Q
1
.S312
A-L
Jul/Dec
2001
Subj Ind
N/C
REF

INDEX

NON-CIRC

REFERENCE

31-P
21

D.I.C.
MAR 15 2002
LIBRARY

Electrical & Electronics Abstracts

Science Abstracts Series B
July – December 2001

Subject Index (A – L)

INSPEC®
THE INSTITUTION OF ELECTRICAL ENGINEERS

SIX-MONTHLY INDEXES TO ELECTRICAL & ELECTRONICS ABSTRACTS

Twice a year as part of their subscription to Electrical & Electronics Abstracts, subscribers receive cumulative indexes for the periods January-June and July-December. Each index is in two parts – a Subject Index, and an Author Index which comprises personal and corporate author indexes, and indexes to conferences and book titles. The List of Journals abstracted by INSPEC is also included with the July-December issue of the Author Index, while the supplement to that List is included with the January-June issue. Cumulative indexes for earlier years are also available: for details please see the inside back cover.

Subject index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles under it. The majority of the subject headings fall into the following categories: property, phenomenon, substance or named objects, instrument, device, theory, method, process, application, event.

2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.

3. If you do not find the subject heading you first chose, try a more general heading.

4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal, e.g. 12345 refers to abstract number 12345 for the period covered by the Index.

The language of the article, if it is not in English, is also indicated, e.g. amplification of information signals in chaotic masking (*Japanese*) 34992.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored (e.g. α-brass, 5-sulphosalicylic, 31 Gygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists: alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, allows and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe-list e.g. Fe-Al,... Fe-Co,... Fe-Si,... Fe-Si-B,... FeCo,... FeSi and so on in this order.

ELECTRICAL & ELECTRONICS ABSTRACTS, ISSN 0036-8105, is published monthly by INSPEC, IEE, Michael Faraday House, Six Hills Way, Stevenage, Herts. SG1 2AY, UK. INSPEC is a registered trademark of the Institution of Electrical Engineers. The annual subscription rate in the USA is US$3605 (valid in North, Central and South America only). For full details of subscription rates and ordering procedures see inside back cover. Printed by Unwin Brothers Limited, The Gresham Press, Old Woking, Surrey, UK.

© 2001. THE INSTITUTION OF ELECTRICAL ENGINEERS. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the Institution of Electrical Engineers.

INSPEC®
THE INSTITUTION OF ELECTRICAL ENGINEERS

Electrical & Electronics Abstracts

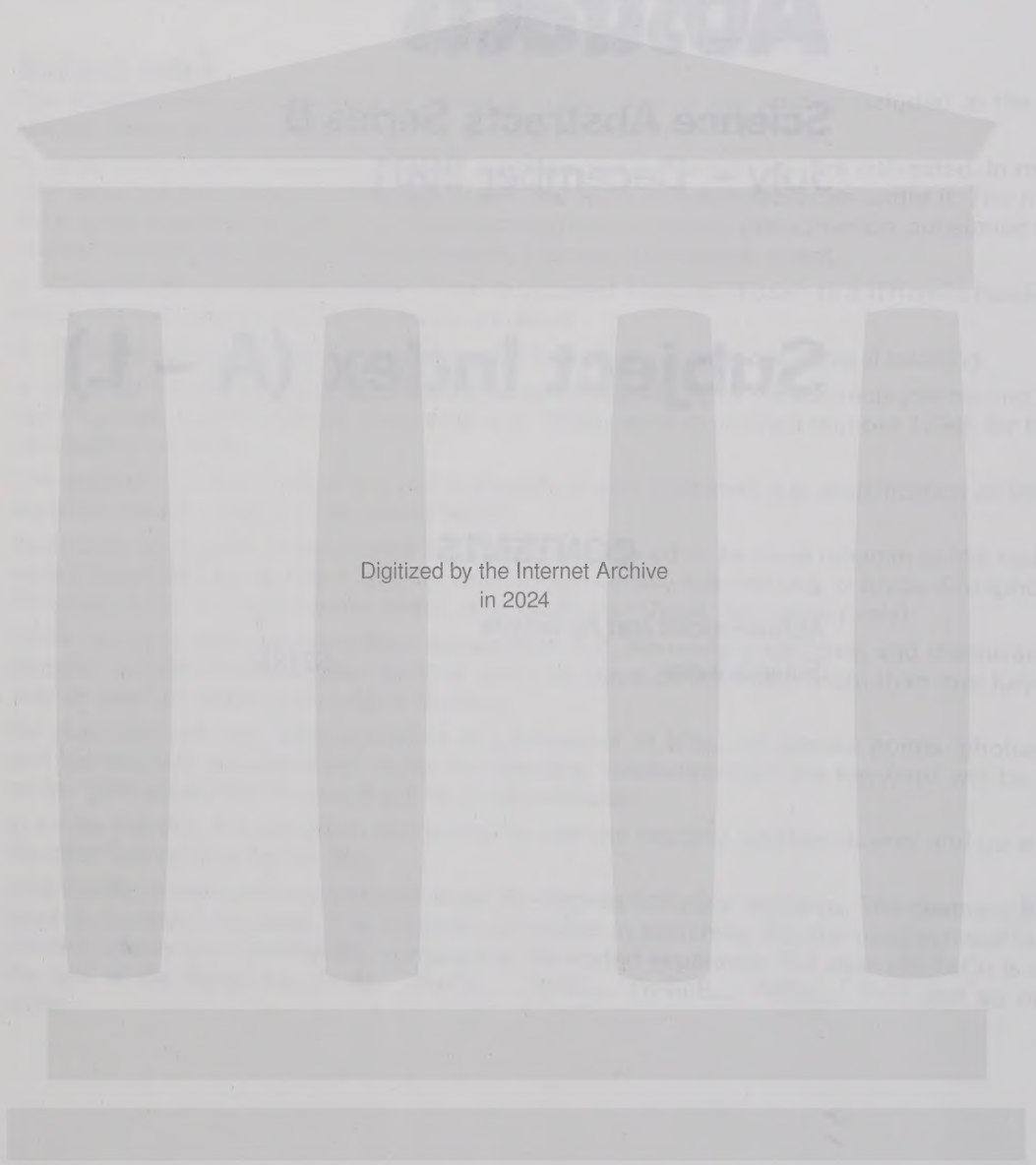
Science Abstracts Series B

July – December 2001

Subject Index (A – L)

CONTENTS

Abbreviations and Acronyms	i
Subject Index	S2133



Digitized by the Internet Archive
in 2024

https://archive.org/details/science-abstracts-series-electrical-and-electronics-abstracts_july-december-2001_index-a-l

Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. **Organic substances** including **liquid crystals** and **polymers** are not given as formulae but common abbreviations are used.

1D	one-dimensional
2D	two-dimensional
2DEG	2D electron gas
3D	three-dimensional
4GL	fourth generation language
A/D	analogue-to-digital
AAL	ATM adaptation layer
AAS	atomic absorption spectrometry (-oscopy)
ABC	absorbing boundary condition *or* aerial bundled cables/conductors
ABR	available bit rate
ABS	acrylonitrile-butadiene-styrene
AC	alternating current
ACD	automatic call distribution
ACEL	AC electroluminescent
ACI	adjacent channel interference
ACQW	asymmetric coupled quantum well
ACRT	accelerated crucible rotation technique
ACSR	aluminium conductor steel reinforced
ACT	acoustic charge transport
ACTFEL	AC thin film electroluminescent
ACTS	advanced communication technology and services *or* Advanced Communication Technology Satellite
ACTV	advanced compatible television
ACV	air cushion vehicle
ADC	analogue-to-digital conversion(-ter)
ADM	adaptive delta modulation *or* add-drop multiplexer
ADP	administrative data processing
ADPCM	adaptive differential PCM
ADS	automatic depressurisation system
ADSL	asymmetric digital subscriber line
ADTV	advanced definition television
AE	acoustic emission
AEA	American Electronics Association
AES	Auger electron spectra (-oscopy)
AF	audio-frequency
AFBC	atmospheric fluidised bed combustion
AFC	automatic frequency control
AFL	abstract family of languages
AFM	atomic force microscopy
AFMR	antiferromagnetic resonance
AFR	away from reactor (spent fuel storage)
AGB	asymptotic giant branch
AGC	automatic gain control
AGN	active galactic nucleus (nuclei)
AGR	advanced gas-cooled reactor
AGS	alternating gradient synchrotron
AGV	automatic guided vehicle
AHDL	analogue HDL
AHP	analytic hierarchy process
AI	artificial intelligence
AIC	adaptive interference canceller
AIN	advanced intelligent networks
ALARA	as low as reasonably achievable
ALE	atomic layer epitaxy *or* adaptive line enhancer
ALGOL	Algorithmic Language
ALS	Advanced Light Source
ALU	arithmetic logic unit
ALV	autonomous land vehicle
ALWR	advanced light water reactor
AM	air mass number *or* amplitude modulation
AM/FM	automated mapping/facilities management
AMLCD	active matrix liquid crystal display
AMPS	Advanced Mobile Phone System
AMPTE	Active Magnetospheric Particle Tracer Explorers
AMR	automatic meter reading
AMS	accelerator mass spectroscopy
AMTEC	alkali metal thermoelectric convertor
ANA	automatic network analyser
ANN	artificial neural network
ANOVA	analysis of variance
ANS	Advanced Neutron Source
ANSI	American National Standards Institute
AO	acousto-optic(al)
AOI	automatic optical inspection
APACHE	Accelerator for Physics and Chemistry of Heavy Elements
APC	adaptive predictive coding
APCM	adaptive PCM
APCVD	atmospheric pressure CVD
APD	antiphase domain *or* avalanche photodiode
APFIM	atom probe field ion microscopy
API	application programming interface
APK	amplitude phase keying
APL	A Programming Language
APS	Advanced Photon Source *or* appearance potential spectra (-oscopy)
APW	augmented plane wave
APWR	advanced pressurised water reactor
ARC	antireflection coating
ARET	accelerated reliability enhancement testing
ARINC	Aeronautical Radio Inc.
ARMA	autoregressive moving average
ARMAX	ARMA exogenous
ARPA	Advanced Research Projects Agency
ARPES	angle resolved photoemission spectra (-oscopy)
ARQ	automatic repeat request
ARROW	antiresonant reflecting optical waveguide
ART	adaptive resonance theory
ARUPS	angular resolved UPS
ASCII	American Standard Code for Information Interchange
ASD	adjustable speed drives
ASE	amplified spontaneous emission
ASIC	application-specific integrated circuit
ASIP	application-specific integrated processor
ASK	amplitude shift keying

ASN	abstract syntax notation
ASPSK	antipodal Stokes parameters shift keying
ASQC	American Society of Quality Control
ASSP	application-specific standard product
AST	accelerated stress testing
AT&T	American Telephone & Telegraph
ATC	air traffic control
ATCS	Advanced Train Control System
ATE	automatic test equipment
ATF	Advanced Toroidal Facility
ATG	automatic test generation
ATLAS	Abbreviated Test Language for Avionic Systems
ATM	asynchronous transfer mode *or* automatic teller machine *or* Axilrod-Teller-Moto
ATMS	assumption-based truth maintenance system
ATPG	automatic test pattern generation
ATR	attenuated total reflection *or* automatic target recognition
ATS	automatic test system
ATV	advanced television
ATW	accelerator transmutation of (radioactive) waste
ATWS	anticipated transients without scram
AUV	autonomous underwater vehicle
AVC	automatic volume control
AVHRR	advanced very high-resolution radiometer
AWGN	additive white Gaussian noise
B-ISDN	broadband ISDN
BAER	brainstem auditory evoked response
BARITT	barrier injection transit time
BASIC	Beginners' All-purpose Symbolic Instruction Code
BAW	bulk acoustic wave
BBC	British Broadcasting Corporation
BBD	bucket-brigade device
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon
BCB	benzocyclobutene
BCC	body-centred cubic
BCD	binary-coded decimal
BCDMOS	bipolar-CMOS-DMOS
BCH	Bose-Chadhuri-Hocquenghem
BCS	Bardeen-Cooper-Schrieffer
BCT	body centred tetragonal
BDD	binary decision diagram
BEBC	Big European Bubble Chamber
BEC	Bose-Einstein condensate (-ation)
BEDT-TTF	bis(ethylenedithio)-tetrathiafulvalene (-inium)
BEEM	ballistic electron emission microscopy
BEM	boundary element method
BEOL	back-end-of-line
BEPC	Beijing Electron Positron Collider
BER	bit error rate
BERT	bit error rate tester
BESOI	bond-and-etchback silicon on insulator
BFL	buffered FET logic
BFN	beam-forming network
BFO	beat-frequency oscillator
BGA	ball grid array
BGO	bismuth germanate
BH	buried heterostructure
BIBO	bounded input, bounded output
BiCMOS	bipolar CMOS
BiFET	bipolar FET
BIL	buried injection logic
BILBO	built-in logic block observation
BiMOS	bipolar metal-oxide-semiconductor
BIOS	basic input/output system
BIS	bremsstrahlung isochromat spectroscopy
BISDN	broadband ISDN
BISR	built-in self-repair
BIST	built-in self-test
BIT	built-in test
BITE	built-in test equipment
BJT	bipolar junction transistor
BLDCM	brushless DC motor
BNFL	British Nuclear Fuels plc
BOC	Bell Operating Company
BOD	bistable optical device
BOLD	blood oxygenation level dependence(-ent)
BOX	buried oxide
BP	backpropagation *or* British Petroleum
BPM	beam propagation method
BPR	business process reengineering
BPSG	borophosphosilicate glass
BPSK	binary phase shift keying
BPX	burning plasma experiment
BRDF	binomial reflectivity distribution function
BRET	breeder reprocessing engineering test
BSDL	Boundary Scan Description Language
BSG	borosilicate glass
BSI	British Standards Institution
BT	British Telecom
BTA	Basic Technology Accelerator
BTSC	Broadcast Television Systems Committee
BVP	boundary value problem
BWG	beam waveguide
BWIP	Basalt Waste Isolation Project
BWO	backward wave oscillator
BWR	boiling water reactor
BWT	backward wave tube
C-V	capacitance-voltage
C/N	carrier-to-noise
C^2	command and control
C^3	command, control and communications
C^3I	command, control, communications and intelligence
C^3L	complementary constant current logic
C^4	command, control, communications and computers
C^4I	command, control, communications, computers and intelligence
C4	controlled collapse chip connection
CAA	computer-aided analysis
CAA(A)	Clean Air Act (amendments)
CAAD	computer-aided architectural design
CAD	computer-aided design
CADAT	computer-aided design and testing
CADD	computer-aided drafting and design
CAE	computer-aided engineering
CAES	compressed air energy storage
CAGD	computer-aided geometric design
CAI	common air interface *or* computer-assisted instruction
CAIBE	chemically assisted ion beam etching
CAL	computer-aided learning
CALL	computer-assisted language learning
CALS	commerce at light speed *or* computer-aided acquisition and logistic(s) support

CAM	computer-aided manufacturing *or* content addressable memory
CAMAC	computer automated measurement and control
CAN	controller area network(ing)
CANDU	Canadian deuterium uranium
CAPP	computer-aided process (production) planning
CAQ	computer-aided quality assurance
CAR	computer-aided retrieval
CARL	chemical amplification of resist lines
CARM	cyclotron autoresonance maser
CARS	coherent anti-Stokes Raman scattering (spectra)
CART	classification and regression trees
CASE	computer-aided software engineering
CASS	consolidated automated support system
CAT	computer-assisted tomography *or* computerised axial tomography
CATR	compact antenna test range
CATT	controlled avalanche transit transistor
CATV	cable TV *or* community antenna TV
CAV	constant angular velocity
CB	citizens band
CBE	chemical beam epitaxy
CBED	convergent beam electron diffraction
CBI	computer-based instruction
CBL	computer-based learning
CBOOA	cyanobenzylidene octyloxyaniline
CBR	case-based reasoning *or* constant bit rate
CBT	computer-based training
CC	coupled channels *or* calculus of constructions
CCBA	coupled channel Born approximation
CCCS	current-controlled current source
CCD	charge-coupled device
CCFL	counter current flow limiting (LOCA phenomenon)
CCI	co-channel interference
CCII	second generation current conveyor
CCIR	International Radio Consultative Committee
CCITT	International Telephone & Telegraph Consultative Committee
CCL	capacitor coupled logic
CCN	cloud condensation nucleus/nuclei
CCS	common channel signalling *or* calculus of communicating systems
CCTF	Cylindrical Core Test Facility
CCTR	Culham Conceptual Tokamak Reactor
CCTV	closed circuit TV
CCVS	current-controlled voltage source
CD	compact disc *or* critical dimension
CD-I	compact disc - interactive
CD-ROM	compact disc ROM
CD-RW	compact disc - rewritable
CD-V	compact disc - video
CDD	concurrent decision diagram
CDFR	Commercial Demonstration Fast Reactor
CDI	collector diffusion isolation
CDLC	cellular data link control
CDM	code division multiplexing *or* charged device model *or* cold dark matter
CDMA	code division multiple access
CDP	common depth point
CDW	charge-density wave
CEBAF	Continuous Electron Beam Accelerator Facility
CECL	cascade-emitter coupled logic
CELP	code excited linear prediction
CEM	channel electron multiplier
CEMS	conversion electron Mössbauer spectra (-oscopy)
CEO	chief executive officer
CEPA	coupled electron pair approximation
CEPT	Conference of European Postal and Telecommunications
CERDIP	ceramic dual-in-line package
CERN	European Council for Nuclear Research
CESAR	CERN Electron Storage and Accumulation Ring
CESR	conduction electron spin resonance
CETI	contact with extraterrestrial intelligence
CFA	continued fraction approximation
CFAR	constant false alarm rate
CFBC	circulating fluidised bed combustion
CFC	chlorofluorocarbon
CFD	computational fluid dynamics
CFIE	combined field integral equation
CFSK	coherent frequency shift keying
CFT	conformal field theory
CGA	colour (*or* computer) graphics adapter
CGH	computer-generated holography (-gram)
CGI	Common Gateway Interface
CGTO	contracted Gaussian-type orbital
CHF	coupled Hartree-Fock
CHILL	CCITT High-Level Language
CHINT	charge injection transistor
CHO	Chinese hamster ovary
CHP	combined heat and power
CI	configuration interaction
CICC	cable-in-conduit conductor
CID	charge injection device
CIDEP	chemically induced dynamical electron polarisation
CIDNP	chemically induced dynamical nuclear polarisation
CIIL	Common Instrument Interface Language *or* Control Intermediate Interface Language
CIM	computer integrated manufacture (-ing) *or* constituent interchange model
CIO	chief information officer
CIRC	cross-interleaved Reed-Solomon code
CISC	complex instruction set computer
CIT	Compact Ignition Tokamak
CL	cathodoluminescence
CLAN	cordless LAN
CLC	cholesteric liquid crystal
CLCC	ceramic leaded chip carrier
CLEC	competitive local exchange carrier
CLOS	command-to-line-of-sight
CLP	constraint logic programming
CLV	constant linear velocity
CMA	constant modulus algorithm
CMAC	cerebellar model arithmetic computer *or* cerebellar model articulation controller
CMB	core-mantle boundary
CMD	colour-magnitude diagram(s)
CME	coronal mass ejection(s)
CMI	computer managed instruction

CMIP Common Management Information Protocol
CML current-mode logic
CMM coordinate measuring machine *or* Capability Maturity Model
CMOS complementary metal-oxide-semiconductor
CMP chemical mechanical polishing (planarisation)
CMR colossal magnetoresistance *or* common-mode rejection
CMRR common-mode rejection ratio
CMS cable management system
CMV common-mode voltage
CMVR common-mode voltage ratio
CNC computerised numerical control
CNDO complete neglect of differential overlap
CNF conjunctive normal form
CNN cellular neural net(work)
CNR carrier-to-noise ratio
CNS central nervous system
CO central office
COB chip-on-board
COBOL Common Business Oriented Language
COCOMO cost complexity model(ling)
COD crack opening displacement
COFDM coded orthogonal FDM
COG chip-on-glass
COIL chemical oxygen-iodine laser
COM computer output to microform (fiche or film) *or* coupling of modes *or* Component Object Model
COMFET conductivity-modulated FET
CORBA Common Object Request Broker Architecture
CORDIC coordinate rotation digital computer
COTS commercial off-the-shelf
COVA computer code validation
CP charge, parity
CP-MAS cross-polarisation MAS
CPA coherent potential approximation *or* critical path analysis
CPC compound parabolic concentrator
CPE customer premises equipment
CPFSK continuous phase FSK
CPLD complex programmable logic device
CPM continuous phase modulation *or* critical path method
CPN coloured Petri net *or* customer premises network
CPS coplanar strip(line)
CPSK coherent phase shift keying
CPT charge, parity, time
CPU central processing unit
CPV common pressure vessel
CPW coplanar waveguide
CQPSK coherent quadrature PSK
CRBR Clinch River Breeder Reactor Project
CRC cyclic redundancy check
CRCW concurrent read, concurrent write
CRDA control rod drop accident
CREAM cosmic radiation environment and activation monitor
CREDO cosmic radiation environment dosimetry experiment
CREW concurrent read, exclusive write
CRMA cyclic reservation multiple access
CRNL Chalk River Nuclear Laboratories
CRO cathode ray oscilloscope
CRSR coherent resonant Stokes rotation
CRT cathode ray tube
CS coupled states
CSCW computer supported cooperative work
CSI current source invertor
CSM continuous slowing down models
CSMA/CD CSMA with collision detection
CSMA carrier sense multiple access
CSP channel substrate planar *or* chip-scale packaging *or* communicating sequential processes *or* constraint satisfaction problem
CSRS coherent Stokes-Raman spectra (-oscopy)
CSS contact start/stop
CSSB/AM companded single-sideband AM
CSTR continuous stirred tank reactor
CSVT close-spaced vapour transport
CT computerised tomography *or* current transformer
CT1/2/3 cordless telephony (of 1st, 2nd, 3rd generation)
CTD charge transfer device
CTE coefficient of thermal expansion
CTI computer telephony integration
CTL complementary-transistor logic
CTR controlled thermonuclear reactor
CUI character-based user interface
CUT circuit under test
CV cataclysmic variable(s)
CVD chemical vapour deposition
CVI chemical vapour infiltration
CVSDM continuously-variable slope delta modulation
CVT chemical vapour transport
CW continuous wave
CZ Czochralski
D/A digital-to-analogue
DAB digital audio broadcasting
DAC digital-to-analogue conversion(-ter)
DACS digital access and cross-connect system
DAD digital audio disc
DAG directed acyclic graph
DAI distributed artificial intelligence
DAMA demand assigned multiple access
DAQ data acquisition
DARMA deterministic autoregressive moving average
DARPA Defense Advanced Research Projects Agency
DASD direct access storage device
DAT digital audio tape
DATAC digital autonomous terminal access communication
DAW dry active waste
DBMS database management system
DBPSK differential-binary phase-shift keying
DBR distributed Bragg reflector
DBS direct broadcasting by satellite
DC direct current
DC-PBH double-channel PBH
DCA direct chip attach *or* dynamic channel allocation
DCE distributed computing environment

DCEL direct current electroluminescent
DCFL direct-coupled FET logic
DCG dichromated gelatin
DCLC drift cyclotron loss cone (instability)
DCOM Distributed Component Object Model
DCS digital cross-connect system *or* digital cellular service (system) *or* distributed control system
DCT discrete cosine transform
DCTL direct-coupled transistor logic
DCVS differential cascode voltage switch
DDC direct digital control
DDE dynamic data exchange
DDL diode-diode logic
DDS direct digital synthesis
DE differential equation
DECENT distribution of exact classical energy transfer
DECT digital European cordless telecommunication (*or* telephone)
DEDS discrete event dynamic system
DEFT density functional theory
DEM digital elevation model(s)
DEMUX demultiplexer(-ing)
DENOX nitrogen oxides removal
DES data encryption standard
DESIRE diffusion enhanced silylating resist
DESY Deutsches Electron Synchrotron
DEVS discrete event system specification
DF Dirac-Fock
DFB distributed feedback
DFE decision feedback equaliser *or* design for environment
DFG difference frequency generation
DFM design for manufacture(-ability)
DFT discrete Fourier transform *or* design for testability
DFWM degenerate four-wave mixing
DGPS differential GPS
DH double heterostructure
DHBT double heterojunction bipolar transistor
DHF Dirac-Hartree-Fock
DHT discrete Hartley transform *or* discrete Hilbert transform
DIAL differential-absorption lidar
DIBL drain induced barrier lowering
DIC digital integrated circuit
DIET desorption induced by electronic transitions
DIL dual-in-line
DIP DIL package
DIS deep inelastic scattering *or* distributed interactive simulation
DITE Divertor in Torus Experiment
DLA diffusion limited aggregation
DLC diamond-like carbon
DLL delay lock loop *or* dynamic link library
DLMS delayed least mean squares
DLTS deep level transient spectra (-oscopy)
DM delta modulation
DMA direct memory access
DMC dynamic matrix control
DMD digital micromirror device
DMM digital multimeter
DMOS double-diffused metal-oxide-semiconductor
DMSK differential minimum shift keying
DMSO dimethylsulphoxide
DMU decision-making unit
DNA deoxyribonucleic acid *or* Digital Network Architecture
DNF disjunctive normal form
DNMR double nuclear magnetic resonance
DNS domain name system
DNTS digital data exchange network testing system
DOA direction of arrival
DOBAMBC p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate
DoD Department of Defense (USA)
DOE Department of Energy (USA) *or* design of experiments *or* diffractive optical element
DOF degree(s) of freedom
DOI document object identifier
DOPSK differential offset phase shift keying
DORIS Doppel-Ring-Speicher
DOS disc operating system *or* density of states
DOVETT double velocity transit time
DOX design of experiments
DP data processing
DPCM differential PCM
DPDA deterministic pushdown automaton
DPIV digital particle image velocimetry
DPLL digital phase locked loop
DPOAE distortion product otoacoustic emission
DPPC dipalmitoyl phosphatidyl chloride
DPPH diphenylpicrylhydrazyl
DPS distributed parameter system
DPSK differential phase shift keying
DQDB distributed queue dual bus
DQPSK differential quadrature PSK
DRAM dynamic RAM
DRO dielectric resonator oscillator
DS-SS direct sequence spread spectrum
DS-SSMA direct sequence SSMA
DSA digital subtraction angiography
DSAM Doppler shift attenuation method
DSB double sideband
DSC differential scanning calorimetry
DSF dispersion shifted fibre
DSI digital speech interpolation
DSL digital subscriber line
DSM demand side management
DSO digital storage oscilloscope
DSP digital signal processor (-ing)
DSRC dedicated short-range communications
DSS decision support system *or* digital subscriber signalling
DST discrete sine transform
DTA differential thermal analysis
DTL diode transistor logic
DTMF dual tone multi-frequency
DTP desktop publishing
DTPP Demonstration Tokamak Power Plant
DTU dual topological unitarisation
DUT device under test
DUV deep UV
DV-Xα discrete variational Xα
DVD digital versatile (*or* video) disc
DVI digital video interactive
DVM digital voltmeter

DWBA distorted wave Born approximation
DWDM dense WDM (multiple access)
DWIA distorted wave impulse approximation
DWPF Defence Waste Processing Facility
E. coli Escherichia coli
E/D enhancement-/depletion-mode
E1 electric dipole
E2 electric quadrupole
E^2PROM electrically erasable PROM
EAROM electrically alterable ROM
EAS extensive air shower
EAX electronic automatic exchange
EB exponential Born
EBBA 4-ethoxybenzylidene-4n-butylaniline
EBIC electron beam induced current(s)
EBIS electron beam ion source
EBIT electron beam ion trap
EBL explanation-based learning
EBR experimental breeder reactor
EBT Elmo Bumpy Torus
EBU European Broadcasting Union
ECA event-condition-action
ECALE electrochemical atomic layer epitaxy
ECC emergency core cooling *or* error correction code
ECCM electronic counter-counter measures
ECCS emergency core cooling system
ECELR Epithermal Critical Experiment Laboratory Reactor
ECG electrocardiography (-gram)
ECL emitter coupled logic
ECM electronic countermeasures
ECMWF European Centre for Medium Range Weather Forecasts
ECoG electrocortiography (-gram)
ECR electron cyclotron resonance
ECRH electron cyclotron resonance heating
EDA ethylene diamine *or* electronic design automation
EDAX energy-dispersive X-ray analysis
EDF Electricité de France
EDFA erbium-doped fibre amplifier
EDI electronic data interchange
EDIF electronic data interchange format
EDM electrical discharge machining
EDP electronic data processing
EDS energy dispersive spectra (-oscopy)
EDTA ethylene diamine tetra-acetic acid
EDTV extended definition TV
EDW electron density wave
EDX energy-dispersive X-ray
EEG electroencephalography (-gram)
EELFS electron energy loss fine structure
EELS electron energy loss spectra (-oscopy)
EEPLD electrically erasable PLD
EEPROM electrically erasable PROM
EFG edge-defined film fed growth
EFIE electric field integral equation
EFL emitter-follower logic *or* emitter function logic
EFM extended Flygare method
EFT electronic funds transfer
EGA Enhanced Graphics Adaptor
EGG electrogastrography (-gram)
EHD electrohydrodynamics
EHDTV enhanced high-definition TV
EHF extremely high frequency
EHP electron-hole potential method
EHT extended Hückel theory *or* extra high tension
EHV extra high voltage
EIA Electronic Industries Association
EIRP equivalent isotropically radiated power
EIS electrochemical impedance spectroscopy
EISA extended Industry Standard Architecture
EKF extended Kalman filter
EKG electrokymography (-gram)
EL electroluminescent(-ence)
ELDOR electron electron double resonance
ELF extremely low frequency
ELNES energy loss near edge structure
ELO epitaxial lateral overgrowth
EM electromagnetic *or* expectation maximisation
EMC electromagnetic compatibility *or* European Muon Collaboration
EMF electromotive force
EMG electromyography (-gram)
EMI electromagnetic interference
EMP electromagnetic pulse
EMS energy management system
EMTP electromagnetic transients program
ENDOR electron nuclear double resonance
ENEL Ente Nazionale per l'Energia Elettrica (Italian National Electric Energy Agency)
ENG electronic news gathering
ENOB effective number of bits
ENSO El Nino - Southern Oscillation
EO electro-optic(al)
EOF end-of-file
EOG electrooculography (-gram)
EOQ economic order quantity
EOS electrical overstress
EPA Environmental Protection Agency (USA)
EPDM ethylene propylene diene monomer
EPI echo planar imaging
EPLD electrically programmable logic device
EPMA electron probe microanalysis
EPR Einstein-Podolsky-Rosen *or* electron paramagnetic resonance *or* ethylene propylene rubber *or* European Pressurised water Reactor
EPRI Electric Power Research Institute
EPROM erasable PROM
EPUT events per unit time
ER electrorheology(-ical) *or* entity-relationship
ERBE Earth Radiation Budget Experiment
ERDA elastic recoil detection analysis
EREW exclusive read, exclusive write
ERG electroretinography (-gram)
ERP effective radiated power
ES expert system
ESA European Space Agency
ESCA electron spectroscopy for chemical analysis
ESCAR Experimental Superconducting Accelerating Ring
ESD electron stimulated desorption *or* electrostatic discharge
ESDIAD electron stimulated desorption ion angular distributions

ESF	engineering safety features
ESM	electronic support measures
ESOC	European Space Operations Centre
ESP	electrostatic precipitators
ESPI	electronic speckle pattern interferometry
ESPRIT	estimation of signal parameters by rotational invariance techniques *or* European Strategic Programme for Research in Information Technology
ESR	electron spin resonance *or* equivalent series resistance
ESS	electronic switching system *or* environmental stress screening
ESTELLE	Extended State Transition Language
ET	bis(ethylenedithio)-tetrathiafulvalene
ETA-II	Engineering Test Accelerator-II
ETACS	Extended Total Access Communications System
ETM	engineering test model
ETSI	European Telecommunications Standards Institute
ETV	enhanced TV
EU	European Union
EUT	equipment under test
EUV	extreme UV
EV	electric vehicle
EW	electronic warfare
EX-OR	exclusive OR (logic)
EXAFS	extended X-ray absorption fine structure
EZW	embedded zerotree wavelet
F-N	Fowler-Nordheim
F/V	frequency-to-voltage
FAA	Federal Aviation Administration
FACTS	flexible AC transmission system
FAMOS	floating gate avalanche MOS
FBC	fluidised bed combustion
FBG	fibre Bragg grating
FBL	fly-by-light
FBR	fast breeder reactor
FCAW	flux-cored arc welding
FCC	face-centred cubic *or* Federal Communications Commission (USA)
FCFS	first come first served
FCI	fuel-cladding interaction
FCMA	frequency comb multiple access
FCOB	flip chip on board
FCT	field-controlled thyristor
FDD	floppy disc drive *or* frequency division duplex
FDDI	fibre distributed data interface
FDM	frequency division multiplex(ing)
FDMA	frequency division multiple access
FDNC	frequency dependent negative conductance
FDNR	frequency dependent negative resistance
FDTD	finite difference time-domain
FDTS	fixed delay tree search
FEA	finite element analysis *or* field emitter array
FEC	forward error correction
FECFET	floated electron channel FET
FECL	feedback ECL
FED	Fusion Engineering Device (USA) *or* field emission display
FEDC	Fusion Engineering Device Centre (USA)
FEL	free electron laser
FEM	field emission microscopy *or* finite element method
FER	Fusion Experimental Reactor (Japan) *or* frame error rate
FES	functional electrical stimulation
FET	field effect transistor
FFH	fast frequency hopping
FFHR	fusion-fission hybrid reactor
FFT	fast Fourier transform
FFTF	Fast Flux Test Facility
FGD	flue gas desulphurisation
FGM	functionally graded material(s)
FH-SS	frequency hopped spread spectrum
FH-SSMA	frequency hopped SSMA
FHNC	Fermi hypernetted chain
FIB	focused ion beam
FIFO	first in, first out
FIM	field ion microscopy
FIMOS	floating gate ionisation injection metal-oxide-semiconductor
FIPOS	full isolation by porous oxidised silicon
FIR	far IR *or* finite impulse response
FISH	fluorescence in-situ hybridisation
FISO	fast in, slow out
FITL	fibre in the loop
FLAIR	flow-sensitive alternating inversion recovery
FLC	ferroelectric liquid crystal
FLCD	ferroelectric liquid crystal display
FLIR	forward looking infra-red
FLL	frequency locked loop
FLOPS	floating point operation(s) per second
FLOTOX	floating-gate tunnel oxide
FM	frequency modulation
FMEA	failure mode and effects analysis
FMECA	failure modes effects and criticality analysis
FMIT	Fusion Materials Irradiation Test Facility
FMR	ferromagnetic resonance
fMRI	functional magnetic resonance imaging
FMS	flexible manufacturing system *or* flight management system
FOG	fibre optic gyroscope
FORTRAN	Formula Translation (language)
FOTS	fibre optic transmission system
FOV	field of view
FP	functional programming
FPA	focal plane array
FPAA	field programmable analogue array
FPC	fusion power core
FPD	flat panel display
FPGA	field programmbale gate array
FPLA	field programmable logic array
FPLMTS	future public land mobile telecommunication system
FPT	finite perturbation theory
FQHE	fractional quantum Hall effect
FRAM	ferroelectric random access memory
FRAP	fluorescence recovery after photobleaching
FRED-FET	fast recovery epitaxial diode FET
FRMR	field reversed mirror reactor
FROG	frequency resolved optical gating
FSDE	fission suppressed direct enrichment (breeder blanket)
FSGO	floating spherical Gaussian orbitals

FSK	frequency-shift keying
FSM	finite state machine
FSR	full scale range
FSS	fixed satellite service *or* frequency selective surface
FT	Fourier transform
FTIR	Fourier transform IR *or* frustrated total internal reflection
FTP	File Transfer Protocol
FTR	Fast Test Reactor
FTTB	fibre-to-the-building
FTTC	fibre-to-the-curb
FTTH	fibre-to-the-home
FWHM	full width half maximum
FWM	four wave mixing
FZ	floating zone
FZP	Fresnel zone plate
GA	genetic algorithm
GABA	γ-aminobutyric acid
GAMBIT	gate modulated bipolar transistor
GANIL	Grand Accelerateur National à Ions Lourds
GASH	guanidine aluminium sulphate hexahydrate
GCB	gas circuit breakers
GCC	gasification combined cycle
GCFR	gas-cooled fast breeder reactor
GCHWR	gas cooled heavy water moderated reactor
GCM	general circulation model *or* generator coordinate method
GCR	group code recording
GDR	giant dipole resonance
GDSS	group decision support system
GEO	geostationary orbit
GETR	General Electric Test Reactor
GF	Galois field
GFSK	Gaussian frequency shift keying
GHF-NO-CI	generalised Hartree-Fock/natural orbital/configuration interactions
GIAO	gauge-invariant atomic orbitals
GIC	generalised immittance convertor *or* geomagnetically induced currents *or* graphite intercalation compound
GIDL	gate-induced drain leakage
GIF	graphical image format
GIS	gas-insulated system (substation or switchgear) *or* geographic information system
GITL	gas-insulated transmission line
GKS	Graphical Kernel System
GLONASS	Global Orbiting Navigation Satellite System
GMA	gas metal arc
GMDH	group method of data handling
GMDSS	Global Maritime Distress and Safety System
GMI	giant magnetoimpedance
GMR	giant magnetoresistance *or* giant monopole resonance
GMRF	guided mode resonance filter
GMSK	Gaussian filtered MSK
GMW	Gordon-Mills-Welch
GNSS	Global Navigation Satellite System
GO	Gaussian orbitals *or* geometrical optics
GOI	gate oxide integrity
GP	Guinier-Preston
GPC	generalised predictive control
GPED	gas phase electron diffraction
GPIB	general-purpose interface bus
GPM	ground potential model
GPS	Global Positioning System
GQR	giant quadrupole resonance
GR	general relativity
GRIN	graded (*or* gradient) refractive index
GRINSCH	gradient-index separate confinement heterostructure
GSI	gigascale integration
GSM	global system for mobile communications *or* Groupe Speciale Mobile
GSMBE	gas-source molecular beam epitaxy
GSPC	gas scintillation proportional chamber (*or* counter)
GT	group technology
GTAW	gas tungsten arc welding
GTD	geometrical theory of diffraction
GTHTGR	gas turbine HTGR
GTO	gate turn-off *or* Gaussian-type orbitals
GUI	graphical user interface
GUT	grand unified theory
GVB	generalised valence bond
HALT	highly accelerated life test(ing)
HASL	hot air solder levelling
HASS	highly accelerated stress screening
HAST	highly accelerated stress test(ing)
HAWT	horizontal axis wind turbines
HB	horizontal branch
HBM	human body model
HBS	home bus system
HBT	heterojunction bipolar transistor *or* N-(p-hexyloxybenzylidene)-p-toluidene
HCDA	hypothetical core disruptive accident
HCI	human-computer interaction
HCMOS	high-speed complementary MOS
HCP	hexagonal close packed
HCSEL	horizontal cavity surface emitting laser
HD-MAC	high-definition MAC
HD-VCR	high-definition VCR
HDD	hard disc drive
HDDR	hydrogenation disproportionation desorption recombination
HDI	high-density interconnect
HDL	hardware description language
HDLC	high-level data link control
HDM	hot dark matter
HDMI	high-density multichip interconnect
HDPE	high-density polyethylene
HDSL	high bit-rate digital subscriber lines
HDTV	high-definition television
HEED	high-energy electron diffraction
HeLa	Henrietta Lacks
HEMP	high-altitude electromagnetic pulse
HEMT	high electron mobility transistor
HET	hot electron transistor
HEU	highly enriched uranium (93% U235)
HEU/Th	highly enriched U/Th fuel
HEXFET	hexagonal MOSFET
HF	Hartree-Fock *or* high-frequency
HFC	hybrid fibre coax
HFEF	Hot Fuel Examination Facility
HFET	heterojunction (*or* heterostructure) FET
HFIR	high flux isotope reactor

HFITR	High Field Ignition Test Reactor
HFS	Hartree-Fock-Slater *or* hyperfine structure
HGMS	high-gradient magnetic separation
HI	heavy ion
HID	high-intensity discharge
HIFET	heterointerface FET
HIGFET	heterostructure insulated gate FET
HIP	hot isostatic pressing
HIPERLAN	high-performance (radio) LAN
HIPPI	high-performance parallel interface
HIRF	high-intensity radiated fields
HIS	hospital information system
HIXE	heavy ion induced X-ray emission
HJBT	heterojunction bipolar transistor
HJFET	heterojunction FET
HLA	High Level Architecture
HLL	high-level language
HLLW	high-level liquid waste
HLW	high-level waste
HMC	hidden Markov chain
HMD	helmet mounted display
HMM	hidden Markov model
HMO	health maintenance organisation *or* Hückel molecular orbitals
HMOS	high-performance metal-oxide-semiconductor
HMTSeF	hexamethylene-tetraselenafulvalene (-inium)
HMTTF	hexamethyltetrathiofulvalene (-inium)
HOAB	heptyloxyazoxybenzene
HOE	holographic optical elements
HOMO	highest occupied molecular orbitals
HOPG	highly oriented pyrolytic graphite
HOS	higher order statistics
HPCI	high-pressure coolant injection
HPCS	high-pressure core sprays
HPF	High Performance FORTRAN
HREELS	high-resolution EELS
HREM	high-resolution electron microscopy
HRSG	heat recovery steam generator
HRTEM	high-resolution TEM
HRV	heart rate variability
HSLA	high-strength low alloy (steel)
HSLAN	high-speed LAN
HST	Hubble Space Telescope
HT	high tension
HTGR	high-temperature gas-cooled reactor
HTGRSC/C	HTGR steam cycle cogeneration
HTML	Hypertext Markup Language
HTSC	high-temperature superconductor
HTTP	Hypertext Transfer Protocol
HTTR	High-Temperature Engineering Test Reactor
HUD	head-up display
HV	high voltage
HVAC	heating, ventilation and air conditioning *or* high-voltage alternating current
HVDC	high-voltage direct current
HVEM	high-voltage electron microscopy
HVIC	high-voltage integrated circuit
HWIR	hardware-in-the-loop
HWLWR	heavy water moderated LWR
HWR	heavy water reactor
HZE	high Z and energy
HZP	hot zero power
I-FOG	interferometric fibre-optic gyroscope
I-V	current-voltage
i.i.d.	independently identically distributed
I/O	input/output
I^2L	integrated injection logic
I^3L	isoplanar I^2L
IAEA	International Atomic Energy Agency
IAR	isobaric analogue resonance
IAS	isobaric analogue state
IBA	interacting boson approximation
IBAD	ion beam assisted deposition
IBCN	integrated broadband communication network
IBFA	interacting boson-fermion approximation
IBM	interacting boson model *or* International Business Machines
IBOC	in-band on-channel
IBPBAC	isobutyl-4-(4'-phenylbenzylidene-amino) cinnamate
IBT	insulated base transistor
IC	integrated circuit
ICA	independent component analysis
ICAM	integrated computer-assisted manufacturing
ICB	ionised cluster beam
ICDF	intermediate coupling Dirac-Fock
ICE	in-circuit emulator
ICF	inertial confinement fusion
ICMA	idle signal casting multiple access
ICP	inductively coupled plasma
ICPP	Idaho Chemical Processing Plant
ICRF	ion cyclotron range of frequencies
ICRH	ion cyclotron resonance heating
ICTS	isothermal capacitance transient spectra (-oscopy)
ICU	intensive care unit
IDDQ	quiescent power supply current
IDEF	ICAM definition
IDFL	integral diode FET logic
IDL	interface definition language
IDT	interdigital transducer
IDTV	improved definition television
IEC	interexchange carrier *or* International Electrotechnical Commission
IEE	Institution of Electrical Engineers
IEEE	Institute of Electrical and Electronics Engineers
IEPA	independent electron pair approximation
IES	Institute of Environmental Sciences
IETS	inelastic electron tunnelling spectra (-oscopy)
IF	intermediate-frequency
IFA	ionisation front accelerator
IFE	intelligent front end
IFF	identification friend or foe
IFIP	International Federation for Information Processing
IFM	instantaneous frequency measurement
IFS	iterated function system
IGBT	insulated gate bipolar transistor
IGCC	integrated gasification combined cycle
IGES	Initial Graphics Exchange Specification
IGFET	insulated gate FET
IgG	immunoglobin
IGT	insulated gate transistor
IHEP	Institute of High Energy Physics
IIR	infinite impulse response

IKBS	intelligent knowledge-based system
IKO	Institute v. Kernph Ouder (Amsterdam)
ILD	interlayer dielectric
ILP	inductive logic programming
ILS	instrument landing system
ILW	intermediate level (radioactive) waste
IM	induction motor
IM-DD	intensity modulated direct detection
IMA	integrated modular avionic
IMAPS	International Microelectronics and Packaging Society
IMD	intermodulation distortion
IMPATT	impact avalanche transit time
IN	intelligent network
INDO	incomplete neglect of differential overlap
INDOR	internuclear double resonance
INEPT	insensitive nuclei enhanced by polarisation transfer
ING	intense neutron generator
INO	iterative natural orbital
INS	inertial navigation system *or* Information Network System
INSPEC	Information Services for the Physics and Engineering Communities
INTELSAT	International Telecommunications Satellite Consortium
INTOR	International Tokamak Reactor
INTUG	International Trade and User Group
IOCω	inclusion of the overlap charges in the omega
IP	Internet Protocol
IPC	Institute for Interconnecting and Packaging Electronic Circuits
IPI	intelligent peripheral interface
IPSE	integrated programming support environment *or* integrated project support environment
IPSS	international packet switching system
IQHE	integer quantum Hall effect
IR	infra-red
IRBIC	IR beam-induced current(s) (*or* contrast)
IREB	intense relativistic electron beam
IRED	IR emitting diode
IRFPA	IR focal plane array
IRL	Internet reconfigurable logic
IRQ	interrupt request
IRRAS	IR reflection absorption spectra(-oscopy)
IRS	information retrieval system *or* Internal Revenue Service
IRST	IR search and track
IS	information system
ISA	Industry Standard Architecture *or* Instrument Society of America
ISAR	inverse synthetic aperture radar
ISDN	integrated services digital network
ISDSN	integrated services digital satellite network
ISFET	ion-sensitive FET
ISHM	International Society for Hybrid Microelectronics
ISI	intersymbol interference
ISL	integrated Schottky logic *or* inter-satellite link
ISM	industrial, scientific and medical
ISM	interstellar medium
ISO	independent system operator(s) *or* International Standards Organization
ISP	Internet service provider
ISPBX	integrated services PBX
ISR	intersecting storage ring
ISS	ion scattering spectroscopy
ISX	impurity study experiment
IT	information technology
ITC	ionic thermocurrents
ITEP	Institute of Theoretical and Experimental Physics
ITO	indium tin oxide
ITOX	internal thermal oxidation
ITR	Ignition Test Reactor
ITU	International Telecommunication Union
IU	Indiana University (USA)
IVHS	intelligent vehicle highway system
IVO	improved virtual orbitals
IVP	initial value problem
J^{π}	spin/parity (nuclear levels)
JAERI	Japan Atomic Energy Research Institute
JANET	Joint Academic Network
JCL	job control language
JDK	Java Development Kit
JEDEC	Joint Electronic Device Engineering Council
JET	Joint European Torus
JFET	junction FET
JINR	Joint Institute for Nuclear Research
JIT	just in time
JPEG	Joint Photographic Experts Group
JSD	Jackson system development
JT-60	Japanese Tokamak-60
JTAG	Joint Test Action Group
JTC	joint transform correlator
JTE	junction termination extension
JTIDS	Joint Tactical Information Distribution System
JVD	jet vapour deposition
KADS	knowledge acquisition and design structuring
KBS	knowledge-based system
KDD	knowledge discovery in databases
KdV	Korteweg-de Vries
KEK	Japan National Laboratory for High Energy Physics
KGD	known good die
KKR	Korringa-Kohn-Rostoker
LAAS	local-area augmentation system
LAMPF	Los Alamos Meson Physics Facility
LAN	local-area network
LATA	local access and transport area
LAWN	local-area wireless network
LB	Langmuir-Blodgett
LBIC	light beam induced current(s)
LBLOCA	large break LOCA
LC	inductance-capacitance
LCA	logic cell array
LCAO	linear combination of atomic orbitals
LCBO	linear combinations of (semi-localised) band orbitals
LCC	leadless chip carrier
LCCC	leadless ceramic chip carrier
LCD	liquid crystal display/device
LCI	load commutated inverter
LCP	Large Coil Program *or* least cost planning
LCTF	Large Coil Test Facility
LCTV	liquid crystal television

LD	laser diode
LDA	laser Doppler anemometry (-meter) *or* local density approximation
LDD	lightly doped drain
LDI	lossless discrete integrator
LDMOS	lateral double-diffused metal oxide semiconductor
LDPE	low density polyethylene
LDV	laser Doppler velocimetry (-meter)
LEAR	Low Energy Antiproton Ring
LEC	liquid encapsulated Czochralski *or* local exchange carrier
LED	light emitting diode
LEED	low energy electron diffraction
LEFD	Large Experimental Fusion Device
LEIS	low energy ion scattering
LEMP	lightning electromagnetic pulse
LEO	lateral epitaxial overgrowth *or* low-Earth orbit
LEP	Large Electron Positron (CERN)
LET	linear energy transfer
LEU	low enrichment uranium (10% U235)
LEU/Th	low enrichment U/Th fuel
LF	low-frequency
LFSR	linear feedback shift register
LGA	land grid array
LHC	Large Hadron Collider (CERN)
LHPG	laser heated pedestal growth
LHRH	lower hybrid resonance heating
LIF	laser induced fluorescence
LIFO	last in, first out
LIGA	lithography galvanoformung abformung
LIM	linear induction motor
LIME	laser induced magnetically enhanced
LINAC	linear accelerator
LIS	laboratory (*or* library) information system
LISP	List Processor (language)
LLTR	Large Leak Test Rig
LLW	low level (radioactive) waste
LMC	Large Magellanic Cloud
LMDS	local multichannel (*or* multipoint) distribution system
LME	liquid metal embrittlement
LMFBR	liquid metal fast breeder reactor
LMI	linear matrix inequalities
LMIS	liquid metal ion source
LMR	liquid metal reactor *or* land mobile radio
LMS	least mean square(s) *or* land mobile satellite
LMSS	land mobile satellite system
LMTO	linear combination of muffin tin orbitals
LMXB	low-mass X-ray binary
LNA	low noise amplifier
LNB	low noise block
LNG	liquified natural gas
LO	local oscillator *or* longitudinal optical
LOCA	loss of coolant accident
LOCE	loss of coolant experiment
LOCOS	local oxidation of silicon
LOF	loss of flow
LOFT	Loss of Flow Test Facility
LOFW	loss of feedwater
LOLP	loss of load probability
LOOSP	loss of on-site power
LOS	line of sight *or* loss of signal
LOTOS	Language Of Temporal Ordering Specification
LP	linear programming
LPC	linear predictive coding
LPCS	low pressure core spray
LPCVD	low pressure CVD
LPE	liquid phase epitaxy
LPEE	liquid phase electroepitaxy
LPFL	low pinchoff-voltage FET logic
LPI	low probability of intercept *or* liquid photoimageable
LQ	linear quadratic
LQG	linear quadratic Gaussian
LRO	long-range order
LSA	least squares approximation *or* limited space charge accumulation
LSB	least significant bit
LSD	local spin density *or* loop shut-down
LSF	line spectral frequency
LSI	large-scale integration
LSP	line spectrum pair
LSPB	Large Scale Prototype Breeder
LSSD	level sensitive scan design
LSTF	Large Scale Test Facility
LTCC	low-temperature co-fired ceramic
LTE	local thermodynamic equilibrium
LTI	linear time invariant
LTR	loop transfer recovery
LUMO	lowest unoccupied molecular orbitals
LV	low voltage *or* left ventricle
LVQ	learning vector quantisation
LW	long-wave
LWBR	light water breeder reactor
LWHCR	light water high convertor reactor
LWIR	long-wavelength IR
LWR	light water reactor
M-QAM	multilevel QAM
M1	magnetic dipole
M2	magnetic quadrupole
MAC	multiplexed analogue components *or* media access control
MAG	metal arc gas
MAGFET	magnetic field sensitive FET
MAGLEV	magnetic levitation
MAI	multiple access interference
MAN	metropolitan-area network
MAP	Manufacturing Automation Protocol *or* maximum a posteriori *or* medium access protocol
MARC	machine readable catalogue
MARS	Mirror Advanced Reactor Study
MAS	magic angle spinning
MATE	modular automatic test equipment
MBBA	4-methoxybenzylidene-4'n-butylaniline
MBC	meteor burst communication
MBE	molecular beam epitaxy *or* multi-band excitation
MBPT	many body perturbation theory
MBR	model-based reasoning
MCA	multichannel analyser
MCCB	moulded-case circuit breakers
MCCI	molten core-concrete interaction
MCD	magnetic circular dichroism
MCFC	molten carbonate fuel cell
MCFR	magnetic confinement fusion reactor

MCM	multichip module *or* multicarrier modulation
MCP	microchannel plate
MCSCF	multiconfiguration SCF
MCVD	modified chemical vapour deposition
MCXα	multiconfiguration Xα
MDS	maximum distance separable
MEC	molecular electron correlation(s)
MEG	magnetoencephalography (-gram)
MEI	measured equation of invariance
MELP	mixed excitation linear prediction
MEMS	microelectromechanical system
MERIE	magnetically enhanced reactive ion etching
MESFET	metal-semiconductor FET
MEU	medium enrichment uranium (20% U235)
MEU/Th	medium enrichment U/Th fuel
MF	medium-frequency
MFIE	magnetic field integral equation
MFM	magnetic force microscopy
MFP	mean free path
MFQ	maximally flat quadratic
MFR	mirror fusion reactor
MFSFET	metal-ferroelectric-semiconductor FET
MFSK	multiple frequency shift keying
MFTF	Mirror Fusion Test Facility
MHD	magnetohydrodynamics
MHEG	Multimedia and Hypermedia Experts Group
MHS	message handling system
MHTGR	modular HTGR
MIC	microwave integrated circuit
MID	magnetically insulated diode *or* moulded interconnect device
MIDI	musical instrument digital interface
MIDP	microwave induced delayed phosphorescence
MIG	metal inert gas *or* metal-in-gap
MIL-STD	military standard
MIM	metal-insulator-metal
MIMD	multiple input (instruction), multiple data
MIMIC	millimetre-wave monolithic integrated circuit
MIMO	multiple input, multiple output
MIN	multiprocessor interconnection network
MIND	mass impregnated non-draining
MINDO	modified incomplete NDO
MIPS	million instructions per second
MIS	management information system *or* metal-insulator-semiconductor
MISFET	metal-insulator-semiconductor FET
MISO	multiple input, single output
MIT	Massachusetts Institute of Technology (USA)
MITATT	mixed tunnelling avalanche transit time
ML	Martin-Löf
ML-EM	maximum likelihood expectation maximization
MLB	multilayer board
MLC	multilayer ceramic
MLE	maximum likelihood estimation *or* molecular layer epitaxy
MLP	multilayer perceptron
MLS	microwave landing system *or* multi-level secure
MLSE	maximum likelihood sequence estimation
MLTF	multilayer thick film
MLW	medium level (radioactive) waste
MM	millimetre
MMC	metal-matrix composite
MMDS	microwave (*or* multichannel) multipoint distribution system
MMF	magnetomotive force *or* multimode fibre
MMI	man-machine interface
MMIC	monolithic microwave integrated circuit
MMSE	minimum mean squared error
MMU	memory management units
MNDO	modified neglect of differential overlap
MNOS	metal-nitride-oxide-semiconductor
MO	molecular orbitals
MOBILE	monostable-bistable transition logic element
MOCLD	metal-organic chemical liquid deposition
MOCVD	metal-organic chemical vapour deposition
MODFET	modulation doped FET
MODOR	microwave-optical double resonance
MODPOT	modulator potential
MOKE	magneto-optical Kerr effect
MOMBE	metal-organic MBE
MONOS	metal-oxide-nitride-oxide-semiconductor
MOPA	master oscillator power amplifier
MORB	mid-ocean ridge basalt
MOS	mean opinion score *or* metal-oxide-semiconductor
MOSFET	metal-oxide-semiconductor FET
MOSIS	metal oxide semiconductor implementation service
MOST	metal-oxide-semiconductor transistor
MOV	metal oxide varistor
MOVPE	metal-organic vapour phase epitaxy
MOX	mixed oxide fuel
MP-CELP	multi-pulse CELP
MPEG	Moving Picture Experts Group
MPH	moving plasmoid heater
MPI	Message Passing Interface
MPP	massively parallel processing
MPPT	maximum power point tracking
MPSK	multiple phase shift keying
MPU	microprocessing unit
MQORC	modified quadrature overlapped raised cosine
MQW	multiple quantum well
MR	magnetoresistive
MRAC	model reference adaptive control
MRC	minimum resolvable contrast
MRD	multiple-reference double excitation
MRI	magnetic resonance imaging
MRINDO	modified Rydberg INDO
MRP	manufacturing resources planning *or* materials requirements planning
MRS	monitored retrievable storage (radioactive waste) *or* magnetic resonance spectroscopy
MRT	minimum resolvable temperature
MS	management science
MSB	most significant bit
MSE	mean square error
MSELP	mixed sinusoidally excited linear prediction
MSGD	micro-strip gas detector
MSI	medium scale integration
MSK	minimum shift keying
MSM	metal-semiconductor-metal

MSR	molten salt reactor
MSS	mobile satellite system
MSSM	minimal supersymmetric standard model
MSSW	magnetostatic surface wave
MSU	Michigan State University
MSW	magnetostatic waves
MSXα	multiple scattering Xα
MT	machine translation *or* magnetotelluric
MTBF	mean time between failures
MTF	modulation transfer function
MTI	moving target indicator
MTL	merged-transistor logic
MTR	maximum transition run-length
MTTF	mean time to failure
MTTR	mean time to repair
MTXα	muffin-tin Xα
μ-TAS	micro total analysis system
μCF	muon-catalysed fusion
μP	microprocessor
μSR	muon spin rotation (resonance)
MUF	material unaccounted for *or* maximum usable frequency
MUMPS	Multi-User Multi-Programming System
MUSE	multiple sub-Nyquist sampling encoding
MUSIC	multiple signal characterisation
MUX	multiplexer(-ing)
MV	medium voltage
MVDR	minimum variance distortionless response
MVDS	multipoint video distribution system
MVTL	modified variable threshold logic
MWIR	mid-wavelength IR
MWNT	multi-wall(ed) nanotube
MWPC	multiwire proportional chamber
NA	numerical aperture
NAA	neutron activation analysis
NAL	National Accelerator Laboratory
NAND	NOT-AND (logic)
NAPLPS	North American Presentation Level Protocol Syntax
NASA	National Aeronautics and Space Administration
NASICON	sodium zirconium silicate phosphate
NATO	North Atlantic Treaty Organisation
NAVSTAR	Navigational Satellite Timing and Ranging
NBETF	Neutral Beam Engineering Test Facility
NBFM	narrowband frequency modulation
NBI	narrow band interference *or* neutral beam injection
NBPS	neutral beam power systems
NC	numerical control
NCAR	National Center for Atmospheric Research (USA)
NCBR	nitrine cooled breeder reactor
NCMET	non-closed shell many electron theory
NCSL	National Conference of Standards Laboratories
NDC	negative differential conductance (-ivity)
NDDO	neglect of diatomic differential overlap
NDE	nondestructive evaluation
NDO	neglect of differential overlap
NDR	negative differential resistance
NDRO	nondestructive readout
NDSF	non-dispersion-shifted fibre
NDT	nondestructive testing
NEA	negative electron affinity
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NET	Next European Tokamak
NETD	noise equivalent temperature differential
NEXAFS	near-edge X-ray absorption fine structure
NEXT	near-end crosstalk
NGS	nuclear generating station
NHS	National Health Service (UK)
NIC	negative impedance convertor
NICAM	near-instantaneously companded audio multiplex
NIR	near IR
NIST	National Institute of Standards and Technology (USA)
NLC	nematic liquid crystal
NLDC	nonlinear directional coupler
NLMS	normalised least mean square(s)
NLO	next-to-leading order *or* nonlinear optical
NLP	natural language processing
NLTE	non-local thermodynamic equilibrium
NMOS	n-channel MOS
NMR	nuclear magnetic resonance
NMR-ON	NMR on oriented nuclei
NMRR	normal-mode rejection ratio
NMS	network management system
NNI	network node interface
NNNDO	neglect of non-neighbour differential overlap
NOAA	National Oceanic and Atmospheric Administration (USA)
NOFC	New Oxide Fuels Complex (BNFL)
NOR	NOT-OR (logic)
NOVA	nonoverlapping super-self-aligned
NOW	network of workstations
NP	nondeterministic polynomial
NPL	National Physical Laboratory (UK)
NPP	nuclear power plant
NQR	nuclear quadrupole resonance
NRC	Nuclear Regulatory Commission (USA)
NRD	nonradiative dielectric
NRM	natural remanent magnetisation
NRZ	non-return to zero
NRZI	NRZ inverted
NS	Navier-Stokes
NSLS	National Synchrotron Light Source
NSOM	near-field scanning optical microscopy
NSPUDT	natural single phase unidirectional transducer
NSRR	Nuclear Safety Research Reactor
NSSS	nuclear steam supply system
NTC	negative temperature coefficient
NTD	neutron transmutation doping
NTE	network termination equipment
NTL	nonthreshold logic
NTSC	National Television Standards Committee *or* National Television Systems Committee
NTT	Nippon Telegraph and Telephone
NTU	network termination unit
NURBS	non-uniform rational B-spline
NVG	night vision goggles
NVL	night vision laboratory
NVLAP	National Voluntary Laboratory Accreditation Program
NVM	nonvolatile memory
NVRAM	nonvolatile RAM

NWA	network analyser
NWPA	Nuclear Waste Policy Act (USA)
OA	office automation
OAM&P	operations, administration, maintenance and provisioning
OAM	operations, administration and maintenance
OATS	open area test site
OBDD	ordered binary decision diagram
OBIC	optical beam induced current(s)
OBIRCH	optical beam induced resistance change
OCR	optical character recognition
OCRWM	Office of Civilian Radioactive Waste Management (USA)
OCT	optical coherence tomography
ODA	Office Document Architecture
ODE	ordinary differential equation
ODF	orientation distribution function
ODMG	Object Data Management Group
ODMR	optical detection of magnetic resonance
ODP	open distributed processing
OEIC	optoelectronic integrated circuit
OEM	original equipment manufacture(r)
OER	oxygen enhancement ratio
OFDCS	optical fibre digital communication system
OFDM	orthogonal FDM
OH	ohmic heating
OHTE	Ohmically Heated Toroidal Experiment
OIM	orientation imaging microscopy
OISF	oxidation induced stacking fault
OLAP	online analysis and processing
OLCR	optical low coherence reflectometer(-try)
OLE	object linking and embedding
OLED	organic light emitting device (*or* diode *or* display)
OLTP	online transaction processing
OMCVD	organometallic CVD
OME	oxide-mediated epitaxy
OMI	optical mode interference
OMT	object modelling technique
OMVPE	organometallic vapour phase epitaxy
ONA	open network architecture
ONO	oxide-nitride-oxide
OO	object-oriented
OOP	object-oriented programming
OPA	optical parametric amplifier
OPAC	online public access catalogue
OPC	object linking for process control
OPF	optimal power flow
OPGW	optical fibre composite ground wire
OPHF	orbital polarised Hartree-Fock
OPO	optical parametric oscillator
OPW	orthogonal plane wave
OQPSK	offset quadrature phase shift keying
OR	operations research
ORB	object request broker
ORELA	Oak Ridge Electron Linear Accelerator (USA)
ORNL	Oak Ridge National Laboratory (USA)
OS	operating system
OS-EM	ordered subset expectation maximization
OSE	open system environment
OSI	Open Systems Interconnection
OSP	organic solderability preservative
OSS	operations support system
OTA	operational transconductance amplifier
OTDR	optical time domain reflectometry
OTEC	ocean thermal energy conversion
OTF	optical transfer function
OTH	over the horizon
OTS	Orbital Test Satellite
OTSG	once-through steam generator
OZL	Okubo-Zweig-Lizuha (quark model)
PAA	paraazoxyanisole
PABX	private automatic branch exchange
PAC	perturbed angular correlation *or* probably approximately correct
PACS	picture archiving and communication system *or* personal access communication system
PAE	power-added efficiency
PAFC	phosphoric acid fuel cells
PAG	photo-acid generator
PAH	polycyclic aromatic hydrocarbon(s)
PAHR	post-accident heat removal
PAL	phase alternate line *or* programmable array logic
PAM	programmable active memory *or* pulse amplitude modulation
PANDA	polarisation maintaining and absorption reducing
PANI	polyaniline
PAP	paraazoxyphenetole
PARS	private advanced radio service
PBF	power bursts facility
PBFA	Particle Beam Fusion Accelerator
PBGA	plastic ball grid array
PBH	planar buried heterostructure
PBL	planetary boundary layer
PBR	pebble bed reactor
PBT	permeable base transistor
PBW	power-by-wire
PBX	private branch exchange
PC	personal computer *or* printed circuit *or* programmable controller
PCA	principal component analysis
PCAC	partially conserved axial currents
PCB	polychlorinated biphenyl *or* printed circuit board
PCES	phase change energy storage
PCI	pellet-cladding interaction *or* Peripheral Component Interconnect
PCILO	perturbative configuration interaction using localised orbitals
PCILOCC	PCILO for crystal calculation
PCM	phase change material *or* pulse code modulation
PCMCIA	Personal Computer Memory Card International Association
PCN	personal communications network
PCR	polymerase chain reaction *or* principal component regression
PCRV	prestressed concrete reactor vessel
PCS	personal communication services (systems)
PCTE	Portable Common Tools Environment
PCV	primary containment vessel
PCX	plasma confinement experiment
PD	partial discharge
PDB	planar doped barrier
PDE	partial differential equation
PDEF	physical design exchange format

PDF portable document format *or* probability density (*or* distribution) function
PDH plesiochronous digital hierarchy
PDLC polymer dispersed liquid crystal
PDP plasma display panel
PDPA phase Doppler particle analyser
PDT photodynamic therapy
PDX Poloidal Divertor Experiment
PE phase encoded
PEC photoelectrochemical cell
PECVD plasma enhanced CVD
PEEK polyaryletheretherketone *or* polyetheretherketone
PEEL programmable electrically erasable logic
PEFC polymer electrolyte fuel cell
PEM photo-electromagnetic *or* privacy-enhanced mail *or* proton exchange membrane
PEP Positron Electron Photon (collider, Stanford, USA)
PES photoelectron spectra (-oscopy)
PET polyethylene terephthalate *or* positron emission tomography
PETRA Positron Electron Tandem Ringbeschleuniger Anlage
PF poloidal field *or* power factor
PFBC pressurised fluidised bed combustion
PFC perfluorocarbon *or* power factor correction
PFG pulsed field gradient
PFM pulse frequency modulation
PFP power factor pre-regulator
PFR Prototype Fast Reactor
PGA pin grid array *or* programmable gate array
PHEMT pseudomorphic high electron mobility transistor
PHIGS Programmer's Hierarchical Interactive Graphic System
PHS personal handy-phone system
PHWR pressurised heavy water reactor
PIC particle-in-cell
PICTS photo-induced current transient spectra (-oscopy)
PID proportional + integral + differential (*or* derivative)
PIII plasma immersion ion implantation
PIN p-type intrinsic n-type
PIPECO photoion photoelectron coincidence
PIUS process inherent ultimately safe
PIXE particle (*or* proton) induced X-ray emission
PL photoluminescence
PLA phase-locked array *or* programmable logic array
PLBR Prototype Large Breeder Reactor
PLC programmable logic control(ler)
PLCC plastic leadless chip carrier
PLD programmable logic device *or* pulsed laser deposition
PLEX plant life extension
PLL phase locked loop
PLT Princeton Large Torus
PLZT lead lanthanum zirconate titanate
PM permanent magnet *or* phase modulation *or* pulse modulation
PMAD power management and distribution
PMDR phosphorescence microwave double resonance
PMF polarisation maintaining fibre
PML perfectly matched layer
PMMA polymethylmethacrylate
PMOS p-channel metal-oxide-semiconductor
PMR private mobile radio *or* proton magnetic resonance
PMS pre-main sequence
PMSM permanent magnet synchronous motor
PN planetary nebula(e) *or* pseudonoise
PNDO partial neglect of differential overlap
PNNI private network-network interface
PNO-CI pair natural orbital configuration interaction
PNS Pulsed Neutron Source
PO physical optics
POCS projection on to convex sets
POL pair orthogonalised Lowdin
PON passive optical network
POP point of presence
POPAE protons on protons and electrons
POPOP phenyl-oxazolyl-phenyl-oxazolyl-phenyl
PORV power operated relief valve
POS point of sale
POTS plain old telephone service
PPB parts per billion
PPC persistent photoconductivity
PPDP/S Pariser-Parr-Del Bene-Pople/Segal calculations
PPI plan position indicator
PPM parts per million *or* pulse position modulation
PPP Pariser-Parr-Pople
PQFP plastic quad-flat-pack
PRA probabilistic risk assessment
PRAM parallel random access machine
PRDDO partial retention of diatomic differential overlap
PREPP Process Experimental Pilot Plant
PREVAIL projection reduction exposure with variable-axis immersion lenses
PRF pulse recurrence (repetition) frequency
PRIME positive resist images by dry etching
PRMA packet reservation multiple access
PRML partial response maximum likelihood
PRN packet radio networks
PROLOG Programming in Logic (language)
PROM Pockels readout optical modulator *or* programmable ROM
PS proton synchrotron (CERN)
PSA probabilistic safety assessment
PSD power shut-down *or* power spectral density
PSDN packet switched data network
PSG phosphosilicate glass
PSI phase-shifting interferometry
PSK phase shift keying
PSNR peak signal-to-noise ratio
PSS packet switching service *or* power system stabiliser
PSTN public switched telephone network
PSU power supply unit
PTC positive temperature coefficient
PTD physical theory of diffraction
PTF polymer thick film
PTFE polytetrafluoroethylene
PTH plated through hole
PTM pulse time modulation

PTT Posts, Telephones and Telegraphs
PV photovoltaic
PVA polyvinyl alcohol
PVC polyvinyl chloride
PVD physical vapour deposition
PVDF polyvinylidene fluoride
PVER pattern visual evoked response
PVM Parallel Virtual Machine
PWA partial wave analysis *or* printed wiring assembly
PWB printed wiring board
PWBA plane wave Born approximation
PWIA plane wave impulse approximation
PWM pulse width modulation
PWR pressurised water reactor
PXI *PCI extensions for instrumentation*
PZT lead zirconate titanate
QA quality assurance
QAM quadrature amplitude modulation
QASK quadrature amplitude shift keying
QBO quasi-biennial oscillation
QC quality control
QCD quantum chromodynamics
QCM quartz crystal microbalance
QCPM quadrature continuous phase modulation
QCSE quantum confined Stark effect
QD quantum dot
QDMBPT quasi-degenerate MBPT
QED quantum electrodynamics
QFP quad-flat-pack *or* quantum flux parametron
QFSK quadrature frequency shift keying
QFT quantum field theory
QGP quark-gluon plasma
QHD quantum hadrodynamics
QHE quantum Hall effect
QMD quantum molecular dynamics
QMF quadrature mirror filter
QML qualified manufacturers list
QORC quadrature overlapped raised cosine
QoS quality of service
QOSRC quadrature overlapped squared raised cosine
QPL qualified parts (or products) list
QPM quark-parton model
QPO quasi-periodic oscillation
QPR quadrature partial response
QPRS quadrature partial response signalling
QPSK quaternary phase shift keying
QRC quasi-resonant converter
QSO quasi-stellar object (quasar)
QTAG Quality Test Action Group
QW quantum well
QWH quantum well heterostructure
QWIP quantum well IR photodetector
QWITT quantum well injection transit time
R&D research and development
RACE Research and Development in Advanced Communications Technologies in Europe
RAD ribbon-against-drop
RAID redundant arrays of inexpensive disks
RAM radar absorbing material *or* random access memory *or* reliability, availability and maintainability
RAMDAC random access memory digital/analogue convertor
RAN radio-area network
RARE rapid acquisition with relaxation enhancement
RBE relative biological effectiveness
RBF radial basis function
RBMK light water cooled, graphite moderated reactor
RBOC Regional Bell Operating Company
RBS Rutherford backscattering
RBSOA reverse biased safe operating area
RC resistance-capacitance
RCCB residual current circuit breaker
RCD residual current device
RCIC reactor core isolation cooling
RCS radar cross-section *or* rapid cycling synchrotron *or* reactor coolant systems
RCTL resistor-capacitor-transistor logic
RDBMS relational DBMS
RDS Radio Data System
RDSS radio determination satellite service
REA rod ejection accident
REE rare earth element(s)
REELS reflection electron energy loss spectra (-oscopy)
RELP residual excited linear prediction
REM reflection electron microscopy *or* rare earth metal(s) *or* rapid eye movement
REMPI resonance enhanced multiphoton ionisation
RESURF reduced surface field
RF radiofrequency
RFI RF interference
RFIC RF integrated circuit
RFP reversed field pinch *or* request for proposals
RFPR reversed field pinch reactor
RFX reversed field (pinch) experiment
RG renormalisation group
RGA residual gas analyser
RGB red, green, blue
RGM resonating group method
RHEED reflection high-energy electron diffraction
RHET resonant hot electron transistor
RHF restricted Hartree-Fock
RHIC relativistic heavy ion collider
RIA reactivity initiated accident
RIB radioactive ion beam
RIBE reactive ion beam etching
RICH ring imaging Cherenkov detector
RIE reactive ion etching
RINDO Rydberg incomplete NDO
RISC reduced instruction set computer (-ing)
RKKY Rudermann-Kittel-Kasuya-Yosida
RLC resistance-inductance-capacitance
RLL run-length limited
RLS recursive least squares
RLSA radial line slot antenna
RMS root-mean-square
RNA ribonucleic acid
RNS residue number system
ROC receiver operating characteristic
ROM read-only memory
ROV remotely operated vehicle
ROXNOX reoxidised nitrided oxide
RPA random phase approximation
RPAE RPA with exchange

RPC	resistive plate chamber/counter *or* remote procedure call
RPM	relaxation potential model *or* revolutions per minute
RPV	reactor pressure vessel *or* remote piloted vehicle
RS	Reed-Solomon
RSA	reverse saturable absorber *or* Rivest-Shamir-Adleman
RSCE	reverse short channel effect
RSF	response surface function
RSFQ	rapid single flux quantum
RT	room temperature
RTA	rapid thermal annealing
RTCVD	rapid thermal CVD
RTD	resonant tunnelling diode
RTG	radioisotope thermoelectric generators
RTI	road traffic informatics
RTL	resistor-transistor logic *or* register transfer level
RTN	rapid thermal nitridation
RTO	rapid thermal oxidation
RTP	rapid thermal processing
RTT	resonant tunnelling transistor
RTTY	radio teletypewriter *or* remote teletype terminal
RTV	room temperature vulcanizing
RVB	resonating valence bond
RWG	Rao-Wilton-Glisson
S/H	sample and hold
S/N	signal-to-noise
SAA	Systems Application Architecture
SAED	selected area electron diffraction
SAG	self-aligned gate
SAINT	self-aligned implantation for N^+-layer technology
SAIR	synthetic aperture interferometric radar
SAM	scanning acoustic (*or* Auger) microscopy *or* self-assembled monolayer *or* serial access memory
SAMO	simulated ab initio molecular orbitals
SAMOS	stacked gate avalanche injection metal-oxide-semiconductor
SAMPLE	simulation and modelling of profile in lithography and etching
SAN	small-area network
SANS	small-angle neutron scattering
SAR	synthetic aperture radar *or* specific absorption rate
SARSAT	search and rescue satellite aided tracking
SAW	surface acoustic waves *or* self-avoiding walk
SAXS	small-angle X-ray scattering
SBE	super birefringence effect
SBH	strip buried heterostructure
SBLOCA	small-break LOCA
SBS	stimulated Brillouin scattering
SC	switched capacitor
SCADA	supervisory control and data acquisition
SCALPEL	scattering with angular limitation projection electron beam lithography
SCARA	selective compliance assembly robot arm
SCC	stress corrosion cracking
SCDMA	synchronous code division multiple access
SCE	service creation environment
SCF	self-consistent field
SCFL	source-coupled FET logic
SCH	separate confinement heterostructure
SCI	scalable coherent interface
SCID	severe combined immunodeficiency
SCL	space charge limited
SCM	scanning capacitance microscopy *or* subcarrier multiplex(ing)
SCP	service control point
SCPC	single channel per carrier
SCPI	small-computer programmable instrument *or* standard commands for programmable instruments
SCR	silicon-controlled rectifier
SCSI	Small Computer System Interface
SCTF	Slab Core Test Facility
SDB	silicon direct bonding
SDF	synthetic discriminant function
SDFL	Schottky-diode FET logic
SdH	Shubnikov-de Haas
SDH	synchronous digital hierarchy
SDI	selective dissemination of information *or* Strategic Defense Initiative (USA)
SDK	software development kit
SDL	Specification and Description Language
SDLC	synchronous data link control
SDM	space division multiplexing
SDMA	space division multiple access
SDW	spin density wave
SEAM	scanning electron acoustic microscopy
SECAM	sequential colour and memory
SED	stochastic electrodynamics
SEE	single event effect(s)
SEED	self-electrooptic effect device
SEG	selective epitaxial growth
SEI	Software Engineering Institute
SEIG	self-excited induction generator
SEL	surface emitting laser
SEM	scanning electron microscopy
SEMI	Semiconductor Equipment and Material International Association
SEP	somatosensory evoked potential
SERC	Science and Engineering Research Council
SERS	surface enhanced Raman scattering
SETI	search for extraterrestrial intelligence
SEU	single event upset
SEXAFS	surface extended X-ray absorption fine structure
SFE	solar-flare effect
SFG	sum frequency generation
SFL	substrate-fed logic
SFM	scanning force microscopy
SFUR	self-filtering unstable resonator
SGEMP	system generated electromagnetic pulse
SGHWR	steam generating heavy water reactor
SGML	Standard Generalized Markup Language
SGMP	sol-gel microsphere pelletisation
SHF	super-high-frequency
SHG	second harmonic generation
SHOOT	superfluid helium on-orbit transfer
SHR	self-healing rings *or* South Hall Ring (MIT-Bates)
SHS	self-propagating high-temperature synthesis
SHV	super-high votage

SI	semi-insulating *or* Système International
SICOS	sidewall base contact structure
SID	Society for Information Display
SIF	stress intensity factor
SIL	single-in-line *or* solid immersion lens
SIMD	single instruction, multiple data
SIMOS	stacked-gate injection MOS
SIMOX	separation by implantation of oxygen
SIMS	secondary ion mass spectra (-oscopy)
SIN	Swiss Institute of Nuclear Research
SINDO	scaled incomplete NDO
SINR	signal-to-interference-plus-noise ratio
SIPOS	semi-insulating polycrystalline silicon
SIR	safe integral reactor *or* signal-to-interference ratio
SIS	semiconductor-insulator-semiconductor *or* superconductor-insulator-superconductor
SISAM	spectrometer with interference-selective amplitude modulation
SISFET	semiconductor-insulator-semiconductor FET
SISO	single input, single output
SIT	static induction transistor
SLA	semiconductor laser amplifier
SLAC	Stanford Linear Accelerator
SLALOM	semiconductor laser amplifier in a loop mirror
SLAM	scanning laser acoustic microscopy
SLC	smectic liquid crystal *or* Stanford Linear Collider *or* subscriber loop carrier
SLD	strict logical determinacy
SLIA	Spiral Line Induction Accelerator
SLIC	subscriber line interface circuit
SLM	spatial light modulator
SLS	strained-layer superlattice
SLSF	Sodium Loop Safety Facility
SMA	surface mount(ed) assembly *or* shape memory alloy
SMATV	satellite master antenna television
SMC	Small Magellanic Cloud *or* surface mount(ed) component
SMD	surface mount(ed) device
SMDS	switched multimegabit data service
SME	shape memory effect *or* small and medium-sized enterprises
SMES	superconductive magnetic energy storage
SMF	single mode fibre
SMIF	standard mechanical interface
SMOBC	solder mask over bare copper
SMOKE	surface magneto-optic(al) Kerr effect
SMPS	switched mode power supply
SMQORC	staggered modified quadrature overlapped raised cosine
SMSR	side mode suppression ratio
SMT	surface mount(ed) technology
SN	supernova(e)
SNA	Systems Network Architecture
SNM	special nuclear material
SNMP	simple network management protocol
SNOM	scanning near-field optical microscopy
SNR	signal-to-noise ratio *or* supernova remnant
SNS	spallation neutron source *or* superconducting-normal-superconducting
SOA	safe operating area *or* semiconductor optical amplifier
SoC	system on chip
SOFC	solid oxide fuel cells
SOG	spin on glass *or* strongly orthogonal geminal *or* sea of gates
SOHO	small office/home office
SOI	silicon on insulator *or* signal of interest
SOIC	small outline integrated circuit
SOL	scrape-off layers
SONET	synchronous optical network
SOP	small outline package *or* state of polarisation
SOPPA	second-order polarisation propagator approximation
SOR	successive over-relaxation *or* synchrotron orbital radiation
SOS	silicon on sapphire
SOT	small outline transistor
SPA	separated pair approximation
SPARC	scalable processor architecture *or* Standards Planning and Requirements Committee (of ANSI)
SPC	statistical process control *or* stored program control
SPCP	single parity check product (code)
SPDT	single-point diamond turning *or* single pole, double throw
SPE	solid phase epitaxy
SPEAR	Stanford Positron Electron Asymmetric Ring
SPECT	single photon emission computerised tomography
SPICE	Simulation Program with Integrated Circuit Emphasis
SPIHT	set partitioning in hierarchical trees
SPLEED	spin polarised low energy electron diffraction
SPM	scanning probe microscopy
SPN	stochastic Petri net
SPRITE	signal processing in the element
SPS	Super Proton Synchrotron (CERN)
SPST	single pole single throw
SPUDT	single-phase unidirectional transducer
SPV	surface photovoltage
SQAM	superposed QAM
SQC	statistical quality control
SQL	Structured Query Language
SQPR	staggered quadrature partial response
SQPSK	staggered quadrature PSK
SQS	self-quenching streamer chamber
SQUID	superconducting quantum interference device
SQW	single quantum well
SR	synchrotron radiation
SRAM	static RAM
SREMP	source region electromagnetic pulse
SRM	switched reluctance motors
SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations
SRO	short-range order
SRS	stimulated Raman scattering
SRV	safety release valve
SS	spread spectrum
SS-TDMA	satellite-switched TDMA
SS7	Signalling System No.7

SSB	single sideband
SSBW	surface skimming bulk wave
SSC	sudden storm commencement *or* Superconducting Super Collider
SSCR	spectrum shift controlled reactor
SSFL	Schottky-barrier coupled Schottky-barrier gate FET logic
SSFLC	surface stabilised ferroelectric liquid crystal
SSI	small-scale integration
SSMA	spread spectrum multiple access
SSNTD	solid-state nuclear track detector
SSR	subsynchronous resonance
SST	sea surface temperature *or* supersonic transport *or* super self-aligned technology
SSV	structured singular value
STAP	space-time adaptive processing
STATCOM	static compensator
STD	salinity-temperature-depth *or* subscriber trunk dialling
STEC	solar thermal energy conversion
STEM	scanning transmission electron microscopy
STEP	Standard for Exchange of Product Data
STI	scientific and technical information *or* shallow trench isolation
STL	Schottky transistor logic *or* Standard Template Library
STM	scanning tunnelling microscopy *or* synchronous transfer mode
STN	super twisted nematic
STO	Slater-type orbitals
STOL	short take-off and landing
STP	Slater-transfer Preuss
STS	scanning tunnelling spectra (-oscopy)
SURMAC	surface magnetic confinement
SUSY GUT	supersymmetric grand unified theory
SVC	static VAr compensator
SVD	singular value decomposition
SVM	support vector machine
SVQ	split vector quantisation
SW	short-wave
SWAMI	sidewall masked isolation
SWAP	synchronous wireless access protocol
SWEAT	standard wafer-level electromigration accelerated test
SWEPP	Stored Waste Examination Pilot Plant
SWNT	single wall nanotube
SWR	sodium water reactor *or* standing wave ratio
SXAPS	soft X-ray appearance potential spectra (-oscopy)
SXLS	Superconducting X-ray Lithography Source
T/H	track and hold
T/R	transmit/receive
TA	transverse acoustic
TAB	tape automated bonding
TACS	Total Access Communications System
TASI	time assignment speech interpolation
TAT	transatlantic telephone cable
TBBA	terephthal-bis-butylaniline
TBDF	transborder data flow
TCAD	technology CAD
TCAS	traffic alert and collision avoidance system
TCE	temperature (*or* thermal) coefficient of expansion
TCM	trellis-coded modulation
TCNE	tetracyanoethylene
TCNQ	tetracyanoquinodimethane
TCP/IP	Transport Control Protocol/Internet Protocol
TCR	temperature coefficient of resistance *or* thyristor-controlled reactor
TCSC	thyristor-controlled series compensation (capacitor)
TCXO	temperature-compensated crystal oscillator
TDD	ternary decision diagram *or* time division duplex
TDDB	time-dependent dielectric breakdown
TDF	Technology Demonstration Facility *or* transborder data flow
TDHF	time-dependent Hartree-Fock
TDI	time delay and integration
TDM	time division multiplex(ing)
TDMA	time division multiple access
TDMF	time-dependent mean field theory
TDPAC	time differential PAC
TDR	time domain reflectometry
TDRSS	tracking and data relay satellite system
TDS	thermal desorption spectra (-oscopy)
TE	transverse electric
TEA	transversely excited atmosphere
TED	transferred electron device *or* transient enhanced diffusion *or* transmission electron diffraction
TEGFET	two-dimensional electron gas FET
TEM	transmission electron microscopy *or* transverse electromagnetic
TEO	transferred electron oscillator
TEOS	tetraethylorthosilicate
TETRA	trans-European trunked radio
TEXT	Texas Experimental Tokamak
TF	toroidal field
TFCX	Toroidal Fusion Core Experiment
TFEL	thin film electroluminescent
TFSOI	thin film silicon on insulator
TFT	thin film transistor
TFTR	Tokamak Fusion Test Reactor
TGA	thermogravimetric analysis
TGFB	triglycine fluoroberyllate
TGS	triglycine sulphate
TGSe	triglycine selenate
THA	track-and-hold amplifier
THD	total harmonic distortion
THF	tremendously high frequency
THG	third harmonic generation
THORP	Thermal Oxide Reprocessing Plant
THORS	Thermal Hydraulic Out-of-Reactor Safety Facility
THTF	Thermal Hydraulic Test Facility
TIA	Telecommunications Industry Association
TID	travelling ionospheric disturbance
TIG	tungsten inert gas
TIL	two-interdigitation level
TINA	Telecommunications Information Network(ing) Architecture
TISSS	Tester-Independent Software Support System
TJS	transverse junction stripe

TLD	thermoluminescent dosimeter (-metry)
TLM	transmission line matrix
TM	transverse magnetic
TMAH	tetramethyl ammonium hydroxide
TMC	test module coil
TMHR	tandem mirror hybrid reactor
TMMC	tetramethylammonium manganese chloride
TMN	telecommunications management network
TMR	tandem mirror reactor *or* tunnel magnetoresistance
TMS	truth maintenance system
TMTSF	tetramethyltetraselenafulvalene (-inium)
TMTTF	tetramethyltetrathiafulvalene (-inium)
TMX-U	Tandem Mirror Experiment-Upgrade
TNS	The Next Step
TO	transverse optical
TOF	time-of-flight
TOFMS	time-of-flight mass spectra
TOI	thermal oxide isolation
TOP	Technical Office Protocol *or* transient overpower accident
TPAD	time differential perturbed angular distribution
TPC	time projection chamber
TPD	temperature programmed desorption
TPP	thermal power plant
TPS	test program(me) set
TPTF	Two Phase Flow Test Facility
TPV	thermophotovoltaic
TQFP	thin quad flat pack
TQM	total quality management
TR3	time-resolved resonant Raman
TRAPATT	trapped plasma avalanche triggered transit
TRD	transition radiation detector
TREAT	Transient Reactor Test Facility
TRM	thermoremanent magnetisation
TRRR	time-resolved resonant Raman (spectra (-oscopy))
TRU	transuranic (waste)
TRV	transient recovery voltage
TSA	tapered slot antenna
TSC	thermally stimulated currents *or* totally self checking
TSD	thermally stimulated desorption
TSEE	thermally stimulated exo-electron emission
TSeF	tetraselenafulvalene (-inium)
TSeT	tetraselenatetracene
TSIC	thermally stimulated ionic currents
TSMA/PCD	tone sense multiple access/partial collision detection
TSOP	thin small-outline package
TSP	travelling salesman problem
TSR	terminate and stay resident
TSTA	Tritium Systems Test Facility
TTC	telemetry tracking and command
TTF	tetrathiafulvalene (-inium)
TTL	transistor-transistor logic
TTMP	transit time magnetic pumping
TTT	temperature-time-transformation *or* tetrathiatetracene
TTY	teletype terminal
TUCA	transient undercooling accident
TUCOP	transient undercooled overpower accident
TUNNETT	tunnel transit time
TV	television
TVRO	TV receive only
TW	travelling wave
TWA	TW amplifier
TWOA	TW optical amplifier
TWT	TW tube
TWTA	TWT amplifier
TXRF	total reflection X-ray fluorescence
UART	universal asynchronous receiver transmitter
UBR	unspecified bit rate
UCHF	uncoupled Hartree-Fock
UCN	ultra-cold neutrons
UDP	user datagram protocol
UGS	unattended ground sensor
UHF	ultra-high frequency *or* unrestricted Hartree-Fock
UHPS	underground hydroelectric pumped storage
UHV	ultra-high voltage
UIMS	user interface management system
UJT	unijunction transistor
UK	United Kingdom
UKAEA	United Kingdom Atomic Energy Authority
ULA	uncommitted logic array
ULF	ultra-low frequency
ULSI	ultra-large scale integration
UMD	unitised microwave devices
UML	Unified Modeling Language
UMTS	universal mobile telecommunication system
UNI	user-network interface
UPFC	unified power flow controller
UPS	UV photoelectron spectra (-oscopy) *or* uninterruptible power supply
UPT	universal personal telecommunication
UPW	ultrapure water
URL	uniform resource locator
US	ultrasonic *or* United States
USART	universal synchronous/asynchronous receiver transmitter
USB	universal serial bus
USRT	universal synchronous receiver/transmitter
UTD	uniform theory of diffraction
UTP	unshielded twisted pair
UUT	unit under test
UV	ultraviolet
UWB	ultra-wideband
V/F	voltage-to-frequency
VACSY	variable angle correlation spectroscopy
VAD	vapour-phase axial deposition
VAN	value-added network
VANS	VAN services
VAWT	vertical axis wind turbine
VB	valence bond
VBL	vertical Bloch line
VBR	variable bit rate
VC	virtual circuit *or* Vapnik-Chervonenkis
VCCS	voltage-controlled current source
VCO	voltage-controlled oscillator
VCR	video cassette recorder
VCSEL	vertical cavity surface emitting laser
VCVS	voltage-controlled voltage source
VCXO	voltage-controlled crystal oscillator
VDM	vector dominance model *or* Vienna Development Methodology

VDMOS	vertical double diffused MOS
VDSL	very high-speed digital subscriber line
VDT	visual display terminal
VDU	visual display unit
VDW	van der Waals
VER	visual evoked response
VFD	vacuum fluorescent display *or* variable-frequency drive
VFO	variable-frequency oscillator
VGA	Video Graphics Array
VGF	vertical gradient freeze
VHDL	VHSIC HDL
VHF	very high frequency
VHPIC	very high-performance integrated circuit
VHSIC	very high-speed integrated circuit
VHSOL	very high-speed optical loop
VHV	very high voltage
VI&P	visual, intelligent and personal (communications)
VIPER	verified processor for enhanced reliability
VISA	Virtual Instrument Software Architecture
VJFET	vertical junction FET
VLBI	very long base line interferometry
VLBR	very low bit rate
VLC	variable length code
VLF	very low frequency
VLIW	very long instruction word
VLSI	very large scale integration
VM	virtual machine
VMEbus	versatile modular E-bus
VMOS	vertical channel MOS
VMS	Virtual Management System
VNA	vector network analyser
VOC	volatile organic compound
VoD	video on demand
VOR	VHF omnidirectional range
VP	virtual path
VPE	vapour phase epitaxy
VPN	virtual private network
VQ	vector quantisation
VR	virtual reality
VRAM	video RAM
VRC	visual record computer
VRML	Virtual Reality Modeling Language
VS	virtual storage
VSAT	very small aperture terminals
VSB	vestigial sideband
VSELP	vector sum excited linear prediction
VSEPR	valence shell electron pair repulsion
VSI	voltage source invertor
VSOP	very small-outline package
VSP	vertical seismic profiling
VSS	variable structure systems
VSWR	voltage standing wave ratio
VTOL	vertical take-off and landing
VTR	video tape recorder *or* voltage transformation ratio
VUV	vacuum UV
VVVF	variable voltage, variable frequency
VXI	VME extensions for instrumentation
W-CDMA	wideband CDMA
WAAS	wide-area augmentation system
WAN	wide-area network
WARC	World Administrative Radio Conference
WASP	WSI associative string processor
WATM	wireless asynchronous transfer mode
WATS	wide-area telecommunications service
WAXS	wide-angle X-ray scattering
WDF	wave digital filter
WDM	wavelength division multiplex(ing)
WDMA	wavelength division multiple access
WECS	wind energy conversion system
WHT	Walsh-Hadamard transform
WIMP	weakly interacting massive particle *or* windows, icons, mice, pull-down menus
WIP	work in progress
WIPO	World Intellectual Property Organisation
WIPP	Waste Isolation Pilot Plant
WKB	Wentzel-Kramers-Brillouin
WLAN	wireless LAN
WLL	wireless local loop
WLR	wafer-level reliability
WORM	write once, read many times
WP	word processing
WR	Wolf-Rayet
WSI	wafer scale integration
WTA	winner take(s) all
WWER	water-moderated water-cooled reactor
WWW	World Wide Web
WYSIWYG	what you see is what you get
WZW	Wess-Zumino-Witten
XANES	X-ray absorption near-edge structure
XCT	X-ray computerised tomography
XLPE	cross-linked polyethylene
XLS	X-ray Lithography Source
XOR	exclusive OR (logic)
XPD	cross-polarisation discrimination
XPS	X-ray photoelectron spectra
XRD	X-ray diffraction
XTEM	cross-sectional transmission electron microscopy
XUV	X-ray-UV
YAG	yttrium aluminium garnet
YIG	yttrium iron garnet
YM	Yang-Mills
YSO	young stellar object(s)
YSZ	yttria-stabilised zirconia
YTO	YIG tuned oscillator
ZAMS	zero-age main sequence
ZBLA	zirconium barium lanthanum aluminium fluoride
ZBLAN	zirconium barium lanthanum aluminium sodium fluoride
ZBLANP	zirconium barium lanthanum aluminium sodium lead fluoride
ZCS	zero-current switching
ZEKE	zero kinetic energy
ZGS	zero gradient synchrotron
ZIF	zero insertion force
ZMR	zone melting recrystallisation
ZPPR	zero-power plutonium reactor
ZRC	zero-field cooling(-ed)
ZTP	Z toroidal pinch
ZVS	zero-voltage switching
ZVT	zero-voltage transition

Subject Index

1/f noise
5-DOF tracking syst., 2D-array of Hall sens. & PM, posn. sens. 109491
auto-zero amps., offset, drift and 1/f noise elimination, overview 68606
ballistic missile defense FPA IR sens. 88251
bandpass filters, 1/f noise spectral components intens. 80703
bipolar transistors, LF and HF noise level rels. 70053
broadband VCO phase noise sensitivity to oscillator cct. params. 114969
buried/surface LTCC resistors, DC/AC elec. props., long-term stabil. 125840
CCD output sig., noise reduction *(Chinese)* 97354
charge-sensitive preamplifier, integrated, low noise/power, fast, for APD in JFET CMOS 114640
CMOS based smart temp. sens. & voltage refs., sig. proc. 132085
CMOS front-end for 900 MHz zero-IF wireless receiver, paging sigs. 125780
CMOS logic, tailoring for RF appls. 115026
CMOS transistors, 1/f noise, analog ccts. 115910
DC SQUID readout electronics, automatic bias voltage tuning 70919
dual channel noise cancelling syst. 84068
HBT perform./reliab., predictive simul. 115853
high detectivity QW IR HET photodetector, optim. at low temp. 86525
high quality analog CMOS and mixed sig. LSI design 81507
high-power QW lasers, low-freq. elec. noise, device quality 117247
high-precision wide-bandwidth micromachined tunneling accelerometer 121031
laser rang finding and tracking syst., low noise electronic cct. design *(Chinese)* 96996
LF noise anal. of bipolar transistors and MOSFETs using complementary BiCMOS technol. 116043
low background QW IR photodetectors 86550
low noise high-T_c bicrystal jn. rf SQUID fab. 70784
low-threshold telemetry, improved carrier tracking, smoothing filter 131330
magnetoresistive tunnel jn. field sens., LF noise 120780
microwave background radiat. anisotropy, low noise cryogenic preamp. 75262
MOSFET LF noise meas. for mixed-sig. LSI & SoC, noise model *(Japanese)* 81512
n-MOSFETs, channel width/length depend. flicker noise charactn. 103892
nMOSFET, 1/f noise behavior rel. to NO nitridation 70088
on-wafer 1/f noise meas./charactn. syst., robust 109464
p-channel JFETs, low noise, X-ray spectrosc. with Si drift detectors 115962
percolation theory, materials sci./microelectronics appls. 91570
PFETs, polymer FETs, LF noise props. 92371
piezoelec. accelerometers, noise immune charge amp. 75461
random RC networks, 1/f noise, effective network dielec. loss 68498
Raytheon's IR Operations focal plane, adaptive IR Sensor, thinfilm analog image proc. 109634
RF-CMOS, scaling impact on analog perform. 91377
ROTOR VLSI proc. optim. 121708
semiconds., 1/f noise, anal. model 115281
similarity anal., spline and Daubechies wavelets *(Chinese)* 68093
thick-film resistors, LF noise, quality and reliab. indicator 69333
thin gate oxide MOSFETs, LF 1/f noise, drain current 70076
tunnel-jn. arrays, single-electron soliton avalanches 91822
tunneling MR heads, read perform. 116419
ultrathin gate oxide CMOS with undoped selective epitaxial Si channel layer 70307
VCSEL lineshape & freq. noise spectrum 71835
(Al,In)GaAs/GaAs pseudomorphic HEMTs, 1/f noise study, 4.2 K cryoelectronics 70188
Al/AlO_y/Al single electron tunneling transistors, annealing effects 104575
AlGaN/GaN HFETs, gate leakage current effect on noise 81382
$Al_{0.4}Ga_{0.6}N$-based Schottky barrier photodetectors, low-freq. noise 97239
C free-standing multiwalled nanotubes, low-noise SETs for ultrasensitive electrometers 69360
CdZnTe detectors, noise 110320
GaAs thin films, 1/f noise anal. 80703
GaAs/AlGaAs charge-imaging FET, charge noise 103763
GaInP/GaAs hetero-bipolar transistors, LF noise modelling, 1/f-noise model 102631
GaN and GaAs-based HFETs, LF and microwave noise charact. 125728
GaN based HBT, band offsets, current transport, 1/f noise 81239
GaN materials/devices, quantum 1/f noise anal. 91677
n-GaN:Si thin films/MESFET structs., low level of 1/f noise 69526
HgCdTe heterojunction photodiodes, low 1/f noise 127947
HgCdTe/Si MWIR FPA, fab. & perform., MBE 97395
$Hg_{0.9}Re_{0.1}Ba_2CaCu_2O_y$ SQUID, grain boundary jns. flux noise 127489
InAs-GaSb uncooled superlattice photodiodes 71548
InGaAs, lattice-matched HEMT, high-field region, effective length 126899
$LaNiO_3$ epitaxial metallic films, O-ion elec. field-induced migration, 1/f noise 115666
$La_{0.7}(Pb_{1-x}Sr_x)_{0.3}MnO_3$ films, CMR, bolometer/mag. sens. appls. 81800
Nb/Al+AlO_x/Nb weak link devices, 1/f noise *(Japanese)* 70869
NbN/AlN/NbN tunnel jns., high current dens., 1/f noise 70803
$PbTiO_3$ thin film, pyroelec. detector array 81789
Si JFET, low temp. readout electronics, bolometric detector 70203
Si Schottky diode, flip-chip mounted, I-Q mixer 102622
Si bipolar transistor-based microwave transceiver LO, phase noise/LF noise behavior 91285
Si microelectrodes with on-chip electronics, preamp. noise perform. 87379
poly-Si piezoresistive cantilevers, noise and sensitivity anal. 131882
Si polycryst. TFT, current crowding, 1/f noise 126758
Si-CoSi shallow n^+-p jn. diodes, elec. characts., silicide layer thickness effects 115361
n-SiC/Ni ohmic contacts, ECR plasma etching and current noise meas. 91859
SiGe BiCMOS HBT, LF noise behaviour and phase noise perform. study 69196
SiGe HBT RF technol., transistor noise 126671
SiGe HBT RF technol., transistor noise 103789
SiGe HBTs, LF noise and phase noise behavior, Ge profile shape 102624

1/f noise continued
SiGe and Si nMOSFETs with gate oxide grown by low temp. plasma anodisation, noise study 81346
SiON-based CMOS, heavily NO nitrided, analog charact. for mixed analog/digital LSIs 127048
VO_x films, reactive magnetron sputtering, current 1/f noise level 79217
Y-Ba-Cu-O SQUID, LF noise, artificial defects 70930
YBaCuO dc SQUID multilayer magnetometers, low-freq. noise in ambient mag. fields 131866
YBaCuO step edge jn. rf-SQUID magnetometers, noise charact. 70985
$YBa_2Cu_3O_7$ film based Josephson jn. rf-SQUID magnetometers, step struct. effects 81979
$YBa_2Cu_3O_{7-\delta}$-$SrTiO_3$ epitaxial films, bolometer appls., low 1/f noise 71145
2-6 semiconductors *see II-VI semiconductors*
2D digital filters *see two-dimensional digital filters*
2D electron gas *see two-dimensional electron gas*
2D spectroscopy *see two-dimensional spectroscopy*
2DEG *see two-dimensional electron gas*
3-5 semiconductors *see III-V semiconductors*
3-6 semiconductors *see III-VI semiconductors*
3D displays *see three-dimensional displays*
3D TV *see three-dimensional television*
4-6 semiconductors *see IV-VI semiconductors*
A-centre lasers *see colour centre lasers*
A-centres
p-GaAs:Be/AlGaAs QW multilayered structs., low-temp. hopping cond. over upper Hubbard band 126133
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
KCl:Li crysts., F_A centers, second order opt. nonlin., parametric mixing 93757
A/D conversion *see analogue-digital conversion*
abacs *see nomograms*
abductive inference *see inference mechanisms*
aberrations
aberrations in optics and particle optics only
see also lenses; particle optics
1.48-μm flared resonators, CW power coupling into single-mode fiber 128343
2D inverse filtering of opt. images, noise suppression 118363
3D blind image reconstruction, combined nonlin. and stat. techs. 129485
3D opt. data storage, vol. holographic device 127586
achromatic fan-out diffractive syst. for white-light free-space opt. interconnects 82260
achromatic holographic opt. lens Fourier proc. 84160
adaptive imaging using 8×128 array 110768
adaptive US imaging using SONOLINE Elegra 110767
afocal components design for opt. metrology systs. 104867
annular phase apodizer effect on opt. disc syst. read-out sig. *(Korean)* 116573
arbitrarily shaped cathode electron gun, iter. solns. 72180
aspheric holographic opt. element, non-spherical wave recorded, ray tracing 128583
Autoref R-1 readings, monochromatic aberrations effect 76410
ball lens-conically lensed fiber scheme for LD coupling 93029
blue digital video recording opt. pick-up 127584
brain US imaging, focusing tech. 110763
Brillouin enhanced dyn. holography, dyn. aberrations 128573
Cherenkov radiation, energy loss fluct., angular distrib. 87217
circ.-hybrid electrode struct. adaptive liq. cryst. lenses, aberrations, point-spread fns. 116836
coherent/aberrated laser beam quality improvement by using optimum/smooth pure phase filter 82738
combined EM focusing systs., differential alg. method for aberrations calc. 93975
combined immersion mag.-electrostatic lens systs., curvilinear-axis focusing 117625
common mode/path adaptive optics syst., retroreflector array pseudo phase conjug. fidelity anal. *(Chinese)* 82805
concave holographic diffr. grating fab. 105600
CRT, rect. deflection syst., multipole approx. *(Chinese)* 80615
CRT high defn. color display tubes, electron gun design 80575
digital holography, correct-image reconstruction in presence of severe anamorphism 93908
direct casting/laser welding opt. focus control syst. 72113
display projection imaging syst., geometric rectification method *(Chinese)* 84123
distorted laser beam wavefront correction simul. 128367
dual-freq. controlled liq. cryst. modulators, wavefront corrector appls. 104825
dual-order spectrograph holographic grating, UV groove efficiency 83001
DVD opt.-head alignment using fast wave aberration meas. *(Japanese)* 127575
electron beam projection lithog., space charge neutralization 115765
electrostatic accelerator tubes, nonlin. optics, third order Lie map *(Chinese)* 132247
electrostatic quadrupole lens systs., fifth-order aperture aberration 72193
endoscope, electronic, image distortion correction *(Chinese)* 110829
endoscopic video images, nonlin. distortion correction 98361
Far Ultraviolet Spectroscopic Explorer high-dispersion spherical holographic gratings 72071
FAST-Net global interconnection syst., beam-steering, aberration anal. 93457
femtosecond Gaussian beam focusing by lenses *(Chinese)* 105413
foveated wide FOV imaging syst., liq. cryst. SLM 86640
fractional Talbot effect based wavefront sens., opt. wavefront meas. 109529
GRIN lens for LD beam collimation and shaping 93184
HAADF-STEM, focusing/astigmatism correction auto-tuning method 110109
Hermite-Gauss/Laguerre-Gauss mode laser beams 117338
high power solid state laser static phase control elements 93692

aberrations continued
high resoln. wavefront control conf., San Diego, CA, USA (Aug. 2000) 100415
high-dens. DVD, opt. pickups, spherical aberration detect. 71219
high-power solid-state laser thermal effects, anal. model 71717
high-resoln. projection microdisplays, lens image quality 109884
holographic diffr. gratings fab. using two step recording proc. 105595
holographic recording, LCD, aberration compensation 72092
holographic scanning disk, straight-line scanning anal., aberration correction *(Chinese)* 93886
holographically recorded ion-etched varied line spacing grating for monochromator 117540
hybrid micro-opt. elements, coded gray-tone mask 127815
image quality enhancement with LOS stabilization 109698
immersion mag. lenses in projection electron beam lithog., optim. 93987
IR imaging, multiband opt. syst., DOE spectral filter 109641
IREB, corkscrew oscill. confine. by alternate solenoid field *(Chinese)* 110114
large optics real-time holographic compensation in space-based opt. systs. 105605
laser beam charactn. using Shack-Hartmann sens. 71887
laser material proc., focal posn. monitoring syst. 121211
LD astigmatism meas., beam-line method 82740
LD beam collimating micro-lens, laser ablative shaping 127823
LD radiation, high power, fast axis collimation using microlenses 82650
low-energy ion implant., decel lens syst., high dose uniformity 121321
mag. immersed lens, wide beam, curved axes aberration *(Chinese)* 105682
microcapillary X-ray lens, fab. tech./ray tracing calcs. 110480
microscopic objs., digital holographic reconstruction, aberration compensation 83008
microscopic particles, hologram recording and reconstruction 105590
mid-IR holographic correction by opt. addressed liq. cryst. SLM 105606
MOPA, beam propag. and perturb., thermal aberrations 105407
multielement dual-freq. LCD, high-speed adaptive opt. wave-front correction 71425
multirow array transmit focus charact. effect on aberration estim. 110769
nuc. microprobe systs., new generation, RF ion sources, lens aberrations 125983
opt. coupled digital X-ray imaging, lens distortion 87755
opt. design and fab., conf., Tokyo, Japan (Nov. 2000) 124215
opt. lithog., pattern placement errors, in-situ interferometry 103529
opt. lithog. lenses, wave-front aberrations meas., IC mfg. appl. 126585
opt. profilometer, diffr. anal. and focus-error detect. scheme eval. 121217
phase aberration correction using near-field sig. redundancy, 2D array algm. 110782
phase shifting mask, aberrations, defect-feature interacts. 103611
phase-shift interferometry, interf. pattern with step, proc. tech. 94752
planar concave grating, NxN wavelength interconnector 109182
PLZT act. adjustable focus opt. correction lens, design and testing 127873
real-time phase-aberration correction syst., clinical eval. 110783
reflective type opt. addressed liq. cryst. SLM, holographic correction 105607
refr. plano-convex microlens arrays, fab., ultra-flat photolithographic projection systs. 71370
ring laser, polariz.-nonuniform radiation, transverse Hermite-Gaussian modes 128363
SCALPEL, mask membrane, image blur 115770
SCALPEL Coulomb image deform. projection systs. 72183
sextupole magnets, third order Lie map *(Chinese)* 75991
Shack-Hartmann sens. for aspherical surfaces nonnull testing 109718
single-grid moire interferometer for line imaging appls. 132174
single-mode fiber, collimated beam coupling, lens design 116642
solid-state laser beam mode control using holographic mirrors 93709
spherically aberrated lens effects on laser beam quality *(Chinese)* 82736
spiral laser beams review 128368
STEM, aberration-corrector, autotuning software 102950
stretching for next generation lithog. masks 103508
tetrachloromethane liq., Hermite-Gaussian/Laguerre-Gaussian beam generation/conversion 82737
three-element cavity Kerr mode-locked laser resonator *(Chinese)* 71862
tissue harmonic imaging, clinical benefits 110750
ultrashort ultraintense laser syst., beam quality meas. and amendment *(Chinese)* 110015
ultrasound fund./harmonic lateral transmit beam shapes, vivo comparison 110770
videoendoscopic distortion correction, endoscopy virtual guidance appl. 98354
VUV lithog., reticle material, hard pellicle 103612
wave-front meas. errors from restricted concentric subdomains 118402
whole opt. wavefield reconstruction by digital holography 128582
Wolter-type grazing incidence mirror for hard X-rays wavelength focusing 121805
$Bi_{12}TiO_{20}$, self-pumped phase-conjug. mirror recording, spatial subharmonics generation 128446
CO_2 CW fast-flow laser beam quality 82481
CO_2 act. medium CW fast-axial-flow laser, small-scale opt. nonuniformities 82469
CO_2 laser proc., high-power, focal mirror aberration meas. 117344
CO_2 laser, slab RF-excited, unstable-waveguide resonator, output charact. 82473
Nd:YAG lasers, end-pumped, beam quality, thermal effects 105258
Si microfabricated SIL for SNOM 116767
Si_3N_4 micromachined deformable mirrors, focus control 116759

aberrations (visual) *see vision defects*

abrasion
see also hardness; wear
3D microstructuring MEMS technol. using powder blasting 92564
CMP proc., model for mech. wear and abrasive particle adhesion 92072
CMP slurries, extensive pump handling effects 103380
diamond microcrystals hot filament CVD growth, charatn. and polishing appls. 114324
jet machining device, precision etching 116109
low-temp. press.-assisted bonding technol., microchemical anal. appls. 92557
semicond. wafers, chem. mech. polishing 3D wafer scale hydrodynamic modeling 81087
SIMOX wafers, low dose O implant.-induced bulk and surface defects anal. 69791
total hip replacements, hard-hard articulations, tribological behaviour 76674
Cu-Ta-based multilevel interconnects, CMP 103479
H-silsesquioxane spin-on polymer low-k film, proc./props., CMP charact. 92149
Si back contact buried contact solar cells, metallization wrap around electrodes 100076
Si solar cells, high-quality passivated rear contact struct. 100075

abrasive wear *see abrasion*

absolute stability
4-point spline collocation methods for solving second-order IVP 79076

absorbers (surge) *see surge protection*

absorption
for absorption of substances see sorption
see also acoustic wave absorption; electromagnetic wave absorption
building cooling systs., surplus heat, freon-free absorpt. chillers 78342
CHP and absorpt. refrigeration with gas turbines, economic feasibility 88600
discrete FEA method for free boundary diffusion problem with absorpt. 114156
district heating network efficiency serving hot water absorpt. chillers 77744
fluoresc. lamp central partial darkness mechanism expts. *(Japanese)* 124065
guided-wave reson., conc./absorpt. meas., highly sensitive method 120997
porous glasses, water absorpt., thermally stimulated current method 81644
refrigeration systs. perform., heat exchangers effect 100341
struct. acrylic latex based elec. insulation coatings 104412
VRLA Refined lead, batts. spec. and perform. 78155
n-C/p-C jn. solar cell, p-Si substr. 112906
$In_{0.62}Ga_{0.38}As/In_{0.47}Ga_{0.53}As(InP)$ strain bal. QW cell, TPV 113029
Ni-Cd secondary batt. perform., form. effects *(Chinese)* 78122
Ni-Cd space power batt., Ag-Hg auxiliary oxygen-absorbing electrode *(Chinese)* 112777
Ni-MH secondary cell H_2 storage intermetallic particles, surface modif. 99905
Pb-acid valve-regulated batts., RBSM struct. design criteria 89117
Pb-acid valve-regulated batts., oxygen cycle inefficiency expts. 89118
$Pd/Ti/SiO_2/Si$ multi-layer syst., N absorpt., inter-diffusion, resist. change 103190
SiO_2:F films, water absorpt., residual stress effects 90369
$Zr_{1-x}Ti_xCrNi$ alloy electrodes, Ni-MH batt., H_2 absorpt., electrochem. props. 99899

absorption coefficients
3D contrast-enhanced opt. tomography, error considerations 76412
A_2MX_4 incommensurate phase ferroelec. crysts., digital recording 127562
carbon nanotube single-wall bundles, two-photon absorpt./nonlin. refr. 117402
conjug. oligomers, opt. power limiting based on two-photon absorpt. 93780
cryogenic water ice contaminants detect. & IR AI&T environ. 109627
diamond CVD films, IR opt. props. charactn. 116551
diffuse opt. tomography inverse problem, admissible soln. approach 110844
fibroadenoma, NIR tomographic breast imaging scatt. heterog. 87524
fluoropolymer resist props. for 157 nm UV lithog. 103649
g-line pos. photoresists, opt. characterisation 115739
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
gigabit all-opt. shift register for photonic past packet switches 71453
heater, absorbing opt. fiber-based 82096
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
hollow fibers filled with absorbing weakly ionizing gas, high-order harmonic generation, phase matching 72027
mesoionic cpds., anti-Stokes fluoresc., reverse saturable absorpt. 71950
mixed amplit.-phase holographic gratings, shifted Borrmann effect 83011
multistage pulsed dye laser syst., output power, optimisation, laser isotope separation appls. 128124
near-IR imaging probe design, ultrasound localization 98371
opt. material absorpt. coeffs., laser interferometer calorimetry 132191
photorefr. crysts., dark/bright PV spatial solitons, pos. refr.-index perturb. 117508
phthalocyanines, rare earth substituted, opt. limiting, nonlin. absorpt. 93782
poly(hetero-arylene-ethynylene), third order NLO coeffs. 92925
poly N-vinyl-2-pyrrolidone/urethane-urea copolymer blend, nonlin. optics 72001
polybithiophene, films, electrochem. polymerization, solvent effects 125027
polythiophene, films, electrochem. polymerization, solvent effects 125027
rhodamine B doped plastic opt. fibers, side illum. induced fluoresc. 116644
SIMOX film, thickness meas., IR spectrosc. *(Chinese)* 91884
strain depth profiling, micro-Raman meas. 97848
superlattices, quasi-localized states, opt. transits. 80835
thin absorbing film thickness/opt. consts. determ. 86996
thin absorbing film thickness/opt. consts. meas., photom. quantities, error anal. 86995
triazolehemiporphyrazines, substituted, third order opt. nonlin. 117410
Ag nanoclusters in PMMA films, post-heating, NLO props. 71920
$AgGaSe_2$ cryst. OPO conversion efficiency 72023
AlN ceramic, material proc., fs/ns/μs laser ablation 125082
AlN film, prep., DOS distrib., CPM/DLTS anal. 91631
AlN films, ECR plasma-aided reactive PLD 90472
AlN:O,C, conductive film fab., two beam PLD, XRD 90467
AlN:O,C films, two-beam PLD, ohmic character 91630
As-Ge-Ga-S:C(Pr)OH)(CS_2)(hydrocarbon) glasses, opt. props. 90583
As-S-Se glass opt. fibres, prep., opt. & strength params. 93086
$(Ba,Sr)TiO_3$, ferroelec. thin films, PLD, charactn. 114376
$Bi_4Si_3O_{12}$:Nd, Bridgman growth, opt. props. 101170
$C_{18}H_{16}N_2O_2B_2F_4H_2O$, laser dye, opt. charactn. 71654
Ca_2CuO_3 films, PLD, orient.-controlled epitaxy 114373
CdS PLD films on glass, green single-/two-photon gap emission 116916
CdS clusters in mordenite/MCM-41 matrices, opt. props. 126044
$CdS_{1-x}Se_x$ QD in borosilicate matrix, X-ray irrad. 91848
Ce:YIG magneto-opt. props. for mag. field sens. *(Japanese)* 109503
Cr^{2+} doped polycrystal ZnSe mid-IR laser 82615
$CrSi_2$ films on Si(111), transport, opt., thermoelec. props. 91723
CuS thin film, high yield synthesis, chem. bath deposition 125025
Cu_2Se thin film, high yield synthesis, chem. bath deposition 125025
Er-doped fibre characterisation, laser transient behaviour anal. 93500
Er^{3+}-doped fibre amp. temp. charact., gain control compensation 128152
$FeSi_2$ films on Si(111), transport, opt., thermoelec. props. 91723
$Ga_{1-x}Al_xAs/GaAs$ QW, double-barrier, photoionization spectrum 126152
GaAs single crysts., Cz growth; layered homog., low freq. vibs. effects 90200
GaAs:As, ion-implanted, opt. transm. spectra 80687
GaInSb/InAs IR detectors, charactS., struct. params. influence 97261
GaN crysts., opt. props., picosecond Z-scan meas. 80693
Ge expanding laser prod. plasma X-ray laser medium, opacity calcs. 117086
Ge-As-Se chalcogenide glasses, third order NLO props., Z-scan meas. 82940
$Ge_2Sb_{2.3}Te_5$ alloy rewritable phase-change opt. disk amorph. film thickness/refr. index determ. by ellipsometric meas. 127580
$Ge_{10+x}Se_{40}Te_{50-x}$ thin film, opt., elec. props. 91695
$InAs_{0.4}P_{0.6}$ nanocrystals embedded in SiO_2 films, prep., opt. props. 79203
InGaAs/AlAsSb QW, intersubband transit., nonlin./response speed eval. 115399
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, photocurrent/transm. spectra anal. 126191
$In_{1-x}Ga_xAs/In_{1-y}Ga_yP$ MQW modulator, smart-pixel appl. 116840
InGaAs-InP quantum wire opt. modulators, 1.55 μm, simul. and optim. 116799
InP, ozone-treated, surface oxide layer 69835
$(K_xNa_{1-x})(Sr_yBa_{1-y})Nb_2O_6$:Ce(Cu), opt. props. *(Chinese)* 71938
$LiNbO_3$:In, photodamage resist., opt. props. 104392

absorption coefficients continued
$NaNbO_3$ crystallite containing BSG glass-ceramic, opt. limiting behavior 93775
$Na_2O{\cdot}Cd_3Al_2Si_3O_{12}{:}Er^{3+}$ glass, opt. charactn. 71217
Nd:YAG laser welding, keyhole form. & power deposit law 105644
PZT, ferroelec. thin films, PLD, charactn. 114376
PbO-containing glass with large opt. nonlin., Z-scan anal. 92930
Si, spectral responsivity, temp. depend., anal. model 93359
$Si{:}Er/SiO_2$ nanocrystals, PL, energy exchange 69483
a-Si:H p-i-n jn. solar cell, const. photocurrent method, simul. 112902
nc-Si:H, phosphor film, PECVD, struct./opt. props. *(Chinese)* 115285
a-Si:H solar cells, low temp. PECVD 100036
Si/SiGe(C) QWs/QDs, light-emission pot. from absorpt. coeff. 127923
$a\text{-}Si/SiO_2$ superlattices, sputter deposition, opt. props. *(Chinese)* 114241
SiC, 4H, free carrier diffusion, transient grating techs. 69579
15R-SiC, valence band splitting, wavelength modulated absorpt. spectrosc., low temp. PL 69580
μc-SiC:H films, VHF-PECVD, optoelectronic & structural props. 90388
μc-SiGe films as low-gap material for stacked solar cells 100206
$Si_{20}Te_{80}$ glasses, phys. props., acoustooptic devices appl. 93260
Sr_2CuO_3 films, PLD, orient.-controlled epitaxy 114373
ZnBeSe mixed crysts., photoacoustic studies, two-layer approach 115326
$ZnGeP_2$, near-IR femtosecond pumping, parametric generation 71988
ZnO films, thermally evaporated, opt. props., annealing effects 90328
ZnO:Al(Ga) epitaxial layers, opt. props., doping effects 91979
ZnTe:Cu thin films, struct. and opt. props., Cu soln. immersion immersion time depend. anal. 103283

absorption spectra *see spectra*

abstract data types
see also data encapsulation
commun. protocols, formal descriptions, Java 84954
NPP fault diagnosis, functionally abstracted inform. presentation 112220
polygon-based bounding vol. as, spatiotemporal data model for video content access 94465

abstract machines *see finite automata; program compilers*

AC-AC power convertors
200 kV cable tests, HV AC-AC power converter 88448
AC monophase motor drive, ST52 fuzzy microcontroller 123893
AC/DC/AC converter with H-bridge cascade five-level PWM inverter 78015
buck-boost AC-AC freq. converter 88976
CHP syst., PM sync. generator, 3-phase AC/AC converter, UPS 112297
fault-tolerant reversible AC motor drive syst. 134219
HF electronic ballast providing line freq. lamp current 124073
HF SPWM VVVF syst. for AC machine speed control *(Chinese)* 77809
high-power indust. motor drive power convertors, harmonic anal. method 77989
IGBT, reverse blocking, AC-AC direct conversion cct. 126859
inverter, build-in PFC soft-switching, unified controller 88830
low-cost matrix converters, two-step commutation policy 78035
matrix converter topol. with simple commutation 134208
matrix converters, indirect modulation method, output current vector control 134211
matrix converters, input current ripple reduction, space vector modulation 112646
PM motor drive single-phase high PF converter develop. *(Japanese)* 77970
primary-switched AC/DC line-side converter, modulation 112645
pulse converter for induction heating appls. 123637
PWM matrix converters, current modulation strategies comparison 123621
reduced switch count AC/AC converter topologies 134209
single phase voltage regulators, comparative anal. 88907
six-switch single-phase AC/AC converter 88835
technol., soft switching, GTO, IGBT, IGCT 99743
three-phase IM, optimal phase-shifter cct. params. 123470
three-phase matrix converters, input current harmonics under unbalance *(Chinese)* 88886
three-phase PWM power converters, graphical phasor anal. 123599
three-phase static PWM freq. converter struct. 123652
uninterruptible power supplies, ferromag. components reduction 112668
variable speed wind turbine, voltage source AC/DC/AC converter interface 112377

AC-DC power convertors
see also rectifying circuits
2.2 kW PWM rectifier/inverter CMV suppression 134210
3-phase 3-level neutral point clamped boost rectifier, input/output feedback lin. control 134175
3-phase AC-DC converter, high PF, phase shifted control 123612
3-phase AC-DC step-down unity PF PWM converter, soft-switching 123600
4 kW, 42 V induction machine-based automotive power generation scheme 134565
6-pulse thyristor converters, pulse multiplication tech. 88902
10 kVA offshore wind farm HVDC interconnection model 99589
18-pulse capacitor input-type voltage source rectifier *(Korean)* 123633
20 kW GTO NPC inverters, PWM switching pattern control scheme 134187
48 V power convertor archit. for datacom-telecom appls. 88850
48 V telecom. power supply systs., dimensioning aspects 108450
AC motor ASDs, PWM operation adverse effects elimination 134475
AC motor drives modelling for transients anal. appls. 134457
AC/DC/AC converter with H-bridge cascade five-level PWM inverter 78015
act. front-end converters, act. power filters, control design 133705
act. power filter perform. without compensation current detect. filter 89037
act. power filter robust current tracking control design 123711
act. power filters, unified const.-freq. integrat. control 77340
act.-front-end voltage/current source rectifiers operating region 123620
arc welding machine harmonic reduction using three-phase PWM boost converter 134679
ASD ride-through syst. using CMV 123935
bi-directional AC-DC thyristor converter unified control scheme 88822
bi-directional AC/DC converter based on neutral point diode clamped config. 134243
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag-Mn 6.6 kV HTSC fault current limiter, design, testing 77619
boost DCM power converter, input current waveform anal./improvement *(Japanese)* 88812
brushless three-phase sync. generators, winding condition monitoring 133979
buck-boost converter, soft-switched, high PF, anal. *(Japanese)* 78023
CCM boost converters, rectifier reverse-recovery problem alleviation 123598
class E isolated DC/DC power converter anal. and design 88963
CMOS power IC AC-DC converter, lateral power MOSFET 126840
controlled rectifier load, transient procs. eval. *(Russian)* 77953
current-source-type act. rectifier, current control, transfer fn. 78008
DC chopper systs. spec. for electrochem. appls. 77988

AC-DC power convertors continued
DC drive systs. supply, high precision, AC-DC converter fuzzy control 134159
DM 99815
dyn. voltage restorer based on voltage space vector PWM control 88935
EMI filter design, LabVIEW computerized syst. 128804
external power supply markets, current status, future prospects 88819
fluid proc. efficiency improvement, AC motor drive converter topol. 134458
force-controlled rectifier systs. common mode disturbances 77992
fuzzy-logic current-sensorless feedforward act. rectifier 134160
HF bi-directional three-phase rectifier topol. with PFC 88906
HF current-driven sync. rectifier topol. 123597
high PF 3-phase AC/DC Cuk struct., doubly discontinuous cond. mode 78000
high-PF PWM AC/DC power converters, sensorless voltage control 123648
HT-7U supercond. Tokamak, PF power supply design 77950
HVDC capacitor-commutated converter using act.-pass. capacitor 112007
hybrid AC-DC supply generators no-load voltage waveform calc. *(Chinese)* 99736
IM drive design, freq. converter filter characts. optim. 113081
injection-current-based 3-phase rectifier, hysteresis/PWM control techs. 134151
input waveforms transient anal. 112676
ITER tokamak, coil power supply components 112619
matrix converter PMSM drive, neural-network switching strategy 123929
multi-phase buck converter voltage/current control scheme 88847
multiple AC/DC static power converters, harmonic current eval. 134154
multiple high-power AC/DC converter power systs., harmonic domain soln. 112060
multipulse power converters/controls for HVDC and FACTS systs. 88876
MV IM drive with integrated DC link choke 134474
opt. network unit, outdoor enclosure, thermal design, power supply 109080
optimized PFC controller using CCM boost converter power IC 88882
parallel three-phase PWM buck rectifiers, control/modelling approach 134168
PFC AC-DC converters, energy mgt., reactance values control 99758
PFC boost converter diode recovery optimisation soln. 77994
PFC cct. with modified SEPIC converter 134158
PFP design using boost power convertor *(Chinese)* 133493
PFP using ZVS PWM power converter 88852
piezoelec. transformer power converter control strategy 88860
power quality engng. 112077
power semicond. device technol. future 90715
power supply business models anal. 88818
present and future technols. 134235
primary-switched AC/DC line-side converter, modulation 112645
primary-switched line-side converter, modulation 78013
PWM AC/DC converter, predictive-fuzzy control 88970
PWM AC/DC power converter, high-speed source voltage sensorless control 123615
PWM converter-inverter syst., fast dyn. DC-link power-balancing scheme 99823
PWM rectifier fuzzy logic feedforward current scheme 123617
PWM voltage source rectifiers, predictive instantaneous current control scheme 112644
quasi 12-pulse rectifier for adjustable speed drive appls. 88903
rectified-voltage DC traction motor commutation studies 89368
rectifier control charact., grid-voltage instabil. effect compensation 111903
rectifier load elec. cct. transient procs. 99749
rectifier power semicond. devices, long-term reliab. eval. *(Japanese)* 134239
rectifier systs. coupling with harmonic cancelling reactors 88980
rectifier-type supercond. fault current limiter studies 77580
robust variable-freq. flyback batt. chargers, small-sig. modelling 88867
separately excited DC motor, parallel inductive R-L load, AC-DC converter supply 99684
series-reson. convertor, phase shifted control, quasi-soft switching 88940
shunt VAr compensator capacitor voltage equalisation, closed loop control 111828
single phase UPS syst., AC-DC/DC-DC boost converter, half-bridge inverter 88909
single-phase AC/DC integrated PWM converter, digital control 134213
single-phase line-interactive UPS improvement 99824
single-phase PFC rectifier with wide output voltage control range 78036
single-phase PWM AC/DC power converter, fuzzy-neural controller studies 134242
single-phase switch-mode voltage-doubler rectifier using pump ccts. *(Japanese)* 112655
single-phase three-level PWM AC/DC power converter topol. 123573
single-phase ZVS PWM rectifier using inductor energy recovery ccts. 134244
single-stage AC-to-DC converter, DC bus voltage control 123658
single-stage high-PF electronic ballast topol. 134630
single-stage input-current-shaping power convertor cct. topologies 88962
single-stage PFC converter, link voltage suppressing cct. 78011
single-stage push-pull electronic ballast with high input PF 100318
single-stage step-up/down three-phase AC-to-DC converter modelling 88877
sinusoidal absorpt. AC-DC converter, stored energy optimisation 78027
SMES control algms. for customer power quality improvement 78190
SMES double-DSP controlled power conditioning syst. studies 122850
SMES syst. for study on utility/customer power appls. 78189
soft-switching PWM convertor with high PF, simul. 112629
solid rotor pulsed asynchronous generator, FEM-based num. anal. 123437
static converters, nonsinusoidal conditions, probabilistic modeling 134155
step-down piezoelec. transformer for AC-DC converters, design, fabr. and operation 91437
SVC using five-level PWM inverter 133514
technol., soft switching, GTO, IGBT, IGCT 99743
telecomm. company power supply, product develop. efforts 108451
telecomm. controlled rectifier, periodic/chaotic responses anal. 108452
three phase buck-boost PWM rectifier multi-chip power module design 88905
three-phase AC/DC PWM power converter, adaptive directive neurocontrol 123643
three-phase autotransformer/rectifier PFC scheme 88904
three-phase boost rectifier, PWM control strategies, output voltage bounds 99794
three-phase boost rectifiers, discontinuous cond. mode operated 123603
three-phase current-source PWM rectifiers, welding machine appl. 88901
three-phase diode rectifier with sinusoidal input current 134250
three-phase four-wire distrib. syst. harmonic suppression scheme 88436
three-phase LC bridge rectifier with almost sinusoidal input current 114606
three-phase PFC 123611
three-phase PWM power converters, graphical phasor anal. 123599
three-phase PWM rectifier direct power control, virtual flux estim. 123618
three-phase PWM rectifiers, current control stabil. issues 123619
three-phase PWM voltage-source rectifier, predictive instantaneous current control *(Japanese)* 77972

AC-DC power convertors continued
three-phase single-stage step-up/down current rectifier sliding mode control 134167
three-phase soft-switched current-source PWM rectifier topol. *(Japanese)* 99804
three-phase space vector PWM boost power converter, digital controller design *(Korean)* 77969
three-phase step up/down AC/DC converter modelling 112639
three-phase three-level NPC rectifier, adaptive nonlin. control 134174
three-wire three-phase partly-decoupled CCM PFC power converter 88869
undergraduate power supply design/anal. curriculum 100454
unidirectional three-level act. rectifier topol. for MV drive systs. 88868
unity IDF correction, modulation strategy 90729
unity PF act. clamping single-phase three-level rectifier 88851
unity PF PWM rectifier using digital/analog hybrid control *(Chinese)* 134241
UPS series reson. power converter topologies 112669
variable speed wind turbine, voltage source AC/DC/AC converter interface 112377
voltage doubler rectifier, two-input current mode PFC *(Japanese)* 77971
ZVS AC-DC boost converter, energy recovery ccts. 134228
ZVT boost converter using ZCS auxiliary cct. 114613
Cr/Nb cryogenic AC-DC converter, fab., charactn. 71188
Pb-acid batt. charger topol. using power MOSFET/Schottky bridge rectifiers 112621
SiC Schottky rectifier, PFC perform. 134169
SiC rectifier HV diode develop. 88934

AC generators
see also asynchronous generators; synchronous generators
200 MW class brushless supercond. generator, mag. flux-pump excitation 77821
biaxial excitation generator for automobiles, salient pole, 3-phase 113121
combustion engine torque output equalisation, AC starter generator 123316
electrotherapy for patient treatment, hist. 76595
embedded generator, loss of earth protection detect., relay 99624
H_∞ based PSS design, partial pole placement, numerator-denominator perturb. 133516
HTSC magnet, advanced design approach 81991
HTSC magnet, racetrack type, shape optim. using response surface methodology 81992
hybrid EVs, PM TORUS generator appl., auxiliary power unit 100288
inset NdFeB PM rotor three-phase AC generator perform. 123304
load side voltage stabil. neurocontrol with FACTS devices 88350
network voltage collapse prediction though simul. 111931
nonutility generator shaft torque under voltage sag, fault current limiter effect 99629
Powerformer, HV generation, ABB technol. 112597
stator windings, ground-fault protection syst. operation 99616
SuperGenerator, high T_c supercond. generator 123314
transverse flux wind generator, design, anal. 123283
VAr limit modelling for power-flow calcs. 88679

AC machines
see also AC generators; AC motors; asynchronous machines; synchronous machines
3-D animations for power transformer/AC machine education 78535
axial-flux circumferential current PM AC machine studies 133938
complex motor direct torque control, VLSI design approach 78102
control algms., optimized IC design studies 133927
direct torque control, speed estim. using wavelet transform 88675
discrete-winding salient pole AC machines, phys. procs. modelling *(Russian)* 99607
doubly fed machines, starting problems 112463
doubly-fed AC machines, starting problems study 77829
HF SPWM VVVF syst. for AC machine speed control *(Chinese)* 77809
rot. mach., surge voltage protection, bibliography 133934
rot. machine params. determ. for transients simul. 112454
speed-adjustable syst., grey sliding mode controller design *(Chinese)* 134085
stator current modulation minimisation, rotor slots skewing 88690
TORUS concept machine topologies, pre-prototyping design assess. 133937
VPI stator coils, unimpregnated ground insulation, surge testing 133941
winding temp. meas. under load, measuring device 99617

AC motor drives
see also induction motor drives; synchronous motor drives
3-phase servo motor driver, integrated intell. power module 134452
3-phase VCCS inverter for AC drives 99834
20 kW GTO NPC inverters, PWM switching pattern control scheme 134187
50 kW soft-transit. inverter, ZCS, near-ZVS 88913
adjustable freq. AC motor drive synchronising appls. 134491
adjustable speed drive systs., NEMA Application Guide 134490
ASD ride-through syst. using CMV 123935
ASD supplies, winding insulation degrad. 99609
ASDs, PWM operation adverse effects elimination 134475
automatic nonlin. auto-tuning method, Hammerstein modeling 78219
cascaded two-switch buck-boost PFC cct., current programmed control 88854
cement kiln drives, selection criteria eval. 89482
cement plant, kiln main drive, AC and DC technols. comparison 89480
cement plant kilns, fans, ASD, maint./prod. improvements 89481
channel state inform. AC multimotor drive, space vector control 89344
converter-fed AC motor drives modelling for transients anal. appls. 134457
DC supplied, DC-AC conversion strategy optim. 123915
direct torque control extension 78222
doubly-salient PM motor flywheel for building-integrated PV power systs. 89311
DSP appl. 112470
elec. machines and drives, conf., Cambridge, MA, USA (June 2001) 113201
EV, axial airgap PM AC motor control 89384
EV AC motor drive soft-switching inverters comparison 134203
fault-tolerant reversible AC motor drive syst. 134219
fluid proc. efficiency improvement, AC motor drive converter topol. 134458
gauge change train, wheel-mounted direct drive PM traction motor develop. *(Japanese)* 113106
high perform. vector controlled AC drives, PI vel. regulators, design and tuning 134433
high-power IGBT CSI for AC motor drive appls. 134183
high-power indust. motor drive power convertors, harmonic anal. method 77989
IEEE petroleum and chem. indust. conf., Toronto, Ont., Canada (Sept. 2001) 124213
intell. motion, conf., Nurnberg, Germany, June 2000 113204
inverter-fed AC motor drives, two-phase PWM techs. 123896
knitting machine, circ. warp, patterning servomechanism 100533
mag. levitated centrifugal pump, bearingless motor, digital control 123315
monophase motor drive, ST52 fuzzy microcontroller 123893

AC motor drives continued
multi-disc axial flux stratospheric aircraft propeller drive 133261
multi-motor AC-drive act. front end converters, staggered sampling SVM 123921
multi-phase filterless freq. converters for controllable elec. drives 112661
multiple three-level NPC inverter systs., circulating current control scheme 112652
MV AC drives, reduced switching freq. act. front end converter, PWM-CSR 123922
PM AC motor drive multivariable PI model ref. current control 134435
PM AC/DC motor drives, DSP-based integral variable struct. control 123943
PM double sided axial field disc motor, EV direct wheel drive 89383
PM motor drive single-phase high PF converter develop. *(Japanese)* 77970
power converter, earth fault current/overcurrent protection *(Polish)* 99805
PWM AC motor drives, full digital sync. frame current regulator 134469
PWM CSI using symmetric gate-commutated thyristor 77987
PWM inverter drives, AC motor transients, syst. params. interact. 123861
PWM invertor-fed AC motor drives, HF model for EMC anal. 134453
PWM universal motor, sensorless speed control scheme 89361
PWM VSI-fed AC motor drives, dead-time behavior simul. 123895
PWM VSI-fed AC motor drives, hardware dead time compensation 134497
R&D, Brazil 123914
reduced switch count converter configs. 134477
reduced switch count three-phase AC motor drive 89322
reliab. improvement, four-leg three-phase inverter 89323
rotor flux ident., integral error correction method *(Chinese)* 134436
sensorless AC motor drive control, saturation-induced saliencies anal. 134459
sensorless PM brushless AC motor drives, speed estim. improvement 123879
sensorless speed control algms. 123888
sensorless-controlled AC motor drives, practical implement. issues 134489
servoactuators, full integrated soln. 123525
speed perform. specs. for AC/DC motor drives 100259
stator fault detector, DSP controller based 123859
textile indust./web handling, elec. control systs. 123853
three-phase PWM inverter, space vector modulation, FPGA-based control IC 68572
three-wheel EV, slotless PM AC motor wheel direct drive 113097
transverse flux PM motor, cogging torque assess. 123971
ultra light rail bus, flywheel powered, integrated elec. drive train 100281
variable-speed drives, control techs., book 123854
voltage source PWM drives, near unity input displacement factor 113049
VSI control, parasitics effects modelling 88926

AC motor protection
see also induction motor protection
3-phase servo motor driver, integrated intell. power module 134452
intell. power modules for appliance motor control 88684

AC motors
see also AC motor drives; AC motor protection; capacitor motors; commutator motors; induction motors; synchronous motors
3-phase AC machines, noise minimisation, control scheme modif. 123317
3-phase AC motor, SVPWM VSI, integrated DSP motor controller ADMC331 *(Chinese)* 99613
5-phase hybrid stepping motors, oscill. anal. *(Chinese)* 112560
Alpha Step two-phase hybrid stepping motor with keep-in-step control 123526
consequent pole PM machine with field weakening capability 123285
D-Module two-input/output filter, AC motor vector control appls. 133928
dividing stator core AC servomotors, mfg. technol. study *(Japanese)* 88773
DSP control systs., CPLD *(Chinese)* 77808
five-phase hybrid stepping motor characts., winding connections effects 77902
fuzzy-neuro intell. fault diagnosis 78712
intell. power modules for appliance motor control 88684
LV AC motor winding damage, PWM invertor effects studies 123324
open delta winding vibr. motor for cellular phone appls. 134099
paper machines, AC/DC motors, rolls, bearing fluting 124156
PWM inverter drives, motor bearing currents reduction studies 123616
random wound AC motors, magnet wires, relative impulse strength 123330
self-tuning PID adaptive speed controller 123334
servomotor neuro-fuzzy speed controller design 133945
single phase AC servo motor, speed and posn. control using neural network 99631
single-phase PM motors, param. determ., math. model 123306
single-phase PM motors, perform. and test results 123307
three-phase ac motors, DSP-based control, A/D conversion syst. 78104
three-phase motor meas., paper discussion 88667
vac. cleaners, universal-motors design methodology 124126
Written-Pole motor, water hammer elimination, irrigation/municipal systs. 124164
BiSrCaCuO/Ag-based elec. HTS motors, recent results, future prospects 82021
YBaCuO-based elec. HTS motors, recent results, future prospects 82021

AC network analysers *see network analysers*

academic libraries
rem. users, ref. assistance 130543

accelerated testing *see life testing*

acceleration
see also acceleration control; acceleration measurement; accelerometers
DC motor drive combined digital speed-control schemes 113055
electron bunch, accel. by wakefield, dyn. 97893
EM rail launchers, accel. efficiency, init. state effect 117638
hybrid EM syst., for solid body accel., electroexplosive, electrothermal mechanisms 117637
manoeuvring target tracking, accel. estimator using past posns. *(Japanese)* 131669
multipole circ. elec. connectors for withstanding high accel. *(German)* 125861
piezoelec. resonator, accel. sensitivity, design theory 116199
pulsed induction accelerator EM launcher, cct. theory-based model 72206
ultraintense laser accel., conf., Pisa, Italy (Sept.-Oct. 2000) 117550

acceleration control
see also acceleration measurement
BLDCM, global sliding-mode control 77887
IM PID accel. controller/pre-compensator design 134050
lin. PM sync. motor drive control for mfg. automation appls. 89473
servomotor discrete time accel. control loop studies 134100
tele-operated unmanned vehicle, sens. fusion design 134517

acceleration measurement
see also acceleration control
absol. gravimeters, fifth internat. comparison, uncertainty 75361
compressive resist. vibr. ang. accel. sens. *(Chinese)* 120768
damage diagnosis, time series anal. of vibr. sigs. 86409

acceleration measurement continued
dyn. ang. accel. meas. device 110001
FBG sens., 3D accel. meas. 120857
fiber Bragg grating, chirp tuning, accelerometer appls. 97320
fibre opt. cantilever beam photonic sens., mech. & reliab. issues 86576
hemiplegic patients, cerebral haemorrhage, rolling pattern, quantitat. assess. 76222
hemiplegic patients, gait param. assess. by accelerometry 76221
hybrid on-line vibr. diagnosis microsystem, neural class. 121046
induction servomotor HF mech. oscills., act. damping control 134039
large struct. monitoring opt. fiber sens. syst., vibr./temp. meas. 109598
lightweight fibre opt. microphones/accelerometers, act. sound control 75601
mandrel fiber-optic hydrophones, press.-to-accel. responsivity ratio 97311
mechano-encephalogram, amorph. wire micro SI accel. sens. 121901
MEMS sens., modelling and simul. 121048
motor units, elec./contractile props. meas., EMG/accelerometry 98251
one-chip-style quartz cryst. motion sens. with two fns. of gyro and accel. detect. 132535
opt. fibre grating press. sens., train real-time tracing syst. 120878
Rosetta Lander anchoring harpoon, accelerometry meas., data reduction 76798
sens., heating bar, bridge instrum. *(German)* 86467
sens., high-Q opt. microsphere resonator, pedestal antiresonant reflecting waveguide coupler 132182
sens. sig. proc. by neural net 86456
sens./eval. syst. for super-low-range freq. 97843
SOI micromachining technols. for MEMS 92535
spirit level, electronic, thermal sens. to measure accel. and inclination *(German)* 97212
uniform period fiber Bragg grating, chirp tuning, accelerometer appl. 127714
vasovagal syncope patients, heart rate variability/myocardial contractility appl. 110500
vehicle delineation detect. syst., laser-based 117577
vestibular syst., inertial/gravit. inputs assess. 87301
wireless pass. radio sens. *(German)* 109499

accelerator-based transmutation
lin. proton accelerators for neutron generators and electronuclear setups 97891
multifragmentation, accel. driven systs., SSNTD 121678

accelerator cavities
beam diagnostics, direct digital down converters, appl. 87100
BESSY II ring, design and commissioning of third harmonic cavities 121335
CAEP supercond. photocathode injector expt., coupling param. *(Chinese)* 110116
CLIC machine-detector interface, design anal. 110209
coupled cavity chain, indiv. cell freq., genetic alg. 87060
coupled cavity chain, indiv. cell freqs., linac 132267
DC-RF supercond. cavity Pierce gun, design anal. *(Chinese)* 121319
disk-and-washer accelerating struct., X-band, optim. *(Chinese)* 132270
future high-intens. muon facility design anal. 132263
high resoln. linac beam posn. monitors, design 87098
longit. coupl.-bunch instabil. control, IIR feedback algms. 87093
multi-stage high-gradient cyclotron reson. proton accelerator concept 110158
muon-collider ring, beam oscill. decoherence 87146
RF damped cavity, coaxial HOM coupler using SiC ceramics 121349
RTA beam dyn., limiting cumulative transverse instabil. growth 110146
Siam Photon Source, reson. cavity shape optim. 75945
supercond. ion linac and assoc. accelerator develop. at NSC 132242
supercond. LINAC booster for Mumbai pelletron 132241
superconduct. accel. cavities, cell freq. tuning, GA anal. *(Chinese)* 110170
synchrotron light sources, pass. harmonic cavities, lifetime increase 87077
TESLA, overview and objectives 97921
three-cavity freq. quadrupling coaxial gyroklystrons for linacs 110157
trapped modes anal. 75948
UVSOR storage ring upgrade, new lattice design 121344
Cu-Nb low-β supercond. resonator, sputtered, expts. *(Chinese)* 97911
Nb, supercond. thin film accelerator RF cavities 87067

accelerator control systems
APS storage ring, X-ray BPM-based feedback syst. 87134
beam-based modeling/control 87081
BEPC storage ring, bunch lengthening anal. 87073
BESSY II beamlines conception, engng. aspects 121394
conf., SR instr., Berlin, Germany (Aug. 2000) 113247
EPICS, HLS control syst. *(Chinese)* 110072
EPICS role in DAQ and beamline control 109456
HASYLAB BW2 beamline, automatic alignment 132235
HICAT, beam diagnostics 87124
high field supercond. wigglers, mag. field stabilis. with DAQ controllers 121368
HLS transport line and linac focusing power supplies control syst. 110102
ISAC, fast Faraday cups, oscilloscope, bunch shape meas. 87128
Jefferson Lab, switched electrode electronics beam posn. monitor 87127
LEDA, beam phase meas. syst. 87126
LEDA beam diagnostics instrumentation, beam current anal. 87096
Neptune photoinjector commissioning/design, review 110180
PEP II fast lumin. monitor syst., review 87072
PLS storage ring, transverse beam feedback syst. 121351
Pohang Light Source, upgraded machine perform. and beamline status 121340
PSI Injector 2 cyclotron, proton beam dump, surveillance protect. 87129
REXEBIS post ion beam accelerator, design/commissioning 110092
Siam Photon Laboratory, present status 121341
SPring-8 beamline control, network security 132236
SPring-8 beamline control syst. 132254
SSRF DeviceNet control syst. design anal. 121313
VSX ring orbit feedback syst. develop. 121347
VSX third generation light source, lattice design and error correction 121343

accelerator magnets
2.7 GJ LHC CMS supercond. coil project overview 75974
600 A HTSC current lead develop. for LHC correction magnets 75992
LHE polarised beams on polarised proton target expts. 132271
A1900 Fragment Separator supercond. accelerator magnet studies 75978
Aladdin storage ring, PM undulator 121395
ALS Superbend magnet syst., supercond. dipoles 76006
ANKE, medium energy hadron phys. at COSY-Julich 87061
Antiproton Decelerator status report 132259
APS BESSRC-CAT bending mag. X-ray beamline design anal. 121408
APS Nd-Fe-B PM, ^{252}Ca neutron damage testing 97892
ATLAS barrel toroid supercond. coils, back quench study 75972
ATLAS central supercond. solenoid magnet support, mech. charact. 75958
ATLAS supercond. accelerator magnet test facility at CERN 75975
ATLAS supercond. toroids, quench modelling 75973
beam-based modeling/control, particle optics 87081

accelerator magnets continued
bent supercond. solenoids with superimposed dipole fields 76003
BESSY-2 supercond. wavelength shifter, mag. field stabilisation, NMR anal. 116531
BL-1C Photon Factory, bending magnet beamline, monochromator perf. 121402
BNL superconduct. solenoid, mag. field meas., rot. Hall probe 104586
CEBAF injector, beam mom. meas. by quadrupole lens 87116
Central Solenoid Model Coil, instrumentation and coil insert 75979
compact sweeper magnet design/anal. for nuc. phys. expts. 75977
conf., SR instr., Berlin, Germany (Aug. 2000) 113247
design anal. review for future expts. 132272
dual 6T persistent-mode SC solenoid ion-opt. syst. 75960
ESRF, beam diagnostics tool, parab. cpd. refr. lenses 121376
Fermilab $\bar{p}$ storage ring design for hyperon CP violation expts. 132260
future electron lin. collider design anal. 132264
future hadron collider accelerator design anal. 132262
future high-intens. muon facility design anal. 132263
Helmholtz coil meas. syst., principle and software design *(Chinese)* 132140
HERA Luminosity Upgrade supercond. magnet prod. 75952
HI fusion final focus magnet shielding designs 76010
high field supercond. wigglers, mag. field stabilis. with DAQ controllers 121368
high-precision polarimeter at JLAB 87062
HIRFL-CSR electron cooling device, high precision solenoid coils, mag. field meas. *(Chinese)* 121332
intense muon beam lines, hybrid LTS-HTS solenoid magnet 76004
JAERI/KEK PS design anal. 132238
JLC mask syst. at B=3T 110206
KEK-LHC low-β quadrupoles, 1-m magnet model, quench protection heaters 75965
large supercond. solenoids modeling, scaling laws 76001
large warm-bore supercond. quadrupoles, cost scaling anal. 75953
LEDA beam diagnostics instrumentation, review 87113
LHC, lattice magnets enter prod. 97920
LHC, supercond. magnets, random geometric errors 75950
LHC ALICE detector design for HI phys. expts. 132357
LHC ATLAS detector toroids, discharge anal. 75994
LHC CMS supercond. coil winding, pre-indust. activities 75976
LHC inner triplet quadrupole heat exchanger, He II heat transfer 75967
LHC inner triplet quadrupole program status at Fermilab 75955
LHC inner triplet quadrupoles, Fermilab model magnets, quench perform. 75968
LHC inner triplet quadrupoles, quench protection 75964
LHC insertions, 6 kA single-/twin-supercond. quadrupoles, performs. 75971
LHC insertions, twin-aperture supercond. quadrupoles, 1-m model perform. 75970
LHC interact. region quadrupoles, supercond. busbars 75963
LHC interact. region supercond. quadrupole magnets develop. 75957
LHC IR quadrupole magnet cooling, pressurized stagnant superfluid 75966
LHC low-β quadrupole magnets develop. at KEK 75956
LHC low-beta quadrupoles, quench perform., mech. behavior 75969
LHC supercond. cables, current imbalance/magnetis. interact. 75962
LHC supercond. coils, persistent current calc., modified Bean model, FEM 87064
LHC supercond. cryodipoles, opt. interferometric displacement sens. 97815
LHC supercond. magnet windings, dyn. magnetisation calcs. 75993
low energy region lin. collider detector, design anal. 110389
microwave inverse FEL expt., accel. results 110129
mucool RF expt., supercond. solenoid test 76002
muon cooling by emittance exchange 110140
Nb_3Sn react and wind common coil dipoles develop. for VHLC 75986
NLC, interact. region layout and background estim. 110207
NUCLOTRON POLARIS cryogenic polarized D source design anal. 132284
planar pure perm. mag. wigglers, SR, FT. 121794
polarized proton beams, accelerators, expt. review 110186
REXEBIS post ion beam accelerator, design/commissioning 110092
RHIC commissioning/operation/design, review 110201
S-band/X-band integrated PWT photoelectron linacs 110128
sextupole magnets, third order Lie map *(Chinese)* 75991
short LHC dipole model mag. field pattern meas. 75961
Siam Photon Laboratory, present status 121341
soft X-ray plane grating monochromator, mech. design aspects 121827
solid scintillator-based muon detector for lin. collider expts. 110368
SPring-8, high energy synchrotron X-ray focusing 121381
SPring-8 long undulator source X-ray beamline design 121405
SRRC, VUV bending magnet beamline perform. 121401
SSRL, planar PM quadrupole, field aperture 110179
stored polarized proton beam, spin flipping by RF dipole 75942
Super-ALIS compact storage ring low energy injection accel. anal. 132256
supercond. septum magnet design for hypernuclear phys. expts. 75959
TESLA Compton polarimeter, design anal. 110213
TESLA lin. collider, muon detector syst., design anal. 110388
Tohoku Univ. storage ring light source design study 121788
UVSOR facility, spherical grating monochromator perform. 121829
UVSOR storage ring upgrade, new lattice design 121344
VLHC, instrumentation concepts 87086
VLHC, single-layer common coil dipole supercond. magnet 75997
VSX third generation light source, lattice design and error correction 121343
Nb_3Sn 2-in-1 shell-type dipole models for VLHC, mech. design/anal. 76000
Nb_3Sn 88-mm bore dipole magnet develop. for LHC 75996
Nb_3Sn HEP accelerator high-field supercond. magnet cable develop. 75982
Nb_3Sn Rutherford cables, accelerator magnets, strand crit. current degrad. 70682
Nb_3Sn common coil HTSC magnet program at BNL 75985
Nb_3Sn dipole magnets, hadron colliders, persistent current effect correction 75981
Nb_3Sn double aperture dipole magnets for VLHC, mag. designs 75987
Nb_3Sn high field dipole magnet, coil end parts design/fab. 75999
Nb_3Sn high field magnets for hadron colliders 75980
Nb_3Sn quadrupole magnet model for particle accelerators 75988
Nb_3Sn racetrack accelerator coils, fab. and testing 75984
Nb_3Sn racetrack coils high-field dipole collider magnets 75998
Nb_3Sn shell-type dipole accelerator magnet fab. at Fermilab 75983
Nb_3Sn supercond. react and wind accelerator magnets cable 76005
Nb_3Sn/Cu hybrid-coil dipole for hadron colliders 75995
NbTi cable based supercond. dipoles for LHC, test results 75954
NbTi cable, local magnetis. compensation, supercond. accelerator dipoles 87079

accelerator RF systems
see also accelerator cavities
beam diagnostics, direct digital down converters, appl. 87100
beam profile monitoring syst., multivideo source image proc. 87115
BEPC mini-β scheme, electron beam bunch length anal. *(Chinese)* 121318

accelerator RF systems continued
BEPC storage ring, bunch lengthening anal. 87073
BNL EBIS high current electron/ion beam dyn. simul. 110198
BRIC charge state breeder EBIS, RIBs 110272
CAEP supercond. photocathode injector expt., coupling param. *(Chinese)* 110116
CARM klystron config. 110147
CLIC machine-detector interface, design anal. 110209
compact storage ring, spont. coherent microwave emiss. 97917
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
conf., SR instr., Berlin, Germany (Aug. 2000) 113247
DC-RF supercond. cavity Pierce gun, design anal. *(Chinese)* 121319
dielec.-lined waveguide, wake field gen., bunch stabil. 110130
DUV FEL facility, S-band photocathode RF gun, design anal. *(Chinese)* 110242
electron lin./circ. accel., arbitrary different RF's, synchroniz. 132265
electron linac, comparison of discrete klystron prod. RF to two-beam prod. RF 110150
electron storage ring, high-power RF distrib. syst., asymmetric power divider 132244
eRHIC, accelerator phys. issues 87075
EUV SASE FEL, design, appls., review 82695
ferroelec. cathode electron gun for high power microwave sources 102914
flat-field, high-aspect ratio RF struct. design 110154
future electron lin. collider design anal. 132264
future lin. colliders, MM-wave drivers 110152
gyroklystron, freq. doubling, for advanced accelerator appls. 80603
gyroklystron develop. for accelerator appls. 110144
high field supercond. wigglers, mag. field stabilis. with DAQ controllers 121368
high resoln. linac beam posn. monitors, design 87098
high-power magnicon amps., 3D space charge simul. 110156
high-power TWA, symmetric/asymmetric mode interact. 110143
HIRFL Separated Sector Cyclotron, RF amplit. stabilization device *(Chinese)* 87142
ISAC, fast Faraday cups, oscilloscope, bunch shape meas. 87128
JAERI/KEK PS design anal. 132238
Japanese advanced accelerator develop., review 110181
JNC high-power/duty electron linac, reson. ring design 87069
klystron design and fab. issues, accelerator appl. 110149
LEDA, slow wire scanner beam profile meas. 87123
LEDA beam diagnostics instrumentation, beam current anal. 87096
LEDA beam diagnostics instrumentation, review 87113
LEDA BPM analog front-end electronics, design 87132
light ion beams for radiation treatment, facility design anal. 111130
lin. electron collider, X-band struct. anal., TM isolation 87074
linac total driver energy for HI plasma ignition, review 97910
long pulse multi-bunch linac, SLED syst. *(Chinese)* 75937
longit. coupl.-bunch instabil. control, IIR feedback algms. 87093
longit. instabil. control syst., program. DSP-based multibunch fdbk. 87094
low emittance flat-beam electron source for lin. colliders 97935
microwave inverse FEL expt., accel. results 110129
MIT RF gun, low emittance electron beam form. 132282
MIT-Bates Linear Accelerator Center, SHR projects, linac upgrades 87044
mucool RF expt., supercond. solenoid test 76002
multiple beam guns develop. for high power RF sources 110142
multipurpose neutron generators, RF quadrupole linac based syst. 110222
muon-collider ring, beam oscill. decoherence 87146
Neptune photoinjector commissioning/design, review 110180
Next Linear Collider, design progress 110204
Next Linear Collider, multi-moded pass. RF pulse compression develop. 110148
NSLS VUV ring, coherent FIR SR obs. 87076
NSRL klystron corridor, leaked EM noise *(Chinese)* 110111
NSRL klystron gallery, leaked EM field *(Chinese)* 97912
NUCLOTRON POLARIS cryogenic polarized D source design anal. 132284
NV-GSD-HE, high energy ion implanter, energy accuracy and control method 115565
PEP-II storage ring, beam posn. mis-meas., mode propag. 87135
photonic band gap fiber accelerator develop. 97915
pulsed magnicon project for accelerator appl. 110155
RF photoinjector/compressor systs., prod./synchroniz. of electron beams, ultra-fast appl. 110134
RF-driven ion source in electrostatic accelerator, props. extraction *(Chinese)* 110113
RF-linac FEL, efficiency optimiz./reduced energy spread by inverse tapering 93679
RHIC commissioning/operation/design, review 110201
RHIC EBIS-based preinjector design, review 110202
Robinson instabilities with, higher-harmonic cavity 110167
Siam Photon Source, reson. cavity shape optim. 75945
SNS beam loss monitor syst., design 87112
SNS linac, beam posn./phase monitors, EM modeling 87101
SNS linac beam diagnostic suite, review 87114
synchrotron light sources, pass. harmonic cavities, lifetime increase 87077
three-cavity freq. quadrupling coaxial gyroklystrons for linacs 110157
TOUTATIS RF quadrupole code for cw high power LINAC 75951
twisted waveguide accelerating struct. 110133
two-channel act. high-power X-band pulse compressor 110151
UMER electron beam injector, design, appl. 97907
W-band accelerator study in KEK 110159
W-band RF source for advanced accelerator research 110153
X-band dielec. loaded TW accel. struct. 110145
Cs_2Te photocathode test, polarized RF-gun feasibil. 110239
GaAs S-band photogun driven by solid state GaAs pulse laser 110237
Nb, supercond. thin film accelerator RF cavities 87067

accelerator superconducting magnets *see accelerator magnets; superconducting magnets*

accelerators (particle) *see particle accelerators*

accelerometers
see also acceleration measurement
accurate obj. reconstruction from partial shapes for virtual worlds 84104
ADXL202E accelerometer, very small sigs. detect. 131846
automotive microsens. & sens. syst., current trends 124048
Ball semicond. MEMS technol. using spherical substrs. 116053
bulk micromachining of SOI wafers using double-sided litho. and anisotropic wet etching 92565
chest-wall surface, lung-sound transducers, absol. sensitivity *(Japanese)* 87322
CMOS integrated three-axis accelerometer, bulk micromachining 109822

accelerometers continued
convective accelerometer, micromachining and design optim. 121026
deep space opt. commun. link, accelerometer-assisted tracking/pointing 120393
devices for DAQ systs., charact., limitations 120719
fiber Bragg grating, chirp tuning, accelerometer appls. 97320
fibre optic sens. for machine health monitoring 120829
fracture zone, telemetric monitoring, implantable accelerometer 132016
gyroscope-balancing machine, design & develop. challenges 122513
HDD vibr. compensation, MEMS-based accelerometer 92858
hemiplegic patients, standing, special motion assess. 87330
high lin. piezoresistance micromachining, sensitivity *(Chinese)* 97845
high-precision wide-bandwidth micromachined tunneling accelerometer 121031
IC/MEMS packaging reliab. reliab. test methodologies, comparison 116054
inclination angle meas., servo-accelerometer *(Chinese)* 132171
inertial sens., dual-axis SOI micromachined device, opt. sens. 121036
inertial sens., micromachined disc, electrostatic levitation 97575
integrat. accelerometer for severe conditions, develop. and appl. 75453
knee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
langasite, STW device, accel. sensitivity 92743
lateral accelerometers, micromachined, viscous damping, review 81587
lightweight fibre opt. microphones/accelerometers, act. sound control 75601
LISA grav. wave detector drag-free control posn. sens. 132170
LS-TLS seq. ident. algm. 97202
mechano-encephalogram, amorph. wire micro SI accel. sens. 121901
MEMS accelerometer 2D posn. detect. syst., mouse appls. 132080
MEMS packaging/assembly issues 116057
MEMSIC accel. sens. using convection heating changes, wire strip *(German)* 75744
micro inertial meas. units, calib. techs. *(Chinese)* 121029
micro-mag. sens., magneto-impedance/stress-impedance, review 75765
microaccelerometer, force based displacement meas. using AFM 81572
micromachined accelerometer with area-changed capacitance 131859
micromachined thermal accelerometer for motion/inclination/vibr. meas. 97564
milling QC, roughness recogn. by fuzzy neural net 100662
miniature device, vibr. meas. and drop testing *(Italian)* 97184
mobile robot positioning, small-sized solid-state accelerometer 75893
noise shaping accelerometer interface circuit., two-chip implement. 131877
optimum selection for appl., guidelines 86468
piezoelec. accelerometer, cryogenic temp., spurious transients 86981
piezoelec. accelerometer modif. based on FEM 97850
piezoelec. accelerometers, noise immune charge amp. 75461
polysilicon cantilever MEMS-struct., shock load, mech. reliab. 127102
polysilicon capacitive microaccelerometer, unevenly distributed comb electrodes *(Korean)* 132068
polysilicon micro-opt. accelerometer, micromachining fab. *(Chinese)* 82198
polysilicon wafer edge die yield loss elimination for accelerometers 97579
posture anal., inclinometry, triaxial accelerometers, validity/reliab. 110490
posture improvement syst., low power accelerometer use 132996
quartz, STW device, accel. sensitivity 92743
rem. sens. with self test, new opportunities for phys. transducers perform. improvement 132086
reson. accelerometer, self-test syst. 109808
rigid bodies, accelerated, drift-free attitude estim. 97224
ring laser gyro for track geom. params. meas. 128627
rot. accelerometer microsensor packaging, plastic SOIC 97577
SAW based radio sens. systs. 70452
sens., low-cost, perform. augmentation 121049
SiO_2 microsphere resonator and SPARROW waveguide coupler struct. 116718
smart accelerometers, neural net based, for telecare med. 98130
SOI device micromachining, accelerometer and optic fibre connector 116118
SQUID gravity gradiometer, sensitivity limit, elastic interact., sens. currents/test masses 122593
strapdown INS, navig. perform. anal. method *(Chinese)* 88057
STRV-2 payload, Space Technology Research Vehicle, act. and pass. expts. 122487
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
tunneling accelerometer, dyn. range, fab. tech. 86759
uniform period fiber Bragg grating, chirp tuning, accelerometer appl. 127714
USITT micromachined Si sens., capacitive press. sens., reson. strain gauges 121028
vestibular syst., inertial/gravit. inputs assess. 87301
visually impaired navig. syst. develop., sens., DGPS & digital maps 76714
Si force-balance accelerometer, MEMS design *(Chinese)* 121040
Si micro-g accelerometers, closed-loop, deposited rigid electrodes, perform. limits 75756
Si micromachined accelerometer with mixed-sig. ASIC, extremely low-noise, oil/gas exploration 88119
Si spherical device, 1 mm, clustering/enabling proc. technols. 69774
Si surface micromachined capacitive transducer accelerometer, low stress packaging 75747
Si triaxial accelerometer, integrated PZT thin film detector 109807
Si/PZT thick film accelerometer, µP self-validation 109809
ZnO surface micromachined piezoelec. accelerometers, design, sensitivity anals. 86754

acceptor levels *see impurity states*

access control
for physical access only
see also biometrics (access control); building management systems
3D model-based visual surveillance syst. 118559
automotive access systs. technol. evol. 134592
automotive rem. key entry systs., interf. issues 134593
building access control automation based on LonWorks technol. *(Polish)* 130655
distributed environ., hierarchy-based access control 129276
dyn. traitor tracing 118046
home automation, tele-Haus project with integrated microsystems 78349
Internet, intell. door monitoring syst. 74061
lock opening/closing with image base by cellular phone via Internet 74863
MAC in role-based security syst., realisation *(Chinese)* 107618
model-based tool-assistance for packet-filter design 108220
NEC parking lot access mgt. telecontrol syst. *(Japanese)* 124029
OO RBAC model spec./enforcement 119750
PERIFELD-M security fence, capacitive detector, outdoor influences 120769
RF staff ident. to open doors in homes for aged *(Japanese)* 131047
speaker ident. syst. using model of ANN for elevator 106400

access control (computers) *see authorisation*

access networks *see subscriber loops*

access protocols
see also carrier sense multiple access; code division multiple access; demand assigned multiple access; frequency division multiple access; packet reservation multiple access; space division multiple access; time division multiple access
3G mobile radio access stds. 96610
3G UMTS networks, integrated QoS support 85884
3G UMTS syst., MAC/RLC for higher data rates and QoS 85780
3R opt. regeneration, all-opt. clock recovery 131419
10 Gbit Ethernet appls. & opportunity, IEEE 802.3ae std. 108109
40 GHz band radio channel, ARQ combined with SR/GBN for broadband wireless systs., perform. 119262
156 Mbit/s ultrahigh-speed WLAN prototype in MM-wave band 108209
802.11 wireless networks, MAC layer broadcast support 108550
802.11 WLAN, service differentiation extensions for elastic/real-time traffic 119575
acoustic-based underwater commun., MAC protocol design 131623
act. repeat DS/CDMA ALOHA protocol *(Chinese)* 119230
ad hoc mobile heterog. networks, IEEE 802.11 MAC protocol perform. 130456
ad hoc network, modified MAC protocol, QoS *(Chinese)* 119364
ad hoc network commun. effects 85022
ad hoc networking, wireless network interface energy consumption 119374
ad hoc networks, random access MAC for efficient broadcast support 85002
ad hoc networks, TCP perform., preemptive maint. routing 130491
ad-hoc networks, receiver-initiated channel-hopping protocol 85053
adaptive media access protocol for ring topol. terabit networks *(Japanese)* 119270
adaptive resource negotiation based control 107878
adaptive ring access protocol for super high-speed networks, perform. eval. 95928
all-digital impulse radio for MUI/ISI-resilient multiuser commun. over freq.-selective multipath channels 108673
all-opt. label swapping Internet protocol packet switching 120344
AMIDEN peer-to-peer archit., networked appliances connnection 130638
anonymous electronic auction protocols, Eng. vs. sealed bid 129329
ARQ adaptive hybrid schemes for wireless links 94292
ARQ incremental-redundancy scheme in block-fading Gaussian collision channel, throughput perform. 129074
ATM mobile networks, credit-based dyn. reservation integrated services multiple access 85886
ATM mobile networks, MAC protocol with QoS guarantee 96591
ATM ring MAC protocol, hardware modeling/verification 74493
ATM tactical network, CAC fn. 111594
ATM wireless links, real-time traffic, dyn. WFQ scheduling 96407
ATM wireless networks, efficient QoS guaranteed MAC protocol 107809
ATM wireless networks, quantitat. comparison of multiple access control protocols 95874
ATM-based PON, MAC scheme with double-side scheduling 95883
ATM-based wireless multimedia services network, multiple access control 85653
B2B transactions, Simple Object Access Protocol 85266
backoff protocols for distributed mutual exclusion and ordering 73914
Bluetooth MAC, throughput and power consumption improvement policies 85489
Bluetooth pers. area networks, distributed topol. constr. 120068
Bluetooth technol. testing, protocol analyzer 108940
Bluetooth wireless ad-hoc network, asynchronous data traffic perform. 119899
broadband Internet for Web computing *(Japanese)* 130839
broadband telecomm. networks, QoS service, fuzzy requirement based strategy 119159
broadband wireless access based on cable modem 85548
BusNet protocol for backplane bus-based interprocessor commun., perform. anal. 119324
cct.-switching opt. cross-connects in WDM transm. systs. 120328
CDMA cellular network, investig. of channel access algms. with meas. error 74826
CDMA connectionless systs., acquisition depend. random access 84884
CDMA S-ALOHA networks, packet combining in Rayleigh fading channels, higher layer protocol perform. 73896
CDMA SMPT-based systs., spreading seqs. design 107922
cellular ad hoc networks, on-demand weighted clustering algm. 74862
cellular mobile IS, integrated isochronous/bursty media data, channel-state-depend. bandwidth allocation 107847
cellular multi-service networks with mobile users, perform. anal. 96460
cellular radio, multiple access protocol with explicit/implicit reservation 73925
cellular radio data syst., Aloha channel perform. 85622
cellular voice/data services, integrated multiple access control/adaptive channel coding 84976
centralised access over TCP/IP based on real-time Java VM 130868
centralized adaptive reservation, perform. anal. 119381
centralized dyn. access probab. protocol for next generation wireless networks 119351
centralized intell. channel assigned multiple access for ad-hoc wireless networks with UAVs 95858
CHARISMA, channel-adaptive TDMA-based MAC protocol for integrated voice/data services 85018
clustering protocol for multihop wireless ad hoc networks 85035
code division random multiple access systs. with packet combining, anal. 107759
collision-free topol.-depend. channel access scheduling 107844
collision-free voice/data integrated PRMA protocol *(Chinese)* 73929
core-network provisioning in interconnect WDM systs., Internet protocol centric signaling 131581
DAMA waveforms for integrated broadcast service 111611
data broadcasting software *(German)* 97053
DECT air interface, TCP/IP data transfer with multibearer capability and asymmetric flows 73922
distributed contention-free traffic scheduling in IEEE 802.11 multimedia networks 108316
DOCSIS protocols for mil. point-to-multipoint wireless links 107837
DQRUMA with scheduling algms. for multimedia traffic in indoor environ. for W-ATM networks 85026
DRMA with multiple slot reservation/retransmission using exponential backoff *(Japanese)* 107883
DS-41 and UMTS intersystem roaming 96474
DS/CDMA wireless networks, group-based common-receiver code protocol 130363
DS/SSMA unslotted ALOHA syst. with variable length data traffic, perform. anal. 131242
dyn. DNS for regional PC commun. syst., implement. 74189
dyn. planning based protocols for real-time commun. in LAN and switched LAN environ. 107877
dyn. sync. aloha protocol under heavy load conditions, commun. networks 107910
end-to-end stat. QoS guarantees for expedited forwarding 73932
Ethernet interface soft IP, spec. and design 108193
exact eval. of multi-traffic for wireless PCS networks with multi-channel 85047
Extended GPRS voice/data stat. MUX, MAC layer 96448
fault tolerant WDM datacomm./telecomm. network designs 96112
FH PRN, transm. range control and inform. efficiency 108556
FH radio networks with partial-band interf., energy-efficient routing 84980
FH-PRN with adaptive retransm. backoff, perform. 131075
fibre commun. conf., Anaheim, CA, USA (March 2001) 124207
fibre-ribbon pipeline ring network with distributed global deadline scheduling and deterministic user services 131445
Fieldbus-oriented MAC protocol model framework using time division and sync. *(Chinese)* 85032
fieldbuses, real-time MAC protocols, charact. anal. 119659
five-phase reservation protocol for mobile ad hoc networks 107868
fixed broadband wireless networks, QoS-sensitive SDTM-TDMA access 119912
fixed size packets centrally controlled transm., energy efficiency 96354
FPBA algm. using random transmitter power levels, perform. improvement 119285
functional and timing specs. of real-time systs., modelling and eval. 85041
Gb/s Ethernet dual-bus WDM ring network 96113
general packet radio service dyn. scheduling framework 74545
geo-sync. satellite networks, dyn. channel access protocol 96615
GPRS, radio link control level, acknowledgment procedures 85641
GPRS networks, retransmission mechanisms perform. 85883
GPS receivers, operation, equatorial ionos. scintillations effects 120481
group commun. syst. based on MAC-over-IP 108318
GSM cellular systs., high service grade DECT micro/pico cell clusters deployment 96436
GSM-based mobile positioning using WAP 97012
HAVi home networking std., Internet protocol functionality 119760
HERA-B database services, detector config., calib. 132432
HFC networks, improved guaranteed access MAC protocol 130400
hierarchical opt. path cross-connect syst., matrix WDM scheme 120339
high throughput IP, WDM packet switched technol. 119664
high-speed Ethernet simple link protocol, zero-overhead packet delineation scheme 119758
HIPERLAN, modified EY-NPMA channel access scheme 73853
HIPERLAN/2, capacity request and allocation mechanisms, perform. eval. 119325
HIPERLAN/2, concept of forwarding mobile terminal 119635
HiperLAN/2, MAC protocol overview/eval. 85207
HIPERLAN/2 and IEEE 802.11a, phys. and MAC layer comparison 85535
Hiperlan/2 and IEEE 802.11a stds. for 5 GHz band high speed wireless multimedia networking *(English)* 85562
HORNET, packet-over-WDM multiple-access MAN 74320
hybrid MAC protocols for multimedia wireless networks, simul. models 95938
hybrid-ARQ protocols for Gaussian collision channel, throughput 85038
I-WarpII, MAC protocol for integrated vehicle-to-vehicle and roadside commun. *(Japanese)* 119371
IEEE802.11 networks, CBR packetized voice transm. 130778
IEEE 802.11 ad hoc WLAN, bandwidth allocation/sharing/extension protocol for multimedia 130369
IEEE 802.11 ad hoc WLAN, distributed bandwidth allocation/sharing/extension protocol for multimedia 119375
IEEE 802.11 adaptive multirate WLAN 108143
IEEE 802.11 MAC protocol, capacity anal. 73924
IEEE 802.11 MAC protocol working in multihop wireless ad hoc networks 73985
IEEE 802.11 mobile ad hoc networks, hidden terminal jamming problems 131229
IEEE 802.11 networks, IP QoS support, service discipline 108371
IEEE 802.11 networks, priority-based transm. 107950
IEEE 802.11 std., differentiation mechanisms 119303
IEEE 802.11 wireless LAN, packet telephony support 120114
IEEE 802.11 WLAN, distributed mechanism for power saving 107938
IEEE 802.11 WLAN, enhanced MAC implement. 130378
IEEE 802.11 WLAN, net throughput 96353
IEEE 802.11 WLAN, protocol for dyn. tuned backoff 119327
IEEE 802.11 WLAN, voice services support 119667
IEEE 802.11/ETSI HIPERLAN type 1 under burst noise channel, perform. comparison 96089
IEEE 802.11a WLAN, MAC scheme for prioritized services 130379
IEEE 802.1D std. for LAN/MAN MAC bridges, amendment 96081
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 124193
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE Std.802.1w-2001, MAC bridges operation changes 119552
IEEE Std 802.11d-2001, WLAN MAC and PHYS layer specs. 119553
incoherent symmetric attacks, EPR-based quantum cryptography security 118024
INFINIBAND parallel opt. data link, prog. network interface 85209
integrated voice/data WLAN, CSMA/CA protocol 74326
interactive multimedia services, broadband satellite access 109003
Internet protocol routers, opt. technol. 130860
Internet protocol WDM packet routing 75033
Internet protocols, WDM perform. requirements overview 119662
IP wireless networks, centralized TDMA-based scheme for fair bandwidth allocation 130300
IP-based signaling, opt. cross connect control 130858
IP-HORNET, CSMA/CA MAC protocols, WDM metropolitan area ring network 74321
IP-over-WDM access networks, av. packet delay simul. 130863
IP/MPLS WDM networks, opt. packet switching 120308
IST Project FAIN, flexible IP act. networks archit. 73999
IVFCP flow control protocol for Internet video 73880
joint IP/opt. layer restoration on link failure 130864
kernel-based control of persistent Web server connections 119658
label-swapping XOR logic by integrated interferometric wavelength converter 86088
layered self-organizing ad-hoc wireless networks, MAC protocol 108906
LIES (Location-Independent E-mail Service) syst. implement. 119522
LMDS stds., architectural issues 96416

access protocols continued
LMDS wireless access network, ATM traffic mgt. 119917
low cost all-opt. format/protocol transparent 2R translators, regenerative capability 120341
M-DCF, MAC protocol with QoS support in ad hoc network 107828
MAC adaptive protocol for satellite ATM 95923
MAC collision resoln./dyn. allocation protocol for wireless networks data/voice integrat. 84941
MAC dyn. queue protocol for random access channels with multipacket reception 107921
MAC layer ad hoc medium access mechanisms under TCP 107916
MAC layer fairness in wireless packet networks 73992
MAC protocol, channel request, wireless commun. syst. 85062
MAC protocol for mobile ad hoc networks using directional antennas 85051
MAC protocol for voice/data integrated wireless CDMA systs. 85034
MAC protocol optim., new approach 73973
MAC protocols for wireless ATM networks, perform. comparison 107811
MAC protocols for wireless multimedia services, perform. eval. 73961
MACA, large propag. delay situation, simple modif. for drastic improvement 95857
MARCH, medium access control protocol for multihop wireless ad hoc networks 107845
MIL-STD-188-220B, efficient data/voice MAC algm. 111573
mobile ad hoc networks, multicast protocols comparison 130353
mobile ad-hoc networks, power and mobility-aware wireless protocol 108704
mobile CORBA develops. 130895
mobile environ., public key infrastructures adaptation 118011
mobile multimedia service, sub-multiplex fn. 108668
mobile network, low power ad hoc protocol stack 96470
mobile packet radio, service differentiation, distributed control algms. 120020
mobile-assisted data forwarding, ad-hoc overlay addit. on fixed cellular infrastructure 85795
multi-channel MAC protocol for multi-hop mobile ad hoc networks 73912
multi-service WDM networks, wavelength channel provisioning 131598
multiaccess adaptive random protocols for nonMarkov networks 96614
multicode multicarrier random access 107920
multimedia access protocols for shared medium networks, anal. 73968
multimedia appls. roadmap for mobile customers 108686
multimedia driven HFC MAC protocol, hardware implement. 108481
multimedia networks, CDMA ALOHA protocols, QoS and capacity comparisons 95880
multimedia WLAN, advanced prototype test platform 130715
multimedia WLAN, dwell adaptive fragmentation for short dwells 74204
multiple access scheme for real-time/bursty traffic integrat. 73969
multiprotocol label switching WDM-based broad-band wavelength switched IP network 75034
multispan DWDM opt. fiber telecomm. systs. 120305
multiwavelength opt. LAN internetworking, wavelength-tolerant receiver technol. 109141
Nakagami fading channels, NPCSMA protocol for NCPSK/QPSK, data packet transm., perform. eval. 85515
NCFSK demodulation, exact eval. of capture effect 72751
next generation wireless networks, heterog. traffic scheduling 74532
noncollision PRMA for data/voice traffic, perform. anal. 107919
OBP satellites, broadcast congestion control 109015
opt. Internet protocol networks, flow-routing approach 130861
opt. packet-switched ring network with flexible bandwidth allocation 120276
OSU-MAC, real-time medium access control protocol for wireless WANs with asymmetric wireless links 73955
p_i-persistent protocol, delay-throughput perform. improvement 130399
packetized layered space-time detect. over wireless links, perform. 130397
PAM all-digital impulse radio for multiple-access through freq.-selective multipath 74662
partial compensation sig.-level-based up-link power control for extending terminal batt. duration 108812
pers./inter-vehicle cordless commun. syst. for combat vehicle crewman 111564
phasar-based packet WDM network archits., Internet/ATM protocols 96111
planetary exploration, space networking & protocols, HMP site 131327
powerline commun. networks MAC layer model 108512
PRIME ARQ for high-speed wireless ATM 73888
PRMA protocol, stabil. and optim. anal. for voice data integrat. in PCN 84940
PRMA protocol for collision free integrated voice/data commun. 85014
PRMA wireless network based video/voice/data transm. service 85379
PRN, multihop, interf.-free time-freq. broadcast scheduling 85481
PRN, quasi-sync., perform. eval. 131226
PROFIBUS token-passing protocol over error-prone links, ring stabil. 130627
pseudo-Bayesian ALOHA algm. with mixed priorities 73920
random access syst. per-queue stabil. anal. 119213
random multiple access protocols, unreliable two-phase service, retrial queueing models 130338
RBRP, robust broadcast reservation protocol for mobile ad hoc networks 130457
real-time LAN codesign, stat. model and realization of access unit 85193
real-time multimedia appls. in ad hoc networks, mobility-independent flooding 73953
receiver-initiated collision-avoidance protocol for multi-channel networks 119301
reliable all-informed voice networking syst., perform. 111584
reliable multicast protocols over Ethernet-connected networks 130724
rem. wireless presence in field device mgt. 95945
response initiated multiple access, MAC protocol for satellite channels 73967
RLC/MAC enhanced design for integrated services support over EGPRS 95861
RQDMA, MAC protocol supporting QoS in IP-based broadband WLL 95859
SDMA for mobile multihop broadcast PRN 107846
SEAMA protocol, diffusion approx. for voice/data integrat. in wireless network 85061
single group slotted ALOHA systs., arrival rate estim. algm. 119290
single-hop photonic networks, adaptive protocols 131559
slow-freq.-hopped slotted ALOHA systs. with retransm. cutoff, stabil. 131062
smart antenna base stations with dyn. slot allocation, forward-link capacity 108810
smart layer two protocol IP over WDM WAN 130862
SOAP (Simple Object Access Protocol), simplifying distributed develop. 119261
SOAP (Simple Object Access Protocol) and communicating devices 119363
SONATA large scale all-opt. WDM network, centralised controller design 131499
space diversity S-ALOHA with steerable beam smart antenna arrays, perform. anal. 74661
SS MAP with collision avoidance 119362
star networks, CSMA with adaptive reservations by interruptions 95921
syst. archit. for broadband fixed wireless capacity maximisation 85572

access protocols continued
TACO protocol proc. simul. environ. 79666
TCP perform. over contention based wireless multi-hop network 85021
TD-CDMA MAC wideband protocol, scheduling scheme 130459
TDD/TCDMA real time/nonreal time traffic, channel adaptive scheduling 131274
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decoding 108857
TDMA modified grouped-tag access protocol for RF ident. networks 85019
TDMA narrowband systs., successive CCI cancellation 94060
TDMA protocol, minimizing syst. modif. in incremental design approach 84958
telecontrol inform., network access *(Chinese)* 119524
third-generation mobile commun. 96607
timed-token MAC protocol, sync. bandwidth allocation for real-time commun. 84998
UHF SATCOM slot-connection conflicts caused by half-duplex radio equipt. 111603
UMTS satellite systs., CDMA and PRMA anal. models for voice users 109032
UMTS terrestrial radio access network, ATM/AAL2 transport 96437
UMTS third generation mobile radio, differences from GSM *(German)* 74782
unifying slot assignment protocol multiple broadcast access 108709
universal pers. computing over Internet, agent-based approach 74276
UPMA, user-depend. perfect-scheduling multiple access for wireless ad hoc Internet access 107827
variable length packet reservation-ALOHA access schemes, transm. perform. *(Japanese)* 130242
voice/data integrated packet networks, MAC protocol 131067
VPN, syst. safety 74357
W-CDMA syst., RLC multiple rejects ARQ for packet data service, perform. anal. 73897
W-CDMA UTRA radio interface, tree random access protocol with priority resoln. 84919
WAN, secure group commun., integrated soln. 130768
WAP over Bluetooth, technol./appls. 119283
WATM/CDMA protocol, MAC layer anal. 73899
WDM MAN, MAC protocol for IP differentiated services 86005
WDM opt. network scheduling, traffic prediction using HMC 109140
WDM pass. star networks, scheduling algm. for variable length messages 75039
WDM pass.-star single-hop networks, MAC protocols for real-time/data services integrat. 119293
WDM protocol, archit. and perform. 120212
WDM ring networks with dyn. ADM 130455
WDM switchless network using arrayed-waveguide grating 96843
WDM-based pass. opt. access network 96772
Web, mobile WAP-based mgt. 108034
Web-based secure LDAP mgt. syst., design/implement. 96230
Wi-Fi (802.11b) and Bluetooth systs. coexistence 120008
Wireless Access Protocol, mobile Internet *(Spanish)* 96596
wireless ad hoc mobile network, delay-oriented routing protocol 96513
wireless ATM networks, optimal MAP 85015
wireless environ., prefetching protocol for continuous media streaming 130367
wireless indust. networking using CAN MAC-sublayer 130793
wireless multiaccess systs., optimal throughput 131074
wireless multimedia commun. syst., traffic perform., access scheme selectability impact 119781
wireless multimedia networks, admission control schemes supporting QoS 74447
wireless multimedia services, robust multiple access control 130348
wireless multiuser environ., receiver access *(English)* 73931
wireless packet networks, multimodal dyn. multiple access 119302
wireless packet networks, power controlled multiple access protocol 119304
wireless packet networks, service differentiation support using distributed control 131162
wireless point-to-point link with multimedia appl. support, design/prototyping 108360
wireless voicemail data retrieval, advanced integrated archit. 108085
wireless-ATM syst., multimedia traffic, DQRUMA MAC protocol 85063
WLAN, distributed access control method in shadowing environ. 85042
WLAN, token ring based, mean packet delivery time, wireless channel impact 130821
WLAN efficient polling MAC 119944
WLAN MAC protocols for ad-hoc networks 73890
WLANs, RF power/MAC combined tuning 130736
WLESS-frame, 802.11 stations simul.-based devel. environ. 108239
WorldFIP bus arbitrator table config., real-time engng. appls. 119660
wt. based distributed clustering algm. for mobile ad hoc networks 85049

accidents
see also electric shocks; explosions; fission reactor accidents; safety
110/20 kV distrib. substation transformer, unanticipated fault studies 77944
ATC commun., shift work and workload effects 98935
automotive forward collision warning systs., soft testing approach 134578
automotive telematics systs., safety/efficiency benefits 134590
cct. breaker arcing-generated complex accident anal. *(Chinese)* 123674
distrib. substation expansion/constr. planning considering contingency *(Korean)* 134288
driver assistance systs., scene anal./behavior organization 94830
elderly drivers, respiration and heartbeat meas., unconstrained noninvasive method *(Japanese)* 87306
engng. designs, hazard criteria derivation from historical knowledge 100523
fibre optic sens., electrification meas. in power transformers 77936
fork lift overturns and head injury 98741
HV systs., indirect contacts protection, global earthing syst., safety *(English, French)* 133771
HYLIFE-II ICF power plant design, accident consequences anal. 99480
ICF target materials from safety/environ. perspectives 99481
in-vehicle cell phones use, driver distraction and rel. to car accidents 108870
LV network, neutral conductor disconnection, DDR differential protection 122953
mining indust., elec. accidents, 1990-1999 134705
mobile commun., driver distraction and vehicle accidents 78555
mobile phones and driving, UK perspective on government policy 78557
MV switchgear operation safety, user instruction panels standardisation *(English, French)* 134262
NPP, accident support via human-machine interface design 133845
num. anthropomorphic model, radiological accidents, internal dosimetry *(English)* 98829
overhead power line contact by mobile equipt., warning alarm 134706
overhead power lines, accidental contact, injuries/fatalities reduction 77439
phone-use related driver distraction detect. feasibility 78556

accidents continued
power network joint anti-accident training syst., design and appl. *(Chinese)* 77263
road traffic accident risk of car drivers during mobile telephone use 78554
safety mgt., reasonable precaution approaches 67495
sulphur crushing operations, ESD protective measures investig. 83122
telemedicine, accident and emergency, accuracy, effect of image resoln., compression, colour depth and display modality 133159
traffic accidents caused by driver use of car phones, react. time meas. 78553
vulnerable traffic participants protection, sens. fusion 124039
^{60}Co indust. radiography source detachment, radiation incident mgt. 133116

accommodation coefficient *see sorption*

accounting
see also auditing; costing; credit transactions; invoicing
ATM distributed simulator for network mgt. research 85138
cost/mgt. accounting innovations diffusion eval. 89699
environ. accounting, Fujitsu's activities *(Japanese)* 78731
IEEE integrated network mgt., conf., Seattle, WA, USA (May 2001) 124177
Internet access technols., overview of wired and wireless systs. *(Polish)* 85320
Internet accounting 74184
MBA, multicast billing/accounting tool 130771
mobile IP AAA archit. extension for differentiated services 130830
Mobile IP AAA infrastructure, authenticated key exchange 107851
power plant operation/bidding, dyn. cost anal. *(Chinese)* 111791
sci. and technol. R&D accounting 89725
telecom. network design, reliab./cost considerations 119452
telecomm. companies, revenue assurance fn. study 96004
TINA accounting archit. mgt. security 130589
US telephone traffic imbalances 108071

accreditation
ABET accreditation criteria, engng. education, project work 113343
ABET Engineering Criteria 2000 for German Electrical Engineering program 89628
engng. as social and ethical practice, role of course accreditation requirements 89627
engng. competence recogn., Canada-France mutual recogn. agreement 113359
engng. courses accreditation, Portugal 78507
engng. education in developing countries, accreditation, QA 78506
European higher engng. education recogn./accreditation 113358
Japanese engng. education accreditation syst. introduction 113362
metrological service, accreditation, competence eval. 86383
pers. dosimetry service, formal accreditation, Swiss legislation 133109
Polish higher vocational engng. education schools experiences 113361
PV training programs accreditation, global quality standardisation 112385
radiation oncology phys., Australia & New Zealand requirements 87822
roughness stds., Australian surface roughness meas. syst. develop. 120617
Turkish engng. universities, internat. accreditation activities 113360
US Engineering Education 1933-2000, accreditation requirements for nontechnical curriculum content 89623
US research student exchange consortium proposal 124252

accumulation layers
diamond surface doping and p-type cond., adsorbate electron transfer 126003
dihexyl-quaterthiophene TFT, I-V charact. simul. 70156
elec. induced body dyn. threshold SOI MOSFET, large body effect, low threshold voltage 103822
FeNi-Al_2O_3-FeNi mag. tunnel jns., interfacial capacitance effects 126253
n-$Hg_{0.80}Mg_{0.20}Te$/CdTe MBE films, interface accumulation layer, cond. *(Chinese)* 115323
InAs (110), electron accumulation layers, near-surface region 115322
InP/InAlAs/InGaAs HEMTs, hole accumulation, source resist. 115954
PLZT chem.-soln.-derived thin films, imprinting behavior, thickness depend. anal. 81684
Si/CaF_2 layered heterostruct., carrier dyn. modeling, neg. pulse precharging effects 80935
SiC Schottky diodes, metal overlap edge termination, lateral current spreading 126634
SiC accumulation-mode power MOSFET, fully depleted N-channel epilayer 92372
SnO_2 thin films, laser CVD grown, O_2/H_2 exposure effects, XPS anal. 101345

accumulators *see secondary cells*

ACD systems *see automatic telephone systems*

acidity *see pH*

acoustic analysis
FDTD for 3D acoustic anal., num. dispersion/stabil. *(Japanese)* 88202
gas sens., electroacoustically coupled resonator config. 132054
on-line US instrum., microcomputer-based, soln. conc. meas. *(Chinese)* 109426
$La_3Ga_5SiO_{14}$ SAW wafers, homog. charactn., BAW meas. 104279

acoustic applications
see also ultrasonic applications
buried objs. acoustic detect. in 3-D fluid saturated porous media 88218
electronic assembly stress screening using broad spectrum acoustic excitation 102832
fuel oil storage tank level meas. by acoustic echo method, accuracy 110067
gas insulated substations, PD params. from AE 134312
helicopter detect. and class. demonstrator 77123
high-speed inkjet printing, drop modulation firing, focused acoustic wave *(Japanese)* 111547
LMFBR steam generator tubes, water leak detect., act. acoustic anal. *(Japanese)* 123152
magneto-acoustic sens. for meas. of liq. temp., viscosity and dens. 76977
near-field acoustic levitation, suspen. mechanism 99104
pass. acoustical animal identif., ANN/time domain sig. coding 122744
seismic detect. and tracking tech. appls. 73737
target models and phenomenology 77124
temp. distrib. visualiz., acoustic computerized tomography 121252
UGS, conf., Orlando, FL, USA (April 2000) 67398
underground engng. struct., seismoacoustic survey 111548
virtual acoustics, appls. and technol. trends 129962
Nb_2O_5-TiO_2 thin films for electrochromic devices 71405

acoustic arrays
see also acoustic transducer arrays; sonar arrays; ultrasonic arrays
distributed sens. arrays, source localization 77125
flexible acoustic array, beamforming 99065
hearing aid virtual sens. arrays, robust phase shift estim. in noise 122347
lin., planar, and vol. apertures and arrays, directivity approxs. 111489
lin. discrete acoustic arrays synthesis 99066
multiple in-line reflecting arrays, props. and appl. prospects 92712
seismic detect. and tracking tech. appls. 73737

acoustic arrays continued
speech enhancement for hands-free terminals 129373
tunable acoustic resonator, sound insulation charact. anal. 104461
underwater acoustic commun., expt. testing of pass. phase conjug. 109229

acoustic convolution
see also surface acoustic wave convolution
2D image frame matching degrad., elevational motion influence 110778
blind sig. separation based on second order stats. using simplified mixing model 129958
bone, cancellous and cortical, imaging by US refl. tomography 122031
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633
guided wave inspection accuracy increase, time-varying matched filter 101588
inverse synthetic aperture sonar based on convolution back-projection algm. *(Chinese)* 131681
nonlin. acoustic NDE, superheterodyne receivers, absol. calib. 122733
one-way acoustic/EM wave fields, reciprocity theorems 128760
ultrasound transm. tomography, image reconstruction algm. adaptation 88215
underground imaging, shear-horiz. waves, deconvolution method 99097
underwater acoustic sigs., blind source separation 73720
US C-scan images, blind deconvolution, H_∞ ident. strategy 101589
US cross-correl. flow meas., modulated sig. vel. depend. charact. 110054

acoustic correlation
see also acousto-optical correlation; surface acoustic wave correlation
2D image frame matching degrad., elevational motion influence 110778
3D target localization from seismic and acoustic signatures 73736
adaptive US imaging using SONOLINE Elegra 110767
blood vel. vectors estim., focused US & matched filtering 110742
cardiovascular syst. blood vel. estim., pre- & post-proc. filters 110743
deformed media US scatt., effects on strain imaging 110820
Doppler angle estim., autoregressive spectrum model 110739
formant freq. extraction, lin. predictive anal. *(Japanese)* 83979
incompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
lyric singer vibrato meas., DSP tech., time freq. anal. 129984
mobile robot, US dist. meas. tech. 75236
noisy speech, pitch extraction, weighted autocorrelation 118073
real-time phase-aberration correction syst., clinical eval. 110783
real-time strain images, frame-to-frame stats., prostate imaging 110816
respiratory sound class., spectral correl. methods 87504
robust speaker localization using microphone array 118910
soft tissues, ultrasound-based noninvasive shear elasticity probe 110814
sonoelastography, strain imaging, multi-resoln. algm. 122000
speech recogn., Markov random field lin. regression algm. 118128
tissue harmonic imaging, spatial covariance anal. 110784
translating apertures algm., C-/D-weighted imaging 110759
ultrasound speckle reduction, compounding approach 110776
US cross-correl. flow meas., modulated sig. vel. depend. charact. 110054
US cross-correl. flowmeter, demodulation, undersampling 110053
US NDE, multistage adaptive noise cancellation, adaptive LMSE filter 79489
US NDT, fixed transceiver syst. sig. proc., inverse filter 125159
vector-sens. correls. in ambient noise, array proc. 111445
vessel mimicking cryogel phantoms, axial strain imaging 110818

acoustic delay lines
see also surface acoustic wave delay lines; ultrasonic delay lines
acoustooptical discrete delay line with electronic control 109469

acoustic detectors *see acoustic transducers*

acoustic devices
see also acoustic delay lines; acoustic filters; acoustic generators; acoustic microwave devices; acoustic parametric devices; acoustic radiators; acoustic receivers; acoustic resonators; acoustic transducers; acoustic waveguides; acousto-optical devices; acoustoelectric devices; bulk acoustic wave devices; musical instruments; surface acoustic wave devices; ultrasonic devices
duct, robust broadband control 88205
ocean target detect. by ambient noise, acoustic daylight anal. 120473

acoustic dispersion
see also ultrasonic dispersion
human nasal tracts, sound transm. charact. determ. using computer-tomographic data *(German)* 76553
land mine detect., elastic wave interact., 3D FDTD model 76945
thin-film BAW device, laser interferometry 81764

acoustic echoes *see echo*

acoustic emission
3-D laser proc., in-proc. depth meas./control *(Japanese)* 105628
AC supercond. coil windings vibr., AE studies 71010
conical miniature transducer realized by excimer laser micro-machining tech. 127130
fibre optic sens. for machine health monitoring 120829
gas insulated substations, PD params. from AE 134312
laser welding, QC, AE sigs. wavelet anal. 105630
PZT-based piezoelec. composite laminates, bending, elec. field effects 104374
sig. proc. methods, review 129983
single-cryst. Si microscratching tests, ductile-to-brittle transit. *(Japanese)* 68475
vibro-acoustography, sound fields generated by focused annular array 110751
vibroacoustography, ultrasound surgery monitoring, finite-element simul. 110752
PZT conical transducers, self-calib. simulated AE source 122736
Si solid substrs., laser ablation in water-confined environ. 105633

acoustic emission testing
AC supercond. coil windings vibr., AE studies 71010
calib., ref. source, conical piezoelec. transducer 101607
composite materials mech. prop. estim. by impact sound freq. anal. *(Japanese)* 125092
cpd. ceramic pass. components strength investigs. 69281
damped oscill., logarithmic decrement eval., integral sig. proc. 101594
fibre opt. AE sens. develop. for NDE syst. 114531
fibre optic sens. for machine health monitoring 120829
gas turbine structural health monitoring using piezoelec. act. sens. 112321
GIS acoustic wave propag. props./PD location ident. *(Japanese)* 112704
laser cleaning, diverse in-proc. monitoring techs. 72114
laser welding, QC, AE sigs. wavelet anal. 105630
laser welding, real-time in-proc. monitoring using AE sigs. *(Chinese)* 72115
metallic fuselage struct., AE sigs. propag. 122499
PD type ident. from AE freq. spectra 104402
rolling element bearings condition monitoring by AE 131848
single-cryst. Si microscratching tests, ductile-to-brittle transit. *(Japanese)* 68475
transformers aging sig. feature extraction, discrete wavelet transform *(Korean)* 123546
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC ribbons, sintering, AE testing 81970

acoustic emission testing continued
C-fiber-reinforced-epoxy stay cables, AE monitoring 114545
PZT conical transducers, self-calib. simulated AE source 122736
PZT miniature conical AE transducer, laser micromachining 101621
$YBa_2Cu_3O_x$ ceramic superconds. AE testing, PZT transducer studies *(Polish)* 68488
acoustic field
2D opt. fibre microphone array, matrix-style data readout 99074
blood flow dyn., vector vel. estim., pulsed ultrasound field 98308
capacitive micromachined SAW and Lamb wave transducers, FEM and normal mode modeling 92718
digital transducer array loudspeaker, distortion and directivity 97109
environ. noise, multichannel free-field acoustic systs. 107366
HF acoustic field, computer-controlled exposimetry syst. 110029
Huygens-type SAW constr., HF sig. proc. and sens. appls. 92731
interaural cross-correl. temporal change, sound image broadening by single refl. 86350
Key West LWAD expt., 3D image effects 109304
LF power US transducer, acoustic field meas. by laser-interferometer *(Chinese)* 75911
magnetomechanical US transducers, sound fields, computer modelling 99095
microparticle filter, US standing waves & laminar flow 70342
mine detect., acoustic array syst., liq.-filled roller array 77000
NDE syst. US transducers creation, flexural waves use 88212
nondiffracting bandlimited wave solns. for US pulsed waves in imaging appls. 99108
ocean acoustic waveguide, source bearing determ. from sound field interf. pattern 97001
one-way acoustic/EM wave fields, reciprocity theorems 128760
periodic surface, computer reconstr., scatt./transm. acoustic fields 109990
plane-wave sound field reprod. with loudspeaker array 107386
PSAW guiding/diffr., full wave and simple models 92734
pulsed plane wave decomp., improved beamforming perform. 110786
quartz, piezoelec. transducer dyn. in current flow, acoustic appls. 133378
shallow-water oceanic waveguides, medium-scale diffr. tomography 111435
sound image rendering using loudspeaker and fully open-air headphone-set 75332
sound intens. meas., random errors predict. 110027
supersonic rect. jet, nozzle trailing edges effect on acoustic field 97869
time domain acoustical holography and appls. 83012
US cleaning vessel, cavitation monitoring, acoustic sens. 99082
US transducer radiated field, spatial freq. spectra, ball reflector 101625
US wave propag. in teeth, modeling using PSpice, comparison with FE models 98328
vibro-acoustography, sound fields generated by focused annular array 110751
virtual microphones for act. noise control, forward prediction anal. 121247
Si miniature micromachined US point detectors, airborne radiated fields meas. 111501
Si patterned wafers, silica particles, megasonic cleaning 126387
acoustic filters
see also acoustic resonator filters; surface acoustic wave filters
brain US imaging, focusing tech. 110763
incompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
iter. speech separation, difference phase-correl.-based criterion fn. *(Chinese)* 106334
moving scatterer differentiation using trapezoid filter/pulse echo ultrasound 110732
sidelobe reduction filters in ultrasound imaging 110781
acoustic focusing
see also ultrasonic focusing
high-speed inkjet printing, drop modulation firing, focused acoustic wave *(Japanese)* 111547
horiz. acoustic array in smoothly horiz. varying oceanic waveguide 76968
intell. US phased array syst. for steel NDT, optimised design 114532
microphone array acoustic focusing for human-robot interact. 120591
synthetic aperture sonar for underwater rem. sens. 131687
underground engng. struct., seismoacoustic survey 111548
acoustic generators
see also loudspeakers; photoacoustic effect
analogue cct. courses, PC sound card-based audio waveform generator 78523
fiberised laser-US source design, proc. monitoring & biomed. appl. 122732
planetary rock sampler, US/sonic driller/corer mechanism 122470
acoustic holography
sound source ident. by acoustic holography method *(Chinese)* 72082
time domain acoustical holography and appls. 83012
time slice appl. to imaging syst. using acoustic holography 111546
acoustic imaging
see also acoustic holography; acoustic microscopy; acoustic tomography; sonar imaging; ultrasonic imaging
apodized piezotransducer AO cell transm. fn. 116851
bonded wafer yield increase by acoustic micro imaging 89902
CSP/micro-BGA proc./damage assess. with acoustic micro imaging 113585
Doppler acoustic imaging syst. for borehole wall, fluid flow distrib. around subsurface fractures 111545
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
fusion-bonded SOI wafer yield enhancement by acoustic inspection 126259
land mine detect., acoustic technol., LDV, program overview 77007
land mine detect., laser-based noncontact acoustic imager 77004
land mine imaging & detect., inversion method, 3D grid 77006
landmine detect., autom., multiple features, GPR & acoustic data 77064
mine detect. systs., perform. assess. 73193
NLC polariz. converter 82246
phase difference meas., cross-talk correction, AO proc. 116854
pulmonary diagnostic syst. for combat casualty care, obstructive/restrictive flow charact. extraction 76337
real-time 3D acoustic image localization algm. by embedded DSP 84141
seismic acoustic image segmentation, fuzzy fusion of attributes 122605
SOI bonded wafers, eval. by automated acoustic micro imaging 126220
time slice appl. to imaging syst. using acoustic holography 111546
underwater environ. reconstruction environ. by robust pre-aligned ICP 88203
TeO_2 AO cell image proc./edge enhancement 118199
acoustic impedance
see also acoustic wave velocity
1-3 piezocomposite transducer material consts., thermal behaviour 104436
array element mutual impedance from modal Pritchard approx. 88210
capacitive micromachined SAW and Lamb wave transducers, FEM and normal mode modeling 92718
acoustic impedance continued
charact. acoustic impedance meas. in Kundt tubes, finite difference algm. 8700
lightweight fibre opt. microphones/accelerometers, act. sound control 75601
meas. of acoustic impedance, new calib. method 87006
meas. of acoustic impedance, review 87005
mine detect., acoustic array syst., liq.-filled roller array 77000
piezo-actuated vibroacoustic absorbers, interior noise control 123696
piezocomposite transducer, acoustic matching layer optim. 111525
piezopolymer US transducer, backing & wear protection/matching layers 111514
pneumatic balloon actuators, struct. tuning, acoustic imped. control 111540
steel, beam, mech. impedance meas., structural intens. anal. 110028
transduction efficiency, binding layers effect 116862
US NDT, acoustic coupling stabilis., coupling layer transparency 79481
US sig. detect., useful echoes ident., parallel comput. 107588
vocal tract anal. allowing for glottal acoustic impedance *(German)* 73007
PZT US transducer, thick film sol gel proc., dip coating 111510
PZT ceramics for US transducers, microwave sintering 101479
acoustic insulating materials *see noise abatement*
acoustic intensity
see also acoustic noise; loudness
land mine detect., laser-induced acoustic generation 76946
spacecraft panel shaker random vibr. test for high-intens. acoustics simul. 98892
acoustic intensity measurement
beam struct., structural intens. meas. by scanning laser vibrometer 132197
environ. noise level rating, overview of amendment 1 to ISO 1996-2 132199
equal-loudness contours meas., randomized max. likelihood seq. procedure 110025
infrasound press. meter and examples of measuring data 132200
lightweight fibre opt. microphones/accelerometers, act. sound control 75601
machining noise, honing sound monitoring, ANN appl. *(Japanese)* 89788
plate struct., structural intens. meas. by scanning laser vibrometer 132198
random errors predict. 110027
steel, beam, mech. impedance meas., structural intens. anal. 110028
virtual microphones for act. noise control, forward prediction anal. 121247
acoustic materials
tunable acoustic resonator, sound insulation charact. anal. 104461
acoustic measurements *see acoustic variables measurement*
acoustic microscopes
B-scan US microscope for microflaw inspection/subsurface imaging 114498
scanning microdeformation microscope, near-field acoustic interact., FEM anal. 99069
sector scanning US backscatt. microscope 110772
acoustic microscopy
coronary arteries, ultrasound charactn., temp. depend. wave speed 110810
crossed SAW fields investig. by scanning acoustic force microscopy 97870
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633
electronic component autom. defect detect., US SAM, DSP 100658
FCOF, flip chip on flex, standoff height meas., SAM nondestructive methodology 78608
flip chip procs., reflowable underfill appl., design rules 113638
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
LTCC resistors, elec./stabil. props., US microscope characterisation 69263
MEMS press. sens. using flip-chip on low-cost flexible substr. 121034
microelectronic component SAM inspection, freq. domain anal. 124393
plastic SMT package moisture sensitivity perform., Pb-free reflow temp. effects 113574
thyroid, C-scan ultrasound backscatt. microscope syst. *(Chinese)* 110679
time-resolved acoustic microscopy, elastic prop. meas., inverse algm. 114496
UHF acoustic resonator, acoustic microscopic imaging 92769
ZnO varistors, energy handling capability meas. 125843
Ag-Pd(Pt) metallized LTCC modules, thermal fatigue in reflow solder joints 124319
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
AlSiC base plate power modules, chip/DCB solder joint reliab. eval. 124323
$PbTiO_3$ US transducers, high-perform. HF, design, med. appl. 111509
Si single-cryst. micromachining using multiple fusion-bonded layers, SOI MEMS appls. 92559
acoustic microwave devices
see also acoustic transducers; surface acoustic wave devices
BAW composite resonators, parametric amplif. 104455
diamond/ZnO/SiO_2 struct., HF SAW filter 92757
film bulk acoustic resonators, modified Butterworth-Van Dyke cct. 104456
LSAW resonators, low-loss, BAW radiation, scanning laser interferometry 104460
SAW microwave oscillator, CAE design 92704
water bearing samples, moisture content meas., microwave acoustic tech. 75929
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
GaAs reson. tunnelling struct., monolithic electroacoustic device 81753
acoustic noise
see also noise pollution
2D image frame matching degrad., elevational motion influence 110778
3-phase AC machines, noise minimisation, control scheme modif. 123317
anisotropic magnetostatic problems, coupled magnetoelastic finite element formulation 83145
auditory cortex echo-planar fMRI, decay-sampling design 87572
automobile rear wiper, PM DC motor noise reduction 124018
capacitive micromachined US transducers, elec. impedance mismatch 111494
car hands-free cellular radio, speech enhancement, spectral subtraction 119834
car noise environ., speech quality and recogn. rate improve. 84027
CELP coder, perceptual speech quality, codebook shaping method 84019
digital transducer array loudspeaker, distortion and directivity 97109
dyn. mixed systs., blind speech separation 118068
echo canceller, short-time spectral amplit. estim. *(Japanese)* 95664
elec. machine acoustic noise/vibr. reduction design approaches 133924
EMI control door gasket develop., door closure sound tuning 105788
EPI, acoustic noise charact. 122116
formant freq. extraction, lin. predictive anal. *(Japanese)* 83979
freehand spatial compounding, speckle variance suppression 110775
freq. domain step-size control in nonstationary environ. 107504
functional MRI, silent BOLD imaging, visual/auditory simul. 132656
hearing aid virtual sens. arrays, robust phase shift estim. in noise 122347
hearing aids, perceptual time-freq. subtraction algm. for noise reduction 111161
home ventilation equipt., brushless PMSM drives 124116
HVAC overhead transm. lines design, audible noise calc. formulae *(Korean)* 123026
IM drives, PWM-extended DTC strategy 123881
induction furnaces, EM force excitation, structural-dyn. behavior 134643
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078

acoustic noise continued
machine speech recogn. systs. usability *(German)* 73076
machining noise, honing sound monitoring, ANN appl. *(Japanese)* 89788
mixture recogn., bottom-up and top-down proc. 118803
multi-microphone technol. for severe-to-profound hearing loss 76702
multichannel speech sigs. recording/anal. in motor vehicle environ. *(German)* 73008
multimodal speech recogn., visual features use 84035
multipath and underwater sound sigs., appl. of robust DWT 119087
own voice in auditory virtual environ. 106383
pass. broadband bionic sonar, underwater & buried target detect. 77055
physiological effects of noise/whole body vibrs. on rats 110506
PM motor torque, asymmetry effects modelling 123290
PMSM, sensorless FOC, 6 sigma tool, param. optim. 134667
power transformers, load-controlled acoustic noise, FEM/BEM calc. scheme 88786
PWM invertor-fed IM acoustic noise, fan cowl influence 123408
range depend. media, noise directionality/coherence/array response, CANARY anal. 109303
robust automatic speech recog. with missing/unreliable acoustic data 73063
rot. machines, vibr. sigs., adaptive noise control *(Spanish)* 88681
sensorineural hearing impaired listeners, digital ITE-hearing aids eval. *(German)* 111160
speech, noise PSD estim. 84008
speech, pitch extraction, weighted autocorrelation 118073
speech, pitch tracking based on stat. anticipation 106391
speech and speaker recogn., MFCC components importance *(Chinese)* 84055
speech enhancement, constrained iter. sinusoidal model 118074
speech enhancement, nonstationarity and beamforming use 94388
speech enhancement for hands-free terminals 129373
speech in noise, intelligibility for hearing-aid users 133051
speech recogn., nonstationary AR HMM method 118144
speech recogn. methods *(Chinese)* 84054
speech segreg. and enhancement in reverberant conditions 73040
speech voiced/turbulence-noise components, pitch-scaled estim. 118072
speech-interfering noise modeling, applied chaos theory 84036
SRM, vibr./acoustic noise reduction, commutation strategy *(Chinese)* 77834
SRM design vars., acoustic noise/mode freqs. expts. 133961
SRM modal freqs. calc. formulae for vibr./noise control 123346
SRMs, low vibr. design, modal anal., automotive appls. 123962
supersonic rect. jet, nozzle trailing edges effect on acoustic field 97869
switched/flux switching reluctance motor drives, acoustic noise comparison 134481
tissue harmonic imaging, clinical benefits 110750
TW US motors, servo speed control using PWM 123531
two-channel noise reduction with pitch-adaptive post-proc. 106344
ultrasound image segmentation, region growing method 110779
ultrasound images, wavelet based denoising techs. 98313
vector hydrophone, near-field/far-field azimuth and elevation angle estim. 130025
work environ. ergonomic factors effect on human body impedance *(Polish)* 67489

acoustic noise control *see noise abatement*

acoustic noise measurement
airframe noise reduction, high-lift wing wind tunnel expts. 88051
automatic acoustic QC, autosynchronized wavelet transform anal. 75374
blast noise monitor data validation using fuzzy logic 75913
environ. noise level rating, overview of amendment 1 to ISO 1996-2 132199
Glastonbury festival, rem. noise monitoring 97871
HDD, small acoustic chamber screening, meas. var. reduction 75914
infrasound press. meter and examples of measuring data 132200
landing aircraft noise, fly-over meas. with planar microphone array *(Chinese)* 75912
mach. noise source sound power meas. under hemi-anechoic conditions 132201
machining noise, honing sound monitoring, ANN appl. *(Japanese)* 89788
product sound level emissions comparison methods 134662
supersonic rect. jet, nozzle trailing edges effect on acoustic field 97869
switched/flux switching reluctance motor drives, acoustic noise comparison 134481
target models and phenomenology 77124
two-stage axial turbine, acoustic meas., microphone localization effect *(Polish)* 123102
underwater hearing thresholds, noise exposure limits, acoustic estim. 122694

acoustic parametric devices
BAW composite resonators, parametric amplif. 104455
bubble shape oscill., transient proc. near threshold 104451

acoustic power measurement *see acoustic intensity measurement*

acoustic pressure measurement *see acoustic intensity measurement*

acoustic pulses
air-coupled US NDE, high-power high-resoln. pulser 114552
infant endotracheal tube positioning/monitoring, in-line acoustic syst. 98591
land mine detect., laser-based noncontact acoustic imager 77004
parametrically-driven bubble shape oscill., transient proc. near threshold 104451
seabed, acoustic params. meas. using multiply scatt. sound pulses 111463
tissue harmonic imaging, clinical benefits 110750
US NDT, acoustic coupling stabilis., coupling layer transparency 79481
US therapy, compact self-focusing transducers, strong pulses 111113

acoustic radiators
see also acoustic generators; Doppler effect
3D acoustic scatt. from irregular fluid waveguide via BEM 79139
AE calib., ref. source, conical piezoelec. transducer 101607
home ventilation equipt., brushless PMSM drives 124116
piezotransducers radiation in fluids, mixed formulation FEA/BEM Green's fn. anal. 111522
underwater mine detect., thin lightweight LF acoustic projectors 77021
PZT conical transducers, self-calib. simulated AE source 122736
$(Tb,Dy)Fe_2$, giant magnetostrictive material, static/dyn. charcts. under high pre-stress 99098

acoustic reactance *see acoustic impedance*

acoustic receivers
see also microphones
capacitive micromachined transducers, low freq., RF detect. appls. 111496
hearing aids, directional acoustic receiving syst., microphone array 111136
mobile robot US positioning syst. using sonar net 97002
nonlin. acoustic NDE, superheterodyne receivers, absol. calib. 122733
piston transducer beam spatial averaging, diagnostic US bioeffects appl. 99072
underwater acoustic commun. using phase conjug. 120395
US FT camera for quasi-real-time imaging 88219

acoustic receivers continued
PZT hydrophones for high-energy react. det. in water 122739

acoustic resistance *see acoustic impedance*

acoustic resonator filters
see also surface acoustic wave resonator filters
film bulk acoustic resonator duplexer for USPCS handset appl. 85906
Al/AlN/Au film bulk acoustic resonator, W/SiO_2 multilayer reflector, filter appl. 104450
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
ZnO piezoelec. multilayers, BAW response, transm. line method 104300

acoustic resonators
see also acoustic resonator filters; surface acoustic wave resonators
$Au/Cr/ZnO/Au/Cr/SiO_2$, buffer electrodes effect, BAW resonator, XRD 104453
$Au/Ti/ZnO/Au/Ti/SiO_2$, buffer electrodes effect, BAW resonator, XRD 104453
BAW composite resonators, parametric amplif. 104455
BAW thin-film composite resonator, finite element simul. 116209
composite BAW resonator, 3D FEM modeling 104458
gas sens., electroacoustically coupled resonator config. 132054
microwave film bulk acoustic resonators, modified Butterworth-Van Dyke cct. 104456
modified Mach-Zender laser interferometer, BAW probing 92735
pneumatic balloon actuators, struct. tuning, acoustic imped. control 111540
quartz BAW resonator, electrode config., liq. sens. 92764
speech recogn., robust assess. of formant freqs. *(German)* 73100
tapered single-mode opt. fiber with acoustic Bragg gratings, 1D acoustic cavity study 104841
tunable acoustic resonator, sound insulation charcts. anal. 104461
UHF acoustic resonator, acoustic microscopic imaging 92769
VHF fund. AT-cut resonators, inharmonic modes suppression, ellipt. electrodes 99067
$Al/AlN/SiO_2/Al$ piezoelec. acoustic thin film resonators, temp. compensation 104454
AlN Bragg reflector thin film resonator, fab. by RF sputter deposition 70455
AlN RF reactive sputtering depos., consumer wireless commun. appl. 101179
$La_3Ga_5SiO_{14}$, bulk resist./capacity/reson. freq., BAW devices, SIMS 104462
ZnO, thin film GHz BAW resonator, electrode effects 81754

acoustic signal detection
see also sonar detection
3D target localization from seismic and acoustic signatures 73736
adaptive laser US receiver, polaris. self-modulation effect 101554
adaptive opt. phased array interferometer for acoustic wave detect. 101552
aircraft flight path estim. using freq. meas. from wide aperture acoustic array 99084
blind broadband source localization/separation in miniature sens. arrays 95720
cocktail party problem, neural net approach 84046
echo canceler double-talk detector, normalized cross-correl. vector 107615
electronic stethoscope with diagnosis capability 87299
fast US detect. syst., photorefr. GaAs two-wave mixing 101551
helicopter detect. and class. demonstrator 77123
helicopter sound detect., neural networks, parametric spectral representation techs. 88249
land mine detect., acoustic technol., LDV, program overview 77007
land mine detect., laser-based noncontact acoustic imager 77004
land mine detect., laser-induced acoustic generation 76946
landmine detect. using high-press. water jets, vibr. anal. 77014
mag., acoustic, chem. microsensors for real time unattended use 109821
matched-lag filter for detecting broadband multipath sigs. 73713
multipath and underwater sound sigs., appl. of robust DWT 119087
multiple acoustic source localization in reverberant environ. 119100
multiple beam US sens. using gas-coupled laser acoustic detect. 114528
nonlin. acoustic NDE, superheterodyne receivers, absol. calib. 122733
pass. EM-acoustic detect. and ranging, data flow deciphering 130151
phase-comparison hyperb. pass. syst. for source positioning of acoustic sig., accuracy 130152
photo-EMF receivers for laser US detect., high-responsivity 101553
power transformer PD, opt. fiber sens.-based detect. 109590
robust speech recogn., missing data approach, reliab. measure 118131
robust speech/nonspeech detect. using high order stats. 118130
seismic detect. and tracking tech. appls. 73737
self-organizing cooperative UGS network 77103
snoring sig. automatic detect., simple snorers/OSAS patients 110682
snoring sigs., automatic pitch detect., early disease diagnosis 98339
speech intelligibility improvement by detect. of relevant acoustic events 118051
stereophonic acoustic echo cancellation, adaptive filtering algm. 119015
stochastic matched field array proc. for detect./nulling in uncertain ocean environ. 109310
time-series act. search using histogram features 95719
transient detect., wavelet packets and de-noising based on HOS 119096
underwater acoustic sens., WDM, fiber Bragg grating 131956
underwater acoustic sigs., blind source separation 73720
underwater acoustic transient sig. detect. based on waveform sect. technol. 75237
US flaw detect. by EM acoustic transducers, inverse flaw ident. 101627
US sig. detect., useful echoes ident., parallel comput. 107588
VAD, voice activity detect. algm. employing speech enhancement preprocessing 83981
vowel ident. in considerable noise *(English)* 73080
wheezes, lung disease, time-freq. detect./anal. algm. 98340

acoustic signal processing
see also acoustic convolution; acoustic correlation; acoustic signal detection; acousto-optical signal processing; sonar signal processing; surface acoustic wave signal processing
abdominal image quality, real-time correction of wavefront arrival time errors 110766
advanced US techs. for eval. of materials 99100
affine projection filter algm. based on M-estim. *(Chinese)* 95710
anisotropic plate, rapid dispersion curve mapping, elastic prop. estim. 122742
automatic defects class. using pulse-echo tech., pattern recogn. 79488
automatic labeling of prosodic events *(English)* 73012
automobile act. noise control use with audio syst. 120593
automobile noise corrupted speech, binaural diverse sub-band proc. 72991
B-scan US microscope for microflaw inspection/subsurface imaging 114498
battlefield target ident., acoustic signature BP 122734
binaural room impulse responses, transfer-fn. meas. with sweeps 118839
binaural sound synthesis, interaural transfer fn. model 130052
biological tissues, scanning thermoacoustic tomography, sig.-proc. 98309
biomedical sound vel. inhomogeneities, correl.-based correction using $\Delta\Sigma$ modulators 87473
biomimetic acoustic microsystems, heterog. integrat. 99068

acoustic signal processing continued
blast noise monitor data validation using fuzzy logic 75913
blind separation implemented in time-freq. domain 107449
block-exact fast affine projection algm. *(Japanese)* 95663
blood vel. estim., recursive ultrasound imaging/spatially encoded sigs. 110730
bonded struct., laser US NDE, dispersion curve, ANN appl. 114563
branched tube systs., param. estim. *(English)* 73003
breast tissue, duct detect. and wall spacing estim. 87494
breathing sigs., time-freq. anal., in vitro airway model 110675
BSS for fault detect. and machine monitoring using time or freq. domain approach 118821
chirp interf. adaptive cancellation method *(Chinese)* 129943
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
contrastive accents, alleged existence 94392
damped oscill., logarithmic decrement eval., integral sig. proc. 101594
declined seabed, acoustic discrim. of underwater materials 97003
delayless freq. domain acoustic echo cancellation 84741
DFE coeff. placement algm. for sparse reverberant channels 107674
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
digital flute, virtually real, synthesis model, interface design 131781
digital musical sound synthesis by phys. modelling 131787
digital sound synthesis, transfer fn. model with nonlin. excitations 129963
distributed sens. arrays, source localization 77125
DSP-driven cochlear prostheses, eight-channel-stimulator design 122353
echo canceling trends *(Japanese)* 95607
echo cancellation, adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
echo cancellation, freq.-selective step-size control 119076
echo cancellation, low complexity nonlin. filters anal. 107484
echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
echo canceller, short-time spectral amplit. estim. *(Japanese)* 95664
edge-preserving noise reduction for ultrasound images 110727
education, interactive multimedia 78501
elec. guitar, obtaining more acoustic timbre by digital filtering 131779
electronic component autom. defect detect., US SAM, DSP 100658
ELF band seismic EM radiation, sig. proc. and sonification 122602
emission sig. proc. methods, review 129983
engine failure diagnosis using wavelet transform-based sound sig. anal. *(Japanese)* 95604
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
fetal breathing movement detect., modified fetal monitor/sig. proc. 110719
flexible acoustic array, beamforming 99065
freq. domain act. noise control syst. without secondary path model 119075
freq. domain step-size control in nonstationary environ. 107504
Gabor expansion for stereophonic acoustic echo cancellation 95683
gastrointestinal sounds, multi-resoln. anal. 110499
general-purpose auralizer implement. on floating-point sig. proc. 129966
GSAEC, acoustic echo cancellation embedded into generalized sidelobe canceller 118968
GSM receiver acoustic echo cancellation using simplified Volterra filters 130059
guided wave sig., dispersion effect removal, sig. proc. tech. 101587
hands-free commun. unit acoustic echo canceller *(Japanese)* 96326
hands-free telephony, nonlin. acoustic echo canceller 118084
head-related transfer fn., computational quality assess. 129967
hearing aid based on single reson. anal. for delivering high quality speech sounds *(Japanese)* 122319
hearing aid fitting procedures eval., sig. proc. algms. 76700
hearing aid virtual sens. arrays, robust phase shift estim. in noise 122347
hearing aids, variable step-size of LMS algm. for acoustic feedback reduct. 73017
heterodyning demodulation tech. for spatial quadrature 110733
high speed beamformer using TMS320C6201 DSP 110803
highway surface grooves, speech annunciation 84037
human nasal tracts, sound transm. charact. determ. using computer-tomographic data *(German)* 76553
intell. US phased array syst. for steel NDT, optimised design 114532
intravascular US palpation, automated approach 110809
Japanese news commentary cognition 118158
Kalman filter approach to act. noise control 119077
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
large lin. Toeplitz systs., augmented iter. method 118960
laser welding, QC, AE sigs. wavelet anal. 105630
laser welding, real-time in-proc. monitoring using AE sigs. *(Chinese)* 72115
lin.-array Doppler syst., steady flow, max. vel. estim. error sources 98266
liver disease, US diagnostic syst., fractal dimens. 110720
LMS and LMF threshold tech. 107321
low complexity nonlin. filters for acoustic echo cancellation 73664
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078
machine vibr., blind separation with bilinear forms 118813
machining noise, honing sound monitoring, ANN appl. *(Japanese)* 89788
material class. by US sig. HOS anal. 118863
med. US images, speckle removal, Bayesian multiscale method 110678
microphone array acoustic focusing for human-robot interact. 120591
microphone array syst. using iter. echo suppression method as inverse filtering 109387
microphone arrays, dereverberation and noise reduction 118055
minke whale vocalization, localization and visual verification 86244
mobile radio integrated echo/noise canceller 119833
morpheme based speech corpus annotation tool 73059
Motorola DSP56307-based real-time acoustic echo canceller 119510
moving vehicles detect. from acoustic sig. proc. 73620
MPEG-4 virtual worlds, spatial sound proc. 129382
multi-channel acoustic echo canceller, adaptive algm. accel. *(Japanese)* 95665
multichannel sound reprod. syst. using min.-norm-soln. in freq. domain *(Japanese)* 86351
multichannel speech sigs. recording/anal. in motor vehicle environ. *(German)* 73008
multilayer backplane board material charactn. using acoustic wave technol. 113591
multilayer struct. NDT, US tomography, iter. reconstr. 101601
multimode dispersive Lamb waves, sig. proc., reassigned spectrum 114490
multipath and underwater sound sigs., appl. of robust DWT 119087
multiple acoustic source localization in reverberant environ. 119100
multiple talker locations estim. using randomly positioned microphones 73619
music perform., sound source ident. 73571
natural environ., coloration, binaural decoloration 107301
near-bottom sediment, multifreq. acoustic data color-encoding 122683
neonatal click-evoked otoacoustic emissions, time-freq. anal. 87469
neural class. of Lamb wave US weld testing sigs. 79486
newborns, spontaneous/click-evoked otoacoustic emissions anal. 87468
acoustic signal processing continued
noise mixture recogn., bottom-up and top-down proc. 118803
noise-robust speech recogn., acoustic sig. proc., car environ. *(Japanese)* 124037
non-Gaussian composite sig., uncertainty product 73569
noninvasive press. meas., microbubble contrast agent & wavelet transform 122009
octave anal. for sound perception 72993
orchestral music, unwanted sound blind removal 95692
pass. acoustical animal identif., ANN/time domain sig. coding 122744
pass. target tracking with uncertain sens. posns. 107352
PCA filter in blind source separation 107555
periodic surface, computer reconstr., scatt./transm. acoustic fields 109990
periodicity estim. algms. 129959
phase aberration correction using near-field sig. redundancy, 2D array algm. 110782
phonocardiogram sig., short-time FT anal., nonstationarity 76362
phonocardiograms, automatic denoising methods comparison 121991
piano sound synthesis, phys.-based, DSP methods 129965
plane-wave sound field reprod. with loudspeaker array 107386
plural-zone sound segreg. *(Japanese)* 94383
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. proc. *(Chinese)* 122034
pulse-echo imaging results with 1D capacitive micromachined US transducer arrays 111502
pulsed plane wave decomp., improved beamforming perform. 110786
quartz, piezoelec. transducer dyn. in current flow, acoustic appls. 133378
RBF network, step-size control for acoustic echo cancellers 118969
real-time 3D acoustic image localization algm. by embedded DSP 84141
real-time automated video and audio capture 118716
reciprocating pumps check valves, fault diagnosis, rough set theory appl. 118957
rem. in situ US materials charactn., temp. compensation 101608
reson. piezoelec. transducers, broadband test sig. generation 86503
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
rolling element bearings condition monitoring by AE 131848
room acoustics meas., multitone sigs. appl., freq. response 110031
Sanshin sound pitch distinction, overtone spectrum deletion method *(Japanese)* 84697
Sanshin three stringed musical instrum., timbre, waves spectrum *(Japanese)* 84698
seabed geoacoustic param. inversion, adaptive hybrid algm. 111444
session syst. with acoustic instrums., develop. 75331
single-point noise cancellation, Lyapunov tuning of leaky LMS algm. 130039
Slovenian spoken dialog systs., acoustic and lang. modelling 129402
sound sig. proc. for virtual room 129964
sound synthesis syst. in Windows-based visual environ., O'kinshi *(Japanese)* 86361
spallation generated minute cracks, nonlin. US meas. 114494
Sparse-BEFAP, fast affine projection avoiding explicit regularisation 119078
spatially complex sound synthesis in virtual space, accurate offline algm. 88213
speech, hybrid connectionist-structural acoustical modeling 73612
speech biometrics syst. with multi-grained speaker modeling *(English)* 73096
speech dereverberation, spectral subtraction 106381
speech enhancement through binaural neg. filtering 118979
speech recogn., robust assess. of formant freqs. *(German)* 73100
speech sig. convolutive blind source separation, AM decorrelation 107443
speech voiced/turbulence-noise components, pitch-scaled estim. 118072
spoken lang. recogn., multilingual speech proc. 106405
steel, Cr-Mo-V, high temp. exposure effect, nonlin. acoustic NDE 114493
steel, laser US meas. of scatt. waves, microstruct. eval. 114495
stereo acoustic echo cancellation, nonlin. use 106342
stereophonic acoustic echo canceler, real-time implement. 85429
stereophonic acoustic echo cancellation, adaptive filtering algm. 119015
stereophonic acoustic echo cancellation, comparison of adaptive algms. 118967
stereophonic acoustic echo cancellation, overview and recent solns. 130901
stereophonic acoustic echo canceller, pre-proc. filters, convergence anal. *(Japanese)* 73674
stereophonic low complexity subband adaptive algm., teleconferencing appl. 96244
stochastic matched field array proc. for detect./nulling in uncertain ocean environ. 109310
synthetic transmit aperture imaging using orthogonal Golay coded excitation 110771
temporomandibular joint clicking sounds, time-freq. anal. with radially Gaussian kernels 98321
time delay estim. using sig. subspace model 107395
time-resolved acoustic microscopy, elastic prop. meas., inverse algm. 114496
Tokyo Inst. of Technology progress in speech recogn. 118162
transformers aging sig. feature extraction, discrete wavelet transform *(Korean)* 123546
ultrasound image segmentation, adaptive snake model 87474
underground engng. struct., seismoacoustic survey 111548
underwater acoustic commun. using phase conjug. 120395
underwater acoustics, advances in research work, review *(Chinese)* 111436
US colour flow diagnostic syst., gen. purpose, digital beamforming *(Japanese)* 76368
US flaw class. problems, domains & features selection 101599
US meas. syst. sig. anal. using wavelet transform 107354
US med. images, freq. decomp./compounding with wavelet packets 110677
US NDT, dist.-amplit. correction curves, anom. dip 101626
US NDT expertise, CAD-based simul. & imaging tools 101609
US sig. class., neural net based multidimens. sig. proc. 101591
US sig. detect., useful echoes ident., parallel comput. 107588
US transducer radiated field, spatial freq. spectra, ball reflector 101625
US weld inspection sigs., LEARN++ incremental learning algm. 100634
utterance verification integrat. with stat. lang. modeling/spoken lang. understanding 94438
vector hydrophone, near-field/far-field azimuth and elevation angle estim. 130025
violin sound synthesis, body mode modeling and modif. 131786
virtual acoustics, appls. and technol. trends 129962
vocal tract anal. allowing for glottal acoustic impedance *(German)* 73007
weldment intell. US flaw class., perform. enhancement 101614
wideband acoustic scatt. fn. estim., wavelet proc. 75244

acoustic sources *see acoustic radiators*

acoustic surface wave devices *see surface acoustic wave devices*

acoustic surface waves *see surface acoustic waves*

acoustic tomography
airborne US fields mapping by opt. heterodyne probing/tomography reconstruction 110030

acoustic tomography continued
biological tissues, scanning thermoacoustic tomography, sig.-proc. 98309
bone, cancellous and cortical, imaging by US refl. tomography 122031
circ.-scanning US diffr. tomography, LF scatt. component 98302
conf., computational acoustics, Rome, Italy (1999) 100384
diffr. tomography in finite form and computer simuls. 99103
elastic wave tomography of joint P-wave traveltime and polariz. data 76974
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
laser optoacoustic imaging syst. for med. tomography 87499
LW sound wave CT, prior distribs. subspace projection algm. 98279
med. optoacoustic press. transients, temporal backward projection, FT methods 98350
multi-modal proc. tomography syst. 109473
multilayer struct. NDT, US tomography, iter. reconstr. 101601
ocean acoustic tomography data anal. using Kalman filter 99016
opto-acoustic tomography syst., wide-band acoustic pulse detect. 110689
optoacoustic tomography, time-gated press. distrib. meas./image reconstruction 121989
reconstruction of homog. objs. using multi-step ART 98318
scanning thermoacoustic tomography, microwave-induced, tissue imaging 87498
shallow-water oceanic waveguides, medium-scale diffr. tomography 111435
temp. distrib. visualiz., acoustic computerized tomography 121252
thermoacoustic tomography inverse problem, minimization 98262
transm.-type US inverse scatt. CT, circ. arc points ob. data 98294
ultrasound diffr. tomography, use of harmonics 88217
ultrasound transm. tomography, image reconstruction algm. adaptation 88215
underwater acoustics, advances in research work, review *(Chinese)* 111436
underwater obj. detect., HF forward-scatt. sonar sig. proc. 86252
US imaging of flow profiles *(German)* 110050
$(Tb,Dy)Fe_2$, giant magnetostrictive material, static/dyn. characts. under high pre-stress 99098

acoustic transducer arrays
see also ultrasonic transducer arrays
2D opt. fibre microphone array, matrix-style data readout 99074
aircraft flight path estim. using freq. meas. from wide aperture acoustic array 99084
battlefield target ident., acoustic signature BP 122734
broadband array design for perform. improvement 120596
deep-sea floor search using tilted array side scan sonar 99015
digital transducer array loudspeaker, distortion and directivity 97109
distributed surveillance sens. self-organized task assignment 88211
element mutual impedance from modal Pritchard approx. 88210
focusable horiz. acoustic array in smoothly horiz. varying oceanic waveguide 76968
lin. acoustic vel. sens. arrays, directivity factors 97004
microphone array syst. using iter. echo suppression method as inverse filtering 109387
mine detect., acoustic array syst., liq.-filled roller array 77000
multichannel speech sigs. recording/anal. in motor vehicle environ. *(German)* 73008
multiple talker locations estim. using randomly positioned microphones 73619
ocean acoustic source localization, matched-mode proc., modal decomp. algms. 88164
plane-wave sound field reprod. with loudspeaker array 107386
plural-zone sound segreg. *(Japanese)* 94383
shallow sea, charact. of receiving antenna arrays 133342
shallow water, acoustic surveillance arrays, line vs. planar 76973
speaker tracking using microphone array/camera 75329
vector hydrophone, near-field/far-field azimuth and elevation angle estim. 130025

acoustic transducers
see also acoustic transducer arrays; acoustoelectric transducers; surface acoustic wave transducers; ultrasonic transducers
3D target localization from seismic and acoustic signatures 73736
3D-ACM WAVE on fixed & taut-wire moorings, directional wave spectra 76908
apodized piezotransducer AO cell transm. fn. 116851
asymmetrical piezoelec. annular bimorph anal. using impedance/admittance matrices 99079
chest-wall surface, lung-sound transducers, absol. sensitivity *(Japanese)* 87322
comb transducers, periodic crack-model, efficiency/optimisation 88207
curved piezostructure dyn., effects of press. loading 122740
disks, piezoceramic, reson. freq. spectra with convergence tests using FEM 88209
local environ. mapping, robust bistatic sonar obj. class. 99096
MEMS acoustical sens. array, hearing instrum. appl. 87920
microacoustic sens., automotive appls. 97566
natural environ., coloration, binaural decoloration 107301
pass. sens. for locating vehicles, footsteps, and gunshots 109525
pipe length/temp. meas. using 2 acoustic sens. *(Japanese)* 133373
pneumatic balloon actuators, struct. tuning, acoustic imped. control 111540
probes, cable params. 111516
rare earth magnetostrictive flextensional transducer testing *(Chinese)* 111504
seismic and acoustic sig. ident. algms. 73735
steel, beam, mech. impedance meas., structural intens. anal. 110028
UGS, conf., Orlando, FL, USA (April 2000) 67398
unattended surveillance and monitoring syst. 111634
PZT miniature conical AE transducer, laser micromachining 101621

acoustic variables control
see also active noise control; noise abatement
duct, robust broadband control 88205
electrolarynx with, pitch control fn. and eval. *(Japanese)* 87921
pneumatic balloon actuators, struct. tuning, acoustic imped. control 111540

acoustic variables measurement
see also acoustic intensity measurement; acoustic noise measurement; acoustic wave velocity measurement; ultrasonic measurement
AC supercond. coil windings vibr., AE studies 71010
boiler temp. distrib. meas. using acoustic vel. *(Japanese)* 87021
buried antitank landmines detect., acoustic-to-seismic coupling 88232
buried objs. acoustic detect. in 3-D fluid saturated porous media 88218
Canadian Standards Association activity in acoustics 2000 update 87007
charact. acoustic impedance meas. in Kundt tubes, finite difference algm. 87008
flight vehicle vibr. monitoring by PCM telemetry, data compression 98893
impedance meas., new calib. method 87006
impedance meas., review 87005
impregnated paper insulation, charge evol., pulsed electroacoustic method 112098
ISDN BRI-Simulator QS4017, multi-purpose precision instrum. *(German)* 86395

acoustic variables measurement continued
LF power US transducer, acoustic field meas. by laser-interferometer *(Chinese)* 75911
liq. flow SH-SAW sens. syst., liq. acoustic prop. meas. 97176
metal halide lamps, acoustic reson. detect. 134637
power transformer PD, opt. fiber sens.-based detect. 109590
room acoustics meas., multitone sigs. appl., freq. response 110031
spacecraft panel shaker random vibr. test for high-intens. acoustics simul. 98892
thin film, acoustic props., piezoelec. thickness mode resonator 92692
Si miniature micromachined US point detectors, airborne radiated fields meas. 111501

acoustic velocity *see acoustic wave velocity*

acoustic wave absorption
see also noise abatement; ultrasonic absorption
coastal environ., sonar perform., suspen. sediments and microbubbles 75235
fiber AO tunable filter, acoustic wave atten. *(Chinese)* 104840
LMFBR steam generator tubes, water leak detect., act. acoustic anal. *(Japanese)* 123152
tunable acoustic resonator, sound insulation characts. anal. 104461
virtual microphones for act. noise control, forward prediction anal. 121247

acoustic wave amplification
see also acoustoelectric effects
hearing aid fitting strategies, children's amplif. requirements 98701

acoustic wave attenuation *see acoustic wave absorption*

acoustic wave diffraction
see also ultrasonic diffraction
conf., computational acoustics, Rome, Italy (1999) 100384
land mine detect., acoustic method, soil poroelastic model 77005
limited beam, collinear AO interact., Gaussian distrib. 127861
multi-track SAW devices, inter-channel interact. eval. 92727
omnidirectional sound sources deisgn using aperture and reverse horn 131784
quartz, SAW filter, min. diffr. cut 92744
slanted finger IDT SAW filters, diffr. effects anal. 91018
slanted finger IDTs, diffr. anal. 92726
tomography in finite form and computer simuls. 99103

acoustic wave diffusion *see acoustic wave scattering*

acoustic wave interference
see also acoustic wave interferometers; acoustic wave interferometry
high-resoln. interf. acoustic location 109314
ocean acoustic waveguide, source bearing determ. from sound field interf. pattern 97001

acoustic wave interferometers
see also acoustic wave interferometry
modified Mach-Zender laser interferometer, BAW probing 92735

acoustic wave interferometry
see also acoustic wave interferometers
side scan sonar and interferometric noise 76923

acoustic wave production
fiberised laser-US source design, proc. monitoring & biomed. appl. 122732
omnidirectional sound sources deisgn using aperture and reverse horn 131784
thin metal sheets, noncontact US generation, plasma igniter 122731

acoustic wave propagation
see also acoustic dispersion; acoustic pulses; atmospheric acoustics; Doppler effect; second sound; shock waves; surface acoustic waves; ultrasonic propagation; underwater acoustic propagation; underwater sound
battlefield target ident., acoustic signature BP 122734
comb transducer efficiency, freq charact. 104441
comb transducers, periodic crack-model, efficiency/optimisation 88207
GIS acoustic wave propag. props./PD location ident. *(Japanese)* 112704
glycine phosphite crysts., ferroelec. phase transit., acoustic/dielec. anoms. 104337
hybrid BEM in time domain, acoustic calcs. 68086
land mine detect., acoustic method, soil poroelastic model 77005
metallic fuselage struct., AE sigs. propag. 122499
SAW grating waveguide of reflector-filter, propag. loss study 92717
speech prod., phys., models and prospective appls. 129372
time delay estim. using sig. subspace model 107395
wake vortex detect. using radio acoustic sounding syst., num. simul. 97879
waveguides, local orthogonal transform., one-way anal. 83497
wind field characterisation with time/space high resoln. 72212
$BaTiO_3$, piezoelec., acoustic axes 81677
$GaPO_4$, piezoelec., acoustic axes 81677
$KTiOPO_4$, super-high electromechanical coupling SAW substrs. 92633
$LiBO_4$, piezoelec., acoustic axes 81677
$LiNbO_3$, piezoelec., acoustic axes 81677
$Pb(ZrTiNb)O_3$, super-high electromechanical coupling SAW substrs. 92633

acoustic wave reflection
see also echo; reverberation; ultrasonic reflection
act. piezoelec. layers, sound refl./transm. control, modelling 114476
multiple acoustic source localization in reverberant environ. 119100
multiple in-line reflecting arrays, props. and appl. prospects 92712
natural environ., coloration, binaural decoloration 107301
nonlin. preprocessing of heavy tailed reverberation 130132
ocean target detect. by ambient noise, acoustic daylight anal. 120473
periodic solid-gas rough surf., US diffr. in elec. contact weld 101542
SAW periodic struct., FEM and Green's fn. anal. 116210
SAW reflector, withdrawal weighting, first sidelobe suppression *(Japanese)* 70453
submerged moving obj., range and depth estim. by using noise cepstrum 120470
AlN Bragg reflector thin film resonator, fab. by RF sputter deposition 70455

acoustic wave scattering
see also ultrasonic scattering
3D acoustic scatt. from irregular fluid waveguide via BEM 79139
atm. radio-acoustic/acoustic sounding, fluct. effective centers 133292
coastal environ., sonar perform., suspen. sediments and microbubbles 75235
dielec. cylinder, acousto-EM scatt. behaviour 128740
hydroacoustic inform.-transm. channel model 109315
inverse scatt. for plane screen 90168
land mine detect., acoustic-EM wave interact., Doppler spectrum 77057
land mine detect., acoustic-LDV syst., shape discrim. 77003
land mine imaging & detect., inversion method, 3D grid 77006
multi-aspect scatt., wavelet coeff. charactn. by dual HMM 95608
multi-aspect scatt. data, wavelet coeffs., dual HMM charactn. 73436
ocean target detect. by ambient noise, acoustic daylight anal. 120473
one-way acoustic/EM wave fields, reciprocity theorems 128760
parametrically-driven bubble shape oscill., transient proc. near threshold 104451
SAW periodic struct., FEM and Green's fn. anal. 116210
seabed, acoustic params. meas. using multiply scatt. sound pulses 111463

acoustic wave scattering continued
wind field characterisation with time/space high resoln. 72212
acoustic wave transmission
see also ultrasonic transmission
act. piezoelec. layers, sound refl./transm. control, modelling 114476
curved piezostructure dyn., effects of press. loading 122740
human nasal tracts, sound transm. charact. determ. using computer-tomographic data *(German)* 76553
limited beam, collinear AO interact., Gaussian distrib. 127861
acoustic wave velocity
see also acoustic dispersion; shock waves; ultrasonic velocity
Coriolis massflowmeters accuracy, finite medium speed of sound effect *(German)* 132231
humidity and gas sens. 120716
p(VDF/TrFE) ferroelec. copolymer film, transverse sound vel. 127186
PVDF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. props., XRD 127206
AlGaAs/GaAs double layer 2D hole syst., SAW vel. shift 80796
AlN films, reactive DC magnetron sputtering, SAW, transducer appl. 114256
AlN piezoelec. polycryst. films, rf magnetron sputter deposition, SAW appl. 124818
$Fe_{77.5}Si_{7.5}B_{15}$ glass covered amorph. wire, sound vel. 104489
GaN, MOVPE on (0001) sapphire, SAW vel., electromechanical coupling coeff. 126010
GaN:Mg thin film SAW filter with high vel./low insertion loss, MOCVD 81762
$Li_2B_4O_7$ single cryst., Bridgman growth, struct./SAW props. 114215
Si(001)/Cu film syst., SAW phase vel. scanning method 103157
acoustic wave velocity measurement
see also ultrasonic velocity measurement
3D-ACM WAVE on fixed & taut-wire moorings, directional wave spectra 76908
air real-time acoustic vel. meas. using LDV, PLL, demodulation 110032
lin. acoustic vel. sens. arrays, directivity factors 97004
piezoelec. vibrator for multifunctional meas. methods, sound vel., impedance meas 86499
temp. distrib. visualiz., acoustic computerized tomography 121252
wake vortex detect. using radio acoustic sounding syst., num. simul. 97879
acoustic waveguides
see also surface acoustic wave waveguides
comb transducer guided wave mode excitation, phase vel. spectrum 101624
finite-length discontinuities, explicit SW asymptotics for diffr. 117734
limited access pipe inspection, US guided wave flexural mode tuning 101549
ocean acoustic waveguide, source bearing determ. from sound field interf. pattern 97001
piano sound synthesis, phys.-based, DSP methods 129965
shallow sea, charact. of receiving antenna arrays 133342
shallow-water oceanic waveguides, medium-scale diffr. tomography 111435
single/two-phase media and flows, US waveguide meters *(Russian)* 75924
transduction efficiency, binding layers effect 116862
US conical transformer, fiber waveguide, long. guided waves 99088
US guided wave transducer, TDPRA, FEA 122738
acoustic waves
see also acoustic emission; seismic waves; shock waves; surface acoustic waves; ultrasonic waves
inverse problem for acoustic wave eqn., probabilistic approach to approxs. and uniqueness 101113
Sanshin three stringed musical instrum., timbre, waves spectrum *(Japanese)* 84698
steel, beam, mech. impedance meas., structural intens. anal. 110028
acoustics
see also acoustic applications; acoustic devices; acoustic noise; aeroacoustics; architectural acoustics; atmospheric acoustics; audio acoustics; hearing; musical acoustics; nonlinear acoustics; photoacoustic effect; sound reproduction; structural acoustics; ultrasonics; underwater sound
MPEG-4 virtual worlds, spatial sound proc. 129382
shape sensitivity calcs. for exterior acoustics problems 79121
virtual acoustics, appls. and technol. trends 129962
acousto-optical correlation
tunable AO filters, image proc./opt. commun. appls. 127859
acousto-optical deflectors
DIAL rapidly tunable AO spectrometer for space environ. 93941
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
packets synchroniser, AO cells & EO switch, photonic switch 120333
phase proc., dyn. range eval. 82250
phase proc. of HF sigs. 82249
ultrashort-pulsed laser micromachining, acoustooptic device ang. dispersion compensation 117570
$LiNbO_3$:Mg photorefr. cryst. beam deflection 116800
$LiNbO_3$:Ti integrated opt. planar waveguide AO switches 116739
acousto-optical devices
see also acousto-optical deflectors; acousto-optical effects; acousto-optical filters; acousto-optical modulation; acousto-optical signal processing; acousto-optical switches
2D opt. fibre microphone array, matrix-style data readout 99074
act. fibre waveguide sens., embedded structural condition monitoring 121054
analog sig. transm. 116861
AO interact. opt. packet sync. device 120269
apodized piezotransducer AO cell transm. fn. 116851
fiber optic dielec. multilayer hydrophone, freq. response 111526
holographic memory AO devices, inform. charcts. 82067
laser beam steering syst., satellite commun. 127862
limited beam, collinear AO interact., Gaussian distrib. 127861
NLC polariz. converter 82246
RF photonic devices and systs., conf., San Diego, CA, USA (July/Aug. 2000) 78427
SAWs, electron and light interacts. 70448
seismic fiber optic multiplexed sens. for oil exploration and reservoir mgt. 122547
submicrosecond speed acoustooptic variable opt. attenuator 85979
tapered single-mode opt. fiber with acoustic Bragg gratings, 1D acoustic cavity study 104841
transduction efficiency, binding layers effect 116862
two-order cascading AO bistable syst., hyperchaos control *(Chinese)* 104843
very fast focus scanning AO lens 116855
CO_2 high-power laser, US beamsplitter 116853
DF chem. laser, pulse-periodic operation 105087
$LiNbO_3$ spherical waveguide AO devices, light beam guiding/collimating/focusing 116852
PZT/TiO_x/SiO_2/SiN_x/SiO_2/Si struct., AO device appls. 81758
acousto-optical effects
see also acousto-optical devices
fibre acoustic gratings, strain-induced phase-matching, tunability 104626
high-power ultrasound pulse, opt. sens. tech. 97196
homeotropically aligned NLC film, ultrasound-intens.-depend. opt. transm. 71479
layered crysts., nonlin. acoustic props., AO study 117423
limited beam, collinear AO interact., Gaussian distrib. 127861
local tissue charactn. by backscatt. AO imaging 122039
narrow laser beams, Raman-Nath condition AO interact. 117331
opt. fibers, AO coupling 93075
SAWs, electron and light interacts. 70448
tissues imaging, US tagging of transm./backscattered photons paths 87511
$CsLiB_6O_{10}$ crystallites in photopolymer matrices, acoustically induced electrooptics appl. 116547
TeO_2 AO cell image proc./edge enhancement 118199
ZnSe-ZnS QW, acoustically driven opt. phenom. 115378
acousto-optical filters
AOTF hyperspectral imagers 75606
colorimeter based on AO tunable filter 127857
dyn. FBG strain sens., serial arrays, simultaneous interrogation 97295
fiber AO tunable filter, acoustic wave atten. *(Chinese)* 104840
fs regenerative amp. syst., opt. pulse shaping/compression, AO prog. dispersive filter *(Japanese)* 116857
Fujitsu opt. devices for photonic networks *(Japanese)* 120170
NIR spectrometer based on AO tunable filter 71444
single mode fibers, AO tunable filters, mode conversion efficiency *(Chinese)* 104650
spectropolarimetric imaging, field-portable imager, AOTF 97347
switchable narrow-bandwidth comb filters, AO superlattice modulator 116859
tunable AO filters, image proc./opt. commun. appls. 127859
tunable filter interrogated fiber Bragg grating sens. 131959
tunable filters, beat noise reduction method 116863
tunable filters, inform. limitations 82251
UV quartz AO tunable filter wavelength selection for ICP AES 104842
wavelength-dilated multiple wavelength filters for WDM/TDM PON 120260
WDM packet-switched network with multi-wavelength selectivity, design 86008
Ti:sapphire laser, electronically tuned, dual-wavelength oscill. 105244
Tl_3AsSe_3 cryst. for AOTF imaging, perform. 82289
acousto-optical modulation
acousto-photonic imaging, field interact. mechanisms 87538
all-opt. gain-clamped EDFA, suppression of SBS 93516
at. fountain freq. std., computerised control syst. 75358
biological tissue, opt. imaging using AO light modulation 82248
DIAL rapidly tunable AO spectrometer for space environ. 93941
displacement meas., laser Doppler effect 117582
displacement meas. using rem. sens., Doppler effect *(Chinese)* 86474
FFH modulation, AO-modulator based laser pulse shaping 105446
long-period fiber grating Mach-Zehnder interferometer based AO amplit. modulator 127856
multiply scatt. coherent light, US modulation. Monte Carlo model 122043
opt. computed tomography imaging of absorbers, US phase-shift detect. 110845
phase difference meas., cross-talk correction, AO proc. 116854
phase proc., dyn. range eval. 82250
phase proc. of HF sigs. 82249
radio sigs. demodulation, AO method 71445
RF sig. time scale conversion, method and implement. 116860
self-compensation heterodyne vibrometer using AO modulator vibr. detector 116858
sig. proc. systs., time integrat., ultrasound divergency influence 127858
switchable narrow-bandwidth comb filters, AO superlattice modulator 116859
tapered single-mode opt. fiber with acoustic Bragg gratings, 1D acoustic cavity study 104841
tissue imaging, US-modulated opt. tomography, parallel detect. 87531
ultrasound tagging of light, detect. of inhomogeneities 93261
CO_2 laser atm. relay digital commun. syst. 120188
CO_2 planar waveguide laser amp., microsecond pulses for micromachining 105112
GaAs, fiber-coupled photorefr. US demodulator 93767
$LiNbO_3$ four-channel Bragg cell AO modulator, design and fab. 93262
$LiNbO_3$ spherical waveguide AO devices, light beam guiding/collimating/focusing 116852
Nd:LuYLF laser, mode-locking operation 117361
Nd-doped oxide crysts. for solid state laser appls. 71722
$Si_{20}Te_{80}$ amorph. AO cell, IR diode laser radiation appl. 116856
$Si_{20}Te_{80}$ glasses, phys. props., acoustooptic devices appl. 93260
$Ta_2O_5/SiO_2/128°YX\text{-}LiNbO_3$ photoelasticity enhancement, SAW, opt. modulator appl. 116725
acousto-optical signal processing
see also acousto-optical correlation
CCD photodetectors, backend opt. proc. syst. devices 131982
incomplete circ. array, sig. reception, spatial source distrib. projection reconstruction, algm./simul. 118195
laser welding, QC, AE sigs. wavelet anal. 105630
Moscow State Univ. Department of Physics of Oscillations research 116798
phase difference meas., cross-talk correction, AO proc. 116854
phase proc., dyn. range eval. 82250
phase proc. of HF sigs. 82249
radio air obs. using AO spectrum analyzers 86433
radio sigs. demodulation, AO method 71445
RT-22 radiotelescope AO spectrum analyzer and 3-mm obs. 86278
satellite radioline sync., AO complex-sig. proc. 120086
techs. and facilities in AO sig. proc. 127860
time integrat., ultrasound divergency influence 127858
TMS320C80 based digital multibeam receiver implement. for laser optoacoustic rem. sens. 75238
tunable AO filters, inform. limitations 82251
acousto-optical switches
four port opt. switch, Brillouin-based fibre-optic sens. 105551
narrow-bandwidth comb filters, AO superlattice modulator 116859
packets synchroniser, AO cells & EO switch, photonic switch 120333
photonic switching integrated AO devices, multiwavelength separation 96814
WDM networks, simultaneous opt. monitoring and fiber supervision 109123
$LiNbO_3$:Ti integrated opt. planar waveguide AO switches 116739
Nd:$GdVO_4$/$KTiOPO_4$ green laser, diode-pumped Q-switched, flat-flat resonator 71751
Nd:YAG rod lasers, diode arrays side pumped, $KTiOPO_4$ intracavity-freq.-doubling operation *(Chinese)* 82570

acoustoelasticity *see elasticity*
acoustoelectric devices
see also acoustoelectric transducers
SAWs, electron and light interacts. 70448
solid insulators, space-charge distrib. meas. by HV high-speed pulsed electro-acoustic apparatus 109918
GaAs reson. tunnelling struct., monolithic electroacoustic device 81753
acoustoelectric effects
acetophenone-soaked polyethylene, carrier mobility estim. by transient space charge *(Japanese)* 127250
EVA copolymer film space charge meas. in cryogenic-RT region *(Japanese)* 127249
immersion US meas. syst. components, electroacoustic meas. model 114533
impregnated paper insulation, charge evol., pulsed electroacoustic method 112098
layered PTFE interfacial charges meas. using step electroacoustic tech. 83128
LDPE film, transit space charge distrib. and external cct. current up to breakdown *(Japanese)* 81731
SAWs, electron and light interacts. 70448
XLPE, ethylene-acrylic acid copolymer modified, space charge accumulation, water treeing *(Chinese)* 104418
GaAlN/GaN heterostruct., US waves amplif. 91750
GaAs chip, quantised current driven by SAWs 126043
GaN, bulk, US waves amplif. 91750
acoustoelectric transducers
see also headphones; hydrophones; loudspeakers; microphones
electrostatic measuring techs. develop. 83126
EM acoustic transducer, FEA 133377
flaw detect. by echo method using bulk shear waves, sensitivity of EMA probes 133384
gas sens., electroacoustically coupled resonator config. 132054
piston transducer beam spatial averaging, diagnostic US bioeffects appl. 99072
three-layered PTFE sample piezoelec. transducer meas. comparison 81641
US phased array antennas for med. imaging, micromachined chips 122021
acoustoluminescence *see sonoluminescence*
acoustomagnetic effects *see magnetoacoustic effects*
acoustooptics *see acousto-optical effects*
actinide burning *see radioactive waste disposal; radioactive waste processing*
actinide transmutation *see radioactive waste disposal; radioactive waste processing*
actinometers *see radiometers*
actinometry *see radiometry*
activation analysis (neutron) *see neutron activation analysis*
activation functions *see transfer functions*
active antenna arrays
2 GHz act. integrated antenna, design and implement. 94182
2D coupled oscillator array 117833
2D phased arrays, planar quasi-Yagi antennas, mutual coupling 72626
20 GHz phased array antenna for GEO satellite commun. 105947
act. integrated retrodirective transponder for rem. info. retrieval-on-demand 108945
broadband arbitrarily-pol. planar rectenna array, charactn. 112088
butterfly-shaped patches, FET-loaded, opt. control of radiation 72635
decade wide bandwidth integrated LNA, 0.4-8 GHz, act. antenna appl. 125784
generalized act. phased array antennas, syst. charact. 94189
injection-locked act. antenna arrays, heterostruct. interband tunnel diodes, model 105970
interrupted SAR 96932
Josephson jn. act. antenna array, phase shifting 72652
K-band full-duplex transmit-receive lens array, uniplanar circuitry 105937
Ka-band broadband aeronautical satellite commun. expts. 108989
Ku-band act. transmit-array module with horn or patch array sig. launching/receiving device 72648
Ku-band driver amp. for act. phased array appls. 117826
lin. arrays with peak amplit./radiated voltage distrib. constraints, transmit patterns 83744
microstrip antenna array, polariz. agility *(Chinese)* 105922
microwave antenna arrays, small sig. and large sig. models 105928
MM-wave harmonic space diversity act. integrated array, design 72678
MSAG-based MAE-UAV act. array antenna 94199
multimedia mobile satellite commun., antenna technols. 83685
phased array antenna using transm.-line coupling network and VCO 72662
phased array elements, low loss contactless microwave transit. design 83707
phased arrays for new millennium 128883
planar radiating oscillator with parasitic patch element, act. antenna array 128899
planar receive mode act. phased array 83687
polariz.-agile act. microstrip antenna array with LNA 72693
printed dipole radiating element for wide-scanning array appl. 83709
push-pull oscillating antennas, spatial power combining arrays, rect. patch 128901
reconfigurable retrodirective/direct conversion receiver array, wireless sens. 96409
retrodirective array, target tracking, act. element model 83665
retrodirective diode grid array using FWM 105938
RF front end technols. 85471
spatial power combiner, act. reflect array and horn antenna 69039
spatial power combiner, act. reflect-array, dual-feed aperture coupled patch antennas 128900
USA Navy's digital array radar develop. 99164
wireless commun. systs. hardware, new multilayer techs. 83727
GaAs MMIC oscillator, act. patch antenna array 105951
GaAs PHEMT wideband true-time delay MMIC, act. phased array appl. 125799
active antennas
see also active antenna arrays
2D photonic-bandgap structs., integrated antenna usage, membrane support 94128
BAR-mode low bias high-efficiency act. transmitting patch antenna 72546
BiCMOS AM/FM car act. antenna with on-board batt. voltage regulator 94162
C-band push-pull power amp. integrated with quasi-Yagi antenna 80259
circ. pol. rectenna for microwave power transm. at 5.8 GHz 112089
concentric circ. ring microstrip antenna, dual-freq. operation 83585
dual feed single act. patch beam steering antenna, compact design 72581
dual-beam microstrip leaky-wave antenna, asymmet. scan capability 72583
homodyne act. patch antennas, direct-conversion demodulators 128853
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
IMPATT diode integrated act. microstrip antenna, large sig. anal. 72519
INTA/CSIC collaboration on antennas, develops. 72472
active antennas continued
integrated antennas using direct-conversion detect. 83611
integrated microstrip shorted antenna, hybrid act. circulator 72495
ITS, Intelligent Transport Systems, combined RF ident., vehicle detect./train posn. 100280
LMCS, dual-polarized lens antenna 96411
microstrip antenna, act., IMPATT integrated, theory 72482
microstrip antennas, Gunn integrated, noise 105905
microstrip antennas in subsurface sens., moisture meas. & NDT 88194
MLC-polyimide substr. 83661
modules for mobile phones 83513
monolithic LNA patch antenna 94139
monopulse radar, low noise act. integrated antenna receiver 105931
parasitic element for act. antenna 72459
planar antenna, MM-wave emitter, TLM anal. 105853
planetary landing vehicle antennas, Mars and Phobos 72621
RF transmitter front-end, planar antenna and PBG 74535
SAR antenna for airborne 56-channel operation 128880
slot antennas, quantum reson. tunneling diodes appl. 83546
Stentor satellite transmit act. antenna, Ku-band Quadri-SSPA 96617
transmitting-receiving integrated act. antennas, FDTD anal. 72492
tunnel diode nonlin. model for microwave ccts. and act. antennas 80384
UWB for navig. and commun. 120490
X-band monolithic integrated twin dipole antenna mixer on GaAs substr. 69172
active circuits *see active networks*
active filters
see also biquadratic filters; continuous time filters
3-phase 3-wire VSI shunt act. filter, sliding mode control in dq frame 134149
3-phase 3-wire VSI shunt act. harmonic filter, input-state feedback control 134150
3-phase 4-wire ccts. compensation, time instantaneous/av. value concepts 111677
3-phase 4-wired syst., 3-level power inverters, 3D PWM tech. 77966
3-phase act. power filter, multiple single-phase VSI modules 122987
3-phase act. power filter, vector based control 122985
3-phase act. power filter control using neural networks 112083
3-phase current-source act. power filter, current control 133706
3-phase distortion currents detect., adaptive lin. neural network *(Chinese)* 88496
3-phase rectifier, AC harmonic elimination, act. filter, PWM current control 134152
AC/AC single phase voltage regulators, comparative anal. 88907
adaptive radar receivers, tunable recursive act. MMIC filters, intermodulation props. 125802
analog ratio spectrum cct. with adaptive Butterworth low-pass filter 80132
anti-blocker struct. MOSFET-C filter for direct conversion receiver 102371
ARC low-pass filter design for band 1-50 MHz 102349
ASD, harmonic distortion mitigation, filters 134432
batt. charger PFC preregulators, optimal control scheme 78012
batt. chargers, optimal control, PFC preregulators 112641
BiCMOS AM/FM car act. antenna with on-board batt. voltage regulator 94162
BiCMOS MMIC lumped and transversal filters 69229
BiCMOS transconductor, LV VHF transconductance-C filter 80050
cardiac pacemaker, sens. chain, CMOS micro-power low noise log-domain amp. 87894
CCII, reduced parasitic resist., bandpass filter appl. 80039
CCII current-mode filter, act. sensitivity 91027
CCIII first-order all-pass sect. 91042
CMOS bandpass amp., notch filter, wireless receiver 90753
CMOS bandpass filter for pager appls., LV high-Q design 91046
CMOS charge-pump PLL, sample-reset loop filter 101861
CMOS current-mode filter, modified multi-output differential difference current conveyor 68931
CMOS dual-mode RC-opamp baseband filter for PDC and WCDMA 91031
CMOS fully bal. differential difference amp. and appls. 101798
CMOS LNA, source degeneration, image-rejection notch filter 101811
CMOS low distort. wideband act.-RC filter for base station transmitter 80044
CMOS low-noise asymm. poly-phase filter, GSM low-IF radio receiver 108665
CMOS low-power analog FIR filter, 100 MHz, PRML equalization appl. 102366
CMOS OTA-C seventh-order lin. phase filter, HDD read channel systs. 91039
CMOS RF inductorless differential second-order bandpass filter 102634
CMOS transconductor g_m-C filter, cct. stabilization 80053
CMOS unity-gain cell gyrator techs., inverting CCII 68909
converter nonintegral harmonics from AC network resonating with DC network 134217
coplanar technol. tuneable act. planar looped filter struct. optimised in noise 125684
current harmonics elimination using series hybrid act. filter 133714
current mode filters, current differencing buffered amp., grounded capacitors 102362
current-mode all-pass filter, current feedback amp. 102340
current-mode high output impedance multifunction filters employing min. no. of FTFNs 102368
current-mode multiple loop feedback multiple output OTA-C filters 102345
current-mode universal filter using current differencing buffered amp. 91043
DAQ systs., sens. noise reduction method 131830
design using CFOA-poles, resonators/filters/oscillators 102336
differential log-domain filters, high-gain common-mode feedback ccts. 80054
distorted line voltage power syst. load symmetrization apporach 111929
distrib. network parallel act. power harmonic filter control strategy 133553
distrib. networks power quality improvement, voltage/harmonics compensation 133698
distributed generation syst. act. power harmonic filtering optim. *(Japanese)* 133905
dominant harmonic act. filter operation under realistic utility conditions 99365
doubly-fed induction machine, rotor side control strategy 134468
electrified rly., harmonics elimination, hybrid filter, fuzzy set theory *(Chinese)* 78234
electromechanical act. power harmonic filter 123710
ellipt. log-domain ladder filters, high-order low-pass and band-pass filters, HSPICE simul. 80072
ESSCIRC 2000, conf., Stockholm, Sweden (Sept. 2000) 89548
flicker compensation, act. power filters, topologies/control 122986
floating-gate MOS filter using translinear ccts., 1.25 V design 80067
front-end converters, act. power filters, control design 133705
front-end filter with automatic center freq. tuning circuitry 68910
FTFN-based current-mode and inverse filters 80079
fuzzy controlled, optimum duty cycle design 122984
GIC-based third-order act. low-pass filters 125605
harmonic distort. anal. of sigs. prod. by nonlin. dyn. systs. 90661

active filters continued
harmonic power filter current ref. synchronisation *(Slovenian)* 77369
harmonic power vars., transient perform. 122988
high output impedance current-mode multifn. filter with dual output CCIIs 91045
high power PWM inverter with series act. filter, control strategy 123605
high-Q tuned act. bandpass filter for wireless appl., varactor use 85690
household elec. appliance, PWM inverter, conducted EMI 134663
hybrid act. power filter, harmonics detect. design *(Chinese)* 112741
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
image reject notch filter, integrated tunable cct. 91024
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
indust. power syst., harmonic filters, reactive power compensation 133692
integrated PF compensator, sliding mode controller 77359
LCL-filter based front-end 3-phase act. rectifier, design/control 134162
leapfrog multiple loop feedback bandpass filters, tuning 68927
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl. 125602
line current detect. act. filter, digital deadbeat current control 133707
log-domain filter, distortion anal., Volterra series 80051
log-domain ladder filter synthesis, unified matrix method 80074
long distrib. feeder, shunt act. filter installation considerations 133663
lossless floating immittance simulator employing only two FTFNs 125607
low-noise act.-RC low, high and band-pass allpole filters using impedance tapering 102369
micropower log-domain filter using enhanced lateral PNPs in 0.25 μm CMOS proc. 125600
microstrip resonator, neg. resist., act. bandpass filter 102539
microwave act. bandpass filters, lin. and noise perform. optim. 69182
microwave act. filters, AFC theory and expt. 125608
microwave act. notch filter, varactor tuning 102364
min. time-bandwidth products for filter design, impulse response duration 80027
MMIC broadband 90° power divider using all-pass act. filter 125788
mobile broadcasting plants, power supply *(Italian)* 86317
MOSFET-R-C filtering tech. with improved lin. 91038
multimodule parallelable series-connected PWM voltage regulator 78007
noninvasive techs. for syllabic companding in sig. proc. 80058
notch freq. adjustable filter using uniformly distributed RC line 68928
opt. fiber ring resonator filter, linewidth factor, optim. *(Chinese)* 71692
OTA-C band pass filter, noise/dyn. range 102343
OTA-C filters, noise-flow-graph anal. 80060
pair-MOSFET OTA, low power supply voltage, SPICE simul., low-pass filter 102342
parallel act. power filters under unbalanced load conditions *(Korean)* 123712
parametric filter of sig. const. component, synthesis and anal. 80040
partially reson. act. filter, digital PWM control cct. with DSP 112081
planar microwave act. filters, neg. resist., tuneable bandstop/bandpass filters 125756
power conditioning, act./hybrid harmonic filters 122982
power filter, act., grey prediction control 122981
power filter, adaptive neural network based harmonic current compensation 112076
power filter, harmonic current, neuron adaptive detect. *(Chinese)* 102363
power filter perform. without compensation current detect. filter 89037
power filter robust current tracking control design 123711
power filtering using multi-current source power converter approach 112739
power filters, expanded current sync. detect. algm. 134333
power filters, unified const.-freq. integrat. control 77340
power filters for power quality improvement, EMI filtering 112084
power harmonic filter, internal model control using reson. model 133715
power harmonic filter capacitor, energy storage fuzzy control 89036
power harmonic filter using predicted current control 78118
power harmonic filters, adaptive learning current control algm. 133704
power quality conditioner, unified series-parallel deadbeat control 133703
power quality conditioner control, harmonic compensation 99360
power quality problems, solns., technol. 77342
power quality regulation by power electronics methods 99364
power syst. harmonics, active power filter, adaptive digital filtering, harmonic detect. *(Chinese)* 77356
pulp/paper mills, act. harmonic filters appl. 124153
radar receiver, act. tunable BP filter and image rejection mixer 75183
RC filter, oscill. test struct. 80038
RC notch and band-pass filters, transistor-only configs., CMOS implement. 80062
reactive current STATCOM, 3-phase power crosswise act. harmonic filters *(Polish)* 122976
ref. currents detect., Darrieus reactive power defn. 122983
SAB low-Q band-pass act.-RC filter, impedance tapering effects 91051
screened radio interf. test rooms, EMC compatibility, filter charact. *(German)* 72348
second-order BP filter design using lossy LP-BP transform. 125606
series act. power filter control algm. *(Korean)* 123713
series act. power filter deadbeat control appl. *(Chinese)* 99879
series act. power harmonic filter adopting hybrid control approach 78112
shunt act. harmonics filter, DSP-controlled, distrib. network *(Japanese)* 88431
shunt act. power harmonic filter neurocontrol scheme 78114
single phase shunt act. power filter, simul./anal. *(Chinese)* 122993
single-phase modular act. power harmonic filter, rule-based controller 112755
single-phase PWM inverter act. filters, current-tracking method 77986
single-phase three-level PWM AC/DC power converter topol. 123573
single-phase UPS, power multiprocessing conversion, high efficiency 134220
SPEEDAM 2000, conf., Ischia, Italy (June 2000) 78442
static converters, indust. and utility appls. 99747
stochastic first-order filter, universal fig. of merit 91041
subthreshold log filters, LV CMOS basic building blocks 80131
supply current harmonics, power act. filters, direct control method 112071
SVC Light, reactive power compensation, harmonic act. filtering, ABB technol. 112597
switched controller for fast voltage fed parallel act. filter 99363
switched-MOSFET prog. LV bandpass filter, hearing aid devices 80071
switched-MOSFET tech. for prog. filters operating at low-volt. supply 80070
syllabic-companding log domain filters, exponential and translational mapping approach 91033
sync. filter topol., delay approx. 91026
sync. filter topologies, delay approx., Euler fn. 80059
three phase act. power filtering using sliding mode control 99362
three-phase act. power filter, power cct. config., peak detector 122992
three-phase act. power filter controller design/implement. 99889
three-phase act. power filters modelling/simul. 112743
three-phase act. power harmonic filter direct power control scheme 89030
active filters continued
three-phase current-source act. power filter, deadbeat current control 134339
three-phase four-wire distrib. syst. harmonic suppression scheme 88436
three-phase four-wire distrib. systs., neutral harmonic mitigator design 133702
three-phase four-wire shunt act. power filter control strategy 134331
three-phase line-interactive UPS syst. implement. 134221
three-phase power act. harmonic filter, vector control transient behavior 123716
three-phase shunt act. power filter control methods 78113
tunable act. microwave filters having multilayer struct. using LTCC 102528
tunable narrow-band recursive act. MMIC filters for adaptive radar receivers 69204
UHF filters and OTAs, analog cct. design 90705
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
unbalanced lattice switched-current filters, almost phys. symm. struct. 80064
unified power quality conditioner, theory, modelling, appl. 77353
universal act. current-mode filter using modified current conveyors 68918
universal current-mode filter using CCII and current followers 68923
urban Maglev syst. invertors, soft-switching HV act. power filter 134529
voltage-sourced inverter reactive power/imbalance compensation 112656
weak-inversion log-domain filters, operating point elimination tech. 80075
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655
FeCoSiB amorph. wire mag. field sens. design, sig. proc. cct. *(Chinese)* 86481
GaInAsP/InP act./pass. microring resonator filter appl. 116732

active networks
see also active filters; current conveyors; gyrators; impedance convertors; negative resistance circuits; RC circuits
3D hysteresis piecewise-const. cct., bifurcation 90693
act.-clamp DC/DC power converters using mag. switches 88915
act.-R three-phase oscillator operating at power line freqs. 101826
all-pass act. filters with current differencing buffered amp. 102361
appl. layer routing archit. infrastructure 74386
ATM switch core, act., reusable, rapid prototyping with PCI Pamette 96333
CMOS analog act. ccts., evol. synthesis using current path based coding 125596
CMOS fully differential inductorless RF bandpass amp, 1.5 V, 1 GHz 80349
CMOS low noise transconductor, low distort. HF fully differential design 68930
CMOS LV act. inductor and appl. to RF bandpass amp. design 115025
computational intell. techs., appl. to act. networks 74045
conf., Tokyo, Japan (October 2000) 67411
current differencing buffered amp., act. building block and appls. 91043
decomp. synthesis approach to design of RF and microwave act. ccts. 91297
distributed computations by act. network calls 74000
doubly-bal. act. & pass. RF mixers, digital CMOS proc. 79641
evolvable Internet hardware platforms 108222
floating neg. resist. voltage-controlled resistor design 102760
floating resistor ccts., appls. to synaptic wts. in analog neural nets 80145
fully ZVS phase-shift bidirectional DC-DC power converter 88919
fuzzy-logic current-sensorless feedforward act. rectifier 134160
guard band cct., substr. noise suppression 80052
IN archit. based on act. networks *(Chinese)* 108393
instrum. transformer calib., impedance synthesis methods 115094
IST Project FAIN, flexible IP act. networks archit. 73999
LF differentiators/integrators for biomedical and seismic sigs. 109468
lin. ccts. with interval params., freq. response eval. 90644
lin. lumped element formulation in general coord. syst. 90646
lin. network, transfer fn., extra element theorem 101684
loss-free resistor sources with internal loss-free resistive charact. 90721
low capacitance meas., act. bridge tech. 97773
LV HF MOS transconductors for IF sects. 91044
LV neutralised class AB switched-current tech. 80057
microwave act. cct., interactive visual design 102599
microwave act. ccts., global modelling by iter. procedure 102637
microwave act. nonlin. cct., FETD algm. 102596
microwave act. resonator 127281
MMIC varactor diode, neg. capacitance, tuning range 102676
monolithic pass. and act. tunable capacitors for RF appls. 80342
multiple-output FTFN based current-mode biquadratic filters 68929
μP power delivery systs., high-current, sync. DC/DC converters 125561
PLAN, packet lang. for act. networks 74385
power IGBT series assoc., act. clamping cct. optim./integrat. 126787
power transformer act.-clamped forward cct., super nanocryst. core *(Chinese)* 134237
programmability, act. proc. interact. with, environ. 74389
PWM VSI, CMV reduction, act. canceling/compensating ccts. 123566
reflective act. network node 74387
Rohde and Schwarz EMI test receiver, microwave sig. generator as tracking generator 75773
series-connected NDR devices, low-high-low I-V charact. 91048
single-resist.-controlled oscillator using pos. four-terminal floating nullor 68642
single-resist.-controlled sinusoidal oscillator, pos. four-terminal floating nullor 125253
symbolic cct. fns., ideal op-amp *(Russian)* 91023
symbolic network anal. with valid trees and valid tree-pairs 101678
transconductance ccts. 80056
translinear-based multi-output four-terminal floating nullor, bipolar implement. 80079
two-amp. partially act.-R sinusoidal oscillator 68640
two-terminal devices with polynomial nonlin., synthesis procedure 90672
VoIP gateway, act. networks archit. using declarative lang. 74384
wideband LNA, all two-MOS-transistor amps., MOSFET VCCS 90761
SiGe HBT MMIC 16 GHz oscillator design with act. elements 125810

active noise control
acoustic duct, robust broadband control 88205
act. piezoelec. layers, sound refl./transm. control, modelling 114476
adaptive IIR filters, classical algms. 107476
adaptronics technol. for intell. lightweight struct. 68452
automobile act. noise control use with audio syst. 120593
aviation helmets, act. noise reduction, mil. jet trainer test flight 87936
confined spaces act. noise control techs. 118837
cross-updated act. noise control syst. with online secondary path modeling 84679
curved piezostructure dyn., effects of press. loading 122740
driver IS network speech interface *(Japanese)* 124036
environ. noise, multichannel free-field acoustic systs. 107366
freq. domain act. noise control syst. without secondary path model 119075
freq.-domain ANC syst. using optimal step-sizes *(Japanese)* 107417
hands-free car telephones, noise reduction using inform. on vehicle and engine speeds 118081
Kalman filter approach to act. noise control 119077
lightweight fibre opt. microphones/accelerometers, act. sound control 75601

active noise control continued
LMS algm. with saturation nonlin., adaptive filter output, stochastic anal. 84722
MRI gradient coils, act. acoustic control 132775
piezo-actuated vibroacoustic absorbers, interior noise control 123696
portable audio appls., act. noise controller syst., CMOS analogue implement. 97107
RBF network, step-size control for acoustic echo cancellers 118969
self-sens. actuation loudspeaker approach 120594
server fan noise, low group-delay ANC appls., adaptive cancellation 67613
single-point noise cancellation, Lyapunov tuning of leaky LMS algm. 130039
virtual microphones for act. noise control, forward prediction anal. 121247
Volterra adaptive filters for act. control of nonlin. noise procs. 95703
active transformers *see impedance convertors*
active vision
3D depth reconstruction, act. multibaseline stereo vision *(Chinese)* 109689
3D stance recovery, shadows use, parallel/perspective projection 118455
3D vision, smart VLSI opto-sens., laser spot posn. meas. 109707
adaptive multiresolution imager based on FPGA 120914
agent-based control archit. for act. vision systs. 73271
aircraft autonomous landing, act. vision, predictive control law 88054
analogue VLSI model of selective attention 103988
autonomous exploration, Bayesian recursive estim. strategy *(Chinese)* 73179
autonomous robotic navig., visual landmark ident. 97383
car disassembly, stereo-vision-based robot syst. 84598
coupled-view act. appearance models 129912
cross ratio, PDF 129628
depth estim., robot visual control syst., perform. criterion 97387
dyn. reconfigurable vision for intell. sens. 106796
face recogn., robust, cooperative distributed image registration *(Japanese)* 73444
foveate wavelet transform for camera control/motion recovery 106499
free-form complex surfaces, non-contact 3D sens. 89909
HiBall tracking syst., high-perform. wide-area opt. head tracking 73248
human activity real-time monitoring, multiple vision sens. 86413
intens. profile efficient computation in real-time vision 84337
interactive visual dialog, act. vision based obj. recogn. 129844
laser act. tracking, basics & appls. 93937
log-polar images, disparity estim. and vergence control 131966
motion estim. based contours tracking 118413
neural movement predictor 109680
obj. boundaries tracking, stabilized snake constraint 129653
obj. recogn. 129857
obj. tracking, robust model-based, edge-projected integrat. of image and model cues 129854
obj. tracking by adaptive color model 95594
planar manipulator, globally convergent vision-based posn. controller, adaptive visual servoing problem 97373
real-time inspection of metal laminates by means of CNN 118293
real-time teleconferencing, fast hand gesture recogn., stereo act. vision interface 108383
robot binocular navig. with act. vision 73270
robust control and tracking 84117
sens. agents, adaptive reconfiguration, distributed contract networks 131990
shape-from-shadows with controlled illuminant trajectories 129521
social robot, context-depend. attention syst. 109695
stereo 3D reconstruction, automatic neural net training 95000
stereo act. vision interface, act. controlled teleconferencing syst. 118419
stereo vision syst., lines/points matching using GA 94815
straight lines and circles in log-polar image 129488
teleoperation, automated camera placement, Visual Acts model 94735
video flow act. control by means of adaptive shifted foveal geometries 94458
zoom tracking act. vision tech. and appls. 129430
activity-oriented simulation *see discrete event simulation*
actuators
see also electric actuators; electromagnetic actuators; intelligent actuators
2D control systs., learning from implement. 109496
8 cm DVD-RAM video camera recorder, actuator control for disturbance suppression 120584
ABB vac. cct. breaker product family develop. 134260
aircraft air valve, BLDCM monitoring 76801
bionic robot arm with compliant actuators 87901
distillation column for teaching/research, instrumentation 120666
DVD player, tracking servo perform., defect. detect. 116585
electrohydraulic syst., chopper-driven mag. actuator model 116499
fighter aircraft, thrust vectoring syst. control concept 133387
flexible fluidic actuators, appl. in med. engng. *(German)* 110486
high-dens. disk drives, dual-stage actuator control 92857
IEEE 1451 smart transducer interface archit., sens. networking 74288
Italian rly., servo-actuated pantograph 100293
MEMS appls. in commun. satellites 81551
microelectronics, conf., Tehran, Iran (Nov. 1999) 78403
micromachined Si comb device, microcrack initiation, fracture toughness 104156
MICRO.tec 2000, conf., Hannover, Germany (Sept. 2000) 113199
multisensor measuring syst., implement. and calib. 95578
parallel manipulator autonomous calib. using constraint link 97130
pneumatic balloon actuators, struct. tuning, acoustic imped. control 111540
polypyrrole films, electrochem. soft actuators 79454
polypyrrole pipe electrochem. actuators, cation insertion/extraction 79456
shell finite element for smart piezoelec. composite plate/shell struct., act. vibr. control 121051
single gimbal control moment gyroscope systs., trajectory tracking, adaptive compensation control *(Chinese)* 76802
solenoid actuator, coupled syst., interlaced nonlin. iter. 128719
Terfenol-D, magnetostrictive alloy, sens. and actuator material 120724
thermopneumatic vol. actuators based on PCB technol. 127090
vehicles in platoon, automated, fault diagnostic syst. 86410
PZT:La thin films on NiTi alloys, SME, PLD 101390
Si scanning micromirror, bi-directionally movable mag. microactuator 93199
Ada
Beagle 2, Mars Lander, Ada lang. appl. 88037
CAN, at. multicast prog. 74188
Ada 9X *see Ada; object-oriented languages*
adaptive antenna arrays
2.6 GHz DBF adaptive array antenna, DOA estim. expts. 105960
2D RAKE receiver in correl. freq.-selective Nakagami-fading 119876
3G CDMA transmit adaptive arrays 85623
AGC Applebaum array for rejection of eigenvalue spread interfs. 94193
AGVs; teleoperated, with wireless link in container terminal 119887
adaptive antenna arrays continued
arbitrary antenna arrays for mm-wave direction-finding algms., spectral estim. 105929
asynchronous TDD systs., adaptive array for high-power CCI reduction 108877
beam-steering/ modulation-assisted DCA algms., comparison 73587
beamforming archit., microwave cct. design 72642
beamforming with random error in cycle freq. 107338
Bluetooth access point smart antenna 85749
broadband mobile commun., beam and null simultaneous steering S/T-equalizer 108880
broadband mobile radio, joint spatial/temporal equalizer 85829
broadband wireless access appl. 83689
broadband wireless access systs., trends and challenges 85561
cdma2000 antenna array syst., multi-user-beamforming 85748
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA, combined nonlin. MMSE beamforming and interf. cancellation 84898
CDMA and SDMA, spatial filter oriented adaptive spreading tech. 107745
CDMA cellular syst. *(Chinese)* 96497
CDMA cellular systs. with adaptive antennas, data access control 108883
CDMA cellular systs. with augmented antenna arrays, perform. 85587
CDMA mobile commun. systs., space-time iter./multistage receiver struct. 108858
CDMA mobile radio syst. with joint power control and optimum beamforming 96570
CDMA networks with smart antenna, capacity anal. 131130
CDMA smart antenna receiver with space-time proc. 119891
CDMA smart antenna syst. based on DOA estim. *(Chinese)* 119224
CDMA soft handoff based archits., sector orient. 108736
CDMA syst., adaptive array research 83675
CDMA syst., novel cost fn. of adaptive antenna 73627
CDMA syst. smart antenna, capacity improvement *(Chinese)* 72685
CDMA systs., adaptive array antenna with optimally form. beams, design 83669
CDMA technol., conf., Seoul, South Korea (1999) 67372
cellular commun. using aerial platforms 96501
cellular radio, narrow-beam antennas and fractional loading factor 74732
cellular radio, smart antennas using software radio archit. 72659
circ. polarized act. circulator radiating conformal patch, smart skin antenna 83755
CMA adaptive array antenna syst. with single receiver using TDM 96515
commun. sig. blind spatial signature estimators 108917
constrained adaptive antenna arrays, uncorrelated interf. patterns space fitting using neural networks 128886
control with GA using dominance/diploidy 128895
DFT and LMS hybrid adaptive algm. 105964
digital beamforming for angle estim. in jamming 96920
digital beamforming systs., adaptive pattern synthesis 72681
digital phased array antenna syst. for cellular PCS band appl. 83759
digital-to-radio converter for software radio 74579
DOA estim., multipath environ. 72640
DOA super-resoln. estim. in switch beam smart antenna 84653
double-directional channel meas. 84655
DS-CDMA adaptive array antenna systs., grouped multipath reception *(Japanese)* 107367
DS-CDMA cellular systs., adaptive array antenna beam pattern selection *(Japanese)* 131255
DS-CDMA detect. with combination of smart antennas and parallel interf. canceller 96518
DS-CDMA mobile radio with multimedia services, downlink beamforming 96552
DS-CDMA syst., power inversion adaptive array antenna for high power interf. suppression 72370
DS-CDMA syst. with smart antenna in wideband multipath channel 130287
DS-CDMA systs., adaptive array antennas with common correl. matrix *(Japanese)* 108822
DS-CDMA systs., smart antenna testbed 128890
DS-CDMA systs. with smart antennas, DOA estim. 96380
DS-CDMA wireless commun., PN code acquisition with adaptive antenna array/threshold 74668
DS-CDMA wireless commun., smart antenna PN code acquisition 108735
DS-CDMA-based adaptive antenna array, online calib. algm. 105977
dyn. spatial channel assignment simul. 119989
EM band-gap struct., class./charactn./appls. 83222
EM coupled microstrip antenna smart mech. actuated two-layer microstrip antenna 72649
ESPAR antenna, adaptive beamforming based on steepest gradient algm. 105957
ESPAR antenna, adaptive beamforming using seq. perturb. 83761
European smart antenna test-bed, field trial results 117849
fast-converging robust adaptive arrays 94197
FDTL-spatial/MLSE temporal equalizers in CCI, link-level simul. results 108891
ferroelec. smart antennas, null pattern synthesis 83769
FH CDMA mobile cellular networks, adaptive array appl. 107308
freq.-invariant adaptive receiving/transmitting null beamforming 108871
FTDL-spatial/MLSE-temporal equalizer, link-level simul. using field meas. data 108890
FTDL-spatial/MLSE-temporal equalizer, perform. eval. using field meas. data 84875
GPS receiver, interf. nulling, SS sig., adaptive antenna 74903
GPS-SDMA syst., transmitter posn. estim. methods 85916
GSM networks, appl. of smart antennas for capacity enhancements 117858
GSM-1800 syst., adaptive array antenna, calib. errors 94195
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IEEE wireless commun. and systs., conf., Richardson, TX, USA (1999) 78396
IMT-2000 smart antenna syst., radiation patterns of circ. array 105961
indoor wireless commun., adaptively sampled near-field smart array antenna 108879
Internet wireless access, highly sectorized syst. 83701
Japan, advances in adaptive antenna technols. 105956
K-band broadband fixed wireless access base station, adaptive array antenna 119928
lens antenna arrays, design and appls. 83760
LMR, CCI reduction and path-diversity reception 74739
low complexity array response vector estim. 105935
microcellular environ., spatiotemporal non-LOS propag. charact. *(Japanese)* 120050
microstrip adaptive array antenna, opt. control 83703
MIMO commun. systs., advanced wireless access soln. 84656
MIMO interf.-limited cellular syst., attainable throughput 108657
MIMO multiuser smart antenna systs., spectral efficiency optim. 83753
MIMO vector channel sounder meas. for smart antenna syst. eval. 120062

adaptive antenna arrays continued
MISO CDMA transm. with simplified receiver for wireless commun. handsets 74791
MM-wave broadband wireless indoor networks, combined spatial-temporal CM equalization 85465
mobile radio, deterministic spatial channel models, design procedure 108905
mobile radio, DOA estim. using weighted subspace fitting 108737
mobile radio adaptive antenna arrays, beam-steering/directive characts. 96433
mobile radio appls., pot. of adaptive antennas 117857
mobile radio MIMO smart antennas, optim. 85863
mobile transmit diversity for base-station antenna arrays 105934
modified CMA and polyphase filters for adaptive array *(Japanese)* 130110
monopulse antenna arrays, power optim. 117846
MTT-S International Microwave Symposium, Phoenix, AZ, USA (2001) 78477
multibeam interf. canceller based on order extended fast algms. 83393
multichannel array subbanding with adaptive proc., architect. 96537
multipath fading mitigation via filter banks 73653
multiple-antenna OFDM systs., channel estim. and adaptive power allocation 85520
multiuser sig. design/detect. using interf.-resistant modulation 130156
Nakagami fading, CCI, av. error probab. of optimum combining 85747
nonstationary receiver-transmitter config. 107362
nulling antenna, fast follower jammer suppression *(Chinese)* 85932
OFDM-CDMA systs., adaptive antenna array appl. 108872
opt. SCM transm. 128897
optimal subarray size for spatial smoothing 117847
optimal wideband transmit antenna diversity utilizing channel state inform. 108745
overloaded array proc. with spatially reduced search joint detect. 107595
PCS antenna design, miniaturization 117810
phased arrays, adaptation to engng. condition 117824
PHS base station, perform. of adaptive array antenna *(Japanese)* 74843
PHS network, massive scale air interface reciprocity (motion) survey 108908
planar antenna arrays, appl. in mobile commun. systs., beamforming algm. 117860
planar array smart antenna syst. with hybrid analog-digital beamforming 83758
power reduction with null depth trade-off 105965
radio transmitter ident., adaptive array algms. based on transient response *(Japanese)* 107368
radioinertial navig. equipt. with adaptive antenna array, jamming resist. 120485
rect. arrays for uniform wideband beamforming with adjustable struct. 105963
reduced-complexity detect. algms. for systs. using multi-element arrays 73732
SDMA, space domain multistage interf. 72353
SDMA base station receiver for broadband fixed wireless access systs., modified DCMP algm. 108647
semi-blind closed-form co-channel sigs. separation method used in smart antenna systs. 72680
sidelobe canceller-type preprocessor, adaptive array antenna *(Japanese)* 72687
smart antenna, tracking capability, RLS algm., 3G mobile commun. 94194
smart antenna array calib. incl. amplit. and phase mismatch and mutual coupling 83754
smart antenna base stations with dyn. slot allocation, forward-link capacity 108810
smart antenna design, variable geom. truss struct. 117829
smart antenna syst., DSP board, W-CDMA WLL channel 72639
smart antenna systs., impact of W-CDMA sigs. 83705
smart antenna technol. for wireless commun. 117843
smart antennas for mobile commun. systs. 83722
smart antennas for multi-service UMTS, perform. study 117856
smart antennas in micro-/pico-cellular propag. environ. 117842
smart antennas in mobile commun. systs., calib. 117859
smart base station antenna 85767
smart WLAN syst., improved algm. for dyn. slot assignment 108309
smart-antenna space-time UMTS uplink proc. for syst. capacity enhancement 108843
SMI and CMA adaptive algms., combination 108881
software antenna, broadband multimedia sig. 83682
space diversity S-ALOHA with steerable beam smart antenna arrays, perform. anal. 74661
space-time array data simul. 107534
space-time sig. proc./coding 107310
space-time transmit precoding with imperfect feedback 117948
spatial domain interf. canceller using multistage adaptive array with precise timing estim. 108878
spatial/temporal optimal receiver using array antenna 85869
spatial/temporal receiver, broadband wireless syst. 74534
spatio-temporal equalization based on estim. channel response 119182
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
STAP/adaptive antennas, pragmatic approach 84773
subband sig. proc. based, develop. 73628
TD-SCDMA syst., perform. of smart antenna 96517
TDD systs., automatic calib. of adaptive array using dispersed SPDT switches 120057
TDMA smart antenna wireless base stations, Internet controlled calib. syst. 85568
terminal/base-station antennas, Wroclaw Univ. of Technology study 117835
third generation mobile radio systs., use of smart antennas 120064
transmit antenna wt. adaptation with feedback, stochastic gradient algm. 84687
transmitting array antenna rem. calib., sync. orthogonal codes 105959
tripole planar adaptive array 72657
UMTS spatio-temporal propag. trial results 83302
uniform circ. array, multipath param. estim. *(Chinese)* 117845
vehicular speed response adaptive antenna design *(Japanese)* 105971
W-CDMA blind adaptive antenna array beamforming scheme 108924
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108885
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
W-CDMA reverse link, coherent adaptive antenna array diversity/SINR-based fast transmit power control 74639
W-CDMA reverse link, receivers for packet transm., comparison 108884
W-CDMA syst. smart antenna, wideband multipath channel 131063
W-CDMA UMTS systs., switched beam antennas, perform. and capacity 85844
wall antenna directional beamforming, electronic and opt. methods *(Polish)* 105972
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short-term channel props. 74666
WCDMA UTRA uplink, joint demodulation with smart antennas *(English)* 106069
adaptive antenna arrays continued
WCDMA UTRA uplink with unknown channel model order, smart antenna schemes 74688
wideband DS/CDMA commun., combined space-time multiuser receivers 96519
wideband smart antenna systs., freq. compensation, perform. anal. 128902
wireless ad-hoc network, adaptive antenna techs. 105978
wireless airborne commun. systs., overloaded array proc. 108694
wireless broadband commun., constraints/possibilities 83684
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
wireless mobile systs. with ISI and CCI, spatial-temporal proc. 96520
Xilinx Virtex-E FPGA based 20-GFLOPS quadratic residue proc. 96979
GaAs MESFET phase shifter MMIC for C-band smart antenna combining 69200
$LiNbO_3$:Ti opt. waveguide for opt. beamforming network in multibeam array antenna 105958
adaptive arithmetic codes *see adaptive codes; arithmetic codes*
adaptive beamforming *see array signal processing*
adaptive codes
see also adaptive decoding
2D shape-adaptive transforms, math. formulation 129755
3D adaptive wavelet transform/context modeling for scalable lossy to lossless video coding 95211
arith. coders, carry propag. control method, loss bits *(Japanese)* 72903
ARQ adaptive hybrid schemes for wireless links 94292
ARQ hybrid schemes, adaptive block encoding 129055
ATM commun., smooth and adaptive forward erasure correction 84946
ATM satellite traffic, throughput anal. and coding 85917
ATM wireless networks, adaptive FEC scheme for data traffic 117952
audio sigs., low delay perceptually lossless coding 106377
binary entropy coder 106178
binary images, adaptive VQ 106872
block-based adaptive lossless image coder 84454
Bluetooth, adaptive link-level error recovery mechanisms 85488
bounded indiv. seqs., zero-delay adaptive seq. lossy source coding 117935
broadband radio access networks, real-time ATM, hybrid ARQ protocol 131108
CDMA satellite systs., adaptive orthogonal code assignment 108991
CDMA wireless commun., adaptive signaling schemes 108740
cellular radio data channels, rate-adaptive protocol 85896
cellular traffic, hybrid method using optic beam interconnects 85895
cellular voice/data services, integrated multiple access control/adaptive channel coding 84976
CELP coders, frame erasure concealment algm. 118090
content-adaptive watermarking based on stochastic multiresolution image modeling 129710
DCT PM, robust digital watermark procedure for still images 118620
DCT watermarks, effective channel coding 95366
DS-CDMA mobile reverse link, variable-rate adaptive channel coding 74630
DS-CDMA multicarrier systs., rate adaptive convolutional coding 108742
DS-CDMA PRN, adaptive error control 108545
DS-CDMA systs., adaptive serial search PN code acquisition scheme 85757
DS-SS systs., adaptive double-dwell PN code acquisition 108697
DS/CDMA adaptive rate convolutionally coded multicarrier syst., anal. 108809
error-robust video coding with channel-optimized trellis-coded quantization 106995
fast fractal image encoding based on adaptive search 106883
FEC/ARQ for utility-based wireless fair scheduling, perform. improvement 131069
flat-fading channel variable-rate adaptive trellis coded QAM 119979
FM band terrestrial DAB, soft selection combining 120507
forward-adaptive wavelet image coder design and anal. 95073
FS-1016 CELP, algm. compatible improvements 106371
FS-1016 CELP, enhancement via selective harmonic pre-emphasis 73026
Glicbawls, grey level image compression algm. 107080
GSM, adaptive multi-rate speech service *(English)* 74723
GSM, adaptive multirate speech codec *(English)* 74721
GSM adaptive multi-rate syst., wideband speech coding *(English)* 74724
H.263+ compliant video coding with packet loss resilience 118554
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
image and video coding, shape-adaptive transforms, overview 107000
image coding, adaptive transforms with overlapping basis fns. 106887
image transm. over noisy channels using joint source-channel coding 95155
indoor precoded packet wireless systs., fast code rate adaptation 96445
integrated video commun. for wireless ATM 129728
IP telephony using intrastandard hybrid speech coding 108073
IR wireless commun. systs., direction diversity, adaptive-rate code combining 108198
limited-delay lossy coding/filtering of indiv. seqs. 129140
lin. prediction for lossless coding of greyscale images 84456
LOS bandlimited channel, efficient error free data transm. 111583
lossless image coding, adaptive predictor combination 118564
lossless image coding, design of min.-rate predictor 118579
lossless image coding, integer-to-integer wavelet transforms 84486
lossless image coding using optimum prediction generated by local image features 106868
lossless image data seq. compression using optimal context quantization 107053
lossy context-based adaptive entropy coding, lookahead search 95385
lossy image compression, adaptive quantization and noise detect. 107090
lossy image compression using adaptive wavelet filters 129709
low bit-rate video coding using space-freq. adaptive coding 129723
low-bit-rate adaptive mesh-based motion compensation tech. 95319
low-bit-rate CELP coders, adaptive window excitation coding 119828
low-delay audio coder using adaptive VQ 129379
low-energy adaptive bus coding, Mediabench benchmark set run-time memory access traces 92108
mil. commun., ATM and Internet via satellite 108164
mobile commun. systs., research challenges for 3G and 4G 85705
MPEG-2 content-based error-resilient scheme, AMISP 106966
MPEG-4 video, obj.-adaptive vertex-based shape coding 118637
multiresolution adaptive image pyramid based compression algm. 106984
nonguaranteed network services, video frame rate control 74205
on-board satellite image compression, bit rate and local QC using rate/distortion criterion 118558
optimal adaptive DCT watermarks 118619
parametric lossless image compressors 84455
Rayleigh channel, combined source adaptive and channel optimised VQ algm. 83900
region-based video coding by shape adaptive DCT, prediction error regions determ. 95100

adaptive codes continued
rem. sens., digital image, class. coding, software simul. *(Chinese)* 95142
resoln. and frame-rate scalable subband/wavelet video coder 106970
RS coded FH/SSMA commun., combined power/code rate adaptation 74544
RS codes, adaptive coding and modulation for Rayleigh fading channels 128995
run-length adaptive encoder for bi-level images 107062
scalable speech coder based on wavelet transform *(English)* 74486
scene adaptive multiple coding for robust image transm. 84475
skew-coord. DCT method for images, entropy coding based on Gaussian mixture distrib. model 73327
smooth/adaptive forward erasure correcting 119354
space-time sig. proc./coding 107310
standardisation of adaptive multi-rate codec 120034
TETRA Trans European Trunked Radio, alg. CELP speech coding *(Chinese)* 73030
text compression using fewer lexical n-grams 106189
transcoder principle, adaptive motion vector model *(Chinese)* 129059
video transm. over erasure channels, joint source-channel rate allocation 118613
VLBR wavelet video coding combined with H.263 and SLCCA 73355
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
watermark for digital image authentication, wavelet packet/adaptive spatial transform. 95061
wavelet image compression, simple and efficient algm. 95287
wavelet image compression/coding scheme 106990
wireless systs. bandwidth-efficient multimedia commun. 83798
XML compression with multiplexed hierarchical PPM models 106842

adaptive control
see also adaptive systems; model reference adaptive control systems
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 133212
3-phase act. power filter control using neural networks 112083
ABR adaptive congestion control with act. buffer control 95766
AC motor self-tuning PID adaptive speed controller 123334
act. mag. bearings, control design/simul./expts. 116500
act. power harmonic filters, adaptive learning current control algm. 133704
act. service mgt., novel archit. 130572
act. services, QoS, distributed GA, robust adaptive control 74308
adaptronics technol. for intell. lightweight struct. 68452
ARQ, control params. decision 107918
asymmetric wireless commun., OFDMA/TDD packet transm. 119888
asynchronous AC drive adaptive fuzzy neural power control 134430
ATM network congestion control by neural net 130527
ATM networks, adaptive weighted round robin scheduling algm. 84930
ATM networks, predictive congestion control, multiple sources/single buffer scenario 73780
atmos. adaptive opt. syst., adaptive control algm. anal. *(Chinese)* 76850
av. Markov decision chains under Lyapunov stabil. condition 124506
B-spline fuzzy neural networks, control appl. *(Chinese)* 77812
biologically inspired autonomous robot, approach-avoidance behaviors learning 75628
broadband satellite multimedia networks, service mapping and QoS provisioning 109008
camera tracking syst. using self tuning regulator/visual feedback 129450
car-following collision prevention, adaptive network fuzzy inference syst. 113119
CDMA, adaptive power allocation for mobile stations under soft handoff and traffic deviation 96582
CDMA networks, adaptive resource allocation for network-level QoS assurance 74857
Chua's cct. adaptive control/sync. 101720
CMP, optimal, neuro-fuzzy inference 92005
combustion engine torque output equalisation, AC starter generator 123316
computerised control with adaptive rate, elastic scheduling 86412
congestion control using agent-inspired act. network resource trading model 74105
cruise control, collision prevention between cars 113125
DBS networks, adaptive rate control/QoS provisioning 85920
DC motor drive, field-weakening regime, nonlin. MIMO speed control 134446
DC servomotor adaptive fuzzy sliding-mode controller 99689
DC servomotor speed control, adaptive fuzzy logic controller design, tabu search 134071
DS-CDMA variable data-modulation syst., multipath transm. 108714
DS/CDMA cellular overlay systs., open-loop power control error anal. 85856
dual-axis Maglev positioning syst., adaptive sliding mode controller design 128731
e-beam evap. syst., adaptive controller design/implement. 68197
ECN decentralized adaptive marking algm. 74325
elec. switching networks, Cuk convertor, Euler-Lagrange model 88942
environ. noise, multichannel free-field acoustic systs. 107366
ESPAR antenna, adaptive beamforming based on steepest gradient algm. 105957
ESPAR antenna, adaptive beamforming using seq. perturb. 83761
face focus coding, H.263+ video coding std. 73426
FACTS, multimodel adaptive control, design params. selection 111937
fading channel with adaptive feedback equalization, variable rate data transm. 107709
fair wireless channel allocation, adaptive zone selection/modulation under nonuniform traffic 108212
FDD mode, adaptive method for closed-loop transmit antenna diversity 120036
filtered back EMF based speed-sensorless IM drive 134460
FNS muscle model ident. using Matlab Simulink 122328
fork lift vehicle speed control, DC motor drive, GA 134551
freq.-hop wireless commun. networks, adaptive-transm. protocol 130420
fused-silica plate SLM, intense fs laser pulses, adaptive feedback control 105426
fuzzy PSS design using GA, ANN 88383
GA for mobiles equilib. 108695
gas turbine combustors, NO_x emissions, adaptive predictive control 88599
Genetic Algorithm for Mobiles Equilibrium applied to video traffic 107906
grid-connected PV, single phase inverter, fuzzy predictive current control 112421
hearing aids, adaptive dyn. range optimisation 76678
human-machine interface to match human satisfaction *(Japanese)* 87367
hybrid Kalman-Bucy filter struct. synthesis 119041
hydroelectric power station control, Krasovskii's works 112354
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IM, neuro-fuzzy controller design on DSP 134053
IM, rotor resist. estim., autotuning algm. *(Chinese)* 134008
IM, speed sensorless FOC, full adaptive backstepping design 134040
IM, vector controlled, params. var. effect compensation 123400
IM control, unknown torque, sensorless speed tracking 134028

adaptive control continued
IM drive high-perform. adaptive parallel distributed compensator 123866
IM drive with time delay, speed controller design 78214
IM nonlin. control, parallel neural network estimator training 123459
IM sensorless torque control syst. 123410
image-based adaptive control, nonlin./stabil. 84137
indirect water-cooled chilling systs., variable-speed pumps, adaptive control 89464
induction machine direct torque control, adaptive flux observer *(Chinese)* 88731
induction machine params. estim. using continuous-time observer 134014
induction servomotor syst., adaptive fuzzy sliding-mode controller design 123699
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
integrated predictive/adaptive building HVAC/lighting control 89453
integrated terrestrial-satellite wireless networks, multimedia appls., adaptive error control 85024
intell. posn. controller-based adaptive self-tuning drive syst. 134449
IP QoS mgt. framework based on DiffServ *(Chinese)* 74098
IS protection, adaptive methods with directional antennas 119115
KNU-2 PWR fuel loading, parallel adaptive simul. annealing scheme 99515
large-capacity power transformers, adaptive cooling control device *(Chinese)* 112584
laser Doppler vibrometer body vibr., adaptive compensation *(Korean)* 121234
layered video multicast, inter-session fairness 130871
lighting controller integrat. into self-adaptive building control syst. 113126
lin. motors, output feedback adaptive robust control 88766
long-range depend. network traffic, rate control of elastic connections 84814
machining by laser, adaptive measure/neural net control *(Chinese)* 117552
mag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 89022
MAGLEV syst., posn. tracking, adaptive robust nonlin. control 83183
mechatronic systs., nonlin. observer and control design 78223
microscale adaptive optics, wave-front control with μ-mirror array and VLSI stochastic gradient descent controller 116784
missiles, tail-controlled, adaptive control, param. affine 77130
mobile wireless ad hoc networks, adaptive control protocol 74763
mobile wireless environ., predictive mobility support for QoS provisioning 131154
MPEG multichannel video data streams, adaptive QoS control *(Japanese)* 95249
MPEG video data streams multi-channel commun., adaptive QoS control method 129799
multielement dual-freq. LCD, high-speed adaptive opt. wave-front correction 71425
multimachine power syst. turbogenerators, adaptive neurocontrol scheme 111898
multimedia stream service with intell. proxy 96232
multiple product procs., adaptive control, microelectronics mfg. facilities 100724
multiple-antenna OFDM systs., channel estim. and adaptive power allocation 85520
nonlin. chaotic Chua ccts., robust tracking control, fuzzy approach 90678
nonlin. systs., semi-strict feedback form, neural network adaptive robust control 113046
nonsalient PMSM drive sensorless control method adaptive observer 113067
normal form SISO nonlin. systs., neural network adaptive robust control 113058
NPP low-press. heaters adaptive automatic level control 123129
nuc. reactor load follow capability, fuzzy adaptive robust optimal controller 123133
observer-based sensorless IM drive stabilisation 134442
on-board satellite image compression, bit rate and local QC using rate/distortion criterion 118558
output feedback control, motor friction appl. 88759
planar manipulator, globally convergent vision-based posn. controller, adaptive visual servoing problem 97373
PM lin. sync. servomotor drive adaptive hybrid neurocontrol scheme 123948
PM sync. motor drive, adaptive fuzzy logic control perform. anal. 89318
PMSM drives, adaptive fuzzy logic-based nonlin. robust control 134493
polymeric powder coating proc., adaptive computer-aided control syst. *(Russian)* 67685
port controlled Hamiltonian model of FACTS with adaptive L_2-gain control *(Chinese)* 122951
power converter control techs. 99745
power syst. adaptive preventive-restoration control syst. 77273
power syst. stabil. enhancement, variable series capacitor, recurrent NN *(Japanese)* 99291
power syst. stabilizer, adaptive fuzzy control tuning 133529
PSS, fuzzy logic tech., freq. domain anal. 77223
PV power syst. adaptive MPPT scheme 123260
QC strategy, inspection reduction, acceptance-sampling schemes 124436
QoS hierarchical control archit. for configurable multimedia appls. 108419
QoS provisioning distributed call admission control 131275
QoS routing with adaptive updating of link states 74011
QoS-sensitive wireless mobile networks, adaptive distributed call admission control 85751
quasi-reson. buck converter, large sig. modeling, regulated unified model 88977
quasi-reson. buck PWM convertor, passivity-based adaptive controllers 123639
quick-return servomechanism, adaptive fuzzy neural network control 77903
RCA cleaning syst. adaptive predictive temp. control, thermal model *(Japanese)* 124304
reson. DC-DC power converters, adaptive fuzzy control algm. 112658
RF Cartesian predistorter for high power class-AB amp. 91250
RIE syst., neural net-based adaptive proc. control 115622
robot high perform. IM drives, speed neuro-controller 113080
rot. machines, vibr. sigs., adaptive noise control *(Spanish)* 88681
RTP, wafer temp. control, stable nonparametric adaptive control 126267
rules adaptive fuzzy controller based on neural network, AC servo syst. *(Chinese)* 112732
SAR raw data, compression using method of BABC *(English)* 73295
satellite commun. line quality change, adaptive control mechanism *(Japanese)* 96618
second-order ΔΣ modulator with sig. adaptive control archit. 90983
self-tuning dual input power syst. stabilizer, ANFIS-based 122876
sens. agents, adaptive reconfiguration, distributed contract networks 131990
separately-excited DC motor global speed control 112543
single gimbal control moment gyroscope systs., trajectory tracking, adaptive compensation control *(Chinese)* 76802
sinusoidal sigs., unknown freqs., global estim. 73662
smart antenna design, variable geom. truss struct. 117829
speed sensorless vector controlled IM drive, core loss 89321
SRM, adaptive torque-ripple minimization 77852

adaptive control continued
SRM drive intell. adaptive online direct EM torque estimator 123875
SRM drive speed control using switching angle self-tuning 134501
SRM speed control using adaptive sliding mode observer *(Korean)* 77841
STATCOM, adaptive passivity PI nested control 133541
STATCOM reactive current, robust adaptive control *(Chinese)* 89033
static VAR systs., adaptive voltage regulator design 111845
stochastic power control with averaging 85772
supercond. generator control, adaptive/fuzzy logic stabilizer comparison 77814
SVC, arc furnaces voltage flicker/phase current imbalance elimination 122980
sync. generator fuzzy adaptive control scheme 123395
sync. generators, unknown mech. power, adaptive nonlin. excitation control 77228
sync. lin. motor servodrive, adaptive neural control 78203
sync. machine nonlin. adaptive optimal excitation control scheme *(Chinese)* 77840
three-phase AC/DC PWM power converter, adaptive directive neurocontrol 123643
unity PF rectifier adaptive passivity-based controller 88967
upper limb myoelec. prosthesis control, adaptive framework develop. 98711
vehicle vision syst. for adaptive cruise control *(French)* 73132
video frame rate control over explicit rate networks based on channel rate prediction 106974
VLSI central pattern generator chip for robot leg control 81411
VoD servers, meas.-based adaptive stat. admission control 109375
voltage-sourced inverter reactive power/imbalance compensation 112656
W-CDMA cellular phone syst. adaptive fuzzy power control 120015
wireless cellular networks, mobility-based predictive call admission control/bandwidth reservation 120018
wireless commun., transmit diversity scheme with power control 108876
wireless commun. networks, multimedia services, adaptive resource allocation 74438
wireless point-to-point link with multimedia appl. support, design/prototyping 108360
ZVT inverters, load adaptive fixed timing control 88834

adaptive decoding
see also adaptive codes
AM band DAB, RS decoding algms. 120508
blind/robust space-time receiver for turbo coded syst. 106135
FM band terrestrial DAB, soft selection combining 120507
matched and adaptive subspace detectors, interf. dominates noise 107602
PSP-based decoding for space-time trellis code, time-variant wireless channels 83836
reduced-complexity iter. decoding 72816
space-time trellis code, soft-decision adaptive decoder 84888
turbo code decoder, adaptive iter., power consumption 72807
turbo codes on flat fading channels, adaptive iter. detect. 83857
varying channels, progressive source coding with regressive channel coding *(English)* 72892

adaptive delta modulation *see adaptive modulation; delta modulation*

adaptive differential pulse code modulation *see adaptive modulation; differential pulse code modulation*

adaptive equalisers
see also blind equalisers
ABLMS equalisation, nonuniform amplit. division 107679
antenna array, spatial/temporal receiver, broadband wireless syst. 74534
AR equalization with const. modulus criterion 119191
Bayesian DFE for alpha-stable noise environ. 107720
binary signalling, adaptive min.-BER DFE 107677
blind adaptive equalizer, dithered signed-error CMA 73836
blind adaptive phase offset correction 73833
canceller-equalizer, pipelined implement. of decision-aided equalisation 108504
CDMA forward link, reduced-rank adaptive MMSE equalization 108919
channel equalization using class. trees 119188
chaotic commun. systs., adaptive blind equalization, EKF 107676
CMOS low-power gigabit Ethernet analog equalizer 85446
color images, adaptive-neighborhood histogram equalization 73161
commutating DFE for digital mobile radio 85726
DFE on systolic array archit. 119173
DFE under slowly fading multipath channels, error probab. anal. 84876
DFE with complete lattice orthogonalisation 95806
digital receiver phase equalization, min. phase SAW filters anal. 107541
discrete chaotic syst., robust dead-beat sync., secure commun. *(Chinese)* 94221
DMT receivers with selective windowing, per tone adaptive equalization 131008
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
DS-CDMA cellular systs., SINR maximizing equalizer receiver 119949
DS-CDMA commun. syst. in time-varying multipath channels, adaptive H_∞-subweight equalizer 85521
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS-CDMA systs. under multipath fading channels, robust adaptive DFE receiver 84856
DVD-ROM readout RF sig. equalization, ANFIS-based PRML syst. 116595
DWDM adaptive dispersion compensator based on re-MUX concatenated AWG config. 120368
equalisation of time variant multipath channels using amplit. banded LMS algms. 73823
fading channel with adaptive feedback equalization, variable rate data transm. 107709
FDTL-spatial/MLSE temporal equalizers in CCI, link-level simul. results 108891
FIR-/IIR-based, design realization *(Chinese)* 95818
FTDL-spatial/MLSE-temporal equalizer, link-level simul. using field meas. data 108890
hybrid factor graphs and adaptive equalization 130271
ISI adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sigs. 107690
lin. equalization algm., wavelet packets transform *(Chinese)* 130265
LMS and logistic-lin. equalizers, adaptive combination for speed-perform. improvement 119174
low-power and high-speed equalizer for mag. storage read channels 80125
M-QAM digital commun., adaptive equalizer, wavelet network *(Chinese)* 73842
microcellular environ., spatiotemporal non-LOS propag. charact. *(Japanese)* 120050
MLP-based DFE with lattice struct. 73840
MLSE equalizer in time-dispersive channels based on adaptive channel estimator 108761
MMSE DFE, interior point least sq. estim. 85657

adaptive equalisers continued
mobile channel equalization, complex real time recurrent learning fully recurren neural network appl. 107712
mobile radio environ., perform. assess. of adaptive equalizers 108763
multichannel array subbanding with adaptive proc., architect. 96537
noncoherent LMS algm. for noncoherent seq. estim. 73830
noncoherent seq. estim. combined with noncoherent adaptive channel estim *(English)* 107719
nonlin. channel noise reduction/ident. using neural net 130269
OFDM receivers, freq. domain equalization of IQ imbalance 119177
OFDM syst., adaptive equalization study *(Chinese)* 73838
OFDM syst., alias-free subband adaptive equalizer 107710
OFDM-dedicated short range commun. modem, equalization 85755
on-line eval. of equalizer perform. based on HOS 119189
optimized DFE for convolutional coding 130278
pass./adaptive opt. equalizer for reconfigurable multiwavelength networks 96673
piecewise RBF decision feedback channel equalizer, VLSI archit. 102480
PMR, bi-directional adaptive equalizer 108762
polariz. insensitive adaptive gain profile equalizer, variable Faraday rotators 131435
QAM, CPLD device *(Chinese)* 130255
SFH SS commun., equalization/decoding 108674
Shalvi-Weinstein receivers, domains of attraction 84854
sig. proc. advances, totally adaptive systs. 73615
single-chip Q-VLMS MLSE equaliser LSI, 100 Mbit/s, TDMA mobile radio 108653
slow freq. hopping syst., error code rate reduction, SW sq. root Kalman filters *(Chinese)* 74547
TDMA systs., optimal training seqs. 119226
turbo equalization, jointly optimized adaptive equalization/channel decoding 107717
UTRA TDD adaptive multiuser MMSE down-link receiver techs. 108958
UWB SAR imagery, 2D polarimetric calib. filters 96961
wavelet packet-based subband adaptive equalization 107721
wireless mobile systs. with ISI and CCI, spatial-temporal proc. 96520
Si MEMS/MOEMS, lightwave network appls., review 82196

adaptive estimation
see also adaptive signal processing
algm. for maneuvering target tracking 107458
autoregressive models, adaptive, criterion 73602
binary signalling, adaptive min.-BER DFE 107677
blind adaptive optimum lin. cancellation for long code CDMA 73743
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind MAI suppression, inform.-theoretic approach 119221
blind sig. separation using risk-sensitive criterion 84709
block-based video coding, blocking artifacts reduction 106859
CDMA forward link, reduced-rank adaptive MMSE equalization 108919
commun. sig. blind spatial signature estimators 108917
crosstalk-robust struct. based on sub-band noise estim. 129368
deterministic sig.-noise models, suboptimal robust estim. 107396
direction set based algm. for spectral estim. 95689
DOA estim., adaptive quantization based on database retrieval tech. 107387
downlink transmit beamforming with selective feedback 108925
DS SS systs., blind channel estim. and data recovery 107422
DS-CDMA asynchronous systs., code acquisition/interf. cancellation 107758
DS-CDMA flat fading channel blind adaptive MMSE receiver 107753
DS-CDMA multirate/multicode systs. with long spreading codes, channel estim. 84917
DS/SS systs., fast varying correl. multipath channel, blind adaptive estim./diversity combining 108529
ECG sigs. with little a priori inform., adaptive filtering 110620
equalizer perform., on-line eval. based on HOS 119189
evoked pots. latency change estim., algms. perform. comparison 76256
FIR predictors, adaptive general param. extension 119026
freq. estim. by variable sampling proc., appl. 84798
fuzzy adaptive GA, crossover and mutation probab. *(Chinese)* 113968
genetically determined variable struct. multiple model estim. 118999
GPS navig., enhanced accuracy, interact. multiple model estim. 131713
hybrid Monte Carlo-recursive ident. for blind detect. over Rayleigh fading channel 119197
ICA model, source distrib. adaptive MLE 107445
IIR blind equalizer class, pole placement techs. 130067
IIR gradient-based adaptive notch filter with constrained poles and zeros 130066
IM drive with time delay, speed controller design 78214
image intens., struct.-adaptive filtering based on polynomial regression modeling 73156
image restoration by neural networks 106841
image restoration in act. sounding systs. 120403
Kalman filtering-based speech enhancement algm. 118079
KLT basis vectors, blind adaptive estim. 83847
line spectrum estim., data-adaptive regularization method 118886
matched and adaptive subspace detectors, interf. dominates noise 107602
MCM systs., adaptive channel estim. algm. using cyclic prefix, convergence anal. 72730
min. rate adaptive estim. over continuous hyper-params. 83791
minor component extraction with modular struct. 107383
MLSE equalizer in time-dispersive channels based on adaptive channel estimator 108761
mobile downlink transmit diversity, feedback efficiency and robustness 85669
mobile radio, variant fading channel estimator with speed estim. 85677
multivariate adaptive sampling, comput. EM anal. minimis., interpolation 102552
myoelectric surface sigs. recorded during dyn. protocols, adaptive amplit. estim. 76270
noncoherent LMS algm. for noncoherent seq. estim. 73830
noncoherent seq. estim. combined with noncoherent adaptive channel estim. *(English)* 107719
OFDM systs., adaptive algm. for sym. timing/carrier phase estim. 128986
radar detect., adaptive cosine estimator, max. invariance 109262
robust speaker ident., adaptive fusion of speech and lip inform. 106413
robust speech recogn., adaptive model-based tech. 106422
robust subspace tracking in impulsive noise 130035
satellite channels, weather-induced impairments, prediction & adaptation 131306
satellite navig. receiver, robust estim. for integrity 120087
second order syst. nonlin. meas., 2D adaptive algm. 107561
sens. bias fault diagnosis, robust, in nonlin. systs. 86470
Shalvi-Weinstein receivers, domains of attraction 84854
single-tone freq. estim. based on autoregressive model 119017
space-time adaptive estim. data, large stationary discretes 118902

aptive estimation continued
space-time cochannel TDMA, DOA adaptive acquisition 108604
sparse time-varying channels, adaptive matching pursuit algm. for estim./equalization 107706
speech recogn., Markov random field lin. regression algm. 118128
thresholding algms., max. fn. spaces with given convergence rate 118925
two-channel meas. syst., speech sig. filtering and sync. error estim. 106349
variable bandwidth mean shift and data-driven scale selection 106563
VBR MPEG-2 video, traffic prediction/network resources estim. 107048
video coding, space-freq. block motion field modeling 73339
Volterra param. estim. using zero tolerance optimisation 119010

aptive filters
see also adaptive Kalman filters
2D FIR compaction filter design 95705
2D-multiple notch filter, blocking artifact reduction, DCT coded image 95156
3D coded video seqs., spatio-temporal post-filtering 107040
1000BASE-T Gigabit Ethernet, low-power digital adaptive filter archits. 114883
abdominal fetal ECG proc., review 110641
acoustic echo cancellation, freq.-selective step-size control 119076
acoustic echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
acoustic echo canceller, short-time spectral amplit. estim. *(Japanese)* 95664
act. noise control, adaptive IIR filters, classical algms. 107476
affine projection algm. using novel subband adaptive syst. 84757
affine projection filter algm. based on M-estim. *(Chinese)* 95710
algms., syst. ident. 130082
algms. for efficient and accurate edge detect. and localization 107141
analog adaptive median filters for image proc. 114870
analog ratio spectrum cct. with adaptive Butterworth low-pass filter 80132
AR equalization with const. modulus criterion 119191
ARM detect., adaptive lin. prediction error filtering *(Chinese)* 111620
array proc. for multipath fading mitigation via filter banks 73653
auditory evoked pot., time-freq. anal. using STFT-based adaptive filters 110521
automotive hybrid IC proc. error reduction, microcontroller implement. 125918
B-scan 3D ultrasound imaging, speckle suppression method *(Chinese)* 122027
BFSK sigs., demodulation by adaptive digital notch filtering 83809
bias-free adaptive IIR filtering algms. 73679
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind image deconvolution, wavelet transform-based noise reduction schemes 118223
block-exact fast affine projection algm. *(Japanese)* 95663
Boolean and order stats.-based filters, optimal predictive design 118988
broadband beamforming, freq. domain adaptive filter 107492
CALF adaptive filtering algm. improvement 107487
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA cellular systs., adaptive interf. suppression filtering 130054
CDMA multistage multicarrier receiver, enhanced interf. suppression 85525
CDMA systs., adaptive interf. suppression, power control 107749
cellular telephony, prediction-based time-varying filtering for speech enhancement 107485
cluster anal. by adaptive rank-order filters 107511
CMOS adaptive filter implement. using switched-current tech., FIR transversal cct. 80120
color image impulse noise reduction filter 130095
colour image proc., adaptive filters, survey 118216
combined projection/correl. LMS sq. algm. for channel estim. with uncoded/chaotic coded speech 129388
compensation of analog front-end I/Q mismatches in digital receivers 102420
complexity beamforming using split RLS algm. 73637
continuous-time Hopfield neural networks for filtering of ECG sigs. 98237
convolved non-stationary sig. separation, adaptive non-causal FIR filters 118980
correl. interf. conditions, spatial/polariz. filtering 83406
cross-updated act. noise control syst. with online secondary path modeling 84679
crosstalk-robust struct. based on sub-band noise estim. 129368
D_{st} geomag. index forecasting, adaptive nonlin. systs. ident. 122640
DCTLMS algm. with selective coeff. updating, anal. 107385
degraded images restoration by combined homomorphic/adaptive fuzzy multilevel median filtering *(Chinese)* 129514
delay LMS 1D and 2D adaptive digital filters, systolic archits. 68941
delayless freq. domain acoustic echo cancellation 84741
DFT-modulated filter bank design for oversampled subband systs. 119045
digital holographic opt. memory syst., hybrid error correction coding 93021
digital IIR filter design using adaptive simulated annealing 107552
digital receiver phase equalization, min. phase SAW filters anal. 107541
digital watermarked images, noise corruption influence 84078
direct blind channel equalization, prog. canonical correl. anal. 107723
direction set based algm. for spectral estim. 95689
discrete time wavelets using degenerate eigenvalues 119071
discrete Wigner distrib., interf. term elimination using nonlin. filtering 119027
distorted power meas. under nonsinusoidal & noisy conditions 121136
distributed evol. digital filters, convergence behavior 91087
Doppler radar data, spin estim., new method 75095
downlink transmit beamforming with selective feedback 108925
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA asynchronous systs., code acquisition/interf. cancellation 107758
DS-CDMA cellular systs., SINR maximizing equalizer receiver 119949
DS-CDMA commun., adaptive narrowband interf. cancellation 85820
DS-CDMA mobile systs., order-adaptive filter for channel estim. 96565
DS-CDMA systs., adaptive narrowband interf. rejection, parallel interf. cancellers scheme 83356
DS-SS CDMA, narrowband interf. suppression 128809
DS-SS commun., AM-FM jammers excision, instantaneous bandwidth use 96390
DS-SS commun. systs., HOS and GA-based interf. rejection filter 74541
DS-SS perform. improvement using adaptive FIR notch filter 95822
DS-SS systs., interf. rejection using nonlin. interpolation lattice filters 85528
DSP concept, structural subband decomp. 130092
DSP for joint time-freq. adaptive echo canceller 107565
dual channel noise cancelling syst. 84068
dual isotope SPECT, noise reduction, analytic atten. correction method 122174
duplex scanning, show-through cancellation 94680
ECG, adaptive canceller of 50 Hz interf., FPGA appl. 110623
ECG sigs. with little a priori inform., adaptive filtering 110620
echo canceler double-talk detector, normalized cross-correl. vector 107615
echo cancellation, adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
EEG brain map reconstruction by incorporating blind source separation 98173
electronic components mfg., motion control syst. 113821

adaptive filters continued
endoscopic images, automatic boundary enhancement and detect., iris filter 76202
eqn. error IIR ADF, unbiased online algm. 91097
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
evoked pots. latency change estim., algms. perform. comparison 76256
exponential filter, inverse transfer fn. estim. *(Japanese)* 84720
extended block-adaptive Fourier analyser, sig. component separation 118992
fast data transm. ISI removal, adaptive digital filter 130257
fiber optic gyroscopes, INS alignment procs., angle random walk reduction 131961
FIR adaptive filters, non-quadratic error criteria, stabil. conditions 119011
FIR adaptive interpolated filtering, simplified RLS algm. 119020
FIR delay LMS adaptive digital filter, systolic archit. 91084
FIR digital filter, modified normalized LMS modelling algm. 118976
FIR filter, breeder GA for syst. ident. 102397
FIR predictors, adaptive general param. extension 119026
fixed order RLS adaptive filters, Laguerre networks 91076
FM superimposed sig. tracking, fake alg. Riccati eqn. 84784
FPD image interpolator with image improvement 132105
FPGA, adaptive heterodyne filter 102399
fractal image compression, adaptive post-proc. 95173
freq. domain act. noise control syst. without secondary path model 119075
freq. domain step-size control in nonstationary environ. 107504
freq.-selective filtering using weighted myriad filters with real-valued wts. 130125
Gabor expansion for stereophonic acoustic echo cancellation 95683
global fig. extraction, Hough transform, voting proc., variable-sized directional image filter *(Japanese)* 106746
GPS navig., enhanced accuracy, interact. multiple model estim. 131713
gradient-based algm., gradient noise reduct. by variable step-size tech. 73704
gradient-type adaptive filters, pipeline implement. 84765
GSM systs., freq. sync. acquisition 85784
hands-free commun. unit acoustic echo canceller *(Japanese)* 96326
hands-free telephony, nonlin. acoustic echo canceller 118084
HDTV, post-proc. using computationally efficient adaptive nonlin. filters 118332
heterog.-driven hybrid denoising 118180
high-rate high-resol. gamma spectrometry, adaptive digital filter 121859
high-rate high-resoln. gamma spectrometry, adaptive digital filter 110396
higher-order nonlin. Fourier IR filter, chaotic time series *(Chinese)* 118971
hyperspectral image anal. tech., anom. detect. algm., Quad-AR filter 95412
IF digital filters design, adaptive method 107481
IIR filter, freq. detect. in noisy environ., VLSI design 102405
IIR gradient-based adaptive notch filter with constrained poles and zeros 130066
IIR notch filter, memoryless nonlin. gradient algm. 95684
image adaptive noise canceling and edge detect. filter 107294
image burst noise reduction, decimation and adaptive weighted median filter 106486
image denoising 118335
image enhancement, edge preserving filtering by combining CBAE/median filter 129444
image impulse noise suppression using adaptive L-Filters 106477
image intens., struct.-adaptive filtering based on polynomial regression modeling 73156
image noise reduction using midpoint-type nonlin. filters 106528
image proc., fuzzy tunable filter based on differences between pixels 118233
image proc. using rank-order filters with spatial elements connectivity 106715
image seq. restoration, impulse noise, adaptive 3D median filtering 73142
impulse noise removal for color image, noise detect. based 73314
interpolated FIR echo canceller, low complexity 102404
IR image, noise removal based on H.263 video recommendation with adaptive filter *(Chinese)* 106678
IR thermal image proc., time domain/space domain tech. 109623
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 2001) 124234
JPEG compressed images, deblocking approach 106884
Kautz filters adaptation in identifying dyn. systs., separable nonlin. least-sq. methods 107537
L-filter based on sig. local stats., edge preservation *(Chinese)* 107268
LCMP beamforming under quadratic constraint, RLS implement. 73655
lifting schemes, filter design 119068
lin. CCD camera, interf. fringes, fast accurate algm. anal. *(Chinese)* 109703
line enhancement via subspace tracking 107546
LMS adaptive filtering for time-varying systs. *(Japanese)* 84721
LMS adaptive filters using distributed arith. *(Japanese)* 80086
LMS adaptive FIR filters, word-length optim. 107563
LMS adaptive sig.-depend. L-filters using impulse detector as switch 73302
LMS algm., convergence behavior in subband adaptive filtering 73699
LMS algm. with saturation nonlin., adaptive filter output, stochastic anal. 84722
LMS block Volterra filters 118997
LMS complementary pair algms., perform. improvement 119016
LMS long adaptive filters, wave theory 130065
LMS multiple adaptive filters in tandem, perform. 130128
LMS multiplierless adaptive filters using distributed arith., high-perform. VLSI archit. 84764
LMS step-size, dyn. adjust. based on variances of wt. fluctuations 73703
LMS-based adaptive order-stat. filters 73303
local smoothing, adaptive Gaussian filter 129504
locally adaptive deblocking filter for low bit rate video 95202
long adaptive LMS filters, wave theory, tapped-delay line type 84727
long-range depend. sigs., adaptive vs. robust predictors 73645
lossy image compression using adaptive wavelet filters 129709
low-bit-rate moving picture coding using loop filtering/post-filtering 95149
low-bit-rate perceptual audio coder, perceptual entropy-based method for sig.-adapted wavelet tree 129380
low-delay audio coder using adaptive VQ 129379
low-power and high-speed equalizer for mag. storage read channels 80125
low-power digital filtering, adaptive error-cancellation, algorithmic noise-tolerance 102409
M-band wavelet transform, adaptive approach to unsupervised texture segmentation 106512
M-estim. robust adaptive filtering 119052
M-QAM nonlin. amplified sigs., fast adaptive predistorter 72728
mag. recording, PRML read channel, adaptive FIR filtering 70517
maneuvering target, online tracking, neuro-fuzzy adaptive filter, linguistic method 107505
maneuvering target tracking, neuro-fuzzy adaptive filter 120400
median based impulse rejecting filters, new class 94564
MEMS vibratory rate gyroscope, syst. ident. 75766
MMSE DFE, interior point least sq. estim. 85657

adaptive filters continued
MMSE spectral domain estimators for nonuniform syst. modeling subband adaptive filters 107566
mobile radio, variant fading channel estimator with speed estim. 85677
modified fast affine projection algm. 107486
momentum LMS algm., tracking perform. for chirped sinusoidal sig. 119021
monochrome video seqs., spatiotemporal filter for noise reduction 106765
moving target tracking in scenery, change detect., ICA 106524
MPEG-coded video seqs., real-time visual postprocessor 84413
multi-channel acoustic echo canceller, adaptive algm. accel. *(Japanese)* 95665
multifrequency sig., adaptive interperiod proc. 86172
multiple jammer suppression using adaptive lin. constrained inverse QRD-RLS beamformer 84755
multistage adaptive higher-order nonlin. FIR filters, chaotic time series 80082
neural filter banks with filter neuron, design 130135
NMR spin syst. ident. by nonlin. adaptive filtering 73661
noise canceller with master-slave filter struct. 73644
noise reduction, thresholding neural network 73676
noise reduction filter using cascaded sandglass-type neural nets 73686
noisy image seq. filtering by adaptive lower-upper-middle smoother 106767
noisy speech, adaptive filtering & spectral subtraction 94421
nonlin. blind equalization, bilinear recursive polynomial perceptron 119178
nonlin. cumulant based adaptive filter for image Gaussian/impulsive noise removal 129443
notch adaptive filters, design 130089
notch filter with subband filtering, algm. convergence 95685
OFDM receivers, freq. domain equalization of IQ imbalance 119177
OFDM syst., alias-free subband adaptive equalizer 107710
OFDM systs., freq. offset blind estim. filter 106032
optimal adaptive multiuser detect. in unknown multipath channels 84771
optimal compaction gain by eigenvalue minimization 73700
optimal nonlin. filtering design, duality 119061
orchestral music, unwanted sound blind removal 95692
parallel filter struct., 2-by-2 LMS algm. based, simul. *(Chinese)* 130108
parallel-cascade truncated Volterra filters, computation-efficient adaptive algm. 130131
partition-based median type filters for image noise suppression 73256
partitioned freq.-domain block LMS algm. 107519
perfect-reconstruction filter banks, low-delay design using LP 107499
perform. anal. of adaptive filter struct. employing wavelets and sparse subfilters 119024
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
photonic RF filters realized with adaptive Bragg gratings 80395
power amp. lin., adaptive predistorter, complex convolution *(Chinese)* 119969
power syst. harmonic detect., synchronizing datum-sig. adaptive filtering *(Chinese)* 112065
power syst. harmonics, active power filter, adaptive digital filtering, harmonic detect. *(Chinese)* 77356
prog. adaptive analog filters using arrays of floating-gate ccts. 68959
progressive and exact image reconstruction using nonlin. bank filters 118555
QRD fast inverse-updates adaptive filtering algm., stabilisation 73667
QRD-based least-sq. adaptive filters, pipelining, hybrid annihilation transform. 125613
quadratic adaptive Volterra filters, pipeline archit., NLMS algm. 91095
quadratic Volterra adaptive filters, fast RLS adaptive algms. 119022
radar data objective anal., Barnes filter adaptation appl. 88153
radar detect., adaptive cosine estimator, max. invariance 109262
radar images modified alpha-trimmed filtering 86173
radar syst. multichannel filtering optim. 109284
radar systs., adaptive sig. proc. against pass. interf. 75119
real time video compression, reduction of blocking artifacts *(Chinese)* 84440
recursive weighted median filters with real-valued wts., optim. algm. 94559
reduced param. nonlin. adaptive filter for chaotic time series prediction *(Chinese)* 125201
reduced-rank interf. suppression algms., convergence/tracking 105813
reduced-rank interf. suppression with rank selection 105783
redundant sig. calib./estim. appls. 84754
rejection filter anal. during repetition period wobbling 107516
rejection filter optimisation during repetition period wobbling 130087
RLS algm. for throughput improvement of adaptive filters, implement. 119023
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
RLS-Laguerre lattice adaptive filtering, error feedback and array-based algms. 91077
RLS-Laguerre lattice adaptive filtering, error-feedback/normalized/array-based algms. 130117
robust adaptive filtering in impulse noise, least mean M-estim. algms. 119014
robust adaptive SS receiver, neural net preprocessing, non-Gaussian noise 74571
robust orthogonal adaptive deconvolution filters 91088
robust quasi-Newton adaptive filtering algm. for impulse noise suppress. 95672
rot. machines, vibr. sigs., adaptive noise control *(Spanish)* 88681
SAR image speckle reduction using iterated struct. filters *(Chinese)* 131650
SAR imagery, lossless compression using multiple-pass gradient adaptive lattice filter 109251
SAR images, open-loop adaptive filtering for speckle reduction 109242
sea mine class., adaptive subspace-based background normaliser 77051
sea mine detect. & class. proc. strings fusion for sonar imagery 77050
second order syst. nonlin. meas., 2D adaptive algm. 107561
second-order adaptive IIR notch filter, constrained poles/zeros, plain gradient algm. 130090
second-order adaptive IIR notch filter for freq. detect., variable step-size LMS-like algm. 84792
self learning video filters for wavelet coded video streams 84462
set-membership affine projection algm. 95687
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
sig. and image denoising and segmentation approaches 84267
sig. denoising using line-adaptive lifting wavelet transform 118993
sign-based LMS algms., DC bias effects 107488
single-channel noise reduction with pitch-adaptive post-filtering 118052
single-tone freq. estim. based on autoregressive model 119017
smoothing, adaptive, computable Jacobians/Newton method 73672
Sparse-BEFAP, fast affine projection avoiding explicit regularisation 119078
spectacles detect. for face recogn. using Bayes rules 73542
speech driven in-service nonintrusive meas. device, optimum variable step-size adaptation 130617
speech sig. enhancement in noisy environ. using two microphones 118059
speech sig. noise reduction syst. based on freq. domain adaptive filter 94386
speech sig. recovery in white noise using adaptive Kalman filter 118050
squirrel cage motor, rotor bar breaking, on-line detect. *(Chinese)* 77868
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
adaptive filters continued
stack filters optim. based on mirrored threshold decomp. 73656
STAP for airborne high range resoln. phased array radar 96945
stationary cost fn. adaptation algm., recursive approach 119012
stereophonic acoustic echo canceler, real-time implement. 85429
stereophonic acoustic echo cancellation, adaptive filtering algm. 119015
stochastic fastest convergence NLMS algm., adaptive filter *(Japanese)* 73673
sub-RLS algm., convergence property 130080
subband adaptive filters, steady-state perform. limitations 107524
texture mapping by successive refinement 94648
time-varying channel tracking, robust adaptive predictive algms. 119018
total least sq. filtering, stable simplified gradient algms. 107544
totally adaptive systs., adaptive sig. proc. advances 73615
transform domain image restoration methods, review/comparison/interp. 118177
transversal adaptive filtering algm., fast converg. for impulsive environ. 95671
two-channel noise reduction with pitch-adaptive post-proc. 106344
two-channel wavelet filter banks with variable zero moments, adaptation criteria 107560
uncoded/chaotic coded speech, robust channel estim./perform. 73037
unimodal blind equalization criterion 119192
US NDE, multistage adaptive noise cancellation, adaptive LMSE filter 79489
UWB SAR imagery, 2D polarimetric calib. filters 96961
variable step size LMS adaptive filtering algm. and anal. *(Chinese)* 119054
variable wt. mixed-norm LMS-least mean fourth adaptive algm. convergence 107531
variable-step-size LMS algm., subband adaptive filtering, echo cancellation 95682
VDTs, content-depend. health hazards, adaptive temporal filters appl. 98764
ventricular late pots., beat-to-beat detect. method 98228
video coding, adaptive postprocessors with DCT-based block class. 107018
video coding, block-DCT based, low-complexity post-proc. for artifact reduction 95203
video sig. denoising/sharpening 118334
Virtex FPGA based high-perform. fine-grained pipelined LMS algm. 91102
voice activity detect. and speech enhancement based on coherence using pitch inform. 118054
Volterra adaptive filter, decoupling problem, MMSE criterion *(Chinese)* 107475
Volterra adaptive filters for act. control of nonlin. noise procs. 95703
wavelet filter bank with adaptive filter params. 119064
wavelet packet-based subband adaptive equalization 107721
white input and convergence speed in adaptive filtering 119025
Wiener spatio-temporal filtering of image seqs. using parametric motion model 84301

adaptive Kalman filters
4D adaptive Kalman filter for Doppler freq. tracking *(Chinese)* 119056
act. noise control using Kalman filter 119077
air quality emissions, discrete Kalman filter use 133348
ARMA model ident., self-adaptive evol. strategies 119019
asynchronous CDMA, blind adaptive multiuser detect. algm. *(Chinese)* 130283
cancellation of selected harmonics from sig. 119053
chaotic commun. systs., adaptive blind equalization, EKF 107676
FIR model-based adaptive filters, proc.-/meas.-noise covariance estim. 107493
FPGA-based adaptive tracking estim. computer 102200
interpolation/smoothing algms., state-space approach 130130
maneuvering target tracking, adaptive filter, innovation bias *(Chinese)* 118994
radar detect., adaptive spectral conditioning 109265
RLS pipelined adaptive filters, low computational complexity implement. 107495
speech enhancement algm. 118079
tactical missile, tracking algm., adaptive Kalman filter *(Chinese)* 111619
tracking, aerial manoeuvring obj., adaptive Kalman filter 88080

adaptive modulation
3G mobile radio, high-speed downlink access, evol. to 4G systs. 85699
ADPCM schemes, nonlin. predictive model computation 118093
algm. for multiple antenna systs. 106062
ASIC, space-qualified downlink image compression for commercial rem. sens. appls. 106913
beam-steering/adaptive modulation-assisted DCA algms., comparison 73587
bit-interleaved coded modulation 119980
broadband wireless access systs., trends and challenges 85561
broadband wireless data commun., space-time open archits. 74531
CDMA systs. with multiuser receivers, optimum modulation/multicode formats 120016
CDMA uncertain channels, multicoding and adaptive modulation 108915
cellular systs., perform. anal. of adaptive modulation with optimum power control 85685
differential modulation, non-uniform sampling companding method *(Polish)* 117902
DS-CDMA cellular mobile radio, reverse link power control improvement 108897
DS-CDMA variable data-modulation syst., multipath transm. 108714
fair wireless channel allocation, adaptive zone selection/modulation under nonuniform traffic 108212
flat-fading channel variable-rate adaptive trellis coded QAM 119979
flat-fading channels, DOF in adaptive modulation 119879
freq.-selective multiple access channels with adaptive QAM modulation 84911
freq.-selective multiple access channels with adaptive QAM, resource allocation 73865
future mobile radio systs., turbo-coded modulation *(English)* 74722
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
indoor precoded packet wireless systs., fast code rate adaptation 96445
interactive mobile video syst., channel quality estim. error 84430
IR indoor rate-adaptive commun., convolutional codes and PPM 86123
layered demodulation scheme for adaptive modulation without modulation inform. transm. 108770
low-delay audio coder using adaptive VQ 129379
MCM for wireless systs. 106066
MCM systs., adaptive channel estim. algm. using cyclic prefix, convergence anal. 72730
MIMO interf.-limited cellular syst., attainable throughput 108657
MIMO interf.-limited cellular syst., simul. results 74752
mobile commun. systs., research challenges for 3G and 4G 85705
OFDM based adaptive modulation with multilevel transmit power control *(Japanese)* 106052
packet based wireless commun. systs., adaptive modul. for fading channels 72749
QAM, optimum discrete-power adaptive scheme for Rayleigh fading channels 94242

adaptive modulation continued
robust image transm. using source adaptive modulation with diversity 73358
RS codes, adaptive coding and modulation for Rayleigh fading channels 128995
sigma delta modulator, SNR perform. 79977
software defined radio, blind modulation estim. with carrier freq. offset 108715
space-time block codes with partial channel state feedback, perform. anal. 83941
speech coding, comparison of dual autocorrelation with std. methods 106362
speech synthesis inventories, data reduction *(German)* 73091
threshold modulation used in pulse stuffing and pointer adjustment schemes 128974
voice synthesis module based on CAN bus *(Chinese)* 118157
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
wideband burst-by-burst wireless video telephony 85164
wireless broadband networks, channel state-adaptive techs. for throughput enhancement 119925
wireless systs. bandwidth-efficient multimedia commun. 83798
WLAN systs., power control combined adaptive zone selection 108208

adaptive optics
see also optical phase conjugation; wavefront sensors
3D real-time reconstruction on high resoln. FPA 94532
act. opto-electronic devices/components, standardization *(Japanese)* 93316
act. polynomial gratings for soft-X-ray monochromators/spectrometers 121379
atmos. adaptive opt. syst., adaptive control algm. anal. *(Chinese)* 76850
atmos. optics, conf., Barcelona, Spain (Sept. 2000) 89539
azo containing photosensitive liq. cryst. polymer film, two-wave mixing 128442
binary distorted diffr. grating for multiplane imaging and wavefront sens. 104862
Brillouin enhanced dyn. holography, dyn. aberrations 128573
Chinese Academy of Sciences, Inst. of Optics and Electronics, act. opt. components 93282
circ.-hybrid electrode struct. adaptive liq. cryst. lenses, aberrations, point-spread fns. 116836
closed-loop adaptive optic visual aberrations correction syst. 76413
common mode/path adaptive optics syst., retroreflector array pseudo phase conjug. fidelity anal. *(Chinese)* 82805
deformable membrane mirrors, microfab., packaging & testing 71380
dual freq. NLC adaptive optic SLM 104775
dual-conjug. adaptive optics 128786
dual-freq. controlled liq. cryst. modulators, wavefront corrector appls. 104825
dyn. phase mask high-power laser beam focal spot optim. 105409
Far Ultraviolet Spectroscopic Explorer high-dispersion spherical holographic gratings 72071
far-field beam shaping/beam steering by phase-retrieval-based wavefront control 105410
fast Fourier/wavelet transforms, adaptive optics wavefront reconstruction 106675
fast US detect. syst., photorefr. GaAs two-wave mixing 101551
FLC SLM free-space opt. switch, computer-controlled adaptive beam steering 116837
focal-plane image and beam quality sens., wavefront phase distortion 75064
foveated wide FOV imaging syst., liq. cryst. SLM 86640
fractional Talbot effect based wavefront sens., opt. wavefront meas. 109529
French SWIR technol. used for astron. 111327
Gb/s receiver, long transparent WDM link 131607
Hartmann-Shack wavefront sens., ICF laser amp. wavefront meas. 109685
Hartmann-Shack wavefront sens. adaptive optics syst., noise and detect. error effect *(Chinese)* 97350
high av. power solid-state pulse-repetitive ps lasers, distortions dyn. correction 128382
high resoln. wavefront control conf., San Diego, CA, USA (Aug. 2000) 100415
high-resoln. phase-contrast wavefront sens., opt. addressed phase SLM based 109683
high-resoln. wavefront control syst., opt. addressed NLC SLM 109686
image-intensified CCD wavefront sens., sig. transferring charact., meas. error *(Chinese)* 109687
IRFPA, adaptive nonuniformity correction *(Chinese)* 75626
large optics real-time holographic compensation in space-based opt. systs. 105605
laser beam control conf., St. Petersburg, Russia (June 2000) 124197
laser US receiver, polaris. self-modulation effect 101554
lin. CCD camera, interf. fringes, fast accurate algm. anal. *(Chinese)* 109703
liq. cryst. phase modulators modal control, adaptive opt. 116835
liq. cryst. phase shifters, high-resoln. wavefront control 104824
liq. cryst. SLM correction element, laser energy transport adaptive syst. 104822
local space vol./large space scale lidar meas., adaptive methods 120466
loop resonator, intracavity beams opt. phase distortions 82702
MEMS technol. for NASA space missions, JPL research & facilities 98883
MEMS-based SLM, high-resoln. wavefront control appls. 104773
microelectronic very large-scale integrated systs., adaptive optics, advanced imaging 105042
micromachined mirror arrays, adaptive optics perform. eval. 104774
micromirror array wavefront correction 93219
microscale adaptive optics, wave-front control with μ-mirror array and VLSI stochastic gradient descent controller 116784
mid-IR holographic correction by opt. addressed liq. cryst. SLM 105606
mid-power solid state laser thermal lens intracavity correction by liq.-cryst. adaptive lens 128478
multielement dual-freq. LCD, high-speed adaptive opt. wave-front correction 71425
NLC wavefront correctors, static/dyn. models 127843
nonlin. Zernike filter adaptive wavefront control 104884
optomechanical engng., conf., Boston, MA, USA (Nov. 2000) 78462
phase meas., time delays effects 86997
phase only liq. cryst. SLM optoelectronic Zernike filter, high-resoln. wavefront anal. 109684
phased array interferometer for acoustic wave detect. 101552
PLZT act. adjustable focus opt. correction lens, design and testing 127873
polychromatic guide star, adaptive optics 128622
polymer waveguide array, wavefront sens., opt. space commun. 75065
reflective type opt. addressed liq. cryst. SLM, holographic correction 105607
Sea-viewing wide Field-of-View Sensor test, ocean color imagery atmos. correction 88174
Shack-Hartmann lenslet array fast modal wave-front sens. 120898
Shack-Hartmann sens. for laser beam M^2 anal. 110023
Shack-Hartmann wavefront sens., realistic atmos. turbulence, slope meas. error *(Chinese)* 122664
solid state laser resonator, thermal lens effect, adaptive compensation *(Chinese)* 117320

adaptive optics continued
SPring-8 multisegmented piezoelec. bimorph X-ray mirror substrs., R&D 121798
stereo obj. tracking syst., opt. binary phase extraction JTC 73497
stochastic gradient descent controlled micromachined mirror array adaptive optics syst. 104777
syst. design params., reconstructor formulation error 131867
turbulent atmos., adaptive phase compensation, synthetic image methods 133299
twisted NLC display phase screen, atmos. turbulence simul. 104827
vortex spatial filter opt. sig. detect. 71475
zonal wavefront reconstruction, wavelet transform 94751
β-BaB_2O_4 noncollinear OPA 117446
CO_2 indust. laser, act. mirror resonator, Q-switch regime generation 105114
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
GaP cryst. fast adaptive interferometer, small out-of-plane vibr. meas. 83067
I photodissociation ASTERIX laser, PALS project and upgrade 105081
$LiNbO_3$:Fe,Mn photorefr. holographic interferometer sens. 105604
Na laser guide star expt. with diode-laser pumped sum-freq. laser 72100
O_2-I chem. U.S. Air Force Airborne Laser, missile defence appls. 111639
O_2-I chem. laser with hybrid confocal type resonator, output charact. 105142
Si deformable mirror CMOS-based wavefront sens. 104772
Si eye using MEMS micromirrors for intell. vision systs. 86603
Si micromachined deformable mirror, opt. wavefront compensation 104771
Si micromachined membrane deformable mirror, intracavity Nd:YAG laser radiation control 82191
Si, porous, deformable mirror, non-interferometric wave front sens. method 104776
Si-PZT-PZT-Si, aspherical bimorph piezoelec. X-ray optics, design anal. 121804
Si_3N_4 micromachined deformable mirrors, focus control 116759

adaptive radar
airborne radar, adaptive MTI scheme in freq. domain 86178
clutter suppression scheme, freq. domain proc. 75082
CTM on multiprocessor, SAR bottleneck soln. 75096
imaging in wide ang. sector 96956
multifunction radar-IRST integrat. in naval environ. 133410
polyphase channelizer chip-set, low-power design, FFT, appls. 102226
STAP bistatic radar, adaptive clutter cancellation 109266
target detect. across clutter boundary, GLR/max. invariant detectors 96890
tunable narrow-band recursive act. MMIC filters for adaptive radar receivers 69204

adaptive resonance theory
see also ART neural nets
distrib. network, load profile ident., ART algm. 99245

adaptive resonance theory networks *see ART neural nets*

adaptive signal detection
see also adaptive signal processing
asynchronous CDMA, blind adaptive multiuser detect. algm. *(Chinese)* 130283
bistatic space-based radar, adaptive algm. for enhanced target detect. 99159
blind adaptive optimum lin. cancellation for long code CDMA 73743
blind multiuser decorrelation detector, high order cumulant *(Chinese)* 95827
blind separation of sources using dens. estim. and simulated annealing 130150
CDMA, combined nonlin. MMSE beamforming and interf. cancellation 84898
CDMA adaptive LMS detect. with Gram-Schmidt pre-proc. 119208
CDMA dual-rate sync. multi-carrier syst., perform. 74578
CDMA spatio-temporal receiver struct. for multi-rate appls. 119991
CDMA wireless systs., robust constrained lin. receivers 85477
channel equalization using class. trees 119188
DS-CDMA, blind ident. of co-existing sync./asynchronous users 84880
DS-CDMA, efficient multiuser detect. algm. using neural networks 130158
DS-CDMA blind adaptive multiuser detect. 119880
DS-CDMA detect. scheme, decision directed algms. 130288
DS-CDMA detect. with combination of smart antennas and parallel interf. canceller 96518
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS-CDMA multipath channels, blind adaptive multiuser detect. 95839
DS-CDMA networks, near-far resistant receiver for packet data transms. 74657
DS-CDMA sigs. in multipath channels, adaptive min.-BER lin. multiuser detect. 73722
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
DS-CDMA systs., adaptive narrowband interf. rejection, parallel interf. cancellers scheme 83356
DS-CDMA systs., combined adaptive interf. cancellation with antenna array 72358
DS-CDMA systs., efficient blind multiuser detector 73717
DS-CDMA systs., multistage semi-blind adaptive multiuser detector for reverse link 131227
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
DS/CDMA systs., two-stage decorrelating detector 74549
DS/SSMA commun. with generalized random spreading, blind adaptive multiuser detect. 84788
freq. estim. by variable sampling proc., appl. 84798
freq.-hopping interfered channel, adaptive pass. predetect. algm. *(Chinese)* 119209
freq.-selective multiple access channels with adaptive QAM, resource allocation 73865
GLRT-based adaptive detect. algms. for range-spread targets 86160
group-blind multiuser detect., new subspace tracking algm. 95718
HDD head-disc spacing var. suppression, act. flying height control 116308
hemiplegic patients' adaptive FES switching syst. 122357
HRV adaptive spectral estim. for transient detect. 110559
IIR filter, freq. detect. in noisy environ., VLSI design 102405
mammography, automated detect. syst. for microcalcifications 132821
matched and adaptive subspace detectors, interf. dominates noise 107602
median based impulse rejecting filters, new class 94564
microcellular environ., spatiotemporal non-LOS propag. charact. *(Japanese)* 120050
min.-BER lin. multiuser detect. for CDMA sigs., 4-QAM 73738
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuser detect. 73721
moving target detector with Wigner-Ville distrib. as Doppler filter bank, perform. 75107
multichannel adaptive energy detector and jamming 85501
multicomponent IF estim., stat. comparison in quadratic class of time-freq. distribs. 84802
multipath equalization time delay estim. with bias-removal 84801

adaptive signal detection continued
multirate sync. DS-CDMA, blind adaptive decorrelating decision-feedback multi-user detect. 84906
multiuser detect., pilot-channel based adaptive algm. 74694
multiuser sig. design/detect. using interf.-resistant modulation 130156
NMR spin syst. ident. by nonlin. adaptive filtering 73661
OFDM-dedicated short range commun. modem, equalization 85755
opt. wireless commun. systs., adaptive threshold detect. 75067
optimal adaptive multiuser detect. in unknown multipath channels 84771
PCA for STAP, Kronecker product improvement 107599
power syst. harmonics, active power filter, adaptive digital filtering, harmonic detect. *(Chinese)* 77356
pre-combining advanced blind multiuser detector for time and freq. selective wireless channel 119955
radar detect., adaptive cosine estimator, max. invariance 109262
radar detect., adaptive spectral conditioning 109265
Rayleigh fading time-multiplexed pilot channel, adaptive parallel interf. cancellation 95815
Raytheon's IR Operations focal plane, adaptive IR Sensor, thinfilm analog image proc. 109634
reduced-complexity detect. algms. for systs. using multi-element arrays 73732
RLS-type adaptive fast on-line sig. separation algm. 130145
robust adaptive SS receiver, neural net preprocessing, non-Gaussian noise 74571
sample-covariance-based adaptive sonar detectors, perform. 109311
seismic and acoustic sig. ident. algms. 73735
single-tone freq. estim. based on autoregressive model 119017
spatial domain interf. canceller using multistage adaptive array with precise timing estim. 108878
speech driven in-service nonintrusive meas. device, optimum variable step-size adaptation 130617
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
STAP algms. with mismatched steering/clutter stats., perform. charactn. 109264
sym. timing, adaptive detect. 108413
target detect. across clutter boundary, GLR/max. invariant detectors 96890
time-varying sig. detect. and ident., adaptive transform. 119086
transient detect., wavelet packets and de-noising based on HOS 119096
turbo codes on flat fading channels, adaptive iter. detect. 83857
UTRA TDD adaptive MMSE RAKE receiver 108916
UTRA TDD adaptive multiuser MMSE down-link receiver techs. 108958
VLSI implement. of adaptive-effort low-power Viterbi decoder for wireless commun. 129006
voice activity detect. and speech enhancement based on coherence using pitch inform. 118054

adaptive signal processing
see also adaptive signal detection; space-time adaptive processing
2D adaptive sampling for obj. detect. 106835
2D generalized sidelobe canceller with partial adaptivity 129952
3-D backprojected PET data, scatt./random events, adaptive correction 132929
3D adaptive wavelet transform/context modeling for scalable lossy to lossless video coding 95211
3D autostereoscopic adaptive multi-screen syst. 121120
3D facial model adaptation 94638
3D graphic models, error-resilient coding via adaptive mesh segmentation 95043
3D polygon meshes for hierarchical representation/coding of surfaces 84452
3D scenes, adaptive light projection and highlight anal. method 94530
abdominal image quality, real-time correction of wavefront arrival time errors 110766
acoustic echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
act. vision, obj. tracking by adaptive color model 95594
affine projection algm. using novel subband adaptive syst. 84757
affine projection filter algm. based on M-estim. *(Chinese)* 95710
algm. for maneuvering target tracking 107458
algms. for efficient and accurate edge detect. and localization 107141
AMR speech codec, noise suppression syst. *(English)* 74489
antenna array based on subband sig. proc., develop. 73628
antenna systs., nonstationary receiver-transmitter config. 107362
antipersonnel landmine detect., GPR, wavelet shape feature extraction 77074
ARMA model ident., self-adaptive evol. strategies 119019
array antennas using modified CMA and polyphase filters *(Japanese)* 130110
array proc. for multipath fading mitigation via filter banks 73653
atrial activity enhancement, Wiener filtering with artificial neural net 98229
audiometer-telephone interface, digital feedback suppression syst. 76703
auditory evoked pot., time-freq. anal. using STFT-based adaptive filters 110521
automobile noise corrupted speech, binaural diverse sub-band proc. 72991
autoregressive models, adaptive, criterion 73602
background removal algm. for Navy IRST systs. 122755
Bayer pattern images, saturation-based adaptive inverse gradient interpolation 94864
Bayesian DFE for alpha-stable noise environ. 107720
beam-steering/adaptive modulation-assisted DCA algms., comparison 73587
bionic wavelet transform, time-freq. method based on auditory model 98718
bit-plane matching algm., adaptive, full-search *(Chinese)* 129685
blind deconvolution of dyn. systs., natural gradient approach 107426
blind image regularization, recursive soft-decision PSF/neural network approach 94954
blind separation from noisy time-varying mixtures 118946
blind sig. proc. algm. for decorrelation and channel equalization 108928
blind sig. separation, complex domain nonlin. fn. 95624
blind sig. separation of arbitrary mixtures, adaptive algms., stabil. anal. 107436
blind sig. separation using risk-sensitive criterion 84709
blind source separation, globally convergent algms. 118914
blind source separation and sig. class. 107400
block-based video coding, blocking artifacts reduction 106859
blocking artifacts reduction, transform coeffs. adaptive postfiltering 73336
brain parcellation, adaptable fuzzy C-means for improved image class. as preproc. procedure 98423
bright targets segmentation using wavelets/adaptive thresholding 84273
CAD model acquisition, range image segmentation 94695
cancellation of selected harmonics from sig. 119053
cascaded adaptive canceller using loaded SMI 94064
cellular systs., distributed adaptive channel allocation scheme 74830
CFAR tech. and freq.-domain partially adaptive array algm. 118899
chirp sig. anal. using adaptive short-time fractional FT 118875
chirplet sig. decomp. algm. *(Chinese)* 84694
chirplet-based real sig. decomp., fast algm. 84711
classified zerotree wavelet image coding/adaptive packetization for low-bit-rate transport 106969
combined blind/nonblind source separation gradient 95626

adaptive signal processing continued
combined projection/correl. LMS sq. algm. for channel estim. with uncoded/chaotic coded speech 129388
competitive/re-init. learning, adaptive VQ 106910
complex location syst., act. jamming compensation 83442
computational image sens. with pixel-based integrat. time control 97353
constrained adaptive antenna arrays, uncorrelated interf. patterns space fitting using neural networks 128886
contour sampling/coding using skeleton/curvature 95218
cpd. image compression using adaptive wavelet transform *(English)* 84450
cross-updated act. noise control syst. with online secondary path modeling 84679
cryogel elasticity props. for calib. IVUS elasticity images 110819
DCT low-complexity scalable image compression 95383
DCTLMS algm. with selective coeff. updating, anal. 107385
decision-directed adaptive nonlin. canceller for opt. read channels 118382
delayless freq. domain acoustic echo cancellation 84741
denoising using line-adaptive lifting wavelet transform 118993
dense range image smoothing using adaptive regularization 96910
deterministic sig. discrim., adaptive robust algm. 84649
deterministic sig.-noise models, suboptimal robust estim. 107396
diamond zonal-based algms. for fast/efficient motion estim. 95241
digital beamforming for angle estim. in jamming 96920
digital beamforming systs., adaptive pattern synthesis 72681
digital commun., adaptive blind joint source-phase separation 130036
digital IIR filter design using adaptive simulated annealing 107552
digital predistortion, EDGE std. 102585
direction set based algm. for spectral estim. 95689
discrete time wavelets using degenerate eigenvalues 119071
Doppler radar data, spin estim., new method 75095
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA mobile radio, adaptive parallel interf. canceller *(Korean)* 120011
DS-CDMA syst., power inversion adaptive array antenna for high power interf suppression 72370
DS-CDMA systs., combined adaptive interf. cancellation with antenna array 72358
DS-SS CDMA, narrowband interf. suppression 128809
DS-SS perform. improvement using adaptive FIR notch filter 95822
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
DS/CDMA systs., two-stage decorrelating detector 74549
DSP education, Java applet 78526
DSP for joint time-freq. adaptive echo canceller 107565
DSSS high-speed adaptive receivers, parallel digital archits. 108617
ECG, adaptive canceller of 50 Hz interf., FPGA appl. 110623
ECG, multichannel compression using multichannel adaptive VQ 121962
echo cancellation, adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
edge detect., adaptive multiscale, by neighborhood entropy 73460
edge directed interpolation 94649
edge-adaptive clustering for unsupervised image segmentation 94547
edge-directed prediction for natural imagelossless compression 73401
EEG adaptive freq. decomp. with subsequent ES anal. 132560
EEG sig. separation using adaptive-geometric methods 110650
EM vector sens., source separation and tracking 107397
emission computed tomography, stat. regulated/adaptive EM reconstruction 111031
emission CT, stat. regulated/adaptive EM reconstruction 132885
epileptic EEG, adaptive separation of background activity and transient phenom. using math. morph. and wavelet transforms 76269
European smart antenna test-bed, field trial results 117849
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
evol.-based methods for adaptive sig. representation 73696
exponential filter, inverse transfer fn. estim. *(Japanese)* 84720
extended block-adaptive Fourier analyser, sig. component separation 118992
extended RLS algm. 73625
fast block motion estim., adaptive motion tracking method 106770
fast motion estim., adaptive matching scan algm. 73163
fast-converging robust adaptive arrays 94197
feedforward lin. for RF amps., DSP archit. 90751
fiber optic gyroscopes, INS alignment procs., angle random walk reduction 131961
filter employing wavelets and sparse subfilters, perform. anal. 119024
filtering for image denoising 118335
FIR filters, output envelope constraints, recursive design, cubic constraint approx. 73658
FIR model-based adaptive filters, proc.-/meas.-noise covariance estim. 107493
FIR predictors, adaptive general param. extension 119026
foetal heart rate, ambulatory monitoring algm. 98256
foetal heart-rate estim., sig. separation, adaptive algm. 110589
foreground segmentation using adaptive mixture models in color/depth 95011
FPGA archit. for videowall image proc. 118173
fragment adaptive reduction for coping with radio unlicensed bands interferers 128806
freq. domain act. noise control syst. without secondary path model 119075
freq. domain step-size control in nonstationary environ. 107504
freq. estim. by variable sampling proc., appl. 84798
freq.-selective filtering using weighted myriad filters with real-valued wts. 130125
geophys. meas. syst., irregular and adaptive sampling 88103
GPR, landmine detect., adaptive ground bounce removal 131624
gray-level document images, stroke-model-based character extraction 94778
gray-level images, geometric proc., filtering/enhancement operations accel. 84294
gray-scale document image lossy compression, quantization 95334
grey-scale images, adaptive threshold-gradient segmentation 94444
GSAEC, acoustic echo cancellation embedded into generalized sidelobe canceller 118968
Haar transforms with arbitrary time/scale splitting 118788
hands-free telephony, nonlin. acoustic echo canceller 118084
harmonic sigs. recovery, adaptive extrapolation algm. anal. 107351
HCORDIC, high-radix adaptive CORDIC algm. 73570
HDTV, post-proc. using computationally efficient adaptive nonlin. filters 118332
hearing aids, variable step-size of LMS algm. for acoustic feedback reduct. 73017
hierarchical unsupervised learning of facial expression categories 95018
hyperspectral image, fusion class. based on adaptive subspace decomp. 94821
hyperspectral imagery, adaptive hierarchical segmentation algm. based on quad-tree decomp. 94539
hypertrophic cardiomyopathy, exercise high resoln. ECG, adaptive filtering 121958
I/Q imbalance compensation methods 119883

laptive signal processing continued
ICA model, source distrib. adaptive MLE 107445
image coding using orient. adaptive lapped orthogonal transform 95381
image compression, region-based scanning 95217
image database using wavelets 106763
image denoising algm., wavelet-based method, adaptive algm. 73293
image denoising using scale-adaptive lifting schemes 94806
image enhancement, edge preserving filtering by combining CBAE/median filter 129444
image intens., struct.-adaptive filtering based on polynomial regression modeling 73156
image proc. using rank-order filters with spatial elements connectivity 106715
image resoln. enhancement, adaptive algm. 106759
image restoration in act. sounding systs. 120403
image segmentation by adaptive geodesic act. contours 84108
image seqs., firing particle detect., fuzzy threshold 73169
image zooming at fractional scaling ratio, adaptive low complexity algm. 118469
image-content adaptive mesh generation, new approach 84311
indoor wireless commun., adaptively sampled near-field smart array antenna 108879
instantaneous mean freq. estim. using adaptive time-freq. distribs. 118954
intell. sig. proc. education, multidisciplinary approaches 130006
intercolor error prediction codes, lossless color picture compression 129740
interf. canceling receiver with few operation quantities, algms. 72361
interf. cancellation with nonlin. proc., hyper RBF neural networks 107419
ISI channels, time-recursive max. likelihood based seq. estim. 105812
Japan, advances in adaptive antenna technols. 105956
joint watermarking and video compression 95160
Kalman filter approach to act. noise control 119077
landmine detect., autom., multiple features, GPR & acoustic data 77064
lifting schemes, filter design 119068
light microscopy, adaptive shape-from-focus with error estim. 129578
lin. prediction for lossless coding of greyscale images 84456
Lincoln Laboratory's develop. of radar sig. proc. 99143
line enhancement via subspace tracking 107546
line spectral pairs param. quantization, adaptive bit allocation 73038
LMS adaptation, optimum error nonlin. with i.i.d. input 118874
LMS adaptive filtering for time-varying systs. *(Japanese)* 84721
LMS algm. with saturation nonlin., adaptive filter output, stochastic anal. 84722
LMS and LMF threshold tech. 107321
LMS convergence, cross-correl. p-vector influence 118873
LMS multiple adaptive filters in tandem, perform. 130128
LMS multiplierless adaptive filters using distributed arith., high-perform. VLSI archit. 84764
LMS noise-constrained algm. 107375
local activity indicators, hard-switching adaptive image filtering 118317
locally adaptive deblocking filter for low bit rate video 95202
long-range depend. sigs., adaptive vs. robust predictors 73645
Lorenz chaotic masking, param.-adaptive identical synchroniz. 95618
low-bit rate adaptive mesh-based motion compensation tech. 73175
low-bit-rate perceptual audio coder, perceptual entropy-based method for sig.-adapted wavelet tree 129380
M-estim. robust adaptive filtering 119052
M-QAM nonlin. amplified sigs., fast adaptive predistorter 72728
med. X-ray imaging, digital self-adaptive acquisition 122137
median based impulse rejecting filters, new class 94564
MIMO blind adaptive deconvolution, globally convergent approach 73592
MIMO interf.-limited cellular syst., attainable throughput 108657
min. robust M-beamforming for multiple moving sources and impulse noise 95655
minor component extraction with modular struct. 107383
mixed time scale recursive algms. 95702
mixed-kurtosis sig. blind separation using adaptive threshold nonlin. 107444
mixed-sig. narrowband interf. canceller for wireline transm. systs. 108514
MMSE spectral domain estimators for nonuniform syst. modeling subband adaptive filters 107566
mobile multimedia syst., video stream transm. via scheduling 85395
mobile radio interf. cancellation, adaptive array algm. with spatial interpolation 131295
model-based speech enhancement 94391
momentum LMS algm., tracking perform. for chirped sinusoidal sig. 119021
Morse code recogn. for users with phys. impairments, neural network appl. 87933
motion compensated de-interlacing for both real time video/still images 94688
motion estim. algm. using adaptive search tech. *(Chinese)* 106490
motion estim. using adaptive blocksize obs. model/efficient multiscale regularization 94672
moving target detector with Wigner-Ville distrib. as Doppler filter bank, perform. 75107
MPEG-2 software-based high-quality encoder using scene change detect./adaptive quantization 118534
MPEG-4 noisy still texture image, adaptive thresholding 95382
MRI, adaptive sensitivity encoding incorporating temporal filtering 87619
MRI, robust fuzzy image segmentation 106845
multichannel array subbanding with adaptive proc., architect. 96537
multichannel blind source separation/deconvolution stabil. 118872
multichannel EGG, adaptive ICA 87385
multifrequency sig., adaptive interperiod proc. 86172
multigrid motion compensation video coder, perceptual feedback 118520
multimode multiservice software radio, adaptive multisampling proc. *(Japanese)* 108590
multipath tree-struct. VQ 118869
multiple minor components extraction adaptive algm. 118871
multipoint video conferencing, region-based obj. tracking using wavelet transform 118607
multiuser sig. design/detect. using interf.-resistant modulation 130156
musical sigs., anal. and synthesis, adaptive parametric schemes 97113
myocardial perfusion assess., adaptive/self-evaluating registration method 110893
N-dimens. adaptive DP syst., quadratic goal fn., second derivative estim. 73669
neighborhood contrast enhancement using histogram-based image partitioning, parallel implement. 110943
noise canceller, normalized LMS algm. *(Chinese)* 130018
noise canceller with master-slave filter struct. 73644
nonlin. cumulant based adaptive filter for image Gaussian/impulsive noise removal 129443
nonlin. single-/multi-fractal sigs., state-space equilib. based Volterra predictor 95691
nonstationary data, optimal proc. 109309

adaptive signal processing continued
nonuniform modulated complex lapped transform 118064
NQR landmine detect., stat. sig. proc., Bayesian algm. 76995
obj. recogn., modular neural network 118671
obj. tracking by adaptive modeling 94790
obstacle detect., color segmentation/stereo homography 94729
OFDM, baseband adaptive predistorter perform. 72717
OFDM receivers, freq. domain equalization of IQ imbalance 119177
OFDM receivers, optimum Nyquist windowing 73777
OFDM sig., use of interleaving to reduce peak-to-av. power ratio 73771
OFDM systs., fuzzy adaptive sig. predistorter 129970
OFDM TDD systs., adaptive interleaving 72750
OFDM-CDMA systs., adaptive antenna array appl. 108872
online image compression using SVD and adaptive VQ 118563
opt. flow with adaptive gradients, motion estim. 94553
optimal adaptive proc. for domain factorised element-digitised array radar 75072
optimal compaction gain by eigenvalue minimization 73700
organ motion artifacts correction, X-ray CT adaptive proc. 110937
parallel implement. of class of adaptive sig. proc. appls. 86234
parallel syst. dedicated to projective image matching 95513
parametric adaptive sig. decomp. based on Gaussian elementary fns. *(Chinese)* 73614
partition-based median type filters for image noise suppression 73256
per-survivor proc. 107404
PET, segmented atten. correction, fuzzy inference systs. 122188
PET images, adaptive lossless compression method 111002
phased array radar, target tracking with adaptive sampling intervals *(Japanese)* 75214
PHS network, massive scale air interface reciprocity (motion) survey 108908
post-nonlin. source separation, hard switching vs. soft learning 73630
post-proc. error concealment based on video-surveillance syst. feedback 95306
predistortion-based lin. for forward-channel link broadband appl., CDMA 74704
proadaptive image compression 107083
QRD fast inverse-updates adaptive filtering algm., stabilisation 73667
quadratic Volterra adaptive filters, fast RLS adaptive algms. 119022
quantization using nonlin. adaptive fns. 118870
radar image proc., local transform-based denoising 120397
radar systs., adaptive sig. proc. against pass. interf. 75119
radar target adaptive detect. algms. comparison 120431
radio reception against band-limited nonGaussian noise background 119872
random-like unpredictable binary seqs. generation, chaos, adaptive median thresholding 95621
rank-adaptive sig. proc., subspace based biological sig. anal. 110621
read-write channels, charactn. with embedded sync. 118942
receivers, interf. distrib. ident. by moment method 118888
reconfigurable terminals, architectural solns. overview 108817
recovery techs. for real-time audio streams 118075
recovery via adaptive Gabor coeffs. shrinking with Bayes rule *(Chinese)* 84761
recursive adaptive Fourier analyzer based on WHT 118830
recursive weighted median filters with real-valued wts., optim. algm. 94559
reduced-complexity detect. algms. for systs. using multi-element arrays 73732
reduced-rank interf. suppression algms., convergence/tracking 105813
reduced-rank interf. suppression with rank selection 105783
RF Cartesian predistorter for high power class-AB amp. 91250
RLS algm. for throughput improvement of adaptive filters, implement. 119023
RLS pipelined adaptive filters, low computational complexity implement. 107495
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
RLS-Laguerre lattice adaptive filtering, error-feedback/normalized/array-based algms. 130117
RLS-type adaptive fast on-line sig. separation algm. 130145
robust adaptive SS receiver, neural net preprocessing, non-Gaussian noise 74571
sample-covariance-based adaptive sonar detectors, perform. 109311
SAR imagery, lossless compression using multiple-pass gradient adaptive lattice filter 109251
SAR images, open-loop adaptive filtering for speckle reduction 109242
SAR imaging, buried obj. detect., adaptive focussed proc. 86212
SAR interferometric images, adaptive complex-amplit. texture classifier, local phase unwrapping/feature extraction 75175
SAR unsupervised image segmentation using recursive partitioning 75134
satellite down links, neural net adaptive predistortion 108996
scalable router mechanism for load adaptive fair packet dropping 74014
scalable video over Internet, network adaptive rate control with unequal loss protect. 108436
sea mine class., adaptive subspace-based background normaliser 77051
segmentation/tracking of overlapping objs. with feedback 95009
selective sharpness enhancement of heavily-corrupted old film seqs. 94687
self learning video filters for wavelet coded video streams 84462
sens. lin., BP neural networks & regression algm. *(Chinese)* 130020
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
shallow water mine class., CAD/CAC algms., sonar data fusion 77052
shallow water mine hunting, synthetic aperture sonar, adaptive focusing 77053
shape from texture, scale adaptation from spectral defocusing min. 107123
sig. and image enhancement by generalized adaptive diffusion proc. 118802
sig. separation, second order stats. 107319
sigma-delta modulator, stabil. and perform. anal. 68871
sigs., systs. and computers, conf., Pacific Grove, CA (2000) 100407
skin detect., novel adaptive colour segmentation algm. 129610
sleep apnoea, on-line detect. in crit. care monitoring, data fusion 76204
smart antenna systs., impact of W-CDMA sigs. 83705
space-time sig. proc./coding 107310
sparse time-varying channels, adaptive matching pursuit algm. for estim./equalization 107706
Sparse-BEFAP, fast affine projection avoiding explicit regularisation 119078
speech driven in-service nonintrusive meas. device, optimum variable step-size adaptation 130617
speech sig. noise reduction syst. based on freq. domain adaptive filter 94386
speech sig. recovery in white noise using adaptive Kalman filter 118050
spinal SEP anal., time-freq. distrib. tech. comparison 87424
SS commun. systs., interf. rejection using RBF network *(Chinese)* 94067
stack filters optim. based on mirrored threshold decomp. 73656
stationary cost fn. adaptation algm., recursive approach 119012
stereophonic acoustic echo cancellation, adaptive filtering algm. 119015
stereophonic acoustic echo cancellation, comparison of adaptive algms. 118967
stereophonic low complexity subband adaptive algm., teleconferencing appl. 96244
still image coding, hybrid method 129719
subband adaptive filters, steady-state perform. limitations 107524
surfaces hierarchical representation and coding, 3D polygon meshes 95250

adaptive signal processing continued
sync., chaotic carrier/noisy channel 72708
TDMA systs., lin./nonlin. space diversity combining algms. 119993
tech. document images, optimum binarization 106450
texture anal. 84315
texture mapping by successive refinement 94648
thresholding algms., max. fn. spaces with given convergence rate 118925
time-varying channel tracking, robust adaptive predictive algms. 119018
totally adaptive systs. 73615
transduction networks, robust amplif. *(French)* 118836
transform domain image restoration methods, review/comparison/interp. 118177
transmit antenna wt. adaptation with feedback, stochastic gradient algm. 84687
two-channel noise reduction with pitch-adaptive post-proc. 106344
ultrahigh-speed VQ, scalable lin. array archit. with data-driven control 96320
uncoded/chaotic coded speech, robust channel estim./perform. 73037
underwater obj. detect., HF forward-scatt. sonar sig. proc. 86252
underwater target class., adaptive, multi-aspect feedback 109306
underwater target class. in changing environ., adaptive feature mapping 77044
US adaptive imaging using 8×128 array 110768
US adaptive speckle reduction and coherence enhancement 87510
US images, morph. operations, locally variable structuring elements 98276
US imaging using SONOLINE Elegra 110767
US NDE, multistage adaptive noise cancellation, adaptive LMSE filter 79489
video coding, adaptive motion vector VQ 95214
video coding, adaptive postprocessors with DCT-based block class. 107018
video image seqs., algms. for deformable lin. objs. shape change recogn. 84328
video obj. motion tracking, struct. vs. unstructured 2D hierarchical mesh 129705
video seq., adaptive resoln. image acquisition using mosaicing 84303
video seqs., synthetic summaries using multiresolution based key frame selection in perceptually uniform color space 94647
video sig. denoising/sharpening 118334
Volterra adaptive filters for act. control of nonlin. noise procs. 95703
VQ, overlapping 107068
wavelet domain adaptive vis. watermarking of images 129424
wavelet filter bank with adaptive filter params. 119064
wavelet packet-based subband adaptive equalization 107721
wavelet-compressed image restoration using adaptively masking smoothness constraints 106862
weighted av. of sig. subspaces for robust wideband direction finding 118842
white input and convergence speed in adaptive filtering 119025
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655
wideband smart antenna systs., freq. compensation, perform. anal. 128902
wireless commun. syst. time domain charactn., meas. station 119961
wireless video conferencing using multiple description coding 108391
zero-tree quantization algm., block-adaptive *(Chinese)* 73415

adaptive systems
see also adaptive control; adaptive filters; adaptive optics; cognitive systems; learning systems; model reference adaptive control systems; pattern recognition; self-adjusting systems
2D r-adaptive FEM using error indicators 68067
40 Gbit/s RZ transm., adaptive dispersion compensation using Bragg gratings 85951
ABR traffic, adaptive burst spacer design/implement. for effective-rate enforcement 130225
ad hoc wireless testbed for scalable adaptive QoS support 85880
asynchronous learning networks, collaborative learning support, knowledge mgt. 113352
asynchronous real-time distributed systs., adaptive commun., heuristic algms. 74283
automobile control, adaptive scheduling using imprecise computation 134542
background acoustic noise fuzzy pattern class. 73052
BER of freq. adaptive radio syst. with sounding sigs. 108649
blind source recovery in static/dyn. environ., state space model 107577
blood vessel tracking in CTA/CE-MRA vol. images, adaptive min. path generation tech. 87663
bursty multimedia traffic, admission control schemes 119795
C4I defensive infrastructure for survivability against multi-mode attacks 111587
cdma2000 syst., phase predistortion 108923
CDMA techs. for embedding data in digital images 95066
cellular mobile IS, integrated isochronous/bursty media data, channel-state-depend. bandwidth allocation 107847
cellular wireless systs., utility-based power control 120017
centralized adaptive reservation, perform. anal. 119381
channel-adaptive scaled VQ for low-cost approx. of COVQ on time-varying channels 129212
clutter reduction and buried minelike target enhancement 77089
CMOS digital sliding controller for adaptive power supply regulation 125228
CMOS pipelined ADC, 8 bit, 80 Msample/s with background calib. 114846
CMOS prog. BP on-chip learning neural net with learning rate adaptation *(Chinese)* 91161
commun. network confidence based dual reinforcement Q-routing 107978
content based image retrieval in image databases, clustering based 106661
data network adaptive agent based routing 74041
dendritic adaptation, analog VLSI cct. basis 102482
differentiated services model for adaptive traffic, absol./relative bal. 119576
distributed routing for dyn. multicasting with advance resource reservation inform. 107962
DS-CDMA cellular systs., adaptive channel reservation scheme for soft handoff 74725
DS-CDMA systs., constrained optim. 108616
DS-CDMA systs., power control with signature seq. adaptation 85506
DS-CDMA with multipath, spreading code adaptation 108828
DVD-ROM readout RF sig. equalization, ANFIS-based PRML syst. 116595
dyn. rate control algms. for HDR throughput optim. 119900
e-commerce charact.-clustering model based on ART algm., design/implement. *(Chinese)* 108099
Earth-space rain atten. model based on EPNet-evolved ANN 117696
ECSAIWeb, adaptive learning environ. on WWW 100464
EM with vector tetrahedra, time discretization 128645
error recovery strategies, expts. 130396
evol. search, stochastic dyn., pop.-based incremental learning 78916
FH radio networks with partial-band interf., energy-efficient routing 84980
GA, variable search range, perform. relative to changes 78949
global congestion avoidance using decentralized adaptive agents 130848
GSM radio network, hierarchical cellular struct. with inter-layer reuse, capacity increment 131175
handwritten character recogn. via aspect ratio adaptive normalization 73553
hemiplegic patients' adaptive FES switching syst. 122357
hidden targets detect., mine-detect.-like task 77111

adaptive systems continued
highly nonlin. syst. modeling/prediction, adaptive-neuro fuzzy inference 1189
home-area networks, adaptive resource mgt. syst. 74233
HOS-based adaptive syst. training, entropy and MSE criteria 107431
human face feature extraction via adaptive principal component extraction algr 84577
hypermedia systs., user models role 113311
ideal/optimal/real/adaptive sig. receivers 108622
IEEE 802.11 adaptive multirate WLAN 108143
image compression, wavelet adapted and visually tuned 107007
image region segmentation, conc.-based adaptive approach 129846
Internet mobile telephony, adaptive resource allocation during handoff 85311
Internet server switching, yesterday and tomorrow 108502
IP phone gateway, adaptive network-attached storage syst. *(Chinese)* 119501
iter. multiuser parallel decision feedback with different code rates, perform 131292
layered video multicast, inter-session fairness 130871
LEO satellite channel with high dyn., generic multistep power control algm 131309
lossless data compression via adaptive alphabet decomp. *(Japanese)* 84666
low-cost adaptive ramp generator for analog BIST appls. 101849
MAC adaptive protocol for satellite ATM 95923
machine, etalonless diagnostics, adaptive syst. 88691
mobile computing, adaptive bus model for distributed multimedia stream 108166
mobile terminal power on/off state mgt., adaptive 131177
motors, fuzzy-neuro intell. fault diagnosis 78712
MPEG-2 QoS adaptive streaming based on scalable media obj. 108400
multi-resoln. resource behavior queries using wavelets 118924
multiaccess adaptive random protocols for nonMarkov networks 96614
multicarrier wireless access syst. 85556
multicast topol. inference 119167
multicast with cache, adaptive zero-delay VoD service 120569
multimedia telecom services comp., auto-adaptive preliminary approach 130965
multirate digital systs., lin. and nonlin., sig. flow graphs 90012
multiresolution imager based on FPGA 120914
multiscale models for DP, sensitivity anal. 118364
multiuser interf. suppression using optimal seqs. combined with antenna arrays 94059
N-dimens. adaptive DP syst., quadratic goal fn., second derivative estim. 73669
network modeling scheme 85233
networked multimedia appls., adaptive causality and media sync. control 130977
neural nets, adaptive, nonlin., with delays, anal. 114911
neural network-based sens. sig. accelerator 121050
nonGEO satellite diversity based systs., hybrid channel adaptive handover 96541
OFDM/SDMA-based wireless local networks, adaptive loading 74605
opt. networks with wavelength translation, oblivious/adaptive routing anal. 119382
packet video receivers with finite buffer capacity, adaptive playout strategies 130336
periodic sigs., noisy meas., time derivatives, nonlin. observers 73643
QoS using delay-synchronized dyn. priority scheduling 130227
QoS-aware IP multicast routing protocols, perform. 95927
QuO middleware, adaptive support in wide-area and embedded distributed obj. appls. 74280
rate adaptive TCP, congestion control with explicit rate feedback, perform. 73946
rate compatible product codes 106094
ring access protocol for super high-speed networks, perform. eval. 95928
SAMOAGA (Simulated Annealing Maintaining Optima Adaptively by Genetic Algorithm) and appls. *(Chinese)* 124579
smart on-board adaptive sens., MECA electrometer 133250
software radio, spectrum mgt. evol. or rev. 111563
space-time channel tracking for multipath fast-fading channels 130275
space-variant point spread fn. model for undercorrected opt. systs. 84265
speech recogn. using integra-normalizer defined metric 129396
tactical battlefield networks, adaptive config. mgt. archit. design 111572
target detect. enhancements, in-situ adaptive clutter modeling 131688
TCP perform. over end-to-end rate control/stochastic available capacity 119267
token-passing strategy, adaptive, develop. and refinement 73956
transm. syst., in-service estim. scheme for radio propag. path charcts. *(Chinese)* 74565
ultimatum bargaining adaptive learning vs. punishment 124491
variable bandwidth wireless environ., dyn. mgt./adaptive appls. 130366
video on Internet, multilevel adaptive streaming, control 86338
video shot detect. via adaptive cumulation algm. 84244
Voice over IP, predictive playout delay adaptation 108083
voiced/unvoiced segmentation for Mandarin syllable *(Chinese)* 106336
vol. images, complex boundary extraction via deformable surface 73509
W-CDMA channels, multimedia transm., resource allocation with adaptive QoS 85384
WDM networks, adaptive distributed wavelength routing algm. 74989
wireless broadband networks, channel state-adaptive techs. for throughput enhancement 119925

adaptive transform coding *see adaptive codes; transform coding*

add-on boards
see also memory cards; memory expansion boards
adaptive parallel syst. dedicated to projective image matching 95513
ADC testing, transportable A/D box for comparative meas. 109425
ADC/DAC plug-in cards for Personal Computers *(German)* 68861
aerial photograph draping & perspective correction, hardware soln. 94754
AMP Z-pack 2 mm HM connectors, Quiet Mate contacts, nanosec. discontinuity, hot-swap appl. 115112
analogue input ccts. for PC plug-in measuring cards *(German)* 125570
analogue temp. sens., plug-in expansion card, resist. thermometers and thermocouples *(German)* 75405
FPGA based image proc. board *(Chinese)* 94606
KPCI PC plug-in card for DMM voltage meas. *(German)* 120640
megasamples/sec region computer-aided data collection, plug-in cards, built-in web servers *(German)* 131835
meteorological radar, digital sig./image proc. 106834
PCI bus expansion card with floating point DSP, develop. *(Slovenian)* 97153
plug-in board, DIN EN 50155 reliab. requirements, rly. appls. *(German)* 78703
prog. proc. cards, data security *(Polish)* 125466
wood real-time inspection archit. 95532

add-on computers *see coprocessors; satellite computers*

adders
64-bit carry-select adder with reduced area, single ripple-carry adder 68735
adiabatic logic cct., power clock generator 102069
all-opt. digital proc. ccts., switching/regenerative memory appls. 116868

dders continued
area-efficient binary adder, novel design 102015
area-efficient Manchester carry-bypass adder, low energy-delay product 102022
binary carry-propag. addit., adder family 79866
bit-parallel bireciprocal lattice WDF, arith. transforms. 91098
bit-serial arith. cct. evol. synthesis *(English)* 79851
BLOWFISH algm., optimal datapath design for cryptographic proc. 106288
body contact-type pass transistor, complementary pass transistor logic *(Japanese)* 70133
carry-save adder, low-power multiplier block 102058
carry-save adders, residue to binary conversion, carry-propag. barrier, comments and reply 102013
carry-save representation based arith. implement. 90878
CMOS adder, 2D IDCT, image compression 107010
CMOS adder, partially depleted SOI technol. 114726
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS C^3L high-speed logic ccts. in capacitor coupling tech. 102068
CMOS dyn. logic, single-phase adiabatic cct. 68716
CMOS full adders in different design styles with emphasis on low-power topologies 90890
CMOS high-perform. adder, 64 bit, implement. using output prediction logic 68731
CMOS low-power carry select adder 102057
CMOS multiple-valued logic signed-digit full adder, neg.-differential-resist. devices 68761
CMOS race logic high-speed carry look-ahead adder, 64-bit 125457
CMOS regularly struct. parallel multiplier with low-power non-binary-logic counter ccts. 125426
CMOS VLSI, LV design, temp. instabilities 116035
complementary pass-transistor logic ccts., testing, single-stuck faults 102018
current-mode CMOS ccts., design based on current threshold-controllable tech. 68967
Δ-Σ converters, low-power decimation filter design 68864
discrete wavelet transform computation using RNS archit. 114700
disjoint decomp. of bal. Boolean fns. through Walsh spectrum 68768
DSP appls., floating point low power adder design 68757
dual-rail multiple-valued current-mode VLSI with biasing current sources 79815
fast IEEE floating-point adders, design 79862
few adder multiplier design, graphical methods 107480
FIR canonic signed digit Chebyshev filter design 68934
FIR freq. masking filters, narrow-band single filter 118981
flexible multiplication unit for FPGA logic block 102064
flexible proc. based on full-adder/D-flip-flop merged module 79772
floating-point adder, on-line testing method, abridged operation 79791
FPGA struct. for const. coeff. multiplication *(Polish)* 114713
full adder cell, low-power embedded archit. 102059
full adder design using CMOS cpd. mode logic *(Korean)* 114698
heterog. cct. synthesis, evol. graph generation, terminal-colour constraint 79827
high speed multiplier-accumulator archit. 90880
high-radix RNS forward and inverse converters 68744
high-speed Booth-algm. FIR archit., A low-complexity 102402
IIR multiplierless ellipt. filters, cascade and parallel realizations 130073
independent gamma stats., distrib. sum 95728
inductive voltage adder module, pulse generator 99784
joint module selection and retiming with carry-save representation 114737
leading zero anticipation and detect. 79652
lin. threshold gate implement. in SET technol. 90868
logarithmic adder optimal struct. with fanout of two for minimizing area-delay product 90849
logic gates, intermolecular/intramolecular 91505
low power adders based on representations of carry sigs. 102085
low power arith. ccts., design method *(Japanese)* 79763
low power consumption arith. units, Plastic Hard Macro Technology *(Japanese)* 79764
low-power design method for CPL, CVSL and domino logic families 68746
low-power shared division and sq.-root archit. using GST algm. 125425
M-ary/DS-SS syst., digital matched filter using real-valued shift-orthogonal finite-length seqs. 85519
merged inner-product proc. using modified Booth algm. 68711
micromechanical phase-shifting gate technol. for opt. logic components desiugn 104845
min.-adder integer multipliers using carry-save adders 90852
MOS floating gate neuron cct., low temp. DC charact. 68984
MOS multiple-valued logic voltage-mode adders, cct. design 102032
multigate SETs, single-electron pass-transistor logic, binary adder 125459
multiple operand redundant binary adder design, MOSFET technol. *(Japanese)* 114706
multiple-valued arith. ccts. synthesis using evol. graph generation 79841
multiplier-less IIR filter synthesis algms. to trade-off delay and no. of adders 91080
μPs, CMOS, RTD, SET and QCA technols. 102193
nonlin. digital recursive second-order ccts. dyn. under const. external influence *(Russian)* 90696
NORA dyn. CMOS ccts., clock-race conditions investig. 114732
orthogonal 1D DWT, canonical and retimed RNS archits., field-PLD 102055
orthonormal inverse DWT, design and FPGA implement. 86455
parallel modified signed-digit algms. for division/sq. root/logarithmic/exponential fns. 104846
parallel multiplier, multiple carry-propagate adders 102033
parallel prefix adder design 79864
parallel-prefix modulo 2^n+1 adders for diminished-one operands 79863
peak constrained least sq. FIR filters with low complexity finite precision coeffs. 91067
prefix adders, deep-submicron technol., anal. wire delay model 102086
QD logic ccts., shared BDD 101999
real-time image proc., convolution operation implemented in FPGA 129586
recursive Gram-Schmidt orthonormalization procedure and appl. to commun. 85533
redundant binary adder-subtractor representing each digit by hybrid 2 bits/3 bits *(Japanese)* 79774
redundant binary no. to two's complement conversion for parallel archits. 79801
redundant digit systs. gate networks design 90879
ripple carry and cascaded carry lookahead adders *(Japanese)* 79854
RMS responding LCDs, restricted patterns display controller 97717
RSFQ logic cct., top-down design, BDD 70891
self-timed pipelining using latest arriving sig. detect. 68736
SFQ-RL logic cct., pipelined archit. 127493
short wordlength selective IIR filters, design procedure, implement. complexity 102380
adders continued
single ended pass-transistor logic, comparison with CMOS/CPL 101945
SISO low latency module, broadband turbo decoding appl. 72879
split-level precharge differential logic, high-speed charge-recycling 102003
supercond. RSFQ ccts., BER and pulse jitter 70842
sync. data-path ccts., sig. represent. guided synthesis using carry-save adders 125442
tree-struct. carry lookahead adder, 1.25 GHz, 32-bit 102021
true single phase clock style, scalable counter archit. for pre-scaler 102024
variable-latency pipelined multipliers, asynchronous and sync., design 68777
Viterbi decoders, high speed add-compare-select scheme 114733
VLSI low-complexity combinat. RNS multiplier, full adder-based cct. 125429
WDF design and implement. 125609
width-adaptive data word archits., asynchronous VLSI techs. 68728
C_{60} mol. transistor, memory/adder model 125932
InAlAs/InGaAs HBT IC, adder carry-and-sum logic cct. 114710
InAlAs/InGaAs HBT carry-and-sum logic cct., adder archit. 114705
InP RTD/HFET MOBILE depth-2 full-adder cct. 114708
Nb/AlO_x/Nb jn., phase-mode pipelined parallel multiplier 70845
additive white Gaussian noise *see AWGN*
additive white Gaussian noise channels *see AWGN channels*
adherence *see adhesion*
adhesion
see also adhesives
3-phase AC locomotive, rail-wheel adhesion ident. 89399
850 nm 2D selectively oxidized VCSEL arrays, flip-chip integrat. 115224
BCB, low-temp. full-wafer adhesive bonding 103228
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effects 92140
beams, act. piezoelec. damping, bonding layer props. 127265
BGA wire bond integrity/package interfacial adhesion, plasma cleaning gas chem. effects 113568
bisphenol A epoxy/phenoxy resin encapsulant, thermosetting/thermoplastic combination 67581
bondpad peeling failure in wafer fab., AES/EDX studies 103949
ceramic/epoxy composite for integral capacitors, particle packing/Cu plating/permitt. 80441
chem. amplified pos. resist profile change, re-adhering acid effects 103552
clean room, high-sensitivity multiple-point monitor for ammonia and amino-ethanol gas 115727
CMP proc., model for mech. wear and abrasive particle adhesion 92072
COB glob top encapsulant curing, variable freq. microwave proc. 78641
compact muon solenoid conductor, effect of surface treatment on adhesion at 300 K and 4.2 K 82003
consecutive plasma procs., effects of wall contamination 124902
cryogenic temp. opt. fibre perform. tests 127629
CSP proc. with reworkable underfills for mobile phone appls. 113708
diamond low temp. CVD deposition using halogenated precursors 68278
diamond nucleation, biased HFCVD, Raman spectra, SEM 68282
dielec. thin films, low-k, thermal mech. props., advanced metrology for rapid charact. 75895
direct print microlithography, computational modeling 103699
discolored bondpads caused by $Al(OH)_3$ form., SEM inspection, EDX, FIB 102873
dry electrophotographic procs., toner to photoconductor adhesion 83171
electronic package, dissimilar material jn., sensitivity derivatives 113646
electronic packaging materials, surface energy improvement by plasma treatment 124350
electrostatic powder coatings, thickness/adhesive props. meas. 83170
electrostatic powder coatings adhesion meas. 83127
epoxy underfill adhesion, flip-chip packaging 113483
epoxy underfill materials, titanate/zirconate coupling agent effects 67599
epoxy/phenolic resin, no-flow underfill, non-anhydride curing syst. 113730
flip chip package with reflowable underfills, reliab. studies 113706
flip chip packaging, passiv. and solder mask, surface props. 113718
flip chip packaging, surface tension/adhesion 67597
flip chip underfill to passiv. material adhesion, environ. influence 67598
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
flip-chip package, single pass reflow encapsulant 113502
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
flying slider in HDD, oil-repellent treatment 104529
fritting contacts applicability to micromachined probe cards *(Japanese)* 125859
gas sens. sapphire substr., Pt metallis. bonding, adhesion layers 97529
glass microspheres, adhesion based micromanipulation, contact geom. *(French)* 70346
hard disk coatings, charactn. of nano-wear mechanisms 68476
high power locomotives, vehicle/drive dyn. simul., wheel-rail models *(German)* 100269
HMDSO film, bottom antireflective coating, DUV lithog. 126550
IC packaging, wafer surface profile impact 67612
ink-jet printing technol. appl. to display assembly/interconnect 86797
inorganic-organic hybrid polymers, sol-gel, opt. interconnection 71216
ITO/SiO_2/PET transparent conductive films, SiO_2 anchor layer, resistive touch panel appl. 109910
keratinocytes, reacts. to in vitro mm wave exposure 98744
Kovar-Pyrex anodically bonded samples, charact., packaging approach for MEMS devices 104164
laser direct-write of materials for microelectronics appls. 103979
laser surface cleaning, sci./engng. 128597
lead-free solder plating, ionic migration, reflow proc. and flux residue, QCM method 124315
localizable HDI-PCB technol. develop. 113588
MCM-D packaging, wet etch stop resist eval. 69375
MEMS, stiction suppression, review 104159
MEMS, surface engng. chem. 81553
MEMS struct., effects of temp. on surface adhesion 104201
MEMS surfaces, auto-adhesion model, surface roughness effects 81581
MEMS torsional ratcheting actuator, reliab. 89024
MEMS tribology, overview 81545
Micro-faze thermal grease, dry-to-touch 67582
micromachine stiction, 2H-perfluorodecyltrichlorosilane coatings 70326
nano-imprint lithog., mold surface treatment for easy release 103710
nanolithography, resist materials, metal binding SAM 92263
no-flow underfill, toughening agents, effect on fillet cracking 113485
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
no-flow underfills, flip chip assemblies, adhesion charactn. 67626

adhesion continued
Northeast Bioengineering Conference, 27th annual, Storrs, CT, USA (Mar-Apr 2001) 100396
PCB HDI, epoxy dielec., metal thin film adhesion 115161
photosensitive copolymer comps. for opt. inform. proc. and storage 71204
piezopolymer US transducer, backing & wear protection/matching layers 111514
plastic encapsulant, moisture induced delamination, coupling agent bonded interface degrad. 113716
polyetherimide adhesion to Si wafer, Al-chelate treatment, MCM fab. 80542
polyimide film, photosensitive insulator, lithographic props. 92219
polyimide-Cu MCM-D, copper capping alternatives eval. 115231
polyimide/Cu PCB materials, laser-assisted via hole metallization 69327
polymer bonding proc., nanolithography appls. 126522
polynorbornene low-k dielec. material, photosensitive, for packaging appls. 67601
polysilicon bolometer, IR FPA, membrane transfer bonding 120795
polysilicon cantilevers, surface-micromachined, repair of stiction-failed samples using laser 92550
polysilicon MEMS, alkene based monolayer coatings 104181
polyurethane-acrylates, protective coatings in opt. fiber technol. 116558
pre-bond IC plasma cleaning, wire bond pull strength enhancement 81077
refractory ceramic coatings, procs., systs., wettability/adhesion 101481
repairable CSP underfill materials for reliab. enhancement 113598
resist outgassing at EUV wavelengths 103645
resist pattern adhesion on SiH_4-coupling treated surface, direct AFM meas. 103638
self-primed spin-on low-k materials testing for wafer cost of ownership optim. 92124
semicond. device polyimide films, surface plasma treatments expts. *(Japanese)* 81059
smart beams, piezoelec. actuator/sens., debonding effect 114477
solder paste stencil printing, crit. factors affecting paste flow 80508
stud bump bonding flip-chip technol., chip-on-flex develop. 69363
SU-8 proc. on substrs., wettability, adhesion, surface tension 102965
SU-8 resist, high-aspect-ratio microstruct. fab., Si/Cu(NiFe)(Au)(Ti) syst. 92530
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
thin films, stresses and mech. props., conf., Boston MA, USA (Nov.-Dec. 1999) 113277
thin-film interconnect struct., interfacial adhesion, temp. and moisture effects 126428
transit. metal oxide ARC for airborne diamond optics 71500
ULSI interconnect form. using dispersed nanoparticles 92100
underfill encapsulant affected by flip chip assembly variables, adhesion 67578
underfill hot-wet adhesion improvement, adhesion promoter appl. 113734
underfill material, adhesion/reliab./reworkability study, free radical polymerization syst. 113636
underfill resin develop., flow microcalorimetry appl. 67610
universal solders for direct/powerful bonding on semicond./diamond/opt. materials 78601
wafer-level packaging, photosensitive thick film, stress compensation layer 113500
wirebonding proc. control, ASTM method F.459 revision 69370
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Al magnet wire continuous cleaning proc., MF atmos. plasma appl. 125857
AlN piezoelec. film, sputter deposition 90244
AlON diffusion barrier form. for Ag interconnect metallization 92179
ArF excimer laser resist, pattern collapse, DPAT method 126557
ArF lithog., 193 nm, vinyl ether-maleic anhydride alternating polymer resist syst. 103545
ArF/SOR resist patterns, adhesion/cohesion anal. with AFM microtip 103637
Au neutral electroless PCB surface finishes, wire bondability/solderability 102834
Au/In isothermal solidif., die bonding failure modes *(Chinese)* 69371
Au/Pt/Ti opt. module thin-film electrodes, adhesion force meas. *(Japanese)* 82432
c-BN films, IBAD, depth resolved stress anal. 115629
BN, vapour deposition, substr. effect 79277
$Bi_2Sr_2CaCu_2O_x$/Ag/Ni HTSC clad tape, fab., mech. props., J_c 70735
ta-C films, ion-assisted pulsed magnetron sputtering deposition 79214
C ion beam deposited overcoats, mag. disks, mech. strength, wear resist. 116435
C nanotube emitters, screen printing, field emission charact. 80581
C self-organized nanotips, high-dens. ICP CVD and electron field emission charact. 115796
a-C:F PECVD film charact., damascene interconnection 69954
a-C:H DLC films, deposition methods for GMR heads 79293
Co-W-P thin films, electroless deposition for ULSI, MEMS appls. 90509
Cr/Cu/Ni underbump metallization, flip-chip interconnection 113650
Cr/Ti/diamond, IBAD, RBS charactn. 114402
Cu BGA substr. etch treatment, solder mask adhesion 67575
Cu CVD, Cu(TMVS)(hfac) sourced, on TaN substrs., surface morph., water vap. effects 90463
Cu electroless deposition, Pt-Ag/Al_2O_3 substr., IC packaging 124325
Cu electroplated films, adhesive strength & scratch resist. 126491
Cu, high purity, diffusion bonding, brazing, lin. collider struct. 97916
Cu interconnect oxid. and reduction anal. using spectrosc. ellipsometry 104036
Cu interconnects, SR X-ray microdiffraction 69946
Cu interconnects, thermal stress and reliab. charactn. of barriers 126456
Cu layers, enhancement of adhesion to Dow Cyclotene 3022 through metal sputtering 114424
Cu seed layer for Cu metallisation, stresses 103484
Cu seed layer for interconnection, agglomeration control 126482
Cu spontaneous nonaqueous electrochem. deposition on Al and AlCu 68325
Cu thin films, thermal mech. props., advanced metrology for rapid charact. 75895
Cu wafer bonding, microstruct., oxide distrib. 68387
Cu wetting of 2D silicates, robust barriers for interconnect appls. 126438
Cu/CVD SiOC dual-damascene interconnect, electromigration reliab. 115710
Cu/Cr/BPDA-PDA struct., plastic bending, T-peel test 67554
Cu/Ni/surface-modified poly(tetrafluoroethylene) films, electroless plating 92130
Cu/SiLK interconnect, flip-chip package, interfacial adhesion 115678
Cu/a-C:F low-k dielec. damascence interconnection, electroplating 103475
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu/dry-film adhesion enhancement, PCB surface prep. chem. 102818
Cu/low-k cyclohexane-based plasma polymer films interface, chem. interact., adhesion charact. 103453
Cu/low-k dielec. interconnects, interfacial adhesion 115707
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
adhesion continued
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
Cu-TiWN multilayer interconnections, electromigration 81117
Cu-W-Si , selective MOCVD on AZ 5214-patterned substrs., IC metallisation 69952
CuAl-SiO_2 barrier/adhesion promoter-ILD interface microstruct., charactn 103461
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packaging 125945
GaAs nanopillars fab., colloidal gold natural lithog. 126601
GaAs, pixel detectors, bump bonding interconnect technol. 132302
GaAs pixel detectors, bump bonding interconnect technol. 132303
GaAs-Si heterog. wafer direct surface activated bonding, RT method 69777
GaN bonding with Si, SeS_2 bonding assisted layer, laser lift-off 80971
H-silsesquioxane ultra low-k ILD films with tunable elec./mech. props. 92159
ITO films, bias RF magnetron sputtering, struct./elec./opt. props. *(Chinese)* 114244
InP-Si direct wafer bonding, cryst. defects charactn. 115475
$LaCrO_3$/Cu-Pd/Cr-Fe-Y_2O_3, brazed joints, SOFC 89156
$LiNbO_3$/Pt/Ti/Au/Au integrated opt. waveguide modulator, mech. testing 82177
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
$MgAl_2O_4$/Al(Ag) heterophase boundary, local bonding, ab initio study 103217
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
Ni/SiC, interface reaction, Ar^+ irrad. effects, thermal annealing 69704
Ni/Ti/diamond, IBAD, RBS charactn. 114402
Ni/ZrO_2 anode catalyst prep., mist pyrolysis method, SOFC appl. 79441
PZT actuator, fab., high speed AFM 81625
PZT thin film, structural charactn., SEM/HREM/XRD 116146
PZT thin films, MOCVD, lower electrode structs., piezoelec. MEMS appl. 127163
PZT thin films, mech. props., adhesion, SPM/SEM, MEMS 127095
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
Pd spontaneous nonaqueous electrochem. deposition on Al and AlCu 68325
Pd/Si(111) syst., laser spraying, Pd_2Si interface struct. 126205
SOI struct. fabr. by UHV electron beam evap. and epitaxial layer transfer 80933
Si patterned wafers, silica particles, megasonic cleaning 126387
Si, selective wafer bonding, surface roughness control 92573
μc-Si, thermal PECVD, ultrafast deposition 68285
Si thin film solar cell, adhesive bonding tech. 113014
Si wafer, small W particles removal, laser-induced plasma shock waves 81057
n-Si:H/Cu jns., Cu electroplating, struct./elec. props. 101420
Si(001)/SiC, 6H interfaces, wafer bonding, interface struct. 126257
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
α-SiC aligned nanorods on β-SiC particles, arc-discharge prep. 79412
SiO_2 growth by TEOS-O_2 plasma mixture, 3D Monte Carlo model 68218
a-SiO_2 surf., hydrophilic wafer bonding modeling 81056
SiO_{2-x}-Al thin-film polarizer, mech. eval. 93301
SiOC very low-k ILD film with extendibility to k<2.7, material props. 92150
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Ta/low-k cyclohexane-based plasma polymer films interface, chem. interact., adhesion charact. 103453
TaN/Ta bilayer, high perform. liner for Cu-Damascene ULSI interconnects 126439
Ti film liner, coil sputtering, IMP technol. 103473
Ti:sapphire laser crysts., direct bonding tech., feasibility study 92936
W/Ti/diamond, IBAD, RBS charactn. 114402
ZnO thin films for UV laser, synthesis and charactn. 68317
ZnS:Ag, electrophoretically deposited phosphor, opt. charactn. 104918

adhesives
see also adhesion
3M, opt. interconnect appls., high-perform. polymers 113618
adhesive curing, polymerisation reacts., UV laser light induced 72129
advanced packaging materials, conf., Braselton, GA, USA (March 2001) 78404
ALIVH any layer interstitial via hole substr., interconnection tech. 67562
AMLCD, low temp. COG bonding, printed UV curable ACA 97754
anisotropic conducting adhesive used as flex-to-card interconnection, charact. 113529
anisotropically conductive adhesive, elec. conductance 78633
automatic solder stencil cleaning proc., cleaning agent develop. 80499
backside mounting procedures for semicond. wafer proc. 126425
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
concurrent engng. in electronic packaging, conf., Calimanesti-Caciulata, Romania (May 2001) 124229
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
conductive adhesives for flip-chip appls., self-alignment capability 67604
conductive adhesives for packaging, Internet course, expt. seq. 113372
conductive layers in LTCC ccts., assembly props. 78657
elec. conductive adhesive, metal-filled, microwave curing 113611
elec. conductive adhesive, self-alignment and contact resist. 113527
electronically conductive filled adhesive joints, behaviour under cyclic loading 67559
epoxy adhesive, opt. fiber/pass. component, cure kinetics 116624
epoxy adhesives, stress effects, packaged LTCC, mag. appls. 67548
epoxy resin adhesive samples, shear wave vel. meas., EM acoustic transducers appl. 99093
fine-pitch solder stencil cleaning guidelines 91479
flip chip-in-package stud bump bonding proc., reduced proc. steps 80536
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip BGA package, thermal interface material 113526
flip-chip-on-ceramic substr., packaging proc. 67633
HDI flip chip-on-flex, base materials eval. 124359
HDI microelectronics packaging roadmap for space appls. 133228
IC package inspection using X-ray systs. 124403
isotropic conductive adhesive joints in flip-chip test vehicle, HF meas. 67584
isotropic conductive adhesives as SMT solder alternative 124349
isotropically conductive adhesives, nonepoxy-based polymer matrix 67560
isotropically conductive adhesives as interconnect materials, flip-chip test vehicle 113688
LCD module interconnection, chip-on-film technol. 86859
low strain new generation light curing adhesives 78604

dhesives continued
Mars rover microelectronics, die attachment for -120°C to +20°C thermal cycling 88075
MEMS/MOEMS packaging, getters as dual-purpose moisture-particle scavengers 70328
micro-dispensing for electronics assembly, integrated engng. approach 69321
microbump bonding, internal stress and connection resist. 113536
microsystem technol., unfilled adhesive, microdosing 116087
MR/GMR-based mag. heads, ultra-high dens., constr./technol. 127373
multilayer struct., electronic package, thermal fatigue, finite element simul. 67549
noncontact adhesive dispensing in SMT assembly procs., advantages 115138
OTDR monitoring in dams 79474
PCB, via filling, conductive adhesive materials 115162
peripheral array package, interfacial delamination propag., 2D/3D num. models 78634
polymer electronics, sens., adhesives, encapsulated ccts. *(Spanish)* 79446
semicond. packaging assembly, case-based decision support model 113709
SMT adhesives/epoxies/dispensing proc. technol., overview 80500
structural adhesives, dielec. cure monitoring, split post dielec. resonator 75823
surface mount conductive adhesives, contact resist. 113528
thermoplastic isotropically conductive adhesive, contact resist. degrad. 113530
US motor stator vibr., adhesive effects modelling *(Chinese)* 112567
Ag-epoxy conductive adhesive/Sn-Pb coating interface, high temp. degrad. mechanism 67561
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
Au/Cr/sapphire interfacial fracture, hybrid microcircuits, annealing 102839
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packaging 125945
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pb-free leadframe packages, plating chem. eval./reliab. 113700
needle dispensing equipt. design for very high speed deposition 113468

adiabatic compression, plasma *see plasma heating*

adiabatic demagnetisation *see magnetic cooling*

adjacent channel interference
algm. for channel assignment under channel interf. constraints 85513
AM band DAB, RS decoding algms. 120508
BFDM/OQAM systs. based on biorthogonal modulated filter banks, design 73776
Bluetooth network in adjacent/CCI presence, perform. eval. 85633
Bluetooth radio data chip, VCO and quadrature demodulator *(German)* 74166
Bluetooth-based public Internet access point, perform. eval. 108640
broadband mobile commun., wavelet-based multicarrier DS-CDMA syst. 108753
cellular CDMA and TDMA over nondispersive channels, capacity 131215
cellular environ., downlink transm. power control for CDMA/shared-TDD packet commun. 96514
cellular networks, constrained channel assignment, approx. algms. 85870
cellular radio, modified Viterbi algm. for non-Gaussian interf. 119990
CPM, serial concatenated, ACI suscept. 129064
DCS-1800 syst., overview of interfering emissions 96593
digital baseband predistorter using calib. memory, perform. 108576
direct conversion digital six-port receiver, analog carrier recovery loop 96612
direct-digital six-port receivers, adjacent channel suppression 119882
DS-CDMA multi-cell randomly spread syst., multiuser detect., inform. theory 119105
DS-CDMA multicarrier wavelet based syst., multistage interf. cancellation, perform. enhancement 105818
Earth-space triple-site dual polarized syst., adjacent terrestrial microwave syst. interf. effects 83389
European DVB-T equalizer in time-variant channel for digital mobile commun. 97050
FHMA turbo-coded commun., iter. multiuser detect. 107614
FHMA turbo-coded commun., iter. multiuser detect. 84781
fixed wireless access syst., simulated tolerance for uplink sync. 85560
FM band terrestrial DAB, soft selection combining 120507
freq. assignment problem, interf.-oriented version 131145
FSR-LPTV filtering for blind equalization and interf. rejection 130263
indoor WLAN, adaptive pre-selected sector antenna transmitter diversity using DS-CDMA 108211
interf.-resistant LPTV-MMSE equalisation 119196
ISM-band sub carrier multiplexed broadband digital microwave radio link 96530
mobile radio channels, interchannel interf. of OFDM 74696
multichannel coherent CPFSK syst. using opt. amp., sensitivity penalty 109069
OFDM, freq. offset estimator 72722
OFDM bandwidth-efficient indoor wireless, channel equalization 131083
OFDM commun. systs., in-band/out-band spectrum anal. using ICI cancellation methods 94248
OFDM multi-user satellite syst., code selection for interchannel interf. elimination 106034
OFDM receivers, optimum Nyquist windowing 73777
OFDM sigs. nonlin. predistortion over fading channels 74567
OFDM syst. for power line commun., clock freq. synchronisation 106018
OFDM systs., carrier freq. offset effect 106039
OFDM-OQAM conjug. syst., filter design 106019
on-board proc. satellite commun., bandwidth efficient channel spacing 109020
partially coherent MC-CDMA downlink perform. in Rayleigh fading channels 108568
perfect-reconstruction cosine-modulated filter banks, coeff. quantization 119067
PSK sigs. with channel interf., BER perform. derivation methods 85490
radio transmitter, adjacent channel transient power meas., wavelets 75288
RF power amp. lin. with digital predistort., LUT indexing method 79602
RZ polaris. multiplex transm. expt., 84 fs PMD detect. sensitivity 120287
self ICI cancellation-based OFDM systs. with carrier freq. offset estim., perform. 106038
two-channel grating-based OCDMA syst., interchannel interf. noise reduction 74972
two-stage periodically time-varying equalizer and interf. suppression 107698
unbiased blind separation using threshold nonlin. 84684
UTRA TDD, throughput of hybrid ARQ types 95911
UTRA-TDD and FDD syst., interf. 96563
W-CDMA RAKE reception in interpath interf., combining schemes 84902
W-CDMA/digital TV sigs., ACI meas. via spectrum analyzer 72350
WCDMA, uplink spatio-temporal interf. rejection combining 85831
WCDMA single-user interf. cancellation for fading channels and diversity antennas 108777
WCDMA-based cellular wireless IP networks, TCP perform. 84984

adjacent channel interference continued
wireless transm. syst., quadrature coded OFDM for reduction of freq. offset effects 108688
GaAs enhancement HJFET dual-mode power amp. for TDMA/CDMA handsets 114993

adlayers *see adsorbed layers; chemisorbed layers*

administrative data processing
see also business data processing; educational administrative data processing; financial data processing; government data processing; law administration; logistics data processing; manufacturing data processing; marketing data processing; medical administrative data processing; office automation; public administration; reservation computer systems; service industries; spreadsheet programs; word processing
equipt. maint. admin. using integrated software systs. 100508

admittance *see electric admittance*

admittance measurement *see electric admittance measurement*

ADP *see administrative data processing*

ADPCM *see adaptive modulation; differential pulse code modulation*

ADSL *see digital subscriber lines*

adsorbed layers
see also chemisorbed layers
diamond:H, p-type surface cond., adsorbates 69492
diamond:H, surface cond., adsorbate coverage, FTIR obs. 69494
diamond, mol. adsorbates, p-type surface doping and cond., first-principles study 126002
diamond covalent surfaces, at. H-induced abstraction of adsorbed D 115290
diamond photocathodes, CVD, surface reactivity with O/O_2 80649
diamond surface doping and p-type cond., adsorbate electron transfer 126003
polydiacetylene nanowires by STM-induced chain polymerization on graphite 125923
self-assembled QD, form. and size evol. 114285
surfactant-mediated heteroepitaxy, strained growth 68136
Au/Si(111)-7×7 surface, adsorbed Au oxid. effects 103422
Ba/Si(111)-(3×2) reconstruction, struct. anal. 103177
C nanotube tip, adsorbed water mols., field-emission, DFT 125960
$C_{60}F_x$ thin films growth, STM, HREELS 114282
Cs/p-GaAs(110), photoemiss., STM, STS, spin-polarized photoelectron source 110232
Cs_2O/Si(111) surfaces, thermal annealing, photoemission/work-fn. meas. 126274
GaAsP, MBE growth, As atoms, surf. migration, substr. temp. depend. 90294
GaN, MBE, surface adatoms, current-induced migration 101245
GaN wurtzite film on 6H-SiC, surface superstruct., PL props. 103040
GaSb/GaAs QD, MOCVD, struct. props. 126164
Ge covalent surfaces, at. H-induced abstraction of adsorbed D 115290
Ge, homo- and heteroepitaxies on (100)-2×1 surfaces, single adatom diffusion 124811
InAs/GaAs nanomesa syst., million-atom mol. dyn. simul. 69648
O, GaAs(001), effect on Schottky barrier height 115431
O_2/GaAs(100) interface, electron-beam-induced reacts. 103419
Si covalent surfaces, at. H-induced abstraction of adsorbed D 115290
Si, homo- and heteroepitaxies on (100)-2×1 surfaces, single adatom diffusion 124811
Si nanocrystals/adsorbed O superlattice, electronic transport, opt. props. 115385
Si polycryst. films on polymer substrs., low temp. deposition and charactn. 101177
Si/O nine period superlattice, transport charact., quantum device appl. 91808
Si(111)-(7×7) surfaces, H-saturated Si clusters, STM-assisted assembling 69993
SiC films, growth on Si, adsorbed propene laser melting 79379
SiC thin films, CVD using methylsilanes, C incorp., IR spectra 101342
a-SiO_2 surf., hydrophilic wafer bonding modeling 81056

adsorption
see also heat of adsorption
automated rapid vap. concentrator, nitroaromatic vap. sampling 75695
bimaterial microcantilever, adsorpt.- and absorpt.-induced stress studies 81558
bipolar supercapacitor electrodes, oxidized glassy carbon sheets 123847
BSG film, LPCVD, wafer bonding appl., AFM, FTIR 124887
carboxylic acid derivatives, electrode surface adsorpt., SAM growth 116975
conducting polymer, electrochem. investig., polymerisation/depolymerisation, secondary Li batts. 125112
diamond:N nanocryst. films, PECVD, struct., electrochem. behavior 91605
diamond(111) CVD growth steps, C-species incorporation and surface migration modelling 115807
2,4-dichlorophenoxyacetic acid monitoring, QCM immunosens. 111471
DMFC platinum-based electrocatalysts, methanol oxid. mechanisms 134370
dual receptor biosensors, fluoresc. reson. energy transfer pairs 109721
epoxy for electronic packaging appls., moisture absorpt. 67596
gas moisture, porous Al_2O_3 sens. 75930
glucose, amperometric determ., biosensor fab. 86675
glucose biosens., mol. imprinted polymers, capacitive detect. 86683
human serum albumin QCM immunosens., disposable 120953
IC stress tests, moisture-based failure modelling 126953
III-V semiconds., MOVPE, low temp. kinetic effects 90427
IPVD feature scale evol., effects of transient diffusion 68367
low-k dielec. films, characterisation by ellipsometric porosimetry 92600
lysozyme adsorpt./conform. change on SAM obs. 121258
mag. disk, durability, lubricant and additive adsorpt. 116314
mag. storage technol., applied surface anal., review 104526
MEMS chem. sens., adsorpt.-induced/photoinduced stresses 109729
nickel phthalocyanine thin films, chemiresistor-type NO gas sens. 97508
organic SOG, $Si(OH)_{4-x}F_x$ liq.-phase deposition, optics 90482
PANI composite coating, NH_3 sens., nulling opt.-transm. bridge 97433
paper, roughness change during wetting, air-coupled US meas. 109991
PCB electrochem. migration mechanism/accel., SO_2 gas environ. *(Japanese)* 69296
penicillin detect., capacitive EIS & enzyme FET sens. 120942
peroxidase-modified Au electrodes, mediatorless peroxide biosens. 86682
photomech. chem. microsens., situ hazardous chem. detect. 97449
phthalocyanine EL device, NO_2 gas adsorpt. *(Japanese)* 116967
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
QCM based DNA sens., immobilis. methods, genetic diagnosis 75674
SDS gas source ion implanter adsorbent technol., charactn. 126289
silicide films form. on Si, low-energy MD simul. 69999
tetra-iso-propoxyphthalocyaninato copper(II) film, gas sensitivity 75712
tribochemistry in contact recording 70541
ultra-pure proc. gas filter membranes, contamination contrib. eval. 103381
underfill resin develop., flow microcalorimetry appl. 67610
uracil alkyl derivatives, oxygen reduction rate on Pt catalysts 112821
UXO detect., explosive vap. diffusion in snow, modelling 76990

adsorption continued
vehicle exhaust VOC meas., extractive FTIR spectrosc. 122702
Al/Si(100) nanowire growth simul., anisotropic adatom diffusion and sticking prob. anal. *(Chinese)* 81155
Al/por-Si/Si struct., adsorpt.-based porosimetry using capacitance meas. 115424
Al_2O_3 porous tape cast substr., humidity sens., electrode geom. 75497
Au gate MOS capacitors, NO_2 sensitivity, transient response 91429
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
(Ba,La)TiO_3 PTCR ceramic, CO gas sens. 97479
(Ba,Sr)TiO_3 films prepared by liq. source CVD, at. incorporation rates, surface reacts. 79285
Bi_2Se_3-Sb_2Se_3 multilayer films, SILAR deposition, PEC 89041
C, activated, H_2 adsorpt., modelling, transportation appl. 113090
C high porosity electrodes derived from mesophase pitch for elec. double-layer capacitors 91432
C nanotube vert. aligned array, growth, field-emission obs. 102893
C nanotubes, adsorpt., functionalization, confine., appls. 79469
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
C_2F_6 removal, ferroelec. packed-bed barrier discharge reactor 122710
CO adsorpt. on Pd clusters deposited on pyrolytically prepared SnO_2, XPS 75725
Co-silicide field emitter arrays from Ti/Co layers 69424
GaAs (001), Mg adsorpt., surface/bulk props. 126039
GaAs:Se(Te) MLE, doping characts., impurity precursor adsorpt. control 103284
GaAs(100), thioacetamide passiv., struct., thermal stabil. 69836
GaInNAs/GaAs QW, plasma-assisted MBE growth/charactn. 101253
GaN films, MOVPE, thermal annealing, Ga droplet form. 68292
GaN single crysts. high-N_2-press. growth, doping, props. charactn. 124798
Ga_2O_3 high temp. gas sens., SiO_2 top layer, H sens. mechanism 121009
β-Ga_2O_3/O_2 interact., impedance spectrosc./SIMS obs. 109755
H/Si(100), Ba react., hydrogen termination effects, STM 91591
In_2O_3 films, O_3/NO_2 detect. 97510
K/GaAs(001), nonmetal-metal transit., modulated photovoltage changes 103179
MgO addits., aq. powder coating methods for boundary engineered ceramics 114441
MoO_3-TiO_2 thin film gas sens., RF sputtered & sol-gel prep. 109772
NO_x in flue exhaust gas, adsorpt., nonthermal plasma desorpt. proc. 133351
Na/GaAs(001), nonmetal-metal transit., modulated photovoltage changes 103179
Ni/PTFE porous anodes for alkaline fuel cells, activation 112837
Ni/YSZ cermet anodes in H_2-H_2O SOFC, competitive adsorpt. react. mechanism 100015
Ni-YSZ cermet anodes in YSZ fuel cells, methane fuelled, polaris. 89173
Ni-based SOFC anodes, microstruct., electrochem. 99998
NiS thin films, SILAR, prep./charactn. 125021
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
Pd/Mo field emitter tips, faceting 91535
Pd-Ag(Ni) hybrid suspen. gate FET, coevap. prep., H_2 sens. 132051
Pt fuel cell electrocatalyst, CO adsorpt., NMR, voltammetry 100013
Pt/Ir field emitter tips, faceting 91535
Pt/W field emitter tips, faceting 91535
Pt-WO_3 porous MISFET, CO gas sens. 86696
Pt-WO_3-Si_3N_4-SiO_2-Si-Al capacitor, NO_2 sens. characts. 97484
RuO_2-impregnated C electrodes, electrochem. capacitor appl. *(Japanese)* 91428
Si MBE, incorporation procs., pseudopotential method 90281
Si films, temp. modulation mol. layer epitaxy, surface reacts. 114360
Si, low temp. gas-source MBE, adsorpt. kinetics role 90316
Si, porous, high-temp. carbonizing, plasma proc. effects 115624
Si, porous, potentiometric triglyceride biosens., calib. 109724
Si surface, (001), Au-induced nanoscopic pattern form. 69994
Si surface, etching in KOH/TMAH soln., isopropyl alcohol effect 126417
Si:B, B sticking coeff. on Si during vap.-phase doping 126301
Si:H CVD growth, Monte Carlo model, H_2/SiH_4 gas source, desorpt. rate 90443
Si:H(100) thin film growth, mol. dyn. simul., H coverage effect 90442
Si:H(111) surfaces, H-passivated, H_2O/NH_3 temp.-activated reacts. 69472
Si:P, P sticking coeff. on Si during vap.-phase doping 126301
Si:P(B)(100)/Cl etching react. and adsorpt. 103442
Si/$CoSi_2$ syst., interlayer mediated epitaxy, CVD Co film 90541
Si/Si(100) nanowire growth simul., anisotropic adatom diffusion and sticking prob. anal. *(Chinese)* 81155
Si/SiO_2, pregate oxide cleaning, one-step cleaning soln. 103325
Si(001) surface, ab initio temp. depend. studies of homoepitaxial growth 79197
Si(001)-(2×1) step-free surfaces, enhanced terrace stabil., modelling and LEEM obs. 126418
Si(100), Si(113) and Si(115) surfaces, alkoxy modified, water adsorpt. 92023
Si(100), oxid. by ozone, init. proc., STM anal. 103418
Si(111)/(001), thin oxides growth, O adsorpt. 115632
SiC-Pd(Pt) Schottky diode, high temp. H_2 and CH_4 detect. 97540
SiH_2Cl_2 self-limited GSMBE on Si(100) 124851
SiO_2 growth by TEOS-O_2 plasma mixture, 3D Monte Carlo model 68218
SiO_2 sol-gel derived porous layers for low-k dielec. appls. 92163
SiO_2 ultra low-k porous films, prep., dielec./mech. props. 114405
$Sm_{0.5}Sr_{0.5}CoO_3$, SOFC cathode, reacts., rate-determining steps 89235
$Sm_{0.5}Sr_{0.5}CoO_3$ porous cathodes used in SOFC, mechanism 112830
SnO_2, CO adsorpt., in situ diffuse reflectance FTIR spectr. 109749
SnO_2 based heterolayer gas sens., slide-off transfer printing 97481
SnO_2 ceramics, chem. precip. & freeze-drying, CO gas sens. 75714
SnO_2 nanoparticulate film work fn. sens., NO_2 sensitivity 132045
SnO_2 nanosized powder & thick film gas sens., prep., charactn. 132048
SnO_2 nanosized thin films, mechanochem. proc., gas sens. 97546
SnO_2 sens. array, VOC detect., ANN pattern recogn. 97506
SnO_2 sens. for N_2O monitoring, catalytic decomp. 97485
SnO_2 sol-gel film microsens., CO response, moisture/electrode effects 97548
SnO_2 thick film ultralow power CO microsens., micromachining 97447
SnO_2 thin film, UV light activation, low temp. NO_2 sens. 132046
SnO_2 thin/thick film gas sens. comparison, diffusion-react. model 97482
SnO_2 thin-film gas sens. mechanism, dual ion beam sputtering 97503
n-SnO_2:Ni/p-Si heterostruct., NO_2/ethanol adsorpt., C-V characts. 69635
SnO_2:Pd,Cu nanocryst. gas sens. films, doping effect on props. 97463
SnO_2:Si films, CO & NO_2 gas sens. props. 97442
SnO_2-PdO nanocomposite based CO gas sens., fab. proc. 75734
TiO_2 nanoparticle coated quartz, CO/NO_2 adsorpt., gas sens. appl. 120960
TiO_x films, PECVD, multi jet hollow cathode plasma source 68236
TiO_2/mol. composite ultrathin film, synthesis, nanotechnology 125035
WO_3 based heterolayer gas sens., slide-off transfer printing 97481
WO_3 sens., SO_2 sensitivity, noble metal loading effect 97480
WO_x-SnO_2 nanosized powder & thick film gas sens., prep., charactn. 132048
ZnO, depletion layer depth, energy barrier height under H_2 103013
adsorption continued
ZnSe/GaAs heteroepitaxy, defect form., Monte Carlo simul. 101278
advertising
see also advertising data processing
Bent seqs. based variable-length coding for wireless advertising 129056
Internet TV economics, new niches or mass audiences 97057
targeted advertising and consumer privacy 129302
VoD, pricing considerations 131763
advertising data processing
iMEDIA business model of pers. interactive TV advertising 75327
aerials *see antennas*
aeroacoustics
air real-time acoustic vel. meas. using LDV, PLL, demodulation 110032
conf., computational acoustics, Rome, Italy (1999) 100384
handheld vac. cleaner, modifs. for noise control 78348
supersonic rect. jet, nozzle trailing edges effect on acoustic field 97869
aerodromes *see airports*
aeroelasticity *see elasticity*
aerogels
carbon cloth reinforced resorcinol formaldehyde aerogel films 79463
polymer electrolyte membrane fuel cells, carbon aerogel integrat. 89187
silica aerogel RICH radiator, testbeam results on particle ident. 121644
threshold aerogel Cherenkov detectors, new 5 inch photomultiplier eval. 121593
viral particle detect. by aerogel-immobilized bacteria 86678
$Ba_{1-x}Sr_xTiO_3$-Al_2O_3-MgO ferroelec. composite, dielec. prop., sol-gel synthesis 114448
$BaTiO_3$ powders, prep. using supercritical CO_2 drying of gels 79438
C aerogels, planar fibre reinforced, prep., struct. and PEM fuel cell appls. 78160
CeO_2-ZrO_2 thin film, sol-gel prep., counter electrode appl. 68320
$Cu_{0.1}V_2O_5$ xerogel cathodes, metallic Cu reversible form., XAS 112775
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2, silica self-assembled aerogel-like low dielec. const. films, prep. 79418
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
SiO_2-xerogel nanoporous low-k ILD films, grazing incidence SAXS 92161
SnO_2:Sb xerogel electrodes prep. and charactn. for electrochem. capacitor appls. 102768
aeroplanes *see aircraft*
Aerosils *see aerosols*
aerosols
see also foams
act. opt. true airspeed sens., precursor expt. 76873
aerosol particles, unipolar charging in alternating elec. field 83137
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
aerosols, bipolar charge meas. 86902
atm. dust and aerosols, ground-based lidar meas. 111421
atmos., Antarctic Plateau sites, IR-submm astron. 105747
atmos. aerosol charact., lidar develop. and expt. research *(English)* 99003
atmos. aerosols, laser rem. diagnostics, backscatt. spectrum reson. method 122703
atmos. particle charactn. from 3-wavelength Raman-lidar obs. 128624
bipolar charge aerosol classifier instrum. syst. 128663
Chernobyl nuc. reactor site, Object Shelter, aerosol distrib. 111223
cloud water content & droplet diam., multiply scatt. lidar returns 98982
corona plume, HV overhead lines, aerosols charging 111249
DIAL lidar rem. sens. & spectrosc., pulsed LD use 122663
direct-detect. mid-IR random-modulation CW lidar SNR 131678
dispersion model validation, rapid-scanning backscatt. lidar 122709
Durban atmos. LIDAR program 133284
electrostatic sprayer, aerosol space charge generation, drops, EHD instabil. 83168
fuel aerosol stream, drop av. diam. meas., diffr. method 109980
fuel aerosol stream, drop size determ., diffractive method 109979
global energy budget, cloud microphysical params. effects 99464
high power laser amps., slab cavity cleanliness *(Chinese)* 82703
hyperspectral data anal., mitigation of atmos. effects 76863
hyperspectral imagery, atmos. correction algm., adjacency effect 97169
irradiance-based method appl. for atmos. environ. obs. *(Chinese)* 76883
laser multiphoton ionis. appl. to fast direct environ. anal. 111481
lidar syst. for atmos. aerosol extinction and turbulence profiles meas. 133289
mid/upper stratos., temp. meas., Rayleigh scatt. lidar *(Chinese)* 76881
midtropospheric aerosol backscatt. background mode, space-based/airborne lidars appl. 131674
MM-wave meteoradar, atm. radioacoustic sounding 88158
MODTRAN4, radiative transfer modeling for rem. sens. 76830
opt. prop. rem. sens., airborne A-band spectrometer 122629
optoelectronic surveillance systs. effectiveness, aerosol residues influence 117703
polyethylene pellets mass flows, electrostatic charges elimination, supersonic injection 83106
quasi-monodispersive aerosol, drop sizes, diffr. meas. methods 75866
real-time DIAL meas. using 1-kHz-repetition-rate tunable laser 133290
Rhodamine 6G-doped spherical solid microparticles, cascade lasing 71651
satellite rem. sens. data, atmos. correction, aerosol extinction profiles influence 88123
Sea-viewing wide Field-of-View Sensor test, ocean color imagery atmos. correction 88174
self-calib. prog. mobility spectrometer, atmos. ion meas. 98995
silane low-press. oxid., modeling particle form., chem. kinetics/aerosol dyn. 68217
size distrib. retrieval, multiwavelength lidar data 76848
spaceborne aerosol sens., operational rem. sens., directional effects 88120
spatial-ang. charact. of laser beam leaving aerosol layer 117335
stratified media, laser sounding, multiple scatt., sig. depolarization 88147
stratos. aerosol meas. with L625 Mie lidar *(Chinese)* 122665
stratos./upper tropos. aerosol and O_3 opt. monitoring 88148
suspen. particles in ASSA TV analyzer, image form. 132159
Terra Multiangle Imaging Spectroradiometer, imagery/results 111394
thin cirrus cloud, structural params., spaceborne backscatt. lidar 111416
urban area atmos. aerosol monitoring by two-wavelength lidar 76900
VIS-SWIR hyperspectral data, perform. assess. of atmos. correction algms. 76862
VIS-SWIR hyperspectral data anal., atmos. correction algms. 98974
$Hg_{0.75}Re_{0.25}Ba_2Ca_2Cu_3O_{8+\delta}$ bi-axially textured HTSC film, synthesis, J_c 68337
O_2-I supersonic chem. laser, twisted-aerosol singlet O_2 generator, energy performs. 105078
PZT thin films, prep. by aerosol deposition method, elec. and opt. props. 127168
^{99m}Tc-diethylenetriaminepentaacetate aerosol, lung ventilation imaging 132849

rosols continued
Ti, trace element anal. using X-ray posn. sensitive spectrometer *(Chinese)* 132294

rospace
see also aerospace computing; aerospace control; aerospace industry; aerospace instrumentation; aerospace propulsion; aerospace simulation; aerospace test facilities; aircraft; ground support systems; space research; space vehicles
conf., Big Sky, USA (March 2001) 113282
DC aerospace servomotors, ZVS convertor-fed, fuzzy-based speed control 123500
plate de-icing in cold cross flow by hot fluid injection through slot, aircraft appls. 88026
radiation-induced losses in opt. fibres prediction 93062

erospace biophysics
aircraft pilots, myoelec. sigs. to augment speech recogn. 110558
astronauts, interplan. flights, radiation shielding, CREAM surveyor to Mars 133120
aviation helmets, act. noise reduction, mil. jet trainer test flight 87936
BNL accelerator-based radiobiology facilities 122367
cosmic-radiation dosemeter, mil. aircraft crew 87996
edge profiles crafting in aerospace indust., occupational biomechs. eval. 111330
electronic pers. dosemeter, internat. flights, cosmic radiation protection 98814
HI risk assess., nuc. detecting systs., hadrontherapy appl. 132325
integrat. ion imager, DNA samples, HI doses 122441
International Space Station, radiation meas. 133073
ISS Lab module, radiation distrib., visualisation in human body 122437
ref. radiation facility, dosimetry at flight altitude/in space 122438
shield material design, astronaut space radiation protection 111215
shielded HI environ. lin. detector, RTD mission 122440
space radiation health, conf., Arona, Italy (May 2000) 124172
space station MIR, av. LET depth distrib., absorbed dose 122439
spacecraft, LEO, LET distribs. 121611
^{7}LiF:Mg,Ti TLD, glow curve, space radiation dose equiv. 98762

erospace computing
see also aerospace expert systems; aircraft computers
3D laser tracking syst. by triangulation/photogrammetry techs. 93912
adaptive instrum. module, space instrum. controller "Brain" through PLD 111332
aeronautical education course problems soln. using spreadsheet fluid dyn. 100452
aircraft air valve, BLDCM monitoring 76801
aircraft engines, abnormal behavior detect., data mining appl. 76816
aircraft repair notes, free-text, inform. extraction 133204
Aura project TES instrum., ground data systs./flight operations 133320
aviation, Internet protocols 122492
Beagle 2, Mars Lander, Ada lang. appl. 88037
COGENT, cognitive agent for Spacecraft telemetry monitoring 76823
deep space network ranging syst., use of DSP technol. 133267
distributed satellite C^2 testbed develop. 122504
distributed spacecraft modeling and simul. testbed, navig. validation 122503
evolvable antenna syst., syst. for evolving antennas in-situ 111331
hybrid PCI/VME archit. develop. for space syst. 133245
hyperspectral syst. simul., hyperspectral sens. simul. and VNIR testing results 75621
hyperspectral syst. simul., integrated sens. scene modeling and simul. archit. 75620
integrated secure & fault-tolerant voting in distributed syst. 130578
LOADNET project, migration of digital avionics data buses to low cost opt. data networks 133223
lunar satellite, orbit optimal manoeuvre calc. *(Chinese)* 98879
material struct., NDT, interval methods 122032
micromission spacecraft, low-cost high-capability platform 122485
NASA Discovery-class missions, implement. approach 122484
neural network struct. for spacecraft ASMS tone detect. 119107
on-board spacecraft electronics, reconfigurable systs., periodical test, redundancy techs. 133230
plate damage detect., optimal US pulse repetition rate, RBF network 90616
reconfigurable on-board payload data proc. syst., ESA develop. 98920
rocket engine test facility, DAQ & health monitoring syst. 111319
Saab Gripen aircraft, synthetic attitude/heading ref. 88053
satellite on-board front-end proc., systematic-DSP 133246
SMEX program, ground data syst. risk mitigation tech. 122543
space based membrane antennas/reflectors, local defect study 117768
space junk, organization of opt. obs./DP 133208
space simulators heat sinks, quantitat. thermal design *(Chinese)* 111317
spaceborne payload proc., scalable reprog. modular archit., COTS 133242
spacecraft avionics, networking intell. I/O components 133243
spacecraft command & data handling subsyst., level-0 telemetry collection 133241
spacecraft form. flying, HWIR testbed 122505
star tracker, star image simul. software *(Chinese)* 98899
StarLight mission, instrum. complement & spacecraft concept 122488
STEREO observatory trade studies, avionics archit. 122530
supersonic inlet flow in air-breathing propulsion systs. for high-speed space travel appls. 111363
telecomm. services, common criteria, aviation 119445
tethered satellite syst., simul., FE anal./fuzzy sets 88052
Tropospheric Emission Spectrometer, ground data syst. develop. 133321
turbofan engine controller design, nonlin. anal. 98929
turbojet engines with large constructive and geom. limitations, CAD 76817
wind tunnel, automatic meas., computerized syst. 88044
wind tunnel, injector powered transonic, PID controller 133211

aerospace control
see also air traffic control; aircraft control; attitude control; missile control
air spindle and triaxial air bearing testbeds for spacecraft dyn. and control expts. 133216
deep space exploration, instrum. syst. evol. & trends 122533
digital HWIR real time simul. *(Chinese)* 88042
distributed satellite C^2 testbed develop. 122504
distributed spacecraft systs., integrated navig./commun./control 120105
fighter plane, vibr. sigs., noise removal, morph. filter 88269
flight servos, intell., high-perform., neural net-based control, advanced mechatronic systs. design 122538
flying robot navig. using insect-inspired visual odometer 86972
form. flying, stochastic modeling based DGPS estim. algm. 85931
hypersonic flight control, GA appl. 122539
interorbital flight programmed motions constr. method 133215
large flexible space struct., vibr. suppression, modelling and control 81745

aerospace control continued
launch vehicle, secondary injection thrust vector control power plant lin., fuzzy logic appl. 98919
LISA grav. wave detector space mission, review 133260
micromechanical flying insect, virtual insect flight simulator, software testbed 98894
Muses-C, asteroid sample return mission, guidance, navig. and control 88034
NASA Discovery-class missions, implement. approach 122484
New Millennium Deep Space One spacecraft, Remote Agent autonomous control syst. 76822
opt. inter-satellite commun., wide-range fine pointing mechanism 88073
plasma wave analyzer with digital control, polar region rocket expt. *(Japanese)* 133313
satellite attitude control, mag. coils, simul. syst. *(Chinese)* 98890
satellite motion control systs., electroreactive motors 111366
scientific satellites, X-/S-band telemetry, tracking and command 85912
self-sustaining Earth-Mars archit., North Polar Cap based colonies 122490
smart antenna design, variable geom. truss struct. 117829
Space Interferometry Mission instrum., real-time command, data & control 133239
Space Interferometry Mission technol. develop., status & plans 133238
space vehicle inertial flywheel control syst. using torque servomotor *(Chinese)* 98917
spacecraft command & data handling subsyst., level-0 telemetry collection 133241
spacecraft form. flying, HWIR testbed 122505
Starlight mission interferometer instrum. control electronics 133237
temp. control valve, fuzzy-PID control *(Chinese)* 88055
Terra's operational subsystems 111313
thrust vectored flying wing, aggressive maneuvering, receding horizon approach 88222
turbofan engine controller design, nonlin. anal. 98929
ultrahigh reliab. establishment by fault injection expts. 113797
UWB for navig. and commun. 120490

aerospace engines
see also rocket engines
aéroengine, low order ZP/LTR control *(Chinese)* 88079
aircraft engine exhaust, SO_2 & SO_3 meas., tunable LD syst. 111478
aircraft engines, abnormal behavior detect., data mining appl. 76816
aircraft engines dyn. ident. with neural networks *(Chinese)* 133214
aircraft gas turbine, nonlin. modelling using NARMAX struct. 122536
future air systs., reliab. goals 122482
gas turbine engines, testing automation *(Russian)* 76821
self-sustaining Earth-Mars archit., North Polar Cap based colonies 122490
shells,thin-wall elastic, precession vibr., aircraft engine appls. 122537
supersonic jet exhaust flow field, automatic testing syst. *(Chinese)* 131807
surveillance radar, spectral portraits of propeller-driven fixed-wing/turbojet aircraft, expt. 75165
trapped-vortex gas turbine combustor, metal fuel injector nozzle array, microfabrication 98928
turbofan engine controller design, nonlin. anal. 98929
turbojet engines flight charact. modelling *(Chinese)* 133262
turbojet engines with large constructive and geom. limitations, CAD 76817
wear failure, intell. diagnostics, debris anal. based method *(Chinese)* 133259
SiC micromachined diaphragm/sapphire fibre optic press. sens. for high-temp. aerospace appls. 120827

aerospace expert systems
aircraft struct. anal., OO FE modeling ES *(Chinese)* 111308
helicopter main rotor blades, damage detect. tech. 111321
microgravity environ. on-board monitoring using nerual nets 120659
reusable launch vehicles, Livingstone model-based syst.-level health mgt. syst. 76793

aerospace ground equipment *see ground support equipment*

aerospace industry
advanced metal finishing tech. for aerospace appl., conf., Keystone, USA (Aug. 1999) 78434
aviation gas turbine engines, testing automation *(Russian)* 76821
BIT for intell. syst. design & condition monitoring, overview 131805
edge profiles crafting in aerospace indust., occupational biomechs. eval. 111330
John Hopkins APL R&D services, business operations model 133206
John Hopkins APL technol. transfer to indust. 133205
R&D, inform. carriers selection investig. 67487
time-correl. single photon counting, 3D imaging 106743
Al alloys, direct diode laser welding 117559

aerospace instrumentation
see also airborne radar; aircraft instrumentation; instrument landing systems; Langmuir probes; microwave landing systems; space vehicle electronics
adaptive instrum. module, space instrum. controller "Brain" through PLD 111332
AMS Si tracker, cosmic-ray events 98015
ASTER cryocooler, in-flight perform. 111399
ASTER early sci. outcome and operation status 111393
ASTER init. image eval. 111397
ASTER target obs. scenario 109475
Atmospheric Infrared Sounder, prelaunch perform. charact. 122645
ballistic missile defense FPA IR sens. 88251
camera syst., image motion compensation, coord. transform. *(Chinese)* 98898
CCD camera sensitivity anal., bidirectional reflectance distrib. fn. 97345
CERES/TERRA data validation 111395
Chandra X-ray Observatory, ACIS Advanced CCD Imaging Spectrometer door failure investig. 88050
coastal ocean imaging spectrometer, on-orbit calib. 99009
contactless DC pump motors for spacecraft, develop. 111334
COVIR Compact Visible and IR Radiometer, Earth/climate monitoring 133279
cryogenic fluid temp./liq. level meas. for space vehicle appls. 122514
deployable space telescope, direct adaptive disturbance rejection and control 133222
digital HWIR real time simul. *(Chinese)* 88042
double-freq. laser interf. tech. for high precision straightness meas. *(Chinese)* 128629
Earth orbiting scatterometers, multiprocessor DSP 133334
Engineering Test Satellite VI, laser commun. equipt., in-orbit meas. 75062
EURD, high sensitivity double UV spectrometer 76196
evolvable antenna syst., syst. for evolving antennas in-situ 111331
Far Ultraviolet Spectroscopic Explorer high-dispersion spherical holographic gratings 72071
far-field beam shaping/beam steering by phase-retrieval-based wavefront control 105410

aerospace instrumentation continued
fiber neutron monitor for energy range 15-100 MeV on ISS 87171
forward-looking airborne camera image degrad., phys.-based color image enhancement approach 129508
GLAS spaceflight instrum. fiber optic syst. components testing/reliab. 104633
harsh environ. microelectronics/microsystems, research/develop. 132073
high resoln. Compton telescopes, perform. charact. 132488
hyperspectral imagery spectral anal., HMM approach 133278
IBIS, γ-ray imaging telescope on board INTEGRAL 76192
imaging spectroradiometers ground-ref. calib. 98947
in-scene calib. 99047
indiv. addressable micro-mirror-arrays, space appls. 93221
integrated high-power EO lens/scanner for space-based platforms 93153
internally grounded feedthrough capacitor, reliab./appls. 115068
ion trap mass spectrometer, field emitter, space instrumentation 76805
IR data link, large-aperture MQW modulating retroreflector 120386
IR detectors, miniature coaxial pulse tube refrigerator 111325
IR-detectors, lin. Stirling cryocoolers, space platform 111326
ISO detectors, conf., Madrid, Spain (Jan. 1998) 113272
JEM-X, Joint European X-Ray Monitor 76193
large deployable space telescopes, microdynamic issues 82266
large optics real-time holographic compensation in space-based opt. systs. 105605
LEGRI, low energy gamma-ray imaging telescope 76196
long range oblique photography syst. 118466
Mars Climate Orbiter Mars Color Imager, charcts. and mission 131994
Mars Polar Lander, MVACS Robotic Arm Camera 131992
Mars Polar Lander, MVACS Surface Stereo Imager 131991
Mars Polar Lander Mars Descent Imager, charcts. and mission 131993
MODIS and ASTER airborne simulators, imaging spectrometers 98885
MTI dense-cloud mask algm. comparisons 99046
MTI init. on-orbit calib. perform. 97346
multi-moded corrugated horns for far-IR space appls., radiation patterns 117815
multichannel scanning radiometer, geostationary meteorological satellite 111407
multichannel scanning radiometer, geostationary meteorological satellite 111406
multispectral satellite data, atmos. ocean syst. state estim. 98946
pers. neutron dosemeters develop. and first meas. in MIR 87958
polymer liq. cryst. membrane filters, space appls. 93305
pulse tube cryocoolers for cooling IR sens., mil. tactical appls. 111553
satellite IR surveillance, high operating temp. FPA develop. 133409
satellite laser ranging theodolite, pointing precision calib. by observing stars *(Chinese)* 98902
Sea-viewing wide Field-of-View Sensor test, ocean color imagery atmos. correction 88174
semicond. sens., automotive and aerospace appls. 86768
shielded HI environ. lin. detector, RTD mission 122440
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
SIXE, Spanish Italian X-ray Experiment 76195
space based IR surveillance & stored cryogens, adv. cryogenic technol. 133219
space camera CCD focal plane, opt. assembly *(Chinese)* 98900
space camera real-time auto-focusing, centroid sens. method *(Chinese)* 98905
space opt. rem. sens., external thermal flux simul. *(Chinese)* 98903
space opt. rem. sens., thermal equilib. expt. device *(Chinese)* 98891
space rem. sens., thermal engng. design *(Chinese)* 98906
Space Shuttle Discovery, hydrogen leak detect. by fiber optic sens. syst. 133218
Space Solar Telescope, imaging syst. and DP 109699
Space Solar Telescope star sens., high accuracy attitude determ. 98907
space systs., microwave photonics 88056
spaceborne aerosol sens., operational rem. sens., directional effects 88120
star ident. using connection cluster *(Chinese)* 98901
star tracker, star image simul. software *(Chinese)* 98899
StarLight separated spacecraft interferometer mission, stray light anal. 122516
STRV-1d QW IR photodetectors, space flight technol. validation 86659
surface temp. retrieval from MODIS data 111396
Terra's operational subsystems 111313
Terra Multiangle Imaging Spectroradiometer, imagery/results 111394
TRMM CERES thermistor bolometer sens., lunar radiance broadband meas. 122644
tropos. emission spectrometer ground syst. 133319
TRWIS III hyperspectral sens., agricultural imagery anal. 106519
wide-field imaging interferometry testbed for space mission support, develop. 120661
X-band MMIC direct 8 PSK modulator for high data rate Earth obs. appls. 125748
γ-ray lens telescopes charcts. 76194
GaAs hybridized QW IR photoconductors arrays at Goddard Space Flight Center 86657
Ge:Ga stressed detectors, compact 2D array for IR astron. 120821
HgCdTe multi-band IR detector, spaceborne rem. sens. 109538
$Ho,Tm:LiYF_4$ 2 μm cryst. laser transmitter, space appls. 105233
$Nb/Al\text{-}AlO_x/Nb$ SIS jn., space borne subMM-wave mixer 70832
Nd:YAG ultra-stable solid-state laser, space appls. 71735
Si opt. press. sens, white light fibre interferometry 75759
Si_3N_4 micromesh bolometer array for 350 μm astrophys. 131924
Xe second-generation ATON-type plasma thruster, radiation and energy charact. 76820

aerospace propulsion
see also aerospace engines
5-kg obj. to LEO, laser launching 133254
ambient vac. condition laser propulsion *(Japanese)* 83038
artificial satellite thruster, exhaust plumes, BGK eqn. simul. 122534
ATON-thruster plasma accelerator, perform. charact. 76819
cryogenic fluid temp./liq. level meas. for space vehicle appls. 122514
diode pumped solid state laser, high power, appls. 128183
dual-beam opt. fiber trapping syst., obj. manipulation in cosmic space 104674
electrostatic thruster, microwave engine, operational charcts eval. *(Japanese)* 88076
hypersonic flight control, GA appl. 122539
Kovar-Pyrex anodically bonded samples, charact., packaging approach for MEMS devices 104164
laser impulse space propulsion, laser ablation studies 133258
laser launching, of objs. into LEO, optimum params. 98926
laser propulsion, repetitive pulse ablation, momentum coupling efficiency 133253
laser-driven rocket traction, macroparticle accel., CO_2-laser expts. 133257
laser-pushed light sails in vac., expt. investig. 133255
LEO payloads launching with ground-based laser, simul. 111364
LEO propulsion requirements, CO_2-laser lightcraft expts. 133252
lightcraft vehicle, laser beam propulsion, parab. mirror misalignment 133251

aerospace propulsion continued
lin. EHD charged particle source, elec. space propulsion 110223
LISA grav. wave detector space mission, review 133260
MEMS technol. for NASA space missions, JPL research & facilities 98883
micro laser plasma thrusters for small satellites 133256
micromission spacecraft, low-cost high-capability platform 122485
multi-disc axial flux stratospheric aircraft propeller drive 133261
New Millennium Deep Space One spacecraft, Remote Agent autonomous control syst. 76822
rocket engine test facility, DAQ & health monitoring syst. 111319
sandwich heterog. solid rocket propellant, combustion, quasi-1-D model 122535
satellite motion control systs., electroreactive motors 111366
self-sustaining Earth-Mars archit., North Polar Cap based colonies 122490
high av. power solid state laser, diode pumped, output charact., indust. appls. 105211
space propulsion, opportunities for fusion in 21st century, advanced fuels 76818
space propulsion syst., gas pipeline, neural network model based fault prediction *(Chinese)* 88078
stationary plasma thruster, strain gauge based thrust meas. syst. 122508
supersonic inlet flow in air-breathing propulsion systs. for high-speed space travel appls. 111363
VISTA fusion powered spacecraft, magnet coil shielding mass 98927
Xe second-generation ATON-type plasma thruster, radiation and energy charact. 76820

aerospace robotics
EVA gloves, space environ., SkilMate finger develop. 97207
FIDO rover, state estim. and vehicle localization, sens. fusion framework 86498
flying robot, visual navig. based on insect homing 97036
free-floating objs., grasping, robotic gripper 97208
helicopter, autonomous scale-model, visual servoing 94993
Mars landed missions, second generation projects overview 122491
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
MEMS technol. for NASA space missions, JPL research & facilities 98883
micromechanical flying insect, virtual insect flight simulator, software testbed 98894
mobile robots, teleoperations/rem. sens. DAQ *(German)* 120669
planetary lander vision syst., on-Mars calib. procedure 97402
planetary rock sampler, US/sonic driller/corer mechanism 122470
rotorcraft, unmanned, vision syst. for landing 94996
satellite inspection robot, end-effector 100507
self-sustaining Earth-Mars archit., North Polar Cap based colonies 122490
space manipulation, arm/gripper syst., posn./force control 109482
unmanned aerial vehicle, vision based navig. 97401
unmanned air vehicle landing, vision based motion estim. and nonlin. control 109670

aerospace simulation
see also aerospace test facilities
3-axis flight motion simulator, math. modeling and simul. *(Chinese)* 76794
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 133212
agile missile guidance and autopilot systs., integrated design 122475
agile missiles, nonlin. guidance techs. 122769
air turbulence sig. simul., appl. 111324
aircraft engines dyn. ident. with neural networks *(Chinese)* 133214
ATC, free routing environ., controller conflict probe effects 88084
ATC, prioritized CSMA, OPNET simul. 122542
ATC, psychophysiological measures on personnel 98939
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
CAMEO-SIM phys.-based broadband scene simul. tool, camouflage/concealment/deception methodologies 133398
CURWIN space power solar array design concept 111345
defense displays in 21st century 98910
digital HWIR real time simul. *(Chinese)* 88042
distributed spacecraft modeling and simul. testbed, navig. validation 122503
docking control proc. of spacecraft, modeling and simul. *(Chinese)* 76795
docking dyn. simul. of spacecraft with peripheral docking mechanism *(Chinese)* 76796
ECR plasma source, ionos. environ. satellite simulator *(Chinese)* 88039
flight simulators, computer-aided, design concept 111320
fog imitators for aviation appl., liq. cryst. cells 98889
heat sinks, quantitat. thermal design *(Chinese)* 111317
hyperspectral syst. simul., hyperspectral sens. simul. and VNIR testing results 75621
hyperspectral syst. simul., integrated sens. scene modeling and simul. archit. 75620
integrated syst. for design, anal., simul. and eval. of small satellite *(Chinese)* 111323
interorbital flight programmed motions constr. method 133215
ION-F, Ionospheric Observation Nanosatellite Formation, flight software, nonlin. simul. 122502
ISS Columbus Orbital Facility, space environ. NDT feasibility 122468
Kapton, spacecraft material, at. oxygen effects simul. 111318
laser launching, of objs. into LEO, optimum params. 98926
LEO payloads launching with ground-based laser, simul. 111364
MEMS technol. for NASA space missions, JPL research & facilities 98883
micromechanical flying insect, virtual insect flight simulator, software testbed 98894
MODIS and ASTER airborne simulators, imaging spectrometers 98885
multiple unmanned aerial vehicles, decentralized data fusion, localization and map building 88048
NASA Space Environ. Testbed, solar variability effects 122511
orb. satellite lin. EM motor operating principles 111340
pilot visual inform. flow syst., ergonomic factors *(Chinese)* 88062
RADIOSS-CFD syst., explicit schemes applied to aeroacoustic simul. 111322
regional aeronautical telecom network, simulated perform. charcts. 120033
satellite attitude control, mag. coils, simul. syst. *(Chinese)* 98890
self-federating aviation simul. using HLA 125391
space opt. rem. sens., external thermal flux simul. *(Chinese)* 98903
space opt. rem. sens., thermal equilib. expt. device *(Chinese)* 98891
space stations conceptual design methodology, flight simul. 98882
space stereo visual simul. technols., research and implement. *(Chinese)* 76797
spacecraft form. flying, HWIR testbed 122505
spacecraft panel shaker random vibr. test for high-intens. acoustics simul. 98892
tethered satellite syst., simul., FE anal./fuzzy sets 88052
TF/TA flight path tracking, control and simul. *(Chinese)* 88041
thermal environ. expt., DP, software *(Chinese)* 97142
tower ATC operator, autonomous agent monitoring assistant 76824
turbojet engines flight charact. modelling *(Chinese)* 133262

aerospace simulation continued
white paint multilayer plane absorbing medium, space environ. opt. degrad. 122494
aerospace test facilities
see also aerospace testing; wind tunnels
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 133212
air spindle and triaxial air bearing testbeds for spacecraft dyn. and control expts. 133216
integrated syst. for design, anal., simul. and eval. of small satellite *(Chinese)* 111323
intrinsically safe meas. transducers for control/safety systs. *(Russian)* 131857
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
MEMS technol. for NASA space missions, JPL research & facilities 98883
NASA Space Environ. Testbed, solar variability effects 122511
Photovoltaic Engineering Testbed for space power solar cell testing 111356
proton irrad. facility, space radiation monitoring, Paul Scherrer Inst. 122507
rocket engine test facility, DAQ & health monitoring syst. 111319
spaceborne instrum. radiometric calib., thermal vac. facility 122632
spacecraft form. flying, HWIR testbed 122505
wide-field imaging interferometry testbed design, FIR/sub-MM missions 98887
wide-field imaging interferometry testbed for space mission support, develop. 120661
aerospace testing
see also aircraft testing
aviation gas turbine engines, testing automation *(Russian)* 76821
Chandra X-ray Observatory, ACIS Advanced CCD Imaging Spectrometer door failure investig. 88050
CloudSat/Picasso-Cena, form. flying strategy 122501
cryogenic water ice contaminants detect. & IR AI&T environ. 109627
CubeSat deployer and CubeSat class PicoSatellite 122471
CURWIN space power solar array design concept 111345
digital HWIR real time simul. *(Chinese)* 88042
distributed satellite C^2 testbed develop. 122504
distributed spacecraft modeling and simul. testbed, navig. validation 122503
fibre optic sens. for machine health monitoring 120829
fibre optic sens. network for spacecraft health monitoring 98888
HDI modular packaging for space electronics appls. 133234
helicopter blade vortex interact., background oriented schlieren method 122509
indiv. addressable micro-mirror-arrays, space appls. 93221
International Space Station surface coatings contamination studies 88049
interplan. missions advanced space power solar cells perform. 111357
ISS Columbus Orbital Facility, space environ. NDT feasibility 122468
Mars Array Technology Experiment for space power solar cells 111359
material struct., NDT, interval methods 122032
MEMS technol. for NASA space missions, JPL research & facilities 98883
Mir solar array return expt., power degrad. studies 111342
Mir spacecraft sample degrad., real-time total integrated scatt. meas. 82275
multi-jn. space power solar cells testing using balloon technols. 112963
Orion-Emerald, carrier DGPS for LEO form. flying 122500
Photovoltaic Engineering Testbed for space power solar cell testing 111356
polymer multimode waveguide opt. backplane, avionic appls. 105040
Powersphere Power System demons. station 111360
proactive rideshare opportunity brokering services for secondary payloads 122489
SMEX program, ground data syst. risk mitigation tech. 122543
space flight environ. tested opt. fiber cable assemblies 104634
space power solar cells dust charactn. expt. for Martian operation 111358
spacecraft panel shaker random vibr. test for high-intens. acoustics simul. 98892
spacecraft solar cell arrays, at. oxygen effect expts. 111341
STRV-1d QW IR photodetectors, space flight technol. validation 86659
thin delta wings, testing, thin internal strain gauge bal. 122510
UNISAT terrestrial technol. solar panels, orbit perform. 122524
$Cu(In,Ga)Se_2$ thin-film solar cells, proton-irrad. expts. 112866
$Cu(In,Ga)Se_2$ thin-film space power solar cell perform. 112867
$CuInS_2$ thin-film solar cells, proton-irrad. expts. 112866
GaAs/Si space power solar cells, flight degrad. data 111343
GaInP/GaAs/Ge triple jn. space power solar cells 112938
$GaInP_2$/GaAs/Ge Hughes 702 satellite solar cells charactn. 111348
InGaP/GaAs dual-jn. solar cell mfg. experience 112936
Ni-Cd aerospace secondary cell verification studies 88070
Ni-Cd ultra-radiation hard aerospace batts. 88069
SiC micromachined diaphragm/sapphire fibre optic press. sens. for high-temp. aerospace appls. 120827
$ZnO-K_2SiO_3$ thermal control coating opt. charact. after electron exposure *(Chinese)* 104885
AES *see Auger electron spectra; Auger electron spectroscopy*
AF amplifiers *see audio-frequency amplifiers*
AF oscillators *see audio-frequency oscillators*
AFC *see automatic frequency control*
AFM *see atomic force microscopy*
AFMR *see antiferromagnetic resonance*
afterglows
parylene-N film, rem. microwave oxygen plasma etching 69899
O_2-I chem. laser, RF discharge pumped, singlet O_2 generator *(Japanese)* 128117
Si surface, neg.-ion/pos.-assisted etching 115641
AGC *see automatic gain control*
ageing
see also strain ageing
AMLCD, low temp. COG bonding, printed UV curable ACA 97754
anisotropic conducting adhesive used as flex-to-card interconnection, charact. 113529
annealing furnaces, cascade controllers appl. *(German)* 113162
Australian hydroelectric power installations, life extension overview 112355
broad-area vac. gap, field emission sites, aging effect 102880
buried GITL and XLPE-cable, thermal calcs. 112096
buried/surface LTCC resistors, DC/AC elec. props., long-term stabil. 125840
cable aging assess., discrete wavelet transform appl. 99524
cable jn. monitoring syst., fault prewarning, jn. resist., insulation aging *(Chinese)* 133764
cast-resin power transformer onsite insulation diagnosis 134125
CMS barrel muon chambers, wire ageing, X-ray irrad. tests 98039
compact muon solenoid conductor, effect of surface treatment on adhesion at 300 K and 4.2 K 82003
conference, reactor integrity engng., Tokyo, Japan (Aug. 1999) 100390
CSP/area array package board level reliab. 113602
distrib. transformer diagnostics, multi-channel wireless commun. *(Korean)* 123543
EL phosphors, deterioration mechanism *(Chinese)* 71540
ageing continued
elastomers, QC by NMR-MOUSE, (mobile universal surface explorer) 90578
electret film sens. and actuator appls., aging, reciprocity, act. sound control 111539
embedded capacitors, high-k polymer-ceramic composite for RF appls. 69273
epoxy-silica composites, dielec. props., effects of humidity and thermal stress 81642
FED panel syst. buildup, phosphor ageing effect 97740
flip chip underfill to passiv. material adhesion, environ. influence 67598
flip-chip package, lead-free solder and under-bump metall. 113513
FRAM, reliab., imprint effect 116234
fused silica opt. fibers, coating additives, enhanced mech. reliab. 127674
Gb/s OC-192 syst. manufacturer design guidelines, high speed fibre syst. compatibility 120172
German LWR NPPs, piping degrad., ageing-related aspects 112235
high capacity undersea WDM transm. systs. 131549
high press. sodium lamps, class d LC_sC_p series-parallel reson. inverter 124074
high-temp. fiber reinforced cellulose transformer insulation endurance 134114
HV insulation, PD diagnosis strategies for measuring systs. 109430
Hydro-Quebec fiber optic transms., elec. utility appls. 96720
IC stress tests, moisture-based failure modelling 126953
insulating material, 150°C glass transit. temp., PD stabil. 70433
insulating polymers, AC/DC electrolum., elec. ageing implications 92671
insulation, ageing 104403
insulation materials ageing expts., PD meas. technol. *(Korean)* 70386
insulation systs., PD activity, ageing accel., voltage distortion 70431
INTERCAST CR-39, calib. and response time stabil. 121658
isotropic conductive adhesives as SMT solder alternative 124349
isotropically conductive adhesives, nonepoxy-based polymer matrix 67560
isotropically conductive adhesives as interconnect materials, flip-chip test vehicle 113688
laser-US, NDT, indust. appls. 90610
LDPE film, plasma-treated, surface resist., ageing effects 104421
lead free chip scale package for wireless appls., no clean solder paste 113619
light pulse irrad. MEMS, defects/impurities migration 127089
LR 115 cellulose nitrate Rn detector, aging proc. 121660
LTCC resistors, elec./stabil. props., US microscope characterisation 69263
microelectronic solders, diffusional coarsening modelling 113713
monolithic integrated single ridge stripe electroabsorption modulated DFB lasers, selective area LP-MOVPE *(Chinese)* 82654
MOSFET, submicron device ageing, SPICE 3F4 model 126737
MOSFET spectrosc. charge pumping, surface pot. determ. 92353
μBGA solder joint, vibr. fatigue, intermetallic cpds. effects 78616
multisection electro-absorpt. DBR laser, accelerated aging modelling 128269
MV underground power cable ccts., condition based maint. 133721
MV XLPE cables, ageing, condition based maint., PD diagnostics 133722
NBUL class of life distrib. and replacement policy comparisons 113426
network opt. fiber reliab., accelerated aging tests, opt. charactn. 127669
NPP decommissioning overview *(German)* 112218
nuc. RPV aging eval. by nondestructive techs. 77714
OC-192 commun. high-speed syst., fiber testing 96719
oil-cooled transformers, loss-of-life assess. guidelines, IEEE/IEC stds. 123563
oil-cooled transformers, overloading/loss-of-life assess. guidelines 123541
opened fibre coating strip force test 127678
opt. coatings surface, sol-gel method, particle size and distrib. *(Chinese)* 82278
opt. coatings surface, sol-gel method, particle size and distrib. study *(Chinese)* 71497
OSP accelerated aging, solderability assays via three test methods 115200
overhead transm. line ampacity anal. using FEM 99382
oxide-apertured VCSEL, angle-depend. photocurrent spectr., aging effect 71756
PDP ageing, PC-based automatic syst. 109900
photomultiplier tubes, hemispherical, opt. props., MAGIC air Cherenkov telescope 125980
plastic-encapsulated hermetically sealed automotive electronic components, thermal study 134560
poly(ferrocenylsilane) semicond. thin films with vap.-phase I diffusion doping, electronic props. 69606
polyetherimide adhesion to Si wafer, Al-chelate treatment, MCM fab. 80542
polyethylene insulation, water trees, fractal anal. 127143
polymer housed surge arresters develop., verification tests 123059
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647
power apparatus condition assess. for service time extension 133911
power apparatus PD meas. eval. strategies 112442
power plant upgrading for competitiveness improvement 123097
power station maint./ageing mgt. strategies *(German)* 88504
power syst. reliab., aging transm. conductors effect 112111
power thyristors, ageing monitoring using gate current threshold 126689
power transformer on-load tap-changers, ageing detect. from vibr. signatures 112582
power transformers overload capacity assess., on-line monitoring systs. 112588
PV power syst. optimum batt. design theory 77799
PVC insulated cable, nuc. qualification 133732
refinery power plant, fault current limiters, benefits assess. 78366
semicond. devices, reliab. certification using Goldthwaite diags. 103731
semicond. lasers, transparent current stabil., accelerated aging tests 82605
single ridge waveguide electroabsorption modulated DFB laser for 2.5-Gb/s transm. 120183
SMA, lead-free, reliab., power cycling 78632
small oil gaps bridged by pressboard, breakdown under AC, DC and combined AC/DC voltages 99722
Sn-Ag-Cu Pb-free solders for BGA appls., reliab./Au embrittlement 67571
SOI N-MOSFETs, hot carrier degrad. 126818
solar cell modules/encapsulations, indoor study/ageing tests 134388
solid dielec., space charge distrib. meas. 127144
stator bars, epoxy/mica insulation, multifactors aging, AC params. *(Chinese)* 77810
stator winding insulation, thermal ageing, SQUID mag. field mapping 112441
steel, duplex stainless, NDT, thermoelec. power meas. 101544
substation transformer life estim. approach 123561
thermoplastic isotropically conductive adhesive, contact resist. degrad. 113530
thick-film resistors, LF noise, quality and reliab. indicator 69333
TPP, renewal plan optimisation method *(Japanese)* 77738
traction, IGBT modules reliab. testing 89389
transformers aging sig. feature extraction, discrete wavelet transform *(Korean)* 123546
transm. transformers, oil samples, furfural content meas. 88799
two-point bending ribbon opt. cable test results, Weibull probab. distrib. 125155
underfill encapsulant affected by flip chip assembly variables, adhesion 67578
underfill hot-wet adhesion improvement, adhesion promoter appl. 113734
vintage ceramic suspen. insulator integrity assess. 88471

ageing continued
XLPE, deep trapping centers, mol. modeling, luminesc. techs. 127243
XLPE insulation, space charge meas., LIPP method 104420
Ag-filled conductive adhesive joints, ionic impurities effects 125899
AgO electrodes, chem. prepared, aging, Zn/AgO reserve batts. 89050
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al/Si/p-SiC ohmic contacts, thermal stabil., LPE 69703
Al-Cu thin-film metallizations, thermal aging, reliab. tests 115669
Al-Fe, bulk metastable nanostructured alloys, effects of heating/aging 114428
Al-Zn-Mg-Cu-Zr, bulk metastable nanostructured alloys, effects of heating/aging 114428
AlGaAs/GaAs high-power QW rem. jn. laser, elec. noise charact. 82662
AlGaAs-GaAsP high power broad area LD, large opt. cavity struct. 82670
AlGaAs-based VCSEL, single-mode, long-term spectral stabil. 82652
n-AlGaN/Au Schottky contacts, environ. aging 69736
Au ribbon bonding for IC interconnection, designed expt. for proc. eval. 80535
Au-Sn(Ag) micro-metal bonding technol., LSI package 113532
$BaTiO_3$:Hf,Zr, pure and doped ferroelec. ceramics, aging effects 92624
a-C:H films, saddle-field glow discharge deposition and props. 68381
Cr/Cu/Ni underbump metallization, flip-chip interconnection 113650
Cs freq. stds., drift rate, aging effect 97122
Cu electroless deposition, Pt-Ag/Al_2O_3 substr., IC packaging 124325
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu/Sn-Bi solder interconnect, Bi interfacial segreg. 79420
GaAs, aged porous, IR opt. props. 69516
Ge highly doped fiber Bragg gratings, spectral charact., temp.-induced reversible changes 82085
In-Sn/Ag soldered joint, $AgIn_2$/Ag_2In transforms., thermal aging 114417
InAlAs-InGaAs-InP HEMTs from various proc. options, charactn./reliab. 92417
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
$KTa_{1-y}Nb_yO_3$ disordered ferroelec. crysts., dielec. const. 127234
$La_{1-x}Ca_xMnO_3$ SOFC cathode, thermal expansion behaviour 89224
$La_{3.5}Ru_4O_{13}$ SOFC cathode with ZrO_2-Y_2O_3 electrolyte, elec. meas./reactivity 89170
$La_{1-x}Sr_xMnO_3$ SOFC cathode, thermal expansion behaviour 89224
Li-ion secondary cells, thermal abuse studies 89150
$LiTaO_3$, vap.-phase proton-exchange for high-quality waveguides fab. 127723
MgO-CaO protective films, e-beam prep., annealing, AC PDP appl. 68168
Mn-Ni-Fe-O NTC ceramics, aging behaviour, thermistors 101494
Nb/Al supercond. microstrips, radiation detectors appl. 71133
Ni addit. to oxide cathodes, emission stabil., elec. cond. effects 102897
PZT motors/actuators/sens., HDD suspen assemblies appls. 104445
PZT thick film layers, ageing rate determ. 81716
Pb-free PCB solderability preservative coatings 69318
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
Pb-free soldered interconnections, board level reliab. 115152
Pb-free solders, high m.p. impact on PWB reliab. 115150
$Pr_{20}Fe_{73.5}B_5Cu_{1.5}$, bulk metastable nanostructured alloys, effects of heating/aging 114428
Pt/$SrBi_2Ta_2O_9$/Pt ferroelec. thin film capacitors, room temp. aging 125849
Pt-Ru-WO_x/C catalysts synthesis, PEMFC, XRD, XPS, XFA, TEM anal. methods 134374
Si HBT, hot carrier reliab., extrapolation model 126677
-aSi PV modules, grid connected syst., perform., ageing effect 112998
a-Si PV modules, stabilisation/perform. charact. 112978
Si, anisotropic wet etching, rapid plasma treatment masking 103404
Si photo-emitters for opt. interconnects, accelerated stressing/degrad. mechanisms 82450
Si, porous, metal-aided electrochem. etching, PL obs. 103328
SiGe HBT, hot carrier reliab., extrapolation model 126677
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
Sn/Pb solder joints, thermal cycling aging, microstruct., shear/fatigue strength, intermetallic growth effects 68389
Sn-Ag Pb-free solders for flip-chip interconnects 100596
Sn-Ag alloy, Cu(Ag) particulate reinforced composite solder 90561
Sn-Ag solder alloy, In addit. effects, phase equilib., thermodyn. behaviors 67541
Sn-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Ag-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Ag(-Cu) Pb-free solder joints, reliab. under mfg. conditions 115151
Sn-Cu Pb-free microelectronic solder joints, Sn pest 100597
Sn-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Pb-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516
SnAgCu surface mount solder joint, aging and thermal cycling *(Chinese)* 80514
Ti/Ni/Ag thin-film metallizations in solder joints, dissolution, interfacial reacts. 101469
Ti-Al-V, bulk metastable nanostructured alloys, effects of heating/aging 114428
ZnO ceramic varistors, ageing effects, dielec. spectrosc. *(Polish)* 115036
ZnO:F thin films, spray pyrolysis prep., struct./elec./opt. props. 114404

agent-oriented programming *see object-oriented programming; software agents*

aggregates (materials) *see composite materials*

aging *see ageing*

agriculture
see also farming
biological product detect., conf., Boston, USA (Nov.2000) 78377
blackberry, NMR imaging, multivariate stat. methods 118204
combine harvester guidance, fuzzy inform. merging *(French)* 75245
crop spinach, microwave response through rem. sens. 76828
crops, height meas., ERS Tandem InSAR method 111488
crops-weeds discrim., LIF 111486
deboned poultry phys. contaminant detect. by image segmentation 73145
electrostatic spray appl., R&D in 20th century 89491
environ. monitoring, status report 113802
fields with surface drainage network, SAR image 133369
food products, disease control, microwave drying 80406
fruit contact press. distrib. meas. equipt. 120643
grain & seed moisture content, RF sens., on-line monitoring 110068
hyperspectral rem. sens., conf., Sendai, Japan (2000) 89538
intellectual property mgt., holistic audit 89746
land/water resources, sustainable develop., rem. sens.-based integrated approach 111487
modernisation, renewable energy, Uganda 88525
multi ISFET/FIA soil anal. syst. with automatic sample extraction 73608
neem oil and seed pulp, dielec. props. meas. at 2.45 GHz 86914

agriculture continued
pinklady apples, electronic nose sigs. and fruit quality indicators 132060
radar, multifreq. SAR, hydrol. params. 88170
radar, wheat crops, microwave radar scatt. 122686
RAPIDS rem. sens. receiving station,agric. monitoring 122720
resist. heating seed germination apparatus, temp. distrib. calcs. *(Polish)* 124103
robotic farm tractors, posn. meas. and control, error anal. 97030
slotted waveguide applicator for continuous flow grain drying 113178
soil, moisture/organic matter prediction, NIR sens. 122592
soil moisture, L-band radiometry emission model 111452
soil moisture, microwave scatt. coeff., rem. sens. 94032
space-based hyperspectral imaging and commercial appls. 122545
texture images, class. using multi-scale stat. estimators of fractal params. 129622
TRWIS III hyperspectral sens., agricultural imagery anal. 106519
vehicles, technol. develop., innovation, China 113412
wooded region/agricultural region discrim. by SAR 111485
X-band scatt. response of pea (Pisum sativum) for rem. sens., estim. 76839

AGV *see automatic guided vehicles*

aids for the handicapped *see handicapped aids*

air bases *see airports*

air blast circuit breakers
LV air cct. breaker technol. for distrib. syst. protection 78054
substation equipt., HV network switching, conducted immunity requirements 134287

air compressors *see compressors*

air conditioning
see also building management systems; HVAC; ventilation
42 V automobile air-conditioner, efficienct brushless motor design 134566
250 kW PEFC syst., field tests 99950
auto-welding proc. quality improvement, fractional/full factorial DOE 89841
automobile climate control using sliding mode 124020
automotive air conditioner variable displacement compressors, control valve develop. *(Chinese)* 134572
building humidity control using condenser/CHP heat reclamation 134659
building night-time cooling technol., prototype testing 100338
car air conditioning, mean radiant temp. sens. 124114
central air-conditioning, energy mgt. and control syst., online optimal strategy *(Chinese)* 89461
chiller selection considerations 124121
CHP-absorpt. chiller systs. for telecom. switching centres 123189
classical evaporative, summer syst., perform., working fluid effects 100339
commercial packaged unit air-conditioner power ratings 124120
compact high-efficiency scroll compressor develop. *(Japanese)* 89458
CS-E281A series room air-conditioner, energy saving *(Japanese)* 89459
DB Regio commuter trains, power supply/air conditioning installations *(German)* 100270
direct load control using ripple sigs. *(Chinese)* 78344
direct load control using ripple sigs., customers' satisfaction *(Chinese)* 77264
district heating network efficiency serving hot water absorpt. chillers 77744
district heating/cooling systs., Taiwanese feasibility study *(Chinese)* 77737
EV air conditioning inverter/compressor develop. *(Japanese)* 89417
HFC refrigerant mixtures R407C, comp. control, energy saving *(Japanese)* 89463
home appliance inverter syst., digital logic control PWM/PFC cct. design 77976
home automation, tele-Haus project with integrated microsystems 78349
household refrigeration/air-conditioning systs., TEWI eval. *(Japanese)* 100342
HV water treatment in recirculating systs. 100356
ice thermal storage type air-conditioning/hot water syst. for home *(Japanese)* 89456
inner unit develop., cross-flow fan air flow anal. *(Japanese)* 89457
load mgt. assess. by load survey in Taipower 134660
monomethylamine-water solns. in single-stage solar absorpt. refrigeration cycle, thermodyn. anal. 134411
multi-type inverter air conditioner, perform. anal. 89455
multifunctional buildings ice slurry-based thermal storage 134656
multiple air conditioning syst., water heater, ice thermal storage *(Japanese)* 124119
nonlin. dyn. systs. reconstruction/prediction, hierarchical Bayesian approach 106001
office occupants in Sydney, activity rates/thermal comfort 122364
office refrigeration/air-conditioning systs., TEWI eval. *(Japanese)* 100343
room air conditioner, filter cleaning, filter automatic raising/lowering *(Japanese)* 124118
room air conditioner energy efficiency std. implement., pot. CO_2 reduction 100336
single-bodied humidity & temp. sens., adv. lin., design, fab. 97562
telecomm. network shelters, low energy air conditioning 113152
VAV air handling unit online fault detect./diagnosis method 100335
VAV air-conditioning syst. fault-tolerant supervisory control 100334

air gaps
for air gaps in machines see "electric machines" or appropriate NTs and RTs
5-phase IM drives, DSP-based vector control and direct torque control 123862
5-phase reluctance motor drive, DSP-based direct torque control 89336
ammonia compressor, IM, stray load losses, stator/rotor slot ripple 134021
automobile direct-start asynchronous starter/generator, vector controlled 89423
axial airgap disc induction machines modelling 88737
axial airgap machines, review 88764
axial mag. couplings for large machine drives 89341
BLDCM, bonded soft mag. material 99682
brushless PM motors, low inductance, multilevel DC link inverter 133931
capacitance transducer with air gap modulation, sensitivity *(Russian)* 131853
CDM ESD simul. using time domain air gap discharge meas. 72176
consequent pole PM machine with field weakening capability 123285
differential protection, transformer bushing, fault anal. *(Chinese)* 77920
direct-drive slotless type PMSM design *(Korean)* 77854
elec. machine modeling, unified wavelet-based approach 123305
electrified rly. track cct., impulsive interf. suppression 78312
five-phase IM, rotor field oriented control, third harmonic currents 89324
gapped HF inductors, conductive losses prediction 99724
IM, single layer 3-phase AC windings design optimisation 112522
IM bar/end-ring connector breakages, data mining, FEM 134033
IM drive, distorted voltage fed, torsional vibr., real-time tracking 89342
IM mech. fault online diagnosis, ANN appl. 88735
induction machines, flux angle estim., FEM, HF sig. injection 88742
insulation strength for DC voltages, air gap bridged by flames 99421
lightning impulse testing, humidity correction factor 99418
long-gap free arc column path estim. method develop. *(Japanese)* 92619
low-AC-resist. planar/foil wound inductors, quasidistributed gap tech. 80460

air gaps continued
magneto-opt. recording with SIL flying head, air gap depend. of write/read characts. 116363
mech. power transm., induced eddy currents, PM machines 134466
micromachined struct., viscous damping, review 81587
multi-disc axial flux stratospheric aircraft propeller drive 133261
neg. pre-stressed conductor-plane gaps sparkover, pos. switching impulse voltages 91530
Neue Bahntechnik Paderborn, lin. motor, pitch anal./control 134537
PM double sided axial field disc motor, EV direct wheel drive 89383
PM supercond. bearing, air-gap mag. field homogenization 71015
PMSM drive, eddy-current losses calc. 89355
point/plane air gaps, probabilistic anal. of spark paths 104264
polyoxymethylene films, hot filament CVD, air gap sacrificial layer 125100
polysilicon TFT integrated gate-data line-crossover struct., AMLCD panel appl. 92364
pos. direct voltage pre-stressing rod conductor gaps, sparkover 91531
pos. point-barrier-plane air gap elec. strength, space charge effects 99422
power line reactance design air gap length calc. 111998
rod-type HTS supercond. fault current limiter 77596
short air and SF_6 gaps breakdown, insulating barriers effect 92614
small wind generators, axial airgap alternators, developing countries 88645
small-rating single-phase PM motors, air-gap field modelling 88779
smooth air-gap induction machines, dyn. eccentricity modelling 123421
soft mag. cores, HF, core type/appl.-based testing 116477
spark paths, 3D image capturing and proc. 84169
std. sphere gaps sparkover, field utilization factor/elec. fields study *(Japanese)* 81655
straight type polarized mag. syst., anal./calc. *(Chinese)* 112678
transformers, inverter-fed, magnetis. control, turn-off devices 77947
transverse flux induction heating, thermal field, EM forces 113148
wafer level CSP for micromechanical/microlenses appls. 116055
Cu interconnects, air-gap fab. for low intralevel dielec. const. 92148
Cu-SiO_2 air gap interconnect, CMOS technol. 115719
GaP/GaP mol.-force wafer bonding, nanometer air gaps meas. 68471
multilevel interconnect technol. with intra-metal air-gap for ≤0.25 μm procs. 92147

air insulation
see also air gaps
compact air and gas insulated switchgear develop. 123665
compact HV/MV distrib. substations, gas insulated switchgear 134310
ESD from charged cylindrical bodies-to-grounded/floating surfaces 117616
HV substations, EMI monitoring 78081
PTFE plane insulating material surfaces, corona discharges *(German)* 127252
substation equipt., HV network switching, conducted immunity requirements 134287

air pollution
see also air pollution control; air pollution measurement; smoke
acid rain, theoretical study of MM-wave scatt. characts. 72327
Brazilian diesel power generation, rural rem. area air pollution impact 123233
deregulated elec. markets, locational gaming model 111689
discrete Kalman filter appl., init. conc. discrepancies 133348
elec. supply, resources, pollution, dyn., Pakistan 122812
electronic power supplies reliab., airborne contaminants effects 88841
environ. friendly wafer prod., NF_3 rem. microwave plasma for chamber cleaning 67525
external elec. costs estim. project *(French)* 111696
HEVs, powertrain sizing, emissions influence eval. 89391
Juragua VVER-440 NPP, hypothetical accident seqs. 112276
Korean energy-related carbon emissions, time-series anal. 123096
nonceramic insulator polymers, SIR and EVA and blends, stress, hydrophobic stabil. 104416
ozone conc. prediction, fuzzy DSS 133364
partitioning ODE systs. with, appl. to air pollution models 101069
PV systs., perform., tilt angle/air pollution effects, Tehran 88658
salt contaminants distrib. with dist. from sea, west coast, South Korea *(Korean)* 99388
small-sized HTRs, source term estim., German safety anals. 123136
Space Shuttle exhaust, ionos. modif., plasma dens. depression 133310
TPP, global energy-ecologic efficiency, analogy with seismic activity 77721
TPP NO_x emissions estim. using neural nets 112282
urban area energy demand modifs. due to climate changes 99466
wind power change in US due to atmos. greenhouse gases increase 88518
CO_2 emission and energy consumption scenarios, Brazil, 2010 77681
CO_2 emission from power generated for office air conditioning/refrigeration *(Japanese)* 100343
NO emissions from coal-fired PFBC *(Chinese)* 88574
N_2O emissions from coal-fired PFBC *(Chinese)* 88574
Ni-Zr, amorph., catalyst, global CO_2 recycling 76925
O_3, Arctic stratos., lidar, Lagrangian reconstruction 98989

air pollution control
1.5 MW low-emissions gas turbine catalytic combustion syst. 123213
36 V Pb-acid batt., vehicle appls. 78298
400 MW lignite-fired power station, FGD retrofitting experience *(English)* 123208
800 MW Matra steam power plant FGD scrubber retrofit project, Hungary *(English)* 99547
2785 MW coal-fired steam power plant FGD project, Poland 112309
Asian power generation prospects, environ. effect/strategy 99445
automobile cabin ventilation control, semicond. type gas sens. 100291
automobile rapid catalyst light-off using strategic engine control 100305
automotive microsens. & sens. syst., current trends 124048
boilers, LIFAC FGD proc. perform. improvement, modelling, China 88559
Bulgaria's energy syst. transit. to market economy, barriers to change 99468
catalytic technol. PFC emissions control in semicond. mfg. 89932
cement plant detached plumes mgt. 78735
cement plant dry proc. line upgrade project, USA 89483
cement plant semi-dry kiln proc. conversion project, USA 89484
cement plants, proc. gas anal./prod. control integrat. 78741
CHP plant, elec. dust precipitators, power supply *(Russian)* 123187
climate change mitigation with renewable/high-efficiency generation 99456
CO_2 capturing hybrid solar-steam power generation syst. characts. *(Japanese)* 88651
coal-fired power plant planning, environ. considerations *(German)* 111947
coal-fired power station NO_x emission MLP prediction model 133863
coal-fired TPP, environ. protection technol. trends 112286
coal/pet-coke firing pipe design customisation 78580
cogen. systs. operation strategy under environ. constraints 77740
cogeneration operation dispatch, interactive best-compromise approach 112299

air pollution control continued
commercial buildings, energy saving technols. effects eval. *(Japanese)* 113041
corona plasma air emissions control, pulsed power generators 99778
corona radical shower NO_x removal syst., 2D imaging expts. 133354
Danish elec. indust., energy consultant appl. overview 133452
diesel engine emissions, control strategies 88183
diesel engine exhaust treatment, pulsed streamer corona reactor, RVC electrodes 76929
distributed generation approach for carbon emissions reduction 99443
elec. arc furnace pollution control, NIR opt. proc. sens. 110042
elec. demand, use of coal for power generation, USA 99455
elec. sector anal. in clean energy futures study 133489
electrostatic precipitator, HV pulsed power syst. *(Korean)* 117628
electrostatic precipitator microsecond pulsed power supply 134231
electrostatic precipitator with barrier discharge, electrode particle collection *(Japanese)* 111473
energy pricing strategy with CO_2 tax, effect on CO_2 emission mitigation 111764
European Community cogen. research programmes 112288
EV environ. eval. using dyn. traffic-flow model 78248
eyesafe indust. fibre lidar, rem. sens. appls. 99034
flue gas cleaning systs., fertiliser/stabilising landfill prod. 88560
gas heat pump systs., environ. friendly engine *(Japanese)* 122715
gas turbine combustors, NO_x emissions, adaptive predictive control 88599
gas turbine peaking units, retrofit conversion for emissions reduction 77761
HFC refrigerant mixtures R407C, comp. control, energy saving *(Japanese)* 89463
hydrogen rich gas from plasmatron fuel converters, emissions reduction 133835
ice thermal storage type air-conditioning/hot water syst. for home *(Japanese)* 89456
incinerator dioxins & furans, real-time continuous emissions monitor 111477
Indian renewable energy technols. and climate change policies 99450
Indonesian small/medium scale industries, energy use, CO_2 emissions 78353
indoor air cleaning, corona ionisers effectiveness 88191
ion implant. proc., effluent species abatement, customized dry scrubber design 126287
ionizer air-cleaners, dust removal, ozone emission 83163
IPP elec., fuel-depend. pricing, CO_2 emission limitations 111763
Latvian energy policy, energy conservation, energy sector legislation 99227
low-CO_2 energy pathways, regional air pollution, Europe 123094
low-NO_x combustion chamber optim. using CFD simul. 134652
MCFC based combined cycle power plant, efficiency, pollution reduction 99566
Mitsui Recycling 21 proc., automatic control syst. *(Japanese)* 89931
multipoint dielec. barrier discharge, NO/NO_x removal, narrow gap 91526
natural gas-fuelled microturbines, economic assess., testing 133870
nonthermal plasma reactor/ESP-based elec. air cleaner 117629
Norwegian hydropower resources, role and benefits 88622
novel integrated desulphurisation for FGD, enhancements 88558
oil shale-fired CFB boiler, perform. charact. *(Chinese)* 77722
package boilers, emission levels reduction 123230
perfluoro cpds., dry-etching exhaust, Li^+ ion-attachment mass spectrom. 103318
power engng., climatic effects prediction 111646
power plant continuous emission monitoring syst. *(Chinese)* 77678
power plants air emissions control in competitive power market 133831
power prod., probabilistic models, fuel limitations, environ. constraints 112216
power station efficiency/capacity pot. overview *(German)* 123104
pulsed corona induced nonthermal plasmas, pulse generators 88189
pulverized coal fired boiler, IT-based combustion mgt. syst. 112304
renewable energy systs. CO_2 emissions reduction economic value 99449
renewable/high-efficiency power generation for climate change mitigation 133838
Romanian CHP technols. 123176
Romanian elec. power sector, efficient power market operation restrictions 111694
room air conditioner energy efficiency std. implement., pot. CO_2 reduction 100336
Slovak Republic energy economy, energy conservation, environ. issues 99470
SOFC, natural gas fueled, zero CO_2 emissions 89199
steam power plant boilers, three-staged fuel combustion anal. 112314
steam power plant ESP using skewed gas flow technol. 99555
steam power plant flue gas cleaning efficiency improvement *(German)* 99548
steam power plant flue gas treatment using electron beam technol. 88587
steam power plant fluidized-bed coal combustion technol. *(Serbian)* 88590
steam power plant generating unit perform. discrepancies study *(Chinese)* 77755
STEM-II air quality model on distributed memory syst. 133297
T700 steam power plant FGD retrofitting project, Czech Republic *(English)* 112301
Taiwan Power Company's strategy for changes in fuel markets *(Chinese)* 77174
thermal power generating facilities, environ. perform. improvement 112283
toluene decomp. using streamer discharge reactor/catalyst combination 124434
Tsuruga Thermal Power Station, FGD syst. operating results *(Japanese)* 88573
US buildings sector, energy-related challenges overview 133843
US clean energy future scenarios 133487
US clean energy policies, market failures and barriers 133488
US consumers' willingness to pay for green elec. 122796
US indust. CHP promotion, pot. energy policy impact 133857
wafer epitaxial deposition procs., low press., exhaust mgt. challenges 79288
Wygen Unit 1 pulverised-coal-fired power plant, low emissions 88579
zero-emissions gas-fired cogen. of power and hydrogen 133859
C_2F_6 removal, ferroelec. packed-bed barrier discharge reactor 122710
CO determ., Au colloid self-assembled electrode 132032
CO_2 background retrieval, engineered chem. sinkage 76928
CO_2 emission reduction, coal-fired plants, cost-effective repowering concepts *(English)* 99545
CO_2 emission reduction using PV and cogen. systs. *(Japanese)* 88652
CO_2 emissions from energy prod. for refrigeration/air conditioning *(Japanese)* 100342
CO_2/Forane 134a concs. discrim., air conditioned atmos., electronic nose 132062
NO conversion in barrier discharge plasma reactor with Cu-ZSM-5 133355
NO removal charact. of corona radical shower syst. 122712
NO_x, SO_x, particulates removal by single-stage plasma-chem. proc. 133349
NO_x air pollutant removal, pulsed power discharges 133359
NO_x control, solid-state switched pulser, nonthermal plasma proc. 133361
NO_x control technol. using plasma-chem. hybrid proc. 122711
NO_x emissions reduction, Talin No.3 unit DeNOx project *(Chinese)* 123191
NO_x emissions reduction, coal-over-coal reburn, Vado Ligure power plant 88578
NO_x emissions reduction impact on elec. prices, Indiana 88316
NO_x in flue exhaust gas, adsorpt., nonthermal plasma desorpt. proc. 133351
NO_x removal, oxid., nonthermal plasma reactors 133356
NO_x removal, pulse corona discharges, luminesc. 88190
NO_x removal using DC corona reactor over water surface 88184

air pollution control continued
NO_x/SO_x emissions control, fossil fired CHP systs., economic dispatch 123184
^{222}Rn, indoor conc., mitigation methods, QC 111226
SF_6, environ. aspects related to MV switchgear 134269
SF_6/N_2 gas mixture insulated power equipt. 123273
SO_2 removal, dielec. barrier discharge, ammonium salts collection 133353
SO_2 removal, reactive sorbents, fly ash-$Ca(OH)_2$ mixture *(Chinese)* 77726
SO_2 removal using wet-type nonthermal plasma reactor 133350
^{99m}Tc-diethylenetriaminepentaacetate aerosol, lung ventilation imaging 132849
V_2O_5 catalysts, dil. trichloroethylene decomp., nonthermal plasma proc. 133352
WO_3 catalysts, dil. trichloroethylene decomp., nonthermal plasma proc. 133352

air pollution measurement
absorptive methane opt. fiber sens. *(Chinese)* 121000
act. rem. gas sens. using LDs, pseudorandom tone burst modulation 111476
aerosol dispersion model validation, rapid-scanning backscatt. lidar 122709
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
aerosols, laser rem. diagnostics, backscatt. spectrum reson. method 122703
automated rapid vap. concentrator, nitroaromatic vap. sampling 75695
automobile cabin ventilation control, semicond. type gas sens. 100291
benzene vapour sens. using spun films of calix[4]resorcinarene derivatives 120983
benzene/ethylbenzene gas quantification/gas discrim. using sens. array/ANN 132029
binary gas mixture conc. meas., high sensitivity NIR laser absorpt. 109786
capacitance sens. for micro imaging in elec. tomography systs., particle detect. appl. 120738
catalytic sens. for monitoring explosive atmos. 75707
Chernobyl nuc. reactor site, Object Shelter, aerosol distrib. 111223
coal fired power-plant in-situ monitoring, NIR LD spectrosc. 111475
conc. meas. by LIDAR/DIAL gas detect., water vapour detect. calib. 76939
conf., Boston, USA (Nov. 2000) 89541
conf., Nuclear tracks in solids, Portoroz, Slovenia (Aug./Sept. 2000) 113241
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
continuous particulate air monitoring, quantitat. methods 133358
copper phthalocyanine, film, gas sens., atmos. pollution meas. 109768
CW-cavity ring down spectrosc., ultra-sensitive atmos. trace detect. 76935
direct-detect. mid-IR random-modulation CW lidar SNR 131678
dry-etching procs., perfluoro cpd. on-line monitoring 100684
electronic nose, Forane 134a discrim., time reduced modelling param. 97550
electronic nose, pollutant gases ident., pattern recogn. 76930
environ. gas sens. & sens. mechanisms, overview 133357
exhaust gas anal., thick-film sens. study 121021
external cavity LD design, spectrosc. opt. sens. appl. 105364
forest fire smoke, AVHRR imagery, neural nets 122607
formaldehyde, atmos., conc. meas. by laser absorpt. spectrosc. 76936
gas-fired power-plant ignition proc., LD-based in-situ methane detect. 112338
hyperspectral imagery, gas plumes, matched filters 99035
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
incinerator dioxins & furans, real-time continuous emissions monitor 111477
integrated chemiresistor array for microrobot sens. platform 75688
ionizer air-cleaners, dust removal, ozone emission 83163
IVA-L type dust conc. meas. laser instrum. for indust. conditions 132212
Japanese urban atmos. N_2O conc. data anal. 99039
large format broadband QW IR photodetector arrays, spatially modulated prism interferometer appls. 86656
laser multiphoton ionis. appl. to fast direct environ. anal. 111481
lidar methods, conf., Sendai, Japan (Oct. 2000) 100442
Love-wave gas sens., polysiloxane coated, organophosphate sens. 97437
LR 115 cellulose nitrate Rn detector, aging proc. 121660
LR-115 based Rn dosemeter, sensitivity 121677
metal-oxide gas sens. for pollution detect., fully digital user interface cct. 109794
methane detect., solid electrolyte based catalytic asymm. sens. 75716
methane trace gas flux meas., fast chem. sens., LD spectrosc. 111474
methane/air burner, NO_x prod., temp. meas., CARS 110034
micropulse imaging lidar design, computer simul. 122659
monitoring syst. based on ANN 88177
multichannel gas leakage monitoring syst. using CPLD chip 99040
nanostruct. thick-film gas sens., fab., air pollution meas. 99030
narrow linewidth OPO photoacoustic spectrosc., LIDAR/sens. appls. 72037
nitroaromatic explosives electron capture detector, attachment react. 75690
OMI ozone monitoring instrum., design & capabilities 98975
opt. particle sizer for hostile environ., on-line monitoring 76932
pass. rem. chem. vap. monitoring, FTIR spectrometer 99033
PBL ozone/water-vap. meas. by Raman lidar 88185
Polish permanent monitoring station response compar. with TLD/γ-ray detectors 121458
pool fires, multiple species meas., tunable LD spectrosc., FDM use 111479
power plant continuous emission monitoring syst. *(Chinese)* 77678
prediction of gaseous emissions using neural networks 99032
pulverised coal flames, concurrent temp. & soot conc. meas. 124096
pulverised coal-fired utility boiler, mercury distrib. charact. *(Chinese)* 112306
QCM selective polypyrrole electrodes, NO_2 & gas flux sensitivity 97440
quality impact studies, baseline data collection 99005
quantum cascade DFB laser based sens., trace gas detect. 109784
radioact. air pollution meas. using long. stabil. of ionization forms. 99031
rain droplet, pH meas., ISFET sens. 86742
rem. multipoint fibre opt. gas sens., FMCW tech. & tunable laser 120989
road vehicle emission factors validation in tunnel, UV-DOAS meas. 122701
smoke plumes detect. using eyesafe lidar, operation conditions 75233
space-based MM-wave/sub-MM-wave radiometry for impact monitoring 88180
Taichung power plant, hazardous air pollutants emissions meas. *(Chinese)* 88570
TOMS-5 total ozone mapping spectrometer, radiometric calib. 122633
tropos. emission spectrometer, Aura instrum., O_3 76876
tryptophan airborne microparticles monitoring, fluoresc. size depend. 88187
tunable diode laser, cryogenic rem. sens., air pollutants 76926
urban atmos. environ. monitoring, lidar network 122708
vehicle exhaust emissions, multicomponent rem. sens., dispersive IR/UV spectrosc. 111469
vehicle exhaust VOC meas., extractive FTIR spectrosc. 122702
VOC trace gas detect. by NIR seeded cavity ring-down spectrosc. 76940
white light continuum/ultrashort pulse atmos. gas trace detect. 76934
widely tunable difference freq. spectrometer, trace gas detect. appls. 88182
C-black-polymer composite vap. detector arrays, landmine detect. 75689
CO determ., Au colloid self-assembled electrode 132032
CO electrochem. sens., ZrO_2/Pt thick-film lamination 97501
CO gas sens., SnO_2-PdO nanocomposite based, fab. proc. 75734
CO gas sens. charact. of SnO_2 ceramics 75714

air pollution measurement continued
CO gas sens. props. of SnO_2:Si films 97442
CO sens., SnO_2 sol-gel film response 97548
CO ultralow power microsens., SnO_2 thick film, micromachining 97447
CO_2 atmos. conc., IR-ray analyzer appl. 120998
CO_2 laser based trace gas analyzer 76927
CO_2 monitoring, ZnO-$BaTiO_3$/CuO/La_2O_3 gas sens. 122716
CO_2 rapidly tunable 2.5 kW laser, lidar/pollution monitoring appls. 76933
CO_2 sens., NASICON-based, stabil. in humid environ., low temp. 75721
CO-methane mixture discrim., SnO_2 thick-film sens. arrays 132044
CO_2-TEA laser based LIDAR-DIAL syst. for O_3 dyn. in Madrid urban atmos. 76937
InGaAsSb(Gd)/InAsSbP DH lasers, 3-3.3 μm, LD spectrosc. 71833
InP, film, gas sens., atmos. pollution meas. 109768
InP-monolithic resistive sens., air quality eval. 86720
KTP periodically-poled crysts., opt. nonlin. mixing, gas sens. 120994
$KTiOPO_4$ periodically-poled cryst. tunable mid-IR light generation, gas sens. appl. 88181
$LiNbO_3$ DFG periodically poled laser spectrometer, ambient formaldehyde detect. 88188
$LiNbO_3$ quasi-phase-matched OPO source, IR chem. sens. 109783
MoO_3-WO_3 gas sens. for monitoring appls. 109788
NH_3 detect., SnO_2 gas sens. array on common Si substr. 121024
NH_3 sens., RT, Cu_xS-microporous-Si struct. 121010
NO detect., planar spinel coated amperometric sens. 132050
NO detect. using 214.8 nm Nd:YAG/Cr^{4+}:YAG microchip-laser 105253
N_2O monitoring using SnO_2 sens., catalytic decomp. 97485
NO_2, atmos., LIF detect., instrum. design 111480
NO_2 gas sens. props. of SnO_2:Si films 97442
NO_2 gas sens., tetra-iso-propoxyphthalocyaninato copper(II) film 75712
NO_2 monitoring, ZnO-$BaTiO_3$/CuO/La_2O_3 gas sens. 122716
NO_2 sens., Au gate MOS capacitors 121008
NO_2 sens., NASICON based amperometric, electrode react. anal. 97486
NO_2 sens., SiC based microhotplate, high stabil. 121011
NO_2 sens. charact. of Pt-WO_3-Si_3N_4-SiO_2-Si-Al capacitor 97484
NO_2 sens., low temp., UV light activated SnO_2 thin film 132046
NO_2 sens., porous Si deposition tech. 97483
NO_2 sens., surface modified In_2O_3 thin films 132049
NO_2 sensitivity of $NaNO_2$-attached FET type gas sens. 97549
NO_2 sensitivity of SnO_2 nanoparticulate film work fn. sens. 132045
NO_x sens., SnO_2-xCr_2O_3 varistor-type, micro p-n jns. 109740
NO_x sens., semicond. heterolayer, slide-off transfer printing 97481
O_3, satellite rem. sens., Aura tropos. spectrometer 76876
O_3, tropos., simultaneous DIAL-null profiling method 133296
Rn SSNT detectors, Monte Carlo simul. 121672
^{222}Rn, α-particle detect., activity anal. 111198
SO_2 & SO_3 meas. in aircraft engine exhaust, tunable LD syst. 111478
SO_2 sens., amino-functional copolymer coated QCM 97528
SO_2 sensitivity of WO_3 sens., noble metal loading effect 97480
SO_2 thin-film gas sens., photom./ellipsometric methods 75692
SiC catalytic MIS Schottky diode sens. array, hydrocarbon detect. 97500
SiC:Al,B UV photodetectors, ecological monitoring appl. 86569
SnO_2 based gas sens. in microreactor syst., smart microfluidics 109748
SnO_2 sens. array, VOC detect., ANN pattern recogn. 97506
SnO_2 thin/thick film gas sens. comparison, diffusion-react. model 97482
SnO_2 toxic gas sens.-based autonomous real time air pollution monitoring syst. 133360
SnO_2:Pd sens. elements for electronic detect. of methane, charactn. 109735
SnO_2-based semicond. gas sens. for combustible/pollutant gases, fab. 75727
SnO_2-based semicond. sol-gel sens. array, air pollutants detect. 109769
TiO_2 polymer dispersed films, room temp. gas sens. 75723
TiO_2-based gas microsensors for high temp. appls. 132031
WO_3 based sens. array for detect. of NO_x and NH_3 97490

air pumps *see compressors*

air terminals *see airports*

air traffic
fuzzy set theory for air transportation service quality meas. 133266

air traffic control
see also aircraft; aircraft landing guidance
Aeronautical Telecommunication Network, OSI archit. 122541
airport mgt. database in simul. environ. 111367
ARCEMIS for ATC and air defense radio systs. central control 88088
B757 pilots, descent scenarios, ATC clearances, mgt. by consent problems 133265
commun., shift work and workload effects 98935
commun. syst. archit. for air traffic mgt. and weather info. dissemination 133264
DDM of radio commun. based on HLA *(Chinese)* 111368
en route ATC, Free Flight concept 88082
en-route ATC interface redesign 98936
evol. in early 21st Century 122540
flow mgt., rate control index 88081
free flight operations, problem resoln. support 88083
free routing environ., controller conflict probe effects 88084
fuzzy set theory for air transportation service quality meas. 133266
GB208 control unit for airport radio traffic handling 88089
human controllers, physiological meas. 98940
Lincoln Laboratory, radar develop. overview 99135
manoeuvring target tracking, accel. estimator using past posns. *(Japanese)* 131669
multiple aircraft conflict resoln., optimal maneuver, pure braid group approach 88087
neural network based fuzzy logic model for target ident., design 96908
prioritized CSMA, OPNET simul. 122542
psychophysiological measures on ATC personnel 98939
regional aeronautical telecom network, simulated perform. charact. 120033
rerouting in bad weather, dyn. network flow approach 98931
satellite commun., optimum freq. resource, air traffic mgt. 74900
secondary surveillance radar sigs., MLE, identifiability, Cramer-Rao bounds 120405
simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
tower ATC operator, autonomous agent monitoring assistant 76824
trust of people and systs. in ATC 98934
user interface design, combining human factors methods 98933
windfarm develop. effects on ATC radar procedures 133890
workplace training program, organisational context, ATC appl. 124282

airborne radar
act. SAR antenna for airborne 56-channel operation 128880
adaptive clutter suppression scheme, freq. domain proc. 75082

airborne radar continued
adaptive MTI scheme in freq. domain 86178
advanced fighter radar electronic protection measures 99123
Amery Ice Shelf, marine ice distrib., radar study 88175
AN/APY-6 SAR/GMTI surveillance, tracking and targeting radar, test results 99149
APS-94F SLAR syst., image capture, proc. & recording syst. upgrade 99124
bistatic STAP perform. anal. in radar appls. 96939
clutter Doppler spectrum, radar detect. 120422
clutter suppression, STAP, elevation interferometry 86141
coherent laser radar develop. at Lincoln Laboratory 99146
compact forward-looking SAR with digital beamforming on receive only *(English)* 75210
displaced-phase-center antenna tech., airborne/spaceborne radars 99142
dual polariz. stacked microstrip patch antenna array, airborne SAR appls. 128893
dual-freq. dual-polariz. microstrip antenna, airborne SAR 72629
ERASME radar data, Orgeval site, rough surface model validation 96984
fiber-based Doppler lidar airborne turbulence sens. *(Japanese)* 99004
fire control radar, slowly moving target detect. *(Chinese)* 109230
FM waveform mgt. by missile-borne pulsed Doppler radar during target tracking in clutter 99166
forested terrain rem. sens., SAR tomography and interferometry *(English)* 76962
GMTI radar posn. bias estim. 97021
HBSC, heliborne battlefield surveillance radar DP 77082
HRR airborne phased-array radars, clutter suppression/moving target detect./feature extraction 75160
hydrogeology, airborne SAR-GPR methods, L-/P-bands 88112
integrated X-band radar syst., dominant scatterer ident. testing 99150
interrupted SAR 96932
MEDUSA, airborne multispectral oil spill detect. and charactn. syst. 111468
moving target detect. via airborne HRR phased array radar 120418
multibaseline InSAR, appl. of array proc. techs. for layover soln. 98968
P-band airborne Experimental-Synthetic Aperture Radar, seabed imaging 111460
pass. act. L- and S-band microwave sens., marine/hydrol. 76905
pass. interferometric airborne radar, algm. support 75163
probe-fed stacked microstrip patch antenna for high-resoln. polarimetric C-band SAR 72561
PWB conductive filament growth, airborne radar eval. 115117
SAR, airborne, motion compensation 75090
SAR, moving target detect. and imaging 120402
SAR, rem. sens. systs. 75185
SAR antennas, effect of phase flucts. on sig. proc. time 131636
SAR image proc. for moving target focusing 99158
SAR interferometry, residual motion error correction 109294
SAR interferometry of Greenland ice sheet, topography, penetration 86203
SAR multi-antenna tomography using superresolution techs. *(English)* 76963
SAR polarimetric data and self-organizing map for urban features extraction *(Japanese)* 96982
SAR real-time proc., 1st order motion compensation, resample problem 75085
Sensor Craft multi-mission radar, STAP proc., severe clutter 122761
slotted waveguide array antenna technol. 72655
space-time adaptive estim. data, large stationary discretes 118902
STAP, effects of internal clutter motion in heterog. environ. 96940
STAP bistatic radar, adaptive clutter cancellation 109266
STAP for airborne high range resoln. phased array radar 96945
STAP forward-looking radar, Doppler compensation 131637
STAP radar, ground moving target tracking 96905
STAP/adaptive antennas, pragmatic approach 84773
surveillance radar detect., 2D freq. domain least sq. algm. 86182
surveillance radar detect., 2D least sq. algm. 84799
tactical radars for ground surveillance 99144
turbulence intens. in clouds and precip., radar meas. 76903
UAV-HALE surveillance syst., SAR images, autom. obj. detect. 96977
unmanned airborne vehicle waveguide array 86208
VERA 3D pass. surveillance syst., accuracy anal. 75200
WGS-84 coord. for surface target tracking 88244
X-band scatt. response of pea (Pisum sativum) for rem. sens., estim. 76839
Tm,Ho:$LiYF_4$ imaging laser radar for heli-borne obstacle warning avoidance syst. *(Japanese)* 96998

aircraft
see also aerospace control; aerospace instrumentation; air traffic control; aircraft control; aircraft maintenance; aircraft navigation; aircraft power systems; aircraft testing; helicopters; military aircraft
aerial images, automatic aircraft detect. 129828
flight path estim. using freq. meas. from wide aperture acoustic array 99084
GSM terminals real-time detector 85713
ident. of large aircraft, shape based 94772
INSTANT software for antenna interacts. anal. 83527
ISAR imaging of moving targets, robust autofocus algm. 75140
ISAR imaging of moving targets, simul. 96976
landing aircraft noise, fly-over meas. with planar microphone array *(Chinese)* 75912
lift theory in works of N. E. Zhukovsky 88030
lightning-interact. problems, FDTD anal., ABC 105796
multi-disc axial flux stratospheric aircraft propeller drive 133261
multiple unmanned aerial vehicles, decentralized data fusion, localization and map building 88048
neural network based fuzzy logic model for target ident., design 96908
plate de-icing in cold cross flow by hot fluid injection through slot, aircraft appls. 88026
polymer opt. fibre appls. 119729
propeller flow, blade-based theory, Zhukovsky's soln. 88031
radar target freq. response data in clutter environ., scatt. center estim. *(Chinese)* 75230
shells,thin-wall elastic, precession vibr., aircraft engine appls. 122537
SMA contrib. to aerospace related smart struct. 101529
struct. anal., OO FE modeling ES *(Chinese)* 111308
surveillance radar, spectral portraits of propeller-driven fixed-wing/turbojet aircraft, expt. 75165
telemedicine services in airline framework 85117
tracking-syst. control sigs. synthesis 109235
weather radar develop. and appl. programs at Lincoln Laboratory 98994
wing theory of N.E. Zhukovsky and S.A. Chaplygin 88029

aircraft antennas
3D airborne radome of superspheroidal shapes, discrete anal. 72703
adaptive antenna systs., nonstationary receiver-transmitter config. 107362
aircraft antennas continued
CLASP software suite for antenna design/optim. 83526
conformal onboard array antenna synthesis, MoM-based algm. 83752
GBS/Milstar airborne RX/TX antenna 105874
HeliNet programme, high-altitude commun. platform 85942
HF helicopter antenna, reson. features anal. using model morphing 94143
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
microstrip antenna, lateral isolation, radio altimeter *(Chinese)* 128862
microstrip patch antenna, single freq. ice gauge 88060
nonequidistant antenna arrays, directivity patterns synthesis 105969
phased arrays for new millennium 128883
SAR, airborne, motion compensation 75090
self-navig. unit, antenna-radome syst. calc. 120486
slotted array antenna, planar magic tee jn., CAD 83666
space-time array data simul. 107534
stratos. platform based broadband wireless access syst. 74600

aircraft communication
see also aircraft antennas
Aeronautical Telecommunication Network, OSI archit. 122541
aeronautics technol., satellite commun., mobile terminal 120102
air traffic mgt., optimum freq. resource satellite commun. 74900
air traffic mgt. and weather info. dissemination, commun. syst. archit. 133264
broadband multimedia satellite telecomm. systs. *(Polish)* 74888
cellular commun. using aerial platforms 96501
centralized intell. channel assigned multiple access for ad-hoc wireless networks with UAVs 95858
dispersive aeronautical channel, differentially-encoded MPSK, optimum detect. 83827
fade depth prediction, two-ray multipath model 120074
GB208 control unit for airport radio traffic handling 88089
HALO stratos. aircraft for high-speed Internet access 85632
HeliNet programme, high-altitude commun. platform 85942
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
high-altitude platforms characts. 85941
Internet protocols 122492
IP mobility mgt. for airborne commun. node platform 108042
Joint Combat Information Terminal, software definable radio 111581
Ka-band broadband aeronautical satellite commun. expts. 108989
multi-layer ad-hoc wireless networks with UAVs, hierarchical routing 108706
NASA space and aeronautical networks, appl. of mobile-IP 119358
pers. commun., in-flight technols. develops. 111311
reconnaissance image data transm., airborne network 99118
regional aeronautical telecom network, simulated perform. characts. 120033
satellite technol., Aero-SAPIENT project 120103
SHF/EHF airborne/satellite commun., tropos. propag. effects 83283
stratos. platform based broadband wireless access syst. 74600
UAV covert datalink, MQW modulating retroreflector 99117
unmanned aerial vehicles as commun. routing nodes, common data link 99116
US Air Force develop. of high-altitude laser crosslink 86110
wireless airborne commun. systs., overloaded array proc. 108694

aircraft computers
APS-94F SLAR syst., image capture, proc. & recording syst. upgrade 99124
cockpit terrain intervisibility displays, avionics integrat. 122518
commercial PCs, mil./commercial aircraft interface archits. 76809
COTS hardware/software/tools in mil. equipt., user experience 122748
distributed fault-tolerant syst. for UMS *(Chinese)* 111338
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
flight control syst. reconfig., actuator failure, fault tolerance 122520
flight display instrum., pictorialized meas., enhanced perform. *(Chinese)* 111337
helicopter autonomous aggressive maneuvers, avionics syst. 122521
open syst. COTS avionics network, MIL-STD-1553 replacement 122747
reconnaissance pushbroom electro-opt. sens., motion correction 99125
warfighter C^4ISR syst., integrat. technols. 77032

aircraft control
see also aircraft landing guidance
aeroengine, low order ZP/LTR control *(Chinese)* 88079
agile missile guidance and autopilot systs., integrated design 122475
autonomous helicopter hover, ANN appl. 98884
determ. of aircraft posn. and orient. from images of millimetric surface radar 98930
engines dyn. ident. with neural networks *(Chinese)* 133214
environ. control syst. counterflow heat exchanger, thermodyn. optim. 76791
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
fighter aircraft, nonlin. tuned RBF neurocontroller design 111641
fighter aircraft, thrust vectoring syst. control concept 133387
flight control syst. reconfig., actuator failure, fault tolerance 122520
flight control systs., fault tolerant design, maint. planning 133224
flight simulators, computer-aided, design concept 111320
flight vehicle control, aeroservoelasticity, (non)lin. anal. 122512
gas turbine, nonlin. modelling using NARMAX struct. 122536
helicopter, autonomous scale-model, visual servoing 94993
helicopter autonomous aggressive maneuvers, avionics syst. 122521
helicopter pilotage, image intensified and IR data, image fusion 98880
helicopter robot stereo vision for power cable inspection 88452
mortar launched surveillance syst., unmanned fixed-winged aircraft 106798
multiple autonomous flight vehicles, decentralised control, inform.-theoretic approach 84700
param. selection of low RCS serrated pylon *(Chinese)* 111307
rem. surveillance by low-cost inflatable lighter-than-air syst. 111304
Saab Gripen aircraft, synthetic attitude/heading ref. 88053
sens. failure detect., ident., and accommodation, min. resource allocating networks appl. 111305
Swissair 111 crash EEPROM data recovery, failure anal. techs. 79899
TF/TA flight path tracking, control and simul. *(Chinese)* 88041
UAV-HALE surveillance syst., SAR images, autom. obj. detect. 96977
unmanned aerial vehicle distributed video appl., QuO QoS framework 129804
unmanned air vehicle landing, vision based motion estim. and nonlin. control 109670
unmanned combat aerial vehicles, real time DP, delay model *(Chinese)* 88224
unmanned mini-helicopter control for visual power lines inspection 123020
vectored thrust aircraft advanced flight control Harrier, robust lin. param.-varying control 88233
vert. fin buffeting alleviation, strain actuation, closed-loop control tests 111306
wing rock motion control, nonlin. Kalman filter theory appl. 107496

aircraft displays
3D aircraft perspective displays, depth cues, develop. 98913
airborne digital computers/display devices *(Russian)* 133217
AMLCD, field-emission lamp design 98914
APS-94F SLAR syst., image capture, proc. & recording syst. upgrade 99124

aircraft displays continued
avionics LCD, photom. meas., intraplant & interplant correl. 98912
cockpit terrain intervisibility displays, avionics integrat. 122518
fighter jet cockpits large screen display 99109
flight display instrum., pictorialized meas., enhanced perform. *(Chinese)* 111337
fog imitators for aviation appl., liq. cryst. cells 98889
mil. cockpit displays, luminance level effects on visual perform. 98909
optoelectronic HMD and sight syst. 121121
pilot visual inform. flow syst., ergonomic factors *(Chinese)* 88062
RECCE mission planning 99174
wide-angle opt. systs. for HUD *(Russian)* 132094
ZnS:Cu,Mn, EL display panel in aircraft cabin meters *(Chinese)* 88061
aircraft electronics *see avionics*
aircraft instrumentation
see also aircraft displays; aircraft landing guidance; avionics; instrument landing systems; microwave landing systems
AHI airborne thermal IR hyperspectral imager 98896
angle target tracking IR sens. for range estim. 133220
build-up cct. carriers for electronic assemblies in aviation/spacecraft technol. *(German, English)* 76803
digital terrain elevation data/GPS/radar altimeter for aircraft flight safety, in-flight error detect. 98911
fuel vol. meas. in aircraft, feedforward neural nets 111329
IFSAR for rapid terrain visualization demons. 111628
interf. due to VSAT/SNG and SIT terminals 88058
interferometer fiber optic gyros, navig. appls. *(Japanese)* 97337
micromachined silicon sens., press. meas., aircraft appls. 131875
microstrip patch antenna, single freq. ice gauge 88060
mixed-mode VLSI opt. flow sens. for in-flight control of micro air vehicle 98895
motion image proc. techs. for obj. detect. 129454
Saab Gripen aircraft, synthetic attitude/heading ref. 88053
SQUID mag. anom. detector, surface ship detect. 70920
Swissair 111 crash EEPROM data recovery, failure anal. techs. 79899
SWUIS-A UV/vis/IR imaging syst. for airborne astron. & aeronomy 98897
UV photon-counting radiometer 86646
MEMS press. sens. assembly, aircraft flight tests/reliab. improvement 122515
aircraft landing guidance
see also instrument landing systems; microwave landing systems
autonomous aircraft landing, navig. syst. design, nonlin. pass. sens., nonlin. filtering appl. 88059
autonomous landing, act. vision, predictive control law 88054
F/A-18 autoland trials for aircraft carrier operations, test results 133263
GPS, ATC, nonprecision instrum. approach procedure with vert. guidance 86259
integrated X-band radar syst., dominant scatterer ident. testing 99150
Local Area Augmentation System, ranging source integrity 97029
NOVA 9000, surface movement radar display and proc. syst. for ATC 98932
rotorcraft, unmanned, vision syst. for landing 94996
Wide Area Augmentation System for aviation 131706
aircraft maintenance
air valve, BLDCM monitoring 76801
composite mater. elastic moduli, Lamb wave vel., contactless method 114489
computer-aided tap test syst., mag. cam 122498
deep-lying flaw detect., SQUID pulsed eddy-current probe model 101630
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
flight control systs., fault tolerant design, maint. planning 133224
free-text repair notes, inform. extraction 133204
future air systs., reliab. goals 122482
multilayer aircraft struct. inspection, rem.-field eddy-current syst. 122495
NDE sens. integrat., scanning/positioning modules 122497
phase stepping shearography, improved software 122496
plane surface top lacquer laser cleaning 72132
source-sample react. forces meas., EM NDE tech. 101572
structural health mgt. 88045
aircraft navigation
see also aircraft landing guidance
airborne magnetometric navig. systs., aircraft appl. 111335
closed-loop basic gravit. inertial syst. 76807
digital terrain elevation data/GPS/radar altimeter for aircraft flight safety, in-flight error detect. 98911
evol. in early 21st Century 122540
flying robot, visual navig. based on insect homing 97036
France, future of air navig. *(French)* 88085
GPS availability, fast calc. using satellite rise and fall time *(Japanese)* 97026
GPS receivers, operation, equatorial ionos. scintillations effects 120481
GPS/INS integrated navig. syst., fault detect. method *(Chinese)* 76804
GSM/air navig. networks, generalized EMC anal. 83403
Indian air navig. WAAS, ionos. grid point value estim. 75248
interferometer fiber optic gyros, navig. appls. *(Japanese)* 97337
self-navig. unit, antenna-radome syst. calc. 120486
thermal radiometry, hist. and develop. 111312
track vel. and drift angle meas. 76808
aircraft power systems
batt. appls./develop., conf., Long Beach, CA, USA (Jan. 2001) 78449
batt. systs. technol. develop., Li-ion and N-MH batts. 88064
DC/DC reson. converter with one-switch sync. regulator 88957
multilevel converter for aircraft power syst. appls. 76810
solar inverter, synchronized multi-phase PWM concept, wide input voltage range 77974
turbojet engines with large constructive and geom. limitations, CAD 76817
Li ion large batt. for aerospace/aircraft appl., var. temp. cycling 122525
Li-ion batts. for aerospace and aircraft appls. 88071
Li-ion prismatic cells, aircraft appls. 88065
Ni-MH batts. for mil. aircraft 88068
aircraft testing
air turbulence sig. simul., appl. 111324
air valve, BLDCM monitoring 76801
airframe noise reduction, high-lift wing wind tunnel expts. 88051
computer-aided tap test syst., mag. cam 122498
deep-lying flaw detect., SQUID pulsed eddy-current probe model 101630
digital terrain elevation data/GPS/radar altimeter for aircraft flight safety, in-flight error detect. 98911
engine exhaust, SO_2 & SO_3 meas., tunable LD syst. 111478
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
F/A-18 autoland trials for aircraft carrier operations, test results 133263
flight vehicle control, aeroservoelasticity, (non)lin. anal. 122512
helicopter main rotor blades, damage detect. tech. 111321
hydraulic syst., generalized cross-sig. anom. detect. 122506
IFSAR for rapid terrain visualization demons. 111628
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
aircraft testing continued
materials testing, photonics techs. appl. 88043
metallic fuselage struct., AE sigs. propag. 122499
multilayer aircraft struct., fatigue crack charactn., US imaging 101615
multilayer aircraft struct. inspection, rem.-field eddy-current syst. 122495
NDE, multiplexed SQUID array 70965
NDE sens. integrat., scanning/positioning modules 122497
phase stepping shearography, improved software 122496
plate damage detect., optimal US pulse repetition rate, RBF network 90616
skin panels, embedded FBG sens., buckling anal. 88046
vibr. monitoring by PCM telemetry, data compression 98893
wheel testing, rem. eddy current tech., HTS SQUID magnetometer 76799
MEMS press. sens. assembly, aircraft flight tests/reliab. improvement 122515
airfields *see airports*
airlines *see travel industry*
airmail *see postal services*
airplanes *see aircraft*
airports
air traffic flow mgt., rate control index 88081
dual-energy X-ray imaging syst. for organic material detect., airport security appl. 121769
GB208 control unit for airport radio traffic handling 88089
GPS, ATC, nonprecision instrum. approach procedure with vert. guidance 86259
med. equipt., electronic, EMI by radio waves coming from outside the hospital 122446
SAR generalized inversion/ω-k algm. for runway imaging, comparison 96893
surveillance, surface movement radar DP 98937
weather radar develop. and appl. programs at Lincoln Laboratory 98994
AIX *see Unix*
alarm systems
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 119468
cardiac ICU, patient state monitoring, intell. alarms syst. 132530
CMOS microcontroller, low-power cct., smoke detector *(German)* 102187
coal mine & tunnel autom. alarm, distrib. opt. fibre temp. sens. 67499
custom intrusion detect. filters using data mining, develop. 111588
driver vigilance monitoring, skin resist.-based automatic checkout syst. 67502
fire detect., smoke turbulent charact. *(Chinese)* 113424
fire detect. syst. reliab. calc., Chaudhuri bounds 89926
handheld mine detector operator perform., audio icon design issues 77114
home elec. appliances, desirable props. for auditory warning sigs. ident. 113155
Intelli-FIELD electrostatic field disturbance sens. 89777
IVHS, global vehicle location syst., GPS/cellular telephones 131690
LAN fault diagnosis syst. 130739
modular mission config. threat detect. sens. suite demonstrator 99128
overhead power line contact by mobile equipt., warning alarm 134706
power dispatch EMS, commun. syst. Blown Scan improvement *(Chinese)* 77173
power syst. alarm proc., fuzzy ES 99241
power syst. fault diagnosis, probabilistic NN, multiple alarm proc. *(English)* 123076
PROCONTROL P distributed control system for power plants *(Chinese)* 77733
real-time water quality monitoring across Internet, virtual instrum. 99029
security alarm syst. batt., charge/discharge, peripheral interface controller IC 113419
smoke particles discrim. using IR photoelec. detect. 75534
threaten laser warning/orienting technol. *(Chinese)* 99129
UNICAT control syst. at APS 109457
vulnerable traffic participants protection, sens. fusion 124039
CO level meas./control syst. 109773
ALE *see atomic layer epitaxial growth*
Alfven waves *see solid-state plasma*
Alfven waves (plasma) *see plasma Alfven waves*
algebra
see also algebraic codes; Banach spaces; Boolean algebra; Galois fields; group theory; Hilbert spaces; linear algebra; matrix algebra; polynomials; process algebra
3D computer vision, SVM using geometric alg. 106666
brain elec. tomography, alg. reconstruction techs., Tikhonov regularisation 98207
canonical fuzzy measure on (0, 1) 100856
Clifford's geometric alg., covariant isotropic constitutive rels. 72241
combined EM focusing systs., differential alg. method for aberrations calc. 93975
DE, alg., parallel Rosenbrock methods 78775
ellipt. curve discrete logarithm problem *(Chinese)* 67704
ellipt. curve random no. generator 118030
entangled inform. and quantum capacity 106007
equalization, digital channel, by alg. perceptron 119179
fuzzy ideals in BCC-alg. 100892
fuzzy ideals in BCI-alg. 100890
fuzzy subinclines of incline alg. 100889
HFE, security of hidden field eqns. 129293
high-perform. automated control systs., data protection, controlled operation-based fast methods 94355
homomorphisms of poset-valued alg. 67834
hypercube multicomputers, cube alg. based fault-tolerant multicast routing algm. 119383
implicative alg., quotient struct. via fuzzy implicative filters 67833
intense vortex light beam splitting, soliton generation 93867
Internet mapping, dist. estim., alg. approach 119743
interval doubling schemes of lattice of permutations 67706
Neumann-Neumann methods for vector field problems 67978
NIST ellipt. curves over prime fields, software implement. 129292
orthodox transversals of regular semigroups 67845
power systs., double sing.-induced bifurcation points and sing. Hopf bifurcations 88337
quaternion wavelets for moving vol. representation 100754
random sigs. discrim. based on invariant alg. of rank predicates 107346
type 5,6,7 and 8 fuzzy pos. implicative hyperK-ideals 124532
Weil descent attack, anal. 129296
algebraic codes
see also algebraic geometric codes
coherent/differentially coherent space-time codes, alg. designs 83852
cyclic codes, recurrent sliding correl. decoding 72894
digital simultaneous voice and data appls., fast alg. codebook search method 94301
FT, factor graphs 129173
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
integer encoding, error free computation of DCT/IDCT 107098

algebraic codes continued
low dens. parity check codes based bandwidth efficient modulation 129138
low dens. parity check codes constr. using Ramanujan graphs 129037
low power electronics, memory bus encoding, power-aware alg. coding techs. 79878
MIMO wireless syst., layered space-time coding/sig. proc. 119862
multilevel codes with inner convolutional code, alg. soft decoding 129224
network coding, alg. approach 130186
real-valued discrete transform implement. by alg. integer encoding 129975
RS codes, soft decision decoding using extended erasure magnitude matrix 106090
space-time codes for block fading channels 129130
speech replay and compression on H/PC *(Chinese)* 94400
systematic binary alg. block codes, iter. decoding 72826
algebraic geometric codes
asymptotically good quantum codes exceeding Ashikhmin-Litsyn-Tsfasman bound 83922
asymptotically good quantum codes from alg.-geometric codes 83923
Berlekamp-Massey-Sakata algm. 83864
constrained m-D shift-register synthesis, fast GMD decoding, one-point alg. geom. codes *(Japanese)* 72902
fn. field tower, splitting of places, Drinfeld-Vladut bound 72792
Gilbert-Varshamov bound, low-complexity constr. algm. 117925
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
list decoding, representations of alg.-geometric codes 72808
list decoding of alg.-geometric codes, root-finding algm. 117944
one-point alg. geom. codes, fast encoding method 129029
one-point alg.-geom. codes, fast erasure deletion generalized min. dist. decoding 129020
one-point alg.-geom. codes, parity-check fns. 117942
polynomial representation, list decoding 72791
algebraic manipulation *see symbol manipulation*
algorithm correctness proving *see program verification*
algorithm termination *see program verification*
algorithm theory
see also bisimulation equivalence; competitive algorithms; computability; computational complexity; deterministic algorithms; randomised algorithms
3D image proc. algms., topol. preserving transform. *(Japanese)* 98138
3D med. gray images, line fig. extraction algms. *(Japanese)* 98141
3D med. image proc., math. morph. *(Japanese)* 98421
3D surface topography meas., simplex algm. automatic relocation 121195
ant colony syst. optim., dyn. weighted rule 100914
anthropomorphic phantom, CT, 3D treatment planning algms. 76634
ATLAS pixel detector, second level trigger, fast track finding algm. 98059
Bayesian source separation, matrix element distribn., max. likelihood fn. 107591
bounded cycle-cover problem 74057
brain MRI, automatic scan prescription 132672
brain MRI, fast fuzzy clustering segmentation algm. *(Chinese)* 110859
cementless hip prosthesis, optim., evol. programs 122315
dyn. power mgt. in wireless sens. networks 75752
ECG anal. algm., LADT-BP neural network *(Chinese)* 110553
electronics mfg. AOI, optimal allocation of AOI resources 100648
generalised quant. search algm., phase inversions, expt. NMR 106252
greedy-GA combined algm. for data transfer binding problems 81489
Hamilton cycles containing randomly selected edges in random regular graphs 113930
intens.-modulated radiation therapy, beam orient. optim. algm. 98617
intens.-modulated radiation therapy, inverse planning algms. 111088
look-ahead based fuzzy decision tree induction 78803
mag. reson. spectrosc., time-domain quantitation methods, overview 98448
med. US images, fuzzy boundary extraction algm. *(Chinese)* 110680
multileaf collimator intens.-modulated radiation therapy, dose calc. 111195
multiple personnel dosimeters, dose calc. algm. 111225
posn. sensitive photomultiplier tube, high resoln. 3D SPECT 115275
probab. maximisation, greedy algm. perform. bounds 78819
proton pencil beam algm., patient compensators, dose computations 88001
real-time face tracking under partial occlusion and illum. change 73543
step and shoot intens. modulated radiotherapy, optim. algm. 98646
temporal bone, helical CT, image reconstruction algm. *(Japanese)* 98514
thermolum. pers. dosimetry, abnormal glow curves, algm. 133112
tongue diagnosis, image proc., texture, colour *(Chinese)* 110489
view planning with registration constraint 84212
wireless database broadcasting, effective data placement 96221
wireless TDMA, optimal carrier sharing 108579
^{131}I therapy, thyroid, Graves' disease, committed dose calc. 111245
algorithms (computer listings) *see subroutines*
alkali metal thermoelectric convertors *see thermoelectric conversion*
alkaline fuel cells
direct methanol-air fuel cells, membranes, circulating electrolyte 89161
Ni/PTFE porous anodes for alkaline fuel cells, activation 112837
alkalinity *see pH*
all-pass filters
act. filters with current differencing buffered amp. 102361
adaptive notch filter with subband filtering, algm. convergence 95685
anti-aliasing filter effect on largest Lyapunov exponent calc. 90687
CCIII first-order all-pass sect. 91042
CMOS OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
coupled cavity thin film based all-pass filters, third-order dispersion compensation appl. 109187
current-mode all-pass filter, current feedback amp. 102340
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
current-mode high output impedance multifunction filters employing min. no. of FTFNs 102368
data transm. over noisy channels, optimal orthogonal finite order transmitter/receiver filters design 107538
digital receiver phase equalization, min. phase SAW filters anal. 107541
fractional delay allpass filters, design 130041
fractional delay filters, design 91083
GSM/EDGE, mobile channels zeros distrib. 85859
high-speed recursive digital filters 114880
IIR filter lossy/lossless seq. transforms, image coding appl. *(Japanese)* 107030
IIR filters, optimal energy compaction, design procedure 125614
IIR multiplierless ellipt. filters, cascade and parallel realizations 130073
Jot's reverberation algm., coeffs. computation 118063
lattice filters, implement. using four operands real-multiply accumulation 68944
lattice WDF, max. sample freq., circulator, Richards struct. 102392
all-pass filters continued
LC all-pass network based quadrature generation in RFICs 80348
LDI/LDD all-pass lattice filters, computational props, FPGA implements. 91079
low-sensitivity IIR WDF with hypercomplex coeffs. 91104
LPC, warped/conventional techs. comparison 84009
MMIC broadband 90° power divider using all-pass act. filter 125788
multichannel parallel sampling syst., timing skew calib. technol. *(Chinese)* 120698
near-perfect-reconstruction IIR QMF banks, design using FIR phase-compensation filters 130104
octave-band all-pass based IIR filter banks, image enhancement appls. 106479
orthonormal symmetric wavelet bases using complex allpass filter 130120
OTDM syst., sync., opt. all-pass filters 120194
parallel config. thin-film allpass coupled-cavity filters, adjustable dispersion-slope compensation 131423
planar waveguide allpass opt. filters, tunable dispersion compensators 131403
pulse shaping and jitter-free freq. error detect. and timing recovery, digital filters 73660
QMF two-channel approx. lin. phase filter bank design, image compression appl. 73383
recursive digital filter model, inverse filtering tech. 130137
SC filters based on allpass sects., testability 80068
speech sigs., imperceptibility in all-pass watermarking 118101
stereophonic acoustic echo canceller, pre-proc. filters, convergence anal. *(Japanese)* 73674
tunable fractional-delay allpass filter struct., closed-form design 102403
two-channel QMF filter bank, approx. lin. phase, based on allpass filters 102376
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
universal current-mode filter using CCII and current followers 68923
universal voltage-mode filter, three input/single output, operational floating current conveyors 68921
UWB-SAR syst., underground targets migration 96898
warped DFT, filter design appls. 113839
SiO_2/Ta_2O_5 thin-film based coupled-cavity allpass filters, dyn. dispersion-slope compensation 131402
Al_2O_3-α *see corundum*
ALOHA *see access protocols*
α-Al_2O_3 *see corundum*
alpha-particle detection
air dens. and humidity sens., opt. fibre and α-ray detector 97293
conf., Nuclear tracks in solids, Portoroz, Slovenia (Aug./Sept. 2000) 113241
coplanar diamond alpha particle detectors, spectrosc. response 121485
CR-39/85 etched detectors with alpha/neutron-induced tracks, He-Ne laser transmiss. 121662
CVD-diamond posn. sensitive detectors for HI detect. 121454
diamond coplanar CVD radiation detector, charactn. 97992
diamond CVD films, detector grade, growth, efficiency and charge collection dist. 114330
diamond CVD particle detectors, trapping-detrapping behavior 87219
diamond films, high quality CVD, for particle detect. appls., structural charact. 114331
diamond radiation detectors, charge transport props. 132305
diamond radiation detectors, response, temp. effects 98099
gas electron multiplier scintillation, tracking device perform. 121510
imaging plate readout, wavelength shifting fibres, line-shaped laser 121646
lateral straggling using microbeam at CENBG 132258
LR 115 cellulose nitrate Rn detector, aging proc. 121660
LR-115 based Rn dosemeter, sensitivity 121677
LR-115 detector efficiency, alpha particle exposure 121684
micromapping tech. for alpha/fission tracks 132441
nucl. multidetector arrays, neutron-induced react. cross-sect. anal. 110306
РК-АГ-02 α-γ-radiometer-spectrometer, ^{241}Am proximate monitoring 98080
plastic scintillator, B loaded, simul./exptl. study 121531
radiation dosimetry using 3D opt. RAM based on bistable photochromism 132368
CaF_2:Tm, single cryst. TLD, dose response, radiation therapy appls. 133086
CdZnTe detectors for coincident α-γ spectrosc. 87187
CsI(Tl) cryst., scintillation charact. depend. on Tl^+ concs. under e/α excitations 132401
InP:Fe, VGF growth, nuc. radiation detector appl. charactn. 97991
$LiBaF_3$ scintillator, fast neutron and alpha detect. 121570
$LiBaF_3$:Ce^{3+} scintillator, fast neutron/alpha detect. 110332
$Lu_3Al_5O_{12}$:Ce single-cryst. films for biological and radiation monitoring 121530
^{222}Rn, α-particle detect., activity anal. 111198
^{222}Rn conc., PIN Si photodiodes, alpha particles detect. 97971
^{222}Rn conc. monitoring syst. for continuous meas. 121587
Si(Li) detectors eval. by Cu plating method and X-ray anal. microscopy 132379
TeO_2 high-resoln. bolometers for rare events detect. 76082
Xe liq., scintillation light detect. using large area APD 121592
ZnS:Ag phoswich detectors, simultaneous α/β/γ/n counting using multi-param. tech. 121559
ZnS(Ag) phoswich detectors, simultaneous α, β/γ and n counting by dual-param. tech. 132404
ZnS(Ag) scintillator/PMT for continuous Rn conc. meas. in underground soil 110339
alpha-particle effects
ADCs, transient fault sensitivity anal. 90993
Alpha μP, α-particle induced soft error rates, historical trends 79953
diamond, CVD detector, thermolum., UV light sensitivity 88005
imaging plate, photostimulated luminesc. *(Japanese)* 71531
photonic sens. interact./perform. in space radiat. environ., review 122477
planar triac, radiation-induced struct. modif. effect on mag. sensitivity 81243
radiation dosimetry using 3D opt. RAM based on bistable photochromism 132368
semiconds., proton/alpha particle radiation defects, doping 115494
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
SRAM, alpha-particle irrad., soft error rate immunity 125502
SRAMs soft error improvement by ion implanted shallow well struct. 115979
very deep sub micron memories, soft error rate, syst. reliab. 68804
wafer level area array solder bump interconnects with Pb-free/low-α solders 113594
n-GaAs:Si, α-particle irrad., annealing, electronic/struct. props. 126008
$GaAs/Al_{0.35}Ga_{0.65}As$ MQW, alpha particle irrad., annealing, PL obs. 80816
GaN/sapphire, N_2^+-ion implantation and α-irrad. effects, Raman and photolum. spectra anal. 126007
LiF detector, self-atten. of TL light, exptl. comparis. 132322
LiF:Mg,Cu,Na,Si TL detectors, sintered, dosimetric props. 133085
Si, polycryst. film and npn transistor, particle irrad. 126611
Si(001), nitridation, isotope-beam material modif. 92057

alpha-particle effects continued
$Si_{1-x}Ge_x$ single- and poly-crysts., material props., nuc. detectors appl. 115342
SiO_2 on 6H-SiC, ion beam induced charge gate rupture 115805
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964
alpha-particle spectra
SiC Schottky diode, radiation hardness under relativistic protons, precision alpha spectra 70014
alpha-particle spectrometers
see also alpha-particle spectra
AMS-01 spectrometer, aerogel threshold Cherenkov counter 98032
GREAT spectrometer, triggerless total data readout method 110412
PK-AΓ-02 α-γ-radiometer-spectrometer, ^{241}Am proximate monitoring 98080
^{222}Rn, α-particle detect., activity anal. 111198
alpha-rhythm *see bioelectric potentials*
alpha-rhythm measurement *see electroencephalography*
alternators
36 V Pb-acid batt., vehicle appls. 78298
automobile electronics, power semicond. devices 134600
automotive brushless alternator, design and testing 134564
automotive integrated PM starter/alternator, flux weakening control algm. 134567
cage rotor induction machine perform. in automotive starter-alternator appls. 77873
car integrated starter-alternator syst., switched reluctance machine 124016
crankshaft starter-alternator, transverse flux reluctance machine 89395
diesel generator sets, small alternators, digital AVR 88716
dual-voltage automotive elec. syst., std. EMI impulses adaptation 100311
flux reversal machine, automotive alternator with 42/14 V DC dual output 113120
four pole sync. genset alternator, loss eval. 99639
HEV, integrated starter generator, LV/HV systs. comparison 123969
HEV auxiliary power unit lin. alternator/engine syst. design 123963
interior PM offset-coupled automotive integrated starter/alternator 134562
microalternator ident./control, local model networks 88715
mobile mil. diesel generator set, PM alternator, power conversion syst. 133910
power network relax. mechanism study 77669
salient-pole belt-driven automotive alternators 134563
small wind generators, axial airgap alternators, developing countries 88645
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
surface PM direct drive starter/alternator, weakened flux linkage 134569
turboalternator transfer fn. estim. using spectral anal. 123371
altitude measurement *see height measurement*
aluminosilicate glasses
polysilicon TFT-LCD glass substr., thermal dimens. stabil. 104818
Al_2O_3-SiO_2:Ce^{3+} planar waveguides, sol gel proc., photosensitivity 82151
$Ca_2Al_2SiO_7$ cryst. slab waveguides from surface crystallized glass 93113
Na_2O-Al_2O_3-B_2O_3-SiO_2-NaCl-CuO glass, SHG, poling 128499
$Na_2O{\cdot}Cd_3Al_2Si_3O_{12}:Er^{3+}$ glass, opt. charactn. 71217
SiO_2-Al_2O_3-P_2O_5-Na_2O-K_2O-CaO-Er_2O_3-Yb_2O_3 glasses, act. opt. waveguides 93156
AM (modulation) *see amplitude modulation*
amateur radio *see radiocommunication*
amblyopia *see vision defects*
ammeters
subranging digital SQUID ammeter 75779
ammonia clocks *see atomic clocks*
amorphous-crystalline transformations *see crystallisation*
amorphous magnetic materials
alloys, appls. in electronic devices 104481
CoGdZr films, perpend. anisotropy induced by DC mag. field applied during deposition 116256
conf., Phys. props. of mag. materials, Poznan, Poland (June 2000) 89545
conf. on magnetism, Recife, Brazil (Aug. 2000) 113250
design and synthesis of mag. struct., review 81793
elec. machines, annealed amorph. mag. cores, power loss, permeab. 99630
ferrimag./Cu/ferrimag. films, pos. GMR 81845
ferromag. core magnetoelastic sens., muscular activity in vivo expt. 76234
FM-type wireless CMOS MI sens., magnetis. magneto-impedance effect in amorph. wires *(Japanese)* 109937
GMI sens., pass. wireless design 86478
machines, annealed amorph. mag. cores, power loss, relative permeab. 88678
mag. charact., sensor appl., overview *(Chinese)* 70481
magneto-opt. recording, basic phys./current technols., review 116393
magnetostrictive amorph. wire micromotor, load charact. 134105
magnetostrictive amorph. wires, AC field induced rot., viscosimeter appl. 75931
micro-mag. sens., magneto-impedance/stress-impedance, review 75765
novel mag. structs. and appls., symp., San Sebastian, Spain (Sep. 2000) 78435
relay safety systs., EMC, metallic glass housings 77579
soft mag. wires, prep./mag. props./appls., overview 81794
superhigh dens. mag. recording, prospects *(Chinese)* 92840
switch-mode power supply design methods for computer facilities 112677
two-axis planar flux gate sens. with multilayer struct., fab. *(Japanese)* 109935
wireless FM type magneto-impedance sens., flash anneal of amorph. wires 120781
Co alloy, amorph. ferromag. wire, gyromagnetic reson., HF losses 127300
CoCrPt/CrTi mag. recording noise, amorph. Ni alloy seed layer 116312
$(CoFe)_{70}(MoSiB)_{30}$ racetrack fluxgate sens., sensitivity & noise 120771
CoFeSiB ring shaped amorph. wires, GMI, mag. sens. 75486
a-$Co_{68.25}Fe_{4.5}Si_{12.25}B_{15}$ wires/ribbons, GMI 81813
$Co_{71.3}Fe_{3.7}Si_{15}B_{10}$ amorph. wire based sensitive CT 75478
$Co_{68.5}Mn_{6.5}Si_{10}B_{15}$ amorph. microwire magnetoelastic GMI sens. 75480
a-CoSiB magnetostrictive wire, hair-type air-flow sens. element *(Japanese)* 110046
CoZrTa mag. film HF and low resist. integrated inductors with 3D struct. 125738
$Dy_{20}Fe_{80-y}$-Co_y amorph. thin films, mag. and conversion electron Mossbauer spectra 127294
$(Fe,Ni)_{70}Zr_{10}B_{20}$ amorph. alloy powders, mech. alloying, mag./thermodyn. props. 81817
Fe-Al-Ga-P-C-B-Si glassy alloy powders, consolidation, mag. props. *(Japanese)* 81797
Fe-B-Si alloys, mag. props., Al substitution effect 104493
Fe-Co-Si-B metallic glass, induced anisotropy, magnetoelastic props. 104490
Fe-Cr-Si-B alloys, rapid solidif. by melt spinning, mag. props. 79421
$Fe_{70}B_{15}Si_{15}$/SiO_2-based magneto-SAW microdevice, design, fab. 70458
FeCoB co-sputtered films, high moment soft mag. materials, coercivity, saturation induction 127293
$Fe_{64}Co_{21}B_{15}$ soft amorph. ribbons, stress-depend. hysteresis, model 127287
FeCoCrSiB, amorph., GMI strip/coil sens. 75482

amorphous magnetic materials continued
$Fe_{62.5}Co_6Ni_7Zr_6CuNb_2B_{15}$ amorph. ribbons, nanocrystn., sens. appl. 70493
$Fe_{62.5}Co_7Ni_{7.5}Zr_6CuNb_2B_{15}$, magnetoelastic resonators, vib. detect. 75484
FeCoSiB amorph. wire mag. field sens. design, sig. proc. cct. *(Chinese)* 86481
FeCoSiB magnetostrictive film pattern strain sens., anisotropy control 120779
$Fe_{77.5}Si_{7.5}B_{15}$ amorph. wire, magnetostrictive delay line, force meas. 70564
$Fe_{77.5}Si_{7.5}B_{15}$ glass covered amorph. wire, sound vel. 104489
$Fe_{84}Zr_7B_8Cu_1$ ribbons, effect of annealing on mag. props./magneto-impedance response 81816
Gd_xCo_{1-x}/$Gd_xCo_{1-x'}$ amorph. bilayers, interlayer exch. coupling, MOKE 127342
$Nd_{50}Fe_{40}Al_{10}$ amorph. alloys, high-coercivity, mag. and structural props. 104487
$Nd_xFe_{85-x}Co_8VB_6$ exchange-spring magnet ribbons, spark plasma sintering 127315
Ni-W thin films, perp. mag. anisotropy, microstruct. 81898
Pr-Fe-Co-Nb-B syst. exchange spring magnets, mag. props. *(Japanese)* 127329
$Sm_2Fe_{17}N_{2.3}$, PM, prod., nanocrystalline 116479
a-TbFeCo film, perp. recording media, magnetis. reversal *(Japanese)* 70487
amorphous semiconductors
see also chalcogenide glasses; insulators
C:H, rf plasma deposition using methane, transmittance/reflectance spectrometry 103065
catalytic CVD, conf., Kanazawa, Japan (Nov. 2000) 124220
diamond amorph. films, field electron emission, threshold field 69399
a-diamond thin films, tensile prop., MEMS, sens. 127097
diamond-like C coating DC-RPECVD on OPC drum, DC power depend. anal., laser printer appls. 68225
electronic stopping in Si, amorph./crystn., comprehensive model 115288
high-resoln. AMLCD made with a-Si:H TFTs having Al-gate 97746
IEEE PV specialists conf., Anchorage, AK, USA (Sept. 2000) 89575
interface struct./diamond coatings/appl. 123811
MB-TTPA light sensitive amorph. materials, PV props. 116909
microbolometer, 320×240, uncooled IRFPA develop., a-Si 109646
MNTDATA light sensitive amorph. materials, PV props. 116909
PANI-methoxyaniline))/μc-Si:H-based PV diodes, characts. 116962
PECVD films for low-temp. poly-Si TFT-LCD 86813
polysilicon TFT data drivers for SVGA TFT-LCD panel 79642
Powersphere Power System demons. station 111360
radioisotope batts. for long-life low-power appls. 99893
satellite patch antenna array/a-Si:H solar cells combination 72661
Si:H p-i-n diode params., trap cross-sect., simul. and param. extract. 70008
Si:H pin diodes, electron irrad., dark-photoconductivities and PL *(Chinese)* 115840
Si:H TFTs, plasma CVD fab. at 150°C on polyimide foil, DC-gate-bias stressing 103824
Si:H thin films, light-induced annealing effects, positron beam annihilation/FTIR spectra 80977
Si large-area MEMS fab., thick SU-8 photoresist, X-ray image sens. array 97375
Si p-i-n diode/organic LED image sens. and display device 97733
Si TFT LCD of SXGA class, universal controller, interpolation algm. 97730
smart thin-film flow sens., respiratory monitoring appl. 98146
topol. disordered systs., generalized effective-medium approx. for hopping transport 115330
uncooled IR microbolometer arrays for Earth rem. sens. 109552
Al/a-Si:H,Er/Si/Al heterostruct., high-intens. electroluminesc. 116910
a-$Al_xGa_{1-x}As$:H films, Hall mobility/carrier conc. expts. 80757
a-AlN thin-film phosphors with Cu, Mn, or Cr, vis. emission 104914
Alq_3 amorph. films, nondispersive electron transport 126089
a-Alq_3, interface-limited injection meas. and modelling 115436
Au/C:H,B/n-Si heterojunction solar cells, PV props. 134383
Au/Ge bilayer films, fractal form., thickness ratio/annealing depend. 91858
Au/SiO_2/amorph. Si/SiO_2 superlattice/p-Si LEDs, electroluminesc. 71585
B_4C films, PLD, comp./bonding 90470
a-BN_x films, opt. absorpt., elec. cond. 69554
C, amorph. & nanostructured, conf., Boston, USA (Nov/Dec 1999) 67389
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
a-C film, electron field emission, resist. effect 80566
ta-C films, FCVA deposition, ESR and Raman spectra charactn. 68382
ta-C films, electron field emission, surface morph. effect 102898
ta-C films, ion-assisted pulsed magnetron sputtering deposition 79214
a-C films, kerosene vap. pyrolysis, field emission 80568
C magnetron sputtered thin films, microstruct. and effect on cond. 69560
C_{60} thin film solar cells, B and P ion implant. 112905
ta-C:F ion beam deposited films growth/props. 68383
a-C:H, Fomblin Z lubricant films, TDS 104531
a-C:H PECVD films, low-energy N ion bombard., surf. modif. 92056
a-C:H, diamond-like C layers depos. by PACVD, 1D fluid model 90377
a-C:H films and assoc. heterostruct., artificial pot. relief 103121
a-C:H films, current-induced conditioning, field emission 80567
a-C:H films, saddle-field glow discharge deposition and props. 68381
a-C:H thin films, field electron emission 102909
a-C:H,F films, PECVD, F incorporation 68261
a-C:H,N films, PECVD prep., N incorporation and elec. props. 126082
a-C:H,N films, RF PECVD, spectrosc. props. 68286
a-C:H,N films, low-temp. annealing effect, field emission 80569
a-C/a-C:H multilayers on Si, photodiode effects, EL obs. 82352
a-C/n-Si sputtered heterojunctions, charge carrier response time 126113
n-C/p-C jn. solar cell, p-Si substr. 112906
C_{60}/a-C superlattice struct. solar cell, nitrogen doping effects 112889
CN_x thin films, elec. and structural props. 69558
a-CN_x:H films, PECVD, effects of CF_4 addit. on growth 68262
$CoSi_2$/Si(100) films, SPE growth, Co/a-Si/Ti/Si multilayer react. 114413
a-$FeSi_x$, prep., struct. opt. props. 103068
a-GaAs, implant.-induced struct., EXAFS 80760
GaAs/Ge MQW, epitaxial matching, defects 80862
$Ga_{1-x}C_x$ epitaxial films, growth, struct. characterisation 124817
GaN film, amorphization by ion implant. 81009
GaN/Si(111) films, RF sputter deposition, struct. and charactn. 69536
a-Ge, ion implant.-induced disorder, EXAFS/Raman spectr. obs. 80758
a-Ge on GaAs, epitaxial pulsed laser crystn. 101432
$Ge_2Sb_{2.3}Te_5$ alloy rewritable phase-change opt. disk amorph. film thickness/refr. index determ. by ellipsometric meas. 127580
ITO/a-Si:H/Pd based posn. sensitive detector, carrier transport 131929
a-InP, implant.-induced struct., EXAFS 80760
In_2Se_3 amorph. films, AC cond., dielec. props. 91693
$(K_2O$-$Li_2O)$-Fe_2O_3-P_2O_5 glass, elec. cond. eval., Raman spectra obs. 69561
Ni/SiC interface reacts., interdiffusion pathway, XRD, TEM, EDS 115491
SOI form., Ni metal induced lateral crystn., TFT appl. 125052
SOI struct., multilayer thermal via incorporation and charactn. 115443

morphous semiconductors continued
a-Se based diagnostic imagers, sig. form. quantitat. anal. 76512
a-Se based diagnostic/portal imagers, X-ray interacts. 87701
a-Se based direct-detect. act. matrix flat panel imager, DQE 98526
a-Se film, flat panel X-ray image sens. *(Japanese)* 122146
a-Se film, flat-panel X-ray detector *(Japanese)* 76532
a-Se films, thermally stimulated discharge, PVF interface barrier effects 126079
a-Si LPCVD films, excimer-laser crystalliz., cryst. islands form. 115333
-aSi PV modules, grid connected syst., perform., ageing effect 112998
a-Si PV modules, stabilisation/perform. charact. 112978
a-Si PV-powered DC floating pump syst., irrigation water 113180
Si, Sofradir IR detector products, past/future 109551
Si TFT act. pixel sens., flat panel imagers, readout cct. 131984
a-Si, TFT array, digital chest radiography syst. 98504
a-Si TFT, tail and deep states, anal. model 126732
a-Si TFT, two-step exposure technol., reduced-mask proc. 81265
a-Si TFT-LCD pixel, EO simul. 75784
Si TFTs with planarized gate insulators, large-area TFT-LCD appl. 92368
a-Si X-ray imager, large-area, perform., NDE appl. 120895
a-Si alloy lightweight triple-jn. solar cells, space qualification testing 112948
a-Si and μc-Si films deposition, Hot Wire CVD, solar cells 112881
Si, bend strength, fracture toughness, MEMS appl. 104168
Si, cryst. defect stabil., amorphization, mol.-dyn. simul. 91595
Si, deep amorph. wells, crystn. by ion implant. 79415
a-Si film crystn., long-pulse excimer laser annealing 103235
a-Si film/Cu selective metallization, electrochem. contact displacement 92053
a-Si films, DC magnetron sputtering, growth front roughness 114257
Si films, catalytic CVD, NEDO project, review 124939
a-Si films, elec. field assisted metal-induced lateral crystn. 126081
a-Si films, ultra-large lateral grain growth by double laser recrystn. 114398
Si films/amorph., Ni induced lateral crystn., elec. field effects 125053
a-Si flat-panel detector, digital chest radiography, imaging 98505
a-Si, ion beam induced epitaxial crystn., point defects role 80759
Si, ion implant., dopant diffusion, amorphization, atomistic modelling 91964
a-Si, large area X-ray image sens. arrays, MEMS fab. technol. 110426
Si, mechanism of metal induced lateral crystn. *(Chinese)* 114238
a-Si microbolometer based IR camera for unattended ground sens. 75632
Si, microcryst., amorph.-cryst. phase transit. during growth of thin films 114352
a-Si microdot detectors, sq.-shaped electrodes 120978
Si nanoparticles, quantum confine., Anderson localization of carriers 104911
a-Si p-i-n solar cells and modules, SnO_2/p and ZnO/p contact resist. and jn. props. charact. 100196
a-Si p-i-n solar cells efficiency enhancement using LP-CVD ZnO 100200
a-Si, photonic-grade, hot-wire deposition 124955
a-Si pin solar cells, ZnO front electrode, PECVD grown 112893
a-Si pin thin film solar cells, texture-etched ZnO substrs. upscaling 112861
a-Si pn jns., tunnelling generation-recomb. currents 91759
Si polycryst. layers, epitaxial realignment, BiCMOS technol. 124888
a-Si solar cells on PECVD natively textured ZnO 112860
a-Si solar cells status made near microcrystallinity onset 100199
a-Si solar cells, temp. coeffs., light degrad. & recovery 134400
a-Si solar cells, temp. depend. of PV params. 100192
a-Si structural improvement using metal-induced crystn. 69490
Si technol., digital cct. stabil. 114859
a-Si thin film PV modules, kWh/kWp perform. prediction 112991
a-Si thin film PV products develop. and mfg. 100044
a-Si thin film solar cells, ZnO texture-etched substrs. prep. 100203
a-Si thin film solar cells for space power appls. 112869
Si thin film solar cells, perform. meas., sweep rate effects 100133
a-Si thin film space power solar cells develop. for PowerSphere concept 112870
Si thin films, thermo-catalytic CVD, PV appls. 124979
a-Si thin-film solar cells, high-rate depos. by HWCVD 124957
Si, vert. furnace in situ spectrosc. ellipsometry, CVD appl. 67684
Si:As, 2D amorphized, corner defect microstruct., stress effects 126084
Si:As(Ge), ion implant., amorphization 115332
Si:B, laser thermal processed, annealing, B diffusion 115480
Si:B, ultra low energy implant., decelerator module 115544
Si:B, ultra-low energy implant., damage, MEIS obs. 115511
a-Si:Ge films, lateral solid phase recrystn. by RTA 69778
Si:Ge layers, preamorphous implants in-line charactn. 115597
Si:Ge,B(P)(As) implanted wafers, laser thermal annealing, Boxer cross meas. 115488
a-Si:H, Al-induced crystn. at 150°C 90537
a-Si:H HV TFT, SCL currents 70163
a-Si:H MSM analogue memory switching device 115818
a-Si:H, PECVD, high rate growth, effect of substr. temp. on plasma param. 90435
Si:H, PECVD, microcrystalline to amorph. growth transit., thin film solar cells appl. 101358
a-Si:H PV modules, residential expansion, competitive elec. markets 77795
a-Si:H, RF CVD, laser melting, polycryst. films, PV props. 91607
a-Si:H RF PECVD, microstructural evol., solar cell perform. 100193
a-Si:H Schottky barrier struct. based posn.-sensitive detectors 109582
a-Si:H TFT, AIM-SPICE model, param. extraction 115887
Si:H TFT pixel electrode ccts. for act.-matrix OLED 86867
a-Si:H TFT reflective stacked crossed guest-host LCD 97744
a-Si:H, TFT technol. for polyimide substrs. 103826
a-Si:H TFTs, ESD damage threshold, time-volt. trade-off 126817
a-Si:H TFTs, LV/HV, modified inverted-staggered struct., wet etch fab. proc. 70134
a-Si:H TFTs, leakage charact., front hole channel effect 70135
Si:H, amorph. and microcryst., hot wire CVD, review in USA 124940
a-Si:H based pin solar cells, interfacial opt. spectra 100195
a-Si:H based tritium-powered betavoltaic cells 113031
Si:H, colour filter fab., thin-film layers absorpt./transmittance 97597
a-Si:H continuous-sens. imagers, crosstalk, lateral cond. effects 76558
a-Si:H, deep defect dens., amplit. modulating capacitance tech. meas. *(Korean)* 69555
a-Si:H deposition infl. by catalytic CVD on transparent cond. oxides 124956
a-Si:H, femtosecond transm., exponential band tail pumping 91692
a-Si:H films, Cat-CVD prep., struct. and photo-induced vol. changes 126086
a-Si:H films, H exposure, dangling bond creation and free H diffusion, in situ ESR obs. 91691
a-Si:H films, HWCVD, PECVD, growth kinetics, at. H infl. 124951
a-Si:H films, PECVD, improved stabil. 80761
μc-Si:H films, PECVD, struct./elec. props. 103069
a-Si:H films, UV/white/sub-gap light soaking effects 104902
Si:H films, amorph./microcryst., hot-wire CVD, review in Europe 124941
a-Si:H films, catalytic CVD, solar cell/TFT appls. 124950
a-Si:H films, catalytic CVD, solar-cell materials appl. 124954

amorphous semiconductors continued
μc-Si:H films, catalytic CVD, struct. props. 126087
μc-Si:H films, catalytic CVD, struct./elec./opt. props. 124965
a-Si:H films, direct patterning by NSOM 103698
a-Si:H films growth, thermocatalytic CVD, nucleation, coalescence 124952
a-Si:H films, hot wire CVD, TFT/solar cell appl. 124983
μc-Si:H films, hot-wire CVD, RF-plasma assistance 124968
a-Si:H films, hot-wire CVD, gaseous radicals, decomp. 124944
a-Si:H films, hot-wire CVD, phys./chem. 124942
a-Si:H films, hot-wire CVD scale-up, solar cell appls. 124946
μc-Si:H films, hot-wire CVD, struct. 124961
a-Si:H films on SiO_2 passivated steel substrs., crystn., polysilicon TFT 103237
a-Si:H films, plasma deposition, SiH_3 contrib., phys. props. 68359
a-Si:H hot wire thin films, SiH_4 flow, H_2 dilution 103073
a-Si:H hot-wire CVD films, electronic states, light-induced metastability 127907
a-Si:H, hot-wire CVD, saturated defect densities 68267
a/μc-Si:H hot-wire CVD, thin-film MEMS appl. 124949
a-Si:H hot-wire or PECVD films, elastic props. anal. 126085
a-Si:H, image sens. array, large-area, two-color 97382
a-Si:H, ion beam synthesis of low resist. contacts 69710
a-Si:H large-area thin-film solar cells, textured ZnO:Ga film props. 100202
a/μcSi:H laser-scanned p-i-n photodiode for image detect. 109658
a-Si:H, light-induced struct. changes, weak bonds, dangling bonds role 93325
a-Si:H multilayer solar cells, degrad./annealing effects 112899
a-Si:H n-channel thin film MOSFET, threshold volt., saturation region 81313
a-Si:H n-i-p solar cells, all-hot-wire CVD 100194
a-Si:H n-i-p solar cells, hot-wire CVD 134407
Si:H nanocryst. TFT, catalytic CVD, stabil. 126821
Si:H nanostructured films, cryst. size, temp. meas., Raman spectra 126083
a-Si:H, occupation of dangling-bond states and photocond., band tails effect 93323
a-Si:H p-i-n imager, spatial resoln. 109674
a-Si:H p-i-n jn. solar cell, const. photocurrent method, simul. 112902
a-Si:H p-i-n solar cell charact., correl. with p/i interface 112904
Si:H pass. pixel sens. for med. imaging, VHDL-AMS modeling/simul. 109719
a-Si:H, photo-induced structural change, photocond. degrad. *(Japanese)* 82307
a-Si:H photocond. PECVD layers, light-doped B infl. *(Chinese)* 82301
a-Si:H photodiode, laminar-flow photo-CVD, light soaking 116957
a-Si:H, photoresist ashing using CF_4 gas plasma, NH_3 gas addit. 103505
a-Si:H pin diodes, ideality factor spatial effects 92285
a-Si:H pin solar cell device stabil. improvement 123809
a-Si:H plasma-assisted microcrystallization, PV appls., low temp. nanoscopic kinetics 82309
a-Si:H solar cell dark I-V charact., electron irrad. effects 112871
a-Si:H solar cell thin films, light-induced degrad. props. 112884
a-Si:H solar cells, UHV PECVD syst. prep. 78169
a-Si:H solar cells, charged dangling bonds, short cct. current effect 103072
a-Si:H solar cells, conductive oxide/p^+/i jn. improvement 123805
a-Si:H solar cells, current instabil. after light exposure 100032
a-Si:H solar cells, disordered struct., material props. 100041
a-Si:H solar cells, limiting carrier effect 89277
a-Si:H solar cells, low temp. PECVD 100036
a-Si:H solar cells, quantum efficiency/opt. losses expts. 112886
a-Si:H solar cells using pulsed plasma CVD tech. 112900
a-Si:H sputtered thin-film posn. sensitive detectors fabr. and charactn. 97235
a-Si:H struct., trap-assisted tunnelling, temp. studies 69657
a-Si:H, thermo-optic coeffs. at 1.55μm in practical optoelectronic device operation temp. range 91690
a-Si:H thin film imaging technol. on glass/plastic substrs. 75629
a-Si:H thin film nip solar cells, VHF-PECVD, photo-induced degrad. 112890
a-Si:H thin film solar cells, periodic light coupler gratings 78173
a-Si:H thin films, VHF-PECVD, U shaped loop antenna electrode 103074
a-Si:H thin films, field electron emission 102909
a-Si:H thin films, hollow cathode plasma-jet reactive sputtering 101181
Si:H thin films, hot-wire CVD, solar cell appls. 124980
a-Si:H thin films on glass textured by embossing, light trapping and refl. control 100156
a-Si:H thin films, plasma CVD, elec./opt. props. *(Japanese)* 90359
a-Si:H thin-film UV detectors, diode struct. 86567
a-Si:H thin-film space power solar cells 112874
a-Si:H/NLC interf. gratings, reversible recording 117545
a-Si:H/SiN_x TFT, hot-wire CVD, device charact. 124985
a-Si:H/SiO_2 gate pH-ISFET, surface pot. temp. depend. anal. 92338
α-Si:H/ZnO solar cells on metallized polymer substrs., struct. 78166
a-Si:H/a-Si:H tandem solar cells, hot-wire CVD fab. 112895
a-Si:H/a-SiGe:H/a-SiGe:H triple-jn. solar cells, 70 MHz PECVD 112883
a-Si:H/c-Si heterojunction, CF_4/O_2 dry etching, solar cells 92039
a-Si:H/c-Si heterojunction solar cells, emitter/interface optim. 112898
a-Si:H/c-Si solar cells, sputter deposited, PV water electrolysis, H_2 prod. 100029
a-Si:H/μc-Si:H tandem solar cells, laser patterning 112980
a-Si:H/poly-Si stacked solar cell submodule 112974
a-Si:H-based PIN solar cell, rough back/front transparent conductive oxide layers, simul. 78176
Si:H-based stereoscopic X-ray imaging syst. for full-field digital mammography 132813
n^+(a-Si:H)-i(a-$Si_{1-x}Ge_x$:H)-n^+(a-Si:H)-struct., varyband layer, C-V charactn. 103105
a-Si:H,(B)(P) nanocryst./amorph. films, catalytic CVD, doping 124953
a-Si:H,(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
Si:H,B(P), films, amorph./μc, hot-wire CVD, gas phase doping 126300
a-Si:H,Er, PECVD films, electronic props. 69556
a-Si:H,Er/c-Si PECVD struct., effect of Er on electronic traps 91743
μc-Si:H,P films, hot-wire CVD, struct./elec./opt. props. 124966
a-Si:H,P p-i-n solar cells, spectral response simul. 134382
a-Si:H,P/SiN_x TFT, catalytic CVD prep. 124984
a-Si:H,P(B) films, DC magnetron sputtering, opt. props. 114253
Si:Ni polycryst. films on glass, Ni induced selective nucleation, SPE 125051
Si:P nanocryst. films, low temp. transport mechanisms *(Chinese)* 115297
a-Si/Ge multilayers, interdiffusion coeff. nonlin. 69689
a-Si/Si microcryst. superlattice, isotropy/transport props. control 126138
a-Si/SiO_2 superlattices, sputter deposition, opt. props. *(Chinese)* 114241
a-Si/a-SiGe tandem jn. thin-film solar cells, mfg. perspective 112975
a-Si/a-SiGe tandem solar cells, RF plasma CVD deposited 100198
a-Si/a-SiGe/a-SiGe triple-jn. plastic film substr. solar cells, fab. technol. 100204
a-Si/c-Si heterojunction solar cells, dark I-V-T meas. 91760
a-Si/p-SiO:H/n-μc-Si:H solar cells conversion efficiency improvement 112880
a-Si/poly-Si based stacked solar cells, efficiency improvement 100205
a-Si-Ge:H alloys, global mechanism for light-induced degrad. 69553
a-Si-alloy/c-Si stacked solar cells, design, technol., perform. eval. 112992

amorphous semiconductors continued
Si(001) amorph./cryst. interface, SPE growth, MD simul., Reply to Comment 79398
a-SiC:H ECR-PECVD films, microstruct. and opt. props. 68265
a-SiC:H alloy photolumin. wide-bandgap films deposited by Cat-CVD using acetylene 124971
a-SiC:H, femtosecond transm., exponential band tail pumping 91692
a-SiC:H film plasma CVD by dissociating source gases separately, opt. props. *(Japanese)* 90361
a-SiC:H, ion beam synthesis of low resist. contacts 69710
a-SiC:H, thermo-optic coeffs. at 1.55μm in practical optoelectronic device operation temp. range 91690
a-SiC:H/a-Si:H/a-SiN:H, multilayer photodiodes on Si, photocurrent multiplication 116945
a-$Si_{0.35}C_{0.65}$:H, proton irrad. thermally annealed, PL props. 93338
a-$Si_{1-x}C_x$:H film, ECR-CVD, struct./opt. props., RF bias voltage effect 80753
a-$Si_{1-x}C_x$:H films, PECVD, microstruct., thermal stabil. *(Chinese)* 103075
a-$Si_{1-x}C_x$:H films, plasma CVD, deposition rate/film struct. *(Japanese)* 79276
a-$Si_{1-x}C_x$:H films, prep. by hot-wire CVD and props. 124970
a-$Si_{1-x}C_x$:H thin films, ECR-CVD deposited, blue emission 71528
a-$Si_{1-x}C_x$:H thin films, quantitat. anal., vibr. spectra 69557
a-$Si_{1-x}C_x$:H,Ti, films, sputtered, XPS/UPS charactn. 103063
a-Si_xC_y:H films, three-electrode reactor fab., amorph. semicond./amorph. insulator 124928
a-SiC_x:H plasma CVD films, surface passiv. of p-Si 126360
a-SiGe films, low temp. cond., ESR, opt. absorpt. 115331
SiGe, nucleation, comp. influence, LPCVD growth, free energy 114366
a-SiGe solar cells status made near microcrystallinity onset 100199
a-SiGe:H component solar cell band gap grading width, perform. depend. 112888
a-SiGe:H, femtosecond transm., exponential band tail pumping 91692
a-SiGe:H films, PECVD, props. anal. 103067
a-SiGe:H films, UHV PECVD deposition params. and PV quality correl. 101385
a-$Si_{1-x}Ge_x$:H pin X-ray detector 110428
SiGe/Si layers, amorph., metastable cryst. state, CW laser irrad. 115335
a-SiH TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
a-SiN_x:H/a-Si:H MIS capacitors, C-V charact. *(Korean)* 80940
a-SiN_xH_y thin-film diodes, hot-electron degrad., LCD appl. 70011
SnO_2 perfectly amorph. ultrathin ALE layers, gas-sens. appls., conductometric sens. 97516
a-V_2O_5-P_2O_5:CuO with metallic contacts, elec. props. 126250
V_2O_5-P_2O_5-TeO_2 glasses, switching, DC cond. 115334
WO_3-B_2O_3 glass, elec. cond., O_2 sens. props. 97457
WO_3-Sb_2O_3-TeO_2 glass, elec. cond., O_2 sens. props. 97457
ZnO:Al/a-pin Si_xC_{1-x}:H/Al optimized laser scanned photodiode imaging transducer 86666
Zn(Se,OH) buffer layer as heterojunction partners on Cu(In,Ga)$(S,Se)_2$ thin film solar cells 100189

amorphous state
see also amorphous magnetic materials; amorphous semiconductors; vitreous state
Al alloy based migration resistant metallization for SAW sens. 116225
5,5′-bis(dimesitylboryl)-2,2′-bithiophene, nonlin. optics, Z-scan meas. 71966
C:H film in MIS struct., permitt. as fn. of thermal annealing 91895
diamond, polycryst. materials struct./props., simul., interfacial perspective 102964
field emission from C films, struct./deposition effects 102907
magnetooptic films, micropatterned ridge fab., selected-area sputter epitaxy 71388
organic EL devices, amorph. mol. material 104980
organic LED, 2,5-bis(2-{4-[bis(4-methylphenyl)amino]phenyl}thiophen-5-yl) amorph. mol. material 105009
Ag-In-Sb-Te materials, phase change opt. recording 71224
Al_2O_3:Er(Ti)(Cr) for act. integrated opt. appls. 127802
a-As_2S_3 lin. holographic recording 83014
$BaSrTiO_3$ thin films for tunable microwave appls., microstructural archit. 91174
a-$Bi_4Ti_3O_{12}$, crystn. proc., dielec. props. effects 127192
C amorph. underlayers for CoCrPtTa and Co/Pd perp. mag. recording media 116400
C antireflective coating over photoresist, etch selectivity, O_2/CHF_3/Ar gas chem. 103308
C crossing multiwalled nanotubes, form. of connection in electron beam 101535
a-C film, ECR plasma sputtering prep., struct., tribology 79409
a-C tetrahedral films, as-deposited and N implanted, electron field emission 125959
a-C tetrahedral films prepared on mag. hard disks, deposition and props. 104517
a-C:F PECVD film charact., damascene interconnection 69954
a-C:F films, ICPCVD, struct./dielec. props. 114333
a-C:F films, ion beam deposition, charactn. 124845
a-C:H DLC film on Al_2O_3-TiC sliders, tribo-chem. wear 92809
a-C:H DLC films, deposition methods for GMR heads 79293
a-C:H, film, PECVD, vac. electron emission with low turn-on elec. field 91533
a-C:H films, RT deposition from laser-assisted photolytic CVD at 248 nm 114336
a-C:H/ZnSe/BaF_2/Y_2O_3 DLC IR antirefl. multilayered interf. coatings 116883
a-C:H,N film, electronic struct., field emission 102906
a-C:H,Si,Cr(Mo) DLC films, plasma CVD, thermostable resistor appl. 79292
a-C:M film, (M=Co,Al,Ti), filtered cathodic arc deposition, field emission 115245
C/a-MnO_2 electrochem. pseudocapacitor electrode, kinetic reversibility 91425
a-C/diamond MEMS technol. 81563
a-C-Co composite films on glass, heat treated, field emission 69410
a-CN_x film, ECR plasma sputtering prep., struct., tribology 79409
a-CN_x films, N-rich, deposition, charactn. and appls. 90411
a-CN_x films prep. by layer-by-layer method, photocond. and photolum. 71516
a-$C_{1-x}Si_x$:H alloys prep. by high plasma dens. source 68264
InGaN films, high In content, PL/structural props. comparison 127926
a-Li_xWO_3 films, polaron absorpt. obs. 93312
a-Mn-Ta alloys, sputtered, sputtered in H_2SO_4 solns. 90260
MoO_3 amorph. films, thermal coloration, metal oxid. state influence 104891
Ni-Zr, amorph., catalyst, global CO_2 recycling 76925
PLZT films crystallized from amorph. state by two-step postdeposition annealing, props. 127169
$PbTiO_3$ thin film, low temp. crystn. by excimer laser irrad., XRD, SEM, EDX 101392
$PbZr_{0.53}Ti_{0.47}O_3$ thin films, densification/evol. of stress effects 101427
RuO_2/Lipon/RuO_2/Pt thin film supercapacitor, electrochem. charactn. 91431
a-$RuO_2{\cdot}xH_2O/WO_3{\cdot}xH_2O(Na_{0.37}WO_3{\cdot}xH_2O)$ composites for electrochem. capacitors 100231

amorphous state continued
Si SPE, mol. dyn. simul., growth mechanism, defect form. 90547
a-Si oxide films, Al doped, RT vis. EL 82366
Si, polycryst. materials struct./props., simul., interfacial perspective 102964
Si/C layer syst., SiC ion beam induced solid state react. 79404
Si/ta-C/Al(TiN) structs., barrier temp. depend., C-V charact. 80937
a-Si_xC_y:H films, three-electrode reactor fab., amorph. semicond./amorph. insulator 124928
a-Si_xN_y:H, rem. PECVD film, H dissoc. reacts. 126272
a-SiN_x:H microcavities, DBR fab. 93331
a-Si_3N_4/SiON PECVD thin films, IR spectrosc. anal. 68296
a-SiO_2, film, PECVD, props. thickness depend. 101365
a-SiO_2 surf., hydrophilic wafer bonding modeling 81056
a-SiO_2 thin films, increased dielec. permitt. 92599
SiO_2 thin-film, defect-induced dielec. loss, Coulomb glass 81631
a-SiO-SnO powders synthesized by mech. milling, anode props. 99912
SiP-PMA/PWA hybrid gels, amorph. phosphate-Nafion hybrids, inorganic/organic composites, fast proton conductors 125095
a-Ta-nanocryst. RuO_x diffusion barrier for lower electrode of high dens. memory devices 69958
Ta_2O_5 amorph. thin film, HF dielec. props. 116122
Ta_2O_5 thin-film, defect-induced dielec. loss, Coulomb glass 81631
a-$TaSi_xN_y$ films, reactively sputtered, diffusion barrier layer against Cu 80913
a-V_2O_5:Pt cathode films for thin film microbatteries, microstruct./electrochem. props. 134345
WO_3 amorph. films, thermal coloration, metal oxid. state influence 104891
a-WO_3 films, electrocoloration curve anal. 104607
ZnO thin-film, defect-induced dielec. loss, Coulomb glass 81631
Zr-Sn-Ti oxynitride thin films, enhanced dielec. props. 70379
ZrO_2 deposited directly on Si as alternative gate dielec. material 115464
ZrO_xN_y prep. by NH_3 annealing of ZrO_2, elec. charact./thermal stabil. 91891
a-iO_2 films, VUV-irrad., Si nanocrystals precip., Si-Si bonds form. 69997

amorphous state structure *see noncrystalline structure*

amplification
see also acoustic wave amplification; amplifiers
900 MHz handset diversity antenna, head/hand/shoulder effects, effective gain charact., perform. anal. 94160
adaptive sig. transduction networks, robust amplif. *(French)* 118836
APD, large-area, planar-constr. design 116949
CDMA downlink multicarrier with space diversity, perform. 74747
current-to-voltage converter and buffer cct., parasitic capacitance 114906
DS-CDMA forward link imperfect orthogonal MUX, nonlin. amplif. 108947
dye laser intens. amplif. by injection seeding *(Japanese)* 128123
EM oscill. generation/amplif. by tubular electron beam in crossed radial electrostatic/axial mag. fields 105683
eye movements, impulse-like, effects of digital filtering on gain and latency params. 87366
gaseous photomultipliers, posn. sensitive 132341
gyrotropic cubic crysts., DFB lasers, oscill. conditions 82588
high-order harmonics amplif., in short laser pulse, by stimulated interact. 105510
incoherent triangular holography, resoln. anal. 128564
intens. modulated systs. using opt. amps., capacity considerations 109046
large area APD with different struct., scintillation detect. 121583
LINC transmitter, gain/phase imbalance minimization tech. 96479
microwave multistage act. freq. multiplier 91127
motion perception, sensitive calib./meas. procedures based on amplif. principle 98375
multianode photomultiplier tube for use with scintillating fibers, props. 80621
nonparaxial laser beams, small-scale self-focusing, lin. stabil. theory *(Chinese)* 105488
photomultiplier tubes, hemispherical, opt. props., MAGIC air Cherenkov telescope 125980
sealed gas UV-photon detector with multi-gas electron multiplier 121582
sealed gas UV-photon detector with multi-GEM multiplier 110341
two-beam coupling two-stage opt. amplif., temp. depend. *(Chinese)* 117420
two-port under test, noise fig. meas. uncertainty due to low gain 75851
WDM opt. networks using erbium doped fiber amp. 96837
WDM opt. sig. amplif. unit, design and charact. *(Korean)* 96847
GaAs opt. biased MESFET, anal. model, unilateral power gain 115963
GaAs-Al_xGa_{1-x}As photodiodes as photon counter 121585
InAlGaAs QW laser, low threshold current dens. design, k.p method 117278
InGaN MQW laser, differential gain charact. optim., tuning 117266
InGaN QW struct., high-perform. laser operation, band-states model 117265
Si:B,P planar-constr. APD 127945
ZnTe, DFG, opt. switching/amplif. 117482

amplification measurement *see gain measurement*

amplified spontaneous emission *see superradiance*

amplifiers
see also specific amplifier headings, e.g. "microwave amplifiers", "optical fibre amplifiers", "power amplifiers"
AB class low noise I-V integrated charge amp. *(Polish)* 90766
adaptive amps., computer simul. *(Russian)* 68618
all-pass act. filters with current differencing buffered amp. 102361
analog cct. internal noise calc./meas. for noise effects reduction 132150
ASIC, 16 channel, Si drift detector read out 121695
autozeroed, bandpass SS clocking 79595
bandwidth-compensated transimpedance amp. for multigigabit opt. receivers 101787
BJT small-sig. Darlington and cascode amps. 90768
BTeV Si pixel vertex detector beam test anal. 121651
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0.1 μm rule *(Japanese)* 68773
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
charge amp., design and implement. *(Chinese)* 68608
charge-transfer amp. for ADC appl., dyn. behavior anal. 90763
class-E amp. used as electronic ballast with dimming capability for PV appls., anal. 100313
class-E amp. with nonlin. capacitor, steady state anal. 68548
cluster feed syst. with hybrid low-level BFN 105979
CMOS current-mode exponential-control variable-gain amp. 90759
CMOS transconductance amp., harmonic distortion 114629
current differencing buffered amp., act. building block and appls. 91043
current mode filters, current differencing buffered amp., grounded capacitors 102362
Delta charge sensitive front-end amp. for Si detector readout 76138
DOM AMPL-8.3 amp. for gaseous wire detectors 87256
dual-mode front-end stage for solid state detector appl. 121721
ECG amp., combined driven right leg/guarding ccts., stabil. conditions 110591
extracellular recording, inexpensive high-perform. amp./electrode 87369

nplifiers continued
FEM amp. with groove waveguide, num. anal. *(Chinese)* 90749
FESA chip for X-ray/gamma ray detectors 121696
fibre, opt. soliton propag., nonlin. damping, saturable amps. 104657
fully integrated HEMT based charge amp., design/expt. 121710
GREAT spectrometer triggerless total data readout design anal. 121734
HERA-B high-p_T trigger design anal. 121737
high-rate high-resol. gamma spectrometry, adaptive digital filter 121859
HTSC SQUID amp., PD meas. 75813
IF amp. with distributed selectivity, synthesis 101804
integrated HEMT-based charge amp. design and expt. 110398
intens. modulated radiation therapy, liq. ionization chambers *(German)* 111099
LEDA BPM analog front-end electronics, design 87132
lin. amp., coherent states superpositions 68622
LNA in mixed-sig. cct. environ., effects of IC packaging on perform. 68948
low-power SC cct. topol. 101782
mag. sens. noise meas., DAQ syst. 127402
microwire detector perform., review 76031
MOS IC amp. design teaching to undergraduates 104006
multifunctional DMM, nonelectrical quantities meas. *(Polish)* 121066
multistage amp. stabil., spurious sig. cancellation 101780
PM lin. motor, disturbance observer-based motion control, PWM modeling 77895
power syst. protection, sampling cct., dyn. working scope *(Chinese)* 133783
power syst. protection relay testing using variable compliance voltage 77612
RC oscillator with distributed params., self-oscills. anal. using piecewise-lin. approx. 101831
self-lin. ccts. involving PN jns. 101690
single-cryst. Si-resonator, on-chip readout amp., std. CMOS 127060
SNS jn., sig. amplif., hysteresis 79572
SQUID amp. and supercond. tunnel jn., X-ray detect. 71150
submicron CMOS technol., current mode sense amps. 68589
two-chip charge amp. for high stabil. X-ray spectrosc. systs. 114641
XPAD read-out pixel chip for X-ray counting 121711
Er^{3+}:$LiNbO_3$ waveguide amps., pumped, spectrosc. vars. assoc. with fab. proc. 105245
GaAs HEMT cryogenic LNA 68604
InP HEMT cryogenic LNA 68604
KrF laser amp., electron-beam-pumped, output charact., init. testing 71635
Nd:phosphate glass slab laser, pass. Q-switch, output charact. *(Chinese)* 105239
Si OEICs in CMOS/BiCMOS technols. for DVD systs. 82437
Si detectors, irrad. p^+-n-n^+ diodes, electron/hole sigs., temp. depend. 121463
XeCl oscillator-amp. laser syst., high contrast nanosecond pulse train generation 105130

amplitrons *see microwave amplifiers; microwave tubes*

amplitude estimation
acoustic echo canceller, short-time spectral amplit. estim. *(Japanese)* 95664
adaptive cancellation of selected harmonics from sig. 119053
AR multi-channel model, robust estim. using t-distrib. assumption 118959
Barkhausen noise robust estim., multi-features num. instrum. 114505
bistable meas. devices, noise tuning, neuro-fuzzy approach 120649
Capon spectral estimator, efficient implement. 118882
indoor multipath propag., stochastic model anal. 85766
indoor wireless, site-specific channel modelling accuracy 83334
ISAR imaging of maneuvering targets, param. estim. of multicomponent polynomial sigs. 75084
multipath channel param. determ. using wavelet decomp. 84813
myoelectric surface sigs. recorded during dyn. protocols, adaptive amplit. estim. 76270
paired transient proc., characts. estim., input action delay 75340
power amp. nonlin. estim., subsampled temporal data 114626
radiated emission source location accuracy, CISPR emission meas. syst. 105785
sigs., amplit./phase modulated, optimal estim. 73668
sparse deconvolution by means of GA 73603
spectral anal. of gapped data 107503
wideband receivers, compensation of freq.-selective I/Q imbalances 85518

amplitude limiting circuits *see limiters*

amplitude modulation
see also amplitude shift keying; pulse amplitude modulation; quadrature amplitude modulation
80 to 10 Gbit/s DEMUX using fiber cross-PM and opt. filtering 96869
act. mode-locked fiber laser, self-PM, time-domain ABCD matrix 93505
Al reflective layer on SiO_2 substr., complex-AM DOE 105610
AM-FM image segmentation approach 94634
AM-type mag. field sens. using transm. line impedance change *(Japanese)* 109477
awake/sleeping humans, AM following responses, 40/80 Hz modulation freqs. comparison 87357
bandpass nonlin. RF ccts., distortion, autocorrelation anal. 108967
β-wave AM, scaling behaviour rel. to alertness 87435
BiCMOS AM/FM car act. antenna with on-board batt. voltage regulator 94162
Boolean alg., holographic fields generation, second-order nonlin. interacts. 71455
campus fibre network, AM-VSB CATV/Internet access sigs. 120559
CATV long dist. analogue link, SBS counteraction 131745
chirped FBG strain sens., subcarrier phase detect. scheme 97287
class-E power amp., electronic tuning 101788
clutter suppression in radar by quasi-continuous complex sig. and proc. optim. 96962
color image watermarking, Gaussian pixel weighting marks in AM 118397
covert commun. using digital phase modem, syst. trade-offs 72724
DFE hybrid struct. for CAP-based DSL systs., perform. 95814
distributed base station amp., lin. optim. 101791
DRM syst., digital AM defn. and field-testing 75270
DS-SS commun., AM-FM jammers excision, instantaneous bandwidth use 96390
DWDM syst. wavelength stabilization tech. using dithering-induced AM cancellation 75056
DWDM systs., wavelength stabilization using dithering-induced AM cancellation 86097
Fabry-Perot semicond. laser, subharmonic sync. modelocking, suppressed AM 71890
fingerprint class. 73263
flattened opt. multicarrier generation, sinusoidal amplit.-phase hybrid modulation tech. 108104
flickermeter testing, calib. syst., digital logic & software control 109836
Gyrotron FU series, develop. and appls. 91551

amplitude modulation continued
hard disk head readout sig. AM, micro-waviness effect *(Japanese)* 92852
homog. elec. long line, AM sig. propag. 94078
homog. elec. long line excited by AM sig. with suppressed carrier, secondary params. 72403
hybrid AM/OFDM light ware syst., BER perform. *(Chinese)* 96301
hybrid CATV/DWDM syst., multimedia trunking 96777
inductance sens., AM meas. cct., precision improvement *(Chinese)* 109486
laser Doppler vibrometer-based mine detect., speckle noise immunity 77002
laser radiation noisy sig. proc. by FWM 128440
localized spatially-modulated medium, spatial solitons interact. 105570
long-period fiber grating Mach-Zehnder interferometer based AO amplit. modulator 127856
low power analogue-ROM based DDS with AM, 200 MHz 114895
low-noise wide-band amp. with inductive source 101795
MRI brain image segmentation using AM-FM model 110898
multi-wavelength fiber ring laser, tunable act. mode locking 71684
neonatal HRV quadratic phase couplings, stat. quantification *(English)* 87401
non-Nyquist sampling on AM wave sig. *(Chinese)* 73605
OFDM, coded modulation for noncoherent reception 106046
OFDM, peak-factor reduction by Reed-Muller channel coding, soft decision decoding algm. 106161
opt. fiber AM-CATV externally modulated transmitter, SBS suppression, PM *(Chinese)* 109072
opt. fiber AM-CATV externally modulated transmitter, composite triple beat distortion *(Chinese)* 109053
opt. fiber Bragg gratings, dispersion, opt. freq. domain charactn. 127634
polymer asymmetric Fabry-Perot film, external EO sampling 82215
radio sigs. demodulation, AO method 71445
react.-diffusion for oriented texture completion 73259
real sig. instantaneous freq., defn. 118805
recogn. of modulation type, neuro-classifier 106037
retransmission, refl. sig. and lateral spectrum components 108574
rot. axle ang. speed/posn. meas., pulse generator with num. count discriminator 75396
sampled AM enhanced analog transm. over opt. fiber 131452
sigs., amplit./phase modulated, optimal estim. 73668
solder droplet printing, high precision, amplit. modulated droplet form. 67570
sonar, overlapping underwater sound streams, separation and fusion 119088
spatial soliton switching PM tech. 93856
speech sig. convolutive blind source separation, AM decorrelation 107443
SS watermarking combining visual/detect. models 95370
subharmonically mode-locked semicond. laser, pulse AM suppression 71816
surface pot. detect. using scanning force microscope *(Japanese)* 97766
unsupervised texture segmentation using dominant image modulations 106754
utility-interactive PV power network power convertor syst. *(Japanese)* 77973
UV prog. femtosecond laser pulses, spectrally compensated SFG 72028
VDSL, VDSL technol., fibre-to-the-cabinet connections *(Italian)* 130986
Er-doped externally modulated NTSC AM-VSB fiber amp. 96776
Er-doped fiber amplified externally modulated NTSC AM-VSB repeater syst. 74933
$KTiOPO_4$ integrated-opt. high power amplit. modulator for vis. wavelength range 82145
Si optoelectronic modulator based on Bragg mirror 82220
Si, polycrystal torsional micromirror array design, opt. binary switching, AM appls. 104762

amplitude modulation, optical *see amplitude modulation; optical modulation*

amplitude shift keying
16 DAPSK sigs., decision feedback differential detect. 73708
16DAPSK sigs., flat Ricean fading channels transm., lin. prediction based decision-feedback differential detect. 107569
advanced modulation/coding transm. capacity, SCM complements DWDM 96785
APSK multiple-sym. differential detect., limited search using (M,L) algm. 83824
AWGN channels, non-uniform QAM sig. shaping; turbo coding appl. *(English)* 72752
AWGN channels, optimum criterion for multilevel coding systs. 106022
CMOS FSK/ASK transceiver, 900-MHz, low power, half-duplex low datarate commun. 91343
DAPSK postdetection diversity receiver on Rayleigh-/Rician-fading channel 119974
DAPSK preamble-assisted transm. in digital mobile radio syst., channel estim./compensation 74737
DAPSK-OFDM transms. for high date-rate digital mobile radio 85900
dedicated short range commun. syst., phys. layer 119994
diffuse wireless IR commun., power and bandwidth efficient modulation 131620
direct detect. opt. receivers using RZ coding, BER reduction 120140
DMT with insufficient cyclic prefix, channel equalization 107697
fading channels, coded modulation for differential encoding and non-coherent reception *(English)* 72754
fading channels, multilevel coding, set partitioning strategies *(Chinese)* 94308
IEEE 1394 wireless home networks, ASK transceivers, 60GHz-band 130757
implanted med. device, power/inform. transm. using US 98712
ISI adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sigs. 107690
Mb/s radio-over-fiber transm., opt. injection phase-lock loop source 96665
mobile fading channels, MLC/MSD and MLC/PDL *(Chinese)* 85854
mobile radio differential amplit. PSK, adaptive signalling algms. 85637
multilevel coded modulations based on asymmetric ASK and PSK constellations 128990
multilevel coding, mapping strategies in fading presence, soft decision decoding 94273
multilevel coding schemes, perform. in mobile fading channels 96538
OOK CDMA indoor IR wireless systs. on diffuse channel, perform. anal. 86124
OOK-CDMA indoor IR wireless commun., equalization 131622
opt. ASK coherent and PSK squeezed-state sigs., quantum detect. 119089
opt. CDMA, modulation using ECC embedded in opt. orthogonal code 128987
opt. preamplified NRZ receivers, optimum filter bandwidths 120141
opt. time-spreading/freq.-hopping differential OOK-CDMA syst. 74916
opt. wireless commun., outdoor appls., modulation methods 96883
quantum-limited opt.-matched commun. link, opt. preamplified OOK 131610
Rayleigh fading channel, multilevel coded modulation *(Chinese)* 83820
Rayleigh fading channels, decoding methods for multilevel coded modulation 106020
Rayleigh fading channels, improved multilevel coding schemes research 94272
retrodirective antenna array card-type transponder, dedicated short-range commun. 96640

AMR *see automatic meter reading*
AMTEC *see thermoelectric conversion*
analogical reasoning *see case-based reasoning*
analogue circuits
see also analogue computer circuits; analogue integrated circuits; analogue processing circuits
act. power filter, harmonic current, neuron adaptive detect. *(Chinese)* 102363
analog cct. internal noise calc./meas. for noise effects reduction 132150
analog filters review 114861
ANN appl. to fault diagnosis in analog ccts. with tolerances 68551
automated analog cct. synthesis by superimposing of sub-ccts. 101748
behavioural models for analog ccts., validity region 90636
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
chaos preservation through continuous chaotic PPM 90692
component values design centering, parallel GA 68552
continuous functionals, parallel minimisation, nonlin. ccts., defn. 101692
DC nonlin. ccts. soln., ellipsoid-based approach 79523
decomp.-based symbolic anal. method for analog synthesis from behavioral specs. 101739
design automation using software tools 79540
design methodology for optim. of analog building blocks using genetic algms. 101750
design problem formulation by control theory 101740
dyn. syst. testing, integral sensivity 101730
fault diagnosis of analog ccts. with tolerances using ANNs 68554
fault diagnosis using symbolic anal. techs. 90709
filters, introduction 107528
four-transistor current copy unit based current buffer *(Chinese)* 114900
GA based design/synthesis 90710
high level synthesis of lin. analog systs., hierarchical perform. optim. 101749
instrum. transformer calib., impedance synthesis methods 115094
large analog/RF ccts., steady-state stabil. anal. algm. 79516
LC analogue filter tuning, multiobjective genetic algm. approach 91009
lin. ccts. with interval params., freq. response eval. 90644
LV high output impedance tail current source and differential amp. appl. 90739
median and median-type filters for continuous-time sigs. sorting 130126
mixed-sig. PCB partitioning/layout 115126
multiple fault diagnosis by locating ambiguity groups of test eqn. 101741
MUROS-1 med. imaging pixel detector read-out syst. design anal. 122155
network behavioral macromodel constr. for functional-level simul. 125210
noise simul. of modulated nonlin. ccts. 101694
nonlin. analog cct., fault isolation, neural network L_1-norm 101746
nonlin. analogue ccts., tolerance, fault diagnosis, neural net based L_1-norm optimisation 114590
nonlin. dyn. sim., chaos, electronic cct. synth. 79532
nonvolatile memories, fully qualified analog design flow, CAD tools 79541
one-way open coupled double-scroll ccts., spatiotemporal stabil. study 125631
OTA-based PID controller, optimum param. tolerance calc. 125237
piecewise lin. ccts., fault ident., homotopy approach 101744
precision analog device struct. synthesis 114599
repair of analog ccts., extrinsic/intrinsic evol. techs. 101734
RF cct. CAD, high-level simul. 79500
single electron tunnel jn. based cct., energy conservation 79544
soft fault diagnosis, sensitivity anal. by randomized algms. 125209
Spice-like analog simulator extension with time-domain full-wave field solver 90632
thresholds detect. by electronic cct. using jump phenom. 68531
two-terminal devices with polynomial nonlin., synthesis procedure 90672
UHF filters and OTAs, analog cct. design 90705
unified simulator for analog/digital ccts. 125164
VHDL-AMS simul. for batt. chargers 90734
voltage down converters for CMOS high-speed SRAMs 90902
analogue computer applications *see analogue simulation*
analogue computer circuits
see also function generators; operational amplifiers
ANN implement. via digital counters for wt. storage 114920
reset watchdog ccts., timing accuracies *(German)* 102439
smart ccts., evol. design 114598
analogue computers
see also analogue-digital conversion; analogue storage; digital-analogue conversion
shape/size simultaneous discrim., opt. analogue computer develop. *(Japanese)* 107224
analogue digital computers *see hybrid computers*
analogue-digital conversion
see also digital-analogue conversion; quantisation (signal); sigma-delta modulation
1-to-4 opt. TDM DEMUX, photonic ADC 86082
1-Wire addressable digital instrums. for environ. monitoring 88149
3D vision, smart VLSI opto-sens., laser spot posn. meas. 109707
10-bit, 0.25-μm CMOS, design and test results 132451
79 dB-SNR 70 mW 18 MHz CCD front-end with fully-digital amplif. 120903
accel. beam diagnostics, direct digital down converters, appl. 87100
acetabula cups, seq. impressions meas., noncontact syst. 122330
adaptive mixed-sig. narrowband interf. canceller for wireline transm. systs. 108514
ADC sampling rates for sig. reprod./anal. 109470
algorithmic ADCs, modeling of dyn. errors 102293
analog CMOS ADC building blocks, anal. of manufacturability factors 102271
analog-digital systs. description, sig. proc. and control appl. 102288
analog/mixed-sig. IP modeling for design reuse, SoC appl. 80114
anti-alias FFT error anal., interpolation *(English)* 107322
anti-aliasing filter effect on largest Lyapunov exponent calc. 90687
APS-94F SLAR syst., image capture, proc. & recording syst. upgrade 99124
asynchronous sampling rate converter, two-stage design, interpolation method *(Japanese)* 114849
atmos. turbulence meas. syst., meteorological param. *(Chinese)* 76882
AUGER fluoresc. detector, bilinear analog compressor to adapt sig. dyn. range 76152
bandpass delta-sigma modulator using SC resonator struct., 80 MHz 90966
batt. state-of-charge front end soln., V/f and A/D converters comparison 89142
BELLE Si vertex detector, perf., upgrade plan 98014
bichromatic pyrometry, high-temp. proc. rem. diagnostics via integrated photodetectors 132204
BiCMOS SOI ADC delta-sigma modulator, Bluetooth transceiver 102294
biological sigs., long-term DAQ, storage and presentation, Microsoft Windows appl. 110527
BIST, oscill. based method for functional testing of smart sens. devices 80124
analogue-digital conversion continued
bit-serial column parallel proc. archit. for CMOS sens. DFT 109692
broad band software-defined radio receivers, supercond. device based 74635
broadband power spectrum analyser, implement. & perform. eval. 120685
BTeV Si pixel vertex detector beam test anal. 121651
capacitor ratio converter, nonideal amp. 79998
capacitor testing, fast measuring meter, phase components *(Chinese)* 109834
CDMA syst., PN code nonzero-IF likelihood acquisition scheme 84899
CDMA transmitter perform. testing & troubleshooting, adv. DSP 108836
charge-transfer amp. for ADC appl., dyn. behavior anal. 90763
CMOS A/D converter error table compensator, VLSI chip implement. 90975
CMOS ADC, 8 bit design, efficient archit. 102277
CMOS ADC, high-speed subranging syst. with background equalization of sampling instants 79983
CMOS ADC, IF sampling 102287
CMOS ADC with background offset cancel., 165 MS/s, 8 bit 102301
CMOS chip, sig. capture and timing meas. 102440
CMOS current-steering D/A converters, stat. yield model 125581
CMOS embedded low-power FIR filter 102401
CMOS flash ADC, ultrafast design for SoC appls., 1 GS/s 90992
CMOS flash ADCs, capacitive cct. archit. for compact realization 90995
CMOS folding/interpolation A/D converter for analog interface module of TFT-LCD driver 79997
CMOS folding/interpolation ADC design, 3.3 V, 8 bit, 200 MS/s *(Korean)* 114815
CMOS high-speed current-mode wave-pipelined ADC, 8 bit archit. 68866
CMOS high-speed pipeline ADC for W-CDMA appls., design/power optim. 102270
CMOS high-speed track/hold cct. design 114901
CMOS image sens., ADC cct. 102289
CMOS image sens., pixel cct. design, one-bit A/D converter 75645
CMOS low power 10 bit, 80 MS/s pipelined ADC at 1.8 V power supply 80002
CMOS low power pipeline archit. ADC, 33 MS/s, 10 bit *(Chinese)* 114814
CMOS low power pipelined ADC for cable modem appls., 10 bit 79985
CMOS low-power SC noncalib. successive approx. ADC, 12 bit, 1 MS/s 90970
CMOS LV high-speed pipelined ADC, 10 bit, 2.5 V, 40 MS/s 80001
CMOS LV switched-current pipelined ADC, 8 bit, 40 MS/s 80000
CMOS op amp design for mixed sig. LSIs *(Japanese)* 70314
CMOS opt. head for high-resoln. posn. encoders 92474
CMOS oversampling $\Delta\Sigma$ mag. to digital converters, archit. 86447
CMOS parallel pipeline ADC, 10-bit 200-MS/s, front-end S/H cct. 90969
CMOS pipeline 15 bit 10 Msample/s ADC for ADSL appls. 79978
CMOS pipeline ADC, 14 bit, design and characts. *(German)* 125569
CMOS pipeline ADC, 8 bit, 30 MS/s, 1.8 V single power supply 125574
CMOS pipeline ADC, stochastic nonlin. anal. 125580
CMOS pipelined ADC, 14 bit, 20 Msamples/s, design and perform. 68870
CMOS pipelined ADC, 8 bit, 80 Msample/s with background calib. 114846
CMOS random nos. generator based on a chaotic syst., 8 bit, 20 MHz 68949
CMOS regenerative comparators, symbolic anal. 91125
CMOS S/H amp., high-speed ADC *(English)* 90747
CMOS single-amp. pipeline ADC, 6 bit, W-CDMA receiver appl. 80003
CMOS synapses cct., neural A/D converter 91155
CMS EM calorimeter, light-to-light readout syst. 110400
CMS EM calorimeter, light-to-light readout syst. 121629
color images, blind/readable watermarking 95059
computational image sens. with pixel-based integrat. time control 97353
continuous-time filters digitization, weighted-sample method extensions 95696
CORDIC proc. design for mixed-sig. A/D conversion 114819
correlative zero-phase fund. component notch filter for power sigs. 112082
custom integrated front-end cct. for CMS EM calorimeter 121717
DAQ syst., sampling rate improvement, time-interleaved data converter 131847
DAQ syst. accuracy description, param. minimization 109458
differential mode for CMOS image sens. 114835
differential nonlin. testing, exponential shaped voltage 102284
digital array nonlin., mitigation 96990
digital filter freq. response characts., analog shaping, Doppler tracking 118991
digital meas. instrums., relative error normalisation *(Polish)* 120638
digital phased array antenna syst. for cellular PCS band appl. 83759
digital-domain multistep ADC calib., interstage gain-proration tech. 125579
dual-ADC front end, built-in calib., DAQ appls. 114844
dyn. sig. analyzers, overview 131849
dyn. test setup, timing jitter contribs. meas. 80013
dyn. testing, dual-tone sig. based 2D histogram 114840
dyn. testing, freq. domain design 102265
effective resoln., metrological charactn., IEEE std. 90978
energy-sensitive hybrid pixel detectors, ADC design 98064
error correction using Volterra filtering 125572
F1 TDC, dead-time free, COMPASS detector readout 76148
Fabry-Perot based spectrometer, MEMS sens., sig. conditioning, A/D conversion 86770
flash ADC, 6 bit digital design in 0.25 μm CMOS 102299
flash ADC using cellular nonlin. network, error correction 102263
flash ADC using reson.-tunneling multiple-valued ccts. 80010
flexible multichannel high-resoln. TDC ASIC 121720
flickermeter testing, calib. syst., digital logic & software control 109836
floating-point ADC with lin. archit., realisation 79980
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
four-channel analog sig. converter *(Russian)* 86452
FRAM retention anal. method based on memory cell read sig. voltage meas. 102162
free-running sampling, pulse recording 121634
fuse elements voltage drop/current meas. using digital techs. 123676
fuzzy A/D converter, current-mode approach 102279
Gamma Knife treatment spec., verif. using stereo-opt. camera 76619
γ-ray detect., optimal P-Z setting, spectrosc. tech. 121860
Gb/s flash all-opt. ADC design 93239
GHz sampling rate ADC, photonics technols. 91402
high speed ADCs for low power appls. 68875
high speed analog sigs., comparison of transient digitization methods 86451
high-rate high-resol. gamma spectrometry, adaptive digital filter 121859
high-rate high-resoln. gamma spectrometry, adaptive digital filter 110396
high-resoln. DAQ systs., transducer/sens. excitation and meas. techs. 75383
high-resoln. high-speed A/D converters, sub-ps aperture uncertainty meas. 114830
high-speed ADC, DSP-based tech. for coherently sampled seqs. gen. 120700
high-speed ADCs, speed-power-accuracy trade-off, nanoelectronics 102304
high-speed EO ADC principle, tunable laser & DOEs 86448
high-speed low power ADC design, current-mode approach 90996
high-speed opto-electronic transient waveform digitiser, mil. appls. 90972
higher order delta-sigma A/D converter with optimized stable coeffs. 68863

nalogue-digital conversion continued
higher-order delta-sigma ADC, optimal design 68874
histogram test, small-amplit. triangular waves 114829
histogram testing, IEEE Std. 1241, benefits & risks 102285
HRV DAQ, anal. & demographic database, HEARVAAD program 98200
hyperspectral syst. simul., hyperspectral sens. simul. and VNIR testing results 75621
hysteretic ADC dyn. testing, IEEE 1057-94 std., nonlin. 120701
hysteretic distortion detect., phase-spectrum anal. 114827
IEEE Std 1241-2000 for ADC terminology and test methods 90962
IM protection using microcontrollers 112536
implant med. transmitter, ADC spec. 87898
inductance sens., AM meas. cct., precision improvement *(Chinese)* 109486
integral nonlin. determ., FFT test, Chebyshev polynomials 102286
integrat. ADCs, Volterra filtration tech., a-priori error model 114826
integrated opt. DAC, pulse pattern recogn. 127781
integrated polymeric photonic devices for RF and phased array appls. 115033
intell. EM field meter *(Polish)* 131813
interleaved and double-sampled ccts., feedforward approach for timing skew 68853
interleaved CMOS flash ADC, 6 bit, 900 MS/s 102300
interleaved-sampling front-end, sampling-rate optim. 90963
internal friction meas., high speed ADC DAQ, low phase delay *(Chinese)* 75385
KLOE DAQ/trigger syst. design anal. 132449
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
LCD monitor controller IC, integrated ADCs, high perform. 86895
LEDA BPM analog front-end electronics, design 87132
LF mag. flux dens. meas., sens. network design & control 131878
LHC CMS microstrip silicon tracker, readout/control syst. 76104
lin. estimators, stat. efficiency 114833
lin. histogram BIST for ADCs, time decomp. tech. 79964
lin. histogram testing, low-cost BIST archit. 125578
lin. variable differential transformers, DSP-based sig. conditioning 86489
list-mode time stamping DAQ module prototype for coincidence meas. 110954
low power ADCs, design techs. 102298
low power consumption devices, dyn. perform. *(Italian)* 79966
low power pipelined successive approx. A/D converter 90981
low-cost ADC interface cct., undergraduate student educational resource 89643
low-cost intell. portable MCA design anal. 121742
low-power 10 bit ADC, 0.25 μm CMOS, design/test results 121706
meas. systs. with combined analogue input/output facilities for practical education 75373
med. image digitisers, protocol-based eval. 132642
meteorological radar, digital sig./image proc. 106834
microcontroller-based portable multifunctional patient monitor 98205
micropattern gas detector compar. for CMS expts. 132331
microwave ADC, distortion reduction 68855
microwave ADC for broadband commun. 80331
mini-spectrometric syst., improved meas. quality, hardware-software fn. sharing 109432
mismatch-shaped pipeline ADC, 12 bit, CMOS implement. 125575
mixed A/D networks, PWL simul., waveform relax. approach 90965
mixed-sig. functional level simul. framework based on SystemC, SoC appls. 114891
modelling & testing, state-of-the-art review 114839
multi-gap RPC, front-end electronics, timing compensation comparis. 121697
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
multichannel parallel sampling syst., timing skew calib. technol. *(Chinese)* 120698
multiple bandpass sigs. downconversion using bandpass sampling, efficient algm. 130138
multistage sync. sampling rate converter, cascaded interpolators *(Japanese)* 114848
NEMO-3 calorimeter electronics 121693
neuromorphic paradigm for extrinsically evolved hybrid analog/digital device controllers 102280
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
next generation mixed sig. ICs, ADCs, cct. specific failure modes, test 80117
nonuniform sampled bandlimited sigs., digital fractional filters for sig. reconstruction 95669
on-chip sub-ns sig. capture and charactn. ccts. 104076
opamp gain error correction in pipelined ADCs 79999
opt. sampled ADC, PE tech., bandwidth 125571
parallel sampling, electronic motor control *(German)* 114837
particle counter opt. sens., standardized method 97201
particle detector gas-cylinder inversion syst. based on embedded computer 76137
PC-CLD EO modulator, MM-wave photonic time stretching 102751
periodic orbits realisation of Bernouilli shift map in digital computer *(Chinese)* 114836
photonic ADCs, develops. 82795
photonic ADCs, optoelectronic receivers, preamplifiers 93317
photonic data conversion for ultrafast ADCs and DACs 68856
PIBETA detector, ADC common noise correction and zero suppression 87214
PIBETA detector syst. for precision $\pi\beta$ meas. 121648
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
pipeline A/D converter, high-speed low-power area-efficient, CMOS technol. 68862
pipeline ADC, behavioral model, MATLAB and SIMULINK appl. 68858
pipeline ADC with radix<2 archit. 68867
pipelined ADC, struct. testing, BIST schemes 79987
pipelined ADCs, background digital error correction tech. 79981
pipelined ADCs, self-testable with low hardware overhead, BIST scheme 102276
pipelined data converters, LV/energy efficient design 90985
pipelined switched-current cyclic A/D converter, low power, cyclic RSD algm. 90982
pixel-level ADC for hybrid pixel detectors with energy sensitivity 121712
PLL jitter, nonwhite spectrum effects on sampled sig. SNR 68857
plug-in cards for Personal Computers *(German)* 68861
polyethylene sheets, crease detect. using opt. syst. *(Japanese)* 131922
polyphase interpolator for combined time-to-code convertors 76136
portable dual-input MCA with large memory, dual isotope diagnostics 122156
power amp. nonlin. estim., subsampled temporal data 114626
power consumption and conversion speed, resoln., S/N ratio *(German)* 125568
power pulse lasers, radiation energy meas. using multichannel calorimetric syst. 110013
power quality meas. digital instrum., calib. procedure 109835
power syst. protection, sampling cct., dyn. working scope *(Chinese)* 133783

analogue-digital conversion continued
power system faulty waveform recording, waveform distortion, waveform recovery *(Chinese)* 77475
precise opt. powermeter, photodiode spectral sensitivity, calib. factors 116954
prog. sig.-proc. electronics, PET/SPECT/CT scanners appl. 120672
pulmonary gas meas., portable syst., fast lung fn. test 110522
quadrature sampling scheme with improved image reject. for complex-IF receivers 85534
queued ADC 114850
rail-to-rail successive approx. ADC, 1 V 10 bit, std. CMOS 79990
reconfigurable pipeline ADC, high speed ICs, cell design 68859
resistive plate chamber timing cct. front-end electronics chain 132455
resistor network termination ccts. *(Japanese)* 102258
resolver-to-digital converter, elec. machine posn. meas. 123311
RF upconverter, quadrature modulator, baseband proc. 125637
rotary encoder, digitally enhanced resoln. tech. 90997
RSFQ time digitizing syst. 70939
sampling oscilloscope card and spectrosc. ADCs integrat. in DAQ syst. 98082
SC image rejection filter for complex IF receivers 68917
SC S/H cct., charge injection errors 79536
scintillation counter exponential sig. former, pulsed ADC 98070
scintillation detector syst., 2D, for SANS expts. 132396
seismic DP software radio receiver 122625
selection 79960
sens. technol. advances & future develop., miniaturisation, overview 109816
sens.-bridge-to-microcontroller interface, two-point calib. 120650
silicone rubber outdoor insulators, degrad., leakage current monitoring *(Korean)* 123037
sinewave histogram testing, quasi-coherent sampling 120702
sinusoidal elec. drives for opt. time DEMUX 131522
sinusoidal-encoder-based digital tachometers, probabilistic learning tech. 75777
smart transducers interface design, time triggered archit. 131824
SoftCell™, multi-carrier chip-set for software definable radio base-stations 74669
software defined radio prototypes for multimode operation 108729
stacked A-to-D converter for increased radar sig. proc. dyn. range 96989
subpixel edge detect. syst., dimens. meas., obj. localization, digital-based approaches 107277
subranging digital SQUID ammeter 75779
subsurface digital multifreq. EM cond. imaging syst. 84166
successive approx. ADC, metastability errors influ. on SNR 102267
supercond. ADC, oversampling, encoder and decimation filter 70846
supercond. ADC testing, segmented correl. 68854
superconductive time-to-digital converter, prescaler cct. 70838
symbolic seq. based chaotic coding and ADC appls. 72869
synchronised clocks, DAQ syst. and sig. sources 80014
test freqs. select. for two-tone phase plane anal. 114831
testing, cumulative histogram variance, freq. errors 114841
testing, std. framework for IEEE-STD-1241 in MATLAB 114832
testing, transportable A/D box for comparative meas. 109425
testing using joint time-freq. anal. 90977
testing with IEEE Std 1241-2000 114838
three-phase ac motors, DSP-based control, A/D conversion syst. 78104
time-domain/wavelength-domain opt. preprocessing, ADC 93747
time-interleaved ADC systs., channel lin. mismatch effects 79984
time-interweaved sampling scheme for opt. ADC 86050
time-to-amplit. convertor based TOF trigger, diff. discriminator 98069
time-to-digital converter, time interval selection 87258
transient fault sensitivity anal. of ADCs 90993
transit. level meas., dyn. input, servo-loop extension 114843
transparent hybrid fiber/copper approach, DSL service area enlargement 74474
twin laser sens. thickness meas. instrum. calib., isoline bilinear LUT 113743
ultrahigh bandwidth photonic A/D converters, highly lin. photoreceiver design 80011
UXGA compatible TFT LCD panel low noise triple channel graphic digitizer 114834
video ADC, differential gain & phase testing, time-freq. anal. 114842
video front-end proc. syst. 131739
virtual instrum. meas. uncertainties eval. methods, DSP 109437
VLSI, conf., Orlando, FL, USA (April 2001) 89562
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
wide bandwidth oscillator/counter A/D converter 71191
wide dyn. range charge integrat. ADC converter with FASTCAMAC readout 121701
wideband low-distortion delta-sigma ADC topol. 79959
wideband photonic ADC, monolithic integrat. 114851
wireless commun. syst. time domain charactn., meas. station 119961
X-ray spectrometers and γ-ray imagers, compact back-end module 121744
X-ray spectrosc., DSP, software based, spectrum deconvolution 73604
γ-ray spectrom. dead-time loss correct. apparatus design/perform. anal. 132446
$(\bar{p},X)$, elastic scatt. cross sect. with multilayered scintill. fibre arrays 132306
GaAs HBT dual T/H, 1 GS/s, wideband pipelined ADC appl. 125633
GaAs low-temp.-grown MSM switch, ultrafast differential S/H 82441
InP HBT OEIC, photonic ADC 128030
Nb chip based supercond. high-resoln. ADC 71190
NbN DSP module, IR FPA sens. 70827
Si piezoelec. press. sens. with integrated digital calib. ccts. *(German)* 75414
SiGe RF BiCMOS SC pipelined ADC design, clock jitter 79986
SiO_2 radiation tolerant pixel front end, BTEV design 98057
microminiature force sens., thin-film Wheatstone strain gauge bridge *(German)* 75742

analogue integrated circuits
see also analogue processing circuits; BiCMOS analogue integrated circuits; bipolar analogue integrated circuits; field effect analogue integrated circuits
act. vision, analogue VLSI model of selective attention 103988
adaptive ramp generator, low cost for analog BIST appls. 101849
AnalogRouter, automatic current-driven routing tool for analog ccts. 81473
automated layout tools, design rule description 68553
behavioural modeling of analogue and mixed-sig. ICs 114571
cephalopod retina/visual syst. simul. by analog VLSI 103958
CMOS imager with focal-plane computation, feature detect. 97365
current mirror cct. with accurate mirror gain for low β transistors 80134
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
dendritic adaptation, analog VLSI cct. basis 102482
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
device params., test generation based diagnosis 79538
DSP & SOC analog integrat. in Internet era 79924
electronic spiking neural net building blocks 114914
ESD protection cct., input capacitance 81464

analogue integrated circuits continued
fault detect. probab. fn. 101733
fault diagnosis, bilinear transform. in 3D & 4D space 101743
fault diagnosis, single-output/1-of-k neural network archits. comparison 101745
GAME, mismatch modeling and simul. in analogue IC design 125214
hierarchical fault diagnosis of analog and mixed sig. ccts. 103985
hierarchical stat. optim. method, constraint generation, Mahalanobis' dist. 68550
Hodgkin-Huxley neuron model cct. implementation, PWL approach 91159
IGBT gate driver, monolithic, for smart power modules, CMOS 0.8 µm/50 V proc. implement. 81538
interconnect, current dens. 116018
ispPAC family of reconfigurable analog ccts. 103957
large-scale analog networks, regularity-based hierarchical symbolic anal. method 79542
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
low testability analog ccts., software program for ambiguity group determ. 90640
LSI design, data clustering/labeling in speech recogn. 79954
matching-relevant transistor pairs ident., fast method for analog design 104078
microelectronics, conf., Tehran, Iran (Nov. 1999) 78403
miniaturised low power convolutional decoders archit. 108491
mismatch, yield optimisation, spec-wise lin., feasibility-guided search 125217
MMIC, high-speed HF analog RF cct. 102664
multilevel simul. 68521
multiple fault diagnosis by locating ambiguity groups of test eqn. 101741
multiple fault diagnosis method 79548
multiple power supply controller, LM2645, single chip implement. *(German)* 125223
multistage feedforward compensated opamps, low power and distortion 68600
neurofuzzy systs., num. info. process., hardware implement. 114907
nonlin. analog ICs, optimum test stimuli, nonlin. prog., time-domain sensitivities 79539
nonlin. dyn. analog ccts., symbolic behavioral model generation, term ordering 90708
optim., fuzzy perform. model of mismatch 101731
over-designed ccts., analog cct. synthesis, library creation 68556
PEP-II B-Factory, logarithmic beam posn. monitor 87122
PHEMT analog MMICs, MM-wave appls. 69185
quadratic assignment problem, modified algm., chaotic-neuro-dyn., VLSI implement. 102469
robot model of cricket behavior, sensorimotor integrat. 84699
s-expanded symbolic network fns. for computer-aided analog IC design 79545
SC filters based on allpass sects., testability 80068
sensitivity based analog fault dictionary 90711
SKILL-based library for retargetable embedded analog and mixed-sig. cores 81442
small-sig. modeling, behavioral sig. path modeling 125212
small-sig. modeling, elementary transistor stages, behavioral sig. path 125213
SoC analog non-volatile storage syst. for audio sigs. with sig. conditioning for mobile commun. devices 102436
SPICE anal., novel MOSFET model implement. 103845
substr. interf., smart power IC 79543
substr. noise in ICs, anal., models and optim. 104047
sustained neurons in fly, analogue IC design 91134
symbolic modeling and anal. of analog ICs,, Analog Insydes 90707
testing, DC fault dictionary 101729
time-invariant ccts., algm.-based fault detect. 101742
top-down analog design methodology using Matlab and Simulink 101747
top-down syst.-on-a-chip design for mobile radio transceivers 108837
translinear cct., sinusoidal freq. division by integer no. 114905
VHDL-AMS library of RF blocks models 125191
VLSI, single event transient testing, OBIC imaging 127003
VLSI error correcting decoders, mismatch errors 106118
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
VLSI technol., systs. and appls., conf., Hsinchu, Japan (April 2001) 113284
voltage converters, lin. type, 5 V to 3.5 V with output regulators *(German)* 80139
voltage ref. cct., on-chip, evol. prog. design 101768
wide-range precision oscillator in 5-pole IC package *(German)* 125254
WWW based analog cct. CAD tool, design space interactive exploration 79547
Si oxygenated microstrip detectors readout with LHC speed electronics, radiation hardness 132378

analogue memories *see analogue storage*

analogue multipliers
AC-DC transfer, inherently digital stochastic analog multiplier 120632
CMOS accurate LV analog memory-cell with built-in multiplication 80129
CMOS analogue reinforcement neural chip, design & implement. 91140
CMOS composite transistor for LV low power appls. *(English)* 127029
CMOS current-mode multiplier/divider ccts. based MOS translinear principle 102437
CMOS LV triode-MOSFET four-quadrant multiplier, optim. current efficiency 80127
CMOS voltage multiplier using MOS transistors in saturation region 68964
DCT, recursive implement., comparative study 100756
double single slope multiplier cum divider 68965
floating-gate CMOS differential analog inverter for ultra LV appls. 81516
impedance meas. using harmonic oscillator, food sterility testing 121145
optimal analogue multiplier coeff. values in cascade realized discrete networks 68962
portable audio appls., act. noise controller syst., CMOS analogue implement. 97107
symbolic modeling and anal. of analog ICs, Analog Insydes 90707
vector multiplication/quantization, error-compensated cells 102433
VLSI neural network with digital wts. & analog multipliers 91139

analogue processing circuits
see also analogue multipliers
AC EM flowmeter with analogue sig. proc. 120764
adaptive neuro-fuzzy inference systs., analog VLSI, stochastic perturbative techs. 68980
AMPS/CDMA mobile handset, IF/BBA proc., BiCMOS chipset 119940
analog-digital systs. description, sig. proc. and control appl. 102288
AO devices, analog sig. transm. 116861
AUGER fluoresc. detector, bilinear analog compressor to adapt sig. dyn. range 76152
Auger Fluorescence Detector prototype, analog sig. proc. 68966
baseband sig. proc. systs., analog memory, low-power appls. 80126

analogue processing circuits continued
Beta basis fn. neural network in CMOS subthreshold mode 91163
BiCMOS very high-speed replicating current comparator for Viterbi decoders 114898
bladder controller nerve sig. analog proc. cct., implantable, low-power CMOS 76677
cardiac pacemaker, analog front-end, CMOS proc., sens. chain 76670
CMOS analog similarity eval. cct. featuring variable functional forms 91151
CMOS analogue SIMD focal-plane proc. array, smart-sens. VLSI cct. 109691
CMOS current conveyor, LV low-power cct. 80061
CMOS current-mode hysteretic WTA VLSI network, excitatory/inhibitory coupling 102485
CMOS current-mode prog. CNN, low-power consumption 68986
CMOS data recovery cct., analog parallel sampling 102434
CMOS device design, deep sub-micron, for low power analog appls. 127047
CMOS IF sig. component separator chip for LINC transmitters 108635
CMOS image sens., SoC, prog. analog image preprocessing 109690
CMOS low-power analog FIR filter, 100 MHz, PRML equalization appl. 102366
CMOS OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
CMOS outlier rejection cct., sens. array parallel sig. proc. 91121
CMOS photodiodes for image sens., charactn. 86623
CMOS prog. BP on-chip learning neural net with learning rate adaptation *(Chinese)* 91161
CMOS prog. spatial proc. imager chip, focal plane steerable spatial filtering 75657
CMOS SC video FIR filter with analog-RAM-based delay efficient realization 102352
CNN cell for computing disparity map using stereo vision algm. 68990
CNN hardware implement. for analog simul. of react.-diffusion partial differential eqns. 91147
CNN VLSI implement. approaches, hybrid struct. 102460
cochlea, 2D silicon model, analogue VLSI cct. 98715
current differencing buffered amp., act. building block and appls. 91043
current mode ccts. for prog. WTA neural network 114908
current-mode CMOS ccts., design based on current threshold-controllable tech. 68967
cyclic connected neural networks, limit cycle generator, design 91167
DAQ boards with onboard proc. for PC-based tasks 120670
dendritic adaptation, analog VLSI cct. basis 102482
depth of interact. PET, detector module, analog ASICs 122256
DRAM, analogue sync. mirror delay with duty cycle-correction scheme 102145
ear-type multisensors, MEMS switched current mode cct. realisation 86771
EEPROM, high-precision, real-time write monitoring, analog sig. proc. appls. 80130
exponential and logarithmic fns. using std. CMOS 0.8 µm technol. 114897
FG-MOSFET digitally prog. attenuator, HSPICE simul. 68961
field prog. analogue amp. array ICs, switched capacitance feedback ccts. *(German)* 102431
floating gate subthreshold CMOS translinear ccts., dyn. charge restoration 68960
floating gate subthreshold MOS translinear ccts., dyn. charge restoration 80128
FPAAs, configurable analogue block, SC ccts., harmonic anals. *(Italian)* 125627
Gabor-type CNN image filters, subthreshold current mode design 102456
harsh environ. microelectronics/microsystems, research/develop. 132073
image sens. analog front-end, image sens. sig. conditioning 68963
lin. opt. link using radiation hard VCSELs for analogue front-end chip 76153
locally regular CNN 68978
low power and noise radiation hard BiCMOS front-end readout syst. for capacit. detectors 110416
low-power and high-speed equalizer for mag. storage read channels 80125
LV SC bandpass $\Delta\Sigma$ modulator 79633
miniaturised low power convolutional decoders archit. 108491
MOS analogue neural networks, fault-tolerant training in presence of transistor mismatches 68988
multilayer CNN-UM, optimal path finding with space variant metric wts. 91146
neuro-fuzzy cct., multidimensional membership fns., CMOS implement. 102458
noncontact ang. posn. sens. technol., differential displacement/lin. capabilities 75418
on-chip BP learning neural net with prog. neuron characts. 102464
optimal path finding with analog CNN, depend. dist. pot. source algm. 90631
plumb-line-type liq. level meas. syst., dyn. anal. 121271
portable dual-input MCA with large memory, dual isotope diagnostics 122156
press. sens., Wheatstone bridge, automotive electronics, analogue sig. proc. devices *(Italian)* 131852
prog. adaptive analog filters using arrays of floating-gate ccts. 68959
prog. analog MUX array, analog ccts. evol. 125629
prog. neural network, low-power current mode ccts., AB class neuron struct. 91156
prog. sigmoidal fn., analog cct. realization for on-chip BP learning 68991
ratio spectrum cct. with adaptive Butterworth low-pass filter 80132
Raytheon's IR Operations focal plane, adaptive IR Sensor, thinfilm analog image proc. 109634
self-organizing neural net analog cct. based on mutual inform. 80149
smart on-board adaptive sens., MECA electrometer 133250
SoC analog non-volatile storage syst. for audio sigs. with sig. conditioning for mobile commun. devices 102436
specialized neuroprocessor design 125641
subpixel accuracy analogue fast edge location meas. using CCD image 118729
subthreshold CMOS analog MAP decoder for (8, 4) Hamming code 68958
subthreshold CMOS transistor analogue ASIC for biological neuron modelling 102488
subthreshold log filters, LV CMOS basic building blocks 80131
sustained neurons in fly, analogue IC design 91134
switched nonrecursive discrete-time lin.-phase FIR filters 102390
switched-current bilinear integrator realised using single current-mirror 125626
switched-current Viterbi decoders, effects of sig.-depend. errors on perform. 125628
synapse neural nets, analog cct. for VLSI implement. 68985
tailed tent map chaotic cct. exploiting S^2I memory elements 91122
video front-end proc. syst. 131739
VLSI error correcting decoders, mismatch errors 106118
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655
Yagi-type hardware neuron model, CMOS IC implement. *(Japanese)* 91133
Cu/low-k interconnect CMOS platform, 0.13 µm, for SoC appls. 127019
Si CNN-UM chip, trigger wave computing 91137
SiGe HBT 40-Gb/s opt. receivers, AGC amp., full-wave rectifier and decision cct. 109070

nalogue simulation
cephalopod retina/visual syst. simul. by analog VLSI 103958
CNN hardware implement. for analog simul. of react.-diffusion partial differential eqns. 91147
nonlin. evol. eqns. simul. via cellular networks 107490
power syst. anal., real-time combined analog/digital simulator 111675
semicond. laser and photon transport transistor, virtual analogue simul. 117183
TCSC, SSR mitigation test, analog simulator, capacitor voltage control *(Chinese)* 112742
Van der Pol oscillator coupled to Duffing oscillator, dyn., analog simulators 79528

nalogue storage
see also sample and hold circuits
baseband sig. proc. systs., analog memory, low-power appls. 80126
CAM implement. with floating gate transistors *(Korean)* 102435
CMOS accurate LV analog memory-cell with built-in multiplication 80129
CMOS EEPROM, PWM analog memory prog. cct. 102432
EEPROM, high-precision, real-time write monitoring, analog sig. proc. appls. 80130
large dyn. range radiation-tolerant analog memory in qtr.-micron CMOS technol. 110391
low power analogue-ROM based DDS with AM, 200 MHz 114895
multilevel analog flash memory, prog. method 114899
self-convergent MOS flash-memory prog. scheme for MV and analog data storage 102438
SoC analog non-volatile storage syst. for audio sigs. with sig. conditioning for mobile commun. devices 102436
vector multiplication/quantization, error-compensated cells 102433
voice reprod., SAMI, ISD technol. 120592

nalysing power *see polarisation in nuclear reactions and scattering*

nalytical chemistry *see chemical analysis*

AND gates *see logic gates*

Anderson model
interact. QD in nonequilib. state, AC response 69672
single-electron transistor, Kondo effect 92422
p-$Hg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor band 115301
Si nanoparticles, quantum confine., Anderson localization of carriers 104911
Si:Ag coupled quantum wire-dot, single-electron transport through Anderson center 69683
organic films/CdSSe interfaces, photoelectrical props. 69631

Anderson transition *see Anderson model; metal-insulator transition*

anechoic chambers (acoustic)
room acoustics meas., multitone sigs. appl., freq. response 110031

anechoic chambers (electromagnetic)
ANSI C63.5/ARP958 methods of emission-antennas calib. for EMC 120630
antenna testing in Taiwan, progress 72468
array antenna meas. with rough surface reflector, anal. 105967
EMC chambers, anechoic and semianechoic, homogenization and GO 128811
EMC test chamber characts., amp. RF power requirement determ. 83376
Gabor schemes for analyzing antenna meas. 117765
microcompact scatt. range, EHF/THF backward/forward scatt. 83326
mode-stirred chamber, EM field distrib. meas. tech. 72351
OATS antenna factors for small anechoic chambers 128803
pyramidal horn gain proximity corrections, anechoic chamber, two/three-antenna method 72477
radiated emission source location accuracy, CISPR emission meas. syst. 105785
radiated emission source visualization based on CISPR meas. syst. *(Japanese)* 72379
semi-anechoic chamber BGF facility for EMI/EMC meas., latest develops. 83375
ITO X-band transparent wave absorber using resistive-film for oblique incident wave 128810

anelastic relaxation
see also creep; stress relaxation
polymer electrets, mol. procs. 79460
$PbNb_2O_6$ ceramics, anelastic relax., defect interacts. 104270

anemometers
see also laser velocimeters
coherent lidar LDA for wind turbines, opt. mixing schemes 99591
hot-wire anemometer with temp. compensation 120760
phase-Doppler sizing anemometer, laser light scatt. by particles *(Chinese)* 132181
six-corner tangentially-fired boiler, burner region conc. field meas. *(Chinese)* 88575
wind sens., electronic interface, thermal sigma-DM 109812

anemometry
see also laser Doppler anemometry
atmos. turbulence meas. syst., meteorological param. *(Chinese)* 76882
environ. wind tunnel, particle image velocimetry meas. 121285
hot-wire anemometry, look-up inversion method, binormal vel. fluct., method of correction 110063
surface hot wire for mean/fluct. wall shear stress meas. 132220
turbulent round jet, heated, temp. dissipation meas., cold-wire anemometry 132222
two-phase-flow meas. using particle image velocimetry, phasic discrim. 97881

angiocardiography
3D coronary reconstruction from routine single-plane coronary angiograms 132782
3D high-resoln. fast spin-echo coronary mag. reson. angiography 122099
3D magnetisation-prepared true-FISP, coronary arteries imaging tech. 132688
3D MR coronary angiography, navigator echo-based respiratory gating 110885
AIM, attentionally-based syst. for interp. of angiography 87352
angiographic image seqs., simulated, layer decomp., accuracy assess. 132803
breath-hold MR angiography, magnetisation-prepared contrast-enhanced method 87682
calcifications, vol. quantification, dual-slice spiral CT 98483
Cardio Net View series, DICOM network viewer *(Japanese)* 76786
carotid artery contrast-enhanced MRI angiography, array coil 98469
coronary artery bypass surgery, graft patency eval., thermal-coronary-angiography 76405
coronary artery disease ES, SPECT images, plural neural nets *(Japanese)* 132848
coronary Ca quantification algms. reproducibility, electron beam CT 132504
coronary flow relative distrib., model & digital densitometry 87746
coronary mag. reson. angiography, motion compensation strategies 76450
coronary MRA motion effect suppression, real-time navigator approach 87688
CT imaging, multisector image reconstr. 132800

angiocardiography continued
gradient-echo coronary MR angiography, 3D spiral vs. Cartesian 132774
image compression viability comparison, JPEG/wavelet data reduction 110969
interventional cardiology procedures, skin dose/dose-area prod. values 76765
left atrial/ventricular-based single lead DDD pacing 87906
mag. reson. coronary angiography, motion correction 87690
med. ultrasound and X-ray image compression methods, clinical assess. 132837
MRI, off-reson. distortion reduction, echo-time interpolation 122107
MRI, spoiled gradient echo seqs. 76451
multimodal 3D cardiac inform. registration using iter. closest-point approach 76213
quality criteria, cardiac images, diagnostic/interventional cardiology 132541
quantitat. accuracy tests of MR-, CT-, and DS-angiography, photogrammetric meas. and visualization of blood vessel branching casting 98473
quantitat. coronary angiography, centre-line extraction algms. eval. 132779
radiation doses in cardiac angiographic procedures 98770
thoracic aortic dissection, phase-contrast cine MRI angiography 132659
^{201}Tl-dipyridamole myocardial SPECT perfusion scintigrams, automated assess. 76567

angiography (cardiac) *see angiocardiography*

angiography (MRI) *see biomedical MRI*

angiography (nuclear) *see radioisotope imaging*

angiography (X-ray) *see diagnostic radiography*

angle measurement *see angular measurement*

angle-of-arrival estimation *see direction-of-arrival estimation*

angular correlation techniques
Cherenkov radiation, energy loss fluct., angular distrib. 87217
detect. systs., geom. params. sim. using OMEGA code 76014
EUROMET Ge γ-ray spectrometry efficiency transfer software compar. 121764
nucl. multidetector arrays, neutron-induced react. cross-sect. anal. 110306
RPC carpet expt., ang. res., energy spectrum, Monte Carlo sim. *(Chinese)* 87224
SNO underground D_2O Cerenkov solar neutrino detector anal. 132309
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
γ-ray emitting radionuclides, depth distrib. anal. 87215
n-detector efficiency, pulse form., Monte Carlo anal. *(Chinese)* 132293

angular measurement
see also angular velocity measurement
2D Hall ang. detector, contactless angle meas. *(Chinese)* 120765
3D small angle meas. with CCD image sens. 109442
absol. capacitive ang. meas. syst. develop. 75892
air navig., track vel. and drift angle meas. 76808
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
automotive cruise control, radar sens., ang. misalignment, lane config. 131671
axis roundness meas., V-shaped method *(Chinese)* 89896
bend angle sens., VR data glove appl. 75451
capacitive ang. posn. sens., sig. proc. by DFT 120696
carotid arteries, 3D US imaging, EM tracking device 110796
circ. raster, angle posn., photoelec. phase-comparing method *(Chinese)* 97821
CMOS Hall ang. posn. sens. 120748
CMR mag. sens., polycryst., fab., appl. 75471
compressive resist. vibr. ang. accel. sens. *(Chinese)* 120768
cylinder press. peak posn. in internal combust. engine, indirect meas. 121180
double-reflector optronic theodolite, calib. syst. *(Chinese)* 133277
dyn. ang. accel. meas. device 110001
force-plate actometer, rodent locomotion, rot., spatial patterning, tremor 110502
GMR angle detect. & rot. speed sens., robust, automotive appl. 75469
hemiplegic patients wheelchair to bed transfer, 3D ang. sens. 76606
high precision in-plane rot. meas. by tunable LD ESPI 75889
high speed/high resoln. angle meas. syst. *(Chinese)* 109997
inclination angle meas., servo-accelerometer *(Chinese)* 132171
inclined cylindrical storage tanks, calib. characts., geom. method 75355
incremental motion encoder, automatic self-calib. 132164
inductosyn angle-measuring syst., error separation technol. *(Chinese)* 86962
inertial-mag. systs., attitude defn. using laser gyros 132136
ISS transfer vehicles automatic guidance, RendezVous sens. 98923
knee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
laser interferometer for moving stage straightness meas. 75882
LINAC, gantry angle indicators calib., patient treatment 75939
low power hybrid posture monitoring syst. 132995
magneto-resistive angle transducer using tapered coating on cylinder *(German)* 75415
MEMS sens., modelling and simul. 121048
microcellular radio, angle-of-arrival meas. for mobile channel modelling *(English)* 128780
micromirror ang. rot. determ. using laser interferometric method 109978
microvolumes liqs., refr. index meas. with temp. control 121244
ML angle extractor for two closely spaced targets 96957
mobile robots, set membership localization via angle meas. 132156
multipole mag. drum of mag. encoder, surface mag. field distrib. 86457
multiturn shaft angle encoders with electronic rot. transducers *(German)* 131869
MUMPs ang. posn. and speed sens., wireless transm. 75761
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
Nobeyama 10-m submm antenna, high-precision angle encoder 109341
noncontact ang. posn. sens. technol., differential displacement/lin. capabilities 75418
orthognathic surgery, cephalometric image anal. syst. 87747
photoelec. rotary encoders *(Chinese)* 97818
piezoelec. ceramics displacement, bending deform. correction *(Korean)* 121190
planar capacitive sens. for ang. meas. 120733
posn. detect., 2D opt. scanning angle sens. *(Japanese)* 97807
posn. sensitive detector for rotated angle location *(Chinese)* 75543
precise angle meas. for vert. microstruct. on substr. 113747
precision angle & length meas., HOPG regular cryst. lattice ref. 121194
pressbrake control, bend angle meas., sens. design 109969
rem. flat surface angle meas., LD injection-detect. 121205
resolvers, angle meas., sizing procedures, installation 75860
ring laser dyn. goniometer, angle meas., systematic errors 128628
ring laser gyro for track geom. params. meas. 128627
rotary encoder, digitally enhanced resoln. tech. 90997
rotary encoder automatic high precision calib. syst. *(Japanese)* 132153
rotary encoder based on magneto-opt. storage method *(Japanese)* 71431
roundness/radial motion meas. using inverse matrix three-point method *(Japanese)* 97810
scoliosis, digital radiography with scanning method, init. eval. 87762
self-calib. cct. for opt. rotary encoder microsystems 132165
step gauge flatness & parallelism, high-accuracy interferometric meas. 120621
target tracking with angle-only meas. from two platforms, commun. bandwidth influence 118893

angular measurement continued
total internal refl. precision small-angle meas. 75857
triangulation, direction finding, angle meas. syst. 86264
turning spindle motion errors meas. using multipoint method *(Japanese)* 132155
$LnTaO_3$ piezoelec. micro-bimorph-type resonators, vibr. charcts. *(Japanese)* 97174
Si Hall devices and mag. ang. sens. 109810

angular velocity control
3-axis manipulator, microcontroller-based, PCB driller syst. appl. 123927
axial mag. couplings for large machine drives 89341
brushless PM motor drives, SABER simul. 123899
car wiper motors, brush PMDC motor drive, fuzzy logic controller 89359
coal pulverization, IM, operating current, HV vars. *(Chinese)* 88732
CRONE speed controller for sync. motor drives 89353
DC drive, static subordinate speed control syst., state observers synthesis 100246
DC drive, subordinate speed control syst. synthesis, neg. viscous friction 100245
DC motor drive, field-weakening regime, nonlin. MIMO speed control 134446
DC servomotor speed control, adaptive fuzzy logic controller design, tabu search 134071
elec. bicycle, DC motor speed control, load induction unit 123988
elec. locomotive, SRM parallel drive syst. 124011
EV, sensorless IM drive, freq.-hybrid vector control 89375
filtered back EMF based speed-sensorless IM drive 134460
fluid proc. efficiency improvement, AC motor drive converter topol. 134458
fork lift vehicle speed control, DC motor drive, GA 134551
hoisting IM drive syst., cycloconverter based, control 100359
IM, adjustable speed syst. *(Chinese)* 133997
IM, DSP-based speed sensorless direct torque control *(Chinese)* 77860
IM, magnetizing rotor flux determ., VSI 112535
IM, robust tuning of speed loop in indirect field oriented control 123928
IM, rotor IGBT chopper controlled, quasi-dyn. model *(Chinese)* 77859
IM, sensorless control, robust flux/speed/rotor time const. estim. 134041
IM, sensorless control, VSI control, ANN 133995
IM, speed sensorless FOC, full adaptive backstepping design 134040
IM, speed-sensorless vector control, NN speed estim. 78218
IM control syst., load profiling meas. & proc., clipping integrator 112517
IM drive field-oriented PI speed control, bifurcations 134434
IM drive speed control, fuzzy-logic controller, DSP syst. 89347
IM drive with time delay, speed controller design 78214
IM drives, indirect FOC, 1 DOF and 2 DOF controllers design 123947
IM drives, speed sensorless vector control, nonlin. inverter model 134487
IM flux observer, mutual inductance sensitivity, discrete time domain 112526
IM indirect field oriented control, PI controller design 134429
IM sensorless rotor vel. tracking control 88741
IM sliding mode output feedback speed control *(Italian)* 123399
indirect field oriented IM drive, flux/speed observer 123856
indirect water-cooled chilling systs., variable-speed pumps, adaptive control 89464
induction servo motor drive, DSP based, robust integral struct. control 123860
interior PM IM drive, sensorless posn. control, posn. estim. 134486
interior PMSM drive, field oriented speed control, ANN controller 134451
interior PMSM drive, Kalman filter based vector control 89354
LV elec. motors, research, design, manufacture at NIPTIEM, Russia 123464
mag. levitated centrifugal pump, bearingless motor, digital control 123315
paper machines, AC/DC motors, rolls, bearing fluting 124156
PM DC motor drive, neural controller, fuzzy controlled training algm. 113070
PMSM, robust speed control 112490
PMSM drives, sensorless control, sliding mode observer 134462
PMSM sensorless speed control, sliding mode observer, EKF 133971
power syst. dyn. stabil. enhancement, doubly-fed adjustable speed machine 77220
regenerative gas turbines, regenerative gas turbines 123217
reluctance motor drives, modified direct torque control 78224
reluctance motors, high efficiency drive strategy, stator iron loss, NN 89338
sensorless induction spindle motor drive, fuzzy NN speed controller 123904
speed sensorless vector controlled IM drive, core loss 89321
squirrel cage motor, direct/indirect space vector control methods 123923
squirrel cage motor sliding mode posn./speed control 123474
SRM, optimal driving condition, torque/speed control, GA-ANN 134503
SRM ASD, torque anal. by flux linkage curves 113062
SRM drive control syst., phase switching off/on angle regulator 88706
surface PM sync. servomotor, current sensorless speed control 133974
three-phase soft-transit. inverter, ZCS, near ZVS control strategy 123602
TW US motors, servo speed control using PWM 123531
variable speed wind energy syst., PM sync. generator control 123250
VSI IM drive, adaptive nonlin. controller based optimal control 134463

angular velocity measurement
automotive microsens. & sens. syst., current trends 124048
CMR mag. sens., polycryst., fab., appl. 75471
compressive resist. vibr. ang. accel. sens. *(Chinese)* 120768
dual-mode digital rev. counter realisation 121226
engine misfire detect., crankshaft ang. vel. meas., fuzzy pattern recogn. 89408
engine speed indicators, floating point electronics 124012
fusion of electrorotation freq. estim. 118198
gait phase detect., reliable syst., neuroprosthetics appl. 87318
GMR angle detect. & rot. speed sens., robust, automotive appl. 75469
GMR robust sens. for automotive appls. 113113
GMR sens. for contactless posn. detect., automotive appl. 75467
HV meas. techs., corona assess. method, neural nets 97769
IM control syst., load profiling meas. & proc., clipping integrator 112517
IM speed meas., current harmonic anal., Chirp-Z transform 112516
IM/DC drives for educational purposes 123939
integrated ang. speed sens. syst. design, automotive appl. 109824
interferometric FOG ang. vel. sens., noise charcts. 120852
knee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
LF flat-type piezoelec. vibratory gyroscope, constr. 127262
MR sens. for indust./automotive appls. *(German)* 120746
MUMPs ang. posn. and speed sens., wireless transm. 75761
noncontact vel. meas. systs. calib., uncertainty *(Polish)* 121227
piezoelec. single resonator three-axes vibratory gyrosensor 109480
planar capacitive sens. for ang. meas. 120733
quartz tuning-fork ang. rate microsensor, dyn. charcts. compensation tech. 75758
rot. axle ang. speed/posn. meas., pulse generator with num. count discriminator 75396
smart sens. closed-loop meas. channel, noise detect. algms. 109825
$LiNbO_3$, opp. polarized plate, H-type single cryst. piezoelec. gyroscope 92684
Nd:YAG laser, single-freq. diode pumped, ranging/velocimetry 93939

anharmonic oscillators *see harmonic oscillators*
animal communication *see biocommunications*
animation *see computer animation*
animats *see artificial life*
anisotropy, magnetic *see magnetic anisotropy*

annealing
see also incoherent light annealing; laser beam annealing; magnetic annealing; rapid thermal annealing; recrystallisation annealing; solution annealing; stress relaxation
ageing annealing furnaces, cascade controllers appl. *(German)* 113162
alkaline earth fluorides, rare earth doped, thermolum. spectra 82327
anodically bonded interface, diffusion 91943
asymmetric source/drain extension MOSFET struct. for sub-50 nm gate length CMOS devices 126740
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
BSG film, LPCVD, wafer bonding appl., AFM, FTIR 124887
carbon fibers, field emission cathode materials, prep., appls. 102890
ceramic thick film struct. microfabrication using colloidal suspens./photoresist masks 104221
CMOS APS image sens., radiation-induced dark sig. 97377
CMOS device, hot carrier reliab., deuterium annealing 126808
CMOS device charcts., γ radiation dose influence *(Chinese)* 103851
CMOS IC, ultra-shallow jn. doping technol. 116039
CMOS shallow jn. technol., International Technology Roadmap for Semiconductors perspective 104141
CMOS technol. develop., 0.35-µm, blanket/pocket anti punchthrough device designs 104091
CMOSFET, optimum halo struct. 115927
CMOSFET, sub-100 nm, ultrashallow jn. form., TED 80990
copper phthalocyanine thin films, carrier injection, STM anal. 69617
Corning code 1737 glass for TFT-LCD, thermal shrinkage 97600
diamond:B/Al Schottky contacts, DLTS space charge spectrosc. 80906
diamond:Fe, type Ib synthetic, PL/CL obs., treatment effects 116915
diamond:H, surface cond., adsorbate coverage, FTIR obs. 69494
diamond:N, synthetic crysts., implanted N redistribution 126322
diamond:S single crysts., ion implanted, struct. props. 126290
diamond, built-in bolometric detector 121248
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
diamond, ion implant. related defects, inhib. of light element diffusion 115557
diamond, ion-implanted, graphitization, variable range hopping cond. 91987
diamond, search for donors 115550
diamond(100) surfaces, CVD homoepitaxial grown, photoemission props. 91603
diamond films, oriented, deposition on noble metal *(Japanese)* 101344
diamond radiation detectors, response, temp. effects 98099
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
DMOSFET, trench device, self-aligned fab., hydrogen annealing 126829
DRAM cells, 0.18 µm, enhanced retention time by fast-pull/fast-cool ingot growth, thermal budget 125474
dual gate CMOS DRAM self-aligned contact proc., tetrachlorosilane-based SiN mask films 125473
dual spin-valve type ferromag. double tunnel jns., annealed, charact. *(Japanese)* 92801
elec. machines, annealed amorph. mag. cores, power loss, permeab. 99630
ferromag. tunnel jns., local transport props. 127327
FET high-temp. high-power technol. 103908
five-wafer batch annealing syst. using resistively heated stacked hot plates 69782
flash EEPROM, annealing after self-aligned source dry etching, reliab. 90918
flash EEPROMs, thin oxide, anom. cell cond. mechanism 79894
flip-chip package, lead-free solder and under-bump metall. 113513
fluoropolymer film, amorph., prep., ultra-low dielec. const. 81643
gas sens. sapphire substr., Pt metallis. bonding, adhesion layers 97529
gate oxides, N_2O(NO)-nitrided on 4H SiC 92016
gate oxides, very thin, trap generation/breakdown procs. 69761
glass/Ta/NiFe/MnIr/CoFe/Ta bottom-pinned spin valves, exchange enhancement 81836
granular systs., nanostruct., GMR props. 127325
graphite, field emission cathode materials, prep., appls. 102890
III-V semiconds., modeling of implanted B(Se) ion distrib. 115523
Josephson trilayer jn., interface treatment 70882
LCD glass substrs. with different barrier layers, Na exchange 132104
LCD TFT prep. using high-press. annealing syst. *(Japanese)* 82239
lead-free electronic joints, ternary intermetallic alloy kinetics and form. 113623
LED, LD, proton displacement damage 128307
light-induced metastable defects, photocarrier lifetime, annealing 127902
logic/syst. LSI, front end of line technol., review 115506
long-period fiber grating fab. by FIB irrad. 82090
long-period fibre grating fab. by F_2-laser radiation 82091
machines, annealed amorph. mag. cores, power loss, relative permeab. 88678
mag. tunnel jns., naturally oxidized, temp. effects 127361
methylsilane/trimethylsilane-doped low k PECVD organosilicate glasses, elec. props. 104233
MOS IC oxide leakage currents, Si dangling bond defect link, direct evidence 81529
MOSFET, mobile hydrogenous ion generation in gate oxide, memory appls. 70114
MOSFET, radiation induced pos. charge, bias annealing *(Chinese)* 81332
MOSFET gate oxide, H_2-anneal induced pos. charge generation and props. 92378
MOSFETs, deep sub-µm, RF perform., plasma charging damage impact 102643
n-MOSFETS fabricated in BiCMOS proc., radiation damage 115798
n-channel enhancement mode power MOSFET, C-V/G-V charact., high temp. anneal effects 103832
nanoparticles deposition on single cryst. substrs., surface smoothing 68368
nMOSFET, 1/f noise behavior rel. to NO nitridation 70088
nMOSFET, interface trap generation under stress, H/D isotope effect 92355
ohmic contacts, surface treatment, low resist./thermal stabil. 80917
organic LEDs, Joule heating effect, organic decomp. and gas evol. anal. *(Chinese)* 128008
organic mol. dots, self-organized cohesion 126599
oxide/oxynitride films on strained-$Si_{0.82}Ge_{0.18}$ layers, post-oxid. annealing 103240
oxygenated microstrip detectors, read out with LHC speed electronics 121461
p^+/n and n^+/p shallow jns. form. by PIII, dopant deposition effects 115569
pentacene TFT, elec. charact., annealing effects 69568
phosphosilicate FBG, thermal/UV presensitis., high temp. sens. appl. 97288
photoresist film, mech. props., He ion irrad./annealing 90579
piezoceramic resonators, reson. freq. stabil./domain struct. *(Polish)* 70438
PMOS dosimeter, annealing *(Chinese)* 87991
poly/SIS/Si interface eval. by differential conductance *(Chinese)* 103223

nnealing continued
polyimide insulation film, vac. props. *(Chinese)* 81725
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647
polymeric LB film incorp. LED, operating lifetimes 116990
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. props. 104092
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec. props. 103243
polysilicon films for MEMS integrat. with submicrometer CMOS proc. 92560
polysilicon TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
polysilicon TFT, RF plasma & SiN_x hydrogenation comparison 81264
polysilicon TFT, silicide mediated crystn., large-area LCD 97732
polysilicon TFT-LCD glass substr., thermal dimens. stabil. 104818
polysilicon-ONO-Si NVM device retention reliab., two-step high temp. deuterium anneals 79892
PPV-type pentamers, vac.-deposited/spin-cast films, field-effect mobilities 69624
PSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
PVDF-trifluoroethylene copolymers, ferroelec. phase transit., struct. 125103
PVDF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. props., XRD 127206
PZT(:Mn) sol-gel thin films, pyroelec. detectors 104478
quartz, plasma assisted RT bonding, MST technol. 103241
α-quartz films, ion beam doping, epitaxial regrowth 79406
radioisotope batts. for long-life low-power appls. 99893
sapphire:H^+,Er^{3+}, waveguide fab., ion doping, moderate temp. diffusion technols. 127726
sapphire-ruby single-cryst. fibre, high temp. thermometers 97304
Si:N, low energy N implant., chem. anal. 91976
Si solar cells, degrad. of surface quality due to antireflective coating deposition 100144
silica low-k film, methylene group incorporation, CVD, elec. props. 101320
silicate glass, F(C) doped, low dielec. const. CVD oxides, phys./elec. charactn. 102767
silicide thin film form. on Si under high-temp. annealing, diffusion model 115690
SIMOX structs., oxide layer charging, depth profile anal. 80958
SIMOX wafer surface defects, effects on device charact. *(Japanese)* 91888
SOI, wafer direct bonding, lin. annealing method 115454
SOI MOSFET, large-grain polysilicon-on-insulator substr. 81316
SOI substrs., buried WSi_x layer, charactn., appls. 91917
SOI wafers, thermally oxidized bonded, cryst. surface defect, oxygen gettering 91907
SOS, solid phase epitaxially regrown, oscillatory strain relax. 79301
spin-on organic aromatic polymers, dielec. and barrier props. 104405
SSNTD, nuc. tracks annealing, activation energy 98051
stacked hotplate low-temp. annealing syst. for 300 mm wafer thermal proc. 80978
steel, elec., sheets, oxide layer characterisation, high resoln. AES/XPS 68400
steel indust., strip speed determ., mag. contact-less sens. 132179
string ribbon Si solar cells, PECVD SiN_x induced hydrogen passiv. 100056
SU8C resist, electron beam lithog., exposure, micro-optics appl. 69977
sub-5 nm multiple-thickness gate oxide form. by O implant., optim. 70313
sub-qtr.-micron CMOS devices, ultrathin ox/nitride gate stack, RTCVD 127025
surface capping during annealing, effects on ultrathin SIMOX materials microstruct. 91908
thin film integrated capacitors, paraelectric and ferroelec. materials as dielec. 91414
thin gate oxide MOSFETs, interface states, thermal annealing 126814
thin Si containing polymer films, two fluorinated ionic PAG diffusion/distrib., RBS, SIMS 92244
triphenylamine polymers, ethynyl/aromatic moieties, synthesis & props. 90569
tris-8-hydroxyquinoline aluminum films, nanoscale photophysics 115347
ultra-shallow jns., PLAD, comparison with beamline implant. 115574
US transducers, micromachined, using SiN membrane, fabricated in PECVD technol. 111503
wafer batch furnace proc., develop./appls. 70244
WWER press. vessel, radiation damage control 112260
YIG films, narrow-linewidth, for heterog. integrat. 92790
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
Ag direct write metallizations, contact form. 103492
Ag ribbons, {110} textured, prep. for biaxially aligned supercond. tapes 68396
Ag/Al bilayer self-encapsulation proc. kinetics model 92180
$Ag/YBa_2Cu_3O_{7-δ}$ thin film contact, contact resist., Ag morph. 102495
Ag-In-Sb-Te phase-change opt. recording films, crystn. 82279
Ag-In-Te-Sb-O monolayer high dens. opt. storage films 93289
Ag-nanoparticle-dispersed fluorinated polyimide, thin flexible polariser fab. 71458
Ag^+-glass waveguides, GRIN profiles, thermodiffusional form. 127734
$AgGaSe_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
Al direct write metallizations, contact form. 103492
Al multigrain thin film lines, electromigration props., grain boundary struct. 92110
$Al/AlO_x/Al$ single electron tunneling transistors, annealing effects 104575
Al/GaN ohmic contacts, elec. characts. 91862
Al/TiN bilayers, 111-textured, interfacial react. pathways/kinetics, XRD and TEM study 126479
$Al/TiN_x/Si(100)$ thin film diffusion barrier syst., XANES obs. 80901
Al/TiN(001) epitaxial diffusion barrier, annealing, interfacial react. 91933
Al-Cu lines, electromigration immunity, pre-annealing effect 115672
Al-Si jn. detectors, proton irrad. effects 87216
AlF_3 thin films growth on GaAs(110), struct. and chem. stabil. 114403
AlGaAs/GaAs high-power 980 nm laser arrays, nonabsorbing facets 117246
AlGaInP/GaAs HBT, proton implant isolation *(Chinese)* 103785
AlGaN/GaN HEMT, proton-irrad., dc/rf perform. 125706
AlGaN/GaN emitters, field emission study, UPS, MOVPE 80577
AlInAs/InGaAs HEMT, diffusing F atom suppression by PH_3 plasma treatment 115949
AlN epilayers, MBE growth, annealing, reactive N_2 kinetic energy 124835
AlN, epitaxial growth on $SrTiO_3$ substrs. 101304
AlN/sapphire films, oxid., synchrotron X-ray scatt. 69894
AlN/sapphire thin films, SPE recrystn., GaN epitaxy substr. 125050
AlN(0001) blocking layer, self-limited wurtzite-struct., form at Al/TiN(111) diffusion barriers 69539
AlON diffusion barrier form. for Ag interconnect metallization 92179
Au multiple island layers on fiber core, sens. appls. 75558
Au nanoclusters in SiO_2 films, nanocluster sizes control, ion-beam assist. depos. 90529
Au/Cr/sapphire interfacial fracture, hybrid microcircuits, annealing 102839
Au/Ge bilayer films, fractal form., thickness ratio/annealing depend. 91858
Au/Ge/Pd/n-GaSb ohmic contacts, microstruct. anal., sub-μm contacts 103165

annealing continued
Au/PZT/p-Si ferroelec. memory diode, fab./charactn. *(Chinese)* 104475
Au/Pd/p-GaN, interfacial react., surface treatment effect, ohmic contact 81105
$Au/Si_xN_y/n$-GaAs struct., N-rich PECVD dielec. fab. 124909
Au/Sn flip-chip interconnection, thermal reliab. 67641
$Au/Sr_{1-x}La_xTiO_3$, Schottky jn. fab. 80902
Au/Ti/p-diamond:B ohmic contact, specific contact resist. meas., transm. line model anal. *(Chinese)* 115427
$Au/TiB_2/GaAs$ Schottky contacts, transit. layer, transverse bulk photovoltage 69712
Au-In-Ni bonding syst., fluxless microjoining, isothermal solidif. 102871
B doped LPCVD polysilicon film, pre-annealing influ. on residual stresses 103245
$(Ba,Sr)TiO_3$ dielec. film, two-step annealing, TiN barrier props., post-treatment temp. effect 92662
$(Ba,Sr)TiO_3$ film, MOCVD growth, annealing proc. optimisation 70403
$β$-BaB_2O_4, planar waveguides, He^+ implant., losses, freq. conversion 128524
$Ba_{0.96}Ca_{0.04}Ti_{0.84}Zr_{0.16}O_3$:Mg thin films, metalorganic decomp., dielec. props. 70390
$BaMg_{(1+x)}Si_xAl_{10}O_y:Eu^{2+}$ films, spray pyrolysis prep., luminesc. 116934
$Ba_{0.7}Sr_{0.3}TiO_3$ thin films, sol-gel tech. prep., props. 104381
$Ba_xSr_{1-x}Ti_{1+y}O_{3+z}$, MOCVD films for high freq. tunable devices 81666
$Ba_xSr_{1-x}TiO_3$, thin film tunable microwave components, current status, appls. 81663
$BaSrTiO_3$ thin film MOCVD growth/charactn. for HF devices 90367
$(BaSr)TiO_3$ thin films, D doping, annealing, capacitor elec. props. 81672
$BaSrTiO_3$ thin films by PLD, microstruct./props., O_2 partial press. 90466
$(BaSr)TiO_3$ thin films, hysteresis effect, alternative gate dielec. appl. 115465
$Ba_{1-x}Sr_xTiO_3$:La thin films, growth, dielec. props. 81671
$(Bi,La)_4Ti_3O_{12}$ MFIS-FET, ferroelec. memory 81769
Bi2212/Ag tapes, melt proc., 2201 intergrowths 127436
$Bi_{4-x}La_xTi_3O_{12}$ thin film, phys. and elec. props., effects of bottom electrodes 127172
BiPbSrCaCuO HTSC tapes, Ag clad, mag./elec. transport props., precursor powder props. effect 70706
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, overpressure proc., J_c 70716
$Bi_2Sr_2CaCu_2O_{8+δ}$ whiskers, synthesis tech., charactn. 68112
$Bi_2Sr_2CaCu_2O_{8+x}$, SOFC contact layers, chem. compatibility 89174
$Bi_2Sr_2CaCu_2O_{8+x}$ single-cryst. films, LPE growth 125033
$Bi_2Sr_2CuO_{6+x}$, SOFC contact layers, chem. compatibility 89174
Bi_2TeO_5:Au$^+$, nanoclusters form., strong absorpt. max. 91961
$Bi_4Ti_3O_{12}$ ferroelec. films on Si(100) with Si oxynitride ultrathin buffer layer 127171
C antireflective coating over photoresist, etch selectivity, O_2/CHF_3/Ar gas chem. 103308
C crossing multiwalled nanotubes, form. of connection in electron beam 101535
a-C:F low-k ILD thin films, thermally stable, by ICP-CVD 92152
a-C:H film in MIS struct., permitt. as fn. of thermal annealing 91895
a-C:H films, saddle-field glow discharge deposition and props. 68381
a-C:H,N films, low-temp. annealing effect, field emission 80569
$CaAl_2O_4:Eu^{2+}$ blue-emitting phosphor films, PLD, post annealing 127936
$CaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
CdHgTe films, nonaqueous electrodeposited, solar cell appl. 101439
CdO/CdS thin films, cond. oxide layer form. during air heating 103369
CdS nanocrystallites in SiO_2 matrix, surface modif. 91634
CdS nanocrystals form. in SiO_2 substrs. by ion implant. 126240
CdS/CdTe thin film solar cells, 2-μm thick, approaching high efficiencies over 13% 100191
CdS-CdTe solar cells, Ni_2P back contact material expts. 100129
CdS-Cu(InGa)Se_2 heterostruct. solar cells, D^+ implant. effects 100125
$CdS_{1-x}Se_x$ QD in borosilicate matrix, X-ray irrad. 91848
$CdSe/TiO_2$, screen printed/spray painted coatings, sensitization by CdSe 79383
CdSeS QD in glass, structural and opt. props. *(Chinese)* 126179
Cd_2SnO_4, film, nanocryst., sol-gel prep., electrochem. props. 103089
CdTe films, MBE growth in (100) orient., GaAs(100) substrs. 101279
CdTe, gamma detector, semicond. cryst. optim. 87277
CdTe superstrate thin film solar cells, window/absorber layers influence 100109
CdTe/CdMgTe buried quantum wires, interdiffusion using patterned SiO_2 masks 80826
CdTe/CdMgTe buried single QDs using selective thermal interdiffusion 91775
CdTe/CdS flexible solar cells on polymer films 89286
CdTe/CdS heterojunctions, interface morph., annealing effects 126116
CdTe-CdS solar cells, CdO:Sn MOCVD front contact appl. 100181
CdZnTe, gamma detector, semicond. cryst. optim. 87277
CdZnTe, high resist. wafers, annealing, cryst. quality *(Chinese)* 103244
CdZnTe substrs., IR absorpt. behavior, annealing 91671
CdZnTe:N,H_2 QW, N acceptors, H_2 passiv., PL obs. 103146
CdZnTe/Si growth, morph./cryst. quality improvement, MBE 90341
CeO_2 thin films for gate dielec. appls., microstruct., elec. props. 70372
Co/Si thin films, annealing, init. stage, dens. functional study 80974
$Co/SiO_x/Si$, SPE growth, stress effects, TEM 125049
Co/Ti/Si, SPE growth, stress effects, TEM 125049
Co-C ferromag. nanodot arrays prod. by direct interferometric laser annealing 116270
a-Co-C films, mag. nanodot arrays prod. by direct laser interf. lithog. 127309
Co-Cr films with perp. anisotropy, magnetis. reversal 92804
CoCrPt thin film mag. recording medium, nanoscale protection 116451
$CoCr_{15}Pt_{13}$ perp. recording media, high M_r sq. and exchange decoupled 116263
CoCrPt:C HCP granular films with CrTi underlayer, mag. and reversal props. 127284
$CoFe_2O_4$ epitaxial thin films, strain tuned mag. props. 92795
a-$Co_{68.25}Fe_{4.5}Si_{12.25}B_{15}$ wires/ribbons, GMI 81813
$Co_{27}Pt_{73}$ alloy films with perp. mag. anisotropy, grain growth 70491
CoPt/C multilayers, annealed, mag. and structural props. 81881
$CoSi_2$ films, etching in dil. HF solns. 92001
$CoSi_2$ form. on porous Si by high dose ion implant. 81014
$CoSi_x$, advanced salicide technol., sub-0.20 μm fully-depleted SOI devices 80930
$CoSi_2$/n-Si(111) contacts form. by solid state react., Schottky barrier characts. *(English)* 103169
Cr/Ti/diamond, IBAD, RBS charactn. 114402
CsI:Pb crysts., Pb^{2+}-based aggregates, luminesc. *(English)* 71523
Cs_2O/Si(111) surfaces, thermal annealing, photoemission/work-fn. meas. 126274
Cu backside contamination issues in CMOS proc. integrat., case study 92476
Cu dual damascene microstruct./via chain yields, annealing conditions optim. 126487
Cu electroless deposition for ULSI 90501
Cu electroplated film, Cu/Cu/TaN/SiO_2/Si multilayer interfacial react. 81113

annealing continued
Cu films, acid-based electroless deposition, kinetics & microstruct. 90518
Cu films on Si substrs., strain-energy-driven abnormal grain growth 79218
Cu inlaid interconnect lines, microstruct., annealing conditions 69929
Cu interconnect technol., high-vol. mfg. transit. 115685
Cu interconnects, thermal stabil., self-aligned MgO layer effects 69924
Cu layers, enhancement of adhesion to Dow Cyclotene 3022 through metal sputtering 114424
Cu line patterning, high resoln., by direct imprinting 115668
Cu metallization, 0.10 μm wide lines, failure obs. by OBIRCH method 126459
Cu metallization, SiN diffusion barrier, NH_3 plasma pretreatment 126478
Cu migration, H promoted in high press. anneal proc. 69923
Cu seed layer for Cu metallisation, stresses 103484
Cu seed layer for interconnection, agglomeration control 126482
Cu straight wires arrays form., electrodeposition 101433
Cu thin films, void form. by thermal stress conc. at twin interfaces 103464
Cu two-level interconnect, defects and electromigration 115691
Cu wafer bonding, microstruct., oxide distrib. 68387
$Cu/(HSiO_{3/2})_x/Si$, sputtered Cu films, thermal reacts. 92134
Cu/Cu/TaN/SiO_2/Si multilayer, interfacial reacts., electroplated Cu props. 81122
Cu/SiO_2/Si, sputtered Cu films, thermal reacts. 92134
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu/Sn/Si syst., 3D struct. form./evol., AFM, AES, SEM, EDX 114307
Cu/Ta/Si(111) thin films, neg. bias sputtering for Ta silicidation retardation 92136
Cu/Ta/SiO_2/Si films, Ta diffusion barrier layer oxid., thermal annealing 69935
Cu/TaN/SiO_2/Si multilayers, struct. integrity, IMP-deposited nitride thickness effect 92099
Cu/a-SiCOF interface, ULSI interconnect metallization, annealing, XPS/AES/SEM 103477
Cu/low-k cyclohexane-based plasma polymer films interface, chem. interact., adhesion characts. 103453
Cu-Al alloy/SiO_2 interfaces, evol. during bias temp. stressing 91909
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-Mo-based multilayer films for advanced metallisation, microstruct., Mo addit. effects 115675
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
Cu(111) single-oriented state on SiO_2 by annealing Cu-Zr film, Cu-Zr/ZrN/Zr/Si contact thermal stabil. 103483
Cu(In,Ca)Se_2 large area films for high efficiency solar cells 126104
Cu(InGa)$(SSe)_2$ solar cells, absorber transient behaviour, buffer layer effects 100136
$CuInS_2$ thin films, spray pyrolysis, heat treatment and props., solar cell appls. 79374
$CuInSe_2$ thin films, flash evaporated, struct. anal. 90535
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-3y}O_4$ NTC thermistors, reliab. 102763
Er_2O_3 buffer layers for YBCO/Ni coated conductors, prep. 68343
$EuBa_2Cu_3O_x$ films, recovery, sputtering induced oxygen plasma effect 70625
$(Fe,Ni)_{70}Zr_{10}B_{20}$ amorph. alloy powders, mech. alloying, mag./thermodyn. props. 81817
Fe/CoNbZr multilayers prep. by Ar/H_2 mixed gas sputtering/heat treatment, permeab. 104512
α-Fe/$Nd_2Fe_{14}B$ melt spun ribbons, reversible magnetis. 81812
Fe/Si bilayers, β-$FeSi_2$ form., combined ion irrad./annealing 91959
Fe-Al-Ga-P-C-B-Si glassy alloy powders, consolidation, mag. props. *(Japanese)* 81797
Fe-B-Si alloys, mag. props., Al substitution effect 104493
Fe-N sputtered films, prep., struct., soft mag. props. 127304
Fe-Pt bulk magnets, remanence, order-disorder transform. effects 70553
Fe-Pt isotropic nanostructured thin films, struct. and mag. props. *(Chinese)* 116249
Fe-Si, spray form., mag. props. 104497
$Fe_{73.5}Cu_1Mo_3Si_{13.5}B_9$, large sized nanocrystalline cores, mass annealing, exothermal proc. anal. 81911
$Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$, large sized nanocrystalline cores, mass annealing, exothermal proc. anal. 81911
FeMn/NiFe films, improvement of thermal stabil. of exchange coupling by Pt addit. 81857
FeMn-based spin valves, giant magnetoresist., nano-oxide layers effects 81841
FeNbCuBSi nanocryst. glass-coated microwires, struct. and HF mag. props., annealing effect 81815
FePt alloy films, Zr-doped, rapid ordering 81795
FePt comp. controlled nanoparticle materials, mag. props. 116251
FePt self-assembled nanomagnet arrays, MOKE spectra, ultrahigh dens. recording appls. 116303
$FeSi_2$ thermoelec. devices, slip casting prod. 68390
β-$FeSi_2$-based MIS diodes, sputtering prep. 90238
$Fe_{77.5}Si_{7.5}B_{15}$ glass covered amorph. wire, sound vel. 104489
FeZrBAg double rect. spiral thin-film inductors, characts. 127405
$Fe_{84}Zr_7B_8Cu_1$ ribbons, effect of annealing on mag. props./magneto-impedance response 81816
GaAs (001), Mg adsorpt., surface/bulk props. 126039
GaAs, SI, internal friction, annealing effects 91653
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
GaAs cryst. annealing proc. using VB method, disloc. dens. anal. 115486
GaAs epilayer on Si, $(NH_4)_2S$ treatment, annealing, deep levels reduction 92007
GaAs epilayers, low temp. grown, defect props. 79235
GaAs, epitaxial growth on $SrTiO_3$ substrs. 101304
GaAs films, LT-MBE grown/As implanted, As precip. Ostwald ripening 126035
GaAs solar cells, proton irrad. and thermal annealing *(English)* 112876
GaAs surface, SR treated, photoreflectance obs. *(Korean)* 69515
GaAs:^{73}As, implant., diffusion study 126278
GaAs:Br, ion-implanted, damage prod., ion energy depend. 81038
p-GaAs:C,Mg wafer, elec. isolation, proton ion bombard./annealing 126038
GaAs:H, H-ion implant., depth distrib., damage profiles 115561
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dispersion 69543
GaAs:Sb films, low temp. grown, struct. transforms. 68190
GaAs:Se, ion implant., strain profile, Bragg-case sect. topography 69820
n-GaAs:Si, α-particle irrad., annealing, electronic/struct. props. 126008
GaAs:Si epitaxial layers, combined FIB/MBE synthesis, carrier activation 91660
GaAs:Si,He layers, ion-beam-induced isolation 126310
$GaAs/Al_{0.35}Ga_{0.65}As$ MQW, alpha particle irrad., annealing, PL obs. 80816
GaAs/AlGaAs QD, droplet epitaxy, photolum. study 114297
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaAs/InGaAsN/GaAs QWs, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
GaAs(100), thioacetamide passiv., struct., thermal stabil. 69836

annealing continued
$GaAs_{0.983}N_{0.017}$, dil. syst. N distrib., STM obs. 103000
GaAsSbN/GaAs QWs, MBE growth, 1.3-1.55 μm emission appl. 101259
Ga(In)NAs films, rf plasma MBE, VCSEL appl. 124848
Ga(In)NAs materials, MBE growth, annealing improved luminesc. efficiency 102998
GaInNAs, solid source As MBE 101453
GaInNAs, solid source-MBE grown, high temp. in-situ annealing 103242
GaInNAs/GaAs LDs, 1.3 μm, low threshold current operation 93670
GaInNAs/GaNAs QWs, MBE, struct./PL props. 124866
$Ga_{1-x}Mn_xAs$ films, MBE, defect-controlled ferromag., annealing time 104486
$Ga_{1-x}Mn_xN$ single cryst., powder growth method., struct./mag. props. 124802
GaN LEDs, Ni/Au ohmic contacts form., annealing in O_2 ambient, oxid. 80918
GaN, RF plasma MBE growth, post growth thermal annealing 103239
n-GaN Schottky diode charact. in Ni, Ta and Ni/Ta metal contact schemes 92291
GaN Schottky diodes, dry-etch damaged, elec. props. recovery by N_2 plasma exposure 126633
n-GaN Schottky diodes, high dens. plasma damage, Cl_2/Ar discharges 126645
n-GaN, Ti/Al ohmic contacts, microstruct. evol. with increasing anneal temp. 69721
GaN cryst., ion implanted, wet etching, photoresist 126420
n-GaN, develop. of Al-free ohmic contact 103175
GaN, dry etch damage recovery by N_2 plasma treatment 69860
GaN, effect of N/Ge coimplantation on Ge activation 103270
GaN epilayers, MBE grown, annealing, PL 126276
GaN, epitaxial growth on $SrTiO_3$ substrs. 101304
GaN films, MOVPE, thermal annealing, Ga droplet form. 68292
GaN films, RF plasma MBE on GaAs, cryst. struct. 68210
GaN films, high press./temp. annealing, micro Raman spectra 126061
GaN, ion implant., current status 103251
GaN layers, ELO, WN_x mask, MOVPE, elec. props., WN_x/GaN contacts 79334
p-GaN layers, Ni/Al/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
p-GaN layers, Ni/Ti/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
p-GaN ohmic contact, H_2 storage materials effect 80920
GaN one-step MOCVD growth on $ZnAl_2O_4$/α-Al_2O_3 substrs., XRD charactn. *(Chinese)* 124932
GaN surface, RIE damage 126382
p-GaN, surface-treated, elec. characts. of thermally stable Ru and Ru/Au ohmic contacts 69709
p-GaN, thermally stable Nb and Nb/Au ohmic contacts 69720
GaN:Au, ion implant., thermal annealing 81010
GaN:Be (Mg),O, coimplantation, ohmic contact resist. appl. 126304
GaN:Be, elec./structural anal., Raman spectrosc., high resoln. XRD 81000
GaN:C(Au) films, ion implant. disorder, dyn. annealing 81011
GaN:Eu epilayers, ion implant., PL 81022
GaN:Fe, ion implant., damage, annealing, lattice site location 81016
GaN:Fe^+ films, implanted, struct., ion channeling/Mossbauer spectra 81037
p-GaN:Mg activation, thermal annealing, oxidizing atmos. 81045
GaN:Mg bulk single crysts., elec. props., temp. depend. 69537
p-GaN:Mg film, MOCVD growth, Mg doping *(Chinese)* 79315
p-GaN:Mg films, local vibr. modes, acceptor activation/deactivation 79344
GaN:Mg films, low temp. activation, N_2 annealing with thin Ni film 80975
GaN:Mg, novel methods, p-type/RF input activation, long-time air annealing, hole conc., PL 80983
GaN:Mg/AlN epilayers, ion implant., annealing, PL 126328
p-GaN:Mg/Pd ohmic contact, Au diffusion barrier, elec. props. 80919
GaN:Mg,Be films, MOCVD, Be implant., high hole conc. 69826
GaN:Mn, high dose ion implant., nanoscale mag. regions 127326
GaN:Pr epilayer, Pr doped, PL/CL 126329
n-GaN:Si/Ti/Al/Pt/Au ohmic contact, Pt barrier thermal stabil. 103176
GaN:Ti^+, O^+, Fe^+, Cr^+, FET struct., implant isolation, sheet resist. 126822
p-GaN/Au/Pd contacts, elec./struct. props., surface treatment 69717
GaN/GaP(001) epilayers, growth evol., MOVPE, XRD, AFM 90395
p-GaN/Pd contacts, elec./microstruct. changes, surface treatment 69716
GaN/sapphire, N_2^+-ion implantation and α-irrad. effects, Raman and photolum. spectra anal. 126007
p-GaN/transition metal ohmic contacts, contact resist., reliab. 80921
$GaN_{1-x}P_x$ hexagonal films, laser-assisted MOCVD growth, PL obs. 101381
Ga_2O_3:Mn thin films, TFEL devices, sol gel proc., dip coating tech. 101409
GaP:^{73}As, implant., diffusion study 126278
GaP:N_2^+, α-GaN phase, ion-implant. synthesis 126296
GaSe nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
p-GaSe single cryst., defect centers, annealing 91941
GaInNAs/GaAs superlattice, thermal treatment, structural effects 115410
Gd_2O_3 buffer layers for YBCO/Ni coated conductors, prep. 68343
$Gd_{0.23}Si_{0.14}O_{0.63}$ gate dielec. films, thermal stabil. and diffusion anal. 127254
Ge QD, CVD growth, dielec. substr. 101310
Ge QD on Si(100), multistep growth, dot struct./size/dens. control 124828
Ge embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
Ge nanowires in oxidized Si V-grooves, ion beam synthesis 92250
Ge, uniform nanoscale islands, form. on Si(111)-7×7 90269
Ge wafers, ion-implanted B diffusion 126305
Ge:C, clean low-defect-dens. surfaces, in situ procs. 69840
Ge:H, surface blistering, H-implant. dose effects 91968
Ge/Au/Si, SPE growth, stress effects, TEM 125049
Ge/GaAs, SPE growth, stress effects, TEM 125049
Ge-redistributed polysilicon-SiGe stack gate for CMOSFETs, high-perform. 126773
Ge(100) substrs., self-ion-induced swelling 81032
Ge(100) surface, S terminated, core level photoemission spectra 69914
$Ge_2Sb_2Te_5$ chalcogenide glass opt. data storage material, thermal treatment effects 92960
GeTe chalcogenide glass opt. data storage material, thermal treatment effects 92960
HfO_2 ultra-thin gate dielec. MOSFETs with TaN electrode, nitridation surface prep. 126739
HfO_2/$HfSiO_4$/Si struct., $HfSiO_4$ form. react. 103193
$HgBa_2CaCu_2O_x$ HTSC thin films, prep. 79411
HgCdTe, CVD on Te adsorbed Si substr., surface morphologies, annealing effect 126059
HgCdTe LPE layers, undoped annealed, carrier conc., substr. quality effect 91673
HgCdTe, MBE growth, In doping, IR FPAs appls. *(Chinese)* 91966
HgCdTe p-on-n heterostruct. IR photodiodes, planar proc. charactn. 97259
$Hg_{1-x}Cd_xTe$:As epilayers, in situ doped, MBE growth, elec. props. 102999
$Hg_{1-x}Cd_xTe$:As, p-type dopant activation kinetics 91989
HgSe:V crysts., growth, transport props. 91643
ITO coatings, chem. soln. deposition, proc. and elec. props. 101426

annealing continued
ITO films, DC/RF magnetron sputtering, elec./struct./opt. props. 79209
ITO films, rf sputtering, struct./elec. props. 103050
ITO thin films, reactive evap. prep. and charactn. 79228
ITO/polysilicon contacts with In & Sn diffusion barriers, TFT LCD *(Korean)* 115437
InAlAs/InGaAs HEMT IC, opt. commun. cct. 120166
InAs (110), electron accumulation layers, near-surface region 115322
InAs, epitaxial growth on $SrTiO_3$ substrs. 101304
InAs nanocrystals in Si, form. by seq. ion implant., charactn. 81031
InAs/GaAs QD, post-growth thermal treatment, PL/TEM obs. 126168
InAs/InP QD, MOVPE, V/III ratio/annealing effects 80982
InAs/InP QD superlattice, solid source MBE, emission tuning 114299
InAs-GaAs QD, LP-MOVPE grown, PL efficiency 91825
InGaAs SQW, ion implanted, saturable absorber mirrors for pass. mode-locking 105485
InGaAs concave disks, heterog. droplet epitaxy, In segreg. 114296
$In_{0.2}Ga_{0.8}As$ on GaAs(001), growth method, monitoring of surface topography/stress evol. 90274
InGaAsN, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
InGaAsN, deep levels, high-efficiency multi-jn. solar cells 89283
$In_{0.04}Ga_{0.96}As_{0.99}N_{0.01}$, dil. syst. N distrib., STM obs. 103000
InGaAsN/InP QW struct., CBE growth, NH_3 precursor 91942
InGaAsP/InP lasers for CMS tracker, radiation damage & annealing 97988
$In_xGa_{1-x}N$:Mg epitaxial MOCVD films, elec./opt. characts. 69513
p-InGaP solar cells, electron radiation induced defects recovery 112923
InGaP solar cells, radiation hard, DLTS obs. 134408
InN films, MBE on InN buffer layers, disloc. densities, XRD 79229
InN films, low temp. growth, annealing, RF plasma excited MBE growth 91937
In_2O_3/SeO_2 thin films, struct., elec. and gas sens. props. 97474
InP, MeV As and P ion implanted and annealed, elec. and opt. props. 126018
InP, SI substrs. 115312
InP, dry etching using N_2 containing chem., damage charactn. 126372
n-InP, elec. isolation by ion bombard., dose depend., thermal stabil. 80734
InP, implant.-induced carriers/depth profiles correl., annealing 91958
InP, n-type/p-type, proton bombard., elec. isolation 69508
InP:Er, implanted, lattice location, emission channeling obs. 81039
n-InP:H, hydrogen neutralization effect, defect states 80711
p-InP:Zn, plasma-induced defects, elec. props., migration mechanism 115314
InP/InGaAs/InGaAsP integrated laser heterostruct., ion implant. mask fab. 93625
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
InP-Si direct wafer bonding, cryst. defects charactn. 115475
InP(001), As/P exchange quantum wires/dots form. 68202
InSb radiation hardness, preliminary irrad. infl., detector appl. 126325
p-InSb:Te, elec. charact. 91618
In_2Se_3 amorph. films, AC cond., dielec. props. 91693
$In_2(Se_{1-x}Te_x)_3$ film, synthesis, struct./elec. props. 79247
Ir films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
Ir/TaN/SiO_2 struct., MFMOS one transistor memory, electrode/barrier thermal stability 104471
IrMn exchange-biased double tunnel jns., bias voltage & interdiffusion 116298
IrMn spin valve films, magnetron/ion beam sputtered, thermal stabil. 81854
IrO_2 films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
$K_3Na(SO_4)_2$:Eu TLD phosphor, correl. ESR/PL/TL studies 76725
$(La,Ca)CrO_3$ for interconnect in SOFC, durability *(Japanese)* 101478
$(La,Nd)_{0.7}Sr_{0.3}MnO_3$ epitaxial films, PLD, thermal stabil., O control 79359
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial CMR thin films, RF magnetron sputtering deposition 79210
$LaCrO_3$/Cu-Pd/Cr-Fe-Y_2O_3, brazed joints, SOFC 89156
$LaMg_{0.5}Ti_{0.5}O_3$-$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
$LaNiO_3$/PZT films, enhanced fatigue property 116147
$La_{0.5}Sr_{0.5}CoO_{3-\delta}$ thin films, O surface exchange coeff. 123781
$La_{0.5}Sr_{0.5}CoO_3/Pb_{0.9}La_{0.1}Zr_{0.2}Ti_{0.8}/La_{0.5}Sr_{0.5}CoO_3$ capacitors, O, deficiency, vacancy type defects form. 102775
$La(Sr)Cr(Ru,Mn)O_{3-\delta}$, SOFC anodes, catalytic/electrochem. props. 134379
$La_{2/3}Sr_{1/3}MnO_3/SrTiO_3/YBa_2Cu_3O_{7-\delta}$ HTSC multilayers, growth, struct. 68303
$La_2Zr_2O_7$ buffer layers for YBCO/Ni coated conductors, prep. 68343
^{6}LiF:Mg,Ti TLD, Fe-ion irrad., glow-peak stabil. 98815
$Li_2B_4O_7$ cryst., low-loss opt. planar waveguides, He^+ implant. form. 71345
$Li_2B_4O_7$, planar waveguides, He^+ implant., losses, freq. conversion 128524
LiB_3O_5, planar waveguides, He^+ implant., losses, freq. conversion 128524
LiB_3O_5, waveguide form. by keV H^+ ion implant. 116668
$LiCoO_2$ film micro-batt. develop., micro/nanospacecraft appl. 122523
$LiCoO_2$ thin film cathodes, sol-gel fab., Li/$LiCoO_2$ cells 123735
LiF:Mg,Cu,Na,Si TL detectors, sintered, dosimetric props. 133085
LiF:Mg,Cu,P phosphor, prep., thermolum., ESR 116936
β-$LiGaO_2$ films, MOCVD growth using novel single precursors 90426
$LiNbO_3$, annealed proton-exchanged waveguides, quasi-phase-matched SHG *(Chinese)* 128494
$LiNbO_3$ dielec. channel waveguides, propag. loss, Fabry-Perot reson. method 104734
$LiNbO_3$, proton exchanged Z-cut, phase comp., Raman study 71316
$LiNbO_3$ waveguides, ion implanted, SHG depth depend. 82872
$LiNbO_3$:H^+,Er^{3+}, waveguide fab., ion doping, moderate temp. diffusion technols. 127726
$LiNbO_3$:Ti near-surface waveguide layers, struct., XRD 71336
$LiTaO_3$, waveguide form. by keV H^+ ion implant. 116668
$LiZnFe_2O_4$ ferrite films, microstruct., mag. props. 81826
MgO-CaO protective films, e-beam prep., annealing, AC PDP appl. 68168
MgSe thin films, MBE growth on ZnSe/GaAs(001), core levels 68176
$MgTiO_3$-$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
Mn/Sb multilayer films, mag. props., MOKE 70512
Mo cold cathodes, microfabricated, field emission current cleaning/annealing 69428
Mo/CIS/CdS thin film interfaces, electrodeposition, PV appl. 123807
MoO_3 amorph. films, thermal coloration, metal oxid. state influence 104891
MoO_3:Ti nanosized thin film, gas sens. 97552
MoO_3-TiO_2 nanocomposite thin film, gas sens. 91687
MoO_3-TiO_2 thin film gas sens., RF sputtered & sol-gel prep. 109772
MoO_3-V_2O_5 thin films, struct. & H_2 sens. props. 97526
(Nb,Ta)$_3$Sn multifilamentary superconds, prep. using Osprey bronze with high Sn content 70765
Nb/AlN_x/NbTiN jns., fab., SIS mixer appls. 71084
Nb_3Al multifilamentary supercond. wires, rapidly heated/quenched, microstruct. 70761
NbN/MgO/SiO_2/NbN multilayers on R-plane sapphire, on-chip fast RSFQ ccts. 70801
Nd-Ba-Cu-O single crysts., effect of O content on flux pinning 70661
annealing continued
(Nd-Eu-Gd)Ba_2Cu_{3-x}:Ag HTSC, melt-processed, flux pinning 70668
NdBaCuO ramp-edge jns. with interface-modified barrier 70810
$NdBa_2Cu_3O_7$ bicrystal Josephson jns./SQUIDs operating at 77 K 70983
NdFeB magnets, Sn/Al/Dy addit. effects *(Chinese)* 79422
NdFeB, rapidly quenched alloys, high-coercivity composite magnets 81912
NdFeB strip-cast PM, mag. props. and microstruct. 104488
NdFeB thin film magnets, laser ablation prep., high coercivity 125008
$Nd_2Fe_{14}B$ grains, nanostruct., mag. props. optimisation 92862
$Nd_{33}Fe_{65.9-x}Nb_xB_{1.1}$ magnets, microstruct., mag. props. *(Chinese)* 127310
Ni LIGA MEMS, microstruct. mech. props. 104176
Ni, electroless, wettability in under bump metall. with Pb free solder 67539
Ni film, magnetoelastic SAW atten. & magnetoresist., annealing 127318
Ni powder for MLC capacitors, oxid. props. comparison 114426
Ni tapes, thermal oxid. of NiO, annealing temps. 68395
Ni/6H-SiC Schottky diodes, nearly ideal breakdown volt., model/param. extract. 103762
Ni/Au contact on GaN(0001), catalytic role of Au 69730
Ni/Au/GaN, low resist. ohmic contacts, cryogenic treatment 126216
Ni/Au/p-GaN ohmic contact, microstruct., elec. props. 69711
Ni/GaN, defect-induced lateral chem. heterog., interface electronic props. 126213
Ni/SiC interface reacts., interdiffusion pathway, XRD, TEM, EDS 115491
Ni/SnBi solder interfacial react., annealing, microstruct. 101470
Ni/Ti/diamond, IBAD, RBS charactn. 114402
Ni/n-type 4H-SiC, ohmic contact form. mechanism 115432
Ni-Cr tapes, thermal oxid. of NiO, annealing temps. 68395
Ni-P electroless UBM-solder interface, Ni-Sn intermetallics,joint reliab. 113715
Ni-Ti shape memory thin film, growth & charactn. 116065
Ni-V tapes, thermal oxid. of NiO, annealing temps. 68395
$NiCo_2O_4$ films, spin casting, struct./elec./opt. props. 101397
NiFe/NiMn bilayer/pinned spin valve, exchange coupling *(Japanese)* 70509
$Ni_{50}Nb_{50}$/C amorph. multilayers, prep., struct., water window soft X-ray appl. 90474
$NiSi_x$ form. in MOSFET, micro-RBS obs. 115920
$NiZnCuFe_2O_4$ ferrite powders/films, prep., struct./mag. props. 127333
PLZT, H-damaged capacitors, Pt (IrO_2) top electrode, recovery charact. 104466
PLZT amorph. film deposition, crystn., ferroelec. charactn. 114260
PLZT films crystallized from amorph. state by two-step postdeposition annealing, props. 127169
PLZT thin films, crystn. and roughness, annealing effects 101424
PLZT/Pt(IrO_2) ferroelec./electrode systs., heating, interface anal. 127225
PMN-PZT thin films, sol-gel prep., dielec., piezoelec. props. 92661
PMN-based relaxor ferroceramics, Ni electroplating, resist. degrad. and recovery 104308
PZT capacitors, H-induced damage, hybrid struct. top electrodes 70462
PZT films, RF magnetron sputtered, struct./elec. props. 81706
PZT films, excimer laser ablation, ferroelec. props. 127167
PZT films, sol-gel method, external stress induced preferred-orient. 104390
PZT, piezoelec. props., influence of (Zr/Ti) ratio and Nb substitution 116144
PZT thin film, structural charactn., SEM/HREM/XRD 116146
PZT thin films, RF magnetron sputtering, struct./ferroelec. props. 124819
PZT thin films, perovskite phase, selective nucleation, grains form., lateral growth 104292
PZT thin films, prep. by aerosol deposition method, elec. and opt. props. 127168
PZT thin films prod. by oxide precursors and crystallized by conventional and RTA proc. 101460
PZT wet chem. derived thin films, self-polariz. and texture 81701
PZT:Nb films, RF magnetron sputtering, ferroelec./piezoelec. props. 81707
PZT/$PbTiO_3$/TiO_2/Pt, sputter deposition, orient./comp. 101192
(Pb,La)TiO_3 piezoelec. film, InP substr., CeO_2 buffer layer 70407
Pb-Sn alloy, void free soldering proc., large-area high power IGBT modules 92322
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
$Pb_5Ge_3O_{11}$ thin film MFMOS capacitor, ferroelec. props. 104473
$Pb_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films, capacitance dens. 125853
PbS QD embedded glass for mid-IR laser Q-switching 71916
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ thin films, prep. and elec. props. 101435
Pb_2ScTaO_6 sputtered thin films for dielec. bolometer mode thermal detector arrays 87014
PbSe QD embedded glass for mid-IR laser Q-switching 71916
PbSnTe:In epilayers, low-temp. diffusion annealing 91939
(PbSr)TiO_3 thin films, prep., elec. props., post-annealing, DRAM appl. 116159
$PbTi_{0.6}Zr_{0.4}O_3$ films, spray pyrolysis prep., dielec. props. 90533
$PbWO_4$:Fe^{3+} large single cryst. CZ growth, annealing and opt. charactn. 79187
$Pb(Zn_{1/3}Nb_{2/3})O_3$-based ceramics, domain struct., annealing atmos. effect 116160
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$PbZr_{0.5}Ti_{0.5}O_3$ thin films, chem. soln. deposition epitaxial growth and props. 90497
Pd ultrathin sputtered activator layers on SnO_2, structural transforms., gas sens. appls. 109753
Pd/$Al_{0.11}Ga_{0.89}N$ Schottky diodes, thermal stabil., annealing, XRD, AFM, AES 81204
Pd/Au/GaN, low resist. ohmic contacts, cryogenic treatment 126216
Pd/Au/p-GaN, ohmic contact form., cryst. ordering 126207
Pd/GaAs:H,S Schottky contact, sulfidation/thermal hydrogenation 103159
Pd/Ge/GaAs, SPE growth, stress effects, TEM 125049
Pd/p-GaN:Mg ohmic contacts, elec. props. 69733
(Pr,Nd)FeB magnet, hot workability, ball milling and melt spinning 127387
Pr-Fe-Co-Nb-B syst. exchange spring magnets, mag. props. *(Japanese)* 127329
$Pr_{1-x}Ca_xMnO_{3-y}$/$YBa_2Cu_3O_7$ HTSC jns., field effect 70485
$Pr_{13}Dy_2Fe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_{14}DyFe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_2Fe_{14}B$ magnet, metastable phases and texture, HDDR proc. 127384
$Pr_8Fe_{88}B_4$ ribbons, exchange-spring magnets, exchange field temp. depend. 70490
Pr_2O_3 epitaxial growth on Si, postgrowth N_2 annealing, hexagonal to cubic phase transit. 90310
Pt laser deposited films, thermal stabil./anal. 103493
Pt patterning for Si load cell, modified lift-off tech. 116098
Pt/$Bi_{4-x}La_xTi_3O_{12}$/Pt capacitors, ferroelec. props. degrad. 125848
Pt/PLZT/Pt capacitors, H-induced degrad., nanoscale investig. 104468
Pt/$SrBi_2Ta_2O_9$ films for ferroelec. memories, Pt coverage, quantitat. XPS 81683
Pt/W/Cr/SiC Schottky-barrier diodes, thermal stabil., radiation hardness 92275
Pt/$YMnO_3$/Y_2O_3/Si gate capacitor MFISFET, MOCVD prep. 81662
Pt/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal stabil. 80917
Pt-$Ba_{0.7}Sr_{0.3}TiO_3$-Pt thin film capacitors, H_2/deuterium induced degrad. 104467
PtSi-Si Schottky diode IR detectors, quantum efficiency increase 75539

annealing continued
RuO_2-impregnated C electrodes, electrochem. capacitor appl. *(Japanese)* 91428
SIMOX low dose wafers, energy depend., struct. props. 115528
SIMOX wafer, Si top layer residual O behaviour, photolum. and SIMS obs. *(Chinese)* 126245
SIMOX wafers, interstitial-type {311} planar defects, photolum. anal. 80656
SOI form., Ni metal induced lateral crystn., TFT appl. 125052
SOI, low energy water ion implant. synthesis 115525
Sb_2Te_3 chalcogenide glass opt. data storage material, thermal treatment effects 92960
a-$Se_{70}Sb_{15}Ge_{15}$ thin film, annealing temp. effect on cond. and activation energy 103076
Si, As^+-implanted/2D amorphized, solid-phase epitaxial regrowth, corner defect generation, stress effects 101456
Si CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
Si EFG multicrystalline solar cells, lifetime enhancement 100054
Si, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115536
Si PIN detector, fab., planar technol. *(Chinese)* 110282
a-Si PV modules, stabilisation/perform. charact. 112978
μc-Si TFT fab., high-dens. plasma approach 92363
Si, deep amorph. wells, crystn. by ion implant. 79415
Si detectors, radiation hard, develop. by defect engng., CERN RD48 Collaboration 97945
Si, dwell-time depend. of irrad. damage 81005
Si embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
Si epitaxial films, fast electron irrad., specific resist., annealing 92265
a-Si films, elec. field assisted metal-induced lateral crystn. 126081
poly-Si gate oxide reliab. post annealing degrad. and suppression *(Chinese)* 126244
Si, high energy ion implant., annealing, elec. act. centres 115510
Si, high-energy ion implant./annealing generated vacancy clusters 102967
Si, ion implant., dopant diffusion, SIMS 126298
Si, ion implant., dopant diffusion, amorphization, atomistic modelling 91964
c-Si, ion implant., point defect diffusion and clustering 81003
Si irrad. (non)oxygenated microstrip detectors, sig. comp. 76073
a-Si, mechanism of metal induced lateral crystn. *(Chinese)* 114238
Si multicrystalline solar cells, screen printed contact form. mechanisms 100170
Si nanocrystal arrays based MOS memory devices 127065
Si nanocrystals/adsorbed O superlattice, electronic transport, opt. props. 115385
Si oxynitride films, plasma-nitrided, gate-quality, XPS study 103331
Si, plasma assisted RT bonding, MST technol. 103241
Si, polycryst., built-in strain, sens. fab., surface micro machining 110003
Si, radiation defects bistability, bias depend., detector appl. 98020
Si radiation hardness, preliminary irrad. infl., detector appl. 126325
Si solar cell surface passiv. using low temp. deposited SiN_x:H 100158
a-Si solar cells, temp. coeffs., light degrad. & recovery 134400
Si strained p/p^+ wafers, misfit disloc. interacts., XRD 69644
Si, string ribbon, Al-enhanced PECVD SiN_x induced H passiv. 69917
Si surface layer cleavage, H-induced, thermodyn. model 80996
Si surface micromachining, deep vac. cavity struct. appl. to microflow sens. 97568
a-Si thin film PV modules, kWh/kWp perform. prediction 112991
a-Si thin films, crystn. using viscous Ni soln. 103238
Si thin films, low temp. epitaxial growth by hot wire cell method 125067
Si thin films, wafer bonding, exfol. proc., IR spectrosc., X-ray imaging 126353
Si thin-film solar cells, grain size and struct. engng. during Al-induced crystn. 100142
Si tip array, BST sol-gel ferroelec. coating, electron emission 69396
Si tip array, nanodiamond(AlN) coating, field emission 69407
Si, void dyn., radiation damage/impurities effects, TEM obs. 80664
p-Si wafer, OISF generation suppression, annealing 102991
p-Si wafers, laser IR photothermal radiometric/ELYMAT charactn. 92022
p-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
Si:Al,H, interstitial-type defect aggregations, H-enhanced self-organization 126000
Si:As, clustering equilib., deactivation kinetics 81017
Si:As, implanted As redistrib., substr. temp., annealing ambient effects 115513
Si:As, near-surface damage annealing and ultralow energy implants elec. activation 126275
Si:As(Ge), anom. P diffusion during postarsenic-implant. annealing 69823
Si:B, B diffusion, HI irrad. effects 115559
Si:B, B-interstitial Si clusters, interstitial supersaturation, postimplantation annealing 102953
Si:B, Bi ion irrad. effects on impurity redistribution 126605
Si:B MOS-struct., through-gate implant., induced damage 115508
Si:B, PIII, annealing, low-leakage p$^+$n jn. form. 80991
Si:B, init. anom. diffusion in superlattice wafers at low-temp. annealing 126313
Si:B, low energy B^+ implant., lattice damage, slow positron obs. 81027
Si:B, ultra low energy implant., decelerator module 115544
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91977
Si:B ultra shallow jns., sub keV ion implant. 115505
Si:B, ultralow energy implanted B, TED 69800
Si:B(Ga)(O)(C) solar cells, radiation-induced defects, impurity effects 100033
Si:B(P) polycryst. resistors, mech. stress of elec. perform. 125837
Si:B,F implanted samples, TED reduction 115512
Si:B,Fe, ultrapure float-zoned samples, Fe trace levels detect., photolum. method 69468
Si:C, ion implant., $Si_{1-x}C_x$ form./stabil. 69803
Si:C ion-implanted epitaxial wafers, heavy metals gettering efficiency, TXRF obs. 69788
Si:C(N), low-energy ion implant., buried insulating layer form. 103253
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si:Er, Er centers optimisation for reverse biased LEDs 69489
Si:Er nanocrystals, ion beam synthesis 80665
Si:Er struct., sublimation MBE method, opt. act. Er centers photolum. 69485
Si:Er/SiO_2 nanocrystals, nonradiative de-excitation procs. 69482
Si:Er,O, O-coimplant., donor centers form. effect 69486
Si:Fe(Cu), gettering by disloc., cavities 80970
a-Si:H, Al-induced crystn. at 150°C 90537
Si:H, H-ion implant.-induced layer splitting, layer thickness effects 69804
Si:H, H-plasma-etched and H-implanted single-cryst., annealing effect 69781
Si:H, PIII, damage, defect form. 91982
a-Si:H films, UV/white/sub-gap light soaking effects 104902
Si:H films, hot-wire CVD, solar cell appls. 124981
a-Si:H films on SiO_2 passivated steel substrs., crystn., polysilicon TFT 103237
Si:H float-zone crysts., H-defect shallow donors study 69475
a-Si:H, ion beam synthesis of low resist. contacts 69710
Si:H, ion implant., nanocavity form. and defect interacts. 80657
Si:H, microcrystalline films, PECVD, postgrowth annealing 91946

annealing continued
Si:H nanocrystals in silica, PL, H passiv. 93337
a-Si:H, photo-induced structural change, photocond. degrad. *(Japanese)* 82307
a-Si:H pin diodes, electron irrad., dark-photoconductivities and PL *(Chinese)* 115840
a-Si:H solar cell dark I-V charact., electron irrad. effects 112871
Si:H, surface blistering, H-implant. dose effects 91968
a-Si:H thin-film space power solar cells 112874
Si:H^+,He^+ single cryst., evol. during annealing 126273
Si:H-terminated surfaces, UHV contactless C-V method for passivated defect-free surfaces 91577
Si:H(He)/SiO_2 SOI buried layer, O precip. form. 126408
Si:H,F, film, polycryst., PECVD transport props. 102973
Si:H,He, layer splitting, low energy channeling effect limitation 91972
Si:H,Ni/SiO_2 SIMOX, H-implant.-induced nanocavities, Ni gettering 115529
n-Si:He^+(111) epitaxial wafer, bubble form., high energy ion implant. dose rate depend. 91604
Si:He(H)(O), uniform stress effect 115558
Si:He,N, porous Si form., MeV energy pre-implant. 80992
Si:N, ion implanted, N-vacancy complexes, positron annihilation spectrosc. 91584
Si:N wafers, 300 mm, cryst. growth, grown-in defects 101157
Si:N,O, O precip., TEM anal. 69783
Si:Ni polycryst. films on glass, Ni induced selective nucleation, SPE 125051
Si:O, BOX, SIMOX, positron annihilation 91969
Si:O, CZ growth, defects, simul. 124779
Si:O, FZ grown, O precip. in hydrogen ambience and its appl. 79175
Si:O, annealed under hydrostatic press., O aggregation and thermal donors 115478
Si:P(Ge)(As)(Si), impurity proximity gettering, trans-projected-range effect 91957
Si/Ag(001) thin film deposition, AES/LEED/SEM obs. 80667
Si/C layer syst., SiC ion beam induced solid state react. 79404
Si/$CoSi_2$ syst., interlayer mediated epitaxy, CVD Co film 90541
Si/SiGe/Si heterostruct. thermal stabil., annealing time, Si cap layer thickness effects 101285
Si/SiO_2, interface nitridation, struct., MOSFET appls. 92082
Si/SiO_2/Ta/$Ni_{80}Fe_{20}$/CoFe/Cu/CoFe/IrMn/Ta spin valves, annealing study 81851
Si/SiO_2(ZrO_2)($ZrSi_xO_y$)/Hf(Zr) MOS capacitors, interacts. 80438
Si-C-N(:B) ceramics, struct. and transport props. 126102
a-Si-Ge:H alloys, global mechanism for light-induced degrad. 69553
Si-Mn cube texture oriented soft mag. steel sheets, fine grain struct., prod. proc. 127295
Si-rich oxide layered MIS capacitor, elec./struct. charactn. 69748
Si(001)/(111) step-free terraces, instabilities/point defects, high temp. annealing 126269
Si(001)-(2×1) step-free surfaces, enhanced terrace stabil., modelling and LEEM obs. 126418
n-SiC, 4H, epilayers, proton irrad. induced defects, DLTS 69590
SiC, 4H, proc. induced intrinsic deep level PL 69582
SiC, 4H/6H, electron/ion irrad., intrinsic defect centers, annihilation 69810
SiC, 6H, MOS struct., shallow dopant/surface levels, TSC 69758
SiC MOS capacitors, interface props. rel. to N_2O annealing 69754
4H-SiC buried channel normally-off MOSFETs, high channel mobility 70127
β-SiC film, porous, electrolum. *(Chinese)* 81091
6H-SiC, ion-beam-induced disorder, accumulation, dyn. annealing, thermal recovery 80979
SiC, liq.-phase-sintered, with oxynitride glass, TEM obs. 101490
6H-SiC, lithographically introduced cavities, high-temp. morph. evol. 80772
4H-SiC merged pn-Schottky diodes, fab. *(English)* 103745
4H-SiC n$^+$p$^+$ struct., passiv., SIPOS-SiO_2 layer *(Chinese)* 91992
4H-SiC power MOSFET, large-area device 126837
$Si_{1-x}C_x$, C ion implant./annealing form. *(Chinese)* 126318
$Si_{1-y}C_y$ thin films, low temp. epitaxial growth by hot wire cell method 125067
4H-SiC:Al, implant. damage/annealing, IR investig. 69808
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
SiC:Al,N 6H LDMOS transistors, silane-ambient implant anneal 126735
SiC:Au, ion implant., thermal annealing 81010
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 69811
SiC:B epitaxial layer, diffusion 69795
SiC:Ge, ion implantaion form., elec. characts. 91724
SiC:H, 6H, vibr. props., H_2 ion implant., annealing effects 69794
SiC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796
a-SiC:H, ion beam synthesis of low resist. contacts 69710
SiC:H, surface blistering, H-implant. dose effects 91968
p-SiC:H,Al, acceptor passiv. and thermal reactivation 126403
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807
4H-SiC:P,C(Si), co-implant., n-type doping 103278
SiC:Si (Au), recoils, primary damage states, MDM, expt. study 69821
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
SiC:Ta crysts., deep levels, Ta incorp. during growth 126295
a-$Si_{0.35}C_{0.65}$:H, proton irrad. thermally annealed, PL props. 93338
$Si_{1-y}C_y$:H films, photo-/plasma CVD, struct. 101318
β-SiC/Pt contact, elec. props., annealing 126197
SiC/Pt diode, high-temp. H_2 sens. appl., stabil. 86747
3C-SiC/Si buried layers, ion beam synthesis and charactn. 81004
SiC/SiO_2 MIS struct., interface-state dens., H_2 annealing, reply to comment 80924
SiC/SiO_2 MOS structs., interface-state dens., H_2 annealing, comment 80923
4H-SiC/Ti Schottky diode charactn., ICP etch damage anal. 69874
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealing *(Korean)* 114436
6H-SiC(0001) surfaces, reconstructions, STM/RHEED obs. 69565
SiC(111) growth by C_{60} decomp. on Si(111), electron spectroscopies 114269
SiCOH-based low-k dual-phase ILD materials by PECVD 91902
SiGe, nucleation, comp. influence, LPCVD growth, free energy 114366
SiGe on insulator struct., form. MOSFET appls. 80929
SiGe pseudomorphous epitaxial layers, ion beam induced strain relax. 115503
$Si_{1-x}Ge_x$ films, CVD epitaxy, relax. mechanisms 79302
$Si_{1-x}Ge_x$:B strained epitaxial layer, boron diffusion 103281
SiGe/Si opt. channel waveguide, mapping of local stress distribs. 82157
$Si_{1-x}Ge_x$/Si MQW struct., photocurrent spectrosc. *(Chinese)* 80877
$Si_{1-x}Ge_x$/Si(100) heterostruct., struct. & stabil., MBE 101283
$Si_{1-x-y}Ge_xC_y$, B TED 91980
$Si_{1-x-y}Ge_xC_y$ film, UHV-CVD, annealing effects *(Chinese)* 103249
a-SiH TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
SiH_2Cl_2 self-limited GSMBE on Si(100) 124851
SiN compressive thin film, mech. props., ring test struct. 104214

nnealing continued
Si_3N_4 thin films, microbridge testing, deform., CVD 132183
SiN_x, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
Si_3N_4/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
SiO_2 MOS capacitors, F-N tunnelling coeffs., nitridation 115046
SiO_2 PECVD films, residual stress/fracture rel. to MEMS fab. 101373
SiO_2 films, electron injection stressed, trapped charges nonuniform distrib. 92675
SiO_2 gate dielec. oxid., trench gate power device 126426
SiO_2, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiO_2, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2, plasma assisted RT bonding, MST technol. 103241
SiO_2, porous silica thick films by base-catalyzed sol-gel route 79375
SiO_2 superthin films on GaAs, liq. phase deposition, metal-semicond. barrier height 80934
SiO_2 thin film on GaAs, annealing, enhanced quality 103246
SiO_2:Ag(Cu)(Au)(Er), opt. response, ion implanted nanoparticles, review 116552
SiO_2:B, boron diffusion, p-channel MOSFET 80988
SiO_2:Er films, Si nanoparticles, PL/EL enhancement 82319
SiO_2:F fluorinated-silicate-glass film stacks, IC interconnect interlayer dielec., cap oxides 126469
SiO_2:F,C with low dielec. const., deposition, high resist. to annealing 124917
SiO_2:Ge(Si) gate oxide for MOS devices, Ge(Si) nanoclusters, phys. props. 115790
SiO_2/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
SiO_2/Si, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115536
SiO_2/Si device-quality interfaces, ECR-PECVD low-temp. form. 80957
SiO_2/Si, low energy N implant., chem. anal. 91976
SiO_2/Si:Er nanocryst. syst., exciton-Er energy transfer, PL 69481
SiO_2/Si:Er,Y nanocryst. films, luminesc. sensitization 71527
SiO_x/organic composite thin films, PECVD, dielec. props. 90364
SiO_2-TiO_2-Er_2O_3, planar waveguides on silica-on-Si substrs., RF sputtering, characts. 93157
SiOC, PECVD layer, chem. mech. polishing 115645
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
SiON film, opt. waveguide 104738
SiO_xN_y/Si Bragg reflector for reson. cavity photodetectors *(Chinese)* 86537
$SmCo_5$/α-Fe nanocomposite magnets, mech. milling, struct., mag. props. 70549
$SmCo_{7-x}Ti_x$ magnets, mag./struct. props. 127331
SmFe/NiFe multilayers, hard/soft exchange-coupled, modulated mag. props. 81882
$Sm_2Fe_{17}N_{2.3}$, PM, prod., nanocrystalline 116479
Sn-O epitaxial films on sapphire, oxid., phase transits. and elec. props. 80744
SnBi-SnAg solder paste, mech. props., SnAg addit. effect 68399
SnO_2 film, nanoparticle engng., chem. microsensor 132023
SnO_2 films, chem. prep., sulphide route, methane sensitivity, annealing temp. effects 75739
SnO_2 films, microstruct., phys. props. 115327
SnO_2 microhotplate gas sens., spin-on nanoparticle proc. 97496
SnO_2 nanosized thin films, mechanochem. proc., gas sens. 97546
SnO_2:F thin films, sol-gel prep. from alkoxyfluorotin complex 68335
SnO_2-CoO varistor prop., sintering sensitivity, La_2O_3 addit. effect 80748
SnO_2-based ceramics, powder milling, I-V charact. 102759
Sr/SiO_xN_y/Si(100) nanostruct., interfacial chem., XPS/SIMS obs. 126228
$Sr_{0.8}Bi_{2.3}(Ta_{1-x}Nb_x)_2O_{9+\alpha}$ thin films, sol-gel prep. and elec. props. 81719
$SrBi_2TaNbO_9$ film, RF magnetron sputter deposition, microstruct., micro Raman spectra 114262
$SrBi_2Ta_{2-x}Nb_xO_9/IrO_x$ capacitors, Pt top electrode, thermal stabil., elec. props. 116233
$SrBi_2Ta_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2Ta_2O_9$ ferroelec. thin film, prep., struct. & props. 127173
$SrBi_2Ta_2O_9$ film, RF magnetron sputter deposition, microstruct., micro Raman spectra 114262
$SrBi_2Ta_2O_9$ film, chem. soln. deposition, a-axis orient. control 127158
$SrBi_2Ta_2O_9$ films, fatigue charact., forming gas annealing effect 127157
$SrBi_2Ta_2O_9$ for metal-ferroelec.-Si struct. without buffer layers 81695
$SrBi_2Ta_2O_9$ thin films, chem. soln. deposition, crystn. in N_2 ambient 68321
$SrBi_2Ta_2O_9$ thin films, high leakage current dens., annealing 70417
$SrBi_2Ta_2O_9$ thin films prepared by MOD method, polariz. switching 70415
$SrBi_2Ta_2O_9$ thin films with Bi_2O_3 buffer layers by liq.-delivery MOCVD, ferroelec. props. 104334
$SrBi_2Ta_2O_9$:Nb MOCVD, integrated ferroelec. capacitors, RAM 101333
$Sr_{0.8}Bi_{2.2}Ta_2O_9$/$LaAlO_3$/Si syst., prep., ferroelec. props. 92646
$SrBi_2Ta_2O_9$(115) thin film, deposition from chem. soln., crown ether 101410
$SrBi_2(Ta_{0.9}V_{0.1})_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2Ta_{1.8}V_{0.2}O_9$ ferroelec., O-vacancy-related dielec. relax. 70396
$SrBi_2(V_{0.1}Nb_{0.9})_2O_9$ ceramics, ferroelec. props., O_2 annealing 116165
$Sr_2(Ta,Nb)_2O_7$ thin films, chem. proc., struct./elec. props. 81661
$SrTiO_3$:Nb_2O_5,NiO capacitor-varistor, sintered, XPS 125838
Ta films on Si and SiO_2/Si substrs., struct., annealing 80976
Ta:N-doped powder for MLC capacitors, anodized oxide film, struct. 114427
Ta/AlGaN/GaN, ohmic contacts for HFET, contact resist. 69706
Ta/NiFe/CoFe/Cu/CoFe/PtMn/Ta spin valves, magnetoresist., interlayer diffusion 81877
bcc-Ta/TaN_x gate metal-nitride-semicond. FETs, plane gate struct., <450°C proc. 126774
Ta/Ti/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
Ta/low-k cyclohexane-based plasma polymer films interface, chem. interact., adhesion characts. 103453
Ta-C-N film, sputtered, charactn. in Cu/barrier/Si contact syst. 115674
a-Ta-nanocryst. RuO_x diffusion barrier for lower electrode of high dens. memory devices 69958
TaC_x sputtered films as diffusion barriers for Cu metallization 126471
TaN CVD diffusion barrier for Cu interconnects 92166
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
TaN thin film, growth & precursor props., MOCVD/XRD 114364
Ta_3N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ta_2O_5 films, LPCVD & PECVD, struct. & elec. charactn. 104232
Ta_2O_5 films, annealing, dielec./opt. props. 116126
Ta_2O_5 thin film, growth & precursor props., MOCVD/XRD 114364
Ta_2O_5 thin films on RuO_2 and Ru bottom electrodes, dielec. characts. 104234
TaO_x barrier mag. tunnel jns., MR ratio rel. to oxid. time 70558
Ta_2O_5-Si struct., gamma irrad. 91916

annealing continued
TaO_xN_y ultrathin gate dielec., O_3 annealing, elec./reliab. charact. 69779
$TaSi_xN_y$ gate electrodes for dual gate CMOS devices, elec. charact. 127038
TbFe/Fe multilayer, giant magnetostriction, annealing 127351
Te nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
Ti:sapphire regions, Ti/O ions localised high-energy implant., struct. charactn. 117171
Ti/Al/GaN:Si contacts, struct., AES/TEM obs. 103173
Ti/Al/Pd/Au/n-GaN multilayer contacts, elec. charactn., metall. anal. 91870
Ti/Al/Pt/Au/GaN ohmic contacts, elec. characts. 91862
Ti/Au ohmic contacts to n-ZnO, elec./structural props. 91874
Ti/Mo/Si, ultrathin surface/interface Mo layer, annealing 115490
Ti/Si films, solid-state react., vol. anal. of C49-C54 transform. 126474
Ti/Ta/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
Ti-Si bilayers, init. reacts., in situ resist. meas. 80892
$Ti_xCo_{1+x}Fe_{2-2x}O_4$ ferrite powders, struct., mag. props 92785
TiN CVD gate electrode, residual Cl, gate oxide reliab. 81112
TiN films deposited on Pa-n, crack form. due to large thermal mismatch 114252
TiN films on GaAs, IBAD tech., surface morph. 114400
TiN_x/SiO_2/Si, interface form., elec. props. 103186
TiNi thin film micro actuator study *(Japanese)* 112735
TiO_2 films, annealing using vac. heater, sputter deposition 126271
TiO_2 nano-porous films, electron transport and effect on dye-sensitized solar cells 100209
TiO_2 sputtered film humidity sens., neg. substr. bias, charactn. 97178
TiO_2 thin film, synthesis, metalorganic decomp./annealing 116133
TiO_2/CdSe films, PV conversion, thermal treatment effect 134404
$TiSi_2$/Si contacts, surface prep., chem. and thermal stabil. 92033
$TiSi_x$/poly-Si/oxide/Si transistor gate struct., memory device appl. 92135
Tl_3AsSe_3 nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
$Tl_2Ba_2CaCu_2O_x$ HTSC epitaxial films, bicryst. grain boundary Josephson jns. 70794
V_2O_5-TiO_2 nanocryst. thin-films, sol-gel prep., O_2 sens. 97545
W bit-line, PECVD-Ti proc., enhanced nitridation 115722
W single-cryst. substrs., cleaning procedure, thermionic cathode appl. 102895
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101
W/SiO_2/Si MOS capacitors, interface passiv. using at. H 69740
W/Ti/diamond, IBAD, RBS charactn. 114402
W/TiN/SiO_2/Si MOS capacitor struct., TiN deposition method effect 103199
W/TiN/Ta_2O_5 gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
W/TiN/Ta_2O_5/Si syst., Ta_2O_5 gate dielec. degrad. 81647
W/WN_x/Ta_2O_5 gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
W-TiN/SiO_2/Si, MOS capacitors stacked gate props. 103187
W-ZrN-polysilicon gate electrode config., ZrN barrier thermal stabil. 81115
WC_x diffusion barrier for Cu metallization, thermal stabil. 103467
WC_x diffusion barrier/Cu metallization syst., phys./elec. props. 81109
WC_x sputtered films as diffusion barriers for Cu metallization 126471
WO_3 amorph. films, thermal coloration, metal oxid. state influence 104891
WO_3 chemiresistive sens. films., stoich. & microstruct. effects 97530
WO_3 films, air/vac. thermal treatments, NO_2 gas sensitivity effects 103055
WO_3 thin film gas sens., chlorine detect. 97513
WO_3 thin film surfaces, UHV/O_2 annealing, O loss/recovery, gas sens. 109732
WSi_2 film form., ion beam synthesis, charactn. 69959
WSi_x sidewall in W-polycide gate, deform., contact resist, annealing effects 103234
Y silicate ultrathin insulators on Si, phys. and elec. charact. 91893
Y-Ba-Cu-O/Ag($SrTiO_3$) HTSC, biaxially aligned, spray pyrolysis epitaxial growth 68348
$Y_{3-x}Al_5O_{12}$:Tb, thin films, cathodolum. phosphors, alkoxy sol-gel prep. 71541
YBaCuO HTSC tape on Ag-Cu/Ni/Ag-Cu clad tapes, textured props. 127433
YBaCuO coated conductors, seed/buffer layers fabr. on metallic substrs. for PLD 127417
YBaCuO film growth on Y_2O_3 buffered/nonbuffered $SrTiO_3$ using precursor films incl. fluorides 68180
YBaCuO interface-controlled Josephson jn. fab. using Sr_2AlTaO_6 insulating layers 70809
YBaCuO ramp-edge jns. with interface-modified barrier 70810
$YBa_2Cu_3O_7$ HTSC deposition on metal tape substrs. and charactn. 68179
$YBa_2Cu_3O_7$, c-axis microbridges, characts., interface role 69116
$YBa_2Cu_3O_7$ coated tapes, Ag/Ni composite ribbons 127470
$YBa_2Cu_3O_7$ double-sided film, PLD on MgO, X-band filter charactn. 71088
$YBa_2Cu_3O_{7-\delta}$ HTS, grain microstruct. & growth, melt-texturing 104559
$YBa_2Cu_3O_{7-x}$, SOFC contact layers, chem. compatibility 89174
$YBa_2Cu_3O_{7-x}$ film, US spray pyrolysed, post annealing props. 70600
$YBa_2Cu_3O_{7-x}$ grain boundary jns., comp. anal. 70865
$YBa_2Cu_3O_{7-x}$ ramp-edge Josephson jns. with surface-modified barriers 70812
$YBa_2Cu_3O_{7-\delta}$:Ca HTSC films, grain boundaries, J_c/T_c 70676
YBaCuO/Ag HTSC tapes prod. by oxid. of metallic precursors 70698
$YBa_2Cu_3O_{7-\delta}/Eu_2O_3(Gd_2O_3)$ buffer layer HTSC, dip-coating 68341
$YBa_2Cu_3O_{7-\delta}/NdGaO_3$ buffer layer/textured Ni tape, fab. 68313
$YBa_2Cu_3O_{7-\delta}/SrTiO_3$ heterostruct., tunable microwave filter 71122
YBaLaCuO ramp-edge interface modified jns. for HTS SFQ ccts. 70811
$(Y_{1-m-n}Ce_mGd_n)_2SiO_5$ phosphor, combustion synthesis/particle size effects 104934
$YMnO_3$ based MFSFET, annealing effect, MOCVD 101328
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
$YMnO_3$ thin films, microstruct., post-annealing, ferroelec. props. 127229
Y_2O_3 sputtered films for electrochem. sens. 70375
Y_2O_3/SiO_2 bilayer gate dielec. based MIS devices on Si, interfacial charge trapping 103201
Y_2O_3-Bi_2O_3 solid electrolytes, SOFC, phase stabil., moisture effect 89214
$ZnGeP_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
ZnMgSSe/ZnSe MQW lasers, opt. pumped lasing, PL 93619
ZnO films, thermally evaporated, opt. props., annealing effects 90328
ZnO films, undoping, reactive sputtering, defect PL 91669
ZnO luminesc. thin films, PLD growth and charactn. 68315
ZnO single cryst. substrs., epitaxial ZnO film growth 79213
ZnO thin films, US spray pyrolysis deposition 68360
ZnO thin films, post-annealing treatment effect on light emission props. 93342
ZnO varistors, Bi_3O_{12} doping/annealing effects 81404
ZnO varistors, elec. degrad., additive effects *(Japanese)* 103940
ZnO varistors, grain boundaries, photoacoustic spectrosc. 103939
ZnO:Al films, transparent conductive, sol-gel proc. prep., elec./struct./opt. props. 103003
ZnO:Cr films, chem. spray deposition, chem. stabil., etching rate, surface morph. 126025
ZnO:Li films, sol-gel method, crystn., c-axis orient. 114389
ZnO/GaN:Mg heterostruct., edge UV luminesc., N_2 plasma annealing effects 91744

annealing continued
ZnO/ITO multilayer ohmic contacts to n-type GaN isotype conjunction 69666
ZnO-CdS-Cu(InGa)Se_2 heterostruct. solar cells, D^+ implant. effects 100125
ZnO-based ceramic films, prep. & props., sol-gel proc. 126915
ZnO-based materials, plasma-assisted MBE, charactn. 90347
ZnS:Mn, doped/undoped, dc EL, elec. cond. 93336
ZnS:TbOF,Ag,Cu,Ce EL phosphor films, co-doping studies 127932
ZnS-Cu(In,Ga)Se_2 thin film solar cells, annealing proc. expts. 100115
ZnSe films, electrodeposition, struct./opt. props. 125042
ZnSe layers on GaAs(001), threading disloc. removal 92089
ZnSe:Al single cryst., phys. vap. transport growth/doping 101165
ZnSe:Ga, δ-doped superlattices, persistent photocond. *(Chinese)* 80879
ZnSe:N, implanted defect props., β-NMR obs. 91650
ZnSe/GaAs interface, thermal element diffusion, SIMS anal. 69632
$Zn_2Si_{0.5}Ge_{0.5}O_4$:Mn green TFEL display, high brightness 97668
(Zr,Sn)TiO_4-La_2O_3-NiO ceramics, sintering, microwave props., annealing 114438
ZrO_2 IBICVD thin films, microstruct., surface roughness, opt. props. 79299
ZrO_2 sputtered thin films charactn. for gate oxide appls. 104231
ZrO_2:Sm^{3+}, monoclinic, evidence of nonradiative energy transfer from host to act. ions 93345
$ZrO_2/SiO_2/Si$ layered struct., interface engng. in situ reoxidation 69766
$ZrO_2/ZrSi_xO_y$ ultra-thin films for CMOS gate appls., high thermal stabil. 127049
$ZrO_2/ZrSiO_4$, thermally stable ultra-thin silicates, jet-vap.-deposition, CMOS appls. 127023
ZrO_2-based ceramic insulation coatings for HTSC magnets, elec. charactn. 70437
(ZrSn)TiO_4 microwave ceramics with low sintering temp., control of Zn 114449
diamond, CVD polycryst. films, elec. props. 80643
metal/Ta_2O_5/Si gate devices, elec. charact./thermal stabil. of W, WN_x, and TiN barriers 91910

annealing, magnetic *see magnetic annealing*

annular antennas *see loop antennas*

anodes
airborne UV photon-counting radiometer with metal anode 86646
atmos. press. arc plasmas heat transfer anal. 113137
batt. and fuel cell materials, conf., San Francisco (April 1999) 113256
carbon-carbon composite anodes,, Li-ion batt. 89074
compact PSPMTs, imaging props. eval., discrete γ-cameras appl. 122267
copper electrowinning plants, multi-cct. electrolytic cells approach 124133
cross strip imaging anodes for MCP detectors 110343
Danish SOFC R&D status 89191
direct alcohol fuel cell, aliphatic alcohols, electrocatalytic oxid. 134375
direct hydrocarbon PEMFC, acetals electrooxidation 134373
direct methanol fuel cell perform., anode flow charact. 89162
direct methanol fuel cells, methanol electrochem. oxid. expts. 134372
direct methanol fuel cells electrooxidation, ternary catalysts expts. 89179
direct reforming MCFC stack explicit dyn. model 112832
elec. double-layer capacitors, organic electrolytes, perform. 123846
gas puffing INPIStron develop. for pulsed power supply appls. *(Korean)* 78057
graphite, coke, carbon anode materials for Li-ion batts., state-of-the-art *(Chinese)* 112782
high-current vac. arc, three-liq. hydrodynamics approx. *(Russian)* 115234
high-perform. SOFCs at temps. below 700°C 99958
image intensifier, MCP and anode gap, spatial resoln. 75644
ion nitriding devices, glow discharge energy exploitation *(Polish)* 124105
lanthanum/strontium based perovskites, SOFC anodes, cond., stabil. 89255
lateral IGBT, npn controlled, segmented anode 115847
lead-free solder plating, ionic migration, reflow proc. and flux residue, QCM method 124315
low-temp. direct propane polymer electrolyte membranes fuel cell 99995
MCFC electrochem. materials research *(Chinese)* 134381
MCFC generation syst. rapid load changes, perform. implications 112437
MCP-based detectors, delay-line anode design, single photon detect. 109518
mixed-reactant strip-cell direct methanol fuel cells, feasibility anal. 100023
MOSFET, anode hole injection model, impact ionization 126813
multiple-anode photomultiplier tubes 80622
neg. polarity pulse power drivers, rod pinch diodes 99780
one-sided anode disk MHD generator perform. studies *(Japanese)* 89306
PEFC, PEM optimisation, humidifying conditions 89184
PEFC operation on reformate feed, model 100008
PEM fuel cells, CO poisoning expts. 100005
PEMFC, portable power source for commun. 89159
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
planar anode supported SOFC, perform. 99953
planar anode supported SOFC stacks manufacture, deform. procs. 99978
planar vircator, freq. charact. study *(Chinese)* 80600
polyelectrolyte membrane-type fuel cell anodes, CO_{ads} oxid. expts. 134366
polymer anode/small mol. interfaces, hole injection barriers 91737
pulsed field emission X-ray source, pulse generators, rem. control syst. 110456
single cryst. diamond particles electron field emission props. *(Japanese)* 80555
small animal PET, prototype develop. 132991
small tubular SOFC syst., CeO_2 biogas internal reforming catalyst 89252
small-tubular SOFC fab. by electrophoretic deposition tech. 99961
SOFC, anode-supported, anode thickness effect on perform. 99954
SOFC, electrolytes, electrodes, interconnects, conf., Honolulu, HI, USA (Oct. 1999) 78471
SOFC, porous thin-film anode materials, PVD, photolithographic patterning 123794
SOFC, tape casting for dry hydrocarbons direct oxid. 100019
SOFC anode-supported tube fab. and charact. 99956
SOFC electrochem. perform. studies, anode develop. 89241
SOFC nickel mesh methane steam reforming catalyst expts. 89253
SOFC power generation, gas species effects 99603
solar cells, dye-sensitized, SPV spectrosc., electron injection 112864
Sulzer Hexis SOFC product develop. status 89194
synthesis gas prod. using SOFC technol. 99989
AgO watch batts., electrolyte sealing, anode can/gasket clearance *(Japanese)* 89049
Au anodic corros. in LiNbO-based opt. modulators 127824
C anodes from PMAN/DVB copolymers, Li-ion batt., electrochem. perform. 123765
CeO_2-ZrO_2 interfacial procs., SOFC, charge transfer control, nano-scale effects 99964
Cr alloy SOFC interconnect material, elec. charactn. 89265
ITO anode, carboxylic acid derivatives surface adsorpt., SAM growth 116975
La(Sr)Cr(Ru,Mn)$O_{3-δ}$, SOFC anodes, catalytic/electrochem. props. 134379
$La_{0.8}Sr_{0.2}Cr_{0.97}V_{0.03}O_3$ anode material for SOFC 100009
Li micro-batt. develop. for spacecraft appls. 89152

anodes continued
Li-ion batts., SONY-type, degrad. reacts. 123763
Li-ion high-power secondary cells, impedance spectrosc. studies 99944
Li-ion liq. electrolyte batts., recent develop., future prospects 89073
Li-ion prismatic cells, aircraft appls. 88065
Li-ion secondary cells, Mn-spinel cathode-based perform. improvements 89105
Li-ion secondary cells, key components safety studies using ASC 89149
Li-ion secondary cells, thermal abuse studies 89150
Li-rechargeable batts., anodes, portable telecomm. devices 112806
LiF-ITO anode for poly(styrene sulfonate)-doped poly(3,4-ethylene dioxythiophene) electrolum. device 104967
$Li_xMn_2O_4$ spinel cell electrode, heat generation charact. meas. 99920
Mg-soln. phase catholyte semi-fuel cell optim. using Taguchi methods 89167
$Na_{0.25}MoO_3$ anode, Li-ion batt., Li insertion, oxygen role 123766
Ni, H_2-H_2O|YSZ anodic SOFC syst., modeling, simul., expts. 89246
Ni SOFC anode, metal dusting corros. 89254
Ni/CeO_2-GdO_2 cermet SOFC anodes, internal fuel reforming expts. 89251
Ni/Ni_3Al porous MCFC anodes, creep testing 123778
Ni/YSZ SOFC anodes, hydrogen oxid. rate limitations 89244
Ni/YSZ anode/$Fe_{78}Cr_{22}$ SOFC interconnect, $Fe_{78}Cr_{22}$ foil 123795
Ni/YSZ cermet anodes in H_2-H_2O SOFC, competitive adsorpt. react. mechanism 100015
Ni-MH secondary batt. syst. for high-power appls. 89079
Ni-MH secondary cell H_2 storage intermetallic particles, surface modif. 99905
Ni-SDC/La(Sr)Ga(Mg)O_3/La(Sr)CoO_3 single SOFC, perform. 99967
Ni-YSZ SOFC anode, elec. cond./microstruct. studies 89242
Ni-YSZ cermet SOFC anode materials charactn. 89249
Ni-YSZ graded cermet foils, anode substrs., planar SOFC 99955
Ni-YSZ porous cermet SOFC anode, electrochem. charact. 89247
Ni-YSZ/YDC anode based SOFC, methane/ethane oxid. 99974
Ni-YSZ-Ag thin film SOFC testing 99966
Ni-ZrO_2 anode supported SOFC technol. demons., YSZ electrolyte 89198
Ni-ZrO_2 cermet SOFC anode, internal reforming/electrochem. perform. studies 89250
Ni-ZrO_2 cermet SOFC anode perform., ionic-cond. effect 89243
Ni-ZrO_2 cermet anodes, SOFC, internal methane reforming 89248
Ni-based SOFC anodes, microstruct., electrochem. 99998
$NiAl_2O_4$ anode material, catalytic activity, IR-SOFC methane steam reforming 89256
NiO/YSZ thin anode supported SOFC, YSZ electrolytes 89273
NiO-YSZ anode substr. supported YSZ electrolyte flat plate SOFC 99951
Pd anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt-Ru anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt-Ru-W composite PEMFC electrocatalysts, anodic methanol/methanol-reformate oxid. 134376
Pt-Ru-WO_x/C catalysts synthesis, PEMFC, XRD, XPS, XFA, TEM anal. methods 134374
Pt-YSZ SOFC anode syst., CH_4-H_2O gas-mixture react. kinetics 99973
PtRu anode catalyst for PEFC, abnormal IR effects 134368
a-Si microdot detectors, sq.-shaped electrodes 120978
Sn-Sb nanostructure alloy anodes, Li-ion batts. 123764
Sn-Sb-Cu nanostructure alloy anodes, Li-ion batts. 123764
SnO anode materials for Li-ion batts., state-of-the-art *(Chinese)* 112782
SnO_2-based nanostructured anode, sol gel proc., Li-ion batt. 99931
SnO_2-carbon composites anodes for Li-ion secondary batts. 99941
Ta capacitors, high CV, evol., anode sintering proc. 115057
Ta/Nb high CV powder metall. capacitor anodes, electrolytes for anodization 115060
Ti-V-Cr BCC-type solid soln. alloy anodes, surface struct., N-MH batts. 123767
Zn alkaline AAA cell configs., K_2FeO_4/$BaFeO_4$ cathodes synthesis 123725
Zn anode based alkaline primary/secondary cells, membranes 89051
Zn anodes, high-rate capability, alkaline primary cells 89052
Zn-air Instant Power™ primary batts. for portable consumer products 89057
Zn-air batt. fuelled EV demons. program, Israel 124009
ZrO_2-Y_2O_3-TiO_2 SOFC anodes, screen printed, I-V polaris. 89245

anodes, electrochemical *see electrochemical electrodes*

anodisation
Al_2O_3 porous anodic films, opt. polariz. props. of electrodepositing metal *(Chinese)* 127894
compact muon solenoid conductor, effect of surface treatment on adhesion at 300 K and 4.2 K 82003
contact pattern mask, photolithography, nanofab. 103510
cut-edge corros. inhib. on coil-coated steel sheet, model electrochem. cell 112759
FED, tubeless packaged, glass-to-glass anodic bonding 97739
MEMS polysilicon electrodes, anodic oxid., reliab. at high relative humidity/HV 104154
planar microcontacts form. by conductive probe, differential conductance 91786
poly(3-butylthiophene), electrosynthesis, semicond. props. 80778
polyethyleneimine-coated Si electrodes, pH sensitivity, potentiometric transducers 120976
polysilicon low-temp. TFTs, anodic oxid. on Al/glass substrs., LCDs 70123
Al film mass transfer during local anodic oxid. 69938
Al:Bi capacitor foils, simulated proc., Bi behaviour 80439
AlGaN/GaN MOS heterostruct. FET, photoanodic oxide, DC charact. 70113
Al_2O_3 MIM tunnel emitter fab. using anodic oxid. 115471
AlO_x, porous, anodic, nanoscale field emission array by self-organisation 102926
Au on n-Si(111), local depos., scanning electrochem. microsc. 101441
$CuFe_2$ cathodic electrodeposition/oxid. for $CuFe_2O_4$ thin film prep. 79366
GaAs, anodic oxide films, radioactivation anal. 103394
n-GaN epilayers, disloc. dens. eval., photoassisted anodic etching 81100
n-GaN, photoanodic oxid., oxide elec. props. 103335
InAs dots, MBE on anodised GaAs, honeycomb hollows effects 114293
InAs nanostructure device, fab., AFM oxid. proc. 115793
InGaAs/InP quantum wires/dots, MBE growth using nanopore templates 115407
InGaAsSb RWG QW diode laser, pulsed anodization etching 105353
InGaAsSb mid-IR QW laser material, ridge-waveguide struct., pulsed anodization etching 115644
La(Sr)Cr(Ru,Mn)$O_{3-δ}$, SOFC anodes, catalytic/electrochem. props. 134379
Nb strip lines, local anodization for Josephson jn./SQUID fab. 92891
Nb-Ti-Nb SNS jn., microwave cct., voltage std. 70955
PtSi ultrathin layer patterning, scanned probe lithog., quantum device appl. 103498
p-Si, anodization, macropore form. 115627
Si bulk micromachining, sens./actuator appls. 81616
Si epilayer, UHV/CVD growth, double layer porous silicon substr. *(Chinese)* 90355

nodisation continued
Si etching, galvanic cell form., sens. fab., review 103304
Si, macropore form., cryst. orient. depend., anisotropic props. 103326
Si, macroporous-based micromachining on full wafers 104217
Si nanohole array fab., self-organised porous alumina mask 126593
Si porous LED by std. BCD technol., yellow-orange EL 93432
Si, porous, NO_2 sens., deposition tech., electrochem. etching 97483
Si, porous, anodisation form. on Si surfaces, IR spectra anal. 91999
Si, porous, cold cathode, field emission perform rel to anodiz. *(Chinese)* 69391
Si, porous, form. technol., galvanic internal current generation 103374
Si, porous, form. technol. using internal current generation 126399
Si, porous, integrated LEDs, fab. proc. using graded doping profiles 82396
Si, porous, light-addressable potentiometric sens., prep. 97448
Si, porous, patterning for integrated opt., H ion implant., RTA 92008
Si, porous, prediction of nanoscale struct. from proc. params. 126412
Si, porous, sacrificial layer, microstruct. fab., morph. 101523
Si, porous semicond. form., anodization and electroless stain etch combination 92042
Si, porous silicon cold cathode device, field emission charact. *(Chinese)* 69390
Si, porous, strong photolum., anodization time, current dens. effects 103416
Si, porous, thick layer form., implanted mask, gas sens. fab. 92009
Si, porous, unoxidized and oxidized, metal/PS/c-Si photodetector 131907
n-Si rot. disk electrode, dissolution proc. in water/ethanol/HF solns. 92079
Si thick porous sacrificial layer form. using implanted mask technol., gas microsensors 92534
Si, ultra-thin gate oxide, AC anodization and RTA 126348
p^+-Si:B porous layers selective anodization, X-ray synchrotron topography obs. 103449
Si:Er,O porous films, MBE, PL *(Chinese)* 102990
Si:He,N, porous Si form., MeV energy pre-implant. 80992
β-SiC film, porous, electrolum. *(Chinese)* 81091
SiC layers on porous SiC, epitaxial/bulk growth, defect dens. reduction 125125
4H-SiC, opt. props., surface and pore morph. 103324
SiGe and Si nMOSFETs with gate oxide grown by low temp. plasma anodisation, noise study 81346
SiGe epitaxial layers on Si, anodic oxid., enhanced passiv. of oxide/SiGe interface 92049
SiO_2 film, AFM anodic oxid., nanofabrication 81083
Ta:N-doped powder for MLC capacitors, anodized oxide film, struct. 114427
Ta/Nb high CV powder metall. capacitor anodes, electrolytes for anodization 115060
Ta_2O_5 anodic thin films, defects, DLTS and conductance transient investig. 116134
Ta_2O_3/poly(EDT) bilayered film, solid electrolyte capacitor *(English)* 90491
Ti-SiO_2, tip-induced ultrathin metal film oxid. kinetics 126591
ZnO, anodic thin film, rectification, L-C-R charact. 80962

anodised layers
Al, anodized surface, laser cleaning study 128598
Al electrolytic capacitor, composite oxide film form. *(English)* 91418
Al_2O_3, nanoporous anodic layer, Ni deposition, substr. fab. 68450
Si, porous, porosity & film thickness, electrolyte comp., anodization 92002

anomalous skin effect
lin. polarized laser pulse in overdense plasma, anom. absorpt. 105772
BiSrCaCuO sintered supercond., normal/anom. skin effect regions 70624

ANSI standards
see also IEEE standards
BusNet protocol for backplane bus-based interprocessor commun., perform. anal. 119324
C63.5/ARP958 methods of emission-antennas calib. for EMC 120630
DS-41 and UMTS intersystem roaming 96474
DSLs, spectrally-shaped crosstalk-impaired, peak-energy-limited multicarrier systs. loading 131009
FDA regulations for laser product manufacturers 100505
HPGe coaxial detectors, specs. 98026
IEEE 205-2001, TV video sig. luminance level meas. 120537
LV elec./electronic equipt. radio-noise emissions meas. 97120
multiple laser pulse max. permissible exposure determ., ANSI Z136.1-2000 100504
refinery power plant, fault current limiters, benefits assess. 78366
retinal fs laser pulses spot size, vis. lesion threshold depend. 67501
roadway luminaries, vibr. test method, ANSI std. 113134
sectorized proximity location mgt. 97009
steam turbine-generator IEEE/ANSI C50 Standards series revision 123190
Pb-free solder paste residues, post-solder cleaning 115135

antenna accessories
see also antenna earths; antenna feeds; directional couplers; radomes
base-station antennas perform. enhancement using resistive plates 74844
contoured-beam spacecraft antenna, stripline beamforming network 74887
cylindrical wire antenna with flat end caps, modeling 72596
dipole enhanced charact. using nonconventional metallic reflectors 128847
dual band/wideband waveguide polarizer, design and perform. 72698
EM scanning 3-element array with integral phase shifters 83733
hexapod paraboloid truss antenna, deployable power *(Chinese)* 105917
inverted trapezoidal pulse antenna improvements 94134
Japanese cdmaOne syst., band-switching SAW antenna duplexer 96527
Ku band, multi-layered meander line polarizer 72701
microstrip antennas, Gunn integrated, noise 105905
microstrip periodic stub diplexer, multifrequency transceiver 125678
multilayer printed periodic structs., appl. to antenna technol. 83774
Nobeyama 10-m submm antenna, high-precision angle encoder 109341
phased-array antenna, polymeric waveguide ccts. for true time delay 117844
plate Luneberg lens, permitt. distrib. effects *(Japanese)* 83647
SAW antenna duplexer for mobile appl., miniaturization tech. 94204
SAW duplexer, high power durable electrodes 92700
SAW duplexer, stress migration anal. 92699
subreflector rotary antenna mechanism, rotary actuator 89017
switch diplexer front-end module for GSM/DCS/PCS appls., PHEMT switches 91348
two-channel polarizing device for radiating syst. 114946
UHF high-directivity patch antenna with photonic bandgap struct. 105871
$Ba_{0.5}Sr_{0.5}TiO_3$ paraelectric film phase shifter 69247
GaAs SPDT FET switches with capacitor-cancelled parasitic inductance 80377

antenna arrays
see also active antenna arrays; adaptive antenna arrays; antenna phased arrays; antenna travelling wave arrays; dipole antenna arrays; directional couplers; linear antenna arrays; log periodic antennas; microwave antenna arrays; millimetre wave antenna arrays; monopole antenna arrays; planar antenna arrays; Yagi antenna arrays
2.6 GHz low cost receiver for digital beam forming 83708
2D angle estim., ESPRIT method, uniform parallelogram array *(Chinese)* 95643
2D array antenna synthesis, array elements pattern effects 117848
3 and 5 GHz bands spatial propag., eval. of WLL and WLAN systs. 105751
3G CDMA commun., interf. mgt. methods 96549
3G DS-CDMA systs. with array antenna, direction finding 108738
3G mobile radio systs., stochastic spatio-temporal propag. 74789
3G W-CDMA semi-blind channel ident., orthogonal transmit diversity 85804
adaptive modulation for multiple antenna systs. 106062
amplit. pattern, phase-only synthesis 83667
antenna technol. and applied EM, conf., Winnipeg, Man., Canada (2000) 78440
azimuthal angle-of-arrival meas., design/eval. 83748
beam scanning reflector antennas, BFN design for cluster feeding 117862
BLAST algm., fast sq.-root implement. 108613
BLAST systs. perform., iter. detect./decoding effects 72866
BLAST-like indoor radio systs., asymptotic anal. 131111
blind/robust space-time receiver for turbo coded syst. 106135
block-fading channels with multiple antennas, limiting perform. 74517
broadband wireless commun., transmit/receive spatial MUX 131199
broadside antenna arrays, directivity approx. 120430
calib. algms. for antenna arrays 117859
Cantor ring arrays design using fractals 117837
CDMA, low-complexity interf. mitigation on vector channels, design/anal. 105803
CDMA asynchronous multipath channels, blind space-time detect. 73728
CDMA cellular radio, spatial diversity and power allocation 74806
CDMA distributed antenna systs., reverse-link power control 85798
CDMA high capacity array-receiver requiring reduced pilot power 74750
CDMA mobile radio capacity, BLAST based multiuser detect. 131288
CDMA multichannel nonlin. systs., blind zero forcing equalization 119884
CDMA space-time spreading multilayered syst. 74582
CDMA spectral efficiency, freq.-flat fading impact 74519
CDMA systs., spectral efficiency with transmit and receive antenna arrays 85662
cellular radio, antenna arrays perform. in urban multipath environ. 73573
cellular radio antenna arrays, robust constrained downlink beamforming 120035
cellular systs., transmit-diversity coding 118006
circ. antenna array with helical antennas, anal. 72697
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
co-channel sigs. detect. and copy, space-time proc. 108554
comb-shaped antenna for radiofrequency ident., anal. of near field 105933
concatenated vector-valued fading channels, asymptotic eigenvalue distrib. 131268
conformal onboard array antenna synthesis, MoM-based algm. 83752
convex circ. cylinder apertures, mutual coupling calc. using hybrid UTD-MoM method 72650
cross-mesh array antenna 83717
DBF receiving array antenna calib. using ref. seq. 105945
design, neural network enhanced GA 83505
diagnosis from near-field data, interferometric methods comparison 117830
differential encoding/decoding schemes 119866
directivity props., num. modeling 72473
diversity reception of nonorthogonal multipulse sigs. in multiuser Nakagami fading channels 74515
DOA estim. using cosθ amplit. response antenna *(Japanese)* 107348
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753
DS-CDMA asynchronous robust space-time multi-user receiver 74581
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA cellular forward link, transmitting array antenna beamforming 108887
DS-CDMA downlink transm., spatio-temporal array proc. 107390
DS-CDMA mobile radio channel, blind space-time channel estim. 108698
DS-CDMA networks with multiuser receivers/spatial diversity, resource pooling/effective bandwidths 74631
DS-CDMA PCS indoor systs. with distributed antennas, forward link perform. eval. 85744
DS-CDMA syst., closed-loop transmit diversity with feedback delay 119982
DS-CDMA systs., code-timing sync. using space-time diversity 107767
DS-CDMA wireless systs., space-time blind MOE detect. 107598
dual-antenna-array wireless systs., capacity scaling 108605
dual-antenna-array wireless systs., capacity scaling 83700
dual-freq. unequal power divider, base station antenna array 114945
fading-resistant constellation transm. scheme 96350
fast-scan GMTI/STAP archits., perform. comparison 96991
FDD systs., downlink space-time proc. 119046
fixed high capacity wireless access systs. with antenna arrays 85557
FMCW radar, sig. proc. method for switch antenna array 96949
freq. re-use from high altitude platforms 108731
freq.-selective fading channels, space-time block-coded multiple access 85719
GPS attitude determ. receiver integrated with dead reckoning *(Korean)* 109324
GSM mobile telephone handset, low complexity pre-detect. antenna syst. 105946
halfwave antenna based config. 128837
hand-set mobile telephone with reduced EMW hazard, triple-freq. operation 105974
HF digital commun., source separation with collocated antennas 84729
HF direction finding and array proc., colocated antennas design 83713
HF high lat. path commun., directional diversity and spatial filtering 85576
hierarchical radar target localization, seq. techs. 96894
high gain and wideband antenna arrays, automatic optim. 117855
high speed wireless data access 119920
high-rate multiple-antenna code design, representation theory 119863
high-resoln. phase sampled interferometry using symm. no. systs. 131705
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
IEEE antennas, propag. and EM theory, conf., Beijing, China (Aug. 2000) 67407
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
ILS glide slope perform. sensitivity to sideband-only phase variances 98908
impulse radiating antennas with arrays, prompt aperture efficiency 105861
incoherent sig. summing equipt., diag.-plotting systs. 119893
interferometric array design, antenna pads location optim. 131716
IS with antenna arrays, optimal/quasioptimal algms. of superresolution 107343
iter. receiver algm. for space-time encoded sigs. 106134
LEO satellite link with multiple antennas user terminals, capacity study 109025
lightning location, range-difference and direction-finding methods 88144

antenna arrays continued
LOFAR radio-telescope using cluster computers and grid proc. 75263
long-range radar transmitting antenna feeding network, synthesis and anal. 83686
LOS sig., time-delay estim. in multipath environ. 118966
max. ratio transm., tightness of SNR gain bound 96521
metallic PBG struct. based wire antennas, design with explicit method 72577
MIMO interf.-limited cellular syst., simul. results 74752
MIMO systs. using multiple spreading codes, MUX scheme 107661
MIMO systs. with antenna selection, capacity 131289
MIMO virtual framework for multipath fading channels 108910
MIMO wireless channels, capacity/perform. prediction 74560
MIMO wireless syst., layered space-time coding/sig. proc. 119862
ML deterministic algm. for blind joint channel/data estim. with multiple antennas 130004
MM-wave Gaussian radiation pattern antennas 117820
MM-wave indoor LAN, antenna-coupled detector arrays 85224
mobile radio propag. channel MIMO meas./ident., antenna array 119960
mobile telephone three-element array antenna with triple-freq. operation 105975
moving target imaging in foliage using polarimetric multi-freq. antenna array SAR 99156
MTI with multiple receive apertures, general sig. proc. algm. 96954
multi-coord. radar meas., pot. accuracy anal. 75120
multi-element struct. charact., Chebyshev modified fns. 116224
multiantenna applicators, regional hyperthermia, optimal controls, fast algm. 122305
multiband terminal/base-station antennas for mobile commun. 83711
multiple antenna fixed outdoor commun., multiuser diversity 85508
multiple antennas, high spectral efficiency promise 83668
multiple transmit/receive antennas with lin. unitary precoders 108959
multiuser interf. suppression using optimal seqs. combined with antenna arrays 94059
OFDM mobile systs., channel estim. for multiple antenna diversity reception 108926
OFDM syst. improvement using antenna diversity *(Chinese)* 117913
onboard array antennas synthesis, antenna interacts. 72663
open area repeater with interf. cancellation syst., channel simulator 131071
pass. matched antenna, min. scatt. field calc. from pattern 83699
pattern meas., element current reconstruction method *(Chinese)* 128908
pattern synthesis accomplishing tapered minor lobe distribs. 83677
power param. optim. of antenna arrays with suppressed cross-polarized radiation 105949
quadratic receivers in Rayleigh-fading channels, asymptotic error probab. anal., coherent/noncoherent space-time receivers anal. 119864
radiation in different media *(Chinese)* 105941
radiation pattern sidelobe suppression 128911
radio interf. autocompensator, multipath effects 85502
Rayleigh fading channel multiple-antenna sig. constellations 119865
receiver with Kalman channel predictor for fast Rayleigh flat fading environ., perform. 83664
receivers in autoregressive flat fading channels 108611
reciprocal multipoint networks, LEGO approach for max-min capacity 108907
satellite commun., array sig. proc. for improvement of rural area coverage 131318
SD/TD/CDMA systs., joint detect./pre-distortion techs. *(English)* 130147
SDMA systs., blocking probab. determ., theoretical model 119214
semi-infinite quadratic prog. algm. with appls. to array pattern synthesis 72666
separable dimens. subspace method for joint sig. freqs./DOAs/sens. mutual coupling estim. 107392
side-lobe transient response of large antennas 83691
sig. separation at three-component antenna array from spatially distinct sources, tracking algms. 119092
single/multiple region field computation, domain-decomposed MEI method 83241
space-time bit-interleaved coded modulation over freq. selective fading channels with iter. decoding 72936
space-time block codes, max. SNR approach 74521
space-time cochannel TDMA, DOA adaptive acquisition 108604
space-time proc. with channel knowledge at transmitter 130037
spaceborne antenna design 117771
spatial CDMA for multiple antenna access, capacity/error rate anal. 74529
spatial spectrum, resoln. enhancement by virtually expanded array 118918
specular transm. channel blind multipath params. estim. 107629
spherical array in superresolution direction finding systs. 131693
STAP algms. with mismatched steering/clutter stats., perform. charactn. 109264
subband arrays, perform. anal. 117854
subspace leakage environ., rapid adaptation 107388
super-resoln. direction estim., antenna array perform. study *(Chinese)* 95628
SW array antennas in outfield, test method 83674
synthesis from curvilinear radiators with account of mutual influence 117832
TCM with receiver diversity, turbo space-time equalization, max.-likelihood detect. 107694
TDD-CDMA systs., FIR RAKE multipath diversity with antenna array 96397
time-reversal space-time block coding and transmit delay diversity 108911
time-selective fading channels, double differential space-time block coding 119878
transm. line band stop filters for antenna arrays 72653
transmit diversity for arrays with correl. Rayleigh fading 108909
TURBO-BLAST for high-speed wireless commun. 83409
turbo-coded modulation for transmit/receive antenna diversity systs. over block fading channels 72888
UHF external array self-calib. algms. 105966
UHF indoor/outdoor channels, multi-element arrays capacity growth 85543
UHF real-time spherical near-field handset antenna meas. 94178
unequal SNR denoised commun. sigs., time difference of arrival estim. 108912
VLF polarised antenna array, null steering algm. 107312
wideband array-pattern design, superdirectivity and SNR constraints 94196
wideband multiple transmitter/multiple receiver systs., unsupervised proc. 107394
wireless commun., transmit diversity scheme with power control 108876
wireless handheld terminals, spatial/polariz./pattern diversity 119937
wireless MIMO channels, transmit antennas near-optimal selection 108601
wireless networks, cooperative diversity protocol 131093
wireless systs. beyond 2000, role of antennas and propag. 85498

antenna beam steering *see beam steering*

antenna components *see antenna accessories*

antenna earths
broadband probe-fed patch antenna with reduced cross-polaris. radiation 83730
broadband suspen. plate antenna with vert. grounded wall 83590

antenna earths continued
ELES antenna for mobile satellite terminals 83583
MF elec. small broadcast antenna, radiation charact. anal. by simul. 83521
microstrip antennas on high permitt. ceramic substrs./small ground planes, expt. study 83529
PIFA/helical antenna on different ground planes, simulated impedance bandwidths/gains/radiation patterns/SAR values 83520

antenna feeders *see antenna feeds*

antenna feeds
see also reflector antenna feeds
2.45 GHz cavity-backed slot antenna perform., FDTD anal. methods 83654
2.4 GHz diversity antenna for wireless handset external mounting 83637
3G triband probe fed printed eccentric spiral antenna for nomadic wireless devices 83616
4-cm band latching controlled ferrite power divider 116481
35 GHz microstrip tapered-array antenna with wide detect. range 72688
act. antenna using parasitic element 72459
act. concentric circ. ring microstrip antenna, dual-freq. operation 83585
annular ring microstrip antenna, L-probe proximity feed 72560
aperture-coupled microstrip patch antenna, anal./network modeling 83639
automotive radar, three-beam antenna 96993
broadband circ. polarised proximity coupled patch antenna 83613
broadband planar antenna, DBS reception 105930
broadband probe-fed patch antenna with reduced cross-polaris. radiation 83730
broadband suspen. plate antenna with vert. grounded wall 83590
C-band microwave relay antenna syst., feed design 72611
CAD of high-perform. slotted waveguide array antenna for maritime patrol radar appls. 86198
circ. polaris. dielec. resonator antenna, perturbed annular slot 94174
circ. printed antenna, dimens. reduction 83589
cluster feed syst. with hybrid low-level BFN 105979
compact CPW-fed printed antennas, small ground planes, anal. and modelling 128875
compact handset antenna, design 83719
corrugated waveguide polarizers for satellite antenna feed syst., design 72704
coupled CPS for microstrip fed CPS tee jn., dipole antennas 91197
coupled line feed single-layer rect. patch antenna, bandwidth enhancement 83631
CPW-excited broadband microstrip antenna *(Japanese)* 105944
CPW-fed coplanar patch and array antennas, simul. and expt. study 72672
CPW-fed slot antenna design, simple model 83550
CPW-fed slot-loop antenna with low cross-pol. radiation 72564
cross-mesh array antenna 83717
cylindrical dielec. resonator antennas, mutual coupling 83595
cylindrical multi-sector antenna with self-selecting switching cct. 117852
DCS base station broadband probe-fed patch antenna 131256
dielec. resonator antenna with displaced conformal strip feed 72548
double-folded capacitive-fed cavity-backed microstrip antenna 117792
dual band sq. microstrip antenna embedded with shaped slot 72597
dual feed single act. patch beam steering antenna, compact design 72581
dual polarised broadband CPW fed patch antennas, design study 72567
dual polariz. stacked microstrip patch antenna array, airborne SAR appls. 128893
dual polarized patch antennas fed by hybrid feeds 72598
dual-freq. CPW-fed dual-slot loop antenna 105870
dual-polarized planar microstrip antenna fed by dog-bone slots 83587
E-band broadband patch antenna, design 72538
FDTD anal. of stacked microstrip antenna with high gain 94167
FDTD anal./design of probe-fed dual-polarized circ. stacked patch antenna 72592
FDTD anal./design of probe-fed dual-polarized circ. stacked patch antenna 105881
FDTD solns. for dielec. resonator antenna problems with different feeding sigs. 128844
feedthroughs, for high-power ICRF antenna, HV test 72700
Fermi-profile tapered slot integrated antennas for mm-wave receiver IC 72515
ferrite fed microstrip array antenna, beam scanning characts. 72624
finite corner antenna, directivity factor optim. 117817
finite microstrip patch antenna, broadband anal. using FDTD 83607
finite phased arrays, element charact. anal. using matrix manipulations 83751
finite-slot phased arrays fed by rect. waveguides, MoM anal. 72651
folded loop antenna syst. for handsets based on advanced design concept 120056
fractal antenna research at Univ. of Birmingham 83569
FSS resonator elements on circ. dielec. rod antenna for mobile commun. 83622
future handset antenna syst. 108718
GBS/Milstar airborne RX/TX antenna 105874
ground-penetrating radar antenna feed models for response computation *(Korean)* 120451
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
Ka-band array elements for ATM-Sat terminal antenna 72670
L-band radar transmitting antenna pattern synthesis and feed network *(Polish)* 72625
L-probe fed small wideband triangular patch antenna 105914
L-probe-fed shorted broadband semicircular patch antenna 83649
L-type aperture coupled circ. polariz. patch antenna with single feed, design 72690
LMCS, dual-polarized lens antenna 96411
long. TSA, coaxial line balun feed 117777
long-range radar transmitting antenna feeding network, synthesis and anal. 83686
mesh antennas for dual polariz. 83635
microstrip antenna, probe-fed compact circ. design for circ. polariz. 72540
microstrip array antenna with beam squint, develop. 83673
microstrip arrays, aperture coupled, anal. 128884
microstrip Butler matrix, beamforming network 83704
microstrip disk antennas with inhomog. artificial dielec. 83655
microstrip line fed H-slots, transm. line model for field distrib. 94159
microstrip reflectarray with line-source-feed 94184
microstrip-fed microstrip second higher order leaky-mode antenna 83640
microstrip-fed slot antenna for MM-wave RFID syst. 72563
microstrip-line-fed printed wide-slot antenna, bandwidth enhancement 94126
miniature dielec.-loaded bifilar antennas for mobile commun., num. simul. packages 83599
miniaturized fiber coupled RF elec.-field sens., resoln. and sensitivity 109602
MM-wave dielec. slab leaky-wave antennas 117819
MM-wave Gaussian radiation pattern antennas 117820
MM-wave Rotman lens for multi-beam feed, design using NRD guide, car radar appl. 94203
mobile handset chassis, antenna efficiency meas., loss mechanisms 119963

ntenna feeds continued
multi-band mobile telephone antennas 83528
multi-moded corrugated horns for far-IR space appls., radiation patterns 117815
multi-octave band conical spiral antenna 72464
multilayer coupled-line struct., design and cct. appls. 80205
nonuniformly spaced lin. array antenna, feed syst., GA *(Japanese)* 83770
patch antenna, broadband probe-fed, bent ground plane 72556
patch radiators, radiated cross-polar levels and mutual coupling 83573
PCS and IMT-2000 base station wideband microstrip array antenna design 117828
PCS base station, broadband dual polariz. patch antenna 72559
PCS base station low-cost microstrip-line-fed shorted-patch antenna 72543
PCS phone surface-mounted chip dielec. ceramic antenna 83551
photonic phased-array antenna, opt. Blass matrix TTD steering 94191
PIFA compact dual-freq. designs using LC resonators 94125
planar antenna array, parallel waveguide feed cct. 83681
planar folded slot lens for slab-beam power combining 94179
polariz. diversity antenna with hybrid feed syst. for WLAN appls. 72582
printed dipole antenna, balun, FDTD anal. 72500
probe excited rect. cavity-backed slot antenna, input impedance 83554
pulse-excited thin wire monopole radiation 94133
quadrifilar helix antenna with parasitic helical strips 105879
radar planar antenna arrays, multichannel in-phase power dividers *(Polish)* 105982
radial line slot array antenna, polaris. props. 72628
radio-on-fibre syst., photodetect., photonic feeding antenna & transm. 85567
rect. patch antenna on uniaxial anisotropic dielec. substr., FDTD anal. 128845
rect. waveguide endwall slot feed microstrip arrays, num. study 72683
RLSA, CPW planar feeding cct. design *(Chinese)* 128912
rot.-mode RLSA, aperture coupled planar feed ccts. 72489
Rotman lens for MM-wave sens. appls., high efficiency design and simul. 72673
series microstrip-fed two-element slot antenna 83543
series TW-fed arrays, radiating element conductances *(Chinese)* 72682
single-feed rect.-ring microstrip antenna for indoor commun. under Bluetooth protocol 117787
single/dual band quadrifilar spiral antennas for satellite-mobile handsets, new designs 83621
slotline, space leakage of power, dispersion characts., antenna appls. 94176
Smith chart appls. for microwave component charact. 102592
space-borne compact ortho-mode-transducer for freq. reuse appls. 72699
spaceborne precip. radars, second generation 133329
TEM face-to-face horn fed pulse radiation antenna 83547
thick microstrip antenna finite arrays, anal. 83750
three-offset microstripline-fed slot antenna, bandwidth 128866
triple-band dipole antenna with multiple parasitic elements 117822
two-layered patch and loop antenna with dual freq. for indoor microcellular syst. 72579
UHF vehicle telematics syst. hidden antennas 120047
ultrawide band TEM antennas, radiation procs., num. simul. *(Chinese)* 105883
UWB CPW-fed spiral antenna and balun for humanitarian demining 128859
Vivaldi uniplanar four-element array, CPW fed 105925
wide-band low-cost suspen. patch element using 3D dual-feeding sect. 83564
wideband double-T-shaped microstrip-line-fed slot antenna 105911
wideband TE_{21} mode tracking corrugated horn with feed syst. 72576

antenna lobe patterns *see antenna radiation patterns*

antenna patterns *see antenna radiation patterns*

antenna phased arrays
see also adaptive antenna arrays
2D opt. sig.-proc. beamformer using multilayer polymeric opt. waveguide arrays 125831
2D phased arrays, planar quasi-Yagi antennas, mutual coupling 72626
3D water-coated antenna applicator for deep-body hyperthermia 87847
8 to 26.5 GHz low-cost phased array antenna using piezoelec. transducer controlled phase shifter 117825
20 GHz phased array antenna for GEO satellite commun. 105947
act. phased array antenna using transm.-line coupling network and VCO 72662
adaptation to engng. condition 117824
adaptive antenna arrays control with GA using dominance/diploidy 128895
adaptive radar imaging in wide ang. sector 96956
airborne moving target detect. using lin. phased array radar 131659
Army microwave beamforming, opt. controlled phased-array antenna use, monolithic opt. element integrat. 99173
automated testing 117841
bi-directionally steering phased array antenna controlled by dual piezoelec. transducers 83764
broadband high-power photodetector arrays for photonically implemented phased array antenna archits. 83738
broadband matched antenna array, freq.-domain, pulse simul. 83721
calib. 72646
calib. procedures based on element patterns 83732
circ. patch microstrip antenna 8-element circ. array in plasma 105953
CLASP software suite for antenna design/optim. 83526
coupled tapered slot-line antenna with sum/difference beams 72667
cylindrical multi-sector antenna with self-selecting switching cct. 117852
decade wide bandwidth integrated LNA, 0.4-8 GHz, act. antenna appl. 125784
digital array nonlin., mitigation 96990
digital phased array antenna syst. for cellular PCS band appl. 83759
digital phased array beamforming, single-bit delta-sigma conversion, non-uniform oversampling 95645
digital radar arrays, digitization requirements 96988
displaced-phase-center antenna tech., airborne/spaceborne radars 99142
DS-CDMA systs., dyn. groupwise successive interf. cancellation array receiver 85741
dual band phased array antenna design for radar appls. 83712
element in waveguide simulator 128903
elements, low loss contactless microwave transit. design 83707
ferrite based patch array, scanning improvement, time delay method 72656
ferrite based patch arrays, magneto opt. tech. for beam steering 105950
fig.-8 satellite earth station antenna, array pattern tuning method 72637
finite phased arrays, element charact. anal. using matrix manipulations 83751
finite phased arrays, similar behaviors of planar and lin. arrays anal. 105955
finite-sized lin. phased stacked microstrip antenna arrays, FDTD anal. 83698
finite-slot phased arrays fed by rect. waveguides, MoM anal. 72651
Fourier opt. proc. beamforming network 120704
generalized act. phased array antennas, syst. charact. 94189
GMTI perform. of $\Sigma\Delta$-STAP for forward-looking radar 96944
infinite planar waveguide phased array antennas, scan range enhancement 94181
inline capacitive and DC-contact MEMS shunt switches 104200

antenna phased arrays continued
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
Ka-band broadband aeronautical satellite commun. expts. 108989
Ka-band dipole holographic antennas 83663
Ku-band driver amp. for act. phased array appls. 117826
L-type aperture coupled circ. polariz. patch antenna with single feed, desihn 72690
large finite sized phased array antennas, scatt. prediction using FDTD 83696
LEO satellite compact conical patch phased array antenna 83679
LEO small satellite antenna, compact phased array design 83725
lin. phase antenna arrays simul. with waveguide simulator 83743
max.-likelihood beamspace proc. for improved search/track 96884
meas. in time and freq. domains using sampling oscilloscope 75847
MEMS appls. in commun. satellites 81551
MESSENGER deep space mission, electronically scanned phased-array antenna 120109
microstrip antenna array, plane spiraphase focusing lens 105940
microstrip antennas in subsurface sens., moisture meas. & NDT 88194
microstrip periodic stub diplexer, multifrequency transceiver 125678
microwave phase shifter, opt. control, CFG and OFS 69253
MM-wave antennas, MEMS RF devices 72643
MM-wave radar phased antenna array 131662
MM-wave semicond. phase shifters, charact. 80281
MMIC phased arrays for new millennium 128883
MRI planar strip array antenna, DAQ, parallel proces 87694
MTT-S International Microwave Symposium, Phoenix, AZ, USA (2001) 78477
multibeam array antenna, spatial opt. sig. proc. 83683
multielement struct., compensational phase weighting 105854
multifunctional monopole antenna array for terrestrial and satellite radio appls. 83768
multilayer ferroelec./continuous transverse stub phase shifters and phased antenna arrays 80306
multilevel photonic modules for MM-wave phased array antennas 83739
multimedia mobile satellite commun., antenna technols. 83685
natural radar detect./navig./direction finding tracking systs. guiding hornets flight, hypothesis 120437
next-generation space based radar, phased array technols. 117839
noise coupling determ. method 83766
optimal adaptive proc. for domain factorised element-digitised array radar 75072
optimized beamsteering by appropriate random phasing quantization methods 83672
Orchard-Elliott pattern synthesis algm. by pseudo-inverse and LMS 117838
phased array antenna, improvement by parasitic elements 72645
photonic phased-array antenna, opt. Blass matrix TTD steering 94191
photonic true-time-delay networks design for radar appl. 91395
planar rect. phased dipole arrays, 3D Green's fn. 117836
polymeric waveguide ccts. for true time delay 117844
PON retrodirective array perform., real component effects 83728
radar antenna for multiple obj. tracking 83671
radar technol. develop. at Lincoln Laboratory 96983
reflective antenna array, shorted ring slots 105927
RF MEMS devices technol. 80236
SAR reduced pers. commun. handset, FDTD investigs. 83706
self-healing arrays design using vector-space projections 72647
semicond.-laser based opt. PLL, phased array commun. antenna sig. source 80393
shipboard multiple satcom antennas, optimum combining for hemispheric coverage 105926
SIGMA-eye applicator, antenna arrays, interacts./transforming networks 111105
smart antennas, appl. for capacity enhancements in GSM networks 117858
Square Kilometer Array project, finite array effects computation 86280
STAP/adaptive antennas, pragmatic approach 84773
surface meas. using microwave holography 83516
TDMA smart antenna wireless base stations, Internet controlled calib. syst. 85568
TechSat21 distrib. space-based radar syst., pattern synthesis 120456
thinned antenna arrays using nonlin. proc. in DBF radar appls., perform. 83767
time delay photonic commun. syst. design 120160
time-domain response comparison 83552
true time-delay MM-wave array transmitter, ultrawide-band fiber-optic control 94177
two-layer printed reflectarrays design using variable size rect. patches 128894
USA Navy's digital array radar develop. 99164
UTD ray-tracing models, radio site topographical data, base station antenna design optimisation 83714
Vivaldi dual-polar antennas for phased arrays with wide-angle scanning 83693
waveguide phased array antennas, parametric studies on WAIM sheets 94190
welded/machined phased array antennas perform., mech. uncertainties effect 83736
wideband arrays, sidelobe reduction through subarray overlapping 94198
Au-$BaSrTiO_3$ thin film ferroelec. phase shifters, anal./optim. 80296
Au-$SrTiO_3$ thin film ferroelec. phase shifters, anal./optim. 80296
$(Ba,Sr)TiO_3$ thin film phase shifters on sapphire/glass substrs. 91217
$Ba_{0.5}Sr_{0.5}TiO_3$ paraelectric film phase shifter 69247
$BaSrTiO_3$-based phase shifters, RT, for electronically steerable antennas 83757
GaAs PHEMT wideband true-time delay MMIC, act. phased array appl. 125799
GaAs SPDT FET switches with capacitor cancelled parasitic inductance 80377
GaAs/AlGaAs photonics IC for opt. beamforming in phased array antennas 82439
Si-SiGe mm-wave MMIC near-range radar sens., coplanar transm. lines, MEMS switches 115019
YAG:Tm^{3+} cryst., opt. coherent transient true-time delay 117425
$YBa_2Cu_3O_7$-$SrTiO_3$ thin film ferroelec. phase shifters, anal./optim. 80296

antenna radiation patterns
1D Fresnel zone phase correction for reflector antenna 105846
1D photonic bandgap resonator antenna 83650
2.45 GHz cavity-backed slot antenna perform., FDTD anal. methods 83654
2.45 GHz low-cost Bluetooth PBG patch antenna for wearable systs. 83568
2.4 GHz diversity antenna for wireless handset external mounting 83637
2.4/5.2 GHz dual-band shorted microstrip antenna, WLAN/HIPERLAN appls. 117807
2D complex source point beam, degrad. due to circ. dielec. radome 72457
2D mech. beam steering antenna fabricated using MEMS technol. 83763
2D Van Atta retrodirective array using dual polarized two-port sq. microstrip patches 83734
3D airborne radome of superspheroidal shapes, discrete anal. 72703
3D conducting struct., stationary phase method for radiation anal. 83506
3D metallic PBG struct.-based antenna, radiation pattern calc. 94119

antenna radiation patterns continued
3D waveguide/antenna struct. on curvilinear grids, nonorthogonally-oriented higher-order FDTD 69014
3D-FDTD subgridding tech. applied to mobile phone antenna radiating structs. 105916
4-cm band latching controlled ferrite power divider 116481
4-element triangular microstrip array antenna for circ. polaris. 72644
30 GHz leaky MM-wave lin. slot array 94188
35 GHz microstrip tapered-array antenna with wide detect. range 72688
60-GHz indoor WLAN access point shaped reflector antenna 74609
76 GHz band low-sidelobe single-layer slotted-waveguide arrays 117851
900 MHz handset diversity antenna, head/hand/shoulder effects, correl. charact. 94161
900 MHz handset diversity antenna, head/hand/shoulder effects, effective gain charact., perform. anal. 94160
1800 MHz PCN compact dual-polarized patch antenna 72537
act. antenna using parasitic element 72459
act. antennas with butterfly-shaped patches, opt. control of radiation 72635
act. concentric circ. ring microstrip antenna, dual-freq. operation 83585
act. dual-beam microstrip leaky-wave antenna, asymmet. scan capability 72583
act. lin. arrays with peak amplit./radiated voltage distrib. constraints, transmit patterns 83744
act. microstrip antenna array, polariz. agility *(Chinese)* 105922
act. phased array antenna using transm.-line coupling network and VCO 72662
adaptive antenna arrays, power reduction with null depth trade-off 105965
AGVs, teleoperated, with wireless link in container terminal 119887
airborne radome, elec. design, vector aperture-integrat./surface-integrat. method *(Chinese)* 105981
amat. radio antennas near-field exposure assess. 85492
annular ring microstrip antenna, L-probe proximity feed 72560
annular slot-fed cavity antenna 94153
ANSI C63.5/ARP958 methods of emission-antennas calib. for EMC 120630
antenna, min. scatt. field calc. from pattern 83699
aperture antennas at 42 GHz for LMDS commun. syst. 72615
approx. by at. fns. 117754
approx./lin. radiator synthesis based on at. fns. 117753
array antenna amplit. pattern, phase-only synthesis 83667
array antenna meas. with rough surface reflector, anal. 105967
array antenna pattern meas., element current reconstruction method *(Chinese)* 128908
array pattern synthesis accomplishing tapered minor lobe distribs. 83677
array radiation in different media *(Chinese)* 105941
array radiation pattern sidelobe suppression 128911
array synthesis from curvilinear radiators with account of mutual influence 117832
arrays with suppressed cross-polarized radiation, power param. optim. 105949
axisymmetric antennas, scatterers and resonators, AKBOR computer code 83502
azimuth super-resoln. using phase inform., study/expt. 75091
bal.-fed antenna syst. for handset 94154
bal.-fed planar built-in antenna for IMT-2000 3G mobile commun. 83556
BAR-mode low bias high-efficiency act. transmitting patch antenna 72546
base-station antennas perform. enhancement using resistive plates 74844
base-station-antenna radiation patterns, 3D interpolation method 72665
beam scanning reflector antennas, BFN design for cluster feeding 117862
bent crossed wire antenna with vert. parasitic elements, circ. polarized conical beam *(Japanese)* 117761
bent patch element for polariz. diversity antenna 72675
bent-slot loading rect. microstrip antenna, dual-freq. operation 72553
biconical dielec. resonator antenna for wideband appls. 94141
bidirectional rod antennas comprising narrow patch and parasitic elements 117853
bifilar and quadrifilar truncated spherical helical antennas, FDTD design 117793
bistatic radar denial/embedded commun. via waveform diversity 99155
Bluetooth access point smart antenna 85749
broadband circ. polarised proximity coupled patch antenna 83613
broadband low-profile cylindrical monopole antenna 72484
broadband microstrip array antenna for PCS and IMT-2000 base stations 72631
broadband planar antenna, DBS reception 105930
broadband probe-fed patch antenna with reduced cross-polaris. radiation 83730
broadband probe-fed plate antenna with stub, design 117798
broadband rect. patch antenna with pair of wide slits 117783
broadband suspen. plate antenna with vert. grounded wall 83590
broadband tapered printed quadrifilar helical antenna 94172
broadband triple gap-coupled triangular microstrip antennas 72509
broadband two-layer shorted patch antenna with low cross-pol., design/anal. 72475
broadband wireless network, dense deployment techs. 85472
C-band corrugated horn for satellite Earth station antennas 72702
C-band microstrip array antenna beam-shaping 94187
calib. algms. for antenna arrays 117859
car dipole antenna, radiation charact. 108719
Cassegrain asymmetric reflector antennas 83500
Cassegrain systs., design and valid. of shaped subreflector geom. 72568
cavity backed antenna in conducting cone, radiation charact. 72454
cavity-backed slot antennas, coupling modeling/reduction 105889
CDMA cellular systs., effects of soft/softer handover on sectorization gain 108769
CDMA LEO multi-beam syst., MAI 109024
CDMA systs., adaptive array antenna with optimally form. beams, design 83669
cellular base station dual-band printed antenna optim. 85694
cellular telephone antenna radiation efficiency enhancement using low loss mag. plate 96558
cellular telephones, radiation efficiency, near field control around human model 74477
ceramic chip antenna using meander conductor lines 94173
circ. antenna array with helical antennas, anal. 72697
circ. antenna arrays, pattern synthesis, null form. with excitation constraints 72686
circ. disk dielec. patch antenna, anal. of charact. 72620
circ. ideally conducting cylinder with dielec. layer coating and nonlin. loads 117757
circ. monopole array, ground plane radiating lin. polarized conical beam for WLAN appls., anal. 83678
circ. patch antenna, superstrate layer, WLAN 72558
circ. patch microstrip antenna 8-element circ. array in plasma 105953
circ. pol. conical beam spherical slot array antenna, charact. 72634
circ. polaris. dielec. resonator antenna, perturbed annular slot 94174
circ. polarized conical beam spherical slot array antenna, polariz. charact. 83676
circ. polarized dielec. resonator antenna excited by dual conformal strips 83657
circ. printed antenna, dimens. reduction 83589

antenna radiation patterns continued
circ. waveguide array antenna for 60 GHz wireless video home-link 128906
circ. waveguide with dielec. coated hard/soft walls 94088
circ.-symmetric feed horn design, profile options 72572
cluster feed syst. with hybrid low-level BFN 105979
comb-shaped antenna for radiofrequency ident., anal. of near field 105933
combined filtering/radiating fns. microwave device for telecom satellites 83762
common aperture dual freq. antenna, patch/folded reflector combo., 900 MHz/60 GHz) 105918
compact CPW-fed printed antennas, small ground planes, anal. and modelling 128875
compact dual-band dual-polarized microstrip antenna 83651
compact dual-freq. dual-polarized slotted microstrip patch antenna 72541
compact handset antenna, design 83719
compact microstrip antenna with meandering slots in ground plane 72487
compact microstrip patch antenna with rect. slot 72507
compact pentagon microstrip antenna with circ. polariz. 117804
compact semi-disc microstrip patch antenna with improved bandwidth 94149
COMWIN vest antenna, fab./testing 105873
conformal microstrip antenna array on cylinder, directivity patterns 72691
conformal onboard array antenna synthesis, MoM-based algm. 83752
conformal patch antennas modelling using FDTD method 105899
conical horn antenna excited by quasi-Yagi array, 60 GHz design 94157
conical horn antennas loaded with metallic discs, near-field meas. 94142
conical-pattern annular-ring microstrip antenna with PBG ground plane 105908
constrained adaptive antenna arrays, uncorrelated interf. patterns space fitting using neural networks 128886
contra-wound toroidal helix antenna, EM anal. 105900
contrawound toroidal helix antenna fields 105901
control using reactively loaded loop antenna 83624
corner reflector antenna with rect. dielec. feed 117808
corner reflector antennas, optimal design by real-coded genetic algm. 72676
correl. radiometers in antenna meas. engng. 83575
corrugated substr. microstrip patch antennas, ring patch antennas, effective permitt. 128876
cosecant sq. beam form. using curved leakywave struct. 83645
coupled tapered slot-line antenna, optim. for sum/difference beams 72476
coupled tapered slot-line antenna with sum/difference beams 72667
CPW-excited broadband microstrip antenna *(Japanese)* 105944
CPW-fed coplanar patch and array antennas, simul. and expt. study 72672
CPW-fed slot-loop antenna with low cross-pol. radiation 72564
crank-line antenna radiation cells, circ. polarized tilted beam form. 83756
crescent-shaped microstrip antenna, dual freq., dual polaris. 72524
cross-mesh array antenna 83717
cross-mesh strip antenna on finite-size dielec. substr., anal. 72490
cup microstrip antenna for radiating ellipt. beam *(Japanese)* 128867
curved juncture cavity short backfire antenna, optim. 72684
cylindrical dielec. resonator antenna arrays 83692
cylindrical dielec. resonator antennas, mutual coupling 83595
cylindrical multi-sector antenna with self-selecting switching cct. 117852
cylindrical plasma crater, scatt. surface and radiation diag. of axial lin. source 117755
cylindrical reson. struct., sq. loop FSS 94164
cylindrical spiral patch array, radiation patterns anal. 72694
cylindrical/planar microstrip patch antennas and arrays for wireless commun. 83731
DBF receiving array antenna calib. using ref. seq. 105945
DCS/GPS compact dual-band microstrip patch antenna 94130
dielec. hollow-sphere lens antennas anal. 72587
dielec. lens antenna curvature design 105892
dielec. loaded slot antenna, 3D anal., polariz. current model method appl. 72609
dielec. resonator antenna array, seq. rot. 128905
dielec. resonator antenna with displaced conformal strip feed 72548
dielec. tapered rod antennas anal. 105906
dielec.-loaded flanged parallel-plate waveguide with box-type termination, radiation props. 72584
digital beamforming systs., adaptive pattern synthesis 72681
dipole antenna on partially screened layered sphere, radiation 117801
dipole enhanced charact. using nonconventional metallic reflectors 128847
directional leaky coaxial cables, design and calc. 117797
directivity props., num. modeling 72473
distributed amplif. planar array/array fed reflector 83720
double-folded capacitive-fed cavity-backed microstrip antenna 117792
DS-CDMA cellular forward link, transmitting array antenna beamforming 108887
DS-CDMA cellular systs., adaptive array antenna beam pattern selection *(Japanese)* 131255
dual feed single act. patch beam steering antenna, compact design 72581
dual freq. capacitor loaded sq. slot microstrip antenna 72522
dual freq. compact microstrip antenna 72525
dual polariz. stacked microstrip patch antenna array, airborne SAR appls. 128893
dual polarized patch antennas fed by hybrid feeds 72598
dual profile corrugated circ. waveguide horns for radioastronomy appls. 83534
dual-band rect. microstrip antenna using PBG ground plane 117795
dual-band spur-line printed antennas comparison for handheld terminals 105912
dual-freq. CPW-fed dual-slot loop antenna 105870
dual-freq. dual-polariz. microstrip antenna, airborne SAR 72629
dual-freq. monopole-helical antenna, mobile handset 72503
dual-freq. planar printed antenna, microstrip fed, design and anal. 94150
dual-freq. rect. microstrip antenna with double π-shaped slots 72549
dual-polarized planar microstrip antenna fed by dog-bone slots 83587
E-shaped planar inverted-F antenna, low absorpt., triple-band cellular phones 72479
E-shaped wideband patch antennas for wireless commun. 94127
elec. small antenna radiating close to conducting plane, Q factor 83636
ELES antenna for mobile satellite terminals 83583
EM fields of thin circ. loop antenna above (un)grounded multi-layered chiral slabs 72535
embedded antenna in composite medium, EM anal. 83633
embedded antennas design 83517
equidistant lin. array, directional precision, multi-level amplit. shading *(Chinese)* 128907
equilateral-triangular dielec. resonator antenna excitation using conformal strip 83652
ESPAR antenna, adaptive beamforming using seq. perturb. 83761
ESPAR antennas, Hamiltonian approach to reactance optim. 72679
failure restoration/array synthesis using GA 128888
far field reconstruction from near field data 94168
far-field meas. for mobile phones with small no. of meas. locations 132141

ıtenna radiation patterns continued
far-field time domain antenna meas., modelling and pattern error correction 83509
fast-scan GMTI/STAP archits., perform. comparison 96991
FDTD anal. of stacked microstrip antenna with high gain 94167
FDTD anal./design of probe-fed dual-polarized circ. stacked patch antenna 105881
FDTD anal./design of probe-fed dual-polarized circ. stacked patch antenna 72592
FDTD solns. for dielec. resonator antenna problems with different feeding sigs. 128844
FEM freq. domain EM radiation problems, multipoint Galerkin asymptotic waveform eval. for model order reduction 128746
Fermi-profile tapered slot integrated antennas for mm-wave receiver IC 72515
ferrite magnetised film, MSSW accel. and EM waves radiation 81914
ferroelec. smart antennas, null pattern synthesis 83769
fig.-8 satellite earth station antenna, array pattern tuning method 72637
filamentary current distrib. and transient radiation 94132
finite corner antenna, directivity factor optim. 117817
finite microstrip antennas, SEMN method and ENSEMBEL software, comparison 94146
finite microstrip patch antenna, broadband anal. using FDTD 83607
finite phased arrays, element charact. anal. using matrix manipulations 83751
finite phased arrays, similar behaviors of planar and lin. arrays anal. 105955
folded dipole, self-balancing antenna 72544
four-sector cross-shaped urban microcellular syst., intell. switched-beam antennas 74738
freq. extrapolation for computing antenna-platform radiation problems 105852
freq.-invariant adaptive receiving/transmitting null beamforming 108871
FSS resonator elements on circ. dielec. rod antenna for mobile commun. 83622
future handset antenna syst. 108718
Gaussian profiled horn antennas, design aspects 72616
generalized classical axially symmetric dual-reflector antennas 72511
georadar, slot and dipole antennas 86170
GPS dual freq. bi-orthogonally polarized antenna, design 105866
GPS receiving antenna, radiation pattern meas., in-situ method 86269
ground-penetrating radar, conical spiral antenna anal. 75182
ground-penetrating radar data, amplit.-vs.-offset var. 88094
GSM 900/1800 handset terminals, built-in antennas, near-field influence 87940
GSM base stations, near EM field levels calc./meas. 85612
GSM handset antennas, total radiated power meas. methods eval. 119959
GTEM cell for radiation pattern meas. 75841
H-plane strip-loaded hollow dielec. sectoral horn antennas for sq. radiation pattern 72539
H-shaped aperture wideband and high-gain strip patch antenna *(Korean)* 117758
half vol. dielec. resonator antenna, FDTD simul. 72608
handheld telephone complex antenna, modelling close to human tissue 117812
head exposure to cellular phone helical antennas, FDTD method 133074
Hertz dipole radiation in presence of penetrable prismatic surface 83597
Hertzian dipoles, EM energy 72550
HF four wire dual-mode spiral antenna, CAD 72599
HF high lat. path commun., directional diversity and spatial filtering 85576
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
hierarchical radar target localization, seq. techs. 96894
high gain reflectors mounted on struct., modelling 83604
Hilbert curve fractal antenna, reconfigurable charact. 83508
Hilbert curve fractal antennas, self-similarity and multiband charact. 72443
Hilbert curve fractal small reson. antenna for VHF/UHF appls. 72591
HIPERLAN syst. circ. monopole antenna array, conical beam 105962
holographic antenna design using Floquet's theorem 94155
horiz. pol. slot-array antenna on coaxial cylinder 72674
horiz./vert. Hertz dipoles, near-field vector pot. 128849
horn antenna synthesis 72603
horn antenna window on medium cover, spec. determ. 72605
horn radiators with generating line break, polariz. characts. 83632
human body-mobile phone interact., computational EM 133079
human head SAR reduction, directional antennas for cellular phones 87938
imperfect radome, radiation pattern model 83771
IMT-2000 mobile handset, small broadband internal antenna 105904
IMT-2000 smart antenna syst., radiation patterns of circ. array 105961
inflatable array antennas devel. 117834
INMARSAT-C and GPS L-band shaped beam quadrifilar helix antenna 72527
INTA/CSIC collaboration on antennas, develops. 72472
integrated lens antennas, radiation props./input imped., effect of internal refls. 83541
integrated multibeam dual-polarised microstrip planar antenna array 105948
integrated probe for phaseless plane-polar near-field meas. 128909
integrated shorted microstrip antenna, finite ground plane effect 72506
intercardinal antenna pattern based on cardinal data, estim. 117759
irradiators for study of microwave sterilization effects 115035
ISM dual-band monopole antenna design 83555
isolated image guide eigenmode and elementary microstrip radiators interact. study 83542
K-band broadband fixed wireless access base station, adaptive array antenna 119928
Ka-band 20/30 GHz dual band flat plate arrays for low cost satellite terminals 83694
Ka-band array elements for ATM-Sat terminal antenna 72670
Ka-band dielec. resonator antenna reflectarray 128898
Ka-band dipole holographic antennas 83663
L-band radar transmitting antenna pattern synthesis and feed network *(Polish)* 72625
L-probe fed small wideband triangular patch antenna 105914
L-probe low-cost patch antenna array 72689
L-probe-fed shorted broadband semicircular patch antenna 83649
large adaptive reflector antenna, feed-reflector design 105902
large reflector antennas, microwave holographic meas. 72578
large reflector antennas rapid anal., Gaussian beam method 83641
lens antenna, MM-wave automotive radar, arbitrarily shaped surface 128881
lens-coupled terahertz dipole antennas, cross-polarized ang. emission patterns 128848
LEO satellite compact conical patch phased array antenna 83679
LEO small satellite antenna, compact phased array design 83725
lin. antenna array on multilayer dielec. ground, anal. *(Polish)* 105973
lin. antenna arrays, null steering using modified tabu search algm. 105954
lin. antennas anal. and synthesis using at. fns. 117752
lin. array antenna, sector nulling 83747
lin. array of dielec. resonator antennas optimized for low-sidelobe appls. 72630
lin. arrays with equal side lobes, alternative design 105976
lin. phase antenna arrays simul. with waveguide simulator 83743

antenna radiation patterns continued
line-source-fed microstrip reflectarray, hat-shaped patches 94201
long antenna, photonic cryst. substr., radiation pattern 83499
long-range radar transmitting antenna feeding network, synthesis and anal. 83686
loop antenna for wristwatch phone 83653
low-profile bi-directional cavity antenna with broadband impedance charact. 117775
low-profile dual-freq. circ. microstrip antenna, ISM bands 105885
low-profile switched-beam diversity antennas using high-impedance ground planes 128877
LTCC-multilayer technol. for planar antenna arrays 83695
Ludwig-3 defn. for lin. copolarization/cross polariz., generalization 83246
meas. in multipath waves presence 83531
meas. in time and freq. domains using sampling oscilloscope 75847
medium cover, window spec., approx. calc. method 72606
MEMS RF switches with metal-metal contacts, integrat. into components 125721
mesh antennas for dual polariz. 83635
metallic PBG struct. based wire antennas, design with explicit method 72577
metallic reflectors, radiation anal., Gaussian beam expansion 83606
MF elec. small broadcast antenna, radiation charact. anal. by simul. 83521
microstrip antenna, full-wave anal. *(Chinese)* 105867
microstrip antenna, lateral isolation, radio altimeter *(Chinese)* 128862
microstrip antenna, probe-fed compact circ. design for circ. polariz. 72540
microstrip antenna design/anal., transverse transm. line method appl. 83574
microstrip antenna on finite size ground plane with small vert. edge walls 83518
microstrip antennas, photonic band gap substrs. effect 72516
microstrip antennas on high permitt. ceramic substrs./small ground planes, expt. study 83529
microstrip array antenna, airgap/no-airgap, plasma environ. 105952
microstrip array antenna with beam squint, develop. 83673
microstrip Butler matrix, beamforming network 83704
microstrip circ.-slot antenna using spiral line *(Korean)* 117809
microstrip disk antennas with inhomog. artificial dielec. 83655
microstrip leaky-wave antenna with beam-switchable scanning radiation 72552
microstrip patch antenna, 2-layer, tunnel diode integrated 72481
microstrip patch antenna, C-shaped slot 72497
microstrip patch antenna, dielec. resonator loading 72551
microstrip patch antenna, MoM multilevel divide and conquer method 72455
microstrip patch antenna, superstrate and air gap, FDTD anal. *(Chinese)* 128832
microstrip probe fed patch antenna, superstrate effect on radiated field 105893
microstrip reflectarray with line-source-feed 94184
microstrip small antennas, simul. 83565
microstrip-line-fed printed wide-slot antenna, bandwidth enhancement 94126
microwave antenna radiation pattern meas. syst. 83538
microwave array synthesis with null field constraints in near-field region 72677
microwave radio link interf. environ., antenna charact. 72442
MM wave flat plate antenna based on partially reflective FSS 83586
MM wave low-profile high-gain antennas meas. and testing 83723
MM wave reduced-sidelobe broadband antenna design 72594
MM-wave antenna systs., develop./appl. of MODTool integrated design tool 117770
mm-wave antenna using high permitt. LSE NRD guide 94175
MM-wave band ship-borne navig. radar 120444
MM-wave beam-steering using dielec.-image-line-fed grating film 83765
MM-wave Gaussian radiation pattern antennas 117820
MM-wave meteoradar, atm. radioacoustic sounding 88158
mm-wave microstrip/slot antennas on low cost large area panel MCM-D substrs. 117785
MM-wave receivers modelling using extended FDTD method 83612
MM-wave wireless commun., const. flux illum. of sq. cells 74574
MM/microwave 5-freq. antenna, spaceborne limb sounder 88145
mobile commun. higher-order-mode microstrip antennas for road vehicle commun. 105864
mobile computing network stations, relative direction determ., switched beam array 131342
mobile handset chassis, antenna efficiency meas., loss mechanisms 119963
mobile network capacity gain, beamforming/interf. cancellation 85647
mobile radio adaptive antenna arrays, beam-steering/directive charact. 96433
mobile telephone three-element array antenna with triple-freq. operation 105975
modal scatt. at radiating apertures, near field anal. 128756
modified printed strip monopole antenna with pol. diversity for WLAN appls. 72582
modular antennas on multilayer dielec. 72695
monopole antenna, bandwidth enhancement, parasitic normal-mode helix, mobile handset 72480
monopole antenna with conducting flat disk above earth, theoretical anal. 72437
monopulse radar, low noise act. integrated antenna receiver 105931
moving wire-antenna radiation in plane interface presence 72534
multi-band mobile telephone antennas 83528
multi-mode conical corrugated horn design 83557
multi-moded corrugated horns for far-IR space appls., radiation patterns 117815
multi-octave band conical spiral antenna 72464
multi-panel small reconfigurable reflector antenna, num. study 117762
multi-posn. space-coherent radar, antenna posns. sync., syst.-level anal. 120432
multibeam switched parasitic antenna embedded in dielec. for wireless commun. 94192
multifunctional monopole antenna array for terrestrial and satellite radio appls. 83768
multilayered microstrip antenna, voltage-controlled ferroelec. thin tape 128874
multimode based direction finding 109326
near field-far field transform., nonuniform helicoidal scanning 94144
near-field diagnostic tech. based on equiv. mag. currents 83510
near-field sampling represent. of antenna radiated EM field over sphere 72451
nonequidistant antenna arrays, directivity patterns synthesis 105969
nonuniform helix diam. helical antennas 128846
nonuniformly spaced sub-arrayed printed self-tracking reflector antenna 83735
normal mode spherical helical antenna for mobile commun. 72580
octagonal micromachined horn antenna for submillimeter-wave appls., anal. 83643
Odin telescope, 119 GHz meas. with hologram-type CATR 120496
omni-directional antenna for Mars sample return mission 117769
on-glass mobile antenna perform. modelling 117767
onboard array antennas synthesis, antenna interacts. 72663
optimal far-field interpolation, ellipsoidal source modeling 72449
optimized beamsteering by appropriate random phasing quantization methods 83672
Orchard-Elliott pattern synthesis algm. 105924
Orchard-Elliott pattern synthesis algm. by pseudo-inverse and LMS 117838

antenna radiation patterns continued
patch antenna, surface micromachining, design optim. 83628
patch antennas, simplified anal. 72523
patch array antenna with opt. delay lines for 155 Mbit/s data transm. at 60 GHz 108788
patch radiators, radiated cross-polar levels and mutual coupling 83573
PCS and IMT-2000 base station wideband microstrip array antenna design 117828
PCS antenna design, miniaturization 117810
PCS base station bi-directional polariz. diversity antenna 105891
PCS base station low-cost microstrip-line-fed shorted-patch antenna 72543
pentagonal planar monopole for digital mobile terminals, bandwidth/modelling 83591
periodically arranged pass. dipoles line, fields 83737
phased array antenna for multiple obj. tracking radar 83671
phased array calib. procedures based on element patterns 83732
PIFA/helical antenna on different ground planes, simulated impedance bandwidths/gains/radiation patterns/SAR values 83520
planar antenna arrays, appl. in mobile commun. systs., beamforming algm. 117860
planar inverted-F antenna, FDTD and TLM anal. using irregularly graded space connection 72595
planar near field meas., error correction 83549
planar receive mode act. phased array 83687
plane-polar geom. phaseless near-field meas., integrated microstrip probe 105858
polariz.-agile act. microstrip antenna array with LNA 72693
portable planar inverted-F antenna, polariz. diversity and human body effects 120055
portable radio, near fields in front of and on far side of head model 98767
printed antennas, near-field diagnostics using equiv. mag. current approach 83746
printed dipole radiating element for wide-scanning array appl. 83709
printed monopole antenna, FDTD anal. 83570
printed quadrifilar helical antenna size reduction using simulated annealing 83617
probe excited rect. cavity-backed slot antenna, radiation pattern anal. 72600
probe-fed rect. dielec. resonator antenna study 72610
pulse-excited thin wire monopole radiation 94133
pulsed beam scatt. by random medium over ground 86177
quadrifilar helical antenna printed on dielec. prism, anal. 72569
radial line slot array antenna, polaris. props. 72628
radial line slot array antennas, beam shaping 83688
radiated emission source location accuracy, CISPR emission meas. syst. 105785
radio in tunnel environ., delay spread prediction, ray-tracing method 83332
radome, radiation from loops next to sphere 94115
RCS anal. involving large bodies, extrapolation tech. 72470
reactively loaded wire loop antenna, pattern shaping 105897
rect. dielec. resonator antennas, modelling/expts. 83627
rect. dielec. resonator antennas for switching polaris. diversity receiver 83593
rect. microstrip antenna, multiport network model 83503
rect. microstrip radiator, near field 105849
rect. patch antenna on uniaxial anisotropic dielec. substr., FDTD anal. 128845
rect. plate antenna with Ω-shaped slot 128873
rect. waveguide endwall slot feed microstrip arrays, num. study 72683
reduced-size multi-octave spiral antenna 72465
reflector antenna field stats. 72531
reflector feed optim. for two widely separated bands 94156
reson. contrawound toroidal helix antenna 94129
retrodirective array, target tracking, act. element model 83665
retrodirective diode grid array using FWM 105938
RF sens. pointing of satellites using multilobe reflector antenna 83610
rhombic switched beam antenna 72486
ridged circ. disc microstrip antenna element anal. using cavity model 105898
RLSA, CPW planar feeding cct. design *(Chinese)* 128912
SAR, moving target param. estim., blind angle ambiguity resoln. 118881
SAR images, moving targets anal., Bayesian approach 96891
SAR reduced pers. commun. handset, FDTD investigs. 83706
satellite Earth station antenna in presence of near field obstacles, far field 83605
satellite tracking, circ. aperture antenna $TE_{21}{}^0$ mode charact. 120089
secondary radar beam synthesis, planar array antenna 75220
self-healing arrays design using vector-space projections 72647
semi-infinite quadratic prog. algm. with appls. to array pattern synthesis 72666
seq. rotated circ. polarized patch radiator lin. arrays, scanning props. 128910
series TW-fed arrays, radiating element conductances *(Chinese)* 72682
shaped reflector antenna for 60-GHz radio access points 94124
shipboard multiple satcom antennas, optimum combining for hemispheric coverage 105926
short slot in impedance surface, lossy-ground plane effects on radiation 128850
shorted fractal Sierpinski gasket antenna, quasi log periodic reson. behaviour 105886
side-lobe transient response of large antennas 83691
sidelobe canceller for reflector antenna using sig. subspace eigenvectors 117718
Sierpinski generalized fractal multiband antenna 105863
single-layer discrete surfaces, electrodynamic props. 105848
single-layer miniature broadband microstrip antenna using wirebonding tech. 105896
slot antenna, receiving props., fused quartz substr. *(Japanese)* 72532
slot antenna radiation charact., influence of metallization width 128855
slot antenna radiation under semi-infinite dielec. layer 83576
slot antenna with varying Gaussian curve slot width 105847
slot antennas, effects of parasitic wire on coupling 117764
slot-line-excited equilateral-triangular dielec. resonator antenna 72593
slotline, space leakage of power, dispersion charact., antenna appls. 94176
small dielec. loaded antennas, efficiency-fractional bandwidth product 117776
small enclosed antenna, radiation quality factor 72585
small printed-wing antenna for wireless handset terminals 117790
smart antenna systs., impact of W-CDMA sigs. 83705
smart base station antenna 85767
smart lens antenna arrays, design and appls. 83760
space diversity S-ALOHA with steerable beam smart antenna arrays, perform. anal. 74661
spaceborne antenna design 117771
spaceborne microwave radiometer, multifrequency corrugated feed 117861
spatial power amp. array, fault tolerance anal. and meas. 102628
spatio-temporal equalization based on estim. channel response 119182
spiral-loaded low-profile monopole antenna with parasitic elements 94152
stacked semi-disc dual-freq. printed antenna design 83596
stacked shorted patch antenna, tilted parasitic radiator 117780
stripline-fed meander slot antenna for miniaturised PCS 105884
antenna radiation patterns continued
sum patterns, phase-only control 72448
surface meas. using microwave holography 83516
SW array antennas in outfield, test method 83674
SW broadband antenna design 83544
syst. archit. for broadband fixed wireless capacity maximisation 85572
TDD systs., automatic calib. of adaptive array using dispersed SPDT switches 120057
TechSat21 distrib. space-based radar syst., pattern synthesis 120456
TEM face-to-face horn fed pulse radiation antenna 83547
TEM horn antennas optimized for transient radiation 105909
terahertz dipole antenna mounted on photonic cryst., radiation props. 72510
terminal/base-station antennas, Wroclaw Univ. of Technology study 117835
thin circ. loop antennas, near-/far-zone EM fields 83638
thin hexagonal loop transceiver antennas, near-/far-zone fields 83656
thinned multi-ring arrays using GA 128887
three-offset microstripline-fed slot antenna, bandwidth 128866
tracking radars, time domain synthesized binary phase code sidelobe suppression filter 75094
transmitting array antenna rem. calib., sync. orthogonal codes 105959
triangular dielec. resonator antenna excited by coaxial probe 128870
triple-band dipole antenna with multiple parasitic elements 117822
TW wire antennas, transient radiation, comments 72590
two-layer printed reflectarrays design using variable size rect. patches 128894
two-layered patch and loop antenna with dual freq. for indoor microcellular syst. 72579
two-polarized complex cross-sect. waveguides and periodic struct. 128904
U-slot stacked microstrip antenna, effect of shorting posts or vias 94148
UHF bodyworn antenna systs., num. anal. 72460
UHF commun. antennas charactn. in reverberation chambers 117806
UHF compact integrated diversity antenna for wireless commun. 83642
UHF high-directivity patch antenna with photonic bandgap struct. 105871
UHF indoor propag., simul. using num. tech. 128763
UHF real-time spherical near-field handset antenna meas. 94178
UHF vehicle telematics syst. hidden antennas 120047
ultra-low sidelobe antenna, planar near-field meas., truncation error anal. *(Chinese)* 105857
ultra-low-side-lobe antennas, planar near-field meas., multiple refl. errors *(Chinese)* 105865
ultra-wide band ground penetrating radar antennas, perform. 83618
ultrawide band TEM antennas, radiation procs., num. simul. *(Chinese)* 105883
unequally spaced arrays and scanning lin. antennas, synthesis 105932
UWB conformal helmet antenna, design and perform. 72575
UWB microstrip quasi-horn antenna, develop. 83537
V-shaped narrow slots, coupling and radiation charact. using FDTD method 128836
vehicular speed response adaptive antenna design *(Japanese)* 105971
VHF ground elec. cond. anoms. meas. eqpt. 88096
VHF normal mode helical antenna anal. close to human abdomen 72614
viewer terminal appl. of handset phone, dipole antenna pattern meas. 72571
Vivaldi dual-polar antennas for phased arrays with wide-angle scanning 83693
Vivaldi uniplanar four-element array, CPW fed 105925
VLF antennas, EM waves excitation, curvilinear interface effects 128856
W-CDMA UMTS systs., switched beam antennas, perform. and capacity 85844
wall antenna directional beamforming, electronic and opt. methods *(Polish)* 105972
waveguide/horn radiators, matching/directional charact. anal. 117816
welded/machined phased array antennas perform., mech. uncertainties effect 83736
whip type low SAR mobile handset antenna 83603
wide angle antenna perform. meas. using small planar scanners 83525
wideband conformal antenna with fractal geom. 72505
wideband double-T-shaped microstrip-line-fed slot antenna 105911
wideband dual-polarised microstrip patch antenna, H-shaped coupling aperture 128842
wideband planar monopole antennas, impedance bandwidth control using beveling tech. 117791
wideband printed microstrip antenna 94138
wideband TE_{21} mode tracking corrugated horn with feed syst. 72576
wire frame TEM horn feedback paraboloid, high power pulse radiation antenna *(Chinese)* 117799
wireless handheld terminals, spatial/polariz./pattern diversity 119937
wireless terminals, antenna design for selection diversity 120054
X-, Ku- and Ka-band feed horns for global-Earth coverage from geostat. orbit 72570
X-band monolithic integrated twin dipole antenna mixer on GaAs substr. 69172
$BaSrTiO_3$, ferroelec., CTS antenna array, 2D beam steering 72641
$BaSrTiO_3$-based phase shifters, RT, for electronically steerable antennas 83757
antenna reflectors *see reflector antennas*
antenna testing
2.5 GHz meas. and charactn. of broadband MIMO fixed wireless channels 85753
2D Van Atta retrodirective array using dual polarized two-port sq. microstrip patches 83734
ANSI C63.5/ARP958 methods of emission-antennas calib. for EMC 120630
array antenna meas. with rough surface reflector, anal. 105967
array antenna pattern meas., element current reconstruction method *(Chinese)* 128908
array diagnosis from near-field data, interferometric methods comparison 117830
array for azimuthal angle-of-arrival meas., design/eval. 83748
C-band corrugated horn for satellite Earth station antennas 72702
coil loaded monopole antennas, meas./computed results comparison 94170
compact forward-looking SAR with digital beamforming on receive only *(English)* 75210
COMWIN vest antenna, fab./testing 105873
contoured-beam spacecraft antenna, stripline beamforming network 74887
correl. radiometers in antenna meas. engng. 83575
DS-CDMA systs., smart antenna testbed 128890
dual band phased array antenna design for radar appls. 83712
elec. small antennas meas., NWA drift error reduction 105860
European smart antenna test-bed, field trial results 117849
far-field time domain antenna meas., modelling and pattern error correction 83509
Gabor schemes for analyzing antenna meas. 117765
GBS/Milstar airborne RX/TX antenna 105874
GPS dual freq. bi-orthogonally polarized antenna, design 105866
GPS receiving antenna, radiation pattern meas., in-situ method 86269
GSM handset antennas, total radiated power meas. methods eval. 119959
H-shaped aperture wideband and high-gain strip patch antenna *(Korean)* 117758

ntenna testing continued
integrated lens antennas, radiation props./input imped., effect of internal refls. 83541
integrated probe for phaseless plane-polar near-field meas. 128909
K-band broadband fixed wireless access base station, adaptive array antenna 119928
large reflector antennas, microwave holographic meas. 72578
meas. in multipath waves presence 83531
microwave antenna radiation pattern meas. syst. 83538
MM wave low-profile high-gain antennas meas. and testing 83723
mobile handset chassis, antenna efficiency meas., loss mechanisms 119963
near field-far field transform., nonuniform helicoidal scanning 94144
near-field diagnostic tech. based on equiv. mag. currents 83510
OATS antenna factors for small anechoic chambers 128803
octagonal micromachined horn antenna for submillimeter-wave appls., anal. 83643
Odin telescope, 119 GHz meas. with hologram-type CATR 120496
PCS antennas, miniaturisation and meas. techs. 128858
phased antenna array element in waveguide simulator 128903
phased array calib. 72646
phased-array subarrays, automated testing 117841
planar near field meas., error correction 83549
planar near-field meas., hybrid algm. for correcting probe posn. errors 83511
plane-polar geom. phaseless near-field meas., integrated microstrip probe 105858
precision EM field & dipole antenna stds. develop., OATS *(Japanese)* 83443
printed antennas, near-field diagnostics using equiv. mag. current approach 83746
pyramidal horn gain proximity corrections, anechoic chamber, two/three-antenna method 72477
pyramidal microwave absorbers for outdoor use 72291
radiotransparent antenna dome, noise temp. meas. 117773
reduced-size multi-octave spiral antenna 72465
reflective antenna efficiency meas. in reverberation chambers 128869
reflector/phased array antennas, time-domain response comparison 83552
reverberation chamber, UHF mode/plane wave distrib. and antenna charactn. 117746
shaped reflector antenna for 60-GHz radio access points 94124
small antennas meas. using NWA, drift error reduction/charactn. 83548
smart antenna array calib. incl. amplit. and phase mismatch and mutual coupling 83754
smart antenna syst., DSP board, W-CDMA WLL channel 72639
space antenna, structural damage detect., neural network and freq. response fns. techs. 128872
surface meas. using microwave holography 83516
SW array antennas in outfield, test method 83674
Taiwan, progress in antenna testing 72468
time-domain near-field meas. of antenna by IDFT tech. *(Chinese)* 128838
UHF commun. antennas charactn. in reverberation chambers 117806
UHF real-time spherical near-field handset antenna meas. 94178
ultra-low sidelobe antenna, planar near-field meas., truncation error anal. *(Chinese)* 105857
ultra-low-side-lobe antennas, planar near-field meas., multiple refl. errors *(Chinese)* 105865
viewer terminal appl. of handset phone, dipole antenna pattern meas. 72571
WCDMA systs., indoor antennas meas. 83512
wide angle antenna perform. meas. using small planar scanners 83525
wireless handheld terminals, spatial/polariz./pattern diversity 119937
Si opt. microsensor, direct near-field antenna testing 109603

antenna theory
see also frequency selective surfaces
2D array antenna synthesis, array elements pattern effects 117848
2D generalized exponential integral, num. eval. 72446
2D PBG structs., equiv. cct. modeling and patch antenna appl. 114954
2D RAKE receiver in correl. freq.-selective Nakagami-fading 119876
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 105695
3D-FDTD subgridding tech. applied to mobile phone antenna radiating structs. 105916
3G DS-CDMA systs. with array antenna, direction finding 108738
4-element triangular microstrip array antenna for circ. polaris. 72644
act. microwave antenna arrays, small sig. and large sig. models 105928
adaptive array beamforming with random error in cycle freq. 107338
adaptive arrays, optimal subarray size for spatial smoothing 117847
aircraft self-navig. unit, antenna-radome syst. calc. 120486
amat. radio antennas near-field exposure assess. 85492
amplit. direction-finders with small-base antennas, systematic error reduction 120484
antenna technol. and applied EM, conf., Winnipeg, Man., Canada (2000) 78440
arbitrary antenna arrays for mm-wave direction-finding algms., spectral estim. 105929
arbitrary-shape printed antenna modelling, multiresolution method of moment 128840
array radiation in different media *(Chinese)* 105941
array radiation pattern sidelobe suppression 128911
arrow-shaped compact microstrip antenna, reson. freqs. calc. 117786
at. fns. theory appl. in antenna synthesis problems 117760
BLAST-like indoor radio systs., asymptotic anal. 131111
block-fading channels with multiple antennas, limiting perform. 74517
broadband double-sleeve monopole antenna, modal-expansion anal. 72573
broadside antenna arrays, directivity approx. 120430
cavity backed antenna in conducting cone, radiation characts. 72454
cavity backed rect. patch antennas with inhomogen. chiral substrs., anal. via FEM-BEM tech. 128843
cavity loop antenna, coupling calc., ICR heating, 3D model *(Chinese)* 128841
CDMA mobile radio capacity, BLAST based multiuser detect. 131288
CDMA syst. smart antenna, capacity improvement *(Chinese)* 72685
cellular telephone antennas affected by human body interact., current distrib. estim. 117796
chiral multilayer printed struct., anal. 117763
circ. disk dielec. patch antenna, anal. of charact. 72620
circ. disk monopole antennas, anal. using mode matching method *(Chinese)* 105869
circ. ideally conducting cylinder with dielec. layer coating and nonlin. loads 117757
circ. microstrip antenna with double stubs, anal. 83561
circ. microstrip-patch antenna, directivity approx. 117811
circ. pol. conical beam spherical slot array antenna, characts. 72634
circ. polarised cross-aperture-coupled microstrip antenna, cavity model 105894

antenna theory continued
circ. polarised rect. microstrip antenna anal. 83532
circ.-symmetric feed horn design, profile options 72572
co-channel sigs. detect. and copy, space-time proc. 108554
coaxially excited cylindrical antennas, admittance correction factor 72445
commun. sig. blind spatial signature estimators 108917
concatenated vector-valued fading channels, asymptotic eigenvalue distrib. 131268
conformal antenna array modeling using locally nonorthogonal FDTD 117827
conformal patch antennas modelling using FDTD method 105899
corner reflector antennas, optimal design by real-coded genetic algm. 72676
coupled tapered slot-line antenna, optim. for sum/difference beams 72476
CPW-fed coplanar patch and array antennas, simul. and expt. study 72672
cross-mesh strip antenna on finite-size dielec. substr., anal. 72490
cylindrical wire antenna with flat end caps, modeling 72596
cylindrical wire antennas, MoM anal., convergence accel. methods *(Chinese)* 128861
design, neural network enhanced GA 83505
design and teaching, MATLAB Antenna Toolbox 83501
diagonal metal edges and their microwave appls., enhanced FDTD eqns. 69026
dielec. lens antenna curvature design 105892
dielec. reson. disk in circ./rect. waveguide radiators 117678
dielec. resonator antenna, conformal FDTD anal. 117750
dipole antenna, wavelet simulator tech., moment method 94117
dipole antenna array, optim., GA 83742
dipole antennas, propag. props. of pulse voltage and current, equiv. cct. method *(Chinese)* 117814
directivity props., num. modeling 72473
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA wireless commun., smart antenna PN code acquisition 108735
dual-band antennas for wireless handsets, freq.-domain finite-difference anal. 83578
E1 antenna, EM field propag. in dielec. medium 72474
Earth station antennas, Fresnel region power dens. levels predict. 94158
Earth-ionos. waveguide excitation by VLF radiators 128825
ELF antennas in conducting media, excitation 128857
EM coupled microstrip slot antenna, design by FDTD equiv. cct. method 72498
EM fields determ., Maxwell's eqns. soln. 105668
ESPAR antenna, adaptive beamforming based on steepest gradient algm. 105957
ESPAR antennas, Hamiltonian approach to reactance optim. 72679
fading-resistant constellation transm. scheme 96350
finite microstrip antennas, symm. considerations using SEMN method 94135
finite-size circ. polarized corner reflector antenna, radiation characts. 83594
finite-sized lin. phased stacked microstrip antenna arrays, FDTD anal. 83698
flange-mounted ellipt. waveguide arrays, mutual coupling 83745
FSS, multiscreen double sq. in multilayered medium, subsectional current approx. 94114
FSS using cross dipole elements 72654
fund. radiation phys., review 94116
fuzzy inference method appl. to general transm. lines 72396
gap-coupled microstrip antenna, equiv. cct. anal. 94165
generalized act. phased array antennas, syst. charact. 94189
gridded sq. FSSs, anal. 72440
ground penetrating radar, hybrid FDTD-MoMTD simul. 86168
H-slot coupled microstrip antennas, transm. line model for field distrib. 94159
half wavelength dipole antenna, radiation impedance in terms of Bessel fns. 105921
handheld telephone complex antenna, modelling close to human tissue 117812
handset antenna, human body, EM simulator 94118
hard corrugated conical horn anal. by method of generalised scatt. matrices 83567
high gain and wideband antenna arrays, automatic optim. 117855
high power microwave beam scan by spin and swing, offset parab. antennas *(Chinese)* 83629
Hilbert curve fractal antenna, reconfigurable charact. 83508
Hilbert curve fractal antennas, self-similarity and multiband charact. 72443
IEEE antennas, propag. and EM theory, conf., Beijing, China (Aug. 2000) 67407
INS errors estim. using GPS meas. 131699
integrated lens antennas, radiation props./input imped., effect of internal refls. 83541
intercardinal antenna pattern based on cardinal data, estim. 117759
leaky coaxial cable, radiation mode, high-order mode restraint *(Chinese)* 72444
lin. antennas anal. and synthesis using at. fns. 117752
line source antenna, generalized Gaussian quadrature appl. to inverse problem 105851
LMR, CCI reduction and path-diversity reception 74739
log-periodic dipole antenna design using GA *(Chinese)* 83697
long antenna, photonic cryst. substr., radiation pattern 83499
long-range tropos. commun. systs., losses of antenna gain factor 105850
low-cost sq. cross sect. helical antennas 94122
matrix thinning, preconditioning tech., MEI method 67990
metallic PBG struct. based wire antennas, design with explicit method 72577
metallic photonic bandgap propag. mode charactn. 72439
microstrip antenna, act., IMPATT integrated, theory 72482
microstrip antenna, full-wave anal. *(Chinese)* 105867
microstrip antenna with ferroelec. layer 83515
microstrip antennas, design and troubleshooting using commercial EM simulators 83579
microstrip antennas, elec. cct. model and mutual coupling study using FDTD method 128860
microstrip antennas, reson. freq. calc. method 83581
microstrip antennas, subsectional edge expansion fns. calc. 83620
microstrip antennas in multilayered media, full-wave anal. 72566
microstrip patch antenna, MoM multilevel divide and conquer method 72455
microstrip patch antenna, superstrate and air gap, FDTD anal. *(Chinese)* 128832
microstrip patch antennas, parametric study using spectral domain method 72565
microstrip patch antennas, temp. sensitivity of reson. freq., spectral-domain method 117794
microstrip series-fed patch arrays for 77 GHz sens. appls., synthesis 72632
microwave array synthesis with null field constraints in near-field region 72677
microwave dielec. resonator antenna anal. and design 72574
MIMO interf.-limited cellular syst., attainable throughput 108657
MIMO multiuser smart antenna systs., spectral efficiency optim. 83753
MIMO systs. with antenna selection, capacity 131289
MIMO wireless syst., layered space-time coding/sig. proc. 119862
mixed pot. integral eqn. soln., fast algm., microstrip antenna appl. 72441
MM-wave antenna systs., develop./appl. of MODTool integrated design tool 117770
MM-wave commun. systs., plane antenna with optoelectronic scanning 117831
MM-wave dielec. slab leaky-wave antennas 117819

antenna theory continued
MM-wave Gaussian radiation pattern antennas 117820
MM-wave patch antennas, composite double layer struct. EM scatt. 128889
mobile phones peak SAR assess., head tissue complexity role 85613
mobile radio antenna charact. 117802
mobile radio interf. cancellation, adaptive array algm. with spatial interpolation 131295
mobile radio MIMO smart antennas, optim. 85863
MoM anal., vectorization using sinusoidal react. matching 72453
monolithic half-wave radomes, wall thickness 128913
multi-moded corrugated horns for far-IR space appls., radiation patterns 117815
multi-panel small reconfigurable reflector antenna, num. study 117762
multiband fractal antennas, genetically engineered design 117751
multichannel array subbanding with adaptive proc., architect. 96537
multielement struct., compensational phase weighting 105854
multilayer printed antennas and ccts., multiresolution anal. 83507
multilayered stratified gyroelectric chiral media, dyadic Green's fns. 72452
multiple transmit antenna differential encoding/decoding schemes 119866
near-field sampling represent. of antenna radiated EM field over sphere 72451
NRD-guide leaky-wave antennas anal. 105910
offset FZP reflector, design method and satellite TV appl. 83562
open area repeater with interf. cancellation syst., channel simulator 131071
open-ended coaxial waveguide radiating into chiral half-space, refl. coeffs. 94111
opt. D-fibre antenna, radio-over-fibre distrib., FEA 74999
optimal far-field interpolation, ellipsoidal source modeling 72449
optimum gain pyramidal horns design 72586
Orchard-Elliott pattern synthesis algm. by pseudo-inverse and LMS 117838
patch antennas, simplified anal. 72523
PCAAD21, antenna anal. program 128835
PDC handset diversity antenna perform., head/hand/shoulder effects, diversity antenna gain 108691
periodic strip grating on grounded dielec. slab, LF dispersion features of complex mode 91200
periodically arranged pass. dipole scatterers, waveguiding props. 94202
pers. satellite commun. antenna, SAR and polaris. purity 128833
phased array antenna, noise coupling determ. method 83766
phased arrays, adaptation to engng. condition 117824
planar antenna, MM-wave emitter, TLM anal. 105853
planar inverted-F antenna, FDTD and TLM anal. using irregularly graded space connection 72595
planar waveguide elec. dipole, wave excitation 83658
plasmasphere, satellite elec. field antennas, elec. stabil. 111413
printed dipole and dipole arrays, radiation efficiency anal. 83702
quadrifilar helical antenna printed on dielec. prism, anal. 72569
radiating dipoles in layered media, complex image tech., accuracy improvement 72438
radiotelescope, VIRAC, antenna optimisation 109337
ray tracing and UTD 72456
Rayleigh fading channel multiple-antenna sig. constellations 119865
rect. microstrip antenna, multiport network model 83503
rect. microstrip antenna, reson. freq., fuzzy inference syst. 72447
rect. microstrip antennas, reson. freq. computation 117789
rect. patch antenna design using ANN model 72504
rect. waveguide endwall slot feed microstrip arrays, num. study 72683
ridged circ. disc microstrip antenna element anal. using cavity model 105898
rot. lin. antenna arrays, superresolution direction finding 105936
Rotman lenses anal., hybrid least sq. FEM/transfinite element method 105895
self-term wire antenna kernel, integral transform tech. 83498
semi-blind closed-form co-channel sigs. separation method used in smart antenna systs. 72680
series TW-fed arrays, radiating element conductances *(Chinese)* 72682
ship antenna radar band ENC perform. prediction 83422
shorted microstrip patch antennas, locally conformal FDTD anal. 105913
sidetap opt. fibre grating filters 127889
single/multiple region field computation, domain-decomposed MEI method 83241
slot antenna radiation charact., influence of metallization width 128855
slot-coupled patch antenna, input charact. improvement with strip 72462
slotline, space leakage of power, dispersion characts., antenna appls. 94176
small antenna geometries, FDTD simul. using non-uniform mesh algm. 83608
small aperture RLSA, inner fields visualization using FDTD 83724
smart antenna systs., low complexity array response vector estim. 105935
space-time block codes, max. SNR approach 74521
space-time cochannel TDMA, DOA adaptive acquisition 108604
specular transm. channel blind multipath params. estim. 107629
split cylindrical dielec. resonator antennas, bandwidth enhancement 94169
strip dipole antenna, dielec. material cover, FDTD anal. 72555
super-broadband aperture antenna, extremal energy coeffs. of direct action 117756
thick microstrip antenna finite arrays, anal. 83750
thin-wire antenna, ground penetrating radar, FDTD/MoMTD anal. 83504
transmitting-receiving integrated act. antennas, FDTD anal. 72492
UHF microstrip antennas, reliab., Monte Carlo simul. 117818
ultrashort-pulse antennas, correcting sigs. synthesis 105919
vector/scalar pot., general expressions 117622
vert. antennas in dielec. half-spaces, complex image prediction model 94145
W-CDMA blind adaptive antenna array beamforming scheme 108924
waveguide phased array antennas, parametric studies on WAIM sheets 94190
wire antenna attached to surface, EM anal., floating attachment mode 105878
wire antennas, two-stage num. synthesis 105876
wireless MIMO channels, transmit antennas near-optimal selection 108601
wireless networks, cooperative diversity protocol 131093
wireless systs. beyond 2000, role of antennas and propag. 85498
zone plate antenna design 105845
GaAs/AlGaAs QW IR photodetectors, microstrip antenna coupling 86546

antenna travelling wave arrays
series TW-fed arrays, radiating element conductances *(Chinese)* 72682

antennas
see also more specific antenna headings, e.g. "antenna arrays", "dipole antennas", "microwave antennas", "radar antennas", "reflector antennas"
antenna technol. and applied EM, conf., Winnipeg, Man., Canada (2000) 78440
base station panel antennas, dosimetric anal. 85611
beam forming antennas for electronic toll collection syst. appls. *(Japanese)* 119895
broadband antenna response anal. using hybrid freq. domain MoM/FDTD tech. 83625
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209

antennas continued
DS-CDMA wideband syst., RAKE reception, antenna and path diversity 85869
embedded antennas design 83517
EUROTEM-Antenna set-up for fully compliant emission/immunity testing 83374
evolvable antenna syst., syst. for evolving antennas in-situ 111331
GSM base stations, near EM field levels calc./meas. 85612
halfwave antenna based config. 128837
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
IEEE antennas, propag. and EM theory, conf., Beijing, China (Aug. 2000) 6740
IEEE broadband wireless Internet access, conf., Richardson, TX, USA (April 2000) 78405
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE elec. and electronic engineers conf., Tel-Aviv, Israel (2000) 113257
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE pers. wireless commun., conf., Hyderabad, India (Dec. 2000) 89556
inductive pass. RFID technol., product lifecycle mgt. 109034
INS vs. carrier-phase DGPS for off-road vehicles control attitude determ., comparison 97027
INSTANT software for antenna interacts. anal. 83527
IRCTR, International Research Centre for Telecommunications transm. and Radar 85105
low antenna height base station in urban area, propag. path ident. 105755
MIKON-2000, microwaves, radar and wireless commun., conf., Wroclaw, Poland (2000) 78398
mil. syst. antennas, review from Indian perspective 77034
mobile commun. syst., polaris. diversity 74865
mobile wireless commun. beyond 3G 120003
Nat. radio sci. conf., Mansoura, Egypt (March 2001) 124179
naval platforms, microwave EMI modelling, Mutual Interference Simulation Tool 83423
opt. transceiver modules, radiated emission/immunity charact. eval. 72387
PCS, handheld transceiver unit, human head model/EM interact. anal. 83342
pers. commun., handheld transceiver unit, human head/EM interact. anal. 83343
power-recycled interferometric gravit.-wave antenna control, Michelson interferometers 128632
radiotelescope, VIRAC, antenna optimisation 109337
$TE_{111}{}^{y}$ mode in rect. dielec. resonator for antenna appl., reson. freq. determ. 80202
GaAs photocond. antenna, ultrabroadband THz radiation detect., fs laser pulses 97797
$YBa_2Cu_3O_{7-\delta}$ HTSC thin film antennas, THz beam generation from 1.55 μm fs laser 70620

antennas in plasma
bifocal microwave plasma device, lin. extended, materials proc. appls. 128865
cavity loop antenna, coupling calc., ICR heating, 3D model *(Chinese)* 128841
circ. patch microstrip antenna 8-element circ. array in plasma 105953
cylindrical plasma crater, scatt. surface and radiation diag. of axial lin. source 117755
Earth-ionos. waveguide excitation by VLF radiators 128825
feedthroughs, for high-power ICRF antenna, HV test 72700
high-dens. microwave plasma, internal spoke antenna, μc-Si:H film deposition 90536
microstrip array antenna, airgap/no-airgap, plasma environ. 105952
microstrip patch antennas, reson. freqs., plasma effect 72458
plasmasphere, satellite elec. field antennas, elec. stabil. 111413
reflectometry dens. meas., turbulence and beam size effects 75831
short dipole antenna in cold plasma, impedance anal. 128851
space plasma Langmuir probes, antenna-plasma coupling effects 133303
spacecraft EM propulsion engine, plasma-microwave antenna interact. 85927
spiral antenna inductive discharges, collisionless heating regime 117774
GaAs, surface-wave plasma source, O-plasma damage, ashing proc. 115642

anti-forgery devices *see copy protection*

antialiasing
FFT error anal., interpolation *(English)* 107322
filter, band-limitation effects on largest Lyapunov exponent estim. *(Japanese)* 68541
FIR/IIR digital filters satisfying magnitude and phase specs., comparison 91112
LSI cct. video image proc., contour extraction algms. 101997
sig. proc., time series anal., aliasing benefits 119006
texture mapping by successive refinement 94648

anticorrosion coatings *see corrosion protective coatings*

antidots *see quantum dots*

antidots, semiconductor *see semiconductor quantum dots*

antiferroelectric liquid crystals
conf., Liquid crysts., chem., phys., appls., Krynica, Poland (Sep. 1999) 100412
displays, domain wall motion and switching 97620
ferroelec. phase in antiferroelec. liq. crysts., dielec. relax. behavior 127187
ferroelec./antiferroelec. liq. cryst. opt. PM 104826
LCD, EO props., addressing waveforms 104829
mol. optics smectic antiferroelec. liq. cryst., EO props. 104823
operation mode for high contrast ratio/fast switching time in AFLC cell 104817
reflective display, opt. config. and fab. *(Korean)* 93250
SSFLC/AFLC display, matrix addressing, multichannel waveform generator 109911
thresholdless antiferroelec. in chiral SLC 97604
XGA thresholdless antiferroelec. TFT-LCD, 15 in., quasi-DC driving 109877

antiferroelectric materials
see also antiferroelectric liquid crystals; ferroelectric materials
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
Ni-tungstates, hydrothermal synthesis, modeling/thermodyn. calcs. 116180
PZT antiferroelec. thin films on bare and RuO_2 coated steel, prep. 68355
$Pb(Zr,Sn,Ti)O_3$ ceramics, elec. field-induced antiferroelec.-ferroelec. transit. *(Chinese)* 116167
$PbZrO_3$ antiferroelec. thin films, pulsed excimer laser ablation 79356
$PbZrO_3$ thin films, ac elec. & dielec. props. 92625
$SrTiO_3$-$PbZrO_3$ solid soln., ferroelec. phase transit. 104350

antiferromagnetic Curie temperature *see Curie temperature*

antiferromagnetic materials
see also magnetic semiconductors
coupled long. media, recording pot. 116290
IV-VI mag./nonmagnetic superlattices, interlayer exchange coupling 91821
polycryst. exchange biased systs., thermally assisted pinning decay 81862
spin valves, band-struct. calcs. of specular refl. 81842
AlN:C,O, valence/spin control by codoping 115563
CoFe spin-filter spin-valve GMR head, GMR ratio & controllable bias *(Japanese)* 92807

tiferromagnetic materials continued
CoFe/Ir/CoFe artificial antiferromag. sandwich as hard mag. layer in hard-soft GMR sens. 116491
CoFe/Ru/CoFe/FeMn synthetic antiferromagnet-based spin valves, interlayer coupling field 81869
CoO/Co/NiFe film with antidot array, MR, Hall resist., magnetis. 104508
Cu interlayer coupling reduct. in bottom synthetic spin valves 81852
Cu spin valve with single/double specular oxide layers, mag./elec. props. 81838
Fe/Cr superlattices, exchange-spring/bias systs., multiple switching cycles stabil. 81860
Fe/Fe_2O_3 films growth on Cu(110) surface 90321
α-Fe_2O_3 antiferromag. layer, bottom giant MR spin valves 81923
GaN:Mg,Si(O), valence/spin control by codoping 115563
MnIr/CoFe based spin valves, exchange bias enhancement, Cu underlayer, surface modif. 81848
NiFe/NiMn bilayer/pinned spin valve, exchange coupling *(Japanese)* 70509
NiFe-based mag. tunnel jns., interface struct. effects 81868
NiMn, spin valve multilayers, stress, antiferromag. phase transform. 127347
PtMn, spin valve multilayers, stress, antiferromag. phase transform. 127347
Si(100)/Ru/Co/Ru/Co/Cu/Co/Ru spin valves, biquadratic coupling, GMR 81865
$ZnFe_2O_{4-\delta}$ spinel-type thin films, cluster-glass transit. temp. 81831

tiferromagnetic-paramagnetic transitions *see paramagnetic-antiferromagnetic transitions*

tiferromagnetic resonance
projected SO(5) Hamiltonian for cuprates, underdoped SNS jns. appl. 116528

tiferromagnetism
see also antiferromagnetic materials; metamagnetism
granular recording media, collective thermal fluct. 116385
HTSC, sine-Gordon vortex states, quantum antiferromagnets 127483
laminated antiferromag. coupled recording media, micromag. simul., thermal energy 116326
laminated antiferromag. coupled recording media, noise reduction mechanisms 127366

tireflection coatings
beatwave Fabry-Perot interferometer calib. using tunable external-cavity diode laser *(Chinese)* 75348
BK7 glass anti-reflecting films design and deposition for opt. fiber commun. appls. 116894
CMOS 0.18-μm logic with dual polysilicon gate, CD control 103571
CMOS image sens., embedded act. pixel technol. 120922
conf., Coatings on glass, Maastricht, Netherlands (Oct./Nov. 2000) 100392
CW single-freq. semicond. laser with Bragg fibre grating 128303
DLC film-Si struct. solar cells, space appl. 89300
electroabsorption modulated DFB laser, low wavelength shift *(Chinese)* 105442
external-cavity semicond. lasers, tuning range, AR-coating facet wavelength depend. *(Chinese)* 117315
film coating on sapphire window, high power laser appls. *(Chinese)* 127895
grating-mode-type SAW resonator for VCO, fab. method and optimum electrode finger shape 127269
HMDSO film, bottom antireflective coating, DUV lithog. 126550
integrated micromachined tunable laser using polysilicon 3-D mirror 71357
interf. multilayer ARC for NIR wavelengths 116896
lithographic imaging, photoresists and anti-refl. coatings, complex refr. indices 103568
micro-conical array fab. for antirefl. struct. surface 104781
micromachined sub-MM and MM-wave variable pol. compensator 91195
mixed strained MQW act. material SOA for opt. networks 117276
multilayer deposition, in situ laser reflectometry, target control 114270
one-facet antirefl.-coated semicond. lasers, oscill. wavelength 117248
opt. polymer thin films with controlled surface topologies, appls. 71501
organic bottom ARCs for photolithography, recent progress 103558
photolithography proc., overlay error, reticle interf. effect, IC foundry fab 103569
polymer films, UV-moulding for micro-opt. systs. and O/E-integrat. 71371
Si solar cells, degrad. of surface quality due to antireflective coating deposition 100144
silylated resists, nanoscale lithog., opt. charactn., surface imaging 92264
solar glazings, ang. depend. opt. props., outdoor meas. 123836
thin-film coating, laser-induced damage, surface resist. 105405
transit. metal oxide ARC for airborne diamond optics 71500
via-first dual-damascene proc., planarization 103386
wet chem. functional coatings for automotive glasses and CRTs 101425
AlInGaAs-InP three-QW polariz.-insensitive opt. amps. 93657
C antireflective coating over photoresist, etch selectivity, $O_2/CHF_3/Ar$ gas chem. 103308
C spun-on bottom ARC film for KrF/ArF lithog., pattern transfer proc. 103554
a-C:H/ZnSe/BaF_2/Y_2O_3 DLC IR antirefl. multilayered interf. coatings 116883
CdTe surfaces, antireflective struct. by ECR plasma etching 93313
CdZnTe surfaces, antireflective struct. by ECR plasma etching 93313
GaAs anti-reflecting films design and deposition for opt. fiber commun. appls. 116894
GaAs/AlGaAs superlattices, miniband transport, ARC 103141
GaSb TPV generator AR-coated refractory metal matched emitters 113021
ITO transparent conducting, anti-static/anti-static-anti-glare coatings on plastic substrs. 104877
InGaAs/GaAs strained layer SCH SQW laser, output charact. 71805
InGaAsP/InGaAsP MQW electroabsorption waveguide, facet reflectivity, photocurrent 104809
InP-InGaAs reson.-cavity enhanced photodetectors, high BWE product 97236
KrF laser lithog., ARC materials containing isoflavone derivative chromophore 103557
KrF lithog. imaging syst., anti-refl. layer design considerations 103559
MgF_2/CeO_2/Si, optim. for ARC on cryst. Si solar cell 123802
NbN hot electron bolometric mixer, terahertz receiver 71177
Nd:YAG single-mode diode-pumped laser, freq. scanning regimes 117155
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
Si buried contact solar cells, MgF_2-CeO_2 double layer AR coatings 100168
Si, porous, antireflective coatings for solar cells, etching, rapid thermal proc. 104875
Si porous layer antireflective coatings, solar cell appls. 93314
Si random reactive ion etched-textured solar cells, hemispherical reflectance 78171
poly-Si solar cell, ITO electrode, synthesis & perform. 123801
Si solar cell fab. proc. monitoring, PV-reflectometer 100063
Si solar cells, PECVD single-layer (SiN:H) and double-layer (SiN:H/SiO_2) ARC 100147
Si solar cells, RIE texturing proc. 100160
n^+/p mc-Si solar cells, optoelectronic props., surface modif. 100151
Si solar cells, proc. with porous Si texturing 100145

antireflection coatings continued
mc-Si solar cells, synergetic effect of Al, thermally treated porous Si for bulk passiv. 92093
SiN anti-refl. coating, PECVD, multicrystalline Si solar cells 100079
SiN_x, PECVD, AR coating, mc-Si solar cells 100091
SiN_x:H films, PECVD, opt. props., IR-sens. arrays 131921
SiN_x:H films for polysilicon gate patterning, charactn. 127134
SiO_2, fused silica, microcone array form., antirefl. struct. surface 104874
SiO_xN_y:H films for polysilicon gate patterning, charactn. 127134
TiO_2/Si antireflective coatings, prep. & charactn., dip coating 93297
Y_2O_3-ZrO_2 anti-reflective coatings for 1.3 μm LD *(Chinese)* 82717
ZnS dome, antireflective/protective film prep. *(Chinese)* 93303
ZnS/MgF_2 interf. filter, laser induced damage *(Chinese)* 104869

antisite defects
CdZnTe:In, Te antisite defects, deep donor levels 126050
Co_2MnX (X=Si,Ge) Heusler single crysts., growth, mag. props. 116279
GaAs epilayers, low temp. grown, defect props. 79235
GaAs:Be, electron-hole recomb., two-color pump-probe obs. 126036
GaAs:Be films, MBE, defect engng., elec. props. 126032
p-GaAs:C,Mg wafer, elec. isolation, proton ion bombard./annealing 126038
GaAs:Sb films, low temp. grown, struct. transforms. 68190
GaAs:Si,Be δ-codoped material charact., MBE 90282
n-InP, elec. isolation by ion bombard., dose depend., thermal stabil. 80734
InP, n-type/p-type, proton bombard., elec. isolation 69508
n-InP:H, hydrogen neutralization effect, defect states 80711
α-SiC, 4H, intrinsic defect complexes, antisite pairs form., charge self-consistent, DEFT, LDA 69591
SiC:Si (Au), recoils, primary damage states, MDM, expt. study 69821
ZnO, native defect energetics, first-principles plane-wave pseudopot. calcs. 91636
ZnSe/GaAs heteroepitaxy, defect form., Monte Carlo simul. 101278

AOI *see automatic optical inspection*

APCVD *see chemical vapour deposition*

APD *see avalanche photodiodes*

aperture antennas
2D microstrip-dipoles reconfigurable aperture antenna array gain 128892
bidirectional antenna, input impedance eval. using probe excited rect. ring 83553
Cassegrain asymmetric reflector antennas 83500
cavity backed antenna in conducting cone, radiation charact. 72454
circ. polaris. dielec. resonator antenna, perturbed annular slot 94174
common aperture dual freq. antenna, patch/folded reflector combo., 900 MHz/60 GHz) 105918
compact forward-looking SAR with digital beamforming on receive only *(English)* 75210
conical horn antennas loaded with metallic discs, near-field meas. 94142
convex circ. cylinder apertures, mutual coupling calc. using hybrid UTD-MoM method 72650
Earth station antennas, Fresnel region power dens. levels predict. 94158
H-shaped aperture wideband and high-gain strip patch antenna *(Korean)* 117758
hard corrugated conical horn anal. by method of generalised scatt. matrices 83567
Ka-band array elements for ATM-Sat terminal antenna 72670
large-aperture photoconductive antenna, intense THz pulse generation, time-resolved study 117766
metal-flanged rect.-aperture arrays anal., parallel framework 128896
MM-wave aperture antennas for LMDS commun. syst. at 42 GHz 72615
neck hyperthermia, circ. phased aperture antenna EM emissions 133018
pulsed beam scatt. by random medium over ground 86177
reduced-size multi-octave spiral antenna 72465
reflector antenna field stats. 72531
satellite tracking, circ. aperture antenna $TE_{21}{}^0$ mode charact. 120089
small aperture RLSA, inner fields visualization using FDTD 83724
super-broadband aperture antenna, extremal energy coeffs. of direct action 117756
synthesized aperture, Doppler sig., obj. internal struct. scanning 84124

aperture cards *see microforms*

API *see application program interfaces*

apodisation *see acoustic imaging; optical images*

apparatus *see instrumentation; instruments; laboratory techniques*

appearance potential *see ionisation potential*

Apple computers
dual-platform wireless AirPort network creation and files transfer 130843
Mac OS X machine, network security problems 130806
Web server, usage of older Apple Mac computers 85259

applets *see distributed programming; Java; object-oriented programming*

appliances, domestic *see domestic appliances*

application program interfaces
3D rem. brain mapping invocation, distributed appl., Java & VRML 88016
advanced collaboration services 108058
Alcatel VIPeR, value-added IP routing, flexible software archit. 130509
analogue video interface for general-purpose DSP 73247
anonymity network archit. 129328
Antigone 2.0 framework, group commun., flexible constr. of secure groups 96097
audio-video content abstraction program interface for home network appls. 120540
bandwidth monitoring for network-aware appls. 119703
CLF middleware, scalability issues 130878
client server syst. advanced faults mgt., Java API 130684
clustered computers, distributed OO virtual computing environ. 130748
commodity software for audio/visual home appliances 120539
computer-vision-based HCI with back projection wall using arm gestures 129531
converged IN services and API 130907
converged network, value added services 119772
CORBA interoperability, test framework 130881
CX6800-CA call control server 85201
data warehouse middleware for unified resource mgt. 130554
dependency-spheres, global transaction context for distributed objs. and messages 130879
distributed shared memory cluster with improved commun. subsystem, perform. eval. 108149
distributed virtual simul., network protocols/archit. 96127
e-charging API, outsource charging for content and appl. usage 130759
EDA tools, scripting lang. capability for interoperability 79507
free universal TV networks, FUN *(German)* 131737
grammar controlled speech recogn., Microsoft speech appls. prog. interfaces *(German)* 129390

application program interfaces continued
Grid computing environ. for enabling large scale quantum mech. simul. 108115
group commun., commercial Java implement. using reliable multicast 130752
GSM-based mobile positioning using WAP 97012
indust. robot open-network-interface, proposal for std. 96240
interactive digital TV Java environ. 86302
interchangeable virtual instrum. drivers, test syst. perform. 97141
Internet appls., end-to-end perform. meas./anal. syst. 108154
Internet backplane protocol for data storage mgt. 119715
Java 2 distributed obj. middleware, perform. eval. and optim. 84987
JFWD API, platform independent portal 108321
Joint Tactical Radio System, network API defn. 111578
location-adaptive virtual networked appliance 74236
low-latency SCI systs., perform. modeling and eval. 130808
middleware support for voting and data fusion 107407
mobile commun. appl., parallel proc. scheme based on transaction partitioning *(Chinese)* 74839
mobile Internet, intell. SIP syst. 130758
MOVE middleware archit., voice and data services integrat. for mobile Internet collaboration 130885
MPEG-4 based multimedia e-mail syst. 96063
multimedia IP networks, service creation 108403
multimodal systs., interactive advice tool on speech use 118138
next generation intell. reconfigurable mobile networks, OO organic archit. 130935
next-generation networks, prototype for service archit. 131186
OO protocol agents in commun. devices 74285
open SCE 130917
open service gateways for home, software archit. 74176
Parlay API, validation through prototyping 130912
Parlay enhancement with mobile code technols. 130930
platform-independent API for QoS mgt. 119577
prog. networks 108174
QoSME, QoS mgt. and guarantees 95908
radiology IS/imaging modality interface syst., based on DICOM std. classes *(Japanese)* 76218
Raincore API for clusters of networking elements 119716
retail set-top box appl. platform archit. for digital cable network 120562
Rohde & Schwarz digital video quality analyzer, DVQ 75297
script wrapper for software integrat. systs. 108307
SEAN, Signaling Entity for ATM networks 73942
secure Java appls. using smart cards 118014
self-organizing sens. networks, inform. dissemination, distributed services 129991
server, neural network chip-based 119832
service authoring for third-party prog., service-mediation-enabled feature servers 108057
service dependencies mgt. 130690
SIP and conversational Internet appls. 84951
SIP-based VoIP service prototyping in Java 96237
SMTP server and client for e-mails via Internet 130754
software radio, multiprocessor archit., full-duplex real-time commun. *(Japanese)* 108874
STARS of MPEG decoder, worst-case anal. of discrete-event systs. 83835
subsetting/formatting Landsat 7 L0R ETM+ data products 73186
variable bandwidth wireless environ., dyn. mgt./adaptive appls. 130366
virtual act. networks, multi-edged network computing 85191
Web-based appl. server *(Chinese)* 108101
Web-based network element mgt. 108177
weld inspection, US data reconstr., visualis. & anal., AutoCAD(R)2000 100644
xBSP, Bulk Synchronous Parallel prog. library for cLAN 74409

application specific integrated circuits
see also analogue processing circuits; mixed analogue-digital integrated circuits
0.18 μm ASIC MOSFETs, robust design using Taguchi method with TCAD 126991
3-level voltage-fed inverter IM drive, NN space vector PWM controller 134467
9:4 DBS receiver switch in MCM-C/D technol. 120530
16 channel ASIC, Si drift detector read out 121695
AC machine, complex motor direct torque control, VLSI design approach 78102
algorithmic level DSP synthesis, symbolic alg., multimedia appls. 125551
analogue video interface for general-purpose DSP 73247
annotated data types for addressed token passing networks 85222
ARC 32 bit proc. core, theory/practice 68827
archit.-independent run-time reconfigurable appls. framework 90843
area array packaging, high dens., high speed separable interconnect appl. study 124336
ASDBLR straw tube readout ASIC, DMILL technol. 121716
ASDBLR straw tube readout ASIC in DMILL technol., implement. 132453
ASIC indust., product develop. proc., buyer-seller rels. 89795
ASIC verification methodologies, prog. logic 101927
ASSP design, multimedia syst. 79946
ATLAS Level-1 Calorimeter Trigger Pre-Processor syst., ASIC design proc. 121727
ATLAS pixel detector module, design/perform. 97960
ATLAS SCT, radiation-hard optoelectronic data readout 98063
ATLAS tracking detector radiation hard opt. readout syst. 132447
ATM over ADSL IC, simul. approach for functional verification 108477
ATM router in space, TRW ASIC design 109000
ATM scalable access switches, perform. study 131032
ATM-PON, opt. network unit controller, archit. design 131390
backplanes, prog. routing device, clock regeneration *(German)* 74255
BiCMOS one-chip Bluetooth ASIC, tradeoffs and challenges 127070
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
BISRAMGEN phys. design tool for BISR RAMs 68809
block turbo decoder implement. 117992
Bluetooth packet early-late gate receiving, implement. and perform. anal. 120077
Broadcom BCM12500 single chip multiprocessor syst. for broadband networking appls. 125567
bus-based prog. SoCs, IP cores, self-test methodology 101920
capacitive humidity sens. design/fab., interdigit electrodes *(Korean)* 120740
CAV 414 and CAN 404 analog ASICs for capacitive meas. technol. 131865
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
ceramic column grid array modules, mfg. proc. for high vol. prod. 78646
CGH, phase computation by addit. 105583
CHIPDESIGN, project-oriented microelectronics course, ASIC std. cell design flow 125298

application specific integrated circuits continued
CMOS analog IC, sliding mode control, switching DC-DC power converte 88946
CMOS ASIC archit., timing-optimized std. cell logic, wireless/wireline producr 102011
CMOS ASICs, shifter design 90861
CMOS chip, organic/ceramic packages, simultaneous switching noise 113668
CMOS flash ADC, ultrafast design for SoC appls., 1 GS/s 90992
CMOS high-speed low-power fully parallel CAM macros, design for ASIC appls 68798
CMOS high-speed μP, register renaming units, ASIC multi-port RAM cell cc 102247
CMOS mixed-sig. SoC for press.-sensitive fabric 109535
CMOS monolithic act. pixel sens., charged particle tracking 97955
CMOS platform-based highly parallel DSP for wireless OFDM based moden 102256
CMOS QLM technol. H.263 video CODEC with protocol proc. 108489
CMOS serial link, AS memory syst., PWM transceiver 114759
CMOS/SIMOX ASIC, current-sensed double-dens. SRAM 114762
coarse-grained dyn. reconfigurable hardware archit. for wireless commun. 96529
color seq. driver design for LCOS microdisplay devices 114750
colour LCD controllers, SoC implements. *(Italian)* 132107
common reuse strategy for ASICs and FPGAs 68771
component selection and matching for IP-based design, SoCs 81430
compressed coefficient's band-pass delay time charact. extrapolation using GA on DCT 73639
conditional task graph allocation/scheduling, hardware/software co-synthesis 81441
const. rate wavelet-based image compressor 108484
cooperative voltage scaling between OS and appls. for low-power real-time systs. 114784
coupling-driven bus design for low-power appl.-specific systs. 126989
cpd. semicond. IC technols., appls. in high data rate opt. fiber commun. 131389
cross-chip delay meas. and characts. of delay modeling flow, boundary scan delay chain 79736
crosstalk-induced logical/delay faults, on-chip buses, embedded-software-based approach 101921
CSPs for portable consumer electronics appls. 113600
custom and ASIC designs, methodologies for freq. gap reduct. 126982
custom ASIC design methodology with on-demand library generation 125387
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
DAB chipset develop., real-time rapid prototyping approach, behavioral synthesis 79743
data prep. mgt. for opt. proximity correction 101938
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
DCT, GA, band-pass delay time charact. 73837
DECT ASIC, RF interface design, mixed mode methodology 102423
dedicated sig. proc. systs., hierarchical automated design flow, layout generation 114783
delay insensitive SoC interconnect using 1-of-4 data encoding 79671
dental implants, ASIC strain gauge meas. syst. for stress monitoring 111166
depth of interact. PET, detector module, analog ASICs 122256
design, MOS cct. appls. *(German)* 103982
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
design methodology achieving 550 MHz operation 125358
design using EDA tools, IP service providers *(German)* 115995
design verification, hardware tools 125380
deterministic software-based self-testing of embedded proc. cores 79911
DFT based methodology reduces fault-coverage anal. 101929
digital design reuse, survey 101903
digital VLSI design, architectural synthesis with interconnection cost control 101957
discharge lamps, hybrid electronic ignition ccts. 124085
distributed packet switches with QoS support for IP and ATM 131020
DMD device for high-defn. home entertainment 109847
DOM AMPL-8.3 amp. for gaseous wire detectors 87256
DSPs, spill code, register constraint anal. 79930
dual-slope method time interval meas. core, CMOS technol. 101907
DVB-RCS appls., high-speed on-board multi-carrier demodulator 109012
Earth orbiting scatterometers, multiprocessor DSP 133334
EDRAMs, design archits. 90903
efficient fn. approx. for embedded and ASIC appls. 125190
efficient GF multiplier, VLSI appls. *(Chinese)* 129334
embedded CAM with power-saving and design for test features 102181
embedded memory access time meas. using BIST circuitry 79745
embedded memory core testing, on-chip march pattern generator, low hardware overhead 125291
embedded systs.-on-chip, partitioned memory synthesis, multi-bank SRAM archit. 125383
embedded trench DRAMs, sub-0.10-μm, hemispherical-grain tech., LOCOS collar 102124
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut partitioning 102105
EPGAT, embedded PGA core ASIC for board-based designs 68756
Ethernet and companion protocols in CAN 130813
EWTS82 series quartz cryst. ang. rate sens. for vehicle navig. syst. *(Japanese)* 131894
extended-range RF ident. systs., inductively coupled contactless design *(German)* 85940
fault coverage vies for clear DFT rules 125284
fault models, VITAL compliant VHDL simulation 102424
fax thermal printing head ASIC, self-heating effects *(Chinese)* 92434
FeRAM device and cct. technols. fully compatible with advanced CMOS 102179
FESA chip for X-ray/gamma ray detectors 121696
field prog. syst. IC for syst. level designs 79650
FLEX pager design, MCU and DSP on single ASIC 108492
flexible multichannel high-resoln. TDC ASIC 121720
flight vehicle vibr. monitoring by PCM telemetry, data compression 98893
flip-chip and wire bonded packages 113672
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
floating point CORDIC proc., low power, behavioural synthesis 68822
FPGA design, functional decompos., sub-fn. input support sel., inform. rels. meas. 79811
FPGA develop. and manufacture 90859
FPGA to ASIC migration 68772
FPGA-based adaptive tracking estim. computer 102200
FPGAs appls. to high perform. DSPs 90957

application specific integrated circuits continued
FPX, field prog. port extender, hardware modules, Internet routers/firewalls, CAI platform 124266
freq.-directed run-length codes, appl. to syst.-on-a-chip test data compression 101911
FROST, low-noise high-rate photon counting ASIC for X-ray appl. 68876
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808
functional test coverage maximization in ASICs using evol. algms. 92440
geometric-primitives-based compression scheme for testing systs.-on-a-chip 101913
HDTV video sig. post-proc., erasable PLD appl. 97062
HERA-B inner tracker, GEM microstrip gas chambers, review 76133
heterog. multiprocessor DSP archit. for low-power audio sig. proc. appls. 90936
heterog. multiprocessor SoC, appl.-specific archit. generation 125553
heterog. multiprocessor systs., power minimisation, voltage reduction 125529
high rate environ. MWPC readout chip 121631
HRM, hierarchical simulator for full-chip power network reliab. anal. 79734
hybrid PCI/VME archit. develop. for space syst. 133245
IEEE1394 syst. simul. environ. and design of link layer controller 101960
IEEE 802.11 WLAN, enhanced MAC implement. 130378
IM DTC-based speed control, ASIC design 134051
image sens. analog front-end, image sens. sig. conditioning 68963
implant charging, photoresist bake, electron flood gun effect 115582
implantable stimulators, semi-custom CMOS vs. low-power microcontroller 76690
implement. flow, estim. of speed, area, and power of parameterizable soft IP 125337
indust. network proc., C compiler design 130342
indust. sens. networks, embedded networking, hardware/software design 109451
input space adaptive design, high-level methodology, energy/perform. optim. 125375
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
instruction-level power anal. model with data dependency, generic RISC proc. 114788
integrated chemiresistor array for microrobot sens. platform 75688
integrated opt. posn. encoder syst. with phase calib. 75505
integrated readout syst. for high count rate X-ray posn. sensitive meas., Si strip det. 121709
integrated SoC test framework 81431
interactive BIST appl., compression tech., test data vol. reduction 101909
Interbus commun. protocol, ASICs, ring-struct. data transm. interfaces *(German)* 74504
inverse gate electrode flash technol., CMOS proc. compatible for SoC appl. 102180
IP-based designs, delay fault testing via symbolic path modeling 125288
IR FPAs, systs.-on-a-chip, CMOS technol., design tools 109635
Irvine Sensors advanced vis./IR microcameras for dual-use appls. 109653
JTAG boundary scan test in high mix mfg. environ. 86404
killer-defect control using reliable high throughput SEM-automatic defect class. 104019
Large Area Detector single photon counting pixel detector characterisation 98008
latency-driven design of multi-purpose systs.-on-chip, deep submicron technol. 125336
LHC data transm., G-link, gigabit Ethernet compliant serializer 121704
lithog. challenges of DRAM to ASIC prod. transit. 115983
logic blocks, efficient path delay test generation 114718
LOTTERYBUS, high-perform. commun. archit. for SoC designs 125334
low power DSP core, semicustom ASIC design, batt. powered appls. 125541
low-power ASIC systs. design 115205
low-power domino logic ccts., automated phase assignment in synthesis 79830
low-power systs. on chips, asynchronous and locally sync., software design 79696
Luna 340, emulation on Axis Xtreme syst. 101657
MAMon, hardware/software monitor for high-level SoC verification 79727
MegASIC, analogue, mixed-sig. and digital ICs, IC design, foundry facilities *(German)* 126929
merged DRAM logic for video sig. proc., design metrics 102231
mesograph, continuous intraocular press. monitor, telemetric syst., glaucoma diagnosis 132544
metal-oxide gas sens. for pollution detect., fully digital user interface cct. 109794
MetaRTL, RTL design abstraction level, ASIC design 79677
mfg. lines defect inspection method *(Japanese)* 69332
micro-mag. sens., magneto-impedance/stress-impedance, review 75765
microelectronic systs. education, conf., Las Vegas, NV, USA (June 2001) 124190
micromechanical transducer elements, CMOS-based proc. *(German)* 75745
MicroNetwork-based integrat. for SOCs, automated develop. environ. 125371
mission logic for embedded testing, syst.-on-a-chip logic cores 79747
mixed-sig. SoC design, joint university/indust. Internet-based course 124256
mobile DSP, reconfigurable syst.-on-a-chip archit. 131137
modular proc. technol. for VLSI syst.-on-a-chip appls. 104080
MPEG-2 video stream decomp., variable length decode, VHDL description *(Chinese)* 96318
MPEG-4 core profile video codecs, algorithmic complexity, motion estim., VLSI archit. 131017
MPEG-4 video, bitstream parsing coprocessor, RISC model 125522
multi-chip syst. on silicon using thin-film technol., SoC assemblies *(German)* 67544
multicore systs. on silicon, exact fault simul., intellectual property protection 79716
multimedia stream proc. and commun., syst.-on-a-chip 130957
multiple asynchronous domains, static scheduling, functional verification 125445
multiple EDA tools within ASIC design flow 101879
multiprocessor SoC, generic archit. model 79676
µP and PLD, on-chip debugging tool and embedded memory *(Italian)* 90929
MWPC readout chip for high rate environ. 110402
MXLO21E1-3 SDH syst. chip, integrated design and appls. 96331
NiCad batt. charging charact., computer charge syst. *(German)* 88954
non-group cellular automata for message authentication 70233
obsolescence and DSP appls., intellectual property, fab. procs. 114682
OFDM transceiver for WLAN, 72 Mbit/s, C++ based syst. design 119580
partial bus-invert coding for power optim. of appl.-specific systs. 68701
peripheral I/O high quality ASICs, I/O cell placement, elec. checking methodology 81451
pipelined reprogrammable microcontrollers, high-level synthesis techs. 68832
platform design approach for re-config. network appliances 101988
PN generator, DSP 106103
positron emission mammography camera, electronics syst. 111008

application specific integrated circuits continued
positron emission mammography camera, LBNL, electronics syst. 122260
prog. logic IP cores in SoC design 102251
prog. multiplierless digital filter array for embedded SoC appls. 80083
public-key cryptosystems, ellipt. curve, hardware-accelerated, rapid prototyping 94362
RAD750™-a radiation hardened PowerPC™ proc., spaceborne appls. 133248
radix-2 online division using LSA organization 79865
real-time video compression, motion estim., FPGA chip implement. 129771
reconfigurable computing for wireless base station design 125546
reconfigurable hardware for real time image proc. 94794
reconfigurable parallel inner product proc. archits., pipelined design 68850
reconfigurable RISC proc. core, embedded appls., FPGA prototyping 68849
reconfigurable systs., design space, reconfiguration hierarchy 125348
RENE, Rice Everywhere NEtwork project, multitier wireless commun. 85499
reusable baseband Bluetooth IP, SoC integrat., ASIC design house 125352
RLS systolic array proc. 79941
ROM, low-power and high-speed modules, ASIC appls. 114761
ROM-less direct digital freq. synthesizer using segmented nonlin. DAC 101821
RS codec, finite field multiplier, custom VLSI design 108487
RTL morphing, making IP-reuse work in syst.-on-a-chip designs 114674
Samsung S3C4520X syst. manager for network SoC designs with various memory access types 131015
scratch-pad memory space, compiler-controlled dyn. on-chip mgt. 125373
SDH, multiplex sect. adaptation fn., ASIC design *(Chinese)* 96821
SDH cross-connection ASIC, design and appls. 95782
SDH network sync. issues 95802
shared BISR anal. for multiple embedded memories in SOC 102182
shared fuse macro for multiple embedded memory ASIC devices with redundancy 102183
sig. integrity anal. for network board designers 101660
simultaneous switching noise modelling, high speed systs., digital design 79656
SMT-compatible opt.-I/O chip packaging for chip-level opt. interconnects 113642
SoC, substr. RC network model, substr. coupling noise, triple well CMOS 70297
SOC, syst. on a chip, cost, power dissipation, technol. and design 116019
SoC, systs. on a chip, multidisciplinary and collaborative design, interactive video course 126957
SoC design challenges 125526
SoC design flow quality, std. design langs., APIs 81463
SoC design for verification methodology, functional verification at blockto syst. level 79726
SoC design skills, collaboration in design team, hardware-software implement., education 124263
SoC design with IP blocks, coherent functional, elec. and phys. modeling 114572
SoC designs, thermal mgt. syst. and prototyping 70262
SoC interconnect crosstalk defects testing using on-chip embedded proc. cores 126977
SoC Masters, internat. MSc program in SoC design at KTH 124267
SoC multimedia codesign based on multicriteria optim. 119808
SoC proc., hardware/software instruction set configurability 125547
SoC programme, digital hardware organization course, block-oriented design 125292
SoC research infrastructure for Canadian universities 126956
SoC syst. level archit. exploration using SpecC methodology 101961
SoC techs., reusable design flow *(Spanish)* 102223
SOC test resource partitioning, Object Oriented Paradigm and UML 79675
socillator test, delay test scheme for embedded ICs in boundary-scan environ. 104012
SoCs, multi-million gate designs, hierarchical power network anal., power grid modeling 79735
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
Socware design cluster for SoC, research & education programme 126955
SOI-BiCDMOS single-chip automotive LSI, air bag controller, RISC CPU 89411
soil, intell. dielec. sens. 121059
SONOS nonvolatile semicond. memories for space/mil. appls. 125505
space-qualified downlink image compression for commercial rem. sens. appls. 106913
stack proc. virtual component, design and verification 68682
stat. design space exploration, appl.-specific unit synthesis 125179
subthreshold CMOS transistor analogue ASIC for biological neuron modelling 102488
syst.-level perform. anal. for designing on-chip commun. archits. 70275
syst.-on-a-chip, combining low-power scan testing and test data compression 125347
syst.-on-a-chip design methodology/products using flexible interconnect archit. approach 70273
syst.-on-a-chip design technol. 126945
syst.-on-a-chip designs, sub-wavelength tools integrat., opt. proximity correction 81477
syst.-on-a-chip interconnect, commun.-based design, formal approach 125554
syst.-on-a-chip optimal test access archits. 115989
syst.-on-a-chip precedence-based, preemptive, and power-constrained test scheduling 104031
SystemC design lang. for develop. of ASICs and systs. *(German)* 90813
TestChipB, prog. logic core advanced technol. demonstrator 102252
transformer temp. monitor, single chip integrat., increased functionality 80461
turbo decoder, power-efficient layered proc. archit. 79915
unified DFT archit., IEEE 1149.1 and VSIA/IEEE P1500 compliant test access controllers 125339
unified reconfigurable arith. proc. design, array size/bitwidth trade-off 79935
US transducer array, beam-forming transmit ASIC 111507
VHDL modeling of overcurrent relays 88479
video format conversion, picture rate conversion and de-interlacing, consumer TV ICs 84285
VITAL, VHDL ASIC libraries, ASIC modeling spec. 127009
VLBI network, Chinese, high-speed FX correlator, super spectrum analyzer, prog. ASIC 86275
VLSI buffer and wire resource allocation, design methodology 126973
VLSI functional test synthesis, design methodology 92459
VLSI mixed-timing systs., robust interfaces, latency-insensitive protocols 125335
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
voiceband analog audio sigs., record, playback and proc. syst., coarse-fine prog. 131133
voltage overshoots in high-speed digital SoCs, built-in-chip testing 101916
VSIA quality metrics for IP and SoC, Quality Evaluation Spreadsheet appl. 78695

application specific integrated circuits continued
WCDMA receiver ASICs, cellular handset design 120076
Web server, functionally minimized embedded, network connectivity for small appliances 130637
weighted pseudo-random testing hybrid BIST, test resource partitioning scheme 101908
wireless batt. powered device, very high bandwidth, SOC solns., compiler techs. 96478
X-MatchPRO full-duplex lossless data compressor on ProASIC FPGA 102119
Xilinx Virtex-E FPGA based 20-GFLOPS quadratic residue proc. 96979
Xtensa configurable synthesizable core proc. for SoC designs *(Italian)* 79939
CdTe high resoln. detector, imaging devices 121479
CdZnTe hybrid pixel detector, high resoln., high energy X-ray astron. 121774
Cu full damascene metallization, sub-0.18 μm RF CMOS SoC high Q inductor and MIM capacitor appl. 125740
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025
Si pixel detector, high resoln., high energy X-ray astron. 121774
Si pixel detectors, front-end electonics, readout chips 76108
Si strip detectors, posn.-sensitive X-ray meas., fully integrated readout syst. 110397
Si vertex detector upgrade of Collider Detector at Fermilab, port card 110401
SiGe SoC RF technol., cable modems for high-speed broadband services 119819
SnO_2/Al discrete gate ISFET pH sens., ASIC CMOS std. proc. 75710
YBaCuO IR bolometer array, cryogenic CMOS readout cct. 71169
applicators, microwave *see hyperthermia; microwave heating*
applied potential tomography *see electric impedance imaging*
approximate reasoning *see inference mechanisms; uncertainty handling*
approximation theory
see also function approximation; interpolation; least squares approximations; mean square error methods; polynomial approximation
0-1 integer programs, tight approx. via lin. relax. 101038
2-approx. algm. for path coloring on trees of rings 100809
2D random variable, dens. fn. logarithm nonparam. approx. 113897
3D anisotropic opt. waveguide, approx. scalar finite-element BPM 71327
3D conducting struct., stationary phase method for radiation anal. 83506
3D head models generation from multiple images using ellipsoid approx. for rear part 84316
3D shape approximants via spherical wavelet decomp., clinical pelvimetry appl. 110539
3D struct., adaptive integral method based capacitance computation 72164
3D surfaces, hierarchical coding using box splines 129718
100 Mbps PACE technol. Ethernet networks, perform. anal. 130780
acoustic duct, robust broadband control 88205
admittance matrices passivity enforcement, paper discussion/closure 124648
all-to-all opt. commun. network routing in chordal rings 131447
amat. radio antennas near-field exposure assess. 85492
antenna pattern approx. by at. fns. 117754
antenna pattern approx./lin. radiator synthesis based on at. fns. 117753
antenna with medium cover, window spec., approx. calc. method 72606
asymptotically exact a posteriori estimators for pointwise gradient error, smooth problem and globally quasi-uniform meshes 79149
asymptotically LRD traffic, autocorrelation fns. and verification 95749
ATR, model-based, anisotropic scatt. attribution 75138
backward error of polynomial roots 114003
beam propag. algm. for opt. tapers 72425
bianisotropic composite mediums, ellipsoidal topol./orient. diversity/correl. length 104503
binomial matching transformers, design methods comparison 83468
bivariate quadratic C^1 splines, approx. power 90070
broadband nonGaussian random sigs., peaks distrib. approx. *(Japanese)* 100791
broadside antenna arrays, directivity approx. 120430
Burgers' eqn. lin. implicit time integrat. scheme 114102
CAD model acquisition, range image segmentation 94695
cascade time-series syst., nonparametric estim. of nonlin. by multiscale approx. 73599
CDMA cellular uplink systs., Erlang capacity calc. 85740
CDMA fiber-optic networks incorporating multiple opt. amps. 74987
CDMA ML detect., semidefinite prog. 130289
CDMA systs., soft interf. cancellation improvement 128813
CDT subproblem, dual fn. max. 79014
cellular commun., handoff arrival proc. 74715
cellular networks, constrained channel assignment, approx. algms. 85870
channel-adaptive scaled VQ for low-cost approx. of COVQ on time-varying channels 129212
chaotic systs. for secure random no. gen., design tools 68537
circ. microstrip-patch antenna, directivity approx. 117811
clear dielec. isotropic epoxy coating light scatt. meas. by interferometric microscopes 75907
clustering for edge-cost minimization 67940
codebook index assignment, traveling salesman problem, approx. soln. 129009
coded free-space opt. commun. through atmos. turbulence channels, pairwise codeword error probab. 131621
color video, fast act. obj. tracking 118378
combinat. ccts., max. power consumption problem, approx. algms. 102004
competitive power generation market expansion planning optimisation 122933
complex higher-order systs. synthesis using chain fractions 101639
complex lineshape fn. semicond. laser modelling, simple anal. non-Lorentzian approx. 71828
composed Pade-type approx. 114005
composite scatt. of targets/environ. 72272
compression encoders, tree approx. and optimal encoding 118926
concatenative recogn./synthesis paradigm based VLBR speech coder 84006
conic quadratic minimisation, polyhedral approx. by LP 78905
const.-intens. approx. in nonlin. wave theory 94046
convection-diffusion two-point BVP, derivative approx. 124731
convergence of splitting scheme applied to Ruijgrok-Wu model of Boltzmann eqn. 114010
convex envelope of fn., charactn. and approx. 100954
corrugated horns perform., surface waves high-Q resons. effects 72512
covariance kernels, simultaneous diagonalization approx. soln., second-order stochastic procs. 119079
cryptosystems based on real quadratic no. fields 129324
CSMA/CD buffered systs., perform. anal., tagged user approach 107783
cylinders and flat plates, RCS 120430
DCT approx. with lifting scheme, systematic design/appls. 106896
DCT with lifting scheme, fast multiplierless approx. 106916
DCT/triangular mesh based scalable image coder 95386
decision tables, probab., variable precision rough set model 113942

approximation theory continued
diffr. over uniform array of absorbing half-screens, generalized soln. 83243
diffusion approx. under accretiveness and compactness assumptions, radiat. transfer eqns. 100987
digital image compression using wavelet transform with transit. matrix 1069
digital radio receiver, non-decision-aided carrier freq. offset estimator 9639
discrete nonlin. filter based on quantisation, approx. 84737
discrete relativistic Toda mol. eqn., Pade approx. algm. 124643
discrete-time Volterra eqns., solns., asymptotic equivalence 78770
distorted laser beam wavefront correction simul. 128367
double-exponential pulse propag. through Debye medium 72265
downlink time acquisition/tracking for man portable MDR terminal 111614
DS/SSMA band-limited commun., closed-form BER expression 108524
DSP, spectral props. of at. fns. 95707
DWDM high-capacity systs., efficient design 131589
dye laser, ray trajectories in axial-symmetric inhomog. medium 117094
E-polarized field of point source, HF excitation of thin dielec. coated smoo metallic cylinder 83208
elec. small antenna radiating close to conducting plane, Q factor 83636
EM device CAD, multiobjective design optim. 93981
EM far-region radiation with vert. MI in sea 83327
EM fields eval. in nonlin. media using approxn. analytic method 117614
EM scatt. from PEC target above or buried in lossy half space, fast multipo method 83237
fast Fourier/wavelet transforms, adaptive optics wavefront reconstructio 106675
FDMA-based multiuser transmit optim. for broadcast channels 84901
Fermi-Dirac integrals, anal. expansion and num. approx. 90171
finite element approxs. of conformal mappings 101134
FIR channels excited by convolutionally encoded inputs, MLE 95807
first-order evol. eqns. in Banach spaces, spline techs. 101012
floating point divider, accurate lin. approx. using bipartite reciprocal tabl 114057
fractal coding of shapes, projected IFS model based 95177
fractal image coding, trigonometric approx. method 73422
fractional delay allpass filters, design 130041
free-model based power syst. stabilization scheme 111893
freq. domain notch periodogram algm. 107574
FSS, multiscreen double sq. in multilayered medium, subsectional curren approx. 94114
fuzzy no. interval approx. 90016
G/G/1 queue with Markov-modulated arrival, departure proc. approx. 113848
GA pop. dyn., approx., and anal. of optim. problems 113964
Gaussian RBF expansions, scaled simplicial approx. for inversion 90098
Gegenbauer approx., DE, rough asymptotic behaviors 124645
generator rotor earth fault relay protection fn. 77823
genetic algms., crossover-induced linkage modeling 100948
geometric dispersion problems approx. 67976
Gilbert-Elliott channel with interleaving/retransmission, delay anal. of block coded transm. 94271
greedy-GA combined algm. for data transfer binding problems 81489
Green's fn. for rough surface with Dirichlet/Neumann/impedance boundary con ditions 72270
GRIN planar opt. waveguides, propag. consts., alg. recursion formulas 127774
hard-edge apertured paraxial ABCD opt. syst., Gaussian beams, approx. close form expression *(Chinese)* 105411
HF sig. reconstruct. from LF sampling data based on wavelet multiresol. anal. 73631
hierarchical loss network model, perform. anal. 74053
high-order bal. multiwavelets, theory/factorization/design 107521
high-permitt. nanostructure scatterers, EM scatt. 128782
high-speed interconnects, anal. using multipoint Pade approx. 90642
high-speed packet-switched networks, emulated weighted fair queueing algm. 130243
HiRAMBO planar curves hierarchical representation scheme 124619
holey opt. fibers, splice losses, FDTD simul. 93089
hypersurface fitting, math. modeling *(Chinese)* 67933
IC layout congestion estim./minimization during placement 104002
IM end-rings EM field anal. approach *(Japanese)* 77872
image deblurring combining total var. and wavelet packet approaches 118253
image region segmentation, conc.-based adaptive approach 129846
image watermarking/data hiding, inform.-theoretic model 95365
induction machine simplified stator flux vector control method 123445
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
inform. cost fns. 117875
invariant curves of planar map Lyapunov-type no. calc. 124630
inverse problem for acoustic wave eqn., probabilistic approach to approxs. and uniqueness 101113
inverse syst. (many-valued function) approx. by neural network 79022
Ishikawa iter., stabil., strong pseudo-contractions 78979
isotropic point source, evanescence asymptotics 117699
iter. equalization of partial response channels using dens. evol., thresholds 130259
iter. turbo decoder anal., dens. evol. based 72882
k-station placement problem 95791
Kerr nonlin. waveguides, non-classical behaviour 82833
Kronrod quadrature rules, overview of computational aspects 67922
$L_p(\mu)$-norm approx. capability of generalized Mamdani fuzzy systs. 100991
L-curve for MINRES method 90091
large aperture ARROW-type VCSEL modal charact., reflector width optimisation 117206
lateral-shear holographic interferograms, wave-front control 93903
LDPC regular codes over PR channels, threshold 129083
lin., planar, and vol. apertures and arrays, directivity approxs. 111489
lin. 2-stage stochastic prog., quantiles, approx. 100955
lin. block codes, unified BER approx. 129007
lin. integral eqns., weakly stable method 101109
lin. radio networks, min. range assignment problem 67806
Liouvillean-type theorems for lin. DEs on interval, approx. and complexity 114106
longest common subsequence, approx. algm. 67974
lower semicontinuous differential inclusions approx. 100995
M/G/∞ input queues, Poisson proc. 100766
M/M/n queue with unreliable servers, asymptotic behaviour 78790
manifold reconstruction from unorganized points 106761
Markov decision procs., av. cost, learning algms. 124486
matching pursuit video coding, dictionary approx. 95205
matrix general block distrib. approx. 79040
(max, +)-lin. systs., Poisson input, joint Laplace transform 78789

pproximation theory continued
max. entropy image restoration revisited 84292
max. independent sets and coloring approx. in 3-uniform hypergraphs' 124622
max. norm resolvent estim. for ellipt. finite element operators 79152
max-bisection approx. on regular graphs 114013
Max-Bisection on planar and geometric graphs, polynomial time approx. 90019
max.-order-min.-support fns. 84277
microwave filters with max. flat passband response, amplit. characts. approx. *(Japanese)* 114961
min. bounded-diam. spanning forest problem is log-approximable 100974
ML decoding, approx. upper bounds on error probab. of lin. codes *(English)* 72834
ML source separation using natural gradient 84793
mobile robot simultaneous localization and map building problem, set theoretic approach 75413
mobile terminals posn. estim. from delay meas. with survey data 120494
mobile tracking with local scatt. modeling 118922
modal intervals for generation of error-bounded envelopes 67928
modes of convergence, interpolation methods 124625
morph. opening and closing in noise, approx. 118377
mortar-type Morley element method for plate bending problem 68075
motion estim. using spatio-temporal CW transform, new results/implement. 94669
MR cardiac images, variational approach for segmentation of LV 122087
MSK receiver under fading conditions, interfering sigs. impact 108546
multi-commodity flow global routing by approx. algm. 103994
multi-view image coding incorporating approx. geom. 95108
multicarrier CDMA in multipath fading channel, successive carriers overlapping, perform. effect 73863
multiconductor power transm. lines, phase domain harmonic anal. 133586
multiconductor transm. line simul. using order-reduction techs. 94072
multihop wireless ad hoc networks, distributed topol. control for power efficient operation 131048
multilevel algms. for finite difference discretizations on sparse grids 68026
multiobjective prog. problem, optimisation over weakly efficient set 100906
multiresolution target discrim. during image form. 75143
multiscale image representation using B-spline approaches 129466
multispace Karhunen-Loeve for pattern class. 118717
multivariate approx. by affine-invariant dictionaries, lower bounds 67934
multivariate Pade approximants to meromorphic fn. 124616
NCFSK demodulation, exact eval. of capture effect 72751
Newton method convergence, Holder continuous first derivative 78996
nonhomogeneous scalar conservation laws finite vol. schemes 79064
nonlin. approxs. using sets of finite cardinality or finite pseudo-dimens. 114038
nonlin. sig. proc. using index calculus DBNS arith. 95640
nonsmooth optim., Lyapunov methods, quasi-Newton algms. 67878
nonstationary rational procs., param./spectral estim., spectral matching approach 118845
nonuniform lossless coupled transm. lines, discrete time-domain anal. 83450
nonuniform mesh finite element approx., gradient recovery/error estim. 124763
num. algms., conf., Kent, OH, USA (March 1999) 67354
num. anal. of explicit one-step methods for stochastic delay diff. eqns. 90164
num. approx. of parab. problem with blowing up solns., asymptotic behaviour 114022
OO OPF 99266
optim., diffuse element approx., adaptive method 124582
optim. of delay-differential inclusion, stabil. of approx. 100936
optimal assignment for unequal loss protection 83934
optimal joint source-channel decoding, iter. approx. 106151
orthogonal length-3 approx. order preserving prefilters 119043
orthogonal scaling fns. series expansions 114205
p-Laplacian, nonconforming approx., quasi-norm a priori/a posteriori error estim. 124752
packet loss rate prediction using universal traffic indicator 130976
parallel plate photonic band gap/periodic media waveguides 80170
parallel series approx. for fast floating point divider 79802
parametric image restoration/resoln. enhancement 106688
periodic mag. multilayers, magneto-optic polar Kerr effects 116842
periodic nanostructure modelling, enhanced SHG, rigorous coupled-wave anal. 105501
permitt. profile retrieval 127138
perspective view registration, new method 94703
picocellular/microcellular networks, approx. models, moment matching 131241
piecewise approx. of curves using nonlin. diffusion in scale-space 94470
planar ccts., arbitrarily shaped, wavelet-based simul. 125695
planar circ.-grating DBR laser, nonlin. operation 71791
planar TSP, simple quick approx. algm. 100813
plane electron beams, geometrized theory 93980
PM recoil line, starting point calcs. *(Chinese)* 104537
polyphase seqs. with even/odd crosscorrelation props. 108527
power syst. steady-state conditions, init. approx. determ. *(Russian)* 111838
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
proximal bundle method based on approx. subgradients 113990
PSF/global frame shifts, simultaneous estim. at lower S/N ratios 94959
pulsed beam scatt. by random medium over ground 86177
quadtree image form., error anal. 96899
queueing networks, multiclass departure proc. approxs. 113845
quorum queueing syst. max. entropy soln. 67733
radial line slot array antennas, beam shaping 83688
radio waves in oblique ionos. sounding, limiting polariz., quasi-isotropic approx. 83274
RAKE receiver with imperfect phase estim., perform. upper bounding 108528
random sigs. in noise, array detect. 130148
rank-reduced matrix approxs. 84689
rate-type viscoplasticity, num. anal. of contact problem 113957
rates of convergence of approx. max. likelihood estimators in Ornstein-Uhlenbeck proc. 68036
RC oscillator with distributed params., self-oscills. anal. using piecewise-lin. approx. 101831
re-entrant beam distributed-emission crossed-field tubes, advanced design 80595
reciprocal approx. theory with table compensation 90877
recogn. syst. output sigs., orthogonal polynomials expansion, multidimensional probab. dens. charact. 73528
rect. pillar posn. detect. by image, Hough transform. *(Japanese)* 84607
regular BEM for thermoelasticity/elasticity with body force 79114
regularization approach for variational inequalities 67970
regularization for surface representations of discontinuous solns. of lin. ill-posed problems 101112
regulated traffic streams MUX, design/perform. 119150

approximation theory continued
reliab.-based optimal structural design using decoupling approach 113786
RNS Montgomery modular multiplication, improvements 90809
rough perfect conducting surface scatt., Kirchoff and integral eqn. models comparison 83194
rough surface underground imaging, stat. approach 96896
rough water surface atmos.-emitted IR radiance refl. 76941
SAR unsupervised image segmentation using recursive partitioning 75134
SC/MRC hybrid systs. on Nakagami-m channels, error rates 85484
scatt. by doubly periodic gaps/cracks 72252
second-order fluid flow, algorithmic soln. 130314
self-similar network traffic generation 95748
self-validating sens. probab. estim. algms. 132083
seq. convex prog. global convergence 124604
seqs., strong mixing, nonparam. dens. derivative estim. 118945
shape approx. through recursive scalable layer generation 95222
shape preserving spline approx., lin. approach 124634
shape reconstruction from moments, theory/algms./appls. 94747
shape-preserving approx. by space curves 124644
sharp edge particle EM wave scatt. anal., extended boundary condition method 83348
shielded multiconductor lines, quasi-TEM eigenwaves params. anal. 85454
shortest-path data networks, optimal routing 108288
sig. proc., wavelets/approx./compression 118978
single sample path based Markov reward procs., recursive approaches 100785
single-phase PM motors, param. determ., math. model 123306
Sleszynski-Pringsheim continued fractions approximants 90077
Smolyak algm., fast calc. of coeffs. 67964
spatial-ang. charact. of laser beam leaving aerosol layer 117335
stabilized wavelet approxs. of Stokes problem 114199
stabilizing tech. for boundary integral methods for water waves 79106
stationary loss systs., lost customers in light traffic case 78791
stochastic diff. eqns., mean sq. approx. 68051
stochastic power control with averaging 85772
straight wires, normalized current distrib./scatt. field pattern, closed-form soln. 128738
string matching over compressed text 107465
sub-Riemannian geom., sub-analyticity of dist./spheres 67876
successive estim. of registration params., error stabilization 84305
successive survivable routing, optimal spare capacity allocation approx. 119420
superconvergence of residual as error estimator in BEM, collocation, num. integrat. and error indicators 101119
superconvergence/nonsuperconvergence of Shortley-Weller approxs. for Dirichlet problems 101108
switchgear contacts overheating under short-cct. currents 78049
symbolic computation of approx. symms. for ODE 124698
TCP/IP network design, stochastic approx./transaction-level 73981
TDMA modified grouped-tag access protocol for RF ident. networks 85019
TE_{111} mode in rect. dielec. resonator for antenna appl., reson. freq. determ. 80202
telecomms. traffic model M/D/s/N, approx. anal. *(Japanese)* 130335
Tikhonov generalized regularized lin. inverse problems, regularization param. selection 84293
trapezoidal fuzzy sets approx. 124555
traveling salesman problem restricted to relax. triangle inequality inputs 113921
turbid media imaging, photon-transport forward model 122040
two-label point labeling, approx. algms. 114048
two-scale FEM foil ellipt. mixed BVP with small periodic coeffs. 114187
ULV recursive decomp. 95638
unified framework for primal/dual quadrilateral subdivision schemes 78991
unimodal blind equalization criterion 119192
uniqueness of best ϕ-approx. by 3-convex fns. 100994
vector bit-plane encoding, uniform distrib. of points on hyper-sphere 95331
VLSI design, global routing, multicommodity flow, approx. algm. 70253
VLSI power/perform. optim., fuzzy simulated evol. 104009
voltage stabil.-constrained VAr planning using stat. approxn. 77296
Volterra filter equalizers, convergence, pth-order inverse approach 95812
VP-based ATM networks, random early blocking routing 107959
wavelet filter bank with adaptive filter params. 119064
wavelet-subband image coder, design 107052
weighted Hamiltonian path completion problem on tree 100977
weighted L_p spaces approx. 114027
wide-angle nonlocal boundary conditions for parab. wave eqn. 83242
wireless commun., dual Gabor frames approx. and window decay 118928
wireless commun. networks, composite perform./availability anal. 119874
wireless networks, broadcast scheduling 74202
Er-doped fibers, gain calcs. using field approxs. 71698
ZnS:Mn laterally emitting TFEL displays, fast modelling 75806

APW calculations
computational band-struct. engng. of III-V semicond. alloys 91625
$BaTiO_3$, film, lattice deform., polariz., FLAPW calcs. 127190
$PbTiO_3$, elastic props., spontaneous pol., full-pot. lin. APW method 127189

aquaculture
3D reconstruction for high-speed vol. meas. 106794
coastal water quality, multiparam. inversion, hyperspectral anal. 99010
fishponds aeration, PV power 113181

arbiters (computers) *see computer interfaces*

arbitrary waveform generators *see function generators*

arc cutting
GlidArc-II, gliding arc reactor, props. and elec. diagnostics 78360

arc discharges *see arcs (electric)*

arc furnaces
3-phase covered corundum arc furnace, neural supervisory control 113141
adaptive SVC, arc furnaces voltage flicker/phase current imbalance elimination 122980
advanced SVC using three-level NPC inverter, robust control scheme 88367
connection to Andalucian network, harmonics generation 134674
DSP-100 steel-melting arc furnaces efficiency, transformer power upgrade 100326
elec. arc furnace pollution control, NIR opt. proc. sens. 110042
EM field effects, 3D num. modeling 89446
flicker compensation, act. power filters, topologies/control 122986
foundry AC arc furnaces, arc modelling, arc power control 113165
harmonics/interharmonics/unbalance, freq. domain anal. 134649
influence on power syst., simul. *(Polish)* 124108
load anal. 100328
mixed chaotic elec. arc furnace model develop. *(English)* 124097
nonlin. arc furnace loads anal. using EMTP 134651
pass. higher harmonics filter perform. *(Polish)* 124104

arc furnaces continued
spline-based time domain anal. 134648
steel melting furnace, power quality aspects 113167
steel mill DC furnace upgrade project results 89470
steelmaking arc furnace transformer, operating current/secondary voltage selection 113164
three-phase AC elec. arc furnaces, EM/thermal fields modelling 113149
time-varying power syst. harmonics visualisation using Morlet wavelet transform 99367
TopArc steel plant arc furnace stability monitoring syst. 89471
unity PF 3-phase PWM SCR rectifier, induction heating, metal indust. 134647
Ta ingot melting, vac. plasma elec. furnace 89469
arc heaters *see arc furnaces*
arc lamp annealing *see incoherent light annealing*
arc lamps
Bytelight high brightness electrodeless lamp, projection display 109902
Fort Wayne Electric Company, historical overview 88292
high-press. arcs, collision-dominated space-charge sheaths 113128
multijunction solar cells, AM0 solar simulator, carbon arc source 112962
projection display technol., optimised light sources, UHP lamps 109901
solar panels, state-of-the-art, characterisation, large area testing 112961
Xe flashlamps, bright choice for illum. 113129
arc welding
see also welding equipment
control power stages design based on IGBT switching ferrite transformers 77977
cracked steam turbine blades, ER410/ER316L steel repair welding 67498
GlidArc-II, gliding arc reactor, props. and elec. diagnostics 78360
half-bridge zero current transit. reson. converter *(Chinese)* 134156
harmonic reduction using three-phase PWM boost converter 134679
IGBT arc welding power supply using soft-switch inverting control *(Chinese)* 90718
induced current/radiation transients 100349
indust. robots, geometric/non-geometric errors calib. 75859
inverter power source of double loop control, const. voltage and large current *(Chinese)* 90719
inverter-fed arc welding machine, mixed I-V control scheme 89472
Langmuir multi-probe syst. for atmos. press. arc plasmas charactn. 124140
laser-based sens. for weld inspection 124395
plasma cloud charge sens., pulse keyhole proc. control 100728
robust sens. of arc length 86487
symmetric thyristor voltage regulator 113174
welding robots, high speed rot. arc sens., seam tracking controller 134683
Al alloys, laser hybrid welding, automotive indust. appls. *(German)* 128614
archaeology
3D modeling of archaeological vessels using shape from silhouette 84208
automated extraction of accurate 3D models from close-range photogrammetric networks 94902
excavation, miniaturised laser range-finder 88196
mag. anom. exploration, gradiometry 3D inversion 122569
stone cultural heritage, lidar rem. sens., protective treatment detect. 122726
time-correl. single photon counting, 3D imaging 106743
archaeomagnetism *see palaeomagnetism*
archeomagnetism *see palaeomagnetism*
architectural acoustics
see also anechoic chambers (acoustic); echo; noise abatement; reverberation
binaural room impulse responses, transfer-fn. meas. with sweeps 118839
building simul. programs, multiple-domain approach 113150
Canadian Standards Association activity in acoustics 2000 update 87007
delayless freq. domain acoustic echo cancellation 84741
dyn. mixed systs., blind speech separation 118068
Jot's reverberation algm., coeffs. computation 118063
machine speech recogn. systs. usability *(German)* 73076
ported enclosures, lumped-param. model assumptions 86353
room acoustic transfer fns. estim. 85360
room acoustics meas., multitone sigs. appl., freq. response 110031
room reverberation time determ. from speech using ANN 83990
speech enhancement, nonstationarity and beamforming use 94388
stereo acoustic echo cancellation, nonlin. use 106342
architectural CAD
building simul. programs, multiple-domain approach 113150
architecture
see also building; civil engineering
buildings, environ. sustainability assess., UAE 88532
cut-edge corros. inhib. on coil-coated steel sheet, model electrochem. cell 112759
education, studio course, implications for software education 113320
online constr. project collaboration 130855
project-based cross-disciplinary teamwork education 113335
architecture, computer *see computer architecture*
archiving systems *see information retrieval systems*
arcing *see arcs (electric)*
arcing, switches *see circuit-breaking arcs*
arcs (electric)
see also arc furnaces; arc lamps; arc welding; circuit-breaking arcs; vacuum arcs
250 W high-press. sodium lamp electronic ballast develop. 134632
ablating material in arc-heated plasma flow microwave transm. 128761
adaptive reclosure, HF fault transients, wavelet transform 77138
ADSS fiber-optic cable leakage current meas. sens. design 109060
arc-discharge ion sources for HI fusion 97930
arc-fault cct. protection, faults ground-forced cable 133784
atmos. press. arc plasmas heat transfer anal. 113137
capacitors self healing, metallized polypropylene films 115052
computer SMPS, arcing prediction, zinc spray/partial vac. tests 88840
DC motors, commutation arc in gasoline, effect on brush wear and commutator 123486
diamond, DC-arc jet CVD syst., N addit. effects 68281
diamond wafers, DC arcjet plasma proc. 68275
digital fault locator perform., fault arc influence, time domain model 77649
digital fault locators, accuracy, fault arc charact. effect 112195
distrib. panel/sub-panel, branch cct., current-depend. arc model 88991
earth fault feeder detect. techs. for indust. networks 133820
earthing systs. ionisation proc. characterisation 99414
EDM arc plasma temp. distrib., spectrosc. meas. *(Japanese)* 78362
EDM current mode-controlled LCC reson. DC/DC power converter 123627
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
ESD, EM radiation field 83103
arcs (electric) continued
fabric systs. for elec. arc thermal effects protection 67496
fault arc optimum time domain simul. using combined iter. method 99325
gapped arresters, air containing ozone/nitric oxides, intensive PD, elec. stren 112172
gas-insulated substation dist. protection relay operation anal. 77492
GlidArc-II, gliding arc reactor, props. and elec. diagnostics 78360
HID lamps near-cathode phenom. modelling 100317
high-power pulsed magnetron sputtering, requirements of power supply para 101191
high-press. arcs, collision-dominated space-charge sheaths 113128
HV switching devices, short-cct. current making capability 134279
inductive load-current interruption, arcing duration estim. *(Japanese)* 1027
kestrel implanter, increased ion source life 121418
Langmuir multi-probe syst. for atmos. press. arc plasmas charactn. 124140
long arc in free air, dyn. model, lab. testing 102885
long arc in free air, testing, modelling and param. estim. 92620
long arc in still air, testing, modeling and simul. 102883
long period fibre grating fab. by elec. arc discharge 93042
long-gap free arc column path estim. method develop. *(Japanese)* 92619
long-period fiber grating fab. by elec. arc tech. 127623
long-period gratings, fab. tech., discharge & laser exposure 93048
MEEC distrib. syst., weak points, early detect., US emissions 133669
metal-clad switchgear low-level arcing faults location/detect. 78051
modelling in free air, overhead line protection appls. 77567
multijunction solar cells, AM0 solar simulator, carbon arc source 112962
MV distrib. networks, arcing breakdown, short cct. currents calc. *(Germa* 133671
NFPA 70E elec. safety Standard changes for yr. 2000 89780
nonceramic insulator polymers, SIR and EVA and blends, stress, hydrophob stabil. 104416
open arc faults overview 112144
overhead line arc fault detect./location using induced VHF sferics 77665
overhead lines, nonunit fault location method 123088
overhead lines workers, 100% cotton clothing, ignition hazard estim. 67497
overhead power line free air long arc simul. 99381
overhead power line protection/adaptive autoreclosure algm. 77517
polluted porcelain insulators, dielec. behaviour studies 112115
pulsed high-press. Hg arcs, electrode sheath voltage 69381
PV solar elec. generators, DC output arc discharges *(German)* 133903
railtron, accelerated compact projectile slider, pinch-induced transit., scaling fa tor effect 83184
resist. calc. 102884
resist. calc., new formula 102881
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. perform 88470
suspen. insulator, artificially polluted, leakage current waveforms, freq. charact 112125
three-wire power distrib. network high-impedance arcing fault detector 11220
TopArc steel plant arc furnace stability monitoring syst. 89471
unbalanced three-phase power systs. simul. for dispatcher training simulato *(Chinese)* 88312
underground cable arc fault location, single terminal voltage/current data 9937
welding robots, high speed rot. arc sens., seam tracking controller 134683
Cu-Cr contact materials for high power vac. interrupters *(Chinese)* 134267
KrF excimer TEA gas lasers, excitation discharge, floating particles influenc 105131
Si surface plasma charging damage, reverse-act. area etching in poly-buffere STI proc. 103425
area measurement
abdominal aortic aneurysm, US image boundary recogn. validation 110676
aortic regurgitation, stenotic mitral valve area calc. 98268
aortic valve area determ. accuracy, ejection fraction/valvular regurgitation influ ence 76377
artery wall, black blood MRI, semiautomatic tech. 87675
cardiac MRI, left ventricular motion/shape anal. syst. *(Chinese)* 98401
cardiac MRI, multistage hybrid act. appearance model matching, ventricles seg mentation 76481
carotid vessel wall area meas., black blood MRI, atherosclerosis 132721
contactless opto-electronic area meas., accuracy 86347
LV area/vol., gated SPECT, prolate spheroidal transform 111039
perimembranous ventricular septal defects, shunt quantification, proximal isovel surface area 98270
peripheral vein grafts, cross-sect. area changes, 3D US imaging 122003
surface area estim. for digitized regular solids 68022
surface orient. meas. of transparent objs. using polariz. in highlight 86975
vessel cross sect. determ. for flow rate quantification 132729
ARI *see radio data systems*
arithmetic
see also arithmetic codes; digital arithmetic
ellipt. curve cryptography, finite field extensions 118043
fuzzy arith., addit. from common-sense viewpoint 124553
G fn. arith. of HF high speed FH CHESS radio *(Chinese)* 96388
lossless image compression, arith. coding 95326
multiple-sclerosis brain tissue class., stat. 3D image segmentation algm. 110909
noncontinuous generalization of arith.-geometric mean 124615
operation-efficient subgroups of finite fields, cryptographic appls. 94377
shift for accurate sing. values in differential qd algm. 124662
Taylor coeffs. of analytic fns., validated bounds 113834
arithmetic codes
see also residue codes
1D grammar-based codes for lossless image coding 95256
3D adaptive wavelet transform/context modeling for scalable lossy to lossless video coding 95211
3D wavelet scalable video compression, efficient context modeling 95102
ARQ protocols, request seqs. qualitat. modeling/compression 107470
audio sigs., low delay perceptually lossless coding 106377
binary arith. coding and rapid probab. estim. 73325
binary image optimized coding based on rect. partitioning *(Chinese)* 106958
blockwise zero mapping image coding method 95286
carry propag. control method, loss bits *(Japanese)* 72903
connected-index finite-length arith. codes 72800
countable alphabet sources, arith. coding, finite precision 129034
data encryption scheme, arith. coding *(Chinese)* 118016
digital image compression using directional sub-block DCT 95260
error detect. techs. comparison using arith. coding 106186
error-resilient block sorting 106184
H.263 appl. of variable to fixed entropy coders 117970
image compression, entropy coders based on binary forward class. 106953

thmetic codes continued
joint source-channel coding using arith. codes and TCM 106175
joint source/channel coding using arith. codes 72901
JPEG2000, embedded block coding 95112
JPEG stat. model redesign, DCT coeffs. lossy mode fitting distrib. 95380
JPEG-2000 error resilience technol. 106942
limited-order blocksort based image compression 107089
lossless data compression, perceptron based neural network predictors appl. 73576
lossless image coding, adaptive predictor combination 118564
lossy image compression, adaptive scanning methods for wavelet difference reduction 95289
MPEG-4 shape decoding, conformance test 118533
multi-bit binary arith. coding 94268
multiple access networks, optimal code design for lossless/near lossless source coding 106171
near lossless image compression by relax. labeled prediction 84461
parametric lossless image compressors 84455
QM/MQ-coded data, worst av. code word length, single context coding model *(Japanese)* 73397
reliable commun., continuous error detect. 119111
resoln. and frame-rate scalable subband/wavelet video coder 106970
resoln. scalable lossless progressive image coding via conditional quadrisection 95095
scalable embedded zero tree wavelet packet audio coding 84012
VLBR wavelet video coding combined with H.263 and SLCCA 73355
VLIW proc., code compression 102242
VLSI improved arith. coding algm. *(Chinese)* 117995
wavelet image compression, simple and efficient algm. 95287
wavelet image compression/coding scheme 106990
wavelet-based image compression using shuffling and bit plane correl. 106952
YK lossless data compression algm., efficient implement. archit. 107468
RMA processes *see autoregressive moving average processes*
mouring (cables) *see cable sheathing*
RPES *see photoemission*
RQ *see automatic repeat request*
ray processors *see parallel processing*
ray signal processing
see also direction-of-arrival estimation
1D arrays, quantum interf. procs., sig. coding/decoding 92427
2.6 GHz DBF adaptive array antenna, DOA estim. expts. 105960
2.6 GHz low cost receiver for digital beam forming 83708
2D angle estim., ESPRIT method, uniform parallelogram array *(Chinese)* 95643
2D DOA estim. using lin. interpolation tech. for circ. array 118948
2D generalized sidelobe canceller with partial adaptivity 129952
2D opt. sig.-proc. beamformer using multilayer polymeric opt. waveguide arrays 125831
2D RAKE receiver based on space-time searching/tracking algm. 74540
2D virtual ESPRIT algm. based on sens. array geom. 107340
2D/3D high-resoln. radar proc., time-freq. sig. anal. via transformed windowed data array 109239
3G CDMA commun., interf. mgt. methods 96549
3G DS-CDMA systs. with array antenna, direction finding 108738
3G mobile radio systs., stochastic spatio-temporal propag. 74789
acoustic vector-sens. correls. in ambient noise, array proc. 111445
act. array, Cramer-Rao bounds for estimating range/vel./direction 75106
adaptive antenna array, beamforming archit., microwave cct. design 72642
adaptive antenna arrays, power reduction with null depth trade-off 105965
adaptive antenna arrays control with GA using dominance/diploidy 128895
adaptive antenna systs., nonstationary receiver-transmitter config. 107362
adaptive array antenna, DFT and LMS hybrid adaptive algm. 105964
adaptive array antennas using modified CMA and polyphase filters *(Japanese)* 130110
adaptive array based on subband sig. proc., develop. 73628
adaptive array beamforming with random error in cycle freq. 107338
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive arrays, optimal subarray size for spatial smoothing 117847
adaptive beam-steering/adaptive modulation-assisted DCA algms., comparison 73587
adaptive beamforming using affine projection algms. 73577
adaptive digital beamforming for angle estim. in jamming 96920
adaptive low complexity beamforming using split RLS algm. 73637
adaptive min. robust M-beamforming for multiple moving sources and impulse noise 95655
adaptive nulling antenna, fast follower jammer suppression *(Chinese)* 85932
adaptive space-time sig. proc./coding 107310
adaptive spatial/temporal optimal receiver using adaptive array antenna 85869
alg. channel decomp. MUX in space-time 107660
alg. CMA, asymptotic props. 95650
antenna array calib. employing beacons/steering vector estim. 83710
antenna array Fourier opt. proc. beamforming network 120704
antenna array radiation pattern sidelobe suppression 128911
antenna arrays perform. in urban multipath environ. 73573
antenna-switching cellular base-station receivers upgrade 74807
AOA estim., small sens. array design 118917
audio multipoint proc. on DSP array 85427
bandpass clutter rank estim. for STAP 96915
BLAST algm., fast sq.-root implement. 108613
blind broadband source localization/separation in miniature sens. arrays 95720
blind complex-valued sig. separation by real-valued rot. 118859
blind focusing wideband array proc. 118861
blind sig. separation exploiting nonGaussianity 107311
Bluetooth access point smart antenna 85749
broadband beamforming, freq. domain adaptive filter 107492
broadband DOA estim. in presence of ang. spread 95727
broadband high-power photodetector arrays for photonically implemented phased array antenna archits. 83738
broadband mobile commun., beam and null simultaneous steering S/T-equalizer 108880
broadband mobile radio, joint spatial/temporal equalizer 85829
calib. algms. for antenna arrays 117859
calib. with unknown sens. charact. and mutual coupling 118911
cascaded adaptive canceller using loaded SMI 94064
cdma2000 antenna array syst., multi-user-beamforming 85748
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA, combined nonlin. MMSE beamforming and interf. cancellation 84898
CDMA asynchronous multipath channels, blind space-time detect. 73728
CDMA cellular syst., adaptive antenna arrays *(Chinese)* 96497
CDMA cellular systs. with augmented antenna arrays, perform. 85587

array signal processing continued
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA mobile radio syst. with joint power control and optimum beamforming 96570
CDMA multichannel nonlin. systs., blind zero forcing equalization 119884
CDMA smart antenna receiver with space-time proc. 119891
CDMA space-time spreading multilayered syst. 74582
CDMA spatio-temporal receiver struct. for multi-rate appls. 119991
CDMA syst., adaptive array research 83675
CDMA syst., novel cost fn. of adaptive antenna 73627
CDMA syst. smart antenna, capacity improvement *(Chinese)* 72685
CDMA systs., adaptive array antenna with optimally form. beams, design 83669
CDMA systs., space-time-code blind receiver and neural net implement. 96391
CDMA wideband networks, interf. subspace rejection, mixed-power operation modes 128812
cellular radio antenna arrays, robust constrained downlink beamforming 120035
CFAR tech. and freq.-domain partially adaptive array algm. 118899
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
CMOS outlier rejection cct., sens. array parallel sig. proc. 91121
co-channel sigs. detect. and copy, space-time proc. 108554
coffee QC using electronic nose, PCA & MLP 109828
coherent sig. detect., alternating projection algm., MDL principle 73745
computationally efficient DOA estim. of scatt. source 118921
cyclostationary sigs., direction-finding method 95609
DBF receiving array antenna calib. using ref. seq. 105945
denoising, new approach 110533
deterministic blind beamforming, identifiability in incoherent multipath with small delay spread 118915
digital array nonlin., mitigation 96990
digital beamforming systs., adaptive pattern synthesis 72681
digital commun., adaptive blind joint source-phase separation 130036
digital phased array antenna syst. for cellular PCS band appl. 83759
digital phased array beamforming, single-bit delta-sigma conversion, non-uniform oversampling 95645
digital radar arrays, digitization requirements 96988
dipole circ. array in interferometric direction-finding syst., anal. 73629
direct blind multichannel ident. 130250
direct conversion receiver, digital beamforming 108536
direction finding method, sens. gain and phase are unknown 118796
direction finding of non-circ. sources using polynomial rooting 107424
direction finding syst., wideband antenna array beam forming cct. *(Polish)* 114963
displaced-phase-center antenna tech., airborne/spaceborne radars 99142
distributed sens. networks, sens. placement using coding theory 130160
distributed sources, DOA estim., generalized eigenvalue decomp. *(Chinese)* 118938
DOA estim. of coherent narrowband sigs. using lin. prediction, MSE-based regularization 130024
DOA MLE, modified EM algm. 107393
DOA of multiple scatt. sources 130023
DOA super-resoln. estim. in switch beam smart antenna 84653
DOA tracking of coherent cyclostationary sigs. without eigendecomposition 84688
double-directional channel meas. 84655
downlink beamforming algms., perform. anal. 118950
downlink transmit beamforming with selective feedback 108925
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
DS-CDMA, multiuser space-time channel estim. under reduced-rank constraint 74667
DS-CDMA adaptive array antenna systs., grouped multipath reception *(Japanese)* 107367
DS-CDMA asynchronous robust space-time multi-user receiver 74581
DS-CDMA asynchronous systs., Kalman filter based space-time receiver 108599
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA FDD mobile radio, suboptimal algms. for downlink beamforming 85857
DS-CDMA mobile radio channel, blind space-time channel estim. 108698
DS-CDMA mobile radio with multimedia services, downlink beamforming and data rate allocation 108713
DS-CDMA mobile radio with multimedia services, downlink beamforming 96552
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA syst., data-independent beamformer 73866
DS-CDMA syst., power inversion adaptive array antenna for high power interf. suppression 72370
DS-CDMA systs., adaptive array antennas with common correl. matrix *(Japanese)* 108822
DS-CDMA systs., blind array sig. proc., temporal diversity 107421
DS-CDMA systs., code-timing sync. using space-time diversity 107767
DS-CDMA systs., combined adaptive interf. cancellation with antenna array 72358
DS-CDMA systs., Cramer-Rao bound for joint DOA/time delay estim. 107309
DS-CDMA systs., dyn. groupwise successive interf. cancellation array receiver 85741
DS-CDMA systs., smart antenna testbed 128890
DS-CDMA wireless commun., PN code acquisition with adaptive antenna array/threshold 74668
DS-CDMA-based adaptive antenna array, online calib. algm. 105977
DS/SSMA commun. with generalized random spreading, blind adaptive multiuser detect. 84788
dyn. mixed systs., blind speech separation 118068
ear-type multisensors, MEMS switched current mode cct. realisation 86771
electronic nose, Forane 134a discrim., time reduced modelling param. 97550
electronic nose, pollutant gases ident., pattern recogn. 76930
EM vector sens., source separation and tracking 107397
ESPAR antenna, adaptive beamforming based on steepest gradient algm. 105957
ESPAR antenna, adaptive beamforming using seq. perturb. 83761
ESPRIT algm. for distributed source localization 118841
European smart antenna test-bed, field trial results 117849
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
far-talking speech recogn., microphone array sig. proc. 84050
fast-converging robust adaptive arrays 94197
fast-scan GMTI/STAP archits., perform. comparison 96991
FDD systs., downlink space-time proc. 119046

array signal processing continued
FH CDMA mobile cellular networks, adaptive array appl. 107308
finger posture/shear force meas. using fingernail sens. 98163
flat-fading channels, freq. offset estim. 131167
flexible acoustic array, beamforming 99065
FMCW radar, sig. proc. method for switch antenna array 96949
freq.-invariant adaptive receiving/transmitting null beamforming 108871
GPS receivers, FM jamming suppression, subspace array proc. 109327
GSAEC, acoustic echo cancellation embedded into generalized sidelobe canceller 118968
GSM mobile telephone handset, low complexity pre-detect. antenna syst. 105946
GSM-1800 syst., adaptive array antenna, calib. errors 94195
hearing aid virtual sens. arrays, robust phase shift estim. in noise 122347
HF digital commun., source separation with collocated antennas 84729
HF direction finding and array proc., colocated antennas design 83713
HF high lat. path commun., directional diversity and spatial filtering 85576
hierarchical radar target localization, seq. techs. 96894
high-resoln. array proc. in multiple wideband chirp sigs. 107332
high-resoln. phase sampled interferometry using symm. no. systs. 131705
hybrid ICA/classical adaptive beamforming for self-organizing collaborative wireless networks 107452
IEEE sig. proc. in wireless commun., conf., Taiwan, China (March 2001) 78451
ILS glide slope perform. sensitivity to sideband-only phase variances 98908
image form., optimal sampling 94533
incoherent sig. summing equipt., diag.-plotting systs. 119893
incomplete circ. array, sig. reception, spatial source distrib. projection reconstruction, algm./simul. 118195
indoor wireless commun., adaptively sampled near-field smart array antenna 108879
instantaneous DOA and ang. spread estim. with MUSIC using extended array mode vector 108882
intell. US phased array syst. for steel NDT, optimised design 114532
IS with antenna arrays, optimal/quasioptimal algms. of superresolution 107343
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
iter. soft interf. cancellation for multiple antenna systs. 83408
Japan, advances in adaptive antenna technols. 105956
land mine detect., near-field beamforming array, elastic waves 77056
LCMP beamforming under quadratic constraint, RLS implement. 73655
LCMV broadband beamforming, single interf. presence, optimal temporal wt. spacing 72986
LEO satellite link with multiple antennas user terminals, capacity study 109025
lightning location, range-difference and direction-finding methods 88144
lin. acoustic vel. sens. arrays, directivity factors 97004
LOS sig., time-delay estim. in multipath environ. 118966
max.-likelihood beamspace proc. for improved search/track 96884
max.-likelihood DOA estim. in unknown nonuniform noise 84668
micro-gas sens. array, heating power control method 97495
microcellular double-directional radio channel 120013
microphone arrays, dereverberation and noise reduction 118055
microstrip adaptive array antenna, opt. control 83703
microstrip Butler matrix, beamforming network 83704
MIMO commun. systs., advanced wireless access soln. 84656
MIMO interf.-limited cellular syst., attainable throughput 108657
MIMO interf.-limited cellular syst., simul. results 74752
MIMO vector channel sounder meas. for smart antenna syst. eval. 120062
MIMO wireless syst., layered space-time coding/sig. proc. 119862
min. robust M-beamforming for moving sources 118908
minke whale vocalization, localization and visual verification 86244
ML deterministic algm. for blind joint channel/data estim. with multiple antennas 130004
MM-wave broadband wireless indoor networks, combined spatial-temporal CM equalization 85465
mm-wave PC antenna syst. for automotive appls. 105968
mobile radio, DOA estim. using weighted subspace fitting 108737
mobile radio interf. cancellation, adaptive array algm. with spatial interpolation 131295
mobile radio propag. channel MIMO meas./ident., antenna array 119960
monopulse antenna arrays, power optim. 117846
moving vehicles, real-time laser-based detect. syst. 83064
multi-coord. radar meas., pot. accuracy anal. 75120
multi-inform. array inversion using variational Born iter. method 76845
multibaseline InSAR, appl. of array proc. techs. for layover soln. 98968
multibeam array antenna, spatial opt. sig. proc. 83683
multibeam interf. canceller based on order extended fast algms. 83393
multichannel array subbanding with adaptive proc., architect. 96537
multichannel neural recordings, array wavelet denoising algm. 87429
multichannel speech sigs. recording/anal. in motor vehicle environ. *(German)* 73008
multidimensional arrays, low-rank decomp., Cramer-Rao lower bounds 107380
multidimensional harmonic retrieval, identifiability 107372
multimedia mobile satellite commun., antenna technols. 83685
multipath channels, optimal space-time multiuser detect. *(Chinese)* 119871
multiple acoustic source localization in reverberant environ. 119100
multiple beamforming, Rotman-type lens, ellipt. refocusing 83680
multiple jammer suppression using adaptive lin. constrained inverse QRD-RLS beamformer 84755
multiple talker locations estim. using randomly positioned microphones 73619
multisensor meas. data assoc., perform. anal. 75104
multisensor syst. target tracking filter for proc. time-delayed data *(Japanese)* 130111
multiuser interf. suppression using optimal seqs. combined with antenna arrays 94059
multiuser sig. design/detect. using interf.-resistant modulation 130156
MUSIC and MODE for exploiting arrays with multiple invariances 130026
MVDR beamformer for circ. arrays 107331
Nakagami fading, CCI, av. error probab. of optimum combining 85747
narrowband direction finding, sens. arrays, pattern diversity 107364
neg. beamformers in speech enhance. and source separation, freq. domain steering 84714
non-circ. source localization *(French)* 107305
nonstationary data, optimal proc. 109309
obj. region detect., sens. array proc. approach 132525
OFDM-CDMA systs., adaptive antenna array appl. 108872
open area repeater with interf. cancellation syst., channel simulator 131071
open-loop downlink beamforming, min. algm. 84710
optimal adaptive proc. for domain factorised element-digitised array radar 75072
optimal wideband transmit antenna diversity utilizing channel state inform. 108745
array signal processing continued
optimum beamforming for coherent sig. reception 84652
orthogonal space-time block codes improvement using quantized feedback inform. 129170
orthogonal space-time block coding utilizing quantized feedback inform. 72859
orthonormal subspace tracking algms. design 107461
overloaded array proc. with spatially reduced search joint detect. 107595
PCA filter in blind source separation 107555
perturbed arrays, efficient quadratic detect. via FT techs. 84775
phase aberration correction using near-field sig. redundancy, 2D array algm 110782
phased arrays for new millennium 128883
phased-array radar technol. develop. at Lincoln Laboratory 96983
photonic phased-array antenna, opt. Blass matrix TTD steering 94191
PHS network, massive scale air interface reciprocity (motion) survey 108908
planar antenna arrays, appl. in mobile commun. systs., beamforming algm 117860
planar array smart antenna syst. with hybrid analog-digital beamforming 83758
plural-zone sound segreg. *(Japanese)* 94383
polyaniline film SO_2 sens., neural network detect. vel. *(Chinese)* 75696
polyphase channelizer chip-set, low-power design, FFT, appls. 102226
radio interf. autocompensator, multipath effects 85502
radio transmitter ident., adaptive array algms. based on transient response *(Japanese)* 107368
random sigs. in noise, array detect. 130148
real-time automated video and audio capture 118716
real-time vibr. modal coords. sens. using piezoelec. array 132087
receiver with Kalman channel predictor for fast Rayleigh flat fading environ. perform. 83664
rect. arrays for uniform wideband beamforming with adjustable struct. 105963
reduced-complexity detect. algms. for systs. using multi-element arrays 73732
reson. sens. arrays, high-resoln. multichannel instrum. 131816
RF photonic devices and systs., conf., San Diego, CA, USA (July/Aug. 2000) 78427
robust direction finding, game theory H_∞ approach 73581
robust speaker localization using microphone array 118910
robust subspace tracking in impulsive noise 130035
rot. lin. antenna arrays, superresolution direction finding 105936
SAGE algm. behaviour in 2D multi-user environ. 84673
sample-covariance-based adaptive sonar detectors, perform. 109311
SAR multifrequency antenna array, detect./location/imaging of fast moving targets 75159
satellite commun., array sig. proc. for improvement of rural area coverage 131318
scale-cumulant domain deconvolution 95635
SD/TD/CDMA systs., joint detect./pre-distortion techs. *(English)* 130147
SDMA, space domain multistage interf. 72353
SDMA systs., blocking probab. determ., theoretical model 119214
secondary surveillance radar sigs., MLE, identifiability, Cramer-Rao bounds 120405
seismic array proc. and D″ layer fine struct. 111373
sens. networking, declarative ad-hoc 97183
sens. networks, collaborative sig. proc. 95612
sens. networks, querying/tasking 75369
sens. node cluster, distributed, collaborative sig. proc. 95611
separable dimens. subspace method for joint sig. freqs./DOAs/sens. mutual coupling estim. 107392
separation at three-component antenna array from spatially distinct sources. tracking algms. 119092
shallow water mine hunting, synthetic aperture sonar, adaptive focusing 77053
shallow water mine/obstacle survey, radar acoustic hybrid 77054
sigs., systs. and computers, conf., Pacific Grove, CA (2000) 100407
single-card C-band receiver array, DOA estim. 73574
sinusoidal freq. estim., multirate filter bank appl. 107518
smart antenna base stations with dyn. slot allocation, forward-link capacity 108810
smart antenna systs., impact of W-CDMA sigs. 83705
smart antenna systs., low complexity array response vector estim. 105935
smart antennas for mobile commun. systs. 83722
smart antennas for multi-service UMTS, perform. study 117856
smart antennas in micro-/pico-cellular propag. environ. 117842
smart lens antenna arrays, design and appls. 83760
smart-antenna space-time UMTS uplink proc. for syst. capacity enhancement 108843
SMI and CMA adaptive algms., combination 108881
sonar sig. proc., decision level data fusion *(Chinese)* 131679
source separation in multipath channels, blind beamforming and max. ratio combining 84685
space-time bit-interleaved coded modulation over freq. selective fading channels with iter. decoding 72936
space-time cochannel TDMA, DOA adaptive acquisition 108604
space-time distributed multi-path params., detect. and estim. 108544
space-time proc. with channel knowledge at transmitter 130037
space-time transmit precoding with imperfect feedback 117948
spatial CDMA for multiple antenna access, capacity/error rate anal. 74529
spatial sig. proc. merging diversity/beamforming perceptions *(English)* 107549
spatial spectrum, resoln. enhancement by virtually expanded array 118918
spatio-temporal equalization based on estim. channel response 119182
specular transm. channel blind multipath params. estim. 107629
speech enhancement, nonstationarity and beamforming use 94388
speech enhancement based on noise-adaptive nonlin. microphone array 118053
speech enhancement for hands-free terminals 129373
speech enhancement through binaural neg. filtering 118979
spherical array in superresolution direction finding systs. 131693
Square Kilometer Array project, finite array effects computation 86280
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
STAP, interf. suppression algm. 83385
STAP/adaptive antennas, pragmatic approach 84773
stat. sig. proc., ambiguities 118963
steering vector estim. improvement 118920
stochastic matched field array proc. for detect./nulling in uncertain ocean environ. 109310
struct. spatial interf. rejection combining 118909
subspace leakage environ., rapid adaptation 107388
subspace rot. invariance algm. for DOA estim. with sens. gain uncertainties *(Chinese)* 130017
subspace-based calib. approach for mutual coupling among sens. in arrays *(Chinese)* 130015
subspace-based direction finding, fractional lower order stats. 95647
super-resoln. direction estim., antenna array perform. study *(Chinese)* 95628

ray signal processing continued
super-resoln. image reconstruction with multisensors, preconditioned iter. methods 94746
TCM with receiver diversity, turbo space-time equalization, max.-likelihood detect. 107694
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
TD-CDMA uplink, space-time sig. proc. using multistep joint detect. 96604
TDMA systs., lin./nonlin. space diversity combining algms. 119993
thinned antenna arrays using nonlin. proc. in DBF radar appls., perform. 83767
third generation mobile radio systs., use of smart antennas 120064
three-phase current sens., mag. sens. arrays, sig. proc. 109522
transm., thermal reson. 95619
transmit diversity for arrays with correl. Rayleigh fading 108909
transmitting array antenna rem. calib., sync. orthogonal codes 105959
true time-delay MM-wave array transmitter, ultrawide-band fiber-optic control 94177
TURBO-BLAST for high-speed wireless commun. 83409
turbo-coded modulation for transmit/receive antenna diversity systs. over block fading channels 72888
ultrasound imaging, sidelobe reduction filters 110781
uncalibrated sens. array, noncircular source localization *(French)* 107304
underwater acoustic commun. using phase conjug. 120395
unequal SNR denoised commun. sigs., time difference of arrival estim. 108912
uniform circ. array, DOA and Doppler freq. estim. *(Chinese)* 95721
uniform circ. array, multipath param. estim. *(Chinese)* 117845
US colour flow diagnostic syst., gen. purpose, digital beamforming *(Japanese)* 76368
US transducer array, beam-forming transmit ASIC 111507
USA Navy's digital array radar develop. 99164
UTD ray-tracing models, radio site topographical data, base station antenna design optimisation 83714
UTRA/FDD uplink, space-time combining 74825
UWB-SAR systs., underground targets migration 96898
V-BLAST syst., low complexity archit. 85505
vector hydrophone, near-field/far-field azimuth and elevation angle estim. 130025
vector MAC capacity region with covariance feedback 128942
VLF polarised antenna array, null steering algm. 107312
W-CDMA, near-far-resistant single-user channel ident. by interf. subspace rejection 84904
W-CDMA blind adaptive antenna array beamforming scheme 108924
W-CDMA mobile radio systs., sectorized space-time multiuser detect. 84794
W-CDMA network downlink, pilot-assisted spatio-temporal array-receiver 85830
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108885
WACNet, wireless ad-hoc community network 108632
wall antenna directional beamforming, electronic and opt. methods *(Polish)* 105972
WCDMA, look-direction downlink-beamforming *(English)* 107413
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short-term channel props. 74666
WCDMA UTRA uplink, joint demodulation with smart antennas *(English)* 106069
weighted av. of sig. subspaces for robust wideband direction finding 118842
wide-band impulsive noise source, direction-finding tech. 75253
wideband array-pattern design, superdirectivity and SNR constraints 94196
wideband arrays, sidelobe reduction through subarray overlapping 94198
wideband DS/CDMA commun., combined space-time multiuser receivers 96519
wideband lin. FM waveforms, interf. cancellation 109241
wideband multiple transmitter/multiple receiver systs., unsupervised proc. 107394
widely separated subarray DOA estim. 107391
wireless ad-hoc network, adaptive antenna techs. 105978
wireless airborne commun. systs., overloaded array proc. 108694
wireless channel, TST-ESPRIT based joint DOA and delay estim. 84686
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
wireless mobile systs. with ISI and CCI, spatial-temporal proc. 96520
wireless pers. multimedia commun., conf., Bangkok, Thailand (Nov. 2000) 89557
Xilinx Virtex-E FPGA based 20-GFLOPS quadratic residue proc. 96979
GaAs/AlGaAs photonics IC for opt. beamforming in phased array antennas 82439
$LiNbO_3$:Ti opt. waveguide for opt. beamforming network in multibeam array antenna 105958
SnO_2 gas sens. array, impedance characts., ANN pattern recogn. 97504
SnO_2 sens. array, VOC detect., ANN pattern recogn. 97506
SnO_2 thick-film sens. arrays, CO-methane mixture discrim. 132044

rrays
see also acoustic arrays; antenna arrays; ball grid arrays; logic arrays; optical arrays; phased array radar; superconducting arrays
1D, quantum interf. procs., sig. coding/decoding 92427
2D geom. disordered multitunnel jn. arrays, min. resist. path calc. 103936
2D PBG struct., charactn. of diffr. anoms. 125661
2D PBG structs., equiv. cct. modeling and patch antenna appl. 114954
act. FSS with ferroelec. substrs. 83188
array of cond. C black-polymer composites for sens./discrim. of vapours 97464
azobenzene polymer film, pattern form./quasicrystal struct. *(Chinese)* 116546
benzene/ethylbenzene gas quantification/gas discrim. using sens. array/ANN 132029
binary array set, zero correl. zone 83868
binary arrays with zero correl. zone 129097
biocomputing, appl. for micro-arrays 80525
broadband high-power photodetector arrays for photonically implemented phased array antenna archits. 83738
cantilever array based gas sens., multicomponent anal. 132037
ceramic packaging, MEM sens. arrays 100582
CMOS OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
cortical rat neurons, dissociated foetal, dielectrophoretic trapping 98227
coupled arrays of oscillators, sync. stabil., universal probe 90682
diffr. over uniform array of absorbing half-screens, generalized soln. 83243
disordered nm-size arrays, Coulomb blockade, threshold voltage dispersion, variance anal. 92421
DNA arrays in 21st Century 80524
dual concentric conductor microwave applicators, hyperthermia at 433 MHz 76615

arrays continued
EM props. of periodical arrays with small nonreciprocal inclusions 72253
FED, current degrad. 132101
ferroelec. memory cells, 1T2C-type, with an array struct., write and read-out operations 70467
flat panel CRT, field emission technol. 132100
FRAM archits., std. and chain-type, comparison 81770
gas sens. array syst., micro hotplate substr. fab., CMOS integrat. 97532
Hg-electroplated-Ir microelectrode array based sens., Cd/Pb/Cu trace anal. 86719
homopolymer films, lithographically induced self-assembly 114459
infectious disease screening for field med. emergencies 76381
integrated chemiresistor array for microrobot sens. platform 75688
long metallic brick wall, microwave transm. 128772
LSO scintillator array, PET detector module, interact. depth meas. 111016
mech. sens. array, micromachining, dual-stage etching 75755
metal dot arrays, hexagonally ordered, large area dense nanoscale patterning 92192
metal nanoclusters on semicond. substrs., electronic props. 69992
microdischarge array UV sources, fab. 134609
micromachined lin. thermoelec. IR sens. array design 120823
micromachined uncooled IR bolometer lin. array using VO_2 thin films 75533
MM-wave quasi-opt. oscillator with Gunn diode array, power combiner optim. 80287
Montgomery multiplication, scalable algm. and implement. on coarse-grain reconfigurable chip 129291
Mueller matrix of two-layer eccentrically bianisotropic cylinder lin. array with double helical conductances 72251
multi-layered arrays of conducting strips, switchable photonic band gap struct. 105724
multiparameter miniaturised sens. arrays for multiple use 86688
multisensor towed array detect. syst., buried unexploded ordnance 88231
nanometer-sized arrays, Coulomb blockade, threshold voltage dispers. reduct. 126907
open-ended waveguide array, mutual coupling 72410
open-ended-waveguides located in infinite ground plane, mutual coupling 128831
patterned mag. particle arrays, electron beam lithog. 127324
periodic inorganic microstruct. growth, embossed polymeric relief struct. as template 92260
Permalloy particles, mag. interact. obs. 116242
PET, high resoln., 32-channel LSO matrix coupled to monolithic 4×8 APD array 122205
PET, high-resoln., granulated dual-layer detectors, Monte Carlo study 132949
PET detector module with LSO scintillation crysts./APD array 132961
planar ellipt. bandpass filter using SMD type rect. DRs, design 102534
planar ICs, surface-wave band-gaps using periodic metallic patch arrays 91390
power pulse lasers, radiation energy meas. using multichannel calorimetric syst. 110013
prog. multiplierless digital filter array for embedded SoC appls. 80083
PZT etching in MORI high dens. plasma syst., pyroelec. detector array contact reliab. 103377
QCM sens. array with on-chip heating, meas. mode 121022
QD arrays, quantum Hall transport, reson. peaks 80845
quartz tuning fork resonator array, photolithography/selective etching 116205
quasioptical resonator-single mode rect. waveguide coupler 114956
resistor matching charactn. for mixed-sig. proc. develop. using DAC 102430
satellite array form. flying orbit dyn. anal. for Leonardo-BRDF 122480
SAWs in periodic electrode arrays, harmonic admitt. and dispersion eqns., theorem 92724
shape moments on arrays with reconfigurable opt. buses, parallel algm. 129565
single domain particles, rot. aftereffect 116287
small γ-camera using PSPMT, NaI(Tl), CsI(Tl) and CsI(Na), perform. eval. 132981
small-FOV γ-cameras, optimal cryst. geom., arrays vs. disks 132992
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
spatial power amp. array, fault tolerance anal. and meas. 102628
spherical-primary orb./sub-orb. submm-wave telescopes, large detector array design 86281
sq. pipe-array jet-type O_2 generator for chem. O_2-I laser *(Chinese)* 82477
subcutaneous array electrode, act. can implantable cardioverter defibrillator, efficacy 122323
subharmonic MMIC mixer array for 2D imaging in ECE radiometry, 150 GHz 80339
subharmonically pumped MMIC mixer array with patch antennas, 150 GHz 80327
TFT-array testing for high resoln./high content AMLCDs 81494
triode device arrays using field-emitting inks 102923
tunnel-jn. arrays, single-electron soliton avalanches 91822
ultramicroelectrode arrays QC, voltammetry, EIS, electrochem. microscopy 86692
uremia diagnosis, electronic nose breath anal. 98127
W-band overmoded waveguide oscillator with Gunn diodes, 94 GHz 102629
zinc porphyrin thin film optoelectronic memory with crossed ITO arrays, addressing 104614
Ag ultrathin single-cryst. nanowire arrays form. in ambient soln. phase 125075
Au nanoparticles assembled chem. on biomol. scaffolds, nanoscale patterns, electron transport props. 102856
Bi nanowire, transport props. 103129
Bi:Te nanowire arrays fab., transport props., modelling 102966
C highly ordered monodispersed nanotube arrays, field emission prop. 69384
C nanotubes, field-induced evap. 115240
C nanotubes, uniform patterned growth without surface C 101536
C-black-polymer composite vap. detector arrays, landmine detect. 75689
Co/Cu/NiFe patterned pseudo spin valves, mag. switching 116299
Co-C ferromag. nanodot arrays prod. by direct interferometric laser annealing 116270
a-Co-C films, mag. nanodot arrays prod. by direct laser interf. lithog. 127309
Co-Ni alloy nanowire array, prep., mag. props. *(Chinese)* 127311
CoPt patterned media with perpend. mag. anisotropy, fab. and props. 116265
CsI:Tl scintillator-Si-well X-ray microdetector based on deep RIE techs. 110942
CsI(Tl) scintillating arrays for scintimammography, imaging eval. 132984
Cu_2S/Cu_2O nanowire arrays, oxide-assisted nucleation/growth 126174
Fe interact. nm-scale particles on Permalloy, mag. meas. and num. simul. 81803
Fe(100) dot arrays, interdot dipole coupling obs. 116269
GaAs dot-wire coupled structs. grown by selective area MOVPE, single electron devices appl. 101370
GaAs/AlGaAs, open QD arrays, electron-electron interacts. 91814
GaAs/AlGaAs, open QD arrays, multiple-single dot interf. transit. 115418

arrays continued
GaSb/GaAs QD, MOCVD, struct. props. 126164
Ge:Ga stressed detectors, compact 2D array for IR astron. 120821
Ge/Si(001) QD heterostruct., electron spatial separation 103145
HF CW chem. laser with three-jet nozzle array, secondary-fuel supply effect on charact. 128114
HF CW chem. laser with three-jet nozzle array, spatial-energy and spectral charact. 128113
HgCdTe, LW neg. luminesc. devices 104966
HgCdTe LWIR n^+-p photodiode array, zero-bias resist.-area product/quantum efficiency 93362
$InAs_xP_{1-x}$ 2D ordering array islands, exchange react. form. 126414
InGaAs ridge quantum wires, sub-μm pitch lin. arrays, selective MBE 115406
InGaAs vert. QD arrays, mismatch/chem. comp. anal. by TEM 68198
InGaAs/GaAs QD, low-press. MOVPE, In comp. distrib. 124895
LSO scintillator array, PET detector module, depth of interact. meas. 122261
Nb films, electron beam lithog., RIE, supercond. props. 125074
NiFe/Cu/Co pseudo-spin-valve element arrays, sub-100 nm, magnetis. reversal 104548
O_2-I chem. laser, act. medium high total press. 82475
O_2-I chem. laser with pipe-array jet-type singlet O_2 generator 105080
PZT and PZT/$PbTiO_3$ multilayered thin films, pyroelec. props. 81702
PZT based ferroelec. thick film actuator on Si, prep. by screen-printing 127277
(PbCaLa)TiO_3/P(VDF/TrFE) composite based lin. pyroelec. sens. array 81788
Pb_2ScTaO_6 sputtered thin films for dielec. bolometer mode thermal detector arrays 87014
Si QD arrays, electronic state localization, wormholes 91811
a-Si, large area X-ray image sens. arrays, MEMS fab. technol. 110426
Si nanocrystal arrays based MOS memory devices 127065
Si pyramidal devices on flexible metal/polymer struct., planar microdischarge devices 91544
Si tipless gated field emitter arrays, LV electron emission 69386
Si(001)/(111) step-free terraces, instabilities/point defects, high temp. annealing 126269
SiC catalytic MIS Schottky diode sens. array, hydrocarbon detect. 97500
Si_3N_4 micromesh bolometer array for 350 μm astrophys. 131924
SnO_2/Pt gas microsens. arrays, heated, chem. crosstalk 97499
VO_2-based uncooled microbolometer lin. array, design/fab. 75538
ZrW_2O_8, temp. compensation, radial Bragg grating package, interferometric hydrophone arrays 104665

arresters
154 kV transm. line arrester withstand capability reduction studies *(Japanese)* 77621
distrib. lightning surge arrester damage prevention, overhead ground wire *(Japanese)* 123061
distrib. lightning surge arrester damages prevention *(Japanese)* 123060
gapped arresters, air containing ozone/nitric oxides, intensive PD, elec. strength 112172
HV overhead distrib. lines, lightning protection effectiveness *(English)* 112165
HV transm. lines, dist. protection settings, capacitor insertion effects 77516
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 2001) 124221
LEMP-excited lossy multiconductor power line dyn. anal. approach 88490
lightning return stroke model, EMP pulse calcs., overhead line protection *(Japanese)* 112174
LV distrib. networks, lightning surge protective devices 133599
metal oxide surge arrester design for UHV transm. lines 112179
metal oxide surge arrester diagnostics, voltage harmonics, representation model 133807
metal oxide surge arresters, CONEL Romania-ST Sibiu policy 133796
MV cable sheath power losses prevention, surge arresters 133765
overhead lines, concrete poles, grounding lead conductor, surge impedance 99350
polymer housed metal oxide surge arresters durability, impulse current stresses 133801
polymer housed surge arresters, ecological design *(English, French)* 133800
polymer housed surge arresters develop., verification tests 123059
power syst. lightning protection project overview, USA 99417
power syst. surge arrester modeling during EM transients 112166
semicond. arrestor, multi-cell struct. model *(Chinese)* 99416
series graded gapped arrester, reliable overvoltage protection 112168
surge arresters with MV current limiting fuses, coord. 123068
transm. line arresters eval. against winter lightning 112167
ZnO arrester blocks characts. changes by multiple-lightning impulse currents *(Korean)* 77622
ZnO arrester element charact. prediction, stat. approach 133808
ZnO based built-in surge arresters for pole transformers/switchgear 133805
ZnO polymeric surge arresters for 500 kV compact transm. line 77623
ZnO varistors nonuniformity effect on energy absorpt. capability 133806

art
acrylic laser sculptures, segmented pixel drawing, thermal monitoring 105642
acrylic sculpture proc., laser segmented pixel drawing 105637
American university education, conceiving engng. liberal art 89626
artwork conservation, laser surface cleaning, structural changes 72106
holography conf., St. Polton, Austria (July 2000) 78374
paintings, microdetachment studies, hologram interferometry 83023

ART neural nets
autonomous robot behavior, sens. fusion, control arbitration, LAPART-2 neural archit. 109709
brain conditions, rapid class. using ANNs 87400
cephalopod retina/visual syst. simul. by analog VLSI 103958
DC motor fault diagnosis using fuzzy ARTMAP *(Chinese)* 112537
EEG sigs., cognitive task prediction using parametric spectral anal. 110634
image compression, fuzzy-ART VQ and 2D runlength encoding 73352
image compression/VQ by ART2 neural net, hierarchical clustering 118596
land cover mapping, supervised, ART neural net class. 122613
mixed sig. ccts., online fault diagnosis, simplified fuzzy ARTMAP appl. 80122
mobile vehicle control, ART neural network-based image proc. 129654
multi-spectral thermometry, artificial neutral network DP *(Chinese)* 75918
NPP diagnostics, ANN vs. sig. pattern recogn. 88548
obj. recogn. by sonar, fuzzy ARTMAP, mobile robot appl. 86251
organic impurities in water soln., thermal luminesc. spectrosc. meas. method 88186
robust-invariant pattern recogn. model, fuzzy ART appl. 84528
rule extraction as data mining tool 94859
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033

articulation (speech) *see speech*

artificial guide stars
Na laser guide star expt. with diode-laser pumped sum-freq. laser 72100

artificial hearts *see artificial organs*

artificial intelligence
see also adaptive resonance theory; adaptive systems; artificial life; automata theory; biocybernetics; brain models; cooperative systems; expert systems; fuzzy control; generalisation (artificial intelligence); heuristic programming; knowledge engineering; learning (artificial intelligence); learning systems; neural nets; perceptrons; planning (artificial intelligence); problem solving; self-adjusting systems; uncertainty handling
3D silicon and recogn. based logic, enabling road to HAL 91131
analogue ccts., smart, evol. design 114598
anytime contract algms., av. quality optim. over interval 100777
batt. state-of-health meas., Cadex 7200 batt. analyser 89136
Bayesian ordering, extended probab. distrib., refinability principle 105994
biologically inspired visual syst. for autonomous robot 84564
calib. automation and AI 86414
computer vision syst. for autonomous mobile robot 94454
distrib. syst. contingency, CPN, customer load patterns 133594
embedded sens. arrays, sensitive skin 75769
faulty graph exploration agents, vertex-ant-walk method 78870
gas insulated substation PD signatures, condition monitoring, multi-agent paradigm 112725
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
integrated framework for traffic control in ATM networks based on soft-computing techs. 108497
intell. controllers for switched capacitor filters 90699
intell. mobile agent for network mgt. *(Chinese)* 108017
mobile handsets, mobile assistants and AI techs. 74706
network mgt., overviews *(Chinese)* 74110
notebook computers, intell. multiple batt. archit. 89144
nuc. power indust. safety, intell. syst. selection 112281
one-round secure computation and secure autonomous mobile agents 94374
order params. for detecting target curves in images 118303
power syst. data warehouse/data mining techs. appl. *(Chinese)* 122833
power syst. fault sect. estim., graph partition method 111669
power syst. protection, graphic-interface-based breaker status simul. syst. *(Chinese)* 99408
power systs. engng., conf., Halifax, NS, Canada (July 2001) 100448
power transformer fault diagnosis using decision tree approach *(Chinese)* 77913
short-term generation scheduling using hybrid AI/heuristic method 122927
sleep anal. by AI, visual sleep stage ident. proc. modelling *(German)* 98153
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
substation voltage/VAr control, strategies and implement. modes *(Chinese)* 123683
tele-healthcare environ. offering pers.-centric/wellness-maint. services 122464
wind micropower induction generators, sensorless power maximization algm. 123252

artificial kidneys *see artificial organs*

artificial life
breast tumor images, feature extraction and class., artificial organisms 76201
cct. switching commun. networks, routing 119414
CULUTRE, artificial life simul., learning pot., primary school children 67442
image segmentation based on artificial life 129555

artificial limbs
arm spherical US motor develop. *(Japanese)* 98709
below-knee amputees, kinematics props. and energy cost 111165
biomechatronic hand, design and fab. 98728
bone X-rays anal. syst. for prosthesis placement, segmentation module 76545
compliant actuators in bionic robot arm 87901
Edinburgh modular arm syst. develop. 87918
EMG prosthetic hand control, on-line learning method 87915
feet, mech. charactn. using prosthetic foot loading apparatus 87882
hand prosthesis, lightweight, adaptable, multiple-axis design 76685
legs, reviews *(Chinese)* 98710
lower limb prosthesis, portable meas. of press., temps. and humidity 133049
lower limbs, artificial tendons, biomech. design props. 87883
micromanipulation mechanisms synthesis for bioengineering *(Chinese)* 104186
multifunction myoelec. prosthesis, agent-based control 87899
patient hand movement, assistant force compensation by exogenous/neurophysiological sigs. 129516
residual limb, laser scanning, CAD model constr. algm. 122314
robotic hand prosthesis with adjustable power transm. mechanism 122339
upper limb myoelec. prosthesis control, adaptive framework develop. 98711
upper-limb prosthesis design, computer simul. tool 76684

artificial organs
see also prosthetics
biomedical syst. control/modeling, conf., Karlsburg, Germany (2000) 124195
European Soc. for Engineering and Medicine, conf., Belfast, Ireland (May 2001) 78370
heart, blood pump, drive motor control *(Chinese)* 122352
heart, HF mag. telemetry, sig. transm. 133046
heart assist devices, multi-objective optimal control 87900
Phoenix-7 total artificial heart, vivo/clinical study 122313
totally artificial hearts, wireless transcutaneous energy transm. syst. 76712
transcutaneous energy transm. syst. efficiency, capacitor use *(Japanese)* 111135
ventricle assist device, pulsatile, drive screw pitch optimisation 111157

artificial satellites
see also satellite tracking; solar power satellites
Advanced Land Observing Satellite, telemetry, tracking and command subsystem 85910
array form. flying orbit dyn. anal. for Leonardo-BRDF 122480
attitude control, mag. coils, simul. syst. *(Chinese)* 98890
attitude control syst. sens., fault observer *(Chinese)* 88035
attitude determ. subsyst., MEMS based Sun sens. 122532
ballistic missile defense FPA IR sens. 88251
battlefield IS, satellite tools 99127
Beagle 2, Mars Lander, Ada lang. appl. 88037
CLOUDS cloud-radiation monitoring satellite, instrum. & syst. 122634
CloudSat/Picasso-Cena, form. flying strategy 122501
cluster form. flying, perturbative anal. of geopotential disturbances 122481
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
conf., sens./syst./next-generation satellites, Barcelona, Spain (Sept. 2000) 113183
CubeSat approach to space increased delivery pot. 122472
CubeSat deployer and CubeSat class PicoSatellite 122471
Delta-2D radiometric satellite syst. for anal. of world ocean params. 76922
distributed satellite C^2 testbed develop. 122504
dual freq. SAR mission for Earth monitoring 120455
dual-color laser satellite ranging, refr. limitations 128630

tificial satellites continued
dumbell satellite, stabil. of relative equilibria 76790
Earth orbiting SAR mission planning, conflict resoln. 111316
Earth-orbiting satellites, 2001 Leonid meteor hazard predictions 133207
ECR plasma source, ionos. environ. satellite simulator *(Chinese)* 88039
electronic packages, proton dosimetry, satellite appl. 133210
electrostatic thruster, microwave engine, operational charcts eval. *(Japanese)* 88076
Engineering Test Satellite VI, laser commun. equipt., in-orbit meas. 75062
Envisat, Europe environ. obs. satellite 76837
ETS-VII rendezvous docking, relative GPS navig. *(Japanese)* 86262
fig.-8 satellite 108990
form. flying, HWIR testbed 122505
form. flying, stochastic modeling based DGPS estim. algm. 85931
geosynchronous orbit monitoring, variable-baseline interferometer *(Japanese)* 97041
Global Change Observation Mission, objectives & instrum. 122626
global satellite commun., multimedia and stored/forward data relay *(Japanese)* 96622
GOCE LEO gravity mission, GPS-based orbit determ. 120477
GPS availability, fast calc. using satellite rise and fall time *(Japanese)* 97026
GPS satellite, optimum selection using recursive method 97022
guide star catalog constr., star map ident. *(Chinese)* 98904
Hughes 702 commercial satellite, concentrator solar array 98918
integrated syst. for design, anal., simul. and eval. of small satellite *(Chinese)* 111323
internat. Earth rem. sens., 1980-2010 overview 111371
International Space Station, radiation meas. 133073
ION-F, Ionospheric Observation Nanosatellite Formation, flight software, nonlin. simul. 122502
ISS, secondary neutrons predictions, radiation effects 88028
ISS Lab module, radiation distrib., visualisation in human body 122437
Landsat-7 ETM+ internal calibrator, data models 122551
laser intersatellite links, opt. WDM networking 96881
LEO satellites, mag. attitude control syst. 111310
lunar orbit transfer, optimal manoeuvre calc. *(Chinese)* 98879
Maul Space Surveillance Site nonimaging laser radar data, reflective tomography reconstruction 86240
MEMS for spacecraft 98921
micro laser plasma thrusters for small satellites 133256
microsatellite reconfigurable semi-virtual computer archit. 133244
MIPAS onboard ENVISAT, flight model perform., calib. & charactn. 122630
motion control systs., electroreactive motors 111366
MSG SEVIRI imager, in-flight verification & calib. 122628
NASA Earth-observing 1 mission, cost-effective approach to risk mitigation 122479
NEC multi-mission spacecraft concepts and technols. 88032
orb. satellite lin. EM motor operating principles 111340
orbit determ., onboard GPS method *(Chinese)* 98878
orbit determ., robust Kalman filtering *(Chinese)* 98881
orbit determ. by combination of two kinds of meas. *(Chinese)* 93935
Orion-Emerald, carrier DGPS for LEO form. flying 122500
Planck-LFI, microwave background satellite, cryogenics 97040
plasmasphere, satellite elec. field antennas, elec. stabil. 111413
power supply syst., behaviour Petri model based diagnostic inference *(Chinese)* 88066
Powersphere Power System demons. station 111360
PRISM hyperspectral imager, IR imaging chain design 111328
Resurs-01 satellite 4 develop. for ecological monitoring appls. 111309
SATEX I expt. microsatellite, opt. commun. payload design 120392
Skymed/Cosmo syst. simul., rem. sens., VIRS imaging spectrometer 122550
Space Solar Telescope star sens., high accuracy attitude determ. 98907
space station MIR, av. LET depth distrib., absorbed dose 122439
SPOT satellite imaging instrum., stat. self-calib. 109696
star ident. using connection cluster *(Chinese)* 98901
stereo image seqs., incremental shape reconstruction 94697
TechSat21 distrib. space-based radar syst., pattern synthesis 120456
Terra's operational subsystems 111313
tethered satellite syst., simul., FE anal./fuzzy sets 88052
three-axis stabilized microsatellite bus concept 133231
thruster manoeuvre, exhaust plumes, BGK eqn. simul. 122534
USA shutter control policy, commercial rem. sens. firms impact 122555
wideband radar for ballistic missile defense and range-Doppler imaging 99141
XMM-Newton, pn-CCD camera syst. micrometeoroid damage 110440
XMM/NEWTON satellite, direct meas. of sub-pixel struct. of EPIC MOS CCD 98108
GaAs/Ge MQW, epitaxial matching, defects 80862
GaAs/Ge interfaces, device-quality III-V epitaxy 89293
GaAs-Ge Terra spacecraft flexible blanket solar array 112872
$Gd_2SiO_5:Ce^{3+}$ scintillator for ASTRO-E hard X-ray detect., energy response 121572
Si solar cells on Argentine SAC-A satellite, testing, radiation damage 112966
artificial vision *see computer vision*
asdic *see sonar*
ASIC *see application specific integrated circuits*
ASK *see amplitude shift keying*
aspherical optics
advanced opt. mfg. and testing technol., conf., Chengdu, China (Nov. 2000) 89567
CGH based interferometric setup for aspheric lens testing, sensitivity anal. 105617
CGH wavefront-transforming element, design and fab., binary opt. techs. *(Chinese)* 128575
components fab. for NIF laser 104864
concave holographic diffr. grating fab. 105600
DOE wide FOV array, integrat. with photodetectors 104855
fine pattern replication by EUV lithog. 103646
high-quality aspherical optics testing by CGH 83003
high-resoln. projection microdisplays, lens image quality 109884
holographic opt. element, non-spherical wave recorded, ray tracing 128583
incoherent opt. systs., depth of focus, image encoding/decoding *(Chinese)* 84376
IR imaging, multiband opt. syst., DOE spectral filter 109641
IR Shack-Hartmann wavefront sens. for conformal dome metrology 109717
logarithmic asphere electronic imaging 86641
refr. plano-convex microlens arrays, fab., ultra-flat photolithographic projection systs. 71370
Shack-Hartmann sens. for aspherical surfaces nonnull testing 109718
GaP aspheric off-axis microlenses, distortionless opt. interconnect syst. 116772
assemblers (program) *see program assemblers*
assembling
see also assembly planning; microassembling
2-robot assembly, task seq. optim. by evol. algms. 125897
actions detect. by scene obs. 84302
AOI/real-time SPC for high-mix/low-vol. PCB mfg. 115198
area array components, X-ray/endoscopy-based inspection techs. 124417
automated odd-form component placement in PCB assembly 115182
automatic solder stencil cleaning proc., cleaning agent develop. 80499
automatic tooling, realisation in PCB mfg. environ. 91473
automobile body assembly line robot reliab. study *(Japanese)* 124425
automobile oil filters, rot. positioning and type verification, PC-based machine vision syst. *(Slovenian)* 75637
automobile prod. line, automated gap inspection by stereo vision 118265
automotive microelectronic sens., EMC/EMI limitations 124055
automotive PBGA assembly, board-level reliab. with SnAg Pb-free/SnPbAg solder interconnects 113572
BGA package repair using MWIR systs., proc./rework cost control 89853
BGA packaging, solder sphere quality considerations 124340
BGA solder joint X-ray slicing using transm. X-ray systs./standalone software 113584
BGA-style CSP, extremely thin profile 67638
BGA/CSP standardization, 2000 status 113599
BIAC liq. cryst. polymer film, high heat resist./dimens. stabil. 113710
black box proc. control syst. for electronics mfg. line failure anal. 113812
box type SMD film capacitors, reliable solder quality under mech./thermal stress 80447
capacitor technols./design practices for portable electronics 115070
CCD camera, vision syst., calib. tool 97340
centrifugal semi-aq. cleaning proc. for high-dens. package substrs. 115183
ceramic BGA, 1 mm pitch, reliab., design/proc. effects 113569
ceramic column grid array modules, mfg. proc. for high vol. prod. 78646
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334
chip scale BGA packaging, high-dens., for hand-held/portable products, design for assembly 67628
component mounting in PCB mfg., schedule optimisation *(Japanese)* 91490
component placement, 3D vision technol. appls. 115140
composite insulator end-fitting plastic deform. law *(Chinese)* 88468
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
conductive layers in LTCC ccts., assembly props. 78657
CSP attachment reliab., package constr. 113596
CSP flexure-induced tensile stress effects charactn./minimization, empirical strategy 78644
CSP rework, proc./cost control 89854
CSP solder attach reliab. optim. 113603
CSP/micro-BGA proc./damage assess. with acoustic micro imaging 113585
CSP/RF package assemblies, thermal cycling testing 113597
CSPs for portable consumer electronics appls. 113600
DC-DC converters, capacitor/resistor integrat. for improved efficiency/miniaturisation 79553
denture mfg., robotic tooth insertion with interactive ES 98727
deterioration anal. of materials and finite elements 79134
dimpled BGA proc. develop. for space flight appls. 133229
dual-arm robot image-based visual feedback control 129451
Dynamic Process Control for electronics assembly, closed loop real-time SPC/AOI 67686
eDFM Web-based DFM in electronics assembly 115134
elec. conductive adhesives, low m.p. alloy incorporation, depletion/wetting 67600
electronic assembly QC, NDT, inspection/X-ray eval. techs. *(German, English)* 115188
electronic packaging materials, surface energy improvement by plasma treatment 124350
electronically conductive filled adhesive joints, behaviour under cyclic loading 67559
electronics assembly contract mfg., outsourcing decision criteria 69320
electronics assembly productivity enhancement via smart machine set-up 69326
electronics DFT, concepts/methods/implement. techs. 125887
electronics mfg., changing supplier-customer rels. 67485
electronics mfg., human error/mistake proofing 113450
electronics mfg. mach., control syst. design and implement. 89945
EMI shielding gaskets, automated installation 83390
environ. conscious electronics manufacture, global regulations/materials concerns 67679
fine-pitch BGA board-level solder joint reliab. enhancement by package modifs. 124335
fine-pitch solder stencil cleaning guidelines 91479
fine-tuned reflow soldering proc. for increased line productivity/profits 91487
flexible assembly, flexible parts feeding 89837
flexible parts assembly algm., visual sens. syst. 86673
flip-chip populated PCB rework by laser desoldering 124351
fluorinated soldering technol. for fluxless proc. 115148
fluxless wafer solder bump reflow proc. using carboxylic acids 69368
high-yield component assembly and packaging, laser welding 128617
Hiperprint interconnect technol. for printed subassemblies, high perform./low cost 67636
hole plugging technol. for HDI circuitry/through-hole multilayer PWBs 125903
hot bar blade for PCB soldering, design, simul. and prototype 125893
inspection strategy optim. in electronics prod. using quality cost models/SPC 124411
integral pass. in PCBs, appl.-specific economic anal. 125896
integral pass. in PCBs, appl.-specific economic anal. 67611
ionization-based ESD-control techs. for electronics assembly, safety 125902
IPC 7525 stencil design guidelines for electronics assembly, overview 115137
irregular components, insertion machine, SMD appl. *(Spanish)* 102820
isotropic conductive adhesive joints in flip-chip test vehicle, HF meas. 67584
isotropic conductive adhesives as SMT solder alternative 124349
isotropically conductive adhesives, nonepoxy-based polymer matrix 67560
large panel PCBs, solder paste stencil printing 91477
lead forming methods for IC packaging 100586
liq. solder joint technol. for electronic assembly bonding *(German, English)* 89864
metal stencil technol. for SMA, overview 69322
mfg.-cell design flexible simul., response surface anal. 100560
micro-BGA/chip/wafer test/burn-in, high-dens. sockets 124338
micro-dispensing for electronics assembly, integrated engng. approach 69321
Micro-faze thermal grease, dry-to-touch 67582

assembling continued
microrobots miniaturisation, design considerations and appls. *(Japanese)* 81542
mini-wave selective soldering proc. for double-sided SMT assembly mfg. 115147
miniaturised consumer electronics, assembly proc. trends 67637
minifactory, distributed automation syst., high-perform. network infrastructure and protocols 108175
mirror-imaged area array assemblies on SMT PCBs, rework proc. develop. 115168
mixed gas-insulated HV power transm. line project, Switzerland 88450
no-clean PCBs, solder bead elimination 102821
no-clean residue-free SMT proc. using gaseous form flux supply 115149
no-clean stencil printing proc. develop. for SMT/through-hole interconnect technols. 124339
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
noncontact adhesive dispensing in SMT assembly procs., advantages 115138
noncontact micro soldering using light beam technol. 115167
odd-form assembly automation, component location/handling 115143
odd-form component assembly, develop. 115141
odd-form component placement using SMT equipt. 80512
Omega wafer level CSP, board level reliab. 113601
optoelectronic component assembly automation 109082
OSP accelerated aging, solderability assays via three test methods 115200
package solder joint reliab. testing, computer simul. 78661
packaging design concept eval., appls. of computer-vision techs. 67577
packaging/board warpage charactn., location/type/magnitude importance 124330
pass. component lead wires, welding/soldering procs./materials 78650
pass. components, 0201 size, high-yield assembly proc. charactn. 80501
pass. components, 0201 size, PCB design/assembly factors 125882
Pb-free reflow soldering impact on electronics packages 124358
PBGA on flex substr., board level reliab. 67622
PCB AOI, color/black-and-white systs. comparison 113769
PCB assembly, GA for seq. part assignment 115132
PCB assembly proc., real-time factory data collection/Web reporting 115172
PCB assembly proc. automated inspection strategy selection 113770
PCB assembly proc. planning, multicriterion set-up decision 69328
PCB cleaning equipt., collaborative develop. 102822
PCB defects, data mining for quality engng. 78586
PCB design, product data mgt. modules 125874
PCB DFM, design elements overview 115121
PCB in-cct./functional testing, cluster approach 115196
PCB manufacture, high complexity, quality/test modeling role 115175
PCB proc. integrat. via transcollaborative mfg. 80497
PCB proc. optimisation by stat. expt. design 102826
PCB proc. quality cost models, SPC method integrat. 115171
PCB reflow soldering proc. thermal profiling 102824
PCB rework with 0201 components 125912
PCB RF shield rework, laser soldering appls. 91465
PCB solder joint assembly defect level/fault spectrum study 115155
PCB X-ray inspection, 2D with oblique view at highest magnification systs. 78690
PEN capacitor dielec. films for surface mounting/high temp. appls. 80448
pick-and-place systs. technol., trends *(German, English)* 115191
pin-in-paste odd form component assembly proc. 115142
planar anode supported SOFC stacks manufacture, deform. procs. 99978
plastic SMT package moisture sensitivity perform., Pb-free reflow temp. effects 113574
power semicond. device technol., current status/trends 126704
precision positioning device, combined piezo-voice coil motor actuator *(Japanese)* 67529
proc. knowledge incorporation into obj. recogn. for assemblies 107173
PV module assembly/testing proc. automation 112973
PWB mech. loading, global/local reliab. modelling 115185
real-time SPC with AOI, SMT prod. line implement. 91481
reflow solder proc., classic PCB thermal profiling 80505
reliab. phys., conf., Orlando, FL, USA (April/May 2001) 78456
repairable CSP underfill materials for reliab. enhancement 113598
satellite inspection robot, end-effector 100507
selective soldering for double-sided multilayer PCB assembly, proc. implement. 115145
selective soldering implement. for through-hole components 80502
shipbuilding planar panels visual recogn. using line features 129892
six-sigma PCB mfg., AOI role 115184
SMD assembly syst. optim., dyn./thermal behaviors 80517
SMT adhesives/epoxies/dispensing proc. technol., overview 80500
SMT assembly, 0201″ chip component proc. implement. for reduced defects 115144
SMT assembly proc. enhancement using prod. defect data 115173
SMT assembly thermal absorpt. for multicriterial thermal design 125910
SMT component placement, overview 91480
SMT electronics assembly, SPC/data collection, determ./implement. 115170
SMT insertion systs. selection, basic principles *(German, English)* 115189
SMT laser soldering for high-temp. environ. 125914
SMT mfg. line test proc. optim. 125891
SMT PCB assembly quality-centered productivity improvement 91491
SMT placement proc., long-term stabil., machine capability test 91478
SMT post-placement/pre-reflow AOI syst. eval./implement. 113736
SMT proc. control strategies using automated X-ray inspection 115153
SMT prod. line scheduling, mixed integer prog. 115133
SMT reflow soldering, integrated thermal profiling/proc. control 115174
SMT solder paste printing, overview 69323
SMT soldering technol., overview 115194
SMT test/inspection tools for improved proc. control 115154
SMT yield enhancement by X-ray inspection/rework integrat. 80498
Sn-Ag-Cu Pb-free solders for BGA appls., reliab./Au embrittlement 67571
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
solder alloy fatigue life prediction, two-scale model-based simul. 114416
solder column interposer ceramic grid array technol. for ACPI appls. 113578
solder droplet printing, high precision, amplit. modulated droplet form. 67570
solder fatigue theory, phys. damage mechanism-based failure criterion 79426
solder fume extraction/filtration considerations 80511
solder paste micro dispensing for densely packed PCBs 102828
solder paste printers, machine/proc. capability coeffs. 125898
solder paste stencil printing, crit. factors affecting paste flow 80508
solder paste stencil printing, high speed, full factorial DOE 115136
solder preforms for high vol. assembly productivity 102814
soldering pastes/fluxes, surface insulation resist. testing 115201

assembling continued
soldering/solder inspection, automated syst. 113465
solid solder deposits, SMT mfg. environ. implement. 115179
space camera CCD focal plane, opt. assembly *(Chinese)* 98900
surface mount PCB mfg., design issues assoc. with neural net systs. 91474
surface mounted PC connectors using through-hole reflow to allow reflow solder ing *(German)* 80518
Thai automotive indust. supply chain, new mfg. technols., QM 89901
through-hole reflow using LeadScan Sensing odd-form placement mach. 102825
ultra-precision assembly, using force meas. 97859
vectoral imaging-based AOI for PCB assembly 113761
vectoral imaging-based PCB AOI for zero-defect prod. line 100654
wafer level transient voltage suppression CSP for ESD protection, low cost/low I/O 113592
wafer proc. for 300 mm, mfg. equipt. sector challenges 103945
wave soldering proc. test vehicle for continuous proc. improvement 115146
X2 series EMI suppression capacitors, miniaturisation 115083
yielded cost appl. in modeling electronic assembly procs. 124309
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second level reliab., comparison 113586
Ag-epoxy conductive adhesive/Sn-Pb coating interface, high temp. degrad. mechanism 67561
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Au PCB finger contacts, flux spatter minimization/elimination, systematic anal. 115202
CuNi substr. surface/Pb-free solder interacts. 113582
Cu_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
$FeSn_2$ particle reinforced Sn-Ag solder joints, creep props. 100595
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
Pb-free PCB finish effects on final disk drive assembly proc. 115199
Pb-free PCB solderability preservative coatings 69318
Pb-free SMT assembly cleaning, trends/procs. 125913
Pb-free packages, board level reliab. assess. 113573
Pb-free proc., thermal effects on SMT components 91484
Pb-free reflow soldering, proc. requirements 91485
Pb-free solder paste residues, post-solder cleaning 115135
Pb-free soldered interconnections, board level reliab. 115152
Pb-free soldering of OSP PCBs, wetting patterns *(German, English)* 115190
Pb-free soldering proc. conversion, prod. implement. 102823
Pb-free soldering proc. param. effects anal., quality/repeatability 80504
Pb-free soldering prod. implement., cost/energy aspects 115197
Pb-free soldering, robust proc. develop. 91466
Pb-free wave soldering defect anal., Taguchi DOE/SPC 91482
Pb-free wave soldering temp. selection, wetting bal. testing 80503
Si strain gauge, single-cryst., user-friendly, high sensitivity 97563
Sn flat solderable finishes, prod. appl., practical considerations 115180
Sn-Ag solder joints, creep props. 100595
Sn-Ag-Cu Pb-free soldering implement., optimum alloy comp. 91483
Sn-Ag-Cu Pb-free solders for pass. components, usage implications 80445
Sn-Ag-Cu solder alloys, ternary eutectic comp. 114423
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702
Sn-Ag(-Cu) Pb-free solder joints, reliab. under mfg. conditions 115151
Sn-Ag(-Cu) solder alloys, thermo-mech. props./creep deform. 68392
Sn-Ag(-Pb) eutectic solder joint, Pb contamination effects 80507
Sn(-Cu) surface finishes for Pb-free packaging 67617
Sn-Cu-In Pb-free solder, high-perform., In low-melting element effects 80506
Sn-Pb-Ag cylindrical solder interconnects with creep, bending/twisting 78653
Sn-Pb-Ag solder alloy, thermo-mech. props./creep deform. 68392
SnAgCu Pb-free solder flux vehicle selection proc. 115169
Ta SMT capacitors, Pb-free soldering technol. effects 115058
Ta chip capacitor, 1608 size, 6.3 WV/10 µF, face down terminals for fillet-less surface mounting 115084
Ta chip capacitors, <10 mΩ ESR, heat/moisture-stable 80433
Ta chip capacitors, Pb-free soldering proc. effects 80446
needle dispensing equipt. design for very high speed deposition 113468

assembly language
cascade coding for compressing broadband residue seqs. 72799
DSP pipelined proc., dyn. prog. approach to complex allocation 125520
NIST ellipt. curves over prime fields, software implement. 129292
Stream Code based act. network, internetwork syst. implement./eval. 95949

assembly lines *see assembling*

assembly planning
2-robot assembly, task seq. optim. by evol. algms. 125897
laser triangulation cell calib. in simul. 83070
micro assembly planning, virtual environ. 80538
PCB assembly, CAPP syst., CORBA integrated technol. *(Chinese)* 124302
PCB assembly, robot moves sequencing, extended dyn. point spec. approach 67687
PCB assembly, tabu search heuristic for component assignment 125892
PCB assembly seq., feeder assignment, Tchebyshev robot arm motion, problem 89822
PCB assembly seq., feeder assignment, Tchebyshev robot arm motion, models 89823
PCB DFM, assembly and fab. considerations 125875
PCB distributed electronics mfg. environ., cycle time estim. 125895
product design/assembly planning oriented to change 78579
product-mix VLSI assembly facility, operator allocation planning 89775
recycling, disassembly seq. generation method 78734
SMT dual-robot syst., coord. planning and control, hierarchical model 89875
SMT mfg. proc. bottlenecks, elimination 115139
turret style surface mount-placement machine, PCB assembly, perform. optimisation 125894

assembly programs *see program assemblers*

associative processing
feature associative proc. for image recogn. based on A-D merged archit. 107252
MPEG-4 visual ACE profile, parallel archit. 118543
multiple obj. tracking using multiple sens. 107232
planar optics for proc./network appls. 128029
rot. spreading associative neural network, recogn. perform. 84600
texture feature anal. using assoc. rules 107143

associative storage *see content-addressable storage*

asteroid satellites *see planetary satellites*

asteroids
crater detect. for autonomous landing on asteroids 118418
Muses-C, asteroid sample return mission, guidance, navig. and control 88034

stigmatism (eye) *see vision defects*
stigmatism (optical) *see aberrations*
strometry
radio pairs, close, space-VLBI method 86277
stronautics *see space research*
stronomical instruments
see also astronomical techniques; astronomical telescopes; coronagraphs; radiotelescopes
128x128 microshutter array design, lithog. proc. 93196
balloon-borne telescope, GPS pointing method *(Chinese)* 88027
CCD photodetectors, Kharkiv Observatory experience 75526
Chandra ACIS X-ray telescope, resoln., split-pixel events 110423
conf., imaging, Stockholm, Sweden (June 2000) 124186
deep space exploration, instrum. syst. evol. & trends 122533
EURD, high sensitivity double UV spectrometer 76196
Far Ultraviolet Spectroscopic Explorer high-dispersion spherical holographic gratings 72071
gamma-ray astron., conf., San Diego, USA (Aug. 2000) 89532
HPGe detector cooled by Stirling cycle cryostat, SELENE lunar mission, gamma ray spectrometer 121775
in-situ comp. sens., inductive & capacitive sens. arrays 120987
Infrared Space Observatory, CAM LW detector, cosmic rays 120927
Infrared Space Observatory, ISOCAM detectors, review 120924
Infrared Space Observatory, ISOCAM detectors response 120925
Infrared Space Observatory, ISOCAM faint obj. detect. 120928
Infrared Space Observatory, ISOCAM LW glitch effects 120929
Infrared Space Observatory, ISOCAM LW transients 120933
Infrared Space Observatory, ISOCAM SW transient effects 120932
Infrared Space Observatory, ISOCAM-LW dark current 120926
Infrared Space Observatory, ISOPHOT, deglitching methods 120930
Infrared Space Observatory, ISOPHOT, space weather effects 120934
Infrared Space Observatory, ISOPHOT transient effects 120931
Infrared Space Observatory, LWS doped Ge photo-detectors 120818
Infrared Space Observatory, SWS detectors, perform. 120819
Infrared Space Observatory, SWS spectrometer sensitivity 120820
INTEGRAL SPI, astron. γ-ray spectrometer, imaging test setup 121778
interferometers, integrated optics appl. 127791
ISO detectors, conf., Madrid, Spain (Jan. 1998) 113272
lunar probe, close earth orbit, GPS navig. *(Chinese)* 97013
Mars Climate Orbiter Mars Color Imager, characts. and mission 131994
Mars Polar Lander Mars Descent Imager, characts. and mission 131993
multi-moded corrugated horns for far-IR space appls., radiation patterns 117815
NEC, 30 yrs. of space activities and satellite programs 85908
NMR spectrometer, MEMS force-detected, planetary exploration 121035
obj. image reconstruction from speckle pattern, astron. instrums. appls. 129870
partially coherent submillimeter-wave antenna systs., dyadic anal. 105862
particle phys. and space expts., connection 75932
photometer, InGaAs photocathode photomultiplier 69465
piezoelec. composite transducers in USMT & ROSETTA comet mission 101623
PISCES, wide-field, 1-2.5 μm camera for large-aperture telescopes 75663
pixel detectors for X-ray astron. and other appls. 76189
Planck-LFI, microwave background satellite, cryogenics 97040
plasma wave analyzer with digital control, polar region rocket expt. *(Japanese)* 133313
pyrgeometer, clear sky detect. 133293
rocks-minerals, XRD/XRF microanalysis instrum. 87282
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
SIXE, Spanish Italian X-ray Experiment 76195
solar corona, CCD imager, 530.3 nm, tunable Lyot filter *(Japanese)* 109662
solar spectrograph detectors research *(Chinese)* 97233
supercond. astron. detector, RF SET readout amp. 71147
supercond. tunnel jn. array, SQUID readout, astron. detector 71137
supercond. tunnel jns., X-ray and opt. photon counting detectors 71163
SWUIS-A UV/vis/IR imaging syst. for airborne astron. & aeronomy 98897
UV, aerospace optoelectronic detectors 86527
UV photon counting intensified CCD 75640
wide-field CCD camera for Kiso Schmidt telescope 109715
X-ray astron., conf., San Diego, USA (Aug. 2000) 89532
X-ray polarimeter, photoelec. instrum. 87281
X-rays, soft, aerospace optoelectronic detectors 86527
CdTe(CdZnTe) detectors, recent develop. 121767
CdZnTe hybrid pixel detector, high resoln., high energy X-ray astron. 121774
Ge:Ga stressed detectors, compact 2D array for IR astron. 120821
Si pixel detector, high resoln., high energy X-ray astron. 121774
Si_3N_4 micromesh bolometer array for 350 μm astrophys. 131924
astronomical spectra
EURD, high sensitivity double UV spectrometer 76196
high resoln. Compton telescopes, perform. charact. 132488
RT-22 radiotelescope AO spectrum analyzer and 3-mm obs. 86278
SIXE, Spanish Italian X-ray Experiment 76195
SPI, Spectrometer for INTEGRAL, characts. 76191
Si, LET spectrometers, space-flight radiation risk, Monte Carlo anal. 110285
astronomical spectroscopy *see astronomical spectra; spectroscopy*
astronomical techniques
see also radioastronomical techniques
CCD photodetectors, Kharkiv Observatory experience 75526
Flexible Image Transport System (FITS) 130628
Infrared Space Observatory, ISOCAM faint obj. detect. 120928
Infrared Space Observatory, ISOCAM SW transient effects 120932
Infrared Space Observatory, ISOPHOT, deglitching methods 120930
Infrared Space Observatory, ISOPHOT transient effects 120931
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
Mars spacecraft, laser-retroreflector covered sphere 117329
obj. image reconstruction from speckle pattern, astron. instrums. appls. 129870
Palomar 5-m telescope, QW IR photodetector astron. imaging 86658
rocks-minerals, XRD/XRF microanalysis instrum. 87282
Space Interferometry Mission instrum., real-time command, data & control 133239
Space Interferometry Mission technol. develop., status & plans 133238
Space Solar Telescope, imaging syst. and DP 109699
time-freq. meas., space environ., relativistic theory 75898
vortex spatial filter opt. sig. detect. 71475
astronomical telescopes
see also radiotelescopes
Advanced CCD Imaging Spectrometer using X-ray CCDs 97351
ANTARES neutrino telescope, R&D programme status 98048
Astro-E, X-ray telescope, ground based charactn. 121752
balloon-borne telescope, GPS pointing method *(Chinese)* 88027
astronomical telescopes continued
Chandra ACIS X-ray telescope, resoln., split-pixel events 110423
cryogenic temp. opt. fibre perform. tests 127629
DEPFET pixel sens., spectrosc./imaging perform. 97966
French SWIR technol. used for astron. 111327
gamma-ray astron., conf., San Diego, USA (Aug. 2000) 89532
GLAST, beam test engng. model, Si tracker assembly 98022
GLAST beam test engng. module, Si tracker 121459
GLAST gamma-ray large area space telescope 98098
HESS telescopes for gamma-ray astron. 121814
high resoln. Compton telescopes, perform. charact. 132488
IBIS, γ-ray imaging telescope on board INTEGRAL 76192
indiv. addressable micro-mirror-arrays, space appls. 93221
INTEGRAL SPI, astron. γ-ray spectrometer, imaging test setup 121778
interferometers, integrated optics appl. 127791
ion-exchanged integrated waveguide devices, appl. fields 127779
JEM-X, Joint European X-Ray Monitor 76193
kilometric opt. fiber interferometer, field polariz. state control 131955
Kiso Schmidt telescope, wide-field CCD camera 109715
large deployable space telescopes, microdynamic issues 82266
large optics real-time holographic compensation in space-based opt. systs. 105605
large-aperture lightweight diffractive lens fab., astron. telescope objectives 116872
LEGRI, low energy gamma-ray imaging telescope 76196
LXeGRIT, liq. Xe gamma-ray imaging telescope, light trigger syst. perform. 121773
LXeGRIT, upgraded DAQ syst. 132461
LXeGRIT, Xe liq. TPC γ-ray imaging 76188
LXeGRIT gamma ray imaging telescope, DAQ upgrade 121862
MAGIC telescope, two-level pattern trigger 76150
MEGA telescope, Si strip detectors 121469
MEMS technol. for NASA space missions, JPL research & facilities 98883
micro-pore X-ray optic, high-resoln., MCP technol. based 110450
optomechanical engng., conf., Boston, MA, USA (Nov. 2000) 78462
Palomar 5-m telescope, QW IR photodetector astron. imaging 86658
Pierre Auger Cosmic Ray Observatory, fluoresc. detect. prototype, analog sig. proc. 121625
PLZT act. adjustable focus opt. correction lens, design and testing 127873
polychromatic guide star, adaptive optics 128622
Space Interferometry Mission instrum., real-time command, data & control 133239
Space Interferometry Mission technol. develop., status & plans 133238
Space Solar Telescope, imaging syst. and DP 109699
Space Solar Telescope star sens., high accuracy attitude determ. 98907
sparse aperture imaging, origs. and hist., opt. synthesis imaging 120937
SPI, Spectrometer for INTEGRAL, characts. 76191
STACEE γ-ray detector prog. digital delay/trigger syst. 121739
StarLight mission, instrum. complement & spacecraft concept 122488
Starlight mission interferometer instrum. control electronics 133237
StarLight separated spacecraft interferometer mission, stray light anal. 122516
TeV γ-ray astron. apparatus/observational anal. 132425
wide-field imaging interferometry testbed design, FIR/sub-MM missions 98887
wide-field imaging interferometry testbed for space mission support, develop. 120661
X-ray astron., conf., San Diego, USA (Aug. 2000) 89532
X-ray polarimeter, photoelec. instrum. 87281
XMM, X-Ray Multi-Mirror mission, CCD pass. cooling, low-mass multistage radiator 122528
XMM-Newton, pn-CCD camera syst. micrometeoroid damage 110440
γ-ray lens telescopes characts. 76194
CdTe high resoln. detector, imaging devices 121479
CsI hodoscopic calorimeter for GLAST beam test engng. module 121573
$Gd_2SiO_5:Ce^{3+}$ scintillator for ASTRO-E hard X-ray detect., energy response 121572
Si, LET spectrometers, space-flight radiation risk, Monte Carlo anal. 110285
astronomy computing
see also computerised instrumentation
ANTARES offshore DAQ, distributed COTS-based syst. 120676
balloon-borne telescope, GPS pointing method *(Chinese)* 88027
celestial sphere, unique point images 95402
CMB observational maps, sig. imaging, power filtration anal. 107547
data compression software on space-qualified DSP board 118576
distributed computing for large-scale simul. 119705
Flexible Image Transport System (FITS) 130628
GRAPE project, special-purpose computers for many-body simul. 114800
LOFAR radio-telescope using cluster computers and grid proc. 75263
lunar satellite, orbit optimal manoeuvre calc. *(Chinese)* 98879
LXeGRIT, upgraded DAQ syst. 132461
LXeGRIT gamma ray imaging telescope, DAQ upgrade 121862
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
photom. sigs., stat. anal. of parametric model 118964
radio image denoising, astron., Daubechies wavelet *(Chinese)* 97038
radiotelescope, VIRAC RT32, tracking-pointing syst. 97042
radiotelescope array, vibr. rejection manipulator syst. 97043
VIRGO grav. wave expt., astron. interferometer, review 97163
VLBI radiosource, lunar surface sited, temp. control *(Japanese)* 109336
wide-field imaging interferometry testbed design, FIR/sub-MM missions 98887
SETIathome, massively distributed computing for SETI 75256
TIHome project, combating cheats 120499
asymmetric digital subscriber lines *see digital subscriber lines*
asymptotic stability
2D digital filter stabil., Fornasini-Marchesini second model, overflow nonlin. 68935
$\mathcal{H}_\infty$ robust filtering for uncertain discrete-time state-delayed systs. 95697
act. mag. bearing sync. disturbance compensation 92880
bounded solns. and asymptotic stabil. of nonlin. difference eqns. in complex plane 90117
Chua's cct. adaptive control/sync. 101720
constrained nonlin. optim., stabil. theory 124575
convolution type discrete nonlin. integro-DE, num. stabil. 68050
delay diff. eqns., asymptotic stabil. 114116
delay difference systs., asymptotic behavior 90104
delay-depend. criterion for neutral systs. with multiple delays 124653
delayed bi-directional associative memory networks, exponential stabil. 68979
distributed sens. network, discrete-time systs., time-varying delays, stabil. 130192
fluid networks, stabil., Lyapunov method 78778
gastric elec. uncoupling, deterministic chaos level dyn. 87418

asymptotic stability continued
generalized proc. sharing fed by long-tailed sources, asymptotic anal. 119246
hop-by-hop congestion control stabil. in data networks 74023
host-parasite model, asymptotically stable pop. coexistence 113856
IM, indirect field-oriented control, global asymptotic stabil., robustness 77866
IM drive high-perform. adaptive parallel distributed compensator 123866
image-based adaptive control, nonlin./stabil. 84137
induction servomotor drive robust control scheme 78212
LIM servo-drive, nonlin. decoupled control, sliding-mode tech. 100238
Lur'e systs. with time-delay, master-slave synchroniz. 101722
Lyapunov-Razumikhin method for impulsive functional DEs and pop. dyn. appl. 68017
MAGLEV syst., airgap deviation, variable struct. control 128730
manipulator, kinematic uncertainty, setpoint control, approx. Jacobian feedback controller 97390
Markov decision procs., av. cost. learning algms. 124486
matrices, lin. difference and differential inclusions 89954
multi-area power syst. PI sliding mode load freq. control scheme *(Chinese)* 88339
multi-link smart materials robots, model-free regulation 92694
n DOF robot, model uncertainties, set-point regulation, smooth lin. control algm. 121225
nonautonomous Volterra difference systs. with infinite delay, asymptotic props. 90134
nonlin. ccts., equilib. point global asymptotic stabil. anal. *(Chinese)* 90669
nonlin. complementarity problems with neural networks, reformulation method approach 90083
nonlin. discrete time-varying uncertain systs., robust nonlin. H_∞ FIR filtering 84718
nonlin. dyn. ccts. with MOS transistors, global and local stabil. 101700
nonlin. neutral functional-DEs, dissipativity and exponentially asymptotic stabil. 68033
nonlin. prog., stabil. theory 67857
nonsmooth optim., Lyapunov methods, quasi-Newton algms. 67878
num. approx. of parab. problem with blowing up solns., asymptotic behaviour 114022
piezolaminated anisotropic shells, selective modal control theory 104438
point-robot posn. control, single-camera visual servoing 86607
port controlled Hamiltonian model of FACTS with adaptive L_2-gain control *(Chinese)* 122951
semicond., charge transport hydrodynamical model, equilib. state stabil. 92274
SISO networked control syst., packet switching WAN appl. 108267
STATCOM robust nonlin. control scheme *(Chinese)* 77235
stochastic differential delay eqns., Markovian switching, stabil. robustness 67719
sync. lin. motor servodrive, adaptive neural control 78203
unmanned air vehicle landing, vision based motion estim. and nonlin. control 109670
vehicles in platoon, automated, fault diagnostic syst. 86410
Volterra eqn. periodicity conditions 90172
Wiener state deconvolution filters *(Chinese)* 119033

asynchronous circuits
see also asynchronous sequential logic; sequential circuits
AMULET3i async. dual-ported copy-back cache archit. 79874
Blowfish algm. implement., sync. to asynchronous conversion 101942
BSFQ cct. design, param. margins 70937
bundled-delay and dual-rail ccts., asynchronous design styles 79778
bus interface design for 80C51 microcontroller 79670
CADRE, Configurable Asynchronous DSP for Reduced Energy, low power multiported register bank 79908
CADRE, low-power, low-EMI DSP archit. for digital mobile phones 125542
Cascade ALU archit. for async. super-scalar proc., perform. eval. 79910
CMOS asynchronous interlocked pipelined chip *(Italian)* 90858
CMOS compact central arbiters for memories with multiple read/write ports 79828
CMOS contactless smart card IC using on-chip antenna and asynchronous microcontroller 91116
CMOS dyn. single phase logic, self-timed stages, power reduction, pipeline cct. designs 102027
CMOS low-power asynchronous DES chip 106243
CMOS self-timed divider using fast, robust pipeline scheme, DCVSL ccts. 68760
conf., Salt Lake City, UT, USA (March 2001) 78399
control cct. for asynchronous micropipelines 114720
CPU design, use of asynchronous methodologies 79672
cross-pipelined multiplier design, handshake cct. 102002
current sens. completion detect., dyn. biased current sens. 109504
DCAP, async. superscalar archit. for exploiting instruction-level parallelism 79909
delay insensitive SoC interconnect using 1-of-4 data encoding 79671
DFT init. tech. 125407
dual-rail and bundled-delay ccts., asynchronous design styles 79778
embryonic arrays, asynchronous digital design 102052
exact two-level hazard-free sum-of-products logic minimization 79781
fast asynchronous ccts., design proc. 79786
FIR filter banks for discrete wavelet transform 91105
FLEETzero chip, async. switching fabric expt. 79785
GasP async. ccts., design method and CMOS sq. FIFO implement. 79787
GasP asynchronous ccts., min. FIFO control, self-resetting logic forms 79779
GRAVITY 32 bit asynchronous proc. core, design aspects 90949
intentional clock skew scheduling algm. for high perform. clock distrib. network 102307
low-power asynchronous design, self-resetting logic, computing struct. 79776
low-power mixed sync./asynchronous implement., automatic FSM synthesis 114694
low-power systs. on chips, asynchronous and locally sync., software design 79696
MOS asynchronous FIFO with fights, speed optim. 68742
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
multi-radix approach to asynchronous division, data-depend. computation time 79777
multiple asynchronous domains, static scheduling, functional verification 125445
multiplier with asymmetric parallel array struct. 68730
µP *(French)* 68812
parallel bus control method for dependability *(Japanese)* 119597
partial-order correctness-preserving props. of delay-insensitive ccts. 79782
pass. RFID appls., asynchronous vs. sync. cct. designs 96637
PCA-1, plastic cell archit., dyn. reconfigurable logic LSI 125460

asynchronous circuits continued
PCA-1, Plastic Cell Architecture, fully asynchronous self-reconfigurable LSI 79780
PDM digital ccts. based neural network syst. *(Japanese)* 80143
pipelined dataflow small micro-coded asynchronous proc. and DCT appl. 102243
reshuffled handshaking expansions, anal. 79669
resource constrained async. scheduling method via DFG transform. 101971
RISC proc., FPGA-based rapid prototyping 102206
self-timed cct. design, achieving worst-case perform. 79673
self-timed pipelining using latest arriving sig. detect. 68736
seq. ccts., anal., OBDD method *(Chinese)* 79834
sig.-type async. data commun. mechanism, synthesis and implement. 79784
speed-independent async. ccts., test pattern generation 79807
supercond. SFQ asynchronous pulse arbitration cct. 70854
sync. and asynchronous seq. synchronizers 68721
synthesis, pseudo delay-insensitive timing model 79749
systematic error-correcting codes for semi-delay-insensitive data transm. 130835
testing, techs. and ATE archits. 79788
TITAC2 abstracted instruction cache, formal verification 102080
transforms. for synthesis and optim. of async. distributed control 125353
ULSI syst., asynchronous interface, locally clocked module 102311
variable-latency pipelined multipliers, asynchronous and sync., design 68777
VLSI advanced research, conf., Salt Lake City, UT, USA (March 2001) 67360
VLSI FIR filter, low-power single bit-plane archit. 68933
width-adaptive data word archits., asynchronous VLSI techs. 68728
GaAs VLSI ccts., self-timed techs. for low-power digital arith. 102079

asynchronous electric machines *see asynchronous machines*

asynchronous generators
1.5 kVA HTSC induction generator, develop. and testing 77862
3-phase induction generator connected to single-phase network, harmonic effects 134000
4 kW, 42 V induction machine-based automotive power generation scheme 134565
10 kV distrib. networks stabil., dispersed CHP/wind generators impact 133622
automobile direct-start asynchronous starter/generator, vector controlled 89423
belt-driven induction starter-generator, design, testing 123961
CHP-fed distrib. network, self-excitation phenom. 122849
control syst. instabil. anal. 134561
diesel-elec. locomotive double-feed induction generator, state feedback control 113103
grid-connected induction generator, naturally-commutated AC voltage control 134001
grid-connected induction generators, dyn. stabil. limit 123475
hybrid EV starter/generator fuzzy control expts. 134522
IM-generator traction set develop. 134545
induction generator controller for standalone appl. with unbalanced load 112558
induction wind power generator, 2 MW, digital electronic control *(German)* 123452
isolated three-phase induction generator, excitation capacitance requirement 112512
lab. perform. test procedure 123477
megawatt output induction generator used in megawatt wind power generator, digital control *(German)* 133996
pulsed asynchronous generator with iron-free cylindrical solid rotor, FEM simul. 99650
SEIG, current-controlled VSI, voltage control anal. 133993
SEIG feeding IM, dyn. eigenvalue anal. 112510
SEIG transient conditions under symmetric load 123471
SEIG using STATCOM, voltage control anal. 134003
self-excited slip-ring induction generators, voltage/freq. control 123414
small-scale hydroelectric power generation using induction generators 112358
small-scale hydroelectricity, variable-speed cascaded induction generators 133876
solid rotor pulsed asynchronous generator, FEM-based num. anal. 123437
steady-state phase-coord. model 88739
three-phase induction generator, utility grid-connected, perform. anal. 112511
turbogenerator syst. modelling 123441
variable speed wind turbine back-to-back VSI efficiencies comparison 88873
wind farm, double fed induction machines, digital simul. perform. 112380
wind farm perform. simul., wind speed changes, double fed induction machines 133882
wind micropower induction generators, sensorless power maximization algm. 123252
wind turbines, generator/gearbox couplings 77790
wind-driven induction generator, grid disconnection, transient anal. 133885
wind-energy converter syst. mgt. 77791

asynchronous machines
see also asynchronous generators; induction motors; slip (asynchronous machines)
3-phase 2-pole induction machine diagnosis, simplified spectral approach 134030
3-phase induction machine model, cross-saturation, leakage path saturation 123481
3D eddy current FE anal. of electromechanical devices 88722
AC induction machine online shaft current monitoring/prediction 99666
asymmetrical two-phase induction machine vector control model 123405
asynchronised machines as controllable FACTS devices 122950
automotive integrated starter-generator, induction machine, pole-PM 134570
auxiliary machine for asynchronous machine reliab. improvement *(Russian)* 88707
axial airgap machines, review 88764
cage rotor induction machine perform. in automotive starter-alternator appls. 77873
cascaded doubly-fed induction machine, combined magnetising flux oriented control 99669
current-fed double-star induction machine, speed sensorless vector control, robust speed identif. 78101
direct heat induction machine for useful heat generation appls. 99653
direct torque control, adaptive flux observer *(Chinese)* 88731
efficiency optim. using ripple correl. control 88758
elec. machines and drives, conf., Cambridge, MA, USA (June 2001) 113201
equiv. cct., conceptual aspects 123416
flux angle estim., FEM, HF sig. injection 88742
grid-connected wound rotor induction machine, sensorless direct power control 77861
inaccessible neutral induction machines air-gap flux posn. estim. 88744
increased safety induction machine design, develop. and testing 99665
induction machine param. ident. by GA 123446

synchronous machines continued
induction machines, harmonic rejection, optimal control 77864
instantaneous real/imaginary power control 134034
large induction machines, inertia and mech. losses ident. 112520
liq.-metal rotor operation 124137
multipole asynchronous machine generalised eqns. 112502
nonlin. sliding-mode torque/flux control method 99655
params. estim. using continuous-time observer 134014
polyphase rot. induction machines, stray load losses calc. 112518
power syst. stabil./control, doubly-fed rotary freq. converter modeling 77276
power syst. voltage stabil. studies, indust. loads modelling 133528
PWM inverter-fed induction machine, torque/stator flux control 123431
RA asynchronous machines, three-phase windings, EM calc., param. optimisation 123466
RA series induction machines, three-phase winding, EM params. optimisation *(Russian)* 99674
RA series of 3-phase short-circuited rotor asynchronous machines 123465
seven-level neutral point clamping VSI, high power induction machine drive 112666
simplified stator flux vector control method 123445
smooth air-gap induction machines, dyn. eccentricity modelling 123421
speed estim. using robust sliding mode observer 88725
stabil. torque coeffs. theorems for power engng. courses 89646
stator/rotor flux-based deadbeat direct torque control 134013
three-phase induction machines, PWM power converter-fed, losses studies 112499
total iron losses, slotting effect contrib. 123409
vector control methods overview 88751
WECS power smoothing control, vector-controlled induction machine 77794
wound-rotor induction machine posn.-sensorless control algm. 99671

asynchronous motors *see induction motors*

asynchronous sequential logic
see also asynchronous circuits; sequential circuits; sequential switching; switching theory
cct. anal., OBDD method *(Chinese)* 79834
distributed asynchronous control unit, hierarchically decomposed AFSMs, CDFG 68671
embryonic arrays, asynchronous digital design 102052

asynchronous transfer mode
2.56-Terabit/s opto-electronic switching fabric based photonic core node 85443
2.5-D video avatar, develop. 73201
2-MMPP traffic model, versatility anal. 73766
3G wireless commun., virtual connection tree over multiple access techs. 74656
5-Tb/s frame-based ATM switching syst. using 2.5-Gb/s×8-λ opt. switching tech. 120277
51.84 Mbit/s airborne wireless expts., HALO commun. technol. 74562
60 GHz fiber-radio commun. syst. for indoor ATM network 131086
AAL2, perform. eval. with continuous time Markov proc. 108751
AAL2 protocol for low-bit-rate multimedia services, perform. 107810
AAL2 voice data transm. using shared-buffer scheme 130223
ABR, virtual channel onto VP MUX 73808
ABR adaptive congestion control with act. buffer control 95766
ABR congestion control algm., fairness, equal profit principle *(Chinese)* 95739
ABR explicit rate algm., ATM switches, stat.-learning control 73781
ABR explicit rate flow control, deterministic/probabilistic anals. of resource requirements 84829
ABR explicit-rate traffic flow control 119146
ABR flow control, explicit fast rate computation scheme 119145
ABR flow control, optimal struct. feedback policies 119126
ABR flow control using explicit forward congestion indication 130215
ABR multipoint-to-point service, rate-based congestion control 95778
ABR service, source control based approach 108494
ABR service based on cell delay, fairness study 95948
ABR service category, flow control based on chaos 95779
ABR services, EFCI/ERICA ATM switches, interoperability 119161
ABR services for overcoming misbehaving sources in heterog. environ. 74258
ABR traffic, adaptive burst spacer design/implement. for effective-rate enforcement 130225
ABR video services, picture quality optim. 84408
access switch syst., providing flexible redundancy 131033
act. networks, appl. of computational intell. techs. 74045
adaptive and integrated video commun. for wireless ATM 129728
adaptive bandwidth allocation based on playback tunnel to support VOD service over ATM networks 120571
adaptive bus arbitration for scalable shared-medium ATM switch 73787
adaptive network modeling scheme 85233
adaptive weighted round robin scheduling algm. for ATM networks 84930
ADSL broadband access syst. *(Chinese)* 85411
ADSL IC, simul. approach for functional verification 108477
ADSL network, QoS multicast video, act. network based mgt. 131744
ADSL-lite technol., PT Telkom Indonesia field test results 130998
advanced cell recovery techs. 130248
agent-based rate coord. between TCP and ABR congestion control algms. 73934
all-opt. IP packet transport/switching nodes, granularity anal. 120335
all-opt. self-routing packet header recogn. 109110
ASHMEN, ATM services over shared media networks 108322
ASIC devices for distributed packet switches with QoS support for IP and ATM 131020
assoc. memory based switch 95786
ATLAS high-level triggers, ATM studies 132463
ATM access networks, QoS interworking for Diffserv 74997
ATM access switch, signaling software *(Chinese)* 74294
ATM based PON, upstream bandwidth allocation *(Chinese)* 96733
ATM networks, ABR service, chaos-based flow control *(Chinese)* 95756
ATM router in space, TRW ASIC design 109000
ATM workgroup switch *(Chinese)* 107656
ATM-PON access systs., opt. transceiver design 120182
ATM/AAL2 as switching technol. in 3G mobile access networks, perform. eval. 74492
ATM/frame relay interworking, traffic param. mapping and control *(Chinese)* 107652
augmented IP routing protocol in IPv6 environ. 130447
B-ISDN network self-healing protocol based on multiple backup VP 130235
backbone network, correl. traffic, expt. study 108357
backward predictive congestion control using neural networks 96009
bal. packet discard for improving TCP perform. 119840
bandwidth allocat. in ATM networks with guaranteed QoS using well-trained ANN 73813

asynchronous transfer mode continued
bandwidth allocat. of heterogen. sources in ATM networks using neural net 73821
bandwidth allocation using declared usage param. control 107642
BLOWFISH block cipher, VLSI archit. design, secure modes of operation 106208
Brazos software DSM syst., high speed networks 96197
broadband network, cell delay var. allocation in domestic region *(Korean)* 119147
broadband radio access networks, real-time ATM, hybrid ARQ protocol 131108
broadband satellite commun. network, perform. of on-board ATM switching scheme 107890
broadband satellite multimedia networks, service mapping and QoS provisioning 109008
broadband satellite networking 109001
broadband telecomm. networks, QoS service, fuzzy requirement based strategy 119159
broadcast-and-select photonic ATM switch with tunable wavelength converter for wavelength reduction *(Japanese)* 109190
broadcasting appls., experience of Institut fur Rundfunktechnik *(German)* 119143
buffer control and packet scheduling, IP and ATM networks 96204
buffered networks, tight bounds for tail of packet waiting time distrib. 130317
burst level bandwidth allocation using multipath routing reservation 130522
bursty multimedia traffic, admission control schemes 119795
CAC method based on error-corrected Chernoff bound with joint optimisation 73764
call admission, QoS 119461
call admission control, stat. MUX gain 130199
call admission control by cell loss rate estim. 73873
call admission control schemes using additional inform. 73759
call blocking probab. reduction, cell splitting/merging strategy 95794
carry-over round robin cell scheduling mechanism, comments 84845
CBR and rt-VBR, automatic mapping of real-time traffic constraints 130222
CBR ATM MUX, jitter anal. and simul. 84827
CDMA technol., conf., Seoul, South Korea (1999) 67372
CDMA/ATM-based mobile systs., QoS simul. of AAL2 95910
cell delineation procedure modeling 107667
cell delineation protocol anal. 119355
cell distrib. approach for parallel ATM switch 84837
cell loss rate estim., convolution appl. 107640
cell scheduling scheme, fair-cycle based round robin service *(Chinese)* 95769
cell segmentation and reassembly, functional realization *(Chinese)* 119836
cell struct. of next generation 130230
cell-based switch archits., accurate approx. anal. 74252
cell-relay networks, distributed simulator using Java 95773
cellular networks, nondisruptive handoff protocol 85652
Clos terabit EO switch archit. 120281
COMETS 21 GHz advanced satellite broadcasting expts. 74890
commun. systs., networks and DSP, conf., Bournemouth, UK (July 2000) 78391
compressed video connection utilization, masking in ATM networks 107108
concurrent QoS-assured multicast sessions, mgt. using prog. network archit. 96048
congested networks, packet loss control, dyn. partial buffer sharing 95797
congestion control based on SELA *(Chinese)* 73818
congestion control via online sampling 130196
congestion mgt. for high speed networks using aggregated large deviations principle 73935
connection admission control using modular neural networks 84824
contemporary cell-switched audio/video traffic, transport issues 107027
country-wide elec. generation and distrib. syst., DCS, real-time video 133520
credit-based fair queueing, service-scheduling algm. for packet-switched networks 130323
Croatian ATM based public multiservice network 108003
crossbar ATM switch for multicast traffic 107658
Cyclone terabit multiservice switch 73877
data-driven label switching networks, cache replacement schemes 119133
differentiated services and ATM networks, ABR usage mechanisms 130213
differentiated services in ATM switches, priority scheduling perform. 95775
differentiated services PHBs matching to ATM service categories, AF to VBR case 107927
differentiated services support using ATM GFR service 85243
differentiated-services, congestion control using nonlin. control theory 130782
DiffServ-based QoS over ATM access networks 95969
digital video transport, joint source-channel coding to scalable delivery 84469
discrete time queueing systs. with general stochastic sources, anal. 119252
distributed denial of service attacks, coord. defense scheme, on-off feedback control approach 95760
distributed robust traffic controller for ATM networks 130202
distributed routing for dyn. multicasting with advance resource reservation inform. 107962
distributed simulator for network mgt. research 85138
distributed virtual simul., network protocols/archit. 96127
DQRUMA with scheduling algms. for multimedia traffic in indoor environ. for W-ATM networks 85026
DRABR protocol for seamless handovers in wireless ATM networks 85009
DSL access network, voice call quality 108065
duality in ATM layout problems 119398
DV transm. systs. using ATM networks, delay/quality anal. 107964
dyn. multicast connections, blocking 84833
dyn. priority queue for bursty traffic control, perform. anal. 95759
E-FMMRA for ABR point-to-multipoint service in ATM network 73765
ECG sigs. acquisition and tele-transm. via mobile phone 110512
EDF scheduling, resource division policies 130772
EFCI algm., anal./improvement 130319
elec. power utility backbone networks, multi-protocol label switching technol. 111755
enterprise LAN, trends 108172
error concealment algms. for video packet loss 73769
Ethernet access switch, mgt. model/implement. *(Chinese)* 108016
explicit forward congestion indicator based ABR flow control *(Chinese)* 119255
explicit rate congestion control with binary notifications 107925
fair and cost-effective service mechanism for cell scheduling in ATM networks 95771
Fairisle ATM switch fabric using FormalCheck, model checking 131027
fault-tolerant ATM switch, redundant path anal. *(Chinese)* 119837
fault-tolerant ATM switches, grid-based switch fabrics 119630
fault-tolerant ATM switching archits. based on MINs 84818
fault-tolerant VP layout in ATM networks 85084
FEC coding for real-time transport 119129

asynchronous transfer mode continued
Fibonacci opt. ATM switch, design and eval. 86080
finite buffer ATM switches, cell loss probab./delay *(Chinese)* 107654
flexible switching syst. supporting QoS 131030
flow control for encoded video appls. 129751
flow control scheme for self-similar traffic in ATM networks 130746
FPBA algm. using random transmitter power levels, perform. improvement 119285
FPX, field prog. port extender, hardware modules, Internet routers/firewalls, CAI platform 124266
fractal α-stable broadband traffic shaping/policing 119756
frame-based hierarchical fair queueing scheduling *(Chinese)* 107633
future all-opt. networks, advanced device develop. 109209
future WAN archit. driven by services, traffic vol., and technol. trends 108286
fuzzy buffer mgt. 119166
fuzzy-based estim. of upperbound CLR for rare event anal. 107645
fuzzy-based traffic policing mechanism for ATM networks 95764
GA for ATM network design 85431
GBS IP multicast tunneling 107822
general switch mgt. protocol hardware implement. 131034
generalized proc. sharing schedulers, optimal call admission control 119149
GEO multimedia commun. satellites, air interface and payload archit. 109004
geo-sync. satellite networks, dyn. channel access protocol 96615
geostationary satellite networks with on-board proc., perform. of resource mgt. 109007
GI^X/Geom/m, modeling and anal. of discrete-time multiserver queues with batch arrivals 113847
GI-G-1 queue, continue-after-interruption and repeat-after-interruption transm. modes, perform. eval. 119236
global mgt. fns. for ATM networks 96176
growable output queueing switch with shared knockout buses 130216
guaranteed frame rate service, TCP/IP, buffer mgt. and scheduling 73816
guaranteed service networks, joint smoothing/source rate selection 118601
H.263-based codecs for ATM environ., error resilient two-layer 96312
handover protocol and network archit. for wireless extensions of ATM networks 108324
hardware compilation for software engineers, ATM example 68500
HDTV transm., network infrastructure *(German)* 75303
heterog. on-off sources, tight upper bound 73796
HFC networks, improved guaranteed access MAC protocol 130400
hierarchic 4×4 ATM integrated switching unit, design and emulation 74497
hierarchical networks, robust QoS routing algm. 107641
hierarchical neuro-fuzzy call admission controller for ATM networks 96120
hierarchical opt. path cross-connect syst., matrix WDM scheme 120339
hierarchical QoS routing, dyn. inform. update methods 130482
hierarchical QoS routing in ATM networks 119842
hierarchical QoS routing in ATM networks, dyn. update policy 96202
high capacity switches, fast round robin priority port scheduler 130220
high speed ATM network end-to-end congestion control 95803
high speed ATM networks, flow control mechanisms comparison 119162
high speed networks, optimal admission control, dyn. prog. approach 73814
high speed networks, probabilistic priority scheduling discipline 107788
high speed packet switches, improved fair traffic shaping algm. 119131
high-perform. and wide-area cluster computing, ATM and network technols. 130749
high-speed commun. networks congestion predictive control 130525
high-speed networks, bandwidth requirement reduction by traffic dispersion 130326
high-speed networks, QoS-based routing algms. 107971
high-speed packet switched networks, traffic mgt. 119479
hybrid multiple MCS model for multicasting 107639
IADs, Integrated Access Devices, xDSL services, hardware and software design 85412
IEEE ATM and high speed intell. Internet, conf., Seoul, South Korea (April 2001) 124230
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 124193
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IEEE high perform. switching and routing, conf., Dallas, TX, USA (May 2001) 113207
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE vehicular technol. and commun., conf., Leuven, Belgium (Oct. 2000) 78454
image transm. over ATM quality improvement by priority dithering 74453
IMT-2000 networks, AAL2 QoS mgt., third generation mobile commun. systs. 96597
indust. ATM networks, point-to-multipoint ABR service, consolidation algm. 130546
infinite buffer speeded-up output-buffered ATM switches anal. *(Chinese)* 107653
input-queued multicast switch design, scheduling policy research 119138
input-queued switch with pipelined approach to arbitration 73790
integrated framework for traffic control in ATM networks based on soft-computing techs. 108497
integrated framework for transport of real-time MPEG video over ATM best effort service 96313
integrated services QoS model, implement. with IPv6 over ATM networks 74329
intell. leaky bucket algms. for sustainable-cell-rate usage param. control 107775
interact. fluid queues, joint distribs. 84934
interactive VoD over high speed networks 109381
Internet backbone, traffic meas. and anal. 119839
Internet-ATM network convergence in terms of QoS *(Polish)* 85321
internetwork, addressing schemes interworking 74036
interworking unit with ISDN/Ethernet interfaces 108356
IP+ATM switch router archit. for best-effort/guaranteed services, design 130501
IP in GSM, GPRS and UMTS mobile networks *(Polish)* 85866
IP opt. networks *(Chinese)* 109205
IP over ATM networks, fast incremental CRC codes updates 119128
IP over DWDM networks, mgt. issues 96024
IP QoS over GEO satellite systs. using MPLS 131311
IP scalable switching based on opt. interconnects 119847
IP service load routing with I-PNNI *(Chinese)* 95988
IP switching, perform. study 95776
IP transm. network technols., anal. 96012
IP unicast/multicast error perform. over ATM satellite link 107871
IP-over-ATM frame reassembly, hardware/software tradeoffs in integrated archit. 74262
IP-over-ATM networking, CAC and routing of QoS-aware and best-effort flows 107898

asynchronous transfer mode continued
IP-over-ATM networks, real-time cell arrival seq. estim./simul. 74195
IP-over-WDM network archits. 86003
IP/ATM and wireless environ., QoS/GOS mgt. meas. 108372
IP/ATM cut-through forwarding in dyn. routed networks 95905
IP/ATM integrat. expts./enhancements, IthACI project 73887
IP/ATM label-switched routing over random networks, flow generation 84956
IP/ATM router, traffic-based scheduling mechanism, queue model 119435
IP/ATM router, traffic-based scheduling mechanism and perform. anal. 95979
IPv6 address hierarchy linked label switching 73941
IPv6 to ATM flow mapping techs., simul. study 84991
IUSTA, prioritized multicast ATM switch 73768
knockout ATM switch with batcher network for multiple priority classes, perform. anal. 107650
label switching 95906
LAN, optimal switch and interconnection location 119122
LAN, signalling overview/perform. meas. 130401
LAN emulation, broadcast and unknown server perform. 85301
LANs, admission control for hard real-time connections 119585
large-scale ATM switches, queuing strategy 84828
leaky bucket generic flow control mechanism, large cyclic models soln. 95869
legacy IP appls. in an ATM-over-HFC access network, QoS 74338
LER, self-adaptive X/Y flow class. method 107833
link-state routing protocol for data services over ATM networks 84977
LOADNET project, migration of digital avionics data buses to low cost opt. data networks 133223
long range depend. testing/estim., pitfalls 73799
MAC adaptive protocol for satellite ATM 95923
MAC protocols for wireless multimedia services, perform. eval. 73961
MAC scheme with double-side scheduling for ATM-based PON 95883
managing selection of transm. archit. for backbone networks 85110
max-min flow control with min. rate guarantee, scalable/stable explicit rate allocation algm. 84844
meas.-based delay perform. estim. 73809
media cruising resource reservation protocol gateway 130381
microcellular networks, QoS supported frequent handover schemes design/anal. 107879
mil. commun., ATM and Internet via satellite 108164
MMCPP/GE/c queue with generalised service time distrib. 130318
mobile ad hoc networks, on-demand bandwidth QoS routing protocol 73975
mobile agent in ATM NMS 95893
mobile cellular networks, ATM cell transm. scheme 130194
mobile commun. systs., access network mgt./control by neural networks 108948
mobile computing protocol-based handover, formal spec. and verification 131232
mobile networks, connection rerouting enhancement model 85074
mobile networks, credit-based dyn. reservation integrated services multiple access 85886
mobile networks, MAC protocol with QoS guarantee 96591
mobile wireless networks, handoff, integrated approach 85673
mobile wireless networks, perform. models of handover protocols/buffering policies 108803
MPEG video appls. over wireless networks 130740
MPEG video sources, ATM MUX, simul. study 95767
MPEG-1 video traffic in ATM networks, model 84424
MPEG-2 streams, transm. using CBR channel of ATM network *(Polish)* 130941
MPLS and ATM networks, optimal virtual topol. config. for multicast 119163
MPLS network, flow-based traffic admission control algm. 95793
MPLS network, mobile IP service path re-routing algm. 130211
MPLS networks, VC-merge capable crossbar switch implement. 131029
MPLS over WDM networks, stds. activities 107834
MPLS-ATM switch for differentiated services 85244
MPLS-based ATM switching, differentiated service, packet discard algm. *(Chinese)* 73784
MPOA flow class. design and anal. based on neural network 95872
multi-plane switching network, archit., perform. *(Chinese)* 95770
multi-satellite form. flying satellites, network config. anal. 120093
multi-service backbone networks *(Polish)* 119412
multi-service networks, pricing policies 119567
multiagent-based reservation of backup VP 96133
multicast real time relay using ATM networks 85214
multicast switching, Batcher Banyan network with cell copy prep. 84848
multicast traffic scheduling in input-buffered ATM switch 119841
multicasting policies, Internet usage, perform. comparison 85275
multihop mobile networks, on-demand QoS routing 120069
multimedia commun. syst./dist. learning appl. 96285
multimedia conferencing, interconnected networks, modelling and simul. 96282
multimedia desk area network based on ATM technol., perform. anal. 96156
multimedia interactive satellite commun. syst., ATM cell/IP packet transm. 74880
multimedia satellite systs., on-board switching archits. 109014
multimedia stream proc. and commun., syst.-on-a-chip 130957
multiple input-queued switches, perform. eval. 107635
multiple priority per flow dual GCRA rate controller 119154
multiple protocol label switching, ATM/IP comparison *(Chinese)* 119287
multiple service class networks, cumulative switch delay effect 85430
multiple-criteria call admission control 95758
multiple-path ATM switch archit. for dyn. VC establishment 96327
multiplexed video traffic, packet delay modeling 84831
multipoint-to-point ABR service in ATM networks, merging algm. 119843
multiprotocol label switching, pot. for use in broadcasting *(German)* 119295
multiprotocol label switching network, flow-based admission control 130209
multiprotocol label switching networks, improved VC-merging method 130208
multiprotocol label-switching or single IP networks, traffic mgt. 108191
multistep scheduling strategy in input-queued switches *(Chinese)* 119157
MUX of video and data sources in ATM access network 73788
MUX with heterog. ON-OFF sources, perform. anal. 130237
MUX with large size buffer, call admission control *(Chinese)* 73785
NASA Ames Research Center network, simul. 96153
NEC ATOMIS 16 multiservice switching syst. 85435
neighborhood discovery protocol in commun. networks, distributed OO method 119365
network backbone 84835
network behavior simul. 107668
network CBR/VBR encoded digital video transport, perform. 84382
network congestion control by neural net 130527
network design, traffic models and optim.-based heuristics 84832
network flow control, lin. control approach 95796
network mgt., computational intell. 119480
network mgt. archit. cube model, ATM appl. 96054

nchronous transfer mode continued
network mgt. based on distributed AI 74114
network mgt. tool for monitoring ATM networks 85140
network simul., sync. and concurrent control 95795
network traffic modeling, discrete-time loss anal., overload probab. capture 73806
networks, IP multicast, SIMMT-II simulator 95787
new horizons with ATM *(German)* 84822
next generation Internet backbone router 130506
next-generation wireless/mobile networks, CAC mechanism for multimedia traffic QoS guarantee 131276
noisy network links, hybrid ARQ/FEC scheme 106117
non-blocking multiple input ATM switches for VBR bursty traffic, perform. anal. 96332
OBP satellites, broadcast congestion control 109015
OFDM bandwidth-efficient indoor wireless, channel equalization 131083
on-board scheduling for multimedia appls. 108418
OPITMA-1 Tbit/s ATM switching syst., adv. hardware technol. 109158
opt. core networks, future WAN archit. 96736
opt. networks, fault location methods review 120233
opt. packet switching networks, interfacing & sync. issues 120331
overlay network design problem for S-PVC connections 74050
packet discard schemes for differentiated services networks with ATM switching systs. 107903
packet generator in heteregeneous network environ. *(Polish)* 130195
packet networks, nonstationary offered-load model 84821
packet switched network, queue decay rate 84931
packet-switched networks, multicast trees under packet-replication restrictions 119164
PACS in Toolo Hospital, filmless radiology/surgery 88012
parallel ATM cell delineation for cell-based interface, anal. and design 95772
parallel data mining, dyn. rem. memory use on ATM-connected PC cluster *(Japanese)* 119596
parallel shared-memory simulator perform. for large ATM networks 95788
partial packet discard and early packet discard schemes in ATM switches, perform. model 119322
per-VC scheduling scheme in ATM networks, two-phased weighted fair queuing 107647
perform. improvement using OOC and 2^n prime seq. code with VBR 107644
perform. params. of ATM networks with bursts of errors 84820
perform. testing, frame-level meas. apparatus 131806
phasar-based packet WDM network archits., Internet/ATM protocols 96111
photonic core node based on 2.56 Tbit/s optoelectronic switching fabric 74501
ping-pong flow control, ATM implement. 73782
PNNI, PNNI perform. eval. 130823
PNNI networks, link state aggregation using shufflenet 74033
PNNI protocol, SDL-based hierarchical model for multicasting 95958
PON, opt. network unit controller, archit. design 131390
PON FTTx syst., broadband services delivery 108480
power syst. commun. network using SDH technol. *(Chinese)* 77137
prediction-based longest-queue-first scheduling algm. 130328
predictive congestion control, multiple sources/single buffer scenario 73780
PRIME ARQ for high-speed wireless ATM 73888
prioritised switch, fuzzy congestion controller design 73801
priority leaky-bucket regulator for VP traffic in ATM networks 108231
priority queueing syst., priority traffic servicing, simple fluid model 84928
professional broadcasting using ATM networks 109352
protocol and implement. of ATM over Ethernet 95891
PRouST, PNNI routing/simul. toolkit 119281
pseudo-Bayesian ALOHA algm. with mixed priorities 73920
QoS anal. for stat. MUX with Gaussian distributed and autoregressive input 84830
QoS in digital TV networking 97047
QoS model for ATM networks *(Chinese)* 108230
QoS networks, CAC algm. based on advanced round robin method 130181
QoS of rerouting algm. using stochastic automata networks 130489
QoS path-constrained-cost-optimized routing problem 74051
QoS routing in ad hoc networks 85089
QoS-aware routing in ATM/IP-over-ATM 74265
QoS/new archits. for future telecomms. networks 108166
QoSME, QoS mgt. and guarantees 95908
QS-CDMA, timing control algm. anal. 107746
queue length proportional assignment, joint buffer mgt./scheduling for switches 119238
queueing syst. with multiple delay and loss priorities for ATM networks 108496
radio local loop for broadband access 74607
rapidly deployable radio networks, end-to-end QoS provisioning 120043
rate adaptation buffer with Markovian arrivals 84922
RCC+ fast/reliable scheduler for QoS through service separation 73817
real-time multicast connection, integrated routing/CAC mechanism 119142
real-time transport of MPEG video in ATM networks 85352
reconfigurable component based network mgt., devel. framework 130676
restoration mechanisms comparison 108499
ring MAC protocol, hardware modeling/verification 74493
robust ABR control for uncertainties in long-range depend. traffic 107928
route inform.-based prioritization for ATM networks 95849
satellite ATM network, ABR congestion control algm. based on onboard proc. 96623
satellite link, dyn. bandwidth allocation, DAMA algm. 131307
satellite network, std. TCP mechanisms, expt. and anal. 130435
satellite traffic, throughput anal. and coding 85917
scalable access switches, perform. study 131032
scalable subband audio coding scheme for ATM environ. 84005
scalable survivable group commun. 107977
SDH, ATM and photonic networks, transport network technol. advances 131461
SDH-based ATM transport network, multi-layer network survivability strategies 130471
selective packet dropping, predictability/relative service differentiation support 73795
self similar traffic, cell loss probab. estim., fuzzy approach 130226
self-healing algm. for network reliab. enhancement 108317
self-similarity of computer network traffic *(Polish)* 130646
semi-Markov flow proc. queueing fluid model, bounds 84936
serial network, ABR service, flow control, buffer design *(Chinese)* 95768
shared buffer switches with arbitrary traffic distrib., exact anal. model 73802
shared knockout switch for hardware reduction under variable hot-spot traffic 130231
shared-buffer switches with grouped output channels, queuing anal. 73783
shared-memory switches, Markov chain model for replicate-at-send multicasting 73800

asynchronous transfer mode continued
shared-memory switches, replicate-at-send multicasting model 73791
SHR, capacity design, GA 84826
single routing of traffic demand 85065
smooth and adaptive forward erasure correction 84946
smooth/adaptive forward erasure correcting 119354
SOA gate opt. cell compressor, TDM/WDM photonic ATM switching systs. 86071
SOA-based Tb/s opto-electronic packet switch, WD/SD archit. 120371
SONET transcoder design for ATM over SONET or directly over fiber 85344
source-oriented topol. aggregation in hierarchical networks 96219
stat. MUX of self-similar sources 73810
stat. perform. guarantees for streaming flows using expedited forwarding 119254
stats. counter archit. anal. 130720
SuperPON, adaptive bandwidth allocation algm and delay perform. anal. *(Chinese)* 96731
switch, traffic control mechanism based on load of output ports 119130
switch controller, multicast fns., VLSI implement. 74495
switch core, act., reusable, rapid prototyping with PCI Pamette 96333
switch core for scalable perform., parallel packet forwarding archit. 119385
switch with per-VC queueing, connection admission control for real-time VBR service 130228
switches, multiple priority per flow dual GCRA rate controller 119132
switching nodes, on-off arrival procs., selective-delay push-in buffering for QoS 107638
switching syst. inter-proc. commun. network 131031
tactical network, CAC fn. 111594
TCP connections in wormhole routing and ATM networks 73933
TCP over ATM network, explicit react., early packet discard scheme 95954
TCP over ATM network, tightening of cell discarding method 95937
TCP over ATM-UBR service, effective recovery algm. for packet losses 84836
TCP perform. improvement by priority cell discarding 130210
TCP perform. improvement over ATM UBR service using modified selective drop buffer mgt. 119273
TCP perform. over end-to-end rate control/stochastic available capacity 119267
TCP/IP over ATM, acknowledgement mechanism 95896
TDM and packet tandem networks, anal. of service operations cost 74094
technol. and develop. *(Chinese)* 107665
telecomms. network component testing from phys. layer to appl. layer 74491
telecomms. network monitoring, chronicles discovering 108048
teleteaching and teleconferencing codec, IP and ATM networks 108390
third-generation mobile systs., neuron-based CAC for transport network 85840
time-crit. multimedia components and cell delay jitter 95798
time-slotted multihop mobile networks, connection admission control 131159
traffic classifier for QoS mgt., FPGA implement. 102098
traffic control, fuzzy logic controller 107649
traffic control, neural network training 96008
traffic shaping syst., PC interface fns. support 95757
transm. link under GoS constraints, capacity sharing between guaranteed- and best-effort services 84819
triple-DES network encryptor 106231
turbo codes for satellite and wireless ATM 72827
two stage frame dropping for scalable video transm. over data networks 107673
two-level wireless ATM network, heuristic algm. for optimal design 108646
UBR++, TCP perform. over ATM-UBR, packet discard scheme 107841
UMTS terrestrial radio access network, ATM/AAL2 transport 96437
UMTS/IMT-2000 cellular networks, transport archit. evol. 74676
unmanned aerial vehicles as commun. routing nodes, common data link 99116
US Army installations, inform. assurance archit. 111589
Usage Parameter Control using feedback fuzzy leaky bucket 96335
UTRAN, AAL2 protocol timer-CU, effect on traffic perform. 107947
variable length packet shapers 119844
VBR MPEG sources over ATM networks, policing method for Markovian traffic descriptors 73382
VBR real-time connections, QoS control 130214
VBR service networks, traffic params. estim. 130897
VBR video multiplex strategy *(Chinese)* 106728
VBR video over ATM, rate control simplification/implement. 106971
video retrieval over ATM access network under IPv6/RSVP protocols 130972
video streaming services on IP multicast *(Japanese)* 86340
video streams, resource allocation for deterministic services 129749
video traffic in cellular wireless ATM network, delay jitter perform. 74693
videoconferencing, interactivity and stabil. 108388
videoconferencing syst. optimum design 96251
VLSI modular archit. for video streaming real-time proc. 106826
VLSI packet switching fabrics, low-power syst.-level design, perform. specs. 74496
VoATM trunk traffic transfer scheme 85160
VoD server of quality syst. 131769
VoDSL, voice over DSL 74151
voice trunking, reliable soln. 96057
voice-over-Internet protocol, packet commun., digitised voice sigs. *(Italian)* 130602
VP restoration, novel rerouting algm. 73767
VP routes program, tabu search method *(Chinese)* 74029
VP trees, multicast demand aggregation 84834
VP-based ATM networks, random early blocking routing 107959
VP-based restoration scheme for multiple restorability levels 130236
VPN using frame relay 107795
WATM networks, improvement of CBR service playback buffer mechanism 131214
WATM/CDMA protocol, MAC layer anal. 73899
WDM networks, novel opt. IP router archit. 96876
WDM PON, wavelength assignment schemes 96741
WDM SDM opt. switch based on parallel reservation scheme 96839
WDM ultra-dense networks, modular switching archit. for packet transport 131618
Weibull model for weighted distrib. of residual failure data 96242
wide area collaboration of public ATM networks and CATV local networks 85213
wireless ATM, BBA filter and IF transceiver 74538
wireless ATM, cell delineation, anal. and implement. algm. 95777
wireless ATM, handoff rerouting schemes, perform. issues 85672
wireless ATM, handover quality effect on buffering requirements 85845
wireless ATM, hybrid ARQ/FEC scheme 95915
wireless ATM, hybrid II ARQ schemes using punctured RS code, perform. 119286
wireless ATM, LAN emulation model 85293
wireless ATM, QoS oriented data-link control protocol for CBR traffic 130422

asynchronous transfer mode continued
wireless ATM, resource allocation during handover with dyn. guard bandwidth 108567
wireless ATM access networks, CLR perform. of random traffic and error control 108644
wireless ATM network, design optim., GA 131225
wireless ATM network, handover algm. considering user's mobility pattern 85659
wireless ATM network, handover perform. of VBR sources 108749
wireless ATM network archits. 85292
wireless ATM network cell assignment, genetic algm. approach 95762
wireless ATM networks, connection rerouting 130732
wireless ATM networks, high-speed PVC-based handover control 119838
wireless ATM networks, optimal MAP 85015
wireless ATM networks, rerouting techs. and signalling for handoff 108748
wireless ATM networks, service and network mgt. strategies 74096
wireless ATM networks and mobile IP 131192
wireless ATM/AAL2 over burst error channel, perform. anal. 120075
wireless broadband networks, intell. control of QoS adaptation 131223
wireless commun. network infrastructure, evol. 85881
wireless CPN, efficient location mgt. protocol 84974
wireless links, real-time traffic, dyn. WFQ scheduling 96407
wireless multimedia services, robust multiple access control 130348
wireless multimedia services network, multiple access control 85653
wireless network, compensation modeling for QoS support 74530
wireless network, throughput enhancing techs. 96358
wireless network, two-phase combined QoS-based handoff scheme 131259
wireless networks, adaptive FEC scheme for data traffic 117952
wireless networks, bandwidth/buffer dimensioning for guaranteed QoS 96351
wireless networks, DLC strategies with flexible error control 107838
wireless networks, efficient QoS guaranteed MAC protocol 107809
wireless networks, in-band signaling based local/global handovers 108793
wireless networks, punctured turbo codes with unequal error protection appl. 83886
wireless networks, QoS mgt. using large deviation principle 85736
wireless networks, quantitat. comparison of multiple access control protocols 95874
wireless networks, resource allocation based on joint packet/call levels QoS constraints 74682
wireless networks, signaling/transm./traffic mgt. 107869
wireless networks, stochastic control of path optim. for inter-switch handoffs 85729
wireless opt. receivers, dyn. range boosting, transimpedance amp. 109073
wireless pers. multimedia commun., conf., Bangkok, Thailand (Nov. 2000) 89557
wireless scheduling algms. and practical implement. issues 107790
wireless switch using priority-based dyn. capacity allocation, perform. eval. 73807
wireless-ATM syst., multimedia traffic, DQRUMA MAC protocol 85063
WLAN, QoS-oriented dyn. channel assignment method 85304
wormhole IP over (connectionless) ATM 130500
xDSL network bandwidth meas. 130997
$LiNbO_3$ waveguide based opt. packet switching matrix, ATM *(Chinese)* 75010

AT bus *see system buses*

ATM communication *see asynchronous transfer mode*

atmospheric acoustics
conf., computational acoustics, Rome, Italy (1999) 100384
F_2 layer infra-sonic wave disturbance due to typhoons 76893
MM-wave meteoradar, atm. radioacoustic sounding 88158
radio-acoustic/acoustic sounding, fluct. effective centers 133292

atmospheric aerosols *see aerosols*

atmospheric chemistry
tropos. chem. meas., Imaging Geostationary Fourier Transform Spectrometer 133327

atmospheric duct *see atmospheric electromagnetic wave propagation*

atmospheric dynamics *see atmospheric movements*

atmospheric electricity
see also atmospheric electromagnetic wave propagation; atmospheric ionisation; electrojets; lightning; thunderstorms
balloon-born electrometer, cloud high-resoln. atmos. elec. field meas. 76888
ELF band seismic EM radiation, sig. proc. and sonification 122602
space plasma data, time series anal. using HOS *(English)* 122678
sprite min. plasma dens. determined by VLF scatt. 76872

atmospheric electromagnetic wave propagation
see also atmospheric light propagation; ionospheric electromagnetic wave propagation; magnetospheric electromagnetic wave propagation; tropospheric electromagnetic wave propagation
48/47 GHz, 30/20 GHz, and IMT-2000 freq. bands, stratos. commun. syst. 108778
GPS radiosignals, direct, land surface refl. 83321
high-altitude platform systs., radiowave propag. effects 74592
LOS microwaves links clear air perform., computer anal. 105764
microwave sigs. propag. above sea, opt. visibility range, space/time struct. 117692
MM-wave-beam propag. along intersatellite path crossing limb area 117691
mobile stratos. commun. systs., fading channel model 108752
periodic spatial patterns in random media, backscatt. response 99006
radio noise, meas. and anal. *(Chinese)* 72363
scintillation intens./spectrum, wind effects 83308
stochastic inform.-transm. systs., multiplicative interf. anal. 105814
unified approach in semi-infinite atmos. 72297
VHF backscatt. from stable/turbulently mixed tropical layers 128766
VHF/UHF radio waves propag. studies in south Baltic area 83298
wideband gapfiller satellite commun. link, propag. effects 108974
wind field characterisation with time/space high resoln. 72212

atmospheric humidity
see also hygrometers
1-NaphDATA hole transport layers, aging-induced traps, TSC meas., LED appls. 69616
1-Wire addressable digital instrums. for environ. monitoring 88149
50 GHz propag. expt. using satellite beacon and radiotelescope receiver 94036
act. microwave occultation method, O_3 and humidity determ. 122646
air conditioned atmos., Forane 134a/CO_2 concs. discrim., electronic nose 132062
α-NPD hole transport layers, aging-induced traps, TSC meas., LED appls. 69616
Antarctic Plateau sites, IR-submm astron. 105747
Antarctica, water vapour, transport, SSM/T2 rem. sens. 98991
Calcutta, mean temp. eval., mm radiosonde data, water vapour content 76852
DIAL lidar rem. sens. & spectrosc., pulsed LD use 122663

atmospheric humidity continued
fiber-based lidar, atmos. water-vap. meas. 111415
forecasting appl. of ground-based GPS water vapour estim. 111428
geostationary atmos. sounding instrum. 133326
GPS estim. 111430
GPS radio occultation atmos. sounding, temp/humidity struct. 122666
GPS real-time national networks, atmos. sens. 111429
GPS/MET bending angle obs., optimal estim. inverse method appl. 122679
ground-based aperture synthesis obs., atm. water vap. correction 97039
Ka-band radiometer for tropos. water vap. meas. 133333
LEANDRE II airborne lidar, tropos. water-vap. profiling, syst. description 111417
LEANDRE II airborne lidar, tropos. water-vap. profiling meas. 111418
LOS water vap. meas. validation with GPS 76890
Mauna Kea, atmos. water vapour meas. using IR radiometer 88125
Microwave Radiometer for Cloud Carthography, 22-channel radiometer 122649
mm waves, anom. refr., humidity fluctuations. 105734
moist tropos. radio occultation sigs. modeling/inversion 76889
Nigeria, VHF radio propag. and meteorological conditions 83282
PBL ozone/water-vap. meas. by Raman lidar 88185
precipitable water vap. determ. from GPS propag. delays 76851
real-time water vapour estim. in German GPS network 111427
rem. sens., satellite IR radiometry 98964
rem. sens., SSM/T2 microwave radiometry, Antarctica 98991
skin soil moisture, SSM/I quantitat. estim. 98980
slant path scintillation intens. prediction using GPS data 85918
Taipei, precipitable water vapour, GPS receiver meas., microwave radiometry 72315
turbulence meas. syst., meteorological param. *(Chinese)* 76882
water vapour mixing ratio and O_3 meas. by solar blind Raman lidar 76901
water vapour profile retrieval from single GPS station 76855
water vapour profiling, operational ground-based act./pass. rem. sens. 76866
wide area DGPS networks, integrated water vap. determ. 120088
KrF laser based lidar for boundary layer water vap. meas. 76854
Tm-doped fibre laser intracavity absorpt. spectrosc., water vapour detector appl. 76897

atmospheric ionisation
ionos. VLF sigs. propag., total solar eclipse effects 117688
sprite min. plasma dens. determined by VLF scatt. 76872
thunderstorm cloud, ionized electrons, anom. RF EM pulse, EAS generated 83352

atmospheric light propagation
785/1550 nm laser beam propag. in fog/haze for opt. wireless commun., comparison 86111
airborne laser rangefinder syst. perform., simul. & optimal design 122757
broadband local services using free-space opt. links, network business perspective 86114
coded free-space opt. commun. through atmos. turbulence channels, pairwise codeword error probab. 131621
correl. turbulent free-space opt. channels, max.-likelihood spatial-diversity reception 75066
dual-color laser satellite ranging, refr. limitations 128630
dual-conjug. adaptive optics 128786
fluct. characts. for opt. wave propag. in atmos. turbulence *(Chinese)* 105769
free space opt. technol./distrib. archit. for broadband metro/local services 86115
IR indoor wireless channel charactn. by meas. 109224
irradiance PDF, laser beam propag. through turbulent media 117702
lidar syst. for atmos. aerosol extinction and turbulence profiles meas. 133289
local space vol./large space scale lidar meas., adaptive methods 120466
long-range laser illum. imaging, clandestine nighttime surveillance 83068
midtropospheric aerosol backscatt. background mode, space-based/airborne lidars appl. 131674
monostatic lidar in weak-to-strong turbulence 96999
Moon-to-Earth high-bandwidth opt. data link 86116
opt. pulse and beam propag., conf., San Jose, CA, USA (Jan. 2001) 124184
opt. wireless propag., theory vs. expt. 86112
optoelectronic surveillance systs. effectiveness, aerosol residues influence 117703
OTH opt. data-transm. syst., propag. medium effects 109222
Rytov method for opt. scintillation modelling in atmos. turbulence 94049
stratos. aerosol meas. with L625 Mie lidar *(Chinese)* 122665
sub-picosecond UV laser pulse filamentation, nonlin. propag. 82785
twisted NLC display phase screen, atmos. turbulence simul. 104827
ultra-short high-power laser pulse propag. in air, lidar eqn. modifs. 120462
upper atm. wind vel. meas., stellar scintillation patterns anal. 133283
CO_2 laser based trace gas analyzer 76927

atmospheric measuring apparatus
see also ionospheric measuring apparatus; meteorological instruments
act. microwave occultation method, O_3 and humidity determ. 122646
act. opt. true airspeed sens., precursor expt. 76873
adaptive opt. syst., adaptive control algm. anal. *(Chinese)* 76850
airborne A-band spectrometer, aerosol & cloud opt. prop. rem. sens. 122629
AIRS hyper-spectral IR sounder for weather forecasting 133325
Atmospheric Infrared Sounder, prelaunch perform. charact. 122645
balloon, buoyancy-controlled, ACE-2 111412
CCD imaging radiometer, bidirectional reflectance distrib. fn. meas. 111409
CW bistatic laser Doppler wind sens. 76849
direct-detect. mid-IR random-modulation CW lidar SNR 131678
Durban atmos. LIDAR program 133284
Earth orbiting scatterometers, multiprocessor DSP 133334
eyesafe indust. fibre lidar, rem. sens. appls. 99034
Fabry-Pérot interferometer with CCD recording of aurora 88134
fiber-based Doppler lidar airborne turbulence sens. *(Japanese)* 99004
FM-CW radar atmos. profiler, dedicated computer syst. 76902
formaldehyde, atmos., conc. meas. by laser absorpt. spectrosc. 76936
FORTE photodiode detector+CCD imager, space-borne lightning obs. 133294
FTIR spectrometer, pass. rem. chem. vap. monitoring 99033
geostationary atmos. sounding instrum. 133326
GLAS spaceflight instrum. fiber optic syst. components testing/reliab. 104633
hyperspectral imaging polarimeter, design changes, flight meas. 76878
hyperspectral imaging polarimeter, rem. sens., limitations, uncertainties 76879
IR radiometer for water vapour meas., Mauna Kea 88125
IR sounder technol. trends 133324
Ka-band radiometer for tropos. water vap. meas. 133333
Kolmogorov turbulence-induced phase distortions corrections, adaptive mirror perform. 88135
L-band spaceborne radiometer-radar for land/ocean surface monitoring 133332
LEANDRE II airborne lidar, tropos. water-vap. profiling meas. 111418

mospheric measuring apparatus continued
LEANDRE II airborne lidar, tropos. water-vap. profiling, syst. description 111417
lidar methods, conf., Sendai, Japan (Oct. 2000) 100442
lidar syst. for atmos. aerosol extinction and turbulence profiles meas. 133289
long-range low-coherence pulsed Doppler lidar, ref.-beam storage 88151
LW atmos. radiation, sky-scanning radiometer meas., blackbody calibrated pyrgeometer 76877
magnetos., current dens. coil instrum. 111414
micro-pulse lidar syst., atm. aerosols meas. 111421
MICROTOPS II, handheld ozone monitor and Sun photometer 111433
Microwave Radiometer for Cloud Carthography, 22-channel radiometer 122649
microwave sounding unit, NOAA, atmos. temp., recalibration 98990
MIPAS, Michelson Interferometer for Passive Atmospheric Sounding, profile retrieval 111419
MIPAS onboard ENVISAT, flight model perform., calib. & charactn. 122630
MM-wave meteoradar, atm. radioacoustic sounding 88158
MM/microwave 5-freq. antenna, spaceborne limb sounder 88145
OMI ozone monitoring instrum., design & capabilities 98975
opt. rem. sens., fly-eye design advances 122676
overhead line arc fault detect./location using induced VHF sferics 77665
PARABOLA III, land/atm. bidirectional obs. 111410
PBL ozone/water-vap. meas. by Raman lidar 88185
plasmasphere, satellite elec. field antennas, elec. stabil. 111413
pyrgeometer, clear sky detect. 133293
pyrheliometer calib., factors affecting accuracy 111425
radar antenna, Yagi interlaced phased array 98977
rain-induced lidar depolarization, atmos. icing meas. 133286
real-time DIAL meas. using 1-kHz-repetition-rate tunable laser 133290
SeaWinds, QuikSCAT wind scatterometer 133330
SeaWinds scatterometer follow-on mission, advanced design 133331
self-calib. prog. mobility spectrometer, atmos. ion meas. 98995
SGLI sens. for GCOM, multiband medium spatial resoln. imager 122627
Shack-Hartmann wavefront sens., realistic atmos. turbulence, slope meas. error *(Chinese)* 122664
space-based ozone rem. sens., solid state UV laser develop. 98981
spaceborne instrum. radiometric calib., thermal vac. facility 122632
spaceborne precip. radars, second generation 133329
SPARCLE telescope, metrology of opt. beam expander 109302
Strategy Builder software for atmos. retrievals 133322
stratos./upper tropos. aerosol and O_3 opt. monitoring 88148
TOMS-5 total ozone mapping spectrometer, radiometric calib. 122633
transportable multiple-mirror Rayleigh/Raman LIDAR 76899
TRMM CERES thermistor bolometer sens., lunar radiance broadband meas. 122644
tropos. chem. meas., Imaging Geostationary Fourier Transform Spectrometer 133327
tropos. emission spectrometer ground syst. 133319
Tropospheric Emission Spectrometer ground data syst., sci. data visualization 133323
turbulence meas. syst., meteorological param. *(Chinese)* 76882
wind sens. with integrated interface electronics 86775
CO_2-TEA laser based LIDAR-DIAL syst. for O_3 dyn. in Madrid urban atmos. 76937
GaAs hybridized QW IR photoconductors arrays at Goddard Space Flight Center 86657
KrF laser based lidar for boundary layer water vap. meas. 76854
O_3, satellite rem. sens., Aura tropos. spectrometer 76876
Tm-doped fibre laser intracavity absorpt. spectrosc., water vapour detector appl. 76897
WO_3, ozone sens., sens. drift, meas. correction method 86710

tmospheric movements
see also wind
Antarctica, water vap. transport, SSM/T2 obs. 98991
Durban atmos. LIDAR program 133284
F2-layer max. height, long. var., neutral wind component separation 98999
Great Lake-induced thermal circ., SAR imaging 88154
ionos. irreg. diagnostics from MF/HF radio echoes 122655
ionos. macroscale inhomogeneities and radio sounding 105730
ionos. movements, bitemporal response fn. method 88128
lower thermos. over Svalbard, ion-drag induced neutral instabil. 120443
tropical convection, C-band polarimetric radar obs., propag. effects correction 72318
tropos. scatt. layers, multiple-freq. range imaging 122652
Typhoon Alex 1987, single-Doppler radar obs., kinematic struct. retrieval 86233
VHF tropos. radar data, spaced antenna/Doppler beam steering methods 133317
VHF ultrahigh-resoln. atm. radar profiling, freq. diversity 122653
VHF/UHF radio waves propag. studies in south Baltic area 83298

atmospheric noise *see atmospherics*

atmospheric optics
see also atmospheric light propagation; sunlight
adaptive opt. syst., adaptive control algm. anal. *(Chinese)* 76850
aerosol charact., lidar develop. and expt. research *(English)* 99003
aerosols, laser rem. diagnostics, backscatt. spectrum reson. method 122703
airborne A-band spectrometer, aerosol & cloud opt. prop. rem. sens. 122629
cirrus clouds, pristine/deformed hexagonal ice prisms, lidar returns 111424
cloud polaris. prop. effect on target discrim., composite image 133406
cloud sounding, lidar sig. anal., multiple scatt. case 122662
cloud water content & droplet diam., multiply scatt. lidar returns 98982
conf., Barcelona, Spain (Sept. 2000) 89539
conf., Tomsk, Russia (July 2000) 89536
dust and aerosols, ground-based lidar meas. 111421
forward-looking airborne camera image degrad., phys.-based color image enhancement approach 129508
GOES 10 cloud opt. prop. retrievals for vert. varying microphysics 133295
IR images, human target detect., atmos. blur/noise distortion/Wiener filter restoration 84156
irradiance-based method appl. for atmos. environ. obs. *(Chinese)* 76883
Kolmogorov turbulence-induced phase distortions corrections, adaptive mirror perform. 88135
mid-IR holographic correction by opt. addressed liq. cryst. SLM 105606
mid/upper stratos., temp. meas., Rayleigh scatt. lidar *(Chinese)* 76881
particle charactn. from 3-wavelength Raman-lidar obs. 128624
probing, laser light scatt. spectral struct., nonresonant lidars 133366
real-time DIAL meas. using 1-kHz-repetition-rate tunable laser 133290
satellite image restoration success criteria 98954
satellite rem. sens. data, atmos. correction, aerosol extinction profiles influence 88123
atmospheric optics continued
Shack-Hartmann wavefront sens., realistic atmos. turbulence, slope meas. error *(Chinese)* 122664
stratified media, laser sounding, multiple scatt., sig. depolarization 88147
stratos./upper tropos. aerosol and O_3 opt. monitoring 88148
transportable multiple-mirror Rayleigh/Raman LIDAR 76899
turbulence meas., angle of arrival fluct., intens. scintillations 76898
turbulent atmos., adaptive phase compensation, synthetic image methods 133299
water vapour mixing ratio and O_3 meas. by solar blind Raman lidar 76901
White Sands Missile Range IR imagery data, turbulence-induced edge image waviness 75604
wind detect. lidar, beam scanning tech., inversion method *(Chinese)* 99002
CO_2-TEA laser based LIDAR-DIAL syst. for O_3 dyn. in Madrid urban atmos. 76937
I_2 atmos. monitoring using Cu vap. pulse laser radiation 133288

atmospheric pollution *see air pollution*

atmospheric precipitation
see also rain; snow
cloud water content & droplet diam., multiply scatt. lidar returns 98982
GPS local network/microwave ground-based radiometer for precipitable water vapour assess. 83276
insulator salt contaminants, dist. from sea, stat. method, Korea *(Korean)* 123038
melting-layer altitude, radar reflectivity profiles 76871
meteorological radar, digital sig./image proc. 106834
microwave rem. sens., conf., Sendai, Japan (Oct. 2000) 89531
MM wave pulse Doppler radar, suppression of interf. from hydrometeors 109249
oceanic regions, coastal buoy GPS tracking, absol. precipitable water estim. 133291
phased array radar weather clutter simul. 96973
radar polarimetry, bulk hydrometeor class. 76869
radar reflectivity profiles, melting-layer altitude 76871
radar rem. sens., neural net class. 76853
Slovenian hydroelectric power plant water inflow forecasting *(Slovenian)* 123234
tropos. clouds & precip. monitoring, dual-polaris. scanning lidar 98983

atmospheric spectra
see also atmospheric optics
Atmospheric Infrared Sounder, prelaunch perform. charact. 122645
DIAL lidar rem. sens. & spectrosc., pulsed LD use 122663
limb sounder radiometry, atm. obs. inversion using NNs 133316
MIPAS, Michelson Interferometer for Passive Atmospheric Sounding, profile retrieval 111419
temp. profiling using pure rot. Raman scatt. lidar 122660
CO_2 laser based trace gas analyzer 76927

atmospheric techniques
see also ionospheric measuring apparatus; ionospheric techniques; meteorological instruments
act. microwave occultation method, O_3 and humidity determ. 122646
ACUIM, atmos. correction using imbedded models 76861
adaptive opt. syst., adaptive control algm. anal. *(Chinese)* 76850
aerosol charact., lidar develop. and expt. research *(English)* 99003
aerosol size distrib. retrieval, multiwavelength lidar data 76848
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
air quality impact studies, baseline data collection 99005
aircraft flight, air turbulence sig. simul., appl. 111324
AMPTE magnetopause crossings, improved boundary normal calcs. 122639
atmos. pollutants conc. meas. by LIDAR/DIAL gas detect., water vapour detect. calib. 76939
Aura project TES instrum., ground data systs./flight operations 133320
bidirectional reflectance distrib. fn., atmos. correction 76958
cloud, liq. water, ground-based microwave rem. sens. 111432
cloud aircraft and ship based meas. 122648
cloud sounding, lidar sig. anal., multiple scatt. case 122662
cloud top height retrieval, AVHRR data, lidar obs. 88150
cloud water content & droplet diam., multiply scatt. lidar returns 98982
coherent lidar high-resoln. Doppler vel. profiles retrieval 122661
convective turbulence, sea-surface SAR imaging method 88146
CW bistatic laser Doppler wind sens. 76849
CW-cavity ring down spectrosc., ultra-sensitive atmos. trace detect. 76935
D_{st} geomag. index forecasting, adaptive nonlin. systs. ident. 122640
DIAL, pseudo-random code-based, LWIR, QC laser, intens. modulation 111426
DIAL lidar rem. sens. & spectrosc., pulsed LD use 122663
Doppler meteorological radar, sig. freq. shift meas. 122636
Earth obs. systs., conf., San Diego, USA (Aug. 2000) 111400
Earth-satellite links, spaceborne IR/microwave radiometry for near real-time rainfall atten. monitoring 117677
ELF/VLF-noise radiation sources, narrow-sector finding 88137
EM/acoustic waves, wind field characterisation with time/space high resoln. 72212
Envisat, Europe environ. obs. satellite 76837
falling raindrops, radar/scatt. params. 88152
fiber-based lidar, atmos. water-vap. meas. 111415
flow field constituents direct meas. by spontaneous Raman imaging tech. *(Chinese)* 121259
forest fire smoke, AVHRR imagery, neural nets 122607
formaldehyde, atmos., conc. meas. by laser absorpt. spectrosc. 76936
geomag. storm forecasting, power syst. risk mgt. 111984
GIC impact on NGC transm. syst. 111985
Global Change Observation Mission, objectives & instrum. 122626
GPS appls., conf., Tsukuba, Japan (Oct. 1999) 113270
GPS meteor. method, grazing points *(Chinese)* 98979
GPS radio occultation atmos. sounding, temp/humidity struct. 122666
GPS real-time national networks, atmos. sens. 111429
GPS refl. tech., sea state and surface winds determ. 88155
Great Lake-induced thermal circ., SAR imaging 88154
hydrocarbons, Raman lidar monitoring, theory 76858
hydrometeor class., radar polarimetry data 76869
hyperspectral data anal., mitigation of atmos. effects 76863
hyperspectral imagery, atmos. correction algm., adjacency effect 97169
hyperspectral imaging polarimeter, rem. sens., limitations, uncertainties 76879
hyperspectral rem. sens., conf., Sendai, Japan (2000) 89538
illuminance prediction techs., BRE-IDMP dataset 89427
image archives, query-by-shape 122668
irradiance-based method appl. for atmos. environ. obs. *(Chinese)* 76883
LEANDRE II airborne lidar, tropos. water-vap. profiling meas. 111418
lidar methods, conf., Sendai, Japan (Oct. 2000) 100442
lidar rem. sens., 2 μm, modelling 76887
lightning imaging sens. aboard tropical rainfall measuring mission, ground validation *(Japanese)* 122681

atmospheric techniques continued
lightning location, range-difference and direction-finding methods 88144
lightning strike dist. determ., pulse EM method 122647
limb sounder radiometry, atm. obs. inversion using NNs 133316
LOS water vap. meas. validation with GPS 76890
low elevation angle radio wave bending angles determ. 76891
LW atmos. radiation, sky-scanning radiometer meas., blackbody calibrated pyrgeometer 76877
magnetos. magnetometer data, wavelet anal. results 122642
marine boundary layer wind, inverse method soln. 76895
marine boundary layer wind determ. with spaceborne scatterometer 76894
mesos., DROPPS, rocket-radar-lidar research expt. 88124
mesos.-stratos.-tropos. radar echoes interp. 133318
micropulse imaging lidar design, computer simul. 122659
microwave refr., near water surface, diagnostics 117693
microwave rem. sens., conf., Sendai, Japan (Oct. 2000) 89531
microwave sounding unit, NOAA, atmos. temp., recalibration 98990
mid/upper stratos., temp. meas., Rayleigh scatt. lidar *(Chinese)* 76881
middle atm. dens./temp. profiles determ., lidar/occultation meas. 88130
MM-wave radiometry for rem. sens. of atmos. plumes 76856
MM-wave-beam propag. along intersatellite path crossing limb area 117691
MODTRAN4, radiative transfer modeling for rem. sens. 76830
moist tropos. radio occultation sigs. modeling/inversion 76889
moisture, satellite IR radiometry rem. sens. 98964
multispectral satellite data, atmos. ocean syst. state estim. 98946
neutral wind component separation method, F2-layer max. height var. 98999
oceanic wind field, pencil-beam conical scanning scatterometer anal. 76896
opt. methods, conf., Barcelona, Spain (Sept. 2000) 89539
opt. methods, conf., Tomsk, Russia (July 2000) 89536
opt. rem. sens., fly-eye design advances 122676
overhead line arc fault detect./location using induced VHF sferics 77665
ozone conc. profile monitoring solar-blind Raman lidars 76847
pass. rem. chem. vap. monitoring, FTIR spectrometer 99033
PBL ozone/water-vap. meas. by Raman lidar 88185
periodic spatial patterns in random media, backscatt. response 99006
photonics technol. appls., conf., Quebec City, Quebec, Canada (June 2000) 89534
pollution monitoring, conf., Boston, USA (Nov. 2000) 89541
pollution plumes, hyperspectral imagery, matched filters 99035
precip., radar rem. sens., neural net class. 76853
precipitable water estim. using coastal buoy-based GPS receiver 133291
precipitable water vap. determ. from GPS propag. delays 76851
radar, freq. radar domain interferometric imaging 98985
radar, low range sidelobe pulse compression 98988
radar, spaceborne, clutter, antenna sidelobes 122673
radar sigs., higher order spectral estim. 122670
radio-acoustic/acoustic sounding, fluct. effective centers 133292
rain, C-band radar, rain atten. correction 122672
rain, melting-layer altitude, radar reflectivity profiles 76871
rain, microwave radiometry, rain horiz. distrib. 122669
rain, radar polarimetry, 5 cm, sensitivity anal. 76870
rain, radar polarimetry, spherical and spheroidal water scatterers 86204
rain-induced lidar depolarization, atmos. icing meas. 133286
raindrop shape, radar polarimetry algm. 76868
rainfall, microwave radiometry, subgrid cloud, downscalling 98993
rainfall patterns forecasting, regularized Gaussian mixture models *(English)* 122637
real-time DIAL meas. using 1-kHz-repetition-rate tunable laser 133290
rem. sens., conf., Sendai, Japan (Oct. 2000) 89537
rem. sens., conf., Warsaw, Poland (July 2000) 113260
SAR workshop, Florence, Italy (25-26 Feb. 1998) 78436
SAR/scatterometer combination for, marine boundary layer study 86218
satellite rem. sens. data, atmos. correction, aerosol extinction profiles influence 88123
satellite-to-satellite path, atm. monitoring 122635
SeaWiFS ocean/atm. products, sun glint contamination correction 133287
skin soil moisture, SSM/I quantitat. estim. 98980
space solar cells, ground level sunlight calib. 112964
space-based ozone rem. sens., solid state UV laser develop. 98981
spectral/spatial rem. sens. and inform. content within Vis-SWIR hyperspectral imagery, thin-cloud effects 76864
sprite min. plasma dens. determined by VLF scatt. 76872
STEM-II air quality model on distributed memory syst. 133297
stratified media, laser sounding, multiple scatt., sig. depolarization 88147
stratos. aerosol meas. with L625 Mie lidar *(Chinese)* 122665
stratos./upper tropos. aerosol and O_3 opt. monitoring 88148
surface temp. and emissivity separation, atmos. compensation 76860
temp., IR spectrometry rem. sens., spectral mixtures 99058
temp., microwave vert. profiling, priori data 122671
temp., soil-vegetation, multiangle IR rem. sens. 111411
temp. profiling using pure rot. Raman scatt. lidar 122660
tornadoes, USA, 3 mm Doppler radar obs., radar upgrading 98996
tropos. clouds & precip. monitoring, dual-polaris. scanning lidar 98983
tropos. emission spectrometer ground syst. 133319
tropos. radio occultation sigs. tracking from LEO 76892
Tropospheric Emission Spectrometer, ground data syst. develop. 133321
turbulence meas., angle of arrival fluctS., intens. scintillations 76898
turbulent atmos., adaptive phase compensation, synthetic image methods 133299
upper atm. wind vel. meas., stellar scintillation patterns anal. 133283
upper atmos. wind vel. meas. by speckle-correl. calc. method 133285
urban area atmos. aerosol monitoring by two-wavelength lidar 76900
vegetation, climate responses, AVIRIS rem. sens. 98986
VHF impulsive terrestrial sigs., sources location determ. 122651
VHF ultrahigh-resoln. atm. radar profiling, freq. diversity 122653
VIS-SWIR hyperspectral data, perform. assess. of atmos. correction algms. 76862
VIS-SWIR hyperspectral data anal., atmos. correction algms. 98974
water vap. estim. from GPS data 111430
water vapour, Antarctica, SSM/T2 rem. sens. 98991
water vapour meas. using IR radiometer, Mauna Kea 88125
water vapour mixing ratio and O_3 meas. by solar blind Raman lidar 76901
water vapour profile retrieval from single GPS station 76855
wavelength calib. and instrum. line shape estim. of LWIR hyperspectral sens. from in-scene data 76859
white light continuum/ultrashort pulse atmos. gas trace detect. 76934
wind, complex terrain, Doppler radar, real-time synthesis 98997
wind detect. lidar, beam scanning tech., inversion method *(Chinese)* 99002
wind direction, airborne microwave polarimetry method 98987
winds, marine, satellite radar, ocean relative motions 99018

atmospheric techniques continued
worldwide lightning mapping with ELF tomography 88142
CO_2 laser based trace gas analyzer 76927
H_2, lidar rem. sens. 76857
I_2 atmos. monitoring using Cu vap. pulse laser radiation 133288
I_2, lidar rem. sens. 76857
O_3, Arctic stratos., lidar, Lagrangian reconstruction 98989
O_3, satellite rem. sens., Aura tropos. spectrometer 76876
O_3, tropos., simultaneous DIAL-null profiling method 133296
Tm-doped fibre laser intracavity absorpt. spectrosc., water vapour detector appl. 76897

atmospheric temperature
act. microwave occultation method, O_3 and humidity determ. 122646
Calcutta, mean temp. eval., mm radiosonde data, water vapour content 76852
Durban atmos. LIDAR program 133284
fixed tilt flat-plate PV modules, thermal charact. model 112977
geostationary atmos. sounding instrum. 133326
GPS radio occultation atmos. sounding, temp/humidity struct. 122666
GPS/MET bending angle obs., optimal estim. inverse method appl. 122679
GPS/MET radio occultation data anal. and validation 122680
ground temp., satellite IR radiometry rem. sens. 98964
LW atmos. radiation, sky-scanning radiometer meas., blackbody calibrated pyrgeometer 76877
Microwave Radiometer for Cloud Carthography, 22-channel radiometer 122649
microwave radiometry, vert. profiling, priori data 122671
microwave sounding unit, NOAA, atmos. temp., recalibration 98990
mid/upper stratos., temp. meas., Rayleigh scatt. lidar *(Chinese)* 76881
middle atm. dens./temp. profiles determ., lidar/occultation meas. 88130
MIPAS, Michelson Interferometer for Passive Atmospheric Sounding, profile retrieval 111419
MM-wave meteoradar, atm. radioacoustic sounding 88158
Nanjing daily peak load forecast, summer air temp. anal. *(Chinese)* 111970
Nigeria, VHF radio propag. and meteorological conditions 83282
PV module perform. eval., outdoor meteorological broadband/spectral conditions 112943
radio wave scatt. and temp. data wavelet anal. 128779
rem. sens., IR spectrometry, spectral mixtures 99058
rem. sens. of atmos. plumes with MM-wave radiometer 76856
Saharian Fishing Bank, tropos. EM wave propag. 72336
soil-vegetation temps., multiangle IR rem. sens. 111411
stratos., long-term temp. changes, lidar data and NCEP anals. 76885
temp. profiling using pure rot. Raman scatt. lidar 122660
tropos. temp. 1979-98, radiosonde vs. satellite datasets comparison 98973
turbulence meas. syst., meteorological param. *(Chinese)* 76882
Nd:phosphate glass Shenguang III laser prototype, residual thermo-opt. distortions *(Chinese)* 105237

atmospheric wind *see wind*

atmospherics
see also atmospheric electromagnetic wave propagation; whistlers
arc welder induced current/radiation transients 100349
coherent M-ary signaling in impulsive noise, optimum detector 85512
ELF band seismic EM radiation, sig. proc. and sonification 122602
ELF natural noise, derived Hurst exponent 88141
ELF natural pulse in Earth ionos. cavity, time domain soln. 83293
ELF/VLF-noise radiation sources, narrow-sector finding 88137
geoelectromagnetic disturbances, effects on technol. systs. 83440
Halley Station, Antarctica, lightning atmos. count rates (1997-8) 94041
lightning discharges, ELF pulses time-domain representation 122667
lightning location, range-difference and direction-finding methods 88144
lightning strokes, ELF pulses in Earth-ionos. cavity 128770
Mars, ionos., ELF/VLF EM propag. and atmos. detect. 72302
mesos. lighting strokes, Schumann reson. 117689
overhead line arc fault detect./location using induced VHF sferics 77665
power syst. fault location using RF emissions 77641
radio noise, meas. and anal. *(Chinese)* 72363
worldwide lightning mapping with ELF tomography 88142

atom probe field ion microscopy
vac. elec. discharge, accelerated nanoparticles-induced 125947

atom-surface impact
see also sputtering
microsystem technol., IC bare chip bonding, Ar atom bombard. 116088
oligophenylene thin films, n-doped, UPS, MAES studies 101231
C(100)2×1 surfaces, at. H irrad. etching, epitaxial growth enhancement, ab initio calcs. 81060
Cu smooth thin film deposition in deep-sub-μm trench using H atom source plasma CVD reactor 90461
Si surface, reactive sputtering by F cluster impact, cluster size effect 92019

atomic absorption spectroscopy
Hg-electroplated-Ir microelectrode array based sens., Cd/Pb/Cu trace anal. 86719
CaS DCEL powder, copper-coating, fire atom absorpt. spectrosc. method *(Chinese)* 71539
Si:H,N,O,Ni CZ wafers, intrinsic gettering, minority carrier lifetime 91930

atomic beams
see also atom-surface impact; particle velocity analysis; plasma-beam interactions
GaAs-Si heterog. wafer direct surface activated bonding, RT method 69777
H at. jet target, ultra-cold, polarized, props. 110257
^{39}K atoms, two-photon stimulated emission proc., laser polariz. instabilities 71637

atomic clocks
see also frequency measurement; time measurement
fountain freq. std., computerised control syst. 75358
GPS carrier phase meas. for freq. sync., fuzzy & PD control 86378
NIST primary freq. stds., uncertainty aspects 97125
opt. SDH syst., 2.4 Gb/s two-way time transfer 86377
stabilized laser design for opt. pumped at. freq. stds. 109409
CO_2/OsO_4 stabilized laser at 28.8 THz, absol. freq. meas. 71636
Ca opt. clock transits., absol. freq. meas. with femtosecond laser 75816
Cs at. clock, freq. pulling by hyperfine σ-transit. 109402
Cs beam freq. std., opt. pumping, light shift 120620
Cs freq. stds., drift rate, aging effect 97122
Cs opt. at. clock, Er fiber laser microwave source 75359
Hg^+ opt. clock transits., absol. freq. meas. with femtosecond laser 75816
$^{199}Hg^+$ single trapped ion based opt. clock 120631
^{87}Rb laser-cooled fountain, juggling at. clock 97127

omic configuration interactions *see configuration interactions*
omic electron correlations *see electron correlations*
omic emission spectroscopy
diamond:N films, hot filament CVD, struct., nucleation *(Chinese)* 114355
electrothermal-chem. launcher plasma, temp. meas. 72205
PZT thin films, depth profile, RF glow discharge at. emission spectrosc. 104315
UV quartz AO tunable filter wavelength selection for ICP AES 104842
$RBa_2Cu_3O_{7-\delta}$, mixed, solubility and LPE growth 68330
TiO_x films, PECVD, multi jet hollow cathode plasma source 68236
omic energy *see nuclear power*
omic excited states *see excited states*
omic explosions *see nuclear explosions*
omic fine structure *see fine structure*
omic fluorescence *see fluorescence*
omic fluorescence spectroscopy *see atomic emission spectroscopy*
omic force microscopy
see also magnetic force microscopy
3-D piezodriven microcantilever for scanning force microscope *(Japanese)* 89019
3D machined surfaces topography, fractal geom. appl. 121200
acetylene, pulsed PECVD reactor, computer controlled, polymer thin films deposition 124916
alternating aperture phase shift mask, automated AFM metrology 103667
aniline, pulsed PECVD reactor, computer controlled, polymer thin films deposition 124916
back side failure anal. flow for flip-chip/lead-on-chip/multi-metal-level dies 113778
BSG film, LPCVD, wafer bonding appl., AFM, FTIR 124887
cantilever, fab. & charactn., scanning magnetoresist. microscope *(Japanese)* 109940
CD-R opt. disc media, stamper AFM charactn. 92979
CD-R substr. groove geom. testing syst. 92984
combined SEM-AFM for 3D nano-struct. meas. *(English)* 81603
conf., Nuclear tracks in solids, Portoroz, Slovenia (Aug./Sept. 2000) 113241
conf., Scanning probe microsc., Nizhny Novgorod, Russia (Feb./Mar. 2001) 89546
copper phthalocyanine films, MBE on Si:H, in-plane orient. 68203
CPS, opp. polarised pulse shapes, scanning force optoelectronic microscope meas. 128410
CR-39, latent track size meas. using at. force microscope 121657
diamond:H/M (M=Au,Al) interfaces, elec. contact, spectrosc. anal. 69734
diamond:N homoepitaxial (001) surface, ion beam nitridation, AFM/XPS 115628
diamond, smooth films on SiO_2, hot-filament CVD 101311
diamond films, low field-emission, charact. by SPM 80558
diamond films, nanocryst., biased enhanced microwave plasma CVD 114326
diamond films, nanocryst., microwave plasma CVD synthesis, roughness anal. 114325
diamond films, pos. DC bias-enhanced nucleation with high CH_4 conc. 101341
diamond for high-dens. opt. recording 82056
diamond polycryst. films, layered struct., ex situ spectrosc. ellipsometry 91594
diamond pyramid, metal cantilever, elec. AFM probe 132126
diamond replica films, CVD growth dyn. anal. 101351
diamond tip wear mechanism, Si AFM-based micro/nano-machining 127118
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
DNA, meniscus force nanografting 125930
DNA, oriented, elec. props., conducting AFM imaging 125926
electronics materials, nanoprocessing, laser-scanning probe microscope 92255
enzyme immobilisation onto glass/mica, AFM charactn. 97425
fast 3D topography meas. accuracy, instrum. comparison 113757
ferritin mol. nano-particle 2D array, AFM/SEM 102867
ferroelec. domain distrib. meas., scanning nonlin. dielec. microscopy 104278
ferroelec. liq. cryst., stripe-shaped domains, SLM appl. 93242
ferromag. tunnel jns., local transport props. 127327
fine parallel stripe mag. polishing microfabrication 81597
fritting contacts applicability to micromachined probe cards *(Japanese)* 125859
GMR heads, mag./mech. spacing, thermal behavior 92815
hard disk coatings, charactn. of nano-wear mechanisms 68476
high-stiffness axial reson. probe for AFM 121032
holey fibre, AFM and SNOM imaging 127693
horiz. scanning instrum., surface interact., length-scale fractal anal. 121192
IC packaging, wafer surface profile impact 67612
laser beam/tissue interacts., advanced therapeutic/diagnostic techs. 117597
lin. encoder using cryst. as ref. *(English)* 81733
lubricant films, mag. hard disk, accelerated wear test 101635
mag. storage technol., applied surface anal., review 104526
meas. force estim. method of tapping stylus *(Japanese)* 97847
MEH-PPV/PEO:Li-salt blend light emitting electrochem. cells charactn. 134342
MEMS material, microtensile testing, SPM 81566
metal nanowire nanogap fab. by scanning probe lithog. for mol. electronics device 92218
metal phthalocyanine films, ion irrad., AFM study, gas sens. appls. 91708
metallic point contact, nanoimprint lithog. 126204
microaccelerometer, force based displacement meas. using AFM 81572
micromachine stiction, 2H-perfluorodecyltrichlorosilane coatings 70326
micropatterned solid-supported membranes, capillary micromolding 69982
microscope vibrs., dyn. modelling 127267
MMIC, vector voltage meas. using electrostatic force microscopy 91305
nano scale interact. and manipulation, bilateral scaled teleoperation syst. develop. 90595
nanoalignment mask fabricated directly on Si by AFM 103715
nanofabrication, computer-assisted design, automated vector-scanning probe lithog. 103708
nanofabrication using AFM lithog. combined with opt. lithog. 92215
nanometre-scale force sens. with MEMS devices, review 109796
Nanonics NSOM/AFM 100, characts. and WDM components meas. 120133
Northeast Bioengineering Conference, 27th annual, Storrs, CT, USA (Mar-Apr 2001) 100396
nuc. track detectors, AFM study 121674
ohmic contacts, surface treatment, low resist./thermal stabil. 80917
oligothiophene ultrathin films, surface pot. meas., Kelvin probe force microscopy 91498
organic EL device, electropolymerized hole-transport layer, deposition current dens. effect 71570
organic LED, EL/PL perform. rel. to deposition method 127988
organic SAM, STM lithog. 103512
osteoblastic adhesion, implant surfaces, AFM, cytodetachment tech. 111156
P(VDF/TRFE) copolymer film, ultra-high dens. mol. memory fab. 81782

atomic force microscopy continued
PCB HDI, epoxy dielec., metal thin film adhesion 115161
Permalloy based mag. thin film multilayers, magnetoresist. and mag. props. 116288
photoinduced nanofabrication, near-field exposure from ns laser pulse 103706
photomasks, 3D scanning probe metrology 115733
piezoresonator shear force microscope, probe-surface interact. 92687
planetary appls. 109819
PMMA, femtosecond laser micromachining, struct. 127108
poly(3-octylthiophene)/solid state dye-sensitized TiO_2 solar cells 123817
poly(pyridopyrazine vinylene)-polythiophene based single-layer-photodiodes, synthesis, AFM 82346
polybithiophene, films, electrochem. polymerization, solvent effects 125027
polyetherimide adhesion to Si wafer, Al-chelate treatment, MCM fab. 80542
polyethylene film, polythiophene grafting, ATR-FTIR, XPS, SEM, AFM 125110
polyimide, femtosecond laser micromachining, struct. 127108
polymer/Pt nanocluster composite film actuators, self-assembly 114479
polymeric micromechanical components with tunable stiffness 116102
polysilicon micromachined MEMS structs., micro nano technol. visualization 104202
polythiophene, films, electrochem. polymerization, solvent effects 125027
poly[(2-methoxy-5-(2′-ethyl-hexyloxy)phenylene vinylene)] Langmuir-Schaefer films, PEC appl. 90570
printable catalyst for electroless deposition in flex-cct./PCB appls. 102835
probe with sputtered Si tip, modular design 103371
PVDF oligomer ferroelec. thin films, structural/electronic charactn., AFM 127213
PVDF/trifluoroethylene copolymer variable capacitor 115048
redox probe microscopy, mol.-scale lithographic appls. 126575
resist pattern adhesion on SiH_4-coupling treated surface, direct AFM meas. 103638
reticles, ESD damage mechanisms, wide bandwidth transient-EMI sens. antenna 81148
scanning nonlin. dielec. microscopy, higher-order meas., vert. resoln. 109931
scanning thermal microscopy for microscale thermal meas. *(Japanese)* 87018
semicond. device, implant profile, AFM/SCM imaging 103255
semicond. failure anal., SPM appls. 113779
SETs, RT, nanostructure fab. 92428
sexithiophene semicond. grain boundary , temp./gate volt. depend. transport 91715
Si(110), roughness, etching, AFM, fractal, power spectrum dens., scaling anal. 103343
SIMOX wafers, low dose O implant.-induced bulk and surface defects anal. 69791
single electron tunneling detected by electrostatic force 115974
single mol. DNA device, triple-probe AFM meas. 125927
SPM based nanolithography, electrodes fab., mask patterning, local oxid. 103511
striatal neurones, voltage-depend. membrane currents, Si substrs. 76320
subsurface defect characts. of semicond. opt. components, quality assess. 97801
surface micromachined electrostatic micromotors 112569
surface pot. detect. using scanning force microscope *(Japanese)* 97766
surface roughness study, X-ray scatt. methods 97167
teeth, laser irrad., surface morph., SEM, AFM 76398
ultra-precision plastics cutting, surface roughness expts. *(Japanese)* 100565
ultra-thin oxides growth on Si(100) by RTO for CMOS/advanced devices 103358
vinylidene fluoride oligomer, mol. ferroelec., AFM anal. 92648
Ag thin films inside silica capillaries for hollow waveguides, surface roughness 116674
$Ag_8In_{14}Sb_{55}Te_{23}$/phthalocyanine recording film microstruct., AFM study 92989
Al/Si/p-SiC ohmic contacts, thermal stabil., LPE 69703
Al-Si-Cu metallization lines, local temp. distrib., scanning thermal microsc. 115671
AlGaAs/GaAs p-i-n LD heterostruct., fine struct., electrostatic force microscopy 93615
AlGaN epilayers, undoped, nanopipes obs. 103041
AlGaN/GaN HFET, fab./charactn., KOH based UV photoassisted wet etching 81106
AlGaN/GaN heterostruct., chem. treated/thermally oxidized surface prop. 80809
AlGaN/GaN heterostruct., surface pot., scanning Kelvin probe microscopy 80791
AlGaN/GaN heterostructs., surface morph. and disloc. electronic props. 69641
AlGaN/GaN structs., RF plasma-assisted MBE growth, struct. and surface morph. 68186
AlInGaN/AlInGaN MQW, pulsed ALE, LED appl. 124871
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, elec. charactn. 103894
AlN epitaxial films, RF-MBE/-MEE on SiC, charactn. 101221
AlN films, ion-beam-enhanced deposition, surface struct./resist. 125063
AlN low-temp. piezoelec. thin film, reactive DC magnetron sputtering, MEMS appls. 92533
AlN piezoelec. polycryst. films, rf magnetron sputter deposition, SAW appl. 124818
AlN piezoelec. thin films, morph. props., DC reactive magnetron sputtering 68148
AlN thin films, PLD 68316
AlN thin films, reactive ion beam coating 68152
AlN:Si heavily doped electron field emitters, phosphor, AFM 80578
AlN/sapphire thin films, SPE recrystn., GaN epitaxy substr. 125050
Al_2O_3 MIM tunnel emitter fab. using anodic oxid. 115471
ArF excimer laser resist, pattern collapse, DPAT method 126557
ArF/SOR resist patterns, adhesion/cohesion anal. with AFM microtip 103637
AsSeI chalcogenide photoresists for IR micro-optic fab. by thermal reflow proc. 82193
Au microstrips, reversible surface modif., nanomachining by voltage-biased AFM tip 92217
Au nanoparticles assembled chem. on biomol. scaffolds, nanoscale patterns, electron transport props. 102856
Au on n-Si(100), C contam., electrodepos., electron-beam induced nanomasking 90511
Au/Ni/n-GaN Schottky contacts, disloc. effect on I-V characts. 69727
$Au/SiO_2/Si$ MIS tunnel jn., neg. resist., light emission *(Chinese)* 115448
BN films on Si substr. with cubic BN grains, field emission 69401
BN thin films, cubic, microwave PECVD, charactn. 90374
(Ba,Sr)TiO_3 films, ICP etching, surface damage 104277
$BaFe_{12}O_{19}$ films, nearly intrinsic FMR linewidth 127337
$BaSrTiO_3$ films, sol-gel derived, grain oriented, phase shifter appl. 90486
$Ba_{0.9}Sr_{0.1}TiO_3/LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
$BaTiO_3$ dielec. films, prep. & microstruct., sol-gel/powder coating proc. 81691

atomic force microscopy continued
$BaTiO_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$BaTiO_3$ sol-gel derived thin film on ITO-glass, ferroelec. props. 70418
Bi scanning Hall probe microscopy on AFM tip 109797
$Bi_2Ti_2O_7$ films, chem. soln. decomp. prep., RTA, dielec. props. 68323
$Bi_4Ti_3O_{12}$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
C MWNT, 3D nanorobotic manipulations 90594
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
C nanocrystalline CVD films, electron field emission, microstruct. 69388
C nanotube single-electron transistors at RT 91511
C nanotubes, adsorpt., functionalization, confine., appls. 79469
C nanotubes, appl. as electromechanical sens., first-principles simul. 91507
C nanotubes, mech., friction at nanometer scale 92248
C, single walled nanotubes, mech.-induced kinks, electronic props. 70219
C single-walled nanotubes, CVD growth on microcontact-printed catalyst patterns 125140
a-C tetrahedral films prepared on mag. hard disks, deposition and props. 104517
a-C:H films, RT deposition from laser-assisted photolytic CVD at 248 nm 114336
a-C:H films, current-induced conditioning, field emission 80567
a-C:H/ZnSe/BaF_2/Y_2O_3 DLC IR antirefl. multilayered interf. coatings 116883
C-coated fiber strength 127675
$CaBi_2Ta_2O_9$ thin films, PLD, dielec. props. 101394
CdHgTe films, nonaqueous electrodeposited, solar cell appl. 101439
CdO single-cryst. rocksalt layers, MOMBE growth on GaAs (001) substrs. 90315
CdO thin films, low-press.CVD and elec. props. 90407
CdS nanosized particles in hyperbranched conjug. polymers, fluoresc. spectr. 126046
CdS platelet particles synthesis/charactn. in octylamine-water syst. 115325
CdS thin films, chem. deposition, growth kinetics, mag. field effects 90492
CdS-nanoparticles-porous-Si heterojunction, photolum., I-V charact. 126107
CdSe QD on ZnBeSe/GaAs epilayers, MBE, struct./PL props. 103118
CdSe nanocrystal films, electrodeposition, pH effects 90480
CdSe self-assembled QD form., diffusion effect 79325
CdSe self-assembled QD, form. mechanism 124936
CdSe/ZnSe surfaces, nanostructure growth, MBE, AFM anal. 101274
CdTe Apollo solar module perform. and reliab. 100043
CdTe, self-organized islands on ZnTe(001), hot wall epitaxy 101452
CdTe:O thin films, sputter deposition, characts., O content effect 79201
CeO_2, epitaxial dielec. thin films, controlled orient., PLD 68311
Co/NiO bilayers on MgO(001), sputtered growth, stress relax. 68141
Co-Bi ferrite powders/films, sol-gel method prep., mag. props. 92788
$CoSi_2$ films, etching in dil. HF solns. 92001
Cr dry etch proc. charactn. using surface nanoprofiling 103582
Cu CVD, Cu(TMVS)(hfac) sourced, on TaN substrs., surface morph., water vap. effects 90463
Cu electroless deposition on Ta/SiO_2/Si substrs., displacement activation 101421
Cu electroplated film, Cu/Cu/TaN/SiO_2/Si multilayer interfacial react. 81113
Cu film, filtered cathodic vac. arc deposition, microstruct., internal stress, substr. bias effect 125056
Cu interconnects, sub-0.1 μm, fab./perform. limits 92168
Cu ion sens. thiacalix[4]arene films, semicond. substrs. 120975
Cu layers, enhancement of adhesion to Dow Cyclotene 3022 through metal sputtering 114424
Cu metallization, SiN diffusion barrier, NH_3 plasma pretreatment 126478
Cu on TiN, electrochem. deposition, nucleation 90498
Cu selective electrodeposition on nanoscratches in Si(100), AFM obs. 115682
Cu/Sn/Si syst., 3D struct. form./evol., AFM, AES, SEM, EDX 114307
Er:YAG planar and ridge waveguides, deposition and material characterisation 93123
Fe/Al_2O_3/Fe tunneling jn., ion beam sputtering, microstruct. 81925
FePt $L1_0$ ordered films, rect. shaped domains *(Japanese)* 70489
GaAs (n11)A substrs. grown using MBE, As press. depend. of hillock morph. 90279
GaAs, anisotropic island phase on flat GaP, Stranski-Krastanow corrugated surface 68172
GaAs devices, channel temp., scanning thermal microscopy 126065
GaAs film, MBE growth, Si(110) substr. tilting angle 101210
GaAs pyramidal microstruct. on pre-patterned GaAs(001), growth optimisation 90277
GaAs surface, pure water treatment and charactn., water droplet contact angle meas. 103444
GaAs surfaces, (100), morph./microrelief 81069
GaAs/$Al_xGa_{1-x}As$ 1D channel, AFM fab., ballistic transport 69665
GaAs/AlGaAs 2DEG, quantum Hall regime, inter-edge-state scatt. centers 91756
GaAs/AlGaAs shallow 2DEG, conducting tip AFM lithog. 126121
GaAs/InAs superlattices, 1.3-1.5 μm wavelength QD self-form. on InP (411) 115404
GaAs(001) homoepitaxy at low substr. temps., mound form. 124836
GaAs(100), fs UV laser treatment, surface modifs., surface states 69865
GaAs(100) surface, ion-induced nitridation 69915
GaAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
GaInNAs/GaAs densely packed QDs, CBE growth, dot size/dens. control 114272
GaInP epilayers, compositional modulation by surfactants in OMVPE 124913
GaInP etching in Cl_2/Ar ECR proc., low damage and low surface roughness 126368
$Ga_{1-x}In_xP$ strained layers growth, gas source MBE 90292
GaN, ICP etched surface, plasma-induced damage, photolum. 126380
GaN MBE growth, thin SiC layer coated (100)/(111) Si substrs. 101250
GaN Schottky diodes, dry-etch damaged, elec. props. recovery by N_2 plasma exposure 126633
GaN bonding with Si, SeS_2 bonding assisted layer, laser lift-off 80971
GaN epilayers, MBE, at. H_2 impact 90299
GaN epilayers, surface pot., scanning Kelvin probe microscopy 80791
GaN epilayers, wurtzitic films, low energy IBAD, ion irrad. influenc 90527
GaN film, MOVPE growth on porous Si substr., struct./elec. charactn. 69547
GaN films, MBE on GaN/AlN buffer layers, polarity anal. 79241
GaN films, MOCVD, 3D-2D transit. 90457
GaN films, MOCVD/MBE, high N_2 press. growth, defects 68294
GaN films, ion implant., structural and opt. charact. 126292
GaN films, low-energy ion assisted epitaxy and struct. 69514
GaN, high-dose ion implant. 81033
GaN homoepitaxy by MBE *(English)* 79263
GaN layers, low temp. growth on sapphire with dimethylhydrazine/triethylgallium, crystallinity evol. 101357
GaN polycryst. films, metal substrs., gas source MBE, PL, XRD 79261
atomic force microscopy continued
GaN self-assembled QD, plasma-assisted MBE growth and charactn. 69687
GaN surface ablation by fs. pulses, accumulation effects, AFM obs. 126334
GaN thin films, epitaxial growth on sapphire(0001) 68318
GaN:Er, C films, GSMBE grown, surface morph., PL, SEM, AFM 126062
GaN:In films, MOVPE, indium doping effect 115555
GaN/Al_2O_3(0001), hydride VPE growth, high temp. GaN buffer effects, P 68249
GaN/AlAs/GaAs(001), epitaxial layers, cryst. orient., MOVPE, computer simu 90394
GaN/AlN epilayers, ammonia gas source MBE growth/charactn., sapphire sub str., excitons 90305
GaN/GaInN based high power blue violet LD, epitaxial overgrowth, disloc. den 93596
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion dam age 124863
GaN/GaP(001) epilayers, growth evol., MOVPE, XRD, AFM 90395
GaN/Ni/Au Schottky diodes on sapphire and SiC substrs. 126630
GaN/Si(111) films, RF sputter deposition, struct. and charactn. 69536
GaN/sapphire HVPE films, interfacial region impurity band, SFM obs. 69518
GaN/sapphire(0001), hydride VPE, thermal cond., disloc./grain boundary effect 126068
GaN-based high power blue-violet LD, ELO and charactn. 82634
GaN-based lasers, etched facets, charactn. 103334
GaN(0001), Ga-polar, morphology depend. growth kinetics 90352
GaN(1100) M-plane plasma-assisted MBE on γ-$LiAlO_2$(100), nitride semicond free of internal electrostatic fields 101252
GaP films, solid-source MBE/ALE growth, struct. 101235
GaP/TmP/GaAs heterostruct., transistor action, MBE growth of TmP/GaA 115871
GaSb surfaces, ordered QD form. during ion sputtering 80851
Ga_xSe_y thin film buffer layers, solar cells, opt., structural, morph. props. 100135
$Gd_xY_{1-x}Ca_4O(BO_3)_3$ films, laser MBE, at.-scale surface control/SHG 116553
Ge QD, CVD growth, dielec. substr. 101310
Ge QD on Si(100), two-stage MBE 114302
Ge growth mode on Si(100), buried Ge islands prescence 102977
Ge nanostructures, self-assembled, on polymer-coated Si, growth/charactn 68358
Ge self-assembled dots on patterned Si substrs., selectively epitaxial growth 114301
Ge/Si near-IR photodetector, growth & photoresponse spectrum 97231
Ge/Si superlattices, self-assembled struct., X-ray reflectivity 69685
Ge/Si(001) islands, UHV CVD, strain-driven alloying 68268
Ge/Si(111) QD, Ge islands, STM/AFM obs. 126162
HfO_2/SiO_2 high refl. coatings, laser damage and defects rels. *(Chinese)* 116890
HgCdTe(211) epilayers, MBE grown, cross-hatch morph. charactn. 90344
ITO films, bias RF magnetron sputtering, struct./elec./opt. props. *(Chinese)* 114244
ITO thin films, reactive thermal evaporated, opt./elec. props., AFM study 93307
InAs QD on (001) GaAs, MBE growth conditions optimisation 114304
InAs QDs, epitaxy on self-organized 2D InAs islands by AP-MOCVD 90368
InAs islands on InAlAs templates, effects of mismatch strain/alloy comp. on form. 68205
InAs nanostructure device, fab., AFM oxid. proc. 115793
InAs self-assembled QD on GaAs/InP, LP-MOCVD growth 101343
InAs self-assembled QDs, SSMBE growth on InP (100) substr., PL props. 103117
InAs/GaAs self-organized QDs on (411)A GaAs by MBE 114289
InAs/GaInP self-assembled QD, MBE, opt. props. 114300
InAs/InGaAs self-assembled composite QD for PV appls. 100213
InAs/InP QD, MOVPE, V/III ratio/annealing effects 80982
InAs/InP quantum wire, vert. self-organization 115408
InGaAs, MBE, surface roughness, growth params. effects 101204
InGaAs MOVPE init. stage growth on multiatomic-stepped GaAs struct. 101356
InGaAs films, MOCVD on InP non-planar substrs. 114359
InGaAs quantum wire honeycomb network, BDD quantum LSI, MBE growth 115972
InGaAs ridge quantum wire, selective MBE growth 79224
InGaAs:C, heavily doped, CBE growth, surface morph. 101205
$In_{0.15}Ga_{0.85}As$/GaAs self-organized quantum wire channel FET characts. 103915
$In_{0.15}Ga_{0.85}As$/GaAs(553)B quantum wires, MBE growth and charactn. 91812
$In_{0.53}Ga_{0.47}As$/AlAs/InAs, pseudomorphic RTD, MBE, elec. props. 81190
InGaN nanoscale dots, MOCVD, PL, AFM, TEM 124991
InGaN/GaN MQW heterostructs., MBE, struct./PL props. 124868
InGaP-Au/Cu Schottky contact, thermal reliab. and MSM photodetector appls. 69708
InN film, low-temp. epitaxial growth 114255
InN/Ga(In)P, MOCVD, substr. surface nitridation suppression 90397
InO_x thin films, chem. and optoelectronic appls. 82054
InP films, MOCVD on InP non-planar substrs. 114359
InP self-assembled QD embedded in $In_{0.5}Al_{0.5}P$, MOCVD 68216
InP self-assembled QDs embedded in InAlGaP, MOCVD growth on GaAs 115403
InP self-assembled QDs embedded in InAlP grown on GaAs, growth and charact. 68290
InP/$In_{0.5}Al_{0.3}Ga_{0.2}P$ photopumped red-emitting QD heterostruct. lasers 82626
InP-Si direct wafer bonding, cryst. defects charactn. 115475
In_xSe_y thin film buffer layers, solar cells, opt., structural, morph. props. 100135
InSnO thin films, UV irrad., cond., work fn., stabil./instabil. 69551
$K_{1-x}Rb_xTiOPO_4$ epitaxial waveguide films, opt. props. 116878
$(LaAlO_3)_{0.3}(Sr_2AlTaO_6)_{0.35}$, perovskite substrs., wet etching, AFM/RHEED 126352
$LaNiO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$LaSrCoO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$LaSrMnO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$La_{2/3}Sr_{1/3}MnO_3$/$SrTiO_3$/$YBa_2Cu_3O_{7-\delta}$ HTSC multilayers, growth, struct. 68303
Li alloys, colossal reversible vol. changes, ion batt. appl. 99921
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
$LiNbO_3$, ferroelec. domains, morph., scanning nonlin. dielec. microscopy 104268
MgO, MOMBE, AFM/AES/TEM studies 124852
MgO film grown on p-InP, microstructural & elec. props. 104397
MgO films on p-GaAs(100), microstruct./elec. props. 68187
Mo FEA, frit sealing, emission characts., ambient gas influence 97666
$MoSe_2$, layered semicond., electrodeposition, solar cell electrodes 90493
Nb strip lines, local anodization for Josephson jn./SQUID fab. 92891
Nb/Al/Nb trilayer, SNS Josephson jn. fab. 70962
NbN/TaN_x/NbN SNS Josephson jns., PLD 70804
Nb_2O_5-TiO_2 thin films for electrochromic devices 71405
$NdGaO_3$, perovskite substrs., wet etching, AFM/RHEED 126352

mic force microscopy continued
Ni/Ti/GaAs(001) films, RF magnetron sputtering, struct. anal. 124815
Ni-P(B) deposits, surface props. & solderability, electroless plating 78599
$NiZnCuFe_2O_4$ ferrite powders/films, prep., struct./mag. props. 127333
O plasma wafer bonding, low temp. epitaxial layer transferring 115637
PLZT films crystallized from amorph. state by two-step postdeposition annealing, props. 127169
PZT actuator, fab., high speed AFM 81625
PZT, ferroelec. domains, morph., scanning nonlin. dielec. microscopy 104268
PZT ferroelec. films, modified sol-gel prep., ferroelec./struct. props. 125032
PZT films, ferroelec. memory devices, pulse width/voltage, bit size depend., AFM 70466
PZT films, high resoln. obs. 81679
PZT films on ITO coated glass, sol-gel proc., charactn., ferroelec. LCD appl. 90484
PZT films, sol-gel method, external stress induced preferred-orient. 104390
PZT nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
Pb-acid secondary cell PbO_2 electrode, situ morph. change obs. 78147
$(Pb_{0.76}Ca_{0.24})TiO_3$, nanocrystalline thin films, sol-gel prep., props. 101430
$Pb_{0.90}La_{0.15}TiO_3$ thin films on different bottom electrodes, struct./elec. charact. 70395
$Pb_{1-x}La_xTiO_3$ La-graded heterostruct. films, sol-gel prep. and elec. charactn. 104401
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substitution 104311
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ thin films, prep. and elec. props. 101435
$PbScTaO_3$ films, prep., piezoelec./pyroelec. props. 81704
PbTe QD, Volmer-Weber mode MBE growth, AFM obs. 101296
$PbTe/BaF_2(111)$ epilayers, hot wall epitaxy growth, opt. props. *(Korean)* 69574
$Pb(Zr,Ti)O_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$PbZr_xTi_{1-x}O_3$ epitaxial films, near-field second harmonic imaging 82915
Pd ultrathin sputtered activator layers on SnO_2, structural transforms., gas sens. appls. 109753
$Pd/Al_{0.11}Ga_{0.89}N$ Schottky diodes, thermal stabil., annealing, XRD, AFM, AES 81204
$Pd_{40}Cu_{30}Ni_{10}P_{20}$, amorph., superplastic nanoforming, MEMS 92521
$Pr_8Fe_{88}B_4$ ribbons, exchange-spring magnets, exchange field temp. depend. 70490
Pt laser deposited films, thermal stabil./anal. 103493
Pt/Co/Pt ultra thin film devices, AFM fabricated defects, mag. domain wall propag. 127344
Pt/PLZT/Pt capacitors, H-induced degrad., nanoscale investig. 104468
Pt/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal stabil. 80917
Pt-Si based O_2 sens., reactivation, surface heating & temp. meas. 97453
PtSi ultrathin layer patterning, scanned probe lithog., quantum device appl. 103498
RuO_2 thick film resistors, elec. force microscopy, contrast 91408
SOI struct. fabr. by UHV electron beam evap. and epitaxial layer transfer 80933
a-Si films, DC magnetron sputtering, growth front roughness 114257
Si films, selective area CVD epitaxy, bilayer SiO_2/Si_3N_4 mask 101312
Si microcalorimetric gas sens., catalyst materials 120968
Si nanocantilevers for noncontact AFM, mech. charact. *(English)* 81604
Si nanolithography, tip-surface interacts. 126584
Si ordered nanocryst. dot prod. by low-energy ion sputtering 69663
Si particle detectors, nanoscale pot. profiles, AFM 76074
Si polycryst. films, temp.-depend. thermal cond. 80632
Si, porous, antireflective coatings for solar cells, etching, rapid thermal proc. 104875
Si porous layer antireflective coatings, solar cell appls. 93314
Si, porous, thick oxidized, growth, microanal. *(Chinese)* 91991
Si, selective epitaxy using at. H, substr. temp. modulation 125055
Si single nanocrystals charging by conducting-tip AFM 69469
n^+/p mc-Si solar cells, optoelectronic props., surface modif. 100151
Si substr., alkylsilane SAM, photo/scanning probe lithog. 92245
Si, surface form. by MBE, adsorbed mols. influence *(Japanese)* 79234
Si surfaces, nano-oxid., contact/noncontact AFM studies 92017
Si thin films, electron-beam evap. on CeO_2/Si(111) 114266
Si ultrathin layer thermal agglomeration on buried SiO_2 69757
Si wafer strength/surface morph. correl. 100593
Si wafer, surface roughening due to Cu contamination prior to ultra-thin gate oxid. 126338
Si wafer surfaces, laser-assisted particle removal, opt. field enhancement effects 81073
Si:B,O, roughness, crater bottom comp., SIMS obs. 69825
Si:Cr,Zn surface, contaminants removal, rem. plasma cleaning 91995
p-Si:Fe surfaces, contamination, SCM 91600
Si:H, H-ion implant.-induced layer splitting, layer thickness effects 69804
a-Si:H thin film solar cells, periodic light coupler gratings 78173
n-Si:H/Cu jns., Cu electroplating, struct./elec. props. 101420
Si:P high-dens. buried nanopyramid FEA, ion implant. & wet etching 80583
Si:P, ion implant. role in quantum computing 91974
p-Si/n-InP wafer bonding, surface activated bonding method at room temp. 115366
$(Si_m/Ge_n)_N$ step-graded short-period superlattices, solid source MBE 79250
Si-Si homo-epitaxial growth mechanism, substr. orient. effects *(Japanese)* 103336
Si-chip-based DNA microarray, surface charactn. 69343
Si(100), laser-induced chem. etching, Cl_2 atmos., opt. fiber tip 92013
p-Si(100) surface, TMAH etching, chem. pre-treatment 69884
Si(100) surfaces, AFM nanopatterning, selectively electrodepositing Cu 103709
Si(100), wet etching, nanoscale texturing, multicomponent SAM phase behav. 103337
SiC, 6H, epitaxial layers, sublimation grown, surface morph. 68099
4H-SiC epitaxial layers CVD growth, substr. surface prep. effects 69873
SiC films, growth on Si, adsorbed propene laser melting 79379
3C-SiC films, oxid. depend. on defect dens. 103327
SiC, surfaces, cluster ion beam smoothing 69866
SiC, wet and dry sacrificial thermal oxid. 69913
3C-SiC:B/α-SiC(0001), MBE growth, PL, D_1 centre lines, AFM 68184
SiGe buffer layers on Si(100), growth in situ low energy H plasma prep. 79255
SiGe films, high-quality strain-relax., MBE growth with low temp. Si buffer 68204
poly-SiGe layers, oxid. behavior, Ge content depend., gate electrode appl. 92068
$Si_{0.7}Ge_{0.3}$ fully relax. buffers grown on patterned Si for hetero-CMOS transistors 114263
a-SiGe:H films, PECVD, props. anal. 103067
SiGe/Si MQW, UHV/CVD growth *(Chinese)* 90353
SiGe/Si epitaxial layers, stress relax., Raman spectrosc., AFM 124832

atomic force microscopy continued
SiGe/Si multilayers, self-organized wires, X-ray studies 68189
$Si_{0.75}Ge_{0.25}$/Si(001) step-by-step MBE growth, short-period superlattice buffer effects 90267
Si_3N_4 films, smooth and dense, prep. and charactn. 114251
SiN_x films, ion-assisted deposition, ECR plasma, props. anal. 101448
SiN_x:F, gate dielec. films, rem. ECR-PECVD from NH_3/SiF_4 90414
Si_3N_4/SiO_2 stacked gate dielec., at. layer deposition, p-MOSFET 101218
SiO_2 film, AFM anodic oxid., nanofabrication 81083
SiO_2 films, electron injection stressed, trapped charges nonuniform distrib. 92675
SiO_2 implanted layer on Si, AFM investig. of radiation damage distrib. 91892
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2 stressed ultrathin films, nm-scale elec. charactn., cond. AFM 80939
SiO_2 thin film, AFM growth, surface roughness 103397
SiO_2 thin film, elec. breakdown, conductive AFM 104257
SiO_2, ultrathin combustion CVD layers on Zn coated steel, struct., morph. 101368
SiO_2 ultrathin gate oxide films, elec. cond., nanoscale conducting AFM study 80959
SiO_2:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254
SiO_2/TiO_2/γ-glycidoxypropyltrimethoxysilane composite materials, opt. waveguides charactn. 104693
SiO_2-Fe nanostructures, selective etching, AFM study 115661
SiO_2-Si interface, trapped charge imaging, noncontact AFM 80925
SiO_2N_y/Si(100) interface, roughness, N atom incorporation 80943
Si(SiGe), growth rate & nonselective growth, modified GSMBE 101281
SnO_2 gas sens., epitaxial growth on sapphire substr., charactn. 97488
SnO_2 nanocryst. thin films grown on p-InSb(111), structural, elec., and opt. props. 80749
SnO_2 nanocrystalline thin film, sol-gel synthesis, gas sens. *(Chinese)* 79388
SnO_2 nanoparticulate film work fn. sens., NO_2 sensitivity 132045
SnO_2 sol-gel thin films, integrated gas microsens. fab. 97547
SnO_2 thin film gas sens., prep. by PLD, charact. 97541
SnO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
SnO_2:F, film, electrostatic spray assisted vapour deposition 101457
SnO_2:F mixed phase film deposited by US spraying, props. 101461
SnO_2:Os(Pd) films, sol gel proc., gas sens. devices 109775
SnO_2-LaOCl mixed layers, electrostatic spray pyrolysis, gas sens. 125066
$SnTe/BaF_2(111)$ epilayers, hot-wall epitaxy growth, opt. props. *(Korean)* 114309
$SrBi_2TaNbO_9$ film, RF magnetron sputter deposition, microstruct., micro Raman spectra 114262
$SrBi_2Ta_2O_9$ ferroelec. thin film, prep., struct. & props. 127173
$SrBi_2Ta_2O_9$ film, RF magnetron sputter deposition, microstruct., micro Raman spectra 114262
$SrBi_2Ta_2O_9$ film piezo/leakage defects, SPM-based nanoscale investig. 92657
$SrBi_2Ta_2O_9$ films prep. by metalorganic decomp. using RTA, charact. 70421
$SrBi_2Ta_2O_9$, nano-size ferroelec. memory cells, patterning, switching 81715
$SrBi_2Ta_2O_9$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
$SrBi_2Ta_2O_9$ thin films, ferroelec. props., microstruct. effects 104307
$SrBi_2Ta_2O_9$-Bi_3TiNbO_9 ferroelec. thin films, structural study, Raman spectra, XRD, AFM 104289
$SrRuO_3$ epitaxial thin films on (001) $LaAlO_3$, microstruct. and growth mechanism 79202
$Sr_2(Ta_{1-x}, Nb)_2O_7$ ferroelec. thin film, PLD 101387
$SrTiO_3$, perovskite substrs., wet etching, AFM/RHEED 126352
$SrTiO_3$, single cryst. faceting, chem. etching, AFM 126354
TaN diffusion barrier against Cu diffusion, perform. eval. using SIMS/AFM 69939
TeO_x thin film, SW recorded marks obs., AFM 127579
TeO_x thin film high dens. opt. storage medium charactn. *(Chinese)* 71496
TiN, femtosecond laser micromachining, struct. 127108
TiNi SMA thin films charactn., MEMS appls. 125069
TiO_2 electrodes, local cond., AFM 103061
TiO_2 film, photocatalytic, sputtered, charactn. 103058
TiO_2 mesoporous thin films, prep. by surfactant templating 79395
TiO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
TiO_x films, vac. arc deposition/implant. growth, ion energy effects 79403
TiO_2/ORMOSIL composite thin film waveguide, sol-gel proc. 116688
TiO_2/organically modified silane composite, sol-gel, charactn. 71498
$TiSi_2$/Si contacts, surface prep., chem. and thermal stabil. 92033
$Tl_2Ba_2CaCu_2O_8$ HTSC large area films, prep., microwave appl. 124823
V_2O_{5-x}-PANI nanorods, prep., elec. resist., AFM microscopy 125118
W CVD films, rarefied particle clouds, in situ monitoring 101314
W films, chem. treatment, IC appl. 103439
WO_3 electrochromic films, rf-sputtering, residual charges, IR absorpt. 127900
$W_{1-x}Si_x$/Si multilayers, excimer laser proc., thermal stabil. 126210
YBaCuO, PLD on $SrTiO_3$, plume/growth kinetics anal. 92886
YBaCuO film, surfaces, cluster ion beam smoothing 69866
$YBa_2Cu_3O_{6+x}$ laser MBE layer, T_c, AFM meas. 116526
$YBa_2Cu_3O_7$ HTSC large area films, prep., microwave appl. 124823
$YBa_2Cu_3O_7$ thin films on substrs./bicrystals with vicinal offcut, high I_cR_n jns. 70673
$YBa_2Cu_3O_{7-\delta}$ epitaxial film, microwave loss, vortex propag., surface impedance 70576
$YBa_2Cu_3O_7/NdBa_2Cu_3O_7$ single cryst. contacts, LPE growth 70584
$YBa_2Cu_3O_{7-\delta}$/Au HTSC double-sided films, microstrip band-pass filters 92910
$YBa_2Cu_3O_{7-y}/PrBa_2Cu_3O_{7-y}(SrTiO_3)$ HTSC Josephson jns. 70795
ZnCdTe-ZnTe QW, LPMOCVD, growth/charact. 124937
ZnO single cryst. substrs., epitaxial ZnO film growth 79213
ZnO substrs. for homoepitaxy, eval. 101291
ZnO thin films for UV laser, synthesis and charactn. 68317
ZnO:Li films, sol-gel method, crystn., c-axis orient. 114389
ZnSe thin film buffer layers, solar cells, opt., structural, morph. props. 100135
ZnSe/XGaAs/GaAs (X=Al,In) epilayers, MBE, cryst. quality, surface segreg. 101273
$(ZrSn)TiO_4$ thin films via aq. polymeric precursor route 125030
polysilane catenated polymer, end grafted, mol. wire, AFM 101513
polysilicon/SiO_2/Si structs., thermally induced (100)Si/SiO_2 interface degrad. 91915

atomic hyperfine structure *see hyperfine structure*

atomic interferometry *see particle interferometry*

atomic layer epitaxial growth
at.-layer engng. of supercond. oxides, yesterday/today/tomorrow 70588
CVD for metal nitride growth, dual damascene barrier requirements 90460

atomic layer epitaxial growth continued
sublimation modelling, competing surface reconstr. 101301
AlInGaN/AlInGaN MQW, pulsed ALE, LED appl. 124871
AlO_x, at. layer deposition, thin film head gap appl. 101232
CaS:Pb EL devices, high-luminance/blue-emitting characts. 109886
CdS films, electrochem. ALE on Ag(111) 90519
GaAs MLE, self-limiting growth, surface react. mechanism anal. 101384
GaAs:Se(Te) MLE, doping characts., impurity precursor adsorpt. control 103284
GaN epilayers, low press. MOCVD on ALE AlN 91679
GaP films, solid-source MBE/ALE growth, struct. 101235
Ge, monolayer growth on Si(100), CAICISS anal. 90266
(InGa)As QD, at. equilib. conc. 68161
$In_{0.2}Ga_{0.8}As$ on GaAs(001), growth method, monitoring of surface topography/stress evol. 90274
Si films, temp. modulation mol. layer epitaxy, surface reacts. 114360
Si, monolayer growth on Ge(100), CAICISS anal. 90266
Si self-limiting at.-layer deposition on SiO_2 by alternate supply of Si_2H_6 and $SiCl_4$ 90309
$Si/Al_2O_3/n+$-polySi MOS capacitors, at. layer CVD, charactn. 80936
SnO_2 perfectly amorph. ultrathin ALE layers, gas-sens. appls., conductometric sens. 97516
SrS:Ce thin films for electrolum. displays, tris(cyclopentadienyl)cerium as Ce dopant source 101321
TiN, at. layer deposition, film growth rate, kinetic modeling 101220
TiN diffusion barrier, at. layer deposition method for Cu metallization 103482
W at. layer deposition, kinetics of WF_6 and Si_2H_6 surface reacts. 79238
ZnO films, ALE growth, charactn., substrs. for GaN, InGaN MBE growth *(Polish)* 79264
ZnO selective-area ALE growth on soft lithog.-patterned substrs. 114278
ZnS film growth, successive at. layer deposition using mol. beams 91615
ZnS films, electrochem. ALE on Ag(111) 90519
atomic metastable states *see metastable states*
atomic photoionisation *see photoionisation*
atomic power *see nuclear power*
atomic resonant states *see resonant states*
atomic spectra *see spectra*
atomic spectral line breadth *see spectral line breadth*
ATPG *see automatic test pattern generation*
ATR (spectra) *see attenuated total reflection*
attaching *see joining processes*
attenuated total reflection
EO polymer modulator, guided wave reson. 116821
guided-wave reson., conc./absorpt. meas., highly sensitive method 120997
mid-IR fiber-optic spectrosc., anal. appls. 97318
polyethylene film, polythiophene grafting, ATR-FTIR, XPS, SEM, AFM 125110
polymer double-channel EO modulators in ATR config. 116822
polymer LV EO modulator using attenuated total internal refl. 116802
variable opt. attenuator based on guided wave reson. 127798
Si(111)-H surface in dil. NH_4F soln., electrochem. ATR-FTIR spectra 103443
SiON film, opt. waveguide 104738
Ti-Au-Ti thin metal film, long-range plasmon-polariton wave propag. 93300
attenuation *see absorption; dispersion (wave); scattering*
attenuation measurement
12 GHz high elevation angle satellite-to-Earth propag. meas. in tropics 117676
62.4 GHz propag. charactn. through single tree using wideband meas. 83285
naval ships bulkhead shielding eval., NATO stds. appl. 83427
STENTOR for site diversity meas. 83279
UWB P-3 and CARABAS II foliage atten. and backscatt. anal. 98969
wet antenna atten. effect on propag. data stats. 105752
attenuators
see also waveguide attenuators
BiCMOS attenuator for audiometric appls. with on-chip power amp. 92481
CMOS attenuator, lin.-control wideband device 102327
digital controller, deep sig. power atten., 1-4 GHz range 80408
FFH CDMA multirate opt. syst. using power control 74986
FG-MOSFET digitally prog. attenuator, HSPICE simul. 68961
high-accuracy digital 5 bit 0.8-2 GHz MMIC RF attenuator for cellular phones 102721
MM-wave device, opt. control, dielec. image line 102750
multilayer coupled-line struct., design and cct. appls. 80205
PCS, freq.-tunable feedforward amp. 74760
PCS surface mount vector modulator 91235
pulsed TOF laser radar, wide dyn. range receiver channel 109298
RF attenuators, terminations, matching pads, loads 96348
Rohde & Schwarz's SMIQ sig. generator, electronic level setting 132089
vector modulator, attenuator and phase shifter 68650
AlGaN/GaN HEMT MMIC attenuator, dyn. range 125769
Si MEMS/MOEMS for lightwave networks 92489
Si MEMS/MOEMS, lightwave network appls., review 82196
Si micromechanics, MEMS/MOEMS for lightwave networks 71361
attitude control
air spindle and triaxial air bearing testbeds for spacecraft dyn. and control expts. 133216
aircraft tracking with single imaging sens. using num. optim.-based methods 73119
astron. telescope, balloon-borne, GPS pointing method *(Chinese)* 88027
constr. mach. unstructured obj. attitude/stabil. control 134322
GPS antenna attitude sens. on turntable 75252
guide star catalog constr., star map ident. *(Chinese)* 98904
hypersonic flight control, GA appl. 122539
ISS transfer vehicle guidance, RendezVous sens. laser rangefinder 98925
ISS transfer vehicles automatic guidance, RendezVous sens. 98923
ISS transfer vehicles automatic guidance, RendezVous sens. 98924
LEO satellites, mag. attitude control syst. 111310
micromission spacecraft, low-cost high-capability platform 122485
New Millennium Deep Space One spacecraft, Remote Agent autonomous control syst. 76822
RHex hexapod robot, proprioception based behavioral advances 109481
satellite attitude control, mag. coils, simul. syst. *(Chinese)* 98890
satellite attitude control syst. sens., fault observer *(Chinese)* 88035
satellite laser ranging theodolite, pointing precision calib. by observing stars *(Chinese)* 98902
simultaneous attitude control and energy storage using VSCMGs 133221
single gimbal control moment gyroscope systs., trajectory tracking, adaptive compensation control *(Chinese)* 76802
Solar Probe, mission & technol. challenges 122486
Space Solar Telescope star sens., high accuracy attitude determ. 98907
space stations conceptual design methodology, flight simul. 98882
attitude control continued
spacecraft attitude control using mag.-GPS dataware syst. 122476
spacecraft attitude determ. subsyst., MEMS based Sun sens. 122532
star ident. using connection cluster *(Chinese)* 98901
star tracker, star image simul. software *(Chinese)* 98899
StarLight mission, instrum. complement & spacecraft concept 122488
STEREO observatory trade studies, avionics archit. 122530
unmanned mini-helicopter control for visual power lines inspection 123020
attitude measurement
diffuse obj. tilt meas. by double-exposure speckle photography, speckle fanning 132151
Earth Sensor Assembly, satellite attitude determ. 88074
Engineering Test Satellite VI, laser commun. equipt., in-orbit meas. 75062
flying target, dist. and attitude meas., opt. imager 109656
GPS attitude determ. receiver integrated with dead reckoning *(Korean)* 10932
guide star catalog constr., star map ident. *(Chinese)* 98904
inertial-mag. systs., attitude defn. using laser gyros 132136
miniaturized integrated opt. sens. design modelling, MQW microring laser us 131870
mobile robot positioning, small-sized solid-state accelerometer 75893
robotic farm tractors, posn. meas. and control, error anal. 97030
satellite laser ranging theodolite, pointing precision calib. by observing star *(Chinese)* 98902
satellite radio navig. syst., covariant coord. method for object's attitude determ 86254
spacecraft attitude determ. subsyst., MEMS based Sun sens. 122532
star ident. using connection cluster *(Chinese)* 98901
star tracker, star image simul. software *(Chinese)* 98899
audio acoustics
see also audio recording; audio systems; hearing; speech
digital transducer array loudspeaker, distortion and directivity 97109
interaural cross-correl. temporal change, sound image broadening by single refl 86350
loudspeakers, optimal source distrib. for binaural synthesis 75333
mil. environ., 3D audio displays 88223
multichannel sound reprod. syst. using min.-norm-soln. in freq. domain *(Japa nese)* 86351
omnidirectional sound sources deisgn using aperture and reverse horn 131784
sound image rendering using loudspeaker and fully open-air headphone-se 75332
underwater hearing thresholds, noise exposure limits, acoustic estim. 122694
audio amplifiers *see audio-frequency amplifiers*
audio coding
7 kHz speech and audio at 16 kbit/s, low-complexity ACELP coding 84010
ANN inter-subjective model for audio quality assess. in packet networks 10635
Astra Digital Radio, high-quality digital audio transm. 75289
asymptotically optimal scalable coding for min. weighted MSE 106376
ATM network environ., scalable subband audio coding scheme 84005
ATM-based multimedia commun. syst./dist. learning appl. 96285
batt.-powered embedded syst., energy-efficient design 68504
boundary filter optim. for segmentation-based subband coding 95700
computer arith. for media sigs. proc. 90807
const. divider for wideband audio decompression proc., BIST implement. *(Chi nese)* 79844
copyright protection via audio watermarking 129383
D-FIRE 2, combined DAB/FM receiver SoC for receiver chipset 120529
DAB, FEC block, low-complexity design 109347
data concealment in audio sig. using sub-band LSB coding, pipelined archit 68833
decoding, low-power MPEG I/II layer 3 decoder 84018
digital audio archive project 97112
digital watermark, class./estim. based attacks/benchmarks 106923
digital watermarking, algms./appls. 95352
distributed multimedia systs., conf., Enschede, Netherlands (Oct. 2000) 78394
EBU listening tests on Internet audio codecs 74488
EBU watermarking test, summary 73421
EGPRS wireless networks, link adaptation/power control for streaming services 131161
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
halftone images, audio data coding 118092
HiFi audio sigs., source encoding *(German)* 84013
high-resoln. digital audio, transparent differential coding 118091
hybrid PWM technol., use in audio data reprod. 73027
Internet, multiresolution-multicast video distrib. 95122
Internet interactive music station, develop. 96231
Internet telephony error control, audio redundancy codec combination 96059
Ka-band broadband aeronautical satellite commun. expts. 108989
landmine detect., EM induction sens., human auditory discrim. 77113
lossless compression of digital audio 94412
low delay perceptually lossless coding of audio sigs. 106377
low-bit-rate perceptual audio coder, perceptual entropy-based method for sig.- adapted wavelet tree 129380
low-bitrate audio coding, state-of-the-art and future directions 94402
low-delay audio coder using adaptive VQ 129379
LPC, warped/conventional techs. comparison 84009
LSF quantization in LPC and warped LPC 129381
modulated lapped transform computation, fast algm. 84716
MP3 music delivery, security methods 106367
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
MPEG audio data, coding bit rate scalability 84015
MPEG audio encoder, fast bit allocation algm. 84021
MPEG audio layer III decoder using dual-core DSP, archit./implement. 118105
MPEG audio Layer III decoding algm., computer simul. *(Chinese)* 94396
MPEG coded audio sigs., decoding by list output Viterbi algm. *(English)* 73029
MPEG open-source software proc. 73350
MPEG syst. target decoder implement. 129704
MPEG-2 AAC decoder, design optim. 118103
MPEG-2 video/audio/signalling inform. real-time transm. using LAN/WAN *(German)* 75308
MPEG-4, audio codification std. multimedia *(Spanish)* 94411
MPEG-4 audio and its appls. in mobile commun., overview 94404
MPEG-4 digital multimedia broadcasting appls. 119786
MPEG-4 facial animation, audiovisual integrat. in multimedia commun. 129781
MPEG-4 low-power/scalable soln. for wireless commun. 118645
MPEG-4 time/freq. partial encoding, score extraction 106369
MPEG-4 virtual worlds, spatial sound proc. 129382
MPEG-audio layer III algm. for 16-bit DSP 79951
MPEG-II real-time syst., audio encoding *(Chinese)* 118085

dio coding continued
MPEG/audio low power encoders using simplified psychoacoustic model/fast bit allocation 118104
multichannel audio coding 129385
multichannel audio coding, DAB and DVB appls. 94403
multichannel audio coding, exploration of Karhunen-Loeve transform 106364
multilevel data compression techs. 84004
parametric audio coding, overview 94405
perceptual audio coder quantization module with PE-based algm. *(Chinese)* 94410
perceptual audio coding and cross channel prediction 118089
real time audio systs., bit-rate reduction by psychoacoustic masking 94397
robust audio watermarking in time domain 73031
scalable audio coding based on hierarchical transform coding modules 84016
scalable embedded zero tree wavelet packet audio coding 84012
scalable layered streaming media delivery, optimal scheduling 108427
Serpent encryption algm. implement. on 24-bit DSP 129283
sorted sinusoidal params., sig. reconstruction 84020
speech synthesis inventories, data reduction *(German)* 73091
streaming media appliances, video and audio encoding 119802
subband perceptual audio coding with nonideal reconstruction filters, optimum bit allocation 73021
SV-SD70 and SV-SD01 audio players *(Japanese)* 86354
time-domain audio watermarking subj. to psychoacoustic masking 84017
videophone for hearing impaired using MPEG-4 tools 96247
wireless multimedia commun., QoS mgt., feedback control model 108853
EG-2 422PML video, audio, and syst. encoder, 64-Mbit embedded DRAM, portable HDTV encoder 107111
dio discs
CD-on-demand syst., design and implement. *(Chinese)* 86358
compact disc, filter banks, Lie groups 109389
digital music performers, Japanese, laptop performers, CD designers and techno artists 75334
DVD-RAM audio/video discs 92991
opt. disc drives, digital control 116586
video compact disc, technol. develop., innovation, China 113412
dio equipment
see also audio discs; audio-frequency amplifiers; audio-frequency oscillators; Hi-Fi equipment; loudspeakers; magnetic tape equipment; microphones; pick-ups
general-purpose auralizer implement. on floating-point sig. proc. 129966
HAVi/ECHONET gateway *(Japanese)* 85119
intell. audiostimulator *(Chinese)* 97143
multibit ΣΔ ADC for digital audio appls., A 105 dB SNR 102295
networked radio theatre prod. facilities *(German)* 75273
portable audio appls., act. noise controller syst., CMOS analogue implement. 97107
selective digital megaphone syst. over network line *(Spanish)* 75330
sig. octave anal. for sound perception 72993
underwater hearing thresholds, noise exposure limits, acoustic estim. 122694
dio-frequency amplifiers
all-digital amps. in audio subsystem 97106
BiCMOS attenuator for audiometric appls. with on-chip power amp. 92481
boost bridge audio amp. 131783
boost bridge music sig. amp., efficiency and total harmonic distortion 68602
Class D amp., low-power LV, feedback design, improved THD 79589
class D digital amp., sampling proc. and pulse generator 101808
class-D AF power amps., distort. reduction using feedforward tech. 68624
class-D audio amps. based on binary sigs. with separated baseband 101781
CMOS audio power amp. driving 8 V_{pp} into 7 ohm resistive load 90770
loudspeakers, low power audio amps. efficiency 120597
LV prog.-gain CMOS amp. topol., very-low temp. drift 79587
dio-frequency oscillators
phase shift oscillator, low cost config. *(German)* 79618
dio oscillators *see audio-frequency oscillators*
dio recording
see also audio discs
AC biased audio recording LSI cct., automatic level control *(Japanese)* 97111
ARMA procs. in sub-bands, audio restoration appl. 84712
Broadcast Wave Format, audio files hist. 75335
digital audio archive project 97112
digital speech store 96369
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 113211
in-car spoken dialogue recording syst. *(Japanese)* 84030
motion picture films, opt. variable dens. sound tracks restoration 106702
multichannel audio coding 129385
multichannel speech sigs. recording/anal. in motor vehicle environ. *(German)* 73008
sig. denoising by wavelet shrinkage, perceptual eval. 129369
voiceband analog audio sigs., record, playback and proc. syst., coarse-fine prog. 131133
wearable electronics integrated into clothes 120600
dio signal processing
see also audio coding
3D audio syst., improving perform. 75328
3D multimodal tracking/event detect. via particle filter 95716
5.1-channel surround sound syst., pairwise sig. mixing 83993
acoustic sigs., quick search algm. using histogram features 95719
adaptive recovery techs. for real-time audio streams 118075
analogue/digital conversion, low power consumption devices, dyn. perform. *(Italian)* 79966
auditory filter bank inversion using least sq. optim. tech. 95667
automatic sound detect. and recogn. for noisy environ. 118071
blind people, auditory guidance syst. with sig. transform. 133380
blind person's US navig. aid, DSP-based, spatial hearing 133060
blind separation of more sources than mixtures using sparsity of short-time FT 106351
broadcast audio sigs., real-time occurrence monitoring 109356
C++ R&D environ. 106354
class. of audio data into speech and music 83986
class-D audio amps. based on binary sigs. with separated baseband 101781
CMOS OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
computational requirements for media sig. proc. 106757
computer music, post-digital tendencies 75336
content based class. and retrieval of audio database 106337
convolved non-stationary sig. separation, adaptive non-causal FIR filters 118980
D/A converters, sigma-delta conversion techs. 80012
de-reverberation using freq.-domain center clipper 83987

audio signal processing continued
digital audio sigs., novel algm. for embedding watermarks *(Chinese)* 129362
digital home entertainment syst., elevated speaker projection 118080
digital music legislation, neutral judicial advice 131782
digital TV, objective audio and video quality assess. 129477
double-threshold-based approach to impulsive noise detect. in audio sigs. 129367
dyn. content multimedia databases, audio signatures indexing 106353
echo canceler design, freq. domain extended correl. LMS 73015
fourth-order SC sigma-delta A/D converter, high-ripple Chebyshev loop filter 80006
framing through peripheral perception 94786
FSK mixed sig. decoder for AF appls. 68655
handheld mine detector operator perform., audio icon design issues 77114
head-related transfer fns., spatial sound synthesis 83991
hearing aids, variable step-size of LMS algm. for acoustic feedback reduct. 73017
heterog. multiprocessor DSP archit. for low-power audio sig. proc. appls. 90936
hybrid auditory masking models 83995
ICA and blind sig. separation, conf., Helsinki, Finland (June 2000) 113195
IEEE SOUTHEASTCON conf., Clemson, SC, USA (March-April 2001) 78407
immersive audio-augmented environ., LISTEN project 106345
intell. multimedia, video and speech proc., conf., Hong Kong (May 2001) 78475
Japanese BS digital broadcast receiver 120545
Jot's reverberation algm., coeffs. computation 118063
melody extraction from midi files with modified Lempel-Ziv algm. 83996
melody input user interface, Tuneserver 106346
model-based audio source separation, particle filter 118058
MPEG audio segmentation, neural multi-expert class. syst. 94384
MPEG-7 audio, overview 83980
multilevel analog flash memory, prog. method 114899
Multimedia Description Framework, content description of audio/video documents 119777
multipoint proc. on DSP array 85427
musical instrum. separation using multiple-cause neural networks 118061
musical instrum. tones synthesis, perceptual wavetable matching 83992
musical sigs., anal. and synthesis, adaptive parametric schemes 97113
muteness based audio watermarking tech. 72987
news and sport videos, semantic inform. extraction 129569
Nintendo GameCube, video game console syst., ATI Flipper chip design 79922
nonlin. distorted sig. reconstr., regularised inverse characts. 129986
nonuniform modulated complex lapped transform 118064
nonuniform oversampled filter banks for audio appls. 106355
octave anal. for sound perception 72993
Peep, network auralizer for network monitoring with sound 108022
plane-wave sound field reprod. with loudspeaker array 107386
plucked string instrums., automatic IIR anal./synthesis 120603
polyphonic piano music transcription using ANN 106352
pulsar synthesis, electronic music synthesis 86362
real time audio over best effort Internet, adaptive audio tool realisation 83978
scaling using freq. domain techs. 106356
scene determ. based on video/audio features 129642
semantic concepts detect. using context/audiovisual features 95017
sigma-DM, multibit chaotic device 68877
smart copying, audio sig. reconstruction, new approach 118065
SoC analog non-volatile storage syst. for audio sigs. with sig. conditioning for mobile commun. devices 102436
sonagram of audio sig. based on wavelet packet transform 73018
sound MagicBoard, augmented reality tools 74457
speaker ident. in noise using auditory props. 84063
speech rate conversion syst., high-quality real-time *(Japanese)* 83977
spoken document retrieval for langs. of Hong Kong 84053
stereo acoustic echo cancellation, nonlin. use 106342
stereo echo canceler with correct echo-path ident., input-sliding tech. 131785
stereophonic acoustic echo canceler, real-time implement. 85429
substation, video server based surveillance syst. design *(Chinese)* 89012
temporal events in all dimens./scales 95016
time-varying AR modeling of audio and speech sigs. 129366
trio automatic music transcription from stereo musical sound sigs. *(Japanese)* 94385
TV programs, automatic genre class. 131734
unified digital platform, develop. 119807
User Gateway, realization scheme 74226
VHS VCR, μP-assisted audio sig. proc. syst. 131775
wavelet shrinkage denoising, perceptual eval. 129369
audio signals
for specific equipment see appropriate headings
see also audio coding; audio discs; audio equipment; audio-frequency amplifiers; audio-frequency oscillators; audio recording; audio signal processing; audio systems; loudspeakers; sound reproduction
intell. audiostimulator *(Chinese)* 97143
multichannel audio coding, exploration of Karhunen-Loeve transform 106364
multichannel audio programme metering 118067
open component-based distributed systs. develop., dyn. QoS mgt., aspect-oriented spec. 119529
struct. video browsing/editing, image/audio seq. visualization/interact. mechanisms 94642
audio systems
see also acoustic devices
3D audio syst., improving perform. 75328
5.1-channel surround sound syst., pairwise sig. mixing 83993
all-digital amps. in audio subsystem 97106
automobile act. noise control use with audio syst. 120593
BiCMOS attenuator for audiometric appls. with on-chip power amp. 92481
CD-on-demand syst. *(Chinese)* 85377
downloadable audio and dial-up voice browser appls. via Web 96277
image texture, audification/sonification 106510
real time audio systs., bit-rate reduction by psychoacoustic masking 94397
audio-visual aids *see audio-visual systems*
audio-visual systems
broadcast TV to Internet audio/video 108196
commodity software for audio/visual home appliances 120539
content abstraction program interface for home network appls. 120540
dist. learning technols., hypermedia classroom *(Slovenian)* 130742
education with audiovisual and multimedia images *(French)* 89614
Finnish audio-visual text-to-speech synthesizer, eval. 118136
forgiveness effect, temporal charact. 86318
HAVi home networking std., Internet protocol functionality 119760
HAVi/ECHONET gateway *(Japanese)* 85119

audio-visual systems continued
HJA, Java prog. for CE devices 120538
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
MPEG-7 SpokenContent representation 84040
MPEG-7 std., overview 85382
multi-modal dialog scene detect. using HMM 85363
multimedia teaching presentation for ISDN telecomms. protocols 100474
OTE-TS (Hellenic Telecommunication Organization Telemedicine Service), value-added telematics service 111293
speech handicapped children, multimedia supported pronunciation training 111188
teleconferencing face detect. by audio/video cues 108382
ToCAI description scheme for multimedia document indexing and retrieval 85364
transfer error recovery for broadcasting network 86295
videophone for hearing impaired using MPEG-4 tools 96247
Web based dist. learning/teaching using DVD and Internet 109364
wireless gateway for wireless home AV network, implement. 119902
auditing
ATC user interface design, combining human factors methods 98933
dyn. multi-threshold metering schemes 129313
intrusion detect. for network connections, data mining approaches 85141
NPP maint. auditing, ES *(Chinese)* 123124
PACS security model 98852
Y2K audit, challenge for clinical engineers in Mexico 87293
auditory activity *see hearing*
auditory brainstem evoked potentials *see auditory evoked potentials*
auditory event related potentials *see auditory evoked potentials*
auditory evoked potentials
ambulatory physiological monitor for animal welfare studies 121968
anaesthesia depth monitoring, auditory evoked pot. coherence estim. 87377
anesthetic states, auditory evoked pot., ANN 76235
attention-deficit hyperactivity disorder, event-related pots., wavelet anal. 110578
awake/sleeping humans, AM following responses, 40/80 Hz modulation freqs. comparison 87357
β-wave AM, scaling behaviour rel. to alertness 87435
brain pot. maps during pain, KLT anal. 98210
brainstem auditory evoked pot. averaging, parametric filter 76266
brainstem auditory responses, quality improvement, single-sweep-based methods 121908
brainstem responses, quality improvement, single-sweep-based methods 110597
button-pressing, effect on P300 amplit./scalp topography 121941
cochlear implant, nerve monophasic/biphasic stimulation anal. 122345
cochlear implant users, loudness perception/late auditory evoked pots. 76695
cochlear implants stimulation, auditory thresholds, sympathetic skin response 76665
diabetic patients, brainstem auditory-evoked pot. exams. 87358
EEG, steady-state responses, weighted averaging 76291
epilepsy, persisting unilateral auditory cortex dysfunction, electrophysiology 76250
event-related pots. for single trial anal., stimulus generation 98202
foetal/neonatal auditory evoked responses, improved neuromag. detect. 87464
gamma band activity, auditory oddball paradigm, wavelet transform anal. 110574
interaural time/intens. disparities responses, differences between N1 waves 76286
lossy compression of auditory brainstem response sigs. 110593
middle latency responses, stimulus type/intens. influence 121976
mismatch negativity as temporal proc. index in audition 121943
neuromagnetic source localisation, auditory evoked fields/intracerebral evoked pots. 132592
P300, evoked pots. with visual/auditory stimuli *(Japanese)* 132551
paragraphs auditory memory, electrophysiology, projection/activation theory of mind 87453
PC syst. for auditory evoked responses recording 76273
perception, induced electrocorticographic gamma activity 87405
schizophrenia, 40 Hz γ/phasic arousal integrat., novelty/routinisation proc. 121911
single trial estim., amplit. estims. comparison 98249
single-event-related pot. anal. by fragmentary decomp. 110628
skull effect on event-related P300, T2-weighted MRI 121946
state effect on sens. gating, waking, REM and nonREM sleep 110569
steady-state responses detect., phase appl. 121942
time-freq. anal. using STFT-based adaptive filters 110521
auditory perception *see hearing*
Auger effect
see also Auger electron spectra; Auger electron spectroscopy
1.55 μm SOA Auger recomb. heating/hot phonon effects 71798
asymmetrical funnel-shape QW lasers, intraband transits. 71831
Auger-suppressed IR photodetector, photonic cryst. enhancement 86519
LD-pumped act. media, excited state absorpt. & upconversion effects 93801
PDPs, secondary electron yield of insulator cathodes 109856
polypyrrole films, Cu/Pd electroless plating metallization, XPS obs. 114392
scintillators, energy relax., VUV/XUV luminesc. spectrosc. 121547
solid targets, laser excitation, X-ray generation 93463
C inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
C, ultrafast inner shell photo-ionization pumped X-ray laser 128091
p-CdS:Cu thin films, chem. states, depth profiles, XPS anal. 103263
CdTe:O thin films, sputter deposition, characts., O content effect 79201
Cu/Sn-Bi solder interconnect, Bi interfacial segreg. 79420
GaAs, laser heating, thermal melting threshold, ultrafast XRD 72118
GaAs/GaAlAs single quantum wire, Auger mechanism carrier scatt., time-resolved microphotolum. 103004
Ge, laser heating, thermal melting threshold, ultrafast XRD 72118
HgCdTe dual-band PV detectors, computer modeling 97241
HgCdTe dual-band PV detectors, triple layer heterojunction design 109545
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
InAs-GaInSb type-II high power high efficiency interband cascade QW lasers 93674
InGaAs/GaAs self-organized QD lasers, temp.-depend. Auger recomb. coeffs. 91807
$In_{1-x}Ga_xAs_yP_{1-y}$ MQW heterostruct. lasers, opt. and structural props. 93624
InGaAsP/InP LD, modulation response, amplified luminesc. 117180
InGaAsP/InP QW lasers, threshold charact. 117177
InGaP/GaAs HBT current gain charactn., heavily doped base effects anal. 115868
InSb, Auger recomb. coeff., IR-FIR dyn. plasma reflectivity 115305
N inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
Auger effect continued
Si, cleaned surface, neutral Ar impact, doubly charged sputtered ions 103405
Si:Er/SiO_2 nanocrystals, nonradiative de-excitation procs. 69482
Si/SiGe/Si DHBT, neg. resist. characts., high power appls. *(Chinese)* 115867
SiC, 6H, epitaxial layers, intrinsic photocond., free exciton binding energy 71512
$a\text{-}Si_{1-x}C_x$:H films, plasma CVD, deposition rate/film struct. *(Japanese)* 79276
SiO_2/Si:Er nanocryst. syst., exciton-Er energy transfer, PL 69481
$ZnS_{1-x}Te_x$, Auger param. shift, extra-at.-relax. 103018
Auger electron spectra
bondpad peeling failure in wafer fab., AES/EDX studies 103949
copper phthalocyanine films, photosensitivity/gas sensitivity in O_2/NO_2 132065
diamond CVD grains on dot-patterned substrs., electron field emission and surface props. 69419
diamond films, nanocryst., biased enhanced microwave plasma CVD 114326
diamond heteroepitaxial growth on pre-deposited β-SiC oriented layer on Si(001) *(Chinese)* 101377
FIB based local deposition of dielec. for phase shift mask repair 103586
FIB techs. for IC failure anal. appls. 70289
fluoresc. detector prototype, analog sig. proc. syst. 110393
gas sens. sapphire substr., Pt metallis. bonding, adhesion layers 97529
hard disk coatings, charactn. of nano-wear mechanisms 68476
mag. storage technol., applied surface anal., review 104526
MCM-D, BCB layer, via form., plasma descum and RF cleaning 115232
microelectronics materials charactn. by AES-sputter depth profiling 70248
pattern writing by large-scale plasma source ion implant. syst., planar ICP source 115497
polypyrrole mixed surfactant films, multilamellar vesicles electrophoretic engulfing 90580
RIB, biomedical research, nuc. med. 133015
steel, elec., sheets, oxide layer characterisation. high resoln. AES/XPS 68400
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
trimethylphosphine as $^{31}P^+$ implant. source for Si device fab. 91984
Ag,AgI hollow glass waveguide, atten., thickness crit. factor 116656
Al-Cu lines, electromigration immunity, pre-annealing effect 115672
Al-Si casting mold materials, surface modif. by plasma-based ion implant. *(Japanese)* 79423
AlF_3 thin films growth on GaAs(110), struct. and chem. stabil. 114403
AlGaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 69642
AlGaN/GaN heterostruct., chem. treated/thermally oxidized surface prop. 80809
AlN thin films, reactive ion beam coating 68152
Al_2O_3, noncrystalline dielec. films, PECVD, phys., elec. props. 101315
AlO_x, porous, anodic, nanoscale field emission array by self-organisation 102926
Au focused electron beam induced deposition 115667
Au on n-Si(100), C contam., electrodepos., electron-beam induced nanomasking 90511
Au/C:H,B/n-Si heterojunction solar cells, PV props. 134383
BN, cubic films, laser ablation deposition 90469
$BaTiO_3$ thin film on $SrTiO_3$, MBE growth in UHV without introducing oxidant 68200
Be-based multilayer masks, X-ray reflectivity and AES 103668
Bi-2212 ribbon-like thin films, growth mechanism, AES obs. 70589
C nanotubes, uniform patterned growth without surface C 101536
CdSe/ZnSe surfaces, nanostructure growth, MBE, AFM anal. 101274
CdTe electrodeposited film struct. and comp., deposition pot. depend. anal. 125043
CdTe films, band gap shallow levels on metallic substrs. 126060
CoCrPtTa/Si, perp./long. composite medium *(Japanese)* 92831
$CoSi_2$ selective growth on patterned substr., dual ion beam tech. *(Chinese)* 81124
Cu CVD for gigascale interconnects, 2,2,6,6-tetramethyl-2-sila-3,5-heptanedione precursor 92167
Cu MOCVD on TiN diffusion barrier, plasma pretreatments effect 92112
Cu/Sn/Si syst., 3D struct. form./evol., AFM, AES, SEM, EDX 114307
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ NTC thermistors, reliab. 102763
Fe/Fe_2O_3 films growth on Cu(110) surface 90321
FeMn/NiFe films, improvement of thermal stabil. of exchange coupling by Pt addit. 81857
GaAs HIGFET, 0.35 μm, surface oxid. status effects on charact. 103843
GaAs, anodic oxide films, radioactivation anal. 103394
GaAs epilayers, low temp. grown, defect props. 79235
GaAs surface, pure water treatment and charactn., water droplet contact angle meas. 103444
GaAs(100), thioacetamide passiv., struct., thermal stabil. 69836
n-GaN, N_2O plasma surface treatment, elec./ohmic contact props. effects 126385
GaN films, MOVPE on c-Al_2O_3, substr. orient. effects anal. *(Chinese)* 126054
GaN, hydride VPE layers, mass transport growth, opt. emission 79401
p-GaN ohmic contact, H_2 storage materials effect 80920
n-GaN, photoanodic oxid., oxide elec. props. 103335
p-GaN, surface-treated, elec. characts. of thermally stable Ru and Ru/Au ohmic contacts 69709
GaN/M (M=Au, Cu), Schottky contacts, XPS, AES 126218
GaP:N_2^+, α-GaN phase, ion-implant. synthesis 126296
Ge QD, CVD growth, dielec. substr. 101310
Ge:C, clean low-defect-dens. surfaces, in situ procs. 69840
HfO_2:Dy gate dielec., elec. charact. for MOSFET appls. 126748
HgCdTe/Si heterostruct., laser beam epitaxy 68365
InGaAs/InGaP HEMTs, technol. optim., anal. modelling 70200
InGaP-Au/Cu Schottky contact, thermal reliab. and MSM photodetector appls. 69708
InN film, low-temp. epitaxial growth 114255
InO_x thin films, chem. and optoelectronic appls. 82054
$In_x(OH,S)_y$ buffer layers for Cu(In,Ga)Se_2 solar cells 100037
InP, low damage sidewall form. by ECR-RIE using CH_4/H_2 115639
InP(100) surface, nitridation studied by AES and EELS 92012
$LaGaO_3$ powders, pure and doped, chem. synthesis by amorph. citrate/EG method, oxide fuel cells appl. 123780
MgO, MOMBE, AFM/AES/TEM studies 124852
Mo FEA, frit sealing, emission characts., ambient gas influence 97666
Mo conductive film deposition on semicond., Mo hexacarbonyl decomp. in glow discharge 90528
Mo silicide conductive film deposition on semicond., Mo hexacarbonyl decomp. in glow discharge 90528

ger electron spectra continued
Ni/Au/p-GaN contacts, annealing effects 103161
Ni-P(B) deposits, surface props. & solderability, electroless plating 78599
Ni-Ti shape memory thin film, growth & charactn. 116065
PZT capacitor integrat. for high dens. FRAM, electrode-barrier struct. 70463
Pb-free solder pastes and PWB finishes, wetting charact. 115203
$Pb(Zr,Ti)O_3$ capacitors, ozone treatment, enhanced retention charact. 116229
$Pd/Al_{0.11}Ga_{0.89}N$ Schottky diodes, thermal stabil., annealing, XRD, AFM, AES 81204
Pt/Ru/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal stabil. 80917
$Pt/SrBi_2Ta_2O_9/ZrO_2/Si$ ferroelec. gate oxide struct., elec. props. 69755
$Pt/SrBi_2Ta_2O_9/ZrO_2/Si$ struct., cryst. struct. & elec. props. 116226
Pt/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal stabil. 80917
Rh focused electron beam induced deposition 115667
Si, chem. dry etching in fast discharge flow, etch rate enhancement 69847
Si field emitters, damageless vac. sealing, CHF_3 plasma treatment 69435
Si films, self-assembly, wet-chem. proc., photolum. 125994
Si implanted with N by PIII, reciprocal space mapping 81036
Si microcalorimetric gas sens., catalyst materials 120968
Si, porous, implanted with N by PIII 81035
Si, porous, thick oxidized, growth, microanal. *(Chinese)* 91991
Si surface, SR-induced nitrization and oxid. at low temp. 81093
Si wafer/glass substr., Sn-Ag(Pb) fluxless soldering 67542
Si wire-like submicron cryst., self-organized growth and charactn. 92249
Si:H(111) surfaces, H-passivated, H_2O/NH_3 temp.-activated reacts. 69472
Si:Mn films, super-doped, gas source MBE growth, anom. Hall effect 90295
Si:Mn, super-doped, photo-thermal excitation GSMBE growth, for spin-photonics appls. 124860
Si:N,C, high dose shallow plasma immersion ion implant. 91973
Si:O,H,N, porous, passiv., PL intens. 71522
$Si/(Ta_2O_5)_x(Al_2O_3)_{1-x}$ interface, electron traps 103185
Si/Ag(001) thin film deposition, AES/LEED/SEM obs. 80667
Si/SiGe strained QW MODFET, cryogenic cct. 115943
Si-Ge wire-like submicron cryst., self-organized growth and charactn. 92249
Si(111) surfaces, contamination, carbonization in UHV, SiC islands form. 126339
SiC, 4H, high dens. plasma via hole etching 103313
SiC, cubic epitaxial films, MOCVD using single mol. precursors 101316
c-SiC/Si(111) thin layer UHV growth, C incorporation, AES/LEED/EELS obs. 114306
SiGe epitaxial layers on Si, anodic oxid., enhanced passiv. of oxide/SiGe interface 92049
SiGe lin. graded buffer, UHV CVD growth and charactn. *(Chinese)* 79280
SiN_x films, ion-assisted deposition, ECR plasma, props. anal. 101448
SiN_x films, low temp. thermal CVD, for microelectronics appls. 124922
SiO_2 ultrathin oxide growth, ultra-slow multicharged ion beam 103396
SiO_2:F for ILD appls., low dielec. const. anal. 91921
SiO_xN_y, low stress films, sputtering type ECR plasma deposition, charactn. 124812
SnO_2 nanocryst. thin films grown on p-InSb(111), structural, elec., and opt. props. 80749
SnO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
$SrBi_2Ta_2O_9$ films prep. by metalorganic decomp. using RTA, charact. 70421
Ta:N-doped powder for MLC capacitors, anodized oxide film, struct. 114427
Ta_2O_5 films, LPCVD & PECVD, struct. & elec. charactn. 104232
Ta_2O_5 thin films on RuO_2 and Ru bottom electrodes, dielec. characts. 104234
Ti/Al/GaN:Si contacts, struct., AES/TEM obs. 103173
Ti/Au ohmic contacts to n-ZnO, elec./structural props. 91874
Ti-Si bilayers, init. reacts., in situ resist. meas. 80892
TiN diffusion barrier, at. layer deposition method for Cu metallization 103482
$TiN_x/SiO_2/Si$, interface form., elec. props. 103186
TiO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
W at. layer deposition, kinetics of WF_6 and Si_2H_6 surface reacts. 79238
W single-cryst. substrs., cleaning procedure, thermionic cathode appl. 102895
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101
$W/n\text{-}Si_{0.83}Ge_{0.17}(001)$ Schottky contacts, low press. CVD, struct., elec. and chem. props. 103155
$WSi_x/n\text{-}Si_{0.83}Ge_{0.17}(001)$ Schottky contacts, low press. CVD, struct., elec. and chem. props. 103155
$Zn_{1-x}Be_xSe$ crysts., AES, ellipsometry, photolum. studies 90213
ZnO layer on ZnS, prolonged electron bombard., degrad. effect, AES/cathodolum. obs. 103049
ZnS:Cu,Al,Au phosphor, cathodolum. brightness, surface chem. changes, temp. effects 104943
ZnS/Si(100) thin films, PLD and cathodolum. studies 79357
ZnSe:(Te,N), δ-doped MBE growth, PL 103032

Auger electron spectroscopy
bondpad peeling failure in wafer fab., AES/EDX studies 103949
discolored bondpads caused by $Al(OH)_3$ form., SEM inspection, EDX, FIB 102873
MAX II ring, soft X-ray beam line 1411 perform. and first results 121336
scanning Auger electron microscope for high spatial resoln. surface pot. meas. 102948
Au/Pt/Ti opt. module thin-film electrodes, adhesion force meas. *(Japanese)* 82432
$CdTe\text{-}CdS\text{-}Zn_2SnO_4\text{-}Cd_2SnO_4$ solar cells layer thickness/interdiffusion charactn. 100114
Cu/a-SiCOF interface, ULSI interconnect metallization, annealing, XPS/AES/SEM 103477
GaAs/TaN/Cu MESFETs, backside metallization using TaN as diffusion barrier 70194
GaAs(Cs,O) photocathode, transm. mode stabil. *(Chinese)* 69389
Pt/W/Cr/SiC Schottky-barrier diodes, thermal stabil., radiation hardness 92275

Auger recombination *see Auger effect; electron-hole recombination*

augmented plane wave calculations *see APW calculations*

augmented reality
2.5-D video avatar, develop. 73201
4G mobile systs., user centric multisphere model, visual cell platform 108971
annotation overlay on video frames, panorama-based, real-time implement. *(Japanese)* 129436
chem. reactor, fluid mixing, ERT, augmented reality 121143
display, adaptive brightness control 97690
endoscopic images and 3D surfaces, mixed-reality merging 87713
fast calib. scheme for augmented reality 109845
immersive audio-augmented environ., LISTEN project 106345
med. imaging and augmented reality, conf., Shatin, Hong Kong, China (June 2001) 89525

augmented reality continued
mobile augmented reality, service connectivity perform. eval. 108969
neurosurgery, augmented-reality endoscope navig. syst. 87789
orthopaedic surgery, computer assisted, augmented reality navig. syst. 76602
PARTNER human-robot interface syst., adaptive annotation fn. 97838
scene constraints during calib. 106603
sound MagicBoard, augmented reality tools 74457
surgical interventions under video-augmented X-ray guidance, appl. to needle placement 87799
surgical navig. syst. with intuitive 3D display 87787

austempering *see heat treatment*

austenitising *see heat treatment*

authoring languages
see also computer aided instruction; high level languages; Perl
dist. education network courses, WWW technol. appls. *(Chinese)* 67414
EDA tools, scripting lang. capability for interoperability 79507
PIKT, problem informant/killer tool for network monitoring 108026

authoring systems
Broadcast Satellite digital data broadcast service, BML authoring syst. 120082
EEG quantitat. anal., virtual training simulator-designer for tutoring students and doctors 89656
hypermedia documentation design for safety crit. training appls. 78503
immersive audio-augmented environ., LISTEN project 106345
intell. tutoring systs. for asynchronous dist. education 113310
Mcast multicast multimedia commun. software develop. platform 85367
multimedia computing and networking conf., San Jose, CA, USA (2001) 89588
multimedia tutorial authoring, adaptation for dist. learning 100475
on-demand viewing, video presentation design 109382
SimulNet educational platform, stds.-driven E-learning 78529
VoD, human-like avatars/hypermedia 86336

authorisation
see also message authentication
ACLA framework for access control list anal. and optim. 119707
agent-based model of anonymous commun. protocols 130443
anonymous message sending over Internet 108325
appl. service mgt., agent syst. design and implement. *(Japanese)* 130642
Argus, digital doorman, automatic visitor ident. syst. 73473
asymmetric self-enforcement scheme with public traceability 106271
CIPRESS syst., transparent access to encrypted data using OS network stack extensions 119482
CONUGA, constrained user-group assignment 74257
conversational speech biometrics for E-commerce appls. 118145
cryptographic key generation from voice 83952
digital rights mgt. on open/semi-open networks 108333
digital signature with one-time pair of keys, cryptanal., modified version 94364
digital signatures, efficient long-term validation 106283
distributed cooperative intrusion detect. *(Chinese)* 85142
DTV zero-knowledge identity authentication scheme *(Chinese)* 109354
dyn. config. of access control for mobile components in FARGO 74186
dyn. voice-over-IP firewall with IP telephony appls. 85317
ELK, efficient large-group key distrib. protocol 85240
Ethernet Wrapper, host access control 96199
evolvable Internet hardware platforms 108222
firewall implement. for software and hardware-based routers 119415
firewall operations *(French)* 108268
firewalls evol. 119539
firewalls for protecting trusted networks 130632
formal authentication algm. based on intruder and security *(Chinese)* 130423
group signatures, identity revocation 106269
hierarchical access control using secure filter 83946
Honeywell Global Home Server, home automation commun. security syst. 119711
identity mgt. syst., multilaterally secure commun. 108350
Internet access technols., overview of wired and wireless systs. *(Polish)* 85320
Internet appls. in extranet environ., proxy-based security archit. 119727
Internet crackers. secure access control mechanism 74116
Internet security via Antibody Layer 74215
Internet users, anonymity service using free MIX routes 106242
Intranet Health Clinic, Web-based med. support services employing XML 111270
intrusion detect. based on protocol context anal. 96036
intrusion detect. for network connections, data mining approaches 85141
IP networking archits. security 108188
LHL threshold group signature scheme, security limits *(Chinese)* 129267
MedStage platform for inform. and commun. in healthcare 111268
mobile Internet commun. services, secure authentication infrastructure 119508
mobile IP AAA archit. extension for differentiated services 130830
Mobile IP AAA infrastructure, authenticated key exchange 107851
mobile multimedia appls., secure commun. protocol 107863
model-based tool-assistance for packet-filter design 108220
multicast media, large-scale distributed watermarking through encryption 119798
multimedia content protection in consumer electronics devices, overview 74428
music protection online and MP3 compression 84715
NEC's CX6800-RD, IP infrastructure server *(Japanese)* 130810
network intrusion detect. syst. based on cooperative distributed agent *(Chinese)* 108226
network intrusion detect. via visual browser design 130598
networked cryptographic devices resilient to capture 83950
networked phys. world, automated ident. archit. 108327
open protocol for secure online presence notification 119265
PACS images, cable modem access using Web browser over Internet 98848
password authentication, multi-user case 106219
patient data cards in health networks, secure interoperability 111267
PC cryptographic coprocessor based on TI sig. proc. and smart card syst. 118033
privacy enhancing technol., anonymity, unobservability and pseudonymity 108011
privacy enhancing technols. conf., Berkeley, CA, USA (2000) 100408
public key infrastructure in VPN environ. 72946
public key traitor tracing scheme with revocation using dyn. shares 106270
publisher-centric Web caching infrastructure, security 130696
PVSS with discrete logarithm hardness and shareholder separability 106275
Raincore API for clusters of networking elements 119716
RSVP as firewall signalling protocol 130384
scalable anonymous connections in context of MIP and AAA 129330
SD-link for secure collaboration across private networks 85248
secure access ports with authentication using Secure Shell, network security *(Japanese)* 130643
Secure Border Gateway Protocol public-key infrastructure 94344

authorisation continued
secure digital archiving of high-value data 129242
secure e-commerce transactions, certificate-based distributed firewalls 130731
secure rem. access from office to home 130636
signature verification online via model-guided segmentation 129678
smart card based rem. authentication protocol for Internet-based syst. 130444
speaker ident. systs. testing using SVM, decision strategy *(German)* 73090
SPKI, logical reconstruction 83969
SPring-8 beamline control, network security 132236
strong-password authentication, attacks and solns. 118047
systs. admin. conf., New Orleans, LA, USA (2000) 100377
TCP/IP network security *(Polish)* 85322
WAKE protocol, key recovery 106278
Web MIXes, syst. for anonymous and unobservable Internet access 108258
Web-based rem. security camera server syst. using index search algm. 131758
wireless ad-hoc networks, intrusion detect. 74382
Autler-Townes effect *see Stark effect*
autoionisation
see also Auger effect
Xe-Ne gas mixtures, gas proportional-scintillation counters 76121
automata theory
see also deterministic automata; finite automata; probabilistic automata; self-reproducing automata; sequential machines; stochastic automata; switching theory; Turing machines
combinatorics in computer sci., conf., Palaiseau, France, Sept. 1997 100423
Compror, text compression method 106187
data commun. protocol, no. of rules needed for automaton grammar to generate finite lang. 73959
decision algm. for rational Presburger sentences using merge routine for polyhedra *(Japanese)* 95876
DNA computation, forbidding/enforcing 69356
graphs, minus and signed domination 100814
radiotransmission security systs., selection of key code seq. 118021
separating systs. theory, basic aspects 106005
automated highways
see also driver information systems
60 GHz MM waves for ITS inter-vehicle commun., propag. charact. 120058
automatic operation bus syst., safety eval. 134546
automobile control, adaptive scheduling using imprecise computation 134542
automobile lateral deviation detect. using mag. sens. syst. *(Japanese)* 124026
automobile MM wave radar syst. *(Japanese)* 124024
autonomous vehicle, real-time lane detect., image recogn. 134555
autonomous vehicle lateral control by yaw rate feedback, machine vision syst. 134556
car IS for intell. transport systs. *(Japanese)* 124044
CNN syst. for toll driving 102477
collision detect. VLSI proc., highly safe intell. vehicles, hierarchical obstacle representation *(Japanese)* 102159
content-based scalable H.263 video coding for road traffic monitoring 84431
DaimlerChrysler vision systs. for intell. vehicles 89422
electronic road pricing vehicles, GPS based IPS, multisens. fusion 124007
ETC, electronic toll collection syst., RF transceiver MMIC, surface via-hole isolation 91345
I-WarpII, MAC protocol for integrated vehicle-to-vehicle and roadside commun. *(Japanese)* 119371
intell. transport systs., wireless commun. technol. appls. 85704
inter-vehicle commun. network with autonomous relay access scheme 74649
InternetCAR appl. software, testing environ. design and implement. *(Japanese)* 124045
intervehicle commun., oncoming vehicle interf. charact. 78233
ITS, Intelligent Transport Systems, combined RF ident., vehicle detect./train posn. 100280
ITS, video based traffic param. extraction, integrative method, background subtraction 73483
ITS road vehicle commun., ROF technol., MM-wave propag. 74913
IVHS, LED traffic lights and vehicle-mounted cameras 131969
IVHS packet-switched cellular single channel radio archit. 108952
laser act. tracking, basics & appls. 93937
location finding of vehicle, using cellular radio 96477
location syst. for vehicles, GPS/cellular telephones 131690
moving vehicles, real-time laser-based detect. syst. 83064
multimode multiservice software radio, adaptive sym. timing sync. 108889
no.-plate recogn., road user charging 118762
platoons of automated vehicles, fault diagnostic syst. 86410
retrodirective antenna array card-type transponder, dedicated short-range commun. 96640
road images, real-time proc., optimal moving windows method 95554
road surface monitoring syst. for cruise-assist highway systs. *(Japanese)* 124000
surveillance, content-based event retrieval 129815
unmanned vehicle, H∞ steering control syst., MR sens. 134518
vehicle detect., UV roadside sens. 131906
vehicle GPS/map matching integrated navig. syst., D-S reasoning *(Chinese)* 86265
vehicle in motion class., inductive loop detectors 113101
vehicle platooning using carrier phase GPS/MM-wave radar 131700
video network, multiple vehicles identity maint. 95007
visually guided agents, hierarchies of sens. and control 84151
automatic call distribution systems *see automatic telephone systems*
automatic frequency control
front-end filter with automatic center freq. tuning circuitry 68910
fully-digital MDPSK DS/CDMA receiver, AFC algm. 107750
induction heating current-fed inverter AFC 124100
Ka-band resonator autooscillating instrumentation for Q-meas. 75394
loop-gap resonator, automatic coupling control, by variable capacitor attached coupling coil 69275
microwave act. filters, AFC theory and expt. 125608
space VLBI mission, uplink freq. control *(Japanese)* 120500
automatic gain control
3D mouse using US dist. meas. with AGC, design 76979
AC biased audio recording LSI cct., automatic level control *(Japanese)* 97111
Applebaum array for rejection of eigenvalue spread interfs. 94193
BiCMOS dyn.-range dB-lin. prog.-gain amp., GSM transceivers 125819
CMOS SC channel-select filter, Bluetooth transceiver 91025
CMS digital opt. link, radiation-tolerant opt. receiver 98060
const.-output dyn. amp. for variable amplit. target tracking 75400
digital phased array antenna syst. for cellular PCS band appl. 83759
direct conversion hybrid CDMA transceiver, low-power AGC, telemetry appl. 108587
DS-SS packet radio commun., serial matched-filter acquisition 108814
automatic gain control continued
HEMT AGC transimpedance amp., low noise, wide input, 10-Gb/s opt. commun systs. 125239
interferometric fiber-optic sens., divide/combine polariz.-induced-fading elimination tech. *(Chinese)* 120881
J-CDMA/AMPS appl. IF-baseband CMOS receiver, 110-MHz 108833
MM-wave receiver, AGC loop, equiv. model, error anal. 85466
MMIC adaptive transversal preamplifier for high-speed lightwave systs. 96674
phase-lock receivers, lock detector 79640
sinusoidal oscillator design adjusting for opamp slew rate and bandwidth limitations 68634
AlGaAs/GaAs four-terminal HBT, RF AGC and mixer 92305
Er-doped fibre amp., opt. WDM node, power-managed control channel 131526
GaAs MESFET MMIC adaptive transversal preamplifier for high speed lightwave systs. 91361
SiGe HBT 40-Gb/s opt. receivers, AGC amp., full-wave rectifier and decision cct. 109070
automatic guided vehicles
precise dead-reckoning, optimal landmark pattern 109667
precision transport adaptive correl. velocimeter 110000
Profibus-DP/IEEE 802.11 WLAN network integrat. 130709
robotic farm tractors, posn. meas. and control, error anal. 97030
steering control/ident. using vision syst. 129448
teleoperated AGVs with wireless link in container terminal 119887
warehouses, mobile robots guidance, intell. space project 97405
automatic meter reading
appl. mode, UNB carrier, 485 bus *(Chinese)* 112189
EPRI SE-240 modular open archit. residential meter, commercialisation 88499
gas/elec. prepayment scheme 99222
InterDAQ data logging Internet appliance, power meas. tech. 112198
meter-supplied customer inform. mgt./appl. 112186
Micro-RF Unit *(Japanese)* 85464
power line carrier, customer services automation *(Chinese)* 77655
power line carrier automated meter reading technol., power quality issues 123072
power line commun. technol. adoption 133815
automatic optical inspection
2D laser scan, closed-loop dyn. inspection 113765
3D automated visual inspection syst. for SMT assembly 80495
3D imaging vision systs. for inspection, conf., Boston, USA (2000) 100440
3D meas. systs., calib. 106793
3D shape meas., computer-aided projection fringe syst. *(Chinese)* 78687
3D shape meas. in neurovision syst. 106789
3D surface/vol. inspection by brightness/laser *(Japanese)* 100652
anamorphic magnification using, chirped grating in grazing incidence mode 106787
ANN embedded automated inspection quality mgt. syst. for mfg. industries 113739
AOI/real-time SPC for high-mix/low-vol. PCB mfg. 115198
assembly line, soldering/solder inspection, automated syst. 113465
automated surface profiling syst., fringe-free interferometry syst., Mueller matrix error correction 89905
automobile prod. line, automated gap inspection by stereo vision 118265
automotive parts, CAD-guided dimens. inspection, graph-based surface merging 100622
BGA chip pins 3D meas., line-struct. laser sens. appl. *(Chinese)* 78663
BGA substr. conducting path defects, AOI 100611
CCD camera FOV generation, neural net 100664
CCD images, line jitter nonuniformity, expt. study 129415
cct. board inspection, 3D vision syst., small FOV inspection 102830
CD-R discs, stamper quality testing, laser beam recorder 92978
ceramic tiles, visual QC, image comparison method, matrix SVD 118470
chip shape, image recogn. 113766
coating inspection with PMD refl. sens. *(German)* 67661
comprehensive test solns. of AOI and AXI, cost 78701
cracks automatic meas. using fibre-optic reflectometry 90600
crankshaft finish control by light scatt. tech. 109974
cylinder-bore surface defect detecting syst., computer vision tech. *(Chinese)* 89895
deboned poultry phys. contaminant detect. by image segmentation 73145
defect inspection syst. with subpixel resoln., morph. operation 107280
dense 3D surface acquisition, struct. light appl. 89908
digital color AOI syst., high-resoln., for 0201 component inspection 100655
distributed neural networks, archit., AOI appl. 124410
DWDM thin-film filter yield, accurate metrology 96782
dyn. lighting syst. for specular surface inspection 118290
Dynamic Process Control for electronics assembly, closed loop real-time SPC/AOI 67686
electronics mfg. AOI, optimal allocation of AOI resources 100648
food inspection by opt. methods, conf., Boston, USA, (Nov. 2000) 78378
forensic sci., striation pattern anal. on firearm bullets 118652
frame rate meas. approach for real-time computer vision appls. 121176
helicopter robot stereo vision for power cable inspection 88452
high-fiber-count networks, automated OTDRs, fully automated DAQ 82108
high-precision surface profiling with broadband accordion fringe interferometry 106788
high-speed image matching using GA-based partial template extraction *(Japanese)* 100656
high-speed phase-shifting profilometry 106784
IHI-CFi LCD colour filter automatic inspection syst. *(Japanese)* 82280
in-line SEM automatic defect class. for vol. IC fab defect reduction/yield enhancement 100636
indust. image proc., real-time behaviour, multivariate approach 113745
indust. image texture anal., multivariate anal. using PCA 118678
indust. proc. monitoring & SPC, multivariate image anal. 113809
indust. visual inspection, fast alignment search algm. 100640
IR thin film monitoring syst., init. param. auto-check algm. execution *(Chinese)* 67651
Japanese nat. micromachine project overview, micro-opt. devices 71379
large-size arclength meas., noncontact ultra-accurate syst. *(Chinese)* 100623
laser act. tracking, basics & appls. 93937
LCD, brightness uniformity/cell gap deviation rels. *(Japanese)* 97637
localization and meas. of miniature SMC objs. 113746
machine vision appls. in indust. inspection, conf., San Jose, CA, USA (Jan 2001) 113221
machine vision lighting, LEDs vs. fibre opt. illuminators 89886
machine vision syst. for inspection of laminated tubes 118291
machine vision-based inspection systs., fund. 89900
MEMS struct. illum. and loading control *(German)* 81560

utomatic optical inspection continued
MEMS/MEOMS machine vision 93210
microcomponents, inspection, digital holography, meas. sensitivity *(German)* 81630
micromechanical measuring struct., plasma proc. technol. *(German)* 81629
Model Maker rapid prototyping syst., online layer profile dimens. meas. 100621
model-based inspection of shot-peened surfaces using fusion techs. 106781
opt. center calib., vision coord. meas. *(Chinese)* 89897
opt. flow computation 129616
optoelectronic computer-aided systs. for 3D inspection of complex objs. 106795
PanelMaster LCD panel inspection syst. *(Japanese)* 82241
paper curl shape meas. by stereoscopic camera syst. 86966
PCB AOI, color/black-and-white systs. comparison 113769
PCB assembly proc. automated inspection strategy selection 113770
PCB golden fingers defect class., bootstrap sampling method 80516
PCB inspection using SVM 80513
PCB mfg. quality mgt., AOI technol. impact 113760
PDP fluoresc. patterns, automated rapid defect inspection algm. 121130
pharmaceutical tablet prod., vision-based QC syst. *(Polish)* 89894
polyester filament diam. meas. by real time opt. method *(Japanese)* 86956
power transm. line inspection, autonomous robot, CT principle 99368
precise angle meas. for vert. microstruct. on substr. 113747
range images correl., shape conformity eval. 106965
rapid prototyping, online visual accuracy inspection 124397
real-time AOI syst. for PCBs, image matching 124412
real-time inspection of metal laminates by means of CNN 118293
real-time SPC with AOI, SMT prod. line implement. 91481
reflective liq.-cryst. microdisplays, automatic inspection syst. for defect detect. 97654
ring bar code, high-speed reading method *(Japanese)* 100653
rly. overhead contact lines, automatic optic inspection *(German)* 78288
robust and accurate image alignment, hybrid search algm. 113748
semicond. material, etch pit dens., automated opt. syst. 89887
separated-kernel image proc. using FSM, implement. for template matching 106780
single-image fringe projection profiling method for dyn. appl. 113749
six-sigma PCB mfg., AOI role 115184
SMD, lead inspection, edge detect., wavelet transform 118708
SMT post-placement/pre-reflow AOI syst. eval./implement. 113736
sodium lamp tube automatic defect detect. syst. *(Japanese)* 100315
specular tilted surface meas. by fiber-optic sens. 89910
surface roughness meas. of tooling spheres for laser meas. 105657
textile inspection, texture selective removal using wavelets *(Japanese)* 94625
textured materials, surface defects ident., wavelet packets 124401
TFT LCD inspection using high-speed high-resoln. vision syst. 127845
tolerance control with high resoln. 3D meas. 84232
topography reconstruction of specular surfaces from series of grey-scale images 106786
transparent lenses surface defects detect., concentric frame difference method *(Japanese)* 82257
turning, surface roughness inspection by computer vision 100663
twin laser sens. thickness meas. instrum. calib., isoline bilinear LUT 113743
vectoral imaging-based AOI for PCB assembly 113761
vectoral imaging-based PCB AOI for zero-defect prod. line 100654
visual inspection by binocular rivalry, stereo viewing 78700
weld joint inspection, thermographic images compression 78693
wood real-time inspection archit. 95532
GaAs 6 inch wafer mfg., cost effective yield enhance. using August NSX syst. 126924

utomatic programming
image proc., automated program generation syst., CBR appl. *(Japanese)* 84101
logic fns., evol. synthesis using MUX 114679
open archit. microcontroller based distributed meas. syst. and control syst., automatic program generation 75375
PCB design, optimal moving path for NC drilling, automatic prog. *(Chinese)* 102807
software clustering algms., computation distrib. archit. 130877
unified header compression framework for low-bandwidth links 74590

utomatic repeat request
3G mobile radio, high-speed downlink access, evol. to 4G systs. 85699
32 kbits/s real-time/dual-direction video commun. syst. for wireless channels, perform. eval. 74637
40 GHz band radio channel, ARQ combined with SR/GBN for broadband wireless systs., perform. 119262
adaptive ARQ, control params. decision 107918
adaptive FEC/ARQ for utility-based wireless fair scheduling, perform. improvement 131069
adaptive hybrid schemes for wireless links 94292
adaptive protocol relay capability for real-time media with allowable delay *(Japanese)* 119369
adaptive robust type-I hybrid ARQ scheme 85801
ARQ perform. in satellite commun. syst. with intersatellite links 95952
ATM noisy network links, hybrid ARQ/FEC scheme 106117
ATM satellite traffic, throughput anal. and coding 85917
ATM wireless networks, bandwidth/buffer dimensioning for guaranteed QoS 96351
ATM wireless networks, DLC strategies with flexible error control 107838
black side data link layer, retransmission inform. appl. 111605
Bluetooth, adaptive link-level error recovery mechanisms 85488
Bluetooth wireless ad-hoc network, asynchronous data traffic perform. 119899
broadband radio access networks, real-time ATM, hybrid ARQ protocol 131108
CDMA packet-switched syst., capacity eval. 108798
CDMA wireless commun., adaptive signaling schemes 108740
channel condition ARQ rate control for real-time wireless video under buffer constraints 95884
coherent high-speed TD-OFCDM broadband packet wireless access, multi-level modulat., hybrid ARQ 96423
combined lin.-decision feedback seq. estim., pre-filter 84768
DQRUMA with scheduling algms. for multimedia traffic in indoor environ. for W-ATM networks 85026
DS-CDMA Rayleigh channel variable block 2D-CELP image transm. 108946
dyn. error recovery mechanism and error control algms. *(Chinese)* 130424
event error control codes, appls. 117946
FEC/ARQ hybrid syst. using turbo codes, retransmission strategies 83893
FEC/automatic retransmission requests for reliable multicast transm. 130354
full memory multidestination selective repeat ARQ protocol with finite receiver buffer, anal. method 73892
future mobile network, tech. overview and data link control scheme 85700

automatic repeat request continued
go-back-N ARQ protocol with multiple copy-transm., throughput perform. 95881
go-back-N ARQ scheme over multiple parallel channels, delay perform. 85043
GPRS, radio link control level, acknowledgment procedures 85641
H.263 video for mobile commun., error resilient transm. 84379
HFC upstream channel, multiuser detectors, S-CDMA access *(Chinese)* 107737
high-speed MC-CDMA wireless access in forward link with multi-level modulation and hybrid ARQ 108774
hybrid ARQ schemes using turbo TCM for wireless channels, perform. 83939
hybrid schemes, adaptive block encoding 129055
incremental-redundancy scheme in block-fading Gaussian collision channel, throughput perform. 129074
LOS bandlimited channel, efficient error free data transm. 111583
mobile radio foveation-based error resilience, unequal error protection 96522
multi-access WLAN, reliable multicast 108228
noisy channel progressive image transm., optimal protection 108014
PRIME ARQ for high-speed wireless ATM 73888
protocols, request seqs. qualitat. modeling/compression 107470
rate compatible product codes 106094
Rayleigh fading channels, hybrid type-II ARQ with scheduling for packet data transm. *(English)* 73930
reliable commun., continuous error detect. 119111
reliable multicast file transfer on inter-university satellite network 96235
reliable wireless video transm. via fading channel estim./adaptation 84394
satellite commun., reliable broadcast scheme throughput 131313
scalable video, error-resilient compression/transm. 106934
scalable video streaming, wireless channel, power-optimized joint source channel coding 107107
smooth/adaptive forward erasure correcting 119354
third generation wireless commun., multiple rejects ARQ for RLC, perform. anal. 85003
turbo iter. decoding convergence and errors 129046
type-I hybrid bandwidth-efficient turbo-ARQ scheme, diversity combining techs. 129164
type-I hybrid protocol over optimal-seq. CDMA link 107818
type-II hybrid ARQ protocol and appls. in slotted Aloha DS-CDMA 95914
UTRA TDD, throughput of hybrid ARQ types 95911
variable redundancy coding for mobile channels 129057
video transport over wireless channels, rate-control scheme 74636
visual commun. over noisy channels, error resilience tools 129784
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
W-CDMA, packet data access enhancement 107774
W-CDMA, rate compatible punctured turbo coding 84887
W-CDMA channels, multimedia transm., resource allocation with adaptive QoS 85384
W-CDMA forward link, high-speed packet transm., hybrid ARQ schemes 96424
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
W-CDMA syst., RLC multiple rejects ARQ for packet data service, perform. anal. 73897
wireless ATM, hybrid ARQ/FEC scheme 95915
wireless ATM, hybrid II ARQ schemes using punctured RS code, perform. 119286
wireless ATM, QoS oriented data-link control protocol for CBR traffic 130422
wireless ATM access networks, CLR perform. of random traffic and error control 108644
wireless packet data, packet size depend. link adaptation 74525
wireless video transport using conditional retransm. and low-delay interleaving 108634

automatic telephone systems
see also call centres; telephone equipment
three-level connection fields, software mgt. of links 73815

automatic test equipment
see also automatic test software
120 kVA automated power quality test platform 133708
acoustic QC, autosynchronized wavelet transform anal. 75374
ADC testing, transportable A/D box for comparative meas. 109425
asynchronous cct. testing, techs. and ATE archits. 79788
ATM equipt. perform. testing, frame-level meas. apparatus 131806
automotive electronic control modules, simul./design validation 113118
aviation gas turbine engines, testing automation *(Russian)* 76821
axis roundness meas., V-shaped method *(Chinese)* 89896
Bluetooth wireless technol., test challenges 131252
CAS-BUS testing of TAPed and wrapped cores 81433
commun. satellite reception conditions, Poland 85923
complex digital systs., logic analyzers, test instrums. 131837
data commun. test automation using scripting langs. 120642
DC motor fault diagnosis using fuzzy ARTMAP *(Chinese)* 112537
dist. relay testing, automatic test procedures 77570
DSL telephone pair gain systs., automatic testing 119815
dual-slope method time interval meas. core, CMOS technol. 101907
dynamic testing/analyzing syst., virtual instrumentation *(Chinese)* 75372
electromechanical overcurrent relays, electronic test sets approaches 77611
end-to-end relay testing using GPS-synchronized secondary injection 77485
EV power batt. perform. testing syst. *(Chinese)* 78125
fruit contact press. distrib. meas. equipt. 120643
GPIB-to-parallel interface for obsolete instrums. 86403
high-speed ADC, DSP-based tech. for coherently sampled seqs. gen. 120700
hot wire inspection using eddy current tester with computer syst. 113742
IC design/test, DFT tool/ATE platform cooperation 126997
IC testing using force control, flexible IC inserter 81498
IEEE 1394 computer connectivity std. for automatic test appl. 75366
interchangeable virtual instrum. drivers, test syst. perform. 97141
JTAG pipeline prog. via VME-6U interface, embedded test bus controllers *(Italian)* 86401
KPCI PC plug-in card for DMM voltage meas. *(German)* 120640
LCD-based vision screener, tech. develop. *(German)* 98351
manufacture, education using FPGA 109422
MEMS self-test techs., nonelectrical test stimuli induction on-chip 104219
microprofile meas. syst. develop. using vibroscanning method *(Japanese)* 109970
mil. avionics testing, open syst. archit., COTS, cost savings 122746
mission logic for embedded testing, syst.-on-a-chip logic cores 79747
motorcycle, light, automatic test syst. design *(Chinese)* 86402
multisite IC testing for reduced test time/costs 116007
online inspection for hidden internal defects 78691

automatic test equipment continued
ONT analyzer for meas. of opt. networks supporting DWDM and SONET/SDH *(Spanish)* 75367
parallel distributed test syst. design 86399
PC parallel port appl. for automated test systs. 97135
PC-based logic analyser *(German)* 120684
PCB in-cct. test for QA 69314
pellet component quality eval. using image proc. with neural networks 94817
phased-array subarrays, automated testing 117841
piezoelec./ferroelec. materials, complex meas., universal apparatus 86911
power diodes, non-destructive tester for single event burnout 131803
pump test rig syst., prototype 97133
Rohde & Schwarz ROGER GSM interf. analyser 75388
Rohde and Schwarz CMU 300 universal radio commun. tester 86783
scan chain concealment for test vol. and appl. time reduction 125433
secondary batt. recycling, service counter-based testing/restoration 89137
sens. conditioning cct. simul. *(Chinese)* 109466
seq. TDR for DSL diagnostics 85408
small power engines testing, AC dynamometer syst. *(Chinese)* 75364
SMT/through-hole technol. based PCB testing, comparison 102831
source-measure units, automated testing role 131808
SRM magnetis. charact. meas., ATE 88709
supersonic jet exhaust flow field, automatic testing syst. *(Chinese)* 131807
syst.-on-a-chip test data compression/decompression 81432
TCXO, automatic freq.-temp. test chamber 125255
TLD automated syst., pers. monitoring, Ireland 122385
torque convertor automatic test syst., interchangeable virtual instrum. *(English)* 131809
TPS delivery in less than 4 months, case study 97134
transaction-based simul./emulation archit. for functional verification 131810
TrySense develop. platform for sens. systs. realization 109423
underwater test facility, computer controlled transducer positioning syst. 97136
VRML animation of inspection syst. 120639
wafer level/parametric IC test systs. for design/life cycle enhancement 104042
Cu CMP proc. modules, defect class. 126502

automatic test pattern generation
accumulator-based bit-serial test response compaction schemes, ISCAS'85 benchmark ccts. 79738
aliasing-free space compactor design, switching theory formulation 101965
analog ICs, device params., test generation based diagnosis 79538
BIST, distributed and embedded, test pattern generator 79731
BIST for seq. cores in SoC environ., spectral methods 101918
BIST test pattern generator using ATPG vectors 125329
CMOS digital ccts., defect-oriented fault simul. and test generation 79740
CMOS digital VLSI cct. fault detect., gate orient. effects 70305
CMOS dyn. logic cct. testing based on charge sharing 102075
combinat. ATPG algms., test pattern compaction, independent/compatible faults *(Korean)* 102095
combinat. cct., configurable hardware, ATPG 68718
combinat. cct., defect coverage, target faults, test generation 79796
combinat. cct. path delay faults, ATPG methodology 79810
combinat. logic ccts., test generation, OBDD *(Chinese)* 79756
combinat. MVL ccts., genetic algm. for ATPG tool 90891
Combination of BIST and External Test for SoC *(Japanese)* 70282
complementary pass-transistor logic ccts., testing, single-stuck faults 102018
continuous scan, test environ., fault coverage 125346
deterministic scan-BIST archit. with appl. to field testing of high-availability systs. 101994
DFT scan wheel, tech. for interfacing high speed scan-path with slow speed tester 101915
dominator gates, fault equivalence ident., redundancy, static/dyn. extraction 102043
DSP syst., coverage-directed generation of syst.-level test cases for validation 101930
embedded memory core testing, on-chip march pattern generator, low hardware overhead 125291
evol. meta-heuristic, state justification in seq. atpg 101905
fault simul., high-level std. 68508
formal property verification, abstraction refinement, formal, simul. and hybrid engines 125430
full-scan ccts., test appl. by input control tech., power consumption 79754
functional test generation for behaviorally seq. models 79691
functional vector generation using interact. FSM model 79741
IP-based designs, delay fault testing via symbolic path modeling 125288
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
low power BIST test pattern generator, modified clock scheme 101924
memory test models, automatic generation/validation for µP 125183
mission logic for embedded testing, syst.-on-a-chip logic cores 79747
mixed sig. DFT/BIST automation using behavioral modeling 68952
multi-output incompletely specified logic fns., bi-decomp., BDD-based method 125431
multicore systs. on silicon, exact fault simul., intellectual property protection 79716
multiple scan chain design for two-pattern testing, seq. cct. appl. 102042
multipliers, array and Booth, low power BIST schemes 125428
µP IP cores testing, SOC develop. 79914
MVpGen test program generation tool for complex pipeline behavior verification 125563
path delay fault diagnosis in combinat. ccts. with implicit fault enumeration 114714
power optim. 109421
PowerPC µP, anal. of testing methodologies for custom designs 102203
PowerPC µP, false timing path ident. 79920
random limited-scan to improve random pattern testing of scan ccts. 125344
retiming-based test pattern generator design for BIST of data path archits. 102065
RTL ccts., non-scan DFT method, fixed-control testability *(Japanese)* 68712
RTL partial scan design syst. *(Japanese)* 79767
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
scan chain concealment for test vol. and appl. time reduction 125433
seq. ATPG, efficient spectral techs. 79681
shifter/accumulator pairs in datapaths, deterministic BIST scheme 79737
simultaneous switching gate delay model, static timing anal., ATPG 125437
single wire replacement algm. 102092
SOC design verification, port order fault model 104054
SoC embedded cores testing, twisted-ring counters use 101966
speed-independent async. ccts., test pattern generation 79807

automatic test pattern generation continued
static timing anal., false coupling interacts., ATPG-based approach 125374
stopping criteria comparison, high quality behavioral verification 79723
sync. seq. cct., crossover operator for GA based test pattern generator 90829
sync. seq. ccts., almost independent reset sigs., testability struct. 102041
syst.-on-a-chip, combining low-power scan testing and test data compression 125347
syst.-on-achip ASIC design, logic bist 68692
TACOS, testability allocation and control syst., BIST cost/quality trade-off 125332
transit. faults, diagnostic test generation, delay fault models 68685
two-level LFSR high efficiency BIST scheme, asynchronous test pattern transfer 102017
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
weighted pseudo-random testing hybrid BIST, test resource partitioning scheme 101908

automatic test software
includes software for computerised instrumentation
120 kVA automated power quality test platform 133708
acoustic QC, autosynchronized wavelet transform anal. 75374
ADC testing, std. framework for IEEE-STD-1241 in MATLAB 114832
arbitrary waveform generators, eqns.-based waveform creation 132091
data commun. test automation using scripting langs. 120642
electromechanical overcurrent relays, electronic test sets approaches 77611
field intell. instrum. software syst., integrat. technol. *(Chinese)* 109427
functional test program develop. syst. 86400
interchangeable virtual instrum. drivers, test syst. perform. 97141
JTAG boundary scan test in high mix mfg. environ. 86404
live network clouds, automated unit testing 130563
machine vision technol., emerging trends 118213
mil. avionics testing. open syst. archit., COTS, cost savings 122746
motorcycle, light, automatic test syst. design *(Chinese)* 86402
multi-appl. FFT analyser, DSP archit., real-time behaviour 86408
noise-mixed PD recogn. using feedforward triple-layer neural net 116182
power transformers insulating oil diagnosis using neural nets 134135
SoC device modelling for virtual test using VHDL 80115
space channel simulator design, virtual instrum. software 107923
test program develop., prod. floor execution speed 75365
torque convertor automatic test syst., interchangeable virtual instrum. *(English)* 131809
TPS delivery in less than 4 months, case study 97134
US NDT data proc., 3D graphics role, adv. software environ. 114539
VLSI functional test synthesis, design methodology 92459
VLSI layout anal., geom. proximate nets 81472

automatic testing
see also automatic test pattern generation; automatic test software; built-in self test
Alpha 21364 µP error handling syst., pre-silicon verification 125564
ASIC cell fault models, VITAL compliant VHDL simulation 102424
assembled PCBs, IEEE std. test access port, boundary-scan register 102816
asynchronous cct. testing, techs. and ATE archits. 79788
automated opt. MEMS test solns. 104761
BIST, oscill. based method for functional testing of smart sens. devices 80124
BIST scheduling for min. energy consumption under power constraints 101933
BIST strategies at register-transfer and algorithmic levels 125341
block-test scheduling under power constraints, combined tree growing 104053
CAS-BUS testing of TAPed and wrapped cores 81433
CATV networks, automatic meas. of IMD 75313
cct. tests scheduling for low power BIST 109424
CMOS logic open defect detect. by supply current test 79797
colour counting tech. and appl. to path delay fault coverage in ICs 79742
component testing, fast real-time syst. *(German)* 120641
continuous scan, test environ., fault coverage 125346
cross-chip delay meas. and charact. of delay modeling flow, boundary scan delay chain 79736
cyclical-monotonic drift, non-parametric tests 120607
data path synthesis, GA 114731
diagnostic March tests for memories, ATG algm. 102140
distributed base station amp., lin. optim. 101791
electronic devices, prod. testing, DMM *(Italian)* 100559
electronic meas. technol., fund. concepts *(Japanese)* 86363
embedded test in semicond. chip and concept of embedded quality 78694
FFM, functional fault modeling, opamp ccts., test generation 125241
floating-point adder, on-line testing method, abridged operation 79791
forward-looking fault simul. for improved static compaction 114716
FPGA-based systs., run-time reconfiguration for fault injection appls. 114711
freq.-directed run-length codes, appl. to syst.-on-a-chip test data compression 101911
geometric-primitives-based compression scheme for testing systs.-on-a-chip 101913
hierarchical test of VLSI, transparency extract. and utilization 101923
high-dens. PCB functional testing, proc. factors 102813
IC tunneling opens diagnosis, screening and localization issues 104011
ICs, HBM ESD testing, contact reliab. 127001
IM control lab., Internet-based 77858
indust. DSP block, semi-formal test generation, Genevieve methodology 102202
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
integrated SoC test framework 81431
interactive BIST appl., compression tech., test data vol. reduction 101909
interconnect testing, switching activity, automated BIST synthesis 104058
isochronous testing strategy for hierarchical adaptive distributed syst.-level diagnosis 125333
JTAG based AC leakage self-test for digital VLSI ccts. 125303
microwave film bulk acoustic resonators, modified Butterworth-Van Dyke cct. 104456
microwave filter, automatic test and tuning syst. 102538
microwave meas., four-port syst., on-wafer calib. and testing 86923
mixed-sig. IC testing, lin. model 102417
multiple logic defect diagnosis, full-scan design, curable vectors 101910
n-detect. test generation, fault dominance appl. 101934
near-line inspection of CD/DVD opt. discs, automatic test method 93004
neighborhood pattern-sensitive fault test algms. for semicond. memories 102136
nonlin. analog ICs, optimum test stimuli, nonlin. prog., time-domain sensitivities 79539
online inspection for hidden internal defects 78691
online testing, diagnosis, and fault tolerance for FPGAs in adaptive computing systs. 102047
opt. component testing, opt. connection matrices, GPIB interface *(German)* 97137

tomatic testing continued
opt. storage conf., Shanghai, China (May 2000) 89533
parameterizable error-propag. space compactors for response obs. 101912
path delay faults, diagnosis in at-speed environ., functionally sensitized paths 102038
phased-array subarrays, automated testing 117841
pipelined ADCs, self-testable with low hardware overhead, BIST scheme 102276
power syst. digital protection relay PC-based tester *(Korean)* 77452
power system protection relay digital test methods 133780
proc. control subsystems, software-based self-test methodologies for perform. faults 101995
prog. BIST for embedded SDRAM, Verilog BIST modules 125478
pseudo random BIST for detecting real defects, min. test length 104032
rot. machine condition monitoring/diagnosis by vibr. sigs. 97132
round bar US testing, angle beam immersion tech., echoes anal. 114519
scan ccts., test compaction, at-speed testing 125345
self-testing of user-programmed FPGAs based on concept of lin. segments 125323
shooting range, computer-aided meas., live shell appls. 122767
sigma-delta techs. for integrated test and meas. 126951
SoC interconnect crosstalk defects testing using on-chip embedded proc. cores 126977
socillator test, delay test scheme for embedded ICs in boundary-scan environ. 104012
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
SOI bonded wafers, eval. by automated acoustic micro imaging 126220
source-measure units, automated testing role 131808
SPIRIT, highly robust combinat. test generation algm. 102072
static CMOS PLA, testable design method, IDDQ testing 79806
supercond. integrated receiver, test and control, DAQ syst. 71166
sync. seq. ccts., BIST method for fault diagnosis 68776
syst.-on-a-chip optimal test access archits. 115989
syst.-on-a-chip precedence-based, preemptive, and power-constrained test scheduling 104031
syst.-on-a-chip test data compression/decompression 81432
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
TFT-array testing for high resoln./high content AMLCDs 81494
tristate syst. environ., fault detect. 125173
unified DFT archit., IEEE 1149.1 and VSIA/IEEE P1500 compliant test access controllers 125339
wafer test automation in 300 mm environ. 116011
Al-Cu thin-film metallizations, thermal aging, reliab. tests 115669

utomation, social aspects *see social aspects of automation*

utomobile electronics *see automotive electronics*

utomobile industry
Audi aluminium alloy car body, Nd:YAG material proc. lasers 72103
BIT for intell. syst. design & condition monitoring, overview 131805
body assembly line robot reliab. study *(Japanese)* 124425
CAD-guided dimens. parts inspection, graph-based surface merging 100622
conf. on sens. and control techs., Wuhan, China (June 2000) 78371
crankshaft finish control by light scatt. tech. 109974
dimethyl oxalate electro-oxid., direct oxid. fuel cells appls. 123776
energy savings with variable speed drives 134431
ethylene glycol electro-oxid., direct oxid. fuel cells appls. 123776
EV develop., patent activity, US automobile indust. 89747
hermetically enclosed elec. machines, precision meas. *(French)* 113089
Japan's automobile indust., supplier syst. anal. 89750
Japanese-style supply chain mgt. in auto-electronics indust. 89749
natural fibre reinforced car interior trim panel laser beam cutting 72140
oil filters, rot. positioning and type verification, PC-based machine vision syst. *(Slovenian)* 75637
plant power supply modernisation benefits *(German)* 78358
product develop. structuring, boundary mgt. 89790
project scope decisions empowerment using R&D content graphs 113398
QC, electronic nose, GC/MS syst. 121020
quality action programs, effect on quality/firm perform. 89755
requirements specs. for cars, high-quality 124056
stereo vision for automated gap inspection in automobile prod. line 118265
supply chain mgt., environ. factors, strategy, implement. 100542
tailored blank laser welds, QC, US guided wave & EMAT use 124139
Thai automotive indust. supply chain, new mfg. technols., QM 89901
time-correl. single photon counting, 3D imaging 106743
vehicle components/systs., lab. reliab. demons. test 89920
Al alloys, laser hybrid welding, automotive indust. appls. *(German)* 128614

automobiles
30 GHz transmit/receive modules, test equipt., sens. modules *(German)* 131336
accident meas., scene images from digital camera 109975
act. noise control syst. use with audio syst. 120593
advanced IS for car with on board computer *(Spanish)* 113122
antennas integrated with vehicle glazing, installed perform. modelling 83619
audio/video, telematics data bus technol., politics, stds. 123954
automatic lane keeping, Perception Net based sens. fusion 86650
automobile noise corrupted speech, binaural diverse sub-band proc. 72991
autonomous vehicle, real-time lane detect., image recogn. 134555
autonomous vehicle lateral control by yaw rate feedback, machine vision syst. 134556
batts., prod. line test, failure detect., ΔV criteria 78156
BEGA, biaxial excitation generator for automobiles 78306
belt-driven induction starter-generator, design, testing 123961
cabin ventilation control, semicond. type gas sens. 100291
car air conditioning, mean radiant temp. sens. 124114
car license plate recogn. syst., neural network based 84566
car license plates detect. from complex scene 73457
car wiper motors, brush PMDC motor drive, fuzzy logic controller 89359
components/systs., design optim. 89814
components/systs., lab. reliab. demons. test 89920
crankshaft starter-alternator, transverse flux reluctance machine 89395
cylinder press. peak posn. in internal combust. engine, indirect meas. 121180
DC motors, commutation arc in gasoline, effect on brush wear and commutator 123486
direct-start asynchronous starter/generator, vector controlled 89423
disassembly, stereo-vision-based robot syst. 84598
elderly drivers, respiration and heartbeat meas., unconstrained noninvasive method *(Japanese)* 87306
elec. motor car unit, brake force control *(Chinese)* 78307
electrohydraulic vehicle braking syst. develop. 134575

automobiles continued
electrostatic precipitator with barrier discharge, electrode particle collection *(Japanese)* 111473
engine mounting systs., survey 78311
EWTS82 series quartz cryst. ang. rate sens. for vehicle navig. syst. *(Japanese)* 131894
flexible EM shock absorber 117641
fly-by-wire systs. for motor cars using time triggered protocol *(German)* 89367
flywheel balancing, factorial designs, cylindrical response 89309
fuel cells, environ. issues, review 112839
fuzzy inference method for car image recogn. 129925
fuzzy logic in automobile appls. *(Russian)* 134553
gasoline engine transient air-fuel ratio control using US flowmeter 100303
hermetically enclosed elec. machines, precision meas. *(French)* 113089
i-mode car navig. syst. with small GPS appliance, overview *(Japanese)* 131712
in-car spoken dialogue recording syst. *(Japanese)* 84030
in-vehicle networking for future automobiles *(German)* 113124
intell. image sens. for inner space monitoring 124038
intell. transportation, adaptive scheduling using imprecise computation 134542
low noise engines develop., key steps and methods 100276
MICRO.tec 2000, conf., Hannover, Germany (Sept. 2000) 113199
mobile commun., driver distraction and vehicle accidents 78555
mobile phones and driving, UK perspective on government policy 78557
multichannel speech sigs. recording/anal. in motor vehicle environ. *(German)* 73008
multifunctional sens. for oil condition eval. *(German)* 109770
parking detect. method using image segmentation 84601
phone-use related driver distraction detect. feasibility 78556
polymer opt. fibre appls. 119729
positioning technols. 120491
public liq. hydrogen filling station for automobiles, Munich Airport 99457
RAC Motoring Services, mobile data/location devel. 120048
real-time intell. fault diagnosis, joint time-freq. anal. based hybrid neurosystem appl. *(Chinese)* 118936
requirements specs. for cars, high-quality 124056
road images, real-time proc., optimal moving windows method 95554
robust design, reliab.-based optim. 89813
SCAN, hardware minimised low cost/low power fieldbus, low power concept 120663
SENSiTEC appl. specific MR sens. for automotive appls. 120788
hard clad silica fiber based opt. star net for automotive appls. 109107
speech quality and recogn. rate improve. in car noise environ. 84027
speech synthesis inventories, data reduction *(German)* 73091
SRMs, low vibr. design, modal anal., automotive appls. 123962
switch short arc duration laws and distribs. at low current and voltage 115106
syst. wiring design and layouts, automobiles, high-level approach 80466
test data mgt. 100272
torque convertor automatic test syst., interchangeable virtual instrum. *(English)* 131809
two-channel noise reduction with pitch-adaptive post-proc. 106344
tyre press. diagnosis, param. vars., observer based estim. 86979
UHF vehicle telematics syst. hidden antennas 120047
vehicle license image segmentation using wavelet transform 84239
Ni hydride electrodes, sintering, elec. vehicle appl. 89128
Pb-acid super-high batts., latest Indian develops. 89084

automotive electronics
see also road vehicle radar
4 kW, 42 V induction machine-based automotive power generation scheme 134565
42 V automobile air-conditioner, efficienct brushless motor design 134566
42 V automotive elec. distrib. systs. load dump protection 89412
42 V automotive power supplies, integrated charger/disconnect switch unit 78321
42 V automotive powernet, small PM DC motor effects 124019
42 V car elec. syst., impact on power semiconds. 78319
42 V vehicle elec. syst., energy mgt. overview 78316
42 V vehicle power archits., energy storage/mgt. systs. 78315
42/14 V PowerNet, DC/DC converter topol. 78318
95/54/EC Automotive EMC Directive, appl. guidelines 134580
access systs. technol. evol. 134592
adaptive cruise control, collision prevention between cars 113125
ADRIE overcritical damped laterally moving microstructs., SOI-substrs., automotive appls. 99871
air conditioner variable displacement compressors, control valve develop. *(Chinese)* 134572
airbag, foil resistor, electro-pyrotechnic initiator 115044
airbag systs., integrated electronics for bus systs. igniters 100298
amorph. mag. alloys, appls. in electronic devices 104481
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
arbitrarily configurable customer tailored instrum. for vehicle appls., LCD units 124014
automated elec. design anal., reliab. anal. improvement 134597
automobile MM wave radar syst. *(Japanese)* 124024
Automotive Multimedia Interface Collaboration overview 134585
AutoSteve, automated automotive elec. design anal. 68519
batt. options for 42 V car elec. systs. 134595
biaxial excitation generator for automobiles, salient pole, 3-phase 113121
BiCMOS capacitive press. sens., surface micromachined, for automotive appls. 78324
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
BIT for intell. syst. design & condition monitoring, overview 131805
BLDC motors for automotive appls., prediction of conducted RFI emissions 100307
brushless alternator, design and testing 134564
cage rotor induction machine perform. in automotive starter-alternator appls. 77873
CAN *(Italian)* 85282
capacitor selection for reliable automotive appls. 89414
car advanced IS with on board computer *(Spanish)* 113122
car integrated starter-alternator syst., switched reluctance machine 124016
car-following collision prevention, adaptive network fuzzy inference syst. 113119
ceramic chip capacitors for automotive indust., qualification testing 89413
CEV1 EV, elec. syst. config., control seq. design 100312
climate control using sliding mode 124020
CMOS technol., overvoltage/reverse voltage protection 70315
commercial vehicles, antilock brake syst. ECU, HWIR simul. 134599
commun. protocols, rapid prototyping 95887
complex IS in automotive design, in-car electronics 124013

automotive electronics continued
component safety/reliab. requirements defn. 134574
control modules, simul./design validation 113118
control modules, throughput multiplier for simultaneous multiple testing 113116
controller software safety, MISRA compliance 134579
crit. electronic automotive systs., high-intens. radiated field hazards 134581
current meas., historical overview 78320
current shunts, punched strips, surface-mounting component, automotive appls. *(German)* 89409
DaimlerChrysler vision systs. for intell. vehicles 89422
DC-DC converter *(Italian)* 89420
deep trench technol. HV devices on thick SOI substrs., automotive appl. 113112
Dervish mine-clearance vehicle, image-seq. motion estim. 100309
design for reliab., environ. requirements 124053
design for reliab., modules 124054
digital car, hacking aspects, digital hot rodding 134557
dist. from ground meas., US sens., smart car 113110
distributed elec./electronic systs. in automobiles, multiplex systs. *(Spanish)* 134554
drive-by-wire systs., mechatronic sens. and actuators, safety integrity methods 124051
driver assistance, collision avoidance and automated driving 124050
driver assistance syst. algm. develop., embedded image proc. platform 134584
driver IS network speech interface *(Japanese)* 124036
driver IS using DSRC *(Japanese)* 124027
dual-voltage automotive elec. syst., std. EMI impulses adaptation 100311
dual-voltage self-clamped IGBT for automotive ignition appls. 134602
electrohydraulic brake syst., reliab./safety enhancement, simul. 134598
electrohydraulic vehicle braking syst. develop. 134575
EMC directive for radio products utilisation 83431
engine misfire detect., crankshaft ang. vel. meas., fuzzy pattern recogn. 89408
engine speed indicators, floating point electronics 124012
EV air conditioning inverter/compressor develop. *(Japanese)* 89417
fibre optic sens., automotive meas. appls. 120825
film capacitor requirements for automotive electronics appls. 124041
film capacitors for automotive electronics, reliab. 113115
flat discharge lamp for LCD backlighting, Hg-free/high luminance/high efficacy 121129
flip chip technol. utilization in automotive electronics, perspective 124021
flux reversal machine, automotive alternator with 42/14 V DC dual output 113120
foil capacitors for use in motor vehicle electronics, high reliab. *(German)* 69274
foil resistors for smart airbag syst. electro-pyrotechnic initiators, low energy 124042
forward collision warning systs., soft testing approach 134578
FPAAs, configurable analogue block, SC ccts., harmonic anals. *(Italian)* 125627
fuel injector, solenoid actuator, mag. aftereffect 128722
future requirements, semicond. technol. develop. 124052
fuzzy logic, automobile appls. *(Russian)* 134553
gasoline engine transient air-fuel ratio control using US flowmeter 100303
GMR angle detect. & rot. speed sens., robust, automotive appl. 75469
GMR robust sens. for automotive appls. 113113
GMR sens. for contactless posn. detect., automotive appl. 75467
GMR thin film mag. sens., automotive appls. 75466
graduate automotive technol. education in energy storage systs. 113305
graphical displays, single chips *(Italian)* 89419
harsh environ. microelectronics/microsystems, research/develop. 132073
HDI PCB organic laminate substrs., microstructural anal. 113590
HID headlamp systs. for automobiles, electronic ballasts *(Japanese)* 100300
high temp. bipolar IC for automotive appls., behaviour and reliab. *(Japanese)* 100301
high temp. electronic microsystems for automotive appls. 134568
high-power HV power ICs for automotive appls. 78323
hybrid IC proc. error reduction, microcontroller implement. 125918
hydrogen fueled vehicle engine, optimisation 134558
IEEE 1394 data bus syst. for automobile appls. *(German)* 89424
IGBT power module in automotive traction inverter, lifetime estim. 125219
in-vehicle multimedia, car manufacturer challenges 134587
in-vehicle networking for future automobiles *(German)* 113124
induction generator control syst. instabil. anal. 134561
inform. display using plug and play computers 100306
insulated-type automotive AC power supplies for EV *(Japanese)* 99734
integrated ang. speed sens. syst. design, automotive appl. 109824
integrated automotive components wiring/interconnecting for intell. vehicles 134594
integrated PM starter/alternator, flux weakening control algm. 134567
integrated starter-generator, induction machine, pole-PM 134570
intell. transport systs., car IS *(Japanese)* 124044
intell. transport systs., downloadable multi-mode and multi-service software radio 113114
interior PM offset-coupled automotive integrated starter/alternator 134562
internal combustion engine turbocharger motor-generator design 100302
Internet intell. transport syst. studies *(Japanese)* 124030
InternetCAR appl. software, testing environ. design and implement. *(Japanese)* 124045
Japanese-style supply chain mgt. in auto-electronics indust. 89749
large goods vehicles' electronic systs. overview 134589
laser-radar collision avoidance, microcomputer control syst. *(Chinese)* 134571
lateral deviation detect. using mag. sens. syst. *(Japanese)* 124026
LDMOSFET, 25 kV ESD proof, with turn-on discharge MOSFET 92367
LED instrum. panel design in automotive indust. 89410
LOCATIONWARE location-aware service platform, notification service technols. *(Japanese)* 124035
magnetostrictive type torque sens., steering shaft appl. 75481
Mazda Telematics Center car posn. inform. service *(Japanese)* 124033
MEMS packaging/assembly issues 116057
MEMS press. sens., span and offset compensation 75751
microacoustic sens., automotive appls. 97566
microelectronic sens., EMC/EMI limitations 124055
microsens. & sens. syst., current trends 124048
microsystems, med. appls. 132079
microsystems-technol., sens., vehicle electronic systs. 100295
Mitsubishi M32C/83 microcontroller, ISDN and automotive CAN appls. *(German)* 79925
motor racing appls. of LEDs 105025
Motorola MC9S12DP256 16-bit microcontroller, automobile appls. *(German)* 79903
MR sens. for indust./automotive appls. *(German)* 120746
multi-sens. driver assistance flexible archit. syst. develop. 134576
multiple driver systs. HMI integrat. design proc. 134586

automotive electronics continued
narrow-bandpass follow-up filter, vehicle speedometer appl. *(Chinese)* 102355
NEC parking lot access mgt. telecontrol syst. *(Japanese)* 124029
network, LIN protocol *(Italian)* 113117
neural network-based sens. sig. accelerator 121050
next-generation electronic systs., power mgt. 79550
NEXUS microsystems roadmap, automotive appls. 100296
night vision technol., safety improvement appls. 134577
noise-robust speech recogn., acoustic sig. proc., car environ. *(Japanese)* 124037
non-volatile memories for microsystems in automotive appls, reliab. 114765
occupant detect. using SVM, intell. airbags 100310
on-the-fly location referencing/obj. embedding for navig. databases 134588
packaging of electronic devices using transfer moulding proc. 113699
PBGA assembly, board-level reliab. with SnAg Pb-free/SnPbAg solder interconnects 113572
PHEMT 77 GHz mixer modules with finline transits. for automotive appls 69119
piezoresistive thick film engine cylinder press. sens. 134596
plastic-encapsulated hermetically sealed automotive electronic components, thermal study 134560
platoons of automated vehicles, fault diagnostic syst. 86410
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647
polysilicon TFT-LCD, 7-inch full-colour design 86891
power conversion, power semiconds., conf., Nurnberg, Germany (June 2000) 67391
power LEDs, lighting appls. 82394
power MOSFET technol. develop. for automotive appls. 78322
power semicond. devices 134600
press. sens., design/manufacture 78314
press. sens., Wheatstone bridge, automotive electronics, analogue sig. proc. devices *(Italian)* 131852
Probe Car System driver inform. proc. overview *(Japanese)* 124031
Pseudolite syst. concept for intell. transport systs. *(Japanese)* 124028
qtr.-car suspen. syst., fuzzy logic controller design 78317
quality and reliab. assurance 134573
rapid catalyst light-off using strategic engine control 100305
real-time vehicle tracking in image seq., digital rear-view mirror 124040
rear wiper, PM DC motor noise reduction 124018
rem. key entry systs., interf. issues 134593
requirements specs. for cars, high-quality 124056
safety, reliab., conf., Coventry, UK (June 2001) 124228
safety-relevant distributed systs. anal. 134582
salient-pole belt-driven automotive alternators 134563
semicond. sens., automotive and aerospace appls. 86768
sens., low-cost, perform. augmentation 121049
short range automotive radar sens., sub-nanosecond pulse generator 124049
silicone packaging/interconnect materials, thermal props., transient plane source method 78649
sliding mode wheel slip controller perform. enhancement 100304
smart airbag systs., foil resistors as electro-pyrotechnic initiators, low energy 89418
smart cruise collision prevention syst., NEC road sens. appls. *(Japanese)* 124023
smart IGBT for automotive ignition appls., chip on chip technol. 134603
smart power IC, automotive electronics *(German)* 81539
smart PWM driver in SO-8 package for automotive solenoid controls 134601
smart sens. closed-loop meas. channel, noise detect. algms. 109825
SMD solder joints for automotive devices, degrad. behavior at high temp., life predict. *(Japanese)* 89851
SOI microproducts, MEMS devices, automotive appls. 92482
SOI-BiCDMOS single-chip automotive LSI, air bag controller, RISC CPU 89411
speedometer, electronics in vehicles 124043
SPIRIT concept car, driver cockpit innovation 134591
STN LCDs for automobiles, multi-line addressing technol. appl. 97601
super graphics CPU with direct unified memory controller, car inform. and control syst. 102257
surface PM direct drive starter/alternator, weakened flux linkage 134569
surroundings recogn. using on-board camera *(Japanese)* 124025
switched reluctance starter/generator for more-elec. cars 124015
syst. design trends, functionality, prototype systs. 89415
systs. commun. links, conformance testing 134583
telematics systs., safety/efficiency benefits 134590
TELEMATICS traffic IS using mobile commun. *(Japanese)* 124032
test data mgt. 100272
thin-film mag. sens. for automotive appls. *(German)* 120747
traffic location IT, business develop. prospects *(Japanese)* 124034
transm. syst., integrated mechatronic syst. 124047
transms., mechatronic control units, extreme environ. demands 100297
TRESCOM simul. tool for cars components packaging 89421
tyre press. monitoring microsystems, automotive indust. 100299
tyre press. monitoring systs. using surface acoustic wave resonators *(German)* 113111
UCM, universal commun. model for automotive syst. integrat. platform 89416
UHF data receiver IC for automotive vehicle appls. 100308
unknown input estim. techs. for automotive appls. 134604
vehicle EM suspen. syst. using tubular LIM 124046
vulnerable traffic participants protection, sens. fusion 124039
WASPP Program, passiv. develop. for packages in harsh environ. 77013
windshield wiper motor, rain sensitive triggering syst. 124017
Ag immersion PWB finish for automotive electronics, eval. 124022
Pb-acid batt. develop. and appls. 78149
Pb-free solder alloys for flip chip/area array package bumping 67569
Si Schottky diode, flip-chip mounted, I-Q mixer 102622
SiGe MMICs near-range sens. for 24 GHz automotive appls. 113123
Sn-Ag(-Pb) eutectic solder joint, Pb contamination effects 80507
SrS:Cu,Ag/ZnS:Mn stack phosphor, white monochrome TFEL displays 109861
TiO_2-based gas microsensors for high temp. appls. 132031

automotive radar *see road vehicle radar*

autonomous land vehicles *see artificial intelligence; mobile robots; vehicles*

autonomous underwater vehicles *see remotely operated vehicles; underwater vehicles*

autoradiography *see radioisotope imaging*

autoregressive moving average processes
2D sigs. restoration using autoregressive models 106453
3G W-CDMA systs., channel estim. using Kalman filter algm. 85676
aircraft gas turbine, nonlin. modelling using NARMAX struct. 122536
ARIMA model vs. f-ARIMA model 95750
ARMA(p,q) time series forecasting, 2-layer neural net 113884

toregressive moving average processes continued
ATM networks, predictive congestion control, multiple sources/single buffer scenario 73780
bispectral estim., multitaper approach 118864
block-recursive logarithmic filterbanks 119072
computer speech recogn., nonlin. stochastic models/new params. 129401
context depend. modeling 118951
D_α geomag. index, evol., global nonlin. model 122643
daily load forecasting model, wavelet decomp., recurrent NN *(Chinese)* 99306
discrete systs., optimal self-tuning filtering/prediction 129978
EWMA feedback quality adjustment schemes for drifting disturbances 78737
f-ARIMA procs. anal. in broadband traffic modelling 130872
fuzzy reasoning for ARMA order selection method 95610
gear faults detect. using spectral anal., AR and ARMA models comparison *(French)* 123335
hearing aid perform., multiple model least sq. tech. 122355
IM, speed estim., nonlin. ident. tech. 77874
image restoration, parametric modeling of blurred images 106758
lin. infinite-variance procs., diagnostic checking 113894
mixed nonGaussian/Gaussian ARMA noises, harmonic retrieval, HOS 84803
multiple IR background generation for warning/search-and-track systs., modeling/simul. 88246
NPP diagnostics, ANN vs. sig. pattern recogn. 88548
orchestral music, unwanted sound blind removal 95692
perform. mgt., service level objectives achievement using control theory 130574
progressive lossless image coding, adapted nonlin. multiresolution decomp. 129777
PSD fns., ARMA modelling 118884
radar data modeling with time series models 118879
rel. entropy and covariance type constraints yielding ARMA models 105998
robust hybrid evol. method for ARMA model ident. 130013
rot. machine condition monitoring/diagnosis by vibr. sigs. 97132
segmented data, time series anal. 73582
self-adaptive evol. strategies for ARMA model ident. 119019
short-term hourly load forecasting, time-series modeling, peak load estim. 88408
sliding av. models, param. optim. 107344
spectral estim., nonnegative constraints handling 107334
sub-band sigs. anal., audio restoration appl. 84712
time series spectral models, automatic monitoring & detect. 130083
underwater acoustic transient sig. detect. based on waveform sect. technol. 75237
variance-time test for long-range depend. inference, limitations 130313
VBR video traffic sources, resource allocation 107786
WAN, jitter-based delay-boundary prediction 130816
Wiener state deconvolution filters *(Chinese)* 119033

utoregressive processes
see also autoregressive moving average processes
2D AR model using lattice representation and inform. criteria for texture anal. 118486
3D matched filter for detect. of land mines 73125
3D obj. motion and struct. recogn., contours 95459
3D thin-plate obj. recogn. via orthogonal AR model 129879
3D vector autoregressive coeffs. 73490
adaptive autoregressive model criterion 73602
adaptive IIR filter, freq. detect. in noisy environ., VLSI design 102405
adaptive Kalman filtering-based speech enhancement algm. 118079
adaptive model-based speech enhancement 94391
adaptive single-tone freq. estim. based on autoregressive model 119017
airborne moving target detect. using lin. phased array radar 131659
antenna array receivers in autoregressive flat fading channels 108611
ARCAP time-freq. representations for decision 119029
array receiver with Kalman channel predictor for fast Rayleigh flat fading environ., perform. 83664
audio and speech sigs., time-varying AR modeling 129366
blind sig. de-noising via ICA, hybrid method 107557
Cardan-Viete formulas, refl. coeffs. counterpart 95701
chaotic commun. systs., adaptive blind equalization, EKF 107676
chaotic freq. hopping seqs., FPGA-based generator, SS commun. 73847
closed planar curves, regularized autoregressive spectral estim. 107358
computer networks, optimal control of queues 130870
contour anal. using time-varying AR model 94715
damage diagnosis, time series anal. of vibr. sigs. 86409
distributed nonstationary proc. modeling/time-varying AR syst. ident. by wavelets 119186
DOA of multiple scatt. sources 130023
Doppler angle estim., autoregressive spectrum model 110739
DS-CDMA mobile syst., orthogonal successive interf. canceller for downlink commun. 74700
EEG sigs., autoregressive spectral anal. using MLE 132562
EEG sigs., cognitive task prediction using parametric spectral anal. 110634
EEG-based brain-computer interfaces, motor imagery control 111185
equalization with const. modulus criterion 119191
FDD wireless systs., uplink predictive closed-loop power control 85712
gear faults detect. using spectral anal., AR and ARMA models comparison *(French)* 123335
GPS-SDMA syst., transmitter posn. estim. methods 85916
hidden Markovian procs., smoothed functionals, recursive computation 67766
HRR airborne phased-array radars, clutter suppression/moving target detect./feature extraction 75160
hybrid Monte Carlo-recursive ident. for blind detect. over Rayleigh fading channel 119197
image compression, interscale/intrascale dependencies between wavelet coeffs. 95078
image representation, nonsymmetric half-plane AR model 118192
instantaneous multivariate EEG coherence anal., adaptive autoregressive models 87414
Irish short-term load forecasting models comparison 99309
irregularly sampled data, AR spectral estim., Burg algm. 118832
isotropic/anisotropic Gaussian textures, generalized circ. autoregressive models 95530
landmine thermal detect., resoln. requirements, 2D AR models 76982
laser velocimeter, feedback interferometry, real-time param. estim. 117580
limb movement, paraplegics, elec. stimulation control design 133000
lin. prediction coding filters, source separation techs. 107558
MCG time-freq. anal., 3D vector meas. *(Japanese)* 110664
microwave filters, low-order AR models for FDTD anal. 68893
model order estim., composite hypothesis testing 100793
model order selection, analytic finite sample criteria 118790
moving av. model estim., windowed periodograms 84661

autoregressive processes continued
moving target detect. via airborne HRR phased array radar 120418
multi-channel model, robust estim. using t-distrib. assumption 118959
multichannel autoregressive modelling, finite sample effects 129985
multipath tree-struct. VQ 118869
multirate Burg algm., order selection 129953
multiscale autoregressive models, computationally efficient stochastic realization 84704
noisy autoregressive sigs., unbiased param. ident. 84804
noisy speech recogn., nonstationary AR HMM method 118144
nonGaussian time-varying AR model, recursive blind ident., time-varying channel equalisation 119200
partitioned freq.-domain block LMS algm. 107519
periodic oscills. buried in white/coloured noise, ident. 76216
photom. sigs., stat. anal. of parametric model 118964
power market clearing price forecasting, Bayesian-based class. method 111761
prediction of gaseous emissions using neural networks 99032
QoS anal. for stat. MUX with Gaussian distributed and autoregressive input 84830
quantization noise compensation by anal. filter bank optimisation 129365
quasiperiodic sig., AR model, SVD 129944
radar imaging, high resoln., 2D data extrapolation using AR lattice modelling 131640
random Gaussian proc. change-point detect./estim. by brief obs. samples 129948
recursive autoregressive speech anal. based on quadratic classifier 118070
regularized autoregressive models, calculus of vars. and spectrum anal. *(French)* 107302
reson. piezoelec. transducers, broadband test sig. generation 86503
ROCKET, reduced order correl. kernel estim. tech. 107389
SAR imagery, target discrim. 109277
satellite channels, weather-induced impairments, prediction & adaptation 131306
SEAMA protocol, diffusion approx. for voice/data integrat. in wireless network 85061
short-time stationary sigs. in additive noise/channel distortion, spectrum estim. 84670
sig.-depend. media noise mag. recording channels, decision feedback equalization 116465
sing. lin. behaviors, AR-representations 124453
spectral quality measures, absol. & relative, perform. comparison 84678
speech proc., endomorphic model for adaptive prediction 129370
speech sig. representation 118147
STAP for airborne high range resoln. phased array radar 96945
symmetric steady autoregression procs. prediction 83323
texture segmentation, self-supervised, by complementary feature type 118664
textures with circ./ellipt. correl. struct., long-correl. image models 84275
two-stage texture segmentation using complementary features 94832
underwater target class., sonar bandwidth effects 77042
underwater target class. in changing environ., adaptive feature mapping 77044
US C-scan images, blind deconvolution, H_∞ ident. strategy 101589
V-BLAST, perform. losses due to fading 85532
VAV air handling unit online fault detect./diagnosis method 100335
WCDMA systs., Kalman filter channel tracking algm. 74695
wideband speech codecs, safety-net pyramid VQ of LSF params. 73028
wire EDM servo control state anal. *(Chinese)* 124141
Yule-Walker method for AR param. estim., small sample stats. 118907
Yule-Walker noise-compensated eqns. soln. 73589

autoresonant accelerators *see collective accelerators*

autorouters *see circuit layout CAD; network routing*

autotransformers
500/230 kV autotransformer protection, utility suitability tests 77918
EHV autotransformer windings, HV stress problems review 77940
motor starting methods, advantages, limitations 77805
motors, burned windings removal, heat effect on mag./material charact. 123299
railroad syst., supply network, train voltage distrib., power flow anal. *(Korean)* 78308
rly. autotransformer syst. meas., SIMSPOG simul. tool *(German)* 78253
rly. line, combined booster/autotransformer feeding syst., Sweden *(German)* 78285
rly. line supply by combined auto and booster transformers, Sweden *(German)* 78254
star-star auto-transformer real-time digital simul. model *(Chinese)* 88794
three-phase autotransformer/rectifier PFC scheme 88904
traction power supply systs., grounding systs. anal. 78301

availability measures *see reliability*

avalanche breakdown
see also impact ionisation
2D dopant profiling of power MOSFET, SCM appl. 126277
bipolar transistor, collector p-n jn., emitter current push-out effect, avalanche multiplication 103767
BJT, selectively implanted collector, impact ionization 81226
Darlington power transistor, electrothermal breakdown modes 92314
drift step recovery diodes, impact ionization wave breakdown 81185
freq. converter-multiplier based on controlled avalanche breakdown 125712
IGBT power pack, reverse bias safety operating area 126826
LDMOS transistor, avalanche-induced thermal instabil. 126831
MIS struct., avalanche-multiplication coeff., probabilistic distrib. 115453
power MOSFET technol. develop. for automotive appls. 78322
punch-through limited breakdown volt. of parallel-plane jn., calc. *(Chinese)* 92271
SIPOS terminated HV planar diodes, dyn. avalanche breakdown, semi-resistive field plates 81200
VGBNPN bipolar transistor, ESD protection, smart power technol. 126668
$Al_{0.6}Ga_{0.4}As$ thin APDs, low multiplication noise, modelling/expt. study 82349
$Al_{0.8}Ga_{0.2}As$, low avalanche noise behaviour 126074
Cr/n-GaAs Schottky barriers, nonuniform plasma breakdown, surface microrelief effect 126632
Er_2O-doped Si layered struct. 1.54 μm light emitting devices, MBE grown 93393
GaAs HBT, RF power amp., microwave meas. 103776
GaAs current filament lasers, short pulse energy, perform. & model 117205
GaAs-AlGaAs DEHBT, optoelectronic switch 116941
InGaAlAs/InP HBT, multiple NDR switching 92300
InGaAs/InP APD, low-noise single-photon detect., quantum cryptography appls. 104962
InGaAsP/InAlAs asymm. superlattice struct. APD, dark current reduction 116948
InGaP/GaAs bipolar transistor, multiple NDR switching 92300
SF_6-N_2 gas mixtures, electron ionization, attachment, detachment 127149
Si EO device, LED antifuse/photodetector integrat., sens. appls. 104745
Si p-n jns., electrolum., avalanche breakdown condition 103111

avalanche breakdown continued
Si photo-emitters for opt. interconnects, accelerated stressing/degrad. mechanisms 82450
Si:As-based photodetectors, photoelec. charact., blocked hopping cond. 75520
Si/SiC based MIS struct., nonsteady avalanche proc., fluct.-related prop. 103214
4H-SiC IMPATT oscillator, design/fab./microwave charactn. 69141
SiGe HBT, RF lin. 103793
SiGe HBTs, RF distortion anal. 91255

avalanche diodes
see also avalanche photodiodes; IMPATT diodes
autopolarisation voltage ref. thermally stabilized cct. 101766
CDMA direct-detect. opt. sync. systs. with interf. canceller using group inform. codes 74920
MICROMEGAS detector in low-background astron./particle search appls. 132346
MM band avalanche-breakdown diode oscillators for noise generation 114653
overvoltage protection devices, avalanche protection diodes and MOV *(German)* 88495
RPC optimal design simul. for CMS expt. 132442
Si avalanche diodes, effect on LV power network fuses behaviour 133792
Si avalanche sharpener, subnanosecond switching of gigawatt peak power 126642
$Si/Si_{1-x}Ge_x$-based heterostruct. MITATT device with low noise 70016
4H-SiC p^+-n-n^+ avalanche diodes, elec. charactn. 92294

avalanche multiplication (gases) *see electron avalanches*

avalanche multiplication (solids) *see avalanche breakdown*

avalanche photodiodes
all-opt. asynchronous CDMA commun. syst. with double opt. harder-limiters *(Chinese)* 120121
CDMA opt. systs., MAI reduction 109092
CDMA sync. opt. systs. with APD and thermal noise, mark-detect. algm. 96667
charge-sensitive preamplifier, integrated, low noise/power, fast, for APD in JFET CMOS 114640
chirped fiber Bragg gratings, group delay anal. 71284
CMS detector, APD 116950
CMS EM calorimeter, APD 76117
conf., Semicond. pixel detect. for particles/X-rays, Genova, Italy (Jun. 2000) 89507
fiber optic CDMA LAN, time-domain syst. model 96109
FMCW laser rangefinder, delay line tech., APD detect. 117576
hybrid APD, time-resoln. study under single-photon irrad. 82348
impact-ionization-engineered multiplication region APD 93375
intell. control, laser radar syst. 75231
large area APD with different struct., scintillation detect. 121583
large area APDs and monolithic arrays for scintillation det. 121584
large-area, planar-constr. design 116949
laser ranging APD detectors, optimal control, DSP appl. 117594
light intens. meas., noise reduction, correl. twin photons 97229
low cost APD-based photodetect. syst. for low level O_2 conc. meas. 120972
MAGIC air Cherenkov telescope, image camera 132489
microcell Si APD with limited Geiger mode gain 121586
multiplexed APD arrays, gamma detector, readout scheme 110292
neutron scintillator silicon-well detector, thin photodiodes 132402
nuc. sci., conf., Lyon, France, (Oct. 2000) 113217
opt. channels, PPM capacity 109039
output currents, transimpedance op amp *(German)* 101774
PET, APD array, monolithic Si wafers, 32-channel LSO matrix 132935
PET, high resoln., 32-channel LSO matrix coupled to monolithic 4×8 APD array 122205
PET, high resoln., granulated dual layer detectors, Monte Carlo study 132914
PET, high-resoln., granulated dual-layer detectors, Monte Carlo study 132949
phosphoresc. photodetection, fibre optic and APD 120824
phoswich/APD detectors, low-noise CMOS preamplifiers, high-resoln. PET systs. 111011
phoswich/APD detectors and low noise CMOS preamplifiers for PET systs. 121627
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
reach-through APD, drift-diffusion model 127942
scintillation detect., APD with different struct. 132410
semiconds., nonlocal impact ionization, Fokker-Planck model, device appl. 91573
separate absorpt. multiplication region superlattice APD, excess noise 71555
single-photon avalanche diodes, defect charactn., CMOS proc. monitoring 104965
smoke particles discrim. using IR photoelec. detect. 75534
thermo-perform. 116952
thin APD freq. response, excess noise factor 93376
very low excess noise APD detect. 82353
wide-bandwidth DWDM syst. modules, commercial optoelectronic components 96862
AlGaAs thin APDs, low avalanche excess noise 104949
$Al_{0.6}Ga_{0.4}As$ thin APDs, low multiplication noise, modelling/expt. study 82349
$Al_{0.8}Ga_{0.2}As$ p-i-n/n-i-p photodiodes, avalanche multiplication charact. 116956
$Al_xGa_{1-x}As$ homojn. APD, multiplication noise 71559
AlGaN/GaN UV photodetectors, recent advances 97240
AlGaN-based UV photodetectors, recent develop. 109560
Ar gas proportional scintillation counter, UV APD scintillation readout 121511
Ar gas proportional scintillation counter with UV APD scintillation readout 132391
BGO, small cryst. arrays with APD, reflective separators 121528
CsI:Tl, γ-ray scintillator detectors as hidden explosive identifiers 132342
CsI(Tl), small cryst. arrays with APD, reflective separators 121528
GaAs device technols. in Japan, current/future appls. 74082
GaAs/AlGaAs MQW APD, param. optim., GA 93371
GaNAs high-sensitivity reson.-cavity avalache photodiode 93377
InAlAs/InGaAs superlattice APD, dark current reduction 116939
InAlAs-InGaAs reson.-cavity APDs, ultra-low-noise 97271
$In_{0.52}Al_{0.48}As$-$In_{0.53}Ga_{0.47}As$ waveguide APD gain-bandwidth product 93372
InGaAs APD, Peltier cooling and pass. quenching, single photon counting 71558
InGaAs/InP APD, low-noise single-photon detect., quantum cryptography appls. 104962
InGaAs-AlGaAs reson.-cavity separate absorpt. charge and multiplication APD freq. response, model 93364
InGaAs-InP photon-counting diode detectors, ps time-resolved PL 71561
InGaAsP/InAlAs asymm. superlattice struct. APD, dark current reduction 116948
LSO, small cryst. arrays with APD, reflective separators 121528
$LaCl_3:Ce^{3+}$ scintillation cryst. readout with large area APD 121554

avalanche photodiodes continued
$LuAlO_3$:Ce scintillators, timing props. studied with large area APD 121553
$PbWO_4$ CMS cryst. calorimeter for LHC 132428
Si APD, Geiger mode single photon detect., pass. & act. quenching 120808
Si APD, particle detector modelling/fab. 97967
Si single photon avalanche diodes detectors 93378
Si, submicron diodes, impact ionization, soft threshold 104960
Si:B,P planar-constr. APD 127945
Si-based opt. interconnect for sig. transm., VLSI technol. 126453
4H-SiC APD fab. with multistep jn. extension termination 104961
SiC:Al,B UV photodetectors, ecological monitoring appl. 86569
Xe gas proportional scintillation counter, UV-sensitive large-area APD 121512
Xe gas proportional scintillation counter with UV-sensitive large-area APD 110326
Xe liq., scintillation light detect. using large area APD 121592

avionics
see also aircraft computers; military avionics; space vehicle electronics
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 133212
airborne equipt., pass. vibr. control using circ. steel ring 122517
AIRBUS, MLS all-weather landing syst. *(French)* 88086
aircraft flight control systs., fault tolerant design, maint. planning 133224
aircraft structural health mgt. 88045
AMLCD, field-emission lamp design 98914
BIT for intell. syst. design & condition monitoring, overview 131805
CCD video camera & aircraft platform integrat. appl. 97378
contactless meter of DC, aviation appl. 122522
COTS technol. appl. in future modular avionic systs. 111339
electronics mfg. facility relocation, planning 113418
HIRF penetration through apertures, FDTD vs. meas. 105791
LCD, photom. meas., intraplant & interplant correl. 98912
LOADNET project, migration of digital avionics data buses to low cost opt. data networks 133223
NEC multi-mission spacecraft concepts and technols. 88032
orb. satellite lin. EM motor operating principles 111340
polymer multimode waveguide opt. backplane, avionic appls. 105040
X2000 avionics develop. program, schedule & financial risk mgt. 122519
X2000/IFDP syst. engng. proc. for risk mgt., interplan. mission set 122526

Avogadro's number *see constants*

AWGN
see also AWGN channels
adaptive equalization in OFDM syst. *(Chinese)* 73838
adaptive IIR notch filter, memoryless nonlin. gradient algm. 95684
adaptive line enhancement via subspace tracking 107546
adaptive LMS block Volterra filters 118997
approx. image message authentication codes 73392
approx. ML source separation using natural gradient 84793
asynchronous multicarrier CDMA commun. syst., Hopfield neural net/Viterbi decoding 73868
automatic modulation class, stat. moments/fuzzy classifier 72729
automatic sound detect. and recogn. for noisy environ. 118071
Bayesian blind/semi-blind equalisation of channels with Markov inputs 119199
BPSK/QPSK modulation class. with unknown sig. level 106033
CATV, testing with noise 86332
CDMA asymptotically optimal receiver, perfect MAI cancellation 96357
CDMA commun., spatiotemporal chaotic spreading seqs. 95834
coherent M-ary signaling in impulsive noise, optimum detector 85512
complexity-regularized image denoising 73403
const. amplit. phase modulated sigs. detect. in additive noise 84774
CPM waveform, post-distortion ang. equalizer appl. 107685
CRLB matrix scaling due to meas. of uncertain orig. 84777
decision-feedback multiuser detect. with feedforward orthogonal transform. 130172
dielec. cylinders inverse scatt., RBF NNs 128759
digital commun. and classical receivers compared by computer simul. 129982
digital phase-tracking and measuring loop for dist. meas., perform. anal. *(Chinese)* 125271
digital radio offset-QPSK and MSK sigs., modulation params. 96359
digital watermarks, optimum attack/defense 107545
DMT with insufficient cyclic prefix, channel equalization 107697
DMT/OFDM modulation on twisted pair cables, guard interval reduction by impulse compression 72771
DS-CDMA, low-complexity multiuser channel estim. with aperiodic spreading codes 131257
DS-CDMA interblock data rate downlinks, comparison 74664
DS-CDMA systs. with one-stage HD-PIC, perform. anal. 84886
DS-CDMA with lin. interf. suppression, pilot-to-data power ratio optim. 85800
EDGE mobile radio syst., space-time coding 85670
fast data transm. ISI removal, adaptive digital filter 130257
fuzzy aggregated connectedness for image segmentation 129888
hybrid DS-FH-SS syst., transform domain interf. suppression *(Chinese)* 130299
ICA-based speech features for speech coding and noise reduction 118088
image denoising via wavelet coeff. magnitude correl. adjustment 94804
input output quadratic systs., cumulant-based algm. for ident. 118905
IS-95 downlink SIC receiver, ML rate determ. perform. 105811
ISI adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sigs. 107690
joint fractional FT correlator, fractional-order filtering, nonlin. proc. 84554
land mobile to mobile channel, differential detect. 131125
LMS noise-constrained algm. 107375
LMS-based adaptive order-stat. filters 73303
MRC coherent receivers in Nakagami-m fading channels, perform. anal. 85507
multibaseline InSAR, appl. of array proc. techs. for layover soln. 98968
multicomponent sigs. anal., high-resoln. quadratic time-freq. distrib. 118998
multimode multiservice software radio, adaptive sym. timing sync. 108889
multipath-fading channels, bandwidth-efficient pilot-sym.-aided tech. 108813
Nakagami fading, CCI, av. error probab. of optimum combining 85747
Nakagami fading channel, multiple equal-power cochannel interferers, perform. anal. of max. ratio combining 74735
noisy narrowband sigs., estim. and smoothing of instantaneous freq. 119074
nonlin. image noise filtering algm. based on SVD block proc. 106480
optimal convolutional codes, multi-bit GF, Viterbi algm. 72921
PLL jitter, input sig. shape effects 68659
pulmonary ventilator lin. drift eval., stat. test reliab. 98129
pulsed sigs. class., limits 107330
QPSK syst., bit error probab. in presence of noise and multiple sine interfs. 72772
robust speech recogn., adapted wavelet packets domain denoising 129407
satellite loading tools using spreadsheets 109022
SAW feedforward ANN proc. appl. to digital modulation recogn. 92709

WGN continued
serially concatenated partial response mag. recording channels, iter. detect. 116464
Shalvi-Weinstein estimators, existence/perform. 107378
sig. detect., extended translation invariance wavelet transform 95726
space-time Viterbi equalisation, sig. design/receiver dimensioning 95805
spatial sig. proc. merging diversity/beamforming perceptions *(English)* 107549
speech, audio-visual enhancement in noise 83983
speech enhancement, Bayesian evidence approach 73013
speech enhancement, constrained iter. sinusoidal model 118074
speech sig. recovery in white noise using adaptive Kalman filter 118050
time-freq. space charactn. based on stat. criteria 118883
touch screen IR sig. detect., syst. perform. 73716
unbiased blind separation using threshold nonlin. 84684
video denoising using fuzzy-connectedness principles 84358
Viterbi decoder, FPGA implement. 94328
watermarking based on duality with distributed source coding/robust optim. 94266
wavelet-based image denoising tech. using spatial priors 94808
wavelet-based image denoising under overcomplete expansion 94809

WGN channels
2D pilot-sym.-aided freq. offset tracking in orthogonal multicarrier wireless systs. 120038
4-PSK turbo space-time coded modulation design and perform. 72770
adaptive reduced-complexity iter. decoding 72816
ADSL, bandwidth-efficient RS coding 96305
ADSL transm. using turbo coding 96299
APD-detected opt. channels, PPM capacity 109039
aperiodically embedded sync. patterns detect. 129121
APSK multiple-sym. differential detect., limited search using (M,L) algm. 83824
backward-compatible hierarchical coded modulation, labeling/decoding schemes 83801
band-limited digital transm. systs., timing jitter anal. 85127
bandwidth-efficient modulation schemes, interf. suscept. 131335
BICM-ID with sq. QAM constellations, Rayleigh fading channels, design/anal./perform. eval. 72887
blind source separation, globally convergent algms. 118914
blind turbo equalization in Gaussian and impulsive noise 107683
block turbo code, reduced search trellis decoding, perform. eval. 94278
block-fading channels with multiple antennas, limiting perform. 74517
CDMA, coded, lin. front end for iter. soft interf. cancellation/decoding 131070
CDMA cellular radio, lin. successive interf. cancellation 96550
CDMA multicarrier archit., orthogonal complementary codes for wideband wireless commun. 129001
CDMA multirate sigs. constr. with controlled peak-to-av. power ratio using bal. incomplete block designs 83821
CDMA sync. channels, turbo multiuser detect. with unknown interferers 130292
CDMA sync. systs., iter. constr. of optimum signature seq. sets 85867
CDMA systs., interleavers design and anal. 130297
cellular CDMA and TDMA over nondispersive channels, capacity 131215
chaos based modulations, inform. theory perspective 94238
CIMA, carrier interf. in SSMA 74755
coded systs. over AWGN/fading channels, error probabilities upper bounds 72934
complexity of breadth-first bounded dist. convolutional decoding over AWGN channel *(English)* 72833
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
concatenated turbo-TCM for mobile satellite channels 129004
correl. sources over noisy channels, joint source-channel decoding 106173
covert commun. using digital phase modem, syst. trade-offs 72724
CPM over AWGN/Rician channels, channel coding of serially concatenated encoders 106092
data rate-sum maximisation over vector multiple access channel 84893
DBS networks, adaptive rate control/QoS provisioning 85920
digital phase detectors with carrier phase tracking, error floor assess., large deviations approach 130159
digital radio broadcasting, punctured convolutional codes/turbo-codes 109346
DS PN code acquisition on Rayleigh fading channels, anal 131243
DS-CDMA, chip-delay locked matched filter 107734
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA asynchronous trellis coded systs., trellis-based multiuser receiver struct. 131098
DS-CDMA coded asynchronous systs., long vs. short spreading seqs. comparison 108859
DS-CDMA detect., semidefinite prog. appl. 107593
DS-CDMA detect. scheme, decision directed algms. 130288
DS-CDMA mobile satellite noncoherent systs. with orthogonal sigs., perform. anal. 74651
DS-CDMA mobile syst., orthogonal successive interf. canceller for downlink commun. 74700
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA RLS-based adaptive multicode syst. 96469
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
DS-CDMA syst. with timing errors, perform. of parallel interf. cancel. *(Chinese)* 96389
DS-CDMA systs., combined adaptive interf. cancellation with antenna array 72358
DS-CDMA systs., power control with signature seq. adaptation 85506
DS-CDMA wireless commun., smart antenna PN code acquisition 108735
DS-SS systs., adaptive double-dwell PN code acquisition 108697
encoded Gaussian filtered CPM, generalized concatenation *(English)* 72753
ergodic chaos shift keying for digital sig. decoding 94305
error-resilient compressed images transm. using soft-input source decoding 106982
fading channels, multilevel coding, set partitioning strategies *(Chinese)* 94308
FFH/MFSK systs., max. likelihood multi-user detect. 84780
FH-SSMA networks, multiuser demodulation/iter. decoding 107732
fixed convolutional codes, error probab., tighter bounds 72795
fixed-point iter. decoders for concatenated codes with interleavers, design 72880
FPGA-based software radio syst., config. data transm. scheme *(Japanese)* 108591
Frog-in-the-Box codes and robust quantizer index assignments 129214
Gallager bounding tech. for turbo-like codes over fading channels 117982
GMSK modulation based on squaring algm., sym. timing recovery 72720
HFC network, up-stream channel, burst mode DQPSK demodulation *(Chinese)* 131002
hierarchical coded modulation systs., perform. anal. 72769
high-dens. mag. recording channel, turbo decoding of generator matrix code 72915
HPA nonlin. effects on freq. multiplexed OFDM sigs. 119922
hybrid DS/SFH MSK syst., Rayleigh fading channel, partial-band noise interf. 105806
image commun., hidden Markov sources transm. 84468
inform. embedding and source coding with side inform., duality 129228
IS-95 CDMA uplink, perform. improvement using decision feedback and sub-optimal Viterbi decoding 108936
ISI channels, joint turbo and modulated code encoding decoding 129215
iter. reliab.-based decoding of low-dens. parity check codes 72883
joint source-channel coding using arith. codes and TCM 106175
joint source-channel decoding with iter. algms. 117953
joint trellis coded quantization/modulation, optimal bit allocation for source/channel coding 94274
L-phase-level coherent freq./phase modulated sigs., trellis coding 83814
lattice decoding, ½log(1+SNR) on AWGN channel using nested codes 129116
likelihood ratio tests for modulation class. 106016
lin. parallel interf. cancellation, perform. 84797
M-ary DPSK DS/CDMA receiver, nonphase-based freq. acquisition method 95826
M-PSK code constr. with good min. Euclidean dist. for AWGN channels 83848
M-PSK sigs., successive cancellation based multiuser detector perform. 130157
M-QAM perform. in freq. non-selective slowly fading channels 94255
MDS codes, BER 72822
ML-decoded low-dens. parity check codes, tangential sphere bounds on ensemble perform. *(English)* 72840
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuser detect. 73721
mobile fading channels, MLC/MSD and MLC/PDL *(Chinese)* 85854
modem-based commun. using synchronized chaos 72738
modulation phase/freq. estim., Cramer-Rao lower bounds 117897
MPEG coded audio sigs., decoding by list output Viterbi algm. *(English)* 73029
multi-carrier DS CDMA, multi-rate traffic, BER anal. 95838
multi-dimens. parity-check codes for bursty channels 129115
multiaccess scheme over flat slow fading channels, anal./simul. 84894
multiband WDM transm. systs. using AWG and spatial phase filter, 40 Gbit/s 86044
multicarrier m-ary/DS-CDMA systs., perform. anal. for high-data-rate transms. 108755
multilevel coded modulations based on asymmetric ASK and PSK constellations 128990
multilevel codes, multistage decoding, reliab.-based decoding algm. 129032
multilevel coding design with soft decision decoding for AWGN/Rayleigh fading channels 106091
multilevel coding schemes, perform. in mobile fading channels 96538
multilevel coding systs., optimum criterion in AWGN channels 106022
multimode multiservice software radio, adaptive multisampling proc. *(Japanese)* 108590
multiple DS-SS systs. with channel bands overlapped, perform. eval. 74573
multiple parallel concatenated single parity check codes 129199
multiple sym. differential detect. with diversity reception 73730
multiuser RBF-based receiver of DS-CDMA syst. 107761
non-uniform QAM sig. shaping; turbo coding appl. *(English)* 72752
noncoherent channel capacity 130183
OFDM, coded modulation for noncoherent reception 106046
OFDM in fading channels, joint sym. detect. and channel estim. *(English)* 117907
OFDM sig., peak-to-av. power ratio reduction by interleaving 106040
OFDM sigs. nonlin. predistortion over fading channels 74567
OFDM systs., amplit. and phase predistortion 72763
OFDM systs., ML-oriented data-aided sampling clock sync. 94249
PAM, PSK, or QAM waveform, Cramer-Rao bound low-SNR limit 72719
parallel concatenated TCM, perform. eval. 129024
parity-check codes on Rayleigh fading channels, perform. anal./code optim. 72885
partial parallel interf. cancellation using non-const. weighting factors 108552
partial response channels, precoder design for concatenating convolutional codes 72912
PLL GFSK demodulator, perform. in multipath channel 108772
polyphase seqs. with even/odd crosscorrelation props. 108527
PRIME ARQ for high-speed wireless ATM 73888
punctured trellis coded freq./PM in mobile satellite channels 128971
quantization index modulation, digital watermarking and inform. embedding 72779
radio source location detect. using hyperb. posn. estim. *(Japanese)* 97024
random phase channel, importance sampling 73756
rate compatible product codes 106094
Rayleigh and AWGN channels, robust multilevel codes based on capacity rule 106096
Rayleigh fading channel multicarrier sigs., carrier freq. offset 74551
RBF-based multiuser detector for multicode DS/CDMA syst. 84778
right decoding for channel with AGWN and binary symmetric channel with random choice of code words 72871
robust image transm. using source adaptive modulation with diversity 73358
robust multilevel coding design using soft decision decoding 94320
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN channels, perform. anal. 108542
RS codes, soft decision low complexity decoding algms. 72803
RS codes matching with 4-DPSK block detectors 72774
RS product codes, iter. appl. of Chase algm. 129068
self ICI cancellation-based OFDM systs. with carrier freq. offset estim., perform. 106038
sig. space dimens. reduction, CPM appl. 128989
single carrier commun., training seq. vs. cyclic prefix 73834
single carrier commun., training seq. vs. cyclic prefix 95808
single user/multiple access commun. over fading channels with finite buffer constraints 131072
soft source decoding with appls. 129002
soft-decision decoding, nonredundant error correction differential detect. 94321
software defined radios, sync. improvements, diversity use 108580
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
space-time block codes with partial channel state feedback, perform. anal. 83941
SPCP codes 106073
SS multicarrier transm. chain for robust/discrete tactical commun. 111597
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
still images transm., combined source-channel coding 106994

AWGN channels continued
subspace tracking based blind multiuser detect., MMSE estim. 73719
subspace-invariant detector and flat-fading channels capacity 107628
sym. synchronisers, improved fig. of merit 130188
systematic binary alg. block codes, iter. decoding 72826
transform domain commun. syst., init. acquisition perform. 107625
trellis coded M-ary 1RC CPM with lin. receiver/pre-coding, perform. 106028
turbo block codes using modified Kaneko's algm. 106084
turbo code perform. and design trade-offs 106083
turbo codes, convergence based design 129099
turbo codes, tight bound on bit error probab. 83888
turbo codes for satellite and wireless ATM 72827
turbo codes/turbo-like codes, perform./complexity 129101
turbo greedy multiuser detect. 107754
turbo-coded AWGN and Rayleigh fading channels, soft-decision channel-optimized VQ 83871
type-I hybrid bandwidth-efficient turbo-ARQ scheme, diversity combining techs. 129164
UTRA TDD, MMSE adaptive receiver 119947
vector multiple access channels, multiuser detect. using generalized DFE 73828
video transm. over third-generation mobile systs. 106906
VQ codebooks/QAM sig. constellations optim. 72900
VQ/RCPC channel codes for Rayleigh fading channels, joint design 72935
watermarking, anals. of error correction strategies for typical commun. channels 94264
WCDMA sync. channel and common pilot channel, transfer power allocation 96583
wireless airborne commun. systs., overloaded array proc. 108694
wireless mobile systs. with ISI and CCI, spatial-temporal proc. 96520
axicons *see lenses*
B-ISDN
adaptive network modeling scheme 85233
ATM B-ISDN network self-healing protocol based on multiple backup VP 130235
ATM guaranteed frame rate service, TCP/IP, buffer mgt. and scheduling 73816
ATM high-speed networks, QoS-based routing algms. 107971
ATM network, flow control for encoded video appls. 129751
ATM networks, error concealment algms. for video packet loss 73769
ATM networks, feedback fuzzy leaky bucket 96335
ATM networks, flow control scheme for self-similar traffic 130746
ATM networks, queueing syst. with multiple delay and loss priorities 108496
ATM networks, VBR service traffic params. estim. 130897
ATM SHR, capacity design, GA 84826
ATM switch controller, multicast fns., VLSI implement. 74495
ATM systs., assoc. memory based switch 95786
ATM technol. and develop. *(Chinese)* 107665
ATM traffic control, neural network training 96008
DWDM based broadband integrated services network archit. 120266
ITU-T BICC protocol, integrated voice-data multiservice platform develop. 73886
multi-channel diagnostics syst. in TDX-families sig. service equipt. 131037
OPITMA-1 Tbit/s ATM switching syst., adv. hardware technol. 109158
real-time transport of MPEG video in ATM networks 85352
SOA gate opt. cell compressor, TDM/WDM photonic ATM switching systs. 86071
store-and-forward VoD services, traffic control scheme 97087
survivable network design using hybrid of exact and GA 130464
video, broadband delivery via DSL networks 119803
Weibull model for weighted distrib. of residual failure data 96242
B-trees *see tree data structures; trees (mathematics)*
back-up procedures
LIES (Location-Independent E-mail Service) syst. implement. 119522
PACS, fault-tolerant 98859
backplane buses *see system buses*
backplane wiring *see wiring*
backpropagation
2D obj. recogn., geom. invariant, BP network appl. *(Chinese)* 107208
3-level voltage-fed inverter IM drive, NN space vector PWM controller 134467
3-phase act. power filter control using neural networks 112083
3D obj. recogn. using appearance based neural image proc. algm. 95548
3D objs., recogn. and pose estim., neural net 107243
3D range migration algm. extension to cylindrical/spherical scanning geometries 131631
AC servomotor neuro-fuzzy speed controller design 133945
adaptive GA and differential evol. based BP neural network for epileptic pattern recogn. 94858
adaptive neuro-fuzzy inference systs., analog VLSI, stochastic perturbative techs. 68980
adaptive syst. training using HOS, entropy and MSE criteria 107431
aircraft engines dyn. ident. with neural networks *(Chinese)* 133214
Alzheimer's disease, MRI, image proc., artificial neural net *(Chinese)* 98424
ANN appl. to fault diagnosis in analog ccts. with tolerances 68551
ANN for rem. sensed images class. 94599
ANN-based neurocontroller for IM 77877
articulatory speech synthesizer, param. estim. with neural network mapping 129391
asynchronous AC drive adaptive fuzzy neural power control 134430
ATM network, VoD server of quality syst. 131769
ATM networks, backward predictive congestion control using neural networks 96009
ATM networks, neural net for bandwidth allocation of heterogen. sources 73821
automatic sleep stage scoring, hybrid ANN & expert syst. 76261
blanking parts' defects diagnosis using neural ES *(Chinese)* 113768
blocking artifacts reduction algm. in block boundary area using neural network 129795
brachytherapy cancer treatment, simulated annealing and ANNs 122312
brain region auto-extraction from MRI, neural network controlled snake 110864
breast cancer diagnosis, CSP, neural net approach 122133
breast MRI, contrast enhancement curve eval. using neural net 98394
byzantine agreement, new approach 108148
camera calib., neural, locked/unlocked/semi-locked net wts. 120894
CDMA systs., successive interf. cancellation receiver with neural network compensation 105817
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform detect. using compensatory fuzzy neural nets 110801
chaos seq. generation, neural network *(Chinese)* 94352
CMOS prog. BP on-chip learning neural net with learning rate adaptation *(Chinese)* 91161
CMOS prog. on-chip backpropag. learning neural net 91154
backpropagation continued
composite plate impact-induced damage detect. by neural nets 109429
DC servo motor, real-time speed control, PID-learning controller *(Korean)* 112733
distortion-invariant multiobject recogn. and class. 118687
distributed fibre opt. temp. sens., spatial resoln. wavelet ANN 120860
drum boiler syst. identifier, fuzzy rules extraction, GA 112291
DS-CDMA, efficient multiuser detect. algm. using neural networks 130158
DS-CDMA systs. with smart antennas, DOA estim. 96380
dyn. grounding systs., neural net based features ident. 112152
ECG QRS wave recogn. using fuzzy neural networks 121954
eddy current testing, automated quantitat. defect charactn., ANN use 101596
EHV series-compensated transm. lines, neural net-based fault location 123086
EHV series-compensated transm. lines fault location using neural nets 77663
elec. capacitance tomography, image reconstruction 109929
electronic nose, pollutant gases ident., pattern recogn. 76930
EM device design, use of ANN inverse mapping tech. 128703
face detect., color images with complex background, neural 107219
face detect. by region-based fuzzy neural nets 118787
face recogn. security entrance 73485
failed distrib. transformers diagnosis using neural networks 134133
fire image detect. syst. based on BP neural network *(Chinese)* 129920
flowmeter for loading road tankers using proc. tomography 121276
FMCW opt. fiber sens., neural network based nonlin. recovering tech. *(Chinese)* 75551
foetal heart rate pattern categorization using neural nets 121990
Gabor-atom network radar target recogn., high-resoln. range profiles *(Chinese)* 131630
gas turbine engine fault diagnosis using feedforward neural nets 112319
globular material, feature extraction and edge detect., hybrid neural network appl. *(Chinese)* 129869
GSM channel equalization with complex-valued MLP 130281
human dyn. mapping, stance posture control, feature extraction *(Japanese)* 75879
IM, neuro-fuzzy controller design on DSP 134053
IM, speed-sensorless vector control, NN speed estim. 78218
IM rotor flux vector magnitude reconstruction, ANN appl. *(Polish)* 123404
image class. using BP scheme 94595
impact damaged delaminated composite, shearography, neural fuzzy anal. 125156
indust. gas discrim. syst., neural network, PLD implement. 132066
interior PMSM drive, field oriented speed control, ANN controller 134451
Internet traffic ident. using feedforward multilayer layer perceptron 119754
intrusion detect., true anom. detector design 107587
IR gas sens., cross sensitivity reduction, GA neural network 109730
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
laser welding proc. optim. using ANN, param. selection 105643
lin. and nonlin. tomography, inverse scatt., review 129468
LMR channels, nonlin. transmit amps., neural network modeling 74762
load forecasting using feedforward multilayer neural net, environ. effects 111979
LOGic oriented neural nets, quantized wts., multilevel threshold neurons, backpropag. 68983
LV shape/motion, 3D dyn. model, deformable superquadrics 76361
machine tool coolant fault diagnosis by neural net 109436
magnitude retrieval, neural network approach 118897
mammographic mass detect., adaptive thresholding, region growing 122154
Maul Space Surveillance Site nonimaging laser radar data, reflective tomography reconstruction 86240
med. image enhancement using complex-valued CNN filters 132539
microgravity environ. on-board monitoring using nerual nets 120659
microwave transistor perform. optim. using sig.-noise neural network 102613
mine detect. in IR imagery, wavelet-based third-order neural network 73435
mixed mode self-prog. neural syst. on-chip for real-time appls. 102462
mm wave band random rain media, equiv. complex refr. index, neural network model *(Chinese)* 105746
Morse code recogn. for users with phys. impairments, neural network appl. 87933
Morse code recogn. syst., backpropag. neural net, disabled pers. appl. 111186
MPEG video quality objective assess., neural net approach 106911
multiple handwritten word recogn. techs. fusion 84592
neural net facial expression recogn. syst. using unsupervised local proc. 129908
neural network based sens., redundant technol., sens. fault diagnosis *(Chinese)* 121060
neural network face recogn. using stat. feature/skin texture params. 129823
neural network match filter of chirp pulse compression 75092
neuro-vision syst., 3D image reconstruction 118745
new-borns, artificially ventilated, blood gases values prognosis, neural based methods 133003
noise-mixed PD recogn. using feedforward triple-layer neural net 116182
novel attacks recogn., neural-network based intrusion detector training 96141
NPP diagnostics, ANN vs. sig. pattern recogn. 88548
oil content online monitoring by neural nets 111472
on-chip BP learning neural net with prog. neuron characts. 102464
OPF, multilayer feedforward NN approach 111989
opt. pattern recogn., cascaded lin. shift-invariant proc. 107263
pellet component quality eval. using image proc. with neural networks 94817
piezoelec. ceramic lin. US motor drive, recurrent fuzzy neural network control 99703
planar array synthesis with scatt. inverted-element locations using neural networks 128885
plasma etch procs. modelling using lin. output neuron neural net 125915
PM DC motor drive, neural controller, fuzzy controlled training algm. 113070
PM lin. sync. motor, servo drive syst., RFNN on-line gain tuning control 99863
PM lin. sync. servomotor drive adaptive hybrid neurocontrol scheme 123948
pneumoconiosis, computer-aided diagnosis using neural network 110979
pneumoconiosis rounded opacities detect. using neural net 132840
polyaniline film SO_2 sens., neural network detect. vel. *(Chinese)* 75696
power quality, 3-phase AC sigs. detect./class., ANN 122995
prog. sigmoidal fn., analog cct. realization for on-chip BP learning 68991
pulse-compression radar, neural network sidelobe suppression filter 109271
pulsed laser radar high resoln. dist. meas., DSP, MLP use 120461
radar obj. recogn. by wavelet transform and neural network 75223
radar target class. using neural network and median filter 131626
rect. microstrip antennas, reson. freq. computation 117789
reverse engng., neural net based image proc. 89802
rot. machine failure diagnosis, multisens. data fusion, fuzzy ANN 123274
rotary US motor, TW type, robust neurocontrol 88781
rotodynamic mach., wavelet transform and neural net for condition monitoring 123276
satellite down links, neural net adaptive predistortion 108996

ackpropagation continued
satellite imagery, improved neural network tech. for data dimens. reduction *(French)* 111375
scalp pot. fast comput., EEG forward problem, BP ANN 87398
sens. lin., BP neural networks & regression algm. *(Chinese)* 130020
sens. modelling, neural-network based, nonlin., monitor appl. 86773
short-term load forecasting/class. using neural nets 122930
soil moisture, microwave brightness temps., neural nets 111448
speaker verification syst. using simple BP, recurrent neural networks and dyn. time warping techs. 94437
SPECT, ^{67}Ga imaging, scatt. compensation method, ANN use 122180
spectral chem. sens., systematic profile/feature-based intell. 109737
speech LPC coeffs. based on predictive neuron model, new soln. method *(Chinese)* 84014
speech recogn. using integra-normalizer defined metric 129396
ST-T episode detect. by isoelectric level global curvature in ECG *(Korean)* 110614
steam generator tube flaws, eddy current sig., ANN inversion 101598
stereo vision meas., ANN 118742
structural damage detect. by neural nets and FRF data reduced via principal component prediction 76976
substation alarm MHS using ANN/ES *(Chinese)* 112708
surface EMG, automatic anal./class., parametric modelling 121950
sync. lin. motor servodrive, adaptive neural control 78203
tactile sens. syst. for obj. recogn. 118681
transformer oil, dissolved gas detect. using ANN *(Chinese)* 99710
translation invariant operations design via neural network training 94562
true temp. meas. by multi-spectral radiation thermometry *(Chinese)* 75919
underwater target class., sonar bandwidth effects 77042
underwater target class. in changing environ., adaptive feature mapping 77044
US sig. class., neural net based multidimens. sig. proc. 101591
VLSI systolic implement. 68977
waste heat recovery sect. gas turbine, feedforward neural net simul. 112323
wind tunnel wall press. meas., boundary layer flow, opt. & ANN method 131889
SnO_2 gas sens. array, impedance characts., ANN pattern recogn. 97504
SnO_2 sens. array, VOC detect., ANN pattern recogn. 97506
SnO_2 sens. array, gas conc. quantification in unknown gas mixtures 86712

backscatter
see also particle backscattering
1D ocean-like surface, radar image studies 122695
1D struct., local defect detect./recogn. 118659
2D random rough surfaces, EM wave backscatt., forward-backward/spectral accel. method 128739
2D randomly rough surfaces, EM wave scatt., appl. of reduced Rayleigh eqns. 94021
3D range migration algm. extension to cylindrical/spherical scanning geometries 131631
aerosol dispersion model validation, rapid-scanning backscatt. lidar 122709
agricultural fields with surface drainage network, SAR image 133369
antenna window on medium cover, spec. determ. 72605
atmos. aerosol charact., lidar develop. and expt. research *(English)* 99003
atmos. aerosols, laser rem. diagnostics, backscatt. spectrum reson. method 122703
atmos. probing, laser light scatt. spectral struct., nonresonant lidars 133366
bidirectional ring laser with injected sig., backscatt., stat. props. *(Chinese)* 105385
biotissues, laser-ablated, Doppler diagnostics 117601
biotissues, nonstationary mass removal by laser ablation, Doppler diagnostics 122047
Bohai Sea, ice detect. and classif., SAR and SSM/I obs. 76919
bomb detect. using backscattered X-ray radiography 110436
Brillouin fiber ring laser, soliton compression and locking 128136
Brillouin opt. time domain reflectometer-based distributed temp. sens. 75555
buried objs., mines, EM scatt., complex natural reson. 88259
buried objs., radar time-domain sens., rough surface 111387
carbon tetrachloride, effective SBS pulse compression 82794
cargo inspection syst., low-dose backscatt. imaging 113092
complex targets in continuous random media, backscatt. enhancement for H-wave incidence 120436
Compton backscatt. X-ray generation by high power dens. laser *(Chinese)* 110441
conducting target in fractal atm. turbulence, EM scatt. 72334
coronary arteries, ultrasound charactn., temp. depend. wave speed 110810
direct-detect. mid-IR random-modulation CW lidar SNR 131678
displacement meas. using rem. sens., Doppler effect *(Chinese)* 86474
distributed fiber Raman gain amp., 1410 nm operation principle *(Chinese)* 93524
distributed fibre optic temp. sens. utilising spontaneous Brillouin scatt. 86595
distributed Raman fibre amp., double Rayleigh backscatt. 128170
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
EM fields of ellipt. torus knots 83086
EM scatt. from surfaces with/without slicks, finite size illum. area influence 117653
fetal lung microstruct., maturation, US charactn. 76340
fiber bundle tip backscattered light intens., non-contact vibr. meas. 121233
fiber Raman amps., double Rayleigh scatt. noise *(Chinese)* 105204
fluorocarbon, effective SBS pulse compression 82794
forward-boundary-integral/parab.-wave-eqn. propag. models comparison 72230
fully-distributed opt. fiber polariz. props., OTDR backscatt. tech. 93056
Gbit/s channel repeatered bi-directional WDM transm. 86075
GRAAL, polarized photon beam 110183
ground penetrating radar, FDTD 88109
ground penetrating radar, rough interface, scatt. model 88199
ground penetrating radar, soil response, 2D FDTD 88110
hand-held forward-looking focused array mine detect. 77084
image intensifier syst. under automatic brightness control, computer model 111204
in vessel nuc. fusion reactor viewing syst., amplit. modulated laser radar 105655
in vivo normal human dermis charactn., 20-MHz US backscatt. 110710
kidney, US backscatt. microstruct. feature anal. *(Chinese)* 98337
knots/symm./scatt. 117646
landmine detect., forward-looking UWB radar imaging 77077
landmine detect., ground radar, HMM 88261
local tissue charactn. by backscatt. AO imaging 122039
long single-mode fibers, birefr. correl. length meas. 93095

backscatter continued
mammalian cells, polarized backscatt. fiber-optic meas. 132638
marine boundary layer wind, inverse method soln. 76895
marine radar clutter meas. using instrumentation radar 75216
Mars, rock-strewn surface props., radar backscatt. 75203
metallic materials, backscatt. dose, obliquely incident high-energy photon beams 87874
microwave backscatt. model for bare soil field 76843
microwave heterodyne detect. calibrated distributed fiber temp. sens. 75556
midtropospheric aerosol backscatt. background mode, space-based/airborne lidars appl. 131674
MM-wave patch antennas, composite double layer struct. EM scatt. 128889
monostatic lidar in weak-to-strong turbulence 96999
multimode opt. fiber, ring-shaped field pattern, backward SRS 104654
myocardium, integrated backscatt. image, 2-D cyclic var. 98277
ocean large-scale gravity waves due to ship motion, radar detect. 122698
opt. backscatt. enhance. from 1D rough surface, study using Monte Carlo method 128787
osteoporosis, bone status assess., quantitat. US tech., review 110715
OTDR for opt. fibre cable problem isolation 120190
OTDR receiver, backscatt. tech., PDF 110018
OTDR type fibre sens., Brillouin backscatt., optimum temporal pulse shape 86573
output ratio modeling in air for megavoltage photon beams 88004
periodic spatial patterns in random media, backscatt. response 99006
phase fluct. imaging OCT 76397
phase-dispersion opt. tomography, low-coherence interferometry 73300
pulsed beam scatt. by random medium over ground 86177
radar imaging, high resoln., 2D data extrapolation using AR lattice modelling 131640
radar range profiles, relative phase inform. 75141
radar returns from raindrop roughened water surfaces, expt. study 117694
radar sea-clutter modeling using RBF neural network 109256
rain, radar polarimetry, 5 cm, sensitivity anal. 76870
rain backscatt. props. and effects on radar perform. at MM-wave band 83328
rain-induced lidar depolarization, atmos. icing meas. 133286
Raman fibre amp. struct. syst. performs. *(Korean)* 93511
randomly distributed chiral spheroids, wave polariz. scatt. and transm. property 83254
RCS modeling, data compression, comparative study 86144
rough sea surface with breaking waves, radar sigs. scatt. 99026
rough surface, EM scatt., modified perturb. method 83235
SAR images, ship detect. using segmentation-based approach 96986
scatt. from obj. above half space, four-path model 105705
sea surface, multi-freq. polariz. backscatt. 72322
sea-water target detect. by modulated LIDAR 76921
SeaWinds scatterometer follow-on mission, advanced design 133331
sector scanning US backscatt. microscope 110772
short oceanic gravity waves, rem. sensed reflectance, lidar implications 133343
single-mode fibers, Raman amplif., nonlin. effects 128157
skin US param., global & local estim., high resoln. images 110716
smoke plumes detect. using eyesafe lidar, operation conditions 75233
soil moisture, microwave scatt. coeff., rem. sens. 94032
soil moisture inversion, neural network based 88163
SPring-8 X-ray beamline commissioning anal. 121403
steel, laser US meas. of scatt. waves, microstruct. eval. 114495
stratos. aerosol meas. with L625 Mie lidar *(Chinese)* 122665
terrain mapping, radar refl. coeff., scatt. model 122618
terrain mapping, rough surface EM scatt., BMIA-CAG method 88116
thin cirrus cloud, structural params., spaceborne backscatt. lidar 111416
thin tilted ionos. layers, auroral backscatt. 111403
thyroid, C-scan ultrasound backscatt. microscope syst. *(Chinese)* 110679
time-varying rough sea surface, EM scatt. considering distrib. of sea power spectrum *(Chinese)* 128755
tissue US imaging, large K distrib. params. estim., neural network approach 110789
tissues imaging, US tagging of transm./backscattered photons paths 87511
transient breaking waves, radar backscatt., ang. depend., PO model 76910
transient breaking waves, radar backscatt., PO model 76909
transportable multiple-mirror Rayleigh/Raman LIDAR 76899
two-mode ring laser with injected sig., dyn. props. 71865
ultra long-haul WDM transm. syst. Raman amplif. 131537
underdense plasma, high intens. TW fs Ti:sapphire laser pulse propag. 128790
underwater bottom 2D topography inversion, SAR imagery 76920
underwater target class., adaptive, multi-aspect feedback 109306
US echo decomp. perform. using sing. spectrum anal. 132618
US med. images, freq. decomp./compounding with wavelet packets 110677
US tissue charactn., use of freq. diversity and Nakagami stats. 98329
UWB P-3 and CARABAS II foliage atten. and backscatt. anal. 98969
VHF atmos. backscatt. from stable/turbulently mixed tropical layers 128766
water phantom, photon beams, PEREGRINE Monte Carlo dose calc. 98791
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626
$BaTiO_3$:Co photorefr. cryst., self-pumped phase conjug., all opt. control 128427
CS_2 SBS phase conjugator for Cr:$LiSrAlF_6$ laser pulse width compression *(Chinese)* 82571
Er-doped fiber laser, self-Q-switched, SBS, output charact. *(Chinese)* 82522
I_2 atmos. monitoring using Cu vap. pulse laser radiation 133288
Yb-doped double-clad fiber laser, unidirectional ring geom., high power operation 82535

backscattered electrons *see electron backscattering*

backtracking
curvilinear paths, trust region methods, nonmonotonic back tracking, unconstrained optim. 78938
firewall implement. for software and hardware-based routers 119415

backward wave oscillators
coaxial extractor relativistic BWO *(Chinese)* 102940
helix TWT, Brillouin-flow periodic PM focusing, BWO anal. 91565
phase lock-in of MM-/subMM-wave BWOs, develop. and appls. 69459
plasma filled, lin. theory 80610
relativistic BWO with circ. wave-guide reson. reflector *(Chinese)* 80613
weak external mag. field effect on operation 91562

backward wave tubes
see also backward wave oscillators
wideband miniature MM-wave BWT 69463

bacteriorhodopsin *see proteins*

Badgers rule *see bond lengths*

balance (physiological) *see mechanoception*

balanced amplifiers *see differential amplifiers*

ball grid arrays
50 GHz broadband SMT package for microwave appls. 113629
area array components, X-ray/endoscopy-based inspection techs. 124417
area array devices, combined visual/X-ray inspection 113737
area array packages, solder bump shape prediction algms. 78607
area array packaging, high dens., high speed separable interconnect appl. study 124336
area array rework challenges in PCB assembly 113576
area array solder joints, reliab. in bending 113577
area-array packages, decomposed anal. procedure appls. 78673
assembling tech. without thermal procs., flip-chip mounting 67552
attach technol., solder paste screen printing 113489
automotive PBGA assembly, board-level reliab. with SnAg Pb-free/SnPbAg solder interconnects 113572
back-to-back tape BGA packages, thermal perform. 113628
backplane connector for high speed differential sigs. 115111
BGA/CSP connection durability during thermal shock, finite element modeling 100598
BGA/CSP semicond. packaging rework/repair, outsourcing aspects 67592
BGA/CSP standardization, 2000 status 113599
BIAC liq. cryst. polymer film, high heat resist./dimens. stabil. 113710
board level testing of BGA SMD components *(German)* 80485
buildup struct. CTE mismatch, reliab., thermal cycling, FEA 113679
cavity down BGA/flip-chip-in-package encapsulation procs. 113467
CBGA assembly, reflow soldering, reliab. 113553
centrifugal semi-aq. cleaning proc. for high-dens. package substrs. 115183
ceramic BGA, 1 mm pitch, reliab., design/proc. effects 113569
ceramic BGA package, Pb-free solder alloy 113655
CFD, PBGA, compact model topologies 113548
chip pins 3D meas., line-struct. laser sens. appl. *(Chinese)* 78663
chip scale BGA packaging, high-dens., for hand-held/portable products, design for assembly 67628
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
chip size BGA packaging for high perform. memory appls. 68790
CMOS chip, organic/ceramic packages, simultaneous switching noise 113668
CMOS test vehicle, CBGA package, core switching noise 113669
CMOS-based microsens. fab. technol., packaging approaches 109802
component placement, 3D vision technol. appls. 115140
coplanarity study on BGA packaging 113557
CSP, BGA-style, extremely thin profile 67638
CSP, BGA-style, extremely-thin profile, appl. specific develop. 113566
CSP assembly reliab., thermal cycling ramp rate effect 113681
CSP solder paste quality/vol., impact of print params./package pitch and I/O 115223
CSP technol. for electronic hardware miniaturization, trends 100602
CSP/area array package board level reliab. 113602
CSP/BGA packaging yield enhancement with solder flux/paste proc. control 124333
CSP/BGA solder joint fatigue life, thermal cycling ramp rate effects 113579
CSP/BGA yield enhancement with solder flux/paste proc. control 125940
CSP/micro-BGA proc./damage assess. with acoustic micro imaging 113585
CSP/RF package assemblies, thermal cycling testing 113597
dimpled BGA proc. develop. for space flight appls. 133229
ellipt./round solder pads, thermal stress/strain behavior 78672
epoxy resins, molding cpds., CABGA packages 113724
FBGA package, mech. chip crack 113488
fine pitch package, RF elec. meas. 78631
fine-pitch BGA board-level solder joint reliab. enhancement by package modifs. 124335
flex-based two metal layer electronic packaging 67547
flip chip assembly subcontracting, integrated turn-key capability 69369
flip chip BGA packages, molded underfill material charact. 113497
flip chip BGA underfill charactn. using rigid substr. 113562
flip chip PBGA packaging, OSP surface finish charactn. 113711
flip chip-in-package, molded underfill material/proc. 113563
flip-chip BGA package, design and reliab. 113494
flip-chip BGA package, reliab. 113495
flip-chip BGA package, solder bump, thermo-electromigration 113654
flip-chip BGA package, thermal interface material 113526
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
flip-chip package, single pass reflow encapsulant 113502
flip-chip PBGA package 113656
flip-chip populated PCB rework by laser desoldering 124351
fpBGA packages, fine pitch BGA, ball-shear strength 78676
HDI BGA substrs., ultra-high dens., develop. 113587
HDI modular packaging for space electronics appls. 133234
IC package inspection enhancement using real-time X-ray systs. 100639
IC package inspection using X-ray systs. 124403
IC packages, elec. anal., equiv. cct. models 113733
IC packages, simultaneous switching noise, computer simul. 113670
IC packaging for high perform. memory 124328
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
integrated power electronics modules, CSP of power devices 78617
IPC 7525 stencil design guidelines for electronics assembly, overview 115137
Ka band transmitter modules for LMDS equipt. mass prod., BGA/LM packages 96387
lead coplanarity, line-struct. laser scanning meas. syst. 67646
lead free interfacial struct., accelerated thermal cycle testing, BGAs and CSPs 113621
lead-free solder joints, thermal fatigue life prediction by FEA 67642
LGA/BGA packages, second level reliab. comparison 113581
LNA in mixed-sig. cct. environ., effects of IC packaging on perform. 68948
localizable HDI-PCB technol. develop. 113588
low-cost flip chip package design concepts for high dens. I/O 113677
MCM for video graphic accel., sig. integrity and design consideration 91521
MCM package, telecomm. equipt., mech. integrity 113493
MCM-D technol. front-end digital readout perform. 121699
MCM-D/L/BGA integrated package with embedded pass., satellite TV demonstrator 124364
MEMS, modularized syst., top-bottom BGA package 116064
micro-BGA/chip/wafer test/burn-in, high-dens. sockets 124338

ball grid arrays continued
miniaturised consumer electronics, assembly proc. trends 67637
mirror-imaged area array assemblies on SMT PCBs, rework proc. develop 115168
mixed-sig. and digital ICs, radiative coupling 113519
MLC IC-BGA device reliab. 78642
moulded PBGA socket, solder joint reliab., assembly quality 113686
μBGA packaging for high-perform. RDRAM/SDRAM appls. 125497
μBGA solder joint, vibr. fatigue, intermetallic cpds. effects 78616
multi-chip syst. on silicon using thin-film technol., SoC assemblies *(German)* 67544
multichip BGAs, stress simul., failure anal. 78618
neo-Manhattan bump interconnection for B²IT build-up PWBs/area array IC package substrs. 113703
no-clean stencil printing proc. develop. for SMT/through-hole interconnect technols. 124339
noncontact probe for profilometric meas., BGA substr. inspection 132177
OptoBGA opto-electronic SMT package for next-generation fiber optic data links 113727
package assembly failures, Ta capacitor induced 113571
package repair using MWIR systs., proc./rework cost control 89853
packaging, solder sphere quality considerations 124340
packaging, ultravia substr. for high perform. 67593
packaging technol. rev., overview 124326
packaging technols./materials/procs., overview 67558
packaging whole field displacement meas. tech. using speckle interferometry 113473
packaging/board warpage charactn., location/type/magnitude importance 124330
Pb-free reflow soldering impact on electronics packages 124358
PBGA, multilayer substr., dummy pattern design 113729
PBGA, SMT solder joint reliab., CAD *(Chinese)* 78669
PBGA, ultra-fine-pitch encapsulation 113490
PBGA and QFN package bandwidths, high-speed broadband products 113728
PBGA flip-chip package, CFD, compact thermal model 78625
PBGA flip-chip package, solder ball reliab. 78639
PBGA on flex substr., board level reliab. 67622
PBGA package, thermal charact., IR thermography 113721
PBGA package, underfill material, board-level reliab. 113662
PBGA solder joints, fatigue lifetime rel. to reflow conveyor speed 113545
PBGAs, lead-free assembly capability, moisture blocking planes and reflow perform. 113472
PCB solder joint reliab., thermal expansion mismatch impact 115116
plastic cored solder ball, BGA and CSP packages, reliab. 113717
plastic SMT package moisture sensitivity perform., Pb-free reflow temp. effects 113574
polymer stencils, UV laser-cut, for fine pitch wafer bumping 100587
PWB mech. loading, global/local reliab. modelling 115185
PWB surface finish proc. develop. for enhanced solder joint strength/reliab. 69316
reliab., underfill material 113474
reworkable underfills for area array packaging encapsulation 67563
single-pass reflow encapsulant for flip chip appl., develop. 67568
Sn-Ag-Cu Pb-free solders for BGA appls., reliab./Au embrittlement 67571
solder ball shear testing 113665
solder joint reliab., FEA assess. methodology, prediction accuracy 113580
solder joint reliab., thermal, power and bend cycling 113492
solder joint voiding, PCB surface pad finish/contamination impact 113712
solder joint voids, effects on thermal fatigue 113570
solder joint X-ray slicing using transm. X-ray systs./standalone software 113584
substr. conducting path defect detect., AOI 100611
super BGA, wideband model for high speed digital ccts. 89860
super-BGA package reliab., underfill effects 67606
T-G²BGA, tape gold-gold gang bond BGA, highly reliable CSP develop. 113470
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
two metal layer tape package for improving high speed DRAM perform. 113632
wafer level area array solder bump interconnects with Pb-free/low-α solders 113594
wafer level CSP using liq. bismaleimide polymers 124327
wafer level packaging, WAVE wide area vert. expansion proc. implement. 113604
wafer-level CSP, wafer proc. package, reliab. 100616
WAVE, wide area vert. expansion packaging proc. develop. 113508
wire bond integrity, probe scrubbing damage effects 113682
wire bond integrity/package interfacial adhesion, plasma cleaning gas chem. effects 113568
X-ray digital microlaminography, BGA/flip-chip inspection 67652
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second level reliab., comparison 113586
Au immersion/electrolytic PCB final finishes, comparison 115177
Cu BGA substr. etch treatment, solder mask adhesion 67575
Ni/Au electroless plating, flip-chip BGA, solder joint reliab. 113723
Ni/Au surface finish, PBGA package 113666
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
Pb-free packages, board level reliab. assess. 113573
Pb-free solder spheres for BGA appls., pad finishes, shear strength 113701
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag solder ball on effect on microstruct. of BGA joints with Au/Ni coated Cu pads 69330
Sn-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu lead-free solder vol. effect on intermetallic layer form., interface microstruct. 113515
Sn-Ag-Cu solder ball bonding, microstruct. and strength props., cooling rate 69331
Sn-Ag-Cu solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Pb-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516
needle dispensing equipt. design for very high speed deposition 113468

ll lightning *see lightning*
ll milling *see powder technology*
llasts, electronic *see lamp accessories*
llistic electron emission microscopy *see field emission electron microscopy*
llistic electronic conduction *see high field effects*
llooning instability
NCSX coil design using GA 128721
lloons
see also aircraft
astron. telescope, balloon-borne, GPS pointing method *(Chinese)* 88027
balloon-born two-sphere elec. field instrum., neural net DP *(Chinese)* 105666
meteorological balloon, buoyancy-controlled, ACE-2 111412
multi-jn. space power solar cells testing using balloon technols. 112963
stratos. platform based broadband wireless access syst. 74600
luns
air-gap stacked Marchand balun for MMIC, graphical design method 80373
broadband circ. polarised proximity coupled patch antenna 83613
broadband CPW Marchand balun using photoimageable MLTF proc. 125656
broadband uniplanar building blocks for MMIC and hybrid mm-wave ICs 125812
coupled tapered slot-line antenna with sum/difference beams 72667
double-Y baluns, parasitic effects anal. 114948
Fermi-profile tapered slot integrated antennas for mm-wave receiver IC 72515
HEMT bal. act. mixer 90798
long. TSA, coaxial line balun feed 117777
low-loss planar microwave balun with integrated bias scheme for push-pull amps. 80372
LTCC-MLC balun, WLAN/Bluetooth 80221
MCM elements, time domain charactn. with TLM method 91519
microwave baluns, anal./design 69219
multi-level metal winding on-chip transformer/balun for RFICs 91332
multi-octave band conical spiral antenna 72464
multilayer coupled-line struct., design and cct. appls. 80205
printed dipole antenna, balun, FDTD anal. 72500
printed dipole radiating element for wide-scanning array appl. 83709
SAW filters, multimedia appls., impedance transform., double bal. operation 92762
single-fed crossed V-dipole antenna for circ. polariz. *(Japanese)* 94166
symmetric broadside-coupled CPW balun, anal. and design 69091
UWB CPW-fed spiral antenna and balun for humanitarian demining 128859
X-band MMIC up-converter, CAD-simul. 91381
CoZrNb/polyimide multilayer mag./dielec. hybrid transm.-line, wavelength shortening 127398
GaAs FET 1.8-GHz push-pull power amp. using impedance-transforming baluns 125733
GaAs FET act. balun and bal. mixer, C-band down-converter 69131
GaN HEMT, broadband push-pull microwave power amp. 114987
Si BJT bal. upconvertor MMIC, Marchand-type balun, unit mixers 80361
SiGe BiCMOS technol. LNA/mixer IC, lin., cell phone appls., 2.5-GHz 91351
anach spaces
augmented Lagrangian algms. in Banach spaces, inexact versions of proximal point 113959
B-valued martingale random variables, moment convergences *(Chinese)* 124519
bounded solns. and asymptotic stabil. of nonlin. difference eqns. in complex plane 90117
composite functionals, two-sided second-order epi-derivatives 100748
convex vector optim., efficient point geom. charactn. 78904
differentiable mapping, compactness condition 124564
first-order evol. eqns. in Banach spaces, spline techs. 101012
first-order impulsive functional diff. eqns. in Banach spaces 124709
implicit fns./multi-fns. and stationary points, contingent derivatives 100854
infinite dim. Banach manifold , quant. info., exponential connection 83783
Ishikawa iter., stabil., strong pseudo-contractions 78979
lower semicontinuous fns. in normed spaces, error bounds 100918
Mann and Ishikawa iter. procs., stabil. 114095
metric projections onto normed lin. spaces, directional differentiability 100853
n-cut cube fuzzy nos. and embedding theorem 124550
Newton method convergence, Holder continuous first derivative 78996
noncompact fuzzy no. space, embedding problem 113946
nonlin. diff. eqns., controllability in Banach space, nonlocal conditions 100750
nonlin. hyperb. eqns., num. existence and uniqueness proof for solns. 114170
nonparametric exponential model, class. stat. manifolds 83785
polar cones' solidness, duality and Banach spaces 67816
pos. fixed points of nonlin. operators on ordered Banach spaces 90106
quantitat. version of theorem due to Borwein-Reich-Shafrir 113960
Secant method and divided differences Holder continuous 124703
semilocal convergence theorem for Newton's method in Banach space using hypotheses on second Frechet-derivative 67950
well-posedness and optim. under perturb. 100943
and-elimination filters *see band-stop filters*
and gap *see energy gap*
and model of magnetism
see also Hubbard model
giant magnetostrictive materials, recent R&D *(Japanese)* 81796
and-pass filters
see also channel bank filters; crystal filters; vocoders
1.55 μm opt. sampling syst., pulse waveform sonogram charactn. 71892
1.8 GHz wireless LNA with high quality factor L-C filter 102703
1/f noise spectral components intens. 80703
3D 30 GHz bandpass filter using LIGA micromachined proc. 102710
32-channel very low crosstalk arrayed-waveguide grating multi/DEMUX module 120375
80 to 10 Gbit/s DEMUX using fiber cross-PM and opt. filtering 96869
80-channel integrated dyn. drop flat-top passband filter 131404
act. RC filter, oscill. test struct. 80038
act. second-order BP filter design using lossy LP-BP transform. 125606
act.-RC filter, single-amp. biquad type, design 80077
adaptive line enhancement via subspace tracking 107546
adaptive neural filter banks with filter neuron, design 130135
adjustable multilayer HTS bandpass filter 68905
air-gap overlay struct. low-loss monolithic CPW filters 102725
all-opt. DEMUX by fiber cross-PM 96852
all-opt. tunable interferometric bandpass filter, DARR loaded coupler 93146
analog filters, introduction 107528
asymmetric filters, rect. waveguide, passband and stopband reqs. 80179
BiCMOS high-selectivity SC bandpass filter, biquad cells 91035
BiCMOS MMIC lumped and transversal filters 69229
bicorn single-mode waveguide filters, strong broad rejection 127890
band-pass filters continued
bipolar transistors, HF biquadratic cct. *(Japanese)* 91047
Bragg grating arrayed opt. fiber transversal filter 127882
broad band software-defined radio receivers, supercond. device based 74635
broadband indoor wireless multimedia access, holographic opt. receiver front end 86121
CCII, reduced parasitic resist., bandpass filter appl. 80039
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
Chebyshev filters using dual-mode patch resonators, low insertion loss 102575
CMOS bandpass amp., notch filter, wireless receiver 90753
CMOS bandpass continuous-time filter, freq. and Q-factor tuning 80049
CMOS bandpass filter for pager appls., LV high-Q design 91046
CMOS Chebyshev bandpass filter, Q-enhanced spiral inductors appl. 125593
CMOS current-mode filter, modified multi-output differential difference current conveyor 68931
CMOS digitally prog. current steering semidigital FIR reconstruct. filter 80092
CMOS high-Q G_m-C bandpass filter, automatic tuning, wireless receivers 91049
CMOS high-speed opamps, gain and bandwidth boosting techs., filter appls. 79581
CMOS IF bandpass amp. design, low sensitivity to temp. and proc. vars. 79604
CMOS OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
CMOS RF inductorless differential second-order bandpass filter 102634
CMOS SC band-pass biquad filter 102374
CMOS SC bandpass filter, freq. up-translation, DDFS syst. 80048
coherent opt. sources, blind discrim. using reticle-based opt. trackers and ICA 106824
combline filters, coupling & reson. freq., non-adj. resonator effect 102518
compact ellipt. fn. BPF, triple-mode cavities, digital TV transmitter 109358
compensated uniform transversal filters 102333
complex coeff. BPF synthesis based on real coeff. BPF 80026
compressed coefficient's band-pass delay time charact. extrapolation using GA on DCT 73639
continuous-time OTA-C filters, tuning method using GA 68926
CPW filter, conductor-backed design 69049
cross-coupled dielec.-loaded waveguide filters design 80174
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
current-mode biquadratic filters using multiple-output FTFNs 68929
current-version neg. feedback biquad filter, opamp cct. 68932
CW radar target tracking in Doppler freq. shift 86238
DAQ systs., sens. noise reduction method 131830
DCT, GA, band-pass delay time charact. 73837
design method *(Russian)* 114872
DFB LD, gain-switched, pulse generation, opt. filtering effects 82661
dielec. multilayer bandpass filters 71490
digital cellular base station, dielec. resonator duplexer 74798
digital filter freq. response characts., analog shaping, Doppler tracking 118991
direct-coupled-resonator bandpass photonic filters, synthesis tech. 104892
dispersion-managed soliton control with narrow-bandpass filters/energy enhancement 128551
DS-SS commun. systs., narrowband interf. rejection algm. 96392
dual-mode stepped-impedance ring resonator for bandpass filter appls. 91186
duplex filter tuning using time domain transforms, cross-coupled resonators 125683
EEG beta event-related sync. after tactile finger stimulation *(English)* 87433
EHWPack, evolvable hardware environ. using SPICE simulator and field prog. transistor array 114573
electrolytic capacitors, state diagnosis proc. 91424
ELF natural noise, derived Hurst exponent 88141
ellipt. log-domain ladder filters, high-order low-pass and band-pass filters, HSPICE simul. 80072
equal-element LC lowpass filter, design and use as bandpass filter 80031
evanescent-mode bandpass filter, ridged waveguide, inductive strip 102519
evanescent-mode ridge waveguide bandpass filters, length reduction 102536
FBG strain sens., tunable narrow bandpass filter demodulator *(Korean)* 97316
ferroelec. tunable bandpass filter, K-band appls. 70465
FILTEX, microband filter intell. design syst. 68518
FIR digital filters, low/high-pass and mid-pass/stop designs 114878
FIR freq. masking filters, narrow-band single filter 118981
FIR least sq. filter design using piecewise polynomial approxs. 130069
FIR peak constrained least sq. filters, design 107543
floating-gate MOS filter using translinear ccts., 1.25 V design 80067
folded symmetric resonator filters with source-load coupling, direct synthesis 80192
fourth order band-pass ΔΣ-modulator 79634
FPGA, adaptive heterodyne filter 102399
fractional operations and time-freq. distribs. 95539
front-end filter with automatic center freq. tuning circuitry 68910
fully functional integrator based continuous-time filters, VHF 80045
GSM, microstrip rect. ring bandpass filters 74797
hairpin type coupled line bandpass filter, design method 102572
harmonic-suppressed tunable microstrip-ring bandpass filter 102324
hearing aid LV CMOS filter, dyn. gate biasing use 122354
heart, harmonic phase MRI, bandpass filters design 98408
high isolation planar filters using EM bandgap substrs. 80188
high output impedance current-mode multifn. filter with dual output CCIIs 91045
high-Q tuned act. bandpass filter for wireless appl., varactor use 85690
high-temp. supercond. hairpin-comb filter, cascaded struct. *(Korean)* 114865
high-temp. supercond. microstrip filter using multiple coupled line resonators *(Korean)* 114866
holographic spherical mirror as front end receiver for wireless in-house IR commun. 96677
HTSC CPW bandpass filter, meander line half-wavelength resonator 71112
HTSC cross-coupled microstrip bandpass filter, design 127532
HTSC microwave filters 71092
hybrid EO oscillator, injected OTDM sig. 8×2.5 Gbit/s frame clock recovery 120357
hybrid microstrip/NRD-guide filter with enhanced upside stop-band rejection 91191
IF SAW filters, high selectivity, CDMA mobile phones 96528
IIR filters with flat passband and equiripple stopband responses, design 95695
IIR filters with variable delay, optimal design 118983
image class. by local inform., independent component anal. 118772
inhomog. broadened systs. pulse saturation, noise suppression 84738
integrated gain flattening waveguide filter design by Abeles computation method 127899
IR imaging, multiband opt. syst., DOE spectral filter 109641
ISM band pass filter, integrated combline struct. 68892

band-pass filters continued
Japanese cdmaOne syst., band-switching SAW antenna duplexer 96527
Ka-band bandpass filter, LIGA micromachined proc. 69073
Ka-band planar HTSC filters for commun. satellite appls. 82013
large channel count wavelength-selectable 1.5 μm laser, GHz WDM appls. 109167
LC bandpass filter, high-valued pass. element simul. using low-power CCIIs 91036
leapfrog multiple loop feedback bandpass filters, tuning 68927
lin. combination of weighted medians, design 107522
lin. FM SAW filter, finger cut effects on perform. 127270
log-domain ladder filter synthesis, unified matrix method 80074
Love mode layered SAW filters, config., fab. and perform. 80029
low-noise act.-RC low, high and band-pass allpole filters using impedance tapering 102369
low-power continuous-time integrators, dyn. range limits 91032
low-power direct conversion receiver module for C-band wireless appls. 96360
LTCC materials for high dens. multilayer interconnect 124378
LV OTA using common mode feedforward, HF SC filter use 80055
M-band wavelet transform, adaptive approach to unsupervised texture segmentation 106512
mag. micro-strip line, constr. & miniaturization optim. *(Japanese)* 102502
mammogram microcalcifications, unsupervised detect. 87349
med. image compression by DCT spectral similarity strategy 110525
MIC bandpass filter with microstrip and two ring dielec. resonators, FDTD anal. 80344
microstrip bandpass filter, aperture compensation and multipole generation 69074
microstrip bandpass filter, thick film dielec. overlay 91206
microstrip bandpass filter, three-line struct. 102541
microstrip bandpass filters, harmonic suppression, parallel coupled lines *(Chinese)* 102510
microstrip dual-mode filter, full-wave design, FDTD method 69037
microstrip multistage coupled ring bandpass filters with harmonic suppress. 69016
microstrip resonator, neg. resist., act. bandpass filter 102539
microstrip resonator loop filter, 3G mobile terminal 102540
microstrip ring bandpass filter, varactor tuning, harmonic suppression 69041
microstrip ring resonator filter, atten. pole freq. control 80183
microsystem opt. bandpass filters, ion assisted deposition 104803
microwave act. bandpass filters, lin. and noise perform. optim. 69182
microwave band pass filter, power handling capacity 102544
microwave combline BP filter, cct. design, atten. poles 69028
microwave filters with max. flat passband response, amplit. characts. approx. *(Japanese)* 114961
microwave MUX design based on triplexer filters 119846
MM-wave filters, CPW struct. 69033
MM-wave FSS, high perform. micromachined 83718
MM-wave planar printed ICs, scaling-fn. based multiresolution time domain anal. 102708
MM-wave tunable band-pass filter, micromachining technol. *(Korean)* 69058
Mobius bandpass filters, dual-mode/quad-mode types 102553
multi-IDT input tunable SAW filter, wireless telecomm. systs. 116216
multi-slit rangefinder develop. *(Japanese)* 84090
multichannel array subbanding with adaptive proc., architect. 96537
multichannel biotelemetry syst., filter bank use 88011
multichannel RF/opt. SCM commun., MMIC-based modules 131564
multiconductor multilevel folded-line bandpass filters, design methodology 125677
multimedia sig. proc., tunable/variable pass. digital filters 84758
multiple bandpass sigs. downconversion using bandpass sampling, efficient algm. 130138
multiple cavities Fabry-Perot narrow-bandpass interf. filters, auto-design *(Chinese)* 116889
multireflector reson. bandpass filter design, guided wave optics 82270
narrow-band band-pass filter design, software tool 102334
narrow-bandpass follow-up filter, vehicle speedometer appl. *(Chinese)* 102355
narrow-linewidth bandpass filters with diffractive thin-film layers 71489
non-iter. waveform deconvolution, anal. reconstr. filters 118996
nonlin. optimal filters, parametric design 118989
OFDM sigs., clipping for peak power reduction 73778
open-ended resonator, microwave filter 69072
opt. CT, sig. proc. schemes comparison 75814
optimised low-pass filter integrat. in band-pass filters 102517
OTA-C band pass filter, noise/dyn. range 102343
parallel-coupled ring-resonator filter synthesis, WDM appls. 85986
parallel-coupled-line microstrip filter with spurious passband suppress. 102577
pass. RF band-pass filters in LTCC module, prep. from fine-line thick-film pastes 114868
periodic structs. for design of voluminous and planar microwave/MM-wave filters 102533
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
photonics-based interf. mitigation fibre filters for microwave sigs., parallel topol. 131380
π-shifted long-period fiber grating bandpass filters for act. mode-locked Er-doped fiber lasers 116881
planar ellipt. bandpass filter using SMD type rect. DRs, design 102534
planar HTS lumped element bandpass filter with spiral inductors 80210
planar HTSC lumped element bandpass filter with spiral inductors 82015
planar microwave act. filters, neg. resist., tuneable bandstop/bandpass filters 125756
polyethylene sheets, crease detect. using opt. syst. *(Japanese)* 131922
quasi-opt. filters by hybrid MoM/BI-RME method, efficient anal. 93294
radar receiver, act. tunable BP filter and image rejection mixer 75183
RC notch and band-pass filters, transistor-only configs., CMOS implement. 80062
reactive ion-assisted sputtered thermally stable narrow-bandpass filter 71464
reciprocal photonic lattice filter, all-opt. config., perform. characts. 71504
reconfigurable MEMS filters, tunable lumped components design 80223
rect. loops in rect. coaxial cavities, mutual coupling factor 91190
rect. waveguide filters, stop-band improve., resonator width select. 102547
recursive weighted median filters with real-valued wts., optim. algm. 94559
reson. piezoelec. transducers, broadband test sig. generation 86503
response and phys. symm. in filters, exploitation 80030
robust motion estim. using spatial Gabor filters 118393
robust optimal granulometric bandpass filters 107500
SAB low-Q band-pass act.-RC filter, impedance tapering effects 91051
Sagnac interferometer, single opt. fiber grating *(Chinese)* 116892
Sagnac loop with inserted fiber Bragg gratings, transm. charact. *(Chinese)* 71295
band-pass filters continued
satellite mobile nonlin. channel ident. using Volterra filters 119951
SAW transversely coupled resonator filter, passband widening 116218
SC based synthesis 114871
sidelobe cancellation for high rejection in SAW filters 116211
sigma-delta modulator dyn., piecewise isometry 90991
SiP, syst.-in-a-package, RF blocks, WLAN appl. 89881
speech sig. enhancement in noisy environ. using two microphones 118059
spline wavelets, quadratic/cubic, fast algm. 84760
split-mode resonator bandpass filter, PBG excitation 114950
spurious responses suppression filter with atten. poles 69035
stack filters optim. based on mirrored threshold decomp. 73656
supercond. band-pass filter, parallel resonators struct. 71101
supercond. band-pass sigma-delta modulators, noise-shaping charact. 127530
suspen. stripline band pass filter 69032
suspen. substr. stripline band-pass filter with optimal redundancy param. 68898
suspen. substr. stripline filter design with hybrid EM simul. tools 69043
switched-MOSFET prog. LV bandpass filter, hearing aid devices 80071
symm. interact. relatively wideband diplexers, direct design *(Chinese)* 114867
tandem AWG filter, 1010-channel, one primary/ten secondary AWGs 71488
thick film technol. for wireless appls. 125917
thin film filter MUX devices 96781
total harmonic distortion anal. simul. 77364
transform., ideal transformers insertion 107562
transm. lines, wavelet transform based noncommunication protection scheme *(Chinese)* 112133
triple-mode dielec. monoblock bandpass filter for base station appls. 102556
tunable dielec. resonator bandpass filter 68906
tunable ferroelec. filters with const. fractional bandwidth, design 102531
tunable recursive bandpass filters, finite word length effects 91101
two track RSPUDT struct. for SAW filter size reduction, design and perform. 92763
UHF band pass filter using miniaturized sq. stepped-impedance resonator *(Korean)* 114864
UHF current-mode filter based on biquad of regulated cascode topol. 80078
UHF OTA-C filters, design issues and CMOS implement. 69217
ultra-thin long-period grating, random grating period and amplit. errors 104659
ultrashort-pulse amplit./phase meas., two-photon absorpt. sonogram trace 105447
universal voltage-mode filter, three input/single output, operational floating current conveyors 68921
ventricular late pots., beat-to-beat detect. method 98228
ventricular repolaris. in cardiac hypertrophy, mag. map anal. 87462
VHF CMOS bandpass filter for IF appl. 102356
wave digital ladder filters, direct design 130072
waveguide bandpass filters with improved stopband perform. 69036
waveguide filters with improved stopband perform. 125666
waveguide-grating struct., guided-mode resons., filters, GA 104881
wavelength calib. and instrum. line shape estim. of LWIR hyperspectral sens. from in-scene data 76859
WDM DEMUX/opt. filters using finite 2D photonic crysts., freq. domain anal. 86052
wide stop-band/flat-pass-band opt. filters based on multi-resonators 71503
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655
X-band MIC dielec. resonator bandpass filter 69055
Zolotarev bandpass filters, synthesis 102537
Al/AlN/Au film bulk acoustic resonator, W/SiO_2 multilayer reflector, filter appl. 104450
$(Ba_x,Sr_{1-x})TiO_3$ capacitor tunable RF filters, bandpass and lowpass, IMD 102332
BaSmTiO dielec. resonator bandpass filter for cellular phones 85415
$Bi_{12}SO_{20}$ photorefr. JTC, rot. invariant pattern recogn. 107251
Cu E-plane ccts., membrane-supported, fab. and realisations 91196
GaAs MESFET LTCC Ku-band transmitter module, integrated filter, satellite commun. appls. 96620
InGaAsP/InP cascaded microdisk resonators, opt. filter responses 71354
Si integrated mm-wave micromachined band-pass filters, flip chip bonding techs. 125771
Si low resist. substr. microwave filters, polyimide interface layer, wireless ccts. 91334
TiO_2/SiO_2 band pass opt. filters, central wavelength stabil. *(Chinese)* 82277
TiO_2/SiO_2, multilayer thin-film narrow bandpass filters, transm. characts. 93293
TiO_2-SiO_2 multilayer film narrow-bandpass filter design, stepwise GRIN profiles 116875
$Tl_2Ba_2Ca_1Cu_2O_8$ HTSC films on 3″ sapphire wafers, high freq. filter appls. 70613
$Tl_2Ba_2CaCu_2O_8$ HTSC large area films, prep., microwave appl. 124823
Y-Ba-Cu-O bandpass filter, quasi-ellipt. freq. response 71111
Y-Ba-Cu-O filter and resonator, sapphire substr. 71095
Y-Ba-Cu-O thin films, sapphire substrs., microwave devices 71094
YBaCuO HTSC bandpass filter, microstrip circ. patch resonator 71102
YBaCuO microstrip hairpin-type filter 71106
YBaCuO supercond. lumped-element filter with planar spiral inductors 71082
$YBa_2Cu_3O_7$ HTSC large area films, prep., microwave appl. 124823
$YBa_2Cu_3O_{7-\delta}$ adjustable multilayer HTS bandpass taped comb-line filters 116538
$YBa_2Cu_3O_{7-\delta}$ microstrip resonator, cross-coupled band-pass filter 71113
$YBa_2Cu_3O_{7-x}$ microstrip filter, H-type resonator 71097
$YBa_2Cu_3O_{7-\delta}$:Ag HTSC films, large-area PLD, device appl. 68307
YBaCuO/SrTiO/LaAlO multilayers, freq. agile microwave devices 68897
$YBa_2Cu_3O_{7-\delta}$/Au HTSC double-sided films, microstrip band-pass filters 92910
Yb^{3+}-doped narrow-linewidth fiber laser, unpumped dopant fiber fn. *(Chinese)* 105182

band-rejection filters *see band-stop filters*

band-stop filters
see also notch filters
1D microstrip PBG band stop filter 91008
analog filters, introduction 107528
antenna arrays, transm. line band stop filters 72653
asymmetric filters, rect. waveguide, passband and stopband reqs. 80179
broad band-rejection fiber filters based on long-period fiber gratings 116654
broadband waveguide rejection filters 125590
cascaded dual concentric core fibre filters, stop-band filter 116877
circ. dielec. rod waveguide with periodic corrugations, dispersion characts. anal. 117732
CPW, slit discontinuity, equiv. cct. model 69013
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
ferromag. metallic film planar transm. lines for microwave device appls. 127394
FIR digital filters, low/high-pass and mid-pass/stop designs 114878
FIR peak constrained least sq. filters, design 107543
FIR two-channel PR filter bank with lin.-phase, design 73640

band-stop filters continued
fractional operations and time-freq. distribs. 95539
grating-assisted codirectional coupler filter using EO/pass. polymer waveguides 127898
IIR filters with flat passband and equiripple stopband responses, design 95695
Japanese cdmaOne syst., band-switching SAW antenna duplexer 96527
K_u band-stop filter design using waveguide-slot lines 125665
Kurokawa-type oscillator reson. struct., equiv. cct. derivation 79613
long. coupled dual-mode leaky-SAW resonator filter, upper-sideband suppression 116213
microstrip periodic stub diplexer, multifrequency transceiver 125678
microstrip rejection filter, thick film overlay, Q-factor 69076
microwave act. notch filter, varactor tuning 102364
microwave MUX design based on triplexer filters 119846
multimedia sig. proc., tunable/variable pass. digital filters 84758
multiresonant diaphragms based waveguide filter, freq. response 80204
nonparametric ident. of lin. systs., resonator based 101686
periodic EM bandgap struct. for finite-width conductor-backed CPWs 80191
planar microwave act. filters, neg. resist., tuneable bandstop/bandpass filters 125756
planar tunable microwave devices, ferromag. composite appl. 116483
rejection filter anal. during repetition period wobbling 107516
tapped line filter, stopband charact. 102546
THD/harmonic act. power meas., virtual instrumentation 112073
three-band waveguide filter, network with direct couplings 80203
waveguide-grating struct., guided-mode resons., filters, GA 104881
WG-mode DR based microwave and opt. network components, num. anal. 80186
wide stop-band/flat-pass-band opt. filters based on multi-resonators 71503
Fe/Ag/GaAs waveguide structs., microwave bandstop filter appl. 104538
$YBa_2Cu_3O_{7-\delta}$/Au L-band microstrip bandstop filters 71104

band structure
see also Brillouin zones; conduction bands; degenerate semiconductors; effective mass; energy gap; Fermi surface; many-valley semiconductors; valence bands
alkylthiophene copolymers, reversible thermochromism, PL/EL/vis. spectra 127917
borate crysts., NLO coeffs., anionic group/Gaussian92 ab initio calc. 82918
bulk nitride growth, related techs., conf., Brazil (Nov. 2000) 113249
computational band-struct. engng. of III-V semicond. alloys 91625
conf., SMA and related technol., Sendai, Japan (Aug. 2000) 113245
DB-PPV/Alq_3 multilayer LEDs, luminous efficiency, small mol. electron transport layer effects 127992
diamond, carriers impact excitation under extremely high elec. fields 102971
doped diamond nanocrystallites, qubits, quantum computing appl. 125136
endo-fullerenes, qubits, solid-state quantum computing appl. 125136
engng. carbon nanotubes/nanotube ccts. using elec. breakdown 79471
Gaussian superlattices, band struct. estim. by applying image params. in cct. theory 69691
modulated superlattices, symm. Gaussian pot. profile, band struct. *(Japanese)* 103126
MOS electron tunneling cathodes, emission charact., field emitters 115254
n-i-p-i superlattices/struct., functional optoelectronic props. 126157
oligo(phenylenevinylene)s, increased electron affinity 69611
oligothiophene/oligophenyl based devices, photoemission studies of band alignment 115440
organic LEDs, Joule heating effect, organic decomp. and gas evol. anal. *(Chinese)* 128008
organic/metal interface electronic struct., UV photoemission spectra, Kelvin probe method 103164
poly(N-vinyl carbazole) film:ammonium salt, enhanced electron injection & EL 127925
polyimides, photogeneration/PV props. 115355
polyperinaphthalene thin films by laser ablation of PTCDA/Co mixture target, elec. cond. 101518
QW IR photodetectors, full bandstructure modeling 131933
RTDs, electron/hole tunneling, full band tight-binding simul. 126659
semicond. interface with cryst. oxide, phys. struct. and inversion charge 103216
semicond. lasers, linewidth enhancement factor meas., injection-locking tech. 71891
spin valves, band-struct. calcs. of specular refl. 81842
stilbenoid phosphors with increased electron affinity, sulfones as electron accepting groups 69610
superlattices, quasi-localized states, opt. transits. 80835
thienylene/phenylene copolymers, electron-donating/-withdrawing group functionalisation 69601
two-site mol. devices, electron-electron interacts., neg. differential resist. asymmetry 125924
zinc blende/wurtzite III-V semiconds., band params., review 80686
Ag-O-Cs photoemissive thin films with internal field-assisted struct., vac. fab. *(Chinese)* 79262
AlGaN/GaN, MQWs, localised states, PL obs. 80869
AlGaN/GaN/6H-SiC, surface/buried MQW, MBE, opt. emission, band bending 91778
n-i-$Al_{0.33}Ga_{0.67}N$/p-GaN UV photodiode structs., solar-blind perform. anal. 131923
AlInGaN/InGaN, MQWs, localised states, PL obs. 80869
BN, cubic, electronic transport, Monte Carlo simul. *(Chinese)* 115308
Bi:Te nanowire arrays fab., transport props., modelling 102966
$Bi_{1-x}Sb_x$ nanowires, anom. high thermoelec. fig. of merit, carrier pocket alignment 91696
$Bi_4Ti_3O_{12}$ film, electronic struct., soft-X-ray emission spectrosc. 127188
a-C:H,N film, electronic struct., field emission 102906
CdS, electronic struct., defect phys., thin film solar cells 91654
CdSe, electronic struct., defect phys., thin film solar cells 91654
Cd_2SnO_4, film, nanocryst., sol-gel prep., electrochem. props. 103089
CdTe, electronic struct., defect phys., thin film solar cells 91654
$CoSi_2$/Si(111), BEEM, band struct. effects 69713
Cu(In,Ga)(S,Se)$_2$-based solar cells, electronic struct., surface oxid., buried interfaces 134393
FePt self-assembled nanomagnet arrays, MOKE spectra, ultrahigh dens. recording appls. 116303
GaAs p/n structs., etching, galvanic effects anal. 92064
n-GaAs/AlAs:Si MQW, hot electrons inelastic scatt. 80814
GaAs/AlGaAs periodic superlattice struct., quantum cascade devices, hot electron distrib. 93637
GaAs/AlGaAs undoped asymmetric double QW, intersubband absorpt. dyn. 126052
GaAs/$Ga_{1-x}Al_xAs$ parab. superlattices, opt. transits. 103025

band structure continued
GaAsP/InGaAsN SLS for solar cells, lattice matching 112949
$Ga_{1-x}In_xN$/GaN polarised QW, PL excitation spectrosc., level assignment 80716
$Ga_xIn_{1-x}P$, band struct., order param. 69512
GaInSb/InAs IR detectors, charact., struct. params. influence 97261
GaN/InGaN, MQWs, localised states, PL obs. 80869
GaSb/InGaAsSb based photodiodes, band energy diag. engng. & photoresponse 71547
Ge QD self-assembled on Si(001), elec. struct., comp. interdiffusion 69659
HfO_2, gate dielec., theoretical approach 91896
InAlGaAs QW laser, low threshold current dens. design, k.p method 117278
InAs/GaSb cascade laser, interband tunneling 82608
InAsP/In(GaAs)P MQW laser structs., band-struct. and opt. gain 117283
InGaAlAs strained MQW lasers, act. struct. design 82638
InGaAs SQW strain-modulated nanostructs., grazing-incidence XRD, photolum. 69684
InGaN QW, MBE, PL study 124861
InGaN QW struct., high-perform. laser operation, band-states model 117265
InGaN/GaN MQW, different In comp., struct./opt. props. comparision 126188
InGaN/SiC MQWs, carrier lifetime, PL energy shift, QCSE, free carrier screening 80863
InP bulk high field carrier transport, Monte Carlo modeling 103022
MgO-TiO_2 protective layer for AC PDP, elec. props. 75788
MoO_3/Au films, Au nanoparticles, enhanced vis.-light coloration 116559
$NiCo_2O_4$ films, spin casting, struct./elec./opt. props. 101397
$(Pb_2Cu)Sr_2(Dy_{1-x}Ca_x)Cu_2O_{8\pm\delta}$, epitaxial films, chem. bond nature, XPS obs. 70592
PbSe/PbSrSe MBE MQW, band struct. and opt. props., mid-IR laser appls. 126139
Si nanocrystals, band struct. alterations, size-confine. effects 125999
Si surfaces, Cs promoted oxid., PES peak posns. oscills. obs. 81081
Si:B RT LED, ULSI compatability 71611
a-Si:H solar cells, conductive oxide/p$^+$/i jn. improvement 123805
Si:P nanocrysts., ball milling, grain size distrib. and band struct. modif. 126596
Si/SiO_2 systs., conf., Boston, MA, USA (Nov.-Dec. 1999) 100429
SiO_2:F for ILD appls., low dielec. const. anal. 91921
SiO_2-Si interface, trapped charge imaging, noncontact AFM 80925
n-$SnS_{1.9}Se_{0.1}$/p-GaSe:Cd heterojunctions, photoelec. props., energy bands 91762
n-TiO_2 film electrodes, enhanced photocurrent 71510
ZnS, thin film electrolum. devices, transport props., simul. *(Chinese)* 116974

band theory
see also APW calculations; band model of magnetism; Hubbard model; k.p calculations; tight-binding calculations
C nanotube tip, adsorbed water mols., field-emission, DFT 125960
InAs/$Al_{0.6}Ga_{0.4}Sb$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InAs/AlSb IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
Si, non-parab. band hydrodynamical model, electron device simul. 91578

bandlimited channels *see bandlimited communication; telecommunication channels*

bandlimited communication
analog wideband sig. transm. through narrowband channel 73559
ATM wireless networks, DLC strategies with flexible error control 107838
cascade coding for compressing broadband residue seqs. 72799
CDMA asynchronous band-limited systs., discrete sufficient stats. 107733
cellular systs., dyn. freq. hopping 96571
chaotic commun., noisy channel 105985
CPM multipath-distorted/freq.-discriminated sigs., charactn. 106065
CPM waveform, post-distortion ang. equalizer appl. 107685
DS-CDMA convolutionally coded multi-carrier systs. 107739
DS-CDMA downlink, pilot-aided multipath delay estim. 131285
DS-SS systs., blind channel estim./data recovery 108543
DS/SSMA band-limited commun., closed-form BER expression 108524
DS/SSMA with random spreading seqs./matched filter receiver 85803
dyn. resource allocation via video content/short-term traffic stats. 95751
energy-efficient wireless broadcasting/multicasting 108547
error-resilient video coding with channel-optimized trellis-coded quantization 84396
H.263 video transm. over CDMA wireless networks, quality improvement 95121
isolated word recogn., high-perform. robust, sig. modeling 106402
iter. equalization and decoding, hybrid equalization strategies 129216
LOS bandlimited channel, efficient error free data transm. 111583
mil. IP networks, dyn. precedence 111593
MLP-based DFE with lattice struct. 73840
mobile radio bandlimited procs. lin. prediction 85658
Mobile User Objective System, commun. diversity advantages 111595
MPEG-4 facial animation, audiovisual integrat. in multimedia commun. 129781
MPSK, coherent, multichannel reception over freq. selective fading channels, perform. eval. 106045
multimedia inform., mobile adaptation, content model 119793
nonlin. satellite link, data predistortion and TCM 109019
punctured recursive convolutional encoders and appl. in turbo codes 117930
real-time multimedia commun., header compression 96260
SNR scalable transcoding for video over wireless channels 95120
trellis coded M-ary 1RC CPM with lin. receiver/pre-coding, perform. 106028
UHF satellite commun., ionos. scintillation effects 105733
video obj. motion tracking, struct. vs. unstructured 2D hierarchical mesh 129705

bandlimited signals
blood flow simul., US resoln. test obj., thin film phantom 110744
class-D audio amps. based on binary sigs. with separated baseband 101781
convergence aspects 84648
distorted bandlimited almost-periodic sig. recovery, PQ theorem 95623
fast extrapolation/superresolution algms. 95185
FIR fractional delay filter, optimal synthesis in reproducing kernel Hilbert space 73650
interpolation and extrapolation, synthetic view 129956
inverse band-limited sig. prob., regularisation, Malvar-Wilson wavelets 129980
nondiffracting bandlimited wave solns. for US pulsed waves in imaging appls. 99108
nonuniform sampled bandlimited sigs., digital fractional filters for sig. reconstruction 95669
periodic sig., nonlin. least-sq. multisine fitting algm. 118831
prefiltering algm., Shannon sampling point, Daubechies wavelet sampling point *(Chinese)* 95693
radio reception against band-limited nonGaussian noise background 119872
region-selective image compression, nonuniform sampling theorem 106988

bandlimited signals continued
sampling theorems, Nyquist and other methods 118853
specular transm. channel blind multipath params. estim. 107629
time seq. shape ident. with limited receiving bandwidth 107316

bandwidth allocation
see also frequency allocation
ABR adaptive congestion control with act. buffer control 95766
adaptive bandwidth allocation based on playback tunnel to support VOD service over ATM networks 120571
approx. algms. for bandwidth and storage allocation problems 100919
ATM and differentiated services networks, ABR usage mechanisms 130213
ATM B-ISDN network self-healing protocol based on multiple backup VP 130235
ATM based PON, upstream bandwidth allocation *(Chinese)* 96733
ATM geostationary satellite networks with on-board proc., perform. of resource mgt. 109007
ATM multipoint-to-point ABR service, rate-based congestion control 95778
ATM networks, bandwidth allocation using declared usage param. control 107642
ATM networks, call admission control, stat. MUX gain 130199
ATM networks, multiple-criteria call admission control 95758
ATM networks, neural net for bandwidth allocation of heterogen. sources 73821
ATM networks, real-time VBR connections, QoS control 130214
ATM networks with guaranteed QoS, bandwidth allocat. using well-trained ANN 73813
ATM switching systs., packet discard schemes for differentiated services networks 107903
ATM syst., burst level bandwidth allocation, multipath routing reservation 130522
ATM wireless links, real-time traffic, dyn. WFQ scheduling 96407
ATM wireless networks, bandwidth/buffer dimensioning for guaranteed QoS 96351
battlefield networking, flexible commun. 77030
best-effort networks, modeling/perform. anal. via large networks asymptotics 119421
broadband satellite multimedia networks, service mapping and QoS provisioning 109008
broadband wireless network, multimedia traffic, dyn. scheduling and admission policy 84938
broadband wireless network, multimedia traffic, dyn. scheduling and admission control 84937
broadcast delivery of digital products via scheduling algms. 120516
burst reservation multiple access, satellite channel bandwidth assignment scheme 120083
CAC for distrib. of smoothed video using patching algms. 108422
CATV, data services 86330
CDMA commun., image source coding, channel coding and spreading 108739
CDMA design through asymptotic anal., fading channels *(English)* 73856
cellular mobile IS, integrated isochronous/bursty media data, channel-state-depend. bandwidth allocation 107847
cellular multi-service networks with mobile users, perform. anal. 96460
cellular radio, dyn. meas.-based bandwidth allocation scheme 85873
cellular radio, TeleMIP mobility archit., QoS support integrat. 85674
cellular voice/data services, integrated multiple access control/adaptive channel coding 84976
centralized intell. channel assigned multiple access for ad-hoc wireless networks with UAVs 95858
CHOKe router algm., approx. fair dropping for variable length packets 73876
class based queuing, decoupling bandwidth/delay props. 130321
combining fairness with throughput 119438
controllable bandwidth motion description encoding by seq. algm. 84426
core stateless networks, fair queuing with in/out bit 96130
differentiated service, assured service, TCP algm. *(Chinese)* 119292
differentiated services networks, dyn. provisioning, bandwidth reallocation algms. 108030
differentiated services networks, dyn. provisioning, bandwidth reallocation algms. 130580
DiffServ domain, dyn. congestion control framework 96160
DiffServ framework, multiple QoS guarantees with scalable support 130853
DiffServ network assured services, guaranteed throughput fairness 130481
DiffServ networks, multicast transport service with bandwidth guarantees 107900
DiffServ networks, policy mgt. framework using traffic engng. 108263
distributed computing networks, priority based resource allocation strategy 119726
DS/SFH-CDMA multirate wireless commun., multi-proc. gain anal. 107743
dual WLAN archit. based control syst., bandwidth allocation scheme 130825
DWDM fibre networks, optimisation and cost savings 120243
dyn. bandwidth allocation, VoD in VPN 97086
dyn. bandwidth allocation for low delay low jitter real-time commun. 95845
dyn. resource allocation via video content/short-term traffic stats. 95751
ECVBA (Efficient Changes and Variability Bandwidth Allocation) algm. for VBR media streams 74436
empirical effective bandwidths as perform. measure 73752
end-to-end network path props. estim. *(English, Spanish)* 130415
end-to-end policy inform. provision for network QoS 119698
equiv. bandwidth estim. with delay constraint *(Chinese)* 74442
Ethernet and SONET compared for gigabit metropolitan networks 120262
fair bandwidth allocation, back press. based multicast scheduling 119688
fair queuing algm. based on CSFQ archit., perform. eval. 108319
fairness impact on Internet perform. 119643
feedback based/fair queuing mechanisms for unresponsive traffic, comparison 130320
Foundation Fieldbus, bandwidth allocation scheme 120664
frame-based bandwidth allocation, simple shaping scheme 73798
Genetic Algorithm for Mobiles Equilibrium applied to video traffic 107906
Gigabit Ethernet services for corporate users 130730
heuristic for dyn. bandwidth allocation with preemption and degrad. for prioritized requests 74075
high speed packet switches, improved fair traffic shaping algm. 119131
high-speed networks, equiv. capacity estim. using fuzzy logic 74106
hot-spotted network, data transfer with prefetching 108217
IEEE 802.11 ad hoc WLAN, bandwidth allocation/sharing/extension protocol for multimedia 130369
IEEE 802.11 ad hoc WLAN, distributed bandwidth allocation/sharing/extension protocol for multimedia 119375
IEEE INFOCOM conf., Anchorage, AK, USA (April 2001) 113236
IN with cross-network open provisioning, Internet bandwidth transactions 130932

bandwidth allocation continued
indust. cyclic-service fieldbus nets, bandwidth allocation 86419
input queued switches, fairness criterion for allocating resources 119242
integrated framework for traffic control in ATM networks based on soft-computing techs. 108497
integrated voice/data services in hybrid fiber/coax networks, anal. 85404
Internet2 QoS 108336
Internet, tech., economic, legal and social trends 85206
Internet covert channels, commun. using phantoms 130828
Internet periodic broadcast of dyn. data, time division is better than freq. division 130827
Internet soft QoS service 130761
IP and MPLS networks, perform. comparison and anal. 107831
IP fair queueing networks, video multicast 96178
IP router for next-generation network 108280
IP scalable traffic control for weighted bandwidth allocation per flow 130852
IP VoD over dyn. STM, QoS *(English, Spanish)* 131771
IP wireless networks, centralized TDMA-based scheme for fair bandwidth allocation 130300
IP-over-ATM networking, CAC and routing of QoS-aware and best-effort flows 107898
layered multicasting, network-supported rate control *(Japanese)* 74364
lexicographically optimal bal. networks 119117
M/M/1 queue, required work with appl. in IP packet proc. 84972
Many Sources Asymptotic, anal. and perform. eval. of CAC scheme 107782
microcellular networks, QoS provisioning for multimedia traffic, resource allocation 131258
MMTP, multimedia MUX transport protocol *(English, Spanish)* 130417
mobile networks, bandwidth allocation considering multimedia components priorities 85724
mobile wireless networks, adaptive bandwidth allocation using online local estim. 74712
model-based estim. of buffer overflow probabilities from meas. 119648
MPEG multichannel video data streams, adaptive QoS control *(Japanese)* 95249
MPEG traffic, buffer/bandwidth allocation 130968
MPEG video data streams multi-channel commun., adaptive QoS control method 129799
MPEG video sources, ATM MUX, simul. study 95767
MPEG video VBR traffic support in wireless networks 106920
MPEG-2 time sharing MUX in CATV networks, VBR scheduling algm. 97076
MPLS network routing paths, oriented diffusion algm. 130518
multi-class cellular wireless networks, bandwidth allocation strategies 120025
multi-class traffic resource sharing based call admission control algm. *(Chinese)* 119119
multi-program broadcasting, modular joint bit-rate control syst. 75280
multibeam satellite commun., CDMA and switching 109006
multihop mobile networks, on-demand QoS routing 120069
multihop wireless networks, new model for packet scheduling 74853
multimedia appls. over wireless channels, co-operative service and link adaptation 108416
multimedia commun., QoS control using ANN 119787
multimedia satellite networks, signalling issues and call admission control 85937
multimedia satellite systs., on-board switching archits. 109014
multimedia services and computation intensive appls., cooperative scheduling 74458
multimedia VSAT networks, transponder vs. proc. payload 109002
multiple-path ATM switch archit. for dyn. VC establishment 96327
multiprotocol label switching path restoration simulator 130479
Myrinet clusters, NIC-based rate control for proportional bandwidth allocation 130786
network, distributed appl., rate control, stable perform. anal. *(Chinese)* 119110
network access charging strategy, real-time bandwidth renegotiation 119474
OFDMA, subcarrier allocation and power control 106036
on-board scheduling for multimedia appls. 108418
on-demand data delivery via bandwidth requirement minimization 119805
packet networks, enhanced weighted round robin schedulers for bandwidth guarantees 108262
packet networks, guaranteed rate scheduling, adaptive excess bandwidth distrib. 95799
PCP, end-to-end meas.-based CAC for real-time services over IP networks 107907
PCR-based fair intell. bandwidth allocation for rate adaptive video traffic 84499
plane cover multiple access for cellular syst. capacity maximization 131239
PRN, quantitat. adaptation, utility-based approach 131213
probabilistic weighted fair queuing algm. for packet scheduling 119240
proc. control, Ethernet network stations bandwith assignment, dyn. smoothing 119747
QoS bandwidth constrained routing algm. 119394
QoS DiffServ networks, resource allocation/admission control styles 107901
QoS for multimedia over IP, integrated solns. 108186
QoS provision in dyn. network environ. 107860
queue length proportional assignment, joint buffer mgt./scheduling for switches 119238
rate-matching packet scheduler for real-rate appls. 95943
real-time Internet appls., efficient bandwidth mgt. scheme 85346
satellite link, dyn. bandwidth allocation, DAMA algm. 131307
satellite network, multimedia traffic 74893
scalable MPEG video traffic, bandwidth allocation 95032
scalable VoD server with data sharing 97098
security-enhanced packet video with dyn. multicast throughput adjustment 85291
serial network, ABR service, flow control, buffer design *(Chinese)* 95768
shared access networks supporting Internet DiffServ, access control 84963
single-hop photonic networks, adaptive protocols 131559
stream-bundling approach for video services over broadband networks 97097
streaming service signalling using session initiation protocol extensions 107951
SuperPON, adaptive bandwidth allocation algm and delay perform. anal. *(Chinese)* 96731
TCM/TDMA pass. double star syst., shared access technols. *(Japanese)* 119233
TCP flows, core-stateless fair bandwidth allocation 130452
TCP/IP protocol stack, requirements for real-time commun. in wireless environ. 107904
TCP/IP with drop tail buffers, fairness anal. 73909
thresholding algms., max. fn. spaces with given convergence rate 118925
time-slotted multihop mobile networks, connection admission control 131159
timed-token MAC protocol, sync. bandwidth allocation for real-time commun. 84998
unicast/multicast traffic, bandwidth-allocation policies 119547
utility-based inter-stream adaptation in multiple-flow IP session 85369

andwidth allocation continued
VoATM trunk traffic transfer scheme 85160
VoD, VBR encoding, monotonic-decreasing rate scheduling 86342
voice/data integrated mobile wireless networks, dual-threshold reservation, perform. anal. 85734
VoIP, dimensioning next generation transport networks 107972
VPN, dyn. bandwidth mgt. 130797
WINTRAC, TCP window adjustment scheme for bandwidth mgt. 119260
wireless ATM, LAN emulation model 85293
wireless ATM, resource allocation during handover with dyn. guard bandwidth 108567
WLAN, distributed fair scheduling 73994
wt.-based bandwidth allocation algm. for transporting compressed video 84498
andwidth assignment *see bandwidth allocation*
andwidth compression
see also compandors; data compression; vocoders
3D mismatched stereoscopic inputs, human perception 84451
Carson's FM bandwidth rule lab./computer tests 83828
cascade coding for compressing broadband residue seqs. 72799
hybrid digital-analog coding for bandwidth compression/expansion using VQ/turbo codes 129210
hyperspectral data, obj. detect., compression effect 107149
narrowband digital sig. prod. by spectrum deletion and recovery *(Japanese)* 72758
unified header compression framework for low-bandwidth links 74590
video streams, resource allocation for deterministic services 129749
ang-bang control
see also on-off control
mobile commun. systs., power control methods 120004
semicond. gas discharge image converter, high-speed switch-on, optimal control 109661
sensorless hybrid direct torque control IM drive 134444
servos mag. hysteresis modelling using neural nets 112734
sync. machine losses meas. using synthetic loading 123391
ank data processing
A2iA CheckReader, commercial bank check recogn. syst. 84517
Brazilian bank cheques, modular syst. for num. amount recogn. 129672
change mgt., innovative IT benefits case study 100494
Chinese bank check amount recogn. and segmentation 84518
e-commerce, tech. and market approach 130873
handwritten dates on bank cheques, knowledge-based segmentation syst. 129671
IP billing *(Polish)* 130651
anking
see also bank data processing
innovation adoption anal. approach in commercial banking indust. 67486
anking services *see banking*
anks *see banking*
anyan networks *see multistage interconnection networks*
ar code readers *see mark scanning equipment*
ar codes
combinat. DNA word design 69349
polynomial recursive optim. algm. for recogn. 95405
Bardeen-Cooper-Schrieffer theory *see BCS theory*
Barkhausen effect
NDE, stress meas. stabil. in harsh environ. 114535
noise robust estim., multi-features num. instrum. 114505
steel, C, mag. Barkhausen noise and hysteresis loop 79487
steel, mild, Barkhausen noise stress meas., prestraining effect 79490
steel, Ni-Mo-Cr, microstruct., fracture toughness, Barkhausen noise *(Korean)* 114551
steel, residual stress & carburisation, Barkhausen noise anal. 114526
steel, stress eval., Barkhausen noise meas., CRT prod. appl. 79482
Vicalloy, mag. wire, output voltage generation 127322
CoCrPt-based spin depend. tunneling jns., parallel hard bias, read heads 81894
Fe-C, annealed low carbon sample, appl. of nonlin. Barkhausen model 127299
Pt/Co/Pt ultra thin film devices, AFM fabricated defects, mag. domain wall propag. 127344
Barnett effect *see gyromagnetic effect; magnetisation*
barometers
liq. column displacement based press. metrol., inherent errors 75921
barrages *see dams*
barrel distortion *see aberrations*
barretters *see thermistors*
basicity *see pH*
batch processing (computers)
see also computer operating procedures
video servers, batching/piggybacking integrat. 75324
batch processing (industrial)
300 mm wafer fab controllers design, CPN-based approach 89948
AirJet paper mover, mesoscale MEMS device 81619
BEOL post-ash residue removal, recirculated batch spray proc., low cost 81084
changeover, rel. to maint. 124285
CMOS-compatible microfluidic microchannels, fab. techs. 81611
five-wafer batch annealing syst. using resistively heated stacked hot plates 69782
IC interconnect technol. for ≤100 nm scaling, impact on key chip metrics 69941
inspection strategy optim. in electronics prod. using quality cost models/SPC 124411
MM-size transformer, batch proc., miniaturized power appl. 123547
out-of-control sig., distrib. location change, chem. shipments arrival 124435
proc. perform. metrics, utilization of effective availability/effective capacity 100552
semicond. wafer mfg., resource portfolio planning methodology 89934
SimWitch software tool for materials stream cost distrib. assess., FLIPAC Esprit Project 67494
wafer batch furnace proc., develop./appls. 70244
wafer level packaging, WAVE wide area vert. expansion proc. implement. 113604
Si eye using MEMS micromirrors for intell. vision systs. 86603
Si, porous semicond. form., anodization and electroless stain etch combination 92042
SiO_2-on-Si opt. planar waveguide fab., batch proc. 82175
bathymetry
2D topography inversion, SAR imagery 76920
geoacoustic param. estim., cross-rel. matched field inversion 122700
lidar rem. sens., polarized method, turbid water 122696
mapping, SPOT satellite data anal. 99024
modulated lidar, RF modulation loss, multiple scatt., FOV effects 86241
bathymetry continued
radar depth inversion, waves, coastal bathymetry 122620
seabed radar imaging mechanism, C-STAR expt., SW, current var. 111460
seamounts, global distrib. inferred from gridded Geosat/ERS-1 altimetry 131664
SPOT multispectral images, bathymetric segmentation *(French)* 122699
batteries *see cells (electric); primary cells; secondary cells*
battery chargers
4 kW, 42 V induction machine-based automotive power generation scheme 134565
42 V automotive power supplies, integrated charger/disconnect switch unit 78321
AC-UPS with PFC and fast dyn. response 88908
aircraft batt. systs. technol. develop., Li-ion and N-MH batts. 88064
all-elec. transportation commun./recharging via wireless power beam 89366
batt.-operated power mgt. systs., design challenges 78026
CEV1 EV, elec. syst. config., control seq. design 100312
chopper charger equipt. control cct., EMI anal. 88837
Compton current generator, design and testing using gamma radiation/X-rays 98089
contactless batt. charger for portable telecomm./computing electronics 119814
DC and AC back-up power systs., batt. chargers and batts. 134234
dyn. voltage restorer based on voltage space vector PWM control 88935
EV charging, single-phase residential harmonic loads 113095
EV loads, power distrib. syst. harmonic effects 122990
grid-connected hybrid EV commercialisation 89403
high side current meas. methodology, overcurrent protection, prog. sources 88951
LDMOS IC, batt. charger, one-chip proc. 134254
Leghorn funicular rly., PV syst. supply 113108
MEMS sens. microbattery power supply, fuzzy solar charge controller 86769
microbatteries, fuzzy logic-based solar charge controller 112657
miniaturised batt. charger using piezoelec. transformers 88789
mobile lighting apparatus, batt. charging, PM lin. generator 123510
NATIBO rechargeable batt. study overview 89093
NiCad batt. charging charact., computer charge syst. *(German)* 88954
notebook computers, intell. multiple batt. archit. 89144
optimal control, PFC preregulators 112641
PFC preregulators, optimal control scheme 78012
portable telecomm. apparatus, power supplies *(Italian)* 108440
proc. control, neuro-fuzzy-genetic approach 134143
PV power syst. capacity reduction, batt. charging-discharging control method 112413
renewable energy syst. optimal control strategy modelling 123106
robust variable-freq. flyback batt. chargers, small-sig. modelling 88867
rural electrification, PV batt. charging stations, Thailand 88947
SBS-IF's smart batt. syst. archit., overview 89143
security alarm syst. batt., charge/discharge, peripheral interface controller IC 113419
segmented batt. charger for high energy 28 V Li ion batt. 123645
single-phase line-interactive UPS improvement 99824
soft switching 3 kW DC-DC converter 77997
solar home PV power systs., batt./charger testing procedures 133897
telecomm. UPS-equipt. design, long-term backup times 108459
Ultralife polymer electrolyte rechargeable Li-ion batts. for cellular phones 89091
USB-powered Li-ion batt. charger 78014
VHDL-AMS simul. for batt. chargers 90734
Li ion batt., charging cct., USB bus *(Italian)* 99751
Li-ion 28 V batt., segmented batt. charger 89115
Li-ion batt., analog-digital switching mixed mode batt. charger 134229
Li-ion batt., fuzzy controlled charger, act. state-of-charge controller 78159
Li-ion batts., portable charger, power dissipation mgt. 88989
Li-ion intell. rechargeable batt. develop. for mil. appls. 89090
Pb-acid EV batt. charging control, charging/discharging monitoring 123987
Pb-acid batt. charger topol. using power MOSFET/Schottky bridge rectifiers 112621
Pb-acid secondary batt. charging method study *(Chinese)* 78129
Zn-air Instant Power™ primary batts. for portable consumer products 89057
battery storage plants
energy vs. power capabilities 112776
FACTS UPFC schemes, dyn. performs. comparison 111857
grid-connected rooftop hybrid wind-PV power syst. perform. 112371
hybrid wind turbine/batt. energy storage for isolated island power systs. *(Japanese)* 123249
isolated power systs. dyn. behavior, batt. energy storage systs. impact 99270
Metlakatla batt. energy storage syst., VRLA batt. cells exam. 88665
multi-area load freq. control using batt. energy storage 122865
power QC using redox rechargeable batt. syst. 112063
PV hybrid-VRLA batt. test results from telecomms. site 112386
PV-diesel hybrid power systs., size optim., perform. prediction 112391
PV/PEM fuel cell power syst. for rem. telecomms. station 112392
redox flow batt., appl. to load freq. control and power quality maint. 123272
redox-flow batt. syst. for installation inside office buildings, develop. 123727
RETScreen model for pot. PV projects assess. 112402
stand-alone PV power systs., perform. determ. procedures 112393
static sync. series compensator integrated with batt. energy storage 112750
three-phase soft-switching VSI for energy storage appls. 112672
universal custom power conditioner with integrated control 112039
wind-diesel power systs., fuzzy logic controllers 123257
battery testers
EV power batt. perform. testing syst. *(Chinese)* 78125
secondary batt. recycling, service counter-based testing/restoration 89137
smart batt. adaptive algms., normalized capacity learning methods 89145
state-of-health meas., Cadex 7200 batt. analyser 89136
vehicle elec. power systs., automotive batt. implications 78297
$Li_xMn_2O_4$ spinel cell electrode, heat generation charact. meas. 99920
Pb-acid valve-regulated batt. monitoring syst. 112815
BAW devices *see bulk acoustic wave devices*
Bayard-Alpert gauges *see ionisation gauges*
Bayes methods
2D AR model using lattice representation and inform. criteria for texture anal. 118486
3D MR image segmentation using mixture model and morph. filtering 122080
accelerated coord. descent methods for Bayesian reconstruction using ordered subsets of projection data 76575
access networks, fault anal. and prediction 119816
adaptive ARQ, control params. decision 107918
adaptive Bayesian DFE for alpha-stable noise environ. 107720
adaptive lin. prediction for lossless coding of greyscale images 84456

Bayes methods continued
adaptive QC strategy, inspection reduction, acceptance-sampling schemes 124436
adaptive sens. fusion, stochastic vector quantisers 84674
ADPCM schemes, nonlin. predictive model computation 118093
antipersonnel land mine detect., operational sens.-fusion syst. 77008
asymptotic Bayesian DFE, multiple hyperplane detector 130272
asynchronous multisensor tracking in clutter, Bayesian seq. MC method 133412
ATR, model-based, anisotropic scatt. attribution 75138
ATR systs., HRR data, interfering scatterers mastering 75157
autonomous exploration, Bayesian recursive estim. strategy *(Chinese)* 73179
autonomous mobile robots, geometric world models, consistency estim. 97222
autonomous mobile robots, map building, probabilistic and count methods 75871
Bayesian model determ. for binary-time-series data with appls. 78825
behavioral verif., high quality using stat. stopping criteria 79499
blind equalization by parallel Bayesian DFE 84852
blind turbo equalization in Gaussian and impulsive noise 107683
blind/semi-blind equalisation of channels with Markov inputs 119199
brain fMRI, stat. parametric maps, Bayesian approach to segmentation 122093
BraMBLe, Bayesian multiple-blob tracker 106594
bright targets segmentation using wavelets/adaptive thresholding 84273
buried metallic mines discrim. from metallic clutter 73707
buried targets, rough air-ground interface, time-domain sens. 77067
Bussgang-zero crossing equalization, integrated HOS-SOS approach 130267
car detect. in low resoln. aerial image 107172
cardiovascular syst. blood vel. estim., pre- & post-proc. filters 110743
CDMA connectionless systs., acquisition depend. random access 84884
CDMA long-code multipath syst., blind multiuser detect. 107604
CDMA space-time block coded multicarrier syst. multiuser receiver 108860
cellular commun. syst., mobile posn. location with constrained bootstrap filter 109325
Chinese road maps, automating data extraction/ident. 73144
conditional quantile estim. using neural networks 78820
conf., Bayesian inference/max. entropy methods, Gif-sur-Yvette, France (Jul. 2000) 100410
decentralized quickest change detect. 73566
Dempster-Shafer framework of automatic map updating by multispectral image fusion 106672
digital images restoration/resoln. enhancement 106485
digital modulation class. by Markov chain Monte Carlo method 84664
discrete sources, Bayesian separation via Gibbs sampling 118822
discrete tomography by Bayesian labeling with efficient algm. 76521
elec. load forecasting by fuzzy Bayes predictor 111983
EMI mine sens., Bayesian optimal class. 73122
entropy-based gaze planning 118417
event-related BOLD fMRI, Bayesian tech. for lin. investig. 87646
evol.-based adaptation strategy for VQ image filtering 76484
exponential family, change detect., Bayesian anal. 124518
failure probab. estim., zero-failure data *(Chinese)* 124433
finline in MM-wave IC design, knowledge-based ANN models 80161
five-phase reservation protocol for mobile ad hoc networks 107868
flexible workobject localization for CAD-based robotics 94450
fMRI, ref. fn. determ., Bayesian source separation 132747
fn. MRI sigs., source separation, Bayesian stats. 107590
FPBA algm. using random transmitter power levels, perform. improvement 119285
fuzzy hypothesis testing, Bayesian approach 100829
gammagraphic images, cpd. regularizer for Bayesian restoration 110443
global navig. satellite syst. integrity predict. and monitoring 131695
GMSK signaling over multipath channels, turbo equalization based on Gibbs sampler 107718
GPS satellite selection, Bayesian approach 131702
hazard models with nonconstant shape param. 114201
histogram-based probab. multihypothesis tracking, intens.-modulated sens. data 130134
HMM based speech audio/visual features fusion 94390
Hough transform error propag. 94479
human visual behavior, top-down guided eye movements 106428
hydropower syst. flood control, stochastic approach 88636
hyperspectral mixture proc., Gibbs-based partitioning 98958
ICA fast algms. 107446
ideal observer approx., Bayesian class. neural nets 132502
IM, rotor fault detect., pattern recogn. 134032
IM broken rotor bar detect. using pattern recogn. 123424
image denoising, pixon-based, with Markov random fields 106695
image proc., Markov obj. procs. 73240
image reconstruction and projections no. modif. 94664
image restoration in act. sounding systs. 120403
image segmentation, multisensor, Dempster-Shafer fusion 111386
image segmentation and obj. recogn. by Bayesian grouping 95550
image seqs., nonuniform motion detect. using reduced order likelihood ratio test 84309
image stats. learning for Bayesian tracking 106657
indust. furnaces, fuel combustion status eval., image class. based method *(Chinese)* 84118
inform. fusion, param. estim. by Bayes method 84675
inform. geom., irreversible procs., max. entropy anal. 105995
inform. maximization and expt. design 105997
interactive visual dialog, act. vision based obj. recogn. 129844
isolated word recogn., inform. and HMM decision fusing using Bayesian causal tree 118154
iter. binary filter design 118179
Jaynes die problem, max. entropy, Bayesian anal. 106004
joint target tracking and class., radar and ESM sens. 120423
land mine detect., sens. fusion archit., limited training data sets 77009
land mines detect., low-metallic-content, EMI data anal. 73121
landmine detect., GPR/IR/metal detector, stat. sens. fusion 77061
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
landmine detect., time-domain metal detector & GPR data fusion 77060
laser Doppler vibrometer-based mine detect., speckle noise immunity 77002
laser proc., online quality detect. & beam control, multisens. class. 117564
list-mode emission tomographic image reconstruction, likelihood maximisation 132891
local lin. generative models, Bayesian sens. image fusion 118314
long-term potentiation failure, posterior probab. estim., seq. Bayesian anal. 76295
M-ary ISI-corrupted PAM sig. detect., DFE using multiple-hyperplane partitioning 73839
mammographic image segmentation, tissue-mixture model, Markov random fields 98548
Bayes methods continued
math. modelling, estim. and imaging, conf., San Diego, CA, USA, July-Aug. 2000 67380
med. equipt., repairable, failure database/rate model 89914
med. US images, speckle removal, Bayesian multiscale method 110678
MEG/EEG inverse problem, spatial-temporal Bayesian inference 110667
meteorite search by robot vision in Antarctic, outcomes 95596
microwave radiometric systs., Volosyuk-FT for optimal radio brightness image reconstruction 73284
min. message length grouping of ordered data 72711
missile hit accuracy, Bayes assess., stochastic weighted method *(Chinese)* 122753
mixed exponential pop., cost optimal burn-in tests, Bayesian calc. 89799
mobile robot sonar, multi-echo feature detect./ident. 97008
motion estim. using adaptive blocksize obs. model/efficient multiscale regularization 94672
multi-obj. tracking, engng. stats. 95713
multi-scale based Bayesian denoising algm., wavelet shrinkage 129459
multiframe detector/tracker, optimal, rigid extended targets 120419
multiple sclerosis detect., magnetisation transfer ratio images 98261
multiple sens., distributed, fusion; hypotheses testing 95605
multiscale class. using complex wavelets/hidden Markov tree models 94658
multiscale image segmentation, wavelet-domain HMM 107213
multiscale texture segmentation using hybrid contextual labeling tree 94835
multisens. data fusion, accuracy detect. method *(Chinese)* 118835
music perform., sound source ident. 73571
Nash equilib. games, Bayesian learning eval. expt. 67751
neural activity detect., block-design functional MRI 98407
neural networks, Bayesian techs., review and case studies 118860
neural responses, functional MRI estim. and classif. 98404
nonlin. channel equalization, reduced-complexity clustering 73827
nonlin. dyn. systs. reconstruction/prediction, hierarchical Bayesian approach 106001
NQR landmine detect., stat. sig. proc., Bayesian algm. 76995
obj. posn. estim., multi-robot systs., distributed sens. fusion 95704
OCR clustering, sample distrib. modeling 94886
opt. diffusion tomography, nonlin. multigrid algms. 73260
opt.-pattern recogn., matched filtering generality, MED projection 95531
optimal Bayesian filter, receding horizon FIR filter, suboptimal algm. 130136
optimal binary filter, small-sample error estim. 130068
optimal increasing binary filter, Bayesian switching algm. 129463
optimum data fusion algm. for distributed detect. syst. 73718
order fields, extended probab. distrib., refinability principle 105994
ordered piecewise const. failure rates, Bayesian estim. 89928
pairwise face recogn., Bayes classifier 107181
parallel chains, delayed rejection and reversible jump MCMC for obj. recogn. 129841
parametric and nonparametric models, fitting to noisy data, Bayesian method 78986
partially occluded obj. recogn., Bayesian framework 107166
pattern recogn. algms. based on space-filling curves/orthogonal expansions 84595
PCA improved using Bayesian estim. 124524
perfect sampling, exact MAP states 106711
periodograms interp. 84669
PET reconstruction, Bayesian multiresolution algm. 98581
power market clearing price forecasting, Bayesian-based class. method 111761
power markets cascaded neural network prediction, confidence regions 111773
power syst. components stochastic wear, predictive maint. programme 88286
preventive syst. maint., components partial monitoring, Bayesian inference 113425
pseudo-Bayesian ALOHA algm. with mixed priorities 73920
radar target ident. using 1D scatt. centres 131641
randomly moving cluttered targets, multiframe Bayesian tracking 94792
range/intens. image fusion, segmentation, robust trimmed method 107217
rapid speaker adaptation using probabilistic PCA 73055
rel. entropy and covariance type constraints yielding ARMA models 105998
reliab. in accelerated life tests using Gibbs sampler 113874
reliab. modelling, expert judgement mgt. using Bayesian belief nets 100682
robot localization using context in omnidirectional imaging 94999
robots, indoor feature-based probab. sonar map building 120469
robust optimal granulometric bandpass filters 107500
sample inform. in Bayesian anal. 124480
SAR, class. perform. prediction using parametric scatt. feature models 86132
SAR, moving target param. estim., blind angle ambiguity resoln. 118881
SAR image speckle reduction using iterated struct. filters *(Chinese)* 131650
SAR image super-resoln. using Bayesian/convex set-theoretic approaches 75139
SAR images, moving targets anal., Bayesian approach 96891
SAR target recogn., model-based Bayesian feature matching 84525
satellite image deconvolution using complex wavelet packets 94953
scanner-model-based document image improvement 94676
sea ice roughness, radar scatterometry, Bayes model 99021
SHARP ATR syst., Bayesian multiple-look updating appl. 75158
sig. classifiers, soft probabilistic neural network implement. 107314
sig. proc. problems, choice of prior distribs. 118965
sig. recovery via adaptive Gabor coeffs. shrinking with Bayes rule *(Chinese)* 84761
sonar occupancy grid constr., uncertainty method comparison 86253
source separation, matrix element distribn., max. likelihood fn. 107591
source separation algms., logical induction, Bayesian inform. 105999
spatial video noise reduction using wavelet based freq. decomp. 90195
spatio-temporal motion detect. under varying illum. 129469
speaker recogn., neural network implement., hybrid model 106386
spectacles detect. for face recogn. using Bayes rules 73542
speech enhancement, Bayesian evidence approach 73013
speech enhancement using adaptive wavelet shrinkage 129376
speech recogn., codebook-based speaker adaptation *(Chinese)* 84058
SPOT satellite imaging instrum., stat. self-calib. 109696
state-depend. M/G/1 queues, steady state optimal service rates 124463
std. uncertainty & coverage probab., Bayesian eval. 109397
stereoscopic noisy image pair, occluded and common vis. areas detect. 95551
struct. from motion and colour constancy in computer vision 118306
subsurface targets, time-domain EM induction, algms. 88200
supervised freq. change detect. using stochastic simul. methods 119106
supervised fuzzy/Bayesian class. of high dimens. data, comparative study 94538
surgery, image-guided using 3D ultrasound, intra-operative soft tissue deform., Bayesian estim. 87480
surveillance camera visual-thermal image fusion 84158
symmetric steady autoregression procs. prediction 83323
target tracking and Bayes detect. in real clutter image seqs. 96941

ayes methods continued
TDD-CDMA receivers, Bayesian multistage interf. canceller for multiuser detect. 105799
TDD-CDMA receivers, soft Bayesian recursive interf. cancellation/turbo decoding 108938
texture segmentation, multiscale Bayesian model averaging framework 94518
textured image segmentation using Markov random field in wavelet domain 94834
track-before-detect Bayesian particle filter 130142
transm. channel sigs., discrete source separation, MCMC anal. 107589
tree-struct. image modeling using wavelet-domain HMMs 84276
ultrasound images, wavelet based denoising techs. 98313
underwater obj. detect., HF forward-scatt. sonar sig. proc. 86252
underwater target discrim., neural network class. paradigms 77045
universality of Bayes codes and Ziv-Lempel codes for sources which emit data seq. by block unit *(Japanese)* 118000
unmanned aerial vehicle, vision based navig. 97401
urban regions automatic extraction, SPOT satellite imagery 99052
US sens. fusion, obj. recogn. 95593
UXO remediation, sens. fusion, training algms., clutter effect 77010
variance components fns., confidence intervals constr. 113892
video objs. generation by multiple-view extensive partition lattice operators 94826
visual uncertainty and occlusion, resoln. through probabilistic reasoning 129627
VQ based Bayesian image filtering, MRI appl. 95193
wavelet-based image denoising tech. using spatial priors 94808
wavelet-based image estim., empirical Bayes approach 106689
Weibull distrib., reliab. demons. testing, Bayesian anal. *(Chinese)* 124429
wireless commun. posn. location, bootstrap filtering 73648
wireless-ATM syst., multimedia traffic, DQRUMA MAC protocol 85063
GeSi alloys growth, comp. tracking, seq. Bayesian estim. 68135
SnO_2 sens. array, gas conc. quantification in unknown gas mixtures 86712

Bayesian networks *see belief networks*

bays (magnetic) *see geomagnetic variations*

BBGKY equation *see integro-differential equations*

BCDMOS integrated circuits *see BIMOS integrated circuits*

BCH codes
3D graphic models, error-resilient coding via adaptive mesh segmentation 95043
ATM wireless network, throughput enhancing techs. 96358
AWGN channels, optimum criterion for multilevel coding systs. 106022
binary codes, bounds for min. dist. of duals 83920
binary lin. codes, complete coset wt. distrib. computation *(Japanese)* 83846
block turbo codes for space-time systs. 72864
block turbo decoder design, perform.-complexity tradeoffs, VLSI 106106
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
cyclic codes, recurrent sliding correl. decoding 72894
data hiding using wavelet transform and error-control coding 95070
decoding using back multiplication algm. 129005
duals, dist. distribs. 83933
fading channels, multilevel coding, set partitioning strategies *(Chinese)* 94308
FLEX pager design, MCU and DSP on single ASIC 108492
Gilbert-Elliott channel with interleaving/retransmission, delay anal. of block coded transm. 94271
gray level image embedding, DCT-based image hiding algm. 107017
image compression, robust data hiding 95255
image watermarking algm., matched filtering *(Chinese)* 84437
iter. soft-decision decoding algms., search centers selection 129023
mobile fading channels, MLC/MSD and MLC/PDL *(Chinese)* 85854
multilevel coding schemes, perform. in mobile fading channels 96538
QS-CDMA, timing control algm. anal. 107746
rank dist. BCH code, parity check matrix *(Chinese)* 94313
Rayleigh fading channels, decoding methods for multilevel coded modulation 106020
Rayleigh fading channels, improved multilevel coding schemes research 94272
satellite images coding, real BCH codes as joint source/channel codes 73357
video watermarking, channel coding, soft decoding for watermark retrieval 95267
VLSI implement. of RS decoder 90887
watermarking, anals. of error correction strategies for typical commun. channels 94264
wireless ATM, hybrid ARQ/FEC scheme 95915
wt. distribs. of coset leaders of some Reed-Muller codes and BCH codes 72801

BCS theory
conf., Models and phenom. for convent. and high temp. supercond., Varenna, Italy (Jun./Jul. 1997) 100446
ultrasmall supercond. grain, pairing correl. effect on reson. tunneling conductance 70912

BDD *see binary decision diagrams*

beam choppers
high-speed X-ray beam chopper 121759

beam handling equipment
see also accelerator cavities; accelerator magnets; particle beam diagnostics; wigglers
4-sided electron irrad. systs., cable/pipe-like product appl. 97913
LHE polarised beams on polarised proton target expts. 132271
act. polynomial gratings for soft-X-ray monochromators/spectrometers 121379
ALS, synchrotron IR beamlines, spectromicroscopy and fast timing 87139
ANKA SR facility, research opportunities 87140
APS insertion devices, gap separation mechanism, undulator magnet structs. 110178
Axcelis GSD/HE class high energy implanters, LINAC dataset efficiency 121323
BESSY-II ellipt. undulator UE46, monochromator beam-line 121823
BNL EBIS high current electron/ion beam dyn. simul. 110198
boron neutron capture synovectomy, DD/DT sources, beam-shaping assemblies 87829
circ. polarised undulator beamline, BESSY II, commissioning 121754
Daresbury SRS soft X-ray undulated beamline, perform./develop. 121399
EBIS beam form./collection, beam handling equipt. design 110197
EBIS primary ion sources, beam transport/prod. 110278
electrostatic accelerator tubes, nonlin. optics, third order Lie map *(Chinese)* 132247
ELV-8 accelerating tube, electron opt. charact. *(Chinese)* 110115
energetic ion beams, transport, plasma boundary shape effect 121322
EUV detector radiometry beamline, SURF III, photodiode test appl. 109580
EUV lithog. research, Synchrotron Radiation Center beamline 103659
fast ion extraction from intense electron beams, EBIS single-turn inject. 110199

beam handling equipment continued
GSD/VHE implanter, high energy/high current perform. 115546
HI fusion source injector, adiabatic matching sect. 97906
high-speed X-ray beam chopper 121759
HiSOR helical undulator beamline, 3 m off-plane Eagle monochromator 121822
HLS transport line and linac focusing power supplies control syst. 110102
hybrid dielec./iris-loaded periodic accelerating struct. 97926
IMI-2 electron beam multicharge ion source 72184
intense ion beams accelerated by Petawatt-class lasers 110100
intense RIB facilities, post accelerator design anal. 110203
ion implanters, Varian VIISta series, improved cooling 121385
ISOLDE on-line isotope separator facility 132276
IW-630 ion implanter for 300-mm wafers, perform. 115545
kestrel implanter, increased ion source life 121418
LEDA beam diagnostics instrumentation, beam current anal. 87096
LEDA beam diagnostics instrumentation, review 87113
lin. colliders, electron-positron pair detector, simul. anal. 110350
lin. RF ion trap for RIB 121316
longit. instabil. control syst., program. DSP-based multibunch fdbk. 87094
low-energy ion implant., decel lens syst., high dose uniformity 121321
low-energy radioact. ions, beam cooler design 121315
magneto-opt. devices, fringe fields and higher order multipoles, charged particle optics 97922
MeV ion beams for implant., electrostatic scanning 121383
MIS-1 electron-optic syst. design anal. 110200
MIS-I multicharge ion source, electron-optic syst. design 72185
MIT-Bates Linear Accelerator Center, SHR projects, linac upgrades 87044
Neptune photoinjector commissioning/design, review 110180
NLC, gamma-gamma interact. region design 110208
NLC, interact. region layout and background estim. 110207
NLC advanced collimator prototypes, review 87110
NLC electron beam final focusing syst., design anal. 110214
NSRL electron storage ring, VLS diffr. grating, groove dens. anal. *(Chinese)* 110217
NSRL IR beam handling equipt., appls. *(Chinese)* 110216
NV-GSD-HE ion implanter, energy enhancement 121325
Photon Factory undulator beamline BL-2C, current status 121817
PLS polarized electron source, photocathode test-stand design/fab. 110265
PLS storage ring, transverse beam feedback syst. 121351
PLS synchrotron X-rays, phantom/animal imaging 122139
Pohang light source, first undulator beamline, commissioning results 121398
Pohang Light Source, upgraded machine perform. and beamline status 121340
profile monitoring syst., multivideo source image proc. 87115
pseudospark electron beam source for FEL, impedance match *(Chinese)* 71861
pulsed electron source, at. collisions, expt. design 110266
radiation therapy, proton beam delivery syst., design anal. *(Chinese)* 121320
RF damped cavity, coaxial HOM coupler using SiC ceramics 121349
RF-driven ion source in electrostatic accelerator, props. extraction *(Chinese)* 110113
RIB line at Compact Storage Ring *(Chinese)* 87144
Siberian snake and rf-dipole, polarized proton beam spin-flipping 110188
single wafer medium current ion implanter, perform. charcts. 121384
SIRAD, irrad. facility at LNL tandem accel. for rad. damage studies on semicond. det. and electronic devices/systs. 87152
SPring-8, front end and optics of IR beamline 121387
SPring-8, IR beamline BL43IR, design and commissioning 121388
SPring-8 beamline BL27SU, soft X-ray photochem. appl. 121820
SPring-8 beamline interlock syst. and rfBPM interlock syst. 132253
SPring-8 soft X-ray photochem. beamline BL27SU, high-resoln. monochromator 121821
SPring-8 X-ray beamline commissioning anal. 121403
synchrotron X-ray monochromators under heat load, cryst. compar. 121837
TESLA, interact. region layout, collimation and extraction 110205
third-gen. SR sources, cryst.-based diffr. focusing elements 121380
UNICAT insertion device X-ray beamline at APS, design 110472
Univ. of Maryland electron ring, PC quadrupoles/dipoles, design/field meas. 75949
Varian VIISta 3000 single wafer high-energy ion implanter, design and perform. 115540
varied line spacing grating monochromators/spectrographs, SR 110460
velvet cathode diode design, uniform electron beam diagnostics *(Chinese)* 87141
VIISta 3000 ion implanter, beam optics 121324
wavelength shifter, supercond., 7 T, BESSY-II 121365
Wolter-type grazing incidence mirror for hard X-rays wavelength focusing 121805
X-ray beam cleaner, harmonic selection/rejection, Si(111) monochromator 110464
XEBIST ion beam focusing, rel. electron beam pinch effects 110274
γ-ray beams from linac with narrow beam collimator, med. appls. 122300
$\bar{p}$ accelerator complex, 3 to 15 GeV, GSI facility 110106
AsF_5 dopant gas for RF ion source, device charcts. 121417
Cu, high purity, diffusion bonding, brazing, lin. collider struct. 97916
Si:B, ultra low energy implant., decelerator module 115544
Si:In, ion implant., 8250$_{HT}$ implanter perform. 115564
V/Al_2O_3 sputtered multilayer X-ray mirrors for water window 121806

beam handling techniques
see also mass spectroscopy; particle beam diagnostics; particle beam extraction; particle beam focusing; particle beam injection; particle optics
Aladdin storage ring, approaches to lowering emittance in existing light sources 121339
Bates SHR, radiative polariz. 110191
collimated swift ion microbeam, profiling using 16 M bit DRAM 103722
computed tomography images, beam-hardening correction using post-reconstruction method and equiv. tissue concept 98498
deceleration beam line, energy contamination control syst. 115611
electron beam, exchange self-polaris. 87054
electron storage ring, radiative laser cooling 75944
EPICS role in DAQ and beamline control 109456
eRHIC, accelerator phys. issues 87075
future kaon programs at BNL, FNAL 87055
GRAAL, polarized photon beam 110183
GSI accelerators, future nucl. phys. facility, review 110105
HERA Luminosity Upgrade, polarised $e^{\pm}$ beams, experience and expectations 110192
HI inertial fusion in Europe 97896
HI inertial fusion injectors, funneling expts. 97899
high-energy storage ring, cryst. ion beams 110172

beam handling techniques continued
intense pulsed lasers, electron accel., laser polariz. direction effect *(Chinese)* 97914
ion beams, buffer gas cooling 121317
ion evaporative cooling, selective RF heating, EBIS/T 110196
ion induction accelerator, recirculator project results at LLNL 97903
ion ring, rot., self-trapping 110164
ion trap project at IGISOL, status 75941
low energy ion beams, beam noise, tuning aid 121386
miniature inductive adder modulator for LLNL small recirculator expt. 97900
muon beam transverse ionization-cooling channel design and simul. 121334
muon colliders and neutrino factories, status of ionization cooling tests 110160
muon cooling by emittance exchange 110140
muon sources, ν factory to $\mu^{\pm}$ colliders 110162
MX beamline control syst. toolkit 110468
particle accelerator, source-to-target simul. studies 97904
PEP-II, KEKB, DAΦNE, e^+e^--factories 76007
plasma electron accel. by 12 TW 50 fs laser pulse, num. simul. 110119
proton beam, polarized, develop. at COSY, EDDA polarimeter 110187
radioact. beam facilities, present status, second generation perspectives 110104
radioact. beams in nuc. phys./astrophys., conf., Erice, Italy, Sept. 2000 67356
SPring-8 storage ring, polarized photon beam expt. 110182
SR beamlines, focusing mirrors *(Chinese)* 87057
storage ring-FEL, sawtooth instabil. suppression 128340
stored polarized proton beam, spin flipping by RF dipole 75942
transverse-phase-space dens., CT meas. appls. *(Chinese)* 121331
UNICAT control syst. at APS 109457
VSX third generation light source, lattice design and error correction 121343
pp total cross sect., TOTEM expt. at LHC 121517
GeF_4 isotopically enriched SDS ion implant. source, anal. 132261
Si:P wafer, ion implant., channeling uniformity control 115605

beam-lead devices
see also hybrid integrated circuits
Ka-band HTS/III-V semicond. hybrid bal. mixer 69157
MCM-D, direct Ku-band BPSK and I/Q vector modulator 90800
microwave Schottky diode with beam-lead contacts 81187

beam position monitors *see particle beam diagnostics*

beam splitters (optical) *see optical beam splitters*

beam steering
for particle beam aspects, use "beam handling techniques" or NTs
2D mech. beam steering antenna fabricated using MEMS technol. 83763
2D/3D MEMS crossconnects, design/packaging 82200
adaptive beam-steering/adaptive modulation-assisted DCA algms., comparison 73587
AO laser beam steering syst., satellite commun. 127862
arrayed waveguide grating wavelength tuned beam steerers 82746
automotive radar, three-beam antenna 96993
automotive radar sens., microstrip patch antenna array 96995
bi-directionally steering phased array antenna controlled by dual piezoelec. transducers 83764
birefr. photonic IC BFN 91400
blood flow & arterial wall vibr. simult. meas., US beam steering 110745
broadband mobile commun., beam and null simultaneous steering S/T-equalizer 108880
χ^2-waveguide arrays, beam steering/switching 131393
co-channel sigs. detect. and copy, space-time proc. 108554
coupled nonlin. oscillator arrays, difference pattern beam steering 101845
discrete spatial opt. solitons in NLO waveguide arrays, power depend. steering 93869
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
dual feed single act. patch beam steering antenna, compact design 72581
EM scanning 3-element array with integral phase shifters 83733
ESPAR antenna, adaptive beamforming based on steepest gradient algm. 105957
ESPAR antennas, Hamiltonian approach to reactance optim. 72679
far-field beam shaping/beam steering by phase-retrieval-based wavefront control 105410
FAST-Net global interconnection syst., beam-steering, aberration anal. 93457
ferrite based patch array, scanning improvement, time delay method 72656
ferrite based patch arrays, magneto opt. tech. for beam steering 105950
FLC SLM free-space opt. switch, computer-controlled adaptive beam steering 116837
H depth profiling by refl. elastic recoil detect. anal., geometric alignment 132268
integrated high-power EO lens/scanner for space-based platforms 93153
laser act. tracking, basics & appls. 93937
laser beam deflection polygon scanner using HTSC bearings 71869
LCD, large-area, ultra-compact 109904
liq.-cryst. diffr. gratings, asymmetric transmissive behavior, beam-steering efficiency 116830
Mars rover antenna systs., parab. and array 72622
micro-machine scanner opt. switch based on beam steering angle error anal., design criterion 127818
micromechanical opt. cross connects 116795
microoptical scanners of photoresist reflow lens on MEMS XY-stage *(English)* 71395
microstrip adaptive array antenna, opt. control 83703
mixed phase disloc. odd dark beam directional coupling 82960
MM-wave antenna, semicond. plasma, electronic beam steering 105875
MM-wave beam-steering using dielec.-image-line-fed grating film 83765
MM-wave radar phased antenna array 131662
mobile radio adaptive antenna arrays, beam-steering/directive characts. 96433
MOEMS conf., Santa Clara, CA, USA, (Sept. 2000) 89584
multi-panel small reconfigurable reflector antenna, num. study 117762
multibeam array antenna, spatial opt. sig. proc. 83683
multibeam switched parasitic antenna embedded in dielec. for wireless commun. 94192
narrow-stripe high-power LD, 980 nm, lateral beam steering 117333
NLC multiplexed opt. scanner technol. 117549
opt. beam steering using MEMS-controllable microlens array 105047
optimized beamsteering by appropriate random phasing quantization methods 83672
pattern control using reactively loaded loop antenna 83624
phase conjug. beam steering using multipass amp. syst., high gain 71944
phased array beam steering with limited dispersion 117346
phased array radar, target tracking with adaptive sampling intervals *(Japanese)* 75214
photonic phased-array antenna, opt. Blass matrix TTD steering 94191
photonic true-time-delay networks design for radar appl. 91395
planar receive mode act. phased array 83687

beam steering continued
polymeric waveguide prism-based EO beam deflector 116804
reactively loaded wire loop antenna, pattern shaping 105897
Rotman lens for MM-wave sens. appls., high efficiency design and simul. 72673
smart antennas, appl. for capacity enhancements in GSM networks 117858
smart base station antenna 85767
space diversity S-ALOHA with steerable beam smart antenna arrays, perform. anal. 74661
symm. stripline scanning array, ferrite phase shifters 128882
transskull US surgery & therapy, large-area arrays design 111114
two axis MEMS tilt mirror micro-mech. opt. cross connect systs., commun. networks appls. 93187
ultrashort-pulsed laser micromachining, acoustooptic device ang. dispersion compensation 117570
ultrasound imaging, sidelobe reduction filters 110781
US MEMS microphone lin. array, source localization 99081
VHF tropos. radar data, spaced antenna/Doppler beam steering methods 133317
wide-aperture VCSELs, transverse mode selection, elec. steerable beams 71880
wireless ad-hoc network, adaptive antenna techs. 105978
$BaSrTiO_3$, ferroelec., CTS antenna array, 2D beam steering 72641
$BaSrTiO_3$-based phase shifters, RT, for electronically steerable antennas 83757
$KTiOPO_4$, quadratic spatial soliton generation/steering in noncollinear geom. 82957
$LiNbO_3$:Ti integrated opt. waveguides for opt. BFN, birefr. 127782
Si reconfigurable antenna 83660

beam-trapping *see self-focusing*

beamlines, particle *see beam handling equipment; beam handling techniques*

beamlines, X-ray *see X-ray apparatus*

bearing estimation *see direction-of-arrival estimation*

bearings (machine) *see machine bearings*

BEBO method *see bonds (chemical)*

behavioural sciences
see also psychology
children with develop. disorders, behavioural meas. syst. using omni-directional camera *(Japanese)* 132631
mental health professionals, cognitive-behavioural therapy training, videoconferencing pilot study 130898
residential energy consumption, behavioral factors study 88405

behavioural sciences computing
see also behavioural sciences; psychology
animal behavioral anal. by water maze tests, computerized syst. 129519
EthoVision, video tracking syst. for behavioral expt. automation 129520
workplace training program, organisational context, ATC appl. 124282

belief maintenance
see also belief networks
conflict detect. during plan integrat. for multi-agent systs. 106431
landmine detect. sens. modelling, fusion & discounting, D-S theory 77019
multi-target detect., transferable belief model 133392
seq. accumulation of evidence 129858

belief networks
3D multimodal tracking/event detect. via particle filter 95716
agent-based Bayesian forecasting model for enhanced network security 74286
asynchronous and decentralized estim. 131900
automated event class. for multi-Gbyte/day data streams 130034
automatic target detectors, relative perform. 75147
Bayesian ordering, extended probab. distrib., refinability principle 105994
branch-and-bound algm. with mini-bucket heuristics 100841
COGENT, cognitive agent for Spacecraft telemetry monitoring 76823
convergence props. of Bayesian evol. algms. with pop. size greater than 1 90053
cooperative obj. recogn. 107241
dependency preserving probabilistic modeling of switching activity using Bayesian networks 125435
diagnostic models, based on FMEA models and ontologies 131799
DS-CDMA coded systs., turbo multiuser detect., Gibbs sampling 107770
eddy current sens. response, ill-conditioned mixtures, Bayesian anal. 110037
entropy-coded sources, joint source-channel turbo decoding 106153
feature subset selection by Bayesian networks, comparison with genetic and seq. algms. 118449
handwritten character segmentation, conditional independence assumption 129666
hierarchical unsupervised learning of facial expression categories 95018
high-dens. mag. recording channel, turbo decoding of generator matrix code 72915
image class. syst., belief networks constr. 94787
integrated obj. recogn. methods, multiple-path archit. 95447
Internet-based self-aware services, anoms. detect. using Bayesian networks 130688
landuse class., SAR/INSAR data and opt. imagery fusion *(English)* 76964
LDPC and turbo codes, universal belief propag. based decoding 129152
low dens. parity check codes, belief propag. decoding, perform. bounds 129036
low-dens. parity check codes over finite-state binary Markov channels, decoding 129084
meteorite ident. by robot vision, Antarctica 107134
modular systs., reliab. and diagnosis 124423
multi-camera syst. for tracking multiple people 95006
multiple camera fusion for multi-obj. tracking 95010
multiple-fault diagnosis, independent choice logic appl. 99322
Nomad robot, meteorite search, Science Autonomy System 97400
probabilistic multihypothesis tracker using turbo coding concept 130133
real time intell. sens. validation, Bayesian network 133872
reliab. modelling, expert judgement mgt. using Bayesian belief nets 100682
rem. sens. image classifiers, supervised, combination based on indiv. class performs. 122723
risk-sensitive decision-theoretic fault diagnosis 96023
self-organising map for Gaussian mixtures 118739
semantic understanding of consumer photographs 94827
shallow-water mine countermeasure, Web-centric virtual prototyping environ. 77048
SHF/EHF direct-conversion six-port receivers, Bayesian network decoder 108519
simultaneous tracking of multiple objs., evidence-based Bayesian modality fusion 106616
source separation algms., logical induction, Bayesian inform. 105999
speech, narrowband cue integrat., stat. model 73105
speech understanding, intention based probabilistic phrase spotting 84064
target recogn., intell. compression, feature detect./fusion 84551
transm. channel sigs., discrete source separation, MCMC anal. 107589
turbo decoding, distrib. of loop lengths in graphical models 117937

elief networks continued
video indexing/retrieval, semantic concepts inference 94942
elief revision *see belief maintenance*
elousov-Zhabotinskii reaction *see chemical equilibrium*
enchmark testing *see performance evaluation*
ending
see also bending strength; buckling; stress analysis
ABS copolymer film, bending piezoelec. 104380
angle sens., VR data glove appl. 75451
area array packaging, mech. bending fatigue reliab. 113613
area array solder joints, reliab. in bending 113577
austenitic stainless steel plates, residual magnetis., fatigue depend. 121159
BCC++ and QFN packages, solder joint reliab. 113663
cantilever type small load cell with circ. pan, 3D FEA 120715
cascaded directional coupler-based WDM device, 4-channel/1200 GHz spacing/1550 nm, design 109180
CBGA assembly, reflow soldering, reliab. 113553
CMOS device mismatch, mech. stress impact 104122
corrugated long-period fiber grating strain/torsion/bending sens. 109605
CSP, stacked, cyclic bending, failure and fatigue life 113667
CSP flexure-induced tensile stress effects charactn./minimization, empirical strategy 78644
CSP interconnects, cyclic bending, fatigue 113550
D-type FBG, bending sens. 97289
diamond film, CVD, residual stress effect, micromech. anal. 124886
electronic packages, 2D surface curvature meas. during thermal cycling 113544
sampled FBG for temp./bending sens. 97335
FBG sens., bending effects 75584
fibre-optic curvature sens., light output lin. var. with bending angle *(German)* 131934
filament wound press. vessel monitoring, embedded FBG sens. 97309
flexible power/inform. cables, breakage studies 77385
Green's fn. of thin circ. plate with elastically supported edge 114067
ionic polymer-metal composites, fund. props., review 114481
JOS Uniphase clip design, fibre attachment for 980 nm pump lasers 117029
large-mode holey fiber, mode area/bend loss study 116599
laser forming thermal proc. studies *(Japanese)* 113169
LGA/BGA packages, second level reliab. comparison 113581
LOC-TSOP memory package, warpage, epoxy mold cpds. effects 102872
long-period fibre gratings pair, curvature/load/chem. sens. appls. 97282
long-period grating bend-sens. fibre sens. 97307
LTCC tape systs., chem./structural/mech. props. 79434
MEMS chem. sens., adsorpt.-induced/photoinduced stresses 109729
metal capillary splice fiber-optic macro-bending sens. *(Korean)* 120847
microbent opt. fiber for chem. sens. 131953
microfabricated cantilever array chem. sens., reson. freq./bending readout 97493
mortar-type Morley element method for plate bending problem 68075
multilevel nanoimprint lithog. with submicron alignment over 4 in. wafers 92213
next-generation telecomm. opt. fiber coatings 127673
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
notebook PC CPU cooling, packaged miniature heat pipe 79931
packaging design concept eval., appls. of computer-vision techs. 67577
PBGA on flex substr., board level reliab. 67622
photomech. chem. microsens., situ hazardous chem. detect. 97449
photonic cryst. fibres, design props., strong nonlin. *(English)* 104655
piezoceramic materials, asymmetric hysteresis, modelling 104378
piezoelec. ceramics displacement, bending deform. correction *(Korean)* 121190
piezoelec. transducer cochlear implant, bending piezoelec. mode, modelling 111164
plate bending anal. with hr-adaptive boundary elements 114161
polymer/Pt nanocluster composite film actuators, self-assembly 114479
polymeric micromechanical components with tunable stiffness 116102
polypyrrole pipe electrochem. actuators, cation insertion/extraction 79456
polysilicon, notch form. by stress enhanced spontaneous etching 126369
polysilicon microcantilever beam bending, nanoindentation, Young's modulus *(Chinese)* 81569
polysilicon microcantilever beams, mech. props., nanoindentation *(Chinese)* 81565
pre-tensioned string-plate press. sens., natural freq., press.-freq. charact. 120762
pressbrake control, bend angle meas., sens. design 109969
PWB mech. loading, global/local reliab. modelling 115185
rem. addressed opt. fibre curvature sens., two-core photonic cryst. fibre sens. element 97308
SAN copolymer film, bending piezoelec. 104380
slab deflection meas. using Sagnac effect FOG 75590
smart beams, piezoelec. actuator/sens., debonding effect 114477
smart piezoelec. beams, Bernoulli-Euler beam theory correction 114475
smart struct. monitoring using PZT actuators & PVDF sens. 109823
solder joint reliab., thermal, power and bend cycling 113492
strain meas. by digital holography 125141
superconvergent method for approximating bending moment of elastic beams with hysteresis damping 79073
suspen.-in-resin-coil dispersion compensating fiber module for DWDM appl. 120149
thermally actuated pneumatic 3/2-way-microvalve develop. 123709
tightly jacketed double-coated opt. fibers, axial strain/thermal loading/hydrostatic press. 127712
trapezoidal multilayer in-plane bending piezoelec. actuator, deflect. charact. 92691
uniformly loaded rect. plate bending anal. with variable width corner supports 79143
Al free standing cantilever beam, bending response, MEMS actuator 127116
BiSrCaCuO 2223 HTSC tape, transport E-J charact. under bending strain, percolation model 127443
BiSrCaCuO 2223 tapes, OPIT fab., current paths and current carrying capability 70775
BiSrCaCuO conductors and magnets at high stress-strain levels 127519
$Bi_2Sr_2CaCu_2O_x$/Ag/Ni HTSC clad tape, fab., mech. props., J_c 70735
C nanotubes, appl. as electromechanical sens., first-principles simul. 91507
Cu/Cr/BPDA-PDA struct., plastic bending, T-peel test 67554
Cu/low-k dielec. interconnects, interfacial adhesion 115707
GaN MOVPE, a-face/c-face sapphire substrs. FET appl. 90450
GaN substrs., bowing, hydride VPE 68251
KH_2PO_4 cryst., vac. chucking influence on distortion 92937
$LaCrO_3$/Cu-Pd/Cr-Fe-Y_2O_3, brazed joints, SOFC 89156
Nb_3Sn supercond. wire reinforced by jelly-rolled Nb/Cu composite, strain effects 68428
PZT films, sol-gel derived, mech./elec. fatigue 81705
bending continued
PZT multilayer bender type actuator, proc. 116207
PZT:La thin films on NiTi alloys, SME, PLD 101390
Si high-force piezoresistive force sens., max. hysteresis error 86758
Si, photoelec. props., non-uniform deform. effect 80652
Si polycrystalline MEMS devices, W coating, crit. features testing, tension strength, fracture 104158
Si strain gauge, single-cryst., user-friendly, high sensitivity 97563
Si ultra-thin ICs, dicing by thinning for improved mech. reliab. 70231
Si:B, metal-insulator transit., uniaxial stress, comment 125992
Si_3N_4/Si_3N_4-TiN laminates, crack propag. detect., elec. resist. 114550
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
SiO_xN_y thin films, low residual stress, sacrificial layer, MEMS 104171
Sn-Pb-Ag cylindrical solder interconnects with creep, bending/twisting 78653
bending of light *see light*
bending strength
diamond MPACVD-windows, high-power/long-pulse mm wave transm. 114328
high-strength opt. fibers, cyclic fatigue testing 127668
long-period grating bend-sens. fibre sens. 97307
opened fibre coating strip force test 127678
P/M component quality, sintering proc. kinetics, US in-situ NDE 114511
polymethylsilsesquioxanes, mech. props., fracture toughness 125099
power law crack growth theory, test glass tubes, static fatigue param. error 127670
PZT-based piezoelec. composite laminates, bending, elec. field effects 104374
silica opt. fibers, nano porous silica core/cladding, mech. props. 127667
single-coated opt. fibres, thermally/mech. induced microbending losses 127689
spliced fiber optics, two-point bending, strength reliab. 127682
strain meas. by digital holography 125141
stripping-induced fibre flaws, 2-point bending strength/tensile strength results 127677
two-point bending ribbon opt. cable test results, Weibull probab. distrib. 125155
two-point fibre bending strength meas. 127664
Al free standing cantilever beam, bending response, MEMS actuator 127116
As-S-Se glass opt. fibres, prep., opt. & strength params. 93086
Ni LIGA cantilevered microposts, mech. props. eval. and failure anal. 116051
Ni-MLC capacitors, Y5V dielec., bakeout-property rels. 80426
PZT motors/actuators/sens., HDD suspen assemblies appls. 104445
Si, bend strength, fracture toughness, MEMS appl. 104168
Si polycryst. microcantilever beams, mech. props., specimen size effect 81559
SiC, bend strength, fracture toughness, MEMS appl. 104168
BER *see error statistics*
Bessel differential equation *see Bessel functions*
Bessel functions
anisotropic Bessel-Gaussian beams, sidelobe control/mode selection 82723
asymptotic expansion of Bessel fn. integral using hypergeometric fns. 89962
biaxial crysts., high-order Bessel light beam form. 128365
bounds on differences of adjacent zeros of Bessel fns. and iter. rels. between consecutive zeros 79000
continuous Euler transform. for FT of slowly decaying fn. 68092
Fourier-Bessel pattern anal. in circ. domain, decomp. amplit. 70362
half wavelength dipole antenna, radiation impedance in terms of Bessel fns. 105921
holonomic fns. eval. near and in regular sing. 79078
integrals related to Sonine's finite integrals, anal. eval. 114006
isotropic point source, evanescence asymptotics 117699
layered dielec., rapid calc. of electrostatic Green's fns. 128657
light beam freq. doubling, wavefront disloc. 128500
localised heating due to low power focussed laser, max. temp. rise calcs. 83059
MM-wave Bessel beam, computer hologram 83022
OPO, periodically poled, practical Bessel beam pumping 105494
quasi-diffr.-free beams 83346
radar image stats. modeling, terrain feature ident. 96900
rib waveguide curved bends, wave propag., evanescent field, radiation loss, sens. appls. 104709
SAR imagery, terrain feature class. 133270
solid-state lasers, axially pumped, temp. distrib., anal. treatment 105247
spectrosc. MR imaging using SS prod. by oscill. gradient fields 76427
sync. filter topologies, delay approx., Euler fn. 80059
thin hexagonal loop transceiver antennas, near-/far-zone fields 83656
$KTiOPO_4$ cryst. Bessel light beam sum freq. mixing 82871
$KTiOPO_4$ cryst. SHG three-wave mixing, Bessel/Gaussian light beams 82729
beta-ray detection
8 mm data cartridge 2D DAQ apparatus for $4\pi\beta$-γ coincidence meas. 97974
combination β-γ-radiometer & dose-rate meter, extended dyn. range 98030
direct ion storage dosemeter, instant readout capabilities 122421
direct ion storage dosimeters with MOSFET devices, review 133142
dose distribs. from ophthalmic applicators, model eye comparison 98785
extremity dosemeters, beta/photon fields, intercomparison 122379
intracerebral beta microprobe, radiotracer kinetics study, freely moving animals 132977
intracerebral radiosensitive probe, neuropharmacology investigs., small lab. animals 132962
microcolumnar scintillators, opt. fibre coupled compact imaging syst. 111009
mountain rock, radionuclide distrib. visualisation syst. 121783
ophthalmic applicators dosimetry, different meas. methods comparison 98784
pers. dosemeters, external β-rays, EURADOS trial perform. test 122378
pers. electronic dosemeters, legal dosimetry 133102
phoswich detector for continuous blood-sampling syst. 132938
radiation distrib. sens. with normal opt. fiber 121567
radioactivity primary std. estab., traceability syst. *(Japanese)* 86391
BGO/plastic scintillators, phoswich detector, continuous blood sampling 121617
CsI scintillator, γ/β decay power, reactor safety appl. 76118
^{18}F, radionuclide guided surgery, intraoperative probe perform. 76572
^{111}In, radionuclide guided surgery, intraoperative probe perform. 76572
^{192}Ir brachytherapy sources, beta/gamma dosimetry 133123
LiF:Mg,Cu,P detectors, ENEA pers. dosemeters, beta/photon fields 122380
$Lu_3Al_5O_{12}$:Ce single-cryst. films for biological and radiation monitoring 121530
Si 3D archit. sens., test results, future plans 121448
^{99m}Tc, radionuclide guided surgery, intraoperative probe perform. 76572
ZnS:Ag phoswich detectors, simultaneous $\alpha/\beta/\gamma/n$ counting using multi-param. tech. 121559
ZnS(Ag) phoswich detectors, simultaneous α, β/γ and n counting by dual-param. tech. 132404
beta-ray effects
see also electron beam effects
carcinogenesis, chronic β-irrad., threshold dose-response 76733
diamond CVD particle detectors, trapping-detrapping behavior 87219

beta-ray effects continued
planar triac, radiation-induced struct. modif. effect on mag. sensitivity 81243
PVDF/trifluoroethylene copolymers, electron irrad. effects, NMR, naval transducer appl. 127209
skin depth dose, hot particles, electron backscatt. correction 133129
AlN:O ceramics, radiation induced recomb. procs. 127921
GaAs double Schottky barrier particle detector charactn. *(Chinese)* 97937
$Si_{1-x}Ge_x$ single- and poly-crysts., material props., nuc. detectors appl. 115342
$^{90}Sr/^{90}Y$ beta particles, phantom materials water equivalence 87876
beta-ray scattering *see beta-ray effects; particle backscattering; potential scattering; transport processes*
beta-ray sources
see also electron sources
^{90}Sr, catheter-based intravascular brachytherapy, dosimetry 122391
beta-ray spectrometers
see also electron spectrometers
double-focusing Helmholtz-coil spectrometer 98081
GREAT spectrometer, triggerless total data readout method 110412
MAC-1 universal setup, β-spectrograms meas., image-reading syst. 98079
beta spectrometers *see beta-ray spectrometers*
bevatrons *see synchrotrons*
BGA *see ball grid arrays*
BGO detectors *see solid scintillation detectors*
BH lasers *see semiconductor lasers*
Bi-FET integrated circuits *see monolithic integrated circuits*
Bi-MOS integrated circuits *see BIMOS integrated circuits*
bibliographies
AC rot. mach., surge voltage protection, bibliography 133934
collaborative technols., asynchronous and distributed proc. improvement 85170
computer vision, future and past 106456
cryptographic research in past and future 106203
error estim. and adaptive FEM, bibliog. (1990-2000) 124757
EthoVision, video tracking syst. for behavioral expt. automation 129520
hardware compilation for software engineers, ATM example 68500
power syst. reliab. eval., probab. methods, bibliog., 1996-99 133423
predictability, complexity, and learning 124521
relay literature bibliog., 1999 IEEE Committee report 133789
single-phase IM drives, literature survey 123877
video based teleconferencing, distributed interact., audio/video delays 74417
BiCMOS analogue integrated circuits
AC biased audio recording LSI cct., automatic level control *(Japanese)* 97111
AM/FM car act. antenna with on-board batt. voltage regulator 94162
anti-blocker struct. MOSFET-C filter for direct conversion receiver 102371
attenuator for audiometric appls. with on-chip power amp. 92481
bandgap ref. cct., curvature-compensated, 1 V supply 90720
bandgap ref. for BiCMOS VLSI appls., stat. anal. and optim. 125216
Brokaw bandgap voltage ref., freq. anal. of power supply rejection 79562
CCII, macromodel cct. for simul. 125595
const. G_M rail-to-rail opamp with bipolar input stage 79579
double-bal. subharmonic mixer for direct conversion receivers, 1.9-GHz 91352
dual-band dual-mode RF front-end for WCDMA & GSM appls. 108654
dyn.-range dB-lin. prog.-gain amp., GSM transceivers 125819
harmonic VCOs for GHz-range appls., varactor diodeless configs. for tuning 114995
high-selectivity SC bandpass filter, biquad cells 91035
high-speed voltage follower, Gilbert's translinear loop 125604
highly lin. down-conversion mixer with MCM pass. for GPS appls. 69215
hybrid 4-in-1 DC-DC controller chip for PC mainboard 99797
large dyn. range radiation-tolerant analog memory in qtr.-micron CMOS technol. 110391
LDMOS power transistor, BiCMOS analog IC 126835
log domain filters, bipolar, std. CMOS proc., SPICE compatible model 80073
low power and noise radiation hard BiCMOS front-end readout syst. for capacit. detectors 110416
mag.-coupled tuneable inductor for wideband VFOs, 1.4-2 GHz 91363
MMIC lumped and transversal filters 69229
op amp input differential stage, EMI robustness 90771
orthopaedic implant long term monitoring, inductive power supply 122338
pass. and act. tunable capacitors for RF appls. 80342
PCS-CDMA power amp. 101807
prog. lin. mag. Hall sens. for automotive appls. 78325
pulsed TOF laser radar, wide dyn. range receiver channel 109298
quadrature multi-phase LC oscillators, phase noise perform., quality factor 125821
spiral inductor Q enhancement, n^+-diffusion patterned ground shield 102659
super-regenerative transceiver, low-power 1 GHz, time-shared PLL control 96374
transconductor, LV VHF transconductance-C filter 80050
very high-speed replicating current comparator for Viterbi decoders 114898
Si BJT neg.-conductance ccts., RFIC VCOs 101823
Si BiCMOS receiver IC supporting WCDMA, CDMA, AMPS cellular handset appls. 96483
Si MMIC BiCMOS LNA chip sets, high-lin. for base station appls. 69180
Si PCS-CDMA MMIC power amp. with impedance-controllable biasing scheme 91349
SiGe BiCMOS VCO and PLL freq. synthesizer for 5.7 GHz Hiperlan std. 91330
SiGe BiCMOS proc. 12-GHz quadrature LC-VCO, fully-differential oscillator 125822
SiGe BiCMOS switched LNA, dyn. range 90754
SiGe BiCMOS switched-LNA, 800-900 MHz, wide dyn. range design 80379
SiGe BiCMOS technol. LNA/mixer IC, lin., cell phone appls., 2.5-GHz 91351
SiGe HBT for analogue BiCMOS technol. appl., review 92477
BiCMOS digital integrated circuits
see also BiCMOS logic circuits
ATLAS Transition Radiation Tracker, DTMROC time meas. chip 121632
DTMROC time meas. chip for ATLAS Transition Radiation Tracker 110403
GMSK modulator using ΔΣ freq. discriminator-based synthesizer 108656
multi-channel opt. interface transmitter/receiver chip set, LCD appl. 117033
RF single-chip front-end for digital sound broadcasting 120511
two-chip charge amp. for high stabil. X-ray spectrosc. systs. 114641
VHS VCR, μP-assisted audio sig. proc. syst. 131775
BiCMOS integrated circuits
see also BiCMOS analogue integrated circuits; BiCMOS digital integrated circuits
2.4 GHz ISM radio soln. for Bluetooth and wireless home networking 96143
AMPS/CDMA mobile handset, IF/BBA proc., BiCMOS chipset 119940
capacitive press. sens., surface micromachined for automotive appls. 78324
CMP, prototyping and low vol. prod., engng. education 126920
BiCMOS integrated circuits continued
collector insert layers, highly doped, proc. develop./simul. 92478
continuous-time filter, digitally prog. 68919
current conveyor, wideband, prog. filter appl. 68920
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
DCS 1800 base station, receiver downconverter, silicon RFIC 120078
design and perform., act. WDM components appls. 127071
digitally controlled oscillator for clock recovery and freq. synthesis PLLs, 600 MHz 68630
dual-band freq. synthesizer, PCS cell phone 114643
EOS/ESD, conf., Anaheim, CA, USA (Sept. 2000) 67377
flip-chip multi-mode, multi-band VCO IC using low cost BiCMOS proc. 91329
full-rate ADSL-RT analog frontend IC with integrated line driver 102428
GSM 900/DCS 1800 prog. PLL-based fractional-N freq. synthesizer 91321
high-speed high-sensitivity photodiodes & OEIC props., review 117020
lateral power device integrat. in mixed sig. BiCMOS technol. 81533
LF noise anal. of bipolar transistors and MOSFETs using complementary BiCMOS technol. 116043
low noise high-speed X-ray readout IC for imaging appls. 110415
LV act. mixer, direct conversion receiver 101860
Micro-RF Unit *(Japanese)* 85464
microwave radio for Doppler radar sens. of vital signs, use of RFICs 87564
mixed-sig. and RF ICs, ESD protection cct. in BiCMOS technol. 114890
modulated Σ-Δ freq. synthesizers, automatic calib. 125252
n-MOSFETS fabricated in BiCMOS proc., radiation damage 115798
multi-level metal winding on-chip transformer/balun for RFICs 91332
multicarrier QAM-modulator for WCDMA basestation with on-chip D/A converter 101872
NPN bipolar transistor breakdown anal., ESD protection cct. design appl. 81242
one-chip Bluetooth ASIC, tradeoffs and challenges 127070
optimal curvature-compensated BiCMOS bandgap ref. 125233
pad-oriented multiple-mode ESD protect. struct. and layout optim. in BiCMOS 127069
power BiCMOS proc., HV device implement., 20 V mixed sig. cct. appl. 127072
power IC, lateral MOSFET, dual cond. paths 126856
quadrature ring oscillator for opt. receivers, 9.8-11.5 GHz 102736
RF receiver, bandpass sigma-delta ADC 96363
SOI ADC delta-sigma modulator, Bluetooth transceiver 102294
SOI BiCMOS 800 Mbit/s write driver for HDD 114888
SOI complementary BiCMOS devices, perform. eval. using test struct. 104147
SOI-BiCDMOS single-chip automotive LSI, air bag controller, RISC CPU 89411
sync. PWM switching regulator chip, design, CPU power supply appl. 68586
TFSOI technol., isolation structs. for mixed sig. RF SOC appls. 104145
torsional actuator, LV, appl. in RF-microswitches 112736
two-chip charge amp. for high-stabil. spectrosc. systs. 132452
uncooled microbolometer FPA, on-chip low-noise ROIC archit. 109631
VCO, 4.7 GHz, chip/MCM-D package co-design for HIPERLAN-2 transceiver appl. 131087
waveguide-based OEIC design 105048
XGA full-color display, serial transceiver chip set 86887
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
Si OEICs in CMOS/BiCMOS technols. for DVD systs. 82437
Si bipolar transistors in 0.5-μm based BiCMOS technol., fab./charactn. 103771
Si polycryst. layers, epitaxial realignment, BiCMOS technol. 124888
SiGe BiCMOS 12.5 Gbaud transceiver for serial data commun. 130985
SiGe BiCMOS HBT, LF noise behaviour and phase noise perform. study 69196
SiGe BiCMOS IC, W-CDMA zero-IF front-end, UMTS receiver 96481
SiGe BiCMOS PLL freq. synthesizer, 10 GHz 115000
SiGe BiCMOS technol. and CAD environ. for 2-40 GHz VLSI mixed-sig. ICs 114999
SiGe BiCMOS technol. at IBM, progress/evol. 92479
SiGe HBT technol. implement., low-temp. UHV/CVD tech. 103778
SiGe HBTs for 40 Gb/s SONET fibre-optic data-rate, mixed-sig. BiCMOS 104146
SiGe HBTs for BiCMOS technol., stabil., reliab., material params. 81210
SiGe HBTs, vert. scaled, low-temp. collector profile design 70034
SiGe RF BiCMOS SC pipelined ADC design, clock jitter 79986
SiGe:C HBT module for integrat. in deep submicron CMOS proc. 69194
BiCMOS logic circuits
CMOS/BiCMOS static latch ccts., design/meta-stable operation considerations 102046
fault charactn. and DFT tech. for I_{DDQ} fault detect. 125438
fault charactn./DFT for I_{DDQ} faults detect. 125406
biconical antennas *see conical antennas*
bicrystals
diamond, polycryst. materials struct./props., simul., interfacial perspective 102964
four-jn. bicryst. switch for HTSC SQUID magnetometer pickup coil 116516
HTS bicrystal Josephson mixers, noise props. at 345 GHz and 20 K 69158
metals, polycryst. materials struct./props., simul., interfacial perspective 102964
SQUID, HTS flux dam inserted into pickup coil, props. 92892
tetracene bicrystal, hole transport through single grain boundary 69605
$NdBa_2Cu_3O_7$ bicrystal Josephson jns./SQUIDs operating at 77 K 70983
Si, polycryst. materials struct./props., simul., interfacial perspective 102964
$Tl_2Ba_2CaCu_2O_x$ HTSC epitaxial films, bicryst. grain boundary Josephson jns. 70794
Y-Ba-Cu-O bicrystal Josephson jn., SFQ shift register 70855
Y-Ba-Cu-O bicrystals, low angle, crit. current hysteresis 70675
YBaCuO bicrystal grain boundaries, IMD and Josephson vortices 70601
$YBa_2Cu_3O_7$ HTSC film bicrystal Josephson jns., transport 70677
$YBa_2Cu_3O_7$ Josephson jn., $LaAlO_3$ bicrystal, THz spectrosc. 70851
$YBa_2Cu_3O_7$ thin films on substrs./bicrystals with vicinal offcut, high I_cR_n jns. 70673
$YBa_2Cu_3O_{7-\delta}$ SQUID, grain boundary jn., vortex motion 70929
$YBa_2Cu_3O_{7-x}$ bicrystal Josephson jn., THz spectral anal. 70850
ZnO-based quasi-bicryst., CVD epitaxy, struct. 68224
bifurcation
see also chaos; nonlinear dynamical systems
1D iter. map with infinite collapses, chaotic charact. 90679
3D automated segmentation and structural anal. of vascular trees using deformable models 121884
3D hysteresis piecewise-const. cct., bifurcation 90693
absorptive opt. bistability eqn., time-depend. bifurcation, dyn. behaviors *(Chinese)* 117493
anisotropic vectorial Kerr cavities, bright cavity solitons 72067

furcation continued
automatic current control systs. with PWM-1, pre-chaotic behaviour 123577
autonomous space-invariant CNNs, complex dyn. 90680
boost converter, qualitat. dyn. 99762
broadband chaos generation, blocking oscillator, continuous power spectrum 79527
buck converter, chaos, bifurcation diag., PID controller 112625
buck converter, period doubling bifurcation, harmonic bal. anal. 99764
BVP, param.-depend. sing. 101063
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
chaotic oscillators, transm. line coupling, bifurcation 90689
chaotic spiking oscillator, periodic pulse-train input, sync. phenom. anal. 102471
chaotic spiking oscillator transistorised cct. 102472
chaotic syst. control by dithers, Lyapunov method 101718
Chua's eqns., cusps in strong resons. organized for degenerate Takens-Bogdanov 125203
Colpitts oscillator, amplit. of oscill., nonlin. syst. theory 101828
coupled arrays of oscillators, sync. stabil., universal probe 90682
coupled BVP neurons with external impulsive forces, bifurcation and chaos 90685
coupled Chua ccts., chaos sync., uncertainty phenom. 101723
delayed-feedback klystron oscillator, chaotic operation 91558
diode coupled RC phase shift oscillators, chaotic phenom. anal. 125259
directly modulated high-speed LW LD, stabil. and nonlin. dyn. 71917
discrete-time DC-DC converter, bifurcations detectability, stochastic reson. 77990
dual channel reson. DC-DC power converter bifurcation 123626
external cavity semicond. lasers, low-freq. fluct., stochastic dyn., calcs. 93634
fiber-optic ring resonator coherence effect, nonlin. dyn. 105466
fingerprint ident., automatic, curvature-based matching approach 84620
Fisher eqn., first-order and second-order, chaos-free, finite difference schemes 114137
flexible rotor, act. mag. bearings, bifurcation anal. 127410
generator set supercritical Hopf bifurcation studies 88676
hysteresis oscillator, bifurcation anal. 114651
IM, robust tuning of speed loop in indirect field oriented control 123928
IM drive field-oriented PI speed control, bifurcations 134434
integrate-and-fire chaotic cct. with periodic input, dyn. study 68542
large nonlin. microwave ccts., Krylov-subspace tech. for global stabil. anal. 80248
limit cycle, bifurcation anal., Floquet multipliers 101706
log-domain cct., exponential I-V rel., nonlin. dyn. 90695
lossless multiconductor transm. lines, nonlin. resistor termination, dyn. 101698
lossy single lines, nonlin. resistors, bifurcations and chaos 101699
matrix-free num. continuation/bifurcation 101020
microchip laser, fiber-coupled diode end-pumped, helical-wave emission dyn. 105224
micromachined elastic struct. with electrostatic actuation, bifurcation of equilibria 70348
mode-locked lasers with fast saturable absorbers, pulse generation, solitons, period doubling 93734
model-based meas., resoln. concept, param. estim. 109394
MOSFET thermal params. from electrothermal oscills. 115934
multiparameter bifurcation points, NLO systs. 82931
Neimark-Sacker bifurcation param. values, fixed point calc. method *(Japanese)* 68534
nonautonomous electronic cct., expt. study of nonlin. dyn. and chaos 68545
nonautonomous systs., chaos generator, Duffing-like oscillator 68539
nonfeedback nonresonant laser syst. control 128422
nonlin. commun. scheme, sync., multiple attractors 129062
nonlin. feedback systs. with short time-delays, dyn. study 105549
nonlin. optics, coupled Schrodinger eqns., multipulse solns. 93865
nonresonant Hopf bifurcation of Van der Pol-Duffing syst. *(Chinese)* 90676
ODEs, border-collision bifurcation and corner collision 79556
one machine infinite bus power syst., nonlin. oscills. *(Chinese)* 99261
one-way open coupled double-scroll ccts., spatial instabil. 90681
opt. injected semicond. laser, sudden chaotic transits. 82791
opt. injection semicond. lasers, chaotic attractor bifurcations 93753
parallel-connected boost converters, bifurcation behaviour 68575
period-doubling bifurcation, quasi-anal. method 90688
piecewise-lin. chaotic cct., bifurcation, hysteresis and 1D map 125200
PLL forced eqn., double heteroclinic tangency crisis 90802
polycarbonate layer CD recordables, radial-pattern form. 116583
power HBTs, dyn. self-consistent electro-thermal model 115848
power syst. diff.-alg. eqn. model, stabil. limits, param. space 99286
power syst. nonlin. oscills., stabil. criterion, Hopf bifurcation theory *(Japanese)* 111926
power syst. transient stabil. assess. methods comparison *(Chinese)* 122841
power syst. transient/voltage stabil. enhancement control scheme 77246
power syst. voltage collapse points calc. using OPF method 99265
power syst. voltage stabil., dyn. state-space anal. *(Chinese)* 99263
power syst. voltage stabil., SVC/TCSC effects anal. *(Chinese)* 122860
power systs., double sing.-induced bifurcation points and sing. Hopf bifurcations 88337
power transfer capability incorporating FACTS devices *(Chinese)* 77259
PWL hysteresis based oscillator, 2D bifurcation diag. 90788
PWM voltage-controlled DC-DC boost converter, chaos, quasi-periodic route 101756
QW LD, optoelectronic delayed-feedback and chaos 82646
rect. plate buckling with block GMRES method 124676
rotor syst. with clearances, bifurcation, nonlin. dyn. theory 99620
self-exciting Faraday disk homopolar dynamo, behav. in external mag. field 112548
self-oscillating mixers, nonlin. design tools 101868
semicond. laser phase-conjug. feedback, bifurcations to opt. chaos 93735
simple power syst. voltage stabil., dyn. anal. 122871
single-machine-infinite-bus syst. Hopf bifurcation 88351
slow-freq.-hopped slotted ALOHA systs. with retransm. cutoff, stabil. 131062
solid-state laser, Laguerre Gaussian $TEM_{0,1}$* mode dyn. 82590
standalone/parallel DC-DC power converters, nonlin. stabil./dyn. anal. 88900
stressed power syst. global control, stabil. 88352
switch-coupled relax. oscillators, superstable sync. phenom. 90784
switching soln. branches at pitchfork bifurcation point 79042
synchronized oscillators, nonlin. dyn., noise effects 114655
three-bus power syst., model, chaos, dyn. IM model *(Chinese)* 111839
thresholds detect. by electronic cct. using jump phenom. 68531
turbogenerator shaft torsional oscill., bifurcation anal., stable region estim. *(Chinese)* 77827
two-machine infinite-bus power syst. steady-state stabil. limit *(Japanese)* 77250
two-order cascading AO bistable syst., hyperchaos control *(Chinese)* 104843

bifurcation continued
Van der Pol oscillator coupled to Duffing oscillator, dyn., analog simulators 79528
van der Pol oscillators, fully-interconnected, multimode oscills. 90783
vascular branches in fundus retinal images, geom. and morph. anal. 87521
vis. semicond. lasers with external light input, chaotic oscill. modes, commun. appls. 105328
voltage stabil., generator and load dynamics effect 88382
Z_2-symmetric electronic cct., Takens-Bogdanov bifurcations of periodic orbits and Arnold's tongues 68544
zigzag sampled phase detect freq. synthesizer, Hopf bifurcation set, chaos *(Chinese)* 125249
$BaTiO_3$:Co semilinear photorefr. coherent oscillator, opt. phase transit. 128454
CdMgTe-CdTe-CdMnTe asymm. QW, mag. polaron bifurcation, photolum. spectra anal. 80833
Er-doped fibre dual-ring laser, chaotic systs. inverse sync. scheme anal. 105186
GaAs bifurcation optic act. device, extinction ration, half-wave voltage 116704
Ge oscillistor, electron-hole plasma, nonlin. chaos phenom. 69499
Si FZ cryst. growth, Marangoni flow/interfaces, 3D simul. 90231

big-bang theory *see cosmology*

bilinear systems
computer vision, noise in bilinear problems 106652
filtering, suboptimal, bilin. stochastic differential systs. 84745
H_∞-suboptimal fault detect. filter 73642
hard-switching DC/DC power converters time-varying sliding-mode control *(Chinese)* 99792
nonlin. blind equalization, bilinear recursive polynomial perceptron 119178
TPP superheater syst. temp. control, bilinear syst. controller design 133861

billing *see invoicing*

BIMOS integrated circuits
see also BiCMOS integrated circuits
60 V NMOS/PMOS transistors for multi-voltage syst. integrat. 127077
ADXL202E accelerometer, very small sigs. detect. 131846
BCD5 smart power technols., ESD protection struct. 127074
BCD, BCDMOS technol., gate oxide lifetime indicator, wafer level reliab. 104144
BCDMOS smart power technol., MOSFET-based temp. sens. 116044
clustered IGBT monolithic integrat. with LV components to form 3 kV intell. power chip 81537
FSK power line transceiver with reduced power consumption 131042
high performs. switching buck converter IC 78002
LDMOSFET, 25 kV ESD proof, with turn-on discharge MOSFET 92367
nanoelectronic complementary bipolar ccts., single-lithog. proc., num. simul. 70323
power VDMOS FETs in BCDMOS technol., reliab. study 126727
SC DC-DC convertor, monolithically integrated, BiMOS proc. *(English)* 88978
smart IGBT for automotive ignition appls., chip on chip technol. 134603

bin packing
2-dimens. vector packing problem, lower bounds and algms. 90022
CPLD technol. mapping algm. under time constraint 68681
DAB network ensemble planning, problems and techs. 120514
GPRS wireless networks, resource allocation 85775
oligo arrays, equireplicate bal. binary codes 125931
polynomial-time approx. algms., bin-packing algms., maximizing no. of unused bins 100976
SONET/SDH, optimal cost stacked uni-directional path switched ring design 86042
VOD syst., optimal MPEG file placement, GA 131759

binaries (stellar) *see binary stars*

binary adders *see adders*

binary codes
see also binary sequences
2D runlength constrained arrays, zero/pos. capacities 128964
[52, 26, 10] binary self-dual codes with an automorphism of order 7 83865
adaptable binary entropy coder 106178
ADSL DMT systs., turbo coding 129203
alg.-geometric codes better than Gilbert-Varshamov bound, low-complexity constr. algm. 117925
analog MAP decoding with binary trellises, cct.-based interp. *(English)* 72842
arith. coding and rapid probab. estim. 73325
ARQ incremental-redundancy scheme in block-fading Gaussian collision channel, throughput perform. 129074
asymptotically good quantum codes exceeding Ashikhmin-Litsyn-Tsfasman bound 83922
asymptotically good quantum codes from alg.-geometric codes 83923
AWGN channel, complexity of breadth-first bounded dist. convolutional decoding *(English)* 72833
BCH binary codes, bounds for min. dist. of duals 83920
Bent seqs. based variable-length coding for wireless advertising 129056
bridge & generalised bridge fns., copy theory, binary codes *(Chinese)* 106078
broadband wireless channels, soft decoding techs. 94276
CDMA mobile systs., complete complementary code for efficient freq. usage 130306
CELP speech coding, soft-decision decoding of binary block codes 118094
chaotic phase code for radar pulse compression 96948
Clifford groups invariants 117871
completely transitive codes with error-correcting capability e>3, nonexistence 72793
compression improvement by coupling coding techs./redundant transform 95388
convolutional codes, max.-likelihood decoding, error probab. bounds 129134
crit. indecomposable codes, constr. 83911
cryptographic props. of cosets of R(1, m) 72943
cyclic codes which are Z_4-cyclic codes 129144
digital fingerprinting codes 129135
distributed sens. networks, sens. placement using coding theory 130160
DS/CDMA multirate commun., multiuser detect. 107571
DS/SSMA tech. for MBC 131338
duadic codes over ring Z_{2k} 72786
even isodual codes, generalized Hamming wt. enumerators/coset wt. distribs. 129077
extremal doubly-even self-dual codes of length 40, mass determ. 117940
extremal even formally self-dual codes of lengths 20 and 22, classif. 94282
extremal self-dual codes, trellis struct. and higher wts. 117965
fix-free codes existence, sufficient conditions 129219
formally self-dual even codes of lengths up to 16 class. 94298
frameproof codes, efficient constr. 129110
Frog-in-the-Box codes and robust quantizer index assignments 129214
future mobile radio systs., turbo-coded modulation *(English)* 74722

binary codes continued
Goppa codes constr. 118002
h-Chase decoding, testing conditions eval. method 129209
hexagonal (d,k)-constraints capacity 129079
Huffman codes redundancy, Gallager's upper bound improvement 129168
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image enhancement based on GA *(Chinese)* 129505
incoherent detect. of multi-posn. sigs. 107582
iter. reliab.-based decoding of low-dens. parity check codes 72883
laser beam, analog intens. value, binary coded data with tree archit. 116871
length 40 binary self-dual cyclic codes 117976
limited-order blocksort based image compression 107089
lin. code, automorphism group computation 129041
lin. code detect. and recogn. 94288
lin. codes, complete coset wt. distrib. computation *(Japanese)* 83846
lin. codes, computational model 106077
lin. encoders, constellation labeling 117932
lin. error detect. block codes, criteria *(English)* 72844
lin. Hamming codes, efficient algm. 106127
lossless image data seq. compression using optimal context quantization 107053
LPC in binary syst. for speech sig. transm. 73025
min. av. dist. of binary codes, LP approach 90023
min.-PSL binary codes 94326
ML-decoded low-dens. parity check codes, tangential sphere bounds on ensemble perform. *(English)* 72840
MPEG-4 imagery, ring convolutional trellis codes design for MAP decoding 129800
MPEG-4 shape decoding, conformance test 118533
multi-bit binary arith. coding 94268
multiposition sig. detect. by decomp. method 107581
multiuser k-ary code for noisy multiple-access adder channel 117947
noisy channels, decoding bit-error probab. upper bound 129117
oligo arrays, equireplicate bal. binary codes 125931
opt. orthogonal code design using GA 128999
optimal binary codes of length 9 and covering rad. 1 117939
optimal binary cyclic self-complementary codes 129082
optimal joint source-channel decoding, iter. approx. 106151
optimal prefix-free codes ending in specified pattern, uniform probab. case 106168
perfect 2-burst-correcting codes constr. 117938
perfect binary codes, struct. of i-components 94287
perfect codes, intersection matrices for partitions 72794
permutation codes, multilevel constr., cardinality 129030
phase coded pulse compression, time sidelobe reduction 109258
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
prediction-based text compression, binary coding 107471
printed images, watermarking/copyright labeling 106888
PSK full diversity space-time codes 129128
pulse-compression radar, neural network sidelobe suppression filter 109271
punctured recursive convolutional encoders and appl. in turbo codes 117930
quadratic trace Goppa codes, true dimens. 117968
quantum self-dual codes and symmetric matrices 129069
reduced GMD decoding with threshold erasing 129207
Reed-Muller binary code, non-min. codewords 129054
Reed-Muller code R(2,5) decoding by hand and by machine 129093
Reed-Muller codes, projections onto GF(4) and multilevel constr. 117941
Reed-Muller codes, seq. stack decoding *(English)* 72836
self-complementary bal. codes and quasi-symmetric designs 129159
spectral graphs for quasi-cyclic LDPC codes 129175
systematic binary alg. block codes, iter. decoding 72826
t-design supporting binary lin. codes 117927
tracking radars, time domain synthesized binary phase code sidelobe suppression filter 75094
turbo codes, dist. profile *(English)* 72847
turbo codes, trellis complexity anal., interleaver props./appls. 72898
turbo-single parity check codes 72895
Type II codes over F_4 117926
undetected error probab. for binary codes 129132
uniform nonlin. binary arrays, enumerative aspects/asymptotics 129078
unrestricted block codes, dist. distrib. bounding 129107
vertices sets identifying codes in Hamming spaces 117978
wt. distribs. of coset leaders of some Reed-Muller codes and BCH codes 72801
Z_4-lin. Goethals codes, coset wt. distribs. 72787
Z_4-lin. Goethals codes, coset wt. distribs. 83909
Z_8-lin. Hensel lift of binary Golay code and nonlin. binary $(96,2^{37},24)$-code 72788

binary decision diagrams
*BMD minimisation exploiting don't care conditions 100875
asynchronous seq. ccts., anal., OBDD method *(Chinese)* 79834
automatic functional vector generation using interact. FSM model 79741
behavioral and gate level designs, power estim. improvement 90823
biosignal engng., integrated intell. class. engine appl. 132519
Boolean fn. spectral transform., BDD rep., graph transform. 79704
Boolean satisfiability procedures in formal verification of superscalar/VLIW μP 125549
cct.-based Boolean reasoning, structural transforms., SAT procedure 125349
CMOS seq. ccts., power estim. using graph-based methods 114695
CMOS wave steered ccts., latch count minimization and latency, integer LP 125440
combinat. cct. path delay faults, ATPG methodology 79810
combinat. ccts., multiple error rectification, AND/OR graphs and BDDs 68741
combinat. equivalence checking using Boolean satisfiability and BDD 79790
combinat. logic ccts., test generation, OBDD *(Chinese)* 79756
decentralized M-ary detect. via hierarchical binary decision fusion 83780
digital cct. sig. probab. calc. in Boolean fns., graph oriented realization 68678
digital ccts., timing simul. with BDDs 79693
fault tree anal., component/gate importance assess. algms. 78714
formal property verification, abstraction refinement, formal, simul. and hybrid engines 125430
FPGA design based on LUT, error diagnosis via pattern- and BDD based formal tech. *(Japanese)* 125278
hierarchical image computation, dyn. conjunction scheduling 125397
image resoln. increase, binary operator design, k-NN learning 118456
IP-based designs, delay fault testing via symbolic path modeling 125288
k-out-of-n and related systs., reliab. assess., BDD 89929
landmine/UXO detect., GPR/EMI/magnetometer sens. fusion 77020
logic fns., evol. synthesis using MUX 114679
logic verification, Boolean matching by simplified BDD *(Chinese)* 101662

binary decision diagrams continued
low power cct. synthesis combining CMOS/pass transistor logic *(Japanese)* 79850
min. expected path length, Boolean fn. rep. 79703
minimization of decision diags. 125311
minimization of OPKFDDs using GA 125310
multi-output incompletely specified logic fns., bi-decomp., BDD-based method 125431
multiple-output logic fns., realization by reconfigurable cascades 125462
nanoscale Coulomb blockade memory and logic devices 81400
OC-3072 packet class. using BDDs and pipelined SRAMs 125281
oscillating algm. for variable ordering in BDDs 68676
pseudo-symmetric BDDs, global approach to variable ordering problem 101977
QD logic ccts., shared BDD 101999
reduced ordered BDD, variable ordering by scatter search 125188
RSFQ logic cct., std. cell design, BDD 70820
RSFQ logic cct., top-down design, BDD 70891
RSFQ μP, cell-based top-down design methodology 127491
satisfiability-based functional delay fault testing, CNF formulas 101951
seq. ccts., use of don't cares during symbolic reachability anal. 102104
speed-independent async. ccts., test pattern generation 79807
static CMOS and pass transistor logic designs, technol. mapping, delay reduction 125417
symbolic cct. anal., lower bound based determinant decision diag. minimisation 125189
symbolic verification of Boolean constraints over partially specified fns. 101976
VLSI CAD, hist.-based dyn. minimization during BDD constr. 101949
wave-steered design methodology, global routing tech. 126967
InGaAs quantum wire honeycomb network, BDD quantum LSI, MBE growth 115972

binary reflected codes *see Gray codes*

binary sequences
see also binary codes; codes; m-sequences; number theory; switching theory
2D binary (d,k) constrained array 72707
2D perfect quaternary arrays 72782
2D runlength constrained arrays, zero/pos. capacities 128964
adaptive channel equalization using class. trees 119188
Alexis binary seqs. with perfect correl. 83878
almost-perfect quadriphase seqs. 117867
array set, zero correl. zone 83868
arrays with zero correl. zone 129097
asynchronous DS-CDMA, choice of chaotic spreading seqs. 72939
asynchronous DS-CDMA syst., SS seq. design using chaotic dyn. systs. 94306
Baker transform based chaotic FH seq. *(Chinese)* 117961
Bent seqs. based variable-length coding for wireless advertising 129056
BER upper bound for single user as fn. of interfering user's sig. strength 107575
CDMA, max. periodic correl. of pseudo-random seqs. 107769
CDMA channel with two-level total sig. quantization, coded orthogonal sigs. reception, noise immunity 119203
CDMA commun., delay estim. using fast ICA algm. 107768
CDMA design through asymptotic anal., fading channels *(English)* 73856
CDMA mobile systs., complete complementary code for efficient freq. usage 130306
CDMA pulse-posn.-hopped syst., capacity anal. 119939
chaos-based DS-CDMA, CCI, multipath propag. and receiver sync. 96403
chaos-based DS-CDMA syst., optimal MAI reduction 95823
chaotic neural encryption/decryption network, design and VLSI archit. 68989
code cracking problems, complexity computation 129263
conditional correl. attack, anal. and modifs. *(English)* 72960
correl. binary source compression using turbo codes 129014
correl. sources over noisy channels, joint source-channel decoding 106173
countable alphabet sources, arith. coding, finite precision 129034
data encryption scheme, arith. coding *(Chinese)* 118016
DC motor ASD testing, param. ident., pseudorandom binary seqs. 113087
DFT of N-point real seq. and inverse DFT of N-point complex seq. with conjug. symm. 72767
diagnostic March tests for memories, ATG algm. 102140
Diffie-Hellman public-key exchange scheme, weak private-keys *(Chinese)* 94366
digital matched filter for real-valued shift-orthogonal finite-length seq. *(Japanese)* 68939
discrete Gabor transform matrix, rank 73626
DPSK-based distributed sample acquisition for coherently demodulated MPSK/DS-CDMA systs. 94230
DS-CDMA, joint despreading and iter. decoding with serially concatenated turbo code and Walsh code 83891
DS-CDMA, spreading seqs. over GF(p) with low correl. zone 94324
ellipt. curve random no. generator 118030
filter categories preserving desirable sig. charact. 130047
finite digital sync. ccts., 2-alg. truth tables characterisation 90863
FNS muscle model ident. using Matlab Simulink 122328
generalized RS codes, explicit wt. enumerator 72922
Hall's sextic residue seqs., lin. complexity 83793
integer-modulated filter banks providing perfect reconstruction 119070
joint source/channel coding design 94303
Legendre seqs., trace representation 129195
LILI keystream generator 129321
lin. FSM, phase shifter synthesis, pseudorandom seq. generation 90832
lin. parallel interf. cancellation, perform. 84797
lin. periodic time-varying filters for digital coding 130071
lossless image data seq. compression using optimal context quantization 107053
M-ary/DS-SS syst., digital matched filter using real-valued shift-orthogonal finite-length seqs. 85519
message authentication in broadcast networks, prepositioned secret sharing scheme 118034
mixed-sig. cct., syst. level testing of analog fns. 68955
mobile computing, organization of invalidation reports for energy-efficient cache invalidation 108348
modulatable periodic complete complementary codes, generalized constr. 83897
multicarrier DS/SSMA syst. with reduced MAI and higher data rate in Rician fading channels 119896
multiple burst correction RS codes, decoding 129147
multiplicative watermarks, optimal detect. 118618
nested block decodable runlength-limited codes 72796
noise presence, universal prediction 117921
noisy indiv. binary seq., twofold universal prediction for finite-state predictability 83916
nonrobustness property of indiv. ergodic theorem 117878
OFDM, joint time freq. sync. and channel estim. using one training sym. 106042

nary sequences continued
opt. orthogonal code design using GA 128999
optimal autocorrelation, constr. 72797
optimum binary spreading seqs. of Markov chains for async. DS-CDMA systs. 129000
optimum compaction FIR filters, line spectrum design 119073
orthogonal Oppermann seqs., family size 72829
oversampled chaotic map binary seqs., realisation and perform. 72938
permutations containing/avoiding 123 and 132 patterns 67840
phase control seq. fast generation, array interleaving *(Chinese)* 83839
PN generator, DSP 106103
PN seqs. with low correl. zone, anal. 72798
polyphase seqs. with even/odd crosscorrelation props. 108527
power spectrum tests of random nos. 106207
pseudorandom seqs. with given probab. of unity syms., generation 83833
pulse compression radar, ambiguity anal. using Gold code seqs. 96931
q-ary shrinking generator, period and lin. complexity of seqs. *(Chinese)* 72979
Q-CDMA and chaotic SS CDMA systs., perform. comparison over Saleh indoor channel 74584
quantised chaotic dyn. in multiplex commun., 1D maps 94304
quasi-orthogonal seqs. 83896
radar sig. design problem with neural network proc. 120435
radiotransmission security systs., selection of key code seq. 118021
random-like unpredictable binary seqs. generation, chaos, adaptive median thresholding 95621
secure encryption, binary seq. lin. complexity profiles *(English)* 72964
SFQ chip, SS modem, dewar-to-dewar data transfer 70940
shifter/accumulator pairs in datapaths, deterministic BIST scheme 79737
SoC embedded cores testing, twisted-ring counters use 101966
spreading seqs., bounds on aperiodic and odd correl. 117958
SS comms., NBI cancellation using chaos 95821
SS transm., spreading waveform estim. 72725
stack filters optim. based on mirrored threshold decomp. 73656
sync. CDMA syst., perform. of UCHT seqs. 73848
text decoding, stat. reasoning 106108
three-state Markov chains, optimum spreading seqs., SSMA 94307
universal lossless data compression with side inform. using conditional MPM grammar transform 117920
watermarking syst. based on Bernoulli chaotic seqs., stat. anal. 94265
wavelet based image watermarking schemes, comparison 95369
woven convolutional codes, pipeline decoding *(English)* 72854

inary stars
LISA grav. wave background anal. using time-delay interferometry 132192

inomial distribution
adaptive QC strategy, inspection reduction, acceptance-sampling schemes 124436
bandwidth demand, second telephone lines and on-line services 130992
BCH codes/duals, dist. distribs. 83933
clinical radiotherapy, normal tissue complication probab. calcs. 133019
IC defect level estim. and model accounting for fault clustering effect 104044
image texture, auto-binomial model param. estim. methods 118193
interconnected power systs., transfer capability eval., hybrid stochastic approach 133434
light traffic in cellular syst. with mobile subscribers and appls. 119997
$M^X/M/\infty$ queue, transient anal. 78779
matching transformers, design methods comparison 83468
memoryless sources, binomial channel capacity or min. coding redundancy 128947
paired-comparison-based scaling methods, error simul. 94871
Poisson's law and inform. theory 128938
Poisson and binomial distribs. as max. entropy distribs. 83789
queue, 1 server, 2-stage heterog. service, vacations 89966
spectral-amplit.-coding opt. CDMA syst. perform. anal. 96664
transitory evoked otoacoustic emissions, subjective class./machine scoring *(German)* 121993

io-optics
see also biological effects of optical radiation; bioluminescence
3D endoscopic images, ref.-based fast stereo matching syst. 76403
acousto-photonic imaging, field interact. mechanisms 87538
biliary tract percutaneous-transhepatic fibre & video endoscopy 122051
biomarkers and biological spectral imaging, conf., San Jose, CA, USA (Jan 2001) 113265
bone tissue, pathological changes diagnostics, polariz.-correl. anal. 76407
brain, O_2 saturation from time-resolved diffuse reflectance meas. 87556
brain struct. & fn., high resoln. imaging using OCT 98380
C-reactive protein detect., CCD-based light-scatt. instrum. 87546
chromosome images, homologue class., iter. centromere segmentation algm. 87519
ciliary cell beats, metachronal wavelength, digitised image correl. map 76402
cytoskeletal organis. in chondrocytes, temporal var., image anal. 87541
dental freq.-domain IR photothermal radiometry & luminesc. 87532
diffuse opt. tomography inverse problem, admissible soln. approach 110844
digital endoscopic imaging syst., pass. autofocusing *(English)* 87543
digital opt. fibre photoplethysmograph design, DDS, DSP 110847
ellipsometric imaging syst., image grabbing, image proc. *(Chinese)* 94603
epithelial neoplasia, early detect., fluoresc. guided OCT 98376
heart surface deform. meas., computer aided speckle interferometry 122053
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
human tissues, opt. charactn., time-resolved reflectance spectrosc. 110843
hyperspectral fundus imager, syst. concept & data proc. 98346
local tissue charactn. by backscatt. AO imaging 122039
low-coherence off-axis photorefr. holography, beam walk-off elimination 72090
meconium conc. in amniotic fluid, biosensor design/develop. 86679
mini-endoscopes develop. for ENT disease diagnosis/treatment 122050
mini-endoscopy in orthopaedic/traumatology diagnostics/therapy 122278
multiply scatt. coherent light, US modulation, Monte Carlo model 122043
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
NIR tissue imaging syst. with diffuse photons, 2D image constr. 76392
OxiCarbo sens., noninvasive arterial O_2 saturation & P_{CO2} meas. 87547
primate/rabbit eyes, polaris. sensitive OCT, birefr. tissue 98378
pulsed photothermal radiometry, blood vessel-like structs. investig. 76383
retinal hazard eval., laser safety apparent source anal. 111190
thermographic diagnosis standardisation, data proc. method 76391
tissue fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
tissue imaging, US-modulated opt. tomography, parallel detect. 87531
tissue microcirculation imaging, phase resolved OCT/ODT syst. 98379
tissue opt. props. meas., small portable spectrophotometry syst. 122058
tissues imaging, US tagging of transm./backscattered photons paths 87511

bio-optics continued
tooth-bone interface, advanced digital photoelastic investigs. 76384
ultrasound tagging of light, detect. of inhomogeneities 93261
ventilatory movements monitoring, FBG strain sens. 98349

bioacoustics
see also biological effects of acoustic radiation; biomedical ultrasonics; hearing; sonar
biomimetic platform for studying echolocation of bats 86250
bone struct. ultrasound interact. simul. based on 3D MRI/micro-CT 98314
breathing sigs., time-freq. anal., in vitro airway model 110675
chest-wall surface, lung-sound transducers, absol. sensitivity *(Japanese)* 87322
dorsal aortic flow vel. in chick embryos of stage 16 to 28 110794
echolocating bat, spike-based VLSI neural syst. modeling 125639
inhomog. tissues, microwave-induced thermoacoustic tomography 132648
knee-joint vibr. sigs., computer-assisted sonification 87476
laryngeal pathologies detect., acoustic anal. of speech, ANN 87500
living body, sonoluminescence imaging, clinical diagnostics appls. *(Chinese)* 76375
LW sound wave CT, prior distribs. subspace projection algm. 98279
minke whale vocalization, localization and visual verification 86244
multielement carotid tonometry sens., noninvasive pulse wave vel. meas. 122019
phonocardiogram sig., short-time FT anal., nonstationarity 76362
phonocardiograms, automatic denoising methods comparison 121991
pulmonary diagnostic syst. for combat casualty care, obstructive/restrictive flow charact. extraction 76337
respiratory impedance meas., forced oscill. tech., analogue instrum. 87493
respiratory sound class., spectral correl. methods 87504
skin US param., global & local estim., high resoln. images 110716
snoring sig. automatic detect., simple snorers/OSAS patients 110682
snoring sigs., automatic pitch detect., early disease diagnosis 98339
sonar, overlapping underwater sound streams, separation and fusion 119088
temporomandibular joint clicking sounds, time-freq. anal. with radially Gaussian kernels 98321
wheezes, lung disease, time-freq. detect./anal. algm. 98340

biochemistry
act. microfluidic mixer, microparticle-liq. mixing 92497
adaptive sig. transduction networks, robust amplif. *(French)* 118836
ammonium dichromate gelatin, enzyme etching, refr. microlens array fab. 71369
amperometric glucose sens., rMnO carbohydrate oxidase 109725
aortic valve leaflet cells, flow environ., biosynthetic activity 122341
biomass monitoring, continuous on-line opt. sens. 75680
biosensor materials, conf., Boston, USA (Nov.2000) 78376
blood serum, zero vs. geomag. fields, Zn/Cu effects 98748
bovine viral antigens detect., surface SHG based immunosensor 86687
brain fMRI & neurochemistry spectrosc., review 110896
brain MRI, J-coupled macromol. reson., GABA editing 132676
C-reactive protein serum diagnosis, latex piezoelec. immunoassay 98126
carotenoid antioxidants in living human tissues, reson. Raman detect. 122042
cartilage grown in hollow-fibre bioreactor, EPR O_2 mapping 132776
clinical mag. reson. spectrosc., freq. domain methods, review 98449
cochlear implants, elec. stimulation, pH shift 122340
coronary atherosclerotic plaque charactn., IVUS elastography/Raman spectrosc. 110808
coronary Ca quantification algms. reproducibility, electron beam CT 132504
diabetic patients, glycaemic control, biosensors appl. 132003
2,4-dichlorophenoxyacetic acid monitoring, QCM immunosens. 111471
dip-pen nanolithography, custom multicomponent sub-100 nm surface archit. fab. 103713
DNA array sens., mag. microbeads & GMR magnetoelectronic detect. 75668
dual receptor biosensors, fluoresc. reson. energy transfer pairs 109721
ELF mag. field effects on haematological/biochem. params. 98752
enzyme-immunoassay, amperometric detector appl., AIDS/hepatitis diagnosis 120949
ferrocene encapsulated ormosil modified electrode, GOD bioelectrochem. 97417
human tissue X-ray diffr., breast, brain, prostate 110923
image sens., biochem., light-addressable potentiometric *(Chinese)* 97427
immunoassay element modelling of opt. immunosensor 120941
immunosens. sig. transduction, chronopotentiometry, Faradaic imped. spectrosc. 97411
lab-on-a-chip technol., microfluidic devices in chem. meas. 109781
lacidipine pharmacokinetics, circulatory model of distrib. 133005
lateral tibial condyle cartilage layer, gradient echo MRI 87593
mag. relax. immunoassay, low-T_c SQUID meas. syst. 70987
metabolites, normally aged brain, multislice ^1H MR spectrosc. imaging 87625
micro-total anal. syst., micro-opt. and microfluidic syst. 93168
microarray gene chip technol., lung physiology 91503
microfluidic chem. microreaction systs., multiphysics simul. tools 116073
octafluorocyclobutane patches, hydrophobic valves in deep reactive ion-etched channels 78107
opt. indust. procs. conf., Boston, MA, (Nov. 2000) 100387
piezoelec. quartz cryst. based veterinary diagnosis for Salmonella enteritidis infection 75681
pulsed RF EM fields, effects on selected markers of immune syst. 87935
radiochromato-imager, biological/biochem. appls., tissue/body sect. autoradiography 122270
reagentless bioaffinity sens., EIS, protein immobilis. in polypyrrole 120952
renal tumors, human, biochem. charactn., in vitro ^1H NMR meas. 98425
renal/hepatic tissue, 2-bromoethanamine toxicity, ^1H MAS NMR 87612
retinal oxygenation response to hyperoxic challenge, MRI meas. 132753
river biochem. O_2 demand eval. biosensor using photocatalytic pretreatment 132013
saline tonometry, continuous, method validation in porcine model 121876
SAW immunosens. for liq. environ., SiO_2 protective layer 97412
Si micromechanical cantilever-based biosensors, review 132015
SiON UV transparent multimode buried-channel waveguide biochem. sens. 75740

biocommunications
see also biocybernetics; hearing; learning systems; speech
animals speech recogn., acoustic-phonetic issues 94429
Japanese vowels, nonlin. deterministic struct. recogn., causal anal. 118110
minke whale vocalization, localization and visual verification 86244
natural radar detect./navig./direction finding tracking systs. guiding hornets flight, hypothesis 120437
rem. sign lang. via wireless network *(Japanese)* 87929

biocomputers
see also biocomputing
DNA computation for engng. optim. problems *(Chinese)* 125928

biocomputing
used for computing using biological mechanisms, use biology computing for computing about biological mechanisms
biologically inspired soft computing methods in structural mech. and engng. 80523
Blue Gene project, vision for protein sci. using petaflop supercomputer 91504
class. and fn. estim. of protein by using data compression and GA 102859
combinat. DNA word design 69349
context-sensitive components, evol. search strategy 102861
CPU-less robotics, distributed control of biomorphs 91501
CYBERCYCLER simulator for simulating biological reacts., modular approach 69352
DNA analog vector alg. and phys. constraints on large-scale DNA-based neural network computation 69348
DNA arrays in 21st Century 80524
DNA based computers, conf., Cambridge, MA, USA (June 1999) 67371
DNA computation, forbidding/enforcing 69356
DNA computation for engng. optim. problems *(Chinese)* 125928
DNA computing, error correction, misclassification and strand loss 69347
DNA computing, hybridization proc. 69351
DNA computing, NP-complete problems, rel. to GA *(Chinese)* 102866
DNA computing in vitro and in vivo 69359
DNA hybridization catalysts and mol. tweezers 69354
DNA simul. of Boolean ccts. 79758
DNA tilings, computation by self-assembly 69353
DNA wiring electronic props., research trends 125925
DNA-based cryptography 69358
DNA-based self-propag. algm., Boolean cct. simul. 79759
evol. strategy for global optim. of clusters in gene expression data of DNA microarrays 106459
liposome mediated biomol. computation 69346
logical string rewriting 102868
membrane computing and one-way fns. 102863
membrane computing based on splicing 69357
micro-array appls. 80525
mol. nanotechnol., overview & future implications 115211
mutation buffering capabilities of hypernetwork model 102860
nucleic acid computers, components design and selection 69355
oligo arrays, equireplicate bal. binary codes 125931
OneMax DNA evol. computation, vitro selection 69345
probabilistic logical inference using quantities of DNA strands 102858
RNA computer constr. 69344
smart on-board adaptive sens., MECA electrometer 133250
soft mol. computing 69350
splicing models separation 115213

biocontrol
see also biocommunications; biocybernetics
2-D/3-D whole-body PET scanning, true continuous bed motion 132945
3D conformal radiotherapy, relocatable head fixation syst. 76618
anaesthesia, hypnosis modelling/closed-loop control, bispectral index, isoflurane 98601
arterial unloaded situation modelling, oscillometric blood press. waveform meas. 121899
artificial heart blood pump, drive motor control *(Chinese)* 122352
artificial urethral valve, transcutaneous energy transformer, shape memory actuators 122344
asthma rem. control, telemedicine and Internet appl. 133191
atrial fibrillation induction, paced sheep model, pacing protocols effect 111145
BION bionic neuron syst., distributed neural prosthetic interfaces 76687
bladder controller nerve sig. analog proc. cct., implantable, low-power CMOS 76677
blinking commun./control channel for disabled people, image proc. 87930
cardiovascular syst. control during sleep, lin. feedback model anal. 87394
cardiovascular variability sigs. anal., transfer fn. estim. reliab. 87337
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
chronic selective nerve stimulation, implantable syst. 76689
cortical rhythms related to voluntary movements, EEG/fMR integrat. 76271
diabetic patients, glycaemic control, biosensors appl. 132003
digital controller, deep sig. power atten., 1-4 GHz range 80408
disabled pers., voluntary upper-limb movements, computer simul. 111139
drug delivery, controlled release microchip, microreservoirs 122279
EEG-based brain-computer interfaces, motor imagery control 111185
EM induced hyperthermia, optim. and control, model order reduction 133026
EMG prosthetic hand control, on-line learning method 87915
FES, mag. coil, power transm. and control sig. detect. 133047
FNS muscle model ident. using Matlab Simulink 122328
functional elec. stimulation, error correction, safe stimulation patterns 133006
functional reach test, elderly subjs., kinematic/dyn. anal. 76220
gait training, closed-loop controlled functional elec. stimulation 87913
hazard ident./safety insurance control for med. robot 98606
heart closed-loop pacing, atrio-ventricular cond. time, syst.-theoretical approach 133048
heart rate dyn. nonlin., neural network appl., ECG meas. 87386
hemiplegic patients, standing, special motion assess. 87330
hemodialysis, physiological blood press. control/stabil. 133004
implantable mech. microsyst. develop., blood pumps 122335
implantable microdevices, electrode-substr.-package codesign 122336
implantable stimulators, semi-custom CMOS vs. low-power microcontroller 76690
Implas LSI microchip, nerve stimulation, body fn. control 122337
limb movement, paraplegics, elec. stimulation control design 133000
low power hybrid posture monitoring syst. 132995
lung cancer treatment with CHARTWEL, breathing control appl. 98659
MANUS, wheelchair-mounted rehabilitation robot 87932
mol. nanotechnol., overview & future implications 115211
multiantenna applicators, regional hyperthermia, optimal controls, fast algm. 122305
multichannel cochlear implant technol. based FES, bladder control 76693
multifunction myoelec. prosthesis, agent-based control 87899
MUROS-1 med. imaging pixel detector read-out syst. design anal. 122155
neuromorphic VLSI cct. & spinal cord real-time interact. 122329
neurovascular coupling, cerebral autoregulation, control syst., Doppler US 76341
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
otiatria, mag. devices appl., implantable prostheses 76666
palmar skin, impedance locus meas., computer-controlled syst. 121951
paraplegic standing, feedback controllers design 76661
paraplegic subjs. standing, ankle control, neuro-fuzzy ang. inform. extraction 87801

biocontrol continued
powered orthosis control for people with muscular dystrophy 87916
prostate computer-assisted transurethral laser resection, motion plan 122308
prostate disease thermal treatment, MRI compatible intracavitary ultrasound array 76426
PTCA balloon catheters, computer-controlled inflation/deflation 87781
pulsed RF EM fields, effects on selected markers of immune syst. 87935
rabbit muscle afferents, nerve-cuff recordings, joint posn. effect 122327
radiometry controlled conformal microwave array hyperthermia applicator 76622
relax. syst., user's condition adaptation 110560
rhythmogram spectral anal., cardiac rhythm pacemaker control model 98700
saccade control, neural net model using probab. expectation 100795
semicond. strain gauge tactile transducer, finger force meas. 109509
simple bimanual movements, cortical motor control, mag. stimulation 76664
soft tissue mech. charactn., instrum. microgripper, force feedback 132505
spastic diplegia, prematurity/Angelman syndrome, distinct multijoint control strategies 121938
spinal cord injury fn. restoration, implanted stimulators 76688
tetraplegia, hand grasp, stimulated pronosupination, synergistic control 122326
TICA implant. hearing syst., direct electromech. stimulation 122334
total body irrad., cells array compensator, state-space water-level control 133038
total liq. ventilation, press.-limited respirator/lung mech. syst. 122283
upper extremity, myoelectrically controlled FES, pilot study 87888
upper limb five-DOF powered orthosis, design 87917
upper limb myoelec. prosthesis control, adaptive framework develop. 98711
vasovagal syncope, heart rate variability sig., time-freq. anal. 132550
virtual surgery syst. with haptic sensation for both hands 98589

biocybernetics
see also artificial intelligence; brain models; learning systems; man-machine systems; neural nets
BION bionic neuron syst., distributed neural prosthetic interfaces 76687
biophys. model of single synaptic connection, pre- and postsynaptic mechanisms 87426
carcinogenesis, visually safe dose estim., optimal risk assess. 98832
electrophysiological activity to cell metabolism sig. transduction, feedback regulatory biochem. pathway 87425
opiate receptors, mechanism of sig. transduction operating 87338
pass. broadband bionic sonar, underwater & buried target detect. 77055

biodiffusion
3D SSFP imaging, diffusion weighted, navigator motion correction 98399
BOLD/perfusion NMR, approaches to brain fn. studies 87653
brain, diffusion tensor MRI, partial vol. effects 87611
brain, extracellular apparent diffusion, NMR 87614
brain, MRI, apparent diffusion tensor 87667
brain, normal, high b-value diffusion-weighted MRI 122090
brain disorder class. based on apparent diffusion coeff. values in diffusion MRI 76472
brain MRI, Fe-rich gray matter, CPMG relax. rate 98441
brain MRI, highly diffusion-sensitised, gray/white matter dissoc. 87609
cardiac diffusion tensor MRI, solenoidal tensor fields, 3D reconstruction 87597
cardiac MRI, iter. approach to tensor tomography 132708
cerebral blood flow quantitat., diffusible tracer, background compens. 122245
corticospinal tract, treatment planning, BOLD fMRI appl. 110865
diffusion weighted MRI, microscopic tissue params. 76463
fMRI, BOLD sig. changes, extravascular contrib., num. anal. 132769
foetal lung maturation, EPI, diffusion meas. 122104
hearts, isolated perfused, 2-component diffusion tensor MRI 87642
herpes simplex encephalitis, diffusion-weighted MRI findings 110882
high ang. resoln. diffusion-weighted MRI 87631
intracerebral glioma, rat, lipid droplets size, NMR meas. 132665
intratumor injection of laser-absorbing dye, digital X-ray imaging tech. 122301
ischemic stroke, acute, diffusion/perfusion MR imaging 87605
laser transcutaneous drug delivery, model, diffusion rate 76608
lateral tibial condyle cartilage layer, gradient echo MRI 87593
mammalian tissues, endogenous metabolites, diffusion-weighted MRS 76464
microchip separations, diffusion coeffs. determ. 97561
MR diffusion tensor acquisition strategies optimisation, diffusion anisotropy meas. 87649
MRI, contrast agent research develop., conf., Attard, Malta (May 2000) 89509
MRI, noise correction, apparent diffusion coeffs. 132667
MRI diffusion-weighted RARE imaging, online motion correction 87608
myelin-deficient rat spinal cords, apparent diffusion tensor meas. 122097
nerve bundles connectivity, diffusion tensor MRI, scalar pot. field 87660
neural tissue water compartments visualis., diffusion tensor MRI 76442
newborns, functional residual capacity meas., He dilution transient phase 87343
NIR diffusive tomography, image reconstruction algm. 110837
perfusion, dyn. contrast MRI meas. in brain/heart 132736
single living cell probing microscopic photon correl. spectrometer 132645
spine, diffusion-weighted MRI, radial k-space trajectories 76423
stroke, acute, rapid 3D diffusion MRI, mice expts. 98444
stroke, white matter tract disruption, MR diffusion tensor imaging 132718
stroke MRI, diffusion-weighted EPI, sensitivity encoding 132695
tensor imaging of developing mouse brain 98429
trabecular bone, dipolar demagnetizing field MRI 132764
vessel size imaging, rat brain MRI/Monte Carlo simul. 132664

bioelectric phenomena
see also bioelectric potentials; biomagnetism
age/sex effects on ECG/cardiac electrophysiological props. in adults 76312
arrhythmogenic/normal human heart elec. excitation, modelling 98248
atria, computer model, reasonable computation load/realistic anatomical props. 132565
atria, human, defibrillation proc. study in computer model 76682
atrial defibrillation thresholds, atrial elec. remodelling effects 122282
atrial fibrillation, RF catheter ablation using long coiled electrodes 111051
auditory nerve, chronic elec. stimulation, high surface area Pt electrodes 122322
bioimpedance dyn., implantable lock-in analyser, mixed-sig. ASIC 110624
bioimpedance meas., orthostatic fluid shift effect 132553
biophys. model of single synaptic connection, pre- and postsynaptic mechanisms 87426
BOLD MRI responses, human sensorimotor activation, transcranial DC stimulation 122098
brain, deep stimulation, desynchronising double-pulse phase resetting appl. 133008
cardiac elec. field simul., noninvasive diagnosis aid 98236
cardiac myocytes, postnatal develop., elec. field stimulation 76718
cardiac tachyarrhythmias, SQUID magnetometer appl. 87459
cardiac tissue, phase sing. dyn., expt./theoretical anal. 110566
cellular elec. stimulation, light-addressed microelectrode array 132563

bioelectric phenomena continued
cerebellar granule neuron math. model 121926
cerebrally dead adult patients, pulsatile elec. impedance response, perfusion changes 87392
cochlear implants, elec. stimulation, pH shift 122340
cortical rat neurons, dissociated foetal, dielectrophoretic trapping 98227
current dens. imaging, MRI tech., biological systs. appl. 132726
cycling, functional elec. stimulation, test bed with force-meas. crank 87319
defibrillation and heart geom., meas., implications for defibrillation mechanisms 87470
defibrillation threshold lowering, crit. timed auxiliary shock 111053
diabetic patients, sympathetic skin response waveform 110575
driver drowsiness detect., physiological measuring syst. *(Japanese)* 132580
DSP-driven cochlear prostheses, eight-channel-stimulator design 122353
dyn. biol. syst. charactn., multisine based impedance spectrosc. 110625
ECT, DC current therapy for tumor compression, EM force distrib. 132998
electrophysiological activity to cell metabolism sig. transduction, feedback regulatory biochem. pathway 87425
electroporation mediated muscle injury, surfactant therapy 87782
electroporation threshold determ. in vivo, rabbit liver model 98211
electrosurgery, nonsticking, pass. cooled instrums. develop. 111060
EM wave/inhomogenous anisotropic media interact., FDTD anal. 83197
ESD transient EM fields, ultra wide band test syst. 87375
eye, artificial, control using EOG following real eye 98722
FES-cycling syst., network capability, multi-centre clinical studies 122284
FES-induced muscle fatigue, activation dyn. model 87891
functional bundle branch block ventricular extrastimulation-induced dissipation, electrophysiologic charcts. 121937
functional elec. stimulation, error correction, safe stimulation patterns 133006
gait training, closed-loop controlled functional elec. stimulation 87913
galvanic skin responses, principal component anal. 98250
glucose, amperometric determ., biosensor fab. 86675
haemodialysis, children, intercompartmental fluid shifts, impedance meas. 87796
Hall effect imaging feasibility in humans 110762
human body, power freq. mag. field interact., eval. methods *(Polish)* 133071
human body elec. fields resulting from 60-Hz contact currents 111192
human body-power freq. field interacts., modeling accuracy 133080
induced pain inhib. syst., elec. stimulation, hexagonal electrodes 111059
interferential current, psoriasis local treatment strategy appl. *(German)* 111057
internal atrial defibrillation, waveform optimisation 122281
intracranial tissues, living, cond., monopolar needle electrode 87390
knee elec. fields due to knee-thigh electrode pair 132999
left atrium activation patterns during clockwise/counterclockwise atrial flutter 121936
LF elec. fields, dosimetry in child/adult models 111241
liver graft rejection diagnosis, implant. telemetric impedance device 87449
long-term potentiation failure, posterior probab. estim., seq. Bayesian anal. 76295
long-term potentiation/synaptic events anal., LTP DAQ program 121949
Lorentz effect imaging, neuronal elec. activity detect. 132719
lower extremity, elec. nerve stimulation, H-reflex, F-wave params. 76275
lymph nodes, suspected malignancy, elec. impedance scanning appl. 76310
mag. stimulation, induced elec. fields rel. to coil design *(Chinese)* 110549
mosaic elec. props., human skin, line patterns, cross-correl. study 76296
MRI, current dens. distrib., mag. field meas., accuracy/limitations 98458
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
otosclerotic ears, elec. bone-cond. audiometry, Carhart notch effect 87359
palmar skin, impedance locus meas., computer-controlled syst. 121951
paraplegic pers., FES assisted sit-to-stand transfer 87890
paraplegic standing, feedback controllers design 76661
patient RF heating during MRI 133076
percutaneous device, implantable amperometric glucose sens. 86676
physiological response to music, reinforcement, neural net 110656
plunge electrodes, cardiac tissue elec. stimulation, extracellular mapping 121963
preterm infants, skin cond. changes anal., software program develop. 121914
pudendal nerve terminal motor latency, age effects/tech. considerations 76284
QRS wave extraction in ECG based on dyn. prog. matching *(English)* 110673
reflexotherapy, galvanic effects electrochem. aspects 87800
RF catheter ablation, heating efficiency prediction, bioimpedance meas. 111074
SAR, man model, parametric depend. on permitt. values 122428
SAR prediction, Sprague-Dawley rat, rel. to permitt. 133063
sens. transduction, model for biological detect. of EM fields 98750
skin cancer, X-ray therapy combined with HF elec. pulses *(Russian)* 111131
skin conductance meas., 3-electrode method, op amp param. influence 98203
spastic diplegia, FES-induced ankle dorsiflexion, PM effects 87892
spinal cord subacute combined degeneration, Vitamin B_{12} deficiency, electrophysiology, MRI *(Chinese)* 76435
sympathetic skin response to respiratory stimulation, sympathetic fn. meas. 98191
thin-layer mater. dielec. charactn., open-ended coaxial probe dimens. 121149
thoracic elec. impedance, fluct. airway obstruction/coughing episodes monitoring 87444
tissue, dielec. props., age, microwave freqs., dosimetry 87974
tissue ischaemia monitoring using impedance spectrosc., neural networks appl. 110585
transthoracic defibrillation current dens., two-layer segmented electrode 76593
transthoracic defibrillation with chopping-modulated biphasic waveforms 133053
UHF apparatus for water based gels in microwave phantoms 87846
ultrashort elec. pulses, intracellular effect 133068
virtual electrode polaris. and reentry in far field 122324
whole body fat, upper arm/leg elec. resist. 87393

bioelectric potentials
see also auditory evoked potentials; contact potential; electrocardiography; electroencephalography; electromyography; electroretinography; visual evoked potentials
3-D MCG QRS complex, HF components anal. using wavelet packets *(Japanese)* 110663
adaptive silicon neuron space-rate coding 114916
Alzheimer type dementia, daily activity monitoring, actigraph 76304
anterior spinal cord injury, preserved neurogenic motor evoked pots. 110647
arrhythmic propag., line stimulation-induced virtual electrodes, action pot. prolongation 76319
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
atrial action pot., stretch-activated channel blocker 87402
biomedical sig. ICA 121931
biomedical sigs., ICA for automatic noise and interf. cancellation 121929
biopotential amp., single supply 98216

bioelectric potentials continued
cardiac elec. activity imaging and 3D visualization 110635
cardiac electrophysiological fn., mag. field mapping 98260
cell-based biosensors, short time series, dyn./geometric anal. 109728
cervical nerve roots, evoked cpd. action currents, magnetoneurography 76325
chronic renal failure, hemodialysis, electrodiagnostic test 87362
CNS stimulation microelectrodes, current dens. & elec. field, FEM model 87885
cognitive brain elec. activity recording paradigms 110587
cortex, spike trains, precise firing seqs. detect. 110583
cortical rhythms related to voluntary movements, EEG/fMR integrat. 76271
cpd. nerve action pot. of common peroneal nerve 76322
driver vigilance monitoring, skin resist.-based automatic checkout syst. 67502
EEG, sens. stimulation, coherence between random/periodic sigs. 87376
EEG adaptive freq. decomp. with subsequent ES anal. 132560
EEG sig. ICA for brain tumor ident. 121928
EEG spectra, photoinduced reson. phenom. 87365
EGG, basic study for meas., electrode posns., mental stress appl. 76307
electro-oculogram, human, fast oscills. recording 132578
electronic spiking neural net building blocks 114914
electropotential problems, high-order coupled FEM/BEM procedure, computational perform. 132566
EM fields in the operating room, evoked pot. recordings disruption 98599
epileptic brain activity detect. and localization, dipole source anal. 121922
epileptic seizure detect. syst. using multiple single neuron recordings 110584
epileptic seizures, anal. of singing phenom. using partial coherence 121925
epileptiform activity suppression by elec. stimulation, review 111073
event-related desync./sync. during memory task, test-retest consistency 87441
evoked pot. DAQ, PC controlled const. current stimulator 98201
evoked pots. latency change estim., algms. perform. comparison 76256
extracellular recording, inexpensive high-perform. amp./electrode 87369
eye movements, impulse-like, effects of digital filtering on gain and latency params. 87366
F-wave studies, different params. comparison, diabetes appl. 98192
fast electrophysiological events, adaptive temporal recording, DAQ card 76306
FastICA decomp. of evoked responses, dipole modeling 110651
fMRI data anal., comparison of temporal and spatial ICA 122082
galvanic skin responses anal., PCA & hierarchical clustering 121959
gastric elec. uncoupling, deterministic chaos level dyn. 87418
head models with homog./inhomog. cond., pseudo-cond. values 87384
head SAR due to mobile phones, interpolation/extrapolation 111221
implanted cardiac pacemakers, elec. field interf. threshold 76667
left ventricular hypertrophy, action pot. cond., reduced anisotropy 110638
light-addressable microelectrode chip, extracellular stimulation/recording 87450
MEG, localization of independent components 121982
microwave stimulation of act. points and effect on elec. activity of brain fields 98740
monkeys, freely moving, brain single-cell recording 98232
motor cortex, piracetam, facilitatory I-wave interact., mag. stimulation 76248
multichannel EEG/event-related pot. recordings, electrolyte bridges detect. 76290
multichannel EGG, adaptive ICA 87385
multichannel match & mismatch evoked pots., robust class. 76259
nerve action pots. detect., low S/N ratio condition 98223
neuron-electrode interface, geom. based dyn. modelling 87378
olfactory event-related pots. in patients with brain tumours 121912
pain reduction cognitive strategies, somatosensory event-related pot./autonomic activity 121909
paraplegic subjs. standing, ankle control, neuro-fuzzy ang. inform. extraction 87801
Parkinson's disease patients, spontaneous blinks, EMG, electro-oculogram 87361
premovement bereitschaftspotential, steep early neg. slopes 121940
proximal lumbosacral nerve cond. tracing, simultaneous magneto-/electroneurography 110672
single-unit neural recording with act. microelectrode arrays 98226
sleep modelling, EOG and EEG sig. based Gaussian mixture model 121921
sleep onset, event-related pots. mismatch negativity vanishing pt. 87440
sleep spindle detect., fuzzy reasoning and autoassociative MLP methods 121924
somatosensory evoked pots., parametric modelling using DCT 132572
spinal cord neurons cultured on microelectrode arrays, response to stimuli and homeostasis 132583
spinal SEP anal., time-freq. distrib. tech. comparison 87424
temporal/correl./rate coding, unified approach 110588
tibial nerve SEP, vibr.-induced inhib. 76251
ultralate evoked pots., Tm:YAG laser stimuli, scalp topography 132587
whole nerve sigs., optimal filtering 87372
Si-microarray devices, heterog. protein crystn. screening 132010
Tl^{201} myocardial perfusion scintigraphy, surgical revascularization, ECG 98218

bioenergy conversion
32 MW biomass integrated gasification-gas turbine technol. project 123224
36 MW straw-fired steam power plant project, UK 88581
alternative vehicle powertrains, primary energy efficiency 134538
biomass gasification for elec. power generation appls. 123114
biomass materials downdraft gasifier perform. prediction 77686
biomass resource facilities/conversion proc. for fuels and chem. 77683
biomass-fired fuel cells, techno-economic anal. 99605
Botswana national renewable energy policy objectives/programmes 88524
brown coal-fired boiler retrofitting for waste wood incineration *(German)* 99546
cassava biomass fuel for power generation 77758
Chinese biomass gasification technol. develop. overview 99452
cottonseed cake pyrolysis, biocrude from biomass 88527
forest/sawmill residues based elec. prod., Ireland 133866
noncommercial biomass consumption driving factors, multivariate approach 99448
Ospitale di Cadore biomass fired fluidised bed power plant 88555
renewable energy policy in Lithuania 77682
renewable energy sources, social acceptance survey, Delphi questionnaire 88530
Romanian biomass use perspectives 112212
small tubular SOFC syst., CeO_2 biogas internal reforming catalyst 89252
solid fuels, coal, pet coke, biomass, cleaner technol. 99454
steam-turbine generator CHP plants, lightning effects reduction 112305
Syrian renewable energy resources study 88521

biographical dictionaries *see biographies*

biographies
Bernd Girod, entrepreneurial elec. engng. professor, biog. 124187
commun. business start-up mgt., Judy Estrin profile 95999
David C. Prince, switchgear design engineer, researcher, inventor 112699
Ferraris, Galileo, work in field of elec. power distrib. 78742
Herwig Kogelnik, lasers/optoelectronics developer biog. 82454

biographies continued
Jim Zimmerman, SQUID research, obituary 70948
John Logie Baird, TV inventor, biog. 100731
biological cybernetics *see biocybernetics*
biological effects of acoustic radiation
see also biomolecular effects of radiation; cellular effects of radiation
breast tumors, focused ultrasound surgery, MRI monitoring 87591
intracranial temp. elevation from diagnostic US 110791
physiological effects of noise/whole body vibrs. on rats 110506
piston transducer beam spatial averaging, diagnostic US bioeffects appl. 99072
biological effects of alpha-particles *see alpha-particle effects; biological effects of ionising particles*
biological effects of beta-rays *see beta-ray effects; biological effects of ionising particles*
biological effects of electric fields *see bioelectric phenomena; biological effects of fields*
biological effects of electrons *see biological effects of ionising particles; electron beam effects*
biological effects of fields
antenna technol. and applied EM, conf., Winnipeg, Man., Canada (2000) 78440
Bavarian pop. 50 & 16.667 Hz mag. field exposure meas. 98807
behavioral monitoring/mag. field exposure syst. 133064
blood serum, zero vs. geomag. fields, Zn/Cu effects 98748
cardiac myocytes, postnatal develop., elec. field stimulation 76718
cardiac pacemakers, MRI interf. 87907
cellular telephones, human head temp. rise, peak SARs, safety guidelines 88008
chromosomal aberrations, peripheral lymphocytes, Swedish train engine drivers 98743
CNS activity, mobile phone pulsed EM field effects *(German)* 87952
computational dosimetry, advances 87968
connective tissue regulation and mag. fields 98683
Drosophila melanogaster, wing size params., permanent mag. field effect 98745
E. coli elec. sterilization using electrostatic atomization 87951
ECT, DC current therapy for tumor compression, EM force distrib. 132998
EEG sig. nonlin. dyn., mag. field influence on brain 98245
ELF EM fields interact. with humans, power/inform. aspects 87949
ELF EM radiations and intrinsic EM phenom., human health issues 87947
ELF mag. field effects on haematological/biochem. params. 98752
EM field modeling in human body at low freqs., error eval. 98765
EM fields, biological effects, health and safety, risk assess. 87941
EM fields, standardisation/regulation in Germany 87944
EM phenom. and standardisation implications overview 72384
EM radiation hazards assess. in residential areas 83401
EM wave/inhomogenous anisotropic media interact., FDTD anal. 83197
EMC, conf., Wroclaw, Poland (June 2000) 67408
EMF stds., neg. human health effects 87942
European EMF legislation standardisation 87943
floating multipole discharge sterilization effect expts. *(Japanese)* 98746
GSM 900/1800 handset terminals, built-in antennas, near-field influence 87940
GSM mobile terminals, anal. of proposals to reduce SAR levels 108931
hand effect on cellular phone radiation 122410
hand-set mobile telephone with reduced EMW hazard, triple-freq. operation 105974
human body, induced currents, power syst. elec./mag. fields 98747
human body, power freq. mag. field interact., eval. methods *(Polish)* 133071
human body-power freq. field interacts., modeling accuracy 133080
human EM field exposure limitation regulations, overview 87945
human head SAR reduction, directional antennas for cellular phones 87938
human head temp. rise for cellular phones, peak SARs prescribed in safety guidelines 111193
human health depend. on geomag. activity 87946
human health hazards from EM energy emitted by ELF commun. systs. *(Polish)* 133070
idiopathetic Parkinson's disease, repetitive transcranial mag. stimulation 76591
implanted cardiac pacemakers, elec. field interf. threshold 76667
intermittent mag. field effects on pers. with elec. hypersensitivity 133081
interventional MRI, local RF heating, Green's fn. 122089
Japanese EM fields human exposure limitation regulations 78548
leukemia cell growth inhib. using strong mag. fields, TCC-S growth prevention 133023
LF meas. inhomog. mag. fields in human body, induced current dens. determ. 76720
mag. related EMC/EMI, VLF fields biomag. *(Japanese)* 83354
mitochondria metabolic activity, middle-level static mag. field effects 122361
mobile phones peak SAR assess., head tissue complexity role 85613
mobile telephone three-element array antenna with triple-freq. operation 105975
motor cortex, piracetam, facilitatory I-wave interact., mag. stimulation 76248
MRI gradient coils, magnetostimulation thresholds, simple lin. formulation 87627
narcolepsy patients, mobile phone EM field, visual event related pot. effects 133084
PDC handset diversity antenna perform., head/hand/shoulder effects, diversity antenna gain 108691
pers. commun., handheld transceiver unit, human head/EM interact. anal. 83343
pers. satellite commun. antennas, polaris. purity/SAR investigs. using hybrid method 83584
Polish EM field human exposure limitation regulations 78549
power freq. mag. fields meas. in different environ. 105672
protein tyrosine phosphorylation, cultured cells, 50 Hz mag. field effects 98753
pulsed RF EM fields, effects on selected markers of immune syst. 87935
residences, static mag. field meas., power-freq. mag. field/human interacts. 98742
selective bacteria detect. using dielectrophoretic impedance meas. 132533
sens. transduction, model for biological detect. of EM fields 98750
simple bimanual movements, cortical motor control, mag. stimulation 76664
skin blood perfusion, PM effects, laser Doppler flowmetry/imaging 133082
sleep EEG, mobile phone EM field exposure effect 76721
small hand muscle, motor thresholds, transcranial mag. stimulation 76663
static mag. fields, blood press. modulatory effects in rabbits 133065
static mag. fields, props. calc., Green fn. method 133083
static/ELF mag. fields, tumour growth inhib./apoptosis induction 133066
stun gun impulse voltage release, human body resist. *(Japanese)* 133388
temporal variability meas. in residential mag. field exposures 87934
thenar muscles, motor-evoked pot., transcranial mag. stimulation 87407
tibial bone struct., simulated microgravity, mag. reson. microscopy 87666
transthoracic defibrillation current dens., two-layer segmented electrode 76593
UHF bodyworn antenna systs., num. anal. 72460
urban environ., outdoor background ELF mag. fields 76747
wheat seeds, different germination stages, ELF-EMF treatment effects 98755
biological effects of fields continued
whip type low SAR mobile handset antenna 83603
white noise excitation, bio-response 98754
K^+ channel, EM-RF exposure, Zeeman-Stark/Markov model approach 87953
Si-microarray devices, heterog. protein crystn. screening 132010
biological effects of gamma-rays
see also biomolecular effects of radiation; cellular effects of radiation
A-bomb gamma ray spectra, radiotherapy/radiobiology simul. 111246
fractionated cranial irrad., ellipsoidal radiosurgery targets, radiobiologic modelling 87858
organ doses, at. bomb survivors, radiation therapy 87961
peripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746
^{32}P-orthophosphate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724
^{90}Y-citrate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724
biological effects of infrared radiation *see biological effects of optical radiation*
biological effects of ionising particles
see also biomolecular effects of radiation; cellular effects of radiation
BNL accelerator-based radiobiology facilities 122367
carcinogenesis, chronic β-irrad., threshold dose-response 76733
corona plume, HV overhead lines, aerosols charging 111249
HI radiotherapy, inverse treatment planning, dose optimisation 98671
HI risk assess., nuc. detecting systs., hadrontherapy appl. 132325
integrat. ion imager, DNA samples, HI doses 122441
ion-kill dosimetry, neutron/HI therapy 133115
microorganisms inactivation, electron beam and microwave heating effects 110083
skin depth dose, hot particles, electron backscatt. correction 133129
space radiation health, conf., Arona, Italy (May 2000) 124172
therapy-dedicated cyclotron, proton beams RBE, cell lethality 98672
^{11}C beams, cancer radiotherapy, spot scanning, dose distrib. 76609
^{90}Sr/^{90}Y beta particles, phantom materials water equivalence 87876
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964
biological effects of ionising radiation
see also biological effects of gamma-rays; biological effects of ionising particles; biological effects of X-rays; biomolecular effects of radiation; cellular effects of radiation
brain thermomapping for radiation effect diagnosis, stats. 98118
cerebral radiation injuries, ^{1}H mag. reson. spectra/imaging 87637
cervix carcinomas, radiotherapy, micronucleus assay 76621
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
clinical radiotherapy, normal tissue complication probab. calcs. 133019
hadrons, radiation therapy, dose distrib. 98678
hormesis, doses, beneficial health effects 87987
ICRP, UNSCEAR, some distant memories 87998
interstitial brachytherapy treatment plans, homog. dose distrib. 87859
Ionising Radiations Regulations 1999, generic approach to risk assess. 76766
malignant brain tumours, gamma knife stereotactic radiosurgery 133032
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
num. anthropomorphic model, radiological accidents, internal dosimetry *(English)* 98829
oncology radiation biol., conf., Fuglso, Denmark (Jun. 2001) 124217
organ doses, at. bomb survivors, radiation therapy 87961
peripheral blood lymphocytes, radiotherapy, chromosome aberration anal. 76744
pers. dosimetry, Latvia, EPR, TLD 98831
prostate cancer, conformal radiotherapy, rectal sequelae, dose-vol. 98782
radiation therapy, dose accuracy requirements, review 98679
serial organ archit., radiotherapy, inhomog. dose distrib. 87959
^{99m}Tc-labelled radiopharmaceuticals, Indian adult, radiation dose estim. 111235
^{99m}Tc-annexin V, intravenously administered, patient dosimetry 76735
biological effects of ions *see biological effects of ionising particles; ion beam effects*
biological effects of laser radiation
see also biomolecular effects of radiation; cellular effects of radiation
biotissues, laser-ablated, Doppler diagnostics 117601
chromosome abberations, DNA photoproducts, med. images enhancement model 122056
chromosomes, human, nanodissection with NIR fs laser pulses 83072
cornea, human, laser ablation, fluoresc. surgical feedback 98633
dental hard tissue modif./removal using CO_2 lasers 76610
histologic changes after superpulsed CO_2/Er:YAG/blended laser treatment 87825
hyaline cartilage, NIR laser radiation effect on opt. props. 132640
Iber Braun hens, excimer laser keratectomy, postoperative corneal haze meas. 76393
interstitial laser photocoagulation, relative light fluence changes, opt. monitoring 122302
knee osteochondral lesions, low-power diode laser stimulation 98665
multiple laser pulse max. permissible exposure determ., ANSI Z136.1-2000 100504
ophthalmic microsurgery, laser induced vap. bubbles, quartz fiber tip geom. 98632
pointers, diode laser, power output, federal stds., safety hazard 122365
pre-embryo zona drilling, laser-assisted, thermal effects 76611
retinal damage, red diode laser exposure 98816
retinal fs laser pulses spot size, vis. lesion threshold depend. 67501
retinal hazard eval., laser safety apparent source anal. 111190
teeth, laser irrad., surface morph., SEM, AFM 76398
tissue, temp. meas. artefacts, thermocouples, fluoroptic probes 87526
ultralate evoked pots., Tm:YAG laser stimuli, scalp topography 132587
venous blood, human, low-intens. He-Ne laser interact., transm. spectrum 93948
biological effects of magnetic fields *see biological effects of fields; biomagnetism*
biological effects of microwaves
see also biomolecular effects of radiation; cellular effects of radiation
150 MHz helical antenna close to human abdomen, radiation efficiency *(Japanese)* 83646
915 MHz miniature helical applicators for Barrett's oesophagus 87848
agricultural food products, disease control, microwave drying 80406
airborne microorganisms, microwave irrad. effects 98738
atherosclerotic discirculatory encephalopathy, EHF treatment 87853
blood-brain barrier, cell phone effects and tumor treatment 98739
cell cultures, microwave EM radiation effects, microwave oven calib. 87939
cell phones, public health concerns and emissions testing 122366

logical effects of microwaves continued
cellular mobile telephones, health impact, precautionary principle, EC commun. 122436
cellular phone, human head, SAR 85615
cellular protein changes due to environ. nonionising radiation 98749
CNS activity, mobile phone pulsed EM field effects *(German)* 87952
ferris wheel mice exposure syst., RF exposure study FDTD anal. 133127
head exposure to cellular phone helical antennas, FDTD method 133074
head phantom, induced EM field reconstruction, microwave imaging 132649
head SAR due to mobile phones, interpolation/extrapolation 111221
homog. phantom exposed to cordless phones radiation, SAR 87937
human 2450 MHz CW energy exposure, outside IEEE C95.1 std., no core temp. increase 133067
human body-mobile phone interact., computational EM 133079
human head, mobile phone emissions, absorpt. calcs. 133069
implantable med. device, EM model, cylindrical DGFs 87889
inhomog. tissues, microwave-induced thermoacoustic tomography 132648
insects, RF and microwave dielec. props. 92588
irradiators for study of microwave sterilization effects 115035
keratinocytes, reacts. to in vitro mm wave exposure 98744
macrophages, phagocytic activity, microwave/ELF mag. field effects 98751
malignant tumour growth, low-energy ns microwave pulses effect 76657
mammalian cells, RF exposure, CDMA, FDMA, DNA damage 122433
microorganisms inactivation, electron beam and microwave heating effects 110083
mobile commun. handset, interact. of EM energy with human arm 111220
mobile phone user, num. dosimetry for head/hand 133126
MTT-S International Microwave Symposium, Phoenix, AZ, USA (2001) 78477
neck hyperthermia, circ. phased aperture antenna EM emissions 133018
non-invasive tech. for microwave dosimetry 98766
plant seeds, MM radiation effects 87297
radiowave absorpt. by brain/eyes in human head eccentric spheres model, anal. 87950
RF EM fields, safety stds. 122363
sleep EEG, mobile phone EM field exposure effect 76721
stimulation of act. points and effect on elec. activity of brain fields 98740
tissue, dielec. props., age, microwave freqs., dosimetry 87974
tissues, RF interacts., FDTD simul. 87948
UHF apparatus for water based gels in microwave phantoms 87846
UHF real-time spherical near-field handset antenna meas. 94178
Univ. of Bradford mobile telephone dosimetry studies 133075
cellular radio, health effects and precautionary principle 76719

ological effects of neutrons
see also biomolecular effects of radiation; cellular effects of radiation
hadron therapy, selected tumour types, overview 98677
hadrons, radiation therapy, dose distrib. 98678
ion-kill dosimetry, neutron/HI therapy 133115
prostate cancer, fast-neutron therapy RBE 111128
radiation therapy, tumors, diagnoses, review *(German)* 76624
B neutron capture therapy, brain tissue neutron RBE 98626
B neutron capture therapy, perform., safety, QA 98638
B neutron capture therapy, strongly forward-directed beams appl. 98689
Gd neutron capture therapy, glioblastoma cell cultures, spectromicroscopy 76625

ological effects of optical radiation
see also biological effects of laser radiation; biological effects of ultraviolet radiation
EEG spectra, photoinduced reson. phenom. 87365
VDTs, content-depend. health hazards, adaptive temporal filters appl. 98764

ological effects of protons *see biological effects of ionising particles; proton effects*

ological effects of radiation
see also biological effects of acoustic radiation; biological effects of fields; biological effects of ionising radiation; biological effects of microwaves; biological effects of neutrons; biological effects of optical radiation; biomolecular effects of radiation; cellular effects of radiation; dosimetry; radiation therapy
alternative local loop 85403
catheter ablation procedures, cardiac electrophysiology, dose reduction 122435
cellular phone, RF radiation, health effects 122362
electronic device user protection from low-energy radiation 133145
head MRI, UHF interacts. calc. 133077
layered biological media, electrode array excitation model 133078
patient RF heating during MRI 133076
PCS, handheld transceiver unit, human head model/EM interact. anal. 83342
radiofrequency radiation exposure stds., global harmonization 111232
SAR reduced pers. commun. handset, FDTD investigs. 83706

ological effects of ultraviolet laser radiation *see biological effects of laser radiation; biological effects of ultraviolet radiation*

ological effects of ultraviolet radiation
see also biomolecular effects of radiation; cellular effects of radiation
low-press. microwave plasma UV lamp, water purif./ozone appls. 134607
UV phosphor blends for suntanning lamps, design 104930

ological effects of X-rays
see also biomolecular effects of radiation; cellular effects of radiation
eye lens, radiation dosimetry, Monte Carlo simul. 122375
hepatic/renal interstitial radiotherapy lesions, temporal CT 76499
organ doses, at. bomb survivors, radiation therapy 87961
patient size, X-ray CT tech. factors, hazards 110939
peripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746
peripheral blood lymphocytes, micronuclei, angiography, excretory urography 76560
prostate carcinoma radiotherapy, late-term rectal complications probab. 98641
radiobiology, X-ray dosimetry, EULEP-EURXDOS protocol 98780

iological NMR
see also biomedical NMR
biological product detect., conf., Boston, USA (Nov.2000) 78377
current dens. imaging, MRI tech., biological syst. appl. 132726
diffusion tensor imaging of developing mouse brain 98429
intracerebral glioma, rat, lipid droplets size, NMR meas. 132665
mag. reson. spectrosc., time-domain quantitation methods, overview 98448
meat sci., fat quantification, MRI/image anal. techs. testing 132716
myelin-deficient rat spinal cords, apparent diffusion tensor meas. 122097
skeletal muscle, 3D fiber archit., MRI, opt. imaging 87673
skull/brain, rat, PET, CT, and MR image registration 132942
trabecular bone, short-TE projection reconstruction NMR microscopy 98476
Nd-Fe-B PM, 1.0 T MR microscope develop. 132727

biological organs
see also artificial organs; brain; ear; eye; kidney; liver
3D med. image segmentation, metaballs appl., struct. deformable models 110495
3D PET, whole body phantom, radioact. uptake, dose/count rate optim. 122236
3D ultrasound imaging systs., diagnostic appls. review 76367
abdominal image quality, real-time correction of wavefront arrival time errors 110766
abdominal organ recogn. in CT images, contextual neural net, fuzzy rules 76540
Barrett's oesophagus, colorimetric detect, low-cost fibre-optic instrum. 76399
bladder, servo-mech. dyn. simulator 121866
bladder carcinoma, intens. modulated radiotherapy, dyn. multileaf collimation 98635
bladder controller nerve sig. analog proc. cct., implantable, low-power CMOS 76677
brachytherapy prostate implants, vol./dosimetric study, US/CT image fusion 98661
breast, human tissue X-ray diffr. obs. 110923
breast, improved irrad. tech., 3D geom. inform./intens. modulation 76653
breast, intact, radiotherapy, virtual simul. appl. 76627
breast cancer patients, virtual simul. 98667
breast cancer radiotherapy, contralateral breast dose meas., superflab appl. 98825
breast cancer radiotherapy, dosimetry meas., START trial 98625
breast cancer therapy manipulator for mag. reson. tomography device *(German)* 110868
breast electron boost planning, comparison of CT and US 87879
breast radiotherapy, interfractional patient movement, dosimetric consequences 98668
breast radiotherapy, vol. changes/set-up error effects 76760
breast radiotherapy phantom design for START trial 87808
breast tissue dens. quantification via digitised mammograms 110915
breast treatment, 3-D treatment planning syst. algm. verification 111203
breasts, X-ray therapy, mixed energy beams/beam spoiler 111095
chest radiography, beam tube pot. var., gonad dose, LiF:Mg,Cu,P TLDs 87970
colon polyp detect., electronic cleansing, material tagging/image segmentation 132822
colonic contractions, static parametric modelling, μP-controlled stimulation 111077
deformable organ model, sphere-filled method, virtual surgery 98588
dose conversion coeffs., monoenergetic neutrons, anatomical model 111228
doses, at. bomb survivors, radiation therapy 87961
dyn. biol. syst. charactn., multisine based impedance spectrosc. 110625
EGG, basic study for meas., electrode posns., mental stress appl. 76307
ELF mag. field effects on haematological/biochem. params. 98752
hazard ident./safety insurance control for med. robot 98606
IMRT, forward treatment planning, "sequential"' optimisation tech. 76643
laryngeal phonation fn., noninvasive assess., colour Doppler US imaging 122013
laryngectomy stoma, medium energy electron boost, dose distrib. 76752
larynx, paralysed, reanimation using an injectable microstimulator 98719
lumbar spine CT/X-ray exams., radiation dose to uterus, ovaries, bladder 87954
med. image vol. rendering method 98135
motion, CT, radiotherapy treatment planning, dosimetry modelling 76756
motion artifacts correction, X-ray CT adaptive proc. 110937
motion artifacts correction in X-ray CT systs. 110938
motion effects in radiotherapy, model, serial imaging data 122431
motion model, prostate radiotherapy serial imaging meas. 122432
multielement catheter-cooled interstitial ultrasound applicators for thermal therapy 98639
oesophagus outer wall detect., US images, data fusion, stochastic optim. 76350
organ class. from cross-sect. images, fuzzy c-means med. image clustering 98417
ovarian masses, ultrasound image gray level stats. 98312
ovarian tumour in US images, 3D image reconstruction 110790
polyps, computerised detect., CT colonography, automated colonic walls segmentation 122140
posn. sensitive photomultiplier tube, high resoln. 3D SPECT 115275
prostate, ^{103}Pd implant dose distribs. comparison 98806
prostate, benign disease/carcinoma diagnosis, MRI coils comparison 122071
prostate, dose-escalated conformal radiotherapy, multileaf collimator orient. 98636
prostate, HDR-brachytherapy, anatomy-based dose optimisation 98805
prostate, human tissue X-ray diffr. obs. 110923
prostate, intens.-modulated radiation therapy, treatment planning protocol 76637
prostate, nonmetastatic/metastatic tumours differentiation, high resoln. MRI 87643
prostate, normal/decreased blood flow, contrast-enhanced power Doppler imaging 110793
prostate, tissue elasticity imaging, increased contrast 110822
prostate, transurethral robotic laser resection, LaserTrode lightguide appl. 76612
prostate brachytherapy, high dose rate, CT planning, catheter reconstruction 98653
prostate brachytherapy, low energy/low activity seeds calib. 98660
prostate brachytherapy, treatment plans standardisation using US images 98680
prostate brachytherapy treatment planning using, std. plan 98662
prostate cancer, 3D conformal radiotherapy, bladder opacification, dose 98783
prostate cancer, conformal radiotherapy, rectal sequelae, dose-vol. 98782
prostate cancer, dose escalated conformal radiotherapy, optimal arrangement 76650
prostate cancer, interstitial microwave thermal therapy, helical antenna arrays 98623
prostate cancer, treatment planning, CT image segmentation 87809
prostate cancer discrim., 3D US Doppler imaging, zonal anal. 110713
prostate cancer irrad., randomised trial, accurate in vivo dosimetry 87993
prostate cancer radiotherapy, couch height-based patient set-up 98618
prostate cancer radiotherapy, organ motion var. models, affine transform. 87839
prostate computer-assisted transurethral laser resection, motion plan 122308
prostate disease thermal treatment, MRI compatible intracavitary ultrasound array 76426
prostate imaging, compact positron tomograph, conceptual design 132950
prostate imaging, compact positron tomograph, conceptual design 122223
prostate implant seed, automated localisation, fluoroscopic images, simulated annealing 98663
prostate implants, (103)Pd seed activity choice 98652
prostate intens.-modulated radiotherapy, interrupted dyn. seqs. 98616
prostate patient with prosthetic hip, intens. modulated radiotherapy 76731
prostate radiotherapy, treatment chain audit, phantom design/eval. 111116
prostate seed brachytherapy, simple US/CT fusion image fusion 110705
prostate segmentation from 2D ultrasound images 110683
prostate treatment, microwave transurethral applicator with helix-loaded-dipole-antenna 87872
prostate US imaging for guiding biopsies & planning/monitoring therapy 110721

biological organs continued
radiotherapy, inverse planning incorporating organ motion 111097
real-time strain images, frame-to-frame stats., prostate imaging 110816
SAR prediction, Sprague-Dawley rat, rel. to permitt. 133063
serial organ archit., radiotherapy, inhomog. dose distrib. 87959
spiral CT colonography, reader agreement and diagnostic perform. 87761
thyroid, I-131 studies, high-resoln. detector syst., perform. meas. 111006
thyroid ^{131}I monitoring with an imaging plate, feasibility 122160
thyroid malignancies, intens. modulated radiation therapy 76729
tooth enamel/organ doses, ESR dosimetry 111244
trachea segmentation in CT images using act. contours 110922
US image 2D motion field parametric estim., spatially smoothed regression model 110777
^{125}I seed prostate implants, ultrasound guided, in-house software 98640
^{125}I seeds, prostate implant, CT-based source localization 98531
^{131}I therapy, thyroid, Graves' disease, committed dose calc. 111245
^{103}Pd seeds, prostate implant, CT-based source localization 98531
^{99m}Tc-RP128, rheumatoid arthritis inflammation imaging, dosimetry 76723
^{99m}Tc-annexin V, intravenously administered, patient dosimetry 76735

biological sciences *see biology*

biological specimen preparation
PMMA electrophoresis microchip, DNA sample preconcentrator 70359
tooth enamel, EPR biodosimetry, radiation therapy appls. 132731

biological techniques
see also biological specimen preparation; biomedical equipment; biomedical measurement; biosensors; microelectrodes
3D image reconstruction, translational alignment method 73268
abdominal temp., rem. meas., miniature data loggers 76215
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
aligned microcontact printing of biomols. on microelectronic device surfaces 80526
ALS hard X-ray imaging microscopy & tomography 76174
animal nervous syst. microscope images, enhancement techs. 121865
animal PET scanner, microPET II, syst. design 132973
animal positron tomograph, image generation, Monte Carlo coincident fns. 132971
animal positron tomograph, image generation, Monte Carlo coincident aperture fns. 111033
ANIPET, versatile PET scanner for lab. animals 132975
ankle, dog, electronic brace for muscle contractions meas./eliciting 121875
artificial retina camera, real-time pattern recogn., Hough transform algm. 73439
attack detect. devices 132004
axo-somatic boutons, motoneuron cell membrane, computer-assisted quantification 76400
behavioral monitoring/mag. field exposure syst. 133064
BETAview autoradiography syst., lab. tests/biological expts. 76588
biological product detect., conf., Boston, USA (Nov.2000) 78377
biopolymer mass spectrometry, supercond. microcalorimeter energy meas. 76155
blinks, Kalman filter detect. in video-oculography, locomotion appl. 98365
blood, opt. meas., conf., Amsterdam, Netherlands (Jul. 2000) 78375
BNL accelerator-based radiobiology facilities 122367
C-reactive protein detect., CCD-based light-scatt. instrum. 87546
camshaft, self-assembling, nanoscale, protein/nucleic acid materials/devices 92572
cartilage grown in hollow-fibre bioreactor, EPR O_2 mapping 132776
cell cultures, microwave EM radiation effects, microwave oven calib. 87939
cellular elec. stimulation, light-addressed microelectrode array 132563
cervix carcinomas, radiotherapy, micronucleus assay 76621
chromosome feature extraction via topographic anal. *(Chinese)* 110498
chromosomes, feature extraction from 3-D confocal microscope images 132636
chromosomes, human, nanodissection with NIR fs laser pulses 83072
ciliary cell beats, metachronal wavelength, digitised image correl. map 76402
cortex, opt. imaging, neuronal activity-driven sigs. extraction *(Japanese)* 132629
cortex, spike trains, precise firing seqs. detect. 110583
cortical rat neurons, dissociated foetal, dielectrophoretic trapping 98227
CRT displays for vision research, luminance artifacts 121102
cuff electrode, nerve recording/stimulation, acute small animal expts. 98231
current dens. imaging, MRI tech., biological systs. appl. 132726
cytoskeletal organis. in chondrocytes, temporal var., image anal. 87541
dip-pen nanolithography, custom multicomponent sub-100 nm surface archit. fab. 103713
DNA bands in low-contrast images, automatic edge detect. 110972
dorsal aortic flow vel. in chick embryos of stage 16 to 28 110794
EEG, freely moving guinea pigs, simple meas. method 110582
ellipsometric imaging syst., image grabbing, image proc. *(Chinese)* 94603
EM micromotor for microfluidics appls. 112571
ESR imaging, long. detect., quadrature excitation coil 98454
evanescent-field fibre optic sens. for E. coli O157:H7 122060
extracellular recording, inexpensive high-perform. amp./electrode 87369
F_1-ATPase biomol. motors, precision attachment on Ni dot nano-substrs. 92538
FEL, appls. 93680
ferris wheel mice exposure syst., RF exposure study FDTD anal. 133127
flash ERG in rodents, different recording params. eval. 98233
force-plate actometer, rodent locomotion, rot., spatial patterning, tremor 110502
freq.-domain fluoresc. microscopy, LED excitation source 116991
genetic spot array images, robust spot fitting 98151
heart cell force transducer syst. implemented in MEMS technol. 110518
HGMS syst., mag. device/particle design param. 76198
high-speed soln. switching using piezo-based micropositioning stages 81751
high-T_c SQUID gradiometer, biological immunoassay appl. 132006
Hotelling transform, computerised biological objs. recogn., corneal cells appl. 98159
HTSC SQUID magnetometer, biological immunoassay 76330
human skin, topographical in-vivo meas. series by displacement vector fields, area tracking 110510
hybrid pixel detectors for electron microscopy 97426
immersed surfaces, study using focused US, electrokinetic sens., proteins appl. 133385
implantable video telemetry for biocompatibility studies 86423
intracerebral beta microprobe, radiotracer kinetics study, freely moving animals 132977
jaw-tracking syst. implanted in freely moving mouse 98259
laser-guided direct writing, biological/electronic appls. 117554
LF electronic gate detect., cell/bacteria/colloid counting/sizing 121867
licking behaviour detect. during brain electrophysiological sigs. recording 98230
local tissue charactn. by backscatt. AO imaging 122039
long-term potentiation/synaptic events anal., LTP DAQ program 121949

biological techniques continued
mag. relax. immunoassay, low-T_c SQUID meas. syst. 70987
meat sci., fat quantification, MRI/image anal. techs. testing 132716
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
microarray gene chip technol., lung physiology 91503
microbiology, high-resoln. X-ray imaging appls. 98090
microchip separations, diffusion coeffs. determ. 97561
microparticle filter, US standing waves & laminar flow 70342
micropatterned solid-supported membranes, capillary micromolding 69982
microPET detectors, coincidence meas., small animal imaging scanner 132959
microPET P4, syst. dedicated to small animal imaging 132972
micropinch X-ray source, vac. spark, expt. model & appls. 98106
monkeys, freely moving, brain single-cell recording 98232
moths, ultralight biotelemetry backpack for recording EMG sigs. 76297
motion perception, sensitive calib./meas. procedures based on amplif. principle 98375
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
multichannel neural probes, cond. polymer polypyrrole/PSS, electrochem. deposition/charactn. 125123
multistage mag. particle cell separator, magnetophoresis 76199
nanoparticles/nanostructured surfaces, biological appl., conf., San Jose, CA, USA (Jan. 2001) 113264
objs. movement/motility, act. contours 87300
OCT image form., quantization methods 106494
on-chip mag. bead separator, spiral electromagnets, semi-encapsulated permalloy 116107
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
one-chip-style quartz cryst. motion sens. with two fns. of gyro and accel. detect. 132535
opt. sens./manipulation, biological/biomedical appls., conf., Taipei, Taiwan (July 2000) 89497
palmar skin, impedance locus meas., computer-controlled syst. 121951
peripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746
PET/CT image registration of rat brain/skull using AIR algm. 122212
phantom/animal imaging studies using PLS synchrotron X-rays 110958
phase-contrast X-ray microtomography, interferometer design 76177
phase-contrast X-ray microtomography, polychromatic sealed source 76172
Photosystem II photochem. charact., airborne laser assess. 105656
physiological effects of noise/whole body vibrs. on rats 110506
phytoplankton, marine, biomass meas. by dual-beam laser fluoresc. Doppler cytometer 86677
phytoplankton photochem. charact., airborne laser test 111461
pinhole SPECT of mice using LumaGEM gamma camera 111037
pinklady apples, electronic nose sigs. and fruit quality indicators 132060
projection X-ray microscopy, modified SEM, enhanced contrast & 3D CT 76173
quad-HIDAC, next-generation PET camera for small-animal imaging 132960
radiochromato-imager, biological/biochem. appls., tissue/body sect. autoradiography 122270
retinal damage, red diode laser exposure 98816
retinal fs laser pulses spot size, vis. lesion threshold depend. 67501
retinal pathologies, expert eval. using digital image anal. 87535
RF-driven ion source in electrostatic accelerator, props. extraction *(Chinese)* 110113
rhesus monkeys, PET neuroimaging apparatus, behavioural training protocol 98582
RIKEN structural biol. beamline II BL44B2, SPring-8 121848
skeletal muscle, 3D fiber archit., MRI, opt. imaging 87673
skeletal muscle, sarcomere length meas., epi-illum.-type polaris. microscope 122049
small animal emission tomography, TOHR, charactn./first eval. 132965
small animal imaging, conventional γ-cameras appl. 132980
small animal PET, prototype develop. 132991
small animal PET devices with mm resoln., design considerations 132970
small animal PET scanner, depth-of-interact. capability, absol. sensitivity 132974
small animal SPECT, coded aperture imaging investig. 132979
small animal SPECT imaging, high resoln. detectors develop. 132978
small animals, EEG recordings, ECG interf. removal 121948
small-animal compact DOI-PET systs., fast image reconstruction method 132976
small-animal PET scanner, DOI capability, design optimisation 132985
small-animal tomographic imaging, high-resoln. semicond. camera 132967
spatially complex sound synthesis in virtual space, accurate offline algm. 88213
striatal neurones, voltage-depend. membrane currents, Si substrs. 76320
subhertz sensitivity phase-referenced interferometer, cell membrane dyn. study 120940
submicron bioparticle dielectrophoretic manipulation, lab-on-chip 87298
tech. materials, impedance computer tomographic diagnostics using elec. current 122148
three-component capacitive force transducer design, non-std. specimens 97205
time-resolved 2D μs X-ray imaging 98559
tissue, opt. imaging using AO light modulation 82248
tissues, impedance computer tomographic diagnostics using elec. current 122148
trabecular bone, short-TE projection reconstruction NMR microscopy 98476
tryptophan airborne microparticles monitoring, fluoresc. size depend. 88187
tumor hypoxia, scanning beam confocal fluoresc. microscopy 98355
two-photon fluoresc. labels, biological imaging sensitivity 110831
valveless pump, microfabrication, non-pulsatile flow 92517
whole nerve sigs., optimal filtering 87372
X-ray microtomograph, desktop instrum., 3D microscopy 76171
X-ray microtomography using interferometric phase contrast 76517
XM-1 high-resoln. soft X-ray microscope at ALS, computer proc. 98093
Nb-based integrated DC-SQUID magnetometers for multichannel systs. 70806
Nd-Fe-B PM, 1.0 T MR microscope develop. 132727
Si-microarray devices, heterog. protein crystn. screening 132010
Ti:sapphire mode-locked laser sub-5.2 fs pulse generation, techs./dyn./appls. 82760

biological tissues
see also blood vessels; muscle; skin; tumours
3D pose estim. of biological tissues by CT/fluoroscopy 98506
3D sagittal brain MR images, automated segmentation by masking/restoration operations 110867
3D vol. registration, expts. on tissue phantom & liver 110753
4.4 GHz microwave thermometer with compensation of refl. coeff. 87558
abdominal image quality, real-time correction of wavefront arrival time errors 110766
acoustic rem. palpation of tissue, init. in vivo results 110748

iological tissues continued
animal nervous syst. microscope images, enhancement techs. 121865
anterior cruciate ligament, strain distrib. meas./anal., photoelastic coating method 121873
articular cartilage, proteoglycan depletion, spin-lattice NMR relax. 132680
articular cartilage, T_2 relax., spatial collagen archit., MRI/opt. microscopy 132687
articular cartilage indentation test, ultrasound transducer calib. 122018
blood in cylindrical models, acoustic streaming, finite element simul. 110738
BOLD MRI, functional neuroimaging, 1.5 & 3 T comparison 76444
brain disorder class. based on apparent diffusion coeff. values in diffusion MRI 76472
brain tissue class. from MRI using decision-tree learning tech. 122084
brain tissue segmentation in MRI, RF inhomog. correction method 110881
brain tissue vols. quantification using MRI fusion 76432
BrainSuite, automated cortical surface ident. tool 87578
breast cancer, computerized thermography, image segmentation, temp. vars. 76387
breast lesions, mammography, automated registration tech. 87753
Breast Perfusion Analysis System for MRI 110907
breast tissue, biomech. 3D FEM modelling, MRI data 76421
breast treatment, intens.-modulated radiotherapy delivery techs. 98648
carotenoid antioxidants in living human tissues, reson. Raman detect. 122042
cartilage grown in hollow-fibre bioreactor, EPR O_2 mapping 132776
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
clinical radiotherapy, normal tissue complication probab. calcs. 133019
collagen-containing tissues, double quantum filtered spectrosc. MRI 76465
colonic cancer images, classif., orient. coherence metrics 132632
computed tomography images, beam-hardening correction using post-reconstruction method and equiv. tissue concept 98498
connective tissue regulation and mag. fields 98683
cornea, human, laser ablation, fluoresc. surgical feedback 98633
cryogel elasticity props. for calib. IVUS elasticity images 110819
cytoskeletal organis. in chondrocytes, temporal var., image anal. 87541
deformed media US scatt., effects on strain imaging 110820
dens. vols. class., multilevel neural network model 132754
dental hard tissue modif./removal using CO_2 lasers 76610
dentistry, lasers appl., conf., San Jose, CA, USA (Jan. 2001) 89542
dielec. props., age, microwave freqs., dosimetry 87974
diffusion weighted MRI, microscopic tissue params. 76463
digital mammograms, fixed block-based lossless compression 132785
Doppler diagnostics of laser-ablated biotissues 117601
dose conversion coeffs., external monoenergetic photon beams 111227
echocardiography and Doppler tissue imaging, myocardial vel. meas. 132608
elastic modulus distrib. reconstruction, 3-D displacement vector 110817
elasticity, US imaging, spatial resoln. limits 121997
elasticity imaging, exploiting strain-hardening to increase contrast 110822
EM scatt., MoM using high-order non-uniform grids 83224
European Soc. for Engineering and Medicine, conf., Belfast, Ireland (May 2001) 78370
facial soft tissue change anal., 3D measuring techs. 87522
fast/noninvasive fluoresc. imaging using flying-spot scanner 110842
fetal lung maturity prediction using stat. textural features 122030
fluoresc. freq.-domain photon migration, 3D unconstrained/constrained image-reconstruction 76406
fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
fluoresc. sens., conf., San Jose, CA, USA (Jan.2001) 89503
focused US surgery, thermoacoustic lens effect simul. 76592
functional MRI, tissue segmentation-assisted anal. for human motor response combining neural net and fuzzy C-means 76483
Hall effect imaging feasibility in humans 110762
hand effect on cellular phone radiation 122410
head models with homog./inhomog. cond., pseudo-cond. values 87384
head MRI, UHF interacts. calc. 133077
helical CT data for virtual colon dissection and polyp detect. 132839
high-power incoherent opt. radiation for interstitial thermotherapy 98687
high-speed high DOF spatial normalization for human brain imaging 76206
human body-mobile phone interact., computational EM 133079
human body-power freq. field interacts., modeling accuracy 133080
human tissues, opt. charactn., time-resolved reflectance spectrosc. 110843
hyaline cartilage, NIR laser radiation effect on opt. props. 132640
hyperthermia induced temp. distrib. in sarcomas, DE-MRI meas. tissue perfusion 76425
image registration, rigid, block matching to improve robustness 87314
image segmentation, expert delineation learning by neural net 121896
imaging, US tagging of transm./backscattered photons paths 87511
imaging, US-modulated opt. tomography, parallel detect. 87531
impedance computer tomographic diagnostics using elec. current 122148
in vivo exam., calibrated fluoresc. imaging syst. 87513
incompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
inhomog. tissues, microwave-induced thermoacoustic tomography 132648
interstitial RF therapy effectiveness, shear modulus reconstr. 122289
intratumor injection of laser-absorbing dye, digital X-ray imaging tech. 122301
intravascular US palpation, automated approach 110809
ischaemia monitoring using impedance spectrosc., neural networks appl. 110585
knee articular cartilage, high resoln. MRI, watershed segmentation 110863
knee elec. fields due to knee-thigh electrode pair 132999
lactate discrim. in echo-planar spectrosc. imaging, J-coupling 76441
laser ablation in model two-phase syst. 93949
laser beam/tissue interacts., advanced therapeutic/diagnostic techs. 117597
laser optoacoustic imaging syst. for med. tomography 87499
laser-tissue interact., tumour treatment and bone surgery 128636
lateral tibial condyle cartilage layer, gradient echo MRI 87593
layered biological media, electrode array excitation model 133078
living body, sonoluminescence imaging, clinical diagnostics appls. *(Chinese)* 76375
local tissue charactn. by backscatt. AO imaging 122039
lung adenocarcinoma, tissue colour images anal. 87350
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
lung tissues, human; intrinsic microscopic fluoresc. and imaging *(Chinese)* 132635
mammalian tissues, endogenous metabolites, diffusion-weighted MRS 76464
mammograms, X-ray and 3D MRI data, elastic registration 98501
mammographic image segmentation, tissue-mixture model, Markov random fields 98548
mammography unit automatic exposure control perform. assess. 98530
maxillofacial distraction procedures, image-based 3D planning, soft tissue implications 87791

biological tissues continued
mech. charactn., instrum. microgripper, force feedback 132505
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
med. image vol. rendering method 98135
metabolite maps reconstr. in ^{1}H-MRS imaging, time-domain tech. 87570
metal implants, tissue react., X-ray scanning anal. microscopy 76660
microscopic images of human breast disease using competitive neural networks 121904
mobile phone user, num. dosimetry for head/hand 133126
mobile phones peak SAR assess., head tissue complexity role 85613
MRI, automatic intens.-based tissue class. 122095
MRI, magnetis. transfer contrast, review 76461
multi-angle spatial compounding, imaging strategies 110761
multielement catheter-cooled interstitial ultrasound applicators for thermal therapy 98639
multiple-sclerosis brain tissue class., stat. 3D image segmentation algm. 110909
multirow array transmit focus charact. effect on aberration estim. 110769
myocardium, laser-tissue interact., 3D interactive visualization, Java 98666
neural tissue water compartments visualis., diffusion tensor MRI 76442
neutron capture therapy, absorbed dose imaging/profiling 111238
noninvasive US surgery, microbubble enhanced cavitation role 111121
nonstationary mass removal by laser ablation, Doppler diagnostics 122047
oligodendroglioma with cystic component in infant 76520
opt. computed tomography imaging of absorbers, US phase-shift detect. 110845
opt. imaging using AO light modulation 82248
opt. props. meas., small portable spectrophotometry syst. 122058
opt. spectrometry, biomedical diagnostics 76414
osteoarthritis, articular cartilage vol./thickness, 3D FLASH MRI 87592
p-MOSFET dosimeters, tissue-equiv. phantom response meas. 111242
patient RF heating during MRI 133076
PCS, handheld transceiver unit, human head model/EM interact. anal. 83342
pencil/fan beam dual energy X-ray absorptiometers, bone/soft tissue meas. 76552
percutaneous device, implantable amperometric glucose sens. 86676
periodontium, tension-deformative condition investig., bone tissue atrophy 87317
pers. commun., handheld transceiver unit, human head/EM interact. anal. 83343
phase-coded pulse seq. for nonlin. imaging 110749
physiological flow rate wall-less stenosis phantoms, ultrasound 76346
portable soft tissue indentor, accuracy & reliab. testing 87320
proportional counters, tissue-equiv. for BNCT/BNCEFNT dosimetry 133124
prostate cancer, fast-neutron therapy RBE 111128
prostate cancer nuclei, automated detect. 121893
prostate disease thermal treatment, MRI compatible intracavitary ultrasound array 76426
prostate tissue, MRI, single-voxel oversampled J-resolved spectrosc. 87636
prostate US imaging for guiding biopsies & planning/monitoring therapy 110721
pulse inversion Doppler harmonic imaging, generalisation 122008
quantitat. 3D ultrasound imaging using automated image tracking 110756
radiochromato-imager, biological/biochem. appls., tissue/body sect. autoradiography 122270
radiotherapy treatment planning, electron dens. phantom eval. *(German)* 87971
real-time opt. coherence-domain reflectometry, ang. dispersion imaging scheme 87518
renography, time-series contrast-enhanced MRI, image registration 110910
retinal layers functional imaging, laser scatt., spreading depression 87533
RF interacts., FDTD simul. 87948
rheumatoid arthritis, radiography versus MRI on wrist joints *(Chinese)* 76436
SAR prediction, Sprague-Dawley rat, rel. to permitt. 133063
scanning thermoacoustic tomography, microwave-induced, tissue imaging 87498
scanning thermoacoustic tomography, sig.-proc. 98309
segmentation/tracking of overlapping objs. with feedback 95009
shielded HI environ. lin. detector, RTD mission 122440
simultaneous water/fat MRI with chem.-shift correction 110861
soft tissue, high-precision motion estim., speckle echo wavelet transform 98301
soft tissue deform. simul., improving triangle mesh quality with SurfaceNets method 79140
soft tissue perfusion, power mode rel. to press. amplit. decorrel. 132623
soft tissues, neutron imaging using med. linacs, BNCT appl. 98133
soft tissues, ultrasound-based noninvasive shear elasticity probe 110814
soft-tissue lesions, automated meas. of struct. in CT and MRI, validation study 110976
sonoelastography, strain imaging, multi-resoln. algm. 122000
spinal cord injury, vivo dyn. contrast-enhanced MRI 76446
strain estim. using extended combined autocorrel. method 98290
surgery, image-guided using 3D ultrasound, intra-operative soft tissue deform., Bayesian estim. 87480
temp. distrib. estim. by multifrequency microwave thermography 87559
temp. meas., MRI, thermal physiology techs. 122074
tendon, HF lin. array US viewing, beam angulation 76374
tendon elastic prop. meas., US elastography 122001
thin-layer mater. dielec. charactn., open-ended coaxial probe dimens. 121149
thyroid, C-scan ultrasound backscatt. microscope syst. *(Chinese)* 110679
time-resolved 2D pulsed elastography, LF shear wave beam forming 110815
tofu as, tissue-mimicking material 132624
tongue diagnosis, image proc., texture, colour *(Chinese)* 110489
translating apertures algm., C-/D-weighted imaging 110759
treatment accel. by modif. of sound fields & sonication modalities 111129
UHF apparatus for water based gels in microwave phantoms 87846
UHF bodyworn antenna systs., num. anal. 72460
ultrahigh-resoln. OCT, continuum generation in air-silica microstruct. opt. fiber 73254
ultrasound fund./harmonic lateral transmit beam shapes, vivo comparison 110770
ultrasound harmonic imaging, clinical benefits 110750
ultrasound harmonic imaging, spatial covariance anal. 110784
ultrasound nonlin./lin. imaging techs. at HF 110765
ultrasound speckle reduction, compounding approach 110776
ultrasound/MRI 3D registration & fusion, major vessels as fiducial markers 76339
US contrast agent detect., three-stage pulsing seq. 98324
US imaging, large K distrib. params. estim., neural network approach 110789
US tissue charactn., low-refl.-coeff. liq. interfaces 110798
US tissue charactn., use of freq. diversity and Nakagami stats. 98329
vessel mimicking cryogel phantoms, axial strain imaging 110818
vibro-acoustography, sound fields generated by focused annular array 110751
vibroacoustography, ultrasound surgery monitoring, finite-element simul. 110752
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626

biological tissues continued
^{99m}Tc-annexin V, intravenously administered, patient dosimetry 76735
Ti:sapphire laser-syncroscan streak camera, time-resolved opt. tomography syst. *(Chinese)* 132641
biological transport *see biotransport*
biology
see also biochemistry; biological techniques; biophysics; biotechnology; blood; botany; cardiology; ecology; genetics; medicine; physiology; zoology
directly transm. infections modelling in routinely vaccinated pop., infection force by Volterra integral eqn. 90167
host-parasite model, asymptotically stable pop. coexistence 113856
biology computing
see also computerised instrumentation; environmental science computing
3D image reconstruction, translational alignment method 73268
animal behavioral anal. by water maze tests, computerized syst. 129519
animal fibers, fuzzy pattern recogn. and class. 118487
animal nervous syst. microscope images, enhancement techs. 121865
animal positron tomograph, image generation, Monte Carlo coincident aperture fns. 111033
animals, ARO-PET 76585
automatic counting of chlorella using image proc. and neural network 73451
axo-somatic boutons, motoneuron cell membrane, computer-assisted quantification 76400
cell image segmentation with kernel-based dyn. clustering and ellipsoidal cell shape model 110516
cephalopod retina/visual syst. simul. by analog VLSI 103958
chromosome images, homologue class., iter. centromere segmentation algm. 87519
chromosomes, feature extraction from 3-D confocal microscope images 132636
ciliary cell beats, metachronal wavelength, digitised image correl. map 76402
cytoskeletal organis. in chondrocytes, temporal var., image anal. 87541
dolphin photo-ident., invariant models, eval. 107298
ellipsometric imaging syst., image grabbing, image proc. *(Chinese)* 94603
EthoVision, video tracking syst. for behavioral expt. automation 129520
finger tip deform. and grip/load force meas. via visual tracking *(Japanese)* 84091
genetic spot array images, robust spot fitting 98151
goldfish species discrim. by image recogn. 84599
high resoln. animal PET, PVM, DAQ 122258
Hotelling transform, computerised biological objs. recogn., corneal cells appl. 98159
human dyn. mapping, stance posture control, feature extraction *(Japanese)* 75879
implantable video telemetry for biocompatibility studies 86423
insect-infested forest class., video proc. algms. 99042
larva class., learning VQ neural net training 110537
long-term potentiation/synaptic events anal., LTP DAQ program 121949
meas. systs. with combined analogue input/output facilities for practical education 75373
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
microvascular permeab., rat cerebral pia mater, image computer anal. *(Chinese)* 110827
multidetector compact DAQ syst. time encoding anal. 120677
objs. movement/motility, act. contours 87300
palmar skin, impedance locus meas., computer-controlled syst. 121951
pollen grain images, nonlin. features extraction 121864
projection X-ray microscopy, modified SEM, enhanced contrast & 3D CT 76173
sigs., long-term DAQ, storage and presentation, Microsoft Windows appl. 110527
skull/brain, rat, PET, CT, and MR image registration 132942
small animal SPECT, coded aperture imaging investig. 111035
space radiation health, conf., Arona, Italy (May 2000) 124172
whole nerve sigs., optimal filtering 87372
XM-1 high-resoln. soft X-ray microscope at ALS, computer proc. 98093
bioluminescence
ATP mol. recogn. chip fab. using biolum. enzyme luciferase 132009
cornea, human, laser ablation, fluoresc. surgical feedback 98633
microbial biosensors, environ., food, fermentation appl. 120943
refr. microlenses for fluoresc. detect. in chem. microsystems 71358
tissue, in vivo exam., calibrated fluoresc. imaging syst. 87513
viral particle detect. by aerogel-immobilized bacteria 86678
biomagnetism
see also magnetocardiography; magnetoencephalography
3-D differential coil design for localised mag. stimulation 121986
anatomy/fn. MR imaging based on intermolecular double-quantum coherences 110862
anterior tibial muscle, motor evoked pots., elec./mag. stimulation 110555
artificial heart, HF mag. telemetry, sig. transm. 133046
Bavarian pop. 50 & 16.667 Hz mag. field exposure meas. 98807
behavioral monitoring/mag. field exposure syst. 133064
biomedical sig. ICA 121931
cardiac pacemakers, MRI interf. 87907
chromosomal aberrations, peripheral lymphocytes, Swedish train engine drivers 98743
conformal photon-beam therapy with TM fields, Monte Carlo study 111093
connective tissue regulation and mag. fields 98683
Drosophila melanogaster, wing size params., permanent mag. field effect 98745
ELF mag. field effects on haematological/biochem. params. 98752
EM wave/inhomogenous anisotropic media interact., FDTD anal. 83197
ESD transient EM fields, ultra wide band test syst. 87375
expiratory muscles, functional mag. stimulation, improved coil design 76598
eye motion meas., mag. search coil tech., field homog. improvement 121987
FES, mag. coil, power transm. and control sig. detect. 133047
HGMS syst., mag. device/particle design param. 76198
HTSC SQUID magnetometer, biological immunoassay 76330
HTSC SQUID magnetometer, sentinel-lymph node biopsy 76331
human body, power freq. mag. field interact., eval. methods *(Polish)* 133071
human body, steel needle localization, SQUID magnetometry 76335
human body-power freq. field interacts., modeling accuracy 133080
idiopathetic Parkinson's disease, repetitive transcranial mag. stimulation 76591
induced elec. fields in mag. stimulation rel. to coil design *(Chinese)* 110549
intermittent mag. field effects on pers. with elec. hypersensitivity 133081
interventional MRI, local RF heating, Green's fn. 122089
inverse field problem, min. norm estims. multi-channel-SQUID sens. 121981
LF meas. inhomog. mag. fields in human body, induced current dens. determ. 76720
macrophages, phagocytic activity, microwave/ELF mag. field effects 98751
mag. induction tomography, biomedical and indust. uses 110666
biomagnetism continued
mag. relax. immunoassay, low-T_c SQUID meas. syst. 70987
meas., mag. noise, DC elec. railcar 132589
mitochondria metabolic activity, middle-level static mag. field effects 122361
motor cortex, piracetam, facilitatory I-wave interact., mag. stimulation 76248
MRI gradient coils, magnetostimulation thresholds, simple lin. formulation 87627
multiple sclerosis detect., magnetisation transfer ratio images 98261
multistage mag. particle cell separator, magnetophoresis 76199
nervous syst. mag. stimulation device optim., skin/proximity effect 98592
neuromagnetic meas., high-sensitivity SQUID magnetometer, fab./charact. *(Korean)* 87456
on-chip mag. bead separator, spiral electromagnets, semi-encapsulated permalloy 116107
otiatria, mag. devices appl., implantable prostheses 76666
protein tyrosine phosphorylation, cultured cells, 50 Hz mag. field effects 98753
proximal lumbosacral nerve cond. tracing, simultaneous magneto-/electroneurography 110672
pudendal nerve terminal motor latency meas., mag. neurostimulation 110665
pulsed RF EM fields, effects on selected markers of immune syst. 87935
residences, static mag. field meas., power-freq. mag. field/human interacts. 98742
simple bimanual movements, cortical motor control, mag. stimulation 76664
skin blood perfusion, PM effects, laser Doppler flowmetry/imaging 133082
small hand muscle, motor thresholds, transcranial mag. stimulation 76663
SQUID systs. for biomag. imaging, review 98463
static mag. fields, blood press. modulatory effects in rabbits 133065
static/ELF mag. fields, tumour growth inhib./apoptosis induction 133066
temporal variability meas. in residential mag. field exposures 87934
thenar muscles, motor-evoked pot., transcranial mag. stimulation 87407
transcranial mag. stimulation, evoked silent periods, graphical meas. method 121978
transcranial mag. stimulation, repetitive, therapeutic appl., review 111075
urban environ., outdoor background ELF mag. fields 76747
Nb-based integrated DC-SQUID magnetometers for multichannel systs. 70806
biomass conversion *see bioenergy conversion*
biomedical aids for handicapped *see handicapped aids*
biomedical applications of computers *see medical computing*
biomedical communication
see also biomedical telemetry; PACS; telemedicine
acute care hospitals, technol. transfer, survey design and data collection, Internet/intranet usage and impact meas. 98842
AX.25 amat. packet radio as med. emergency network 111261
care coord., professional commun., intermediation for better patient mgt. 111260
clinical health inform. network using off-the-shelf software to safely transfer med. data 111290
clinical trials, rem. data entry using WAP phones 98874
DiasNet, Internet tool for commun. and education in diabetes 98876
DICOM extensions for narrow-band networks 106930
digital pair line transm. syst. *(Japanese)* 85451
Fukuoka City physician group, diagnosis support *(Japanese)* 133202
head/neck lesions treatment, networked electronic portal imaging effectiveness 98675
health care network, regional, supported by organisational change, electronic referral and booking confirmation 111259
healthcare inform., pers., intell. inform. struct. for composing and pushing over Internet 111300
IIADPS model for distributed med. image proc. using CORBA 110542
integrated command environ. develop., lessons learned 99113
Internet-assisted Home Healthcare System on CATV network *(Japanese)* 133192
interoperability of med. devices, open std. platform 111050
med. dosimetrists, dist. learning by world wide web 98820
med. IS, WWW-based, for collaboration between rural clinics and central hospital *(Japanese)* 76785
mental health services, community-based, ICT soln. 111258
microwave radio for Doppler radar sens. of vital signs 87564
MIPAV (Medical Image Processing, Analysis and Visualization) program appl. in clinical research 110544
Morse code recogn. for users with phys. impairments, neural network appl. 87933
multimedia content distrib. to bal. QoS and cost 96265
oncology data network develop. in Germany 111257
paralysed patients, EEG-based commun., self-initiation 76717
patient admin. master-syst./clinical subsystem data transfer realised using ProtoGen/HL7 98875
patient data cards in health networks, secure interoperability 111267
patient immediate discharge letters, use of XML in Scotland 111266
physiological data, efficient transm. for rem. display, lifting scheme appl. 88010
radiological image and report distrib. syst., Java-based, implement. in non-PACS environ. 98851
radiological image distrib. and workflow 98845
radiology IS/imaging modality interface syst., based on DICOM std. classes *(Japanese)* 76218
radiology result receipt confirmation using digital certificates 98865
stereo video imaging, real-time, dedicated fibre-optic network implement. 109115
stereoscopic virtual environ., networked syst. 108375
TEAC-Health project, research-based recommendations for European certification of health telematics services 98873
UHF bodyworn antenna systs., num. anal. 72460
Web-based radiotherapy treatment planning syst., client-server appl. 87845
wireless Internet appl. for healthcare 111299
biomedical education
assistive technol. projects for engng. students 87927
asthma telepharmacy counseling, metered-dose inhaler tech. 121869
bone deformity correction planning, computer-aided surgical operations 111080
clinical engng. education, ISO guide 25 certified testing lab. 87291
clinical PACS, research and teaching access 89608
congenital heart disease, rem. diagnosis, mgt. and education 111288
design experience for biomed. engng. students, "technical entrepreneurship" course 98112
diabetes, tutoring syst. design considerations 98113
DiasNet, Internet tool for commun. and education in diabetes 98876
disability aids senior design projects, dist. learning 78508
EEG quantitat. anal., virtual training simulator-designer for tutoring students and doctors 89656
endoscope, virtual, haptic/visual feedback, for training 98164
endovascular brachytherapy, QA, equipt., personnel and education 98670

omedical education continued
Estonia, biomedical engng./med. phys. education/professional accreditation 98111
filmless radiology teaching 89610
hearing impairments, VR CD-ROM, HI-SIMv1.0 87290
intraoperative EEG monitoring, educ. simul., model param. 110545
meas. systs. with combined analogue input/output facilities for practical education 75373
med. dosimetrists, dist. learning by world wide web 98820
mental health professionals, cognitive-behavioural therapy training, videoconferencing pilot study 130898
MSc curriculum, joint Baltic, biomedical engng./phys. 87292
MSc in biomedical engng., all-Ireland course 98116
occupational therapy, engng. students & assistive technol. interact. 87928
professional develop. service delivery for health, education and welfare professionals, telemedicine 67424
radiation oncology interactive case mgt. exam., patient treatment portal design skills assess. 89607
radiation oncology phys., Australia & New Zealand requirements 87822
radiological databases for telemedicine and teaching, European projects IAEVA II and HERMES 111277
radiologist continuing professional develop. using WWW as delivery vehicle 89600
radiology teaching, dist. learning in digital environ. 89609
software aids for biomed. engng. design courses 98115
stereoscopic virtual environ., networked syst. 108375
technol. in biomedical research, education and training, Web-based appls., mgt. and delivery 100478
teleconsultation for primary-care ophthalmology and dermatology, cost study 76783
teledermatology as commun. tool between general practitioners and dermatologists 111281
telemedicine effects on workplace changes, emergency nurse practitioner opinions 133154
telemedicine for dist. education 124241
telemedicine in the Michigan Upper Peninsula region, eval. 133156
telemedicine systs., multimedia DP and transm. *(Polish)* 88025
telepathology network, conceptual groundwork and eval. 111272
The Netherlands, educational program on biomedical engng. 98117
TOF-PET tech., educational tool for demonstrating 132895
undergraduate & graduate design projects in bioengineering 87295
USA, case study of telemedicine appls. 98862
video conferencing and Internet for surgeon training 119769
videoconferencing in Queensland health service 133152

iomedical electrodes
5% electrode syst. for high-resoln. EEG/ERP meas. 87412
act. biomedical implants, HDI and flexible hybrid assemblies 111138
array denoising, new approach 110533
arrhythmic propag., line stimulation-induced virtual electrodes, action pot. prolongation 76319
atrial fibrillation, RF catheter ablation using long coiled electrodes 111051
atrioventricular defibrillator, atrial defibrillation thresholds, electrode configs. 122325
auditory nerve, chronic elec. stimulation, high surface area Pt electrodes 122322
BION bionic neuron syst., distributed neural prosthetic interfaces 76687
bipolar/tripolar elec. stimulation, shock artifacts 98183
cardiac syncytium, elec. excitability heterog. 87403
catheter type long-life miniature O_2 sens. *(Japanese)* 132507
cellular respiration & acidification meas. with CMOS ISFET 86685
chronic selective nerve stimulation, implantable syst. 76689
CNS stimulation microelectrodes, current dens. & elec. field, FEM model 87885
cochlear implant children, av. electrode voltage, intra-/post-operative obs. 87911
cochlear implants, elec. stimulation, pH shift 122340
cochlear implants stimulation, auditory thresholds, sympathetic skin response 76665
concentric needle electrodes, sharpness eval., Al foil penetration test, EMG appl. 121970
concentric-ring electrode systs., single motor unit activity, noninvasive detect. 132570
contact lens electrode, built in LED, ERG 98241
cortical imaging, finite-element-based cortex pot. estim. 76237
driver vigilance monitoring, skin resist.-based automatic checkout syst. 67502
dual threshold shocks optim., RV/LV electrodes, defibrillation simul. 87886
EEG, historical develop., equipt., tech. & pitfalls 76267
EEG brain map reconstruction by incorporating blind source separation 98173
EEG dipole source localisation, realistic head model, electrode location errors 121947
EEG ref. choice and related methodology issues, theoretical implications 87373
EGG, basic study for meas., electrode posns., mental stress appl. 76307
EGG, Kohonen neural net appl. 98257
elec. impedance tomography syst., electrode struct. optimum design 110616
elec. property enhanced tomography, simul. study 98206
electrohydraulic lithotriptors, efficient LV shock wave generator 98620
entrapped pacing/defibrillator leads, excimer laser extraction 98707
epileptic seizure onset, sphenoidal electrode site recording 76246
evoked pot. DAQ, PC controlled const. current stimulator 98201
eye, artificial, control using EOG following real eye 98722
FES, mag. coil, power transm. and control sig. detect. 133047
FES for paralysed extremity fn. restoration 133061
flexible biomed. microdevices, double-sided electrodes, neural appl. 76681
gastrointestinal myoelectrical recordings 87364
generator longevity extension by high impedance ventricular leads 87902
Hall effect imaging feasibility in humans 110762
heart, elec. stimuli, pass. current redistribution 87404
hepatic bipolar RF ablation, separated multiprong electrodes 122309
implantable microdevices, electrode-substr.-package codesign 122336
implantable neuromuscular stimulators, appl. & technol., overview 76686
Implas LSI microchip, nerve stimulation, body fn. control 122337
induced pain inhib. syst., elec. stimulation, hexagonal electrodes 111059
Internet-based pacemaker/ICD pulse generator/lead registry 76709
intracranial tissues, living, cond., monopolar needle electrode 87390
intramuscular/transcutaneous EMG electrodes, selectivity/sensitivity 98195
knee elec. fields due to knee-thigh electrode pair 132999
layered biological media, electrode array excitation model 133078
left atrial/ventricular-based single lead DDD pacing 87906
light-addressable microelectrode chip, extracellular stimulation/recording 87450
liver graft rejection diagnosis, implant. telemetric impedance device 87449
living chip, cell sens., toxicity and therapeutical biomonitoring 132019

biomedical electrodes continued
local electrogram prematurity, electrode catheter, simultaneous uni/bipolar recordings 87438
mil. press exercises, open grip, EMG 98185
mosaic elec. props., human skin, line patterns, cross-correl. study 76296
multichannel cochlear implant technol. based FES, bladder control 76693
multichannel EEG/event-related pot. recordings, electrolyte bridges detect. 76290
multifreq. elec. impedance tomography syst., frontend archit. 87423
multiple microelectrode-recording syst. for human intracortical appls. 87370
neuroelectronic interfacing with cultured multielectrode arrays 111163
neuron-electrode interface, geom. based dyn. modelling 87378
neuronal recording multisite microelectrodes design, DAQ syst. 121953
pacemaker endocardial electrodes, polaris./evoked response sigs., intraoperative study 122317
pacemaker/defibrillator lead extraction syst., ancillary tools 98705
paraplegic standing, feedback controllers design 76661
plunge electrodes, cardiac tissue elec. stimulation, extracellular mapping 121963
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
QT dispersion, manual meas., lead exclusion effect 76315
rabbit muscle afferents, nerve-cuff recordings, joint posn. effect 122327
retina implant, microphotodiode arrays, elec. prop. 133043
right atrium, noncontact/contact probe electrograms 87383
scalp electrode impedance, infection risk, and EEG data quality 76289
scalp electrode posn. & MRI data sets alignment, digitisation compens. 98464
septal lead implant., paced QRS duration reduction, pass.-fixation leads 76708
single-unit neural recording with act. microelectrode arrays 98226
skeletal muscle fibre pot., charact. freqs., bipolar recordings 76255
skin conductance meas., 3-electrode method, op amp param. influence 98203
spinal cord injury fn. restoration, implanted stimulators 76688
subcutaneous array electrode, act. can implantable cardioverter defibrillator, efficacy 122323
surface EMG, crosstalk reduction tech. 87406
temporal lobe foci lateralisation, depth vs. subdural electrodes 98188
temporary DDD pacing using single lead, balloon-tipped catheter 111146
transplanted kidneys, rejection control, freq. depend. impedance, mixed sig. telemetry IC 98714
transthoracic defibrillation, myocardial vector fields mapping, bipolar electrode array 98225
transthoracic defibrillation current dens., two-layer segmented electrode 76593
virtual electrode polaris. and reentry in far field 122324
O_2 meas., P22 tumor, polarographic electrode, fiber-optic sens. 87517
Si microelectrodes with on-chip electronics, preamp. noise perform. 87379

biomedical electronics
see also biosensors; defibrillators; electrocardiography; electroencephalography; microelectrodes; pacemakers; patient monitoring; patient treatment; prosthetic power supplies; prosthetics; sensory aids
act. biomedical implants, HDI and flexible hybrid assemblies 111138
BiCMOS attenuator for audiometric appls. with on-chip power amp. 92481
bioimpedance dyn., implantable lock-in analyser, mixed-sig. ASIC 110624
biopotential amp., single supply 98216
bladder controller nerve sig. analog proc. cct., implantable, low-power CMOS 76677
brain-implantable biomimetic electronics, neurocomputational chips 111162
chemoluminant med. diagnostics, low-light-level sens. 122065
cone-beam CT for MV LINAC, electronic portal imaging 98544
depth of interact. PET, detector module, analog ASICs 122256
digital beamforming in handheld ultrasound systs., low power delay calc. 110805
digital radiographic syst. using CMOS image sens., develop./eval. 110955
diode dosimetry program, diode charact. changes over 4-yrs. 111214
ECG telemedicine and telecare, µP syst. 110590
elec. impedance tomography DAQ, DSP based master-slave syst. *(Chinese)* 132585
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
electrophoretic microchips, LIF detect., clinical diagnostics 98348
endoscope, electronic, image distortion correction *(Chinese)* 110829
ESSCIRC 2000, conf., Stockholm, Sweden (Sept. 2000) 89548
evoked pot. DAQ, PC controlled const. current stimulator 98201
eye press. monitoring syst., wireless, hybrid IC integrated into intra-ocular lens 122459
fast electrophysiological events, adaptive temporal recording, DAQ card 76306
foetal/maternal heart rate recorder for 24 hours 98255
foot monitoring, in-shoe multisensory DAQ syst. 87344
FPA Doppler imaging with per-pixel CW-Doppler receiver array 110736
FROST, low-noise high-rate photon counting ASIC for X-ray appl. 68876
gait assess., low-power wireless microcontroller PC interface 111265
head/neck fields, electronic portal images, automatic setup deviation meas. 87840
head/neck lesions treatment, networked electronic portal imaging effectiveness 98675
hearing aid LV CMOS filter, dyn. gate biasing use 122354
hearing aids, adaptive dyn. range optimisation 76678
high speed beamformer using TMS320C6201 DSP 110803
implantable power supply with opt. rechargeable Li batt. 87912
implantable stimulators, semi-custom CMOS vs. low-power microcontroller 76690
infant apnoea monitors testing, electronic simulator, actual physiologic data 87324
infant endotracheal tube positioning/monitoring, in-line acoustic syst. 98591
intens. modulated radiation therapy verification, electronic portal imaging 87816
intens.-modulated radiotherapy, dosimetric verification, electronic portal imaging 122369
intraocular CMOS press. sens. syst. implant, prog., on-chip micromech. sens. array 98868
list-mode time stamping DAQ module prototype for coincidence meas. 110954
low noise high-speed X-ray readout IC for imaging appls. 110415
low power hybrid posture monitoring syst. 132995
low-cost intell. portable MCA design anal. 121742
LSO scintillator array, PET detector module, interact. depth meas. 111016
LTCC multilayer technol. for thick film sens. appls. 131879
MEMS product commercialization, contract manufacturer perspective 116058
mesograph, continuous intraocular press. monitor, telemetric syst., glaucoma diagnosis 132544
microcontroller-based portable multifunctional patient monitor 98205
microwave radio for Doppler radar sens. of vital signs 87564
MRI desktop microscope, transceiver design, DDS 87671
multichannel cochlear implant technol. based FES, bladder control 76693
multidetector compact DAQ syst. time encoding anal. 120677

biomedical electronics continued
multifreq. elec. impedance tomography syst., frontend archit. 87423
MUROS-1 med. imaging pixel detector read-out syst. design anal. 122155
neuroelectronic interfacing with cultured multielectrode arrays 111163
neuromorphic VLSI cct. & spinal cord real-time interact. 122329
neuromuscular stimulation & recording, LabVIEW based syst. *(Chinese)* 133052
neuronal recording multisite microelectrodes design, DAQ syst. 121953
NIR transcutaneous telemetry, implant. transmitter, LD irrad. 98869
ophthalmology, CMOS microtransceivers, batt. operation 122332
percutaneous intervention, sonographically guided, electronic needle placement device 98273
PET, APD array, monolithic Si wafers, 32-channel LSO matrix 132935
PET, continuous scintillator with pixellated photodetector, design/simul. 132939
PET, high resoln., 32-channel LSO matrix coupled to monolithic 4×8 APD array 122205
PET, high resoln., granulated dual layer detectors, Monte Carlo study 132914
PET, high-resoln., granulated dual-layer detectors, Monte Carlo study 132949
PET dedicated instrum., small planar detectors, improved perform. 122232
PETRIC, PET CMOS mixed sig. front-end readout IC 122257
PETRIC PET readout IC 111004
phoswich/APD detectors, low-noise CMOS preamplifiers, high-resoln. PET systs. 111011
photodiode matrix detector, scintillator cryst. optimisation, Monte Carlo simul. 132915
pixellated photodetector, continuous scintillator, design/simul. 132916
portable dual-input MCA with large memory, dual isotope diagnostics 122156
portal imager, simple clinical dosimetry model 87962
portal images, electronic/film, image quality/clinical efficacy 87815
portal imaging, guide to clinical use 76626
portal imaging, incident beam distribs., iter. algm. for reconstruction 111127
portal imaging detector for advanced radiation therapy 133035
positron emission mammography camera, electronics syst. 111008
positron emission mammography camera, LBNL, electronics syst. 122260
posture improvement syst., low power accelerometer use 132996
prepolarized MRI, pulsed electromagnet controller 98455
psychosocial impact of electronic aids to daily living 98732
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
pulmonary gas meas., portable syst., fast lung fn. test 110522
radiotherapy, electron boost treatments, in vivo dose meas. eval. 98813
radiotherapy, semicond. based in-vivo dosimetry syst. appl. 98777
scoliosis treatment, low power portable EM posture monitoring syst. 111068
scoliosis treatment, low power wireless load monitoring syst. 111067
single X-ray exposure half-value layer meas., portable electronic device 98772
single-unit neural recording with act. microelectrode arrays 98226
skin conductance meas., 3-electrode method, op amp param. influence 98203
smart thin-film flow sens., respiratory monitoring appl. 98146
solid state microdosimetry, radiotherapy appls., review 133140
Terason 2000 handheld PC-based US imaging syst., SoC design 110696
ultralow freq. digital synthesizer, biophys. investigs. 79621
video windowing controller design for electronic endoscope and multimedia 75292
CsI(Tl)/Si PIN photodiode imaging module, compact 64-pixel, IC readout, perform. 122263
LSO scintillator array, PET detector module, depth of interact. meas. 122261
Si microelectrodes with on-chip electronics, preamp. noise perform. 87379
Si multi-sens. needles, temp. sens. and ISFETs, appls. in surgery 121971
Si, porous, microelectronic biological implants, overview 111140

biomedical engineering
see also biomedical communication; biomedical education; biomedical electronics; biomedical equipment; orthotics; patient treatment; prosthetics; sensory aids
asthma telepharmacy counseling, metered-dose inhaler tech. 121869
electroactive polymer-based artificial muscle nanotechnology 98724
extrusion melt press. meas. for food/med. appls. 100572
Forschungszentrum Karlsruhe, biomedical engng. and biophys. *(German)* 110485
hist., phys./engng. appls. to med. 98114
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (May 2001) 113283
IEEE elec. and electronic engineers conf., Tel-Aviv, Israel (2000) 113257
intell. operating room, robotic biomedical technol., UCLA Medical Center 122447
internally grounded feedthrough capacitor, reliab./appls. 115068
intuitive surgical Da Vinci syst., robotics, dexterity 122449
laser-guided direct writing, biological/electronic appls. 117554
MEMS product commercialization, contract manufacturer perspective 116058
microcontroller-based semi-automatic coagulator 132499
micromanipulation mechanisms synthesis for bioengineering *(Chinese)* 104186
ROBODOC surgical assistant syst., bone milling, pinless registration 122448
robotic surgery, procedural compatibility, dexterity enhancement, patient safety 122450
tomographic med. image viewing, presentation methods 76466
Venezuelan health sector Y2K Nat. Evaluation Project 87294
XIMIT, X-ray migration meas. of hip socket implants using implant models and image templates 76711
Y2K audit, challenge for clinical engineers in Mexico 87293

biomedical EPR imaging *see biomedical MRI; EPR imaging*

biomedical equipment
see also biological techniques; biomedical electrodes; biomedical electronics; biomedical measurement; biomedical telemetry; biomedical transducers; biosensors; drug delivery systems; handicapped aids; laser applications in medicine; medical robotics; orthotics; prosthetics; sensory aids
1.75D ultrasound array, preliminary expt. results 110704
2-D/3-D whole-body PET scanning, true continuous bed motion 132945
3-D differential coil design for localised mag. stimulation 121986
3-headed γ-camera PET, resoln., detector thickness influence 122211
3D conformal radiotherapy, relocatable head fixation syst. 76618
3D US imaging equipt., QA test device, image/meas. errors *(German)* 87492
3D water-coated antenna applicator for deep-body hyperthermia 87847
3D X-ray microtomographic syst., CMOS image sens., bone imaging 132827
3D X-ray microtomographic syst. with CMOS image sens. 132834
915 MHz miniature helical applicators for Barrett's oesophagus 87848
ADAC mol. coincidence detect. PET camera, NEMA NU-2 2000+ stds. 132952
ambulatory med. instrumentation, data logging technol. appl. 87304
anthropomorphic phantom integrated EGS4 Monte Carlo code, Compton probe appl. 132958
arteries, human, 3D forward-viewing intravascular US imaging 110797
Asia/Pacific Region, radiotherapy resources, quantitat. status 111117

biomedical equipment continued
atrial fibrillation ablation with loop catheter design 122277
auditory evoked responses recording, PC syst. 76273
Autoref R-1 readings, monochromatic aberrations effect 76410
Barrett's oesophagus, colorimetric detect, low-cost fibre-optic instrum. 76399
beta-ray ophthalmic applicators dosimetry, different meas. methods comparison 98784
biliary tract percutaneous-transhepatic fibre & video endoscopy 122051
birdcage coil, 3 T, RF mag. field mapping 132748
bladder, servo-mech. dyn. simulator 121866
boron neutron capture synovectomy, DD/DT sources, beam-shaping assemblies 87829
brachytherapy treatment planning, CT based, automatic catheter reconstruction 98543
breast cancer, quasi-monochromatic CT syst., combined emission-transm. tomography 110957
breast cancer therapy manipulator for mag. reson. tomography device *(German)* 110868
breast imaging, 1.75-D 1280-channel US syst. design 110703
breast radiotherapy phantom design for START trial 87808
breast tumour imaging using tiltable head SPECT camera 132947
cardiac tachyarrhythmias, SQUID magnetometer appl. 87459
cardiopulmonary monitoring at home, CHIME monitor 87305
carotid arteries, 3D US imaging, EM tracking device 110796
carotid artery contrast-enhanced MRI angiography, array coil 98469
cellular telephones, operation zones in hospital hallways 94057
chest wall movement meas., video-based opt. syst. 122044
coaxial slot array catheter antenna for microwave cardiac ablation 76658
collimator, medium-sensitivity rot., high-perform. radioisotopic imaging 111013
compact PSPMTs, imaging props. eval., discrete γ-cameras appl. 122267
Compton camera for multi-tracer imaging, segmented Ge detectors 122207
Compton camera for multitracer imaging, Monte Carlo simul. 111012
computed radiography detector, needle-cryst. storage phosphor plate 98489
conf. on nuc. med. imaging, Lyon, France (Oct. 2000) 100419
conformal radiotherapy, exact/objective positioning syst., opt. 3D-surface-detect. 87530
conformal stereotactic radiotherapy, phantom dosimetry, head/neck localiser frame 98760
contact laser scalpels, emergent power distrib., Monte-Carlo simul. *(Chinese)* 128635
control/modeling, conf., Karlsburg, Germany (2000) 124195
controlled radiation light guide med. devices 122054
CPET scanner, perform. eval. using IEC & NEMA protocols 122231
CRT displays, monochrome, medium-resoln., calib. for purpose of board exams. 97635
CT-SPECT, combined syst. with single CdZnTe detector 122149
CT-SPECT combined tomographic imager, scintimammography 122150
CTRx, therapy machine and CT scanner 87736
cycling, functional elec. stimulation, test bed with force-meas. crank 87319
dental X-ray survey results, Canada Nat. Capital Region, 1999 to 2000 111199
depth-encoding Anger detector using scintillating fibres 132936
diagnostic monitors, high-resoln., QC issues 98123
diaphragmal sinus, malignant pleural mesothelioma, wedge-shaped applicator 98622
digital clinical thermometers, accuracy & reliab. eval. 132508
digital endoscopic imaging syst., pass. autofocusing *(English)* 87543
digital fluoroscopy equipt., image quality, tandem optics/TV-tube *(German)* 110970
digital K-edge imaging syst., electron beam transit. radiation 110959
digital mammography X-ray imaging detectors design/appls. 132806
digital opt. fibre photoplethysmograph design, DDS, DSP 110847
digital radiographic syst. using CMOS image sens., develop./eval. 110955
digital radiology CRT display syst. params. 110927
digital spot mammographic unit eval. using contrast detail phantom 122122
DIGITEXαPlus digital angiographic syst., interventional radiology *(Japanese)* 76537
double-spiral coil syst., high elec. field generation, 2D modelling 99786
dual head coincidence imaging, scatter response, Monte Carlo simul. 122197
dual-/triple-head hybrid PET systs., estim. task perform. 122210
dual-energy hybrid imaging sens., single exposure radiography 110945
dual-energy X-ray absorptiometry, CdZnTe detector implement. 110925
dyn. multileaf collimation systs., interleaf leakage, patient motion 111104
ECAT HRRT, high resoln. research tomograph, perform./first clinical appl. 122221
ECG amp., combined driven right leg/guarding ccts., stabil. conditions 110591
ECG equipt. testing/calib., accurate prog. ECG simulator 110649
EKKh high-frequency electrosurgical equipt. for cosmetic surgery 111069
elec. defibrillation, sig. anal. systs. for optimal timing 110652
elec. tomography devices perform., quantitat. eval. *(English)* 98199
electro-goniometer model, calib. for biomech. appls. 76231
electrohydraulic lithotriptors, efficient LV shock wave generator 98620
electromedical apparatus safety considerations *(Italian)* 87296
electron accelerator circ./rect./sq. fields, Monte Carlo calc. 87053
electronic, EMI by radio waves coming from outside hospital 122446
electronic portal imager, simple clinical dosimetry model 87962
electronic stethoscope with diagnosis capability 87299
electrosurgery, nonsticking, pass. cooled instrums. develop. 111060
electrotherapy for patient treatment, hist. 76595
Elekta SL25 LINAC, fixed bending current 133037
ellipt. supercond. magnets, design, rapid force computation 82007
ELNOS X-ray diagnostic table syst. with flat panel detector *(Japanese)* 76533
EM interf. to med. devices from digital TV sigs. 133194
emergency department at level-I trauma centre, diagnostic workstation impact on workflow 98839
EMG systs., microvolt calibrator 132579
endoscope, 3D posn. determ. inside patient body using mag. field sens. 76232
endoscope, electronic, FPGA-based real-time image proc. syst. 76415
endoscope micro-surveillance syst. *(Chinese)* 87346
endoscopic laser diagnosis/surgery prototype, in-vitro/in-vivo trials 117600
ENDOSTAB, endoscopic stabiliser for min. invasive cardiac surgery *(German)* 111056
endovascular brachytherapy, QA, equipt., personnel and education 98670
epileptic seizure detect. syst. using multiple single neuron recordings 110584
EPR/NMR simult. imaging, composite resonator, multimodal cavity 110895
ESD transient EM fields, ultra wide band test syst. 87375
ethylene oxide monitoring in sterilization operations, miniature IR gas analyzer 75700
European Soc. for Engineering and Medicine, conf., Belfast, Ireland (May 2001) 78370
expiratory muscles, functional mag. stimulation, improved coil design 76598

omedical equipment continued
FES-cycling syst., network capability, multi-centre clinical studies 122284
fiberised laser-US source design, proc. monitoring & biomed. appl. 122732
fibreoptic IR radiometer, thermometry inside MRI syst. 87603
finger blood press. beat-to-beat meas., vasoconstriction effect 87327
flat panel X-ray image sens., amorph. Se & polycryst. CdTe *(Japanese)* 122146
flat-panel X-ray detector for digital radiography & fluoroscopy *(Japanese)* 76532
flexible fluidic actuators, appl. in med. engng. *(German)* 110486
fluoresc. X-ray computed tomography, dual agents 122129
focusing GRIN rod lens, LD beam shaping, endoscope appls. 122052
foetal/maternal heart rate recorder for 24 hours 98255
fracture movement monitoring syst., fracture healing assess. aid 110529
gait perform./outcomes, clinical meas., portable devices 76373
gait phase detect., reliable syst., neuroprosthetics appl. 87318
gamma camera dead-time correction for ^{131}I, scatt. independ. 122249
gamma camera detector, virtual PMTs, centroid positioning perform. improvement 122268
γ-camera collimators, quality perform., investig. comparison *(Chinese)* 111044
gamma-cameras, Monte-Carlo simul. using GEANT 132957
gated intens. modulated radiotherapy, feasibility 98656
glass capillary antiscatter grids for mammography 87732
grip force adjustments meas., precision grip tasks, instrumented ring 110530
Gulmay D3300 kilovoltage X-ray therapy unit, perform. assess. 122286
haemorrhage, subdural and intraparenchymal intracranial, diagnosis using microwave-based detector 76416
hand-held γ-cameras, reconstruction implement., surgery appl. 132983
head MRI, UHF interacts. calc. 133077
heart recovery, centrifugal pump, antithrombogenecity, rot. impeller 76668
heat stress assess., global radiation meas. by light sens. 122048
Heidelberg Retina Tomograph, topographic meas. reproducibility, contour line size/location influence 76409
hemiplegic patients, gait param. assess. by accelerometry 76221
hemiplegic patients wheelchair to bed transfer, 3D ang. sens. 76606
high press. Xe proportional tube detector for Tc-99m imaging 121525
high-resoln. phantom for MRI 132730
high-speed γ-camera design, high-yield-pileup-event recovery method 98571
high-temp. supercond. surface coil, human skin microimaging 132662
homog. ^{242m}Am-fueled reactor for neutron capture therapy 98621
human action pattern meas. using mag. IR sens. *(Japanese)* 110658
human body temp. on-line monitoring, virtual instrum. 110511
human skin, topographical in-vivo meas. series by displacement vector fields, area tracking 110510
hybrid flat-panel detector arrays for digital X-ray fluoroscopy 110917
hybrid PET/SPECT resoln., LSO/NaI scintillators, online rebinning 122218
hyperspectral fundus imager, syst. concept & data proc. 98346
I/Q sigs. compression for US diagnostic equipt. 98289
image digitisers, protocol-based eval. 132642
image intensifier syst. under automatic brightness control, computer model 111204
implantable detect. microcoils for min. invasive NMR spectrosc. 132704
implantable mech. microsyst. develop., blood pumps 122335
IMRT, NOMOS Peacock, utilising the BEAK™ post collimation device 98809
indoor wireless patient monitoring, assoc. technols., review 133196
inductive hyperthermia, handy excitation coil, simul. *(Japanese)* 111063
infant apnoea monitors testing, electronic simulator, actual physiologic data 87324
infectious disease screening for field med. emergencies 76381
integrated CT-SPECT syst. for small-animal imaging 110929
integrated PET-SPECT imager for small animals, tumour therapy eval. 76586
intens. modulated radiotherapy dose delivery, dyn. multileaf collimation 122372
intens.-modulated radiotherapy, QA procedures for Peacock syst. 98812
interface press. meas. using pneumatic tourniquet cuffs, hammocking effect 132534
interoperability of med. devices, open std. platform 111050
intracavitary radiotherapy, electron cones fab., dosimetry characts. 87844
intravascular devices localisation with paramag. markers in MRI 132711
intravascular ultrasonography, flexible acoustic transm. line develop. 110694
intravascular ultrasonography, imaging syst. using pulse compression tech. 98295
ISPA-tubes with scintillating YAP:Ce windows, X & γ ray imaging 121812
Japanese nat. micromachine project overview, micro-opt. devices 71379
KCCH cyclotron magnet, highly stabilized/high precision power supply 133039
kidney stones comminution, dual-reflector lithotripter 111122
knee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
laparoscopic tools, motion assess. 111062
LCD-based vision screener, tech. develop. *(German)* 98351
lever-control, respiratory/cardiac motion sens., MRI expts. 132728
light ion beams for radiation treatment, facility design anal. 111130
linac head-scatter contrib. & photon source size, pinhole camera obs. *(German)* 87828
linac radiation output constancy check, ionis. chamber/diode comparison *(German)* 87972
linac radiation quality QA, Plexitom phantom *(German)* 87973
liq. Xe PET camera, simul./posn. sensitive PMT tests 122226
liver diseases diagnostic syst. based on conventional US equipt. 98293
lung cancer radiotherapy, video-based respiratory gating syst. 87837
lymphoscintigraphy handheld scintillation camera, high-resoln. 110998
mag. micro-machine, swimming device, med. appls. 127085
mag. stimulation, induced elec. fields rel. to coil design *(Chinese)* 110549
magnetostimulation thresholds, whole-body and head/neck gradient coils 132749
mammary/axillary region PET imaging syst., breast cancer appl. 111034
mammographic X-ray tube output/half value layer determ, parametric method 87716
mammography, automatic exposure control assess., GE Senographe 600 TS 132830
mammography, photon-counting X-ray imaging syst. eval. 132835
mammography 2D air-core antiscatter grids, MC simul., fab. 76505
mammography automatic exposure control compens. test, phantoms 76506
MaxPET, dedicated mammary/axillary region syst. for breast cancer 122220
MDAPET camera, missing projection data compensation 122230
mechano-encephalogram, amorph. wire micro SI accel. sens. 121901
mechatronics technols. in med., research/appls. 121863
micro-columnar scintillators, opt. fibre coupled compact imaging syst. 132964
microcolumnar scintillators, opt. fibre coupled compact imaging syst. 111009
microPET P4, perform. eval., animal imaging appl. 98575
microsensors, surgery, min. invasive, blood vessels, spatially confined tissue structs. 133010
microstrip RF surface coil design, extremely high-field MRI/spectrosc. 132683
microwave coagulation therapy, coaxial-dipole antenna heating 87812

biomedical equipment continued
mini-endoscopes develop. for ENT disease diagnosis/treatment 122050
mini-endoscopy in orthopaedic/traumatology diagnostics/therapy 122278
miniaturized antennas for microwave ablation of arrhythmia causing cardiac tissues 76616
modelling, photon beams prod. from electron accelerator, Monte Carlo code 76186
monochromatic X-ray CT, fluoresc. X-rays excited by SR 98561
MR-guided vascular intervention on high-field syst. 122072
MRI desktop microscope, transceiver design, DDS 87671
MRI gradient coils, act. acoustic control 132775
MRI low-field imager using hyperpolarised ^{129}Xe 98467
MRI magnet, compact clinical design, multilayer current dens. approach 122113
MRI open scanners, flat RF body coil design 87670
multiantenna applicators, regional hyperthermia, optimal controls, fast algm. 122305
multielement carotid tonometry sens., noninvasive pulse wave vel. meas. 122019
multielement catheter-cooled interstitial ultrasound applicators for thermal therapy 98639
multielement tonometry sens.-based noninvasive PWV meas. syst. accuracy *(Japanese)* 132506
multifunctional Si-based microscale surgical syst. 111072
multileaf collimator leaves, abutting, half beam blocking, intens. modulation 87978
multipurpose neutron generators, RF quadrupole linac based syst. 110222
muscle stretch treatment/spasticity assess. device 76603
MUX-100 mobile X-ray syst., power assist cart *(Japanese)* 76535
myocardial ischemia venous lactate/glucose monitoring, ultrafiltration catheter 87347
myocardial perfusion SPECT, camera perform. eval., channelised Hotelling observer 132921
neck-shield for neurological studies with whole-body PET scanner 122228
needle-shaped waveguide excited microwave radiator, clinical appls. *(Chinese)* 76417
nervous syst. mag. stimulation device optim., skin/proximity effect 98592
neuromagnetic meas., high-sensitivity SQUID magnetometer, fab./characts. *(Korean)* 87456
newborn incubator functionality, microprocessed assess. 76224
Nuclear Medicine Soc., conf., Toronto, Canada (Jun 2001) 100369
ophthalmic therapeutic laser systs., perform. required *(Japanese)* 111110
opt. biopsy/in-vivo study of human skin, laser syst. 122057
opto-acoustic tomography syst., wide-band acoustic pulse detect. 110689
pacemaker/defibrillator lead extraction syst., ancillary tools 98705
paediatric surgery, IR ear thermometers, appl. criteria 111047
panoramic radiography, image charact. and convenience using CCD, storage phosphor and film receptors 98500
parallel X-rays prod. with bent-cryst. monochromator/X-ray tube 132816
pencil/fan beam dual energy X-ray absorptiometers, bone/soft tissue meas. 76552
PET, ADAC MCD camera, NEMA NU 2-2000 perform. meas. 122214
PET, block detectors, polaris. effects on scatt. normalisation 122269
PET, depth-encoding Anger detector using scintillating fibres 122203
PET, hybrid gamma camera imaging, septal spacing optim. 122235
PET, micro cryst. element detectors, perform. characts. 132937
PET, MR-compatible shields for 511 keV γ-photons 122094
PET, slat collimation/cylindrical detectors, simul. using SimSET 132987
PET, small animal, posn. sensitive detector, LSO array *(English)* 87776
PET cameras, irregular sampling/interact. depth, 3-D reconstruction 132953
PET cameras with irregular sampling/interact. depth, 3D reconstruction 132877
PET dedicated instrum., small planar detectors, improved perform. 122232
PET imaging, trends overview, instrumentation, detector modules, cameras 132896
PET micro cryst. element detectors, multichannel PMT coupled 122202
PET syst. design, optimisation for lesion detect. 132946
PET syst. design optimisation for lesion detect. 132912
PETRRA positron camera, backprojection-space 3D scatter correction 122196
phantom develop. for morphometric X-ray absorptiometry 87717
phoswich detector for continuous blood-sampling syst. 132938
pinhole collimators, depleted U, 511-keV photon SPECT imaging, small vols. 132948
pixellated semicond. gamma camera, phys.-based model 111005
pixellated semicond. γ-camera, phys. based model 132913
plasma flash X-ray generator, Ce target, quasimonochromatic X-rays 110435
portal imaging detector, therapeutic X-ray spectrum, X-ray absorpt., noise, DQE 132833
portal imaging detector for advanced radiation therapy 133035
portal imaging device for advanced radiation therapy 133028
positron emission mammography camera, electronics syst. 111008
positron emission mammography-guided stereotactic breast biopsy 76566
positron-sensitive surgical probe, portable, design/perform. 132963
posture anal., inclinometry, triaxial accelerometers, validity/reliab. 110490
posture improvement syst., low power accelerometer use 132996
PRISM-IRIX γ camera syst., 3-head positron coincidence detect. *(Japanese)* 76583
prostate, benign disease/carcinoma diagnosis, MRI coils comparison 122071
prostate, transurethral robotic laser resection, LaserTrode lightguide appl. 76612
prostate cancer, interstitial microwave thermal therapy, helical antenna arrays 98623
prostate imaging, compact positron tomograph, conceptual design 122223
prostate imaging, compact positron tomograph, conceptual design 132950
prostate radiotherapy, treatment chain audit, phantom design/eval. 111116
prostate treatment, microwave transurethral applicator with helix-loaded-dipole-antenna 87872
PTCA balloon catheters, computer-controlled inflation/deflation 87781
pulmonary gas meas., portable syst., fast lung fn. test 110522
Pulsair 3000 tonometer, readings no. to ensure accuracy of av. 87340
radiograph viewing boxes, QC and luminance levels 122131
radiological imaging systs., Monte Carlo simul., Poisson distrib. recovery 132990
radiology, digital equipt. acquisition and installation procedures, team approach at Mayo Clinic 98499
radiology, low-cost PC-based image review workstation appl. 98840
radiotherapy, photon/electron beams, apparatus for applying mag. fields 76640
radiotherapy diode detectors, perform. limitations 76742
real time fiber optics-plastic scintillator syst. for X-ray detect. 110439
regional hyperthermia, EM phased arrays, optimal freq./antenna arrangement 87873
regional hyperthermia applicator design using FDTD modelling 98624
repairable equipt., failure database/rate model 89914
respiratory gating radiotherapy syst., clinical perform. eval. 87821

biomedical equipment continued
respiratory impedance meas., forced oscill. tech., analogue instrum. 87493
retinal diseases imaging, scanning laser ophthalmoscope appl. *(Japanese)* 110835
Saturne-25/-41, electron contamination sources, Monte Carlo approach 122303
scanned projection radiography, gas electron multiplier detector 76514
scintillation camera, bias free positioning estimators 132917
scintillation cameras, bias-free positioning estimators investig. 111019
scintillation detectors, spatial resoln. improvement, retro-reflective tape appl. 122265
scintimammography, dedicated scintillation cameras perform. 110997
scintimammography procedure optimisation using detector prototypes/compressible phantoms 111036
scintimammography/stereotactic core biopsy digital X-ray combined syst. 122209
sentinel lymph nodes localisation, hand-held γ-ray imaging device 132966
sentinel node radio-guided surgery, compact γ-cameras appl. 132969
SET-080 Alpha, high resoln. multiple slice brain SPECT *(Japanese)* 76582
shaped surface coil, sensitivity at 63 MHz, num. eval. 98402
Shimadzu MH-200 C-arm angiographic syst., ceiling suspens. type *(Japanese)* 76536
Shimadzu Mx8000 X-ray CT scanner, multiple slice type *(Japanese)* 76539
side viewing endoscope, FOV auto-scanning, miniature surgery *(Chinese)* 110828
SIGMA-eye applicator, antenna arrays, interacts./transforming networks 111105
slot-scan digital radiographic imaging, dual-energy detector 121770
small γ-camera using PSPMT, NaI(Tl), CsI(Tl) and CsI(Na), perform. eval. 132981
small-FOV γ-cameras, optimal cryst. geom., arrays vs. disks 132992
SPECT, compact Compton camera design, params./imaging algms. 132924
SPECT, fan beam collimators, geometric, scatt., septal penetration components 132920
SPECT, fan-beam collimators, geom. response modelling 132926
SPECT, pinhole collimator sensitivity with penetration, analytic determ. 110982
SPECT mammography, compact imagers rot. around breast vert. axis 132968
SPECT scatter correction, collimator depend., transm. depend. convolution 122200
SR X-ray transm. microtomography facility for biomed. imaging 132825
stents in angiographic images, deformable boundary detect. 110950
stereotactic head mask syst., patient fixation/positioning, accuracy/reproducibility 87869
stereotactic radiosurgery, modern linac systs., Gamma Knife obsolescence 133025
stereotactic radiosurgery dosimetry, miniature plastic scintillator detector 111240
stereotactically-guided conformal radiotherapy, paediatric patients treatment syst. 122291
Subrina X-ray CT scanner design, subsecond type, Genius View software *(Japanese)* 76538
surgical navig. 3D display syst. 87804
target of the day radiotherapy precision, computer-controlled table 87820
telepathology and rem. microscopy for intra-operative diagnoses on frozen sects. 111273
Terason 2000 handheld PC-based US imaging syst., SoC design 110696
thyroid, I-131 studies, high-resoln. detector syst., perform. meas. 111006
tissue opt. props. meas., small portable spectrophotometry syst. 122058
tomotherapeutic megavoltage CT calib. 87700
tongue movements on palate, monitoring syst. for stress evaluation 121895
transformer reson. phase-shifted PWM DC-DC converter, X-ray generator appls. 112653
triple-head gamma-camera PET syst., software geom. calib. method 122216
twin pregnancy, fetal cardiac activity, SQUID magnetometer appl. 87460
UHF apparatus for water based gels in microwave phantoms 87846
urologic tube, complex US & microwave irradiator interf. 87850
urologic tube, US & microwave irradiator design, model 87849
vascular imaging syst., Integris Allura, rot. angiography, 3D reconstruction 76529
ventilatory movements monitoring, FBG strain sens. 98349
vert. field open MRI, convex gradient coil design 87656
vibrotactile stimulation syst. to treat apnea of prematurity 111061
virtual PMTs, centroid positioning perform. improvement near γ-camera detector edges 111010
voice recogn. syst. eval. for radiology department 94414
whole body FDG-PET, simult. emission & transm. scanning *(Japanese)* 76581
whole-body PET scanner, neurological studies, neck shield 132951
wireless endoscopy camera, image proc. tools develop. *(German)* 131967
X'sy general radiographic syst. for GPs, compact design *(Japanese)* 76534
X-ray diagnosis source, K-fluoresc. enhanced X-ray tube 98507
X-ray films, RMS granularity meas. with commercial film scanner 132495
X-ray phosphor screens, opt. sig./gain and inform. content charact. 87748
γ-ray beams from linac with narrow beam collimator, med. appls. 122300
BGO HPLC positron detector, human PET metabolite anal. 98572
BaF_2 PET module, PMT coupled, gamma detect. efficiency 122208
CO_2 laser light delivery syst., hollow bent output tips props. 82716
CdTe gamma detectors, coincidence timing resoln., PET appl. 110291
CsI(Tl)/Si PIN photodiode imaging module, compact 64-pixel, IC readout, perform. 122263
^{18}F-FDG scintigraphy, CDET hybrid gamma-camera, malignant melanoma recurrence *(French)* 87772
GSO PET/SPECT detector, possibility anal. 122206
GSO brain PET camera, perform. obs. 122222
HgI_2 based high-resoln. X-ray act. matrix image sens. 109669
HgI_2 thick film radiological X-ray detectors, charactn. 110926
LSO-based scanner, in-beam PET, ion tumour therapy QA 122262
NaI/LSO and YSO/LSO phoswich block detectors, efficiency, PET/SPECT appl. 122266
Nd:YAG based yellow laser source for portwine treatment 93947
a-Se based diagnostic imagers, sig. form. quantitat. anal. 76512
a-Se based diagnostic/portal imagers, X-ray interacts. 87701
a-Se based direct-detect. act. matrix flat panel imager, DQE 98526
SnO_2 sens. for N_2O monitoring, catalytic decomp. 97485
Ti:sapphire laser-syncroscan streak camera, time-resolved opt. tomography syst. *(Chinese)* 132641
TiO_2 dielec. filled toroidal RF cavity resonator for high-field NMR 87652
Xe chambers, high-press., med. radiography appl. 76557
Xe tube detector array, high-press., EGS4 Monte Carlo simul. 132988

biomedical image processing *see medical image processing*

biomedical imaging
see also angiocardiography; biomedical measurement; biomedical MRI; biomedical ultrasonics; diagnostic radiography; electric impedance imaging; medical image processing; radioisotope imaging
3D vols. matching using self organising maps for computer vision 118297
acousto-photonic imaging, field interact. mechanisms 87538
AIM, attentionally-based syst. for interp. of angiography 87352
autofluorescence spectrosc., oral cancer diagnosis 87514
biliary tract percutaneous-transhepatic fibre & video endoscopy 122051
blood, opt. meas., conf., Amsterdam, Netherlands (Jul. 2000) 78375
blood erythrocyte shapes, holographic interf. microscope exam. 122061
bone tissue, pathological changes diagnostics, polariz.-correl. anal. 76407
brain struct. & fn., high resoln. imaging using OCT 98380
breast cancer, computerized thermography, image segmentation, temp. vars. 76387
breast tumor, microwave detect., skin subtraction algm. 87560
cardiac activation site orig. localisation, model-based ECG imaging 76294
cardiovascular sci., nanotechnol. needs, overview 132993
clinical image review using act.-matrix LCD, comparison with CRT displays 97631
combined ultrasound/NIR diffusive light imaging 110764
compact gamma camera design optimisation for breast imaging 132523
conformal imaging with non-contacting microwave antenna array 98384
continuous posn. sensitive diode performs. and assoc. electronics 121591
coronary artery bypass surgery, graft patency eval., thermal-coronary-angiography 76405
CRT-FPD transitional challenge 97710
DC SQUIDs, operation, technol. and appls. 92894
deformable modeling for characterizing biomedical shape changes 94977
diagnostic monitors, high-resoln., QC issues 98123
Doppler OCT, fluid flow vel. imaging 110839
dose conversion coeffs., monoenergetic neutrons, anatomical model 111228
ECG imaging, body surface pots., torso inhomogeneities effects 76317
EEG, high-resoln. imaging, equiv. source techs. 110618
elec. property enhanced tomography, simul. study 98206
electronic portal imager, simple clinical dosimetry model 87962
electronic portal imaging, clinical use, AAPM Task Group report 122297
electronic portal imaging, guide to clinical use 76626
endoscope, self-propelling, miniature robotic manipulator 110836
epithelial neoplasia, early detect., fluoresc. guided OCT 98376
eukaryotic cell imaging by X-ray FELs 87727
extracted human teeth, OCT imaging, coherent artifacts cancellation 132639
fibroadenoma, NIR tomographic breast imaging scatt. heterog. 87524
fluoresc. freq.-domain photon migration, 3D unconstrained/constrained image-reconstruction 76406
fluoresc. sens., conf., San Jose, CA, USA (Jan.2001) 89503
fluoresc. X-ray computed tomography, dual agents 122129
focusing GRIN rod lens, LD beam shaping, endoscope appls. 122052
functional brain imaging, opt. technol., overview *(Chinese)* 132643
functional brain imaging based on ERD/ERS 76302
gaseous micropattern detectors in astrophys., radiology and plasma phys. 121431
geometric sing. theory in embryology, inverting dedevelopment 76208
glass capillary antiscatter grids for mammography 87732
glucose conc. noninvasive monitoring, OCT 98374
head, human, hemodynamics, 3D vol. tomographic localization 132644
head/neck lesions treatment, networked electronic portal imaging effectiveness 98675
heart valve bio-prostheses, lensless Fourier holographic interferometry 122062
Heidelberg Retina Tomograph, topographic meas. reproducibility, contour line size/location influence 76409
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
high precision QW IR photodetector camera systs., med. imaging appls. 87544
high press. Xe proportional tube detector for Tc-99m imaging 121525
high-speed high DOF spatial normalization for human brain imaging 76206
hip-joint socket imaging using pulsed laser radar 132647
horse hoof horn capsules, 3D deform., photogrammetric meas. 98372
human bronchial tissue autofluorescence spectrum, Monte Carlo modelling *(Chinese)* 98347
human movement study using multimedia syst. 132521
image sens. for testing refr. error of eyes 76408
inhomog. tissues, microwave-induced thermoacoustic tomography 132648
intens. modulated radiation therapy verification, electronic portal imaging 87816
intens.-modulated radiotherapy, dosimetric verification, electronic portal imaging 122369
laser prod. X-ray source, med. imaging quality appls. 121815
LED med. diagnostics, oximetry and retinal imaging 87516
living body, sonoluminescence imaging, clinical diagnostics appls. *(Chinese)* 76375
living human face meas. using pulsed holography 82973
local tissue charactn. by backscatt. AO imaging 122039
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
lung tissues, human, intrinsic microscopic fluoresc. and imaging *(Chinese)* 132635
mag. induction tomography, biomedical and indust. uses 110666
mammalian cells, polarized backscatt. fiber-optic meas. 132638
Mayo Clinic, biomedical imaging resource, historical review 132501
med. imaging, geometric deformable model in confidence field 73221
mini-endoscopes develop. for ENT disease diagnosis/treatment 122050
mini-endoscopy in orthopaedic/traumatology diagnostics/therapy 122278
MLC/composites, med. imaging phased arrays 111535
multimedia algms., syst. bus load and power reduction, med. imaging 122036
multiply scatt. photons, low-coherence interferometric path-length-resolved Doppler meas. 132646
myocardium, laser-tissue interact., 3D interactive visualization, Java 98666
nailfold capillaries, taxonomy based on morph. 76382
near field microwave brain imaging, two-port microstrip test fixture 87561
near-IR imaging probe design, ultrasound localization 98371
OCT image form., quantization methods 106494
ocular/body disease detect. by dyn. light scatt. 132637
opt. computed tomographic imaging by photon counting method *(Japanese)* 122066
opt. sens./manipulation, biological/biomedical appls., conf., Taipei, Taiwan (July 2000) 89497
opt. tomography, parallel finite element and Monte Carlo methods 132633
optic nerve head, age-related topographical changes, scanning laser tomography 98367
optics/photonics trends, conf., Miami Beach, FL, USA (Apr. 2000) 100430

biomedical imaging continued
PACS, multi-imaging centre, planning 98122
phase fluct. imaging OCT 76397
phosphor materials in med. imaging radiation detectors, entropy meas. 82339
photonics technol. appls., conf., Quebec City, Quebec, Canada (June 2000) 89534
PILATUS project, pixel readout chip 97964
polariz.-sensitive OCT, biological sample birefr. props. 122041
portal dosimetry, imaging plate appl., clinical X-ray beams 98821
portal imager scatter dose model, Monte Carlo validation 98819
portal images, electronic/film, image quality/clinical efficacy 87815
portal imaging, EC film, direct opt. meas., X-ray scatt. effects 110918
portal imaging, kilovoltage X-ray source, thermal modelling 76646
portal imaging detector, therapeutic X-ray spectrum, absorpt., noise, DQE 133029
portal imaging detector, therapeutic X-ray spectrum, X-ray absorpt., noise, DQE 132833
portal imaging device for advanced radiation therapy 133028
primate/rabbit eyes, polaris. sensitive OCT, birefr. tissue 98378
QA programmes, imaging diagnostic departments, real-time mgt. syst. 98132
radiation oncology treatment setup, simple, routine monitoring/correction 87843
rare event detect. photomultiplier tube, med. imaging/neutrino detect. appls. 115277
rat-tail tendon, collagen-rich tissues, polariz.-sensitive second harmonic confocal imaging 98377
real-time opt. coherence-domain reflectometry, ang. dispersion imaging scheme 87518
relative fuzzy connectedness among multiple objs., image segmentation algms. 73288
retina, 3D OCT images 98363
retinal diseases imaging, scanning laser ophthalmoscope appl. *(Japanese)* 110835
semiinfinite media with vol. defects, thermal contact scanning anal. 132650
shape and topol. constraints on parametric act. contours 129419
side viewing endoscope, FOV auto-scanning, miniature surgery *(Chinese)* 110828
single living cell probing microscopic photon correl. spectrometer 132645
skin, 3D OCT images 98363
soft tissues, neutron imaging using med. linacs, BNCT appl. 98133
steady state IR reflectance oximetry, pre-computed Monte Carlo results 87540
subsurface sens. & imaging syst., unified discipline develop. 84167
teeth, laser irrad., surface morph., SEM, AFM 76398
telemedical consultations, depth perception 111255
tissue, in vivo exam., calibrated fluoresc. imaging syst. 87513
tissue fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
tissue microcirculation imaging, phase resolved OCT/ODT syst. 98379
tissues, fast/noninvasive fluoresc. imaging using flying-spot scanner 110842
tomographic imaging, symm., redundant inform., noise control 87283
transparent turbid media, differential phase-contrast OCT 76390
tumor hypoxia, scanning beam confocal fluoresc. microscopy 98355
tumour angiogenesis detect./eval., IR imaging appl. 76404
Tuned-Aperture Computed Tomography 76522
turbid media small absorbing heterog., detect. sensitivity 122064
two-photon fluoresc. labels, biological imaging sensitivity 110831
ultrahigh-resoln. OCT, continuum generation in air-silica microstruct. opt. fiber 73254
ultrasound tagging of light, detect. of inhomogeneities 93261
ventricular multiple events, noninvasive charactn. using ECG imaging 110556
viewing 3D MRI data in perspective 76477
virtual holographic recogn., digital methods, med. appls. 82967
visual fn. imaging with multifocal m-seq. tech. 76301
X-ray phosphor screens, opt. sig./gain and inform. content charact. 87748
Ca^{2+} intracellular dyn., THG laser scanning microscopy 76389
CdSe colloidal semicond. QD, time-gated biological imaging 87525
GaAs pixellated photon counting, med. imaging 98386
a-Se based diagnostic/portal imagers, X-ray interacts. 87701
a-Si:H pass. pixel sens. for med. imaging, VHDL-AMS modeling/simul. 109719
Ti:sapphire laser-syncroscan streak camera, time-resolved opt. tomography syst. *(Chinese)* 132641

biomedical laser applications *see laser applications in medicine*

biomedical materials
albumin-bound MRI contrast agents, rot. correl. time dilemma 98397
apatite bone-mimicking phantom, osteoporosis diagnosis appl. 98297
biocompatible O_2-permeable films holding paramag. C particles, EPR oximetry 132700
biodegradable PLGA microspheres, US contrast agents appl. 110702
chitosan films, self-expandable biocompatible stent, design, prep. 98717
electroactive polymers, compliant actuators, appls. 125102
FES implant design & constr., materials/power supply/telemetry 76692
heart valve prostheses, dedicated biomaterials testing syst. 111143
insulinoma cells encapsulation, nanoporous biocapsules, biotransport/biocompatibility considerations 133045
mammography automatic exposure control compens. test, phantoms 76506
metal implants, laser-microtextured surfaces, tissue integrat. 117596
metal implants, tissue react., X-ray scanning anal. microscopy 76660
metal/metal hip joints, lubrication, wear, femoral diam. 76675
metallic implants, MRI artifacts, num. simul. integral method 76459
MRI, contrast agent research develop., conf., Attard, Malta (May 2000) 89509
physiological flow rate wall-less stenosis phantoms, ultrasound 76346
polyethylene acetabular cups, contact stress, wear/friction 76672
polyethylene hip joint, elastohydrodynamic lubrication anal. 76673
polyethylene hip joints, wear-debris-induced osteolysis 76671
scintillation materials for nuc. med. appls. 111007
superparamagnetic iron oxide nanoparticles, brain MRI contrast agent appl. 98447
tofu as, tissue-mimicking material 132624
Al_2O_3 ceramic bearing couples, wear, hip joint simulator 87896
Co-Cr fermoral heads, N ion implant., hard coatings 133054
I contrast media, catheter-based intravascular brachytherapy, dosimetry 122391
NdFeB PM, dental prosthetic device, mag. props. 122318
Si, porous, microelectronic biological implants, overview 111140
Ti dental implants placement, MRI, spatial distortion 76489

biomedical measurement
see also biological techniques; biomedical equipment; biomedical imaging; biomedical NMR; biomedical telemetry; blood flow measurement; blood pressure measurement; diagnostic radiography; electrocardiography; electroencephalography; gait analysis; laser applications in medicine; oximetry; patient diagnosis; plethysmography
3D medical images, line and sheet struct. detect. and quantification 87308
3D posn. meas., gait anal. & surgical navig., calib. method *(English)* 87332
3D shape approximants via spherical wavelet decomp., clinical pelvimetry appl. 110539
abdominal aortic aneurysms, 3D image anal. 110947
abdominal temp., rem. meas., miniature data loggers 76215
acetabula cups, seq. impressions meas., noncontact syst. 122330
acetabular cup posn., post-operative meas. X-ray/CT registration 76561
amperometric glucose sens., PFC polymer coating 109722
anterior cruciate ligament, strain distrib. meas./anal., photoelastic coating method 121873
arteriovenous malformations, vol. estim. from biplane DSA images, computer program 87711
artery wall, black blood MRI, semiautomatic tech. 87675
ATC, human controllers, physiological meas. 98940
Autoref R-1 readings, monochromatic aberrations effect 76410
awake/sleeping humans, AM following responses, 40/80 Hz modulation freqs. comparison 87357
biochips, appls. of laser ablation to microengineering 128595
bioimpedance meas., orthostatic fluid shift effect 132553
biomag. inverse field problem, min. norm estims. multi-channel-SQUID sens. 121981
biomag. meas., mag. noise, DC elec. railcar 132589
blood, opt. meas., conf., Amsterdam, Netherlands (Jul. 2000) 78375
blood perfusion, noninvasive meas. in vivo, heating method *(Chinese)* 110488
blood sugar level, noninvasive monitoring by mm-wave transm. coeff. meas. *(Japanese)* 98382
blood sugar level noninvasive meas., MM wave appls. 87563
bone cond. hearing aids, skull vibr. meas., PC-based in-situ test 76706
bone fracture callus dens. eval., X-ray radiography & quantitat. CT 76515
bone mineral content assess., 3D SR microtomography images 132823
bone porosity, quantitat. meas. by mercury intrusion 110505
bone tissue, pathological changes diagnostics, polariz.-correl. anal. 76407
button-pressing, effect on P300 amplit./scalp topography 121941
cardiac deform., regional, estim. of 3D strain from 4D cine-MRI and echocardiography, in-vivo validation 87662
carotenoid antioxidants in living human tissues, reson. Raman detect. 122042
cellular respiration & acidification meas. with CMOS ISFET 86685
chest wall movement meas., video-based opt. syst. 122044
chest-wall surface, lung-sound transducers, absol. sensitivity *(Japanese)* 87322
composite femurs, surface strain, computer anal., photoelastic coating 98720
control/modeling, conf., Karlsburg, Germany (2000) 124195
cpd. nerve action pot. of common peroneal nerve 76322
cycling, functional elec. stimulation, test bed with force-meas. crank 87319
dental implants, ASIC strain gauge meas. syst. for stress monitoring 111166
diabetic feet, plantar ulcer detect., walking foot press. images 87334
diabetic patients, foot press. meas., GUI/syst. 110507
diabetic patients, glycaemic control, biosensors appl. 132003
digital clinical thermometers, accuracy & reliab. eval. 132508
driver drowsiness detect., physiological measuring syst. *(Japanese)* 132580
dual X-ray absorptiometry systs., bone densitometry, cross-calib. 87696
dual-energy X-ray absorptiometry, CdZnTe detector implement. 110925
dyn. biol. syst. charactn., multisine based impedance spectrosc. 110625
ECG abnormality discrim., feature extraction scheme appl. 132581
ECG beat class. by hybrid neural network 110639
echocardiography and Doppler tissue imaging, myocardial vel. meas. 132608
education, meas. systs. with combined analogue input/output facilities 75373
elderly drivers, respiration and heartbeat meas., unconstrained noninvasive method *(Japanese)* 87306
electro-oculogram, human, fast oscills. recording 132578
electrophoresis microfluidic device, hot embossing proc., DNA separation/detect. appls. 92515
epithelial neoplasia, early detect., fluoresc. guided OCT 98376
erythrocyte aggregation/disaggregation kinetics in blood flow syst., opt. investig. 122037
ethanol/water mixtures, sound speed meas., US imaging 75910
extrusion melt press. meas. for food/med. appls. 100572
eye motion meas., mag. search coil tech., field homog. improvement 121987
eye pupil response to light meas., novel imaging syst. 110846
facial soft tissue change anal., 3D measuring techs. 87522
femur, 3D meas. using clinical US, image-guided intramedullary nail fixation 87481
fiber optic IR thermometer, human body core temp. accurate meas. 87548
fiber optic sens. for respiratory depth meas. 87536
foetal growth, irregular, detect. using lin. mixed models 98344
foetal heart rate pattern categorization using neural nets 121990
force platform for large human displacements 87316
functional reach test, elderly subjs., kinematic/dyn. anal. 76220
gait anal. lab., technol. overview 132536
gait perform./outcomes, clinical meas., portable devices 76373
grip force adjustments meas., precision grip tasks, instrumented ring 110530
haemodialysis, children, intercompartmental fluid shifts, impedance meas. 87796
heart surface deform. meas., computer aided speckle interferometry 122053
heat stress assess., global radiation meas. by light sens. 122048
hemiplegic patients, standing, special motion assess. 87330
hemiplegic patients wheelchair to bed transfer, 3D ang. sens. 76606
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
horse hoof horn capsules, 3D deform., photogrammetric meas. 98372
human action pattern meas. using mag. IR sens. *(Japanese)* 110658
human serum albumin QCM immunosens., disposable 120953
human skin, water content meas., microsensor 120956
hyaline cartilage, NIR laser radiation effect on opt. props. 132640
Iber Braun hens, excimer laser keratectomy, postoperative corneal haze meas. 76393
interface press. meas. using pneumatic tourniquet cuffs, hammocking effect 132534
intracranial tissues, living, cond., monopolar needle electrode 87390
knee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
knee laxity meas., roentgen stereophotogrammetric anal., accuracy/repeatability 122132
latex spheres in Intralipid suspens., turbid media opt. props., CW meas.-based methods 76394
left atrium activation patterns during clockwise/counterclockwise atrial flutter 121936

biomedical measurement continued
living body, sonoluminescence imaging, clinical diagnostics appls. *(Chinese)* 76375
long baseline thin film SQUID gradiometers, human heart monitoring 75490
lower extremity, elec. nerve stimulation, H-reflex, F-wave params. 76275
LTCC multilayer technol. for thick film sens. appls. 131879
lung, regional fn. meas., non-invasive imaging using X-ray computed tomography 122123
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
magnetocardiographic study technol., supercond. transformer-based 132588
mechano-encephalogram, amorph. wire micro SI accel. sens. 121901
meconium conc. in amniotic fluid, biosensor design/develop. 86679
metacarpophalangeal joint kinematics, 3D meas. using 2 markers on phalanx 110848
miniature sens. for temp. meas. and control by microwave radiometry in med. appls. 87356
mosaic elec. props., human skin, line patterns, cross-correl. study 76296
multi-loop relax. oscill. SQUID magnetometer, flux-to-voltage transfer fn., MEG 75489
multielement carotid tonometry sens., noninvasive pulse wave vel. meas. 122019
multiple sclerosis, ataxic symptoms meas. with graphic tablet 121890
myocardial ischemia venous lactate/glucose monitoring, ultrafiltration catheter 87347
MyoTrack, 3D deform. field method to measure cardiac motion from gated SPECT 87774
needle EMG, pain determinants 110645
neuromagnetic meas., high-sensitivity SQUID magnetometer, fab./characts. *(Korean)* 87456
neurosurgery, augmented-reality endoscope navig. syst. 87789
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
newborns, functional residual capacity meas., He dilution transient phase 87343
ocular lens, aging human, thickness determ. from corrected Scheimpflug images 98366
one-chip-style quartz cryst. motion sens. with two fns. of gyro and accel. detect. 132535
opt. sens./manipulation, biological/biomedical appls., conf., Taipei, Taiwan (July 2000) 89497
ovarian follicle detect., meas. model syst. error suppression 132606
pencil/fan beam dual energy X-ray absorptiometers, bone/soft tissue meas. 76552
percutaneous device, implantable amperometric glucose sens. 86676
peripheral vein grafts, cross-sect. area changes, 3D US imaging 122003
physiological press., method for recording, storage and anal. 110657
planovalgus foot, surgical rehabilitation in cerebral palsy 87794
portable soft tissue indentor, accuracy & reliab. testing 87320
posture anal., inclinometry, triaxial accelerometers, validity/reliab. 110490
preterm infants, indirect calorimetry perform. improvement, O_2 consumption/CO_2 prod. 121870
prostate tissues, human, FTIR microspectroscopy, SRIXE techs. 98356
proximal lumbosacral nerve cond. tracing, simultaneous magneto-/electroneurography 110672
pudendal nerve terminal motor latency, age effects/tech. considerations 76284
pudendal nerve terminal motor latency meas., mag. neurostimulation 110665
pulmonary emphysema, lung vol. assess. using multi-detector helical CT, comparison with pulmonary fn. tests 110952
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
pulmonary gas meas., portable syst., fast lung fn. test 110522
Pulsair 3000 tonometer, readings no. to ensure accuracy of av. 87340
pulsed photothermal radiometry, blood vessel-like structs. investig. 76383
rectal cancer, neoadjuvant treatment response predicting by laser-induced endogenous fluoresc. 87554
respiration/heart beat meas., microwave displacement meter 122068
respiratory flow meas., opt. sens., cross-correl. techs. appl. 98359
respiratory syst., ident. algm., short-time press. pulse 121883
retinal damage, red diode laser exposure 98816
retinal fs laser pulses spot size, vis. lesion threshold depend. 67501
saline tonometry, continuous, method validation in porcine model 121876
SAW sens. for harsh environ. 70451
single-breath alkane uptake, VA/(Q+VTIS) distrib. estim. 87341
skeleton-based tracking, opt. motion capture reliab. increase 110849
skin conductance meas., 3-electrode method, op amp param. influence 98203
sleep apnoea airway obstruction, polysomnography phase detect. 110523
sleep related respiratory disease diagnosis, home appl., cardio-respiratory biosignals 121881
sleep-wake estim., wrist movement, actigraphic modalities 87415
soft tissue mech. charactn., instrum. microgripper, force feedback 132505
soft-tissue lesions, automated meas. of struct. in CT and MRI, validation study 110976
surface EMG, bispectral anal. 110654
surgical navig., magneto-optic hybrid 3D sens. 87790
sympathetic skin response to respiratory stimulation, sympathetic fn. meas. 98191
tendon elastic prop. meas., US elastography 122001
thin-layer mater. dielec. charactn., open-ended coaxial probe dimens. 121149
tissue, laser irrad., thermocouples, fluoroptic probes, temp. meas. 87526
tissue opt. props. meas., small portable spectrophotometry syst. 122058
tissue strain estim. using extended combined autocorrel. method 98290
trabecular bone, US param., impulse response, decorrel., BUA 110714
trabecular bone, US wave propag., stratified model 122023
trabecular struct. in human bone, time-lapse deform. tracking method, image anal. 110841
tumor imitator design for microwave radiometry, physiological props. 132651
urology/proctology press. profile sens. syst., catheter design 132543
VALYDYNE diff. press. sens. dyn. prop., human airducts model ident. 110524
vascular branches in fundus retinal images, geom. and morph. anal. 87521
ventilatory movements monitoring, FBG strain sens. 98349
vertebral column, functional anal. based on MRI and direct vol. rendering 87588
vestibular syst., inertial/gravit. inputs assess. 87301
vocal folds regional vibratory pattern assess., videostrobokymography 87542
wavefront aberration meas. of human eye *(Japanese)* 110834
wheelchair users, custom contour cushion fab., press. mapping method 87924
whole body fat, upper arm/leg elec. resist. 87393
X-ray films, RMS granularity meas. with commercial film scanner 132495
X-ray tomography, discontinuous 2D dens. reconstruction algm. 121237
XIMIT, X-ray migration meas. of hip socket implants using implant models and image templates 76711
Al_2O_3 ceramic bearing couples, wear, hip joint simulator 87896
Ca^{2+} intracellular dyn., THG laser scanning microscopy 76389
NO breath analyser, WO_3 based chemiresistive microsens. 87348

biomedical measurement continued
Pb conc., patella, in vivo X-ray fluoresc. bone meas. 110932

biomedical MRI
used for biomedical EPR and NMR imaging
see also biomedical NMR
2D cardiovascular vel. maps, visualisation with Hilbert transform 87659
2D discrete Fourier irregular samples, closed-form image reconstruction using Good-Thomas FFT 84299
2D fast MRI brain segmentation, region-based level-set snakes 110889
2D human brain MRI white matter/gray matter boundary segmentation 98412
3-D ultrasound, rigid registration with MR images 132598
3D angiographies, variational image restoration 122085
3D brain struct., adaptive-focus stat. shape model, segmentation 76420
3D brain vessel visualization on immersive projection syst. 87569
3D breast topol. vars. during repeat MRI, quantification 98468
3D contrast-enhanced MR angiography, nonrepetitive phase-encoding orders, quantitat. eval. 132694
3D cortical surface flattening of improved 2D visualization *(Chinese)* 110876
3D deform. field estim., robust, by template propag. 84149
3D functional MR image segmentation using, GA 98416
3D heart segmentation and tracking, FEM-based deformable model 132756
3D high-resoln. fast spin-echo coronary mag. reson. angiography 122099
3D mag. reson. angiography acquisition, embedded fluoroscopy 132765
3D magnetisation-prepared true-FISP, coronary arteries imaging tech. 132688
3D med. image proc., math. morph. *(Japanese)* 98421
3D med. images, global 3D rigid registration 98459
3D medical images, line and sheet struct. detect. and quantification 87308
3D MR coronary angiography, navigator echo-based respiratory gating 110885
3D MR image segmentation using mixture model and morph. filtering 122080
3D MRI temp. phase difference mapping 132763
3D PET, partial vol. effects correction algm., segmented MRI appl. 122251
3D phys.-based multi-obj. deformable model constr. 87684
3D sagittal brain MR images, automated segmentation by masking/restoration operations 110867
3D SSFP imaging, diffusion weighted, navigator motion correction 98399
3D struct., image segmentation, adaptive-focus stat. shape model 87583
3D TOF MRI angiography, laminar flow model 87658
3D tubular tree structs., accurate detect., MR angiography 98471
3D ultrasound, rigid registration with MRI, generalized correl. ratio 87479
3D water-coated antenna applicator, mag. reson. compatible 87847
3D-micro-mag. reson. angiography, polyamidoamine dendrimer core 132668
abdominal breathhold contrast enhanced mag. reson. angiography, scantiming 87594
accelerated image acquisition, lin. prior-inform. 132760
acrylic phantom, CT, MRI, stereotactic localization syst. 76635
acute cerebral vascular occlusion diagnosis, T_1-weighted images *(Chinese)* 76434
adaptive sensitivity encoding incorporating temporal filtering 87619
albumin, quantitat. ^{19}F-imaging at 1.5 T, pot. in-vivo tool 132725
albumin-bound MRI contrast agents, rot. correl. time dilemma 98397
Alzheimer's disease, cortical disease progression, MRI, deform. maps 132761
Alzheimer's disease, MRI, image proc., artificial neural net *(Chinese)* 98424
Alzheimer's disease diagnosis, brain atrophy meas. by image segmentation and fuzziness 129658
amyotrophic lateral sclerosis, multislice ^1H MR spectrosc. imaging 132675
anatomical struct., robust 3D image segmentation with level sets 87310
anatomically-accurate body model, MRI surface coil calcs. 76455
anatomy/fn. MR imaging based on intermolecular double-quantum coherences 110862
angiography, cerebral blood vessel extraction, region growing 76492
angiography, conf., Lyon, France (Oct. 2000) 67353
angiography, image anal. using skeletonization and dist. transforms 76495
angiography & brain attack diagnosis software, SLINKY & iPass *(Japanese)* 76490
angiography at 0.3 T using MS-325 98396
ANN reconstruction from noisy sparse images 76428
aortic wave vel., rapid meas., in vivo eval. 98434
arterial/venous trees, highly automated segmentation from 3D MR angiography 110901
artery wall, black blood MRI, semiautomatic tech. 87675
artery-vein separation via MRA, image proc. approach 110856
articular cartilage, T_2 relax., spatial collagen archit., MRI/opt. microscopy 132687
asymmetric zonal shim coils, systematic design 110871
atherosclerotic blood vessel tracking/lumen segmentation, MRI 98411
auditory cortex, hierarchical organization, fMRI 76468
auditory cortex echo-planar fMRI, decay-sampling design 87572
automated enhancement, segmentation and class. of digital brain images using networks of networks 110878
automatic intens.-based tissue class. 122095
backprojection filtering algms., vector/second order tensor fields reconstruction 129486
BBLimage, portable open-source software toolkit for vol. image anal. 132714
birdcage coil, 3 T, RF mag. field mapping 132748
BISTRO, outer-vol. suppression method, RF field inhomog. toleration 87647
black blood MRI quality and vessel wall segmentation 132738
blood flow meas., fast vel. encoded cine MRI, breath holding effect 122115
blood motion, vel. spectrum, mag. reson. tagging 132669
blood vessel permeab. map to blood pool contrast agent calc. from dyn. MRI, lesion charactn. 98391
blood vessel tracking in CTA/CE-MRA vol. images, adaptive min. path generation tech. 87663
blood vessels, deformable model with single point init. for segmentation, quantification and visualization in 3D MRA 87590
BOLD contrast fMRI, activation patterns, specified-resoln. wavelet anal. 110857
BOLD fMRI human brain imaging, ultrahigh mag. field 76443
BOLD MRI, functional neuroimaging, 1.5 & 3 T comparison 76444
BOLD MRI responses, human sensorimotor activation, transcranial DC stimulation 122098
BOLD/perfusion NMR, approaches to brain fn. studies 87653
bolus-chase 3D MR DSA, k-space 98403
bone marrow comp. in vertebral bodies, spectrosc. imaging 110892
bone MRI segmentation algm. assess. using SR micro-CT 132717
bone struct. ultrasound interact. simul. based on 3D MRI/micro-CT 98314
bone tumor segmentation from MR perfusion images with neural networks 110890
brain, diffusion tensor MRI, partial vol. effects 87611
brain, extracellular apparent diffusion, NMR 87614
brain, human, water T_2 relax. components, magnetisation transfer 132722

omedical MRI continued
brain, MRI, apparent diffusion tensor 87667
brain, MRI, double quantum coherence filtered glutathione sig. 76456
brain, normal, high b-value diffusion-weighted MRI 122090
brain, proton MR spectrosc. imaging, lipid contamination reduction methods 132767
brain, single-vol. ^{1}H NMR spectra, macromolecular resons. 87633
brain, single-voxel PMR spectra 87610
brain deform. tracking during neuro-surgical intervention 87692
brain disorder class. based on apparent diffusion coeff. values in diffusion MRI 76472
brain dyn. imaging using ICA, blind source separation, review 110617
brain fMRI, stat. parametric maps, Bayesian approach to segmentation 122093
brain fMRI & neurochemistry spectrosc., review 110896
brain gliomas MRI, FLAIR seq., CSF/blood flow artifacts reduction 98388
brain haemodyn. response, BOLD & perfusion based event-related fMRI 87571
brain hemodyns., functional MRI, nonlin. regression anal. 122069
brain image segmentation using AM-FM model 110898
brain images, 2D shape model automatic constr. 87607
brain images, connectivity-restrained multi-scale segment., fuzzy C-means 76471
brain maps, perfusion MRI, dyn. arterial spin labeling 87640
brain MR images, tumour ident., fractal anal. approach 98480
brain MR images, white matter areas extraction 98389
brain MR images segmentation, regularized EM algm. 73265
brain MRI, 3-D robust registration, dense deform. field, hierarchical estim. 76479
brain MRI, automated segmentation of cerebrospinal fluid and lateral ventricles 132778
brain MRI, automatic scan prescription 132672
brain MRI, cerebrospinal fluid flow artifacts reduction, FLAIR tech. 132745
brain MRI, fast fuzzy clustering segmentation algm. *(Chinese)* 110859
brain MRI, Fe-rich gray matter, CPMG relax. rate 98441
brain MRI, highly diffusion-sensitised, gray/white matter dissoc. 87609
brain MRI, human, fast 3D sodium imaging 132655
brain MRI, J-coupled macromol. reson., GABA editing 132676
brain MRI, large lesions segmentation 98420
brain MRI, lateral ventricular vols., accurate meas. method 87599
brain MRI, long. change, normalised accurate meas. 110888
brain MRI, nonlin. diffusion for interactive multi-scale watershed segmentation 87584
brain MRI, perfusion-based segmentation using similarity mapping 122106
brain MRI, subcortical structs., automatic segmentation, inform. fusion 98418
brain MRI datasets, 3D texture anal. 76482
brain MRI slices, holographic two-step storage method *(Chinese)* 98395
brain parcellation, adaptable fuzzy C-means for improved image class. as pre-proc. procedure 98423
brain parenchyma, multigradient-echo MRI data, biexponential modeling 87650
brain region auto-extraction from MRI, neural network controlled snake 110864
brain region connectivity, level sets approach 98481
brain shift, 3D intraoperative MRI, image registration using finite-element biomechanical model 87576
brain slices, macroscopic opt. images, 3D reconstruction 87520
brain SPECT and MRI, image co-registration using anatomical features 98569
brain stem/normal cerebellum, proton MR spectrosc. imaging 132766
brain struct. segmentation, MRI, fuzzy modeling 98406
brain tissue class. from MRI using decision-tree learning tech. 122084
brain tissue segmentation in MRI, RF inhomog. correction method 110881
brain tissue vols. quantification using MRI fusion 76432
brain tumors automatic detect., MRI unsupervised segmentation 98405
brain tumour SPECT & MRI images, surface fitting based registration 87775
brain tumours, corticospinal tract displacement simul. 87575
brain tumours, gross vol. delineation on CT and MRI 110944
brain tumours, radiology & radiat. oncology data integrat., PACS 76763
brain tumours, vol. MRI/MR spectrosc. imaging data anal. 132733
brainstem, high resoln. MRI at 8 T 98387
BrainSuite, automated cortical surface ident. tool 87578
breast cancer, dyn. contrast-enhanced Gd-DTPA MRI, arterial input fn. 87641
breast cancer investigs., MRI scans, automatic finite element mesh generation 110872
breast cancer therapy manipulator for mag. reson. tomography device *(German)* 110868
breast dyn. images, thin-plate spline based autom. alignment 98465
breast images, contrast-enhancing MRI, non-rigid registration, vol. and shape preservation of enhancing lesions 87586
breast MRI, computer-based anal. of enhancement curves 98422
breast MRI, contrast enhancement curve eval. using neural net 98394
breast pathology assess. by MRI-mammography 2D/3D data fusion 87585
Breast Perfusion Analysis System for MRI 110907
breast tissue, biomech. 3D FEM modelling, MRI data 76421
breast tumors, focused ultrasound surgery, MRI monitoring 87591
breast tumour contrast-enhanced MRI, arterial input fn., T_2* change 87657
breast tumours, microvascular charact., rapid clearance blood pool MR contrast medium 87623
breast/brain MRI, preprocessed image reconstruction appl. 122076
breath-hold MR angiography, magnetisation-prepared contrast-enhanced method 87682
cancellous bone struct., 3D MRI, connectivity anal. 122088
cardiac aquisition weighted ^{31}P chem. shift imaging 87616
cardiac deform., regional, estim. of 3D strain from 4D cine-MRI and echocardiography, in-vivo validation 87662
cardiac diagnostics appl. 76486
cardiac diffusion tensor MRI, solenoidal tensor fields, 3D reconstruction 87597
cardiac images, left ventricular segmentation 132755
cardiac longitud. strain, short-axis images, strain-encoded MRI 132742
cardiac MR 2D vel. images, vortex segmentation 98413
cardiac MR image quality, flow and motion 87689
cardiac MRI, iter. approach to tensor tomography 132708
cardiac MRI, left ventricular dimens. meas., real-time acquisition 132657
cardiac MRI, left ventricular motion/shape anal. syst. *(Chinese)* 98401
cardiac MRI, mixed echo train acquisition displacement encoding with stimulated echoes 132692
cardiac MRI, multistage hybrid act. appearance model matching, ventricles segmentation 76481
cardiac MRI, six-element array, SNSE coil design 132673
cardiac pacemakers, MRI interf. 87907
cardiac pacemakers/ICDs, MRI scanner force/torque effects 87674
cardiac suscept. artifacts arising from heart-lung interface 122114
cardiovascular relative press., time-resolved 3D phase contrast MRI 87622

biomedical MRI continued
carotid arteries, 3-D power Doppler US/MR angiographic images registration 110795
carotid artery contrast-enhanced MRI angiography, array coil 98469
carotid vessel wall area meas., black blood MRI, atherosclerosis 132721
cerebral blood flow, 2-chloroadenosine, spin labeled MRI 87629
cerebral blood flow, BOLD fMRI 87613
cerebral blood flow estim., single-coil arterial spin-tagging MRI 132685
cerebral blood flow MRI, arterial input fn., fuzzy clustering 87654
cerebral blood flow/vol. meas. using double-echo FAIR 87620
cerebral blood vol. maps, MR-derived, histological validation, tumour angiogenesis 132770
cerebral images, rule-based ES for automatic segmentation 76429
cerebral misery perfusion, MRI, spin echo T_2 BOLD 76424
cerebral pain proc., event-related fMRI, EPI & FLASH seqs. *(German)* 87606
cerebral perfusion MRI, arterial input fn., artifacts correction 132671
cerebral radiation injuries, ^{1}H mag. reson. spectra/imaging 87637
cerebral spinal fluid, white/grey matter, MRI segmentation 87566
cerebrovascular reactivity, MRI mapping, end-tidal PCO_2 87638
cervical spine, 3D fast spin-echo MRI, long. magnetisation recovery 122079
checkerboard stimulation, human V1, event-related BOLD response/VEPs 122100
chem. exchange model, weakly magnetized particles 87639
chem. shift imaging with spectrum modelling 98437
Chinese characters proc., brain response, event-related fMRI 87573
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
CNS tumour malignancy eval., MRI, fractal dimens. use 76494
coil-by-coil image reconstruction with SMASH 132702
collagen-containing tissues, double quantum filtered spectrosc. MRI 76465
conformal radiotherapy, MRI syst., CNS tumour vol. delineation 110858
contrast agent research develop., conf., Attard, Malta (May 2000) 89509
contrast enhanced MR angiography 76485
coronary angiography, motion correction 87690
coronary artery MRI, off-reson. distortion reduction, echo-time interpolation 122107
coronary mag. reson. angiography, motion compensation strategies 76450
coronary MRA motion effect suppression, real-time navigator approach 87688
cortex inner/outer surfaces segmentation, PDE based approach 76493
cortex segmentation, variational geometric approach 121885
cortical rhythms related to voluntary movements, EEG/fMR integrat. 76271
cortical sulci, automatic landmarking 87580
cortical sulci, automatic recogn. using cluster of neural networks 87577
cortical sulci detect. and tracking 122081
cortical sulci detect. MRI 3D curves tracking 98461
corticospinal tract, treatment planning, BOLD fMRI appl. 110865
craniopharyngioma, PMR spectrosc. 110883
CSF-attenuated imaging, T_1/T_2 selective method for improved SNR 132679
CT, MRI, regional factors affecting use in Sweden 87725
current dens. distrib., mag. field meas., accuracy/limitations 98458
DAQ times, EPI 110879
deformable image matching, topol. preservation 84606
deformable organ model, sphere-filled method, virtual surgery 98588
dephasing artifact reduction methods, perform. time, sensitivity 132670
desktop microscope, transceiver design, DDS 87671
diffusion tensor acquisition strategies optimisation, diffusion anisotropy meas. 87649
diffusion tensor MRI, fiber tract mapping 122086
diffusion weighted MRI, microscopic tissue params. 76463
diffusion-weighted RARE imaging, online motion correction 87608
dry-processed film image quality 87721
DSA/CT/MRI optimal localis. & image fusion, Leksell frame 76504
dyn. k-space sampling, temporal freq. anal. 76438
dyn. MR studies, optimal Gd-DTPA dose 132740
dyn. MRI, multiple resolns., phase-encode select dimens. 87632
dyn. MRI, region of interest acquisition method 87676
echo planar functional MRI, repetition time 132771
EEG dipoles spatial localisation in MRI 98482
elastography, 3D gradient echo meas., steady-state motion 110870
elastography, 3D subzone-based reconstruction algm. 87617
elastography, complex-valued stiffness reconstruction, differential eqn. alg. inversion 122110
ellipt. magnets, inverse design method 98478
endovascular radiological interventions 87687
endurance athletes, iliac arteries kinking detect., MR angiography 122075
EPI, acoustic noise characts. 122116
EPI, ghost/geometric distortion artifacts correction, multiecho ref. scan 87665
EPI, optimised distortion correction tech. 132678
EPR/NMR simult. imaging, composite resonator, multimodal cavity 110895
event-related BOLD fMRI, Bayesian tech. for lin. investig. 87646
evol.-based adaptation strategy for VQ image filtering 76484
extraocular muscle borders detect. using math. morph. 76544
extraocular muscle vol. estim. using 2D MRI 87565
extraocular muscle vol. meas. using dyn. contours 87598
fast T_1 mapping with vol. coverage 98438
fat-saturated 3D TrueFISP, magnetisation prep. during steady state 87645
ferromag. implants, suscept. difference artefacts, Volterra series modelling 98462
ferromag. pillow, pot. MR hazard not detectable by hand-held magnet 132757
fibreoptic IR radiometer, thermometry inside MRI syst. 87603
finger, mag. reson. phase contrast blood vel. meas. 76457
flow imaging, mapping vel. vector onto spin vector 132773
flux maximizing geometric flows, geometric act. contour models 110866
fMRI, artifact due to B_0 flucts., correction 98446
fMRI, auditory stimulation, intermolecular double-quantum coherences 132660
fMRI, high-resoln., multislice partial k-space GR-EPI, cubic voxels 98436
fMRI, high-sensitivity single-shot perfusion-weighted method 98433
fMRI, motor areas detectability, BOLD contrast, 3 T magnet 110886
fMRI, quantitat. differentiation between BOLD models 122103
fMRI, real-time multiple lin. regression, time-aware acquisition/proc. 122109
fMRI, ref. fn. determ., Bayesian source separation 132747
fMRI and MEG sigs., elec. stimulation, repetition rate 132591
fMRI data, graphical display, multidimensional space visualisation 87602
fMRI data anal., comparison of temporal and spatial ICA 122082
fMRI data anal. method using fast infomax-based ICA algm. 132705
fMRI data anal. using spline wavelets 132706
fMRI neuroimages, ICA 122083
fMRI scans, elastic registration using fast DCT 98466
fMRI sig. in motor area, early decrease detect. 122096
fMRI/VEP expts. combination, neural activity/BOLD response coupling 132686
focal blood brain barrier opening, MRI guided focused US 111065

biomedical MRI continued
foetal lung maturation, EPI, diffusion meas. 122104
foetal lung vol. estim. by MR imaging, init. results 87679
force-minimized compact magnets for high-field clinical MRI imaging appls., stochastic design 116529
four-element planar strip array 76453
functional MRI, human auditory cortex, block/event-related designs 122105
functional MRI, human spinal cord, contrast changes charactn. 132724
functional MRI, image distortion correction by multimodal non-rigid warping 87589
functional MRI, image-based physiological artifacts estim./correction tech. 132744
functional MRI, independent component-cross correl.-seq. epoch anal. 110906
functional MRI, neural activity detect. using canonical correl. anal. 122112
functional MRI, silent BOLD imaging, visual/auditory simul. 132656
functional MRI, tissue segmentation-assisted anal. for human motor response combining neural net and fuzzy C-means 76483
functional MRI data anal., contextual clustering 76480
functional MRI data anal., inform. theoretic approach incorporating spatial priors 87579
functional MRI image realignment tools comparison using computer-generated phantom 132690
functional MRI params., confidence intervals, jackknife resampling techs. 76419
fuzzy-region-segmentation 106669
generalised Fourier sampling patterns, irregular 2D support regions 132703
generalized regression neural networks based image interpolation 110899
generalized series dyn. imaging 87693
geometric act. contours, incorporation of shape priors 121886
ghost artifact cancellation using phased array proc. 132743
gradient coil design, stream fn. optim. 132674
gradient coils, act. acoustic control 132775
gradient coils, magnetostimulation thresholds, simple lin. formulation 87627
gradient-echo coronary MR angiography, 3D spiral vs. Cartesian 132774
guided US surgery, concentric-ring sector-vortex phased array 111123
haemodialysis access grafts & fistulae, MRI angiography 76439
haemodynamic eval. with TURBO BRISK, phase contrast angiography 76473
hand effect on cellular phone radiation 122410
head model, clinical ultra high field MRI 87596
head model, MRI, idealized birdcage coil 76454
head MRI, 7 T vs. 4 T, RF power, homog., S/N comparison 98430
head MRI, UHF interacts. calc. 133077
heart, harmonic phase MRI, bandpass filters design 98408
heart deform., tagged MRI and elasticity-based region model 98409
heart disease, phase contrast MRI, left ventricular wall motion 122091
hearts, isolated perfused, 2-component diffusion tensor MRI 87642
heat perception, specific absorpt. rates in MR exams. 132720
herpes simplex encephalitis, diffusion-weighted MRI findings 110882
hierarchical pre-segmentation without prior knowledge 110875
high ang. resoln. diffusion-weighted MRI 87631
high resoln. gel-dosimetry, opt. CT, MR scanning 98789
high-resoln. phantom for MRI 132730
high-temp. supercond. surface coil, human skin microimaging 132662
highly nonlin. RF mag. fields, high resoln. mapping 98457
hippocampal surface struct. in patients with unilateral mesial temporal sclerosis, shape anal. 98390
hippocampus of patients with mesial temporal sclerosis and temporal lobe epilepsy, MRI, deform.-based segmentation 98392
hist., phys./engng. appls. to med. 98114
human head MRI images segmentation, anisotropy reduction of topol. operators 76478
hyperechoes, spin-echo-based refocusing MRI strategy 98427
hyperthermia induced temp. distrib. in sarcomas, DE-MRI meas. tissue perfusion 76425
ICA, factor anal. preprocessing 110674
iliac arteries, contrast-enhanced MR angiography optimisation 132746
image contrast enhancement, discrete wavelet transform 76543
image QC param., sig. diff., sig. diff. to noise ratio, SNR 87655
image registration, consistent, forward/reverse transforms, MRI/CT appl. 98419
image registration, rigid, block matching to improve robustness 87314
image registration by maximization of combined mutual inform. and gradient inform. 84111
image segmentation by adaptive geodesic act. contours 84108
image seq., modeling/tracking of cardiac left ventricular motion by lin. harmonic model *(French)* 110860
index finger moment arms/tendon action lines, high resoln. MRI 87568
infant cerebral ventricle vol., 3-D US/MRI comparison 122017
inflammatory, degenerative, traumatised joints, low-field MRI appl. 122070
inform. theoretic criteria and mag. reson. image anal. 87567
interleaved EPI, oblique flow artifacts, centric reordering 76447
internal carotid artery, extracranial, spontaneous bilateral dissection with hypoglossal nerve palsy 110880
interventional MRI, catheters/guidewires, problems/solns. 76487
interventional MRI, local RF heating, Green's fn. 122089
intra-operative surgeries, vol. registration by surface point signature/mutual inform. maximization 87683
intracranial white matter lesions, MRI, multispectral 3D segmentation 87595
intraocular diseases, CT and MRI diagnoses *(Chinese)* 76508
intratumoral vasculature, 3D MR angiography, macromol. contrast agent 132698
intravascular devices localisation with paramag. markers in MRI 132711
inversion-recovery T_1, meas. precision, increased repetition time effect 87601
ischemic stroke, acute, diffusion/perfusion MR imaging 87605
kidney, fast breath-hold T2-weighted MRI, HASTE 76418
knee articular cartilage, high resoln. MRI, watershed segmentation 110863
knee MRI, musculo-skeletal radiology, progression to 3-D imaging 110854
knee surgery, patient model constr., motion simul., biomech. visualisation 111070
knowledge discovery from fMRI brain images by logical regression anal. 87685
L-band EPR spectrosc., tunable surface-coil-type resonator 76498
lactate discrim. in echo-planar spectrosc. imaging, J-coupling 76441
lang. proc. in children, fMRI/PEPSI comparison 122101
lateral tibial condyle cartilage layer, gradient echo MRI 87593
left-ventricular heart wall, 2D strain params., MR tagging 110902
lever-coil, respiratory/cardiac motion sens., MRI expts. 132728
limited-extent images aliased because of spectral undersampling, recovery 118404
liver MR imaging, contrast agents, review 122077
liver parenchyma, dyn. contrast-enhanced 3D MR imaging 87677
long. detect. imaging, quadrature excitation coil 98454
long. magnetis., T_1 estims., inversion recovery TrueFISP 76458
Lorentz effect imaging, neuronal elec. activity detect. 132719
biomedical MRI continued
low-field imager using hyperpolarised ^{129}Xe 98467
lumbar spine, 3D MRI seq. for computer assisted surgery 110897
LV, finite element mech. model, gated SPECT/cine MRI 132922
LV, finite-element mech. model, gated SPECT/MRI data 111021
LV motion, fast estim. using subspace approx. techs. 87664
LV segmentation in cardiac MR images 110874
LV wall motion, image anal. by MRI tagging 110911
magnet, compact clinical design, multilayer current dens. approach 122113
magnetis. transfer mag. reson. spectrosc. 76462
magnetomechanical vibrotactile devices, fMRI 133044
magnetostimulation thresholds, whole-body and head/neck gradient coils 132749
mammograms, X-ray and 3D MRI data, elastic registration 98501
med. image appl., differentiate MRI image by image comparison tech. 110900
med. IS, WWW-based, for collaboration between rural clinics and central hospital *(Japanese)* 76785
metabolic changes, nonlin., time averaging, fitting, muscle energetics ^{31}P MRS investig. 76437
metabolite maps reconstr. in ^{1}H-MRS imaging, time-domain tech. 87570
metabolites, normally aged brain, multislice ^{1}H MR spectrosc. imaging 87625
metallic implants, MRI artifacts, num. simul. integral method 76459
metastatic rodent tumours, pure absorpt. mode high-resoln. MRS imaging 87574
microstrip RF surface coil design, extremely high-field MRI/spectrosc. 132683
microtherapy, image guided, min. invasive approaches 133011
min. invasive robotic coronary artery bypass, 3-D visualization 76599
model-based EEG/MEG, MRI brain segmentation algm. appl. 132713
motorsensory activation prototype device, fMRI 110873
MR cardiac images, variational approach for segmentation of LV 122087
MRI-SPECT vol. images, multimodal 3D image registration 76430
MRSI, limited support region, fast k-space sample selection 132652
multi-channel data, colouring 110877
multidimens. fast Pade transforms for med. MRI/CT appls. 132712
multilinear models for facial emotion proc. using math. model 76475
multimodal brain image anal., phys.-based stat. deformable model 132710
multimodal med. vol. registration, spherical markers appl. 98554
multimodality image fusion toolkit, high-speed interactive fusion 76433
multimodality med. image registration, mutual inform. based 76431
multimodality registration, EEG/MEG and MRI data sets, automatic alignment 121980
multiple sclerosis, magnetisation transfer ratio histograms anal. 132699
multiple sclerosis lesions, 3-D surface reconstruction using spherical harmonics 132772
multiple sclerosis lesions, automated segmentation, model outlier detect. 110855
multiple-sclerosis brain tissue class., stat. 3D image segmentation algm. 110909
multislice echo planar MRI, rapid T_1 mapping 76448
multislice gradient echo T_1, accurate meas. 87618
multispectral image segmentation using hierarchical self-organizing map 110908
myocardial blood flow, regional differences assess., T_2-weighted 3D BOLD imaging 132697
myocardial infarction visualisation, improved MR imaging tech. 122078
myocardial ischaemia MRI, serial motion assess. by ref. tracking 122092
myocardial perfusion imaging, non-contrast agent MRI tech. 132654
myocardial perfusion MR imaging with interleaved notched saturation 87680
myocardial strains determ. from tagged MRI, fast techs. 98470
myocardial wall tagging with undersampled projection reconstr. 76440
myocardium, Gd-DTPA bolus tracking, T_1 fast acquisition relax. mapping 132696
myocardium, stunned, canine model, Gd-DTPA-enhanced MRI 87621
nasal papilloma diagnosis, Gd-enhanced MRI, spatiotemporal neural net 98479
nasopharyngeal carcinoma, automated detect. with dyn. Gd-enhanced MRI 110903
nerve bundles connectivity, diffusion tensor MRI, scalar pot. field 87660
neural activity detect., block-design functional MRI 98407
neural responses, functional MRI estim. and classif. 98404
neural tissue water compartments visualis., diffusion tensor MRI 76442
neurological CT and MRI, JPEG and JPEG 2000 irreversible compression algms., eval. 98493
neuronal activity, hemodynamic response, MRI, BOLD effects 87615
neurosurgery, augmented-reality endoscope navig. syst. 87789
neurosurgery, image-guided, model-updated, anal. using intra-operative MRI 87784
neurosurgery, US/MRI overlay with image warping 87477
neurosurgery/brain stereotaxic irrad. optimisation, multimodal matching appl. 122285
neurosurgical guidance, intra-op. 3D US & pre-op. MRI integrat. 76600
neutron capture therapy agent BSH, ^{10}B MRI, mice obs. 98428
noise correction, apparent diffusion coeffs. 132667
non-rigid image registration, inter-subj., mixed variable optim. approach 76496
non-rigid registration of 3D scalar, vector and tensor med. data 87661
nonCartesian k-space data, direct reconstruction, nonuniform FFT 87626
nonrigid image registration, symmetrization using inversion-invariant energies, appl. to multiple sclerosis 84112
Northeast Bioengineering Conference, 27th annual, Storrs, CT, USA (Mar-Apr 2001) 100396
oblique slices, automatic shimming, degenerate spherical harmonics effect 87651
occipital lobe MRI, gray/white matter, inverse T_2 contrast 132751
off-reson. & on-reson. seq. optim., magnetis. transfer contrast *(German)* 87672
oligodendroglioma with cystic component in infant 76520
open scanners, flat RF body coil design 87670
ordered-subsets EM algm., image segmentation, brain MRI appl. 132715
organ class. from cross-sect. images, fuzzy c-means med. image clustering 98417
osteoarthritis, articular cartilage vol./thickness, 3D FLASH MRI 87592
PACS, image registration and dyn. imaging 111297
pancreaticobiliary tract, congenital anoms., MR cholangiopancreatography findings using HASTE 110884
parallel MRI, generalised approach 110869
parallel MRI, SMASH image reconstruction 132777
parametric shape estimators perform. for 2-/3-D imaging systs. 122219
patient RF heating during MRI 133076
perfusion, dyn. contrast MRI meas. in brain/heart 132736
perfusion imaging by spin-labelling methods, functional MRI appl. 98443
perfusion imaging using encapsulated laser-polarised ^{3}He 132693
perfusion quantification in FAIR imaging by offset correction 98445
perfusion-weighted MRI, contrast agent conc./dosage effect 132723
PET, MR-compatible shields for 511 keV γ-photons 122094
PET reconstruction, Bayesian multiresolution algm. 98581
physiological press., method for recording, storage and anal. 110657
planar rigid body motion estim. 98460

omedical MRI continued
planar strip array antenna, DAQ, parallel proces 87694
plaque MR imaging, inform. theoretic anal. 98410
polymer gel dosimetry, param. selective MR-microimaging, radiotherapy appl. 122390
pontine auditory pathway, human, functional mag. reson. imaging 122073
portal vein, Gd-enhanced 3D MR portography with subtraction 76497
prepolarized MRI, pulsed electromagnet controller 98455
projection angiography, contrast-enhanced, background suppression, magnetisation prep. 98432
prostate, benign disease/carcinoma diagnosis, MRI coils comparison 122071
prostate, nonmetastatic/metastatic tumours differentiation, high resoln. MRI 87643
prostate disease thermal treatment, MRI compatible intracavitary ultrasound array 76426
prostate tissue, MRI, single-voxel oversampled J-resolved spectrosc. 87636
pulmonary regional perfusion eval., ultrafast MRI 98442
pulmonary ventilation kinetics, dyn. ^{19}F-MRI using inhaled SF_6 76445
pulsed arterial spin labelling MRI, tagging schemes, imperfect slice profiles 98439
quantitat. accuracy tests of MR-, CT-, and DS-angiography, photogrammetric meas. and visualization of blood vessel branching casting 98473
quantum holography, mag. reson. tomography and gravit. wavelets 82965
radial k-space acquisitions, 2-step navigatorless correction algm. 122108
radiology, telerobotics, CT and MRI imaging methods 132843
radiology and pathology conf., Web browser-based image presentation, eval. in traditional film-based environ. 98835
radiosurgery, multimodality image fusion, arteriovenous malformations appl. 98654
radiosurgery, stereotactic localisation, mag. reson. imaging accuracy 98456
rat lung MRI using low-temp. prepolarized helium-3 87668
real-time interactive coronary mag. reson. angiography 132682
real-time MRI techs. and appls. 87686
reconstruction, VD-AUTO-SMASH imaging 87644
reconstructive surgery/med. modelling, design methods appl. 98590
registration, min. spanning tree algm. 95440
renal arteries, high-spatial-resoln. contrast-enhanced MR angiography 87678
renography, time-series contrast-enhanced MRI, image registration 110910
resting brain, oxygenation-sensitive dual-echo spiral MRI 132758
retinal oxygenation response to hyperoxic challenge, MRI meas. 132753
retinal projections, 3D gradient echo MRI, Mn^{2+} contrast 132681
RF ablation treatment planning, blood vessel detect. 111134
rheumatoid arthritis, radiography versus MRI on wrist joints *(Chinese)* 76436
scalp electrode posn. & MRI data sets alignment, digitisation compens. 98464
sensitivity encoding, arbitrary k-space trajectories 132759
sensitivity-encoded spectrosc. imaging 132768
shaped surface coil, sensitivity at 63 MHz, num. eval. 98402
sig. anal., ICA techs. 132555
sigs. acquisition, undersampling tech. pot. use 132658
simulated wave propag. and traceback in vascular extraction 98414
simultaneous water/fat MRI with chem.-shift correction 110861
single-shot EPI, suscept.-induced losses, sig. recovery 132752
skeletal muscle, 3D fiber archit., MRI, opt. imaging 87673
skeletal muscle perfusion, arterial spin labelling MRI, venous occlusion plethysmography 132739
skin, human, high-resoln. spectrosc. imaging 87600
skull effect on event-related P300, T2-weighted MRI 121946
skull stripping problem in MRI solved by single 3D watershed transform 87581
SMASH/SENSE, expt./num. comparisons 87648
snakes-based cardiac contour extraction, automatic init. 76470
soft-tissue lesions, automated meas. of struct. in CT and MRI, validation study 110976
spatio-temporal image segmentation using opt. flow and clustering algm. 94961
SPECT reconstructions enhancement by coregistered MR data 111025
SPECT reconstructions enhancement by coregistered MR data 132869
spectrosc. MR imaging using SS prod. by oscill. gradient fields 76427
spinal cord injury, vivo dyn. contrast-enhanced MRI 76446
spinal cord subacute combined degeneration, Vitamin B_{12} deficiency, electrophysiology, MRI *(Chinese)* 76435
spine, diffusion-weighted MRI, radial k-space trajectories 76423
spiral imaging, efficient off-reson. correction 132677
spiral-in/out BOLD fMRI, increased SNR/reduced suscept. artifacts 132691
spoiled gradient echo seqs., T_1-weighted images 76451
SQUID systs. for biomag. imaging, review 98463
steady-state MR imaging, transient response charactn./reduction 98440
stereoscopic MRI, fast real-time techs. 132741
stereotactic neurosurg., image guided, functional database 76601
stochastic modeling for mag. reson. quantification of myocardial blood flow 76476
stroke, acute, rapid 3D diffusion MRI, mice expts. 98444
stroke, white matter tract disruption, MR diffusion tensor imaging 132718
stroke MRI, diffusion-weighted EPI, sensitivity encoding 132695
subcutaneous vascular fn./maturation, vivo BOLD contrast MRI mapping 87624
superparamagnetic iron oxide nanoparticles, brain MRI contrast agent appl. 98447
technol. evol., limitations & future prospects, review 110924
temporal lobe epilepsy, ictal hyperperfusion, SPECT & MRI coregistration 110993
temporal lobe epilepsy, interictal hypoperfusion, MRI/PET comparison 132666
thoracic aorta four-D blood flow pattern anal. 87691
thoracic aortic dissection, phase-contrast cine MRI angiography 132659
thoracic vertebra, 3D digital images, dosimetry, chord distribs. 98786
tibia, human, stress anal. under pathological conditions 76460
tibial bone struct., simulated microgravity, mag. reson. microscopy 87666
tissue dens. vols. class., multilevel neural network model 132754
tissue temp. meas., MRI, thermal physiology techs. 122074
tissues, MRI, magnetis. transfer contrast, review 76461
tomographic med. image viewing, presentation methods 76466
topol. preserving deformable image matching 94517
trabecular bone, dipolar demagnetizing field MRI 132764
trabecular bone vol. fraction mapping by low-resoln. MRI 98435
trabecular skeleton, beta-particle dosimetry, MRI, Monte Carlo 98787
trabucular bone MRI, automated 3D region growing algm. 98472
transthoracic 3D echocardiography, patient motion compensation, MRI 76342
traumatic brain injury, EEG power spectrum, MRI T_2 relax. time 121944
truncation artifacts, layer extraction tech. 132707
tumor boundary detect. in MR image seqs. 84636
tumour resection and PDT, integrat. of intra-operative MRI scanner and neurosurgical guidance 87786
tumour thermal therapy, MR monitoring appl. 110894

biomedical MRI continued
ultrasound/MRI 3D registration & fusion, major vessels as fiducial markers 76339
undersampled multislice fMRI data, respiration-induced noise fluct. 76449
Univ. of Bradford mobile telephone dosimetry studies 133075
upper limb torque generation, cortical organization, EEG, MRI 98214
vascular intervention on high-field syst. 122072
vascular morph., quantitat. anal., 3D MR angiograms 122111
vascular segmentation in phase-contrast MRA, fusing speed and phase inform. 87582
vascular tree extraction from MRA/power Doppler US image vols. 76491
vein, ellipt. centric 3D contrast-enhanced MR angiography 87669
venous blood T_2, tissue O_2 extraction ratios meas. 132737
ventricle mech., MRI, finite-element reconstruction method 98474
ventricular assess. using real-time interactive multislice MRI 132661
ventricular fn., MRI eval., true FISP vs. FLASH obs. 87681
vert. field open MRI, convex gradient coil design 87656
vertebral bone marrow perfusion, dyn. contrast-enhanced MRI 110904
vertebral column, functional anal. based on MRI and direct vol. rendering 87588
vertebral cross-sects., image segmentation 122117
vessel cross sect. determ. for flow rate quantification 132729
vessel size imaging, rat brain MRI/Monte Carlo simul. 132664
Vesselize syst. for anal. and visualization of mag. reson. angiography 98393
viewing 3D MRI data in perspective 76477
VIPAR polymer gel dosimetry, wide dyn. dose range 111218
virtual MR microscopy for unruptured aneurysm 87604
Visible Human Project datasets, automatic registration methods *(Chinese)* 110919
visual obj. constr., shape discrim., fMRI 76469
visual/motor/auditory cortices, fMRI, optimum echo time 87630
vol. multishot echo-planar spectrosc. imaging, brain diseases appl. 132732
vol. vascular images, skeletonization 98477
Voxel Stuffing, vol. interpolation from cross-sectional images 98415
VQ based Bayesian image filtering, MRI appl. 95193
whole-body MRI in 30 s with real-time true FISP 110905
^{241}Am lung meas., voxelised num. phantoms, MCNP code *(English)* 98830
Bi(Pb)SrCaCuO$_x$ HTSC SNS jns., whole-head SQUID syst., mag. shield 76327
^{13}C angiography, subsecond, parahydrogen-induced polaris. MRI 98426
Dy-bearing red cells, MRI transverse relax. agents 87628
^{3}He, hyperpolarized, pulmonary gas flow, dyn. spiral MRI 132762
^{3}He microbubbles, encapsulated laser-polarized, perfusion imaging 76422
^{192}Ir HDR brachytherapy source, polymer gel MRI dosimetry 98792
^{7}Li 2D CSI of human brain on clinical scanner 110891
O_2 uptake, muscle microcirculation, MRI, transverse relax. 76452
^{106}Ru ophthalmological applicator, BANG polymer gel dosimeter, MRI 76771
^{106}Ru ophthalmological applicator, dose distrib. meas., BANG gel MRI 98769
Ti dental implants placement, MRI, spatial distortion 76489
TiO_2 dielec. filled toroidal RF cavity resonator for high-field NMR 87652
$YBa_2Cu_3O_7$ surface receive coils for low field MRI appls. 76467
$YBa_2Cu_3O_x$ HTSC surface coil, MRI, small animals 76488
breast cancer assess., constrained modulus reconstruction tech. 132653

biomedical NMR
for biomedical NMR imaging, use "biomedical MRI"
see also biological NMR; biomedical MRI
articular cartilage, proteoglycan depletion, spin-lattice NMR relax. 132680
brain, human, in vivo spectrosc., broadband proton decoupling 122102
brain, human, localised 2D shift correl. MR spectrosc. 98431
brain, in vivo ^{1}H MR spectra anal., second derivative method 98400
brain, metabolite, coupled spins, PMR, STEAM seq. 87634
brain, metabolite sigs., ^{1}H mag. reson. spectra anal. 87635
brain, MRI, double quantum coherence filtered glutathione sig. 76456
brain, single-vol. ^{1}H NMR spectra, macromolecular resons. 87633
brain, single-voxel PMR spectra 87610
brain, vivo ^{1}H NMR spectrosc. at 7 T 132684
brain fMRI & neurochemistry spectrosc., review 110896
brain lesions, ^{1}H-MR spectra anal., mobile lipids 132701
brain metabolite conc., ^{1}H NMR spectra, LCModel 98450
bronchial tree modeling and 3D reconstruction 76474
cerebral radiation injuries, ^{1}H mag. reson. spectra/imaging 87637
clinical mag. reson. spectrosc., freq. domain methods, review 98449
collagen-containing tissues, double quantum filtered spectrosc. MRI 76465
dystrophic cardiac tissue, abnormal lipid profile, ^{1}H NMR spectrosc. 132735
ellipt. supercond. magnets, design, rapid force computation 82007
implantable detect. microcoils for min. invasive NMR spectrosc. 132704
lactate discrim. in echo-planar spectrosc. imaging, J-coupling 76441
mag. reson. spectrosc., Cramer-Rao lower bound 98453
mag. reson. spectrosc., time-domain quantitation methods, overview 98448
mag. reson. spectrosc., wavelet transform, time-freq. methods 98451
magnetis. transfer mag. reson. spectrosc. 76462
mammalian tissues, endogenous metabolites, diffusion-weighted MRS 76464
metabolite maps reconstr. in ^{1}H-MRS imaging, time-domain tech. 87570
metastatic rodent tumours, pure absorpt. mode high-resoln. MRS imaging 87574
MRUI quantitation package, Java-based GUI 98398
myoglobin, skeletal muscle, quantitat. ^{1}H mag. reson. spectrosc. 132734
NMR relax. peaks, marginal resoln. using UPEN and diagnostics 98475
proton MR spectra, motion-related sig. loss restoration 132750
renal tumors, human, biochem. charactn., in vitro ^{1}H NMR meas. 98425
renal/hepatic tissue, 2-bromoethanamine toxicity, ^{1}H MAS NMR 87612
sig. enhancement via time-freq. transform 132709
spectral quantitation, PCA 98452
SQUID systs. for biomag. imaging, review 98463

biomedical NMR imaging *see biomedical MRI*

biomedical radiography *see diagnostic radiography*

biomedical signal detection *see medical signal detection*

biomedical signal processing *see medical signal processing*

biomedical telemetry
abdominal temp., rem. meas., miniature data loggers 76215
AcriSensor, foldable intraocular lens, integrated telemetric press, sens., glaucoma diagnosis 132545
ambulatory physiological monitor for animal welfare studies 121968
artificial heart, HF mag. telemetry, sig. transm. 133046
bioimpedance dyn., implantable lock-in analyser, mixed-sig. ASIC 110624
BION bionic neuron syst., distributed neural prosthetic interfaces 76687
capacitance to freq. converter, sens. appls. using telemetry, biomedical field 121919
cardiac telemonitoring, therapy surveillance mgt. for myocardial failure 122457
dementia wandering location syst., telemetry, cellular phone & GPS 76774
distributed DAQ syst., coding and transm. 111295
driver vigilance monitoring, skin resist.-based automatic checkout syst. 67502

biomedical telemetry continued
EEG telemetry & telemonitoring syst. develop., TDM technol. *(Chinese)* 88023
EM interf. from digital TV to med. telemetry systs. 133195
EM interf. to med. devices from digital TV sigs. 133194
eye press. monitoring, wireless syst., intra-ocular lens 122467
eye press. monitoring syst., wireless, hybrid IC integrated into intra-ocular lens 122459
femoral replacements, forces/moments telemetered during various activities 111154
femur, fracture healing, loads acting in intramedullary nail 111155
FES implant design & constr., materials/power supply/telemetry 76692
FES-cycling syst., network capability, multi-centre clinical studies 122284
finger-ring plethysmographic sens., artifact-resistant power-efficient design 87342
finger-ring plethysmographic sens., artifact-resistant power-efficient design 98145
finger-ring plethysmographic sens., artifact-resistant power-efficient design 98385
FM-FM-FSK radiotelemetry syst. for multi-sig. transm. 76773
fracture zone, telemetric monitoring, implantable accelerometer 132016
freq. bands, hospital decision on which band to use 133193
gait assess., low-power wireless microcontroller PC interface 111265
GSM 1800-based pers. telemedicine equipt. deployment, propag. issues 83278
ICDs, inability to communicate with, underreported failure mode 76707
indoor wireless patient monitoring, assoc. technols., review 133196
LD Pace II, easily prog. device for cardiomyoplasty 76691
liver graft rejection diagnosis, implant. telemetric impedance device 87449
mesograph, continuous intraocular press. monitor, telemetric syst., glaucoma diagnosis 132544
microcontroller-based portable multifunctional patient monitor 98205
moths, ultralight biotelemetry backpack for recording EMG sigs. 76297
multichannel biotelemetry syst., filter bank use 88011
NIR transcutaneous telemetry, implant. transmitter, LD irrad. 98869
orthopaedic implant long term monitoring, inductive power supply 122338
pacemaker depend. patients, chronic ventricular output prog., safety 87904
scoliosis treatment, low power portable EM posture monitoring syst. 111068
scoliosis treatment, low power wireless load monitoring syst. 111067
scratching movements, portable recording syst., PC IR link *(English)* 98154
sleep disorders, polysomnogram online transfer 122460
smart accelerometers, neural net based, for telecare med. 98130
spinal cord injury fn. restoration, implanted stimulators 76688
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
transplanted kidneys, rejection control, freq. depend. impedance, mixed sig. telemetry IC 98714

biomedical transducers
see also biosensors
1D US array, perform. eval. & charactn., laser interferometry 110708
2D arrays, real time vol./intracardiac imaging, simultaneous ECG 110687
2D image frame matching degrad., elevational motion influence 110778
3D synthetic aperture imaging using virtual source element in elevation plane 110785
3D US imaging syst. using mag. posn. sens., calib. *(Chinese)* 132601
abdominal image quality, real-time correction of wavefront arrival time errors 110766
acoustic rem. palpation of tissue, init. in vivo results 110748
amorph. ferromag. core magnetoelastic sens., muscular activity, in vivo expt. 76234
articular cartilage indentation test, ultrasound transducer calib. 122018
C-reactive protein serum diagnosis, latex piezoelec. immunoassay 98126
cochlear blood flow meas., catheter mounted Doppler US transducers 110693
colour Doppler US accuracy, transducer, vel., Doppler angle, instrum. settings effects 87490
combined ultrasound/NIR diffusive light imaging 110764
conformal ultrasound phased arrays for thermal therapy, fab. 76623
coronary arteries, ultrasound charactn., temp. depend. wave speed 110810
correl.-based blood-flow vel. estim., intravascular ultrasound array catheter 110728
dental implants, ASIC strain gauge meas. syst. for stress monitoring 111166
diagnostic ultrasound power meter, force bal. 98311
digestive tract tumours, thermal coagulation necrosis, US applicator 87854
digital beamforming in handheld ultrasound systs., low power delay calc. 110805
elastic modulus distrib. reconstruction, 3-D displacement vector 110817
fast rot. phased array real-time 3D acquisition unit, DP 110757
ferroelec. sens. advances & emerging technol., review 131881
finger posture/shear force meas. using fingernail sens. 98163
finger-ring plethysmographic sens., artifact-resistant power-efficient design 98145
finger-ring plethysmographic sens., artifact-resistant power-efficient design 98385
finger-ring plethysmographic sens., artifact-resistant power-efficient design 87342
FPA Doppler imaging with per-pixel CW-Doppler receiver array 110736
glucose sens. for diabetics 132528
Hall effect imaging feasibility in humans 110762
harmonic imaging, optimised high bandwidth transducer 110686
heart cell force transducer syst. implemented in MEMS technol. 110518
HF composite lin. US arrays design for med. imaging 110697
hydrophone spatial averaging corrections from 1 to 40 MHz 110773
image sens. for testing refr. error of eyes 76408
implanted devices for cardiac care, mobile integrat., future advances 76223
infant endotracheal tube positioning/monitoring, in-line acoustic syst. 98591
interstitial US therapy, heating pattern control, wideband transducers 111112
intravascular ultrasound, miniaturised circ. array mfg. 110695
intravascular US palpation, automated approach 110809
lin.-array Doppler syst., steady flow, max. vel. estim. error sources 98266
magnetocardiographic study technol., supercond. transformer-based 132588
med. transducer materials, tensor props., accurate determ. 111521
mesoscopic SNS jns., 64-channel whole-head SQUID magnetometer appl. 70911
micromachine intracardiac ultrasound scanner, IC technol. 111495
middle ear implant, differential floating mass type vibr. transducer 98713
miniprobe endoscopic US, future perspectives 122020
MRI-guided US surgery, concentric-ring sector-vortex phased array 111123
multicore flexible fiber endoscopes, pulsed digital holographic interferometry 87523
multielement catheter-cooled interstitial ultrasound applicators for thermal therapy 98639
multifunctional Si-based microscale surgical syst. 111072

biomedical transducers continued
multirow array transmit focus charact. effect on aberration estim. 110769
one-chip-style quartz cryst. motion sens. with two fns. of gyro and accel. detect. 132535
PET, LSO crysts., dual APD array readout, cryst. surface treatment optimisation 122204
piston transducer beam spatial averaging, diagnostic US bioeffects appl. 99072
portable soft tissue indentor, accuracy & reliab. testing 87320
principles, appls., develop. trends 132000
principles, develop. hist., future trends 132001
prostate therapy, focused US phased arrays design 111115
pulsed plane wave decomp., improved beamforming perform. 110786
PZT-PNN piezoceramic film, US transducer, med. imaging 111528
quantitat. 3D ultrasound imaging using automated image tracking 110756
real time rectilinear vol. imaging, abdominal, breast, vascular appl. 110688
real-time 3D intracardiac echocardiography, simultaneous ECG 132612
real-time ultrasound transm. camera, moving joint/tendon images 110760
sector scanning US backscatt. microscope 110772
semicond. strain gauge tactile transducer, finger force meas. 109509
smart accelerometers, neural net based, for telecare med. 98130
smart thin-film flow sens., respiratory monitoring appl. 98146
soft tissues, ultrasound-based noninvasive shear elasticity probe 110814
spinal cord injury fn. restoration, implanted stimulators 76688
surgical navig., magneto-optic hybrid 3D sens. 87790
teeth imaging using diagnostic US, simul. models, transducer design 110718
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
time-resolved 2D pulsed elastography, LF shear wave beam forming 110815
total liq. ventilation, press.-limited respirator/lung mech. syst. 122283
transcranial Doppler US, 1 MHz transducer eval., embolic sig. detect. 98285
transskull US surgery & therapy, large-area arrays design 111114
transurethral high intens. focused US, catheter based prototype 111120
ultrasono-therapy transducers, design, phase considerations 111111
ultrasound array design, 1.75 D, beamforming scheme/param. tradeoff 110706
ultrasound tagging of light, detect. of inhomogeneities 93261
urology/proctology press. profile sens. syst., catheter design 132543
US 3D imaging from small cylindrical aperture 110755
US coagulation therapy, multisector split-focus transducer 111119
US echoes refl. from surface under two layers, modelling and anal. 87478
US phased array antennas for med. imaging, micromachined chips 122021
US therapy, compact self-focusing transducers, strong pulses 111113
US transducer, ribbon-based probe cable, crosstalk 111532
VALYDYNE diff. press. sens. dyn. prop., human airducts model ident. 110524
vascular pathologies strain imaging using compliant balloon catheter 110807
vector Doppler syst., low cost, utilizing diffr.-grating transducers 110734
vibro-acoustography, sound fields generated by focused annular array 110751
CsI:Tl scintillator-Si-well X-ray microdetector based on deep RIE techs. 110942
$KNbO_3$ single cryst., US transducer material, props., transducer perform. 111518
PZT US transducer, thick film sol gel proc., dip coating 111510
PZT-PNN piezoceramics, prep., dielec. props., transducer appl. 104353
$PZT\text{-}Pb(Ni_{1/3}Nb_{2/3})O_3$ piezoceramic, prep., med. appl. 101484
$PbTiO_3$ US transducers, high-perform. HF, design, med. appl. 111509
Si multi-sens. needles, temp. sens. and ISFETs, appls. in surgery 121971

biomedical ultrasonics
see also echocardiography; ultrasonic imaging
1.75D ultrasound array, preliminary expt. results 110704
1-3 PZT composites fab., micro PMMA mold, med. US transducer array *(Korean)* 98319
1D US array, perform. eval. & charactn., laser interferometry 110708
2D arrays, real time vol./intracardiac imaging, simultaneous ECG 110687
2D image frame matching degrad., elevational motion influence 110778
2D motion field parametric estim., spatially smoothed regression model 110777
3-D tracking of US images using spatial localiser, fast calib. method 132617
3-D ultrasound, rigid registration with MR images 132598
3D abdominal sonography, liver tumours appl. 121992
3D HF US images of skin and eye 98303
3D imaging from small cylindrical aperture 110755
3D imaging using spherical US wave generated by laser-induced breakdown 98291
3D synthetic aperture imaging using virtual source element in elevation plane 110785
3D synthetic-focus US image generation using MPI, parallel implement. 87497
3D ultrasound, rigid registration with MRI, generalized correl. ratio 87479
3D ultrasound compounding, rapid image registration 110754
3D ultrasound images, blind homomorphic deconvolution 98307
3D ultrasound imaging systs., diagnostic appls. review 76367
3D US image reconstr. for home health care *(Japanese)* 87471
3D US imaging, 2D transducer array, finite element simul. 122737
3D US imaging equipt., QA test device, image/meas. errors *(German)* 87492
3D US imaging syst. using mag. posn. sens., calib. *(Chinese)* 132601
3D vol. registration, expts. on tissue phantom & liver 110753
abdominal aortic aneurysm, US image boundary recogn. validation 110676
abdominal image quality, real-time correction of wavefront arrival time errors 110766
adaptive imaging using 8×128 array 110768
adaptive speckle reduction and coherence enhancement 87510
adaptive US imaging using SONOLINE Elegra 110767
anatomical struct., robust 3D image segmentation with level sets 87310
antenatal fetal risk assess. by US, neural nets 110823
aortic haemodynamics, esophageal probe/multigate Doppler-proc. syst. 110731
aortic Windkessel fn., age, gender, cardiovascular risk factors effects 132615
apatite bone-mimicking phantom, osteoporosis diagnosis appl. 98297
arterial flow and wall props., peripheral, real-time, derived by pulse waveform anal. and B-mode US imaging 110824
arterial wall cross-sect. elasticity, intravascular ultrasonography 122002
arterial wall cross-sectional elastic imaging by intravascular ultrasonography 110726
arterial wall layers, noninvasive high-freq. ultrasonography validation 98281
arterial wall regional elasticity, thickness change meas. during entire heartbeat 110821
arterial wall thickness meas., US beam focal posn. optimisation 98300
arterial wall vel. and distension, US Doppler syst. 98323
arteries, elastic modulus/motion estim. using intravascular US *(Chinese)* 122033
arteries, human, 3D forward-viewing intravascular US imaging 110797
artery dimens. params. assess., high frame rate 2-D B-mode 98284
articular cartilage indentation test, ultrasound transducer calib. 122018
automated ovarian follicle segmentation using region growing 98342
B-mode blood flow imaging 110729
B-mode images, coded excitation, clinical use 110774

iomedical ultrasonics continued
B-scan 3D ultrasound imaging, speckle suppression method *(Chinese)* 122027
B-scan breast images, malignant vs. benign tumour class. 110717
B-scan ultrasound images, 2D noise-robust blind deconvolution 98306
B-scan US imaging, liver thermal coagulation, freq. shift atten. mapping 98287
battlefield biomedical imaging, vascular struct. anal. 76338
beamforming scheme/param. tradeoff in 1.75 D ultrasound array design 110706
biodegradable PLGA microspheres, US contrast agents appl. 110702
biological tissues, scanning thermoacoustic tomography, sig.-proc. 98309
blind person's US navig. aid, DSP-based, spatial hearing 133060
blood flow & arterial wall vibr. simult. meas., US beam steering 110745
blood flow Doppler US sig., time-freq. anal. 98292
blood flow dyn., vector vel. estim., pulsed ultrasound field 98308
blood flow simul., US resoln. test obj., thin film phantom 110744
blood flow turbulence, pulsed-wave Doppler US, time-freq. representation 87489
blood in cylindrical models, acoustic streaming, finite element simul. 110738
blood vel. estim., recursive ultrasound imaging/spatially encoded sigs. 110730
blood vel. estim. using speckle decorrelation 98325
blood vel. vectors estim., focused US & matched filtering 110742
bone, cancellous and cortical, imaging by US refl. tomography 122031
bone deformity correction planning, computer-aided surgical operations 111080
bone struct. ultrasound interact. simul. based on 3D MRI/micro-CT 98314
brachial artery reactivity meas., automated edge-detect. tech. 132622
brachytherapy prostate implants, vol./dosimetric study, US/CT image fusion 98661
brain deform. tracking during neuro-surgical intervention 87692
brain images restoration method, speckle noise removal 98330
brain perfusion conditions, contrast agent US imaging, data proc. 110746
brain US imaging, focusing tech. 110763
breast cancer autom. diagnostic syst., ultrasonography, CWTD algm. 110711
breast electron boost planning, comparison of CT and US 87879
breast imaging, 1.75-D 1280-channel US syst. design 110703
breast lesions, automatic segmentation on ultrasound 110685
breast microcalcifications visualisation, US imaging param. effect 110712
breast tissue, duct detect. and wall spacing estim. 87494
breast tumors, focused ultrasound surgery, MRI monitoring 87591
breast ultrasonograms, malignant and benign tumours, comparative anal. of texture charact. 98280
breast US images, boundary detect. algms., eval. methodology 132605
broadband phase US spectrosc., phase sheet ambiguity elimination 76349
cardiac elastography, local cardiac muscle motion imaging 110700
cardiac output, noninvasive determ. in small circulatory systs., limitations *(German)* 98334
cardiovascular syst. blood vel. estim., pre- & post-proc. filters 110743
carotid arteries, 3-D power Doppler US/MR angiographic images registration 110795
carotid arteries, 3D US imaging, EM tracking device 110796
carotid artery plaques, US images, objective grading method 122014
carotid artery segmentation in US images, contour PDF 76371
carotid US images anal., EcoStudio computer tool 98275
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
cerebral embolus ident. using rule-based ES 122016
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform detect. using compensatory fuzzy neural nets 110801
circ.-scanning US diffr. tomography, LF scatt. component 98302
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
coagulation therapy, multisector split-focus transducer 111119
cochlear blood flow meas., catheter mounted Doppler US transducers 110693
coded-excitation pulse-echo imaging, optimal transmit/receive beam synthesis 110692
colour Doppler US accuracy, transducer, vel., Doppler angle, instrum. settings effects 87490
colour flow diagnostic syst., gen. purpose, digital beamforming *(Japanese)* 76368
combined ultrasound/NIR diffusive light imaging 110764
conformal ultrasound phased arrays for thermal therapy, fab. 76623
contrast agent detect., three-stage pulsing seq. 98324
contrast agents-US interact. during Doppler investigs. 132621
contrast imaging, pulse inversion & second harmonic comparison 122007
coronary arteries, ultrasound charactn., temp. depend. wave speed 110810
coronary artery disease and post-heart transplantation patients, value of intravascular US imaging 98343
coronary atherosclerotic plaque charactn., IVUS elastography/Raman spectrosc. 110808
coronary vasculature, 4D quantif., angiography & US data fusion 98535
correl.-based blood-flow vel. estim., intravascular ultrasound array catheter 110728
cryogel elasticity props. for calib. IVUS elasticity images 110819
deep venous thrombosis, ultrasound elasticity imaging 110812
deformed media US scatt., effects on strain imaging 110820
delta-sigma-based US beamformers, dyn. focusing tech. 87472
detect. of inhomogeneities, ultrasound tagging of light 93261
developing CNS, clinical concerns in ultrasound exposure 110792
diagnostic ultrasound power meter, force bal. 98311
diagnostic US, robot-assisted, user interface 98332
diagnostics, US, telemanipulator syst. 98333
digestive tract tumours, thermal coagulation necrosis, US applicator 87854
digital beamforming in handheld ultrasound systs., low power delay calc. 110805
diseased heart/liver tissues, acoustic prop. distribs. 98298
display pixel-based focusing method for med. ultrasound imaging 122028
Doppler angle estim., autoregressive spectrum model 110739
Doppler US blood flow sigs., nonlin. characts. anal. *(Chinese)* 121994
dual-pulse lithotripter to generate localized and intensified cavitation field 122026
echo decomp. perform. using sing. spectrum anal. 132618
echocontrast agents, blood flow assess. by US-induced destruction 76376
echoes refl. from surface under two layers, modelling and anal. 87478
echographic aiming, increased effectiveness of laser therapy 132597
echography contrast agents, harmonic imaging 122004
edge-preserving noise reduction for ultrasound images 110727
elastic modulus distrib. reconstruction, 3-D displacement vector 110817
elastograms, simulated, class. based on texture features 110825
elastography, theoretical bounds on meas. params. 87495
electrohydraulic lithotriptors, efficient LV shock wave generator 98620
emboli detect./discrim., gas bubbles nonlin. characts. 98286
emboli detect./discrim. using harmonics 110735
endometrium, estim. in US images using recursive model 132603
endometrium charactn. in connection with uterine contraction 132604
endometrium motion estim. in US image seq. 76363

biomedical ultrasonics continued
endoscopic ultrasound, echo-enhancing agents use 122022
ethanol/water mixtures, sound speed meas., US imaging 75910
eye 3D US images, high-resoln., morph. assay 110722
fast rot. phased array real-time 3D acquisition unit, DP 110757
fast simul. of ultrasound images 110780
femur, 3D meas. using clinical US, image-guided intramedullary nail fixation 87481
fetal breathing movement detect., modified fetal monitor/sig. proc. 110719
fetal lung maturity prediction using stat. textural features 122030
fetal lung microstruct., maturation, US charactn. 76340
fetoplacental vasculature, 3D power Doppler US imaging 132611
fiberised laser-US source design, proc. monitoring & biomed. appl. 122732
filter, fast edge-preserving noise reduction 132602
flow vel. sig. proc. unit, flow vel. meas. *(Chinese)* 98272
focal blood brain barrier opening, MRI guided focused US 111065
focused US surgery, thermoacoustic lens effect simul. 76592
foetal cerebral ultrasound exposures from clinical exams. 110799
foetal growth, irregular, detect. using lin. mixed models 98344
foetal wt. estim., support vector regression appl. 110707
forward-looking ring-annular US arrays, modified weighting method 122029
FPA Doppler imaging with per-pixel CW-Doppler receiver array 110736
freehand spatial compounding, speckle variance suppression 110775
freq. decomp./compounding with wavelet packets 110677
fund./harmonic lateral transmit beam shapes, vivo comparison 110770
fuzzy boundary extraction algm. *(Chinese)* 110680
gait perform./outcomes, clinical meas., portable devices 76373
geometric act. contours, incorporation of shape priors 121886
gluteal aneurysm embolization, giant, colour Doppler sonography in follow-up 76364
haematoma model, acoustic streaming, colour Doppler detect. 132620
haemodynamics, Doppler US time freq. images anal., deformable models 87508
Hall effect imaging feasibility in humans 110762
harmonic imaging, optimised high bandwidth transducer 110686
hematocrit estim. by dual-gate power Doppler 110737
hepatic cancer RF thermal ablation, ultrasonography and Doppler tech. *(Chinese)* 76358
hepatitis C, glucagon injection, portal blood flow vel., sonography 98267
heterodyning demodulation tech. for spatial quadrature 110733
HF acoustic field, computer-controlled exposimetry syst. 110029
HF composite lin. US arrays design for med. imaging 110697
high speed beamformer using TMS320C6201 DSP 110803
hip arthroplasty, postoperative thrombosis risk, lower extremity haemodynamics eval. *(German)* 98335
hip joint, newborn, 3D visualization using ultrasound and automatic image segmentation 110724
hist., phys./engng. appls. to med. 98114
hydrophone spatial averaging corrections from 1 to 40 MHz 110773
I/Q sigs. compression for US diagnostic equipt. 98289
iliosacral screw placement, percutaneous, computer-assisted, clinical validation 87792
image compression, irreversible, using JPEG algm., clinical eval. 98263
image compression by cosine and wavelet transforms 110788
image segmentation, adaptive snake model 87474
image texture edge detect., Gabor fns.-based approach 87488
images, auto-segmentation by GA 122024
images compression, space-freq. segmentation with entropy coding 98315
implanted med. device, power/inform. transm. using US 98712
in vivo normal human dermis charactn., 20-MHz US backscatt. 110710
incompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
infant cerebral ventricle vol., 3-D US/MRI comparison 122017
infant endotracheal tube positioning/monitoring, in-line acoustic syst. 98591
internal bleeding & deep tumour treatment, US surgery 133016
interstitial applicators meas., FEA computations of heating patterns 110787
interstitial RF therapy effectiveness, shear modulus reconstr. 122289
interstitial US therapy, heating pattern control, wideband transducers 111112
intimal hyperplasia develop. study, Doppler US appl. 76372
intracranial temp. elevation from diagnostic US 110791
intramyocardial M-mode Doppler tissue imaging anal. 98341
intravascular echography, ultrasound contrast agent, parametric mapping 110811
intravascular ultrasonography, flexible acoustic transm. line develop. 110694
intravascular ultrasonography, imaging syst. using pulse compression tech. 98295
intravascular ultrasound, miniaturised circ. array mfg. 110695
intravascular ultrasound elastography, high resoln. 110806
intravascular ultrasound images, modeling and segmentation *(French)* 110681
intravascular US palpation, automated approach 110809
inverse scatt. image reconstruction, refl./transm. data ob. 98299
kidney, US backscatt. microstruct. feature anal. *(Chinese)* 98337
kidney kidney malignant tumor, color Doppler flow imaging diagnosis *(Chinese)* 76360
kidney perfusion, ultrasound contrast agents, radiofrequency proc. 76344
kidney stones comminution, dual-reflector lithotripter 111122
knee arthroplasty, planning by use of 3D US image vols. 110725
laryngeal phonation fn., noninvasive assess., colour Doppler US imaging 122013
laser optoacoustic imaging syst. for med. tomography 87499
lin.-array Doppler syst., steady flow, max. vel. estim. error sources 98266
liposomes, drug delivery through US cavitation 111081
liver cancer coagulation, microwave-induced thermal distrib., computer-aided dyn. simul. 87870
liver cirrhosis diagnosis, RF echo sig., envelope characts. estim. 98296
liver disease, US diagnostic syst., fractal dimens. 110720
liver diseases diagnostic syst. based on conventional US equipt. 98293
liver perfusion conditions, contrast agent US imaging, data proc. 110746
liver surgery, impact of combined pre-operative 3D CT and intra-operative real-time 3D ultrasonography 87788
liver tissues class., M-band wavelet transform appl. 87512
local myocardial dysfunction caused by ischemia/reperfusion, Doppler tissue imaging *(Chinese)* 76357
local tissue charactn. by backscatt. AO imaging 122039
local vector tomography using wavelets 98317
lognormal approx. for gray level stats. in ultrasound images 98312
material struct., NDT, interval methods 122032
med. ultrasound, robust auto-focusing algm., consistent phase refs. 76351
median nerve movement meas., HF US images, cross-correl. anal. 132616
microbubble contrast agent imaging, act. enhancement 122006
microcirculation HF flow imaging, syst. param. & tissue prop. effect 110747
micromachine intracardiac ultrasound scanner, IC technol. 111495
micromachined US transducer arrays, cross-talk in Si substrs. 111491

biomedical ultrasonics continued
microsensors, surgery, min. invasive, blood vessels, spatially confined tissue structs. 133010
microtherapy, image guided, min. invasive approaches 133011
microvasculature blood flow imaging, real-time HF US syst. optim. 110723
miniprobe endoscopic US, future perspectives 122020
ML contour estim. using beta-stats. in ultrasound images 132607
modeling biomedical US RF echoes using power-law shot-noise model 98322
morph. operations, locally variable structuring elements 98276
moving scatterer differentiation using trapezoid filter/pulse echo ultrasound 110732
MR elastography, 3D gradient echo meas., steady-state motion 110870
MRI-guided US surgery, concentric-ring sector-vortex phased array 111123
multi-angle spatial compounding, imaging strategies 110761
multielement catheter-cooled interstitial ultrasound applicators for thermal therapy 98639
multiply scatt. coherent light, US modulation, Monte Carlo model 122043
multirow array transmit focus charact. effect on aberration estim. 110769
myocardial fn., quantitat. regional strain & strain rate imaging 110698
myocardial rapid vel. distrib., tissue Doppler imaging 87485
myocardium, integrated backscatt. image, 2-D cyclic var. 98277
myocardium high vel. distrib. meas., US beam direction control 110701
near-IR imaging probe design, ultrasound localization 98371
nephrourology, abdominal ultrasound diagnosis, hist. 87482
neuro-stat. approach to ultrasound speckle modeling 87505
neurosurgery, US/MRI overlay with image warping 87477
neurosurgical guidance, intra-op. 3D US & pre-op. MRI integrat. 76600
neurovascular coupling, cerebral autoregulation, control syst., Doppler US 76341
nondestructive subharmonic imaging with US contrast agents 122012
noninvasive press. meas., microbubble contrast agent & wavelet transform 122009
noninvasive US surgery, microbubble enhanced cavitation role 111121
nonlin./lin. imaging techs. at HF 110765
Northeast Bioengineering Conference, 27th annual, Storrs, CT, USA (Mar-Apr 2001) 100396
oesophagus outer wall detect., US images, data fusion, stochastic optim. 76350
opt. computed tomography imaging of absorbers, US phase-shift detect. 110845
optimal US focusing, spatio-temporal inverse-filter, med. appls. 99101
opto-acoustic tomography syst., wide-band acoustic pulse detect. 110689
optoacoustic press. transients, temporal backward projection, FT methods 98350
osteoporosis, bone status assess., quantitat. US tech., review 110715
ovarian follicle detect., meas. model syst. error suppression 132606
ovarian tumour in US images, 3D image reconstruction 110790
percutaneous intervention, sonographically guided, electronic needle placement device 98273
peripheral vein grafts, cross-sect. area changes, 3D US imaging 122003
phase aberration correction using near-field sig. redundancy, 2D array algm. 110782
phase aberration effects in elastography 98288
phase-coded pulse seq. for nonlin. imaging 110749
phased array antennas for med. imaging, micromachined chips 122021
phased array transducer, study of peak neg. acoustic press. distrib. within image plane 98326
physiological flow rate wall-less stenosis phantoms, ultrasound 76346
physiotherapy, US power meas., radiation force bal. 122290
piston transducer beam spatial averaging, diagnostic US bioeffects appl. 99072
porcine blood, Doppler power var. under steady/pulsatile flow 132619
posturography meas., 2D US TOF syst., c.g. location 121995
preterm newborn infants, neurodevelopmental outcome, cranial US scanning 87483
prostate, normal/decreased blood flow, contrast-enhanced power Doppler imaging 110793
prostate brachytherapy, treatment plans standardisation using US images 98680
prostate cancer discrim., 3D US Doppler imaging, zonal anal. 110713
prostate disease thermal treatment, MRI compatible intracavitary ultrasound array 76426
prostate seed brachytherapy, simple US/CT fusion image fusion 110705
prostate segmentation from 2D ultrasound images 110683
prostate therapy, focused US phased arrays design 111115
prostate tissue malignancy, tissue class. & elastographic imaging 121998
prostate treatment by ultrasound phased arrays 87855
prostate US imaging for guiding biopsies & planning/monitoring therapy 110721
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. proc. *(Chinese)* 122034
pulsatile axial flow vel. waveforms in curved elastic tubes 98320
pulse inversion Doppler harmonic imaging, generalisation 122008
pulsed plane wave decomp., improved beamforming perform. 110786
PZT-PNN piezoceramic film, US transducer, med. imaging 111528
quantitat. 3D ultrasound imaging using automated image tracking 110756
real time rectilinear vol. imaging, abdominal, breast, vascular appl. 110688
real-time freehand 3D ultrasound syst. for image-guided surgery 110758
real-time phase-aberration correction syst., clinical eval. 110783
real-time strain images, frame-to-frame stats., prostate imaging 110816
real-time ultrasound transm. camera, moving joint/tendon images 110760
region growing method for segmenting ultrasound images 110779
rem. palpation of tissue, init. in vivo results 110748
renal transplant diagnosis, reconstructive ultrasound elasticity imaging 87496
ribbon-based probe cable, crosstalk 111532
scanning thermoacoustic tomography, microwave-induced, tissue imaging 87498
second harmonic imaging, US image quality, computer generated phantom model 76348
sector scanning US backscatt. microscope 110772
sidelobe reduction filters in ultrasound imaging 110781
sig. detect., useful echoes ident., parallel comput. 107588
skin US param., global & local estim., high resoln. images 110716
small vessel blood flow imaging, HF US, time & freq. domain anal. 110741
soft tissue, high-precision motion estim., speckle echo wavelet transform 98301
soft tissue perfusion, power mode rel. to press. amplit. decorrel. 132623
soft tissues, ultrasound-based noninvasive shear elasticity probe 110814
sonoelastography, strain imaging, multi-resoln. algm. 122000
sonoelastography images, modal artifacts reduction 121999
spatial deform., dual transducer approach 98274
speckle reduction, compounding approach 110776
speckle removal in US images, Bayesian multiscale method 110678
spherical high intens. focused US phased array with unequal space between elements *(Chinese)* 76969
stenoses morph. eval., power Doppler US, flow phantom 121996
stenosis, tissue vibr., in vivo US meas., case study 122015

biomedical ultrasonics continued
surgery, image-guided using 3D ultrasound, intra-operative soft tissue deform., Bayesian estim. 87480
synthetic aperture techs., motion compensation 110804
synthetic dyn. transmit focus, clinical US imaging 110690
synthetic transmit aperture imaging using orthogonal Golay coded excitation 110771
synthetic transmit focusing for US imaging 110691
systolic fn. estim., quantitat. tissue vel. imaging *(Chinese)* 98305
teeth, modeling of US wave propag. using PSpice, comparison with FE models 98328
teeth imaging using diagnostic US, simul. models, transducer design 110718
telemedical support by ultrasonography and endoscopy images 87491
telemedicine in US, virtual patient, software-based 3D syst. 133201
teleultrasound, image quality meas. methods 87466
tendon, HF lin. array US viewing, beam angulation 76374
tendon elastic prop. meas., US elastography 122001
Terason 2000 handheld PC-based US imaging syst., SoC design 110696
therapy, compact self-focusing transducers, strong pulses 111113
thermoacoustic tomography inverse problem, minimization 98262
thrombolysis, ultrasound-enhanced therapy 98681
thyroid, C-scan ultrasound backscatt. microscope syst. *(Chinese)* 110679
thyroid images, computer-aided US image proc., speckle noise, least sq. approx. 76380
time-normalised wave intens. haemodyn. index, real-time meas. 110740
time-resolved 2D pulsed elastography, LF shear wave beam forming 110815
tissue charactn., low-refl.-coeff. liq. interfaces 110798
tissue charactn., use of freq. diversity and Nakagami stats. 98329
tissue Doppler imaging develop. for vascular & cardiac appls. 110709
tissue elasticity, US imaging, spatial resoln. limits 121997
tissue elasticity imaging, exploiting strain-hardening to increase contrast 110822
tissue harmonic imaging, clinical benefits 110750
tissue harmonic imaging, spatial covariance anal. 110784
tissue imaging, US-modulated opt. tomography, parallel detect. 87531
tissue mimicking phantom, axial strain estim. based on acoustic shear wave *(Chinese)* 76352
tissue strain estim. using extended combined autocorrel. method 98290
tissue US imaging, large K distrib. params. estim., neural network approach 110789
tissues imaging, US tagging of transm./backscattered photons paths 87511
tofu as, tissue-mimicking material 132624
tomographic reconstruction of homog. objs. using multi-step ART 98318
trabecular bone, US param., impulse response, decorrel., BUA 110714
trabecular bone, US wave propag., stratified model 122023
transcranial Doppler ultrasonography, functional, test-retest reliab. 87487
transcranial Doppler US, 1 MHz transducer eval., embolic sig. detect. 98285
transdermal insulin delivery using LF US, sonophoresis 111066
translating apertures algm., C-/D-weighted imaging 110759
transskull US surgery & therapy, large-area arrays design 111114
transurethral high intens. focused US, catheter based prototype 111120
treatment accel. by modif. of sound fields & sonication modalities 111129
tumour blood flow, quantified power Doppler US, microscopic quantification 87507
tumour microwave thermotherapy, US temp. monitoring 87834
ultrasono-therapy transducers, design, phase considerations 111111
ultrasound/MRI 3D registration & fusion, major vessels as fiducial markers 76339
urologic tube, complex US & microwave irradiator interf. 87850
urologic tube, US & microwave irradiator design, model 87849
vascular pathologies strain imaging using compliant balloon catheter 110807
vascular struct./deform., B-mode ultrasound imaging 87509
vascular tree extraction from MRA/power Doppler US image vols. 76491
vector Doppler syst., low cost, utilizing diffr.-grating transducers 110734
vel. inhomogeneities, correl.-based correction using $\Delta\Sigma$ modulators 87473
vessel mimicking cryogel phantoms, axial strain imaging 110818
vibro-acoustography, sound fields generated by focused annular array 110751
vibroacoustography, ultrasound surgery monitoring, finite-element simul. 110752
visual servoing for robot-assisted diagnostic ultrasound 98278
wavelet based denoising techs. for ultrasound images 98313
wideband sub-forcing harmonic phase inversion US imaging 122005
^{125}I seed prostate implants, ultrasound guided, in-house software 98640
PZT US transducer, thick film sol gel proc., dip coating 111510
PZT-based multilayer composite hybrid transducer, med. ultrasound 111534
$PbTiO_3$ US transducers, high-perform. HF, design, med. appl. 111509

biomembrane transport
see also osmosis
atrial action pot., stretch-activated channel blocker 87402
brain, MRI, apparent diffusion tensor 87667
electroporation mediated muscle injury, surfactant therapy 87782
high-speed soln. switching using piezo-based micropositioning stages 81751
insulinoma cells encapsulation, nanoporous biocapsules, biotransport/biocompatibility considerations 133045
malignant tumour growth, low-energy ns microwave pulses effect 76657
neuron-electrode interface, geom. based dyn. modelling 87378
striatal neurones, voltage-depend. membrane currents, Si substrs. 76320
subhertz sensitivity phase-referenced interferometer, cell membrane dyn. study 120940
wheat seeds, different germination stages, ELF-EMF treatment effects 98755
K^+ channel, EM-RF exposure, Zeeman-Stark/Markov model approach 87953

biometrics (access control)
see also fingerprint identification; handwriting recognition; speaker recognition
Argus, digital doorman, automatic visitor ident. syst. 73473
conversational speech biometrics for E-commerce appls. 118145
face recogn., 3D dist. maps, PCA 107229
face recogn. in open environ. 84641
fibre grating vision sens. in pers. recogn. syst. *(Japanese)* 107145
force field transform for ear/face recogn. 84608
fuzzy commitment scheme, cryptographic primitive 106216
high spatial resoln. tactile array sens. *(Russian)* 86475
human ident. using ECG anal., data fusion, SIMCA class. 87413
ident. using biometric charact., problems, acceptance/rejection stats. *(German)* 118107
iris detect., fast cooperative modular neural nets 106521
iris fast detect. using neural nets 129826
pers. ident., human irises recogn., opt. transm. binary models, Fourier spectra 84561
pers. ident. and emotion recogn. from facial images *(Japanese)* 129859

ometrics (access control) continued
real-time face recogn. syst. using multiple mean faces/dual mode Fisherfaces 129824
review of automated biometrics methods 95457
smart card advances to link biometrics and cryptography 129340
speaker class., biometric 73060
speech biometrics syst. with multi-grained speaker modeling *(English)* 73096
omimetics
acoustic microsystems, heterog. integrat. 99068
beer aftertaste detect. using lipid membrane taste sens. *(Japanese)* 97423
brain-implantable biomimetic electronics, neurocomputational chips 111162
cephalopod retina/visual syst. simul. by analog VLSI 103958
CMOS imager, shunting inhib. image proc. 97364
echolocation of bats, biomimetic platform 86250
electroactive polymer-based artificial muscle nanotechnology 98724
electronic nose, Forane 134a discrim., time reduced modelling param. 97550
electronic tongue, voltammetric sens., data compression 86723
electronic tongue, voltammetric sens., tea discrim. 86722
ionic polymer-metal composites, fund. props., review 114481
mol. imprinted polymer, bovine liver clenbuterol sens., voltammetry 97421
odour sens., thiol layer immobilised on Au, electrochem. imped. meas. 75715
olfactory cortex design & implement. in analogue VLSI 102483
iomolecular effects of radiation
see also biological effects of ..... (type of radiation)
see also photosynthesis
carcinogenesis, chronic β-irrad., threshold dose-response 76733
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
integrat. ion imager, DNA samples, HI doses 122441
mammalian cells, RF exposure, CDMA, FDMA, DNA damage 122433
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
space radiation health, conf., Arona, Italy (May 2000) 124172
Si-microarray devices, heterog. protein crystn. screening 132010
iomolecular electronics
3D electrophoretically driven microlab., DNA hybridisation chip 86684
aligned microcontact printing of biomols. on microelectronic device surfaces 80526
ATP mol. recogn. chip fab. using biolum. enzyme luciferase 132009
bacteriorhodopsin mol. film, opt. inform. storage 91502
bacteriorhodopsin/GaAs heterostructs., transient/steady-state photocond. 71511
BioFET microchip, insect antenna/FET biosensor 132020
BioWatch, giant electronic bio-inspired watch 102862
conf., Nanomolecular electronics, Kobe, Japan (Dec. 2000) 100445
context-sensitive components, evol. search strategy 102861
deoxyguanosine derivative based MSM photodetector, self-assembly fab. 75514
DNA, meniscus force nanografting 125930
DNA, oriented, elec. props., conducting AFM imaging 125926
DNA chip, sample manipulation *(Chinese)* 120947
DNA nucleic acid hybridization for nanoassembly of mol. components 115212
DNA wiring electronic props., research trends 125925
DNA/C nanotube mol. films, electronic struct. self-form., charge transfer 125929
DNA/CNT chip on Si, electronic props. 102865
F_1-ATPase biomol. motors, precision attachment on Ni dot nano-substrs. 92538
ferritin mol. nano-particle 2D array, AFM/SEM 102867
logic gates, intermolecular/intramolecular 91505
micro-fabricated plastic chips, hot embossing prep., DNA separation/detect. appls. 70330
microarray gene chip technol., lung physiology 91503
nanotechnol., overview & future implications 115211
nucleic acid computers, components design and selection 69355
protein-based bio-photodiode, rectified photocurrent 102864
single mol. DNA device, triple-probe AFM meas. 125927
Au nanoparticle networks, single electron charging, biopolymer templates 102857
Au nanoparticles assembled chem. on biomol. scaffolds, nanoscale patterns, electron transport props. 102856
Si-chip-based DNA microarray, surface charactn. 69343
iomolecular NMR *see biological NMR*
ionics *see biocybernetics*
iophysical effects of radiation *see biological effects of radiation*
iophysical instrumentation *see biological techniques*
iophysical techniques *see biological techniques*
iophysics
see also aerospace biophysics; bio-optics; bioacoustics; bioelectric phenomena; biomagnetism; biothermics; cardiology; hearing; speech; vision
Forschungszentrum Karlsruhe, biomedical engng. and biophys. *(German)* 110485
mm-wave absorpt. in biological media, distortion by thermocouples/other objs. 111191
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
SAR prediction, Sprague-Dawley rat, rel. to permitt. 133063
X-ray tomography, discontinuous 2D dens. reconstruction algm. 121237
iosensors
see also biomedical transducers
3D electrophoretically driven microlab., DNA hybridisation chip 86684
3D opt. sens., med. diagnostics appls. 76396
agent sens., conf., Orlando, USA (Apr. 2000) 67364
alcohol oxidase screen-printed amperometric biosens., enzyme immobilis. 75683
aligned microcontact printing of biomols. on microelectronic device surfaces 80526
amorph. ferromag. core magnetoelastic sens., muscular activity, in vivo expt. 76234
amperometric glucose sens., PFC polymer coating 109722
amperometric glucose sens., rMnO carbohydrate oxidase 109725
antenna/chip biosensor using insect species, organic odour mols. 132011
ATP mol. recogn. chip fab. using biolum. enzyme luciferase 132009
automotive microsystems, med. appls. 132079
bacteria growth monitoring, wireless rem. query reson.-cct. sens. 109723
beer aftertaste detect. using lipid membrane taste sens. *(Japanese)* 97423
beverage glucose/ethanol amperometric sens., quinoprotein electrodes 120951
biochem. image sens., light-addressable potentiometric *(Chinese)* 97427
BioFET microchip, insect antenna/FET biosensor 132020
biological attack detect. devices 132004
biological product detect., conf., Boston, USA (Nov.2000) 78377
biomass monitoring, continuous on-line opt. sens. 75680
bipotentiostatic uric acid sens., conducting polymer based, charact. reproducibility 132007
BIST, oscill. based method for functional testing of smart sens. devices 80124
biosensors continued
blood gas anal. micromachined sens. module, design optim. 86691
bovine liver clenbuterol sens., mol. imprinted polymer, voltammetry 97421
bovine viral antigens detect., surface SHG based immunosensor 86687
cell-based biosensors, short time series, dyn./geometric anal. 109728
cellular respiration & acidification meas. with CMOS ISFET 86685
chem./biosensors, fluoresc. lifetime change detect. by optoelectronic cct. autooscill. 120961
compact integrated opt. (bio)chem. sens. syst., replicated chips 75670
conf. on sens. and control techs., Wuhan, China (June 2000) 78371
diabetic patients, glycaemic control, biosensors appl. 132003
diamond electrolyte-soln.-gate FET, biocompatible ion sens. 86749
2,4-dichlorophenoxyacetic acid monitoring, QCM immunosens. 111471
differential opt. fiber refractometer, patient monitoring on drug injection 110840
DNA array sens., mag. microbeads & GMR magnetoelectronic detect. 75668
DNA chip, sample manipulation *(Chinese)* 120947
DNA electrocatalytic detect., Ru(II) complex modified C electrode 97420
DNA hybridization interacts. monitoring, SiO_2 sol-gel films sens. appl. 101408
DNA hybridization transducers, reson. slot antennas appl., computational feasibility 86695
DNA-chips, oligonucleotide monolayer selective labeling, Au nanobeads 97415
DNA-covalently modified electrodes, electrochem. biosens. 75687
dual receptor biosensors, fluoresc. reson. energy transfer pairs 109721
electrochem. biosensors, recommended defns. & class. 75677
electrophoresis microfluidic device, hot embossing proc., DNA separation/detect. appls. 92515
electrophoretic microchips, LIF detect., clinical diagnostics 98348
enzyme immobilisation onto glass/mica, AFM charactn. 97425
enzyme-immunoassay, amperometric detector appl., AIDS/hepatitis diagnosis 120949
estrogen, receptor-ligand assay, SPR sens. 97409
ferrocene encapsulated ormosil modified electrode, GOD bioelectrochem. 97417
α-fetoprotein immunosensing, disposable amperometric glucose oxidase sens. 132014
fiber optic Fabry-Perot resonator, invasive press. meas. 131962
fibre opt. lactate biosens., bacterial cytoplasmic membranes 75676
fibre opt. sens., surface plasmon reson. on Ag film, SAM coating 75571
flow-through amperometric sens., dialysis tubing, free enzyme reactors 120945
fluoresc. immunosensor, tapered tubular opt. waveguide probe 75685
fluoresc. sens., conf., San Jose, CA, USA (Jan.2001) 89503
fluoresc. thin-film integrated sens. for nanotechnol. and biomedical appls. 120752
food inspection by opt. methods, conf., Boston, USA, (Nov. 2000) 78378
fracture zone, telemetric monitoring, implantable accelerometer 132016
functionalized polydiacetylene, mol. recogn., fiber optic biosensors 75686
glass bioanal. microchips, powder blasting, electro-osmotic flow 109726
glucose, amperometric determ., biosensor fab. 86675
glucose amperometric sens., microchannel integrated, fab. 120948
glucose biosens., mol. imprinted polymers, capacitive detect. 86683
glucose conc. noninvasive monitoring, OCT 98374
glucose sens. for diabetics 132528
glucose-sensitive enzyme FET, MnO_2 catalyst powder doped 97416
guided-wave reson., conc./absorpt. meas., highly sensitive method 120997
high-T_c SQUID gradiometer, biological immunoassay appl. 132006
HTSC SQUID magnetometer, biological immunoassay 76330
HTSC SQUID magnetometer, sentinel-lymph node biopsy 76331
human eye, microsystem technol. 133056
human serum albumin QCM immunosens., disposable 120953
human skin, water content meas., microsensor 120956
human skin moisture sens., flat surface attachment, interconnection tech. 132008
immunoassay element modelling of opt. immunosensor 120941
immunosens., opt. heterodyne SPR phase detect. 97418
immunosens. sig. transduction, chronopotentiometry, Faradaic imped. spectrosc. 97411
implantable devices, sens. 132017
ISFET-based NAD^+-depend. enzyme sens. for lactate, PQQ biocatalyst 97419
Klebsiella BOD sens., dairy products wastewater treatment facility 132012
lab-on-a-chip technol., microfluidic devices in chem. meas. 109781
living chip, cell sens., toxicity and therapeutical biomonitoring 132019
mammalian cells, polarized backscatt. fiber-optic meas. 132638
materials, conf., Boston, USA (Nov.2000) 78376
MCG, SQUID gradiometry, noise cancellation 76334
meconium conc. in amniotic fluid, biosensor design/develop. 86679
med. net instrums. for telemedicine 75679
MEMS defense appls., overview 88221
MEMS flexible encapsulated press. sens., biomechanical appls. 75760
micro-mag. sens., magneto-impedance/stress-impedance, review 75765
micro-total anal. syst., micro-opt. and microfluidic syst. 93168
microbial biosensors, environ., food, fermentation appl. 120943
microbiosensor output sig. fluct., external environ. influence 75673
microchip separations, diffusion coeffs. determ. 97561
microfluidic chem. sens. array 97429
microsensors, vascular flow meas. and fracture repair 132018
microsystems for chem./biological appls. 81548
mol. imprinted polymers, environ./biotechnology sens. appl. 132002
multichannel surface plasmon reson. biosensor 97422
multicore flexible fiber endoscopes, pulsed digital holographic interferometry 87523
multiparameter miniaturised sens. arrays for multiple use 86688
myocardial ischemia venous lactate/glucose monitoring, ultrafiltration catheter 87347
Northeast Bioengineering Conference, 27th annual, Storrs, CT, USA (Mar-Apr 2001) 100396
olive oil, rancidification proc., biosensor appl. 97414
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
opt. diagnostics/sens., glucose/cholesterol monitoring, conf., San Jose, CA, USA (Jan. 2001) 113266
opt. peroxide biosens. using elec. controlled-release tech. 86681
opt. sens./manipulation, biological/biomedical appls., conf., Taipei, Taiwan (July 2000) 89497
organophosphate pesticides direct determ., biosens. appl. 111470
ormosil electrocatalytic dopamine biosensor, ferrocene encapsulation 75682
OxiCarbo sens., noninvasive arterial O_2 saturation & P_{CO2} meas. 87547
oxidase-based fibre-optic biosensors, luminol electrochemiluminescence 97407
oxidase-bound amperometric biosens. output charactn., dyn. model 75671
penicillin detect., capacitive EIS & enzyme FET sens. 120942
penicillin detect., EnFET, capacitive EIS sens. & LAPS comparison 120950
penicillin sens., pH ISFET-based, immobilised enzyme 86690
percutaneous device, implantable amperometric glucose sens. 86676
peroxidase-modified Au electrodes, mediatorless peroxide biosens. 86682

biosensors continued
photonic ccts. integrated with CMOS compatible photodetectors 93452
piezoelec. quartz cryst. based veterinary diagnosis for Salmonella enteritidis infection 75681
polariz.-sensitive OCT, biological sample birefr. props. 122041
polymer nanofiber thin films for biosensor appls. 109727
polypyrrole-glucose oxidase film fab., potentiometric biosens. 86680
potentiometric immunosensor for herbicide simazine, food testing appls. 75684
principles, appls., develop. trends 132000
principles, develop. hist., future trends 132001
QCM based DNA sens., immobilis. methods, genetic diagnosis 75674
reagentless bioaffinity sens., EIS, protein immobilis. in polypyrrole 120952
refr. microlenses for fluoresc. detect. in chem. microsystems 71358
river biochem. O_2 demand eval. biosensor using photocatalytic pretreatment 132013
SAW immunosens. for liq. environ., SiO_2 protective layer 97412
Sea-viewing wide Field-of-View Sensor test, ocean color imagery atmos. correction 88174
siloxane polymer, amperometric O_2, NO and enzyme sens. 86728
single mol. level biological probes, two-photon excitation fluoresc. correl. microscopy 75678
skin cancer diagnosis, FTIR fiber optic evanescent wave spectrosc. 87529
skin humidity sens., bonding tech., laser micromachining 109814
sol-gel optodes of various shapes for indirect fiberoptic sens. 97306
solid-state transducers., conf., Copenhagen, Denmark (Aug. 2000) 100428
SPR biosensor, integrated opt. waveguide 97410
subhertz sensitivity phase-referenced interferometer, cell membrane dyn. study 120940
sucrose biosens., amperometric, mediated tri-enzyme electrode 75672
supported lipid membrane on Si electrode, elec. props. 69773
surface plasmon reson., immunosensors, heroin detect. 75666
surface plasmon reson. array biosens., spectrosc. imaging 75675
systs.-in-a-package technol. research at Interuniversity Microelectronics Center 67595
temp. microsensor, biological instrum. 132076
thermal biosensors, principles/appls. review 120946
time-resolved fluoresc. opt. fiber biosensor *(Chinese)* 97424
triglycerides, pH detect., ISFET sens. 120954
TTF based organic semiconds., sens. for recogn. of nucleic acid components 75667
turbid media particle size anal., single opt. fiber white light detect. 120939
ultramicroelectrode arrays QC, voltammetry, EIS, electrochem. microscopy 86692
ultrathin Pt film sens. to meas. biomol. binding 120944
urea amperometric sens. syst., pH-stat/flow injection anal. 97413
urease immobilised AC conductimetric biosens., charactn., optim. 75669
uremia diagnosis, electronic nose breath anal. 98127
viral particle detect. by aerogel-immobilized bacteria 86678
Vitamin E conc. in oils & fats, voltammetry at ultramicroelectrodes 109747
voltammetric formate & glucose-6-phosphate biosens., NADH/NADPH meas. 86686
Au multiple island layers on fiber core, sens. appls. 75558
Ca^{2+} conc., bound calcein acrylamide fibre-optic sens. 97408
NO breath analyser, WO_3 based chemiresistive microsens. 87348
NO spectrosc. detect. by quantum cascade laser 86713
Na^+ anal., gingival fluid, NASICON microsensor 86689
O_2 biosensing, sharp spectral imprint gas signature detect. 86694
Rh miniaturized thin film sens. for clinical blood CO_2 gas anal. 120955
Si micromechanical cantilever-based biosensors, review 132015
Si multi-sens. needles, temp. sens. and ISFETs, appls. in surgery 121971
Si nanoscale microcavities, biosensing appl. 132005
Si, porous, light-addressable potentiometric sens., prep. 97448
Si, porous, potentiometric triglyceride biosens., calib. 109724
Si technol./devices, develop. 103948
Si-based biosensors, microfabrication 86693
Si_3N_4 nanoporous membrane, ion beam sculpting, DNA detector 103711
SiON UV transparent multimode buried-channel waveguide biochem. sens. 75740
$YBa_2Cu_3O_7$ multichannel DC-SQUID, biomag. meas. 76329

biosonic generation *see bioacoustics; mechanoception*

Biot-Savart law *see electromagnetism*

biotechnology
biofactory-on-a-chip technol., microfabrication proc. 97406
cell manipulation bio-microsystem, fab., shadow mask techs. *(English)* 76233
electroactive polymer-based artificial muscle nanotechnology 98724
mol. imprinted polymers, environ./biotechnology sens. appl. 132002
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
PCR chip, micromachined, integrated optics 92542
structuual biol./genome research, Berlin Protein Structure Factory beamlines 121756

biothermics
see also hyperthermia
3D MRI temp. phase difference mapping 132763
abdominal temp., rem. meas., miniature data loggers 76215
ambulatory physiological monitor for animal welfare studies 121968
atherosclerotic vulnerable plaques diagnosis, IR/NIR fibre optic imaging 110826
atrioventricular node, catheter cryoablation in atrial fibrillation patients 98604
blood perfusion, noninvasive meas. in vivo, heating method *(Chinese)* 110488
brain thermomapping for radiation effect diagnosis, stats. 98118
breast cancer, computerized thermography, image segmentation, temp. vars. 76387
breast tumors, focused ultrasound surgery, MRI monitoring 87591
cardioelectrical inform. of dyn. physiology/pathology, nonlin. dyn. research *(Chinese)* 110546
cell cultures, microwave EM radiation effects, microwave oven calib. 87939
cellular protein changes due to environ. nonionising radiation 98749
cellular telephones, human head temp. rise, peak SARs, safety guidelines 88008
coaxial slot array catheter antenna for microwave cardiac ablation 76658
coronary arteries, ultrasound charactn., temp. depend. wave speed 110810
coronary artery bypass surgery, graft patency eval., thermal-coronary-angiography 76405
dental hard tissue modif./removal using CO_2 lasers 76610
diode temp. sensitivity, vivo patient dosimetry 122393
drug-pad moxibustion cauterizer, single/multiple heating-pads 133013
dual-band phones, human head, power absorpt. and temp. elevations 88009
electroporation mediated muscle injury, surfactant therapy 87782
ethanol/water mixtures, sound speed meas., US imaging 75910
fiber optic IR thermometer, human body core temp. accurate meas. 87548
fibreoptic IR radiometer, thermometry inside MRI syst. 87603

biothermics continued
heart valve prostheses, dedicated biomaterials testing syst. 111143
heat stress assess., global radiation meas. by light sens. 122048
hepatic cancer RF thermal ablation, ultrasonography and Doppler tech. *(Chinese)* 76358
high-power incoherent opt. radiation for interstitial thermotherapy 98687
human 2450 MHz CW energy exposure, outside IEEE C95.1 std., no core temp. increase 133067
human body temp. on-line monitoring, virtual instrum. 110511
human head temp. rise for cellular phones, peak SARs prescribed in safety guidelines 111193
infants, deep brain temp. monitoring, multi-freq. microwave radiometry 98383
inhomog. tissues, microwave-induced thermoacoustic tomography 132648
interventional MRI, local RF heating, Green's fn. 122089
intracranial temp. elevation from diagnostic US 110791
isometric muscle contraction, heat/cold appl., surface EMG 87360
microorganisms inactivation, electron beam and microwave heating effects 110083
miniaturized antennas for microwave ablation of arrhythmia causing cardiac tissues 76616
mobile handset antenna, exposed human body, temp. distrib. calc. *(Chinese)* 111189
MR exams., heat perception, specific absorpt. rates 132720
MRI, accelerated image acquisition, lin. prior-inform. 132760
office occupants in Sydney, activity rates/thermal comfort 122364
opt. computed tomography imaging of absorbers, US phase-shift detect. 110845
paediatric surgery, IR ear thermometers, appl. criteria 111047
patient RF heating during MRI 133076
port wine stain birthmarks, dye laser irrad., epidermal protection 87826
pre-embryo zona drilling, laser-assisted, thermal effects 76611
preterm infants, indirect calorimetry perform. improvement, O_2 consumption/CO_2 prod. 121870
pulsed photothermal radiometry, blood vessel-like structs. investig. 76383
RF ablation treatment planning, blood vessel detect. 111134
super long pulse laser hair removal, thermal damage 98685
telemedicine syst., wireless, multi-purpose, effect of wavelet compression on data transm. 133163
thermal biosensors, principles/appls. review 120946
thermodilution, cardiac output meas., Levenberg-Marquardt estim. 76225
thermographic diagnosis standardisation, data proc. method 76391
tissue, dielec. props., age, microwave freqs., dosimetry 87974
tissue, laser irrad., thermocouples, fluoroptic probes, temp. meas. 87526
tissue temp. meas., MRI, thermal physiology techs. 122074
transmyocardial laser revascularisation/RF ablation, histologic thermal injury signatures 87823
tumor imitator design for microwave radiometry, physiological props. 132651

biotite *see mica*

biotransport
see also biodiffusion; biomembrane transport; neurophysiology
radiopharmaceutical biodistributions, SPECT, PET, dosimetry 98585
^{18}F-labeled dopamine transporter ligand, biodistribution, dosimetry 76734
^{131}I, therapeutic dose, patient release, another indiv. exposure 98817
^{99m}Tc-RP128, rheumatoid arthritis inflammation imaging, dosimetry 76723

bipolar analogue integrated circuits
see also BiCMOS analogue integrated circuits
LNA, 5.8 GHz, 1 V, overall noise fig., robust integrat. 102728
LNAs, monolithic type up to 10 GHz in Si and SiGe bipolar technols. 125785
low-power operational transresistance amp. based on CCI+ 101799
multitransistor MMIC ccts., MM-wave amps., stabil. anal. 125807
op amp, high-speed IC *(German)* 79606
RF Micro Devices RF2910, RF2911, GaAs general purpose LNA/PA 114636
translinear-based multi-output four-terminal floating nullor, bipolar implement. 80079
UMTS mobile commun., W-CDMA IF receiver and transmitter 108944
AlGaAs-GaAs HBT variable gain power amp. for mobile WCDMA appls. 91368
Cu post-processed inductors with appl. to 2 GHz integrated VCO 69240
GaAs HBT dual T/H, 1 GS/s, wideband pipelined ADC appl. 125633
GaAs based HBT power amps., ident. of humidity related failure mechanisms 127017
InGaP emitter HBT variable-gain LNA, 2 GHz mobile phone appl. 80381
InGaP emitter HBT, variable-gain LNA, mobile phone 90756
InGaP/GaAs HBT transimpedance amp., capacitive peaking tech. 114631
Si bipolar W-CDMA IF transceiver chip-set for UMTS mobiles 96484
Si bipolar high-IP3 RF receiver chip set for mobile radio base stations 91358
Si bipolar technol., dual-modulus prescalers 125635
Si bipolar transimpedance preamplifier, opt. receiver front-end 101809
SiGe HBT 40-Gb/s opt. receivers, AGC amp., full-wave rectifier and decision cct. 109070
SiGe HBT LNA, dual bias feed cct. 90755
SiGe HBT amp., 900 MHz, variable gain with low noise fig. 80356
SiGe HBT lin. LNA with dual bias feed cct., 2 GHz band design 80380
SiGe HBT technol. LNA, 23-GHz 91342
SiGe bipolar and CMOS LNAs and mixers for WLAN appl., comparison 114998
SiGe bipolar universal dual band LNA implement. for wireless appls. 91357
SiGe freq.-scalable bipolar RF front-end design, LNAs and act. mixers 69224
SiGe laser driver IC, 3.3 V, 20 Gbit/s VCSEL modulation 120202

bipolar digital integrated circuits
see also BiCMOS digital integrated circuits; bipolar logic circuits; bipolar memory circuits
high-speed IOE modulation cct. 71626
InGaAs/InP DHBT technol. and design methodology for >40 Gb/s opt. commun. ccts. 131411
Si PLL freq. synthesiser in 0.8 μm bipolar prod. technol., 7.35 GHz 91006
SiGe self-aligned SEG HBT static freq. divider and MUX/DEMUX, fibre links 79835

bipolar integrated circuits
see also BiCMOS integrated circuits; BIMOS integrated circuits; bipolar analogue integrated circuits; bipolar digital integrated circuits; bipolar MIMIC; bipolar MMIC
ambipolar organic devices for complementary logic 70292
BJT RF LNA/mixer ICs, spurious free dyn. range perform. anal. 69236
BJT small-sig. Darlington and cascode amps. 90768
CMP, prototyping and low vol. prod., engng. education 126920
CNN sampling theorem 102475
custom integrated front-end cct. for CMS EM calorimeter 121717
DOM AMPL-8.3 amp. for gaseous wire detectors 87256
high temp. bipolar IC for automotive appls., behaviour and reliab. *(Japanese)* 100301

ipolar integrated circuits continued
NPN bipolar transistor breakdown anal., ESD protection cct. design appl. 81242
polysilicon oxide quality optim. at wafer level, BCDMOS technol. 124432
substr. coupling, modeling methods *(Polish)* 70264
wideband gain block amp., design techs. 68601
Au interconnections, electromigration/electrochem. react. failure mechanism 115673
InGaAs p-i-n photodiode array monolithic four-channel DWDM opt. receiver array 109153
InGaAsP/InP monolithic HBT 40 Gbit/s opt. receivers 96710
InP HBT IC technol./appls. 70291
InP HBT ICs, proc. integrat. 116020
InP HBT VHSICs, opt. commun., prediction extraction modelling scheme 104084
InP HBT prod. proc. based on MBE 127016
InP transferred substr. HBT technol. continuous-time Σ-Δ A/D converter 125577
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
Si bipolar RF transceiver chip for DECT appl. 119957
Si-bipolar monolithic IC design for opt. receivers, emitter-coupled pair ccts. 74964
SiGe HBT UHF power amps. in flip-chip and packaged technol. 91325
SiGe device archits., local area Ge^+ implant. synthesis 115498
SiGe self-aligned base heterojunction bipolar technol., UHS2 proc. 81499
SiGe technols. for future multimedia appls. 69193

ipolar logic circuits
see also BiCMOS logic circuits
ambipolar organic devices for complementary logic 70292
CML ring oscillator, oscill. freq. 101832
CML testability, inductive fault anal., library cell layouts 102074
MOBILE-based RTDs, 3-terminal, for high-speed logic appl. 90892
AlInAs/InGaAs HBT CML ring oscillator, sub-5 ps gate delay demo. 79845
AlInAs/InGaAs HBT IC, low-power static freq. divider 127015
InAlAs/InGaAs HBT ECL static freq. divider, 75 GHz 68769
InAlAs/InGaAs HBT IC, adder carry-and-sum logic cct. 114710
InAlAs/InGaAs HBT carry-and-sum logic cct., adder archit. 114705
InP/InGaAs DHBT master-slave D-type flip-flop, ETDM syst. 79856
InP-based monolithically integrated RTD/HBT MOBILE for logic ccts. 114709

ipolar memory circuits
ECL SRAMs, internal waveform obs., EO samping prober 116000

ipolar MIMIC
see also bipolar MMIC
InGaAs/InAlAs transferred-substr. HBT monolithic amp., 185 GHz, design 102681
InGaP/InGaAs quadruple power combined monolithic HBT oscillator, 100-GHz-band *(Japanese)* 102658
InP/InGaAs ultrahigh-speed DH DHPTs for optoelectronic mm-wave MMICs 131383
Si BJT bal. upconvertor MMIC, Marchand-type balun, unit mixers 80361
Si/SiGe bipolar technol. based act. mixer, 30 GHz, fab. and perform. 69198
Si-SiGe mm-wave MMIC near-range radar sens., coplanar transm. lines, MEMS switches 115019
SiGe SIMMWIC HBT technol., coplanar and microstrip oscillators 102673
SiGe technol., role in microwave/MM-wave appls., HBT modeling, amp. design 80277

ipolar MMIC
see also bipolar MIMIC
5.8 GHz OFDM commun., integrated transceiver module, multilayer packaging 108787
FTTH low-power single-chip receiver IC for opt. video distrib. syst., 1.5-GHz 96293
HBT MMIC VCO, phase noise 102667
LC-tank VCO, wireless-targeted, 2.5-GHz, automatic amplit. control loop 102733
LNA, 5.8 GHz, 1 V, overall noise fig., robust integrat. 102728
LNAs, monolithic type up to 10 GHz in Si and SiGe bipolar technols. 125785
phased arrays for new millennium 128883
PLL freq. synthesizer in 0.8 μm Si bipolar prod. technol., 6.7 GHz 91320
power MMIC, base feed design using high power HBTs 91387
super high speed polysilicon emitter IC technol. *(Chinese)* 104085
triple-push oscillator ccts. 114658
GaAs S-band solid-state amp., high-power, radar transmitter 96971
GaAs/AlGaAs HBT 5.8 GHz OFDM transmitter MMIC chip set, design/perform. 91312
GaAs/AlGaAs HBT MMIC chip set, OFDM transmitter 91353
GaInP/GaAs HBT MMIC oscillator, phase noise 102670
GaInP-GaAs HBT technol. for high power X-band/broadband amps. 125745
InP-HBT differential VCO with wide tuning range, SONET/SDH fiber optic appls. 91338
Si BJT bal. upconvertor MMIC, Marchand-type balun, unit mixers 80361
Si bipolar LNA for WLAN appls., 5.8 GHz, design and perform. 114994
Si bipolar VCO, high-speed opt. commun. syst. 102674
Si bipolar monolithic RF bal. down conversion mixers, noise anal. 69216
Si bipolar technol., dual-modulus prescalers 102448
Si bipolar technol., monolithic LNA 91378
Si/SiGe HBT ICs with low cost in 15 to 20 GHz range 80357
Si/SiGe HBT low-cost Ku to Ka band MMICs using commercial HBT proc. 69197
Si/SiGe bipolar technol. based act. mixer, 30 GHz, fab. and perform. 69198
SiGe HBT 40 Gb/s 4:1 MUX and 1:4 DEMUX IC modules, SONET/SDH 109178
SiGe HBT MMIC 16 GHz oscillator design with act. elements 125810
SiGe HBT lin. LNA with dual bias feed cct., 2 GHz band design 80380
SiGe HBT monolithic wideband amp., 15 GHz, 2.8 dB noise fig. 91356
SiGe HBT technol. LNA, 23-GHz 91342
SiGe HFET/HBT technol. for microwave/mm-wave appls., advances 91289
SiGe bipolar technol., monolithic LNA 91378
SiGe bipolar wideband amp., 15 GHz, 2.8 dB noise fig., design 91315
SiGe technol., role in microwave/MM-wave appls., HBT modeling, amp. design 80277
SiGe/Si HBT and lumped pass. components for An X-band high-power amp. 91360
SiGe-HBT for RF wireless commun., advantages 81217

bipolar transistor circuits
used for general papers and papers where use of bipolar transistors is significant
7.8 to 8.7 GHz X-band microstrip VCO 90780
100W class A power amp. for L-band T/R module 86201
biasing ccts. for bipolar transistors 68507
CMOS temp. sens., curvature correction, digital bus interface 86776

bipolar transistor circuits continued
exponential sweep freq. generator 114661
general BJT networks, DC solns., topol.-based method 68532
HBT cct., design optimisation, opt. demodulator 82357
HF biquadratic cct. *(Japanese)* 91047
LMDS wideband subharmonically injection-locked freq. synthesizer 131107
log-domain cct., exponential I-V rel., nonlin. dyn. 90695
log-domain filter, distortion anal., Volterra series 80051
microwave cct. modeling/simul., design principles 125689
multiphase sinusoidal oscillators realisation, translinear bipolar second generation current-controlled conveyors 79619
RF power amp., BJT lin. cct. 68596
RF power amp., memory effects, IMD meas. 101797
self-oscillating mixer, low power, wireless commun. 91220
triple-push oscillator ccts. 114658
two-stage chaotic Colpitts oscillator, 3 GHz, design 69112
two-transistor multistable cct. constr. methodology 90665
wideband gain block amp., design techs. 68601
GaAs HBT power amps., feedback bias cct. design 80317
Ge/Si HBT power amp. 68592
InGaP-GaAs HBT Doherty amp. with high efficiency over wide power range 91264
InP DHBT, X-band/Ka-band power amps. 114981
InP HBT VCO, freq. tuning range 101843
Si BJT neg.-conductance ccts., RFIC VCOs 101823
$Si/SiO_2/Si_3N_4$ polycryst. emitter bipolar transistors/cct., very high speed *(Chinese)* 103764

bipolar transistor switches
see also power semiconductor switches
3-phase ZVS PWM inverter, digital control, reson. snubber, CT 134225
600 V/6 kA bidirectional ZVS hybrid DC IGBT switch 134271
1200 V carrier stored trench bipolar transistor switch characts. 126788
1200 V soft punch through IGBT develop. 70172
auxiliary reson.-commutated snubber-linked three-level IGBT ZVS VSI 134202
auxiliary reson.-commutated soft-switching inverter topol. 134200
BLDCM drive syst. for EV appls. 123960
current switch, nonlin. dyn. behaviour after step input 80471
distrib. syst. power quality improvement using PWM IGBT convertors 133691
EconoPACK+ six-pack IGBT module invertor package 88883
EconoPACK-Plus large-capacity 6-in-1 IGBT module 126795
epitaxial/nonepitaxial planar gate and trench gate IGBTs, turn-off behaviour 115912
fixed-speed IM PWM invertor-based ASD retrofit 134496
hard/soft switched PWM invertors, conducted EMI emissions modelling 123635
high speed switching bipolar power transistor with corrugated base jns. 81253
high-power HV power ICs for automotive appls. 78323
high-power IGBT CSI for AC motor drive appls. 134183
high-power IGBT inverter for induction heating appls. *(German)* 112618
hybrid act. power harmonic filter topol. develop. 89034
IGBT PWM inverter, partially coupled electro-thermal anal. 123656
IGBT PWM inverter-fed IM, insulation charact. anal. 134047
IGBT PWM VSI-fed IM drives, series line termination net 123926
IGBT-based freq. converters for IM drives 112663
IM winding voltage distrib., PWM IGBT inverter effects 88728
induction heating freq. convertors, retrospective, develop. trends *(German)* 112617
MV power converter topologies for high-power appls. 134205
NPT IGBT rated overload charact. study 126789
pipeline fluid heating using PWM invertor-eddy current dual pack heater 124099
power BJT switches, anal. model 115864
power IGBT series assoc., act. clamping cct. optim./integrat. 126787
power IGBT switches, flexible dv/dt/di/dt control method 126786
power semicond. device modelling for power convertor transient simul. 112634
PWM inverter high-power IGBT module ratings for traction appls. 78046
PWM invertor switching pattern generators, FPGA implement. 123654
PWM invertor-fed IM drives, shaft voltage prediction model 134454
single-phase switch-mode voltage-doubler rectifier using pump ccts. *(Japanese)* 112655
SMES control algms. for customer power quality improvement 78190
SMES syst. for study on utility/customer power appls. 78189
soft-switched act. clamped reson. link inverter eval. 77982
soft-switching choppers, load adaptive ZVS scheme 134189
sync. generator excitation systs. using IGBT power convertor 133952
three-phase boost rectifiers, discontinuous cond. mode operated 123603
three-phase PWM VSI IM drive, lumped param. model 123897
three-phase soft-switched current-source PWM rectifier topol. *(Japanese)* 99804
trench-gate IGBT switching charact., temp. effects 126793
unity PF act. clamping single-phase three-level rectifier 88851
VSI control, parasitics effects modelling 88926
VSI IGBT perform., cct. parasitic impedance effect modelling 88921

bipolar transistors
see also bipolar integrated circuits; bipolar transistor switches; heterojunction bipolar transistors; hot electron transistors; insulated gate bipolar transistors; microwave bipolar transistors; millimetre wave bipolar transistors; permeable base transistors; power bipolar transistors; UHF bipolar transistors
AC and DC power transm., power converters operation *(Russian)* 122896
base transit time, base doping profiles, iter. schemes 70049
base transit time, doping profile 103791
BiCMOS collector insert layers, highly doped, proc. develop./simul. 92478
BiCMOS design and perform., act. WDM components appls. 127071
BJT, selectively implanted collector, impact ionization 81226
BJT base resist./Early voltage charactn. using dual base transistor test struct. 103783
BJT model sets, confidence limits estim. using bootstrap tech. 103784
BJT RF LNA/mixer ICs, spurious free dyn. range perform. anal. 69236
CMOS/bipolar integrated temp. sens., portable appl. 120891
collector p-n jn., emitter current push-out effect, avalanche multiplication 103767
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
DECT VCO integrated pass. using thin film MCM-D technol. 131263
disloc.-free fab., stress sing. params. *(Japanese)* 70132
double-gate-controlled NPN bipolar transistors, total-dose effects 126672
electronic solid state dosimetry, review 133141
generation-recomb. noise, deep-level impurities 81220
high current biased, sig. propag. delay, microscopic anal. 126666
high-dose-rate transient ionizing radiation effects, bipolar devices 126673
JFET structs., bipolar mode, neg. resist. behaviour, input I-V curves 70177

bipolar transistors continued
jn. temp. inhomog. meas. by ΔV_{be} method *(Chinese)* 92298
LF and HF noise level rels. for bipolar transistors 70053
LF noise anal. of bipolar transistors and MOSFETs using complementary BiCMOS technol. 116043
magneto-transistor cct., magneto-controlled generation with period-adding seq. and chaos *(Russian)* 79526
microwave ADC for broadband commun. 80331
neuron-BJT, silicon retina and CNN 91132
neutron/ion effects 103780
NPN bipolar transistor breakdown anal., ESD protection cct. design appl. 81242
output conductance and cutoff freq. 126669
output conductance and cutoff freq., compact model 103787
parasitic bipolar transistor model in protection MOSFET, generated-hole-depend. base resist. 81418
PNP lateral transistor, piezojunction effect, stress sens. 109495
semicond. barrier structs., SEM techs., EBIC, thermoacoustic detect. 103096
SOI bipolar transistors, self-heating effects 126676
SOI complementary BiCMOS devices, perform. eval. using test struct. 104147
SOI LDMOS technol. for fully-integrated RF power amps. 115016
SOI substrs., buried WSi_x layer, charactn., appls. 91917
spin-valve transistor, fab., charactn., and phys. 81922
super self-aligned bipolar transistor, gamma ray hardness struct. *(Japanese)* 103770
super-self-aligned bipolar transistor, deep selectively ion-implanted collector, high f_T/J_c *(Japanese)* 70051
test struct. for parasitic resist. extraction 103782
thermal resist. extraction methods 92307
vert. integrated transistor-laser struct., modified design 93665
VGBNPN bipolar transistor, ESD protection, smart power technol. 126668
VGBNPN device, smart power ESD protection 103786
GaN high current gain BJT, regrown emitters 126686
GaN-based materials OMVPE growth, single step nucleation proc. 90440
GaP/TmP/GaAs heterostruct., transistor action 115844
GaP/TmP/GaAs heterostruct., transistor action, MBE growth of TmP/GaAs 115871
InAlAs/InGaAs complementary NPN and PNP HBTs, monolithic integrat. 115863
$Ni_{80}Fe_{20}$, hot-electron transport, spin-valve transistor study 81921
SOI FETs, ion beam induced charge collection, body-tie effects 126728
Si BJTs, high injection effects on noise charact. 81218
Si bipolar transistor, emitter diffusion depth, $TiSi_2$ form. 103792
Si bipolar transistors in 0.5-μm based BiCMOS technol., fab./charactn. 103771
Si photo-emitters for opt. interconnects, accelerated stressing/degrad. mechanisms 82450
Si, polycryst. film and npn transistor, particle irrad. 126611
Si sens. & ccts., piezojunction effect rel. to piezoresist., review 109479
Si:As, polysilicon emitter transistor, RCA oxid. *(Chinese)* 92296
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
SiGe bipolar technol., broadband mixer 102623
SiN spacer technol., elec. detect. & stress simul. 115845

bipolarons
see also magnetic polarons
bis-(diphenylamino)diphenylpolyene based model dendritic macromols., highly absorbing transient charge states generation 71956
conf., Models and phenom. for convent. and high temp. supercond., Varenna, Italy (Jun./Jul. 1997) 100446
oligophenylene thin films, n-doped, UPS, MAES studies 101231

biquadratic filters
act. RC networks for freq. response correction *(German)* 68907
adjustable video-freq. current amp., biquadratic filter 101775
ARC biquadratic filters using voltage and current followers 102344
automatic channel equalization, digital data transm., embedded fuzzy control 96342
band-pass act.-RC filter, single-amp. biquad type, design 80077
BiCMOS high-selectivity SC bandpass filter, biquad cells 91035
bipolar log domain filters in std. CMOS proc., SPICE compatible model 80073
bipolar transistors, HF biquadratic cct. *(Japanese)* 91047
cardiac pacemaker, analog front-end, CMOS proc., sens. chain 76670
CMOS 800 MHz continuous time biquadratic cell, gm-C fully differential config. 102348
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
CMOS G_m-C biquadratic stage for PRML read channel appl. 102337
CMOS high-Q G_m-C bandpass filter, automatic tuning, wireless receivers 91049
CMOS SC band-pass biquad filter 102374
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
current-mode biquadratic filters using multiple-output FTFNs 68929
current-version neg. feedback biquad filter, opamp cct. 68932
eighth-order CMOS low-pass filter, 30-120 MHz tuning, prog. boost 91029
floating-gate MOS biquad, LV, second-order g_m-C filter 125601
generalised divider struct. based biquad, SC implement. 102339
hearing aid LV CMOS filter, dyn. gate biasing use 122354
HF high-Q continuous-time filters, automatic tuning scheme 68913
insensitive current-mode universal biquad implement. using current conveyors 91037
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
min.-sensitivity single-amp. biquadratic low-pass filters 102347
OTA-based act.-c filters, simul. & implement. 102338
robust high-pass and notch Gm-(grounded) C biquads, filter topologies 80066
SC integrators, gain/offset compensated/very large time const., comparison 68971
second order building block with minimised parasitic transfer zero influence 102346
SYSCUF, automated synthesis package for switched current filters 68916
UHF current-mode filter based on biquad of regulated cascode topol. 80078
VHF CMOS bandpass filter for IF appl. 102356

birefringence
see also Kerr electro-optical effect; light polarisation; magneto-optical effects; mechanical birefringence; optical constants; optical rotation
10 Gb/s birefr. nonlin. fiber opt. pulse transm., chirp and pulse shape 131356
A_2MX_4 incommensurate phase ferroelec. crysts., digital recording 127562
absorptive neutral-dens. glass filters, thermally induced birefr./refr. 71499
ADM with UV-written Bragg gratings and directional coupler 120143
all-opt. switch using cross-polariz. modulation in SOA 75041
azo dye doped polymer film periodically photoisomerized waveguide, quasiphase-matched SHG 93806
azo dye mol. doped thick polymer films, holographic grating generation 105594

birefringence continued
azo-doped PMMA film, photo-induced birefr., bicolor image storage *(Chinese)* 93027
azobenzene side-chain polymer liq.-crysts., opt. data storage 93887
azobenzene-containing polymer surface relief grating immobilization/poled alignment, photopolymerization 105464
azopolymer thin films, opt. induced surface relief gratings fab. 93899
azopolymers/cadmium stearate mixed LB films, opt. storage 71226
biaxial crysts., high-order Bessel light beam form. 128365
birefr. photonic IC BFN 91400
bis-tolane liq. crysts., birefr., display appls. 97621
Bragg grating fiber strain sens. demodulator 97338
bulk glass current sens. sensitivity, refl.-induced retardance 121135
bulk opt. sens., environ. effects compensation 132116
calcite NIR birefr. filter syst. 82297
cholesteric liq. crysts., 1D photonic band-gap and low threshold lasing 82504
D-type waveguide fiber-optic polarizer 116639
dark soliton transm., randomly varying birefr. influence 72057
depolarised speckle radiation wave front polaris. capture by holographic laser mode 117535
diazo linkages, liq. cryst. mixtures, IR appls. 127844
dielec. grating, press. and temp. sens. 75600
disperse red 19 mixed LB films, opt. storage 116594
dispersion-managed soliton transm. systs., polaris.-mode dispersion influences 85948
distorted laser beam wavefront correction simul. 128367
doped fibre polaris. props., magneto-opt. beat length meas. method 104627
dual-long.-mode birefr. moire DFB fiber laser sens. in rf domain 97333
DVD-RAM opt. disk substrs. study 93000
DVD-RAM substrs., optimum design of replication proc. 93023
EDFA, gain flattening using high-birefr. fiber loop mirror 105196
electro-mechano-opt. polymer balls, light modulating material 92943
ellipt. birefr. media props. using Senarmont compensator setup 132195
ellipt.-core NLC fibers, light propag., BPM 116634
Faraday rotator design for high av. power lasers 127852
FBG sens. demodulator, fiber birefr. 109616
fiber laser mode locked by Sagnac interferometer with nonlin. polariz. rot. 128405
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
fiber ring laser, wavelength tuning mechanism by pol. control *(Korean)* 117100
fibers, laser heterodyne sig. detect. 116638
fibers, nonlin. index meas. accuracy, Raman suscept. symm. rules 71297
fibers, polariz. mode dispersion, opt. birefr. 93099
fibre DFB laser, microwave carrier generation, propag. mode matrix 80390
fibre opt. voltage sens., dual light channel, temp. compensation 120844
fibre optic current sens., Faraday rotator mirror 75603
fibre Sagnac interferometer theory *(Spanish)* 93097
fibres, polariz. modes, third-order dispers. effect suppress./compens. 127687
Fuji-Wide View film biaxiality 97680
fully-distributed opt. fiber polariz. props., OTDR backscatt. tech. 93056
Gaussian/super-Gaussian solitons in birefr. opt. fibers, dyn. 93863
glass-based Bragg waveguide gratings, poling research *(English)* 104858
group-vel.-matched birefr. cryst. three-wave mixing 71948
high av. power laser Faraday rotator design 117326
high-power solid-state laser thermal effects, anal. model 71717
highly birefr. fiber dyn. grating, Bragg modulational instabil. 82092
highly birefr. fibers, multiple FWM-induced modulational instabil. 127630
highly-birefr. fiber, polariz. mode dispersion, pulse narrowing 96646
laser opt. components, test methods, standardization trend *(Japanese)* 93691
LCD using birefr. filters, generating full color 86799
liq. cryst. azobenzene side-chain polymer photo-induced birefr., data storage materials 71223
liq. crysts., third order NLO props. in phase transit. region 93750
long dist. fibre polariz. mode dispersion probab. distrib. 127715
long single-mode fibers, birefr. correl. length meas. 93095
low polaris. mode dispersion fibers, optimized spinning design 127621
low-coherence interferometric sens. based on highly birefr. fibers, detect. syst. optimisation 109595
micromachined sub-MM and MM-wave variable pol. compensator 91195
mol. optics smectic antiferroelec. liq. cryst., EO props. 104823
multifunctional liq. cryst. based fiber-optic sens. 120865
multilayer waveguides, mode control, efficient SHG 116715
multiple dark soliton propag., randomly varying birefr. influence 72062
nematic LCD, patterned field-induced polymer wall form. 97619
nonlin. loop mirrors with twisted low-birefr. fiber, theory 93037
normally dispersive highly birefr. fibers, modulational instabil., SRS 117505
OPO, nanosecond, image-rot. cavity designs for improved beam quality 71987
opt. fiber, nonmonochromatic radiation polariz. 82125
opt. fiber spatial birefr. distrib. meas. 93094
opt. fiber with lin. birefr., soliton interact., coupled nonlin. Schrodinger eqn. 104658
opt. fiber with loss and freq. chirping, soliton propag. 104680
opt. fibers, PMD suppression, soliton self-trapping phenom. *(Chinese)* 104671
opt. fibers, super-Gaussian solitons param. dyn. 93081
photodefinable polyimide for pass. photonic devices 116549
photom. return-path birefr. sens. based polarimetric opt. fiber refractometer 86578
photonic cryst. fibres, design props., strong nonlin. *(English)* 104655
planar glass sample, UV written opt. waveguides, zero birefr. 127746
PMMA, Disperse Red I doped photoactive film, interferometric studies 87003
polarimetric opt. fibres with ellipt. liq.-cryst. core 97301
polariz. independent NLO loop mirror 82117
polariz. synthesized opt. transversal FBG filter, tunable microwave freq. response 71471
polariz.-insensitive Bragg gratings design in zero-birefr. ridge waveguides 104717
polariz.-sensitive OCT, biological sample birefr. props. 122041
poly(arylene ether sulfide) low-loss fluorinated waveguides 82131
poly(p-phenylenevinylene) derivatives, third-order nonlin. optics 128482
polymers, photorefr. solitons, orient. enhanced birefr./EO effects 72065
PPV derivative polymer laser polariz. depend. threshold 82029
primate/rabbit eyes, polaris. sensitive OCT, birefr. tissue 98378
quasi-phase-matched seeded OPA, high-power fs light pulse generation 82911
QW laser, grating feedback locked, polariz.-depend. photon-no. squeezing 93585
reflective mixed-mode TN cells, small pixels, opt. modelling 97683
reflective twisted NLC displays, polariz. eigenvectors 132106
sapphire low-loss high-reflectance coating advanced detector optics, birefr. meas. 116876
short low-birefr. fibers, beat length meas. 116600
side-hole fiber-optic sens. for dyn. hydrostatic press. meas. 97327

ingence continued
ica microstruct. photonic-cryst. fibers, design and appls. 127706
ica UV-written planar waveguides and gratings, magneto-optic birefr. meas. 27744
gle-layer polymer LED, emission zone 82388
gle-mode fiber polariz. modes, fiber ring interferometer zero drift 120842
gle-mode fibers, polariz. mode dispersion/loss 82075
gle-mode opt. fiber, modal birefr., polariz. mode dispersion, channeled interf. pectrum 104673
gle-mode opt. fiber homodyne dyn. light scatt., sensitivity improvement 27592
MF, normally dispersive highly birefr., small-sig. parametric amplif. 71286
OA, waveform distortion suppression using internal birefr. and slope filtering 71807
OAs, noninverted wavelength conversion, birefr., chirp compression 71817
l-solid-state laser systs. with fiber phase-conjug. mirror 105212
rong dispersion managed fibre syst., vector solitons 117522
rongly birefr. fibers, polariz. modes transm., dispersion effects *(Chinese)* 93030
ird-order dispersion in birefr. fibre, enhanced pulse compress. 127686
ansmyocardial laser revascularisation/RF ablation, histologic thermal injury signatures 87823
wisted nematic display, dichroic dye, opt. params. 109891
wisted nematic LCD, wide VA photoaligned plastic films 86840
IV-induced planar lightwave cct. index changes, birefr. control 128611
IV-written gratings and waveguides, expt. charactn. methods review 127743
/CSEL, polariz. switching from low to HF mode 71907
/HF impulsive terrestrial sigs., sources location determ. 122651
wave plates, opt. phase retardation, laser freq. splitting technol. 117584
wavelength meas. using opt. fiber retarder, operating charact. *(Korean)* 75903
WDM fibre network monitoring, opt. SNR monitoring tech. 109150
Zygo Pegasus 2000 fly height testers, meas. uncertainty 127362
$AgGaSe_2$ cryst., extraordinary ray refr. index in mid-IR range 82896
As-Ge-Se-S chalcogenide glass thin film, photoinduced birefr. 91688
β-BaB_2O_4 birefr. delay compensator for femtosecond opt. parametric generator 72024
$Bi_{12}SiO_{20}$ cubic gyrotropic photorefr. cryst., mutually phase-conjug. light waves 93760
$Bi_{12}TiO_{20}$ cubic gyrotropic photorefr. cryst., mutually phase-conjug. light waves 93760
Er-doped birefr. fibre amps., C + L band max. saturation output power 128161
Er-doped fibre DFB lasers for sens. appl. 75576
$Ga_xIn_{1-x}P/Al_{0.5}In_{0.5}P$ (110)-oriented strained QWs, opt. anisotropy, barrier height effect 115313
$Gd_xY_{1-x}Ca_4O(BO_3)_3$, noncritically phase-matched harmonics, UV laser generation 105242
Ge-As-S photobleached glassy films, photoinduced anisotropy 82830
He-Ne laser, full-inner-cavity birefr. dual-freq., angle-block and freq.-stabilization *(Chinese)* 105150
InGaAsP MQW, carrier transport, ultrafast spin dyn., polaris. switching 117500
K^+-Na^+ ion exchange planar waveguides, propag. consts. 116689
$KTiOPO_4$, Nb doping effect on SHG and sum freq. mixing *(English)* 117462
$LiNbO_3$ cryst. growth proc., noncritical type I birefr. phase matching 71996
$LiNbO_3$ waveguides, all-opt. amplif. 105208
$LiNbO_3$:Ti integrated opt. waveguides for opt. BFN, birefr. 127782
$LiNbO_3$:Ti opt. waveguide for opt. beamforming network in multibeam array antenna 105958
Nd:YAG ceramic laser, 72 W CW, LD pumped 71740
Nd:YAG diode-pumped laser, micromachining appls. 82584
Nd:YAG dual-freq. laser with quartz birefr. Fabry-Perot etalon *(Chinese)* 71742
Nd:YAG laser, vectorial phase conjug. mirror in gain medium 71945
Nd:YAG planar waveguide laser, high av. power cw face pumping 71713
Nd:YAG rod laser birefr./thermal lensing, dyn. correction 105226
Nd:YAG tunable single-freq. diode-pumped ring laser at 946 nm 93740
p-Si TFT-LCD, splay to bend alignment 86881
Si nanowire layered opt. polarisers 116882
Si porous films, inplane birefr., SHG phase matching 105503
Si, tri-cryst., characterisation, solar cell appls. 91597
Si wafers, photoelasticity, scanning IR polariscope obs. 102994
SiC wafers, dielec. fn., spectrosc. ellipsometry 69587
SiO_2:N planar waveguides, refr. index change, birefr. 127745
$SrBaNb_{O6}$ photorefractive crysts., waveguide channel elec. fixing 82052
TeO_2 AO cell image proc./edge enhancement 118199
YVO_4 raw material synthesis, prep. conditions optimisation *(Chinese)* 68128
$ZnGeP_2$ phase-matched SHG OPO 71974

isimulation equivalence
multiple entities commun. protocol constr.; compositional approach 130882
service and protocol specs. comp. 95926
temporal logic model checking of event timings, abstractions 101978
timed transit. systs., cones and foci proof tech. 119328

BIST *see built-in self test*
bistable multivibrators *see flip-flops*
bistable optical devices *see optical bistability*
bit rate error *see error statistics*
Bitbus *see peripheral interfaces*
Bitter patterns *see magnetic domains*
BJT *see bipolar transistors*
blackboard architecture
3D intra- and interframe target detect. in IR/mmW image seqs. 111622
blazars *see quasars*
bleaching, optical *see optical saturable absorption*
blending
organic thin film photodiodes, current develop., review 116959
poly N-vinyl-2-pyrrolidone/urethane-urea copolymer blend, nonlin. optics 72001
steam power plant coal firing proc. control using dyn. coal blending 99553
Sn-Ag alloy, Cu(Ag) particulate reinforced composite solder 90561
blind equalisers
256-QAM CATV networks 107707
adaptive equalizer, dithered signed-error CMA 73836
adaptive phase offset correction 73833
AR equalization with const. modulus criterion 119191
array sig. proc., direct blind multichannel ident. 130250
asynchronous CDMA receivers using code-constrained CMA 84865
Bayesian blind/semi-blind equalisation of channels with Markov inputs 119199
Bussgang-zero crossing equalization, integrated HOS-SOS approach 130267
carrier freq. offset blind estim. in unknown multipath 83803
CDMA blind asynchronous channel estim./equalization, multistep lin. prediction 84851

blind equalisers continued
CDMA downlink, spreading code optim., channel capacity estim. 85781
CDMA multichannel nonlin. systs., blind zero forcing equalization 119884
channel equalization and ε-approx. algms. 130268
channel equalization with colored sources, second-order stats. based, lin. prediction 107692
channel ident., subspace tracking method 119184
channel ident. and sym. estim., low-cost adaptive algm. 119190
chaotic commun. systs., adaptive blind equalization, EKF 107676
CMA-based nonlin. blind equaliser, two-layer neural network model 119180
concurrent blind deconvolution for channel equalization 130273
const. modulus props. 107725
correl. source, second-order stats. 107688
deterministic sig., blind zero-forcing ident. 73826
digital commun., blind equalization based on fourth-order cumulants 130251
direct blind channel equalization, prog. canonical correl. anal. 107723
discrete chaotic syst., robust dead-beat sync., secure commun. *(Chinese)* 94221
DS-CDMA blind asynchronous multiuser receivers, ISI channels 107752
DS-CDMA in multipath channels, blind asynchronous sig. detect. 84896
DS-CDMA systs., semi-blind spatio-temporal equalization and multiuser detect. 85815
DS-CDMA systs., semi-blind spatio-temporal equalization/multiuser detect. 131132
DS-SS systs., blind channel estim./data recovery 108543
DS/CDMA systs., MIMO inverse filter criteria and blind max. ratio combining using HOS 84905
EDGE systs., blind equalization feasibility 84871
enhanced Godard blind equalizer based on transient phase anal. 73843
evol. prog. appl. 107701
fast CMA 107700
fast fading vector channel transmit diversity combining 108913
fractionally spaced blind equalizers computation 84858
fractionally spaced equalisation using anal. const. modules 119194
FSR-LPTV filtering for blind equalization and interf. rejection 130263
Godard-based blind channel ident., perform. anal. 95813
HOS based blind multi-channel deconvolution 107401
IIR blind equalizer class, pole placement techs. 130067
IIR channel 130254
ISI/MAI cancellation based on periodically time-varying transm. power 95817
lin. multiuser systs., second-order stats. based equalization/interf. cancellation 107691
lin. time-varying channels, blind equalization 84874
M-PSK sigs., cost fn. for blind estim. 95804
MIMO blind equalization, blind source separation and fractional sampling 84872
MIMO channel identifiability from 2nd-order stats., matrix polynomials 84863
MIMO channels, blind estim./equalization, multidelay whitening 107689
MM-wave broadband wireless indoor networks, combined spatial-temporal CM equalization 85465
multichannel blind deconvolution, estimating fns., semiparametric model 73744
multichannel blind source separation and blind equalization using fractional sampling 107724
multichannel ident., lin. channel-based noise subspace parameterizations 84870
nonGaussian time-varying AR model, recursive blind ident., time-varying channel equalisation 119200
nonlin. blind equalization, bilinear recursive polynomial perceptron 119178
nonlin. channel ident., constrained hybrid GA 119176
OFDM and related multicarrier systs., finite-alphabet based channel estim. 106014
OFDM sigs. on HF-channels 107611
on-line eval. of equalizer perform. based on HOS 119189
parallel Bayesian DFE approach 84852
piecewise RBF decision feedback channel equalizer, VLSI archit. 102480
POCS efficient algms. for deterministic blind equalization of time-varying channels 73831
pulse shape filter estim. in multipath context 107535
satellite nonlin. digital link, PSK modulation, blind equalization 96619
semi-blind OFDM channel estim. using coded pilot sig. 107680
sig. proc. algm. for decorrelation and channel equalization 108928
single-input multiple-output time-varying channels, blind equalization 84873
source separation and sig. class. 107400
sparse channels, blind equalisation using antenna diversity 119193
stat./structural approaches 107702
TDMA cellular syst., channel ident. and interf. cancellation 131138
time-freq. methods param. estim. 106335
time-varying channels with DPSK inputs, blind DFE 84857
turbo equalization in Gaussian and impulsive noise 107683
two-stage periodically time-varying equalizer and interf. suppression 107698
unimodal blind equalization criterion 119192
unknown data channels, nonlin. blind-deconvolution 85656
white data and block encoded seqs. 119175
wireless broadcast channels, blind/semiblind channel equalization 73845

Bloch walls *see magnetic domain walls*

block codes
3G mobile commun., short frame turbo decoding and ML decoding 106133
4-PSK schemes for unequal error protection 117887
128-bit symmetric block ciphers, fault-based side-channel cryptanal., concurrent error detect. 129277
alg.-geometric codes better than Gilbert-Varshamov bound, low-complexity constr. algm. 117925
ARQ hybrid schemes, adaptive block encoding 129055
ATM cell transm. scheme over mobile cellular networks 130194
BCH codes decoding using back multiplication algm. 129005
BCH min. wt. decoder for double error 129003
behavioral interpolation, coding, and control 78980
binary lin. error detect. block codes, criteria *(English)* 72844
BLAST archits., random space-time codes and iter. decoders 131073
BLAST perform. improvement using space-time block codes/turbo decoding 72867
blind equalisers, white data and block encoded seqs. 119175
blocking artifacts reduction algm. in block boundary area using neural network 129795
BLOWFISH block cipher, VLSI archit. design, secure modes of operation 106208
broadband wireless channels, soft decoding techs. 94276
CDMA multipath systs., space-time block coding 129129
CDMA multirate sigs. constr. with controlled peak-to-av. power ratio using bal. incomplete block designs 83821
CDMA space-time block coded multicarrier syst. multiuser receiver 108860
CDMA systs., interleaver design/anal. 129015

block codes continued
CDMA systs., optimal space-time block codes 106089
CELP speech coding, soft-decision decoding of binary block codes 118094
Chameleon dyn. reconfigurable hardware-based cipher *(English)* 79849
channel estim. and equalization with block interleavers 84868
ciphers, group theoretic property, encryption fns. 72971
CMOS Hermitian decoder IC, Koetter's decoding algm. 106194
colour image databases using BTC for storage and retrieval 84433
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
constrained block coding and computational complexity theory 129204
constrained VQ codebook design for noisy channels 72830
convolutional codes, block code description *(English)* 72855
correl. Rayleigh fading channel, coded modulations compared 83817
cryptology, conf., Bruges, Belgium (May 2000) 113200
data sync. with timing 73746
digital commun. links, frame error estim. criterion 128994
digital transm. scheme with hunting-free reframing 72809
diversity codes for differential PM in correl. Rayleigh fading channel 96510
double differential space-time block coding for time-selective fading channels 83850
DS-CDMA multidimensional multicode syst., code diversity/error detect., perform. 74790
EDGE mobile radio syst., space-time coding 85670
enhanced block coded modulation using iter. decoding based on parity check codes 129067
even isodual codes, generalized Hamming wt. enumerators/coset wt. distribs. 129077
event error control codes, appls. 117946
(F,K,l) opt. orthogonal codes, constr. from block design 83829
fading channels, single-carrier freq. domain equalization and space-time block-coding 95809
FH-PRN with adaptive retransm. backoff, perform. 131075
FIR MIMO DFE for space-time block-coded transm. over multipath fading channels 84878
freq.-selective fading channels, space-time block-coded multiple access 85719
Gallager bounding tech. for turbo-like codes over fading channels 117982
generalized array codes for wireless image commun. in fading presence 129797
Gilbert-Elliott channel with interleaving/retransmission, delay anal. of block coded transm. 94271
H.263 appl. of variable to fixed entropy coders 117970
h-Chase decoding, testing conditions eval. method 129209
hierarchical disparity estim. algm. for stereoscopic video coding 84371
high order differential attack and trace attack on block ciphers 94363
high-order spectral-null codes, perform. metric 129205
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image compression, fuzzy-ART VQ and 2D runlength encoding 73352
image VQ with degrad. control mechanism 129720
image watermarking, coding techs. for data hiding and capacity limit 95047
interleaved fading channel block codes, decoding error probab. bounds 117929
iter. receiver algm. for space-time encoded sigs. 106134
JPEG2000, embedded block coding 95112
JPEG 2000, regions of interest encoding and reconstruction 118562
JPEG-2000, EBCOT, embedded block coding for optimized truncation 95225
lin. block code, coord. ordering algms. for min. trellis complexity reduction 106097
lin. block codes, unified BER approx. 129007
lin. block codes, wt. location vectors 129075
lin. UEP codes, sym.-by-sym. MAP decoding 72937
list Viterbi algms. for continuous transm. 72897
low dens. parity check codes for coded modulation scheme 129031
low power electronics, memory bus encoding, power-aware alg. coding techs. 79878
low-dens. parity-check convolutional codes, iter. decoding perform. anal. 129154
M-ary runlength-constrained channels, optimal block codes 83926
mag. recording channels, low-dens. parity-check codes appl. 72884
MAP decoding algm. for lin. block codes using BCJR and recursive techs. 129022
MAP sym. decoding in channels with error bursts 83914
MDS convolutional codes constr. 83919
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
MIMO FIR channels, freq. domain space time coding 106139
MIMO systs. with space-time block coding, optimal antenna selection 108593
min. delay decoder design 72928
mobile radio transmit antenna diversity systs., turbo proc. 117993
motion estim. with opt. flow-based adaptive search region 84390
MPEG-4 coding, joint optim. of compression/restoration 118502
MPEG-4 coding perform. optim., post-proc. role 106858
multicarrier transm. peak power reduction, modified simple block code 94325
multiple transmit antenna differential encoding/decoding schemes 119866
multiple-antenna transm., optimum coded diversity with scalar codes 83927
multiuser DFE of block-spread multirate transms. for QoS wireless networking 84862
nearly optimum generalized multilevel block truncation coding algm. with fast nonexhaustive search 106925
non-orthogonal space-time block codes, max. sym. diversity 129157
nonbinary block codes, Chase-2/GMD decoding combination 72776
nonlin. Boolean fns. with cryptographic props. 106323
OFDM, generalized, multipath presence, transmit antenna space-time block coding 83902
orthogonal space-time block codes, fading channel, perform. estim. *(Chinese)* 106149
orthogonal space-time block codes decoding using squaring method 129017
orthogonal space-time block codes improvement using quantized feedback inform. 129170
orthogonal space-time block coding utilizing quantized feedback inform. 72859
packing, group codes, Radon transforms and integral geom. 94279
parallel concatenated block codes, iter. decoding, F24 coset MSP algm. 106079
permutation trellis codes constr. 129217
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
product block codes, LMSE criterion based iter. decoding 129113
progressive partial norm matching motion-estim. algm. 95135
PSK full diversity space-time codes 129128
quasi-orthogonal space-time block codes with partial diversity 83854
Rayleigh fading channel, compressed image commun., trellis decoding of blo codes 106093
Rayleigh fading channel, GAC-based trellis decoding of block codes 94275
Rayleigh fading channel, multilevel generalized array coding 83890
REACT, rapid enhanced-security asymmetric cryptosystem transform 12934
reliab.-based decoding algms., Rayleigh fading channel, coherent detect., er perform. 129033
reliable commun., continuous error detect. 119111
RS codes, soft decision decoding using extended erasure magnitude mat 106090
serial concatenated TCM with rate-1 inner code 72817
serially concatenated code charact. matching for iter. decoding 117989
serially concatenated space-time coding 106138
SFH high capacity high data rate networks 83856
space-time block codes, max. SNR approach 74521
space-time block codes for four Tx antennas 72861
space-time block codes with partial channel state feedback, perform. anal. 8394
space-time block-coded OFDM for unknown freq.-selective fading channe 129012
space-time coding using generalized delay diversity code 106021
space-time coding with max. diversity gains over freq.-selective fading channe 129058
space-time group codes design 106137
space-time proc. with channel knowledge at transmitter 130037
still image compression, JPEG 2000, lifting based DWT, embedded block co ing, optimized truncation 129708
systematic binary alg. block codes, iter. decoding 72826
tailbiting trellis codes, block and convolutional codes *(English)* 72853
tailbiting trellises ML decoding 129222
TCM anal. and design with transmit diversity for wireless commun. 83826
third generation wireless systs., open loop transmit diversity schemes comparis 85750
time-reversal space-time block coding and transmit delay diversity 108911
time-selective fading channels, double differential space-time block codin 119878
transmit diversity for arrays with correl. Rayleigh fading 108909
transmit diversity techs., matched filter bound 131291
turbo block codes using modified Kaneko's algm. 106084
turbo code, reduced search trellis decoding, perform. eval. 94278
turbo codes, trellis complexity anal., interleaver props./appls. 72898
turbo codes and product-type codes meeting Gilbert-Varshamov bound *(English* 72837
turbo codes for satellite and wireless ATM 72827
turbo codes for space-time systs. 72864
turbo decoder design, perform.-complexity tradeoffs, VLSI 106106
turbo decoder implement. 117992
turbo product codes decoding, fast Chase algm. appl. 129016
UMTS downlink capacity with space-time block coding, realistic channel mode considerations 85827
unrestricted block codes, dist. distrib. bounding 129107
variable redundancy coding for mobile channels 129057
vertices sets identifying codes in Hamming spaces 117978
vision model based perceptual coding of digital images 84494
W-CDMA systs., appl. of transmit diversity 108779
wavelet image compression, simple and efficient algm. 95287
wavelet packet modulation, transm. method in pulse-wise noise *(Japanese* 106054
WCDMA, optimum demodulator for STTD 108678
wireless ad hoc network, space-time block coding 108962
wireless networks, integrated services with space-time block-coded transms 108612
woven codes with outer warp, vars./design/dist. props. 72874
wt. distribs. of coset leaders of some Reed-Muller codes and BCH codes 72801

block polymers *see polymer blends*

blood
3D brain vessel visualization on immersive projection syst. 87569
acoustic streaming, blood in cylindrical models, finite element simul. 110738
artery wall, black blood MRI, semiautomatic tech. 87675
automatic class. of cells using morph. shape in peripheral blood images 98119
biomedical optics/photonics trends, conf., Miami Beach, FL, USA (Apr. 2000) 100430
BOLD/perfusion NMR, approaches to brain fn. studies 87653
brain, O_2 saturation from time-resolved diffuse reflectance meas. 87556
breast cancer, dyn. contrast-enhanced Gd-DTPA MRI, arterial input fn. 87641
breast enlargement, unilateral, as complication of subclavian vein catheterization for haemodialysis 76519
cardiology, diagnostic ultrasound, nonlin. native propag. 76347
cell image anal. for abnormalities 132509
cerebral haemorrhage, interdisciplinary mgt. using telemedicine, case report from Nepal 133157
cerebral misery perfusion, MRI, spin echo T_2 BOLD 76424
chromosomal aberrations, peripheral lymphocytes, Swedish train engine drivers 98743
diabetic patients, glycaemic control, biosensors appl. 132003
ELF mag. field effects on haematological/biochem. params. 98752
emboli detect./discrim., gas bubbles nonlin. characts. 98286
erythrocyte aggregation/disaggregation kinetics in blood flow syst., opt. investig. 122037
erythrocyte shapes, holographic interf. microscope exam. 122061
fMRI, BOLD sig. changes, extravascular contrib., num. anal. 132769
fMRI, motor areas detectability, BOLD contrast, 3 T magnet 110886
fMRI, quantitat. differentiation between BOLD models 122103
fMRI/VEP expts. combination, neural activity/BOLD response coupling 132686
focal blood brain barrier opening, MRI guided focused US 111065
functional MRI, silent BOLD imaging, visual/auditory simul. 132656
gas anal. micromachined sens. module, design optim. 86691
glucose conc. noninvasive monitoring, OCT 98374
haematoma model, acoustic streaming, colour Doppler detect. 132620
haemoglobin conc., oxy-/deoxy-/total-, opt. meas. precision 83073
hematocrit estim. by dual-gate power Doppler 110737
high-spatial-resoln. blood tomographic vel. mapping by real time colour Doppler OCT 76395
implantable video telemetry for biocompatibility studies 86423
infectious disease screening for field med. emergencies 76381
left ventricular ejection fraction determ., gated blood-pool tomography 98579
liver repair/haemorrhage control, liq. albumin laser soldering 87824
LV, ECG-gated SPECT, ejection fraction/vol. estim. 132899

continued
mphocytes, cancer detect., fractal dimens. anal., electron microscope images 32522
acrophages, phagocytic activity, microwave/ELF mag. field effects 98751
alarial blood slide image, using granulometries in proc. 110535
crocontroller-based semi-automatic coagulator 132499
yocardial ischemia venous lactate/glucose monitoring, ultrafiltration catheter 7347
yocardium PET, FDG uptake, blood glucose effect 122247
w-borns, artificially ventilated, blood gases values prognosis, neural based nethods 133003
on-homothetic granulometric mixing theory for blood cell counting 129886
ot. diagnostics/sens., glucose/cholesterol monitoring, conf., San Jose, CA, USA Jan. 2001) 113266
ercutaneous device, implantable amperometric glucose sens. 86676
eripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746
eripheral blood lymphocytes, micronuclei, angiography, excretory urography 76560
eripheral blood lymphocytes, radiotherapy, chromosome aberration anal. 76744
ET, estrogen receptors, [^{18}F]fluoroestradiol radiation dosimetry 98758
hoswich detector for continuous blood-sampling syst. 132938
hotoplethysmographic total/pulsatile tissue blood vol. changes meas., sympathetic blockade 87527
orcine blood, Doppler power var. under steady/pulsatile flow 132619
erum, zero vs. geomag. fields, Zn/Cu effects 98748
ugar level, noninvasive monitoring by mm-wave transm. coeff. meas. *(Japanese)* 98382
ugar level noninvasive meas., MM wave appls. 87563
elemedical consultation, standardization on basis of multimedia case hist. 111301
hrombolysis, ultrasound-enhanced therapy 98681
issue blood flux monitoring by time-space cross-correl. anal. 87515
enous blood, human, low-intens. He-Ne laser interact., transm. spectrum 93948
enous blood T_2, tissue O_2 extraction ratios meas. 132737
isual obj. constr., shape discrim., fMRI 76469
Dy-bearing red cells, MRI transverse relax. agents 87628
He microbubbles, encapsulated laser-polarized, perfusion imaging 76422
NH_3-related modulation, retinal oscillatory pot., factor struct. 76252
O_2 uptake, muscle microcirculation, MRI, transverse relax. 76452
^{32}P-orthophosphate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724
Rh miniaturized thin film sens. for clinical blood CO_2 gas anal. 120955
^{99m}Tc-RP128, rheumatoid arthritis inflammation imaging, dosimetry 76723
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964
^{90}Y radioimmunotherapy, monoclonal antibody, biodistribution, dosimetry 98757
^{90}Y-citrate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724

od flow measurement
2D cardiovascular vel. maps, visualisation with Hilbert transform 87659
3D TOF MRI angiography, laminar flow model 87658
adaptive second-order accurate particle image velocimetry tech. 132218
antenatal fetal risk assess. by US, neural nets 110823
aortic coarctation, post-operative eval., Doppler echocardiography limitations 110684
aortic haemodynamics, esophageal probe/multigate Doppler-proc. syst. 110731
aortic wave vel., rapid meas., in vivo eval. 98434
arterial flow and wall props., peripheral, real-time, derived by pulse waveform anal. and B-mode US imaging 110824
arterial wall vibr. & blood flow simult. meas., US beam steering 110745
B-mode blood flow imaging 110729
brain fMRI & neurochemistry spectrosc., review 110896
brain haemodyn. response, BOLD & perfusion based event-related fMRI 87571
brain maps, perfusion MRI, dyn. arterial spin labeling 87640
breast tumour contrast-enhanced MRI, arterial input fn., T_2* change 87657
cardiac fn. measures, impedance cardiography sig. fidelity requirements 121877
cardiac output, noninvasive determ. in small circulatory systs., limitations *(German)* 98334
cardiac perfusion ^{201}Tl SPECT, static/dyn. data comparison 111029
cardiovascular syst. blood vel. estim., pre- & post-proc. filters 110743
cerebral blood flow, 2-chloroadenosine, spin labeled MRI 87629
cerebral blood flow, heterog. tissues, computationally efficient PET algm. 98576
cerebral blood flow, SPECT assess., stat. parametric mapping 122253
cerebral blood flow estim., single-coil arterial spin-tagging MRI 132685
cerebral blood flow MRI, arterial input fn., fuzzy clustering 87654
cerebral blood flow vel./background EEG activity, cross-correl. 110491
cerebral blood flow/mRNA sigs., simultaneous meas., correl. anal. 122166
cerebral blood flow/vol. meas. using double-echo FAIR 87620
cerebral perfusion meas., dyn. CT *(Chinese)* 122151
cerebral quantitat. CT perfusion imaging, reproducibility, stroke appl. 122119
cerebrovascular reactivity, MRI mapping, end-tidal PCO_2 87638
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
cochlear blood flow meas., catheter mounted Doppler US transducers 110693
coronarographic densitometric meas., X-ray scatt. & veiling glare 76516
coronary blood flow reserve meas., split dose ^{201}Tl rest/stress imaging 132846
coronary flow relative distrib., model & digital densitometry 87746
correl.-based blood-flow vel. estim., intravascular ultrasound array catheter 110728
diabetic neuropathy, autonomic nervous syst. fn., blood flow variability anal. *(Japanese)* 132630
Doppler angle estim., autoregressive spectrum model 110739
Doppler OCT, fluid flow vel. imaging 110839
Doppler US blood flow sigs., nonlin. characts. anal. *(Chinese)* 121994
Doppler US sig., time-freq. anal. 98292
dorsal aortic flow vel. in chick embryos of stage 16 to 28 110794
echocontrast agents, blood flow assess. by US-induced destruction 76376
endoscopic ultrasound, echo-enhancing agents use 122022
exercise induced pulmonary arterial hypertension detect., Doppler echocardiography 132595
finger, mag. reson. phase contrast blood vel. meas. 76457
forward-looking ring-annular US arrays, modified weighting method 122029
FPA Doppler imaging with per-pixel CW-Doppler receiver array 110736
functional brain imaging, automated PET atten. correction model 98580
haemodialysis access grafts & fistulae, MRI angiography 76439
hepatitis C, glucagon injection, portal blood flow vel., sonography 98267
heterodyning demodulation tech. for spatial quadrature 110733
high-spatial-resoln. blood tomographic vel. mapping by real time colour Doppler OCT 76395

blood flow measurement continued
hip arthroplasty, postoperative thrombosis risk, lower extremity haemodynamics eval. *(German)* 98335
intra-arterial blood flow meas. by self-mixing feedback LD 132626
intracardiac press. grad. mapping, Euler eqn., colour echocardiograms 98264
ischaemia, regional cerebral blood flow levels, PET estim. 111003
kidney kidney malignant tumor, color Doppler flow imaging diagnosis *(Chinese)* 76360
left ventricular diastolic fn., coronary artery disease, left atrial M-mode echocardiography *(Chinese)* 76359
left ventricular early diastolic blood flow, load change and ischemia effects *(Chinese)* 76355
lin.-array Doppler syst., steady flow, max. vel. estim. error sources 98266
microcirculation HF flow imaging, syst. param. & tissue prop. effect 110747
microvasculature blood flow imaging, real-time HF US syst. optim. 110723
mitral regurgitation, 3D color Doppler reconstruction 76345
moving scatterer differentiation using trapezoid filter/pulse echo ultrasound 110732
MR flow imaging, mapping vel. vector onto spin vector 132773
MRI meas., fast vel. encoded cine method, breath holding effect 122115
myocardial blood flow, 1-^{11}C-acetate PET 76565
myocardial blood flow, dyn. PET, factor/cluster anal. appl. 132909
myocardial blood flow, regional differences assess., T_2-weighted 3D BOLD imaging 132697
myocardial imaging, strain values calc. from strain rate curves 110699
myocardial perfusion, US contrast agent destruction & imaging sync. 122010
neurovascular coupling, cerebral autoregulation, control syst., Doppler US 76341
nondestructive subharmonic imaging with US contrast agents 122012
obesity, coronary flow reserve/abdominal fat, ultrasonographic assess. 132614
opt. meas., conf., Amsterdam, Netherlands (Jul.2000) 78375
perfusion quantif., Levovist infusion & power Doppler image pairs 98265
perimembranous ventricular septal defects, shunt quantification, proximal isovel. surface area 98270
periodic oscills. buried in white/coloured noise, ident. 76216
phase contrast angiography, haemodynamic eval. with TURBO BRISK 76473
phased-array intracardiac echocardiography guided RF ablation 87503
physiological flow rate wall-less stenosis phantoms, ultrasound 76346
prostate, normal/decreased blood flow, contrast-enhanced power Doppler imaging 110793
pulmonary regional perfusion eval., ultrafast MRI 98442
pulsatile axial flow vel. waveforms in curved elastic tubes 98320
recursive ultrasound imaging/spatially encoded sigs., vel. estim. 110730
regional cerebral blood flow, upright posture, orthostatic PET 110988
regional myocardial blood flow, dyn. $H_2{}^{15}O$ PET images 110990
renal cortical blood flow, ^{15}O water dyn. PET, factor anal. 132911
rigid simulated collapsed tube, steady turbulent flow meas. 110830
simul., US resoln. test obj., thin film phantom 110744
skin blood perfusion, PM effects, laser Doppler flowmetry/imaging 133082
small vessel blood flow imaging, HF US, time & freq. domain anal. 110741
SPECT, cerebral blood flow quantification, atten./scatt. correction impact 122189
stenoses morph. eval., power Doppler US, flow phantom 121996
stochastic modeling for mag. reson. quantification of myocardial blood flow 76476
thermodilution, cardiac output meas., Levenberg-Marquardt estim. 76225
time-normalised wave intens. haemodyn. index, real-time meas. 110740
tissue blood flux monitoring by time-space cross-correl. anal. 87515
tissue microcirculation imaging, phase resolved OCT/ODT syst. 98379
tomographic reconstruction of homog. objs. using multi-step ART 98318
transcranial Doppler ultrasonography, functional, test-retest reliab. 87487
transcranial Doppler US, 1 MHz transducer eval., embolic sig. detect. 98285
tumour blood flow, quantified power Doppler US, microscopic quantification 87507
turbulence, pulsed-wave Doppler US, time-freq. representation 87489
US colour flow diagnostic syst., gen. purpose, digital beamforming *(Japanese)* 76368
US flow vel. sig. proc. unit, flow vel. meas. *(Chinese)* 98272
vector Doppler syst., low cost, utilizing diffr.-grating transducers 110734
vector vel. estim., pulsed ultrasound field 98308
vel. estim. using speckle decorrelation 98325
vel. spectrum, mag. reson. tagging 132669
vel. vectors estim., focused US & matched filtering 110742
vessel cross sect. determ. for flow rate quantification 132729
$H_2{}^{15}O$ PET, regional cerebral blood flow, vascular radioactivity 132898
^{82}Rb, PET, myocardial perfusion, wavelet-based noise-reduction 76569

blood platelets *see blood*

blood pressure measurement
anesthetic states, auditory evoked pot., ANN 76235
arterial flow and wall props., peripheral, real-time, derived by pulse waveform anal. and B-mode US imaging 110824
arterial unloaded situation modelling, oscillometric blood press. waveform meas. 121899
autonomic nervous syst.-controlled cardiac pacing 122349
baroreflex, continuous determ., 4 sig. proc. techs. 110494
cardiovascular relative press., time-resolved 3D phase contrast MRI 87622
cardiovascular variability sigs., freq. shift estim. 110492
dilated cardiomyopathy, finger arterial blood press. waveform anal. 87328
exercise induced pulmonary arterial hypertension detect., Doppler echocardiography 132595
fiber optic Fabry-Perot resonator, invasive press. meas. 131962
finger arterioles viscoelasticity, vol.-press. plots, diode laser obs. 122055
finger artery blood press. meas., vol.-compensation method *(Japanese)* 87321
finger blood press., changes induced by arterial occlusive thigh cuff 87325
finger blood press. beat-to-beat meas., vasoconstriction effect 87327
head, human, hemodynamics, 3D vol. tomographic localization 132644
home ECG/blood press. telemonitoring centre develop. 88013
implanted devices for cardiac care, mobile integrat., future advances 76223
intracardiac press. grad. mapping, Euler eqn., colour echocardiograms 98264
multielement tonometry sens.-based noninvasive PWV meas. syst. accuracy *(Japanese)* 132506
noninvasive press. meas., microbubble contrast agent & wavelet transform 122009
OxiCarbo sens., noninvasive arterial O_2 saturation & P_{CO2} meas. 87547
paced respiration, heart rate rel. to pulse transit time 121920
periodic oscills. buried in white/coloured noise, ident. 76216
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. proc. *(Chinese)* 122034

blood pressure measurement continued
RV fn., stable/unstable VT, haemodynamic monitoring, future defibrillators 98124
telemedicine syst., wireless, multi-purpose, effect of wavelet compression on data transm. 133163
time-normalised wave intens. haemodyn. index, real-time meas. 110740
trends monitoring in cardiac surgery/postoperative care 98593

blood vessels
3D abdominal sonography, liver tumours appl. 121992
3D contrast-enhanced MR angiography, nonrepetitive phase-encoding orders, quantitat. eval. 132694
3D imaging using spherical US wave generated by laser-induced breakdown 98291
3D mag. reson. angiography acquisition, embedded fluoroscopy 132765
3D med. gray images, line fig. extraction algms. *(Japanese)* 98141
3D med. image proc., math. morph. *(Japanese)* 98421
3D TOF MRI angiography, laminar flow model 87658
3D tubular tree structs., accurate detect., MR angiography 98471
3D-micro-mag. reson. angiography, polyamidoamine dendrimer core 132668
abdominal aortic aneurysm, US image boundary recogn. validation 110676
abdominal aortic aneurysms, 3D image anal. 110947
abdominal breathhold contrast enhanced mag. reson. angiography, scantiming 87594
abdominal image quality, real-time correction of wavefront arrival time errors 110766
anatomical struct., robust 3D image segmentation with level sets 87310
aortic coarctation, post-operative eval., Doppler echocardiography limitations 110684
aortic dissection-simulating artifact, charactn. in computed tomography 98519
aortic haemodynamics, esophageal probe/multigate Doppler-proc. syst. 110731
aortic wave vel., rapid meas., in vivo eval. 98434
aortic Windkessel fn., age, gender, cardiovascular risk factors effects 132615
arterial compliance changes, photoplethysmography 122067
arterial flow and wall props., peripheral, real-time, derived by pulse waveform anal. and B-mode US imaging 110824
arterial unloaded situation modelling, oscillometric blood press. waveform meas. 121899
arterial wall cross-sect. elasticity, intravascular ultrasonography 122002
arterial wall layers, noninvasive high-freq. ultrasonography validation 98281
arterial wall regional elasticity, thickness change meas. during entire heartbeat 110821
arterial wall thickness meas., US beam focal posn. optimisation 98300
arterial wall vel. and distension, US Doppler syst. 98323
arterial wall vibr. & blood flow simult. meas., US beam steering 110745
arterial/venous trees, highly automated segmentation from 3D MR angiography 110901
arteries, elastic modulus/motion estim. using intravascular US *(Chinese)* 122033
arteries, human, 3D forward-viewing intravascular US imaging 110797
arteriovenous malformation extraction with factor anal. 98538
arteriovenous malformations, 3D reconstruction, radiosurgery, DSA 98558
arteriovenous malformations, vol. estim. from biplane DSA images, computer program 87711
artery dimens. params. assess., high frame rate 2-D B-mode 98284
artery wall, black blood MRI, semiautomatic tech. 87675
artery-vein separation via MRA, image proc. approach 110856
atherosclerotic blood vessel tracking/lumen segmentation, MRI 98411
atherosclerotic vulnerable plaques diagnosis, IR/NIR fibre optic imaging 110826
atrial fibrillation, internal low energy cardioversion with single lead syst. 122320
battlefield biomedical imaging, vascular struct. anal. 76338
black blood MRI quality and vessel wall segmentation 132738
bolus-chase 3D MR DSA, k-space 98403
brachial artery reactivity meas., automated edge-detect. tech. 132622
brain fMRI & neurochemistry spectrosc., review 110896
breast enlargement, unilateral, as complication of subclavian vein catheterization for haemodialysis 76519
breast tumour contrast-enhanced MRI, arterial input fn., T_2* change 87657
cardiac fluid dyn., diastolic fn. modelling 98336
cardiac perfusion ^{201}Tl SPECT, static/dyn. data comparison 111029
carotid arteries, 3-D power Doppler US/MR angiographic images registration 110795
carotid arteries, 3D US imaging, EM tracking device 110796
carotid artery contrast-enhanced MRI angiography, array coil 98469
carotid artery plaques, US images, objective grading method 122014
carotid artery segmentation in US images, contour PDF 76371
carotid US images anal., EcoStudio computer tool 98275
carotid vessel wall area meas., black blood MRI, atherosclerosis 132721
catheter 3D orient. & posn. determ., single-plane X-ray images 87698
cell images, anal./classif., directional fractal dimens. features 87551
cerebral blood flow estim., single-coil arterial spin-tagging MRI 132685
cerebral blood flow MRI, arterial input fn., fuzzy clustering 87654
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform detect. using compensatory fuzzy neural nets 110801
cerebral lesions, multichannel derived median nerve SEP vs. EEG 110631
cerebral microemboli monitoring, unilateral/bilateral US, cardiac surgery 98282
cerebral perfusion MRI, arterial input fn., artifacts correction 132671
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
collagen-containing tissues, double quantum filtered spectrosc. MRI 76465
contact lens trauma assess., corneal images anal. 87552
contrast enhanced MR angiography 76485
coronarographic densitometric meas., X-ray scatt. & veiling glare 76516
coronary arteries, ultrasound charactn., temp. depend. wave speed 110810
coronary artery disease and post-heart transplantation patients, value of intravascular US imaging 98343
coronary artery disease diagnosis, ECG exercise test, RBF network 87422
coronary artery reporting syst., computer-assisted diagnosis *(Japanese)* 98142
coronary atherosclerotic plaque charactn., IVUS elastography/Raman spectrosc. 110808
coronary flow relative distrib., model & digital densitometry 87746
coronary mag. reson. angiography, motion compensation strategies 76450
coronary vasculature, 4D quantif., angiography & US data fusion 98535
correl.-based blood-flow vel. estim., intravascular ultrasound array catheter 110728
cross sect. determ. for flow rate quantification 132729
cryogel elasticity props. for calib. IVUS elasticity images 110819
curvature-based internal struct. anal. of pulmonary nodules using thoracic 3D CT images 132836
deep venous thrombosis, ultrasound elasticity imaging 110812
deformable model with single point init. for segmentation, quantification/visualization in 3D MRA 87590

blood vessels continued
digital subtraction peripheral angiography using image stacking, init. clinical results 98525
dilated cardiomyopathy, finger arterial blood press. waveform anal. 87328
DSA, patient motion artifacts reduction 87764
echographic aiming, increased effectiveness of laser therapy 132597
endoscopy, virtual, WWW-based, for CT anal. of bronchial airways 110946
endothelialized vascular graft, pulsatile shear stress, radiolabeling procedure 76659
endovascular brachytherapy, QA, equipt., personnel and education 98670
endovascular interventions, X-ray fluoroscopy, guide-wire tracking 87710
endurance athletes, iliac arteries kinking detect., MR angiography 122075
fetoplacental vasculature, 3D power Doppler US imaging 132611
finger arterioles viscoelasticity, vol.-press. plots, diode laser obs. 122055
flux maximizing geometric flows, geometric act. contour models 110866
fMRI, BOLD sig. changes, extravascular contrib., num. anal. 132769
fMRI, quantitat. differentiation between BOLD models 122103
fundus image features extraction, diabetic retinopathy appl. 98381
Gamma Knife radiosurgery optim. 76647
gluteal aneurysm embolization, giant, colour Doppler sonography in follow-up 76364
haemodialysis access grafts & fistulae, MRI angiography 76439
haemorrhage, subdural and intraparenchymal intracranial, diagnosis using microwave-based detector 76416
Hall effect imaging feasibility in humans 110762
head and neck cancer, 3D spiral computed tomography imaging for staging and surgical planning 98485
hemodialysis grafts, venous anastomosis, external-beam photon irrad. 98673
iliac arteries, contrast-enhanced MR angiography optimisation 132746
image segmentation by adaptive geodesic act. contours 84108
imaging syst., Integris Allura 76529
internal carotid artery, extracranial, spontaneous bilateral dissection with hypoglossal nerve palsy 110880
intimal hyperplasia develop. study, Doppler US appl. 76372
intracranial arteriovenous malformation visualisation with physiological inform 110960
intratumoral vasculature, 3D MR angiography, macromol. contrast agent 132692
intravascular brachytherapy sources, Monte Carlo calc. 98800
intravascular devices localisation with paramag. markers in MRI 132711
intravascular echography, ultrasound contrast agent, parametric mapping 110811
intravascular neurosurgery, telesurgery syst. 87783
intravascular ultrasonography, flexible acoustic transm. line develop. 110694
intravascular ultrasonography, imaging syst. using pulse compression tech 98295
intravascular ultrasound, miniaturised circ. array mfg. 110695
intravascular ultrasound elastography, high resoln. 110806
intravascular US palpation, automated approach 110809
kidney kidney malignant tumor, color Doppler flow imaging diagnosis *(Chinese)* 76360
left ventricular diastolic fn., coronary artery disease, left atrial M-mode echocardiography *(Chinese)* 76359
liver parenchyma, dyn. contrast-enhanced 3D MR imaging 87677
liver surgery, impact of combined pre-operative 3D CT and intra-operative real-time 3D ultrasonography 87788
lung vascular sizes, spatial distrib., 3D greyscale morph. 87702
mag. reson. angiography at 0.3 T using MS-325 98396
mag. reson. angiography image anal. using skeletonization and dist. transform 76495
mag. reson. coronary angiography, motion correction 87690
malignant tumors, 2D/3D images, vector convergence index filter *(Japanese)* 98140
microangiopathy, capillary image segmentation exploiting weak shape constraints 87315
microcirculation HF flow imaging, syst. param. & tissue prop. effect 110747
microsensors, surgery, min. invasive, blood vessels, spatially confined tissue structs. 133010
microsensors, vascular flow meas. and fracture repair 132018
microsurgery, tissue props. and pulse meas., force feedback-based microinstrument 98595
microvascular permeab., rat cerebral pia mater, image computer anal. *(Chinese)* 110827
microvasculature blood flow imaging, real-time HF US syst. optim. 110723
min. invasive robotic coronary artery bypass, 3-D visualization 76599
MR guided endovascular radiological interventions 87687
MR projection angiography, contrast-enhanced, background suppression magnetisation prep. 98432
MR-guided vascular intervention on high-field syst. 122072
MRI, contrast agent research develop., conf., Attard, Malta (May 2000) 89500
MRI, interleaved EPI, oblique flow artifacts, centric reordering 76447
MRI angiography, cerebral blood vessel extraction, region growing 76492
myocardial ischemia venous lactate/glucose monitoring, ultrafiltration catheter 87347
nailfold capillaries, taxonomy based on morph. 76382
neovascular maculopathy, PDT/transpupillary thermotherapy *(Japanese)* 111108
nephron sparing surgery, 3D vol. rendering using videotape display 122121
neurovascular coupling, cerebral autoregulation, control syst., Doppler US 76341
nondestructive subharmonic imaging with US contrast agents 122012
nonstenotic internal carotid arteries, Doppler US vel. meas. 110802
OxiCarbo sens., noninvasive arterial O_2 saturation & P_{CO2} meas. 87547
patterns detect. in noisy environ. 87549
perfusion quantif., Levovist infusion & power Doppler image pairs 98265
peripheral vein grafts, cross-sect. area changes, 3D US imaging 122003
permeab. map to blood pool contrast agent calc. from dyn. MRI, lesion charactn 98391
phase-contrast MRA, vascular segmentation, fusing speed and phase inform 87582
phased-array intracardiac echocardiography guided RF ablation 87503
photothermal coagulation, OCT, modelling 87830
plaque MR imaging, inform. theoretic anal. 98410
polyps, computerised detect., CT colonography, automated colonic walls segmentation 122140
portal vein, Gd-enhanced 3D MR portography with subtraction 76497
PTCA balloon catheters, computer-controlled inflation/deflation 87781
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. proc. *(Chinese)* 122034
pulmonary blood vessel rheology, gene expression correl. 91503
pulmonary nodule surrounding struct., charactn. using differential geom.-based vector fields 87707

vessels continued
ulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 98515
ulsed arterial spin labelling MRI, tagging schemes, imperfect slice profiles 98439
ulsed photothermal radiometry, blood vessel-like structs. investig. 76383
uantitat. 3D ultrasound imaging using automated image tracking 110756
uantitat. accuracy tests of MR-, CT-, and DS-angiography, photogrammetric meas. and visualization of blood vessel branching casting 98473
adiation oncology biol., conf., Fuglso, Denmark (Jun. 2001) 124217
adiosurgery, multimodality image fusion, arteriovenous malformations appl. 98654
eal time rectilinear vol. imaging, abdominal, breast, vascular appl. 110688
eal-time interactive coronary mag. reson. angiography 132682
enal arteries, high-spatial-resoln. contrast-enhanced MR angiography 87678
enal arteries, rot. DSA, transplants appl. 76550
estenosis, intravascular radiation therapy, soft X-ray source charactn. 87860
etinal images, fundus, vascular branches, geom. and morph. anal. 87521
F ablation treatment planning, blood vessel detect. 111134
ot. digital angiography syst., acute pulmonary thromboembolism 87723
ector scanning US backscatt. microscope 110772
imulated wave propag. and traceback in vascular extraction 98414
ize imaging, rat brain MRI/Monte Carlo simul. 132664
mall vessel blood flow imaging, HF US, time & freq. domain anal. 110741
piral CT angiography, pulmonary vascular tree, automated segmentation/visualisation 122142
tenoses morph. eval., power Doppler US, flow phantom 121996
tenosis, tissue vibr., in vivo US meas., case study 122015
tents in angiographic images, deformable boundary detect. 110950
subcutaneous vascular fn./maturation, vivo BOLD contrast MRI mapping 87624
superior mesenteric arteriography, spiral-shaped iatrogenic arterial dissection risk in diagnostic angiography using power injector 110951
synchrotron microangiography, angiogenic vessels visualisation, quantification, therapeutic eval. 87749
thoracic aorta four-D blood flow pattern anal. 87691
time-normalised wave intens. haemodyn. index, real-time meas. 110740
tissue Doppler imaging develop. for vascular & cardiac appls. 110709
tissue microcirculation imaging, phase resolved OCT/ODT syst. 98379
tracking in CTA/CE-MRA vol. images, adaptive min. path generation tech. 87663
transcranial Doppler US, 1 MHz transducer eval., embolic sig. detect. 98285
transmyocardial laser revascularisation/RF ablation, histologic thermal injury signatures 87823
tumor hypoxia, scanning beam confocal fluoresc. microscopy 98355
tumour angiogenesis detect./eval., IR imaging appl. 76404
ultrasound/MRI 3D registration & fusion, major vessels as fiducial markers 76339
US 3D imaging from small cylindrical aperture 110755
US contrast imaging, pulse inversion & second harmonic comparison 122007
US microbubble contrast agent imaging, act. enhancement 122006
US surgery, internal bleeding & deep tumour treatment 133016
vascular morph., quantitat. anal., 3D MR angiograms 122111
vascular pathologies strain imaging using compliant balloon catheter 110807
vascular tree extraction from MRA/power Doppler US image vols. 76491
vein, ellipt. centric 3D contrast-enhanced MR angiography 87669
vessel mimicking cryogel phantoms, axial strain imaging 110818
Vesselize syst. for anal. and visualization of mag. reson. angiography 98393
visual servoing for robot-assisted diagnostic ultrasound 98278
vol. vascular images, skeletonization 98477
vol. X-ray CT images, automatic lung segmentation, accurate quantitation 87742
wideband sub-forcing harmonic phase inversion US imaging 122005
X-ray angiography images, algms. for combining, comparison 110913
^{13}C angiography, subsecond, parahydrogen-induced polaris. MRI 98426
$H_2{}^{15}O$ PET, regional cerebral blood flow, vascular radioactivity 132898
^{192}Ir HDR brachytherapy source, polymer gel MRI dosimetry 98792
^{192}Ir, intracoronary radiation therapy, re-endothelialization, T-cell infiltration 98615
^{201}Tl-dipyridamole myocardial SPECT perfusion scintigrams, automated assess. 76567

looming mills
see also steel manufacture
high-speed milling, automated control syst. *(Russian)* 85198

lowing problem *see boundary layers*

lue brittleness *see brittleness*

oard computers *see microcomputers*

ode diagrams
see also frequency response
analog filters, introduction 107528
buck-based sinusoidal generator, sliding-mode control 78010
dyn. voltage restorer, software PLL 111872
oscillator, lin. open-loop S-params. 79611
SC DC-DC convertor, control design & closed-loop anal. 123634
ZrO_2-Y_2O_3 TBC degrad., quantitat. NDE, impedance spectrosc. 114491

oilers
see also nuclear reactor steam generators
300 MW coal-fired supercritical steam power plant efficiency improvement 123200
300 MW power unit, nonlin. dyn. boiler model 133868
550 MW Hawthorn-5 steam power plant project, USA 99551
1100 MW combined cycle power plant repowering project *(Chinese)* 77764
2000 MW lignite-burning power plant repowering project, Poland 88583
2785 MW coal-fired steam power plant FGD project, Poland 112309
animal waste-fired steam cogen. plants 112302
brown coal-fired boiler retrofitting for waste wood incineration *(German)* 99546
cassava biomass fuel for power generation 77758
cogen. steam power plant boiler water chem. monitoring syst. 88596
cogeneration operation dispatch, interactive best-compromise approach 112299
combined cycle plants modeling for grid simul. 112335
cracks automatic meas. using fibre-optic reflectometry 90600
cyclone boiler, internal tube cleaning, tetrammonium EDTA soln. 88556
drum boiler syst. identifier, fuzzy rules extraction, GA 112291
drum-type high-press. boilers, corrosive damage prevention 123181
EL-TO Zagreb cogen. plant, math. model 99536
European Community cogen. research programmes 112288
HRSG optimisation, combined cycle gas turbine power plants 88616
HRSG perform. meas., shortcut methods 99533
HRSG remaining life, cycling effects 112307
LIFAC FGD proc. perform. improvement,-modelling, China 88559
lignite fired power station furnace cleaning using water cannons 88588

boilers continued
main steam temp. control, self recurrent neural network, identifier, training algm. *(Chinese)* 77750
municipal solid waste-fired CHP plants, UK operating experience 88582
novel integrated desulphurisation for FGD, enhancements 88558
OCC™ HRSG design 112308
oil fired power plant boiler, multivariable fuzzy model predictive control 99544
oil-fired power plants repowering to natural gas fired combined cycle plants 88614
package boilers, emission levels reduction 123230
power boilers, fuel oil burners, fiberoptic monitoring syst. 120872
power plant mach., computerized online vibr. monitoring, anal., and assess. 123188
power stations, fuel oil handling systs., BHEL experience 112303
prediction of gaseous emissions using neural networks 99032
primary energy mgt. at STEAG, hard coal procurement/handling *(English)* 99460
pulverised coal-fired utility boiler, mercury distrib. charcts. *(Chinese)* 112306
pulverized coal fired boiler, IT-based combustion mgt. syst. 112304
reheat cycle steam power plants, thermodyn. anal. 99550
resist. steam generator three-phase electrode heating units *(Polish)* 124106
Romanian biomass use perspectives 112212
Russian fossil fuels CFBC, technol. substantiation 112312
Russian power security, regional aspects 111911
Russian steam power plants, coal substitution implications 123198
six-corner tangentially-fired boiler, burner region conc. field meas. *(Chinese)* 88575
solid fuels, coal, pet coke, biomass, cleaner technol. 99454
steam boiler furnace incident radiation fluxes determ. 123201
steam cogen. power unit, expt. dyn. charact. 112315
steam power generating unit, starting/control problems 123202
steam power plant boiler furnace reconstruction, requirements, tech. solns. 112313
steam power plant boiler reliab. improvement using mag. control *(Russian)* 99539
steam power plant boilers, three-staged fuel combustion anal. 112314
steam power plant capacity limitation, coal quality effect 123197
steam power plant coal combustion efficiency improvement using O_2/CO monitoring 88586
steam power plant ESP using skewed gas flow technol. 99555
steam power plant generating unit perform. discrepancies study *(Chinese)* 77755
steam power plant reliab., boiler bends/steam line tubes monitoring 88595
steam power plant start-up seqs. optimisation simulator *(English)* 123192
steam-turbine power units maneuverability improvement 112310
sub-crit. press. natural circ. boiler, feedwater down-comer feed style 77746
Sulzer Hexis SOFC technol., residential fuel cell syst. 89177
T700 steam power plant FGD retrofitting project, Czech Republic *(English)* 112301
temp. distrib. meas. using acoustic vel. *(Japanese)* 87021
thermal testing software develop. *(Chinese)* 88553
thermal waste treatment, multivariable fuzzy control, neural nets *(English)* 123195
thermodyn. pumped storage power generation, economics *(Chinese)* 88640
TP-80 gas fired boiler, starting regimes optimisation 123182
TPP load control syst. simul., energy feedback sig. *(Chinese)* 77723
Tsuruga Thermal Power Station, FGD syst. operating results *(Japanese)* 88573
turbine-boiler coord. control, rule of experts, PID-type fuzzy controller *(Chinese)* 77752
two phase flow model of power plant boiler syst. *(Chinese)* 77749

bolometers
capacitive massive bolometers, piezoelec. cryst. weak opt. absorpt. 131913
cooled IR imaging sens., Schottky barrier bolometer arrays appl. 109626
COVIR Compact Visible and IR Radiometer, Earth/climate monitoring 133279
cryogenic bolometers, dark matter detect. develop. 121435
cryogenic transit.-edge microbolometer/calorimeter 71141
CUORE detector, solar axions/dark matter search 97267
cylindrical thin-wire bolometer, light absorpt. nonuniformity 117566
diamond, built-in bolometric detector 121248
direct laser beam focal spot meas. 117334
EDELWEISS WIMP dark matter search using cryogenic Ge detector 110289
expendable IR sens., uncooled technol., producibility improvements 111551
focused laser beam, random errors of diam. meas. by thin-wire bolometers 117337
focused laser radiation, meas. profile distrib., bolometer diam. effect 117336
FPA uncooled microbolometer based cameras, UL3 ALPHA and OMEGA 75635
horn-shaped antenna array fab. using SU-8 lithog. technol., bolometer appl. 94200
hot-electron bolometer mixer, IF bandwidth, hotspot model 71180
hot-electron bolometer with normal metal-insulator-supercond. tunnel jn. 87011
hot-electron micro-bolometer, thermal charactn. 70909
IR camera, uncooled, law enforcement appls. 109710
IR detector, uncooled, study of charcts. of VO_x and $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ 120792
IR uncooled sens. technol., Australian research 109544
laser radiation pulse energy meas. using thin-wire bolometer 75535
microbolometer, 320×240, uncooled IRFPA develop., a-Si 109646
microbolometer arrays, thin film ferroelec. materials use 109540
microbolometer fab., structural stabil. and IR detect. charcts. improve. 97248
microbolometer uncooled thermal imaging sens., law enforcement appls. 109711
microbolometers, stabil. conditions, nonlin. dyn., thermal runaway 97252
micromachined uncooled IR bolometer lin. array using VO_2 thin films 75533
microwave background radiat. anisotropy, low noise cryogenic preamp. 75262
NIS submicron tunnel jn., micro-bolometer 71171
partially coherent submillimeter-wave antenna systs., dyadic anal. 105862
phonon-cooled hot electron bolometer gain/noise, hot spot mixer model 71135
polysilicon bolometer, IR FPA, membrane transfer bonding 120795
single-photon energy resolving detectors, supercond. electronics requirements 75662
SNS antenna-coupled direct sub-mm radiation detect. 75465
Sofradir IR detector products, past/future 109551
sub-picowatt precision radiometry, supercond. transit. edge sens. bolometers 71189
supercond. bolometer, AC voltage-biased, SQUID MUX 71128
supercond. transit. edge bolometer, resistive/inductive modes 71158
terahertz detector and mixer, 2DEG hot electron bolometer 102615
thermal particle detectors, neutrinoless double β decay expt., review 87222
THF ultrasensitive hot-electron microbolometers with Andreev refl. 120495
TRMM CERES thermistor bolometer sens., lunar radiance broadband meas. 122644

bolometers continued
uncooled IR microbolometer arrays for Earth rem. sens. 109552
uncooled IR sens. technol., future advances 109628
uncooled microbolometer FPA, on-chip low-noise ROIC archit. 109631
VISIR vis. imaging spectrometer & IR radiometer, coastal & land appl. 122717
Al hot electron bolometer, subMM-wave mixer 71134
Al supercond. hot electron bolometer mixer, conversion efficiency 71176
$(Ba,Sr)TiO_3$ ferroelec. bolometer on micromachined Si, uncooled IR sens. 109629
$Ba_{1-x}Sr_xTiO_3$, film, MOCVD, uncooled IR image sens., dielec. bolometer mode 86530
Bi-La-Sr-Mn-O film fabr., uncooled IR microbolometer appl. 120816
$Bi_2Sr_2CaCu_2O_y$ HTSC film bolometer response to variable duty ratio IR laser pulses 127541
GdBaCuO bolometer, SiN membrane, act. electrothermal feedback 71140
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial thin film based CMR bolometer *(Chinese)* 120807
$La_{0.67}Ca_{0.33}MnO_{3-y}$ thin-film microbridge opt. detector 120798
$La_{0.7}(Pb_{1-x}Sr_x)_{0.3}MnO_3$ films, CMR, bolometer/mag. sens. appls. 81800
Nb THz hot-electron bolometer mixer, microstrip-line-coupled, direct response 127540
Nb diffusion-cooled supercond. hot-electron bolometer mixers 71179
Nb hot electron bolometer, terahertz radiation 71129
Nb microbolometer-microstrip dipole antenna as IR detector, FDTD vs. expt. 97230
Nb quasi opt. hot-electron bolometer mixers, 2.5 THz radiation detect., heterodyne response 71118
Nb supercond. hot electron bolometer mixer, microstrip line coupling 71130
NbN hot electron bolometer mixer, THz freq. waveguide receiver 71174
NbN hot electron bolometer, terahertz radiation 71129
NbN hot electron bolometric mixer, terahertz receiver 71177
NbN hot electron bolometric mixers, IF bandwidth/noise temp. meas. 71125
NbN phonon-cooled hot electron bolometers, 2D hot-spot mixer model 71091
NbN supercond. HEB, THz low-noise receiver 104592
Pb-Au thin film bolometers, second sound meas. near λ-point appl. 132209
Pb_2ScTaO_6 sputtered thin films for dielec. bolometer mode thermal detector arrays 87014
Si JFET, low temp. readout electronics, bolometric detector 70203
a-Si microbolometer based IR camera for unattended ground sens. 75632
SiGe uncooled microbolometer array, hybrid LWIR sens., CMOS readout 120885
Si_3N_4 micromesh bolometer array for 350 μm astrophys. 131924
TeO_2 high-resoln. bolometers for rare events detect. 76082
VO_2 bolometer based IR radiation detect., double correl. sampling tech. 120695
VO_2 transit.-edge microbolometer, hysteresis model 120812
VO_x film uncooled membrane-type lin. microbolometer array 86528
VO_x microbolometer, uncooled focal plane sens. 109632
VO_2-based uncooled microbolometer lin. array, design/fab. 75538
VO_2-based uncooled thin film bolometer *(Chinese)* 75528
YBaCuO IR bolometer array, cryogenic CMOS readout cct. 71169
YBaCuO mid-IR bolometer array, inter-pixel crosstalk 71160
YBaCuO semicond. self-supporting uncooled IR microbolometers, low-thermal mass 120901
$YBa_2Cu_3O_{7-\delta}$ semicond. film, elec. characts., bolometer appl. *(Chinese)* 131903
$YBa_2Cu_3O_{7-\delta}$ slot antenna coupled hot-electron bolometers, mm-wave radiation detector 127535
$YBa_2Cu_3O_{7-x}$ hot-electron bolometer mixers, microwave radiation response dyn. 116541
$YBa_2Cu_3O_{7-x}$ thin film, hot electron bolometer 71159
$YBa_2Cu_3O_{7-\delta}$-$SrTiO_3$ epitaxial films, bolometer appls., low 1/f noise 71145
high-T_c supercond. devices, photoinduced phenom., appls. 92902

Boltzmann equation
see also transport processes
convergence of splitting scheme applied to Ruijgrok-Wu model of Boltzmann eqn. 114010
DQW, nonequilibrium electrons, Boltzmann eqn. approach 126151
high resoln. electron beam lithog. simul. 92190
laterally moving microstruct., gas-rarefaction effects, compact damping models 81577
MESFET, opt. control, energy-depend. phys. model 92406
microwave and MM-wave device model, Boltzmann transport eqn. 102605
microwave FET fingers, full wave anal., semicond. phys. models 80310
min. residual method applied to transport eqn. 68044
plasma etch reactor, vol. av. models, sensitivity 126616
quantum wires, elec. cond., correl. roughness effects 69697
RTD simul., quantum hydrodynamic eqns. with quantum corrected pot. 70022
semiconds., hot electrons, high-field transport 91574
single/coupled double quantum wires, multisublevel magnetoquantum cond. 126149
six moments of Boltzmann's transport eqn. for device simul. 103743
therapeutic beam dose calcs., electron loss model with energy straggling 111205
turbid media imaging, photon-transport forward model 122040
ArF discharge-pumped excimer laser kinetic modelling 82499
a-C:H, diamond-like C layers depos. by PACVD, 1D fluid model 90377
Cu-wedge spin valves, temp. depend. specular scatt. enhancement 81843
p-GaAs base of HBT, nonthermal electrons, femtosecond energy relax. 81216
GaN TEDs, 200-300 GHz microwave power generation, Monte Carlo tech. 115820
GaN, degenerate QW, polar-opt. phonon-limited transport 91816
Ge QD superlattices growth, thermoelec. appls. 114303
Nd:YAG LD-pumped microchip laser instabil. 117136
Si, doped, nonlin. Boltzmann eqn. reduction 80670
Si field emitters, carrier transport, num. simul. *(Chinese)* 80571
Si polycryst. films, temp.-depend. thermal cond. 80632
poly-Si:B(P) LPCVD layers, thermal cond. study 115293
SiGe HBT, ultrathin base, transport model *(Chinese)* 81234

Boltzmann machines
N-best proper nouns pronunciation, automatic generation 84033

Boltzmann-Vlasov equation *see Vlasov equation*

bond angles
ultrathin gate oxides, soft breakdown, stat. anal. 126221
a-SiO_2 surf., hydrophilic wafer bonding modeling 81056

bond distance *see bond lengths*

bond energy *see ionisation potential*

bond graphs
datapath routing based on decongestion metric 101655

bond lengths
$Ca_2(Mn_{1-x}Nb_x)O_4$ tetragonal K_2NiF_4-type cpd., elec. props. anal. 80773
a-GaAs, implant.-induced struct., EXAFS 80760

bond lengths continued
$In_xGa_{1-x}N$, structural/elastic props. modeling, DEFT 91678
a-InP, implant.-induced struct., EXAFS 80760

bonds (adhesive) *see adhesion*

bonds (chemical)
see also bond angles; bond lengths; dangling bonds; hydrogen bonds
ALIVH any layer interstitial via hole substr., interconnection tech. 67562
conducting polymer, electrochem. investig., polymerisation/depolymerisation/ secondary Li batts. 125112
diamond, polycryst. materials struct./props., simul., interfacial perspecti 102964
diamond films, hot filament CVD, growth rate *(English)* 124875
diamond films, low-press. flat flame growth and Raman spectra charactn. 8066
diamond polycryst. films, layered struct., ex situ spectrosc. ellipsometry 9159
diamond wafer bonding, mol. dyn. simul. 126614
diamond/sp^2-bonded carbon nanostruct., QW field electron emission 80563
DLC surface, N-doped, field emission current, scanning probe obs. 80565
low-k dielec., mater. charactn. for damascene integrat. 126463
metals, polycryst. materials struct./props., simul., interfacial perspective 10296
methyl radical form. in hot filament CVD 68279
MOS device degrad., role of holes in D isotope effect and mechanisms 9188
multiwall carbon nanotube arrays, nanojunction struct., elec. field induced 9059
organic low-k hybrid-organic-siloxane-polymer dielec., nitridation and integra issues 92071
organic SOG, $Si(OH)_{4-x}F_x$ liq.-phase deposition, optics 90482
organosilane SAMs irrad. with VUV light, photodegradation, friction forc microscopy 103503
PDSOI NMOSFETs, channel hot-carrier-induced gate oxide breakdown anal *(English)* 126804
QCM based DNA sens., immobilis. methods, genetic diagnosis 75674
self-assembling monolayer/Si(001) syst., electronic dens. modulation, gas sens appls. 97467
siloxane-based low k materials, heat/moisture resist., IC appl. 104238
sub-100 nm devices failure anals., concept anal. instrums. develop. 115998
tree propag. initiation, fatigue failure type, simulated tree channel *(Japanese* 127238
AgPd:$BaTiO_3$ electrode/Pb-based relaxor ferroceramic cofiring characts. 79446
AlAs:Na,Xe, ion implant., amorph. rate, RBS anal. 81028
AlN:H films, chem. stabil., nitrogen plasma treatment 92045
B_4C films, PLD, comp./bonding 90470
BN, cubic, growth from hexagonal graphitic BN powders 90202
BN films, sputter deposition, phase ident., multichannel ellipsometry 91629
C antireflective coating over photoresist, etch selectivity, $O_2/CHF_3/Ar$ gas chem 103308
C, nanostructured, field emission, sp^2 phase role 91540
a-C:F films, ICPCVD, struct./dielec. props. 114333
a-C:H,N films, low-temp. annealing effect, field emission 80569
C(100)2×1 surfaces, at. H irrad. etching, epitaxial growth enhancement, ab initio calcs. 81060
$C_{60}F_x$ thin films growth, STM, HREELS 114282
C_xF synthesized at room temp., charact./electrochem., C starting material effec 99894
CN_x films, N implant. synth. into diamond, bonding struct. 126302
a-CN_x films, N-rich, deposition, charactn. and appls. 90411
a-CN_x:H films, PECVD, effects of CF_4 addit. on growth 68262
a-$C_{1-x}Si_x$:H alloys prep. by high plasma dens. source 68264
CeO_2 thin films as buffer layer for ferroelec. RAM appl., etch characts. 104465
Cu phthalocyanine/InSb(111) thin films, mol. beam deposition growth, in-situ monitoring 90337
p-GaN/Pd contacts, elec./microstruct. changes, surface treatment 69716
Ge-Se-Te-Si_3N_4-CdS spin-coated chalconitride thin film, prep. 125061
InAs(P)(Sb) surface, nitridation, XPS anal. 103408
InGaN, $(NH_4)_2S_x$-treated, XPS surface anal. 126367
$LiMn_2O_4$ pos. electrode, cyclic capacity, total overlap pop. anal. 112769
$LiNbO_3$:$Mg^{2+}(Zn^{2+})(In^{3+})$, induced Li-site vacancies, NLO behavior 72000
$Li_{3.3}PO_{3.9}N_{0.17}$ solid electrolyte film, prep., batt. appl. *(Korean)* 114246
$MgAl_2O_4$/Al(Ag) heterophase boundary, local bonding, ab initio study 103217
$Na_{0.25}MoO_3$ anode, Li-ion batt., Li insertion, oxygen role 123766
$Nd_2Ba_{0.5}(Sr,Ca)_{0.5}ZnO_5$, microwave dielec. props., cryst. struct. 114926
Ni-dithiolene complexes, synthesis, dimerized struct. and elec. props. 124799
Pd/GaAs:H,S Schottky contact, sulfidation/thermal hydrogenation 103159
poly-Si gate oxide reliab. post annealing degrad. and suppression *(Chinese)* 126244
Si, polycryst. materials struct./props., simul., interfacial perspective 102964
Si thin films, wafer bonding, exfol. proc., IR spectrosc., X-ray imaging 126353
μc-Si:H films, catalytic CVD, struct. props. 126087
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 102955
Si:O,H,N, porous, passiv., PL intens. 71522
Si-SiO_2 interface transit. region width, F-N tunneling current oscills. meas. 103215
Si(001) surface, ab initio temp. depend. studies of homoepitaxial growth 79197
Si(111)/H-1×1 surface, init. oxid. stages, IR absorpt. obs. 103305
nc-SiC film growth, hot filament CVD 68263
a-SiC:H ECR-PECVD films, microstruct. and opt. props. 68265
a-SiC:H film plasma CVD by dissociating source gases separately, opt. props. *(Japanese)* 90361
SiC:O, 3C, 4H, isolated oxygen defects; elec. activity 69594
a-$Si_{1-x}C_x$:H films, PECVD, microstruct., thermal stabil. *(Chinese)* 103075
3C-SiC/Si(100) heteroepitaxy using monomethylsilane, interfacial buffer layer form. 90383
SiC(111) growth by C_{60} decomp. on Si(111), electron spectroscopies 114269
$Si_{1-x}Ge_x$ epilayers, RIE, XPS *(Korean)* 69868
SiO_2:methyl films, CVD, struct./dielec. props. 124893
$SiO_x/ZrO_2(TiO_2)$ gate dielec. stacks, charge trapping in MOS capacitors 80927
SiO_x/organic composite thin films, PECVD, dielec. props. 90364
SiON film, opt. waveguide 104738
SiO_xN_y PECVD films, correl. of phys. props./chem. struct., IR spectrosc. 68297
Sr/SiO_xN_y/Si(100) nanostruct., interfacial chem., XPS/SIMS obs. 126228
a-Ta-nanocryst. RuO_x diffusion barrier for lower electrode of high dens. memory devices 69958
Ti nitride thin films, low temp. CVD with hydrazine and tetrakis-(dimethy- lamide)titanium 124921
Ti-Si-N films, RF reactive sputtering deposition characts. 68142
TiO_x IBAD films on Si, dielec. const., surface roughness, O ion dose depend. 115447
WO_3 electrochromic films, rf-sputtering, residual charges, IR absorpt. 127900
ZnO(0001) surface, lattice relax., DV-Xα calcs. 103042
$(ZrO_2)_x(SiO_2)_{1-x}$ high-k gate dielec., chem./phys. limits 104422
a-iO_2 films, VUV-irrad., Si nanocrystals precip., Si-Si bonds form. 69997

, dangling *see dangling bonds*

ee also orthopaedics
) med. image segmentation, metaballs appl., struct. deformable models 110495
) shape approximants via spherical wavelet decomp., clinical pelvimetry appl. 10539
) X-ray microtomographic syst., CMOS image sens., bone imaging 132827
ncellous bone struct., 3D MRI, connectivity anal. 122088
mentless hip prosthesis, optim., evol. programs 122315
nical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
T-scan images, bone texture charactn. 98566
formity correction planning, computer-aided surgical operations 111080
ns., tetrahedral mesh modelling of data for anatomical atlases and intens.-based mage registration 87739
al X-ray absorptiometry systs., bone densitometry, cross-calib. 87696
ual-energy X-ray absorptiometry, CdZnTe detector implement. 110925
trance surface doses, X ray procedures, Bangladesh 133119
mur, 3D meas. using clinical US, image-guided intramedullary nail fixation 87481
acture callus dens. eval., X-ray radiography & quantitat. CT 76515
eterog. phantoms, radiotherapy treatment planning dose distribs. 76753
p joint, newborn, 3D visualization using ultrasound and automatic image segmentation 110724
diopathic scoliosis, optimal 3D correction, radiograph 122120
mage segmentation by adaptive geodesic act. contours 84108
nee arthroplasty, planning by use of 3D US image vols. 110725
nee osteochondral lesions, low-power diode laser stimulation 98665
ser-tissue interact., tumour treatment and bone surgery 128636
teral tibial condyle cartilage layer, gradient echo MRI 87593
g extraskeletal chondrosarcoma, intens. modulated radiotherapy plan 76633
umbar vertebral ident., automatic, using surface-based registration 110953
naxillofacial distraction procedures, image-based 3D planning, soft tissue implications 87791
netal implants, laser-microtextured surfaces, tissue integrat. 117596
netastases recalcification, radio- & chemotherapy, densitometry 87852
nineral content assess., 3D SR microtomography images 132823
MRI segmentation algm. assess. using SR micro-CT 132717
NMR relax. peaks, marginal resoln. using UPEN and diagnostics 98475
Northeast Bioengineering Conference, 27th annual, Storrs, CT, USA (Mar-Apr 2001) 100396
rgan doses, at. bomb survivors, radiation therapy 87961
steoporosis, bone status assess., quantitat. US tech., review 110715
steoporosis eval., conventional radiography/dual energy X-ray absorptiometry 87756
steoporosis mouse model, bone archit., 3D SR microtomography 132826
steoporotic bone, encoded FTIR microspectroscopic data visualizationy 110852
p-MOSFET dosimeters, tissue-equiv. phantom response meas. 111242
pathological changes diagnostics, polariz.-correl. anal. 76407
patient dose, radiographic tech. factors, Greek hospitals 111236
pelvic malignancies, radiotherapy, inguinal node boost, collimator jaws 98637
pelvic screw fixations, safe zones, virtual fluoroscopy 76562
periapical lesion anal. using stat. textural features 110949
periodontium, tension-deformative condition investig., bone tissue atrophy 87317
peripheral blood lymphocytes, radiotherapy, chromosome aberration anal. 76744
radiotherapy treatment planning, electron dens. phantom eval. *(German)* 87971
reaming, Internet force-feedback control syst. 98596
rheumatoid arthritis, radiography versus MRI on wrist joints *(Chinese)* 76436
SAR, man model, parametric depend. on permitt. values 122428
scapula bone, CT, 3DFE model, semi-automated method 76510
skull bone thickness meas. by pulse compression method, SPECT appl. 109968
skull stripping problem in MRI solved by single 3D watershed transform 87581
spine, diffusion-weighted MRI, radial k-space trajectories 76423
spine X-ray images, computer-assisted retrieval of biomedical features 110975
surgical navig. syst. with intuitive 3D display 87787
temporal bone, helical CT, image reconstruction algm. *(Japanese)* 98514
thin cortical bone dens./thickness eval., clinical CT method 98536
thoracic vertebra, 3D digital images, dosimetry, chord distribs. 98786
tibia, human, stress anal. under pathological conditions 76460
tibial bone struct., simulated microgravity, mag. reson. microscopy 87666
trabecular bone, dipolar demagnetizing field MRI 132764
trabecular bone, short-TE projection reconstruction NMR microscopy 98476
trabecular bone, US param., impulse response, decorrel., BUA 110714
trabecular bone, US wave propag., stratified model 122023
trabecular bone patterns, CT image multiscale anal. 76548
trabecular skeleton, beta-particle dosimetry, MRI, Monte Carlo 98787
trabecular struct. in human bone, time-lapse deform. tracking method, image anal. 110841
ultrasound interact. simul. with bone struct. based on 3D MRI/micro-CT 98314
US imaging by refl. tomography of cancellous and cortical bone 122031
vertebral column, functional anal. based on MRI and direct vol. rendering 87588
vertebral trabecular bone, texture, CT images, fractal anal. 132842
X-ray/portal image matching, automatic syst., eval. 87708
X-rays anal. syst. for prosthesis placement, segmentation module 76545
XIMIT, X-ray migration meas. of hip socket implants using implant models and image templates 76711
^{32}P-orthophosphate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724
Pb conc., patella, in vivo X-ray fluoresc. bone meas. 110932
^{99}Tc^{m}-labelled radiopharmaceuticals, Indian adult, radiation dose estim. 111235
^{90}Y radioimmunotherapy, monoclonal antibody, biodistribution, dosimetry 98757
^{90}Y-citrate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724

Boolean algebra
see also Boolean functions; formal logic
BSFQ cct. design, param. margins 70937
combinat. equivalence checking using Boolean satisfiability and BDD 79790
converter ccts., min. memory vol. 102012
GA, optimal control params. 113963
games-comp. dimens. 124488
Grobner bases in polynomial rings over von Neumann regular rings 124647
holographic fields generation, second-order nonlin. interacts. 71455
LECOBA learning companion syst., expertise, motivation and teaching 67441
logic blocks, lookup tables, Boolean matching 102088
logic verification, Boolean matching by simplified BDD *(Chinese)* 101662
multiple implication checks, learning procedure, DNF, DIMACS benchmarks 79680

Boolean algebra continued
order stats. and Boolean filters, optimal predictive design 118988
possibility measures/integrals defined on complete lattice 67786
SAT, Satisfiability algm. for combinat. equivalence checking 79789
sitting, proper posn. enhancement using sEMG protocol 111054
sub-effect alg. and Boolean sub-effect alg. 124455
substitution algm. 101649
temporal morph. systs. modeling via lattice dyn. systs. 118183
ultrafast nonlin. interferometer gate, GHz all-opt. XOR logic 131568

Boolean functions
1D recursive median sieve, simplified implement. 106514
*BMD minimisation exploiting don't care conditions 100875
applied Boolean equivalence verification and RTL static sign-off 101875
BDD cct.-based Boolean reasoning, structural transforms., SAT procedure 125349
BDD with min. expected path length, Boolean fn. rep. 79703
binary monotone syst., reliab. theory, disjoint sum forms 124424
bounded queries, approxs., and Boolean hierarchy 113984
cct. minimization problem 68668
center-weighted median filters, conversion to pos. Boolean fns. 130097
channel routing, 3-layer HVH, min. crosstalk layer assignment, pseudo-Boolean optim. 70272
classical fault models, anal. of realistic defects 79739
code cracking problems, complexity computation 129263
conditional correl. attack, anal. and modifs. *(English)* 72960
correl. immunity, cryptographic Boolean fn. 129352
correl.-immunity of highly nonlin. Boolean fns. 106324
COS ciphers, fast block cipher design 129278
CPLD technol. mapping algm. under time constraint 68681
cryptanalysis appls. of correl. theorems of Boolean fns. 94348
cryptographic props. of cosets of R(1, m) 72943
cryptology, conf., Bruges, Belgium (May 2000) 113200
cryptology, INDOCRYPT 2000, conf., Calcutta, India (Dec. 2000) 78450
cycle time optim., timing driven placement with simultaneous netlist transforms. 101964
decomp. of fuzzy rels. 106850
digital cct. sig. probab. calc. in Boolean fns., graph oriented realization 68678
disjoint decomp. of bal. Boolean fns. through Walsh spectrum 68768
ellipt. curves and resilient fns. 129353
fast correl. attacks using parity-check eqns. 106328
finite digital sync. ccts., 2-alg. truth tables characterisation 90863
fixed polarity Reed-Muller expansions, Reed-Muller tree-based minimisation 72924
FPGA technol. mapping, look-up table, unified functional decomp. 68775
FPLA cct. CAD by rewriting, Boolean vectors 101659
hard core predicates, complexity bounds 118044
HAS-V, hash fn. with variable output length 129318
high order correl. immune fns., spectral anal. 129997
high-order correl.-immune fns., improved nonlin. upper bound 129322
highly nonlin. zigzag fns. and unbiased fns. 83963
HMM Boolean vector seq. pattern learning, IC BIST appl. 116008
image anal. and pattern recogn., coord. logic filters 129575
improved Reed decoding algm. *(Chinese)* 72831
incremental rerouting, Boolean satisfiability-based, FPGA appl. 79799
kernel extraction during logic optim. 114703
lin. threshold gate implement. in SET technol. 90868
logic synthesis based on functional decomp. 125307
lower-upper-middle Boolean smoother design, permutation coloring concept 73693
LPSAT, unified approach to RTL satisfiability 79690
LUT-based FPGA technol. mapping for power minimization with optimal depth 90870
masking against differential power anal. 106233
minimization, mutations 125327
minimization of decision diags. 125311
minimization of OPKFDDs using GA 125310
modular systs., reliab. and diagnosis 124423
multiple-level logic simul. algm. 90838
MUX, low-power decomp., sig. transit. propag. 102323
nonlin. Boolean fns. with cryptographic props. 106323
partial implement. in VLSI CAD, equivalence checking 125350
partial-order correctness-preserving props. of delay-insensitive ccts. 79782
pseudo-symmetric BDDs, global approach to variable ordering problem 101977
random model params. estim. via lin. systs. with granulometric inputs 73218
randomized commun. protocol, privacy and partition arguments 95855
reduced ordered BDD, variable ordering by scatter search 125188
regular realization of symmetric fns. using reversible logic 125324
reusable components based synthesis, arith. spec., POLYSYS tool 101888
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
satisfiability problem, inactive clauses, dyn. detect., image computation algm. 125364
satisfiability procedures in formal verification of superscalar/VLIW µP 125549
satisfiability-based functional delay fault testing, CNF formulas 101951
scalable hybrid verification of complex µP 125545
secondary power syst. planning optim. using reduced ordered BDD *(Japanese)* 77292
seq. datapath comp. verification, arith. transform 125396
sign Walsh spectra of Boolean fns., calc. from disjoint cubes 101974
simultaneous representations of semilattices by lattices with permutable congruences 67844
spectral transform., BDD rep., graph transform. 79704
SPIRIT, highly robust combinat. test generation algm. 102072
stack filter design, tree representation evol. 84742
stack filters optim. based on mirrored threshold decomp. 73656
strict avalanche criterion ident. by Walsh spectral symms. 90816
structural pattern matching algm. for technol. mapping, subj. Boolean network 125357
sum of pseudoproduct logic minimization using XOR gates 125432
switch logic tutorial tool, Boolean fns., static CMOS complex gate implement. 125293
symbolic verification of Boolean constraints over partially specified fns. 101976
threshold Boolean filtering, CNN 107489
transform. to fn. of degree 3, iters. upper bound 124456
virtual components, publicly detectable protection techs., watermarking method 125443
Welch-Gong transform. seq. generators 129319

Boolean lattices *see Boolean algebra*
boost convertors *see DC-DC power convertors*
booster injectors
BNL EBIS high current electron/ion beam dyn. simul. 110198
conf., EBIS and traps appls., New York, USA (Nov. 2000) 100436
light ion beams for radiation treatment, facility design anal. 111130
RHIC EBIS-based preinjector design, review 110202
supercond. ion linac and assoc. accelerator develop. at NSC 132242
supercond. LINAC booster for Mumbai pelletron 132241
Tohoku Univ. storage ring light source design study 121788
ultra-high gradient plasma wakefield booster 110163
boosters (electric generators) *see exciters*
bootstrap circuits
1.8 GHz wireless LNA with high quality factor L-C filter 102703
BJT model sets, confidence limits estim. using bootstrap tech. 103784
cellular commun. syst., mobile posn. location with constrained bootstrap filter 109325
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS bootstrapped charge recovery logic cct. *(Chinese)* 90836
current-to-voltage converter and buffer cct., parasitic capacitance 114906
pyroelec. IR sens., 3D simul., optimized peripheral cct. *(Korean)* 86533
RFIC, tuned LNA, bootstrapped inductor 91435
bootstrapping (circuits) *see bootstrap circuits*
bootstrapping (computers) *see computer bootstrapping*
borate glasses
see also borosilicate glasses
Rhodamine 6G doped boric acid glass films, two beam coupling 93761
B_2O_3:Eu glass, X-ray irrad., RT persistent spectral hole burning 93774
La_2O_3-B_2O_3-GeO_2 transparent surface crystallized glasses with stillwellite-type LaBGeO$_5$, SHG 71989
$Li_2B_4O_7$-$SrBi_2Ta_2O_9$ glass ceramic, NLO and ferroelec. behavior 82024
WO_3-B_2O_3 glass, elec. cond., O_2 sens. props. 97457
Zn-B-O glass addit. to $BaTi_4O_9$, effect on sintering temperture & microwave prop. 68994
ZnO-B_2O_4:Eu fibre/Si photodiode selective UV detector 86568
boronising *see surface hardening*
borosilicate glasses
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
BPSG films, atmos.-press. CVD 124933
BPSG planarization proc., capillary force vs. centrifugal/gravit. forces 103400
BPSG pre-metal dielec. film CMP, removal rate/uniformity/defectivity 103346
CMP slurry-induced metallic contaminations elimination, post-CMP cleaning proc. 103435
DIRC PMTs, BSG window corros. in water 115276
doped oxide films, anhydrous hydrofluoric etching, residues charactn. 103317
films, LPCVD, wafer bonding appl. 124887
germano BSG, Na doped, channel planar waveguide fab., direct UV writing 127747
microsens. substr., microhole electrochem. discharge machining 116110
photomask fab., micro-EDM feasibility study 92430
porous glasses, water absorpt., thermally stimulated current method 81644
Pyrex glass etching and bonding, micromachining technols. for capillary electrophoresis 92556
sintering promoter for $BaTiO_3$ internal capacitors 102766
thin film anodic bonding, sodium distrib. 103227
AlN-BSG composite, material synthesis, gravity behaviors *(Chinese)* 125093
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
B_2O_3-SiO_2-La_2O_3-Gd_2O_3-BaO:Ce^{3+} scintillator, yield, transm./decay time 97989
CdZnSSe-based QD nanocrystals, nucleation/growth in BSG 91801
Er-doped Bi-based fiber laser for WDM amps. *(Japanese)* 128142
GeO_2-B_2O_3 co-doped core silica fiber long period grating temp. sensitivity, compositional depend. 127644
$NaNbO_3$ crystallite containing BSG glass-ceramic, opt. limiting behavior 93775
Na_2O-Al_2O_3-B_2O_3-SiO_2-NaCl-CuO glass, SHG, poling 128499
PZT-SiO_2-B_2O_3 sol-gel derived ferroelec. glass-ceramic thin films, RTA, props. 125020
SiO_2-B_2O_3-P_2O_5-TeO_2-Fe_2O_3-BaO-CaO glass, elec. relax. 92581
SiO_2-Bi_2O_3 gradient glasses, sol-gel method fab. 116555
thin film, dielec. props. 114921
Borrmann effect *see X-ray crystallography; X-ray diffraction*
Bose-Chaudhuri-Hocquenghem codes *see BCH codes*
Bose-Einstein condensation
inflationary universe, holography, quant. geom./inform. theory 83776
$Al_{1-x}Ga_xN$ refl. spectra, Kramers-Kronig anal. 91681
GaAs/AlAs type-II superlattice, excitons-biexcitons, quantum stats. 69670
Bose-Einstein statistics *see Bose-Einstein condensation*
botany
computer graphics simul. of bot. bark images *(Japanese)* 106820
phytoplankton photochem. charact., airborne laser test 111461
pinklady apples, electronic nose sigs. and fruit quality indicators 132060
plant seeds, MM radiation effects 87297
wheat seeds, different germination stages, ELF-EMF treatment effects 98755
botany computing *see biology computing; botany*
boundaries *see boundary layers; boundary-value problems; grain boundaries; interface phenomena*
boundary-elements methods
2D boundary element calcs., self-optimizing discretization scheme 83134
2D conducting targets, EM imaging, GA-BEM hybrid 72281
2D elastic BEM, regularized algms. for calc. of values on and near boundaries 114190
3D acoustic scatt. from irregular fluid waveguide via BEM 79139
3D BEM systs. of eqns., iter. techs. 79137
3D exterior Helmholtz problem, coupled natural boundary-FEM *(Chinese)* 124761
3D time domain boundary element formulation to wave propag. in poroelastic solids 79113
AC motor drives, DC supplied, DC-AC conversion strategy optim. 123915
additive Schwarz method for p-version of BE method for single layer pot. operator on plane screen 90181
additive Schwarz preconditioners for h-p version of Galerkin BEM for 2-d problems 114151
algm. for accurate computation of field variables and derivatives near boundary 114188
Barnes-Hut multipole method for EM scatt., predicting computer run-time 83214
blood perfusion, noninvasive meas. in vivo, heating method *(Chinese)* 110488
boundary-elements methods continued
busbar trunking systs. power freq. impedance studies *(Chinese)* 122969
cavity backed rect. patch antennas with inhomogen. chiral substrs., anal. v
FEM-BEM tech. 128843
chip-level thermal anal. algm., BEM *(English)* 104033
composite dielec. elec. field calc. using curved triangular surface charge metho
70376
conductive cylinders in nonuniform elec. fields, induction charging 83131
conformal dielec. interconnect capacitance, BEM-based simul. *(Chinese)*
104243
conformal imaging with non-contacting microwave antenna array 98384
crack shape sensitivity anal., boundary-element based formulations 79112
cracked panels repaired by mech. fastened composite patches 79111
cracks ident. using boundary elements and evol. algms. 68090
cracks in piezoelec. solids, boundary element modeling 116151
cylindrical particles charging in monoionized elec. fields 128708
cylindrical shell, EM shielding, boundary elements method *(Chinese)* 10577
deep submicron design, state of art and trends in parasitic extraction 104069
deep-lying flaw detect., SQUID pulsed eddy-current probe model 101630
deflection yoke mag. field, 3D edge element method, geom. symm. 125977
degenerate scale problems in BEM using degenerate kernels and circular
114167
earthing systs. ionisation proc. characterisation 99414
eddy current testing, multi-freq. excitation spectrogram method, BEM 10159
EEG dipole source localisation, realistic head model, electrode location error
121947
EEG source reconstruction, BEM vol. conductor models 110644
elec. impedance tomography inverse problem, dual reciprocity BEM 132125
elec. machine automated design platform develop. 123321
electromagnet, shell elements for computation of mag. forces 128718
electropotential problems, high-order coupled FEM/BEM procedure, computa
tional perform. 132566
electrostatic BEM computations, adaptive multilevel fast multipole metho
Galerkin method 128658
ELF mag. field shields, anal. methods eval. 128801
EM field formulation, math. models/num. methods 128653
error estim. and adaptive mesh refinement in BEM 101118
ESD conditions calc. between charged body/floating pot. conductor 72175
ESP wire electrode configs., corona inception studies field 72192
estim. of elastic consts. from 3D range-flow 84231
fast field comput. with fast multipole method, reduced comput. cost 83102
fast multi-pole BEM and large-scale engng. design *(Chinese)* 90179
free surface effects on through cracks under impact loading 79135
Galerkin BEM, computational lin. alg. issues 124663
generalisation of Telles' method for weakly sing. boundary element integral
evaluation 90173
generalized BEM for solids exhibiting nonhomogeneities 79136
gradient weighted residuals for error indicators in FEM and BEM 101122
Green's fns., theory/appl. 67711
green-state P/M compacts, electrothermographic crack detect. 114512
Greens fns. for boundary element anal. of anisotropic bimaterials 68088
h-adaptive mesh refinement strategy for BEM based on local error anal. 10112
h-hierarchical Galerkin BEM using Haar wavelets 101121
HAWT perform. prediction using strip theory 133889
heterog. math. models in num. anal. of struct. 101131
homogenization of lin. and of debonding composites using BEM 114450
HV pn jn. termination, crit. elec. field, BEM 115837
hybrid BEM in time domain, acoustic calcs. 68086
inhomog. double-layer shields, mag. anal. at low freqs. 83371
inhomog. problems, magnetostatic field, BEM 83141
iter. coupling of boundary element and FEM in elastostatics 114164
iter.-solver-based substructuring algm. for 3D time-harmonic problems in elas
todynamics 114166
Laplace's eqn. using BEM without num. integrat. 101093
layered elastic materials, method of fund. solns. 114191
lin. voice coil actuator params. 123515
Maglev train, supercond. magnet outer vessel, num. anal. 116534
magneto-opt. devices, fringe fields and higher order multipoles, charged particle
optics 97922
magnetoelec. systs., steady mag. fields, FE and BE modelling 72198
magnetomechanical US transducers, sound fields, computer modelling 99095
math. justification for RBF-MFS 114193
mech. fastened composite joints and repairs anal. and design 79138
MESFET, shape optim. algms., Regier model 70208
minimizing error near discontinuities in BEM 101123
mixed mode I, II and III anal. of multiple cracks in plane anisotropic solids by
BEM 68087
mixed-FEM and BEM coupling for 2D eddy current problem 117608
mixed-sig. ICs, substr. coupling param. extraction, BEM *(Chinese)* 80123
multidimensional interpolation and num. integrat. by BEM 114165
multilayer composite laminates, init. strain effects 114163
nonlin. eddy current problems, 3D transient anal., FEM/BEM coupling 83151
nonlin. inductive ccts., ferromag. hysteresis and eddy currents, free regimes
128681
nonlin. interface problem in unbounded domains, soln. method 124748
nonsingular symmetric boundary element formulation for elastodynamics
114189
num. field computation, conf., Graz, Austria (Sept. 2000) 78387
num. soln. of nonlin. hypersingular boundary integral eqn. 90174
phase-change opt. disk struct., 3D FDTD anal. of light scatt. 127582
piezotransducers radiation in fluids, mixed formulation FEA/BEM Green's fn.
anal. 111522
planar deflection syst. for field emission devices, 3D simul. 69434
plate bending anal. with hr-adaptive boundary elements 114161
plate-type ESP, conducting particle trajectories computation, BEM 83178
posteriori error estim. and adaptive mesh-refining algms. for boundary integral
eqns. 101110
pot. problems with nonlin. boundary conditions, BEM 79108
power transformers, load-controlled acoustic noise, FEM/BEM calc. scheme
88786
preconditioners, iter. soln. of boundary element eqns. for 3D Helmholtz eqn.
68014
preconditioning for BEM in domain decomp. 68091
quantum struct. modeling with BEM 115387
regular BEM for thermoelasticity/elasticity with body force 79114
regularized spectral multipole BEM for plane elasticity 68089
right atrium, noncontact/contact probe electrograms 87383
SAW and BAW devices, modeling of third-order effects 92721
SAW periodic struct., FEM and Green's fn. anal. 116210
shape design sensitivity anal. in elasticity using BEM 114192

boundary-elements methods continued
simultaneous MEG/EEG source anal., covariance matrix derivation 98258
sing. in BIEs for Laplace eqn., Joukowski trailing-edge conjecture 114150
superconvergence of residual as error estimator in BEM, collocation, num. integrat. and error indicators 101119
symmetric Galerkin BEM for multi-connected bodies 114162
syst. generators shielded busbar, EM field soln. at open boundary problem 123333
temporal lobe epilepsy, interictal epileptiform activity, cortical current dens. reconstruction 121945
transient eddy current problems, FDTD scheme 128679
tuneable irises for rect. waveguide filter, modelling 125667
upper limb torque generation, cortical organization, EEG, MRI 98214
US contact SH-wave transducers, num. modelling, BEM simul. 101616
US flaw detect. by EM acoustic transducers, inverse flaw ident. 101627
VLSI design, interconnect capacitance, param. extraction 81458
Fe interact. nm-scale particles on Permalloy, mag. meas. and num. simul. 81803

boundary integral equations
2D elastic BEM, regularized algms. for calc. of values on and near boundaries 114190
3-D heat eqn., boundary integral method 114132
3D Galerkin integrat. without Stokes' theorem 68061
boxed microwave cct., MoM/BI-RME anal. 102590
cavity backed antenna in conducting cone, radiation charact. 72454
chiral coated conducting cylinders, RCS computation 75174
convergent boundary integral method for 3D water waves 79107
degenerate scale problems in BEM using degenerate kernels and circulants 114167
dielec. loaded slot antenna, 3D anal., polariz. current model method appl. 72609
dual-dual mixed formulation for nonlin. exterior transm. problems 114185
eddy current testing, multi-freq. excitation spectrogram method, BEM 101593
eddy currents, boundary integral method coupled to FEM for E and H fields 128682
elec. impedance tomography inverse problem, dual reciprocity BEM 132125
EM anal., fast time-domain finite element-boundary integral method 128742
EM scatt. problems, surface integral boundary conditions, interior reson. errors detect. 83244
fast multipole boundary integral eqn. method to crack problems in 3D 68059
ferromag. substr. with nonmag. coating, thickness meas., secondary field calc. 79480
fluxset sens. data, mag. field map calc., NDT, hybrid method 79477
forward-boundary-integral/parab.-wave-eqn. propag. models comparison 72230
free surface effects on through cracks under impact loading 79135
FSS, gigahertz/terahertz appls. 105844
Galerkin BEM, computational lin. alg. issues 124663
Galerkin trigonometric wavelet methods for natural boundary integral eqns. 68056
generalized BEM for solids exhibiting nonhomogeneities 79136
Greens fns. for boundary element anal. of anisotropic bimaterials 68088
indirect scalar boundary integral eqn. formulas for biharmonic eqn. 114152
ITER tokamak, magnetostatic reconstr., optimal probe placement 86919
meshless hypersingular boundary node method for 3D pot. theory and lin. elasticity problems 114149
meshless regular hybrid boundary node method 124735
microstrip ccts., freq./time-domain modeling by modif. spectral domain approach 91392
mobile commun. handset, interact. of EM energy with human arm 111220
multidimensional interpolation and num. integrat. by BEM 114165
num. soln. of nonlin. hypersingular boundary integral eqn. 90174
Ostrowski-Gruss type inequalities 68057
parallel conductors syst., imped. boundary condition use in imped. calc. *(Slovenian)* 117723
partially open cavity, reson. modes anal. 72430
posteriori error estim. and adaptive mesh-refining algms. for boundary integral eqns. 101110
pot. problems with nonlin. boundary conditions, BEM 79108
preconditioning for BEM in domain decomp. 68091
quasi-opt. filters by hybrid MoM/BI-RME method, efficient anal. 93294
sing. in BIEs for Laplace eqn., Joukowski trailing-edge conjecture 114150
SSBW to PSAW conversion in SAW devices using heavy mech. loading, anal. 92725
stabilizing tech. for boundary integral methods for water waves 79106
Stokes flows containing suspen. particles using traction boundary integral eqn. method 68060
US contact SH-wave transducers, num. modelling, BEM simul. 101616
wavelet-based preconditioners for dense matrices with non-smooth local features 84261
WG-mode DR based microwave and opt. network components, num. anal. 80186

boundary layer flow *see boundary layers*

boundary layers
air-water interface, vortex pair impact, thermal signature 132228
flexible and elastically supported struct. subj. to turbulent boundary layer flow excitation 114159
isothermal cuboids, laminar forced convection heat transfer, anal. models 113543
LIGA PMMA resists, develop. rate, acoustic agitation appl. 92214
local nonsimilarity solns. for mixed convection boundary layer flow of micropolar fluid 101091
supersonic inlet flow in air-breathing propulsion systs. for high-speed space travel appls. 111363
surface hot wire for mean/fluct. wall shear stress meas. 132220
turbulent shear flow in thin laminar boundary layer embedded vert. fence, vel. field meas. 132217

boundary scan testing
assembled PCBs, IEEE std. test access port, boundary-scan register 102816
BIST, partitioning-based diagnosis, failing scan cell ident. 79679
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
bus-based prog. SoCs, IP cores, self-test methodology 101920
CAS-BUS testing of TAPed and wrapped cores 81433
chain concealment for test vol. and appl. time reduction 125433
continuous scan, test environ., fault coverage 125346
cross-chip delay meas. and charact. of delay modeling flow, boundary scan delay chain 79736
DFT scan wheel, tech. for interfacing high speed scan-path with slow speed tester 101915
dominator gates, fault equivalence ident., redundancy, static/dyn. extraction 102043

boundary scan testing continued
full-scan ccts., test appl. by input control tech., power consumption 79754
hierarchical IC test approach using boundary scan test 100556
high-dens. PCB functional testing, proc. factors 102813
implement. into prod. facility 78585
JTAG boundary scan test in high mix mfg. environ. 86404
mil. avionics testing, open syst. archit., COTS, cost savings 122746
multiple logic defect diagnosis, full-scan design, curable vectors 101910
multiple scan chain design for two-pattern testing, seq. cct. appl. 102042
multiple scan chains in full scan module, scan chain disable, power dissipation reduction 102071
PCB boundary-scan for interconnect and in-cct. prog. 115160
PCB in-cct. test for QA 69314
random limited-scan to improve random pattern testing of scan ccts. 125344
SoC testability using LSSD scan struct. 104005
socillator test, delay test scheme for embedded ICs in boundary-scan environ. 104012
static compaction procedure, at-speed testing enhancement 125345
sync. seq. ccts., almost independent reset sigs., testability struct. 102041
syst.-on-a-chip, combining low-power scan testing and test data compression 125347
TACOS, testability allocation and control syst., BIST cost/quality trade-off 125332
tristate syst. environ., fault detect. 125173
two-level LFSR high efficiency BIST scheme, asynchronous test pattern transfer 102017
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395

boundary-value problems
see also initial value problems
2D composite uniaxial bianisotropic cylinders, EM scatt. model 83213
2D photonic cryst. waveguiding element, multichannel WDM 86072
3D anisotropic opt. waveguide, approx. scalar finite-element BPM 71327
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
a posteriori, pointwise, residual-based estim. of the finite element error 114000
abruptly ended fiber waveguide, radiation charact. 93069
accelerated convergence of nonoverlapping Schwarz methods 68020
arbitrary dispersive media freq.-depend. FDTD method, ABC 105696
attractors for discretization of Ginzburg-Landau-BBM eqns. 79099
B-spline surface approxs. of six-sided PDE patch 67954
beams, act. piezoelec. damping, bonding layer props. 127265
bipolar hydrodynamic model, semiconds., init.-boundary value prob. 69467
block preconditioned systs. arising from LMF-based ODE codes, convergence 114120
bordered almost block diagonal lin. systs. 124675
building blocks for odd-even multigrid with appls. to reduced systs. 79084
cholesteric absorbers for microwave freqs., circ. pol. sensitive absorpt. props. 114922
circ. waveguide, tensor Green's fn. of lin. and point sources 83491
collocation methods for solving lin. differential-alg. BVP 79065
complex microwave struct., gradient computation reduction, method of moments 102501
computational electromagnetism, topol. approach 72151
computational EM appl. of meshless method 128641
cone with long. slots, plane EM waves scatt. 83229
conical slot antenna excitation 117772
controlled BVP, equilib. control search 100774
convection-diffusion two-point BVP, derivative approx. 124731
convergence in discretized minimization problems 113958
convergent deferred correction schemes based on parametrized Runge-Kutta-Nystrom methods for second-order BVPs 79089
coupled mixed partial diff. syst., convergent discrete soln. 79053
Crouzeix-Raviart type finite elements on anisotropic meshes 124751
cubic splines, second-order BVP 100988
defect correction and domain decomp. for second-order BVP 68065
degenerate sing. semilinear parab. eqns., steady state soln. 68034
dielec. rod, EM pulse diffr. 128747
difference ϕ-Laplacian problem with nonlin. functional boundary conditions 90128
discrete Hodge-operators, alg. perspective 67997
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
edge detect. by Helmholtz principle 84603
electrodynamic struct., anal. of irregular dispersion 72211
electrodynamics BVP, R-fn. method 117605
ellipt. BVP, Lagrange multipliers 124726
ellipt. PDE, Tikhonov regularization 101103
EM field, dyadic Green's fn. 72170
EM levitation coupled re-entrant cavity syst. 93989
EM scatt., conformal Thompson-FDTD method using MEI-ABC 83203
EM scatt., screen, pseudodifferential eqn. 72292
EM theory, auxiliary fns. 83076
error estim. using hypersingular integrals in BEM for lin. elasticity 101065
FDTD schemes for Maxwell eqn. 79005
FEA for parametrized nonlin. eqns. around turning points 90097
FEM weak formulation using wavelet basis fns. 124742
fixed-sign solns. for syst. of higher-order difference eqns. 90122
fourth-order finite-difference method for sing. two-point BVP 124695
Galerkin trigonometric wavelet methods for natural boundary integral eqns. 68056
Galerkin-spectral method, error anal. 114114
gas turbine mag. bearings, neg. stiffness coeffs. calcs. 123216
global superconvergences of domain decomp. methods with nonmatching grids 79098
GPR imaging of land mines, inverse problem soln. 77088
gradient-FEM for ellipt. problems 101098
$H^2(I)$ Sobolev space, multiresolution anal. *(Chinese)* 124457
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
inhomog. regions, Poisson's eqn. soln. 83080
interorbital flight programmed motions constr. method 133215
interpolating wavelet scaling fn. with lifting appl. 114053
inversion formulas for tridiagonal matrices with appl. to BVP 101106
Laplace's eqn. using BEM without num. integrat. 101093
lin. eqns. with tridiagonal Toeplitz coeff. matrices 67999
lin. two-point BVP, well-conditioning, quantitat. measure 113836
local exponentially fitted finite element schemes for sing. perturbed convection-diffusion problems 90177
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563

boundary-value problems continued
M/M/1 queue in semi-Markovian environ. 119650
MESFET, shape optim. algms., Regier model 70208
microoptical element plane wave diffr., effective hybrid approach 94440
modal scatt. at radiating apertures, near field anal. 128756
monotone iter. method for second-order BVP in presence of lower and upper solns. 101095
monotone method for extremal solns. to second-order periodic BVP construction 124691
Mueller matrix of two-layer eccentrically bianisotropic cylinder lin. array with double helical conductances 72251
multiple pos. solns. to third-order discrete focal BVP 90108
Mumford-Shah problem, curve evol., boundary-value stochastic procs. 94837
nearly H^1-optimal FEM 101127
Neumann-Neumann methods for vector field problems 67978
nMOSFET, gate-current calc., closed-/open-boundary models 92376
nonlin. cct. differential-alg. eqns., consistent init. conditions 68528
nonlin. functional difference eqns., pos. solns. 90096
nonlin. shooting method for two-point BVP 124713
nonlin. two-point BVP, develop. of Numerov's method 90127
nonlin. uncertain syst. robust control design, motor appl. 134054
nonplanar anisotropic PML, accuracy of FE soln. of wave propag. problem 128733
NS eqns., boundary-layer growth, infinite porous flat plate 101085
num. reconstruction of internal states by boundary meas. for Laplace eqn. 101107
num. soln. of fifth-order BVP by decomp. method 124694
num. study of nonlin. init.-BVP or IVP 68032
num. verification methods for solns. of ordinary and PDE 101105
ODE BVP, iter. shooting method, feedback control appl. 100749
open delta winding vibr. motor for cellular phone appls. 134099
open waveguide boundary conditions for finite element modal anal. 116710
opt. waveguide anal., concurrent complementary operators, perfectly matched layer 116717
param.-depend. sing. 101063
partly lossy chiral media, EM BVP 93961
perfectly matched layer ABC implement., mimetic differencing schemes 72237
perfectly matched layer boundary condition, scalar FDTD method 71309
periodic Riemann BVP, approx. soln. 114146
piezoelec. stack resonator, complex mater. consts., imped. reson. 104435
planar opt. jns., finite-element simul., boundary condition 116711
plane periodic slot array 83740
pos. fixed points of nonlin. operators on ordered Banach spaces 90106
pos. soln. of sing. nonlin. third-order periodic BVP 90149
pos. solns. for higher-order Lidstone BVP 68037
pos. solns. for nonlin. diff. eqns. with periodic boundary conditions 90151
pos. solns. of nonlin. m-point BVP 101067
Post-Galerkin method, based on approx. inertial manifold *(Chinese)* 124723
pre-tensioned string-plate press. sens., natural freq., press.-freq. charact. 120762
qualitat. props. of nonlin. difference systs. 101094
quasi-Monte Carlo method for ellipt. BVP 79059
quasilinear ellipt. eqn., pos. entire solns. existence & multiplicity *(Chinese)* 79060
quasilinearization of BVP for impulsive diff. eqns. 90152
rot. symmetric cavities, multipole theory anal. of axisymmetric modes 94086
scalar wave diffr. by perfectly soft infinitely thin circ. ring 128732
Secant method and divided differences Holder continuous 124703
second order diff. eqn., fuzzy BVP, difference method *(Chinese)* 114118
second order lin. ellipt. eqns., transms. problems, min. estim. 67722
semi-implicit finite vol. scheme for nonlin. diffusion eqns. in image proc. 118454
semiconds., hydrodynamic/drift diffusion models, init. boundary value prob. 79062
sharp edge particle EM wave scatt. anal., extended boundary condition method 83348
shielded homog. multiconductor transm. lines, PEC and PMC walls, TEM props. 94097
sing. perturbed react.-diffusion eqn., high order FEA solns. 124768
sing. superlinear BVP for 1D p-Laplacian, upper and lower solns. method 101072
sing. two-point BVP *(Chinese)* 101087
single-freq. vibrs. excitation of mech. resonator, oscill. scheme 81590
slot antenna radiation under semi-infinite dielec. layer 83576
slow TW on finite interval for Burgers'-type eqns. 79090
spectral corrections for Sturm-Liouville problems 90154
stochastic PDE, Galerkin finite element techs. 124714
Strang-type preconditioners for systs. of LMF-based ODE codes 68021
strongly nonlin. ccts., steady-state time domain simul. 90655
structural defects detect. using operational deflection shapes 90606
TEM transm. line with non-std. inner conductor, charact. impedance 72397
tensor product multigrid anal. 68043
thick conducting plane, magnetostatic pot. penetration into two circ. apertures 105678
three-point BVP for 2nd order nonlin. diff. eqns. 79054
time-domain discrete Green's fn. method, FDTD grid boundary characterisation 93996
topol. methods for some BVP 90121
transient EM wave beam scatt. modelling 83206
twin solns., BVP for ordinary differential and finite difference eqns. 90136
two-phase flow elec. impedance imaging, sens. strategies anal. 121275
two-scale FEM foil ellipt. mixed BVP with small periodic coeffs. 114187
undergraduate EM education using spreadsheet software 100458
uniformly accurate finite difference approx. of sing. perturbed react.-diffusion problem using grid equidistribution 90145
variable mesh spline approx. for sing. perturbed turning point problems 124633
variational optim. of constrained domain functionals 67859
wave scatt. amplit. by reson. bodies in free space/waveguides, investig. 83210
wavelet transforms, Green's fn. methods 90196
SF_6 tank type cct. breaker, double breaks anal., hybrid FEM-charge simul. method 134257

bowing *see bending*

Bragg gratings
2.5-Gb/s wavelength conversion using grating fiber external cavity laser 117451
2×2 symmetric fused fiber couplers with Bragg gratings, tilt angle influence 127598
7-/63-chip opt. CDMA encoders and decoders, superstructured fiber Bragg grating based 120147
20 Hz linewidth MM-wave generation by opt. sideband filtering 80394

Bragg gratings continued
24-node transparent WDM bi-directional wavelength path switched ring network 96794
40 Gbit/s RZ transm., adaptive dispersion compensation using Bragg gratings 85951
64-chip OCDMA syst., superstructured fiber gratings, time-gating detect. 131364
980 nm LD module, fiber Bragg grating wavelength stabilized 128283
acoustooptic tunable filter interrogated fiber Bragg grating sens. 131959
adaptive photonic RF filters realized with adaptive Bragg gratings 80395
add-drop config. dispersion-free FBG 131357
add-drop filter, planar waveguide, apodised Bragg grating 127887
ADM, multimode interf. device, grating-induced dispersion 109201
ADM with UV-written Bragg gratings and directional coupler 120143
aircraft skin panels, embedded FBG sens., buckling anal. 88046
all fiber add/drop filter, Bragg grating in fused fiber coupler, WDM appls. *(Korean)* 85984
all-fibre components for WDM, design to prod. develop. 93049
all-fibre Moire DFB lasers, stable multiple wavelength generation, CW output power 128132
all-opt. label detect. and swapping tech. 74951
all-opt. Mach-Zehnder ADM, back-refl. spectrum monitoring *(Chinese)* 97278
appl.-specific integrated lenses and filters for microdisplays using elec. switchable Bragg grating technol. 109850
arrayed-waveguide gratings/fiber Bragg gratings, isomorphic FT anal. 109077
binary dielec. surface-relief Bragg gratings, coated phase masks for proximity printing 82290
bow-tie fibre imprinted two-mode FBG grating, temp./strain sensitivity 97285
Bragg gratings, photosensitivity and poling in glass, conf., Stuart, FL, USA (Sept. 1999) 124178
Bragg wavelength fiber-optic grating filter fab., modified Talbot interferometer use 127622
bridge & highway static/dyn. testing, long-gauge FBG strain sens. 120843
bridge struct. health monitoring with FBG sens. 86781
Brillouin opt. time domain reflectometer-based distributed temp. sens. 75555
broad band-rejection fiber filters based on long-period fiber gratings 116654
broad-band tunable microwave transversal notch slicing Bragg grating fibre filter 80399
broadband dispersion compensation using fiber Bragg grating 93076
buried Bragg grating strain sens. fiber optic coils 97324
cantilever-based fiber Bragg grating sens., simultaneous displacement/temp. meas. 86592
cascaded Raman fibre laser for stable dual-wavelength operation 82511
cascaded WDM fiber Bragg grating sens. elements, ring-compounded-cavity fiber laser use 86591
CDMA hybrid wavelength/time opt. transm., photonic technols. 120382
central-wavelength tuned fiber Bragg grating temp.-compensating telecomm. device 74932
chirped Bragg gratings and WDM filters, group delay ripple anal. and modelling 127600
chirped FBG fab., tapered transducers/loading 93280
chirped FBG strain sens., subcarrier phase detect. scheme 97287
chirped fiber Bragg gratings, chromatic dispersion correction 127605
chirped fiber Bragg gratings, group delay anal. 71284
chirped fiber grating, chromatic dispersion compensation meas. 116653
commercial aspects and appls. *(English)* 104859
composite-bonded concrete strain meas., FBG sens. 86571
configurable tunable Bragg grating ADM archit. 109176
corrugated struct. long-period/Bragg fibre gratings, tunable coupling strength 104646
cryogenic FBG temp. sens., high-sensitivity, Teflon substrs. 97298
CW single-freq. semicond. laser with Bragg fibre grating 128303
D-type FBG, bending sens. 97289
DFB fiber lasers, multiple wavelength operation 82537
differential press. flow sens. with FBG 109594
dissimilar two-core fiber based channel-dropping filter, grating-frustrated coupler 127593
distortion monitoring syst., opt. fiber Bragg grating sens.-based *(Japanese)* 86951
dual-wavelength cascaded Raman fiber laser, WDM coupler/Bragg gratings 105173
DWDM low cost devices 131585
DWDM networks, opt. ADM charactn. 75022
DWDM transm. using directly modulated fiber Bragg-grating external-cavity laser 120290
DWDM-systs., pass. opt. components 131505
dyn. FBG strain sens., serial arrays, simultaneous interrogation 97295
elec. current sens. using EM tuning 120754
elec. tunable chirped fiber gratings by bulk distributed heater 116611
elec. tunable etched cladding fiber Bragg grating filter 71470
electroholographic switches, Bragg grating, DWDM switching appls. 82210
elevated temp. multiplexed fiber-optic Bragg stack sens. 75557
embedded fiber optic sens., single-fiber fragmentation test 131952
epoxy-cured fiber optic connectors, fiber strain, in-situ strain sens. 120197
external cavity LD for all-opt. wavelength conversion, injection current selection *(Chinese)* 117314
external cavity LD with cascaded fiber Bragg gratings, dual-mode operation *(Chinese)* 117252
FBG, interferometric side diffr. tech. 127635
FBG, multiple spatial harmonics 127601
FBG, nonlin. nonuniform & Gaussian apodised, pulse switching 105557
FBG array for distributed strain sens. 97299
FBG arrays, multiple grating writing, OCDMA encoder/decoder appl. 93046
FBG filters, impulse response synthesis, efficient inverse scatt. algm. 127599
FBG for pulse shaping and pattern generation/recogn. 71269
sampled FBG for temp./bending sens. 97335
FBG grating fab., fibre-buffer UV absorpt. effect 93047
FBG in opt. satellite links, radiation-induced spectral effects 96879
FBG interferometric sens. demodulation, noise-induced resoln. limit 97283
FBG laser sens., SOA gain medium 109615
FBG proc., high temp. miniature oven, low thermal gradient 93074
FBG refl. enhancement and tuning, F_2-laser post exposure 82098
FBG refractometer, side-polishing, liq. optochem. sens. 97279
FBG reson. sens. using micro-cantilever beam *(Chinese)* 75563
FBG sens., 3D accel. meas. 120857
FBG sens., bending effects 75584
FBG sens., displacement meas. 120854
FBG sens., LPG and EDF, dyn. strain meas. 109613
FBG sens., simultaneous displacement and temp. meas. 120856
FBG sens., simultaneous strain and temp. meas. 120855

Bragg gratings continued
FBG sens., transformer oil acetylene gas content monitoring 75732
FBG sens. based on long-period fiber grating *(Chinese)* 75562
FBG sens. demodulator, fiber birefr. 109616
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
FBG sens. interrogation, scanning filter, M-Z interferometer, coupler 97281
FBG sens. systs., meas. accuracy improvement 86574
FBG sensor for temp. detection *(Chinese)* 75564
FBG strain sens., shaft torsion deform. meas. 75591
FBG strain sens., tunable narrow bandpass filter demodulator *(Korean)* 97316
FBG strain sens., ventilatory movements monitoring 98349
FBG strain sens. ship hull struct. monitoring, sig. proc. 89388
fiber Bragg dispersion compensation gratings for commun. bandwidth 93078
fiber Bragg dispersion compensators, freq.-depend. group delay responses 93055
fiber Bragg grating, chirp effect, temp.-independent bend sens. *(Chinese)* 75595
fiber Bragg grating, chirp tuning, accelerometer appls. 97320
fiber Bragg grating, large bandwidth/short grating length, charact. 104640
fiber Bragg grating appls. in material charact. param. meas. 75593
fiber Bragg grating based elec. current sens. *(English)* 120876
fiber Bragg grating based opt. ADM in DWDM 120363
fiber Bragg grating based tunable transparent cost effective opt. ADM 131553
fiber Bragg grating external cavity LD, gain saturation effect, all-opt. wavelength conversion *(Chinese)* 105519
fiber Bragg grating group delay, apodisation profile influence 127637
fiber Bragg grating period reconstruction by time-freq. sig. anal., distributed sens. appl. 75565
fiber Bragg grating sens., simultaneous displacement/temp. meas. *(Chinese)* 131948
fiber Bragg grating sens. array, serial TDM using tunable laser 109604
fiber Bragg grating sens. syst., interferometric demodulation tech. *(Chinese)* 120846
fiber Bragg grating stabilized 980-nm pump lasers, L-I charact. 71781
fiber Bragg grating vibr. sens. using incoherent light 97313
fiber Bragg grating with metal coating, tuning efficiency *(Chinese)* 71292
fiber Bragg gratings, cross-PM, nonlin. pulse switching 104661
fiber Bragg gratings, dispersion mgt., multisoliton solns. stabil. 127613
fiber Bragg gratings, double phase mask fab. 127608
fiber Bragg gratings, pass. interrogation of low-finesse Fabry-Perot cavities 109610
fiber Bragg gratings, photosensitivity, coupled mode theory 127602
fiber Bragg gratings, stds. and metrology 127636
fiber Bragg gratings, transm., dispersion compensation efficiency *(Chinese)* 127627
fiber Bragg gratings based encoder/decoder in direct seq. opt. CDMA syst. *(Chinese)* 120310
fiber Bragg gratings based local access network 120259
fiber Bragg gratings fab. using flexible/stable Sagnac interferometer 127631
fiber Bragg gratings for WDM, phase mask stitching error study 109192
fiber Bragg gratings with Fabry-Perot struct., reflectivity and group delay charact. 127638
fiber Bragg-grating-based spectral-amplit.-coding opt. CDMA systs., code families 120142
fiber grating element narrow band suppression filter, non-lin. photosensitive charact. 109065
fiber grating refl./phase responses, apodisation impact 127661
fiber grating semicond. laser, act. mode locking, time domain anal. 117392
fiber grating sens., simultaneous strain/temp. meas. *(Chinese)* 131954
fiber gratings, laser-induced densification, interferometric determ. 127645
fiber gratings components, mixed polymer packaging, temp. sensitivity *(Chinese)* 120875
fiber laser sens. with cavity form. by ref./sens. Bragg gratings 86596
fiber strain sens. demodulator 97338
fiber transm., dispersion compensation using uniform Bragg gratings 120158
fibre DFB laser, microwave carrier generation, propag. mode matrix 80390
fibre grating sens. for simultaneous press./temp. meas. 75579
fibre laser, pass. modelocking, dissipative FWM 93508
fibre laser with SOA gain medium, wavelength-switching, Vernier effect 93522
fibre opt. dual temp./strain sens., fluoresc. lifetime decay & FBG 97330
fibre optic Bragg gratings, pol. mode propag. modelling 71304
fibre optic ref. beam LDA 93938
fibre optic sens., automotive meas. appls. 120825
fibre optic sens. network for spacecraft health monitoring 98888
fibre optic strain sens. arrays, large-scale/low-cost 75578
fibre Raman ring laser, multi-wavelength CW 1.55 μm operation 82521
fibre-optic temp.-strain discrim. sens. using WDM chirped in-FBG 86575
fibre/waveguide lasers, controllable tuning of radiation freq. 128162
filament wound press. vessel monitoring, embedded FBG sens. 97309
flexible fiber Bragg grating encoder/decoder, hybrid wavelength-time opt. CDMA 131363
gain equalised chirped fiber Bragg gratings, gain-flattening filter technols. 82107
gain-switched DFB Bragg semicond. laser, pulse compression, chirp elimination 71772
Gb/s multi-span lightwave systs., dispersion compensating fiber Bragg gratings 96681
germanosilicate opt. fibers, Bragg grating fab., opt. losses 127632
glass-based Bragg waveguide gratings, poling research *(English)* 104858
group delay ripple in dispersion compensating fiber Bragg gratings, modulator chirp 109064
guided wave opt. sens. devices, modeling and charactn. 127727
high bit rate TDM syst., FBG elec. tunable dispersion compensation 86074
high-power CW Raman phosphosilicate fiber laser, output charact. 105171
high-resoln. fiber Bragg grating sens. syst., time-domain addressing tech. *(Chinese)* 109587
high-strength proof-tested fiber Bragg grating strain sens., survival probab. 127680
highly birefr. fiber dyn. grating, Bragg modulational instabil. 82092
holographic Bragg grating fringe stabilizers for telecomm. device mfg. 82977
hybrid multilayer heterostruct. optoelectronic transistors, fiber coupled E-field sens. element appls. 104742
hybrid multiple wavelength ref. fiber gratings, mol. absorpt. 131796
hybrid opt. CDMA coding, freq. hopping/time spreading, struct. of coder and decoder *(Chinese)* 109130
hydrogenated fiber Bragg grating, cladding mode coupling loss 127641
IC reliab., short-time tests, opt. interconnect/transistor failures, stat. models 78723
in-fiber Bragg grating sens., interferometric interrogation 97312
in-service OTDR supervisory DWDM syst., Mach-Zehnder fiber-grating opt. ADM 131595
infinite length fibre gratings fab. using circ. amplit. and phase masks 127606

Bragg gratings continued
interleaved multiwavelength bidirectional ring networks, opt. cross-connect struct. 120205
intermodal coupling based all-fiber add-drop WDM MUX 75015
intracavity self-adapted photorefr. Fabry-Perot 128350
ion-exchanged waveguide add/drop filter fab. using photowritten Bragg gratings 82152
ion-exchanged waveguide add/drop filter with Bragg grating 127721
isosceles-triangle-shaped beam fiber Bragg grating current sens. *(Chinese)* 97277
large serial fiber-optic Bragg grating sens. arrays, TDM 86577
large struct. monitoring opt. fiber sens. syst., vibr./temp. meas. 109598
LD, fiber Bragg grating, tunable narrow line-width 117380
local press. shaped fiber Bragg grating, charactn. 104645
low-coherence spectral interferometry of noiselike pulses 71287
Mach-Zehnder interferometers with fiber Bragg gratings, OADMs config. 120360
mask-tuned microwave plasma gratings in semicond. CPW, bandwidth/centre freq. anal. *(English)* 125707
metal capillary splice fiber-optic macro-bending sens. *(Korean)* 120847
metallic struct. embedded FBG sens., prep., thermal perform. 120849
micro-opt. FBG sens., micromech. reson., vibr. meas. 131937
mismatching photorefractive effect, anisotropic self-diffr. 82048
mode diffr. switchable opt. element 82937
modified grating-frustrated fibre coupler optimisation 116623
multi-channel long period fiber gratings, controllable transm. charact. 82114
multi-wavelength fiber ring laser, tunable act. mode locking 71684
multicomponent force sens., multiplexed FBG strain sens. 97286
multimode fiber Bragg grating fab. for narrow-spectrum VCSELs 127594
multimode opt. fiber Bragg gratings sens., strain/temp. mes. 131949
multiple fibre grating sens. syst., rapid response using CDMA 97297
multiple wavelength DFB fiber lasers, dyn. anal. 117119
multiplexed FBG sens., gamma-neutron radiation effects obs. 97319
multiwavelength fiber Bragg grating opt. cross-connect archit., DWDM networks appls. 96871
nonlin. chirped fiber-Bragg-grating technol. compensated chromatic-dispersion impairments 96857
nonuniform fiber Bragg gratings 127654
OADM, scaling limitation of full-mesh rings 96827
OCDMA network, multi-rate encoding and blind receiving, FBG array 74976
off-reson. gap solitons in nonlin. grating, Bragg reson. detuning 128555
oil indust., distributed fiber grating sens. down-hole reservoir monitoring 131939
opt. ADM with low crosstalk 75042
opt. FBG, packaging 116608
opt. fiber Bragg gratings, dispersion, opt. freq. domain charactn. 127634
opt. fiber symmetric couplers, unified coupled-mode theory *(Chinese)* 116640
opt. fiber transversal filter 127882
opt. fibre amps., WDM syst. gain equalization 93507
opt. fibre grating press. sens., train real-time tracing syst. 120878
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov. 2000) 113262
opt. pulse and beam propag., conf., San Jose, CA, USA (Jan. 2001) 124184
opt. time-spreading/freq.-hopping differential OOK-CDMA syst. 74916
parametric soliton tunneling, counterpropagating wave anal. 128554
pass. fiber-based components design/fab. 82106
pass. modelocked self-starting fiber laser pulse anal. using step chirped draw tower grating arrays 128389
phase-sensitive sideband detect. chromatic/polaris. mode dispersion meas. tech. 127718
phase-shifted Bragg gratings, ultrashort light pulses transm. 127620
phase-shifted fiber Bragg grating, pulse shaping, antisymmetric pulse generation 127611
phosphosilicate FBG, thermal/UV presensitis., high temp. sens. appl. 97288
photonic band-gap struct., all-opt. sig. proc. and telecomms. appls. 86027
photonic sens. interact./perform. in space radiat. environ., review 122477
photonics technol. appls., conf., Quebec City, Quebec, Canada (June 2000) 89534
red sensitive photopolymer holographic Bragg grating, Lloyd's interferometer 117544
photopolymer holographic memory, grating detuning effect 128591
plasma etching thinned Bragg grating fiber, tunable wavelength filter 127897
plasma etching thinned single-mode grating fiber, tunable wavelength filter appl. 131570
plastic fiber Bragg grating pass. component, tunability, WDM appls. 116651
PMMA-based polymer fiber Bragg gratings, thermal tuning 93093
polariz. synthesized opt. transversal FBG filter, tunable microwave freq. response 71471
polariz.-insensitive Bragg gratings design in zero-birefr. ridge waveguides 104717
power equipt. FBG-based temp. meas., deconvolution of opt. spectra 123074
press. sens. using shielded polymer-coated fiber Bragg grating 75568
quantum cascade laser for LWIR emission 93635
quasi-distributed intrinsic fiber-optic strain sens., white-light interferometry 97334
RZ opt. transm., 40 Gbit/s, adaptive dispersion compensation using Bragg gratings 74960
Sagnac loop with inserted fiber Bragg gratings, transm. charact. *(Chinese)* 71295
sampled Bragg grating with chirp in sampling period 71274
sampled fiber Bragg grating, temp./refr.-index meas. 86579
SCM sig. extraction, opt. switching syst., FBG filter 131506
self-adapted laser mode filtering photorefr. Fabry-Perot interferometers 127569
semicond. waveguides, opt. pulse nonlin. interacts., time-domain large-sig. model 117377
short pulse OTDM sig. transm. over nonzero-dispersion fibre 96866
sidetap opt. fibre grating filters 127889
silica UV-written planar waveguides and gratings, magneto-optic birefr. meas. 127744
simulated annealing designed for ideal WDM filter bank 104883
single FBG for modern telecomms. network 131443
single fiber Bragg grating, strain/temp. two params. sens. *(Chinese)* 86585
single type I fiber Bragg grating transducer, strain/temp. meas. 109596
slanted fiber Bragg grating gain equalization filters 109160
smart material/struct. condition, fiber optic sens. syst. 90564
smectic C* integrated Bragg grating continuously tunable filter 127885
SMF Bragg grating light distrib. meas. 116625
SOI Michelson interferometer sens. with waveguide Bragg reflective grating temp. sens. 131895
sol-gel based waveguides, fab., opt. amplif. and photosensitivity 104716
Space Shuttle Discovery, hydrogen leak detect. by fiber optic sens. syst. 133218

Bragg gratings continued
spectral-amplit.-coded fiber-Bragg-grating-based opt. CDMA systs. 96700
std. telecomm. fiber refr.-index changes on tightly focused fs NIR pulse irrad. 104641
step chirped fibre grating, phase mask principle & design *(Chinese)* 127683
stress-gradient sampled Bragg grating with chirp in sampling period, expt. study 74959
strong fiber Bragg grating chirp meas. by opt. freq. domain reflectometry 127639
struct. with fractionally organized gaps, reflectivity spectra evol. 74945
submicrosecond speed acoustooptic variable opt. attenuator 85979
superlattice filter low temp. microrefrigerators, SIN tunnel jns. 93173
superstructure fiber Bragg grating, soliton pulse shaping 128536
superstructured fiber Bragg grating, rect. pulse generation 72059
switchable narrow-bandwidth comb filters, AO superlattice modulator 116859
tapered single-mode opt. fiber with acoustic Bragg gratings, 1D acoustic cavity study 104841
TDM fiber Bragg grating sens. array crosstalk charactn. 109589
telecomm. fiber grating writing, blanket post-exposure, thermal stabil. 75029
telecomms. appls. 131392
temp. meas., phase-shifted Bragg grating all-fibre syst., sig. separation 120830
temp.-insensitive fiber Bragg grating lin. strain meas. 131960
temp./strain meas., fibre fluoresc./Bragg grating 120833
third-order dispersion-managed multisolitons, fiber Bragg gratings 105565
tilted short-period FBG coupling to cladding modes, refractometry 97280
transparent opt. networks, conf., Cracow, Poland (June 2001) 124192
tunable add-drop MUX, Bragg grating assisted MMIMI-coupler config. 109203
tunable chirped fiber Bragg gratings by distributed heater 116619
tunable external cavity semicond. laser with fiber Bragg grating feedback *(Chinese)* 71854
tunable fiber Bragg grating external cavity LD, 1550 nm 117243
tunable fiber Bragg grating fab. with independently adjustable central wavelength and chirp 127596
twin fiber grating tunable dispersion compensator 104664
twin-grating fiber optic sens., demodulation algm. 75573
unchirped fiber Bragg gratings, transm. props. based dispersion compensation 116650
underwater acoustic sens., WDM, fiber Bragg grating 131956
uniform FBG variable time delay line, dyn. channel routing 131374
uniform fiber Bragg grating strain-temp. discrim. 86589
uniform period fiber Bragg grating, chirp tuning, accelerometer appl. 127714
UV laser exposed fiber Bragg grating tensile strength 127681
UV-induced planar lightwave cct. index changes, birefr. control 128611
UV-written gratings and waveguides, expt. charactn. methods review 127743
variable-wavelength switchable Bragg gratings in PDLC 93278
waveguide with nonlin. Bragg grating, pulse power limiting 127752
wavelength-selective fiber-optic devices, modified phase-shift method charactn. 71277
WDM coarse/multimode/high channel devices, perform. comparisons 120130
WDM distrib. networks, single-fiber bidirectional opt. ADM 120139
WDM networks, simultaneous opt. monitoring and fiber supervision 109123
weapon stabilization/fire control, MEMS-based fiber optic sens. 76980
wide flat passband high cascadability wavelength-selective cross connect, 8-channel WDM transm. 131594
wide-band monochromator, fiber diffr. grating meas. 116637
widely tunable fiber Bragg grating design/fab. 131415
xanthene dye sensitised DCG holographic sensitivity 83017
Al_2O_3 fiber reinforced plastics, health monitoring technols. 68474
As-S-Se/As-S based chalcogenide glass multilayer channel waveguides, photoinduced Bragg reflectors 71308
As-S-Se/As-S chalcogenide glasses, multilayer channel waveguides, photoinduced Bragg gratings 127748
As_2S_3 chalcogenide glass waveguides, Bragg gratings, temp. depend. 116721
As_2S_3 chalcogenide thin glass film, second-order nonlin. suscept. 82938
As_2S_3 thin films, polariz. depend. photoinduced surface relief micro-gratings 93186
B,Ge-doped Bragg/long-period fibre gratings fab. using freq.-doubled Cu vapour laser 127607
Cu vap. lasers, output charact. and appls. 105088
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
Er/Yb-P/Al/Si co-doped short-cavity fibre grating laser 82514
Er-doped all-fiber pass. Q-switched low-threshold laser with Co^{2+}:ZnSe saturable absorber 71685
Er-doped all-opt. gain-clamped fiber-ring laser amp., laser filtering tech. 93529
Er-doped dual-stage fiber amp., gain equalization by short-period Bragg gratings 96802
Er-doped fiber Bragg grating lasers, freq./intens. noise 117096
Er-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wavelength operation *(Chinese)* 82523
Er-doped fibre DFB lasers for sens. appl. 75576
Er-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
Er-doped gain-clamped fiber amp. using single fiber Bragg grating 82524
Er-doped single-mode tunable fiber ring laser operation, widely tunable fiber Bragg grating 128415
Er-doped spectrally-efficient L-C band fibre amp., sampled fiber Bragg gratings 71660
Er^{3+}-doped fibre quasi-ring & FBGs, dual-wavelength lasers 93514
Er^{3+}-doped tunable DFB fiber laser, Bragg grating fab. method 105176
GaInAsP/InP lasers, high-reflectivity semicond./BCB Bragg reflector mirrors 71771
GaInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814
Ge highly doped fiber Bragg gratings, spectral charact., temp.-induced reversible changes 82085
Ge-SiO_2 fiber Bragg gratings, index struct., paramag. defects 127647
GeO_2-SiO_2 thin film, photon-induced vol. expansion, Bragg grating prep. 127554
H-loaded germanosilicate waveguides, strong photosensitivity 127794
H-loaded phosphosilicate opt. fibers, low-temp. hypersensitization 116602
InGaAs gain-switched LD with fiber Bragg gratings, near-transform-limited ps pulses 93720
InGaAs/GaAs single-mode ridge waveguide lasers with aperiodic Bragg-grating fibre, near-transform-limited picosecond pulses 71822
InGaAsP QW waveguide photodiodes arrays for WDM and fiber sens. appls. 131904
InGaAsP-InP integrated Bragg grating struct. opt. add/drop filters 131398
$LiNbO_3$ vol. hologram Bragg condition, PV field effects 83031
$LiNbO_3$ waveguides, Ti-indiffused, high order proton-exchanged grating reflector fab. 71457
$LiNbO_3$:Fe, light controlled delay of MW sigs. 127867
P_2O_5-SiO_2 Raman fibre laser, three-cascaded, Bragg gratings 71688
Si optoelectronic modulator based on Bragg mirror 82220
Bragg gratings continued
SiO_2-P_2O_5 fibers, H loading/UV irrad. effects on opt. props. 127646
SiO_2-on-Si waveguides, Bragg gratings, doubly leaky cladding modes 127793
Ta_2O_5 sub-micron period grating struct., interferometric excimer laser ablation 72126
Ta_2O_5/SiO_2/128°YX-$LiNbO_3$ photoelasticity enhancement, SAW, opt. modulator appl. 116725
Yb/Al-doped germanosilicate planar waveguide lasers, internal UV-written Bragg gratings 117173
ZrW_2O_8, temp. compensation, radial Bragg grating package, interferometric hydrophone arrays 104665

brain
see also electroencephalography; magnetoencephalography; neurophysiology
2.0 GHz, meas. elec. near-fields of model cellular transmitters near human head models 98768
2D fast MRI brain segmentation, region-based level-set snakes 110889
2D human brain MRI white matter/gray matter boundary segmentation 98412
3D functional MR image segmentation using, GA 98416
3D intraoperative MRI, brain-shift image registration using finite-element biomechanical model 87576
3D PET imaging, partial vol. correction, image/sinogram based algms. 122250
3D sagittal brain MR images, automated segmentation by masking/restoration operations 110867
3D SSFP imaging, diffusion weighted, navigator motion correction 98399
3D tubular tree structs., accurate detect., MR angiography 98471
3D-VIEWER, atlas-based syst. for indiv. and stat. investigs. of human brain 111064
acute cerebral vascular occlusion diagnosis, T_1-weighted images *(Chinese)* 76434
Alzheimer's disease, cortical disease progression, MRI, deform. maps 132761
Alzheimer's disease, MRI, image proc., artificial neural net *(Chinese)* 98424
Alzheimer's disease diagnosis, brain atrophy meas. by image segmentation and fuzziness 129658
amyloidosis diseases, microscope image class. by filtering of amyloid plaque 121892
amyotrophic lateral sclerosis, multislice ^1H MR spectrosc. imaging 132675
anaesthetised humans, motor evoked pots., neurophysiological mechanisms 76281
anatomical struct., robust 3D image segmentation with level sets 87310
anatomy/fn. MR imaging based on intermolecular double-quantum coherences 110862
anencephalic fetus, heart rate variability anal., time series fractal dimens. 122035
animal behavioral anal. by water maze tests, computerized syst. 129519
ANIPET, versatile PET scanner for lab. animals 132975
atherosclerotic discirculatory encephalopathy, EHF treatment 87853
auditory cortex, hierarchical organization, fMRI 76468
auditory cortex echo-planar fMRI, decay-sampling design 87572
BBLimage, portable open-source software toolkit for vol. image anal. 132714
biomedical MRI, sensitivity encoding, arbitrary k-space trajectories 132759
biomedical optics/photonics trends, conf., Miami Beach, FL, USA (Apr. 2000) 100430
blood flow, SPECT assess., stat. parametric mapping 122253
blood flow estim., single-coil arterial spin-tagging MRI 132685
blood flow vel./background EEG activity, cross-correl. 110491
blood flow/mRNA sigs., simultaneous meas., correl. anal. 122166
blood flow/vol. meas. using double-echo FAIR 87620
blood vol. maps, MR-derived, histological validation, tumour angiogenesis 132770
blood-brain barrier, cell phone effects and tumor treatment 98739
BOLD contrast fMRI, activation patterns, specified-resoln. wavelet anal. 110857
BOLD fMRI human brain imaging, ultrahigh mag. field 76443
BOLD MRI, functional neuroimaging, 1.5 & 3 T comparison 76444
BOLD MRI responses, human sensorimotor activation, transcranial DC stimulation 122098
BOLD/perfusion NMR, approaches to brain fn. studies 87653
brainstem, high resoln. MRI at 8 T 98387
BrainSuite, automated cortical surface ident. tool 87578
breast/brain MRI, preprocessed image reconstruction appl. 122076
broadband proton decoupling, vivo brain spectrosc. in humans 122102
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
cerebral blood flow, 2-chloroadenosine, spin labeled MRI 87629
cerebral blood flow, BOLD fMRI 87613
cerebral blood flow MRI, arterial input fn., fuzzy clustering 87654
cerebral blood flow quantitat., diffusible tracer, background compens. 122245
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform detect. using compensatory fuzzy neural nets 110801
cerebral haemorrhage, interdisciplinary mgt. using telemedicine, case report from Nepal 133157
cerebral microemboli monitoring, unilateral/bilateral US, cardiac surgery 98282
cerebral misery perfusion, MRI, spin echo T_2 BOLD 76424
cerebral pain proc., event-related fMRI, EPI & FLASH seqs. *(German)* 87606
cerebral perfusion meas., dyn. CT *(Chinese)* 122151
cerebral perfusion MRI, arterial input fn., artifacts correction 132671
cerebral radiation injuries, ^1H mag. reson. spectra/imaging 87637
cerebral spinal fluid, white/grey matter, MRI segmentation 87566
cerebrally dead adult patients, pulsatile elec. impedance response, perfusion changes 87392
cerebrovascular reactivity, MRI mapping, end-tidal PCO_2 87638
checkerboard stimulation, human V1, event-related BOLD response/VEPs 122100
Chinese characters proc., brain response, event-related fMRI 87573
CNN appl. to brain elec. activity anal. in epilepsy 110586
CNS activity, mobile phone pulsed EM field effects *(German)* 87952
CNS tumour malignancy eval., MRI, fractal dimens. use 76494
cognitive rehabilitation using telemedicinal VR 111278
conditions class. using ANNs 87400
connectivity, level sets approach 98481
cortex, opt. imaging, neuronal activity-driven sigs. extraction *(Japanese)* 132629
cortex, spike trains, precise firing seqs. detect. 110583
cortex segmentation, variational geometric approach 121885
cortical rat neurons, dissociated foetal, dielectrophoretic trapping 98227
cortical sulci, automatic landmarking 87580
cortical sulci, automatic recogn. using cluster of neural networks 87577
cortical sulci detect. MRI 3D curves tracking 98461
corticospinal tract, treatment planning, BOLD fMRI appl. 110865
craniopharyngioma, PMR spectrosc. 110883
CSF-attenuated imaging, T_1/T_2 selective method for improved SNR 132679
CT brain images, stroke lesion anal., rule-based approach 132838

brain continued
CT perfusion imaging, quantitat., reproducibility, stroke appl. 122119
CT-SPECT, combined syst. with single CdZnTe detector 122149
deform. tracking during neuro-surgical intervention 87692
developing CNS, clinical concerns in ultrasound exposure 110792
diffusion tensor imaging of developing mouse brain 98429
diffusion tensor MRI, partial vol. effects 87611
diffusion weighted MRI, microscopic tissue params. 76463
disorder class. based on apparent diffusion coeff. values in diffusion MRI 76472
DSA, patient motion artifacts reduction 87764
dual-band phones, human head, power absorpt. and temp. elevations 88009
dyn. & gated image seqs., spatially-adaptive temporal smoothing 132861
dyn. brain PET using ICA, noninvasive extraction of input fn. from carotid artery 122162
dyn. PET, OS-EM 110991
ECAT HRRT, high resoln. research tomograph, perform./first clinical appl. 122221
ECG, dyn. beat-to-beat QT-RR rels., ischaemic stroke effect 98176
echo planar functional MRI, repetition time 132771
EEG/MEG and MRI data sets, automatic alignment 84199
embolus ident. using rule-based ES 122016
endoscopic images and 3D surfaces, mixed-reality merging 87713
epileptic seizure transit., optim. 76309
epileptiform activity suppression by elec. stimulation, review 111073
extracellular apparent diffusion, NMR 87614
FastICA decomp. of evoked responses, dipole modeling 110651
FDG, fast parametric image reconstruction, dyn. PET data 132904
fluoroscopy, patient skin dose estim., angiographic frames, embolisation/cerebral angiograms 98771
fMRI, auditory stimulation, intermolecular double-quantum coherences 132660
fMRI, high-resoln., multislice partial k-space GR-EPI, cubic voxels 98436
fMRI, high-sensitivity single-shot perfusion-weighted method 98433
fMRI, motor areas detectability, BOLD contrast, 3 T magnet 110886
fMRI, stat. parametric maps, Bayesian approach to segmentation 122093
fMRI & neurochemistry spectrosc., review 110896
fMRI data, graphical display, multidimensional space visualisation 87602
fMRI data anal., comparison of temporal and spatial ICA 122082
fMRI data anal. using spline wavelets 132706
fMRI neuroimages, ICA 122083
fMRI scans, elastic registration using fast DCT 98466
fMRI sig. in motor area, early decrease detect. 122096
fMRI/VEP expts. combination, neural activity/BOLD response coupling 132686
focal blood brain barrier opening, MRI guided focused US 111065
foetal cerebral ultrasound exposures from clinical exams. 110799
functional brain imaging, opt. technol., overview *(Chinese)* 132643
functional MRI, human auditory cortex, block/event-related designs 122105
functional MRI, image distortion correction by multimodal non-rigid warping 87589
functional MRI, image-based physiological artifacts estim./correction tech. 132744
functional MRI, independent component-cross correl.-seq. epoch anal. 110906
functional MRI, neural activity detect. using canonical correl. anal. 122112
functional MRI, tissue segmentation-assisted anal. for human motor response combining neural net and fuzzy C-means 76483
functional MRI data anal., inform. theoretic approach incorporating spatial priors 87579
functional MRI image realignment tools comparison using computer-generated phantom 132690
functional MRI params., confidence intervals, jackknife resampling techs. 76419
geometric act. contours, incorporation of shape priors 121886
gliomas MRI, FLAIR seq., CSF/blood flow artifacts reduction 98388
hadrons, radiation therapy, dose distrib. 98678
haemodyn. response, BOLD & perfusion based event-related fMRI 87571
haemoglobin conc., oxy-/deoxy-/total-, opt. meas. precision 83073
haemorrhage, subdural and intraparenchymal intracranial, diagnosis using microwave-based detector 76416
head, human, hemodynamics, 3D vol. tomographic localization 132644
head motion correction in emission tomography, hybrid 3D reconstruction/registration algm. 132851
head MRI, 7 T vs. 4 T, RF power, homog., S/N comparison 98430
hemiplegic patients, cerebral haemorrhage, rolling pattern, quantitat. assess. 76222
hemodyns., functional MRI, nonlin. regression anal. 122069
herpes simplex encephalitis, diffusion-weighted MRI findings 110882
HF cochlear hearing loss patients, cortical reorganisation 121977
high ang. resoln. diffusion-weighted MRI 87631
high-speed high DOF spatial normalization for human brain imaging 76206
hippocampal surface struct. in patients with unilateral mesial temporal sclerosis, shape anal. 98390
hippocampus of patients with mesial temporal sclerosis and temporal lobe epilepsy, MRI, deform.-based segmentation 98392
homog. phantom exposed to cordless phones radiation, SAR 87937
human, water T_2 relax. components, magnetisation transfer 132722
human tissue X-ray diffr., breast, brain, prostate 110923
image proc., neural-net/ActiveX integrated environ. 106704
image registration, rigid, block matching to improve robustness 87314
imaging, fast multimodal surface matching, Powell's and Downhill Simplex algms., comparative study 76207
implantable biomimetic electronics, neurocomputational chips 111162
in vivo ^{1}H MR spectra anal., second derivative method 98400
infant cerebral ventricle vol., 3-D US/MRI comparison 122017
intens.-modulated stereotactic radiosurgery using dyn. micro-multileaf collimation 111091
intracerebral beta microprobe, radiotracer kinetics study, freely moving animals 132977
intracerebral glioma, rat, lipid droplets size, NMR meas. 132665
intracerebral radiosensitive probe, neuropharmacology investigs., small lab. animals 132962
intracranial arteriovenous malformation visualisation with physiological inform. 110960
intracranial germinoma, radiotherapy with tumour vol.-based dose selection 87877
intracranial temp. elevation from diagnostic US 110791
intracranial tissues, living, cond., monopolar needle electrode 87390
intracranial white matter lesions, MRI, multispectral 3D segmentation 87595
intravascular neurosurgery, telesurgery syst. 87783
ischaemia, regional cerebral blood flow levels, PET estim. 111003
lactate discrim. in echo-planar spectrosc. imaging, J-coupling 76441
landmark-based elastic registration using approximating thin-plate splines 87333
lesions, ^{1}H-MR spectra anal., mobile lipids 132701
brain continued
lesions, stereotactic conformal radiotherapy, proton/photon beams, dose distribs. 87994
localised 2D shift correl. MR spectrosc., human brain 98431
Lorentz effect imaging, neuronal elec. activity detect. 132719
mag. reson. angiography, conf., Lyon, France (Oct. 2000) 67353
magnetis. transfer mag. reson. spectrosc. 76462
malignant brain tumours, gamma knife stereotactic radiosurgery 133032
mammalian tissues, endogenous metabolites, diffusion-weighted MRS 76464
maps, perfusion MRI, dyn. arterial spin labeling 87640
MDAPET camera, missing projection data compensation 122230
mechano-encephalogram, amorph. wire micro SI accel. sens. 121901
metabolite, coupled spins, PMR, STEAM seq. 87634
metabolite maps reconstr. in ^{1}H-MRS imaging, time-domain tech. 87570
metabolite sigs., ^{1}H mag. reson. spectra anal. 87635
metabolites, normally aged brain, multislice ^{1}H MR spectrosc. imaging 87625
microPET P4, syst. dedicated to small animal imaging 132972
microstrip RF surface coil design, extremely high-field MRI/spectrosc. 132683
microvascular permeab., rat cerebral pia mater, image computer anal. *(Chinese)* 110827
microwave stimulation of act. points and effect on elec. activity of brain fields 98740
midsagittal plane extraction from coarse pathological 3D images 87307
ML-EM images, noise/resoln. props., incorrect modelling effects 132887
motor cortex somatotopy, long-term spinal cord injury/amputation 87887
motor evoked pots., anaesthetised humans, neurophysiological mechanisms 76280
motor-evoked pots., muscle vibr., crossed effects 76282
motorsensory activation prototype device, fMRI 110873
MR diffusion tensor acquisition strategies optimisation, diffusion anisotropy meas. 87649
MR images, tumour ident., fractal anal. approach 98480
MR images, white matter areas extraction 98389
MR images segmentation, regularized EM algm. 73265
MRI, 2D shape model automatic constr. 87607
MRI, apparent diffusion tensor 87667
MRI, automated segmentation of cerebrospinal fluid and lateral ventricles 132778
MRI, automatic intens.-based tissue class. 122095
MRI, automatic scan prescription 132672
MRI, brain region auto-extraction, neural network controlled snake 110864
MRI, cerebrospinal fluid flow artifacts reduction, FLAIR tech. 132745
MRI, cortical sulci detect. and tracking 122081
MRI, double quantum coherence filtered glutathione sig. 76456
MRI, fast fuzzy clustering segmentation algm. *(Chinese)* 110859
MRI, fast T_1 mapping with vol. coverage 98438
MRI, high b-value diffusion-weighted, normal brain 122090
MRI, highly diffusion-sensitised, gray/white matter dissoc. 87609
MRI, human brain, fast 3D sodium imaging 132655
MRI, J-coupled macromol. reson., GABA editing 132676
MRI, large lesions segmentation 98420
MRI, lateral ventricular vols., accurate meas. method 87599
MRI, long. change, normalised accurate meas. 110888
MRI, multispectral image segmentation using hierarchical self-organizing map 110908
MRI, nonlin. diffusion for interactive multi-scale watershed segmentation 87584
MRI, perfusion-based segmentation using similarity mapping 122106
MRI, registration, min. spanning tree algm. 95440
MRI, sensitivity-encoded spectrosc. imaging 132768
MRI, subcortical structs., automatic segmentation, inform. fusion 98418
MRI angiography, cerebral blood vessel extraction, region growing 76492
MRI angiography & brain attack diagnosis software, SLINKY & iPass *(Japanese)* 76490
MRI brain image segmentation using AM-FM model 110898
MRI brain images, connectivity-restrained multi-scale segment., fuzzy C-means 76471
MRI cerebral images, rule-based ES for automatic segmentation 76429
MRI datasets, 3D texture anal. 76482
MRI slices, holographic two-step storage method *(Chinese)* 98395
multileaf collimator intens.-modulated radiation therapy program 111090
multimodality med. image registration, mutual inform. based 76431
multiple sclerosis, magnetisation transfer ratio histograms anal. 132699
multiple-sclerosis brain tissue class., stat. 3D image segmentation algm. 110909
multislice echo planar MRI, rapid T_1 mapping 76448
near field microwave brain imaging, two-port microstrip test fixture 87561
nerve bundles connectivity, diffusion tensor MRI, scalar pot. field 87660
neural activity detect., block-design functional MRI 98407
neural tissue water compartments visualis., diffusion tensor MRI 76442
neuronal activities, blind separation from opt. imaging data 121880
neuronal activity, hemodynamic response, MRI, BOLD effects 87615
neuronal recording multisite microelectrodes design, DAQ syst. 121953
neurosurgery, augmented-reality endoscope navig. syst. 87789
neurosurgery, image-guided, model-updated, anal. using intra-operative MRI 87784
neurosurgery, US/MRI overlay with image warping 87477
neurosurgery/brain stereotaxic irrad. optimisation, multimodal matching appl. 122285
neurosurgical guidance, intra-op. 3D US & pre-op. MRI integrat. 76600
neurosurgical health services, video consultation, comparative impact 111279
neurovascular coupling, cerebral autoregulation, control syst., Doppler US 76341
non-rigid image registration, inter-subj., mixed variable optim. approach 76496
Nuclear Medicine Soc., conf., Toronto, Canada (Jun 2001) 100369
occipital lobe MRI, gray/white matter, inverse T_2 contrast 132751
oligodendroglioma with cystic component in infant 76520
opt. flow independent components have brain-like receptive fields 118245
opt. images of brain slices, macroscopic, 3D reconstruction 87520
opt. imaging data, fast convergent factorial learning of low-dimens. independent manifolds 110531
ordered-subsets EM algm., image segmentation, brain MRI appl. 132715
paediatric brain vols. comparability, image orient. effects, 3D MR data 110887
parcellation, adaptable fuzzy C-means for improved image class. as pre-proc. procedure 98423
perfusion, dyn. contrast MRI meas. in brain/heart 132736
perfusion conditions, contrast agent US imaging, data proc. 110746
perfusion imaging by spin-labelling methods, functional MRI appl. 98443
PET, high resoln. scanner, SSRB, MSRB, and FORE methods comparison 132871
PET, reconstruction strategies for HRRT 132873
PET brain images, penalised discriminant anal., prediction error selection 76578

brain continued
PET brain imaging, head movement correction, opt. motion tracking 122233
PET images, adaptive lossless compression method 111002
PET/CT image registration of rat brain/skull using AIR algm. 122212
phosphodiester spectral region, ^{31}P brain spectra, postprocessing method 132663
planovalgus foot, surgical rehabilitation in cerebral palsy 87794
pontine auditory pathway, human, functional mag. reson. imaging 122073
portable radio, near fields in front of and on far side of head model 98767
preterm newborn infants, neurodevelopmental outcome, cranial US scanning 87483
proton MR spectrosc. imaging, lipid contamination reduction methods 132767
radiowave absorpt. by brain/eyes in human head eccentric spheres model, anal. 87950
recogn. memory, perceptual/semantic components, PET 110996
regional cerebral blood flow, upright posture, orthostatic PET 110988
resting brain, oxygenation-sensitive dual-echo spiral MRI 132758
rhesus monkeys, PET neuroimaging apparatus, behavioural training protocol 98582
SAR in infant-sized head model near portable telephone users *(Japanese)* 122444
single-shot EPI, suscept.-induced losses, sig. recovery 132752
single-vol. ^{1}H NMR spectra, macromolecular resons. 87633
skull stripping problem in MRI solved by single 3D watershed transform 87581
skull/brain, rat, PET, CT, and MR image registration 132942
smooth distribs. reconstruction within unsmooth circumferences from limited views 132888
SPECT, absol. activity quantitat., anal. vs. iter. methods 122239
SPECT, cerebral blood flow quantification, atten./scatt. correction impact 122189
SPECT, dopamine receptor imaging, scatt., atten., collimator response 122173
SPECT, high resoln. multiple slice, SET-080 Alpha instrum. *(Japanese)* 76582
SPECT, lin. registration algms., errors from hypoperfusion lesions 111000
SPECT absol. activity quantitation from projections, anal. approach 111028
SPECT and MRI, image co-registration using anatomical features 98569
SPECT brain imaging, simult. Tc-99m/I-123, spectral factor anal. 122241
SPECT collimation/syst. geom., class. tasks related to Parkinson's disease 111022
SPECT filtered backprojection images, partial vol. effects correction 122248
SPECT receptor data, automated stereotactic standardization 76573
SPECT reconstructions enhancement by coregistered MR data 132869
SPECT reconstructions enhancement by coregistered MR data 111025
spiral-in/out BOLD fMRI, increased SNR/reduced suscept. artifacts 132691
stem/normal cerebellum, proton MR spectrosc. imaging 132766
stereotactic head mask syst., patient fixation/positioning, accuracy/reproducibility 87869
stereotactic neurosurg., image guided, functional database 76601
stereotactically-guided conformal radiotherapy, paediatric patients treatment syst. 122291
striata, ^{123}I SPECT imaging, simultaneous reconstruction/segmentation method 132868
stroke, acute, rapid 3D diffusion MRI, mice expts. 98444
stroke, white matter tract disruption, MR diffusion tensor imaging 132718
stroke MRI, diffusion-weighted EPI, sensitivity encoding 132695
struct. & fn., high resoln. imaging using OCT 98380
struct. segmentation, MRI, fuzzy modeling 98406
superparamagnetic iron oxide nanoparticles, brain MRI contrast agent appl. 98447
TDMA cellular telephone, EMI with hearing aid 94055
telemedicine, med. sig. watermarking 111292
temporal lobe epilepsy, ictal hyperperfusion, SPECT & MRI coregistration 110993
temporal lobe epilepsy, interictal hypoperfusion, MRI/PET comparison 132666
therapy, image-guided, intra-operative image segmentation and non-rigid image registration 87785
thermomapping for radiation effect diagnosis, stats. 98118
tissue, dielec. props., age, microwave freqs., dosimetry 87974
tissue class. from MRI using decision-tree learning tech. 122084
tissue dens. vols. class., multilevel neural network model 132754
tissue segmentation in MRI, RF inhomog. correction method 110881
transcranial Doppler ultrasonography, functional, test-retest reliab. 87487
transcranial Doppler US, 1 MHz transducer eval., embolic sig. detect. 98285
transcranial mag. stimulation, evoked silent periods, graphical meas. method 121978
transcranial mag. stimulation, repetitive, therapeutic appl., review 111075
transskull US surgery & therapy, large-area arrays design 111114
tumors automatic detect., MRI unsupervised segmentation 98405
tumour resection and PDT, integrat. of intra-operative MRI scanner and neurosurgical guidance 87786
tumour SPECT & MRI images, surface fitting based registration 87775
tumours, clinical thermometry, 27 MHz interstitial hyperthermia 111071
tumours, corticospinal tract displacement simul. 87575
tumours, gross vol. delineation on CT and MRI 110944
tumours, laser PDT appl. 87851
tumours, radiology & radiat. oncology data integrat., PACS 76763
tumours, vol. MRI/MR spectrosc. imaging data anal. 132733
ultrasound images, wavelet based denoising techs. 98313
US brain images restoration method, speckle noise removal 98330
US imaging, focusing tech. 110763
vascular cerebral lesions, multichannel derived median nerve SEP vs. EEG 110631
vascular tree extraction from MRA/power Doppler US image vols. 76491
VDTs, content-depend. health hazards, adaptive temporal filters appl. 98764
vessel size imaging, rat brain MRI/Monte Carlo simul. 132664
visual obj. constr., shape discrim., fMRI 76469
visual/motor/auditory cortices, fMRI, optimum echo time 87630
vol. multishot echo-planar spectrosc. imaging, brain diseases appl. 132732
Voxel Stuffing, vol. interpolation from cross-sectional images 98415
white matter, single-voxel PMR spectra 87610
B neutron capture therapy, brain tissue neutron RBE 98626
B neutron capture therapy, strongly forward-directed beams appl. 98689
^{10}B neutron capture therapy, accelerator-based, dosimetry 122394
^{18}F-labeled dopamine transporter ligand, biodistribution, dosimetry 76734
GSO brain PET camera, perform. obs. 122222
Gd neutron capture therapy, glioblastoma cell cultures, spectromicroscopy 76625
^{1}H NMR spectrosc. in vivo at 7 T 132684
^{123}I/^{99m}Tc simultaneous brain SPECT, absol. activity quantitation 76571
^{7}Li 2D CSI of human brain on clinical scanner 110891
O_2 saturation from time-resolved diffuse reflectance meas. 87556
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964

brain models
see also learning systems; neural nets
3D brain struct., adaptive-focus stat. shape model, segmentation 76420
3D phys.-based multi-obj. deformable model constr. 87684
3D silicon and recogn. based logic, enabling road to HAL 91131
adaptive GA and differential evol. based BP neural network for epileptic pattern recogn. 94858
Alzheimer's disease, cortical disease progression, MRI, deform. maps 132761
anticipatory attent. for upcoming stimulus, event-related desync., EEG/MEG 76268
blood flow, heterog. tissues, computationally efficient PET algm. 98576
CAM-brain machines, evolvability 91164
cerebellar granule neuron math. model 121926
cerebral blood flow, BOLD fMRI 87613
cortical source imaging from EEG, spatial filters, simul. study 98208
deep stimulation, desynchronising double-pulse phase resetting appl. 133008
diffusion tensor MRI, partial vol. effects 87611
echolocating bat, spike-based VLSI neural syst. modeling 125639
EEG dipole source localisation, realistic head model, electrode location errors 121947
EEG problems, anisotropic conducting media, finite vol. calc. method 132573
EEG source estim., dipole distrib. model 76260
EEG source reconstruction, BEM vol. conductor models 110644
EEG-/MEG-data, spatio-temporal current dens. reconstruction 76324
elec. tomography, alg. reconstruction techs., Tikhonov regularisation 98207
EM source anal., EEG/MEG, parametric noise covariance model 76298
epileptic seizures, foramen ovale/scalp EEG, simulated neuronal cell models 110602
epileptic sigs., interdependencies interp., macroscopic physiological model 110573
evoked pot. enhancement using neurophysiologically-based model 121916
face ident., 1 spike per neuron, degrad. resist. 118770
fMRI, quantitat. differentiation between BOLD models 122103
fractionated cranial irrad., ellipsoidal radiosurgery targets, radiobiologic modelling 87858
functional brain imaging, automated PET atten. correction model 98580
head model, clinical ultra high field MRI 87596
head model, EEG/MEG appls. *(Chinese)* 110608
high-resoln. EEG, realistic geom. spline Laplacian estim. tech. 98189
infants, deep brain temp. monitoring, multi-freq. microwave radiometry 98383
instantaneous multivariate EEG coherence anal., adaptive autoregressive models 87414
interaural time/intens. disparities responses, differences between N1 waves 76286
knowledge discovery from fMRI brain images by logical regression anal. 87685
lateralised event-related brain pots., attention/movement-related activity overlap 76285
metabolite conc., ^{1}H NMR spectra, LCModel 98450
MRI, 3-D robust registration, dense deform. field, hierarchical estim. 76479
MRI, Fe-rich gray matter, CPMG relax. rate 98441
multimodal brain image anal., phys.-based stat. deformable model 132710
multiple sclerosis lesions, automated segmentation, model outlier detect. 110855
neocortical interacts., stat. mechs., react. times, EEG correls. 98213
parenchyma, multigradient-echo MRI data, biexponential modeling 87650
perfusion-weighted MRI, contrast agent conc./dosage effect 132723
PET/SPECT neuroreceptor quantification models 110989
scalp EEG epileptic discharges, dipole modelling, intracerebral fields correl. 76278
spikes/background separation, independent component anal., dipole modelling/intracranial recording 76277
sustained neurons in fly, analogue IC design 91134
temp.-/constr.-change distrib., reconstructed permitt./cond. images 87380
temporal lobe epilepsy, interictal epileptiform activity, cortical current dens. reconstruction 121945
tissue vols. quantification using MRI fusion 76432
upper limb torque generation, cortical organization, EEG, MRI 98214
visual cortex, spiking associative memories, patterns 114917
$H_2{}^{15}O$ PET, regional cerebral blood flow, vascular radioactivity 132898

brakes
elec. motor car unit, brake force control *(Chinese)* 78307
electrohydraulic brake syst., reliab./safety enhancement, simul. 134598

braking
see also eddy current braking; regenerative braking
42 V automotive power supplies, integrated charger/disconnect switch unit 78321
artificial arm spherical US motor develop. *(Japanese)* 98709
asynchronous lin. short stator machine, rly. appls. 123955
automobile sliding mode wheel slip controller perform. enhancement 100304
commercial vehicles, antilock brake syst. ECU, HWIR simul. 134599
constr. mach. unstructured obj. attitude/stabil. control 134322
copper ore transport, 20 MW downhill conveyor syst., three-level converters 134707
eddy currents modeling, mag. Reynolds no. consideration 128695
electrohydraulic vehicle braking syst. develop. 134575
fly-by-wire systs. for motor cars using time triggered protocol *(German)* 89367
GMR angle detect. & rot. speed sens., robust, automotive appl. 75469
hot strip mill runout table, EM force appl. 100346
induction machine, liq.-metal rotor operation 124137
intell. sensorless PM sync. drives, direct axis current utilization 134443
LIREX class 618/619 diesel-elec. multiple-unit *(German)* 78259
mechatronic drive systs. braking, DC coreless motors 88763
model engine lip seals, tribocharging effects expts. 83113
rail vehicles electromechanical brake syst. *(German)* 78260
road surface monitoring syst. for cruise-assist highway systs. *(Japanese)* 124000
rot. conducting disc braking torque, 3D transient mag. modelling 123289
Shinkansen trains on-board ATC syst. control method *(Japanese)* 78243
steam turbine blades, vibrs. suppression, braking resistor bank 112316
stepping motor braking, back-phasing damping approach 112563
tele-operated unmanned vehicle, sens. fusion design 134517
transient stabil., braking resistors optimal control, Lyapunov method 88387
vehicle electronics, safety, reliab., conf., Coventry, UK (June 2001) 124228

branch-and-bound techniques *see tree searching*

brazing
see also soldering
DOE, rapid prototyping, packaging appls. 128576
high-power diode laser materials proc. review 72102
ultra-slim diode, high capability/reliab., welding appls. 70023
Ag-SnO_2-In_2O_3 elec. contacts, prod. optim. 90563
Au/Ni platings, thin sheet laser welding 72137

brazing continued
Cr-Fe-Y_2O_3/brazed conductor joints, solid oxide fuel cell 89157
Cu, high purity, diffusion bonding, brazing, lin. collider struct. 97916
$LaCrO_3$/Cu-Pd/Cr-Fe-Y_2O_3, brazed joints, SOFC 89156
$LaCrO_3$-CrFe5$Y_2O_3$1 heat-resistant elec. conducting joint, brazing, SOFC 123790
Ni-based brazing filler mech. alloying and nanostruct. charactn. 68385
breadth first search *see tree searching*
breakage *see fracture*
breakdown (electric) *see electric breakdown*
breakdown diodes *see avalanche diodes; Zener diodes*
bremsstrahlung
see also gamma-ray spectra; gamma-rays; X-ray emission spectra; X-rays
anisotropic XRD image mottling effects, energy dispersive meas. 101586
APS, layout for new undulator-only beamline front ends 132251
clinical electron beams, lateral bremsstrahlung dose distrib. 98644
equipt. modelling, photon beams prod. from electron accelerator, Monte Carlo code 76186
Europa Orbiter camera systs., charged particle-induced noise 133209
high-energy film radiography, proc. param. optim., MCNP model 101584
IREB, corkscrew oscill. confine. by alternate solenoid field *(Chinese)* 110114
kV X-ray therapy beams, surface dose increase, thin plastic wrap layer 98822
metallic materials, backscatt. dose, obliquely incident high-energy photon beams 87874
monochromatic X-ray CT, fluoresc. X-rays excited by SR 98561
plasma flash X-ray generator, Ce target, quasimonochromatic X-rays 110435
plasma maser effect, mech. model 93461
portal imaging detector, therapeutic X-ray spectrum, absorpt., noise, DQE 133029
portal imaging detector, therapeutic X-ray spectrum, X-ray absorpt., noise, DQE 132833
radiation dosimetry appls. using MCNP Monte Carlo code, review 98826
recycling accelerator, hard bremsstrahlung, high-efficiency source 110246
tuneable monochromatic gamma-ray source at 15 MeV linac of Gent Univ. 97934
X-ray diagnosis source, K-fluoresc. enhanced X-ray tube 98507
X-ray imaging methodology advances & capabilities, review 110431
ZEUS expt. at HERA, lumin. meas. from ep bremsstrahlung proc. 110110
$^{115}In(\gamma,\gamma')^{115m}In$, 4.3 MV DYNAMITRON photoactivation facility, review 87068
Kr^{8+} soft X-ray laser, opt.-field-induced ionization initiated transient excitation scheme 128085
Nd:YAG laser-induced vap./plasma plumes, shadowgraphic/interferometric obs. 105627
brewing industry
see also fermentation
beer aftertaste detect. using lipid membrane taste sens. *(Japanese)* 97423
bridge circuits
see also bridge instruments
1 kW asymmetric half-bridge converter cct. optimisation 88889
3-phase act. power filter, multiple single-phase VSI modules 122987
3-phase bridge rectifier, earth faults simul., safety protection *(Polish)* 99806
3-phase grid-connected inverters interface for alternative energy sources 134233
3-phase power networks calc. using Pspice *(Russian)* 77134
4 kW, 42 V induction machine-based automotive power generation scheme 134565
13.56 MHz current-source generator using HF CSI approach 123623
125 W high-press.-mercury lamp full-bridge reson. inverter ballast 89439
250 W high-press. sodium lamp electronic ballast develop. 134632
250 W metal halide lamp electronic ballast develop. 134633
500 W series-reson. DC/AC inverter for impedance-load drives 77960
AC motor drives, DC supplied, DC-AC conversion strategy optim. 123915
AC transm. conversion into HVDC, FACTS, rectifier, inverter 112005
AC-AC inverter, build-in PFC soft-switching, unified controller 88830
AC/DC power systs., harmonic anal., power converters, indust. drives 123001
AC/DC/AC converter with H-bridge cascade five-level PWM inverter 78015
act. noise reduction by loudspeaker with self-sens. actuation 120594
act. UPS using HF ZVS cycloconverters 123607
alternative HVDC converter schemes comparison 123657
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
arc welding inverter power source of double loop control, const. voltage and large current *(Chinese)* 90719
asymmetrical half-bridge power converter design optimisation 88888
autonomous bridge-type voltage inverter, invariant tracking control 99788
auxiliary reson.-commutated soft-switching inverter topol. 134200
bearing currents/EMI/DC-link voltage vars. mitigation, dual-bridge inverter 123458
bi-directional AC/DC converter based on neutral point diode clamped config. 134243
boost bridge audio amp. 131783
boost bridge music sig. amp., efficiency and total harmonic distortion 68602
buck+half bridge very-LV DC/DC power converter topol. 88891
buck-based config. AC chopper voltage conditioner 79568
capacitance displacement sens., digital synthesis technol. *(Chinese)* 86483
capacitive sens., self-oscillatory convertor, thermistor bridge 75462
cold cathode fluoresc. lamps, piezoelec. transformer electronic ballast 134631
coupled RC oscillators network, Wien-bridge ccts. *(Japanese)* 68639
coupling static converter with control loop/nonlin. EM devices 125220
current-mode absol. value ccts., biasing error improvement 101754
distributed PV power supply systs. implement. 123261
double half bridge DC/DC converter, peak current mode controller 78037
doubly-fed induction machine, rotor side control strategy 134468
dual full-bridge motor driver IC family for indust. motion control 114604
dual-bridge PWM DC-DC soft switching power converter 88892
EconoPACK+ modular IGBT inverter design platform 77993
EconoPACK+ six-pack IGBT module invertor package 88883
eddy-current testing, GMR based sens., (sub)surface crack detect. 125144
flowmeter for loading road tankers using proc. tomography 121276
fluid proc. efficiency improvement, AC motor drive converter topol. 134458
fluoresc. lamp, electronic ballast, self-oscillator, half-bridge inverter *(Japanese)* 125256
fluoresc. lamp, high PF ballast, forward half-bridge reson. inverter 134619
fluoresc. lamp act. PFC/ballast control IC 134618
fluoresc. lamp ballast, inverter, inductively coupled preheating ccts. 134620
fluoresc. lamp electronic ballast using half-bridge reson. invertor 89440
fluoresc. lamp electronic ballast with no series pass. elements 89436
fluoresc. lamp electronic ballasts, toggled duty cycle current control 134617
fluoresc. lamps, high PF electronic ballast, modified valley-fill filter 134614
bridge circuits continued
full bridge ZVS DC-DC converter, MOSFET body diode reverse recovery stress 134178
gas discharge lamp self-oscillating PFC electronic ballast 89438
GMR angle detect. & rot. speed sens., robust, automotive appl. 75469
half-bridge converters, current-doubler rectifier, unified anal. 88862
half-bridge driver IC with newly designed HV diode 125236
half-bridge series-parallel reson. converter, EM considerations 99741
half-bridge zero current transit. reson. converter *(Chinese)* 134156
hard/soft switched PWM invertors, conducted EMI emissions modelling 123635
Helmholtz-Thevenin theorem expansion to multiterminal networks 90624
HV CMOS IGBT gate driver controlling four switches 116045
IGBT H-bridge switching converters, full-digital control board 88832
IM drive design, freq. converter filter charcts. optim. 113081
impedance std. calib., rem. controlled coaxial switch, pneumatic actuator 109416
induction furnace, current reson. inverter, switching surge *(English)* 124095
induction heating power supply with PLL, surge anal. 124098
inductive sens., alternative cct. configs. comparison 75487
laser resist. trim syst., resist. meas. *(Chinese)* 97774
LCD backlight inverter topologies anal. 134249
LF electronic gate detect., cell/bacteria/colloid counting/sizing 121867
lin. fluoresc. lamp inductorless piezoelec. transformer electronic ballast 89435
low capacitance meas., act. bridge tech. 97773
low resist. meas., line resist. and jn. resist. removing *(Chinese)* 97775
modulating fn. PWM inverters, polynomial sampling algm. 123630
multi-bridge PWM inverter static sync. compensator, dyn. charcts. *(Korean)* 122868
multi-level converter, voltage-source duty-cycle modulation 134536
multifreq. quadrature bridge for capacitance & resist. stds. 109412
multiple lamp independent operation, voltage-fed half-bridge reson. converter 134613
multiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
MV power converter topologies for high-power appls. 134205
natural ZVS high-power half-bridge bi-directional DC-DC converter 134192
parallel bridge rectifier feed syst., current feedback algm. *(Chinese)* 90714
phase-shifted ZVS full bridge SMPS, MOSFET failure modes 88933
PM motor drive single-phase high PF converter develop. *(Japanese)* 77970
power electronics, flip-chip flex-cct. packaging 124386
power IC low-side device, high speed and low power dissipation, half-bridge power output *(Chinese)* 104148
power MOSFETs for HV full-bridge phase-shifted ZVS converter appls. 70167
press. sens., null pt. & sensitivity, applied/bridge voltage influence *(Chinese)* 75464
prog. AC power source, switched current topol. 99754
prog. single phase AC power source, switched current topol. 99757
resist. to freq. converter *(Polish)* 125636
semicond. strain gauge tactile transducer, finger force meas. 109509
sens.-bridge-to-microcontroller interface, two-point calib. 120650
single DC reactor type supercond. FCL as power source 77597
single phase UPS syst., AC-DC/DC-DC boost converter, half-bridge inverter 88909
single-phase DC drive syst. control, uniform PWM full-bridge DC-DC converter 113086
single-phase half bridge boost rectifier, SVM based control, PFC 123609
single-phase inverter discontinuous/continuous PWM schemes investig. 123651
single-phase PFC rectifier with wide output voltage control range 78036
single-phase three-level PWM AC/DC power converter topol. 123573
single-stage AC-to-DC converter, DC bus voltage control 123658
sinusoidal oscillator design adjusting for opamp slew rate and bandwidth limitations 68634
small doubly-salient PM motor, design and anal. 112462
smart-power ICs, parasitic minority carrier injection, substr. pot. shift, simul. 81535
soft-switched phase-shifted DC-DC converter, MOSFET switching stresses reduction 99738
solar energy-elec. sig. conversion modelling 104957
solar inverter, synchronized multi-phase PWM concept, wide input voltage range 77974
spin valve bridge sens. for current meas. & control 109508
SRM drives, half bridge inverter topol. 134504
supercond. fault current limiter, DC reactor effect 77583
T8 fluoresc. lamp ballast using piezoelec. transformer, charact. 134638
telecomm. controlled rectifier, periodic/chaotic responses anal. 108452
temp. sens. using DC bridge wires, params. determ. 110040
thick film strain sens., TCR and LF noise 75457
three phase buck-boost PWM rectifier multi-chip power module design 88905
three-phase 12/8 struct. SRM drive anal. 134500
three-phase LC bridge rectifier with almost sinusoidal input current 114606
three-phase soft-switching VSI for energy storage appls. 112672
two-arm delta-sigma modulated bridge based freq. deviation meas. 121139
two-cycle autonomous inverter ccts. for HF heating appls. 78032
Wheatstone bridge transducers, single-element impedance var. anal. 97192
Wien bridge oscillators, coupled network, sync. 101825
Wien-bridge based chaos generating cct., time-domain sensitivities 68543
Wien-bridge oscillator, fractional-order cct. 114647
ZCZVT PWM full-bridge DC-AC converter, commutation cell 134179
ZVS asymmetrical half bridge PWM converter, planar integrated L-L-C-T module 134218
ZVS half-/full-bridge converters, gate drive cct. 134212
ZVS MOSFET DC/DC bridge power converter losses anal. 123649
ZVS-half bridge type HF reson. DC-DC power converter *(Korean)* 123589
ZVS/ZCS full bridge DC-DC converter, transformer isolation 123592
ZVT PWM boost converters, conducted EMI noise generation/propag. modeling 123613
ZVZCS full-bridge PWM DC/DC power converter using coupled output inductor 88918
ZVZCS PWM full-bridge power converter topol. 99822
NbTi supercond. magnet diagnosis method using fast current discharge 71055
Pb-acid batt. charger topol. using power MOSFET/Schottky bridge rectifiers 112621
Si high-press. sens., fusion bonding, low-cost packaging 109804
Si sens. & ccts., piezojunction effect rel. to piezoresist., review 109479
4H-SiC merged PIN/Schottky diodes, inductively-loaded half-bridge inverter charactn. 126625
bridge instruments
see also bridge circuits
accel. sens., heating bar, bridge instrum. *(German)* 86467
freq. deviation meas. based on two-arm delta-sigma modulated bridge 121139
gradienter, hydraulic press. method, resoln. and response time 75452

bridge instruments continued
nondestructive material homog. charactn. by MM-wave bridge tech. 121162
press. sens., Wheatstone bridge, automotive electronics, analogue sig. proc. devices *(Italian)* 131852
press. sens. using thick film piezoresistive ink, SEM and X-ray diffr. anal. 97181
resist. bridge, cryogenic current comparator, SQUID readout 75780
$La_{0.67}Sr_{0.3}MnO_3$ mag. thin film based posn. sens. 109494
microminiature force sens., thin-film Wheatstone strain gauge bridge *(German)* 75742

Bridgman method *see crystal growth from melt*

brightness
3D motion multiresolution/luminance anal. based rigid obj. segmentation method 84325
abdominal image quality, real-time correction of wavefront arrival time errors 110766
AC PDP, LaF_3-coated MgO protecting layer 86833
AC PDP, sustaining electrode, luminous efficiency 121097
AC-PDP, address voltage pulse, luminance and luminous efficiency 109893
AC-PDP, luminance efficiency improve. by self-erase discharge waveform 97660
achromatic wide-angle CLC-based broadband polariser, perform. 109881
ALS, synchrotron IR beamlines, spectromicroscopy and fast timing 87139
antiferroelec. liq. cryst. cell reflective display, opt. config. and fab. *(Korean)* 93250
ASV-LCD, high-perform., continuous pinwheel alignment mode *(Japanese)* 121090
augmented reality display, adaptive brightness control 97690
avionics AMLCD, field-emission lamp design 98914
background-foreground segmentation, dominant motion estim. and static segmentation 94962
background-foreground segmentation via dominant motion estim. 73211
biaxial MEMS-based scanner, microdisplay appls. 93207
bistable cholesteric reflective displays, gray scale states, refl. spectra 97707
blue EL from polymer LED 93418
blue emitting organic thin film LEDs *(Chinese)* 104993
buoyed instrums. for upwelling sea-surface radiance meas., self-shading correction 88168
Bytelight high brightness electrodeless lamp, projection display 109902
carbazole-naphthalimide dyads, single-layer EL device 82372
CCD camera sensitivity anal., bidirectional reflectance distrib. fn. 97345
chromaticity diffusion 94704
CLC colour filters, opt. characts.,light recycling, brightness 109882
clinical image review using act.-matrix LCD, comparison with CRT displays 97631
cold-cathode fluoresc. lamp for LCD backlighting 97703
color image enhancement in poor visibility conditions 94705
color image proc., gamut clipping 94711
color image saturation enhancement, luminance adjustment method 106720
color-coded grating profilometry, lumin., RGB and HIS models *(Chinese)* 73388
colour LCD & CRT displays, colour gamut differences 86832
colour PDP, gas discharge principles, expts. & simul. 86825
colour PDP, surface-discharge AC type, advanced Japanese mfg. 86856
colour PDP module, NEC product lineup and technol. 121104
colour TFT-LCD, wide-viewing-angle, recent trends 86827
Compton backscatt. X-ray generation by high power dens. laser *(Chinese)* 110441
cornea/PMMA plate, excimer laser absorpt., vol. luminance appl. 117598
coronarographic densitometric meas., X-ray scatt. & veiling glare 76516
CRT cathodes, thermionic and cold cathodes, current dens., brightness effects 91566
CRT display image quality under ambient glare, ISO 9241-7 ergonomic std. 97687
CRT displays, monochrome, medium-resoln., calib. for purpose of board exams. 97635
CRT displays for vision research, luminance artifacts 121102
CRT phosphor screens granularity, CCD-based charactn. 97701
CRT picture tube, variable transm. coating 80620
Denisyuk's hologram recording, brightness distrib. features 82972
digital radiology CRT display syst. params. 110927
dihedral reflector faces, vis./IR wavelengths brightness correl. 117666
display devices, contrast-detail charact. evals. 97632
display viewability & measurable characts. correl. 97656
displays for hand-held portable electronic products 97695
double-layer organic thin film electrolum. devices, red light emission props. anal. 82367
DPVBi/AlO_x/Al-based OLEDs, nanosec. electrolum. spikes at voltage turn-off 127996
dye-doped poly(N-vinylcarbazole) film/ITO/Ag electroluminesc. device, all-wet fab. 71565
Earth-satellite links, spaceborne IR/microwave radiometry for near real-time rainfall atten. monitoring 117677
N-ethylcarbazole, plasma-polymerized, organic thin film EL device 127956
FEA-CRT, high defn. bright monitors, focus characts. 109908
FED, green phosphor, luminesc. charact. 75792
FED, luminance efficiency 97691
FED, MCP, moving picture, luminance 97661
FED indicator using screen-printed C nanotube emitters 86826
field-emission FPD, fully sealed carbon nanotube design 109885
flat discharge lamp for LCD backlighting, Hg-free/high luminance/high efficacy 121129
flicker reduction in old films 94684
fluoresc. lamp central partial darkness mechanism expts. *(Japanese)* 124065
fluorinated organometallic iridium cpds., efficient EL materials 93339
fractal image coding with multi-scaling for brightness *(Japanese)* 73396
full-colour pass.-matrix organic EL displays 121105
gas high-order harmonic generation, sub-10-fs laser driven 82844
generalised mixed-mode refl. LCD, 3-panel colour projection syst. 97686
green OLED pass. matrix display, long-life, characts. 109887
HDTV projection display for ATSC std., 61 in., large neck CRT 86327
high brightness high power semicond. lasers, inhomog. pumping 82671
high brightness X-ray sources, ultrashort pulse high power lasers *(Japanese)* 87271
high luminous efficiency V-shaped electrode struct. for PDP with high Xe ratio gas 97735
high-energy laser pulse opt. fibre beam delivery 72104
high-perform. displays, small spot contrast meas. 97657
8-hydroxyquinoline lanthanum LB film based double-layer EL devices 104990
ILA projector technol. based electronic cinema 86893

brightness continued
illuminance prediction techs., BRE-IDMP dataset 89427
image compression with non-uniform block segmentation and luminance approx. using bilinear curved patches *(Japanese)* 95145
image intensifier syst. under automatic brightness control, computer model 111204
image mode laser, ASE model, video projection display 97671
image registration by selective correl. coeffs. *(Japanese)* 84529
indirect illum. syst., LEDs, halogen & metal halide lamps 100319
interior lamp colour props./apparent brightness review 124058
IR imaging, target acquisition perform. modeling 75636
landmine detect., microwave radiometry, layered medium model 76986
large AC PDP, addressing time, single scan syst. 75804
LCD, advanced technol., mater. develop. & future trends 121083
LCD, brightness uniformity/cell gap deviation rels. *(Japanese)* 97637
LCD, wide-viewing-angle, interdigital electrodes, switching perform. 86829
LCD backlight unit, light-guide plate, plano-convex microreflectors 97748
LCD backlighting, elec.-field-coupled discharge lamp 97747
LCD backlighting unit, ultrahigh luminance, monitor appl. 97749
LCD backlights, white EL lamps appl. 97750
LCD image quality improvement using photopolymers 97711
LCOS liq. cryst. on Si microdisplays, frame-buffering cct. 97765
LD bar emission, effective brightness, array curvature correction 71886
LD radiation, high power, fast axis collimation using microlenses 82650
LED, ITO/LED/mirror/Si struct., wafer bonding 82383
LED colour spec. & perform., user requirements 93396
Leith-Upatnieks transm. hologram, public display appls. 82983
low power colour reflective TFT-LCD technol. 121106
luminous intens. & flux stds. develop., cryogenic radiometer *(Japanese)* 86389
mammography, GE DMR and full-field digital imaging, viewing conditions optim. and phantom image quality eval. 98497
med. image quality, light-box/computer monitor, visual syst. model 122147
med. imaging, CRT-FPD transitional challenge 97710
micro-opt. laser beam transform. systs., assembly procs. 93204
micromirror thin-film array for inform. displays 97759
microwave backscatt. model for bare soil field 76843
microwave radiometric systs., Volosyuk-FT for optimal radio brightness image reconstruction 73284
mil. cockpit displays, luminance level effects on visual perform. 98909
miniature act. matrix EL displays, gray-shade perform. 86836
MM-wave radiometer calib. load, brightness temp. 86925
multi-domain vert. aligned LCD 97678
multilayer stacked EL device concept, luminance enhancement 97667
natural backgrounds and artificial objs., spectropolarization contrasts 73534
night-time target detect., visual complexity effects 124087
nonimaging Fresnel lens solar concentrators for space PV, flux dens. issues 111351
ocean scanning multi-spectral imager, on-orbit solar calib. meas. 99011
old films, low complexity cut detect. in flicker presence 106857
OLED, white, improved stabil. 128014
OLED on polymer substrs. 104975
on-line temp. meas. instrum. for high-temp. obj., specific radiance *(Chinese)* 110035
opt. flow estim. using forward-backward constraint eqn. 94675
opt. flow motion estim., variable brightness phys. model 84131
organic LED, dye doped, EL 116997
organic single layer EL device, evap. 127957
PDLC reflective microdisplays, cell gap optim. & alignment effects 97699
PDP discharge, 3-D light emission images anal. *(Korean)* 121089
PDP drive syst., Plasma AI, image quality 86890
PDP technol. for large size TV screens, future perspectives 132099
phase-matched high-order harmonic generation *(Japanese)* 82453
photorefr. crysts., dark/bright PV spatial solitons, pos. refr.-index perturb. 117508
plasma display, high-resoln. interlaced addressing 86841
poly(2,2′-diphenylbiphenyl-4,4′-ylenevinylene-2″, 5″-bis(trimethylsilyl)-para-phenylenevinylene), EL/PL characts. 104910
polymer LED, singlet/triplet energy transfer to mol. dopants 93420
polymer stabilized cholesteric texture materials for projection display 97614
polymeric alkoxy PBD, synthesis, LED appls. 116999
polymeric LEDs, device characts. 116998
PPV/hole-transporting unit alternating copolymers, prep., LEDs 86814
projection display technol., optimised light sources, UHP lamps 109901
PV-photorefr. cryst., Gauss beam solitary evol. *(Chinese)* 93864
radiance factor maps of natural scenes, CCD-array-based apparatus 86628
radiation & detector stds. using SR sources, develop. *(Japanese)* 86390
radiograph viewing boxes, QC and luminance levels 122131
rain-perturbed sea surface, microwave emission, third Stokes param. 122690
real-time face recogn. syst. using multiple mean faces/dual mode Fisherfaces 129824
reflective CMOS LCD light valves, fringe-field effects 97685
reflective colour LCD panels, RGB directive reflectors *(Japanese)* 121091
reflective colour TFT-LCD using twist PDLC mode with single polarizer 97681
reflective full-colour TFT-LCD, micro slant reflector, high brightness and contrast 97708
reflective LCD, high brightness, opt. compensated twist-LC cell 97743
reflective LCDs, diffusive micro slant & bump reflector comparison 86830
reflective light valves, polarising microscope metrology 97658
reflective liq.-cryst. microdisplays, automatic inspection syst. for defect detect. 97654
reflective TN-LCD, wide VA, single polariser, compensation films 86839
retarder stack technol. for colour manipulation, polaris. control 109883
sea surface temp. estim., AVHRR MWIR band, MODTRAN values 133345
selective sharpness enhancement of heavily-corrupted old film seqs. 94687
self-ASE X-ray FEL laser saturation 82701
semicond. resonator solitons, incoherent opt. switching 82959
seq. arranged aperture syst., coherent beam focusing 128358
short glass fiber-reinforced polycarbonate notched plates, luminance measuring tech. *(Japanese)* 79476
snowcover, microwave emission model, layered struct. 99014
solid-state laser-based displays 97760
spatial luminance interacts. influence on perceived brightness 94870
street lighting, required illuminance, high-efficacy fluoresc. lamps *(Japanese)* 124086
TOMS-5 total ozone mapping spectrometer, radiometric calib. 122633
transparent OLEDs using $Ni(acac)_2$ as electron injection buffer layer 71577
twisted nematic display, dichroic dye, opt. params. 109891
twisted nematic LCD, wide VA photoaligned plastic films 86840
twisted nematic LCD viewing angle, in-plane-compensation foils 86838
ultrasound speckle reduction, compounding approach 110776

ghtness continued
VDT offices, lighting quality recommendations, dimmable lighting ccts. control 89426
video display unit tasks, inner contrast and perceptual quality 121088
video projectors, opt./illum. params. meas. *(German)* 86320
video seq. illum. effect descriptor 118460
video sig. denoising/sharpening 118334
video surveillance environ., illum. vars. compensation 118174
virtual mesa/spoiler mid-IR angled-grating DFB laser fabricated by ion bombard. 71765
vortex spatial filter opt. sig. detect. 71475
wavelet domain adaptive vis. watermarking of images 129424
white organic LED, high efficiency 97651
WWW shopping, coloured goods ordering, display problems 109876
XUV synchrotron/laser based X-ray sources 117311
YAG projection tube, luminance and lifetime 102942
AlGaInP/AlInP LED, fab. & perform. 117277
AlN:Si heavily doped electron field emitters, phosphor, AFM 80578
C nanotube composite electron transport layer for M3EH-PPV based LED, EL/brightness 127991
CO_2 lasers, waveguide-unstable cavities, laser beam profiling 82470
CaS:Pb EL devices, high-luminance/blue-emitting characts. 109886
Eu^{3+} polymer, organic EL device 116973
GaN:Zn blue powder phosphor for VFD/FED, synthesis, cathodolum. 109862
I act. quantum filter for image intensification 116886
InGaN, white light source based LEDs 82421
InGaN/SiC QW LEDs, high-brightness, growth mode, strain depend. 104998
InGaN-based UV LED excited ZnS-based phosphors, white luminesc. 82377
InGaN-based white LED lighting, high-efficiency, illum. characts 89441
Mo field emitters with integrated focusing electrode 97705
Nd:$YAlO_3$ high-brightness laser systs., fiber phase conjug. 71720
$Sr_2B_5O_9Cl$:Eu blue-emitting thin-film phosphors, luminesc. characts. 93353
SrS blue ACTFEL display, luminance-time characts., model 97670
SrS:Cu,Ag ACTFEL display device, electron transport and luminance 121096
SrS-based ACTFEL devices, electrolum. thermal quenching study 104977
Tb pyrazolone complex LED, efficient single layer operation 128017
Ti-phosphor fluoresc. PA-LOOK lamp, whiteness colour preception enhancement *(Japanese)* 124069
Xe flashlamps, bright choice for illum. 113129
Y_2O_3:Eu phosphor particles, flame spray pyrolysis, morph. charact. 93347
Y_2SiO_5:Ce,Sc,La,Gd,Lu, blue phosphor, luminesc. props. 104917
Yb^{3+} complex LED, IR EL 93402
Yb-doped phase-locked multicore fiber laser array, high-brightness laser beam 71661
$Zn(Ga_{1-x}Al_x)_2O_4$:Mn spherical phosphors, LV cathodoluminesc. 104940
$ZnGa_2O_4$:In_2O_3 phosphor, doping-enhanced luminance 127933
ZnO luminesc. thin films, PLD growth and charactn. 68315
ZnS TFEL device, $BaTa_2O_6$ interface elec. prop., turn-on charact. 97669
ZnS:Cu phosphor based AC powder EL flexible inform. display *(Korean)* 121123
ZnS:Cu,Cl(Al) phosphors, luminesc. mechanisms 93349
ZnS:Mn based EL device, growth & luminance, quasi-rheotaxy 104923
ZnS:Mn, doped/undoped, dc EL, elec. cond. 93336
ZnS:Mn-based ACTFEL devices, electrolum. thermal quenching study 104977
ZnS:TbOF thin films, sputter deposition, electrolum. phosphor 124816
ZnS:TbOF,Ag,Cu,Ce EL phosphor films, co-doping studies 127932
ZnS_xSe_{1-x}:Mn TFEL devices, band gap engng. for improved efficiency/brightness 75796
$Zn_2Si_{0.5}Ge_{0.5}O_4$:Mn green TFEL display, high brightness 97668
poly(N-vinylcarbazole) LED, $LiClO_4$ doped, efficiency 116982
upconversion phosphors, recent advances, new appls. 104932

Brillouin scattering *see Brillouin spectra*

Brillouin spectra
see also stimulated Brillouin scattering
back scatt. spectrum estim., least sq. method repetition algm. *(Japanese)* 97329
bal. Sagnac loop, all-fiber squeezing expt. 72068
diamond, CVD films, mech./opt. props., Brillouin microscopy 80636
distributed fiber temp. sens., microwave coherent detect. 75574
distributed fibre optic temp. sens. utilising spontaneous Brillouin scatt. 86595
distributed temp. sens., fibre-optic based for oil and gas wells 120828
distributed temp. sens., S/N characts. improvement 97302
EDFA-Brillouin hybrid amp., polariz.-maintaining, high-power low-noise source 105194
fiber optic BOTDA sens., distributed strain meas. *(Korean)* 120848
four port opt. switch, Brillouin-based fibre-optic sens. 105551
liq. cryst. SLM correction element, laser energy transport adaptive syst. 104822
microwave heterodyne detect. calibrated distributed fiber temp. sens. 75556
opt. fibers, multiple pulses stabil., phase-sensitive amplif., noise 104636
OTDR type fibre sens., Brillouin backscatt., optimum temporal pulse shape 86573
Rollinsford bridge distributed strain monitoring by Brillouin-scatt. based fiber optic sens. 97323
simultaneous distributed fibre temp.-strain sens., spontaneous Brillouin backscatt. 97290
temp. meas., phase-shifted Bragg grating all-fibre syst., sig. separation 120830
time-domain reflectometer distributed opt. fiber strain sens. 86777
transverse fibre Brillouin effect, electrostriction prod., soliton transm. systs. 120203
water bulk viscosity meas. by Brillouin scatt. *(Chinese)* 132232
Er-doped fiber laser, effect of pass. Q-switching at low pumping power 82784
GaAs(001)/(110)/(111), SAW ang. dispersion/propag. 69540
MgO/Fe(001)-based multilayers, growth, struct., electronic and mag. props. 124809
N_2 gas flow, high-speed, laser Doppler diagnostics, spontaneous Brillouin scatt. 121266
$(PbMg_{1/3}Nb_{2/3}O_3)_{0.68}(PbTiO_3)_{0.32}$ relaxor ferroelec. single cryst., hypersonic/dielec. studies 104375
$Pb(Sc_{1/2}Ta_{1/2})O_3$ cryst., ferroelec., micro-Brillouin scatt. 127194
Yb-doped double-clad fiber laser, unidirectional ring geom., high power operation 82535

Brillouin zones
see also band structure
GaAs/AlAs piezoelec. (111) superlattice, acoustic phonons, dispersion, transm. and refl. 91837
n-GaAs/AlGaAs superlattices, phonon-pumped terahertz gain 71763
$Ga_xIn_{1-x}P/Al_{0.5}In_{0.5}P$ (110)-oriented strained QWs, opt. anisotropy, barrier height effect 115313
GaN, bulk, polar opt. phonon scatt. and neg. Kromer-Esaki-Tsu differential cond. 103020

Brillouin zones continued
InAs, Shockley-Read-Hall recomb. rates, full-band-struct. calc. 91635
SiC, 4H, band to band tunneling, high field transport 69598
SiC thin films, 3C, 6H-SiC(0001) substr. crysts., lattice param. meas., XRD 68171
SiC:H, 6H, vibr. props., H_2 ion implant., annealing effects 69794

Brinell testing *see hardness testing*

bristles *see fibres*

brittle-ductile transitions *see ductile-brittle transition*

brittle fracture
see also ductile-brittle transition
BWRs, weld-induced residual stresses, num. modelling 77704
composite insulator rods brittle fracture mechanisms assess. 133763
CSP proc. with reworkable underfills for mobile phone appls. 113708
high-strength opt. fibers, cyclic fatigue testing 127668
semicond. residual stress, lifetime prediction model 125154
ultrananocrystalline based high resoln. MEMS technol. 104172
welded joints maint., fatigue, fracture, probabilistic optim. 89843
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
Nd-Fe-B PM, degrad. procs. 92863
Ni-P electroless UBM-solder interface, Ni-Sn intermetallics,joint reliab. 113715
Si:H pattern-implanted wafers, thermal/mech. separation 115292
Sn-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Ag-Cu solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Pb-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516

brittle materials *see brittleness*

brittleness
see also brittle fracture
high T_c supercond. coil mag. shield type fault current limiter 88493
high-strength opt. fibers, cyclic fatigue testing 127668
oblique powder blasting, 3D micromachining of brittle materials 103373
opt. glass micro-machining, brittle regime, in-proc. monitoring *(Japanese)* 89839
polymethylsilsesquioxanes, mech. props., fracture toughness 125099
semicond. residual stress, lifetime prediction model 125154
single-cryst. Si microscratching tests, ductile-to-brittle transit. *(Japanese)* 68475
wiresaw mfg., brittle material slicing, free abrasive machining 113459
Si single cryst. MEMS, sub crit. crack growth, crack vel./length 104170

broadband amplifiers *see wideband amplifiers*

broadband ISDN *see B-ISDN*

broadband networks
see also B-ISDN
3G mobile radio access stds. 96610
3G radio, wideband channel dyn., meas. and simul. 85692
3G radio design challenges in meeting customer expectations 108650
3G UMTS networks, integrated QoS support 85884
3G W-CDMA semi-blind channel ident., orthogonal transmit diversity 85804
3G wireless network, GSM and mobile IP integrat. 85893
3GPP syst., CPCH mechanisms, perform. anal. 74642
5.3 GHz wideband indoor radio channel, empirical charactn. 105753
5.8 GHz indoor radio channel charactn. 74608
10BaseS symm. Ethernet links, dedicated VDSL chipset *(German)* 74168
40 GHz band radio channel, ARQ combined with SR/GBN for broadband wireless systs., perform. 119262
51.84 Mbit/s airborne wireless expts., HALO commun. technol. 74562
60-GHz indoor WLAN access point shaped reflector antenna 74609
62.4 GHz LOS indoor channels, delay spread effects 85575
ABR explicit-rate traffic flow control 119146
access network implement. models, techno-economic study 108478
access network transport, standardization plan 96290
access networks, evol. and convergence implications for equipt. providers 96263
access networks, radio technol. *(Spanish)* 96422
access services, Belgacom perspective 130988
adaptive antennas for wireless broadband commun., constraints/possibilities 83684
adaptive multicarrier wireless access syst. 85556
ADSL broadband access syst. *(Chinese)* 85411
Advantest R3267 and R3273 spectrum analyzers 75389
Alcatel Myriad, telecomms. network appl. service-enabling platform 130545
all-digital impulse radio for MUI/ISI-resilient multiuser commun. over freq.-selective multipath channels 108673
all-IP 3rd generation networks, joint radio-IP resource reservation 85055
all-IP syst. beyond 3G, QoS support 108816
ATM, new horizons *(German)* 84822
ATM access switch, signaling software *(Chinese)* 74294
ATM broadband network, cell delay var. allocation in domestic region *(Korean)* 119147
ATM geostationary satellite networks with on-board proc., perform. of resource mgt. 109007
ATM networks, adaptive weighted round robin scheduling algm. 84930
ATM networks, neural net for bandwidth allocation of heterogen. sources 73821
ATM networks with guaranteed QoS, bandwidth allocat. using well-trained ANN 73813
ATM PON FTTx syst., broadband services delivery 108480
ATM traffic classifier for QoS mgt., FPGA implement. 102098
ATM wireless broadband networks, intell. control of QoS adaptation 131223
ATM wireless networks, quantitat. comparison of multiple access control protocols 95874
ATM-based radio local loop for broadband access 74607
ATM-based wireless multimedia services network, multiple access control 85653
ATV broadcasting in digital broadband distrib. environ. 109353
Belgacom's opt. backbone network 131479
BLAST capacities, thermal noise, spectral efficiencies 74625
BPSK-based WCDMA using RAKE receivers with channel estim., downlink perform. 131240
BRAIN develop. for broadband mobile access network beyond third generation 85546
BS digital broadcasting, multimedia home network systs., IP-based HSLAN *(Japanese)* 119791
business, commun. innovation 74161
business class services in broadband networks *(Polish)* 119457
cable modem broadband access, problems and solns. 85417
cable products, impairment testing 109374

broadband networks continued
cable systs., next-generation broadband services 97074
CableLabs CableHome project, home networking 74360
capacity upgrade strategies in residential areas, investment cost anal. 74461
CATV broadband network archits. 75312
CATV broadband network design and simul. 120555
CATV home networking components, lightning discharges 131743
CATV Internet, content and backbone *(Japanese)* 131749
CDMA, multimode, reduced intercell interf. for broadband wireless networks 85860
CDMA broadband WLL systs., capacity anal. 85558
CDMA downlink wideband channel estim. algms., error robustness 131286
CDMA mobile commun. syst., syst.-level simul. *(Chinese)* 85852
CDMA mobile radio, digital correl. proc. use 85714
CDMA multicarrier archit., orthogonal complementary codes for wideband wireless commun. 129001
CDMA networks, receiver perform., sync. impact 108830
CDMA wideband cellular networks, power control results 85745
CDMA wideband interf. cancellation base station, field test perform./anal. 72354
CDMA wideband networks, interf. subspace rejection, mixed-power operation modes 128812
CDMA/TDD cellular radio, video delivery and resource allocation 85890
CDSP, appl.-specific DSP for third generation wireless commun. 114792
cellular commun. using aerial platforms 96501
cellular traffic, hybrid method using optic beam interconnects 85895
circle trace channel estim. algm. for wideband commun. with pilot *(Chinese)* 119125
combined opt.-wireless broadband Internet access, transm. aspects 96135
commercial satellites for space missions commun. support 74905
connection admission control, performability 96330
core-network provisioning in interconnect WDM systs., Internet protocol centric signaling 131581
country-wide elec. generation and distrib. syst., DCS, real-time video 133520
Croatian ATM based public multiservice network 108003
CS-PRMA/AP, carrier sense PRMA with adaptive permission 95912
current situation 108013
CYTA ADSL field trial experience of broadband service delivery 108479
Czech Republic, interactive broadband systs. and market pot. 96013
data delivery over TV networks 97105
database migration in WAN environ. 96241
DCS base station broadband probe-fed patch antenna 131256
design methodology for high perform. ICs, wireless broadband radio baseband case study 125305
digital MUX syst., clock sync. coding/decoding 95801
digital reverse path 97072
dispersion compensation using fiber Bragg grating 93076
dist. education and training 108012
distributed appl., rate control, stable perform. anal. *(Chinese)* 119110
distributed Raman amplif., nonlin. pump interacts., multi-terabit transm. 131412
distributed WDM Raman fiber amps., bandwidth limitations 131602
DS-41 and UMTS intersystem roaming 96474
DS-CDMA, coherent multi-carrier/single-carrier, broadband packet wireless access, perform. 74597
DS-CDMA multicarrier commun., receiver design 108661
DS-CDMA multirate wideband systs., power control/rate allocation 85664
DS-SS CDMA wideband modem, IMT-2000 syst. test plant 131253
DSL CPE for business users 74463
DSL techs. for broadband access services *(Spanish)* 96307
DVD, broadband entertainment bridge 93012
elec. supply network powerline commun. technol. *(German)* 108509
electronic media, interactivity and broadband convergence highway 108435
empirical effective bandwidths as perform. measure 73752
equiv. bandwidth estim. with delay constraint *(Chinese)* 74442
Ericsson ENGINE Integral Network soln. for telecomms. mgt. 130594
ESA's ARTES Element 2, on-board proc. develop. 109010
Ethernet in the first mile, Internet access 108292
f-ARIMA procs. anal. in broadband traffic modelling 130872
FDD WCDMA systs., closed-loop transmit diversity 108746
fibre-optic wireless secure digital network, uninterruptible self-determinate hybrid high-speed multimedia 74965
FITCE 2001 telecomms. conf., Barcelona, Spain (Aug. 2001) 124214
fixed and broadband wireless access networks, basic principles 131103
fixed broadband wireless access systs. coexistence, IEEE recommended practice 119929
fixed broadband wireless networks, QoS-sensitive SDTM-TDMA access 119912
fixed cellular broadband wireless systs., transmit power control 85559
fixed wireless access in future integrated commun. 119916
fixed-wireless access 96418
fractal α-stable broadband traffic shaping/policing 119756
free space opt. technol./distrib. archit. for broadband metro/local services 86115
freq.-selective fading channels, space-time block-coded multiple access 85719
future-generation wireless networks 131206
generalized proc. sharing networks, end-to-end delay bound calc. 130182
GEO satellite multimedia syst., architectural solns. 109005
geo-sync. satellite networks, dyn. channel access protocol 96615
Germany, broadband cable networks, media law 131719
HALO stratos. aircraft for high-speed Internet access 85632
HeliNet programme, high-altitude commun. platform 85942
heterog. mobile environ., handover algm. 96568
HF multimode wideband channels, scatt. fns. 83290
HFC CATV networks, upgrading for broadband interactive services 97066
HFC fiber optic transm. equipt. for renewal *(Japanese)* 131755
high speed fibre optics develop. for greater bandwidths *(German)* 131493
high speed packet switches, improved fair traffic shaping algm. 119131
high-altitude platform links, rain scatter interf. levels calc. 83388
high-altitude platforms characts. 85941
high-dens. integrated PLC devel. and appl. to arrayed waveguide gratings 131427
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
high-speed MC-CDMA wireless access in forward link with multi-level modulation and hybrid ARQ 108774
high-speed networks supporting multimedia, traffic charactn. 84926
HIKARI Commerce service, convenience/security provision 120264
HIKARI Community and Collaboration Service using broadband network 119459
HIPERLAN/2, providing IP QoS 119326
HIPERLAN/2 WLAN std. MPEG-2 video transm. 119785
hybrid fiber radio systs., features and perform. 86026
hybrid mobile radio/fiber systs., opt. microwave sigs. generation 131471

broadband networks continued
IEEE ATM and high speed intell. Internet, conf., Seoul, South Korea (April 2001) 124230
IEEE broadband wireless Internet access, conf., Richardson, TX, USA (April 2000) 78405
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE MELECON conf., Lemesos, Cyprus (May 2000) 113196
IEEE vehicular technol. and commun., conf., Leuven, Belgium (Oct. 2000) 78454
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
IMT-2000, partially decentralized resource-mgt. 74821
integrated broadband cable networks emergence 75309
Integrated Broadband Mobile System, smart antennas to reduced dimens. space-time proc. develop. *(English)* 107414
integrated services future broadband radio access 108645
interactive commercial/multimedia inform. retrieval *(Japanese)* 119792
interactive multimedia services, broadband satellite access 109003
Internet, next-generation, overview and tech. challenges *(Japanese)* 119534
Internet connection and access services *(Japanese)* 130807
Internet delivery, telecomms./computer/broadcast technols. convergence 108105
Internet multimedia, caching/streaming framework 130345
Internet services, global mobility/QoS provision, SUITED soln. 96100
inverse MUX, xDSL systs. 73812
ionos. HF channel computer simul. 85496
IP flow control engine for broadband access network edge *(Japanese)* 130615
IP opt. networks *(Chinese)* 109205
IP optimized broadband wireless access 131105
IP with QoS guarantees via GEO satellite channels, perform. issues 84964
IT, global, satellite roles, trends/implications 85919
KomNet, opt. transport/networking technols. for broadband Internet 131469
LAN develop. trends 85181
LEO satellite networks, distributed geographic-based packet routing 74892
LF fixed broadband wireless access radio systs. 119918
Linkway™ for 21st century mil. commun. 111559
LMDS archit., multipath propag. and LOS interf. 85552
LMDS coding & modulation schemes, modem develop., channel anal. 74522
LMDS multicarrier radio transmitters, design and test considerations 119926
LMDS stds., architectural issues 96416
LMDS wideband subharmonically injection-locked freq. synthesizer 131107
LMDS wireless access network, ATM traffic mgt. 119917
local loop unbundling, shaping BT for broadband competition 96289
local services using free-space opt. links, network business perspective 86114
M-QAM nonlin. amplified sigs., fast adaptive predistorter 72728
mil. radio networks, service provision feasibility 111600
MM wave antennas, new considerations/challenges 128834
MM wave broadband wireless access technol. demonstrator for next generation Internet 119919
MM-wave broadband wireless indoor networks, combined spatial-temporal CM equalization 85465
mobile commun., beam and null simultaneous steering S/T-equalizer 108880
mobile commun., future generations using broadband access methods 85696
mobile commun., wavelet-based multicarrier DS-CDMA syst. 108753
mobile DSP, reconfigurable syst.-on-a-chip archit. 131137
mobile multimedia, transm. capacity 108815
mobile radio channels charactn. using SVD-Prony algm. at 2.4 GHz 83303
MPLS for multiservice delivery 95875
multichannel array subbanding with adaptive proc., architect. 96537
multichannel ultra-wide band WDM networks, supporting technols. 96795
multihop logical topol. for reliable broadband commun. 96819
multimedia driven HFC MAC protocol, hardware implement. 108481
Multimedia Information Service Center, design 74434
multimedia satellite networks and TCP/IP traffic transport 84943
multimedia satellite telecomm. systs. *(Polish)* 74888
multiple antennas, high spectral efficiency promise 83668
multiple transmitter/multiple receiver systs., unsupervised proc. 107394
multiservice broadband HFC networks, DWDM opt. technols. 108113
multiservice loss systs. Monte Carlo simul. 96220
music content, security and superdistribution *(Japanese)* 131238
NEC's coaxial transm. equipt. for renewal *(Japanese)* 131004
Nokia WCDMA expt. syst. for macro cell meas. 83306
NTT HIKARI-Soft services vision 120263
NTT opt. networks/technol., current status 131465
OFDM, RF high perform. front-ends in broadband wireless access 72761
OFDM broadband systs., spatial transmit diversity 74823
OFDM layered space-time coded wideband archit. for dispersive wireless links 128977
OFDM mobile systs., channel estim. for multiple antenna diversity reception 108926
OFDM mobile systs., receive diversity 96434
OFDM multi-user broadband mobile channel, decision-directed tracking 97011
OFDM space-freq. coded broadband systs. 83849
OFDM-based broadband wireless systs., efficient multiuser loading algm. 73773
OFDM-CDMA mobile radio syst., multipath fading channel, BER eval. 108893
OFFH-CDMA multirate syst., SIR perform. eval. 74967
office environ., 5.25 GHz OFDM expt. study 131084
on-board scheduling for multimedia appls. 108418
open service gateways for home, software archit. 74176
OpenCable 75310
opt. core networks, future WAN archit. 96736
opt. fibre-fed millimetre-wave radio systs. for broadband services 74564
opt. transceivers, MEM integrated waveguides 109056
OSS archit. for business proc. change *(Japanese)* 74131
packet-fair queueing schedulers in high speed networks, FPGA implement. 74074
PAM all-digital impulse radio for multiple-access through freq.-selective multipath 74662
picocells, wideband propag. prediction, new fast approach 83271
PLC high-dens. integrated technols., AWGs appl. *(Japanese)* 93141
PON, opt. fibre access networks 96295
power controlled cellular radio systs., time delay compensation 96542
power line carrier technol., review *(Chinese)* 74507
power transm. line common commun. platform concept *(Chinese)* 74506
prog. cable modems, wideband networks *(Italian)* 96311
public WLAN access, fixed and cellular IP access towards broadband connectivity 108206
QoS mgt. in multimedia networks and services, conf., Fortaleza, Brazil (Sept. 2000) 67373
QoS of rerouting algm. using stochastic automata networks 130489
QoS requirements, reservation-based session routing 107961
QoS service, fuzzy requirement based strategy 119159

adband networks continued
radio access networks, real-time ATM, hybrid ARQ protocol 131108
RAKE coherent combining for broadband single-carrier DS-CDMA wireless commun., expt. 74638
reliable Ethernet connectivity, broadband access network 108282
response initiated multiple access, MAC protocol for satellite channels 73967
RLS systolic array proc. 79941
Rogers Cable's network upgrade for reliab. increase 109373
RQDMA, MAC protocol supporting QoS in IP-based broadband WLL 95859
satellite commun. network, perform. of on-board ATM switching scheme 107890
satellite multimedia networks, service mapping and QoS provisioning 109008
satellite networking 109001
SDMA base station receiver for broadband fixed wireless access systs., modified DCMP algm. 108647
self-healing in networks with multiple reliab. classes 74012
self-organizing broadband wireless networks, design issues 119413
semicond. indust. role in wireless commun. evol. 108684
service perform. 96292
services provisioning 108064
SFH multicarrier DS-CDMA for transm. over Nakagami multipath fading channels 85538
shared access networks supporting Internet DiffServ, access control 84963
shuffleout network routing, QoS provisioning 84838
SLAMNet, Statistical Lambda Multiplexing Network archit. 74995
smart antenna syst., DSP board, W-CDMA WLL channel 72639
smart antennas for broadband wireless access 83689
software radio, mode switching/QoS issues 131208
South Tokyo Cable Television, Internet commun. service *(Japanese)* 131750
stratos. commun. syst., narrowband interf. rejection 108679
stratos. platform based broadband wireless access syst. 74600
stream-bundling approach for video services over broadband networks 97097
stressed networks, prioritized resource allocation 130973
substation automation, broadband commun., protocols, cryptography 78092
Switzerland, xDSL gateway to data highway *(German)* 131001
syst. archit. for broadband fixed wireless capacity maximisation 85572
TCP asymmetric service provision using broadband satellite, perform. 73962
TCP perform. improvement over high-speed flow switching networks 73948
TCP traffic in satellite networks with differentiated services, QoS 107889
TD-CDMA MAC wideband protocol, scheduling scheme 130459
TDM DEMUX, fiber OPA based 86084
TDMA networks, DCA by fixed cell assignment 120042
TDMA/W-CDMA and N-CDMA/W-CDMA spectrum overlaid systs., interf. suppression 72356
Telecom Italia's broadband services 131000
THESEUS syst. for open stock exchange trading, pan-European broadband networks/satellite links based 74322
third generation wireless networks, common mgt. archit. 96015
third generation wireless systs., open loop transmit diversity schemes comparison 85750
transm. scheduling for efficient wireless utilization 120022
turbo decoding, $O(\log_2 N)$-latency SISO 106085
UK, VDSL 74469
Unisphere Solutions IP platform for broadband services *(Polish)* 85439
USA broadband cable market, consequences of AOL/Time Warner merger rules 74066
USA broadband market, recovery or relapse 74465
UTRA TDD adaptive MMSE RAKE receiver 108916
UWB technol. for wireless video networking 119868
UWB WDM, network archits. 86059
VDSL based broadband access network 131010
VDSL for broadband access syst. *(Japanese)* 131003
VIA/BGA(R)low-cost high-perform. packaging technol. for broadband telecomms. 78613
video over BPON with integrated VDSL 108424
virtual Internet based on CATV using prefetch agent 120589
VoD systs. in broadband networks, perform. modeling 97084
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
W-CDMA blind adaptive antenna array beamforming scheme 108924
W-CDMA bursty data traffic, rate guarantee and fair access support 130446
W-CDMA cellular systs. supporting multimedia traffic, perform. eval. 84890
W-CDMA channels, multimedia transm., resource allocation with adaptive QoS 85384
W-CDMA downlink receiver algms. prototyping, basics and implement. 108562
W-CDMA mobile network videotelephony, decoded video quality 96523
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller with iter. channel estim. 72355
W-CDMA mobile terminal, PLL module 74691
W-CDMA mobile terminal, RF module, direct modulation 74799
W-CDMA power controlled schemes with interf. cancellation, capacity 85877
W-CDMA receiver, DSP ultra low power implement. 74678
W-CDMA receiver, IF-SAW filtering 96386
W-CDMA reverse link, coherent adaptive antenna array diversity/SINR-based fast transmit power control 74639
W-CDMA reverse link, inter-cell site diversity using two-step selection combining, expts. 74640
W-CDMA syst., RLC multiple rejects ARQ for packet data service, perform. anal. 73897
W-CDMA systs., QoS guaranteed services, emulator for radio resource mgt. 131152
W-CDMA UTRA radio interface, tree random access protocol with priority resoln. 84919
W-CDMA VBR traffic, anal. framework 96455
W-CDMA/OFDM for mobile multimedia commun. via LEO satellites, uplink perform. comparison 85640
wavelet packet-based MCM 83818
WCDMA, look-direction downlink-beamforming *(English)* 107413
WCDMA, periodic/event-triggered intra-freq. handover meas. reporting comparison 85787
WCDMA, shared and dedicated resources perform. 96439
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short-term channel props. 74666
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA downlink syst., soft handover technol. *(Chinese)* 108651
WCDMA mobile syst., fading channel, power control 74689
WCDMA single chip high speed channel decoder, design/implement. 94331
WCDMA single code/multi-code signalling for high rate data transm., delay spread effects, BER perform. 96465
WCDMA systs., indoor antennas meas. 83512

broadband networks continued
WCDMA systs., Kalman filter channel tracking algm. 74695
WCDMA UTRA uplink, joint demodulation with smart antennas *(English)* 106069
WCDMA vehicular channels, turbo TCM error perform. 74808
WDM burst-switched opt. networks, fault mgt. 96747
WDM PON, wavelength assignment schemes 96741
WDM switchless network using arrayed-waveguide grating 96843
WDM UWB 1000 channel network, architectural solns. 96727
WDM-based pass. opt. access network 96772
WDM-PON upstream channels, spectral slicing using wavelength-seeded refl. SOAs 120227
Web computing, broadband Internet *(Japanese)* 130839
wideband channelizing tunable opt. domain microwave filter 102745
wideband gapfiller satellite commun. link, propag. effects 108974
wireless access based on cable modem 85548
wireless access networks, consecutive point archit. 85549
wireless access networks, new design scheme 108641
wireless access systs., trends and challenges 85561
wireless ATM networks, rerouting techs. and signalling for handoff 108748
wireless ATM/AAL2 over burst error channel, perform. anal. 120075
wireless broadband access technols. 130837
wireless broadband data access, high quality delivery 96419
wireless broadband networks, channel state-adaptive techs. for throughput enhancement 119925
wireless channels, soft decoding techs. 94276
wireless commun., transmit/receive spatial MUX 131199
wireless data commun., space-time open archits. 74531
wireless Internet over LMDS, archit./expt. implement. 74595
Wireless Multimedia Hiperaccess syst. 74614
wireless network, dense deployment techs. 85472
wireless network, multimedia traffic, dyn. scheduling and admission strategy 84938
wireless network, multimedia traffic, dyn. scheduling and admission control 84937
wireless networks, dyn. guard bandwidth scheme 120019
wireless networks, integrated services with space-time block-coded transms. 108612
wireless stds., harmonization 85274
wireless systs., spatio-temporal channel model, ray-tracing-based charactn./verification 74652
wireless telecomm. systs., interf.-oriented version of freq. planning 108949
wireline network transceivers, CMOS analog front-end 102429
WLAN, SS syst., SAW filter, chirp $\pi/4$-DQPSK modulation 96384
X/Ka-bands mil. media mix for wideband gapfiller satellite syst. 111612
xDSL broadband access services, mktg. and managing 130989
Er-doped fibre amp., Yb-free cladding pumped, C-band WDM appls. 96788
GaAs MMIC, influence on struct. and cost of HF commun. and radar systs. 85547
SiGe BiCMOS IC, W-CDMA zero-IF front-end, UMTS receiver 96481

broadcast antennas
see also broadcasting; transmitting antennas
DVB-S, general systs. concepts 75268
MARCH, medium access control protocol for multihop wireless ad hoc networks 107845
MF elec. small broadcast antenna, radiation charact. anal. by simul. 83521
microstrip antenna, act., IMPATT integrated, theory 72482
Northpoint Technologies spatial diversity syst. 97045

broadcast channels
ad hoc networks, reliable broadcast protocol, receiver-oriented approach 84982
blind/semiblind channel equalization for wireless broadcast channels 73845
broadband data delivery over TV networks 97105
CDMA time-varying channels, unequally protected multistage VQ 85720
data broadcast, power efficient, hybrid index tech. 96222
degraded broadcast channel, ident. capacity region inner/outer bounds 128948
digital radio broadcasting, punctured convolutional codes/turbo-codes 109346
digital satellite news gathering and DVB, co-ordination channels 75300
DVB-T mobile reception, channel modelling & meas. 109349
FDMA-based multiuser transmit optim. 84901
Gaussian multi-antenna broadcast channel, achievable rates 128949
hierarchical coded modulation, broadcast commun. on fading channels 72727
inform. theory of large networks, achievable rate region 128951
Internet covert channels, commun. using phantoms 130828
Internet periodic broadcast of dyn. data, time division is better than freq. division 130827
IP fair queueing networks, video multicast 96178
RBRP, robust broadcast reservation protocol for mobile ad hoc networks 130457
set reconciliation with nearly optimal commun. complexity 128957
third generation wireless systs., open loop transmit diversity schemes comparison 85750

broadcast information systems *see radio data systems*

broadcast software *see telesoftware*

broadcasting
see also broadcast channels; direct broadcasting by satellite; radio broadcasting; television broadcasting
802.11 wireless networks, MAC layer broadcast support 108550
2002 Salt Lake City Winter Games, network access/flexibility 85143
acoustic sigs., quick search algm. using histogram features 95719
ad hoc networks, unidirectional links discovery/commun. using multi-hop acknowledgements 85020
ATM for broadcasting appls., experience of Institut fur Rundfunktechnik *(German)* 119143
ATM PON FTTx syst., broadband services delivery 108480
audio files hist. 75335
bandwidth requirement minimization for on-demand data delivery 119805
bandwidth-limited energy-efficient wireless broadcasting/multicasting 108547
British broadcasting indust., dyn. of indust. clustering 131723
BS digital broadcasting, multimedia home network systs., IP-based HSLAN *(Japanese)* 119791
data broadcast syst., concurrency control 130822
data broadcasting, push-based scheduling for min. latency time 85333
data multicast techs./archits./algms., survey 119124
domain caching for live-event Web services 108331
DVD, multimedia redefinition 93014
efficient commun. in unknown networks, broadcasting algms. 107632
EU competition law impact on public service broadcasters financing 97054
faster broadcasting in unknown radio networks 73757
GBS IP multicast tunneling 107822
interconnection networks, dual of hypercubes 85082

broadcasting continued
Internet delivery, telecomms./computer/broadcast technols. convergence 108105
Japanese inform. and commun. indust. survey 130531
Japanese news commentary cognition 118158
lightweight probabilistic broadcast 107924
LMDS/MMDS for datacasting 119927
location-depend. inform. service using data broadcasting *(Japanese)* 119737
log_2(N.m.p) broadcast switching networks 130245
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
media develop., historical aspects 75277
min. c-broadcasting network compounding algm. 107631
min.-time k-broadcasting, improved upper and lower bounds 67801
mobile computing environ., consistent data broadcasting 85349
mobile multi-hop ad-hoc networks, multicasting 74775
Mobilizer, distributed protocols for networks with mobile users 73918
MPLS technols. for IP networking soln. 84948
multi-attribute data broadcast, indexing techs. for power mgt. 86297
multiprotocol label switching, pot. for use in broadcasting *(German)* 119295
NTT HIKARI Content Service, video on Internet 119730
opt. broadcast-and-select networks, real-time message scheduling 131486
payment scheme for broadcast multimedia streams 130967
relay stations, broadcast-freq. coupling loop interf. canceller 97056
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
star interconnection networks, incomplete, commun. algms. 85083
stream-bundling approach for video services over broadband networks 97097
streaming video with storage area networks 119782
surveillance systs., networked *(Polish)* 131774
terrestrial transm. assets 75271
Tokyo Inst. of Technology progress in speech recogn. 118162
transfer error recovery for broadcasting network 86295
unifying slot assignment protocol multiple broadcast access 108709
VoD, dyn. heuristic broadcasting protocol 73957
WDM client server network archit., design/anal. 74318
WDM switchless network using arrayed-waveguide grating 96843
wireless networks, broadcast scheduling 74202
wireless sens. networks, convex posn. estim. 119909

broadside antennas *see antenna arrays*

bromide glasses *see halide glasses*

Brownian motion
see also colloids
2-D fractional Brownian motion interpolation, image proc. 129418
ATM network design, traffic models and optim.-based heuristics 84832
bone X-ray tomographic microscopy projections, fractal anal. 76526
conf., quantum mech., Gargnano, Italy (Sept. 2000) 89505
ELF natural noise, derived Hurst exponent 88141
filtering for lin. systs. with fractional Brownian motion 84744
fingerprint class. based on fractal Brownian motion 73462
fingerprint images, fractal method for sing. detect. 73442
fractional Brownian motion, stochastic calculus 67710
fractional Brownian motion rough surface, EM scatt. *(Chinese)* 131629
interact. Brownian motions, tagged particles, skew symmetric drifts 78814
low level vision, stochastic procs., from Langevin to Beltrami 106545
Markov procs., resolvents/Laplace transforms eval. by LP 78811
multiclass priority queueing networks, existence condition for diffusion approxs. 124466
multiply scatt. photons, low-coherence interferometric path-length-resolved Doppler meas. 132646
nonlin. filtering problems, Gaussian filters appl. 73681
open quant. systs., non-Markovian dyn., time-convolution projection 106285
queueing networks, multidimensional refl. map with discontinuities 119247
radar detect., sigs. fractal anal. 86171
self-affine intrinsic random fns., local stationarity/simul. 73634
self-similar proc. model, overview *(Chinese)* 118939
stat. MUX of self-similar sources 73810
stochastic partial diff. eqn. for nonlin. diffusion 79067
texture images, class. using multi-scale stat. estimators of fractal params. 129622
variational problems and semimartingale Brownian motions 78774

brushes
commutator motors, minimizing influ. of current commutation on EM environ. *(Slovenian)* 123278
DC motors, commutation arc in gasoline, effect on brush wear and commutator 123486
DC motors, maint. concerns for long operation 123497
discharges, dust ignition tests 83118
pulp and paper indust., DC motors, carbon brush perform. 124159
small PM motors, perform./brush commutation modelling 123524
universal motor brushes, bedding-in proc. *(German)* 112448

brushgear *see brushes*

brushless DC motors
aircraft air valve, BLDCM monitoring 76801
artificial heart blood pump, drive motor control *(Chinese)* 122352
axial field disc-type double-sided BLDCM, PM excitation 88762
BLDCM, single-phase, unequal air gap topol. 134062
bonded soft mag. material 99682
C-dump converter-fed, winding mutual inductance studies *(Chinese)* 88756
contactless power conversion for motors, HF transformer model 123498
control loop, time stepping finite element model 134056
design optim., Taguchi's methodology and FEM 134057
drive syst. for EV appls. 123960
DVD, two-phase spindle motor 134089
education, magnetostatic anal. of BLDCM using 2D PDE solver 113287
elec. bicycle BLDCM, act. EM torque harmonics compensation 123959
elec. scooter BLDCM torque control scheme 123957
elec. scooters, variable-winding BLDCM drive, control 123973
energy-efficient BLDCM mfg. technol. *(Japanese)* 99677
field-weakening regime using instantaneous power theory 77888
four-switch BLDCM drives, indust. appl. feasibility 89327
full-wave boosting C-dump convertor, operating modes *(Chinese)* 88878
fuzzy control of BLDCM by gray prediction 134073
HDD, BLDC spindle motor, unbalanced-mag.-pull optim. 123530
HDD BLDCM spindle vibr., eccentricity calcs. 134072
HDD brushless DC spindle motors, robust torque optimisation 78220
inner rotor, ferrite bonded magnet, magnetis. 134060
inverter with low cost RC snubber for induction/BLDCM 134207
IPM and SPM motors, rotor eccentricity, mag. forces 134087
lin. BLDCM, precise posn. control *(Korean)* 134065
mechatronics simul. educational software develop. 78518
num. simul. by coupling of mag. and elec. eqns. *(Chinese)* 77885

brushless DC motors continued
optimal torque control, quadratic prog. 99687
optimisation techs. derived from expt. design method 134058
PM BLDC compact motor solns. for transient appls. 123492
PM BLDCM, digital controller implement. 123488
PM BLDCM, FEM-based torque ripple anal. 123489
PM BLDCM EM torque calc. *(Chinese)* 99685
PM BLDCM torque ripple minim., ref. frame approach 134069
PMBDC motor, C-dump converter, switch operating model *(Chinese)* 88879
polyphase brushless PM DC-machine direct drive syst., design, eval. 134447
positioning syst. with BLDCM, control design 78226
powered wheelchair controller using master-slave control archit. 133058
prediction of conducted RFI emissions in BLDC motors for automotive appls. 100307
pump motors for spacecraft, develop. 111334
PV pumping syst. NdFeB BLDCM studies 88650
PV pumping systs., test facility/charact. meas. perform. eval. 99595
radial force dens., PM overhang effect 112544
rem. BLDCM learning lab. 78513
robust controller design, hard constraints, vector controlled BLDCM drive 113077
sensorless BDCM drive, current-mode control, intell. commutation tuning 89334
sensorless brushless DC driver, LEQG/LTR controller design 112541
servo-drive, DSP based, variable struct. model following control 123869
single-phase winding disc-type BLDCM, perform. testing 123485
skewed slots, cogging torque, 2D/3D anal. methods 88757
sliding-mode control, global of time-varying syst. 77887
speed control, using low-resoln. sens. 134066
table drive syst., nonlin. friction, GMDH-based modeling/compensation 113082
thyristor-based brushless PM DC motor drive speed control 89328
torque optim., response surface methodology 134061
torus BLDCM 3-D struct., mag. field/torque anal. 112538
traction motors, perform. anal. studies 123974
trapezoidal EMF BLDCM, commutation torque ripples reduction 88755
turbomolecular pump, integrated electronic control module 134094
two-wheel drive wheelchairs, steering algm., vector control, microcontroller 133062

brushless machines
see also brushless DC motors
42 V automobile air-conditioner, efficienct brushless motor design 134566
200 MW class brushless supercond. generator, mag. flux-pump excitation 77821
automotive brushless alternator, design and testing 134564
axial airgap machines, review 88764
cooling fan motor, speed control *(German)* 88774
DC generators voltage fluct., PWM control strategies effects *(Chinese)* 112547
doubly fed reluctance machines, space vector theory/control 99640
doubly salient PM motor, design anal. 123528
doubly-fed machines, EM design features *(Chinese)* 112466
doubly-fed reluctance machines, PF control 123366
doubly-fed reluctance machines, pump/wind turbine appls. 133985
doubly-fed reluctance machines control strategies *(English)* 77843
doubly-fed reluctance machines study 88710
flywheel slotted/slotless ring-wound PM brushless machines comparison *(Korean)* 123841
Halbach PM machines and appls. review 99632
high-speed PM brushless machine rotor resons. 123312
high-speed slotless brushless PM machines, airgap flux dens. comparison *(Korean)* 133932
home ventilation equipt., brushless PMSM drives 124116
knitting machine, circ. warp, patterning servomechanism 100533
lin. brushless PM motor design/develop. optim. 123508
multi-disc axial flux stratospheric aircraft propeller drive 133261
PM high-speed slotless machine, design and anal. 134093
PM lin. brushless motor, air core, space harmonics field anal. 134063
PM motor, design optim., min. fn. calls 124293
PM motor drives, SABER simul. 123899
PM motors, low inductance, multilevel DC link inverter 133931
radial/axial field PM brushless DC machines, perform. comparisons 123496
refrigerator compressor motors, sensorless sinusoidal control 124123
sensorless PM brushless AC motor drives, speed estim. improvement 123879
servoactuators, full integrated soln. 123525
slotless-type PM lin. brushless motor design/anal. approach 123519
spindle motor, cogging torque, mag. cct. 134092
three-phase sync. generators, winding condition monitoring 133979
ultra light rail bus, flywheel powered, integrated elec. drive train 100281
washing machines, three-phase IM, electronic control ccts. *(German)* 89467

bubble chambers
see also position sensitive particle detectors
HI tracks, charact. in bubble detectors 121682
ICARUS liq. argon CR detector expt., review 110385
liq. Ar detectors, neutrino meas., expt. design 97981
particle tracks, high-resoln. recording by in-line holography 82981

bubble jet printers *see ink jet printers*

Buchholz relays *see relay protection*

buck-boost convertors *see DC-DC power convertors*

buck convertors *see DC-DC power convertors*

bucket-brigade device arrays *see charge-coupled device circuits*

bucket-brigade devices *see charge-coupled devices*

buckling
aircraft skin panels, embedded FBG sens., buckling anal. 88046
composite sandwich under hygrothermal/mech. loads, delamination growth *(Chinese)* 101504
design optim. of structural steelwork using GA, FEM and syst. of design rules 79124
electrostatic microstructs., 3D self-assembling/actuation, MOEMS appl. 99878
metal layer/ceramic substr. buckling driven interface delamination 113616
micromachined elastic struct. with electrostatic actuation, bifurcation of equilibria 70348
nonlin. structural response, sensitivity anal. and optim. 79131
plate, laminated, shear-deformable, piezoelec. actuators, thermal postbuckling 127266
plates, laminated, shear deformable, piezoelec. actuators, postbuckling anal. 127263
plates, thin piezoelec., buckling anal., FEM/DKQ element *(Chinese)* 127162
rect. plate buckling with block GMRES method 124676
Si diaphragms, form. by precision grinding, buckling suppress. 92548
Si, polycryst., built-in strain, sens. fab., surface micro machining 110003
SiN compressive thin film, mech. props., ring test struct. 104214

ckling continued
SiO_2-Au buckled composite microbridges 104185
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
ckminsterfullerene *see fullerenes*
ckyballs *see fullerenes*
dgeting
see also costing
Danish elec. indust., energy consultant appl. overview 133452
R&D budget allocation, optimal parallel strategy *(Chinese)* 89664
ffer circuits
ATLAS high-level triggers, readout buffer prototype 132459
chemoluminant med. diagnostics, low-light-level sens. 122065
clock buffers design, min. jitter 91000
CMOS adiabatic gates, buffer comparison with conventional approach 90884
CMOS buffer, adiabatic charging of long interconnects 68743
CMOS buffer amp. design used in LV MEMS interface ccts. 114620
CMOS chip output buffers, switching noise reduction, design tech. 104088
CMOS clock and data recovery with two-XOR phase-freq. detector cct. 102314
CMOS logic ccts., path balancing algm. for glitch power reduction 90856
CMOS LV rail-to-rail switched buffer topologies for opamp input stages 114627
CMOS PLL, low-power voltage control oscillator 101837
CMOS power-on reset pulse generator, LV cct. 101852
CMOS systs., ground interconnection networks, max. simultaneous switching noise 70298
CMOS voltage buffer with resistive freq. compensation 92475
current-to-voltage converter and buffer cct., parasitic capacitance 114906
four-transistor current copy unit based current buffer *(Chinese)* 114900
IC interconnect tree optim., hybrid DQP algm. 70258
indust. GHz CPU, VLSI clock distrib. cct. design 102250
integrated opt. posn. encoder syst. with phase calib. 75505
ISFET/MEMFET, const. current driver 81344
LCOS liq. cryst. on Si microdisplays, frame-buffering cct. 97765
LV interface for TFT-LCD, low power consumption 101753
metal interconnection, ESD/EOS protection cct. and I/O buffer 126505
MMU, fully associative TLB, CAM match cct. 125535
pass transistor logic cct., buffer minimization 68707
polysilicon TFT LCD data driver output buffer, VGS compens. source follower 86854
polysilicon TFT push-pull analogue buffer for TFT-LCD data drivers 109914
post-layout optim. combining buffer insertion and transistor sizing 125285
sinusoidal oscillators based on current differencing buffered amp. 101827
Steiner tree optim. for buffers, blockages and bays, VLSI 104068
submicron interconnect delay reduction techs. for bi-directional/uni-directional buses 125274
tri-state buffer inference in HDL synthesis 101972
tristate-capable output buffer, 7 V, implemented in std. 2.5 V CMOS proc. 114854
VLSI, symm. buffer design 92438
VLSI buffer and wire resource allocation, design methodology 126973
VLSI design, interconnect-centric floorplanning, repeater block planning 70256
GaAs PHEMT laser/modulator driver IC with dual-mode act. matched output buffer, 10-Gb/s 131410
NbN IC, RSFQ logic cells 70841
Si radiation detectors, leakage current, low-power CMOS SOI readout front-end 110390
buffer storage
see also cache storage
2.56-Terabit/s opto-electronic switching fabric based photonic core node 85443
AAL2 protocol for low-bit-rate multimedia services, perform. 107810
AAL2 voice data transm. using shared-buffer scheme 130223
ABR adaptive congestion control with act. buffer control 95766
ABR explicit rate flow control, deterministic/probabilistic anals. of resource requirements 84829
ABR traffic, adaptive burst spacer design/implement. for effective-rate enforcement 130225
ad hoc networks with self-similar traffic, stat. multiplexed adaptive operation 74563
adaptive multimedia stream service with intell. proxy 96232
ATM guaranteed frame rate service, TCP/IP, buffer mgt. and scheduling 73816
ATM input-queued switch with pipelined approach to arbitration 73790
ATM LANs, admission control for hard real-time connections 119585
ATM mobile wireless networks, perform. models of handover protocols/buffering policies 108803
ATM MUX with heterog. ON-OFF sources, perform. anal. 130237
ATM network, rate adaptation buffer with Markovian arrivals 84922
ATM network, VLSI modular archit. for video streaming real-time proc. 106826
ATM network MUX with large size buffer, call admission control *(Chinese)* 73785
ATM networks, call blocking reduction, cell splitting/merging strategy 95794
ATM networks, cell loss rate estim., convolution appl. 107640
ATM networks, multiple-criteria call admission control 95758
ATM networks, prediction-based longest-queue-first scheduling algm. 130328
ATM prioritised switch, fuzzy congestion controller design 73801
ATM shared buffer switches with arbitrary traffic distrib., exact anal. model 73802
ATM shared knockout switch for hardware reduction under variable hot-spot traffic 130231
ATM shared-buffer switches with grouped output channels, queuing anal. 73783
ATM shared-memory switches, replicate-at-send multicasting model 73791
ATM switching nodes, on-off arrival procs., selective-delay push-in buffering for QoS 107638
ATM systs., general switch mgt. protocol hardware implement. 131034
ATM wireless links, real-time traffic, dyn. WFQ scheduling 96407
ATM wireless networks, bandwidth/buffer dimensioning for guaranteed QoS 96351
ATM wireless networks, in-band signaling based local/global handovers 108793
ATM wireless networks, QoS mgt. using large deviation principle 85736
ATM/IP networks, fuzzy buffer mgt. 119166
banked-promotion TLB for high perform. and low power 125513
BFR routing protocol for real-time transport in grid networks 73940
Birkhoff-von Neumann input-buffered crossbar switches, scheduling 95761
broadband commun. networks, QoS requirements, reservation-based session routing 107961
broadband satellite multimedia networks, service mapping and QoS provisioning 109008
broadcast-and-select photonic ATM switch with tunable wavelength converter for wavelength reduction *(Japanese)* 109190
CDMA random access systs. with heavy-tailed packet length distrib., perform. anal. 131202
buffer storage continued
channel condition ARQ rate control for real-time wireless video under buffer constraints 95884
CIXB-1, combined input-one-cell-crosspoint buffered switch 119137
closed-loop telecommun. traffic control, fuzzy set theory/fuzzy logic 73820
combined input-output buffered switches, delay-bound guarantee 73793
compressed image transm. on fixed-rate digital channels 107050
computer networks, fast congestion feedback with mark-front strategy 96161
congested networks, packet loss control, dyn. partial buffer sharing 95797
crossbar ATM switch for multicast traffic 107658
CSMA/CD buffered systs., perform. anal., tagged user approach 107783
CSMA/CD network traffic model, crit. phenom. anal. by computer simul. *(Japanese)* 85289
data transport network, buffer mgt. control 119622
dominant time scale based QoS estim., meas.-analytic framework 119151
DWDM opt. buffers, wavelength allocation algms. 131501
DyBASe, buffer allocation scheme for VoD systs. 109380
electronic white board, commun. aspects 96283
energy aware sampling schemes 96446
error control/media sync. effect on appl.-level perform. 74433
Exedra media server, modular and efficient resource mgt. 119611
fast block-based motion estim. via DC matching 107255
fast-TCP mechanism for networks with high bandwidth-delay products, perform. anal. 95892
feedback/feedforward arrayed-waveguide grating-based opt. packet switches 119850
fiber loop buffer memory-based all-opt. packet switch 75011
full memory multidestination selective repeat ARQ protocol with finite receiver buffer, anal. method 73892
G/D/1/B queueing model with self-similar input traffic, perform. 84925
generalized proc. sharing fed by long-tailed sources, asymptotic anal. 119246
guaranteed service networks, joint smoothing/source rate selection 118601
H.261 video coding, quantization factor perform. 129758
H.323 multimedia conf. syst., MUX model 95774
HDTV decoder sync. syst., video buffer mgt. 86324
heterog. network traffic modelling in wavelet domain 130325
high-speed networks supporting multimedia, traffic charactn. 84926
high-speed shared-memory switch fabric buffers, scaling 119135
input and output buffered switch, simple iter. matching 130219
input-buffered switch, practical scheduling algm. 95785
input-buffered switches, max.-sized matching scheduling, pipeline-based approach 107634
input-queued cell-based switches, av. delays/queue size av./variances bounds 119152
interactive VoD over high speed networks 109381
Internet charact. inference from moment-based estimators 119687
Internet router, jitter regulation with delay consideration 74203
Internet routers, rate and queue controlled random drop buffer mgt. 74206
IP DiffServ fairness, traffic conditioning and buffer mgt. scheme 130762
IP over WDM links, Internet traffic shaping 96728
IP traffic with multi-class QoS in VPN, modeling/perform. anal. 107842
IP traffic with QoS provisioning, opt. packet switch 109195
jitter mgt. algms., perform. eval. 130200
large-scale ATM switches, queuing strategy 84828
lifting factorization-based discrete wavelet transform archit. design 73636
LINUX TCP/IP protocol stack, anal./eval. 95897
LMDS wireless access network, ATM traffic mgt. 119917
load bal. Birkhoff-von Neumann switches 120282
logic schematics, high-speed display/graphics mgt. *(Chinese)* 79755
M/M/1 queue, required work with appl. in IP packet proc. 84972
Manhattan street networks, opt. buffering effects 86012
memory archit. for fast packet buffers, anal. 114748
mgt., load adaptive mechanism 107780
mobile agent based reliable message passing 107815
mobile multimedia networks, data transfer control during handoff 85675
mobile network, multicast protocol for multimedia streaming 130380
MPEG syst. target decoder implement. 129704
MPEG transcoder, rate control considering drift-error propag. 95091
MPEG-4 compliant video encoding, anal. and rate control 106893
multi-Tbps protocol independent switching fabric, archit./perform. 119139
multimedia commun., integrated push/pull buffer mgt. method 108429
multimedia networks, QoS depend. curve charactn. 85385
multimedia on demand services, video multicast distrib. 97100
multimedia systs., compensation buffer size 108417
multimedia traffic, network load limit and queueing buffer size 119571
multiple input-queued switches, QoS guarantees for unicast/multicast traffic with fixed/variable-length packets 130224
multiplexed video traffic, packet delay modeling 84831
multiprotocol label switching networks, improved VC-merging method 130208
network flow control and resource mgt., DiffServ fast-TCP policy 107826
next generation Internet backbone router 130506
nonguaranteed network services, video frame rate control 74205
nonstream format video files streaming, access emulation/buffering tech. 120570
opt. IP networks, flow routing 86004
opt. packet-switching routers with self-similar bursty traffic, resource allocation 86062
optimal multimedia smoothing, network calculus appl. 130955
packet networks, nonstationary offered-load model 84821
packet video receivers with finite buffer capacity, adaptive playout strategies 130336
packet waiting time distrib., tight bounds for tail in buffered networks 130317
parallel-polled virtual output queued switch, design/eval. 131024
parallel-polled virtual output queued switch with buffered crossbar 119134
pipelined sects., buffer mgt. for scalable QoS provision 119165
PRN, quasi-sync., perform. eval. 131226
QoS packet networks, jitter control 119127
QoS support in mobile ad-hoc networks 85773
queue length proportional assignment, joint buffer mgt./scheduling for switches 119238
regulated traffic streams MUX, design/perform. 119150
rem. monitoring syst. using pro-act. buffering *(Japanese)* 74132
router archits. with input-queued cell-based switching fabrics 107982
router input-buffer switch, group-pipeline scheduler 130218
second-order fluid flow, algorithmic soln. 130314
self-similar network traffic charactn. through lin. scale-invariant syst. models 84809
single user/multiple access commun. over fading channels with finite buffer constraints 131072
smart antenna base stations with dyn. slot allocation, forward-link capacity 108810

buffer storage continued
SS7-signaling networks, automatic congestion control improvement 107648
stochastic switching systs., min. cross entropy control 130239
switched LAN design, loss probab. in heterog. traffic environ. 119557
tag-based unified fairness 119248
TCP over ATM network, explicit react., early packet discard scheme 95954
TCP over heterog. networks, FDA base station flow control scheme 119300
TCP perform. improvement over ATM UBR service using modified selective drop buffer mgt. 119273
TCP perform. in WAN, successive bottlenecks/exogenous traffic influence 73976
TCP perform. over end-to-end rate control/stochastic available capacity 119267
TCP Reno/NewReno/SACK, large bandwidth-delay product influence 95951
TCP throughput in small LAN, improvement by delayed ACK control *(Japanese)* 96148
TCP with faster recovery 107840
TCP/IP networks, act. queue mgt. using control theoretic approach 84924
third generation wireless commun., multiple rejects ARQ for RLC, perform. anal. 85003
three-stage packet switch with internal speedup and independent routing, perform. eval. 95784
two stage frame dropping for scalable video transm. over data networks 107673
UBR++, TCP perform. over ATM-UBR, packet discard scheme 107841
VBR video over ATM, rate control simplification/implement. 106971
VBR video playback, buffer allocation mechanism 109378
VBR video traffic sources, resource allocation 107786
video commun., multidimensional bit-rate control 106871
video server disk bandwidth and buffer utilization 97092
video transm. over networks with no QoS guarantees, encoder buffer constraints 129750
video transport over wireless channels, rate-control scheme 74636
VLSI mixed-timing systs., robust interfaces, latency-insensitive protocols 125335
VLSI parallel video/commun. controller 91004
VoD systs., dyn. buffer allocation 86339
W-CDMA syst., RLC multiple rejects ARQ for packet data service, perform. anal. 73897
WATM networks, improvement of CBR service playback buffer mechanism 131214
WDM arrayed-waveguide grating based single-hop networks 131485
WDM MAN, MAC protocol for IP differentiated services 86005
WDM networks, VPN with QoS, archit. and anal. 96714
WDM opt. burst switched networks, contention resoln. policies 96745
WDM opt. packet switch for IP traffic, design 75045
WDM packet-routed opt. networks, distributed router archit. 86023
wireless ATM, handover quality effect on buffering requirements 85845
wireless environ., prefetching protocol for continuous media streaming 130367
wireless mobile networks with depend. calls arrival procs./impatient calls, handoff calls waiting time 96444
buffers (circuits) *see buffer circuits*
building
see also architecture; civil engineering; erection
3D vision syst., explosives disposal & building inspection appl. 86630
constr. mach. unstructured obj. attitude/stabil. control 134322
Huizhou pumped-storage power station constr. necessity *(Chinese)* 112364
hydropower plants constr., ecological aspects, building work *(English)* 112341
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
materials, transparent/reflective/absorbing props. expts. 114454
materials in microwave/MM-wave bands, freq. depend. of dielec. const. 105743
online constr. project collaboration 130855
project-based cross-disciplinary teamwork education 113335
residential buildings, recycling disassembly material use, energy impacts 113798
thin heat flux sens. for building appl., ASTM C 1130 calib. 97175
^{222}Rn, indoor conc., mitigation methods, QC 111226
building acoustics *see architectural acoustics*
building automation *see building management systems*
building management systems
central air-conditioning, energy mgt. and control syst., online optimal strategy *(Chinese)* 89461
chilled water plants optimal control develop. using quadratic representation 100236
decentralized Energy Bus technol. for building HVAC automation 78343
energy simul., power flow modelling integrat. 100235
energy syst. simul., efficient soln. strategies 100233
energy-efficient buildings, components effects anal. 133842
EnergyPlus new-generation building energy simul. program develop. 100234
I-centric commun. 85654
i.Lon™ 1000 Internet server appl. to to linking LonWorks control network and IP based networks *(Polish)* 130657
integrated predictive/adaptive building HVAC/lighting control 89453
intell. building EMS using LAN technol. 89316
intell. buildings, EMS/control systs. design/testing, simul. tools 89452
lighting controller integrat. into self-adaptive building control syst. 113126
LonWorks technol. based building access control automation *(Polish)* 130655
power line commun. interface based on SS technol. *(Chinese)* 107793
SCAN, hardware minimised low cost/low power fieldbus, low power concept 120663
smart buildings, multifunctional transponder-based appls./services 75770
thermal load prediction, automated proc. using recurrent neural net 124111
US buildings sector, energy-related challenges overview 133843
VAV air handling unit online fault detect./diagnosis method 100335
building wiring
busbar layout, CSCW syst. using VRML *(Chinese)* 100501
busbar trunking systs. power freq. impedance studies *(Chinese)* 122969
commercial building power syst. harmonics, digital monitoring systs. 77347
domestic main wiring, power-line commun., radiated emission 74510
energy simul., power flow modelling integrat. 100235
home inform. wiring syst. using bal. cable for high-speed network 119693
LV power-installation networks, lightning-induced voltages eval. 111661
parallel-connected single-core cables, overheating, current distrib. 133716
power freq. mag. fields meas. from EMC viewpoint 77668
structural cabling syst. lightning overvoltage studies 77554
built-in self test
2D cellular automata, VLSI testing appl. 90830
8051-like microcontroller, transient fault tolerance, VHDL description 125544
accumulator-based bit-serial test response compaction schemes, ISCAS'85 benchmark ccts. 79738
adaptive ramp generator, low cost for analog BIST appls. 101849
ADCs, lin. histogram testing, low-cost BIST archit. 125578
built-in self test continued
aliasing-free space compactor design, switching theory formulation 101965
ASIC-embedded CAM with power-saving and design for test features 102181
BISRAMGEN phys. design tool for BISR RAMs 68809
BIST test pattern generator using ATPG vectors 125329
Boolean vector seq. pattern learning HMM, IC BIST appl. 116008
Booth array datapath multipliers, seq. fault testing, low-cost BIST archits. 102037
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
bus-based prog. SoCs, IP cores, self-test methodology 101920
cct. tests scheduling for low power BIST 109424
CMOS analogue BIST, current sens., proc. var. independent 101736
CMOS data commun. transceivers, at-speed testing, BIST methodology 101906
CMOS embedded memory diagnosis via test response compression 102139
CMOS high-perform. ccts., test mode, arbitrarily low test freq. 102040
CMOS single-phase adiabatic multiplier, SCAL-D logic, HSPICE simul. 68725
CMOS SRAM macro, quasi-worst-condition BIST 125487
CMOS true single-phase adiabatic multiplier, BIST logic, HSPICE simul. 125449
Combination of BIST and External Test for SoC *(Japanese)* 70282
computational anal. of counter-based schemes for VLSI test pattern generation 68663
const. divider for wideband audio decompression proc., BIST implement. *(Chinese)* 79844
current sens. devices for micro-IDDQ test of VLSI chips 127008
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
design-for-test method, breaking correl. to improve testability 101914
deterministic scan-BIST archit. with appl. to field testing of high-availability systs. 101994
deterministic software-based self-testing of embedded proc. cores 79911
digital systs., hybrid BIST, test cost calc. 125328
digital VLSI, crosstalk faults, BIST *(Japanese)* 68666
distributed and embedded, test pattern generator 79731
economics of BIST 114687
embedded memory access time meas. using BIST circuitry 79745
embedded memory core testing, on-chip march pattern generator, low hardware overhead 125291
embedded RAM built-in self-diagnosis, use of syndrome compression 125479
embedded RAM fault diagnosis by syndrome compression, built-in self-diagnosis 79875
embedded SRAM of µPs, µCs and DSPs, efficient BIST method 102176
FPGA global interconnects, parity-based BIST, design/implement. 114586
FPGA logic blocks, BIST-based test and diagnosis 68719
hierarchical fault diagnosis of analog and mixed sig. ccts. 103985
high dens. memory fault diagnosis algm. *(Korean)* 102158
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
intell. syst. design & condition monitoring appls., overview 131805
interactive BIST appl., compression tech., test data vol. reduction 101909
interconnect testing, switching activity, automated BIST synthesis 104058
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
lin. histogram BIST for ADCs, time decomp. tech. 79964
logic BIST synthesis, cct. partitioning, divide-and-conquer approach 79678
loop-based at-speed self-testing 68675
low power BIST test pattern generator, modified clock scheme 101924
MEMS self-test techs., nonelectrical test stimuli induction on-chip 104219
microprogrammed proc., self-repairing execution unit 125539
mixed sig. DFT/BIST automation using behavioral modeling 68952
mixed-sig. cct., syst. level testing of analog fns. 68955
multi-port memories, simul.-based test algm. gen. and port scheduling 125498
multicycle ccts., self-dual self-testing, props. 79720
multipliers, array and Booth, low power BIST schemes 125428
µP internal-SRAM testing using zero-overhead BIST 68834
µP IP cores testing, SOC develop. 79914
neighborhood pattern-sensitive fault test algms. for semicond. memories 102136
next generation mixed sig. ICs, ADCs, cct. specific failure modes, test 80117
on-chip oscilloscopes for noninvasive time-domain meas. of waveforms 125377
on-chip short-time interval meas. tech. for testing high-speed commun. links 101936
online/offline BIST in IP-core design 114754
oscill.-based BIST method for functional testing of smart sens. devices 80124
pipelined ADC, struct. testing, BIST schemes 79987
pipelined ADCs, self-testable with low hardware overhead, BIST scheme 102276
prog. BIST for embedded SDRAM, Verilog BIST modules 125478
pseudo random BIST for detecting real defects, min. test length 104032
retiming-based test pattern generator design for BIST of data path archits. 102065
RT level test insertion using functional test metrics 68677
RTL data paths, testability trade-offs, 3D design space 79715
scan-based BIST, partitioning-based diagnosis, failing scan cell ident. 79679
scheduling for min. energy consumption under power constraints 101933
SDH cross-connection ASIC, design and appls. 95782
self-testable data path synthesis, high-level data path allocation 90822
self-testing of user-programmed FPGAs based on concept of lin. segments 125323
sens. technol. advances & future develop., miniaturisation, overview 109816
seq. cores in SoC environ., spectral methods 101918
set covering model appl. to reseeding 81434
shared BISR anal. for multiple embedded memories in SOC 102182
shifter/accumulator pairs in datapaths, deterministic BIST scheme 79737
shifter/accumulator pairs in datapaths, deterministic BIST scheme 125331
SoC embedded cores testing, twisted-ring counters use 101966
SoC test challenges and DFT methodologies 126949
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
SRAM transparent testing methodology using dyn. power supply current 114738
step response based mixed-sig. BIST approach 68953
strategies at register-transfer and algorithmic levels 125341
sync. seq. ccts., BIST method for fault diagnosis 68776
sync. seq. ccts., BIT pattern generation method 125393
syst.-on-a-chip, test techs. *(Italian)* 90817
syst.-on-achip ASIC design, logic bist 68692
TACOS, testability allocation and control syst., BIST cost/quality trade-off 125332
two-level LFSR high efficiency BIST scheme, asynchronous test pattern transfer 102017
uniform march tests, optimal, memory ICs, fault coverages 102137
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395

ilt-in self test continued
voltage overshoots in high-speed digital SoCs, built-in-chip testing 101916
weighted pseudo-random testing hybrid BIST, test resource partitioning scheme 101908
ilt-in testing *see built-in self test*
lk acoustic wave devices
see also surface acoustic wave devices
Au/Cr/ZnO/Au/Cr/SiO_2, buffer electrodes effect, BAW resonator, XRD 104453
Au/Ti/ZnO/Au/Ti/SiO_2, buffer electrodes effect, BAW resonator, XRD 104453
composite resonators, parametric amplif. 104455
film bulk acoustic resonator duplexer for USPCS handset appl. 85906
gas sens., high overtone BAW resonator 75741
microwave film bulk acoustic resonators, modified Butterworth-Van Dyke cct. 104456
PZT/alumina piezoelec. resonator, acoustic wave mass sens. 104459
quartz BAW resonator, electrode config., liq. sens. 92764
quartz BAW sens., measurand-induced mech./elec. prop. changes 97438
quartz resonator time base & sens., environ. effects, review 104423
self-focusing acoustic-wave liq. ejector for ink-jet printing appl. 116222
shear-horiz.-type surface and BAW 116208
thickness shear mode acoustic wave sens., quantitat. anal. 121019
thin-film BAW device, laser interferometry 81764
thin-film composite resonator, finite element simul. 116209
third-order effects in SAW and BAW device modeling 92721
UHF bulk and surface acoustic wave devices 70457
AlN Bragg reflector thin film resonator, fab. by RF sputter deposition 70455
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
$GaPO_4$, material consts. for BAW/SAW device appl. 81678
$La_3Ga_5SiO_{14}$ based high temp. nanobalance sens. 97439
$La_3Ga_5SiO_{14}$, bulk resist./capacity/reson. freq., BAW devices, SIMS 104462
$LiTaO_3$, IDT admittance, BAW radiation 116219
$LiTaO_3$, IDT admittance, bulk wave radiation 92746
ZnO piezoelec. multilayers, BAW response, transm. line method 104300
ılk diffusion *see diffusion*
ılk modulus *see elastic moduli*
ılletin boards *see electronic mail; hobby computing; information services*
ınched particle beams *see particle beam bunching*
ıried heterostructure lasers *see semiconductor lasers*
ıried layers
buried/surface LTCC resistors, DC/AC elec. props., long-term stabil. 125840
CMOSFET shallow n^+/p^+ jn. form. using PIII 126742
diamond:Al(Cu), high energy ion implant., conducting layer form. 80999
DRAM buried-channel pFET device, threshold voltage 115937
embedded capacitors, RF elec. simul. 69276
embedded decoupling capacitors, HV charact. 115067
embedded pass. component technol., cost/perform. considerations 100588
embedded pass. components for MCM technols. 125943
GSD/VHE implanter, high energy/high current perform. 115546
LDMOS power transistor, SOI-BCD proc. 126832
LTCC resistors, elec./stabil. props., US microscope characterisation 69263
magnetooptic films, micropatterned ridge fab., selected-area sputter epitaxy 71388
PCB design for embedded pass. 115125
Pi-Gate SOI MOSFET, computer simul. 92365
polysilicon four-terminal TFTs, improved reliab. for AMLCD appl. 92343
QD, Coulomb blockade, background charge 126172
semicond., BEEM, review 115452
silicide films form. on Si, low-energy MD simul. 69999
SIMOX film, thickness meas., IR spectrosc. *(Chinese)* 91884
SIMOX SOI structs./devices, BOX, thermally activated procs. 91920
SIMOX structs., oxide layer charging, depth profile anal. 80958
SIMOX technol., BOX microstruct. 115526
SIMOX wafer surface defects, effects on device charact. *(Japanese)* 91888
SOI LDMOSFETs, lin. region model, back-gate/series resist. effects 115931
SOI MOSFET, USJ/3D-RESURF, breakdown voltage 126855
SOI MOSFET technol., plasma charging damage 103864
SOI power ICs with intell. CMOS control circuitry 81536
SOI substrs., buried WSi_x layer, charactn., appls. 91917
SOI substrs. with buried ground plane for substr. noise suppress., modeling 102691
SOI wafer, charging damage, scanning Maxwell-stress microscopy 80931
SOI wafer, interface roughness, film thickness meas. 103204
SOI wafers, thermally oxidized bonded, cryst. surface defect, oxygen gettering 91907
SRAM, alpha-particle irrad., soft error rate immunity 125502
surface channel metal gate CMOS with light counter doping, single work fn. gate electrode 81268
threshold voltage model for deep-submicron fully depleted SOI CMOS transistors 103733
top Si/BOX interface, charactn. in SIMOX wafers 115461
tunneling MR heads, LEEN 104516
unibond-SOI materials, press. sens., total dose radiation effects 121264
AlGaN MOCVD selective growth, LD struct. appl. 79328
AlGaN/GaN HEMT fab., buried p-layers 81380
AlGaN/GaN/6H-SiC, surface/buried MQW, MBE, opt. emission, band bending 91778
CdTe/CdMgTe buried single QDs using selective thermal interdiffusion 91775
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Fe/SmCo spring magnet, mag. imaging of buried SmCo layer 81790
GaAs MESFETs, substr.-trapping effects suppression, buried p-layers 126886
GaAs buried gate MESFET, opt. FET 103924
GaAs:Si epitaxial layers, combined FIB/MBE synthesis, carrier activation 91660
GaAs:Si,Mg, buried p-layer in GaAs MESFET channel, RTA, activation anal. 80707
GaN layers, ELO, WN_x mask, MOVPE, elec. props., WN_x/GaN contacts 79334
GaN with buried WN_x, ELO 69831
GaN/$Al_xGa_{1-x}N$ buried layer QW high-power LD 71811
Ge growth mode on Si(100), buried Ge islands prescence 102977
InAlAs/InAs epitaxial bilayer film, misfit disloc. introduction 126110
InAs/GaAs(InP) buried QD, TEM obs. 91841
InAs/InP quantum wire, vert. self-organization 115408
InGaAsP BH LD, AlInAs-oxide current blocking layer, low threshold current 93672
InGaAsP MQW LD, SI InP:Fe, buried layer *(Chinese)* 82681
InGaAsP/InAsP mass-transport-grating DFB lasers for externally modulated systs. 128224
InGaN/GaN:Mg blue LEDs, MBE, charact. 71602
buried layers continued
InP CVD optoelectronic struct., scanning spreading resist. microscopy 103257
InP heterostruct. laser, rapid thermal MOCVD growth 114344
InP/InGaAsP LD, low internal loss, ICP etching fabr. 117219
InP-based VCSELs for 1.55 μm wavelength range 117212
$LiNbO_3$/Si SAW-semicond. coupled device fab., film bonding 92736
Ni/SiC, interface reaction, Ar^+ irrad. effects, thermal annealing 69704
SIMOX low dose wafers, energy depend., struct. props. 115528
SOI, deep levels, charge/capacitance DLTS 115446
SOI struct. fabr. by UHV electron beam evap. and epitaxial layer transfer 80933
Si buried contact solar cells, rear-surface technols. 100146
Si films, posn.-controlled giant-grain growth, phase-modulated laser annealing 102957
Si ultrathin layer thermal agglomeration on buried SiO_2 69757
Si:B CZ substr., boron implant., CMOS technol. 103282
Si:C(N), low-energy ion implant., buried insulating layer form. 103253
Si:Cu, diffusion rel. to gettering, silicide retardation effects 125996
Si:H(He)/SiO_2 SOI buried layer, O precip. form. 126408
Si:O, BOX, SIMOX, positron annihilation 91969
Si/3C-SiC/Si ion beam synthesized layer, metallization 91960
Si/SiO_2 double barrier structs., NDC due to reson. tunnelling 115450
Si-on-reflector substrs., high-reflectivity, optoelectronic device appl. *(English)* 105032
4H-SiC buried channel normally-off MOSFETs, high channel mobility 70127
3C-SiC epitaxial growth on SOI, Si cavity suppression 90542
4H-SiC power MOSFET, large-area device 126837
SiC:B epitaxial layer, diffusion 69795
SiC:N^+,Al^+ buried layer implant., interstitial diffusion, internal stress effects 69816
3C-SiC/Si buried layers, ion beam synthesis and charactn. 81004
SiGe pMOSFET perform. rel. to hole mobility in fully-strained layers 92377
SiGe ultrathin relax. buffer layers for strained SOI MOSFET, fab. 81273
SiGe/Si MQW reson.-cavity-enhanced photodetector 109565
SiO_2 surface /buried interface layers in Si-Si bonded wafers 103357
SiO_2:D SIMOX BOX, incorp. D behaviour 80946
SiO_xN_y/Si Bragg reflector for reson. cavity photodetectors *(Chinese)* 86537
SiON-based CMOS, heavily NO nitrided, analog charact. for mixed analog/digital LSIs 127048
TaO_x top layers, buried photoresist layers etching 126410
W-TiN damascene metal gate CMOS technols., perform. improvement 127040
buried object detection
3D ground penetrating radar simulator, FDTD method 86194
3D ground-penetrating radar simul., plane-wave theory, anisotropic media 120440
3D matched filter for detect. of land mines 73125
3D microwave imaging using UWB radar techs. 129564
3D ray-based GPR simul. code 77085
acoustic detect. in 3-D fluid saturated porous media 88218
adaptive clutter reduction and buried minelike target enhancement 77089
advanced hand-held mine detector and mine detect. neutralization and route marking syst. 77092
AHI airborne thermal IR hyperspectral imager 98896
anti-personnel landmines detect., forward-looking ultrawideband SAR appl. 77093
antipersonnel land mine detect., operational sens.-fusion syst. 77008
antipersonnel landmine detect., GPR, wavelet shape feature extraction 77074
antipersonnel mine detect., GPR imaging, subspace decomp. tech. 77072
antipersonnel mine detect., shallow depth, UWB FMCW radar 77068
antitank landmines detect., acoustic-to-seismic coupling 88232
antitank mine detect., ground-penetrating SAR 77071
archaeological excavation, miniaturised laser range-finder 88196
automated rapid vap. concentrator, nitroaromatic vap. sampling 75695
BSS for eddy current sens. based on induction bal. principle 109531
COBRA ATD minefield detect., Joint Countermine ACTD Demons. 77094
COBRA ATD minefield detect. model, perform. anal. 77120
COBRA ATD multispectral camera response model 75624
cylindrical target, EM ident., neural network 72294
decision-level sens.-fusion methods for anti-personnel landmine detect. 118427
dielec. cylinder, acousto-EM scatt. behaviour 128740
digital multifreq. EM cond. imaging syst. 84166
EM induction, time-domain method, algms. 88200
EM induction, wideband response, model 88111
EM induction exploration, very early time, 3D imaging 88113
EM induction spectrosc., buried objs. detect. and ident. 75390
EMI mine sens., Bayesian optimal class. 73122
EMI signatures detect. of mines, timers, and fuses 72347
engng. struct., seismoacoustic survey 111548
explosives & chem. warfare agents detect., electrochem. sens. 76987
explosives/chem. agents detect., sorbent coated SAW sens. 76992
ferrous 3D objs., ident., finite elements, eddy currents and magnetisation 117639
GEM-3 multifreq. EM induction data, UXO discrim. capability 88228
GPR, impulse syst., dispersive matched layer RBC implement., FDTD framework 86156
GPR, landmine detect., adaptive ground bounce removal 131624
GPR imaging of land mines, inverse problem soln. 77088
ground penetrating radar, anal. model for soil modif. effects 86175
ground penetrating radar, buried target detect., FDTD simul. 86167
ground penetrating radar, FDTD 88109
ground penetrating radar, imaging, Radon transform 122581
ground penetrating radar, pipes, dispersive soils, 3D calc. 122582
ground penetrating radar, rough interface, scatt. model 88199
ground penetrating radar, soil response, 2D FDTD 88110
ground penetrating radar appl. 86210
ground penetration radar sigs. for AP mine detect., instant. params. anal. 131666
ground-penetrating radar, conical spiral antenna anal. 75182
ground-penetrating radar images, land mines resoln. enhancement 77087
ground-penetrating radar vel. estim. and imaging method 86195
hand-held forward-looking focused array mine detect. 77084
handheld mine detector operator perform., audio icon design issues 77114
hidden targets detect., mine-detect.-like task 77111
imperfect conductor, image reconstruction, EM scatt. 86193
imperfectly cond. cylinder, image reconstr. freq. depend. 107225
imperfectly conducting circ. disc, EM wave scatt. 72225
in-situ comp. sens., inductive & capacitive sens. arrays 120987
inductive array imaging of buried objs. 77109
JMDT Navy/Marine Corps program, future enhanced mine detect. capability 77095
land mine detect., acoustic method, soil poroelastic model 77005
land mine detect., acoustic technol., LDV, program overview 77007

buried object detection continued
land mine detect., acoustic-EM wave interact., Doppler spectrum 77057
land mine detect., acoustic-LDV syst., shape discrim. 77003
land mine detect., acoustic-seismic coupling, geophone & LDV meas. 76944
land mine detect., elastic wave interact., 3D FDTD model 76945
land mine detect., HMM/morph. neural networks 77083
land mine detect., hybrid elastic & EM wave tech., GPR 76999
land mine detect., laser-based noncontact acoustic imager 77004
land mine detect., laser-induced acoustic generation 76946
land mine detect., near-field beamforming array, elastic waves 77056
land mine detect., sens. fusion archit., limited training data sets 77009
land mine detect. and class., stat. sig. proc. 73123
land mine detect. simulants, X-ray lateral migration radiography 76996
land mine imaging & detect., inversion method, 3D grid 77006
land mine vap. signature determ., sens. develop. 76997
land mines detect., low-metallic-content, EMI data anal. 73121
land mines detect. improvement by soil freezing 75832
land-mines, plastic, PDFT algm. for data eval. 128758
land-mines, radar detect., near-field focusing 111629
landmine detect., air-soil boundary line rep., multifreq. sig. 73470
landmine detect., autom., multiple features, GPR & acoustic data 77064
landmine detect., automated, multispectral imaging, iter. morph. algms. 77065
landmine detect., correl.-based, GPR, lin. prediction tech. 77079
landmine detect., data fusion & Dempster-Shafer evidential reasoning 77062
landmine detect., EM induction imaging, modelling 77018
landmine detect., EM induction sens., human auditory discrim. 77113
landmine detect., EM scatt., penetrable-PEC objs. 88258
landmine detect., forward-looking GPR eval., target recogn. algms. 77078
landmine detect., forward-looking UWB radar imaging 77077
landmine detect., GPR, high-dimens. ANOVA & seq. probab. ratio test 77075
landmine detect., GPR & metal detector fusion scheme 77059
landmine detect., GPR/IR/metal detector, stat. sens. fusion 77061
landmine detect., ground radar, HMM 88261
landmine detect., hyperspectral reflectance signatures perform. 77011
landmine detect., Jaycor's forward-looking GPR data eval. 77076
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
landmine detect., microwave radiometry, layered medium model 76986
landmine detect., multimode subsurface sens. & imaging 88226
landmine detect., multisens. mine signature meas. 77063
landmine detect., pass. microwave sens. assess. 76985
landmine detect., phase-angle-based EM induction obj. discrim. 77017
landmine detect., polymer film amplif. fluoresc. quenching, sniffer 76993
landmine detect., rough surface stat. effect, FDTD tech. 73437
landmine detect., soil environ. dielec. contrast enhancement, watering 77070
landmine detect., soil temp. prediction model, IR thermography 77016
landmine detect., stepped-freq. GPR, antenna characts. & de-embedding 77097
landmine detect., temporal IR contrast var. 76983
landmine detect., time-domain metal detector & GPR data fusion 77060
landmine detect., UWB ground penetrating radar, time-domain modelling 77098
landmine detect., X-ray lateral migration radiography syst. 111557
landmine detect. & class., EMI sens., non-Gaussian noise environ. 77012
landmine detect. by pulse inductive eddy current meas., high sensitivity 129987
landmine detect. sens. modelling, fusion & discounting, D-S theory 77019
landmine detect. using high-press. water jets, vibr. anal. 77014
landmine detect./discrim., single-waterjet-induced thermal profile 77015
landmine detect./location, X-ray fluoresc. tech. 88197
landmine detector, NQR method 88198
landmine detector operator training, motion tracking, virtual mine lane 77112
landmine discrim., joint spectral region 77115
landmine discrim., sens.-specific data proc. & unsupervised clustering 73471
landmine electronic chem. sens., using fluoresc. polymers 88230
landmine localization, vehicle-mounted IR imager calib. 75347
landmine thermal detect., resoln. requirements, 2D AR models 76982
landmine trip wires opt. detect. 77116
landmine under rough surface, IR signatures, diurnal cycle, simul. 76943
landmine/UXO chem. signatures, weather effects 76989
landmine/UXO chem. signatures transport, model comparison 76988
landmine/UXO detect., GPR/EMI/magnetometer sens. fusion 77020
landmine/UXO detect., soil/air sampling, TNT & DNT anal. 76991
landmines, polarimetric radar interferometry, clutter 88263
landmines IR imaging, surface roughness effects 73126
landmines polariz. features for improved automatic detect. 77118
laser Doppler vibrometer-based mine detect., speckle noise immunity 77002
MEMS explosive particle detector, dissolved TNT/DNT in soil 75691
metal tag recogn., smart eddy current sens., blind source separation 118800
metallic mines discrim. from metallic clutter 73707
microstrip antennas in subsurface sens., moisture meas. & NDT 88194
microwave imaging inverse scatt., neural net approach 72295
microwave rem. sens., combined radar-radiometer sig. proc. 88195
mine detect., 2D and 1D approaches comparison 77119
mine detect., acoustic array syst., liq.-filled roller array 77000
mine detect., acoustic/seismic laser Doppler vibrometer assess. 76998
mine detect., scanning LDV vibrometer, acoustic-seismic coupling 77001
mine detect. & remediation technol., conf., Orlando, USA (Apr. 2000) 67351
mine detect. in IR imagery, wavelet-based third-order neural network 73435
mine detect. systs., perform. assess. 73193
mine detect. training based on expert skill 77110
Mine Hunter/Killer Advanced Technology Demonstrator 77090
Mine Hunter/Killer program, close-in detect. syst. 77091
mine-free trackway maint., forward-looking GPR, change detect. 77096
minelike obj. detect., complex syst. stat. anal., fixed segment proc. 73195
modelling/estim., EM induction sens. 73124
multiband polarimetric imagery acquisition, calib. aspects 75655
multiresolution target discrim. during image form. 75143
multisensor towed array detect. syst., buried unexploded ordnance 88231
near-surface buried struct. imaging with high-resoln. surface-wave group-vel. tomography 94683
noncoincidently sampled sens. fusion for land mine detect. 84129
NQR land mine detect. syst., field test results 76994
NQR landmine detect., stat. sig. proc., Bayesian algm. 76995
ordnance detect. & discrim. at Fort Ord range, instrum. eval. 88229
pass. broadband bionic sonar, underwater & buried target detect. 77055
pass. microwave complex of rem. sens. for detect. of objs. in soil 76966
pass. microwave radiometer mine detector, field tests 76984
PELAN pulsed neutron portable probe for UXO & landmine ident. 111556
plastic landmine detect., GPR imaging, permitt. contrast, curve evol. 77099
predictive sens. fusion, fuzzy set tools, linguistic vectors 73584
pulse borehole radar, 3D simul., hybrid FDTD/PSTD method 86165
radar, mines, EM scatt., complex natural reson. 88259
radar, subsurface EM inversion, distorted Born approx. 111388
buried object detection continued
radar, time-domain sens., rough surface 111387
radio sig. recogn. for buried obj. detect. and ident. 75226
random noise radar, low coherence fiber optics appl. 109299
rough air-ground interface, time-domain sens. 77067
rough surface underground imaging, stat. approach 96896
SAR buried objs. imaging from MoM modelled scatt. field 96904
SAR imaging, buried obj. detect., adaptive focussed proc. 86212
SAR subsurface objs. detect. 122722
scatterable landmines detect., high contrast 77117
seismic landmine detect. syst. using radar 88250
SFCW radar, stratified dielec. medium, microwave imaging 86916
shallow subsurface detect., freq.-domain EM syst. config. 88090
soil radar sounding, aperture synthesis method 88108
stepped freq. SAR, imaging of objs. embedded in lossy half-space 75221
stochastic minelike obj. detect., nonlin. model, delay diff. eqns. 73194
Stokes imaging polarimetric target acquisition & mine detect. 77027
subsurface detect., alternative synthetic apertures, impulse response 75195
subsurface discrim. using EM induction sens., eigenvalue distrib. 88227
subsurface sens., EM wave scatt., discrete dipole approx. 83227
subsurface sens. & imaging syst., unified discipline develop. 84167
symm. obj. detect., multipolarimetric reverse-time migration imaging 77073
terrain scanning robot, map building, image registration method 109668
trip wire detect. using polarimetric IR 75516
turbid media small absorbing heterog., detect. sensitivity 122064
underground imaging, shear-horiz. waves, deconvolution method 99097
underwater mine detect., thin lightweight LF acoustic projectors 77021
underwater target class., sonar bandwidth effects 77042
unexploded ordnance, EM induction discrim., review 88265
unexploded ordnance, EM induction signatures, MTADS array 88264
unexploded ordnance, radar detect., ultrawide-bandwidth 88260
unexploded ordnance, radar polarimetric scatt. 99176
unexploded ordnance, UWB SAR method 88262
unexploded ordnance, wideband freq.-domain EM induction 88266
UWB CPW-fed spiral antenna and balun for humanitarian demining 128859
UWB-SAR systs., underground targets migration 96898
UXO detect., above-ground/buried, UWB SAR, MoM & PO modelling 77069
UXO detect., explosive vap. diffusion in snow, modelling 76990
UXO remediation, sens. fusion, training algms., clutter effect 77010
vehicle-mounted mine/UXO detect., DGPS error, EKF, fixed interval smoothing 77066
video surveillance systs., automated obj. detect. and tracking 118165
wide bandwidth time-domain EM sens. for metal target classif. 86490
C-black-polymer composite vap. detector arrays, landmine detect. 75689

burst correction codes *see error correction codes*

burst noise
bipolar transistors, generation-recomb. noise, deep-level impurities 81220
EZW image compression, multi-channel channel-optimized scheme 84474
IEEE 802.11/ETSI HIPERLAN type 1 under burst noise channel, perform. comparison 96089
image burst noise reduction, decimation and adaptive weighted median filter 106486
speech, partial temporal corruption, union model 118141
speech recogn. in time-varying burst noise, probabilistic union model 118114
turbo code over impulsive noise channel, perform. eval. 129025
Er-doped highly inverted fibre amp. cascades, WDM packet-switched burst-mode networks 86104
Si forward-biased single-cryst. solar cells, impulse noise, nondestructive reliab. 112857

burst switching *see telecommunication switching*

bus conductors (electric) *see busbars*

bus reactors *see current limiting reactors*

busbars
15 kV enclosed bus assembly, 5 kA, 60 Hz 3-phase continuous current test 133417
400 kV substation stranded conductor buses, short-cct. tests 112717
aerial multi-conductor transm. lines with branch, switching transient EM field 134289
CSC2000 substation automation system, bus-bar differential protection, distributed control unit, clock sync. *(Chinese)* 99857
decentralised num. busbar protection relay using instantaneous current values 78074
differential busbar protection during measuring power transformers saturation *(Serbian)* 88483
differential protection, impedance-based CT saturation detect. algm. 133786
distrib. network directional relay protection approach 77506
distrib. substations, interlocked overcurrent busbar zone protection 78078
elec. modelling, interconnection inductance, CAD 77131
flexible tinned copper connectors, overheating, power stations, outgoing busbars 123036
generalized power syst. state estimators, disconnected branches inclusion 122787
high power IGBT inverter, wiring inductance minimisation 112635
HV/MV transformer substation, optimal exploitation/constr. policy 134300
HV/MV transformer substation refurbishment, reliab. study 134301
IGBT module, chip current imbalance meas. *(Japanese)* 81283
indust. radial power systs., energy saving, life cycle cost design criteria 134670
layout, CSCW syst. using VRML *(Chinese)* 100501
LHC interact. region quadrupoles, supercond. busbars 75963
LV switchgear, mag. field meas. 134264
medium impedance and digital busbar protection selection *(Chinese)* 133782
municipal works CHP station, network disturbance consequences 77745
power syst. transient protection using wavelet transform 77507
power syst. unit protection scheme using superimposed fault currents 77504
substation busbar end contact heating computation 89004
substation busbar prolongation muff heating calcs. 89005
substation differential busbar protection systs., numerical techs. 78077
syst. generators shielded busbar, EM field soln. at open boundary problem 123333
three-winding transformer/busbar protection using current diff.-based algm. 112137
train power busbar supply by diesel locomotives *(German)* 134511
trunking systs. power freq. impedance studies *(Chinese)* 122969
VAr planning optim. using expert knowledge adopted genetic algm. *(Chinese)* 111968
Al high-current busbar terminal screw joints, creep studies *(German)* 133768
Cu elec. busbar joints, laser surface melting treatment effects 115623
N_2/SF_6 gas insulated 275 kV busbar, insulation design *(Japanese)* 99851

uses (computers) *see system buses*
ushes *see bushings*
ushings
115/22 kV transformer, transient behaviour, 3D FEM modeling 77938
differential protection, transformer bushing, fault anal. *(Chinese)* 77920
EPDM rubber insulators and bushings, basic charact. 123031
failed distrib. transformers diagnosis using neural networks 134133
power transformer bushings/winding insulation, PD location/anal. 134126
SF_6 GIS apertures, radiated EM wave, freq. charact. 134276
usiness *see commerce*
usiness communication
10 Gbit/s Ethernet, IEEE 802.3ae and pre-std. products 130735
adaptive network modeling scheme 85233
ASP, appl. service providers 96006
ATM in network backbone 84835
ATM-ABR, virtual channel onto VP MUX 73808
B2B e-commerce trends, e-procurement/e-marketplaces *(German)* 85336
B2B transactions, Simple Object Access Protocol 85266
Bluetooth future scenarios, effects on value networks and business models 108637
BRAIN develop. for broadband mobile access network beyond third generation 85546
broadband fixed-wireless access 96418
broadband local services using free-space opt. links, network business perspective 86114
broadband networks, business class services *(Polish)* 119457
BT Brightstar, corporate incubation model 107995
cable systs., next-generation broadband services 97074
commercial DSL 131005
component-based act. network archit. 130485
computer networks, data flow charact. 108364
Concert IP Secure, managed firewall/VPN service 119540
constr. indust., mobile user support 130794
converged network, value added services 119772
corporate networks, radio relay *(German)* 130802
CRM infrastructure 108007
data warehousing/business intell., wireless technol. appl. 131218
dedicated access line, value added integrated telecomm. services 96011
DiffServ networks, policy mgt. framework using traffic engng. 108263
Directory Enabled Networking 96020
distributed mgt. platform, Web interfaces use 130679
DSL CPE for business users 74463
DVD business/indust. appls. 97103
e-commerce heterog. systs., maximizing transactions by gateway filtering 130851
ECA + SQL, practical event correl. approach 96152
Eloquent Communication 6.0 server for identifying threats or assets 108107
enhanced service design exploiting syst.-independent reusable feature modules 130924
enterprise LAN, trends 108172
enterprise mgt. software 74112
enterprise network planning 96019
enterprise network topol. design, fuzzy evol. hybrid metaheuristic 95966
enterprise network traffic monitoring, anal., reporting 108179
enterprise networking, cabling 108503
enterprise voice portals 108006
enterprise VOIP 108066
enterprise WAN, frame relay 108192
fiber access links, prospects for completion to business end users 120229
firewalls 96021
firewalls evol. 119539
FITCE 2001 telecomms. conf., Barcelona, Spain (Aug. 2001) 124214
HFC, deep fiber baseband access network design 130996
HFC business market 96297
Hong Kong, IT and telecomm. infrastructure appls. for business and service 130964
IAD, integrated access devices 108008
iCE, cool operation support syst. and interactive customer empowerment engine 130586
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IN SCP services platform, migration to IP-based appls. platform 130929
innovation 74161
instant messaging 85159
instant messaging in business commun. 74077
intell. engine software 85135
intell. opt. network, opt. services 120206
Internet access technols., overview of wired and wireless systs. *(Polish)* 85320
intranet services, features and implementation 130854
IP NMS 108284
IP service provision over heterog. wireless networks, 4G develop. 108241
IP service switches 96119
IP telephony solns. for customer premises 85151
IP traffic with multi-class QoS in VPN, modeling/perform. anal. 107842
IP videoconferencing prospects for daily commun. *(German)* 96243
IP-QoS server syst. 85203
ISDN implement. costs, eval. based on survey and case studies 74416
IT and MIS 108020
managed IP multicast platform, business appls. 74198
MIB variable based fault class. for proactive mgt. 130561
mobile agents, eval. of security schemes *(English, Spanish)* 129266
mobile no. portability in Australia 85157
NEC IX5010/5020 carrier class edge router, new service feature 85070
network archits. evol. 108255
networks convergence to multiservice systs. *(German)* 85128
NTT Communication Science Laboratories, ten-yr. hist./future vision 89952
office environ., 5.25 GHz OFDM expt. study 131084
online customer contact 96062
organizational media use in Singapore 85114
PBX wireless network, mobility mgt., implement./perform. eval. 85589
policy based SLA mgt. in enterprise networks 108221
policy-based network mgt. 96032
PROFIBUS token-passing protocol over error-prone links, ring stabil. 130627
QoS enabled VPNs mgt. 74100
QoS in next-generation Internet 95889
secure e-commerce transactions, certificate-based distributed firewalls 130731
security event mgt. 130579
service charging/billing 130665
services opt. network archit. 120207
streaming content, business appls. 130937
business communication continued
SyncML initiative, std. for pers. data synchronisation 130841
TCOLLABO, Team Collaboration Support System 85204
TCP/IP in commun. systs. 108399
telecomms. and economic activity, Granger causality 89692
telephony services, network security *(German)* 130600
UHF indoor/outdoor channels, multi-element arrays capacity growth 85543
unsolicited junk e-mail, methods of combating spam 74155
US Air Force enterprise mgt., layered model 111590
USA broadband market, recovery or relapse 74465
UWB WDM, network archits. 86059
video, broadband delivery via DSL networks 119803
video server archits., fibre channel vs. SCSI 131768
video-conferencing meetings, changing patterns of business commun. 119768
VideoTalks multimedia conferencing syst. 85378
virtual SME, PRODNET Communication Infrastructure 74304
voice over DSL, revolutionary transm. syst. for small businesses 85158
voice over IP, conversion or replacement considerations *(German)* 85144
voice-over-IP networks, service level agreement dimensioning 130613
VOIP 108067
VoIP, access dimens. 85150
VoIP and enterprise telecomm. network mgt. 74147
VOIP migration, exam. of different solns. 85162
VoIP private intranets for crit. commun. 119505
VPN, assuring enterprise customers of secure data exchange 119601
VPN, new revenue opportunities for MSO 97073
VPN, planning framework 96123
VPN, tunneling techs. 95901
VPN using frame relay 107795
WDM UWB 1000 channel network, architectural solns. 96727
Web syst. technol. *(Japanese)* 130840
Web-based network config. mgt. syst. 96157
wireless MAN, product review 119591
business data processing
see also electronic commerce
act. VPN services on demand 74334
commun. innovation 74161
data warehousing/business intell., wireless technol. appl. 131218
EBU project group P/META work on metadata exchange stds. 74081
elec. utility deregulation, metering/billing/customer IS impacts 122802
elec. utility workflow automation tool experiences 133525
enterprises resource planning implement., crit. success factors 89731
German energy market liberalisation, business procs. IT support 133470
multimedia meeting documents, automatic linking by image matching 106515
MySAP.com Utilities elec. utility business mgt. software 111777
organizational media use in Singapore 85114
power plant mgt. in competitive markets, IT solns. 77673
streaming content, business appls. 130937
TELEMATICS traffic IS using mobile commun. *(Japanese)* 124032
traffic location IT, business develop. prospects *(Japanese)* 124034
US elec. utility mgt., IT business solns. outsourcing 122813
business re-engineering *see systems re-engineering*
business television *see business communication; television*
butterfly networks *see hypercube networks*
Butterworth filters
analog ratio spectrum cct. with adaptive Butterworth low-pass filter 80132
bandwidth-efficient modulation schemes, interf. suscept. 131335
biorthogonal wavelets derived from discrete interpolatory splines 130123
broadband microwave diode detectors, CAD using filter approxs. 125703
CMOS dual-mode RC-opamp baseband filter for PDC and WCDMA 91031
continuous-time low-pass all-pole OTA-C filters, perform. comparison 68925
continuous-time LPFs, mixed-sig. tuning approach 80080
dielec. multilayer bandpass filters 71490
direct-coupled-resonator bandpass photonic filters, synthesis tech. 104892
dual isotope SPECT, noise reduction, analytic atten. correction method 122174
embedded third order LC low pass Butterworth filters in MCM-L technol. 80033
GIC-based third-order act. low-pass filters 125605
gravity data filtering using Hartley transform 122598
hairpin resonator filters with tunable transm. zeros 102573
image sharpening/softening using freq. domain filters 106435
inverse filtering in a priori indeterminacy, optim. algms. 84730
max. flat magnitude beyond the orig. filters, nomographs 107539
min. peak stored energy resonator filters, filter topol. 102549
opt. preamplified receivers, perform. eval., Gaussian approach 96691
optimal digital IIR filter design 102393
parallel-coupled-line microstrip bandpass filter with spurious passband suppress. 102577
pass. LC filters, multiple solns., sensitivity comparison 102330
S/H distortion, anal. compens., monotonic & equiripple approx. 86449
SC FIR filter structs., comparison based on CMOS realization and PSPICE simul. 80063
SYSCUF, automated synthesis package for switched current filters 68916
total harmonic distortion anal. simul. 77364
two-port SAW oscillator electronics design for sens. appl. 92696
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
FeCoSiB amorph. wire mag. field sens. design, sig. proc. cct. *(Chinese)* 86481
BWO *see backward wave oscillators*
BWT *see backward wave tubes*
C_{60} *see fullerenes*
C_{70} *see fullerenes*
C_{60} compounds *see fullerene compounds*
C_{70} compounds *see fullerene compounds*
C language
see also C++ language; C listings
2D convolution algms., dedicated VLSI devices/general-purpose proc./DSPs implement. *(Polish)* 73178
capacitive level sens. develop. with LabView software *(Slovenian)* 75459
code-perturb. simul.-based hardware verification, black- and white-box approach 79725
communicating systs., testability anal. algm. 107981
corner block list, floorplanning with abutment constraints and L-shaped/T-shaped logic blocks 125381
ECHONET commun. middleware program, support tool for developing commun. software *(Japanese)* 85120
Hierocrypt block cipher 129309
indust. network proc., C compiler design 130342
ION-F, Ionospheric Observation Nanosatellite Formation, flight software, nonlin. simul. 122502

C language continued
JPEG-2000 std., computational complexity eval. 106945
low-power systs. on chips, asynchronous and locally sync., software design 79696
Mitsubishi 16-bit M30624 microcontroller, develop./appls. *(Spanish)* 102201
NIST ellipt. curves over prime fields, software implement. 129292
ripple effect meas. of Pascal programs, telephone switching syst. 108501
RISC microcontroller core design 102186
server, neural network chip-based 119832
SystemC design lang. for develop. of ASICs and systs. *(German)* 90813
TCP-socket, C and Java, perform. comparison, JavaNws appl. 96124
testable data path synthesis, GA 114731
transaction-based simul./emulation archit. for functional verification 131810
Web server, functionally minimized embedded, network connectivity for small appliances 130637

C³ lasers *see semiconductor lasers*

C listings
SMTP server and client for e-mails via Internet 130754

C² systems *see command and control systems*

C³ systems *see command and control systems*

C++ language
adaptive distributed network monitoring/control, syst. designs 130663
CHORUS emulsion expt., CERN, data handling 87251
Classification Canvas, biomedical data anal. 132510
display projection imaging syst., geometric rectification method *(Chinese)* 84123
e-commerce charact.-clustering model based on ART algm., design/implement. *(Chinese)* 108099
embedded proc., RTL fault simulator 79750
ION-F, Ionospheric Observation Nanosatellite Formation, flight software, nonlin. simul. 122502
KOM RSVP engine implement./eval. 130351
mixed-sig. functional level simul. framework based on SystemC, SoC appls. 114891
network/systs. mgt., computational obj. approach 85130
optimal greedy algm. for wavelength assignment in directed tree nets 75009
oscillator CAD, Colpitts, Clapp and Class E, Osciladores 68641
power syst. load flow calc., static security anal., OO method *(Chinese)* 122943
rem. sens., digital image, class. coding, software simul. *(Chinese)* 95142
RNS converters, automatic generation, archit. level exploration, CAD tool 102218
SoC design, fast hardware-software co-simul. framework 79710
speech/audio proc., C++ R&D environ. 106354
structural IC design comp. for C++ hardware models, layout struct. 90821
syst.-level design of OFDM transceiver for WLAN, C++ based environ. 119580
SystemC, behavioral synthesis, compiler generation techs. 79674
SystemC design lang. for develop. of ASICs and systs. *(German)* 90813
TACO protocol proc. simul. environ. 79666
thermal environ. expt., DP, software *(Chinese)* 97142

cable insulation
see also insulating oils; power cable insulation
4-sided electron irrad. systs., cable/pipe-like product appl. 97913
all-dielec. self-supporting opt. ground wires, aeolian vibr. tests 74925
elec. conductor tensile props. 91440
fire-retardant cable cpds., toxicity aspects 69292
fusion using quadridirectional electron bombard. 102795
insulation displacement contact technol., sens./actuator syst. implications 80480
next generation materials for wires and cables 69290
polypropylene-insulated cable cost minim. using intell. selection 91444
space grade wires & cables, radiation tolerance, fast eval. tech. 122469
MgO mineral insulated vac. gauge cable, SPring-8 storage ring irrad. 70436
Nb_3Sn quadrupole magnet model for particle accelerators 75988

cable jackets *see cable sheathing*

cable jointing
500 kV DC extruded dielec. power cable *(Japanese)* 88442
500 kV XLPE insulated DC submarine power cable develop. *(Japanese)* 88446
cable-in-conduit supercond. cables, strand joints/copper location impact 77390
EHV XLPE cable joints, semicond. interface dielec. strength, diffusion method *(Japanese)* 99389
extruded laminated dielec. shielded power cable joints, IEEE Standard 112119
holey opt. fibers, appl. in transport networks 127652
HV cable conductor temps. determ. 133725
jn. monitoring syst., fault prewarning, jn. resist., insulation aging *(Chinese)* 133764
long-dist. XLPE cable lines, PD detect. method *(Japanese)* 99375
multi-pin connectors, circ. and rect., indust. syst. cable interconnections *(German)* 80477
overhead transm. line ampacity anal. using FEM 99382
power cable on-line diagnosis, noninvasive UWB PD tech. 112101
prefabricated cable joints, shrink phenom. *(Japanese)* 88466
supercond. cables, current distrib., mag. field probes location 77426
underground distrib. cable joints overheating diagnostics *(English, French)* 133766
underground XLPE power cable, HF PD meas., capacitive sens. 77387
XLPE cable for Shin-Toyosu long-dist. line, 500 kV, develop. and instal. 123014
Al high-current busbar terminal screw joints, creep studies *(German)* 133768
Al-Cu bimetallic cable jns. 99390
$(BiPb)_2Sr_2Ca_2Cu_3O_8$-Ag HTSC tape joint method, AC loss dependency 70686
NbTi Rutherford supercond. cables, Al-clad, resistive joints 71184

cable laying
12.4 kV HTSC power cable installation/operation 77431
400 kV XLPE underground power cable laying project, UK 88451
500 kV DC extruded dielec. power cable *(Japanese)* 88442
525 kV XLPE EHV power cables installation project, China 88449
ACEMOLE for no-dig operations with conduits installation 131041
duct-cable pulling forces calc., bending effects 112123
flexible power/inform. cables, breakage studies 77385
insulated power cable installation, termination, testing, IEEE Standard 99371
mixed gas-insulated HV power transm. line project, Switzerland 88450
submarine cable laying proc. control scheme 125858

cable sheathing
36 kV XLPE cable syst. for Belgian network *(English, French)* 133717
Eco-Cable, halogen free recyclable cable, liq. cyclone tech. *(Japanese)* 88443
multibranch cable network sheaths/screens, currents calc. *(Russian)* 123016
MV cable sheath power losses prevention, surge arresters 133765
noncontacting cover cable conduits, Schwarz-Christoffel anal. 80468
SiC-SiO_2 coaxial nanocables, solid-liq.-solid growth 126597
substation, opt. fiber control cable grounding under lightning strike 78088

cable sheathing continued
underground power transm. cables, sheath fault charactn./modelling 77384
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC conductor AC transport current losses studies 70741
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC tape AC loss tests 77428
$(BiPb)_2Sr_2Ca_2Cu_3O_8$-Ag HTSC tape joint method, AC loss dependency 70686
$YBa_2Cu_3O_{7-\delta}$ HTSC conductor AC transport current losses studies 70741

cable shielding
see also cable sheathing
arc-fault cct. protection, faults ground-forced cable 133784
CPW/coupled struct., quasi-TEM anal. 102496
HV substation shielded cables, transient voltages anal. software 134296
HV substations, ground pot. rise influence, urban areas 134295
multibranch cable network sheaths/screens, currents calc. *(Russian)* 123016
multiconductor lines, quasi-TEM eigenwaves params. anal. 85454
parallel double layer screen, interf. coupling 85448
power cable insulation, ground shield semicon, resist. 112099
power cable systs., preventive maint. testing 123017
shielded screening atten. test method down to 5 MHz 83360
telecom. cable screening effectiveness, standardised EMC meas. procedures 85444
transformer substation power freq. mag. shielding techs. 134298

cable splicing *see cable jointing*

cable television
see also interactive television
256-QAM CATV networks, blind equalization 107707
2002 Salt Lake City Winter Games, network access/flexibility 85143
automatic IMD meas. in CATV networks 75313
BCE's ComboBox for DTH satellite TV, DSL and pers. video recorder 75307
bidirectional hybrid DWDM syst., CATV/OC-48 trunking 96856
broadband access networks, evol. and convergence implications for equipt. providers 96263
broadband network archits. 75312
broadband network design and simul. 120555
broadband RF amps., CPW interconnects, on-board probing, calib. tech. 91335
broadband wireless access based on cable modem 85548
BS digital tuner unit for CATV syst. *(Japanese)* 131753
campus fibre network, AM-VSB CATV/Internet access sigs. 120559
cct.-switched telephony 74149
coaxial vs. opt. fiber investments 75305
data services 86330
digital cable set-top boxes 97069
digital home terminal, addressable syst. *(Japanese)* 131752
digital network testing 109370
digital reverse path 97072
digital services 97070
digital set-top boxes 109372
digital TV and video compression 95139
directly modulated 1550 nm AM-VSB CATV systs., long-dist. transm. 86039
dispersion compensation fiber gratings for CATV systs. *(Chinese)* 74922
DOCSIS, enhanced services provision 75306
DVB version 2.0 *(German)* 97052
DVB-T sig. over CATV network, phase noise requirements 86304
Ethernet and SONET compared for gigabit metropolitan networks 120262
fluid headend 86331
Germany, broadband cable networks, media law 131719
HDTV transm., network infrastructure *(German)* 75303
HFC, wavelet modulation 96296
HFC business market 96297
HFC CATV networks, upgrading for broadband interactive services 97066
HFC fiber optic transm. equipt. for renewal *(Japanese)* 131755
home networking components, lightning discharges 131743
home telecomm. equipt., middleware emergence 75311
hybrid CATV/DWDM syst., multimedia trunking 96777
hybrid DWDM syst. for CATV/256-QAM transport 120556
impairment testing of cable products 109374
integrated broadband cable networks emergence 75309
interdiction as means of preventing theft 120561
Internet, content and backbone *(Japanese)* 131749
Internet syst. *(Japanese)* 131746
Internet-assisted Home Healthcare System on CATV network *(Japanese)* 133192
life zone network, concept/config. method 108142
mixed sig. multiplex, interact. between analog and digital distortions 97067
modem NMS *(Japanese)* 131748
modem technol./market perspectives, overview 74482
modem termination systs., switches and routers 97071
MPEG-2 time sharing MUX in CATV networks, VBR scheduling algm. 97076
MPEG-2 TS transm., HFC network *(Chinese)* 97075
MPEG-2 video/audio/signalling inform. real-time transm. using LAN/WAN *(German)* 75308
MPLS for multiservice delivery 95875
multimedia commun. over fixed wireless systs. via DOCSIS 1.1 108397
NEC's BS trans-modulation syst. *(Japanese)* 131751
NEC's CATV network supervisory control syst. *(Japanese)* 131756
NEC's coaxial transm. equipt. for renewal *(Japanese)* 131004
network operation center for CATV Internet *(Japanese)* 131747
networks screening effectiveness, field meas. 86328
next-generation broadband services 97074
next-generation cable network 131742
next-generation opt. fiber networks 109371
OpenCable 75310
opt. fiber AM-CATV externally modulated transmitter, SBS suppression, PM *(Chinese)* 109072
opt. fiber AM-CATV externally modulated transmitter, composite triple beat distortion *(Chinese)* 109053
PacketCable 1.x archit. 74152
packetized format for cable telephony 97065
panoramic video, compression issues 84490
quasi-sync. CDMA with high-order modulation 97077
retail set-top box appl. platform archit. for digital cable network 120562
return path maint. 86329
Rogers Cable's network upgrade for reliab. increase 109373
Rohde and Schwarz SFQ TV test transmitter for digital cable std. ITU-T/J.83B 86312
SCM opt. transm. syst., clipping induced distortions *(Japanese)* 96825
server systs. for video area networks *(German)* 75320
SIP and H.323 interworking, VoIP networks 84952
South Tokyo Cable Television, Internet commun. service *(Japanese)* 131750

cable television continued
streaming media 97068
Taiwan CATV operators and channel providers, anti-competition issues 120557
telecom/CATV co-network transm. syst. dispersion compensation, nonlin. distortion anal. 96724
telephony and cable operators 74150
testing with noise 86332
three-transformer CATV divider using bead-type ferrite core, freq.-range widening 131757
transm. syst. for renewal *(Japanese)* 131754
TU-DC1 BS digital CATV tuner *(Japanese)* 120558
two-way CATV network, bidirectional data transfer rate tests 120554
video piracy prevention 120560
virtual Internet based on CATV using prefetch agent 120589
VOD, data broadcasting/seamless channel transit. 75322
VPN, new revenue opportunities for MSO 97073
VSB/QAM/QPSK single IC for ATSC/OpenCable™ digital terminals 120526
WDM/SCM broadcast-and-select archit. for streaming-media 109369
wide area collaboration of public ATM networks and CATV local networks 85213
wideband Internet access using cable modem systs. 109368

cable terminations *see electric connectors*

cable testing
see also power cable testing
ADSS fiber-optic cable leakage current meas. sens. design 109060
all-dielec. self-supporting opt. ground wires, aeolian vibr. tests 74925
coupling atten. standardisation, future develop. 83361
EM shielding, primary/secondary params. 83359
fire-retardant cable cpds., toxicity aspects 69292
insulated elec. conductor tensile props. 91440
shielded screening atten. test method down to 5 MHz 83360
space grade wires & cables, radiation tolerance, fast eval. tech. 122469
sq. coaxial lines, multipactor threshold 85447
telecom. cable screening effectiveness, standardised EMC meas. procedures 85444
Nb_3Sn supercond. react and wind accelerator magnets cable 76005

cables (electric)
see also cable shielding; cable testing; coaxial cables; power cables; submarine cables; superconducting cables; telecommunication cables; underground cables
48 V telecom. power supply systs., dimensioning aspects 108450
acoustic probes, cable params. 111516
aging assess., discrete wavelet transform appl. 99524
complex cable systs. anal. using EM topol. 80467
coupling atten. standardisation, future develop. 83361
electronic equipt. immunity, indirect ESD, transient anal. 78582
EM shielding, primary/secondary params. 83359
fire-retardant cable cpds., toxicity aspects 69292
insulation fusion using quadridirectional electron bombard. 102795
NPP cable ageing, nondestructive diagnosis 101568
PVDF beta phase content, piezoelec. cable proc. steps effect 81720
resistive measuring cable for field-probe meas., unit step response anal. *(Japanese)* 132119
space grade wires & cables, radiation tolerance, fast eval. tech. 122469
US transducer, ribbon-based probe cable, crosstalk 111532

cache storage
2D wavelet coding implement., scheduling strategies 119825
32-bit microcontrollers, memory mgt. facilities, flash memory, caches *(German)* 68814
adaptive hybrid cache coherence protocols perform. eval. 119274
age penalty and cache perform. 119613
AMULET3i async. dual-ported copy-back cache archit. 79874
appl. level act. networking infrastructure 74305
archits., fast syst.-level exploration driven by energy-delay metrics 102151
area-efficient multiport SRAM, high random-access bandwidth, on-chip data-storage 68791
bandwidth-conserving cache validation schemes in mobile database syst. 108134
BuddyCache, cache coherence for transactional peer group appls. 108326
chip multiprocessor design 114779
CMOS instruction cache, leakage energy dissipation 68789
CMOS RISC µP cache memory redundancy tech., inverse-gate-electrode flash 125566
code placement in hardware software co-synthesis, perform./cost effects 79700
content distrib. networks, business models 74260
continuous media objs. based on logical caches and obj. partitioning 130785
cooperative proxy caching, viability anal. 130693
data-driven label switching networks, cache replacement schemes 119133
DHTTP, efficient/cache-friendly transfer protocol for Web traffic 119376
distributed servers archit. for on-demand video services, cost optim. 120566
distributed shared-memory multiprocessors, write invalidation, multicast commun. appl. 96218
domain caching for live-event Web services 108331
DRAM cache for high quality distributed video 85366
DSP-kernel software anal. by implicit cache simul. 68835
dyn. Web content, class-based cache mgt. 130694
Dynamic Source Routing protocol, caching strategies 73913
educational computer room, caching-proxy in LAN *(Polish)* 130648
embedded proc., power efficient cache based on dual cache struct. 102161
embedded proc. in codesigns, customizable partitioned caches 79722
end-to-end WAN service availability 119614
energy behavior anal. using software/hardware optim. 114740
energy efficiency of µP memory struct., architectural/cct.-level 101944
generational behavior exploitation to reduce cache leakage power 90952
heterog. networks TCP enhancement, hierarchical cache design 74684
hidden double data transfer scheme for merged DRAM logic design 68806
HTTP Web transfers across satellite links, latency reduction by smart proxy 85016
hybrid caching strategy for streaming media files 96276
hyper audio Web browsing syst. via telephone 119721
image compression, arith. coding archits. 129721
independent storage units model, evol. prefetching/caching 74404
instruction cache organisation for embedded low-power proc. 68813
interactive video, scalable support, proxy servers 120565
Internet, proxy caching scheme for continuous media streams 108155
Internet differentiated caching services, control-theoretical approach 74279
Internet multimedia, caching/streaming framework 130345
Internet packet destinations, pseudo-address generation algm. 130706
IP multicast implement. based on open shortest path first protocol 85010
JPEG/JPEG2000, memory complexity comparison 106946

cache storage continued
layered encoded video distrib. through caches 119745
longest match table look-up method using pointer cache 95882
low-power cache design for CalmRISC™-based systs. 125514
map-based hoarding mechanism for location-depend. inform. 108136
Markov model for copy-back cache reliab. prediction 114746
Markov proc. model cache algm. for network file servers 119556
memory hierarchies for network VoD *(Chinese)* 86333
merged DRAM/logic LSIs, high-perform./low-power cache archits. *(Japanese)* 68802
mobile computing, organization of invalidation reports for energy-efficient cache invalidation 108348
mobile computing, pers. cache mgt. 119696
mobile computing using semantic caching to manage location-depend. data 74379
mobile environ., scalable low-latency cache invalidation strategy 74378
mobile environ. archit., intell. genetic search and proxy caching 119713
mobile wireless environ., cache invalidation scheme 96193
MPOA flow class. design and anal. based on neural network 95872
multicast connections, efficient setup using tree-caching 119407
multimedia collaboration and caching, reliable multicast Webcast protocol 130346
multimedia pre-fetching in Internet, prediction syst. 130944
µP, on-board cache subsystem, design and packaging 113480
µP cache energy reduction by dual voltage supply 102246
µP caches, static energy reduction tech. 125499
µP control logic, online integrity monitoring 125378
mutual consistency maint. for cached Web objs. 74250
NetNews servers, effective caching 74197
neural chip µP dyn. resource allocation 102489
on-chip CPU pipelined caches, design and anal. 102224
on-demand routing protocols for wireless ad hoc networks, caching strategies 73996
optimal allocation of electronic content 120575
PACS archits., centralized, distributed and autonomous, perform. comparison 98860
PCS, caching-based location mgt. 108669
Pentium III Xeon proc. with L2 cache, cartridge thermal design/metrol. 114799
PLDs, high-speed/flexible controllers design 114735
prefetching in small data cache, cache pollution reduction 125500
proc. based high-speed longest prefix match search engine 119573
proxy cache consistency exploiting metadata of absent objs. 85294
proxy server mgt. scheme for continuous media objs. 96271
publisher-centric Web caching infrastructure, security 130696
quasi-consistency and caching with broadcast disks 108135
reduced latency DRAM memories for cache, 3D graphics and mobile appls. *(German)* 114739
reduced power consumption by reordering memory bus transactions 102160
RMAC, Reliable Multicast using Adaptive Caching *(Japanese)* 73991
SATTL, self-adaptive WWW cache coherence protocol 108358
sens. networks, scalable and robust commun. using directed diffusion 75504
SLA monitoring and service mgt. through distributed intell. agents, generic archit. 130911
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
streaming-media workload, meas. and anal. 119789
syst.-on-a-chip, cache and bus archits., power consumption 90814
trace cache instruction fetch perform., anal. model 125516
VLSI prog. archits., multimedia kernels, memory mgt. approach 90938
Web caching, act. refresh method 119748
Web caching archits., hierarchical/distributed caching anal. 119546
Web clients, service time estim. using server logs *(English, Spanish)* 130414
Web content caches, refreshment policies 130705
Web latency reduction using ref. point caching 119741
Web proxy cache perform., sensitivity to workload charact. 130695
Web satellite-based multicasting services, theoretical framework 130779
WWW large-scale distributed caches, perform. tuning 119560
WWW proxies, optimal hash routing 74024
WWW servers, hierarchical cache archit. 108162
WWW systs., locally distributed, load balancing algms. *(Polish)* 130647

CAD
see also architectural CAD; computer aided analysis; control system CAD; electric machine CAD; electronic design automation; intelligent design assistants; interactive systems; logic CAD; power system CAD; technology CAD (electronics)
3D digital traditional Japanese crafting syst., modernisation 108158
3D obj. model building from multiple views using calib. plate 84191
3D streaming transm. via Internet *(Chinese)* 108275
3D US ray tracing in AutoCAD 2000, add-on modules 101590
3D waveguide components, CAD tool for wideband modeling 69063
airborne slotted array antenna, planar magic tee jn., CAD 83666
arbitrary shape coil, mag. field calc. method, computer program 72203
ATM network design using GA 85431
automation and prototyping trends, discrete event and hybrid systs. appl. 131964
automotive parts, CAD-guided dimens. inspection, graph-based surface merging 100622
autostereoscopic props. of spherical panoramic virtual displays 97761
axiomatic CAD, QC tools and designed expts., combination 89904
B-spline surface approxs. of six-sided PDE patch 67954
broadband fiber amps. simul., scientific/computational challenges 128168
broadband multilayers design, simulated annealing 104894
busbar elec. modelling, interconnection inductance, CAD 77131
CAD-integrated DFE workbench tool develop. 100535
CAE design optim. syst. reconstruction for high-intens. US syst. *(Japanese)* 67514
cascaded directional coupler-based WDM device, 4-channel/1200 GHz spacing/1550 nm, design 109180
Chinese government role in CAD technol. transfer 89732
CLASP software suite for antenna design/optim. 83526
Class 1 cleanroom design, CFD program appls. 89830
coal-fired power plant retrofit project using 3D CAD software 88593
concatenated waveguide sects., refl. coeff., beam propag. algms. 104703
conceptual design chains with basic schematics 100524
concurrent engng. in electronic packaging, conf., Calimanesti-Caciulata, Romania (May 2001) 124229
contact probe rad. compensation in CAD modelling 131814
CPS synthesis, ANN model 69007
crossed Porro laser resonator design, opt. ray tracing software 128347
data-intensive multimedia appls., CAD of syst. integrat. 130946
design disassembly complexity/recyclability anal. from CAD file data 100534

CAD continued
design engng. education, CAx role 113340
design for reliab., engng. knowledge elicitation 100681
diplexer design using pre-synthesized waveguide filters 102548
disabled pers. elec. cart, develop. and use of 3D CAD syst. *(Japanese)* 100267
distrib. constr. IS downsizing, GUI appl. *(Chinese)* 112023
distributed microsystems-CAD, server group *(Chinese)* 92501
DSP systs., parameterized dataflow modeling 118850
DWDM technol., opt. network modeling, simul. tools 96835
EDFA, CAD/simul./optim. 128164
EM device CAD, multiobjective design optim. 93981
EM device design, use of ANN inverse mapping tech. 128703
EM device design, use of interval mathematics 128704
EM devices, Pareto evol. optim., diversity enhancement tech. 83159
EM flowmeter excitation coil CAD, 3D hybrid num. model 120729
engng. design quantitat./qualitat. cost estim. 100525
engng. drawings, vectorisation algm., Object Boundary Encoding 118677
(F,K,l) opt. orthogonal codes, constr. from block design 83829
FIR canonic signed digit filter design 107542
free space opto-electro-mech. syst. design, Chatoyant mixed-sig. CAD tool 116769
free-form surface, adaptive DAQ and modelling, struct.-light vision sens. appl. 86651
free-space interconnects, Chatoyant opto-electro-mech. CAD tool 117044
geometric model generation by registration and integrat. of multiple range images 84224
GraspIt online model-based grasp planning and visualisation syst. 97404
guided-wave opt. devices design, BPM 127771
gyroscope, PM torquer 131885
hand effect on cellular phone radiation 122410
helix TWT, phase and gain matched operation, computational investig. *(Chinese)* 102941
Hermite interpolation by Pythagorean hodograph curves of degree seven 78998
HF EM simulators 93964
HF four wire dual-mode spiral antenna, CAD 72599
holographic concave grating mfg., CAD and eval. 93893
HTSC thin film, surface impedance charactn., CAD algm. 127419
hydro generator refurbishment technol., mech. anal. techs. 99625
hydropower plant rehabilitation, Francis turbine runners CAD 77779
indust. lighting project savings using photom. CAD calcs. 134605
inversion approxs. for fns. via s-power series 114012
Japanese yukata, intell. design support syst. 118473
large orbit gyrotron with PM syst., design 91552
laser beam direct-writing device, CAD drawing exchange file *(Chinese)* 92208
loop detect. in 2D engng. drawings based on node pretreatment *(Chinese)* 129816
main stream laser proc., CIM plant 83046
malformed ears, computer assisted orthosis design syst., automatic shape modif. 87884
maritime patrol radar appls., CAD of high-perform. slotted waveguide array antenna 86198
mass/batch prod. products develop., design substantiation, CAD anal. 89803
meas.-based fully scalable CPW transm. line model 114932
MEMS micro-mirror fab., opto-mech. modeling 82202
metal-flanged rect.-aperture arrays anal., parallel framework 128896
micromechanical phase-shifting gate technol. for opt. logic components desiugn 104845
micromechatronic systs., optimal structural CAD/anal. 127079
microstrip radial stub, CAD model 69062
microsystems and microreactors, NEXUS survey of user needs in design tools 116075
microwave CAD education tool 67454
microwave design syst. based photonic CAD tool 82172
MM-wave antenna systs., develop./appl. of MODTool integrated design tool 117770
model acquisition, range image segmentation 94695
multi-domain opt. MEM systs., CAD framework 82203
multichannel optoelectronic data links, realistic end-to-end simul. 128026
Myrinet SANs, perform. anal., high-fidelity event-driven model 130747
nanofabrication, computer-assisted design, automated vector-scanning probe lithog. 103708
network-based assignment drive-oriented concurrent design, CAD/CAPP integrat. *(Chinese)* 89792
optimum HOE lens, CAD design 128581
parametric design based on topol./geom. constraints *(Japanese)* 100515
PC assemblies, network distributed virtual design, coevolutionary agents appl. 89826
poly(diethylene glycol bis(allyl carbonate)) substr., opt. waveguides direct electron beam writing 93121
power combiner in MM-wave rect. waveguide cavity, global optim. CAD 80206
quasi-opt. filters by hybrid MoM/BI-RME method, efficient anal. 93294
reconstructive surgery/med. modelling, design methods appl. 98590
rect. microstrip antennas, comparison of CAD formulas and expt. 72619
reverse engng., data reduction methods from laser scanning 67516
reverse engng., phys. model shape autonomous meas. 100528
satellite Ku-band E-plane output diplexer, CAD 85922
self-supporting fiber optics cables, CAA and design *(Polish)* 131378
semicond. device noise charactn., extraction techs. and CAD procedure 86943
sheet metal parts, algms. for orthographic views with hidden entities/mfg. features inform. 113437
space opt. rem. sens., thermal equilib. expt. device *(Chinese)* 98891
space simulators heat sinks, quantitat. thermal design *(Chinese)* 111317
SPIDER, design and provisioning tool for protected lightpaths in opt. networks 109119
substation operation order prep., visual/self-acting universal design syst. *(Chinese)* 123678
tele-educational multimedia package for teaching/modelling of digital fiber opt. networks 100476
telecomm. equipt., knowledge driven digital design syst. *(Japanese)* 96000
telecomm. network CAD, evol. algm. approach 107986
thermal imaging syst., 20:1 zoom, athermalization *(Korean)* 120899
tolerance control with high resoln. 3D meas. 84232
transducer design with global parametric optim. 120725
triangle strip compression 83863
trimming for subdivision surfaces 78992
US NDT data proc., 3D graphics role, adv. software environ. 114539
US NDT expertise, CAD-based simul. & imaging tools 101609
user interface design for engng. drawing vectorization software, VHVector *(Chinese)* 129868
waveguide diplexer, design optim., shadow specs. 102571

CAD continued
WDM CAD design tools 86091
WDM component design, crit. mfg./reliab. tolerances 96784
weld inspection, US data reconstr., visualis. & anal., AutoCAD(R)2000 100644
wide-band SOA static model, accurate param. extraction 128287
XIMIT, X-ray migration meas. of hip socket implants using implant models and image templates 76711
Cu vap. laser, output power, CAD, phys. simul. codes *(Chinese)* 82478
Si BJT, temp. depend. large sig. CAD model and direct extract. method 91268
Si, anisotropic etching, MST-CAD environ. 115663

CAD/CAM
see also CAD; computer integrated manufacturing; rapid prototyping (industrial)
3D shape inform., opt. methods, hybrid methodology, overview 132168
3D surface digitizing/modeling develop. 73213
closed loop direct metal deposition, CAD/CAM design 72112
CMM, optimal meas. seq. planning/collision-free path 97139
computer-aided tolerance synthesis with stat./optim. techs. 67504
concrete product life cycle anal./CAD, intell. syst. 125089
design engng. education, CAx role 113340
design of cell, flexible simul., response surface anal. 100560
diagnostic models, based on FMEA models and ontologies 131799
eDFM Web-based DFM in electronics assembly 115134
evol. structural optim. for connection topol. design of multi-component systs. 79125
feature vol. constr. via adjacent surface intersection 84163
flexible cct. DFM, ground rules 91454
geometric obj. reverse engng., sens. error anal. 97814
intell. 3D microstructuring with UV-laser syst., flexible mfg. 70367
main stream laser proc., CIM plant 83046
matrix assisted pulsed laser evap. direct write cct. element rapid prototyping method 115158
mouldmaking, CMM handling, multimedia based training 113367
PCB DFM modelling, proc. rule check *(Chinese)* 102811
PCB DFM using continuous design improvement model 102804
residual limb, laser scanning, CAD model constr. algm. 122314
reverse engng., neural net based image proc. 89802
semicond. mfg. lead frame, integrated CAD/CAM syst. 126918
tolerancing for mfg., 3D model 67512
transcollaborative mfg. software for OEM/contract manufacturer inform. access 89835
SiC conducting/insulating tracks by laser direct writing 115337

CADD *see CAD*

CAES *see compressed air energy storage*

caesium clocks *see atomic clocks*

CAGD *see CAD; engineering graphics*

calcination *see heat treatment*

calculation
see also graphs; nomograms
radiation therapy, centralized dose calc. syst. 98614

calculator program listings *see complete computer programs*

calculus
see also differentiation; integration; refinement calculus; variational techniques
breast MRI, computer-based anal. of enhancement curves 98422
cellular data services with QoS provisioning, fair resource sharing scheduling 96492
digital photoelasticity algms., error simul., Jones calculus 121229
discrete Hodge-operators, alg. perspective 67997
drive dimens. under combined intermittent/short-term operating conditions 113065
generalized proc. sharing networks, end-to-end delay bound calc. 130182
higher order Whitney forms 67953
optimal multimedia smoothing, network calculus appl. 130955
rational PDF/filtering, state-space calculus 130081

calendar software *see personal computing*

calibration
see also measurement standards; standardisation
1-3 piezoelec. composite Navy std. transducer, design/calibr. 75234
2D fringe patterns, natural demodulation, self-calib. phase-shifting algm. 118358
3-D tracking of US images using spatial localiser, fast calib. method 132617
3D imaging vision systs. for inspection, conf., Boston, USA (2000) 100440
3D laser color scanning syst. *(Chinese)* 109410
3D light source geom. calib. from images 118365
3D meas. systs., calib. 106793
3D obj. model building from multiple views using calib. plate 84191
3D pose estim. of biological tissues by CT/fluoroscopy 98506
3D posn. meas., gait anal. & surgical navig., calib. method *(English)* 87332
3D precise meas. with high resoln. stereo head 94967
3D reconstruction systs., image distortion/resoln. effects 94969
3D reconstruction using light stripe projections on cube frame, calib.-free approach 84206
3D shape meas. by digital speckle temporal seq. correl. 75865
3D shape meas./videometrics, conf., San Jose, USA (2001) 89589
3D US imaging syst. using mag. posn. sens., calib. *(Chinese)* 132601
3D video-based meas. syst. dyn. calib., evol. strategy 86406
4-sens. camera calib. for image representation 106636
AC-DC current transfer step-up calib./uncertainty 131797
AC-DC transfer, inherently digital stochastic analog multiplier 120632
accelerator beam-based modeling/control, particle optics 87081
acoustic impedance meas., new calib. method 87006
acoustic impedance meas., review 87005
ACRE radiation environ. control, monitor ident., metrol. support 86380
act. stereo 3D reconstruction, automatic neural net training 95000
adaptive filter for calib./estim. of redundant sigs. 84754
ADC dyn. testing, dual-tone sig. based 2D histogram 114840
ADC modelling & testing, state-of-the-art review 114839
ADC testing, cumulative histogram variance, freq. errors 114841
AE calib., ref. source, conical piezoelec. transducer 101607
affine 3-D reconstruction from two projective images of independently translating planes 106612
affine calib. from moving objs. 106567
AI and calib. automation 86414
air kerma calib. factors and ionisation chamber correction values 111216
air kerma primary stds., low-energy X-rays, NIST & NPL comparison 75351
amp., calibrated lin./nonlin. pulsed RF meas. 101801
amp. accuracy improve., phase and gain error meas., self-calib. 114623
amperometric glucose sens., rMnO carbohydrate oxidase 109725

ılibration continued
ANA, Internet calib. direct to national meas. stds. 109415
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
ANSI C63.5/ARP958 methods of emission-antennas calib. for EMC 120630
antenna array calib. algms. 117859
antenna array calib. employing beacons/steering vector estim. 83710
antenna array for azimuthal angle-of-arrival meas., design/eval. 83748
array calib. with unknown sens. charact. and mutual coupling 118911
arteriovenous malformations, 3D reconstruction, radiosurgery, DSA 98558
articular cartilage indentation test, ultrasound transducer calib. 122018
assembly planning, simul. with laser cell calib. 83070
atmos. pollutants conc. meas. by LIDAR/DIAL gas detect., water vapour detect. calib. 76939
Atmospheric Infrared Sounder, prelaunch perform. charact. 122645
augmented reality, fast calib. scheme 109845
Aura project TES instrum., ground data systs./flight operations 133320
Australian power syst. meas. traceability 77667
automated photogrammetric syst. for photorealistic skull 3D reconstruction 94909
automatic registration of 2D with 3D imagery in urban environ. 106660
automotive electronic syst. design trends, functionality, prototype systs. 89415
avionics LCD, photom. meas., intraplant & interplant correl. 98912
Barkhausen noise NDE, stress meas. stabil. in harsh environ. 114535
beam-posn. monitor syst. for PEP-II B-Factory, various solved problems 87118
beatwave Fabry-Perot interferometer calib. using tunable external-cavity diode laser *(Chinese)* 75348
BES II, error matrix correction on charged channel *(Chinese)* 110387
BESSY, plane grating monochromators, absol. energy calib. 121393
BESSY II BAMline hard X-ray beamline design anal. 132473
beverage glucose/ethanol amperometric sens., quinoprotein electrodes 120951
BGO calorimeter for L3, calib. using, RFQ accelerator 76099
BiCMOS modulated Σ-Δ freq. synthesizers, automatic calib. 125252
biocompatible O_2-permeable films holding paramag. C particles, EPR oximetry 132700
biologically motivated, precise and simple calib. and reconstruction using stereo light microscope 106599
biomarkers and biological spectral imaging, conf., San Jose, CA, USA (Jan 2001) 113265
biomass monitoring, continuous on-line opt. sens. 75680
blower efficiency meas. instrum. using μP technol. *(Chinese)* 109428
bone mineral content assess., 3-D SR microtomography images 110961
BP-1 track-etch detectors, track form. and surface prep. 98050
broadband RF amps., CPW interconnects, on-board probing, calib. tech. 91335
bubble detector, neutron meas., terrestrial and space studies 87170
CALIBR, computer aided calib. syst. for hand-held multimeters diagnostics *(Polish)* 131817
calibrated harmonics tracking generator, internal DSP & DAC 101851
camera calib., neural, locked/unlocked/semi-locked net wts. 120894
camera calib., obj. relative posn./orient. ident. 86642
camera calib. and 3D reconstruction from single images using parallelepipeds 106476
camera calib. using rect. textures 86671
camera intrinsic param. calib. *(Chinese)* 109688
camera motion, error propag. to epipolar constraint 131978
camera param. calib. optimisation based on criterion with effective visual angle 94456
camera self-calib., varying focal length, 2 images 120921
camera self-calib. from ellipse correspondences 97403
capacitive fingerprint sens. LSI, pixel-level auto. calib. cct. 131988
capacitive sens. interface cct., charge-bal. SC-oscillator 109506
catadioptric stereo using planar mirrors 129645
CCD camera, vision syst., calib. tool 97340
CCD camera calib., constraint condition selection *(Chinese)* 97356
CCD camera sensitivity anal., bidirectional reflectance distrib. fn. 97345
CCD imaging radiometer, bidirectional reflectance distrib. fn. meas. 111409
cell cultures, microwave EM radiation effects, microwave oven calib. 87939
CERES/TERRA data validation 111395
charact. impedance meas. error, lossy substr. 97776
charged particle beam current monitoring 87084
CHEMFET and solid-state electrode, multi-ion anal. 121018
circ. coded target for opt. 3D meas. and camera calib. automation 129522
clinical thermoluminesc. dosimetry, mgt. syst. 111209
CLOUDS cloud-radiation monitoring satellite, instrum. & syst. 122634
CMM, calib. syst., spatial coord. comparison *(Japanese)* 97809
CMM feature based metrology systematic error uncertainty estim. *(Japanese)* 75337
CMM geometric calib. *(Japanese)* 75880
CMM geometric calib., parametric error estim. *(Japanese)* 75881
CMOS based smart temp. sens. & voltage refs., sig. proc. 132085
CMOS DAC, 14 bit, current steering archit., calib. method 90971
CMOS deep-sub-0.25 μm technol., TCAD optim. 116036
CMOS humidity sens. with on-chip calib. 109493
CMOS mixed-sig. chip, substr. coupling meas. 114892
CMOS pipeline 15 bit 10 Msample/s ADC for ADSL appls. 79978
CMOS pipelined ADC, 8 bit, 80 Msample/s with background calib. 114846
CMOS temp. sens., curvature correction, digital bus interface 86776
CMS EM calorimeter, recent progress 76097
CMS HCAL, front-end opto-electronic interfaces 121638
coastal ocean imaging spectrometer, on-orbit calib. 99009
coaxial waveguide two-port network param., units reprod. uncertainty 86934
color calib. targets for digital input devices 73282
color mgt. systs. and meas. devices for monitors 94763
color stds., Internet color imaging 73280
Compton current generator, design and testing using gamma radiation/X-rays 98089
computer vision camera calib. param. estim., corresponding point method *(Korean)* 109435
computer vision syst. for autonomous mobile robot 94454
computer vision syst. for tracking players in sports games 94968
conformal ultrasound phased arrays for thermal therapy, fab. 76623
continuous piecewise direct standardization, meta-params. optim. 78912
Coriolis mass flowmeters, model based correction 120731
corner detect. used for calib. of X-ray device 95418
CR-39 neutron detector, bulk etch rate, sample mass-change-method 87247
CRT display prod. line convergence meas., low cost CCD sens. 97700
CRT displays, monochrome, medium-resoln., calib. for purpose of board exams. 97635
CRT displays for vision research, luminance artifacts 121102
cryogel elasticity props. for calib. IVUS elasticity images 110819
cryogenic water ice contaminants detect. & IR AI&T environ. 109627

calibration continued
current-carrying lines, calibrated mag. force microscopy meas. 103455
cylindrical chambers, photon/electron beam calib., absorbed-dose 76770
cylindrical piece meas., laser telemetry, forest caliper appl. 109993
cylindrical scintillating fiber detector of E835 at Fermilab 132397
Cyrax 2400 high-resoln. 3D laser scanner metric perform. 93944
DØ preshower detector, cosmic-ray muon tests 121604
DAQ boards, travelling std. for calib. 131829
daytime star measurement, video interp. *(Chinese)* 94601
DBF receiving array antenna calib. using ref. seq. 105945
dens. std. in single nontoxic liq., hydrometer calib. 75357
detector positioning, transparent opt. sens., ref. laser beam 76075
diagnostic monitors, high-resoln., QC issues 98123
diagnostic radiology, dose-area product meters, calib. freq. 87956
dial indicators calib., uncertainty calc., machine vision syst. 109841
dielec. capacitors calib., high accuracy/high bandwidth method 125850
dielec. moisture meas. methods, dens. independence, review 87039
dielec. porous thin films, low-k, struct. and property charact. 70369
diffusion furnaces, thermocouples, meas. uncertainty 109515
digital baseband predistorter using calib. memory, perform. 108576
digital calib. methods of I and Q errors, phase and gain mismatches *(Chinese)* 131653
digital camera, combining off- and on-line calib. 84211
digital camera imaging polarimeters, calib. requirements, bit depth 75654
digital images, colour difference acceptability 106493
digital low-end camera for on-screen texture visualisation, colorimetric characterisation 97737
digital meas. instrums., relative error normalisation *(Polish)* 120638
digital-domain multistep ADC calib., interstage gain-proration tech. 125579
diode dosimetry program, diode charact. changes over 4-yrs. 111214
disabled pers. movements, opt. fiber curvature sens. 98731
dose quantities, radiation protection, dosemeter calib. 133089
dosemeters calib., mixed high energy photon/electron radiation fields 122412
double-freq. laser interf. tech. for high precision straightness meas. *(Chinese)* 128629
double-reflector optronic theodolite, calib. syst. *(Chinese)* 133277
DPOL deuteron polarimeter and syst. calib. 110347
DS-CDMA FDD mobile radio, suboptimal algms. for downlink beamforming 85857
DS-CDMA-based adaptive antenna array, online calib. algm. 105977
dual X-ray absorptiometry systs., bone densitometry, cross-calib. 87696
dual-ADC front end, built-in calib., DAQ appls. 114844
dual-luminophore press./temp. sensitive paints, PCA 104889
dual-plane stereoscopic particle image velocimetry for lobed jet mixing flow meas. 132219
DVM-based resist. meas. syst., input & leakage resist. anal. 109414
ECG equipt. testing/calib., accurate prog. ECG simulator 110649
eddy current freq. output sens. for precision engng. 75458
elec. arc furnace pollution control, NIR opt. proc. sens. 110042
elec. energy meters, calib., SMPS appl. *(Slovenian)* 77656
elec. field meter calib., ref. field nonuniformity compensation 120628
electro-goniometer model, calib. for biomech. appls. 76231
electrochem. biosensors, recommended defns. & class. 75677
electron beam, shower detector, nuc. emulsion, calib. 87248
electronic dosemeters, comparison test 133106
electronic pers. dosemeter, calib. procedures, Monte Carlo code 133103
EM flowmeters for open channels, 2D design 75428
EM imaging of layered building materials 109286
EM induction spectrosc., buried objs. detect. and ident. 75390
EMC testing meas. uncertainties *(German)* 128807
EMG systs., microvolt calibrator 132579
emission meas., loop antennas, calib. 86942
empirical eval. of calib. chart detector 118301
endoscope, electronic, image distortion correction *(Chinese)* 110829
EO sampling syst., calib. 104811
EOS multiangle imaging spectroradiometer, in-flight calib. 109420
ESD, radiated mag. fields meas. using field sens. 75829
ESD generators, std. compliance 117617
ethanol-nitrobenzene binary mixture, complex permitt. spectra, TDR 116127
ethanol-nitrotoluene binary mixture, complex permitt. spectra, TDR 116127
EUV detector radiometry beamline, SURF III, photodiode test appl. 109580
EUV lithog., light sources, portable diagnostics 92206
EUV lithog., multilayer reflective coatings 103660
EUV transm. grating spectrometer calib. by SR 75346
EWTS82 series quartz cryst. ang. rate sens. for vehicle navig. syst. *(Japanese)* 131894
ext. source γ-ray spectrom., efficiency curves, HPGe/Monte Carlo compar. 132299
face model calib., 3-D facial feature points automatic extraction 95497
fiber optic interferometric fringe projection phase-shifting 3D profilometry using freq.-modulated LD 109620
fibre opt. AE sens. develop. for NDE syst. 114531
fibre opt. two-colour pyrometer, varying emissivity surfaces temp. meas. 97331
fibre optic one-point flow meter calib., spatial filtering *(German)* 75602
filter radiometer monitoring syst. for integrat. sphere sources 122725
finite-element modeling of dry sliding wear in metals 79130
fish-eye lens camera nonlin. calib. for stereo vision syst. 73236
Fizeau interferometer wavemeter for CW lasers, testing and accuracy 121243
flash ADC, 6 bit digital design in 0.25 μm CMOS 102299
flexible workobject localization for CAD-based robotics 94450
flickermeter testing, calib. syst., digital logic & software control 109836
floating-body charge monitor cct. for partially depleted SOI CMOS 127035
fluxgate ringcore portable single axis mag. gradiometer, calib. 131860
fluxset sens. data, mag. field map calc., NDT, hybrid method 79477
football match image seqs., automatic camera calib. 95449
fruit contact press. distrib. meas. equipt. 120643
functional test in high-dens. PCB environ. 115195
Gamma Knife beam output factor meas., detector size effect deconvolution 76741
gas flow calib. facility, PVTt tech., param. determ. *(Chinese)* 86480
gas mass flow calib. at BNM-LNE and PTB 121280
gas sens. response in enclosure, species transport influence, CFD simul. 132052
gases for ULSI proc., impurity meas., atmos. press. ionization mass spectrometer 87022
gauge-block artefacts, internat. comparison implications 120624
general imaging model and method for finding, params. 106601
gigabit chip photodiodes, freq. response 116943
GLAS spaceflight instrum. fiber optic syst. components testing/reliab. 104633
glucose sens., sampling mechanism employing gel phase transit. 132057
GPS attitude determ. receiver integrated with dead reckoning *(Korean)* 109324

calibration continued
GPS carrier phase meas. for freq. sync., fuzzy & PD control 86378
gradiometer, mag. meas., lab. techs. 132135
granular materials, bulk dens. determ. from microwave meas. of dielec. props. 121168
granular materials, microwave moisture sens., universal calib. 120751
graphite electrode surface, 3D profile meas., light-sectioning triangulation *(Chinese)* 121207
grating division-of-amplit. photopolarimeter for spectral polariz. meas. 109521
green alloy compacts, thermographic inspection, ref. composite fab. 114513
GSM-1800 syst., adaptive array antenna, calib. errors 94195
guarded vector voltmeter for AC ratio std. calib. 131798
H depth profiling by refl. elastic recoil detect. anal., geometric alignment 132268
harmonic distortion sine wave amplit. meas. error, laser interferometer *(Chinese)* 86986
head-disk spacing meas., opt. interferometry, error anal. 92812
Hefei light source injection syst., beam posn. monitors calib. *(Chinese)* 121330
height meas. from digitized image for forensic scientists 118171
HERA-B database services, detector config., calib. 132432
HexaM parallel mechanism based milling machine, kinematic calib. *(Japanese)* 78597
high energy low dose ion implant. monitoring and charact. using C(V) tech. 115584
high-accuracy wavelength meter based on stabilized diode laser 128626
high-perform. oscilloscope amplit. calibrator 75778
high-speed network meas. problems, appl. of TDR and VNAs 120682
high-temp. fixed points in 1150°C to 2500°C range 120619
horse hoof horn capsules, 3D deform., photogrammetric meas. 98372
HPGe detector efficiency calib. for environ. sample anal. 132298
human tracking in multiple cameras 106551
HV cable conductor temps. determ. 133725
hydrophone spatial averaging corrections from 1 to 40 MHz 110773
hyperspectral fundus imager, syst. concept & data proc. 98346
hyperspectral radiometry simul., SENSOR end-to-end simul. tool 122719
hyperspectral rem. sensed images, systematic disturbances anal. 73113
hyperspectral syst. simul., hyperspectral sens. simul. and VNIR testing results 75621
ice images proc. interface for automatic features extraction 106783
IF precision refl. coeff. meas., imped. calib. stds., interpolation 120627
IF precision refl. coeff. meas., imped. stds., calib., interpolation 120626
IM total losses, calorimetric meas. facility, calib. procedure 123447
image seqs. with precise camera operation params., robust depth-map estim. 94700
image-based modeling of objs. and human faces 94895
image-encoding based 3D-vision syst., calib. *(Chinese)* 95248
imaging spectroradiometers ground-ref. calib. 98947
immersion US meas. syst. components, electroacoustic meas. model 114533
impedance std. calib., rem. controlled coaxial switch, pneumatic actuator 109416
in-scene calib. 99047
inclined cylindrical storage tanks, calib. characts., geom. method 75355
incremental motion encoder, automatic self-calib. 132164
induction magnetometers spatial nonuniformity and errors 75828
indust. obj., moving target, spatial coord. meas., laser tracking syst. 117585
indust. robots, geometric/non-geometric errors calib. 75859
Infrared Space Observatory, ISOCAM detectors response 120925
Infrared Space Observatory, ISOCAM-LW dark current 120926
Infrared Space Observatory, ISOPHOT transient effects 120931
INS vs. carrier-phase DGPS for off-road vehicles control attitude determ., comparison 97027
instrum. transformer calib., impedance synthesis methods 115094
integrated opt. posn. encoder syst. with phase calib. 75505
intell. robots and computer vision, conf., Boston, MA, USA (Nov. 2000) 89501
intell. US flowmeter, improved meas. & calib. facility 121058
intens. modulated radiotherapy compensators, dose distrib., QA *(English)* 87827
intensified cameras eval. 86639
INTERCAST CR-39, calib. and response time stabil. 121658
interf. microscopes, roughness meas., calib. guideline 120618
intraocular CMOS press. sens. syst. implant, prog., on-chip micromech. sens. array 98868
ionisation chambers calib. in air kerma length 122398
IR dist. sens., noise added theory based, lin. 109573
IR imaging Stokes polarimeter, absol. radiometric calib. 75653
IR radiation thermometer calib., blackbody cavity radiation *(Japanese)* 86507
Ka-band radiometer for tropos. water vap. meas. 133333
kilovoltage X-ray dosimetry, AAPM TG-61 report, formalisms/appls. 87982
KLOE drift chamber, Frascati DAPhiNE ϕ-factory, tracking inform. 76029
KLOE EM calorimeter calib. and reconstruction performs. 76091
Kodak DC200 series digital still camera, calib. modeling and stabil. testing 97129
land mine detect., HMM/morph. neural networks 77083
landmine localization, vehicle-mounted IR imager calib. 75347
Landsat 5/Landsat 7 underfly cross-calib. expt. 76829
Landsat 7 ETM+, early ground-ref. calib. results for using small test sites 74878
Landsat 7 on-orbit geometric calib. and perform. 76951
Landsat sens. cross-calib. using nearly coincidental matching scenes 73182
Landsat-7 ETM+ internal calibrator, data models 122551
large Helmholtz coil calib. at low AC mag. field levels 72204
large-aperture phase-shifting interferometer for PSD fn. meas. 93306
large-scale 3D obj. meas., image data-patching method 97823
laser flowmeter for water, meas. error *(Polish)* 121284
laser range scanner designed for min. calib. complexity 86243
laser-induced exciplex fluoresc., quantitat. vapour-liq. visualization 132215
LEDA, beam phase meas. syst. 87126
LEDA beam diagnostics instrumentation, beam posn. monitors 87104
LF AC/DC voltage calibrator, embedded syst. *(Polish)* 120633
lightwave network anal., recent develop. 74930
LINAC, gantry angle indicators calib., patient treatment 75939
LINC transmitter, gain/phase imbalance minimization tech. 96479
LOFAR radio-telescope using cluster computers and grid proc. 75263
logarithmic CMOS sens., nonlin. illum. depend., model, calib. 120893
long-dist. XLPE cable lines, PD detect. method *(Japanese)* 99375
lossy transm. lines, freq. depend. param. extraction, TDR/TDT 121167
LR 115 cellulose nitrate Rn detector, aging proc. 121660
LW atmos. radiation, sky-scanning radiometer meas., blackbody calibrated pyrgeometer 76877
machine tool meas./inspection syst. synthesis 97168
machine-vision syst. prod. line calib. 73246
mag. recording, SNR calib., bench-level meas. 116349
magnetocardiographic study technol., supercond. transformer-based 132588
mammography, radiation metrology network, calib. systs. 122153
manipulator with vision, self-calib. by factor method 109407
mass stds., vol. determ. by weighing in air, uncertainty 75360
meas. redundancy effect 131789
med. comprehensive anal. syst., sig./inform. proc. 76203
MEMS torsional ratcheting actuator, reliab. 89024
micro device testing by fringe projection/white-light interferometry 120612
micro inertial meas. units, calib. techs. *(Chinese)* 121029
microcontroller based instrums., calib. method 120625
microlens focal length meas. by vibr. knife-edge tech. 128631
microphone, micromachined device, opt. interferometric readout 97108
microstruct. surface detect. by 3D profilometry/projection grating method 121185
microtechnol. & microsyst. develop. in meas. appls. 120608
microtechnol. opportunities in metrology, stds. & calib. 120609
MICROTOPS II, handheld ozone monitor and Sun photometer 111433
microwave HEMT parasitics charactn., S/noise param. meas., calib. 102635
microwave heterodyne detect. calibrated distributed fiber temp. sens. 75556
microwave meas., four-port syst., on-wafer calib. and testing 86923
microwave moisture sens., universal calib. tech., permitt. fn. 120741
microwave sounding unit, NOAA, atmos. temp., recalibration 98990
mini-spectrometric syst., improved meas. quality, hardware-software fn. sharing 109432
miniature mag.-field probe for HF currents meas., LSI and PCB testing 86920
MIPAS onboard ENVISAT, flight model perform., calib. & charactn. 122630
MM-wave circulator, vector-FEM anal. with SOC truncation tech. 69067
MM-wave microstrip cct., anal. using num. short-open calib. tech. 125693
MM-wave radiometer calib. load, brightness temp. 86925
mobile radio propag. channel MIMO meas./ident., antenna array 119960
mobile robot dead-reckoning, precision-calibrated fiber optic gyroscope, sens. fusion 109593
Model Maker rapid prototyping syst., online layer profile dimens. meas. 100621
model-based inspection of shot-peened surfaces using fusion techs. 106781
motion estim., circ. motion, epipolar geom. from profiles 84130
motion perception, sensitive calib./meas. procedures based on amplif. principle 98375
MR current sens. microsystem with full digital calib. 75757
MRI, highly nonlin. RF mag. fields, high resoln. mapping 98457
MRI reconstruction, VD-AUTO-SMASH imaging 87644
MSG SEVIRI imager, in-flight verification & calib. 122628
MTI dense-cloud mask algm. comparisons 99046
MTI init. on-orbit calib. perform. 97346
multi-wafer prod. MBE syst., integrated real-time multisensors 90290
multiband polarimetric imagery acquisition, calib. aspects 75655
multibit $\Delta\Sigma$ ADC with mixed-mode DAC error correction 79968
multichannel parallel sampling syst., timing skew calib. technol. *(Chinese)* 120698
multicomponent force sens., multiplexed FBG strain sens. 97286
multicomponent force/moment sens., relative expanded uncertainty 120786
multifreq. quadrature bridge for capacitance & resist. stds. 109412
multileaf collimation, automated verification using, Siemens EPID 98627
multiple personnel dosimeters, dose calc. algm. 111225
multiple-sens. integrated coord. meas. syst., automatic camera calib. 131971
multisensor measuring syst., implement. and calib. 95578
MUSIC and MODE for exploiting arrays with multiple invariances 130026
mutual coupling and channel imbalance, complex correl., coherent/incoherent noise calib. *(Chinese)* 109954
MV radiotherapy, clinical ref. dosimetry, TG-51 implement. 98773
nanostruct. thick-film gas sens., fab., air pollution meas. 99030
neutron monitor calibrated by accelerator neutron beam, detect. efficiency 87212
neutron pers. dosemeter, NRPB, response, MCNP calcs. 122407
neutron spectrometer, calib., PET cyclotron vault room neutron energy spectra 87266
NIF opt. component wavefront meas. instrumentation, init. mfg. results 110024
NIR spectral responsivity scale, cryogenic radiometer, detector calib. 75350
NIST, NIST, calib. services, indust. appls. 97123
NIST colorimetric calib. facility for displays 97128
noncontact temp. sens., laser induced fluoresc. type, appl. to in-flight droplets 87015
noncontact vel. meas. systs. calib., uncertainty *(Polish)* 121227
nonlin. acoustic NDE, superheterodyne receivers, absol. calib. 122733
nonlin. microwave components, freq. domain meas. & modelling tech. 86928
nose-to-nose sampler impulse response, kick-out pulses, offset voltage 121064
NP-3 UHF image quality, enhancements using digital spotlighting tech. 99147
nuc. spectral anal. with nonlin. robust fitting techs. 98083
NV-GSD-HE, high energy ion implanter, energy accuracy and control method 115565
OATS antenna factors for small anechoic chambers 128803
objs. nonlin. scatt. EM waves 105697
ocean scanning multi-spectral imager, on-orbit solar calib. meas. 99011
oil content online monitoring by neural nets 111472
OMI ozone monitoring instrum., design & capabilities 98975
omni-directional fisheye lenses, calib. techs. 97348
omni-rig, lin. self-recalibration of rig with varying internal/external params. 106475
on-chip integrated Si bulk-micromachined soil moisture sens. 121299
on-wafer open-short-load-thru calib. stds., ANN modeling 75842
open-ended coaxial-line probe, complex permitt. meas., model 86937
opt. center calib., vision coord. meas. *(Chinese)* 89897
opt. disks, scatt. meas., media noise rel. 127574
opt. indust. procs. conf., Boston, MA, (Nov. 2000) 100387
opt. microlithography, effective exposure dose meas., unresolved gratings, multone flood exposure 126589
opt. rotary encoders, CMOS front-end cct. 75397
opt. sampled ADC, PE tech., bandwidth 125571
opt.-spectra, noncalibrated spectral features detect. and correction, wavelet-transform. 106427
orb. pattern, quantitat. imaging, electron momentum spectrom. *(Japanese)* 110420
orthotropic piezoelec. composite material, strain sens. 120757
oxidase-bound amperometric biosens. output charactn., dyn. model 75671
PARABOLA III, land/atm. bidirectional obs. 111410
parallel manipulator autonomous calib. using constraint link 97130
pass. electronic components, reliable in-cct. eval. 115041
pass. electronic components, reliable in-cct. eval. 80413
PCB inspection tools, improper selection/misuse, impact on meas. data 113762
pencil/fan beam dual energy X-ray absorptiometers, bone/soft tissue meas. 76552
peripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746

calibration continued
pers. dosemeters, external β-rays, EURADOS trial perform. test 122378
pers. dosemeters, perform. testing, Swedish regulation 133104
pers./ambient dose equiv., secondary std. chamber 133111
PET brain imaging, head movement correction, opt. motion tracking 122233
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
phase-modulated opt. polarimeters, calib. methods 104821
phased array calib. 72646
phased array calib. procedures based on element patterns 83732
Phobos silicon detectors calib. syst. at RHIC 132416
phoswich neutron detector appl. to neutron spectrum meas. 98042
photodetectors absol. calib. by spontaneous parametric down-conversion biphoton field *(Chinese)* 120789
photosensitive glass wafer microchip fabr. and thermal lens microscopy appl. 121260
Photovoltaic Engineering Testbed for space power solar cell testing 111356
piezo vibr. platform, probe dyn. perform. calib. 120635
piezo-resistive semicond.-based press. transducer, embedded digital error correction *(German)* 75743
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
pipeline ADC with radix<2 archit. 68867
pipelined data converters, LV/energy efficient design 90985
planar robotic contour following, combined vision/force control at corners 95001
planetary lander vision syst., on-Mars calib. procedure 97402
PM sens. syst. for hot strip mill, param. 3D FEA modelling 131899
PM-355 nuc. track detector, light-ion registration, high-temp. plasma diagnostics 121683
pneumatic conveying syst. powder flowrate meas., intell. meas. syst. 123975
polariz.-sensitive OCT, biological sample birefr. props. 122041
polysilicon heater, CMOS microstruct., high temp. sens. 97573
portable soft tissue indentor, accuracy & reliab. testing 87320
power meas. syst., PC controlled 121137
power quality meas. digital instrum., calib. procedure 109835
precise opt. powermeter, photodiode spectral sensitivity, calib. factors 116954
precision length measuring syst. for lin. artefacts 86384
precision wire-wound resistors, thermal dyn. model for meas. uncertainty reduct. 115038
press. sens., on-chip prog. monolithic integrated device 121044
primary std. dosimetric equipt., current & charge meas., unified channels 86379
projective reconstruction upgrading 106602
proportional counter for neutron detect. 87169
prostate brachytherapy, low energy/low activity seeds calib. 98660
PSI anal. tech., FT method 84162
pulmonary gas meas., portable syst., fast lung fn. test 110522
pulse-excited six-port reflectometer 75848
PUMA 560 robot calib. using laser tracking syst., params. selection *(Japanese)* 97119
pure rot.-based self-calib., error anal. 106564
pyrheliometer calib., factors affecting accuracy 111425
QW laser, sectional voltage contrast topography, Fermi energy 128268
radiated immunity testing, elec.-field uniformity in reverberation chamber 117721
radiation & detector stds. using SR sources, develop. *(Japanese)* 86390
radiobiology, X-ray dosimetry, EULEP-EURXDOS protocol 98780
radiochromic dye film dosimeter, transparency slide scanner 76757
radiofrequency metrology from NBS to NIST, legacy 97124
radiographic film sensitometric curve var. in high energy photon beams 88003
radiotelescope, antenna temp. calib. method *(English)* 109333
radiotherapy treatment planning, electron dens. phantom eval. *(German)* 87971
Raman distributed temp. sens., fast reactor JOYO monitoring appl. 97303
RCS bistatic meas., polarimetric calib. techs. 86206
real-time obj. recogn., optimal color quantization 129852
real-time pose estim. in room-size environ., accurate catadioptric calib. 106474
ref. plates absol. calib. for surface interferometric inspection 86392
resist. bridge, cryogenic current comparator, SQUID readout 75780
respiratory inductive plethysmography, natural breathing calib. 87336
RF material charactn. using large-diam. coaxial air line 81638
RF sens. pointing of satellites using multilobe reflector antenna 83610
ring laser dyn. goniometer, angle meas., systematic errors 128628
rocket engine test facility, DAQ & health monitoring syst. 111319
Rohde & Schwarz RF low levels meas. and calib. 74569
Romania, med. practice workers, indiv. radiation monitoring, operational qty. $H_p(10)$ 111210
rot. zooming camera, self-calib. using two views 94863
rotary encoder automatic high precision calib. syst. *(Japanese)* 132153
roughness stds., Australian surface roughness meas. syst. develop. 120617
sampling cct., anal. model 86445
SAR imagery, matched subspace detectors for target discrim. 109267
SAR interferograms, atmos. effects, calib. by GPS/local atmos. models 111431
satellite laser ranging theodolite, pointing precision calib. by observing stars *(Chinese)* 98902
SAW gas sens., design optim. 120979
scanned lin. grating light valve projection syst. 86894
scanning Auger electron microscope for high spatial resoln. surface pot. meas. 102948
scene constraints during calib. 106603
scintillation monitor calib. for effluent water radiation surveillance, CERN accelerators 76123
self-calib. capacitive sens., threshold liq. level meas. 109510
self-calib. cct. for opt. rotary encoder microsystems 132165
self-calib. of stereo rig using monocular epipolar geom. 106635
self-calib. prog. mobility spectrometer, atmos. ion meas. 98995
self-calibrated interferometric-intens.-based opt. fiber sens. 131947
self-referenced hand-held range sens. 86643
semicond. wafer, defect detect., particle scanner, calib. 89889
sens. calib., evol., using genetic prog. on evolvable hardware 97209
sens. meas. uncertainty, online validation using wavelet transforms 131890
sens. property drift, online calib. method 75455
sens.-bridge-to-microcontroller interface, two-point calib. 120650
shear-stress sens., dyn. calib. using Stokes layer excitation 97171
short range automotive radar sens., sub-nanosecond pulse generator 124049
short-circuited rect. waveguide, liq.-filled, refl. coeff. meas. 121150
Shuttle Radar Topography Mission sub-arcsec. metrol. camera 133282
side-hole fiber-optic sens. for dyn. hydrostatic press. meas. 97327
single-grid moire interferometer for line imaging appls. 132174
single-image fringe projection profiling method for dyn. appl. 113749
single-mode fiber-optic press. sens., self-referencing double interferometer 131958
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
six port reflectometer using symmetric five-port ring 109960
calibration continued
six-port reflectometer realization using two microstrip three-sect. couplers 132142
six-port self-calib. based on act. load synthesis, appl. to load-pull tech. 121173
Skymed/Cosmo syst. simul., rem. sens., VIRS imaging spectrometer 122550
smart antenna array calib. incl. amplit. and phase mismatch and mutual coupling 83754
SMT placement proc., long-term stabil., machine capability test 91478
SNO underground D_2O Cerenkov solar neutrino detector anal. 132309
soft X-ray chambers, IPEMB very low energy dosimetry 98794
soft X-ray spectrometer, detect. elements energy response calib. *(Chinese)* 87280
soil, intell. dielec. sens. 121059
solar neutron detector detect. efficiency calibrated by accelerator neutron beam 87207
solder paste printers, machine/proc. capability coeffs. 125898
space solar cells, ground level sunlight calib. 112964
Space Solar Telescope star sens., high accuracy attitude determ. 98907
spaceborne instrum. radiometric calib., thermal vac. facility 122632
spatial coord. comparison calib. syst. develop. *(Japanese)* 97830
spectral calib. params. learning for color inspection 106656
spectral phase interferometry for direct elec.-field reconstruction, homodyne detect. 128419
spectral radiometric stds., calib., synch. rad. appl. *(Chinese)* 109419
SPOT satellite imaging instrum., stat. self-calib. 109696
stat. calib. of CCD imaging proc. 109679
stationary plasma thruster, strain gauge based thrust meas. syst. 122508
std. temp. sens. & thermometer checking, metrological equipt. 86381
steel, stress eval., Barkhausen noise meas., CRT prod. appl. 79482
Stentor satellite transmit act. antenna, Ku-band Quadri-SSPA 96617
step gauge flatness & parallelism, high-accuracy interferometric meas. 120621
stereo camera calib., perform. eval. of RANSAC algms. 129498
stereo rig self-calib. from noisy stereoscopic images 84334
stereo vision, calib./3D reconstr. using neural nets 118432
Stokes imaging polarimetric target acquisition & mine detect. 77027
struct. environ. scenes, distortion removal and automatic calib. 129429
struct. light, shaped depth-image capturing syst. 73283
struct. light calib. for large surface topography 73273
stylus type instrum. calib., ref. specimen scratched surfaces 120616
subspace-based calib. approach for mutual coupling among sens. in arrays *(Chinese)* 130015
supercond. magnets, static fringe field, NMR diffusion techs. appls. 82005
supercond. strands, magnetis. meas. tech. 75826
surface contamination monitors calib., beta-ray plane sources *(Japanese)* 133147
surface curvature class. for multiple reflectance obj. using neural network *(Japanese)* 84279
surface texture measuring instrum., laser interferometer 121197
surface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
surgical interventions under video-augmented X-ray guidance, appl. to needle placement 87799
surveillance camera visual-thermal image fusion 84158
synthetic aperture radiometer, effect of mutual coupling between antenna elements on imaging and calib. *(Chinese)* 131892
TDD systs., automatic calib. of adaptive array using dispersed SPDT switches 120057
TDMA smart antenna wireless base stations, Internet controlled calib. syst. 85568
telemanipulation, uncalibrated, predictive image display 106811
temp. field, 3-D visualisation, meas., liq. cryst. scanning thermography method 131795
temp. scale interpolation & transfer, 800-1600°C, meas. std. 75356
temp.-insensitive fiber Bragg grating lin. strain meas. 131960
terrain mapping, SIR-C/X-SAR, calib., ground truth 88117
thermocouple calib., simultaneous, error sources, ISO/IEC 17025 std. 109418
thermoluminiscent dosimeters, calib., PET cyclotron vault room neutron energy spectra 87266
thin heat flux sens. for building appl., ASTM C 1130 calib. 97175
thin layers, thermal cond. meas. using scanning thermal microscope 132207
thin plastic scintillator, energy calib. method 132406
thin plastic scintillator, simple method of energy calib. 121566
three-phase induction-type watthour meter accuracy, harmonic distortion effects 123091
three-port vector NWA, calib. 109462
time-base for waveform param. estim. 121063
time-domain NWA calib., random error effects, simul. 86434
tissue, in vivo exam., calibrated fluoresc. imaging syst. 87513
TLD, pers. neutron dosimetry, research reactor facility 122382
TLP, transm. line pulse syst., calib., correl., stds. and new techs. 83105
tomotherapeutic megavoltage CT calib. 87700
TOMS-5 total ozone mapping spectrometer, radiometric calib. 122633
track detectors used in gaseous/solid alpha radionuclide monitoring, calib. syst. 121668
transformer test set calib. methods, stds. *(Japanese)* 120614
transm. line meas., high- and low-resist. substrs. 109946
transm. meas. of porosity, neutron generator, geophys. appl. 88160
transm. mode quasi-distributed fiber optic temp. sens. 120869
transmitting array antenna rem. calib., sync. orthogonal codes 105959
transthoracic defibrillation, myocardial vector fields mapping, bipolar electrode array 98225
trichromatic halftone printing syst., colorimetric calib., alg. tech. 86386
triple-head gamma-camera PET syst., software geom. calib. method 122216
TRMM CERES thermistor bolometer sens., lunar radiance broadband meas. 122644
tuned cct. displacement sens., eddy current method *(German)* 75402
turbulent round jet, heated, temp. dissipation meas., cold-wire anemometry 132222
twin laser sens. thickness meas. instrum. calib., isoline bilinear LUT 113743
twin-grating fiber optic sens., demodulation algm. 75573
UHF acoustic resonator, acoustic microscopic imaging 92769
UHF external array self-calib. algms. 105966
ultrashallow jn. form., ion implanter/RTA syst. issues 126316
ultrashort laser pulse detect., time stds., calib. methods 93729
ultrasound, free-hand 3D, automated calib., image registration approach 88214
underground mining LHD vehicle operation safety, stereo vision appl. 129534
underwater test facility, computer controlled transducer positioning syst. 97136
urology/proctology press. profile sens. syst., catheter design 132543
US NDT, dist.-amplit. correction curves, anom. dip 101626
US tissue charactn., low-refl.-coeff. liq. interfaces 110798
US wave propag. through sediments, parametric modeling 99023

calibration continued
UV radiation meas., error avoidance 110019
UV source, calib., normal-incidence monochromator beam lines, BESSY II 124083
UWB SAR imagery, 2D polarimetric calib. filters 96961
vector NWA coaxial calib. components 75363
vectorial NWA for network scatt. params. in RF/microwave systs. *(German)* 109459
vehicle exhaust VOC meas., extractive FTIR spectrosc. 122702
vestibular syst., inertial/gravit. inputs assess. 87301
vibr. sample magnetometer, calib., sample size effects 131871
vibr./accel. pickups, phase shift charact. *(Japanese)* 75896
videoendoscopic distortion correction, endoscopy virtual guidance appl. 98354
VIISta 810 ion implanter, beam autotuning 115566
VIPAR polymer gel dosimetry, wide dyn. dose range 111218
vison camera calib. based on circ. points 131977
VLSI routing estim., via impact model 101638
voltmeters, computer-based calib., virtual voltage supply 109837
wafer 3D micropattern meas., opt. probe & control design 120653
wafer fab., sidewall polymer contamination during metal etching 103350
wafer implant, two implant meas. of press. compensation factors 115586
wafers, lifetime meas., photocond. in passivating liq. 93328
water Cherenkov detector, rem. particle dens. calib. with crossing-through muons 87206
wattmeters spurious errors meas. 121138
wave plates, opt. phase retardation, laser freq. splitting technol. 117584
wavelength calib. and instrum. line shape estim. of LWIR hyperspectral sens. from in-scene data 76859
WDM fiber commun., wavelength calib. transfer stds. 86376
weather radar calib., microwave sig. generator *(German)* 86202
wideband channel sounder for real-time meas. on time-variant indoor radio channels *(German)* 128764
wt. vol./mass determ. comparator *(Japanese)* 97860
X-ray area detector based on logarithmic CMOS camera 121811
X-ray dosimetry, calib., correction factors, AAPM TG-61 report 87983
XD100 extremity ring dosemeter, type tests and calib. 122405
Zener diode voltage transfer std., perform. eval., uncertainty 97121
zoom-lens camera, calib. from noisy data with outliers 131979
Zygo Pegasus 2000 fly height testers, meas. uncertainty 127362
^{241}Am lung meas., voxelised num. phantoms, MCNP code *(English)* 98830
$BaSrTiO_3$ tunable dielec. thin films, microwave permitt./loss, broadband determ. 91171
BiPbSrCaCuO 2223 HTSC multifilamentary tapes, important factors affecting AC losses 127444
$(BiPb)_2Sr_2Ca_2Cu_3O_8$ HTSC Hall sens. AC loss meas. calib. 77406
^{252}Cf-based ref. neutron fields for testing moderating detect. systs. 98798
^{60}Co γ-ray sources, dose calib., ionization chamber syst. *(Japanese)* 122434
^{60}Co sources, Gamma Knife™ treatment plans verification 76632
^{60}Co, whole body counting, in-vivo monitoring intercomparison 87985
^{133}Cs thermal cell, saturated absorpt. spectrum, high-precision freq. meas. 117429
^{137}Cs, whole body counting, in-vivo monitoring intercomparison 87985
CsI calorimeter perform. at KTeV expt. at Fermilab 76090
CsI(Tl) scintillation detector, calib. *(Chinese)* 110296
CsI(Tl) BABAR calorimeter light pulser syst. 76092
Cu(II) in aq. media, voltammetric sens., modified C electrode 86732
Er-doped fiber amp., RIN spectral dens., transfer std. 71696
GSO:Ce energy response for ASTRO-E hard X-ray detector 110337
GaAs MMIC, EO probing, CW calib. 102665
GaAs, carrier profiling, scanning spreading resist. microscopy 103002
$Gd_2SiO_5:Ce^{3+}$ scintillator for ASTRO-E hard X-ray detect., energy response 121572
Ge detector gas monitor detect. efficiency curve determ. 87276
Ge detector peak efficiency curve shape for prompt gamma NAA 97984
Ge high purity detectors, facilitating calib. in situ meas. 99041
^{3}He cylind. proport. counter, Bonner sphere, Vandellos II NPP appl. 121600
Hg vap. lamps, monochromator wavelength calib. stds. 89428
^{125}I interstitial brachytherapy source, Monte Carlo-aided dosimetry 122295
$^{115}In(\gamma,\gamma')^{115}In^m$, 4.3 MV DYNAMITRON photoactivation facility, review 87068
InP, carrier profiling, scanning spreading resist. microscopy 103002
InP-monolithic resistive sens., air quality eval. 86720
InSb multielement IR sources with alternating contrast 117005
^{192}Ir brachytherapy source, direct calib. of ref. chamber 98674
NaI gamma ray spectrometer, air kerma rate, calib. 76743
Nd:YAG monolithic non-planar ring laser freq. noise meas. 93559
NiCr resistor, MMIC compatible, on-wafer VNA calib. 125844
PZT conical transducers, self-calib. simulated AE source 122736
PZT nonlin. phase-shifting adapter, self-calib. *(Chinese)* 70439
$PbWO_4$:Y CMS cryst. calorimeter at LHC, light source monitoring 110336
Pt resist. thermometer calib., ITS-90, Al temp. std. 75354
^{106}Ru ophthalmological applicator, BANG polymer gel dosimeter, MRI 76771
Si CZ growth, online diam. calib., shape estim. 114209
Si Hamamatsu S1337-11 photodiodes for absol. spectral responsivity std. detectors *(Chinese)* 97250
Si piezoelec. press. sens. with integrated digital calib. ccts. *(German)* 75414
Si piezoresistive press. sens., low range, dyn. calib. 109817
Si piezoresistive stress sens., packaging appls. 75427
Si, porous, potentiometric triglyceride biosens., calib. 109724
Si press. sens., integrated reliab. test, automatic syst. 75456
Si solar cell fab., ingot lifetime meas. calib. factors 100163
Si substr., temp. calib., temp. programmed desorpt. anal. 109401
Si:B, ultra-shallow jn. implants, RTA, monitoring 115594
Si:B(P)(As) bulk-doped ref. wafers, dopant conc. meas., SIMS round-robin study 115596
Si:Ge layers, preamorphous implants in-line charactn. 115597
Si-scintillator/photodiode charged particle telescope, on-beam calib. 110283
SiC:Al,B, 4H/6H, absorpt. meas., doping level eval. 69809
Ti:sapphire self-mode-locked laser, femtosecond opt. pulses, time-resolved opt. gating 105459
WO_3 CVD films on Si, gas sens., fab. & calib., DIP 97527
WO_3, ozone sens., sens. drift, meas. correction method 86710
Xe liq. TPC, γ-ray imaging, LXeGRIT appl. 76188

call admission control *see telecommunication congestion control*

call centres
ACD syst. at Princeton Univ. computing and IT help desk 119509
customer rels. mgt., advanced technols. *(Japanese)* 119623
dyn. voice-over-IP firewall with IP telephony appls. 85317
elec. utility, customer services enhancement, call centre 99247
Internet call center, collaborative multimedia middleware archit. 96228
Internet call center, design and implement. 96056
nursing, telephone advice, callers' experiences 133153
power syst. fault situations, call handling centre, customer inform., NIE 133450
Tasmanian Police Call Centre project, offence reporting proc. 85146
Virtual Inhabited Call Centre, pers. mobile agent syst. 74146
VoIP networks, third-party call control for call center appls. 130610
WAP access in advanced call center 108068

calorimeters
see also calorimetry; particle calorimetry
advanced detectors, conf., La Biodola, Elba, Italy, May 2000 67400
ATLAS calorimeter, high-speed digital opt. data link, SEU 98061
ATLAS liq. Ar calorimeter read out driver syst. 121736
ATLAS liq. argon calorimeter, readout drivers, PU design 76105
BGO calorimeter for L3, calib. using, RFQ accelerator 76099
BTeV detector, phys. reach and design 76021
CAPRICE98, balloon-borne mag. spectrometer with gas RICH and Si calorimeter for cosmic rays 76160
CMS calorimeter, Global Calorimeter Trigger proc. using reconfigurable logic 76147
CMS EM calorimeter, light-to-light readout syst. 110400
CMS EM calorimeter, recent progress 76097
CMS HCAL, front-end opto-electronic interfaces 121638
cryogenic transit.-edge microbolometer/calorimeter 71141
curtain-wall-type PV module, fire-proofing encapsulation materials 112996
hadron calorimeter, thin, dual-readout, cosmic ray det. outside Earth's atmos. 87188
halide scintillators, recent develop. 121433
high granularity calorimeters, energy flow 110372
KLOE detector, overview and K_L^0/K_S^0 decays 97987
KLOE trigger syst., EM calorimeter, custom electronics, efficient online monitoring 76141
LHCb detector, CP violation prospects 76022
LHCb detector, overview 97985
lin. collider phys./expts., conf., Batavia, USA, Oct. 2000 100437
MINOS detectors for neutrino interacts. 76081
MONOLITH expt. at Gran Sasso 110302
multichannel hot-electron microcalorimeter-based γ-spectrometer 110313
NEMO-3 calorimeter electronics 121693
NOE scintillating fiber calorimeter, results of R&D activity 76083
Pamela expt. for dark matter imaging 132340
PAMELA expt. in space 76159
PIBETA detector, ADC common noise correction and zero suppression 87214
QCAL tile calorimeter of KLOE 76102
sampling calorimeters at TESLA, mask design and background studies 110349
Shashlik calorimeter with long. segmentation, test beam results 121536
shashlik calorimeter with long. segmentation for lin. collider 76098
supercond. transit. edge sens. array, X-ray microcalorimeter 71127
thermal flow sens., calorimetric device 86763
Tilecal, hadronic calorimeter for ATLAS equipt. 121568
water calorimeter and chem. dosimeter, electron-beam dose comparis. discrepancy 76125
water calorimeter based absorbed dose to water std. 76738
wavelength shifting fiber calorimeter/plastic scintillator bar for neutrino phys. 76084
B_2O_3-SiO_2-La_2O_3-Gd_2O_3-BaO:Ce^{3+} scintillator, yield, transm./decay time 97989
Pb scintillating fiber calorimeter, opt. survey by digital imaging techs. 76101
Pb scintillator detector, compensated hadron calorimeter, hadron, electron, Pb ion det. 76100
PbF_2 Cherenkov calorimeter, meas./simul. of Cherenkov light 98033
$PbWO_4$ calorimeter at CMS, monitoring light source 121569
$PbWO_4$ crysts. for calorimetry 121537
$PbWO_4$:Tb,Mo, EM calorimetry in energy regime below 1 GeV 132292
Si microcalorimetric gas sens., catalyst materials 120968

calorimetry
see also calorimeters; differential scanning calorimetry; heat measurement; particle calorimetry; specific heat; thermal analysis
batt. safety, thermodyn., thermokinetics, accelerating rate calorimetry 89094
bypass orifice inverter heat pump, thermal perform. study 100340
curtain-wall-type PV module, fire-proofing encapsulation materials 112996
elec./hybrid EV secondary cells, thermal characterisation 89133
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
HTSC power cables, calorimetric losses meas. 77391
IM, stray load loss eval., I/O and calorimetric methods 134020
IM total losses, calorimetric meas. facility, calib. procedure 123447
IM total losses/temp. rise determ. using equiv. loading methods 112498
liq.-cryst./liq.-cryst.-polymer composite fab./meas. 97615
opt. material absorpt. coeffs., laser interferometer calorimetry 132191
plate-like ceramics, AC calorimetric thermal diffusivity meas. 110038
power pulse lasers, radiation energy meas. using multichannel calorimetric syst. 110013
preterm infants, indirect calorimetry perform. improvement, O_2 consumption/CO_2 prod. 121870
thermal biosensors, principles/appls. review 120946
underfill hot-wet adhesion improvement, adhesion promoter appl. 113734
underfill resin develop., flow microcalorimetry appl. 67610
Bi-2223 HTS conductor struct., AC loss meas., calorimetry 70684
BiSrCaCuO-Ag HTSC tapes, thermal cond., calorimetric study, exptal. method and simul. 87012
Li secondary batts., salts for solid polymer eletroyte 123761
Li-ion secondary cells, key components safety studies using ASC 89149
Li_xCoO_2 high temp. electrode/electrolyte reacts. 112771
$Li_xMn_2O_4$ high temp. electrode/electrolyte reacts. 112771
$Li_xMn_2O_4$ spinel cell electrode, heat generation charact. meas. 99920
Nb_3Sn conductor for ITER Central Solenoid Model Coil, AC loss meas. 71002
YBaCuO HTS conductor struct., AC loss meas., calorimetry 70684

CAM *see CAD/CAM; industrial control; manufacturing data processing; production engineering computing*

CAMAC
photometer, PMT detector, VECTOR-CAMAC syst. 75544
PIBETA detector syst. for precision πβ meas. 121648
PSI Injector 2 cyclotron, proton beam dump, surveillance protect. 87129
radionuclide activity & neutron flux stds., unified counting channels 87262
wide dyn. range charge integrat. ADC converter with FASTCAMAC readout 121701
CsI(Tl) cryst., intrinsic radioact. background, (α,γ) discrim. *(Chinese)* 110297

acorders *see video cameras*
nera lenses *see photographic lenses*
nera tubes, television *see television camera tubes*
neras
see also coronagraphs; streak cameras; television cameras; video cameras
3-camera capturing syst. for disparity panorama generation 94702
3-headed γ-camera PET, resoln., detector thickness influence 122211
3D obj. model building from multiple views using calib. plate 84191
3D precise meas. with high resoln. stereo head 94967
3D reconstruction systs., image distortion/resoln. effects 94969
3D shape modeling syst. using PC/digital cameras *(Japanese)* 106740
10X microstepper EUV lithog. cameras, multilayer coating/optics test 103500
79 dB-SNR 70 mW 18 MHz CCD front-end with fully-digital amplif. 120903
act. stereo vision syst., lines/points matching using GA 94815
ADAC mol. coincidence detect. PET camera, NEMA NU-2 2000+ stds. 132952
adaptive filtering for image denoising 118335
aerospace camera syst., image motion compensation, coord. transform. *(Chinese)* 98898
airborne reconnaissance, conf., San Diego, USA (Aug. 2000) 89568
artificial retina camera, real-time pattern recogn., Hough transform algm. 73439
Auger fluoresc. detector, camera 102944
auto-focusing algm. for digital cameras *(Korean)* 129556
Bayer pattern images, saturation-based adaptive inverse gradient interpolation 94864
behavioural meas. syst. for children with develop. disorders using omni-directional camera *(Japanese)* 132631
BESSY II, source size/emittance monitoring 121373
binary distorted diffr. grating for multiplane imaging and wavefront sens. 104862
Bluetooth camera to Internet link, connectivity soln. 119582
breast imaging, high resoln. PET appl. 122227
breast tumour imaging using tiltable head SPECT camera 132947
calib., neural, locked/unlocked/semi-locked net wts. 120894
calib., obj. relative posn./orient. ident. 86642
calib. of camera using rect. textures 86671
car accident meas., scene images from digital camera 109975
CCD camera, honeycomb struct., image quality, computer simul. *(Japanese)* 86613
CCD camera, vision syst., calib. tool 97340
CCD camera calib., constraint condition selection *(Chinese)* 97356
CCD camera measuring syst., math. model 120905
CCD color filter array using sig. correl., color interpolation 94823
CCD image sens. camera, image sharpness *(Japanese)* 86601
circ. coded target for opt. 3D meas. and camera calib. automation 129522
CMOS image sens. camera with focal plane edge detect. 131975
color image enhancement in poor visibility conditions 94705
color images chroma transform based face locating/tracking method 73167
compact highly automated pulsed holographic camera systs., white-light-viewable hologram prod. 82980
compact portable photorefr. cryst. holographic camera 83033
compact PSPMTs, imaging props. eval., discrete γ-cameras appl. 122267
Compton camera for multi-tracer imaging, segmented Ge detectors 122207
Compton camera for multitracer imaging, Monte Carlo simul. 111012
computer vision syst. for tracking players in sports games 94968
conf. on nuc. med. imaging, Lyon, France (Oct. 2000) 100419
DeskScan syst., face models scanning with desktop cameras 129417
digital camera, combining off- and on-line calib. 84211
digital camera colour photography, tricolour filter *(Chinese)* 109671
digital camera for taking evidential photographic images 118526
digital camera images transfer to Internet viaGSM phone 119835
digital camera imaging polarimeters, calib. requirements, bit depth 75654
digital camera syst., resoln./image quality, MTF *(Japanese)* 86612
digital cameras, CMOS image sens., graduate level educational course 131987
digital cameras, spectral responsivity meas. method *(Japanese)* 86393
digital endoscopic imaging syst., pass. autofocusing *(English)* 87543
digital low-end camera for on-screen texture visualisation, colorimetric characterisation 97737
digital photography and photographic printing 94868
digital still camera CCD, high resoln. *(Japanese)* 86611
digital still cameras, color segmentation as aid to white balancing 94869
digital still-picture cameras, OECF, ISO speed, and SFR 73278
digital still-picture cameras, spatial freq. response 73277
compact digital zoom photo-cameras for holographic interferometry 105614
dual head coincidence clinical camera, image correction techs. 122240
dual-band framing cameras, wafer-scale vis. & IR FPAs 97379
dual-head γ-camera imaging, random coincidences correction 111038
dyn. reconfigurable vision for intell. sens. 106796
endoscopic robot surgery, laser-pointing image registration 98603
Europa Orbiter camera systs., charged particle-induced noise 133209
EYESCAN, high-resoln. digital panoramic camera 86670
feature-based video mosaic 94714
flexible ref. gratings for surface inspection enhancement, Moire interferometry 97803
French SWIR technol. used for astron. 111327
gamma camera detector, virtual PMTs, centroid positioning perform. improvement 122268
Gamma Knife treatment spec. verif. using stereo-opt. camera 76619
gamma ray imaging, image intensifier/cooled CCD camera 120889
γ-camera collimators, quality perform., investig. comparison *(Chinese)* 111044
gamma-cameras, Monte-Carlo simul. using GEANT 132957
hand-held γ-cameras, reconstruction implement., surgery appl. 132983
helmet-mounted uncooled FPA camera/display for firefighting appls. 75648
high dyn. range panoramic imaging 106460
high-speed γ-camera design, high-yield-pileup-event recovery method 98571
Hybrid Portable Gamma Camera, hybrid collimation for indust. γ-imaging, spatially coded/Compton aperture data 87270
iD PHOTO format for digital still cameras *(Japanese)* 118430
iD PHOTO magneto-opt. disk for digital still cameras *(English)* 71434
iD PHOTO magneto-opt. disk syst. develop. *(Japanese)* 116394
IDC-1000Z digital camera iD PHOTO magneto-opt. disk drive *(Japanese)* 116593
IDC-1000Z digital disk camera SF-MO2 opt. head develop *(Japanese)* 116849
IDC-1000Z digital disk camera using iD PHOTO magneto-opt. recording syst. *(Japanese)* 116848
IDC-1000Z digital still camera fns. *(Japanese)* 118431
image intensifier high-speed photography syst. for surveying *(Chinese)* 131996
image zooming at fractional scaling ratio, adaptive low complexity algm. 118469
cameras continued
intrinsic param. calib. *(Chinese)* 109688
IR camera, uncooled, law enforcement appls. 109710
IR Shack-Hartmann wavefront sens. for conformal dome metrology 109717
Irvine Sensors advanced vis./IR microcameras for dual-use appls. 109653
Kodak DC200 series digital still camera, calib. modeling and stabil. testing 97129
Kodak DCS420m, beam-induced fluoresc. diagnostic for LEDA, init. operation 87119
laser beam charactn. using Shack-Hartmann sens. 71887
legal court cases, digital camera image ident. 118489
lin. CCD camera, interf. fringes, fast accurate algm. anal. *(Chinese)* 109703
liq. Xe PET camera, simul./posn. sensitive PMT tests 122226
lock opening/closing with image base by cellular phone via Internet 74863
lymphoscintigraphy handheld scintillation camera, high-resoln. 110998
magneto-opt. disk, digital camera 93252
mammary/axillary region PET imaging syst., breast cancer appl. 111034
marine plankton underwater particles, in-line/off-axis hologrammetry, replay facility 88173
Mars Climate Orbiter Mars Color Imager, characts. and mission 131994
Mars Polar Lander, MVACS Robotic Arm Camera 131992
Mars Polar Lander, MVACS Surface Stereo Imager 131991
Mars Polar Lander Mars Descent Imager, characts. and mission 131993
MDAPET camera, missing projection data compensation 122230
MICROTOP.06.MFC triangulation-based sens. for noncontact micro/nanotopographic surface inspection 97381
min. ionising particles detect., CMOS sens. 132363
module, flip-chip interconnection 120902
monocular vision method for camera focusing posn. *(Chinese)* 75608
motion estim. with incomplete inform. using omni-directional vision 94671
multi-camera syst. for tracking multiple people 95006
multiple camera fusion for multi-obj. tracking 95010
myocardial perfusion SPECT, camera perform. eval., channelised Hotelling observer 132921
omni directional, real time, stereo image acquisition syst. 84146
overhead power line aerial inspection, camera sightline pointing requirements 77437
panoramic depth imaging with single std. camera 129577
PET, ADAC MCD camera, NEMA NU 2-2000 perform. meas. 122214
PET cameras, irregular sampling/interact. depth, 3-D reconstruction 132953
PET cameras with irregular sampling/interact. depth, 3D reconstruction 132877
PET imaging, trends overview, instrumentation, detector modules, cameras 132896
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
pinhole SPECT of mice using LumaGEM gamma camera 111037
PISCES, wide-field, 1-2.5 μm camera for large-aperture telescopes 75663
pixellated semicond. gamma camera, phys.-based model 111005
pixellated semicond. γ-camera, phys. based model 132913
planar pattern, single view, vanishing self-polar triangle recovery 94698
portable photorefr. cryst. holographic interferometer 128586
positron emission mammography camera, electronics syst. 111008
positron emission mammography camera, LBNL, electronics syst. 122260
quad-HIDAC, next-generation PET camera for small-animal imaging 132960
radiographic image quality comparison from four digitization devices as viewed on computer monitors 76214
rainbow holographic camera, single laser beam recording 117531
real-time ultrasound transm. camera, moving joint/tendon images 110760
reliable real-time multiview tracking 95008
rewritable broad-band color filters for spectral image anal. 84075
rly. overhead contact lines, automatic optic inspection *(German)* 78288
rot. zooming camera, self-calib. using two views 94863
scintillation camera, bias free positioning estimators 132917
scintillation cameras, bias-free positioning estimators investig. 111019
scintimammography, breast compression role, γ-cameras comparison 132982
scintimammography, dedicated scintillation cameras perform. 110997
scintimammography/stereotactic core biopsy digital X-ray combined syst. 122209
Seagle-1, portable thermal imager 75652
self-calib., varying focal length, using 2 images 120921
SEM, X-ray fluoresc. imaging, pinhole relay optics 76187
semicond. laser integrated syst., testing with CCD camera 117272
sentinel lymph nodes detect., compact γ camera, opt. Monte Carlo simul. 110920
sentinel lymph nodes localisation, hand-held γ-ray imaging device 132966
sentinel node radio-guided surgery, compact γ-cameras appl. 132969
single-CCD camera captured color images, multi-image resoln. enhancement 94822
single-chip CCD still cameras, color filter arrays interpolation 131995
single-color dual-band QW IR detector FPA, lab./field imaging testing 86653
small animal imaging, conventional γ-cameras appl. 132980
small γ-camera using PSPMT, NaI(Tl), CsI(Tl) and CsI(Na), perform. eval. 132981
small-animal tomographic imaging, high-resoln. semicond. camera 132967
small-FOV γ-cameras, optimal cryst. geom., arrays vs. disks 132992
solid-state camera systs. eval. in varying illum. conditions 86664
space camera real-time auto-focusing, centroid sens. method *(Chinese)* 98905
SPECT, compact Compton camera design, params./imaging algms. 132924
stereo vision, calib./3D reconstr. using neural nets 118432
still digital camera, H.26L intra mode encoder archit. 120904
Stirling cryogenic coolers in France, IR cameras appl. 109647
teleradiology/teledermatology in Finnish mil. med. 76784
TFT LCD inspection using high-speed high-resoln. vision syst. 127845
tracking syst. using self tuning regulator/visual feedback 129450
unattended imaging sens. advances and appls. 75630
uncooled IR focal plane detector for temp. meas. 75651
US FT camera for quasi-real-time imaging 88219
virtual PMTs, centroid positioning perform. improvement near γ-camera detector edges 111010
visual interface from uncalibrated cameras for uncalibrated displays *(Japanese)* 73140
X-ray image holography, nanometer resoln., micro-zone-plates *(Chinese)* 105578
Z/I-Imaging digital aerial camera syst. for reconnaissance 99112
CsI(Tl)/Si PIN photodiode imaging module, compact 64-pixel, IC readout, perform. 122263
GSO brain PET camera, perform. obs. 122222
Nb supercond. tunnel jn., ASTE subMM-wave camera 75259
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Si_3N_4 micromesh bolometer array for 350 μm astrophys. 131924

CAN *see controller area networks*

cancer
see also tumours
adaptive neighborhood contrast enhancement using histogram-based image partitioning, parallel implement. 110943
algorithmic 3D simul. of breast calcifications, digital mammography 87724
anal cancer, external beam radiotherapy, TLD 98781
autofluorescence spectrosc., oral cancer diagnosis 87514
axilla, digital phantom based on Visible Human Project data set 132956
axilla, digital phantom based on Visible Human Project data set 132940
Barrett's oesophagus, colorimetric detect, low-cost fibre-optic instrum. 76399
biological tissues, estim. of temp. distrib. by multifrequency microwave thermography 87559
bladder carcinoma, intens. modulated radiotherapy, dyn. multileaf collimation 98635
blood-brain barrier, cell phone effects and tumor treatment 98739
bone marrow comp. in vertebral bodies, spectrosc. imaging 110892
bone metastases recalcification, radio- & chemotherapy, densitometry 87852
brachytherapy cancer treatment, simulated annealing and ANNs 122312
brain lesions, ^{1}H-MR spectra anal., mobile lipids 132701
breast, intact, radiotherapy, virtual simul. appl. 76627
breast cancer, 3D microwave tomography, computational modelling 110853
breast cancer, computerized thermography, image segmentation, temp. vars. 76387
breast cancer, internal mammary lymph node chain radiotherapy 87863
breast cancer, quasi-monochromatic CT syst., combined emission-transm. tomography 110957
breast cancer, thermographic interp., num. computation as tool 87545
breast cancer autom. diagnostic syst., ultrasonography, CWTD algm. 110711
breast cancer diagnosis, CSP, neural net approach 122133
breast cancer diagnosis, imaging techs. *(German)* 110930
breast cancer investigs., MRI scans, automatic finite element mesh generation 110872
breast cancer patients, virtual simul. 98667
breast cancer radiotherapy, contralateral breast dose meas., superflab appl. 98825
breast cancer therapy manipulator for mag. reson. tomography device *(German)* 110868
breast dens. estim. on mammograms, computerized image anal. 87760
breast images, dense, microcalcification clustering, computer-aided detect. syst., contrast resoln. effects 98518
breast lesions, mammography, automated registration tech. 87753
breast MRI, contrast enhancement curve eval. using neural net 98394
breast pathology assess. by MRI-mammography 2D/3D data fusion 87585
breast tumor, microwave detect., skin subtraction algm. 87560
breast tumor images, feature extraction and class., artificial organisms 76201
breast X-rays, correspondence, curved epipolar lines 132832
breasts, X-ray therapy, mixed energy beams/beam spoiler 111095
carcinogenesis, chronic β-irrad., threshold dose-response 76733
carcinogenesis, visually safe dose estim., optimal risk assess. 98832
cell phones, public health concerns and emissions testing 122366
cellular phone, RF radiation, health effects 122362
cervix carcinomas, radiotherapy, micronucleus assay 76621
chest CT, automated nodule detect., change over time assess. 122124
chromosomal aberrations, peripheral lymphocytes, Swedish train engine drivers 98743
chromosome images, homologue class., iter. centromere segmentation algm. 87519
chromosome images multi-feature anal. and class. 87550
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
colonic cancer images, classif., orient. coherence metrics 132632
curvature-based internal struct. anal. of pulmonary nodules using thoracic 3D CT images 132836
diaphragmal sinus, malignant pleural mesothelioma, wedge-shaped applicator 98622
digital mammograms, fixed block-based lossless compression 132785
digital mammograms, multiresolution detect. of spiculated lesions 76530
dyn. PET, OS-EM 110991
ECT, DC current therapy for tumor compression, EM force distrib. 132998
ELF mag. field effects on haematological/biochem. params. 98752
endocrine neoplasms eval., combined transm./emission tomography appl. 132815
epithelial neoplasia, early detect., fluoresc. guided OCT 98376
fractionated cranial irrad., ellipsoidal radiosurgery targets, radiobiologic modelling 87858
gynecological brachytherapy implants, dosimetric verification 98804
hadron therapy, selected tumour types, overview 98677
hadrons, radiation therapy, dose distrib. 98678
head and neck cancer, 3D spiral computed tomography imaging for staging and surgical planning 98485
helical CT data for virtual colon dissection and polyp detect. 132839
hepatic cancer RF thermal ablation, ultrasonography and Doppler tech. *(Chinese)* 76358
HI beams, cancer therapy *(Chinese)* 133017
HICAT, beam diagnostics 87124
home care vs. hospital care for oncology patients, cost-minimization anal. 111286
inductive hyperthermia, excitation apparatus 133024
inductive hyperthermia, handy excitation coil, simul. *(Japanese)* 111063
intens. modulation radiotherapy, cancer, prescription dose 133021
intens.-modulated arc therapy, dose distrib., head/neck cancer 98690
intens.-modulated radiation therapy, beam orient. optim. algm. 98617
kidney kidney malignant tumor, color Doppler flow imaging diagnosis *(Chinese)* 76360
Kumakhov lens focused x-ray therapy 87835
laryngectomy stoma, medium energy electron boost, dose distrib. 76752
laser med., conf., Florence, Italy (Oct.1999) 89496
leg extraskeletal chondrosarcoma, intens. modulated radiotherapy plan 76633
leukemia cell growth inhib. using strong mag. fields, TCC-S growth prevention 133023
light ion beams for radiation treatment, facility design anal. 111130
liver cancer coagulation, microwave-induced thermal distrib., computer-aided dyn. simul. 87870
liver MR imaging, contrast agents, review 122077
liver surgery, impact of combined pre-operative 3D CT and intra-operative real-time 3D ultrasonography 87788
lung adenocarcinoma, tissue colour images anal. 87350
lung cancer, CT based radiotherapy dose planning 87861
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059

cancer continued
lung cancer diagnosis, helical CT image anal. 87766
lung cancer radiotherapy, video-based respiratory gating syst. 87837
lung cancer treatment with CHARTWEL, breathing control appl. 98659
lung cancers, 3D med. image proc., math. morph. *(Japanese)* 98421
lung carcinoma, occult, bronchoscopically-guided conformal radiotherapy 76652
lung nodules in CT scans, automated detect., preliminary results 110934
lung tissues, human, intrinsic microscopic fluoresc. and imaging *(Chinese)* 132635
lung tissues, human, NIR Raman spectrosc., mol.-level cancer diagnosis 98364
lymph nodes, suspected malignancy, elec. impedance scanning appl. 76310
lymphocytes, cancer detect., fractal dimens. anal., electron microscope images 132522
lymphoma treatment, high-resoln. absol. SPECT appl. 122238
mammary/axillary region PET imaging syst., breast cancer appl. 111034
mammogram, calcification detect., wavelet packet anal. 87769
mammogram, digital, microcalcification detect., GA 76507
mammogram microcalcifications, unsupervised detect. 87349
mammograms, asymmetry anal., directional filtering with Gabor wavelets 132781
mammograms, microcalcifications detect., optimal neural net archit., simulated annealing 98562
mammograms, X-ray and 3D MRI data, elastic registration 98501
mammographic acquisition param. effects on semi-automated quantitat. measure of breast cancer risk 98494
mammographic mass charactn., spiculation measures/morph. features 98527
mammographic mass detect., adaptive thresholding, region growing 122154
mammographic masses class., automated method develop. *(Japanese)* 132783
mammographic microcalcifications, optimal filter-based detect. 132814
mammography, automated detect. syst. for microcalcifications 132821
MaxPET, dedicated mammary/axillary region syst. for breast cancer 122220
microcalcification clusters, 3D reconstruction from 2 mammographic views 87741
microcalcification detect. by multi-scale methods and stat. techs. 98496
microcalcifications, clustered, computer class. as malignant/benign 132818
microscopic images of human breast disease using competitive neural networks 121904
microwave antenna, thermal therapy appls. 87836
microwave coagulation therapy, tip-split array applicator 98682
MR elastography, 3D gradient echo meas., steady-state motion 110870
multileaf collimator intens.-modulated radiation therapy program 111090
nasopharyngeal cancer, intens. modulated radiotherapy, dose planning, compensating filters 87964
nasopharyngeal carcinoma, automated detect. with dyn. Gd-enhanced MRI 110903
neutron capture therapy, high-power neutron-producing Li target 111098
neutron capture therapy agent BSH, ^{10}B MRI, mice obs. 98428
non-small-cell lung cancer, palliative radiotherapy, virtual simul. impact 98669
oncology data network develop. in Germany 111257
opt. spectrometry, biomedical diagnostics 76414
organ doses, at. bomb survivors, radiation therapy 87961
Pap smear test automated class. using neural nets 121887
pelvic malignancies, radiotherapy, inguinal node boost, collimator jaws 98637
peripheral blood lymphocytes, micronuclei, angiography, excretory urography 76560
peripheral blood lymphocytes, radiotherapy, chromosome aberration anal. 76744
PET, estrogen receptors, [^{18}F]fluoroestradiol radiation dosimetry 98758
PET imaging, trends overview, instrumentation, detector modules, cameras 132896
polyps, computerised detect., CT colonography, automated colonic walls segmentation 122140
primary breast cancer, laser interstitial therapy, clinical approach 98686
prostate, benign disease/carcinoma diagnosis, MRI coils comparison 122071
prostate, intens.-modulated radiation therapy, treatment planning protocol 76637
prostate brachytherapy, low energy/low activity seeds calib. 98660
prostate cancer, 3D conformal radiotherapy, bladder opacification, dose 98783
prostate cancer, conformal radiotherapy, rectal sequelae, dose-vol. 98782
prostate cancer, dose escalated conformal radiotherapy, optimal arrangement 76650
prostate cancer, fast-neutron therapy RBE 111128
prostate cancer, HDR brachytherapy, inverse planning dose optim. 122298
prostate cancer, interstitial microwave thermal therapy, helical antenna arrays 98623
prostate cancer, treatment planning, CT image segmentation 87809
prostate cancer discrim., 3D US Doppler imaging, zonal anal. 110713
prostate cancer irrad., randomised trial, accurate in vivo dosimetry 87993
prostate cancer nuclei, automated detect. 121893
prostate cancer radiotherapy, couch height-based patient set-up 98618
prostate cancer radiotherapy, organ motion var. models, affine transform. 87839
prostate carcinoma, conformal radiotherapy, portal imaging protocol 87862
prostate carcinoma radiotherapy, late-term rectal complications probab. 98641
prostate patient with prosthetic hip, intens. modulated radiotherapy 76731
prostate radiotherapy, treatment chain audit, phantom design/eval. 111116
prostate tissue, MRI, single-voxel oversampled J-resolved spectrosc. 87636
prostate tissue malignancy, tissue class. & elastographic imaging 121998
prostate tissues, human, FTIR microspectroscopy, SRIXE techs. 98356
prostate US imaging for guiding biopsies & planning/monitoring therapy 110721
proton/photon therapy comparison, biological models 133033
pulmonary fissures extraction from thin-sect. CT images 98539
pulmonary nodule surrounding struct., charactn. using differential geom.-based vector fields 87707
pulmonary nodules, high resoln. spiral CT diagnosis *(Chinese)* 76509
pulmonary nodules, internal struct. image anal. 87765
pulmonary nodules, malignant and benign, hybrid class. approach based on topol. and histogram features 87706
pulmonary nodules, surrounding structs. anal., differential geom. based vector fields 98549
pulmonary nodules class., contrast enhancement patterns 87767
pulmonary nodules detect., helical CT images, template-matching 98513
radiation oncology, conf., Melbourne, Australia (Jan. 2001) 67368
radiation oncology biol., conf., Fuglso, Denmark (Jun. 2001) 124217
radiation oncology interactive case mgt. exam., patient treatment portal design skills assess. 89607
radiation oncology phys., Australia & New Zealand requirements 87822
radiometry controlled conformal microwave array hyperthermia applicator 76622
radiotherapy, body surface sens./visualisation, background correction 110965
rectal cancer, neoadjuvant treatment response predicting by laser-induced endogenous fluoresc. 87554
renal tumors, human, biochem. charactn., in vitro ^{1}H NMR meas. 98425

cer continued
scintimammography, breast compression role, γ-cameras comparison 132982
scintimammography/stereotactic core biopsy digital X-ray combined syst. 122209
sentinel lymph nodes detect., compact γ camera, opt. Monte Carlo simul. 110920
sentinel lymph nodes localisation, hand-held γ-ray imaging device 132966
seq. chest radiographs, temporal subtraction, computer-aided diagnosis 110940
skin, X-ray therapy combined with HF elec. pulses *(Russian)* 111131
skin cancer diagnosis, FTIR fiber optic evanescent wave spectrosc. 87529
skin lesions segmentation, partial differential eqns.-based image proc. algms. 98149
skin tissue class., FEW-FTIR spectrosc., neural network 87537
soft tissue, high-precision motion estim., speckle echo wavelet transform 98301
SPECT mammography, compact imagers rot. around breast vert. axis 132968
spiral CT colonography, reader agreement and diagnostic perform. 87761
SVM for lung cancer diagnosis 87807
synchrotron microangiography, angiogenic vessels visualisation, quantification, therapeutic eval. 87749
tandem/ovoid dosimetry, dose optim. schemes 98756
therapy-dedicated cyclotron, proton beams RBE, cell lethality 98672
thyroid gland radiotherapy, biomass anal. by X-ray images 98613
thyroid malignancies, intens. modulated radiation therapy 76729
tissues, fast/noninvasive fluoresc. imaging using flying-spot scanner 110842
transurethral high intens. focused US, catheter based prototype 111120
UHF apparatus for water based gels in microwave phantoms 87846
urban environ., outdoor background ELF mag. fields 76747
whole body FDG-PET, simult. emission & transm. scanning *(Japanese)* 76581
^{11}C beams, cancer radiotherapy, spot scanning, dose distrib. 76609
^{18}F, radionuclide guided surgery, intraoperative probe perform. 76572
^{18}F-FDG scintigraphy, CDET hybrid gamma-camera, malignant melanoma recurrence *(French)* 87772
Gd neutron capture therapy, glioblastoma cell cultures, spectromicroscopy 76625
^{125}I seeds, prostate implant, CT-based source localization 98531
^{131}I lymphoma treatment, high-resoln. absol. SPECT quantitation 111018
^{131}I-metaiodobenzylguanidine uptake, neuroblastoma SPECT imaging 76570
^{111}In, radionuclide guided surgery, intraoperative probe perform. 76572
O_2 meas., P22 tumor, polarographic electrode, fiber-optic sens. 87517
^{103}Pd seeds, prostate implant, CT-based source localization 98531
^{106}Ru ophthalmological applicator, BANG polymer gel dosimeter, MRI 76771
^{99m}Tc, radionuclide guided surgery, intraoperative probe perform. 76572
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964
breast cancer assess., constrained modulus reconstruction tech. 132653

anted spin arrangements
see also weak ferromagnetism
Fe-Co-Si-B metallic glass, induced anisotropy, magnetoelastic props. 104490

apacitance
see also photocapacitance
2D boundary element calcs., self-optimizing discretization scheme 83134
3D CMOS SOI IC using high-temp. metal-induced lateral crystn. 81513
3D ICs, thermal anal., num. modeling 126943
3D struct., adaptive integral method based capacitance computation 72164
50 GHz broadband SMT package for microwave appls. 113629
150 nm partially-depleted SOI and bulk technols., comparative perform. 126921
1608 size chip Ta capacitor, face-down terminals for fillet-less surface mounting 115053
A²BC, adaptive address bus coding for low power deep sub-micron designs 126988
AC voltage regulator modules, topologies, HF power distrib. systs. 88831
act. controlled field emitter array, display appl., cct. modeling *(Korean)* 109915
act.-pass. hybrid piezoelec. network, vibr. control, neg. capacitance 116203
advanced MOS device, halo implant, effective channel length 92339
air plasma, microwave generation using qtr.-wave coaxial resonator 102889
aperture-coupled microstrip patch antenna, anal./network modeling 83639
asymmetrical coplanar lines on double-layered substrs., anal. *(Chinese)* 94075
backward propagated capacitance model for VLSI RTL power estim. 114676
biaxially oriented polypropylene film in AC high field region near breakdown, charging current *(Japanese)* 104409
bipolar UHF power transistor, IMD, collector doping profile 126670
BJT model sets, confidence limits estim. using bootstrap tech. 103784
capacitive humidity sens. design/fab., interdigit electrodes *(Korean)* 120740
capacitor selection for reliable automotive appls. 89414
capacitor sync. reluctance motor starting, transients calc. *(Russian)* 99649
carbon cloth reinforced resorcinol formaldehyde aerogel films 79463
ceramic capacitors, voltage withstanding rating determ. 80444
ceramic chip capacitors for automotive indust., qualification testing 89413
channel routing, 3-layer HVH, min. crosstalk layer assignment, pseudo-Boolean optim. 70272
class E power amp., nonlin. output capacit., finite DC-feed induct., design 80351
CMOS buffer, adiabatic charging of long interconnects 68743
CMOS class AB RF power amp., nonlin. capacit. cancel. tech. 91326
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol. 127020
CMOS gates, RC interconnect loads, π-model, propag. delay 90820
CMOS GHz RFICs, on-chip ESD protection design using polysilicon diodes 125743
CMOS logic ccts., path balancing algm. for glitch power reduction 90856
CMOS pipelined-burst SRAM, low-power, design 102143
CMOS transimpedance amp. for DVD appls., parasitic capacitance compensation 79583
CMOS transimpedance receiver for opt. appls. 109068
CMOS ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
CMOS VLSI low power/low swing bus design archits. 127051
CMS tracker, Si sens. optim. 98016
cold FET, extrinsic capacitance, capacitive transm. line model 103828
conducting cylinder embedded in complex medium above ground plane, anal. 72398
conformal dielec. interconnect capacitance, BEM-based simul. *(Chinese)* 104243
Cool MOS, low on-resist. MOS-gated power device, MOSFET/IGBT comparisons 115881
coupling-driven bus design for low-power appl.-specific systs. 126989
CPW coupler, anal. using conformal mapping transforms. 94093
CPW on semicond. substr. 94095
CPW/coupled struct., quasi-TEM anal. 102496
CRRDL, charge recovery-recycling differential logic, dyn. CMOS 102029
Cu vap. laser, discharge cct., capacitance, inductance, GA study *(Chinese)* 117053

capacitance continued
current-to-voltage converter and buffer cct., parasitic capacitance 114906
current-tunable phase shifter using MOS internal capacits., 700 MHz 69146
DC power supply syst. stabil. simul. anal. 88896
deep sub-micron technols., timing anal. with crosstalk as fixpoints on complete lattice 126986
deep submicrometer technols., crosstalk estim., coupling capacitances 81474
deep submicron design, state of art and trends in parasitic extraction 104069
deep submicron LSI design, parasitic wire capacitance *(Japanese)* 81493
deep submicron technol., coupled RC trees, moment matching method 81438
deep submicron verification tools, crosstalk noise modeling 81439
defective MLC capacitors, elec. test data anal. effectiveness 115074
delay constrained ccts., voltage scaling and gate sizing 114672
diamond:B/Al Schottky contacts, DLTS space charge spectrosc. 80906
diamond, surface channel MISFET, MESFET, HF appls. 126838
diamond Schottky diodes, elec. AC behaviour 81192
dielec. insulation void, PD sigs. modeling, EMTDC 70430
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
differential via holes in PCBs, FASTCAP modelling 91459
dipole antennas, propag. props. of pulse voltage and current, equiv. cct. method *(Chinese)* 117814
distrib. network capacitance current meas. method *(Chinese)* 112190
distributed RLC interconnects, anal. of on-chip inductance effects 126963
domino logic ccts., coupling-aware min. delay optim. 102108
DRAM struct., stacked, parasitic capacitance from multilevel conductors, num. method 114742
dual stripline params. for multilayer PCB design 125650
EDLCs, elec. double layer capacitors, aq. dil. HCl soln. *(English)* 100223
EEPROM floating gate cell, charge sheet model 102171
elec. double layer capacitors, polymer gel electrolytes 123848
elec. induced body dyn. threshold SOI MOSFET, large body effect, low threshold voltage 103822
elec. rly. vehicle brake force improvement using capacitance *(Japanese)* 78244
electrochem. capacitor storage, metal-loaded activated carbon electrode, plasma CVD *(English)* 100219
electrochem. capacitors, characts. and appls. 69272
electrodischarge excimer laser excitation syst. simul. by equiv. elec. cct. 117062
electrodischarge excimer lasers, LC-generator, model operation 117061
electrostatic actuators, extended operation range, current-pulse drive 70340
ellipt. cone stripline, TEM mode, plane periodical struct. *(Chinese)* 105824
embedded capacitors, high-k polymer-ceramic composite for RF appls. 69273
embedded decoupling capacitors, HV charact. 115067
embedded DRAM technols., jn. capacitance reduction by S/D jn. compensation implant 116028
embedded third order LC low pass Butterworth filters in MCM-L technol. 80033
embedded trench DRAMs, sub-0.10-μm, hemispherical-grain tech., LOCOS collar 102124
ESD protection cct., input capacitance 81464
fast asynchronous ccts., design proc. 79786
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
fast rise time HV pulse generator, modified Marx generator *(Korean)* 123591
ferroelec. capacitors, HF C-V charact. model 90912
FET equiv. cct., parasitic capacitance, cold-FET method 103916
FET sens., low power gas detect., work fn. principle 132038
flash memory, source-side-injection cell, capacitance coupling ratio 79871
flat-time-delay transversely coupled resonator SAW filter, parallel connected filter tracks 92716
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
fluoresc. lamp ballast, inverter, inductively coupled preheating ccts. 134620
fluoropolymer film, amorph., prep., ultra-low dielec. const. 81643
flyback rectifier, high PF operation, line current shaping controller 134224
fork lift truck, LV SRM drive, modified C-dump converter 134550
furazano (3,4-b)piperazine thin film device, rectification, charge transport., PV props. 70026
gapped HF inductors, conductive losses prediction 99724
Gekko PowerPC μP, timing convergence, synthesis tools and phys. design 79932
generator stator windings, ground-fault protection syst. operation 99616
half-bridge series-parallel reson. converter, EM considerations 99741
harmonic VCOs for GHz-range appls., varactor diodeless configs. for tuning 114995
HARPSS polysilicon vibr. ring gyroscope, MEMS technol., elec. isolated vert. electrodes 81575
HBT lin., effects of base-collector capacit. 69123
helical slow-wave struct., space-harmonic effects, equiv. cct. anal. 69460
HEMT modulator driver IC, device model params. *(Chinese)* 103914
hetero-MOSFET, mobility extraction, self-consistent Schrodinger-Poisson calc. 70091
HF transformer modelling, refl. coeff. tech. & S matrix 91438
hierarchical capacitance extraction algm. without multipole expansion 126993
high efficiency overdriven power amps., design method 80279
high quality analog CMOS and mixed sig. LSI design 81507
high-k gate dielec. for CMOS devices, future challenges 104130
high-speed prescaler dyn. D-type flip flop 131091
human-body capacitance calc. by surface charge method *(Japanese)* 128667
hybrid normal-supercond. devices, nonlin. transport theory 116519
hydropower plant transformer transfer voltage countermeasure study 99582
IC interconnects with thick conductors, capacitance/conductance calcs. 126510
ICs, HBM ESD testing, contact reliab. 127001
induction heating, MF thyristor converters, elec. shock protection *(Polish)* 100330
inductive heating converters, capacitive/leakage currents, hazard sources *(Polish)* 78340
interconnect proc. var. and timing anal., pico-second differences 126992
interdigitated capacitors by offset lithog., cct. board manufacture 91475
interface-engineered Josephson jns., capacitance anal. based on equiv. cct. model 127486
isolated three-phase induction generator, excitation capacitance requirement 112512
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance charactn. 126215
Ku-band freq.-tunable LNA using variable-capacitance elements/neg. feedback ccts. *(Japanese)* 69241
large area TFT-LCD, crosstalk and flicker simul. 116829
large-size TFT-LCD panel, air-bridge type gate-data line-crossover, sig. delay 75803
lateral flux integrated capacitors, capacity limits and matching props. 104079
lateral p-n jn. photodiodes, HF perform. 71552
layered dielec., rapid calc. of electrostatic Green's fns. 128657

capacitance continued
LDD MOSFET gate fringe capacitance/gate to source-drain overlap length, C-V extraction 103859
LDD NMOSFETs, 0.18 μm, freq. perform., elec. stress effects 103888
lin. copolysiloxane LB superlattice, substituted aromatic acid side chains, dielec. props. 104236
line sects. as capacitances or inductances in microwave range 128815
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
low-k thick film dielec., simul. model 69335
low-loss serial power combiner using suspen. stripline couplers 80214
matrix of unequal diam. dielec. coated cylinders above ground plane 72405
MEMS, capacitance, hybrid p-element and Trefftz method 127104
MEMS fab., high-aspect-ratio struct. 81608
MEMS switch beam oscills., expressions for nonlin. effects 69107
MEMS/electronics integrated technols., co-fab. proc. seqs. 81543
mesoporous activated carbon fiber elec. double layer capacitance *(English)* 100222
metallophthalocyanine-doped polypyrrole/Si heterojunctions, NO_x gas sens. 97454
MFIS struct., ferroelec. gate FET memory 81767
microstrip line on-chip interconnects on lossy Si, freq.-depend. param. 102499
MLC capacitors, vol.-efficient, elec. props. 80431
MLC capacitors with ultrathin dielec. layers, specs./test methods 80436
MM-wave even harmonic mixer, jn. capacitance 101855
MMIC varactor diode, neg. capacitance, tuning range 102676
MOS inversion layer, space charge capacitance, anal. model *(English)* 91883
MOS struct., interface trap params., high-temp. cond. spectra 126232
MOS struct., inversion layer, C-V charact. *(English)* 80953
MOSFET, intrinsic capacitance coeffs. 115930
MOSFET HF noise param. de-embedding procedure, metal interconnect capacitive effects 103887
MOSFET thermal params. from electrothermal oscills. 115934
MOSFETs with pocket implants, effective channel length extraction by C-V method 103858
MOST, inversion charge dens. modeling 103816
multilayered boards, via capacitances, finite difference and FEM/DBCI procedures 125872
multiple dielec. multicond. systs., field computation and capacit. extract. 128660
μP cache energy reduction by dual voltage supply 102246
n-channel enhancement mode power MOSFET, C-V/G-V charact., high temp. anneal effects 103832
nanometer technol., interconnect energy dissipation, minimization tech. 126990
nanoparticle lin. arrays, tunneling thresholds, self-capacitance 70221
natural single-phase, unidirectional SAW transducers, coupled-mode eqns., hybrid FEM 116214
new materials for act./pass. integrated devices, wireless appls. 69221
NMOSFET, self-aligned pocket implant., jn. capacitance 103873
nonintimate Schottky jns., effective dens. of bias voltage depend. interfacial states 80898
nonlin. transm. lines for MM-wave multiplication, soliton wave propag. 69142
nonporous activated carbon electrode elec. double layer capacitor, high energy dens. *(English)* 100224
NPT-IGBT, wide cell pitch carrier stored trench bipolar transistor struct. 126721
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
OLED, voltage depend. capacitances 104974
organic single electron tunneling jn., space charge effect *(Japanese)* 115470
overhanging-metal microstrip detectors, anal. and test 121440
overhead power transm. lines, capacitance calc. methods *(Chinese)* 123024
parallel transm. lines, fault location algm. 77647
PCBs, capacitances/inductances extraction using exponential expansion method 69297
PD-SOI CMOS technol., perform. anal. of tapered gate device sizing methodology 127028
PDP driver, energy recovery sustain cct. design 97734
PEDT-RuO_2 composite electrodes, electrochem. and impedance props., capacitor appls. 99890
phthalocyanine-fullerene PV devices, elec. charactn. 123826
piezoelec. transducer excitation cct., thickness mode time-domain model 104437
PIFA compact dual-freq. designs using LC resonators 94125
PIFA/small patch struct. for mobile phones, capacitive/inductive loading influence 83623
planar transformers, low leakage inductance 80457
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
poly(3-hexyl thiophene) MIS diodes, freq. behaviour, Mott-Schottky anal. 70025
poly(alkoxythiophene) derivative electrodes, capacitance and cycling stabil. 79459
polyimide-Cu MCM-D, copper capping alternatives eval. 115231
polymer cathodes in Al/Ta electrolytic capacitors, perform. issues 115056
polysilicon doping extraction from C-V charact., improved formula 69819
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec. props. 103243
polysilicon TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
power cable testing using electronic capacitor, μP-based, temp. compensation *(Japanese)* 133736
power MOSFET PSPICE modeling method 126766
power plane SPICE models and simulated perform. for materials and geometries 91458
power-ground decoupling dielec. films, broadband charactn. 121164
prefix adders, deep-submicron technol., anal. wire delay model 102086
press. condenser microphone, elec. field force & capacitance, FEA 120728
printed dipole double sided elements, input impedance, terminal conditions 94140
PVDF/trifluoroethylene copolymer variable capacitor 115048
PWM inverter-fed IM, capacitive parasitism anal. 88721
quadrature directional coupler, optimum compensating susceptance/posn. 102526
QW, excitons, C-V charact. 126155
random noise generator using MOSFET channel kT/C noise 101812
random RC networks, 1/f noise, effective network dielec. loss 68498
rect.-type elec. double layer capacitor, high energy dens. *(English)* 100220
RF MOSFETs, freq.-depend. resistive/capacitive components 80295
SC FIR filter structs., comparison based on CMOS realization and PSPICE simul. 80063
semicond. doping profile, C-V charact., electrochem. etching 115495
shear-mode scanning capacitance microscope, topography 86959
shielded interconnect four-line syst., mutual capacitance, inductance 69944
single electron tunnel jn. based cct., energy conservation 79544
SIPOS terminated HV planar diodes, dyn. avalanche breakdown, semi-resistive field plates 81200

capacitance continued
SMPS, mag. devices, energy based capacitance model 88825
SMPS flyback transformers, capacitance model 77946
soft error rate for high dens. DRAM cell *(Korean)* 102168
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
SOI complementary BiCMOS devices, perform. eval. using test struct. 104147
SOI LDMOST with lateral doping gradient, phys. based charge model 126845
SOI wafer plasma etched trench profile eval. using elec. test struct. for MEMS 104230
SOI-MOSFETs, inner fringing capacitance, charge based modeling 103732
solid insulator AC surface spark-over voltage in liq. N_2/He 77443
spin-on organic aromatic polymers, dielec. and barrier props. 104405
SRM drives, rotor posn. estim., robustness anal. 134508
SSR mitigation using TCSC 133433
STATCOM, harmonic reson., pass. components params. selection 112745
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistor sizing 102035
static latches, cosmic ray induced soft errors, scaling trends 125458
stepwise varactor struct., freq. charact. 81198
submicron interconnect delay reduction techs. for bi-directional/uni-directional buses 125274
supercapacitor nanostructure material develop. 123719
supported lipid membrane on Si electrode, elec. props. 69773
symmetric CPS waveguides, open-end capacit. approx. 125647
sync. DRAM perform. improve. by lowering interconnect capacit. 125467
thin gate oxide MOSFETs, LF 1/f noise, drain current 70076
three-body indirect ESD problem expts. 128664
three-phase IM, optimal phase-shifter cct. params. 123470
three-pole single throw RF switch design with defected ground struct. 69097
tomographic data, direct proc. estim. using artificial neural systs. 106504
transm. line fault location algm., distributed param. 77648
two metal layer tape package for improving high speed DRAM perform. 113632
unit-connected generators, grounded neutral, ground-fault currents 77832
UPFC transient anal., DC-link capacitor design appl. 122872
vert. mesh RF capacitors in std. CMOS, design and charactn. 125778
virtual CMOS library approach for fast layout synthesis 104121
VLSI ccts., input vector gen. for max. intrinsic decoupling capacit. 104051
VLSI delay and crosstalk estim., lumped and distributed coupled RC trees, moment computation 81485
VLSI design, interconnect capacitance, param. extraction 81458
VLSI design, interconnect sizing and spacing, coupling capacitance 104059
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optim. 125385
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
VLSI multilayer interconnect, quasi-3D capacitance 81492
voltage multiplier, mag. coupling, parasitic capacitance 70876
word-line read voltage regulator for multimegabit multilevel flash memories 90915
worst-case IC interconnect delay noise, driver modeling and alignment 126987
X-band MEMS microstrip shunt switches, isolation bandwidth, up-state insertion loss 125682
ZVS HF reson. inverter, charact. estim. 134248
ZVT PWM boost converters, conducted EMI noise generation/propag. modeling 123613
Ag/n-Si Schottky jns., ICB deposited, induced interface states 69726
AgPd alloy powders, monodispersed/low-fire, for ultra-thin MLC capacitor electrodes 80427
Al electrolytic capacitors, large, service life/failure mechanisms 115081
Al/Al_2O_3/metal capacitors, anodised interface, interface states 69772
Al/AlO_2/Al single electron tunneling transistors, annealing effects 104575
Al/CeO_2/Si(100) MIS struct., elec. charact., insulator film orient. effects 80944
Al/Ho_2O_3/Al thin-film capacitors, complex capacitance, dielec. permitt. 80453
Al/intrinsic diamond/p$^+$-Si Schottky diodes, Q-DLTS/C-V meas. 92279
Al/p-$AgGa_{0.25}In_{0.75}Se_2$ polycryst. thin film Schottky barrier diodes, charact. obs. 70027
Al/por-Si/Si struct., adsorpt.-based porosimetry using capacitance meas. 115424
Al-Ge alloy thin film resist. switching for resistor/capacitor downtrimming 80412
n-$Al_{0.24}Ga_{0.76}As$, surface states, DLTS, HEMT study 69533
AlGaAs/GaAs high-speed HBTs with reduced base-collector capacit. 125700
AlGaAs/GaAs power HBT, lin., C_{bc} effects 92301
AlGaN/GaN heterostruct., electronic struct., localized vars. 126122
AlN film, prep., DOS distrib., CPM/DLTS anal. 91631
AlN films, DC-magnetron sputtering, dielec. props., MIS capacitor anal. 92591
Au electroless plating using electrochem. QCM, mechanism 101402
Au nanoparticle networks, single electron charging, biopolymer templates 102857
Au/$BaTiO_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
Au/n,p-GaN Schottky diodes, I/V/T charact., inhomog. barrier influence 81205
BN films, low dielec. const., plasma CVD, charactn. 90375
(Ba,Sr)TiO_3 films, permitt./microstruct. temp./elec. field response 92658
$Ba_{0.4}Sr_{0.6}TiO_3$, $SrTiO_3$ 92772
$Ba_xSr_{1-x}TiO_3$ thin films, MOCVD in multiwafer reactor, charactn. 114362
(Ba)$SrTiO_3$ film ferroelec. planar varactors, microwave props. 80422
$BaSrTiO_3$ films grown by PLD on $LaAlO_3$ substrs., dielec. props. 92627
$BaSrTiO_3$ thin film integrat., DRAM devices 101330
$BaSrTiO_3$ thin-films, electrodynamic props., CPW struct. 80159
$BaSrTiO_3$ tunable capacitors, enhanced dielec. props., $SrRuO_3$ buffer layer role 91175
$BaSrTiO_3$ tunable dielec. thin films, microwave permitt./loss, broadband determ. 91171
$Ba_{0.9}Sr_{0.1}TiO_3$/$LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
Bi_2O_3-ZnO-Nb_2O_5 pyrochlore ceramic films for dielec. appls. 92589
C activated electrodes, aq./nonaqueous electrolytes, capacitance, pore size 112760
a-C:H,N films, PECVD prep., N incorporation and elec. props. 126082
n-CdS/p-InP heterojunctions, transport mechanisms & PV charactn. 91734
CdSe jn. capacitance under reverse bias, interlayer insulation effect 126657
CdZnTe detectors, capacitive Frisch grid struct. 110319
CeO_2 thin films for gate dielec. appls., microstruct., elec. props. 70372
CoNbZr RF integrated inductor, stray capacitance, equiv. cct. anal. *(Japanese)* 104541
Cu interconnect features, elec. linewidth, test chip 103495
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu-porous carbon composite elec. double layer capacitor, capacitance props. *(English)* 100221
Cu(In,Ga)Se_2 heterojn. solar cells, electron/proton irrad. induced defects 100031
FeNi-Al_2O_3-FeNi mag. tunnel jns., interfacial capacitance effects 126253

pacitance continued
GaAs MESFET charact. modeling *(French)* 81373
GaAs MESFETs and HEMTs, equiv. cct. model, parasitic capacit. determ. 70181
GaAs V-Band MMIC SPDT pass. HEMT switch using impedance transform. networks 80378
GaAs at. layer doped FET, differential capacitance profile, simple model 92390
GaAs barrier diode, MBE grown, DC/RF charact. 92278
GaAs digital circuitry, Schottky Barrier diode and MESFET ICs, appls. *(Italian)* 79647
n-GaAs nm-sized Schottky contacts, current transport and C-V charact. 91860
GaAs, nonradiative recomb., EL2 defect, elec. studies 80689
GaAs p-n jn. solar cell, gamma irrad., elec. charact. 134409
GaAs super self-aligned RF switch IC for mobile comms. appl. 102657
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dispersion 69543
GaAs:Si,Be MBE growth, compensation 68196
GaAs/$Al_{0.33}Ga_{0.67}As$ QD device, Coulomb charging 126182
GaAs/AlGaAs heterostruct., capacitance theory 115364
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaAs/Ge solar cell, AC params. meas. by impedance spectrosc. 113016
GaInAs-AlGaInAs-AlInAs step QW high-speed Stark shift mid-IR modulator 116815
GaN(:Mg) layers, elec. props., expt./theoretical investigs. 103006
p-GaN:Mg/Ni contacts, Schottky barriers, memory capability 80922
GaN/AlGaN semicond. QW, mesoscopic capacitor effect, piezoelec. field screening 80874
GaN/porous Si heterostruct., rectification behaviour 69547
GaNSi substrs., hydride VPE, carrier/disloc. conc., GaN/InGaN LED fab. 68244
Ga_2O_3:Gd/GaN capacitor, low interface state dens., C-V/G-V charactn. 69743
HfO_2:Dy gate dielec., elec. charact. for MOSFET appls. 126748
Ho_2O_3 films, dielec. props., MIM struct. obs. 92582
ITO/GaP UV-vis. photodiodes, characterisation/modelling 82361
ITO/PbS nanoparticle self-assembled heterojunction, elec. props. 126123
ITO/conjug. polymer-fullerene/Al PV cells, admittance and ESR spectra 127944
InAs QD HFET, memory operation 81359
InGaAs/InAlAs strained MQW electro-absorpt. modulator 116809
InP HBTs, end-of-life reliab., RF modelling 115851
n-InP nm-sized Schottky contacts, current transport and C-V charact. 91860
InP surface damage, methane-H_2 RIE-induced 92094
InP/InGaAs HBTs, vel.-modulation and transit-time effects 103781
IrO_2/Co_3O_4 electrode, pseudocapacitive behavior eval. 102772
$La_3Ga_{5.5}Nb_{0.5}O_{14}$ electrode-width-diff.-reversal-of-directivity transducer 92739
$Li_{1+y}Mn_{2-y}O_{4-\delta}$, spinel cathode, capacity fading-struct. changes co-rel. 112772
MgO films on p-GaAs(100), microstruct./elec. props. 68187
Mg_2SnO_4 ceramics, elec. charactn. 70368
Ni-MLC capacitors, Y5V dielec., bakeout-property rels. 80426
Ni-YSZ cermet anodes in YSZ fuel cells, methane fuelled, polaris. 89173
NiO_x supercapacitor, prep., props. *(Chinese)* 113036
PZT ceramics, piezoelec. actuator, power consumption, capacitance 104446
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
$(Pb,La)(Ca,Ti)O_3$-$La_{0.67}Sr_{0.33}MnO_6$x multilayers, ferroelec., ferromagnetism 70508
$Pb_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films, capacitance dens. 125853
$PbZrO_3$ antiferroelec. thin films, pulsed excimer laser ablation 79356
$PbZrO_3$ thin films, ac elec. & dielec. props. 92625
$PbZrTiO_3$ ultrathin films, MOCVD grown, elec. props. 104294
Pd/$Al_{0.11}Ga_{0.89}N$ Schottky diodes, thermal stabil., annealing, XRD, AFM, AES 81204
Pt/$BaSrTiO_3$/Pt MIM capacitors, dielec. const., coplanar struct. 102778
Pt/Bi_2SiO_5/Si, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
Pt/$Bi_4Ti_3O_{12}$/Pt/Bi_2SiO_5/Si, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
Pt/GaN Schottky diodes, C-V charact., tunnelling 103756
Pt/SBT/polysilicon capacitors, elec. characts., memory appl. 81780
Pt/SiO_xN_y/Si MOS capacitors, intrinsic oxide capacitance from LCR meter meas. 121147
Pt/$SrBi_{2.4}Ta_2O_9$/ZrO_2/Si MFIS-FET struct., prep., elec. props. 81277
Pt/$SrBi_2Ta_2O_9$/CeO_2/Si capacitors for ferroelec. FET, gate stacks, XRD, EDX, TEM 104472
Pt/$SrBi_2Ta_2O_9$/ZrO_2/Si struct., cryst. struct. & elec. props. 116226
Pt/$YMnO_3$/Y_2O_3/Si gate capacitor MFISFET, MOCVD prep. 81662
Ru-$SrTiO_3$-Ru cylindrical capacitor technol. for 0.11 μm generation DRAMs 125495
RuO_2 electrodes, effect of Ca addit. on pseudocapacitance *(English)* 100225
RuO_2/C composite supercapacitors, synthesis, props. 100232
SBT/Al_2O_3/Si heterostruct., PLD, ferroelec. props. 114370
SOI, deep levels, charge/capacitance DLTS 115446
SOI struct., multilayer thermal via incorporation and charactn. 115443
Si LDMOSFETs for high-power amp. design, large-sig. model 102653
Si MOS capacitors, gate oxide reliab., beamline implant./plasma doping 115534
Si MOSFETs, small-sig. RF model, param. extraction, substr. effects 80283
strained-Si MOSFETs with Ti/Pd/Au gate metal for MMIC appl. 80358
Si RF MOSFET small-sig. equiv. cct., substr. model, param. extract. 69120
Si detectors, 3D archit., perform. after intense proton irrad. 132419
Si detectors, radiation damage 121434
Si films, rapid crystn. using elec.-current-induced joule heating 68362
Si indiv. nanocrystals, single-electron charging effect 103114
Si microstrip detector, overhanging-metal, optimiz., test/simul. 110314
Si microstrip detectors at ALICE, develop., props. 76062
Si microstrip detectors with <100> and <111> substrs., proton irrad., props. 98021
Si multilayer structs., MBE growth combining solid/molten Si evap. 103132
Si n^+-p jn. diodes, laser annealed, trap-assisted tunneling near 77 K 92283
Si n-p photodiode, capacitance, color detect. 109586
Si p/p^+ substrs., spiral inductors with reson. freq. of 20 GHz 69227
Si, porous/HF-electrolyte jn., I-V/C-V charact. 80965
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
p-Si:Fe surfaces, contamination, SCM 91600
Si:H-terminated surfaces, UHV contactless C-V method for passivated defect-free surfaces 91577
Si/$(Ta_2O_5)_x(Al_2O_3)_{1-x}$ interface, electron traps 103185
Si/SiO_2 MOS struct., flat-band capacitance 80949
p-Si/SiO_2, RF hydrogen-plasma-related defects, DLTS 69764
n-Si/p-PPV jns., elec. charactn. 115375
Si/ta-C/Al(TiN) structs., barrier temp. depend., C-V charact. 80937
SiC MOS capacitors, interface props. rel. to N_2O annealing 69754
SiC Schottky diode, radiation hardness under relativistic protons, precision alpha spectra 70014
SiC Schottky jn. admittance, carrier freeze-out effects 69718

capacitance continued
4H-SiC p^+-n-n^+ avalanche diodes, elec. charactn. 92294
SiC:Ge, ion implantaion form., elec. charact. 91724
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V meas. 68237
SiC/Pt diode, high-temp. H_2 sens. appl., stabil. 86747
SiGe HBT, RF lin. 103793
SiGe HBTs, RF distortion anal. 91255
SiGe MOSFET, ultrashallow jn., min. drain area, solid phase diffusion prep. 81301
SiGe double QD, hole transport, cond. peak splitting 69694
a-SiH TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
SiN_x:H/Si structs., RTA, elec. props., C-V/SPV charactn. 91887
a-SiN_x:H/a-Si:H MIS capacitors, C-V charact. *(Korean)* 80940
Si_3N_4/SiO_2 ultrathin RTCVD gate stacks for ULSI, post-deposition treatments 69753
Si_3N_4/c-GaN/GaAs passiv. struct., prep., struct./opt. props. 103300
SiO_2 gate oxide growth on plasma damaged Si surfaces, quality degrad. 103430
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2 on 6H-SiC, ion beam induced charge gate rupture 115805
SiO_2 porous low-k ILD film by photo-assisted sol-gel proc. 90523
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiO_2/Si-QD/SiO_2/Si tunnel capacitor, charging dyn. *(Chinese)* 126129
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795
n-SnO_2:Ni/p-Si heterostruct., NO_2/ethanol adsorpt., C-V charact. 69635
SnO_2:Sb xerogel electrodes prep. and charactn. for electrochem. capacitor appls. 102768
$SrBi_2Ta_{2-x}Nb_xO_9$, ferroelec. thin films, reversible/irreversible polaris., temp. depend. 104297
$Sr_{0.8}Bi_{2.2}Ta_2O_9$/$LaAlO_3$/Si syst., prep., ferroelec. props. 92646
$SrTa_2O_6$/SiON buffer layer, ferroelec. gate FET's fab./integrat. reviews 103838
$SrTiO_3$ planar capacitors, microwave nonlin., heat effect 80423
$SrTiO_3$ single-cryst./thin-films, electrodynamic props., CPW struct. 80159
$SrTiO_3$, tunable capacitors, perform., electrode geom. effects 92772
$SrTiO_3$/Si, RF magnetron sputtering, elec. props. 104259
Ta capacitors, high CV, evol., anode sintering proc. 115057
Ta chip capacitor, 1608 size, 6.3 WV/10 μF, face down terminals for fillet-less surface mounting 115084
Ta/Nb high CV powder metall. capacitor anodes, electrolytes for anodization 115060
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ta_2O_5 films, annealing, dielec./opt. props. 116126
Ti/low-k H-silsesquioxane and Ti/TEOS struct. at elevated temps., comparison study 92182
TiO_2, porous, transient dark/photocurrents, neg. capacitance effect 91683
TiO_x MOCVD proc. for microelectronics appls. 90412
TiO_2-Y_2O_3-Nb_2O_5 varistor syst., nonlin. elec. behaviour anal. 80743
W/TiN/SiO_2/Si MOS capacitor struct., TiN deposition method effect 103199
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
$YBa_2Cu_3O_{7-x}$ ramp-edge Josephson jns. with surface-modified barriers 70812
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
$Zn_{1-x}Mn_xSe_{1-x}Te_y$ epilayers, dielec. props. 80767
ZnO spray pyrolysis thin films, struct./DC elec. charact. 69521
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557
ZnO:SnO_2 based varistor ceramics, microstruct. & elec. prop. 101496
ZnOBi_2O_3:Y_2O_3 varistor ceramics, microstructural & elec. charact. 101495
ZrO_2 sputtered thin films charactn. for gate oxide appls. 104231
ZrO_2 ultrathin dielecs. growth by UV O_3 oxid. on passivated Si 126225
ZrO_2-based ceramic insulation coatings for HTSC magnets, elec. charactn. 70437
ZrO_xN_y prep. by NH_3 annealing of ZrO_2, elec. charact./thermal stabil. 91891

capacitance measurement
absol. capacitive ang. meas. syst. develop. 75892
capacitor testing, fast measuring meter, phase components *(Chinese)* 109834
diamond-coated cantilever, SCM 132131
dielec. capacitors calib., high accuracy/high bandwidth method 125850
elec. capacitance tomography, image reconstruction 109929
elec. capacitance tomography, image reconstruction algm. 97780
flame visualizations using elec. capacitance tomography 120652
flowmeter for loading road tankers using proc. tomography 121276
fluidized bed, bottom zone imaging, elec. capacitance tomography 121144
grounding capacit. and fault resist. meas. in ineffectively grounded power syst. 77654
HBT, capacitance, multi-bias S-param. meas. 81229
human-body capacitance calc. by surface charge method *(Japanese)* 128667
hydrogen silsesquioxane charact., appl. of charge-based capacitance meas. tech. 92131
low capacitance meas., act. bridge tech. 97773
MOS device, oxide defects, freq.-resolved capacitance 115463
MOS-gated power transistors, input/reverse transfer capacitance meas. 92358
MOSFET threshold voltage extraction, gate-substr. capacitance meas. 92373
multi-conductor interconnect line systs., capacitance extraction, test struct./method 103496
multifreq. quadrature bridge for capacitance & resist. stds. 109412
multimodal proc. tomography syst. design 120736
multiphase flow meas., elec. capacitance tomography 110058
nonlin. device capacitance, freq. domain meas. 80290
scanning capacit. microscopy of MOS structs., dopant quantif. error study 121142
SCM, zeptofarad resoln. sens. 75499
solar cell AC params. meas., impedance spectrosc. setup 100040
sq. fluidized beds using capacitance tomography 110060
tomography for gas-solids flow charact. meas. 110059
tomography sens., axial charact. simul., FEA *(Chinese)* 109526
tomography sens., internal-external electrodes, reconstr. algm. 120739
transistors, input capacitance and input current meas. 121141
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479
two-phase flow void fraction meas., capacitance tomography 110052
VLSI design, deep-submicron interconnects 81481
Pt/SiO_xN_y/Si MOS capacitors, intrinsic oxide capacitance from LCR meter meas. 121147
Si p-doped multilayers, 2D dopant profiling, SCM obs. 126297

capacitance measurement continued
Si pixel capacitance meas., neutron irrad. 97946
SiO_2 ultra-thin CMOS gate oxides, two-freq. capacitance meas. tech., limitations 104124
Ta solid electrolytic capacitor, low temp. elec. prop. meas. 102784

capacitance transducers *see capacitive sensors*

capacitive sensors
absol. capacitive ang. meas. syst. develop. 75892
accelerometer, micromachined with area-changed capacitance 131859
accelerometers, optimum selection for appl., guidelines 86468
ang. posn. sens., sig. proc. by DFT 120696
BiCMOS capacitive press. sens., surface micromachined, for automotive appls. 78324
CAV 414 and CAN 404 analog ASICs for capacitive meas. technol. 131865
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
CMOS humidity sens. with on-chip calib. 109493
CMOS mixed-sig. SoC for press.-sensitive fabric 109535
CMOS SC interface cct., integrated sens. 79637
CMOS VLSI capacitance sens., particle detect. 109492
composite mater. elastic moduli, Lamb wave vel., contactless method 114489
differential capacitance transducer, ratiometric sig. proc., SC interface 120732
differential-press. flow sens., self-validating, wavelet transforms 120730
displacement sens., digital synthesis technol. *(Chinese)* 86483
elec. capacitance tomography, AC capacitance transducer 109519
electrolytic in-proc. dressing grinding, wheel state estim. 134680
environ. gas sens. & sens. mechanisms, overview 133357
ferroelec. sens. advances & emerging technol., review 131881
fingerprint sens. LSI, pixel-level auto. calib. cct. 131988
finite difference software in 3D images and tomography anal. 120720
flowmeter for loading road tankers using proc. tomography 121276
glucose biosens., mol. imprinted polymers, capacitive detect. 86683
human skin, water content meas., microsensor 120956
humidity sens. design/fab., interdigit electrodes *(Korean)* 120740
humidity sens. selection, capacitive/resistive/thermal cond.-based technols. 109520
in-situ comp. sens., inductive & capacitive sens. arrays 120987
integrated ang. speed sens. syst. design, automotive appl. 109824
interface cct., charge-bal. SC-oscillator 109506
Lamb wave device, capacitive micromachined US transducer 92752
level sens. develop. with LabView software *(Slovenian)* 75459
low capacitance meas., act. bridge tech. 97773
MEMS acoustical sens. array, hearing instrum. appl. 87920
micro imaging in elec. tomography systs., capacitance sens., particle detect. appl. 120738
micromachined SAW and Lamb wave transducers, FEM and normal mode modeling 92718
micromachined transducers, low freq., RF detect. appls. 111496
micromachined US transducer array for below 500 kHz 111492
micromachined US transducers, detect. method 99085
micromachined US transducers, elec. impedance mismatch 111494
micromechanical capacitive US transducers, fab. by surface micromachining 122735
microphones, acoustic sens. using RF detect. and capacitive micromachined US transducers 111542
microsens. design, improvement & future prospects 75753
multiphase pipelines, phase percentage determ., capacitance sens., coaxial capacitor 109532
nanometre-scale force sens. with MEMS devices, review 109796
nonintrusive HV meas. using opt.-isolated differential capacitive sens. 123092
on-chip integrated Si bulk-micromachined soil moisture sens. 121299
penicillin detect., capacitive EIS & enzyme FET sens. 120942
penicillin detect., EnFET, capacitive EIS sens. & LAPS comparison 120950
PERIFELD-M security fence, capacitive detector, outdoor influences 120769
PI/CAB bilayer film humidity sens., sensitive character, temp. coeff. *(Chinese)* 120767
planar capacitive sens. for ang. meas. 120733
polyimide capacitive relative humidity sens. for anodically bonded hermetic micropackages 86755
polymer solid electrolyte, humidity sens. 120982
polysilicon capacitive microaccelerometer, unevenly distributed comb electrodes *(Korean)* 132068
press. condenser microphone, elec. field force & capacitance, FEA 120728
press. microsens., mech. & elec. characts. anal. *(Chinese)* 132077
press. sens., temp. coeff. param. anal. & optim. 132078
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
PZT amorph. thin film hydrogen gas sens. 97535
RF MEMS devices technol. 80236
SAW hybrid sens., wireless press. and temp. meas. 92767
SAW transponder tech. for wireless press.-meas. syst. 75922
SCM, zeptofarad resoln. sens. 75499
self-calib. capacitive sens., threshold liq. level meas. 109510
self-oscillatory convertor, bal. thermistor bridge 75462
single-bodied humidity & temp. sens., adv. lin., design, fab. 97562
smart sens. closed-loop meas. channel, noise detect. algms. 109825
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
thermometer, low temp. & high mag. field use 97206
three-component capacitive force transducer design, non-std. specimens 97205
tomography sens., axial characts. simul., FEA *(Chinese)* 109526
tomography sens., internal-external electrodes, reconstr. algm. 120739
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479
two-phase flow void fraction meas., capacitance tomography 110052
underground XLPE power cable, HF PD meas., capacitive sens. 77387
US phased array antennas for med. imaging, micromachined chips 122021
vibr./accel. pickups, phase shift charact. *(Japanese)* 75896
$BaMO_3$ (M=Ti, Zr, Hf, Sn), humidity sens. materials 121298
Pt patterning for Si load cell, modified lift-off tech. 116098
Si US transducer, capacitive micromachined sens. 88208
Si chip-size-packaged microphones, chip stack design 111505
Si dew point hygrometer mirrors, surface temp. homog. optim. 109803
Si microphone, surface and bulk micromachining 97571
Si sputtered microstructs. integrat. with pre-fabricated CMOS circuitry 104182
SiO_2/Si_3N_4 ISFECs, ion sensitive field effect capacitors, sensitivity, MOSFET amp. structs. 121013

capacitor motors
induction capacitance motor, math. model, SIMULINK *(Russian)* 112504
sync. reluctance motor, static mech./ang. charact. *(Russian)* 123382
sync. reluctance motor starting, transients calc. *(Russian)* 99649
tapped-winding capacitor motor, extended cross-field theory, iron loss 134036

capacitor storage
act. power harmonic filter capacitor, energy storage fuzzy control 89036
advanced static VAr generator, static/dyn. characts. anal. *(Chinese)* 77184
all-elec. transportation commun./recharging via wireless power beam 89366
autodaptive volt/VAr mgt. syst., switched pole-top capacitor bank 122852
bipolar supercapacitor electrodes, oxidized glassy carbon sheets 123847
carbon cloth reinforced resorcinol formaldehyde aerogel films 79463
ceramic capacitors, perform. evals. for pulse-discharge appls. 123845
compensating capacitor bank with reactor, effect on pass. filter *(Chinese)* 113039
distrib. network capacitor transients discrim., posn. ident. 113038
distrib. syst. harmonic Norton models, network impedance effect 77313
EDLCs, elec. double layer capacitors, aq. dil. HCl soln. *(English)* 100223
elec. double layer capacitor, power storage syst. *(English)* 100218
elec. double layer capacitors, polymer gel electrolytes 123848
elec. double-layer capacitors, organic electrolyte studies *(Chinese)* 113037
elec. double-layer capacitors, organic electrolytes, perform. 123846
elec. power supply, elec. energy stores, decentralised operation *(German)* 78132
electrochem. capacitor storage, metal-loaded activated carbon electrode, plasma CVD *(English)* 100219
electrochem. capacitor tests for hybrid EV appls. 123717
electrochem. supercapacitors, electrochem. energy storage beyond batts. 80451
electrochem. ultracapacitors, conducting polymer materials studies 123718
elevators, supercapacitor energy storage syst., soft commutated interface 134523
EM metal forming systs., pulsed mag. fields generation 113170
energy storage technols. comparison 89104
fluorinated polyphenylthiophenes, chem. synthesis, energy storage appl. 125124
graduate automotive technol. education in energy storage systs. 113305
high-power DC-to-DC converter, elec. vehicle supercapacitor appls. 123571
high-power Z-pinch, pulsed power source *(Chinese)* 99801
hybrid batt./RuO_2 ultracapacitor high pulse power syst. 89315
long-action very low resist. crowbar 99848
Luz y Fuerza distrib. automation syst., Mexico 133615
mesoporous activated carbon fiber elec. double layer capacitance *(English)* 100222
nonporous activated carbon electrode elec. double layer capacitor, high energy dens. *(English)* 100224
output-power leveling in solar cell and wind power gen. systs. with elec. double-layer capacitor banks *(English)* 99596
PANI, electrochem. charact., electrochem. supercapacitors electrode appl. 100229
PEDT-RuO_x composite electrodes, electrochem. and impedance props., capacitor appls. 99890
PFC capacitor burn out calc., distrib. systs., harmonics current *(Chinese)* 89312
poly(cyano-substituted-diheteroareneethylene), prep., electrochem. supercapacitor 101512
polyacrylonitrile microcellular foam film electrodes for supercapacitors 100230
power electronics, capacitive components 91413
power quality improvement energy storage systs. overview 133697
power syst. static stabil. anal., freq. vars., static capacitor bank *(Russian)* 99259
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
rect.-type elec. double layer capacitor, high energy dens. *(English)* 100220
SIGNAL high-current pulse generator with µs plasma opening switch 78016
single-/3-phase unbalanced loads, PFC, multilevel diode clamped VSI 111813
single-stage PFC, boost type input-current-shaper, topol. 77964
SMES, inverter-converter bridge energy transfer cct. 78191
solid rotor pulsed asynchronous generator, FEM-based num. anal. 123437
solid-state low-power klystron-pulser for CTF3 injector 91554
SSR mitigation, TCSC, NGH device, comparison 99883
stabil. enhancement, elec. double-layer capacitor, fuzzy switching control 111870
stand-alone PV syst., hybrid EDLC-lead acid batt. storage 112404
supercapacitor, porous electrodes, internal electrolyte resist., voltammetry 89310
supercapacitor dyn. behavior modelling using impedance spectrosc. 134336
supercapacitor nanostructure material develop. 123719
supercapacitors props. and appls., state-of-the-art to future trends 78117
switching syst. 100227
three-phase act. power harmonic filter direct power control scheme 89030
three-phase soft-switching VSI for energy storage appls. 112672
UltraCap double layer capacitors, energy storage device for peak power appls. 78201
ungrounded Y-connected capacitor bank, failure unit removal, syst. imbalance 100226
(Ba,Sr)TiO_3:Zr-substituted thin films for integrated capacitors, elec. props. 91415
C-based capacitor electrode materials, electrochem. energy storage 69270
C-poly(3-methylthiophene) hybrid supercapacitors, perform. 113040
Cu-porous carbon composite elec. double layer capacitor, capacitance props. *(English)* 100221
MnO_2 sol-gel derived ultracapacitor electrode materials 123720
MoO_3/C composite electrodes as electrochem. supercapacitors 100228
NiO_x supercapacitor, prep., props. *(Chinese)* 113036
$Pb_xSr_{1-x}TiO_3$ ceramics, dielec. energy storage 78200
Pd/ZrO_2-Y_2O_3 composites, dielec. props., EDLC 123849
RuO_2 electrodes, effect of Ca addit. on pseudocapacitance *(English)* 100225
RuO_2/C composite supercapacitors, synthesis, props. 100232
RuO_2/Lipon/RuO_2/Pt thin film supercapacitor, electrochem. charactn. 91431
a-$RuO_2{\cdot}xH_2O/WO_3{\cdot}xH_2O(Na_{0.37}WO_3{\cdot}xH_2O)$ composites for electrochem. capacitors 100231

capacitor switching
120 kVA automated power quality test platform 133708
ATSC type fast dyn. VAr compensation device *(Chinese)* 112751
distrib. network capacitor transients discrim., posn. ident. 113038
distribution networks, reconfiguration, capacitor switching coord., fuzzy GA *(Chinese)* 77317
FACTS device computer simul. 112000
HVDC capacitor-commutated converter using act.-pass. capacitor 112007
indust. distrib. network high-speed VAr compensation systs. 88389
integrated power quality in distrib. equipt. 133695
long-cable HVDC-transm., capacitor commutated converter control 111866
MV indust. distrib. syst. power quality assess., wavelet/FFT 133637
power conversion technol. for power syst. appls. *(Japanese)* 88811
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
radial distrib. systs. capacitor switching, fuzzy modeling 112032

acitor switching continued
restrike free gas-blast cct. breakers design, capacitance switching 112696
stabil. enhancement, elec. double-layer capacitor, fuzzy switching control 111870
wavelet-based online disturbance detect. for power quality appls. 112066
acitor testing *see capacitors; electron device testing*
acitors
see also ceramic capacitors; electrolytic capacitors; ferroelectric capacitors; MIS capacitors; power capacitors; thick film capacitors; thin film capacitors; varactors
1 MHz converter, planar LCT components integrat. 88922
50 kW soft-transit. inverter, ZCS, near-ZVS 88913
AC film capacitor reliab. assurance using thermal anal. 69271
air-coupled line-focused capacitive US transducer 111517
aluminum and tantalum capacitors, polymer cathodes, ESR reduction 80450
bearing currents/EMI/DC-link voltage vars. mitigation, dual-bridge inverter 123458
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0.1 μm rule *(Japanese)* 68773
CAT-5E modular jack for high-speed differential sig. interconnection, crosstalk noise reduct. 91445
CMOS IC, MEMS transducer, vibr.-to-elec. energy conversion 68561
CMOS op-amps, LV class AB output stages, floating capacitors 79600
CMOS power amp. with LTCC high-Q integrated pass. for 2.4 GHz ISM band 91367
complex computer syst. boards, multiprocessor modules, mid-freq. delta-I noise anal. and meas. 89877
conf., St.Petersburg, FL, USA (March 2001) 113212
current mode filters, current differencing buffered amp., grounded capacitors 102362
DC power supply decoupling, capacitor charact. impact, SPICE 99737
de-coupling 96372
decoupling capacitors, optimal placement on PCB using simul. tech. 91457
diamond:B nanoporous honeycomb electrodes for elec. double-layer capacitor appls. 102769
dielec. capacitors calib., high accuracy/high bandwidth method 125850
dielec. meas. for power electronic appls. 68574
DRAM trench capacitor, self-aligned buried strap, NFSTI technol. 114769
DRAM trench capacitor technol., array transistor design 114768
EDLC-batt. hybrid stand-alone PV power syst., operating charact. 108441
electrostatic printing-based mfg. procs. for electronics industries 101462
embedded capacitors, high-k polymer-ceramic composite for RF appls. 69273
embedded capacitors, RF elec. simul. 69276
embedded decoupling capacitors, HV charact. 115067
embedded DRAM, low temp. capacitor technol., dielec. stack film 114772
embedded pass. component integrat. for PWB 102827
embedded pass. component technol., cost/perform. considerations 100588
embedded pass. components for MCM technols. 125943
embedded RF capacitors in low temp. cofired ceramic, modelling/testing 113641
ESR reduction trend for portable electronics 115073
fast microcapillary discharge plasma charactn. using Thomson parabola ion analyser 92594
fluoresc. lamp ballast, inverter, inductively coupled preheating ccts. 134620
foil capacitors for use in motor vehicle electronics, high reliab. *(German)* 69274
high PF 3-phase AC/DC Cuk struct., doubly discontinuous cond. mode 78000
high-speed PCB design, power and ground planes, simul. and modeling 102812
IC components, CAD formulas, fuzzy EM formulation 114972
impedance meas. using harmonic oscillator, food sterility testing 121145
induction heating, dual freq. output quasi-reson. inverter *(English)* 113143
insulation systs., PD activity, ageing accel., voltage distortion 70431
integral pass. in PCBs, appl.-specific economic anal. 125896
integrated pass. devices, large sig. dielec. charactn. meas. 86915
lateral flux integrated capacitors, capacity limits and matching props. 104079
leadless format devices for EMI suppression 94062
loop-gap resonator, automatic coupling control, by variable capacitor attached coupling coil 69275
low pass filter, vol. optim., packaging dens. increase 125588
matrix assisted pulsed laser evap. direct write cct. element rapid prototyping method 115158
MCM elements, time domain charactn. with TLM method 91519
MCMs, integrated RF pass. proc., capacitance dens., inductor Q values 102878
MEMS devices for integrated wireless commun. transceivers, IST MELODICT project 74831
MEMS tunable capacitor modelling, MRTD and FDTD techs. 104188
MEMS-based variable capacitors for microwave/MM-wave freqs. 102780
mesoporous carbons synthesis, electrochem. double-layer capacitors appl. 68449
metalized polypropylene films capacitors, pulse withstanding capability 125851
methane-air mixtures ignition from multiple capacitor discharges 83117
micro-dispensing/ink jetting direct write technols., material systs. 100564
microwave capacitors, reson. props., num. modeling/expt. investig. 69105
MIM capacitors, fab., charging reduction 125852
multi-machine power syst., controllable series capacitor, control strategy 111879
multi-terminal capacitors, package distributed models, 2D lossy transm.-line approach 113504
multifreq. quadrature bridge for capacitance & resist. stds. 109412
multilayer polymer chip capacitors in high dens. power converters 88816
multistage amps., coupling capacitor non-ideality effects 125238
μP, package capacitor, max. operating freq. 113479
pager design, new formulae 83600
parallel-plate electrostatic actuator, vert. hinges 116092
Parmod functional electronic materials, laser proc. 115157
pass. component charactn. in non-sinusoidal conditions, virtual instrum. tech. 120656
pass. component lead wires, welding/soldering procs./materials 78650
pass. components, 0201 size, high-yield assembly proc. charactn. 80501
pass. components, conf., Brussels, Belgium (Oct. 2000) 89559
pass. components, market renaissance, overview 80409
pass. electronic components, reliable in-cct. eval. 80413
pass. electronic components, reliable in-cct. eval. 115041
pass. lin. component third harmonic testing, review 113453
PCB decoupling capacitors, optimal placement method 69301
PCB design for embedded pass. 115125
PCB with multilayered geom., gaps and bypass capacitors effects on interconnect 102802
π-sect. RC network noise verification std. 70003
planar reconfig. double stub tuner using MEMS switches 80307
polymer-ceramic nanocomposite, high-k dielec., RF embedded capacitor 115089
polymer-ceramic nanocomposite embedded decoupling capacitor, SSN suppression 113503
capacitors continued
polyphase PMSM, single phase supply, steady state perform. 112481
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec. props. 103243
power electronics, capacitive components 91413
power MOSFET PSPICE modeling method 126766
reconfigurable MEMS filters, tunable lumped components design 80223
RF MEMS tunable capacitor, piezoelec. actuator, micromachining 102782
RF MEMS variable capacitor, electrostatic digital control 102783
RF pass. cct. modelling, coupled lines and scalable models 114962
RF transceivers, MEMS device appls. 85604
robust high-pass and notch Gm-(grounded) C biquads, filter topologies 80066
SC Δ-Σ modulators, high order, capacitor-area/power-consumption optim. 90979
self healing, metallized polypropylene films 115052
single-phase AC sources, high-perform. voltage regulator 78009
SMPS, mag. devices, energy based capacitance model 88825
sync. reluctance motor starting, transients calc. *(Russian)* 99649
T8 fluoresc. lamp ballast using piezoelec. transformer, charact. 134638
testing, fast measuring meter, phase components *(Chinese)* 109834
thin film integrated capacitors, paraelectric and ferroelec. materials as dielec. 91414
three-level VSI, DC side, capacitors' voltage vars. *(Chinese)* 88983
TLP meas., transm. line pulsers, ESD protection device response verification 83104
universal voltage-mode filter, three input/single output, operational floating current conveyors 68921
vert. mesh RF capacitors in std. CMOS, design and charactn. 125778
ZCS PWM DC/DC converters, operation principle *(Korean)* 123583
ZVS asymmetrical half bridge PWM converter, planar integrated L-L-C-T module 134218
ZVS HF reson. inverter, charact. estim. 134248
ZVS-half bridge type HF reson. DC-DC power converter *(Korean)* 123589
$BaTiO_3$/epoxy composite film, integral capacitor, suspen. formulation 115090
C fiber reinforced polymer-matrix composites, capacitors appl. 68430
Cu/low-k interconnect CMOS platform, 0.13 μm, for SoC appls. 127019
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
$MgTi_{1-x}M_xO_3$ (M=Mn,W) ceramics, elec., dielec. props., dopant effects 116128
Ru rugged metal electrode, DRAM MIM capacitor 102125
SiO_2/Si-QD/SiO_2/Si tunnel capacitor, charging dyn. *(Chinese)* 126129
Sn-Ag-Cu Pb-free solders for pass. components, usage implications 80445
Ta_2O_5 amorph. thin film, HF dielec. props. 116122
Ta_2O_5 anodic thin films, defects, DLTS and conductance transient investig. 116134
TiN barriers for high-k capacitors, simul., expt. results 68253
WSi_x metal resistor, MIM capacitor, CMOS technol. 115040
capacity, channel *see channel capacity*
capacity management (computers)
Internet traffic, capacity mgt. 74341
Profibus fieldbus with deadlines, load-carrying capacity planning *(Polish)* 131820
capillarity
see also contact angle; foams; liquid films; surface tension
BPSG planarization proc., capillary force vs. centrifugal/gravit. forces 103400
capillary electrophoresis microchip, radionuclide/metal detect. 86718
charged molten metal droplet deposition as direct write technol. 100612
CSP/flip chip underfill, multi-pass dispensing on dual parallel lanes 100584
direct print microlithography, computational modeling 103699
fast microcapillary discharge plasma charactn. using Thomson parabola ion analyser 92594
flip chip underfill procs., rapid, for large to small flip chips 113704
liq. thin film, thickness, laser-induced thermocapillary response 86974
microcapillary X-ray lens, fab. tech./ray tracing calcs. 110480
microcontact printing for plastic electronics/fiber optics appls. 102876
micropatterned solid-supported membranes, capillary micromolding 69982
OSP accelerated aging, solderability assays via three test methods 115200
Pyrex glass etching and bonding, micromachining technols. for capillary electrophoresis 92556
silica electroosmotic micropumps, fab., charactn. 127132
solder droplet printing, high precision, amplit. modulated droplet form. 67570
thermo-capillary opt. matrix switch using silica waveguide technol. 104790
Ag thin films inside silica capillaries for hollow waveguides, surface roughness 116674
Si, Cz melt, surface pattern form., surface tension driven flow role 114240
Si molten column, thermocapillary convection under microgravity, O_2 partial press. depend. 90214
WO_3·H_2O/PANI electrochromic device, electrochem. & opt. props. 82219
CAPP *see computer aided production planning*
CAR *see records management*
carbon fibre reinforced composites
see also carbon fibre reinforced plastics
act. fibre waveguide sens., embedded structural condition monitoring 121054
air-coupled US NDT, improved transducers 114517
cement-based composites, electronics, review 68416
drift chambers, high-rate expt., carbon-reinforced straw modules, review 76040
impact damage, HTS-SQUID magnetometry 70966
large struct. integrity monitoring, embedded US sens., rem. DAQ 114527
US inspection, laser-generated US 114538
Al matrix-C fibre multilayer composites fabr. and charactn. 114452
C aerogels, planar fibre reinforced, prep., struct. and PEM fuel cell appls. 78160
C/Cu/Cr composite syst., SIMS anal., heat sink appl. 101506
SiC matrix ceramics, high-precision lightweight components for optomechanical appls. 82267
carbon fibre reinforced plastics
ABS resin/carbon fibers composites, resist., EMI shielding coeff. 72366
aircraft skin panels, embedded FBG sens., buckling anal. 88046
capacitors appl. for C fiber reinforced polymer-matrix composites 68430
diode laser module, plastic material, EM shielding 117210
elastic moduli, Lamb wave vel., contactless method 114489
epoxy matrix/concrete, piezoelec. transducer monitoring 68470
epoxy resin matrix stay cables, AE monitoring 114545
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
graphite fibre reinforced epoxy, eddy current microscopy, image proc. 68479
KSTAR Tokamak supercond. magnet-supporting post, low temp., structural safety assess. 81990
laser-US smart mould for composite parts mfg., fibre opt. US sens. 114451
opt. spectrosc./laser-ultrasound generation comparison 114554
plate damage detect., optimal US pulse repetition rate, RBF network 90616
polymer electrolyte membrane fuel cells, carbon aerogel integrat. 89187
smart composite, damage detect., impedance spectrosc. 114482

carbon fibre reinforced plastics continued
smart fiber reinforced polymer rod, ductility and health monitoring 86778
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90602
struct. health monitoring, embedded piezotransducer design 101570
struct. health monitoring by elec. resist. meas., review 114549
thick carbon fiber/PEEK composite laminates, single moire interferometric fringe pattern 125153
C_{3D}/PLA composite, promising material for osteosynthesis devices 68424

carbon fibres
see also carbon fibre reinforced composites; carbon fibre reinforced plastics
activated, mesopore struct., elec. double layer capacitor *(English)* 91420
cathode develop. for semi-fuel cell appls. 89168
field emission cathode materials, prep., appls. 102890
PAN-based, electrochem. props., rechargeable Li ion batts. anodes appl. 99897
vap.-grown, basic props. and their batt. appls. 99896
CsI-coated C fiber cathodes, lifetimes, I-V charact. 80559
KrF lasers pumping, rel.-electron-beam sources, graphite-nanofiber field emitter 117069

carbon nanotubes
see also fullerenes
3D micropatterns, photolithography 125135
adsorpt., functionalization, confine., appls. 79469
Al electrode, quantum transport props., ab initio modeling 91509
array, field emission, FPD *(Japanese)* 80530
array membrane, Al_2O_3 porous template, field emission 69417
arrays, controlled synthesis, PECVD 125134
avionics AMLCD, field-emission lamp design 98914
CAEN, chem. assembled electronic nanotechnology, reconfigurable computing 91508
cathode flat-panel struct., FED 132103
computational materials and electronics, conf., Tempe, AZ, USA (Nov. 2000) 89550
computational nanotechnology with carbon nanotubes and fullerenes 80532
conf., Boston, USA (Nov/Dec 1999) 67389
crossing multiwalled nanotubes, form. of connection in electron beam 101535
CVD growth, struct., gas press. effects 101534
CVD growth on Ni catalyst electroplating and field emission 101537
devices with current flow, pot. drop 115216
diamond and related materials, conf., Porto, Portugal (Sept. 2000) 67401
DNA/C nanotube mol. films, electronic struct. self-form., charge transfer 125929
DNA/CNT chip on Si, electronic props. 102865
electro-mech. transducers, nano/MEMS appls. *(French)* 81564
electromechanical sens. appl., first-principles simul. 91507
electron field emission 102905
electron field emission, phys. model. tunnelling 69426
electron field emission, review 102903
electron microscopy, C nanotube-based electron gun 102892
electron transport layer composite for M3EH-PPV based LED, EL/brightness 127991
electron waveguide, Fabry-Perot interf. 80531
electron waveguides, quantum interf. and ballistic transm. anal. 125934
electronic devices and luminesc. elements *(French)* 80528
engng. carbon nanotubes/nanotube ccts. using elec. breakdown 79471
fab. & field emission, CVD 125953
FED, num. indicator 75799
FED indicator using screen-printed C nanotube emitters 86826
ferromag. contacted, magnetoresist. 80529
field emission current calc. 97611
field emission props. comparison for diamond/carbon nanotubes 115242
field emitters, screen printing, field emission characts. 80581
field-emission FPD, fully sealed carbon nanotube design 109885
field-induced evap. 115240
films, low temp. thermal CVD, field emission appl. 114485
flat-panel FED, carbon nanotube cathode 75809
free-standing multiwalled nanotubes, low-noise SETs for ultrasensitive electrometers 69360
growth, gas source MBE 101290
growth, thermal chem. vap. deposition *(Korean)* 68465
highly ordered arrays, IR detect., fab. procs., review 86562
highly ordered monodispersed nanotube arrays, field emission prop. 69384
large area MWNT films, field electron emission, vac. gap depend. 80570
local elec. field enhancement, electron emission 125958
mech., friction at nanometer scale 92248
metal/MWNT/metal structs., electron transport, Coulomb blockade effect 102870
microwave heating thermal CVD, catalyst effect 68464
microwave plasma CVD growth of well-aligned uniform-sized nanotubes 79468
microwave-assisted CVD, high deposition rate 68462
multi-wall carbon-nanotube films, CVD-grown, field-emission props., Raman spectr. 125138
multi-walled carbon nanotubes, arc discharge tech. synthesis 125139
multiwall aligned carbon nanotubes, microwave PECVD growth 68458
multiwall carbon nanotube arrays, nanojunction struct., elec. field induced 90592
multiwall carbon nanotube heterojunctions, nonlin. transport props. 103092
multiwalled carbon nanotube island with nanotube leads, Coulomb blockade 103934
multiwalled carbon nanotubes, synthesis from hydrocarbon vap., proc. params. effects 68454
multiwalled nanotubes, reliab. and current carrying capacity 102869
multiwalled nanotubes as building blocks in nanoelectronics 125935
MWNT, 3D nanorobotic manipulations 90594
nanotube cathodes, spray deposition, field emission props. 68461
nanotube composite, electron-transport layer for organic LED 93412
nanotube field emission triodes, low turn-on voltage, fab., charactn. 115255
nanotube field emitter arrays on Si emitters, emission props. 125962
nanotube ring transistor, dual-probe STM anal. 81397
nanowires, local arc-discharge synthesis, field emission 69440
opt. limiters, review 71957
patterning technol. using photolithog. for FED appls. 69438
poly(3-hexylthiophene)-C_{60}-C nanotube nanocomposites, elec., opt. props. 115357
polymer-nanotube composites, struct./mech. props., mol. dyn. simul. 68460
quantum mechanism in nanostructures *(Chinese)* 91510
reson. vs. anti-reson. tunneling at C nanotube A-B-A heterostructs. 91506
review of nanotube types, props. and appls. 114487
semi-infinite, EM wave scatt. anal. 105726
SETs, RT, nanostructure fab. 92428
shape-, diam.-controlled growth, template-synthesis method 126598
single mol. DNA device, triple-probe AFM meas. 125927

carbon nanotubes continued
single wall parametric electron pump 125933
single walled nanotubes, mech.-induced kinks, electronic props. 70219
single-electron transistors at RT 91511
single-wall bundles, two-photon absorpt./nonlin. refr. 117402
single-wall carbon nanotubes, growth, laser power dens., ambient gas press. effects 125137
single-walled and multiwalled nanotubes, field-emission, effects of O_2, Ar, and H_2 gases 115249
single-walled carbon nanotube bundles, laser ablation prep., twisting obs. 68457
single-walled carbon nanotubes, gas-phase CVD in HiPco proc. 101532
single-walled nanotube, dimens. effects on field emission props. 91538
single-walled nanotubes, synthesis by floating catalyst method *(Chinese)* 114484
single-walled nanotubes CVD growth on microcontact-printed catalyst patterns 125140
spin transport in nanotubes 80527
straight carbon nanotube Y jns. form. by methane pyrolysis over Co on MgO 114486
struct., HREM 114483
supercond.-C nanotube devices, reson. Andreev refls. 69361
suspens., opt. limiting behaviour, wavelength effects, pulse duration 71963
synthesis on Au patterned quartz 125133
TFT controlled C nanotube field emission devices, display appls. 115215
thermal CVD on Fe-deposited (001) Si substrs. 68213
tip, adsorbed water mols., field-emission, DFT 125960
triode-FED using gated emitter struct. 109912
triodes, fab., high emission current dens. 80586
under-gate triode struct. FED with carbon nanotube emitters 115253
uniform patterned growth without surface C 101536
vac. microelectronic devices, UHF vac. IC 69442
vert. aligned array, growth, field-emission obs. 102893
vert. aligned field emitter array, CVD, high-current emission 125968
B-C-N aligned nanotubes, bias assisted hot filament CVD growth, struct. 68463
BN nanotubes, form. by substitution react. on C-nanotubes 68456
C film containing carbon nanotubes, PLD, electron field emission props. 68314
C nanotube, field emission, HV triode FPD 109894
C_{60} chains synthesis within single wall carbon nanotubes 68455
C_{60}/C nanotubes, opt. limiters, mechanisms *(French)* 82823
C_{60}-bipyridine Fullerence based nanocomposite, opt. limiting *(Chinese)* 128465
CN_x large-scale well aligned nanotube films, PECVD, electron field emission 79273
Fe nanoparticles trapped at tips of aligned C nanotubes, mag. props. 81807
H storage capacity in (single)multi-walled carbon nanotubes 68459
Li electrochem. intercalation, Li batts. anodes appl. 90593
Li electrochem. intercalation into raw carbon nanotubes 101533

carbonitriding *see surface hardening*

carburising *see surface hardening*

cardiology
see also angiocardiography; blood; cardiovascular system; echocardiography; electrocardiography; magnetocardiography
2D arrays, real time vol./intracardiac imaging, simultaneous ECG 110687
3D cardiac motion estim. by point-constrained opt. flow algm. 132537
3D coronary arterial segment reconstr. from projection boundaries 98125
3D gated cardiac SPECT, spatiotemporal noise reduction filter 132860
3D reconstruction of aorta from tomographic image seq., anal. and optimisation 122135
3D US imaging, 2D transducer array, finite element simul. 122737
4D med. image segmentation, space and time shape constrained deformable surfaces 87309
age/sex effects on ECG/cardiac electrophysiological props. in adults 76312
anatomical struct./ventricular shape, intermixed visualisation 132526
anatomically-accurate body model, MRI surface coil calcs. 76455
anesthetic states, auditory evoked pot., ANN 76235
aortic valve leaflet cells, flow environ., biosynthetic activity 122341
aortic valve-sparing, finite-element anal., graft shape/stiffness influence 76597
aquisition weighted ^{31}P chem. shift imaging 87616
arrhythmic propag., line stimulation-induced virtual electrodes, action pot. prolongation 76319
arrhythmogenic/normal human heart elec. excitation, modelling 98248
arterial wall cross-sectional elastic imaging by intravascular ultrasonography 110726
artificial heart blood pump, drive motor control *(Chinese)* 122352
atria, computer model, reasonable computation load/realistic anatomical props. 132565
atria, human, defibrillation proc. study in computer model 76682
atrial defibrillation thresholds, atrial elec. remodelling effects 122282
atrial fibrillation, RF catheter ablation using long coiled electrodes 111051
atrioventricular node, catheter cryoablation in atrial fibrillation patients 98604
atten./scatter-corrected ^{99m}Tc cardiac SPECT studies 111030
backprojection filtering algms., vector/second order tensor fields reconstruction 129486
beats, time-freq. distrib., matrix decomp. method 95632
biomedical MRI, sensitivity encoding, arbitrary k-space trajectories 132759
biomedical syst. control/modeling, conf., Karlsburg, Germany (2000) 124195
cardiac rhythm nonlin. anal. for clinical appls. 87368
cardiopulmonary resuscitation, act. compression decompression, quality on-line monitoring 98605
cardiovascular relative press., time-resolved 3D phase contrast MRI 87622
cerebral microemboli monitoring, unilateral/bilateral US, cardiac surgery 98282
coaxial slot array catheter antenna for microwave cardiac ablation 76658
congenital heart disease, rem. diagnosis, mgt. and education 111288
coronary artery disease and post-heart transplantation patients, value of intravascular US imaging 98343
coronary blood flow reserve meas., split dose ^{201}Tl rest/stress imaging 132846
coronary care units, wireless interface for monitored patients 76788
coronary heart disease service delivery improvement, pot. for telemedicine 133175
defibrillation threshold lowering, crit. timed auxiliary shock 111053
deform., tagged MRI and elasticity-based region model 98409
diffusion tensor MRI, solenoidal tensor fields, 3D reconstruction 87597
digital chest radiography, QC phantom 76559
disease, phase contrast MRI, left ventricular wall motion 122091
disease diagnosis and mgt. using telehealth 133150
diseased heart/liver tissues, acoustic prop. distribs. 98298
dual head coincidence clinical camera, image correction techs. 122240
dyn. & gated image seqs., spatially-adaptive temporal smoothing 132861
dyn. biol. syst. charactn., multisine based impedance spectrosc. 110625

rdiology continued
dyn. emission tomographic reconstruction problems, exponential spectral anal. 132863
dyn. $H_2{}^{15}O$ myocardial PET, components blind separation, ICA 110995
dyn. MR studies, optimal Gd-DTPA dose 132740
dyn. PET, OS-EM 110991
dystrophic cardiac tissue, abnormal lipid profile, ^1H NMR spectrosc. 132735
elderly drivers, respiration and heartbeat meas., unconstrained noninvasive method *(Japanese)* 87306
elec. field simul., noninvasive diagnosis aid 98236
electron beam tomography images, automatic heart region extraction *(Korean)* 95582
ENDOSTAB, endoscopic stabiliser for min. invasive cardiac surgery *(German)* 111056
exponential spectral anal., large dyn. emission tomographic reconstruction problems 132944
fast rot. phased array real-time 3D acquisition unit, DP 110757
functional bundle branch block ventricular extrastimulation-induced dissipation, electrophysiologic charact. 121937
functional MRI, image-based physiological artifacts estim./correction tech. 132744
gated SPECT perfusion studies, ejection fractions, radionuclide ventriculography 87773
$H_2{}^{15}O$ dyn. myocardial PET, blind separation of spatially independent components 111046
harmonic phase MRI, bandpass filters design 98408
heart assist devices, multi-objective optimal control 87900
heart cell force transducer syst. implemented in MEMS technol. 110518
heart recovery, centrifugal pump, antithrombogenecity, rot. impeller 76668
heart valve bio-prostheses, lensless Fourier holographic interferometry 122062
heartbeat-evoked brain pot., diabetic neuropathy patients appl. 87409
home tele-visiting services, modelling using systs. dyn. theory 133182
ICU, patient state monitoring, intell. alarms syst. 132530
image seq. segmentation, act. appearance motion model 94843
impedance cardiography sig. fidelity requirements 121877
implanted cardiac pacemakers, elec. field interf. threshold 76667
internal atrial defibrillation, waveform optimisation 122281
isolated perfused, 2-component diffusion tensor MRI 87642
laser angioplasty, cardiovascular appls. 111092
left atrium activation patterns during clockwise/counterclockwise atrial flutter 121936
left heart ventricle contractility, computer assess., kinetic model 76219
left ventricular ejection fraction determ., gated blood-pool tomography 98579
left ventricular hypertrophy, action pot. cond., reduced anisotropy 110638
left ventricular tachycardia, RF catheter ablation, intracardiac echocardiography 111052
left ventricular vol., cardiac phantom, quantitat. gated SPECT *(Japanese)* 132954
left-ventricular heart wall, 2D strain params., MR tagging 110902
lever-coil, respiratory/cardiac motion sens., MRI expts. 132728
local myocardial dysfunction caused by ischemia/reperfusion, Doppler tissue imaging *(Chinese)* 76357
long. strain, short-axis images, strain-encoded MRI 132742
LV, finite element mech. model, gated SPECT/cine MRI 132922
LV, finite-element mech. model, gated SPECT/MRI data 111021
LV area/vol., gated SPECT, prolate spheroidal transform 111039
LV segmentation in cardiac MR images 110874
LV wall motion, image anal. by MRI tagging 110911
microwave radio for Doppler radar sens. of vital signs 87564
min. invasive cardiac surgery, robot-aided *(German)* 111055
miniaturized antennas for microwave ablation of arrhythmia causing cardiac tissues 76616
motion detect., spatiotemporal-freq. anal., gated-SPECT images 76584
MR cardiac images, variational approach for segmentation of LV 122087
MR perfusion imaging using encapsulated laser-polarised ^3He 132693
MRI, adaptive sensitivity encoding incorporating temporal filtering 87619
MRI, cardiac suscept. artifacts arising from heart-lung interface 122114
MRI, dyn. k-space sampling, temporal freq. anal. 76438
MRI, ghost artifact cancellation using phased array proc. 132743
MRI, iter. approach to tensor tomography 132708
MRI, left ventricular dimens. meas., real-time acquisition 132657
MRI, left ventricular motion/shape anal. syst. *(Chinese)* 98401
MRI, mixed echo train acquisition displacement encoding with stimulated echoes 132692
MRI, multistage hybrid act. appearance model matching, ventricles segmentation 76481
MRI, six-element array, SNSE coil design 132673
MRI cardiac images, left ventricular segmentation 132755
MRI images, 3D heart segmentation and tracking, FEM-based deformable model 132756
MRI in cardiac diagnostics 76486
MRI seq., modeling/tracking of cardiac left ventricular motion by lin. harmonic model *(French)* 110860
multielement carotid tonometry sens., noninvasive pulse wave vel. meas. 122019
multislice CT/cardiac CT sector reconstruction, partial scan weighting algms. 132793
myocardial blood flow, 1-^{11}C-acetate PET 76565
myocardial blood flow, dyn. PET, factor/cluster anal. appl. 132909
myocardial blood flow, regional differences assess., T_2-weighted 3D BOLD imaging 132697
myocardial gated SPECT, nonparametic nonrigid registration 122243
myocardial gated SPECT, space-time segmentation, level set act. contours 98578
myocardial infarction visualisation, improved MR imaging tech. 122078
myocardial ischaemia MRI, serial motion assess. by ref. tracking 122092
myocardial perfusion ^{201}Tl SPECT, static & dyn. imaging 122242
myocardial perfusion assess., adaptive/self-evaluating registration method 110893
myocardial perfusion imaging, non-contrast agent MRI tech. 132654
myocardial perfusion MR imaging with interleaved notched saturation 87680
myocardial perfusion param. imaging, ^{13}N-ammonia PET, nonlin. method 110994
myocardial perfusion SPECT, camera perform. eval., channelised Hotelling observer 132921
myocardial perfusion SPECT, coronary artery disease detect. 132902
myocardial perfusion SPECT, ES diagnostic perform. 122169
myocardial perfusion SPECT, motion artifacts assess., motion-correction program 110985
myocardial perfusion SPECT, reconstr.-based compens., Hotelling observer 122179
myocardial rapid vel. distrib., tissue Doppler imaging 87485

cardiology continued
myocardial SPECT, regional wall motion, systolic thickening, automatic quantification 110986
myocardial SPECT perfusion imaging, var. wall thickness effect 132859
myocardial strains determ. from tagged MRI, fast techs. 98470
myocardial tracking algm., ejection fraction calc., gated SPECT 110992
myocardial wall tagging with undersampled projection reconstr. 76440
myocardium, Gd-DTPA bolus tracking, T_1 fast acquisition relax. mapping 132696
myocardium, integrated backscatt. image, 2-D cyclic var. 98277
myocardium, laser-tissue interact., 3D interactive visualization, Java 98666
myocardium, lin. lesions created by Nd:YAG laser, diffusing opt. fibres 83071
myocardium, stunned, canine model, Gd-DTPA-enhanced MRI 87621
myocardium high vel. distrib. meas., US beam direction control 110701
myocardium PET, FDG uptake, blood glucose effect 122247
myocytes, postnatal develop., elec. field stimulation 76718
MyoTrack, 3D deform. field method to measure cardiac motion from gated SPECT 87774
neonatal heart rate time series, freq. domain methods 121897
optimal target heart rate, exercise-induced T-wave alternans 98147
organ motion artifacts correction in X-ray CT systs. 110938
output, noninvasive determ. in small circulatory systs., limitations *(German)* 98334
pacemakers, MRI interf. 87907
paediatric cardiac catheterisation, radiation doses 76745
perfusion, dyn. contrast MRI meas. in brain/heart 132736
periodic oscills. buried in white/coloured noise, ident. 76216
PET, ^{82}Rb, 2-/3-dimens. studies comparison 110987
PET, atten. correction using consistency conditions/3D template 132932
PET, quantitat. imaging, reproducibility in integrated anal. environ. 122254
PET, time-activity data, wavelet transforms anal. 76568
phase sing. dyn. in cardiac tissue, expt./theoretical anal. 110566
Phoenix-7 total artificial heart, vivo/clinical study 122313
phonocardiogram sig., short-time FT anal., nonstationarity 76362
phonocardiograms, automatic denoising methods comparison 121991
plunge electrodes, cardiac tissue elec. stimulation, extracellular mapping 121963
PTCA balloon catheters, computer-controlled inflation/deflation 87781
pulmonary diagnostic syst. for combat casualty care, obstructive/restrictive flow charact. extraction 76337
pulmonary haemodynamics, congenital heart defect children, scintigraphic methods *(Russian)* 132889
real time rectilinear vol. imaging, abdominal, breast, vascular appl. 110688
regional myocardial blood flow, dyn. $H_2{}^{15}O$ PET images 110990
respiration/heart beat meas., microwave displacement meter 122068
respiratory-gated PET, 4D affine registration models 132852
respiratory-gated PET, 4D affine registration models 111026
RF catheter ablation, heating efficiency prediction, bioimpedance meas. 111074
rhythmogram spectral anal., cardiac rhythm pacemaker control model 98700
robotic cardiac surgery, heartbeat sync. 98608
single camera rot. dyn. SPECT, dyn. EM algm. 122275
sleep related respiratory disease diagnosis, home appl., cardio-respiratory biosignals 121881
snakes-based cardiac contour extraction, automatic init. 76470
SPECT, atten. smear, 'paradoxical' counts increase 132847
SPECT, atten./scatt. corrected, regularisation optimisation 122187
SPECT, cardiac scans, uniformity, contrast and SNR 132941
SPECT, interior point iter. max.-likelihood reconstruction algm. 76564
SPECT, uniformity, contrast, SNR eval. 122252
SPECT cardiac images, truncated projection data, body contour, atten. compensated images 76574
spine, diffusion-weighted MRI, radial k-space trajectories 76423
surface deform. meas., computer aided speckle interferometry 122053
surgery procedures simul., develop./problems 87797
sync. enlargement algm., nuc. med. image segmentation *(Chinese)* 98570
telemedicine, conf., Uppsala, Sweden (Jun 2001) 100362
thermodilution, cardiac output meas., Levenberg-Marquardt estim. 76225
thigh muscles improvement by neuromuscular elec. stimulation, heart failure appl. 87803
torso phantom, interactive software, patient pop. modelling 132828
transmyocardial laser revascularisation/RF ablation, histologic thermal injury signatures 87823
transthoracic defibrillation current dens., two-layer segmented electrode 76593
trends monitoring in cardiac surgery/postoperative care 98593
ultrasound image segmentation, region growing method 110779
valve prostheses, dedicated biomaterials, testing syst. 111143
ventricle assist device, pulsatile, drive screw pitch optimisation 111157
ventricle mech., MRI, finite-element reconstruction method 98474
ventricular assess. using real-time interactive multislice MRI 132661
ventricular energetics during mech. ventilation/intraaortic balloon pumping 111078
ventricular fn., MRI eval., true FISP vs. FLASH obs. 87681
ventricular recovery index, min. invasive ident. 76226
ventricular shape visualization using selective vol. rendering of cardiac data sets 132518
virtual electrode polaris. and reentry in far field 122324
^{192}Ir, intracoronary radiation therapy, re-endothelialization, T-cell infiltration 98615
^{82}Rb, PET, myocardial perfusion, wavelet-based noise-reduction 76569

cardiovascular system
3D automated segmentation and structural anal. of vascular trees using deformable models 121884
abdominal aortic aneurysm segmentation, 3-D deformable model, CT images 98565
atherosclerotic discirculatory encephalopathy, EHF treatment 87853
B-mode ultrasound imaging, variational energy approach 87509
blood vel. estim., pre- & post-proc. filters 110743
blood-brain barrier, cell phone effects and tumor treatment 98739
carotid artery contrast-enhanced MRI angiography, array coil 98469
control during sleep, lin. feedback model anal. 87394
coronarographic densitometric meas., X-ray scatt. & veiling glare 76516
coronary artery disease diagnosis, ECG exercise test, RBF network 87422
coronary artery reporting syst., computer-assisted diagnosis *(Japanese)* 98142
coronary vasculature, 4D quantif., angiography & US data fusion 98535
dilated cardiomyopathy, finger arterial blood press. waveform anal. 87328
elastography, local cardiac muscle motion imaging 110700
fluid dyn., diastolic fn. modelling 98336
HRV DAQ, anal. & demographic database, HEARVAAD program 98200
implantable mech. microsyst develop., blood pumps 122335
intracardiac press. grad. mapping, Euler eqn., colour echocardiograms 98264

cardiovascular system continued
left ventricular diastolic fn., coronary artery disease, left atrial M-mode echocardiography *(Chinese)* 76359
left ventricular early diastolic blood flow, load change and ischemia effects *(Chinese)* 76355
min. invasive robotic coronary artery bypass, 3-D visualization 76599
MR 2D vel. images, vortex segmentation 98413
MR guided endovascular radiological interventions 87687
MR image quality, flow and motion 87689
myocardial fn., quantitat. regional strain & strain rate imaging 110698
myocardial ischemia venous lactate/glucose monitoring, ultrafiltration catheter 87347
myocardial perfusion, US contrast agent destruction & imaging sync. 122010
myocardial radiotracers eval., spectral anal., impulse response fn. 132910
nanotechnol. needs, overview 132993
old myocardial infarction, diastolic fn., echocardiography *(Chinese)* 98304
partial left ventriculectomy, echocardiography hemodynamics eval. *(Chinese)* 76356
perfusion quantif., Levovist infusion & power Doppler image pairs 98265
PFC emulsion blood pool contrast agent, harmonic imaging 122011
plaque MR imaging, inform. theoretic anal. 98410
simulated wave propag. and traceback in vascular extraction 98414
static/dyn. cardiac perfusion ^{201}Tl SPECT comparison 111029
structural segmentation of LV, imaging strategy 87351
systolic fn. estim., quantitat. tissue vel. imaging *(Chinese)* 98305
thoracic aorta four-D blood flow pattern anal. 87691
time-normalised wave intens. haemodyn. index, real-time meas. 110740
tissue Doppler imaging develop. for vascular & cardiac appls. 110709
transmyocardial laser revascularization *(Chinese)* 98634
variability sigs. anal., transfer fn. estim. reliab. 87337

cargo distribution *see goods distribution*

CARM *see cyclotron masers*

carrier communication *see telecommunication*

carrier concentration *see carrier density*

carrier density
see also current density; electron density; hole density
1.55 μm SOA Auger recomb. heating/hot phonon effects 71798
aromatic polyimide films, partially carbonised, semicond. elec. props. 80777
barrel type MOVPE reactor for 6" epitaxial wafers, device appls. 68259
α-(BEDT-TTF)$_2$I$_3$, transport prop. under high press., ultra narrow gap semicond. 103081
buried heterostruct. MQW lasers, internal quantum transport effects 128329
cpd.-semicond. transistor technols., quantum-mech.-Poisson solver 115811
DC-DC buck converter 4H-SiC/Si P-i-N diodes switching performs. 134170
diamond:H films, surface region carrier generation 69493
diamond, polycryst. CVD films, injection depend. long carrier lifetimes 80642
diamond films, plasma CVD, struct., elec. props., Schottky devices 126209
diamond thin film, form. of shallow acceptor states in surface region 69470
diode lasers, mode switching charact., perturb. anal. 105285
directly modulated high-speed LW LD, stabil. and nonlin. dyn. 71917
displacement current meas., scanning vibr. probe *(Japanese)* 121134
external-cavity semicond. lasers, tuning range, AR-coating facet wavelength depend. *(Chinese)* 117315
freezeout/exhaustion prediction under nontrivial conditions 91572
fully self-consistent semicond. hetero-jn. laser current noise model 117295
high T_c supercond. films, microwave surface impedance, phenomenological model 70659
HV diode, ion-induced charge generation 126651
IGBT, anal. model, applied terminal voltages 115849
incoherent opt. feedback semicond. laser dyn. 93689
ITO thin film, sputter deposition, single-phase target 90250
lateral IGBT, current distrib., 2D anal. model 126760
low dens. carrier ferromag. semiconds., mag. interacts. 81811
MESFET, opt. control, energy-depend. phys. model 92406
mol. organic LEDs, guest-host act. layer, enhancing device perform. 71594
MOS inversion layer, space charge capacitance, anal. model *(English)* 91883
MOS struct., surface layer DOS, charge control model *(Chinese)* 80955
MOSFET, non-equilib. steady-state carrier transport noise 81320
MOSFET, Unibond device, low temp. operation, LF noise 70104
MQW lasers, three-level SPICE model *(Chinese)* 82655
multilayer organic LEDs, transient EL 69620
multilayers OLEDs, injection/transport, num. model 71616
nitride QW lasers, opt. anal. 105299
nitrides, Monte Carlo simul. of terahertz generation 103048
nMOSFETs, ultra-thin gate oxide, breakdown softening at low inversion layer dens. 81347
nonintimate Schottky jns., effective dens. of bias voltage depend. interfacial states 80898
NPT IGBT rated overload charact. study 126789
one-facet antirefl.-coated semicond. lasers, oscill. wavelength 117248
organic LED carrier behavior anal. on hopping cond. basis, computer simul. *(Japanese)* 82404
p-i-n diodes, spatially separated carriers, ambipolar drift 115839
pn homojunctions, carrier transport, thermionic emission proc. 103113
polypyrrole thin films, charge transport props., electrode material influence 69572
polysilicon TFT, interface trap states, grain boundaries 115915
power diode, phys.-based compact electrothermal model, cct. simul. 92329
power semicond. devices, pulsed power technol. 126715
QD LEDs, carrier lifetime & radiative recomb. 103127
quantum wire transistor, RT simul. 70217
reson.-cavity enhanced photodetector, impulse response, diffusion 75536
SCH-MQW waveguide saturable absorber of mode-locked LD, carrier dyn. 117430
semicond. geom. struct., volt-ampere charact. anal. 115435
semicond. laser, turn-on transient dyn., opt. feedback 117182
semicond. microscopic pot./free carrier distrib. theory, Debye Huckel approach 80628
sexithiophene semicond. grain boundary , temp./gate volt. depend. transport 91715
smart power ESD protection device, laser interferometric mapping 127076
SOA, multi-electrode, HF band-pass photodetection response 86535
SOA & SOA-based switch matrix, spectral gain/noise fig. 93640
SOAs, transparency condition, pump pulse power depend. reduction 117287
solar cells, anom. degrad., carrier trapping 78170
stripe-like test jns., ion beam induced charge collection 115804
TDATA:F$_4$-TCNQ amorph. hole-transport layer for LED, p-type doping and enhanced hole injection 128011

carrier density continued
thin Si containing polymer films, two fluorinated ionic PAG diffusion/distrib., RBS, SIMS 92244
transit. metal oxide superlattice, spin electronics *(Japanese)* 92797
transparent SOA-based NLO loop mirror 86099
trench MOS barrier Schottky rectifier, thick oxide layer 126719
VCSEL nonuniform carrier distrib. effects, diffusion dyn. model 71834
wavelength-selective external-cavity LD, chaotic self-pulsation/cross-modulation 82705
a-Al$_x$Ga$_{1-x}$As:H films, Hall mobility/carrier conc. expts. 80757
AlGaAs/GaAs HEMT, anal. model 126879
AlGaAs/GaAs depletion-mode HEMT, dyn. behavior under opt. illum., model anal. *(Chinese)* 115945
AlGaAs-GaAs HBTs, long-term reliab., base current study 70044
AlGaAs-GaAs HEMT, 2DEG transport props., quantitat. mobility spectrum anal. 92409
AlGaAs-GaAs-AlGaAs MODFET channel cond. with high doping levels 92412
AlGaInP LED samples, modulated doping effect on work voltage *(Chinese)* 104994
(Al)GaN based heterostruct., near/DUV LD, opt. prop. 80805
AlGaN:In,Si solar blind photodetectors, In-Si codoping 120806
AlGaN/GaN HEMT, ammonia MBE on 4H-SiC 68199
AlGaN/GaN HEMT perform. rel. to MOCVD growth termination conditions 70173
AlGaN/GaN HEMTs, MOCVD on SiC, high-transconductance 126890
AlGaN/GaN HFET, material optimisation 103904
AlGaN/GaN HFET struct., impedance spectrosc. anal. 103905
AlGaN/GaN heterostruct., MBE layer limitations due to lateral inhomog., disloc. 103101
AlGaN/GaN heterostruct., epitaxial FET struct., carrier props., surface treatment effects 92032
AlGaN/GaN heterostruct. growth, NH_3 flow effect, reactor press., 2DEG transport props. 90449
AlGaN/GaN heterostruct. wafers for high-power HFETs, elec. charactn. 103798
AlGaN-GaN MODFET, 2DEG transport props., quantitat. mobility spectrum anal. 92409
Al$_x$Ga$_{1-x}$Sb films, MOCVD, elec./opt. props. 114334
Al$_{1-x}$In$_x$N films, plasma source MBE grown, opt./elec. props. 90311
Al_2O_3, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
Au/Pd/p-GaN, interfacial react., surface treatment effect, ohmic contact 81105
Bi nanowire, transport props. 103129
$Ca_2(Mn_{1-x}Nb_x)O_4$ tetragonal K_2NiF_4-type cpd., elec. props. anal. 80773
Cd_2GeSe_4 films, thermal evap., struct./photoinduced discharge charact. *(Korean)* 69573
CdO MOCVD high mobility films and their depend. on struct. 90408
CdO thin films, low-press.CVD and elec. props. 90407
Cd_2SnO_4, film, nanocryst., sol-gel prep., electrochem. props. 103089
p-CdTe crysts., shallow jn. form. by In diffusion, excimer laser annealing, γ-ray detector appl. 115309
CdTe thin-film solar cells, freq.-depend. complex admittance meas. 100186
CdTe-CdS solar cells, CdS:$CdCl_2$ vac.-evaporated window layer expts. 100130
Cu(In,Ga)Se$_2$ (220)-oriented solar cells, device perform. studies 100100
$CuInSe_2$ crysts., elec. cond., photocond., stoichiometry effects 115336
ErAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
Eu chalcogenide cpds., elec. transport props. anal. 80780
(Ga,Mn)As/AlAs/(Ga,Mn)As dil. mag. semicond. jns., tunneling magnetoresist. 91745
GaAs, SI, effect of Ar^+ implant. on galvanomagnetic props. 80702
GaAs X-ray coord. detectors, charge collection efficiency 98002
GaAs, carrier profiling, scanning spreading resist. microscopy 103002
GaAs current filament lasers, short pulse energy, perform. & model 117205
GaAs detectors, charge division/collection, trapping effects, continuity eqns., proc. modelling 97990
GaAs films, Franz-Keldysh effect, photoreflectance, SPV 80737
GaAs low-temp.-grown layer inserted into n-and p-type matrices, majority carrier accumulation 126112
GaAs power microwave transistors, MOCVD δ-doped struct. 91286
GaAs:Mg MBE layer, opt./elec. props. 80738
GaAs:Si epitaxial layers, combined FIB/MBE synthesis, carrier activation 91660
GaAs:Si,Be MBE growth, compensation 68196
GaAs/Al$_{0.3}$Ga$_{0.7}$As QW microcavity, exciton-photon coupling 93681
GaAs/AlGaAs VCSEL, laser pattern & carrier distrib., microprobe EL 71841
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaAs/GaAlAs hot electron light emitting device at low and high elec. and mag. fields, anal. 117269
GaAs/InGaP heterostruct. bipolar transistor, Raman charactn. 126685
GaAsP:Zn(Sn) MOMBE growth, impurity doping and elec. props. charactn. 69789
GaAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
GaAs$_{0.5}$Sb$_{0.5}$ layers, MBE growth on (111)B InP, elec./opt. charactn. 114273
GaInAsP photopumped microdisk lasers, low-threshold CW lasing 117174
GaInN/GaN MQWs, varying In comp., temp. depend. carrier dyn., PL 80866
Ga$_{1-3x}$In$_{3-x}$N$_x$As$_{1-x}$:Si,Be films, GSMBE, doping, elec. props. 126308
GaInP/GaInAs/GaAs-based QW laser, design, self-consistent num. simul. 128278
GaMnAs layers, migration-enhanced epitaxy, struct. and mag. props. 68163
GaN, MBE layer limitations due to lateral inhomog., disloc. 103101
GaN MOCVD epitaxial layers, influence of As doping on elec. props. 126016
GaN, MOCVD films, defects, monoenergetic positron beams anal. 80700
GaN MOCVD, situ normal incidence reflect. 124912
n-GaN, N_2O plasma surface treatment, elec./ohmic contact props. effects 126385
GaN, RF plasma MBE growth, post growth thermal annealing 103239
GaN based HBT, band offsets, current transport, 1/f noise 81239
GaN, epitaxial lateral overgrowth, growth domains, CL, micro-Raman spectra 79332
GaN films, Ga-polarity, XRD, PL, Hall effect, RF-MBE growth 91621
GaN films, H plasma cleaned sapphire substrs., plasma assisted MOCVD, single cryst. orient. 90458
GaN free-standing high quality templates, Hall mobility, carrier conc. 80713
GaN, geom. magnetoresist., vert./lateral cond. 80704
GaN, high-qual., gas-source MBE, room-temp. electron mobil. 101246
GaN, lateral epitaxially overgrown films, elec. props., spatial var. 91658
GaN layers, LEO, picosecond photoinduced reflectivity 124990
GaN layers, ammonia MBE on 4H-SiC 68199
GaN, low temp. transport, carrier densities, impurity sites effects 126069
GaN, related materials, minority carrier transport, review 126015
GaN selective area growth, MOVPE, PL spectra, impurity incorporation 79339
GaN:H,Mg(Be), RF-plasma MBE growth, on sapphire, doping 81001

rrier density continued
GaN:Mg films, MOCVD, carrier concentratio, microstruct. effect 126051
GaN:Mg, multiple step RTA, enhanced p-type cond. 103236
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaN:Mg/AlN epilayers, ion implant., annealing, PL 126328
GaN:Mg(Si), elec./opt. props. gas source MBE 80728
c-GaN:Si MBE growth on (001) GaAs substrs., PL study 103015
GaN:Si, carrier conc./mobility, IR refl. spectra *(Chinese)* 115319
GaN:Si films, VPE on MOCVD-GaN templates, strain, doping distrib. 68295
GaN:Si single cryst. films on sapphire substrs., growth, luminesc. props. *(Chinese)* 68255
α-GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and IR ellipsometry meas. 69545
GaN/AlN epilayers, ammonia gas source MBE growth/charactn., sapphire substr., excitons 90305
GaN/AlN superlattice, MOVPE growth, phonon modes/free carrier, IR/Raman spectra 124987
GaN/sapphire(0001), hydride VPE, thermal cond., disloc./grain boundary effects 126068
GaN-Au Schottky jn., I-V charact. *(Chinese)* 80910
GaN-based materials OMVPE growth, single step nucleation proc. 90440
GaNSi substrs., hydride VPE, carrier/disloc. conc., GaN/InGaN LED fab. 68244
GaP:N LED, P^+–n^-–n jn. barrier distrib. *(Chinese)* 117004
GeSi:P(B) single crysts., CZ prep., method, high temp. transport property 91699
GeTe-Sb_2Te_3 layered cpds., Hall coeff./elec. cond./thermoelec. power 103078
HgCdTe LPE layers, undoped annealed, carrier conc., substr. quality effect 91673
HgCdTe, MBE growth, In doping, IR FPAs appls. *(Chinese)* 91966
HgCdTe, elec. props. and determ. of CdTe mole fraction *(Korean)* 80695
HgCdTe single/two-colour IR FPA, MBE, run-to-run reproducibility 109644
HgCdTe:As, MBE, elec. props., high-operating-temp. photodetectors appl. 69503
HgSe:V crysts., growth, transport props. 91643
ITO films, PLD and props., laser irrad. effects 79358
ITO films, dc magnetron reactive sputtering, elec. props., film dens. effects 126075
ITO films, rf sputtering, struct./elec. props. 103050
ITO:Sn sputter-depos. films, carrier dens., cryst. orient. depend. orig. 103056
ITO/a-Si:H/Pd based posn. sensitive detector, carrier transport 131929
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ E/D-mode metamorphic HEMT 92400
InAlAs-InGaAs-InP microwave HEMT, carrier-conc.-depend. low-field-mobility model 70196
InAs (110), electron accumulation layers, near-surface region 115322
InAs/AlGaSb QW, back-gate control 69699
InAs/Ga(Al)Sb gated QWs, quantum magnetoresist., beat patterns obs. 69674
InAs/GaAs ultrathin layers, carrier capture, degenerate pump-probe tech. anal. 69676
InGaAlAs strained QW lasers, high-speed microwave modulation 117376
InGaAs/InAlAs ridge-type quantum-wire FET, quasi-1D transport characts. 92394
InGaAs/InP strained quantum wire lasers, linewidth enhancement factor, many body effects 93664
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, photocurrent/transm. spectra anal. 126191
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunctions, effective mass, quantum lifetime 103106
InGaAs-AlGaAs SQW GRINSCH ridge waveguide laser, high-power pump operation 105316
InGaAsP SOA with injection, long. spatial hole burning 82624
InGaAsP strained QW lasers, high-speed microwave modulation 117376
InGaAsP/InP LD, modulation response, amplified luminesc. 117180
InGaN QW struct., high-perform. laser operation, band-states model 117265
InGaN films, high In content, PL/structural props. comparison 127926
InGaN/GaN MQW, interrupt growth method, PL props. 91833
InGaN/SiC MQWs, carrier lifetime, PL energy shift, QCSE, free carrier screening 80863
$In_xGa_{1-x}N$/GaN DH, carrier dyn., femtosecond pump-probe spectra/TRPL 69637
$In_{0.5}Ga_{0.5}P/In_{0.2}Ga_{0.8}As$ dual-gate PHEMTs, characts. 126885
InGaPSb/GaAs-based HEMT and HBT, MOVPE, elec. characts. 115956
InN MBE growth and elec. props., AlN buffer layer effects 101299
InN films, low temp. growth, annealing, RF plasma excited MBE growth 91937
InN/GaN heterostruct., flow modulation epitaxy, MOCVD, HEMT 90454
In_2O_3:Mo transparent conductive film, prep., struct./elec./opt. props. 115328
InP, carrier profiling, scanning spreading resist. microscopy 103002
InP devices, 2D carrier profiling, SSRM 115317
InP layers, MBE growth, surface reconstruction 90293
InP, n-type/p-type, proton bombard., elec. isolation 69508
InP, phonons, acceptors, THz absorpt. spectra 126037
InP:S cryst. growth, VGF tech. 114222
p-InSb, Hall effect, magnetoresist. 103011
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
α-In_2Se_3 single cryst. with In excess, elec./opt. props. 80766
$LiNbO_3$:Ce,Mn(Eu)(Fe), double-doped crysts., photorefr. effect *(Chinese)* 71941
$La_{0.85}Sr_{0.15}Cr_{0.95}Cu_{0.05}O_3$, sintering, elec./thermal props. 90589
MgO, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
Mn-Zn ferrites, Er substituted, thermoelec. power 80751
PZT thin films, MOCVD grown on $LaNiO_3$ buffered Si, elec. props., thickness effects 92654
PbSe:Bi, doping, self-compensation 91965
Sb_2Te_3-Bi_2Te_3:Bi_2Se_3, axial thermopower profiles, cooling to <150K 91707
$Se_{100-x}In_x$, chalcogenide glassy alloys, DC elec. props. 103066
Si detectors, irrad. p^+-n-n^+ diodes, electron/hole sigs., temp. depend. 121463
Si devices, time-depend. charge-collection efficiency for diffusion 126624
Si, doping profile, opt. meas. 91947
Si film on NiSi, DC magnetron sputtering, microstruct. 114261
Si, microcrystalline, ultrafast carrier trapping, opt. pump-terahertz probe meas. 102968
Si multicrystalline ribbon solar cells, hydrogen passiv. expts. 100057
Si, n±p jns., hot-carrier impact ionization PV effect 80788
Si on sapphire, radiation-damaged, ultrafast carrier relax. 69471
Si pn-jn. diode, elec. charact., SCM, Kelvin probe force microscopy 81194
Si, polycryst. films, lightly doped, grain boundary transport props. 115298
Si solar cell wafers IR lifetime mapping tech. 100058
p-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
Si:As, clustering equilib., deactivation kinetics 81017
Si:B(As)(P)(Sb) ultra-shallow abrupt jns., activation/deactivation, laser annealing 115481
Si:BF_2^+, ultra-shallow jn. form. by implant., spike annealing 115517

carrier density continued
Si:Ge,B(P)(As) implanted wafers, laser thermal annealing, Boxer cross meas. 115488
p^+-Si:H,B,Fe, Fe detect., DLTS, Schottky diode meas. 80655
μc-Si:H,O films, O impurity effects, solar cell appls. 91611
Si:O, annealed under hydrostatic press., O aggregation and thermal donors 115478
Si:P, heavily doped, oxid. rate, interfacial silicon emission model simul. 115656
Si/SiGe HFETs, n- and p-type devices, technol. and charact., review 80297
Si/SiGe/Si n-p-n HBT, carrier depth profile, electrochem. C-V method *(English)* 81215
Si/SiO_2 MOS struct., flat-band capacitance 80949
n-Si/p-PPV jns., elec. charactn. 115375
Si-on-sapphire material/devices, RF appl. charactn. 91911
n-SiC, bulk/implanted layers, Raman spectra 69575
4H/6H-SiC, excess carrier lifetime/surface recomb., opt. charactn. 91706
SiC:Al,B, 4H/6H, absorpt. meas., doping level eval. 69809
SiC:B,Al,H passiv. and defect props., ab initio DEFT calcs. 126404
SiC:B,V,N 6H crysts., PVT growth/doping, carrier conc. 124793
p-SiC:H,Al, acceptor passiv. and thermal reactivation 126403
6H-SiC:N^+, ion-implanted, quantitat. carrier profiling 103077
SiGe HBT, base transit time, model, exponential base doping, current dens. *(Chinese)* 126675
SiGe HBT, situ GSMBE growth *(Chinese)* 81232
$Si_{0.95}Ge_{0.05}$, heavily GaP- and P-doped, thermoelec. props. 80764
$Si_{1-x}Ge_x$:B strained epitaxial layer, boron diffusion 103281
SiGeC:P epilayers, low-press. CVD, P doping 80989
SiO_2, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
SiP-PMA/PWA hybrid gels, amorph. phosphate-Nafion hybrids, inorganic/organic composites, fast proton conductors 125095
Sm chalcogenide cpds., elec. transport props. anal. 80780
SnO_2 films, microstruct., phys. props. 115327
SnO_2 nanocryst. thin films grown on p-InSb(111), structural, elec., and opt. props. 80749
SnO_2:Pd(Zr) films as SO_2 gas sens., opt. sensitivity charact. *(Chinese)* 120974
$SrBi_4Ti_4O_{15}$:Mn elec. cond., controlled oxygen partial press. 104379
$SrRuO_3$ film, laser ablation prep., struct./elec. props., capacitor obs. 79353
Tm chalcogenide cpds., elec. transport props. anal. 80780
VO_x films as SO_2 gas sens., opt. sensitivity charact. *(Chinese)* 120974
ZnCdMgSe-based DBRs, high reflectivity symm. strained, MBE, charactn. 105384
ZnO, plasma treated, low-resist./nonalloyed ohmic contacts 69729
ZnO spray pyrolysis thin films, struct./DC elec. charact. 69521
ZnO:Al films, MOVPE, struct./elec./opt. props. 103044
ZnO:Al films, substr. temp. effect on struct., elec. & opt. prop. 90247
ZnO:Al transparent conductive films, DC magnetron reactive sputter prep. and charactn. 69504
ZnO:B films, electrochem. growth, elec. props., dimethylamine-borane conc. effects 101442
ZnO:Ga, film, sputtered, elec. props., PL 126042
p-ZnO:Ga,N films, PLD, codoping fab. 91950
ZnO:Ni films, fab., Ni content/carrier dens. effect on transport & mag. prop. 80698
ZnSe crysts., Br-doped, growth and charactn., vert. sublimation method 101164
ZnSe single crysts. conductive type control in vert. Bridgman method 101162
ZnSe:Al single cryst., phys. vap. transport growth/doping 101165
ZnSe:Cl,Li films, MBE on GaAs, codoping effects 91954

carrier diffusion length *see carrier lifetime*

carrier lifetime
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
Cz-silicon solar cells efficiency improvement strategies 100082
DC-DC buck converter 4H-SiC/Si P-i-N diodes switching performs. 134170
diamond:H,N films, nanoscopic, near-field cathodolum. 116913
diamond, polycryst. CVD films, injection depend. long carrier lifetimes 80642
diamond CVD films, prep., radiation detect. devices 87218
diamond devices electron beam metallization, x-ray radiation perform. effects 102981
diffusion-wave laser photothermal radiometric diagnostics for NDE/NDT 90603
diode lasers, mode switching charact., perturb. anal. 105285
GaN p-n jn., forward biased, minority carrier transport enhance. 91741
ion implant. technol., metal contamination reduction 115608
light-induced metastable defects, photocarrier lifetime, annealing 127902
local lifetime control IGBT structs., turn-off perform. comparison 126702
MOS tunneling diode, carrier lifetime meas. from EL temporal response 126627
MOSFET, diffusion-drift transport, channel length depend. at cryogenic temps. 70101
multi-level flash memory, detrapping-induced threshold voltage shift, anal. method 125472
nMOSFET, hot-carrier reliab., H-transport interface-trap-generation model 70130
organic semiconds., photogeneration center charge carriers thermalization model 103084
p-i-n diodes, spatially separated carriers, ambipolar drift 115839
power diode, phys.-based compact electrothermal model, cct. simul. 92329
power P-i-N diode local lifetime control by light ion irrad., blocking capability 81199
QD LEDs, carrier lifetime & radiative recomb. 103127
quantum cascade lasers, high-freq. modulation without relax. oscill. reson. 128390
QW laser struct., small-sig. impedance characts. 82625
reach-through APD, drift-diffusion model 127942
rear-contacted solar cell struct. anal. 100164
reverse-biased pnipn semicond. struct., current pulses internal amplif. modeling 115374
SCH-MQW waveguide saturable absorber of mode-locked LD, carrier dyn. 117430
semicond., doping profile, C-V meas. interp. 126320
shallow n^+-p-well diodes, generation lifetime from reverse generation current 126106
SOA in-line amp. for WDM syst., pattern effect, probab. model 105303
SOI wafers, thermally oxidized bonded, cryst. surface defect, oxygen gettering 91907
solar cells, anom. degrad., carrier trapping 78170
solar cells, separation of bulk diffusion length and back surface recomb. vel., IQE-anal. 100148
string ribbon Si solar cells, PECVD SiN_x induced hydrogen passiv. 100056
USQ diode, local lifetime control, He ion irrad. 126654
VCSEL's charact., cavity modes influence 128292
VCSEL nonuniform carrier distrib. effects, diffusion dyn. model 71834

carrier lifetime continued
VCSEL with noncylindrical geom., self-consistent model 71838
wafers, lifetime meas., photocond. in passivating liq. 93328
wavelength-selective external-cavity LD, chaotic self-pulsation/cross-modulation 82705
AlGaAs/GaAs single jn. solar cells, Si substr., graded GeSi buffers 112918
(Al)GaN based heterostruct., near/DUV LD, opt. prop. 80805
Au/Si_xN_y/n-GaAs struct., N-rich PECVD dielec. fab. 124909
$Au_3Ga_5Se_9$, Bridgman crysts., photoelec. phenom. 82314
$Au_3In_5Se_9$, Bridgman crysts., photoelec. phenom. 82314
a-C/n-Si sputtered heterojunctions, charge carrier response time 126113
CdHgTe near-contact variband layers, weak opt. emission photoelec. amplif., saturation suppression 103026
n-CdS/p-InP heterojunctions, transport mechanisms & PV charactn. 91734
CdTe-CdS thin film solar cells, low-temp. deposition proc. 100177
CdTe-CdS thin-film solar cells, time-resolved PL studies 100113
$Cd_{1-x}Zn_xTe$ crysts., DC photocond., gamma-ray detector appl. 93329
GaAlAs LED, radiation degrad. effects 105026
p-GaAs electrodes, time-resolved photolum., drift-diffusion model 91928
GaAs epilayers on Si, bulk/surface defect passivation, RF PH_3/H_2 plasma exposure 115626
GaAs film on Si substrs., H plasma passiv. 103414
GaAs, nonradiative recomb., EL2 defect, elec. studies 80689
GaAs:Be films, MBE, defect engng., elec. props. 126032
GaAs/AlGaAs undoped asymmetric double QW, intersubband absorpt. dyn. 126052
GaAs/Si solar cell, phosphine-added hydrogen plasma passiv. 112958
GaAs-AlGaAs QHE, edge states electron-hole-pair recomb. suppression, time-resolved FIR photocond. 80793
GaAs-AlGaAs heterostruct. wide bandwidth MM wave mixer, diffusion cooled 2DEG 80270
GaInAs/GaNAs short-period superlattices gas-source MBE growth and charactn. 101256
GaInAsP/InP wirelike laser, strain-compensated MQW struct., etched/regrown interfaces 117215
$Ga_{0.52}In_{0.48}P$/GaAs, carrier lifetime, PL, ordering depend. 126128
GaN epilayers, nonradiative recomb. proc., transient grating method 80718
GaN, excitonic polaritons, photoreflectance/PL spectra 80719
GaN film, hydride VPE grown, carrier dyn., PL 124988
n-GaN films, deep levels/PPC studies, MOCVD 127909
GaN high current gain BJT, regrown emitters 126686
GaN nanostructure, self-organized, MBE, CL, PL, SEM 91657
GaN p-i-n rectifier struct., elec. props. and deep level spectra 69643
GaN, related materials, minority carrier transport, review 126015
GaN:In films, carrier dyn., MOVPE, time resolved PL 80726
GaN/AlGaN separate confine. heterostruct., spontaneous/stimulated emission 69695
GaN-based LED, minority-carrier diffusion length 105011
HgCdTe LWIR n^+-p photodiode array, zero-bias resist.-area product/quantum efficiency 93362
p-HgCdTe, diffusion length meas. using laser beam induced current 91672
HgCdTe, excess carrier bipolar mobility *(Chinese)* 80731
HgCdTe high perform. VLWIR detectors, fab. issues 75531
$Hg_{1-x}Cd_xTe$:As epilayers, in situ doped, MBE growth, elec. props. 102999
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
HgCdTe-based n^+-p photodiodes, charge transport 116940
ITO/GaP UV-vis. photodiodes, characterisation/modelling 82361
ITO/a-Si:H/Pd based posn. sensitive detector, carrier transport 131929
InAlAs/InGaAs/InP DHBTs, dc current gain rel. to extrinsic base design vars. 115856
InAs QDs in modulation doped AlGaAs/GaAs heterostructs., IR photodetector 120817
InAs, Shockley-Read-Hall recomb. rates, full-band-struct. calc. 91635
InAs self-assembled QDs, struct./electrooptical charact., laser/LED appl. 91839
InAsSb room-temp. mid-IR detectors, MBE growth 101268
InGaAs, high-radiation-resistant solar cells for multijunction solar cells 134386
InGaAs/GaAs self-assembled QD lasers, 1.3 μm, perform. & phys. props. 93669
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunction, magnetotransport 91732
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunctions, effective mass, quantum lifetime 103106
InGaAsN QW, solid source MBE growth, charactn. and laser appls. 101258
InGaAsP, high-radiation-resistant solar cells for multijunction solar cells 134386
InGaAsP/InP multi-QW lasers, neutron radiation damage, carrier lifetime 93623
InGaN MQW laser, differential gain charact. optim., tuning 117266
InGaN/GaN DHBT, p-InGaN base, high current gain, MOCVD/plasma etching fab. 92306
InGaN/GaN LDs, self-consistent simul. & anal. 105347
InGaN/GaN strongly biased QW, piezoelec. field, tunneling times meas. 103115
InGaN/SiC MQWs, carrier lifetime, PL energy shift, QCSE, free carrier screening 80863
InGaP, high-radiation-resistant solar cells for multijunction solar cells 134386
p-InGaP solar cells, electron radiation induced defects recovery 112923
InGaP:C photoconductive gate, picosecond response 127910
InGaP/GaAs single jn. solar cells, Si substr., graded GeSi buffers 112918
InGaP/GaAs/Ge radiation-hard triple-jn. space power solar cells 111362
InGaP-GaAs HBTs under temp./current stress, charactn. 70042
InP:Fe, VGF growth, nuc. radiation detector appl. charactn. 97991
InP-based multi-QW solar cells, proton irrad., EBIC, cathodolum. 112959
Si PIN detector, fab., planar technol. *(Chinese)* 110282
Si PIN diodes, switching time tailoring by induced defects, ion irrad. 115830
Si bifacial solar cell, bulk diffusion length determ. 100092
Si epitaxial film solar cells, low temp. ion-assisted growth 134390
Si epitaxial layer, lifetime charactn. by SPV meas. 102992
Si film on NiSi, DC magnetron sputtering, microstruct. 114261
Si films, rapid crystn. using elec.-current-induced joule heating 68362
Si, gated-diode recomb.-generation current tool for characterizing bulk traps of SOI devices 91898
Si high-quality low-temp. epitaxial films, high deposition rate and props. charactn. 79416
Si ingot, carrier lifetime and diffusion length, laser tomography 80654
Si, microcrystalline, hydrogen passiv. depth, carrier lifetime meas. 91610
Si, neutron-transmuted, elec. params. degree of homog. 102978
Si p^+-i-n photodiodes, radiation degrad. effects 105026
Si parallel/floating multijunction solar cells, comparison 78175
Si passivated emitter solar cell, minority carrier diffusion length, PV method 134401
Si, photoconductance, carrier lifetime, injection levels 102983
Si, polycryst. TFT, photon-induced current 70074
Si, porous, solar cells, surface-recomb. vel. 134395

carrier lifetime continued
Si solar cell fab., ingot lifetime meas. calib. factors 100163
Si solar cell mfg. line, EFG wafers, 15%+ efficiency cells 100080
Si solar cell wafers IR lifetime mapping tech. 100058
Si solar cells, high efficiency, thin CZ wafers 100077
Si solar cells, low bulk-lifetime, bulk resist. optim. 113008
c-Si solar cells perform., oxygen precip. role 100093
Si solar cells, problems of develop. & mfg., review 89276
mc-Si solar cells, simultaneous bulk H_2 passiv./selective emitter form. 100055
Si, space solar cells, proton-/electron-irrad., anom. degrad. 89280
Si surface, passiv., quinhydrone/ethanol treatment 126394
c-Si thin film solar cell minority carrier props. 100050
Si, tri-cryst., characterisation, solar cell appls. 91597
Si wafer nonequilibrium carrier recomb. lifetime by noncontact microwave tech. 125990
Si wafer surfaces, wet chem. treatment, microwave refl. photocond. decay meas. 82305
p-Si wafers, laser IR photothermal radiometric/ELYMAT charactn. 92022
Si wafers, minority carrier lifetime meas., collinear four-probe array *(Chinese)* 102954
mc-Si wafers prod., impurity gettering by indust. phosphorus diffusion 91599
Si:Al polycryst., extended high temp. Al gettering, elec. props. 126261
p-Si:B CZ solar cells, carrier lifetime modelling 100048
Si:B, CZ wafers, minority carrier lifetime degrad. 102982
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:B very-low resist. multicrystalline solar cells, light-induced degrad. 100047
Si:B(Ga)(O)(C) solar cells, radiation-induced defects, impurity effects 100033
Si:Cr,Zn surface, contaminants removal, rem. plasma cleaning 91995
Si:Er, ion implant., IR PL emission, minority carrier lifetime 91585
p-Si:Fe,B, Fe-B pairs, acceptor level, capture cross sects. 69498
a-Si:H, RF CVD, laser melting, polycryst. films, PV props. 91607
Si:H microcrystalline layers, SPV 82304
Si:H, nanocrystalline films, hot-wire CVD, charactn. 124959
μc-Si:H, photocarrier diffusion coeff., ps laser induced grating tech. 93320
a-Si:H photodiode, laminar-flow photo-CVD, light soaking 116957
a-Si:H solar cells, low temp. PECVD 100036
Si:H,N,O,Ni CZ wafers, intrinsic gettering, minority carrier lifetime 91930
a-Si/Si microcryst. superlattice, isotropy/transport props. control 126138
Si/SiGe/Si $p^+/i/n^+$ inter-/intraband tunneling diodes 103750
a-Si/c-Si HIT struct. solar cell, 20.7% efficiency 100042
Si-on-ceramic thin film solar cells, light trapping, monolithic array 100157
SiC, 4H, free carrier diffusion, transient grating techs. 69579
SiC, 4H, p-n diodes, anom. forward voltage increase, cryst. defects influence 70009
4H-SiC GTO thyristor, HV charact. 126698
4H-SiC HV BJT 126683
SiC HV rectifier diodes, minority carrier lifetime meas. study 92293
4H/6H-SiC, excess carrier lifetime/surface recomb., opt. charactn. 91706
SiC films, defects, opt. characterisation 126099
4H-SiC thyristors, turn-on procs., temp. depend. 70054
$p^+/n^-/n^+$ SiC:B struct., EL, opt. emission microscopy 69639
a-SiC_x:H plasma CVD films, surface passiv. of p-Si 126360
SiGe HBT, ultrathin base, transport model *(Chinese)* 81234
SiGe HBTs, profile design considerations for base transit time minimiz. 103769
SiGe bipolar transistors and p-i-n diodes for power switching 115883
SiGe device archits., local area Ge^+ implant. synthesis 115498
a-SiGe:H films, UHV PECVD deposition params. and PV quality correl. 101385
Ta_2O_5 gate oxide MOSFET, electron mobility, interface trapped charge dens. 126784
TlBr crysts. for radiation detector appls., charact. 87279
VDMOSFET HI sensitivity, pre-neutron irrad. effects 81295
ZnSe-ZnS QW, acoustically driven opt. phenom. 115378
diamond, CVD polycryst. films, elec. props. 80643

carrier mean free path
see also electron mean free path
Cu thin films, sputter deposition, resist. meas. 126442
GaAs/GaAlAs single quantum wire, Auger mechanism carrier scatt., time-resolved microphotolum. 103004
ITO films, dc magnetron reactive sputtering, elec. props., film dens. effects 126075
InAs/InP QDs, wetting layer carrier dyn., CW/time resolved PL 69658

carrier mobility
see also carrier mean free path; carrier relaxation time; current density; electron-hole recombination; electron mobility; Hall mobility; hole mobility
acetophenone-soaked polyethylene, carrier mobility estim. by transient space charge *(Japanese)* 127250
advanced MOS device, halo implant, effective channel length 92339
α-(BEDT-TTF)$_2I_3$, transport prop. under high press., ultra narrow gap semicond. 103081
bipolar transistor, base transit time, doping profile 103791
bulk-barrier diodes, DC elec. behavior model 103755
CMOS cct., strained silicon channel 81500
CMOS ccts., mutual compensation of mobility/threshold voltage temp. effects 92465
CMOS SoC, 100 nm, multi-gate dielec. technol. using H pre-treatment 127044
CMOSFET gate length scaling to 35 nm 126738
conjug. dendrimer films, charge transport, electrolum. appls. 127993
conjug. polymer diode, voltage-modulated MM-wave spectrosc., mesoscopic charge transport 115834
copper phthalocyanine based OLEDs, emission props. *(Korean)* 82397
deep sub-micrometer MOSFET, self-aligned asymmetric struct. design 126736
deep-submicrometer SOI gate controlled hybrid transistor, quasi-2D model *(Chinese)* 92333
diamond:P films, low temp. excitation spectrum 69496
diamond, low-resist. wide band-gap, codoping method 126314
diamond, natural, carrier scatt. mechanisms 80639
diamond, polycryst. CVD films, injection depend. long carrier lifetimes 80642
diamond films, hot filament CVD, struct./elec./opt. props. *(English)* 125989
diamond thin film, form. of shallow acceptor states in surface region 69470
dihexyl-quaterthiophene TFT, I-V charact. simul. 70156
doped QW minigap-confined states, intersubband transits., IR detector appls. 80882
dual gate oxide CMOS proc. multi-fingered MOSFETs, wireless appls., flicker noise charact. 125705
elec. anisotropic semiconds., van der Pauw meas., finite-element anal. 86898
forward biased MOS tunnel diodes, impedance spectrosc. anal. 103749
free charge carrier photogeneration in semicond. polymers, free polarons drift, time resoved obs. 103083

rrier mobility continued
hetero-MOSFET, mobility extraction, self-consistent Schrodinger-Poisson calc. 70091
III-nitrides, MBE growth and device appls. 90272
lateral IGBT, current distrib., 2D anal. model 126760
LD, self-pulsing simple conditions, dimensionless rate eqns. 105333
LDD NMOSFET hot carrier degrad. phenom., W or S shape evol. 81354
long-channel MOSFET, complete current model, proportional difference characts. *(Chinese)* 103808
LW QW lasers, phase-conjug. feedback 71939
metal phthalocyanine single layer device, rectification ratio 103759
metamorphic HEMT struct., AlGaAsSb/InAlGaAs/InAlP-based buffers, comparison 70204
n-MOSFET, backsurface Ar^+ bombard. effects *(Chinese)* 103721
MOSFET, oxide soft breakdown, device degrad. 126731
MOSFET, short-channel SCT/CGT device, anal. model 126806
MOSFET gate oxide, H_2-anneal induced pos. charge generation and props. 92378
MOSFETs hot carrier degrad./ageing effects, model param. extraction *(Chinese)* 92269
MQW bistable laser carrier dyn. 117259
multilayers OLEDs, injection/transport, num. model 71616
nanoscale MOSFET, mobility vs. drain current rel. 70131
nanoscale ultrathin body PMOSFETs with raised selective Ge source/drain 103855
NMOSFETs, worst-case hot-carrier stress condition, LDD resist. effects 70116
NMOSFETs with ultra narrow channels, random telegraph sigs. *(Chinese)* 81334
octithiophene polycryst. thin film FET, grain size depend. mobility 70164
OLED, mol. materials, elec. transport 117006
oligothiophene, polycryst., TFT, charge transport props. 115908
oligothiophene single crysts., charge transport, conjug. length depend. 91710
on-chip interconnects, large sig. anal. 69960
organic LED, charge transport/light-emission, intermolecular interacts. effect 93419
organic LEDs, luminous efficiency improvements by carrier trapping dopants 105003
organic materials, carrier transport rel. to functional nanometric interface controlled electronic devices 102854
organic semiconds., photogeneration center charge carriers thermalization model 103084
pentacene, photocond., hydrostatic-press. depend. 127904
pentacene TFT, polyimide/polyacryl gate dielec. layers *(Korean)* 115210
PFETs, polymer FETs, LF noise props. 92371
photodetector array spectrum anal. using influence fn. 109559
pn homojunctions, carrier transport, thermionic emission proc. 103113
pocket implanted MOSFET current gain factor length scaling, charactn. method 103893
poly(2,5-thienylene vinylene) films, disordered semiconds., isokinetic temp. 115346
poly(3-hexylthiophene), 2D charge carrier mobility 115352
poly(methyl(phenyl)silanediyl), charge carrier transport 90567
poly(o-methoxyaniline) thin film FET, charact. behavior 126887
poly(silylene)s, charge carrier photogeneration/transport, polar acceptor side groups effect 71507
polymer LED's, freq. depend. carrier mobility 127977
polymer/organo-clay EL device, carrier mobility 116965
polypyrrole thin films, charge transport props., electrode material influence 69572
polysilicon gate HfO_2 MOSFETs, dopant penetration effects 126778
polysilicon MILC TFT with ultra-thin channel *(Chinese)* 115913
polysilicon TFT, excimer laser crystallisation 126811
polysilicon TFT, recessed-channel struct., excimer laser crystn. 70126
polysilicon TFT, reliab., CMOS inverter cct. 115929
polysilicon TFT, single grain boundary in channel, excimer laser annealing 103853
polysilicon TFTs, low temp. excimer-laser crystallized Si, fab./characts. 115935
polysilicon TFTs, offset metal-induced unilaterally crystallized 92341
PPV, organic semiconds., elec. charactn., transient current methods 69622
QD lasers, carrier capture/escape procs., five-level time-domain model 117237
reverse-biased pnipn semicond. struct., current pulses internal amplif. modeling 115374
self-aligned bottom gate poly-Si TFT with in-situ LDD 92361
semicond. devices, fluct. phenom., num. modeling 92272
semicond. geom. struct., volt-ampere charact. anal. 115435
semicond. waveguides, opt. pulse nonlin. interacts., time-domain large-sig. model 117377
sexithiophene polycryst. thin film FET, grain size depend. mobility 70164
short channel MOSFET, phys. DC model using trapezoidal Gaussian surface 103829
short channel MOSFETs, anal. transit time model 103831
SIMNI films, multiple-steps implant., elec. props. improvements *(Chinese)* 126226
six moments of Boltzmann's transport eqn. for device simul. 103743
SOI MOSFET, highly doped, inversion-layer mobility, self-consistent calc. 92348
SOI-SIMNI film, multiple-step implant., elec. props. *(English)* 91881
SOS film growth, CVD & SPE, charactn., device appl. *(English)* 79414
surface-pot.-based MOS model for RF CMOS design, param. extraction techs. 102740
syst.-on-a-chip, N_2 ion implant. and VHP O_2 re-oxid. 103390
tetracene, photocond., hydrostatic-press. depend. 127904
thin film fully depleted surrounding gate MOSFET, 2D anal. model 70094
tris(8-hydroxyquinolato)aluminium light-emitting devices, SCLC, field/temp. depend. mobility 71573
TW MQW SOA gain dyn. 128238
unipolar conjug. polymer thin film devices, modified transport props. modelling 91866
vel. overshoot, Monte Carlo studies 115813
vert. pMOSFET, enhanced drive current, reduced short-channel/floating body effects 126770
wide range coord.-sensitive photodetector, laser controlled 75546
AlGaAs/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC characts. 115950
$Al_{0.25}Ga_{0.75}As/In_{0.20}Ga_{0.80}As/GaAs$:Si pHEMTs, DLTS obs. 115968
$Al_xGa_{1-x}As/GaAs/Al_xGa_{1-x}As$ QWs, quantum confine. effect on mobility degrad. 91800
AlGaN/AlN/GaN high-power microwave HEMTs, high mobility at high sheet charge densities 125708
AlGaN/GaN HFET, material optimisation 103904

carrier mobility continued
AlGaN/GaN heterostruct., MBE layer limitations due to lateral inhomog., disloc. 103101
AlGaN/GaN heterostruct., epitaxial FET struct., carrier props., surface treatment effects 92032
p-AlGaN/GaN modulation doped superlattices, improved mobil./resist. 126178
$Al_{0.15}Ga_{0.85}N$/GaN HFET, high-temp. electron transport 115959
AlGaN-GaN MODFET, I-V characts. and output conductance, 2D anal. model 70186
$Al_xGa_{1-x}Sb$ films, MOCVD, elec./opt. props. 114334
AlN, low-resist. wide band-gap, codoping method 126314
Al_2O_3 n-MOSFETs with Al gates, elec. charactn. 126757
Au nanoparticles assembled chem. on biomol. scaffolds, nanoscale patterns, electron transport props. 102856
Au/(AlGa)As heterostruct., second derivative BEEM spectra 91876
BN, cubic, electronic transport, Monte Carlo simul. *(Chinese)* 115308
$(Ba_{0.5}Sr_{0.5})TiO_3$:Al thin films, PLD, transient anal. 92655
$Bi_{12}SiO_{20}$ sillenite cryst. photorefr. gratings 92933
$Ca_2(Mn_{1-x}Nb_x)O_4$ tetragonal K_2NiF_4-type cpd., elec. props. anal. 80773
CdHgTe near-contact variband layers, weak opt. emission photoelec. amplif., saturation suppression 103026
CdO thin films, low-press.CVD and elec. props. 90407
CdTe, excimer laser doping techs. 91978
$Cd_{1-x}Zn_xTe$ crysts., DC photocond., gamma-ray detector appl. 93329
$CrSi_2$ films on Si(111), transport, opt., thermoelec. props. 91723
$CuInSe_2$ crysts., elec. cond., photocond., stoichiometry effects 115336
$CuInSe_2$ solar cells using horiz. Bridgman growth method 100176
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
ErAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
Eu chalcogenide cpds., elec. transport props. anal. 80780
Eu^{3+} polymer, organic EL device 116973
$FeSi_2$ films on Si(111), transport, opt., thermoelec. props. 91723
GaAs, CMOS inverter, characts. 127062
GaAs, MM-wave parametric instabil., freq. multiplication 69143
GaAs, low-temp. MBE grown, carrier dyn., terahertz emission spectrosc. 91648
GaAs microresonators, cavity solitons study 127812
GaAs:Si, δ-doped, electronic struct., applied elec. field effects 80997
GaAs:Si planar p-n jns., MBE, elec./opt. props. 69633
GaAs/AlGaAs double-QW superlattice, pop. props./carrier dyn. 91784
GaAs/GaAlAs hot electron light emitting device at low and high elec. and mag. fields, anal. 117269
GaAs-$Al_{0.46}Ga_{0.54}As$ superlattice struct. carrier dyn., time-integrated/time-resolved PL 91827
GaAs-AlGaAs heterojunctions, 2D hot-electron transport 91739
GaAs-GaAlAs 1D photonic band-gap struct., pulsed opt. logic gate simul. 82253
GaAsN/InAs/GaAs superlattices, opt. consts., crit. points, free carrier effects, phonon modes 126063
$Ga_{1-x}In_xAs_ySb_{1-y}$ solid solns. by LPE, role of Pb 114383
$GaIn_{0.16}As_{0.22}Sb$/InAs heterostruct., quantum magnetotransport 115372
$Ga_{1-3x}In_{1-x}N_xAs_{1-x}$:Si,Be films, GSMBE, doping, elec. props. 126308
GaN, MBE layer limitations due to lateral inhomog., disloc. 103101
GaN MOCVD epitaxial layers, influence of As doping on elec. props. 126016
GaN, geom. magnetoresist., vert./lateral cond. 80704
GaN high-mobility epilayer, RF plasma-assisted MBE on GaN buffer layer 124846
GaN, high-qual., gas-source MBE, room-temp. electron mobil. 101246
GaN, low temp. transport, carrier densities, impurity sites effects 126069
GaN, low-resist. wide band-gap, codoping method 126314
GaN, max. mobility predictions 102997
GaN, related materials, minority carrier transport, review 126015
GaN:Si, carrier conc./mobility, IR refl. spectra *(Chinese)* 115319
α-GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and IR ellipsometry meas. 69545
GaN/AlGaN, strained hexagonal superlattices, phonons, free carriers, opt. study 69686
GaN/AlN superlattice, MOVPE growth, phonon modes/free carrier, IR/Raman spectra 124987
Ge raised source/drain ultra-thin body PMOSFETs, LPCVD selectively deposited 126741
GeSi:P(B) single crysts., CZ prep., method, high temp. transport property 91699
HgCdTe, MBE growth, In doping, IR FPAs appls. *(Chinese)* 91966
HgCdTe, excess carrier bipolar mobility *(Chinese)* 80731
HgCdTe single/two-colour IR FPA, MBE, run-to-run reproducibility 109644
HgCdTe/Si heterostruct., laser beam epitaxy 68365
HgSe:V crysts., growth, transport props. 91643
ITO film, struct., conductive mechanism *(Chinese)* 80732
ITO films, dc magnetron reactive sputtering, elec. props., film dens. effects 126075
ITO/MEH-PPV/Alq_3/Al monolayer/bilayer LEDs, transient electroluminesc. 71596
ITO/poly(3-alkylthiophene)/Al cells, photocarrier generation 123820
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ E/D-mode metamorphic HEMT 92400
InAlAs-InGaAs-InP microwave HEMT, carrier-conc.-depend. low-field-mobility model 70196
InAs, 2DEG containing self-assembled QD, transport props. 69696
InAs (110), electron accumulation layers, near-surface region 115322
InGaAs SQW strain-modulated nanostructs., grazing-incidence XRD, photolum. 69684
InGaAsP MQW, carrier transport, ultrafast spin dyn., polaris. switching 117500
$In_{1-x}Ga_xAs_yP_{1-y}$ MQW heterostruct. lasers, opt. and structural props. 93624
InGaN/GaN LDs, self-consistent simul. & anal. 105347
InGaP/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC characts. 115950
InP, MeV As and P ion implanted and annealed, elec. and opt. props. 126018
InP layers, MBE growth, surface reconstruction 90293
InP/InGaAs HBTs, vel.-modulation and transit-time effects 103781
p-InSb, Hall effect, magnetoresist. 103011
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
$KNbO_3$ photorefr. cryst. transverse modulational instabil., counterpropagating two-wave mixing 71932
$LiNbO_3$ cryst. holographic recording, carrier mobility 83029
$LiNbO_3$ vol. hologram Bragg condition, PV field effects 83031
NiFe/Cu(InAs), elec. spin injection in semicond. and metal 80905
$Pb_{1-x}Sn_xTe_{1-y}Se_y$ lattice-matched layers, LPE growth and props. 90479
PbTe thin films, thermoelec. props., percolation transit. 69563
a-Se films, thermally stimulated discharge, PVF interface barrier effects 126079
$Se_{100-x}In_x$, chalcogenide glassy alloys, DC elec. props. 103066
Si MAGFET, low temp. operation 70107
μc-Si TFT fab., high-dens. plasma approach 92363
Si devices, uniaxial tensile-straining effects 102987

carrier mobility continued
Si films, rapid crystn. using elec.-current-induced joule heating 68362
Si, highly doped polycryst., grain boundaries carrier transport 91590
Si, microcrystalline, ultrafast carrier trapping, opt. pump-terahertz probe meas. 102968
Si multicrystalline ribbon solar cells, hydrogen passiv. expts. 100057
Si on sapphire, radiation-damaged, ultrafast carrier relax. 69471
Si p-MOSFETs, saturation region, flicker noise, SPICE models 70111
Si polycryst. TFT, current crowding, 1/f noise 126758
Si, porous, carriers drift mobility 80634
Si solar cells, problems of develop. & mfg., review 89276
Si ultrathin layer, SOI MOSFET devices, quantum mech. *(Japanese)* 81289
Si:B, sub-melt laser annealing, low temp. RTA, minimised diffusion 115483
Si:B,F films, PECVD, struct., transport props. 114337
a-Si:H TFTs, LV/HV, modified inverted-staggered struct., wet etch fab. proc. 70134
μc-Si:H films, PECVD, struct./elec. props. 103069
a-Si:H films, hot wire CVD, TFT/solar cell appl. 124983
Si:H, nanocrystalline films, hot-wire CVD, charactn. 124959
Si:H protocrystalline p-i-n solar cell perform., phase transits. role 100201
a-Si:H solar cells, limiting carrier effect 89277
a-Si:H struct., trap-assisted tunnelling, temp. studies 69657
Si:H/Si heterojunction, carrier transport props. *(Chinese)* 126114
Si:H,F, film, polycryst., PECVD transport props. 102973
a-Si:H,P/SiN_x TFT, catalytic CVD prep. 124984
Si:P, moderately doped, opt. and electronic props. at terahertz freqs. 91587
Si:P(As)(Sb)(B)(Ga), high-field hopping cond., hopping domains 115286
Si/SiGe HFETs, n- and p-type devices, technol. and characts., review 80297
Si/SiGe/Si $p^+/i/n^+$ inter-/intraband tunneling diodes 103750
Si-on-sapphire material/devices, RF appl. charactn. 91911
SiC, 4H, free carrier diffusion, transient grating techs. 69579
SiC MESFETs, 4H/6H, transport model simul. 81367
4H-SiC MOSFETs, inversion layer mobility and interface state dens. 70098
4H-SiC buried channel normally-off MOSFETs, high channel mobility 70127
SiC polytypes, electron mobility models, RF power MESFETs 80284
SiC polytypes, semiempirical model of carrier mobility 69569
6H-SiC:N^+, ion-implanted, quantitat. carrier profiling 103077
a-SiGe:H films, UHV PECVD deposition params. and PV quality correl. 101385
SiGe/Ge, Ge channel modulation-doped structs., mobility, channel width depend. 80784
Si_3N_4 gate dielec. in P-MOSFET, JVD, intrinsic reliab. projections 103868
Sm chalcogenide cpds., elec. transport props. anal. 80780
SnO_2 films, microstruct., phys. props. 115327
TlBr crysts. for radiation detector appls., charact. 87279
Tm chalcogenide cpds., elec. transport props. anal. 80780
W-TiN damascene metal gate CMOS technols., perform. improvement 127040
ZnO, excimer laser doping techs. 91978
ZnO spray pyrolysis thin films, struct./DC elec. charact. 69521
ZnO:Al film, struct., conductive mechanism *(Chinese)* 80732
ZnO:B films, electrochem. growth, elec. props., dimethylamine-borane conc. effects 101442
ZnO:F thin films, spray pyrolysis prep., struct./elec./opt. props. 114404
ZnO:Ga, film, sputtered, elec. props., PL 126042
ZnO:Ni films, fab., Ni content/carrier dens. effect on transport & mag. prop. 80698
ZnSe, excimer laser doping techs. 91978
ZnSe-ZnS QW, acoustically driven opt. phenom. 115378
diamond, CVD polycryst. films, elec. props. 80643

carrier relaxation time
see also electron relaxation time
bipolar hydrodynamic model, semiconds., init.-boundary value prob. 69467
CMOS cct., strained silicon channel 81500
finite short-period modulation-doped superlattices, electronic scatt. meas. and calcs. 91819
high T_c supercond. films, microwave surface impedance, phenomenological model 70659
QD opt. amps., ultrafast nonlin. procs. 117256
self-assembled QD, carrier relax., excited states 91817
self-organized QDs, carrier-dyn., appl. to LW sources and detectors 91774
semiconds., hydrodynamic/drift diffusion models, init. boundary value prob. 79062
vel. overshoot, Monte Carlo studies 115813
BN, cubic, electronic transport, Monte Carlo simul. *(Chinese)* 115308
CdO thin films, low-press.CVD and elec. props. 90407
Co/SiO_x granular multilayers, intra and inter-plane spin depend. tunneling 127360
p-$CuGaTe_2$ magnetoconductivity, localization and electron-electron interact. effects anal. 69609
p-GaAs base of HBT, nonthermal electrons, femtosecond energy relax. 81216
GaAs/AlGaAs QW, intersubband transit., ultrafast all opt. modulation 116699
GaN MBE layer, hot electron/hole dyn. 69549
GaN/AlGaN QW, intersubband transit., ultrafast all opt. modulation 116699
InAs QD amps., elec. pumped, ultrafast carrier dyn./dephasing 128261
InAs QD-SOAs, nonlin. gain dyn., opt. commun. device appl. 93646
InAs/GaAs QD microdisk lasers, ultrafast dyn., fs opt. pumping 71764
In(Ga)As QDs, carrier dyn. rel. to lasers/microcavity light emitters 115398
InGaAs:Si/GaAs single QW, PL, delta-doped sheet posn. 126167
InGaAs/GaAs self-assembled QD lasers, 1.3 μm, perform. & phys. props. 93669
$In_{1-x}Ga_xAs_yP_{1-y}$ MQW heterostruct. lasers, opt. and structural props. 93624
InGaN act. layers, radiative recomb. proc. in GaN-based LEDs 82389
InGaN based LED, nanostructures, radiative recomb. 82426
Si on sapphire, radiation-damaged, ultrafast carrier relax. 69471
Si wafer-air gap-mirror struct., photocond. relax. time, nonuniform microwave field 126004
SiC MESFETs, 4H/6H, transport model simul. 81367
Ta_2O_5 CVD films based metal-oxide-metal structs., elec. props. 91925

carrier scattering at surfaces *see surface scattering*

carrier scattering by dislocations *see dislocation scattering*

carrier scattering by impurities *see impurity scattering*

carrier scattering by point defects *see point defect scattering*

carrier sense multiple access
ad hoc wireless networks, distributed fair queueing, self-coordinating approach 131120
ATC, prioritized CSMA, OPNET simul. 122542
automobiles, CAN *(Italian)* 85282
BusNet protocol for backplane bus-based interprocessor commun., perform. anal. 119324

carrier sense multiple access continued
CS-PRMA/AP, carrier sense PRMA with adaptive permission 95912
CSMA/CD buffered systs., perform. anal., tagged user approach 107783
dyn. planning based protocols for real-time commun. in LAN and switched LAN environ. 107877
fragment adaptive reduction for coping with radio unlicensed bands interferers 128806
IEEE 802.11 adaptive multirate WLAN 108143
integrated voice/data WLAN, CSMA/CA protocol 74326
IP-HORNET, CSMA/CA MAC protocols, WDM metropolitan area ring network 74321
layered self-organizing ad-hoc wireless networks, MAC protocol 108906
MITION, MAC-layer hybrid protocol for multi-channel control networks 84939
mobile packet radio, service differentiation, distributed control algms. 120020
multihop wireless networks, new model for packet scheduling 74853
multimedia ad hoc wireless networks, dyn. QoS allocation 108866
multimedia conferencing, interconnected networks, modelling and simul. 96282
multimedia WLAN, dwell adaptive fragmentation for short dwells 74204
Nakagami fading channels, NPCSMA protocol for NCPSK/QPSK, data packet transm., perform. eval. 85515
network traffic model, crit. phenom. anal. by computer simul. *(Japanese)* 85289
predictable message transfer in CSMA networks 130434
real-time mixed-traffic WLAN, prioritized CSMA 130626
RoboCup team, flexible wireless commun. network 74568
star networks, CSMA with adaptive reservations by interruptions 95921
wireless CSMA/CA LANs supporting real-time voice and data services, anal. 96279
WLAN, spatial radio carrier reuse 108636

carrier systems (power lines) *see carrier transmission on power lines*

carrier telegraphy *see telegraphy*

carrier telephony *see telephony*

carrier transmission on power lines
330 kV three-ended HV transm. lines, relay protection principles 77572
AMIDEN peer-to-peer archit., networked appliances connnection 130638
AMR power line commun. technol. adoption 133815
AMR syst., appl. mode, UNB carrier, 485 bus *(Chinese)* 112189
AMR syst., power line carrier, customer services automation *(Chinese)* 77655
automated meter reading, power line carrier technol., power quality issues 123072
common commun. platform concept *(Chinese)* 74506
commun. de-coupling filter appl. *(German)* 74505
digital pair line transm. syst. *(Japanese)* 85451
digital power line commun., LV distrib. network 74509
distrib. grid, last mile high speed power line commun., EMC 77333
domestic main wiring, power-line commun., radiated emission 74510
ECHONET device adapter *(Japanese)* 85452
elec. supply network powerline commun. technol. *(German)* 108509
elec. supply syst. as data network, modems, Internet *(Spanish)* 74483
EMC, conf., Wroclaw, Poland (June 2000) 67408
EMI, EMC, regulatory authority's eval. 74511
eval., EMC aspects 74508
freq.-selective multiple access channels with adaptive QAM, resource allocation 73865
freq.-selective multiple access channels with adaptive QAM modulation 84911
FSK power line transceiver with reduced power consumption 131042
home automation, power line and Bluetooth for domestic appliance control *(German)* 89465
home networks, power line carrier commun. technols. *(Japanese)* 85450
interlinked distrib. network control syst., power line carrier commun. *(Chinese)* 112024
LV distrib. network SS sig. transm. characts. *(Chinese)* 108511
LV distrib. syst. power line carrier approaches, EMC problems 85453
LV power line, high-speed data commun. using OFDM *(Chinese)* 119857
LV power line commun. sig. proc. using wavelet packet transform *(Chinese)* 108510
MAC layer model for powerline commun. network 108512
Markov-type routing protocol for power line LAN 119356
OFDM syst. for power line commun., clock freq. synchronisation 106018
power distrib. automation, net-based distrib. line carrier tech. *(Chinese)* 77243
power line carrier protection software design/implement *(Chinese)* 111836
principles of powerline commun. *(German)* 108508
PV power syst. islanding prevention using power line carrier commun. 112412
reduced-cable smart motors using DC power line commun. 99867
street lamp rem. supervisory syst. based on power-line carrier commun. *(Chinese)* 124089
technology review *(Chinese)* 74507
wireless/wired subscriber access 74466

carrier traps *see electron traps; hole traps*

carry logic
see also logic circuits
64-bit carry-select adder with reduced area, single ripple-carry adder 68735
adders, residue to binary conversion, carry-propag. barrier, comments and reply 102013
area-efficient Manchester carry-bypass adder, low energy-delay product 102022
binary carry-propag. addit., adder family 79866
bit-parallel bireciprocal lattice WDF, arith. transforms. 91098
carry-save representation based arith. implement. 90878
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS C^3L high-speed logic ccts. in capacitor coupling tech. 102068
CMOS high-perform. adder, 64 bit, implement. using output prediction logic 68731
CMOS race logic high-speed carry look-ahead adder, 64-bit 125457
flexible multiplication unit for FPGA logic block 102064
high speed multiplier-accumulator archit. 90880
incrementer/decrementer cct., high-speed CMOS, multiple look-ahead struct. 102023
min.-adder integer multipliers using carry-save adders 90852
MOS multiple-valued logic voltage-mode adders, cct. design 102032
multipliers, array and Booth, low power BIST schemes 125428
ripple carry and cascaded carry lookahead adders *(Japanese)* 79854
sync. data-path ccts., sig. represent. guided synthesis using carry-save adders 125442
timing and area trade-offs in arith. optim. using carry-save-adders 79846
tree-struct. carry lookahead adder, 1.25 GHz, 32-bit 102021
variable-latency pipelined multipliers, asynchronous and sync., design 68777

ARS *see coherent antiStokes Raman scattering*
rs (vehicles) *see automobiles*
rtography
ADS40 airborne digital sens., data proc., test flight results 122718
airborne mapping, GPS/INS/CCD syst., hardware-software integrat. 122623
bathymetric mapping, SPOT satellite data anal. 99024
Chinese road maps, automating data extraction/ident. 73144
CMOS low-power pipelined map overlaying archit. for hand held appls. 90948
cockpit terrain intervisibility displays, avionics integrat. 122518
colour map interp. via automatic/interactive techs. 107250
geo-location of overhead rem. sens. FOV using synthetic maps 133280
lin. feature enhancement, directional filters 122586
radar surface mapping, spatially-distributed params., optimized estim. 120410
REALM, image database for Landsat 7 data 76956
road network deform. on SPOT satellite image 99053
SPOT multispectral images, bathymetric segmentation *(French)* 122699
synthesized aperture, Doppler sig., obj. internal struct. scanning 84124
urban map, road network extraction using center line *(Japanese)* 106817
ascade control
see also cascade systems
ageing annealing furnaces, cascade controllers appl. *(German)* 113162
lin. PM sync. motor drive control for mfg. automation appls. 89473
lin. sync. reluctance motor, input-output lin. control 123522
photolithography proc. intell. CD control 100718
SRM passivity-based torque/speed/posn. tracking control 123379
US motors, speed control strategies, setpoint adjustment 99708
ascade networks
see also ladder networks
2D systolic-array digital filter using local broadcast scheme, cascade form 68943
act.-R three-phase oscillator operating at power line freqs. 101826
adaptive notch filter with subband filtering, algm. convergence 95685
asynchronous sampling rate converter, two-stage design, interpolation method *(Japanese)* 114849
branched tube systs., param. estim. *(English)* 73003
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
CMOS differential cascade voltage switch logic ccts., delay optim./energy estim. 68752
CMOS OTAs, reversed nested Miller compensation with current follower 79584
current-version neg. feedback biquad filter, opamp cct. 68932
delta delta-sigma modulator, noise shaping, random noise proc. 90974
digital tunable bandpass filter, synthesis/appls. 95686
dispersive filter with long impulse response 68899
dual-gate MESFET, wave approach to sig. and noise modeling 70213
eighth-order CMOS low-pass filter, 30-120 MHz tuning, prog. boost 91029
electronic equipt. with feedback, stabil. anal. 101806
FASTNR fault simulator for lin./nonlin. DC ccts. 101664
high-order cascaded continuous-time ΣΔ modulators, synthesis 102427
IIR multiplierless ellipt. filters, cascade and parallel realizations 130073
LMS multiple adaptive filters in tandem, perform. 130128
microstrip bandpass filters, harmonic suppression, parallel coupled lines *(Chinese)* 102510
min.-sensitivity single-amp. biquadratic low-pass filters 102347
MOSFET HF noise param. de-embedding procedure, metal interconnect capacitive effects 103887
multifrequency sig., adaptive interperiod proc. 86172
multioctave amp., cascaded reactively terminated single-stage distributed, EW syst. 91238
multiphase sinusoidal oscillators realisation, translinear bipolar second generation current-controlled conveyors 79619
multirate-cascade sigma-delta modulators, high speed low power config. 79976
multirate/cascaded filters, optim. algms. 107532
multistage sync. sampling rate converter, cascaded interpolators *(Japanese)* 114848
narrow-band band-pass filter design, software tool 102334
nonuniform multiconductor transm. lines, time-domain simul., nonzero init. conditions 101687
optimal analogue multiplier coeff. values in cascade realized discrete networks 68962
pseudomorphic HFET MM-wave monolithic power amp. for mobile broadband systs. 80325
sigma-delta modulators, adaptive integrator bounding/adaptive interstage coupling 102274
sigma-delta modulators, integrator pole error compensation 86450
sixth-order cascaded ΣΔ modulator, archit. comparison, CMOS implement. 102272
sixth-order MASH delta-sigma modulators for wideband appls., implement. 114896
SYSCUF, automated synthesis package for switched current filters 68916
transducer charactn. and optim. 111523
triplet and quadruplet filters, design using approx. and optim. 102586
tunable narrow-band recursive act. MMIC filters for adaptive radar receivers 69204
tunable recursive bandpass filters, finite word length effects 91101
wavelet coder/decoder, FPGA implement. 68754
woodwind musical instrums. design using microwave theory 120595
GaAs PHEMT distrib. amp. ICs for 40 Gbit/s high output voltage driver modules 125774
ascade systems
see also cascade control
CMOS D flip-flop based synchronizer, perform. eval. *(Japanese)* 125403
CASE *see computer aided software engineering*
ase-based reasoning
aircraft repair notes, free-text, inform. extraction 133204
automated service provisioning, user-centric approach 130552
condition assess. using model-aided diagnosis 112702
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
fishery sens., central prediction using CBR *(Chinese)* 108093
image proc., automated program generation syst., CBR appl. *(Japanese)* 84101
internetwork IS, case based 85309
landmine detect., data fusion & Dempster-Shafer evidential reasoning 77062
power syst. protection design using knowledge mgt./intell. DSS 77546
semicond. packaging assembly, case-based decision support model 113709
seq. accumulation of evidence 129858
stereo matching decision, Dempster-Shafer evidential reasoning *(Chinese)* 94600
transm. networks protection, intell. engng. support 112157
vehicle GPS/map matching integrated navig. syst., D-S reasoning *(Chinese)* 86265
case-based reasoning continued
vehicle target recogn., improved Dempster-Shafer data fusion *(Chinese)* 107323
wireless multimedia commun., QoS mgt., feedback control model 108853
^{201}Tl-dipyridamole myocardial SPECT perfusion scintigrams, automated assess. 76567
Cassegrain antennas *see reflector antennas*
casting
cast surface roughness, laser exam. 132163
ceramic thick film struct. microfabrication using colloidal suspens./photoresist masks 104221
continuous casting proc., steel leakage prediction 75916
continuous casting rot. stirrers, mag. field calc. *(German)* 113160
direct casting/laser welding opt. focus control syst. 72113
HTSC thick-film Josephson transit. on alumina substr., prod. 81982
in-mold EM stirring in continuous casting 100345
induction machine, liq.-metal rotor operation 124137
machines, annealed amorph. mag. cores, power loss, relative permeab. 88678
materials solidif., conf., Cambridge, MA, USA (Jun.2000) 124211
MEH-PPV high efficiency conjug. polymer-based LEDs, morph. effects 82416
metal casting, solidif./filling simul., ProCAST, MagmaSOFT 89844
MLC capacitors, vol.-efficient, elec. props. 80431
molten steel flow distrib., EM imaging 121277
molten steel flow profiles imaging 110061
Newton-Krylov methods preconditioning in solidifying flow appls. 101116
planar anode supported SOFC, perform. 99953
polymer composites, filler technol., elec. insulation 127237
PZT-PNN piezoceramic film, US transducer, med. imaging 111528
sand casting proc., thermal optimisation 79122
selective laser melting, evaporative model fab. *(Japanese)* 113458
SOFC, tape casting for dry hydrocarbons direct oxid. 100019
squirrel cage motor rotor constr. method selection 123462
strip casting proc., steady state control strategy 134682
US sens. and techs. for semi-solid die casting procs. 99070
Al-Si casting mold materials, surface modif. by plasma-based ion implant. *(Japanese)* 79423
Cu-Cr contact materials for high power vac. interrupters *(Chinese)* 134267
CuCr contact, SHS-melting *(Chinese)* 80469
$FeSi_2$ thermoelec. devices, slip casting prod. 68390
$MlNi_{3.7}Co_{0.75}Mn_{0.75}Ti_{0.05}$ Ni-MH secondary cell electrode alloys 99942
NdFeB sintered PMs, high perform., current status *(Chinese)* 70554
Ni-Al_2O_3 anode supported thin film SOFC develop. 99952
Ni-TiO_2 anode supported thin film SOFC develop. 99952
PZT/epoxy 2-2 composites, HF US transducer fab., tape casting 111508
$Pd_{40}Cu_{30}Ni_{10}P_{20}$, amorph., superplastic nanoforming, MEMS 92521
Sb_2O_3-CuI-NaCl(NaI)($PbCl_2$)(PbI_2) glasses, prep., struct., opt. props. 92939
Si wafer fab., vac. casting, mold coating effect, solar cell appl. 114239
Ti-Al-V alloy, quantitat. NDT, neutron tomography 101562
YSZ-Al_2O_3 SOFC electrolyte membrane tube, prep. and appl. *(Chinese)* 89154
ZBLANP glass waveguide, fab. 93131
ZrO_2-Y_2O_3 electrolyte membranes, tape casting, isostatic pressing, SOFC 89202
ZrO_2-based ceramics, net-shape forming, superplastic deform. 68413
cataloguing
see also library automation
audio-visual programs cataloguing, metadata use *(German)* 131736
catalysts
150 W air-feed direct methanol fuel cell stack, develop. and operation 89158
automobile rapid catalyst light-off using strategic engine control 100305
C nanotubes growth, thermal chem. vap. deposition *(Korean)* 68465
carbon nanotubes, shape-, diam.-controlled growth, template-synthesis method 126598
direct alcohol fuel cell, aliphatic alcohols, electrocatalytic oxid. 134375
direct hydrocarbon PEMFC, acetals electrooxidation 134373
direct methanol fuel cells electrooxidation, ternary catalysts expts. 89179
direct methanol-air fuel cells, membranes, circulating electrolyte 89161
DMFC platinum-based electrocatalysts, methanol oxid. mechanisms 134370
DNA electrocatalytic detect., Ru(II) complex modified C electrode 97420
flip-chip packaging, epoxy resin reworkable underfill, thermally degradable 67587
fluoropolymer resist materials for 157 nm microlithography 103656
high-temp. SOFC methane reforming *(Chinese)* 89155
hyperbranched conductive polymers containing triphenylamine, prep. cond. 125107
ISFET-based NAD^+-depend. enzyme sens. for lactate, PQQ biocatalyst 97419
LDPE power cable insulation, metallocene catalyst expts. *(Japanese)* 88445
low-temp. direct propane polymer electrolyte membranes fuel cell 99995
methane detect., solid electrolyte based catalytic asymm. sens. 75716
methanol fuel cell methanol-resistant cathodic oxygen reduction catalysts 134367
package boilers, emission levels reduction 123230
PEFC, binary carbon supported electrode charactn. 100021
PEFC operation on reformate feed, model 100008
PEM fuel cell lightweight bipolar plate syst. expts. 89166
PEM fuel cells, CO poisoning expts. 100005
PEM fuel cells, parametric study of cathode catalyst layer using pseudo-homog. model 134365
PEMFC, ionomers/ionomer membranes containing metal particles/ions, chem. interacts. 123779
PEMFC, oxygen electrode, Pt-Pd/C catalyst, reducing agents *(Chinese)* 89153
PEMFC discharge perform. expts. *(Chinese)* 78162
peroxidase-modified Au electrodes, mediatorless peroxide biosens. 86682
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 92145
printable catalyst for electroless deposition in flex-cct./PCB appls. 102835
small tubular SOFC syst., CeO_2 biogas internal reforming catalyst 89252
SOFC nickel mesh methane steam reforming catalyst expts. 89253
solid polymer direct methanol fuel cells, Pt alloy oxygen-reduction catalysts 89178
toluene decomp. using streamer discharge reactor/catalyst combination 124434
urease immobilised AC conductimetric biosens., charactn., optim. 75669
VRLA batts., standby appl., water loss minimisation 112802
wide freq. band dielec. spectrosc., chem. reacts. under class./microwave heating 132134
C highly ordered monodispersed nanotube arrays, field emission prop. 69384
C nanotube arrays, controlled synthesis, PECVD/SEM 125134
C nanotube, microwave heating thermal CVD, catalyst effect 68464
C nanotubes, uniform patterned growth without surface C 101536
C supported Pt PEM fuel cell catalysts, modif. by sulfonated silane 100003
CO preferential oxid. reactor, PEMFC, automotive appls. 99991
CO supersonic flow laser, RF-discharge, math. model 117070
CO_2 multijoule TE/TEA lasers, mag.-spiker sustainer tech. 105119

catalysts continued
CeO_2-supported Pt as H-O recombinant catalyst for sealed Pb-acid batts. 99913
γ-Fe_2O_3:Pt thin film, fab., gas sens. charact. 90432
GaN thin film gas sens., MOCVD, response/recovery 86750
GaN thin film growth, reactive close space method, high temp. tech. 90459
H_2 generation by steam reforming of methanol over Cu-based catalysts for fuel cell appls. 134364
In_2O_3 thin film gas sens., Au or Ti surface modif. effect 132049
$La(Sr)Cr(Ru,Mn)O_{3-\delta}$, SOFC anodes, catalytic/electrochem. props. 134379
Mg-soln. phase catholyte semi-fuel cell optim. using Taguchi methods 89167
MnO_2 catalyst powder doped glucose-sensitive enzyme FET 97416
MoO_3-V_2O_5 thin films, struct. & H_2 sens. props. 97526
NO conversion in barrier discharge plasma reactor with Cu-ZSM-5 133355
Ni/ZrO_2 anode catalyst prep., mist pyrolysis method, SOFC appl. 79441
Ni-MH batts., intermetallic-based metal hydride electrodes, behaviour 99901
Ni-MH secondary cells, electrode electrocatalytic charact. 89082
Ni-YSZ anode of solid oxide fuel cell, internal steam reforming of methane 89172
Ni-Zr, amorph., catalyst, global CO_2 recycling 76925
$NiAl_2O_4$ anode material, catalytic activity, IR-SOFC methane steam reforming 89256
O_2 reduction on Teflon bonded Pt/WO_3/C electrode in H_2SO_4, fuel cell appls. 100000
Pb-acid batts., conf., Dublin, Ireland (March 2001) 67385
Pb-acid valve-regulated cells, recomb. catalysts role 78144
Pd ultrathin sputtered activator layers on SnO_2, structural transforms., gas sens. appls. 109753
Pt catalytic coating, combustion CVD, polymer electrolyte membrane, PEMFC 123784
Pt fuel cell electrocatalyst, CO adsorpt., NMR, voltammetry 100013
Pt nanoparticle catalyst layers, prep., fuel cell appl. 101436
Pt nanosized catalysts for SPFC electrode, XPS/XRD 99949
Pt/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
Pt-Ru-W composite PEMFC electrocatalysts, anodic methanol/methanol-reformate oxid. 134376
Pt-Ru-WO_3/C catalysts synthesis, PEMFC, XRD, XPS, XFA, TEM anal. methods 134374
Pt-WO_3-Si_3N_4-SiO_2-Si-Al capacitor, NO_2 sens. charact. 97484
PtMo/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
PtRu anode catalyst for PEFC, abnormal IR effects 134368
PtRu/C catalyst PEM fuel cells, morph., electrochem. 100004
PtRu/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
RuO_2/Pt_{black} catalyst, H_2 prod., water splitting, solar energy conversion 100028
Si microcalorimetric gas sens., catalyst materials 120968
Si nanowires, surface reactivity 80817
Si polycryst. films, hot-wire CVD, W/Ta catalysts 124963
SiC catalytic MIS Schottky diode sens. array, hydrocarbon detect. 97500
SnO_2 Pd-catalysed microwave nanoparticles, CO-CH_4 selectivity 132053
SnO_2 nano-gas sens., Pd/Pt/Au catalysts, perform. 132064
SnO_2:Mo thin film gas sens., catalytic additives 97511
SnO_2:Pd,Cu nanocryst. gas sens. films, doping effect on props. 97463
SnO_2:Sb_2O_3-Pd-Pt gas sens., compens. element, improved selectivity 75720
SnO_2/Pt gas microsens. arrays, heated, chem. crosstalk 97499
TiO_2 film, photocatalytic, sputtered, charactn. 103058
TiO_{2-x}:Pt films, prep. & oxygen sens. prop. *(Chinese)* 79386
V-Ti alloy surface-modified by ballmilling proc., electrode charact. 112770
V_2O_5 catalysts, dil. trichloroethylene decomp., nonthermal plasma proc. 133352
WO_3 catalysts, dil. trichloroethylene decomp., nonthermal plasma proc. 133352
ZnO ultrafine particles, prep., surface props., photocatalysis 115320
ZrO_2/Pt electrochem. CO sens., thick-film lamination 97501
ZrO_2-Y_2O_3 amperometric NO sens., spinel coated, Pt electrodes 132050
no-flow underfill materials for eutectic/Pb-free solders, high melting temp. 67586

catastrophe theory
battlefield, digital, appls. of scalable sing. 3D modelling 77122
multispectral and hyperspectral imagery, data reduction based on catastrophe theory appl. 73385
slow-freq.-hopped slotted ALOHA systs. with retransm. cutoff, stabil. 131062

category theory
conf., Edinburgh, UK (Sept. 1999) 67367
distributed systs., redundancy mgt. protocols, modular comp., spec. and verification 73916
filter categories preserving desirable sig. charact. 130047
infinite trees and iter., coalgebraic view 100743

cathode-ray tube displays
ambient light source effect on color image appearance 97595
bulb, tempered panel glass, impact strength 80619
CDTs, ultra fine aperture grille, opt. transmittance 97720
clinical image review using act.-matrix LCD, comparison with CRT displays 97631
color-picture-tube panel, inner surface curvature optim. *(Chinese)* 86847
colour difference eval., parametric effects 121085
colour display, electron beam profile meas. 93977
colour LCD & CRT displays, colour gamut differences 86832
colour monitors, gamma term clarification and charactn. methods 97688
colour-difference eval., colour difference formulae testing 121084
colour-difference eval. using CRT display, parametric effects *(Chinese)* 73244
computed tomography interp., zoom-and-pan vs. browse-and-paste display method, effect on inter-observer agreement 76518
CRT cathodes, thermionic and cold cathodes, current dens., brightness effects 91566
deflection yoke design for color monitors and CRTs with flat panels 97718
deflection yokes ringing meas. 97702
desktop monitors, life-cycle environ. impacts 100702
diagnostic monitors, high-resoln., QC issues 98123
DICOM std., electronic storage, display/print fn. *(Japanese)* 88020
digital radiology CRT display syst. params. 110927
dyn. colour separation CRT displays, 20 V prototype 109878
dyn. CRT error correction scheme, mapping phys. correction params. to image raster 97639
electron gun for large screen color picture tubes, beam forming region and prefocusing lens *(Chinese)* 125979
electron-beam mirror projector, light valve modulator 97741
environ. assess., colour CRT and LCD monitors materials eval. 86812
FD Trinitron, digital TV sig. proc. & display technol. 86326
FEA-CRT, high defn. bright monitors, focus charact. 109908
field seq. high-resoln. CRT using liq. cryst. colour shutter 121112
flat CRT studies *(Chinese)* 132108
flat panel CRT, field emission technol. 132100

cathode-ray tube displays continued
Flatron CDT, near contact exposure and interchangeable mask 97731
global CRT market, price/perform. ratio, desktop PC monitors and color TV 97726
HDTV projection display for ATSC std., 61 in., large neck CRT 86327
high defn. color display tubes, electron gun design 80575
high-perform. displays, small spot contrast meas. 97657
high-resoln. displays in radiology 98560
image quality under ambient glare, ISO 9241-7 ergonomic std. 97687
large-area photomasks for display appls. 75808
letter legibility and pixel resoln. of TFTLCDs/CRTs compared 97646
luminance artifacts of CRT displays for vision research 121102
med. imaging, CRT-FPD transitional challenge 97710
mil. cockpit displays, luminance level effects on visual perform. 98909
monochrome, medium-resoln., calib. for purpose of board exams. 97635
monochrome monitor, high-resoln., based on triple-gun principle 97721
NIST colorimetric calib. facility for displays 97128
online grid-gaps inspection syst. for electron-gun manufacture 80579
optimal TV scanning format 120523
perform., factors affecting 97634
phosphor powders, micron sized, miniature CRT display appls. 97630
phosphor screens granularity, CCD-based charactn. 97701
picture tube, variable transm. coating 80620
prod. line convergence meas., low cost CCD sens. 97700
projection CRT, 16 cm large neck, HDTV display appl. 109903
projection display systs., business and professional, market growth 86882
sharpness determ., eval. of methods 97633
spot size meas. syst., DSP *(Chinese)* 109465
ultra-high resoln. CRTs, reduced aperture grille pitch 97719
WWW shopping, coloured goods ordering, display problems 109876
SiO-Cr black matrix for color CRT, thermo-vac. evap. deposition 86818
ZnS:Cu(Ag) phosphors synthesis using hydrazine monohydrate soln. 97629
ZnS:Cu,Cl(Al) phosphors, luminesc. mechanisms 93349

cathode-ray tube screens *see cathode-ray tube displays; fluorescent screens*

cathode-ray tubes
see also image convertors; image intensifiers; television camera tubes; television picture tubes
aperture-grille CRTs, dual dyn. vibr. suppression 80616
avalanche cold cathode for CRTs, power reduction 91567
avionics AMLCD, field-emission lamp design 98914
cathodes, thermionic and cold cathodes, current dens., brightness effects 91566
color picture tubes, influence of geomag. field on perform. *(Chinese)* 125978
CRPhED units, low-temp. plasmachem. treatment, proc. model 80580
deflection yoke mag. field, 3D edge element method, geom. symm. 125977
deflection yokes ringing meas. 97702
Diamondtron CRT, aperture-grille vibr. suppression and meas. 80617
Flatron CDT, near contact exposure and interchangeable mask 97731
lightweight bulb design 80618
luminesc. materials for displays, overview, future prospects 109863
mfg. and recycling, indust. survey anal. 102918
prod. technol., portable mag. charact. tester 79482
rect. deflection syst., multipole approx. *(Chinese)* 80615
shadow-mask, electron-reflecting coating, CRT life charact. effects 102943
shadow-mask CRTs, life charact., anti-doming-material-coating 91568
small electron tubes, low residual press. meas., outgassing rate 69379
supply chain mgt., fuzzy QFD model, reliab. consideration 89903
thermionic cathode, 3D EM FEM simul. 102899
wet chem. functional coatings for automotive glasses and CRTs 101425
YAG projection tube, luminance and lifetime 102942

cathodes
see also electron emission; oxide coated cathodes; photocathodes; thermionic cathodes
AC-PDP simul., kinetic and cell-geom. effects 97659
aluminum and tantalum capacitors, polymer cathodes, ESR reduction 80450
anode-supported SOFC, anode thickness effect on perform. 99954
arbitrarily shaped cathode electron gun, iter. solns. 72180
avalanche cold cathode for CRTs, power reduction 91567
batt. and fuel cell materials, conf., San Francisco (April 1999) 113256
BNL EBIS high current electron/ion beam dyn. simul. 110198
broad-area vac. gap, field emission sites, aging effect 102880
carbon fiber-based cathode develop. for semi-fuel cell appls. 89168
carbon fibers, field emission cathode materials, prep., appls. 102890
cold cathode fluoresc. lamps, piezoelec. transformer electronic ballast 134631
complex diamond cond. ceramic paste film, field emission perform. 86808
contact discharge, sub-nanosecond HV pulse source 127151
copper electrowinning plants, multi-cct. electrolytic cells approach 124133
CRT cathodes, thermionic and cold cathodes, current dens., brightness effects 91566
cylindrical cathode Cu ion lasers, geometric stabil., usability, operating charactn. *(Korean)* 117055
cylindrical-type drift chamber, backgammon-shaped cathode pads, posn./drift time rel. 132420
diamond:B microtip field emitter cathodes, molding proc. prep. 69404
diamond CVD cold cathode with high current dens. and low threshold field 91539
dimmable fluoresc. lamp life, cathode heating voltage effect 134623
direct methanol fuel cell perform., anode flow charact. 89162
direct-light-triggered thyristors, high power, self-protection fns. 81246
DLC CVD field emission cathode, SFM 69403
dye-doped poly(N-vinylcarbazole) film/ITO/Ag electroluminesc. device, all-wet fab. 71565
EBIS beam form./collection, beam handling equipt. design 110197
EBIS primary ion sources, beam transport/prod. 110278
elec. double-layer capacitors, organic electrolytes, perform. 123846
electron beam, exchange self-polaris. 87054
electron gun charact. in TW electron LINAC, customs inspection systs. *(Chinese)* 80562
electron gun with ferroelec. material cathode, current dens. *(Chinese)* 102913
EVA copolymer film space charge meas. in cryogenic-RT region *(Japanese)* 127249
FED indicator using screen-printed C nanotube emitters 86826
ferroelec. cathodes, emission vs. temp. and relevant phys. 80553
field emission cathode with fractal surface struct., elec. field, computer model 105674
flat-panel FED, carbon nanotube cathode 75809
fluoresc. lamps, single-stage high PF electronic ballast 124081
FPD, low energy electron emitter panel, planar cathode 97714
gas puffing INPIStron develop. for pulsed power supply appls. *(Korean)* 78057
graphite, field emission cathode materials, prep., appls. 102890

hodes continued
high-current vac. arc, three-liq. hydrodynamics approx. *(Russian)* 115234
high-perform. SOFCs at temps. below 700°C 99958
high-power microwave generation, using ferroelec. cathode electron gun 101844
IMI-2 electron beam multicharge ion source 72184
ion nitriding devices, glow discharge energy exploitation *(Polish)* 124105
low-temp. direct propane polymer electrolyte membranes fuel cell 99995
mag. insulated transm. line oscillator, long pulse, cathode design 69446
magnetron guns, high-power electron beams generation 115256
MCFC electrochem. materials research *(Chinese)* 134381
MCFC generation syst. rapid load changes, perform. implications 112437
MCFC stack, pressurised operation, model 99997
methanol fuel cell methanol-resistant cathodic oxygen reduction catalysts 134367
mixed-reactant strip-cell direct methanol fuel cells, feasibility anal. 100023
MOS electron tunneling cathodes, emission charact., field emitters 115254
MOSFET, anode hole injection model, impact ionization 126813
neg. polarity pulse power drivers, rod pinch diodes 99780
PDP cathode, effective secondary electron yield 86865
PDPs, secondary electron yield of insulator cathodes 109856
PEFC, PEM optimisation, humidifying conditions 89184
PEM fuel cells, CO poisoning expts. 100005
PEMFC, portable power source for commun. 89159
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
planar anode supported SOFC stacks manufacture, deform. procs. 99978
planar vircator, freq. charact. study *(Chinese)* 80600
proportional tubes with cathode readout, charged-particle detector 98029
prototype const.-efficiency amps. 120517
pulsed field emission X-ray source, pulse generators, rem. control syst. 110456
semicond. field microemitter, hot electron transport, 2D quasi-hydrodynamic approach 69441
small-tubular SOFC fab. by electrophoretic deposition tech. 99961
SOFC, electrolytes, electrodes, interconnects, conf., Honolulu, HI, USA (Oct. 1999) 78471
SOFC cathode perform. improvement using struct. electrolyte surface 99971
solid-state field-controlled emitters, electron emission charactn. 69413
solid-state field-controlled emitters, thin-film technol. soln. for indust. cathodes 102910
space-harmonic MM-wave magnetrons with secondary emission cathode, anal. 69456
Sulzer Hexis SOFC product develop. status 89194
thermal batts., thermal-sprayed thin-film cathodes 89054
UHF electronics, cathode materials 69416
velvet cathode diode design, uniform electron beam diagnostics *(Chinese)* 87141
velvet cathodes, lifetimes, I-V charact. 80559
vircator with IREB, theoretical/expt. study *(Korean)* 69448
$Ag_2V_4O_{11}$ cathodes, Li insertion, structural study, Li batts. 123760
Al, TFEL mol. lanthanide devices improvement 97612
Al, carboxylic acid derivatives surface adsorpt., SAM growth 116975
Al electrolytic capacitors, large, service life/failure mechanisms 115081
BN films on Si substr. with cubic BN grains, field emission 69401
$Ba(Ce_{0.8-y}Pr_yGd_{0.2})O_{2.9}$ mixed conducting cathodes, PEMFC 100010
Be cold cathode for He-Ne laser, lifetime improvement 117087
a-C films, kerosene vap. pyrolysis, field emission 80568
C, ion implant. into single-element/composite cathodes, freq.-pulsed regime 125955
C nanotube FED, num. indicator 75799
C nanotube cathode flat-panel struct., FED 132103
C nanotube cathodes, spray deposition, field emission props. 68461
C nanowires, local arc-discharge synthesis, field emission 69440
C thin film cathodes, field emission lifetime, color phosphor effects 69412
a-C:H films, current-induced conditioning, field emission 80567
CeO_2-ZrO_2 interfacial procs., SOFC, charge transfer control, nano-scale effects 99964
$CoSi_2$ gate electrode, MOS tunneling cathode 80554
Cr alloy SOFC interconnect material, elec. charactn. 89265
CsI-coated C fiber cathodes, lifetimes, I-V charact. 80559
Cu-Al cpd. cathodes, sputtering resist. under long-term ion-electron bombard. 115241
$Gd_{1-x}Sr_xMnO_3$ SOFC cathode, synthesis and charactn. 89240
He-Ne laser, increasing service life of cathodes by plasma chem. treatment 128108
$K_xMn_{1-y}Co_yO_2$ reversible cathodes stabilisation, Li secondary batts. 123754
$(La,Sr)CuO_{3-\delta}$ SOFC electrodes, in-situ oxygen pot. meas. 89230
$(La,Sr)MnO_3$ SOFC cathode, equilib. condition 89226
$(La,Sr)MnO_3$ SOFC cathode, mass transport, creep investig. 89225
$(La,Sr)MnO_3$ cathode tubes, SOFC, ZrO_2-Y_2O_3 electrolyte films deposition 89201
LaB_6 flat cathode in ELV-8 accelerating tube, electron opt. charact. *(Chinese)* 110115
$La_{1-x}Ca_xMnO_3$ SOFC cathode, thermal expansion behaviour 89224
$La_{1-x}Ca_xMnO_{3\pm\delta}$ SOFC cathode activity, oxygen nonstoichiometry effect 89223
$La_{1-x}Ln_xCrO_3$ SOFC separator eval. R&D 89264
$LaMnO_3$ porous cathodes tubes, YSZ electrolyte film, electrophoretic deposition 89203
$LaMnO_3$ porous doped cathodes, SOFC, ZrO_2-Y_2O_3 electrolyte, electrophoresis 123791
$LaMnO_3$-ZrO_2-Y_2O_3 SOFC interface anal. using SIMS 99969
$LaNi_{0.6}Fe_{0.4}O_3$ SOFC cathode, reduced temp. operation 89236
$La_{3.5}Ru_4O_{13}$ SOFC cathode with ZrO_2-Y_2O_3 electrolyte, elec. meas./reactivity 89170
LaS growth, cold cathode appls. 125954
$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_3$ -$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
La(Sr)CoO_3 SOFC cathode, microstruct. control expts. 89232
$La_{1-x}Sr_xCrO_3$ SOFC cathodes, SHS 89238
$La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.13}Ni_{0.07}O_3$ intermediate-temp. SOFC electrolyte 99959
$La_{0.69}Sr_{0.19}MnO_{3-\delta}$ porous cathode, YSZ membrane fab., sol-gel method 89204
$La_{0.8}Sr_{0.2}MnO_3$ porous cathode substrs., YSZ electrolyte, electrophoresis 99968
$La_{1-x}Sr_xMnO_3$ SOFC cathode, thermal expansion behaviour 89224
$La_{1-x}Sr_xMnO_{3\pm\delta}$ SOFC cathode activity, oxygen nonstoichiometry effect 89223
$La_{1-x}Sr_xMnO_3$ 89238
$La_{0.6}Sr_{0.4}MnO_{3+\delta}$-YSZ SOFC cathode, complex impedance anal. 99972
$La_{0.8}Sr_{0.2}MnO_3$-$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
$(La_{0.8}Sr_{0.2})MnO_3$-ZrO_2-Y_2O_3 SOFC cathode-electrolyte interface reacts. 99970
Li micro-batt. develop. for spacecraft appls. 89152
$Li/Li_{2.8}Ag_2V_4O_{11}$ batts., implantable cardioverter defibrillators 99925
Li-CF_x envelope cells develop. 89053
Li-ion batts., SONY-type, degrad. reacts. 123763
Li-ion cell designs, high energy dens., electrolytes, develop. 89092

cathodes continued
Li-ion high-power secondary cells, impedance spectrosc. studies 99944
Li-ion liq. electrolyte batts., recent develop., future prospects 89073
Li-ion rechargeable batt., 18650 size, advanced perform. *(Chinese)* 89069
Li-ion secondary cells, Mn-spinel cathode-based perform. improvements 89105
Li-ion secondary cells, key components safety studies using ASC 89149
Li-ion secondary cells, thermal abuse studies 89150
Li-polymer secondary batts., novel composite cathode develop. 123733
$LiAl_xMn_{1-x}O_2$ cathode materials, solid state synthesis, Li batts. 123750
$LiAl_xMn_{2-x}O_4$ cathode material for Li secondary cells 99946
$LiCo_{0.5}Al_{0.5}O_2$ thin film batt. cathodes, Li-ion diffusion meas. 123753
$LiCoO_2$ cathode materials for Li-ion batts., state-of-the-art *(Chinese)* 112782
$LiCoO_2$ secondary cell cathodes, intercalation in aq. alkaline electrolytes 99906
$LiCoO_2$ single cryst. particles, super crit. water synthesis, cathodes 123751
$LiCoO_2$ thin film cathodes, sol-gel fab., Li/$LiCoO_2$ cells 123735
$LiCoO_2$ two-phase Li-ion batt. cathodes, technology advances 89139
$Li_{1.01}Mn_{1.99}O_4$ secondary cell cathodes, capacity fading studies 123738
$Li_2Mn_4O_{9-\delta}$ cathodes for Li batts., soln.-based synthesis 123746
$Li_4Mn_5O_{12}$ cathodes for Li batts., soln.-based synthesis 123746
$Li_{8a/n+4}Mn_{8/n+4}O_4$ defect spinel cathode materials, solid-state Li batts. 99928
$LiMn_2O_4$ Li-ion batt. spinel material, electrochem. perform. *(Chinese)* 112781
$LiMn_2O_4$ Li-ion batt. spinel-struct. pos. material prep. *(Chinese)* 112783
$LiMn_2O_4$, PLD, thin film cathode, Li batts. 123755
$LiMn_2O_4$ spinel cathode materials for Li-ion batts., state-of-the-art *(Chinese)* 112782
$LiMn_2O_4$-based composite cathode, carbon black role, Li batts. 99924
$Li_{1-x}Ni_{1-y}Co_yO_2$ delithiated layered cathodes, structural instabil. 91542
$LiNi_{0.3}Co_{0.2}O_2$ cathodes, Li-ion batts., in-situ X-ray diffr. 123752
$LiNi_{0.8}Co_{0.2}O_2$ cathode material, spherical, high-dens. 123741
$LiNi_{0.85}Co_{0.15}O_2$ layered Li-ion batt. cathodes, structural/chem. stabil. 89138
$LiNi_{1-x}Co_xO_2$ cathodes for Li-ion batts., synthesis, characterisation 123747
$LiNi_{1-y}Co_yO_2$ powders, sol-gel proc., Li-ion batt. cathode 123757
$LiNi_{0.8}Co_{0.2}O_2$-$LiMn_2O_4$ cathode, charge-discharge charact., phase transits. 99910
$LiNiO_2$ cathode materials for Li-ion batts., state-of-the-art *(Chinese)* 112782
$LiNiO_2$ 123752
LiSi-FeS_2 thermal secondary cell, cathode material cryst. struct. *(Chinese)* 112784
$LiV_3O_{7.9}$ lithium ion batt. cathode, lithiation 123756
Mg-Ag/ITO electrode for transparent organic LED 97650
Mg-soln. phase catholyte semi-fuel cell optim. using Taguchi methods 89167
$Mg_{0.5}Ti_2(PO_4)_3$ secondary cell cathodes, electrochem. Mg insertion 123739
Mn nodule, cathode material, intercalation perform., Li-ion batt. *(Chinese)* 89068
MnO_2, Ti surface modified, alkaline-manganese batt. 123759
MnO_2 based cathodes, particle size, alkaline primary batts. 89048
Mo cold cathodes, microfabricated, field emission current cleaning/annealing 69428
Mo, ion implant. into single-element/composite cathodes, freq.-pulsed regime 125955
Mo tips, LV FED, gate hole openings 75807
MoO_{3-x} films, charactn. for solid state thin film batts. appl. 112794
Na-$NiCl_2$ ZEBRA cells, inner struct. investig., microtomograph 99930
$Na_xMn_{1-y}Co_yO_2$ reversible cathodes stabilisation, Li secondary batts. 123754
Nb_2O_5 cathode, electrochem. lithium intercalation, Li batts. 123749
$NdMnO_{3+\delta}$ defect struct. modeling, SOFC cathodes 89229
NdS growth, cold cathode appls. 125954
Ni-MH secondary batt. syst. for high-power appls. 89079
Ni-MH secondary cells, $Ni(OH)_2$ electrode props. expts. 99908
Ni-SDC/La(Sr)Ga(Mg)O_3/La(Sr)CoO_3 single SOFC, perform. 99967
Ni-YSZ-Ag thin film SOFC testing 99966
NiO-YSZ anode substr. supported YSZ electrolyte flat plate SOFC 99951
$Ni(OH)_2$ cathode, surface modif., Co coated *(Chinese)* 89063
$(PbBa)(ZrTi)O_3$:Bi_2O_3 cathode electron injection for ion source improvement 104340
$PrMnO_{3+\delta}$ defect struct. modeling, SOFC cathodes 89229
Si field emitters, carrier transport, num. simul. *(Chinese)* 80571
Si nanopillar cathodes, geometric enhancement factors, STM obs. 102969
Si, porous, cold cathode, field emission perform rel to anodiz. *(Chinese)* 69391
Si, porous silicon cold cathode device, field emission charact. *(Chinese)* 69390
Si pyramidal devices on flexible metal/polymer struct., planar microdischarge devices 91544
Si tip array, nanodiamond(AlN) coating, field emission 69407
$Sm_{0.5}Sr_{0.5}CoO_3$, SOFC cathode, reacts., rate-determining steps 89235
Sn-Li_2O thin film neg. electrode enhancement, Li batt. appls. 89124
$(Sr,Ce)MnO_3$ SOFC cathode, elec. props. 89228
Ta surface mounted capacitors for high current appls. *(German)* 80452
V_2O_5 cathodes, Li insertion, structural study, Li batts. 123760
V_2O_5, electrolytic, synthesis, charactn. Li insertion behavior 123748
V_2O_5 thin-film batt. cathodes, Li ion diffusion meas. 123758
W, ion implant. into single-element/composite cathodes, freq.-pulsed regime 125955
Zn alkaline AAA cell configs., K_2FeO_4/$BaFeO_4$ cathodes synthesis 123725
Zn electrodeposition using modified Hull anal. electrochem. cell 79377
Zn/AgO cells, AgO cathodes additives for high-drain pulse perform. 91541
Zn-Ag_2O rechargeable cells, separation comp. eval. 89106
Zn-air Instant Power™ primary batts. for portable consumer products 89057

cathodes, electrochemical *see electrochemical electrodes*

cathodic protection *see corrosion protection*

cathodic sputtering *see sputtering*

cathodoluminescence
ceramic materials deposition using powder/precursor vehicles by direct write proc. 101499
CL display phosphors, efficiency models, band gap energy, particle/crystallite size 104926
diamond:B homoepitaxial film, growth, elec./opt. props. 115294
diamond:B thin film, buffer layer effects on CL, CVD 79318
diamond:Fe, type Ib synthetic, PL/CL obs., treatment effects 116915
diamond:H,N films, nanoscopic, near-field cathodolum. 116913
diamond:P homoepitaxial films, cathodolum. obs. 116914
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
diamond films, (001) polycryst., vacancy defects eliminated by H and B ions bombard. *(English)* 124873
diamond films, hot filament CVD, struct./elec./opt. props. *(English)* 125989
edge emitting LD, defect recogn., long. mode anal. 82642
FED panel syst. buildup, phosphor ageing effect 97740
phosphor screen, cathodolum., field effect diode panel sealing proc. effects 75791
phosphor thin film, cathodolum. light output mechanism at LV 104925

cathodoluminescence continued
RGB thin film FED phosphors, chromaticity, stabil., excitation 97613
semicond. microstruct., beam injection assess., conf., Fukuoka, Japan (Nov. 2000) 113259
silent discharge prod. by piezoelec. transformer in N_2, light emission 125949
AlGaN layers, spatially resolved spectra, CL, micro cracks, stress distrib. 79259
$Al_xGa_{1-x}N$ thin film, GSMBE growth, Si(111) substr. 101207
AlGaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 69642
$Al_yGa_{1-y}N$/GaN cubic heterostruct., MBE, struct., vib., opt. props. 101223
AlN, CBE on compliant Si/SiC substrs. 103035
AlN epitaxial layers, Al_2O_3, SiC, Si substrs., MBE growth, cathodolum. 93333
a-AlN thin-film phosphors with Cu, Mn, or Cr, vis. emission 104914
AlN:Er film, sputter deposited, photo-/cathodo-/electrolum. 91664
AlN:Eu(Tb)(Er) films, vis. cathodolum. 126071
AlN:Si heavily doped electron field emitters, phosphor, AFM 80578
C(:B) diamond films, surface stucture, CL, plasma CVD, Schottky jn. appl. 68274
$Ca_4S(AlO_2)_6$, chalcogenide phosphors, inert oxide matrix, CL, PL, 104927
$CaTiO_3$:Pr, thin-film phosphors, ZnO/ITO/glass substrs., luminesc., ZnO buffer effects 104913
CdS:Si, cathodolum. 91640
CdS/CdTe solar cell struct., doping and intermixing, spatially resolved cathodolum. obs. 112878
CdSe:Si, cathodolum. 91640
Cd_4SiS_6, cathodolum. 91640
Cd_4SiSe_6, cathodolum. 91640
CdTe:Si, cathodolum. 91640
CsI(Tl) cryst., scintillation charact. depend. on Tl^+ concs. under e/α excitations 132401
GaAs conformal layers grown on Si, self-doping near seed/layer interface 103262
GaAs dot-wire coupled structs. grown by selective area MOVPE, single electron devices appl. 101370
GaInN/GaN QW, polaris. control, epitaxially lateral overgrowth orient., cathodolum. 91853
GaN, CBE on compliant Si/SiC substrs. 103035
GaN, EL device, powder prep., AC operation 82370
GaN, epitaxial lateral overgrowth, growth domains, CL, micro-Raman spectra 79332
GaN films, hydride VPE, time modulated growth, disloc. suppression 68246
GaN films, ion implant., structural and opt. charact. 126292
GaN, hydride VPE layers, mass transport growth, opt. emission 79401
GaN, lateral epitaxial overgrown, crystallographic tilting reduction by oxide mask removal 114347
GaN layers, struct., cathodolum. 103031
GaN nanostructure, self-organized, MBE, CL, PL, SEM 91657
GaN self-assembled QD, plasma-assisted MBE growth and charactn. 69687
GaN thick films, hydride VPE, CL charactn. 68250
GaN:Mg, acceptor related recomb. centers, inhomog. spatial distrib., CL 81043
GaN:Mg films, cathodolum., time evol. 69542
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaN:O, defect depth profiling, photolum./cathodolum. following RIE in O_2/Ar plasmas 91663
GaN:Pr epilayer, Pr doped, PL/CL 126329
GaN:Si films, VPE on MOCVD-GaN templates, strain, doping distrib. 68295
GaN:Zn blue powder phosphor for VFD/FED, synthesis, cathodolum. 109862
GaSb:Gd ingots, elec. & compositional props., Bridgman growth method 69520
InGaAs quantum wire honeycomb network, BDD quantum LSI, MBE growth 115972
InGaAs ridge quantum wire, selective MBE growth 79224
InGaN films, strain-relax., MOCVD grown, opt./struct. props. 126072
InGaN thin films, MOVPE, In rich region form. at hexagonal pits, CL, SEM 124986
InGaN/GaN DH, localized states, photoreflectance, PL, CL 91761
InGaN/GaN, blue LED, MOCVD on Si substr., AlAs seed layer 82422
InGaN/GaN/Al_2O_3 heterostruct., MBE/MOVPE growth, structural/opt. props. correl. 126125
InGaN/GaN/sapphire, MOCVD-grown, interface props., cathodolum. anal. 80853
InP-based multi-QW solar cells, proton irrad., EBIC, cathodolum. 112959
a-Si:H based tritium-powered betavoltaic cells 113031
Si-C-N films deposited by microwave plasma CVD on Si with buffer layers, characts. 114332
SiC, 4H, p-n diodes, anom. forward voltage increase, cryst. defects influence 70009
6H-SiC:B, selective dopant diffusion through graphite mask and jn. charactn. 69813
$Sr_2B_5O_9Cl$:Eu blue-emitting thin-film phosphors, luminesc. characts. 93353
$Sr_4S(AlO_2)_6$, chalcogenide phosphors, inert oxide matrix, CL, PL, 104927
W cathodes, Ba_2CaWO_6 activated, topographic struct. 69392
$Y_{3-x}Al_5O_{12}$:Tb_x thin films, cathodolum. phosphors, alkoxy sol-gel prep. 71541
$(Y_{1-m-n}Ce_mGd_n)_2SiO_5$ phosphor, combustion synthesis/particle size effects 104934
$YNbO_4$:Bi phosphor, cathodolum. change after acid treatment 93346
Y_2O_3:Eu, RGB thin film FED phosphors 97613
Y_2SiO_5:Ce, RGB thin film FED phosphors 97613
Y_2SiO_5:Ce phosphor, cathodolum. emission band shift, activator conc. effects 104942
Y_2SiO_5:Ce,Sc,La,Gd,Lu, blue phosphor, luminesc. props. 104917
$Zn(Ga_{1-x}Al_x)_2O_4$:Mn spherical phosphors, LV cathodoluminesc. 104940
$ZnGa_2O_4$:Cr(Mn), RGB thin film FED phosphors 97613
$ZnGa_2O_4$:In_2O_3 phosphor, doping-enhanced luminance 127933
$ZnGa_2O_4$:Mn, thin-film phosphors, ZnO/ITO/glass substrs., luminesc., ZnO buffer effects 104913
ZnO layer on ZnS, prolonged electron bombard., degrad. effect, AES/cathodolum. obs. 103049
ZnO polycryst. films by ZnSe(S) oxid., electron-emission/CL props. 104905
ZnO, polycryst., self-assembled laser cavities, opt. props. 93631
ZnO single crysts., hydrothermal/flux grown, cathodolum. microscopy 126027
ZnS:Ag, electrophoretically deposited phosphor, opt. charactn. 104918
ZnS:Ag,Cl phosphors, ZnO nanoparticle coated, degrad. reduction 82338
ZnS:Cu,Al,Au phosphor, cathodolum. brightness, surface chem. changes, temp. effects 104943
ZnS:Cu,Cl(Al) phosphors, luminesc. mechanisms 93349
ZnS:Eu(Tb) nanocryst. phosphors, prep. & charactn. 104924
ZnS/Si(100) thin films, PLD and cathodolum. studies 79357
ZnSe films, cathodolum., disloc. bundles anal. 103028
Zn_2SiO_4:Mn(Ti), RGB thin film FED phosphors 97613
ZnTe:Cr^{2+} layers, MBE growth on GaAs(100), opt. charactn. 101212

cathodoluminescence continued
GaN, cubic films, MOVPE, selective area growth, hexagonal phase generati detect./anal., 79307

CATR *see antenna testing*

CATV *see cable television; community antenna television*

Cauer filters *see passive filters*

causality
2D image sigs. with missing obs., real-time reconstruction 129467
ATM network simul., sync. and concurrent control 95795
causal source coding of stationary sources with high resoln. 129048
distributed multimedia appls., media sync./causality control 74429
fractional sample rate conversion, min. group delay block proc. 80106
inflationary universe, holography, quant. geom./inform. theory 83776
Japanese vowels, nonlin. deterministic struct. recogn., causal anal. 118110
recursive digital filter model, inverse filtering tech. 130137
stable perfect reconstruction two-channel IIR filter banks, design 130105
transient EM wave propag., comment 117655
transient EM wave propag., nonlocal/spontaneous material responses, reply comment 117656
turbine mach. fault diagnosis, probabilistic causal network *(Chinese)* 88670
unitary operations teleportation, quantum rem. control 128917

causticity *see pH*

cavitation
dual-pulse lithotripter to generate localized and intensified cavitation fie 122026
hydroelectric turbine intell. cavitation diagnostics/monitoring 99581
kidney stones comminution, dual-reflector lithotripter 111122
liposomes, drug delivery through US cavitation 111081
metal proc. using US cavitation jet, small burrs removal 99099
noninvasive US surgery, microbubble enhanced cavitation role 111121
US cleaning vessel, cavitation monitoring, acoustic sens. 99082
Si surface cleaning, wet etching, IC prod. 69907

cavitation erosion *see wear*

cavities (solid) *see voids (solid)*

cavity resonator filters
canonical waveguide filters, full-wave design by optim. 102535
combined filtering/radiating fns. microwave device for telecom satellites 8376
combline filters, coupling & reson. freq., non-adj. resonator effect 102518
compact ellipt. fn. BPF, triple-mode cavities, digital TV transmitter 109358
conductor loaded cavity resonator with improved spurious perform., filters 102555
cross-coupled dielec.-loaded waveguide filters design 80174
diplexer design using pre-synthesized waveguide filters 102548
dual-mode asymmetric filters, low cost design in rect. waveguide 102557
folded E-plane filters, mass-producible cross-coupled designs 102554
K-band diplexer using high-Q micromachined cavities 125670
microwave filter, automatic test and tuning syst. 102538
min. peak stored energy resonator filters, filter topol. 102549
Mobius bandpass filters, dual-mode/quad-mode types 102553
multi-mode waveguide environ., iris design, integrated CAD procedure 91215
multiple cavities Fabry-Perot narrow-bandpass interf. filters, auto-design *(Chinese)* 116889
rect. loops in rect. coaxial cavities, mutual coupling factor 91190
rect. waveguide filters, stop-band improve., resonator width select. 102547
TTL method applied to finline resonators 102567

cavity resonators
see also acoustic resonators; cavity resonator filters; laser cavity resonators; optical resonators; superconducting cavity resonators
2.45 GHz cavity-backed slot antenna perform., FDTD anal. methods 83654
2D cavity enclosing cylinder, modeling using interpol. wavelets 91263
anisotropic spherical cavity resonator, azimuthally homogen. oscills. study 117731
anisotropic vectorial Kerr cavities, bright cavity solitons 72067
axial monotron with rippled wall resonator, 10.5 GHz, operation/efficiency 80589
azimuthally corrugated lossy struct., modified equiv.-impedance approach 72426
bicone resonator with opt. cryst., electrodynamic charact. investig., R-fn. method 117736
circ. cross-sect. cylindrical metallic cavity modeling 105843
circ. resonator with nonlin. load in gap of axial rod, pulse excitation 105839
CMOS 155-Mb/s opt. wireless transmitter for indoor networks 85958
coaxial cavity, structural eccentricity, eigenfrequency shift 80591
composite microwave cavity, temp. stable design 83485
concentric conducting spherical cavity, internal EM fields 72429
conductor corner, coarseness error and wall proc., FDTD method *(Japanese)* 105825
conductor corner, wall proc., FDTD method, cavity resonator *(Japanese)* 105826
coupled cavity chain, indiv. cell freqs., linac 132267
coupled resonators group delay equalizer, design optim. 107682
crossed-field coaxial resonator, relativistic electrons EM generation 115261
curved juncture cavity short backfire antenna, optim. 72684
cylindrical cavity with transverse annular slot/planar dielec. sheet, hybrid modes anal. 91212
cylindrical corrugated structs., pole-location-based estim. of eigenmode characts. 128826
cylindrical struct. with long.-inhomog. filling, Green's fns. 117749
dielec. loaded rect. resonator, Q-factor and reson. freq. 125664
dielec. plate, complex permitt. meas., finite element anal., inverse problem 117738
dielec. props. meas., TE_{011} cylindrical cavity resonator *(Korean)* 121152
dielec. resonator in multilayer cylindrical cavity, transfer matrix method 94090
diffr.-coupled open resonators, eigenfrequencies calc. 83490
disk-and-washer accelerating struct., X-band, optim. *(Chinese)* 132270
dual-mode whispering gallery sapphire resonator, high-Q freq. stable realisation 80218
EM levitation coupled re-entrant cavity syst. 93989
EM simulator for reson. anal. of microwave cylindrical cavity 72434
EMI estim. for shielding-enclosure eval. 105792
EPR/NMR simult. imaging, composite resonator, multimodal cavity 110895
FDTD tech., Pade approx. 72408
fiber Bragg gratings with Fabry-Perot struct., reflectivity and group delay charact. 127638
H-polarized plane wave incidence, reson. scatt. from slit coupled cylindrically eccentric impedance cavity 72239
high-Q coaxial resonators, band-selective extraction of reson. freqs. 94089
high-Q reconfig. planar EM bandgap cavity resonator, design and fab. 80189

ity resonators continued
homog. dielec. material in cavity, permitt. and loss factor estim. using FEM 70370
homojunction interfacial work-fn. internal photoemission FIR detectors 131932
humidity meas., reson. cavity microwave differential tech., optim. 87042
in-building opt. LAN, high speed integrated opt. wireless transceivers 85957
integrated high-speed DFB light source/RCE photodetector for WDM fiber commun. network appl. 120169
integrated opt. microcavities for spectrosc. 127780
Kurokawa-type oscillator reson. struct., equiv. cct. derivation 79613
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
MEMS technol. for RF/microwave wireless appls. 80229
microwave toroidal cavity transducer, theory 120711
MM-wave coupled cavity TWTs, bandwidth expansion methods 80607
MM-wave Gaussian radiation pattern antennas 117820
mm-wave scanning near-field microscope using reson. waveguide probe 132143
Mobius resonator, modes 83487
multilevel atoms, cavity dark states for quantum computing 104851
multiple-beam klystron, output cavity coupling coeff., bandwidth charact. *(Chinese)* 102933
one-photon micromaser, steady-state squeezing, pump phase fluct. 71628
open image-type slotted struct., reson./nonresonant diffr. 83238
open resonator, EM theory 83226
optomechanical transducer with modulated pump, regenerative regime, weak classical force detect. 97200
orotron efficiency, electron-beam width effects 102932
partially open cavity, reson. modes anal. 72430
periodic microcavities, multichannel opt. waveguides form., light propag. 127729
permitt. and loss factor eval. of material in cavity, inverse tech. 81636
photonic cryst. struct., FDTD modelling 127750
photonic-band-gap resonator gyrotron 91550
planar microcavities, spectral props., num. aperture, semi-empirical model 104786
planar photonic crysts. for integrated optics, design rule 82173
quasioptical resonator-single mode rect. waveguide coupler 114956
reson. cavity chain, dispersion rel. and field distrib. *(Chinese)* 117728
reson.-cavity enhanced photodetector, impulse response, diffusion 75536
reverberation chamber, UHF mode/plane wave distrib. and antenna charactn. 117746
ridged circ. disc microstrip antenna element anal. using cavity model 105898
right-angle waveguide bends, high index contrast materials, FDTD method 71307
ring opt. cavity, solitons and chaos, num. simul. 117525
rot. symmetric cavities, multipole theory anal. of axisymmetric modes 94086
Schottky photodetectors, quantum efficiency 104953
shielded infinitely thin meander line, stratified medium, mobile commun. appl. 94109
shorting post loaded circ. microstrip antenna on sphere, reson. modes investig. 72533
space-harmonic MM-wave magnetrons with secondary emission cathode, anal. 69456
split cavity oscillator, three cavities, HF charact. *(Chinese)* 83493
staggered parallel plate waveguide cavities, E-polarized plane wave scatt. 83475
symplectic FDTD method for solving Maxwell eqns. 128643
sync. pumped OPO, pulse jitter suppression 82873
thick-film/LTCC materials for wireless appls., eval., meas. techs. 80343
three mode reson. OPO oscillator, thermal self-freq. locking *(Chinese)* 128502
transm.-type cavity, refl.-type Q-factor meas. 75834
TTL method applied to finline resonators 102567
tunable reson. cavity, microwave dielec. meas. 80196
tunable subMM-wave gyrotrons with optimised reson. cavity, develop. 69444
two-cct. uncooled parametric amp., 60-65 GHz range, develop. study 114965
AlGaN based reson. cavity enhanced UV photodetectors, DBR 86570
Ar plasma jet generation, rect. reson. cavity, params. 100571
CdSe nanocryst./organic dye bilayer opt. microcavities, enhanced Forster energy transfer 82187
$CdSe_xS_{1-x}$ QD in glass spherical microcavities, PL 91779
GaAs microresonators, cavity solitons study 127812
GaAs-based waveguiding heterostruct. with InAs QD, miniband transm. 93137
InAs QD, microdisk struct., cavity-QED 80810
$In_{0.15}Ga_{0.85}As$ QW based microcavity EL device charact. 104976
$KTiOPO_4$, intracavity pumped nanosecond OPO, eye-safe range operation 117477
$KTiOPO_4$ triply reson. OPOs, twin beams correl., single beam noise 105540
$LiNbO_3$, periodically poled, sync. pumped OPO, operating charact. 105539
$LiNbO_3$:Fe PV crysts., self-defocusing to self-focusing dyn. transit. 128471
^{87}Rb laser-cooled fountain, juggling at. clock 97127
SiGe/Si MQW reson.-cavity-enhanced photodetector, fab., responsivity study 120815
$ZnGeP_2$, narrow-linewidth middle-IR OPO 72029
CBE *see chemical beam epitaxial growth*
CBT *see computer based training*
CCCS *see active networks*
CCD *see charge-coupled devices*
CCD circuits *see charge-coupled device circuits*
CCD image sensors
2D flow field meas. by laser PIV tech./cross-correl. method 75926
2D image measuring machine, absol. code, autofocusing *(Chinese)* 124404
3-wheeled robot vehicle, camera/laser/encoder data fusion 120888
3D miniaturized surface profilometer, Young's double pinhole interferometer 109591
3D shape meas., computer-aided projection fringe syst. *(Chinese)* 78687
3D shape meas., LC grating pattern projection method *(Japanese)* 97813
3D shape meas. by digital speckle temporal seq. correl. 75865
3D shapes meas., measuring precision improvement 97827
3D small angle meas. with CCD image sens. 109442
79 dB-SNR 70 mW 18 MHz CCD front-end with fully-digital amplif. 120903
520-TV line high-resoln. surveillance camera, devel. 120587
absol. non-contact orient. sens. for wrist motion control 97148
accelerator-based fast neutron radiography, image form. phys. 101566
act. vision, analogue VLSI model of selective attention 103988
adaptive multiresolution imager based on FPGA 120914
ADS40, airborne digital CCD image sens., test flights 99049
ADS40 airborne digital sens., data proc., test flight results 122718
Advanced CCD Imaging Spectrometer using X-ray CCDs 97351
aerospace camera syst., image motion compensation, coord. transform. *(Chinese)* 98898
AGV steering control/ident. using vision syst. 129448

CCD image sensors continued
airborne A-band spectrometer, aerosol & cloud opt. prop. rem. sens. 122629
airborne mapping, GPS/INS/CCD syst., hardware-software integrat. 122623
airborne reconnaissance, conf., San Diego, USA (Aug. 2000) 89568
airborne/spaceborne photography, EO syst. perform. anal. 94585
aircraft maint., phase stepping shearography, improved software 122496
ALS hard X-ray imaging microscopy & tomography 76174
Antarctic ice borehole probe 122601
astron. CCD photodetectors, Kharkiv Observatory 75526
automation and prototyping trends, discrete event and hybrid systs. appl. 131964
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF techs. 110048
autonomous mobile robots, self-localization, act. omni-directional range sens. syst. 97837
axisymm. drop shape anal. meas., CCD video camera, fast algms. 75883
backend opt. proc. syst. devices 131982
BESSY II scanning transm. X-ray microscope, spectral resoln. 76169
BGA packaging, coplanarity study 113557
bicomponent diffr. syst., diffractive multifocal focusing 71881
binocular machine vision syst., autonomously moving act. viewpoint, perform. effects *(Japanese)* 75610
camera, honeycomb struct., image quality, computer simul. *(Japanese)* 86613
camera, image sharpness *(Japanese)* 86601
camera, vision syst., calib. tool 97340
camera calib., constraint condition selection *(Chinese)* 97356
camera measuring syst., math. model 120905
camera motion, error propag. to epipolar constraint 131978
camera systs. eval. in varying illum. conditions 86664
camera tracking syst. using self tuning regulator/visual feedback 129450
car accident meas., scene images from digital camera 109975
cast surface roughness, laser exam. 132163
CBERS, China-Brazil Earth Resources Satellite, Infrared Multispectral Scanner, CCD camera 111482
cell struct., opto-electronic simul., FDTD method 109705
Chandra X-ray Observatory, ACIS Advanced CCD Imaging Spectrometer door failure investig. 88050
CLOUDS cloud-radiation monitoring satellite, instrum. & syst. 122634
CMOS & CCD low-light-level imagers, perform. comparison 75659
COBRA ATD minefield detect., Joint Countermine ACTD Demons. 77094
COBRA ATD multispectral camera response model 75624
collimation theodolite, photoelec. controlling syst. *(Chinese)* 93936
combustion monitoring, CCD imaging and colorimetry temp. meas. 86600
computed radiography detector, needle-cryst. storage phosphor plate 98489
computer vision syst., laser-struct. microdevices 93930
consumer digital still photography, CCD imagers vs. CMOS image sens. 131976
corona radical shower NO_x removal syst., 2D imaging expts. 133354
COVIR Compact Visible and IR Radiometer, Earth/climate monitoring 133279
CRT display prod. line convergence meas., low cost CCD sens. 97700
CRT monitor, electronic image display sharpness determ., eval. of methods 97633
CRT phosphor screens granularity, CCD-based charactn. 97701
cryogel elasticity props. for calib. IVUS elasticity images 110819
cw terahertz radiation, coherent EO detect. 97791
cylindrical piece meas., laser telemetry, forest caliper appl. 109993
deformable obj. manipulation, force/vision feedback fusion 94491
dense 3D surface acquisition, struct. light appl. 89908
depth meas. based on defocus images *(Chinese)* 97816
digital camera colour photography, tricolour filter *(Chinese)* 109671
digital camera imaging polarimeters, calib. requirements, bit depth 75654
digital endoscopic imaging syst., pass. autofocusing *(English)* 87543
digital high-speed CCD camera, interface design, VHDL *(Chinese)* 97355
digital K-edge imaging syst., electron beam transit. radiation 110959
digital still camera CCD, high resoln. *(Japanese)* 86611
compact digital zoom photo-cameras for holographic interferometry 105614
DIGITEXαPlus digital angiographic syst., interventional radiology *(Japanese)* 76537
diode lasers, freq. fluct. interf. measuring method *(Chinese)* 110016
DP speed accel. method *(Chinese)* 106804
dry etch proc. monitoring, CCD-controlled in situ interferometry 81086
dual-band framing cameras, wafer-scale vis. & IR FPAs 97379
dual-plane stereoscopic particle image velocimetry for lobed jet mixing flow meas. 132219
dyn. 3D shape meas. by FT profilometry 121187
dyn. out-of-plane deform. meas. by pulsed digital holographic interferometry 132186
dyn. phase-shifting photoelasticity by Multispec Imager 114488
electrophoretic gels, image digitalization, automated anal. 110832
elevated temp. multiplexed fiber-optic Bragg stack sens. 75557
ellipsometric imaging syst., image grabbing, image proc. *(Chinese)* 94603
EM driven cylindrical implosions, high speed laser shadowgraphy 97386
endoscope, electronic, FPGA-based real-time image proc. syst. 76415
engine condition estimating fiber-optic sens. 120866
ESRF ID 22 beamline high-resoln. X-ray imaging & tomography 76168
eukaryotic cell imaging by X-ray FELs 87727
eval. of image intensified video cameras 86638
expt. solid mech., digital image/speckle correl. 118318
eye-sens. HMD for real-time eye gaze point tracking *(Japanese)* 131973
EYESCAN, high-resoln. digital panoramic camera 86670
fast imaging polarimeter for magneto-opt. investig. 71443
feature-based visual servoing, stable region enlargement 86618
flexible ref. gratings for surface inspection enhancement, Moire interferometry 97803
float glass thickness meas., on-line DOE sens. meas. 124402
flow field constituents direct meas. by spontaneous Raman imaging tech. *(Chinese)* 121259
FORTE photodiode detector+CCD imager, space-borne lightning obs. 133294
FOV generation by self-organizing map 100664
fringe projection method for meas. of 3D profile and posn. of moving obj., laser tracking 117587
fringe-based images, 3-D gauging image data compression 84403
FT profilometry, CCD discrete sampling, Kaize-Bessel windows *(Chinese)* 121208
FT profilometry review, deformed grating images 86970
gamma ray imaging, image intensifier/cooled CCD camera 120889
glass drops vol./mass meas., eqpt. and image proc. 106718
graphite electrode surface, 3D profile meas., light-sectioning triangulation *(Chinese)* 121207
grating displacement sens. with lin. CCD array for grating line subdivision 121218
grenade-launched imaging projectile syst. (GLIMPS) 77126

CCD image sensors continued
grinding wheel surface automatic image proc. syst. develop. *(Japanese)* 129819
guest-host liq.-cryst. filter automatic color-temp. compensator for video image sens. 86625
hard X-ray lin. dichroism imaging, polariz.-contrast images obs. 87285
Hartmann principle liq.-cryst. SLM, EO scanning wavefront meas. 75665
Hartmann-Shack wavefront sens., ICF laser amp. wavefront meas. 109685
Hartmann-Shack wavefront sens. adaptive optics syst., noise and detect. error effect *(Chinese)* 97350
heart valve bio-prostheses, lensless Fourier holographic interferometry 122062
high data rate opt. parallel proc., error anal. 84159
high frame rate CCD camera with region-of-interest capability 120389
high speed image sens., dyn. range enhancement 131981
high temp. phys. prop. meas. with CCD camera, image segmentation algm. 107226
holographic vibr. fringe pattern extraction, digital camera appl. 117533
horse hoof horn capsules, 3D deform., photogrammetric meas. 98372
hybrid pixel detectors for electron microscopy 97426
hyperspectral fundus imager, syst. concept & data proc. 98346
hyperspectral imaging, act. illum., white light laser source 97344
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
hyperspectral radiometry simul., SENSOR end-to-end simul. tool 122719
III-V dry etching, depth/reflectivity meas. by CCD-controlled in situ interferometry 69888
image intensifier tube perform. eval. 86636
image-intensified CCD wavefront sens., sig. transferring charact., meas. error *(Chinese)* 109687
imaging detector technols. in various fields 132894
imaging spectrometry, conf., San Diego, USA (July-Aug. 2000) 89500
impactron, solid-state image intensifier 120923
implantable video telemetry for biocompatibility studies 86423
in-fiber Bragg grating sens., interferometric interrogation 97312
incoherent triangular holography, resoln. anal. 128564
integrat. ion imager, DNA samples, HI doses 122441
integrated CT-SPECT syst. for small-animal imaging 110929
intensified cameras eval. 86639
internal combustion engine develop., opt. access/diagnostic techs. 120687
IPD coaxial accelerator, current sheet struct., expt. study 121310
IT-CCD image sens., progressive scan mode 109714
Japanese nat. micromachine project overview, micro-opt. devices 71379
JMDT Navy/Marine Corps program, future enhanced mine detect. capability 77095
Kiso Schmidt telescope, wide-field CCD camera 109715
Kodak DCS420m, beam-induced fluoresc. diagnostic for LEDA, init. operation 87119
large rad. of curvature digitalization meas. by noncontact Newton's rings 97826
laser beam charactn. using Shack-Hartmann sens. 71887
LFSZS K1200TsL2 detector for solar activity patrol obs. 109681
lin. CCD camera, interf. fringes, fast accurate algm. anal. *(Chinese)* 109703
line jitter nonuniformity, expt. study 129415
local large-strain meas., noncontact opt. methods 114504
local tissue charactn. by backscatt. AO imaging 122039
logarithmic asphere electronic imaging 86641
low-light-level imaging syst., quantum noise simul. 109701
lung cancer radiotherapy, video-based respiratory gating syst. 87837
LWIR hyperspectral sens. design trade space 97380
MAC-1 universal setup, β-spectrograms meas., image-reading syst. 98079
machine vision, canonical forms and orbit ident. problems 84203
machine vision, pixel-based autofocusing 106531
magneto-optic eddy current sens., NDT appls. 114556
marine plankton underwater particles, in-line/off-axis hologrammetry, replay facility 88173
Mars Climate Orbiter Mars Color Imager, charact. and mission 131994
Mars Polar Lander, MVACS Robotic Arm Camera 131992
Mars Polar Lander, MVACS Surface Stereo Imager 131991
Mars Polar Lander Mars Descent Imager, charact. and mission 131993
med. image digitisers, protocol-based eval. 132642
MEMS microstruct. testing by in-line digital microscopic holography syst. 128570
MEMS motion meas., computer microvision, opt. microscope, CCD camera, stroboscopic illum. 109663
Meyer-Neldel rule for dark current 75660
micro deform. meas. by digital phase-shift shadow moire 121186
micro-operation syst., stereo image proc. *(Chinese)* 97357
microoptical correlators, security appls. 116774
microphone membrane deform. study, multiple-wavelength interferometry 127091
microscopic objs., digital holographic reconstruction, aberration compensation 83008
microstruct. surface detect. by 3D profilometry/projection grating method 121185
MICROTOP.06.MFC triangulation-based sens. for noncontact micro/nanotopographic surface inspection 97381
mirror surface shape errors, surface profile meas. method *(Japanese)* 72147
mobile robot localization, image fingerprint seqs. derivation and matching 97389
mobile robots, vision-based control with CCD camera 94994
monocular vision method for camera focusing posn. *(Chinese)* 75608
mountain rock, radionuclide distrib. visualisation syst. 121783
moving obj. posn. estim. in perspective syst., robust 84202
multiband polarimetric imagery acquisition, calib. aspects 75655
multibeam & multipanel displays, scan archit. perceptual effects 109879
multicore flexible fiber endoscopes, pulsed digital holographic interferometry 87523
multienergy X rays, quant. in-line phase-contrast imaging 98110
multiformat HDTV camera head 120542
multiple mobile robots, laser-based guidance 93913
multiple-sens. integrated coord. meas. syst., automatic camera calib. 131971
n-MOSFETs, sub-0.25 μm, hot-carrier-induced photoemission peak, location from gate center 103890
neutron capture therapy, absorbed dose imaging/profiling 111238
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
non-cryst. specimens appl. of X-ray crystallography techs. 110457
nonlin. optoelectronic feedback syst., spatiotemporal property 105468
ocean bottom LIF imaging 122687
OMI ozone monitoring instrum., design & capabilities 98975
omni-directional fisheye lenses, calib. techs. 97348
online grid-gaps inspection syst. for electron-gun manufacture 80579
opt. ferrule surfaces, automated NDT roughness control by micro-interferometer scheme 113763

CCD image sensors continued
opt. films convex/concave defects detect. using patterned illum. *(Japanese)* 127880
optic target, ballistic coord. meas. model 120918
optoelectric phase discriminator array 120906
panoramic IR viewing, multi-opt. systs. 86624
panoramic radiography, image charact. and convenience using CCD, storage phosphor and film receptors 98500
PARTNER human-robot interface syst., adaptive annotation fn. 97838
phase difference meas., cross-talk correction, AO proc. 116854
phase-contrast X-ray microtomography, polychromatic sealed source 76172
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
phase-shifting digital holography, surface contouring, image reconstruction 93902
phosphor time-integrated behavior in gated image intensifier tubes 80624
photoelec. automatic focusing syst., laser wave interf. patterns, CCD lin. array 127939
PIV syst., online adjustable digital pulse synchroniser 120919
pixel detectors for X-ray astron. and other appls. 76189
pixel misregistration compensated vol. holographic data storage 71222
planar manipulator, globally convergent vision-based posn. controller, adaptive visual servoing problem 97373
planar/strip waveguides, near field power distrib. measuring syst. 116735
plane plate length meas. using CCD sens. with DSP syst. 121181
portable neutron generator based fast neutron radiography 101563
pulverised coal flames, concurrent temp. & soot conc. meas. 124096
QC cloth prod., real-time defect detect. 120886
radiance factor maps of natural scenes, CCD-array-based apparatus 86628
radiometer, bidirectional reflectance distrib. fn. meas. 111409
rangefinder/digital camera syst., real-world scene reconstruction 120900
rapid prototyping, online visual accuracy inspection 124397
rare-earth iron garnet ferromag. plate, metal-loss defects, magneto-opt. visualization 90613
real-time analog holography, pattern recogn. 105579
real-time fingerprint ident. syst. with high discriminability *(Chinese)* 73438
real-time multi-spectral image fusion 129949
reconnaissance pushbroom electro-opt. sens., motion correction 99125
reduced temporal phase unwrapping robustness shape meas., neg. exponential seq. 86965
rehabilitation robots, human-robot interact., visual servoing appl. 98736
resolved depth step color-coded opt. profilometry 75856
respiration rate/posture monitoring, image seq. anal. *(Japanese)* 110520
rewritable broad-band color filters for spectral image anal. 84075
road vehicle speed detect., computer vision and image proc. appl. *(Chinese)* 97339
robot control, robust visual servoing, cameras comparison 97368
robot localization, edge-based features from images 95557
robot positioning control strategy, 3D visual servoing syst. 97391
scanning transm. X-ray microscope imaging, configured detector syst. 76170
SEM, X-ray fluoresc. imaging, pinhole relay optics 76187
semicond. laser integrated syst., testing with CCD camera 117272
sensitivity anal., bidirectional reflectance distrib. fn. 97345
Shack-Hartmann lenslet array fast modal wave-front sens. 120898
Shack-Hartmann wavefront sens., realistic atmos. turbulence, slope meas. error *(Chinese)* 122664
short glass fiber-reinforced polycarbonate notched plates, luminance measuring tech. *(Japanese)* 79476
Shuttle Radar Topography Mission sub-arcsec. metrol. camera 133282
sig. noise reduction *(Chinese)* 97354
single vision-based mobile robot self-localisation approach 129453
single-CCD camera captured color images, multi-image resoln. enhancement 94822
single-chip CCD still cameras, color filter arrays interpolation 131995
single-image fringe projection profiling method for dyn. appl. 113749
single-layer polysilicon electrode 109713
Skymed/Cosmo syst. simul., rem. sens., VIRS imaging spectrometer 122550
small refr. indices changes in water, opt. forward-scatt. laser light detect. 97867
sodium lamp tube automatic defect detect. syst. *(Japanese)* 100315
soft planar fingers, dyn. contact sens., opt. tactile sens. 97370
solar corona, 530.3 nm imager, tunable Lyot filter *(Japanese)* 109662
solar spectrograph detectors research *(Chinese)* 97233
solid-state image sens., opt. charactn. methods 120896
soln. conc., on-line meas., CCD lin. array 120990
space camera CCD focal plane, opt. assembly *(Chinese)* 98900
space camera real-time auto-focusing, centroid sens. method *(Chinese)* 98905
space rem. sens., thermal engng. design *(Chinese)* 98906
Space Solar Telescope, imaging syst. and DP 109699
spacecraft attitude determ. subsyst., MEMS based Sun sens. 122532
spectropolarimetric imaging, field-portable imager, AOTF 97347
SPOT satellite imaging instrum., stat. self-calib. 109696
SPring-8 BL40XU high X-ray flux beamline design/status anal. 121847
star tracker, star image simul. software *(Chinese)* 98899
stat. calib. of CCD imaging proc. 109679
static polaris. interf. imaging spectrometer, airborne rem. sens. 98949
streak camera readout systs., photon-counting techs., sensitive video rate CCD camera 86644
sub-eV energy-resol. soft-X-ray spectrom. for TEM *(Japanese)* 110432
subpixel accuracy analogue fast edge location meas. using CCD image 118729
subpixel edge detect. syst., dimens. meas., obj. localization, digital-based approaches 107277
Subrina X-ray CT scanner design, subsecond type, Genius View software *(Japanese)* 76538
super size image intensifiers develop. 80625
super-Gaussian laser beam, CCD based charactn. 117345
surface contamination effect on quantum efficiency in soft X-ray region 110288
surface plasmon reson. array biosens., spectrosc. imaging 75675
surgical interventions under video-augmented X-ray guidance, appl. to needle placement 87799
swept beam ultrashort-laser-pulse meas., FROG device 128396
SWUIS-A UV/vis/IR imaging syst. for airborne astron. & aeronomy 98897
synchrotron sources, crystallography appl. 110467
TESLA precision detector, ECFA/DESY design 87242
testing refr. error of eyes, use of image sens. 76408
third-order suscept. meas. by Mach-Zehnder interferometry tech. 71918
third-order suscept./nonlin. refr. index meas. by Mach-Zehnder interferometry tech. 75909
transient spectrum meas. instrum., quantum conversion proc. *(Chinese)* 109660
trilinear color image sens., very high resoln. 120887
turbulent jet aircraft perturbed laser beam CCD image sens. 86627
two-CCD vision sens., design optim. 120917

CD image sensors continued
two-colour luminesc. aerodyn. press. sens., prism image splitter 75658
TWT spherical grid curvature rad. meas. 132176
upper atmos. wind vel. meas. by speckle-correl. calc. method 133285
UV laser ablation, plasma/plume effects, CCD photography 105654
UV photon counting intensified CCD 75640
vehicle exhaust emissions, multicomponent rem. sens., dispersive IR/UV spectrosc. 111469
vertex detector, CCD-based, impact param. resoln. effects 110359
vertex detector for future lin. collider 121447
video camera & aircraft platform integrat. appl. 97378
video sens. sig., high-speed great-capacity storage/proc. 86444
view-based visual tracking with occlusions detect. 97388
viewpoint-depend. autostereoscopic 3D display method 129567
wafer 3D micropattern meas., opt. probe & control design 120653
white light continuum/ultrashort pulse atmos. gas trace detect. 76934
wide-field imaging interferometry testbed design, FIR/sub-MM missions 98887
X-ray astron. imaging, Chandra ACIS, split-pixel events 110423
X-ray fluoresc. microtomography at ESRF ID22 beamline, 2D imaging 76175
X-ray image holography, nanometer resoln., micro-zone-plates *(Chinese)* 105578
X-ray image sens., spectral efficiency eval., lin. conversion 76164
X-ray imaging methodology advances & capabilities, review 110431
X-ray streak camera, on-line temporal charactn. 121771
XM-1 high-resoln. soft X-ray microscope at ALS, computer proc. 98093
XMM, X-Ray Multi-Mirror mission, CCD pass. cooling, low-mass multistage radiator 122528
XMM-Newton, pn-CCD camera syst. micrometeoroid damage 110440
XMM/NEWTON satellite, direct meas. of sub-pixel struct. of EPIC MOS CCD 98108
Z/I-Imaging digital aerial camera syst. for reconnaissance 99112
zoom-lens camera, calib. from noisy data with outliers 131979
Ar gas mixture glass resistive plate chamber, streamer size meas. using CCD camera 121653
ArF excimer laser, excitation discharge shock waves charactn. 105138
Cu electroplated interconnects, microtexture/strain 103460
Ge^+ Ne-like x-ray laser, pump condition modelling 128060
Nd:YAG CW laser keyhole dyn. characterisation 83054
Nd:YAG laser precise microstructuring, metallic surface wear props. improvement 72121
Nd:glass multichannel high-power laser facility, rem. control alignment 105216
Ti:sapphire oscillator femtosecond laser pulses, temporal charactn., SPIDER tech. *(Korean)* 93738
CD imagers *see CCD image sensors*
CCII *see current conveyors*
CCIR standards *see standards*
CCTV *see closed circuit television*
CCVS *see active networks*
CD-ROM searching *see information retrieval*
CD-ROMs
see also disc drives
burst cutting area technol. for disc unique ID on ROM type DVD disc *(English)* 71239
CD/DVD disc design, vibr. anal., init. stress, injection moulding 93024
DVD, two-phase spindle motor 134089
DVD-ROM readout RF sig. equalization, ANFIS-based PRML syst. 116595
filmless radiology teaching 89610
HDD slider & disc motion meas. using CD-ROM syst. 127369
hearing impairments, VR CD-ROM, HI-SIMv1.0 87290
high-dens. opt. recording, PRML detect. 116579
high-track-dens. opt. discs, radial direction partial response 71221
opt. disc drives, digital control 116586
polycarbonate layer CD recordables, radial-pattern form. 116583
self-timed Viterbi decoder, low power, convolutional FEC codes, ISI 83837
SimulNet dist. teaching syst., Java based 78519
Si OEICs in CMOS/BiCMOS technols. for DVD systs. 82437
CDMA *see code division multiple access*
CDs (audio) *see audio discs*
Ceefax *see teletext*
celestial mechanics
lunar satellite, orbit optimal manoeuvre calc. *(Chinese)* 98879
satellite orbit determ. by combination of two kinds of meas. *(Chinese)* 93935
satellites, LEO, onboard GPS orbit determin. *(Chinese)* 98878
cell motility
ciliary cell beats, metachronal wavelength, digitised image correl. map 76402
Cellnet *see cellular radio; radiotelephony*
cells (electric)
see also fuel cells; photoelectrochemical cells; primary cells; secondary cells
aluminosilicate/polysiloxane network polyelectrolytes, enhanced ion mobility 123722
batt. separators absorbency under compression 89043
bipolar supercapacitor electrodes, oxidized glassy carbon sheets 123847
cut-edge corros. inhib. on coil-coated steel sheet, model electrochem. cell 112759
discrete-time batt. and convertor models for syst.-level low-power design 125225
elec. double layer capacitors, polymer gel electrolytes 123848
elec. double-layer capacitors, organic electrolytes, perform. 123846
electrode catalytic activity effect in limiting-current-type zirconia cell sens. 109744
electrode current normalisation techs. during polariz. expts. *(Spanish)* 78120
energy efficient batt. mgt. 89046
handheld wireless product remaining batt. capacity gauging 96540
high catalytic activity disordered hydrogen-storage alloys, Ni-metal hydride batts. appl. 89045
Hull cell, secondary current distrib. anal. 112757
mobile computing in wireless ad hoc networks, max. batt. life routing 74361
multivariate anal. techs. for batt. optim./testing 89040
partial compensation sig.-level-based up-link power control for extending terminal batt. duration 108812
PVC-based polymer electrolytes, structural/thermal/electrochem. cell charact. 123721
radioisotope batts. for long-life low-power appls. 99893
series-connected batt. cells, voltage equalizing syst. *(Japanese)* 114616
Ag electrodes discharge in solid electrolyte batts., computer simul. 89039
Li batts. transportation, UN Recommendations amendments 89047
Li/polymer cell composite electrodes, variables separation method 99892
$LiNbO_3$ galvanic cells, open-cct. pot. expts. 112756
cells (electric) continued
$Li_4Ti_5O_{12}$ electrode based asymmetric hybrid nonaqueous energy storage cell 112761
MnO_2-based alkaline cells, second electron discharge plateau anal. 99891
Ni/metal-hydride batts., intermetallic cpds. as neg. electrodes 89044
Pd/ZrO_2-Y_2O_3 composites, dielec. props., EDLC 123849
Si, porous semicond. form., anodization and electroless stain etch combination 92042
Zn electrodeposition using modified Hull anal. electrochem. cell 79377
cellular arrays
see also logic arrays; systolic arrays
$2.4F^2$ memory cell technol. with stacked-surrounding gate transistor DRAM 102122
analog EEPROM, high-precision, real-time write monitoring, analog sig. proc. appls. 80130
ASIC data prep. mgt. for opt. proximity correction 101938
Batcher-Banyan internal link speeded-up packet switch, SFQ std. cell cct. design 73763
bidirectional tunneling program/erase NOR-type 3D flash memory cell 79881
bipolar CML testability, inductive fault anal., library cell layouts 102074
CAM, low-power design, power models, binary static cells 102174
CATS design data transcription streamlining for memory products, mask manufacture 102157
CDMA, single-chip prog. transceiver PRG code 74523
CHIPDESIGN, project-oriented microelectronics course, ASIC std. cell design flow 125298
CMOS all-digital PLLs, digitally controlled oscillator, std. cell library 79631
CMOS all-digital shunt-capacitor DLL, nonlin. reduction tech. 102318
CMOS ASIC archit., timing-optimized std. cell logic, wireless/wireline products 102011
CMOS dyn. single phase logic, self-timed stages, power reduction, pipeline cct. designs 102027
CMOS flash memory technol., quasi-virtual ground array, embedded appls. 68799
CMOS high-speed µP, register renaming units, ASIC multi-port RAM cell cct. 102247
CMOS logic ccts., leakage current estim., product engng. environ. 102073
CMOS low-noise logic cells, substr. noise, resistive substr. model 102070
CMOS µP, all-digital clock generator firm-core 102215
CMOS std. cell, self-routed clock net generation 102306
custom ASIC design methodology with on-demand library generation 125387
delay constrained ccts., voltage scaling and gate sizing 114672
differential CMOS output prediction logic, 64:2 compressor realisation 90865
divided word line memory, block-repair fault-tolerant archit., BISR 102134
EEPROM prog., time and degrad. aspects, tunnel oxide 102173
embedded DRAMs, memory cell array opens and shorts, static/dyn. behavior 79876
field prog. analogue amp. array ICs, switched capacitance feedback ccts. *(German)* 102431
FIR multiplierless cellular networks, lin.-phase filters 102377
flash memory disturbances, modeling and test 102135
FPGA fast placement syst. using macro-blocks 101939
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808
full-feature alternating phase-shifting technol., phase-aware std.-cell design flow 125342
fully differential switched-current memory cell with low charge-injection errors 90897
high speed DRAMs, yield improvement, column redundancy scheme, multiple bit pre-fetch struct. 125511
high speed fully depleted CMOS/SOI 2000 gate SOG array *(Chinese)* 114723
high-dens. DRAMs, cell transistor scalable array archit. 125506
HRM, hierarchical simulator for full-chip power network reliab. anal. 79734
IC routing, pseudopin assignment, crosstalk noise control 70251
low-complexity cellular archit. for performing inversion and divisions 125410
macrocells, constructive procedure for optimising placement 101674
memory efficient motion estimator for three step search block-matching algm. 118540
MOS high-dens. DRAM cell with built-in gain stage 68807
MOS photolithographically-friendly $6F^2$ DRAM cell 114770
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
PCA-1, plastic cell archit., dyn. reconfigurable logic LSI 125460
PCA-1, Plastic Cell Architecture, fully asynchronous self-reconfigurable LSI 79780
peripheral I/O high quality ASICs, I/O cell placement, elec. checking methodology 81451
placement watermarking of std.-cell designs, spatial domain and spectral domain 68732
polyvalent error control codes for multilevel memories 68792
portable high-speed clock generator, full pull-in range, HDL 91001
power-sum ccts. over prog. finite field $GF(2^m)$ 102061
probabilistic event propag. for fast stat. timing anal. of VLSI 125370
recursive partitioning based placement, cut seqs., dyn. prog. approach 125454
reusable components based synthesis, arith. spec., POLYSYS tool 101888
RSFQ logic cct., std. cell design, BDD 70820
soft error rate for high dens. DRAM cell *(Korean)* 102168
Sp2V, post-layout spice simul. accel. using Verilog gate-level modeling 114583
split-gate flash device, registration and proximity effect 102156
std. cell layout, FAME detailed placement algm. *(English)* 79761
std. cell placement optimisation by candidate sieving 125414
std.-cell self-timed multiplier for energy and area crit. sync. systs. 68729
structural pattern matching algm. for technol. mapping, subj. Boolean network 125357
sync. handshake ccts., FPGAs, Tangram behavioral-level spec. 79783
VHDL models of parallel n×n bit multiplication blocks, DSP appls. 102194
virtual components, publicly detectable protection techs., watermarking method 125443
VLSI discrete-time CNN proc. 75395
VLSI LV/low-power/appls., std. cell library design 68837
watermarking of std.-cell feedthroughs in mixed-sig. design 68951
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025
$SrBi_2(Ta_x,Nb_{1-x})_2O_9$-$Bi_2$ $(Ta_x,Nb_{1-x})O_6$ ferroelec. memory, metal covering cell 68808
cellular automata
2D cellular automata, VLSI testing appl. 90830
2D patterns detectors on simulated CAM-Brain machine, evolvable hardware tool for building neuron artificial brain 90893
adiabatic quantum cellular automata, perform. assess. 79773

cellular automata continued
arrhythmogenic/normal human heart elec. excitation, modelling 98248
CAM-Brain Machine, FPGA based robot neural net 91162
CAM-brain machines, evolvability 91164
cellular-automation proc. based vMOS vision chip 81406
continuous-time react.-diffusion cellular nonlin. net., edge-of-chaos 101721
data descrambling/descrambling, periodic boundary 150/90 cellular automata 94329
dyn. load balancing of parallel cellular automata 73118
feature associative proc. for image recogn. based on A-D merged archit. 107252
genetic search for 1D cellular automata using heuristics related to dyn. behavior forecast 90056
HERA-B vertexing experience 87178
image anal. and pattern recogn., coord. logic filters 129575
lattice gas automata, high speed computation with FPGA *(English)* 114729
lattice gas automata for EM scatt. and transm. line modelling 94004
massively parallel mol. computing, model of react.-diffusion cellular automata 80521
meta-patterns and higher order meta-patterns in cellular systs. 114056
mol. QD cellular automata, clocking sig. 125922
μPs, CMOS, RTD, SET and QCA technols. 102193
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
non-group cellular automata for message authentication 70233
opt. phase change recording, fractal theory, computer simul. 92998
QD cellular automata, correl., majority gate 70223
quantum cellular automaton based logic gates/ccts. simul. 102008
VLSI cct., self-reorganising syst. 102060
Si(100)-wafers, anisotropic wet chem. etching, atomistic Monte-Carlo simul. and expts. 92000

cellular communications *see cellular radio*

cellular effects of radiation
see also biological effects of ..... (type of radiation)
see also photosynthesis
behavioral monitoring/mag. field exposure syst. 133064
cardiac myocytes, postnatal develop., elec. field stimulation 76718
cervix carcinomas, radiotherapy, micronucleus assay 76621
chromosomal aberrations, peripheral lymphocytes, Swedish train engine drivers 98743
chromosomes, human, nanodissection with NIR fs laser pulses 83072
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
clinical radiotherapy, normal tissue complication probab. calcs. 133019
cultures, microwave EM radiation effects, microwave oven calib. 87939
interstitial brachytherapy treatment plans, homog. dose distrib. 87859
keratinocytes, reacts. to in vitro mm wave exposure 98744
leukemia cell growth inhib. using strong mag. fields, TCC-S growth prevention 133023
macrophages, phagocytic activity, microwave/ELF mag. field effects 98751
malignant tumour growth, low-energy ns microwave pulses effect 76657
mammalian cells, RF exposure, CDMA, FDMA, DNA damage 122433
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
peripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746
peripheral blood lymphocytes, micronuclei, angiography, excretory urography 76560
peripheral blood lymphocytes, radiotherapy, chromosome aberration anal. 76744
pre-embryo zona drilling, laser-assisted, thermal effects 76611
protein changes due to environ. nonionising radiation 98749
protein tyrosine phosphorylation, cultured cells, 50 Hz mag. field effects 98753
RF ablation treatment planning, blood vessel detect. 111134
serial organ archit., radiotherapy, inhomog. dose distrib. 87959
space radiation health, conf., Arona, Italy (May 2000) 124172
static/ELF mag. fields, tumour growth inhib./apoptosis induction 133066
therapy-dedicated cyclotron, proton beams RBE, cell lethality 98672
transthoracic defibrillation current dens., two-layer segmented electrode 76593
ultrashort elec. pulses, intracellular effect 133068
Gd neutron capture therapy, glioblastoma cell cultures, spectromicroscopy 76625
^{192}Ir, intracoronary radiation therapy, re-endothelialization, T-cell infiltration 98615
K^+ channel, EM-RF exposure, Zeeman-Stark/Markov model approach 87953
^{32}P-orthophosphate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724
^{99m}Tc-annexin V, intravenously administered, patient dosimetry 76735
^{90}Y-citrate, bone marrow erythroblastoid cells, micronucleus dosimetry 76724

cellular logic
CNN modified archit. for Turing patterns generation 102451

cellular neural nets
act. contour topologic transform., discrete-time CNN approach 107140
antipersonnel mines, pass. IR polarimetric rem. sens., GA 88254
automatic generation of multipath algms. in cellular nonlin. network 118299
autonomous space-invariant CNNs, complex dyn. 90680
bistable CNNs, compact design based on RTDs 91138
brain elec. activity anal. in epilepsy 110586
CMOS current-mode prog. CNN, low-power consumption 68986
CMOS multiple-input transconductance amp., prog. analog CNN design 102453
CNN hyperchaotic syst., sync., secure communication appl. *(Chinese)* 95742
concentric shapes filter for image recogn. and implement. in modified DT-CNN 129866
continuous-time CNN, act. contour and skeleton models 107192
cooperative competitive CNN, WTA proc., SPICE simul. 102454
coupled mol. arrays, network representation, weakly Coulomb-coupled nanodevices 102845
discrete time analog polynomial type CNN with digital state 91150
discrete-time CNN image proc. *(Japanese)* 91136
disparity map computation, CNN cell using stereo vision algm. 68990
DTCNN, reconfigurable, compact/robust cct. proposal 102452
dyn. 1D autonomous rings, dyn. PWL cells, equilib. points 101709
epilepsy, brain elec. activity anal. using Boolean CNN 98215
fingerprint recogn. using CNNs, image preprocessing 95523
flash ADC using cellular nonlin. network, error correction 102263
fuzzy proc., react.-diffusion, computational complexity 102476
fuzzy-rule-based image proc. on CNN universal machine 107139
Gabor-type CNN image filters, subthreshold current mode design 102456
general class. problem 102450
gray-scale image proc., lin. CNN 94723
hardware implement. for analog simul. of react.-diffusion partial differential eqns. 91147
hierarchical CNN archit. for image intens. conversion 106870

cellular neural nets continued
high speed visual decision maker, focal plane analog proc. array 79955
human early vision syst., CNN-based retina model 132582
image coding by CNN 118510
image enhancement using shunting inhibitory CNN 118384
lattice of nonlin. ccts., solitons generation, KdV eqn., 1D CNN 90667
locally regular CNN 68978
med. image enhancement using complex-valued CNN filters 132539
modified archit. for Turing patterns generation 102451
multilayer CNN-UM, optimal path finding with space variant metric wts. 91146
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
neuromorphic network, current-mode cct., CNN model 91144
neuron-BJT, silicon retina and CNN 91132
nonlin. cellular neural filters for image proc. problem appls. 84154
nonlin. evol. eqns. simul. via cellular networks 107490
nonlin. networks for minimization of functionals, appl. examples 91166
nonlin. networks for minimization of functionals, theoretical aspects 91165
optimal path finding with analog CNN, depend. dist. pot. source algm. 90631
optoelectronic proc., parallel archit., local image proc. 129536
photonic digital CNN, morph. nonlin. & digital cellular proc. 102457
real-time inspection of metal laminates by means of CNN 118293
sampling theorem 102475
shunting inhib. CNN, digitally prog. current mode cct. 68954
stereo visual syst., CNN IC 94722
surface defects detect./charactn. using CNN 90609
texture image segmentation by combining multiple segmentation results *(English)* 106821
texture segmentation based on multi-layer CNN 84147
threshold Boolean filtering, CNN 107489
toll driving appl. 102477
trajectory tracking and predicting, CNN, VLSI 102455
transconductance/multiple input transconductance amps. based, anal./design *(Polish)* 91160
two-grid coupled arrays, Turing patterns control 101697
unbounded delay CNN, convergence anal., VLSI 80144
universal CNN cell cct. using simplicial neuro-fuzzy inferences for fast image proc. 91149
visual μP, video compression algms. implement. 106869
VLSI discrete-time CNN proc. 75395
VLSI implement. approaches, hybrid struct. 102460
Si CNN-UM chip, trigger wave computing 91137

cellular radio
see also microcellular radio; picocellular radio
1 Gbps/cell 120 MHz bandwidth fixed wireless access syst. *(Japanese)* 85555
1D cellular networks, anal. of call channel limiting tech. for mobile users 108716
1D cellular networks, new call channel limiting tech. anal. 74647
1X RTT CDMA systs., phase-swept/time-delay transmit diversity perform. results 85742
2.0 GHz, meas. elec. near-fields of model cellular transmitters near human head models 98768
2.5 GHz meas. and charactn. of broadband MIMO fixed wireless channels 85753
2D code acquisition in radio environ. with spatially coloured interf., perform. 108728
2G and 3G mobile systs., perspectives till 2010 *(Polish)* 131170
2G/3G dual-mode handsets, implement. issues 119998
3D cellular networks 108667
3G base station design, DSP based wideband amps., power and spectral efficiencies 85593
3G CDMA air interface, QoS differentiation 85878
3G CDMA cellular stds., forward link open-loop transmit diversity 85625
3G CDMA commun., interf. mgt. methods 96549
3G CDMA transmit adaptive arrays 85623
3G cell phones, packet-switched data appls. 96539
3G cellular systs., real time radio bearers QoS mgt. 96472
3G downlink supporting variable rate services, interf. cancellation 119988
3G DS-CDMA systs. with array antenna, direction finding 108738
3G environ., gaining/collecting revenues 131189
3G flow-oriented multimedia networks, QoS guarantees 96450
3G IMT-2000 mobile commun. systs., techno-economic eval. 74677
3G mobile commun. systs., DECT technol. 85786
3G mobile radio, image transm. DC error correction 85888
3G mobile radio, TD-SCDMA benefits and implement. 96609
3G mobile radio, virtual home environ. archit. 96488
3G mobile radio access stds. 96610
3G mobile radio systs., stochastic spatio-temporal propag. 74789
3G mobile systs., cdma2000 and W-CDMA access channel comparison 131194
3G mobile systs., dyn. service provisioning, agent-based platform 108671
3G mobile systs. standardisation proc., introduction 131203
3G radio, wideband channel dyn., meas. and simul. 85692
3G radio design challenges in meeting customer expectations 108650
3G telephony, intell. chipset *(Italian)* 96496
3G triband probe fed printed eccentric spiral antenna for nomadic wireless devices 83616
3G UMTS networks, integrated QoS support 85884
3G UMTS syst., Erlang capacity of base station transceiver 85683
3G W-CDMA cellular radio, transm. power mgt. and control 108954
3G W-CDMA semi-blind channel ident., orthogonal transmit diversity 85804
3G W-CDMA syst., transmit antenna diversity perform. 85668
3G wireless commun., virtual connection tree over multiple access techs. 74656
3G wireless network, GSM and mobile IP integrat. 85893
3GPP syst., CPCH mechanisms, perform. anal. 74642
4G mobile network archit. 108970
4G mobile radio systs., evol. aspects 85606
5IDT long. coupled wide-band bal. SAW filter, long. multi-mode resonator 92760
900 MHz handset diversity antenna, head/hand/shoulder effects, effective gain charact., perform. anal. 94160
access network independent service control syst. for stream services, implement. 96294
ad hoc network capacity 108921
ad hoc networks, on-demand weighted clustering algm. 74862
ad-hoc community protocol, multicast routing *(Japanese)* 119372
ad-hoc on-demand commun. syst. based on mobile agents 108218
ad-hoc wireless networks, hierarchical cellular-based mgt. for mobile hosts 108670
adaptive array antennas using modified CMA and polyphase filters *(Japanese)* 130110
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive call admission control in wireless multimedia network 108666

ular radio continued
adaptive group-blind multiuser detect., new subspace tracking algm. 95718
adaptive iter. multiuser parallel decision feedback with different code rates, perform. 131292
adaptive location mgt. methods in mobile cellular networks 85577
adaptive modulation systs., layered demodulation without modulation inform. transm. 108770
adaptive multi-rate codec, standardisation 120034
adaptive random access algm., improved delay perform. 96536
adaptive spatial/temporal optimal receiver using adaptive array antenna 85869
adaptive SS commun. over multipath dispersive channels 84900
Advantest R3267 and R3273 spectrum analyzers 75389
aerial platforms appl. 96501
agent based education syst., cellular phone based 131298
AI techs., mobile handsets and mobile assistants 74706
aircraft pers. commun., in-flight technols. develops. 111311
All IP UMTS networks migration, transport/mobility issues 96084
all-digital impulse radio for MUI/ISI-resilient multiuser commun. over freq.-selective multipath channels 108673
all-IP 3rd generation networks, joint radio-IP resource reservation 85055
all-IP wireless networks, IP-based base stations/soft handoff 130410
AMIQ I/Q modulation generator/SMIQ sig. generator with WinIQSIM for 3G TDD stds. 132088
AMPS mobile telephone syst., improvement of base station by least sq. method 108780
AMR speech codec, noise suppression syst. *(English)* 74489
antenna arrays, robust constrained downlink beamforming 120035
antenna arrays perform. in urban multipath environ. 73573
antenna switch diplexer front-end module for GSM/DCS/PCS appls., PHEMT switches 91348
antenna-switching cellular base-station receivers upgrade 74807
approved location stamps 131188
Asia-Pacific innovations in mobile commun. 96430
ATM cell transm. scheme over mobile cellular networks 130194
ATM cellular networks, nondisruptive handoff protocol 85652
ATM evol. in wireless commun. network infrastructure 85881
ATM mobile networks, MAC protocol with QoS guarantee 96591
ATM mobile wireless networks, perform. models of handover protocols/buffering policies 108803
ATM wireless network, two-phase combined QoS-based handoff scheme 131259
ATM wireless networks, in-band signaling based local/global handovers 108793
automatic cell planning ES 74683
automatic fast modulation recogn. algm., spectrum monitoring appl. implement. 106017
automotive sector positioning technols. 120491
bandpass delta-sigma modulator using SC resonator struct., 80 MHz 90966
bandpass nonlin. RF ccts., distortion, autocorrelation anal. 108967
bandwidth-limited cellular systs., dyn. freq. hopping 96571
bandwidth-limited real-time multimedia commun., header compression 96260
base station dual-band printed antenna optim. 85694
base station powering, DC/DC converter, RF power amp. 108464
base-station antennas perform. enhancement using resistive plates 74844
base-station-antenna radiation patterns, 3D interpolation method 72665
BER anal. of TCM schemes for CCI reduction in cellular mobile commun. 85681
BiCMOS dual-band freq. synthesizer, PCS cell phone 114643
BiCMOS dyn.-range dB-lin. prog.-gain amp., GSM transceivers 125819
BiCMOS multicarrier QAM-modulator for WCDMA basestation with on-chip D/A converter 101872
binary modulated sigs. with depend. Rician fading, coherent multichannel reception 74776
Bleustein-Gulyaev-Shimizu/shear horiz. SAW resonator filters using edge refls. 92711
blind channel ident. using evol. prog. 107703
blood-brain barrier, cell phone effects and tumor treatment 98739
Bluetooth security weaknesses 129345
Bluetooth wireless data links, office systs., mobile telephone and mobile Internet systs. *(German)* 119627
Bluetooth wireless technol. 96144
Botswana telecomms. reform, policy model for African states 107997
BPSK-CDMA lin. receivers, asymptotic anal. 108855
BRAIN develop. for broadband mobile access network beyond third generation 85546
broadband circ. polarised proximity coupled patch antenna 83613
broadband microstrip array antenna for PCS and IMT-2000 base stations 72631
broadband mobile multimedia, transm. capacity 108815
broadband networks for dist. education and training 108012
broadband wireless networks, dyn. guard bandwidth scheme 120019
broadband wireless stds., harmonization 85274
broadcast commun. on fading channels using hierarchical coded modulation 72727
bus passenger IS using PC/portable telephone *(Japanese)* 119639
CADRE, low-power, low-EMI DSP archit. for digital mobile phones 125542
call admission control, general decision model with state related hand-off rate, soln. 85730
call admission control for multi-rate traffic based on total received power 74641
call allocation in syst. with overlapping coverage 74705
call capacity optimisation, HNN DCA algm. 85707
call locality support, location caching scheme perform. 96026
CAMEL, evol. and PPS eval. 131185
capacitor technols. for portable electronics appls. 80437
capacitor technols./design practices for portable electronics 115070
car hands-free cellular radio, speech enhancement, spectral subtraction 119834
CC/PP, effects and perform. of content negotiation *(Japanese)* 119269
cct.-switched mobile multimedia telephony, terminal requirements and call control 108414
cdma2000 cellular networks, world view of systs. and products 131106
cdma2000 mobile phones, testing requirements 96429
cdma2000 phone standby time, quick paging channel in soft handoff 119976
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA2000 searcher, real-time correlator design 74719
cdma2000 syst., channel coding perform. 85626
cdma2000 syst., phase predistortion 108923
CDMA, adaptive power allocation for mobile stations under soft handoff and traffic deviation 96582
CDMA, capacity doubling by in-cell seq. reuse and soft interf. cancellation 85850
CDMA, min. duration outage anal. for integrated services with correl. interf. 85759

cellular radio continued
CDMA, multimode, reduced intercell interf. for broadband wireless networks 85860
CDMA, outage for integrated voice data services with correl. sig. and interf. 85758
CDMA ad-hoc/cellular networks, perform. comparison 74673
CDMA and SDMA, spatial filter oriented adaptive spreading tech. 107745
CDMA and TDMA over nondispersive channels, capacity 131215
CDMA asynchronous systs., signature seq. optim. 131287
CDMA cellular network, investig. of channel access algms. with meas. error 74826
CDMA cellular radio, lin. successive interf. cancellation 96550
CDMA cellular radio, spatial diversity and power allocation 74806
CDMA cellular syst., adaptive antenna arrays *(Chinese)* 96497
CDMA cellular syst., data traffic, truncated channel inversion based uplink power control 96507
CDMA cellular syst., soft handoff scheme, syst. load anal. 85590
CDMA cellular syst., transparent reconnect procedure 96605
CDMA cellular system,inforstation implementation *(Chinese)* 96545
CDMA cellular systs., adaptive interf. suppression filtering 130054
CDMA cellular systs., call admission control for arbitrary traffic distrib. 85752
CDMA cellular systs., capacity eval. 120021
CDMA cellular systs., effects of soft/softer handover on sectorization gain 108769
CDMA cellular systs., soft handoff, base stations transm. power deviation reduction 85663
CDMA cellular systs., soft handoff, limited wired channels impact 74645
CDMA cellular systs. with adaptive antennas, data access control 108883
CDMA cellular systs. with augmented antenna arrays, perform. 85587
CDMA cellular systs. with limited receiver proc., prioritized call admission perform. 85793
CDMA cellular uplink systs., Erlang capacity calc. 85740
CDMA channel with two-level total sig. quantization, coded orthogonal sigs. reception, noise immunity 119203
CDMA cordless PBX with urban cellular radio, meas. of propag. params. 108759
CDMA distributed antenna systs., reverse-link power control 85798
CDMA downlink, spreading code optim., channel capacity estim. 85781
CDMA forward link, high data-rate service support, capacity eval. 74663
CDMA inter-MSC soft handoffs, blocking perform. anal. of trunk network 108768
CDMA long-code multipath syst., blind multiuser detect. 107604
CDMA mixed traffic networks, downlink rate scheduling 85746
CDMA mobile commun. systs., space-time iter./multistage receiver struct. 108858
CDMA mobile radio syst. with joint power control and optimum beamforming 96570
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA multicell network design 96503
CDMA multicode syst. with SIR-based power control, capacity estim. 96502
CDMA multimedia systs., nonlin. power assignment and impact on capacity 96586
CDMA multipath systs., power control/transmit diversity 85799
CDMA multirate systs. with interf. cancellation, power control 74749
CDMA networks with smart antenna, capacity anal. 131130
CDMA overlay of rural analog sites, coverage considerations 85765
CDMA packet-switched syst., capacity eval. 108798
CDMA perform. improvement, bias reduction using optimized partial parallel interf. cancellation factor 131122
CDMA power-controlled cellular network, single freq. broadcast syst. perform. 85806
CDMA power-controlled packet-switched network, signalling protocol 108847
CDMA QoS-sensitive networks, multiclass call admission control 131270
CDMA reverse link pole capacity formula generalization 131178
CDMA seqs., power variance reduction methods 85588
CDMA serially concatenated ECC syst., joint iter. decoding 108861
CDMA SIR-based power-controlled cellular syst. in multipath fading environ., reverse link capacity 74734
CDMA soft handoff based archits., sector orient. 108736
CDMA soft handoff thresholds, adaptation using fuzzy inference syst. 85760
CDMA space-time block coded multicarrier syst. multiuser receiver 108860
CDMA spatio-temporal receiver struct. for multi-rate appls. 119991
CDMA sync. systs., iter. constr. of optimum signature seq. sets 85867
CDMA syst., adaptive array research 83675
CDMA syst. mobile transm. power optimal control 131297
CDMA syst. uplink, av. SIR/outage probab. calc. 96467
CDMA systs., combined rate/power/cell control for delay insensitive appls. 74681
CDMA systs., composite interf. cancellation 72357
CDMA systs., handoff 108690
CDMA systs., multi-rate interf. canceller for software defined radio 131262
CDMA systs., spectral efficiency with transmit and receive antenna arrays 85662
CDMA systs., successive interf. cancellation receiver with neural network compensation 105817
CDMA systs. with multiuser receivers, optimum modulation/multicode formats 120016
CDMA technol., conf., Seoul, South Korea (1999) 67372
CDMA time-varying channels, unequally protected multistage VQ 85720
CDMA uncertain channels, multicoding and adaptive modulation 108915
CDMA underlaying microcell/macrocell systs., capacity anal. 74832
CDMA uplink coherent detect., dual mode channel estim. 131260
CDMA variable spreading-factor systs., multipath multiuser detect. 119978
CDMA wideband cellular networks, power control results 85745
CDMA wireless commun., adaptive signaling schemes 108740
CDMA wireless commun. link, GSM interf. detect. 83410
CDMA wireless link, distributed power control for real-time and TCP packet commun. 96426
CDMA wireless multimedia systs., power control/rate mgt. 96548
CDMA wireless systs., link/network layer requirements for mobility support 85739
CDMA-based LEO multi-beam multi-satellite syst. with power control, downlink perform. 74894
CDMA-UMTS, asynchronous, sliding window decorrelating detectors 85678
CDMA/ATM-based mobile systs., QoS simul. of AAL2 95910
CDMA/shared-TDD packet systs. in cellular environ., throughput eval. 85738
CDMA/TDD cellular radio, video delivery and resource allocation 85890
CDMA/TDMA hybrid cellular radio, transm. rate scheduling 74627
CDPD, cellular digital packet data, perform. with timed hop and forced hop 74710

cellular radio continued
centralized dyn. access probab. protocol for next generation wireless networks 119351
ceramic chip antenna using meander conductor lines 94173
channel assign. problem, transient chaotic neural net appl. 74828
channel assignment, transient chaotic neural network 96525
channel assignment algms. for portable access 119992
CHARISMA, channel-adaptive TDMA-based MAC protocol for integrated voice/data services 85018
Chinese third generation mobile commun. syst., Turbo decoder design and anal. 74761
chip scale BGA packaging, high-dens., for hand-held/portable products, design for assembly 67628
clinical trials, rem. data entry using WAP phones 98874
clique packing approx. teletraffic characts. of dyn. channel assignment considering mobility 95819
closed loop transmit diversity with feedback delay, perform. 108744
CMOS dual-mode continuous-time baseband filter for GSM and WCDMA 80047
CMOS dual-mode RC-opamp baseband filter for PDC and WCDMA 91031
CMOS fractional-N freq. synthesizer, GSM/GPRS/EDGE appl. 101816
CMOS freq. synthesizer, charge pump, dual-path loop filter, PCS- and cellular-CDMA 125817
CMOS GSM/WCDMA continuous-time filter, automatic tuning 102372
CMOS low-noise asymm. poly-phase filter, GSM low-IF radio receiver 108665
CMOS merged LNA/mixer for WCDMA, 2 GHz, phase noise 125815
CMOS RF power amp. for GSM-1800 mobile handset, 1 W, 55% PAE 91366
CMOS RF power detector, logarithmic/limiting amp., GSM handset appls. 91347
CMOS transceiver chip set for reduced GSM phone costs 131216
CMOS TX-IF chip, multicarrier GSM 900 and 1800 base station 108834
CNS activity, mobile phone pulsed EM field effects *(German)* 87952
cochlear implants & GSM phones, compatibility 76699
code division random multiple access systs. with packet combining, anal. 107759
coded M-ary FSK DS CDMA, design and perform. 85770
coded multistage detect. in correl. Rayleigh channels, perform. 119954
codes for differential signaling with many antennas 83851
coherent high-speed TD-OFCDM broadband packet wireless access, multi-level modulat., hybrid ARQ 96423
column generation models for channel assignment in cellular networks 119859
compact handset antenna, design 83719
competition in telecomms. indust. *(German)* 108663
competitive anal. of on-line randomized call control in cellular networks 85616
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
concatenated vector-valued fading channels, asymptotic eigenvalue distrib. 131268
conf., Osnabruck, Germany (May 2000) *(German, English)* 67384
connection admission control, path/location use 85872
constrained channel assignment, approx. algms. 85870
contention-based service syst., queueing anal. 84915
context awareness and mobile phones 85655
Cool Shield EMI shielding with thermal mgt. 105815
coord. training/transm. for interf. cancellation 105809
CPUs, 32 bit design for handheld consumer electronic product appls. 90942
CSP proc. with reworkable underfills for mobile phone appls. 113708
CSP/MCM-L impact on portable wireless product substr. requirements 124381
current distrib. on cellular telephone antennas affected by human body interact., estim. 117796
DAC benchmarking for commun. appls., syst.-oriented approach 108572
data channels, rate-adaptive protocol 85896
data services with differentiated QoS, fair resource sharing scheme 74685
data services with QoS provisioning, fair resource sharing scheduling 96492
data syst., Aloha channel perform. 85622
DB Regio trains, syst. diagnosis, data transm., GSM-module *(German)* 100271
DCA, blocking probab. anal. 85679
DCA in mobile cellular networks, perform. anal. of min. call blocking probab. 96560
DCS 1800 base station, receiver downconverter, silicon RFIC 120078
DCS base station broadband probe-fed patch antenna 131256
DCS-1800 syst., overview of interfering emissions 96593
decomposable random walk model for mobility in wireless commun. 85645
DECT/GSM portable dual-mode terminal, baseband proc. 108831
delayed location registration procedure 131261
dementia wandering location syst., telemetry, cellular phone & GPS 76774
digital camera images transfer to Internet viaGSM phone 119835
digital cellular base station, dielec. resonator duplexer 74798
digital cellular networks, hyperb. radiolocation 96603
digital cellular radio, optimum combining diversity finite-length DFE 119967
digital mobile handset transmitters using Tropian Polar Impact technol. 120039
digital phased array antenna syst. for cellular PCS band appl. 83759
dipole enhanced characts. using nonconventional metallic reflectors 128847
direct conversion digital six-port receiver, analog carrier recovery loop 96612
direct conversion single-chip receivers, tri-band GSM appls. *(German)* 85648
distributed adaptive channel allocation scheme 74830
distributed location mgt. for wireless networks, perform. anal. 97031
distributed power control algm. for cellular radio systs. 96584
distributed power control algms. 74736
DOA super-resoln. estim. in switch beam smart antenna 84653
DoCoMo's music distrib. service 120052
double-directional channel meas. 84655
downlink transm. power control for CDMA/shared-TDD packet commun. 96514
DRABR protocol for seamless handovers in wireless ATM networks 85009
DS-41 and UMTS intersystem roaming 96474
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753
DS-CDMA, adaptive cell sectorization 85586
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA, multiuser space-time channel estim. under reduced-rank constraint 74667
DS-CDMA, perf. of closed-loop power control for packet transm. in multipath fading 120060
DS-CDMA, successive interf. cancellation with optimum geometric power disparity 108722
DS-CDMA adaptive array antenna systs., grouped multipath reception *(Japanese)* 107367
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA BPSK cellular radio model using simplified improved Gaussian approx. 74786
cellular radio continued
DS-CDMA cellular forward link, transmitting array antenna beamforming 108887
DS-CDMA cellular mobile radio, reverse link power control improvement 108897
DS-CDMA cellular mobile station power control by error approx. 108896
DS-CDMA cellular radio, power control params. optim. 108659
DS-CDMA cellular radio systs. anal. 108951
DS-CDMA cellular syst., dyn. allocation optim. of transmitter power 131183
DS-CDMA cellular syst., perfect power control, path-loss and fading models 74770
DS-CDMA cellular syst., Rayleigh fading, power control, forward-link perform. 74717
DS-CDMA cellular systs., adaptive array antenna beam pattern selection *(Japanese)* 131255
DS-CDMA cellular systs., adaptive channel reservation scheme for soft handoff 74725
DS-CDMA cellular systs., multi-channel assignment schemes, handoff study 108850
DS-CDMA cellular systs., SINR maximizing equalizer receiver 119949
DS-CDMA cellular systs. in freq.-selective multipath fading channel, SIR meas. 85811
DS-CDMA cellular two-tier systs., multi-channel access 108849
DS-CDMA coded asynchronous systs., long vs. short spreading seqs. comparison 108859
DS-CDMA coded systs., multicell uplink spectral efficiency 108856
DS-CDMA commun., adaptive narrowband interf. cancellation 85820
DS-CDMA commun., lin./DF joint detectors using periodic long codes 130170
DS-CDMA commun., space-time multiuser detect. in Rician fading channels 108723
DS-CDMA detect., semidefinite prog. appl. 107593
DS-CDMA detect. with combination of smart antennas and parallel interf. canceller 96518
DS-CDMA downlink SINR maximizing RAKE receiver 108922
DS-CDMA FDD mobile radio, suboptimal algms. for downlink beamforming 85857
DS-CDMA forward link imperfect orthogonal MUX, nonlin. amplif. 108947
DS-CDMA forward-link resource allocation based on pricing 96462
DS-CDMA interblock data rate downlinks, comparison 74664
DS-CDMA mobile radio, concatenated channel coding, transmit power outer loop control 96425
DS-CDMA mobile stations, joint blind rate detect. and data decoding 85779
DS-CDMA multi-cell randomly spread syst., multiuser detect., inform. theory 119105
DS-CDMA multi-service cellular systs., admission control, interf. estim. 74816
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS-CDMA multicarrier systs. over multipath Nakagami fading channels, parallel code-acquisition 74748
DS-CDMA multicell syst. with base station diversity, perform. anal. 74777
DS-CDMA multirate systs., channel estim. 108918
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA networks with multiuser receivers/spatial diversity, resource pooling/effective bandwidths 74631
DS-CDMA nonreal time data, power control/intracell scheduling 131149
DS-CDMA PCS indoor systs. with distributed antennas, forward link perform. eval. 85744
DS-CDMA sigs., blind source extraction 85882
DS-CDMA sub-sym. based multiuser detector, syst. capacity 74658
DS-CDMA syst. downlink, chip-based multiuser detector 96551
DS-CDMA syst. with smart antenna in wideband multipath channel 130287
DS-CDMA systs., adaptive narrowband interf. rejection, parallel interf. cancellers scheme 83356
DS-CDMA systs., CAC based on interf. 85846
DS-CDMA systs., Cramer-Rao bound for joint DOA/time delay estim. 107309
DS-CDMA systs., efficient blind multiuser detector 73717
DS-CDMA systs., joint multidimensional channel param. estim. using modified SAGE algm. 74644
DS-CDMA systs., multi-class services support with limited channel elements, Erlang capacity anal. 85743
DS-CDMA systs., multistage semi-blind adaptive multiuser detector for reverse link 131227
DS-CDMA systs., narrowband interf. suppression, FT-domain tech. 73852
DS-CDMA systs., semi-blind spatio-temporal equalization and multiuser detect. 85815
DS-CDMA systs., throughput enhancement scheme using lin. multiuser detectors 108676
DS-CDMA systs. with closed-loop power control, error probab. anal. 131180
DS-CDMA wireless multirate syst., multipath fading channels, perform. anal. 85630
DS-CDMA wireless systs., noncoherent MLSE detect. of M-DPSK 107583
DS-CDMA with lin. interf. suppression, pilot-to-data power ratio optim. 85800
DS-CDMA with multipath, spreading code adaptation 108828
DS-SS packet radio commun., serial matched-filter acquisition, AGC effect 108814
DS/CDMA, block-sync., struct. multiuser channel estim. 119981
DS/CDMA cellular overlay systs., open-loop power control error anal. 85856
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
DS/CDMA inter-cell sync./asynchronous appls., CDSA fast/robust PN code acquisition *(English)* 108939
DS/CDMA long-code systs., channel estim./multiuser detect. 108854
DS/CDMA multiple-chip-rate systs. supporting multiclass services, radio resource mgt. 96504
DS/CDMA multirate commun., multiuser detect. 107571
DS/CDMA pilot channel assisted syst., channel power assignment 108797
DS/CDMA syst. with mixed multirate sources, forward-link capacity 96505
DS/CDMA systs., multiuser detect. with cell diversity 84790
DS/SSMA with random spreading seqs./matched filter receiver 85803
DSP core FPGA implement. for full rate/half rate GSM vocoders 74768
dual band TDMA power amps., analog power control IC 91346
dual-band dual-mode RF front-end for WCDMA & GSM appls. 108654
dual-band in-building wireless networks 85600
dual-band phones, human head, power absorpt. and temp. elevations 88009
dual-mode filters using metallized dielec. resonators, cellular base station appl. 102560
DVB version 2.0 *(German)* 97052
dyn. adaptive channel reservation scheme in cellular networks 85762
dyn. carrier allocation strategies for mobile cellular networks 119934
dyn. cellular network archit. with high throughput and QoS guarantees 85901
dyn. freq. hopping 131246

llular radio continued
dyn. single freq. networks 131153
E-911 location stds. and location commercial services 85627
E-shaped planar inverted-F antenna, low absorpt., triple-band cellular phones 72479
ECG sigs. acquisition and tele-transm. via mobile phone 110512
ECG transm. syst. for cardiac arrest treatment 133180
EDGE, reduced complexity fractional spaced equaliser struct. 73822
EDGE 2-stage soft-output equalizer 84861
EDGE air-interface, capacity anal. 85631
EDGE mobile radio syst., space-time coding 85670
EDGE syst., power control for wireless packet voice 74674
EDGE systs., blind equalization feasibility 84871
EDGE-based designs, enhanced data rate for GSM evol., test techs. 85706
efficiency of space-diversity reception 131219
EGPRS packet scheduling, differentiated services provision 74817
EGPRS wireless networks, link adaptation/power control for streaming services 131161
EGSM/DCS1800/PCS triple-band cellular systs., integrated SAW antenna duplexer 92761
EM field exposure effect on sleep EEG 76721
embedded systs., dyn. reconfigurable archit. 96532
encryption std. recommendations using ellipt. curve cryptography 83948
End-of-Life Strategy Environmental Impact Model 100698
energy consumption, product life cycle studies 108966
energy efficient network protocols 108791
enhanced wireless network archit. for future commun. environ. 108725
enhancement mode PHEMT power amp. MMICs, single supply, GSM/DCS appls. 91370
equalization with widely lin. filtering 130270
Ericsson EnergyMaster wireless power syst. supervision syst. 111927
Ericsson ENGINE Integral Network soln. for telecomms. mgt. 130594
European in-vehicle traffic IS 120515
European smart antenna test-bed, field trial results 117849
Extended GPRS voice/data stat. MUX, MAC layer 96448
external power supply markets, current status, future prospects 88819
fair scheduling with location-depend. errors, cellular data services 120080
FDD DS-CDMA systs., downlink inter-cell interf. cancellation 108957
FDD systs., downlink space-time proc. 119046
FDD UMTS bands, wideband propag. meas. 83277
FDD wireless access syst., ad-hoc commun. 108412
FDMA/TDMA cellular systs., network capacity and QoS mgt. 74829
FEC, convolutional and RS coding, interleaving syst., appls. *(Italian)* 83869
feedback commun. over fading channel, power control 119975
feedforward power amp. with diode lin. for cellular base stations 91251
FH CDMA mobile cellular networks, adaptive array appl. 107308
film bulk acoustic resonator duplexer for USPCS handset appl. 85906
fixed cellular broadband wireless systs., transmit power control 85559
fixed channel assignment in mobile radio networks, fast constructive algm. 108965
fixed channel assignment with no feasible assignment, GA *(Japanese)* 96555
fixed mobile Internet convergence 85184
fixed wireless access syst., simulated tolerance for uplink sync. 85560
flat-time-delay transversely coupled resonator SAW filter, parallel connected filter tracks 92716
forward-link cellular DS-CDMA over freq.-selective Nakagami multipath fading channels 131144
fourth generation mobile commun. and devel. 85605
fourth order band-pass $\Delta\Sigma$-modulator 79634
fractal-shaped antennas and GSM 900/1800 appl. 128854
freq. assignment problem, interf.-oriented version 131145
freq. re-use from high altitude platforms 108731
freq. reuse dist. reduction using TCM 96493
freq.-selective fading channels, space-time block-coded multiple access 85719
FSP/FSU spectrum analyzers, FS-K5 firmware for GSM/EDGE meas. 86438
future mobile phones, design challenges from embedded systs. perspective 85903
future telecomms., capacity limits 74633
General Packet Radio Service, perform. anal. 74773
Genetic Algorithm for Mobiles Equilibrium applied to video traffic 107906
geo-location in urban areas using sig. strength repeatability 131704
GERAN, GSM/EDGE Radio Access Network, syst. overview/perform. eval. 96413
GERAN, realization of real-time bearer services 108727
global inform. infrastructure, networks integrat. 119935
GMSK multicarrier modulator, devel. and implement. 79623
GMSK signaling over multipath channels, turbo equalization based on Gibbs sampler 107718
GPRS, channel allocation 74728
GPRS, network intell. 131184
GPRS, radio link control level, acknowledgment procedures 85641
GPRS and TETRA PMR networks, NAI resoln. mechanism 85776
GPRS network, Snoop TCP protocol anal. 73926
GPRS network planning on existing GSM syst. 74047
GPRS networks, retransmission mechanisms perform. 85883
GPRS radio interface for Internet appls., perform. eval. 85592
GPRS services, billing 74622
GPRS systs. behaviour, modelling and anal. 120066
GPRS wireless WAN, TCP perform., effect of delays 107949
GPRS with IP QoS support 107905
GPRS/EGPRS enhanced voice over IP support 96442
GPS relative positioning of one mobile phone user to another 131703
GSM, adaptive multi-rate speech service *(English)* 74723
GSM, adaptive multirate speech codec *(English)* 74721
GSM, GPRS and UMTS, integrat. of mobile computing 108215
GSM, microstrip rect. ring bandpass filters 74797
GSM, perform. anal. of channel assignment with prioritized handoff procedures 108689
GSM, uninterrupted data transm., health services appl. 108955
GSM 1800-based pers. telemedicine equipt. deployment, propag. issues 83278
GSM 900/1800 handset terminals, built-in antennas, near-field influence 87940
GSM 900/DCS 1800 prog. PLL-based fractional-N freq. synthesizer 91321
GSM A5/1 stream cipher attack 129281
GSM adaptive multi-rate syst., wideband speech coding *(English)* 74724
GSM and UMTS mobile systs., anal. blind discrete source separation 118801
GSM and UMTS networks, evol. of location services 108785
GSM base stations, near EM field levels calc./meas. 85612
GSM cellular handsets, stats. of meas. body loss 119938
GSM cellular networks, seq. paging of mobile users, POMDP approach 74671
GSM channel equalization with complex-valued MLP 130281

cellular radio continued
GSM dual band TC35 module, config. and features *(Spanish)* 74848
GSM duplexer, 1RU rack mounting, extracted pole resonator 74686
GSM evol., estim. of random access slots 108784
GSM fast fading channels, blind/nonblind turbo estim. 108937
GSM handset antennas, total radiated power meas. methods eval. 119959
GSM microcellular/macrocellular systs., hyperb. posn. location 131126
GSM mobile positioning simulator 86263
GSM mobile telephone handset, low complexity pre-detect. antenna syst. 105946
GSM mobile terminals, anal. of proposals to reduce SAR levels 108931
GSM network traffic distrib. anal. 74866
GSM networks, fraud detect., rule-based neural network syst. 108683
GSM networks, retrial/redial phenom. 96447
GSM receiver acoustic echo cancellation using simplified Volterra filters 130059
GSM short message service for ubiquitous accessing 131166
GSM systs., freq. sync. acquisition 85784
GSM teaching to GSM teaching, hypermedia approach 67453
GSM terminals real-time detector 85713
GSM to GPRS, cellular wireless data transm. evol. 131205
GSM-1800 syst., adaptive array antenna, calib. errors 94195
GSM-based mobile positioning using WAP 97012
GSM-EDGE high power amp., digital lin. 101789
GSM-R cellular positioning method for location depend. addressing 96576
GSM/air navig. networks, generalized EMC anal. 83403
GSM/DCS mobile radio network, database alarms intell. search 131118
GSM/EDGE, mobile channels zeros distrib. 85859
GSM/EDGE radio access network, further evol. 131248
GSM/EDGE speech capacity booster, qtr. rate AMR channels 108786
GSM/EDGE syst., adaptive PSP-MLSE receiver in fast multipath fading channels 85684
GSM/GPRS networks, core network planning, optim. and forecasting 85841
GSM/GPRS/UMTS networks, asymmetric cryptography introduction 129264
GUIDE project, develop. and deployment of context-aware tourist guide 74374
H.263-based turbo-equalised video telephony for GSM/GPRS 130279
hand effect on cellular phone radiation 122410
handheld wireless product remaining batt. capacity gauging 96540
handoff algm., perform. anal. using dist. and RSSI meas. 108765
handoff arrival proc. in cellular commun. 74715
handoff initiation algm. and related params. 96569
handoff traffic charactn. 108804
handover algm., optim. based on posn. of mobile terminals 85849
handset, GPS receiver 96486
handset, high-impedance ground plane 96431
head exposure to cellular phone helical antennas, FDTD method 133074
health effects and precautionary principle 76719
heterog. fixed and mobile networks, mobility convergence 131104
heuristic approach for antenna positioning in cellular networks 131165
heuristic assignment of cells to switches in mobile cellular networks *(French)* 85578
hierarchical cellular syst. with fuzzy control, channel assignment/layer selection 96499
hierarchical hybrid network archit. for integrated services 85090
hierarchical microcellular networks, random early blocking 85783
high dens. lead-free soldering, appl. to 0603 chip component *(Japanese)* 91517
high speed wireless data access using antenna arrays 119920
high T_c supercond. filter subsystems, wireless telecomms. 71083
high T_c supercond. receiver equipt., mobile commun. 131222
high-accuracy digital 5 bit 0.8-2 GHz MMIC RF attenuator for cellular phones 102721
high-altitude platform links, rain scatter interf. levels calc. 83388
high-capacity cellular mobile radio, fully adaptive channel allocation strategies 74834
high-capacity wireless systs., perform. comparison of space-time archit. 108771
HIPERLAN/2, concept of forwarding mobile terminal 119635
HIPERLAN/2, providing IP QoS 119326
HMM for blind channel estim., time depend. inclusion 96508
home appliance control syst., prototyping 108776
hot-spotted network, data transfer with prefetching 108217
HPA nonlin. effects on freq. multiplexed OFDM sigs. 119922
HSCSD and GPRS, review of new mobile terminals *(German)* 96308
human head, mobile phone emissions, absorpt. calcs. 133069
human head SAR reduction, directional antennas for cellular phones 87938
human head temp. rise for cellular phones, peak SARs prescribed in safety guidelines 111193
HV towers, mobile phone base station, safety aspects 133772
hybrid channel assignment using space partitioning 108851
hybrid image rejection receiver, archit./perform. 85585
hybrid method using optic beam interconnects 85895
hybrid TDMA/CDMA-TDD interface, DCA algm. 131147
hyperb. mobile station location in cellular networks, accuracy 74837
I/O heterog. devices, markup lang./syst. 108145
ICEBERG, service portability achievement 96102
IEEE 802.11 WLAN, cell planning 108207
IEEE broadband wireless Internet access, conf., Richardson, TX, USA (April 2000) 78405
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE image and sig. proc. and anal., conf., Pula, Croatia (June 2000) 89596
IEEE pers. wireless commun., conf., Hyderabad, India (Dec. 2000) 89556
IEEE vehicular technol. and commun., conf., Leuven, Belgium (Oct. 2000) 78454
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
IF SAW filters, high selectivity, CDMA mobile phones 96528
IMT-2000, channelization code assignment scheme 85778
IMT-2000, partially decentralized resource-mgt. 74821
IMT-2000 3G mobile commun., bal.-fed planar built-in antenna 83556
IMT-2000 and beyond, radio technols. for future mobile commun. 120053
IMT-2000 mobile handset, small broadband internal antenna 105904
IMT-2000 smart antenna syst., radiation patterns of circ. array 105961
IMT-2000 syst., pilot sig. aided coherent RAKE receiver 96573
IN technol. in mobile network 96581
in-vehicle cell phones use, driver distraction and rel. to car accidents 108870
independent lognormal random variables sum, distrib. bounds 85716
Indonesia, field expt. in fixed wireless CDMA IS-95 74598
indoor precoded packet wireless systs., fast code rate adaptation 96445
infostations wireless data network archit., multiple access issue 96471
InfoTorg online service, migration to WAP 108927
integrated cellular and ad hoc relaying systs. 131164
integrated cellular and ad-hoc relay syst., perform. anal. 131280

cellular radio continued
integrated dyn. radio resource mgt. based on Euclidean dist. metric *(Chinese)* 96534
integrated mobile phone antennas, design 83598
integrated service PRMA, anal. of voice loss ratio and data delay 95909
integrated services future broadband radio access 108645
integrated voice/data cellular syst. handoff, perform. anal. 96578
interactive digital terrestrial TV, wireless return channel/WITNESS project 120509
Internet, multiresolution-multicast video distrib. 95122
Internet delivery, telecomms./computer/broadcast technols. convergence 108105
Internet integrat. with next generation networks *(Polish)* 85319
Internet middleware technol. *(Japanese)* 119624
Internet mobile radio networks 85894
Internet mobile telephony, adaptive resource allocation during handoff 85311
Internet wireless access, highly sectorized syst. 83701
Internet wireless user behavior capture, unique identifier tracking anal. 108156
internetworking protocols, cellular mobile internet *(Chinese)* 108794
IP, global wireless systs. integrat. 85666
IP based integrated wireless network, archit./mobility mgt. 96449
IP in GSM, GPRS and UMTS mobile networks *(Polish)* 85866
IP service provision over heterog. wireless networks, 4G develop. 108241
IP wide area cellular networks, proxy services incorporation 85732
IP wireless networks, QoS scheme for handoffs 85312
IP wireless networks with multiple classes, QoS provisioning through flexible fair queuing 74859
IPMoA, Integrated Personal Mobility Architecture 130831
IPv6, future approval networking 107829
IS, integrated isochronous/bursty media data, channel-state-depend. bandwidth allocation 107847
IS-136 commun. syst., bitstream-based front-end for wireless speech recogn. 84048
IS-2000 CDMA networks, fast forward link power control perform. 85797
IS-95 and 3G CDMA forward link waveforms, peak-to-av. power ratio 108808
IS-95 CDMA, voice privacy anal. 131236
IS-95 CDMA uplink, perform. improvement using decision feedback and sub-optimal Viterbi decoding 108936
IS-95 cellular CDMA location, assisted forward link triangulation proof-of-concept interim results 120493
IS-95A and IS-95B/cdma2000, comparison of soft handoff perform. 108766
IS-95A uplink code, decoding 74628
iter. decoding 72881
IVHS, cellular radio based vehicular location finding 96477
IVHS, global vehicle location syst., GPS/cellular telephones 131690
IVHS packet-switched cellular single channel radio archit. 108952
J-CDMA/AMPS appl. IF-baseband CMOS receiver, 110-MHz 108833
Japanese cdmaOne syst., band-switching SAW antenna duplexer 96527
joint nominal DOA and ang. spread estim. via extension of array mode vector 108721
joint predistortion/transmit diversity 74679
label switched packet transfer 85875
ladder SAW filter on ZnO/GaAs struct., 900 MHz, anal. 91237
large-scale mobility databases in cellular telephone networks, overflow elimination 74632
LCDs futuristic refinements, mobile phones appl. 121113
LDMOS power transistor, cellular base station appl. 126825
LEO constellation with Earth-fixed cell syst., dyn./fixed channel allocation, perform. anal. 74802
LEO MSS, capacity improvement using channel reshuffling 74805
LEO satellite commun. systs., channel assignment strategy without handoff failure 120098
LEO satellite mobile commun. systs., elastic handover 74804
LEO satellite networks, simulcast-based DCA for unicast/multicast commun. 96616
LEO satellite networks, spotbeam handover mgt. 74803
LEO satellite systs., efficient scheme to reduce handoff dropping 74876
LEO satellite systs., fixed channel allocation handover strategies 131302
light traffic in cellular syst. with mobile subscribers and appls. 119997
lin. topol./high user mobility, QoS anal. 96476
LMDS channel meas. and modeling for parameterized urban environ., 28 GHz 108929
location area planning using simulated annealing 119987
location estim., hybrid time and angle of arrival method 108675
location services, enhancement of pers. safety and stimulation of business opportunities 108783
location update strategy, varying user profile based 96577
location-depend. inform. service using data broadcasting *(Japanese)* 119737
lock opening/closing with image base by cellular phone via Internet 74863
long. coupled dual-mode leaky-SAW resonator filter, upper-sideband suppression 116213
LOS microwave urban propag., upper and lower bound evals. 83299
loss formulas, optim. 96500
low-complexity voice recogn. in car environ. 85836
low-power sync. oscillator in SiGe technol. for UMTS 2000 appls. 69199
low-temp. polysilicon TFT LCDs for mobile appls. 132113
LTCC materials for high dens. multilayer interconnect 124378
LV SC bandpass $\Delta\Sigma$ modulator 79633
MACA, cellular network channel allocation scheme 74809
Mandarin speech coding using modified RPE-LTP tech. 85420
Markov modulated Poisson proc. model for hand-off calls 96457
max. likelihood differentiation between static and mobile users 119932
MC-CDMA turbo coded uplink, iter. multiuser detect. and decoding 119235
MC/DS-CDMA in cellular systs., estim. of spectral efficiency 85842
med. equipt., electronic, EMI by radio waves coming from outside the hospital 122446
memory bus transaction reordering for reduced power consumption 102160
MEMS devices for integrated wireless commun. transceivers, IST MELODICT project 74831
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
MIMO interf.-limited cellular syst., attainable throughput 108657
MIMO interf.-limited cellular syst., simul. results 74752
MIMO-EDGE mobile radio channel meas. and exptl. implement. 108914
MISO CDMA transm. with simplified receiver for wireless commun. handsets 74791
mixed platform wireless handover distrib. with multimedia services 108933
Mixed Power Control with Directed Assignment for interf. reduction in channelized wireless systs. 85644
MM-wave transceivers for point-to-point radio 85618
MMIC chip set and MMCM for cellular commun. 120030

cellular radio continued
MMIC lin. power amp. for 3.5 V batt. operated W-CDMA handsets 80334
MMS, multimedia messaging service, building on success of SMS 131247
MMSE chip-level equalization at cell edge 84860
MMSE-DFE receiver with spatial diversity, design and anal. error perform. 85808
MMSEC-RAKE receivers with diversity branches resoln. reduction, anal./simul./appls. 85721
mobile cellular networks, approx. anal. of handoff traffic 85788
mobile cellular networks with bursty traffic, blocking 120014
mobile commun., driver distraction and vehicle accidents 78555
mobile commun., hard handoffs, alternative metrics 85671
mobile commun., mobile station rate, base station dist. and received sig. strength 108767
mobile commun., spectral moment approach to vel. estim. 96440
mobile commun. systs., access network mgt./control by neural networks 108948
mobile community commun. syst. 107861
mobile computing environ., reduced cell switching 74377
mobile computing protocol-based handover, formal spec. and verification 131232
mobile computing/ubiquitous networking, concepts/technols./challenges 85183
mobile data services, converging IN and Internet AAA systs. 131190
mobile environ., load balancing using dyn. channel assignment and channel borrowing 85764
mobile environ., predictive end-to-end QoS 130395
mobile environ., public key infrastructures adaptation 118011
mobile inform. society and DSP, current and future technols. 118793
mobile Internet, mobile host location 95903
mobile Internet, WAP usability study 74355
Mobile IP for 3G wireless networks 85004
Mobile IP for large-scale network syst., reduction of signaling traffic 73891
mobile IP hand-offs, movement detect. methods 119636
Mobile IPv6 and cellular telephony 95890
mobile location algm. *(Chinese)* 97033
mobile multimedia appls., algm. for proc. environ. automatic selection 96490
mobile network, multicast protocol for multimedia streaming 130380
mobile network operators, competitive strategies *(German)* 74845
mobile networks, agent-based forwarding for location mgt. cost reduction 85651
mobile networks, bandwidth allocation considering multimedia components priorities 85724
mobile networks, connection rerouting enhancement model 85074
mobile networks, indiv. location area mgt. 108901
mobile networks, location tracking, integrated strategy 97010
mobile networks, optimal distributed location mgt. 86268
mobile networks, prog. handoff design/implement./eval. 131173
mobile phone fabric antennas integrated within clothing 83523
mobile phone use, availability mgt. 119494
mobile phone use, survey 119493
mobile phone user behavior 108826
mobile phones, location query proc. via behavior based strategy 96613
mobile phones and driving, UK perspective on government policy 78557
mobile phones peak SAR assess., head tissue complexity role 85613
mobile posn. location with constrained bootstrap filter 109325
Mobile RSVP with dyn. resource sharing 95860
mobile satellite Earth terminals, out-of-band emission limits 83417
mobile software agents appl. 108180
mobile station location estim. accuracy 97017
mobile systs., load-bal. location mgt. using quorums and dyn. hashing 131212
mobile systs., opt. MM wave generation 85619
mobile technol. use, sociological/indust. views 119497
mobile telephones, new user study 119495
mobile telephony networks, tariffs/QoS trade-offs, integrated design approach 130612
mobile terminal impact of cellular-IP convergence strategies 85782
mobile terminals posn. estim. from delay meas. with survey data 120494
mobile transmit diversity for base-station antenna arrays 105934
mobile users with uncertain params., tracking 74855
mobile wireless commun. beyond 3G 120003
mobile wireless Internet, intell. handoff 84996
mobile wireless network, influence-based channel reservation 131198
mobile wireless networks, perform. modeling of multimedia traffic 108696
mobile-assisted data forwarding, ad-hoc overlay addit. on fixed cellular infrastructure 85795
mobility impact on cellular network config. 74716
mobility portal services and next generation network technols. 108823
mobility-based predictive call admission control/bandwidth reservation 120018
Mobilizer, distributed protocols for networks with mobile users 73918
modem protocols for analog cellular data collection systs. 85025
modified distributed CAC scheme and perform. 74714
modified Viterbi algm. for non-Gaussian interf. 119990
modulatable periodic complete complementary codes, generalized constr. 83897
Motorola MC13760 multi-mode transceiver for mobile telephones, digital interfaces *(German)* 131250
MPEG audio layer III decoder using dual-core DSP, archit./implement. 118105
MPEG-4 audio-visual coding, error-resilience features and appl. to 3G multimedia terminals 96268
multi-band mobile telephone antennas 83528
multi-class cellular wireless networks, bandwidth allocation strategies 120025
multi-layer cellular systs., service prioritisation queuing scheme 108899
multi-period network design problem for cellular telecomm. systs. 107993
multi-service networks with mobile users, perform. anal. 96460
multi-std. wireless appls., single-chip CMOS front-end receiver 108832
multi-tier cellular network dimensioning 108792
multiband frontend for software radios using high IF and act. interf. cancellation 96611
multiband terminal/base-station antennas for mobile commun. 83711
multicarrier CDMA techs. for future wideband wireless networks 108840
multicarrier DS-CDMA, effects of amplit. clipping on SNR and spectral splatter 96580
multicarrier m-ary/DS-CDMA systs., perform. anal. for high-data-rate transms. 108755
multicast appls., agent-based approach 74860
multicast services, constrained tree migration scheme 131160
multicell migration for network capacity increase 108819
multicell wireless data network, pricing/power control 131151
multichannel array subbanding with adaptive proc., architect. 96537
multifunctional monopole antenna array for terrestrial and satellite radio appls. 83768
multihop mobile networks, on-demand QoS routing 120069
multimedia cellular networks, call admission control proc. 131271

llular radio continued
multimedia cellular networks, integrated capacity manager 131117
multimedia commun., IP-based multi-tier network 131141
multimedia inform., mobile adaptation, content model 119793
multimedia radio IP networks, handoff resource reservation 131155
multimedia wireless networks, autonomous predictive resource reservation for handoff 131200
multipath environ., meas./predicted time dispersion/DOA comparison 117679
multiple access protocol with explicit/implicit reservation 73925
multiple carrier CDMA syst. for integrated voice and data services, Erlang capacity 108756
multirate CDMA cellular systs., partial interf. cancellation receiver 85821
multistandard terminals, radio access selection 131114
multiuser detect., pilot-channel based adaptive algm. 74694
multiuser interf. suppression using optimal seqs. combined with antenna arrays 94059
music content, security and superdistribution *(Japanese)* 131238
Nagano 1998 Winter Olympic Games telecomm. services 85125
Nakagami channels, correl. gamma variates sum for wireless systs. perform. 131233
Nakagami fading, CCI, av. error probab. of optimum combining 85747
Nakagami fading channel, multiple equal-power cochannel interferers, perform. anal. of max. ratio combining 74735
narcolepsy patients, mobile phone EM field, visual event related pot. effects 133084
narrow-beam antennas and fractional loading factor 74732
NEC Digital Mova N502it HYPER, develop. *(Japanese)* 85414
network archit. for mobile commun. systs. beyond IMT-2000 131207
network assisted power control for wireless data 131171
network mgt. goals, data-centric solns. 130548
network mgt. using mobile agents 120045
next generation mobile commun. systs., traffic engng. 96464
next generation networks, service archit. 131191
next generation wireless, path to high-speed mobile multimedia services 131204
next-generation mobile commun. systs. 96608
next-generation mobile Internet, end-to-end QoS 85028
next-generation wireless systs., signaling protocol for intersystem roaming 130368
Nokia mobile handset syst. family archits. 96524
Nokia WCDMA expt. syst. for macro cell meas. 83306
non-geostationary satellite based UMTS systs., antenna pointing algms. 85914
noncoherent LMS algm. for noncoherent seq. estim. 73830
Norwegian teenagers, mobile telephony use 119496
OFDM carrier freq. offset estimator 74741
OFDM cellular systs. utilizing direct-spread slots, airframe extension 131279
OFDM sig. dyn. range limiting to reduce peak-to-av. power ratio 106056
OFDM syst., freq. offset estim. 85817
OFDM-CDMA mobile radio syst., multipath fading channel, BER eval. 108893
one-hop/sym. FHMA perform. 74733
online commun. in cellular networks 108693
open delta winding vibr. motor for cellular phone appls. 134099
operation zones in hospital hallways for cellular telephones 94057
opt. fibre-fed millimetre-wave radio systs. for broadband services 74564
optimal handoff control incorporating delay 85789
optimal transmit-diversity precoders for random fading channels 74824
OSA-enabled global appl. roaming 131187
outages and BER, microdiversity/macrodiversity effects 85802
over-the-air handset mgt. 85620
packet data commun. network, requirements and implement. *(Japanese)* 96556
packet data mobilisation 96557
PACS Mobile and multicast IP services, syst. archit., prototype, and perform. 84997
paging strategy, user location probab. algm. 108903
parallel saturating multioperand adder design, GSM speech coders 131019
partial compensation sig.-level-based up-link power control for extending terminal batt. duration 108812
patch antennas for future mobile commun. terminals 83602
PCS, caching-based location mgt. 108669
PCS adaptive dist.-based location update algm. 131156
PCS and IMT-2000 base station wideband microstrip array antenna design 117828
PCS base station, broadband dual polariz. patch antenna 72559
PCS base station, dual receiver front-end 108789
PCS hierarchical microcell/macrocell archit., teletraffic perform. 85725
PCS network, efficient location mgt. based on moving location areas 119986
PCS network design, cell-to-switch assignment algm. with load balancing 85761
PCS networks, paging schemes with delay bounds as QoS constraints 131210
PCS surface mount vector modulator 91235
PCS/cellular syst. design, indoor propag. 74757
PDC handset diversity antenna perform., head/hand/shoulder effects, diversity antenna gain 108691
pedestrian navig. using small wireless handheld display 109320
perform. anal. of adaptive modulation with optimum power control in cellular systs. 85685
pers. mobility mgt., universal model 96475
pers. mobility/service portability support strategies eval. 96487
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
pers. wireless commun., conf., Lappeenranta, Finland (Aug. 2001) 113214
phone, human head, SAR 85615
phone, LSI packaging, 3D lamination layer *(Japanese)* 113693
phone design, 3G and 4G systs. *(Japanese)* 96554
phone design, 3G and 4G systs. *(Japanese)* 96553
phone power amps., integrated RF front-end modules 131220
phone-use related driver distraction detect. feasibility 78556
PHS network, massive scale air interface reciprocity (motion) survey 108908
PIFA compact dual-freq. designs using LC resonators 94125
PIFA/helical antenna on different ground planes, simulated impedance bandwidths/gains/radiation patterns/SAR values 83520
plane cover multiple access for cellular syst. capacity maximization 131239
planning, dyn./static methods 119977
polar lin. syst. for RF power amps., transmitter archit. 69213
portable electronic syst. miniaturization, device packaging evol. 78614
portable radio, near fields in front of and on far side of head model 98767
positioning systs. in urban environ. 131134
power amps., RF front-end modules 108943
power controlled cellular radio systs., time delay compensation 96542
predistortion-based lin. for forward-channel link broadband appl., CDMA 74704
PRISMA project, fiber-wireless network using flexible wavelength routing 109142
prog. mobile telephones 119492

cellular radio continued
protocol engng. from complex specs. 107896
PSK cellular radio signaling, data-aided freq. estim. 85864
PTF HF E-field probe for cellular phone equipt. testing 132118
public health concerns and emissions testing 122366
public WLAN access, fixed and cellular IP access towards broadband connectivity 108206
pulsed RF EM fields, effects on selected markers of immune syst. 87935
PWB surface finish proc. develop. for enhanced solder joint strength/reliab. 69316
QoS anals. of multimedia traffic in heterog. wireless IP networks 85387
QoS degrad. due to H/O hysteresis 74620
QoS guarantees in wireless commun. environ. 85771
QoS in mobile multimedia networks 95904
QoS provisioning for wireless networks distributed admission control, DCA perform. bounding 74729
QoS-based policy for call admission control in mobile cellular network 85791
QoS-sensitive wireless mobile networks, adaptive distributed call admission control 85751
QoS-sensitive wireless mobile networks, distributed call admission control, perform. eval. 131201
quadrature LC-VCO, low power/phase noise differential tuned 96498
quasi-dyn. networks, mobility protocols comparison 95863
radio channel assignment syst. *(Japanese)* 85723
radio noise and interf. above 30 MHz 83441
radiowave absorpt. by brain/eyes in human head eccentric spheres model, anal. 87950
RAKE 3G CDMA receiver, implement. to cdma2000 std. 85897
random power capture, perform. eval. 96535
random walk modeling, cell type classif. 108799
randomized saturation degree heuristic for channel assignment 74727
Rayleigh fading channels, min. duration outages 131179
reciprocal multipoint networks, LEGO approach for max-min capacity 108907
reconfigurable RF elements *(German)* 74785
rect. arrays for uniform wideband beamforming with adjustable struct. 105963
regulation challenges in area of mobile commun. *(German)* 108662
rem. area telecomm. network components, PV power supply 108455
RENE, Rice Everywhere NEtwork project, multitier wireless commun. 85499
repairable CSP underfill materials for reliab. enhancement 113598
repeater syst., mobile commun. cellular band, microstrip antenna 72669
RF cpd. semicond. technol. for mobile wireless commun. systs. 74801
RF radiation, health effects 122362
RF transceivers, MEMS device appls. 85604
RF-LDMOS lin. power amp. technol., high power/high efficiency 69231
RFI cases on co-located broadcasting sites 72388
RFICs for digital cellular 2G, 3G and cordless systs., status review 120079
RLC/MAC enhanced design for integrated services support over EGPRS 95861
road traffic estim. from location tracking data in mobile cellular network 96456
Rohde & Schwarz's CMU200 universal radio commun. tester for GSM BER meas. 78592
Rohde & Schwarz ROGER GSM interf. analyser 75388
Rohde & Schwarz Universal Radio Communication Tester CMU200, GSM mobiles testing 74795
Rohde & Schwarz Universal Radio Communication Tester CMU200 74794
Rohde and Schwarz's CRTU-G protocol analyzer 131838
Rohde and Schwarz's TS7100, cellular telephone prod. test platform 78591
Rohde and Schwarz CMU 300 universal radio commun. tester 86783
RS coded DS-CDMA cellular systs., errors-and-erasures decoding 131296
satellite CDMA systs., video transm. in generalized fading channels 108711
SAW antenna duplexer for mobile appl., miniaturization tech. 94204
SAW filter design issues for 3G cellular phones, packaging 85904
SAW ladder filters, design algm. 116223
SCARAB services for user and terminal mobility, online travel agency 74247
SCDMA systs. over multipath fading channels, blind fractal sig. estim. 96566
SDMA, blocking probab. improvement 84903
SDMA systs., blocking probab. determ., theoretical model 119214
secure subscription mgt. on agent based platforms 96017
seismic DP software radio receiver 122625
self-served mobile location query service 130920
self-tuning cellular systs. archit. 131115
semi-blind detect., burst unsynchronized CCI robustness 105810
service time distrib. modelling using phase-type distribs. 131278
Siemens and third-generation mobile commun. 96606
sig. detect. and timing estim. via summation likelihood ratio test 85823
single-channel noise reduction with pitch-adaptive post-filtering 118052
Situated Computing Framework for mobile and ubiquitous multimedia access using small-screen devices 130954
smart antennas, appl. for capacity enhancements in GSM networks 117858
smart antennas for multi-service UMTS, perform. study 117856
smart antennas using software radio archit. 72659
smart base station antenna 85767
SoC design, gradual refinement of commun., mixed-level cosimul. 79709
soft handoff between IS-95A and IS-95B/cdma2000, perform. eval. 74765
soft output Viterbi algm. and max-log-MAP decoding, equivalence 108681
Soft-Bar network-assisted resource allocation algm. 85874
softbit speech decoding with re-quantization *(English)* 73024
SoftCell™, multi-carrier chip-set for software definable radio base-stations 74669
software radio, software framework 96599
software radio download channel, accessing/allocation scheme perform. 85792
space diversity S-ALOHA with steerable beam smart antenna arrays, perform. anal. 74661
space-scatt. mobile radio networks, radio sigs. dyn. range 85614
space-time channel tracking for multipath fast-fading channels 130275
space-time equalizer devel./implement. 74858
spatial domain interf. canceller using multistage adaptive array with precise timing estim. 108878
spectrum analyzer, sig. analyzer and firmware for EDGE meas. 86439
SS commun. systs., noise-like carrier generation 84650
SS wireless mobile commun. networks, congestion 85769
state-depend. rejection based fresh/handoff traffic handling 74818
stochastic power control with averaging 85772
stratos. commun. syst., narrowband interf. rejection 108679
stream ciphers for GSM networks 94354
survivable load sharing protocols, simul. study 84967
SW hopping network, fixed channel assignment *(Chinese)* 74720
switching cells simul. by constraints prog. *(French)* 131129
Sydney 2000 Olympic Games, telecomms. delivery 85126
SyncML initiative, std. for pers. data synchronisation 130841
syst. archit. for broadband fixed wireless capacity maximisation 85572

cellular radio continued
T/CDMA archits., integrat. voice and data appls. 119212
talk-time increment with efficient lin. transmitter archits. 74634
TCP behavior over wireless links 85027
TCP/IP header compression impact on cellular syst. perform. 85737
TCP/IP protocol stack, requirements for real-time commun. in wireless environ. 107904
TD-CDMA, channel estim., optimum energy partition between data/midamble 74675
TD-CDMA MAC wideband protocol, scheduling scheme 130459
TD-CDMA syst. perform., radio resource allocation policies 131148
TD-CDMA uplink, multiuser detect. perform. 119946
TD-CDMA uplink, space-time sig. proc. using multistep joint detect. 96604
TD-SCDMA syst., perform. of smart antenna 96517
TDD DS-CDMA mobile commun. syst., link perform. 96564
TDD packet-switched cellular systs., interf. reduction 108848
TDD-CDMA receivers, soft Bayesian recursive interf. cancellation/turbo decoding 108938
TDMA cellular environ., achievable QoS for multiple delay classes 84916
TDMA cellular syst., channel ident. and interf. cancellation 131138
TDMA cellular syst., geometric-cost fn. DCA 108825
TDMA cellular telephone, EMI with hearing aid 94055
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decoding 108857
TDMA hybrid switched integrated voice/data mobile commun., traffic policy 85711
TDMA systs., lin./nonlin. space diversity combining algms. 119993
TDMA-based hierarchical cellular systs., mobile speed estim. 108806
TDMA/CDMA 3G systs., multirate transm. receivers 74660
TDMA/W-CDMA and N-CDMA/W-CDMA spectrum overlaid systs., interf. suppression 72356
telecomm. networks, dual mode phones overflow traffic anal. 96443
telemedicine syst., wireless, multi-purpose, effect of wavelet compression on data transm. 133163
TeleMIP mobility archit., QoS support integrat. 85674
telephone antenna radiation efficiency enhancement using low loss mag. plate 96558
telephone traffic mass meas. & anal., soft testing 119964
telephones, health impact, precautionary principle, EC commun. 122436
telephones, human head temp. rise, peak SARs, safety guidelines 88008
telephones, radiation efficiency, near field control around human model 74477
telephony, location technol., data protection 131182
telephony, prediction-based time-varying filtering for speech enhancement 107485
terminals localization, hybrid satellite/network method 96441
text-independent speaker recogn., influence of GSM speech coding 118113
thin lin. oscillatory actuator for celluar phone, coercive force *(Japanese)* 112728
third generation mobile commun., turbo codes, decoding implement. *(Chinese)* 106080
third generation mobile phone technol., content mgt. *(German)* 119943
third generation mobile radio systs., use of smart antennas 120064
third generation systs., MPEG-4 optimal packetisation 119966
third generation wireless commun., multiple rejects ARQ for RLC, perform. anal. 85003
third generation wireless networks, common mgt. archit. 96015
third generation wireless systs., open loop transmit diversity schemes comparison 85750
third order intermodulation interf. probab. 85689
third-generation mobile commun. 96607
third-generation mobile commun. syst., TDD CDMA, combined power control 74766
third-generation mobile radio base stations, LV differential signalling backplanes *(German)* 74623
third-generation mobile systs., neuron-based CAC for transport network 85840
third-generation mobile systs., security for core network 119360
time-reversal space-time block coding and transmit delay diversity 108911
time-slotted multihop mobile networks, connection admission control 131159
TPOCAST pers. inform. delivery platform *(Japanese)* 120005
transceiver, low power repeater 85667
transm. scheduling for efficient wireless utilization 120022
transmit antenna wt. adaptation with feedback, stochastic gradient algm. 84687
transmit diversity for arrays with correl. Rayleigh fading 108909
transmit diversity techs., matched filter bound 131291
transmit-diversity coding 118006
tunable SAW duplexer for dual-mode AMPS/CDMA cellular syst. 92759
turbo codes, decoding implement. in third generation mobile commun. *(Chinese)* 106114
turbo-coded modulation for transmit/receive antenna diversity systs. over block fading channels 72888
two-state pattern-recogn. handoffs for corner-turning situations 74726
two-tier radio networks, registration traffic and service availability 96454
ubiquitous computing and rem. user interfaces 108328
UHF commun. antennas charactn. in reverberation chambers 117806
UHF real-time spherical near-field handset antenna meas. 94178
UHF vehicle telematics syst. hidden antennas 120047
ultra fine isolator for portable phone, implement. using LC imped. match. ccts. 80227
Ultralife polymer electrolyte rechargeable Li-ion batts. for cellular phones 89091
UMTS, develop. and validation of mgt. strategies 85847
UMTS, develops. in cellular phones and terminal design 120063
UMTS, downlink interf. estim. 74624
UMTS, end-to-end QoS considerations 85628
UMTS, radio resource mgt., network perform. impact *(English)* 74784
UMTS, US CDMA-2000 approach, UMTS std., WCDMA *(Italian)* 85709
UMTS downlink capacity with space-time block coding, realistic channel model considerations 85827
UMTS mobile commun., W-CDMA IF receiver and transmitter 108944
UMTS mobile intranets 108373
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
UMTS multimedia commun. syst. *(German)* 131251
UMTS networks, multimedia, multicall service 130969
UMTS polariz. diversity perform. 85687
UMTS satellite systs., CDMA and PRMA anal. models for voice users 109032
UMTS sig. quality assess., time-freq. rep., virtual instrum. 119962
UMTS spatio-temporal propag. trial results 83302
UMTS terrestrial radio access network, ATM/AAL2 transport 96437
UMTS third generation mobile radio, differences from GSM *(German)* 74782
UMTS VoIP, first-order end-to-end delay anal. 96473
UMTS/IMT-2000, third-generation mobile systs. 108838
UMTS/IMT-2000 cellular networks, transport archit. evol. 74676

cellular radio continued
unequal SNR denoised commun. sigs., time difference of arrival estim. 108912
unknown data channels, nonlin. blind-deconvolution 85656
unsupervised neural network approach to profiling behavior of mobile phone users for use in fraud detect. 119933
user mobility patterns, iter. optim. scheme for resource adaptation 96458
UTD ray-tracing models, radio site topographical data, base station antenna design optimisation 83714
UTRA, common channel access perform. 119921
UTRA downlink with W-CDMA, space diversity schemes 120065
UTRA TDD, MMSE adaptive receiver 119947
UTRA TDD adaptive MMSE RAKE receiver 108916
UTRA-TDD, MAI 119945
UTRA-TDD and FDD syst., interf. 96563
UTRA/FDD uplink, space-time combining 74825
variable redundancy coding for mobile channels 129057
VBR CDMA traffic, power control policies syst. anal. 85876
vehicle motion, teletraffic charact. 74648
vert. IC packaging for portable appls. 100601
video traffic in cellular wireless ATM network, delay jitter perform. 74693
video transport over wireless channels, rate-control scheme 74636
virtual cellular networks for non-uniformly distributed base stations 131139
virtual home environ. trial over Mobile IP 96104
visiting mobile users, facilities provision 96105
voice/data integrated mobile wireless networks, dual-threshold reservation, perform. anal. 85734
voice/data services, integrated multiple access control/adaptive channel coding 84976
voiceband analog audio sigs., record, playback and proc. syst., coarse-fine prog. 131133
VoIP over cellular links, efficient transport 74401
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
W-CDMA, packet data access enhancement 107774
W-CDMA cellular mobile systs., distributed power control algm. 96585
W-CDMA cellular networks, connection admission control eval. 85851
W-CDMA cellular phone syst. adaptive fuzzy power control 120015
W-CDMA cellular syst., delay profile meas. syst. using common pilot channel *(Japanese)* 120049
W-CDMA cellular syst., soft handover algm. timer settings 96575
W-CDMA cellular systs., evol. of high-speed packet-data services 131249
W-CDMA cellular systs. supporting multimedia traffic, perform. eval. 84890
W-CDMA forward link, high-speed packet transm., hybrid ARQ schemes 96424
W-CDMA mobile cellular terminal positioning capabilities 131135
W-CDMA mobile commun. systs., switched beam antenna 108720
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller with iter. channel estim. 72355
W-CDMA mobile radio, reverse link site diversity, turbo/convolutional coding 108895
W-CDMA modem, prog. logic/proc. platform, multimedia capabilities 85418
W-CDMA network downlink, pilot-assisted spatio-temporal array-receiver 85830
W-CDMA networks, receiver perform., sync. impact 108830
W-CDMA networks for high data rate appls., resource allocation strategies 85763
W-CDMA power controlled schemes with interf. cancellation, capacity 85877
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108885
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
W-CDMA reverse link, inter-cell site diversity using two-step selection combining, expts. 74640
W-CDMA reverse link, receivers for packet transm., comparison 108884
W-CDMA syst., RLC multiple rejects ARQ for packet data service, perform. anal. 73897
W-CDMA syst. over Rayleigh fading channels, perform. anal. of init. cell search *(Korean)* 120012
W-CDMA UMTS systs., switched beam antennas, perform. and capacity 85844
W-CDMA VBR traffic, anal. framework 96455
W-CDMA-TDD for multimedia mobile commun. 96574
W-CDMA/digital TV sigs., ACI meas. via spectrum analyzer 72350
W-CDMA/GSM dual band and dual mode handset, RF front-end module design 108930
WAP archit., protocols and content formats *(German)* 119288
WAP integrated transport layer security 96590
WAP over Bluetooth, technol./appls. 119283
WAP protocol over GSM-SMS, perform. anal. 130454
WAP roaming with star*home and Exalink 96489
WATM/CDMA protocol, MAC layer anal. 73899
WB-CDMA terminal, low-complexity channel estim. scheme 85814
WCDMA, optimum demodulator for STTD 108678
WCDMA, periodic/event-triggered intra-freq. handover meas. reporting comparison 85787
WCDMA, radio network planning proc. and methods 108844
WCDMA, shared and dedicated resources perform. 96439
WCDMA, WMSA channel estim. tech., uplink perform. 74767
WCDMA appls., DSP-based high-speed turbo code decoder 96561
WCDMA cellular syst., calc. of cell capacity and coverage rad. *(Chinese)* 119941
WCDMA multimedia systs., optimal resource mgt. 74820
WCDMA receiver ASICs, cellular handset design 120076
WCDMA single code/multi-code signalling for high rate data transm., delay spread effects, BER perform. 96465
WCDMA single-user interf. cancellation for fading channels and diversity antennas 108777
WCDMA sync. channel and common pilot channel, transfer power allocation 96583
WCDMA systs., Kalman filter channel tracking algm. 74695
WCDMA third generation cellular telephones, power source improves output on transm. *(Spanish)* 108692
WCDMA UTRA uplink with unknown channel model order, smart antenna schemes 74688
WCDMA vehicular channels, turbo TCM error perform. 74808
WCDMA-based cellular wireless IP networks, TCP perform. 84984
Web, mobile WAP-based mgt. 108034
Web wireless mobile service, distributed proxy server syst. develop. 108157
wide-band low-cost suspen. patch element using 3D dual-feeding sect. 83564
wideband SAW-VCO, mobile commun., SAW resonator suppression tech. 85905
wideband TDMA networks, DCA, fixed cell assignment 120042

llular radio continued
wireless access network, congestion control for best-effort services 131193
wireless airborne commun. systs., overloaded array proc. 108694
wireless ATM, LAN emulation model 85293
wireless ATM networks and mobile IP 131192
wireless broadband networks, channel state-adaptive techs. for throughput enhancement 119925
wireless cell-cite, auto-config. 74812
wireless cellular networks models partitioning for parallel simul. of radio resource mgt. 85643
wireless commun. network, composite perform./availability anal. 73872
wireless commun. syst. time domain charactn., meas. station 119961
wireless commun. systs., optimal/suboptimal handoff control vars. 85591
wireless commun. systs., suboptimal handoff algms. implement. 74819
wireless DAQ, comparison of systs. 109453
wireless data network perform., self-similar traffic impact 131283
wireless data networks, link adaptation, perform. anal. 74811
wireless data networks, modelling of handoffs and perform. anal. 131102
wireless environ., prefetching protocol for continuous media streaming 130367
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
wireless Internet, mobile commun., location-based services 96592
wireless Internet over LMDS, archit./expt. implement. 74595
wireless IP-based networks, eval. of macro/micro mobility extensions 107852
wireless messaging services 108294
wireless mobile ad hoc networks, struct. routing 130392
wireless mobile multimedia networks, multi-agent syst. for resource mgt. 96588
wireless mobile networks, hyper-Erlang distrib. model appl. 85251
wireless mobile networks, low-cost multicast routing 96466
wireless mobile networks, mobility-based channel reservation 85794
wireless mobile networks with depend. calls arrival procs./impatient calls, handoff calls waiting time 96444
wireless multimedia commun., QoS mgt., feedback control model 108853
wireless multimedia commun. syst., traffic perform., access scheme selectability impact 119781
wireless multimedia networks, resource mgt. 108047
wireless multimedia traffic, distributed dyn. channel and packet assignment 96459
wireless network resource reservation based on pattern recogn. 108968
wireless networks, data fusion archit. for posn. estim. 109322
wireless networks, opportunistic transm. scheduling with resource-sharing constraints 131051
wireless networks, propag. considerations for growth planning 74758
wireless networks, resource allocation based on joint packet/call levels QoS constraints 74682
wireless packet network, handover/admission control 85790
wireless packet networks, service differentiation support using distributed control 131162
wireless pers. multimedia commun., conf., Bangkok, Thailand (Nov. 2000) 89557
wireless security 119942
wireless security technol. challenges 96066
wireless systs., utility-based power control 120017
wireless technols. convergence, results/experience 85796
wireless telecomm. systs., interf.-oriented version of freq. planning 108949
wireless world visions *(English)* 108475
wireless-based authentication/anonymous channels for large scale area 130382
WLAN efficient polling MAC 119944
WLAN/WAN integrat. archit. 85343
WLL, eval. of DECT, PACS, PHS stds. 74596
AlGaAs/InGaAs/AlGaAs enhancement-mode double-doped HJFET, celluar phone appl. 103900
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
BaSmTiO dielec. resonator bandpass filter for cellular phones 85415
GaAs PHEMT SP3T T/R switch for DCS 80375
GaAs PHEMT power amp. MMIC, single supply design for GSM handsets 91369
GaAs device mfg., 150 mm wafer line for wireless handheld commun. appls. 74851
GaAs device technols. in Japan, current/future appls. 74082
GaAs power FET, ultrabroadband, W-CDMA base station appl. 91244
GaAs power HFET, high efficiency, W-CDMA base station appl. 91243
GaAs push-pull FET, W-CDMA base station 126895
GaAs super self-aligned RF switch IC for mobile comms. appl. 102657
InGaP emitter HBT variable-gain LNA, 2 GHz mobile phone appl. 80381
InGaP/GaAs HBT power amp. MCM for 1.95 GHz W-CDMA handsets 96485
InP HBT IC technol./appls. 70291
Li-ion VARTA micro batts. for wireless telecomm. devices 89088
Mo gate VHF power VDMOSFETs, low volt. appl. *(English)* 126705
Ni-MH VARTA micro batts. for wireless telecomm. devices 89088
Si BiCMOS receiver IC supporting WCDMA, CDMA, AMPS cellular handset appls. 96483
Si MMIC BiCMOS LNA chip sets, high-lin. for base station appls. 69180
Si bipolar GSM power transistor, large-sig. model 91269
Si bipolar W-CDMA IF transceiver chip-set for UMTS mobiles 96484
Si power MOSFETs for microwave appl., R&D hist. review *(Japanese)* 91283
SiGe BiCMOS technol. LNA/mixer IC, lin., cell phone appls., 2.5-GHz 91351
SiGe bipolar universal dual band LNA implement. for wireless appls. 91357
Ta chip capacitor, 1608 size, 6.3 WV/10 μF, face down terminals for fillet-less surface mounting 115084
Zn-air Instant Power™ primary batts. for portable consumer products 89057

ellular telephones *see cellular radio*

ELP *see linear predictive coding*

ement industry
best safe plant practices, USA 78562
coal/pet-coke firing pipe design customisation 78580
concrete product life cycle anal./CAD, intell. syst. 125089
conf., Vancouver, BC, Canada (May 2001) 78478
CPCC's Mojave cement plant, GPS surveying 85938
detached plumes mgt. 78735
elec. maint./safety improvement, IEEE Standard 134701
facilities shutdown proc. due to network disturbances 134699
kiln drives, selection criteria eval. 89482
kiln firing, coke utilization, Hercules Cement Company experience 89486
kiln firing, petroleum coke utilization 89487
kiln firing oxygen enrichment concepts 89488
kiln main drive, AC and DC technols. comparison 89480
kilns, fans, ASD, maint./prod. improvements 89481
oxygen enriched firing experiences, USA 89489

cement industry continued
plant dry proc. line upgrade project, USA 89483
plant productivity mgt. with web server technol. 85351
plant semi-dry kiln proc. conversion project, USA 89484
Portland cement plant project overview, Florida, USA 89485
power syst. μP-based protective relays 89479
preventative maint. using vibr. anal. 89490
proc. gas anal./prod. control integrat. 78741
Uruguayan cement plant power quality problems 134698

cemented carbides *see cermets*

cements (building materials)
used only for those materials which bind together particulate matter so as to form a coherent mass of considerable strength. For cements that cause two or more separate masses to adhere see adhesion
cement-based composites, electronics, review 68416
cement-matrix composites, functional props., review 68417
microwave refl./transm. props. meas. 109949
Portland cement-based rectifying/thermocouple jns. 91752
struct. health monitoring by elec. resist. meas., review 114549
NaI std. 3 inch detector, improved quant. gamma-ray spectrosc. 121577

centralised control
500 kV substation automation syst. struct. discussion *(Chinese)* 89006
Chinese distrib. automation schemes *(Chinese)* 77261
DIALOG centralised railroad traffic control syst. *(Russian)* 123984
distrib. systs. integrated volt/VAr control 111877
HFC networks, improved guaranteed access MAC protocol 130400
large-capacity power transformers, adaptive cooling control device *(Chinese)* 112584
mobile ad hoc networks, hierarchical time-vector-routing 130504
mobile robot geometric form., vision based maint. 109702
NTU-Formosa integrated multi-agent soccer robot syst., constr. and dyn. anal. 75641
power plant mgt./control, integrated systs. develop. *(Chinese)* 88509
power plant water syst., centralized controlling scheme *(Chinese)* 77677
power syst. dyn. security improvement, load shedding, nonlin. prog. 111868
power syst. integrated control, multi-variable inverse syst. method *(Chinese)* 88358
public telephone message accounting syst. *(Chinese)* 96329
SONATA large scale all-opt. WDM network, centralised controller design 131499
turbogenerator integrated excitation/valve controller design, inverse syst. *(Chinese)* 88685
universal custom power conditioner with integrated control 112039
WDM pass. star networks, scheduling algm. for variable length messages 75039

centralised plant control *see centralised control*

centrifuges
BPSG planarization proc., capillary force vs. centrifugal/gravit. forces 103400
elec. turbocompressor variable speed motor driver selection 89357
toner satellite form. in electrostatically transferred images 83172
$YBa_2Cu_3O_{7-\delta}$ mag. bearings, centrifuge appls. 81995

cepstral analysis
automatic speaker recogn. syst. by neural nets 118122
blind ident. of nonminimum phase systs., mean differential cepstrum 129974
channel distortion compensation based on handset freq. response meas. 84052
conversational telephone speech transcribing, automatic algms. perform. 118146
DSP fixed-point implement., cepstral vocal tract modelling *(English)* 73034
forensic speaker discrim., comparison of two acoustic methods 73101
helicopter sound detect., neural networks, parametric spectral representation techs. 88249
homomorphic filtering appl. to sig. proc. 95709
isolated word recogn., high-perform. robust, sig. modeling 106402
isolated word speech recogn., finite-state VQ, dyn. spectral features *(Chinese)* 73057
laryngeal pathologies detect., acoustic anal. of speech, ANN 87500
lin. prediction and mel-freq. cepstrum coeffs. 83998
log-amplit. spectra, av. and smoothed periodograms 130007
low-bit-rate speech compression for playback in speech recogn. systs. 118148
mandarin digit string speaker-independent speech recogn. syst. *(Chinese)* 94424
med. B-scan ultrasound images, 2D noise-robust blind deconvolution 98306
microphone arrays, dereverberation and noise reduction 118055
multidimensional PDF approxs. for detect./class./model order selection 119085
PC-independent speech recogn. syst. using DSP 129409
pole-filtered cepstral mean subtraction method, implement. for speaker recogn. 84062
regularized autoregressive models, calculus of vars. and spectrum anal. *(French)* 107302
rel. entropy and covariance type constraints yielding ARMA models 105998
robust automatic speech recogn. in presence of impulsive noise 84026
rot. mach. vibr. sigs., Wigner-Ville spectral moments *(French)* 107303
second-order difference cochlear model-based speech recogn. 84069
speaker ident., effects of co-channel speech interf. 118106
speaker ident., feature extractor design 129404
speaker ident. using nonlin. dyn. features 129400
spectral envelope estim. of voiced sounds using penalized likelihood approach 83984
speech and speaker recogn., MFCC components importance *(Chinese)* 84055
speech recogn., complexity reduction using decimation of cepstral time trajectories 118152
speech recogn., Mel filter-like admissible wavelet packet struct. 84038
speech recogn., pseudo-correl. regions/cepstral region *(German)* 73086
speech sig. charact. in pseudo-correl. regions, calc. *(German)* 73092
speech sig. representation 118147
speech spectrum modeling applied to spectrum coding and prediction 106375
submerged moving obj., range and depth estim. by using noise cepstrum 120470
video sig. temporal events in all dimens./scales 95016

ceramals *see cermets*

ceramic ball grid arrays *see ball grid arrays; ceramic packaging*

ceramic capacitors
see also ferroelectric capacitors
automotive appls., reliable capacitor selection 89414
base metal electrode dielec. comps. for thick/thin layer MLC capacitor appls. 115061
base metal electrode MLC capacitor sintering, atmos. separation/closed loop O_2 control 115066
BG dielec. charact. MIL PRF 55681 capacitors, insulation resist. degrad. 115078
BME X7R/Y5V high-k dielec. for thin layer MLC capacitor appls. 80425
chip capacitors for automotive indust., qualification testing 89413
CMOS power amp., wireless SOP, LTCC pass. library 124374

ceramic capacitors continued
cpd. ceramic pass. components strength investigs. 69281
DC-DC converters, capacitor/resistor integrat. for improved efficiency/miniaturisation 79553
defective MLC capacitors, elec. test data anal. effectiveness 115074
dielec. materials for sintering in reducing atmos., MLCC appl. 115088
distributed SPICE cct. model 115049
dual electrode plate MLC capacitor for HV pulse appls. 89031
internally grounded feedthrough capacitor, reliab./appls. 115068
KEMET base-metal-electrode MLC chip capacitors, HALT 115079
low-sintering composite MLC capacitors, X7R specif. 80454
MLC capacitor, switched rectifier power supply *(Italian)* 91416
MLC capacitors, capacity increase, pricing *(Spanish)* 102773
MLC capacitors, vol.-efficient, elec. props. 80431
MLC capacitors with ultrathin dielec. layers, specs./test methods 80436
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 115077
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 115076
multifiber ceramic capacitor, prep. and props. 91427
perform. evals. for pulse-discharge appls. 123845
portable electronics appls., capacitor technols. 80437
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
replacements for tantalum capacitors, Murata products 115047
surface mount ceramic capacitors, AC testing 115075
technols./design practices for portable electronics 115070
voltage withstanding rating determ. 80444
X7R MLCC meas. using reson. excitation, lot reliab. anal. 80435
AgPd alloy powders, monodispersed/low-fire, for ultra-thin MLC capacitor electrodes 80427
$BaTiO_3$ MLC capacitor geom., optim. for max. yield during binder burnout 102786
$BaTiO_3$ added powder, electrode Ni paste props., multilayer capacitors 79428
$BaTiO_3$ based capacitors, dielec. props., sintering effect 80424
$BaTiO_3$ ceramic capacitors, NDT by PD method 116228
$BaTiO_3$ dispersability in Ni paste/powder, MLCs internal electrodes appl. 90585
$BaTiO_3$ high k low loss X7R dielec. aq. suspens. for BME MLC capacitor appls. 115062
$BaTiO_3$ internal capacitors, BSG sintering promoter 102766
$BaTiO_3$ nonlin. capacitors, situ characterisation 69278
$BaTiO_3$/Ni based MLC capacitor, dc-elec. degrad. 127280
$BaTiO_3$-based Ni-MLCC, core-shell microstruct. and elec. props., milling proc. effect 116177
$BaTiO_3$-based ceramic capacitors, depressed DC breakdown phenom. near Curie temp. 70459
Bi_2O_3-ZnO-Nb_2O_5 multilayer capacitor, electroplating technol. 115050
Cu end termination develop. methodology for base metal electrode based MLC capacitors 115086
Cu end termination electrodes for MLC chip capacitors, metal powder develop. 115063
Cu powder, monodispersed/highly cryst., for MLC capacitor electrode appls. 115064
Cu termination paste develop. for Ni base metal electrode MLCs 80429
Mg_2SnO_4, synthesis from metallic precursors via powder metall. route, XRD/EDX 68408
Ni powder, MCL internal electrode appl., sintering, elec. charact., particle size effects 125073
Ni powder for MLC capacitors, oxid. props. comparison 114426
Ni-MLC capacitors, Y5V dielec., bakeout-property rels. 80426
PMN:SrO ceramics, low temp. sintering 90557
$Pb_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films, capacitance dens. 125853
$SrTiO_3$ ceramics, sintering, HV capacitor appls. 102770
$SrTiO_3$:Nb_2O_5,NiO capacitor-varistor, sintered, XPS 125838
$SrZrO_3$ ceramics, sintering, HV capacitor appls. 102770
Ta:N-doped powder for MLC capacitors, anodized oxide film, struct. 114427
TiO_2 rutile capacitor, improving breakdown strength by gelcasting 114435
TiO_2-Y_2O_3-Nb_2O_5 capacitor-varistor ceramics, elec. props. 91423
ZnO-PMN composite monolithic varistor/capacitor ceramics, proc./charactn. 101508

ceramic filters *see crystal filters*

ceramic industry
elec. shaft furnaces for heat treatment appls. *(German)* 113140
high-speed IR kiln concept for decorative firing appls. *(German)* 113177
low technol. ceramics manufacturer, quality improvement efforts targeting 89893
microwave heating, pot. and limitations *(German)* 113139
plant cogen. facility optim. studies 134700

ceramic insulation
see also ceramic insulators
electrostatic chuck with thin ceramic insulation layer, wafer holding appls. 128707
sol-gel-derived 0-3 composite ceramics for direct write electronics appls. 102841
Al_2O_3-TiO_2, plasma-sprayed coating, elec. insulation behavior *(Korean)* 116189
ZrO_2-based ceramic insulation coatings for HTSC magnets, elec. charactn. 70437

ceramic insulators
see also porcelain insulators
HV disconnecting switches, seismic qualification *(Polish)* 99841
HV instrum. transformer ceramic insulator, 3D elec. field. anal. 88803
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. performs. 88470
vintage ceramic suspen. insulator integrity assess. 88471

ceramic packaging
see also multichip modules
50 GHz broadband SMT package for microwave appls. 113629
area array rework challenges in PCB assembly 113576
BGA, 1 mm pitch, reliab., design/proc. effects 113569
BGA package, Pb-free solder alloy 113655
BGA/CSP standardization, 2000 status 113599
Bluetooth radio module design using low-temp. cofired ceramic technol. 74779
CBGA assembly, reflow soldering, reliab. 113553
CBGA to FR4 PCB with no underfill thermal mismatch study 113732
closely spaced perforations of microstrip line on ground plane, CAD formulas, synthetic asymptote 102588
CMOS chip, organic/ceramic packages, simultaneous switching noise 113668
CMOS power amp., wireless SOP, LTCC pass. library 124374
CMOS test vehicle, CBGA package, core switching noise 113669
coaxial single range thermal convertor, multi-jn. thin-film thermoelement 109408
column grid array modules, mfg. proc. for high vol. prod. 78646

ceramic packaging continued
column grid array package rework proc., challenges/solns. 113575
column grid array packages, assembled/reworked, reliab./failure anal. 124334
component placement, 3D vision technol. appls. 115140
conductive layers in LTCC ccts., assembly props. 78657
diode, ceramic/plastic package, solder joint crack propag. 113664
electronic interconnects/packaging, material factors 69934
embedded pass. components for MCM technols. 125943
embedded RF capacitors in low temp. cofired ceramic, modelling/testing 113641
epoxy adhesives, stress effects, packaged LTCC, mag. appls. 67548
flip-chip/CSP components on ceramic substrs., rapid power cycling 67621
glass solder micro-appl. for micro-systs. technol. prod. techs. *(German, English)* 116108
IC pressed-ceramic package antenna for single-chip wireless transceiver 128868
IF SAW filters, high selectivity, CDMA mobile phones 96528
intell. power electronics modules, embedded power packaging technol. 81534
IPC 7525 stencil design guidelines for electronics assembly, overview 115137
liq. cooled LTCC substrs. for high power appls. 89857
localizable HDI-PCB technol. develop. 113588
LTCC materials for high dens. multilayer interconnect 124378
LTCC MCM substr., design of strip-line struct. and flip-chip interconnects 100591
LTCC microwave packages, vert. transits., LMDS appls. 100592
LTCC multilayer technol. for thick film sens. appls. 131879
LTCC photolithographic feature fab. 124379
LTCC tape systs., chem./structural/mech. props. 79434
LTCC-multilayer module design with integrated liq. cooling syst. 124354
MEM sens. arrays 100582
MLC IC-BGA device reliab. 78642
multilayer low temp. cofired ceramics, wideband vert. transits. 89861
no-clean stencil printing proc. develop. for SMT/through-hole interconnect technols. 124339
OptoBGA opto-electronic SMT package for next-generation fiber optic data links 113727
optoelectronic transponder, ceramic quasi-planar packaging technol. 113512
plastic-encapsulated hermetically sealed automotive electronic components, thermal study 134560
power semicond. package using combined module/discrete assembly 70324
SDH STM-16 short-haul syst. compact 3R-receiver module 120144
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
solder column interposer ceramic grid array technol. for ACPI appls. 113578
thick-film multilayer MCM-C interconnection using diffusion patterning technol. 67645
thick-film/LTCC materials for wireless appls., eval., meas. techs. 80343
VIA/BGA(R)low-cost high-perform. packaging technol. for broadband telecomms. 78613
W-CDMA 180 W 3G LDMOS power amp., internally matched LTCC 102610
Ag-Pd(Pt) metallized LTCC modules, thermal fatigue in reflow solder joints 124319
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
CaO-B_2O_3-SiO_2 recrystallizing glass-ceramic, stress testing for HF electronic packaging 67553
Cu/Ag thick film conductors on Al_2O_3 substrs. for power appls. 78658
GaAs MESFET LTCC Ku-band transmitter module, integrated filter, satellite commun. appls. 96620
ZrW_2O_8, temp. compensation, radial Bragg grating package, interferometric hydrophone arrays 104665

ceramic superconductors *see high-temperature superconductors*

ceramics
see also ceramic capacitors; ceramic industry; ceramic insulation; ceramic packaging; ferroelectric ceramics; glass ceramics; piezoceramics; refractories
3D electrode/electrolyte interface in SOFC, FEM 112845
abrasive jet machining device, precision etching 116109
act. antenna hardware for wireless commun. systs., new multilayer techs. 83727
buried/surface LTCC resistors, DC/AC elec. props., long-term stabil. 125840
ceramic thin films, low temp. liq. phase deposition, review 101419
chem. pyrolysis, nanomaterials prod. *(Chinese)* 126592
complex diamond cond. ceramic paste film, field emission perform. 86808
constrained sintering of glass/glass-ceramic/ceramic coatings on metal substrs. 101482
cryst. opt. materials, brief review 104600
cryst. spherical ceramic particles, low-power plasma torch prep. method 68407
elec./thermal functionally graded ceramic systs. 114440
electroceramics, evolving trends, recent research, review 104225
EM shielding charact. of opt.-fiber feedthroughs 72377
embedded foil stress sens. shock response anal. 97852
epoxy/ceramic based populated PWBs, ecological comparison 100716
ferrite ceramic chips, Cu electrode glow discharge deposition 115098
films, electrodeposition, fuel cell membranes 125039
flaws and anoms. detect., acoustic microimaging 125145
gas moisture, porous Al_2O_3 sens. 75930
glass ceramic green sheet, micro-via proc., Nd:YAG laser ablation *(Japanese)* 83061
heavy scintillating materials for precise heterog. EM-calorimeters 110381
high-speed IR kiln concept for decorative firing appls. *(German)* 113177
high-temp. Young's modulus meas., laser US 68489
high-throughput micromachining with solid state UV laser 128188
ion beam modif., conf., Canela, Brazil (Sept. 2000) 78463
IR-transparent opt. material kinoform element fab. 105599
IR-transparent opt. materials, kinoform elements fab., technol. principles 105601
laser cutting, ceramic materials with metallized surface 128604
laser machining, elastic thermal stresses minimization 72138
LTCC resistors, elec./stabil. props., US microscope characterisation 69263
LTCC-MLC balun, WLAN/Bluetooth 80221
materials deposition using powder/precursor vehicles by direct write proc. 101499
MCFC electrochem. materials research *(Chinese)* 134381
microcomponents, rapid prototyping fab. proc. 127125
microelectronics, devices and materials, conf., Postojna, Slovenia (Oct. 2000) 78447
microstrip antennas on high permitt. ceramic substrs./small ground planes, expt. study 83529
microwave heating, pot. and limitations *(German)* 113139
MLC technol., directional coupler 80217
MLC/composites, med. imaging phased arrays 111535
MOV, oxygen role at grain boundary 91407

ramics continued
MS9001FA gas turbine ceramic components, perform. benefit assess. 123212
nanostruct. thick-film gas sens., fab., air pollution meas. 99030
opt. 2×2 switch matrix with electromechanical micromotors 93197
opt. flow computation 129616
oxyfluoride:Tm vitroceramics/glasses, opt. props., display apl. 116919
Panabeam ceramic metal halide lamp *(Japanese)* 124059
pass. RF band-pass filters in LTCC module, prep. from fine-line thick-film pastes 114868
PCS phone surface-mounted chip dielec. ceramic antenna 83551
piezoelec. transducer cochlear implant, bending piezoelec. mode, modelling 111164
planar multi-cell struct. integrated reactive module 124373
plate-like ceramics, AC calorimetric thermal diffusivity meas. 110038
polymer-ceramic composite electrolyte cond. enhancement for Li-ion cells 99945
polymer-ceramic nanocomposites for MCM-L integral capacitors, colloidal proc. 69277
refractory ceramic coatings, procs., systs., wettability/adhesion 101481
siloxane polymer lightwave cct. on ceramic substr., ultrafast optoelectronic multi-chip-modules 117034
SOFC, multi-layered ceramic components, thermal shock resist. 99977
SOFC ceramic materials synthesis from aq. solns. 89239
SOFC ceramic membranes, oxygen generation perform. comparisons 99990
SOFC-components, ceramics study 112844
symposium, chem. proc. of dielec., insulators and electronic ceramics, USA (1999) 113276
thick film struct. microfabrication using colloidal suspens./photoresist masks 104221
thin bimaterial ceramic systs., thermally induced fracture behaviour 125079
transformer life extension, continuous moisture removal, ceramic mol. sponges 134122
water-quality monitor with ion selective electrodes 120988
X-band waveguide window, 3D simul. and sensitivity anal. 69088
0.7Ba(Mg,Ta)O_3-0.3Ba(Co,Nb)O_3 ceramics, sintering, microwave dielec. props. *(Korean)* 116123
$3Al_2O_3$-$2SiO_2$ ceramic material, microwave heating, FDTD modelling 113144
Ag metallization on co-fired MLC substr., strength of solder interface 67535
Ag-sheathed $(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ multifilamentary tapes, fab., props. *(Japanese)* 127469
AlN, KrF excimer treatment 72125
AlN ceramic, material proc., fs/ns/μs laser ablation 125082
AlN:O ceramics, radiation induced recomb. procs. 127921
AlN-Y_2O_3, ceramic, stimulated luminesc. with UV radiation 127913
β″-Al_2O_3 ceramic membrane, potentiometric NO sens. 97514
Al_2O_3, ceramics low temp. bonding, sol-gel proc., SEM, TEM 125080
Al_2O_3 particle suspens., ink jet deposition, modelling/droplet form. 101500
β″-Al_2O_3, thermal plasma proc. 90556
Al_2O_3-SiC composites, self-propag. high-temp. synthesis tech. anal. 79432
Al_2O_3-TiC ceramic columnar topography form. on excimer laser ablation, TEM anal. 72127
Al_2O_3-TiO_2, plasma-sprayed coating, elec. insulation behavior *(Korean)* 116189
Al_2O_3-ZnO-TiO_2 and In_2O_3-ZnO-TiO_2, microwave dielec. props. 68993
(Ba,La)TiO_3 PTCR ceramic, CO gas sens. 97479
(Ba,Sr)TiO_3 ceramic films, microwave props., phase shifters 80253
Ba ferrites, investig. of mag. force 81828
$BaBiO_{2.77}$ varistor property promoter in ZnO ceramics 69262
$Ba_{1-x}Ca_xTi_{1.02}O_3$ ceramic, PTC thermistor, elec. props. 80410
$BaFe_{12}O_{19}$ hexaferrite monodispersed nanoparticles, prep., mag. props. 104505
$Ba_{1-x}La_xTiO_3$, sintering, O coulometry, SOFC appl. 101498
$BaMO_3$ (M=Ti, Zr, Hf, Sn), humidity sens. materials 121298
$Ba(Mg_{1/3}Ta_{2/3})O_3$-$Ba_5Ta_4O_{15}$ ceramics, microstruct., microwave dielec. props. 116130
$Ba_{6-3x}(Nd,Bi_y)_{8+2x}Ti_{18}O_{54}$ solid soln., struct. and MW dielec. props. 92598
BaO-TiO_2-Nd_2O_3-La_2O_3 ceramic, struct. and dielec. props. *(Chinese)* 125088
$BaTiO_3$ PTC ceramics with low resist., Cl^- effect on props., thermistor fab. appl. *(Chinese)* 90553
$BiNbO_4$ based microwave dielec. ceramics, low firable, sintering, microstructs., dielec. props. 68402
Bi_2O_3-ZnO-Nb_2O_5 microwave ceramics, effect of CuO-based oxide additives 79429
Bi_2O_3-ZnO-Nb_2O_5 pyrochlore ceramic films for dielec. appls. 92589
$Bi_{1.8}Pb_{0.4}Sr_2Ca_{2.1}Cu_3O_x$/Ag tapes with CeO_2 barriers, microstruct., elec. props. 127449
$(BiPb)_2Sr_2Ca_2Cu_3O_x$/Ag sheathed, HTSC wire 127429
$Bi_2Sr_2CaCu_2O_8$ HTSC textured ceramics for improved current leads 77411
$Bi_2Sr_2CaCu_2O_{8+x}$, SOFC contact layers, chem. compatibility 89174
$Bi_2Sr_2CuO_{6+x}$, SOFC contact layers, chem. compatibility 89174
C ceramic TVO temp. sens., mech. stabil. 109484
C fiber reinforced SiC ceramics, high-precision lightweight components for optomechanical appls. 82267
CaO-Li_2O-Sm_2O_3-TiO_2 microwave dielec. ceramic, sintering temp. effects 125645
$Ca_xPb_{1-x}TiO_3$:Li^+ film, prep., humidity sens. appl. 75439
$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
$CaTiO_3$-$Ca(Mg_{1/3}Nb_{2/3})O_3$ with near zero temp. coeff. of reson. freq., high Q value 91177
CdS platelet particles synthesis/charactn. in octylamine-water syst. 115325
$Ce_{0.5}Gd_{0.4}O_{2\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
CeO_2:SrO, fuel cell electrolyte, electrochem. stabil. 112831
CoMgNiO oxygen sens. material, high temp. defect struct., elec. props. *(Chinese)* 75704
Co_3O_4-NiO isobutane sens., low temp. operation 97523
Cr_2O_3 plasma-splayed ceramic coatings. microstruct., high-temp. tribological props., additives effects 68409
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ NTC thermistors, reliab. 102763
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ spinel-based ceramics, technol. modif. 114445
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ syst., controlled thermistor effect 102762
Fe_2O_3, thermal plasma proc. 90556
(HgPb)$Ba_2Ca_2Cu_3O_y$ HTSC, mag. suscept. and AC loss meas. 70615
$La_{0.67}Ba_{0.33}MnO_3$ CMR mag. sens., polycryst., fab., appl. 75471
$LaCrO_3$-CrFe5$Y_2O_3$1 heat-resistant elec. conducting joint, brazing, SOFC 123790
$LaGaO_3$ powders, pure and doped, chem. synthesis by amorph. citrate/EG method, oxide fuel cells appl. 123780
$LaMg_{0.5}Ti_{0.5}O_3$-$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
$La_{1-x}Pb_xMnO_3$ CMR ceramics, co-precip. oxalate precursor prep. 68406
La(Sr)Cr(Ru,Mn)$O_{3-\delta}$, SOFC anodes, catalytic/electrochem. props. 134379
$La_{1-y}Sr_yFe_{1-x}Al_xO_{3-\delta}$ cathodes/YSZ electrolyte for SOFC, chem. stabil. 112846
$La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.2}O_{2.8}$, gelcasting, proc./elec. props. 114431

ceramics continued
$La_{0.65}Sr_{0.3}MnO_3$, SOFC cathode, HTSC contacts compatibility 89174
$La_{0.67}Sr_{0.33}MnO_3$ CMR mag. sens., polycryst., fab., appl. 75471
$La_{0.4}Sr_{0.5}Ti_{0.6}Fe_{0.4}O_{3-\delta}$, mixed cond., SOFC anode appl. 112847
$La_{2/3}TiO_3$-$TiNiO_3$ ceramics, prep., microwave props., microstruct. 114923
γ-$LiAlO_2$(100) substrs., GaN(1100) M-plane plasma-assisted MBE 101252
$LiCoO_2$ for rechargeable lithium batts. 99916
$LiNbTaTiO_3$ low sintering temp. microwave resonator ceramics, prep., props. 114924
$MgAl_2O_4$/Al(Ag) heterophase boundary, local bonding, ab initio study 103217
MgCuZn ferrite, low temp. sintering and elec. and mag. props. 114429
MgO addits., aq. powder coating methods for boundary engineered ceramics 114441
Mg_2SnO_4 ceramics, elec. charactn. 70368
Mg_2SnO_4 ceramics, synthesis-proc.-microstruct. correl. 68401
Mg_2SnO_4, synthesis from metallic precursors via powder metall. route, XRD/EDX 68408
$Mg_{1-x}Sr_xTiO_3$ ceramics, structural/microwave dielec. props. *(Korean)* 114437
$MgTi_{1-x}M_xO_3$ (M=Mn,W) ceramics, elec., dielec. props., dopant effects 116128
$MgTiO_3$-$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
Mn-Ni-Fe-O NTC ceramics, aging behaviour, thermistors 101494
$Mn_{1.5}CoNi_{0.5}O_4$, elec. props., firing, O_2 partial press. depend. 114434
Nd:$Y_3Al_5O_{12}$ ceramic laser, high efficiency, LD end-pumped 82567
Nd:YAG ceramic laser, LD end-pumping scheme, output charact. 105225
Nd:YAG ceramics, hot band reson. pump, spectrosc. and laser emission 105231
Nd:YAG ceramics, laser emission under reson. pump in emitting level 93545
Nd:YAG polycryst. ceramic SHG lasers for photofabrication light source 105228
$Nd_2Ba_{0.5}(Sr,Ca)_{0.5}ZnO_5$, microwave dielec. props., cryst. struct. 114926
$Nd_{0.33}Eu_{0.33}Gd_{0.33})Ba_2Cu_3O_y$:$CeO_2$-Pt, microstruct., mag. props. 116505
$NdNiO_3$ film, PLD 114374
$NiMn_2O_4$ spinel, decomp., quenching, TEM/XRD 114447
PMN:SrO ceramics, low temp. sintering 90557
(Pb,Ca)(Zr,Ti)O_3 ceramics, effect of PbO loss on microwave dielec. props. 70371
$Pb_{0.425}Ca_{0.425}La_{0.1}((Mg_{1/3}Nb_{2/30.\$}\ d5)Ti_{0.5})O_3$ ceramics, dielec. props. 92595
$Pb_nNb_2O_{5+n}$ solid soln., struct./stabilty, electron microscopy 114927
PbO electrode, valve-regulated lead acid batt., electrochem. perform. 123743
Pr_6O_{11}-based ZnO ceramic varistors stabil., microstruct., elec. props., Er_2O_3 addit. effect 79427
$R_{0.8}Sr_{0.2}Fe_{0.8}Co_{0.2}O_{3-x}$ (R=La,Pr,Nd,Sm,Eu,Gd), prep./charactn. 101493
$RTiNbO_6$ ceramics, prep., charactn., microwave dielec. prop. 104235
Si-C-N(:B) ceramics, struct. and transport props. 126102
Si-on-ceramic thin film solar cells, light trapping, monolithic array 100157
SiBCN ceramics, high-temp., dopable electronic materials 69562
SiC seal rings, laser surface microtexturing, tribological prop. 105625
SiC suspens., ultra fine spray, thin film preparation, electrostatics 79410
SiC:V,B, liq. phase sintered, elec./thermal conduct. 115350
a-Si_xC_y:H films, three-electrode reactor fab., amorph. semicond./amorph. insulator 124928
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealing *(Korean)* 114436
SiCN ceramics, high-temp., dopable electronic materials 69562
Si_3N_4 balls, subsurface Hertzian crack detect. using OCT 114564
Si_3N_4/Si_3N_4-TiN laminates, crack propag. detect., elec. resist. 114550
SiSiC ceramics substr. infiltration/recrystn., Si thin film solar cells 100069
SnO_2 Pd-catalysed microwave nanoparticles, CO-CH_4 selectivity 132053
SnO_2 ceramics, chem. precip. & freeze-drying, CO gas sens. 75714
SnO_2 electroceramics with additives, elec. props. 103060
SnO_2 nanopowders, surface reactivity, gas sens. props., particle size influence 120959
SnO_2 varistors, (Ni,Nb)-doped, elec. nonlin., Mn^{2+} effect 115037
SnO_2-based ceramics, powder milling, I-V charact. 102759
SnO_2-based varistor, effect of La_2O_3 doping on microstruct./elec. props. 70227
$Sn_{1-x}Ti_xO_2$ varistor, doped solid soln., nonlin. I-V charact. 125845
Sr ferrites, investig. of mag. force 81828
$(Sr_xCa_{(1-x)})_{n+1}Ti_nO_{3n+1}$, struct.-microwave props. rels. 114925
$Sr_{0.97}Ti_{0.6}Fe_{0.4}O_{3-\delta}$, mixed cond., SOFC anode appl. 112847
$Sr(Ti_{1-x}Fe_x)O_{3-\delta}$ ceramics, resistive oxygen sens., elec. cond., thick films 109780
$SrTiO_3$ doped thin films, high temp. cond. behavior 81635
TaN thin film, growth & precursor props., MOCVD/XRD 114364
Ta_2O_5 thin film, growth & precursor props., MOCVD/XRD 114364
TiO_2-Y_2O_3-Nb_2O_5 varistor syst., nonlin. elec. behaviour anal. 80743
U_3O_8 powder, alternative method to produce MTR fuel elements 101477
V_xO_y film, PLD 114374
WO_3-$Na_2O(MnO_2)(Al_2O_3)(NiO)(Co_3O_4)$ ceramics, elec. props. 90552
Y-Ba-Cu-O, unidirectional solidif., supercond. rod current leads 116506
YBaCuO superconds., MAGLEV appls. 92885
$YBa_2Cu_3O_{7-x}$, SOFC contact layers, chem. compatibility 89174
$YBa_2Cu_3O_y$ bulk HTSC, melt-texture joining 81944
$Y_{1-x}Mn_{1-y}O_{3-\delta}$, ceramic route synthesis, elec. cond. meas. 114442
Y_2O_3-CeO_2 composite ceramics, intermediate temp. SOFC appl. 89185
YSZ/NiO-YSZ thin film syst., elec. & microstructural investigs. 112849
$Y_{0.2}Ti_{0.18}Zr_{0.62}O_{1.9\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
$Zn_{1-x}Co_xO$ semiconds., photoacoustic spectra 103051
ZnO LV varistor ceramics, microstruct. and props. 101489
ZnO based varistor, grain boundary elec. charact., EBIC/SEM 115976
ZnO ceramic varistors, ageing effects, dielec. spectrosc. *(Polish)* 115036
ZnO ceramic varistors, degrad., EPMA, ambient sintering 80411
ZnO electronic ceramic powder, combustion proc. synthesis 100566
ZnO matrix, MV cable, cold applied elastomeric termination systs. 133737
ZnO nanostructured based varistor materials, impedance spectrosc. studies 115304
ZnO varistor, LV, microstruct. and elec. props. 81405
ZnO:Bi_2O_3, electronic ceramics, microwave sintering, varistor appl. 114446
ZnO:Bi_2O_3,Sb_2O_3,CoO,MnO, nanosized powders, sintering, elec. props. 104263
ZnO:Li ceramics/films, PLD, ferroelec./dielec. props. 104386
ZnO:Pr varistors, electronic interface states at grain boundaries 102764
ZnO:SnO_2 based varistor ceramics, microstruct. & elec. prop. 101496
ZnO/Zn_2TiO_4/β-Bi_2O_3 phases mixture LV varistor, chem. proc. prep., proc., phase evol. 125081
ZnO-$BaTiO_3$/CuO/La_2O_3 gas sens., NO_2/CO_2 monitoring 122716
ZnO-Bi_2O_3-Bi_2O_3 varistor, elec. charact., comp. depend. 80414
ZnO-Bi_2O_3-TiO_2-Sb_2O_3 varistor ceramics, sintering condition 80419
ZnO-based ceramic films, prep. & props., sol-gel proc. 126915
ZnO-based varistors, elec. charact., modified citrate gel tech. 70226
ZnO-based varistors, inversion boundaries, study using electron microscopy methods 69267
ZnO-based varistors, modified citrate gel routes 101497
ZnOBi_2O_3:Y_2O_3 varistor ceramics, microstructural & elec. charact. 101495

ceramics continued
ZnSe:Cu ceramics, opt. and elec. props. 91616
$(Zr,Sn)TiO_4$-La_2O_3-NiO ceramics, sintering, microwave props., annealing 114438
ZrO_2 opt. connect ceramic ferrule capillary high-speed flow finishing *(Japanese)* 104622
ZrO_2 suspens., ultra fine spray, thin film preparation, electrostatics 79410
ZrO_2-based ceramics, net-shape forming, superplastic deform. 68413
$(Zr_{0.8}Sn_{0.2})TiO_4$ ceramics, microstructs., microwave dielec. props., additives effects 101476
$(ZrSn)TiO_4$ microwave ceramics with low sintering temp., control of Zn 114449
Cerenkov counters *see Cherenkov counters*
Cerenkov radiation *see Cherenkov radiation*
cermets
Panabeam ceramic metal halide lamp *(Japanese)* 124059
Ag-SnO_2-In_2O_3 elec. contacts, prod. optim. 90563
Cr-Cr_2O_3 cermet solar absorbers, non-invasive opt. topographic eval. 100215
Cr-Cr_2O_3, spectrally selective composite coatings, solar energy appl. 113019
Mo-Al_2O_3, spectrally selective composite coatings, solar energy appl. 113019
Ni/CeO_2-GdO_2 cermet SOFC anodes, internal fuel reforming expts. 89251
Ni/Y_2O_3-ZrO_2 cermets, prep., SOFC anode appl. 101510
Ni/YSZ SOFC anodes, hydrogen oxid. rate limitations 89244
Ni/YSZ cermet anodes in H_2-H_2O SOFC, competitive adsorpt. react. mechanism 100015
Ni/ZrO_2 anode catalyst prep., mist pyrolysis method, SOFC appl. 79441
Ni-SDC/La(Sr)Ga(Mg)O_3/La(Sr)CoO_3 single SOFC, perform. 99967
Ni-YSZ cermet SOFC anode materials charactn. 89249
Ni-YSZ graded cermet foils, anode substrs., planar SOFC 99955
Ni-YSZ porous cermet SOFC anode, electrochem. charact. 89247
Ni-ZrO_2 cermet SOFC anode, internal reforming/electrochem. perform. studies 89250
Ni-ZrO_2 cermet SOFC anode perform., ionic-cond. effect 89243
Ni-ZrO_2 cermet anodes, SOFC, internal methane reforming 89248
WC-NiCr super hard alloy micro-reducer, design, perform. and reliab. study, 3D micro-mechanisms 70339
YSZ/NiO-YSZ thin film syst., elec. & microstructural investigs. 112849
certification
12 kV distrib. network compact load break switches upgrading 134259
ANA, Internet calib. direct to national meas. stds. 109415
avionics LCD, photom. meas., intraplant & interplant correl. 98912
diesel engine emissions, control strategies 88183
electromedical apparatus safety considerations *(Italian)* 87296
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
fiber optic gyro, iXsea products, eval. and certification by LRBA *(French)* 109619
high-energy film radiography, proc. param. optim., MCNP model 101584
IECEx Scheme for explosion protected apparatus, global develops. 124288
increased safety induction machine design, develop. and testing 99665
indust. sens. networks, embedded networking, hardware/software design 109451
Inmarsat D+ terminal develop. 77036
ISO 14001 environ. mgt. syst. certification in PV indust. 100685
ISO 17799/BS 7799 security mgt. std. 119543
metrological service, accreditation, competence eval. 86383
µP components, quality certification 114776
n-way key recovery syst. by extended cryptographic timed Petri net, spec. and anal. 118041
optimistic concurrency control, broadcast invalidation-based certification protocol 130866
paired transient proc., characts. estim., input action delay 75340
PCB syst. design, hierarchical methods 125881
public key distrib. in public key infrastructure systs. *(Polish)* 129238
public key infrastructure appl. to electronic commerce *(Chinese)* 129235
public key infrastructure in VPN environ. 72946
PV training programs accreditation, global quality standardisation 112385
radiologist continuing professional develop. using WWW as delivery vehicle 89600
ring laser dyn. goniometer, angle meas., systematic errors 128628
scientific commun. develop., value chain considerations 119444
secure Internet telephone, design and implement. 119507
semicond. devices, reliab. certification using Goldthwaite diags. 103731
solder paste printers, machine/proc. capability coeffs. 125898
spectrum mgt. and internat. filing, program mgt. perspective 131718
TEAC-Health project, research-based recommendations for European certification of health telematics services 98873
Varian VIISion Implanter certification for SDS, design considerations 126288
MEMS press. sens. assembly, aircraft flight tests/reliab. improvement 122515
$PbWO_4$ full-sized scintillation cryst. radiation hardness anal. during mass prod. 132407
CFD *see computational fluid dynamics*
CFRP *see carbon fibre reinforced plastics*
chalcogenide glasses
chalcohalide glasses, Nd doped, IR-to-vis. upconversion 128495
chalcohalogenide glasses, all-opt. poling, second order SHG nonlin. 82865
non-volatile memory technol. 125504
nonoxide glasses, opt. appls. 104601
polymer/thermoplastic chalcogenide glass composites, phys./opt. props. 82041
rare-earth doped chalcogenide glass fiber, mid-wave/LW IR laser pot. 105192
Ag-In-Sb-Te phase-change opt. recording films, crystn. 82279
$Ag_x(As_{0.33}S_{0.67})_{100-x}$ amorph. films, opt.-induced solid state react. prep. 91689
As-Ge-Ga-S:C(Pr)OH)(CS_2)(hydrocarbon) glasses, opt. props. 90583
As-Ge-Se-S chalcogenide glass thin film, photoinduced birefr. 91688
As-S-(Se)-based chalcogenide glass opt. waveguides, fab./charactn. 116720
As-S-Se glass opt. fibres, prep., opt. & strength params. 93086
As-S-Se thin films, holographic recording, opt. props. 82989
As-S-Se/As-S based chalcogenide glass multilayer channel waveguides, photoinduced Bragg reflectors 71308
As-S-Se/As-S chalcogenide glasses, multilayer channel waveguides, photoinduced Bragg gratings 127748
As-S(Se):Ag(Au) amorph. films, electron irrad. refr. index change 103070
As_2S_3 based glass, NLO atten. at 1.3-1.5µm 93846
As_2S_3 chalcogenide glass waveguides, Bragg gratings, temp. depend. 116721
As_2S_3, chalcogenide glasses surface modif. by N_2 plasma treatment 103412
As_2S_3 chalcogenide thin glass film, second-order nonlin. suscept. 82938
As_2S_3 glass infiltration into opal photonic crysts., nonlin. appl. 82031
As_2S_3 thin film, holographic recording, opt. props. 82989
As_2S_3 thin films, polariz. depend. photoinduced surface relief micro-gratings 93186
AsSe chalcogenide glassy film, near field photo-darkening 82063
AsSe glass infiltration into opal photonic crysts., nonlin. appl. 82031
chalcogenide glasses continued
As_2Se_3 glass, effect of Sn, Mn and Sm addit. on props. 103062
$As_{50}Se_{50}$ amorph. thin films, Ag/Au metal coated, electron/photon induced metal diffusion 93296
a-AsSeGe films, elec./struct./opt. props. 80755
AsSeI chalcogenide photoresists for IR micro-optic fab. by thermal reflow proc. 82193
$(As_2Se_3)_{20}(SbSI)_{80}$, elec. cond., temp./freq. effect 103064
AsSeTe/AsSe chalcogenide glasses, 3D photonic struct., waveguides and MOEMS fab. 127546
a-$As_{50}Se_{50}$chalcogenide films, photoinduced cond. anisotropy 82310
CdS-AgI-AsS films, PLD, stoich., electrochem. sens. appl. 97445
Cu-As_2S_3 membrane ISE, potentiometric sulphide sens. 86734
$Fe_{77.5}Si_{7.5}B_{15}$ glass covered amorph. wire, sound vel. 104489
Ga_2S_3-La_2S_3-La_2O_3 chalcogenide glass based opt. channel waveguides 116676
Ga_2S_3-La_2S_3-La_2O_3:Dy^{3+} for 1.3-µm opt.-fiber amps. 128139
Ge-As-S ADN anal., poling mechanism, SHG *(Chinese)* 117478
Ge-As-S glasses, SHG, electron beam irrad., poling mechanism 128509
Ge-As-S photobleached glassy films, photoinduced anisotropy 82830
Ge-As-S syst., electron-beam irrad., second order NLO effect *(Chinese)* 93827
Ge-As-Se, third order NLO props., Z-scan meas. 82940
Ge-As-Te-based gas sens. selective to low NO_2 concs. 121007
Ge-Sb-Te alloy thin film, non-volatile memory *(Italian)* 90898
Ge-Sb-Te films, magnetron sputtering, charactn., opt. data storage material 101195
Ge-Sb-Te materials, phase change opt. recording 71224
Ge-Se-Te-Si_3N_4-CdS spin-coated chalconitride thin film, prep. 125061
Ge-Se-Ti amorph. films, elec. cond., switching props. 91694
GeAsGaSe:Pr^{3+} core/clad selenide glass fiber, IR appl. 71298
$Ge_{20}As_{25}S_{55}$ chalcogenide glass, electron beam irrad., SHG 117472
$Ge_{30}As_{10}Se_{60}$, chalcogenide glasses surface modif. by N_2 plasma treatment 103412
a-$Ge_{10-x}In_xSe_{90}$ thin films, dielec. props. 92592
a-$Ge_{46}S_{54}$ films, thermoelectrical props. and memory switch phenom. 80756
GeS_2-based glasses, ultrafast all-opt. switching, Z-scan investig. method 82933
$(GeS_x)_{98}(GaS_3)_2$:Pr glass fibre, develop. for Pr-doped fibre amp. 93087
$Ge_{30}Sb_{10}S_{60}$ film, thermal evap. under vac., opt. params. 80754
GeSbTe films, phase-change recording media, mech. props. 82033
$Ge_2Sb_2Te_5$ chalcogenide glass opt. data storage material, thermal treatment effects 92960
a-$Ge_2Sb_2Te_5$ films, laser irrad., crystn., TEM obs. 82043
GeSbTeSe:Cu(Co)(Ni)(Pb), films, crystn. kinetics *(English)* 69559
Ge_xSe_{1-x} thin films, semi-closed space prep. tech., struct. anal. 124859
$Ge_{10+x}Se_{40}Te_{50-x}$ thin film, opt., elec. props. 69552
$Ge_{10+x}Se_{40}Te_{50-x}$ thin film, opt., elec. props. 91695
GeTe chalcogenide glass opt. data storage material, thermal treatment effects 92960
PbS-AgI-AsS films, PLD, stoich., electrochem. sens. appl. 97445
$Sb_{0.16}As_{0.29}Se_{0.55}$, crystn., single-scan calorimetric tech. obs. 103071
Sb_2Te_3 chalcogenide glass opt. data storage material, thermal treatment effects 92960
Se-based chalcogenide glass/polymer composite NIR filters 71473
$Se_{100-x}In_x$, chalcogenide glassy alloys, DC elec. props. 103066
a-$Se_{70}Sb_{15}Ge_{15}$ thin film, annealing temp. effect on cond. and activation energy 103076
$Si_{20}Te_{80}$ glasses, phys. props., acoustooptic devices appl. 93260
Tl-Ag-As-I-S films, PLD, stoich., electrochem. sens. appl. 97445
channel allocation
see also frequency allocation
2.4-GHz WLAN, 802.11 b/HomeRF/Bluetooth, band congestion, OFDM std. *(Italian)* 85258
3D cellular networks 108667
24-node transparent WDM bi-directional wavelength path switched ring network 96794
adaptive beam-steering/adaptive modulation-assisted DCA algms., comparison 73587
adaptive distributed DCA for wireless networks 119531
ADSL systs. supporting downstream wireline/wireless trunks, subchannel allocation 85409
algm. for channel assignment under channel interf. constraints 85513
AMPS mobile telephone syst., improvement of base station by least sq. method 108780
ATM cellular networks, nondisruptive handoff protocol 85652
ATM wireless switch using priority-based dyn. capacity allocation, perform. eval. 73807
ATM WLAN, QoS-oriented dyn. channel assignment method 85304
bandwidth-limited cellular systs., dyn. freq. hopping 96571
CDPD, cellular digital packet data, perform. with timed hop and forced hop 74710
cellular call capacity optimisation, HNN DCA algm. 85707
cellular channel assignment, transient chaotic neural network 96525
cellular commun. systs., efficiency of space-diversity reception 131219
cellular commun. with overlapping coverage, call allocation 74705
cellular mobile commun., radio channel assignment syst. *(Japanese)* 85723
cellular mobile environ., load balancing using dyn. channel assignment and channel borrowing 85764
cellular network channel assign. problem, transient chaotic neural net appl. 74828
cellular networks, constrained channel assignment, approx. algms. 85870
cellular networks, dyn. adaptive channel reservation scheme 85762
cellular networks, hybrid channel assignment using space partitioning 108851
cellular networks, prioritized handoff local-packing distributed DCA 74680
cellular radio, channel assignment algms. for portable access 119992
cellular radio, dyn. freq. hopping 131246
cellular radio networks, randomized saturation degree heuristic for channel assignment 74727
cellular systs., DCA, blocking probab. anal. 85679
cellular systs., distributed adaptive channel allocation scheme 74830
clique packing approx. teletraffic characts. of dyn. channel assignment considering mobility 95819
column generation models for channel assignment in cellular networks 119859
DCA in mobile cellular networks, perform. anal. of min. call blocking probab. 96560
DCA in mobile commun. systs., computer simul. *(Slovenian)* 74836
dependable real-time commun. with elastic QoS, perform. eval. 107714
DS-CDMA cellular systs., adaptive channel reservation scheme for soft handoff 74725
DS-CDMA cellular systs., multi-channel assignment schemes, handoff study 108850

annel allocation continued
DS-CDMA cellular two-tier systs., multi-channel access 108849
dyn. carrier allocation strategies for mobile cellular networks 119934
dyn. single freq. networks 131153
estim. equaliser on stationary channels 107317
fair wireless channel allocation, adaptive zone selection/modulation under nonuniform traffic 108212
FDMA/TDMA cellular systs., network capacity and QoS mgt. 74829
fixed channel assignment in mobile radio networks, fast constructive algm. 108965
fixed channel assignment with no feasible assignment, GA *(Japanese)* 96555
frame size adaptation for indoor wireless networks 120111
fs pulse train all-opt. wavelength conversion 71991
full-mesh WDM networks, arrayed-waveguide grating wavelength-routing fn. *(Japanese)* 120295
GB208 control unit for airport radio traffic handling 88089
General Packet Radio Service, perform. anal. 74773
GPRS 74728
GPRS systs. behaviour, modelling and anal. 120066
GPRS wireless networks, resource allocation 85775
GSM, perform. anal. of channel assignment with prioritized handoff procedures 108689
GSM channel equalization with complex-valued MLP 130281
GSM network traffic distrib. anal. 74866
handoff prioritisation in dyn. channel assignment 95816
hierarchical cell struct., uniform GoS 108717
hierarchical cellular syst. with fuzzy control, channel assignment/layer selection 96499
high-capacity cellular mobile radio, fully adaptive channel allocation strategies 74834
high-speed dyn. wavelength routing SG-DBR laser, wavelength switching 120313
hybrid TDMA/CDMA-TDD interface, DCA algm. 131147
IMT-2000, channelization code assignment scheme 85778
interf.-limited WPAN appls., adaptive freq. hopping scheme 96639
LEO constellation with Earth-fixed cell syst., dyn./fixed channel allocation, perform. anal. 74802
LEO MSS, capacity improvement using channel reshuffling 74805
LEO satellite commun. systs., channel assignment strategy without handoff failure 120098
LEO satellite networks, simulcast-based DCA for unicast/multicast commun. 96616
LEO satellite systs., efficient scheme to reduce handoff dropping 74876
LEO satellite systs., fixed channel allocation handover strategies 131302
MACA, cellular network channel allocation scheme 74809
microcells, DCA schemes for differentiated QoS 131269
Mixed Power Control with Directed Assignment for interf. reduction in channelized wireless systs. 85644
mobile cellular networks, influence-based channel reservation 131198
mobile-assisted data forwarding, ad-hoc overlay addit. on fixed cellular infrastructure 85795
multi-channel MAC protocol for multi-hop mobile ad hoc networks 73912
multibeam satellite commun., CDMA and switching 109006
multicellular commun. networks, DCA modeling 131244
multihop wireless networks, new model for packet scheduling 74853
multiple channel recovery in TDMA wireless commun. systs. 107741
NACR, new adaptive channel reservation in cellular commun. systs. 85583
OFDM, peak-to-av. power reduction, optimized pilot syms. 95835
patching first, channel allocation strategy for VoD *(Chinese)* 97083
PCN, satellite-based, dyn. channel reservation 131315
PHS, self-organized dyn. channel assignment 96598
PRN, routing/scheduling 85510
self-organizing evolving algm./neural net 84815
slotted CDMA systs., single-code/multi-code MAC protocols 119779
smart antenna radio networks, dyn. spatial channel assignment simul. 119989
SONET/WDM rings, effective wavelength assignment algms. 131516
survivable load sharing protocols, simul. study 84967
SW hopping network, fixed channel assignment *(Chinese)* 74720
SWiMNet, scalable parallel simul. testbed for wireless and mobile networks 131211
syst. diversity on software defined radio 131061
TD-CDMA syst. perform., radio resource allocation policies 131148
TDMA cellular syst., geometric-cost fn. DCA 108825
telecomms. networks grooming 120322
UMTS channel equalization, neural nets/gradient algm. 108747
wavelength routed opt. network, routing and wavelength assignment 131450
WDM-based local network, dyn. protocol for variable-sized messages 85000
wideband TDMA networks, DCA, fixed cell assignment 120042
widely tunable DFB semicond. laser transmitters, WDM dyn. wavelength routing 128380
wireless ATM network, handover algm. considering user's mobility pattern 85659
wireless commun., efficient anonymous channel protocol 73889
wireless commun. network, composite perform./availability anal. 73872
wireless commun. networks, composite perform./availability anal. 119874
wireless data networks, network-assisted resource mgt. 85855
wireless local commun., link control protocol for multimedia services 130365
wireless multimedia traffic, distributed dyn. channel and packet assignment 96459
wireless networks, distributed channel probing scheme 119898
wireless TDMA, optimal carrier sharing 108579

channel assignment *see channel allocation*

channel bank filters
2-channel sig.-adapted biorthogonal filter banks, optimal design 118986
2D diamond/quadrant FIR digital filter banks with sharp responses 119069
2D DWT archit., resource cycling, parallel distributed arith. 102244
2D FIR compaction filter design 95705
2D FIR nonfactorable parametrized family of lossless systs., Grobner bases 130113
2D nonredundant directionally selective complex wavelets 94659
2D separable filters for optimal reconstruction of JPEG-coded images 95039
acoustic echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
adaptive array antennas using modified CMA and polyphase filters *(Japanese)* 130110
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive model for texture anal. 84315
ADC, quantization noise 90964
asynchronous FIR filter banks for discrete wavelet transform 91105

channel bank filters continued
audio de-reverberation using freq.-domain center clipper 83987
BFDM/OQAM systs. based on biorthogonal modulated filter banks, design 73776
biomedical image compression using variable order wavelets transforms/HVS charact., progressive scheme 132786
biorthogonal cosine-modulated filter banks 73698
biorthogonal cosine-modulated filter banks, fixed-point arith. 91053
biorthogonal filter banks with nearly optimal time-freq. localization 119028
biorthogonal nonuniform cosine-modulated filter banks with lower syst. delay 80096
blind sig. separation, overcomplete subband representation 83985
block filter bank, perfect reconstruction condition in terms of DFT 107530
block-recursive logarithmic filterbanks 119072
boundary filter optim. for segmentation-based subband coding 95700
boundary filters, max. coding gain, ideal DC behavior, size-limited paraunitary filter banks 91055
Bragg fiber gratings design using simulated annealing for ideal WDM filter bank 104883
Butterworth biorthogonal wavelets derived from discrete interpolatory splines 130123
causal stable perfect reconstruction two-channel IIR filter banks, design 130105
CDMA, low-complexity interf. mitigation on vector channels, design/anal. 105803
CDMA asynchronous orthogonal decision-feedback multiuser detector 119223
CDMA multi-value spreading codes using mirror multi-rate filter banks 95833
CDMA sync. systs., GA assisted joint multiuser sym. detect./fading channel estim. 85459
coherent sig. proc. syst. optim. 130088
content based retrieval, area morph. segmentation 94940
cosine-modulated biorthogonal IIR filter banks, speech coding 102391
digital filter and filter bank design by num. optim., review 118982
digital filter banks in wireless/wireless commun. systs. 102375
digital receivers, multirate digital filters for timing recovery 107513
digital tunable bandpass filter, synthesis/appls. 95686
discrete multitone commun. with principal component filter banks 128993
discrete multitone modulation channels, optimizing capacity 130053
discrete wavelet transform computation using RNS archit. 114700
DS-CDMA mobile systs., order-adaptive filter for channel estim. 96565
dyadic wavelet-based nonlin. cond. eqn., theory/appls. 94557
EMI sig. proc./source ident., wavelet packet-based tech. 72374
even max. decimated pairwise FIR filter banks, symm. response 102388
fingerprint enhancement,directional filter bank based 94949
finite length multirate sig. proc., DC insertion symmetric extension method 95670
FIR 2-channel bank filter design, general-purpose optim. tech. 118985
FIR biorthogonal multi-band filter banks design, anal./synthesis filters 130048
FIR filter bank transceivers with effective band separation 130055
FIR PR filterbanks with order one polyphase, eigenstructure charactn. 119000
FIR two-channel filter bank design using constrained optim. 73665
FIR two-channel low-delay filter banks using constrained optim., design 107483
FIR two-channel PR filter bank with lin.-phase, design 73640
flexible cochlear syst. based on digital model of cochlea, struct., algms. and testing 118082
fractionally spaced DFE with subband decorrelation 107705
generalized lapped biorthogonal transforms using lifting steps 106897
generalized polynomial predictor based receiver for nonselective fading channel 74554
high-order bal. multiwavelets, theory/factorization/design 107521
IIR uniform DFT filter banks, stable, causal, perfect reconstruction, design 102382
image compression, biorthogonal wavelet filters appl. 95190
image denoising using directional filter banks 94807
image proc. parameterized wavelet archits. 73173
integer-modulated filter banks providing perfect reconstruction 119070
integrated thin film resonator filter banks, ladder bandpass filters 102329
intra-frame video coding using biorthogonal symmetric wavelet filters 95397
ISI-free FIR filterbank transceivers for freq.-selective channels 130121
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 2001) 124234
JPEG 2000 std., DWT lossless compression, VLSI design 118527
lattice struct. for regular paraunitary lin.-phase filterbanks/M-band orthogonal symmetric wavelets 129792
lifting factorization-based discrete wavelet transform archit. design 73636
lin.-phase perfect reconstruction filter bank, simplified lattice factorization 84719
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078
M-band compactly supported orthogonal symmetric interpolating scaling fns. 95698
M-channel lin.-phase paraunitary filter banks with unequal length 95681
M-channel mixed analog/digital max. decimated filter banks, freq. response 102341
M-channel paraunitary filterbanks factorization 84724
MMSE spectral domain estimators for nonuniform syst. modeling subband adaptive filters 107566
motion estim. using spatio-temporal CW transform, new results/implement. 94669
multicarrier commun. systs., optimal MSE DFE 85524
multidimensional filter bank design, polynomial methods 130049
multiple description coding using optimal biorthogonal filter banks *(English)* 72856
multiplierless low-delay FIR and IIR wavelet filter banks with SOPOT coeffs. 119066
multirate lin. systs., inform. theory 128952
multirate sig. proc. on finite fields 118626
nonuniform modulated complex lapped transform 118064
nonuniform oversampled filter banks for audio appls. 106355
nonuniform principal component filter banks 119007
OFDM syst., alias-free subband adaptive equalizer 107710
optimal adaptive multiuser detect. in unknown multipath channels 84771
orthogonal block transforms and filter banks, permutation based design 73691
orthogonal length-3 approx. order preserving prefilters 119043
orthonormal symmetric wavelet bases using complex allpass filter 130120
perfect reconstruction cosine modulated filters and modified DFT filter banks, prototypes 80097
perfect reconstruction modulated filter banks with sum-of-powers-of-two coeffs. 73651
perfect-reconstruction cosine-modulated filter banks, coeff. quantization 119067
plucked string instrums., automatic IIR anal./synthesis 120603
polyphonic piano music transcription using ANN 106352
precoded VBR multiuser systs., blind channel estim. 108614

channel bank filters continued
pseudo QMF banks, design 102381
pseudo-QMF cosine-modulated filter bank, spectral factor 73678
QMF bank low delay design using init. filter approach 119005
QMF banks with low delay, efficient design considerations 107564
QMF two-channel approx. lin. phase filter bank design, image compression appl. 73383
quantization noise compensation by anal. filter bank optimisation 129365
quantized oversampled filter banks with erasures 107567
real time audio systs., bit-rate reduction by psychoacoustic masking 94397
rotated textures class. using overcomplete wavelet frames 94598
satellite image deconvolution using complex wavelet packets 94953
sig. compression using slantlet transform, efficient approach 95615
sig. proc., wavelets/approx./compression 118978
sparse sig. representations using overlapping frames 130098
spatial video noise reduction using wavelet based freq. decomp. 90195
spectral anal. of gapped data 107503
stereophonic acoustic echo canceler, real-time implement. 85429
subband adaptive filters, steady-state perform. limitations 107524
subband and transform coder optim., theory and appls., review 84736
subband image coding systs., filterbanks for less ringing artifacts *(Japanese)* 73398
subband perceptual audio coding with nonideal reconstruction filters, optimum bit allocation 73021
surfaces hierarchical representation and coding, 3D polygon meshes 95250
time-domain equalizer for filter bank-based multicarrier commun. 130256
tomographic images, region of interest reconstruction using filter banks 98522
transmultiplexer memory truncation receivers 73775
tree-struct. filter banks, orthogonal extension methods 119030
triplet halfband filter banks, kernels, least sq. design 91056
two channel QMF pseudo-perfect reconstruction IIR filter banks, smooth wavelet fns. 102389
two-channel biorthogonal IIR filter banks, low syst. delay, multiplierless implement. 91052
two-channel FIR filter banks with PR and low-delay, design 91054
two-channel IIR/FIR filter banks 130044
two-channel QMF filter bank, approx. lin. phase, based on allpass filters 102376
two-channel wavelet filter banks with variable zero moments, adaptation criteria 107560
unsupervised texture segmentation using dominant image modulations 106754
unvoiced speech component, ident./reconstruction 106372
video proc., wavelet transform appls. 94661
video sig. denoising/sharpening 118334
wavelet packet-based subband adaptive equalization 107721

channel capacity
2D runlength constrained arrays, zero/pos. capacities 128964
3G radio design challenges in meeting customer expectations 108650
3G UMTS syst., Erlang capacity of base station transceiver 85683
act. repeat DS/CDMA ALOHA protocol *(Chinese)* 119230
adaptive antennas, pot. for mobile radio appls. 117857
adaptive multi-mode error-correction coding for channel protection 96562
adaptive multi-rate codec, standardisation 120034
additive noise channels with transmitter side inform. 117981
analog wideband sig. transm. through narrowband channel 73559
APD-detected opt. channels, PPM capacity 109039
ARQ type-I hybrid protocol over optimal-seq. CDMA link 107818
ATM and MPLS networks, optimal virtual topol. config. for multicast 119163
ATM evol. in wireless commun. network infrastructure 85881
ATM networks, cell loss rate estim., convolution appl. 107640
ATM transm. link under GoS constraints, capacity sharing between guaranteed- and best-effort services 84819
AWGN and Rayleigh channels, robust multilevel codes based on capacity rule 106096
AWGN channels, non-uniform QAM sig. shaping; turbo coding appl. *(English)* 72752
bidirectional hybrid DWDM syst., CATV/OC-48 trunking 96856
binary erasure channel, complexity of reliable commun. 128920
BLAST perform. improvement using space-time block codes/turbo decoding 72867
BLAST-like indoor radio systs., asymptotic anal. 131111
block-fading channel spreading 106008
block-fading channels with multiple antennas, limiting perform. 74517
BPSK/QPSK Rayleigh fading channel, symmetric capacity 107624
CAC for capacity-varying networks with stochastic capacity change times 74895
CDMA, capacity doubling by in-cell seq. reuse and soft interf. cancellation 85850
CDMA, sync. systs., bandwidth-constrained signature waveforms for network capacity maximisation 84891
CDMA asynchronous systs., signature seq. optim. 131287
CDMA broadband WLL systs., capacity anal. 85558
CDMA cellular network, investig. of channel access algms. with meas. error 74826
CDMA cellular uplink systs., Erlang capacity calc. 85740
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA connectionless systs., acquisition depend. random access 84884
CDMA design through asymptotic anal., fading channels *(English)* 73856
CDMA downlink, spreading code optim., channel capacity estim. 85781
CDMA forward link, high data-rate service support, capacity eval. 74663
CDMA high capacity array-receiver requiring reduced pilot power 74750
CDMA mobile commun. systs., design of voice-carrying fixed-network links 85582
CDMA mobile commun. systs., space-time iter./multistage receiver struct. 108858
CDMA MSS, satellite diversity 85861
CDMA multicell network design 96503
CDMA multicode syst. with SIR-based power control, capacity estim. 96502
CDMA multifrequency technols., perfect freq.-time codes 85715
CDMA multimedia systs., nonlin. power assignment and impact on capacity 96586
CDMA networks with smart antenna, capacity anal. 131130
CDMA pulse-posn.-hopped syst., capacity anal. 119939
CDMA SIR-based power-controlled cellular syst. in multipath fading environ., reverse link capacity 74734
CDMA spectral efficiency, freq.-flat fading impact 74519
CDMA sync. systs., iter. constr. of optimum signature seq. sets 85867
CDMA syst., novel cost fn. of adaptive antenna 73627
CDMA syst. uplink, av. SIR/outage probab. calc. 96467
CDMA systs., link budget calc. 119901

channel capacity continued
CDMA systs., successive interf. cancellation receiver with neural network compensation 105817
CDMA systs., sum capacity, periodic correl. props. influence 107760
CDMA two-tier syst., channel segreg. method 74650
CDMA uplink coherent detect., dual mode channel estim. 131260
CDMA wireless systs., link/network layer requirements for mobility support 85739
CDMA/TDD cellular radio, video delivery and resource allocation 85890
cellular call capacity optimisation, HNN DCA algm. 85707
cellular CDMA, min. duration outage anal. for integrated services with correl. interf. 85759
cellular CDMA, outage for integrated voice data services with correl. sig. and interf. 85758
cellular CDMA and TDMA over nondispersive channels, capacity 131215
cellular commun. using aerial platforms 96501
cellular network, coord. training/transm. for interf. cancellation 105809
cellular systs., distributed adaptive channel allocation scheme 74830
chaos based modulations, inform. theory perspective 94238
circle trace channel estim. algm. for wideband commun. with pilot *(Chinese)* 119125
CNR modeling under bandwidth limitation on systs. using opt. super wideband FM tech. *(Japanese)* 74476
coded multistage detect. in correl. Rayleigh channels, perform. 119954
collocated orthogonal dipole antennas 72664
connection admission control, performability 96330
content-adaptive watermarking based on stochastic multiresolution image modeling 129710
CS-PRMA/AP, carrier sense PRMA with adaptive permission 95912
data hiding in compressed images, capacity estim. 95252
DECT air interface, TCP/IP data transfer with multibearer capability and asymmetric flows 73922
degraded broadcast channel, ident. capacity region inner/outer bounds 128948
digital watermarks subjected to optimum lin. filtering and additive noise, anal. 95666
discrete-time memoryless Rayleigh-fading channels, capacity 74518
dispersion-free NLO fiber multispan effects, Shannon channel capacity 109185
DMT transceivers, near-optimum channel shortening, matrix multiplication methods 107678
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753
DS-CDMA, perf. of closed-loop power control for packet transm. in multipath fading 120060
DS-CDMA cellular systs., adaptive channel reservation scheme for soft handoff 74725
DS-CDMA cellular systs., multi-channel assignment schemes, handoff study 108850
DS-CDMA cellular two-tier systs., multi-channel access 108849
DS-CDMA FDD mobile radio, suboptimal algms. for downlink beamforming 85857
DS-CDMA mobile radio with multimedia services, downlink beamforming and data rate allocation 108713
DS-CDMA systs., multi-beam combining using interf. level based weighting factor 85504
DS-CDMA systs., multi-class services support with limited channel elements, Erlang capacity anal. 85743
DS-CDMA voice/data systs. with limited channel elements, Erlang capacity anal. 74646
DS/CDMA forward link based on resource sharing algm., joint Erlang capacity 85660
DS/CDMA syst. with mixed multirate sources, forward-link capacity 96505
dual-antenna-array wireless systs., capacity scaling 83700
dual-antenna-array wireless systs., capacity scaling 108605
dual-use standardized FQPSK, compatibility with data links and WCDMA 74709
duplicate video syst. using alternate temporal sub-sampling 106875
dyn. multicast connections, blocking 84833
EDGE air-interface, capacity anal. 85631
enhanced wireless network archit. for future commun. environ. 108725
entangled input states rel. to quantum channel capacity 128918
erasure channel, capacity-achieving seqs. 129071
etched diffr. grating planar waveguide DWDM devices *(Chinese)* 86065
expander codes, error probab. exponents 129070
fading channel with adaptive feedback equalization, variable rate data transm. 107709
fading channels, coded modulation for differential encoding and non-coherent reception *(English)* 72754
fading channels, multilevel coding, set partitioning strategies *(Chinese)* 94308
FFH CDMA multirate opt. syst. using power control 74986
fixed wireless access syst., mesh-type entrance network 74601
fixed wireless loop systs., simul. 74606
flat-fading channel capacity, convex-prog. bounds 128940
flexible sampling frame meas. syst. 109445
forward-link cellular DS-CDMA over freq.-selective Nakagami multipath fading channels 131144
freq. re-use from high altitude platforms 108731
Gaussian multi-antenna broadcast channel, achievable rates 128949
Gaussian multi-antenna channel capacity 128941
Gaussian vector multiple access channels, multiuser detect. using generalized DFE 73828
generalized time sharing, low-complexity capacity-achieving multiple-access 117933
GPRS network planning on existing GSM syst. 74047
GSM, adaptive multi-rate speech service *(English)* 74723
GSM radio network, hierarchical cellular struct. with inter-layer reuse, capacity increment 131175
GSM/EDGE speech capacity booster, qtr. rate AMR channels 108786
Hadamard transform imaging with nanoresolution, near-field optics 95231
HF ALE third-generation technols., anal. 108827
hierarchical cell struct., uniform GoS 108717
hierarchical cellular syst. with fuzzy control, channel assignment/layer selection 96499
hierarchical PCS syst., handoff perform. anal. *(Chinese)* 120046
high-capacity cellular mobile radio, fully adaptive channel allocation strategies 74834
high-speed networks, equiv. capacity estim. using fuzzy logic 74106
IEEE 802.11 MAC protocol, capacity anal. 73924
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
IM-DD systs. with opt. amps., spectral efficiency 131366
image watermarking, coding techs. for data hiding and capacity limit 95047

nnel capacity continued
image watermarking/data hiding, inform.-theoretic model 95365
inform. theory of large networks, achievable rate region 128951
integrated cellular and ad hoc relaying systs. 131164
intens. modulated systs. using opt. amps., capacity considerations 109046
interactive mobile video syst., channel quality estim. error 84430
interf. channels capacity, genie-aided outer bounds 130294
Internet covert channels, commun. using phantoms 130828
IP fair queueing networks, video multicast 96178
IS-2000 CDMA networks, fast forward link power control perform. 85797
IS-95 CDMA uplink, perform. improvement using decision feedback and sub-optimal Viterbi decoding 108936
ISI channels, joint turbo and modulated code encoding decoding 129215
ISI channels, reduced-complexity receiver capacity 118003
LDPC regular codes over PR channels, threshold 129083
LEO MSS, capacity improvement using channel reshuffling 74805
LEO MSS, capacity occupation strategy for data/telephone traffic 131303
LEO satellite link with multiple antennas user terminals, capacity study 109025
LEO satellite mobile commun. systs., elastic handover 74804
lin. coding on noisy channels, decoding bit-error probab. upper bound 129117
LMDS high perform. upstream scheme using multicarrier DS-CDMA 131196
low dens. parity check code ensembles, wt. distribs. 129073
MAC protocol for voice/data integrated wireless CDMA systs. 85034
MC/DS-CDMA in cellular systs., estim. of spectral efficiency 85842
medium and high capacity wireless TDMA channels, highly efficient voice-data integrat. 73919
memoryless sources, binomial channel capacity or min. coding redundancy 128947
MIMO channel capacity estim. using Jensen's inequality 117885
MIMO channel capacity using exponential correl. matrix 117870
MIMO channels, multimode antenna soln. 105915
MIMO channels, temporal var. in indoor environ., meas. 85635
MIMO channels in indoor environ. 85848
MIMO commun. systs., advanced wireless access soln. 84656
MIMO environ. capacity sensitivity 108608
MIMO indoor radio channel capacity at 5.8 GHz 108606
MIMO indoor wireless channels, capacity meas. 85810
MIMO scatt. channel models, perform. eval. 105758
MIMO virtual framework for multipath fading channels 108910
MIMO wireless channels, capacity/perform. prediction 74560
MIMO-EDGE mobile radio channel meas. and exptl. implement. 108914
mobile ad-hoc wireless networks, capacity increment 131119
mobile commun., bit-interleaved turbo-coded modulation 119950
mobile fading channels, MLC/MSD and MLC/PDL *(Chinese)* 85854
mobile radio, DOA estim. using weighted subspace fitting 108737
mobile radio interf. cancellation, adaptive array algm. with spatial interpolation 131295
MRC coherent receivers in Nakagami-m fading channels, perform. anal. 85507
multi-dimens. parity-check codes for bursty channels 129115
multibeam satellite commun., CDMA and switching 109006
multilevel codes, iter. decoding 72886
multilevel codes/iter. multistage decoding, rate design rules/practical considerations 83853
multilevel coding, mapping strategies in fading presence, soft decision decoding 94273
multilevel coding design with soft decision decoding for AWGN/Rayleigh fading channels 106091
multiple carrier CDMA syst. for integrated voice and data services, Erlang capacity 108756
multiple transm. & receiving syst. capacity, controlled environ. 96398
multiple transmit multiple receive capacity survey in Manhattan 105943
multiple-antenna OFDM systs., channel estim. and adaptive power allocation 85520
multiuser DFE of block-spread multirate transms. for QoS wireless networking 84862
network, distributed appl., rate control, stable perform. anal. *(Chinese)* 119110
noncoherent block fading multiple antenna channel, DOF anal. 128939
noncoherent channel capacity 130183
noncoherent multi-antenna commun., inform. theoretic limits 83778
OFDM, RF high perform. front-ends in broadband wireless access 72761
opt. fibre commun., inform. capacity, nonlin. limits 96644
opt. mesh networks protection/restoration, tree-based algm. 131444
orthogonal space-time block coding utilizing quantized feedback inform. 72859
parity-check codes on Rayleigh fading channels, perform. anal./code optim. 72885
photoanisotropic polymers with photochromic fragments, super-high holographic memory inform. capacity 93009
PHS network, massive scale air interface reciprocity (motion) survey 108908
plane cover multiple access for cellular syst. capacity maximization 131239
Poisson arbitrarily varying channel capacity and decoding rules 128965
Poisson two-user multiple-access channel, error exponents 83917
protocol behaviour compositional constr., arbitrary channel capacity 85064
quantum channels, class. 109052
quantum multiple-access channel, classical capacity 128968
radiocommunication networks interf. noise, Shannon's formula reworking 72383
random early detect., control theoretic anal. 119373
rate compatible product codes 106094
Rayleigh fading channel, multilevel coded modulation *(Chinese)* 83820
Rayleigh fading channels, decoding methods for multilevel coded modulation 106020
Rayleigh fading channels, improved multilevel coding schemes research 94272
Rayleigh flat correl. fading, joint iter. channel estim./decoding 106155
reciprocal multipoint networks, LEGO approach for max-min capacity 108907
regenerative stochastic procs., entropy and mutual inform. 128969
region per unit cost, radio resources pricing for utility maximization 128950
SDMA, blocking probab. improvement 84903
SDMA base station receiver for broadband fixed wireless access systs., modified DCMP algm. 108647
SDMA systs., blocking probab. determ., theoretical model 119214
serially concatenated space-time coding 106138
Shannon capacity of constrained channels via combinat. formula 128958
Shannon channel capacity, dispersion-free NLO fiber transm. 109184
smart antenna base stations with dyn. slot allocation, forward-link capacity 108810
smart antenna systs., impact of W-CDMA sigs. 83705
smart antennas, appl. for capacity enhancements in GSM networks 117858
smart-antenna space-time UMTS uplink proc. for syst. capacity enhancement 108843
soft-decision decoding, nonredundant error correction differential detect. 94321
space-time systs., optimal training 108607

channel capacity continued
SpaceMux, on-board mesh proc. 109013
spanning tree algm. for spare network capacity 120267
spatial CDMA for multiple antenna access, capacity/error rate anal. 74529
SS watermarking combining visual/detect. models 95370
SSMA ultrawideband syst. using time hopping/M-ary PPM, perform. 85462
star networks, CSMA with adaptive reservations by interruptions 95921
stochastic capacity change times, connection admission control 85928
subspace-invariant detector and flat-fading channels capacity 107628
successive survivable routing, optimal spare capacity allocation approx. 119420
symmetric grid networks, single link/double link/nodal failures tolerance 85314
syst. archit. for broadband fixed wireless capacity maximisation 85572
syst. diversity on software defined radio 131061
TCC interf. canceller, FPGA implement. *(Japanese)* 108875
TCP perform. over end-to-end rate control/stochastic available capacity 119267
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decoding 108857
TDMA/W-CDMA and N-CDMA/W-CDMA spectrum overlaid systs., interf. suppression 72356
telecomm. networks, dual mode phones overflow traffic anal. 96443
telecomms. networks grooming 120322
Thaicom 3 satellite, channel capacity estim. from rain stats. 108988
third generation wireless systs., open loop transmit diversity schemes comparison 85750
time sharing multiple-access flat fading channels, channel capacity 107765
turbo-codes as error control codes 106116
UMTS downlink capacity with space-time block coding, realistic channel model considerations 85827
UMTS third generation mobile radio, differences from GSM *(German)* 74782
UTRA TDD, throughput of hybrid ARQ types 95911
UTRA-TDD and FDD syst., interf. 96563
V-BLAST, perform. losses due to fading 85532
vector MAC capacity region with covariance feedback 128942
video server archits., fibre channel vs. SCSI 131768
W-CDMA, optimal power distrib. for successive interf. cancellation 85812
W-CDMA downlink, interf. cancellation schemes 85754
W-CDMA networks, receiver perform., sync. impact 108830
WDM networks with grooming capabilities, capacity fairness 120241
WDM opt. mesh network protection, Hamiltonian cycle protection 109147
WDM star single-hop network capacity *(Chinese)* 107655
WDM transm. systs. using distributed Raman amplif., paths loss distrib. profiles spec. 131566
wideband DS-CDMA syst. with transmit diversity, forward link capacity 85777
wideband DS/CDMA commun., combined space-time multiuser receivers 96519
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
wireless MIMO channels, transmit antennas near-optimal selection 108601

channel coding
see also combined source-channel coding
2D code acquisition in radio environ. with spatially coloured interf., perform. 108728
2D multirate channel coding for opt. page memories 94267
2D runlength constrained arrays, zero/pos. capacities 128964
3G IP WCDMA, simul. of access to fixed packet-switched networks using OPNET 74448
adaptive multi-mode error-correction coding for channel protection 96562
adaptive multi-rate codec, standardisation 120034
adaptive robust type-I hybrid ARQ scheme 85801
ADSL, bandwidth-efficient RS coding 96305
ADSL DMT systs., turbo coding 129203
ADSL transm. using turbo coding 96299
alg. of discrete channels 117950
alg. space-time codes for block fading channels 129130
analog codes for peak-to-av. ratio reduction *(English)* 72756
analog wideband sig. transm. through narrowband channel 73559
ATM networks, FEC coding for real-time transport 119129
ATM perform. improvement using OOC and 2^n prime seq. code with VBR 107644
ATM satellite traffic, throughput anal. and coding 85917
audio data coding in halftone images 118092
AWGN channel, complexity of breadth-first bounded dist. convolutional decoding *(English)* 72833
AWGN channel, turbo codes/turbo-like codes perform./complexity 129101
AWGN channels, VQ codebooks/QAM sig. constellations optim. 72900
BER anal. of TCM schemes for CCI reduction in cellular mobile commun. 85681
BER perform. of tail-biting convolutional encoders in channels using, priori inform. *(English)* 72835
binary erasure channel, complexity of reliable commun. 128920
BLAST perform. improvement using space-time block codes/turbo decoding 72867
blind equalisers, white data and block encoded seqs. 119175
blind turbo equalization in Gaussian and impulsive noise 107683
block-fading channels with multiple antennas, limiting perform. 74517
broadband radio access networks, real-time ATM, hybrid ARQ protocol 131108
CA-CDMA, channel adapted CDMA for MAI/ISI free burst transm. 84912
cdma2000 and W-CDMA, comparative study 74759
cdma2000 mobile radio, SOVA high-perform. decoding for turbo codes 108699
cdma2000 syst., channel coding perform. 85626
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA design through asymptotic anal., fading channels *(English)* 73856
CDMA fiber-optic commun. systs., low-rate super-orthogonal channel coding 85963
CDMA multipath systs., space-time block coding 129129
CDMA serially concatenated ECC syst., joint iter. decoding 108861
CDMA space-time block coded multicarrier syst. multiuser receiver 108860
CDMA technol., conf., Seoul, South Korea (1999) 67372
CDMA uncertain channels, multicoding and adaptive modulation 108915
cellular radio, dyn. freq. hopping 131246
cellular voice/data services, integrated multiple access control/adaptive channel coding 84976
circ. TCM, perform. of simplex signaling 72746
coded modulation, random-coding-exponent-based design for multiple-sym. differential detect. 129136
coded multistage detect. in correl. Rayleigh channels, perform. 119954
coherent/differentially coherent space-time codes, alg. designs 83852
combined Huffman code, row and column array code and phase/FM 83892
complex no. codes, iter. decoding 129045

channel coding continued
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
convolutional codes concatenation with ISI channels, precoder design 83937
convolutional codes over partial-response channels, dist. spectra 94293
CPM over AWGN/Rician channels, channel coding of serially concatenated encoders 106092
DCT watermarks, effective channel coding 95366
digital multimedia wireless telecomm., very-high dens. VLSI chips, low-power design 130971
digital radio broadcasting, punctured convolutional codes/turbo-codes 109346
digital trunking syst., traffic channel coding, perform. anal. 83905
double differential space-time block coding for time-selective fading channels 83850
downlink CDMA systs. with space-time codes and interf. cancellation 85826
DS-CDMA, joint despreading and iter. decoding with serially concatenated turbo code and Walsh code 83891
DS-CDMA, limits of coded transm. over fading channels *(English)* 73857
DS-CDMA convolutionally coded multi-carrier systs. 107739
DS-CDMA forward link imperfect orthogonal MUX, nonlin. amplif. 108947
DS-CDMA mobile radio, concatenated channel coding, transmit power outer loop control 96425
DS-CDMA mobile reverse link, variable-rate adaptive channel coding 74630
DS-CDMA PCS indoor systs. with distributed antennas, forward link perform. eval. 85744
DSP core FPGA implement. for full rate/half rate GSM vocoders 74768
DVB std. for digital satellite news gathering and other contrib. appls. by satellite *(Italian)* 86321
erasure channel, capacity-achieving seqs. 129071
error-control method for narrow-band subliminal channels, carrier bits embedding 83964
estim. and equalization with block interleavers 84868
fading channels, coded modulation for differential encoding and non-coherent reception *(English)* 72754
fading channels, multilevel coding, set partitioning strategies *(Chinese)* 94308
fading multiple-access channels, power control and access strategies *(English)* 73855
fast fading vector channel transmit diversity combining 108913
FEC-based video streaming, novel approach 118644
FEC-based wireless video streaming with pre-interleaving 107071
FHSS-MA commun. syst., jointly optimal RS code rate and no. of users 96378
fixed wireless access syst., simulated tolerance for uplink sync. 85560
flat-fading channel variable-rate adaptive trellis coded QAM 119979
FM band terrestrial DAB, soft selection combining 120507
freq. selective fading channels, outage probab. and space-time code design 129088
full rate space-time turbo codes 72889
future mobile radio systs., turbo-coded modulation *(English)* 74722
Gaussian channel coding/rate distortion with side inform., duality illustration 106145
generalized error-locating codes, decoding *(English)* 72845
generalized space-time lin. precoder/decoder design using weighted MMSE criterion 106140
generalized time sharing, low-complexity capacity-achieving multiple-access 117933
GEO multimedia commun. satellites, air interface and payload archit. 109004
Gilbert channel, interleaving effects 117986
Gilbert-Elliott channel with interleaving/retransmission, delay anal. of block coded transm. 94271
GPRS mobile radio, perform. anal. *(German)* 74783
graphical codes *(English)* 72832
group-metric multiuser decoding 84892
GSM fast fading channels, blind/nonblind turbo estim. 108937
high-rate differential space-code modulation for interf. suppression 83816
high-rate multiple-antenna code design, representation theory 119863
Hiperlan/2 and IEEE 802.11a stds. for 5 GHz band high speed wireless multimedia networking *(English)* 85562
hybrid digital-analog coding for bandwidth compression/expansion using VQ/turbo codes 129210
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 124193
image transm. over noisy channels using joint source-channel coding 95155
image watermarking, coding techs. for data hiding and capacity limit 95047
indoor precoded packet wireless systs., fast code rate adaptation 96445
informed decoders 129160
input-constrained channels, lower bounds 83912
integrated terrestrial-satellite wireless networks, multimedia appls., adaptive error control 85024
interleaved fading channel block codes, decoding error probab. bounds 117929
Internet, video coding for streaming media delivery 107075
Internet covert channels, commun. using phantoms 130828
IP fair queueing networks, video multicast 96178
IS-95 CDMA uplink, perform. improvement using decision feedback and suboptimal Viterbi decoding 108936
IS-95A uplink code, decoding 74628
ISI channels, joint turbo and modulated code encoding decoding 129215
iter. decoding 72881
iter. equalization and decoding, hybrid equalization strategies 129216
iter. soft interf. cancellation for multiple antenna systs. 83408
lattice decoding, ½log(1+SNR) on AWGN channel using nested codes 129116
lin. block codes, unified BER approx. 129007
lin. precoded/coded OFDM for wireless channel fades 83815
list-of-L decoding error probab., expurgation exponent at low rates 129133
low dens. parity check code ensembles, wt. distribs. 129073
low dens. parity check codes for coded modulation scheme 129031
low-complexity turbo-equalization for diversity channels 72932
M-ary FSK DS-CDMA, design and perform. 85770
M-ary runlength-constrained channels, optimal block codes 83926
M-PSK code constr. with good min. Euclidean dist. for AWGN channels 83848
mag. recording channels, low-dens. parity-check codes appl. 72884
MC-CDMA over multipath fading channel, perform. of freq.-time MMSE equalizer 107764
MDS codes, BER 72822
MIMO environ. capacity sensitivity 108608
MIMO FIR channels, freq. domain space time coding 106139
MIMO wireless syst., layered space-time coding/sig. proc. 119862
miniaturised low power convolutional decoders archit. 108491
ML decoding, approx. upper bounds on error probab. of lin. codes *(English)* 72834

channel coding continued
ML-decoded low-dens. parity check codes, tangential sphere bounds on ensemble perform. *(English)* 72840
Mobile User Objective System, commun. diversity advantages 111595
modulatable periodic complete complementary codes, generalized constr. 83897
MPEG-2 seqs., hierarchical transm. in noisy environ. 84378
multi-dimens. parity-check codes for bursty channels 129115
multicarrier CDMA, turbo TCM and serial concatenated convolutional code in Rayleigh fading 106029
multicarrier CDMA techs. for future wideband wireless networks 108840
multicarrier commun. systs., optimal MSE DFE 85524
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multicarrier m-ary/DS-CDMA systs., perform. anal. for high-data-rate transms. 108755
multichannel audio coding, DAB and DVB appls. 94403
multilevel codes, iter. decoding 72886
multilevel codes, multistage decoding, reliab.-based decoding algm. 129032
multilevel codes/iter. multistage decoding, rate design rules/practical considerations 83853
multilevel coding, mapping strategies in fading presence, soft decision decoding 94273
multilevel coding design with soft decision decoding for AWGN/Rayleigh fading channels 106091
multipath fading channel, MLSE equalization, FIR prefilter design 107687
multiple description codes perform. over bit error channels 129183
multiuser detect. using iter. decoding 85828
multiuser k-ary code for noisy multiple-access adder channel 117947
Nakagami fading channel, error flow charact. modeling/eval. 117984
non-orthogonal space-time block codes, max. sym. diversity 129157
nonorthogonal sig. compression iter. algm. 129988
nonuniform filterbank struct. for channel precoding 95668
OFDM, coded modulation for noncoherent reception 106046
OFDM, freq. offset estimator 72722
OFDM, generalized, multipath presence, transmit antenna space-time block coding 83902
OFDM, joint time freq. sync. and channel estim. using one training sym. 106042
OFDM, peak-factor reduction by Reed-Muller channel coding, soft decision decoding algm. 106161
OFDM, RF high perform. front-ends in broadband wireless access 72761
OFDM, selected mapping peak-power reduction without explicit side inform. 83804
OFDM channel independent precoded systs. robust to spectral null channels 83825
OFDM commun. systs., in-band/out-band spectrum anal. using ICI cancellation methods 94248
OFDM sig., peak-to-av. power ratio reduction by interleaving 106040
OFDM space-freq. coded broadband systs. 83849
OFDM systs., 2D iter. APP channel estim./decoding 72815
OFDM systs., interleaving techs. to combat highly freq.-selective channels 72723
OFDM systs., space-time code design 72860
OFDM TDD systs., adaptive interleaving 72750
OFDM-based LMDS, perform. eval., meas. channel models 96414
OFDM-CDMA syst., channel coding aspects *(English)* 72740
optimized soft trellis waveform coding 129065
orthogonal space-time block codes, fading channel, perform. estim. *(Chinese)* 106149
orthogonal space-time block codes improvement using quantized feedback inform. 129170
orthogonal space-time block coding utilizing quantized feedback inform. 72859
parallel concatenated space-time codes perform. 83870
perceptually-based robust image transm. over wireless channels 95163
precoded VBR multiuser systs., blind channel estim. 108614
precoder-assisted channel estim. in complex projective space 84867
progressive quantization, distortion bounds and channel code rates 129213
progressive source coding for power constrained Gaussian channel 106852
punctured recursive convolutional encoders and appl. in turbo codes 117930
quantum birthday problems, geom. aspects of quantum random coding 117949
quantum sigs., reliab. fn. props. 72982
rapid fading channels, space-time codes error probab. 96356
Rayleigh fading channel, GAC-based trellis decoding of block codes 94275
Rayleigh fading channel, multilevel generalized array coding 83890
Rayleigh fading channel, turbo code, union bound *(Chinese)* 129061
Rayleigh fading channel, turbo code transfer fn. bound *(English)* 72890
Rayleigh fading channels, decoding methods for multilevel coded modulation 106020
Rayleigh fading channels, hybrid type-II ARQ with scheduling for packet data transm. *(English)* 73930
Rayleigh fading channels, improved multilevel coding schemes research 94272
recursive space-time trellis codes for turbo coded modulation 72862
reliable wireless video transm. via fading channel estim./adaptation 84394
Rohde & Schwarz's SMIQ sig. generator, channel model simul. for 3GPP fading tests 86787
runlength limited channel, coding theorem 129081
scalable video, error-resilient compression/transm. 106934
semi-blind OFDM channel estim. using coded pilot sig. 107680
serially concatenated space-time code design in flat Rayleigh fading channels 85825
SFH SS commun., equalization/decoding 108674
SNR scalable transcoding for video over wireless channels 95120
soft decoding algms. 129208
soft-decision decoding, nonredundant error correction differential detect. 94321
softbit speech decoding with re-quantization *(English)* 73024
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
space-freq. codes for broadband fading channels 129169
space-time block codes for four Tx antennas 72861
space-time block codes with partial channel state feedback, perform. anal. 83941
space-time block precoded transm., channel subspace-based estim. 108610
space-time code perform. anal. for quasi-static fading channels 129090
space-time codes, outage error probab. over Rayleigh fading 129185
space-time coding perform. on slow Rayleigh fading channels 129131
space-time coding using generalized delay diversity code 106021
space-time coding with max. diversity gains over freq.-selective fading channels 129058
space-time diversity using orthogonal and amicable orthogonal designs 108935
space-time Hadamard codes, efficient decoding using Hadamard transform 129186
space-time trellis code, soft-decision adaptive decoder 84888

annel coding continued
space-time turbo codes, fading channels decorrelation props./perform. anal. 72863
substitution insertion and deletion channels, error-correcting codes 83925
TCM, iter. space-time detect. for broadband wireless channels 85522
TCM for wireless ISI channels, soft detect. of modified phase precoding 108551
time-reversal space-time block coding and transmit delay diversity 108911
time-selective fading channels, double differential space-time block coding 119878
time-varying channels with DPSK inputs, blind DFE 84857
tree-struct. multiple description VQ design 106165
turbo block codes using modified Kaneko's algm. 106084
turbo code perform. and design trade-offs 106083
turbo codes, computational complexities and relative perform. 129230
turbo codes, dist. profile *(English)* 72847
turbo codes transm. over fading channels, iter. channel estim. 83938
turbo coding/unitary space-time modulation 129102
turbo decoding, complexity reduction 120061
turbo greedy multiuser detect. 107754
turbo space-time low complexity code for syst. with large no. of antennas 72858
turbo-coded AWGN and Rayleigh fading channels, soft-decision channel-optimized VQ 83871
turbo-codes as error control codes 106116
two-channel coding of images using spline surfaces 84385
UMTS downlink capacity with space-time block coding, realistic channel model considerations 85827
unknown FIR channels, universal redundant precoders for guaranteed recovery of block transms. 85531
UTRA TDD, throughput of hybrid ARQ types 95911
variable redundancy coding for mobile channels 129057
video messaging over wireless networks, OO source/channel coding 73407
video transm. over third-generation mobile systs. 106906
video watermarking, channel coding, soft decoding for watermark retrieval 95267
VQ for channels with memory 129182
W-CDMA, MUX and channel coding scheme, implement. algm. 107735
W-CDMA, rate compatible punctured turbo coding 84887
W-CDMA forward link, high-speed packet transm., hybrid ARQ schemes 96424
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
W-CDMA systs., appl. of transmit diversity 108779
watermarking, anals. of error correction strategies for typical commun. channels 94264
watermarking based on duality with distributed source coding/robust optim. 94266
watermarking syst. based on Bernoulli chaotic seqs., stat. anal. 94265
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA mobile terminals, flexible RAKE receiver archit. 85807
WCDMA single chip high speed channel decoder, design/implement. 94331
wireless ad hoc network, space-time block coding 108962
wireless fading channels, space-time trellis codes iter. decoding 108600
wireless image transm., product coding/decoding 96381
wireless link, energy-efficient transm. via lazy packet scheduling 119897
wireless opt. channels, space-time channel coding tech. 129187
wireless packet networks 95164
wireless transm. using hierarchical modulation and coding, syst. design *(English)* 72741

hannel substrate planar lasers *see semiconductor lasers*

hannel waveguide lasers *see waveguide lasers*

hanneling radiation *see channelling radiation*

hannelling
diamond:S single crysts., ion implanted, struct. props. 126290
diamond for high-dens. opt. recording 82056
HI channeling, kinetic eqns., long-range fraction 103280
α-quartz films, ion beam doping, epitaxial regrowth 79406
X-ray channeling in capillary struct., wave theory 83482
AlAs:Na,Xe, ion implant., amorph. rate, RBS anal. 81028
$Al_xGa_{1-x}As$, compositional depend. of defect mobility and damage buildup 81034
$Al_xGa_{1-x}N$ films, MBE, struct. quality, ordering 68208
Au, SPE growth, ion beam induced epitaxial crystalliz. 90530
$Bi_2TeO_5:Au^+$, nanoclusters form., strong absorpt. max. 91961
GaAs:Er, electron emission channeling 126279
GaAs:H, H-ion implant., depth distrib., damage profiles 115561
GaN film, amorphization by ion implant. 81009
GaN films, ion implant., structural and opt. charact. 126292
GaN films, low-energy ion assisted epitaxy and struct. 69514
GaN, high-dose ion implant. 81033
GaN:Au, ion implant., thermal annealing 81010
GaN:C(Au) films, ion implant. disorder, dyn. annealing 81011
GaN:Er, implant.-induced damage suppression 80733
GaN:Fe, ion implant., damage, annealing, lattice site location 81016
GaN:Mg(Si)(C)(O) films, ion implanted, SIMS/RBS-channelling obs. 115507
GaN:Mg,H films, H lattice location, ion channeling obs. 80708
Ge/Si multilayers, coherent amorphization by ion beam irrad. 80658
$Ge_{0.2}Si_{0.8}$/Si epitaxial struct., ion beam channeling, strain relax. 69996
InGaN films, MOCVD grown, RBS/channeling, photolum. studies *(Chinese)* 101362
InGaN films, high In content, PL/structural props. comparison 127926
InP:Er, implanted, lattice location, emission channeling obs. 81039
SOI struct. fabr. by UHV electron beam evap. and epitaxial layer transfer 80933
Si, SPE growth, ion beam induced epitaxial crystalliz. 90530
Si, dwell-time depend. of irrad. damage 81005
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
Si polycryst. layers, epitaxial realignment, BiCMOS technol. 124888
$Si:As^+(B^+)(P^+)$ off-axis oriented wafer control during high angle implants 115599
Si:B, low energy B implant., jn. characts., damage, pre-amorph. effects 115516
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91977
Si:Bi (Bi_2), HI bombard., damage buildup 126307
Si:Cu, electron emission channeling 126279
Si:Cu(Ag)(Au), MeV ion implant., damage prod., RBS-channelling anal. 91948
Si:Er, electron emission channeling 126279
Si:Er, high dose channelled implant., temp./ang. effects 91971
Si:Ge, dose rate and temp. depend. of Ge range profiles, channeling implant. 81006
Si:Ge, ion-beam-induced defect evol., channeling implant. study 103720
Si:H, H-ion implant.-induced layer splitting, layer thickness effects 69804
Si:H, PIII, damage, defect form. 91982
Si:H, implant. induced surf. layer exfol. 80993

channelling continued
$Si:H^+,He^+$ single cryst., evol. during annealing 126273
Si:H,He, layer splitting, low energy channeling effect limitation 91972
$Si:He^+$, bubble form., implant. temp. effects 91962
Si:In, halo doping by In ion implant., advanced CMOS devices 115499
Si:P wafer, ion implant., channeling uniformity control 115605
$Si:Si^+/B^+$ dual implanted wafers, RTA 126115
Si/SiO_2 electron waveguides, electronic props., oxid.-induced strain 115975
Si(001) anom. surface amorphization under Ar^+ ion bombard., RBS/channelling obs. 69842
Si(001), nitridation, isotope-beam material modif. 92057
SiC, 6H, self-ion implanted, opt./struct. props. 81040
SiC, ion-implanted 6H, residual damage, RBS anal. 126094
SiC:Al, 4H, single crysts., Al^+ bombard. induced damage, ion beam anal. 69793
6H-SiC:Al^+,(N^+) wafer implant., photothermal meas. and modelling 69815
SiC:Au, ion implant., thermal annealing 81010
SiC:N,Al, ion implant., defect evol., internal stress fields effects 81012
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
YSi & YSi_2 layer synthesis, ion implant. & RTA, VLSI interconnect *(English)* 81125

channelling radiation
GaN:Fe^+ films, implanted, struct., ion channeling/Mossbauer spectra 81037

chaos
see also bifurcation; chaos generators; optical chaos; random processes
1D iter. map with infinite collapses, chaotic characts. 90679
2D chaotic dyn. systs. sync. by transm. of state inform. 94226
2D nanometer-size multijunctions, large current fluct. suppression 126906
AC-driven semicond. superlattices, quasiperiodic curr., strange attractors 69673
adaptive higher-order nonlin. Fourier IR filter, chaotic time series *(Chinese)* 118971
adaptive neuro-fuzzy inference systs., analog VLSI, stochastic perturbative techs. 68980
AE sig. proc. methods, review 129983
anti-aliasing filter, band-limitation effects on largest Lyapunov exponent estim. *(Japanese)* 68541
anti-aliasing filter effect on largest Lyapunov exponent calc. 90687
arbitrary time-series approx. & compression, nonlin. dyn. 95622
asynchronous DS-CDMA, choice of chaotic spreading seqs. 72939
asynchronous DS-CDMA commun., chaotic spreading seqs. *(Chinese)* 107762
asynchronous DS-CDMA syst., SS seq. design using chaotic dyn. systs. 94306
asynchronous DS-CDMA systs., perform. estim. and optimisation 95824
ATM networks, ABR service, chaos-based flow control *(Chinese)* 95756
ATM networksm, flow control for ABR based on chaos 95779
autonomous space-invariant CNNs, complex dyn. 90680
Baker transform based chaotic FH seq. *(Chinese)* 117961
bandpass sigma-delta modulator dyn., piecewise isometry 90991
bistable ccts. coupled via low-pass filter, symm. syst. anal. 101717
blind copyright protect. watermarking scheme using Markov chaotic seqs., stat. anal. 84708
boost converter, chaotic operation, stat. anal. *(English)* 112654
brain chaos, epilepsy, depression, exercise and lateralisation 132574
buck converter, chaos, bifurcation diag., PID controller 112625
cardiac diagnosis, US echo sigs., chaos anal. *(Japanese)* 132599
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
CDMA commun., spatiotemporal chaotic spreading seqs. 95834
CDMA spreading seqs., Lorenz dyn. chaotic sync. 107748
CDMA with FM differential chaos shift keying 107744
cellular channel assignment, transient chaotic neural network 96525
cellular network channel assign. problem, transient chaotic neural net appl. 74828
channel assignment, self-organizing evolving algm./neural net 84815
chaotic direct spreading seq., sync. scheme, transm. error correction *(Chinese)* 95741
chaotic encryption scheme, keystream reconstruction, geometric inform. 72961
chaotic soliton oscillator, hyperradiance, two weakly coupled Josephson jns. *(Chinese)* 81983
chaotic systs., sync., nonlin. observer theory 90677
Chua's cct. adaptive control/sync. 101720
clock sig., chaos-based FM, EMI reduction 106015
CNN hyperchaotic syst., sync., secure communication appl. *(Chinese)* 95742
coherence reson. in chaotic electronic ccts., expt. study 102446
Colpitts oscillator, deterministic chaos ident. using Lyapunov exponents 79530
combined projection/correl. LMS sq. algm. for channel estim. with uncoded/chaotic coded speech 129388
commun., inverse syst. approach 94246
commun., noisy channel 105985
commun. and sig. proc. appls. of chaos, survey 94225
commun. channel, data transm., sync. chaotic response 72712
commun. scheme via robust asymptotic feedback 130180
commun. systs., adaptive blind equalization, EKF 107676
commun. systs., noise reduction methods 107620
commun. using unknown input observers 94232
conf., disordered and complex systs., London, Eng. (Jul.2000) 78460
conf., quantum mech., Gargnano, Italy (Sept. 2000) 89505
continuous-time react.-diffusion cellular nonlin. net., edge-of-chaos 101721
control by dithers, Lyapunov method 101718
control of chaotic systs. by using dither 101710
coupled arrays of oscillators, sync. stabil., universal probe 90682
coupled BVP neurons with external impulsive forces, bifurcation and chaos 90685
coupled chaotic electronic ccts., superpersistent chaotic transients obs. 68538
coupled chaotic oscillators, weak phase-coherent attractors, phase locking 90697
coupled chaotic systs., extended act.-pass. decomp. 77838
coupled Chua ccts., chaos sync., uncertainty phenom. 101723
coupled continuous-time ccts., clustering phenom. 101715
coupled dynamos syst., chaotic behaviour control 125205
covert commun. using digital phase modem, syst. trade-offs 72724
cryptography, chaotic dyn. syst. approach 83956
cryptosystem, symmetric encryption algm., neural network *(Chinese)* 129248
cryptosystems based on space-discretization of chaotic maps 94361
current-mode chaotic ccts., IC design for secure commun. 101713
delayed-feedback klystron oscillator, chaotic operation 91558
deterministic chaos and inform. theory 106009
deterministic dyn. systs., algorithmic complexity, randomness 105991
differential chaos shift keying, multiple access tech. 94240
differential chaos shift keying commun. syst. 128996
differential chaos shift keying scheme with chaotic polyphase seqs. 94256
digital modulation schemes, state of art 94251

chaos continued
digital watermark, wavelet transform, pseudorandom seq. *(Chinese)* 129270
diode coupled RC phase shift oscillators, chaotic phenom. anal. 125259
diophantine eqn. and resulting chaos in geodesics 101719
discrete chaotic syst., robust dead-beat sync., secure commun. *(Chinese)* 94221
DPLL, advances and refinements 68654
DS-CDMA, chaos-based, CCI, multipath propag. and receiver sync. 96403
DS-CDMA. chaos-based, enhanced rake receivers 95820
DS-CDMA syst., optimal MAI reduction 95823
DSP-based chaotic commun. syst., low-cost implement. 119456
dual channel reson. DC-DC power converter bifurcation 123626
ECG, abnormal rhythm complexity anal., ventricular tachycardia/fibrillation *(Chinese)* 121932
ECG sigs. proc., min. dimens. embedding of chaotic attractor 110653
education in microwaves, microwave circuitry and appls. 67452
EEG anal., chaotic tech. appl. 87430
EKF-based chaotic sync., perform. eval. 119003
elec. machine drive systs., chaotic phenom., erratic behavior *(Chinese)* 113078
electromech. oscill. for mag. levitation, switching mode control 125206
epileptic seizure transit., optim. 76309
epileptic seizures, EEG sig. complexity 76247
ergodic chaos shift keying for digital sig. decoding 94305
ferroresonant voltage transformer ccts., chaotic behavior, fractal dimens. methods 79529
Fisher eqn., first-order and second-order, chaos-free, finite difference schemes 114137
flexible rotor, act. mag. bearings, bifurcation anal. 127410
FM-DCSK digital radio syst. simulator, MATLAB 106023
FM-DCSK syst. perform. for multipath channel, robust chaotic commun. 96402
Fourier-Bessel pattern anal. in circ. domain, decomp. amplit. 70362
fractals in ccts. 114584
freq. domain chaotic watermarking of digital images 95128
fuzzy chaotic systs., sig. sync. and secure commun., LMI based approach 105990
fuzzy multimedia IT based on fuzzy control 130978
gastric elec. uncoupling, deterministic chaos level dyn. 87418
heart beat sing., recurrence quantification anal. 98196
hyperchaotic cct. with damped harmonic oscillators, ANP3/PSpice simul. 90690
hyperchaotic ccts., sync., scalar transm. sig. 101708
hyperchaotic ccts. sync. via scalar sig. 90691
hysteresis oscillator, bifurcation anal. 114651
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IFS models, inverse fractal problem, hybrid evolutive-genetic strategy 94571
impulsive sync., chaotic systs. 101707
inductively coupled Chua oscillators, chaotic sync. anal. 125199
integrate-and-fire chaotic cct. with periodic input, dyn. study 68542
Internet distrib. protocols under loaded conditions 73894
Internet traffic, nonlin. time series prediction methods 95763
inverse filter, chaotic dyn., param. estim. 73671
IPF-SV method, impulsive proportional feedback in syst. variable, chaos control in cct. 68546
Japanese vowels, nonlin. deterministic struct. recogn., causal anal. 118110
Josephson jn., driven, chaos suppression 127474
lightwave commun. and use of nonlin. dyn. 96880
lin. autonomous syst., chaos generation, dyn. nonlin. fdbk. control 79533
lin. feedback sync. theorem 125263
locally recurrent neural net., Chua cct. attractors learning 79534
log-domain cct., exponential I-V rel., nonlin. dyn. 90695
Lorenz chaotic masking, param.-adaptive identical synchroniz. 95618
lossless multiconductor transm. lines, nonlin. resistor termination, dyn. 101698
lossy single lines, nonlin. resistors, bifurcations and chaos 101699
Lur'e systs., elementary canonical state models, synchronized chaos appl. 101711
Lur'e systs. with time-delay, master-slave synchroniz. 101722
magneto-transistor cct., magneto-controlled generation with period-adding seq. and chaos *(Russian)* 79526
manifold piecewise lin. chaotic cct., partial const. return map 90683
mental activity EEG changes discrim., nonlin. measures 76264
microwave synthesizers, nonlin. dyn., stabil., phase-noise simul. 125716
min.-phase space vol. param. estim. 119098
minelike obj. detect., complex syst. stat. anal., fixed segment proc. 73195
mixed chaotic elec. arc furnace model develop. *(English)* 124097
mixed chaotic seqs., combined logistic & m seqs., pseudorandom prop. *(Chinese)* 83840
mixed-mode chaotic cct. for chaotic commun. for analog sigs. transm. 72983
mixed-sig. design, conf., Austin, TX, USA (Feb. 2001) 67361
modem-based commun. using synchronized chaos 72738
modified chaotic cryptographic method 118029
modulated fuzzy syst., chaotic systs., secure commun. 94372
modulations, chaos based, inform. theory perspective 94238
multidimensional digital scatter media, dyn. nodal commun. 117884
multistage adaptive higher-order nonlin. FIR filters, chaotic time series 80082
multistep param. modulation, secure digital sig. transm. 128970
neural encryption/decryption network, design and VLSI archit. 68989
neural network, conventional neurons, min. constituents *(Japanese)* 68987
neural network controlled IM, chaos detect. in vel. control 77863
neurofuzzy systs., num. info. process., hardware implement. 114907
noise perform. of chaotic modulation schemes 94237
noisy chaotic time series prediction by RBF neural net, radar appl. 118947
non-integer order integrat. by using neural networks, chaotic syst. 91157
nonautonomous electronic cct., expt. study of nonlin. dyn. and chaos 68545
noncoherent commun., chaotic carriers, max. likelihood approaches 73714
nonlin. arc furnace loads anal. using EMTP 134651
nonlin. chaotic Chua ccts., robust tracking control, fuzzy approach 90678
nonlin. commun. scheme, sync., multiple attractors 129062
nonlin. dyn. sim., chaos, electronic cct. synth. 79532
nonlin. dyn. systs., sync., impulsive feedback anal. 128930
nonlin. dyn. systs. reconstruction/prediction, hierarchical Bayesian approach 106001
nonlin. single-/multi-fractal sigs., state-space equilib. based Volterra predictor 95691
one-way open coupled double-scroll ccts., spatial instabil. 90681
one-way open coupled double-scroll ccts., spatiotemporal stabil. study 125631
one-way three-coupled chaotic maps, delayed-feedback control 125207
optimized piecewise-lin. systs. synthesis using similarity transform. 125196
oscillators, transm. line coupling, bifurcation 90689
oversampled chaotic map binary seqs., realisation and perform. 72938
packet switching networks, multilayer chaotic encryption for secure commun. 107824
parallel-connected boost converters, bifurcation behaviour 68575

chaos continued
PD detect., laser interferometer/Pockels effect 97771
periodic orbits realisation of Bernouilli shift map in digital computer *(Chinese)* 114836
piecewise-lin. chaotic cct., bifurcation, hysteresis and 1D map 125200
piecewise-lin. systs., global chaos sync. and robust filtering in noisy context 125202
plasma chaos pacing with, music sig. 91532
PLL cct., strange attractors and crisis-induced intermittency 101853
PM sync. motors chaotic phenom. anal. using Lyapunov exponent *(Chinese)* 123381
power systs., chaotic phenom. *(Chinese)* 111671
pulse-coupled neural net, chaotic spiking oscillators 102473
PWM voltage-controlled DC-DC boost converter, chaos, quasi-periodic route 101756
Q-CDMA and chaotic SS CDMA systs., perform. comparison over Saleh indoor channel 74584
QD, effect of inelastic scatt. on av. Coulomb-blockade peak height 91796
quadratic assignment problem, modified algm., chaotic-neuro-dyn., VLSI implement. 102469
quadrature chaos shift keying scheme, perform. 94239
quantized piecewise-affine Markov systs., tensor-based theory, map families anal. 124508
radar detect., sigs. fractal anal. 86171
radar pulse compression, chaotic phase code 96948
radar sea-clutter modeling using RBF neural network 109256
radio channel data transm. using masking oscills. 128915
radiowaves in nonlin. transm. line, chaotic transits. 125208
random-like unpredictable binary seqs. generation, chaos, adaptive median thresholding 95621
Rayleigh oscillator driven by weak periodic perturb., chaotic behavior *(Japanese)* 114659
reduced param. nonlin. adaptive filter for chaotic time series prediction *(Chinese)* 125201
region-based tech. for chaotic image watermarking 118622
relax. syst., user's condition adaptation 110560
robust chaotic synchronisation for commun. 95753
rotor syst. with clearances, bifurcation, nonlin. dyn. theory 99620
sea clutter and chaos, improved surrogate-data tests 120404
second-order digital filter with two's complement arith., periodic behaviours 125610
secure chaotic commun. schemes, low-power realizations 74073
secure commun., digitized n-scroll attractor model 94241
secure commun., multi-param. modulation, Lorenz chaos 72737
secure commun., transmitting/receiving terminal behaviour 73760
secure commun. using neural network 72714
secure mobile commun. using chaotic turbo codes 129231
self-similar traffic generators, discrete-time second-order random proc. 130207
seq. proc. neural network, nonmonotonic transfer fn. 91135
ships, natural measure feature of radial noises *(Chinese)* 86248
sig. param. estim. 118903
sigma-DM, multibit chaotic device 68877
simulated chaotic time series, long memory behaviour 124517
speaker recogn. feature using correl. dimens. 129408
speech-interfering noise modeling, applied chaos theory 84036
SPICE simul., freq. warping/chaotic behaviour generation 90630
spiking chaotic oscillator transistorised cct. 102472
spiking oscillator, chaotic, periodic pulse-train input, sync. phenom. anal. 102471
SS comms., NBI cancellation using chaos 95821
SS commun. systs., noise-like carrier generation 84650
SS commun. systs. comparison 95737
SS seq., chaotic dyn. syst., ergodic theory 117872
still images copyright protection, self-similar chaotic watermarks 95052
stochastic minelike obj. detect., nonlin. model, delay diff. eqns. 73194
superimposed pulse trains with higher-order interspike intervals, deterministic chaos *(Japanese)* 68540
SW radio commun., freq. params. predict. based on chaos and ANN 74583
symbolic seq. based chaotic coding and ADC appls. 72869
sync., small noise effect, inform. sig. 117962
sync. commun. systs., comparative anal. *(Russian)* 94379
synchronisation in four-coupled PLL syst. 90675
synchronized chaotic commun. systs., transm. efficiency *(Chinese)* 106286
synchronized hyperchaos, Bell inequality violations 106214
systs. synchronisation, proportional plus derivative control design *(Chinese)* 117876
TDMA secure commun. scheme based on sync. of Chua's ccts. 73858
telecomms. sync., chaotic carrier/noisy channel 72708
temporal/spatiotemporal chaos, synchron., nonlin. feedback control 114595
third-order PWL dyn. systs., decomposed canonical state models 90694
three-bus power syst., model, chaos, dyn. IM model *(Chinese)* 111839
three-segment piece-wise lin. resistor chaotic cct., chaotic syst. numer. anal. 125204
three-state Markov chains, optimum spreading seqs., SSMA 94307
transceiver chip design and CMOS implement. for chaotic commun. syst. 96383
two-support rotator, fault-chaos rel. test ident. 86443
underwater targets radiated noise, nonlin. detect. *(Chinese)* 75241
UWB impulse radio, appls. of symbolic dyn., pseudo-chaotic encoder 96382
Van der Pol oscillator coupled to Duffing oscillator, dyn., analog simulators 79528
voice activity detect., chaos theory *(Chinese)* 118156
vowel synthesis, online EM algm./IIR filter, neural 118120
watermarking syst. based on Bernoulli chaotic seqs., stat. anal. 94265
XLPE cable insulation degrad. monitoring, PD chaotic anal. 133741
zigzag sampled phase demodulation freq. synthesizer, chaotic phenom. *(Chinese)* 117892
zigzag sampled phase detect freq. synthesizer, Hopf bifurcation set, chaos *(Chinese)* 125249
Ge oscillistor, electron-hole plasma, nonlin. chaos phenom. 69499

chaos generators
3D hysteresis piecewise-const. cct., bifurcation 90693
binary-phase and quadriphase chaotic spreading seq., correl. anal. *(Chinese)* 117960
broadband chaos generation, blocking oscillator, continuous power spectrum 79527
cct. design using oscillators/resonators 90686
Chua's cct., chaos generation, small-amplit. time-delay feedback voltage 114594
CMOS random nos. generator based on a chaotic syst., 8 bit, 20 MHz 68949
continuous PPM, Chua's cct. 90692

os generators continued
data commun. at microwave freqs., plain scheme 85569
data protection, syst.-based solns. 106209
freq. hopping seq. generator, FPGAs, n-dimens. nonlin. digital filters *(Chinese)* 102411
freq. hopping seqs., FPGA-based generator, SS commun. 73847
Josephson jn. chaotic dyn., shunted inductive model, commun. appl. 104571
Lur'e systs. with time-delay, master-slave synchroniz. 101722
mutual/drive-response sync. 79531
neural network *(Chinese)* 94352
nonautonomous systs., chaos generator, Duffing-like oscillator 68539
noncoherent detect. in digital commun., chaos tracker 91158
piecewise affine Markov maps for chaos generation in chaotic commun. 95754
piecewise-lin. chaotic oscillators with prescribed eigenvalues, synthesis 114652
PN seq. generation, robust chaotic archit. 106104
pseudo-chaotic seqs. generated using integer-no. iters. 128919
PWL hysteresis based oscillator, 2D bifurcation diag. 90788
quantised chaotic dyn. in multiplex commun., 1D maps 94304
radio-electronic systs. pulse power supply sources study *(Russian)* 74460
Rayleigh oscillator, extremely weak perturb., duck soln. collapse, chaos 101712
RC chaos generator design using current conveyors 101829
relay feedback design, chaos generation *(Japanese)* 79535
secure radio transm. syst. using FM high dimens. chaotic oscillator 74514
secure random no. gen. based on chaotic syst., design tools 68537
self-switching phenom. sync. in chaotic oscillators coupled by one resistor 101714
tailed tent map chaotic cct. exploiting S^2I memory elements 91122
two-stage chaotic Colpitts oscillator, 3 GHz, design 69112
Wien-bridge based chaos generating cct., time-domain sensitivities 68543
InP-based RTD/HEMT microwave freq. divider IC, high-speed operation 115006
Nd:YAG microchip solid-state laser array, synchronized chaotic oscill., Talbot mirror 128204

aracter recognition
see also handwritten character recognition; optical character recognition
automatic document anal., multi-oriented, multi-scaled pattern recogn. *(French)* 118760
Chinese document categorization without dictionary support and segmentation proc. *(Chinese)* 106744
Chinese road maps, automating data extraction/ident. 73144
CNN syst. for toll driving 102477
curved text path detect. based on fuzzy curve-tracing algorithm 129668
digital feedforward neural net at-speed test method 102463
edge-based method for text detect. from complex document images 129670
large-set pattern class. via neural net dimens. reduction method 73310
math. expression recogn., robust method, perform. eval. 129931
Morse code recogn. for users with phys. impairments, neural network appl. 87933
real scene image for robot navig., ident. and distortion rectification of signboards 94455
real-world eval. of generic document recogn. method for mil. form 129604
VLSI wafer ident., microcharacter recogn., V-shaped notch 100545

aracter sets
Confusion Matrix for identifying conflicts in Arabic and Latin characters 84196
document images, font clustering and class. 118338
document images, font clustering/cluster ident. 73446

aracteristic temperature *see Debye temperature*

aracteristics measurement
see also headings for specific characteristics, e.g. "gain measurement", "viscosity measurement"
ceramic capacitors, voltage withstanding rating determ. 80444
CMOS microsensors, parasitic behaviors charactn. 127122
DMOS transistors, channel length extraction, C-V meas. 81303
FFSK modem, BER charact., automated meas. 128975
free/ang. speed gyroscopes, test bench 111333
lateral power MOSFET, SPE, temp. characts., device params. 115901
MOS field-induced pn jns., space charge region, recomb. current meas. 80945
nMOSFETs, hot-carrier degrad., interface trap generation crit. energy 70086
pattern recogn., meas. errors consideration 118713
piezoceramic actuator materials, displacement-field characts., laser interferometric meas. 104434
polysilicon/ZrO_2 gate dielec. MOSFETs for sub-qtr. micron CMOS, low temp. proc. 127024
time interval meas. with appl. to electronic/optoelectronic ccts./systs. 110009
variodes, auto-meas. using PC, C-V and I-V charact. 75378
$CoSi_2$ CMOS test struct., 0.18-μm, latchup charactn. 104095
GaAs high-speed MSM photodetectors with AlAs/GaAs DBR struct., meas. 86517
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
SiGe CMOSFET tunneling currents, ultrathin gate oxide, cond.- and valence-band components 81298
SiGe HBTs, TED suppression by buried carbon layer 92313

charge (electric) *see electric charge*

charge-coupled device arrays *see charge-coupled device circuits*

charge-coupled device circuits
see also CCD image sensors
C-reactive protein detect., CCD-based light-scatt. instrum. 87546
color filter array using sig. correl., color interpolation 94823

charge-coupled device imagers *see CCD image sensors*

charge-coupled devices
see also charge-coupled device circuits
astron. CCD photodetectors, Kharkiv Observatory 75526
COMPASS RICH1 hadron detector opt. mirror design anal. 132468
conf., imaging, Stockholm, Sweden (June 2000) 124186
future lin. collider vertex detector design anal. 110351
historical invention review, appls. 126884
legal court cases, digital camera image ident. 118489
vertex detector, CCD-based, flavour tagging 110357
vertex detector, CCD-based, future lin. collider appl. 110354
vertex detector, CCD-based, optimiz. for Higgs branching ratio meas. 110356
vertex detectors, CCD-based, radiation damage, props. 110353
Ar-Xe, gas mixture, IR scintillation, electron multiplication near thin wire 76037
Si CCD, elementary charge manipulation 81360

charge injection
acetophenone-soaked polyethylene, carrier mobility estim. by transient space charge *(Japanese)* 127250
ADC, SC S/H cct., charge injection errors 79536
alkali metal acetate electron injection layers for organic EL devices 104981

charge injection continued
axisymmetric point/plane electrodes, transformer oil, space charge, Kerr EO reconstr. 104260
ballistic electron normal energy distrib. meas., three-terminal HET 75854
copper phthalocyanine thin films, carrier injection, STM anal. 69617
decacyclene LB film light-emitting devices, AC/DC response 93387
disordered organic LEDs, charge carrier transport/recomb. 105014
flash memories, erratic bit anal. 79889
gate oxide TDDB lifetime prediction under direct tunneling regime, gate voltage depend. model 126223
heterostruct. organic LEDs, transient/steady-state behavior 128020
intra-cavity contacted shallow implant apertured VCSELs, gain-switching 128258
MEH-PPV polymer LEDs, electron-injecting/hole blocking layer 105015
MFIS struct., ferroelec. gate FET memory 81767
MOSFET, anode hole injection model, impact ionization 126813
MOSFET, interface states generation after hole injection 81305
p-MOSFET, off-state stress, device degrad. 92380
n-MOSFET reliab., hot-carrier degrad., gate dielec. electron trapping 103833
nMOSFET, hot-carrier degrad., interface trap generation effect 70089
nMOSFETs, hot-carrier degrad., interface trap generation crit. energy 70086
NMOSFETs, worst-case hot-carrier stress condition, LDD resist. effects 70116
OLED, transport & recomb. simul. 117014
organic LED, charge injection props. 105019
poly-dialkoxy-p-phenylene vinylene, charge injection, temp. depend. 115344
polydiacetylene-based LEDs, bipolar charge transport, mesoscopic model 71618
polymer anode/small mol. interfaces, hole injection barriers 91737
SOI nMOSFETs, mesa-isolated, Bi-MOS mode operation, hot carrier degrad. 103817
solid-state field-controlled emitters, electron emission charactn. 69413
space-charge trapping/cond. in LDPE, HDPE and XLPE 127241
switched current ccts., clock feed-through and charge injection 114596
switched-current Viterbi decoders, effects of sig.-depend. errors on perform. 125628
thin gate oxide MOSFETs, interface states, thermal annealing 126814
transparent OLEDs using $Ni(acac)_2$ as electron injection buffer layer 71577
two-organic-layer interface recomb., electron/hole injection effects 103087
VCSEL design, opt. elec. model, diagonal current injection 93683
vert. integrated transistor-laser struct., modified design 93665
AlGaAs/GaAs heterojunction, quantum Hall regime, charge screening 80794
C nanotube ring transistor, dual-probe STM anal. 81397
GaAs:Si/InGaAs/AlGaAs forward-biased Schottky diode, EL obs. 128001
GaAs/Fe($Ni_{80}Fe_{20}$) structs., spin-polarized electron transport 80894
GaAs/ZnSe jn., spin-coherent transport 103112
GaInP-GaAs collector-up tunneling-collector HBTs, zero-offset/low knee voltage, power amps. 70052
GaMnAs ferromag.-semicond. jn., spin injection 91747
GaMnAs/(In)GaAs heterostructs., spin-depend. props. 91746
GaN based HBT, band offsets, current transport, 1/f noise 81239
GaN:Si/InGaN:Mg QW LED, tunnel jn., hole injection 116976
ITO, work fn. tuning by surface mol. design, OLED appl. 93384
$In_{0.53}Ga_{0.47}As/GaAs_{0.5}Sb_{0.5}$ type II MQW diodes, electrolum. 105005
$In_xGa_{1-x}As/GaAs$ strained QW lasers, degrad. mechanism 71758
InP:Fe,Ru,Zn films, dopant diffusion, current-volt. studies 115554
InP/InGaAs HBT, gain limitations, surface level pinning 81209
NiFe/InGaAs/InAlAs four-terminal struct., ballistic spin transport 126214
PLZT film capacitors, dielec. relax., leakage currents 70416
PZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer effect 102774
SOI FETs, ion beam induced charge collection, body-tie effects 126728
Si, photoconductance, carrier lifetime, injection levels 102983
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
p-Si/n^+-ZnO/n-ZnO/Pd diode struct., forward current suppression by light 70013
SiGe HBTs, profile design considerations for base transit time minimiz. 103769
SiO_2:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254
SrS:Ce ac thin-film EL devices, dyn. space charge mechanism 93390
Tb pyrazolone complex LED, efficient single layer operation 128017
TiO_2, porous, transient dark/photocurrents, neg. capacitance effect 91683
a-WO_3 films, electrocoloration curve anal. 104607

charge-injection device arrays *see charge-coupled device circuits*

charge-injection devices *see charge-coupled devices*

charge measurement
see also electrometers; partial discharge measurement
aerosols, bipolar charge meas. 86902
bipolar charge aerosol classifier instrum. syst. 128663
cyclohexane, streamer inception, sensitive charge meas. tech. 116138
diesel oil injectors, jet charging, internal electrification 83125
electrostatic measuring techs. develop. 83126
electrostatic powder coatings adhesion meas. 83127
ESD protective materials perform. at low relative humidity 83121
FED spacers, charging and reliab. effects 109907
floating-body charge monitor cct. for partially depleted SOI CMOS 127035
immersed surfaces, study using focused US, electrokinetic sens., proteins appl. 133385
impregnated paper insulation, charge evol., pulsed electroacoustic method 112098
layered PTFE interfacial charges meas. using step electroacoustic tech. 83128
metal/polymer contact, charge transfer meas., correl. coeff. 132122
metal/polymer contact charge transfer, contact pot. 83109
power capacitors, dielec. films, space charge meas. 134332
primary std. dosimetric equipt., current & charge meas., unified channels 86379
PVDF transducer, elongation, force, charge sigs. meas. 81752
solid dielec., space charge distrib. meas. 127144
solid insulators, space-charge distrib. meas. by HV high-speed pulsed electroacoustic apparatus 109918
space charge meas., 3D pulsed electroacoustic method 132121
stripe-like test jns., ion beam induced charge collection 115804
three-layered PTFE sample piezoelec. transducer meas. comparison 81641
XLPE insulation, space charge meas., LIPP method 104420

charge-ordered states
CeO_2/Si struct., localised charge storage, electrostatic force microscopy 103191
$Pr_{1-x}Ca_xMnO_{3-y}/YBa_2Cu_3O_7$ HTSC jns., field effect 70485

charge storage diodes
ultra-short-pulse transmitter, MESFET impulse shaping cct. 68648
uniplanar subns. monocycle pulse generator/transformer for microwave appls. 80322
GaAs HV diodes with subnanosecond gate voltage recovery 126643

charge storage diodes continued
Nd:glass high-energy laser fusion PROGRESS syst. with shaped nanosecond laser pulses 105217
charge-transfer device arrays *see charge-coupled device circuits*
charge-transfer devices *see charge-coupled devices*
charge transfer states
conjug. oligomers, opt. power limiting based on two-photon absorpt. 93780
diamond surface doping and p-type cond., adsorbate electron transfer 126003
discrete energy states, TSC curves, auto-separation/reconstruction 92583
DNA wiring electronic props., research trends 125925
DNA/C nanotube mol. films, electronic struct. self-form., charge transfer 125929
fluorinated organometallic iridium cpds., efficient EL materials 93339
N-octadecylbenzidine-TCNQ semicond. LB films, prep., elec. props. 115343
PPV-based ionically SAM, excited state dyn., photolum. props. 116922
n-C_{60}/p-ZnPc interdigitated jn. for PV cell efficiency improvement 116960
$LiNbO_3$:Tb,Fe, nonvolatile/quasi-nonvolatile holographic recording 128587
Si surfaces, Cs promoted oxid., PES peak posns. oscills. obs. 81081
charge transfer transitions *see charge transfer states*
charged dislocations *see dislocation dipoles*
charging, contact *see surface charging*
Charpy testing *see dynamic testing*
Chebyshev approximation
ADC integral nonlin. determ., FFT test, Chebyshev polynomials 102286
B-splines beyond total positivity 124637
Brun's fund. lemma and exponential sums over primes 101008
complex coeff. FIR filters design, LP & Chebyshev approx. *(Chinese)* 125616
constrained optimal location 100996
continuous scanning laser Doppler vibrometer with bow scanning compensation 132189
convergence in discretized minimization problems 113958
DDS archit. based on Chebyshev approx. 101819
distributed interconnect networks, transm. line model based anal./simul. 90651
equidistant lin. array, directional precision, multi-level amplit. shading *(Chinese)* 128907
FIR filter design, simult. magnitude/phase/group delay approx. 95662
FIR filter design combining freq. response masking and WLS-Chebyshev approaches 91069
focusing grating couplers, rigorous 3D anal., spectral collocation method 104699
image reconstruction, Chebyshev moments 118262
multi-element struct. charact., Chebyshev modified fns. 116224
nonuniform cold magnetized plasma column, penetrated and scatt. field distribs. 94019
parallel factorization of polynomials, Newton's and Chebyshev's methods 100992
rational Chebyshev approx. of rational fns. on unit disk and on unit interval 67965
S/H distortion, anal. compens., monotonic & equiripple approx. 86449
steplocked magic sine waves 86791
strapdown INS based GPS integrity monitoring, pseudorange estim. *(Chinese)* 86267
TETRA Trans European Trunked Radio, alg. CELP speech coding *(Chinese)* 73030
variable precision algm. for num. computation of Fermi-Dirac fn. 124626
Chebyshev filters
anti-aliasing filter effect on largest Lyapunov exponent calc. 90687
band pass wave digital ladder filters, direct design 130072
bandpass filters using dual-mode patch resonators, low insertion loss 102575
broadband microwave diode detectors, CAD using filter approxs. 125703
CMOS Chebyshev bandpass filter, Q-enhanced spiral inductors appl. 125593
combined filtering/radiating fns. microwave device for telecom satellites 83762
direct-coupled-resonator bandpass photonic filters, synthesis tech. 104892
FIR canonic signed digit Chebyshev filter design 68934
FIR canonic signed digit filter design 107542
fourth-order SC sigma-delta A/D converter, high-ripple Chebyshev loop filter 80006
HTSC films, planar filters, wireless systs. 71099
HTSC microwave filters 71092
HTSC multipole microwave filter, mobile commun. base station 82009
Ka-band planar HTSC filters for commun. satellite appls. 82013
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
MM-wave filters, CPW struct. 69033
multi-stage dual-mode cross-slotted HTSC filters for telecom appls. 82014
multiconductor multilevel folded-line bandpass filters, design methodology 125677
multisection power divider, singly terminated filter design theory 102515
narrow-band band-pass filter design, software tool 102334
optimal digital IIR filter design 102393
planar ellipt. bandpass filter using SMD type rect. DRs, design 102534
planar HTS lumped element bandpass filter with spiral inductors 80210
planar HTSC lumped element bandpass filter with spiral inductors 82015
S/H distortion, anal. compens., monotonic & equiripple approx. 86449
slotted cylindrical ring resonators based small four-pole filter, realisation 102559
suspen. substr. stripline band-pass filter with optimal redundancy param. 68898
SYSCUF, automated synthesis package for switched current filters 68916
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
waveguide filter, automated tuning, adaptive network model 69030
waveguide filter, design and manufacture 69031
YBaCuO HTSC bandpass filter, microstrip circ. patch resonator 71102
chemical analysis
see also chemical sensors; chromatography; electrochemical analysis; electron probe analysis; ion microprobe analysis; mass spectroscopic chemical analysis; polarimetry; radioactive chemical analysis; spectrochemical analysis; thermal analysis; X-ray chemical analysis
cement plants, proc. gas anal./prod. control integrat. 78741
dielec. porous thin films, low-k, struct. and property charact. 70369
exhaust gas anal., thick-film sens. study 121021
field-deployable opt. tomographic syst., all-optoelectronic solns. 84190
guided-wave reson., conc./absorpt. meas., highly sensitive method 120997
hollow fibers short-pulse FWM for highly sensitive gas-phase anal. 82072
IVA-L type dust conc. meas. laser instrum. for indust. conditions 132212
low-temp. press.-assisted bonding technol., microchemical anal. appls. 92557
low-thermal-budget CMOS proc. simul., Si substr. gettering efficiencies 70000
methane highly sensitive airborne gas analyzer using two-wave freq.-stabilized He-Ne laser 132211
microchip separations, diffusion coeffs. determ. 97561
MIR orb. space station solar array, post-flight research 111355
nanofabricated refr. index sens., photon tunneling in nanofluidic channel 121239
piezoceramic resonators, reson. freq. stabil./domain struct. *(Polish)* 70438
chemical analysis continued
power transformer oil, dissolved gas prediction, grey model *(Chinese)* 88785
power transformers insulating oil diagnosis using neural nets 134135
SHG labels, mol. detect. appls. 117437
solid-state transducers., conf., Copenhagen, Denmark (Aug. 2000) 100428
solns. US conc. meas., phase difference method temp. compensation 110026
substation transformer life estim. approach 123561
transformer oil, dissolved gas detect. using ANN *(Chinese)* 99710
Tropospheric Emission Spectrometer ground data syst., sci. data visualization 133323
US micromixer for microfluidic systs. 127081
water, ultrapure, for microelectronic proc., total organic C monitoring instrumentation 132210
xylene detect. in heptane soln. using long-period fiber grating opt. sens. 75572
AlGaN/GaN heterostruct. growth, NH_3 flow effect, reactor press., 2DEG transport props. 90449
Bi_2SiO_5, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
BiSrCaCuO/Ag sheathed tapes/wires, chem. anal. 70636
$Bi_4Ti_3O_{12}$, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Ca_{10}(PO_4)_6(OH)_2$, cryst. hydroxyapatite powders, mechanochemical-hydrothermal prep. 68444
CdO:F films, spray pyrolysis, chem. comp., elec. cond. mechanism 125047
Fe-V-O thin films for electrochromic smart windows, anal. electron microscopy 71415
GaN/$Al_xGa_{1-x}N$ multilayered struct., Raman spectra, MOCVD, MBE, opt. phonons 79343
InAs/GaAs mesas, surface at. stresses, press. distrib., multimillion atom simul. 103099
$In_xGa_{1-x}N$ SQWs, opt. emission/In disordering, coaxial impact collision ISS 80871
$LaGaO_3$ powders, pure and doped, chem. synthesis by amorph. citrate/EG method, oxide fuel cells appl. 123780
$LaMnO_3$:Sr electrodes of SOFCs, deposition of Cr species, air flow effect 112826
NO inhalational therapy, NO/NO_2 meas. by chemiluminesc. 98358
$(Na_{1/2}Bi_{1/2})TiO_3$-$BaTiO_3$ cryst., growth, struct., dielec. prop. 127183
NdFeB magnets, corros. resist., magnetis. 101472
PZT thin films, sol-gel growth, excess Pb content on microstruct./elec. props., 101412
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substitution 104311
$Pb_{1.05-x}La_xTi_{1-x/4}O_3(100)$ thin films, sol gel tech., structural/microstructural charact., elec. props. 104314
Si:B(P)(As) bulk-doped ref. wafers, dopant conc. meas., SIMS round-robin study 115596
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
$Sr_3Nb_{1-x}Ga_{3+(5/3)x}Si_2O_{14}$ crysts., micro-pulling-down growth and charactn. 79190
chemical analysis by mass spectrometry *see mass spectroscopic chemical analysis*
chemical batteries *see cells (electric)*
chemical beam epitaxial growth
elec./opt. props. gas source MBE 80728
III-V films, pulsed CBE, real-time opt. charactn. 124830
MBE platform growth technol., environ. safety 90201
AlAs/AlP superlattices, gas-source migration-enhanced epitaxy, struct. 101233
AlAs/GaP short-period superlattices, gas-source migration-enhanced epitaxy, PL 101234
$Al_{0.3}Ga_{0.7}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
AlGaAs-GaInP/G HBTs, emitter transit time, CBE, microwave perform. 80274
AlGaInAsP QWs, gas source MBE, laser appl. 101237
AlGaN UV photodetectors on sapphire/Si substrs. 97270
$Al_xGa_{1-x}N$ thin film, GSMBE growth, Si(111) substr. 101207
AlGaN/GaN HFET, fab., GSMBE, ECR plasma 81386
AlN, CBE on compliant Si/SiC substrs. 103035
C nanotubes growth, gas source MBE 101290
CdO single-cryst. rocksalt layers, MOMBE growth on GaAs (001) substrs. 90315
CdS N^+ ion implanted thin films, irrad.-induced PPC 93324
Co-silicided shallow p^+-n jn. Si-capped/$Si_{1-x}Ge_x$:B, elec./struct. props. 91875
GaAs, anisotropic island phase on flat GaP, Stranski-Krastanow corrugated surface 68172
GaAs solid/gas-source MBE, optimized growth conditions 90285
GaAs:Be/$In_{0.49}Ga_{0.51}P$ HBT, growth, GSMBE 103774
GaAs:N CBE incorporation using 1,1-dimethylhydrazine 101295
GaAs/InAs, QD self form. in short-period superlattices on InP 90318
GaAs/InAs superlattices, 1.3-1.5 μm wavelength QD self-form. on InP (411) 115404
GaAs/InGaAsN/GaAs QWs, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
GaAsP:Zn(Sn) MOMBE growth, impurity doping and elec. props. charactn. 69789
GaAsP/GaAs material, buried-channel opt. waveguide fab. by CBE 93124
GaAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
$Ga_{1-3x}In_{3-x}N_xAs_{1-x}$:Si,Be films, GSMBE, doping, elec. props. 126308
GaInNAs/GaAs MQWs, GS-MBE growth, opt./struct. props. 103116
GaInNAs/GaAs densely packed QDs, CBE growth, dot size/dens. control 114272
GaInNAs/GaAsP QW, strain-compensated, GS-MBE, PL obs. 105272
GaInNAsSb 1.26-μm SQW lasers, gas-source MBE growth 117222
GaInNAsSb SQW laser, GSMBE growth 117233
GaInNP/GaAs heterostructs., GSMBE growth, band lineup, PL study 101211
GaInP strained layers grown on GaP(001) by GSMBE, surface reconstruction and morph. 79239
$Ga_{1-x}In_xP$ growth, surface react. kinetics during pulsed CBE 90270
$Ga_{1-x}In_xP$ strained layers growth, gas source MBE 90292
$Ga_yIn_{1-y}P/Ga_{1-x}In_xAs$ dual-jn. solar cells, proton response 112924
GaN, CBE on compliant Si/SiC substrs. 103035
GaN, MBE growth, antimony surfactant 101206
GaN QD form. by self-assembling droplet epitaxy, appl. to SET 126136
GaN epilayer, GSMBE growth *(Chinese)* 90265
GaN epilayers on GaAs(110), elec./opt. props., radical beam epitaxy, TEM, PL 90333
GaN, high-qual., gas-source MBE, room-temp. electron mobil. 101246
GaN polycryst. GSMBE layers, strong PL emission 80692
GaN polycryst. films, metal substrs., gas source MBE, PL, XRD 79261
GaN:Er, C films, GSMBE grown, surface morph., PL, SEM, AFM 126062
GaN:Tb films, GSMBE, PL, RHEED, EXAFS 79260
GaN/Al_2O_3 epilayers, gas source MBE growth, Al_2O_3 surface nitridation, RHEED 90303

mical beam epitaxial growth continued
GaN/AlN epilayers, ammonia gas source MBE growth/charactn., sapphire substr., excitons 90305
GaN/AlN/SiO_2, epilayers, hydride VPE/MOMBE hybrid growth, PL 68243
GaNAs surfaces, wire struct. form., MOMBE, In role 90314
$GaN_{0.011}P_{0.989}$/GaP double-heterostruct., gas-source MBE growth, red LED appl. 101260
InAlAs/InGaAs/InP mid-IR quantum cascade lasers, refr. index dispersion effect on perform. 105294
InAs/InP, self-assembled QD, CBE growth 101202
InAsN film, plasma-assisted GSMBE 114276
InAsN/InGaAs/InP single QW, PL mechanism, photocond., gas source MBE growth 91805
InAsP/InGaAsP ridge waveguide LD, strain compensated, GSMBE growth 105289
InGaAs:C, heavily doped, CBE growth, surface morph. 101205
$In_{0.15}Ga_{0.85}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
InGaAs/InGaAsP microdisk lasers, GSMBE growth 105292
InGaAsN, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
InGaAsN/InP QW struct., CBE growth, NH_3 precursor 91942
InGaAsP/AlGaAs multi-wavelength elec. pumped VCSEL, 1.5 μm, fab. 82688
InGaAsP/InAlAs asymm. superlattice struct. APD, dark current reduction 116948
InGaAsP/InP, laterally complex-coupled DFB lasers, gas source MBE grown 128337
InGaAsP/InP(001), MOMBE growth rate effect on lateral comp. modulation 115315
InGaAsPN detectors, gas source MBE grown 97246
InGaP/(In)GaAs modul.-doped heterostruct., GSMBE, HEMT/HHMT appl. 101242
InMnAsSb, MOMBE growth, LW region sens.-memory device appl. 101269
InP, MOMBE growth 114275
InP QD by GSMBE on GaP, radiative recomb. 69692
InP based strained MQW laser structs., heterointerface optimiz., MOVPE/MOMBE 115400
$InP/In_{0.5}Al_{0.5}As/In_{0.5}Ga_{0.5}As/InAsP$ M-HEMT, GSMBE growth 115946
InP/InGaAs/InAlAs MSM/HEMT OEIC struct., GSMBE growth 101238
InP/InGaAs/InGaAsP strained QW lasers, fab. & perform., GSMBE growth 105291
MgO, MOMBE, AFM/AES/TEM studies 124852
Si, low temp. gas-source MBE, adsorpt. kinetics role 90316
Si:Mn films, super-doped, gas source MBE growth, anom. Hall effect 90295
Si:Mn, super-doped, photo-thermal excitation GSMBE growth, for spin-photonics appls. 124860
Si:P GSMBE, growth kinetics, doping mechanism 90268
Si/SiGe strain-bal. MQWs on SiGe virtual substrs., opt. props. 91783
Si/SiGe/Si HBT, GSMBE growth *(Chinese)* 81235
Si/SiGe/Si HBT struct., GSMBE growth and charactn. *(Chinese)* 126674
Si/SiGe/Si n-p-n HBT, carrier depth profile, electrochem. C-V method *(English)* 81215
SiC on Si-face (0001) 6H-SiC, homoepitaxial growth 101289
SiGe HBT, situ GSMBE growth *(Chinese)* 81232
SiH_2Cl_2 self-limited GSMBE on Si(100) 124851
Si(SiGe), growth rate & nonselective growth, modified GSMBE 101281
TlInGaAs layers, GSMBE growth on GaAs, temp. stable LD appls. 114274
TlInGaAs/InP DH LEDs, gas source MBE growth, temp. stable wavelength 116995
TlInGaAs/InP DH struct., GSMBE growth, WDM syst. appls. 101239

hemical bonds *see bonds (chemical)*

hemical composition *see chemical analysis*

hemical diffusion *see diffusion*

hemical effects of radiation *see radiation chemistry*

hemical energy conversion
Regenesys energy storage technol., regenerative fuel cells 134362
SOFC, hydrogen fed, proton conductor, thermodyn. anal. 134377
spacecraft, combined RTG/Stirling combined cycle engine 88072
a-Si:H/c-Si solar cells, sputter deposited, PV water electrolysis, H_2 prod. 100029

hemical engineering *see chemical technology*

hemical engineering computing
see also computerised control; computerised instrumentation
fault diagnosis of multivariate systs., chem. engng. 107411
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479

hemical equilibrium
gas turbine syst. NO_x emissions control using steam injection 99563
SOFC anodes, thermodyn. anal. of C deposition and electrochem. oxid. of methane 99999
HF chem. laser, power spectral perform. 105082

hemical industry
ammonia prod. plant proc. sustainability solns. 124144
bubble column meas. & control, resist. tomographic imaging 121273
capacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
cord-connected elec. equipt., safety initiatives 134693
crit. LV UPS, standby generator power ccts., selectivity 100352
DC chopper systs. spec. for electrochem. appls. 77988
distrib. back-up protection, μP based multifunction relays 134689
elec. heat tracing, μP control, wireless commun. 134691
elec. safety, PCIC impact 134687
fuzzy control of rectifying power supplies 88807
hazardous locations zone equipt. installation, US experiences 124287
ICEA MV power cable specs. overview 133738
IEEE petroleum and chem. indust. conf., Toronto, Ont., Canada (Sept. 2001) 124213
intermediate products QC, spectrophotometer develop. 67653
LV ground-fault indicators operation, ASD effect 124147
material issues, condition monitoring, NDT, failure anal. 90612
out-of-control sig., distrib. location change, chem. shipments arrival 124435
power supply syst., harmonic filter concept 134684
power syst. grounding, ground fault protection 134686
proc. imaging & image proc., DuPont appls. 113808
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219
Profibus-PA and Fieldbus Foundation fieldbuses, hardware concept *(German)* 131822
scale up vs. numbering up in chem. proc. indust. 113433
severe duty totally enclosed fan-cooled squirrel cage motors, IEEE 841-2001 134688

chemical industry continued
sulphur crushing operations, ESD protective measures investig. 83122
totally enclosed fan-cooled squirrel cage severe duty motors, IEEE Standard 100350
two-soln. interface meas. using image proc. *(Japanese)* 132213

chemical interdiffusion
see also diffusion barriers
at. layer CVD for metal nitride growth, dual damascene barrier requirements 90460
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effects 92140
bondpad peeling failure in wafer fab., AES/EDX studies 103949
Cu/TiN/6H-SiC(0001) heterostruct., epitaxial growth, PLD, XRD, TEM 114381
dual work fn. metal gate CMOS technol. using metal interdiffusion 104120
electroabsorption modulator integrated DFB lasers, optimal wavelength detuning 116824
ferrite ceramic chips, Cu electrode glow discharge deposition 115098
low-k dielec. thin film pore charact., positronium annihilation lifetime spectrosc. 92601
methylsilane/trimethylsilane-doped low k PECVD organosilicate glasses, elec. props. 104233
organic ion-implanted low-k organic SOG films, IC appls. 126466
organic/metal interface electronic struct., UV photoemission spectra, Kelvin probe method 103164
polyimide-Cu MCM-D, copper capping alternatives eval. 115231
polysilicon, metal-induced lateral crystn. technol., device appls. 80629
polysilicon TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
PZT thin films, depth profile, RF glow discharge at. emission spectrosc. 104315
QW IR photodetectors, detect. wavelength tuning 86543
silicide films form. on Si, low-energy MD simul. 69999
silicide thin film form. on Si under high-temp. annealing, diffusion model 115690
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
thin films, stoichiometry, interdiffusion, electrode stability, TEM 101415
Ag/Al bilayer self-encapsulation proc. kinetics model 92180
Ag-epoxy conductive adhesive/Sn-Pb coating interface, high temp. degrad. mechanism 67561
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al plug CVD-PVD proc. for sub-0.25 μm devices, via filling/Al microstruct., underlayer effects 92171
Al/Si/GaAs(001) Schottky diodes, interface reacts./local interface dipoles 103753
$Al/TiN_x/Si(100)$ thin film diffusion barrier syst., XANES obs. 80901
Al/TiN(001) epitaxial diffusion barrier, annealing, interfacial react. 91933
AlAs/GaAs DBR, doping-induced loss, laser appl. 93616
AlGaAs opt. pumped unipolar QW lasers, gain optim. 117262
AlInAs/InGaAs HEMT, diffusing F atom suppression by PH_3 plasma treatment 115949
Al_xMo_{1-x}/n-InP alloy electrode syst. for thermally stable ohmic contacts 115430
AlON diffusion barrier form. for Ag interconnect metallization 92179
Au interconnections, electromigration/electrochem. react. failure mechanism 115673
Au/Cr/sapphire interfacial fracture, hybrid microcircuits, annealing 102839
Au/Ge/Pd/n-GaSb ohmic contacts, microstruct. anal., sub-μm contacts 103165
Au/Sn flip-chip interconnection, thermal reliab. 67641
Au/TiB_2/GaAs Schottky contacts, transit. layer, transverse bulk photovoltage 69712
Au-Ni-Sn intermetallic phase form in eutectic Pb-Sn solder form. on Ni/Au metallization 67531
$(Ba,Sr)TiO_3$ single-phase epitaxial film fabr. and microstruct. charactn. 101459
$(BaSr)TiO_3$ thin films, hysteresis effect, alternative gate dielec. appl. 115465
$Bi_2Sr_2CaCu_2O_{8+x}$, SOFC contact layers, chem. compatibility 89174
$Bi_2Sr_2CaCu_2O_x$/Ag/Ni HTSC clad tape, fab., mech. props., J_c 70735
$Bi_2Sr_2CuO_{6+x}$, SOFC contact layers, chem. compatibility 89174
a-C:H DLC film on Al_2O_3-TiC sliders, tribo-chem. wear 92809
$CaBi_2Ta_2O_9$ ferroelec. films, PLD, dielec. props. 79350
CdS/CdTe solar cell struct., doping and intermixing, spatially resolved cathodolum. obs. 112878
CdSe self-assembled QD form., diffusion effect 79325
$Cd_2SnO_4/Zn_2SnO_4/Zn_xCd_{1-x}S$/CdS/CdTe polycryst. thin film solar cells 100106
CdTe epitaxial films, close-spaced sublimation growth and struct., substr. effects 80685
CdTe/CdMgTe buried quantum wires, interdiffusion using patterned SiO_2 masks 80826
CdTe/CdMgTe buried single QDs using selective thermal interdiffusion 91775
CdTe-CdS-Zn_2SnO_4-Cd_2SnO_4 solar cells layer thickness/interdiffusion charactn. 100114
CeO_2 thin films for gate dielec. appls., microstruct., elec. props. 70372
Co/C, soft X-ray opt. multilayers, grazing specular reflectivity *(Chinese)* 71465
$CoSi_2$ selective growth on patterned substr., dual ion beam tech. *(Chinese)* 81124
$CoSi_2$/Si(100) films, SPE growth, Co/a-Si/Ti/Si multilayer react. 114413
Cu backside contamination issues in CMOS proc. integrat., case study 92476
Cu damascene interconnect sheet resist./line width meas., test struct. issues 103497
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92116
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Cu dual-damascene interconnects, sub-0.1 μm, barrier/seed technols. 115686
Cu electroplated film, Cu/Cu/TaN/SiO_2/Si multilayer interfacial react. 81113
Cu interconnections reliab. improve., use of binary Cu-alloy films 126457
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu interconnects, thermal stabil., self-aligned MgO layer effects 69924
Cu metallization, investig. of sputtered TaC_x/WC_x films as diffusion barriers 126471
Cu seed layers, organic soln. deposition on barrier metals 92185
$Cu/(HSiO_{3/2})_x$/Si, sputtered Cu films, thermal reacts. 92134
Cu/Er/Si(100), Cu metallization interact., solid-phase reacts. 81121
$Cu/ErSi_{2-x}$/Si, Cu metallization interact., solid-phase reacts. 81121
Cu/Gd/Si(100), Cu metallization interact., solid-phase reacts. 81121
Cu/SiO_2/Si, sputtered Cu films, thermal reacts. 92134
Cu/Sn/Si syst., 3D struct. form./evol., AFM, AES, SEM, EDX 114307
Cu/SnPb, interface react., XRD 90549
Cu/Ta/Si(111) thin films, neg. bias sputtering for Ta silicidation retardation 92136
Cu/Ta/SiO_2/Si films, Ta diffusion barrier layer oxid., thermal annealing 69935
$Cu/TaC_x(WC_x)$/Si metallization/diffusion barrier syst., anal. 115676

chemical interdiffusion continued
Cu/a-SiCOF interface, ULSI interconnect metallization, annealing, XPS/AES/SEM 103477
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-Mo-based multilayer films for advanced metallisation, microstruct., Mo addit. effects 115675
Cu-SiO_2 dual-damascene interconnects, electromigration early failure stats. 81134
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
Cu-Ta-based multilevel interconnects, CMP 103479
Cu-TiWN multilayer interconnections, electromigration 81117
CuAl-SiO_2 barrier/adhesion promoter-ILD interface microstruct., charactn. 103461
Cu(In,Ga)Se_2 thin film solar cell absorbers, bandgap profiling effect 100101
Fe/Al_2O_3/Fe tunneling jn., ion beam sputtering, microstruct. 81925
$FeSi_2$ controlled phase form., FeZr and FeV diffusion barriers 114414
a-$FeSi_x$, prep., struct. opt. props. 103068
GaAs (001), Mg adsorpt., surface/bulk props. 126039
GaAs bulk resistors for MMIC appls., highly accelerated stress failures 69266
GaAs, low-temp. grown, enhanced intermixing in anion and cation sublattices 126293
GaAs/$Al_{0.35}Ga_{0.65}As$ MQW, alpha particle irrad., annealing, PL obs. 80816
GaAs/AlGaAs QW, SiO_x capping layers, impurity-free interdiffusion 91838
GaInAs/GaInAsP laser struct., pulsed-laser-induced QW intermixing 71843
$Ga_xIn_{1-x}N_{0.04}As_{0.96}$/GaAs SQW lasers, subbands, interdiffusion effects 82643
n-GaN, Ti/Al ohmic contacts, microstruct. evol. with increasing anneal temp. 69721
GaN epilayers on sapphire, RTO in dry oxygen, XRD, SEM 126421
p-GaN, low-resist. thermally stable ohmic contacts, Pd/Ni metallization 115433
p-GaN ohmic contact, H_2 storage materials effect 80920
p-GaN/Au/Pd contacts, elec./struct. props., surface treatment 69717
p-GaN/Pd contacts, elec./microstruct. changes, surface treatment 69716
$Gd_{0.23}Si_{0.14}O_{0.63}$ gate dielec. films, thermal stabil. and diffusion anal. 127254
Ge self-organised dot superlattices, phonon spectrum, Raman scatt. 101230
Ge/Si(001) islands, UHV CVD, strain-driven alloying 68268
Ge(211)/Si(211) heterostruct., MBE, surfactant-mediated growth, charactn. 101208
H-silsesquioxane low-k dielec. material integrat. with TiN/TaN/W_2N thin film barriers 92181
ITO films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
In-Sn/Ag soldered joint, $AgIn_2/Ag_2In$ transforms., thermal aging 114417
InAs/GaAs QD, GaAs proximity cap, postgrowth RTA, TEM/photolum. obs. 126270
InAs/GaAs multi-stacked QD, defect generation, MBE 80886
InAs/GaAs/InGaAs QD, interdiffusion, luminesc. *(English)* 103142
InAsP/InP strained MQW ridge-waveguide laser, RTA effects 128335
(InGa)As QD, at. equilib. conc. 68161
InGaAs concave disks, heterog. droplet epitaxy, In segreg. 114296
InGaAs/AlAsSb QW, MBE growth, Si doping 115397
InGaAs/InGaAsP MQWs with dielec. and InGaAs capping layers, intermixing behavior 115377
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, dielec.-induced interdiffus., two-step RTA 80973
$In_xGa_{1-x}As$/GaAs strained QW lasers, degrad. mechanism 71758
InGaAs-InGaAsP diffused QW modulators/lasers 127778
InGaAsP/InP MQW laser structs., enhanced band-gap blueshift, group V intermixing 71759
InGaN/GaN QW struct., RTA effects, MOCVD, phase separation, PL, disloc., strain relax. 91944
InGaN/GaN/sapphire, MOCVD-grown, interface props., cathodolum. anal. 80853
InGaP-Au/Cu Schottky contact, thermal reliab. and MSM photodetector appls. 69708
InN/GaN heterostruct., flow modulation epitaxy, MOCVD, HEMT 90454
InP:Fe,Ru,Zn films, dopant diffusion, current-volt. studies 115554
IrMn exchange-biased double tunnel jns., bias voltage & interdiffusion 116298
$LaGaO_3$:Sr,Mg/CeO_2/NiO SOFC, power dens., anode materials 112829
La_2O_3/SiO_2/Si struct., RTA, struct., stabil., TEM/EELS obs. 91879
$MoSi_2$/Al interconnect lines, electromigration, stress-induced escape 126485
Nb_3Sn, internal-Sn, supercond. props., starting Cu-Sn phase effects 70569
Ni, electroless, wettability in under bump metall. with Pb free solder 67539
Ni/SiC interface reacts., interdiffusion pathway, XRD, TEM, EDS 115491
Ni/SnBi solder interfacial react., annealing, microstruct. 101470
Ni-Ti shape memory thin film, growth & charactn. 116065
NiFe based spin valve struct., diffusion behavior 81846
NiFe/NiMn bilayer/pinned spin valve, exchange coupling *(Japanese)* 70509
NiO/FeNi bilayer with interdiffused interface, exchange coupling 81879
NiSi films in Ni/Pt/(111)Si and Ni/Pt/(100)Si systs., thermal stabil. 91864
PLZT/Pt(IrO_2) ferroelec./electrode systs., heating, interface anal. 127225
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
Pb/Sn/Te, thermoelec. material joining, liq. phase diffusion bonding, toughness 103163
Pb-free solder alloys, interfacial reacts. 115159
PbSn solder reflow on Cu and Ni, phase evol. 114418
Pd epitaxy on Si(111), Pd_2Si island form., anal. UHV TEM 79270
Pd/Si(111) syst., laser spraying, Pd_2Si interface struct. 126205
Pt/$SrBi_2Ta_2O_9/ZrO_2$/Si ferroelec. gate oxide struct., elec. props. 69755
SBT/Al_2O_3/Si heterostruct., PLD, ferroelec. props. 114370
a-Si, mechanism of metal induced lateral crystn. *(Chinese)* 114238
Si n-MOSFET, Ta_2O_5 gate dielec., n^+-p jn. leakage characts. 69629
Si thin film technol., struct. control, Ni film prelayer 90261
Si:B/SiO_2, through-oxide implant., SIMS anal. 103254
Si:C, ion implant., $Si_{1-x}C_x$ form./stabil. 69803
Si:Cu, diffusion rel. to gettering, silicide retardation effects 125996
Si/C layer syst., SiC ion beam induced solid state react. 79404
a-Si/Ge multilayers, interdiffusion coeff. nonlin. 69689
Si/SiO_2(ZrO_2)($ZrSi_xO_y$)/Hf(Zr) MOS capacitors, interacts. 80438
Si/$TiSi_2$/Ti syst., sputtering prep., preamorphization, salicide form. 103154
$(Si_m/Ge_n)_N$ step-graded short-period superlattices, solid source MBE 79250
Si(100), carbonization proc., ion-beam bombard. 125060
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
3C-SiC epitaxial growth on SOI, Si cavity suppression 90542
SiGe pMOSFET perform. rel. to hole mobility in fully-strained layers 92377
SiGe/Si MQW p-i-n photodiodes, influence of RTA *(English)* 104958
$Si_{1-x}Ge_x$/Si MQW struct., photocurrent spectrosc. *(Chinese)* 80877
a-SiH TFT, high-perform., $NiSi_2$ use, LCD appl. 86849

chemical interdiffusion continued
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Sn-Au solder micro-bumps, reflow fab., flip-chip bonding 90551
$Sr/SiO_xN_y/Si(100)$ nanostruct., interfacial chem., XPS/SIMS obs. 126228
Ta films on Si and SiO_2/Si substrs., struct., annealing 80976
Ta/NiFe/CoFe/Cu/CoFe/PtMn/Ta spin valves, magnetoresist., interlayer diffusion 81877
Ta/TaC diffusion barriers for Cu metallization on Si, reliab. 91877
TaN CVD diffusion barrier for Cu interconnects 92166
TaN diffusion barrier against Cu diffusion, perform. eval. using SIMS/AFM 69939
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ta_2O_5 films, annealing, dielec./opt. props. 116126
Ti/Al/GaN:Si contacts, struct., AES/TEM obs. 103173
Ti/Mo/Si, ultrathin surface/interface Mo layer, annealing 115490
Ti/Si films, solid-state react., vol. anal. of C49-C54 transform. 126474
Ti/low-k H-silsesquioxane and Ti/TEOS struct. at elevated temps., comparison study 92182
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvement, reservoir modeling 81132
Ti-Si bilayers, init. reacts., in situ resist. meas. 80892
Ti-TiN long throw/ionized PVD liners for W-plug contact/via appls. 103469
$TiAl_3$ interfacial growth, in-situ TEM obs./num. simul. 103462
$Ti_{1-x}Al_xN$ barrier layer. narrow reson. profiling, oxid. 104283
TiN PVD gate thermal stabil. under RTA, impact on CMOSFET charact. 104128
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
TiO_2 thin film, synthesis, metalorganic decomp./annealing 116133
TiO_xN_y films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
$TiSi_2$, C54 phase form. enhance. by multi-thermal-shock proc. 103450
$TiSi_2$ form. and sheet resist., Al interlayer effects 91857
W/W_2N/WO-based thin film CVD using volatile liq. precursors 90462
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 70306
WC_x diffusion barrier/Cu metallization syst., phys./elec. props. 81109
$YBa_2Cu_3O_{7-x}$, SOFC contact layers, chem. compatibility 89174
$YBa_2Cu_3O_7$(-$SrTiO_3$-$YBa_2Cu_3O_7$) PLD thin films on sapphire, microwave appls. 92909
Y_2O_3/Si(001), direct heteroepitaxy, high-k gate dielec. appls. 124844
Zn_3As_2 grown on (001) and (111) InP by MOVPE, TEM investig. 114317
ZnCdSe QW, low temp. migration enhanced epitaxy 101275
ZnMgSSe/ZnSe MQW laser, thermal stabil., opt. pumped lasing 128330
ZnMgSSe/ZnSe MQW lasers, opt. pumped lasing, PL 93619
ZnSe/GaAs interface, thermal element diffusion, SIMS anal. 69632
ZnTe/CdSe(100) interfaces, electronic struct. anal. 91740
metal/Ta_2O_5/Si gate devices, elec. characts./thermal stabil. of W, WN_x, and TiN barriers 91910

chemical lasers
COIL size-reduction cutting of radioact.-contaminated struct. 111642
conf., gas flow/chem./high-power lasers, Florence, Italy (Sept. 2000) 100389
flow field constituents direct meas. by spontaneous Raman imaging tech. *(Chinese)* 121259
high-energy chem. laser press. recovery syst., ejector efficiency *(Chinese)* 122745
high-power gas flow chem. lasers, press. recovery syst. 105144
high-power gas flow chem. lasers, press. recovery systs. 105137
supersonic chem. lasers, press. recovery systs., gas dyn. flows, num. simul. 105135
Al particles in Ar, gas dispersed medium for pulsed chem. lasers 128099
CO_2 several-THz bandwidth wide-aperture laser amp., chem. HF laser pumped 105122
DF chem. laser, pulse-periodic operation 105087
DF/HF CW chem. laser, perform. depend. on flowfield params. *(Chinese)* 105148
H_2-F_2 IR-initiated thermal-chain explosion laser 93471
HF CW chem. laser with three-jet nozzle array, spatial-energy and spectral charact. 128113
HF CW chem. laser with three-jet nozzle array, secondary-fuel supply effect on charact. 128114
HF chain/nonchain phototriggered lasers, perform. study 105086
HF chem. laser, open surface discharge opt. pumping, output charact. 128118
HF chem. laser, power spectral perform. 105082
HF laser, operation conditions, excited mols. fluoresc. meas. *(Korean)* 93486
HF nonchain chem. laser, energy, temporal and spectral charact. 105084
HF nonchain laser, pulsed pumping, output charact. 93481
HF phototriggered laser perform., X-ray preionis. influence 105143
HF pulsed chem. nonchain laser, electron beam pumped, output radiation 105083
HF/DF photoinitiated pulsed chain chem. laser, master generator-amp. cascade scheme 105085
I act. quantum filter for image intensification 116886
I chem. pumped laser transit. 128044
I high-energy photolytically pumped laser, injection seeding 128041
I lasers, resonator SBS-mirrors, phase conjug. develop. 105398
I photodissociation ASTERIX laser, PALS project and upgrade 105081
I_2 high power laser beams, opt. freq. conversion techs. 105069
I_2 short-pulse photolytic laser 128040
I-NCl chem. laser, $^2P_{\frac{1}{2}}$-$^2P_{3/2}$ electronic transit., CW action 105060
I* high-energy photolytically pumped laser, Raman conversion 128042
O_2-I COIL laser, I generation mechanism 93483
O_2-I advanced COIL chem. laser, ElectriCOIL syst. concept 105061
O_2-I chem. U.S. Air Force Airborne Laser, missile defence appls. 111639
O_2-I chem. laser, RF discharge dissoc. 105073
O_2-I chem. laser, RF discharge pumped, singlet O_2 generator *(Japanese)* 128117
O_2-I chem. laser, act. medium high total press. 82475
O_2-I chem. laser, at. iodine chem. generation modelling 105075
O_2-I chem. laser, basic hydrogen peroxide jet stabilization 105076
O_2-I chem. laser, mist singlet oxygen generator 105072
O_2-I chem. laser, multi-guideplate singlet oxygen generator 105071
O_2-I chem. laser, nuc. plant decommissioning appl. 105622
O_2-I chem. laser research in Dalian, multi-kilowatt output 105058
O_2-I chem. laser, small sig. gain and output power study 105062
O_2-I chem. laser, virtual confocal unstable resonator 105388
O_2-I chem. laser with hybrid confocal type resonator, output charact. 105142
O_2-I chem. laser with pipe-array jet-type singlet O_2 generator 105080
O_2-I chem. laser with sq. pipe-array jet-type O_2 generator *(Chinese)* 82477
O_2-I chem. laser with unstable resonator, UR90 outputting annular beam 105067
O_2-I chem. lasers, chem. at. iodine generation 105077
O_2-I closed gas cycle chem. laser design 105070

emical lasers continued
O_2-I discharge chem. laser, $O_2(a^1\Delta_g)$ RF plasma jet generator 105059
O_2-I ejector chem. laser, mixing chamber calcs. 128112
O_2-I high-press. chem. laser, nozzle scale effect on perform. 105065
O_2-I high-press. pulsed laser with instantaneous I generation, operational charact. 105079
O_2-I kW RADICL chem. laser research 105056
O_2-I laser, gas-phase singlet O_2 prod. using organic ozonides thermal decomp. 105395
O_2-I pulsed chem. lasers, SF_6 buffer gas 93470
O_2-I repetitively pulsed freq.-shifted COIL chem. laser 128039
O_2-I supersonic chem. laser, I_2 dissoc. study 105066
O_2-I supersonic chem. laser small sig. gain profiles 105068
O_2-I supersonic chem. laser, transonic/supersonic nozzle sects. 105057
O_2-I supersonic chem. laser, twisted-aerosol singlet O_2 generator, energy performs. 105078
O_2-I supersonic chem. lasers, flow mixing schemes, computational modeling 105063
O_2-I supersonic flow chem. laser, throat-mixing syst. 105074
O_2-I supersonic laser evol. at Russian Federal Nuclear Center-VNIIEF 105064

emical mechanical polishing
3D chem. mech. planarization slurry flow model based on lubrication theory 92083
BPSG pre-metal dielec. film CMP, removal rate/uniformity/defectivity 103346
DUV proc., photo-developing defect and developing-like defect 103573
IC proc. technol. requirements for 300 mm wafer transit. 115984
interconnect param. var., technol. scaling impact on clock skew & delay 126939
interconnects, conf., Burlingame, CA, USA (June 2001) 124180
liq. cryst.-on-Si microdisplay fab. using std. foundry proc. flow 86869
low-k dielec., mater. charactn. for damascene integrat. 126463
low-k hydrogen silisesquioxane, chem. mech. planarisation, dielec. degrad. elimination 81068
low-k porous dielec., dual hard mask, Cu dual damascene fab. 115718
material removal rate model 103388
methylsilsesquioxane film, low-k, chem.-mech. polishing proc. 103293
model for mech. wear and abrasive particle adhesion 92072
model of CMP 103329
Nanoglass E polymer/Cu damascene proc., etch/clean/CMP 126451
operations optimisation, extended X-factor theory, unit hours concept 100546
optimal polishing params., neuro-fuzzy inference 92005
planarisation, oxide removal & in-situ monitoring, review 115659
planarisation using pre-thin-surface grinding, ULSI mfg. 115660
polysilicon CMP proc. with small erosion for trench isolation proc. 103345
post-metal CMP cleaning with electrolyzed DI water, surface control tech. 103344
removal rate uniformity control, empirical-based modeling 81085
reverse tone etchback STI CMP, modeling 92078
semicond. wafers, chem. mech. polishing 3D wafer scale hydrodynamic modeling 81087
slurries, extensive pump handling effects 103380
slurry anal., particle meas. 103384
slurry flow rate/point-of-use filter life using press. transducer/flowmeter 103395
slurry-induced metallic contaminations elimination, post-CMP cleaning proc. 103435
stack capacitor integrat. with buried O barrier using CMP of noble metals 127027
STI planarization proc. using direct CMP 115654
ultra clean proc., conf., Ostend, Belgium (Sept. 2000) 78425
ultralow-k ILD materials develop., IC proc. challenges 126492
VLSI oxide CMP manufacturability, model-based dummy feature placement 81167
wafer scale pattern meas. for CMP anal. 103347
wafer scale var. removal rate, elastic pad deform. anal. 69859
wafer thinning technol. based on CMP techs. 69876
wastewater treatment for reuse/recycling/reclamation 115650
Al-05 Cu alloys, chem. mech. planarization, 1 Gb DRAM chips appl. 103360
AlCu RIE metallization, SiO_2:C low-k interlevel dielec. 103476
Cu BEOL technol., advanced ULSI interconnects, defect reduction 126441
Cu CMP film, RT direct bonding, bumpless interconnection 113630
Cu, CMP in KIO_3-based slurries 92047
Cu CMP, low cost residue-free abrasive-free proc. 126358
Cu CMP proc. modules, defect class. 126502
Cu CMP technol. for ULSI multilevel metallization *(Chinese)* 103302
Cu CMP, two-step proc., 0.13 µm node multilevel metallis. 126461
Cu CMP, two-step proc., chem. induced defects reduction 126462
Cu, chem.-mech. planarization, surface chem. 101464
Cu damascene interconnect sheet resist./line width meas., test struct. issues 103497
Cu damascene interconnects, recrystn. anneal, reliab./post-CMP defects 81135
Cu damascene struct., slurry employing silica abrasive for CMP 103458
Cu dual damascene proc. defect tracing 126496
Cu electroplated profiles, pattern depend. modelling, CMP 115712
Cu films, damascene electroplated, morph., filling capability 68352
Cu full damascene metallization, sub-0.18 µm RF CMOS SoC high Q inductor and MIM capacitor appl. 125740
Cu interconnect CMP optim., proc. flow tuning 126497
Cu interconnects, NH_3-plasma treat. and CMP modif. effect on TDDB improve. 81116
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu interconnects, air-gap fab. for low intralevel dielec. const. 92148
Cu interconnects, sub-0.1 µm, fab./perform. limits 92168
Cu metallization, SiN diffusion barrier, NH_3 plasma pretreatment 126478
Cu, sputtered, patterned using ion milling or CMP, surface electromigration 115664
Cu stressed damascene interconnection, dielec. breakdown, EL obs. 81110
Cu two-level interconnect, defects and electromigration 115691
Cu wafer metrology for electroplating/CMP control 115689
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu/low-k ILD and Cu/ultralow-k ILD layers, CMP module integrat./proc. 126493
Cu/low-k damascene proc. develop., rapid X-ray reflectometry metrology 104037
Cu/low-k dielec. interconnects, interfacial adhesion 115707
Cu/low-k wiring, interconnect module technol. 69928
Cu-CMP for dual damascene technol., (non)Prestonian removal regimes 69858
Cu-Ta-based multilevel interconnects, CMP 103479
GaAs surfaces, (100), morph./microrelief 81069
H-silsesquioxane spin-on polymer low-k film, proc./props., CMP charact. 92149

chemical mechanical polishing continued
a-Si film/Cu selective metallization, electrochem. contact displacement 92053
Si, metallic contaminants removal, post-CMP dry cleaning proc. 69851
Si wafer CMP, mech. interacts. effects 103338
Si/SiO_2, oxide chem. mech. polishing, nanotopography, spectral anal. 115615
4H-SiC epitaxial layers CVD growth, substr. surface prep. effects 69873
SiO_2 ILD, CMP, ULSI mfg. *(Chinese)* 103407
SiO_2 dielec. CMP in ULSI multilevel metallization *(Chinese)* 103301
SiO_2, polymeric surfactants for improving CMP perform. 92051
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
SiO_2:methyl films, CVD, struct./dielec. props. 124893
SiOC, PECVD layer, chem. mech. polishing 115645
SiOCH low k ILD films for <0.18 µm dual damascene appl., integrat./charactn. 92122
Ta, CMP in KIO_3-based slurries 92047
W CMP, appl. of CMP model 103330
W CMP procs., modeling and charactn. 92070
W films, chem. treatment, IC appl. 103439
W plug CMP using different consumables, optim. 69956
W post-CMP defect inspection, recipe optim. 100637
W/TiN damascene metal gate, full CMP proc. integrat. for ULSI 92127
W-damascene SRAM cell interconnect ILD, CMP scratch induced defects, failure mechanism 79891
$YBa_2Cu_3O_{7-x}/PrBa_2Cu_3O_y$ HTSC trilayer Josephson jns., CMP 127415

chemical radiation detectors
gaseous radiation detectors, gas anal. syst., review 76042

chemical sensors
used for sensing of chemical quantities
see also electrochemical sensors; gas sensors; ion sensitive field effect transistors
agent sens., conf., Orlando, USA (Apr. 2000) 67364
ammonia, chem. sens. in integrated microfluidic syst., Berthelot react. 86717
automated rapid vap. concentrator, nitroaromatic vap. sampling 75695
biological attack detect. devices 132004
bovine viral antigens detect., surface SHG based immunosensor 86687
buried landmine/UXO chem. signatures, weather effects 76989
buried landmine/UXO chem. signatures transport, model comparison 76988
capillary electrophoresis microchip, radionuclide/metal detect. 86718
chem./biosensors, fluoresc. lifetime change detect. by optoelectronic cct. autooscill. 120961
CMOS pH sensitive ISFET, chip temp. sens. 86735
compact integrated opt. (bio)chem. sens. syst., replicated chips 75670
conf., Basel, Switzerland (July 2000) 89512
conf. on sens. and control techs., Wuhan, China (June 2000) 78371
2,4-dichlorophenoxyacetic acid monitoring, QCM immunosens. 111471
DNA array sens., mag. microbeads & GMR magnetoelectronic detect. 75668
dopant syst. PLD, chem. sens. appl. 68309
dual receptor biosensors, fluoresc. reson. energy transfer pairs 109721
electronic tongue, response, drift correction algms. 109778
FBG refractometer, side-polishing, liq. optochem. sens. 97279
fibre opt. sens., surface plasmon reson. on Ag film, SAM coating 75571
fibre optic chem. sens. for heavy metals meas. 75730
fluid external species meas., opt. fibre sens., neural net pattern recogn. 120837
fluoresc. dye opt.-fiber sens., organic solvent water content 75570
gaseous hydrocarbon distrib. meas. by NIR absorpt. tomography syst. 110043
GLIMPS projectile, sens. and taggant delivery systs. 111314
glucose conc. noninvasive monitoring, OCT 98374
glucose sens., sampling mechanism employing gel phase transit. 132057
guided-wave reson., conc./absorpt. meas., highly sensitive method 120997
HF thickness-shear-mode resonators, impedance anal., chem. sens. 97434
human serum albumin QCM immunosens., disposable 120953
immunosens., opt. heterodyne SPR phase detect. 97418
in-situ comp. sens., inductive & capacitive sens. arrays 120987
landmine detect./location, X-ray fluoresc. tech. 88197
large format broadband QW IR photodetector arrays, spatially modulated prism interferometer appls. 86656
laser multiphoton ionis. appl. to fast direct environ. anal. 111481
long-period fiber grating opt. sens. with optimized sensitivity, chem. detect. 75572
long-period fibre gratings pair, curvature/load/chem. sens. appls. 97282
mag., acoustic, chem. microsensors for real time unattended use 109821
mass market gas/chem. sens., MEMS device appls. 86765
MEMS chem. sens., adsorpt.-induced/photoinduced stresses 109729
metal conc. in water, RT phosphoresc. opt. fiber chem. sens. 120973
microbent opt. fiber for chem. sens. 131953
microfabricated cantilever array chem. sens., reson. freq./bending readout 97493
microfluidic chem. sens. array 97429
microfluidic opt. detect. syst., waveguide integrat. 93167
microsensor, membrane coating, automatic dispensing machine 121045
microsystems for chem./biological appls. 81548
milk rancidity monitoring by electronic nose, dyn. PCA anal. 132056
mine detect. & remediation technol., conf., Orlando, USA (Apr. 2000) 67351
mineral water tester, µTAS, PCB modular assembly 121047
missile fuel leaks detect. using opt. sens. 75561
mol. imprinted polymer coated QCM, neutral/ion anal. fingerprints 97444
mol. imprinted polymers, environ./biotechnology sens. appl. 132002
multifunctional sens. for oil condition eval. *(German)* 109770
multilayered sol-gel pH sensitive dye coated fibre optic pH sens. 132034
multiresoln. SAW chem. sens., pass. wireless interrogation 97441
neural network-based sens. sig. accelerator 121050
NQR land mine detect. syst., field test results 76994
NQR landmine detect., stat. sig. proc., Bayesian algm. 76995
odour sens. for lavatory in general domicile 97476
olfactory sig. fuzzy logic based recogniser 120962
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
opt. fiber sens. for oil contamination meas., 3D fluoresc. spectrum parameterization 120879
opt. halide sens., fluoresc. quenching kinetics 121005
opt. peroxide biosens. using elec. controlled-release tech. 86681
PANI-ABS composite film, reusable aq. ammonia sens. 75719
photomech. chem. microsens., situ hazardous chem. detect. 97449
photonic ccts. integrated with CMOS compatible photodetectors 93452
planar waveguide opt. chem. gas sens. with 3-layered struct. *(Russian)* 109789
polyethyleneoxide ion-conducting polymer film chem. sens. 97473
polymer channel opt. waveguide sens., vis. spectrosc. *(Japanese)* 116670
polymer-grafted C black composite, soln. contamination sens. 132063
QCM appl. to trace metals in soln. anal., overview 109731
quantum cascade laser spectrosc./chem. sens. 97560

chemical sensors continued
quartz BAW resonator, electrode config., liq. sens. 92764
quasi-distributed opt. fibre pH sens., covalently bound indicator 97432
quasi-long. leaky SAW propag. on quartz, liq. sens. *(Chinese)* 70449
Raman probes, self-referencing, for quantitat. anal. 86703
refr. microlenses for fluoresc. detect. in chem. microsystems 71358
rib waveguide curved bends, wave propag., evanescent field, radiation loss, sens. appls. 104709
sampled fiber Bragg grating, temp./refr.-index meas. 86579
SAW immunosens. for liq. environ., SiO_2 protective layer 97412
SAW liq. sens. design using Bleustein-Gulyaev wave 97436
SAW sens. for harsh environ. 70451
sol-gel optodes of various shapes for indirect fiberoptic sens. 97306
soln. conc., on-line meas., CCD lin. array 120990
spectral chem. sens., systematic profile/feature-based intell. 109737
tea aroma, opt. sens. using n-tetraphenyl porphine manganese (III) chloride LB thin films 109592
thiacalixarene SAM as SERS-based chem. sens. 75708
thickness shear mode acoustic wave sens., quantitat. anal. 121019
tilted short-period FBG coupling to cladding modes, refractometry 97280
triethnolamine coated QCM sens., aldehyde detect., plasma treatment *(Chinese)* 75697
triglycerides, pH detect., ISFET sens. 120954
UGS, conf., Orlando, FL, USA (April 2000) 67398
water, ultrapure, for microelectronic proc., total organic C monitoring instrumentation 132210
AlGaN/GaN HEMT, chem. sens., fluid monitoring 81379
Au multiple island layers on fiber core, sens. appls. 75558
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
Ca^{2+} conc., bound calcein acrylamide fibre-optic sens. 97408
Cu ion sens. thiacalix[4]arene films, semicond. substrs. 120975
InGaAsP/InP laterally coupled ridge waveguide DFB lasers, chem. sens. appls. 71767
$KNbO_3$, Bleustein-Gulyaev waves, liq. sens. 92747
$KNbO_3$ SAW liq. sens., Bleustein-Gulyaev wave 97436
Pr^{3+}:ZBLANP opt. fibre sens., temp./conc. depend. 86597
Si microengineered gas chromatography syst., miniature injector design 109736
Si technol./devices, develop. 103948
a-Si:H/SiO_2 gate pH-ISFET, surface pot. temp. depend. anal. 92338
SiON UV transparent multimode buried-channel waveguide biochem. sens. 75740
SnO_2 film, nanoparticle engng., chem. microsensor 132023
SnO_2/Al discrete gate ISFET pH sens., ASIC CMOS std. proc. 75710

chemical shift
see also isomer shift
brain, human, localised 2D shift correl. MR spectrosc. 98431
brain, metabolite, coupled spins, PMR, STEAM seq. 87634
cardiac aquisition weighted ^{31}P chem. shift imaging 87616
cardiac MRI, left ventricular dimens. meas., real-time acquisition 132657
coronary artery MRI, off-reson. distortion reduction, echo-time interpolation 122107
EPI, ghost/geometric distortion artifacts correction, multiecho ref. scan 87665
kidney, fast breath-hold T2-weighted MRI, HASTE 76418
lactate discrim. in echo-planar spectrosc. imaging, J-coupling 76441
med. chem. shift imaging with spectrum modelling 98437
simultaneous water/fat MRI with chem.-shift correction 110861
skin, human, high-resoln. spectrosc. imaging 87600
spectrosc. MR imaging using SS prod. by oscill. gradient fields 76427
stroke MRI, diffusion-weighted EPI, sensitivity encoding 132695
n-CdTe:In,I MBE films, donors, photocond. spectra 91620
GaN strain-free homoepitaxial layers, donor-bound excitons, magneto-spectrosc./luminesc. 80720
$LiNi_{0.8}Co_{0.2}O_2$ cathode, Li-ion batts., in situ XAFS study 89101
SnO_2 thin films, laser CVD grown, O_2/H_2 exposure effects, XPS anal. 101345
Ti dental implants placement, MRI, spatial distortion 76489

chemical structure
see also bonds (chemical); crystal chemistry; stoichiometry
epoxy/glass fiber composites, surface hydrophobicity, thermal treatment *(Korean)* 116186
$CoPt_3$ irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
$Cu(In,Ga)(S,Se)_2$-based solar cells, electronic struct., surface oxid., buried interfaces 134393
FePd irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
FePt irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
ITO thin films, O_2 plasma treatment, surface chem. states, angle depend. XPS obs. *(Chinese)* 103434
$Pb(Zr,Ti)O_3$ films, alkoxide-based sol-gel proc., chem. struct. evol. 127198
SiO_2, ultrathin combustion CVD layers on Zn coated steel, struct., morph. 101368

chemical technology
see also chemical industry; chemical variables control; chemical variables measurement; fermentation; oil refining
engng. education, making environ. and ethical issues fund. 89630
ethylene oxide monitoring in sterilization operations, miniature IR gas analyzer 75700
FEL, appls. 93680
flexible chem. proc. technol., modular microcomponents 92484
microelectrofluidic systs. hierarchical modeling/simul., perform. anal. 104157
microreactor proc. param., periodic var., modelling & simul. 116079
microsystems for chem./biological appls. 81548
Mikroglas microstruct. glass components for microreaction technol. 114467
non-clogging microreactor for chem. proc. and nano materials 116077
polyethylene pellets mass flows, electrostatic charges elimination, supersonic injection 83106
proc. gas distrib. systs., moisture dry-down charact. modeling 78594
stirred chem. reactor, fluid mixing, ERT, augmented reality 121143
NO, removal from simulated flue gas, using pulsed power, gas flow rate and reactor length effects 113176

chemical vapour deposited coatings *see CVD coatings*

chemical vapour deposition
see also MOCVD; plasma CVD; vapour phase epitaxial growth
at. layer CVD for metal nitride growth, dual damascene barrier requirements 90460
bis(8-hydroxy-5-quinolyl)-methane aluminum chelate polymer film, CVD, organic EL device appl. 127961
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518

chemical vapour deposition continued
BPSG films, atmos.-press. CVD 124933
BSG film, LPCVD, wafer bonding appl., AFM, FTIR 124887
C nanotubes growth, thermal chem. vap. deposition *(Korean)* 68465
Cat CVD chamber cleaning, hot catalyzer-generated at. H etching 126419
Cat-CVD apparatus develop., mass prod. possibilities 124945
catalytic CVD, conf., Kanazawa, Japan (Nov. 2000) 124220
catalytic CVD, NEDO project, review 124939
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
combustion CVD-based low-k dielec. thin-film technol. for HDI PCB appls. 125904
compensator control, reduced-order design model 101326
cryst. growth modeling, conf., Hauppauge, NY, USA (Oct.2000) 89592
custom vac. encapsulations deposited by FIB direct-write CVD 104212
D-shaped opt. fibre, MCVD proc., polarising characts. 71271
damascene metal gate transistors, threshold voltage deviation, inorganic CVD tech. 103818
diamond:B homoepitaxial film, growth, elec./opt. props. 115294
diamond:N electron emitter, sp^2/sp^3 ratio effect on electron emission 115248
diamond:N films, HFCVD modulated growth tech., doping 68272
diamond:N films, hot filament CVD, struct., nucleation *(Chinese)* 114355
diamond, CVD growth from methyl radicals/acetylene, (100),(111) orient. 124878
diamond, CVD-SEM, backscattered electron imaging, Monte Carlo simul. 79286
diamond, large area and flat film prep. *(English)* 124874
diamond, LPCVD synthesis, substr. effects 90409
diamond, smooth films on SiO_2, hot-filament CVD 101311
diamond(111) CVD growth steps, C-species incorporation and surface migration modelling 115807
diamond (100) by Cat-CVD, surface chem. reacts. 124972
diamond CVD, localized elec. field effects, scanning tunnelling microscope appl. 124881
diamond CVD films, detector grade, growth, efficiency and charge collection dist. 114330
diamond CVD films, surface and bulk defects, conf., Diepenbeek-Hasselt, Belgium (March 2001) 113233
diamond CVD microdosimeters 122443
diamond CVD on electroplated diamond tools, multilayer struct. 68276
diamond CVD radiation detectors for harsh environ. 132367
diamond film, hot-filament CVD, bias-enhanced nucleation method at low press. 68219
diamond films, CVD, intrinsic stress meas., curvature meas. 124885
diamond films, HFCVD on Si(111), β-SiC nanocryst. form., TEM 79322
diamond films, hot filament CVD, growth rate *(English)* 124875
diamond films, hot filament CVD, struct./elec./opt. props. *(English)* 125989
diamond films, low-press. flat flame growth and Raman spectra charactn. 80668
diamond films, rapid nucleation by pulsed laser CVD 114350
diamond films selective deposition, hot-filament CVD using double-layer mask 114323
diamond heat-spreading films for GaN-based high-power FET devices 81254
diamond heteroepitaxial growth on pre-deposited β-SiC oriented layer on Si(001) *(Chinese)* 101377
diamond HFCVD film morph. control, low-energy electron bombard. 68234
diamond low temp. CVD deposition using halogenated precursors 68278
diamond low temp. electron assisted CVD growth, Monte Carlo simul. 101367
diamond microcrystals hot filament CVD growth, charatn. and polishing appls. 114324
diamond nucleation, biased HFCVD, Raman spectra, SEM 68282
diamond polycryst. films, CVD, morph./texture 79272
diamond thin films, CVD growth/nucleation, in situ ellipsometry, Raman spectra/SEM 114367
diamond ultra hard film, CVD, maskless patterning, structuring 105631
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
direct write technols., commercial appls./review 103977
dual gate CMOS DRAM self-aligned contact proc., tetrachlorosilane-based SiN mask films 125473
electronics-grade specialty gas delivery line purging requirements 91932
ferroelec. oxides, CVD precursor design, synthesis & charactn. 114363
FIB based local deposition of dielec. for phase shift mask repair 103586
fluorocarbon thin films, hot-wire CVD 124978
HFCVD procs., expt. proc. vs. 3D model calcs. 68280
hot-wire CVD growth simul., film thickness uniformity anal. 124947
in-situ CVD film thickness meas. by thin film interf. 97828
interconnects, related technol., at. layer deposition 124891
large diam. epitaxial wafer develop., tech. issues 70240
local interconnect gap-fill optim., integrated multiscale 3D simul. 126477
methyl radical form. in hot filament CVD 68279
nanometer scale lateral struct. of MOS type layer, anisotropic RIE, LPCVD and PECVD 115788
nanoscale ultrathin body PMOSFETs with raised selective Ge source/drain 103855
nanostruct. fab., SOI proc., SEG, etching, oxid., Si on air 126594
NMOSFET, ultrathin nitride/oxide stack gate dielec. technol. 70125
OLED using B-doped diamond electrodes 104985
opt. planar waveguide fab., single wafer CVD cluster tool develop. 71346
organic LED, EL/PL perform. rel. to deposition method 127988
organosilane SAMs irrad. with VUV light, photodegradation, friction force microscopy 103503
organosilicon thin films, hot-wire CVD 124978
polyoxymethylene films, hot filament CVD, air gap sacrificial layer 125100
polysilicon LPCVD films, struct. depth profiling using Raman microscopy 90360
polysilicon multilayered thick films, low-stress, microsystems fab. 92553
porous poly-Si solar cells, LPCVD, texturing 112901
rapid cooling dual slot load locks for LCD 109854
silica low-k film, methylene group incorporation, CVD, elec. props. 101320
single-mode fibers, prod. proc., water diffusion, loss meas. 116632
smart nanomachining & meas. syst., semicond. diamond probe 116101
SOI CMOSFETs, fully depleted, low-temp. selective tungsten CVD technol. 81299
sub-qtr.-micron CMOS devices, ultrathin ox/nitride gate stack, RTCVD 127025
symposium, chem. proc. of dielec., insulators and electronic ceramics, USA (1999) 113276
vert. furnace in-situ spectrosc. ellipsometry, CVD appl. 67684
void-free pre-metal CVD dielec. for ULSI 90433
wafer batch furnace proc., develop./appls. 70244
Al CVD films prep. from dimethylethylamine alane, morph. and hole filling props. 90415
Al CVD-PVD proc. for DRAM appls. 126455
Al nanostructures, CVD, press./dose effect, cryst. growth 114365

mical vapour deposition continued
Al plug CVD-PVD proc. for sub-0.25 μm devices, via filling/Al microstruct., underlayer effects 92171
Al/GaAs interface, low press. CVD, microstruct., elec. props. 115429
BN, vapour deposition, substr. effect 79277
$(Ba,Sr)TiO_3$ films prepared by liq. source CVD, at. incorporation rates, surface reacts. 79285
a-C films, kerosene vap. pyrolysis, field emission 80568
C nanotube array, field emission, FPD *(Japanese)* 80530
C nanotube array membrane, Al_2O_3 porous template, field emission 69417
C nanotube films, low temp. thermal CVD, field emission appl. 114485
C nanotube vert. aligned array, growth, field-emission obs. 102893
C nanotube vert. aligned field emitter array, CVD, high-current emission 125968
C nanotubes, CVD growth on Ni catalyst electroplating and field emission 101537
C nanotubes, fab. & field emission, CVD 125953
C nanotubes, microwave-assisted CVD 68462
C nanotubes, synthesis & struct., HREM 114483
C, pyrolytic, deposition on porous cathode tubes, interlayer for SOFC zirconia electrolyte 90424
C single-walled nanotubes, CVD growth on microcontact-printed catalyst patterns 125140
a-C:H films, RT deposition from laser-assisted photolytic CVD at 248 nm 114336
a-C/diamond MEMS technol. 81563
C(100)2×1 surfaces, at. H irrad. etching, epitaxial growth enhancement, ab initio calcs. 81060
CdO thin films, low-press.CVD and elec. props. 90407
CdTe APCVD thin-film solar cells 100131
Cu CVD, Cu(TMVS)(hfac) sourced, on TaN substrs., surface morph., water vap. effects 90463
Cu CVD for gigascale interconnects, 2,2,6,6-tetramethyl-2-sila-3,5-heptanedione precursor 92167
Cu ULSI metallization barrier layers, review 69930
Cu damascene interconnection technol., self aligned metal capping 126440
Cu dual-damascene interconnects, sub-0.1 μm, barrier/seed technols. 115686
Cu, superfilling CVD using catalytic surfactant, interconnect appls. 124892
Cu thin film CVD using Cypron volatile liq. precursor 114314
Cu/methylsilane-doped low-k CVD deposited oxides, damascene process,leakage current mechanisms 126448
$CuInS_2$ thin-film solar cell growth using spray CVD 100123
$FeSi_{2-x}C_x$ semicond. thin films, laser CVD, energy gap *(Ukrainian)* 90371
GaAs Cat-CVD, wafer temp. control, apparatus eval. 124948
GaN thin film growth, reactive close space method, high temp. tech. 90459
GaN/AlN/SiC/Si, epilayers, MOCVD, growth rate effect, surface morph., PL 90400
α-Ga_2S_3, CVD from single-source precursors 124929
Ge QD, CVD growth, dielec. substr. 101310
Ge islands, CVD growth, struct. and opt. props. 101369
Ge raised source/drain ultra-thin body PMOSFETs, LPCVD selectively deposited 126741
Ge/Si(001) islands, UHV CVD, strain-driven alloying 68268
Ge-Si heterojunction photodetectors, CVD grown 97264
GeO_2-SiO_2 asymmetric Mach-Zehnder channel waveguide interferometers, quantum cryptography systs. 82155
GeSi, amorph./microcrystalline films, hot wire CVD 124960
H-loaded germanosilicate waveguides, strong photosensitivity 127794
$In_{0.06}Ga_{0.94}As$/GaAs MQWs, photocurrent spectrosc. *(Korean)* 116903
InN whiskers, CVD investigs. 101149
InP epitaxial films, chloride VPE growth on GaAs substr. 114341
α-In_2S_3, CVD from single-source precursors 124929
β-In_2S_3, CVD from single-source precursors 124929
$LiNb(Ta)O_3$ films, prep., struct., piezoelec. props. 79205
Ni-YSZ-Ag thin film SOFC testing 99966
$Pb(Zr_{0.52}Ti_{0.48})O_3$ capacitors, catalytic CVD method, SiN_x passiv. films, act. NH_3 exposure effects 101335
$Pt/SrBi_{2.4}Ta_2O_9/ZrO_2/Si$ MFIS-FET struct., prep., elec. props. 81277
Ru-$SrTiO_3$-Ru cylindrical capacitor technol. for 0.11 μm generation DRAMs 125495
SOI form., Ni metal induced lateral crystn., TFT appl. 125052
Si CVD epitaxial growth modeling from trichlorosilane on 200-/300-mm wafers 68252
poly-Si CVD growth, enhanced bulk prodn. using Si tubes, meas. and modeling 79323
Si, CVD in lamp-heated single-wafer reactor 124908
Si CVD on chlorosilane-treated SiO_2 surfaces, selective deposition using electron beam irrad. 124911
Si CVD on chlorosilane-treated SiO_2 surface, nucleation suppression and enhancement 124910
Si CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
Si Cat-CVD, wafer temp. control, apparatus eval. 124948
Si MOSFETs, ultra shallow jn. form., excimer laser annealing 126823
Si SEG, edge shape, ultra-high vac. CVD 114357
Si, SI polycryst. thin films, low press. CVD 90417
Si, SI polycryst. thin films, low press. CVD, local anl. 90418
Si SR-excited epitaxy from SiH_2Cl_2, dangling-bond regeneration channels 68289
Si, amorph./microcrystalline films, hot wire CVD 124960
a-Si and μc-Si films deposition, Hot Wire CVD, solar cells 112881
Si cryst. thin-film solar cells on laser-perforated SiO_2 barrier layers 100090
Si films, CVD epitaxy, low thermal budget surface cleaning/dry etching 92088
Si films, catalytic-CVD method, solar cell appl. 124964
Si films, selective area CVD epitaxy, bilayer SiO_2/Si_3N_4 mask 101312
poly-Si layers, atmos. press. iodine vap. transport deposition 100067
Si, low-temp. selective deposition on Si_3N_4, narrow wire form. 90382
Si, microcrystalline films, catalytic CVD, struct., electronic props. 124958
a-Si p-i-n solar cells efficiency enhancement using LP-CVD ZnO 100200
a-Si, photonic-grade, hot-wire deposition 124955
Si, polycryst. films for solar cells, RTCVD grown, grain boundaries 68258
Si polycryst. films, hot-wire CVD, W/Ta catalysts 124963
Si polycryst. films, hot-wire CVD, struct. 124962
Si polycryst. layers, epitaxial realignment, BiCMOS technol. 124888
Si polycrystalline film, residual stress control, multilayer deposition, LPCVD, 101336
Si related materials, surface modif. using Cat-CVD syst. for ULSI appls. 124973
μc-Si solar cells, absorber layers, ECR CVD grown 112894
Si solar cells, thin-film, cryst., batch-type LPCVD-syst. 100155
Si straight nanowires, thermal CVD catalytic synthesis and charactn. 69989
Si thin film polycryst. solar cells, quasi 3D simul. 100141
c-Si thin film solar cells, substr. prep., APCVD growth and charactn. 89295

chemical vapour deposition continued
poly-Si thin films, Cat-CVD prep., charactn. and solar cell appls. 124982
Si thin films, high rate deposition by hot wire cell method for solar cell appls. 90438
Si thin films, hot wire CVD, solar cells/TFT appls. 79320
Si thin films, thermo-catalytic CVD, PV appls. 124979
a-Si thin-film solar cells, high-rate depos. by HWCVD 124957
Si:B polycryst. films, CVD, stress, MEMS appls. 104169
Si:H CVD growth, Monte Carlo model, H_2/SiH_4 gas source, desorpt. rate 90443
a-Si:H, RF CVD, laser melting, polycryst. films, PV props. 91607
Si:H, amorph. and microcryst., hot wire CVD, review in USA 124940
a-Si:H and μc-Si:H hot wire thin films, SiH_4 flow, H_2 dilution 103073
a-Si:H deposition infl. by catalytic CVD on transparent cond. oxides 124956
a-Si:H films, Cat-CVD prep., struct. and photo-induced vol. changes 126086
a-Si:H films, HWCVD, PECVD, growth kinetics, at. H infl. 124951
Si:H films, amorph./microcryst., hot-wire CVD, review in Europe 124941
a-Si:H films, catalytic CVD, solar cell/TFT appls. 124950
a-Si:H films, catalytic CVD, solar-cell materials appl. 124954
μc-Si:H films, catalytic CVD, struct. props. 126087
μc-Si:H films, catalytic CVD, struct./elec./opt. props. 124965
a-Si:H films growth, thermocatalytic CVD, nucleation, coalescence 124952
a-Si:H films, hot wire CVD, TFT/solar cell appl. 124983
a-Si:H films, hot-wire CVD, gaseous radicals, decomp. 124944
a-Si:H films, hot-wire CVD, phys./chem. 124942
a-Si:H films, hot-wire CVD scale-up, solar cell appls. 124946
Si:H films, hot-wire CVD, solar cell appls. 124981
μc-Si:H films, hot-wire CVD, struct. 124961
a-Si:H, hot-wire CVD, saturated defect densities 68267
a/μc-Si:H hot-wire CVD, thin-film MEMS appl. 124949
a-Si:H hot-wire or PECVD films, elastic props. anal. 126085
a-Si:H n-i-p solar cells, all-hot-wire CVD 100194
a-Si:H n-i-p solar cells, hot-wire CVD 134407
Si:H nanocryst. TFT, catalytic CVD, stabil. 126821
Si:H, nanocrystalline films, hot-wire CVD, charactn. 124959
Si:H polycryst. films, hot wire CVD, gas phase/surface kinetics 124943
μc-Si:H thin film solar cells, hydrogen-radical CVD, init. growth estim. 112892
Si:H thin films, hot-wire CVD, solar cell appls. 124980
a-Si:H/SiN_x TFT, hot-wire CVD, device charact. 124985
a-Si:H/a-Si:H tandem solar cells, hot-wire CVD fab. 112895
Si:H(100) thin film growth, mol. dyn. simul., H coverage effect 90442
a-Si:H,(B)(P) nanocryst./amorph. films, catalytic CVD, doping 124953
a-Si:H,(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
μc-Si:H,P films, hot-wire CVD, struct./elec./opt. props. 124966
a-Si:H,P/SiN_x TFT, catalytic CVD prep. 124984
Si:P solar cells, high-quality homoepitaxial thin-film emitter growth 100049
$Si/CoSi_2$ syst., interlayer mediated epitaxy, CVD Co film 90541
Si/SiGe MQW, MBE/CVD growth, struct., PL props. 80861
Si/SiO_2 interface, improvement of reliab. for N_2O-nitrided LPCVD oxide *(Chinese)* 103210
SiC, 6H, HV Schottky barrier diodes *(Chinese)* 126640
SiC CVD on Si(100)/(111), enhanced precursor transl. kinetic energy effects 68233
4H-SiC epilayers, hot-wall CVD, doping/trap conc. reduction 124931
4H-SiC epitaxial layers CVD growth, substr. surface prep. effects 69873
nc-SiC film growth, hot filament CVD 68263
SiC films, single-source CVD, micromechanical props. 90370
SiC thin films, CVD using methylsilanes, C incorp., IR spectra 101342
a-SiC:H alloy photolumin. wide-bandgap films deposited by Cat-CVD using acetylene 124971
n-SiC:N, 4H polytype, elec. transport props. 91726
6H-SiC:N CVD site-competition epitaxy and N incorporation mechanism 69790
4H-SiC:N epitaxy, chimney CVD reactor, N incorp. 79329
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V meas. 68237
$a\text{-}Si_{1-x}C_x$:H films, prep. by hot-wire CVD and props. 124970
$Si_{1-y}C_y$:H films, photo-/plasma CVD, struct. 101318
3C-SiC/Si(100) heteroepitaxy using monomethylsilane, interfacial buffer layer form. 90383
n-SiC/SiO_2 MOS capacitor, fab. & elec. charactn. *(Chinese)* 102779
3C-SiC/on-axis 6H-SiC(0001) epilayer CVD growth, substr. etching effects 69855
4H-SiC(1120), CVD and deep level anal. 79275
$Si_{1-x-y}C_xN_y$ cubic single-cryst. films, RTCVD 124907
SiGe HBT struct., epitaxy by HV/RTP/CVD syst. *(English)* 101307
SiGe HBT technol. implement., low-temp. UHV/CVD tech. 103778
SiGe lin. graded buffer, UHV CVD growth and charactn. *(Chinese)* 79280
SiGe, nucleation, comp. influence, LPCVD growth, free energy 114366
$Si_{1-x}Ge_x$ films, CVD epitaxy, relax. mechanisms 79302
$Si_{1-x}Ge_x$, polycryst. films, wet oxid. 103307
$Si_{1-x}Ge_x$ raised source and drain P-channel MOSFETs, low temp. charact. 103821
SiGe:B films deposited by CVD at 400°C, effect in situ B doping on props. 126303
SiGeC HBT, UHV-CVD, bandgap, strain engng. 81207
$Si_{1-x-y}Ge_xC_y$ UHV/CVD, HRTEM, X-ray diffr. *(Chinese)* 79221
$Si_{1-x-y}Ge_xC_y$ films, UHV/CVD, struct. anal. 101379
SiN film, catalytic CVD 124976
Si_3N_4 film, Cat-CVD, ULSI proc. appl. 124975
Si_3N_4 masks, scanning probe oxid. 115786
Si_3N_4 technols. for post-SiO_2 p-MOSFET gate dielec. in CMOS proc. 81520
Si_3N_4 thin films, microbridge testing, deform., CVD 132183
SiN_x films, low temp. thermal CVD, for microelectronics appls. 124922
SiN_x, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiN_x passiv. films for PZT ferroelec. capacitors, catalytic CVD 124977
a-SiN:H, Cat-CVD, deep submicron MOS device appls. 124974
SiO_2 CVD, low-press. silane oxid., modeling particle form. 68217
SiO_2 direct-write ion beam induced CVD for IC post-proc. modif./repair 115978
SiO_2 film, TEOS/ozone CVD modelling 90416
SiO_2, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiO_2 hyperthin coatings on polymers, growth and struct. 124904
SiO_2 low-loss Y-branch waveguide, fab. and testing *(Chinese)* 93105
SiO_2, ultrathin combustion CVD layers on Zn coated steel, struct., morph. 101368
SiO_2:F glass films, prep., struct., IC appl. 114345
SiO_2:methyl films, CVD, struct./dielec. props. 124893
SnO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
SnO_2 thin films, laser CVD grown, O_2/H_2 exposure effects, XPS anal. 101345

chemical vapour deposition continued
$SrRuO_3/(Ba,Sr)TiO_3/SrRuO_3$ capacitors, gigabit DRAM, CVD, electrode technols. 101329
SrS:Ce thin films for electrolum. displays, tris(cyclopentadienyl)cerium as Ce dopant source 101321
TaN CVD diffusion barrier for Cu interconnects 92166
TaN(-polysilicon) SAG n-MOSFETs with ultra thin CVD ZrO_2 gate dielec. 126780
Ta_2O_5 films, LPCVD & PECVD, struct. & elec. charactn. 104232
Ti-Si-N thin film, chem. vap. deposition, gas phase chem. 124883
TiN, APCVD, H_2 addit. effect 79326
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
TiN barriers for high-k capacitors, simul., expt. results 68253
TiO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
W CVD films, rarefied particle clouds, in situ monitoring 101314
W CVD on MOCVD TiN diffusion barrier, step coverage 126470
W LPCVD, selective deposition on Si 114310
W MEMS device coating, CVD 101337
W film, deposition & layer props., CVD 115665
W selective CVD using SiH_4 reduction of WF_6, Si consumption 90422
W thin film, LPCVD growth, run-to-run control 124899
W/TiN/SiO_2/Si MOS capacitor struct., TiN deposition method effect 103199
W/TiN/Ta_2O_5/Si syst., Ta_2O_5 gate dielec. degrad. 81647
W/W_2N/WO-based thin film CVD using volatile liq. precursors 90462
W/WN/TaO_xN_y/SiO_2/p-Si nMOS capacitors, gate dielec. thermal stabil. 81648
W/n-$Si_{0.83}Ge_{0.17}$(001) Schottky contacts, low press. CVD, struct., elec. and chem. props. 103155
W-TiN/SiO_2/Si, MOS capacitors stacked gate props. 103187
WO_3 CVD films on Si, gas sens., fab. & calib., DIP 97527
WO_x electrochromic films, atmos. press. CVD growth and charactn. 101347
WSi_x/n-$Si_{0.83}Ge_{0.17}$(001) Schottky contacts, low press. CVD, struct., elec. and chem. props. 103155
$YBa_2Cu_3O_x$ HTSC films, continuous CVD tech., J_c 68240
$YBa_2Cu_3O_x$ HTSC films, pulsed laser ablation, hot filament effects anal. 125010
ZnO-based quasi-bicryst., CVD epitaxy, struct. 68224
ZnS film growth, successive at. layer deposition using mol. beams 91615
ZnSe CVD, av. grain size, reagent conc. depend. anal. 90356
ZrO_2 IBICVD thin films, microstruct., surface roughness, opt. props. 79299
ZrO_2 RTCVD for MOSFET appl. 124897

chemical vapour infiltration
SiC-SiC composites for fusion reactors, mech. props., interfacial strength 68426

chemical variables control
see also moisture control
cogen. steam power plant boiler water chem. monitoring syst. 88596
elec. arc furnace pollution control, NIR opt. proc. sens. 110042
gas conc. ratio precise control in proc. chamber 113813
gas turbine combustors, NO_x emissions, adaptive predictive control 88599
HFC refrigerant mixtures R407C, comp. control, energy saving *(Japanese)* 89463
intermediate products QC, spectrophotometer develop. 67653
oil-water-gas mixture meas., microwave sens., WaterCut & MultiPhase meters 88193
CO level meas./control syst. 109773
Cu(InGa)Se_2 solar cells, sputter deposition, Cu/(In+Ga) ratio changes control 100105
HgCdTe, MBE growth for LWIR detectors, ellipsometry comp. control 101201
O_2, fuzzy control indirect calorimetric syst., premature infants 132500

chemical variables measurement
see also chemical analysis; moisture measurement; oximetry; pH measurement
benzene vapour sens. using spun films of calix[4]resorcinarene derivatives 120983
biological attack detect. devices 132004
catalytic sens. for monitoring explosive atmos. 75707
catheter type long-life miniature O_2 sens. *(Japanese)* 132507
coal, neutron induced prompt gamma-ray anal. *(Chinese)* 77684
cogen. steam power plant boiler water chem. monitoring syst. 88596
combustion procs. at Bremen drop tower, laser diagnostic syst. 83065
diabetic patients, glycaemic control, biosensors appl. 132003
elec. arc furnace pollution control, NIR opt. proc. sens. 110042
environ. data loggers 132092
fibre optic chem. sens. for heavy metals meas. 75730
field-deployable opt. tomographic syst., all-optoelectronic solns. 84190
flow field constituents direct meas. by spontaneous Raman imaging tech. *(Chinese)* 121259
formaldehyde, atmos., conc. meas. by laser absorpt. spectrosc. 76936
gaseous hydrocarbon distrib. meas. by NIR absorpt. tomography syst. 110043
IVA-L type dust conc. meas. laser instrum. for indust. conditions 132212
laser-induced exciplex fluoresc., quantitat. vapour-liq. visualization 132215
low-mercury fluoresc. lamps, key mercury reduction techs. *(Japanese)* 124066
Mars subsoil geophys. prospecting by TDEM 120690
methane highly sensitive airborne gas analyzer using two-wave freq.-stabilized He-Ne laser 132211
multifunctional indust. combustion proc. monitoring by in-situ NIR tunable diode laser syst. 109738
nanofabricated refr. index sens., photon tunneling in nanofluidic channel 121239
NIR absorpt. tomography, ICE meas. appl. 121257
nuc. power station chem. monitoring DP syst. 123130
oil-water-gas mixture meas., microwave sens., WaterCut & MultiPhase meters 88193
on-line US instrum., microcomputer-based, soln. conc. meas. *(Chinese)* 109426
opt. indust. procs. conf., Boston, MA, (Nov. 2000) 100387
organic cpds. meas. using activated carbon coated sens. 132067
oxygen residues meas. in gaseous nitrogen, influent fields method 110044
ozone conc. profile monitoring solar-blind Raman lidars 76847
photosensitive glass wafer microchip fabr. and thermal lens microscopy appl. 121260
power-generating coals, chem. fractionation, fouling props. estim. 99459
pulverised coal flames, concurrent temp. & soot conc. meas. 124096
pulverised coal-fired utility boiler, mercury distrib. charcts. *(Chinese)* 112306
salt contaminants distrib. with dist. from sea, west coast, South Korea *(Korean)* 99388
sampled fiber Bragg grating, temp./refr.-index meas. 86579
smoke plumes detect. using eyesafe lidar, operation conditions 75233
steam power plant coal combustion efficiency improvement using O_2/CO monitoring 88586
transformer oil, dissolved gas detect. using ANN *(Chinese)* 99710
transm. transformers, oil samples, furfural content meas. 88799

chemical variables measurement continued
Tropospheric Emission Spectrometer ground data syst., sci. data visualization 133323
two-soln. interface meas. using image proc. *(Japanese)* 132213
vehicle exhaust VOC meas., extractive FTIR spectrosc. 122702
xylene detect. in heptane soln. using long-period fiber grating opt. sens. 75572
CO level meas./control syst. 109773
CO_2-TEA laser based LIDAR-DIAL syst. for O_3 dyn. in Madrid urban atmos. 76937
MoO_3-WO_3 gas sens. for monitoring appls. 109788
NH_3 conc. meas. in bioreactor vent gases with DFB diode lasers 121262
NH_3 trace gas sens. by near-IR diode-laser-based overtone spectrosc. 121261
NH_3-O_2 mixtures, laser-induced breakdown/ignition, NH planar LIF 132214
NO spectrosc. detect. by quantum cascade laser 86713
O_2 digital solid-electrolytic gas analyzers, enhanced conc. meas. accuracy 132022
O_2 high press. conc. meas. by VCSEL lasers 86714
O_2, singlet, direct detect. by intracavity laser spectrosc. 121256
Pr^{3+}:ZBLANP opt. fibre sens., temp./conc. depend. 86597

chemiluminescence
see also bioluminescence
FOZAN-II fast-response chemiluminescent airborne ozone analyzer 86707
med. diagnostics, low-light-level sens. 122065
oxidase-based fibre-optic biosensors, luminol electrochemiluminescence 97407
soln. electrochemiluminescent cell using tris(phenylpyridine) iridium 127953
NO inhalational therapy, NO/NO_2 meas. by chemiluminesc. 98358

chemioception
antenna/chip biosensor using insect species, organic odour mols. 132011
beer aftertaste detect. using lipid membrane taste sens. *(Japanese)* 97423
biochem. image sens., light-addressable potentiometric *(Chinese)* 97427
electronic tongue, response, drift correction algms. 109778
food aroma, gas sens. for baking/roasting procs., selective odorant meas. 109767
forane 134a/CO_2 discrim. in humidity controlled atmos., electronic nose appl. 132042
milk rancidity monitoring by electronic nose, dyn. PCA anal. 132056
olfactory cortex design & implement. in analogue VLSI 102483
olfactory event-related pots. in patients with brain tumours 121912
olfactory sig. class. by neural nets 109774
olfactory sig. fuzzy logic based recogniser 120962
pinklady apples, electronic nose sigs. and fruit quality indicators 132060
spiral-in/out BOLD fMRI, increased SNR/reduced suscept. artifacts 132691
tea aroma, opt. sens. using n-tetraphenyl porphine manganese (III) chloride LB thin films 109592
zNose virtual chem. sens. array technol., high-resoln. olfactory images 97458

chemisorbed layers
diamond:H, surface cond., adsorbate coverage, FTIR obs. 69494

chemisorption
see also chemisorbed layers
BSG film, LPCVD, wafer bonding appl., AFM, FTIR 124887
diamond(111) CVD growth steps, C-species incorporation and surface migration modelling 115807
diamond thin films, plasma assisted CVD, struct. *(French)* 79281
explosives/chem. agents detect., sorbent coated SAW sens. 76992
FET sens., low power gas detect., work fn. principle 132038
nanophase diamond, storage and release of hydrogen 100025
PEM fuel cell, CO tolerance, AC impedance spectra 89169
Si(001) surface atom, hydrogen-terminated, etching, hydroxyl fn. *(Japanese)* 126343
tribochemistry in contact recording 70541
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
Cu electrodeposition from sulfate electrolytes, mechanism, effects of thiourea on resist. 90494
Cu_xS-microporous-Si struct., RT ammonia sens. 121010
p-GaN ohmic contact, H_2 storage materials effect 80920
In_2O_3 thin film gas sens., Au or Ti surface modif. effect 132049
Pd-Ag(Ni) hybrid suspen. gate FET, coevap. prep., H_2 sens. 132051
Pt-WO_3-Si_3N_4-SiO_2-Si-Al capacitor, NO_2 sens. characts. 97484
Rh miniaturized thin film sens. for clinical blood CO_2 gas anal. 120955
Si CVD on chlorosilane-treated SiO_2 surface, nucleation suppression and enhancement 124910
Si SR-excited epitaxy from SiH_2Cl_2, dangling-bond regeneration channels 68289
Si, lateral gettering of Fe and Pt by cavities induced by He implant. 81007
Si substr., alkylsilane SAM, photo/scanning probe lithog. 92245
Si(001) surface, hydrogen-terminated, etching, mol.-dyn. simul. *(Japanese)* 126342
Si(100), Si(113) and Si(115) surfaces, alkoxy modified, water adsorpt. 92023
SiH_2Cl_2 self-limited GSMBE on Si(100) 124851
SnO_2-xCr_2O_3 varistor-type NO_x sens., micro p-n jns. 109740
$TiO_{2-\delta}$, nanocrystalline thin films, low temp. reoxidation 103441

chemistry
see also atmospheric chemistry; biochemistry; physical chemistry
Romanian TPP, water chem. optim. 112284

chemistry computing
see also computerised instrumentation; spectroscopy computing
Beowulf cluster for computational chem. 108306
direct reforming MCFC stack explicit dyn. model 112832
mol. images, three-way data pre-proc. by pulse-coupled neural nets 106810
nonuniform X-ray image sampling on electron probe *(Chinese)* 132496
polyaniline film SO_2 sens., neural network detect. vel. *(Chinese)* 75696
tubular SOFC technol., computer modelling using ANSYS package 99981
X-ray fluoresc. microtomography at ESRF ID22 beamline, 2D imaging 76175

chemistry, physical *see physical chemistry*

Cherenkov counters
advanced detectors, conf., La Biodola, Elba, Italy, May 2000 67400
aerogel threshold Cherenkov counter for AMS-01 spectrometer 98032
ALICE detector, HI phys., LHC 87244
Alpha Magnetic Spectrometer expt. on International Space Station 76161
ANTARES detector status, indirect dark matter searches 110301
ANTARES high energy CR neutrino detector design anal. 132313
ANTARES neutrino telescope, R&D programme status 98048
ANTARES offshore DAQ, distributed COTS-based syst. 120676
Auger Observatory, tech. to produce mirrors 121579
BABAR detector perform., May 2000 overview 87163
BABAR DIRC detector for particle ident., SLAC results 87052
Belle DAQ syst. switchless event building farm design anal. 120673
BLAST particle detector design anal. 132438
BLAST project status, spin depend. few body systs. 87168
BOREXINO, tech. description 76087

erenkov counters continued
BTeV detector, phys. reach and design 76021
BTeV expt., overview of design and phys. goals 87179
BTeV main spectrometer motivation and design 87264
BTeV particle detector for std. model CP violation expts. 121649
CAPRICE98, balloon-borne mag. spectrometer with gas RICH and Si calorimeter for cosmic rays 76160
CAPRICE98 balloon-borne gas-RICH detector, perform. 87205
CASTOR calorimeter, Centauro form./ident., ALICE, LHC 87243
CERN COMPASS particle detector design anal. 132437
CLAS Cherenkov threshold gas detector 98035
CLEO III LiF-TEA RICH detector, high energy μ test 87233
CLEO-III trigger design anal. 121741
COMPASS RICH1 hadron detector opt. mirror design anal. 132468
conf., imaging, Stockholm, Sweden (June 2000) 124186
DIRC Cherenkov ring imaging device design/perform. anal. 132320
DIRC internally refl. imaging counters, conceptual design features 121622
DIRC PMTs, BSG window corros. in water 115276
DIRC ring imaging Cherenkov detector operation at BABAR at high lumin. 121643
future accelerator detector R&D, review 87197
HARP neutrino expt. design 97978
hemispherical photomultipliers from Electron Tubes Inc, opt. props. 115274
HERA-B detector, status and phys. overview 97986
HERA-B detector status and commissioning results 87177
HERA-B RICH detector, design criteria, detector components and event anal. tools 121642
HERA-B RICH detector, lens-based light-collectors 121590
HERA-B RICH detector perform. at high track densities 132329
HERA-B RICH spectrometer, proton ring, performance/experience 87227
HESS telescopes for gamma-ray astron. 121814
Jefferson Lab., Hall D detector status 87167
K2K detector perform./design anal. for neutrino oscill. expts. 132310
KamLAND reactor neutrino oscill. expt. anal. 132311
LHC ALICE detector design for HI phys. expts. 132357
LHCb DAQ syst., event building in IN interface card 132464
LHCb detector, CP violation prospects 76022
LHCb detector, overview 97985
LHCb expt. status and expected phys. perform. 87180
LHCb-RICH project, pixel hybrid photon detectors 97965
lumin. monitor for CDF expt. 76110
MAGIC air Cherenkov telescope, image camera 132489
MAGIC air Cherenkov telescope, opt. props. of hemispherical photomultiplier tubes 125980
MAGIC telescope, two-level pattern trigger 76150
nuc. sci., conf., Lyon, France, (Oct. 2000) 113217
nucleon decay and neutrino detector, next generation design 76085
PEP II fast lumin. monitor syst., review 87072
Pierre Auger Cosmic Ray Observatory, fluoresc. detect. prototype, analog sig. proc. 121625
Pierre Auger expt. at southern hemisphere, cosmic ray energy spectrum 132426
pixel readout electronics develop., particle detector appl. 98058
radiation distrib. sens. with normal opt. fiber 121567
recent progress in Cerenkov counters 121432
review of recent progress with indiv. components of Cerenkov counters 132370
RHIC PHENIX HI collision expt. detect. syst. design 132358
RHIC STAR detector design/perform. in rel. HI expts. 132324
RHIC zero degree calorimeter design/perform. anal. 132295
RICH counters, present status 76112
RICH detector, spin phys. with HERMES expt. using hadron ident. 110345
RICH detector for CLEO III 76111
RICH detector for tau-neutrino appearance 110303
RICH detectors, 64-channel multianode photomultiplier 132427
RICH for HERA-B, perform. 76115
RICH neutrino detector perform. simul. 132330
RICH study prototype of AMS, albedo particle rejection 76162
silica aerogel as RICH radiator, testbeam results on particle identif. 132414
silica aerogel RICH radiator, testbeam results on particle ident. 121644
SNO underground D_2O Cerenkov solar neutrino detector anal. 132309
SOUTHERN cosmic ray expt., large area Cherenkov detector syst. *(German)* 110295
Sudbury Neutrino Observatory 87161
TESLA ēN expt., overview 87148
TeV γ-ray astron. apparatus/observational anal. 132425
threshold aerogel Cherenkov detectors, new 5 inch photomultiplier eval. 121593
water Cherenkov detector, rem. particle dens. calib. with crossing-through muons 87206
B^0, flavor tagging, net charge/kaon ident. studies 110370
CsI, HADES RICH detector for lepton ident. expts. 132328
CsI, RICH detector design for high energy phys. expts. 132327
CsI photocathodes, quantum efficiency, RICH appl. 76119
PbF_2 Cherenkov calorimeter, meas./simul. of Cherenkov light 98033
PbF_2 cryst. growth, modif. non-vac. Bridgman method, strong Cherenkov effect *(Chinese)* 124781
SF_6 pressurized gas Cherenkov detector perform. at KEK 121645
W/quartz-fibre Cerenkov calorimeter for H1 lumin., test beam results 132430

herenkov detectors *see Cherenkov counters*

herenkov radiation
see also Cherenkov counters
crossed-field coaxial resonator, relativistic electrons EM generation 115261
electron accel. concepts based on EM struct. 110079
EM wave generation by electrons rot. in cross radial electrostatic/axial mag. fields in free space 83234
energy loss fluct., angular distrib. 87217
Europa Orbiter camera syst., charged particle-induced noise 133209
flux flow oscillator, long Josephson jn./meander-shaped stripline 69155
multilayer coaxial dielec. filled waveguide, Cherenkov radiation 94080
multiwave Cherenkov generators, partitioned, freq. spectrum, numer. anal. 125973
radiotherapy, 3D dosimetry, liq. scintillator, Cerenkov radiation effect 111201
semi-infinite dielec. waveguide, excitation of wake field by relativistic electron bunch 117733
SHG in channel waveguide, propag. loss effect *(Chinese)* 117453
wake-amplif. by solid-state act. medium 110161
$KTiOPO_4/Si_3N_4/SiO_2$ anisotropic waveguide, SHG efficiency, TM case 104712
$LiNbO_3$ planar waveguides, proton-exchanged, Cerenkov type SHG *(Chinese)* 104688
$LiNbO_3$, tunable narrow-band surface-emitted terahertz radiation generation 71993

CHILL *see specification languages*

chilling *see cooling*

chip carriers *see integrated circuit packaging*

chip-on-board packaging
Advanced DV-MULTI build-up packaging substr., proc./struct. 124343
CMOS-based microsens. fab. technol., packaging approaches 109802
electronic component autom. defect detect., US SAM, DSP 100658
epoxy/phenolic syst. underfill for FCOB appls., curing mechanism 67585
FCOB, FCOB, no-flow underfill materials, yield anal., proc. modeling 78667
FCOB, FCOB assemblies, field reworkable underfill materials 67627
FCOB assemblies with/without encapsulation, reliab. 78654
FCOB package, 2D surface curvature meas. during thermal cycling 113544
FCOB SMT assembly proc. trade-off cost anal. 115221
FCOF, flip chip on flex, standoff height meas., SAM nondestructive methodology 78608
flex-based two metal layer electronic packaging 67547
flip chip under bump metailization systs. on Cu pads 113635
flip chip-on-flex OnePass proc. improvement for clean products 113561
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip mounting proc. develop., metallic joint using US wave energy 125936
flip-chip multi-layer pre-encapsul. technol. for wafer-scale underfill 113633
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
flip-chip-onboard package, durability anal., nested FEM methodol. 78721
glob top encapsulant curing, variable freq. microwave proc. 78641
HDI flip chip-on-flex, base materials eval. 124359
IC package inspection enhancement using real-time X-ray systs. 100639
low-cost flip chip package design concepts for high dens. I/O 113677
miniaturized reliable space electronics, prod. commercialization 133232
Nan Ya displays develop., chip-on-film/COG technols. appl. 121069
ultra-thin FCOB assembly 115222
wafer level CSP using liq. bismaleimide polymers 124327
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
Au wire bonding for organic PCB, metallization characts. effects 115166
InP/Si CMOS hybrid integrated photoreceiver, alignment tolerant 120161
Sn-Pb flip COB solder joints, thermal fatigue failure *(Chinese)* 113673

chip scale packaging
2.4 GHz wireless LAN, lin. power amp., 22.5 dBm output level *(German)* 125737
3D SoC, global interconnect design window 126942
act. biomedical implants, HDI and flexible hybrid assemblies 111138
Advanced DV-MULTI build-up packaging substr., proc./struct. 124343
area array components, X-ray/endoscopy-based inspection techs. 124417
area array packages, solder bump shape prediction algms. 78607
area array rework challenges in PCB assembly 113576
area array solder joints, reliab. in bending 113577
array cooling, CFD 78624
assembly reliab., thermal cycling ramp rate effect 113681
attachment reliab., package constr. 113596
BGA lead-free solder joints, thermal fatigue life prediction by FEA 67642
BGA packaging, chip scale/high-dens. for hand-held/portable products, design for assembly 67628
BGA packaging for high perform. memory appls. 68790
BGA solder joint voids, effects on thermal fatigue 113570
BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
BGA-style CSP, extremely thin profile 67638
BGA-style CSP, extremely-thin profile, appl. specific develop. 113566
BGA/CSP connection durability during thermal shock, finite element modeling 100598
BGA/CSP semicond. packaging rework/repair, outsourcing aspects 67592
BGA/CSP standardization, 2000 status 113599
CMOS laser driver, 1 Gbit/s, packaging, on-chip decoupling capacitor 117030
component placement, 3D vision technol. appls. 115140
CSP/area array package board level reliab. 113602
CSP/BGA packaging yield enhancement with solder flux/paste proc. control 124333
CSP/BGA solder joint fatigue life, thermal cycling ramp rate effects 113579
CSP/BGA yield enhancement with solder flux/paste proc. control 125940
CSP/flip chip underfill, multi-pass dispensing on dual parallel lanes 100584
CSP/MCM-L impact on portable wireless product substr. requirements 124381
CSP/micro-BGA proc./damage assess. with acoustic micro imaging 113585
CSP/RF package assemblies, thermal cycling testing 113597
DCA MEMS package, chip scale/modular, archit./proc. 81550
drop-testing instrum., electronic boards mounted with CSPs 113466
dual op amp, flip-chip fine package, 8-pin counts 114633
durability anal., nested FEM methodol. 78721
electronics packaging struct., microDAC strain meas. 115994
FBGA package, mech. chip crack 113488
flex-based two metal layer electronic packaging 67547
flexible CSP interposer substrs., laser via form. for high dens. assembly 124353
flexure-induced tensile stress effects charactn./minimization, empirical strategy 78644
flip chip PBGA packaging, OSP surface finish charactn. 113711
flip chip solder bumps, electromigration failure, voids effects 92137
flip chip-in-package, molded underfill material/proc. 113563
flip chip/wafer-level CSP, emerging packaging technols. 113698
flip-chip package, single pass reflow encapsulant 113502
flip-chip populated PCB rework by laser desoldering 124351
flip-chip/CSP components on ceramic substrs., rapid power cycling 67621
fpBGA packages, fine pitch BGA, ball-shear strength 78676
IC package inspection enhancement using real-time X-ray systs. 100639
IC package inspection using X-ray systs. 124403
IC packaging for high perform. memory 124328
implantable microdevices, electrode-substr.-package codesign 122336
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
integrated power electronics modules, CSP of power devices 78617
interconnects, cyclic bending, fatigue 113550
IPC 7525 stencil design guidelines for electronics assembly, overview 115137
JOS Uniphase clip design, fibre attachment for 980 nm pump lasers 117029
laser rework technol., energy source perform./proc. specific package reliab. 113605
LCD module interconnection, chip-on-film technol. 86859
lead free chip scale package for wireless appls., no clean solder paste 113619

chip scale packaging continued
lead free interfacial struct., accelerated thermal cycle testing, BGAs and CSPs 113621
lead-frame plastic CSPs, modeling for predict. of low-pass filter effects on RFICs 91336
leadframe plastic CSPs for RFICs in wireless appls., elec. models 113505
life-time prediction, simul.-based optim. method, solder param. sensitivity 113496
LNA in mixed-sig. cct. environ., effects of IC packaging on perform. 68948
localizable HDI-PCB technol. develop. 113588
low-cost pluggable chip scale package for high pin-count appls. 113471
MEMS and ICs, wafer-level SMT chip size packaging 78656
micro via-in-pad substrs., solder bumped flip chip appls., design and manufacture 89871
microsyst. packaging concepts for harsh environ. 116085
miniaturised consumer electronics, assembly proc. trends 67637
mobile phone, CSP, reworkable underfill 113487
mobile terminal, high dens. packaging 113675
no-clean stencil printing proc. develop. for SMT/through-hole interconnect technols. 124339
OC-192 CMOS transceivers 96692
Omega wafer level CSP, board level reliab. 113601
optimum on-chip power distrib. networks for GSI 126940
packaging reliab., elastomer thermo-mech. behavior effects 124384
PCB, wafer-level CSP, solder joint crack propag. 78637
PCB X-ray inspection, 2D with oblique view at highest magnification systs. 78690
pixel detector modules, MCM-D technol. 97961
plastic cored solder ball, BGA and CSP packages, reliab. 113717
polymer stencils, UV laser-cut, for fine pitch wafer bumping 100587
polymer stud grid array CSP, flip chip assembly proc. develop., reliab. assess. 113634
portable consumer electronics appls. 113600
power device appls., CSP develop. 115879
proc. with reworkable underfills for mobile phone appls. 113708
PWB surface finish proc. develop. for enhanced solder joint strength/reliab. 69316
QFN, CSP reliab., design and mfg. 100617
repairable CSP underfill materials for reliab. enhancement 113598
rework, proc./cost control 89854
reworkable underfills for area array packaging encapsulation 67563
RF-LGA, LGA, laminate based CSP for 10 Gbit/s appls. 100590
RFIC, lead-frame plastic CSP, low-pass filtering 100610
shape evol. of electrodeposited bumps into deep cavities 89883
shielded vert. interconnection for microwave CSP, design for reliab. 125794
silicone packaging/interconnect materials, thermal props., transient plane source method 78649
single-pass reflow encapsulant for flip chip appl., develop. 67568
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
SoL interconnection, compliant wafer level package, embedded air-gap 126464
solder attach reliab. optim. 113603
solder joint reliab. 78638
solder joint reliab., thermal, power and bend cycling 113492
solder paste quality/vol., impact of print params./package pitch and I/O 115223
stacked, cyclic bending, failure and fatigue life 113667
T-G²BGA, tape gold-gold gang bond BGA, highly reliable CSP develop. 113470
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
technol. for electronic hardware miniaturization, trends 100602
technol. rev., overview 124326
technols./materials/procs., overview 67558
two metal layer tape package for improving high speed DRAM perform. 113632
ultrahigh thermal cond. module, direct solder-attach, C4 reliab. 113678
wafer level area array solder bump interconnects with Pb-free/low-α solders 113594
wafer level CSP for micromechanical/microlenses appls. 116055
wafer level packaging, WAVE wide area vert. expansion proc. implement. 113604
wafer level transient voltage suppression CSP for ESD protection, low cost/low I/O 113592
wafer level/parametric IC test systs. for design/life cycle enhancement 104042
wafer stepper, 300 mm, for bump/wafer level scale packaging appls. 126520
wafer-level chip size package with air cavity above act. surface for MEMS appls. 92510
wafer-level CSP, encapsulated double-bump technol. 100615
wafer-level CSP, microvia build-up layer, solder joint reliab. 113685
wafer-level CSP, thermal stress anal. and design optim., FEM simul. 113624
wafer-level CSP, wafer proc. package, reliab. 100616
wafer-level package, mobile phone appl. 113725
wafer-level packaging, photosensitive thick film, stress compensation layer 113500
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second level reliab., comparison 113586
GaAs MQW modulators, flip-chip bonded kinematic package, design/testing 128027
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pb-free packages, board level reliab. assess. 113573
Pb-free solder alloys for flip chip/area array package bumping 67569
Pb-free soldered interconnections, board level reliab. 115152
Si chip-size-packaged microphones, chip stack design 111505
Sn-Ag solder, top surface metall., fluxless wetting props. 100567
Sn-Ag-Cu lead-free solder vol. effect on intermetallic layer form., interface microstruct. 113515
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702
Sn-Bi solder, top surface metall., fluxless wetting props. 100567
Sn-Pb solder, top surface metall., fluxless wetting props. 100567
Sn-Sb solder, top surface metall., fluxless wetting props. 100567
SnAgCu solder joints on WLP in thermal cycle testing, deform. and crack growth 113622
TiNxOy embedded thin-film resistors, build-up CSP, 10 Gbps opt. transmitter/receiver modules 113640

chiral media *see chirality*

chiral waveguides *see chirowaveguides*

chirality
see also chirowaveguides
2D chiral radome, arbitrary cross sect., EM scatt. and transm. 94034
anisotropic smart coatings, proper polariz. bases, digital control 131635
bianisotropic composite mediums, ellipsoidal topol./orient. diversity/correl. length 104503
cavity backed rect. patch antennas with inhomogen. chiral substrs., anal. via FEM-BEM tech. 128843
chiral multilayer printed struct., anal. 117763
Clifford's geometric alg., covariant isotropic constitutive rels. 72241
coated conducting cylinders, RCS computation 75174
composite triple layer struct., plane wave scatt. 128762
double cladding W-type chiral opt. fiber, single-mode operation *(Chinese)* 93032
EM chiral/achiral transm. problems for small chirality, solns. 83207
EM fields of thin circ. loop antenna above (un)grounded multi-layered chiral slabs 72535
EM sources in chiral medium above soft/hard boundary, image theory 93994
EM waves in bianisotropic media, anal. investig. 117665
enantiomers, mol. recogn., chiral discrim., electrochem. sens. 97456
graded-chiral Dallenbach absorbers pot. 117657
helix mol. films, surface SHG intens. 71999
mol. films, surface SHG-circ. dichroism *(Chinese)* 128504
multilayered chiral filter response at oblique incidence 72450
multilayered stratified gyroelectric chiral media, dyadic Green's fns. 72452
omega- and chiroferrites, constitutive tensors calc. 70496
open-ended coaxial waveguide radiating into chiral half-space, refl. coeffs. 94111
opt. anisotropic thin films, lithographic patterning 127892
partly lossy chiral media, EM BVP 93961
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
randomly distributed chiral spheroids, wave polariz. scatt. and transm. property 83254
sing. waves in bounded chiroplasma 72343
slab, plane EM wave diffr. 72293
smectic C wedge-shaped confined geom., chevron texture, defects 121079
synthetic microwave absorbers, chirality/reson. role 105723
truncated chiral cylinder shielding effectiveness anal. 83366
turbid media with opt. soft large spherical particles, chiroptical spectrosc. 105770
Si large 3D photonic band gap crysts., large-scale microfabrication 92924

chirowaveguides
EM waves charactn. 117741
open chiral waveguides, step discontinuities anal., least sq. boundary residual method 102507
pseudochiral Ω-NRD directional coupler 69051
rect. waveguide with pseudochiral Ω slab, scatt. 72431
rect. waveguides with pseudochiral Ω slab, propag. 83477

chirp modulation
1.28 Tbit/s-70km opt. TDM fs-pulse transm., dispersion compensation *(Japanese)* 120366
10 Gb/s birefr. nonlin. fiber opt. pulse transm., chirp and pulse shape 131356
act. array, Cramer-Rao bounds for estimating range/vel./direction 75106
adaptive chirplet sig. decomp. algm. *(Chinese)* 84694
adaptive chirplet-based real sig. decomp., fast algm. 84711
all opt. bit clock extraction, fiber cross PM effects *(Chinese)* 117433
amplified sq. shaped picosecond pulse generation, RF-gun syst. 105423
analog opt. links, RF response, opt. phase conjug. 85962
anamorphic magnification using, chirped grating in grazing incidence mode 106787
ang. dispersive opt. syst. energy flow 71910
anom. dispersive opt. fiber, soliton pulse compression based on cross-PM *(Chinese)* 104649
anom./normal regime dispersion supported fibre transm. tech. 74921
ARCAP time-freq. representations for decision 119029
birefr. opt. fiber with loss and freq. chirping, soliton propag. 104680
birefr. opt. fibers, super-Gaussian solitons param. dyn. 93081
blue femtosec. opt. pulse generation, SHG and phase mismatch compensation anal. *(Chinese)* 128391
Bragg grating fiber strain sens. demodulator 97338
Bragg gratings and WDM filters, group delay ripple anal. and modelling 127600
broadband opt. parametric amplif., weak chirped-pulses, gain and spectral characts. 82852
cascaded chirped fiber grating, 10 Gb/s WDM syst. dispersion compensation 120355
cascaded TW electroabsorption modulator, distributed effects model 93237
chirped fiber grating group time delay meas., mode-mocking tech. 116647
chirped-pulse amplif. laser syst., stretching factor calc. and meas. *(Chinese)* 105418
chirped-pulse parametric amplif., pump-pulse/sig.-pulse synchronisation *(Chinese)* 105440
compact 3D profilometer with grazing incidence diffr. optics 83027
concatenated fiber links, optimal dispersion compensation, variational approach 96804
DFB diode lasers, metropolitan area and access networks 109097
DFB LD, gain-switched, pulse generation, opt. filtering effects 82661
DFB-LD directly modulated 2.5 Gbit/s transmitter, self PM, extinction ratio, chirp *(Korean)* 96693
directly modulated laser, rate eqns., MAN 105454
discrete fractional FT computation, weighted summation 90193
dispersion-managed act. fiber, chirped solitary waves optimal compression 127618
dispersion-managed fiber syst. design, anal. method 127688
dispersion-managed fibre soliton commun. systs., design and optim. 127614
dispersion-managed soliton commun. with chirped fiber gratings, group-delay ripples 93866
dispersion-managed systs., timing jitter, pre-/postcompensation effects 104683
Doppler radar target tracking, neg. correl. & optimal filters 120428
external-cavity semicond. laser, transm. perform. assess. 96685
Fabry-Perot filter time delay, short opt. pulses 96668
FBG sens. demodulator, fiber birefr. 109616
FBG strain sens., subcarrier phase detect. scheme 97287
feedforward SOA-based opt. pulse regeneration 117268
fiber Bragg grating, chirp effect, temp.-independent bend sens. *(Chinese)* 75595
fiber Bragg grating, chirp tuning, accelerometer appls. 97320
fiber Bragg gratings, chromatic dispersion correction 127605
fiber Bragg gratings, dispersion mgt., multisoliton solns. stabil. 127613
fiber Bragg gratings, group delay anal. 71284
fiber grating, chromatic dispersion compensation meas. 116653
fiber grating, long-period, asymmetric transm. spectrum, removal by beam scanning method 82082

rp modulation continued
fiber optic CDMA LAN, time-domain syst. model 96109
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
fiber spatial-temporal charact., ultrashort-pulse interferometry 104682
fibre gratings for MM-wave generation & proc. appl. 91403
fibre-optic temp.-strain discrim. sens. using WDM chirped in-FBG 86575
fibres, soliton propag. and interacts., bound states, Ginzburg-Landau eqns. 127617
FIR filters with max. flat freq. response error magnitude, instantaneous freq. estimator 107502
fixed central wavelength chirped fiber grating fab. 93092
freq. stepped pulse radar sig., DSP implement. 75088
fs X-ray laser driver, opt. parametric chirped pulse amps. use 128385
fund. opt. fiber soliton, dispersive phase components 93853
gain equalised chirped fiber Bragg gratings, gain-flattening filter technols. 82107
gain-switched DFB Bragg semicond. laser, pulse compression, chirp elimination 71772
Gb/s electroabsorption modulator, DFB laser integrat., long-haul opt. transm. systs. 74926
Gbit/s return-to-zero sigs., wideband tunable wavelength conversion 120300
Gbit/s simultaneous photonic DEMUX, OTDM-to-WDM conversion, FWM 75025
grating assisted opt. waveguide couplers 82147
group delay ripple in dispersion compensating fiber Bragg gratings, modulator chirp 109064
group-vel.-matched birefr. cryst. three-wave mixing 71948
high bit rate TDM syst., FBG elec. tunable dispersion compensation 86074
high reflectivity chirped laser mirrors, fs opt. pulse compression 93723
high spatial resoln. chirped moire fibre grating strain/temp. sens. 131940
high-resoln. array proc. in multiple wideband chirp sigs. 107332
high-speed Mach-Zehnder-type opt. modulators, chirp params. direct meas. 104815
high-speed opt. fibre transm. systs., eye margin charact. 96787
IIR gradient-based adaptive notch filter with constrained poles and zeros 130066
infinite length fibre gratings fab. using circ. amplit. and phase masks 127606
intra-pulse modulated sigs., feature extraction using time-freq. anal. 109233
intravascular ultrasonography, imaging syst. using pulse compression tech. 98295
Kerr-lens mode-locked solid-state lasers, coherent semicond. absorber, ultra-short pulse generation 82578
λ/4-shifted semicond. DFB devices, chirped grating effect on opt. bistability 93837
laser rangefinder, feedback interferometry, chirp-control 117575
lidar-radar, med. diagnostics 75228
location sigs., matched digital filtering in time domain 118972
long period fibre grating chirp 127642
long-haul chirped-return-to-zero WDM syst., symmetric slope compensation 96848
MAN, laser rate eqns. param. extraction, rep. simul. 96759
microwave phase shifter, opt. control, CFG and OFS 69253
microwave/MM-wave opt. links, dispersion effects reduction, SOA booster 86000
moire fiber grating dual-channel real-time FT 131507
momentum LMS algm., tracking perform. for chirped sinusoidal sig. 119021
moving target, chirp modulation by stepped freq. *(Chinese)* 75115
MQW electroabsorption modulator, neg. chirp operation 116808
multi-terabit long haul DWDM transm., VSB-chirped RZ 131547
neural network match filter of chirp pulse compression 75092
noncollinear SHG phase-mismatching scheme, temporal solitons 72053
noncontact fiber-optic dist. gauge, miniature 86581
nonlin. chirped fiber-Bragg-grating technol. compensated chromatic-dispersion impairments 96857
nonlin. lossless fiber, ultrashort chirped hyperb. pulses propag. 127660
nonlin. lossless lightguide, chirped sq. pulse to opt. soliton transform. 117518
oblique ionos. sounding, chirp sig. struct. 88136
OPA, noncollinear phase-matched, seeded by white-light continuum 117442
opt. fiber transm. systs., solitons, pulse interacts., modulation formats 127697
opt. fibre soliton stabil., pulse shape and freq. chirp influence 128560
pass. modelocked self-starting fiber laser pulse anal. using step chirped draw tower grating arrays 128389
Π/2-phase shifted DFB fiber laser chirping, single mode operation 105177
picosecond opt. pulse propag. in higher order dispersion managed fiber links *(Chinese)* 127628
prechirped dispersion-managed soliton transm. *(Chinese)* 104670
pulse microwave computed tomography by num. computation, human head model *(Japanese)* 98533
rare-earth-doped crysts., photon echoes, time-to-freq. FT 128460
return-to-zero format in 10-Gb/s terrestrial transm. systs., perform. optim. 131490
RZ opt. transm., 40 Gbit/s, adaptive dispersion compensation using Bragg gratings 74960
sampled Bragg grating with chirp in sampling period 71274
self-seeded Fabry-Perot LD, wavelength-tunable chirp-compensated single-mode pulse generation 105427
short pulse OTDM sig. transm. over nonzero-dispersion fibre 96866
sig. anal. using adaptive short-time fractional FT 118875
SOA based all opt. wavelength converter, cross-gain modulation *(Chinese)* 105518
SOAs, noninverted wavelength conversion, birefr., chirp compression 71817
step chirped fibre grating, phase mask principle & design *(Chinese)* 127683
step-freq. moving obj. echo real time digital generation methods 75087
superfast scanning of space with phase-modulated laser radiation 131675
symmetric Mach-Zehnder type all-opt. switches for for ultrafast all-opt. sig. proc. 120317
third-/fourth-order act. dispersion compensation in OTDM transm. 75043
third-order dispersion-managed multisolitons, fiber Bragg gratings 105565
time-freq.-selective channels, multicarrier syst. 85718
time-varying multipath channels, params. estim. using chirp sigs. 130261
tissue imaging, US-modulated opt. tomography, parallel detect. 87531
tunable chirped fiber Bragg gratings by distributed heater 116619
tunable fiber Bragg grating fab. with independently adjustable central wavelength and chirp 127596
twin fiber grating tunable dispersion compensator 104664
twin-core coupling fiber, interact. between opt. solitons with lin. chirp *(Chinese)* 116657
UHF bi-dyn. channel sounder for indoor meas. 85474
ultrabroadband double-chirped mirror pairs for octave spectra generation 71872
uniform period fiber Bragg grating, chirp tuning, accelerometer appl. 127714
UV phase-locked Raman side-band generation 82745
WLAN, SS syst., SAW filter, chirp π/4-DQPSK modulation 96384

chirp modulation continued
AlGaAs-GaAs hot electron injection laser, vert. integrated transistor-laser struct. 105310
CO_2 high-power amp., self-chirped picosecond pulses 82754
Er-doped fiber amplified externally modulated NTSC AM-VSB repeater syst. 74933
Er-doped fiber amps., induced phase shift, nonlin. Schroedinger eqn. 117127
I photodissociation ASTERIX laser, PALS project and upgrade 105081
InAs QD laser on InP substr., 2.5 GHz direct modulation, low chirp operation 128319
InGaAs/GaAs single-mode ridge waveguide lasers with aperiodic Bragg-grating fibre, near-transform-limited picosecond pulses 71822
$LiNbO_3$ 2D quasi-phase-matched struct., broadband mid-IR generation 82857
$LiTaO_3$ quasi-phase-matching gratings, sub-6-fs blue pulses, freq. doubling 72019
N^+ ion x-ray recomb. laser, exploding-type-pumping using thin membrane target 117076
Nd:YAG diode-pumped laser, micromachining appls. 82584
Nd:YLF/Nd:glass PROGRESS-P CPA laser facility, laser pulses 128189
Nd:YVO_4/MgO:$LiNbO_3$ monomode microchip laser mm-wave opt. transmitter for lidar-radar 131677
Nd:glass Vulcan laser Petawatt beamline 71714
Ti:sapphire laser, 5-fs pulse generation/octave-spanning spectra 71902
Ti:sapphire lasers, Kerr lens mode-locked, bistability study 82579
Ti:sapphire oscillator femtosecond laser pulses, temporal charactn., SPIDER tech. *(Korean)* 93738
Yb:$LiYF_4$ diode-pumped chirped-pulse tunable laser oscillator 105438
Yb-doped fiber diode-pumped chirped-pulse amplif. systs., high-energy fs pulse generation 82770

chloride glasses *see halide glasses*

chlorine radiochemical detectors *see chemical radiation detectors*

chokes *see inductors*

cholesteric liquid crystals
1D photonic band-gap and low threshold lasing 82504
achromatic wide-angle CLC-based broadband polariser, perform. 109881
bistable cholesteric reflective displays, gray scale states, refl. spectra 97707
colour filters, opt. characts.,light recycling, brightness 109882
director struct. of cholesteric diffr. gratings 82231
gray-scale bistable displays, pulse seq. addressing effects study 116832
liq. crysts., opt. props., conf., Humacao, Puerto Rico (Sept. 1999) 78380
polymer stabilized cholesteric texture reverse-mode light shutters, EO props. 109869
polymer-stabilised CLC texture films, FLC doped, electro-opt. characts. 86807
polymer-stabilized cholesteric texture films doped with SmC* 82232
self-lasing by stimulated emission/fluoresc./DFB 82560
single layer refl. polarisers, elec. controlled spectrum 104820
solar cells, localization and imaging of local shunts using PDLCs 113007

chondrites *see meteorites*

choppers (circuits)
5 kW boost converter, multiphase control, fuel cell energy *(French)* 134363
AC/DC power conversion, present and future technols. 134235
analog EEPROM, high-precision, real-time write monitoring, analog sig. proc. appls. 80130
auto-zero amps., offset, drift and 1/f noise, design ideas 68607
auto-zero amps., offset, drift and 1/f noise elimination, overview 68606
buck-based config. AC chopper voltage conditioner 79568
charger equipt. control cct., EMI anal. 88837
copper ore transport, 20 MW downhill conveyor syst., three-level converters 134707
DC chopper systs. spec. for electrochem. appls. 77988
delta-sigma ADC, ultra-low noise chopper-stabilized prog. gain instrum. amp. 90976
elec. locomotive, SRM parallel drive syst. 124011
electrohydraulic syst., chopper-driven mag. actuator model 116499
EM suspen. syst., fault tolerant controller design *(Korean)* 78309
flux reversal machine, automotive alternator with 42/14 V DC dual output 113120
hybrid EVs, PM TORUS generator appl., auxiliary power unit 100288
IM, rotor IGBT chopper controlled, quasi-dyn. model *(Chinese)* 77859
IM drive, rotor IGBT chopper control 89319
monolithic MOS bidirectional switch, on-state/transient charactn. 126783
PV module, optimal operating point tracking syst. modeling 123833
PV modules generation control cct. 77797
PV power syst. adaptive MPPT scheme 123260
PWM inverter fed IM drive, diode rectifier front end, regenerative braking 123931
PWM VSI-fed IM drives, chopper cct. improvement 134499
self-excited slip-ring induction generators, voltage/freq. control 123414
shunt VAr compensator capacitor voltage equalisation, closed loop control 111828
single-phase IM drives, literature survey 123877
SMES, voltage-source type power conditioning syst., control equipt. *(Chinese)* 123842
SMES double-DSP controlled power conditioning syst. studies 122850
soft-switching choppers, load adaptive ZVS scheme 134189
SRM drives, half bridge inverter topol. 134504
stabilization 80135
static sync. compensator with SMES, dyn. perform. 111856
three-phase static PWM freq. converter struct. 123652
unity PF 3-phase PWM SCR rectifier, induction heating, metal indust. 134647
SiC jn. barrier Schottky diode, switching appl. charactn. 126635

chopping *see cutting*

CHP generation *see cogeneration*

chromatic aberration *see aberrations*

chromatography
automated rapid vap. concentrator, nitroaromatic vap. sampling 75695
automotive indust., QC, electronic nose, GC/MS syst. 121020
buried landmine/UXO chem. signatures transport, model comparison 76988
diamond:B thin films, structuring and electrochem. appls. 120977
electrokinetic capillary separation, LIF, micro-opt. syst. 109782
encapsulants/underfills, gas evol. during curing/solder reflow 113714
fluorene-based star-shaped mols., prep., struct., opt. props. 82320
FPW and SAW sens., gas chromatography 92765
HV insulated wire deterioration research *(Japanese)* 133740
lab-on-a-chip technol., microfluidic devices in chem. meas. 109781
landmine/UXO detect., soil/air sampling, TNT & DNT anal. 76991
low-k dielec., mater. charactn. for damascene integrat. 126463
MOS capacitor breakdown characts., org. contamination, cleaning unit 81053

chromatography continued
nitroaromatic explosives electron capture detector, attachment react. 75690
organic LEDs, Joule heating effect, organic decomp. and gas evol. anal. *(Chinese)* 128008
PMMA, SR exposure, thermal develop., GPC appl. 92207
salt contaminants distrib. with dist. from sea, west coast, South Korea *(Korean)* 99388
silicone rubber insulators, hydrophobicity transfer *(Chinese)* 99386
small tubular SOFC syst., CeO_2 biogas internal reforming catalyst 89252
spectral peak-detect., point-box-dimens., fractal theory *(Chinese)* 106800
UXO detect., explosive vap. diffusion in snow, modelling 76990
zNose virtual chem. sens. array technol., high-resoln. olfactory images 97458
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
SF_6/N_2 high-press. mixtures, decomp. in DC/AC corona discharge in water vapour 92611
Si microengineered gas chromatography syst., miniature injector design 109736
SnO_2-based gas sens., thiodiglycol vapours detect., interact. mechanism 132055

chromising *see surface hardening*

Chua's circuit
adaptive control/sync. of Chua's cct. 101720
arbitrary time-series approx. & compression, nonlin. dyn. 95622
bistable ccts. coupled via low-pass filter, symm. syst. anal. 101717
cellular fuzzy proc., react.-diffusion, computational complexity 102476
chained chaotic oscillators for more secure commun. 72969
chaos generation, small-amplit. time-delay feedback voltage 114594
chaos generation from relay feedback systs. *(Japanese)* 79535
chaos preservation through continuous chaotic PPM 90692
chaos tracker, noncoherent detect. in digital commun. 91158
chaos-based commun. scheme via robust asymptotic feedback 130180
chaotic commun., inverse syst. approach 94246
chaotic electronic ccts., coherence reson. study 102446
chaotic secure commun., transmitting/receiving terminal behaviour 73760
chaotic syst. control by dithers, Lyapunov method 101718
chaotic systs., lin. feedback sync. theorem 125263
chaotic systs., sync., nonlin. observer theory 90677
continuous-time react.-diffusion cellular nonlin. net., edge-of-chaos 101721
coupled arrays of oscillators, sync. stabil., universal probe 90682
coupled Chua ccts., chaos sync., uncertainty phenom. 101723
cusps in strong resons. organized for degenerate Takens-Bogdanov in Chua's eqns. 125203
discontinuous dyn. systs., Chua's cct. 125262
dyn. 1D autonomous rings, dyn. PWL cells, equilib. points 101709
freq. switched, freq. hysteresis 90684
hyperchaotic ccts., sync., scalar transm. sig. 101708
hyperchaotic ccts. sync. via scalar sig. 90691
impulsive sync., chaotic systs. 101707
inductively coupled Chua oscillators, chaotic sync. anal. 125199
locally recurrent neural net., Chua cct. attractors learning 79534
Lur'e systs., elementary canonical state models, synchronized chaos appl. 101711
Lur'e systs. with time-delay, master-slave synchroniz. 101722
multistep param. modulation, secure digital sig. transm. 128970
non-integer order integrat. by using neural networks, chaotic syst. 91157
nonlin. chaotic Chua ccts., robust tracking control, fuzzy approach 90678
oscillator, chaotic waveform, time-freq. anal. 101716
period-doubling bifurcation, quasi-anal. method 90688
secure commun., Chua's cct., nonlin. H_∞ sync. 95747
secure commun., digitized n-scroll attractor model 94241
TDMA secure commun. scheme based on sync. of Chua's ccts. 73858
third-order PWL dyn. systs., decomposed canonical state models 90694
two-grid coupled arrays, Turing patterns control 101697

CI calculations *see configuration interactions*

C^3I systems *see command and control systems*

CIM *see computer integrated manufacturing*

cinefilming *see cinematography*

cinematography
see also cameras
camera, image intensifier dyn. prop. problems *(Chinese)* 131997
digital cinema develop., large screen projection displays 86892
fibre channel transm. vs. storage attached network *(German)* 96216
film flicker removal, enhanced approach 106487
flicker reduction in old films 94684
grooved channel, heat transfer enhancement strategies comparative eval. 132225
ILA projector technol. based electronic cinema 86893
image flicker correction for heavily-corrupted old film seqs., robust method 94686
images and formats 131741
laser act. tracking, basics & appls. 93937
motion picture films, opt. variable dens. sound tracks restoration 106702
motion pictures, dramatic story sects. and tempo determ. 95504
MPEG video, caption proc. in MC-DCT compressed domain 129699
old film pictures, blotches correction/contrast enhancement 94685
old films, low complexity cut detect. in flicker presence 106857
old motion pictures, defect removal 129570
reconstruction of degraded image seqs., appl. to film restoration 94485
selective sharpness enhancement of heavily-corrupted old film seqs. 94687
video movie annotation syst., script-video assoc. 73166

circuit analysis *see network analysis*

circuit analysis computing
see also circuit CAD; circuit simulation; SPICE
*BMD minimisation exploiting don't care conditions 100875
analog ccts., fault diagnosis using symbolic anal. techs. 90709
analog ccts. with tolerances, fault diagnosis using ANNs 68554
analogue ccts. soft fault diagnosis, sensitivity anal. 125209
analogue network behavioral macromodel constr. for functional-level simul. 125210
analogue piecewise lin. ccts., fault ident., homotopy approach 101744
ARC biquadratic filters using voltage and current followers 102344
area-array packages, decomposed anal. procedure appls. 78673
arith. units in deep-submicron CMOS, fast low-power charactn. 102115
asynchronous seq. ccts., anal., OBDD method *(Chinese)* 79834
ATM ring MAC protocol, hardware modeling/verification 74493
automated elec. design anal., reliab. anal. improvement 134597
batt. charger PFC preregulators, optimal control scheme 78012
behavioural models for analog ccts., validity region 90636
BGA substr. conducting path defects, AOI 100611
bipolar transistor, biasing ccts. 68507

circuit analysis computing continued
biquadratic act. RC networks for freq. response correction *(German)* 68907
CMOS regenerative comparators, symbolic anal. 91125
CMOS seq. ccts., power estim. using graph-based methods 114695
CMOS VLSI design in SOI, static timing and noise anal. tools 79728
compact determinant decision diag. symbolic anal. of large lin. analog ccts. 125194
complicated sine cct. soln. using MATLAB *(Chinese)* 90629
DC cct. theory, problem solving, ES 101648
decomp.-based symbolic anal. method for analog synthesis from behavioral specs. 101739
digital cct. sig. probab. calc. in Boolean fns., graph oriented realization 68678
ECSAIWeb, adaptive learning environ. on WWW 100464
FPGA design based on LUT, error diagnosis via pattern- and BDD based formal tech. *(Japanese)* 125278
generic RC trees, crosstalk noise estim. 125186
harmonic anal. of PWM converters, nonlin. DE 101755
HF quartz resonators, perform. 104447
high-PF PWM AC/DC power converters, sensorless voltage control 123648
high-speed interconnects, anal. using multipoint Pade approx. 90642
IC behavioural modeling for timing, noise, and sig. integrity anal. 104077
IC image proc., neocognitron neural net 102836
IC rated EMC params. determ. using EMCpar software 83382
IC structural anal., hierarchical class. algm. 79748
integrated power electronics modules, iSIGHT elec.-thermal anal. software 79557
IP-based design, static power estim. methodology 79685
large analog/RF ccts., steady-state stabil. anal. algm. 79516
large microwave systs., cct.-level anal. by Krylov-subspace harmonic bal. 80243
large weakly nonlin. microwave ccts., computer aided anal. 80233
layout-specific interconnect reliab. assess., cct.-level 92144
lin. cct. fault diagnosis, bilinear transform. in 3D & 4D space 101743
lin. dyn. networks with ideal switches, algm. for state and output eqns. 90698
lin. NWA design with heterog. component comp. 114588
lin. time-invariant ccts., algm.-based fault detect. 101742
low power digital CMOS cct. design, power estim. tech. 101985
low testability analog ccts., software program for ambiguity group determ. 90640
microwave amp. noise fig., precise determ. 68626
microwave oscillating amps., behavioural modeling 125264
microwave transistor perform. optim. using sig.-noise neural network 102613
MOS transistor ccts., algm. for finding all DC solns. 90674
multidielectric multiconductor hybrid ICs, closed form method of lines approx. anal. 80335
multilayer supercond. IC, inductance calc., 3D-MLSI software package 70978
multilevel combinat. networks, power estim. based on switching activity 114696
multiple DC solns. determ., Spice oriented Newton homotopy method 101680
multiple fault diagnosis of analog ccts. by locating ambiguity groups of test eqn. 101741
multiple-feedback delta-sigma modulators with leakage, stabil. anal. 68860
network transfer fns. and sensitivities calc., modified node voltage method 79506
nonlin. analogue ccts., tolerance, fault diagnosis, neural net based L_1-norm optimisation 114590
nonlin. current-mode ccts., stat. anal. 114593
nonlin. microwave device modeling procedure for piecewise harmonic-bal. anal. 80234
nonlin. resistive ccts., matrix-based tech. for uniqueness anal. 68530
nonparametric ident. of lin. systs., resonator based 101686
PCB, double-sided, elec. perform. anal. *(Chinese)* 91452
PCB design, parts obsolescence impact minimization 125885
piecewise lin. ccts., symbolic lin. Mathematica based tech. 68510
piecewise-lin. resistive cct. solns., contraction-type LP test algm. 114591
piecewise-trapezoidal ccts. anal., set-valued mappings *(Japanese)* 79521
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
PLL master-slave tuned filter, tuning range, computer anal. 102351
power electronic device switching, steady-state algm., PWiseSS program 70060
PWM DC-DC converters, small-sig. symbolic anal. 99833
PWM invertor-fed IM drives, shaft voltage prediction model 134454
SC cct., symbolic anal., MAPLE software 101724
sensitivity based analog fault dictionary 90711
seq. ccts., use of don't cares during symbolic reachability anal. 102104
seq. form first- and second-order symbolic sensitivities calc. via transimpedance method 90635
sig. integrity anal. for network board designers 101660
sigma-delta modulators, CAA techs. 102292
solid-state heterodyne receiver for THz operation, challenges 91293
soln.-tracing cct. for fixed-point homotopy method 90656
substr. noise, modelling and digital library creation 79746
SwampFinder product develop. tool, IC DFM 104014
switchmode power supplies, steady-state anal., SUPRA simul. tool 114615
symbolic cct. anal., lower bound based determinant decision diag. minimisation 125189
symbolic cct. fns., topol. anal., binary vectors *(Russian)* 114575
symbolic network anal. with valid trees and valid tree-pairs 101678
telecomm. buck-type power converter load, input dyn. modelling 108454
temporal logic model checking of event timings, abstractions 101978
three-phase PWM rectifier direct power control, virtual flux estim. 123618
tolerance and sensitivity anal., multi agent systs. 101679
transistor voltage series reson. converters, MathCAD 7.0 PRO anal. 99790
wafer sort yield, robust windowing method for Poisson yield model, appl./validation 103954
widely separated time scale ects., anal. using num. PDE methods 68547
Si micromachining microchannels heat sink, theoretical/expt. anal. 100578

circuit bistability
bistable ccts. coupled via low-pass filter, symm. syst. anal. 101717
PWM generator 101850
quantum MOS logic, cct. appls. 102006
RTD-based compact bistable CNNs 91138
two-transistor multistable cct. constr. methodology 90665
van der Pol oscill., sync. oscills. bistability 101846

circuit breakers
see also circuit-breaking arcs; gas blast circuit breakers; residual current devices; vacuum circuit breakers
3-phase faults tripping, switching overvoltages anal., discrete method 99193
110 kV distrib. network cct. breaker replacement efficiency optim. 133609
110 kV/11 kV indust. transformer station overvoltages *(Serbian)* 123687
400 kV substations, cct.-breakers, sync. switching, Romania 112723
420 kV gas insulated substation VFTOs, switching conditions effects 134314

uit breakers continued
aerial multi-conductor transm. lines with branch, switching transient EM field 134289
ambient-proportional sens. trace heating control 134640
arcing-generated complex accident anal. *(Chinese)* 123674
arcless interruptions in low current power ccts. 115107
auto-expansion cct. breaker arcs modelling at high current levels 112694
condition assess. using model-aided diagnosis 112702
current limiting cct. breakers, LV devices, moving contacts, arc root commutation 123661
David C. Prince, switchgear design engineer, researcher, inventor 112699
DC hybrid cct. breaker using integrated gate-commutated thyristors 78055
distrib. substations, interlocked overcurrent busbar zone protection 78078
distrib. substations, on-line fault estim., cause-effect networks 112722
distrib. syst. operation-order-sheet, visual/universal realisation *(Chinese)* 112046
distrib. syst. power lines, noncommunication protection *(Chinese)* 88481
distrib. syst. transfer switch/cct. breaker ratings, indust. stds. 77521
generator cct. breaker, num. simul. using MATLAB *(Chinese)* 133923
generator cct.-breaker stresses, lab./real conditions comparison 78053
generator terminals, cct. breaker installation 112449
HT-7U supercond. Tokamak, PF power supply design 77950
HTS fault current limiter, power syst. stabil. anal. 77595
HV AC cct. breaker Weil-Dobke synthetic testing cct. 112686
HV cct. breaker AC nozzle arcs thermal recovery calcs. 112693
HV cct. breaker fault diagnosis using wavelet sing. detect. *(Chinese)* 99835
HV cct. breaker online monitoring/fault diagnosis using RBF networks *(Chinese)* 123673
HV cct. breakers, fault diagnosis, RBF networks appl. *(Chinese)* 134272
HV cct. breakers, monitoring/diagnostic params. selection, IEEE Standard 99836
HV cct.-breaker cost-effectiveness calc. method *(German)* 112679
HV power transm. line cct. breaker arc modelling 112690
HV substations, EMI monitoring 78081
HV switching apparatus, status, develop. prospects *(Russian)* 123671
HVAC cct. breaker diagnosis, qualitat. reasoning 123675
integrated power quality in distrib. equipt. 133695
interlocking closer fn. under low oil press. *(Chinese)* 99840
ITER tokamak, coil power supply components 112619
Kii-channel HVDC link/Tachibana-bay unit, islanded syst. mode test 112008
large area blackout, syst. restoration, interconnection issues *(Chinese)* 88301
line-charging capacitive current interruption, direct/synthetic tests 78052
live tank cct. breaker nonconventional CT 112688
LV cct. breaker, arc motion, mag. camera obs. 89000
LV cct. breaker arc props./spectrum intens. meas. *(Japanese)* 112703
LV distrib. networks, voltage dips and consumer sensitivity 133681
LV distrib. syst. overcurrent protection using precision breakers 133776
LV miniature cct. breakers, laterally enclosed arc runners, arc struct. and motion 123662
maint., reliab. anals. impact 112697
maint. scheduling using reliab. targets/equipt. perform. 134266
MV power distrib. systs., novel switching technols. integrat. 133625
nonunit dist. protection, accelerated second zone tripping algm. 77527
operating mechanisms eval., signature anal. 88998
Petri net models for power syst. monitoring based on relay and cct. breaker inform. 99435
power station power syst. fault-level limitation using dyn. interlocking 112160
power syst. components stochastic wear, predictive maint. programme 88286
power syst. computer-based relay protection tech. 112136
power syst. fault diagnosis, probabilistic NN, multiple alarm proc. *(English)* 123076
power syst. generalized state estim., reduced substation models 133430
power syst. protection, graphic-interface-based breaker status simul. syst. *(Chinese)* 99408
power syst. protection schemes, reliab. assess. 77563
power syst. state estim., substations representation 111682
power systs. off-line fault diagnosis, ANNs 99428
protective relays, testing methods/simul. 133791
refinery power plant, fault current limiters, benefits assess. 78366
silicone rubber composite insulators, HV live tank cct.-breakers 77444
straight type polarized mag. syst., anal./calc. *(Chinese)* 112678
substation alarm MHS using ANN/ES *(Chinese)* 112708
substation automation technols. and advantages 99854
substation refurbishment, disconnecting cct. breaker-based improvements 134290
transm. network, on-line fault diagnosis, fuzzy ES 111988
ultra fast hybrid cct. breakers with GTO and IGBT, comparison 99842
unit-connected generators, grounded neutral, ground-fault currents 77832
Ag corros./whiskers growth, power contacts, pulp and paper plants 124157
Ag-Cu whiskers growth on cct. breaker contacts in corrosive atmos. 134282
Ag-SnO_2-In_2O_3 elec. contacts, prod. optim. 90563
AgW symmetric contacts, arc chamber wall material and arc gap dielec. recovery voltage 123663
SF_6 HV cct. breakers, react. kinetics model 99852

circuit-breaking arcs
see also circuit breakers
35 kV ZBX-type automatic tracing compensation arc suppression device *(Chinese)* 112164
550 kV shunt reactor current interruption phenom. 112701
600 V/6 kA bidirectional ZVS hybrid DC IGBT switch 134271
arcing-generated complex accident anal. *(Chinese)* 123674
auto-expansion cct. breaker arcs modelling at high current levels 112694
current limiting cct. breakers, LV devices, moving contacts, arc root commutation 123661
evaporating metal droplets in ablation controlled elec. arcs, modelling 91525
fuse elements voltage drop/current meas. using digital techs. 123676
generator cct.-breaker stresses, lab./real conditions comparison 78053
HV cct. breaker AC nozzle arcs thermal recovery calcs. 112693
HV power transm. line cct. breaker arc modelling 112690
line-charging capacitive current interruption, direct/synthetic tests 78052
LV cct. breaker, arc motion, mag. camera obs. 89000
LV cct. breaker arc props./spectrum intens. meas. *(Japanese)* 112703
LV miniature cct. breakers, laterally enclosed arc runners, arc struct. and motion 123662
magnetis.-controlled shunting reactor, design principles 111674
metal-clad switchgear, arc terminator 134281
outdated arc suppression coils, problems and renovation *(Chinese)* 112683
polymer current limiter device, voltage/comp. depend., switching 133799
sliding contacts, arcing, erosion and contact resist. stabil., automotive power appls. 115102

circuit-breaking arcs continued
switch short arc duration laws and distribs. at low current and voltage 115106
thyristor series capacitor arc suppression coil studies *(Chinese)* 123065
vac. arc extinguishing chambers, breaking ability eval. *(Russian)* 123672
wall-stabilized arcs, near current zero conductances decaying procs. *(Japanese)* 123666
AgW symmetric contacts, arc chamber wall material and arc gap dielec. recovery voltage 123663
SF_6 HV cct. breakers, react. kinetics model 99852
SF_6 arc quenching property diagnosis using ICTP *(Japanese)* 112705
SF_6 cct. breaker arc behaviour, nozzle ablation effects 112692
SF_6 cct. breaker, gas discharge, magneto-plasmadynamics 125948
SF_6 cct. breakers, plasma sheath num. modelling 112695
SF_6 self-extinguishing cct. breaker, small current interruption 134258
W-Cu contacts in vac. interrupter envelope, load current switching, elec. erosion 123660

circuit CAD
see also circuit analysis computing; circuit layout CAD; hardware description languages
1D/2D order stat. filters, FPGA design 91099
3D design tools, PCB electronic and mech. design data 69310
activity-sensitive flip-flop and latch selection for reduced energy 68726
aggressor alignment for worst-case coupling noise 103997
air-gap stacked Marchand balun for MMIC, graphical design method 80373
algorithmic level DSP synthesis, symbolic alg., multimedia appls. 125551
ALLTED, optimal cct. designer, PC oriented CAD syst. 101643
Amaterous, parallel wire router with path selection method *(Japanese)* 79511
amp. design for 12 GHz MMDS appl. using neural net transistor noise model 69129
analog building blocks, design methodology for optim. using genetic algms. 101750
analog cct., component values design centering, parallel GA 68552
analog cct. synthesis by superimposing of sub-ccts. 101748
analog ccts., GA based design/synthesis 90710
analog filter design, Mathcad worksheets, FILTERD program 91007
analog IC optim., fuzzy perform. model of mismatch 101731
analog/mixed-sig. IP modeling for design reuse, SoC appl. 80114
analogue ccts., smart, evol. design 114598
analogue CMOS automatic design syst., neurocomputing technol. 101732
APLAC Design Suite for RFIC mixer design simul. 91372
arith. cct. design, evol. graph generation syst., transmigration capability 102106
ASIC design methodology achieving 550 MHz operation 125358
ASIC design using EDA tools, IP service providers *(German)* 115995
asynchronous bus interface design for 80C51 microcontroller 79670
asynchronous distrib. control synthesis and optim., transforms. 125353
ATM router in space, TRW ASIC design 109000
behavioral and gate level designs, power estim. improvement 90823
behavioral partitioning in synthesis of mixed analog-digital systs. 125623
bias dependant LF FET noise model for CAD, large and small sig. models 80308
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
bipolar power MMIC, base feed design using high power HBTs 91387
board design, RF and microwave tools 69308
Boolean satisfiability problem, inactive clauses, dyn. detect., image computation algm. 125364
broadband microwave diode detectors, CAD using filter approxs. 125703
BSIM, Berkeley short-channel IGFET model for cct. design, CMOS appls. 127061
carry-save-adder based arith. ccts., timing and area trade-offs for optim. 79846
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
CHIPDESIGN, project-oriented microelectronics course, ASIC std. cell design flow 125298
clock tree synthesis for semi-sync. ccts. 101894
closely spaced perforations of microstrip line on ground plane, CAD formulas, synthetic asymptote 102588
CMOS ADC, 8 bit design, efficient archit. 102277
CMOS analog act. ccts., evol. synthesis using current path based coding 125596
CMOS analog IC, AMGIE synthesis environ. 104132
CMOS ASICs, shifter design 90861
CMOS cct. av./peak temps., modified high-level synthesis effects 116037
CMOS current steering DAC design, stat. methodology 102290
CMOS digital ccts., gate level power optim. using dual-supply voltages 125287
CMOS digital VLSI design in SOI, cct.-level CAD tools 79728
CMOS seq. ccts., power estim. using graph-based methods 114695
co-ordinated design mgt. procs., project mgt. organisation for CAD *(German)* 114681
code placement in hardware software co-synthesis, perform./cost effects 79700
cold FET mixer design, large-sig. model 79624
combinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
combline filter, CAD and optim., FD-FD GSM algm. 102512
complex nonlin. 3D syst., electrothermal CAD, time-depend. thermal model 90628
component selection and matching for IP-based design, SoCs 81430
computational phys., HW/SW co-design, formal methods, conf. Iechia (June 2000) 113261
conditional task graph allocation/scheduling, hardware/software co-synthesis 81441
constraint-based watermarking for graph partitioning solns. 125362
controlled static power convertors, optimisation proc. 123567
custom and ASIC designs, methodologies for freq. gap reduct. 126982
data path synthesis, clique partition. algms. based on improved merging rules *(Chinese)* 114580
data-driven dyn. logic/NP-CMOS logic, design comparison 68750
datapath operators merging improve. using info. content and required precision anal. 125360
DECIDE subcircuit extraction algm. by recursive graph ident. scheme 101682
decomp. synthesis approach to design of RF and microwave act. ccts. 91297
deep submicron designs, power supply noise estim., vector generation 70287
degradable VLSI/WSI arrays, reconfiguration algm. based on Hopfield network *(Chinese)* 104024
digital cct. design teaching, prototyping hardware/software environ. 124276
digital cct. sig. probab. calc. in Boolean fns., graph oriented realization 68678
digital design, PLD, elec. engng. degree course 125299
digital design education infrastruct., multiple EDA tool vendors, multiple modes of tool access 125300
digital design reuse, survey 101903
digital filter, heuristic synthesis, genetic prog. 91082
digital filter synthesis based on min. signed digit representation 125615

circuit CAD continued
digital VLSI design, architectural synthesis with interconnection cost control 101957
DLX RISC pipelined μP, forwarding and interlock logic design automation 125562
domino logic ccts., coupling-aware min. delay optim. 102108
DSP systs., combined word-length optim. and high-level synthesis 90956
DSP systs. for DSL appls., design for low-power implement. 125527
dual-mode HE_{11} dielec. resonator microwave filters CAD 68901
dual-threshold voltage assignment with transistor sizing for low power CMOS ccts. 68779
dyn. power mgt. tools, integrat. in IC design flow 101946
EasyPLL, RF cct. design on WWW, Nat. Semiconductor *(German)* 69111
eDFM Web-based DFM in electronics assembly 115134
efficient fn. approx. for embedded and ASIC appls. 125190
electronic software engng. education, large-scale parallel-embedded appls. 124275
EM interconnect modeling, CAD approach, HF effects 70274
EM-based design of microwave ccts., neural inverse space mapping optim. algm. 91224
embeddable FPGA archit. for ASIC designs, hardware/software soln. 102116
embedded systs. design and verif., reuse oriented prototyping methodologies 101954
embedded systs.-on-chip, partitioned memory synthesis, multi-bank SRAM archit. 125383
energy efficient storage bandwidth optim. and memory assignment 102178
enzyme genetic prog. for combinat. cct. design 103993
evol. design of electronic ccts., CAD tools 68511
evolvable coprocessor environ. design based on GA 114785
FASTEST, CMOS analog ccts., stat. eval., DC anal. 125215
ferroelec. thin film capacitors, cct. simul. model, AHDL implement. *(Korean)* 81786
Fibonacci interconnection topologies, spectral transforms, cct. realisation 101932
FILTEX, microband filter intell. design syst. 68518
finite ground CPW directional filter, full-wave CAD-based design 69066
finline in MM-wave IC design, knowledge-based ANN models 80161
FIR canonic signed digit Chebyshev filter design 68934
flexible cct. DFM, ground rules 91454
formal methods in CAD conf., Austin, TX, USA (2000) 78448
FPGA design, functional decompos., sub-fn. input support sel., inform. rels. meas. 79811
FPGA design based on LUT, error diagnosis via pattern- and BDD based formal tech. *(Japanese)* 125278
FPGA design reuse strategy for syst.-level integrat. 114727
FPGA hardware/software co-design in embedded syst., partition decision, graduate course 125294
FPGA Windows-based design program, Innoveda packages *(German)* 68738
FPX, field prog. port extender, hardware modules, Internet routers/firewalls, CAI platform 124266
FSM synthesis via GA, flipflop selection 125167
full chip ESD design rule checking 104072
functional verification for virtual components 68694
fuzzy A/D converter, current-mode approach 102279
gap discontinuity in shielded CPW for MM-wave ICs, ANN model 125783
Gekko PowerPC μP, timing convergence, synthesis tools and phys. design 79932
generic RC trees, crosstalk noise estim. 125186
greedy-GA combined algm. for data transfer binding problems 81489
H_2/H_∞ mixed filtering design in multirate transmultiplexer systs., LMI approach 131025
hardware metering scheme, low overhead proofs, manufactured parts 125444
hardware-based GA appl. 125165
Harvard archit. RISC-μC core design, dedicated busses 114797
HDI build-up PWB design tools, requirements 69300
heterog. FPGA under delay constraint, low power driven re-synthesis algm. 102112
hierarchical algorithmic descriptions, architectural transforms. in recursive HLS 101955
hierarchical capacitance extraction algm. without multipole expansion 126993
hierarchical design for SOCs 68848
hierarchical phys. design 104003
high perform. VLSI design, CAD infrastructure 125166
high quality analog CMOS and mixed sig. LSI design 81507
high-bandwidth x86 instruction fetching based on instruction pointer table 90920
high-level prog. lang. descript., global variable localization for hardware synthesis 101673
high-order SC Δ-Σ modulators, capacitor-area and power-consumption optim. 102291
high-speed digital ICs, sig. integrity, MOSFET modeling, LE-FDTD method 90835
high-speed VLSI cct. capacitive coupling noise reduction 126994
Hopper, automation engine, phys. design of large IC 104004
hybrid field prog. archit., routing struct. 68680
IC design, EM emission modelling, syst. anal. 81436
IC interconnect simul., finite difference formulation 92453
IC interconnect tree optim., hybrid DQP algm. 70258
IC interconnect trees for electromigration reliab. estim. 92174
IC packaging design optimisation using 2D/3D EDA environ. 124344
IC power/ground network optim. based on equiv. cct. modeling 126984
IIR stable notch filter design with optimal pole placement 130122
in-place delay constrained power optim. using functional symms. 79689
input space adaptive design, high-level methodology, energy/perform. optim. 125375
intra-task voltage scheduling algm. for low-energy real-time appls. 125359
IP, property ownership challenge, logic block design time 114683
Java simul., cct. design and anal. 125163
large on-chip VLSI interconnect grids, power simul., model reduction 92454
latch-up device simul. tool, 2D, for pre-Si develop. phase 81496
LDMOS electro-thermal model validation from large-sig. time-domain meas. 79608
libraries with scalable polynomial delay model improve modeling accuracy, Synopsys 101658
log-domain ladder filter synthesis, unified matrix method 80074
logic cct. learning tool *(Japanese)* 79838
low-power optim.-based volt. scaling tech. using multiple supply voltages 101987
Luna 340, emulation on Axis Xtreme syst. 101657
LUT-array-based PLD design and SGCT-based synthesis approach 102087
LUT-based FPGA synthesis, functional decomp. 79793

circuit CAD continued
LV low-power continuous-time ΣΔ ADCs, design strategy 79963
MATHCAD program, engng. calcs., elec. cct. design *(German)* 90638
memory test models, automatic generation/validation for μP 125183
MetaCores, design and optim. techs. 125178
MetaRTL, RTL design abstraction level, ASIC design 79677
MIC multiport power combiners/dividers, CAD modeling 102727
microcontrollers and μP, virtual emulation *(Italian)* 90930
microelectronics, conf., Tehran, Iran (Nov. 1999) 78403
microelectronics dist. education course, web-based learning approach 126959
Microexpert, ES for microwave oscillator design 68645
MicroNetwork-based integrat. for SOCs, automated develop. environ. 125371
microstrip cct. design , expanded space mapping design framework, preassigned params. 91231
microstrip coupled-line filter design for WCDMA using EDA package 114949
microwave act. cct., interactive visual design 102599
microwave amps., hybrid and monolithic, cct. CAD 102717
microwave and MM-wave ccts., FDTD simul. 80238
microwave and RF ccts., knowledge-aided-design using ANNs 91225
microwave cct. design/modeling using 3D EM optim., freq. and geom. parameterization 91227
microwave cct. modeling/simul., design principles 125689
microwave MCM-D CPW quadrature couplers/power dividers, X-/Ku-/Ka-band design 125801
microwave power amp., cct. optim., EDA tool 102597
microwave power amp., time-domain harmonic load-pull meas. 80257
microwave simulators, educational appls. 89647
MIMP, Motorola's Impedance Matching Program 125169
mixed control and dataflow systs., modelling in MASCOT 125289
mixed sig. design, ANTRIM software *(Italian)* 80119
mixed sig. IC design via dist. learning, CAD and lab. dilemma 125619
mixed-sig. circuitry, automated top-down design, bottom-up design verification 125622
mixed-sig. IC substr. coupling parasitic extraction, RF/microwave spiral inductors 68957
mixed-sig. systs., analog-digital interface elements, LP approach 102422
mixed-technol. VLSI systs. incl. MEMS and MOEMS, CAD issues 70322
MM-wave quasi-opt. oscillator with Gunn diode array, power combiner optim. 80287
MMIC amp. CAD, PHEMT transistor models 68625
MMIC interconnect, differential via, CAD model 101667
MMIC param. ident. using hybrid neural net archit. 91364
modular component design reuse for PCB products 115130
module CAD education 125172
mol. electronics based ICs, chem. assembly/CAD algms. 102844
multiclock selection/synthesis for control data flow graph 125286
multiobjective optim. in cct. CAD, search space 78961
multitransistor MMIC ccts., MM-wave amps., stabil. anal. 125807
μP, high perform., semi-custom design flow 125552
narrow-band band-pass filter design, software tool 102334
neural based microwave modeling and design, exact adjoint sensit. anal. 91226
nonlin. microwave cct. design, semicond. device modeling 80232
nonvolatile memories, fully qualified analog design flow, CAD tools 79541
OEICs, yields, packaging aspects, CAD tools 93446
OFDM transceiver for WLAN, 72 Mbit/s, C++ based syst. design 119580
on-chip copper interconnects, freq.-depend. current distrib. for inductance modeling 103998
optimal digital IIR filter design 102393
orthonormal DWTs, rapid prototyping on FPGAs 90815
oscillator CAD, Colpitts, Clapp and Class E, Osciladores 68641
over-designed ccts., analog cct. synthesis, library creation 68556
parallel-plate environ., buried and through vias, phys.-based CAD models 124366
parametric timing yield estim. from static timing anal., robust design for-quality 81469
partial implement. in VLSI CAD, equivalence checking 125350
partially simultaneously alive sigs., storage requirement estim., data intensive appls. 126981
partition-codec archit. synthesis for low power and small area cct. design 102113
PCB DC power-bus struct., vert. discontinuities, cct. extraction, MPIE 80486
PCB design, parts obsolescence impact minimization 125885
PCB design reuse methodology 115129
PCB design tool, Constraint Manager program *(German)* 91453
PCB DFM modelling, proc. rule check *(Chinese)* 102811
PCB DFM using continuous design improvement model 102804
PCB EMC design, expert anal. tools 125878
PCB lossy interconnects, time domain modeling, dielec. loss 80488
PCB syst. design, hierarchical methods 125881
PHEMT MMIC amp. design, 1-3 GHz, for transmit/receive appls. 102663
phys. design, conf., San Diego, CA, USA (April 2000) 100382
planar shielded microstrip ccts., rigorous charactn. of shielding effect 80352
PLD-based DSP systs., debugging and design, staged approach 79904
power module integrated cooling design using CFD simul. 127075
pre-routing estim. of shielding for RLC sig. integrity 125185
proc. voltage scaling for energy minimization with QoS constraints 125399
professional CAD environ. for IC design teaching 124269
proprietary hardware emulation software, reprogrammable circuitry, PCBs 69311
Q-GA, modified GA for design of phase equalizers 79546
qualitat. modelling of lin. networks in engng. appls. 68704
quartz cryst. oscillator, low power design, PSPICE 81741
quasi-2D phys. PHEMT model for two-tone time-domain IMD simuls. 80314
quasi-planar high Q_0 dielec. resonator 3D microwave filter, CAD 80187
random global routing algm. independent of net ordering *(Chinese)* 104022
RC-in RC-out model order reduction accurate up to second order moments 125401
reconfigurability of FPGA, Intellectual Property design proc. 79825
reconfigurable proc. with cell-array struct. for general-purpose calc., prog. method and mgt. unit 90844
reconfigurable systs., design space, reconfiguration hierarchy 125348
redundancy addit. and removal logic optim., generalized reasoning scheme 79794
resource constrained async. scheduling method via DFG transform. 101971
reusable direct digital freq. synthesizers, VHDL-based design/design methodology 125585
RF cct. CAD, high-level simul. 79500
RF cct.-level simul. algms., num. simul. strategies 102594
RF design, pop. meas., stat. CAD model 101668
RFIC multidisciplinary design, first-yr. graduate course for RF engineer training 124265

cuit CAD continued
RISC µP with DSP functionality, 32 bit, rapid prototyping 68845
RNS converters, automatic generation, archit. level exploration, CAD tool 102218
RSFQ µP, cell-based top-down design methodology 127491
RTL coding style effect on testability, use of RTL code analyzer 101993
s-expanded symbolic network fns. for computer-aided analog IC design 79545
SC Δ-Σ modulators, high order, capacitor-area/power-consumption optim. 90979
SC-type Δ-Σ modulators, single-bit, power consumption optim. 68878
seq. ccts., peak-power estim. algm., low-power ccts. 102010
sig.-type async. data commun. mechanism, synthesis and implement. 79784
silicon technols. for Bluetooth and other wireless apps 101661
SKILL-based library for retargetable embedded analog and mixed-sig. cores 81442
Smith chart appls. for microwave component charact. 102592
SMPS cost-effective EMC-conforming design 88815
SMPS develop. optimisation using SIMPLORER CAE-tool 88895
SoC, systs. on a chip, multidisciplinary and collaborative design, interactive video course 126957
SoC challenges in deep submicron technol. evol. 102195
SoC design, retargeting of mixed-sig. blocks 80116
SoC design challenges 125526
SoC design flow quality, std. design langs., APIs 81463
SoC design with IP blocks, coherent functional, elec. and phys. modeling 114572
SoC Masters, internat. MSc program in SoC design at KTH 124267
SoC programme, digital hardware organization course, block-oriented design 125292
SoC research infrastructure for Canadian universities 126956
SoC syst. level archit. exploration using SpecC methodology 101961
Socware design cluster for SoC, research & education programme 126955
soln.-based watermarking tech. of satisfiability, combinat. isolation lemmas 125361
SPICE generic optimisation algms. for cct. design 68516
STARC, Semiconductor Technology Academic Research Center, high-level LSI design stages 114691
stat. cct. design, GA, large-scale ccts. 68512
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistor sizing 102035
subcircuit enumeration and class. for module ident. problem 125182
supercond. digital logic cct., yield optim. 70957
superheterodyne FM-IF receiver for FSK sigs., anal. *(Chinese)* 108516
superscalar µP archits., genetic approach to design space exploration 102249
switching noise constraints effect on high-level synthesis 125624
switching regulator design using pseudo-coevolutionary genetic algms. 90727
symbolic Elmore anal. and cct. simul. for logic-stage delays computation 125355
sync. data-path ccts., sig. represent. guided synthesis using carry-save adders 125442
synthetic digital ccts., memory, structural anal. and generation 68667
SYSCUF, automated synthesis package for switched current filters 68916
syst.-level perform. anal. for designing on-chip commun. archits. 70275
syst.-on-a-chip approach for indust. robotic controller design 103992
syst.-on-a-chip design technol. 126945
syst.-on-a-chip interconnect, commun.-based design, formal approach 125554
SystemC design lang. for develop. of ASICs and systs. *(German)* 90813
thick film integrated LC filters, design, fab. & test 114862
timing closure satisfaction, delay bound determ. 101981
timing sign-off re-engng., IC design 92444
timing simul. of sync. models on networks of workstations 114574
top-down analog design methodology using Matlab and Simulink 101747
top-level PCB schematics, systs. design strategy, hierarchical approach 69306
topol. generator, neural network based approach 68491
tristate syst. environ., fault detect. 125173
undergraduate microelectronic systs. education, CAD tools, contemporary engng. practices 124262
verification tool for complex IC design 101928
virtual components, publicly detectable protection techs., watermarking method 125443
VLSI, conf., Orlando, FL, USA (April 2001) 89562
VLSI, multiconductor transm. line CAD, networked supercomputer implement. *(English)* 126933
VLSI, reconfigurable archit., evolvable hardware 68505
VLSI archit.-level power estim. and design expts. 115990
VLSI CAD, hist.-based dyn. minimization during BDD constr. 101949
VLSI CAD, incremental phys. design 103951
VLSI CAD algms., teaching, web-based visualization tools, Java applets 125301
VLSI cct. gate sizing problem, parallel genetic approach 70284
VLSI ccts., input vector gen. for max. intrinsic decoupling capacit. 104051
VLSI design, DUNE multilayer gridless routing syst. 70254
VLSI design education, synchronized streaming media appl., Internet in rem. learning 124268
VLSI image sens. project chip, undergraduate course, design cycle 126954
VLSI inductive crosstalk, differential signaling modelling, phys. synthesis tools 127011
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
voltage ref. cct., on-chip, evol. prog. design 101768
watermarking of std.-cell feedthroughs in mixed-sig. design 68951
waveguide filter, design and manufacture 69031
Web based mining of stat. inform., semicond. proc. steps 79509
wireless SoC design infrastructure and automated chip design flow 114894
WWW based analog cct. CAD tool, design space interactive exploration 79547
X-band MMIC up-converter, CAD-simul. 91381
xDSL sigma-delta modulator, digital CMOS technol., top-down design 79961
zero-skew clock tree constr. by simultaneous routing, wire sizing and buffer insertion 103995
GaAs FET analog, RF and microwave ICs, CAD tool 80347
GaAs PHEMT MMIC power amp., CAD 69202
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025
InGaAs/InP DHBT technol. and design methodology for >40 Gb/s opt. commun. ccts. 131411
InP HBT VHSICs, opt. commun., prediction extraction modelling scheme 104084
SiGe BiCMOS technol. and CAD environ. for 2-40 GHz VLSI mixed-sig. ICs 114999
SiGe HMOSFET differential pair, output I-V charact. lin. 79597

circuit cards *see printed circuits*
circuit complexity
aliasing-free space compactor design, switching theory formulation 101965
analog ICs and mixed-sig. SoCs layout tools, survey 101654
analogue network behavioral macromodel constr. for functional-level simul. 125210
BIST test pattern generator using ATPG vectors 125329
block-matching motion estim. algm., low-power VLSI archit. 68831
CSP/MCM-L impact on portable wireless product substr. requirements 124381
custom logic blocks, efficient path delay test generation 114718
EM scatt., ABC/curvilinear perfectly matched layer 128735
FIR filter design, freq. response masking struct. with reduced complexity 91068
floorplanning-based virtual prototyping for PCB design/layout 125884
FPGA run-time reconfigurable ccts., optim. algm. 114702
GREEDY IIP, partitioning large graphs by greedy iter. improvement 125309
HDI PCB mfg. technol. selection, board thickness prediction 113589
IC packaging planning at design stage, benefits 100579
IC yield mgt., automated image retrieval syst., field test 100627
lateral power device integrat. in mixed sig. BiCMOS technol. 81533
lattice WDF, max. sample freq., circulator, Richards struct. 102392
lin.-phase FIR filters, optim. using freq. response masking approach 80103
low-complexity cellular archit. for performing inversion and divisions 125410
mapping timing behavior of VLSI ccts. on emulators 90873
mini-wave selective soldering proc. for double-sided SMT assembly mfg. 115147
minimization problem 68668
modulo tests, logical ccts. design, unitary positional binary codes 68764
multivariate adaptive sampling, comput. EM anal. minimis., interpolation 102552
network consciousness, beyond ant-hill model 119774
PCB manufacture, high complexity, quality/test modeling role 115175
PCB mfg. quality mgt., AOI technol. impact 113760
PCB solder joint assembly defect level/fault spectrum study 115155
phys. design, conf., San Diego, CA, USA (April 2000) 100382
pipeline ADC with radix<2 archit. 68867
planar cct. simul., wave concept iter. procedure 114960
reusable components based synthesis, arith. spec., POLYSYS tool 101888
schedules for power consumption using multiple supply voltages reduction 125464
selective soldering for double-sided multilayer PCB assembly, proc. implement. 115145
seq. ccts., complexity of parallelizing using parallel-prefix method 125415
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
speculative sync. VLSI logic simul., perform. predictions 79502
STI for CMOS logic technol., mfg. optim. 104097
syst.-on-a-chip design technol. 126945
tree-struct. IIR/FIR octave-band filter banks with very low-complexity anal. filters 91060
under-bump metall. etching for wafer level packaging 100580
variable fractional-delay FIR filters, discretization-free design 91072
very-high-efficiency microwave amp., harmonic manipulation approach 79570
VITAL VHDL gate level std., cycle-based simul. 125405
VLSI CAD, incremental phys. design 103951
VLSI design, gate duplication complexity 104060
VLSI global routing, efficient rectilinear Steiner tree algm. 126944
VLSI layout, area optim. of packing represented by seq.-pair 81424
VLSI power/ground network solver, incomplete Cholesky decomp. conjug. gradient *(Chinese)* 92432
VLSI systolic cct., GF(2^m) iter. division algm. 102019
Cu/low-k ILD proc. metrology, complexity/capabilities 126489
GaAs-AlGaAs HBT prod. proc. technol., perform./reliab. 70043

circuit design *see network synthesis*
circuit diagrams
brushless cooling fan motor, speed control *(German)* 88774
MATHCAD program, engng. calcs., elec. cct. design *(German)* 90638
quartz-cryst. resonators as thermal sens., thermal stabilization cct. 120712

circuit feedback
see also feedback amplifiers; feedback oscillators
3-phase 3-level neutral point clamped boost rectifier, input/output feedback lin. control 134175
3-phase VCCS inverter for AC drives 99834
AC biased audio recording LSI cct., automatic level control *(Japanese)* 97111
ac/dc supplies, PFC 90743
act. second-order BP filter design using lossy LP-BP transform. 125606
act.-R design using CFOA-poles, resonators/filters/oscillators 102336
analogue IC small-sig. modeling, elementary transistor stages, behavioral sig. path 125213
arc welding inverter power source of double loop control, const. voltage and large current *(Chinese)* 90719
band-pass act.-RC filter, single-amp. biquad type, design 80077
bandpass delta-sigma modulators synthesis 79632
bandpass sigma-delta modulator, nonlin. dyn. anal. 102260
BiCMOS very high-speed replicating current comparator for Viterbi decoders 114898
biquad second order building block with minimised parasitic transfer zero influence 102346
broadband MMIC power amps. with compact flat gain PHEMT cells, 20-30 GHz 91385
chaos generation from relay feedback systs. *(Japanese)* 79535
chaotic systs., lin. feedback sync. theorem 125263
Chua's cct., chaos generation, small-amplit. time-delay feedback voltage 114594
classical PLL, sig. distortion and waveform conversion 90806
CMOS analog 2nd generation current conveyors, VLSI design and implement. 102370
CMOS attenuator, lin.-control wideband device 102327
CMOS chip output buffers, switching noise reduction, design tech. 104088
CMOS continuous-time current comparator, high speed/power ratio design 68968
CMOS continuous-time lin. phase filter with auto. tuning syst. 80076
CMOS controlled slew-rate output driver, design and noise reduction 91003
CMOS current comparator cct., high-perform. *(Chinese)* 104086
CMOS current-mode prog. CNN, low-power consumption 68986
CMOS I/O interface ccts., 1.2 Gb/s, 100K pos. ECL syst. compat. 68884
CMOS latches, simulator to study metastability 101937
CMOS low noise transconductor, low distort. HF fully differential design 68930
CMOS MUX/DEMUX ICs using CML, 10 Gb/s, opt. link appl. 75038
CMOS PLL based on multiphase ring oscillator, interpolating inverter stages, 1.25-GHz 69226
CMOS regulator, low dropout, 60 µA quiesc. current/250 mA max. 81502

circuit feedback continued
CMOS SC power converters with integrated low dropout regulators 90726
CMOS transconductor design, 3.3 V, 80 dB SFDR up to 10 MHz 114902
CMOS transconductor g_m-C filter, cct. stabilization 80053
CMOS transimpedance receiver for opt. appls. 109068
CMOS VHF prog. read-channel continuous-time filter with on-chip tuning 80042
CMOS voltage down converters for high-speed SRAMs 90902
code cracking problems, complexity computation 129263
common-mode feedback ccts. for SC stages with large common-mode input 91124
comparator instabil. removal with hysteresis, pos. feedback 68972
continuous-time bandpass delta-sigma converters, feedback DAC delay compensation 114817
continuous-time low-pass all-pole OTA-C filters, perform. comparison 68925
continuous-time sigma-delta modulator, arbitrary feedback waveform 79971
continuous-time sigma-delta modulators, effect of feedback waveform 90967
current tunable CMOS operational transresistance amp. 125244
current-mode multiple loop feedback multiple output OTA-C filters 102345
current-version neg. feedback biquad filter, opamp cct. 68932
DAC, nonlin. error modulation, spectral shaping 90989
DC multiple operating points effect 101691
dendritic adaptation, analog VLSI cct. basis 102482
DFE coeff. placement algm. for sparse reverberant channels 107674
differential log-domain filters, high-gain common-mode feedback ccts. 80054
DIII-D ECR heating upgrade, modulator/regulator power syst., cct. modeling 68579
discrete time analog polynomial type CNN with digital state 91150
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
ECG amp., combined driven right leg/guarding ccts., stabil. conditions 110591
electret microphone sigma-delta modulator interface, on-chip ref. 102296
fading memory, radial basis model 114592
faster-than-light effects/neg. group delays in optics/electronics, appls. 114863
FGMOS analog and digital comparator designs, weighted multiple-input voltages 81517
floating-gate MOS biquad, LV, second-order g_m-C filter 125601
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
fluoresc. lamp electronic ballast with no series pass. elements 89436
FPGA implement. of pulse-shaping IIR filter 114882
fractals in ccts. 114584
high speed dyn. latch comparator with reduced offset using init. switch *(Korean)* 79837
HTSC SQUID gradiometer, feedback electronics 70918
hyperchaotic ccts., sync., scalar transm. sig. 101708
hysteresis-mode boost-converter input stages, high PF AC-fed power supplies 114600
IF amp. with distributed selectivity, synthesis 101804
IIR uniform DFT filter banks, stable, causal, perfect reconstruction, design 102382
independent binary rate multiplier patterns gen. with V/F conversion cct. 68647
IPF-SV method, impulsive proportional feedback in syst. variable, chaos control in cct. 68546
leapfrog multiple loop feedback bandpass filters, tuning 68927
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl. 125602
LINC transmitter, gain/phase imbalance minimization tech. 96479
longit. instabil. control syst., program. DSP-based multibunch fdbk. 87094
low-noise wide-band amp. with inductive source 101795
Lur'e systs., elementary canonical state models, synchronized chaos appl. 101711
Lur'e systs. with time-delay, master-slave synchroniz. 101722
LV low-power accurate CMOS V_T extractor 102444
LV sigma-delta modulators, integrator output swing optimisation 80004
microstrip resonator, neg. resist., act. bandpass filter 102539
mixed A/D networks, PWL simul., waveform relax. approach 90965
mixed-sig. PWM DC/DC converter, proport. current feedback, single chip implement. 90724
multi-modulus divider, low-power, in 0.6 μm digital CMOS technol. 68690
multi-PLL clock distrib. archit. for GSI 91002
multi-point clock distrib. networks, VLSI ccts., top-level high-speed distrib. 70268
multidimensional systs. stabilizability and stabilization, constructive approach 130112
multiple DC solns. determ., Spice oriented Newton homotopy method 101680
multiple-feedback delta-sigma modulators with leakage, stabil. anal. 68860
opt. rotary encoders, CMOS front-end cct. 75397
oversampling sigma-delta modulator stabilized by two local nonlin. feedback loop techs. 80005
parallel bridge rectifier feed syst., current feedback algm. *(Chinese)* 90714
partially-depleted SOI CMOS Schmitt trigger ccts. with controllable hysteresis 125273
PFC cct. with modified SEPIC converter 134158
program word-line voltage generator for multilevel flash memories 68794
PWM DC-DC converters, small-sig. symbolic anal. 99833
reverse blocking IGCTs for CSI appls. 77995
RLS-Laguerre lattice adaptive filtering, error-feedback/normalized/array-based algms. 130117
RT level VHDL simul., cycle-based approach 68706
RTL VHDL simul., synthesizable, fast cycle-based approach 68514
self-convergent MOS flash-memory prog. scheme for MV and analog data storage 102438
sigma-delta modulators, nonlin. stabilization techs. 102262
supercond. RSFQ pseudo-random no. generator, timing design 70853
switching regulator design using pseudo-coevolutionary genetic algms. 90727
three-phase act. power filter controller design/implement. 99889
threshold-voltage-summation archit. based volt. ref. cct. in CMOS/SIMOX 125229
thresholds detect. by electronic cct. using jump phenom. 68531
UHF current-mode filter based on biquad of regulated cascode topol. 80078
V^2 controlled buck regulator, modelling/design considerations 88861
wavelet image compression, optimum quantization error feedback filter 95285
Wilson current mirror, dual-loop neg. feedback operation 79586
wire rope, NDT, integrator cct. *(Chinese)* 102443
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
GaAs HBT power amps., feedback bias cct. design 80317
GaAs HEMT regenerative MMIC freq. dividers for 28 and 14 GHz 125754

circuit layout
see also circuit layout CAD; integrated circuit layout; network routing; printed circuit layout
cube-connected cycle layout without long wires 125517

circuit layout CAD
see also circuit CAD; high level synthesis
2D hierarchical compaction algm. for VLSI layout reuse *(Chinese)* 81488
3D VLSI, placement benchmarks 104046
3D VLSI, placement method based on estim. posns. *(Japanese)* 115119
AC machine, complex motor direct torque control, VLSI design approach 78102
acyclic graphs, min. congestion embedding into ladders, VLSI layout 70280
Amaterous, parallel wire router without detailed/global feedback 125888
analog ICs and mixed-sig. SoCs layout tools, survey 101654
AnalogRouter, automatic current-driven routing tool for analog ccts. 81473
analogue automated layout tools, design rule description 68553
approxs. of crossings in graph drawings and VLSI layout areas 68506
ASIC design methodology achieving 550 MHz operation 125358
asymmetrical coplanar lines on double-layered substrs., anal. *(Chinese)* 94075
autorouting, product-neutral PCB design 125876
buffer location planning by network flows 101897
Butterfly network exposed layouts 104026
cell-based design, library creation 68517
cell-based VLSI ccts., table-lookup delay model-based timing-driven placement algm. *(English)* 79718
clustering based fast clock scheduling for light clock-tree 79684
CMOS analogue cct. routing, contact and via placement algm. *(Chinese)* 101738
CMOS chips, phys. design 81446
CMOS wave steered ccts., latch count minimization and latency, integer LP 125440
combinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
convex-polygons, optimum packing by seq. table data struct., VLSI layout appl. 81426
corner block list, floorplanning with abutment constraints and L-shaped/T-shaped logic blocks 125381
coupled transm. lines, transient simul., time-domain scatt. params. 90652
crosstalk-driven interconnect CAD, optim. 103999
custom ASIC design methodology with on-demand library generation 125387
cycle time optim., timing driven placement with simultaneous netlist transforms. 101964
datapath routing based on decongestion metric 101655
datapath tile placement and routing, automatic layout 79698
dedicated sig. proc. systs., hierarchical automated design flow, layout generation 114783
deep submicron verification tools, crosstalk noise modeling 81439
differential via holes in PCBs, FASTCAP modelling 91459
digital logic ccts., compiler driven simul. tech. 79839
domino logic ccts., coupling-aware min. delay optimisation 79829
DUNE multilayer gridless routing syst. with wire planning 101650
dyn. bit-level systolic arrays, post-layout switch-level simul., netlist reduction 68673
dyn. iter. method for fast network partitioning 101666
dyn. reconfigurable FPGA placement 125400
efficient routing algm. for symm. FPGAs using reliable cost metrics 68715
embeddable FPGA archit. for ASIC designs, hardware/software soln. 102116
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut partitioning 102105
ESD protection circuitry design rule checker for IC I/O cells 104071
exact switchbox routing with search space reduction 103996
fixed-outline floorplanning via better local search 125187
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
floorplan area minimization using Lagrangian relax. 101896
floorplan area optim. problem for VLSI ccts., AWO algm. 70267
floorplan models and backend chip design 101900
floorplanning classical formulations 101901
floorplanning-based virtual prototyping for PCB design/layout 125884
FPGA fast placement syst. using macro-blocks 101939
FPGA global interconnects, parity-based BIST, design/implement. 114586
FPGA place and route problems, simulated annealing, iter. procs. *(Italian)* 79831
full custom layout design 90833
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808
full-feature alternating phase-shifting technol., phase-aware std.-cell design flow 125342
fuzzified iter. algms. for perform. driven low power VLSI placement 127014
generic ILP-based approaches for time-multiplexed FPGA partitioning 114717
hardware compilation for software engineers, ATM example 68500
hardware compiler realising concurrent procs. in reconfigurable logic 125168
high speed multilevel staged clock routing *(Chinese)* 90810
high-speed PCB design, power and ground planes, simul. and modeling 102812
high-speed VLSI, automatic clock tree design with IPs in syst. 104066
hot-carrier degrad. minimization using logic restructuring techs. 125343
hybrid wave-pipelined bit-pattern associative VLSI router 90824
IC layout, congestion-driven placement algm. based on cell inflation *(English)* 103980
IC layout congestion estim./minimization during placement 104002
IC packaging design optimisation using 2D/3D EDA environ. 124344
ILP-based board-level routing of multi-terminal nets for prototyping reconfig. interconnect 104049
incremental rerouting, Boolean satisfiability-based, FPGA appl. 79799
interconnect design, simultaneous shield insertion/net ordering, explicit RLC noise constraint 126975
Itanium μP, repeater insertion mgt. in RTL, layout, floorplan and fullchip timing databases 102197
latency-driven design of multi-purpose systs.-on-chip, deep submicron technol. 125336
leaf cell synthesis, 1D, transistor chaining with integrated dyn. folding 126966
LSI layout with diagonal edges, resizing algm. 81490
LUT-array-based PLD design and SGCT-based synthesis approach 102087
macrocells, constructive procedure for optimising placement 101674
mAgic-FPU and MADE, customizable VLIW core and modular VLIW proc. archit. description environ. 114801
mask generation, automated tapeout syst. for prod. environ. 103585
Mathematica Version 4.1 design software, fibre optic systs., EMC and PCB appls. *(German)* 90637
matrix assisted pulsed laser evap. direct write cct. element rapid prototyping method 115158

uit layout CAD continued
nixed-technol. VLSI systs. incl. MEMS and MOEMS, CAD issues 70322
nodule placement with pre-placed modules using B*-tree representation 104064
MOSGRAD, CAD tool for simulating effects of systematic/random channel param. vars. 81518
nulti-commodity flow global routing by approx. algm. 103994
nulti-level logic optim., graph-based alternative wiring scheme 68740
nulti-way cct. partitioning using GBAW logic perturb. techs. 79683
nultilayer-wiring VLSI area model, compact, multilayer layout for butterfly fat-tree 104028
nultilevel cooperative search, cct./hypergraph partitioning problem 101899
μP, high perform., semi-custom design flow 125552
netlist partitioning, lin. ordering algm., cost fn. 79505
non-slicing floorplanning algm. using corner block list topol. represent. 81429
optimal buffer insertion under accurate delay models, graph based algm. 79697
optimal path finding with analog CNN, depend. dist. pot. source algm. 90631
OrCAD PCB design appls., network environ. methodology 125886
Parmod functional electronic materials, laser proc. 115157
pass transistor logic macrocells, automatic layout generator 79798
PCB, simul. for optimal placement of decoupling capacitors 91457
PCB design archiving systs. 115123
PCB layout, computer program, data mgt. *(German)* 80492
PCB transm. line std. waveguiding struct., sig. atten. 80489
PCB/MCM design, perform. driven and shape-based routing algm. *(Chinese)* 102808
PCBs carrying high pin-count SMDs, layout design *(German)* 125883
perform.-driven global routing technol. *(Chinese)* 79655
peripheral I/O high quality ASICs, I/O cell placement, elec. checking methodology 81451
perturbing algm. for floorplan design using O-tree representation 101895
phys. design, conf., San Diego, CA, USA (April 2000) 100382
PLAs, optimal folding using 0-1 lin. prog. 90847
post-layout optim. combining buffer insertion and transistor sizing 125285
PowerPCB, PC layout and routing program for detecting pot. prodn. defects *(German)* 80490
pre-routing estim. of shielding for RLC sig. integrity 125185
pseudo pin assignment with crosstalk noise control 101651
qtr.-state seq. for floorplan represent., layout optim. appl. 81428
RC delay metric for perform. optim. 101653
recursive bi-sect. timing driven placement using phys. net constraints 125382
recursive partitioning based placement, cut seqs., dyn. prog. approach 125454
reduced ordered BDD, variable ordering by scatter search 125188
repeater block planning for interconnect-centric floorplanning 101898
repeater block planning under simultan. delay/transit. time constraints 81440
repeater insertion in tree struct. inductive interconnect 103987
RISC μP with DSP functionality, 32 bit, rapid prototyping 68845
RT-level route-and-place design methodology for interconnect optim. in DSM regime 104045
selective soldering implement. for through-hole components 80502
shortest route via several designated points, GA for routing 79514
sig. integrity anal. for network board designers 101660
sigma-delta modulator, very LV, design methodology 79962
SIP vs. SOC, partitioning instead of integrat. 70286
SKILL-based library for retargetable embedded analog and mixed-sig. cores 81442
SLASH deterministic block placement algm. based on seq.-pair 81427
slicing floorplan, extension to handle L/T-shaped modules and abutment constraints 70276
slicing tree floorplan representation for VLSI layout design 81435
snap-on cell placement tool 101893
SoC design, retargeting of mixed-sig. blocks 80116
SOM-TSP method, optim. of high speed chip-mounter *(Japanese)* 80487
Sp2V, post-layout spice simul. accel. using Verilog gate-level modeling 114583
std. cell layout, FAME detailed placement algm. *(English)* 79761
std. cell library, automating cost-effective library creation 68693
std. cell placement optimisation by candidate sieving 125414
Steiner tree optim. for buffers, blockages and bays, VLSI 104068
STI silicided bulk CMOS, compact layout rule extract., latchup prevention 81509
structural IC design comp. for C++ hardware models, layout struct. 90821
TCG, transitive closure graph-based representation for non-slicing floorplans, VLSI 127010
terminal vertex graph, planar spanning subgraph extraction 100901
tight coupling of timing-driven placement and retiming 101962
timing-driven VLSI layout, objective fn. modif. for efficient optimisation 103986
trapezoid-to-simple polygon recomposition for resist. extraction 104070
virtual CMOS library approach for fast layout synthesis 104121
VLSI, optimum design of power and ground topol. subj. to reliab. and noise constraints *(Chinese)* 81487
VLSI buffer and wire resource allocation, design methodology 126973
VLSI CAD, timing-driven macro-cell placement algm. 127012
VLSI cct. interconnect trees optim. 104000
VLSI cct. layout CAD, crit. area for missing material defects 104001
VLSI cct. phys. design, crosstalk minimization *(Chinese)* 68501
VLSI ccts., timing-driven placement algm. *(Chinese)* 116012
VLSI design, floorplanning algm., Lagrangian relax. 70259
VLSI design, interconnect-centric floorplanning, repeater block planning 70256
VLSI design IP protection, constraint-based watermarking techs. 116005
VLSI floorplan, area(number)-bal. hierarchy of staircase channels with min. crossing nets 104067
VLSI floorplans using seq.-pair, simulated annealing search *(Japanese)* 104062
VLSI interconnect global routing, perform. driven routing through gradual refinement 127013
VLSI interconnects and electronic packages, elec. modeling and simul. 81484
VLSI layout, area optim. of packing represented by seq.-pair 81424
VLSI layout, optimal sub-cct. extract. by min-cut graph 70281
VLSI layout and packaging of butterfly networks 104027
VLSI layout rendering, texture mapping with mipmapping 126983
VLSI layout topol. reuse by parametric BSG 81425
VLSI multi-layer routing, constrained via minimization *(Chinese)* 116013
VLSI phys. design, floorplanning, top-down partitioning-based method modif. 70288
VLSI phys. design automation, distributed and OO framework 104063
VLSI placement, simulated evol. algorithm adaptive bias scheme 101963
VLSI power/perform. optim., fuzzy simulated evol. 104009
wave-steered design methodology, global routing tech. 126967
wire packing, crosstalk-aware chip-level track/layer assignment with integer LP 101652

circuit layout CAD continued
zero-skew clock tree constr. by simultaneous routing, wire sizing and buffer insertion 103995
Si CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515

circuit noise
see also integrated circuit noise
2-D oscillator, correct decomp. of perturb. into amplit. and phase noise 90782
adaptive sigma delta modulator, SNR perform. 79977
amp. design for 12 GHz MMDS appl. using neural net transistor noise model 69129
analog cct. internal noise calc./meas. for noise effects reduction 132150
analog-digital systs. description, sig. proc. and control appl. 102288
ATLAS pixel detector, Si vertex tracker, review 76056
bar cryogenic grav. wave detector perform., review 127531
bistable meas. devices, noise tuning, neuro-fuzzy approach 120649
bounces on power-/ground-planes, fast anal. 115118
broadband VCO phase noise sensitivity to oscillator cct. params. 114969
comparator instabil. removal with hysteresis, pos. feedback 68972
complex computer syst. boards, multiprocessor modules, mid-freq. delta-I noise anal. and meas. 89877
continuous DC-DC converters, heat and noise control in design *(Spanish)* 101757
continuous-time low-pass all-pole OTA-C filters, perform. comparison 68925
coupled chaotic electronic ccts., superpersistent chaotic transients obs. 68538
current-to-voltage converter and buffer cct., parasitic capacitance 114906
D-type flip-flop cct., eval. of metastabil. for random no. gen. 90869
DAQ systs., sens. noise reduction method 131830
DECT VCO integrated pass. using thin film MCM-D technol. 131263
dielec. resonator PHEMT oscillator, low noise 90797
differential interconnects, charactn. from TDR meas. 125868
digital phase-tracking and measuring loop for dist. meas., perform. anal. *(Chinese)* 125271
EMI immunity diagnosis for PCBs using bulk current inject. test *(Japanese)* 91450
FET in mixer appl., modeling and advantages of electrode loading 69135
HF neg. feedback LNA, noise anal. and design 79569
high stabil. quartz cryst. oscillators *(German)* 114648
higher order delta-sigma A/D converter with optimized stable coeffs. 68863
higher-order delta-sigma ADC, optimal design 68874
large nonlin. microwave ccts., sig. and noise anal., harmonic-bal. techs. 102581
LC oscillator, phase noise 101822
LHC silicon fast frontend electronics, output shape/amplit. 76144
low noise oscillator design, upconversion gain anal. 68631
low noise receiver front end with integrated patch antenna, design tech. 131090
low-noise act.-RC low, high and band-pass allpole filters using impedance tapering 102369
low-noise synthesizer design using YIG-replacement oscillator 114983
mag. sens. noise meas., DAQ syst. 127402
microstrip antennas, Gunn integrated, noise 105905
microwave act. notch filter, varactor tuning 102364
microwave amp., noise charact., integral transform 68591
microwave freq. synthesizer, implement. and perform. anal. 69139
microwave synthesizer based on sampling-phase detector, nonlin. anal. 80315
microwave synthesizers, nonlin. dyn., stabil., phase-noise simul. 125716
MOSFET-R-C filtering tech. with improved lin. 91038
multiple vias in stripline struct., lumped-element models 91189
opt. receiver distributed preamplifiers, noise anal. 120174
optimum noise-matching networks for opt. receivers, design 79518
oscillator, phase noise 90787
oscillator, resonator tap, CNR 79615
oscillators, behavioural simul. of phase noise and jitter 101847
OTA-C band pass filter, noise/dyn. range 102343
OTA-C filters, noise-flow-graph anal. 80060
parallel-plate environ., buried and through vias, phys.-based CAD models 124366
PCB, digital electronic, EMC *(Russian)* 72365
photodiode, readout cct., dielec. polariz. noise 104945
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
PLL, jitter and phase noise, parallel anal. treatment 68651
power/ground plane struct., bounces, planar cct. model, APA-E algm. 78610
prog. ultra-low noise X-band exciter 91278
PWM DC-to-DC converters with random-switching control, LF noise 114617
quadrature subsampling mixer, noise anal. 101866
reduction by analogue lowpass filtering and data averaging 120699
reson. oscillators, time domain method for computing phase noise 101848
RF cct. CAD, high-level simul. 79500
RF cct. noise, anal. and design implications 80282
RF power amp., power supply, HF noise suppression 68613
RLC ccts., radiative noise, fluct.-dissipation theorem 68549
S-series microwave power amps. for wireless telecoms. testing 91275
second-order continuous-time Δ-Σ modulator using RTD quantizer *(Japanese)* 114825
short term oscillator freq. stabil. as fn. of phase noise distrib. 114964
simul. of modulated nonlin. ccts. 101694
surface mount VCO, low phase noise, small footprint 68636
switching power supply, common-mode noise, propag. model *(Japanese)* 68582
synchronized oscillators, nonlin. dyn., noise effects 114655
time delay ccts., noise generation theory 114565
time-delay digital tanlock loop, Gaussian noise 102308
tunable recursive bandpass filters, finite word length effects 91101
UPS push-pull DC-DC converter, PCB parasitic influences, anal. 125227
voltage-controlled SAW oscillators, low phase noise, digital commun. appls. 80272
AlGaN/GaN HEMT-based VCOs, varactor-tuned with low phase noise 80276
GaAs MESFET, cryogenic charge sensitive preamplifier 68614
GaN-AlGaN HEMTs grown by RF-assisted MBE for robust low noise/high power amps. 91280
InP/InGaP/InGaAs RTD relax. oscillator, opt.-injection locking 125260
PZT thin-film vibrator, long. vibr. touch probe sens. 97185

circuit optimisation
0.18 μm ASIC MOSFETs, robust design using Taguchi method with TCAD 126991
1 kW asymmetric half-bridge converter cct. optimisation 88889
2D FIR compaction filter design 95705
2D FPGAs, optimum switch box designs, global routing dens. constraints 125434
2D separable filters for optimal reconstruction of JPEG-coded images 95039
3D FDTD simulator in optimisation loop for automatic design of HF struct. 69109

circuit optimisation continued
3D tech. visualizations in VLSI design, full-wave interconnect anal., clock distrib. 125363
100W class A power amp. for L-band T/R module 86201
H_∞ robust filtering for uncertain discrete-time state-delayed systs. 95697
activity-driven clock design, CMOS sync. digital syst. 68683
adaptive discrete time wavelets using degenerate eigenvalues 119071
air turbulence sig. simul., appl. 111324
all pass IIR filters, optimal energy compaction, design procedure 125614
ALLTED, optimal cct. designer, PC oriented CAD syst. 101643
analog building blocks, design methodology for optim. using genetic algms. 101750
analog cct. synthesis by superimposing of sub-ccts. 101748
analog IC optim., fuzzy perform. model of mismatch 101731
analogue ccts. soft fault diagnosis, sensitivity anal. 125209
analogue CMOS automatic design syst., neurocomputing technol. 101732
analogue IC mismatch, yield, spec-wise lin., feasibility-guided search 125217
analogue syst. design problem formulation by control theory 101740
analogue/digital converters, power consumption and conversion speed, resoln., S/N ratio *(German)* 125568
ARC low-pass filter design for band 1-50 MHz 102349
area-power optimal state assignment, complete weighted graph 114677
area/time optimizing algm. in high-level synthesis of control-based hardwares 68688
arith. cct. design, evol. graph generation syst., transmigration capability 102106
ASIP SoC multimedia codesign based on multicriteria optim. 119808
asymmetrical half-bridge power converter design optimisation 88888
asynchronous ccts. and systs., conf., Salt Lake City, UT, USA (March 2001) 78399
asynchronous distrib. control synthesis and optim., transforms. 125353
autopolarisation voltage ref. thermally stabilized cct. 101766
bandgap ref. for BiCMOS VLSI appls., stat. anal. and optim. 125216
Bayesian switching algm. for optimal increasing binary filter 129463
BCD5 smart power technols., ESD protection struct. 127074
bit-serial arith. cct. evol. synthesis *(English)* 79851
BLOWFISH algm., optimal datapath design for cryptographic proc. 106288
boundary filter optim. for segmentation-based subband coding 95700
boundary filters, max. coding gain, ideal DC behavior, size-limited paraunitary filter banks 91055
buffer insertion under accurate delay models, graph based algm. 79697
buffer location planning by network flows 101897
cache memory archits., fast syst.-level exploration driven by energy-delay metrics 102151
cache memory syst. energy behavior anal. using software/hardware optim. 114740
carry-save-adder based arith. ccts., timing and area trade-offs for optim. 79846
cascade triplet and quadruplet filters, design using approx. and optim. 102586
causal stable perfect reconstruction two-channel IIR filter banks, design 130105
CDMA demodulator, num. word-length optim. 101859
channel routing, 3-layer HVH, min. crosstalk layer assignment, pseudo-Boolean optim. 70272
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
CMOS analogue cct. routing, contact and via placement algm. *(Chinese)* 101738
CMOS ASIC archit., timing-optimized std. cell logic, wireless/wireline products 102011
CMOS ASICs, shifter design 90861
CMOS cct., simultaneous switching noise, IBIS model *(Chinese)* 92471
CMOS compatible MEMS, charactn., design optim. 81585
CMOS device design, deep sub-micron, for low power analog appls. 127047
CMOS differential cascade voltage switch logic ccts., delay optim./energy estim. 68752
CMOS digital ccts., gate level power optim. using dual-supply voltages 125287
CMOS dual V_T domino logic, noise constrained power optim. 102031
CMOS HF I/O interface ccts., design-for-ESD-reliab. 104113
CMOS high-speed pipeline ADC for W-CDMA appls., design/power optim. 102270
CMOS interconnect model, DOE and multiobjective optim. 104061
CMOS LC VCOs, noise props., inductance selection, graphical optim. method 69225
CMOS low-power digital filter IC via soft DSP 102416
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS LV high-speed fourth-order sigma-delta modulator implement. 79958
CMOS LV triode-MOSFET four-quadrant multiplier, optim. current efficiency 80127
CMOS power-conscious proc. scheduling for real-time embedded systs. design 114775
CMOS scaling, optimum gate oxide thickness, cct.-level perspective 92470
CMOS switch, LC resonator, switched tuning 102359
CMOS technol. develop., 0.35-μm, blanket/pocket anti punchthrough device designs 104091
CMOS ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
CMOS VLSI, max. power dissipation, GA *(Chinese)* 90874
CMOS voltage multiplier using MOS transistors in saturation region 68964
CNN appl. to brain elec. activity anal. in epilepsy 110586
combinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
combinat. cct. testing, power consumption optimisation 79805
combinat. ccts., max. power consumption problem, approx. algms. 102004
combinat. equivalence checking using Boolean satisfiability and BDD 79790
combline filter, CAD and optim., FD-FD GSM algm. 102512
concurrent IC/package/syst. design strategy 100585
conductor-backed CPW hybrid for varactor-tuned phase shifting 102441
constraint-based watermarking for graph partitioning solns. 125362
controlled static power convertors, optimisation proc. 123567
coupled resonators group delay equalizer, design optim. 107682
cryogenic spaceborne CMOS testing and optim. 76812
cryptographic scheme, modular exponentiation on fine-grained FPGA 125461
curvature-compensated BiCMOS bandgap ref. 125233
custom ASIC design methodology with on-demand library generation 125387
cycle time optim., timing driven placement with simultaneous netlist transforms. 101964
D2BLP double dens. bottom leaded SDRAM stack package, develop. 113593
data transm. over noisy channels, optimal orthogonal finite order transmitter/receiver filters design 107538
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
DDS optimisation, CORDIC algm. 125251

circuit optimisation continued
de-coupling 96372
deep submicrometer designs, interconnect-driven design planning/synthesis, layout optim. 68684
deep submicron technol., coupled RC trees, moment matching method 81438
delay constrained ccts., voltage scaling and gate sizing 114672
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
DFE coeff. placement algm. for sparse reverberant channels 107674
digital CMOS ccts., transistor sizing for switching activity reduct. 90826
digital filter, heuristic synthesis, genetic prog. 91082
digital filter design, multimode mean field annealing approach 80085
digital IIR filter design 102393
digital multimedia wireless telecomm., very-high dens. VLSI chips, low-power design 130971
distributed base station amp., lin. optim. 101791
distributed RLC interconnects, anal. of on-chip inductance effects 126963
domino logic ccts., coupling-aware min. delay optim. 102108
domino logic ccts., coupling-aware min. delay optimisation 79829
DSP appls., low-power design tech. 102241
DSP systs., combined word-length optim. and high-level synthesis 90956
dual-threshold voltage assignment with transistor sizing for low power CMOS ccts. 68779
dyn. labeling based FPGA delay optim. algm. *(Chinese)* 125275
dyn. power mgt. tools, integrat. in IC design flow 101946
electronic systs., high-speed/low-power design, cct. optim./models 126952
EM-based design of microwave ccts., neural inverse space mapping optim. algm. 91224
embedded systs., memory hierarchy, energy dissipation anal., DCT 102169
energy efficient storage bandwidth optim. and memory assignment 102178
equalization with widely lin. filtering 130270
essential signature set in logic minimization *(Chinese)* 125277
evanescent-mode bandpass filter, ridged waveguide, inductive strip 102519
evolvable hardware aims to optimize cct. design 68496
EXTIGATE, extended trench isolation gate technol., device optim. 69849
fast IEEE floating-point adders, design 79862
feedforward power amp. with diode lin. for cellular base stations 91251
ferroelec. memory cell, single transistor/two capacitor-type, fab./charactn. 90911
filters for gradient-based motion estim. 118467
filters with min. impulse response moment 102325
finite wordlength FIR digital filters, optimal, design 91110
FIR bit-serial filter, area min. archit. 102385
FIR canonic signed digit Chebyshev filter design 68934
FIR compaction filters, semidefinite prog. design with combined constraints 130102
FIR delay LMS adaptive digital filter, systolic archit. 91084
FIR DFE for wireless data commun., fast optim. 73841
FIR filter, low-power multiplierless archit. synthesis 102410
FIR filter VLSI implement., bit-level optimized carry-save addits. 114874
FIR filters, line spectrum design 119073
FIR model-based adaptive filters, proc.-/meas.-noise covariance estim. 107493
FIR two-channel low-delay filter banks using constrained optim., design 107483
fixed-polarity OR-AND-EXOR expressions and minimization *(English)* 79853
flash memory bandwidth optim., ramped gate prog. tech. 90917
flip chip assembly with reflow encapsulants 113564
flip-flops, design params. estim., reliab., speed and cost 102120
floating-point behavioral synthesis, optim. tech. 79823
floorplan area minimization using Lagrangian relax. 101896
floorplan area optim. problem for VLSI ccts., AWO algm. 70267
fly-back converter power supply redesign optimisation 112650
flyback converter, dedicated sizing tool, automatic symbolic proc. 114603
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
fourth order band-pass ΔΣ-modulator 79634
FPGA optim., VHDL, public-domain Matlab software 102063
FPGA place and route problems, simulated annealing, iter. procs. *(Italian)* 79831
FPGA run-time reconfigurable ccts., optim. algm. 114702
freq. filters, optim. via vertex graphs 80028
freq.-selective filtering using weighted myriad filters with real-valued wts. 130125
freq.-time mixed domain optimal filter for moving obj. extraction 106674
Gaussian RBF network, nonlin. time series modelling 68981
Gekko PowerPC μP, timing convergence, synthesis tools and phys. design 79932
Gilbert downconversion mixer, 2.4 GHz for W-CDMA appl., noise perform. optim. 102712
greedy-GA combined algm. for data transfer binding problems 81489
H_2/H_∞ mixed filtering design in multirate transmultiplexer systs., LMI approach 131025
HBT cct., design optimisation, opt. demodulator 82357
HDI PCB organic laminate substrs., microstructural anal. 113590
heterog. cct. synthesis, evol. graph generation, terminal-colour constraint 79827
HF neg. feedback LNA, noise anal. and design 79569
hierarchical FPGA mapping, perform.-driven multi-level clustering 125441
hierarchical stat. optim. method, constraint generation, Mahalanobis' dist. 68550
high speed IC device perform. improvement using E-tests and SPICE model 79936
high speed logic ccts., timing optim. by modified retiming *(Chinese)* 79510
high speed multilevel staged clock routing *(Chinese)* 90810
high-accuracy digital 5 bit 0.8-2 GHz MMIC RF attenuator for cellular phones 102721
high-dens. electronic packaging, SPICE models, coupled interconnections 89885
high-order SC Δ-Σ modulators, capacitor-area and power-consumption optim. 102291
high-speed PCB design, power and ground planes, simul. and modeling 102812
higher order delta-sigma A/D converter with optimized stable coeffs. 68863
higher-order delta-sigma ADC, optimal design 68874
HiperLAN 5.4 GHz low power CMOS sync. oscillator, design 91328
hybrid field prog. archit., routing struct. 68680
IC interconnect, RC delay metric, perform. optim. 70249
IC interconnect tree optim., hybrid DQP algm. 70258
IC layout, congestion-driven placement algm. based on cell inflation *(English)* 103980
IC packaging design optimisation using 2D/3D EDA environ. 124344
IC power/ground network optim. based on equiv. cct. modeling 126984
IC yield optim. for mature semicond. fabricators 104016
IIR compaction filters, optim. with fixed-angle poles 130103
IIR filters design, WISE method 84723
IIR filters with symmetric impulse response, effect of zeros 130046
IIR recursive filters, pipelining using genetic algm. based approach 91074
IIR stable notch filter design with optimal pole placement 130122

uit optimisation continued
in-place delay constrained power optim. using functional symms. 79689
input space adaptive design, high-level methodology, energy/perform. optim. 125375
integrated power transistor size optim. regarding reliab. constraints 127073
IQ modulators, implement. of automatic digital compensation 125265
joint module selection and retiming with carry-save representation 114737
Ka-band MM-wave three-port transistor drain mixer, optimizing design *(Chinese)* 68653
Kalman finite-horizon robust filter design 107525
latch-up device simul. tool, 2D, for pre-Si develop. phase 81496
lattice WDF, max. sample freq., circulator, Richards struct. 102392
layout-driven hot-carrier degrad. minimization using logic restructuring techs. 125343
LC filter tuning, GA and simulated annealing 114860
lin. analog syst. synthesis, hierarchical perform. optim. 101749
lin. filters under PSD stabilization 118320
lin.-phase FIR filters, optim. using freq. response masking approach 80103
LMS adaptive FIR filters, word-length optim. 107563
logarithmic adder optimal struct. with fanout of two for minimizing area-delay product 90849
logic cct., low-power design optim. 102034
logic emulation syst., net assignment problem, FPLA 68766
low-high-low silicon DDD, optimisation and wideband anal. 70017
low-power continuous-time integrators, dyn. range limits 91032
low-power optim.-based volt. scaling tech. using multiple supply voltages 101987
LTCC-multilayer module design with integrated liq. cooling syst. 124354
lumped element quadrature hybrid, transfer fn. 90647
lumped-element equiv. cct., automatic synthesis using GA 79519
Lur'e systs. with time-delay, master-slave synchroniz. 101722
LUT-based FPGA technol. mapping for power minimization with optimal depth 90870
LV sigma-delta modulators, integrator output swing optimisation 80004
macrocells, constructive procedure for optimising placement 101674
MAMon, hardware/software monitor for high-level SoC verification 79727
MCM component placement, optimal, fuzzy thermal modeling 115233
METRICS, syst. for automatic recording and predict. of design quality metrics 81452
microelectronics 3D design/packaging, EMC-oriented 126934
Microexpert, ES for microwave oscillator design 68645
microstrip cct. design , expanded space mapping design framework, preassigned params. 91231
microstrip coupled-line filter design for WCDMA using EDA package 114949
microwave act. bandpass filters, lin. and noise perform. optim. 69182
microwave cct. design/modeling using 3D EM optim., freq. and geom. parameterization 91227
microwave ccts., two-stage num. synthesis 105876
microwave power amp., cct. optim., EDA tool 102597
microwave transistor perform. optim. using sig.-noise neural network 102613
min. time-bandwidth products for filter design, impulse response duration 80027
mixed-sig. IP blocks, DFM characts. and optimisation 104138
MM wave multi-fns., MMIC design approaches, elec. optim. 125809
MM-wave quasi-opt. oscillator with Gunn diode array, power combiner optim. 80287
MMIC multi-layer integrated inductors anal. with wave concept iter. procedure 102696
MMIC param. ident. using hybrid neural net archit. 91364
MNOS NVM technol., current status/future prospects 90904
Monte Carlo simul. expts., appl. to cct. systs. design 79503
MOS asynchronous FIFO with fights, speed optim. 68742
MOS floating gate neuron cct., low temp. DC charact. 68984
MOS ICs, parametric yield optim. rel. to device mismatch 127066
multi-level logic optim., graph-based alternative wiring scheme 68740
multi-level VSI optim. for MVDC transm. systs. 123625
multi-phase seq. ccts., verification method, combinat. equivalence 68723
multi-value voltage-to-voltage converter for on-chip EEPROM prog. 114747
multiclock selection/synthesis for control data flow graph 125286
multidimensional filter bank design, polynomial methods 130049
multilevel flash EEPROMs, optimized programmed threshold voltages 102123
multilevel inverters optimised space vector switching seqs. 88923
multiplierless FIR filters, systematic design algm. 80105
multiplierless low-delay FIR and IIR wavelet filter banks with SOPOT coeffs. 119066
multiresolution permutation filters based on decision trees 94566
multistage microwave power amps., optim. routine, large sig. S params. 69136
MUX, low-power decomp., sig. transit. propag. 102323
near-perfect-reconstruction IIR QMF banks, design using FIR phase-compensation filters 130104
neg.-feedback amps., freq. compensation 79576
noise-matching networks for opt. receivers, optimum design 79518
non-slicing floorplanning algm. using corner block list topol. represent. 81429
nonlin. analog cct., fault isolation, neural network L_1-norm 101746
nonlin. analog ICs, optimum test stimuli, nonlin. prog., time-domain sensitivities 79539
nonlin. analogue ccts., tolerance, fault diagnosis, neural net based L_1-norm optimisation 114590
nonlin. memory power modelling 79879
nonlin. microwave cct. anal., evol. computation 80242
nonlin. optimal filters, parametric design 118989
nonlin. resistive ccts., charact. curves, dual simplex method 90657
nonvolatile memories, fully qualified analog design flow, CAD tools 79541
on-chip and off-chip interconnect, optimum voltage swing 92437
optimized hybrid power filter and VAr compensator 134334
orthogonal length-3 approx. order preserving prefilters 119043
orthopaedic implant long term monitoring, inductive power supply 122338
oscillator, resonator tap, CNR 79615
pad-oriented multiple-mode ESD protect. struct. and layout optim. in BiCMOS 127069
parallel and distributed VLSI synthesis on workstation network 79721
partial bus-invert coding for power optim. of appl.-specific systs. 68701
partially-depleted SOI CMOS design, high perform., for 0.18 μm technol. generation 70308
PCB decoupling capacitors, optimal placement method 69301
PCB DFM modelling, proc. rule check *(Chinese)* 102811
PCB proc. optimisation by stat. expt. design 102826
PCB/MCM design, perform. driven and shape-based routing algm. *(Chinese)* 102808
PFC boost converter diode recovery optimisation soln. 77994
PHEMT MMIC amp. design, 1-3 GHz, for transmit/receive appls. 102663

circuit optimisation continued
post-layout optim. combining buffer insertion and transistor sizing 125285
power BiCMOS proc., HV device implement., 20 V mixed sig. cct. appl. 127072
power IGBT series assoc., act. clamping cct. optim./integrat. 126787
power-managed syst., stochastic modeling, dyn. mgt. policy 116004
PWM inverter, three-phase, FPGA based-IC design with optimized space vector modulation schemes 68573
pyroelec. IR sens., 3D simul., optimized peripheral cct. *(Korean)* 86533
qtr.-state seq. for floorplan represent., layout optim. appl. 81428
quadratic PWM DC-DC power converters families synthesis optim. 123646
quantization noise compensation by anal. filter bank optimisation 129365
quasi-monolithic technol. for power microwave/mm-wave ICs, static thermal design 69234
RC power bus max. voltage drop in digital VLSI ccts. 79730
reconfigurable ANN with GA training, cct. design *(Chinese)* 102481
recursive bi-sect. timing driven placement using phys. net constraints 125382
recursive weighted median filters with real-valued wts., optim. algm. 94559
redundancy addit. and removal logic optim., generalized reasoning scheme 79794
reson. DC/DC power converters, integrated L-C-T modules limitations 77981
retimed seq. ccts., init. state computation, adaptive algm. 68786
reusable direct digital freq. synthesizers, VHDL-based design/design methodology 125585
RF chip-to-substr. interconnect, wire bond parameterized model 113639
RF feedforward-lin. power amps., digital commun., gradient optim. 79571
RF synthesizers, PLL switching speed and speed-up techs. 90774
ROTOR VLSI proc. optim. 121708
RT-level route-and-place design methodology for interconnect optim. in DSM regime 104045
SAR images, open-loop adaptive filtering for speckle reduction 109242
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
SC Δ-Σ modulators, high order, capacitor-area/power-consumption optim. 90979
SC-type Δ-Σ modulators, single-bit, power consumption optim. 68878
segmented sine wave DACs for freq. synthesizers 79995
self-oscillating mixers, nonlin. design tools 101868
seq. logic optim., redundancy addit. and removal 125423
SFQ cct. optim. 127496
sig. word decomposed filters, optimal filter length, subfilter coeff. wordlength assignment 102378
sinadmeter 96370
small-sig. microwave amps., specified stabil. safety margin, optimum design 69121
SMPS develop. optimisation using SIMPLORER CAE-tool 88895
SMX, OO optim. syst. 101669
SPICE, optimisation methods 101647
SPICE generic optimisation algms. for cct. design 68516
split-current mag. field sensitive resistors, model anal. 131898
SRAM parametric yield enhancement, cct. level device optim., stat. cct. simul. 125486
stat. design space exploration, appl.-specific unit synthesis 125179
stat. optimal morph. operators 118987
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistor sizing 102035
std. cell layout, FAME detailed placement algm. *(English)* 79761
std. cell placement optimisation by candidate sieving 125414
Steiner tree optim. for buffers, blockages and bays, VLSI 104068
STI for CMOS logic technol., mfg. optim. 104097
struct. on-chip interconnection networks, top level wires, modular design 125372
subMM-wave Schottky diode harmonic multiplier, self-matching model 102617
substr. noise in ICs, anal., models and optim. 104047
supercond. digital logic cct., yield optim. 70957
suspen. substr. stripline band-pass filter with optimal redundancy param. 68898
switching power amp. for piezo-actuators, optimised design 123695
switching regulator design using pseudo-coevolutionary genetic algms. 90727
sync. ccts., register and phase requirements, software pipelining techs. 90866
sync. data-path ccts., sig. represent. guided synthesis using carry-save adders 125442
sync. filter topol., delay approx. 91026
syst. design, optimum control theory 100526
T/R module of act. phased array radar, optim. of transmittance phase changes of power amps. 86200
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
tapped delay line DFE, tap spacings optim. 130252
testable data path synthesis, GA 125404
three-phase IM, optimal phase-shifter cct. params. 123470
tight coupling of timing-driven placement and retiming 101962
timing closure satisfaction, delay bound determ. 101981
timing-driven VLSI layout, objective fn. modif. for efficient optimisation 103986
top-down analog design methodology using Matlab and Simulink 101747
toroidal neural proc. design optimized for Xilinx Virtex FPGA devices 114909
ULSI ccts., distributed LRC power grid, core switching noise modelling 92445
varactor-tuned cct., tuning range expansion 79610
vert. CMOS gates, feasibility study 104102
VLSI, optimum design of power and ground topol. subj. to reliab. and noise constraints *(Chinese)* 81487
VLSI, static estim. tech. of power sensitivity in logic ccts. 125436
VLSI cct. gate sizing problem, parallel genetic approach 70284
VLSI ccts., input vector gen. for max. intrinsic decoupling capacit. 104051
VLSI design, cct. delay uncertainty increase by perform. optim. 101982
VLSI design, gate duplication complexity 104060
VLSI design, interconnect sizing and spacing, coupling capacitance 104059
VLSI design, min. delay routing tree 103990
VLSI design, power consumption optim., control loop 102214
VLSI digital cct., RC power bus, max. voltage drop 79732
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optim. 125385
VLSI floorplan, area(number)-bal. hierarchy of staircase channels with min. crossing nets 104067
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
VLSI layout, area optim. of packing represented by seq.-pair 81424
VLSI layout, optimal sub-cct. extract. by min-cut graph 70281
VLSI layout topol. reuse by parametric BSG 81425
VLSI multi-layer routing, constrained via minimization *(Chinese)* 116013
VLSI packet switching fabrics, low-power syst.-level design, perform. specs. 74496
VLSI power/ground network solver, incomplete Cholesky decomp. conjug. gradient *(Chinese)* 92432
VLSI power/perform. optim., fuzzy simulated evol. 104009

circuit optimisation continued
VLSI prog. archits., multimedia kernels, memory mgt. approach 90938
VLSI yield optim. design based on sub-proc.-element level redundancy *(Chinese)* 104023
wafer-level CSP, thermal stress anal. and design optim., FEM simul. 113624
wideband gain block amp., design techs. 68601
wireless SoC design infrastructure and automated chip design flow 114894
Cu interconnect CMP optim., proc. flow tuning 126497
Cu interconnects, air-gap fab. for low intralevel dielec. const. 92148
Cu/low-k interconnect CMOS platform, 0.13 μm, for SoC appls. 127019
GaAs FET analog, RF and microwave ICs, CAD tool 80347
GaAs PHEMT mixer, single bal. topol. and design methodology 125749
InP HBT VHSICs, opt. commun., prediction extraction modelling scheme 104084
Si integrated inductors in 0.18 μm CMOS technol. for MMIC/RFICs 125777
SiGe HBT 40-Gb/s opt. receivers, AGC amp., full-wave rectifier and decision cct. 109070
SiGe HBT for analogue BiCMOS technol. appl., review 92477
Sn-Ag Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Cu Pb-free solders for flip-chip interconnects 100596
solder-drop printing proc. for flip chip, liq. metal droplet spreading/solidif. 80534

circuit oscillations
see also circuit resonance
2nd-order recursive digital filters with saw-tooth nonlin., periodic oscills. 91106
125 W high-press.-mercury lamp full-bridge reson. inverter ballast 89439
AC rot. machine params. determ. for transients simul. 112454
act. RC filter, oscill. test struct. 80038
BIST, oscill. based method for functional testing of smart sens. devices 80124
bistable ccts. coupled via low-pass filter, symm. syst. anal. 101717
capacitive sens., self-oscillatory convertor, thermistor bridge 75462
chaos neural network, conventional neurons, min. constituents *(Japanese)* 68987
Colpitts oscillator, amplit. of oscill., nonlin. syst. theory 101828
compact fluoresc. lamp, electronic ballasts, perform. anal. 134616
DC power supply syst. stabil. simul. anal. 88896
distrib. network electromech. mode params. estim. using freq. meas. 112044
distrib. network transient oscills. from voltage notching *(Japanese)* 133672
DPLL, phase jitter, low-denominator rational reson. 101854
FACTS UPFC controller perform. enhancement using modal anal. 111934
feedback oscillator, nonlin. distributed line 101830
fluoresc. lamp, self-oscillating electronic ballast design, control syst. 134612
grid-connected windmills, electromechanical interact./stabil. modelling 123254
high-loss dielec., LF permitt. meas. setup, loss resist. compens. 97782
Hubei elec. power syst. LF oscill. anal. *(Chinese)* 122885
load modulation for electromechanical oscills. damping 111854
log-domain cct., exponential I-V rel., nonlin. dyn. 90695
magneto-transistor cct., magneto-controlled generation with period-adding seq. and chaos *(Russian)* 79526
nonlin. digital recursive second-order ccts. dyn. under const. external influence *(Russian)* 90696
one-way open coupled double-scroll ccts., spatiotemporal stabil. study 125631
power syst. dyn. stabil. improvement by SVC/PSS coord. 111820
power syst. fault oscill. params. calc. method *(Chinese)* 122884
power syst. inter-area oscills. damping using lin. matrix inequality 111823
power syst. oscill. ident. using DFT algm. *(Korean)* 122888
power syst. oscills. damping, unidirectional alternative power generation plants control 111862
power syst. unstable LF oscill. damping, load models effect 88376
quantised chaotic dyn. in multiplex commun., 1D maps 94304
radiowaves in nonlin. transm. line, chaotic transits. 125208
RC oscillator with distributed params., autoparametric oscills. 90796
RC-distributed oscillator, parametric oscills. excitation 101841
reson. freq. tuning 90795
robust power syst. stabilizer design using heuristic optim. tech. 99301
self-oscillating mixers, nonlin. design tools 101868
static sync. compensator with SMES, dyn. perform. 111856
van der Pol oscillators, fully-interconnected, multimode oscills. 90783

circuit reliability
see also integrated circuit reliability; quality control
Advanced DV-MULTI build-up packaging substr., proc./struct. 124343
arc welding inverter power source of double loop control, const. voltage and large current *(Chinese)* 90719
area array solder joints, reliab. in bending 113577
automotive PBGA assembly, board-level reliab. with SnAg Pb-free/SnPbAg solder interconnects 113572
BGA, ellipt./round solder pads, thermal stress/strain behavior 78672
BGA assembly failures, Ta capacitor induced 113571
BGA solder joint reliab., FEA assess. methodology, prediction accuracy 113580
BGA solder joint voiding, PCB surface pad finish/contamination impact 113712
BGA solder joint voids, effects on thermal fatigue 113570
BGA-style CSP, extremely thin profile 67638
BGA-style CSP, extremely-thin profile, appl. specific develop. 113566
box type SMD film capacitors, reliable solder quality under mech./thermal stress 80447
build-up PWBs, low-CTE base materials 69317
CBGA to FR4 PCB with no underfill thermal mismatch study 113732
ceramic BGA, 1 mm pitch, reliab., design/proc. effects 113569
ceramic column grid array package rework proc., challenges/solns. 113575
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
continuous DC-DC converters, heat and noise control in design *(Spanish)* 101757
coreless PCB transformers, fund. struct./charact. *(Chinese)* 102787
CSP attachment reliab., package constr. 113596
CSP solder attach reliab. optim. 113603
CSP/area array package board level reliab. 113602
CSP/BGA solder joint fatigue life, thermal cycling ramp rate effects 113579
CSP/RF package assemblies, thermal cycling testing 113597
CSPs for portable consumer electronics appls. 113600
direct PCB metalization in competitive environ. 125906
electronic assembly QC, NDT, inspection/X-ray eval. techs. *(German, English)* 115188
electronic packaging solder joint reliab., relative damage stress concept 78678
electronic power supplies reliab., airborne contaminants effects 88841

circuit reliability continued
electronic product design, generalized develop. model, crit. success factors 115120
electronic product stress anal., nested FEM methodology 78720
electronics mfg. proc. improvement, failure anal./closed-loop corrective action 113448
electronics trouble-shooting, expert error 67527
embedded capacitors, RF elec. simul. 69276
field-activated etch proc. for fine pitch PWB manufacture 125901
fine-pitch BGA board-level solder joint reliab. enhancement by package modifs. 124335
FLEX pager FM/IF receiver syst. *(Chinese)* 108652
flip chip/chip scale interconnects, durability anal., nested FEM methodol. 78721
flip-flops, design params. estim., reliab., speed and cost 102120
FluxFill self-fluxing underfill product develop./pager product implement. 113705
HDI modular packaging for space electronics appls. 133234
HDI PCB foil lamination technol. 124369
highly accel. solder joint reliab. test using thermo-mech. deflect. syst. 91451
ionization-based ESD-control techs. for electronics assembly, safety 125902
Ka-band microstrip integrated LO-mixer assembly, projectile sens. appl. *(English)* 69218
LGA/BGA packages, second level reliab. comparison 113581
microwave freq. generation unit, space appls., downconverters/upconverters 98922
mirror-imaged area array assemblies on SMT PCBs, rework proc. develop. 115168
multicommodity reliab. of capacitated-flow network 67670
multilayer backplane board material charactn. using acoustic wave technol. 113591
no-clean PCBs, solder bead elimination 102821
noncontact adhesive dispensing in SMT assembly procs., advantages 115138
Omega wafer level CSP, board level reliab. 113601
OSP accelerated aging, solderability assays via three test methods 115200
packaging design concept eval., appls. of computer-vision techs. 67577
packaging/board warpage charactn., location/type/magnitude importance 124330
pass. components, 0201 size, high-yield assembly proc. charactn. 80501
PBGA on flex substr., board level reliab. 67622
PCB in-cct. test for QA 69314
PCB materials selection, perform. drivers 115127
PCB mfg. quality mgt., AOI technol. impact 113760
PCB solder joint assembly defect level/fault spectrum study 115155
PCB solder joint reliab., thermal expansion mismatch impact 115116
PCBs, microvia technol., reliab. 80482
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
plug-in board, DIN EN 50155 reliab. requirements, rly. appls. *(German)* 78703
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647
power electronics reliab. perform. simul., Monte Carlo method 123628
PQFP arrays, forced convection board level thermal design methodol. 78671
PWB conductive filament growth, airborne radar eval. 115117
PWB mech. loading, global/local reliab. modelling 115185
PWB surface finish proc. develop. for enhanced solder joint strength/reliab. 69316
real-time PCB yield monitoring in mass prod. 102815
redundant syst. with nonrepairable units/common cause failures, SPICE reliab. anal. 124427
reflow solder proc., classic PCB thermal profiling 80505
repairable CSP underfill materials for reliab. enhancement 113598
reworkable underfills for area array packaging encapsulation 67563
SMD solder joints for automotive devices, degrad. behavior at high temp., life predict. *(Japanese)* 89851
SMT adhesives/epoxies/dispensing proc. technol., overview 80500
SMT post-placement/pre-reflow AOI syst. eval./implement. 113736
SMT soldering technol., overview 115194
Sn-Ag-Cu Pb-free solders for BGA appls., reliab./Au embrittlement 67571
solder column interposer ceramic grid array technol. for ACPI appls. 113578
solder fatigue theory, phys. damage mechanism-based failure criterion 79426
sonar preamplifier syst., reliab. and availability 120475
tests scheduling for low power BIST 109424
through-hole reflow using LeadScan Sensing odd-form placement mach. 102825
VOC-free PCB protective coating selection 125908
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second level reliab., comparison 113586
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
Pb-free PCB finish effects on final disk drive assembly proc. 115199
Pb-free packages, board level reliab. assess. 113573
Pb-free proc., thermal effects on SMT components 91484
Pb-free soldered interconnections, board level reliab. 115152
Pb-free soldering of OSP PCBs, wetting patterns *(German, English)* 115190
Pb-free soldering, robust proc. develop. 91466
Pb-free solders, high m.p. impact on PWB reliab. 115150
Sn flat solderable finishes, prod. appl., practical considerations 115180
Sn-Ag(-Cu) Pb-free solder joints, reliab. under mfg. conditions 115151
Sn(-Cu) surface finishes for Pb-free packaging 67617
Sn-Pb solder alloy, fatigue damage accumulation model 115115
SnAg lead-free solders, bulk specimens and flip-chip joints 113643
SnAgCu Pb-free solder flux vehicle selection proc. 115169
SnAgCu lead-free solder, intermetallic reacts. between solder and Ni(P)/Au surface finish, PWBs 115181
SnAgCu lead-free solders, bulk specimens and flip-chip joints 113643
TiNxOy embedded thin-film resistors, build-up CSP, 10 Gbps opt. transmitter/receiver modules 113640

circuit resonance
see also circuit oscillations; ferroresonant circuits
250 W metal halide lamp electronic ballast develop. 134633
bacteria growth monitoring, wireless rem. query reson.-cct. sens. 109723
chaotic electronic ccts., coherence reson. study 102446
CMOS switch, LC resonator, switched tuning 102359
converter nonintegral harmonics from AC network resonating with DC network 134217
CSP/RF package assemblies, thermal cycling testing 113597
DC/DC reson. converter with class DE tuned power oscillator 101839
dielec. loaded waveguides, 2D long transm. line-freq. domain treatment 102504
distrib. network transient oscills. from voltage notching *(Japanese)* 133672
DPLL, phase jitter, low-denominator rational reson. 101854
electronic equipt. with feedback, stabil. anal. 101806
environ. monitoring sens., wireless, pass., reson.-cct., design/appl. 131897
high-speed PCBs, ground/power planes discontinuities effects 69298
IGBT behavior in ZCS commutation, test ccts. 90742
LDMOSFET broadband class E power amp., reactance compensation 101802

it resonance continued
ng-dist. IM driving, overvoltages avoidance 88726
obile handset chassis, antenna efficiency meas., loss mechanisms 119963
V IM drive with integrated DC link choke 134474
scillatory cct., reson. freq. tuning 90795
DP driver, energy recovery sustain cct. design 97734
ower-plane reson. anal. using Haar-wavelet-based MRTD 105819
WB nonlin. reson. and stress anal., boundary condition eval. 91464
C-distributed oscillator, parametric oscills. excitation 101841
ctifier-inverter systs., DC-link harmonic reson. damping 134164
ural power syst. FMR, mechanism and countermeasures *(Chinese)* 111880
eries-parallel reson. converter behaviour, HF matching transformer effects 78034
unt capacitor appls., harmonic reson. pot. assess. 77354
mall-scale indust. power network lab. harmonic reson. simul. 77365
oft-switching PWM convertor with high PF, simul. 112629
piking oscillator with two periodic inputs, reson. phenom. of interspike intervals 125258
upercond. quantum interf. filters, LC-reson. voltage response 70977
hree-phase indust. power syst. hybrid power harmonic filter 89468
yristor series capacitor arc suppression coil studies *(Chinese)* 123065
$_2$-symmetric electronic cct., Takens-Bogdanov bifurcations of periodic orbits and Arnold's tongues 68544
GaAs V-Band MMIC SPDT pass. HEMT switch using impedance transform. networks 80378

uit simulation
see also circuit CAD; logic simulation
3-phase 3-level neutral point clamped boost rectifier, input/output feedback lin. control 134175
3D EM anal. of package influence on IC perform. 69248
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
3D microwave IC, EM simul. 115023
3D tech. visualizations in VLSI design, full-wave interconnect anal., clock distrib. 125363
3D voids simul. in chip metallization structs., reliab. eval. 126429
4-phase 8/6 SRM anal., nonlin. reluctance, SPICE model *(Japanese)* 112485
AC to DC converter, unity IDF correction, modulation strategy 90729
daptive amps., computer simul. *(Russian)* 68618
dvanced static VAr generator, static/dyn. characts. anal. *(Chinese)* 77184
AHDL simulator, event-driven ITA, dyn. partitioning 101645
ir-gap stacked Marchand balun for MMIC, graphical design method 80373
Alpha μP, α-particle induced soft error rates, historical trends 79953
mp. design for 12 GHz MMDS appl. using neural net transistor noise model 69129
nalog ccts., multilevel simul. 68521
nalog ccts. fault approach based on self-organizing feature map neural networks *(Chinese)* 101672
Analog Insydes, symbolic modeling and anal. of analog ICs 90707
nalogue and mixed-sig. ICs, behavioural modeling 114571
nalogue IC SPICE anal., novel MOSFET model implement. 103845
nti-aliasing filter effect on largest Lyapunov exponent calc. 90687
APLAC Design Suite for RFIC mixer design simul. 91372
rea array solder joints, reliab. in bending 113577
ARM CPU core verification 68696
Asia Pacific Conf. on ccts. and systs., Tianjin, China (Dec. 2000) 67378
ATM over ADSL IC, simul. approach for functional verification 108477
AutoSteve, automated automotive elec. design anal. 68519
andgap ref. for BiCMOS VLSI appls., stat. anal. and optim. 125216
behavioral cct. modeling conf., Santa Rosa, CA, USA (2001) 124240
BGA solder joint reliab., FEA assess. methodology, prediction accuracy 113580
bi-directional soft-switching DC-DC power converter studies 88894
BiCMOS CCII, macromodel cct. for simul. 125595
BiCMOS continuous-time filter, digitally prog. 68919
BiCMOS current conveyor, wideband, prog. filter appl. 68920
bipolar log domain filters in std. CMOS proc., SPICE compatible model 80073
bistable ccts. coupled via low-pass filter, symm. syst. anal. 101717
BJT base resist./Early voltage charactn. using dual base transistor test struct. 103783
BJT RF LNA/mixer ICs, spurious free dyn. range perform. anal. 69236
boost converter, PFC, large-sig. av. cct. model *(Chinese)* 90733
boost multi-reson. converters modelling, num. method 112648
boost PFC converter, modeling/simul., av./sampled data models 99744
BSIM, Berkeley short-channel IGFET model for cct. design, CMOS appls. 127061
bus-based prog. SoCs, IP cores, self-test methodology 101920
cascaded delta delta-sigma modulator, noise shaping, random noise proc. 90974
CCII, reduced parasitic resist., bandpass filter appl. 80039
CCM single-phase boost PFC converters, power losses eval. 134226
cellular fuzzy proc., react.-diffusion, computational complexity 102476
charge-transfer amp. for ADC appl., dyn. behavior anal. 90763
Cherenkov flux flow oscillator, long Josephson jn./meander-shaped stripline 69155
chip multiprocessor design 114779
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
class-D audio amps. based on binary sigs. with separated baseband 101781
clock-jitter simul., continuous-time delta-sigma modulators 125573
CLUCGS and CLUCR, matrix soln. methods for general cct. simul. 79508
CMOS accurate LV analog memory-cell with built-in multiplication 80129
CMOS adaptive filter implement. using switched-current tech., FIR transversal cct. 80120
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS all-digital PLLs, digitally controlled oscillator, std. cell library 79631
CMOS analog 2nd generation current conveyors, VLSI design and implement. 102370
CMOS ASICs, shifter design 90861
CMOS clock and data recovery with two-XOR phase-freq. detector cct. 102314
CMOS combinat. ccts., av. power estim., pattern compaction tech. 102110
CMOS combinat. ccts., max. power dissipation simul. *(Chinese)* 102053
CMOS composite transistor for LV low power appls. *(English)* 127029
CMOS current comparator design, fully differential, LV/power, high speed 70304
CMOS current conveyor design 114869
CMOS current-mode multiport SRAM, read and write operations, energy reduction 125482
CMOS current-mode prog. CNN, low-power consumption 68986
CMOS deep-sub-0.25 μm technol., TCAD optim. 116036

circuit simulation continued
CMOS differential cascade voltage switch logic ccts., delay optim./energy estim. 68752
CMOS digital ccts., switching activity eval. using logic timing simul. 68664
CMOS digital ICs for spacecraft appls., radiation effects, case study 133236
CMOS full adders in different design styles with emphasis on low-power topologies 90890
CMOS high-Q act. inductor, IF/RF wireless appls., low power supply voltages 70316
CMOS latches, simulator to study metastability 101937
CMOS lin. OTA design using current addit./subtraction tech. 90767
CMOS logic ccts., leakage current estim., product engng. environ. 102073
CMOS logic power simul., stream synthesis, spectral transforms 79847
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS LV logic ccts., design considerations, simulated behavior 68727
CMOS MPU appls., TCAD stat. design methodology 125555
CMOS multiple-input transconductance amp., prog. analog CNN design 102453
CMOS OTAs, reversed nested Miller compensation with current follower 79584
CMOS pipeline ADC, stochastic nonlin. anal. 125580
CMOS PLL for data/clock recovery without freq. divider, phase detector 79627
CMOS simultaneous switching noise minimization using dual layer power line mutual inductors 127052
CMOS SRAM SOI sense-amp., smart-body-contact technol. *(Chinese)* 102121
CMOS true single-phase adiabatic multiplier, BIST logic, HSPICE simul. 125449
CMOS ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
CMOS unity-gain cell gyrator techs., inverting CCII 68909
CMOS/BiCMOS static latch ccts., design/meta-stable operation considerations 102046
CNN, transconductance/multiple input transconductance amps. based, anal./design *(Polish)* 91160
CNN modified archit. for Turing patterns generation 102451
CNN sampling theorem 102475
combinat. digital CMOS ccts., av. switching activity estim. 101882
combinat. logic blocks, coupling and noise aware delay anal. 68748
complementary pass-transistor logic ccts., fault characterisation 102005
complex nonlin. 3D syst., electrothermal CAD, time-depend. thermal model 90628
concurrent simul. of large networks using various fault models 79717
continuous time filters, wide dyn. range, divide and conquer design tech. 80046
continuous-time OTA-C filters, tuning method using GA 68926
continuous-time third-order ellipt. lowpass filters, high-freq. fully differential CMOS OTA 102358
controlled static power convertors, optimisation proc. 123567
converter nonintegral harmonics from AC network resonating with DC network 134217
cooperative competitive CNN, WTA proc., SPICE simul. 102454
coupled van der Pol oscillators, phase-inversion-waves, refl./transm. 90786
coupling static converter with control loop/nonlin. EM devices 125220
CPU design by formal verification, lab. work of undergraduate students 125295
CSP proc. with reworkable underfills for mobile phone appls. 113708
current steering high-speed DAC, archit. anal./simul. 90984
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
current-mode multifunction filter using CMOS dual output CCIIs/grounded pass. elements 68891
D2BLP double dens. bottom leaded SDRAM stack package, develop. 113593
data-driven dyn. logic/NP-CMOS logic, design comparison 68750
DDR-SDRAM, D-RDRAM and DDR-FCRAM, POPeye simulator 102177
de-coupling 96372
DECT VCO integrated pass. using thin film MCM-D technol. 131263
deep submicron crosstalk simul., freq.-depend. charact. 92456
deep submicron designs, power supply noise estim., vector generation 70287
deep submicron IC design, cct. theory and interconnect anal. 70271
deep submicron SoC interconnects, high-level crosstalk defect simul. 104013
delta-sigma modulator, SSDSIM simulator 102264
delta-sigma modulators, dedicated syst.-level simul. 102305
differential interconnects, charactn. from TDR meas. 125868
differential via holes in PCBs, FASTCAP modelling 91459
digital ccts., timing simul. with BDDs 79693
digital CMOS ccts., crosstalk noise, simul. results 79688
digital CMOS ccts., gate-level simul. using IDDM model 101986
digital CMOS IC interconnect, RLC macromodels 101948
digital high-speed CCD camera, interface design, VHDL *(Chinese)* 97355
distributed interconnect networks, transm. line model based anal./simul. 90651
DRAM, analogue sync. mirror delay with duty cycle-correction scheme 102145
DRO design, EM charactn. for inclusion in electronic simulator *(Spanish)* 102711
DSP-RAM archit. for parallel DSP in memory, implement. 114809
DTCNN, reconfigurable, compact/robust cct. proposal 102452
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
dyn. thermal modelling of semicond. packages, variable angle model basis 78665
EEPROM floating gate cell, charge sheet model 102171
electronic device simul. via character inform. technols. *(Russian)* 101671
ellipt. log-domain ladder filters, high-order low-pass and band-pass filters, HSPICE simul. 80072
EM shaker, transient anal., response surface model 128727
embedded DRAMs, memory cell array opens and shorts, static/dyn. behavior 79876
embedded RF capacitors in low temp. cofired ceramic, modelling/testing 113641
embedded systs., memory hierarchy, energy dissipation anal., DCT 102169
embedded systs., OO modeling and co-simul. 101665
EMC anal. of power electronic converter, state variable approach 68581
EV, IM drive inverter, degrad. regimes, num. simul. *(French)* 134519
FACTS device simul. methods and tools 111999
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
fast wavelet collocation method with nonlin. companding in time domain *(Chinese)* 90634
FASTNR fault simulator for lin./nonlin. DC ccts. 101664
fault simul., parallel, high-perform. 125181
FECTED MM-wave oscillator 91234
ferroelec. capacitor model and nonlin. cct. simul. 116232
ferroelec. capacitor switching response simul., parallel element model 90913
ferroelec. capacitors, HF C-V charact. model 90912
ferroelec. memory cell, single transistor/two capacitor-type, fab./charactn. 90911
ferroelec. thin film capacitors, cct. simul. model, AHDL implement. *(Korean)* 81786
FET nonlin. device models, cct. simulators 69159

circuit simulation continued
FG-MOSFET digitally prog. attenuator, HSPICE simul. 68961
FGMOS analog and digital comparator designs, weighted multiple-input voltages 81517
fine grain Cooled Logic archit. for low-power proc. 68818
first kind switched cct. simul., charge-flux method 90700
flash memory read disturb reliab., appl.-specific usage model 79898
FLEX pager FM/IF receiver syst. *(Chinese)* 108652
flip-chip/CSP components on ceramic substrs., rapid power cycling 67621
flip-flop sens. controlled by slow-rise control pulse, simul. 125416
FLL, FLL, based on CMOS F/V converter, design 91119
floating gate neuron MOS cct. perform. improvement by low temp. operation 70299
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
flyback converter, dedicated sizing tool, automatic symbolic proc. 114603
flyback rectifier, high PF operation, line current shaping controller 134224
FM-CW autonomous cruise control radar MMICs, simul. of noise spectra distortion 86239
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
fourth-order DC/DC PWM power converters, external characts. plotting algm. 112643
FPGA global interconnects, parity-based BIST, design/implement. 114586
FPGA implement. of PWM pattern generators 114736
fractals in ccts. 114584
fully decoupled mixed-mode simul. of electronic ccts., algms. 101681
functional verification for virtual components 68694
fuzzy A/D converter, current-mode approach 102279
GAME, mismatch modeling and simul. in analogue IC design 125214
gap discontinuity in shielded CPW for MM-wave ICs, ANN model 125783
graphics hardware, perform. prediction using software simul. 114585
GTO devices, quasi 2-dimens. model develop. 126695
HALOTIS, high accuracy logic timing simulator with delay models 79694
hearing aid LV CMOS filter, dyn. gate biasing use 122354
hierarchical fault diagnosis of analog and mixed sig. ccts. 103985
high quality analog CMOS and mixed sig. LSI design 81507
high speed dyn. latch comparator with reduced offset using init. switch *(Korean)* 79837
high speed IC device perform. improvement using E-tests and SPICE model 79936
high speed interconnection links, elec. modeling, meas. based 115113
high-bandwidth x86 instruction fetching based on instruction pointer table 90920
high-efficiency modulator for dyn. envelope tracking CDMA RF power amps. 101858
high-power thyristor-type semicond. devices, multi-cell cct. model 126696
high-speed coupled interconnections, multiconductor transm. lines, reduced-order models 81420
high-speed interconnect simul. using MIMO type adaptive LS method 101677
high-speed large interconnect network simul., nonlin. cct. reduct. 90639
high-transparency Josephson jns., self-shunted, delayed pulses 70781
higher order delta-sigma A/D converter with optimized stable coeffs. 68863
hot-carrier reliab. simul. appl. to logic design 101996
HV and power ICs, mixed-mode simul. *(Chinese)* 92480
HV GTO and IGBT, PSPICE cct. simul. 81249
I-V mapping educational cct. simul. approach 78524
IBIS and SPICE based simul. tools, develops. 114582
IC connection design, Maxwell eqns. *(Italian)* 81478
IC design, EM emission modelling, syst. anal. 81436
IC interconnect energy model considering coupling effects 126985
IC interconnect simul., finite difference formulation 92453
IC interconnect trees for electromigration reliab. estim. 92174
IC package perform. design for 10 Gb/s systs. 67616
IC packaging, wafer surface profile impact 67612
IC stress tests, moisture-based failure modelling 126953
ICs, self-heating effects, hot spot/electrothermal coupling methods *(Chinese)* 92434
IF digital filters design, adaptive method 107481
IF sig. high order oversampled sigma-delta modulator, design 68869
IGBT 3-level invert voltage space vector control *(Chinese)* 68577
IGBT gate driver, monolithic, for smart power modules, CMOS 0.8 μm/50 V proc. implement. 81538
in-cct. emulators for std. hardware/software modules modif. *(German)* 114576
injection-locked oscillator, two-port Van der Pol model for simul. 90793
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
Intel Pentium 4 μP, validation 125550
inter- and intra-chip MOSFET perform. vars., test cct. based extract. for analog-design reliab. 104139
interconnect param. var., technol. scaling impact on clock skew & delay 126939
interleaved DC/DC power converters, sig. flow graph nonlin. modelling 123641
interleaved dual boost power converter, modelling and anal. 134245
Java simul., cct. design and anal. 125163
JouleTrack Web-based tool for software energy profiling, μP appls. 125548
Krylov-subspace simul., autonomous RF/microwave ccts., digitally modulated carriers 91222
large digital ccts., multiple supply domains, substr. noise generation, high-level simul. 79687
large on-chip VLSI interconnect grids, power simul., model reduction 92454
large seq. ccts., power estim. approach, consecutive vector blocks 68780
large-scale cct. and semicond. device, harmonic bal. anal. 101642
large-scale nonlin. RC ccts., rigorous event-driven anal. 101689
latch-up device simul. tool, 2D, for pre-Si develop. phase 81496
LC bandpass filter, high-valued pass. element simul. using low-power CCIIs 91036
LC based on-chip VCO, power supply induced jitter modelling 68635
LC oscillator, simulated, multi-input floating-gate MOSFETS 90785
LCC voltage-output reson. converters, state-variable modelling 101772
LDMOSFET, 25 kV ESD proof, with turn-on discharge MOSFET 92367
LGA/BGA packages, second level reliab. comparison 113581
lin. differential-alg. eqns., waveform relax. for periodic responses determ. 101022
lin. pass. elec. ccts. with ideal diodes, event-driven simul. 79537
lossless floating immittance simulator employing only two FTFNs 125607
lossy multiconductor transm. lines, pass. macromodels, multiport distributed interconnects 124365
low-noise wide-band amp. with inductive source 101795
low-power continuous-time integrators, dyn. range limits 91032
LTCC-multilayer module design with integrated liq. cooling syst. 124354
lumped winding model, transformer models for cct. simul. 77911
machine code generation appl., computation time reduction 68520
mag. flux controlled Josephson array oscillators 69156

circuit simulation continued
mag. material metrics, modeling and optim. 127377
MEMS, integrated simulator for coupled domain problems 116072
merged inner-product proc. using modified Booth algm. 68711
MESFET amp., microwave device, electro-thermal simul. 80301
MetaRTL, RTL design abstraction level, ASIC design 79677
MIC, microstrip element, FDTD simul. tool 91379
microelectronic solders, diffusional coarsening modelling 113713
microstrip coupled-line filter design for WCDMA using EDA package 114949
microwave act. nonlin. cct., FETD algm. 102596
microwave and MM-wave ccts., FDTD simul. 80238
microwave bal. power amp., harmonic bal. anal. 125704
microwave cct., neural network model, robust algm. 102598
microwave cct., nonlin. simul., harmonic bal. tech. 102582
microwave cct. modeling/simul., design principles 125689
microwave cct. simul., OO approach 69104
microwave cct. transient anal., comparison of wavelet and time-marching-based techs. 80249
microwave ccts., global-anal. model, lin. and nonlin. lumped elements 102591
microwave combline filters, FEM anal., multiport S-param. data, cct. simulator 91214
microwave filter struct., theory and design, book 78389
microwave power amp., cct. optim., EDA tool 102597
microwave power amp. nonlin. distortion, simul. procedures 80280
microwave simulator, FEM 91230
microwave simulators, educational appls. 89647
mixed A/D networks, PWL simul., waveform relax. approach 90965
mixed control and dataflow systs., modelling in MASCOT 125289
mixed sig. design, ANTRIM software *(Italian)* 80119
mixed-HDL simul. for reduced SoC design complexity 114684
mixed-sig. circuitry, automated top-down design, bottom-up design verification 125622
mixed-sig. functional level simul. framework based on SystemC, SoC appls. 114891
mixed-sig. IP blocks, DFM characts. and optimisation 104138
mixed-sig. modeling with AleC++, HDL features 68499
mixed-sig. simulator based on VHDL-AMS *(Chinese)* 114578
mixed-technol. VLSI systs. incl. MEMS and MOEMS, CAD issues 70322
mixer operation modes, nonlin. distortions anal. 105789
MM-wave FSS, high perform. micromachined 83718
Monte Carlo simul. expts., appl. to cct. systs. design 79503
MOSFET, direct tunnelling model, cct. simul. 103740
MOSFET, RSCE modeling for cct. simul. 126730
MOSFET, ultra-short channel, quantum effects 103867
MOSFET RF power amps., multi-harmonic tuning behaviour 102644
MOSGRAD, CAD tool for simulating effects of systematic/random channel param. vars. 81518
multi-coupling core struct. modeling 79552
multi-input DC/DC power converter using flux additivity approach 134191
multi-level pass. order reduction of interconnect networks 92460
multi-modulus divider, low-power, in 0.6 μm digital CMOS technol. 68690
multi-stage power amp. module, large-sig. simul. 90772
multiconductor interconnects, freq.-depend. losses, transm.-line models 126969
multilayer thin film MCM-D, CPW feedthroughs, design/charactn. 80540
multisplitting waveform relax. for lin. integral-diff.-alg. eqns. in cct. simul. 67966
multistage amps., coupling capacitor non-ideality effects 125238
multivariate adaptive sampling, comput. EM anal. minimis., interpolation 102552
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
nanoelectronic complementary bipolar ccts., single-lithog. proc., num. simul. 70323
network transfer fns. and sensitivities calc., modified node voltage method 79506
next generation mixed sig. ICs, ADCs, cct. specific failure modes, test 80117
NMOS inversion layers, direct tunneling, phys. compact model 126233
NMOSFET matching charact. for 0.18 μm CMOS technol., substr. voltage/oxide thickness 103857
noise simul. of modulated nonlin. ccts. 101694
noninvasive techs. for syllabic companding in sig. proc. 80058
nonlin. analog cct., fault isolation, neural network L_1-norm 101746
nonlin. cct., distributed elements, steady state anal., finite difference method 68535
nonlin. cct., steady-state anal., wavelet bal. method *(Chinese)* 101688
nonlin. ccts. anal., Volterra series/piecewise const. interpolation 90668
nonlin. ccts. simul., waveform relax., convergence theorem 68536
nonlin. ccts. with saturating ferromag. coils, anal. 101702
nonlin. dyn. analog ccts., symbolic behavioral model generation, term ordering 90708
nonlin. dyn. ccts., time-domain simul., num. errors, energy content 68526
nonlin. large scale RC ccts. anal., event-driven approach 101695
nonlin. memory power modelling 79879
nonlin. microwave cct. anal., evol. computation 80242
nonlin. microwave cct. simul. at behavioral level, accuracy 74593
nonlin. microwave ccts., simul. in SPICE based on S-params. 69164
nonlin. resistive cct. anal., homotopy-based simul. 68529
nonuniform multiconductor transm. lines, time-domain simul., nonzero init. conditions 101687
nonuniform/conformal FDTD meshes, supraconvergence effects, microwave cct. simul. 91221
NORA dyn. CMOS ccts., clock-race conditions investig. 114732
Omega wafer level CSP, board level reliab. 113601
on-chip inductance extraction via windowing for simul. efficiency 79692
on-wafer 1/f noise meas./charactn. syst., robust 109464
open ended dyn. ramping simul. of multi-discipline systs. 101675
opt. waveguide taps on silicon CMOS ccts. 93266
oscillator time- and freq.-domain measures, cct.-level params. 68633
oscillators, behavioural simul. of phase noise and jitter 101847
OTA-based act.-c filters, simul. & implement. 102338
OTA-based sinusoidal oscillators with fully uncoupled control of oscill. freq./condition *(English)* 125257
OTA-C band pass filter, noise/dyn. range 102343
package solder joint reliab. testing, computer simul. 78661
packet-based DRAM pre-emphasis driver cct. *(Korean)* 114755
pair-MOSFET OTA, low power supply voltage, SPICE simul., low-pass filter 102342
parallel dyn. load balancing for adaptive computing in VLSI device simul. 81175
parallel loaded DC/DC reson. converter with power and control cct. 68571
parallel-plate environ., buried and through vias, phys.-based CAD models 124366

uit simulation continued
parametric timing yield estim. from static timing anal., robust design for-quality 81469
PARDISO, semicond. device simul., serial and parallel sparse lin. solver 126622
partial implement. in VLSI CAD, equivalence checking 125350
partially depleted SOI CMOS technol., device design/modeling and cct. perspective 70309
partially-depleted SOI CMOS SRAM, gate-to-body tunneling current effects 127042
pass. filter design, nonlin. inductance perform. estim. 91019
pass. matrix polymer LED displays, transient response, cct. simul. anal. 128005
pass. planar components, EM-based multidimens. parameterised models 102551
pass-transistor adiabatic logic adder, low-noise/low-power design 68751
PCB, simul. for optimal placement of decoupling capacitors 91457
PCB manufacture, high complexity, quality/test modeling role 115175
PCB perturb. modelling using FEM 69313
PCB syst. design, hierarchical methods 125881
periodically switched nonlin. ccts., distortion anal., time-varying Volterra series 79522
PHEMT MMIC amp. design, 1-3 GHz, for transmit/receive appls. 102663
PHEMT U-NII LNA, EM simul. 68599
pipeline ADC, behavioral model, MATLAB and SIMULINK appl. 68858
pipeline ADC with radix<2 archit. 68867
planar cct. simul., wave concept iter. procedure 114960
planar ccts., arbitrarily shaped, wavelet-based simul. 125695
polysilicon nonlin. resistor modeling for analog cct. design 102761
polysilicon resistors, analog CMOS appls., LF noise current 68555
portable high-speed clock generator, full pull-in range, HDL 91001
power converters for switched reluctance machine systs., simul. package 77857
power diode, phys.-based compact electrothermal model, cct. simul. 92329
power electronic ccts., simul. method sensitivity 101760
power electronics reliab. perform. simul., Monte Carlo method 123628
power semicond. device modelling for power convertor transient simul. 112634
probabilistic event propag. for fast stat. timing anal. of VLSI 125370
proc.-compensated MOS current ref. generation without voltage ref., sub-1 V 125230
prog. transconductance amp. switched current ccts. 101777
PROPHET, placement-depend. full chip thermal simul., functional blocks 126947
PTC thermistor, large-sig. simul. model 103738
PV panel equiv. cct., fuzzy modeling using MATLAB 112407
PV syst., HF link soft switching converter, space vector modulation *(Japanese)* 112432
PWM DC/DC power converters, discontinuous cond. mode operation model 88959
PWM VSI-fed AC motor drives, dead-time behavior simul. 123895
QMF banks with low delay, efficient design considerations 107564
qualitat. modelling of lin. networks in engng. appls. 68704
quasi-2D phys. PHEMT model for two-tone time-domain IMD simuls. 80314
quasi-monolithic technol. for power microwave/mm-wave ICs, static thermal design 69234
quasi-opt. amp., mode converter, 3D EM simul. 90773
quasiresonant soft-switching PWM VSI for induction heating appls. 123638
RC chaos generator design using current conveyors 101829
reconfigurable ANN with GA training, cct. design *(Chinese)* 102481
redundant syst. with nonrepairable units/common cause failures, SPICE reliab. anal. 124427
relax.-based transient anal., matrix splitting, cct. simul. 79504
repeater insertion in tree struct. inductive interconnect 103987
resistive cct. simul. based edge enhancement for image segmentation 106446
reson. oscillators, time domain method for computing phase noise 101848
reson. tunnel diode, nonlin. elec. model 103752
RF amps. with memory effects, IMD simul. 114632
RF cct., steady-state anal., SPICE Krylov subspace method 101670
RF cct. CAD, high-level simul. 79500
RF cct.-level simul. algms., num. simul. strategies 102594
RF chip-to-substr. interconnect, wire bond parameterized model 113639
RF CMOS VCO, tuning behaviour study using cct. modeling tech. 115017
RF design, pop. meas., stat. CAD model 101668
RF quadrature oscillator archit., very low phase noise 90781
RF synthesizers, PLL switching speed and speed-up techs. 90774
RF-CMOS, scaling impact on analog perform. 91377
RF/microwave mixers, artificial freq. mapping techs. for multi-tone simul. 80316
RLCG interconnects, pass. model order reduction, moment components method 92458
rly. traction PWM voltage inverters, dead time effect simul. 123953
RT-level fault simul. based on symbolic propag., VLSI ccts. 101922
RTD containing ccts., SPICE simul. 101644
RTL VHDL simul., synthesizable, fast cycle-based approach 68514
S/390 µP chip, RLC coupled noise eval. 102254
safety crit. microelectronic ccts. perform., EMC 81422
SAPWIN, symbolic simulator, elec. engng. education 78521
SC Δ-Σ modulators, high order, capacitor-area/power-consumption optim. 90979
SC FIR filter structs., comparison based on CMOS realization and PSPICE simul. 80063
SC image rejection filter for complex IF receivers 68917
SC S/H cct. for LF appl., low power dissipation 114904
self-lift DC-DC power converters, voltage lift tech. 99821
semicond. packages, thermal modelling 113696
sens. conditioning cct. simul. *(Chinese)* 109466
series reson. DC-DC converter, HV IGBT eval. 88931
short-channel MOS transistor ccts., DC solns., nth power law model 70317
short-channel MOSFETs modelling for HF cct. simul. 103884
sigma-delta decimation filter for pacemaker appl., low power implement. 114876
sigma-delta modulators, CAA techs. 102292
simul. conf., Seattle, WA, USA (2001) 78452
simultaneous switching noise in high-speed chip package, IBIS model *(Chinese)* 92450
single ended pass-transistor logic, comparison with CMOS/CPL 101945
single-chip inverter-fed IM drive concepts 134470
single-phase inverter discontinuous/continuous PWM schemes investig. 123651
single-resist.-controlled oscillator using pos. four-terminal floating nullor 68642
SISPAD '00, semicond. procs. and devices simul. conf., Seattle, WA, USA (Sept. 2000) 67374
smart-power ICs, parasitic minority carrier injection, substr. pot. shift, simul. 81535
SMPS conducted EMI, simul. and anal. *(Korean)* 123585
SMPS designs verification using SPICE models 123579
SMPS develop. optimisation using SIMPLORER CAE-tool 88895
SMX, OO optim. syst. 101669

circuit simulation continued
SoC design for verification methodology, functional verification at blockto syst. level 79726
SoC device modelling for virtual test using VHDL 80115
SoC syst. level archit. exploration using SpecC methodology 101961
SOI CMOS, self-heating free param. extract./cct. simul. 104140
SOI power MOSFET, low on-resist., dyn. threshold concept, DC-DC converter 126841
solar energy-elec. sig. conversion modelling 104957
Sp2V, post-layout spice simul. accel. using Verilog gate-level modeling 114583
sparse matrices, methods for ordering in cct. simul. 101676
SPICE, optimisation methods 101647
SPICE simul., freq. warping/chaotic behaviour generation 90630
SPICE simulators, benchmark tests *(Slovenian)* 114569
Spice-like analog simulator extension with time-domain full-wave field solver 90632
spiral inductors, low cost MCM-D substrs., design options 115229
SRAM parametric yield enhancement, cct. level device optim., stat. cct. simul. 125486
ST, PERL package for LSI simul. and test environ. 101975
state-space/convolution-based transient simulator for behavioral modeling of nonlin. amp. 79515
strongly nonlin. ccts., steady-state time domain simul. 90655
sub-70 nm dyn. domino MOS ccts., anal. techs. and scaling trends 125455
supercond. power cable, EM behaviour 77402
superheterodyne FM-IF receiver for FSK sigs., anal. *(Chinese)* 108516
suspen. substr. stripline filter design with hybrid EM simul. tools 69043
SVC, control/dyn. anal. using three level inverter topol. 78116
switch-mode power converters, large-sig. time-domain simul. 134157
switched-current S/H cct. for LF appl., 0.6 µm, simul. & perform. 80133
switching converter harmonic spikes suppression, dithered sigma-DM 134214
switching power ccts., simul. model 90722
syllabic-companding log domain filters, exponential and translational mapping approach 91033
symbolic Elmore anal. and cct. simul. for logic-stage delays computation 125355
symmetric band Lanczos proc. based on coupled recurrences 101030
syst.-level perform. anal. for designing on-chip commun. archits. 70275
syst.-on-a-chip design methodology/products using flexible interconnect archit. approach 70273
TDR instrumentation for ensuring sig. integrity in µP motherboards and memory 69307
telecom frontends time-domain simul., exponential sig. model 84659
temp.-compensated voltage ref., temp. coeff. improvement 101767
TFT-LCD panel, timing meas. & simul., pixel macro models 97738
thick film integrated LC filters, design, fab. & test 114862
three-phase line-interactive UPS syst. implement. 134221
three-phase three-level NPC rectifier, adaptive nonlin. control 134174
time-domain cct. simul., sensitivity anal. 101646
time-variant topol. ccts., constraint eqns. formulation 90701
timing modelling in HDL, fund. principles 70234
top-down analog design methodology using Matlab and Simulink 101747
toroidal ferromag. core hysteresis at transient excitation 102791
translinear dyn. ccts., generalized class 101683
tree-struct. carry lookahead adder, 1.25 GHz, 32-bit 102021
UA-FWLIS full-wave layered-interconnect simulator for react. anal. in stripline ccts. 91375
ULSI ccts., distributed LRC power grid, core switching noise modelling 92445
ULSI high-speed serial commun. with error correction using 0.25 µm CMOS technol. 104112
unified simulator for analog/digital ccts. 125164
VDSM IC, full-chip reliab. simul. 126999
very deep submicron CMOS, global interconnects, current sens. techs. 92466
VHDL interconnections analog macromodels, timing behavior, event-driven simulators 101883
VHDL simulator accel. by embedding syst.-cell library *(Chinese)* 104025
VHDL-AMS simul. for batt. chargers 90734
VHDL-based seq. propagated concurrent fault simul. method 79752
VHDL-SPICE mixed-sig. ccts., distributed event-driven simul. 125625
VirtexDS. Virtex device simulator 90839
visual pattern proc., CMOS technol., artificial retina neural net 73276
VITAL, VHDL ASIC libraries, ASIC modeling spec. 127009
VITAL VHDL gate level std., cycle-based simul. 125405
VLSI ccts. designs, conservative cct. simul. on multiprocessor machines 79769
VLSI design, high-speed interconnects, num. simul. 81482
VLSI distributed interconnects simul., freq. depend. params., Krylov-space techs. 92452
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optim. 125385
VLSI interconnects and electronic packages, elec. modeling and simul. 81484
VLSI large-scale power grid anal. based on preconditioned Krylov-subspace iter. methods 126960
VLSI on-chip interconnect modelling, full-wave PEEC time-domain method 81475
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
VLSI test generation for maximizing ground bounce for internal circuitry with reconvergent fan-outs 101935
VLSI time-domain interconnect models, MIMO type selective orthogonal least-sq. method 124367
VLSI transm. line pass. modeling, differential quadrature method 81437
wavelet coder/decoder, FPGA implement. 68754
WDF nonlin. elec. networks, pass. Runge-Kutta simul. methods 91100
welding SMPS, mag. component design integration in SIMPLORER 78043
worst-case IC interconnect delay noise, driver modeling and alignment 126987
WWW based analog cct. CAD tool, design space interactive exploration 79547
X-band MMIC up-converter, CAD-simul. 91381
4H-SiC power diodes, electro-thermal compact cct.-oriented model 126647
Al lines, via/polygranular cluster electromigration-induced stress interact. 92177
Al via-void generation mechanism for Gbit-scale DRAM, anal. 79900
Cu interconnections, microstructural anal. using ps US 92170
Cu interconnects, sub-0.1 µm, fab./perform. limits 92168
Cu/low-k interconnects, deep-sub-µm, impact of vias on thermal charact. 126488
GaAs MESFET amp., large-sig. behavior 102726
GaAs MESFET common-source/drain/gate amps., RF large sig. perform. comparison 91287
GaAs MESFET-like oscillator perform., num. study 125741
GaAs direct digital mm-wave receiver MMICs, six-port 96404
GaAs phys. FET model for power amp. IMD simul. 91252
InP RTD/HFET MOBILE depth-2 full-adder cct. 114708
Si MMIC LNA, substr. resist., EM simul. 91380
Si MOSFETs, anal. large-sig. model for nonlin. cct. simul. 69134

circuit simulation continued
Si bipolar monolithic RF bal. down conversion mixers, noise anal. 69216
a-Si:H pass. pixel sens. for med. imaging, VHDL-AMS modeling/simul. 109719

circuit stability
see also circuit bistability
2D digital filter, stabil. testing, immittance-type tabular test 95679
2D digital filter stabil., Fornasini-Marchesini second model, overflow nonlin. 68935
2nd-order recursive digital filters with saw-tooth nonlin., periodic oscills. 91106
3D recursive digital filter, 3-variable Very Strictly Hurwitz Polynomial 80093
60 V NMOS/PMOS transistors for multi-voltage syst. integrat. 127077
H_∞ robust filtering for uncertain discrete-time state-delayed systs. 95697
adaptive feedforward lin. for RF amps., DSP archit. 90751
adaptive sigma-delta modulator, stabil. and perform. anal. 68871
ADC effective resoln., metrological charactn., IEEE std. 90978
anti-aliasing filter effect on largest Lyapunov exponent calc. 90687
arc welding inverter power source of double loop control, const. voltage and large current *(Chinese)* 90719
bipolar low-power operational transresistance amp. based on CCI+ 101799
bipolar transistor, biasing ccts. 68507
broadband MMIC power amps. with compact flat gain PHEMT cells, 20-30 GHz 91385
causal stable IIR filter banks with powers-of-two coeffs., design 119065
causal stable perfect reconstruction two-channel IIR filter banks, design 130105
chopper stabilization 80135
clock generator using factorial DLL for video appls. 114853
clocked FIFO in asynchronous syst. appls., metastability perform. 102170
CMOS ccts., mutual compensation of mobility/threshold voltage temp. effects 92465
CMOS continuous-time lin. phase filter with auto. tuning syst. 80076
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol. 127020
CMOS IF variable gain amp., lin. controlled gain range, temp. stabil. 125245
CMOS latches, simulator to study metastability 101937
CMOS latches with three stable operating points, open loop anal. 79840
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS phase-locked freq. synthesizers, stabilization tech., 2.4-GHz appl. 125816
CMOS regulator, low dropout, 60 μA quiesc. current/250 mA max. 81502
CMOS transconductor g_m-C filter, cct. stabilization 80053
comparator instabil. removal with hysteresis, pos. feedback 68972
complex coeff. BPF synthesis based on real coeff. BPF 80026
coupled arrays of oscillators, sync. stabil., universal probe 90682
coupled BVP neurons with external impulsive forces, bifurcation and chaos 90685
coupled PLL, sync. and pattern form. selectivity 125267
D-type flip-flop cct., eval. of metastabil. for random no. gen. 90869
DC power supply syst. stabil. simul. anal. 88896
DC-DC converter using load-current feedforward control, transient response 88986
DPLL, advances and refinements 68654
ECG amp., combined driven right leg/guarding ccts., stabil. conditions 110591
electronic equipt. with feedback, stabil. anal. 101806
embedded PLLs, lock/jitter/stabil. verification/characterisation 114664
embedded PLLs, verification tests 79626
fluoresc. lamp electronic ballast with no series pass. elements 89436
freq. triplers, stabil. ensuring design procedure 80367
Grobner bases for multidimensional systs. problem solving 130114
high stabil. quartz cryst. oscillators *(German)* 114648
higher order delta-sigma A/D converter with optimized stable coeffs. 68863
higher-order delta-sigma ADC, optimal design 68874
IIR 2D digital filters, stable design using seq. semidefinite prog. 91063
IIR filters design, WISE method 84723
IIR recursive filters, pipelining using genetic algm. based approach 91074
IIR stable notch filter design with optimal pole placement 130122
IIR uniform DFT filter banks, stable, causal, perfect reconstruction, design 102382
independent binary rate multiplier patterns gen. with V/F conversion cct. 68647
Kalman-Yakubovich-Popov lemma for stabilizable systs. 90623
large analog/RF ccts., steady-state stabil. anal. algm. 79516
large nonlin. microwave ccts., Krylov-subspace tech. for global stabil. anal. 80248
lin. filters under PSD stabilization, optim. 118320
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl. 125602
lin. two-port cct., stabil. circle, geom. params. 68522
long Josephson jn., soliton oscillator clock, jitter meas. 70889
low-pass sigma-delta modulator, stabil. model 102261
Mallows' recursive filter class 130127
microstrip resonator, neg. resist., act. bandpass filter 102539
microwave cct. simul., stabil. characts. of ABC 114935
microwave oscillators, cryogenic resonators for freq. fluct. meas. 79617
microwave sub-harmonic injection-locked bal. oscillator-doubler 91281
microwave synthesizers, nonlin. dyn., stabil., phase-noise simul. 125716
multidimensional systs. stabilizability and stabilization, constructive approach 130112
multiple-feedback delta-sigma modulators with leakage, stabil. anal. 68860
multirate-cascade sigma-delta modulators, high speed low power config. 79976
multistage amp. stabil., spurious sig. cancellation 101780
multitransistor MMIC ccts., MM-wave amps., stabil. anal. 125807
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
neural nets, adaptive, nonlin., with delays, anal. 114911
neuromorphic network, current-mode cct., CNN model 91144
nonlin. ccts., equilib. point global asymptotic stabil. anal. *(Chinese)* 90669
nonlin. dyn. ccts. with MOS transistors, global and local stabil. 101700
nonlin. pulse-phase freq. tracking syst. with second-order filter, model 119039
NOR-type flash memory cells, data retention failure 79893
one-way open coupled double-scroll ccts., spatial instabil. 90681
one-way open coupled double-scroll ccts., spatiotemporal stabil. study 125631
opt. rotary encoders, CMOS front-end cct. 75397
optimal curvature-compensated BiCMOS bandgap ref. 125233
oscillator, lin. open-loop S-params. 79611
oscillator CAD, Colpitts, Clapp and Class E, Osciladores 68641
oversampling sigma-delta modulator stabilized by two local nonlin. feedback loop techs. 80005
parallel bridge rectifier feed syst., current feedback algm. *(Chinese)* 90714
parallel dc-to-dc converter with av. current-balancing controllers, static and dyn. anal. 68566

circuit stability continued
parametric filter of sig. const. component, synthesis and anal. 80040
partially-depleted SOI CMOS SRAM, gate-to-body tunneling current effects 127042
period-doubling bifurcation, quasi-anal. method 90688
pseudomorphic HFET MM-wave monolithic power amp. for mobile broadband systs. 80325
pulse-coupled neural net, chaotic spiking oscillators 102473
PWM ZVT boost converter, dyn. model, large-sig. anal. 99832
quartz cryst. oscillator, low power design, PSPICE 81741
radio engng. network fns., poles and zeros calc. accuracy 125193
RC oscillator, amplit. stabil., CMOS op amp *(German)* 90794
relax. oscillator with relay-hysteresis, robustness 68632
robust min. variance filter design, new approaches 130119
S-band ultra LNA, series drain resistor load/lower reson. matching stubs *(Japanese)* 91302
second-order adaptive IIR notch filter, constrained poles/zeros, plain gradient algm. 130090
short term oscillator freq. stabil. as fn. of phase noise distrib. 114964
sigma-delta modulators, nonlin. stabilization techs. 102262
SLOTFETs, self-aligned fully depleted SOI CMOS devices, opt. lithog. 81523
small-sig. microwave amps., specified stabil. safety margin, optimum design 69121
SoC designs, thermal mgt. syst. and prototyping 70262
solid-state microwave devices in nonlin. mode, S params. calc. 102652
standalone/parallel DC-DC power converters, nonlin. stabil./dyn. anal. 88900
stochastic first-order filter, universal fig. of merit 91041
successive approx. ADC, metastability errors influ. on SNR 102267
synchronized oscillators, nonlin. dyn., noise effects 114655
tunable act. microwave filters having multilayer struct. using LTCC 102528
two-port scatt.-param. stabil. criterium, single stabil. param. 80231
UHF bandpass amps., stabil./unidirectionality 101805
variable recursive digital filters, stabil., multi-dimens. polynomials 68946
VCXO, high precision, phase noise meas. using PLL-type freq. multiplier 114660
VLSI delay and crosstalk estim., lumped and distributed coupled RC trees, moment computation 81485
voltage-controlled SAW oscillators, low phase noise, digital commun. appls. 80272
weak-inversion log-domain filters, operating point elimination tech. 80075
wire rope, NDT, integrator cct. *(Chinese)* 102443
GaAs PHEMT mixer, single bal. topol. and design methodology 125749
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
SiGe HBT for analogue BiCMOS technol. appl., review 92477
a-Si technol., digital cct. stabil. 114859

circuit switching
all-opt. networking, literature survey 130467
ATM network design using GA 85431
automatically switched transport networks, generalized MPLS-based distributed control 107915
bandwidth-limited cellular systs., dyn. freq. hopping 96571
Bluetooth wireless ad-hoc network, asynchronous data traffic perform. 119899
cable operators and cct.-switched telephony 74149
cable operators and telephony 74150
commun. networks, routing 119414
commun. networks convergence to multiservice systs. *(German)* 85128
computer networks and routing models *(Slovenian)* 74300
DS-CDMA, wireless packet transm., variable proc. gain control 84914
dyn. multicast connections, blocking 84833
General Packet Radio Service, perform. anal. 74773
Internet, photonic networking technols. 130765
IP over WDM networks, switching archit. 131562
IP VoD over dyn. STM, QoS *(English, Spanish)* 131771
k-station placement problem 95791
least loaded path routing in cct.-switched networks 85087
Mixed Power Control with Directed Assignment for interf. reduction in channelized wireless systs. 85644
mobile multimedia telephony, terminal requirements and call control 108414
multi-port multi-dimens. torus networks, cct.-switched broadcasting 130206
multibeam satellite commun., CDMA and switching 109006
nonblocking Clos network, lower bounds 84850
opt. networks routing and switching, hybrid vs. router-only solns. comparison 96753
photonic multiprotocol label switching 109114
pipelined cct. switching in hypercubes, perform. model 119123
Singapore, W-CDMA field trial 107862
TCP switching, exposing ccts. to IP 130356
TDMA hybrid switched integrated voice/data mobile commun., traffic policy 85711
voice networks, fuzzy logic-based diagnosis of traffic anoms. 119467
WAP archit., protocols and content formats *(German)* 119288
WDM networks with grooming capabilities, capacity fairness 120241
WDM opt. networks with grooming capabilities, perform. anal. 96751
WDM switchless network using arrayed-waveguide grating 96843
WDM wavelength routed all-opt. networks, lightpath setup time 86029
wireless multimedia traffic, distributed dyn. channel and packet assignment 96459
Er-doped fiber amps., WDM networks, power spread histograms 96721

circuit synthesis *see network synthesis*

circuit testing
see also circuit reliability; integrated circuit testing; logic testing; printed circuit testing
2D digital filter, stabil. testing, immittance-type tabular test 95679
act. RC filter, oscill. test struct. 80038
ADC, dyn. testing, freq. domain design 102265
ADCs, test freqs. select. for two-tone phase plane anal. 114831
analog cct. internal noise calc./meas. for noise effects reduction 132150
analog ccts., multiple fault diagnosis by locating ambiguity groups of test eqn. 101741
analog ccts. with tolerances, fault diagnosis using ANNs 68554
analog dyn. syst. testing, integral sensivity 101730
ANN appl. to fault diagnosis in analog ccts. with tolerances 68551
arbitrary waveform generators, eqns.-based waveform creation 132091
block-level cct., fault diagnosis, neural network *(Chinese)* 114670
digital feedforward neural net at-speed test method 102463
digital systs., hybrid BIST, test cost calc. 125328
DSP syst., coverage-directed generation of syst.-level test cases for validation 101930
electronics quality diagnostics using I-V charact. nonlin. 67528

cuit testing continued
MCM substr., embedded pass. filter, test method 113720
microstrip IMPATT oscillator, design, develop. and testing 68637
microwave filter, automatic test and tuning syst. 102538
multicycle ccts., self-dual self-testing, props. 79720
pass. electronic components, reliable in-cct. eval. 80413
RF power amp., memory effects, IMD meas. 101797
scheduling for low power BIST 109424
UHF filters automatic computer-controlled tuning syst. 125592
verification tool for complex IC design 101928
Ta chip capacitors, breakdown voltage, cct. resist. impact 115069

cuit theory
see also distributed parameter networks; filters; lumped parameter networks; network analysis; network parameters; network synthesis; network topology; time-varying networks
8-way high power divider/combiner design in waveguide and planar types 69052
axiomatic foundations 90618
ccts. and systs., conf., Karuizawa, Japan (April 2000) 67370
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
computational electromagnetism, field and cct. theory 128637
DC cct. theory, problem solving, ES 101648
deep submicron IC design, cct. theory and interconnect anal. 70271
Gaussian superlattices, band struct. estim. by applying image params. in cct. theory 69691
neurofuzzy networks 102474
nonlin. normal conductor-insulator random network, crossover exponents *(Chinese)* 101704
pulsed induction accelerator EM launcher, cct. theory-based model 72206
random RC networks, 1/f noise, effective network dielec. loss 68498
single electron tunnel jn. based cct., energy conservation 79544
slot-coupled microstrip antenna, theoretical anal. 72518
smart mol. based ccts./systs. operating in quantum-mech. regime 69339
syst. theory, conf., Athens, OH, USA (Mar. 2001) 78472
tie-set graph theory and appl. to info. network mgt. 113910
time delay ccts., noise generation theory 114565
vector evaluated GA-ICT for optimum design of wire grid model antenna 83726

cuit topology *see network topology*

cuit tuning
360-degree lin. analog phase shifter design using tunable combline filters 80245
act. filter, notch freq. adjustable using uniformly distrib. RC line 68928
adaptive radar receivers, tunable recursive act. MMIC filters, intermodulation props. 125802
analogue LC filter tuning, multiobjective genetic algm. approach 91009
anti-blocker struct. MOSFET-C filter for direct conversion receiver 102371
BiCMOS quadrature multi-phase LC oscillators, phase noise perform., quality factor 125821
bipolar transistors, HF biquadratic cct. *(Japanese)* 91047
bistable meas. devices, noise tuning, neuro-fuzzy approach 120649
C-band push-pull power amp. integrated with quasi-Yagi antenna 80259
CCII-MOSFET continuous-time current filter synthesis 102350
Cherenkov flux flow oscillator, long Josephson jn./meander-shaped stripline 69155
class-E power amp., electronic tuning 101788
CMOS 2.5 GHz complementary -G_M VCO using PMOS varactors, design 91327
CMOS attenuator, lin.-control wideband device 102327
CMOS bandpass amp., notch filter, wireless receiver 90753
CMOS bandpass continuous-time filter, freq. and Q-factor tuning 80049
CMOS continuous-time common-mode feedback amp. cct., gain partitioning, replica bias 101776
CMOS continuous-time filter, LV, on-chip automatic tuning 102335
CMOS continuous-time lin. phase filter with auto. tuning syst. 80076
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
CMOS differential act. inductor, tunable inductance and Q-factor 91436
CMOS differential act. inductor, tunable L/Q for freqs. up to 5 GHz 91313
CMOS freq. synthesizer, charge pump, dual-path loop filter, PCS- and cellular-CDMA 125817
CMOS freq. synthesizer, LC-tuned VCO, wireless commun. 114644
CMOS fully differential inductorless RF bandpass amp, 1.5 V, 1 GHz 80349
CMOS fully integrated very low phase noise quadrature VCO, 1.57 GHz 125820
CMOS GSM/WCDMA continuous-time filter, automatic tuning 102372
CMOS high-Q G_m-C bandpass filter, automatic tuning, wireless receivers 91049
CMOS LC VCOs, noise props., inductance selection, graphical optim. method 69225
CMOS low distort. wideband act.-RC filter for base station transmitter 80044
CMOS low noise transconductor, low distort. HF fully differential design 68930
CMOS LV act. inductor and appl. to RF bandpass amp. design 115025
CMOS RF front-end filter, sync. rectification, tuning cct. 102326
CMOS single resist. controlled oscillator, current conveyor 101824
CMOS switch, LC resonator, switched tuning 102359
CMOS tunable transconductor for continuous-time filtering appls. 80081
CMOS VCO, Bluetooth wireless transceivers appls., accumulation mode varactors, spiral inductors 102731
CMOS VCO, inductive varactor tuning 101838
CMOS VCO with inductive degeneration noise suppression, 2.2 GHz 102730
CMOS VCO with reduced phase noise, 1.8 GHz, on-chip filters, off-chip low freq. inductor 125823
CMOS VHF prog. read-channel continuous-time filter with on-chip tuning 80042
cold FET I-Q lin. vector modulator topol., monolithic X-band implement. 125750
combline resonators and filters, temp. charcts. study 102532
conductor-backed CPW hybrid for varactor-tuned phase shifting 102441
continuous-time LPFs, mixed-sig. tuning approach 80080
continuous-time OTA-C filters, tuning method using GA 68926
coplanar technol. tuneable act. planar looped filter struct. optimised in noise 125684
cross-coupled dielec.-loaded waveguide filters design 80174
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
current-tunable phase shifter using MOS internal capacits., 700 MHz 69146
DAQ systs., sens. noise reduction method 131830
DC SQUID readout electronics, automatic bias voltage tuning 70919
deep space commun., transponding modem, DRO perform. 131332
dielec. resonator bandpass filter 68906
digital filter freq. response charcts., analog shaping, Doppler tracking 118991
digital tunable bandpass filter, synthesis/appls. 95686
distributed conductor-backed CPW phase/freq. shifter and appl. 102442
dual-band monolithic CMOS LC-tuned VCO, switched resonator concept 102732

circuit tuning continued
duplex filter tuning using time domain transforms, cross-coupled resonators 125683
eighth-order CMOS low-pass filter, 30-120 MHz tuning, prog. boost 91029
Farrow struct. based 1D and 2D FIR filters, variable cutoff freqs., design 91065
ferroelec. filters with const. fractional bandwidth, design 102531
ferroelec. tunable bandpass filter, K-band appls. 70465
floating-gate MOS biquad, LV, second-order g_m-C filter 125601
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
FMCW front end for anticollision radar, low-cost X-band design 120449
FPGA, adaptive heterodyne filter 102399
fractional-N type PLL freq. synthesizer LSI for mobile commun. syst. 91331
front-end filter with automatic center freq. tuning circuitry 68910
fully functional integrator based continuous-time filters, VHF 80045
hairpin resonator filters with tunable transm. zeros 102573
harmonic VCOs for GHz-range appls., varactor diodeless configs. for tuning 114995
harmonic-suppressed tunable microstrip-ring bandpass filter 102324
hearing aid LV CMOS filter, dyn. gate biasing use 122354
HF high-Q continuous-time filters, automatic tuning scheme 68913
high-lin. digitally prog. components for continuous-time sig. proc. 91050
high-Q tuned act. bandpass filter for wireless appl., varactor use 85690
image reject notch filter, integrated tunable cct. 91024
impedance tuner, freq.-variable reson. unit cell 80247
IR FPAs, readout tech. for on-chip compensation of dark current 97363
ISM appls. of wide tuning VCO, 2,4 GHz, LV ccts., freq. control 91273
Ka-band preselected harmonic mixer with YIG tuning filter 80265
Ka-band temp. compensated ring resonator VCO, adjust. using laser trimming 102719
Ku-band freq.-tunable LNA using variable-capacitance elements/neg. feedback ccts. *(Japanese)* 69241
L-band EPR spectrosc., tunable surface-coil-type resonator 76498
Langmuir probes, tunable pass. external RF filter, high imped. 97768
LC filter tuning, GA and simulated annealing 114860
LCR distributed self-oscillator inductively coupled with transm.-line sect., model 114657
leapfrog multiple loop feedback bandpass filters, tuning 68927
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl. 125602
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
LV continuous time tunable HF filters based on floating gates 68911
LV HF MOS transconductors for IF sects. 91044
mag. flux controlled Josephson array oscillators 69156
mag. tunable supercond. filters 92908
Microexpert, ES for microwave oscillator design 68645
micromachined tunable CPW resonator, spiral inductor 80224
microstrip ring bandpass filter, varactor tuning, harmonic suppression 69041
microwave act. filters, AFC theory and expt. 125608
microwave act. notch filter, varactor tuning 102364
microwave dielec. props., tuning by stacked dielec. resonators 69057
microwave filter, automatic test and tuning syst. 102538
microwave freq. synthesizer, implement. and perform. anal. 69139
microwave power amp., harmonic tuning design 79574
mm-wave telecomm. modules, MMIC spread compensation, automatic output power control 91341
MMIC varactor diode, neg. capacitance, tuning range 102676
Mobius bandpass filters, dual-mode/quad-mode types 102553
monolithic grid oscillator 101835
MOSFET RF power amps., multi-harmonic tuning behaviour 102644
MOSFET-R-C filtering tech. with improved lin. 91038
multi-IDT input tunable SAW filter, wireless telecomm. systs. 116216
multiple narrow-band bandpass sigma-delta modulators, transfer fn. design 90973
narrow-band recursive act. MMIC filters for adaptive radar receivers 69204
narrowband ultra-low VSWR cable assemblies 69291
oscillatory cct., reson. freq. tuning 90795
OTA-based act.-c filters, simul. & implement. 102338
PCS, freq.-tunable feedforward amp. 74760
PHEMT MMIC coplanar feedback VCO, fab. technol. 102671
PHEMT MMIC dual-freq. push-push VCO for wideband wireless appls. 125761
PHEMT MMIC VCO, broadband oscillator design 102668
PHEMT MMIC VCO, phase noise, LMDS appls. 102672
PHEMT VCO MMIC with very high tuning bandwidth, design 125752
planar microwave act. filters, neg. resist., tuneable bandstop/bandpass filters 125756
planar reconfig. double stub tuner using MEMS switches 80307
PLL design, clock mgt. 101871
PLL master-slave tuned filter, tuning range, computer anal. 102351
proc. and temp. independ. inverter-comparator for PWM in class-D amps. 114621
proc.-induced clock skew minimisation using delay tuning 102317
quadrature LC-VCO, low power/phase noise differential tuned 96498
radar receiver, act. tunable BP filter and image rejection mixer 75183
reconfigurable MEMS filters, tunable lumped components design 80223
recursive bandpass filters, finite word length effects 91101
RF CMOS VCO, tuning behaviour study using cct. modeling tech. 115017
RF MEMS devices technol. 80236
RF transmitter front-end, planar antenna and PBG 74535
RFIC, tuned LNA, bootstrapped inductor 91435
S-band class AB push-pull power amp. with wideband harmonic suppression, high efficiency 91296
SAW duplexer for dual-mode AMPS/CDMA cellular syst. 92759
SAW filter optimal tuning, param. determ. 68902
SIS receiver, space FIRST/HIFI Band 1 appls. 71143
super-regenerative transceiver, low-power 1 GHz, time-shared PLL control 96374
tunable fractional-delay allpass filter struct., closed-form design 102403
UHF data receiver IC for automotive vehicle appls. 100308
UHF filters automatic computer-controlled tuning syst. 125592
ultra LV floating-gate CMOS transcond. amp. 79601
universal act. current-mode filter using modified current conveyors 68918
varactor-tuned cct., tuning range expansion 79610
waveguide filter, automated tuning, adaptive network model 69030
wideband VCO designs, generalized tuning params. 114984
wideband voltage-tunable DRO controlled by piezoelec. transducer 102619
X-band MMIC direct 8 PSK modulator for high data rate Earth obs. appls. 125748
AlGaN/GaN FET VCO, high-power RF source 101834
AlGaN/GaN HEMT-based VCOs, varactor-tuned with low phase noise 80276
$(Ba_x,Sr_{1-x})TiO_3$ capacitor tunable RF filters, bandpass and lowpass, IMD 102332

circuit tuning continued
$BaSrTiO_3$ ferroelec. tunable pre-select filter/LNA hybrid cct., perform. 91362
$BaSrTiO_3$-$Y_3Fe_5O_{12}$ multilayer by PLD for microwave appls. 91168
InP HBT VCO, freq. tuning range 101843
InP act. device/varactor MMIC HEMT VCO, 80 GHz 102724
InP-HBT differential VCO with wide tuning range, SONET/SDH fiber optic appls. 91338
Nb SIS mixer, NbTiN/SiO_2/Al tuning cct. 70863
NbTiN/SiO_2/Al tuning cct., THz SIS mixer 70860
NbTiN/SiO_2/Al tuning cct. for low-noise 1 THz SIS mixer 92918
Si PLL freq. synthesiser in 0.8 μm bipolar prod. technol., 7.35 GHz 91006
SiGe BiCMOS proc. 12-GHz quadrature LC-VCO, fully-differential oscillator 125822
$SrTiO_3$ tunable dielec. thin films for HTSC microwave filter appls. 82012
YBaCuO resonators and filters, act. tuning, piezoelec. actuator 71093
$YBa_2Cu_3O_7$ microwave filters, tuning by $SrTiO_3$ ferroelec. film 69138
$YBa_2Cu_3O_y$, microstrip-line filters, 2 GHz, tuning props. 68896
$YBa_2Cu_3O_{7-\delta}$/Au L-band microstrip bandstop filters 71104
YIG PM tuned oscillator based synthesizer for LMDS LO appls. 80269

circuits *see networks (circuits)*

circular dichroism
see also magnetic circular dichroism
chiral mol. films, surface SHG-circ. dichroism *(Chinese)* 128504
NSRL electron storage ring, large aperture versatile beamline design *(Chinese)* 110475
turbid media with opt. soft large spherical particles, chiroptical spectrosc. 105770

circular polarisation *see polarisation*

circular waveguides
broadband dielec. probe with coaxial line-circ. waveguide jn. 132148
cavity dimens. determ. from scatt. data 86189
circ.-rect. coaxial waveguide, multipole theory *(English)* 105830
coaxial line-circ. waveguide jn., permitt./permeab. meas. 72433
corrugated circ. groove guide, charact. eqn. 72428
corrugated circ. groove waveguide, atten. coeff. 83474
cylindrical FDTD appls., nonuniform orthogonal mesh generation algm., microstrip filters 90198
cylindrical metallic cavity loaded by inhomog. dielec. sample, TLM modelling 105842
cylindrical reson. struct., sq. loop FSS 94164
cylindrical waveguide, uniaxial anisotropic medium 94084
dielec. coated hard/soft wall waveguide 94088
dielec. loaded waveguides, 2D long transm. line-freq. domain treatment 102504
dielec. reson. disk in circ./rect. waveguide radiators 117678
dielec. rod waveguide with periodic corrugations, dispersion charact. anal. 117732
diplexer design, circ.-to-rect. waveguide T-jn. 102520
dual profile corrugated circ. waveguide horns for radioastronomy appls. 83534
EM scatt. wave, modified Root-MUSIC for freq. dispersion detect. 72235
equiv. cct. for coaxial discontinuities filled with dielec. materials, Marcuvitz's cct. freq. extension 91182
evanescent field microwave microscopy & appls., review 101575
ferrite circ. waveguide variable polarizer loaded with dielec. ring 70556
ferrite fed microstrip array antenna, beam scanning charact. 72624
ferrite-loaded circ. waveguide, hybrid spectrum, explicit eigenvalue approach 94098
FSS resonator elements on circ. dielec. rod antenna for mobile commun. 83622
Green's fn. of lin. and point sources of circ. waveguide 83491
grooved circ. waveguide dual-mode filters, anal. and design 102558
gyroelectric circ. conducting waveguides, theory 83495
high-power cylindrical microwave applicators, propag. modeling 102753
HTSC waveguide, microwave propag. 127539
low-profile dual-freq. circ. microstrip antenna, ISM bands 105885
microwave components eigenvalue anal. program using high order vector elements *(Korean)* 91229
microwave inverse FEL expt., accel. results 110129
MM-wave semicond. phase shifters, charact. 80281
multimode waveguides, dissipative losses freq. depend. 117729
open-ended-waveguides located in infinite ground plane, mutual coupling 128831
Panofsky-Wenzel theorem, generalized, hybrid coupling 117623
periodic circ. waveguide, azimuthally magnetized ferrite tube 69002
Pierce instabil. of nonisothermal plasma stream, theoretical study 117712
plasma-filled dielec.-lined waveguide in mag. field, instabils. driven by intense beam 125651
reflector feed optim. for two widely separated bands 94156
regular circ. waveguide splice with arbitrary refr. index profile, mode refl. 127739
relativistic BWO with circ. wave-guide reson. reflector *(Chinese)* 80613
single-channel variable pol. syst. with short switching time 75206
tapered vane loaded broad-band gyro-TWT anal. 80611
TM_{01} vircator, TE_{11} mode generation converters at 4 GHz 125970
truncated circ. waveguide, internal matching method 128827
truncated waveguides, cutoff wavenumbers 72407
uniform elements series, scatt., Cayley-Hamilton theorem 72427
V-band circ. waveguide array antenna for 60 GHz wireless video home-link 128906
very low loss wideband ferrite isolators for mm-wavelengths 91216
X-band dielec. loaded TW accel. struct. 110145
X-band waveguide window, 3D simul. and sensitivity anal. 69088
GaAs plate, complex permitt., MM-wave meas., circ. waveguide 109934

circulators
see also ferrite circulators; microwave circulators; millimetre wave circulators; optical circulators
integrated microstrip shorted antenna, hybrid act. circulator 72495
lattice WDF, max. sample freq., circulator, Richards struct. 102392

civil engineering
see also architecture; building; civil engineering computing; dams; excavators; structural engineering
buried utility lines location, end-effector mounted pulse induction sens. 86495
earthquake simul. by CaPaMan robot, expt. validation 98972
localization of machines, laser theodolite/odometer 97841
roadway subsurface meas., ground-coupled & air-launched GPR data fusion 86211
serpentine robots, earthquake rescue, online path planning 97198
X-ray FEL multi user facility at DESY, civ. engng. 82698

civil engineering computing
see also architectural CAD; structural engineering computing; town and country planning
online constr. project collaboration 130855
road and pipe detect. within LADAR intens. images via fuzzy techs. 120468

cladding techniques
see also optical fibre cladding
3D parts laser-assisted generation, blown powder proc. 105636
indust. appls. of lasers, state-of-the-art 113168
silica-on-Si waveguide fab. techs. *(English)* 104720
Stellite SF6, laser cladding & rapid prototyping, proc. head 105641
Ag-SnO_2-In_2O_3 elec. contacts, prod. optim. 90563
CO_2 laser edge welding, clad profiles, coaxial powder filler nozzle 83055

claddings
see also optical fibre cladding
multifunctional acrylate based photo-polymer, rapid direct writing, opt. interconnects and hybridisation appls. 92941
all-optic tunable long-period grating using double-cladding layer 116879
ARROW opt. polarizer under quasi-anti-reson. conditions 93135
circ. bent dielec. waveguides with finite cladding thickness, anal. 82142
parab. waveguide based all-opt. security coded key device 109197
periodic dielec. multilayer cladding TM-pass waveguide polarizers 127722
planar waveguide lasers, CW/pass. Q-switched cladding-pumped 82580
planar waveguide with layered cladding, modelling/optim. 127756
polymeric EO modulator, conductive polymer cladding 104813
PVDF ferroelec. polymer clad hollow THz waveguide 69010
silicone oils, transparent, opt. integrated components optim., thermo-opt. coeff. 104755
symmetric slab waveguides, Pockels media, TE waves light transm. *(English)* 71340
ultra short two-sect. vert. directional coupler switches, extinction ratios 93108
Ag-Cu/Ni/Ag-Cu clad tapes, prep. for YBaCuO HTSC tape and textured props. 127433
AlGaInP large opt. cavity LD, opt. loss 128276
AlGaInP lasers emitting at 670 nm, cladding material blocklayers 93667
GaInAsP/AlInAs microcylinder injection laser, cladding oxid. 117323
GaInP/AlGaInP QW LDs, S-shaped NDR, cladding layer thickness depend. 71786
GeO_2-SiO_2 glass hollow waveguide fab. for CO_2 laser transm. *(Chinese)* 104732
GeO_2-SiO_2 opt. waveguide, thermal poling, core-cladding interface effect 116667
InAlAs/InGaAs/InP mid-IR quantum cascade lasers, refr. index dispersion effect on perform. 105294
SiO_2-on-Si waveguides, Bragg gratings, doubly leaky cladding modes 127793
W selective CVD using SiH_4 reduction of WF_6, Si consumption 90422

class libraries *see software libraries*

classification, image *see image classification*

classification, pattern *see pattern classification*

clay
polymer/organo-clay EL device, carrier mobility 116965
PPV/PMA layer-by-layer assembled organic LEDs, isolating clay barrier sheets 93425

clean rooms
Class 1 cleanroom design, CFD program appls. 89830
elec. props. of cleanroom gloves, meas. 124312
ESD-EMI induced IC proc. interruptions 103966
high-sensitivity multiple-point monitor for ammonia and amino-ethanol gas 115727
MEMS micro-syst. proc. education, morph. and elec. charactn. 127123
MEMS press. sens., micro-syst. proc. for education, fab. 127124
MEMS technol. for NASA space missions, JPL research & facilities 98883
minienvironment particle monitoring procedures 89815
obj. motion, rel. to workbench, induced airflow vars., num. simul. 89820
organic cpd. conc. time vars. after init. constr. 89829
semicond. mfg. technol., energy conservation measures *(Japanese)* 89476
spaceborne instrum. radiometric calib., thermal vac. facility 122632
Cu surface modif. by thermal/plasma treatments 92096
GaAs PHEMT/MMIC mfg., $6^{"}$ wafer fab. facilities establishment 70212
He microwave-induced plasma based particle analyzer, use for mfg. environ. assess. 122705

cleaning *see surface cleaning; surface treatment*

cleanliness *see hygiene*

clearing houses *see bank data processing*

cleavage fracture *see brittle fracture*

cleaved coupled cavity lasers *see semiconductor lasers*

client-server systems
3D rem. brain mapping invocation, distributed appl., Java & VRML 88016
access network independent service control syst. for stream services, implement. 96294
act. edge-tagging, network intruder ident./isolation 130769
ad-hoc community protocol, multicast routing *(Japanese)* 119372
Adaptive Gateway Location Protocol for prog. media gateways 130347
adaptive param. collection in dyn. distributed environ. 74277
advanced faults mgt., Java API 130684
aggregration/disaggregation in HLA multi-resoln. distributed simul. 125390
ATM NMS, mobile agent 95893
ATM-based multimedia commun. syst./dist. learning appl. 96285
B2B transactions, Simple Object Access Protocol 85266
bandwidth requirement minimization for on-demand data delivery 119805
bandwidth-conserving cache validation schemes in mobile database syst. 108134
BIRDS-I, benchmark for image retrieval using distributed systs. over internet 96140
broadcast disks, optimized scheduling 108132
BuddyCache, cache coherence for transactional peer group appls. 108326
CAC for distrib. of smoothed video using patching algms. 108422
CC/PP, effects and perform. of content negotiation *(Japanese)* 119269
CD-on-demand syst. *(Chinese)* 85377
CDAA, content distrib. archit. using network-layer anycast 108330
cellular telephone-based home appliance control syst., prototyping 108776
centralized/distributed online games, cheat-proof playout 119298
CLF middleware, scalability issues 130878
client-provider-server systs., depend. data pushing 74380
clinical PACS, research and teaching access 89608
cluster commun. protocols, network technols. 73882
cluster-based network servers, efficiency vs. portability 108354
CompOSE|Q, composable reflective middleware framework design and implement. 74281
computational and inform. grids 85325

nt-server systems continued
computer network anal. using event model *(Polish)* 130653
constr. indust., mobile user support 130794
CSP, syst. archit. for scalable Internet and commun. services 119612
data broadcast, power efficient, hybrid index tech. 96222
data streams, real-time, optimal smoothing schedules 96224
deadline scheduling for client-server systs. on Computational Grid 119704
dependency-spheres, global transaction context for distributed objs. and messages 130879
dist. education network courses, WWW technol. appls. *(Chinese)* 67414
distrib. control centre syst., constr. models *(Chinese)* 99200
distrib. network inform. mgt. syst., component based design *(Chinese)* 112051
distributed real-time appls. support with CORBA, policies and mechanisms eval. 85334
distributed sens. networks, research review 129990
distributed servers archit. for on-demand video services, cost optim. 120566
document image recogn., client-server archit. 95491
domain caching for live-event Web services 108331
dyn. multi-threshold metering schemes 129313
dyn. obj. relocation protocol, network status obs. 130884
dyn. Web content, class-based cache mgt. 130694
ECG data transm., real-time, via Internet for non-clinical appls. 111294
ECG interp., teaching guided by CARDIOLOG tutorial ES 100477
ECVBA (Efficient Changes and Variability Bandwidth Allocation) algm. for VBR media streams 74436
eEMU, client-server syst. for syst. monitoring and event mgt. 108024
electric distributed object management, power market mgt. software, DCOM technol. *(Chinese)* 77171
element mgt. to service mgt. 74088
enterprise desktop computing, server-based computing 96134
event services in high perform. systs. 119724
Exedra media server, modular and efficient resource mgt. 119611
gastroenterology patient record consultation, MPEG-4 scene comp. 88015
German open elec. market, Java-based WWW-transm. schedule syst. 122836
Grid computing environ. for enabling large scale quantum mech. simul. 108115
group commun., commercial Java implement. using reliable multicast 130752
group commun., highly available services framework 74229
HARNESS and fault tolerant MPI 119718
heterog. and mobile environ., adaptive delivery of multimedia data 108128
hierarchical teleconferencing on Internet 85361
home telecomm. equipt., middleware emergence 75311
Host Integration Server 2000 for legacy mainframe systs. data usage 108351
I2-DSI project, Internet2 distributed storage infrastructure 119555
iCE, cool operation support syst. and interactive customer empowerment engine 130586
independent storage units model, evol. prefetching/caching 74404
indust. automation, commun. networks, develop. trends *(Polish)* 74299
inform. announcement toolkit 108130
integrated push-pull method *(Japanese)* 120505
Internet, real-time streaming, retransmission schemes 130700
Internet appls. in extranet environ., proxy-based security archit. 119727
Internet backplane protocol for data storage mgt. 119715
Internet database connectivity and two-machine flowshop 85194
Internet streaming video testbed, periodic broadcast and patching services 120572
Internet telephony signaling 85185
Internet-based server-centred appls., scalability cost and reliab. meas. 119739
Java 2 distributed obj. middleware, perform. eval. and optim. 84987
Java server objs. on rem. hosts, mobile rem. method invocation 130894
Kerberos authentication syst., ElGamal cryptosystem based protocol 118038
large-size images, transm. via Internet, Macintosh-based software syst. 95020
LIME, middleware for phys. and logical mobility 74278
M²RT algm., tool for Internet commun. channels mean message response time prediction 108237
man-in-the-middle attack defence 130767
map-based hoarding mechanism for location-depend. inform. 108136
middleware 74179
middleware services for interoperability in open mobile agent systs. 74312
middleware support for media streaming establishment 85371
middleware support for voting and data fusion 107407
mil. satellite broadcast syst., multicast file transfer 111606
mix and match media servers 85373
mobile agent based workflow systs., perform. and scalability issues 130849
mobile agents technol. for telecomms. 130891
mobile client-server database systs., mobile client caching with asynchronous broadcasting 84947
mobile computing, organization of invalidation reports for energy-efficient cache invalidation 108348
mobile computing environ., consistent data broadcasting 85349
mobile CORBA develops. 130895
mobile data broadcast environ., broadcasted/updated cycles concurrency control tech. 130888
mobile environ., scalable low-latency cache invalidation strategy 74378
mobile OLTP, anal. framework 96150
mobile OO-appls., generic archit. 96106
morpheme based speech corpus annotation tool 73059
MOVE middleware archit., voice and data services integrat. for mobile Internet collaboration 130885
MPEG-4 networked syst., content delivery and mgt. 130958
multi-resoln. resource behavior queries using wavelets 118924
multi-server distributed MPEG video syst. 86344
Multicast-based Distributed LVS, IP clusters 96207
multimedia collaboration and caching, reliable multicast Webcast protocol 130346
multimedia commun., integrated push/pull buffer mgt. method 108429
multimedia commun., QoS control using ANN 119787
multimedia services and computation intensive appls., cooperative scheduling 74458
multimedia streaming services, TMO structuring scheme 74446
multimedia systs., QoS models and archits. *(Polish)* 130940
nettimer tool for bottleneck link bandwidth meas. 119615
network surveillance scheme, supervisor-based, middleware implement. and perform. eval. 119491
network systs., perform. eval. using client obs. *(Japanese)* 74133
NFS over Myrinet-based clusters for parallel multimedia appls., perform. 130711
node migration, continuity of service *(Japanese)* 119736
NTP topol., total cost, expt. eval. 95950
obj. middleware QoS-control archit. 85210
off-line customizable Web browsing with mobile software agents 96107

client-server systems continued
oil refinery power facility, LAN-based load shedding controller 113175
on-demand viewing, video presentation design 109382
optimistic transaction proc. algms. in pure-push environ. 96190
password authentication using multiple servers 129298
patient admin. master-syst./clinical subsystem data transfer realised using ProtoGen/HL7 98875
PC cryptographic coprocessor based on TI sig. proc. and smart card syst. 118033
PiNet, wireless connectivity for organizational inform. access using lightweight handheld devices 108271
portal mgt., cognitive engng. approach 85230
power plant, load mgt., PUSH technol. *(Chinese)* 77192
priority inversion avoidance on proc. of requests by act. replicated servers 108310
public and private networks, dyn. host config. for mobility mgt. 119616
publisher-centric Web caching infrastructure, security 130696
quasi-consistency and caching with broadcast disks 108135
QuO middleware, adaptive support in wide-area and embedded distributed obj. appls. 74280
radiation therapy, centralized dose calc. syst. 98614
real-time streams transm. 130544
regional geoinformational syst., aerospace image proc., intranet network 99043
rem. eval., client server and mobile agent paradigms, anal. comparison 74187
rem. Windows-based sig. generator, design, implement. 109833
replicated redirection service maint. in WWW-based IS 108332
resource selection mechanism for complex network services 119701
RPC commun. design in client/distributed servers syst. model *(Chinese)* 108098
SATTL, self-adaptive WWW cache coherence protocol 108358
scalable layered streaming media delivery, optimal scheduling 108427
scalable VoD server network with QoS guarantees 86335
scalable/error-resilient/high-perform. video commun. in mobile wireless environ. 95042
script wrapper for software integrat. systs. 108307
secure Internet telephone, design and implement. 119507
secure Web server, perform. anal. based on SSL 108168
self-organizing sens. networks, inform. dissemination, distributed services 129991
shallow-water mine countermeasure, Web-centric virtual prototyping environ. 77048
SMTP server and client for e-mails via Internet 130754
software compression 108365
SPring-8 beamline control, network security 132236
Storage Area Network systs. for video prod. *(German)* 75318
stream-bundling approach for video services over broadband networks 97097
streaming-media workload, meas. and anal. 119789
surveillance systs., networked *(Polish)* 131774
sync. collaborative design based on message commun. *(Chinese)* 85316
TCP transactions, CPA *(English, Spanish)* 130413
TelFam telemedicine syst. for family doctor practices 111274
THESEUS syst. for open stock exchange trading, pan-European broadband networks/satellite links based 74322
timing fault tolerance, dyn. replica selection algm. 108311
TRACY, prototype of architected middleware to support mobile agents 74287
transactional multimedia banner as Web access point 85332
transfer error recovery for broadcasting network 86295
TransWeb, framework for transparent Web-server load balancing 130896
video surveillance syst., distributed platforms appl. 129513
Vmedia, virtual media access protocol for interactive image browsing 96211
VPN, syst. safety 74357
W-MAIL, electronic mail syst. for wearable computing environ. 74158
WAP, overview 107797
WAP clients and SET protocol for secure commerce 74162
WDM client server network archit., design/anal. 74318
Web clients, service time estim. using server logs *(English, Spanish)* 130414
Web content caches, refreshment policies 130705
Web content negotiation, CC/PP 108129
Web server, perform. modeling 85254
Web-appl. develop. using model/view/controller design pattern 130880
Web-based acquisition, storage & retrieval of biomed. sigs. 88024
Web-based appl. server *(Chinese)* 108101
Web-based radiotherapy treatment planning syst., client-server appl. 87845
Web-based telecomm. needs modeling tool, EOTIP methodology 108004
wireless ATM network archits. 85292
wireless database broadcasting, effective data placement 96221
wireless Internet for mobile devices 85177
wireless networks, broadcast scheduling 74202
wireless Web access, end-end approach 74245
WWW large-scale distributed caches, perform. tuning 119560
WWW proxies, optimal hash routing 74024
WWW server, differentiated QoS mgt. 130677
WWW systs., locally distributed, load balancing algms. *(Polish)* 130647

climatology
CERES/TERRA data validation 111395
climate change mitigation with renewable/high-efficiency generation 99456
COVIR Compact Visible and IR Radiometer, Earth/climate monitoring 133279
distributed generation approach for carbon emissions reduction 99443
Envisat, Europe environ. obs. satellite 76837
Global Change Observation Mission, objectives & instrum. 122626
long-range elec. load forecasting, climatic effects prediction 111941
LW atmos. radiation, sky-scanning radiometer meas., blackbody calibrated pyrgeometer 76877
power engng., climatic effects prediction 111646
renewable/high-efficiency power generation for climate change mitigation 133838
SeaWinds scatterometer follow-on mission, advanced design 133331
solar energy syst. perform. modelling, weather data complexity requirements 112433
thin cirrus cloud, structural params., spaceborne backscatt. lidar 111416
urban area energy demand modifs. due to climate changes 99466
vegetation, climate responses, AVIRIS rem. sens. 98986

clinical equipment *see biomedical equipment*

clinical measurement *see biomedical measurement*

clipping circuits *see limiters*

clock recovery *see synchronisation*

clocks
see also atomic clocks; time measurement
3D tech. visualizations in VLSI design, full-wave interconnect anal., clock distrib. 125363

clocks continued
15-GHz wireless interconnect, 0.18-μm CMOS, integrated transmitters, receivers, and antennas 125776
activity-driven clock design, CMOS sync. digital syst. 68683
adiabatic logic cct., power clock generator 102069
adiabatic quantum cellular automata, perform. assess. 79773
all opt. bit clock extraction, fiber cross PM effects *(Chinese)* 117433
all-opt. 3R regeneration, nonlin. dyn., long-haul transport systs. appls. 105432
all-opt. sig. proc. using highly-NLO fibers 85988
amp., autozeroed, bandpass SS clocking 79595
appls.-specific backplanes, prog. routing device, clock regeneration *(German)* 74255
buffers design, min. jitter 91000
chaos-based FM, EMI reduction 106015
clock distrib. using multiple PLLs 125269
CMOS asynchronous interlocked pipelined chip *(Italian)* 90858
CMOS clock dividers, VHF, broadband commun. appls. 102319
CMOS digitally controlled PLL, digital phase-freq. detector 114858
CMOS dyn. logic, single-phase adiabatic cct. 68716
CMOS dyn. single phase logic, self-timed stages, power reduction, pipeline cct. designs 102027
CMOS low-power seq. cct. design using T flip-flops 90882
CMOS LV charge pump, four-phase clock generator 80018
CMOS memory ccts., LV four-phase charge pumps, clock generator 125477
CMOS μP, all-digital clock generator firm-core 102215
CMOS on-chip opt. clock distrib., baseline receiver cct. 127056
CMOS PLL, low-power voltage control oscillator 101837
CMOS SC segmented DAC, clock jitter induced distortion 79993
CMOS skew-tolerant high-speed domino logic, noise and timing var. reduction 102030
CMOS std. cell, self-routed clock net generation 102306
concurrent knowledge and logical clock abstractions 107858
core-stateless guaranteed rate scheduling algms. 130708
cycle-to-cycle period jitter meas. of HF clock sigs. 102312
data-depend. clocked logic 101889
DDS clock generator, sub-ns time domain interpolator, 30-MHz 102320
distrib. strategy for IP-based develop. 101943
distributed clock systs., substr. noise anal. 68888
DLL oscillatorless clock multiplication, low jitter 102321
domino logic ccts., coupling-aware min. delay optimisation 79829
DRAM, analogue sync. mirror delay with duty cycle-correction scheme 102145
Fabry-Perot filter based all-opt. clock extraction cct. perform. anal. 75035
factorial DLL based clock generator for video appls. 114853
GSI, interconnect scaling limits 104055
high speed multilevel staged clock routing *(Chinese)* 90810
high-speed VLSI, automatic clock tree design with IPs in syst. 104066
indust. GHz CPU, VLSI clock distrib. cct. design 102250
Intel's Itanium proc. clock design 102196
intentional clock skew scheduling algm. for high perform. clock distrib. network 102307
jitter simul., continuous-time delta-sigma modulators 125573
LD radiation freq. synchronisation with fs Ti:sapphire laser mode freq. 117369
long Josephson jn., soliton oscillator clock, jitter meas. 70889
low power BIST test pattern generator, modified clock scheme 101924
low power protocol converter, protocol modules, selective clock suppression 90862
low-power asynchronous design, self-resetting logic, computing struct. 79776
low-power sinusoidal clock, static CMOS design styles 102310
mol. QD cellular automata, clocking sig. 125922
monolithic mode-locked LD for high-speed opt. commun., freq. control 117373
multi-PLL clock distrib. archit. for GSI 91002
multi-point clock distrib. networks, VLSI ccts., top-level high-speed distrib. 70268
multibitrate burst-mode clock and data recovery cct. 131593
multiclock selection/synthesis for control data flow graph 125286
multiple asynchronous domains, static scheduling, functional verification 125445
multiple scan chains in full scan module, scan chain disable, power dissipation reduction 102071
multiprocessor digital syst., low-power RF clock distrib. 114852
multirate digital filters, fractional polyphase decomp., sub-Nyquist proc. 91111
μP LV swing clock distrib. schemes 102315
NORA dyn. CMOS ccts., clock-race conditions investig. 114732
PCB design for ISR prog., transm. line effects 102803
PLL design, clock mgt. 101871
portable high-speed clock generator, full pull-in range, HDL 91001
proc.-induced clock skew minimisation using delay tuning 102317
S3C2400X indust. embedded SOC product, model checking 125367
scalable sync.-oriented logical clock, barrier-lock clock 102313
sigma-delta-DAC archit., edge-selection algm., second-order extension 90994
single clocked adiabatic static logic for digital low power appls. 68759
stable predicate detect. protocols 84986
submicron IC layout, clock skew and time delay 101885
supercond. RSFQ ccts., BER and pulse jitter 70842
supercond. RSFQ pseudo-random no. generator, timing design 70853
sync. ccts., register and phase requirements, software pipelining techs. 90866
sync. DIC, clock distrib. network 80020
SyncFlash memory, high perform. sync. flash device 68803
syst.-on-a-chip, gigascale, integrated global interconnect archit. 69947
time-delay digital tanlock loop 91005
tree synthesis for semi-sync. ccts. 101894
tree topol. extraction algm., clock distrib. network tolerance to delay uncertainty 102316
true single phase clock style, scalable counter archit. for pre-scaler 102024
ULSI syst., asynchronous interface, locally clocked module 102311
universal digital clock smoothing tech., counting prognostication method *(Chinese)* 125586
VLSI low-power μP design, zero-skew gated clock routing tech. 68836
VLSI mixed-timing systs., robust interfaces, latency-insensitive protocols 125335
VLSI test generation for maximizing ground bounce for internal circuitry with reconvergent fan-outs 101935
VSI space vector modulator with variable clock freq. 99812
wristwatch stepping motor efficiency improvement *(Japanese)* 112561
InP RTD/HFET MOBILE depth-2 full-adder cct. 114708
InP-based monolithically integrated RTD/HBT MOBILE for logic ccts. 114709

Clos networks *see multistage interconnection networks*

closed circuit television
surveillance camera visual-thermal image fusion 84158
surveillance video, content based software DEMUX 118169
traffic video surveillance, vehicle extraction and tracking 129475
Web-based rem. security camera server syst. using index search algm. 131758

closed loop control systems *see closed loop systems*

closed loop systems
see also feedback
2D laser scan, closed-loop dyn. inspection 113765
3-phase 3-level PWM NPC rectifier, input state feedback lin. control 134153
3-phase AC power source using robust MRAC 88944
55 kW traction SRM drive, closed-loop torque control 134534
ABR explicit rate flow control, deterministic/probabilistic anals. of resource requirements 84829
ABR explicit-rate traffic flow control 119146
AC drives, rotor flux ident., integral error correction method *(Chinese)* 134436
act. power filter robust current tracking control design 123711
aircraft sens. failure detect., ident., and accommodation, min. resource allocating networks appl. 111305
Alpha Step two-phase hybrid stepping motor with keep-in-step control 123526
anaesthesia, hypnosis modelling/closed-loop control, bispectral index, isoflurane 98601
anaesthesia syst. design using simul. 76607
AOI/real-time SPC for high-mix/low-vol. PCB mfg. 115198
arc length robust sens. 86487
asynchronous AC drive adaptive fuzzy neural power control 134430
ATM network congestion control by neural net 130527
ATM networks, predictive congestion control, multiple sources/single buffer scenario 73780
base metal electrode MLC capacitor sintering, atmos. separation/closed loop O_2 control 115066
basic gravit. inertial syst. 76807
behavioral interpolation, coding, and control 78980
bridge actuator, micro-adjustment by thermally induced strains using laser technol. 123701
brushless PM motor drives, SABER simul. 123899
bubble column meas. & control, resist. tomographic imaging 121273
buck DC-DC converter, lin. optimal feedback/load-decoupled control 112640
CD player control design, perform.-robustness trade-off 86355
CDMA power control, time delay compensation 73867
CDMA wideband cellular networks, power control results 85745
Chua's cct. adaptive control/sync. 101720
closed-loop adaptive optic visual aberrations correction syst. 76413
CMOS low-jitter, fast-locking delay locked loop using measure and control scheme 68881
controller chips, subband coding for high speed 79942
coupling static converter with control loop/nonlin. EM devices 125220
DC motor drive fuzzy logic PI speed control scheme 123944
DC servomotor digital controller auto-tuning *(Japanese)* 99678
DC shunt motor drive, neuro-fuzzy control 100253
Deep Space Station Controller, autonomous ground station control 131331
digital PLL, loop filters design, mixed H_∞/H_2 method 68886
double armature lin. PM DC motor closed loop posn. control 123514
doubly-fed twin stator IM drive, control perform. eval. 78213
DS-CDMA, perf. of closed-loop power control for packet transm. in multipath fading 120060
DS-CDMA systs. with closed-loop power control, error probab. anal. 131180
dyn. error recovery mechanism and error control algms. *(Chinese)* 130424
dyn. systs., fault detectors design, $\mathcal{H}_\infty$ optim. 84751
elec. scooter BLDCM torque control scheme 123957
elec. scooters, variable-winding BLDCM drive, control 123973
elec. switching networks, Cuk convertor, Euler-Lagrange model 88942
electronics mfg. proc. improvement, failure anal./closed-loop corrective action 113448
electrophotography, piezoelec. cantilever, micro-mirror/laser array 116755
FA-425 fly frame speed sync. control syst. simul. *(Chinese)* 124149
FACTS, multimodel adaptive control, design params. selection 111937
FACTS devices allocation, freq. response tech. 99253
FDD mode, adaptive method for closed-loop transmit antenna diversity 120036
FDD wireless systs., uplink predictive closed-loop power control 85712
fiber optic gyroscope closed-loop syst., modified digital serrodyne proc. *(Korean)* 75554
finite eigenvalues elimination of 2D Roesser model by state feedbacks 90088
flat-fading channel variable-rate adaptive trellis coded QAM 119979
FNS muscle model ident. using Matlab Simulink 122328
gait training, closed-loop controlled functional elec. stimulation 87913
GraspIt online model-based grasp planning and visualisation syst. 97404
HDD head-disc spacing var. suppression, act. flying height control 116308
heart closed-loop pacing, atrio-ventricular cond. time, syst.-theoretical approach 133048
helicopter autonomous aggressive maneuvers, avionics syst. 122521
high speed/high resoln. angle meas. syst. *(Chinese)* 109997
hypersonic flight control, GA appl. 122539
III-V MOCVD proc. control by UV absorpt./US conc. monitoring 101374
IM, nonlin. multivariable flux and speed PI control 134004
IM, speed estim., nonlin. ident. tech. 77874
IM drive field oriented speed control, rotor flux observer 89330
IM drive high-perform. adaptive parallel distributed compensator 123866
IM drive nonlin. speed control strategy improvement 123946
IM drives, sensorless control, perform. limitations 123910
IMT-2000, partially decentralized resource-mgt. 74821
indirect field oriented IM drive, flux/speed observer 123856
induction drive selection criteria for speed-sensorless appls. 134456
integrated ang. speed sens. syst. design, automotive appl. 109824
interior PMSM drive, Kalman filter based vector control 89354
inverter flux control techs. 77985
inverter-fed arc welding machine, mixed I-V control scheme 89472
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
lateral comb microactuator, stroke-length control, PID lin. feedback control 116059
LHD supercond. coils, H_∞ current control 71040
LV continuous-time CMOS current amp. with dyn. biasing 79585
MAGLEV syst., H_∞ control and closed loop ident. 105691
micromachined mass flow sens. for common-rail injection systs. *(German)* 109815
multi-DOF spherical PM motors for manipulators 99701
multi-link smart materials robots, model-free regulation 92694
multicast with cache, adaptive zero-delay VoD service 120569
multimodule parallel DC-DC PWM converter systs., robust av. current-mode control 134144
multivariable syst. faults, set-based detect./isolation 100645

ed loop systems continued
New Millennium Deep Space One spacecraft, Remote Agent autonomous control syst. 76822
nonlin. chaotic Chua ccts., robust tracking control, fuzzy approach 90678
nonlin. Kalman filter theory and wing rock motion control appl. 107496
paraplegic subjs. standing, ankle control, neuro-fuzzy ang. inform. extraction 87801
PID control, filtered, optimum multiple integrat. tuning 107507
PID feedback control, output usefulness in fault detect. 124394
piezo-actuated vibroacoustic absorbers, interior noise control 123696
planar manipulator, globally convergent vision-based posn. controller, adaptive visual servoing problem 97373
planar manipulators, eye-in-hand syst., inverse optimal H_∞ disturbance atten. 86620
PM stepper motor, neural net based posn. control 77826
PM sync. motor drives, posn. sensorless speed control scheme 134494
point-robot posn. control, single-camera visual servoing 86607
positioning syst. with BLDCM, control design 78226
power controlled cellular radio systs., time delay compensation 96542
power plants, closed loop control struct., fn. diags. representation *(German)* 88510
predictive multi-stage VQ, asymptotic closed-loop design 95176
PWM boost converters, discrete controllers, generic av. modeling/simul. 88865
PWM boost type rectifier, input output harmonic elimination, control method 123595
PWM power converter closed loop stabil. fn. control *(English)* 99750
rabbit muscle afferents, nerve-cuff recordings, joint posn. effect 122327
real-time mixed-traffic WLAN, prioritized CSMA 130626
RIE syst., neural net-based adaptive proc. control 115622
RLCG elec. network chain, optimal control 80034
robot control, robust visual servoing, cameras comparison 97368
rolling mill nonlin. roll thickness control scheme 124134
SAMCOP mix-and-match servo stepping drive systs. 123891
SC DC-DC convertor, control design & closed-loop anal. 123634
series act. power filter deadbeat control appl. *(Chinese)* 99879
series-connected controllable FACTS devices, control Lyapunov fns. 133548
Shisanling pumped storage plant, rem. controlled operation *(Chinese)* 88639
shunt VAr compensator capacitor voltage equalisation, closed loop control 111828
sinusoidal-encoder-based digital tachometers, probabilistic learning tech. 75777
six-sigma PCB mfg., AOI role 115184
smart sens. closed-loop meas. channel, noise detect. algms. 109825
Space Interferometry Mission instrum., real-time command, data & control 133239
space vehicle inertial flywheel control syst. using torque servomotor *(Chinese)* 98917
space VLBI mission, uplink freq. control *(Japanese)* 120500
SRM variable speed drive analog-based closed-loop sensorless control 134479
subband coded image quality, fuzzy control, std./fuzzy quality measure 118517
supercond. astron. detector, RF SET readout amp. 71147
supersonic jet exhaust flow field, automatic testing syst. *(Chinese)* 131807
surface PM LSM, init. pole-posn. estim. algm. 134079
switched reluctance motor operating as generator, digital simul. *(Chinese)* 77835
sync. generators, unknown mech. power, adaptive nonlin. excitation control 77228
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
telecommun. traffic controller, fuzzy set theory/fuzzy logic 73820
teleoperated autonomous piezoelec. nanopositioner, coarse/coarse motion control 104430
three-phase PWM rectifiers, current control stabil. issues 123619
three-phase soft-transit. inverter, ZCS, near ZVS control strategy 123602
three-phase static PWM freq. converter struct. 123652
thyristor-based brushless PM DC motor drive speed control 89328
transmit diversity systs., unitary transforms appl. 108743
transmit diversity with feedback delay, perform. 108744
unmanned air vehicle landing, vision based motion estim. and nonlin. control 109670
unmanned vehicle, H∞ steering control syst., MR sens. 134518
variable reluctance direct drive motor for robotic appls., closed-loop control strategy 99866
vert. fin buffeting alleviation, strain actuation, closed-loop control tests 111306
VSI, current regulation, zero crossings of compensated current errors 134186
VSI/CSI modulation, variable band universal flux/charge modulator 134185
W-CDMA, space-time antenna transmit diversity, anal. *(Chinese)* 119231
W-CDMA systs., appl. of transmit diversity 108779
InGaAs/InP tunable external cavity LD, MEMS rotary actuator 117300
InP laser, EAM tuning, WDM telecomm. syst. 117231
TiO_2, high rate reactive sputter deposition, closed loop proc. control 101190

lothing industry *see textile industry*

loud chambers
see also position sensitive particle detectors
OPERA atmos. neutrino long baseline expt., review 110300

Clusius-Dickel columns *see isotope separation*

luster analysis *see pattern recognition*

luster tools
CMOS gate high-k dielec. by liq. source misted chem. deposition 104100
cpd. semicond. indust., high-vol. mfg. 103973
DRAM wafer fab, multichamber work cell mgt., optim. 100547
dual-armed cluster tools for wafer fab., real time scheduler 81476
etch proc. improvement as part of overall plan to increase fab productivity 81075
multi-chamber wafer proc. tools, class., capacity components 100553
opt. planar waveguide fab., single wafer CVD cluster tool develop. 71346
plasma doping syst. for 200 and 300 mm wafers 115570
polysilicon TFT-LCD, low temp. PECVD 124898
proc. perform. metrics, utilization of effective availability/effective capacity 100552
thin chip mfg., pre-assembly 113452
ultrathin gate dielec., proc. metrology 109994
CdZnTe radiation detector sig. proc., clustering method 121427
Si_3N_4/SiO_2 ultrathin RTCVD gate stacks for ULSI, post-deposition treatments 69753
W thin film, LPCVD growth, run-to-run control 124899

clusters of galaxies
see also intergalactic matter
Coma cluster, Sunyaev-Zeldovich effect, MITO expt. obs. 109332
NASA's cosmic journeys missions 122474

clutches
see also brakes; drives
electronically line-shafted paper machine drives, startup/commissioning 124161
International Space Station, solar-cell orient. syst., drives control 111346
low-yield borehole pumps, controllable autosynchronous closed drive 123902

clutter
see also radar clutter; radar interference
adaptive GMRF anom. detector for hyperspectral imagery, perform. anal. 75617
asynchronous multisensor tracking in clutter, Bayesian seq. MC method 133412
buried landmines IR imaging, surface roughness effects 73126
buried metallic mines discrim. from metallic clutter 73707
buried objs. modelling/estim., EM induction sens. 73124
Central Limit Theorem applicability 95644
CFAR distrib.-free detector 119083
COBRA ATD minefield detect. model, perform. anal. 77120
coherent opt. sources, blind discrim. using reticle-based opt. trackers and ICA 106824
FLIR imagery, region based PCA modular clutter rejection 95510
GEM-3 multifreq. EM induction data, UXO discrim. capability 88228
histogram-based probab. multihypothesis tracking, intens.-modulated sens. data 130134
image metrics for clutter charactn. 95508
image-based contrast-to-clutter modeling of detect. 129863
IR clutter background, wide-sense stationary props. *(Chinese)* 120911
IR dual-band pass. imagery for automatic clutter rejection 95507
IR recogn. of objs., high-capacity hardware 111625
JetStream, probabilistic contour extraction with particles 106640
land mine detect., elastic wave interact., 3D FDTD model 76945
landmine detect., automated, multispectral imaging, iter. morph. algms. 77065
landmine detect., EM induction sens., human auditory discrim. 77113
landmine detect., microwave radiometry, layered medium model 76986
landmine detect., pass. microwave sens. assess. 76985
landmine detect., phase-angle-based EM induction obj. discrim. 77017
landmine thermal detect., resoln. requirements, 2D AR models 76982
landmine trip wires opt. detect. 77116
LWIR spectral polaris. signatures of mater., FTIR spectropolarimeter 75656
manmade obj. detect., multispectral sens., water vap. features 99045
mass detect., lesion site selection by morph. enhancement/contextual segmentation 76502
mine detect., 2D and 1D approaches comparison 77119
mine detect., acoustic/seismic laser Doppler vibrometer assess. 76998
mine detect. in IR imagery, wavelet-based third-order neural network 73435
mine detect. systs., perform. assess. 73193
Mine Hunter/Killer program, close-in detect. syst. 77091
multi-ping mine hunting data, classifiers comparison & optim. metric 77043
multiple IR target tracking in clutter environ. 111624
natural image human detect. perform. 133396
natural/enhanced IR images, embedded targets, image metrics/human detect. perform. 84155
NQR landmine detect., stat. sig. proc., Bayesian algm. 76995
obj. tracking, mean shift/optimal prediction 94789
occlusion models for natural images, stat. study of scale-invariant dead leaves model 118304
office environ., 5.25 GHz OFDM expt. study 131084
optimal Bayesian filter, receding horizon FIR filter, suboptimal algm. 130136
pass. broadband bionic sonar, underwater & buried target detect. 77055
pattern detect. using max. rejection classifier 119103
point distrib. model shape fitting using Kalman filter 94541
point target detect., IR clutter rejection 86599
Poisson-distributed clutter generation with uniformly scatt. points 109237
randomly moving cluttered targets, multiframe Bayesian tracking 94792
robust shape tracking in cluttered background 95542
robust visual tracking, co-inference approach 106593
sea mine class., adaptive subspace-based background normaliser 77051
sea mine detect. & class. proc. strings fusion for sonar imagery 77050
shallow water mine detect./class., side-scan sonar, algm. fusion 77046
shallow-water mine countermeasure, Web-centric virtual prototyping environ. 77048
side-scan sonar imagery, robust real-time mine class. 77049
small target, real-time IR pre-detect. *(Chinese)* 94481
stochastic target detect. for hyperspectral data 107148
Stokes imaging polarimetric target acquisition & mine detect. 77027
subspace methods for face/clutter discrim. 95496
target detect. enhancements, in-situ adaptive clutter modeling 131688
target detect. on perspective plane, morph. approach 118376
target tracking, optimal in clutter, waveforms and detect. thresholds control 84733
temporal signature propag. for target detect. enhancement 73583
tissue harmonic imaging, clinical benefits 110750
tracking behavior improvement, virtual sens. in loop 130167
tracking gate algm. based on optimal data assoc. perform. 73578
tracking initiation using obs. data *(Japanese)* 107349
US contrast agent detect., three-stage pulsing seq. 98324
UXO remediation, sens. fusion, training algms., clutter effect 77010

CML *see current-mode logic*

CMOS analogue integrated circuits
2.4 GHz four port mixer for direct conversion used in telemetering 108094
800 MHz continuous time biquadratic cell, gm-C fully differential config. 102348
accurate LV analog memory-cell with built-in multiplication 80129
act. ccts., evol. synthesis using current path based coding 125596
ADC building blocks, anal. of manufacturability factors 102271
adjustable video-freq. current amp., biquadratic filter 101775
AMGIE synthesis environ. 104132
analogue cells for vector multiplication/quantization, error-compensated 102433
analogue neuro-fuzzy cct., multidimensional membership fns., CMOS implement. 102458
APV25 deep sub-micron CMOS front-end chip for CMS tracker 98073
audio power amp. driving 8 V_{pp} into 7 ohm resistive load 90770
automatic channel equalization, digital data transm., embedded fuzzy control 96342
automatic design syst., neurocomputing technol. 101732
bandpass amp., notch filter, wireless receiver 90753
bandpass continuous-time filter, freq. and Q-factor tuning 80049
bandpass filter for pager appls., LV high-Q design 91046
Beta basis fn. neural network in CMOS subthreshold mode 91163
BIST, current sens., proc. var. independent 101736
bladder controller nerve sig. analog proc. cct., implantable, low-power CMOS 76677

CMOS analogue integrated circuits continued
buffer amp. design used in LV MEMS interface ccts. 114620
CAM implement. with floating gate transistors *(Korean)* 102435
cardiac pacemaker, analog front-end, CMOS proc., sens. chain 76670
cardiac pacemaker, sens. chain, CMOS micro-power low noise log-domain amp. 87894
CCII, reduced parasitic resist., bandpass filter appl. 80039
CCII, symmetric two-gain-stage voltage follower 68924
CCII, VLSI design and implement. 102370
charge pump ccts., area efficient design 80140
charge-transfer amp. for ADC appl., dyn. behavior anal. 90763
Chebyshev bandpass filter, Q-enhanced spiral inductors appl. 125593
circ.-geom. act.-transformer power amp., 2.4 GHz 102729
class AB RF power amp., nonlin. capacit. cancel. tech. 91326
Class D amp., low-power LV, feedback design, improved THD 79589
class E power amp., nonlin. output capacit., finite DC-feed induct., design 80351
CNN VLSI implement. approaches, hybrid struct. 102460
common-mode feedback ccts. for SC stages with large common-mode input 91124
composite transistor for LV low power appls. *(English)* 127029
concurrent dual-band CMOS LNA and receiver archits. 125779
configurable analogue block for continuous-time prog. OTA-C filters 102357
const.-gain CMOS open-loop amps., biasing cct. 68611
continuous time low-pass leapfrog-type filter, multi-output differential difference current conveyor *(Chinese)* 68914
continuous-time common-mode feedback amp. cct., gain partitioning, replica bias 101776
continuous-time current comparator, current-mode analog ICs 102447
continuous-time current comparator, high speed/power ratio design 68968
continuous-time filter, LV, on-chip automatic tuning 102335
continuous-time lin. phase filter with auto. tuning syst. 80076
continuous-time third-order ellipt. lowpass filters, high-freq. fully differential CMOS OTA 102358
current comparator cct., robust high-speed and low-power design 68970
current conveyor, LV low-power cct. 80061
current differencing buffered amp., act. building block and appls. 91043
current mode band-gap refs. for near 1 V operation 114605
current mode ccts. for prog. WTA neural network 114908
current-mirror amp. with compact slew rate enhancement cct. 79578
current-mode CMOS ccts., design based on current threshold-controllable tech. 68967
current-mode CMOS S/H IC, 1 V, 20 MS/s and 57 dB SNR 125632
current-mode controller, switching power converter 88945
current-mode exponential-control variable-gain amp. 90759
current-mode filter, modified multi-output differential difference current conveyor 68931
current-mode hysteretic WTA VLSI network, excitatory/inhibitory coupling 102485
current-mode multiplier/divider ccts. based MOS translinear principle 102437
current-mode prog. CNN, low-power consumption 68986
current-mode voltage ref., temp. independent charact. 68562
data recovery cct., analog parallel sampling 102434
DECT CMOS power amp. module with multilayer LTCC pass., 1.9 GHz 80333
device design, deep sub-micron for low power analog appls. 127047
differential act. inductor, tunable inductance and Q-factor 91436
differential act. inductor with tunable L/Q for freqs. up to 5 GHz 91313
differential capacitance transducer, ratiometric sig. proc., SC interface 120732
differential log-domain filters, high-gain common-mode feedback ccts. 80054
direct conversion CMOS transmitter for paging appls., 900 MHz 91344
double-bal. quadrature mixer 101865
down-conversion doubly bal. mixer, LV design 101867
dual-band monolithic CMOS LC-tuned VCO, switched resonator concept 102732
dual-mode continuous-time baseband filter for GSM and WCDMA 80047
dual-mode RC-opamp baseband filter for PDC and WCDMA 91031
dual-output switching converter for power reduct. techs., 1.8 V 125634
EEPROM, PWM analog memory prog. cct. 102432
eighth-order CMOS low-pass filter, 30-120 MHz tuning, prog. boost 91029
equiripple continuous-time filter, 200 MHz, design for nonlin. suppress. 125599
exponential and logarithmic fns. using std. CMOS 0.8 μm technol. 114897
fast-settling CMOS opamps with neg. cond. volt. gain enhancement 79580
FASTEST, CMOS analog ccts., stat. eval., DC anal. 125215
FG-MOSFET digitally prog. attenuator, HSPICE simul. 68961
FGMOS analog and digital comparator designs, weighted multiple-input voltages 81517
field prog. analog array and appl. in continuous-time OTA-C filter design 80065
floating gate subthreshold CMOS translinear ccts., dyn. charge restoration 68960
floating gate subthreshold MOS translinear ccts., dyn. charge restoration 80128
floating resistor ccts., appls. to synaptic wts. in analog neural nets 80145
floating-gate CMOS differential analog inverter for ultra LV appls. 81516
floating-gate MOS filter using translinear ccts., 1.25 V design 80067
folded cascode OTA, 1 V supply, current driven bulk tech. 90762
FPTA chip for intrinsic hardware evol. of analog electronic ccts. 101735
freq. synthesizer, Bluetooth technol. 90777
freq. synthesizer, charge pump, dual-path loop filter, PCS- and cellular-CDMA 125817
front-end chip, HomePNA appls. 108472
front-end filter with automatic center freq. tuning circuitry 68910
front-end for 900 MHz zero-IF wireless receiver, paging sigs. 125780
FSK/ASK transceiver, 900-MHz, low power, half-duplex low datarate commun. 91343
fully bal. differential difference amp. and appls. 101798
fully differential inductorless RF bandpass amp, 1.5 V, 1 GHz 80349
fully-integrated differential VCO for 10 GHz band operation 102701
fully-monolithic LNA 68594
functional elements, large-sig. anal., Fourier-series approxs. 90706
G_m-C biquadratic stage for PRML read channel appl. 102337
Gilbert downconversion mixer, 2.4 GHz for W-CDMA appl., noise perform. optim. 102712
GSM/WCDMA continuous-time filter, automatic tuning 102372
hearing aid LV CMOS filter, dyn. gate biasing use 122354
HF amp., bandwidth charact. 101785
HF low-power multirate SC realizations for NTSC/PAL digital video filtering 80041
high current LV current mirrors for LV analog appls. 102445
high perform. current mirror for LV designs 68969
high quality analog CMOS and mixed sig. LSI design 81507
high speed voltage-to-current converter, lin. tech. 91128
high-Q G_m-C bandpass filter, automatic tuning, wireless receivers 91049
high-speed continuous-time lin. weighted voltage addit. 79598

CMOS analogue integrated circuits continued
high-speed opamps, gain and bandwidth boosting techs., filter appls. 79581
high-speed track/hold cct. design 114901
highly lin. CMOS RF MMIC amp. and Volterra series anal. 80386
HiperLAN 5.4 GHz low power CMOS sync. oscillator, design 91328
HV stress test paradigms, gate-oxide reliab. enhancement 101737
IF bandpass amp. design, low sensitivity to temp. and proc. vars. 79604
IF FSK demodulator for Bluetooth in 0.35 μm proc. 119958
IF sig. component separator chip for LINC transmitters 108635
IF variable gain amp., lin. controlled gain range, temp. stabil. 125245
IIR SC filter, digitally prog. for CMOS technol. 80069
injection-locked ring oscillator prescalers, 1-GHz/2.8-GHz , modulo-8 design 125818
inter- and intra-chip MOSFET perform. vars., test cct. based extract. for analog-design reliab. 104139
ISM band CMOS integrated transceiver design for wireless telemetry syst. 108095
J-CDMA/AMPS appl. IF-baseband CMOS receiver, 110-MHz 108833
LAPS, light addressable potentiometric sens., CMOS analog lock-in amp. 109467
laser driver, 1 Gbit/s, packaging, on-chip decoupling capacitor 117030
LC bandpass filter, high-valued pass. element simul. using low-power CCIIs 91036
LC oscillator, simulated, multi-input floating-gate MOSFETS 90785
LC VCOs, low-power wireless systs., power consumption minimisation 102705
LC VCOs, noise props., inductance selection, graphical optim. method 69225
LHC expts., lin. laser-driver array for opt. transm. 121718
lin. OTA design using current addit./subtraction tech. 90767
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl. 125602
line driver, DSL 79561
LNA, 2.4-GHz ISM band, noise fig., power dissipation 102704
LNA, differential amp., noise fig. 114638
LNA, ESD-protected, 900 MHz, sub-1 dB NF, TQFP48 package 90760
LNA, source degeneration, image-rejection notch filter 101811
LNA plus mixer, GPS appls. 70295
low distort. wideband act.-RC filter for base station transmitter 80044
low noise transconductor, low distort. HF fully differential design 68930
low power RF mixer for GHz wireless appls. 102713
low-noise analog front-end, solid-state detector interface 79636
low-noise asymm. poly-phase filter, GSM low-IF radio receiver 108665
low-noise first-stage amp., 5.25 GHz 125742
low-power analog FIR filter, 100 MHz, PRML equalization appl. 102366
low-power and high-speed equalizer for mag. storage read channels 80125
low-power continuous-time integrators, dyn. range limits 91032
low-power design 116021
low-power gigabit Ethernet analog equalizer 85446
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
LV act. inductor and appl. to RF bandpass amp. design 115025
LV continuous time tunable HF filters based on floating gates 68911
LV continuous-time analog cct. design 90704
LV continuous-time CMOS current amp. with dyn. biasing 79585
LV front-end interface, switched-op amp ccts., SC designs 125603
LV front-end receiver 119907
LV HF MOS transconductors for IF sects. 91044
LV low-power accurate CMOS V_T extractor 102444
LV low-power downconversion mixer, 900 MHz, 0.9 V 114997
LV OTA using common mode feedforward, HF SC filter use 80055
LV prog.-gain CMOS amp. topol., very-low temp. drift 79587
LV rail-to-rail input/output opamp with. nested Miller compensation 68605
LV rail-to-rail switched buffer topologies for opamp input stages 114627
LV S/H cct., switched-op-amp tech. 91123
LV SC bandpass $\Delta\Sigma$ modulator 79633
LV SOS CMOS VCO, 930 MHz, design and perform. 80337
LV submicron CMOS fast-settling OTA, regulated cascoding tech. 90769
LV triode-MOSFET four-quadrant multiplier, optimized current-efficiency 80127
merged LNA/mixer for WCDMA, 2 GHz, phase noise 125815
micropower class-AB CMOS log-domain filter, DECT appl. 91030
micropower log-domain filter using enhanced lateral PNPs in 0.25 μm CMOS proc. 125600
microwave oscillators on SOI substrs., design and fab. 125746
mixers and polyphase filters for large image rejection 68656
MMIC oscillator, MOSFET RF large-sig. model 70095
motorcycle on-board electronics, CMOS power-supply overvoltage protection cct. 68563
MR head preamplifier design, disk drive read elements 68610
multi-mode wireless chipset, 1-10 GHz, design and perform. 102688
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
neural oscillator model, subthreshold analog CMOS VLSI implement. 91142
NMOS transistor prodn., parallel beam and batch implanters, elec. comparison 115542
Norton amp.-based digitally controlled VGA for low-power wireless appls. 68612
OFDM transceiver, FFT LSI design method, current mode cct. 85594
olfactory cortex design & implement. in analogue VLSI 102483
on-chip BP learning neural net with prog. neuron charact. 102464
op amp, SC channel select filter 79594
op amp, total dose radiation effects *(Chinese)* 90748
op amp design for mixed sig. LSIs *(Japanese)* 70314
op amp with rail-to-rail input range at min. supply voltage 101783
op-amps, LV class AB output stages, floating capacitors 79600
op-amps, radiation effects rel. to gate oxide growth method *(Chinese)* 101796
OTA, high input resist. Gm control terminal 79582
OTA, mobility-reduction-free low-distort. design using backgate-bias tech. 68615
OTA CMOS design tech. for SC appls., low-power low-noise design 101786
OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
OTA-C seventh-order lin. phase filter, HDD read channel systs. 91039
OTAs, reversed nested Miller compensation with current follower 79584
outlier rejection cct., sens. array parallel sig. proc. 91121
partial-ground-plane SOI MOSFET for deep sub-0.1-μm channel regime 70128
phoswich/APD detectors, low-noise CMOS preamplifiers, high-resoln. PET systs. 111011
PLL, 2 GHz, gain compensation VCO, peak-to-peak jitter 102734
PLL, voltage regulator, DC-DC capacitive converter 114668
PLL based on multiphase ring oscillator, interpolating inverter stages, 1.25-GHz 69226
PLL with inverse sine fn. phase detector 79630

OS analogue integrated circuits continued
PLL-based freq. synthesizer, wireless commun. systs., 0.9, 1.8, 1.9 and 2.4 GHz 102706
polysilicon resistors, analog CMOS appls., LF noise current 68555
portable audio appls., act. noise controller syst., CMOS analogue implement. 97107
power amp., wireless SOP, LTCC pass. library 124374
power amp. with LTCC high-Q integrated pass. for 2.4 GHz ISM band 91367
power amp. with micromachined solenoid inductors, 2.4 GHz 91308
proc. and temp. independ. inverter-comparator for PWM in class-D amps. 114621
prog. adaptive analog filters using arrays of floating-gate ccts. 68959
prog. BP on-chip learning neural net with learning rate adaptation *(Chinese)* 91161
prog. gain amp., 100 MHz, high lin., current-mode tech. 79591
prog. sigmoidal fn., analog cct. realization for on-chip BP learning 68991
prog. spatial proc. imager chip, focal plane steerable spatial filtering 75657
qtr. micron CMOS technol., radiation tolerant analog memory 121705
quadrature LC-VCO, low power/phase noise differential tuned 96498
rail-to-rail I/O CMOS op amp, 1 V, design strategy 79590
rail-to-rail op amp design, 0.9 V, 0.51 μA 114622
RBF network analogue implement., transducer lin. 102459
RC notch and band-pass filters, transistor-only configs., CMOS implement. 80062
readout ccts. for monolithic IR thermoelec. sens., model./charactn. 120703
reconfigurable ANN with GA training, cct. design *(Chinese)* 102481
regenerative comparators, symbolic anal. 91125
reinforcement neural chip, design & implement. 91140
reverse interconnect scaling in multi-GHz amp. and oscillator design 115015
RF cct., soft breakdown and hot carrier effect 104136
RF CMOS VCO, tuning behaviour study using cct. modeling tech. 115017
RF front-end filter, sync. rectification, tuning cct. 102326
RF inductorless differential second-order bandpass filter 102634
RF power amp. for GSM-1800, 1 W, 55% PAE 91366
RF power detector, logarithmic/limiting amp., GSM handset appls. 91347
RF-CMOS, scaling impact on analog perform. 91377
ripple-free output freq./voltage converter based on CMOS analogue switches *(German)* 91126
routing, contact and via placement algm. *(Chinese)* 101738
S/H amp., high-speed ADC *(English)* 90747
SC band-pass biquad filter 102374
SC channel-select filter, Bluetooth transceiver 91025
SC FIR filter structs., comparison based on CMOS realization and PSPICE simul. 80063
SC ladder filter, embedded anti-aliasing 102373
SC power converters with integrated low dropout regulators 90726
SC S/H cct. for LF appl., low power dissipation 114904
SC video FIR filter with analog-RAM-based delay efficient realization 102352
second harmonic class-F power amp. in std. CMOS technol. 80326
sens. interface, CARIOCA current-mode feedback cct. 79635
short channel CMOS cct. for RFIC appls., nonlin. anal. 102714
sigma-delta techs. for integrated test and meas. 126951
SIMD focal-plane proc. array, smart-sens. VLSI cct. 109691
similarity eval. cct. featuring variable functional forms 91151
single resist. controlled oscillator, current conveyor 101824
single-chip CMOS T/R-MMIC frontend, 2.24 GHz 1.8 V, low loss switch 102656
sinh/tanh shaped ultra low-volt. floating-gate transconduct. amps., harmonic distortion 101810
sliding mode control, switching DC-DC power converter 88946
SOI CMOS technol., hybrid trench isolation 104134
spiral inductor, RF MEMS technol. 69289
strong-inversion CMOS current-mode companding integrator implement. 80137
subthreshold CMOS analog MAP decoder for (8, 4) Hamming code 68958
subthreshold CMOS transistor analogue ASIC for biological neuron modelling 102488
subthreshold log filters, LV CMOS basic building blocks 80131
switched-current S/H cct. for LF appl., 0.6 μm, simul. & perform. 80133
switched-MOSFET tech. for prog. filters operating at low-volt. supply 80070
switching CMOS mixer design for 2 GHz direct conversion receivers 80350
synapse neural nets, analog cct. for VLSI implement. 68985
sync. oscillator, low-power design, HiperLAN syst. 101842
tailed tent map chaotic cct. exploiting S^2I memory elements 91122
threshold-voltage-summation archit. based volt. ref. cct. in CMOS/SIMOX 125229
transceiver for 433/900 MHz ISM bands, LV low-power RF ccts. design 96377
transconductance amp., harmonic distortion 114629
transconductance ccts. 80056
transconductance cell, down-conversion mixer 101864
transconductance feedback amp. based logarithmic convertor 79592
transconductor design, 3.3 V in 0.35 μm CMOS with 80 dB SFDR up to 10 MHz 114902
transconductor g_m-C filter, cct. stabilization 80053
transimpedance amp., 2 Gbit/s for opt. comms. 114624
transimpedance amp. for DVD appls., parasitic capacitance compensation 79583
transimpedance amp. with photocurrent sens. for wireless opt. commun. 120129
transimpedance MMIC amp. design, BSIM large-sig. model, opt. commun. appl. 91339
transistors, 1/f noise, analog ccts. 115910
tunable transconductor for continuous-time filtering appls. 80081
two-stage class B power amp., 1.9 GHz, low resist. substr. 69212
UHF current-mode filter based on biquad of regulated cascode topol. 80078
UHF OTA-C filters, design issues and CMOS implement. 69217
ultra LV floating-gate CMOS transcond. amp. 79601
UMTS transceiver, PLL synthesizer, CMOS VLSI delay oriented waveform converter 102735
unity gain opamp in 3.3 V CMOS technol. using tail current compensation 79577
unity-gain cell gyrator techs., inverting CCII 68909
variable gain IF amp. with -67 dBc IM_3-distortion, AM/FM radio receiver 125246
VCO, Bluetooth wireless transceivers appls., accumulation mode varactors, spiral inductors 102731
VCO, inductive varactor tuning 101838
VCO with inductive degeneration noise suppression, 2.2 GHz 102730
VCO with reduced phase noise, 1.8 GHz, on-chip filters, off-chip low freq. inductor 125823.
very high DC-gain amp., pos. feedback gain enhancement 79588
VGA up-converter, digital TV tuner 90758
VHF prog. read-channel continuous-time filter with on-chip tuning 80042

CMOS analogue integrated circuits continued
VLSI analogue spiking neural net, address domain probab. synapses 91141
VLSI multiple-input transconductance amp., prog. analog CNN design 102453
VLSI neural network with digital wts. & analog multipliers 91139
VLSI universal prog. sampled data filter 102365
voltage amp., readout electronics, cryogenic operation 70301
voltage multiplier using MOS transistors in saturation region 68964
weak-inversion log-domain filters, operating point elimination tech. 80075
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655
wideband LNA, all two-MOS-transistor amps., MOSFET VCCS 90761
Yagi-type hardware neuron model, CMOS IC implement. *(Japanese)* 91133
InGaAs inverted MSM photodetector, Si CMOS differential receiver 105050
InP/Si CMOS hybrid integrated photoreceiver, alignment tolerant 120161
Si microelectrodes with on-chip electronics, preamp. noise perform. 87379
Si radiation detectors, leakage current, low-power CMOS SOI readout front-end 110390
SiGe bipolar and CMOS LNAs and mixers for WLAN appl., comparison 114998

CMOS digital integrated circuits
see also CMOS logic circuits; CMOS memory circuits
1000BASE-T Gigabit Ethernet, pipelined 14-tap parallel decision-feedback decoder 114811
ABC-MT-CMOS DSP core, charge pump cct., standby current 125533
activity-driven clock design, CMOS sync. digital syst. 68683
adiabatic ccts., power estim. using model 127032
affine-based texture mapping, low power SIMD archit. 95525
appl.-specific heterog. multiprocessor systs., power minimisation, voltage reduction 125529
asynchronous events, electronics readout based on multi-correl. double sampling 76145
ATM switch controller, multicast fns., VLSI implement. 74495
BaBar Silicon Vertex Tracker, double-sided strip detectors, review 76055
biorthogonal wavelet transform, VLSI archits. based on filter bank and lifting scheme 90925
BLOWFISH block cipher, VLSI archit. design, secure modes of operation 106208
Broadcom BCM12500 single chip multiprocessor syst. for broadband networking appls. 125567
built-in current sens. devices for micro-IDDQ test of VLSI chips 127008
class D digital amp., sampling proc. and pulse generator 101808
clock and data recovery with two-XOR phase-freq. detector cct. 102314
clock distrib. strategy for IP-based develop. 101943
clock dividers, VHF, broadband commun. appls. 102319
clock generator using factorial DLL for video appls. 114853
CMS digital opt. link, radiation-tolerant opt. receiver 98060
contactless smart card IC using on-chip antenna and asynchronous microcontroller 91116
controlled slew-rate output driver, design and noise reduction 91003
crosstalk noise, simul. results 79688
DAVIC-compliant digital commun., high-speed coded QPSK transmitter LSI 109344
DCAP, async. superscalar archit. for exploiting instruction-level parallelism 79909
DDS synthesizer with digital time domain interpolator 114662
defect-oriented fault simul. and test generation 79740
delay insensitive SoC interconnect using 1-of-4 data encoding 79671
Δ-Σ converters, low-power decimation filter design 68864
differential interfaces, shared data line tech. for doubling data transfer rate per pin 114855
digital filters with low power consumption, design 114879
digitally controlled PLL, digital phase-freq. detector 114858
DLL, 1GHz synthesis, freq. multiplier tech. *(English)* 125261
doubly-bal. act. & pass. RF mixers, digital CMOS proc. 79641
DSM CMOS technol., energy efficient signaling, on-chip interconnect 101984
DSP & SOC analog integrat. in Internet era 79924
DSP-based 10BaseT/100BaseTX Ethernet transceiver 108370
dual-slope method time interval meas. core, CMOS technol. 101907
dyn. prog. arith. array proc., DSP appls. 68819
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
embedded CMOS RISC proc., multimedia archit. extension 125528
energy-aware embedded systs., real-time task scheduling 127053
FFT proc., VDSL transceiver 102228
FGMOS analog and digital comparator designs, weighted multiple-input voltages 81517
flash ADC, 6 bit digital design in 0.25 μm CMOS 102299
FPGA perform., surface channel PMOSFET degrad., plasma-induced damage effects 79857
FR-V archit., VLIW proc. core for SoC *(Japanese)* 114795
freq. synthesizer 101817
full opens in interconnection paths, detectability conditions 125330
gate level power optim. using dual-supply voltages 125287
gate-level simul. of CMOS ccts. using IDDM model 101986
gates, RC interconnect loads, π-model, propag. delay 90820
GPS rapid zero-knowledge sig. acquisition, design and CMOS implement. 131701
GRAVITY 32 bit asynchronous proc. core, design aspects 90949
ground distrib. networks, max. simultan. switching noise expression 114678
H263+ low-power full-search block-matching motion-estim. design 96314
half-rate clock and data recovery ccts. for opt. commun. systs. 131420
handwriting recogn., high speed VLSI archit. 90945
HCMOS proc. microcontroller operation, primary EM emission sources 79919
HDTV advanced multimedia proc. LSI 120548
HDTV CMOS single chip video proc. 120544
HDTV ISO/IEC 13818-1 decoders, design 120547
Hermitian decoder IC, Koetter's decoding algm. 106194
high order giga-bit rate PLL, discrete z-domain anal. 79628
high speed μP, on-die clock jitter detector 125532
high-dens. data commun., opt. interconnects role 117042
high-speed μP, register renaming units, ASIC multi-port RAM cell cct. 102247
high-speed pattern decoder in MPEG-4 padding block hardware accelerator 79950
highly-parallel stereo vision VLSI proc., optimal parallel memory access scheme 68829
I/O interface ccts., 1.2 Gb/s, 100K pos. ECL syst. compat. 68884
IEEE compliant floating point MAF 101941
image sens. camera with focal plane edge detect. 131975
imaging detectors, front-end electronics 132450
inner product proc., 3D vol. rendering 102216
interconnect perform. metric, stochastic wiring distrib. model 125279

CMOS digital integrated circuits continued
interpolation FIR filter, power/area efficient design for W-CDMA appls. *(Korean)* 80091
JPEG 2000 std., DWT lossless compression, VLSI design 118527
JPEG video rate compression on parallel single-chip digital CMOS imager, transpose memory 95272
k-WTA/Sorting network using maskable WTA/MAX cct. 114919
Lempel-Ziv data compress. algm., unified VLSI systolic array design 90924
level shifters for high-speed 1-3.3 V interfaces in 0.13 µm Cu-interconnect/low-k CMOS technol. 125583
LHC expts., lin. laser-driver array for opt. transm. 121718
LMS multiplierless adaptive filters using distributed arith., high-perform. VLSI archit. 84764
low power consumption CMOS digital matched filter *(Japanese)* 80095
low power digital CMOS cct. design, power estim. tech. 101985
low-bit motion detector archit., power scalability and VHDL model 95275
low-jitter, fast-locking delay locked loop using measure and control scheme 68881
low-power 8-PAM serial-transceiver in 0.5 µm digital CMOS 108506
low-power CMOS digital ccts. with subvolt supply voltages 68702
low-power digital filter IC via soft DSP 102416
low-power digital signature transponder IC for high perform. RFID authentication 96638
low-power DSP systs., narrow bus encoding 125531
low-power high-speed max. a priori decoder archits., design 79917
low-power optim.-based volt. scaling tech. using multiple supply voltages 101987
low-power pipelined map overlaying archit. for hand held appls. 90948
low-power rendering engine for portable multimedia syst. 68841
low-power sinusoidal clock, static CMOS design styles 102310
LV charge pump, four-phase clock generator 80018
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078
LV proc., threshold voltage hopping scheme for power saving 102253
mag. recording, PRML read channel, adaptive FIR filtering 70517
MCM digital neural network classifier, reconfigurable design 91143
microcontroller, CMOS fuzzy inference coprocessor chip *(English)* 102220
microcontroller, low-power cct., smoke detector *(German)* 102187
MPEG4 multimedia syst., CMOS LSI for V_{DD}-hopping, real-time feature 102245
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS implement. 79949
MPU appls., TCAD stat. design methodology 125555
multi-step improved breaking-off-search CMOS motion estim. ccts., low power 94575
multiprocessor digital syst., low-power RF clock distrib. 114852
multithreshold voltage technol. for low power bus archit. 101770
µP, all-digital clock generator firm-core 102215
µP, high perform., semi-custom design flow 125552
µPs, CMOS, RTD, SET and QCA technols. 102193
MUX/DEMUX ICs using CML, 10 Gb/s, opt. link appl. 75038
NeuroMatrix NM6403 DSP archit., vector/matrix engine 114781
partial bus-invert coding for power optim. of appl.-specific systs. 68701
photonic digital CNN, morph. nonlin. & digital cellular proc. 102457
piecewise RBF decision feedback channel equalizer, VLSI archit. 102480
pipeline direct digital freq. synthesiser using decomp. method 90999
pixel 8x8 array IC for X-ray spectrosc. 121714
pixel readout chips in deep submicron CMOS for ALICE and LHCb tolerant to 10 mrad 98066
pixel-level ADC for hybrid pixel detectors with energy sensitivity 121712
platform-based highly parallel DSP for wireless OFDM based modem 102256
PLLs, digitally controlled oscillator, std. cell library 79631
PMOS-boosted source follower, robust energy-efficient bus driver tech. 125584
portable high-speed clock generator, full pull-in range, HDL 91001
power-conscious proc. scheduling for real-time embedded systs. design 114775
PreFPIX2 chip, core archit. 121713
proc. ported register file, leakage-tolerant, DC noise robustness 125565
prog. freq. divider for DRRS std., 1.4 GHz/2.7 V 68883
prog. Hamming neural network feature extractor *(Chinese)* 102449
QLM technol. H.263 video CODEC with protocol proc. 108489
reduced memory bandwidth real-time EZW video coder, VLSI implement. 96321
RISC µP cache memory redundancy tech., inverse-gate-electrode flash 125566
RISC µP with DSP functionality, 32 bit, rapid prototyping 68845
RLC macromodels for digital IC interconnect 101948
robust transit. dens. estim., input/output transit. behavior 101983
ROM-less direct digital freq. synthesizer using segmented nonlin. DAC 101821
scaled memory-adder systs., time delay, interconnection and dielec. materials 68842
servo, low power archit. for opt. disc 116589
shunt-capacitor DLL, nonlin. reduction tech. 102318
sigma-delta decimation filter for pacemaker appl., low power implement. 114876
ΣΔ modulator, substr. biased MOS capacitors, series compens. 90968
simulator to study metastability of CMOS latches 101937
single-chip front-end for digital satellite broadcasting 120084
single-chip Q-VLMS MLSE equaliser LSI, 100 Mbit/s, TDMA mobile radio 108653
sliding controller for adaptive power supply regulation 125228
SoC challenges in deep submicron technol. evol. 102195
soft-output Viterbi algm. traceback pipeline chip for turbo decoding appls. 106105
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
SOI CMOS technol. 115466
spacecraft appls., radiation effects, case study 133236
SS wireless commun. systs., efficient PN code design for CMOS implement. 106129
std. cell, self-routed clock net generation 102306
struct. on-chip interconnection networks, top level wires, modular design 125372
super-fast fully depleted CMOS/SOI ring oscillator with delay time of 45 ps *(Chinese)* 79649
switching activity eval. using logic timing simul. 68664
technol.-tolerant I_{DDQ} method for CMOS digital IC diagnosis 101917
time-multiplexed RS decoder FEC codec LSI for digital opt. transm. systs. 109089
transceivers for gigabit rates, Gigabit Ethernet and next-generation Fibre Channel 120148
transimpedance receiver for opt. appls. 109068
transistor sizing for switching activity reduct. 90826
tristate-capable output buffer, 7 V, implemented in std. 2.5 V CMOS proc. 114854
truncated Viterbi decoder, CMOS cct. realization using pipeline tech. 125519

CMOS digital integrated circuits continued
ultra-low threshold voltage CMOS high perform. µP, design methodology 102255
USB2 high-speed mode, serial link transceiver, CMOS technol. 102309
UXGA compatible TFT LCD panel low noise triple channel graphic digitizer 114834
virtual CMOS library approach for fast layout synthesis 104121
Viterbi decoders, path metric memory mgt. for minimising interconnections 90926
VLSI, multiconductor transm. line CAD, networked supercomputer implement. *(English)* 126933
VLSI archit. of dyn. reconfigurable hardware-based cipher 102322
VLSI cct. fault detect., gate orient. effects 70305
VLSI design in SOI, cct.-level CAD tools 79728
VLSI digital cct. low-power design 70302
VLSI digital ccts., substr. noise generation, power-supply parasitic components 125302
VLSI prog. parallel archit. for 2D discrete wavelet transform 94771
VLSI single-chip encoder/decoder, dictionary search proc., LZSS algm., entropy coding *(Korean)* 108490
VSB/QAM/QPSK single IC for ATSC/OpenCable™ digital terminals 120526
wireless LAN to IEEE std. 802.11a, prog. chipset, 2.4 GHz *(German)* 74167
Xetal, CMOS low-power high-perform. smart camera proc. chip 102230
Xtensa configurable synthesizable core proc. for SoC designs *(Italian)* 79939
recording/playback MPEG-2 MPHL single chip decoder 120579
a-Si TFT LCD of SXGA class, universal controller, interpolation algm. 97730
Si photon-counting hybrid pixel detector, soft X-ray sensitivity 98000
Si pixel detectors, front-end electonics, readout chips 76108

CMOS image sensors
2D smart detector array, interferometric appls. 109659
3D opt. reconstruction using CMOS array of photodiodes with electronic proc. 120897
3D vision, smart VLSI opto-sens., laser spot posn. meas. 109707
3D X-ray microtomographic syst., CMOS image sens., bone imaging 132827
3D X-ray microtomographic syst. with CMOS image sens. 132834
act. column sens. CMOS imager 86615
act. pixel sens., radiation-induced dark current 97376
act. pixel sens. imager design, high speed laser detect. 120892
adaptive multiresolution imager based on FPGA 120914
ADC cct. 102289
ADC with differential mode appl. 114835
APS image sens., radiation-induced dark sig. 97377
arbitrated address event represent. digital imager, high dyn. range 97362
bad pixels, compensation algms. 75647
bit-serial column parallel proc. archit. for CMOS sens. DFT 109692
camera module, flip-chip interconnection 120902
camera systs. eval. in varying illum. conditions 86664
camera with focal plane edge detect. 131975
capacitive fingerprint sens. LSI, pixel-level auto. calib. cct. 131988
CCD & CMOS low-light-level imagers, perform. comparison 75659
CCD high-efficiency image sens., advanced microlens/color filter proc. technol. 109682
CMOS/bipolar integrated temp. sens., portable appl. 120891
computational image sens. with pixel-based integrat. time control 97353
consumer digital still photography, CCD imagers vs. CMOS image sens. 131976
Dervish mine-clearance vehicle, image-seq. motion estim. 100309
digital camera colour photography, tricolour filter *(Chinese)* 109671
digital cameras, CMOS image sens., graduate level educational course 131987
digital radiographic syst. using CMOS image sens., develop./eval. 110955
dual pixel-type imager for imaging and motion centroid localization 97361
dyn. reconfigurable vision for intell. sens. 106796
embedded act. pixel technol. 120922
energy-sensitive hybrid pixel detectors, ADC design 98064
field mobile robots, hazardous natural terrain, safe navig. 109665
focal-plane computation, feature detect. 97365
focal-plane motion detectors embedded CMOS imager LSI, develop. 131998
hybrid flat-panel detector arrays for digital X-ray fluoroscopy 110917
I-V mode WTA cct. with spatial filtering, act. pixel sens. 97367
image sens./IC products, prod. line cross-contamination study 104101
intra-oral dental X-ray imaging, integrat. CMOS APS 98542
IR FPAs, readout tech. for on-chip compensation of dark current 97363
IR sens. microsystems, uncooled/micromachined/CMOS compatible 86622
IVHS, LED traffic lights and vehicle-mounted cameras 131969
JPEG video rate compression on parallel single-chip digital CMOS imager, transpose memory 95272
large format LW MQW IR detector arrayed FPA commercialization 86661
logarithmic CMOS sens., nonlin. illum. depend., model, calib. 120893
logarithmic compression CMOS image sens., gamma correction/gain control integrat. *(Japanese)* 120935
low-noise image acquisition via piecewise-lin. bounded-SNR imaging 86616
low-power CMOS imager with charge-leakage compensated frame difference and sum output 109706
microsens. fab. technol., packaging approaches 109802
min. ionising particles detect., CMOS sens. 132363
mortar launched surveillance syst., unmanned fixed-winged aircraft 106798
multispectral smart pixel imaging arrays, modulator design 97399
photodetectors/receivers for smart-pixel based photonic systs. 97341
photodiodes for image sens., charactn. 86623
photoelectronic mixing device, opt. level gauging & 3D-imaging 120913
pixel array detector for time resolved X-ray imaging 110466
pixel cct. design, one-bit A/D converter 75645
pixel detector for min. ionising particle tracking, device simul. 76109
prog. spatial proc. imager chip, focal plane steerable spatial filtering 75657
prog. spatially variant multiresolution readout, sens. focal plane 97366
rangefinding syst. using correl. image sens. 97393
research to product technol. transfer, CMOS MEMS case 81554
robot control, robust visual servoing, cameras comparison 97368
sens. inform. capacity & energy cost, biol. vs. Si photoreceptors 106002
shunting inhib. CNN, digitally prog. current mode cct. 68954
shunting inhib. image proc. 97364
smart pixels, appl. to opt. interconnects and image proc. 117041
SoC, prog. analog image preprocessing 109690
SOI MOSFET/pn jn. diode composite photodetector 86602
solid-state image sens., opt. charactn. methods 120896
stacked CMOS act. pixel charged particle sens. noise charact. 132297
stacked CMOS-type act. pixel sens., output charact. 86667
technol. develop. 131972
very high resoln., pixel size limitations 131974
VISIR vis. imaging spectrometer & IR radiometer, coastal & land appl. 122717

OS image sensors continued
isual pattern proc., CMOS technol., artificial retina neural net 73276
isual pattern recogn. and sig. proc. based on CMOS image sens. with USB interface 75399
isual sens., focal-plane computation, low-complexity algms. 73468
-ray area detector based on logarithmic CMOS camera 121811
Au-In-Ni bonding syst., fluxless microjoining, isothermal solidif. 102871
HgCdTe, long lin. MWIR/LWIR arrays for high-resoln. imaging 109645
-Si TFT act. pixel sens., flat panel imagers, readout cct. 131984
i deformable mirror CMOS-based wavefront sens. 104772
iGe uncooled microbolometer array, hybrid LWIR sens., CMOS readout 120885

OS integrated circuits
see also BiCMOS integrated circuits; CMOS analogue integrated circuits; CMOS digital integrated circuits; CMOS image sensors
.18 µm CMOS with deep n-well implant., RF perform. improve. 125744
.18 µm proc., $CoSi_2$ spike form. in act. contact salicidation 70293
.18-µm 3.5/6.8 nm dual gate oxide CMOS technol., effects of F on parametrics and reliab. 81506
.18-µm salicide CMOS technol., ESD protection design, substr.-triggered tech. 104114
.24 µm CMOS technol. eval. and BSIM RF modeling for Bluetooth power appls. 69171
.4 GHz W-CDMA transceiver, direct conversion mixers and DC-offset cancellation 125814
2D fiber-based opt. interconnect 82433
2D inter-chip opt. interconnect, opt. I/O 93453
3D CMOS SOI IC using high-temp. metal-induced lateral crystn. 81513
3D real-time reconstruction on high resoln. FPA 94532
5-Tb/s frame-based ATM switching syst. using 2.5-Gb/sx8-λ opt. switching tech. 120277
5-GHz wireless interconnect, 0.18-µm CMOS, integrated transmitters, receivers, and antennas 125776
25 nm MOSFET devices, design considerations, gate oxide thickness scaling 126764
310 Mb/s receiver for free-space opt. wireless links 85959
A/D converter error table compensator, VLSI chip implement. 90975
AB class low noise I-V integrated charge amp. *(Polish)* 90766
abnormal jn. profile with Co silicidation 127030
act. clamp cct. for voltage regulation module appls. 114608
act. inductor, L-band MMIC 69286
act. well bias technology, scalability/biasing strategy 127021
adaptive filter implement. using switched-current tech., FIR transversal cct. 80120
ADC, 10-bit, in 0.25-µm CMOS, design and test results 132451
ADC, 8 bit design, efficient archit. 102277
ADC, high-speed subranging syst. with background equalization of sampling instants 79983
ADC, IF sampling 102287
ADC with background offset cancel., 165 MS/s, 8 bit 102301
adiabatic CMOS switching ccts., two-phase power-clock supply *(Chinese)* 104087
antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
asymmetric source/drain extension MOSFET struct. for sub-50 nm gate length CMOS devices 126740
ATM networks, traffic shaping syst., PC interface fns. support 95757
attenuator, lin.-control wideband device 102327
automotive graphical displays, single chips *(Italian)* 89419
av./peak temps., modified high-level synthesis effects 116037
bandpass delta-sigma modulator using SC resonator struct., 80 MHz 90966
bandpass sigma-delta modulator, IF A/D conversion 90980
bang-bang phase detector, clock and data recovery 79638
bend cells optimisation, field-seq. colour microdisplays 97713
bidirectional opt. interconnect, VCSELs, photodiodes, CMOS IC 105044
binary FSK demodulator for low-IF radio receivers 114669
bioimpedance dyn., implantable lock-in analyser, mixed-sig. ASIC 110624
BlueMoonSingle, CMOS System On Chip Bluetooth, near zero-IF RX/2-point modulation TX 102739
Bluetooth technol., low-IF RX two-point ΣΔ-modulation TX 108625
broadband wireline network transceivers, CMOS analog front-end 102429
BSIM3v3 MOSFET model key param. extraction for efficient CMOS design 104093
BSIM, Berkeley short-channel IGFET model for cct. design, CMOS appls. 127061
buffer minimization in pass transistor logic 101891
bulk-dyn. threshold-voltage MOSFET, 65 GHz normal-mode f_t/220 GHz overdrive mode f_t 125711
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
capacitance sens. for micro imaging in elec. tomography systs., particle detect. appl. 120738
CBGA package, core switching noise 113669
CDM ESD phenom., mixed-mode transient anal. *(Korean)* 116026
chaotic commun. syst., transceiver chip design and CMOS implement. 96383
charge pump cct., high efficiency, body effect 104109
charge pump PLL with reduced jitter 90801
charge-pump PLL, sample-reset loop filter 101861
clock and data recovery cct. for serial link appls., 4 Gbit/s 125620
clock buffers design, min. jitter 91000
CMOS-IV SoC technol., 100 nm, for high dens. embedded memory/mixed sig. LSIs 127018
CMOS/CCD high-efficiency image sens., advanced microlens/color filter proc. technol. 109682
CMOSFET, sub-100 nm, ultrashallow jn. form., TED 80990
CMOSFET gate length scaling to 35 nm 126738
CMOSFET shallow n^+/p^+ jn. form. using PIII 126742
CMP, prototyping and low vol. prod., engng. education 126920
CMS tracker, APV25 0.25 µm CMOS readout chip 121715
CNN, transconductance/multiple input transconductance amps. based, anal./design *(Polish)* 91160
compatible MEMS, charactn., design optim. 81585
complementary -G_M VCO using PMOS varactors, 2.5 GHz design 91327
conf., Semicond. pixel detect. for particles/X-rays, Genova, Italy (Jun. 2000) 89507
const. g_m rail-to-rail CMOS input stage with improved lin. 125242
controlled gain PLL 101870
cooled CMOS systs., act. threshold compensation cct. 104110
cryogenic spaceborne CMOS testing and optim. 76812

CMOS integrated circuits continued
current comparator cct., high-perform. *(Chinese)* 104086
current comparator design, fully differential, LV/power, high speed 70304
current conveyor design 114869
current peaking CMOS IC driver designs/reson. cavity LEDs, parallel opt. interconnects appls. 93456
current steering DAC design, stat. methodology 102290
current-based testing for deep-submicron VLSIs 70278
current-mode chaotic ccts., IC design for secure commun. 101713
current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
current-mode multifunction filter using CMOS dual output CCIIs/grounded pass. elements 68891
current-steering D/A converters, stat. yield model 125581
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
Cyclone terabit multiservice switch 73877
DAC, 14 bit, low power, current steering archit. 90971
DAC, 8 bit, high-speed current switching, design 102278
DAC, high-speed current domain design *(Chinese)* 80015
DAC, low-glitch interpolation cct. 102275
DAC cell with ultra high gain op-amp, 10 bit, 1.8 V 79982
data commun. transceivers, at-speed testing, BIST methodology 101906
DC integrat. level anal. of low-Vdd CMOS cct. using worst-case noise margin map 127055
DDS, low-power, self-adjusting phase interpolation 101813
DDS chip, virtual clock enhance. method using analog delay line 90778
DECT ASIC, RF interface design, mixed mode methodology 102423
deep submicron CMOS, dielec. pockets, short-channel effects/DIBL suppression 92469
deep submicron CMOS, energy efficient signaling, on-chip interconnect repeater insertion 81511
deep submicron CMOS device charact. prediction using inverse modeling techs. 127054
deep submicron MOSFETs, extraction method for intrinsic noise currents 91262
deep submicron technol., noise props. 70310
deep submicron technol., standby energy reduction 104111
deep-sub-0.25 µm technol., TCAD optim. 116036
deep-submicron CMOSFETs mismatch, phys. based model for Monte Carlo SPICE simul. 104137
device design, sub-50 nm, expt./simul. study 126769
device downsizing below 0.1 µm, problems/solns. 104090
device mismatch, mech. stress impact 104122
device/cct. ultra-thin oxide reliab., phys./predictive models 81525
devices, 0.12 µm, high perform., with manufacturable 0.18 µm technol. 127020
diamond, CVD films, structs. with feature size <100 nm, fab. 69912
differential ADC, digital CMR tech. 68872
differential bipolar quasi-pass. cyclic CMOS DAC 102303
differential switched-current bandpass ΣΔ modulators, nonlin. effect 79973
digital beamforming in handheld ultrasound systs., low power delay calc. 110805
digital controlled oscillator 101836
digital/analog technol., 0.18 µm, SPICE stat. anal. during proc. develop. 104123
digitally prog. current steering semidigital FIR reconstruct. filter 80092
direct-conversion CMOS transceiver with GFSK modem for Bluetooth appl. 131197
direct-tunneling gate CMOS perform./reliab., wafer orient. depend. 127043
distributed clock systs., substr. noise anal. 68888
distributed mutual inductance/resist. expressions for semicond. interconnects 103463
double ion-implant Ti-salicide technol., high-perform. CMOS appl. 92126
DTCNN, reconfigurable, compact/robust cct. proposal 102452
dual work fn. metal gate CMOS technol. using metal interdiffusion 104120
dyn. I_{dd} test, current meas., energy consumption ratio 104096
eight-level metal low-k intermetal dielec., ESD protection, grounded-up bond pads 81522
embedded DRAM technols., jn. capacitance reduction by S/D jn. compensation implant 116028
embedded low-power FIR filter 102401
EOS/ESD, conf., Anaheim, CA, USA (Sept. 2000) 67377
ESD clamp cct., stacked polysilicon diodes 104115
exhaustive min. dist. search engine using hybrid digital/analog cct. techs. 125618
Fabry-Perot based spectrometer, MEMS sens., sig. conditioning, A/D conversion 86770
fast-lock mixed-mode DLL using 2 bit SAR algm. 114889
fast-locking low-jitter PLL, F/V converters 79629
fault detect. in CMOS mfg. using model-based PCA 104119
FeRAM, 1T1C, fatigue-free ref. scheme and proc.-induced damage 114741
fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
flash ADC, ultrafast design for SoC appls., 1 GS/s 90992
flash ADCs, capacitive cct. archit. for compact realization 90995
FLC alignment over CMOS-based microdisplay backplanes 104828
flexible multichannel high-resoln. TDC ASIC 121720
FLL, FLL, based on CMOS F/V converter, design 91119
floating gate neuron MOS cct. perform. improvement by low temp. operation 70299
floating-body charge monitor cct. for partially depleted SOI CMOS 127035
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
floating-point ADC with lin. archit., realisation 79980
FM-type wireless CMOS MI sens., magnetis. magneto-impedance effect in amorph. wires *(Japanese)* 109937
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
folding/interpolation A/D converter for analog interface module of TFT-LCD driver 79997
folding/interpolation ADC design, 3.3 V, 8 bit, 200 MS/s *(Korean)* 114815
foundry RF CMOS technol., 0.18 µm, 70 GHz F_t for single chip syst. solns. 102689
FPTA family of evol.-oriented reconfigurable devices 104104
fractional-N freq. synthesizer, GSM/GPRS/EDGE appl. 101816
freq. synthesizer, LC-tuned VCO, wireless commun. 114644
front-end, single-wafer diffusion proc. for advanced 300-mm fab. lines 67523
front/back end plasma etch procs., fund. design limitations 104126
full custom layout design 90833
fully depleted SOI CMOS technol., heterog. micropower, high-temp., RF microsystems 92473
fully integrated very low phase noise quadrature VCO, 1.57 GHz 125820
future lin. collider vertex detector design anal. 110351
fuzzy A/D converter, current-mode approach 102279
gas sens. array syst., micro hotplate substr. fab., CMOS integrat. 97532
gate dielec. scaling limits 116034
gate high-k dielec. by liq. source misted chem. deposition 104100
gate level phase shift lithog. eval., test chips 103700

CMOS integrated circuits continued
gate oxide, He plus rem. plasma nitridation 81049
gate oxide damage in plasma proc., historical overview/future prospects 103423
gate oxide plasma proc. induced damage, transistor gate area depend. 104131
gate oxides, very thin, trap generation/breakdown procs. 69761
gate patterning, line-edge roughness effects, anal. model 69971
GHz RFICs, on-chip ESD protection design using polysilicon diodes 125743
ground interconnection networks, max. simultaneous switching noise 70298
ground interconnection networks, max. simultaneous switching noise *(Korean)* 116032
GXGA microdisplay chip, design and fab. 109909
Hall ang. posn. sens. 120748
Hall effect-based CMOS mag. microsystem design 75507
Hall mag. sens., CMOS integrated, mag. flux concentrator 75475
Hall mag. sens., integrated interface electronics 97220
handwritten digit class., Hamming neural network feature extractor *(Chinese)* 91130
HF I/O interface ccts., design-for-ESD-reliab. 104113
high dens. plasma fluorinated silicate glass deposition, plasma-induced charging damage 103232
high energy low dose ion implant. monitoring and charact. using C(V) tech. 115584
high speed ADCs for low power appls. 68875
high speed analog sigs., comparison of transient digitization methods 86451
high speed CMOS pulse stream neuron cct., low power design *(English)* 81504
high speed link, 2 GB/s differential simult. bi-directional I/O cell 119856
high-k dielec. gate materials for ULSI devices, advances/materials compatibility 104108
high-k dielec. layers, gate insulator layer thickness, leakage currents, reliab. 127022
high-k gate dielec., materials eval./selection 104105
high-K gate dielec., Monte Carlo simul. 104107
high-k gate dielec. for CMOS devices, bond ionicity 100665
high-k gate dielec. for CMOS devices, future challenges 104130
high-κ gate dielec., CMOS appl. 70294
high-perform. multiphase clock generator, LVDS driver, 0.25 μm CMOS technol. *(Chinese)* 125270
high-Q act. inductor, IF/RF wireless appls., low power supply voltages 70316
high-resoln. mismatch-shaping DACs, low-complex. digital encoder config. 79994
high-speed bandpass sigma-delta modulator, SC resonator 68879
high-speed current cell matrix CMOS DAC design and charactn. 114813
high-speed current-mode wave-pipelined ADC, 8 bit archit. 68866
high-speed dual-modulus prescaler with new flip-flop *(Chinese)* 101862
high-speed high-sensitivity photodiodes & OEIC props., review 117020
high-speed low power ADC design, current-mode approach 90996
high-speed pipeline ADC for W-CDMA appls., design/power optim. 102270
high-speed RS decoder, modified Euclidean algm. block 94289
hot carrier emission, timing probe 127059
hot-carrier-induced cct. degrad., long run reliab. problems 81510
humidity sens. with on-chip calib. 109493
hybrid VLC, wireless image transm. 108486
hydrogen silsesquioxane charact., appl. of charge-based capacitance meas. tech. 92131
IC pressed-ceramic package antenna for single-chip wireless transceiver 128868
IDCT, inverse DCT, optimized CMOS VLSI implement. *(Chinese)* 84250
IGBT gate driver, intell. power module, HV CMOS proc. 126824
ILD PECVD induced charging damage, IC yield/reliab. effects 101375
image sens./IC products, prod. line cross-contamination study 104101
implantable stimulators, semi-custom CMOS vs. low-power microcontroller 76690
Implas LSI microchip, nerve stimulation, body fn. control 122337
in-building opt. LAN, high speed integrated opt. wireless transceivers 85957
INCA, CMOS single chip terminal soln. for high-end telephone appls. 108483
indiv. addressable micro-mirror-arrays, space appls. 93221
inductorless LNAs, 2 V/1 GHz, with 2-3 dB NF 69235
interchip via technol., vert. syst. integrat. 126465
interconnect model, DOE and multiobjective optim. 104061
interleaved CMOS flash ADC, 6 bit, 900 MS/s 102300
interleaved-sampling front-end, sampling-rate optim. 90963
intraocular CMOS press. sens. syst. implant, prog., on-chip micromech. sens. array 98868
inverter, perform., ionising radiation effects, model 92472
IP scalable switching based on opt. interconnects 119847
IR FPAs, systs.-on-a-chip, CMOS technol., design tools 109635
JAZiO sig. switching technol., low-cost digital I/O for high-speed appls. 68810
LADIC-CAV, prog. high-speed laser driver IC for opt. recording 114614
latch-up device simul. tool, 2D, for pre-Si develop. phase 81496
LCOS liq. cryst. on Si microdisplays, frame-buffering cct. 97765
LCoS liq.-cryst.-on-Si microdisplays, develop. & appls. 121100
LHC data transm., G-link, gigabit Ethernet compliant serializer 121704
low power 10 bit, 80 MS/s pipelined ADC at 1.8 V power supply 80002
low power ADCs, design techs. 102298
low power analogue-ROM based DDS with AM, 200 MHz 114895
low power CMOS 10 bit DAC for high speed appls. 102302
low power CMOS VLSI design methods 104094
low power LSI power-supply scheme, multi-Vt SOI CMOS technol. 127036
low power pipeline archit. ADC, 33 MS/s, 10 bit *(Chinese)* 114814
low power pipelined ADC for cable modem appls., 10 bit 79985
low-jitter PLL with pseudo-differential delay elements based VCO 68657
low-K CMOS, micromachined high-Q inductors in 0.18 μm Cu interconnect 115003
low-k ILD form., instabil. trade-off, act./field device charact. 103487
low-k inter-metal dielec., act. ccts. under wire bonding I/O pads 127031
low-noise wide-band amp. with inductive source 101795
low-power 10 bit ADC, 0.25 μm CMOS, design/test results 121706
low-power CMOS, optimisation of real-time sig. proc. algms. 73164
low-power CMOS 155 Mb/s transceiver for SONET/SDH over co-ax and fibre links 109087
low-power SC noncalib. successive approx. ADC, 12 bit, 1 MS/s 90970
low-power sigma-delta modulator, fully-differential op amp 80007
low-power SOI CMOS cct., high speed, variable threshold voltages 116033
low-temp. submicron polysilicon TFTs, scaling effects, SOG appls., LCD drivers 97605
low-thermal-budget CMOS proc. simul., Si substr. gettering efficiencies 70000
LSI jn. technol., conf., Makuhari, Japan (Dec. 2000) 113209
LSI multi-level interconnects, scaling guidelines 127050
LV CMOS ccts., I_{DDQ} testing, leakage control techs. 127033
LV high-speed fourth-order sigma-delta modulator implement. 79958
LV high-speed pipelined ADC, 10 bit, 2.5 V, 40 MS/s 80001

CMOS integrated circuits continued
LV low power 2nd-order sigma-delta modulator, 15 bit design 102268
LV low-power continuous-time ΣΔ ADCs, design strategy 79963
LV switched-current pipelined ADC, 8 bit, 40 MS/s 80000
LVDS transmitter and receiver, opt. interconnections 109074
MEMS, mech. effects of fatigue and charge 104166
MEMS surface micromachined press. sens., CMOS proc. 97574
MEMS transducer, vibr.-to-elec. energy conversion 68561
metal contacts, rf precleaning, aspect ratio depend. plasma-induced charging damage 103315
metal/polysilicon CMOS gates, work fns., effects of high-k dielec. 127039
micro-mag. sens., magneto-impedance/stress-impedance, review 75765
microfluidic microchannels, fab. techs. 81611
micromechanical press. sens. in CMOS technol. 121043
micromechanical transducer elements, CMOS-based proc. *(German)* 75745
micromirror array test syst., high resoln. SLM 93220
micropower CMOS bandgap voltage ref. 125232
microsensors, parasitic behaviors charactn. 127122
microtransformers, fully integrated spiral-type, Si substr., surface micromachining 92525
mismatch-shaped pipeline ADC, 12 bit, CMOS implement. 125575
mixed digital analog reconfigurable neural network chip with Gaussian synapses 102486
mixed-sig. chip, substr. coupling meas. 114892
mixed-sig. equalizer for Gigabit Ethernet on copper wire 108369
mixed-sig. IP blocks, DFM charact. and optimisation 104138
mixed-sig. SoC for press.-sensitive fabric 109535
monolithic act. pixel sens., charge collection 97950
monolithic act. pixel sens., charged particle tracking 97955
monolithic act. pixel sens. for charged particle tracking, design/testing 121466
monolithic DC/DC switch-mode boost converter dyn. PWM, embedded power mgt. 134177
MOSFET, diffusion-drift transport, channel length depend. at cryogenic temps 70101
MOSFET gate oxide, H_2-anneal induced pos. charge generation and props 92378
MOSFET HF matching meas. for CMOS mixer port crosstalk determ. 102715
MOSFET LF noise meas. for mixed-sig. LSI & SoC, noise model *(Japanese)* 81512
MOSFET matching in deep sub-μm CMOS technols., charactn. method 103884
MOSFETs, deep sub-μm, RF perform., plasma charging damage impact 102643
MOSGRAD, CAD tool for simulating effects of systematic/random channel param. vars. 81518
MOSIS, IC prototyping and low vol. prod. service, educational programm 127034
MOST, effective channel length/threshold voltage extraction, ratio metho 70115
MPEG-4 video codec for mobile multimedia appls. 119823
MR current sens. microsystem with full digital calib. 75757
multi-oxide proc. technol., 100 nm for SoC appls., radical nitridation 127045
multi-std. wireless appls., single-chip CMOS front-end receiver 108832
multichannel optoelectronic data links, realistic end-to-end simul. 128026
multimode-interf. Michelson interferometer temp. sens., integrated optic technol. 109500
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismatc charactn. 104125
multirate-cascade sigma-delta modulators, high speed low power config. 7997
mutual compensation of mobility/threshold voltage temp. effects 92465
n-MOSFETs, channel width/length depend. flicker noise charactn. 103892
n-MOSFETs, sub-0.25 μm, hot-carrier-induced photoemission peak, locatio from gate center 103890
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
nanoscale technol., low temp. operation 116038
neurofuzzy systs., num. info. process., hardware implement. 114907
new materials for act./pass. integrated devices, wireless appls. 69221
nm-level fine struct. anal. methods *(Japanese)* 116006
NMOS capacitors, large area, soft breakdown triggers under const. voltage stre 81527
nMOSFET, lin. resist., enhanced non-scaling at cryogenic temps. 70099
NMOSFET, ultrathin nitride/oxide stack gate dielec. technol. 70125
NMOSFET matching charact. for 0.18 μm CMOS technol., substr. voltage/oxid thickness 103857
NMOSFET plasma induced gate charging damage, source/drain jn. role 10386
NMOSFET protection devices in 0.13 μm CMOS technol., hot electron/ES stress interact. 81526
NMOSFETs, CMOS proc. steps impact on drain current kink at liq. He tem 70312
noise shaping accelerometer interface circuit., two-chip implement. 131877
non-quasistatic CMOS RF-models 102738
OC-192 CMOS transceivers 96692
OEIC, DVD and high-speed fiber receiver 82447
OFDM transceiver for WLAN, 72 Mbit/s, C++ based syst. design 119580
on-chip ESD protection, induced noise issue 127063
on-chip inductance effect on sig. nets under influence of power grid noise 815
on-chip sub-ns sig. capture and charactn. ccts. 104076
on-wafer 1/f noise meas./charactn. syst., robust 109464
ophthalmology, CMOS microtransceivers, batt. operation 122332
OPITMA-1 Tbit/s ATM switching syst., adv. hardware technol. 109158
opt. head for high-resoln. posn. encoders 92474
opt. interconnection as IP macro of CMOS library 130716
opt. modulator, micromachining fab. 116757
opt. on-chip clock distrib., baseline receiver cct. 127056
opt. rotary encoders, CMOS front-end cct. 75397
opt. waveguide taps on silicon CMOS ccts. 93266
optimum voltage swing on on-chip/off-chip interconnect 92437
optoelectronic VLSI, archits. & technols. 117027
organic/ceramic packages, simultaneous switching noise 113668
OTA design for sigma-delta modulators using 0.35 μm CMOS proc. 10180
output driver current slew rate, novel test cct. *(Chinese)* 127057
oversampling ΔΣ mag. to digital converters, archit. 86447
oversampling ΔΣ mag.-to-digital converter 114847
overvoltage/reverse voltage protection for std. CMOS technol. 70315
packet-based DRAM pre-emphasis driver cct. *(Korean)* 114755
parallel pipeline ADC, 10-bit 200-MS/s, front-end S/H cct. 90969
parallel real time implement. of stereo matching 84114
parametric matching meas., high precision, transistor noise impact 104142
partially depleted CMOS/SOI technol. *(Chinese)* 104118
partially depleted CMOS/SOI technol., 0.5 μm channel length *(Chinese)* 104
partially depleted SOI CMOS technol., device design/modeling and cct. persp tive 70309

OS integrated circuits continued
artially-depleted SOI CMOS design, high perform., for 0.18 μm technol. generation 70308
artially-depleted SOI CMOS Schmitt trigger ccts. with controllable hysteresis 125273
artially-depleted SOI CMOS technol., 0.13 μm, for low-power digital/RF appls. 127046
artially-depleted SOI salicide CMOS technol., ESD robustness of devices 116040
D-SOI CMOS technol., perform. anal. of tapered gate device sizing methodology 127028
erform. improvement by laser annealed source/drain extension profiles, simul. 116030
ETRIC, PET CMOS mixed sig. front-end readout IC 122257
ETRIC PET readout IC 111004
H sensitive ISFET, chip temp. sens. 86735
hase-locked freq. synthesizers, stabilization tech. 125816
hotonic ccts. integrated with CMOS compatible photodetectors 93452
iezoelec. cryst. driver, SPICE simul. 104439
iezoresistive microsensor, ball bonding, proc. monitoring 109813
iezoresistive sens. smart compensation syst., MCA7707 proc. 121056
ipeline 15 bit 10 Msample/s ADC for ADSL appls. 79978
ipeline A/D converter, high-speed low-power area-efficient, CMOS technol. 68862
ipeline ADC, 14 bit, design and charact. *(German)* 125569
ipeline ADC, 8 bit, 30 MS/s, 1.8 V single power supply 125574
ipeline ADC, stochastic nonlin. anal. 125580
ipeline ADC with radix<2 archit. 68867
ipelined ADC, 14 bit, 20 Msamples/s, design and perform. 68870
ipelined ADC, 8 bit, 80 Msample/s with background calib. 114846
ipelined mixed-sig. fuzzy logic controller with linguistic hedge modifiers 68956
lanar MOSFET technol., 25 nm, manufacturability 126768
lasma immersion implant. for semicond. modif./doping, historical perspective 103286
lasma proc.-induced damage testing methodology for 0.13 μm CMOS technol. 104129
PLL, low-power voltage control oscillator 101837
PLL for data/clock recovery without freq. divider, phase detector 79627
PLL jitter-induced power/ground noise design perspective 125268
PMMA free-space micro-opt. modules, design, fab. and characterisation for photonic interconnects 127813
pMOSFET reliab., trench edge effects 70117
pMOSFETs, plasma doping/low energy ion implant., elec. props. 115909
PMR magnetometry, fully CMOS integrated probe 75501
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. props. 104092
polysilicon films for MEMS integrat. with submicrometer CMOS proc. 92560
polysilicon four-terminal TFTs, improved reliab. for AMLCD appl. 92343
polysilicon heater, CMOS microstruct., high temp. sens. 97573
polysilicon oxide quality optim. at wafer level, BCDMOS technol. 124432
polysilicon resistors in sub-0.25 μm CMOS ULSI appls., charactn. 81519
polysilicon TFT technol. for notebook displays 86804
polysilicon/ZrO_2 gate dielec. MOSFETs for sub-qtr. micron CMOS, low temp. proc. 127024
power IC AC-DC converter, lateral power MOSFET 126840
power-on reset pulse generator, LV cct. 101852
preamplifiers and phoswich/APD detectors for PET systs. 121627
proc. flow for combined three layer/self-aligned contacts 104099
proc. technol. trends for SoC era 116027
product screening strategy for low failure rate 81524
prog. data-path for MPEG-4 and natural hybrid video coding 106997
prog. on-chip backpropag. learning neural net 91154
proximity correction, dual mask model 103695
PSpice-model for CMOS-compatible stress sens. *(German)* 109498
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
quasi-single-drain MOSFETs, short channel charact. 81343
R-2R ladder D/A convertor, integral nonlin. anal. 114822
RAD750™-a radiation hardened PowerPC™ proc., spaceborne appls. 133248
radiation tolerant design, trends 116031
rail-to-rail successive approx. ADC, 1 V 10 bit, std. CMOS 79990
random noise generator using MOSFET channel kT/C noise 101812
random nos. generator based on a chaotic syst., 8 bit, 20 MHz 68949
reconfigurable pipeline ADC, high speed ICs, cell design 68859
reconfigurable pipelined data converter 102281
redundant binary adder-subtractor representing each digit by hybrid 2 bits/3 bits *(Japanese)* 79774
reflective CMOS LCD light valves, fringe-field effects 97685
reflective CMOS TN displays, projection appls. 97712
regulator, low dropout, 60 μA quiesc. current/250 mA max. 81502
reliab. margins, scaling-induced reductions, design-in reliab. efforts 81508
repeater insertion in tree struct. inductive interconnect 103987
resistor string DACs, design techs. for intrinsic accuracy improve. 79979
retrograde well and channel implants, tech./economic considerations 115504
RF cct. perform. degrad. due to soft breakdown and hot carrier stress in 0.18 μm technol. 91337
RF ccts., effects of gate resist. on perform. 69177
RF CMOS IC, pad de-embedding 92464
RF receiver front-end for Bluetooth appl., 1-V 2.4-GHz 102702
RFICs, conf., Phoenix, AZ, USA (2001) 89526
RFID transponder IC design using damping cct. *(Korean)* 114886
robot, fast path planning VLSI, CAM *(Japanese)* 79886
RP-MDSE, portable video compression syst. 106929
RSFQ-CMOS interface syst. 70879
S/D extension, shallow jn., ion implant. *(English)* 92462
SC bandpass filter, freq. up-translation, DDFS syst. 80048
SC interface cct., integrated sens. 79637
SC segmented DAC, clock jitter induced distortion 79993
SCALPEL mark detect. using Si/SiO_2 and 100 keV backscattered electrons 126527
scan and data driver LSIs for high-resoln. and large-size AC PDPs 97736
second order SC sigma-delta modulator, 1 V, CMOS implement. 114816
second order sigma-delta modulator using S^2I switched current tech. 114821
second-order $\Delta\Sigma$ modulator with sig. adaptive control archit. 90983
self-mixing-free RF front-end, direct-conversion receiver 108586
semicond. micropattern pixel detectors, review of beginnings 97939
shallow jn. diodes for deep sub-μm CMOS, leakage current, proc. factors effect 115822
shallow jn. technol., International Technology Roadmap for Semiconductors perspective 104141
short-channel vert. sidewall MOSFETs, proc. flow 92374

CMOS integrated circuits continued
sig. capture and timing meas. 102440
sigma-delta modulator, LV MOSFET-only speech proc. 79974
SIMOX ASIC, current-sensed double-dens. SRAM 114762
simultaneous switching noise, IBIS model *(Chinese)* 92471
simultaneous switching noise minimization using dual layer power line mutual inductors 127052
single-amp. pipeline ADC, 6 bit, WCDMA receiver appl. 80003
single-cryst. Si-resonator, on-chip readout amp., std. CMOS 127060
single-photon avalanche diodes, defect charactn., CMOS proc. monitoring 104965
sixth-order cascaded $\Sigma\Delta$ modulator, archit. comparison, CMOS implement. 102272
sixth-order MASH delta-sigma modulators for wideband appls., implement. 114896
sizing rule for high perform. long interconnects 81471
SLOTFETs, self-aligned fully depleted SOI CMOS devices, opt. lithog. 81523
small-geom. CMOS, 1.5-nm gate oxide, cutoff freq., propag. delay time 70311
smart power, controlled trigger/holding voltage, protection struct. design/anal. 81540
smart temp. sens. & voltage refs., sig. proc. 132085
SoC, 100 nm, multi-gate dielec. technol. using H pre-treatment 127044
SoC, substr. RC network model, substr. coupling noise, triple well CMOS 70297
SOI CMOS, self-heating free param. extract./cct. simul. 104140
SOI CMOS LVDS driver/receiver pair, source-body-tied transistors 125621
SOI CMOS micro-hotplate gas sens., design/simul. 121006
SOI CMOSFETs, 50 nm, ultra shallow jn., by laser annealing/pre-amorphization implant. 126775
SOI CMOSFETs, sub-60 nm, with 1.2 nm nitride/oxide gate dielec. 126776
SOI MOSFET technol., plasma charging damage 103864
SOI partially depleted MOSFETs, ULSI CMOS appl., LETISOI model anal. 103989
SOI power ICs with intell. CMOS control circuitry 81536
solid-state transducers., conf., Copenhagen, Denmark (Aug. 2000) 100428
SOS, solid phase epitaxially regrown, oscillatory strain relax. 79301
SOS CMOS low-power opt. receiver for inter-chip commun. 117023
SOS switch technol., theory and charact. for RF/microwave appls. 115009
spatially modulated light detector, current response 109583
spiral CMOS compatible micromachined thermoelec. IR microsensor 120796
spiral inductors and transformers for RFICs, modelling 91355
spiral on-chip inductors and transformers, modeling 92435
stack capacitor integrat. with buried O barrier using CMP of noble metals 127027
STI, low temp. corner leakage charact. 70300
STI CMOS devices, phys./quantitat. width depend. hot carrier model 81356
STI silicided bulk CMOS, compact layout rule extract., latchup prevention 81509
strained silicon channel 81500
sub-0.1 μm device fab., ring oscillator ccts. 81514
sub-50 nm gate length transistors and interconnects *(Japanese)* 115905
sub-5 nm multiple-thickness gate oxide form. by O implant., optim. 70313
sub-qtr.-micron CMOS, ESD protection strategy, gate-driven vs. substr.-triggered design 127026
sub-qtr.-micron CMOS devices, ultrathin ox/nitride gate stack, RTCVD 127025
submicrometer CMOS technols., hot carrier degrad. and ESD interact. 116022
substr. noise, chip-level anal. with network reduct. by matrix comput. 81470
successive approx. ADC, metastability errors influ. on SNR 102267
surface channel metal gate CMOS with light counter doping, single work fn. gate electrode 81268
surface channel SOI CMOSFET, low-freq. noise, device design optim. 81302
surface-pot.-based MOS model for RF CMOS design, param. extraction techs. 102740
SVM classifier massively parallel archit. 102461
switch, LC resonator, switched tuning 102359
switched-current 2nd-order bandpass $\Sigma\Delta$ modulator 102282
switched-voltage delay cell with differential inputs, config. and appls. 114903
SXGA liq.-cryst.-on-Si light valve, high-defn. video projector 86850
symmetric inductors fab. in CMOS technol., T cct. topol. for broadband modelling 91354
symmetric inductors in CMOS technol., T cct. topol. for broadband modelling 91314
synapses cct., neural A/D converter 91155
syst.-on-a-chip, Bluetooth transceiver 96365
T-gate recessed-channel MOSFET for sub-100 nm Si CMOS 126763
technol. develop., 0.35-μm, blanket/pocket anti punchthrough device designs 104091
technol. scaling challenges for sub-0.1 μm generations 70303
technol. scaling for wireless commun. arena 115001
temp. sens., curvature correction, digital bus interface 86776
TESLA lin. collider detector, obs. track reconstruction perform. 110366
TestChipB, prog. logic core advanced technol. demonstrator 102252
TFSOI modular proc. for CMOS power devices/ICs 104098
thermoelec. sens., CMOS compatible frontside micromachining 121037
three-axis accelerometer, bulk micromachining 109822
threshold voltage model for deep-submicron fully depleted SOI CMOS transistors 103733
transceiver, Bluetooth, GFSK modulation 96364
transceiver chip set for reduced GSM phone costs 131216
transmitter, broadband wireless commun. 108522
two-axis fluxgate mag. field sens., CMOS proc. fab., perform., appl. 75477
TX-IF chip, multicarrier GSM 900 and 1800 base station 108834
ULSI high-speed serial commun. with error correction using 0.25 μm CMOS technol. 104112
ULSI TDDB charact., nitridation effects, oxide thickness depend. 104081
ultra LV switched opamp $\Sigma\Delta$ modulator for portable appls. 102297
ultra shallow jn. form., low energy B implants, pre-amorphization implants limits 115500
ultra-shallow jn. doping technol. 116039
ultra-shallow jns. in advanced CMOS technol., proc. integrat. challenges/solns. 116029
ultra-thin oxides growth on Si(100) by RTO for CMOS/advanced devices 103358
ultrathin gate dielec. films in 0.13 μm CMOS, rem. plasma nitridation effect on integrity 81521
ultrathin gate oxide breakdown stats., phys.-based analytic approach 70385
ultrathin gate oxide CMOS with undoped selective epitaxial Si channel layer 70307
ultrathin oxide reliab., phys. and predictive models 116023
ultrathin oxide reliab., stat. breakdown meas., data interp. 116025
user prog. PLL freq. synthesizer, 1 V, GHz range design 102737

CMOS integrated circuits continued
variable threshold voltage CMOS, optimum device param., scalability 81501
VCSEL based optoelectronic multiple chip modules 117039
VCSEL high-perform. syst. for different scale opt. interconnections 82663
VCSEL/CMOS optoelectronic chip-2D opt. fiber data link parallel interconnect syst., crosstalk anal. 117040
vel. overshoot, phys. compact model 104135
vert. mesh RF capacitors in std. CMOS, design and charactn. 125778
vert. MOSFETs, 40 nm, fab. within std. CMOS proc. flow 126771
very deep submicron CMOS, global interconnects, current sens. techs. 92466
very LV CMOS companding filters, design based on MOS translinear principle 68912
VHF CMOS bandpass filter for IF appl. 102356
VLSI capacitance sens., particle detect. 109492
VLSI low power/low swing bus design archits. 127051
VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
VLSI systs., low-power ccts., design flows 81505
VLSI systs., phantom mode signaling, sig. to interconnect usage 70296
voltage buffer with resistive freq. compensation 92475
voltage limiter/regulator design 68585
weak chips, MINVDD testing, min. supply voltage value 104116
wind sens. with integrated interface electronics 86775
wireless FM type magneto-impedance sens., flash anneal of amorph. wires 120781
wireless receiver, on-chip filters and image rejection 131064
WLAN, CMOS technol. 96362
X-ray pixel detectors, small area charge sensitive readout chain, dual mode of operation 121766
xDSL sigma-delta modulator, digital CMOS technol., top-down design 79961
XPAD read-out pixel chip for X-ray counting 121711
Al(Cu) interconnect technol., on-chip inductance 81119
AlGaAs-(In)GaAs VCSELs for opt. data link appls., high perform. 82612
$CoSi_2$ CMOS test struct., 0.18-μm, latchup charactn. 104095
$CoSi_2$ SALICIDE CMOS/SOI devices, radiation hardness *(Chinese)* 92461
Cu backside contamination issues in CMOS proc. integrat., case study 92476
Cu damascene interconnection technol., self aligned metal capping 126440
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Cu full damascene metallization, sub-0.18 μm RF CMOS SoC high Q inductor and MIM capacitor appl. 125740
Cu interconnect features, elec. linewidth, test chip 103495
Cu/low-k interconnect CMOS platform, 0.13 μm, for SoC appls. 127019
Cu-SiO_2 air gap interconnect, CMOS technol. 115719
GaAs, CMOS inverter, charact. 127062
GaAs MQW modulators, flip-chip bonded kinematic package, design/testing 128027
GaAs low-temp.-grown MSM switch, ultrafast differential S/H 82441
GaAs/AlGaAs MQW detectors and modulators, optoelectronic smart pixels *(English)* 82448
GaAs-AlGaAs MQW electro-absorpt. modulator devices, parallel opt. interconnects 117038
Ge/Si self-assembled dots for faster FET, DotFETs 70158
Ge-redistributed polysilicon-SiGe stack gate for CMOSFETs, high-perform. 126773
InGaAs-Si hybrid chip Terabit/s parallel opt. connections 71624
InGaAs(GaAs) III-V photodiode /CMOS hybrid receivers, wafer-bonding, sensitivity 85960
InGaAsP optoelectronic devices, monolithic integrat. with Si electronics 117035
Mo gate electrode work fn. adjustment for CMOS technol. 127037
N ultra-low energy ion implant. from rem. plasma source, Monte Carlo simul. 115520
N-MOSFET dominant interface trap generation proc. during hot-carrier stressing 81355
$Pt/Pb_5Ge_3O_{11}/ZrO_2/Si$, sub-μm metal-ferroelec.-insulator-semicond. FET 92357
Si CMOS circuitry, oxidized porous material, low resist. substr., high freq. props. 91323
Si CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515
Si Gb/s p-i-n photodiode 1-μm CMOS technol. monolithically integrated opt. receiver 82440
Si OEICs in CMOS/BiCMOS technols. for DVD systs. 82437
Si integrated inductors in 0.18 μm CMOS technol. for MMIC/RFICs 125777
Si integrated spiral inductors, high-Q implement. in CMOS technol. 115027
Si monolithic act. pixel sens. design and testing for charged particle tracking 121444
Si sputtered microstructs. integrat. with pre-fabricated CMOS circuitry 104182
Si strained layer NMOSFETs for CMOS technol., high perform. 126772
Si surface plasma charging damage, reverse-act. area etching in poly-buffered STI proc. 103425
Si technol. opt. NOR gate 127871
Si wafers, epitaxial growth, CMOS ICs *(English)* 79387
Si:B CZ substr., boron implant., CMOS technol. 103282
Si:Ge,B(As)(P), ultra-shallow abrupt jns., Ge pre-amorphised, species depend. 115514
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 102955
Si:In, halo doping by In ion implant., advanced CMOS devices 115499
Si-based RFICs, effects of polysilicon shield on spiral inductors 115028
Si-on-sapphire CMOS, improved VCSEL/CMOS optoelectronic interconnects 93455
SiGe device archits., local area Ge^+ implant. synthesis 115498
SiGe pMOSFET perform. rel. to hole mobility in fully-strained layers 92377
$Si_{0.7}Ge_{0.3}$ fully relax. buffers grown on patterned Si for hetero-CMOS transistors 114263
SiGe/Si MQW devices for Si microelectronics 86534
Si_3N_4 technols. for post-SiO_2 p-MOSFET gate dielec. in CMOS proc. 81520
Si_3N_4/SiO_2 ultrathin RTCVD gate stacks for ULSI, post-deposition treatments 69753
Si_3N_4-SiON ultra-thin gate stack CMOSFETs, sub-50 nm, high perform. 126743
SiO_2 ultra-thin CMOS gate oxides, two-freq. capacitance meas. tech., limitations 104124
SiON-based CMOS, heavily NO nitrided, analog charact. for mixed analog/digital LSIs 127048
SnO_2/Al discrete gate ISFET pH sens., ASIC CMOS std. proc. 75710
TaN/Ta bilayer, high perform. liner for Cu-Damascene ULSI interconnects 126439
Ta_2O_5 gate dielec. CMOS devices, low freq. noise, reliab. 127058
Ta_2O_5 thin films, gate currents temp. depend. 126243
$TaSi_xN_y$ gate electrodes for dual gate CMOS devices, elec. charact. 127038
TiN PVD gate thermal stabil. under RTA, impact on CMOSFET charact. 104128
TiO_2 thin films, gate currents temp. depend. 126243

CMOS integrated circuits continued
$TiSi_2$, low temp. C54 form., refractory-metal-free C40, CMOS interconnects 80972
W selective CVD using SiH_4 reduction of WF_6, Si consumption 90422
W-TiN damascene metal gate CMOS technols., perform. improvement 127040
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 70306
WSi_x metal resistor, MIM capacitor, CMOS technol. 115040
YBaCuO IR bolometer array, cryogenic CMOS readout cct. 71169
$ZrO_2/ZrSi_xO_y$ ultra-thin films for CMOS gate appls., high thermal stabil. 127049
$ZrO_2/ZrSio_4$, thermally stable ultra-thin silicates, jet-vap.-deposition, CMOS appls. 127023

CMOS logic circuits
0.18-μm logic with dual polysilicon gate, CD control 103571
4 digit CMOS quaternary to analog converter with current switch and neuron MOS down-literal cct. 80009
4-valued unary fns. synthesis using current-mode CMOS ccts., cost-table-based tech. 79814
155-Mb/s opt. wireless transmitter for indoor networks 85958
adder, 2D IDCT, image compression 107010
adder, partially depleted SOI technol. 114726
adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
adiabatic gates, buffer comparison with conventional approach 90884
arith. units in deep-submicron CMOS, fast low-power charactn. 102115
ASIC archit., timing-optimized std. cell logic, wireless/wireline products 102011
async. cross-pipelined multiplier design, handshake cct. 102002
asynchronous interlocked pipelined chip *(Italian)* 90858
auto-bulk-biased multithreshold SOI CMOS cct., high temp. operation *(Chinese)* 92467
binary carry-propag. addit., adder family 79866
body contact-type pass transistor, complementary pass transistor logic *(Japanese)* 70133
Booth array datapath multipliers, seq. fault testing, low-cost BIST archits. 102037
bootstrapped charge recovery logic cct. *(Chinese)* 90836
buffer, adiabatic charging of long interconnects 68743
C^3L high-speed logic ccts. in capacitor coupling tech. 102068
carry-free multiplier, equiv. bit conversion algm. 114725
cascaded CMOS D flip-flop based synchronizer, perform. eval. *(Japanese)* 125403
Chameleon dyn. reconfigurable hardware-based cipher *(English)* 79849
chip output buffers, switching noise reduction, design tech. 104088
CMOS/BiCMOS static latch ccts., design/meta-stable operation considerations 102046
combinat. ccts., av. power estim., pattern compaction tech. 102110
combinat. ccts., max. power consumption problem, approx. algms. 102004
combinat. ccts., max. power dissipation simul. *(Chinese)* 102053
combinat. digital CMOS ccts., av. switching activity estim. 101882
compact central arbiters for memories with multiple read/write ports 79828
complementary pass-transistor logic ccts., fault characterisation 102005
conditional-capture flip-flop for stat. power reduction 102001
cpd. mode logic based high perform. 32×32 bit multiplier design *(Korean)* 114698
CRRDL, charge recovery-recycling differential logic, dyn. CMOS 102029
data-driven dyn. logic/NP-CMOS logic, design comparison 68750
DDS archit. based on Chebyshev approx. 101819
deep submicron CMOS structs., gate output transit. time modeling 102107
differential cascade voltage switch logic ccts., delay optim./energy estim. 68752
differential CMOS output prediction logic, 64:2 compressor realisation 90865
differential logic for low-power and high-speed appls. 102026
differential pass-transistor clocked flip-flop for low power appl. 79770
digit-serial DSP archits. in deep-submicron technol., power efficient inter-module commun. 79937
domino logic ccts., mixed-swing methodology for MAC implement. 102118
DSP appls., floating point low power adder design 68757
dual V_T domino logic, noise constrained power optim. 102031
dual-phase dyn. pseudo-NMOS SOI and bulk CMOS freq. dividers 68737
dual-rail multiple-valued current-mode VLSI with biasing current sources 79815
dual-rail static edge-triggered latch with low power consumpt. 90848
dual-threshold voltage assignment with transistor sizing for low power CMOS ccts. 68779
dyn. logic, single-phase adiabatic cct. 68716
dyn. logic cct. testing based on charge sharing 102075
dyn. single phase logic, self-timed stages, power reduction, pipeline cct. designs 102027
efficient GF multiplier, VLSI appls. *(Chinese)* 129334
encryption VLSI proc., const. charact. power dissipation *(Japanese)* 79848
energy-efficient skewed static logic design, topol.-depend. dual voltage 102103
faithful powering computation using table look-up 79860
fault charactn. and DFT tech. for I_{DDQ} fault detect. 125438
fault charactn./DFT for I_{DDQ} faults detect. 125406
FeRAM device and cct. technols. fully compatible with advanced CMOS 102179
FIR filter chip, PRML read channels 102406
FLEETzero chip, async. switching fabric expt. 79785
full adder cell, low-power embedded archit. 102059
full adders in different design styles with emphasis on low-power topologies 90890
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808
G-vector model for glitch anal. 68758
GasP async. ccts., design method and CMOS sq. FIFO implement. 79787
GasP asynchronous ccts., min. FIFO control, self-resetting logic forms 79779
gate-level simul. using IDDM model 101986
gated-clock FSMs, low power hand-over mechanism 90883
high speed dyn. latch comparator with reduced offset using init. switch *(Korean)* 79837
high speed fully depleted CMOS/SOI 2000 gate SOG array *(Chinese)* 114723
high speed multiplier-accumulator archit. 90880
high-perform. adder, 64 bit, implement. using output prediction logic 68731
high-perform. ccts., test mode, arbitrarily low test freq. 102040
high-speed PLA using dyn. array logic ccts. with latch sense amps. 114707
HV drain extended MOST for 0.18-μm logic CMOS proc. 92468
in-place delay constrained power optim. using functional symms. 79689
incrementer/decrementer cct., high-speed CMOS, multiple look-ahead struct. 102023
inverter, series-voltage noise margin 102097
inverter, vel. saturation, delay model *(Chinese)* 92463
inverter delay, gate length reduction, transistor drive currents 125408

)S logic circuits continued
atches, resistive opens, delay testing, DFT 102044
atches with three stable operating points, open loop anal. 79840
eakage current estim., product engng. environ. 102073
ow power cct. synthesis combining CMOS/pass transistor logic *(Japanese)* 79850
ow power CMOS ccts. with clocked power 68784
ow power high speed charge recycling CMOS threshold logic gate 102093
ow power protocol converter, protocol modules, selective clock suppression 90862
ow-noise logic cells, substr. noise, resistive substr. model 102070
ow-power asynchronous DES chip 106243
ow-power carry select adder 102057
ow-power design method for CPL, CVSL and domino logic families 68746
ow-power seq. cct. design using T flip-flops 90882
ow-swing clock double-edge triggered flip-flop for power reduction 125419
LV logic ccts., design considerations, simulated behavior 68727
LV pos. ECL, scalable crosspoint switch networks *(German)* 85438
n-out-of-n hardware bit voter, CMOS VLSI technol., fault tolerant designs 79809
nask prog. matrix design for seq. ccts. using universal logic gates 102081
nerged inner-product proc. using modified Booth algm. 68711
nixed PTL/static logic for low-power and high-speed ccts. 125427
MOSFETs, bulk Si and SOI, CMOS ULSI standby currents 103877
nulti-modulus divider, low-power, in 0.6 µm digital CMOS technol. 68690
nultilevel combinat. networks, power estim. based on switching activity 114696
nultiple-valued logic signed-digit full adder, neg.-differential-resist. devices 68761
nultiple-valued mask-PLA using one-transistor universal-literal ccts. 79821
nultiplier, 32×32-bit design with sign select Booth encoder 90850
MUX/DEMUX ICs using CML, 10 Gb/s, opt. link appl. 75038
NORA dyn. CMOS ccts., clock-race conditions investig. 114732
pen defect detect. by supply current test 79797
parallel multiplier archit. for low-power design 90871
pass-transistor adiabatic logic adder, low-noise/low-power design 68751
path balancing algm. for glitch power reduction 90856
phys. design of CMOS chips 81446
PLA, high-speed low-power design, pseudofootless dyn. cct. 102000
polysilicon TFT, reliab., CMOS inverter cct. 115929
power distrib. networks, transient voltage fluct. estim. 102109
power simul., stream synthesis, spectral transforms 79847
race logic high-speed carry look-ahead adder, 64-bit 125457
radix-2 online division using LSA organization 79865
regularly struct. parallel multiplier with low-power non-binary-logic counter ccts. 125426
RF appls., tailoring of CMOS logic 115026
ROM, low-power and high-speed modules, ASIC appls. 114761
scaling, optimum gate oxide thickness, cct.-level perspective 92470
schedules for power consumption using multiple supply voltages reduction 125464
self-restored current mode CMOS multiple-valued logic design archit. 79819
self-timed divider using fast, robust pipeline scheme, DCVSL ccts. 68760
self-timed pipelining using latest arriving sig. detect. 68736
seq. ccts., power estim. using graph-based methods 114695
Shifter designs for ASICs 90861
single clocked adiabatic static logic for digital low power appls. 68759
single ended pass-transistor logic, comparison with CMOS/CPL 101945
single-latch static D-type flip-flop *(Chinese)* 79843
single-phase adiabatic multiplier, SCAL-D logic, HSPICE simul. 68725
single-rail variable encoded completion detect. scheme, self-timed design, ternary MVL 90864
skew-tolerant high-speed domino logic, noise and timing var. reduction 102030
SOI domino logic, technol. mapping incl. parasitic bipolar effect 125439
split-gate logic ccts., multi-threshold technols. 102099
split-level precharge differential logic, high-speed charge-recycling 102003
SRCMOS cell, wave-pipelined arith. unit 102036
static CMOS and pass transistor logic designs, technol. mapping, delay reduction 125417
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistor sizing 102035
static CMOS ccts., stand-by leakage power minimisation 79792
static CMOS master-slave flip-flop expt. 68745
static CMOS PLA, testable design method, IDDQ testing 79806
static differential double edge-triggered flip-flop based on clock racing 90860
static gates, cycle-true leakage current modeling, leakage power estim. 102111
STI for CMOS logic technol., mfg. optim. 104097
submicron CMOS technol., current mode sense amps. 68589
subthreshold logic, ultra-low power operation 68717
switch logic tutorial tool, Boolean fns., static CMOS complex gate implement. 125293
switching activity reduction by transistor size optimisation 90826
three-input XOR/XNOR cct. for LV and low-power appls. 68783
three-phase half rail pass-gate differential logic, low-power ccts. 102028
true single phase clock style, scalable counter archit. for pre-scaler 102024
true single-phase adiabatic multiplier, BIST logic, HSPICE simul. 125449
ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
variable-latency pipelined multipliers, asynchronous and sync., design 68777
vert. CMOS gates, feasibility study 104102
Viterbi decoders, high speed add-compare-select scheme 114733
VLSI, LV design, temp. instabilities 116035
VLSI, max. power dissipation, GA *(Chinese)* 90874
VLSI cct., leakage power minimization 104010
VLSI LV/low-power/appls., std. cell library design 68837
wave steered ccts., latch count minimization and latency, integer LP 125440
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025

MOS memory circuits
6T-SRAM, 130 nm technol., high dens./perform. for SoC appls. 125469
area-efficient multiport SRAM, high random-access bandwidth, on-chip data-storage 68791
chain FRAM archit., overview/trends 90908
current-mode multiport SRAM, read and write operations, energy reduction 125482
DRAM devices, charge-to-breakdown/oxide thickness, N implant. effects 115895
DRAM interconnect line charact., underlayer geom. effect, S-param. 114756
dual gate CMOS DRAM self-aligned contact proc., tetrachlorosilane-based SiN mask films 125473

CMOS memory circuits continued
dual-gate PMOSFET, B dopant penetration/gate depletion anal. for Gbit DRAM design 102184
dual-phase-controlled dyn. latched amp. for high-speed/low-power DRAMs 90899
EAROM submicrometer polysilicon surface defects, form. mechanism 102155
embedded DRAM technol., 0.15 µm logic based, with 0.425 µm² stacked cell using MIM capacitor 125491
embedded memory diagnosis via test response compression 102139
fast pump-down back bias volt. generator for sub-1.5 V DRAMs 90900
flash EEPROM, p-channel/n-channel, reliab. comparison 79895
flash memory technol., quasi-virtual ground array, embedded appls. 68799
FRAM with chain cell struct., fully planarized, 8 Mbit 125471
fully differential switched-current memory cell with low charge-injection errors 90897
gigabit dens. DRAM cell transistor using retracted Si_3N_4-liner STI 68800
high-speed low-power fully parallel CAM macros, design for ASIC appls. 68798
instruction cache, leakage energy dissipation 68789
interconnect-centric array archits. for min. SRAM access time 125515
inverse gate electrode flash technol., CMOS proc. compatible, for syst.-on-a chip 90906
inverse gate electrode flash technol., CMOS proc. compatible for SoC appl. 102180
LV four-phase charge pumps, clock generator 125477
LV high-speed sense amp. for multilevel nonvolatile memories 90914
LV nonvolatile SRAM with back-up ferroelec. capacitors, 512 Kbit 125485
MOSFET, mobile hydrogenous ion generation in gate oxide, memory appls. 70114
multi-value voltage-to-voltage converter for on-chip EEPROM prog. 114747
multiple-valued static memory cell 68801
µP caches, static energy reduction tech. 125499
µPs, CMOS, RTD, SET and QCA technols. 102193
nonvolatile ferroelec. memories, driving appls. 70469
NOR-flash memory, low power techs. 102149
partially-depleted SOI CMOS SRAM, gate-to-body tunneling current effects 127042
pipelined-burst SRAM, low-power, design 102143
qtr. micron CMOS technol., radiation tolerant analog memory 121705
radiation hardened memory develop. at Honeywell 125503
SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
serial link, AS memory syst., PWM transceiver 114759
SONOS nonvolatile semicond. memories for space/mil. appls. 125505
SRAM, ion irrad., SEU *(Chinese)* 79882
SRAM, yield-limiting NMOSFET gate depletion 104106
SRAM macro, quasi-worst-condition BIST 125487
SRAM SOI sense-amp., smart-body-contact technol. *(Chinese)* 102121
SRAMs, dyn. power supply current testing for open defects 79883
static power consumption mgt. 102152
ultra-small bulk and SOI ccts., V_T fluct. 104133
voltage down converters for high-speed SRAMs 90902
word-line read voltage regulator for multimegabit multilevel flash memories 90915
Pt-$SrBi_2Ta_2O_9$-Pt capacitor-based FRAM, imprint failure lifetime estim. 90909
$TiSi_x$/poly-Si/oxide/Si transistor gate struct., memory device appl. 92135
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm technol. 125492

CMP *see chemical mechanical polishing*

CNC *see computerised numerical control*

CNDO calculations
EL polymers, electronic props. chain length effects 71529

coal
see also mining
300 MW coal-fired supercritical steam power plant efficiency improvement 123200
348 MW coal-fired generating unit constr. project, Morocco 88585
400 MW lignite-fired power station, FGD retrofitting experience *(English)* 123208
550 MW Hawthorn-5 steam power plant project, USA 99551
800 MW Matra steam power plant FGD scrubber retrofit project, Hungary *(English)* 99547
900 MHz radio propag. in underground coal mines 83325
1200 MW Kincaid steam power plant refurbishment project 99552
1210 MW coal-fired power plant constr. project, Turkey 88584
2785 MW coal-fired steam power plant FGD project, Poland 112309
ball race mill coal/coke grinding, operational features 78605
brown coal surface mining MV switchgear, life-cycle concepts 134261
Coal Blend Automation System, generation optimisation, cost minimization *(English)* 123193
coal-fired power plant planning, environ. considerations *(German)* 111947
coal-fired TPP, environ. protection technol. trends 112286
coal-over-coal reburn at Vado Ligure power plant, NO_x emissions reduction 88578
E-type vert. spindle coal mill syst. ident., GA 99543
elec. demand, use of coal for power generation, USA 99455
firing pipe design customisation 78580
fractures, 3D, microfocus X-ray computer tomography 122604
fuel-camion redeployer, freq. converter control, coal-fired power plant *(Chinese)* 77754
imported coals, economical utilization in existing German power plants *(English)* 99461
in-scene calib. 99047
neutron induced prompt gamma-ray anal. *(Chinese)* 77684
peat gel/water-coal slurry fuel combustion technol. 123199
power generation prospects *(German)* 123204
power-generating coals, chem. fractionation, fouling props. estim. 99459
primary energy mgt. at STEAG, hard coal procurement/handling *(English)* 99460
pulverised coal-fired utility boiler, mercury distrib. charcts. *(Chinese)* 112306
pulverized coal fired boiler, IT-based combustion mgt. syst. 112304
quality, importance for TPP *(Serbian)* 88520
Russian fossil fuels CFBC, technol. substantiation 112312
Russian steam power plants, coal substitution implications 123198
solid fuels, coal, pet coke, biomass, cleaner technol. 99454
steam power plant capacity limitation, coal quality effect 123197
steam power plant coal combustion efficiency improvement using O_2/CO monitoring 88586
steam power plant coal firing conversion, techno-economic aspects 123196
steam power plant coal firing proc. control using dyn. coal blending 99553
steam power plant ESP using skewed gas flow technol. 99555

coal continued
steam power plant flue gas cleaning efficiency improvement *(German)* 99548
steam power plant flue gas treatment using electron beam technol. 88587
steam power plant fluidized-bed coal combustion technol. *(Serbian)* 88590
steam power plant graphical supervisory coal handling syst. *(Chinese)* 77756
steam power plant retrofit project using 3D CAD software 88593
TPP, optimal coal firing, flame image proc./anal. syst. 133867
Wygen Unit 1 pulverised-coal-fired power plant, low emissions 88579
X-ray computer tomography, microfocus, 3D fractures 122604
NO emissions from coal-fired PFBC *(Chinese)* 88574
N_2O emissions from coal-fired PFBC *(Chinese)* 88574

coal gasification
cyclonic gasifier, powdered brown coal, oxygen gasification simul. 112215
Delaware City CHP plant repowering project, large sync. motor appls. 123203
IGCC integrated with methanol synthesis procs., perform. 123225
IGCC power generation syst. components modelling *(Chinese)* 88613
IGCC prospects optimism, petcoke problem, clean coal 88618
ionic transport membrane technol. for oxygen separation/syngas prod. 99602
pressurized two-stage entrained flow coal gasifier, perform. 123107
pulverised coal gasification proc., reactor thermal perform. modelling 133839
solid fuels, coal, pet coke, biomass, cleaner technol. 99454

coating techniques
see also anodisation; cladding techniques; coatings; electrodeposition; electroless deposition; electrophoretic coating techniques; encapsulation; epitaxial growth; liquid phase deposition; metallisation; spin coating; spray coating techniques; vapour deposition
acrylate/polyphenylene sulfide film capacitors for high temp. appls. 115085
advanced electroceramic components, fused deposition tech. 101485
BK7 glass anti-reflecting films design and deposition for opt. fiber commun. appls. 116894
CD-R disc perform., higher dens. recordable formats 92999
cutting tools, direct control by microtechniques 113820
cyanine dye thin film props., high-dens. DVD-recordable appls. 92967
eight-level phase microlens array fab. by thin film deposition 93183
electroceramics, conf., Portoroz, Slovenia (Sept. 2000) 100422
ellipt. X-ray microprobe mirrors, differential coating method 110462
extrusion coating modeling, electronics mfg. appl. 79400
ferroelec. thin films, conf., Boston, MA, USA (Nov.-Dec. 1999) 89554
high-perform. polymer microlens arrays, theoretical modeling 82189
MEMS materials sci., conf., Boston, MA (Nov./Dec. 1999) 89558
microfabrication and micromachining proc. technol., conf., Santa Clara, USA (Sep. 2000) 89582
microoptical elements, sol-gel dip-coating fab. *(Chinese)* 71391
multifunction minifab tools for syst. chip fab., design by Japanese companies 81412
nanostructured electrodes on plastic substrs., mfg. method 90539
opt. coating proc. develop. time/cost reduction, increased stabil., DOE 82284
patterned multifunctional nanostructures, rapid prototyping 103716
PCB conformal coating proc. optim. 115193
PDP photopatternable cond. tapes, Fodel Tape-on-Substr. 109858
photoresist coating recipe, low-vol., solvent prewet step, defect mechanisms 69968
phthalocyanine zinc spin-coated film opt. writing/erasing props. 92964
piezoelec. materials, conf., Montpellier, France (Oct. 2000) 78388
polymeric powder coating proc., adaptive computer-aided control syst. *(Russian)* 67685
solid films/surfaces, conf., Princeton, NJ, USA (July 2000) 89510
surface texture, particle deposition proc., simulated images 79196
web proc., scanning gauge data proc., 2D var. reconstr. 113810
Ag immersion PWB finish for automotive electronics, eval. 124022
CaS DCEL powder, copper-coating, fire atom absorpt. spectrosc. method *(Chinese)* 71539
Cd_3P_2 thin semicond. layered cylinder fibers, fab. methods 71249
CdTe-CdS thin film solar cells, low-temp. deposition proc. 100177
$CrSi_2$ layers on Si(111), growth upon high current pulsed Cr ion implant. 101450
Cu polycryst. films, kinetic Monte Carlo simul. of growth 90532
$CuIn_{1-x}G_xSe_2$ thin film solar cells fab., nonvacuum techs. 100112
Cu(InGa)(S,Se)$_2$ solar cells, buffer layers, ion layer gas react. 100134
GaAs anti-reflecting films design and deposition for opt. fiber commun. appls. 116894
$HgBa_2CaCu_2O_x$ HTSC thin films, prep. 79411
PZT thin films, prep. by aerosol deposition method, elec. and opt. props. 127168
PZT thin films prod. by oxide precursors and crystallized by conventional and RTA proc. 101460
Si MEMS, wear resistant hard TiC coatings, PLD 104174
SiO_2 gate dielec. layers for Si microelectronics, review 103212
ZnO varistor fabr., powder coating with mixed dopant solns. 79372

coatings
see also anodised layers; antireflection coatings; claddings; epitaxial layers; insulating coatings; liquid phase deposited coatings; protective coatings; spray coatings; vapour deposited coatings; varnish
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
advanced packaging materials, conf., Braselton, GA, USA (March 2001) 78404
anisotropic smart coatings, proper polariz. bases, digital control 131635
BCB diffractive struct., fab. for high-power laser appls. 104602
binary dielec. surface-relief Bragg gratings, coated phase masks for proximity printing 82290
capacitance matrix of unequal diam. dielec. coated cylinders above ground plane 72405
dual-luminophore press./temp. sensitive paints, PCA 104889
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
Fizeau interferometer wavemeter for CW lasers, testing and accuracy 121243
inspection with PMD refl. sens. *(German)* 67661
large-aperture phase-shifting interferometer for PSD fn. meas. 93306
large-sized coating parts, thixomolding technol. *(Japanese)* 89933
multilayer diffractive coating, EM waves transform. 117645
near-field opt. recording, fiber probe EM propag., 3D FDTD method *(Chinese)* 71256
opt. coatings surface, sol-gel method, particle size and distrib. study *(Chinese)* 71497
opt. coatings surface, sol-gel method, particle size and distrib. *(Chinese)* 82278
perfect surface, polishing, RMS roughness meas. 109986
polystyrene-coated hollow glass waveguide, IR laser delivery *(Chinese)* 93118
SMART coatings synthesis and functioning for compact instrums. and sens. appls. *(Danish)* 71467
UV lasers, indust.-strength optics, appls. 82714
HfO_2/SiO_2 high refl. coatings, laser damage and defects rels. *(Chinese)* 116890

coatings continued
Mo/Si multilayer coatings, X-ray laser appls. 127878
Nd:YAG lasers, semicond. laser pumped, mirror coating struct. design 127884
$Ni(OH)_2$ cathode, surface modif., Co coated *(Chinese)* 89063
Si opt. excited microresonators, models 116078
Zn-coated C steel plate, ultra-short pulsed Nd:YAG laser-ablation surface cleaning 72143
ZnS/MgF_2 interf. filter, laser induced damage *(Chinese)* 104869

coatings, protective *see protective coatings*

coaxial aperture antennas *see aperture antennas*

coaxial cables
cable modem technol./market perspectives, overview 74482
CATV digital services 97070
circ. waveguide-coaxial line jn., permitt./permeab. meas. 72433
cylindrical problem, method of lines soln., radial discretization 83454
directional leaky coaxial cables, design and calc. 117797
EMC, conf., Wroclaw, Poland (June 2000) 67408
HFC, Hybrid Fiber/Coax up-stream, discrete wavelet multi-tone modulation *(Chinese)* 72766
HFC network upstream transm., all digital packet DS-CDMA transceiver 74498
impedance std. calib., rem. controlled coaxial switch, pneumatic actuator 109416
Interbus commun. protocol, ASICs, ring-struct. data transm. interfaces *(German)* 74504
leaky coaxial cable, adjustable coupling loss, mobile comms. in complex environs. 108507
leaky coaxial cable, guiding radar syst., wave pattern 86166
leaky coaxial cable, radiation mode, high-order mode restraint *(Chinese)* 72444
long. TSA, coaxial line balun feed 117777
low-loss wideband microwave coaxial bias T design 69080
modal cutoff in coaxial transm. lines of conical and cylind. geometries 94079
narrowband ultra-low VSWR cable assemblies 69291
open-ended coaxial cable, full-wave anal. 96344
open-ended coaxial probe dimens., thin-layer mater. dielec. charactn. 121149
open-ended coaxial-line probe, complex permitt. meas., model 86937
open-ended coaxial-line probe, dimens. anal., Buckingham PI-theorem 109947
parallel double layer screen, interf. coupling 85448
PCB transm. line std. waveguiding struct., sig. atten. 80489
power-ground decoupling dielec. films, broadband charactn. 121164
SiC-SiO_2 coaxial nanocables, solid-liq.-solid growth 126597
soil moisture, in situ microwave meas., coaxial cable 86931
sq. coaxial lines, multipactor threshold 85447
thick microstrip antenna finite arrays, anal. 83750
three-conductor transm. line, line-modes decomp. 72394
VLBI radiosource, lunar surface sited, temp. control *(Japanese)* 109336
voltage pulse transm. along coaxial cable, edge distortion 123003
voltage pulses distortion in coaxial cable, UHF device power supply *(Russian)* 96343
$(BiPb)_2Sr_2Ca_2Cu_3O_x$-Ag HTS wires and cables for power transm. 112105

coaxial lines *see coaxial cables*

coaxial waveguides
50 GHz-plus connector and termination constr. 69294
broadband dielec. probe with coaxial line-circ. waveguide jn. 132148
circ.-rect. coaxial waveguide, multipole theory *(English)* 105830
compact coaxial waveguide combiner design for broadband power amps. 80215
complex coaxial-waveguide transits. at MM waves 91210
covered surface cracks in metals, microwave probe detect. 101578
diplexer, design optim. 80198
low-loss wideband microwave coaxial bias T design 69080
multilayer substr., coaxial-microstrip transit., design optim. 102500
needle-shaped waveguide excited microwave radiator, clinical appls. *(Chinese)* 76417
O-type fund.-mode corrugated coaxial waveguide TWT, optim. 115267
open-ended coaxial waveguide radiating into chiral half-space, refl. coeffs. 94111
pulse distortion in supercond. lines, simul. 72415
rect. coaxial line, FT anal. 117742
two-port network param., units reprod. uncertainty 86934

COB *see chip-on-board packaging*

cochannel interference
3G mobile systs., cdma2000 and W-CDMA access channel comparison 131194
adaptive antenna arrays, power reduction with null depth trade-off 105965
adaptive array antennas using modified CMA and polyphase filters *(Japanese)* 130110
adaptive array proc. for multipath fading mitigation via filter banks 73653
algm. for channel assignment under channel interf. constraints 85513
array receiver with Kalman channel predictor for fast Rayleigh flat fading environ., perform. 83664
array sig. proc., struct. spatial interf. rejection combining 118909
asynchronous TDD systs., adaptive array for high-power CCI reduction 108877
ATSC-HDTV trellis decoder, recursive metric for NTSC interf. rejection 120541
BER anal. of TCM schemes for CCI reduction in cellular mobile commun. 85681
BER upper bound for single user as fn. of interfering user's sig. strength 107575
Bluetooth network in adjacent/CCI presence, perform. eval. 85633
Bluetooth piconets, cochannel interf., packet error rate upper bound 85500
BPSK, BER perform. in CCI 117915
broadband mobile radio, joint spatial/temporal equalizer 85829
CDMA, improved multistage parallel interf. cancellation for multipath fading channels 85529
CDMA cellular systs. with adaptive antennas, data access control 108883
CDMA multicarrier archit., orthogonal complementary codes for wideband wireless commun. 129001
CDMA smart antenna receiver with space-time proc. 119891
CDMA syst., adaptive array research 83675
CDMA two-tier syst., channel segreg. method 74650
CDMA underlaying microcell/macrocell systs., capacity anal. 74832
cellular commun., freq. reuse dist. reduction using TCM 96493
cellular radio, dyn. freq. hopping 131246
cellular radio, narrow-beam antennas and fractional loading factor 74732
chaos-based DS-CDMA, CCI, multipath propag. and receiver sync. 96403
clustering techs. and fuzzy inference for CCI rejection 119195
CMA adaptive array antenna syst. with single receiver using TDM 96515
co-channel sigs. detect. and copy, space-time proc. 108554
DCS-1800 syst., overview of interfering emissions 96593
digital phased array antenna syst. for cellular PCS band appl. 83759
direct conversion digital six-port receiver, analog carrier recovery loop 96612
double-directional channel meas. 84655
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753

annel interference continued
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
DS-CDMA cellular syst., dyn. allocation optim. of transmitter power 131183
DS-CDMA cellular two-tier systs., multi-channel access 108849
DS-CDMA commun., space-time multiuser detect. in Rician fading channels 108723
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
EDGE 2-stage soft-output equalizer 84861
fast freq.-hopped multiple access sigs. detect. 130164
FDD DS-CDMA systs., downlink inter-cell interf. cancellation 108957
FDD systs., downlink space-time proc. 119046
FDTL-spatial/MLSE temporal equalizers in CCI, link-level simul. results 108891
freq. assignment problem, interf.-oriented version 131145
FSR-LPTV filtering for blind equalization and interf. rejection 130263
FTDL-spatial/MLSE-temporal equalizer, perform. eval. using field meas. data 84875
high-altitude platform links, rain scatter interf. levels calc. 83388
high-capacity cellular mobile radio, fully adaptive channel allocation strategies 74834
independent lognormal random variables sum, distrib. bounds 85716
indoor WLAN, adaptive pre-selected sector antenna transmitter diversity using DS-CDMA 108211
interf.-resistant LPTV-MMSE equalisation 119196
ISI-impaired narrow-band multiuser systs., min.-error-probab. single-user detect. 83407
land mobile to mobile channel, differential detect. 131125
LEO satellite networks, simulcast-based DCA for unicast/multicast commun. 96616
LMDS coding & modulation schemes, modem develop., channel anal. 74522
LMR, CCI reduction and path-diversity reception 74739
LOS sig., time-delay estim. in multipath environ. 118966
microwave power amps., co-channel distortion ratio, small-sig. in-band meas. 132146
MIMO commun. systs., advanced wireless access soln. 84656
MIMO interf.-limited cellular syst., simul. results 74752
mobile radio, adaptive cochannel interf. canceling with turbo codes 108894
mobile radio MIMO smart antennas, optim. 85863
mobile systs., radio channel investigs. 74864
multibeam interf. canceller based on order extended fast algms. 83393
multipath-fading channels, bandwidth-efficient pilot-sym.-aided tech. 108813
multiuser sig. design/detect. using interf.-resistant modulation 130156
Nakagami channels, correl. gamma variates sum for wireless systs. perform. 131233
Nakagami fading, CCI, av. error probab. of optimum combining 85747
Nakagami fading channel, multiple equal-power cochannel interferers, perform. anal. of max. ratio combining 74735
narrowband mobile radio, iter. CCI cancellation 85624
NCFSK demodulation, exact eval. of capture effect 72751
nonlin. PSK satellite syst., CCI influence on perform. 74873
open area repeater with interf. cancellation syst., channel simulator 131071
pers. CDMA commun., selective partial parallel interf. cancellation 119953
PHS base station, perform. of adaptive array antenna *(Japanese)* 74843
PHS network, massive scale air interface reciprocity (motion) survey 108908
PSK sigs. with channel interf., BER perform. derivation methods 85490
reciprocal multipoint networks, LEGO approach for max-min capacity 108907
RF atten. rate estim. via roadside trees with extraction techs. 117687
RF/microwave commun. systs., nonlin. distortion characterisation 85478
Rice fading channel with cochannel interf., optimum combining/MRC outage probab. 85665
semi-blind detect., burst unsynchronized CCI robustness 105810
speaker ident., effects of co-channel speech interf. 118106
subband arrays, perform. anal. 117854
TCC interf. canceller, FPGA implement. *(Japanese)* 108875
TDD packet-switched cellular systs., interf. reduction 108848
TDD systs., automatic calib. of adaptive array using dispersed SPDT switches 120057
TDMA cellular syst., channel ident. and interf. cancellation 131138
TDMA multiuser channel estim. for cochannel sigs. detect. 130284
TDMA narrowband systs., successive CCI cancellation 94060
third generation mobile radio systs., use of smart antennas 120064
two-stage periodically time-varying equalizer and interf. suppression 107698
UMTS-TDD syst., downlink channel estim. 131284
UTRA/FDD uplink, space-time combining 74825
W-CDMA RAKE reception in interpath interf., combining schemes 84902
WCDMA, uplink spatio-temporal interf. rejection combining 85831
wideband DS/CDMA commun., combined space-time multiuser receivers 96519
wideband TDMA networks, DCA, fixed cell assignment 120042
wireless ad-hoc network, adaptive antenna techs. 105978
wireless airborne commun. systs., overloaded array proc. 108694
wireless data networks, link adaptation, perform. anal. 74811
wireless mobile systs. with ISI and CCI, spatial-temporal proc. 96520

chlea *see ear*

ockcroft Walton rectifiers *see voltage multipliers*

ckpit displays *see aircraft displays*

de division multiple access
1 Gbps/cell 120 MHz bandwidth fixed wireless access syst. *(Japanese)* 85555
1X RTT CDMA systs., phase-swept/time-delay transmit diversity perform. results 85742
2D RAKE receiver based on space-time searching/tracking algm. 74540
3G CDMA air interface, QoS differentiation 85878
3G CDMA cellular stds., forward link open-loop transmit diversity 85625
3G CDMA commun., interf. mgt. methods 96549
3G CDMA transmit adaptive arrays 85623
3G downlink supporting variable rate services, interf. cancellation 119988
3G DS-CDMA systs. with array antenna, direction finding 108738
3G IP WCDMA, simul. of access to fixed packet-switched networks using OPNET 74448
3G mobile radio, high-speed downlink access, evol. to 4G systs. 85699
3G mobile radio, TD-SCDMA benefits and implement. 96609
3G mobile radio access stds. 96610
3G mobile systs., cdma2000 and W-CDMA access channel comparison 131194
3G radio design challenges in meeting customer expectations 108650
3G UMTS networks, integrated QoS support 85884
3G W-CDMA, S(2) family of low correl. quaternary seqs. 83860
3G W-CDMA cellular radio, transm. power mgt. and control 108954
3G W-CDMA semi-blind channel ident., orthogonal transmit diversity 85804

code division multiple access continued
3G W-CDMA syst., transmit antenna diversity perform. 85668
3G W-CDMA systs., channel estim. using Kalman filter algm. 85676
3G wireless commun., virtual connection tree over multiple access techs. 74656
3G wireless network, GSM and mobile IP integrat. 85893
3GPP syst., CPCH mechanisms, perform. anal. 74642
7-/63-chip opt. CDMA encoders and decoders, superstructured fiber Bragg grating based 120147
64-chip OCDMA syst., superstructured fiber gratings, time-gating detect. 131364
act. repeat DS/CDMA ALOHA protocol *(Chinese)* 119230
ad-hoc/cellular networks, perform. comparison 74673
adaptive antenna arrays *(Chinese)* 96497
adaptive antennas, pot. for mobile radio appls. 117857
adaptive array antenna with optimally form. beams, design 83669
adaptive array research 83675
adaptive blind multiuser decorrelation detector, higher order cumulant *(Chinese)* 95827
adaptive group-blind multiuser detect., new subspace tracking algm. 95718
adaptive interf. suppression, power control 107749
adaptive iter. multiuser parallel decision feedback with different code rates, perform. 131292
adaptive learning for CDMA syst. sig. recovery 107773
adaptive LMS detect. with Gram-Schmidt pre-proc. 119208
adaptive min.-BER lin. multiuser detect. for CDMA sigs., 4-QAM 73738
adaptive power allocation for mobile stations under soft handoff and traffic deviation 96582
adaptive reduced-rank interf. suppression algms., convergence/tracking 105813
adaptive reduced-rank interf. suppression with rank selection 105783
adaptive SS commun. over multipath dispersive channels 84900
adaptive wideband burst-by-burst wireless video telephony 85164
Advantest R3267 and R3273 spectrum analyzers 75389
all-IP 3rd generation networks, joint radio-IP resource reservation 85055
all-opt. asynchronous CDMA commun. syst. with double opt. harder-limiters *(Chinese)* 120121
all-opt. network based on opt. CDMA, implement. scheme *(Chinese)* 120249
AMPS/CDMA mobile handset, IF/BBA proc., BiCMOS chipset 119940
analog externally modulated lightwave systs., distortion effects, theoretical model 109151
aperiodic spreading code, blind space-time channel estim. *(Chinese)* 107729
approx. synchronized CDMA, zero-correl. duration, ternary spreading codes 130301
ARQ incremental-redundancy scheme in block-fading Gaussian collision channel, throughput perform. 129074
ARQ type-I hybrid protocol over optimal-seq. CDMA link 107818
array-receiver requiring reduced pilot power 74750
asymptotically optimal receiver, perfect MAI cancellation 96357
asynchronous band-limited systs., discrete sufficient stats. 107733
asynchronous CDMA, blind adaptive multiuser detect. algm. *(Chinese)* 130283
asynchronous CDMA sigs., channel estim. and demodulation in freq.-selective fading 119217
asynchronous CDMA systs., optimal SS seqs. constructed from Gold codes 73851
asynchronous CDMA with freq. offset, multiuser detect. 84787
asynchronous CDMA-UMTS, sliding window decorrelating detectors 85678
asynchronous DS-CDMA, choice of chaotic spreading seqs. 72939
asynchronous DS-CDMA commun., chaotic spreading seqs. *(Chinese)* 107762
asynchronous DS-CDMA syst., hard-decision multistage interf. cancellation 108533
asynchronous DS-CDMA syst., optimal lin. space-time multiuser detector 84920
asynchronous DS-CDMA syst., SS seq. design using chaotic dyn. systs. 94306
asynchronous DS/CDMA systs., robustness of subspace method for blind signature waveform estim. 96405
asynchronous M-PSK/CDMA, generalized even-odd transforms and EOE seqs. 130286
asynchronous multicarrier CDMA commun. syst., Hopfield neural net/Viterbi decoding 73868
asynchronous multicarrier syst., partial sampling MMSE interf. suppression 105805
asynchronous multipath channels, blind space-time detect. 73728
asynchronous orthogonal decision-feedback multiuser detector 119223
asynchronous QPSK/DS-CDMA, multipath Rayleigh fading channels, multistage interf. cancellation, perform. 72367
asynchronous systs., signature seq. optim. 131287
ATM evol. in wireless commun. network infrastructure 85881
ATM perform. improvement using OOC and 2^a prime seq. code with VBR 107644
ATM wireless networks, signaling/transm./traffic mgt. 107869
ATM/CDMA-based mobile systs., QoS simul. of AAL2 95910
bandpass delta-sigma modulator using SC resonator struct., 80 MHz 90966
bandpass nonlin. RF ccts., distortion, autocorrelation anal. 108967
bandwidth division type parallel combinatory DS-CDMA syst. 130285
base station transceiver, config. and perform. *(Chinese)* 120040
Bent seqs. based variable-length coding for wireless advertising 129056
BiCMOS multicarrier QAM-modulator for WCDMA basestation with on-chip D/A converter 101872
BiCMOS PCS-CDMA power amp. 101807
Bleustein-Gulyaev-Shimizu/shear horiz. SAW resonator filters using edge refls. 92711
blind adaptive optimum lin. cancellation for long code CDMA 73743
blind asynchronous CDMA receivers using code-constrained CMA 84865
blind asynchronous channel estim./equalization, multistep lin. prediction 84851
blind channel ident., subspace tracking method 119184
blind equalization with const. modulus props. 107725
blind MAI suppression, inform.-theoretic approach 119221
blind multiuser detect., second-order nonstationarity based, subspace approach 107605
blind multiuser interf. cancellation, max. likelihood approach 72364
blind separation of convolved mixtures 119215
block coded CDMA, max.-likelihood detect. using A* algm. 129095
block-fading channel spreading 106008
Bluetooth phys. layer perform. anal. in indoor wireless network 85486
BPSK W-CDMA downlink, RAKE receivers with channel estim., anal. 84913
BPSK-based WCDMA using RAKE receivers with channel estim., downlink perform. 131240
BPSK-CDMA lin. receivers, asymptotic anal. 108855
broadband mobile commun., wavelet-based multicarrier DS-CDMA syst. 108753
broadband wireless access systs., trends and challenges 85561
broadband WLL systs., capacity anal. 85558

code division multiple access continued
CA-CDMA, channel adapted CDMA for MAI/ISI free burst transm. 84912
call admission control for multi-rate traffic based on total received power 74641
capacity doubling by in-cell seq. reuse and soft interf. cancellation 85850
CATV quasi-sync. CDMA with high-order modulation 97077
cdma2000 antenna array syst., multi-user-beamforming 85748
cdma2000 cellular networks, world view of systs. and products 131106
cdma2000 mobile phones, testing requirements 96429
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA2000 searcher, real-time correlator design 74719
cdma2000 syst., channel coding perform. 85626
CDMA2000 test sigs., I/Q simul. software WinIQIM 74796
CDMA multi-carrier syst. in inperfections, receiver struct. 108609
CDMA/TDMA hybrid cellular radio, transm. rate scheduling 74627
CDSP, appl.-specific DSP for third generation wireless commun. 114792
cellular CDMA, min. duration outage anal. for integrated services with correl. interf. 85759
cellular CDMA, outage for integrated voice data services with correl. sig. and interf. 85758
cellular CDMA and TDMA over nondispersive channels, capacity 131215
cellular commun. using aerial platforms 96501
cellular downlink, spreading code optim., channel capacity estim. 85781
cellular environ., downlink transm. power control for CDMA/shared-TDD packet commun. 96514
cellular multi-service networks with mobile users, perform. anal. 96460
cellular network, channel access algms. with meas. error study 74826
cellular power-controlled packet-switched network, signalling protocol 108847
cellular radio, lin. successive interf. cancellation 96550
cellular radio, spatial diversity and power allocation 74806
cellular syst., data traffic, truncated channel inversion based uplink power control 96507
cellular syst., soft handoff scheme, syst. load anal. 85590
cellular syst., transparent reconnect procedure 96605
cellular system,inforstation implementation *(Chinese)* 96545
cellular systs., adaptive interf. suppression filtering 130054
cellular systs., call admission control for arbitrary traffic distrib. 85752
cellular systs., capacity eval. 120021
cellular systs., effects of soft/softer handover on sectorization gain 108769
cellular systs., soft handoff, base stations transm. power deviation reduction 85663
cellular systs., soft handoff, limited wired channels impact 74645
cellular systs. with adaptive antennas, data access control 108883
cellular systs. with augmented antenna arrays, perform. 85587
cellular systs. with limited receiver proc., prioritized call admission perform. 85793
cellular traffic, hybrid method using optic beam interconnects 85895
cellular uplink systs., Erlang capacity calc. 85740
channel with two-level total sig. quantization, coded orthogonal sigs. reception, noise immunity 119203
chaos-based asynchronous DS-CDMA systs., perform. estim. and optimisation 95824
chaos-based DS-CDMA, CCI, multipath propag. and receiver sync. 96403
chaos-based DS-CDMA, enhanced rake receivers 95820
chaos-based DS-CDMA syst., optimal MAI reduction 95823
chaotic CDMA with FM differential chaos shift keying 107744
closed loop transmit diversity with feedback delay, perform. 108744
CMA-based lin. constrained blind multiuser detector, closed-form anal., comments 95724
CMOS 2.4 GHz W-CDMA transceiver, direct conversion mixers and DC-offset cancellation 125814
CMOS dual-mode continuous-time baseband filter for GSM and WCDMA 80047
CMOS dual-mode RC-opamp baseband filter for PDC and WCDMA 91031
CMOS freq. synthesizer, charge pump, dual-path loop filter, PCS- and cellular-CDMA 125817
CMOS GSM/WCDMA continuous-time filter, automatic tuning 102372
CMOS high-speed pipeline ADC for W-CDMA appls., design/power optim. 102270
CMOS interpol. FIR filter, power/area efficient design for W-CDMA appl. *(Korean)* 80091
CMOS low power RF mixer for GHz wireless appls. 102713
CMOS merged LNA/mixer for WCDMA, 2 GHz, phase noise 125815
CMOS single-amp. pipeline ADC, 6 bit, W-CDMA receiver appl. 80003
CMU 200 universal radio commun. tester, CDMA capability 86784
coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
coded multiuser systs. with optimum joint multiuser decoding/detect., perform. anal. 130295
coded systs., iter. parallel interf. cancellation 130293
codeword optim., interf. avoidance/convergence 119204
coherent high-speed TD-OFCDM broadband packet wireless access, multi-level modulat., hybrid ARQ 96423
commun. systs., networks and DSP, conf., Bournemouth, UK (July 2000) 78391
complexity minimization for estim. of fading Gaussian channel in CDMA commun. 119206
composite interf. cancellation 72357
conf., Seoul, South Korea (1999) 67372
connectionless systs., acquisition depend. random access 84884
constrained detect. for noncoherent nonlin. multiuser commun. 107606
cordless PBX with urban cellular radio, meas. of propag. params. 108759
cost fn. of adaptive antenna 73627
coverage considerations for CDMA overlay of rural analog sites 85765
data embedding in digital images 95066
data transm. over noisy channels, optimal orthogonal finite order transmitter/receiver filters design 107538
data users under delay/error constraints, forward link hierarchical SIR/rate control 131150
decision-feedback multiuser detect. with feedforward orthogonal transform. 130172
decision-feedback receivers, user QoS constraints, optimal joint sig. design/power control 131076
dedicated sig. proc. systs., hierarchical automated design flow, layout generation 114783
delay estim. in CDMA commun. using fast ICA algm. 107768
demodulator, num. word-length optim. 101859
digital commun., adaptive blind joint source-phase separation 130036
digital mobile radio systs., Doppler spread estim. 74626
direct conversion hybrid CDMA transceiver, low-power AGC, telemetry appl. 108587
direct-detect. opt. sync. systs. with interf. canceller using group inform. codes 74920

code division multiple access continued
distributed antenna systs., reverse-link power control 85798
DMT-DS-CDMA syst., per-tone blind sig. separation 119220
down-link beam-forming and up-link Rake receiver joint proc. tech. *(Chinese)* 119973
downlink CDMA systs. with space-time codes and interf. cancellation 85826
downlink multicarrier with space diversity, perform. 74747
downlink scheduling in CDMA data networks 73995
downlink TD-CDMA, lin. reception and multi-sens. extension 108841
downlink wideband channel estim. algms., error robustness 131286
DPSK-based distributed sample acquisition for coherently demodulated MPSK/DS-CDMA systs. 94230
driver amp., bias control tech. for current reduction 102649
DS SS sig. acquisition in freq.-selective Rayleigh and Rician channels 85756
DS-41 and UMTS intersystem roaming 96474
DS-BPSK CDMA multiuser detectors, av.-case perform. 130303
DS-CDMA, adaptive cell sectorization 85586
DS-CDMA, blind ident. of co-existing sync./asynchronous users 84880
DS-CDMA, blind multiuser detect., subspace tracking, MLE approach 95729
DS-CDMA, chip-delay locked matched filter 107734
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA, coherent multi-carrier/single-carrier, broadband packet wireless access, perform. 74597
DS-CDMA, decision feedback partial parallel interf. cancellation 105781
DS-CDMA, double-dwell serial search algm., multi-level threshold values 96567
DS-CDMA, efficient multiuser detect. algm. using neural networks 130158
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
DS-CDMA, limits of coded transm. over fading channels *(English)* 73857
DS-CDMA, low-complexity multiuser channel estim. with aperiodic spreading codes 131257
DS-CDMA, multipath fading channels, slot timing MLE, bursty pilot sigs. 74703
DS-CDMA, multiuser space-time channel estim. under reduced-rank constraint 74667
DS-CDMA, noncoherent MMSE interf. suppression 130304
DS-CDMA, perf. of closed-loop power control for packet transm. in multipath fading 120060
DS-CDMA, Schur-saddle fn. property 131234
DS-CDMA, spreading seqs. over GF(p) with low correl. zone 94324
DS-CDMA, wireless packet transm., variable proc. gain control 84914
DS-CDMA adaptive array antenna systs., grouped multipath reception *(Japanese)* 107367
DS-CDMA asynchronous commun., GA assisted multiuser detect. 130171
DS-CDMA asynchronous robust space-time multi-user receiver 74581
DS-CDMA asynchronous sigs. in multipath channels, blind detect. using code-constrained inverse filter criterion 84776
DS-CDMA asynchronous sigs. over multipath channels, super-exponential methods for blind detect. 130169
DS-CDMA asynchronous syst. in Nakagami fading, precise BER calc. 74559
DS-CDMA asynchronous syst. with concatenated convolutional coding, iter. multiuser detect. 107613
DS-CDMA asynchronous systs., code acquisition/interf. cancellation 107758
DS-CDMA asynchronous systs., Kalman filter based space-time receiver 108599
DS-CDMA asynchronous systs., sigs. blind detect. 107771
DS-CDMA asynchronous trellis coded systs., trellis-based multiuser receiver struct. 131098
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA blind adaptive multiuser detect. 119880
DS-CDMA blind asynchronous multiuser receivers, ISI channels 107752
DS-CDMA blind multiuser detector, sing. values and sing. vectors 95730
DS-CDMA BPSK cellular radio model using simplified improved Gaussian approx. 74786
DS-CDMA cellular forward link, transmitting array antenna beamforming 108887
DS-CDMA cellular mobile radio, reverse link power control improvement 108897
DS-CDMA cellular mobile station power control by error approx. 108896
DS-CDMA cellular radio, power control params. optim. 108659
DS-CDMA cellular radio systs. anal. 108951
DS-CDMA cellular syst., dyn. allocation optim. of transmitter power 131183
DS-CDMA cellular syst., perfect power control, path-loss and fading models 74770
DS-CDMA cellular syst., Rayleigh fading, power control, forward-link perform. 74717
DS-CDMA cellular systs., adaptive array antenna beam pattern selection *(Japanese)* 131255
DS-CDMA cellular systs., adaptive channel reservation scheme for soft handoff 74725
DS-CDMA cellular systs., multi-channel assignment schemes, handoff study 108850
DS-CDMA cellular systs., SINR maximizing equalizer receiver 119949
DS-CDMA cellular systs. in freq.-selective multipath fading channel, SIR meas. 85811
DS-CDMA cellular two-tier systs., multi-channel access 108849
DS-CDMA coded asynchronous systs., long vs. short spreading seqs. comparison 108859
DS-CDMA coded systs., multicell uplink spectral efficiency 108856
DS-CDMA coded systs., turbo multiuser detect., Gibbs sampling 107770
DS-CDMA coherent syst., MMSE interf. suppression/turbo coding 106157
DS-CDMA commun., adaptive narrowband interf. cancellation 85820
DS-CDMA commun., lin./DF joint detectors using periodic long codes 130170
DS-CDMA commun. syst. in time-varying multipath channels, adaptive H_∞-subweight equalizer 85521
DS-CDMA commun. systs., perform. study of decision-directed ML phase estimators 119227
DS-CDMA convolutionally coded multi-carrier systs. 107739
DS-CDMA data bit rate improvement, bal. tree reconstruction method 107742
DS-CDMA detect., semidefinite prog. appl. 107593
DS-CDMA detect. scheme, decision directed algms. 130288
DS-CDMA detect. with combination of smart antennas and parallel interf. canceller 96518
DS-CDMA downlink, pilot-aided multipath delay estim. 131285
DS-CDMA downlink SINR maximizing RAKE receiver 108922
DS-CDMA downlink transm., spatio-temporal array proc. 107390
DS-CDMA FDD mobile radio, suboptimal algms. for downlink beamforming 85857
DS-CDMA flat fading channel blind adaptive MMSE receiver 107753
DS-CDMA forward link imperfect orthogonal MUX, nonlin. amplif. 108947
DS-CDMA forward-link resource allocation based on pricing 96462

de division multiple access continued
DS-CDMA freq.-selective channels, turbo code modified decoding algm. *(Chinese)* 117997
DS-CDMA in fading channels, code timing acquisition by differential correl. 74792
DS-CDMA in multipath channels, blind asynchronous sig. detect. 84896
DS-CDMA interblock data rate downlinks, comparison 74664
DS-CDMA iter. multi-user turbo-code receiver 128814
DS-CDMA MMSE multiuser detect., perform. anal. 95840
DS-CDMA mobile radio, adaptive parallel interf. canceller *(Korean)* 120011
DS-CDMA mobile radio, concatenated channel coding, transmit power outer loop control 96425
DS-CDMA mobile radio channel, blind space-time channel estim. 108698
DS-CDMA mobile radio with multimedia services, downlink beamforming 96552
DS-CDMA mobile reverse link, variable-rate adaptive channel coding 74630
DS-CDMA mobile satellite noncoherent systs. with orthogonal sigs., perform. anal. 74651
DS-CDMA mobile stations, joint blind rate detect. and data decoding 85779
DS-CDMA mobile syst., orthogonal successive interf. canceller for downlink commun. 74700
DS-CDMA mobile systs., detect.-aided RLS multiuser detect. in downlink 85818
DS-CDMA multi-cell randomly spread syst., multiuser detect., inform. theory 119105
DS-CDMA multi-service cellular systs., admission control, interf. estim. 74816
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS-CDMA multicarrier commun., receiver design 108661
DS-CDMA multicarrier systs., rate adaptive convolutional coding 108742
DS-CDMA multicarrier systs. in correl. Rayleigh fading channel *(Chinese)* 119232
DS-CDMA multicarrier systs. over multipath Nakagami fading channels, parallel code-acquisition 74748
DS-CDMA multicarrier wavelet based syst., multistage interf. cancellation, perform. enhancement 105818
DS-CDMA multicell syst. with base station diversity, perform. anal. 74777
DS-CDMA multidimensional multicode syst., code diversity/error detect., perform. 74790
DS-CDMA multipath channels 107755
DS-CDMA multipath channels, blind adaptive multiuser detect. 95839
DS-CDMA multirate systs., channel estim. 108918
DS-CDMA multirate wideband systs., power control/rate allocation 85664
DS-CDMA multirate/multicode systs. with long spreading codes, channel estim. 84917
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA networks, near-far resistant receiver for packet data transms. 74657
DS-CDMA networks with multiuser receivers/spatial diversity, resource pooling/effective bandwidths 74631
DS-CDMA partial parallel interf. cancellation, tracking error effect 83411
DS-CDMA PCS indoor systs. with distributed antennas, forward link perform. eval. 85744
DS-CDMA PRN, adaptive error control 108545
DS-CDMA radio channels, overlapping window decorrelating multiuser detector 107570
DS-CDMA RAKE receiver with TWCL in urban area, field test meas. 108802
DS-CDMA Rayleigh channel variable block 2D-CELP image transm. 108946
DS-CDMA real-valued seqs., SAW matched filters 96385
DS-CDMA RLS-based adaptive multicode syst. 96469
DS-CDMA semi-blind spatio-temporal channel estim. 74659
DS-CDMA sigs., blind source extraction 85882
DS-CDMA sigs., multipath channels, SVM multiuser receiver 73864
DS-CDMA sigs. in multipath channels, adaptive min.-BER lin. multiuser detect. 73722
DS-CDMA sigs. in multipath fading mobile channels, serial acquisition 74740
DS-CDMA sigs. in unknown colored noise, blind code timing estim. 74527
DS-CDMA sub-sym. based multiuser detector, syst. capacity 74658
DS-CDMA sync. with dual-antenna in unknown correl. noise 74528
DS-CDMA syst., closed-loop transmit diversity with feedback delay 119982
DS-CDMA syst., data-independent beamformer 73866
DS-CDMA syst., decoupled multiuser code-timing estim. 107731
DS-CDMA syst., multicarrier signaling and RAKE receiver integrat. 131057
DS-CDMA syst., power inversion adaptive array antenna for high power interf. suppression 72370
DS-CDMA syst. downlink, chip-based multiuser detector 96551
DS-CDMA syst. with smart antenna in wideband multipath channel 130287
DS-CDMA syst. with timing errors, anal. of partial parallel interf. cancellation 108532
DS-CDMA syst. with timing errors, perform. of hard-decision parallel interf. cancellation 108534
DS-CDMA syst. with timing errors, perform. of parallel interf. cancel. *(Chinese)* 96389
DS-CDMA systs., adaptive array antennas with common correl. matrix *(Japanese)* 108822
DS-CDMA systs., adaptive multistage interf. cancellation 108724
DS-CDMA systs., adaptive narrowband interf. rejection, parallel interf. cancellers scheme 83356
DS-CDMA systs., adaptive serial search PN code acquisition scheme 85757
DS-CDMA systs., asynchronous multi-stage SIC detector for multipath fading channels 85819
DS-CDMA systs., blind array sig. proc., temporal diversity 107421
DS-CDMA systs., CAC based on interf. 85846
DS-CDMA systs., code-timing acquisition 108597
DS-CDMA systs., code-timing sync. using space-time diversity 107767
DS-CDMA systs., combined adaptive interf. cancellation with antenna array 72358
DS-CDMA systs., constrained optim. 108616
DS-CDMA systs., Cramer-Rao bound for joint DOA/time delay estim. 107309
DS-CDMA systs., dyn. groupwise successive interf. cancellation array receiver 85741
DS-CDMA systs., efficient blind multiuser detector 73717
DS-CDMA systs., interf. reduction for reliable sync. 130282
DS-CDMA systs., joint multidimensional channel param. estim. using modified SAGE algm. 74644
DS-CDMA systs., multi-beam combining using interf. level based weighting factor 85504
DS-CDMA systs., multi-class services support with limited channel elements, Erlang capacity anal. 85743
DS-CDMA systs., multistage semi-blind adaptive multiuser detector for reverse link 131227
DS-CDMA systs., narrowband interf. suppression, FT-domain tech. 73852

code division multiple access continued
DS-CDMA systs., optimal channel estim. algm. 107738
DS-CDMA systs., power control with signature seq. adaptation 85506
DS-CDMA systs., reduced rank detect. schemes comparison 130161
DS-CDMA systs., robust single-user detect. perform. 84918
DS-CDMA systs., semi-blind spatio-temporal equalization and multiuser detect. 85815
DS-CDMA systs., semi-blind spatio-temporal equalization/multiuser detect. 131132
DS-CDMA systs., smart antenna testbed 128890
DS-CDMA systs., throughput enhancement scheme using lin. multiuser detectors 108676
DS-CDMA systs., two-stage CMA blind multiuser detect. in multipath fading 131235
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS-CDMA systs. in slow time-varying channels, param. estimators using modified SAGE algm. 74815
DS-CDMA systs. under multipath fading channels, robust adaptive DFE receiver 84856
DS-CDMA systs. uplink, multiple user max. likelihood code-timing acquisition 85805
DS-CDMA systs. with closed-loop power control, error probab. anal. 131180
DS-CDMA systs. with multistage HD-PIC, perform. anal. 85680
DS-CDMA systs. with one-stage HD-PIC, perform. anal. 84886
DS-CDMA systs. with smart antennas, DOA estim. 96380
DS-CDMA tracking mode receiver with joint channel/delay estim./MMSE detect. 131056
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
DS-CDMA variable data-modulation syst., multipath transm. 108714
DS-CDMA voice/data systs. with limited channel elements, Erlang capacity anal. 74646
DS-CDMA wideband syst., RAKE reception, antenna and path diversity 85868
DS-CDMA wireless commun., PN code acquisition with adaptive antenna array/threshold 74668
DS-CDMA wireless commun., smart antenna PN code acquisition 108735
DS-CDMA wireless multimedia syst., power assignment algm. *(Chinese)* 119972
DS-CDMA wireless multirate syst., multipath fading channels, perform. anal. 85630
DS-CDMA wireless systs., noncoherent MLSE detect. of M-DPSK 107583
DS-CDMA wireless systs., space-time blind MOE detect. 107598
DS-CDMA with lin. interf. suppression, pilot-to-data power ratio optim. 85800
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
DS-CDMA with multipath, spreading code adaptation 108828
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
DS-CDMA-based adaptive antenna array, online calib. algm. 105977
DS-SS CDMA, narrowband interf. suppression 128809
DS-SS CDMA wideband modem, IMT-2000 syst. test plant 131253
DS-SS commun., code acquisition, multiple dwell-time method 85837
DS-SS commun., piece-wise maps design, genetic prog. 95825
DS-SS perform. improvement using adaptive FIR notch filter 95822
DS/CDMA, block-sync., struct. multiuser channel estim. 119981
DS/CDMA adaptive rate convolutionally coded multicarrier syst., anal. 108809
DS/CDMA cellular overlay systs., open-loop power control error anal. 85856
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
DS/CDMA forward link based on resource sharing algm., joint Erlang capacity 85660
DS/CDMA inter-cell sync./asynchronous appls., CDSA fast/robust PN code acquisition *(English)* 108939
DS/CDMA long-code systs., blind delay estim. algm. 131077
DS/CDMA long-code systs., channel estim./multiuser detect. 108854
DS/CDMA multiple picocellular radio syst., perform. 131121
DS/CDMA multiple-chip-rate systs. supporting multiclass services, radio resource mgt. 96504
DS/CDMA multirate commun., multiuser detect. 107571
DS/CDMA pilot channel assisted syst., channel power assignment 108797
DS/CDMA syst. with mixed multirate sources, forward-link capacity 96505
DS/CDMA systs., effective multiuser receiver 85584
DS/CDMA systs., MIMO inverse filter criteria and blind max. ratio combining using HOS 84905
DS/CDMA systs., multiuser detect. with cell diversity 84790
DS/CDMA systs., two-stage decorrelating detector 74549
DS/CDMA systs. with pilot/traffic channels, per-survivor proc. seq. detect. 108800
DS/CDMA turbo coded multicarrier syst. with nonuniform repetition coding, perform. 108619
DS/FH SSMA hybrid systs., partial successive interf. cancellation 131054
DS/SFH-CDMA multirate wireless commun., multi-proc. gain anal. 107743
DS/SS systs., fast varying correl. multipath channel, blind adaptive estim./diversity combining 108529
DS/SSMA commun. with generalized random spreading, blind adaptive multiuser detect. 84788
DS/SSMA systs. with aperiodic random spreading seqs., chip waveform design 108555
DS/SSMA tech. for MBC 131338
DS/SSMA unslotted ALOHA syst. with variable length data traffic, perform. anal. 131242
DS/SSMA with random spreading seqs./matched filter receiver 85803
DSP-based ionos. radio-link using DS-CDMA and on-line channel estim. 108630
dual-band dual-mode RF front-end for WCDMA & GSM appls. 108654
dual-rate DS-CDMA systs., blind multiuser detectors over freq.-selective channels 119218
dual-rate sync. multi-carrier syst., perform. 74578
dual-use standardized FQPSK, compatibility with data links and WCDMA 74709
earthquake, city lifeline, wireless DAQ syst. 75384
(F,K,I) opt. orthogonal codes, constr. from block design 83829
fading channels, CDMA design through asymptotic anal. *(English)* 73856
fast convolution with PN codes, FPGA implement. 79855
fast freq. hopped CDMA equalization advantages 96793
FBG arrays, multiple grating writing, OCDMA encoder/decoder appl. 93046
FDD DS-CDMA systs., downlink inter-cell interf. cancellation 108957
FDD mode, adaptive method for closed-loop transmit antenna diversity 120036
FDD UMTS bands, wideband propag. meas. 83277
FDD WCDMA systs., closed-loop transmit diversity 108746
feedback commun. over fading channel, power control 119975
FFH CDMA multirate opt. syst. using power control 74986

code division multiple access continued
FFH modulation, AO-modulator based laser pulse shaping 105446
FH CDMA generalized multi-carrier transceivers 107740
FH CDMA mobile cellular networks, adaptive array appl. 107308
fiber Bragg gratings based encoder/decoder in direct seq. opt. CDMA syst. *(Chinese)* 120310
fiber Bragg-grating-based spectral-amplit.-coding opt. CDMA systs., code families 120142
fiber optic CDMA LAN, time-domain syst. model 96109
fiber optic CDMA networks using series coupler access encoder/decoder, higher order sig. anal. 131498
fiber-optic commun. systs., low-rate super-orthogonal channel coding 85963
fiber-optic networks incorporating multiple opt. amps. 74987
fiber-optic receiver struct., perform. anal. 74954
fiber-optic systs., opt. hard limiters 96683
fixed wireless access syst., simulated tolerance for uplink sync. 85560
flexible fiber Bragg grating encoder/decoder, hybrid wavelength-time opt. CDMA 131363
forward link, high data-rate service support, capacity eval. 74663
forward link, reduced-rank adaptive MMSE equalization 108919
forward-link cellular DS-CDMA over freq.-selective Nakagami multipath fading channels 131144
fourth order band-pass $\Delta\Sigma$-modulator 79634
Frank sig. and its generalizations, cyclic and n-adic shifts 117877
freq.-hopping opt. CDMA syst. 131448
freq.-selective fading mitigation, multiband wavelet packet spreading codes with intra-code subband diversity 72933
freq.-selective Rayleigh fading channels, RNS based multicarrier CDMA 107747
FSIQ sig. analyzer for 3GPP base station transmitter meas. 86786
fully-digital MDPSK DS/CDMA receiver, AFC algm. 107750
future-generation wireless networks 131206
GA for mobiles equilib. 108695
general model for multiple access commun. 95831
generalized FH OFDMA through unknown freq.-selective multipath channels 85479
generic wrapper archit. for multi-proc. SoC cosimulation and design 84959
Genetic Algorithm for Mobiles Equilibrium applied to video traffic 107906
Gilbert downconversion mixer, 2.4 GHz for W-CDMA appl., noise perform. optim. 102712
Globalstar, applying IMT-2000 features 85929
Globalstar for mil. appls. 111582
GPS receiver, interf. nulling, SS sig., adaptive antenna 74903
GPS receivers, operation, equatorial ionos. scintillations effects 120481
GSM radio network, hierarchical cellular struct. with inter-layer reuse, capacity increment 131175
H.263 video transm. over CDMA wireless networks, quality improvement 95121
handoff in CDMA systs. 108690
HFC network upstream transm., all digital packet DS-CDMA transceiver 74498
HFC upstream channel, multiuser detectors, S-CDMA access *(Chinese)* 107737
high T_c supercond. receiver equipt., mobile commun. 131222
high-efficiency modulator for dyn. envelope tracking CDMA RF power amps. 101858
high-speed MC-CDMA wireless access in forward link with multi-level modulation and hybrid ARQ 108774
highly integrated future generation software radio basestation transceivers 119956
holographic CDMA for IR wireless commun. systs. appls. 82968
hybrid DS-FH-SS syst., transform domain interf. suppression *(Chinese)* 130299
hybrid fiber-radio systs., multiple carrier CDMA sigs. 120215
hybrid MAC protocols for multimedia wireless networks, simul. models 95938
hybrid opt. CDMA coding, freq. hopping/time spreading, struct. of coder and decoder *(Chinese)* 109130
hybrid TDMA/CDMA-TDD interface, DCA algm. 131147
hybrid wavelength/time opt. transm., photonic technols. 120382
hybrid wavelet/SS syst. for broadband WLAN 108266
hybrid-ARQ protocols for Gaussian collision channel, throughput 85038
IEEE 802.11/ETSI HIPERLAN type 1 under burst noise channel, perform. comparison 96089
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
IEEE pers. wireless commun., conf., Hyderabad, India (Dec. 2000) 89556
IEEE sig. proc. in wireless commun., conf., Taiwan, China (March 2001) 78451
IEEE vehicular technol. and commun., conf., Leuven, Belgium (Oct. 2000) 78454
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
IF SAW filters, high selectivity, CDMA mobile phones 96528
image source coding, channel coding/spreading 108739
improved multistage parallel interf. cancellation for CDMA in multipath fading channels 85529
IMT-2000, channelization code assignment scheme 85778
IMT-2000, partially decentralized resource-mgt. 74821
Indonesia, field expt. in fixed wireless CDMA IS-95 74598
indoor wireless appls., perform. of turbo-coded MC-CDMA 108754
integrated networks, perform. eval. framework 96415
inter-MSC soft handoffs, blocking perform. anal. of trunk network 108768
interf. canceling receiver with few operation quantities, algms. 72361
interf. limited CDMA systs., LP optimisation strategy 107766
interf. suppression, constrained optim. model *(Chinese)* 83444
interleaver design/anal. 129015
interleavers design and anal. 130297
intervehicle commun., oncoming vehicle interf. charact. 78233
IP, global wireless systs. integrat. 85666
IS-2000 CDMA networks, fast forward link power control perform. 85797
IS-95 and 3G CDMA forward link waveforms, peak-to-av. power ratio 108808
IS-95 cdma2000 syst., phase predistortion 108923
IS-95 CDMA, voice privacy anal. 131236
IS-95 CDMA uplink, perform. improvement using decision feedback and sub-optimal Viterbi decoding 108936
IS-95 cellular CDMA location, assisted forward link triangulation proof-of-concept interim results 120493
IS-95A and IS-95B/cdma2000, comparison of soft handoff perform. 108766
IS-95A CDMA syst., multi-rate detect. algm. *(Chinese)* 84795
IS-95A uplink code, decoding 74628
iter. multiuser detect. with graphical modeling 84897
J-CDMA/AMPS appl. IF-baseband CMOS receiver, 110-MHz 108833
Japanese cdmaOne syst., band-switching SAW antenna duplexer 96527
joint detect. and joint transm. in CDMA downlinks 96494
code division multiple access continued
joint detect./pre-distortion techs. *(English)* 130147
joint predistortion/transmit diversity 74679
LDMOS distributed RF power amp., base station 101779
LEO multi-beam multi-satellite syst. with power control, downlink perform. 74894
LEO multi-beam syst., MAI 109024
LEO satellite channel with high dyn., generic multistep power control algm. 131309
LEO satellite systs., CDMA/PRMA medium access control protocol 73905
LEO satellite systs., slotted ALOHA CDMA with capture effect perform. 109017
LEO systs., modified traffic power control, generalized Gaussian user distrib. *(English)* 131308
lin. complexity likelihood ascent search multiuser detectors 107607
lin. digital filter, estim. of quantization noise spectrum 91086
lin. front end for iter. soft interf. cancellation/decoding 131070
lin. interf. cancellation multiuser receivers, convergence 131058
lin. multiuser receivers, perform. 74524
lin. parallel interf. cancellation, large syst. anal. 128805
lin. parallel interf. cancellation, perform. 84797
LINC amp., CDMA sig., efficiency optim. and lin. 101778
link budget calc. for CDMA systs. 119901
LMDS high perform. upstream scheme using multicarrier DS-CDMA 131196
long code systs., multiuser channel estim. 85516
long-code multipath syst., blind multiuser detect. 107604
M-ary DPSK DS/CDMA receiver, nonphase-based freq. acquisition method 95826
M-ary FSK DS-CDMA, design and perform. 85770
M-ary syst., complete complementary seqs. of 4-phase orthogonal seqs. 130307
MAC collision resoln./dyn. allocation protocol for wireless networks data/voice integrat. 84941
MAC protocol for voice/data integrated wireless CDMA systs. 85034
macro-micro cellular overlays design for urban areas 131163
MAI suppression by reduced-rank lin. filtering 84762
mammalian cells, RF exposure, CDMA, FDMA, DNA damage 122433
max. periodic correl. of pseudo-random seqs. 107769
MC DS-CDMA perform. in presence of partial band interf. 95836
MC-CDMA and MC-DS-CDMA, sensitivity to carrier freq. offset 84910
MC-CDMA hybrid uplink interf. cancellation receiver 73860
MC-CDMA over dispersive channel, subspace based detect. 84782
MC-CDMA over multipath fading channel, perform. of freq.-time MMSE equalizer 107764
MC-CDMA syst. with Rayleigh fading multipath channels 108852
MC-CDMA turbo coded uplink, iter. multiuser detect. and decoding 119235
MC-CDMA uplink, blind carrier freq. offset estim. 108829
MC-DS-CDMA downlink sensitivity to carrier freq. offsets 74629
MC/DS-CDMA in cellular systs., estim. of spectral efficiency 85842
microcellular syst., SCM-CDMA opt. fibre base station links 96877
microstrip coupled-line filter design for WCDMA using EDA package 114949
microwave Doherty amp., efficiency and lin. 102611
MIMO blind deconvolution, cumulant-based inverse filter criteria, props./algms./appl. to DS/CDMA systs. 84853
MIMO systs. using multiple spreading codes, MUX scheme 107661
MISO CDMA transm. with simplified receiver for wireless commun. handsets 74791
mixed chaotic seqs., combined logistic & m seqs., pseudorandom prop. *(Chinese)* 83840
mixed traffic networks, downlink rate scheduling 85746
ML detect., semidefinite prog. 130289
MMIC lin. power amp. for 3.5 V batt. operated W-CDMA handsets 80334
MMSE DFE, interior point least sq. estim. 85657
MMSE equalizers for freq. selective multipath CDMA forward link, perform. eval. 107696
MMSE nonlin. beamforming and interf. cancellation combination 84898
MMSE receivers for CDMA systs., blind startup 85476
MMSE reduced-rank multiuser receiver for sync. CDMA 108526
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuser detect. 73721
mobile commun., grouped parallel multiuser detector 108677
mobile commun., multiband wavelet-packet spreading codes 108888
mobile commun. syst., syst.-level simul. *(Chinese)* 85852
mobile commun. systs., design of voice-carrying fixed-network links 85582
mobile commun. systs., power control methods 120004
mobile commun. systs., space-time iter./multistage receiver struct. 108858
mobile computing, channel adaptive multiple burst admission control 130729
mobile fast fading downlink, equal gain combining DPSK multi-carrier CDMA 119952
Mobile IP for 3G wireless networks 85004
mobile multimedia service, sub-multiplex fn. 108668
mobile radio, digital correl. proc. use 85714
mobile radio, SOVA high-perform. decoding for turbo codes 108699
mobile radio capacity, BLAST multiuser detect. 131288
mobile radio devices, digital baseband proc., dyn. reconfigurable soln. 85898
mobile radio discrete-time sigs., residue-division MUX 85717
mobile radio syst. with joint power control and optimum beamforming 96570
mobile radio systs., joint detect. and diversity techs. 108934
mobile satellite commun. syst. with turbo coding, outage perform. 74872
mobile systs., complete complementary code for efficient freq. usage 130306
mobile telecomm. syst., SAW and digital correl. proc. 96526
mobile terminals posn. estim. from delay meas. with survey data 120494
mobile transm. power optimal control 131297
modulatable periodic complete complementary codes, generalized constr. 83897
modulated large-sig. operating conditions, component behaviour, NWA 131843
MSS, satellite diversity 85861
MT-CDMA noncoherent syst. with diversity combining 131050
MT-CDMA sigs. receiver, two-stage MLSE 119910
multi-access interf. avoidance scheme for opt. fibre-based CDMA LAN 120214
multi-carrier CDM, amplit. distribs. for Hadamard/Fourier spreading 74701
multi-carrier CDMA, transmitter diversity 108775
multi-carrier CDMA receiver, low-power MMSE archit. 108563
multi-carrier CDMA systs., Cramer-Rao bound for blind channel estim. 119219
multi-carrier DS CDMA, multi-rate traffic, BER anal. 95838
multi-carrier syst. with virtual carriers over dispersive channels, subspace based blind detector 107600
multi-code CDMA syst. based multi-class services, access control scheme *(Chinese)* 119229
multi-rate commun. systs., double chip waveforms anal. 84681
multi-rate interf. canceller for software defined radio 131262
multi-std. wireless appls., single-chip CMOS front-end receiver 108832

e division multiple access continued
multi-user detect. via iter. proc. 84800
multi-value CDMA spreading codes using mirror multi-rate filter banks 95833
multibeam satellite commun., CDMA and switching 109006
multicarrier archit., orthogonal complementary codes for wideband wireless commun. 129001
multicarrier CDMA, turbo TCM and serial concatenated convolutional code in Rayleigh fading 106029
multicarrier CDMA in multipath fading channel, successive carriers overlapping, perform. effect 73863
multicarrier CDMA syst., difference carrier detect. with two pilots 74764
multicarrier CDMA techs. for future wideband wireless networks 108840
multicarrier DS-CDMA, effects of amplit. clipping on SNR and spectral splatter 96580
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multicarrier m-ary/DS-CDMA systs., perform. anal. for high-data-rate transms. 108755
multicarrier syst., perform. over multipath fading channel 107730
multicarrier wireless systs., spreading codes effectiveness/perform. anal. 83895
multicarrier-CDMA rake receiver, time-deskew buffer design 96495
multicell network design 96503
multicell wireless data network, pricing/power control 131151
multichannel nonlin. systs., blind zero forcing equalization 119884
multicode downlink in shadowed multipath fading 131282
multicode syst. with SIR-based power control, capacity estim. 96502
multicore-fiber CDMA networks, double-wt. signature pattern codes 74966
multidimensional arrays, low-rank decomp., Cramer-Rao lower bounds 107380
multifrequency technols., perfect freq.-time codes 85715
multihop wireless network, code assignment algm. *(Chinese)* 85537
multimedia networks, CDMA ALOHA protocols, QoS and capacity comparisons 95880
multimedia systs., nonlin. power assignment and impact on capacity 96586
multimode, reduced intercell interf. for broadband wireless networks 85860
multipath channels, optimal space-time multiuser detect. *(Chinese)* 119871
multipath fading DS-CDMA channels, blind single-user array receiver for MAI cancellation 119222
multipath non-Gaussian channels, multiuser detect. 119225
multipath systs., power control/transmit diversity 85799
multipath systs., space-time block coding 129129
multiple carrier CDMA syst. for integrated voice and data services, Erlang capacity 108756
multiple DS-SS systs. with channel bands overlapped, perform. eval. 74573
multiple fibre grating sens. syst., rapid response using CDMA 97297
multiple time-scale fading channels, spatial diversity combining/power allocation 85858
multiprotocol WDM/CDMA-based opt. switch archit. 86058
multirate CDMA cellular systs., partial interf. cancellation receiver 85821
multirate sigs. constr. with controlled peak-to-av. power ratio using bal. incomplete block designs 83821
multirate sync. DS-CDMA, blind adaptive decorrelating decision-feedback multiuser detect. 84906
multirate systs. with interf. cancellation, power control 74749
multistage multicarrier receiver, enhanced interf. suppression 85525
multiuser demodulation, stat. mech. 84879
multiuser detect., pilot-channel based adaptive algm. 74694
multiuser detect. based on state-space estim. 108615
multiuser detect. based on sym.-level cancellation 108531
multiuser detect. using iter. decoding 85828
multiuser DFE of block-spread multirate transms. for QoS wireless networking 84862
multiuser interf. cancellation using simplex algm. for CDMA systs. 84889
multiuser interf. suppression using optimal seqs. combined with antenna arrays 94059
multiuser RBF-based receiver of DS-CDMA syst. 107761
multiuser receivers, optimum modulation/multicode formats 120016
multiuser receivers, throughput anal. 96547
multiuser sig. set, dist. distrib. 130296
multiwavelength opt. orthogonal syst., perform. and noise 120226
multiwavelet-based orthogonal CDMA systs. 73849
MVDR filter, auxiliary-vector estimator 107536
Nakagami multipath fading channel, perform. 131123
near-optimal multiuser detector for CDMA channels using semidefinite prog. relax. 107751
network-level QoS assurance, adaptive resource allocation 74857
networks with smart antenna, capacity anal. 131130
neural multiuser detector, perform. anal. 119207
next-generation mobile commun. systs. 96608
Nokia WCDMA expt. syst. for macro cell meas. 83306
nonlin. group-blind multiuser detect. 119983
nonlin. iter. multiuser detect. and equalization for CDMA receivers in interchip interf. 73723
nonlin. modulation, noncoherent multiuser detect., nonBayesian approach 74520
OCDMA en-/de-code, opt. scanning *(Chinese)* 109035
OCDMA encoder/decoder scheme based on waveguide 74909
OCDMA network, multi-rate encoding and blind receiving, FBG array 74976
OFDM and related multicarrier systs., finite-alphabet based channel estim. 106014
OFDM CDMA schemes, general baseband digital model/matrix representation 128992
OFDM-CDMA mobile radio syst., multipath fading channel, BER eval. 108893
OFDM-CDMA syst., anal. of parallel interf. cancellation scheme 96579
OFDM-CDMA syst., channel coding aspects *(English)* 72740
OFDM-CDMA syst. with low peak-to-av. power ratio 106058
OFDM-CDMA syst. with various proc. gains, perform. 74654
OFDM-CDMA systs., adaptive antenna array appl. 108872
OFDM-CDMA systs. with 4-QAM, dyn. spreading code selection method for PAPR reduction 131168
OFFH-CDMA multirate syst., SIR perform. eval. 74967
online arith. for detect. in digital commun. receivers 85902
OOK CDMA indoor IR wireless systs. on diffuse channel, perform. anal. 86124
OOK-CDMA indoor IR wireless commun., equalization 131622
opt. CDMA, asynchronous freq.-time spreading, modified prime code *(Chinese)* 117996
opt. CDMA, coding schemes *(Chinese)* 96654
opt. CDMA, eval. of dispersion influence 71268
opt. CDMA, modulation using ECC embedded in opt. orthogonal code 128987
opt. CDMA encoder/decoder based on fibre delay line 96823
opt. CDMA networks with bipolar codes 86025
opt. commun., coherence MUX syst., generalization 86037
opt. fiber networks design, modified prime codes and opt. proc. 96735

code division multiple access continued
opt. fiber networks MUX strategy 131533
opt. implement. for super resoln., spectrosc. method 106881
opt. implement. for super resoln., temporal method 106882
opt. orthogonal code design using GA 128999
opt. systs., MAI reduction 109092
opt. time-spreading/freq.-hopping differential OOK-CDMA syst. 74916
optimal space-time block codes 106089
optimal wideband transmit antenna diversity utilizing channel state inform. 108745
optimum binary spreading seqs. of Markov chains for async. DS-CDMA systs. 129000
optimum multiuser detect., semiblind demodulation 119216
orthogonal multicarrier-CDMA tech. with MRC scheme on two-ray multipath fading channels 96376
orthogonal Oppermann seqs., family size 72829
over-the-air handset mgt. 85620
over-the-air mobile-stations, integrated mgt. 131116
overall fibre commun. solns., opt. CDM appls. 86077
overlay systs., interf. rejection using time-transform domain distrib. *(Chinese)* 96400
oversampled chaotic map binary seqs., realisation and perform. 72938
packet-switched syst., capacity eval. 108798
partially coherent MC-CDMA downlink perform. in Rayleigh fading channels 108568
patch-slot composite antenna for VH-pol. diversity CDMA base stations 72671
perform. improvement, bias reduction using optimized partial parallel interf. cancellation factor 131122
pers. CDMA commun., selective partial parallel interf. cancellation 119953
pers. commun. network, two-location algm. with implicit registration fn. 119317
perturb. methods for cancelling multi-user interf. 128800
PHEMT IC, dual-band tri-mode receiver, N(W)-CDMA systs. 96482
PHEMT technol. for high efficiency CDMA power amps. 80278
phone standby time, quick paging channel in soft handoff 119976
planar antenna arrays, appl. in mobile commun. systs., beamforming algm. 117860
plastic optic fiber access network based on OCDMA technol. *(Chinese)* 109132
PN code nonzero-IF likelihood acquisition scheme 84899
PN generator, DSP 106103
PN seqs. with low correl. zone, anal. 72798
polyphase seqs. with even/odd crosscorrelation props. 108527
posn. location using IS-95 forward pilot sigs., NLOS error mitigation 108898
power control, time delay compensation 73867
power controlled cellular radio systs., time delay compensation 96542
power-controlled cellular network, single freq. broadcast syst. perform. 85806
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
PPM-CDMA commun. syst. with opt. hard-limiter 74910
PPM-CDMA sync. fiber-optic systs., interf. reduction 109042
pre-combining advanced blind multiuser detector for time and freq. selective wireless channel 119955
predistortion-based lin. for forward-channel link broadband appl., CDMA 74704
PRMA/CDMA TDD protocol with decorrelating multiuser detector and adaptive permission access 95837
PRN, quasi-sync., perform. eval. 131226
pulse interval modulation-CDMA opt. wireless commun. scheme, BER 86119
pulse-posn.-hopped syst., capacity anal. 119939
Q-CDMA and chaotic SS CDMA systs., perform. comparison over Saleh indoor channel 74584
QoS-sensitive networks, multiclass call admission control 131270
QPSK sig., over-saturated multiple access commun., tree-struct. joint detect. *(Chinese)* 95828
QS-CDMA, timing control algm. anal. 107746
quantised chaotic dyn. in multiplex commun., 1D maps 94304
quartz tuning fork resonator array, photolithography/selective etching 116205
quasi-sync. systs., seqs. generation for multicode transm. 72804
RAKE 3G CDMA receiver, implement. to cdma2000 std. 85897
RAKE coherent combining for broadband single-carrier DS-CDMA wireless commun., expt. 74638
RAKE receivers, channel estim. errors and Doppler diversity 108920
random access systs. with heavy-tailed packet length distrib., perform. anal. 131202
random multiple access systs. with packet combining, anal. 107759
random-access networks, traffic-aided multiuser detect. 84882
rate/power/cell control for delay insensitive appls. 74681
Rayleigh correl. multipath fading channels, iter. multi-user detect. *(English)* 74781
Rayleigh fading, orthogonal signaling with coding/diversity, asymptotic perform. 74552
RBF-based multiuser detector for multicode DS/CDMA syst. 84778
receiver steepest descent algm., systolic implement. 119205
reduced-cable smart motors using DC power line commun. 99867
RENE, Rice Everywhere NEtwork project, multitier wireless commun. 85499
reverse link pole capacity formula generalization 131178
RF power amp., BJT lin. cct. 68596
RF sig., digital generation, band-pass Δ-Σ modulation 101820
RF sig. transms., SCM fiber-optic links, nonlin. effects 75040
RF-LDMOS lin. power amp. technol., high power/high efficiency 69231
RFICs for digital cellular 2G, 3G and cordless systs., status review 120079
robust adaptive SS receiver, neural net preprocessing, non-Gaussian noise 74571
robust CDMA sig. detect. in user and interf. signature mismatch 84909
robust commun. systs. using quasi-Walsh PN seqs. 84885
Rohde & Schwarz's CMU200 universal radio commun. tester for WCDMA meas. 131845
RQDMA, MAC protocol supporting QoS in IP-based broadband WLL 95859
RS coded DS-CDMA cellular systs., errors-and-erasures decoding 131296
S-ALOHA networks, packet combining in Rayleigh fading channels, higher layer protocol perform. 73896
S-CDMA and TDMA, comparison for cable modem upstream channel 84883
satellite systs., adaptive orthogonal code assignment 108991
SAW filter design issues for 3G cellular phones, packaging 85904
SCDMA systs. over multipath fading channels, blind fractal sig. estim. 96566
SDMA and CDMA, spatial filter oriented adaptive spreading tech. 107745
semicond. indust. role in wireless commun. evol. 108684
seqs., power variance reduction methods 85588
serially concatenated ECC syst., joint iter. decoding 108861
SFH multicarrier DS-CDMA for transm. over Nakagami multipath fading channels 85538
shared-TDD packet systs. in cellular environ., throughput eval. 85738
sig. MUX under interval uncertainty, Walsh fns. 130298

code division multiple access continued
Singapore, W-CDMA field trial 107862
single-chip prog. transceiver PRG code 74523
SIR-based power-controlled cellular syst. in multipath fading environ., reverse link capacity 74734
slotted CDMA systs., single-code/multi-code MAC protocols 119779
smart antenna, capacity improvement *(Chinese)* 72685
smart antenna receiver with space-time proc. 119891
smart antenna syst., DSP board, W-CDMA WLL channel 72639
smart antenna syst. based on DOA estim. *(Chinese)* 119224
smart antenna systs., impact of W-CDMA sigs. 83705
smart antenna technol. for wireless commun. 117843
smart antennas for multi-service UMTS, perform. study 117856
smart antennas in micro-/pico-cellular propag. environ. 117842
SMPT-based systs., spreading seqs. design 107922
SoC design, gradual refinement of commun., mixed-level cosimul. 79709
soft handoff based archits., sector orient. 108736
soft handoff between IS-95A and IS-95B/cdma2000, perform. eval. 74765
soft handoff thresholds, adaptation using fuzzy inference syst. 85760
soft interf. cancellation improvement 128813
software-based syst., heterog. multimedia services, traffic perform. 74643
space diversity in SDMA and CDMA mobile commun., neural net appl. 74778
space-scatt. mobile radio networks, radio sigs. dyn. range 85614
space-time block coded multicarrier syst. multiuser receiver 108860
space-time decorrelating receivers in multipath fading channels *(Chinese)* 73861
space-time distributed multi-path params., detect. and estim. 108544
space-time spreading multilayered syst. 74582
space-time-code blind receiver and neural net implement. for CDMA systs. 96391
spatial CDMA for multiple antenna access, capacity/error rate anal. 74529
spatio-temporal receiver struct. for multi-rate appls. 119991
spatiotemporal chaotic spreading seqs. for CDMA commun. 95834
spectral efficiency, freq.-flat fading impact 74519
spectral efficiency with transmit and receive antenna arrays 85662
spectral encoded opt. CDMA, error-free matching channel recovery 131362
spectral regrowth and in-channel distortion, time-domain model 107772
spectral regrowth and waveform quality of CDMA sig., anal. 84921
spectral-amplit.-coded fiber-Bragg-grating-based opt. CDMA systs. 96700
spectral-amplit.-coding opt. CDMA syst. perform. anal. 96664
spectrum overlaid systs., interf. suppression 72356
spectrum slicing coherent light sources in high-capacity fibre transm. 85947
spreading seqs., bounds on aperiodic and odd correl. 117958
spreading seqs., design method *(Chinese)* 85536
spreading seqs., Lorenz dyn. chaotic sync. 107748
SS opt. CDMA syst. 120213
SS seq., chaotic dyn. syst., ergodic theory 117872
SS transm., spreading waveform estim. 72725
SS wireless mobile commun. networks, congestion 85769
step chirped fibre grating, phase mask principle & design *(Chinese)* 127683
stratos. commun. syst., narrowband interf. rejection 108679
subchip multipath component separation *(Chinese)* 119906
subchip-spaced multipath diversity 74702
subharmonic load pull of CDMA power amp., anal. 68590
subspace tracking based blind multiuser detect., MMSE estim. 73719
subspace-based multiuser detect., perform. 130290
successive interf. cancellation receiver with neural network compensation 105817
successive interf. cancellation with SISO decoding/EM channel estim. 105804
sum capacity, periodic correl. props. influence 107760
SVM and multiple hypothesis test problem 130166
sync. CDMA, multiuser detect. using probabilistic data assoc. 119210
sync. CDMA syst., perform. of UCHT seqs. 73848
sync. channel, eavesdropping, EM-based approach 95725
sync. channels, turbo multiuser detect. with unknown interferers 130292
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multiuser detector 85527
sync. opt. systs. with APD and thermal noise, mark-detect. algm. 96667
sync. systs., bandwidth-constrained signature waveforms for network capacity maximisation 84891
sync. systs., GA assisted joint multiuser sym. detect./fading channel estim. 85459
sync. systs., iter. constr. of optimum signature seq. sets 85867
sync. trellis-coded syst. for wireless commun., perform. 74543
syst. uplink, av. SIR/outage probab. calc. 96467
T/CDMA archits., integrat. voice and data appls. 119212
TD-CDMA, channel estim., optimum energy partition between data/midamble 74675
TD-CDMA based mobile radio systs., joint-detect. techs. comparison 107594
TD-CDMA MAC wideband protocol, scheduling scheme 130459
TD-CDMA syst. perform., radio resource allocation policies 131148
TD-CDMA uplink, multiuser detect. perform. 119946
TD-CDMA uplink, space-time sig. proc. using multistep joint detect. 96604
TD-SCDMA syst., perform. of smart antenna 96517
TDD cellular radio, video delivery and resource allocation 85890
TDD DS-CDMA mobile commun. syst., link perform. 96564
TDD-CDMA receivers, Bayesian multistage interf. canceller for multiuser detect. 105799
TDD-CDMA receivers, soft Bayesian recursive interf. cancellation/turbo decoding 108938
TDD-CDMA systs., FIR RAKE multipath diversity with antenna array 96397
TDD/TCDMA real time/nonreal time traffic, channel adaptive scheduling 131274
TDMA/CDMA 3G systs., multirate transm. receivers 74660
ternary spreading seqs. with zero correl. duration 72710
third generation mobile commun., heavy traffic period probab. 131174
third generation mobile radio systs., use of smart antennas 120064
third generation wireless systs., open loop transmit diversity schemes comparison 85750
third-generation mobile commun. syst., TDD CDMA, combined power control 74766
three-state Markov chains, optimum spreading seqs., SSMA 94307
time spreading/wavelength hopping codes, opt. CDMA syst. 120116
time-varying channels, unequally protected multistage VQ 85720
time-varying wireless commun. channels, wavelet packet-based model 85813
transmitter perform. testing & troubleshooting, adv. DSP 108836
trellis code multiple access, iter. multi-user detect. using, posteriori probabilities 130155
triple-mode dielec. monoblock bandpass filter for base station appls. 102556
tunable opt. orthogonal code encoder/decoder for opt. CDMA 96822
turbo decoder, 32-bit fixed-point DSP implement. *(Chinese)* 117998
code division multiple access continued
turbo proc. in joint multi-user detect./decoding *(Chinese)* 94333
two track RSPUDT struct. for SAW filter size reduction, design and perform. 92763
two-channel grating-based OCDMA syst., interchannel interf. noise reduction 74972
two-stage MMSE partial PIC receiver for multiuser detect. 84907
two-tier syst., channel segreg. method 74650
type-II hybrid ARQ protocol and appls. in slotted Aloha DS-CDMA 95914
ultra miniature isolator with broadband isolation using ferrite gyrator 92870
ultrafast opt. waveform synthesis/proc./transm. 117351
UMTS, develop. and validation of mgt. strategies 85847
UMTS, downlink interf. estim. 74624
UMTS, general packet radio service *(Italian)* 85710
UMTS, radio resource mgt., network perform. impact *(English)* 74784
UMTS, US CDMA-2000 approach, UMTS std., WCDMA *(Italian)* 85709
UMTS mobile commun., W-CDMA IF receiver and transmitter 108944
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
UMTS networks, multimedia, multicall service 130969
UMTS satellite systs., CDMA and PRMA anal. models for voice users 109032
UMTS sig. quality assess., time-freq. rep., virtual instrum. 119962
UMTS third generation mobile radio, differences from GSM *(German)* 74782
UMTS transceiver, PLL synthesizer, CMOS VLSI delay oriented waveform converter 102735
UMTS-TDD syst., downlink channel estim. 131284
uncertain channels, multicoding and adaptive modulation 108915
underlaying CDMA microcell/macrocell systs., capacity anal. 74832
unipolar opt. CDMA syst. perform., dispersion and nonlin. impact 131560
uplink CDMA systs., multistage multiuser detector with parallel interf. cancellation 84895
uplink coherent detect., dual mode channel estim. 131260
uplink-sync. multi-carrier CDMA in wireless commun., perform. 85816
UTRA downlink with W-CDMA, space diversity schemes 120065
UTRA TDD, MMSE adaptive receiver 119947
UTRA-TDD and FDD syst., interf. 96563
UTRA/FDD uplink, space-time combining 74825
UWB for navig. and commun. 120490
variable redundancy coding for mobile channels 129057
variable spreading-factor systs., multipath multiuser detect. 119978
variable-rate packet syst., perform. anal. *(Chinese)* 95830
VBR CDMA traffic, power control policies syst. anal. 85876
vector channels, low-complexity interf. mitigation, design/anal. 105803
Verdu soft demodulator, iter. coded multiuser detect. 107609
video transm. over third-generation mobile systs. 106906
Viterbi decoder, FPGA implement. 94328
voice/data integrated packet networks, MAC protocol 131067
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
W-CDMA, MUX and channel coding scheme, implement. algm. 107735
W-CDMA, near-far-resistant single-user channel ident. by interf. subspace rejection 84904
W-CDMA, optimal power distrib. for successive interf. cancellation 85812
W-CDMA, packet data access enhancement 107774
W-CDMA, rate compatible punctured turbo coding 84887
W-CDMA, space-time antenna transmit diversity, anal. *(Chinese)* 119231
W-CDMA 180 W 3G LDMOS power amp., internally matched LTCC 102610
W-CDMA blind adaptive antenna array beamforming scheme 108924
W-CDMA bursty data traffic, rate guarantee and fair access support 130446
W-CDMA cellular mobile systs., distributed power control algm. 96585
W-CDMA cellular networks, connection admission control eval. 85851
W-CDMA cellular syst., delay profile meas. syst. using common pilot channel *(Japanese)* 120049
W-CDMA cellular syst., soft handover algm. timer settings 96575
W-CDMA cellular systs., evol. of high-speed packet-data services 131249
W-CDMA cellular systs. supporting multimedia traffic, perform. eval. 84890
W-CDMA channels, multimedia transm., resource allocation with adaptive QoS 85384
W-CDMA downlink, interf. cancellation schemes 85754
W-CDMA downlink detect., Kalman-filter based chip estimator 119948
W-CDMA downlink receiver algms. prototyping, basics and implement. 108562
W-CDMA forward link, high-speed packet transm., hybrid ARQ schemes 96424
W-CDMA handset power amp., lin. based on predistort. tech. 80324
W-CDMA improvements, principles and expt. results 108839
W-CDMA mobile cellular terminal positioning capabilities 131135
W-CDMA mobile commun. systs., switched beam antenna 108720
W-CDMA mobile network videotelephony, decoded video quality 96523
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller with iter. channel estim. 72355
W-CDMA mobile radio, reverse link site diversity, turbo/convolutional coding 108895
W-CDMA mobile radio systs., sectorized space-time multiuser detect. 84794
W-CDMA mobile syst. uplink, channel estim. params. 96572
W-CDMA mobile terminal, PLL module 74691
W-CDMA mobile terminal, RF module, direct modulation 74799
W-CDMA modem, prog. logic/proc. platform, multimedia capabilities 85418
W-CDMA network downlink, pilot-assisted spatio-temporal array-receiver 85830
W-CDMA networks, receiver perform., sync. impact 108830
W-CDMA networks for high data rate appls., resource allocation strategies 85763
W-CDMA power controlled schemes with interf. cancellation, capacity 85877
W-CDMA RAKE reception in interpath interf., combining schemes 84902
W-CDMA receiver, DSP ultra low power implement. 74678
W-CDMA receiver, IF-SAW filtering 96386
W-CDMA reverse link, coherent adaptive antenna array diversity/SINR-based fast transmit power control 74639
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108885
W-CDMA reverse link, inter-cell site diversity using two-step selection combining, expts. 74640
W-CDMA reverse link, receivers for packet transm., comparison 108884
W-CDMA single-chip IF transceiver IC, dyn. range variable gain amps. 131267
W-CDMA syst., RLC multiple rejects ARQ for packet data service, perform. anal. 73897
W-CDMA syst. over Rayleigh fading channels, perform. anal. of init. cell search *(Korean)* 120012
W-CDMA syst. smart antenna, wideband multipath channel 131063

division multiple access continued
W-CDMA syst. Viterbi decoder implemented on TI TMS320C6201 DSP chip 102192
W-CDMA systs., appl. of transmit diversity 108779
W-CDMA systs., QoS guaranteed services, emulator for radio resource mgt. 131152
W-CDMA UMTS systs., switched beam antennas, perform. and capacity 85844
W-CDMA uplink, blind channel estim. and multiuser detect. 73850
W-CDMA UTRA radio interface, tree random access protocol with priority resoln. 84919
W-CDMA VBR traffic, anal. framework 96455
W-CDMA-TDD for multimedia mobile commun. 96574
W-CDMA/digital TV sigs., ACI meas. via spectrum analyzer 72350
W-CDMA/GSM dual band and dual mode handset, RF front-end module design 108930
W-CDMA/OFDM for mobile multimedia commun. via LEO satellites, uplink perform. comparison 85640
WAST3G, comprehensive WCDMA simul. tool for third-generation mobile commun. 120037
WATM/CDMA protocol, MAC layer anal. 73899
wavelet packet based indoor wireless channel model 108598
WB-CDMA terminal, low-complexity channel estim. scheme 85814
WCDMA, look-direction downlink-beamforming *(English)* 107413
WCDMA, optimum demodulator for STTD 108678
WCDMA, periodic/event-triggered intra-freq. handover meas. reporting comparison 85787
WCDMA, radio network planning proc. and methods 108844
WCDMA, shared and dedicated resources perform. 96439
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short-term channel props. 74666
WCDMA, uplink spatio-temporal interf. rejection combining 85831
WCDMA, WMSA channel estim. tech., uplink perform. 74767
WCDMA appls., DSP-based high-speed turbo code decoder 96561
WCDMA cellular syst., calc. of cell capacity and coverage rad. *(Chinese)* 119941
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA downlink syst., soft handover technol. *(Chinese)* 108651
WCDMA matched filter, FPGA implement. *(Chinese)* 95829
WCDMA mobile syst., fading channel, power control 74689
WCDMA mobile terminals, flexible RAKE receiver archit. 85807
WCDMA multimedia systs., optimal resource mgt. 74820
WCDMA receiver ASICs, cellular handset design 120076
WCDMA single chip high speed channel decoder, design/implement. 94331
WCDMA single code/multi-code signalling for high rate data transm., delay spread effects, BER perform. 96465
WCDMA single-user interf. cancellation for fading channels and diversity antennas 108777
WCDMA sync. channel and common pilot channel, transfer power allocation 96583
WCDMA systs., indoor antennas meas. 83512
WCDMA systs., Kalman filter channel tracking algm. 74695
WCDMA third generation cellular telephones, power source improves output on transm. *(Spanish)* 108692
WCDMA UTRA uplink, joint demodulation with smart antennas *(English)* 106069
WCDMA UTRA uplink with unknown channel model order, smart antenna schemes 74688
WCDMA vehicular channels, turbo TCM error perform. 74808
WCDMA voice/data integrated syst., stabilised random access protocol 119289
WCDMA-based cellular wireless IP networks, TCP perform. 84984
wideband cellular networks, power control results 85745
wideband DS-CDMA syst. with transmit diversity, forward link capacity 85777
wideband DS/CDMA commun., combined space-time multiuser receivers 96519
wideband interf. cancellation base station, field test perform./anal. 72354
wideband networks, interf. subspace rejection, mixed-power operation modes 128812
wideband TDD CDMA syst., joint detect. tech., link level simul. *(Chinese)* 96544
wireless CDMA systs., power mgt. for IP-based data transm. 107853
wireless commun., adaptive signaling schemes 108740
wireless commun. link, GSM interf. detect. 83410
wireless commun. receiver, pipelined multiuser detector 108566
wireless commun. syst., PON archit. & implement. 109126
wireless data networks, multiple channel globally constrained power control 131053
wireless data transmitter for embedded sens., machine health monitoring systs. 120112
wireless environ., prefetching protocol for continuous media streaming 130367
wireless link, distributed power control for real-time and TCP packet commun. 96426
wireless multiaccess systs., optimal throughput 131074
wireless multimedia commun. syst., traffic perform., access scheme selectability impact 119781
wireless multimedia systs., power control/rate mgt. 96548
wireless networks, integrated services with space-time block-coded transms. 108612
wireless networks, resource allocation based on joint packet/call levels QoS constraints 74682
wireless packet networks, service differentiation support using distributed control 131162
wireless pers. multimedia commun., conf., Bangkok, Thailand (Nov. 2000) 89557
wireless resource mgt. using GA for mobiles equilib. 130584
wireless systs., link/network layer requirements for mobility support 85739
wireless systs., robust constrained lin. receivers 85477
wireless technol. effect on spectral analysers 97166
wireless video, error resilient codec 96325
wt. init. for adaptive multistage parallel interf. cancellation in CDMA systs. 84908
AlGaAs-GaAs HBT variable gain power amp. for mobile WCDMA appls. 91368
GaAs MESFET MMIC power amp. for PCS and W-CDMA base station, 4 W 125759
GaAs enhancement HJFET dual-mode power amp. for TDMA/CDMA handsets 114993
GaAs power FET, ultrabroadband, W-CDMA base station appl. 91244
GaAs power HFET, high efficiency, W-CDMA base station appl. 91243
GaAs push-pull FET, W-CDMA base station 126895
GaAs/AlAs power MESFET, wet selective etch procs. 92067
$GaPO_4$, SAW props., IF CDMA filter 92753

code division multiple access continued
InGaP/GaAs HBT power amp. MCM for 1.95 GHz W-CDMA handsets 96485
Si BiCMOS receiver IC supporting WCDMA, CDMA, AMPS cellular handset appls. 96483
Si PCS-CDMA MMIC power amp. with impedance-controllable biasing scheme 91349
Si bipolar W-CDMA IF transceiver chip-set for UMTS mobiles 96484
SiGe BiCMOS IC, W-CDMA zero-IF front-end, UMTS receiver 96481
SiGe BiCMOS technol. LNA/mixer IC, lin., cell phone appls., 2.5-GHz 91351

code excited linear prediction *see linear predictive coding*

code generation *see program compilers*

code standards
see also codes
2D separable filters for optimal reconstruction of JPEG-coded images 95039
2D wavelet coding implement., scheduling strategies 119825
3D geom. compression, DPCM and var. appl. 95220
3D models with subdivision surfaces, hierarchical coding 95221
3D source models for content-based video coding 95269
adaptive contour sampling/coding using skeleton/curvature 95218
adaptive IP telephony using intrastandard hybrid speech coding 108073
adaptive multi-rate codec, standardisation 120034
asymptotically optimal scalable coding for min. weighted MSE 106376
broadband wireless channels, soft decoding techs. 94276
compressed video enhancement, pre-/post-proc. algms. 106992
compressed video enhancement using visual quality meas. 95199
content-based scalable H.263 video coding for road traffic monitoring 84431
contex-based predictive coder for lossless/near-lossless video compression 84460
contour coding, modified binary tree and perform. anal. 106902
DCT approx. with lifting scheme, systematic design/appls. 106896
DCT coding, universal VLC 94270
DCT conditional event coding without side inform. in video compression 95087
DFCv2 129308
diamond zonal-based algms. for fast/efficient motion estim. 95241
DICOM protocol, image std., hospital wide service *(Japanese)* 88019
DICOM Standards, image integrat. model *(Japanese)* 88018
DICOM std., electronic storage, display/print fn. *(Japanese)* 88020
DICOM struct. reporting, diagnostic reports, stds., langs. *(Japanese)* 88021
digital TV and video compression 95139
distributed security schemes for networks 83947
DVD-Video std. expansion, MPEG-4 encoded content inclusion 97104
error-detecting codes, ring of congruence classes, probab., ISO std. *(Chinese)* 72870
Ethernet LANs, data security 119558
FORTE-VLC, forward tracing self-error correction VLC for wireless image coding 118567
fractal image coding comparison 84368
FS-1016 CELP, algm. compatible improvements 106371
GoP MPEG video filtering and transm., frame selection algm. *(Chinese)* 118627
H.261 real-time software-based video codec, design/implement. 119826
H263+ low-power full-search block-matching motion-estim. design 96314
H.263+ std., trellis-based R-D optimal quantization 95210
H.263 video encoder for VIRAM, perform. anal. 95271
H.263 video encoding optim. using single proc. computer, perform. trade-offs/benchmarking 95347
H.263 video for mobile commun., error resilient transm. 84379
H.263 video transm. over CDMA wireless networks, quality improvement 95121
H.263-based turbo-equalised video telephony for GSM/GPRS 130279
H.263-compatible error-resilient video coder 95398
H.26L video coding std., adaptive motion vector accuracy 95104
H.26L video encoder on general-purpose proc., perform. 118606
H.324 videotelephony std., H.263 picture header recovery 119504
HDTV ISO/IEC 13818-1 decoders, design 120547
HiFi audio sigs., source encoding *(German)* 84013
image and video compression, trends 118546
image codec, fast efficient computation of cubic-spline interpolation 73370
image seq., moving obj. segmentation, review 95238
Internet packet-loss resilient video using MPEG-4 fine granular scalability 95302
ITU-T video encoding stds. *(German)* 84443
JasPer, software-based JPEG-2000 codec implement. 96315
JBIG2 bi-level image coding std. 84459
JBIG2 std., dictionary design for text image compression 73402
JPEG2000, embedded block coding 95112
JPEG2000, error resilient coding 95300
JPEG2000, multimedia digital data compression std. *(German)* 84442
JPEG2000, new compression paradigms 106936
JPEG2000 codec, implement. on fixed-point DSP 119822
JPEG2000 implement. on different computer platforms 106949
JPEG2000 still image coding std., efficient region of interest coding 95114
JPEG 2000, multiple component compression 106947
JPEG 2000, overview/archit./aplications 95111
JPEG 2000, TCQ 106948
JPEG 2000, visual optim. tools 95113
JPEG 2000 decompression tuning perform. via rounding, theory/practice 106944
JPEG 2000 file format, flexible color encoding archit. 106941
JPEG 2000 file format, imaging archit. 106939
JPEG 2000 for detected SAR imagery compression 109254
JPEG 2000 foundations, modern lossy wavelet image compression tutorial 118495
JPEG 2000 functionalities, anal. study 95116
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
JPEG 2000 next generation image compression syst. features and syntax 95115
JPEG 2000 std., DWT lossless compression, VLSI design 118527
JPEG 2000 still image coding, eval. vs. JPEG-LS, MPEG-4 VTC, JPEG 118550
JPEG 2000 still image coding vs. other stds. 106938
JPEG 2000 still image compression std. 118496
JPEG 2000 technol. develop. for advanced ground station archit. 95232
JPEG bitstreams, embedded binary data extraction using std. JPEG decoder 95064
JPEG compressed domain image retrieval by colour/texture 107088
JPEG compression factor control, new algm. 118545
JPEG image denoising using fuzzy wavelets 118490
JPEG modified image compression tech. 95137
JPEG quantization table, bitmap compression hist. ident., MLE 95088
JPEG stat. model redesign, DCT coeffs. lossy mode fitting distrib. 95380
JPEG std. uniform quantization error modeling, appls. to seq./progressive operation modes 73342

code standards continued
JPEG video rate compression on parallel single-chip digital CMOS imager, transpose memory 95272
JPEG-2000 based scan-based proc. 111383
JPEG-2000 error resilience technol. 106942
JPEG-2000 std., computational complexity eval. 106945
JPEG-2000 technol. and testbed, summary 106937
JPEG-LS, rate control algm. design 106885
JPEG-LS modified image coder with increased channel error robustness 118643
JPEG/JPEG2000, memory complexity comparison 106946
JPEG/JPEG2000, multiple compression cycle perform. comparison 106943
LD-CELP codec, design and implement. 119824
LipTelephone, videophone for deaf people 108482
loss-resilient H.263+ video over Internet 95150
low-bit-rate moving picture coding using loop filtering/post-filtering 95149
low-bitrate audio coding, state-of-the-art and future directions 94402
low-correl. interframe differences, DCT-Hadamard-transform coding 118516
LPC params., fast-search algm. for predictive split VQ 73019
med. image compression by cosine and wavelet transforms 110788
metadata integrat. from prod. to consumer 75276
modified MPEG-2 predictive video coding, spatio-temporal scalability 118557
Motion-JPEG2000 standardization, target market 95117
moving objs. based extraction on morph. motion filter 84363
moving picture coding for scanning compatible broadcasting 118539
MP3 music delivery, security methods 106367
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
MPEG audio layer III decoder using dual-core DSP, archit./implement. 118105
MPEG compressed video, macroblock inform. based efficient wipe detect. 106856
MPEG multimedia stds. (MPEG-1, MPEG-2, MPEG-4, MPEG-7, MPEG-21) *(German)* 83904
MPEG seqs. generation matching intra- and inter-GoP correl., Markov-based algm. 73322
MPEG spatial scalability improvement 96317
MPEG syst. target decoder implement. 129704
MPEG transcoder, rate control considering drift-error propag. 95091
MPEG transcoding, restricted re-quantization rationality 95089
MPEG VBR video stream, stat. charact. *(Chinese)* 129756
MPEG video, MAP estimator for high resoln. video reconstruction 95200
MPEG video, picture quality investig. 73405
MPEG video contents, fast dissolve operations 95181
MPEG video data streams multi-channel commun., adaptive QoS control method 129799
MPEG video over Internet/wireless networks, packet coding schemes 84983
MPEG video streaming, min. cost implement. of full VCR functionality 107102
MPEG video streams, spatial SS watermark detect. 95057
MPEG-2 4:2:2 interoperability tests via satellite 74490
MPEG-2 AAC decoder, design optim. 118103
MPEG-2 coded video seqs., space/freq. masking, digital watermarking appl. 95058
MPEG-2 coding efficiency and scanning format 86299
MPEG-2 compressed video, interactive playout support 84429
MPEG-2 compressed video, wipe prod. 95182
MPEG-2 digital TV broadcast systs., synchronized data services 86296
MPEG-2 HDTV encoder, multiple enhanced SDTV encoding LSIs based develop. 118538
MPEG-2 image seq. coding, rate-distortion optimal fast thresholding 84380
MPEG-2 QoS adaptive streaming based on scalable media obj. 108400
MPEG-2 real-time video encoding, adaptive GOP struct. selection 95206
MPEG-2 seqs., hierarchical transm. in noisy environ. 84378
MPEG-2 software-based high-quality encoder using scene change detect./adaptive quantization 118534
MPEG-2 time sharing MUX in CATV networks, VBR scheduling algm. 97076
MPEG-2 video decoder, error concealment tech. 118537
MPEG-2 video editing in compressed domain with video buffer verifier requirement 95105
MPEG-2 video streams, decoding time estim. 95314
MPEG-2 video transcoding, DCT coeffs. Laplacian params. estim. for requantization 95090
MPEG-2 video/audio/signalling inform. real-time transm. using LAN/WAN *(German)* 75308
MPEG-4, fuzzy theory based robust error concealment algm. 118536
MPEG-4, semiautomatic segmentation using spatio-temporal gradual region merging 118530
MPEG-4 and H.263+ for streaming video appls., perform. comparison 129780
MPEG-4 audio-visual coding, error-resilience features and appl. to 3G multimedia terminals 96268
MPEG-4 based multimedia e-mail syst. 96063
MPEG-4 camera systs., real-time practical video segmentation algm. 118531
MPEG-4 coding perform. improvement, compression optim./blocking effect elimination 95332
MPEG-4 coding syst., efficient algm. for matching pursuits 95213
MPEG-4 data video prioritisation over mobile networks 84377
MPEG-4 digital multimedia broadcasting appls. 119786
MPEG-4 enhanced digital TV set-top terminal, implement. 118532
MPEG-4 facial animation, audiovisual integrat. in multimedia commun. 129781
MPEG-4 facial animation syst., audio-to-visual conversion 118590
MPEG-4 FAP interpolation for facial animation at 70 bits/frame 129691
MPEG-4 low-power/scalable soln. for wireless commun. 118645
MPEG-4 noisy still texture image, adaptive thresholding 95382
MPEG-4 padding block hardware accelerator, high-speed pattern decoder 79950
MPEG-4 shape coding, fast motion estim. algm. 95084
MPEG-4 shape decoding, conformance test 118533
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS implement. 79949
MPEG-4 transport over IP/RTP 84971
MPEG-4 video, obj.-adaptive vertex-based shape coding 118637
MPEG-4 video codec for mobile multimedia appls. 119823
MPEG-4 video decoder implement. on ARM7TDMI 84508
MPEG-4 video encapsulation/marking over IP differentiated services 129748
MPEG-4 video streams, DWT-based obj. watermarking syst. 95262
MPEG-4 video streams, efficient error concealment implement. 118609
MPEG-4 visual ACE profile, parallel archit. 118543
MPEG-4 visual texture coding using double transform coding 107014
MPEG-7, image/video self-description scheme 74427
MPEG-7 appls., P-frame motion vectors, low-complexity global motion estim. 95180
MPEG-7 based TV news programs indexing/retrieval 118483
MPEG-7 std., color/texture descriptors 84387
MPEG-7 Systems, overview 85383

code standards continued
MPEG-TFRCP, video transfer with TCP-friendly rate control protocol 130451
MPEG/audio low power encoders using simplified psychoacoustic model/fast bit allocation 118104
multiple description coding of motion fields for robust video transm. 106967
n-way key recovery syst. by extended cryptographic timed Petri net, spec. and anal. 118041
PRMA wireless network based video/voice/data transm. service 85379
real time audio systs., bit-rate reduction by psychoacoustic masking 94397
reversible variable-length decoding, efficient table access 94335
robust high capacity data embedding 95065
sinusoidal speech coding model, subjective perform. study 119830
spatially correl. motion seqs., estim./mode decision 129692
spectral entropy-based wideband speech coding 106373
streaming/decoding archit. for stored FGS video 118529
translated DICOM Standards, Japan, generalisation activity *(Japanese)* 88017
VBR MPEG sources over ATM networks, policing method for Markovian traffic descriptors 73382
video codec, fast algm. 96324
video coding, color set partitioning in hierarchical tree scheme perform. 95242
video compression using integer DCT 95209
video messaging over wireless networks, OO source/channel coding 73407
video obj. relevance estim. 118553
video scalability, rate control by dyn. bit allocation ratio 118568
video seq., robust transm. using double-vector motion compensation 106968
visual data representation, recent achievements and future develop. 118548
XML and security 119537

codecs
see also speech codecs; video codecs
7-/63-chip opt. CDMA encoders and decoders, superstructured fiber Bragg grating based 120147
AMR speech codec, noise suppression syst. *(English)* 74489
ATM network environ., scalable subband audio coding scheme 84005
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
CMOS VLSI single-chip encoder/decoder, dictionary search proc., LZSS algm., entropy coding *(Korean)* 108490
covert commun. using digital phase modem, syst. trade-offs 72724
DSP systs. for DSL appls., design for low-power implement. 125527
EBU listening tests on Internet audio codecs 74488
EZW image codec based on intraband partitioning 95284
fiber optic CDMA networks using series coupler access encoder/decoder, higher order sig. anal. 131498
geometric compression with predictable compression ratio 95235
high-resoln. digital audio, transparent differential coding 118091
hybrid VLC, wireless image transm. 108486
image codec, fast efficient computation of cubic-spline interpolation 73370
image compression by Gabor expansion 84392
image ringing-artifact removal, max.-likelihood param. estim. 95350
JasPer, software-based JPEG-2000 codec implement. 96315
JPEG2000 codec, implement. on fixed-point DSP 119822
JPEG2000 still image coding std., efficient region of interest coding 95114
low-bitrate audio coding, state-of-the-art and future directions 94402
miniaturised low power convolutional decoders archit. 108491
MMSE optimal estimator for source codec params. using intra-frame/inter-frame correl. 131018
MPEG4 obj.-based compressed video, digital watermarking algm. 84477
MPEG-4 coding perform. improvement, compression optim./blocking effect elimination 95332
MPEG-4 noisy still texture image, adaptive thresholding 95382
multi-rate hybrid codec and perform. eval. for image compression 85426
multi-view image coding incorporating approx. geom. 95108
opt. CDMA encoder/decoder based on fibre delay line 96823
partition-codec archit. synthesis for low power and small area cct. design 102113
PCI bus expansion card with floating point DSP, develop. *(Slovenian)* 97153
progressive quadtree wavelet encoder for lossy image compression 106985
RS codec, finite field multiplier, custom VLSI design 108487
self-correcting codes, Viterbi codecs 96316
sigma-delta-DAC archit., edge-selection algm., second-order extension 90994
teleteaching and teleconferencing codec, IP and ATM networks 108390
time-multiplexed RS decoder FEC codec LSI for digital opt. transm. systs. 109089
tunable opt. orthogonal code encoder/decoder for opt. CDMA 96822
VQ/entropy coding of med. images, progressive reconstruction 110497
wavelet compression improvement with neural networks 107070
wavelet-based image codec in memory-constrained environ., design 74484

coded modulation *see modulation coding*

coded orthogonal frequency division multiplexing *see OFDM modulation*

coder-decoders *see codecs*

codes
see also more specific code headings, e.g. "BCH codes", "convolutional codes", "error correction codes", "Reed-Solomon codes", "trellis codes"
3G W-CDMA, S(2) family of low correl. quaternary seqs. 83860
8-/16-state space-time codes for 4PSK with two transmit antennas 94310
algorithmic stats. 117934
binary arrays with zero correl. zone 129097
Bluetooth receivers, imbalance/DC-offset losses compensation techs. 74655
Boneh-Shaw fingerprinting scheme improvements 129300
CDM opt. networks, wavelength/time matrix codes 120272
CDMA codeword optim., interf. avoidance/convergence 119204
CDMA direct-detect. opt. sync. systs. with interf. canceller using group inform. codes 74920
CDMA fiber-optic receiver struct., perform. anal. 74954
CDMA hybrid wavelength/time opt. transm., photonic technols. 120382
CDMA multi-value spreading codes using mirror multi-rate filter banks 95833
CDMA multicarrier archit., orthogonal complementary codes for wideband wireless commun. 129001
CDMA multicarrier wireless systs., spreading codes effectiveness/perform. anal. 83895
CDMA multifrequency technols., perfect freq.-time codes 85715
CDMA opt. commun., coherence MUX syst., generalization 86037
CDMA opt. fiber networks design, modified prime codes and opt. proc. 96735
CDMA opt. networks with bipolar codes 86025
CDMA quasi-sync. systs., seqs. generation for multicode transm. 72804
CDMA robust commun. systs. using quasi-Walsh PN seqs. 84885
CDMA seqs., power variance reduction methods 85588
CDMA systs. with multiuser receivers, optimum modulation/multicode formats 120016
coaxial extractor relativistic BWO *(Chinese)* 102940
countable prefix codes, efficiency/props. 129085

es continued
cover-free families/superimposed codes, constr./bounds/appls. to cryptography/group testing 129109
covert commun. using digital phase modem, syst. trade-offs 72724
de brain seq. based codes, fast decoding 83872
differential signaling with many antennas 83851
differential space-time modulation, 2×2 unitary sig. constellations 128982
double antenna diagonal space-time codes/continued fractions 129104
DPSK sig. stabil. in freq.-detuned station interf. 117904
DS-CDMA commun., lin./DF joint detectors using periodic long codes 130170
DS-CDMA forward-link resource allocation based on pricing 96462
DS-CDMA multicarrier commun., receiver design 108661
DS/CDMA long-code systs., blind delay estim. algm. 131077
DS/CDMA long-code systs., channel estim./multiuser detect. 108854
erasure channel, capacity-achieving seqs. 129071
even wt. codes, multicovering rads. 129042
expander codes, error probab. exponents 129070
fiber Bragg-grating-based spectral-amplit.-coding opt. CDMA systs., code families 120142
finite generalized quadrangles based code constr., iter. decoding 129172
freq. selective fading channels, outage probab. and space-time code design 129088
freq.-selective fading mitigation, multiband wavelet packet spreading codes with intra-code subband diversity 72933
generalised delay diversity code for freq. selective MIMO channels 128997
generalized FH OFDMA through unknown freq.-selective multipath channels 85479
generalized Steiner systs. GS(2,4,v,2) with v, prime power=7 (mod 12) 117967
generalized wts. of class of trace codes 83867
geom./decoding error probab. rel. 129119
group characters and unitary space-time codes 129103
hierarchical opt. path cross-connect syst., matrix WDM scheme 120339
holographic CDMA for IR wireless commun. systs. appls. 82968
IMT-2000, channelization code assignment scheme 85778
k-cardinality assignment problems, algms. and codes 74899
Kauffman polynomials, computer eval. by using Gauss codes, with skein-template algm. 101010
Lempel-Ziv/multilevel pattern matching codes comparison 129086
lopsided trees 124527
low dens. parity check code ensembles, wt. distribs. 129073
low dens. parity check codes *(Chinese)* 106109
low dens. parity check codes, belief propag. decoding, perform. bounds 129036
low-dens. parity check codes, iter. reliab. based decoding 129177
mag. recording channel, high-dens., 16/17 MTR code error correction, pattern discrim. 104521
MIMO systs. using multiple spreading codes, MUX scheme 107661
modulatable periodic complete complementary codes, generalized constr. 83897
Morse code recogn. syst., backpropag. neural net, disabled pers. appl. 111186
multi-access interf. avoidance scheme for opt. fibre-based CDMA LAN 120214
multiclass discrim., posteriori codes 106478
multilayer dielec. struct. diffr. grating, EM wave propag. 117704
multilevel, multistage reliab.-based decoding algm. 129137
multilevel codes/iter. multistage decoding, rate design rules/practical considerations 83853
multiuser sig. design/detect. using interf.-resistant modulation 130156
nondegenerate quadrics of symplectic space of even order 79031
normalized ML models as universal codes/inform. in data, strong optimality 83906
OFDM multi-user satellite syst., code selection for interchannel interf. elimination 106034
opt. CDMA, asynchronous freq.-time spreading, modified prime code *(Chinese)* 117996
opt. CDMA encoder/decoder based on fibre delay line 96823
opt. intens. modulated channels, sig. constellation design 128988
opt. time-spreading/freq.-hopping differential OOK-CDMA syst. 74916
optimal permutation codes for uniform sources 129050
packet networks, delay-constrained commun., semidefinite programs for code design 106169
periodic-finite-type shift spaces 129080
perturb. methods for cancelling multi-user interf. 128800
PET images, adaptive lossless compression method 111002
polariz. mode dispersion compensation by sliding freq. filters *(Chinese)* 104672
pos. integer code by multiple length inform. coding 83929
pulse interval modulation-CDMA opt. wireless commun. scheme, BER 86119
QPSK seqs. over F_4 129096
quadratic receivers in Rayleigh-fading channels, asymptotic error probab. anal., coherent/noncoherent space-time receivers anal. 119864
Ramanujan spherical code 106141
Rayleigh-fading quasi-static space-time channel, cutoff rate/sig. design 117931
recursive MDS-codes 94257
regular low-dens. parity-check codes, ensemble dist. distrib. 129072
space-freq. codes for broadband fading channels 129169
space-time code perform. anal. for quasi-static fading channels 129090
space-time codes, demodulation in presence of interf. 72926
space-time codes, design for large no. of receiving antennas 106158
space-time codes, outage error probab. over Rayleigh fading 129185
space-time codes perform., spatial fading correl. impact 106136
spherical codes and kissing no. problem *(English)* 72893
SS MAP with collision avoidance 119362
syntactic congruences 72806
three-word codes, unique/multiset/set decipherability 83908
time spreading/wavelength hopping codes, opt. CDMA syst. 120116
transmitting array antenna rem. calib., sync. orthogonal codes 105959
tunable opt. orthogonal code encoder/decoder for opt. CDMA 96822
two-user multiple-access channel using complex-valued sig., uniquely decodable code 72805
unipolar opt. CDMA syst. perform., dispersion and nonlin. impact 131560
universality of Bayes codes and Ziv-Lempel codes for sources which emit data seq. by block unit *(Japanese)* 118000
W-CDMA bursty data traffic, rate guarantee and fair access support 130446
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
wireless ident. tags syst. based on SAW sens. *(Chinese)* 86501
wireless opt. channels, space-time channel coding tech. 129187
^{3}He-Ar-Xe nuc. reactor pumped gas laser cavity *(Chinese)* 105147

coding *see encoding*

coding/decoding *see decoding; encoding*

coding errors
see also error correction; error detection
av. pulse rate estim. using stochastic temporal and rate codes 73561
block-based coded images, efficient similarity-based error concealment method 95305
blocking artifacts blind meas. 106861
cascaded MAP-based lin. predict. error conceal. tech. for consecutive block losses 84485
CGH fab. by electron-beam direct-writing, image quality *(Chinese)* 105591
DCT-coded video seqs., picture quality meas., block visibility 73340
FH-PRN with spatially distrib. users, perform. anal. 74745
fixed-length coding of general sources, error exponent and min. achievable rates 129028
flash ADC using cellular nonlin. network, error correction 102263
GoP MPEG video filtering and transm., frame selection algm. *(Chinese)* 118627
H.263 compatible video coding, parity check error detect. 107093
image wavelet transform coding, edge-based artifact mitigation 107078
integrated lossy/lossless image coding based on LWT and multichannel predict. 73404
JPEG-2000 error resilience technol. 106942
mag. recording storage channels, error correcting codes, applicability *(Japanese)* 70544
MPEG transcoder, rate control considering drift-error propag. 95091
MPEG-2 coded video, blockiness, freq. domain meas. 106860
Poisson two-user multiple-access channel, error exponents 83917
qubit encoding in oscillator, infinite-dimens. Hilbert space 94222
robust error concealment algm. using iter. weighted boundary matching criterion 95304
RS codes, soft decision low complexity decoding algms. 72803
switched-current Viterbi decoders, effects of sig.-depend. errors on perform. 125628
VHDL behavioral-level designs, verif. pattern gen. for coding error detect. *(Korean)* 114568
video coding with channel-optimized trellis-coded quantization 84396

coefficient of thermal expansion *see thermal expansion*

coercive force
see also magnetic hysteresis
antiferromag. coupled film media, recording charact., thermal stabil. 116293
antiferromag. coupled long. media, recording pot. 116290
antiferromag. coupled recording media, micromag. simul. 116376
antiferromag. coupled recording medium, switching field control 116369
cooperative magnetism, Preisach model 81892
disk flying height var., in-situ meas., scanning carrier current method 116441
dyn. remnant coercivity meas. tech. 121158
ferrite thin film, reactive sputtering and mag. props. 116285
fine grains, high-speed coherent switching dyn. 116354
garnet film, crack form., cpd. glass underlayer 127340
GMR props., shape anisotropy 127399
GMR sandwich sens. elements, ultralow hysteresis & self-biasing 120772
HDD, thermal activation vol., computer simul. 116359
isotropic long. media, thermally assisted mag. recording 116330
long. recording media, advanced, SNR improvements 116370
long. recording media, AF coupled, energy barrier & reversal prop. 116291
mag. disk, high-dens. recording, skew angle effects 116323
mag. materials, props. and appls., review 104482
magneto-opt. recording, basic phys./current technols., review 116393
magneto-opt. recording, domain wall displacement detect. *(English)* 70538
magnetostrictive type torque sens., steering shaft appl. 75481
micromagnetic std. problem No. 4, switching dyn. and crit. behavior 81798
multilayer media, recording perform. enhancement, in-situ RTA 116294
PM recoil line, starting point calcs. *(Chinese)* 104537
polycryst. exchange biased systs., thermally assisted pinning decay 81862
steel, NDT, residual magnetis. meas., elastic stress depend. 79479
steel, Ni-Mo-Cr, microstruct., fracture toughness, Barkhausen noise *(Korean)* 114551
thin film recording media, dyn.-thermal effects, coercivity 116377
thin film recording media, thermal stabil. factor distrib. meas. 116378
thin lin. oscillatory actuator for celluar phone, coercive force *(Japanese)* 112728
thin mag. film, moment reversal charactn. by VSM or AGFM 116240
thin-film recording media, fast switching, coercivity 81926
vert. head sens., exchange coupling, edge pinning 116417
$BaFe_{12}O_{19}$ ferrite powder, coprecipitation prep., mag. props. 104506
$BaFe_{12}O_{19}$ hexaferrite monodispersed nanoparticles, prep., mag. props. 104505
$BaFe_{12}O_{19}$ perp. film media, FeAlSi soft mag. underlayer 127353
$(Bi,Lu,Nd)_3(Fe,Al)_5O_{12}$ transverse magneto-opt. phase-shift, integrated Mach-Zehnder isolator 127850
$Bi_3Fe_5O_{12}$ single cryst. films, FMR 92791
Co nanoparticles, microemulsion prep., struct./mag. props. 116282
Co nanowires, electrodeposition, mag. props. *(Chinese)* 125016
Co ultrathin films on flat and sputtered Pt(111) surfaces, mag. props. 70484
Co/Cr/Pd multilayers, prep., struct./mag. props. *(Chinese)* 127349
Co/Cu spin valves electrodeposited on Si 127356
Co/Cu/Co sandwiches, Fe(Ti)(Cu) capping layers, GMR obs. *(Chinese)* 70503
Co/Pd multilayer perp. mag. recording media, C underlayer, prep. *(Japanese)* 90245
Co/Pd multilayers, microstruct., mag. props., seed-layer effect 81867
Co/Pd perp. mag. recording media with amorph. C underlayers 116400
Co/Pd(Pt) multilayers with ITO seed layers and NiFe soft underlayers, perp. mag. recording media 116395
Co/Pt high coercivity multilayers, growth, structural and mag. props. 81876
Co-CoO metal evaporated tapes, mag. charact., recording props. 116408
Co-Cr films with perp. anisotropy, magnetis. reversal 92804
Co-Cr thin film mag. recording medium, nonmagnetic underlayer 116317
Co-Ni alloy nanowire array, prep., mag. props. *(Chinese)* 127311
Co-Ni-Fe-N as-sputtered soft mag. thin films, HF charact. 127289
Co-Ni-P ferromag. MEMS, etch holes 127128
Co-Pt/Ru thin film high-coercivity long. recording medium, mag. props. 116373
CoCr-based perp. recording media, mag. props., thermal agitation effects *(Japanese)* 92819
CoCrPt perp. recording media, thermal agitation effect anal. 116390
CoCrPt thin films on polymer substr., high coercivity 116239
$CoCr_{15}Pt_{13}$ perp. recording media, high M_r sq. and exchange decoupled 116263
CoCrPt:C HCP granular films with CrTi underlayer, mag. and reversal props. 127284
CoCrPt/CrTi mag. recording noise, amorph. Ni alloy seed layer 116312
CoCrPt-(Ta,B)/TiCr perp. mag. recording media, recording perform. 116401

coercive force continued
CoCrPt-based thin film media, activation vol., intergranular mag. interact. 116372
CoCrPtB high-dens. long. media, orient. ratio orig. 116375
CoCrPtB, long. media, noise/grain size reduction by WCr seedlayer *(Japanese)* 92833
CoCrPtB synthetic ferrimag. media, AF exchange coupling strength 116292
CoCrPtTa perp. films, domain patterns, mag. props. 70550
CoCrPtTa thin film media, thermal stabil., mag. switching vol., NiP seedlayer 116259
$Co_{73}Cr_{18}Pt_6Ta_3$ perp. mag. recording media with amorph. C underlayers 116400
CoCrPtTa/NiCr media, microstruct., thickness effects *(Japanese)* 92832
CoCrTaNi(Pt) perp. thin-film media, magnetis., film depth *(Japanese)* 92781
CoNi film, electrodeposited, struct./prop. rels. 90508
CoNi/Gd/CoNi trilayer, interlayer coupling 81861
CoNiFe, electroplating, mag. microsystems 101423
CoPt nanoparticles, microemulsion prep., struct./mag. props. 116282
CoPt/C multilayers, annealed, mag. and structural props. 81881
CoPtCrB trilayer recording struct., magnetis., thermal stabil. 116371
CoPtCrO granular films, perp. recording media, thermal stabil. *(Japanese)* 70526
$DyFe_2/YFe_2$ superlattices, MBE grown, spin config., neg. coercivity 81859
$(Fe,Ni)_{70}Zr_{10}B_{20}$ amorph. alloy powders, mech. alloying, mag./thermodyn. props. 81817
α-Fe, ferromag. particles, intergrain necking, magnetis. reversal 92805
Fe film dual ion beam sputtering, uniaxial mag. anisotropy and surface morph., head appl. 127292
Fe insulated powder, mag. props., AC mag. appl. 104498
Fe/CoNbZr multilayers prep. by Ar/H_2 mixed gas sputtering/heat treatment, permeab. 104512
α′-Fe-C films, magnetocrystalline anisotropy, saturation magnetis., coercive force 116280
α′-Fe-N films, magnetocrystalline anisotropy, saturation magnetis., coercive force 116280
Fe-N sputtered films, prep., struct., soft mag. props. 127304
Fe-Pt bulk magnets, remanence, order-disorder transform. effects 70553
Fe-Si, spray form., mag. props. 104497
Fe(100) dot arrays, interdot dipole coupling obs. 116269
FeAlSi low noise soft mag. under-layer for CoPtCrO double-layered perp. recording media 116398
FeCoB co-sputtered films, high moment soft mag. materials, coercivity, saturation induction 127293
$Fe_{64}Co_{21}B_{15}$ soft amorph. ribbons, stress-depend. hysteresis, model 127287
$Fe_{62.5}Co_6Ni_7Zr_6CuNb_2B_{15}$ amorph. ribbons, nanocrystn., sens. appl. 70493
FeMn/NiFe films, improvement of thermal stabil. of exchange coupling by Pt addit. 81857
FeMoCuSiB nanocrystalline soft mag. alloy, inverter core, mag. field annealing 88887
FePt alloy films, Zr-doped, rapid ordering 81795
FePt comp. controlled nanoparticle materials, mag. props. 116251
FePt self-assembled nanomagnet arrays, MOKE spectra, ultrahigh dens. recording appls. 116303
FePt thin films, grain size control by Ar-ion etched Pt seed layers 116253
FePt(111) ultrathin $L1_0$ films on MgO(111) underlayer, texture control 116252
FeTaN as-sputtered films, substr. temp. effects on mag. props. 127290
GdFe rear expansion detect. magneto-opt. media, domain expansion readout *(Japanese)* 93018
IrMn/Cu/CoFe/Co(CoFe)(NiFe) spin-valves, high temp. magnetoresist. 104513
(Nd,Dy)-(Fe,Co)-B nanocomposite high-energy isotropic resin bonded magnets 127316
Nd-Fe-B PM, degrad. procs. 92863
Nd-Fe-B magnets, proton irrad., mag. flux loss 127390
Nd-Fe-B nanocomposites, coercivity limits 81821
Nd-Fe-B sintered magnet, wet compaction, energy product 127382
Nd-Pr-Fe-B magnets, high-coercivity state generation during sintering *(Ukrainian)* 92780
$Nd_{9}Fe_{40}Al_{10}$ amorph. alloys, high-coercivity, mag. and structural props. 104487
NdFeB PM, dental prosthetic device, mag. props. 122318
NdFeB anisotropic bonded magnet, d-HDDR powder proc. 127383
NdFeB, elastic modulus, intrinsic coercivity 104494
NdFeB films, DC magnetron sputtering, microstruct., mag. props. 127305
NdFeB magnets, Sn/Al/Dy addit. effects *(Chinese)* 79422
NdFeB, rapidly quenched alloys, high-coercivity composite magnets 81912
NdFeB sintered PMs, high perform., current status *(Chinese)* 70554
NdFeB strip-cast PM, mag. props. and microstruct. 104488
NdFeB thin film magnets, laser ablation prep., high coercivity 125008
$Nd_2Fe_{14}B$ films, isotropic/textured, magnetis. procs. 81823
$Nd_2Fe_{14}B$ grains, nanostruct., mag. props. optimisation 92862
NdFeB/epoxy resin bonded magnet, melt-spun powder recycling, liq.-phase pyrolysis *(English)* 92865
NdFeB-type magnets, use of metal hydride powder blending in prod. 68393
$Nd_{33}Fe_{65.9-x}Nb_xB_{1.1}$ magnets, microstruct., mag. props. *(Chinese)* 127310
$Nd_{3.6}P_{15.4}Fe_{83}Co_3B_5$ nanocomposite ribbons, hard mag. props. 81818
Ni-Fe alloy of low coercivity and improved corros. resist. in cyclic damp heat test 81808
Ni-W thin films, perp. mag. anisotropy, microstruct. 81898
NiFe based mag. thin films and spin valve devices, patterning, switching props. 116300
NiFe, electroplating, mag. microsystems 101423
NiFe film, electrodeposited, struct./prop. rels. 90508
$Ni_{80}Fe_{20}$ mesoscopic dots, magnetis. reversal dyn. 116245
NiFeCo/CoFe/Cu/CoFe/NiFeCo mag. multilayers, ion-enhanced dry etching 70502
$NiFe_2O_4$ ferrite films, RF sputtering, struct./mag. props. 79208
NiO/FeNi bilayer with interdiffused interface, exchange coupling 81879
$NiZnCuFe_2O_4$ ferrite powders/films, prep., struct./mag. props. 127333
$NiZnFe_2O_4:MnO_2$ ferrites, high mag. perform. 127332
(Pr,Nd)FeB magnet, hot workability, ball milling and melt spinning 127387
Pr-Fe-Co-Nb-B syst. exchange spring magnets, mag. props. *(Japanese)* 127329
$Pr_{0.85}Ca_{0.15}MnO_3/YBa_2Cu_3O_{7-\delta}$ MSW device, fab., characts. 127537
$Pr_{13}Dy_2Fe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_{14}DyFe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_8Fe_{84}M_2B_6/\alpha$-Fe (M=Cr,Nb,Ti,Zr) nanocomposites, struct./mag. props. 116261
Pt/Co(0.6 nm)/Pt narrow mag. wires, domain wall vel. giant enhancement 116302
Sm-Co magnets, proton irrad., mag. flux loss 127390
SmCo/Fe/SmCo trilayer films, mag. props. 81880
$SmCo_5/\alpha$-Fe nanocomposite magnets, mech. milling, struct., mag. props. 70549
SmCoAlSi/Cr/SmCoCuTi-based multilayers, long. recording media *(Japanese)* 70510

coercive force continued
$SmCo_{7-x}Ti_x$ magnets, mag./struct. props. 127331
SmFe/NiFe multilayers, hard/soft exchange-coupled, modulated mag. props. 81882
$Sm_2Fe_{15-x}Co_xSi_2CCu_y$, struct., permanent mag. props. 81814
$Sm_{1-x}Gd_xCo_5$, mag. anisotropic ribbons, mag. props. 116248
$SrBi_2(Ta_x,Nb_{1-x})_2O_9$-$Bi_2$ $(Ta_x,Nb_{1-x})O_6$ ferroelec. memory, metal covering cell 68808
$Sr_3Co_2Fe_{24}O_{41}$ hexagonal Z ferrite, prep., mag. props. 81829
$SrFe_{12}O_{19}$ perp. film media, FeAlSi soft mag. underlayer 127353
$SrFe_{12}O_{19}$:La,Zn ferrite thin film prep., props. and mag. recording appls. *(Chinese)* 116286
Ta/NiFe/CoFe/Cu/CoFe/PtMn/Ta spin valves, magnetoresist., interlayer diffusion 81877
Tb-FeCo/FeCo multilayers, large magnetostrictive suscept. 70506
TbFeCo exchange-coupled double-layer, mag. flux reading opt. recording 104518
TbFeCo high-magnetis. exchange-couple double-layer, mag. flux reading/opt. recording 116846
$Ti_xCo_{1+x}Fe_{2-2x}O_4$ ferrite powders, struct., mag. props 92785
YIG:Ce films, prep. by RF magnetron sputter techs., struct./mag. charact. 81832

coercivity *see coercive force*

COFDM *see OFDM modulation*

cogeneration
3.1 MW ASE40 aeroderivative gas turbine printing plant CHP project, USA 88605
10 kV distrib. networks stabil., dispersed CHP/wind generators impact 133622
10 MW combined cycle cogen. plant project, USA 123228
17 MW Kawasaki L20A gas turbine genset 99562
32 MW combined cycle cogen. plant project, Australia 77766
53.3 MW GT8C2 gas turbine cogen. plant project 88608
110 MW combined cycle cogen. plant concept, Germany *(English)* 112330
250 kW PEFC syst., field tests 99950
500 MW combined cycle power plant project, USA 99572
absorpt. refrigeration and CHP with gas turbines, economic feasibility 88600
amine feedwater conditioning at HKW Sud cogen. plant 88554
ammonia prod. plant proc. sustainability solns. 124144
animal waste-fired steam cogen. plants 112302
BALMOREL energy sector anal. model, cogen. demand elasticity study 99250
biomass-fuelled CHP steam power plant project, Sweden 88592
building humidity control using condenser/CHP heat reclamation 134659
built environ. PV cogen. 77736
central cogen. units in Athens, economical approach 112298
ceramics plant cogen. facility optim. studies 134700
CHP plant, elec. dust precipitators, power supply *(Russian)* 123187
CHP syst., PM sync. generator, 3-phase AC/AC converter, UPS 112297
CHP-absorpt. chiller systs. for telecom. switching centres 123189
coal-fired plants, cost-effective repowering concepts *(English)* 99545
combined PV/solar heat/CHP syst., primary energy/cost reduction *(Japanese)* 112434
compact cogen., SOFC comparison with PEFC using partial oxid. reactor 88566
complex thermal cogen. plant operation optimisation 88562
cost allocation, reduced exergy, available energy *(Chinese)* 77729
Delaware City CHP plant repowering project, large sync. motor appls. 123203
dispersed fuel cell generation systs. planning optim. *(Korean)* 123270
distributed generation using alternative energy sources 77724
distributed power generation microgrids 112021
district heating/cooling systs., Taiwanese feasibility study *(Chinese)* 77737
EL-TO Zagreb cogen. plant, math. model 99536
elec./heat tariffs form. methods 77719
European Community cogen. research programmes 112288
European SOFC develop. status 89190
feedwater, organic substs. removal, reverse osmosis plants 112296
forest/sawmill residues based elec. prod., Ireland 133866
fossil fired CHP systs., economic dispatch, emission constraints 123184
fuel cell CHP power plants, cost optim. 123271
gas-fired cogen. develop. in Brazil 123180
gas-fired microturbine for distributed power generation appls. 88606
gas-turbine cogen. station energy efficiency indices calc. 133869
GT-35 gas-turbine for CHP, testing 99561
hybrid energy grids, CHP syst. group mgt., game theoretic anal. *(Japanese)* 99534
hybrid PV-plant/steam plant with CHP, control syst. 112399
induction generator CHP-fed distrib. network, self-excitation phenom. 122849
MCFC based combined cycle power plant, efficiency, pollution reduction 99566
micro CHP, pot. impact on elec. supply indust. 133855
microturbine based CHP plant, regulating syst., model 133871
mini cogen. schemes in Mexico 112332
multi-quality tariff syst./cogen. energy market model *(Japanese)* 111800
multimedia services, Strategy for Total Power Management, Japan 108445
municipal solid waste-fired CHP plants, UK operating experience 88582
municipal works CHP station, network disturbance consequences 77745
NHR LOCA, coolant tube rupture, expt. anal. 77696
nonreforming SOFC with high efficiency 99976
operation dispatch, interactive best-compromise approach 112299
operation strategy under environ. constraints 77740
optimal planning method *(Spanish)* 133858
package boilers, emission levels reduction 123230
peat gel/water-coal slurry fuel combustion technol. 123199
PEM fuel cells appls. in deregulated market place 133908
plant thermal efficiency calc. 99530
PM sync. generator with variable speed input 112339
power plant concepts using advanced gas turbines *(English)* 112324
power plant simul. and control using ACSL/MMS and MATLAB/SIMULINK 77725
power plant waste heat recovery using two-phase thermosyphon heat pipe 133832
power stations develop., gas-turbine unit manufacturers, Europe 123221
power stations turbine maneuverability improvement 88564
pulp/paper mill combined cycle CHP plant, steam turbine-generator addit. 124155
radial three-phase four-wire distrib. feeder, cogen. plant effects 77331
regenerative syst., recursive thermal calc. approach *(Chinese)* 88551
Romanian CHP technols. 123176
Romanian TPP MV power syst. modernisation projects 112287
single-house domestic CHP unit, savings prediction models 134655
small build-own-operate onsite cogen. projects 123178
SOFC-based residential cogen. systs. 88565
steam CHP plant delivery-water heaters tube syst. damage anal. 77748

eneration continued
steam cogen. power unit, expt. dyn. charact. 112315
steam power plant boiler water chem. monitoring syst. 88596
steam turbine cogen. syst. perform., spreadsheet model *(Spanish)* 133864
steam-turbine generator CHP plants, lightning effects reduction 112305
steam-turbine installations, economic efficiency enhancement 112311
synthesis gas prod. using SOFC technol. 99989
telecommun./data commun. systs., power supply syst. technols. *(Japanese)* 85399
TP-80 gas fired boiler, starting regimes optimisation 123182
US indust. CHP promotion, pot. energy policy impact 133857
very small scale CHP syst., heat recovery 99574
world-class petrochemical facility expansion challenges 100351
zero-emissions gas-fired cogen. of power and hydrogen 133859
CO_2 emission reduction using PV and cogen. systs. *(Japanese)* 88652
MgO-water chem. heat pump for cogen., thermal anal. 77742
nitive systems
see also adaptive systems; artificial intelligence; automata theory
act. digit classifiers, separability optim. approach 129533
COGENT, cognitive agent for Spacecraft telemetry monitoring 76823
computer vision, high-level representations, conceptual spaces framework 129889
electronic mail mining using similarity-based agents 119523
human visual behavior, top-down guided eye movements 106428
mine detect. training based on expert skill 77110
network consciousness, beyond ant-hill model 119774
portal mgt., cognitive engng. approach 85230
radio for flexible mobile multimedia commun. 131172
speech-to-speech translation, contextual reasoning 106406
herence
see also light coherence
CDMA RAKE receivers, channel estim. errors and Doppler diversity 108920
chaotic electronic ccts., coherence reson. study 102446
crease enhancement diffusion in image filtering 73269
cyclostationary sigs., direction-finding method 95609
distributed sens. arrays, source localization 77125
epileptic seizures, anal. of singing phenom. using partial coherence 121925
FEL Linac Coherent Light Source, radiation props., X-ray optics 82696
high-speed ADC, DSP-based tech. for coherently sampled seqs. gen. 120700
instantaneous multivariate EEG coherence anal., adaptive autoregressive models 87414
laser modes, far-field distribs., spatial coherence effect 128360
microtomography at ESRF beamline ID 22, X-ray undulator beam 132491
phase-contrast X-ray microtomography, polychromatic sealed source 76172
SAR interferometry, unbiased coherence estimator, moving target detect. appl. 96907
sigs., coherent, detect. using polariz. averaging MUSIC algm., perform. 107585
small supercond. quantum states, Cooper-pair box, noise effect 127503
US adaptive speckle reduction and coherence enhancement 87510
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
herence distance *see coherence length*
herence length
Josephson jn. tuning through quantum crit. point 92897
semicond. quantum struct., quantum-mech. effects *(Chinese)* 91831
Al hot electron bolometer, subMM-wave mixer 71134
$YBa_2Cu_3O_{7-\delta}$:Zn HTSC, T_c, flux pinning, CuO_2 site doping 70667
herent accelerators *see collective accelerators*
herent antiStokes Raman scattering
coal mine & tunnel autom. alarm, distrib. opt. fibre temp. sens. 67499
combustion diagnosis appl. *(Chinese)* 97876
methane/air burner, NO_x prod., temp. meas., CARS 110034
Raman laser converters, mol. inorganic, organic cryst., and glassy materials 128214
herent optical transients *see optical coherent transients*
ilguns *see electromagnetic launchers*
ils
see also cores; inductors; solenoids; superconducting coils; windings
3-D differential coil design for localised mag. stimulation 121986
3-phase mixed-pole reluctance machine, ring-coils on rotor poles 123359
AC machines, VPI stator coils, unimpregnated ground insulation, surge testing 133941
act. shields against stationary mag. fields, stochastic optimisation procedure 117714
anatomically-accurate body model, MRI surface coil calcs. 76455
arc suppression coil, controllable inductor, mag. bias *(Chinese)* 77468
axially-orientated DC flux assisted SRM drive, design and control 134478
biomedical parallel MRI, SMASH image reconstruction 132777
birdcage coil, 3 T, RF mag. field mapping 132748
brush DC motors, conc. windings, soft mag. composite armatures 134067
buried Bragg grating strain sens. fiber optic coils 97324
cardiac MRI, six-element array, SNSE coil design 132673
cerebral blood flow estim., single-coil arterial spin-tagging MRI 132685
coating inspection with PMD refl. sens. *(German)* 67661
contactless power transm. for undersea robot, fund. considerations *(Japanese)* 134528
contactless power transm. for undersea use. cone-type coils *(Japanese)* 113088
CRT deflection yokes ringing meas. 97702
cylindrical eddy-current probes, spatial freq. spectra 114541
DC coil, magnet startup phase, skin effect 128717
DC electromagnet, mag. hysteresis, dyn. Preisach model 105687
DC electromagnet switch transient proc., parameters calc. *(Russian)* 93983
deflection yoke design for color monitors and CRTs with flat panels 97718
deflection yoke mag. field, 3D edge element method, geom. symm. 125977
design, source current distrib. problem, sensitivity calc. 125854
desk-type contactless power station syst., coil shape *(Japanese)* 112616
desk-type contactless power station syst., perform. charact. *(Japanese)* 101765
distrib. network, single-phase grounding line selection, grounding-current compensation, integrative device *(Chinese)* 133642
dividing stator core AC servomotors, mfg. technol. study *(Japanese)* 88773
double-spiral coil syst., high elec. field generation, 2D modelling 99786
dyn. ang. accel. meas. device 110001
eddy current coil footprint assess., probab. of crack detect. 114537
eddy current flaw inspection, probe impedance change, 3D FEM model 101631
eddy current microscopy of graphite-epoxy composite, image proc. 68479
eddy current probe improvement, DSP algms., autom. meas. syst. 114506
eddy-current probes anal., arbitrary shape excitation loops 114542
eddy-current testing, GMR based sens., (sub)surface crack detect. 125144
coils continued
elec. systs., power oscill., time-depend. energy var. *(Polish)* 111651
electrotherapy for patient treatment, hist. 76595
EM flowmeter excitation coil CAD, 3D hybrid num. model 120729
EM inductance real-time low-cost 6D-tracker, algm. design/prototype 105681
ESR imaging, long. detect., quadrature excitation coil 98454
expiratory muscles, functional mag. stimulation, improved coil design 76598
eye motion meas., mag. search coil tech., field homog. improvement 121987
ferromag. mater. crack detect., local mag. flux leakage field sens. 68478
FES, mag. coil, power transm. and control sig. detect. 133047
fibre optic current sens. using differentiating Sagnac interferometer 86588
flux-linkage polarity convention proposal 93963
head model, clinical ultra high field MRI 87596
head model, MRI, idealized birdcage coil 76454
head MRI, UHF interacts. calc. 133077
helicoidal single-layer cylindrical coil self-inductance eval. 80462
Helmholtz coil meas. syst., principle and software design *(Chinese)* 132140
high power dens. microtransformers, fab. techs. 80458
homopolar variable reluctance motor using axial field coil 133982
HV surge protection charact. of special-isolation transformer 112169
hybrid double-D sheet-inducer for SQUID-based eddy current NDT 68480
IM, single layer 3-phase AC windings design optimisation 112522
implantable defibrillators, pacing capture, evoked response detect., RV coil to can vector 122350
in-neck yokes, vac. props. of materials, inner yoke tubes appl. 91543
inductive coils, DC resist. meas. method *(Chinese)* 102790
inductive sens., alternative cct. configs. comparison 75487
ITER TF model coil, transient behaviour, 3D FEM 105686
L-band EPR spectrosc., tunable surface-coil-type resonator 76498
lever-coil, respiratory/cardiac motion sens., MRI expts. 132728
lin. DC motor, coil config. for thrust improvement *(Japanese)* 112555
lin. microactuator, var. reluctance stepping motor, thin film. technol. 78110
liq. interf. refractometers, displacement control, induction sens. 86492
loaded monopole antennas, meas./computed results comparison 94170
long. detected ESR magnetometer for low fields wide-range meas. 97787
long ferromag. rod with arbitrary length coil, quasistatic/dyn. mag. permeab. 86921
low-AC-resist. planar/foil wound inductors, quasidistributed gap tech. 80460
mag. flux dens. internat. comparison, field coil transfer stds. 109406
mag. probe coils constr. using thick-film technol. 97203
mag. stimulation, induced elec. fields rel. to coil design *(Chinese)* 110549
magnetoelec. systs., steady mag. fields, FE and BE modelling 72198
magnetomechanical vibrotactile devices, fMRI 133044
magnetostimulation thresholds, whole-body and head/neck gradient coils 132749
magnetostrictive delay line, posn./stress/field sens. 75479
MEG device, 3D digitizer, motion monitoring syst. 110661
metal crack detect./sizing, surface mag. field meas., induction coils 90617
metal detector, processed food foreign obj., SRPM method 109511
micro-fluxgate sens., symm. closed core elements, pulse excitation 121041
micro-fluxgate sens. with closed core, flat coils 75763
microcoils, optimised fab. proc., 3D-UV-depth lithog., electroplating 116096
microcoils fab., electroplated Cu & Permalloy, micromoulding 75764
microfluxgate sens., double-sided symm. core design 109805
microposition meas., high sensitivity mag. syst. design 97204
microstrip RF surface coil design, extremely high-field MRI/spectrosc. 132683
microtransformers, fully integrated spiral-type, Si substr., surface micromachining 92525
middle ear implant, differential floating mass type vibr. transducer 98713
miniature monolithic RF mag. sens. with MESFET circuitry 75474
moving coil lin. motor, armature field anal., posn./stroke control 88767
moving coil lin. oscillatory actuator, dyn. charact. *(Korean)* 134080
moving coil lin. oscillatory actuator, inductance and armature react. 128724
moving coil-type lin. oscillatory actuator, multi-pole PM arrangement *(Korean)* 123690
moving magnet loudspeaker syst. with electronic compensation 120598
MRI, asymmetric zonal shim coils, systematic design 110871
MRI, birdcage resonator, 3D FEM code 128677
MRI, coil-by-coil image reconstruction with SMASH 132702
MRI, four-element planar strip array 76453
MRI, highly nonlin. RF mag. fields, high resoln. mapping 98457
MRI gradient coil design, stream fn. optim. 132674
MRI gradient coils, act. acoustic control 132775
MRI gradient coils, magnetostimulation thresholds, simple lin. formulation 87627
MRI open scanners, flat RF body coil design 87670
nervous syst. mag. stimulation device optim., skin/proximity effect 98592
neuromagnetic meas., high-sensitivity SQUID magnetometer, fab./charact. *(Korean)* 87456
NMR planar inductive micro-coil detector, losses and SNR 125855
NMR spectrosc., multilayer RF microcoils 117633
noncontact energy transfer syst. using immittance converter 123002
nonlin. ccts. with saturating ferromag. coils, anal. 101702
nuc. fuel rod inspection, OD rem. field eddy current probe 112249
oil separation tank, interface level detect., HF mag. field probe 121278
open delta winding vibr. motor for cellular phone appls. 134099
open multideck refrigerated food display cabinets, defrost control params. 78347
orthopaedic implant long term monitoring, inductive power supply 122338
outdated arc suppression coils, problems and renovation *(Chinese)* 112683
planar inductor overcurrent detect., switching power-supplies *(Japanese)* 112574
planar spiral-type microelectromagnetic dist. sens. develop. *(Japanese)* 97811
PM planar motor back-EMF const., coil posn./width effects 123296
PMR magnetometry, fully CMOS integrated probe 75501
power transformer PD, opt. fiber sens.-based detect. 109590
prostate, benign disease/carcinoma diagnosis, MRI coils comparison 122071
rail joint gap meas., shape sizes of detecting coil *(Japanese)* 109476
resetting converters, spiking ccts., surge limiters *(Spanish)* 68583
RF field uniformity improvement of helical surface coil 72209
RFID systs., inductively coupled, dyn. perform. 96636
sandwich type ferromag. RF integrated inductor for 2 GHz range, charcts. 80369
satellite attitude control, mag. coils, simul. syst. *(Chinese)* 98890
saturated ferromag. rect. prism/rect. coil, 3D mag. field 105680
shallow subsurface detect., freq.-domain EM syst. config. 88090
shaped surface coil, sensitivity at 63 MHz, num. eval. 98402
shielded coil inductance 83152
short-circuited coils with cryoresistive winding, electrodynamic interact. *(Russian)* 102789
small hand muscle, motor thresholds, transcranial mag. stimulation 76663

coils continued
spiral inductors, micromachined, UV-LIGA techs., mag. MEMS and RF devices 127409
steam turbine-generator stator coils procurement from quality vendor 123288
steel plate thickness meas. using laminated mag. flux sens. 132157
subsurface digital multifreq. EM cond. imaging syst. 84166
surface eddy current probe, flaw depth phase inform. 101632
three-phase sync. motor sensorless posn. estim. approach 133967
thyristor series capacitor arc suppression coil studies *(Chinese)* 123065
transcutaneous energy transm. syst. efficiency, capacitor use *(Japanese)* 111135
transformer, init. magnetizing current, num. anal. tech. *(Japanese)* 112611
transformer cores/coils materials charact. meas. using power meter 69284
two-axis planar flux gate sens. with multilayer struct., fab. *(Japanese)* 109935
ultrathin pickup coil for surface flux detect., laser micromachining 75762
vert. field open MRI, convex gradient coil design 87656
vert. planar coil inductors, develop. using plastic deform. mag. assembly 80371
Co thin film magneto-opt. sens., freq. response 109507
Nb concentric DC-SQUID gradiometer, integrated, NDE sens. 120742
Ni ferromag. rod, effective field estim. by magnetoacoustic effect *(Japanese)* 127328
NiTi SMA coils optimized for elec. connectors 115109
Zn coating on steel wires, continuous mass meas. 75900

coincidence circuits
see also counters
BC454/BGO fast neutron coincidence detector for U sample anal. 132304
muon pretrigger syst. of HERA-B expt. 132456
radionuclide activity & neutron flux stds., unified counting channels 87262
ring Compton camera DAQ syst. design anal. 121743
time-to-amplit. convertor based TOF trigger, diff. discriminator 98069
γ-ray spectrom. dead-time loss correct. apparatus design/perform. anal. 132446

coincidence techniques
8 mm data cartridge 2D DAQ apparatus for 4πβ-γ coincidence meas. 97974
ADAC mol. coincidence detect. PET camera, NEMA NU-2 2000+ stds. 132952
Blue database, high-fold γ-ray coincidence data 87269
CUORE detector, solar axions/dark matter search 97267
detect. systs., geom. params. sim. using OMEGA code 76014
dual head coincidence clinical camera, image correction techs. 122240
dual head gamma camera PET, ^{153}Gd line source, atten. correction 122183
EUROMET Ge γ-ray spectrometry efficiency transfer software compar. 121764
ext. source γ-ray spectrom., efficiency curves, HPGe/Monte Carlo compar. 132299
eye lens, radiation dosimetry, Monte Carlo simul. 122375
free-running sampling, pulse recording 121634
GammaVision γ-ray spectrosc., true coincidence correction method perform. 98085
high-precision polarimeter at JLAB 87062
HPGe detector efficiency calib. for environ. sample anal. 132298
hybrid PET/SPECT coincidence imaging, patient motion effects 122217
liq. methane chamber, scintillation light obs. from neutron interacts. 121565
orb. pattern, quantitat. imaging, electron momentum spectrom. *(Japanese)* 110420
PAMELA expt. in space 76159
PET, hybrid gamma camera imaging, septal spacing optim. 122235
PET whole body imaging, vol. resoln., coincidence plane defns. 122234
positron lifetime spectrometer stabilization 110419
PRISM-IRIX γ camera syst., 3-head positron coincidence detect. *(Japanese)* 76583
radioactivity primary std. estab., traceability syst. *(Japanese)* 86391
scintillator array detector for neutron pre-emission investigs. 132287
TLD-500K anion-defective corundum TLD for neutron detect. 132291
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
X-ray interferometer, visibility meas., coincidence tech. 98097
BGO HPLC positron detector, human PET metabolite anal. 98572
BGO/plastic scintillators, phoswich detector, continuous blood sampling 121617
CdTe detector, coincidence DAQ, detect. efficiency 121618
CdTe gamma detectors, coincidence timing resoln., PET appl. 110291
CdZnTe detectors for coincident α-γ spectrosc. 87187
$Gd_2SiO_5:Ce^{3+}$ scintillator for ASTRO-E hard X-ray detect., energy response 121572

cold-cathode tubes
see also photomultipliers; phototubes
avalanche cold cathode for CRTs, power reduction 91567
avionics AMLCD, field-emission lamp design 98914
diamond nanocryst. CVD thin film cold cathode devices, electron field emission charact. 69394
field emission props. comparison for diamond/carbon nanotubes 115242
fluoresc. lamps, long lifetimes *(Japanese)* 124061
lighting device, thin film cold cathode electron source, delay charact. anal. *(Chinese)* 102947
multibeam electron beam direct write lithog., cold field emitters, microfabricated 69973
piezoelec. cold cathode fluoresc. lamp driver, LCD backlight 78335

cold rolling
steel, plastic deform., scanning SQUID microscopy 68486
Ag ribbons, {110} textured, prep. for biaxially aligned supercond. tapes 68396
$Ag-SnO_2-In_2O_3$ elec. contacts, prod. optim. 90563
Au/Ni platings, thin sheet laser welding 72137
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_{10+x}$/Ag multifilamentary tape proc., texture develop. 68419
FeSi, high Si content, thermomech. proc., magnetostriction and hysteresis losses 127296
$(Hg_{0.8}Re_{0.2})Ba_2CaCu_2O_{6+\delta}$ HTSC thick films, fab., T_c, J_c 125038
MgB_2 supercond. tapes, unsintered, large transport crit. current dens. 92889
Ni-Cr(V) biaxially textured tape substr. for $YBa_2Cu_3O_{7-\delta}$ HTSC films 68397
Si-Mn cube texture oriented soft mag. steel sheets, fine grain struct., prod. proc. 127295
$YBa_2Cu_3O_7$ HTSC deposition on metal tape substrs. and charactn. 68179

cold shortness *see brittleness*

cold working
see also bending; cold rolling; plastic deformation; work hardening
MgB_2 supercond. tapes, unsintered, large transport crit. current dens. 92889
Y-Ba-Cu-O HTSC coated conductors, Ni alloy substr. treatments 70744

collaborative work *see groupware*

collagen *see proteins*

collections of physical data
solar cell efficiency tables 113009
γ-spectra nuclide quantification GUI, librarian-driven anal. 132485

collective accelerators
see also wakefield accelerators
ATON-thruster plasma accelerator, perform. charact. 76819
direct laser accel. in capillary channel 110077
electron bunches, ultrashort, space-charge effects 110136
electron gun charact. in TW electron LINAC, customs inspection systs. *(Chinese)* 80562
electrons and ions, laser accel. and intense secondary particle generation 75990
future high-intens. muon facility design anal. 132263
high energy dens. electron/positron beams, plasma focusing expt. 110138
intense laser pulses in plasma channels, nonparaxial propag. 105776
intense pulsed lasers, electron accel., laser polariz. direction effect *(Chinese)* 97914
IPD coaxial accelerator, current sheet struct., expt. study 121310
LILAC expt., status 110075
microwave inverse FEL expt., accel. results 110129
Neptune Lab inverse FEL accel., electron beam focusing 110126
Neptune photoinjector commissioning/design, review 110180
phase rot. induction linac, thin supercond. solenoid 75935
PHELIX, PW high-energy laser for HI expts. 105162
plasma electron accel. by 12 TW 50 fs laser pulse, num. simul. 110119
plasma waves, parametric excitation, laser beam detuning 110123
single-moded plasma channel, Raman forward scatt., parametric instabil. 105775
STELLA program, laser-driven prebuncher staged with laser accelerator 110121
table top accelerator with extremely bright beam 110081
tubular plasma channel prod. with intense Bessel beams, MHD simul. 105777
p-GaAs-(Cs,O)-vac. interface. laser-driven electron sources 110231
Xe second-generation ATON-type plasma thruster, radiation and energy charact. 76820

colliding beam accelerators
see also linear colliders
2.7 GJ LHC CMS supercond. coil project overview 75974
600 A HTSC current lead develop. for LHC correction magnets 75992
ATLAS barrel toroid supercond. coils, back quench study 75972
Bates SHR, radiative polariz. 110191
Beam Instrumentation Workshop 2000, conf., Cambridge, USA, May 2000 78423
bent supercond. solenoids with superimposed dipole fields 76003
BEPC, 3W1 beamline, radiation dose level meas. 121301
BEPC storage ring, bunch lengthening anal. 87073
CDF Run II upgrade syst. status 87175
circ. electron collider apertures, beam-beam interact./lifetimes 87070
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
electron storage ring, radiative laser cooling 75944
future hadron collider accelerator design anal. 132262
gas avalanche pixel detectors, elec. charact. 87195
GSI nuc. structure physics, colliders and set-ups 110070
hadronic collider trigger fast tracker proc. design anal. 121738
HERA Luminosity Upgrade, polarised $e^{\pm}$ beams, experience and expectations 110192
high energy colliders for post-LHC era, review 87065
high-energy accelerators/colliders, polarized ion source 110247
intense muon beam lines, hybrid LTS-HTS solenoid magnet 76004
KEKB perform. overview 87046
large supercond. solenoids modeling, scaling laws 76001
LHC, expt. phys. 75940
LHC, supercond. magnets, random geometric errors 75950
LHC ATLAS detector toroids, discharge anal. 75994
LHC beam size monitor, vel. spectrum meas. of accelerated rest gas ions 76009
LHC CMS supercond. coil winding, pre-indust. activities 75976
LHC inner triplet quadrupole program status at Fermilab 75955
LHC interact. region supercond. quadrupole magnets develop. 75957
LHC low-β quadrupole magnets develop. at KEK 75956
LHC lumin., detector for bunch by bunch meas. and optim. 76008
LHC lumin. monitor using secondary emission/ionisation techs. 121326
LHC supercond. cables, current imbalance/magnetis. interact. 75962
LHC supercond. coils, persistent current calc., modified Bean model, FEM 87064
LHC supercond. magnet windings, dyn. magnetisation calcs. 75993
mucool RF expt., supercond. solenoid test 76002
muon colliders and neutrino factories, status of ionization cooling tests 110160
muon cooling by emittance exchange 110140
muon sources, ν factory to $\mu^{\pm}$ colliders 110162
muon-collider ring, beam oscill. decoherence 87146
opt. stochastic muon cooling, bunch lengths 87078
PEP II fast lumin. monitor syst., review 87072
PEP-II, KEKB, DAΦNE, e^+e^--factories 76007
PEP-II B-Factory, logarithmic beam posn. monitor 87122
PEP-II operations report 87045
precision EM calorimeters, LHC appl. 76027
RHIC beam loss monitor syst. commissioning in RHIC yr. 0 run 87103
RHIC beam profile meas. using ionization profile monitors 87105
RHIC collider, ARTUS tune meas. syst. 87107
RHIC p-carbon CNI polarimeter commissioning 110193
short LHC dipole model mag. field pattern meas. 75961
strong-strong regime, beam-beam collis., hybrid fast multipole method 97918
VLHC, instrumentation concepts 87086
ZEUS expt. at HERA, lumin. meas. from ep bremsstrahlung proc. 110110
e^+e^- collider, lumin. and energy resoln. 121333
μ collider ring, broad-band impedance transverse beam instabil. anal. 132255
Nb_3Sn dipole magnets, hadron colliders, persistent current effect correction 75981
Nb_3Sn high field magnets for hadron colliders 75980
Nb_3Sn racetrack coils high-field dipole collider magnets 75998
Nb_3Sn shell-type dipole accelerator magnet fab. at Fermilab 75983
Nb_3Sn/Cu hybrid-coil dipole for hadron colliders 75995

collimators (optical) *see optical collimators*

collision avoidance
adaptive cruise control, collision prevention between cars 113125
automobile control, adaptive scheduling using imprecise computation 134542
automobile laser-radar collision avoidance, microcomputer control syst. *(Chinese)* 134571
automobiles, driver assistance, collision avoidance and automated driving 124050
automotive forward collision warning systs., soft testing approach 134578
AUV obstacle avoidance & path planning, multibeam forward looking sonar 78242
biologically plausible vision systs. integrat. for controlling autonomous robots 94471

lision avoidance continued
car-following collision prevention, adaptive network fuzzy inference syst. 113119
CMM, optimal meas. seq. planning/collision-free path 97139
conformal/stereotactic radiotherapy treatment planning, graphical treatment simul. 98645
FMCW front end for anticollision radar, low-cost X-band design 120449
highly safe intell. vehicles, collision detect. VLSI proc., hierarchical obstacle representation *(Japanese)* 102159
mixed-mode VLSI opt. flow sens. for in-flight control of micro air vehicle 98895
mobile robot obstacle avoidance, US sens. crosstalk, coded sigs. 109981
mobile robots, global nearness diag. navig. 97822
multi-sens. driver assistance flexible archit. syst. develop. 134576
obstacle detect., color segmentation/stereo homography 94729
outdoor autonomous mobile robot 109672
redundant arm collision avoidance, visual, self-organizing 84359
road vehicle night time detect. algm., light pattern use 107240
robot, fast path planning VLSI, CAM *(Japanese)* 79886
robot collision avoidance, looming obj. detectors 84253
robot visual navig., omnidirectional sens. *(Japanese)* 106741
sens.-friendly vehicle and roadway systs. for collision avoidance 120446
smart cruise collision prevention syst., NEC road sens. appls. *(Japanese)* 124023
tele-operated unmanned vehicle, sens. fusion design 134517
vehicle platooning using carrier phase GPS/MM-wave radar 131700
vision based intell. robots 73215
wheeled robot, driving amongst obstacles, multi-sens.-based control strategies 75615

llision avoidance, telecommunication *see telecommunication congestion control*

lloids
see also Brownian motion; electrophoresis; emulsions; gels; magnetic fluids; thixotropy
ceramic thick film struct. microfabrication using colloidal suspens./photoresist masks 104221
colloidal cryst. assembly in Si wafers, photonic chip possibilities 102846
graded gain random liq. laser amp. opt. diode spectral charact. 82506
LF electronic gate detect., cell/bacteria/colloid counting/sizing 121867
mesoscopically disordered systs., local coherence, time developing 2nd harmonic emission 93822
methano-[60]fullerene-Ag nanocomposite, opt. limiting effect 117427
photonic crysts., chem. assembly strategy, review 127568
polymer-ceramic nanocomposites for MCM-L integral capacitors, colloidal proc. 69277
silica suspens., ultra-small-angle X-ray scatt. 121758
thin-film SOFC proc. using colloidal spray deposition tech. 89205
Au colloid self-assembled electrode, CO determ. 132032
Au-loaded inverse polystyrene-block-poly (2-vinylpyridine) micelles, excimer laser ablation 83039
$BaTiO_3$ nanocryst. powder, influence of pH value on props. 114469
C_{70}-doped polyimide films, ps radiation freq. conversion 93793
CdSe colloidal semicond. QD, time-gated biological imaging 87525
GaAs nanopillars fab., colloidal gold natural lithog. 126601
$GaPO_4$, hydrothermal growth, physico-chem. aspects 79164
Pt-Cu colloidal solns., ps Nd:YAG laser THG 93800
Si nanoparticle colloids, thin film form., high temp. single electronics 103930
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
TiO_2 rutile capacitor, improving breakdown strength by gelcasting 114435

olorimeters
see also colorimetry
AO tunable filter based colorimeter 127857
avionics LCD, photom. meas., intraplant & interplant correl. 98912
video projectors, opt./illum. params. meas. *(German)* 86320

olorimetry
see also colorimeters; spectrochemical analysis; spectrophotometry
ammonia, chem. sens. in integrated microfluidic syst., Berthelot react. 86717
avionics LCD, photom. meas., intraplant & interplant correl. 98912
Barrett's oesophagus, colorimetric detect, low-cost fibre-optic instrum. 76399
calibrated digital images, colour difference acceptability 106493
capillary electrophoresis microchip, radionuclide/metal detect. 86718
categorical color mapping, color-categorical weighting method, gamut mapping 84185
chromatic adaptation perform. of different RGB sens. 97392
colour-difference eval. using CRT display, parametric effects *(Chinese)* 73244
combustion monitoring, CCD imaging and colorimetry temp. meas. 86600
CRT colour difference eval., parametric effects 121085
CRT colour-difference eval., colour difference formulae testing 121084
digital cameras, spectral responsivity meas. method *(Japanese)* 86393
digital low-end camera for on-screen texture visualisation, colorimetric characterisation 97737
electrochromic polymer films and devices, situ colorimetric anal. 82039
fiber optic sens., high temp. meas. 75585
gamma-compression gamut mapping method based on concept of image-to-device 84415
microdisplays, contrast and colorimetry meas. vs. viewing angle 109849
NIST colorimetric calib. facility for displays 97128
ocean scanning multi-spectral imager, on-orbit solar calib. meas. 99011
reflective light valves, polarising microscope metrology 97658
spectral reprod. from scene to hardcopy, image proc. 94866
trichromatic halftone printing syst., colorimetric calib., alg. tech. 86386
XYZ prism colour splitting syst. for TV cameras 131732
$CoCl_2$, hydroxyethylcellulose film, opt. fibre humidity sens. 120839

olossal magnetoresistance
used for the enhanced magnetoresistance observed in ferromagnetic metallic manganite oxides of the form $La_{1-x}D_xMnO_3$, where D = Sr or Ca
see also giant magnetoresistance
conf., Phys. props. of mag. materials, Poznan, Poland (June 2000) 89545
current injection into HTSC 127478
MR oxides, related materials, conf., Boston, USA 124235
$DyBa_2Cu_3O_7/La_{2/3}Ba_{1/3}MnO_3$ heterostruct., spin injection & transport 92901
$La_{0.67}Ba_{0.33}MnO_3$ CMR mag. sens., polycryst., fab., appl. 75471
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial CMR thin films, RF magnetron sputtering deposition 79210
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial thin film based CMR bolometer *(Chinese)* 120807
$La_{0.67}(Ca_{0.33-x}Pb_x)MnO_3$ nanopowders, MR behaviour 104485
$La_{1-x}Pb_xMnO_3$ CMR ceramics, co-precip. oxalate precursor prep. 68406
$La_{0.7}(Pb_{1-x}Sr_x)_{0.3}MnO_3$ films, CMR, bolometer/mag. sens. appls. 81800
$La_{0.67}Sr_{0.3}MnO_3$ mag. thin film based posn. sens. 109494
colossal magnetoresistance continued
$La_{0.67}Sr_{0.33}MnO_3$ CMR mag. sens., polycryst., fab., appl. 75471
$La_{0.8}Sr_{0.2}MnO_3/SrTiO_3/La_{0.8}Sr_{0.2}MnO_3$ trilayer, tunneling magnetoresist. *(Japanese)* 92798
$Pr_{0.7}Ca_{0.3}MnO_3$ MR thin films, THz radiation obs. 82936
$YBa_2Cu_3O_{7-\delta}/La_{0.67}$ jns., size depend., mesoscopic effect 127498
$YBa_2Cu_3O_x$/CMR multilayers, mag./supercond. props., spin injection devices appl. 70791
$YBa_2Cu_3O_y/La_{0.7}Ca_{0.3}MnO_y$ HTSC multilayers, Hall effect 70639

colour
see also colour graphics; colour vision; image colour analysis
2,5-dioctyloxy PPV, two-color opt. heterodyned opt. Kerr effect 117435
balancing liq. cryst. filters for image pickup in TV film shooting 127847
BEDOT-pyridines based multi-colored electrochromic polymers 82038
CSP laser rework technol., energy source perform./proc. specific package reliab. 113605
high energy ion implant. detect. wavelength tuned QWIP 97247
holograms, specially designed fast exposure syst. 82993
holographic interferometry recording, research activities at ISL 82994
current holographic materials available from Slavich, recent advances 82026
hybrid sol-gel coloured coatings, prep., proc. and props., glass design appls. 104876
IC path delay fault coverage, appl. of colour counting tech. 79742
images, index data embedding method using wavelet transform 129745
LCD using birefr. filters, generating full color 86799
LED colour spec. & perform., user requirements 93396
light stripe triangulation config. color-coded opt. profilometry 86958
metal-dielec. color shift films *(Chinese)* 90246
micro-optics beam shaping elements for holographic recording appls. 72088
monolithic LWIR/NIR multispectral QWIP night vision 86660
multichannel image proc., impulsive noise 84266
multicolour solitons form., basic concepts 93852
opt. metrology, 3D, diffractive optics 86963
organic LED, 2,5-bis(2-{4-[bis(4-methylphenyl)amino]phenyl}thiophen-5-yl) amorph. mol. material 105009
organic multilayer EL device, bright pure blue emission 105001
polymer light-emitting devices, emission color patterning, maskless dye diffusion tech. *(Japanese)* 71566
pulsed holography wavelengths overview 82979
radiation dosimeter consisting of leuco cryst. violet/halocarbons, develop. 110294
resolved depth step color-coded opt. profilometry 75856
rigid LCD, gap form., reliab. 109890
Sea-viewing wide Field-of-View Sensor test, ocean color imagery atmos. correction 88174
single-color dual-band QW IR detector FPA, lab./field imaging testing 86653
single-mode dye laser syst., colored noise 117090
solar cells, localization and imaging of local shunts using PDLCs 113007
subwavelength period binary phase grating color separator 132111
tea aroma, opt. sens. using n-tetraphenyl porphine manganese (III) chloride LB thin films 109592
two-color QW IR photodetector FPA 86557
watermarking method for embedding index data into colour images using wavelet transform 95353
white light expt. holography for high school teaching 78480
Ag halide lab.-made emulsion 82987
Ag^+ transient Ni-like x-ray laser, two-color irrad. 128057
Ag-halide materials for multicolor holography, comparative study 82992
$CuGaS_2$ microcrystals, cryst. growth, opt./elec. props. 103090
GaN films, MOVPE on c-Al_2O_3, substr. orient. effects anal. *(Chinese)* 126054
$Gd_3PO_7:Eu^+$ phosphor, UV/VUV luminesc. props. 82331
InGaN/GaN MQW monolithic white LEDs, wavelength emission tuning 127962
InGaN-based UV LED excited ZnS-based phosphors, white luminesc. 82377
$(La,Gd)(BO_3,PO_4)$:Ce,Tb,Gd green-emitting phosphors, luminesc. *(Chinese)* 71534
NiO electrochromic coatings, counter electrodes, structural and opt. props. 71477
NiO films, spray pyrolysis prep., electrochromism 127881
Si n-p photodiode, capacitance, color detect. 109586
Si, porous, metal-aided electrochem. etching, PL obs. 103328
$Si/SiO_2/Au$ struct., EL, RTA 71521
$SrTiO_3:Pr^{3+},Y^{3+}$ phosphor, PL, nonradiative transits. 93354
TiO_2 71477
V oxide electrochromic coatings, counter electrodes, structural and opt. props. 71477
WO_3 electrochromic coatings, counter electrodes, structural and opt. props. 71477
WO_x electrochromic films, atmos. press. CVD growth and charactn. 101347
$WO_3:V/V_2O_5:Ti$ double layer thin films, fabr. and electrochromic props. 114372
Xe flashlamps, bright choice for illum. 113129
Y_2SiO_5:Ce,Sc,La,Gd,Lu, blue phosphor, luminesc. props. 104917

colour blindness *see colour vision; vision defects*

colour centre lasers
$Gd_3Ga_5O_{12}:Nd^{3+},Cr^{3+}$ laser single crysts., CZ growth, dopant conc. control 79189
LiF with F_2^+ centres, broadband opt. amp. of IR pulses 117153
$LiF:F_2^+$ colour centre lasers, broadband lasing, nonlin. freq. conversion 117143

colour centres
see also F-centres; OH^--centres; V-centres
diamond, N-vacancy color centers, Raman-excited spin coherences 71943
glass, fs laser induced recording, electron/hole trapping 92976
glass, γ-ray irrad., enhanced $\chi^{(3)}$ 93772
insulator crysts., radiation-induced vacancy aggregation and opt. and scintillation props. 132394
quartz crysts., wedge-like, cryst. growth conditions, structural-morph. characts. 79159
Ce^{3+}-doped phosphate scintillating glasses, opt. props. under irrad. 121552
n–GaN:Er epilayers, ion implanted, Er^{3+} photolum. 81023
GaN:Mg, acceptor related recomb. centers, inhomog. spatial distrib., CL 81043
$Ge-SiO_2$ fiber Bragg gratings, index struct., paramag. defects 127647
$NaPO_3-GdPO_4-Ce(Tb)PO_4$ scintillating glasses, opt. charact. under irrad. 110334
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 69811
SiO_2:Ge glass, photonic materials, second-order nonlin., UV-poling, Ge-E′ centers 71206
Tb^{3+}-doped phosphate scintillating glasses, opt. props. under irrad. 121552
YVO_4:Nd, defects in large single crysts. 90217

colour displays
3D display syst. based on computer-generated integral photography 109896
21st century FPD technol. *(Japanese)* 121122

colour displays continued
ac surface-discharge plasma displays, barrier ribs effect 97641
ambient light source effect on color image appearance 97595
AMLCD monitor, digital controls, VLSI implement., PanelLink 86896
antiferroelec. LCD, domain wall motion and switching 97620
arbitrarily configurable customer tailored instrum. for vehicle appls., LCD units 124014
ASIC design of color seq. driver for LCOS microdisplay devices 114750
autostereoscopic displays, big size holographic screen 109897
avionics LCD, photom. meas., intraplant & interplant correl. 98912
bend cells optimisation, field-seq. colour microdisplays 97713
bistable cholesteric reflective displays, gray scale states, refl. spectra 97707
CLC colour filters, opt. characts.,light recycling, brightness 109882
co-planar color PDPs, T-shaped electrodes, luminance and defn. 97722
control room colour coded displays with visual layers 97593
CRT color-picture-tube panel, inner surface curvature optim. *(Chinese)* 86847
CRT colour difference eval., parametric effects 121085
CRT colour display, electron beam profile meas. 93977
CRT colour-difference eval., colour difference formulae testing 121084
CRT display prod. line convergence meas., low cost CCD sens. 97700
CRT monitors, gamma term clarification and charactn. methods 97688
deflection yoke design for color monitors and CRTs with flat panels 97718
DLP, digital light proc., projection display systs., DMD 132114
dyn. colour separation CRT displays, 20 V prototype 109878
electron gun for large screen color picture tubes, beam forming region and pre-focusing lens *(Chinese)* 125979
electron-beam mirror projector, light valve modulator 97741
environ. assess., colour CRT and LCD monitors materials eval. 86812
Epson mobile phone LCD drivers, low power consumption 119985
FD Trinitron, digital TV sig. proc. & display technol. 86326
FED, luminance efficiency 97691
FED, widescreen full-color display 97753
field seq. high-resoln. CRT using liq. cryst. colour shutter 121112
field-seq. color projectors, color breakup mechanism 97647
field-seq.-colour poly-Si-TFT LCD 121107
filter fab., thin-film layers absorpt./transmittance 97597
filters for LCD miniature displays 97758
fluoresc. 1,2-oxazole cpd. synthesis for organic LED FPD appls. 109865
FPDs for automotive appls. 97645
generalised mixed-mode refl. LCD, 3-panel colour projection syst. 97686
green-blue-emitting 2,5-bis{4-[2-naphthyl(phenyl)amino]phenyl}thiophene for organic EL devices 104971
H-PDLCs, holographically-form. PDLC, colour display perform. 97628
hand-held portable electronic products appls. 97695
image mode laser, ASE model, video projection display 97671
integral-colour plastic LCD, polaris. control, pass. retarders 109880
LCD, advanced technol., mater. develop. & future trends 121083
LCD, reflective, R-OCB cell, diffusing property 97682
LCD, wide-viewing-angle, interdigital electrodes, switching perform. 86829
LCD & CRT displays, colour gamut differences 86832
LCD backlights, white EL lamps appl. 97750
LCD colour display, elec. rot. *(German)* 97715
LCD colour filter stds., Toppan Printing proposals 121086
LCD controllers, SoC implements. *(Italian)* 132107
LCD keytop for displaying syms., characters and animations *(German)* 121101
LCD monitor controller IC, integrated ADCs, high perform. 86895
LCD panels, colour reprod. characts., software-based compensation *(Japanese)* 121093
LCD with switched organic EL backlighting 109905
LCOS liq. cryst. on Si microdisplays, frame-buffering cct. 97765
low power colour reflective TFT-LCD technol. 121106
micro mirror arrays for scanning appl. in laser projection syst., fab. 82192
Mitsubishi LCD monitors for emerging multimedia use 121114
multi-domain vert. aligned LCD 97678
multibeam & multipanel displays, scan archit. perceptual effects 109879
multicolor pixel patterning of light-emitting polymers by ink-jet printing 97603
multicolor polymer EL device fab. using photo-bleaching method 104973
multicolour OLED fab., integrated screen/thermal transfer printing 86805
multilayer stacked EL device concept, luminance enhancement 97667
multiprimary display, color conversion method using matrix switching 109892
NEC Digital Mova N502it HYPER, develop. *(Japanese)* 85414
NIST colorimetric calib. facility for displays 97128
OLED controllable doping, thermal transfer approach 86806
OLED displays, perform. status & future prospects 121099
organic EL displays, future prospects *(Japanese)* 93385
organic LED full color pass.-matrix display 97588
pass.-matrix full-colour organic EL displays 121105
PDP, gas discharge principles, expts. & simul. 86825
PDP, lithog., optim. *(Chinese)* 80627
PDP, surface-discharge AC type, advanced Japanese mfg. 86856
PDP back panel fab., low-cost proc., LTCC on metal 109898
PDP HDTV, color temp. improvement, driving scheme 120543
PDP module, NEC product lineup and technol. 121104
PDP packaging technol., electrostatic bonding 109895
PDP technol. for large size TV screens, future perspectives 132099
plasma addressed LCD, 42-inch high-defn. design 97723
plasma displays, advanced mfg. technol. 86855
polymer light-emitting devices, mol. doping, maskless dye diffusion 109872
polymer organic LEDs, ink-jet dye doping, lateral dye distrib. 116988
polymer-stabilized FLCD cell, FSC matrix display 97623
polysilicon TFT-LCD, 7-inch full-colour design 86891
QSXGA superhigh defn. TFT-LCD, digital interface *(Japanese)* 121094
reflective colour LCD panels, RGB directive reflectors *(Japanese)* 121091
reflective colour TFT-LCD using twist PDLC mode with single polarizer 97681
reflective electromechanically actuated film display for direct viewing 109844
reflective full-colour TFT-LCD, micro slant reflector, high brightness and contrast 97708
reflective LCD, high brightness, opt. compensated twist-LC cell 97743
reflective LCDs, diffusive micro slant & bump reflector comparison 86830
reflective light valves, polarising microscope metrology 97658
reflective TN-LCD, wide VA, single polariser, compensation films 86839
retarder stack technol. for colour manipulation, polaris. control 109883
solid-state laser-based displays 97760
spectral imagery, invariant display strategy 94447
STN LCDs for automobiles, multi-line addressing technol. appl. 97601
Super-TFT IPS-LCD, 18 in., fast response speed 86837
SXGA liq.-cryst.-on-Si light valve, high-defn. video projector 86850
TFEL mol. lanthanide devices, colour purity/device efficiency 97612
TFT-LCD, wide-viewing-angle, recent trends 86827
TFT-LCD module, technol., product trends and appls. 121103

colour displays continued
ThinCRTL, field emission FPD, electron focusing 97692
twisted nematic LCDs, colour reprod. charactn. 97689
two-domain TN-LCD with identical, symm. & ±80° viewing cones 86828
WWW shopping, coloured goods ordering, display problems 109876
XGA full-color display, serial transceiver chip set 86887
Mo FEA, frit sealing, emission characts., ambient gas influence 97666
SiO-Cr black matrix for color CRT, thermo-vac. evap. deposition 86818
SiON thin-film opt. coatings for FPD 97627
ZnS_xSe_{1-x}:Mn TFEL devices, band gap engng. for improved efficiency/brightness 75796
$Zn_2Si_{0.5}Ge_{0.5}O_4$:Mn green TFEL display, high brightness 97668
upconversion phosphors, recent advances, new appls. 104932

colour filters *see optical filters*

colour graphics
block truncation coding tech. for colour image databases 84433
hip joint, newborn, 3D visualization using ultrasound and automatic image segmentation 110724
re-indexing algm. for lossless compression of digital images 118648

colour image analysis *see image colour analysis*

colour perception *see colour vision*

colour photography
aerial reconnaissance photograph data annotation, LED arrays appl. 99110
consumer digital still photography, CCD imagers vs. CMOS image sens. 131976
digital camera colour photography, tricolour filter *(Chinese)* 109671
digital photography and photographic printing 94868

colour television *see television*

colour vision
see also eye
CRT colour difference eval., parametric effects 121085
CRT colour-difference eval., colour difference formulae testing 121084
dichromats color display 94872
ICA features of colour and stereo images 118244
interior lamp colour props./apparent brightness review 124058
LCD-based vision screener, tech. develop. *(German)* 98351
machine vision syst., spectral responsivity estimator 73264
night-time target detect., visual complexity effects 124087
spectral calib. params. learning for color inspection 106656
street lighting, required illuminance, high-efficacy fluoresc. lamps *(Japanese)* 124086
trilinear color image sens., very high resoln. 120887

coma *see aberrations*

comb filters
CAD and optim., FD-FD GSM algm. 102512
dual plane comb-line filter, conductor-backed CPW *(Japanese)* 91207
fibre laser, spacing-tunable multiwavelength operation 105187
GSM duplexer, 1RU rack mounting, extracted pole resonator 74686
high-temp. supercond. hairpin-comb filter, cascaded struct. *(Korean)* 114865
hybrid combline/hairpin like resonator microstrip line elec. tunable filter 102530
IIR comb filter, harmonic interf. removal, multirate method 107491
ISM band pass filter, integrated combline struct. 68892
Jot's reverberation algm., coeffs. computation 118063
microwave combline BP filter, cct. design, atten. poles 69028
microwave combline filters, FEM anal., multiport S-param. data, cct. simulator 91214
multiple narrow-band bandpass sigma-delta modulators, transfer fn. design 90973
real-time 3D acoustic image localization algm. by embedded DSP 84141
supercond. ADC, oversampling, encoder and decimation filter 70846
switchable narrow-bandwidth comb filters, AO superlattice modulator 116859
time-varying recursive filters for decimation/interpolation 119008
Er-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wavelength operation *(Chinese)* 82523
$YBa_2Cu_3O_{7-\delta}$ adjustable multilayer HTS bandpass taped comb-line filters 116538

combination locks (electronic) *see digital circuits; safety systems*

combination scattering spectra *see Raman spectra*

combinational circuits
see also combinational switching
aliasing-free space compactor design, switching theory formulation 101965
ATPG algms., test pattern compaction, independent/compatible faults *(Korean)* 102095
ATPG methodology for path delay faults 79810
BDDs, oscillating algm. for variable ordering 68676
behavioral and gate level designs, power estim. improvement 90823
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
CMOS, max. power dissipation simul. *(Chinese)* 102053
CMOS combinat. ccts., av. power estim., pattern compaction tech. 102110
CMOS digital ccts., av. switching activity estim. 101882
CMOS exhaustive min. dist. search engine using hybrid digital/analog cct. techs. 125618
CMOS logic power simul., stream synthesis, spectral transforms 79847
CMOS ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
combinat. multi-level networks synthesis using inform. theory method 79822
configurable hardware, ATPG 68718
coupling and noise aware delay anal. of combinat. logic blocks 68748
crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
cube rooting, digit-recurrence algm. and logic cct. implement. 68767
cyclic greedy generation method for limited no. of IDDQ tests *(Japanese)* 90819
deep submicron digital ccts., functional correl. anal., crosstalk induced crit. paths 125446
defect coverage, target faults, test generation 79796
dependency preserving probabilistic modeling of switching activity using Bayesian networks 125435
design diversity metric 101967
design error diagnosis without error model 101947
differential diagnosis of faulty gates, eight-valued logic 68703
digital FIR filters, testing schemes 91103
digital logic ccts., compiler driven simul. tech. 79839
domino logic ccts., coupling-aware min. delay optimisation 79829
DSP appls., low-power design tech. 102241
enzyme genetic prog. for combinat. cct. design 103993
equivalence checking using Boolean satisfiability and BDD 79790
fault tolerant combinat. cct. with fault diagnosis capability *(Japanese)* 90818
forward-looking fault simul. for improved static compaction 114716
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808

mbinational circuits continued
G-vector model for glitch anal. in logic ccts. 68758
hierarchical FPGA mapping, perform.-driven multi-level clustering 125441
level assignment for displaying combinat. logic 125319
logic cct. diagnosis by using neural networks 79842
low power CMOS ccts. with clocked power 68784
low-power domino logic ccts., automated phase assignment in synthesis 79830
m-out-of-n hardware bit voter, CMOS VLSI technol., fault tolerant designs 79809
max. power consumption problem, approx. algms. 102004
mixed digital and lin. analog ccts., fault diagnosis 125617
mode dependency timing charactn. method, cct. delays, timing models 125447
multi-valued logic ccts., genetic algm. for ATPG tool 90891
multilevel combinat. networks, power estim. based on switching activity 114696
multiple error rectification, AND/OR graphs and BDDs 68741
multiple-output logic fns., realization by reconfigurable cascades 125462
parity testable design 114724
partition-codec archit. synthesis for low power and small area cct. design 102113
pass-transistor adiabatic logic adder, low-noise/low-power design 68751
path delay fault diagnosis in combinat. ccts. with implicit fault enumeration 114714
path delay faults, diagnosis in at-speed environ., functionally sensitized paths 102038
QD logic ccts., shared BDD 101999
reconfigurable proc. for problems of combinat. computations, design and implement. 125316
resynthesis for path delay fault testability 125418
RTL ccts., non-scan DFT method, fixed-control testability *(Japanese)* 68712
SAT, Satisfiability algm. for combinat. equivalence checking 79789
satisfiability-based functional delay fault testing, CNF formulas 101951
seq. cct. test generation using state transit. diag., combinat. cct. part 114728
simultaneous switching gate delay model, static timing anal., ATPG 125437
SPIRIT, highly robust combinat. test generation algm. 102072
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistor sizing 102035
test generation, OBDD *(Chinese)* 79756
testable data path synthesis, GA 125404
testable data path synthesis, GA 114731
testing, power consumption optimisation 79805
VHDL transparent fault injection and simul., shared variables and linked lists 79833
VLSI, static estim. tech. of power sensitivity in logic ccts. 125436
vMOS-based compressor design for parallel multipliers 68749
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025

ombinational mathematics *see combinatorial mathematics*

ombinational switching
see also combinational circuits
multilevel combinat. networks, power estim. based on switching activity 114696
neural nets, adaptive, nonlin., with delays, anal. 114911

ombinatorial circuits *see combinational circuits*

ombinatorial mathematics
see also graph theory; sorting; travelling salesman problems; trees (mathematics)
2D perfect quaternary arrays 72782
3D conformal radiation therapy, optim. problems 76648
antenna, nonuniformly spaced lin. array, feed syst., GA *(Japanese)* 83770
combinat. optimisation, conf., Brussels, Belgium (April 1998) 113187
computer vision, robust point correspondence by concave minimization 129497
concrete product life cycle anal./CAD, intell. syst. 125089
covering rad. problem for ternary self-dual codes 106132
crossbar switching, Hopfield neural net appl., theoretical limitations 73804
decision-making/scenario develop. under uncertainty 67738
digital filter design, multimode mean field annealing approach 80085
distrib. network service restoration reconfiguration optim. algm. *(Chinese)* 99332
distrib. syst. expansion planning, tabu search approach *(Chinese)* 88428
distrib. systs., loss minimization, ant colony algm. *(Korean)* 122967
distributed generation syst. act. power harmonic filtering optim. *(Japanese)* 133905
DNA based computers, conf., Cambridge, MA, USA (June 1999) 67371
dual min. cast flow algms. 67807
ε-optim. schemes and L-bit precision, perspectives in combinat. optim. 67871
error-correcting codes over alphabet of four elements, combinat. bounds 94299
Eulerian nos., combinat. interps., permutation representation 78857
exact algms. for large-scale unconstrained two and three staged cutting problems 67918
fuzzy shortest path problems, interacts. among paths 113943
GA, parallel distributed, crossover scheme 78911
games on matroids, Shapley value, static model 78799
general meta-heuristic based salver for combinat. optimisation problems 113982
generalized Steiner systs. GS(2,4,v,2) with v, prime power≡7 (mod 12) 117967
heuristic approach for antenna positioning in cellular networks 131165
ideal secret sharing schemes, comp. of matroids 118019
inclusion-exclusion identities via closure operators 78856
IP networks, bandwidth/latency monitoring 119681
IP-based networks, GA for capacity planning 108033
k-interchange tech. for optim. over permutations 124599
Latin sq. isotopy classification algm. *(Chinese)* 118039
length and area fns. on groups and quasi-isometric Higman embeddings 67842
local and global cyclicity in free semigroups 78878
mean field models for spin glasses, rigorous results 113912
mean value theorem of Dirichlet L-fns. 89989
Mix-network based on permutation networks 106277
monotone-struct. reliab. theory, untying of clutter-family supports 113793
multiple aircraft conflict resoln., optimal maneuver, pure braid group approach 88087
networks design problems, genetic local tuning algm. 95975
optim. models, expected perform. of systs. with complex interacts. among components 67882
optimal prefix-free codes ending in specified pattern, uniform probab. case 106168
orthodox transversals of regular semigroups 67845
overlapped block motion compensation, GA based motion optim. 84420
parameterized finite-dimens. optim. problems, soln. sensitivity 100958
particles allocation into distinguishable cells, large-deviation asymptotics 124523
polynomial time approx. schemes for some dense instances of NP-hard optim. problems 67975

combinatorial mathematics continued
power load forecasting, combined crossing self-adaptable optim. *(Chinese)* 77286
powers representation of nos. as subset sums of small sets 100845
priority queues with binary priorities 78795
probabilistic multihypothesis tracker using turbo coding concept 130133
product family config. design, combinat. spaces 124296
quadratic assignment problem, modified algm., chaotic-neuro-dyn., VLSI implement. 102469
quadratic assignment problem polytope and star transform. 90024
quasi-multiple quasi-symmetric designs, Jungnickel-Tonchev conjecture 90010
radial distrib. network power capacitor placement optimisation 133667
radial distrib. systs., shunt capacitors optimisation, dyn. prog. 133638
ranking/unranking permutations in lin. time 113915
restarting after branching in SDP approach to MAX-CUT 67854
robust VQ for wireless channels 83903
secondary power syst. planning optim. using reduced ordered BDD *(Japanese)* 77292
Shannon capacity of constrained channels via combinat. formula 128958
shortest-path data networks, optimal routing 108288
shrinking generator props. 83884
simultaneous representations of semilattices by lattices with permutable congruences 67844
SONET/WDM networks with 1/8 wavelength requirements, drop cost minimization 74973
sums of digits, overlaps, and palindromes 78855
syst. synthesis with morph. clique problem, fusion of subsystem eval. decisions 118429
tomography, discrete, med. appls. 76546
transm. network expansion planning, ant colony optim. method *(Chinese)* 111959
unit commitment, priority-list-embedded tabu search *(Japanese)* 99238
VLSI power/perform. optim., fuzzy simulated evol. 104009
weighted vs. unweighted versions of combinat. optim. problems 90001

combinatorial switching *see combinational switching*

combined cycle power stations
10 MW combined cycle cogen. plant project, USA 123228
17 MW Kawasaki L20A gas turbine genset 99562
32 MW biomass integrated gasification-gas turbine technol. project 123224
32 MW combined cycle cogen. plant project, Australia 77766
110 MW combined cycle cogen. plant concept, Germany *(English)* 112330
110 MW gas and steam heating power plant, constr., experience *(German)* 99569
180 MW GTE-180 gas turbine power unit for combined cycle appls. 99558
386 MW combined cycle power plant upgrade project, Belgium 88619
480 MW Frame 9H gas turbine combined cycle power plant project, UK 123227
500 MW combined cycle power plant project, USA 99572
720 MW combined cycle power plant repowering project, USA 123231
850 MW combined cycle power plant/desalination project, UAE 123226
1100 MW combined cycle power plant repowering project *(Chinese)* 77764
binary combined-cycle installations using advanced gas turbine units 99568
consensus models for utility planners 112334
dispersed generating plant, 132 kV grid connection, relaying problems 77494
feedwater heating combined cycle, perform. anal. *(Chinese)* 112337
fuzzy model struct. ident., combined cycle power plant appl. 99565
gas turbine fuel diversification for combined cycle plant appls. *(German)* 123223
gas turbine power stations simulator *(English)* 123229
gas turbines, dyn. perform. predictive controller appl. 77765
gas-fired power-plant ignition proc., LD-based in-situ methane detect. 112338
gas/oil fired TPPs reequipment using gas-turbine and combined-cycle technols. 112329
gasifier, optimal-tuning PID control schemes 133873
generator terminals, cct. breaker installation 112449
HRSG optimisation, combined cycle gas turbine power plants 88616
IGCC integrated with methanol synthesis procs., perform. 123225
IGCC power generation syst. components modelling *(Chinese)* 88613
IGCC power plant economics, improved gas turbine power output project 99570
IGCC prospects optimism, petcoke problem, clean coal 88618
indust. energy supply project *(German)* 112331
integrated advanced power cycles, techno-economic modelling 99571
ionic transport membrane technol. for oxygen separation/syngas prod. 99602
MCFC based combined cycle power plant, efficiency, pollution reduction 99566
mini cogen. schemes in Mexico 112332
modeling for grid simul. 112335
MS9001FA gas turbine ceramic components, perform. benefit assess. 123212
natural gas pumping station heat-recovery power generation units 78369
oil-fired power plants repowering to natural gas fired combined cycle plants 88614
operation, project planning, optimisation software 88615
package boilers, emission levels reduction 123230
pressurized two-stage entrained flow coal gasifier, perform. 123107
pulp/paper mill combined cycle CHP plant, steam turbine-generator addit. 124155
real time intell. sens. validation, Bayesian network 133872
repowered thermal power station, black-start-up simul. 112333
Russian PGU-170 single-shaft combined-cycle power unit develop. 99567
single-shaft combined-cycle units using water/fuel-oil emulsion 88617
SOFC power plants develop. in US 88663
testing, model validation 112336
W501G gas turbine prototype testing in combined cycle config. 88607

combined heat and power generation *see cogeneration*

combined source-channel coding
adaptive and integrated video commun. for wireless ATM 129728
anti-interf. algm. for wavelet image coding *(Chinese)* 73417
arith. codes use 72901
ATM network CBR/VBR encoded digital video transport, performs. 84382
ATM networks, digital video transport, joint source-channel coding to scalable delivery 84469
AWGN channels, error-resilient compressed images transm. using soft-input source decoding 106982
binary Markov channel with memory, channel-optimized trellis-coded quantization 106143
CDMA commun., image source coding, channel coding and spreading 108739
CDMA time-varying channels, unequally protected multistage VQ 85720
commun. syst. design paradigm 72907
correl. param. estim. in channel codes for softbit source decoding *(English)* 72850
correl. param. estim. in source-controlled channel decoding *(English)* 72849

combined source-channel coding continued
correl. sources over noisy channels, joint source-channel decoding 106173
embedded image sources in noisy channels, dyn. UEP schemes optim. 84472
entropy-coded sources, joint source-channel turbo decoding 106153
error detect. techs. comparison using arith. coding 106186
error resilient image transm. using joint source-channel coding 84473
EZW image compression, multi-channel channel-optimized scheme 84474
finite block length source/channel codes 129211
GSM, adaptive multi-rate speech service *(English)* 74723
GSM, adaptive multirate speech codec *(English)* 74721
GSM adaptive multi-rate syst., wideband speech coding *(English)* 74724
hidden Markov sources, joint turbo decoding/estim. 106152
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image commun., hidden Markov sources transm. over Gaussian channels 84468
image compression, robust data hiding 95255
image transm. over noisy channels using joint source-channel coding 95155
iter. source-channel decoding, generalized framework 117991
joint source-channel coding using arith. codes and TCM 106175
joint source-channel decoding by channel-coded optimal estim. *(English)* 72851
joint source-channel decoding with iter. algms. 117953
joint source/channel coding design 94303
JPEG2000 and turbo-codes for robust image transm. 84470
MPEG-4 imagery, ring convolutional trellis codes design for MAP decoding 129800
multi-source multi-sink network, network inform. flow 130185
multiple description coding using trellis coded quantization 83935
multiresolution joint source-channel coding for mobile radio channels with feedback, perform. 85682
optimal joint source-channel decoding, iter. approx. 106151
overcomplete sig. representations, decoding algms. *(English)* 73586
packet networks image transm., multi-stage vector quantizer design 84471
packet video commun., low bit rate, rate-distortion optimal source/channel coding 84466
progressive image transm., joint source-channel coding *(English)* 73390
progressive image transm. in memory channels, perform. anal./optim. 106980
Rayleigh channel, combined source adaptive and channel optimised VQ algm. 83900
robust blind watermarking scheme based on distributed source coding principles 130945
satellite images coding, real BCH codes as joint source/channel codes 73357
scalable video coding with robust mode selection 84407
scalable video streaming, wireless channel, power-optimized joint source channel coding 107107
scalable/error-resilient/high-perform. video commun. in mobile wireless environ. 95042
scene adaptive multiple coding for robust image transm. 84475
speech sigs., joint MELP turbo code with unequal error protection 73022
still images transm., combined source-channel coding 106994
suboptimal BER minimization, combined source/channel decoding *(English)* 72852
time-varying wireless channel prioritized packet video transm. 108538
trellis coded quantization/modulation, optimal bit allocation 94274
varying channels, progressive source coding with regressive channel coding *(English)* 72892
video joint source-channel coding, distortion-rate charact. modeling 84467
video transm., source/channel coding trade-offs 95050
video transm. over erasure channels, joint source-channel rate allocation 118613
VLC for iter. source/channel decoding 106172
VQ/RCPC channel codes for Rayleigh fading channels, joint design 72935
wavelet-based image coder using joint source-channel coding 107106

combustion synthesis
diamond films, low-press. flat flame growth and Raman spectra charactn. 80668
micropositioning device for automatic alignment of substrs. for indust.-scale thin films deposition 124438
AlN, combustion synthesis, gravity behaviors, microstruct. effect *(Chinese)* 124784
AlN, combustion temps., gravity behaviors effects *(Chinese)* 124783
AlN nanofibers, combustion synthesis and charactn. 68103
$Ba(Sr)TiO_3$ films, HVOF/plasma deposition, dielec. props. 125046
CuCr contact, SHS-melting *(Chinese)* 80469
$La_{1-x}Sr_xCrO_3$ SOFC cathodes, SHS 89238
$La_{1-x}Sr_xMnO_3$ 89238
Li_xMnO_2 for rechargeable lithium batt. appls. 99934
Mg-Zn-Cu ferrites prep. by sol-gel auto-combustion method, EM props. 104248
SiO_2, ultrathin combustion CVD layers on Zn coated steel, struct., morph. 101368
TiC, combustion synthesis, gravity behaviors, microstruct. effect *(Chinese)* 124784
TiC, combustion temps., gravity behaviors effects *(Chinese)* 124783
$(Y_{1-m-n}Ce_mGd_n)_2SiO_5$ phosphor, combustion synthesis/particle size effects 104934
ZnO electronic ceramic powder, combustion proc. synthesis 100566

comets
46P/Wirtanen, Rosetta spacecraft, mutual impedance probe freq. response 76800
55P/Tempel-Tuttle, dust ejections, 2001 Leonid meteor predictions 133207
Rosetta mission, antennae for cometary nucleus sounding 83301
ROSETTA mission, piezoelec. composite transducers appl. 101623

COMFET *see insulated gate bipolar transistors*

command and control systems
3D visualization for situational awareness 97764
ad hoc network mgt. with C2 data models 88236
battlespace digitization for C3I systs. 77031
C4I defensive infrastructure for survivability against multi-mode attacks 111587
C^4ISR distrib. inform. fusion syst., multilayer de Bruijn network *(Chinese)* 122751
Canadian Army, digitization 77029
combat inform. center, human perform., human-centric design impact 99114
commun. effects server, distributed simul. 108199
cruise missile mission planning, heuristic algm. for automatic path generation 133390
DARPA Information Assurance Program dyn. defense expt. 96116
dismounted soldier, combat ident. 76981
distributed satellite C^2 testbed develop. 122504
integrated command environ., large screen displays implement. guidelines 99115
integrated command environ. develop., lessons learned 99113
integrated command environs., conf., San Diego, CA, USA (2000) 89528
intell. agent systs. for mil. centres and equipt. 88257
Joint Tactical Radio Syst. requirements, modelling & simul. 133389
Joint Tactical Radio System, software-defined radio 111577

command and control systems continued
large screen displays' cognitive benefits, C^2 syst. expt. 97742
mil. operations, modelling and control against adversarial control 88234
model research on optimizing allocation of service resources *(Chinese)* 88239
MPEG-integrated still imagery and live video, soft-computing based 73320
network-centric warfare, use of mobile agents 133391
scientific satellites, X-/S-band telemetry, tracking and command 85912
spacecraft command & data handling subsyst., level-0 telemetry collection 133241
spec. of C^3I syst., obj. interact. approach, MIS 99121
support syst. using CORBA 77035
tactical commun. networks, mgt. archit. 111570
TIBD Phase III, V-NAD scheduler perform./param. optim. using Taguchi robust design 111575
US Air Force develop. of high-altitude laser crosslink 86110
visualisation to support campaign planning/assess. 99120
warfighter C^4ISR syst., integrat. technols. 77032
WGS-84 coord. for surface target tracking 88244

command, control and communication systems *see command and control systems*

commensurate-incommensurate transformations
$Pb(Yb_{1/2}Ta_{1/2})O_3$-$Pb(Yb_{1/2}Nb_{1/2})O_3$ solid soln., struct./dielec. props. 127228

commerce
see also banking; business data processing; credit transactions; finance; international trade; investment; marketing
3G environ., gaining/collecting revenues 131189
appl. and ISP, obstacles to merger 119599
appl. service providers, business designs, winners and losers 119600
asset governance distrib. network mgt. approach 133626
Bangladeshi entrepreneurial software develop. company strategies 89772
Bangladeshi quality circle develop. prospects 89714
biomedical engng. students, design experience, "technical entrepreneurship" course 98112
Bluetooth future scenarios, effects on value networks and business models 108637
brand mgt., living brand 67460
BT Brightstar, corporate incubation model 107995
BT tech. archit. 107994
business environ., adaptable perform. meas. syst. 100496
business proc. develop., participative develop. and training 67481
business proc. mgt., business proc. reengng./TQM consolidation 89708
Chinese government role in CAD technol. transfer 89732
commun. business start-up mgt., Judy Estrin profile 95999
company profit sharing, employer vs. owner issues 100482
competitive power markets, US regulator's perspective 111712
customer rels. mgt., future 100480
distrib. businesses risk mgt., emerging aspects 133628
e-commerce and traditional business, hybrid strategies 96069
elec. delivery organizations, challenges and solns. 111713
electronic learning, market develop. and users' aims *(German)* 113309
energy market liberalisation, bal. scorecard syst. business approach 133454
energy utilities privatisation, energo-economical soln. overview 122840
engng. competence recogn., Canada-France mutual recogn. agreement 113359
European elec. deregulation, state-owned utility exemption problems 99201
European elec. sector liberalisation challenges *(French)* 99251
firm innovation, firm charact. impact 89718
Fort Wayne Electric Company, historical overview 88292
French elec. indust., collective sector-based negotiations *(French)* 111697
French power syst. reforms overview 77152
German elec. indust. self-regulation, operator's view *(German)* 111688
IBM's power supply procurement proc. overview 88820
indust.-university R&D collaboration, corporate strategic objectives 67455
innovation impact conceptual modeling for business/technol./society 89675
innovation/technol. mgt., conf., Singapore (Nov. 2000) 89555
internal European elec. markets tariff develop. 133481
Internet flat-rate or usage-based network services pricing 108236
Internet innovation, appliances threat 130634
IT syst. archit. planning platform 130510
mfg. agility develop. in SMEs 67492
mgt. excellence achievement using ideology concept 89713
mobile commun., future for business, technol. and research 85695
new product develop. mgt., shortfalls and solns. 89770
next-generation networks, press. on operators for new design principles 130530
open appl. interfaces for third-party service providers/developers support 85608
organisational competences anal. and mgt. 89712
PACS diffusion into radiology marketplace, adoption of alternative financing strategies 89657
peer-to-peer networking, technol. and business perspectives 74163
power supply business models anal. 88818
product design costs, design eval. implications review 78572
R&D knowledge mgt. capabilities, UK-Japan company comparison 113404
R&D mgt., innovation culture creation 89707
remanufacturing activities, technol. trends, business plans 100708
renewable energy in diverse elec. market 88321
semicond. firms R&D investment/perform. 89726
service sector research valuation using options theory 89764
small/medium-sized elec. utilities, business/IT strategy alignment 133469
SME financial mgt. overview 100485
South Korean elec. infrastructure change 111700
Spanish digital TV services, market strategies analysed 131725
SynThesis real-world product design/business develop. course 113325
Taiwan CATV operators and channel providers, anti-competition issues 120557
technol. mgt. as, virtual enterprise 113403
telecomm. services convergence, mapping business and technol. factors 130533
telecomms. transport capacity trading, electronic markets 130539
telemedicine options appraisal for health district, strategic clinical and business case 133164
Thai mfg. firms' technol. innovation, economic crisis impact 89719
trade develop., syst. dyn. model, electronic home equipt. market *(Chinese)* 89663
transportation enterprise competitive advantage model develop. 89715
UK mfg. indust., future mgt. challenges 67461
unique customer experiences creation, cross-enterprise integrat. business model 89702
US elec. supply indust., putting consumers first 111729
US R&D mgt., business finance aspects 100483
USA broadband market, recovery or relapse 74465
voice network migration towards next-generation networks 130605

nmerce continued
whole-motivated covenant, mode of governance suitable for knowledge business *(Chinese)* 89662
wholesale elec. prices, mergers impact simul. 111810

nmissioning
see also installation
60 MW IPP barge mounted diesel engine power plant, Sri Lanka *(Japanese)* 123232
120 MW hydropower plant Kaplan bulb turbines installation project 77775
2000 MW lignite-burning power plant repowering project, Poland 88583
circ. polarised undulator beamline, BESSY II, commissioning 121754
Delaware City CHP plant repowering project, large sync. motor appls. 123203
electronically line-shafted paper machine drives, startup/commissioning 124161
high-fiber-count networks, automated OTDRs, fully automated DAQ 82108
IM speed-torque characts. using speed sensorless tech. 123425
LINAC MLC-based intens.-modulated radiation therapy, QA 111083
MIPAS onboard ENVISAT, flight model perform., calib. & charactn. 122630
MRCAT insertion device X-ray beamline at APS, commissioning 110471
multifunction num. protective relay commissioning 123051
power syst. dist. relay testing algms. 77457
rly. substation traction current return syst./earthing studies *(German)* 78283
state-controlled high-powered elec. drive, commissioning using evol. algms. 89333
UK NGC commissioning requirements, mgt. proc. 77176

nmodity trading
telecomms. transport capacity trading, electronic markets 130539

nmon channel signalling *see telecommunication signalling*

nmon Object Request Broker Architecture *see distributed object management*

nmon-sense reasoning
AutoSteve, automated automotive elec. design anal. 68519
fuzzy arith., addit. from common-sense viewpoint 124553
HVAC cct. breaker diagnosis, qualitat. reasoning 123675
qualitat. modelling of lin. networks in engng. appls. 68704

nmunicating sequential processes
floor control for multimedia conferencing systs. *(Chinese)* 119315
reshuffled handshaking expansions, anal. 79669

nmunication aids for handicapped *see handicapped aids*

nmunication cables *see telecommunication cables*

nmunication channels *see telecommunication channels*

nmunication complexity
adaptive distributed DCA for wireless networks 119531
anonymous unknown network with leader, label assignment 130812
asynchronous Byzantine agreement using cryptography 94380
binary erasure channel, complexity of reliable commun. 128920
blacklisting problem in broadcast distrib. syst., ECC based soln. 129257
complex computer network model, power spectrum and 1/f type power law 74292
computer networks, delay-bounded multicast trees 107943
concurrent multicast in weighted networks 73966
DAB, FEC block, low-complexity design 109347
DCLC-DSF, distributed delay-constrained least-cost unicast routing heuristic *(Chinese)* 74046
delay-bandwidth-constrained multicast routing, heuristic algm. *(Chinese)* 119429
delay-constrained least-cost unicast routing, distributed heuristic algm. 95982
distributed multicast routing in point-to-point networks 107991
EDGE, reduced complexity fractional spaced equaliser struct. 73822
fairness in routing and load balancing 114566
fairness with throughput, online routing with multiple objectives 73749
faster broadcasting in unknown radio networks 73757
FIR MIMO DFE for space-time block-coded transm. over multipath fading channels 84878
freq. hopping seqs., fast generation method *(Chinese)* 73862
high-speed packet-switched networks, emulated weighted fair queueing algm. 130243
interactive file commun., computationally feasible protocol 130826
key mgt. for dyn. multicast groups 129254
Kronecker seqs., lin. complexity 72906
Kumar freq.-hopping seq., lin. complexity *(Chinese)* 73854
Las Vegas and one-way protocols, quantum and probabilistic commun. 73747
local coteries, efficient constr. method 107636
lower bounds by polynomials 95736
Mobilizer, distributed protocols for networks with mobile users 73918
multiuser detect. algm., polynomial complexity optim., direct proof 119084
network consciousness, beyond ant-hill model 119774
nonorthogonal sig. compression iter. algm. 129988
one-way trapdoor permutations for non-trivial single-server private inform. retrieval 107944
parallel input-output queued crossbar switches with no speedup, scheduling algm. 119136
parallel packet switches implement. 119170
perfectly concealing quantum bit commitment from any quantum one-way permutation 106310
polynomial-time approx. scheme for data broadcast 73748
QoS distributed routing, pre-computation based selective probing scheme 74052
QoS routing algm. based on weighted fair queuing *(Chinese)* 119436
quasi-max.-likelihood multiuser detect. by semi-definite relax. 130154
radio broadcast problem 130184
secure multi-party computation from any lin. secret-sharing scheme 106311
set reconciliation with nearly optimal commun. complexity 128957
single database private inform. retrieval implies oblivious transfer 107945
SoC design, gradual refinement of commun., mixed-level cosimul. 79709
sparse network/efficient routing simultaneous design 95989
SS-TDMA satellite syst. with intersatellite links, time slot assign. problem 120085
threshold proxy signature scheme, nonrepudiable 118042
tie-set graph theory and appl. to info. network mgt. 113910
token-passing strategy, adaptive, develop. and refinement 73956
two-party probabilistic commun. complexity scenario via Werner states 128914
unbounded error probabilistic commun. complexity 95735
update networks and their routing strategies 85099
wireless multimedia networks, admission control schemes supporting QoS 74447

communication congestion control *see telecommunication congestion control*
communication engineering education *see telecommunication engineering education*
communication equipment *see telecommunication equipment*
communication equipment testing *see telecommunication equipment testing*
communication exchanges *see telecommunication exchanges*
communication links *see telecommunication links*
communication network management *see telecommunication network management*
communication network reliability *see telecommunication network reliability*
communication network routing *see telecommunication network routing*
communication networks *see telecommunication networks*
communication overhead transmission lines *see telecommunication transmission lines*
communication power supplies *see telecommunication power supplies*
communication services *see telecommunication services*
communication signalling *see telecommunication signalling*
communication standards *see telecommunication standards*
communication terminals *see telecommunication terminals*
communication theory *see information theory*
communication traffic *see telecommunication traffic*
communication traffic recording *see telecommunication traffic recording*
communication transmission lines *see telecommunication transmission lines*
communications computer control *see telecommunication control*
communications computing *see telecommunication computing*
communications control *see telecommunication control*
community antenna television
long dist. analogue link, SBS counteraction 131745
networks screening effectiveness, field meas. 86328
community planning *see town and country planning*
commutation
see also commutators
2-stage commutated SRM with auxiliary winding, acoustic noise reduction 133991
3-phase AC-DC step-down unity PF PWM converter, soft-switching 123600
3-phase act. power filter, vector based control 122985
3-phase inverter, ZCT schemes comparison 88928
3-phase soft-switching inverters simplification, zero-current-transit. 134184
3-phase ZVS PWM inverter, digital control, reson. snubber, CT 134225
18-pulse diode rectifier, three-phase coupled reactors 112628
150 kW soft-switched HF isolated DC-DC power converter evol. 134190
600 V/6 kA bidirectional ZVS hybrid DC IGBT switch 134271
AC-AC pulse converter for induction heating appls. 123637
AC-excited sync. machine control syst., field weakening, overload capability 123905
act. current rectifier, switch based, math. model & control 88939
adjustable-speed sync. motors harmonic reduction 112472
alternative HVDC converter schemes comparison 123657
auxiliary reson.-commutated snubber-linked three-level IGBT ZVS VSI 134202
auxiliary reson.-commutated soft-switching inverter topol. 134200
brush DC motors, conc. windings, soft mag. composite armatures 134067
brushless refrigerator compressor motors, sensorless sinusoidal control 124123
current commutation, minimizing influ. on EM environ. *(Slovenian)* 123278
current limiting cct. breakers, LV devices, moving contacts, arc root commutation 123661
DC hybrid cct. breaker using integrated gate-commutated thyristors 78055
DC motor, PM and static commutation, rot. induced voltages 99688
DC motor commutation spark image-monitoring method *(Chinese)* 112542
DC motors, commutation arc in gasoline, effect on brush wear and commutator 123486
DC-DC power converter, MOS input device, floating gate drive cct. 99816
direct-drive motor syst. for robot joint 123949
distrib. network transient oscills. from voltage notching *(Japanese)* 133672
double salient motor, commutation torque ripple control, simul. *(Chinese)* 134068
doubly-fed induction machine, rotor side control strategy 134468
drum-type mill motor drives, develop. status/prospects 113173
dyn. voltage restorer power quality device, short sags compensation 77350
electronically-commutated doubly-salient PM SRM perform. anal. 123370
elevators, supercapacitor energy storage syst., soft commutated interface 134523
epitaxial/nonepitaxial planar gate and trench gate IGBTs, turn-off behaviour 115912
EV, IM drive inverter, degrad. regimes, num. simul. *(French)* 134519
EV AC motor drive soft-switching inverters comparison 134203
grid-connected induction generator, naturally-commutated AC voltage control 134001
high power IGBT inverter, wiring inductance minimisation 112635
high-perform. gate cct. driving multiple connections of insulated gate devices 90740
HVDC capacitor-commutated converter using act.-pass. capacitor 112007
HVDC force-commutated converters, ABB technol. 112597
IGBT behavior in ZCS commutation, test ccts. 90742
IM direct stator flux and torque vector control 123913
IM drive, PWM rectifier, four-step commutation strategy 123872
IM drives, PWM inverter fed, control techs. 89356
improved full-load-range isolated ZVS-PWM DC-DC power converter 88890
integrated gate commutated thyristor, CSI 126701
ITER SMES power conditioning syst. 78193
kV/5 kA reverse conducting gate commutated thyristor 126693
LCI fed sync. motor drives, current harmonic losses 134492
litz-wire flyback transformer winding optimisation, 2D field effects 88787
long-cable HVDC-transm., capacitor commutated converter control 111866
lossless commutated boost converter as burn-in appl. act. load 88916
low-cost matrix converters, two-step commutation policy 78035
LV miniature cct. breakers, laterally enclosed arc runners, arc struct. and motion 123662
LV switch cct. poor contact detect. method *(Japanese)* 80470
matrix converter topol. with simple commutation 134208
monolithic bidirectional switch, matrix converter 134255
multi-motor AC-drive act. front end converters, staggered sampling SVM 123921
multiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
MV AC drives, reduced switching freq. act. front end converter, PWM-CSR 123922
nested-cell auxiliary reson. pole commutated power converters 134206
PEM fuel cell stack, dyn. behaviour, stationary appls. 89183

commutation continued
periodic PWM invertors, mixed p-z anal. approach 78003
primary-switched AC/DC line-side converter, modulation 112645
primary-switched line-side converter, modulation 78013
prog. AC power source, switched current topol. 99754
pulse supercond. magnets, inverter-converter bridge energy transfer cct. *(Japanese)* 92906
PV powered water pumping, current-fed parallel reson. push-pull inverter 113179
PWM controller, soft-switching boost PFC 99283
PWM multicell inverter, safety/short-cct. tolerance improvement 77999
radial field PM DC motor, EMF computation with commutation phenom. effects 123491
rectified-voltage DC traction motor commutation studies 89368
sensorless BDCM drive, current-mode control, intell. commutation tuning 89334
series DC motors field-based anal. 123490
series-connected IGBT strings, switching transients control 70152
single-phase ZVS PWM rectifier using inductor energy recovery ccts. 134244
small PM motors, perform./brush commutation modelling 123524
SMES, inverter-converter bridge energy transfer cct. 78191
SMES power conditioning syst., thyristor PWM converter *(Korean)* 123840
soft switching 3 kW DC-DC converter 77997
soft-switched CSI for single-phase utility interfaces 125218
soft-switching cells anal., generalised invariant models 99771
soft-switching choppers, load adaptive ZVS scheme 134189
SRM, DDC, commutation strategy *(Chinese)* 112492
SRM, vibr./acoustic noise reduction, commutation strategy *(Chinese)* 77834
SRM controller LabVIEW implement. 88696
SRM variable speed drive, torque ripple minimization control 89337
STATCOM using thyristor PWM CSI 112746
static transfer switch perform., regenerative load effect 134280
subsonic diagonal-type MHD generator, AC power syst. interconnection 78177
sync. generators, AC/DC stator connections, steady-state charact. *(Chinese)* 133954
three-phase AC-side soft commutated reson. pole PWM converters 78001
three-phase current-fed PWM converter with source commutation and reson. commutation *(Japanese)* 101764
trapezoidal EMF BLDCM, commutation torque ripples reduction 88755
triac operation under transient thermal conditions, thermal fatigue reliab. 126688
ultra fast hybrid cct. breakers with GTO and IGBT, comparison 99842
unity PF buck type PWM rectifier, medium/high power DC motor drives 134166
variable speed wind energy syst., PM sync. generator control 123250
ZCZVT PWM full-bridge DC-AC converter, commutation cell 134179
ZVS AC-DC boost converter, energy recovery ccts. 134228
ZVS PWM buck converter using coupled inductor 123655

commutator motors
current commutation, minimizing influ. on EM environ. *(Slovenian)* 123278
universal motor struct. using soft mag. composites 133926

commutators
see also commutation; commutator motors
DC motors, maint. concerns for long operation 123497
pulp and paper indust., DC motors, carbon brush perform. 124159

compact antenna test range *see antenna testing*

compact disc players *see Hi-Fi equipment*

compact disc storage *see CD-ROMs*

compact discs (audio) *see audio discs*

compacting *see densification*

compandors
see also interference suppression; pulse code modulation; radiotelephony; telephone interference
AO RF sig. time scale conversion, method and implement. 116860
noninvasive techs. for syllabic companding in sig. proc. 80058
OFDM A-law companded syst., SER anal. 72734
pruned tree-struct. scalar quantizers mapping to companding, design 106191
subthreshold log filters, LV CMOS basic building blocks 80131
syllabic-companding log domain filters, exponential and translational mapping approach 91033

comparators (circuits)
see also current comparators; phase comparators
airborne slotted array antenna, planar magic tee jn., CAD 83666
analog adaptive median filters for image proc. 114870
analog EEPROM, high-precision, real-time write monitoring, analog sig. proc. appls. 80130
ASDBLR straw tube readout ASIC in DMILL technol., implement. 132453
chaotic spiking oscillator transistorised cct. 102472
CMOS ADC, 8 bit design, efficient archit. 102277
CMOS continuous-time filter, LV, on-chip automatic tuning 102335
CMOS parallel pipeline ADC, 10-bit 200-MS/s, front-end S/H cct. 90969
CMOS pipeline ADC, stochastic nonlin. anal. 125580
CMOS regenerative comparators, symbolic anal. 91125
cosmic rays, scintillation detector, pulse shape comparator 98024
FESA chip for X-ray/gamma ray detectors 121696
FGMOS analog and digital comparator designs, weighted multiple-input voltages 81517
flash ADC, 6 bit digital design in 0.25 μm CMOS 102299
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
FSK mixed sig. decoder for AF appls. 68655
high speed dyn. latch comparator with reduced offset using init. switch *(Korean)* 79837
high-speed PLA using dyn. array logic ccts. with latch sense amps. 114707
HTSC SFQ ccts., interface engineered Josephson jns. 70883
inductive divider comparator for HV thermal converters 120691
instabil. removal with hysteresis, pos. feedback 68972
low power ADCs, design techs. 102298
multilevel flash memories, high-speed low-power sense comparator 68793
NMAX and NMIN fns. realisation with multi-valued voltage comparators 79816
proc. and temp. independ. inverter-comparator for PWM in class-D amps. 114621
pulsed TOF laser radar, wide dyn. range receiver channel 109298
PWM generator 101850
rail-to-rail successive approx. ADC, 1 V 10 bit, std. CMOS 79990
sorting networks, L_p mean comparators, theoretical props. 125630
three-phase act. power harmonic filter direct power control scheme 89030
wt. vol./mass determ. comparator *(Japanese)* 97860
SiO_2 radiation tolerant pixel front end, BTEV design 98057

compasses
see also navigation
3D Hall struct., integrated vector sens./mag. compass 111380
fiber optic gyro, iXsea products, eval. and certification by LRBA *(French)* 109619
micro-mag. sens., magneto-impedance/stress-impedance, review 75765
pedestrian navig. syst., dead reckoning param. correction 131876
two-axis fluxgate mag. field sens., CMOS proc. fab., perform., appl. 75477
InSb FPA based mil. miniature modular integrated sight 77102

compensation
see also error compensation; motion compensation
3-phase 3-wire VSI shunt act. filter, sliding mode control in dq frame 134149
3-phase 4-wire ccts. compensation, time instantaneous/av. value concepts 111677
3-phase act. power filter, multiple single-phase VSI modules 122987
3-phase act. power filter, vector based control 122985
3-phase power networks calc. using Pspice *(Russian)* 77134
3-phase syst., power quality optimisation, compensator synthesis 77366
3D mouse using US dist. meas. with AGC, design 76979
4.4 GHz microwave thermometer with compensation of refl. coeff. 87558
4-in wafer low-crosstalk arrayed-waveguide grating multi/DEMUX fab. 127804
6-35 kV distrib. networks, insulation params. calc. *(Russian)* 88425
6-35 kV networks, insulation params., continuous monitoring 88430
10 kV automatic reactive power compensating syst. develop. *(Chinese)* 111844
20 kW GTO NPC inverters, PWM switching pattern control scheme 134187
33-420 kV power distrib. protection/control equipt. reliab. 133611
35 kV ZBX-type automatic tracing compensation arc suppression device *(Chinese)* 112164
40-channel multi/DEMUX, dyn. passband shape compensation 86081
500 kV transm. lines transmitting capability improvement measures *(Chinese)* 77376
±500 kVA static VAr generator, GTO dead zone compensation study *(Chinese)* 111727
AC motor drive reliab. improvement, four-leg three-phase inverter 89323
act. filter, fuzzy controlled, optimum duty cycle design 122984
act. filter under harmonic power vars., transient perform. 122988
act. filters ref. currents detect., Darrieus reactive power defn. 122983
act. mag. bearing sync. disturbance compensation 92880
act. power filter, adaptive neural network based harmonic current compensation 112076
act. power harmonic filter, internal model control using reson. model 133715
act. power harmonic filter capacitor, energy storage fuzzy control 89036
adaptive compensation of analog front-end I/Q mismatches in digital receivers 102420
adaptive feedforward microwave amp. lin. using analog circuitry 91272
additive noise, speech recogn. compensation *(Chinese)* 106398
all-fiber grating-based higher order mode dispersion compensator 74950
analogue IC small-sig. modeling, elementary transistor stages, behavioral sig. path 125213
APD, thermo-perform. 116952
APD output currents, transimpedance op amp *(German)* 101774
ATSC type fast dyn. VAr compensation device *(Chinese)* 112751
automobile tyre press. diagnosis, param. vars., observer based estim. 86979
backward propagated capacitance model for VLSI RTL power estim. 114676
Beijing power syst. optimal VAr control software *(Chinese)* 111918
BiCMOS capacitive press. sens., surface micromachined, for automotive appls. 78324
BiCMOS const. G_M rail-to-rail opamp with bipolar input stage 79579
bit-parallel WDM syst., bit skew & dispersion compensation 109206
Bragg grating opt. fibre amps., WDM syst. gain equalization 93507
BrainSuite, automated cortical surface ident. tool 87578
Brazilian interconnected syst., transfer limits, reactive compensation, voltage collapse 111780
Brokaw bandgap voltage ref., freq. anal. of power supply rejection 79562
buck DC-DC converter, lin. optimal feedback/load-decoupled control 112640
bulk opt. sens., environ. effects compensation 132116
CAD modelling, contact probe rad. compensation 131814
capacitor bank protection overview 99887
capacitor bank with reactor, effect on pass. filter *(Chinese)* 113039
capacitor compensated lines, fault location, hybrid fuzzy neural network 99430
CAT-5E modular jack for high-speed differential sig. interconnection, crosstalk noise reduct. 91445
CDMA multi-carrier syst. in inperfections, receiver struct. 108609
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform detect. using compensatory fuzzy neural nets 110801
chromatic-dispersion compensated hybrid refr.-diffractive lens, totally incoherent opt. proc. operations 118326
CMOS bandpass filter for pager appls., LV high-Q design 91046
CMOS ccts., mutual compensation of mobility/threshold voltage temp. effects 92465
CMOS class AB RF power amp., nonlin. capacit. cancel. tech. 91326
CMOS DAC cell with ultra high gain op-amp, 10 bit, 1.8 V 79982
CMOS integrated Hall mag. sens., mag. flux concentrator 75475
CMOS LV rail-to-rail input/output opamp with. nested Miller compensation 68605
CMOS microsensors, parasitic behaviors charactn. 127122
CMOS OTAs, reversed nested Miller compensation with current follower 79584
CMOS PLL, 2 GHz, gain compensation VCO, peak-to-peak jitter 102734
CMOS SC power converters with integrated low dropout regulators 90726
CMOS ΣΔ modulator, substr. biased MOS capacitors, series compens. 90968
CMOS transimpedance amp. for DVD appls., parasitic capacitance compensation 79583
CMOS voltage buffer with resistive freq. compensation 92475
coherence-multiplexed fibre-opt. sens., press./temp. change meas. 109607
coiled single-mode fiber dispersion slope compensator 71265
combline resonators and filters, temp. characts. study 102532
common-mode feedback ccts. for SC stages with large common-mode input 91124
complex location syst., act. jamming compensation 83442
concatenated fiber links, optimal dispersion compensation, variational approach 96804
continuous scanning laser Doppler vibrometer with bow scanning compensation 132189
continuous-time bandpass delta-sigma converters, feedback DAC delay compensation 114817
cooled CMOS systs., act. threshold compensation cct. 104110
coplanar technol. tuneable act. planar looped filter struct. optimised in noise 125684

npensation continued
corrugated struct. long-period/Bragg fibre gratings, tunable coupling strength 104646
coupled cavity thin film based all-pass filters, third-order dispersion compensation appl. 109187
cross-PM based Gb/s wavelength conversion over dispersion-compensating fiber 96850
current reconstr., transformer nonlin. compensation 86905
CVD, compensator control, reduced-order design model 101326
DC motor drives, multi-model param./state estim. 123941
DC motor friction compensation, neuro-fuzzy control 88760
DC motor neuro-fuzzy speed control systs. 112545
DC motor nonlin. friction compensation, adaptive control 88759
deadzone compensator of DC motor syst. using fuzzy logic control 77884
decomp. synthesis approach to design of RF and microwave act. ccts. 91297
differential press. flow sens. with FBG 109594
direct torque control variable speed syst., low speed perform. anal. *(Chinese)* 77807
distrib. line control, load fluct. compensation, fuzzy control, SMES 77311
distrib. line power quality enhancement using series compensator 77325
distrib. network, single-phase grounding line selection, grounding-current compensation, integrative device *(Chinese)* 133642
distrib. network parallel act. power harmonic filter control strategy 133553
distrib. network reconfiguration and reactive power compensation 112059
distrib. power flow anal., voltage control devices models 133665
distrib. syst., optimal capacitor placement using simul. method and GA 77327
distrib. systs., load bus voltage control, unified PQ conditioners rating 112037
distrib. systs., unbalance/fault conditions, PWM STATCOMs operation 112038
distrib. systs. control, FACTS devices, optimal allocation 112036
distributed multimedia, objs. compensation, QoS-based method 130980
distributed substation automation syst., serial commun. delay compensation *(Chinese)* 112714
distribution network, arc-extinction coil compensation mode, neutral point pot./voltage rise *(Chinese)* 77316
double/SSB SCM sigs., PMD-induced power fading stats. 131616
DSTATCOM capacitor voltage equalization control strategies 111829
dual wavelength Raman distributed amplif. repeaterless transm. 131384
dual-mode reson. sens., temp. insensitive 75429
DVD player, tracking servo perform., defect. detect. 116585
DVR syst., zero seq. components control/anal. 112069
DWDM dispersion compensated opt. networks, intra-channel nonlin. effects 131544
dyn. series compensation devices optimal multiobjective planning 112015
dyn. tracking polariz. mode fibre dispersion compensation, fixed/variable differential group delay 131368
dyn. voltage regulator struct./control 111871
dyn. voltage restorer, series compensating voltage *(Chinese)* 133536
dyn. voltage restorer based on voltage space vector PWM control 88935
dyn. voltage restorer power quality device, short sags compensation 77350
earthed network, earth-fault detect., protection, ANN 133812
economic PF, VAr compensation unit effects *(Serbian)* 88313
EDFAs using variable atten. slope compensator, noise perform./dyn. range 85967
elec. bicycle BLDCM, act. EM torque harmonics compensation 123959
electrified rly., harmonics elimination, hybrid filter, fuzzy set theory *(Chinese)* 78234
electromechanical act. power harmonic filter 123710
electronic nose, odor conc., computerized compensation 97451
EM suspen. syst., fault tolerant controller design *(Korean)* 78309
extended AC power lines operating stabil. with shunt compensation controllers 77200
fair scheduling algm. for wireless packet networks 95789
FBG sens. interrogation, scanning filter, M-Z interferometer, coupler 97281
fiber Bragg dispersion compensators, freq.-depend. group delay responses 93055
fiber transm., dispersion compensation using uniform Bragg gratings 120158
fibre opt. voltage sens., dual light channel, temp. compensation 120844
fibre optic current sens., Faraday rotator mirror 75603
film-compensated LCD, symm. viewing angle preservation 97679
first-order polariz.-mode dispersion-compensated lin. systs., soliton robustness 72069
flat force-bal. EM press. sens. for harsh environ. 75476
force sens., temp. compensation algm. 86463
four-wire elec. power systs., load compensation, PFC 77178
freq.-hopping opt. CDMA syst. 131448
fs regenerative amp. syst., opt. pulse shaping/compression, AO prog. dispersive filter *(Japanese)* 116857
Fuji-Wide View film biaxiality 97680
GA, premature convergence, preventing lack of alleles 113966
gain-tuned harmonic drive torque sens., perform. under load and speed conditions 86466
Gb/s 16-channel wavelength interleaved bidirectional sig. dispersion compensation tech. 85949
Gb/s multi-span lightwave systs., dispersion compensating fiber Bragg gratings 96681
Gb/s opt. duobinary transmitter, increased transm. dist. 96699
generating sets with AGC, regulation efficiency, economic compensation modes *(Chinese)* 122898
germanosilicate fiber Raman amp., gain optim., SRS, WDM appls. 105191
GIC impact on NGC transm. syst. 111985
global voltage regulation, radial distrib. network supply quality measure 112061
grid-connected windmills, electromechanical interact./stabil. modelling 123254
group delay ripple in dispersion compensating fiber Bragg gratings, modulator chirp 109064
guest-host liq.-cryst. filter automatic color-temp. compensator for video image sens. 86625
guided wave sig., dispersion effect removal, sig. proc. tech. 101587
gun/turret syst., DC motor drive, fault diagnosis, fault tolerant control 133416
H_∞ based robust static sync. series compensator design 111896
harmonic source/compensation, act. power filters *(Chinese)* 77349
HDD vibr. compensation, MEMS-based accelerometer 92858
HDTV projection display for ATSC std., 61 in., large neck CRT 86327
HF ground wave radar, wideband/narrow-band compensation methods *(Chinese)* 86179
high av. power laser Faraday rotator design 117326
high bit rate TDM syst., FBG elec. tunable dispersion compensation 86074
high perform. current mirror for LV designs 68969
high power solid state laser static phase control elements 93692
high speed link, 2 GB/s differential simult. bi-directional I/O cell 119856
high-dens. disk drives, dual-stage actuator control 92857
high-speed syst., chromatic & polaris.-mode dispersion mgt. 120245

compensation continued
higher order polariz. mode dispersion compensation, nonreturn-to-zero link tolerance 96663
higher order polariz. mode fibre dispersion compensator 131367
higher-order chromatic fibre dispersion compensation, cascaded phase modulated reverse-stretched opt. pulses 96651
highly dispersed pulse transm. at 40 Gb/s 96834
hot-wire anemometer with temp. compensation 120760
HT-7 Tokamak power supply, reactive power compensation, harmonic suppression 134141
HVAC systs. fault detect., model-based feedforward control 100333
hybrid act. power harmonic filter topol. develop. 89034
I-FOG, startup time improvement 75580
IGBT inverter, 3-level space vector PWM, voltage unbalance compensation 88925
IM, vector controlled, params. var. effect compensation 123400
IM control struct. model with erroneous field orient. 112529
IM drive high-perform. adaptive parallel distributed compensator 123866
IM drive rotor speed estim. using Kalman filter algms. 134439
IM drives, sensorless posn. control, inverter clamping saliency anal. 134488
IM drives, speed sensorless vector control, nonlin. inverter model 134487
IM PID accel. controller/pre-compensator design 134050
in-housed damper, adaptively compensated laser Doppler vibrometer body vibr. 110004
induction servomotor syst., adaptive fuzzy sliding-mode controller design 123699
inductive current divider, automatic compensation using op amp 68973
indust. distrib. network high-speed VAr compensation systs. 88389
indust. power syst., harmonic filters, reactive power compensation 133692
indust. power systs., single-phase loads balancing, hybrid scheme 122997
Inmarsat D+ terminal develop. 77036
integrat. ADCs, Volterra filtration tech., a-priori error model 114826
integrated ang. speed sens. syst. design, automotive appl. 109824
integrated PF compensator, sliding mode controller 77359
intell. sens. chips, compensation circuitry, EEPROM arrangements, neural networks *(Italian)* 132081
intens. modulated radiotherapy compensators, dose distrib., QA *(English)* 87827
inter-mesurand compensation, optimized look-up table 109398
interconnected power syst., transient stabil. control, multiple TCSC controllers 111922
interior PM sync. motor drive control, stator resist. effects 134484
interior PMSM drive, direct torque control, offset error effect, compensation 123873
IQ modulators, implement. of automatic digital compensation 125265
IR FPAs, readout tech. for on-chip compensation of dark current 97363
ITER SMES power conditioning syst. 78193
Ka-band preselected harmonic mixer with YIG tuning filter 80265
Ka-band temp. compensated ring resonator VCO, adjust. using laser trimming 102719
klystron, pulse forming network, output pulse waveform shaping *(Japanese)* 80594
large optics real-time holographic compensation in space-based opt. systs. 105605
laser Doppler vibrometer body vibr., adaptive compensation *(Korean)* 121234
laser machine positioning control using real-time dyn. characts. compensation *(Japanese)* 89838
laser radar using amplit. and time-delay compensation *(German)* 75232
launch vehicle, secondary injection thrust vector control power plant lin., fuzzy logic appl. 98919
LC all-pass network based quadrature generation in RFICs 80348
LCD panels, colour reprod. characts., software-based compensation *(Japanese)* 121093
LCD TAB-on-glass connection with anisotropic cond. film, mismatch 86858
LDMOSFET broadband class E power amp., reactance compensation 101802
lin. PMSM driven positioning syst., PWM inverter, robust hysteresis control 134428
lin. SRM robust short-dist. posn. control approach 134083
LINC transmitter, gain/phase imbalance minimization tech. 96479
LMS adaptive filtering for time-varying systs. *(Japanese)* 84721
load voltage compensation, series-shunt power converter 111921
logarithmic electrometer, wide range, diode/temp. characts. correction 97586
long-haul chirped-return-to-zero WDM syst., symmetric slope compensation 96848
low-loss waveguide bends, apexes-linked circle gratings 71332
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
machine speech recogn. systs. usability *(German)* 73076
mag. airborne detector, platform mag. noise compensation, FIR model param. estim. *(Japanese)* 75435
mag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 89022
mag. disk drives, high-bandwidth servo control designs 92855
magnetostrictive actuators, hysteresis modelling and compensation 92878
mains voltage regulator, motor-driven transformer tap switching *(German)* 133530
mammography automatic exposure control compens. test, phantoms 76506
matched dispersion-slope-managed fiber pairs, submarine soln. 86067
MEMS press. sens., span and offset compensation 75751
MEMSIC accel. sens. using convection heating changes, wire strip *(German)* 75744
metal oxide surge arrester diagnostics, voltage harmonics, representation model 133807
Michelson-interferometer-type polariz.-mode-dispersion compensator 131370
microelectronic very large-scale integrated systs., adaptive optics, advanced imaging 105042
micromachined sub-MM and MM-wave variable pol. compensator 91195
micromechanical press. sens. in CMOS technol. 121043
micromirrors, high-reflectivity opt. coatings, curvature compensation 116766
microscopic objs., digital holographic reconstruction, aberration compensation 83008
microwave act. bandpass filters, lin. and noise perform. optim. 69182
microwave act. cct., interactive visual design 102599
microwave ccts., pass. EM compensation of permitt. changes 80244
microwave moisture sens., universal calib. tech., permitt. fn. 120741
mixed sig. test bus, test waveform shaping by pre-equalization 102418
MM-wave broadband wireless indoor networks, combined spatial-temporal CM equalization 85465
mm-wave telecomm. modules, MMIC spread compensation, automatic output power control 91341
mobile robot objs. collection, localization by pan/tilted single camera *(Chinese)* 118769

compensation continued
modulation, generalized CMAC-based predistortion 119881
moving magnet loudspeaker syst. with electronic compensation 120598
MPEG video streaming, min. cost implement. of full VCR functionality 107102
multi-machine power syst., under-excitation limiters, coord. design 111658
multi-machine syst., TCSC/excitation, robust coord. control *(Chinese)* 99262
multi-phase buck converter voltage/current control scheme 88847
multi-phase pulsed DC voltage converters with step-up power channels 112662
multi-string PV-converter topol./control strategy 123265
multi-wave/half-wave spot welding, const. current control *(Chinese)* 89475
multi-wavelength pulses of fiber lasers, gen. and dispersion compensation *(Chinese)* 93728
multiband WDM transm. systs. using AWG and spatial phase filter, 40 Gbit/s 86044
multielement struct., compensational phase weighting 105854
multilevel converters, PFC based on diode clamped rectifier 68559
multilevel flash memories, high-speed low-power sense comparator 68793
multilevel power conversion, worldwide develop. trends 88974
multimedia systs., compensation buffer size 108417
multiple intens.-modulated opt. fiber sens., network compensation tech. 75592
multirate feedforward control, perfect tracking control 77890
multistage amp.-freq. compensation, anal. 114628
multistage feedforward compensated opamps, low power and distortion 68600
multivariable freq. response meas., nonlin. distortions effect 109919
n DOF robot, model uncertainties, set-point regulation, smooth lin. control algm. 121225
NC machine tools multi-axis contouring error on transient state *(Japanese)* 67689
near-perfect-reconstruction IIR QMF banks, design using FIR phase-compensation filters 130104
neg.-feedback amps., freq. compensation 79576
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
neutral grounded MV power systs., high impedance fault detect. 77662
noisy speech recogn. methods *(Chinese)* 84054
non zero-dispersion shifted decorrelating fiber 109152
nonlin. chirped fiber-Bragg-grating technol. compensated chromatic-dispersion impairments 96857
obj. recogn., modular neural network 118671
OFDM systs., nonlin. distortion compensation 94247
opt. soliton fibre commun. systs., timing jitter, dispersion compensation 75004
optic fiber sens. based telemetry for height meas. of telescopic gasometer 75381
optimal curvature-compensated BiCMOS bandgap ref. 125233
optimized hybrid power filter and VAr compensator 134334
orthogonal core transformer, series compensation, power syst. 134120
OTA design for sigma-delta modulators using 0.35 μm CMOS proc. 101800
OTDM systs., sync., opt. all-pass filters 120194
parallel config. thin-film allpass coupled-cavity filters, adjustable dispersion-slope compensation 131423
parallel transm. lines, fault location algm. 77647
param. separation in sens. through sig. proc. *(German)* 75401
particle swarm optim. for reactive power and voltage control 99297
phase jump voltage sags compensation, dyn. voltage restorer control strategies 88434
photodiode spectral response, temp. compens., digital correction 75545
photopolymer holographic memory, grating detuning effect 128591
picosecond pulse transm. syst., third-order dispersion compensation *(Chinese)* 96659
PID feedback control, output usefulness in fault detect. 124394
piezoelec. accelerometers, noise immune charge amp. 75461
pixel misregistration compensated vol. holographic data storage 71222
planar lightwave cct. type variable atten. slope compensator 120150
planar microwave act. filters, neg. resist., tuneable bandstop/bandpass filters 125756
planar narrow-band notch filter, temp. compensated, laser trimming 102561
PM lin. sync. servomotor drive adaptive hybrid neurocontrol scheme 123948
PM machine control, torque ripple compensation approach 123323
PM sens./actuators, temp. compensation, FEA 120773
PM stepper motor, neural net based posn. control 77826
PM sync. motor speed control design using disturbance observer 133975
PM sync. servomotor vibr. suppression control method *(Japanese)* 88698
PMSM, robust speed control 112490
PMSM drives, variable flux control for const. torque operation 89343
polaris. mode fibre dispersion compensators, BER modelling 131353
polariz. mode dispersion, fibre transm. limitations 131396
polysilicon TFT LCD data driver output buffer, VGS compens. source follower 86854
polyspectral techs., appl. to nonlin. modeling and compensation 79525
power cable testing using electronic capacitor, μP-based, temp. compensation *(Japanese)* 133736
power capacitor current control, automatic tracking compensating syst. *(Chinese)* 112753
power filter, act., grey prediction control 122981
power supply quality, voltage fluct. 77348
power syst. operating condition diagnosis, SMES 77208
power syst. oscill. damping, SVC and ASVC, robust H_∞-optimal control *(English)* 111924
power syst. oscills. damping, multiple controllers, coord. design 122869
power syst. reactive power optim., fuzzy model, GA *(Chinese)* 77135
power syst. relay protection options, series compensation effect 99396
power syst. robust nonlin. controller with voltage regulation *(English)* 77232
power syst. SSSC controllers, interface flow limit effects *(Korean)* 122867
power syst. stabilising control/fault current limiting using SMES approach 77207
power syst. voltage collapse avoidance, control actions time depend. 111867
power syst. voltage regulation/network support technols. anal. 122908
power transfer capability incorporating FACTS devices *(Chinese)* 77259
precision analog device struct. synthesis 114599
press. sens., Wheatstone bridge, automotive electronics, analogue sig. proc. devices *(Italian)* 131852
prog. AC power source, switched current topol. 99754
prog. RF predistortion lin. for power amp., develop. 90752
PSpice-model for CMOS-compatible stress sens. *(German)* 109498
PWM AC motor drives, full digital sync. frame current regulator 134469
PWM DC-DC converters, small-sig. symbolic anal. 99833
PWM VSI, CMV reduction, act. canceling/compensating ccts. 123566
PWM VSI-fed AC motor drives, hardware dead time compensation 134497
quantization noise compensation by anal. filter bank optimisation 129365
quartz cryst. oscillator, low power design, PSPICE 81741
quartz resonator sens. for temp./press., thickness-shear mode 75430
compensation continued
quartz tuning-fork ang. rate microsensor, dyn. characts. compensation tech. 75758
quasi-distributed intrinsic fiber-optic strain sens., white-light interferometry 97334
quasi-planar high Q_u dielec. resonator 3D microwave filter, CAD 80187
radial distrib. systs., shunt capacitors optimisation, dyn. prog. 133638
radio interf. autocompensator, multipath effects 85502
radio receivers, I/Q imbalance compensation methods 119883
Raman-amp. dispersion-managed fibers, optimum span config. 128181
reactive current STATCOM, 3-phase power crosswise act. harmonic filters *(Polish)* 122976
reactive power optimal distrib. 99192
reactor allocation optimisation for light load operation 111940
real-time water quality monitoring across Internet, virtual instrum. 99029
reflective CMOS TN displays, projection appls. 97712
reflective LCD, high brightness, opt. compensated twist-LC cell 97743
reflective TN-LCD, wide VA, single polariser, compensation films 86839
rem. in situ US materials charactn., temp. compensation 101608
RF power amps., memory effects cancellation techs. 79603
rly. traction loads, thyristor-switched filters, VAr/harmonics compensation *(Chinese)* 89385
RZ opt. transm., 40 Gbit/s, adaptive dispersion compensation using Bragg gratings 74960
S/H distortion, anal. compens., monotonic & equiripple approx. 86449
Sagnac opt. fibre current sens., temp. induced sens. drift output compensation 109599
SAW device perform. enhancement using dielec. thin films 81763
SC DC-DC convertor, control design & closed-loop anal. 123634
SC filter, LV/low-power, using cascode transistor config. 68922
SC integrators, gain/offset compensated/very large time const., comparison 68971
second-order sampling of wideband sigs., digital demodulation 94236
secondary substations, power-freq. mag. fields mitigation 134297
SEIG, current-controlled VSI, voltage control anal. 133993
self-calib. capacitive sens., threshold liq. level meas. 109510
series act. power filter control algm. *(Korean)* 123713
series act. power harmonic filter adopting hybrid control approach 78112
series compensated lines, fault location, fuzzy logic soln. 123087
series compensated systs., power transm. losses minimisation, GA 111990
series power quality compensator test studies *(Chinese)* 77368
series voltage/harmonic compensator sync. frame-based control strategy 88435
series-compensated parallel lines, fault location 112194
shunt act. power harmonic filter neurocontrol scheme 78114
shunt capacitor bank series group shorting, design and appl. 112738
shunt VAr compensator capacitor voltage equalisation, closed loop control 111828
sigma-delta modulator, LV MOSFET-only speech proc. 79974
single differential-group delay element polariz.-mode dispersion compensators, importance sampling 131615
single fiber link, Gb/s 1.55-μm directly modulated sig. 86085
single gimbal control moment gyroscope systs., trajectory tracking, adaptive compensation control *(Chinese)* 76802
single phase shunt act. power filter, simul./anal. *(Chinese)* 122993
single-channel WDM syst. dispersion compensator 120306
single-phase grounding line-selection/grounding current compensation *(Chinese)* 112130
sinusoidal-encoder-based digital tachometers, probabilistic learning tech. 75777
smart piezoresistive press. sens., correction using microcontroller 75772
smart power conditioner develop. for value added PV appl. 112406
SMF/nonzero dispersion shifted fiber transport band chromatic dispersion, high-order-mode technol. 82095
soft-switching cells anal., generalised invariant models 99771
solns. US conc. meas., phase difference method temp. compensation 110026
South American series VAr compensation experiences 111824
space vector PWM VSI, IM appls., dead-time effects predictive compensation 77983
SPECT, ^{67}Ga imaging, scatt. compensation method, ANN use 122180
SPECT cardiac images, truncated projection data, body contour, atten. compensated images 76574
SPECT scatter correction, collimator depend., transm. depend. convolution 122200
SRM drives, fuzzy logic torque ripple reduction, turn-off angle compensation 78221
SSR damping, subsynchronous freq. impedance charact. *(Chinese)* 122771
SSR mitigation, FACTS devices *(Chinese)* 133538
SSR mitigation mechanism using TCSC *(Chinese)* 77257
SSTF, supercond. magnet syst., induced voltage, AC loss 71039
stable combustion-type gas sens., temp. compensation, ozone detect. 97521
STATCOM nonlin. control scheme *(English)* 77234
std. singlemode fibre unrepeatered Gbit/s RZ transm. by distributed Raman amplif. 74915
stress-gradient sampled Bragg grating with chirp in sampling period, expt. study 74959
strong-inversion CMOS current-mode companding integrator implement. 80137
surface profile meas. using differential laser auto-collimation approach *(Japanese)* 97805
suspen.-in-resin-coil dispersion compensating fiber module for DWDM appl. 120149
SVC Light, reactive power compensation, harmonic act. filtering, ABB technol. 112597
switched controller for fast voltage fed parallel act. filter 99363
switched-voltage delay cell with differential inputs, config. and appls. 114903
switching regulators, design-oriented anal., transfer fns. 68587
sync. generator observer-based nonlin. control scheme 77855
sync. generator-exciter syst. observer-based nonlin. control 88348
sync. machine nonlin. adaptive optimal excitation control scheme *(Chinese)* 77840
synthetic aperture sonar for underwater rem. sens. 131687
table drive syst., nonlin. friction, GMDH-based modeling/compensation 113082
TCSC, state space simul., fund. impedance charact. 112747
TCSC devices location determ. using fuzzy decision making 134328
TCSC impedance step charact., computer simul. studies *(Chinese)* 77258
TCSC transient characts., two-order difference eqn. math. model *(Chinese)* 88338
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
telecom/CATV co-network transm. syst. dispersion compensation, nonlin. distortion anal. 96724
telecom/datacom opt. components, key technols. 120159

pensation continued
temp.-compensated voltage ref., temp. coeff. improvement 101767
thermionic RF gun, beam-loading compensation by feedforward control syst. 125972
three phase act. power filtering using sliding mode control 99362
three-phase current-source act. power filter, deadbeat current control 134339
three-phase four-wire shunt act. power filter control strategy 134331
three-phase HB-type stepping motor torque vibr. suppression control *(Japanese)* 99699
three-phase shunt act. power filter control methods 78113
thyristor series capacitor arc suppression coil studies *(Chinese)* 123065
transm. line protection, I-V transformer correction, ANN 77509
trapezoidal EMF BLDCM, commutation torque ripples reduction 88755
triple-head gamma-camera PET syst., software geom. calib. method 122216
true wave classic fiber high order modes, Gbit/sec transm. test 96722
tuneable irises for rect. waveguide filter, modelling 125667
tuned cct. displacement sens., eddy current method *(German)* 75402
TW dielec. window with matching gratings, power loss calc. 80605
twisted nematic LCD, wide VA photoaligned plastic films 86840
twisted nematic LCD viewing angle, in-plane-compensation foils 86838
two-domain TN-LCD with identical, symm. & ±80° viewing cones 86828
two-wire thermocouples, temp. reconstr., nonlin. state estim. approach 97874
UHF current-mode filter based on biquad of regulated cascode topol. 80078
ultra-high-capacity dispersion compensating fiber systs. 109055
ultra-long haul networks on embedded fiber systs., dispersion mgt. 131475
ultralong haul terrestrial fibre dispersion mgt. systs. 131477
ultrashort-pulsed laser micromachining, acoustooptic device ang. dispersion compensation 117570
unbalanced 3-phase systs., indiv.-phase reactive power compensator *(Japanese)* 88297
uncooled FPA based thermal imager, nonuniformity compensation methods 75649
underground transm. cables, digital dist. relaying algm. *(Korean)* 77552
unity gain opamp in 3.3 V CMOS technol. using tail current compensation 79577
universal custom power conditioner with integrated control 112039
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
UPFC with energy snubber, control *(Chinese)* 111905
UV prog. femtosecond laser pulses, spectrally compensated SFG 72028
V^2 controlled buck regulator, modelling/design considerations 88861
VAr compensation/load balancing compact control algm. 99302
vehicular speed response adaptive antenna design *(Japanese)* 105971
virtually imaged phased array, diffr. grating rot., dyn. tunable dispersion slope compensation 131400
virtually imaged phased array chromatic dispersion compensator, coating design 120135
VSC based HVDC, steady-state model, controller design 112010
VSI-based power oscill. damping scheme 133545
VSI-based voltage sag correcting device with additional VAr compensation *(English)* 111925
wafer implant, two implant meas. of press. compensation factors 115586
WDM, planar lightwave cct. based dispersion compensation 131429
WDM dispersion-compensated transm. syst. with all-pass equaliser *(Chinese)* 131561
WDM fibre transm. syst. channel spacing optimisation 96775
WECS power smoothing control, vector-controlled induction machine 77794
wideband dispersion compensator for fiber-optic transm. syst. 120168
wideband receivers, compensation of freq.-selective I/Q imbalances 85518
wind farm perform. improvement using VAr compensation 123256
wind farms, fault crit. clearing time improvement 99592
wind-energy converter syst. mgt. 77791
wireless temp. & press. sens. unit, SAW transponder technol. 86772
Al/AlN/SiO_2/Al piezoelec. acoustic thin film resonators, temp. compensation 104454
AlN film on Y-128° $LiNbO_3$, temp. compensation, SAW device appl. 70456
$Bi_4Ge_3O_{12}$ opt. voltage transformer, temp. compensation 123550
Er-doped externally modulated NTSC AM-VSB fiber amp. 96776
Er-doped fiber amp. modular bandwidth mgt. subsystem 120296
Er-doped fiber amplified externally modulated NTSC AM-VSB repeater syst. 74933
Er-doped-fiber-amplified systs., dispersion-compensating dual-mode opt. fibers use 71694
Er^{3+}-doped fibre amp. temp. charact., gain control compensation 128152
GaAs X-band MMIC power amp., on-chip temp. compensation cct. 91386
GaAs:Si,Be MBE growth, compensation 68196
InGaAsP QW waveguide photodiodes arrays for WDM and fiber sens. appls. 131904
InGaAsP-InP slab-type coupled waveguide struct. opt. pulse compression 116697
$LiTaO_3$ piezoelec. gyroscope, temp. self-compensation 104428
Nd:YAG diode-pumped laser, micromachining appls. 82584
Nd:YAG rod laser birefr./thermal lensing, dyn. correction 105226
Pb-acid valve-regulated batt. life prolongation study *(Chinese)* 112779
Si lattice defect passiv. by ECR hydrogenation tech. 69895
Si micromachined deformable mirror, opt. wavefront compensation 104771
SiO_2/Ta_2O_5 thin-film based coupled-cavity allpass filters, dyn. dispersion-slope compensation 131402
ZnO/SiO_2/Si multilayer struct., SAW device, temp. compensation 92754
reson. quasi-phase-matched freq. doubling with $KTiOPO_4$ wedged cryst. phase compensation 82877

competitive algorithms
combining fairness with throughput 119438
connection caching under various models of commun. 107835
convexity of carrying simplex of planar Lotka-Volterra competitive systs. 101096
dyn. hand gesture recogn., randomized self-organizing map algm. 73204
fairness with throughput, online routing with multiple objectives 73749
Internet router, jitter regulation with delay consideration 74203
online competitive algms. for call admission in opt. networks 120261
polarimetric SAR image segmentation using robust competitive clustering 120460
TCP acknowledgment delay problem 84973

competitive learning *see unsupervised learning*

compiler generators
indust. network proc., C compiler design 130342
SystemC, behavioral synthesis, compiler generation techs. 79674

compilers (program) *see program compilers*

compilers (silicon) *see circuit layout CAD*

compiling programs *see program compilers*

complementary metal-oxide-semiconductor integrated circuits *see CMOS integrated circuits*

complete computer programs
see also C listings; macros; subroutines
EGS-ray, Monte Carlo calcs. visualisation program in radiation phys. *(German)* 111133
long-term potentiation/synaptic events anal., LTP DAQ program 121949
mobile computing protocol-based handover, formal spec. and verification 131232
preterm infants, skin cond. changes anal., software program develop. 121914

complex systems *see large-scale systems*

complexity classes *see computational complexity*

compliance constants *see elastic constants*

compliance control
bionic robot arm with compliant actuators 87901
HV overhead elec. lines, fully-automatic live-line maint. robot 88463

composite insulating materials
see also composite insulators; impregnated insulation
ceramic/epoxy composite for integral capacitors, particle packing/Cu plating/permitt. 80441
dielec., elec. field by curved surface charge method, elec. flux continuity *(Japanese)* 72162
embedded capacitors, high-k polymer-ceramic composite for RF appls. 69273
epoxy/glass fiber composites, surface hydrophobicity, thermal treatment *(Korean)* 116186
locomotive traction motors, mica-bearing polyamide insulation, life testing 100278
polyethylene, TiO_2 filled, filler-induced chem. modifs. as dielec. probes 127253
polymer composites, filler technol., elec. insulation 127237
pressboard/XLPE insulation failure, regression anal. 116187
PTFE/siloxane nanocomposite ultra low-k ILDs, high-temp. mech. behavior/phase morph. 92153
sol-gel-derived 0-3 composite ceramics for direct write electronics appls. 102841
struct. health monitoring by elec. resist. meas., review 114549
N_2 liq./solid composite insulation syst., PD inception, thermal bubble condition *(Japanese)* 81724
SF_6 gas insulated transformer windings insulation, elec. discharge model 123537

composite insulators
advantages compared to porcelain insulators 112117
artificial contamination method 112121
distrib. insulator develop. and testing investig. 133762
end-fitting plastic deform. law *(Chinese)* 88468
overhead transm. line composite insulator, operational experience *(Chinese)* 112118
rods brittle fracture mechanisms assess. 133763
silicone rubber composite insulators, HV live tank cct.-breakers 77444
supercond. magnets, ground/turn/layer insulation, phys. props. 82000
unidentified power freq. flashover expts. *(Chinese)* 112122
XLPE cable, composite insulator termination develop. *(Japanese)* 112127

composite material interfaces
see also delamination
polymer current limiter device, voltage/comp. depend., switching 133799
solid polymer electrolytes, interface struct. control *(Chinese)* 112758
TQFP, delamination/crack, PECVD SiN_x films, moisture-resist. props. effects *(Chinese)* 68422
Ag/Si, cosputtered nanoscale thin film, interfacial engng., nanocomposites 101503
Ag/SiO_2, cosputtered nanoscale thin film, interfacial engng., nanocomposites 101503
AgPd:$BaTiO_3$ electrode/Pb-based relaxor ferroceramic cofiring characts. 79440
Pb/Al, melt spun nanoscale sheet, interfacial engng., nanocomposites 101503
Sn/Al, melt spun nanoscale sheet, interfacial engng., nanocomposites 101503
ZnO-PMN composite monolithic varistor/capacitor ceramics, proc./charactn. 101508

composite materials
see also cermets; composite insulating materials; composite material interfaces; composite superconductors; concrete; fibre reinforced composites; fibres; filled polymers; glass ceramics; laminates; particle reinforced composites; semiconductor doped glasses
All-Russian Scientific-Research Inst. of Electromechanics, elec. engng. materials develop. 101145
anisotropic material, elastic consts. from photoacoustic phase vels. 68466
automatic defects class. using pulse-echo tech., pattern recogn. 79488
beam, smart composite, self-adapting vibr. control syst. 127264
BGA/CSP connection durability during thermal shock, finite element modeling 100598
bianisotropic composite mediums, ellipsoidal topol./orient. diversity/correl. length 104503
braided composites, embedded opt. fibre sens. 120880
brush DC motors, conc. windings, soft mag. composite armatures 134067
4-butyloxy-4'-cyanobiphenyl doped PVK-C_{60} composites, photorefr. props. 105470
carbazole-contained polymers, spiropyran dyes doped, photochromism, holographic recording and erasing 93896
carbon-carbon composite anodes,, Li-ion batt. 89074
cement-matrix composites, functional props., review 68417
chem. pyrolysis, nanomaterials prod. *(Chinese)* 126592
cholesteric absorbers for microwave freqs., circ. pol. sensitive absorpt. props. 114922
chromophore polymer composites, dual-use erasable photorefr./irreversible holographic gratings 83018
complex random media in random fields, stat. charactn. 105669
conductive polymer composite film, permeation method prep., thermogravimetry/SEM 125111
conf., polymers/advanced materials, Poznan, Poland (June 1999) 67383
D-type FBG, bending sens. 97289
1,10-decanedithiol/Au nanoparticle micro-gap devices, electronic cond. 115207
dielec. props. eval. using combined modulated scatter./near-field microwave NDT tech. 121151
elastic moduli, Lamb wave vel., contactless method 114489
elec./thermal functionally graded ceramic systs. 114440
electroactive polymers, conf., Boston, MA, USA (Nov.-Dec. 1999) 100427
embedded fiber optic sens., single-fiber fragmentation test 131952
EMR fluid with nanoscale composite, vibr. control 79464

composite materials continued
epoxy-silica composites, dielec. props., effects of humidity and thermal stress 81642
ferroelec. ceramic-(porous) polymer, connectivity, electromechanical props. 104399
flexible LCD, phase-separated composite organic films appl. 97697
fracture location self-diagnosis, hollow-center optic fiber *(Chinese)* 114561
glass-reinforced composites, curing, fiber-optic evanescent-wave fluoresc. sens., model 75559
green alloy compacts, thermographic inspection, ref. composite fab. 114513
high-resist. composite layer, crack distrib., electrochem. NDT 90608
homogenization of lin. and of debonding composites using BEM 114450
ionic polymer-metal composites, fund. props., review 114481
large-size polymer resistors, charact. instabil. investigs. 69260
lin. composite materials, inverse homogenization problem, EM constitutive props. 72155
low reflectivity EM energy absorbing composite materials 83221
low-noise reactor composite mag. soft materials 104480
low-profile power converter using ferrite polymer composite PCB transformer 88960
low-sintering composite MLC capacitors, X7R specif. 80454
mag. film-coated wire sens. for composite material strain monitoring 97193
mech. prop. estim. by impact sound freq. anal. *(Japanese)* 125092
metal-dielec. color shift films *(Chinese)* 90246
methano-[60]fullerene-Ag nanocomposite, opt. limiting effect 117427
methanol oxid. at batt. electrochem. co-deposited Pt-Os composite electrode 123775
microelectronic packaging thermal mgt., composites/materials develop. 67607
microelectronics, devices and materials, conf., Postojna, Slovenia (Oct. 2000) 78447
microstrip antennas on high permitt. ceramic substrs./small ground planes, expt. study 83529
MLC/composites, med. imaging phased arrays 111535
MM and submillimeter wave range props. 70380
multilayer composite laminates, init. strain effects 114163
multiscale FEM for subdivided periodic elastic struct. of composite materials 79154
nanocomposite resist, electron beam nanolithography 126587
nanodispersible film materials, microwave radiation absorpt. 80158
nematic liq. cryst./organic(inorganic) semicond. composite, photovoltage 104900
NLO props. 82789
nonlin. normal conductor-insulator random network, crossover exponents *(Chinese)* 101704
normal conductor/perfect insulator/perfect conductor disordered composites, magnetotransport 91923
organic-inorganic hybrid materials for nonlin. optics appls. 71207
organic-inorganic hybrid protonic polymeric electrolytes, PEMFC 123786
orthotropic piezoelec. composite material, strain sens. 120757
pass. mag. composites for beam vib. suppression 81927
$PbTiO_3$-PMN ferroelec. ceramics/polymer composites, high dielec. const. 125115
PEFC bipolar plates, graphite/vinyl ester composites develop. 123785
periodic composites containing complex shaped dielec. particles, quasi-static effective permitt. 104245
phosphate PTFE, fast proton conducting composite materials, fab./props. 125096
photorefr. polymer composite, digital holographic data storage 93017
photorefr. polymeric composite for holographic appls. 116562
piezocomposite transducer, acoustic matching layer optim. 111525
1-3 piezocomposites, tubular hydrophone, free-field voltage receiving sensitivity *(Chinese)* 99083
piezoelec. transducer cochlear implant, bending piezoelec. mode, modelling 111164
piezoelec. transducers, highly sensitive, NDE air borne appls. 111520
planar tunable microwave devices, ferromag. composite appl. 116483
plate NDT, Lamb & SH waves, air-coupled US transducers 90601
poly(3-hexylthiophene)-C_{60}-C nanotube nanocomposites, elec., opt. props. 115357
poly(ethynylene)arylenesilane opt. chromophore/C_{70} fullerene polymer nanocomposites, photorefr. effects 128435
polymer nanocomposite, dyn. photorefr., large photorefr. nonlin. 71922
polymer resistors, charact. instabil. investig. *(Russian)* 69259
polymer-ceramic composite electrolyte cond. enhancement for Li-ion cells 99945
polymer-nanotube composites, struct./mech. props., mol. dyn. simul. 68460
polymer/organo-clay EL device, carrier mobility 116965
polymer/Pt nanocluster composite film actuators, self-assembly 114479
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647
polysiloxane foil cct. carrier technol. *(German, English)* 67590
polytungstic acid thin film composite opt. waveguide, fab. *(Japanese)* 93128
pseudo side-chain liq. cryst. copolymer 97618
PVK/C_{60} composite films with photoinduced charge transfer, props. *(Chinese)* 113013
random lower semicontinuous fns., ergodic theorem 79443
smart polymer composite thermistor, fault/short cct. current heating 125127
smart struct., self-diagnosis/-repair using hollow-centre opt. fibre 114559
soluble cond. polymer/dye composite, jn. device, elec., opt. props. 116963
syst.-on-package, substr. materials 113683
three-component composite, effective permitt. determ. formula 90560
triple jn.-based 10× composite space concentrator solar array 111352
universal motor struct. using soft mag. composites 133926
wet chem. functional coatings for automotive glasses and CRTs 101425
ZEP520 resist, fullerene-derivative incorporation, contrast enhancement 69978
Ag-ZrO_2, Y_2O_3 stabilised, composite film electrode, O_2 sens. *(Japanese)* 132035
AlN-BSG composite, material synthesis, gravity behaviors *(Chinese)* 125093
Al_2O_3:Cu nanocomposite films, nonlin. third order suscept. 71505
Al_2O_3-SiC composites, self-propag. high-temp. synthesis tech. anal. 79432
Au nanoparticle/C_{60} nanocomposite, NLO props. 117424
BN_x-SiN_y composite films, multisource plasma CVD synthesis 124900
C nanotube composite electron transport layer for M3EH-PPV based LED, EL/brightness 127991
C nanotubes, adsorpt., functionalization, confine., appls. 79469
C_{3D}/PLA composite, promising material for osteosynthesis devices 68424
a-C-Co composite films on glass, heat treated, field emission 69410
C_{60}-polymer composite films, photocond. *(English)* 127901
CdS nanoparticles, hydrothermal growth in MOR-type zeolites 125097
CdSe/ZnO composite coatings, sintering, photosensitivity 101501
CoPt high-anisotropy nanocomposite films, mag. recording 116337
Co_xPt_{100-x}:C films, nanocomposite, mag. props. 116414
Cu silicide nanocrystals in Si nanowires 79442

composite materials continued
Cu-Sn flake microcomposite anode for Li-ion batt. 99911
Cu-silica nanocomposites, ion implant. prep., third-order opt. suscept. 93762
ErAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
Fe powders, resin insulated, mech./elec./mag. props. 104496
α-Fe/$Nd_2Fe_{14}B$ nanocomposites, melt spinning, texture/mag. anisotropy 1273
Fe/SmCo spring magnet, mag. imaging of buried SmCo layer 81790
Fe-Si alloy flake-polymer composite based EMI filter, atten. 83395
FePt high-anisotropy nanocomposite films, mag. recording 116337
GaSb nanoparticles embedded in SiO_2 composite films, prep., opt. props. 1142
GaSb solar TPV cells, $Al_2O_3/Er_3Al_5O_{12}$ eutectic composite selective emitt 113024
$(La,Sr)MnO_3$-$(Ce,Gd)O_{2-x}$ composite cathodes, SOFC appl. 134380
Li nanocomposite electrode materials prep., props., Li batt. anodes appl. 1015
Li/polymer cell composite electrodes, variables separation method 99892
Li-ion batts., elevated temp. all-solid-state, composite cell components 89125
$LiFePO_4$/C nanocomposites, capacity at RT at high rates 112795
$LiMn_2O_4$ spinel, improved elev. temp. cycling using compos. LiF-based electro lyte 134351
Mn-Zn ferrite composite materials, mag. field effect on permeab. *(Japanese)* 104501
Mn-Zn ferrite, recycled, mag. props. and their appls. to mag. parts *(Japanese)* 104499
$MnFe_{1.8}Cr_{0.2}O_4$-$BaTiO_3$ composites, AC cond., magnetoelec. effect 127155
MoO_3/C composite electrodes as electrochem. supercapacitors 100228
Nd:YAG pass. Q-switched laser, Cr^{4+}:YAG composite material saturabl absorber 71719
Nd-Fe-B nanocomposites, coercivity limits 81821
$Nd_{3.6}P_{15.4}Fe_{83}Co_3B_5$ nanocomposite ribbons, hard mag. props. 81818
Ni-P composite plating treatment on Mg alloy *(Japanese)* 79363
$(Ni_{0.60}Zn_{0.20}Cu_{0.20})Fe_2O_4/Co_2Fe_2O_4$, sintered, struct./props. 81833
PLZT ferroelec. capacitors, zirconia incorporation, elec. fatigue 127278
PZT ceramics and composites, piezoelec. coeffs. meas. by laser interferometr 104358
PZT pillars for 1-3 composites, ink-jet printing 114432
PZT/$Al_2O_2(LiTaO_3)$ thick film US transducer fab., sol-gel spray 111511
PZT/polymer composite bilayer, 1D 2.5 MHz phased array 111533
PZT-based multilayer composite hybrid transducer, med. ultrasound 111534
(PbCaLa)TiO_3/P(VDF/TrFE) composite based lin. pyroelec. sens. array 81788
PbS-polymer nanocomposite, third-order opt. nonlin., femtosecond Z-scan inves tig. 71928
$Pb(Zr,Ti)O_3$/Pt piezoelec. ceramic/metal composites, elec./mech. props. 12715
$Pr_8Fe_{84}M_2B_6/\alpha$-Fe (M=Cr,Nb,Ti,Zr) nanocomposites, struct./mag. props. 11626
RuO_2/C composite supercapacitors, synthesis, props. 100232
a-$RuO_2{\cdot}xH_2O/WO_3{\cdot}xH_2O(Na_{0.37}WO_3{\cdot}xH_2O)$ composites for electrochem. capaci tors 100231
Se-based chalcogenide glass/polymer composite NIR filters 71473
Si-glass MEMS micropackages, corros. resist., B doping/self-induced galvanic bias 78677
β- SiC anti-corona material for electric generators *(Chinese)* 99628
SiC-Mg/SiC high-refl. multilayer, design and fab. for opt. systs. 116891
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealing *(Korean)* 114436
SiC-Y_2O_3/Mg high-refl. multilayer, design and fab. for opt. systs. 116891
Si_3N_4 MEMS structural films on Si, wafer scale testing 127092
SiO_2/TiO_2/γ-glycidoxypropyltrimethoxysilane composite materials, opt waveguides charactn. 104693
SiO_2/acrylic photocuring organic-inorganic hybrid for neg. resists, develop 101517
SiO_x/organic composite thin films, PECVD, dielec. props. 90364
SiP-PMA/PWA hybrid gels, amorph. phosphate-Nafion hybrids, inor ganic/organic composites, fast proton conductors 125095
SnO_2-PdO nanocomposite based CO gas sens., fab. proc. 75734
SnSb nanosized alloy anode for Li-ion batts., capacity loss and capacity fading 112812
TiO_2/ORMOSIL composite thin film waveguide, sol-gel proc. 116688
TiO_2/organically modified silane composite, sol-gel, charactn. 71498
$TiO_2{\cdot}Y_2O_3{\cdot}Nb_2O_5$ varistor syst., nonlin. elec. behaviour anal. 80743
Y_2O_3-CeO_2 composite ceramics, intermediate temp. SOFC appl. 89185
ZnS nanoparticles, hydrothermal growth in MOR-type zeolites 125097
$Zr(HPO_4)_2$-PTFE, fast proton conducting composite materials, fab./props. 125096
ZrO_2-Y_2O_3/Al_2O_3 composites, SOFC, modelling study 123796

composite superconductors
see also multifilamentary superconductors; superconducting tapes
crit. temp. meas. method of composite superconds. 132208
HTSC multilayer conductor, effect of interlayer insulation on transport AC loss 70665
HTSCs, mag. flux penetration mode, AC loss charact. 127418
Ag ribbons, {110} textured, prep. for biaxially aligned supercond. tapes 68396
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_{10+\delta}$/Ag HTSC tapes, grain boundaries/defects, direct at. scale imaging 68418
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ tapes, Ag-clad, evol. of core dens. during proc. 70756
Bi-2223 based composite conductors, resistive fault current limiting appl. 70632
Bi-Pb-Sr-Ca-Cu-O tape, props. of resistive- and supercond.-joints 70712
BiPbSrCaCuO 2223/Ag supercond. tape, crit. current ang. depend., model 127454
BiPbSrCaCuO, Ag-sheathed 2223 monocore tapes, current distrib. and flow in mag. fields 70763
BiPbSrCaCuO HTSC tapes, Ag clad, mag./elec. transport props., precursor pow der props. effect 70706
BiPbSrCaCuO/Ag 2223 HTSC tape, crit. persistent current for loop 70711
BiPbSrCaCuO/Ag 2223 HTSC wires, sausaging and crit. current dens., drawing params. effects 70776
$(BiPb)_2Sr_2Ca_2Cu_3O_y$/Ag HTSC tapes, I_c and I_c-H behaviours, $CaCuO_2$ precursors addit. 81966
BiSrCaCuO 2223 HTSC tapes, powder-in-tube processed, mech. props. 125091
$Bi_2Sr_2Ca_2Cu_3O_x$ tape conductors, temp. and mag. field depend. of crit. current 70747
BiSrCaCuO/Ag 2223 HTSC tapes, joint resist. meas. using one-turn shorted coil 70710
BiSrCaCuO/Ag HTSC 2223 tapes, ^{235}U doped, vortex pinning by fission tracks 81956
BiSrCaCuO/Ag HTSC tape processed by PIT method, interface irreg. and texture evol. 68434
$Bi_2Sr_2CaCu_2O_{8+\delta}$/$(Sr,Ca)_3Al_2O_6$ HTSC/dielec. syst., T_c 70374
Cu-Nb supercond. composites, crit. temps., stress effects 104558
Cu-NbTi supercond. composites, crit. temps., stress effects 104558
MgB_2 supercond. tapes, unsintered, large transport crit. current dens. 92889

mposite superconductors continued
MgB_2 supercond. wires, Fe-clad, high crit. currents 81950
MgB_2 tape, Fe-clad, high-transport crit. current dens. above 30 K 127466
$(Nb,Ta)_3Sn$ superconds. prod. by Ta-Sn core, high-field perform. and struct. 70764
Nb_3Sn supercond. reinforced by Ta cores, mech. props. 68429
Nb_3Sn supercond. wire reinforced by jelly-rolled Nb/Cu composite, strain effects 68428
Nb_3Sn-bronze supercond. composites, crit. temps., stress effects 104558
R-Ba-Cu-O HTSC (R=rare earth), resin impregnation, mech. props. 81941
Y-Ba-Cu-O high-current coated conductor using MOCVD and IBAD 68257
$YBa_2Cu_3O_{7-x}$ on RABiTS, magneto-opt. imaging of transport currents 70674
$YBa_2Cu_3O_y$ tape, develop. by using inclined substr. method 70750
mposite systems *see large-scale systems*
mposition measurement *see chemical analysis*
mpressed air energy storage
energy storage technols. comparison 89104
mpressibility
see also compressive strength
PEMFC hydrogen storage, compressibility factor/fugacity coeff. determ. 89182
poly(vinyl alcohol)-poly(acrylic acid) gels, constitutive response, elastic deform., acidic/basic environ. 125114
resist. foil strain gauges appl. in high press. research 75498
VRLA batts., cycle life extension, plate-group press. 78148
VRLA batts., plate group, mech. press., compression effect 78136
AgI-Ag_2O-P_2O_5 superionic glass, compressibility, foil strain gauge meas. 75498
Al, isothermal lin. compressibility, foil strain gauge meas. 75498
Cu, isothermal lin. compressibility, foil strain gauge meas. 75498
Fe, isothermal lin. compressibility, foil strain gauge meas. 75498
Pb accumulator plates perform., compression effects, cycling expts. 78137
ompression, bandwidth *see bandwidth compression*
ompression moulding *see moulding*
ompressive strength
see also compressibility
advanced electroceramic components, fused deposition tech. 101485
aluminous porcelain insulators, high-strength, microstructural reinforcement 77449
microwave charactn. of mag. materials, uniaxial/biaxial stresses 86941
near-field microwave NDT, NaCl in mortar determ. 114540
supercond. magnets, ground/turn/layer insulation, phys. props. 82000
GaN (0001) oriented MOCVD epilayer grown on (1120) sapphire 101353
SiO_2-filled epoxy molding cpds., thermal stress anal. 114453
ompressive testing
twisted opt. fiber strain sens., compressive/tensile stresses and strains study *(Chinese)* 75550
SiN compressive thin film, mech. props., ring test struct. 104214
ompressor-expandors *see compandors*
ompressors
42 V automobile air-conditioner, efficienct brushless motor design 134566
acoustic diagnosis, variable-length chromosome GA 107335
air conditioner compact high-efficiency scroll compressor develop. *(Japanese)* 89458
air-conditioning chiller selection considerations 124121
ammonia compressor, IM, stray load losses, stator/rotor slot ripple 134021
automotive air conditioner variable displacement compressors, control valve develop. *(Chinese)* 134572
blower efficiency meas. instrum. using µP technol. *(Chinese)* 109428
brushless refrigerator compressor motors, sensorless sinusoidal control 124123
bypass orifice inverter heat pump, thermal perform. study 100340
commercial packaged unit air-conditioner power ratings 124120
Delaware City CHP plant repowering project, large sync. motor appls. 123203
elec. turbocompressor variable speed motor driver selection 89357
EV air conditioning inverter/compressor develop. *(Japanese)* 89417
exhaust fan, subsynchronous cascade drive, torsional reson. damage 89365
gas-line compressors, EM bearings, elastic rotor oscills. damping 104556
HFC refrigerant mixtures R407C, comp. control, energy saving *(Japanese)* 89463
high-power dens. PMSM drive for fuel cell-powered HEV appls. 123970
high-power gas flow chem. lasers, press. recovery syst. 105144
indust. energy savings with variable speed drives 134431
lin. DC motor, cylindrical moving-coil-type, efficiency characts. 77897
multi-type inverter air conditioner, perform. anal. 89455
natural gas pumping station heat-recovery power generation units 78369
petroleum indust., power distrib. over long dists., design 134692
pulse tube cooler with lin. compressor, IR sens. appl. 109547
Raytheon 95 K high efficiency cryocooler prog. for missile defence 133240
refrigerated showcases, inverter scroll condenser *(Japanese)* 124124
refrigeration compressors thermodyn. perform. simul. using RBFN *(Chinese)* 134661
solid polymer fuel cell power syst., modelling, anal., transportation appls. 89387
steam power generating unit, starting/control problems 123202
turbocompressor PM sync. motor sensorless vector control scheme 133973
twin cylinder rotary compressor with conc. winding DC motor *(Japanese)* 124131
variable speed compressor drives, public power grid connection 133683
Compton effect
3-D Compton scatt. camera images, list mode EM reconstruction 132886
3D PET, Monte Carlo simul. & scatt. correction, perform. anal. 122181
anthropomorphic phantom integrated EGS4 Monte Carlo code, Compton probe appl. 132958
bomb detect. using backscattered X-ray radiography 110436
brain SPECT, absol. activity quantitat., anal. vs. iter. methods 122239
camera for multi-tracer imaging, segmented Ge detectors 122207
coherent scatter X-ray CT med. imaging, Monte-Carlo simul. 110928
collimatorless gamma ray imaging with help of gamma-ray tracking 132351
conf., GDH sum rules and nucleon spin struct., Mainz, Germany (Jun. 2000) 100432
CT, iter. max.-likelihood polychromatic algm. 132804
current generator, design and testing using gamma radiation/X-rays 98089
dual head coincidence imaging, scatter response, Monte Carlo simul. 122197
gamma camera dead-time correction for ^{131}I, scatt. independ. 122249
high resoln. Compton telescopes, perform. charact. 132488
high-energy film radiography, proc. param. optim., MCNP model 101584
Kharkov electron storage ring, compact X-ray source based on Compton scatt. 121348
land mine detect. simulants, X-ray lateral migration radiography 76996
landmine detect., X-ray lateral migration radiography syst. 111557
laser SR femtosecond X-ray source, inverse Compton scatt. 98102
Compton effect continued
mammography 2D air-core antiscatter grids, MC simul., fab. 76505
metallic materials, backscatt. dose, obliquely incident high-energy photon beams 87874
multitracer imaging, Compton camera, Monte Carlo simul. 111012
PET, block detectors, polaris. effects on scatt. normalisation 122269
PETRRA positron camera, backprojection-space 3D scatter correction 122196
portal imager scatter dose model, Monte Carlo validation 98819
portal scatter/primary dose ratio, Monte Carlo calc. 87976
positron emission mammography, accidental coincidences, Compton scatt., obj. size 111045
radiotherapy dosimetry, portal imaging detector spectral response 133130
relative dosimetry, detector line spread fns., Compton scatt. 122392
scintimammography energy resoln., ROI deconvolution, truncated SVD 122195
SPECT, ^{67}Ga imaging, scatt. compensation method, ANN use 122180
SPECT, compact Compton camera design, params./imaging algms. 132924
SPECT, edge detect., atten. map, backscatt. photons 122199
SPECT, spatially varying Compton scatt. correction method 98574
SPECT tomograph, image reconstr., MLE 111043
SPring-8 storage ring, polarized photon beam expt. 110182
$e^-e^- \rightarrow HA$, backward Compton scatt., TESLA project, review 128312
γ-ray imaging, apparent image form. by Compton-scatt. photons 122163
γe, backward Compton scatt., TESLA project, review 128312
$\gamma\gamma \rightarrow WW$, backward Compton scatt., TESLA project, review 128312
CdTe detector, coincidence DAQ, detect. efficiency 121618
CdZnTe detectors, posn. sensitive, prototype Compton scatt. camera 121474
Si doubly bent cryst. monochromator, water-cooled, Compton scatt. expts. 121810
Compton profile *see Compton effect*
Compton scattering *see Compton effect*
compulsators *see pulsed power supplies*
computability
see also computational complexity
abstr. optimal lin. filtering 84750
additive inverse eigenvalue problem, solvability *(Chinese)* 124672
Boolean satisfiability problem, inactive clauses, dyn. detect., image computation algm. 125364
DNA computation, forbidding/enforcing 69356
fuzzy arith., addit. from common-sense viewpoint 124553
graph coloring, frozen develop. 113913
incremental rerouting, Boolean satisfiability-based, FPGA appl. 79799
LPSAT, unified approach to RTL satisfiability 79690
MBO, marriage in honey bees optim., Haplometrosis polygynous swarming approach 90046
multiobjective optim. in cct. CAD, search space 78961
multiple comparisons with the mean, exact simultaneous confidence intervals 113880
network with nonlin. resistors, solvability 90659
P systs. with picture objs. 106738
PLA growth faults detect., test vector generation, CNF-satisfiability problem 81447
quintic/sextic diophantine eqns. of type $f(x,y)=f(u,v)$ 78842
random 3-SAT via diff. eqns., lower bounds 114129
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
stat. mech. methods and phase transits. in optim. problems 113961
vector optim., feasible soln., solvability 67866
computation theory
see also algorithm theory; automata theory; biocomputing; computational linguistics; concurrency theory; formal logic; quantum computing; switching theory
controlled dense coding using Greenberger-Horne-Zeilinger state 94217
multilevel atoms, cavity dark states for quantum computing 104851
quantum computation algms. realization with lin. optics 93275
qubit encoding in oscillator, infinite-dimens. Hilbert space 94222
two-level atom, coherent photon field interact., quantum gates, classical limit condition *(Chinese)* 116866
computational complexity
see also circuit complexity; communication complexity; computability
1-bit quantization and table look-up proc., freq. estim. 118962
1D optim. algm., convergence rate under Wiener measure 113974
2-D fractional Brownian motion interpolation, image proc. 129418
2-dimens. vector packing problem, lower bounds and algms. 90022
2-Round Public Key System with S Boxes 106317
2D complex FFT, efficient implement. of quaternion FT/convolution/correl. 129647
2D DCT, shifted FT-based tensor algms. 106973
2D DCT fast algm. via distributed arith. optim. 95274
2D DHT computation algms. 90194
2D digital objs. representation 94981
2D directional filters, new struct. for opt. flow estim. 94674
2D FIR digital filters, weighted least sq. design 102414
2D FIR filters design, iter. reweighted least-sq. algm. 107517
2D HF complex radar scatt., type-discriminated GTD model *(Chinese)* 131651
2D type-IV DCT, computation 95627
2D wavelet packet based feature selection method for image recogn. 95570
3D endoscopic images, ref.-based fast stereo matching syst. 76403
3D geom. compression, DPCM and var. appl. 95220
3D med. data, multirate coding 98161
3D nonlin. transient eddy current problems, multistep algm. 128683
3D range image, gradient based polyhedral segmentation 94696
3D struct., adaptive integral method based capacitance computation 72164
3D vector radix algm. for 3D new Mersenne no. transform 73212
3D wavelet-based multiresolution anal., microstrip low pass filter appl. 69087
7 kHz speech and audio at 16 kbit/s, low-complexity ACELP coding 84010
ABR services for overcoming misbehaving sources in heterog. environ. 74258
acoustic echo cancellation, low complexity nonlin. filters anal. 107484
acyclic graphs, min. congestion embedding into ladders, VLSI layout 70280
adaptive beamforming using affine projection algms. 73577
adaptive DFE with complete lattice orthogonalisation 95806
adaptive group-blind multiuser detect., new subspace tracking algm. 95718
adaptive lin. equalization algm., wavelet packets transform *(Chinese)* 130265
adaptive line enhancement via subspace tracking 107546
adaptive low complexity beamforming using split RLS algm. 73637
adaptive multigrid solver for convection-dominated problems 114104
adaptive recovery techs. for real-time audio streams 118075
adaptive reduced-complexity iter. decoding 72816
adaptive reduced-rank interf. suppression algms., convergence/tracking 105813
ADSL modem, decision-making method for archit. selection 130999

computational complexity continued
AIM, attentionally-based syst. for interp. of angiography 87352
alg.-geometric codes better than Gilbert-Varshamov bound, low-complexity constr. algm. 117925
algorithmic stats. 117934
all-opt. networks, routing with turn constraints 86030
all-opt. wavelength-routed networks, multicast routing 120234
AMRB, location/migration transparency of services 96195
antenatal fetal risk assess. by US, neural nets 110823
anytime contract algms., av. quality optim. over interval 100777
approx. algm. for longest common subsequence 67974
approx. algm. for weighted Hamiltonian path completion problem on tree 100977
approx. algms. for bandwidth and storage allocation problems 100919
approx. algms. for independent sets in map graphs 124620
approx. sorting of packet-scheduling in high-speed networks 107651
Arcangeli's discrepancy principle, modified projection scheme for ill-posed problems 100972
ARQ adaptive hybrid schemes for wireless links 94292
Arthur-Merlin games derandomization under uniform assumptions 100772
ASIC devices for distributed packet switches with QoS support for IP and ATM 131020
assembly, 2-robot, task seq. optim. by evol. algms. 125897
asymmetric DFE, full-duplex commun. for indoor wireless appls. 119172
asymmetry, observer and perception problems, complexity of indiv. objs. 101082
asymptotical $O((k+1)n^3L)$ affine scaling algm. for $P_*(k)$-matrix lin. complementarity problem 79037
ATM ABR service, source control based approach 108494
ATM high-speed networks, QoS-based routing algms. 107971
ATM mobile networks, MAC protocol with QoS guarantee 96591
ATM network design using GA 85431
ATM scalable survivable group commun. 107977
ATR, anal./expt. perform.-complexity tradeoffs 109273
attribute cluster network and fractal image compression 73354
attribute trees as adaptive obj. models in image anal. 73474
augmented ring networks 85338
AWGN channel, turbo codes/turbo-like codes perform./complexity 129101
bandlimited periodic sig., nonlin. least-sq. multisine fitting algm. 118831
bar code recogn., polynomial recursive optim. algm. 95405
Barnes-Hut multipole method for EM scatt., predicting computer run-time 83214
BCJR-type reduced-state algms. 72878
bend discontinuity, anal. asymptotic extraction tech. 114930
best path routing for multiple QoS requirements, randomized algm. 85069
bi-criterion optim. problems, multi-colony ant algms. 90029
binary image optimized coding based on rect. partitioning *(Chinese)* 106958
binaural sound synthesis, interaural transfer fn. model 130052
biologically motivated, precise and simple calib. and reconstruction using stereo light microscope 106599
Birkhoff-von Neumann input-buffered crossbar switches, scheduling 95761
BIST, set covering model appl. to reseeding 81434
bit rate control in real-time low bitrate video commun. *(Chinese)* 85123
bit-parallel systolic architecture,low-complexity, cryptosystems appl. 102191
bit-plane matching algm., adaptive, full-search *(Chinese)* 129685
bitwise Huffman coding, source mapping 94291
BLAST algm., fast sq.-root implement. 108613
BLAST systs. perform., iter. detect./decoding effects 72866
blind adaptive equalizer, dithered signed-error CMA 73836
block ciphers, polynomial-time universal security amp. 129316
block coded CDMA, max.-likelihood detect. using A* algm. 129095
block codes of small lengths, min. delay decoder design 72928
block motion estim., complexity-distortion optimal search algm. 107091
block motion estim., fast search algm. *(Chinese)* 84435
block turbo code, reduced search trellis decoding, perform. eval. 94278
block turbo decoder implement. 117992
block-based coded images, efficient similarity-based error concealment method 95305
block-exact fast affine projection algm. *(Japanese)* 95663
block-matching motion estim., dual-bit-resoln. image, low-power VLSI architect. *(Chinese)* 106424
block-matching motion estim., multiresolution telescopic search 118492
block-matching motion estim. algm. based on successive elimination 94930
bound multicast tree research 95998
bounded cycle-cover problem 74057
bounded queries, approxs., and Boolean hierarchy 113984
broadband turbo decoding, $O(\log_2 N)$-latency SISO 106085
buffer location planning by network flows 101897
buffer minimization in pass transistor logic 101891
bundle-based relax. methods for multicommodity capacitated fixed charge network design 113950
Burrows-Wheeler transform anal., block-sorting 129011
BVPs, interpolating wavelet scaling fn. with lifting appl. 114053
CALF adaptive filtering algm. improvement 107487
carrier freq. offset estimator for burst mode commun. 72715
CCD color filter array using sig. correl., color interpolation 94823
CCS7 network, A/B plane partition problem and heuristic solns. *(Chinese)* 119451
cct. simul. accel. using machine code generation 68520
cdma2000 mobile radio, SOVA high-perform. decoding for turbo codes 108699
CDMA, coded, lin. front end for iter. soft interf. cancellation/decoding 131070
CDMA, combined nonlin. MMSE beamforming and interf. cancellation 84898
CDMA asynchronous multicarrier syst., partial sampling MMSE interf. suppression 105805
CDMA commun., lin. complexity likelihood ascent search multiuser detectors 107607
CDMA long code systs., multiuser channel estim. 85516
CDMA ML detect., semidefinite prog. 130289
CDMA mobile commun. systs., space-time iter./multistage receiver struct. 108858
CDMA multi-carrier syst. with virtual carriers over dispersive channels, subspace based blind detector 107600
CDMA multicarrier wireless systs., spreading codes effectiveness/perform. anal. 83895
CDMA multiuser detect. based on state-space estim. 108615
CDMA multiuser sig. set, dist. distrib. 130296
CDMA space-time block coded multicarrier syst. multiuser receiver 108860
CDMA systs., composite interf. cancellation 72357
CDMA variable spreading-factor systs., multipath multiuser detect. 119978
CGFFT method with discontinuous FFT algm. 72166
channel assignment algm. under channel interf. constraints 85513
computational complexity continued
channel estim. equaliser on stationary channels 107317
channel estim./equalization, efficient multiplier-free implement. 73825
Chow forms computing, equidimensional decomp. 124621
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
CIXB-1, combined input-one-cell-crosspoint buffered switch 119137
client-provider-server systs., depend. data pushing 74380
client-server Internet database connectivity and two-machine flowshop 85194
closure graphs, min.-cut and max.-flow problems 90002
CNN appl. to brain elec. activity anal. in epilepsy 110586
CNN sampling theorem 102475
CNN visual μP, video compression algms. implement. 106869
code cracking problems, complexity computation 129263
codebook index assignment, traveling salesman problem, approx. soln. 129009
COFDM pre-DFT combining space diversity assisted systs. 74550
color halftone descreening based on color sigma filters 95706
color image interpolation with edge-enhancement 106753
colour image wavelet compression using vector morph. 118498
colour re-indexing algm. for lossless compression of digital images 118648
combinat. ccts., max. power consumption problem, approx. algms. 102004
combinat. digital CMOS ccts., av. switching activity estim. 101882
combined lin.-decision feedback seq. estim., pre-filter 84768
combining fairness with throughput 119438
commun. network reliab., Fishman's sampling plan 96003
commun. networks, optimum requirement spanning tree problem 74084
complete uniform hypergraphs, monochromatic partitions 124548
complex coeff. FIR filters design, LP & Chebyshev approx. *(Chinese)* 125616
computationally scalable partial dist. based fast search motion estim. 94549
computer arith. for media sigs. proc. 90807
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
concurrent zero-knowledge in auxiliary string model 106318
confine. tree implement. algm. 94984
constrained block coding and computational complexity theory 129204
constrained traveling salesman problem, polynomial algm. 113922
continuous speech recogn., nearest-neighbor based search 94423
continuous time dyn. 90143
continuous-time CNN, act. contour and skeleton models 107192
continuous-time Hopfield neural networks for filtering of ECG sigs. 98237
convergent stereo systs., disparity anal., comparative study 129492
convex separable minimization subj. to bounded variables 67917
convolutional codes, max. wt. basis decoding 72825
CORDIC proc., dyn. cct. specialization 90841
correl. computation method for binary images based on matrix factorisation 129934
correl. diversity channels, efficient simul. 84672
countable alphabet sources, arith. coding, finite precision 129034
counter-based schemes for VLSI test pattern generation 68663
counters with near min. counting/sampling period and hardware complexity 102056
CPM sigs., partitioning for SA(B,C) 128980
credit-based fair queueing, service-scheduling algm. for packet-switched networks 130323
cryptic code systs., operations in finite GF $GF(2^n)$ 118022
cryptographic systs. for multimedia appls., hardware oriented anal. 129241
CT, reconstruction, tree-struct. filter bank *(Japanese)* 73138
curve evol. approach for image segmentation using adaptive flows 106638
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
data compression perform. in terms of Hausdorff dimens. 95661
data mgt. in hierarchical bus networks 108252
data struct. for geometric/topol. aspects of finite element algms. 68066
datapath routing based on decongestion metric 101655
DCLC-DSF, distributed delay-constrained least-cost unicast routing heuristic *(Chinese)* 74046
DCT approx. with lifting scheme, systematic design/appls. 106896
DCT low-complexity scalable image compression 95383
DCT prime factor algm. 129977
DCT proc. algm., low power order based 79948
DCT quadtree-based coding, rate-complexity-distortion optim. 95379
DCT video coding via ρ-domain source modeling, low-delay rate control 95348
DCT with lifting scheme, fast multiplierless approx. 106916
DCT-based motion estim. algm., scalable DSP implement. 118500
DCT-based video coding, computation-distortion optimized framework 106960
DCTLMS algm. with selective coeff. updating, anal. 107385
DDM/FMM based fast algm. for scatt. by multi-cylinders 72279
DECIDE subcircuit extraction algm. by recursive graph ident. scheme 101682
decision algm. for rational Presburger sentences using merge routine for polyhedra *(Japanese)* 95876
deformable shapes detect. by stochastic optim. 95442
delay-/delay var. bound multicast tree problem, fast/efficient heuristic algm. 108151
delay-constrained, low-cost multicast routing in multimedia networks 119800
delay-constrained multicast routing algm. 95994
delayless freq. domain acoustic echo cancellation 84741
Dempster-Shafer theory based color edge detector 95519
dense shielded IC, EM anal., adaptive integral method 102695
densely packed microstrip interconnects, anal. using sparse-matrix/canonical grid method 89852
deterministic dyn. systs., algorithmic complexity, randomness 105991
deterministic network commun. broadcasting time determ. 107967
DFT, basis fn. truncation effects 94511
DGPS, approx. nonlin. filtering appl. 74896
digital design reuse, survey 101903
digital FPGAs, genotype-phenotype mapping 102049
digital image proc., 2D new Mersenne no. transform fast algm. 106823
digital simultaneous voice and data appls., fast alg. codebook search method 94301
directed cycles, orthogonal drawings in 3D space 100806
directed networks, compact roundtrip routing 90017
direction set based algm. for spectral estim. 95689
discrete lot sizing and scheduling problem with setup times, integral demand 89937
discrete relax. of combinat. programs 113949
discrete sinusoidal and lapped transforms, multiplier-less approach 79157
discrete-time syst. robust filtering, noise, uncertainty 95675
disjoint decomp. of bal. Boolean fns. through Walsh spectrum 68768
disjoint line segment sets admitting binary tree 124528
distrib. expansion planning, problem modelling and formulation 122935

mputational complexity continued
distributed routing for dyn. multicasting with advance resource reservation inform. 107962
DMT receivers, RLS-based init. for per tone equalizers 130249
DMT receivers with selective windowing, per tone adaptive equalization 131008
DMT transceivers, near-optimum channel shortening, matrix multiplication methods 107678
DNA computation for engng. optim. problems *(Chinese)* 125928
DNA computing, NP-complete problems, rel. to GA *(Chinese)* 102866
doubly selective Rayleigh fading channels, one-shot detectors error perform. 130177
drifting games 67748
DS-CDMA, adaptive cell sectorization 85586
DS-CDMA, blind multiuser detect., subspace tracking, MLE approach 95729
DS-CDMA, low-complexity multiuser channel estim. with aperiodic spreading codes 131257
DS-CDMA, multipath fading channels, slot timing MLE, bursty pilot sigs. 74703
DS-CDMA, multiuser space-time channel estim. under reduced-rank constraint 74667
DS-CDMA asynchronous commun., GA assisted multiuser detect. 130171
DS-CDMA asynchronous trellis coded systs., trellis-based multiuser receiver struct. 131098
DS-CDMA commun. syst. in time-varying multipath channels, adaptive H_∞-sub-weight equalizer 85521
DS-CDMA detect., semidefinite prog. appl. 107593
DS-CDMA iter. multi-user turbo-code receiver 128814
DS-CDMA mobile syst., orthogonal successive interf. canceller for downlink commun. 74700
DS-CDMA systs., blind array sig. proc., temporal diversity 107421
DS-CDMA systs., code-timing acquisition 108597
DS-CDMA systs., combined adaptive interf. cancellation with antenna array 72358
DS-CDMA systs., power control with signature seq. adaptation 85506
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
DS-CDMA wireless systs., space-time blind MOE detect. 107598
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
DS/CDMA long-code systs., blind delay estim. algm. 131077
DS/CDMA long-code systs., channel estim./multiuser detect. 108854
DS/CDMA systs., two-stage decorrelating detector 74549
DS/SSMA commun. with generalized random spreading, blind adaptive multi-user detect. 84788
dyn. image reconstr. for proc. CT, pseudo Kalman filter algm. 106710
dyn. niche clustering, fuzzy variable rad. niching tech. for multimodal optimisation in GAs 90047
EBWIC, efficient bit allocation wavelet image coder with low complexity 95074
echo canceler design, freq. domain extended correl. LMS 73015
echo canceler double-talk detector, normalized cross-correl. vector 107615
echo cancellation, adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
edge directed interpolation 94649
edge representation/recogn., multilayer feedforward NN 129890
edge-directed prediction for natural imagelossless compression 73401
edge-oriented block matching, fast search algm. 84504
edge-preserving regularization, coding artifact removal, post-proc. 84497
EEG anal. using fast wavelet transform 132561
EFIE preconditioner 105732
elementary fns. eval. in multiprecision arith. *(French)* 67925
elementary-alg. systs., real roots enclosure method 124640
ellipt. cryptography, polynomial multiplication 72981
EM anal., FFT accelerated marching-on-in-time algm. 72260
EM appl. of meshless method 128641
EM field anal., large sparse symmetric lin. systs. 128688
EM field computations, wavelet transform appl. 128646
EM fields computation, curvilinear tetrahedral elements innovative class 72152
EM flowmeter excitation coil CAD, 3D hybrid num. model 120729
EM optim. problems, combined evol. strategies & approx. techs. 128642
EM scatt., Galerkin operators in adaptive integral method implement. 83187
EM scatt. by single axis symmetric struct., computational reduction tech. 72288
EM scatt. from PEC target above or buried in lossy half space, fast multipole method 83237
embedded image coding using zeroblocks of wavelet coeffs. and context modeling 107056
energy-aware embedded systs., real-time task scheduling 127053
enterprise network topol. design, fuzzy evol. hybrid metaheuristic 95966
epipolar geom. estim., lin. techs. improve., stereo vision appls. 94917
ε-optim. schemes and L-bit precision, perspectives in combinat. optim. 67871
equalisation of time variant multipath channels using amplit. banded LMS algms. 73823
equiripple min. phase FIR filter design from lin. phase systs. using root moments 102407
error bounds computing complexity 78972
even max. decimated pairwise FIR filter banks, symm. response 102388
evolvable hardware prog. platforms, in-syst. routing strategy 102050
expander codes, error probab. exponents 129070
face detect. algms. using Markov face models 107188
face detect./facial feature extraction, efficient algm. 107220
face recogn., wavelet domain associative memory 84639
fading channels, iter. decoding scheme for pilot-assisted modulation 74699
fading dispersive channels, low-complexity commun. bandwidth expansion 131055
fast algm. for computing $q^{[i]} \times q^{[j]}$ 2D-DCT *(Chinese)* 118350
fast fractal image compression coding method 84364
fast fractal image encoding based on adaptive search 106883
fast Hadamard transform, math. model and FPGA implement. 90846
FDMA-based multiuser transmit optim. for broadcast channels 84901
FEA, fast explicit preconditioned, for symmetric lin. systs. 114194
feature selection, inform.-theoretic algm. 94205
filtering/deconvolution, LMI-based H_2, explicit formulas 107506
fingerprint recogn. using wavelet features 84344
finite element-based algms., mag. scalar pot. cuts, topol. constraints/computational complexity 72160
finite wordlength FIR digital filters, optimal, design 91110
FIR DFE for wireless data commun., fast optim. 73841
FIR digital filter, finite wordlength coeff., branch and bound tech. 130074
FIR equiripple min. phase filter design from lin. phase systs. using polynomial factorisation 73702
FIR model-based adaptive filters, proc.-/meas.-noise covariance estim. 107493
fixed polarity Reed-Muller expansions, Reed-Muller tree-based minimisation 72924

computational complexity continued
fixed-polarity OR-AND-EXOR expressions and minimization *(English)* 79853
flange-mounted ellipt. waveguide arrays, mutual coupling 83745
FPGA-based reconfigurable computers, hierarchical memory mapping 79701
fractal image compression, fast code enhancement with local search 95167
fractional diff. eqns., efficient algms. 90156
frame-skipping low-complexity video transcoder 107101
freq. selective fading channel, turbo codes with multilevel modulation 106059
freq.-domain Volterra kernels, ident. using interpol. scheme 114018
FSM synthesis via GA, flipflop selection 125167
functional MRI data anal., inform. theoretic approach incorporating spatial priors 87579
fuzzy classifier with feature selection based on fuzzy entropy 84258
fuzzy set shape in adaptive fn. approx. 100821
fuzzy similarity matrix max-min transitive closure 100839
fuzzy weighted av., fractional prog. approach 67784
GA for determining thickness of graph 100930
GA pop. dyn., approx., and anal. of optim. problems 113964
generalised K_N-convolution/fast Vandermonde transform, modulo arbitrary polynomial reduction, algms./multiplicative complexity 118995
generalized geometric seqs. family 117868
generalized H-coloring of graphs 100819
geometric-invariant robust watermarking through freq. domain constellation matching 95119
global matching framework for stereo computation 106571
gradient-type adaptive filters, pipeline implement. 84765
graph colourings and partitions 100867
graph isomorphism recogn., heuristic polynomial algm. 124531
graph nodes placement, genetic search 67838
graph theory, NP-completeness of 2-role assignment 67798
gravit. method for LP, complexity issue 67864
group-metric multiuser decoding 84892
groups of simul. on cluster of workstations, appl. to storage area networks 85237
GSM channel equalization with complex-valued MLP 130281
H.263 video encoding optim. using single proc. computer, perform. trade-offs/benchmarking 95347
H.26L video coder, 1D loop filter using coded block pattern and quantization step size 118541
H.26L video coding std., adaptive motion vector accuracy 95104
H.26L video decoder optim. 107005
h-Chase decoding, testing conditions eval. method 129209
Hall's sextic residue seqs., lin. complexity 83793
hands-free telephony, nonlin. acoustic echo canceller 118084
hard core predicates, complexity bounds 118044
hearing aids, variable step-size of LMS algm. for acoustic feedback reduct. 73017
HELINET unmanned aerial vehicles for opt. Earth surveillance 99050
HEMT MMIC RF yield forecasting methods 69233
heterog. network traffic modelling in wavelet domain 130325
heuristic Euclidean algm. of polynomials 67699
heuristic optim. algms., expt. eval. 100909
HFE, security of hidden field eqns. 129293
hierarchical FPGA mapping, perform.-driven multi-level clustering 125441
hierarchical motion estim. with spatial transforms 94670
hierarchical networks, robust QoS routing algm. 107641
hierarchical opt. interconnects using sorting networks 131511
hierarchical QoS routing in ATM networks 119842
high dens. memory fault diagnosis algm. *(Korean)* 102158
high-perform. video sig. proc. scheduling, NP-hard real-time constraints 114803
high-radix RNS forward and inverse converters 68744
high-rate turbo codes, iter. decoding using syndrome trellis 129202
high-speed packet class. using segment tree 74035
high-speed packet-switched networks, emulated weighted fair queueing algm. 95780
high-speed shared-memory switch fabric buffers, scaling 119135
HMM for blind channel estim., time depend. inclusion 96508
HMM state alignment in speaker verification, search-space reduction, detect. approach 84049
HMMs for wavelet-based image denoising 94800
homog. convex cones, Caratheodory no., duality 78908
human face detect. using fast cooperative modular neural nets 95526
human face detect. using fast modular neural nets 73503
human iris detect., fast cooperative modular neural nets 106521
hv-convex 4- and 8-connected discrete sets, reconstruction algms. 129571
hybrid dyn. prog./depth-first search, reliab. optim. 124594
hybrid image rejection receiver, archit./perform. 85585
hyperspectral adaptive matched filter detectors, comparative anal. 75193
hyperspectral data, obj. detect., compression effect 107149
hyperspectral imagery, matrix factorization algms. for band selection 76953
IBM-Research internal prototype platform, e-Seminar lect. recording and distrib. syst. 97095
IC interconnect energy model considering coupling effects 126985
IDCT based complexity scalable video decoding via data pruning 118523
IIR digital filters design in complex domain 107540
image β-skeleton computation, fast algms. 118212
image compression, arith. coding archits. 129721
image compression, directional wavelets appl. 107082
image compression, low-complexity/-memory entropy coder 129696
image compression with non-uniform block segmentation and luminance approx. using bilinear curved patches *(Japanese)* 95145
image cryptosystems, encryption algm. based on VQ 118634
image databases, fast multiresolution feature matching algm. for exhaustive search 73149
image denoising algm., wavelet-based method, adaptive algm. 73293
image displacement computation, methods comparison 94480
image enhancement based on GA *(Chinese)* 129505
image features, block motion estim. using efficient search strategy 94783
image metrics for clutter charactn. 95508
image partitioning for fractal coding under rate/complexity constraints 118603
image region segmentation, conc.-based adaptive approach 129846
image regions/boundaries, optimal, min. ratio wt. cycles 129548
image registration, rot.-invariant, ring Zernike moments *(Japanese)* 94623
image representation lin. model for use with Kalman filter restoration 118238
image resoln. increase, binary operator design, k-NN learning 118456
image restoration, parametric modeling of blurred images 106758
image segmentation, nonoverlapping block binary image representation 129608
image seq., mesh objs. generation/tracking, coarse-to-fine approach 95216
image superresolution, efficient wavelet-based algm. 94656
image zooming at fractional scaling ratio, adaptive low complexity algm. 118469

computational complexity continued
images rank-order similarity eval. 94512
immune evol. algms. 67874
imperfectly conducting bodies, EM scatt., time-domain integral eqn. anal. 83240
incomplete-LU preconditioners for nonsymmetric matrix systs. 67696
inductive cond. meas., model selection, parametric inversion 114497
integer prog., cutting planes and elementary closure 78909
intermediate-level vision, complexity, confusion, and perceptual grouping, curve-like representation 118766
intermediate-level vision, complexity, confusion, and perceptual grouping, mapping complexity 118767
intermediate-level vision, perceptual grouping, curve-like rep. 118662
intermediate-level vision, perceptual grouping, mapping complexity 118663
Internet, QoS path computation/hop-by-hop routing alg./algms. 119674
Internet integrated services, real-time traffic scheduling under controlled load service 108366
Internet mapping, dist. estim., alg. approach 119743
interval routing broadcasting, lin. message-complexity 96223
intractability results for integrat. and discrepancy 114100
IP fast table lookup, memory reduction 119278
IP lookup problem, trie-based algm. 73947
IP multicast, resource/topol. discovery using fan-out decrement mechanism 119377
ISAR imaging of moving targets, robust autofocus algm. 120424
ischemia detect., self-organising map appl., supervised learning suppl. 76300
isomorphism testing algm. for graphs, incidence degree seq. method and appls. *(Chinese)* 113901
iter. multiuser detect. with graphical modeling 84897
iter. multiuser detect./decoding of asynchronous users, reduced complexity algm. 130173
iter. reliab.-based decoding of low-dens. parity check codes 72883
iter. soft interf. cancellation for multiple antenna systs. 83408
iterated transform. theory-based image coding 73411
JasPer, software-based JPEG-2000 codec implement. 96315
JBIG2 std., dictionary design for text image compression 73402
JPEG2000 and turbo-codes for robust image transm. 84470
JPEG2000 implement. on different computer platforms 106949
JPEG 2000, multiple component compression 106947
JPEG 2000, TCQ 106948
JPEG 2000 still image coding vs. other stds. 106938
JPEG-2000 std., computational complexity eval. 106945
k-cardinality assignment problems, algms. and codes 74899
k-station placement problem 95791
k-vertex-connectivity augmentation problems with degree-unchangeable vertices 67810
Kullback-Leibler dist. on wavelet subbands, texture similarity meas. 94938
land mine detect., sens. fusion archit., limited training data sets 77009
landmine discrim., sens.-specific data proc. & unsupervised clustering 73471
Landsat-7 ETM+ internal calibrator, data models 122551
large struct. semidefinite programs, inexact spectral bundle method 78762
least-sq. image resizing using finite differences 106693
length-restricted coding in static and dyn. frameworks 106167
lexicographically optimal bal. networks 119117
LFMCW car sens., OO algm. for range super-resoln. estim. 75080
lifting based discrete wavelet transform archit. for JPEG2000 84488
LILI keystream generator 129321
limit reliab. fn. of large series-parallel systs. with assisting components 100561
lin. constrained generalized Lloyd algm. for reduced codebook VQ 84388
lin. optim., primal-dual Newton method, complexity anal. 78893
lin. radio networks, min. range assignment problem 67806
lin. syst. fault diagnosis, residual generation, polynomial 100631
lin.-complexity soft-decodable high-rate "good" codes, constr./props./perform. 129114
line spectrum freqs. calc. using quotient-difference scheme 106370
linogram algm. for computerized tomography 98511
Liouvillean-type theorems for lin. DEs on interval, approx. and complexity 114106
list decoding, representations of alg.-geometric codes 72808
local decoding procedures for error-correcting codes 72812
logarithmic search motion estim., non-overlapping search pattern appl. 107003
logic BIST synthesis, cct. partitioning, divide-and-conquer approach 79678
logic emulation syst., net assignment problem, FPLA 68766
look-ahead based fuzzy decision tree induction 78803
lopsided trees 124527
lossless compression of digital audio 94412
lossy dielec. random rough surfaces, wave scatt. 117663
low complexity (turbo) classifiers in high dimens. feature spaces 128933
low complexity FIR filters using factorization of perturbed coeffs. 80084
low complexity regular quantizers for overcomplete expansions, constr. 106170
low dens. parity check code decoder, efficient implement. tech. 128998
low dens. parity check codes design using heuristic bit-filling algm. 129198
low power motion estim., hardware-oriented region based algm. 129770
low rate turbo-Hadamard codes with low decoding complexity 129162
low-complexity video coder based on discrete WHT 118582
low-dens. parity check codes, iter. reliab. based decoding 129177
low-dens. parity-check codes at short block lengths, heuristic search 129063
low-exponent RSA with modulus primes sharing LSB 129287
LP/convex prog., long-step cutting plane algm. 78897
LPC params., fast-search algm. for predictive split VQ 73019
LSI layout with diagonal edges, resizing algm. 81490
M-ary ISI-corrupted PAM sig. detect., DFE using multiple-hyperplane partitioning 73839
M-estim. robust adaptive filtering 119052
M-QAM nonlin. amplified sigs., fast adaptive predistorter 72728
M/GI/∞ queue, stationary, busy period 113844
machine layouts, lin. sequencing, modified simulated annealing 67688
magnetostatic field comput., fast integral eqn. scheme, NDE appl. 105677
MAP decoding algm. for lin. block codes using BCJR and recursive techs. 129022
Mastrovito multipliers for general irreducible polynomials, systematic design 90881
matching pursuit video coding, dictionary approx. 95205
Matching Pursuits tech. for weighted atom searching in video coding *(Chinese)* 73416
matrix factorizations for reversible integer mapping 117963
matrix general block distrib. approx. 79040
matrix problems, NP-hard, and robustness, probabilistic solns. 100738
matrix product eigenvalue problem, global optim., computational complexity anal. *(Japanese)* 100741
max. entropy speech class. 106420
max. intens. projection, fast hierarchical algm. 98131
max. intens. projection, fast progressive method 106712
MC-CDMA hybrid uplink interf. cancellation receiver 73860
MC-CDMA over dispersive channel, subspace based detect. 84782
MC-CDMA uplink, blind carrier freq. offset estim. 108829
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulation 94243
med. image vol. rendering using dist. transform 98136
microwave imaging applied to rem. sens. using multilevel fast multipole algm 75127
MIMO systs. with antenna selection, capacity 131289
min. complexity seq. multihypothesis detect. 128923
min. complexity seq. multihypothesis detect., weak seq. tests 83779
min. cost survivable networks with bounded rings, GA 78910
min. energy consumption broadcast subgraph complexity 95991
min. message length grouping of ordered data 72711
min. output energy detector and estimator, sq.-root array forms 130174
min. redundancy zero-error source coding with side inform. 129218
min. spanning strong subdigraph problem for extended semicomplete digraph and semicomplete bipartite digraphs 124526
min.-phase space vol. param. estim. 119098
min.-redundancy prefix codes, space-economical algms. 117923
Minty's algm. for claw-free graph max. wt. stable set, revision 100865
MIX net 106327
mixed hardware/software systs. generation from SDL specs. 79665
mixed-sig. designs, syst.-level test synthesis, hierarchical test approaches 10242
MLE, progressive refinement, carrier freq. recovery appl. 94231
MLP-based DFE with lattice struct. 73840
MLSE sub-optimum detector with folded state-transit. trellis preselection stage 95717
MMSE reduced-rank multiuser receiver for sync. CDMA 108526
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuser detect. 73721
mobile ad-hoc networks, routing with energy considerations 85892
mobile cellular networks, heuristic assignment of cells to switches *(French)* 85578
mobile commun., re-decode based error compensation method 95325
mobile phones, location query proc. via behavior based strategy 96613
model based halftoning, impact of human visual syst. models 94881
modified DFT with doubled freq. resoln. 107333
modified fast vector median filter 129461
modified freq. domain pitch detect. algm. *(Chinese)* 94409
modified MAP decoding algm. 72927
modified multigrid for 3D ellipt. eqns. with cross-derivatives 79051
modular neural nets for high complexity problem solving 68689
modulated lapped transform computation, fast algm. 84716
MoM for compact large planar scatterers in homog. medium 83223
monotropic prog., ε-out-of-kilter method 78907
motion compensation, mesh-based scheme, temporal concealment approach 118227
motion compensation algm. based on second-order prediction 94712
motion estim., advanced center biased search algm. 95079
motion estim., multilevel multistep algm. 84100
motion estim. algm. using adaptive search tech. *(Chinese)* 106490
motion estim. lossless fast full search algm. 106843
motion-based class. of cartoons 84500
MPEG transcoder, rate control considering drift-error propag. 95091
MPEG video coding, rate-distortion charact., hybrid models 95253
MPEG video streams, spatial SS watermark detect. 95057
MPEG video transcoding by spatial resoln. reduction 95094
MPEG-2 decoding with internal resoln. scaling 118524
MPEG-2 real-time video encoding, adaptive GOP struct. selection 95206
MPEG-2 scalable bit-rate transcoder with graceful degrad. 118525
MPEG-4 shape coding, fast motion estim. algm. 95084
MPEG-4 video data protection for multimedia fruition 84367
MPEG-7 metadata for video transcoding, motion and difficulty hints 95340
MPEG-coded video seqs., real-time visual postprocessor 84413
MPLS label switching, steady-state perform. anal. 107776
MPLS-based networks, service restoration approaches 130519
multi-bit binary arith. coding 94268
multi-constrained optimal path selection 119424
multi-lingual synthesis and verification environ. 125304
multi-player prisoners dilemma game co-evol./cooperation 89975
multi-zone in-home hard disk video recorders, min-max subsequence problems 120585
multicarrier systs., optimum equalization, unified geometric approach 130253
multicarrier transceivers, BER efficient estim. 85407
multicast connections, efficient setup using tree-caching 119407
multicast key mgt., probabilistic methods 106197
multicast routing, Steiner tree problem, heuristic evol. prog. *(Chinese)* 130498
multicast traffic scheduling in input-buffered ATM switch 119841
multicast tree, random searching heuristic algm. *(Chinese)* 95976
multichannel audio coding, exploration of Karhunen-Loeve transform 106364
multichannel regularized recovery of compressed video seqs. 95152
multidielectric multiconductor hybrid ICs, closed form method of lines approx. anal. 80335
multidimensional elastic image registration, spline appl. 94663
multifiber opt. tree networks, wavelength assignment problem 96742
multilayered medium, overlying objs. EM scatt. 72213
multilevel codes, multistage reliab.-based decoding algm. 129137
multilevel fast multipole algm., translation matrix interpolation 105702
multimedia commun. multicast routing/path selection 96262
multimedia content distrib. to bal. QoS and cost 96265
multimedia distrib., cost-optimal multicast trees for multi-source data flows 119796
multiple implication checks, learning procedure, DNF, DIMACS benchmarks 79680
multiple input-queued switches with parallel iter. matching scheduling algm. 95846
multiple nonseparated battlefield ordnance events class., ELMO algm. 133405
multiple obj. tracking using multiple sens. 107232
multiple parallel concatenated single parity check codes 129199
multiple turbo codes, non-parallel decoding struct. 129098
multiple type-one equilib. points on stabil. boundary, generalized fixed-point homotopy method 90663
multiple-valued GF S/D trees for GFSOP minimization and their complexity 79820

putational complexity continued
multipoint video conferencing, region-based obj. tracking using wavelet transform 118607
multipoint-to-point ABR service in ATM networks, merging algm. 119843
multiprocessor SoC, syst. design, validation and fast prototyping 102199
MultiProtocol Label Switching networks, scheme for fast restoration 85246
multiresolution modelling of polygonal surface meshes using triangle fans 90191
multiscale autoregressive models, computationally efficient stochastic realization 84704
multisensor target tracking fusion ident., convex optim. 84644
multisensor-multitarget tracking, fast data assoc., multidimensional assignment, clustering 120417
multiuser detect., pilot-channel based adaptive algm. 74694
multiuser sig. design/detect. using interf.-resistant modulation 130156
multivariate polynomial eqn. solving for cryptosystems 106316
multiview image compress. using quadtree disparity estim. 107109
uP simul., expt. error meas. 90953
N-periodic seqs., lin. complexity, finite field *(Chinese)* 129338
Naor-Reingold pseudo-random fn. from ellipt. curves, lin. complexity 124567
near-optimal multiuser detector for CDMA channels using semidefinite prog. relax. 107751
nearly optimum generalized multilevel block truncation coding algm. with fast nonexhaustive search 106925
nested-multilevel redundancy exploitation for fast block matching 95082
network reliab., unreliable nodes, d-min. paths search algm. 78716
neural networks, computer technols. *(Russian)* 125638
New World Campus networking 130722
nice viewpoints of objs. in space, computational complexity 73238
noisy indiv. binary seq., twofold universal prediction for finite-state predictability 83916
noisy speech, adaptive filtering & spectral subtraction 94421
non-interactive public key cryptosystems using non-max. imaginary quadratic orders 129323
nonbinary block codes, Chase-2/GMD decoding combination 72776
nonblocking generalized three-stage switching networks 130247
nonconvex sets, successive convex relax. methods, complexity anal. 113920
nonlin. approxs. using sets of finite cardinality or finite pseudo-dimens. 114038
nonlin. ccts. anal., Volterra series/piecewise const. interpolation 90668
nonlin. channel equalization, reduced-complexity clustering 73827
nonlin. EM field comput., hybrid tech., triangle search method 83143
nonlin. least-sq. struct. from motion, innovative inform. propag. 106620
nonlin. Lebesgue and Ito integrat. problems of high complexity 114096
nonlin. satellite channel, equalization combined with trellis coded/turbo TCM 108985
nonpunctured turbo codes, reduced-complexity iter. decoding 72813
nonrepairable fault-tolerant systs., reliab. bound, failure-dist. based method 89925
NP-completeness for calculating power indices of weighted majority games 100782
NP-optim. problems, approximating values and solns. 100975
obj. contour detect., fast and accurate snake model 73472
obj. modeling and anal. based on morphable model *(Chinese)* 107202
OFDM mobile wireless syst., reduced complexity channel estim. 108892
OFDM sigs. peak-to-av. power ratio reduction, pulse shaping 72762
OFDM systs., fuzzy adaptive sig. predistorter 129970
OFDM systs., timing phase estimator overcoming Rayleigh fading 117900
OFDM systs. with multiple transmit antennas, optimum training seqs. 74814
OFDM-based broadband wireless systs., efficient multiuser loading algm. 73773
OFDM/SDMA-based wireless local networks, adaptive loading 74605
OFDMA, subcarrier allocation and power control 106036
old films, low complexity cut detect. in flicker presence 106857
Omega time-division opt. networks/nonoptical extra-stage networks, equiv. permutation 120271
opt. broadcast-and-select networks, real-time message scheduling 131486
opt. networks, packet addressing using RF carrier assignment 86009
optim., partitioned random search, sampling cost/discounting 100953
optim.-based image segmentation algms. 73531
optimal algms. and inform. complexity 114097
optimal all-to-all pers. exchange in class of opt. multistage networks 86107
optimal FPGA module placement, temporal precedence constraints 79702
optimal greedy algm. for wavelength assignment in directed tree nets 75009
optimal multiple preset dictionaries, NP-hard problem 106179
optimal vol. subintervals; with k points and star discrepancy via integer prog. 124590
orthogonal polygon recogn., visibility concepts 106436
orthographic error diffusion tone scale generation method 106806
overloaded array proc. with spatially reduced search joint detect. 107595
P_4-free colorings and P_4-bipartite graphs 78858
P systs. with commun. based on conc. 102851
page segmentation and content class., document image proc. 84241
parallel concatenated block codes, iter. decoding, F24 coset MSP algm. 106079
parallel k-mismatching of strings using daughter-board struct. 90840
parallel packet switches implement. 119170
parallel real time implement. of stereo matching 84114
parallel simul. of radio-base antennas on massively parallel systs. 83514
parallelism and dictionary based data compression 94261
parametric image restoration/resoln. enhancement 106688
partial-prefix synchronizable codes 83915
partially- obs. discrete-event systs. 124501
partitioned freq.-domain block LMS algm. 107519
pattern class., k-nearest neighbours rule, k-dist. transform. 118731
pattern matching algm. for bal. straight-line programs *(Japanese)* 84134
PCB assembly seq., feeder assignment, Tchebyshev robot arm motion, problem 89822
PCB design, optimal moving path for NC drilling, automatic prog. *(Chinese)* 102807
PCN multimedia commun., distributed dyn. reservation scheme 131245
PDF optimized parametric VQ for speech coding 106374
periodic seq., lin. complexity, stat. charact. *(Chinese)* 118036
periodic seqs., k-error lin. complexity *(Chinese)* 129336
permutation codes, multilevel constr., cardinality 129030
permutations sorting by reversals through branch-and-price 113951
permuted kernel problem cryptanalysis 106266
pers. area networks employing CCK modulation, low-complexity channel estimator 131277
perturbing algm. for floorplan design using O-tree representation 101895
PET 3D image reconstruction using max. entropy on mean *(French)* 122255
Petri net fluidification, semantics and steady state 78863
physicist's approach to no. partitioning 113962
piecing-error for sub-images, relax. algm. 73475

computational complexity continued
pixel purity index algm. comput., blocks of skewers, FPGA proc. 94446
plan recogn. through goal graph anal. 73532
planar TSP, simple quick approx. algm. 100813
POCS-based image reconstruction from irregularly-spaced samples 95183
Poisson procs., nearly completely decomposable Markov chains modulated, reduced-complexity estim. 130330
Poisson-corrupted data, complexity-regularized denoising 95296
polynomial basis squaring, complexity 129312
polynomial time approx. schemes for some dense instances of NP-hard optim. problems 67975
polynomial time interior-point algms., symmetric cones, associative and Jordan alg. 113975
polynomial-time approx. algms., bin-packing algms., maximizing no. of unused bins 100976
polytopes and polynomials, decomp. 79011
pos. real seqs. parameterization and MA param. estim. 130031
pose estim. for robotic control with 3D range data 107270
power systs., NP hard problems, global optim. *(Chinese)* 77143
predictability, complexity, and learning 124521
predictive LSF computation 118095
prefix computation and addit., optimal-depth ccts. 102084
prime factor algm. for multidimensional DCT 107384
prime no. generation 106241
prime-length DCT, computation through cyclic convolutions 73622
probabilistic multihypothesis tracker using turbo coding concept 130133
probabilistic weighted fair queuing algm. for packet scheduling 119240
proc. voltage scaling for energy minimization with QoS constraints 125399
progressive image coding using SPIHT algm. and trellis coded quantiser 73323
progressive partial norm matching motion-estim. algm. 95135
progressive quadtree wavelet encoder for lossy image compression 106985
protocol insecurity with finite no. of sessions 83975
pseudo-random fns. and factoring 72948
pyramid image coder using histogram based classifier 84421
pyramidal algm. for area morph. 94721
q-ary shrinking generator, period and lin. complexity of seqs. *(Chinese)* 72979
QoS multi-constrained routing, heuristic algms. 119425
QoS multiconstraint routing using depth-first search with limited crankbacks 119395
QoS optim. based on adaptive GA *(Chinese)* 85106
QoS routing with network dependant delay cost, perform. anal. 107963
QoS-constrained routing, smart forwarding tech. 74037
quadratic prog., higher order semi-definite relax. 78928
quadtree image form., error anal. 96899
quasi-Monte Carlo method for ellipt. BVP 79059
radar sigs. STAP, orthogonal wavelet decomp. 109263
radio network randomized leader election protocols 107966
radio networks deterministic min. cost broadcasting 95992
random embedding machines for pattern recogn. 129880
range image, progressive registration based on surface triangulation 106489
rate compatible product codes 106094
Rayleigh fading channel, compressed image commun., trellis decoding of block codes 106093
Rayleigh fading channel multicarrier sigs., carrier freq. offset 74551
Rayleigh multipath fading channels, GQR models 83263
real time video compression, reduction of blocking artifacts *(Chinese)* 84440
real-time AOI syst. for PCBs, image matching 124412
real-time commun. protocol using SDL for embedded SoC based on ARM microcontroller 95886
real-time low bitrate video commun., bitrate controlling *(Chinese)* 84439
real-time reconfigurable image recogn. syst., model-based develop. 107227
recursive digital filters, multiplierless realization 130099
recursive randomized coloring and fair dice random colorings 90018
recursive systematic convolutional codes, twin-stack decoding 94294
reduced complexity in-phase/quadrature-phase turbo equalisation using iter. channel estim. 130276
reduced complexity primitive operator FIR filters for low power dissipation 102379
reduced-complexity detect. algms. for systs. using multi-element arrays 73732
reduced-rank automatic target detect./recogn. 109275
reducible$^+$ networks, marginal reliab. importance computation 89927
reduction of blocking artifacts in real time video compression *(Chinese)* 84375
region boundaries detect., one-pass algm. 94592
regression by partial least-sq., simplified algm. 124512
regularized image denoising 73403
relative prioritized packet video, loss propag. model 108404
reliable real-time multiview tracking 95008
resoln. and frame-rate scalable subband/wavelet video coder 106970
resource allocation with non-concave objective fns. 113992
retimed seq. ccts., init. state computation, adaptive algm. 68786
ring loading problem, integer demand splitting 130499
ring networks, tradeoff between cycle complexity and fairness 74311
RLS pipelined adaptive filters, low computational complexity implement. 107495
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
RNS modular multiplication tech., public-key cryptography appl. 106253
RNS Montgomery modular multiplication, improvements 90809
robust global motion estim. using simplified M-estimator 94555
robust location problems with pos/neg wts. on tree 113926
robust spanning tree problem with interval data 107985
robust subspace tracking in impulsive noise 130035
rooted node-connectivity problems 67823
routing interval concept, IP routing table lookup scheme 130505
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN channels, perform. anal. 108542
RS codes, decoding algm. for burst error correct. 72925
RS codes, soft decision decoding using extended erasure magnitude matrix 106090
RS codes, turbo decoding through binary decomp. and self concatenation 129044
s-expanded symbolic network fns. for computer-aided analog IC design 79545
SAR data compression, range focusing/variable-rate trellis-coded VQ 109236
SAR image form., N^2logN back-projection algm. 109238
satellite image deconvolution using complex wavelet packets 94953
satellite link capacity planning, heuristic approach 96628
SC/MMSE ISI iter. equalizers, matched filter approx. 95810
scalable secure storage, half syst. is faulty 106074
scalable VoD server with data sharing 97098
scalp pot. fast comput., EEG forward problem, BP ANN 87398
seismic and acoustic sig. ident. algms. 73735

computational complexity continued
selective frame discard for stored video delivery across resource constrained networks 97082
self-dual lattices, state complexity successive minimization using Korkin-Zolotarev reduced basis 114087
semi-blind closed-form co-channel sigs. separation method used in smart antenna systs. 72680
semicond. track systs., pot. deadlock set ident. 89949
semidefinite optim., primal-dual method, Nesterov-Todd direction, complexity anal. 67909
semidefinite prog. based tests for matrix copositivity 78929
sens. inform. capacity & energy cost, biol. vs. Si photoreceptors 106002
seq. cct. test generation using state transit. diag., combinat. cct. part 114728
seq. logic ccts., design diversity for concurrent error detect. 102045
serial concatenated TCM with rate-1 inner code 72817
series parallel digraphs, 3D symm. detect. algm. 100816
set-membership affine projection algm. 95687
shield insertion and net ordering for capacitive/inductive coupling minimization 101890
shift for accurate sing. values in differential qd algm. 124662
Shor factorization algm. using fewer quantum bits via simultaneous Diophantine approx. 129297
short secret DL-keys, small generic hardcore subsets for discrete logarithm 72965
short wordlength selective IIR filters, design procedure, implement. complexity 102380
shortest connecting networks synthesis 67837
sig. proc., 1D rank order stats., fast computation 130060
sig. proc., computational complexity reduction using sig. redundancy 107415
sig. word decomposed filters, optimal filter length, subfilter coeff. wordlength assignment 102378
signcryption scheme based on integer factorization 106201
simultaneous tracking of multiple objs., evidence-based Bayesian modality fusion 106616
SISO low latency module, broadband turbo decoding appl. 72879
slide attacks 106329
small cutwidth and carving-width, constructive lin. time algms. 100812
smart antenna systs., low complexity array response vector estim. 105935
soft decoding algms. 129208
soft mol. computing 69350
soft output Viterbi algm. and max-log-MAP decoding, equivalence 108681
SONATA, large scale all-opt. WDM network, network controller procedures 86020
SONATA large scale all-opt. WDM network, centralised controller design 131499
sorting algm. for seq. of kings in tournament 113861
source coding with min. and rate-independent search and memory complexity 106190
source current distrib. problem, hierarchical SA vs. Gauss-Newton scheme 83075
source/channel estim. using finite alphabet property, randomised algm. 107728
space-time Hadamard codes, efficient decoding using Hadamard transform 129186
space-time struct. of diffused multipath channels 131094
sparse, regular, and planar graphs, complexity of counting 114017
sparse vector lin. prediction with near-optimal matrix struct. 106864
spatio-temporal equalization based on estim. channel response 119182
speaker-independ. word recogn., piecewise lin. freq. warping *(Japanese)* 94416
spectral accel. forward-backward method for terrain profiles coverage anal. 117681
spectral estim., nonnegative constraints handling 107334
speech recog., discriminative training criteria and optim. 73064
speech recogn., ATROS syst., fast phoneme look-ahead 73074
speech recogn., complexity reduction using decimation of cepstral time trajectories 118152
spherical min. location problem 67887
SPIHT, SPIHT, lossy image coding 73414
spline wavelets, quadratic/cubic, fast algm. 84760
stable monotonic matching for stereoscopic vision 84627
star interconnection networks, incomplete, commun. algms. 85083
stat. shift registering sorting archit., fair queuing algms. in high speed routers *(Chinese)* 108224
stats., algorithmic finding of model to fit data 67772
stereoscopic video seqs., act. contour-based video obj. segmentation 106832
stereovision, indiv. evol. strategy appl. 118201
stochastic prog., primal-dual constraint aggregation 78894
study of TSP 67797
submodular fn. minimization and submodular flow 67869
suboptimal fractal coding using iter. transform. 73334
subspace tracking, fast normalized Oja algms. 84662
subspace tracking based blind multiuser detect., MMSE estim. 73719
successive survivable routing, optimal spare capacity allocation approx. 119420
superimposed HMM transient detect. via target tracking ideas 119094
supervised fuzzy/Bayesian class. of high dimens. data, comparative study 94538
survivable network design using hybrid of exact and GA 130464
switched elec. networks, quantum control techs. 79559
Sylvester-Habicht seqs. and fast Cauchy index computation 67979
sync. seq. ccts., BIT pattern generation method 125393
systolic array design for kernel fns. of video compression 101880
tail-biting codes, suboptimum MAP-decoding using dual trellis *(English)* 72843
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
TCP acknowledgment delay problem 84973
TD-CDMA based mobile radio systs., joint-detect. techs. comparison 107594
TDD-CDMA receivers, Bayesian multistage interf. canceller for multiuser detect. 105799
TDM variable-rate switching assignments, unified algorithmic framework 131320
TDMA/CDMA 3G systs., multirate transm. receivers 74660
teletraffic, Erlang fixed-point iter. scheme 73762
threshold proxy signature scheme, nonrepudiable 118042
time-freq. inform. content from Renyi entropies 73564
time-variant permutation generator, probabilistic cryptanalytic method 129272
time-varying wavelet convolutional codes with bipartite trellises 129188
timed-token MAC protocol, sync. bandwidth allocation for real-time commun. 84998
TLM, FDTD and Haar wavelet MRTD algms. for EM simul. 93956
tomographic images, multilevel domain decomp. algm. for fast reprojection 94682
topol. and geom. cooperation based method for stereo matching 118282

computational complexity continued
total least sq. filtering, stable simplified gradient algms. 107544
total mag. force on PM, num. calc., equiv. source methods 83149
tracking/fusion algm. perform. eval., problem complexity 95616
trapezoid-to-simple polygon recomposition for resist. extraction 104070
tree spanners for subgraphs and related tree covering problems 78880
tree-struct. filter banks, orthogonal extension methods 119030
tree-struct. multiple description VQ design 106165
TSP, cutting planes location 67779
turbo block codes using modified Kaneko's algm. 106084
turbo code, two-step SOVA decoder, computational complexity reduction 7291
turbo code perform. and design trade-offs 106083
turbo codes, computational complexities and relative perform. 129230
turbo codes, parallel decoding using soft output T-algms. 106113
turbo codes, trellis complexity anal., interleaver props./appls. 72898
turbo coding, decoder complexity 94334
turbo space-time low complexity code for syst. with large no. of antennas 7285
turbo-single parity check codes 72895
two-label point labeling, approx. algms. 114048
two-level wireless ATM network, heuristic algm. for optimal design 108646
two-stage RS decoder for coded 2^m-ary QAM systs. 72917
unconstrained binary quadratic prog. problem, simulated annealing-based heuristic 100922
unconstrained scene model-based human face detect. 95498
undirected multigraths simultaneous augmentation 100818
unicast-based approach for streaming multicast 119346
uniquely restricted matchings 124540
universal lossless data compression with side inform. using conditional MPM grammar transform 117920
US sig. detect., useful echoes ident., parallel comput. 107588
variable fractional-delay FIR digital filters, discretization-free design 102408
variable recursive digital filters, stabil., multi-dimens. polynomials 68946
variable step size LMS adaptive filtering algm. and anal. *(Chinese)* 119054
variable-resoln. displays for visual commun. and simul. 97648
vector optim., existence of efficient results 100925
vector partition problem for convex objective fns. 113977
verifiable partial escrow of integer factors 130449
verifiable secret sharing complexity and multiparty computation 72953
vertex connectivity augmentation, near optimal algm. 100817
vertex covering problems, hybrid GA 67808
very large scale vehicle routing with time windows and stochastic demand using GA with parallel fitness eval. 100962
video coding, adaptive motion vector VQ 95214
video coding, adaptive postprocessors with DCT-based block class. 107018
video coding, block-matching motion estim., low power archit. 95400
video coding, VLBR, motion-compensated 3D wavelet transform 95399
video compression using integer DCT 95209
video de-interlacing, nonlin. techs. 94689
video encoder with matching pursuit 84506
video seqs., synthetic summaries using multiresolution based key frame selection in perceptually uniform color space 94647
video shot change detect., near shortest transversal path 84115
videoconferencing, Kalman noise filtering and motion compensated video coding 95099
view planning with registration constraint 84212
visibility partition for affine pattern matching, computer vision and pattern matching 94982
vision, real-time, intens. profile efficient computation 84337
vision, selective attention modeled on prefrontal cortex net 84343
vision, self-organizing, stochastic clustering 129547
visual cortex, spiking associative memories, patterns 114917
VLSI, optimum design of power and ground topol. subj. to reliab. and noise constraints *(Chinese)* 81487
VLSI cct. layout CAD, crit. area for missing material defects 104001
VLSI floorplan, area(number)-bal. hierarchy of staircase channels with min. crossing nets 104067
W-CDMA mobile radio systs., sectorized space-time multiuser detect. 84794
wavelength assignment heuristic to minimize SONET ADMs in WDM rings 131478
wavelength-routed networks, multicast nodes allocation 131502
wavelet image coding using blockwise binary class. and trellis coded quantization 106989
wavelet image compression, simple and efficient algm. 95287
WB-CDMA terminal, low-complexity channel estim. scheme 85814
WDM networks, adaptive distributed wavelength routing algm. 74989
WDM opt. networks, routing dependable connections 109188
WDM opt. networks, scheduling algm. 109214
WDM sparse splitting networks, multicast routing with power consideration 130515
Web graphs compression 107462
weighted vertex cover, fixed param. algms. 100811
whole program compilation for embedded software, ADSL expt. 85406
wireless channel, TST-ESPRIT based joint DOA and delay estim. 84686
wireless commun. receiver, pipelined multiuser detector 108566
wireless database broadcasting, effective data placement 96221
wireless network topol. graph, max. weighted independent set 120041
wireless networks, broadcast scheduling 74202
wireless sens. networks, init. protocol 131140
workpiece localization by meas. syst., error compensation 97147
worst case complexity of surface integrat. 114101
WOWA operator constr., fuzzy, shape preserving splines 78854
WOWA operator constr., fuzzy, using shape preserving splines 78853
YK data compression algms., complexity/implement./expt. results 129998

computational fluid dynamics
3D convection and convection-diffusion problems, multigrid solver 114133
a posteriori error control, finite element discretisations of incompressible stationary flow 114001
aeroelasticity, fluid-solid interacts. 92506
aeronautical education course problems soln. using spreadsheet fluid dyn. 100452
air conditioner inner unit develop., cross-flow fan air flow anal. *(Japanese)* 89457
arbitrary Lagrangian Eulerian anal. of bidirectional micro-pump using spectral elements 79144
axial flow cooling fans, thermal design, CFD modeling 78675
capacitance sens. for micro imaging in elec. tomography systs., particle detect. appl. 120738
Class 1 cleanroom design, CFD program appls. 89830
CMOS VLSI capacitance sens., particle detect. 109492

omputational fluid dynamics continued
CSP array cooling, CFD 78624
desktop computer cooling, min. air flow design, CFD modeling 113542
DPIV, wavelet-based image denoising 106513
elec. heat tracing, CFD modeling 124091
electronic module transient thermal anal. using simplified heat transfer coeff. model 67608
EM flowmeter excitation coil CAD, 3D hybrid num. model 120729
fan-driven power electronics cooling assembly, num. optim. 78652
flight vehicle control, aeroservoelasticity, (non)lin. anal. 122512
gas sens. response in enclosure, species transport influence, CFD simul. 132052
heated devices array, cooling, thermal modelling 67556
hexagonal duct, laminar flow, vel. field 104187
IC packaging thermal design, modelling approach 124371
intell. US flowmeter, improved meas. & calib. facility 121058
isothermal cuboids, laminar forced convection heat transfer, anal. models 113543
laser-guided particle deposition for direct-write fab., CFD modeling 101176
low-NO_x combustion chamber optim. using CFD simul. 134652
mesoscopic integrated conformal electronics, direct write laser substr. heating, simul. 103152
MSW incinerator combustion chamber, bed combustion, gas flow 134653
multiplate microchannel reactors, optimal design for flow uniformity 116074
multiple grid approach for open channel flows with strong shocks 124725
parallel and distributed CFD 85341
PBGA, compact model topologies 113548
PBGA flip-chip package, CFD, compact thermal model 78625
penalty approxs. to stationary power-law NS problem 114128
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
plate-fin type heat sink, impinging air flow and heat transfer 113555
portable computer design, complex heat transfer systs., geom. complex systs. 78626
power module integrated cooling design using CFD simul. 127075
power plant technol., CFD/CRFD appls. 133865
preconditioning iter. method to computation of fluid flow 101021
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
RADIOSS-CFD syst., explicit schemes applied to aeroacoustic simul. 111322
salient pole sync. machine rotors, cooling/ventilation modelling 123362
shallow water eqns. in conservative form, duality methods 114140
Stokes problem, approximating local av. of fluid velocities 68083
Stokes solvers in harmonic Velte subspace 114030
structural segmentation of LV, imaging strategy 87351
supersonic inlet flow in air-breathing propulsion systs. for high-speed space travel appls. 111363
uninterruptable power supply cooling systs., design, Flotherm CAD software *(Italian)* 88955
VRLA cells, overcharge proc. modeling validation 89121
wake vortex detect. using radio acoustic sounding syst., num. simul. 97879
Al_2O_3 particle suspens., ink jet deposition, modelling/droplet form. 101500
AlSiC liq. cooled base plate, integral pin fins, thermal charactn. 78628
solder-drop printing proc. for flip chip, liq. metal droplet spreading/solidif. 80534

computational geometry
see also bin packing
2D digital objs. representation 94981
2D human brain MRI white matter/gray matter boundary segmentation 98412
2D shape recogn., shape touching simul. with matrix sens. 109693
3-dimens. Delaunay triangulations, smoothing/cleaning up slivers 68063
3D 3-subiteration thinning algm. for medial surfaces 94985
3D graph drawing 100899
3D images, centres detect. of max. geodesic discs on dist. transform of surfaces 94987
3D light source geom. calib. from images 118365
3D meas. of human body for apparel mass customization 94897
3D med. image modeling of scatt. data based on data-depend. criteria 76524
3D medial axis computing for chamfer dists. 94986
3D obj. recogn. using range images, morph. feature extraction and geometric hashing 107285
3D reconstruction approach, geom. fund. of polycentric panoramas 106574
3D rendering, fast vertex transform. through predictive VQ 106185
3D scene reconstr., polyhedral projection correction 95595
3D sens. syst. with point light sources, robot navig. appl. 118651
3D shape reconstr. from silhouette, interactive algm. 94856
3D video-based meas. syst. dyn. calib., evol. strategy 86406
4-8 subdivision, four-directional box spline of class C^4 78990
8-point DCT/IDCT, pipeline archit., rescheduled const. geom. algms. 101142
accel. tools for diagonal inform. global optim. algms. 67916
additive Schwarz method for p-version of BE method for single layer pot. operator on plane screen 90181
affine-invariant edge completion with affine geodesics 118673
algm. for reconstructing special lattice sets from their approx. X-rays 94974
algm. on edge partition 129806
approx. algms. for independent sets in map graphs 124620
approx. of geometric dispersion problems 67976
approxs. of crossings in graph drawings and VLSI layout areas 68506
area moment calc. method for wavelet/spline curves 78860
articulated motion, modelling/tracking from multiple camera views 129620
asteroidal triples of moplexes 89999
augmented Lagrangian algms. in Banach spaces, inexact versions of proximal point 113959
automatic reconstruction of top of head from Cyberware PS head scan data 118286
Beltrami framework for vision, affine invariance 118252
binary image, digital line component detect., computer vision appl. 73501
biomedical image rot. and scaling using polynomial-based interpolators 121894
bipartite matchings with appls. to labeled tree comparison 100820
bounded queries, approxs., and Boolean hierarchy 113984
camera posns. computing from multi-camera head 84213
cheirality in epipolar geom. 106573
Chow forms computing, equidimensional decomp. 124621
clusters and hierarchies drawing 100900
coarse grid accel. of parallel block preconditioner 79029
color constancy from hyper-spectral data 129630
combinatorics in computer sci., conf., Palaiseau, France, Sept. 1997 100423
comparability graphs and digital topol. 73287
complex quadratic tridiagonal syst. for C^2 PH quintic splines 114033
confine. tree implement. algm. 94984
conformal approx. of variational problems subj. to convexity constraint, non-convergence result 114173

computational geometry continued
conformal dielec. interconnect capacitance, BEM-based simul. *(Chinese)* 104243
conic approx. of planar curves 114050
conic fitting, least-sq. orthogonal dists. 124646
contour sects. synthesis distinguishing contours from different classes 94990
convexity and global optim. 100961
convexity of carrying simplex of planar Lotka-Volterra competitive systs. 101096
cortex segmentation, variational geometric approach 121885
curvature computation on free-form 3-D meshes at multiple scales 129807
curve evol. approach for image segmentation using adaptive flows 106638
curves of genus 2 with (N, N) decomposable Jacobians 67996
decomp. and parallelization techs. for enumerating facets of combinat. polytopes 113978
Delaunay conforming iso-surface, skeleton extraction and noise removal 101128
Delaunay surface reconstruction from scatt. points 90190
depth-3 arith. cct. for $S_n^2(X)$ and extensions of Graham-Pollack theorem 100983
diffusion snakes, stat. shape knowledge and image inform. in variational framework 118255
digital hyperbola segment reconstruction from code 94976
digital lin. alg. 90093
digital naive planes recogn. and polyhedrization 95592
direct approach for computing shortest rectilinear paths among obstacles in two-layer interconnection model 70241
discrete combinat. surfaces, naive planes 98567
discrete convexity detect. of polyominoes 94989
discrete geom. for computer imagery, conf., Uppsala, Sweden (Dec. 2000) 89597
discrete relax. of combinat. programs 113949
disjoint line segment sets admitting binary tree 124528
domatic no. approx. 67870
dual min. cast flow algms. 67807
dyn. multi-scale image class. 94759
edge detect. by Helmholtz principle 84603
EEG sig. separation using adaptive-geometric methods 110650
elastic contour matching model for tropical cyclone pattern recogn. 84587
Euclidean reconstruction and auto-calib. from continuous motion 106645
Euler trapezoid formulae 101114
exact algms. for large-scale unconstrained two and three staged cutting problems 67918
eye feature extraction using 3D eye template 84246
face pose determ. by using vanishing points 129882
face/facial features detect. automation 129924
FANN-based subsampling of color video seqs. 118222
fast conformal mapping of multiply connected regions 67945
feature vol. constr. via adjacent surface intersection 84163
feature-based syntactic and metric shape recogn. 73491
folds and cuts, how shading flows into edges 107177
fractal image dimens. calc., box-counting method 94472
free-form surface registration using rigid motion constraints 94586
gaze determ. via images of irises 129617
geometric act. contours, incorporation of shape priors 121886
geometric compression with predictable compression ratio 95235
group actions, homeomorphisms, and matching, general framework 118305
HADES radiographic simul. code, capabilities & appl. 101585
head pose estim. with Gabor wavelet networks 129611
hierarchical basis fns. for p-version of FEM *(Spanish)* 90187
hierarchical D-NURBS surfaces and phys.-based sculpting 67980
high-speed packet class. using segment tree 74035
homotopy in digital spaces 95591
ICs, substr. coupling, modeling methods *(Polish)* 70264
illum. insensitive eigenspaces 107157
image anal. using polarimetric device *(French)* 107120
image reprod., ang. distrib. of refl. spectral intens. 94865
image segmentation with min. mean cut 106569
image-based rendering using parameterized image varieties 118307
image-guided surgery, computer vision 132540
immersive teleconference, hybrid block/pixel recursive disparity anal. 96246
implicit G^n-blending of vertices 67958
independent spanning trees in partial k-trees 100810
independent/connected edge dominating set problems approximability 100982
integral-geom. morph. image anal., review 118324
interactive graph cuts for optimal boundary & region segmentation of objs. in N-D images 106471
intermediate-level vision, perceptual grouping, curve-like rep. 118662
interpolating piecewise bicubic surface with shape params. 67967
inversion approxs. for fns. via s-power series 114012
JetStream, probabilistic contour extraction with particles 106640
K-optimal lattice rules of moderate trigonometric degree 114041
lattice height data, crit. points extraction algm. 113756
limited memory space dilation/reduction algms. 67920
line grouping based on uncertainty modeling of parallelism and collinearity 73487
material ident. over var. of scene conditions and viewing geom. 73180
max. independent sets and coloring approx. in 3-uniform hypergraphs' 124622
max-bisection approx. on regular graphs 114013
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
med. images, shape recovery using level set regularizers 110543
med. imaging, geometric deformable model in confidence field 73221
med. imaging, spline interpolation and other convolution-based approaches 132511
method of residual for solving unstable equilib. prog. problems 124584
min. bounded-diam. spanning forest problem is log-approximable 100974
min. spanning strong subdigraph problem for extended semicomplete digraphs and semicomplete bipartite digraphs 124526
mobile robot localisation, Voronoi diags. correl. 97842
model-based bundle adjustment for face modeling 106655
morph. operators with discrete line segments 94973
MPEG compressed domain, B-spline curve representation of segmented obj. 106530
multi-modal image matching, variational approach 118250
multi-scale algm. for drawing graphs nicely 124537
multi-view dyn. face model, modelling faces dyn. across views and over time 107163
multibaseline stereo correction for silhouette-based 3D model reconstruction from multiple images 118283
multicommodity reliab. of capacitated-flow network 67670
multipolyhedron reconstruction using GA via 3-view matching algm. 129507
multiresolution modelling of polygonal surface meshes using triangle fans 90191

computational geometry continued
multiscale image representation using B-spline approaches 129466
natural neighbor coord. of points on surface 101004
nearest neighbor method for efficient iter. closest point algm. 84216
nearness in digital images and proximity spaces 94972
nonlin. sig. proc., approx. nearest neighbor searching 107320
nonuniformly distributed 3D points polygonizing by advancing mesh frontiers 90188
num. anal. of oscills. in nonconvex problem related to image selective smoothing 129426
one-step crust and skeleton extraction algm. 73243
online routing in convex subdivisions 100808
optim.-based image segmentation algms. 73531
optimal algms. for multiple query problem on reconfigurable meshes 118721
optimal estim. and tracking of general rot. using geometric alg. for computer vision 73234
optimal fault-tolerant routing algm. for double-loop networks 85288
optimal irreversible dynamos in chordal rings 124538
optimal reparametrization of polynomial alg. curves 114047
optimal vol. subintervals; with k points and star discrepancy via integer prog. 124590
orthogonal graph layouts compaction algms. 100801
orthogonal polygon recogn., visibility concepts 106436
orthonormal vector sets, regularization using coupled PDE 118248
packing, group codes, Radon transforms and integral geom. 94279
paradigm for graph recogn., cographs and dist. hereditary graphs 100869
parallel line grouping based on interval graphs 94991
parametric design based on topol./geom. constraints *(Japanese)* 100515
partial shape preserving approxs. by bivariate Shepard operators 67968
PDE and variational problems on implicit surfaces 118259
perspective textured plane segmentation through ridges of CW transform 106814
piecewise approx. of curves using nonlin. diffusion in scale-space 94470
planar line rels. by projective invariant of vanishing points *(Chinese)* 129636
planar obj. detect. under scaled orthographic projection 94988
planar shape representation based on multiwavelets 118785
polygonal contour approx. based on relax. 129937
polyhedral representation of fuzzy lin. bases 78935
porosity in conformal infinite IFS 78845
pose estim., shape extraction, Hough transform invariance 129847
pose-invariant face recogn. by face synthesis 129914
primal-dual interior-point methods for convex optim. problems in conic form 113948
pseudo-dist. map for segmentation-free skeletonization of gray-scale images 107175
pulmonary nodule surrounding struct., charactn. using differential geom.-based vector fields 87707
pursuit problem in 3D Euclidean space, generalized solns. 67742
quadratic assignment problem polytope and star transform. 90024
quadratic B-spline surfaces, interpolation of vertices and normal vectors *(Chinese)* 78978
random 3-SAT via diff. eqns., lower bounds 114129
random embedding machines for pattern recogn. 129880
range restricted scatt. data interpolation using convex combination of cubic Bezier triangles 124578
real-time feature tracking and outlier rejection with changes in illum. 106585
reconstruction of discrete sets with absorpt. 94975
rect. G^m-continuous filling surface patch and some improvements at corners 67956
region segmentation via deformable model-guided split and merge 106532
regular alg. curve segments, interactive design and data fitting 67955
regular sampled patterns detect., ellipt. diags. appl. 73516
scene model reconstruction, stat. geometric framework 129625
seq. missing sample reconstr., spatiotemporal VQ 118834
shape from texture, homog. 129612
skeletonization of ribbon-like shapes based on regularity and sing. anals. 84586
space of circles, image proc. appls. 73232
sparse, regular, and planar graphs, complexity of counting 114017
spectral estim. of Gaussian random circles and spheres 124505
spherical min. location problem 67887
spherical motion encoder 97221
stabil. props. of nonnegative solns. of semilinear problems with convex or concave nonlin. 90148
staggered Lax-Friedrichs scheme for nonlin. conservation laws on unstructured 2D grids 90180
stat. multiregion snake-based segmentation 73217
stereo image reconstr. from polycentric panoramas 84340
struct. and motion from two uncalibrated views using points on planes 84210
structural lines, TINs, and DEMs 68070
STS-graphical invariant for perfect codes 94316
sub-Riemannian geom., sub-analyticity of dist./spheres 67876
subdivision scheme for surfaces of rev. 78993
surface area estim. for digitized regular solids 68022
surface reconstruction from planar sectional contours 84539
surface reconstruction tech. based on 3D triangulation enhancement 73214
surface reconstruction using level set method 118260
surface representation using second, fourth and mixed order partial DEs 68052
surfaces geomtry estim. in natural scenes using learning theoretic method 73226
SymGeons, visual complexity model, implications for visual control tasks 129817
tesselations by connection in orders 94971
texture image class. via inform. geom. method *(Japanese)* 73135
trapezoid-to-simple polygon recomposition for resist. extraction 104070
tree spanners for subgraphs and related tree covering problems 78880
triangular grids, finding shortest path with neighbourhood seqs. 129572
triangulation, direction finding, angle meas. syst. 86264
trifocal tensors with Grassmann-Cayley alg. 84341
trimming for subdivision surfaces 78992
turbojet engines with large constructive and geom. limitations, CAD 76817
two-label point labeling, approx. algms. 114048
uncalibrated image seq. matching, 8-point algm. 107278
uncalibrated images of same scene, corresponding point matching 84547
unified framework for primal/dual quadrilateral subdivision schemes 78991
uniform validity of discrete Friedrichs' inequality for general nonconforming finite element spaces 101126
uniqueness of best ϕ-approx. by 3-convex fns. 100994
vertex coding using triangle center of gravity 118569
video obj. extraction via surface optim. and Voronoi order 118588
viewing geom., impact on vision through atmos. 106633
visibility partition for affine pattern matching, computer vision and pattern matching 94982

computational geometry continued
vision geom., conf., San Diego, CA, USA, July 2000 67382
vison camera calib. based on circ. points 131977
visual correspondence computing with occlusions using graph cuts 106639
VLSI cct. layout, missing material defects, crit. area 70250
VLSI cct. layout CAD, crit. area for missing material defects 104001
weighted dist. transforms in four dimens. 94980
weighted dyn. 2D environ., optimal paths determ., framed-octrees 67811
weighted vs. unweighted versions of combinat. optim. problems 90001
wireless ad-hoc sens. networks, coverage problems 130704
Si CZ growth, online diam. calib., shape estim. 114209

computational linguistics
see also programming language semantics; semantic networks
automobile appls. of fuzzy logic *(Russian)* 134553
collocation mining using corpora for ident./representation *(English)* 73009
continuous speech recogn., k-TSS lang. models 73103
KD2000 Chinese text-to-speech syst. 73016
lang. model, eval., perplexity estim. 73047
lang. model, eval. measures 73049
morpheme based speech corpus annotation tool 73059
natural speech proc., conf., Ilmenau, Germany (Oct. 2000) *(German)* 78383
predictive sens. fusion, fuzzy set tools, linguistic vectors 73584
robust speech proc. semantics *(German)* 72998
spoken Chinese lang. translation, time constituents 73108
syllables as phonetic units for continuous speech recogn. in Portuguese *(Portuguese)* 118109
text compression using fewer lexical n-grams 106189
TMN, mgt. inform., semantic expression *(Chinese)* 96027
video data mgt., high level semantics modelling 84243

computer aided analysis
see also analogue simulation; CAD; circuit analysis computing; control system analysis computing; electric machine analysis computing; power system analysis computing
automatic co-site interf. eval. 83358
breast MRI, computer-based anal. of enhancement curves 98422
Breast Perfusion Analysis System for MRI 110907
CLASP software suite for antenna design/optim. 83526
EEG adaptive freq. decomp. with subsequent ES anal. 132560
hybrid perceptual image proc. using interpolating wavelets 98162
LOS microwaves links clear air perform., computer anal. 105764
MM-wave antenna systs., develop./appl. of MODTool integrated design tool 117770
octagonal micromachined horn antenna for submillimeter-wave appls., anal. 83643
power quality disturbances, automated anal. 133694
self-supporting fiber optics cables, CAA and design *(Polish)* 131378
space based membrane antennas/reflectors, local defect study 117768
three-port rect. microstrip unequal power divider/coupler 69079
Vesselize syst. for anal. and visualization of mag. reson. angiography 98393
waveguide/horn radiators, matching/directional charact. anal. 117816
Web site traffic anal., interactive, multidimensional, using OLAWEB 108361

computer-aided circuit analysis *see circuit analysis computing*

computer-aided circuit design *see circuit CAD*

computer-aided design *see CAD*

computer aided design and drafting *see CAD*

computer aided facilities layout
mfg.-cell design flexible simul., response surface anal. 100560

computer aided geometric design *see CAD; engineering graphics*

computer-aided geometric design theory *see computational geometry*

computer aided instruction
see also computer based training; courseware; education; intelligent tutoring systems
3-D animations for power transformer/AC machine education 78535
acoustics, synthesis, sig. proc. education, interactive multimedia 78501
adaptive DSP education, Java applet 78526
advanced power syst. operation teaching, computer-based voltage control expt. 89641
agent based education syst., cellular phone based 131298
agent-based pers. dist. learning syst. 108163
AIMS, learning/teaching support for WWW-based education 67437
antenna design and teaching, MATLAB Antenna Toolbox 83501
asynchronous dist. learning, presentation semantic model 130948
Bulgarian secondary schools, IT implement. 113303
collaborative learning in Finnish schools 113295
collaborative learning tools develop. on Internet 67432
computer relays, PC-based low-cost digital simulator for perform. eval. 91447
conductive adhesives for packaging, Internet course, expt. seq. 113372
CULUTRE, artificial life simul., learning pot., primary school children 67442
DayMedia, multimedia teaching package on daylighting 78329
Deakin Univ., engng., online teaching/learning 78534
design engng. education, CAx role 113340
design engng. education, conf., Claremont, CA, USA (May 1999) 113228
DEWorkstation power engng. education enhancement software 78479
dist. education, student assess., coursework assignment using interactive indiv. questions 67420
dist. education, Web mining 89619
dist. learning syst., satellite commun. network *(Japanese)* 78496
ECSAIWeb, adaptive learning environ. on WWW 100464
education via Internet *(Polish)* 85323
elec. energy basic concepts learning using computer tool 78530
elec. engng., neural networks/fuzzy logic appl. 124245
elec. machines/EM teaching; OO software 123308
electronic packaging, educational course, EM simul. tool 113313
electronic packaging educ. module develop., Sync-O-Matic software tool 113371
electronic packaging education, IEEE/CPMT Virtual Classroom 113312
electronics for mechatronics students, studio teaching 89655
Electronics lab, teaching tool 67448
electronics packaging technol., phys. procs., visual modelling 124352
electrotechnology, CAI syst. *(Chinese)* 78495
energy concepts in the elec. engng. curriculum, computer exercises 78484
ETA (Electronic Teaching Assistant) program for electronics education 113384
filmless radiology teaching 89610
flexible dist. education in Sweden, ICT, proposals for reforms 113292
FPX, field prog. port extender, hardware modules, Internet routers/firewalls, CAI platform 124266
gas turbine technol. internat. electronic interactive teaching platform 113307
GSM teaching to GSM teaching, hypermedia approach 67453

omputer aided instruction continued
hearing impairments, VR CD-ROM, HI-SIMv1.0 87290
high temp./high power electronics, WWW educational course 113314
HV field, undergraduate EM course, role of computers, expts. 113391
hypermedia-aided design, collaboration framework for EDA appls. 125174
I-V mapping educational cct. simul. approach 78524
ICT in education overview, Denmark 113291
IEEE Societies Web-based elec. engng. education efforts 89601
Image Analyser, educational tool 100470
indust. mgt. education support syst. using multimedia *(Japanese)* 67427
inform./commun. technols. in education, Nordic countries 113290
intell. instrums. teaching, dist. learning via Internet 113368
interactive rem. instruction syst. for heterog. network environ., software archit. 124272
interactive simul. toolbox for CAL of wave propag. in dielec. and opt. waveguides 94008
Internet support 67438
Internet-based dist. learning using learning by doing paradigm 78525
internet-based learning environ., discount usability engng. 67430
intraoperative EEG monitoring, educ. simul., model param. 110545
key skills develop. using inform. and commun. technols. 67439
Kidlink online project, classroom online activities 113294
knowledge translation tool for classroom teaching 67440
laser material proc., 3D modeling and visualization 117556
learning on demand, hybrid sync./asynchronous approach 78520
logic cct. learning tool *(Japanese)* 79838
logic ccts., learning tool *(Japanese)* 114699
lower secondary schools, ICT integrat., Slovak Republic 113301
Masters Degree programs, dist. learning via Internet 78527
mechatronics simul. educational software develop. 78518
METID e-learning portal 124273
microcontrollers learning using CAI-oriented multi-micro simul. environ. 78512
microelectronics dist. education course, web-based learning approach 126959
microwave simulators, educational appls. 89647
mobile robots, teleoperations/rem. sens. DAQ *(German)* 120669
multimedia dist. learning systs. 67421
multimedia tutorial authoring, adaptation for dist. learning 100475
multiple design projects auditing, Internet-based approach 89689
NETDRAW, NETOMAC GUI for power engng. education, dist. protection 99410
network IT teaching, cooperative/contributive learning model 113300
networked tools in interactive learning, future approach 67443
online tutorial effectiveness to enhance statics instruction 78485
packaging & interconnection tech., Univ. level educ., Romanian experience 113374
pers. opt. disk library, knowledge engng. 93002
phonetic rules for pronunciation errors diagnosis *(English)* 73010
Polish computer teaching aids, curriculum policy 113304
power engng. education enhancement using Power System Simulator 111659
power quality anal. lab. for power engng. education 89642
power syst. anal./simul. tools, novel implement. approach 89639
power syst. course, Internet/WWW appl. *(Chinese)* 78494
power syst. education, OPF model 133582
power syst. teaching using computer aided instruction software *(Chinese)* 100466
radiological databases for telemedicine and teaching, European projects IAEVA II and HERMES 111277
real-time EM field anal. syst. for engng. education 78493
rem. BLDCM learning lab. 78513
SAPWIN, symbolic simulator, elec. engng. education 78521
schools, use of computers, Czech Republic 113302
SensEdu, Internet course for teaching sensorics 113369
SimulNet dist. teaching syst., Java based 78519
SimulNet educational platform, stds.-driven E-learning 78529
Smith charts program, PC assisted tutorial 83467
SoC, systs. on a chip, multidisciplinary and collaborative design, interactive video course 126957
structural design education for 21st Century 113339
student interact. anal. in computer-mediated commun. environ. 119518
supported web-based learning systs. for higher education students 78502
sync. switching cct. education, computer aided via networking *(Polish)* 124244
TANGOW, model for internet-based learning 67429
teaching hands-on DSP with MATLAB and C31 DSK 78483
technol.-supported environ., collaborative learning, project-enhanced 113296
tele-learning syst. design using GA 89648
telemedicine systs., multimedia DP and transm. *(Polish)* 88025
teleteaching in IS, seminar-like teaching efforts *(German)* 119767
TRANsySTEM, power syst. transient stabil. software package for teaching/research 99279
undergraduate algms. course, image-proc. projects 118451
undergraduate EM education, Maple V-based symbolic computation 78514
undergraduate power syst. anal. course, software program 124277
video streaming, education appls. 100459
Virtual Learning Space for online elec. engng. teaching 67434
virtual school based learning environ. creation, Finland 113293
VRML in microwave propag. studies, WWW and computer aided education 67451
Web based e-educational environ. using Java technol. 100469
Web-based courseware, speech input syst. *(Japanese)* 72996
web-based dist. educational initiatives, metadata models 78504
Web-based dist. instruction eval. model 78516
Web-based interactive e-learning software tool for power engng. 124274
web-based microelectronics lab. within EDIT Distance Learning Network, pilot implement. 124255
Web-based teaching/learning tool for engng. students 78536

computer aided learning *see computer aided instruction*

computer-aided logic design *see logic CAD*

computer aided manufacturing *see CAD/CAM; industrial control; manufacturing data processing; production engineering computing*

computer aided production planning
see also control engineering computing
assembly planning, simul. with laser cell calib. 83070
mech. drawing, 2D, self-learning algm. of feature recogn. *(Chinese)* 73294
network-based assignment drive-oriented concurrent design, CAD/CAPP integrat. *(Chinese)* 89792
OO knowledge-based CAPP syst. for bare cct. boards mfg. 91468
PCB assembly, CAPP syst., CORBA integrated technol. *(Chinese)* 124302
WebFabIS web-based microelectronics lab. inform. syst. 113451

computer aided software engineering
extrusion proc., decentralised DCS, OO infrastructure 124437
learning database syst. for computer network mgt. fns. 119464
tropos. emission spectrometer ground syst. 133319
Tropospheric Emission Spectrometer, ground data syst. develop. 133321
UML diags., online recogn. 129936

computer-aided tomography *see computerised tomography*

computer algebra *see process algebra; symbol manipulation*

computer animation
see also image morphing
3-D animations for power transformer/AC machine education 78535
3D digital imaging and modeling, conf., Quebec City, Quebec, Canada, May-June 2001 78459
3D face synthesis based on orthogonal photos/speech-driven facial animation 95545
3D models with subdivision surfaces, hierarchical coding 95221
3D multiuser virtual environ. creation 73859
3D shape inform., opt. methods, hybrid methodology, overview 132168
3D shape meas./videometrics, conf., San Jose, USA (2001) 89589
automatic face cloning/animation using real-time facial feature tracking/speech acquisition 73199
broadband transducer array design, virtual prototyping, 3D model 111543
CAD of syst. integrat. for data-intensive multimedia appls. 130946
endoscopy, virtual, WWW-based, for CT anal. of bronchial airways 110946
facial expression recogn. approach for perform. animation 95552
facial expressions in realistic communicating clones, view-based approach 118589
facial feature extraction via energy fn. 84580
facial features tracking in video seqs. using deformable-model-based approach 73220
facial image morphing, Kohonen self-organizing feature map appl. 95536
facial motion estim. via 3D facial synthesis and animation *(Korean)* 94924
Finnish audio-visual text-to-speech synthesizer, eval. 118136
foreign lang. words repeating and remembering, implications for lang. teaching systs. 118077
human face computer animation, phys. based model obtained from MRI 118336
human motion coord., AI and planning techs. 73298
human posture estim. based on stat. motion models *(Japanese)* 107146
hydroelectric generating units, 3D dyn. simul. study *(Chinese)* 99579
image-based modeling of objs. and human faces 94895
image-based visual servoing appl. 94727
image/video compression to computer graphics 95109
interactive commercial/multimedia inform. retrieval *(Japanese)* 119792
intermedia in electronic images 84119
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
lip animation based on obs. 3D speech dyn. 94896
LIPPS, telephone with animated face for hearing-impaired 111171
LV wall motion, image anal. by MRI tagging 110911
match moving tech. for merging CG cloth and human movie seqs. 73400
microelectronics technol., interactive course on website, animations 124258
MPEG-4 facial animation, audiovisual integrat. in multimedia commun. 129781
MPEG-4 facial animation syst., audio-to-visual conversion 118590
MPEG-4 FAP interpolation for facial animation at 70 bits/frame 129691
MPEG-4 FBA decoder for Web appls. using Java applet 107001
obj. modeling and anal. based on morphable model *(Chinese)* 107202
planar obj., microscopic defect eval. by specular refl. image seq. 129437
PlayStation2 3D graphics calcs., Emotion Engine proc. archit. 79921
real-time facial expression animation 84236
spine, animation in vitro biomech. tests 98357
talking head interface, realism, believability and acceptability 106412
transcript-based computer animation of movement, tool for nonverbal behavior research 130426
uncalibrated motion capture exploiting articulated struct. constraints 106611
video streaming, education appls. 100459
video-based body modeling, articulated soft objs. 106558
VRML animation of inspection syst. 120639
XML Web based motion capture data warehousing and translation syst. for collaborative animation projects 94854

computer architecture
see also configuration management; interrupts; logic design; memory architecture; neural net architecture; parallel architectures; reconfigurable architectures; reduced instruction set computing
all-opt. networks impact on IP & computer archit. 119663
analog LSI design, data clustering/labeling in speech recogn. 79954
biased random instruction generation, genetic approach 90828
bit-scalable archit. for fuzzy proc. 102190
CAS-BUS testing of TAPed and wrapped cores 81433
clock distrib. using multiple PLLs 125269
commercial PCs, mil./commercial aircraft interface archits. 76809
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
DAQ, high-speed archit. 120680
DCT proc. algm., low power order based 79948
DSP chips, archits. and selection criteria *(Spanish)* 90960
fault tolerant approach to µP design 102233
finite field digit-serial multiplier archit. for cryptography 79751
formal methods in CAD conf., Austin, TX, USA (2000) 78448
Harvard archit. RISC-µC core design, dedicated busses 114797
heterog. multiprocessor SoC, appl.-specific archit. generation 125553
high-security cryptographic fast finite field multiplier archit. 114712
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (May 2001) 113283
IEEE compliant floating point MAF 101941
Intel Pentium-4 µP validation 102237
Intel x86 archit., security vulnerabilities caused by errors 102234
MOUSETRAP, ultra-high-speed transit.-signaling asynchronous pipelines 125180
MPEG-audio layer III algm. for 16-bit DSP 79951
multi-sens. driver assistance flexible archit. syst. develop. 134576
µP in early 21st Century 68825
µP simul., expt. error meas. 90953
mutable functional units and their appls. on µP 125556
NanoFabrics, spatial computing using mol. electronics 91499
network anal. using event model *(Polish)* 130653
PACS archits., centralized, distributed and autonomous, perform. comparison 98860
power as design constraint for future archits. 79768
power aware microarchitecture resource scaling 79913
power consumption as first-class computer archit. design constraint 68564

computer architecture continued
PowerPC 603e™ based single board computer, radiation hardened 133247
REESE method for soft error detect. in µP 106147
regular time-efficient VLSI archit. for multiplication modulo 2^n+1 *(Chinese)* 92433
ROSA rotorcraft open systs. avionics 88063
SoC techs., reusable design flow *(Spanish)* 102223
sync. serial interfaces for commun., software realisation *(Polish)* 131819
syst.-on-a-chip test data compression/decompression 81432
transaction-based simul./emulation archit. for functional verification 131810
virtual and phys. prototyping, testing, and verification of multifunctional proc. queue for single-chip multiprocessor archit. 90941

computer based training
500 kV automated substation simul./training syst. implement. *(Chinese)* 112716
bone deformity correction planning, computer-aided surgical operations 111080
combined-cycle gas turbine power stations simulator *(English)* 123229
continuing mfg. learning using multi-user sync. simul. game 67444
dam/hydro plant operation during floods, RIFA CBT simulator 88626
diabetes, tutoring syst. design considerations 98113
dyn. inspection aptitude test for US NDT 114499
educational proc. simul. using training systs. 67447
EEG quantitat. anal., virtual training simulator-designer for tutoring students and doctors 89656
electronic components/packaging, computer based education/eval. 124279
electronic packaging syst. cost anal., Internet-based educ. mater. 113370
EMG prosthetic hand control, on-line learning method 87915
endoscope, virtual, haptic/visual feedback, for training 98164
engng., self-training through Internet 78505
flight simulators, computer-aided, design concept 111320
hypermedia documentation design for safety crit. training appls. 78503
inter-company power syst. operator training simulator 111847
Java applet program MOS memory simul. for act. learning environ. on WWW 125483
landmine detector operator training, motion tracking, virtual mine lane 77112
LIPPS, lip-reading training syst. with animated face 111171
MEMS, microsystem technols. and design, Web-based training 127106
MEMS proc. design simulators based on VRML and Java 127105
microelectronics technol., interactive course on website, animations 124258
microwave CAD education tool 67454
mixed-sig. SoC design, joint university/indust. Internet-based course 124256
mouldmaking, CMM handling, multimedia based training 113367
NDT educ. improvements, North Central Collaboration efforts 113317
on-demand viewing, video presentation design 109382
power network joint anti-accident training syst., design and appl. *(Chinese)* 77263
power syst. operator training simulator, protection model develop. 77565
professional CAD environ. for IC design teaching 124269
Slovak Univ. of Technology, microelectronics education, university-indust. cooperation 124259
speech handicapped children, multimedia supported pronunciation training 111188
substations, general graphic compilation syst., fault simul., training ES *(Chinese)* 78065
subtransmission power network dispatcher training simulator develop. *(Chinese)* 77300
surgeon training via video conferencing and Internet 119769
tele-training methodologies develop. using Internet technols. 78492
telepathology network, conceptual groundwork and eval. 111272
unbalanced three-phase power systs. simul. for dispatcher training simulator *(Chinese)* 88312
VeriBox CBT syst. for chip design, logic synthesis, multimedia techs. 124257
VLSI design education, synchronized streaming media appl., Internet in rem. learning 124268
Web-based training, desktop videoconferencing 113355
Xilinx Univ. Program, university-based support environ. 124261

computer bootstrapping
AMPAC database, boot program for printing machine, intell. printing 94879

computer bureaux *see computer facilities*

computer centres
ACD syst. at Princeton Univ. computing and IT help desk 119509

computer communications software
used for inter-computer communications
see also terminal emulation
bandwidth tracking in distributed heterog. networking environ. 85217
burst packet losses meas. in Internet end-to-end commun. *(Japanese)* 96126
client/server environ., software compression 108365
collaborative learning, online, constructivist, peer-to-peer, obj.-based systs. 113354
domain caching for live-event Web services 108331
dual-platform wireless AirPort network creation and files transfer 130843
fuzzy multimedia IT based on fuzzy control 130978
instant messaging in business commun. 74077
IP-over-ATM frame reassembly, hardware/software tradeoffs in integrated archit. 74262
IPX protocol based real time network commun. software *(Chinese)* 107830
learner-centred online course, sync. computer-mediated commun. systs., formative eval. 113347
library ref. services enhanced through technol. 119514
MedStage platform for inform. and commun. in healthcare 111268
mobile telephone prog. 119492
open service gateways for home, software archit. 74176
reliable multicast file transfer on inter-university satellite network 96235
sync. serial interfaces for commun., software realisation *(Polish)* 131819
Telebuddy, collective telepresence and tele-conversation through phys. avatars 108385
wedge software for linking field devices to PC, PLC, and DCS 131825

computer companies *see DP industry*

computer conferencing *see teleconferencing*

computer crime
see also computer viruses
Adobe eBook security, digital rights mgt. 129244
anonymous coin marking, privacy protection against blackmail 106264
anonymous packet tracing to approx. source 108124
asymmetric public-key traitor tracing without trusted agents 129301
Bluetooth security weaknesses 129345
cryptographic systs. attacks *(Slovenian)* 129250
DARPA Information Assurance Program dyn. defense expt. 96116
distributed denial of service tools, Shaft 108125

computer crime continued
Internet crackers, secure access control mechanism 74116
network attack detect., fuzzy preference approach 108223
power syst. electronic intrusion safeguards 77277
public telephone networks, types of security attacks 108079
security defence testing by breaking 74087
threshold fail-stop signature schemes based on discrete logarithm 106200
uncheatable distributed computations 130834
wireless mobile computing, security and privacy issues 85307
TIHome project, combating cheats 120499

computer debugging
see also program debugging
dependable proc. perform., pre-silicon perform. validation 102236
HF µP, digitally adjustable resistor for path delay charactn. 68823
Intel Pentium-4 µP validation 102237
µP and PLD, on-chip debugging tool and embedded memory *(Italian)* 90929
PLD-based DSP systs., debugging and design, staged approach 79904
SoC, early error detect. for fault tol. and at-speed debugging 101919

computer displays
ambient light source effect on color image appearance 97595
AMLCD, driving at high speeds 121074
AMLCD monitor, digital controls, VLSI implement., PanelLink 86896
ASV-LCD, high-perform., continuous pinwheel alignment mode *(Japanese)* 121090
augmented reality, fast calib. scheme 109845
avalanche cold cathode for CRTs, power reduction 91567
clinical image display, desktop appl., functional requirements 98838
cold-cathode fluoresc. lamp for LCD backlighting 97703
color mgt. systs. and meas. devices for monitors 94763
colour LCD controllers, SoC implements. *(Italian)* 132107
colour TFT-LCD module, technol., product trends and appls. 121103
CRT display image quality under ambient glare, ISO 9241-7 ergonomic std 97687
CRT monitors, gamma term clarification and charactn. methods 97688
CRT/LCD desktop monitors, life-cycle environ. impacts 100702
deflection yoke design for color monitors and CRTs with flat panels 97718
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
Digital Link, high-functional digital monitor interface 86886
digital monitor interface, DVI std. 86889
environ. assess., colour CRT and LCD monitors materials eval. 86812
flat PC desktop monitors, total market opportunity, display perform. 86883
flight display instrum., pictorialized meas., enhanced perform. *(Chinese)* 111337
FPD repair practices, TAB/PCB/polariser/backlight rework 97729
global CRT market, price/perform. ratio, desktop PC monitors and color TV 97726
hand-held portable electronic products appls. 97695
high-resoln. LCD, at. beam alignment 82235
inform. availability in 2D and 3D displays 109853
ISAC, fast Faraday cups, oscilloscope, bunch shape meas. 87128
IT society advances & display trends *(Japanese)* 113248
Korean display indust. 97596
LC modes for high-perform. monitors 132095
LCD, advanced technol., mater. develop. & future trends 121083
LCD backlighting unit, ultrahigh luminance, monitor appl. 97749
LCD monitor controller IC, integrated ADCs, high perform. 86895
LCD-monitor markets in Europe and UK 86803
LCDs, dissipated power reduction techs. 75801
LCoS liq.-cryst.-on-Si microdisplays, develop. & appls. 121100
low-temp. polysilicon TFT LCDs for mobile appls. 132113
LVDS digital display interface 86888
MicroLens, microlenticular light extraction technol. for monitors 121075
Mitsubishi LCD monitors for emerging multimedia use 121114
mobile HMD terminal for cyber commun. 97751
monochrome monitor, high-resoln., based on triple-gun principle 97721
multibeam & multipanel displays, scan archit. perceptual effects 109879
MVA TFT-LCD panels, manufacture and perform. improvements 86846
notebook displays, polysilicon TFT technol. 86804
polysilicon TFT-LCD for mobile PC XGA display 79645
QSXGA superhigh defn. TFT-LCD, digital interface *(Japanese)* 121094
QVGA LCaD panel, small-size, on-board controller, portable appl. 97655
radiographic image quality comparison from four digitization devices as viewed on computer monitors 76214
SAW tactile display, VR 92698
SimRAD Viewer/P med. imaging station develop. *(Japanese)* 76787
Super-TFT IPS-LCD, 18 in., fast response speed 86837
telemedicine, accident and emergency, accuracy, effect of image resoln., compression, colour depth and display modality 133159
variable-resoln. displays for visual commun. and simul. 97648
VDT offices, lighting quality recommendations, dimmable lighting ccts. control 89426
VDTs, content-depend. health hazards, adaptive temporal filters appl. 98764
video display unit tasks, inner contrast and perceptual quality 121088
visual interface from uncalibrated cameras for uncalibrated displays *(Japanese)* 73140
visual proc. of depth and motion in synthetic visual displays 106677
WWW shopping, coloured goods ordering, display problems 109876

computer equipment evaluation *see equipment evaluation*

computer equipment selection *see equipment selection*

computer equipment testing
CRT monitor, electronic image display sharpness determ., eval. of methods 97633
TV test pattern generator for mobile use by service engineers *(German)* 109830

computer evaluation
µP power anal. by labeled simul. 79912
PACS procurement proc., required steps 98855
power aware microarchitecture resource scaling 79913

computer facilities
see also computer centres; consultancies; software houses
caching-proxy in LAN for educational computer room *(Polish)* 130648
PACS implement. using appl. service providers 76777
switch-mode power supply design methods for computer facilities 112677

computer games
distributed multimedia appls., media sync./causality control 74429
distributed multimedia performs., detect., anal. and rendering of audience reacts. 130952
member impartiality in heterog. network environ. *(Japanese)* 119735
Nintendo GameCube, video game console syst., ATI Flipper chip design 79922

mputer games continued
PlayStation2 3D graphics calcs., Emotion Engine proc. archit. 79921
SH-4 superscalar RISC μP for SEGA Dreamcast game machine 79923

mputer-generated holography
3D actual obj. opt. hologram manufacture *(Chinese)* 72097
3D CGH image reconstruction by 2D FT method 105580
3D image generation, reconfigurable CGH 121117
3D realistic objs., CGH 83016
Al reflective layer on SiO_2 substr., complex-AM DOE 105610
automatic diffr. pattern recogn., neural network based 129917
beam-shaping CGHs for coherent/partially coherent light 105586
binary holograms, fab. method using laser punch tech. 128584
Boolean alg., holographic fields generation, second-order nonlin. interacts. 71455
DOEs design and fab. for imaging spectrometer 104861
dyn. phase mask high-power laser beam focal spot optim. 105409
electron-beam direct-writing fab., image quality *(Chinese)* 105591
emerging novel true 3D holographic displays, computational challenges 97587
long period fiber grating fab. using computer-generated holographic grating 127692
fibre optic sens., interf. pattern recogn., CGH-ANN syst. 86584
fixed-point format *(Japanese)* 72078
float glass thickness meas., on-line DOE sens. meas. 124402
fractal digital holograms, security appls. 82971
FT holograms, gray level/quasi-colors 105615
high-quality aspherical optics testing by CGH 83003
high-speed EO ADC principle, tunable laser & DOEs 86448
image compression/transm./reconstruction *(Japanese)* 118641
image decomp., CGH interf. 84401
interferometric setup for aspheric lens testing, sensitivity anal. 105617
interferometry reconstruction using DMD 83037
IR-transparent opt. material kinoform element fab. 105599
IR-transparent opt. materials, kinoform elements fab., technol. principles 105601
kinoform gratings, phase-step errors from diffr. efficiencies 72079
lithographic micro-opt. element fab. technols. *(German)* 92571
microcomponents, inspection, digital holography, meas. sensitivity *(German)* 81630
microcomponents, local param. determ., thermal loading device *(German)* 81591
MM-wave Bessel beam, computer hologram 83022
nanostructure fab., electron beam lithog./holography, material wave nanotechnology 103702
optimum HOE lens, CAD design 128581
phase computation by addit. 105583
phase-shifting digital holography, surface contouring, image reconstruction 93902
reconstruction of CGH by iter. Fourier method 83024
tomographic imaging spectrometer 97343
ultrashort pulse control by struct. opt. elem., spatiotemporal propag. 93748
wavefront-transforming element, design and fab., binary opt. techs. *(Chinese)* 128575
KrF excimer laser, beam shaping and homogenization using multifacet Fresnel-kinoforms 105401
Nd-doped laser superhigh-fidelity phase conjug. at SBS, new-generation kinoform optics 128366

mputer graphic equipment
see also image scanners; interactive terminals; remote consoles
3D autostereoscopic adaptive multi-screen syst. 121120
AMLCD monitor, digital controls, VLSI implement., PanelLink 86896
CMOS low-power rendering engine for portable multimedia syst. 68841
cylindrical 3D display observable from all directions *(Japanese)* 86795
LCD monitor controller IC, integrated ADCs, high perform. 86895
MCM for video graphic accel., sig. integrity and design consideration 91521
perform. prediction using software simul. 114585
reduced latency DRAM memories for cache, 3D graphics and mobile appls. *(German)* 114739
vol. rendering accel. using on-chip SRAM occupancy map 90935

mputer graphics
see also antialiasing; colour graphics; computational geometry; computer animation; curve fitting; data visualisation; engineering graphics; graphical user interfaces; hidden feature removal; image morphing; interactive systems; natural scenes; realistic images; rendering (computer graphics); solid modelling; virtual reality
3D box method for 3D reconstruction of obj. from multi-images 73225
3D compression, Edgebreaker with ZipandWrap on corner-table 72940
3D digital traditional Japanese crafting syst., modernisation 108158
3D geom. compression, DPCM and var. appl. 95220
3D graphic models, error-resilient coding via adaptive mesh segmentation 95043
3D imaging in studio 118273
3D model and obj. color estim. using multiple color images 129551
3D obj. recogn. using shape similarity-based aspect graph 107158
3D reconstruction technol. *(Chinese)* 106745
3D shape inform., opt. methods, hybrid methodology, overview 132168
3D wavelet-based multiresolution obj. representation 129561
3D-models exploration in stereoscopic way, tool for knowledge, documentation and meas. of cultural heritage 94857
affine transforms. of 3D objs. represented with neural networks 84220
arbitrary-view image generation from multiple silhouette images in projective grid space 94904
binary sketch of grey image, fractal dimens. appl. *(Chinese)* 106725
bot. bark images simul. *(Japanese)* 106820
BRDF/BTF meas. device 106634
cipher strength eval. syst. based on stat. methods *(Japanese)* 129237
component based video commun. tool for collaborative virtual environ. 108141
convex set directional end, theory and appls. 100863
dense depth estim. from dense multiperspective panoramas 106473
dense estim. of surface reflectance params. from registered range and color images 118281
digital visual inform. proc., vision/graphics addit. 94957
dithering pattern, partitioning strategy, space-filling curve *(Chinese)* 73128
facial sketch generation with non-parametric sampling 106630
fMRI data, graphical display, multidimensional space visualisation 87602
geometric refl. theory from rough surfaces 106542
hierarchical D-NURBS surfaces and phys.-based sculpting 67980
holographic vibr. fringe pattern extraction, digital camera appl. 117533
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
image compression research 118547
image template matching using correl.-based block areas selection *(Japanese)* 129550

computer graphics continued
independent/connected edge dominating set problems approximability 100982
INSTANT software for antenna interacts. anal. 83527
multimedia ambiance commun. 74443
multimedia proc. for building immersive environ. 119806
multiple illuminant direction detect. in image synthesis 106500
multiresolution proc. for robust mesh watermarking 73508
Nintendo GameCube, video game console syst., ATI Flipper chip design 79922
occlusion models for natural images, stat. study of scale-invariant dead leaves model 118304
online edge-coloring with fixed no. of colors 100823
page segmentation and text extraction from gray-scale images, microfilm 95575
PC-based editing, compositing, and graphics systs., integrat. into digital studio 97059
PDE and variational problems on implicit surfaces 118259
photorealistic image synthesis, color appearance 94873
prog. data-path for MPEG-4 and natural hybrid video coding 106997
reduced polygon model, interactive quality eval. 94713
robust ICP registration algm. extension using M-estim. *(Japanese)* 129877
scene reconstruction from multiple cameras 84286
SH-4 superscalar RISC μP for SEGA Dreamcast game machine 79923
shape recovery of unknown topol., novel modeling algm. 106559
SignStream, tool for linguistic and computer vision research on visual-gestural lang. data 129549
substations, general graphic compilation syst., fault simul., training ES *(Chinese)* 78065
UML diags., online recogn. 129936
undergraduate image computation course, graphics and computer vision 113389
variable-resoln. displays for visual commun. and simul. 97648
video blending with synthetic images created from matched viewing environ. 129563
virtual fashion simul. by merging CG and humans in video seqs. *(Japanese)* 106441
visual correspondence computing with occlusions using graph cuts 106639

computer industry *see DP industry*

computer installation
see also computer maintenance; distributed processing; storage media
spacecraft avionics, networking intell. I/O components 133243
Wireless Andrew, high-speed campus-wide wireless data network 85287

computer installation management *see computer centres; DP management*

computer installations *see computer centres*

computer integrated manufacturing
300-mm equipt. semicond. mfg. tools, eval. techs. 103726
advanced mfg. systs., intell. commun. networks perform. mgt. 96052
e-diagnostics links, SEMI GEM/SECS stds./equipt. front-end modules, rels. 103962
e-mfg. domino effect for IC proc. efficiency/yield/productivity enhancement 103961
e-mfg. for enhanced IC equipt. productivity 103960
e-mfg. opportunities in semicond. proc. 103959
electronics assembly productivity enhancement via smart machine set-up 69326
electronics mfg. facility relocation, planning 113418
Foundation Fieldbus, open archit. for inform. integrat. 86422
high vol. fiberoptic component prod., automated mfg. systs. 113609
IC fab. facility automation for 300 mm wafers 103965
IC mfg. automation software for 300 mm wafers 70237
IC proc. integrat. for 300 mm wafer fab automation 115985
indust. networks, sens. chip network capability/protocols 97155
main stream laser proc., CIM plant 83046
matrix assisted pulsed laser evap. direct write cct. element rapid prototyping method 115158
minifactory, distributed automation syst., high-perform. network infrastructure and protocols 108175
open systs. using NC, message spec., CORBA 130640
optoelectronic component assembly automation 109082
PCB CIM syst., supply chain mgt. *(Japanese)* 91488
PCB DFM modelling, proc. rule check *(Chinese)* 102811
PCB proc. integrat. via transcollaborative mfg. 80497
reticle delivery automation for 300 mm fab 115737
SECS/GEM IC proc. tool commun. protocols, evol. for e-mfg./300 mm wafers 103963
semicond. mfg. data mining via integrated relational database 80969
SMT insertion systs. selection, basic principles *(German, English)* 115189
SONET opt. receivers, opt. module assembly principle 113610
surface roughness waveforms, fuzzy logic cluster anal. 86964
wafer test automation in 300 mm environ. 116011
wafer tools/fabs, 300 mm automation optim. requirements 81413

computer interfaces
not used for human interfaces for which see "user interfaces"
see also computer communications software; computer peripheral equipment; data communication equipment; network interfaces; peripheral interfaces; system buses
digital motor motion control, Windows-based develop. environ. design 123320
DRAM memory bus with crosstalk transfer logic interface 125480
ERSUEM-2 high-speed demodulator for Earth-resource satellites 109026
med. imaging modality interfacing, relay station impact 98120
musical OO formant synthesizer, prosodic enhancements 106419
PACS-CT interfacing at Baltimore Veterans Affairs Medical Center, historical perspective 98847
PowerPC 603e™ based single board computer, radiation hardened 133247
RAD750™-a radiation hardened PowerPC™ proc., spaceborne appls. 133248
shape matching using curvature based polygonal approx. in scale-space 95516
utility enterprise integrat. interfaces, MultiSpeak™ spec. experience 122804

computer internal arrangement *see computer architecture*

computer languages *see programming languages*

computer literacy
Cyber Teaching Assistant for computer education course assistance 118155
libraries' and museums' role on providing access to commun. tools 74170
neurological teleconsultation for general practitioners 76780
Polish computer teaching aids, curriculum policy 113304
Scandinavian ICT education, internat. comparative survey 113297
telemedicine's pot., barriers, incentives and possibilities in implement. phase 133162
Ukrainian telematics-based education overview 113299

computer maintenance
network security mgt. planning, intrusion detect. syst. 74097

computer manufacturers *see DP industry*

computer metatheory *see computation theory*

computer network management
3G wireless network, GSM and mobile IP integrat. 85893
aberrant behavior detect. in time series for network monitoring 108025
ACLA framework for access control list anal. and optim. 119707
act. fault tolerant networks, on-line network simul. 130577
act. Meta-MIB for policy-based mgt. 96030
act. network, commun. security and mgt. mechanism *(Chinese)* 119475
act. network-based network mgt. framework 96031
act. networking, distrib. denial of service attacks repulsion 130576
act. networks, network inform. collection 130581
act. networks mgt. in telecom environ. 108046
act. proc. interact. with, environ. 74389
act. services, QoS, distributed GA, robust adaptive control 74308
act. VPN services on demand 74334
adaptive distributed network monitoring/control, syst. designs 130663
advanced mfg. systs., intell. commun. networks perform. mgt. 96052
agent-based network mgt. syst., distributed action plans 74113
ANMOS monitoring tool for act. networks 74138
anonymous packet tracing to approx. source 108124
Apache Web server monitoring 74201
appl. service dependencies mgt. 130690
appl. service mgt., agent syst. design and implement. *(Japanese)* 130642
artificial immune syst. for network intrusion detect. 108032
ATM access Ethernet switch, mgt. model/implement. *(Chinese)* 108016
ATM network call admission, QoS 119461
ATM networks, global mgt. fns. 96176
ATM NMS, mobile agent 95893
ATM switch core for scalable perform., parallel packet forwarding archit. 119385
ATM/IP networks, fuzzy buffer mgt. 119166
attack detect. in large networks 96016
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 119468
availability-oriented network mgt. model *(Chinese)* 108245
BGP opt. switches and lightpath route arbiter 96716
broadband Internet for Web computing *(Japanese)* 130839
broadband wireless access based on cable modem 85548
buffer mgt., load adaptive mechanism 107780
business-to-business environ. service charging/billing 130665
caching policy for continuous media objs. based on logical caches and obj. partitioning 130785
CAD of syst. integrat. for data-intensive multimedia appls. 130946
CAINONET network perform. monitor syst., key technol. research 96039
CAINONET perform. real-time monitoring and eval. syst. 96040
ChinaGBN integrated NMS, design and implement. 96038
CIPRESS syst., transparent access to encrypted data using OS network stack extensions 119482
Cisco Netflow technol. and relational databases for network mgt. 108122
CITRA, Cooperative Intrusion Traceback and Response Architecture 96095
client server syst. advanced faults mgt., Java API 130684
Concert IP Secure, managed firewall/VPN service 119540
concurrent QoS-assured multicast sessions, mgt. using prog. network archit. 96048
config. of commun. networks by anal. co-operation graphs 119478
configurability and real time support in network commun. services 130658
congestion arbitration and source problem prediction using neural nets 119602
consumer commun./mass market inform. networking 96182
contextual inquiry methodology 130691
CONUGA, constrained user-group assignment 74257
CORBA, universal commun. environ. for modern mgt. systs. *(Polish)* 130550
CORBA based element mgt. prototype syst. 96037
CORBA/CMIP, distributed mgt. archit. in heterogenous TMN networks *(Polish)* 130654
customizable VPN service with QoS 85190
DARPA off-line intrusion detect. evals. extension 96093
data network adaptive agent based routing 74041
demand enquiring service, network service based on appl. demands and network condition 74398
denial-of-service attack prevention methods 119462
differentiated services networks, dyn. provisioning, bandwidth reallocation algms. 130580
differentiated services usage mgt. using pricing/charging 130664
differentiated-services, congestion control using nonlin. control theory 130782
DiffServ network mgt. using end-to-end traffic flows 96044
Diffserv networks, end-to-end QoS guarantees 130774
DiffServ networks, policy mgt. framework using traffic engng. 108263
disconnected ad-hoc wireless networks, message transm. to mobile users 74376
distributed cooperative intrusion detect. *(Chinese)* 85142
distributed cooperative intrusion detect., archit. design and implement. issues *(Chinese)* 85252
distributed denial of service tools, Shaft 108125
distributed inform. proc. systs., mgt. concepts *(Polish)* 130549
distributed media server mgt. 120563
distributed mgt. platform, Web interfaces use 130679
distributed mgt. services, loosely coupled federation 108178
distributed multimedia computer systs., resource mgt. key issues 108402
distributed network mgt. for coalition deployments 111591
dyn. DNS for regional PC commun. syst., implement. 74189
dyn. load-balancing for distributed mgt. in act. networks 74140
dyn. mirror server selection with network load fluct. *(Japanese)* 74134
dyn. network service installation in act. network, protocols 74306
dyn. resource mgt. considering real behavior of aggregate traffic 74123
ECA + SQL, practical event correl. approach 96152
educational computer resource set-up by help desk staff 119488
eEMU, client-server syst. for syst. monitoring and event mgt. 108024
electronic campus, network exam. syst. design based on BWD *(Chinese)* 119485
end-to-end differentiated service QoS, network mgt. 74403
enterprise LAN, trends 108172
enterprise mgt. software 74112
enterprise network planning 96019
enterprise network traffic monitoring, anal., reporting 108179
enterprise WAN, frame relay 108192
event correl. rules discovery 130682
event data, scalable visualization 96172
extensible policy enforcement points 108053
fault and perform. mgt. of QoS and MPLS-enabled IP network 108062

computer network management continued
fault simul. platform and event samples acquisition techs. for event correl. 119477
fault tolerant WDM datacomm./telecomm. network designs 96112
firewalls 96021
firewalls evol. 119539
fixed point approx. of TCP behavior in network 108045
FlowScan, network traffic flow reporting and visualization tool 108123
future WAN archit. driven by services, traffic vol., and technol. trends 108286
GLI syst., global mgt. for geographical location inform. of mobile entities 108219
global telecomm. systs., complex fault ident. and mgt. 74284
GlobalGuard, IETF-IDWG intrusion alert protocol 96092
heterog. network devices provisioning, meta-data-driven approach 130674
heterog. networks mgt. across security/coalition domains 108041
high-speed network H^∞ flow control, μ-synthesis 130526
high-speed networks, unusual behavior detect. in real-time 96154
HIPERLAN/2, capacity request and allocation mechanisms, perform. eval. 119325
honeynets, network systs. that capture criminals' files etc. 108340
identity mgt. syst., multilaterally secure commun. 108350
IETF activities in operations/mgt. area 74102
IN with cross-network open provisioning, Internet bandwidth transactions 130932
inform. security conf., Wollongong, NSW, Australia (2000) 100378
integrated and federative approach to QoS mgt. in IP networks 74126
integrated secure & fault-tolerant voting in distributed syst. 130578
intell. mobile agent for network mgt. *(Chinese)* 108017
intell. opt. network, opt. services 120206
interact. control in chairperson-controlled university confs. 85354
Internet, all-opt. next-generation, wavelength-convertible opt. switch design 120278
Internet, customer service mgt. archit. 96173
Internet, economic models for QoS 96165
Internet, efficiency of computing resource mgt. *(Chinese)* 108244
Internet crackers, secure access control mechanism 74116
Internet differentiated service-based inter-domain multicasting 96071
Internet for businesses, managed security monitoring 119593
Internet mgt. by delegation, open source components 130670
Internet MIBs, reverse engng. 130559
Internet multimedia, service level agreements mgt. using utility model 74101
Internet quality, perform. and control of networks, conf., Boston, MA, USA. Nov. 2000 100441
Internet routers, rate and queue controlled random drop buffer mgt. 74206
Internet scalable mgt., navig. pattern 130558
Internet security via Antibody Layer 74215
Internet service delivery and mgt., platform archit. 96174
Internet survivable opt. service using short leap shared protection 108367
Internet traffic pricing, incentive-compatible, consumers' private inform. extraction 96028
Internet-based self-aware services, anoms. detect. using Bayesian networks 130688
intrusion detect., SPC 96091
intrusion detect. for network connections, data mining approaches 85141
intrusion detect. systs., plan recogn. 96094
IP advanced networks/services, service creation/mgt. 130569
IP based integrated wireless network, archit./mobility mgt. 96449
IP collaborative network environ., end-to-end security mgt. 130689
IP differentiated services in MPLS-based networks, mgt./control archit. 74099
IP differentiated services networks, QoS architectural framework 130659
IP DiffServ networks, traffic mgt. 108063
IP global networks, appl. services mgt. 119686
IP network config. operation sequencing 108120
IP network QoS provisioning using smart box archit. 85132
IP networking autoconfiguration enabling local commun. 74301
IP networks, bandwidth/latency monitoring 119681
IP networks, efficient reactive monitoring 119685
IP networks, intruder location, Markov decision model 74349
IP networks, Web-based distributed topol. discovery 108161
IP NMS 108284
IP security design and implement. *(Chinese)* 108185
IP service high availability archit. 130669
IP traffic engng. using Optimized MultiPath tech. 85241
IP-based networks, GA for capacity planning 108033
IP-based VPNs, QoS params. embedded monitoring 130675
IP-centric opt. control plane 120208
IP/ATM and wireless environ., QoS/GOS mgt. meas. 108372
IP/WDM networks, overlay-/integrated-traffic engng. 74319
ISO 17799/BS 7799 security mgt. std. 119543
ISP, optimal yield mgt. 119533
IT and MIS 108020
Java-based mobile asset location 85261
LAN time-aware fault diagnosis syst. 130685
learning database syst. for computer network mgt. fns. 119464
lightweight virtual networks, control archit. 96170
location mgt. 96138
location-aware lifecycle environ. for ubiquitous computing 108144
M3C framework for multiple cluster mgt. and monitoring 74410
managing soft QoS requirements in distributed systs. 108050
MASIF compliant platforms, SNMP mgt. 130678
metro-core networks, protection/restoration 119595
middleware platform mgt. based on portable interceptors 96045
mobile agent based workflow systs., perform. and scalability issues 130849
mobile agent executions, visualization 74222
mobile agent prog. 74316
mobile agent strategies for response time reduction in network mgt. 96034
mobile agents recovery protocols 130661
mobile augmented reality, service connectivity perform. eval. 108969
mobile computing environ., reduced cell switching 74377
mobile Internet, end-to-end service assurance 130595
mobile IPv6 based mobility mgt. archit. 108283
mobile packet radio, service differentiation, distributed control algms. 120020
mobile software agents appl. 108180
mobile software agents for decentralised network and systs. mgt. 74314
MomentA, service mgt. using mobile agents in CORBA environ. 119469
MPLS network simulator supporting QoS, design/implement. 107808
MRMA, multicast resource mgt. archit. for IP platforms 96171
multi-domain server farms, layered event correl. engine 130681
multi-protocol label switching mgt. using policies 130686
multicast deployment efforts support, monitoring tools survey 108249

omputer network management continued
multicast stats., scalable archit. for monitoring and visualization 96169
name mgt. archit. based on obj. rels. in large-scale distributed systs. *(Japanese)* 74365
ND comprehensive network admin. and anal. tool 108121
NetCamo, internetwork traffic anal. prevention camouflage 96114
NeTraMet for prod. traffic meas. 130672
Network Characterization Service (NCS) 119481
network inform. mgt. in heterog. decentralized enterprise environ. 108021
network mgt., overviews *(Chinese)* 74110
network resource mgt. using mobile network domain agency 73906
network security, managed security monitoring 119473
network security syst. design based on immune syst. 130599
network surveillance scheme, supervisor-based, middleware implement. and perform. eval. 119491
next generation intell. reconfigurable mobile networks, OO organic archit. 130935
next-generation networks for new business models 108039
NOOSE, Networked Object-Oriented Security Examiner 108029
ntop network traffic and monitoring tool 130671
NwsAlarm tool for resource perform. degrad. detect. 74411
Oceano-SLA based mgt. of computing utility 130575
ODP based network mgt. models *(Chinese)* 85134
OO protocol agents in commun. devices 74285
open component-based distributed systs. develop., dyn. QoS mgt., aspect-oriented spec. 119529
opt. core networks, future WAN archit. 96736
opt. Internet, restoration services 96210
OSPF routing, monitoring service 130472
OSU flow-tools package and Cisco NetFlow logs for network mgt. 108028
packet networks, enhanced weighted round robin schedulers for bandwidth guarantees 108262
PACS, enterprise-wide environ. mgt. using Siemens MagicWatch monitoring station 98854
Peep, network auralizer for network monitoring with sound 108022
peer-to-peer networking, technol. and business perspectives 74163
perform. eval. for network systs. by client obs. *(Japanese)* 74133
perform. eval. of network mgt. based on mobile agents 73907
pervasive computing, autoconfiguration/registration/mobility mgt. 108272
PIKT, problem informant/killer tool for network monitoring 108026
platform-independent API for QoS mgt. 119577
policy based mgt. archit. for large scale act. commun. systs. 108051
policy combination methods 108049
policy division and fusion, multiple classifiers use 130687
policy networking syst. using act. networks 74139
policy-based extensible hierarchical network mgt. in QoS-enabled IP networks 108052
policy-based network mgt. 96032
Ponder lang., policy deployment model 130755
portal mgt., cognitive engng. approach 85230
public and private networks, dyn. host config. for mobility mgt. 119616
public key infrastructure in VPN environ. 72946
QoS and security, components and perspectives 130585
QoS dyn. mapping control for streaming video in relative service differentiation networks 85253
QoS enabled VPNs mgt. 74100
QoS mgt. in prog. networks through mobile agents 74315
QoS Policy Framework and implement. 95907
QoS using delay-synchronized dyn. priority scheduling 130227
QoS-providing multicast NMS 96022
QoSME, QoS mgt. and guarantees 95908
R&D for next-generation IP network 108277
random binary blocks for security appls. 119706
reactive network mgt. archits./routing 130573
reconfigurable component based network mgt., devel. framework 130676
RED queue params., scalable config. 119239
RED/ECN params., adaptive model 95902
robust opt. access, architectural issues 86040
router operating and maint. syst. *(Chinese)* 119720
SARA, Survivable Autonomic Response Architecture 96096
SATMIN satellite multipurpose inform. network, network mgt. *(Chinese)* 74118
scalable resource control in act. networks 74141
SD-link for secure collaboration across private networks 85248
secure access ports with authentication using Secure Shell, network security *(Japanese)* 130643
security defence testing by breaking 74087
security event mgt. 130579
security mgt. planning, intrusion detect. syst. 74097
service contracts based on workflow modeling 96175
service mgt. platform, mgt. tools 96043
services managment in IN, conf., Austin, TX, USA, Dec. 2000 100376
services quality eval. by client obs. 108150
SHAMAN, distributed mgt. appls. environ. 130680
SI2000 version 5 product line, obj. technol. *(Slovenian)* 119471
sing.-spectrum anal. for network behavior forecast 96164
SNMP, CMIP and distributed NMS models based ODP *(Chinese)* 85030
SNMP, NMS research based on intell. agent *(Chinese)* 119476
SNMP agent groups for network fault mgt. 74228
SNMP implement. on TLS/TCP base, perform. anal. 130343
SNMP objs. semi-act. replication in agent groups for fault mgt. 130562
SNMP perform. eval. and scalability anal. 107872
SNMP-based simple NMS, design and implement. *(Chinese)* 119318
software dyn. evol., hot-swapping 130662
software packages for service level agreement compliance meas. 85285
stat. perform. guarantees for streaming flows using expedited forwarding 119254
stochastic-flow network, reliab. eval. 119460
storage, WWW-based mgt., rem. control 74130
storage area networks appls. 119592
Symphony infrastructure for virtual server mgt. 119723
syst. admin. support automation 108027
systs. admin. conf., New Orleans, LA, USA (2000) 100377
TCP-socket, C and Java, perform. comparison, JavaNws appl. 96124
TCP/IP networks, act. queue mgt. using control theoretic approach 84924
TCP/UDP fairness for assured forwarding per hop behavior in differentiated services networks 119276
Thresh, data-directed SNMP threshold poller 108023
time over threshold algm. for noise reduction in perform. and fault mgt. systs. 96047
TINA accounting archit. mgt. security 130589
TINA accounting mgt. archit. based prototype 130666

computer network management continued
TINA service mgt. syst., advanced archit. develop., CORBA based approach 130883
TMN, systs. approach to 2D modeling 96029
Traceroute, network route-tracing utility program 119434
traffic anal. tools 85192
traffic mgt./network control using collaborative on-line simul. 130590
traffic shaping and link scheduling on high-perform. server 85350
trajectory sampling for direct traffic obs. 85299
transaction-oriented networks, adaptive anom. detect. 119583
triple-DES network encryptor 106231
two-layer scalable opt. interconnection network, commun. protocol design and anal. 120256
university environ., network mgt. technols., open source tools 119489
US Army installations, inform. assurance archit. 111589
User Gateway, realization scheme 74226
user profiles for data recharging 108273
variable bandwidth wireless environ., dyn. mgt./adaptive appls. 130366
virtual act. networks, multi-edged network computing 85191
virtual home environ. trial over Mobile IP 96104
virtual LANs, admission control and bandwidth mgt. 119570
virtual network based service provisioning, perform. modeling 130667
virtuosity, prog. resource mgt. for spawning networks 74307
visual browser design for network intrusion detect. 130598
VoIP and enterprise telecomm. network mgt. 74147
VPN generic connection mgt. and service level agreement monitoring platform 130668
WAP log mining as monitoring tool for m-commerce *(German)* 74136
WDM IP end-to-end transport services, integrated mgt. 130660
Web, mobile WAP-based mgt. 108034
Web traffic, RED tuning 85297
Web-based network config. mgt. syst. 96157
Web-based network element mgt. 108177
Web-based secure LDAP mgt. syst., design/implement. 96230
Web-like Internet/bulk-data traffic, tail drop/act. queue mgt. perform. comparison 130770
wired and wireless phys. layer security issues 74351
Wireless Andrew, high-speed campus-wide wireless data network 85287
WWW server, differentiated QoS mgt. 130677
X-Bone, dyn. Internet overlay deployment and mgt. syst. 85189
XML based policy-driven mgt. inform. service 130673
YAAP, Yet Another Active Platform 74225

computer network reliability
2-mode failure anal. 119722
3G wireless network, GSM and mobile IP integrat. 85893
act. fault tolerant networks, on-line network simul. 130577
Antigone 2.0 framework, group commun., flexible constr. of secure groups 96097
appl. service dependencies mgt. 130690
appl. service mgt., agent syst. design and implement. *(Japanese)* 130642
augmented reliable multicast CORBA Event Service 85211
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 119468
BGP opt. switches and lightpath route arbiter 96716
border gateway protocol, inherently safe backup routing 119419
byzantine agreement, new approach 108148
C4I defensive infrastructure for survivability against multi-mode attacks 111587
CAN, at. multicast prog. 74188
client server syst. advanced faults mgt., Java API 130684
combinat. methods 130805
DCE, reliab. eval. using AHP 108238
denial-of-service attack prevention methods 119462
dense WDM network, adaptive QoS for multiple classes of service 130727
distributed systs. security/survivability, overview 108202
DWDM for Parallel Sysplex and metropolitan/storage area networks 96817
end-to-end WAN service availability 119614
enterprise network traffic monitoring, anal., reporting 108179
fault simul. platform and event samples acquisition techs. for event correl. 119477
fault tolerant WDM datacomm./telecomm. network designs 96112
fault-tolerant multicomputer networks with partitioned dimens.-order routers 95993
global telecomm. systs., complex fault ident. and mgt. 74284
group commun., highly available services framework 74229
group commun. protocols, QoS 74290
IEEE 802.11 WLAN for multimedia, robust SuperPoll with chaining protocol 73921
IN perform. anal. and forecast support syst. 119629
Internet, reliab.-based optimal allocation of mirror servers 74400
Internet delayed routing convergence 85300
Internet mobile radio networks 85894
Internet policy/topol. impact on delayed routing convergence 119668
Internet survivable opt. service using short leap shared protection 108367
IP networks, mobile multicast protocol with error control 74402
IP over opt. networks, protection/restoration 96717
IP over WDM networks survivability mechanisms 130468
joint IP/opt. layer restoration on link failure 130864
LAN time-aware fault diagnosis syst. 130685
logarithmic Harary graphs, reliable message broadcasting 74227
MDVA, dist.-vector multipath routing protocol 119348
metro-core networks, protection/restoration 119595
mgt. model for high availability of network *(Chinese)* 108245
mobile agent based reliable message passing 107815
mobile agents recovery protocols 130661
mobile computing recovery scheme based on checkpointing 96189
mobile network syst. reliab., error recovery schemes *(Japanese)* 119734
mobile networks, reliable multicast 107948
modelling with queues, empirical study 119258
MPLS-based protection label switching path recovery mechanism 130480
multi-access WLAN, reliable multicast 108228
multi-domain server farms, layered event correl. engine 130681
multi-protocol label switching recovery porting to multi-protocol λ switching 120231
multicast commun. protocol, perform. eval. 73972
multicast protocol throughput stabil. 74007
multipoint-to-point ABR service in ATM networks, merging algm. 119843
NEC Gatekeeper CX6800-GK 85202
NEC IP networking solns., overview 85199
Network Characterization Service (NCS) 119481
Network Membership partition model for reliable mobile commun. 96188

computer network reliability continued
network surveillance scheme, supervisor-based, middleware implement. and perform. eval. 119491
NFS over Myrinet-based clusters for parallel multimedia appls., perform. 130711
opt. Internet, restoration services 96210
power supplies and climate control 119598
PROFIBUS token-passing protocol over error-prone links, ring stabil. 130627
QoS and security, components and perspectives 130585
QoS model for ATM networks *(Chinese)* 108230
redundancy mgt. protocols in distributed systs., modular comp., spec. and verification 73916
reliable mobile multicast protocol 74861
reliable multicast congestion control 107821
reliable multicast protocol applying act. network technol., perform. eval. *(Japanese)* 73989
robust opt. access, architectural issues 86040
RSVP refresh timer, adaptive dyn. message delivery 96209
scalable fault-tolerant aggregation in large proc. groups 108314
self-healing algm. for network reliab. enhancement 108317
self-stabilizing depth-first token passing, faulty privileges 96196
server-side TCP wrapping for masking connection failures 119344
SNMP agent groups for network fault mgt. 74228
spanning tree approach in all-terminal network reliab. expansion 108233
Spinglass project, secure and scalable commun. tools for mission-crit. computing 95866
stochastic-flow network, reliab. eval. 119460
structural cabling syst. lightning overvoltage studies 77554
survivable intranet IS based on opt. fiber WAN *(Japanese)* 74370
symmetric grid networks, single link/double link/nodal failures tolerance 85314
Symphony infrastructure for virtual server mgt. 119723
transport network archits. evol. 108255
virtual router/server concepts for IP backbone networks *(Japanese)* 119410
WDM mesh-survivable transport networks 96744
WDM opt. burst-switched networks, reliable multicast protocol 96713
WDM opt. networks, restoration in IP 130726
Web services, zero-loss, constr. 119744

computer networks
see also computer network management; computer network reliability; distributed processing; file servers; inter-computer links; internetworking; intranets; local area networks; metropolitan area networks; token networks; wide area networks
4G mobile radio systs., evol. aspects 85606
ABR services for overcoming misbehaving sources in heterog. environ. 74258
ACM SIGCOMM computer commun., conf., Stockholm, Sweden (Aug.-Sept. 2000) 67363
act. network encapsulation protocol spec., interoperability *(Chinese)* 108234
act. network infrastructures implement. using agent technol., security implications 74309
act. networking means evol., dyn. software updating 74383
act. networks, computational intell. techs. 119638
act. networks, conf., Tokyo, Japan (October 2000) 67411
act. networks archit. using declarative lang. 74384
adapted GA for network design techs. 108353
adaptive fault-tolerant routing in star networks 108243
adaptive hybrid cache coherence protocols perform. eval. 119274
adaptive param. collection in dyn. distributed environ. 74277
AF service perform. in multi-DS domain networks, simul. based study 74239
agent based intrusion tolerance, fragmentation-redundancy-scatt. 96088
agent-based Bayesian forecasting model for enhanced network security 74286
agent-based flexible multimedia syst. design 108401
Akhtuba automated secure message delivery syst. *(Russian)* 85197
all-opt. HIPPIs using photonic switches/opt. buffer memories 96791
all-opt. time-domain IP router 96168
AMnet, efficient and flexible provision of heterog. multicast services 108320
ANMOS monitoring tool for act. networks 74138
anonymous unknown network with leader, label assignment 130812
appl. layer routing archit. infrastructure 74386
appl. service providers, business designs, winners and losers 119600
asynchronous learning networks, collaborative learning support, knowledge mgt. 113352
atm. laser commun., computer network linking 120387
ATM networks, flow control scheme for self-similar traffic 130746
ATM networks, multiagent-based reservation of backup VP 96133
ATOM, act. totally ordered multicast 74002
attack detect., fuzzy preference approach 108223
augmented ring networks 85338
authenticated scheme of Onion Routing *(Chinese)* 85176
bandwidth tracking in distributed heterog. networking environ. 85217
Bossnet all-opt. long haul networking testbed 96166
broadcast protocols, tight bounds in lin. cost model 107888
BT response to e-business threats 119536
buffer mgt. control in data transport network node 119622
buffer threshold and link utilization in ABR services 108232
cell distrib. approach for parallel ATM switch 84837
characterizing network traffic based on wavelet tech. *(Chinese)* 119621
closed queueing networks with several classes of messages, optim. and balancing 67727
cluster, opt. interconnection link 119712
complex computer network model, power spectrum and 1/f type power law 74292
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
conf., Kyrnica, Poland (Jun. 2001) *(Polish)* 113274
congestion controlled imaging linking plane protocol, database compression/expansion/mgt. protocol layer 107820
consumer devices, multimedia services provision 119784
content adressable memory appl. to network syst. designs 90916
convergence of IP-based and opt. transport networks 74335
CSMA/CD network traffic model, crit. phenom. anal. by computer simul. *(Japanese)* 85289
DARPA Information Assurance Program dyn. defense expt. 96116
data flow charact. 108364
data transcoding in multicast sessions in act. networks 73819
Data Vortex photonic packet switch archit., internal low latency interconnection network 96167
delay-/delay var. bound multicast tree problem, fast/efficient heuristic algm. 108151
delay-bounded multicast trees in computer networks 107943
denial of service in networks, cost-based framework 83953

computer networks continued
deterministic network commun. broadcasting time determ. 107967
differentiated QoS in appl. layer act. networks 74396
digital document image networking 129802
digital signature tech. in OA syst., signature scheme, encryption, security *(Chinese)* 72957
distributed admission control for anycast flows with QoS requirements 74249
distributed algm. for high-throughput and scalable gossiping 108301
distributed coloring and commun. in rings with local knowledge 85220
distributed computing for large-scale simul. 119705
distributed computing networks, priority based resource allocation strategy 119726
distributed delay-bounded constraint multicast routing, ant algm. *(Chinese)* 119400
distributed network-computing mode, mobile agent platforms *(Chinese)* 108102
distributed neural networks, archit., AOI appl. 124410
distributed sens. networks, research review 129990
distributed shared memory cluster with improved commun. subsystem, perform. eval. 108149
distributed systs. and networks policies, conf., Bristol, UK (Jan 2001) 100383
divergence-free protocol converters using supervisory control techs. 74275
double-loop networks, complementary survey 108300
electronic meeting systs. constr., secure interlink archit. 130803
electronic white board, commun. aspects 96283
embedded networking appls., syst.-level prototyping 95971
end-to-end delay bound computation in guaranteed service *(Chinese)* 96146
end-to-end policy inform. provision for network QoS 119698
entity security archit. for computer networks *(Chinese)* 119619
ES, boundary expansion, evol. computation/intrusion detect. solns. 85231
event model for computer network anal. *(Polish)* 130653
evolvable Internet hardware platforms 108222
fast congestion feedback with mark-front strategy 96161
fault tolerant networks with small degree 108197
firewall implement. for software and hardware-based routers 119415
firewalls for protecting trusted networks 130632
Flexible Image Transport System (FITS) 130628
fluid simul. and packet-level simul. 130697
generalized coincident pulse tech. and addressing schemes for TDM opt. buses 116665
global inform. infrastructure, networks integrat. 119935
Grid computing systs., param.-based approach to resource discovery 108118
HCI approach to usable/effective security 119542
heterog. networks, strictly non-blocking WDM cross-connects 75023
heterog. video multicast using act. networking 74390
high-perform. computing syst. opt. switching 119665
high-perform. IP service node with layer 4 to 7 packet proc. features 108281
high-perform. network intrusion detect. syst. 108251
human and inform. sci. research, past/present/future 96075
IEEE 1451 smart transducer interface archit., sens. networking 74288
IEEE elec. and electronic engineers conf., Tel-Aviv, Israel (2000) 113257
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
inform. society in Poland, computer networks 100367
integrated fixed/mobile network for 3G services 74337
intell. computer network nodes, perform. measures 96253
interactive file commun., computationally feasible protocol 130826
interconnection networks, dual of hypercubes 85082
Internet protocol routers, opt. technol. 130860
interval routing broadcasting, lin. message-complexity 96223
intrusion detect. syst. based on cooperative distributed agent *(Chinese)* 108226
IP core transport network 108278
IP phone gateway, adaptive network-attached storage syst. *(Chinese)* 119501
IP photonic node archit. 108279
IP router for next-generation network 108280
IP wt. based real-time network intrusion detect. 95944
IP-based transm. on third-generation wireless (IMT-2000) and beyond 108862
IPv6 traffic with multiple QoS classes, modelling and perform. anal. 119632
IPX protocol based real time network commun. software *(Chinese)* 107830
irregular networks, turn prohibition based routing 85278
Japanese trunk transm. opt. fiber cable, high data traffic demand 96225
JFWD API, platform independent portal 108321
key generation method based on Lagrange polynomial interpolation formula *(Chinese)* 74297
large deviation anal. for MUX independent regulated inputs 108248
latency-tolerant partitioner for distributed computing on inform. power grid 85219
lin. token passing bus, computer simul. *(Chinese)* 85330
location-adaptive virtual networked appliance 74236
long-range depend. traffic, multifractal modeling 130738
LonWorks, serial commun. *(Chinese)* 74269
lossy packet network compressed image quality measures 129790
M/M/1 queue in semi-Markovian environ. 119650
Mac OS X machine, network security problems 130806
Manhattan street networks, opt. buffering effects 86012
meas. and modelling of computer systs., conf., Cambridge, MA, USA, June 2001 113252
meas.-based admission control in heterog. environ. 96203
media filtering syst., QoS streaming 96270
MobiCom 2000, mobile computing and networking, conf., Boston, MA, USA (August 2000) 85305
mobile agents for reliable migration in networks 108167
mobile agents in network-centric warfare 133391
mobile inform. society, appl. driven evol. 85703
mobile multimedia appls., wireless awareness 96284
model-based estim. of buffer overflow probabilities from meas. 119648
model-based tool-assistance for packet-filter design 108220
MPLS networks, congestion control mechanism for traffic engng. 74339
MPLS VPNs with QoS routing capability 74342
multi-level computer networks with opened opt. channels, creation in Ukraine. strategy and outlook 108377
multicast routing based on ant algm. with delay var. constraints 74055
multicasting data in computer commun. networks, archits. and algms. 119631
multimedia appls., adaptive causality and media sync. control 130977
multimedia computing and networking conf., San Jose, CA, USA (2001) 89588
multimedia desk area network based on ATM technol., perform. anal. 96156
multimedia network systs., consistent global checkpoints 96280
multiparty conferencing, multicast tree constr. algm. 108386
multitechnology networks, design problem 119528
Myrinet clusters, NIC-based rate control for proportional bandwidth allocation 130786
NASOS, no address space OS, act. network implement. 96186

nputer networks continued
network-based assignment drive-oriented concurrent design, CAD/CAPP integrat. *(Chinese)* 89792
networked-intell. motor control systs. 133944
networks for research and education, conf., Pontignano (Nov. 2000) 100443
neural nets, packet flow routing control, mean field approx. 107659
obj.-based systs., message causality 108152
Omega network embedded in WDM photonic network, load balancing 108342
OO RBAC model spec./enforcement 119750
open approach for deployment of prog. nodes into computer networks 130418
open shortest path first interior gateway protocol vulnerabilities 107895
opt. Internet protocol networks, flow-routing approach 130861
optimal allocation of electronic content 120575
optimal fault-tolerant routing algm. for double-loop networks 85288
optimal halftoning for network-based imaging 94882
optimum inform. queue lengths in semi-batch power mgt. methods for palmtop multimedia terminal 74282
OrCAD PCB design appls., network environ. methodology 125886
packet generator in heteregeneous network environ. *(Polish)* 130195
packet switched network load bal. routing/scheduling 85276
packet-switched networks, min. delay routing neural net method 85264
parallel and distributed computing conf., Las Vegas, NV, USA (2000) 78417
path concatenation, fast recovery of MPLS paths 119340
path restoration version of spare capacity allocation problem with modularity restrictions 119527
PC cryptographic coprocessor based on TI sig. proc. and smart card syst. 118033
PC-to-singlechip serial commun. based on OSI network hierarchy module *(Chinese)* 74354
PCI-based workstation cluster parallel opt. data links 108205
peer-to-peer computing 74174
peer-to-peer networking, inform. sharing 96067
perform. of MUX independent regulated inputs 119845
perturb. anal. applied to traffic shaping 74264
PLAN, packet lang. for act. networks 74385
policy based SLA mgt. in enterprise networks 108221
policy networking syst. using act. networks 74139
predictive flow control scheme for efficient network utilization and QoS 119647
probabilistic latency targets, optimal inform. dispersal 108240
prog. network infrastructures, security 74394
prog. networks 108174
protocol-oriented simul. method for computer networks *(Chinese)* 73884
QoS adaptive commun., fuzzy rels. 119764
QoS based init. route setup algms. for multimedia commun. *(Chinese)* 119618
QoS for high perform. inform. transm. in computer networks *(Polish)* 130650
queueing model for space-division packets switches, perform. eval. of computer networks 85216
random geometric networks, random faults 74194
real-time technol., conf. Taipei (May 2001) 78476
reflective act. network node 74387
resource reservation scheme for MPEG transm., eval. 74331
RHiNET-3/SW, 80-Gbit/s high-speed network switch for distributed parallel computing 130721
ring networks, tradeoff between cycle complexity and fairness 74311
routing models *(Slovenian)* 74300
routing models for data exchange in computer networks, parallel computation 119525
routing optim., cost *(Chinese)* 119401
rule-based building-block archits. for policy-based network control 74391
secure e-commerce transactions, certificate-based distributed firewalls 130731
self-specializing mobile code for adaptive network services 74388
service demand allocation problems, multi-agent simulator 74274
Sherlock for commercial high assurance network computing 108169
shortest-remaining-proc.-time scheduling policy, unfairness investig. 119651
smart layer two protocol IP over WDM WAN 130862
source-oriented topol. aggregation in hierarchical networks 96219
stat. shift registering sorting archit., fair queuing algms. in high speed routers *(Chinese)* 108224
streaming media appliances, video and audio encoding 119802
subsystems, QoS guarantee 96129
surveillance systs., networked *(Polish)* 131774
SwitchNet open network for factory automation field-end components 130792
sync. switching cct. education, computer aided via networking *(Polish)* 124244
Tamper Resistance Network (TRN) *(Japanese)* 130818
TCP connections in wormhole routing and ATM networks 73933
TCP/IP based computer networks, perform. meas. tool for packet forwarding devices 119581
TDMA satellite syst., multimedia commun. expts. 85934
telecontrol inform., network access *(Chinese)* 119524
temporal behaviour of packet loss in packet switches with bursty traffic arrivals 96121
testing for network design verification 108347
time transformed machine for high speed computer network perform. meas. 74273
traffic modelling using Markov chains *(Polish)* 130311
two-stage satellite-terrestrial wireless systs., push-based inform. delivery 85554
two-way CATV network, bidirectional data transfer rate tests 120554
unbuffered banyan networks, high speed scheduler/controller 107646
unified IP service control archit. based on mobile commun. scheme 108285
user behavior based network traffic model, self-similarity anal. *(Chinese)* 95740
users' responsiveness in price-controlled best-effort QoS model 119633
variable length packet shapers 119844
VC networks, pre-selection routing 85081
VCSEL opt. interconnects, telecomm. appls. 96226
VPN, syst. safety 74357
XML-based household profiling for home networks 119607

computer operating procedures
see also computer bootstrapping
PACS policies and procedures develop. 98856

computer operator training *see training*

computer performance evaluation *see performance evaluation*

computer peripheral equipment
see also add-on boards; computer displays; computer graphic equipment; data communication equipment; digital storage; disc drives; image processing equipment; interactive devices; interactive terminals; mark scanning equipment; pattern recognition equipment; printers
IP phone gateway, adaptive network-attached storage syst. *(Chinese)* 119501
musical cyberinstrument design, SensOrg, cognitive ergonomics 86359

computer power supplies
3.3 V power supplies for µP ccts., switched mode converters *(German)* 88808
act.-clamp couple-buck converter voltage regulator module 88843
analogue cells suscept. to substr. interf. 79543
architectural design constraint, power consumption 68564
Athlon(R) proc. input current mode DC-DC controller 112620
BiCMOS hybrid 4-in-1 DC-DC controller chip for PC mainboard 99797
BiCMOS sync. PWM switching regulator chip, design, CPU power supply appl. 68586
CMOS act. clamp cct. for voltage regulation module appls. 114608
commercial building power syst. harmonics, digital monitoring systs. 77347
CPU power supply, valley current-mode control design 114607
DC-DC power conversion archits., design complexity, DP appls. 88809
DC/DC reson. converter with one-switch sync. regulator 88957
desk-type contactless power station syst., coil shape *(Japanese)* 112616
energy efficient broadcasting for situation awareness in ad hoc networks 130784
external power supply markets, current status, future prospects 88819
high-input voltage regulator module design using integrated mag. 88845
high-perform. voltage regulator module for µP power supply 88844
IBM's power supply procurement proc. overview 88820
Internet hotels computer equipt. power supplies planning 88397
low-AC-resist. planar/foil wound inductors, quasidistributed gap tech. 80460
MCU syst. for indust. control, EMC design *(Chinese)* 124444
mission-crit. embedded systs., power-aware scheduling, timing constraints 133227
MPEG decoding, dyn. voltage scaling 95324
µP syst., intell. power supply reset controller *(German)* 79554
next-generation electronic systs., power mgt. 79550
notebook computers, intell. multiple batt. archit. 89144
paralleled voltage regulator modules, current-sharing control perform. 88897
portable digital systs., batt. model, life-time anal. 112816
portable systs. lifetime extension by batt. scheduling 88874
power technol. roadmap workshop, IT power supply technol. trends 88817
reson. free power network design using extended adaptive voltage positioning methodology 90744
RISC microcontroller, on-chip hybrid regulator scheme, chip standby power 125534
SMPS, arcing prediction, zinc spray/partial vac. tests 88840
three-phase buck power converter lossless current sens. scheme 112622
three-phase computer power supply networks elec. shock protection *(Polish)* 99344
UPS for computer systs., automatic shutdown aspects *(German)* 99735
web/data servers power demand dens. requirements 130983
Li ion accumulators charact. *(German)* 134346

computer printers *see printers*

computer programming *see programming*

computer programs (listings) *see complete computer programs*

computer programs, complete *see complete computer programs*

computer purchase
PACS procurement proc., required steps 98855

computer science
NTT Communication Science Laboratories, ten-yr. hist./future vision 89952

computer science education
see also computer literacy
architects education, studio course, implications for software education 113320
caching-proxy in LAN for educational computer room *(Polish)* 130648
constructivist pedagogy 113356
digital design education infrastruct., multiple EDA tool vendors, multiple modes of tool access 125300
digital inform. age course for elec. engng. students 78531
electronic software engng. education, large-scale parallel-embedded appls. 124275
electronics packaging technol. teaching methods 124253
ethics education for engineers, indust. perspective 89622
hardware/software codesign senior capstone design project in computer engng. 125296
image proc. teaching, Java vision toolkit 118450
indust. automation undergraduate lab. modular µP kit 78517
Internet dist. education syst., university/indust. linkage 113382
low-cost ADC interface cct., undergraduate student educational resource 89643
mechatronics-based motion syst. design 67446
microcontroller based syst. hardware-software integrat., education 124246
multitasking teaching to electronics/computing students 124250
µP design, Abel-HDL and prog. logic cct. 113286
OZ, dist. learning environ. for computer sci. education 108341
Professional Issues undergraduate student education course 124247
project-based design education courses 113323
technol. education challenges and solns., Latin America 78528
undergraduate computer vision curriculum, primary source material 113386
undergraduate computer vision instruction, expt. learning 113388
undergraduate core algms. course, image related appl. 113390
undergraduate digital image proc. courses, algm. design 113387
undergraduate image computation course, graphics and computer vision 113389
undergraduate IT/sci./engng. degrees, appl. rates anal. 100455
visual interfaces to computers course 118452
web-based dist. educational initiatives, metadata models 78504

computer simulation by computers *see virtual machines*

computer software
not used for specific application software for which see relevant applications see also automatic test software; complete computer programs; computer communications software; expert system shells; integrated software; macros; programming; public domain software; software engineering; software packages; software standards; subroutines; systems software
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (May 2001) 113283
^{125}I seed prostate implants, ultrasound guided, in-house software 98640

computer storage devices *see digital storage*

computer subroutines *see subroutines*

computer supported collaborative work *see groupware*

computer telephony integration
caregivers of people with Alzheimer's disease, factors affecting use of telephone-based intervention 76779
Context Aware Messaging Service *(Japanese)* 119521
embedded systs., dyn. reconfigurable archit. 96532
Ethernet telephone ccts., connection to data networks *(Italian)* 130601
hyper audio Web browsing syst. via telephone 119721
Internet call center, design and implement. 96056
IP telephony from user perspective 108082

computer telephony integration continued
mobile telephone prog. 119492
newspaper archive, interactive vocal IRS 119498
prison inmate telephone conversation monitoring, content recogn. 108080
ripple effect meas. of Pascal programs, telephone switching syst. 108501
speech user interfaces, dialogue design, confirmation and error recovery strategies 96058
Tasmanian Police Call Centre project, offence reporting proc. 85146
User Gateway, realization scheme 74226
user models for intell. telephone assistant 119511
VoIP networks, third-party call control for call center appls. 130610

computer terminals *see interactive terminals*

computer testing
data transm. in EW equipt. simul. test syst. *(Chinese)* 111638
microwave pulses effect on PC perform., expt. study 117719
µP IP cores testing, SOC develop. 79914
PowerPC µP, anal. of testing methodologies for custom designs 102203
TS-1 micro-satellite housekeeping computer, self testing of CPU *(Chinese)* 101926

computer viruses
client-server systs., man-in-the-middle attack defence 130767
distributed denial of service tools, Shaft 108125
Internet security via Antibody Layer 74215
Internet-based self-aware services, anoms. detect. using Bayesian networks 130688

computer vision
see also active vision; motion estimation; robot vision
2D digital image normal vector/winding no., hole detect. appl. 118670
2D gray-level obj. recogn. using shape-specific points 95478
2D pattern matching based on generalized FT 94750
3D computer vision, surface shape meas. and NDT 118410
3D computer vision, SVM using geometric alg. 106666
3D computer vision syst. based on spatial phase mapping 116590
3D form meas. by projecting concentric circle pattern 94901
3D head tracking/head pose estim., stabilized adaptive appearance changes model 106705
3D head/hands tracking in real time by EM algm. 107197
3D image reconstr., lin. parameterized models 95476
3D image reconstr., random sampling/voting method 84339
3D image reconstr., vision-based, dual representation 129836
3D imaging of transparent objs. 129490
3D imaging vision systs. for inspection, conf., Boston, USA (2000) 100440
3D laser tracking syst. by triangulation/photogrammetry techs. 93912
3D meas. of human body for apparel mass customization 94897
3D model acquisition by tracking 2D wireframes 129499
3D motion/struct. recovery from motion/shading flows 118725
3D multiuser virtual environ. creation 73859
3D obj. model building from multiple views using calib. plate 84191
3D obj. recogn. using range images, morph. feature extraction and geometric hashing 107285
3D opt. reconstruction using CMOS array of photodiodes with electronic proc. 120897
3D planar objs., recogn. in canonical frames 95428
3D plane params., iter. computation 129491
3D reconstruction approach, geom. fund. of polycentric panoramas 106574
3D reconstruction for high-speed vol. meas. 106794
3D scene reconstr., polyhedral projection correction 95595
3D sens. syst. with point light sources, robot navig. appl. 118651
3D shape meas., computer-aided projection fringe syst. *(Chinese)* 78687
3D shape meas. in neurovision syst. 106789
3D shape modeling with extended hyperquadrics 84225
3D shape reconstr. from silhouette, interactive algm. 94856
3D shape reconstr. of hybrid reflectance by LMS algm. 106684
3D shapes meas., measuring precision improvement 97827
3D small angle meas. with CCD image sens. 109442
3D surfaces, hierarchical coding using box splines 129718
3D terrain reconstr. by binocular stereo images 84628
3D vehicles in natural lighting, search perform. anal., contrast model 133395
3D video-based meas. syst. dyn. calib., evol. strategy 86406
3D vision based on projection of bidimensional patterns of incoherent light 94900
3D vols. matching using self organising maps for computer vision 118297
3D wavelet-based multiresolution obj. representation 129561
absol. non-contact orient. sens. for wrist motion control 97148
act. contours and surfaces, smoothness measures 118251
adaptive GMRF anom. detector for hyperspectral imagery, perform. anal. 75617
adaptive-rest condition spring syst., edge-preserving regularization 94952
affine matching of two sets of points in arbitrary dimens. 106739
affine-invariant edge completion with affine geodesics 118673
airborne/spaceborne photography, EO syst. perform. anal. 94585
algm. taxonomy for hyperspectral unmixing 75618
anamorphic magnification using, chirped grating in grazing incidence mode 106787
appearance based obj. recogn. using eigenimages 84549
appearance-based recogn. using perceptual components 107260
arbitrary-shape extraction, ambiguities resoln., Hough transform appl. 129838
arbitrary-view image generation from multiple silhouette images in projective grid space 94904
Argus, digital doorman, automatic visitor ident. syst. 73473
articulated motion, modelling/tracking from multiple camera views 129620
artificial retina, optoelectronic cct., stochastic algm. 106775
automated alignment by hybrid video and 3D video moire 106785
automated extraction of accurate 3D models from close-range photogrammetric networks 94902
automatic sorting installation based on CCD cameras for measuring gauge diam. and ellipt. of pulp extractors 94905
automation and prototyping trends, discrete event and hybrid systs. appl. 131964
automation systs. components, sens., PLCs, computer appls. 113819
automobile oil filters, rot. positioning and type verification, PC-based machine vision syst. *(Slovenian)* 75637
automobile prod. line, automated gap inspection by stereo vision 118265
automobile surroundings recogn. using on-board camera *(Japanese)* 124025
automotive intell. image sens. for inner space monitoring 124038
autonomous mobile robot, computer vision syst. 94454
autonomous vehicle lateral control by yaw rate feedback, machine vision syst. 134556
averaging rot. in computer vision 118442
Beltrami framework for vision, affine invariance 118252
bending strain meas. by digital holography 125141

computer vision continued
BGA chip pins 3D meas., line-struct. laser sens. appl. *(Chinese)* 78663
binary image, digital line component detect., computer vision appl. 73501
binary sketch of grey image, fractal dimens. appl. *(Chinese)* 106725
binocular machine vision syst., autonomously moving act. viewpoint, perform effects *(Japanese)* 75610
biologically motivated, precise and simple calib. and reconstruction using ster light microscope 106599
biologically plausible vision systs. integrat. for controlling autonomous robo 94471
biorthogonal wavelet constr. based on human visual syst., GA *(Chinese)* 1068
BraMBLe, Bayesian multiple-blob tracker 106594
BRDF/BTF meas. device 106634
breast dens. estim. on mammograms, computerized image anal. 87760
camera calib., neural, locked/unlocked/semi-locked net wts. 120894
camera calib. based on circ. points 131977
camera calib. param. estim., corresponding point method *(Korean)* 109435
camera motion recovery from occlusions 84597
camera param. calib. optimisation based on criterion with effective visual angl 94456
camera self-calib., varying focal length, 2 images 120921
canonical forms and orbit ident. problems 84203
carpet flooring material, invariant pattern location, unsupervised color-base perceptual organization and graph-based matching 106522
caustics of catadioptric cameras 106591
CCD camera, vision syst., calib. tool 97340
CCD camera calib., constraint condition selection *(Chinese)* 97356
CCD camera FOV generation, neural net 100664
CCD-camera based computer vision syst., laser-struct. microdevices 93930
cct. board inspection, 3D vision syst., small FOV inspection 102830
cellular-automation proc. based vMOS vision chip 81406
cheirality in epipolar geom. 106573
circ. coded target for opt. 3D meas. and camera calib. automation 129522
CMOS imager with focal-plane computation, feature detect. 97365
CMOS visual sens., focal-plane computation, low-complexity algms. 73468
coarse-to-fine face detect. 118693
color constancy from hyper-spectral data 129630
color constancy using KL-divergence 106543
color image proc., color morph. pyramid *(Chinese)* 118420
color images chroma transform based face locating/tracking method 73167
color imaging, device independent color, color hardcopy, and graphic arts, conf. San Jose, CA, USA (Jan 2001) 89586
color recogn./noncontact meas. appls. *(Italian)* 118676
color vision syst., spectral responsivity estimator 73264
color-based localization of patterns through distortion tolerant graph matching 106782
colour edges based change detect. 84631
combine harvester guidance, fuzzy inform. merging *(French)* 75245
comet assay image anal., DNA strand break detect. 132531
comparability graphs and digital topol. 73287
component placement, 3D vision technol. appls. 115140
COMVIS, commun. framework for computer vision 118309
conf., Bristol, UK (Sept. 2000) 124239
conf., Vancouver, BC, Canada (July 2001) 100398
conf. on EO and microelectronics, Tel Aviv, Israel (Nov. 1999) 78457
connected components grouping, algm. perform. 118465
connected components grouping perform. 118310
constrained act. appearance models 106588
corner angle estim., code chain of edge, algm. *(Chinese)* 73176
corner detect. fast algm. using morphologic skeleton 73520
correspondence problem, island model parallel GA 106773
covariance inform. for vision params. estim. 106547
cross-sens. registration optim. study 75623
CSM correspondence calc. algm. to quantify differences between surfaces 132516
CSP laser rework technol., energy source perform./proc. specific package reliab. 113605
curvature computation on free-form 3-D meshes at multiple scales 129807
curvature detect. mechanism 94475
cylinder-bore surface defect detecting syst., computer vision tech. *(Chinese)* 89895
cylindrical piece meas., laser telemetry, forest caliper appl. 109993
DaimlerChrysler vision systs. for intell. vehicles 89422
defect inspection syst. with subpixel resoln., morph. operation 107280
Delaunay surface reconstruction from scatt. points 90190
dense 3D surface acquisition, struct. light appl. 89908
dense estim. of surface reflectance params. from registered range and color images 118281
DeskScan syst., face models scanning with desktop cameras 129417
detect. ellipses, geometric symm. 129428
dial indicators calib., uncertainty calc., machine vision syst. 109841
digital camera, combining off- and on-line calib. 84211
digital snakes for extraction of discrete images boundary 73486
digital video proc., motion estim. and segmentation framework 94844
digital vision chips and high-speed vision systs., fully parallel proc. archit. 129656
digital vision syst. for 3D model acquisition 73224
discrete curvature, chord-to-point dist. accumulation and planar curvature 95464
distributed machine vision syst. using Ethernet networking 113735
driver assistance systs., scene anal./behavior organization 94830
driver assistant syst., lateral and long. dists. detect. 73315
DSP implement. of AOM, defects detect. in textile material 90955
dubious image blocking using colour features 118390
dyn. lighting syst. for specular surface inspection 118290
dyn. reconfigurable vision for intell. sens. 106796
edge detect. in mimic spiral archit. 95563
education and text resources, survey 113385
embedded HMM for face detect./recogn., max. likelihood training 84610
entropy approach to comparison of images 129813
entropy-based gaze planning 118417
epipolar geom. estim., N-dimens. tensor voting appl. 106498
eye-sens. HMD for real-time eye gaze point tracking *(Japanese)* 131973
face and hands tracking in complex background using colour and motion 129902
face recogn., view-subspace anal. of multi-view patterns 107198
face recogn. based on skin/lip chrominance from color images 84526
face recogn. in similarity space under varying head pose 129810
facial features tracking in video seqs. using deformable-model-based approach 73220
facial landmarks location and tracking, Gabor wavelet networks appl. 95450
facial models, compensation for ensemble-specific effects 129913

nputer vision continued
feature selection from huge feature sets 106618
finding colored objs. under different illum. conditions, robotic appls. 95422
Finnish indust., pattern recogn. appls. 94443
flux maximizing geometric flows, geometric act. contour models 110866
football match image seqs., automatic camera calib. 95449
foreground segmentation using adaptive mixture models in color/depth 95011
forest camouflage uniformed personnel, search and target acquisition, observer perform. 133400
FPGAs appls. to high perform. DSPs 90957
frame rate meas. approach for real-time computer vision appls. 121176
free-form 3-D obj. recogn. at multiple scales 129833
free-form obj. representation and recogn. techs., survey 84557
fund. of machine vision optics 86614
fusion of electrorotation freq. estim. 118198
future and past, computer vision 106456
gaze determ. via images of irises 129617
general curves reconstruction using factorization and bundle adjustment 118308
general imaging model and method for finding, params. 106601
generalized distrib. for computer vision 73233
geom. tracking and pose estim. using laser triangulation and photogrammetry 84219
geometric refl. theory from rough surfaces 106542
global motion estim. for global motion compensation coding 84482
graph representation for objs. based on hierarchical decomp. of skeletons *(Chinese)* 107203
gray and colour med. images, impulse noise reduction, random walk approach 132532
gray-scale images, straight lines detect. through regularized Hough transform 94955
hand gesture contours, automated class. for gesture-based interact. and commun. 73127
HCI with back projection wall using arm gestures 129531
head pose estim. with Gabor wavelet networks 129611
HELINET unmanned aerial vehicles for opt. Earth surveillance 99050
high-level representations, conceptual spaces framework 129889
high-precision surface profiling with broadband accordion fringe interferometry 106788
high-resoln. image generation from video image seqs. by light field 94907
high-speed image matching using GA-based partial template extraction *(Japanese)* 100656
highly robust regressor for computer vision 129489
human behavior monitoring from video taken in office environ. 129812
human body kinetics, vision-based feature meas. 87557
human body posture vision-based estim. by neural nets 118757
human segmented natural images database, segmentation algms. evaluation 106628
human skin color model using neural networks 118674
human skin colour phys.-based modelling under mixed illuminants 84596
human tracking in multiple cameras 106551
hybrid Radon-Fourier tech., stat. props. 129618
hyperspectral adaptive matched filter detectors, comparative anal. 75193
IEEE elec. and electronic engineers conf., Tel-Aviv, Israel (2000) 113257
IEEE image and sig. proc. and anal., conf., Pula, Croatia (June 2000) 89596
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
image anal. using polarimetric device *(French)* 107120
image anal./proc., optimal syst. struct. 73440
image capture device using dyn. transcoding, storage and batt. resources mgt. 73165
image compression research 118547
image correl., real-time high-resoln. multiprocessor syst. 84282
image detect. under varying illum. and pose 107186
image matching, outlier rejection by rot., ROR algm. 95474
image proc. automation, OO approaches 95408
image proc. techs., review *(Italian)* 118675
image proc. tools develop. and appls. *(German)* 131967
image retrieval, histograms anal. method 84096
image segmentation using probabilistic PCA and ICA subspace mixture models 129615
image sens., IPOT 2001 exhibition, reviews 120884
image seq. fund. matrix threading by trifocal tensor 94608
image seqs., integrated segmentation and depth ordering of motion layers 129631
image-based modeling of objs. and human faces 94895
image-encoding based 3D-vision syst., calib. *(Chinese)* 95248
image-guided surgery, computer vision 132540
imaging model 106469
implantable video telemetry for biocompatibility studies 86423
indexing/machine vision, color representation 95533
indiv. evol. strategy for stereovision 118201
indust. automation, filter tuning appl. *(Italian)* 113807
indust. visual inspection, fast alignment search algm. 100640
inhomog. Gibbs model of faces learning by min. entropy 107161
integrated obj. recogn. methods, multiple-path archit. 95447
intell. robots and computer vision, conf., Boston, MA, USA (Nov. 2000) 89501
intell. transportation systs., vision-based moving vehicles detect. *(English)* 73478
interactive vision syst. written in Java 106779
intermediate-level vision, complexity, confusion, and perceptual grouping, mapping complexity 118767
intermediate-level vision, perceptual grouping, curve-like rep. 118662
intermediate-level vision, perceptual grouping, mapping complexity 118663
intrinsic images derivation from image seqs. 106597
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 2001) 124234
IVHS, LED traffic lights and vehicle-mounted cameras 131969
Java vision toolkit, teaching 118450
joint invariant signatures 84555
JSIES Joint Services Interoperable Exploitation System 99126
label area detect., comb-shaped illum. 129919
large-size arclength meas., noncontact ultra-accurate syst. *(Chinese)* 100623
laser radar range profiling, expectation-max. algms. 118315
LDA-based face verification, matching scores 129911
least sq. problem with orthogonality constraints, dyn. syst. algm. 118940
level set methods and computer vision 94492
light microscopy, adaptive shape-from-focus with error estim. 129578
lin. color grading, color space conversion 94464
lin. fitting with missing data for struct.-from-motion 73289

computer vision continued
line drawing segmentation into lines of different orient., neural net-based method 118699
line grouping based on uncertainty modeling of parallelism and collinearity 73487
line-segment grouping, eigenclustering approach 129494
linguistic description of relative posns. in images 107117
lip animation based on obs. 3D speech dyn. 94896
liq. opt. flow in images, validity revisited 94554
live power lines teleoperated maint. robotic syst. 88460
local evidence learning for shading and reflectance 106583
local recogn. methods for better image recogn. 129842
low level vision, stochastic procs., from Langevin to Beltrami 106545
low-cost vision sens. 75614
machine vision, imaging anal., tutorial 129545
machine vision, pixel-based autofocusing 106531
machine vision appls. in indust. inspection, conf., San Jose, CA, USA (Jan 2001) 113221
machine vision for robot control/in-line proc. monitoring, advances 97358
machine vision lighting, LEDs vs. fibre opt. illuminators 89886
machine vision syst. for inspection of laminated tubes 118291
machine vision syst. light source requirements 120907
machine vision technol., emerging trends 118213
machine vision technol. evol. 97359
machine vision-based inspection systs., fund. 89900
machine-vision syst. prod. line calib. 73246
mag. induction tomography, biomedical and indust. uses 110666
mammographic mass charactn., spiculation measures/morph. features 98527
material ident. over var. of scene conditions and viewing geom. 73180
max. likelihood framework for iter. eigendecomposition 106581
med. images, shape recovery using level set regularizers 110543
MEMS motion meas., computer microvision, opt. microscope, CCD camera, stroboscopic illum. 109663
MEMS motion meas., situ test tools 81546
MEMS/MEOMS machine vision 93210
micro device prod. automation, flat image recogn. tech. 92575
Microscopic Visual Feedback syst., High Speed Vision *(Japanese)* 84089
mobile robotics visual sens., resoln. enhancement by mech. vibrs. 75616
Model Maker rapid prototyping syst., online layer profile dimens. meas. 100621
model-based init. of vehicle tracking, dependency on illum. 106548
model-based obj. tracking using stereo vision 95555
molten steel flow profiles imaging 110061
monocular video seqs., homography matrices 129495
monocular vision syst. for autonomous vehicle guidance 84307
motion estim. using data fusion 118395
motion segmentation by subspace separation and model selection 106647
moving head tracking in cluttered stereo vision scenes 84625
moving image foreground extraction 129580
MSI imagery simul. from HSI data 73181
multi-model estim. method for computer vision 129644
multi-purpose vision systs. for mobile robotics 94459
multi-resoln. mesh based 3D obj. recogn. *(Chinese)* 107267
multi-scale method for re-assembly of fragmented objs. 129502
multiframe orient. determ., lin. epipolar algm. 94528
multiple contour finding and perceptual grouping using min. paths 84269
multiple illuminant direction detect. in image proc. 106500
multiple motion segmentation by edge tracking between two frames 129632
multiple texture planes, detect. using local spectral distortion 129614
multiple view geom. of non-planar alg. curves 106619
multiple-sens. integrated coord. meas. syst., automatic camera calib. 131971
multiresolution shape recovery by surface deform. 95576
multitemplate image detect., antiface algm. 95475
neuro-vision syst., 3D image reconstruction 118745
neuron-BJT, silicon retina and CNN 91132
noise in bilinear problems 106652
non-hierarchical procedure for re-synthesis of complex textures 94855
non-invasive vision syst. for blinds 98729
non-parametric image subtraction by grey level scattergrams 129848
nonlin. diffusion and multiscale anals. 106749
nonlin. least-sq. struct. from motion, innovative inform. propag. 106620
nonlin. scale-spaces isomorphic to lin. case with appls. to scalar, vector and multispectral images 118444
obj. recogn., modular neural network 118671
obj. recogn. under affine transforms. 129921
obj. surface shape from shading meas. by neural net, indust. appl. 120644
obj. tracking with attributes, probabilistic techs. 106663
objs. selection with freehand sketches 106552
obstacle detect. to prevent miscalculation of line location and orient. 94583
occluded scenes, multiple people tracking, multiple cameras appl. 129493
omni-rig, lin. self-recalibration of rig with varying internal/external params. 106475
omnidirectional image seq., resoln. improvement *(Japanese)* 106503
online grid-gaps inspection syst. for electron-gun manufacture 80579
opt. center calib., vision coord. meas. *(Chinese)* 89897
opt. flow, computation of boundary-preserving estim. 129624
opt. flow computation 129616
optic flow computation using discrete wavelet anal. 106777
optic flow variational method, spatio-temporal smoothness constraint 84270
optim.-based image segmentation algms. 73531
optimal estim. and tracking of general rot. using geometric alg. for computer vision 73234
optimal subband wavelet thresholding using noisy/non-noisy data of images 129773
optoelectronic complex inner product image segmentation, ATR/machine vision appls. 107233
optoelectronic computer-aided systs. for 3D inspection of complex objs. 106795
order params. for detecting target curves in images 118303
orthogonal polygon recogn., visibility concepts 106436
orthonormal vector sets, regularization using coupled PDE 118248
packaging design concept eval., appls. of computer-vision techs. 67577
PanelMaster LCD panel inspection syst. *(Japanese)* 82241
panoramic photography image alignment/color matching 95577
parallel image proc. for line detect. in shared-memory and distributed environ. 94584
parallel thinning algms. for 2D grayscale images 73488
parallel-perspective stereo mosaics 106553
param. estim. given data with covariances 129621
parametric motion tracking, drift reduction 106549
params. estim., covariance inform. 94899
PARTNER human-robot interface syst., adaptive annotation fn. 97838

computer vision continued
pattern recogn., conf., Spain (2000) 67413
PCB AOI, color/black-and-white systs. comparison 113769
PCB golden fingers defect class., bootstrap sampling method 80516
PDP prod. line inspection, morph. skeleton algm. 129458
people tracking with single video camera, hierarchical model of dyn. 129633
pers. recogn. syst. using fibre grating vision sens. *(Japanese)* 107145
perspective dyn. syst. observability 84201
phase-unwrapping algm. based on modulation/phase reliab. 94753
pixel colour invariance 129609
pixel-level image fusion scheme *(Chinese)* 94619
pixel-level image fusion scheme, enhanced visualization, Laplacian pyramid decomp. 95534
plan-view trajectory estim. with dense stereo background models 106653
planar obj. detect. under scaled orthographic projection 94988
Point Distribution Model for determining motion components 73308
pose estim., environ. features learning 118415
pose estim., shape extraction, Hough transform invariance 129847
pose-invariant face recogn. by face synthesis 129914
precise fibre alignment by computer-based vision systs. 94921
probabilistic tracking in metric space 106595
proc. knowledge incorporation into obj. recogn. for assemblies 107173
projection matrices, appls. in computer vision 106560
projective evol. of plane curves 118447
projective transforms., efficient param. estim. 84306
QC cloth prod., real-time defect detect. 120886
random particles guiding by deterministic search 106550
randomized algm. for detecting circles 129420
range recovering from omnidirectional image pair 95553
real-time feature tracking and outlier rejection with changes in illum. 106585
real-time pose estim. in room-size environ., accurate catadioptric calib. 106474
real-time robust detect. of moving objs. in cluttered scenes 118349
RECCE mission planning 99174
rect. pillar posn. detect. by image, Hough transform. *(Japanese)* 84607
region boundaries detect., one-pass algm. 94592
region-based obj. recogn., multiple representations prunning 129843
registration, local deform., transform mapping of correl. images 73313
road and pipe detect. within LADAR intens. images via fuzzy techs. 120468
road vehicle speed detect., computer vision and image proc. appl. *(Chinese)* 97339
robust facial feature tracking 129626
robust lin. algm. for determining epipolar geom. 73235
robust PCA for computer vision 106555
robust point correspondence by concave minimization 129497
robust vel. estim. method in image seq. using mixed domain phase sig. 84546
scale invariant interest points based indexing 106570
scene model reconstruction, stat. geometric framework 129625
segmentation based on circumscribed contours/region growing/clustering fusion 94544
self windowing for high-speed vision 118435
self-organizing vision, stochastic clustering 129547
seq. Monte Carlo fusion of sound and vision for speaker tracking 106587
servoing, visual, multirate sampling, disturbance rejection 94730
shape feature extraction using geometric transform 73231
shape from shading, Green's fn. approac 129881
shape from texture, homog. 129612
shape recovery of unknown topol., novel modeling algm. 106559
shape-resolving local thresholding for obj. detect. 73519
shipbuilding planar panels visual recogn. using line features 129892
SignStream, tool for linguistic and computer vision research on visual-gestural lang. data 129549
simulated potholes detect. and avoidance in autonomous vehicle navig. in unstructured environ. 94582
simultaneous estim. of super-resolved intens. and depth maps from low resoln. defocused obs. of scene 106472
single view point cone mirror omni-directional catadioptric syst. 106600
single-image fringe projection profiling method for dyn. appl. 113749
SIREV, Sector Imaging Radar for Enhanced Vision 131667
skin color 118289
skin detect., novel adaptive colour segmentation algm. 129610
SMD, lead inspection, edge detect., wavelet transform 118708
sodium lamp tube automatic defect detect. syst. *(Japanese)* 100315
sound MagicBoard, augmented reality tools 74457
space carving algm., stat. consistency check 129629
spectral calib. params. learning for color inspection 106656
spectral mixture anal., lin. and semi-parametric full and iterated partial unmixing 118443
spectral variability modelling of ground irradiance fns. 75619
spherical surface curvature meas. by light refl. 97138
split aperture imaging for high dyn. range 106592
sports games players tracking 94968
squint diagnosis, facial symm. estim. by stereo imaging 98345
stable monotonic matching for stereoscopic vision 84627
stat. approach to background subtraction for surveillance systs. 106637
stat. calib. of CCD imaging proc. 109679
stat. context priming for obj. detect. 106589
stereo camera calib., perform. eval. of RANSAC algms. 129498
stereo image reconstr. from polycentric panoramas 84340
stereo image seqs., incremental shape reconstruction 94697
stereo vision image matching by self-organizing neural net 107279
stereoscopic image self-matching without camera calib. 129900
stereoscopic video imaging using low-cost PC-based syst. 94906
striation marks visual comparison with struct. light 107271
struct. and motion from two uncalibrated views using points on planes 84210
struct. environ. scenes, distortion removal and automatic calib. 129429
struct. from motion and colour constancy in computer vision 118306
structural learning from iconic representations 95444
subpixel accuracy analogue fast edge location meas. using CCD image 118729
superellipse detect., efficient/consistent method 118399
surface defects detect./charactn. using CNN 90609
surface shape signatures, obj. matching 118682
surfaces geomtry estim. in natural scenes using learning theoretic method 73226
surfaces reconstruction using anisotropic basis fns. 106650
survey of electronic products charact. *(German)* 131983
symmetric phase type filters for edge detect. *(Chinese)* 84512
telemanipulation/telemetry in microenviron., via Internet 97158
textured materials, surface defects ident., wavelet packets 124401
textured surfaces, struct. estim. using local affine flow 129613
TFT LCD inspection using high-speed high-resoln. vision syst. 127845
three-light-source photom. stereo, illum. config. and surface reflectance 84168

computer vision continued
topography reconstruction of specular surfaces from series of grey-scale image 106786
topol. and geom. cooperation based method for stereo matching 118282
topol. free HMM, background modeling 106546
traffic monitoring, visual feature tracking methods 73130
traffic surveillance, content-based event retrieval 129815
transparent lenses surface defects detect., concentric frame difference metho *(Japanese)* 82257
trifocal tensor estim., versatile method 106646
trust-region methods for real-time tracking 106658
turning, surface roughness inspection by computer vision 100663
TV commercials, automatic recogn. on digital TV 73506
two-CCD vision sens., design optim. 120917
two-step circle detect. algm. from intersecting chords 94478
uncalibrated image pairs, planar homography detect. 129901
uncalibrated image seq. matching, 8-point algm. 107278
uncalibrated images of same scene, corresponding point matching 84547
undergraduate computer vision curriculum, primary source material 113386
undergraduate computer vision instruction, expt. learning 113388
undergraduate image computation course, graphics and computer vision 113389
underground mining LHD vehicle operation safety, stereo vision appl. 129534
unmanned air vehicle landing, vision based motion estim. and nonlin. control 109670
unmanned mini-helicopter control for visual power lines inspection 123020
VI, computational allegory 129778
variable bandwidth mean shift and data-driven scale selection 106563
variational and level set methods in computer vision, conf., Vancouver, BC, Canada (July 2001) 113213
vectoral imaging-based AOI for PCB assembly 113761
vehicle driving, computer vision based obj. detect. and recogn. 95560
vehicle no.-plate recogn. using neural nets 84593
vehicle recogn. using scale space methods 107296
vehicle vision syst. for adaptive cruise control *(French)* 73132
video network, multiple vehicles identity maint. 95007
video surveillance syst., adaptive background subtraction 84626
video switching and sens. fusion for multi-camera sens. systs. 94453
video-based online face recogn. using identity surfaces 107194
video-frame rate detect. of posn./orient. by Radon transform 95556
viewpoint invariant texture matching and wide baseline stereo 106654
virtual video tape, develop. tool for real-time motion image understanding 73434
visibility partition for affine pattern matching, computer vision and pattern matching 94982
vision chip syst. for real time visual proc. *(Japanese)* 84088
vision geom., conf., San Diego, CA, USA, July 2000 67382
vision syst. and 3D modelling for quantification of morph. of irregular particles 94452
visual correspondence computing with occlusions using graph cuts 106639
visual inspection by binocular rivalry, stereo viewing 78700
visual interfaces to computers course 118452
visual pattern proc., CMOS technol., artificial retina neural net 73276
visual target distinctness prediction, min. error gain 129862
visual tracking in appl. domains 73267
visual uncertainty and occlusion, resoln. through probabilistic reasoning 129627
wafer 3D micropattern meas., opt. probe & control design 120653
wide baseline stereo matching based on local, affinely invariant regions 129487
wood real-time inspection archit. 95532
workpiece, 3D coord. vision meas., feature points, overview *(Chinese)* 97817
Xetal, CMOS low-power high-perform. smart camera proc. chip 102230
zoom-lens camera, calib. from noisy data with outliers 131979
Si CZ growth, online diam. calib., shape estim. 114209
Si eye using MEMS micromirrors for intell. vision systs. 86603
Xe flashlamps, bright choice for illum. 113129

computerised conferencing *see teleconferencing*

computerised control
see also building management systems; chemical engineering computing; command and control systems; control engineering computing; electrical engineering computing; industrial control; intelligent control; mechanical engineering computing; nuclear engineering computing; power system control; transport control
500 kV substation, computerized supervisory control syst. *(Chinese)* 123679
adaptive rate control, elastic scheduling 86412
anaesthesia syst. design using simul. 76607
at. fountain freq. std., computerised control syst. 75358
automobile laser-radar collision avoidance, microcomputer control syst. *(Chinese)* 134571
axis roundness meas., V-shaped method *(Chinese)* 89896
CAN, at. multicast prog. 74188
cellular telephone-based home appliance control syst., prototyping 108776
central server for TV program proc./playout *(German)* 75321
Counter Sniper, small projectile and gunfire localization syst. 107412
DC/DC converters, fuzzy rule proc. based nonlin. control syst. 112626
DC/stepping motor control, interfacing to computer based systs. 112546
digital broadcast proc., automation aspects 86305
dot matrix digital display telecontrol wall calendar *(Chinese)* 86870
Dukovany nuc. plant, I&C syst. refurbishment 123120
elec.-engng. equipt., μP control boards software 77802
evoked pot. DAQ, PC controlled const. current stimulator 98201
FEL beams, distributed real time control 108298
IM control syst., load profiling meas. & proc., clipping integrator 112517
induction machine direct torque control, adaptive flux observer *(Chinese)* 88731
induction wind power generator, 2 MW, digital electronic control *(German)* 123452
interf. suppression in distributed intell. control syst. 78736
Jiangya project sluice gate automatic control syst., reservoir dispatch, Ethernet, Profibus network *(Chinese)* 77772
laser beam direct-writing device, CAD drawing exchange file *(Chinese)* 92208
LEDA, beam phase meas. syst. 87126
liq. interf. refractometers, displacement control, induction sens. 86492
low power hybrid posture monitoring syst. 132995
micro-opt. element, laser writing syst., computer aided control 71375
motorsensory activation prototype device, fMRI 110873
MX beamline control syst. toolkit 110468
N4 PWR NPP, computerised control room, post-accident procedure anal. 123150
NanoWalker robot, micrometer and submicrometer motions, piezoceramic actuation 81747
NASA's Deep Space Network, 20 kW CW transmitter 120106
NSRL soft X-ray monochromator, SR, computer control *(Chinese)* 110474

mputerised control continued
obs. subsyst., efficient in automated control syst. design *(Russian)* 97140
opt. images, multi-channel correl. recogn. method 118746
palmar skin, impedance locus meas., computer-controlled syst. 121951
pervasive computing, context-based media adaptation 130956
piezoelec. ceramic lin. US motor drive, recurrent fuzzy neural network control 99703
PSI Injector 2 cyclotron, proton beam dump, surveillance protect. 87129
PTCA balloon catheters, computer-controlled inflation/deflation 87781
Skala-Mikro, reactor control, safety, and automatic-monitoring syst. 112246
Space Interferometry Mission instrum., real-time command, data & control 133239
switched reluctance motor drive with microcomputer control, models/simul. 78228
target of the day radiotherapy precision, computer-controlled table 87820
three-phase ac motors, DSP-based control, A/D conversion syst. 78104
UHF filters automatic computer-controlled tuning syst. 125592
UNICAT control syst. at APS 109457
voice synthesis module based on CAN bus *(Chinese)* 118157
VSX ring orbit feedback syst. develop. 121347
washing machines, three-phase IM, electronic control ccts. *(German)* 89467
wind tunnel test facilities, PID control based trajectory simul. 133213

mputerised instrumentation
see also astronomy computing; automatic test equipment; automatic test software; biology computing; chemical engineering computing; chemistry computing; computerised monitoring; computerised tomography; data acquisition; electrical engineering computing; electronic engineering computing; geophysics computing; high energy physics instrumentation computing; nuclear engineering computing; physics computing; spectroscopy computing; virtual instrumentation
2D image measuring machine, absol. code, autofocusing *(Chinese)* 124404
3-D underwater obj. recogn., piezoelec. composite US sens. *(Korean)* 133372
3D display syst. based on computer-generated integral photography 109896
absol. non-contact orient. sens. for wrist motion control 97148
acetabula cups, seq. impressions meas., noncontact syst. 122330
aircraft inspection, computer-aided tap test syst., mag. cam 122498
aircraft inspection, NDE sens. integrat., scanning/positioning modules 122497
aircraft maint., phase stepping shearography, improved software 122496
alloy surface layer charactn., magnetometric eddy current sens. 101634
ANA, Internet calib. direct to national meas. stds. 109415
aniline, pulsed PECVD reactor, computer controlled, polymer thin films deposition 124916
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
Antarctic ice borehole probe 122601
ASTER target obs. scenario 109475
auditory evoked responses recording, PC syst. 76273
automated meas. systs., neural net appl. 109440
avionic airborne digital computers/display devices *(Russian)* 133217
axisymm. drop shape anal. meas., CCD video camera, fast algms. 75883
batt. state-of-health meas., Cadex 7200 batt. analyser 89136
bistatic microwave intrusion detect. sens. 86930
blower efficiency meas. instrum. using µP technol. *(Chinese)* 109428
bomb detect. using backscattered X-ray radiography 110436
bone cond. hearing aids, skull vibr. meas., PC-based in-situ test 76706
CAD modelling, contact probe rad. compensation 131814
calib. automation and AI 86414
CALIBR, computer aided calib. syst. for hand-held multimeters diagnostics *(Polish)* 131817
CANopen distributed instrums., safe design 120655
capacitive level sens. develop. with LabView software *(Slovenian)* 75459
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
client-server rem. Windows-based sig. generator, design, implement. 109833
CMM, optimal meas. seq. planning/collision-free path 97139
CMM, optimum path planning, comparison of integer prog. model with GA model 120654
CMOS temp. sens., curvature correction, digital bus interface 86776
comfort sens., fuzzy symbolic approach 132084
complex instrums. and meas. systs., embedded IS, generators 131815
cracks automatic meas. using fibre-optic reflectometry 90600
cylindrical piece meas., laser telemetry, forest caliper appl. 109993
damage diagnosis, time series anal. of vibr. sigs. 86409
DAQ and control, multichannel measuring transducer *(Russian)* 75382
DAQ boards, travelling std. for calib. 131829
DC meas., intell. instrum. 86903
deep space network ranging syst., use of DSP technol. 133267
deep X-ray lithog. automated micromachining, NSLS X14B beamline 116084
digital EO meas. technol., power syst. appl. *(Chinese)* 112188
digital potentiometers, advantages over mech. counterparts 121132
digital temperature sensor and distributed temperature measuring system *(Chinese)* 120766
discrim. based monitor for radioact. gases and vaps. 132288
distributed intell. hierarchical syst., heat metering and control 122825
Dukovany nuc. plant, I&C syst. refurbishment 123120
DUV scatterometer for nanoparticle detect. in semicond. mfg. 109434
eddy current probe improvement, DSP algms., autom. meas. syst. 114506
elec. capacitance tomography, use in flame visualizations 120652
electronic endoscope syst. for 3-D shape meas. *(Japanese)* 87302
electronic nose, odor conc., computerized compensation 97451
evoked pot. DAQ, PC controlled const. current stimulator 98201
eyesafe indust. fibre lidar, rem. sens. appls. 99034
femtosecond polariz. laser pulse shaping, dual-channel spectral interferometry 71895
field intell. instrum. software syst., integrat. technol. *(Chinese)* 109427
flexible sampling frame meas. syst. 109445
flickermeter testing, calib. syst., digital logic & software control 109836
flood control/water mgt. radio DAQ syst. 120671
flue gas O_2 content soft sens. based on neural net *(Chinese)* 75694
frame rate meas. approach for real-time computer vision appls. 121176
free-speech command word speech detect. syst., PC-based test syst. eval. *(German)* 73083
friction and roughness mapping, meas. by robot 97146
garishness of metallic painted surfaces, meas. method *(Japanese)* 86994
guarded vector voltmeter for AC ratio std. calib. 131798
hierarchical distrib. intell. sens. instrum. syst., error compens. 120648
high frame rate CCD camera with region-of-interest capability 120389
human body temp. on-line monitoring, virtual instrum. 110511
HV insulation, PD diagnosis strategies for measuring systs. 109430
HV insulation, PD meas./eval., ES, ANN 109917
hydroelectric power stations gate movement protection 112357

computerised instrumentation continued
IC package thermal transients meas., hardware & software solns. 100605
immitance sens. params., computing instrumentation 109930
indust. gas discrim. syst., neural network, PLD implement. 132066
insulation materials ageing expts., PD meas. technol. *(Korean)* 70386
intell. audiostimulator *(Chinese)* 97143
intell. EM field meter *(Polish)* 131813
intell. US flowmeter, improved meas. & calib. facility 121058
intell. US phased array syst. for steel NDT, optimised design 114532
intell. wireless sens. for indust. mfg. 86774
intelligent flow sens. for liq. injection detect., data commun. *(Chinese)* 75768
LIMPET wave-power station, power quality assess., flickermeter 133878
Mars subsoil geophys. prospecting by TDEM 120690
meas. systs. with combined analogue input/output facilities for practical education 75373
med. net instrums. for telemedicine 75679
MEMS motion meas., computer microvision, opt. microscope, CCD camera, stroboscopic illum. 109663
MEMS struct. illum. and loading control *(German)* 81560
microcontroller based instrums., calib. method 120625
microwave film bulk acoustic resonators, modified Butterworth-Van Dyke cct. 104456
minerals and proc. industries, on-line microwave moisture analyser 75927
missile fuel leaks detect. using opt. sens. 75561
mixed-sig. sens. interface microinstrument 109818
mobile robot posn. meas. using US receiver net *(Japanese)* 97812
multi-point opt. fibre sens., fouling determ. in water systs. 99028
multi-purpose fine opt. auto-adjuster, computer controlled *(Chinese)* 110021
multi-sinewave sig. spectra, arbitrary spectrum test sig. generation *(German)* 132090
multileaf collimator intens.-modulated radiation therapy program 111090
NASWAVE program, standing waves display on NWA 86437
neural network-based sens. sig. accelerator 121050
non-metallic media, flaws/defects detect., PC based non-destructive microwave imaging syst. 97144
nonlin. acoustic NDE, superheterodyne receivers, absol. calib. 122733
nonparametric ident. of lin. systs., resonator based 101686
obj. surface shape from shading meas. by neural net, indust. appl. 120644
oil-spill detect., automatic interferometric syst. 76924
olfactory sig. class. by neural nets 109774
on-line instrum. drivers, Internet resource listings 109450
on-line temp. meas. instrum. for high-temp. obj., specific radiance *(Chinese)* 110035
on-line US instrum., microcomputer-based, soln. conc. meas. *(Chinese)* 109426
open archit. microcontroller based distributed meas. syst. and control syst., automatic program generation 75375
opt. fiber LANs, Q-factor online detect. based on DSP technol. 86014
organic LB film deposition, electronic control syst. 120660
packet forwarding devices in TCP/IP based computer networks, perform. meas. tool 119581
parallel mechanism CMM *(Chinese)* 89898
PC based microwave phase-noise meas. syst., 1.25-2.5 GHz 109433
PC-controlled non-incremental dist. meter, comb spectrum/FM CW interferometer 121184
PD DAQ, prog. digital oscilloscope based syst. 120668
permitt. meas., automated amplit.-only PC based free-space syst. 109948
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
pipe length/temp. meas. using 2 acoustic sens. *(Japanese)* 133373
pneumatic conveying syst. powder flowrate meas., intell. meas. syst. 123975
pneumatic tire testing machine, DAQ, control syst. *(Spanish)* 86782
polyaniline film SO_2 sens., neural network detect. vel. *(Chinese)* 75696
power apparatus fault diagnosis using IR imaging tech. *(Chinese)* 112438
power meas. syst., PC controlled 121137
power overhead lines uprating, Israel Electric Corporation 123030
power plant I&C upgrading projects, USA 88505
proton beam micromachining, LabVIEW scanning and control syst. 127110
pulmonary gas meas., portable syst., fast lung fn. test 110522
pulverised coal flames, concurrent temp. & soot conc. meas. 124096
real-time EM field anal. syst. for engng. education 78493
relative permitt. detector for cable insulation 77381
relay testing platform for relay perform. 77488
reson. sens. arrays, high-resoln. multichannel instrum. 131816
RF spectrum monitoring with digital anal. syst. 86411
road surface monitoring syst. for cruise-assist highway systs. *(Japanese)* 124000
robust meas. systs., computerised investig. 109447
rotary encoder automatic high precision calib. syst. *(Japanese)* 132153
rotary encoder based on magneto-opt. storage method *(Japanese)* 71431
roughness stds., Australian surface roughness meas. syst. develop. 120617
sens., low-cost, perform. augmentation 121049
sens. networking and interface standardization 109438
sens. networks, querying/tasking 75369
SEU phenom., transient IBIC & LBIC, data collection syst. & chamber 126606
SI-01 gamma probe surveillance syst. at IFIN-HH 132470
single X-ray exposure half-value layer meas., portable electronic device 98772
smart piezoresistive press. sens., correction using microcontroller 75772
smart sig. conditioning appl. to sens. 86779
soft-tissue lesions, automated meas. of struct. in CT and MRI, validation study 110976
software tool for seismic data recorder/analyser 76842
solid-state devices, low temp. DC/noise meas., automatic syst. 75376
spaceborne instrum. radiometric calib., thermal vac. facility 122632
spaceborne precip. radars, second generation 133329
spherical surface curvature meas. by light refl. 97138
spin valve bridge sens. for current meas. & control 109508
Strategy Builder software for atmos. retrievals 133322
substation grounding impedance meas. syst. 77670
surface roughness meas., fibre probe, computer proc. *(Chinese)* 75599
surgical navig. 3D display syst. 87804
sync. machines reactances determ. from DC decay 123392
sync. methods 131811
technol. and meas., software role 131818
Terason 2000 handheld PC-based US imaging syst., SoC design 110696
thermal cond. meas., PC-based transient method 132206
thermal environ. expt., DP, software *(Chinese)* 97142
thermocouple time consts. meas. during engng. recruiting weekend 78491
three-phase IM fault detect., stator current anal. program 123476
three-phase indust. power syst. unbalance voltage level meas. 77363
time-base for waveform param. estim. 121063
transducer fault detect., ANN optimisation, GA 75377
transducer of elec. variables, self-test *(Chinese)* 77636

computerised instrumentation continued
transm. line power freq. params. meas. syst. *(Chinese)* 77632
turning spindle motion errors meas. using multipoint method *(Japanese)* 132155
twin laser sens. thickness meas. instrum. calib., isoline bilinear LUT 113743
two-coord. automatic-tracing device for accessory size meas. *(Chinese)* 124406
two-soln. interface meas. using image proc. *(Japanese)* 132213
UGS. Army perspective 77022
UGS, conf., Orlando, FL, USA (April 2000) 67398
UIE flickermeter, digital implement., params. sensitivity anal. 109444
ultrashort X-ray pulses from storage ring meas. 110473
US NDT data proc., 3D graphics role, adv. software environ. 114539
variodes, auto-meas. using PC, C-V and I-V charact. 75378
vortex flowmeter sig. proc. syst., DSP with spectrum anal. fn. *(Chinese)* 109487
VVER 1000 control syst. upgrade/verification, Temelin plant 123119
wafer 3D micropattern meas., opt. probe & control design 120653
wattmeters spurious errors meas. 121138
weld inspection by laser-based sens. 124395
wide-field imaging interferometry testbed for space mission support, develop. 120661
wind tunnel, automatic meas., computerized syst. 88044
wireless commun. syst. time domain charactn., meas. station 119961
workpiece localization by meas. syst., error compensation 97147
XM-1 high-resoln. soft X-ray microscope at ALS, computer proc. 98093
CO meas. syst., neural net appl. 109439
CO_2 high power laser beam meas. & control, diagnostic instrum. 93702
Zn-air batt. fuelled EV demons. program, Israel 124009

computerised monitoring
7UT612 two-winding power transformer differential protection relay *(German)* 88791
10 MW expt. HTGR, emergency supply, automatic control *(Chinese)* 123161
AC motor drives, stator fault detector, DSP controller based 123859
act. server pages tech., accessing real-time data in Internet/Intranet, on-line monitoring *(Chinese)* 77727
advanced motor protection/monitoring trends 133940
aerial photography, image seq. overlap monitoring 98944
aircraft structural health mgt. 88045
ambulatory physiological monitor for animal welfare studies 121968
ATM network monitoring via network mgt. tool 85140
automotive intell. image sens. for inner space monitoring 124038
BIT for intell. syst. design & condition monitoring, overview 131805
blast furnace, pulverized coal injection, video monitoring, image anal. 134676
cable jn. monitoring syst., fault prewarning, jn. resist., insulation aging *(Chinese)* 133764
CAINONET perform. real-time monitoring and eval. syst. 96040
cardiac ICU, patient state monitoring, intell. alarms syst. 132530
cardiac telemonitoring, therapy surveillance mgt. for myocardial failure 122457
cardiopulmonary resuscitation, act. compression decompression, quality on-line monitoring 98605
caverned large oil tanks, fibre opt. rem. inspection 123109
coal-fined plant, elec. syst. monitoring and control, DCS *(Chinese)* 99542
cogen. steam power plant boiler water chem. monitoring syst. 88596
COGENT, cognitive agent for Spacecraft telemetry monitoring 76823
commercial building power syst. harmonics, digital monitoring systs. 77347
component reliab. estim., online, using neural networks and wavelets 113783
composite plate impact-induced damage detect. by neural nets 109429
control with adaptive rate, elastic scheduling 86412
cooling water intake, jellyfish detect., video syst. *(Japanese)* 95486
coord. overcurrent protection scheme, computer operated 99401
coronary care units, wireless interface for monitored patients 76788
current phasor meas. using protection CT monitoring syst. 123089
dam safety assess. using ES technol. 88630
DC and AC back-up power systs., batt. chargers and batts. 134234
dielec. breakdown mechanisms diagnosis using neural net PD monitoring 92665
digital generator-transformer protection, Internet-based mgt. syst. *(Chinese)* 99720
digital TV, objective audio and video quality assess. 129477
direct elec. concrete curing, intell. virtual control method 100323
distrib. transformer diagnostics, multi-channel wireless commun. *(Korean)* 123543
disturbance recorders, near real time inform. support, power syst. control 77209
driver vigilance monitoring, skin resist.-based automatic checkout syst. 67502
DSP solns. for power quality monitoring 86407
dyn. group mgt. for large-scale distributed event monitoring 130556
e-diagnostics for semicond. wafer e-factory capability 70236
elec. equipt. on-line insulation monitoring, IS, GIS *(Chinese)* 88666
elec. heat tracing, µP control, wireless commun. 134691
elec. heat tracing control/monitoring 134639
emergency generator set, fault disturbance recorder, online monitoring *(Chinese)* 99573
EnFlex MG-200 substation maint. mgt. syst. 134293
environ. monitoring syst. based on ANN 88177
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
fan-speed control techs. in PCs, thermal-mgt. solns. 67614
fiber optic rem. temp. meas., Internet syst. 120864
fibre optic sens., electrification meas. in power transformers 77936
fibre optic sens. for civ. struct. health condition monitoring *(Chinese)* 131950
flood control/water mgt. radio DAQ syst. 120671
foetal growth, irregular, detect. using lin. mixed models 98344
gait assess., low-power wireless microcontroller PC interface 111265
gas insulated substation PD signatures, condition monitoring, multi-agent paradigm 112725
gas turbine engine fault diagnosis using feedforward neural nets 112319
gas/oil fired generating unit efficiency improvement, perform. monitoring 88568
GIC impact on NGC transm. syst. 111985
GraspIt online model-based grasp planning and visualisation syst. 97404
HAVi appls. on Internet-enabled devices, rem. execution 119691
home ECG/blood press. telemonitoring centre develop. 88013
Honeywell Global Home Server, home automation commun. security syst. 119711
HRSG perform. meas., shortcut methods 99533
human activity real-time monitoring, multiple vision sens. 86413
HV cct. breaker online monitoring/fault diagnosis using RBF networks *(Chinese)* 123673
HV cct. breakers, monitoring/diagnostic params. selection, IEEE Standard 99836
III-V MOCVD proc. control by UV absorpt./US conc. monitoring 101374
IM, on-line condition monitoring 134025
IM, on-line testing, predictive maint., monitoring 123463
IM condition monitoring using PWM spectrum anal./optim. 134024
IM stator condition monitoring, fuzzy logic approach 123418

computerised monitoring continued
implantable video telemetry for biocompatibility studies 86423
IMs, broken rotor bar faults detect., on-line neurofuzzy approach 123422
indust. gas turbine start-up seqs. monitoring using multi agent syst. 88612
instrums. monitoring/control over Internet, GPIB interface 75371
intell. power syst. voltage monitoring instrum. develop. *(Chinese)* 77634
Internet, intell. door monitoring syst. 74061
Internet for businesses, managed security monitoring 119593
Internet-based power syst. freq. monitoring network 112197
IR thin film monitoring syst., init. param. auto-check algm. execution *(Chinese)* 67651
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
LF mag. flux dens. meas., sens. network design & control 131878
LIM online perform. monitoring using virtual instrumentation syst. *(Korean)* 123518
local and rem. substation multi-vendor SCADA syst. 78096
low-cost microsensors for surveillance and monitoring 109443
lower limb prosthesis, portable meas. of press., temps. and humidity 133049
machine health monitoring/control by vibr. sens. 97149
mechatronics student expts., DCS monitoring via Internet 97150
med. net instrums. for telemedicine 75679
metal-clad switchgear low-level arcing faults location/detect. 78051
microcontroller-based portable multifunctional patient monitor 98205
microgravity environ. on-board monitoring using nerual nets 120659
Middle Egypt Electricity Company microscada syst. implement. 133524
mine hoist DC motor drive, intell. monitoring/control syst. 124168
mobile telephone traffic mass meas. & anal., soft testing 119964
MomentA, service mgt. using mobile agents in CORBA environ. 119469
motion monitoring/class. with center-biased motion estim. 94556
motor control systs., intell. devices/networks integrat. 133942
motor drive fault detect./mgt. syst. 113043
multicast deployment efforts support, monitoring tools survey 108249
multichannel gas leakage monitoring syst. using CPLD chip 99040
multifrequency elec. impedance tomography for patient monitoring 121918
µP control logic, online integrity monitoring 125378
MV motors, stator failure modes, field testing, condition monitoring 123328
newborn incubator functionality, microprocessed assess. 76224
NPP, inform. and diagnostic subsystems 112248
NPP navig. syst. 88538
nuc. power indust. safety, intell. syst. selection 112281
nuc. power station chem. monitoring DP syst. 123130
NUMASS, nuc. safety project WWW-based monitoring syst. 109441
oil content online monitoring by neural nets 111472
on-line dielec. loss meas., higher-order sine fitting algm. *(Chinese)* 132133
opt. fiber sens. for oil contamination meas., 3D fluoresc. spectrum parameterization 120879
Paks VVER-440 units, PLASMA on-line safety monitoring, EOP visualiz. module 112230
photolithog. in-line temp. meas., intell. syst., out-of-contact fault 103563
pillow sens. syst. for physiological param. meas. in sleep *(Japanese)* 121902
РК-АГ-02 α-γ-radiometer-spectrometer, ^{241}Am proximate monitoring 98080
power generation energy resource/economics monitoring syst. *(Russian)* 77672
power line carrier protection software design/implement *(Chinese)* 111836
power plant condition monitoring, modal logic reasoning 99442
power plant continuous emission monitoring syst. *(Chinese)* 77678
power plant perform. improvement using Internet 88508
power plant protection/control modernisation, digital technols. 77679
power quality monitoring, instrumentation, data anal. 77344
power quality monitoring integrat. with distrib. automation 133605
power station real-time monitoring syst., MIS *(Chinese)* 133856
power syst. integrated telemetry proc. approach 99440
power system monitoring, picture display dispatch strategy *(Chinese)* 77637
power transformer on-load tap-changers, ageing detect. from vibr. signatures 112582
power transformer on-load tap-changers, automatic condition diagnostics 112581
power transformer overloading, economic benefit, risk eval. 112599
power transformers, on-line monitoring, PLC appl. 112600
power transformers overload capacity assess., on-line monitoring systs. 112588
precise fibre alignment by computer-based vision systs. 94921
primary and secondary batts., model-based predictive diagnostics 89056
prison inmate telephone conversation monitoring, content recogn. 108080
pro-act. network fault mgt. using reinforcement learning 96041
proc. control, plasma impedance matching, discrete wavelet monitoring 124441
prog. resoln. integrated opt. motion detect. microsystem 97582
pulp/paper mill, power quality mgt. 124158
pump. efficiency monitoring, thermodyn. analyzing method *(Chinese)* 77731
pumped storage power plant condition monitoring/anal./diagnosis syst. design 88641
PV pumping systs., test facility/charact. meas. perform. eval. 99595
radiation therapy, centralized dose calc. syst. 98614
real-time mixed-traffic WLAN, prioritized CSMA 130626
real-time power network stabil. monitoring software *(Chinese)* 111835
real-time water quality monitoring across Internet, virtual instrum. 99029
Recklinghausen district heating power plant rem. control, fieldbus technol. *(German)* 123179
rem. monitoring/diagnosis in power plant operation 88506
respiration rate/posture monitoring, image seq. anal. *(Japanese)* 110520
reusable launch vehicles, Livingstone model-based syst.-level health mgt. syst. 76793
RF conducted emissions monitoring, VXI-based digital meas. station 117716
RF spectrum monitoring with digital anal. syst. 86411
rly. traction substation, rem. multimedia video monitoring syst. *(Chinese)* 123950
road EV, advanced diagnostic syst. 89392
Rohde & Schwarz's DVQM, multichannel video quality analyzer for digital TV broadcasting 86436
Rohde & Schwarz Digital Video Quality Analyzer 75298
Rohde & Schwarz digital video quality analyzer, DVQ 75297
Rohde & Schwarz FSP spectrum analyzer family 75387
Rohde & Schwarz ROGER GSM interf. analyser 75388
Rohde and Schwarz broadcast transmitter rem. control and monitoring via Internet 86311
rot. machine fault diagnosis, vibr. anal., DSP-based FFT-analyser 112515
rotodynamic mach., wavelet transform and neural net for condition monitoring 123276
scoliosis treatment, low power portable EM posture monitoring syst. 111068
scoliosis treatment, low power wireless load monitoring syst. 111067
sens. intell. fault detect. for monitoring, diagnostics 132082
Skala-Mikro, reactor control, safety, and automatic-monitoring syst. 112246

nputerised monitoring continued
smart material/struct. condition, fiber optic sens. syst. 90564
Smart PlantWorks power plant O&M DSS 99446
smart sens. design in indust. procs. appls. 121053
software packages for service level agreement compliance meas. 85285
space junk, organization of opt. obs./DP 133208
spacecraft ASMS tone detect. via neural network struct. 119107
steam turbine units, real-time energy-loss monitoring and anal. syst. *(Chinese)* 77753
street lamp rem. supervisory syst. based on power-line carrier commun. *(Chinese)* 124089
substation, HF switching DC power syst., multi-level monitoring *(Chinese)* 123682
substation, video server based surveillance syst. design *(Chinese)* 89012
substation control/protection/monitoring integrat. strategies 134304
substation HV apparatus RS485 bus-model online insulation monitoring syst. *(Chinese)* 89007
substation integrated systs. for protection, control and inform., proposal 78072
substation protection/control, intranet-based meas./monitoring 78069
substations, monitoring, control, software syst. *(Chinese)* 134308
substations, T&D networks, perform. reliab., technol. solns. 78094
tap changers, on-line condition monitoring 134127
telecomms. network monitoring, chronicles discovering 108048
therapy, image-guided, intra-operative image segmentation and non-rigid image registration 87785
TopArc steel plant arc furnace stability monitoring syst. 89471
total liq. ventilation, press.-limited respirator/lung mech. syst. 122283
traffic monitoring, model-based, using neural nets 86405
unburned methane detect. by portable diode laser gas analyzer 109739
user-friendly automatic polishing robot syst., rem. operation 131812
utility struct., avian interacts. monitoring, automated systs. 112109
vehicles in platoon, automated, fault diagnostic syst. 86410
vital signs monitoring, telemedicine, patient and physician satisfaction 133185
vital signs monitoring from home with open systs. 111275
voltage ref. elements monitoring, predictive models 132117
wavelet data compression, real-time monitoring syst. for large hydraulic machines 77771
GaAs 6 inch wafer mfg., cost effective yield enhance. using August NSX syst. 126924
Pb-acid EV batt. charging control, charging/discharging monitoring 123987
Pb-acid valve-regulated batt. monitoring syst. 112815

mputerised navigation
3-wheeled robot vehicle, camera/laser/encoder data fusion 120888
blind people, auditory guidance syst. with sig. transform. 133380
civ. engng. machine localization, laser theodolite/odometer 97841
combine harvester guidance, fuzzy inform. merging *(French)* 75245
ETS-VII rendezvous docking, relative GPS navig. *(Japanese)* 86262
extended TDOA histogram method *(Chinese)* 95613
flying robot, visual navig. based on insect homing 97036
flying robot navig. using insect-inspired visual odometer 86972
fuzzy robot navig. by human visual perception mimicking, terrain traversability 129530
GPS receiver, software type for weak sigs. 109328
indoor pers. navig. syst., IR interactive commun. 111184
integrated navig. systs., interval and fuzzy tech. appl. 130084
ISS transfer vehicle guidance, RendezVous sens. laser rangefinder 98925
ISS transfer vehicles automatic guidance, RendezVous sens. 98924
Kalman filtering, vehicle navig. appl. 84717
mobile robot guidance, curvature opt. fiber whiskers 131946
mobile robot posn., omnidirectional visual sens. SYCLOP *(French)* 73131
mobile robot target tracking, visual-servoing/navig. 84690
Muses-C, asteroid sample return mission, guidance, navig. and control 88034
neurosurgery, augmented-reality endoscope navig. syst. 87789
oral implantology, computer-aided, navig. syst. accuracy 87893
orthopaedic surgery, computer assisted, augmented reality navig. syst. 76602
robot binocular navig. with act. vision 73270
robot localization, edge-based features from images 95557
robot localization using context in omnidirectional imaging 94999
robot navig., mapping, spatial representation acquisition 106708
robot navig., uncalibrated vision for following lines 106812
robot orient. in corridor, projective geom. and act. vision 73510
robot tour guide, GPS-based localization, error-robust 97037
robot vision-based localization by morph. neural net 94998
robot visual navig., omnidirectional sens. *(Japanese)* 106741
robotic soccer, self-localization using laser range finders 109998
robots, indoor feature-based probab. sonar map building 120469
robots, radar sens. model for 3D map building 120707
robots, small, min.-resource distributed navig./mapping 121177
spaceborne autonomous GPS navig. systs. 131323
therapy, image-guided, intra-operative image segmentation and non-rigid image registration 87785
underwater cable following by Twin-Burger 2 robot 94734
underwater robot, concurrent mapping and localisation 109305
underwater robots, terrain-aided sonar navig. 131684
underwater unmanned vehicles, sonar-based guidance 131685
unmanned mini-helicopter control for visual power lines inspection 123020
vehicle, unmanned, fuzzy driving based on DGPS/vision 131707
visually guided agents, hierarchies of sens. and control 84151
visually impaired navig. syst. develop., sens., DGPS & digital maps 76714

omputerised numerical control
3D laser machining, teach-and-play-back prog. based on laser ranging *(Chinese)* 105650
CNC manufacture, tool breakage monitoring, wavelet transform *(Chinese)* 100348
demand pull type control methods, throughput time reduction, supply chain sync. 67691
heavy duty material proc., laser devices and machine/robot interfaces *(German)* 93915
hollow waveguide integrated optic systs. for 10.6 micron laser radar 71347
intell. 3D microstructuring with UV-laser syst., flexible mfg. 70367
involute profile deviations meas., generalised polar-coord. method *(Chinese)* 78739
Japanese technol. innovation, machine tool indust. case study 89717
lathes design, reliab. allocation method 89946
machine tool contouring error detect., wavelets/neural nets 124391
mating part fit-rate, workshop oriented num. method *(Chinese)* 89935
PCB design, optimal moving path for NC drilling, automatic prog. *(Chinese)* 102807

computerised pattern recognition *see pattern recognition*
computerised picture processing *see image processing*
computerised process control *see process control*
computerised signal processing *see signal processing*
computerised spectroscopy *see spectroscopy computing*
computerised test equipment *see automatic test equipment*

computerised tomography
see also emission tomography
2D, reconstruction filters scaling 87771
3D automated segmentation and structural anal. of vascular trees using deformable models 121884
3D med. image modeling of scatt. data based on data-depend. criteria 76524
3D med. image proc., math. morph. *(Japanese)* 98421
3D med. image segmentation, metaballs appl., struct. deformable models 110495
3D medical images, line and sheet struct. detect. and quantification 87308
3D pose estim. of biological tissues by CT/fluoroscopy 98506
3D reconstruction of aorta from tomographic image seq., anal. and optimisation 122135
3D tomographic images, 3D anatomical point landmark localization using deformable models 87709
3D US image reconstr. for home health care *(Japanese)* 87471
3D water-coated antenna applicator, mag. reson. compatible 87847
3D X-ray microtomographic syst., CMOS image sens., bone imaging 132827
3D X-ray microtomographic syst. with CMOS image sens. 132834
4D self-pot. tomography in near-surface geophys. exploration 88167
abdominal aortic aneurysm segmentation, 3-D deformable model, CT images 98565
abdominal aortic aneurysms, 3D image anal. 110947
abdominal CT cine viewing 87722
abdominal organ recogn. in CT images, contextual neural net, fuzzy rules 76540
acetabular cup posn., post-operative meas. X-ray/CT registration 76561
acrylic phantom, CT, MRI, stereotactic localization syst. 76635
adaptive radiotherapy, daily dose prescription, image feedback 87838
ALS hard X-ray imaging microscopy & tomography 76174
ang. weighted hybrid cone-beam CT reconstruction 87728
anthropomorphic phantom, CT, 3D treatment planning algms. 76634
aortic dissection-simulating artifact, charactn. in computed tomography 98519
arc-shaped Xe gas ionization chamber, Monte Carlo charactn., med. appl. 98534
arteriovenous malformation extraction with factor anal. 98538
auditory ossicular chain, CT virtual endoscopy *(Chinese)* 98524
automatic tumour extraction from 2D CT images by neural computation 122126
beam transverse-phase-space dens., CT meas. appls. *(Chinese)* 121331
beam-hardening correction using post-reconstruction method and equiv. tissue concept 98498
BESSY II BAMline hard X-ray beamline design anal. 132473
biological tissues, impedance computer tomographic diagnostics using elec. current 122148
biomedical image compression using variable order wavelets transforms/HVS charact., progressive scheme 132786
bladder carcinoma, intens. modulated radiotherapy, dyn. multileaf collimation 98635
blood vessel tracking in CTA/CE-MRA vol. images, adaptive min. path generation tech. 87663
bone deformity correction planning, computer-aided surgical operations 111080
bone dens., tetrahedral mesh modelling of data for anatomical atlases and intens.-based image registration 87739
bone fracture callus dens. eval., X-ray radiography & quantitat. CT 76515
bone mineral content assess., 3-D SR microtomography images 110961
bone mineral content assess., 3D SR microtomography images 132823
bone MRI segmentation algm. assess. using SR micro-CT 132717
bone struct. ultrasound interact. simul. based on 3D MRI/micro-CT 98314
bone X-ray tomographic microscopy projections, fractal anal. 76526
brachytherapy prostate implants, vol./dosimetric study, US/CT image fusion 98661
brachytherapy source localization, 3D tomosynthetic image restoration 110941
brachytherapy treatment planning, CT based, automatic catheter reconstruction 98543
brain images, stroke lesion anal., rule-based approach 132838
brain tumours, gross vol. delineation on CT and MRI 110944
breast, intact, radiotherapy, virtual simul. appl. 76627
breast cancer, quasi-monochromatic CT syst., combined emission-transm. tomography 110957
breast electron boost planning, comparison of CT and US 87879
bronchial abnormalities, lung CT, automated detect., ERS transform 132780
bronchoscopy, virtual, 3D, automatic centre-line extraction 87712
bubble column gas hold-up meas., elec. resist. tomography, ANN use 110057
bubble column meas. & control, resist. tomographic imaging 121273
bubbly gas/liq. pipe flow cross-correl. meas., dual-plane ERT syst. 110056
capacitance tomography for gas-solids flow charact. meas. 110059
capacitance tomography sens., axial characts. simul., FEA *(Chinese)* 109526
capacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
cardiac CT imaging, multisector image reconstr. 132800
cardiac torso phantom, interactive software, patient pop. modelling 132828
cerebral perfusion meas., dyn. CT *(Chinese)* 122151
cerebral quantitat. CT perfusion imaging, reproducibility, stroke appl. 122119
chem. indust., proc. imaging & image proc., DuPont appls. 113808
chest CT, automated nodule detect., change over time assess. 122124
chest radiographs, small peripheral lung cancers visibility 76549
chest X-ray helical CT images, computer-aided diagnosis syst. 98532
chirp pulse microwave computed tomography by num. computation, human head model *(Japanese)* 98533
chirp-pulse microwave computerized tomography, response fn. computation 87562
coherent scatter X-ray CT med. imaging, Monte-Carlo simul. 110928
colon polyp detect., electronic cleansing, material tagging/image segmentation 132822
computation compression scheme based on multifrequential approach 132802
cone beam filtered back-projection reconstruction algm. 132799
cone beam filtered backprojection reconstruction algm. for circle-plus-two-arc orbit 87759
cone beam vol. CT image artifacts, wavelet-anal. 122134
cone-beam CT, image-guided external beam radiotherapy/brachytherapy appl. 87699
cone-beam CT for MV LINAC, electronic portal imaging 98544
cone-beam helical CT reconstruction algm. using tree-struct. filter bank *(Japanese)* 132784
cone-beam image reconstruction, spherical harmonics 87731

computerised tomography continued
cone-beam image reconstruction using spherical harmonics, short-obj. problem 132792
conf., Bayesian inference/max. entropy methods, Gif-sur-Yvette, France (Jul. 2000) 100410
conf., imaging, Stockholm, Sweden (June 2000) 124186
coronary Ca quantification algms. reproducibility, electron beam CT 132504
cortex segmentation, variational geometric approach 121885
Corvus IMRT treatment plans, target/crit. struct. doses 76732
CT, MRI, regional factors affecting use in Sweden 87725
CT-based bracytherapy treatment planning, automatic reconstruction of catheters 133007
CT-SPECT, combined syst. with single CdZnTe detector 122149
CT-SPECT combined tomographic imager, scintimammography 122150
CTRx, therapy machine and CT scanner 87736
curvature-based internal struct. anal. of pulmonary nodules using thoracic 3D CT images 132836
deblurring subj. to nonnegativity constraints, obj.-constrained CT appl. 132805
digital radiology CRT display syst. params. 110927
digital reconstr. radiography, vol. rendering, splatting shear-warp 132824
discrete combinat. surfaces, naive planes 98567
discrete tomography by Bayesian labeling with efficient algm. 76521
discretized Radon transform and spectral props. 122136
DOEs design and fab. for imaging spectrometer 104861
DRRs calc. algms. for different accelerator voltages, tools 98546
dry-processed film image quality 87721
DSA/CT/MRI optimal localis. & image fusion, Leksell frame 76504
dual modality tomography for material class. 109472
dyn. image reconstr. for proc. CT, pseudo Kalman filter algm. 106710
DynCT real-time motion-compens. reconstr./visualis., 3D CT fluoroscopy 87737
edge-localized image sharpening via reassignment, appl. to computed tomography 76523
eight-row CT scanner, helical reconstruction algms. 132794
EIT, elec. impedance tomography, applied- and induced-current, multiprocessor systs. 110622
EIT algms. modif. using pipeline multiprocessor algm. 110973
elec. impedance computerized tomography, differential imaging 109921
elec. impedance proc. tomography, internal struct./electrodes model 109924
elec. impedance tomography, bipolar DC pulse tech., core anal. 111389
elec. impedance tomography, reconstr. regularis. method optim. 109927
elec. impedance tomography image reconstr., FEM, error propag. simul 109926
elec. impedance tomography reconstruction algm. using EKF 129456
elec. impedance tomography syst., electrode struct. optimum design 110616
elec. resist. tomography, electrode array, image reconstr. *(Chinese)* 86909
elec. resist. tomography using bidirectional current pulse tech. 109923
EM inductance tomography, image reconstruction method 118267
emergency department at level-I trauma centre, diagnostic workstation impact on workflow 98839
endocrine neoplasms eval., combined transm./emission tomography appl. 132815
endoscopic images and 3D surfaces, mixed-reality merging 87713
endoscopy, virtual, WWW-based, for CT anal. of bronchial airways 110946
ESRF ID 22 beamline high-resoln. X-ray imaging & tomography 76168
European Commission ref. dose levels, CT exams. in Crete, Greece 133148
extraocular muscle borders detect. using math. morph. 76544
fan-beam diffr. tomography, min.-scan reconstruction algms. 122158
fan-beam tomography, multiresolution reconstruction 132795
fiducial registration from single X-ray image for fluoroscopic guidance and radiotherapy 87738
filmless imaging department, computed tomography exams., transm. failure rate 98846
filtered backprojection algm., range conditions, pseudoinverse soln. 87744
flowmeter for loading road tankers using proc. tomography 121276
fluoresc. X-ray computed tomography, dual agents 122129
fluoroscopy-guided interventional procedures, techs./radiation dose to radiologists 110971
foot/ankle, computational model, develop./validation 98547
fractional derivatives, splines and tomography 132787
free-space imaging with act. microwave tomographic syst. 79485
globally convergent Newton-SOR method for stat. image reconstruction 132513
gradient magnitude based region growing algm. for accurate segmentation 98552
gravel-air-seawater mixture, neural network reconstruction 109471
HADES-CCG tomographic reconstr. tool, X-ray & neutron radiography 101610
half-scan cone-beam CT fluoroscopy, multiple X-ray sources 98528
head and neck cancer, 3D spiral computed tomography imaging for staging and surgical planning 98485
heart region extraction in electron beam tomography images *(Korean)* 95582
helical CT data for virtual colon dissection and polyp detect. 132839
hepatic/renal interstitial radiotherapy lesions, temporal CT 76499
HI CT reconstruction, range shift distrib., 2D detect. syst. 98158
high resoln. gel-dosimetry, opt. CT, MR scanning 98789
high-energy X-ray/neutron modelling & digital imaging for NDT 101564
hip operations simul. and design of custom-made endoprostheses using VR 87726
hist., phys./engng. appls. to med. 98114
human nasal tracts, sound transm. charact. determ. using computer-tomographic data *(German)* 76553
iliosacral screw placement, percutaneous, computer-assisted, clinical validation 87792
image contrast enhancement, discrete wavelet transform 76543
image reconstruction, fast hierarchical backprojection 84278
image registration, consistent, forward/reverse transforms, MRI/CT appl. 98419
image registration, rigid, block matching to improve robustness 87314
image registration by maximization of combined mutual inform. and gradient inform. 84111
image segmentation by adaptive geodesic act. contours 84108
images, region of interest reconstruction using filter banks 98522
imaging, symm., redundant inform., noise control 87283
imaging spectrometer 97343
indust. objs., nondestructive inspection, cone-beam X-ray computer tomography *(Russian)* 67655
integrated CT-SPECT syst. for small-animal imaging 110929
intens. modulated radiotherapy, inverse planning, ridge fns. 133131
intens.-modulated radiotherapy, dose calcs., CT scans, PEACOCK syst. 98808
intracranial arteriovenous malformation visualisation with physiological inform. 110960
intraocular diseases, CT and MRI diagnoses *(Chinese)* 76508
ionisation chambers calib. in air kerma length 122398
iter. max.-likelihood polychromatic algm. 132804
jaw displacements, lateral pterygoid muscle, motor-unit activity 87416
computerised tomography continued
knee, total replacement planning, crit. params. influencing implant 76683
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
linogram algm. for computerized tomography 98511
liq. insulator elec. field vector distrib., three-direction opt. meas. syst. *(Japanese)* 77447
liver, automated segmentation, multislice CT images *(Japanese)* 122152
liver, breath-hold 3D CT, multi-detector row helical method 87763
liver CT images, computer-assisted diagnosis, modified perceptron algm. 7651
liver surgery, impact of combined pre-operative 3D CT and intra-operative real time 3D ultrasonography 87788
liver tumor detect., automatic, from CT images 87697
liver X-ray diagnosis, simulated annealing with logarithmic cooling schedul 110921
living human face meas. using pulsed holography 82973
lumbar spine CT/X-ray exams., radiation dose to uterus, ovaries, bladder 8795
lumbar vertebral ident., automatic, using surface-based registration 110953
lung, automated CT image eval., morph.-based concept 76525
lung, regional fn. meas., non-invasive imaging using X-ray computed tomogra phy 122123
lung cancer, CT based radiotherapy dose planning 87861
lung cancer diagnosis, helical CT image anal. 87766
lung cancer radiotherapy, video-based respiratory gating syst. 87837
lung carcinoma, occult, bronchoscopically-guided conformal radiotherapy 7665
lung CT, efficient sliding thin-slab vol. visualisation 110916
lung high-resoln. CT images, cardiac motion artifacts reduction *(Japanese)* 87745
lung nodule screening, scanning-beam digital X-ray syst. 76513
lung nodules in CT scans, automated detect., preliminary results 110934
lung radiotherapy, respiratory movement, planning target vol. var. 76649
lung vascular sizes, spatial distrib., 3D greyscale morph. 87702
LW sound wave CT, prior distribs. subspace projection algm. 98279
mag. induction tomography, biomedical and indust. uses 110666
maxillofacial region, coronal reconstruction from axial helical CT data 87715
med. & proc. impedance tomography, hist. & current develop. 110615
med. computerised radiography images, wavelet random noise removal *(Chinese)* 98523
med. images, semi-automatic segmentation of 3D objs. 87705
med. imaging modality interfacing, relay station impact 98120
med. IS, WWW-based, for collaboration between rural clinics and central hospital *(Japanese)* 76785
media and DSP proc., CBP and ART image reconstruction algms. 114777
microtherapy, image guided, min. invasive approaches 133011
microwave tomographic reconstruction, inverse scatt. problem 129650
min. invasive robotic coronary artery bypass, 3-D visualization 76599
MLC-based IMRT dose verification, Clarkson summation algm. 76728
modular algm. for automatic slice positioning in tubular organs 87770
molten steel flow profiles imaging 110061
monochromatic X-ray CT, fluoresc. X-rays excited by SR 98561
multi-modal proc. tomography syst. 109473
multi-modality PET/CT scanners, modular VME or IBM PC based DAQ syst. 122259
multi-seeded fuzzy segmentation on face centered cubic grids 98510
multi-slice CT, nonlin. helical reconstruction algm. 132789
multi-slice helical computed tomography, long. sampling & aliasing 132790
multidimens. fast Pade transforms for med. MRI/CT appls. 132712
multifrequency elec. impedance tomography for patient monitoring 121918
multilayer struct. NDT, US tomography, iter. reconstr. 101601
multileaf collimator intens.-modulated radiation therapy, dose calc. 111195
multimodal med. vol. registration, spherical markers appl. 98554
multimodality image fusion toolkit, high-speed interactive fusion 76433
multimodality med. image registration, mutual inform. based 76431
multislice CT/cardiac CT sector reconstruction, partial scan weighting algms. 132793
nephron sparing surgery, 3D vol. rendering using videotape display 122121
neurocomputing method for image reconstruction of three-phase flows in elec. capacitance tomography *(Chinese)* 122144
neurological CT and MRI, JPEG and JPEG 2000 irreversible compression algms., eval. 98493
neurosurgery, augmented-reality endoscope navig. syst. 87789
neurosurgery/brain stereotaxic irrad. optimisation, multimodal matching appl. 122285
neurosurgical procedures under near-real-time MR guidance 76500
neutron tomography syst. for quantitat. NDT, preproc. corrections 101562
non-small-cell lung cancer, palliative radiotherapy, virtual simul. impact 98669
nonlin. filtering, photon diffusion 87714
nuc. sci., conf., Lyon, France, (Oct. 2000) 113217
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
oligodendroglioma with cystic component in infant 76520
opt. computed tomographic imaging by photon counting method *(Japanese)* 122066
oral implantology, computer-aided, navig. syst. accuracy 87893
ordered subset reconstruction for X-ray CT 98503
organ class. from cross-sect. images, fuzzy c-means med. image clustering 98417
organ motion, CT, radiotherapy treatment planning, dosimetry modelling 76756
organ motion artifacts correction, X-ray CT adaptive proc. 110937
organ motion artifacts correction in X-ray CT systs. 110938
organ motion effects in radiotherapy, model, serial imaging data 122431
organ motion model, prostate radiotherapy serial imaging meas. 122432
osteoporosis mouse model, bone archit., 3D SR microtomography 132826
PACS images, cable modem access using Web browser over Internet 98848
PACS-CT interfacing at Baltimore Veterans Affairs Medical Center, historical perspective 98847
paediatric kidney CT, knowledge-based segmentation, parenchymal vol. meas. 122141
parallel X-rays prod. with bent-cryst. monochromator/X-ray tube 132816
parametric shape estimators perform. for 2-/3-D imaging systs. 122219
patient size, X-ray CT tech. factors, hazards 110939
pelvic screw fixations, safe zones, virtual fluoroscopy 76562
peripheral blood lymphocytes, micronuclei, angiography, excretory urography 76560
PET/CT image registration of rat brain/skull using AIR algm. 122212
phase-contrast SR CT, math. foundations 132492
phase-contrast X-ray microtomography, interferometer design 76177
phase-contrast X-ray microtomography, polychromatic sealed source 76172
pipes in service 2D/3D X-ray image restoration, wall thickness meas. 100643
plastic IC encapsulation, 3D wire sweep meas. using X-ray CT instrum. *(Japanese)* 67639
PM sync. motor vector speed control for CT appls. 132829

mputerised tomography continued
polyps, computerised detect., CT colonography, automated colonic walls segmentation 122140
practical cone beam artifact correction algm. 132788
preoperative CT/intraoperative fluoroscopy images alignment, registration algm. 87750
primary interp., zoom-and-pan vs. browse-and-paste display method, effect on inter-observer agreement 76518
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
prog. sig.-proc. electronics, PET/SPECT/CT scanners appl. 120672
projection X-ray microscopy, modified SEM, enhanced contrast & 3D CT 76173
prostate brachytherapy, high dose rate, CT planning, catheter reconstruction 98653
prostate cancer, 3D conformal radiotherapy, bladder opacification, dose 98783
prostate cancer, treatment planning, CT image segmentation 87809
prostate patient with prosthetic hip, intens. modulated radiotherapy 76731
prostate seed brachytherapy, simple US/CT fusion image fusion 110705
pulmonary emphysema, lung vol. assess. using multi-detector helical CT, comparison with pulmonary fn. tests 110952
pulmonary fissures extraction from thin-sect. CT images 98539
pulmonary nodule surrounding struct., charactn. using differential geom.-based vector fields 87707
pulmonary nodules, high resoln. spiral CT diagnosis *(Chinese)* 76509
pulmonary nodules, internal struct. image anal. 87765
pulmonary nodules, malignant and benign, hybrid class. approach based on topol. and histogram features 87706
pulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 98515
pulmonary nodules, surrounding structs. anal., differential geom. based vector fields 98549
pulmonary nodules class., contrast enhancement patterns 87767
pulmonary nodules detect., helical CT images, template-matching 98513
pulmonary organs, extraction and class. based on thoracic 3D CT images 110962
quantitat. accuracy tests of MR-, CT-, and DS-angiography, photogrammetric meas. and visualization of blood vessel branching casting 98473
radiation dose/image quality optimisation, dose savings 133134
radiation dosimetry appls. using MCNP Monte Carlo code, review 98826
radiation therapy, centralized dose calc. syst. 98614
radiography printing problems, quantitat. observer-independent soln. 98487
radiology, telerobotics, CT and MRI imaging methods 132843
radiology and pathology conf., Web browser-based image presentation, eval. in traditional film-based environ. 98835
radiosurgery, multimodality image fusion, arteriovenous malformations appl. 98654
radiotherapy, 3D patient positioning, video based surface alignment tech. 98657
radiotherapy, CT guided, Monte Carlo simul., errors correction 76737
radiotherapy, rem. verification, digitally reconstructed radiography, portal images 98619
radiotherapy, treatment planning syst., CT-based dose calc., metallic prosthesis 122400
radiotherapy planning, PC-based virtual simul. syst. for small department 87841
radiotherapy treatment planning, electron dens. phantom eval. *(German)* 87971
radiotherapy verification, few-view tomographic reconstruction, MV photon beams 110935
ray tracing based digitally reconstructed radiographs *(Chinese)* 129540
reconstr./recogn. of image, image moment method 118667
reconstruction, tree-struct. filter bank *(Japanese)* 73138
reconstructive surgery/med. modelling, design methods appl. 98590
regional hyperthermia treatment planning syst. 76613
resist. tomography sens., sens. field, soft field charact. *(Chinese)* 75411
rocks, 3D fractures, microfocus X-ray computer tomography 122604
scan images, bone texture charactn. 98566
scanned pencil beam apparatus, dosimetric modelling, ^{60}Co tomotherapy 76764
scanner, computer tomography/PET-based 87695
scapula bone, CT, 3DFE model, semi-automated method 76510
sectored snakes, CT image learned-energy segmentations 118718
seq. cone-beam tomography, fast/efficient method 132796
shape reconstruction from moments, theory/algms./appls. 94747
Shimadzu Mx8000 X-ray CT scanner, multiple slice type *(Japanese)* 76539
sinus CT, image quality/patient dose, decreasing mAs effect 76551
skull/brain, rat, PET, CT, and MR image registration 132942
small obj. & soft material X-ray CT imaging, image intensifier 110438
soft materials, X-ray visualization of interior in terms of atten. coeff. 98109
soft-tissue lesions, automated meas. of struct. in CT and MRI, validation study 110976
spine, animation in vitro biomech. tests 98357
spiral cone-beam CT, exact ROI reconstruction, algm. perform. eval. 122159
spiral cone-beam CT, long obj. problem, 1-D Hilbert transforms 132797
spiral cone-beam CT reconstruction, local ROI algms. eval. 110956
spiral CT angiography, pulmonary vascular tree, automated segmentation/visualisation 122142
spiral CT colonography, reader agreement and diagnostic perform. 87761
spiral scan cone beam CT, second-intersection contribs. elimination 132798
spiral/conventional CT, doses survey 88006
sq. fluidized beds using capacitance tomography 110060
SR microtomography, high energy & resoln., HASYLAB beamline 101565
SR X-ray transm. microtomography facility for biomed. imaging 132825
stereotactic/IMRT plans, accurate comparison 76730
Subrina X-ray CT scanner design, subsecond type, Genius View software *(Japanese)* 76538
subsurface sens. & imaging syst., unified discipline develop. 84167
superior mesenteric arteriography, spiral-shaped iatrogenic arterial dissection risk in diagnostic angiography using power injector 110951
synchrotron light source, dual-energy X-ray computed tomography 98521
target of the day radiotherapy precision, computer-controlled table 87820
tech. materials, impedance computer tomographic diagnostics using elec. current 122148
technol. evol., limitations & future prospects, review 110924
teleradiology, eval. of low- and high-cost systs. for neurological emergencies 133198
temp. distrib. visualiz., acoustic computerized tomography 121252
temporal bone, helical CT, image reconstruction algm. *(Japanese)* 98514
thin cortical bone dens./thickness eval., clinical CT method 98536
thyroid malignancies, intens. modulated radiation therapy 76729
tibia, human, stress anal. under pathological conditions 76460
tilted spiral cone-beam CT, advanced single-slice rebinning 87752
time-resolved 2D μs X-ray imaging 98559
time-varying elec. impedance tomography image reconstr., EKF 109925
tissue dens. vols. class., multilevel neural network model 132754
tomotherapeutic megavoltage CT calib. 87700

computerised tomography continued
trabecular bone patterns, CT image multiscale anal. 76548
trachea segmentation in CT images using act. contours 110922
transm.-type US inverse scatt. CT, circ. arc points ob. data 98294
Tuned-Aperture Computed Tomography 76522
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479
two-phase flow elec. impedance imaging, sens. strategies anal. 121275
two-phase flow void fraction meas., capacitance tomography 110052
vertebral trabecular bone, CT/projection radiography images, texture comparison 110966
vertebral trabecular bone, texture, CT images, fractal anal. 132842
virtual holographic recogn., digital methods, med. appls. 82967
virtual MR microscopy for unruptured aneurysm 87604
Visible Human Project datasets, automatic registration methods *(Chinese)* 110919
Visual-FSSEM, unsupervised data visualization and interactive feature selection 73455
VLSI-oriented algm. for wavelets part image reconstruction from few projections *(Japanese)* 106816
vol. computed tomography syst., misalignment, image reconstruction 98529
vol. X-ray CT images, automatic lung segmentation, accurate quantitation 87742
voxel size effect in CT simul. 132844
weighted hybrid cone beam reconstruction, circ. trajectories 122157
whole body atlas, organ segmentation/delineation, radiation therapy CT 132811
X-ray CT, cone beam reconstr., inversion formula 118268
X-ray CT, fast ordered subset reconstruction 132791
X-ray fluoresc. microtomography at ESRF ID22 beamline, 2D imaging 76175
X-ray imaging methodology advances & capabilities, review 110431
X-ray indust. CT, optoelectronic integrated sens. 87268
X-ray microtomograph, desktop instrum., 3D microscopy 76171
X-ray microtomography using interferometric phase contrast 76517
X-ray tomography, discontinuous 2D dens. reconstruction algm. 121237
CdZnTe detector, diagnostic X-ray spectra/exposure meas. 98508
^{60}Co helical tomotherapy, CT imaging appl. 87735
^{125}I seeds, prostate implant, CT-based source localization 98531
^{103}Pd seeds, prostate implant, CT-based source localization 98531

computers
see also analogue computers; biocomputers; computation theory; computer peripheral equipment; computer software; data handling; digital computers; digital storage; file organisation; hybrid computers; special purpose computers
IBM_R Demanufacturing and Asset Recovery Center overview 100688

concatenated codes
see also turbo codes
3G mobile commun., short frame turbo decoding and ML decoding 106133
4-PSK turbo space-time coded modulation design and perform. 72770
accumulated woven convolutional codes, turbo-like coding schemes comparison 129197
adaptive reduced-complexity iter. decoding 72816
ADSL transm. using turbo coding 96299
alg.-geometric codes better than Gilbert-Varshamov bound, low-complexity constr. algm. 117925
AM band DAB, RS decoding algms. 120508
asymptotically good quantum codes exceeding Ashikhmin-Litsyn-Tsfasman bound 83922
ATM satellite traffic, throughput anal. and coding 85917
binary perfect codes, intersection matrices for partitions 72794
binary Reed-Muller codes, seq. stack decoding *(English)* 72836
bit-error probab., improved tangential sphere bound 72875
block turbo code, reduced search trellis decoding, perform. eval. 94278
block-fading channels with multiple antennas, limiting perform. 74517
broadband turbo decoding, $O(\log_2 N)$-latency SISO 106085
broadband wireless channels, soft decoding techs. 94276
CDMA serially concatenated ECC syst., joint iter. decoding 108861
CDMA-based mobile satellite commun. syst. with turbo coding, outage perform. 74872
convolutional codes concatenation with ISI channels, precoder design 83937
convolutional double accumulate codes or double turbo DPSK 72820
convolutionally encoded sigs. over multipath Rayleigh fading channels, iter. decoding 106156
CPM, power/bandwidth efficient serially concatenated, iter. decoding 72819
CPM, serial concatenated, ACI suscept. 129064
CPM over AWGN/Rician channels, channel coding of serially concatenated encoders 106092
digital commun., turbo techs. overview 72908
DS-CDMA, joint despreading and iter. decoding with serially concatenated turbo code and Walsh code 83891
DS-CDMA asynchronous syst. with concatenated convolutional coding, iter. multiuser detect. 107613
DS-CDMA mobile radio, concatenated channel coding, transmit power outer loop control 96425
DS-CDMA Rayleigh channel variable block 2D-CELP image transm. 108946
DVB satellite broadcasting syst., turbo code technol. 106075
DVB-S, general systs. concepts 75268
encoded Gaussian filtered CPM, generalized concatenation *(English)* 72753
error correcting RLL codes using high rate RSC or turbo code 106159
fault-tolerant quantum computation without concatenation 94296
FH packet radio with turbo TCM in partial-band interf. 108557
FHMA turbo-coded commun., iter. multiuser detect. 107614
FHMA turbo-coded commun., iter. multiuser detect. 84781
fixed-point iter. decoders for concatenated codes with interleavers, design 72880
fixed-point iter. decoders for concatenated codes with interleavers, design 72821
full rate space-time turbo codes 72889
generalized error-locating codes, decoding *(English)* 72845
generalized Kerdock code and related lin. codes over Galois ring 94284
Gilbert-Varshamov type bounds for $Z(2^k)$-lin. codes 129106
Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
hidden Markov sources, joint turbo decoding/estim. 106152
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
image watermarking, coding techs. for data hiding and capacity limit 95047
interleaver design 72876
irregular turbo codes and unequal error protection 129123
ISI channel, precoder effect on serially concatenated coding systs. 94295
ISI channels, joint turbo and modulated code encoding decoding 129215
iter. decoded parallel concatenated codes, convergence behavior 129018
iter. decoders for turbo codes, throughput improvement 83830
iter. decoding 72881

concatenated codes continued
iter. equalization and decoding, hybrid equalization strategies 129216
iter. soft interf. cancellation for multiple antenna systs. 83408
iter. source-channel decoding, generalized framework 117991
iter. turbo decoder anal., dens. evol. based 72882
iter. turbo decoder anal. based on Gaussian dens. evol. 106086
lin.-complexity soft-decodable high-rate "good" codes, constr./props./perform. 129114
list Viterbi algms. for continuous transm. 72897
majority-logic-like vector sym. codes, error correction perform. 83879
ML decoding, approx. upper bounds on error probab. of lin. codes *(English)* 72834
mobile radio transmit antenna diversity systs., turbo proc. 117993
modified turbo codes for perform. improvement 106099
multicarrier CDMA, turbo TCM and serial concatenated convolutional code in Rayleigh fading 106029
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multiple parallel concatenated single parity check codes 129199
mythology of turbo codes *(English)* 72839
noisy channels, decoding bit-error probab. upper bound 129117
noncoherent iter. decoding of spectrally efficient coded modulations 129200
OFDM-CDMA syst., channel coding aspects *(English)* 72740
parallel and serial turbo codes, iter. decoder anal. 129100
parallel concatenated block codes, iter. decoding, F24 coset MSP algm. 106079
parallel concatenated codes, iter. decoding trajectories *(English)* 72838
parallel concatenated space-time codes perform. 83870
parallel concatenated TCM, perform. eval. 129024
parallel concatenated turbo codes for CPM 83859
parallel concatenated turbo codes with non-uniform constellations 129201
partial response channels, precoder design for concatenating convolutional codes 72912
partially concatenated convolutional codes constr. 129223
partitioned and parallel concatenated convolutional codes with puncturing, comparative study 83889
PSK turbo-coded binary sig., carrier recovery cct. using periodically inserted deterministic syms. 83887
Rayleigh flat fast fading channels, soft decision directed MAP estim. 106087
RBF decision feedback turbo equalisation, CC-SSTTC syst. 130266
rect. parity-check outer code with turbo inner code 106110
recursive space-time trellis codes for turbo coded modulation 72862
recursive systematic convolutional codes, twin-stack decoding 94294
reliable commun., continuous error detect. 119111
RS codes, turbo decoding through binary decomp. and self concatenation 129044
SCCPM, multi-user syst., iter. decoding 117957
serial concatenated convolutional code, improved design and SOVA algm. 94322
serial concatenated TCM with rate-1 inner code 72817
serially concatenated code charact. matching for iter. decoding 117989
serially concatenated codes, code doping for iter. decoding convergence 129179
serially concatenated convolutional codes, interleaver design 129163
serially concatenated convolutional codes, iter. decoding in multipath Rayleigh fading environ. 72818
serially concatenated partial response mag. recording channels, iter. detect. 116464
serially concatenated space-time code design in flat Rayleigh fading channels 85825
serially concatenated space-time coding 106138
sig. estim. over freq. selective fading channel, soft-output seq. algm. 108764
SISO low latency module, broadband turbo decoding appl. 72879
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
space-time block codes with TCM/turbo TCM/convolutional/turbo codes, anal. 72911
space-time turbo codes, fading channels decorrelation props./perform. anal. 72863
spectrally efficient coded modulations, noncoherent iter. decoding 117990
SPIHT error-tolerant image compression 95330
TCM, iter. space-time detect. for broadband wireless channels 85522
TCM anal. and design with transmit diversity for wireless commun. 83826
TCM with receiver diversity, turbo space-time equalization, max.-likelihood detect. 107694
turbo block codes using modified Kaneko's algm. 106084
turbo code perform. and design trade-offs 106083
turbo codes, convergence based design 129099
turbo codes, trellis complexity anal., interleaver props./appls. 72898
turbo codes and product-type codes meeting Gilbert-Varshamov bound *(English)* 72837
turbo codes based on recursive systematic convolutional code decomp. 129225
turbo codes perform. improvement by concatenation with rect. parity check codes 129125
turbo codes with non-lin. constituent codes 83858
turbo codes/serially concatenated codes with interleavers, free dist. calc., algms./appls. 72873
turbo coding, decoder complexity 94334
turbo decoding, complexity reduction 120061
turbo decoding, error detect. improvement by short CRC with mean-sign-change criterion 129124
turbo greedy multiuser detect. 107754
turbo-codes as error control codes 106116
turbo-single parity check codes 72895
turbo-TCM for mobile satellite channels 129004
type-I hybrid bandwidth-efficient turbo-ARQ scheme, diversity combining techs. 129164
video watermarking, channel coding, soft decoding for watermark retrieval 95267
VLC for iter. source/channel decoding 106172
VLSI implement. of RS decoder 90887
W-CDMA, rate compatible punctured turbo coding 84887
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA single code/multi-code signalling for high rate data transm., delay spread effects, BER perform. 96465
wireless ad hoc network, space-time block coding 108962
wireless ATM access networks, CLR perform. of random traffic and error control 108644
wireless fading channels, space-time trellis codes iter. decoding 108600
woven codes with outer warp, vars./design/dist. props. 72874
woven convolutional codes, pipeline decoding *(English)* 72854
wt. enumerating fns. generation using recursive method 83832

concave programming
computer vision, robust point correspondence by concave minimization 129497
multiobjective nonconvex prog. with fuzzy nos., coevolutionary GA 78932
nonlin. Lagrangian theory for nonconvex optim. 67892
Tuy cone splitting algm., ω-subdivisions, convergence proof 100932

concentration measurement *see chemical analysis; chemical variables measurement*

concentrators, telecommunications *see line concentrators*

concepts (index language) *see vocabulary*

concrete
see also cement industry
3D finite element formulation for frictional behavior of rubber on ice and concrete surfaces 79123
act. struct. health monitoring, FRC & steel-reinforced concrete 79467
adhesive for OTDR monitoring in dams 79474
bridge struct. health monitoring with FBG sens. 86781
composite-bonded concrete strain meas., FBG sens. 86571
compressive/tensile stresses and strains study using twisted opt. fiber strain sens. *(Chinese)* 75550
crack detect., US multi-refl.-/stationary-wave models *(Japanese)* 101605
current-carrying conductor above two-layer ground, mag. field distrib. 123007
damage model for dyn. FEM appls. 124739
deep neutron penetration at ISIS 87047
direct elec. concrete curing, intell. virtual control method 100323
European Pressurized Water Reactor containment design and testing *(English)* 99520
FBG strain sens., tunable narrow bandpass filter demodulator *(Korean)* 97316
fiber optic sens., anchor monitoring 75587
fibre opt. pre-embedded concrete bar sens., temp. charact. 131938
fibre optic strain sens., temp./strain meas. 75583
in-situ transformer oil maint. using polymer concrete composite 134113
laser scabbling, thermoelastic anal., reactor decommissioning appls. 105629
microwave refl./transm. props. meas. 109949
moisture content meas. using Mach-Zehnder interferometer 90599
NDE nonlin. acoustic techs., freq. shifts & memory effects 114492
near-field microwave NDT, NaCl in mortar determ. 114540
overhead lines, concrete poles, grounding lead conductor, surge impedance 99350
product life cycle anal./CAD, intell. syst. 125089
radiation shielding facilities, direct heat gen., energy conservation 78178
reinforced concrete stress meas., GMR & eddy current sens. 68477
RF material charactn. using large-diam. coaxial air line 81638
smart fiber reinforced polymer rod, ductility and health monitoring 86778
smart material/struct. condition, fiber optic sens. syst. 90564
stabil. monitoring, pass. microwave rem. sens. *(Chinese)* 68468
C fiber reinforced epoxy/concrete, piezoelec. transducer monitoring 68470
NaI std. 3 inch detector, improved quant. gamma-ray spectrosc. 121577

concurrency (computers) *see concurrency control; concurrency theory; multiprocessing programs; multiprocessing systems*

concurrency control
ATM network simul., sync. and concurrent control 95795
data broadcast syst., concurrency control 130822
long-dist. education via multimedia-board, CSCW appl. 108439
mobile client-server database systs., mobile client caching with asynchronous broadcasting 84947
mobile computing, transaction model, data availability 119544
mobile data broadcast environ., broadcasted/updated cycles concurrency control tech. 130888
mobile radio, multilevel secure database, advanced transaction scheduling 131195
NOW, reduced commun. protocol 130432
optimistic concurrency control, broadcast invalidation-based certification protocol 130866
PACS, distributed archit., study status consistency and duplicate-read protection mechanism 98857
quasi-consistency and caching with broadcast disks 108135
timing simul. of sync. models on networks of workstations 114574
transaction proc. in mobile, multi-database environ. 130733

concurrency theory
hardware compiler realising concurrent procs. in reconfigurable logic 125168
Petri nets, concurrent generalized, regenerative conditions 124559

concurrent engineering
see also product development
activities, product develop., heuristic prog. method *(Chinese)* 89801
Chinese enterprises, product requirement acquis. & defn., creativity *(Chinese)* 78568
design fn. deployment, tutorial introduction 78573
digital lin. systs., concurrent testing 101969
digital mobile transceiver single chip implement., design planning 78574
electronic packaging, conf., Calimanesti-Caciulata, Romania (May 2001) 124229
electronic systs. CAD design concept in concurrent engng. context 125171
flex and rigid flex PCBs, concurrent engng., elec. and mech. requirements 125880
IC/package/syst. design, concurrent strategy 100585
knowledge-based concurrent engng. syst. method for die and mold *(Chinese)* 113461
MEMS, concurrent design, CAD tools 104196
network-based assignment drive-oriented concurrent design, CAD/CAPP integrat. *(Chinese)* 89792
PCB design and concurrent engng. 125877
teamwork education within concurrent engng. paradigm 124254

condensers (electric) *see capacitors*

condensers (steam plant)
building humidity control using condenser/CHP heat reclamation 134659
condensing power stations, thermal efficiency, gas-expansion power units effect 88597
German BWR NPP, brass condensers operating experience *(German)* 112219
power plant cooling systs., tower fills, condenser tubing 88589
surface steam condenser high-energy fluids admission model 112300

condition monitoring
2D pyroelec. array technol. appl. 131912
11 kV paper cables, condition assess., self-organising maps 99373
11 kV paper-insulated cable condition monitoring using SOFMs 123018
22 kV power distrib. cable condition monitoring approach 133720
act. fibre waveguide sens., embedded structural condition monitoring 121054
act. struct. health monitoring, FRC & steel-reinforced concrete 79467
adaptronics technol. for intell. lightweight struct. 68452

ndition monitoring continued
AE calib., ref. source, conical piezoelec. transducer 101607
aero engine wear failure, intell. diagnostics, debris anal. based method *(Chinese)* 133259
aircraft air valve, BLDCM monitoring 76801
aircraft engines, abnormal behavior detect., data mining appl. 76816
BiCMOS sync. PWM switching regulator chip, design, CPU power supply appl. 68586
BIT for intell. syst. design & condition monitoring, overview 131805
bridge & highway static/dyn. testing, long-gauge FBG strain sens. 120843
bridge struct. health monitoring with FBG sens. 86781
brushless three-phase sync. generators, winding condition monitoring 133979
CDMA-based wireless data transmitter for embedded sens., machine health monitoring systs. 120112
chem./nuc. industries, material issues, condition monitoring, NDT 90612
component reliab. estim., online, using neural networks and wavelets 113783
comput. methods for smart struct. & mater., conf., Madrid, Spain (June 2000) 124206
damage detect. meas. point selection, mutual inform. concept 86989
damaged IM perform. prediction, FEM appl. 133999
data fusion, self-organizing map using dyn. thresholding 107337
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
distributed fibre opt. strain sens. for long struct. 109608
elec. network crit. condition monitoring DSS *(Italian)* 122788
engine misfire detect., crankshaft ang. vel. meas., fuzzy pattern recogn. 89408
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
fault monitoring and diagnosis, wavelet transform *(Chinese)* 114204
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
FBG-based meas. syst. in struct. health monitoring 86780
fibre opt. cantilever beam photonic sens., mech. & reliab. issues 86576
fibre opt. corros. sens., electroless Ni-P deposit 75569
fibre opt. pre-embedded concrete bar sens., temp. charact. 131938
filament wound press. vessel monitoring, embedded FBG sens. 97309
floating-body charge monitor cct. for partially depleted SOI CMOS 127035
gas insulated substation PD signatures, condition monitoring, multi-agent paradigm 112725
gas turbine engine fault diagnosis using feedforward neural nets 112319
gas turbines, advanced, rem. monitoring and control 77759
generator-transformer short-cct. protection, switch-based insulation monitoring 99618
global navig. satellite syst. integrity predict. and monitoring 131695
group-vel. dispersion of opt. fibre transm. systs., in-service monitor 85943
HV cct. breakers, monitoring/diagnostic params. selection, IEEE Standard 99836
hydroelectric generating set, condition monitoring and diagnostic syst. model 77780
hydroelectric generating set axis orbit, automatic ident. *(Chinese)* 112447
IM, on-line condition monitoring 134025
IM, on-line stator resist. estim., temp. monitoring 134031
IM bearing damage detect. via DWT anal. of starting current transient 123448
IM condition monitoring using PWM spectrum anal./optim. 134024
IM fed act. mag. bearings, rotors vibr. condition monitoring 92881
IM stator condition monitoring, fuzzy logic approach 123418
indust. gas turbine start-up seqs. monitoring using multi agent syst. 88612
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
large struct. integrity monitoring, embedded US sens., rem. DAQ 114527
lin. displacement meas., optoelectronic installation 86967
metallic fuselage struct., AE sigs. propag. 122499
metallic struct. embedded FBG sens., prep., thermal perform. 120849
microgravity environ. on-board monitoring using nerual nets 120659
mining power systs., earth faults, on-site safety eval. 134708
model-aided diagnosis for condition assess. 112702
multifunctional sens. for oil condition eval. *(German)* 109770
MV motors, stator failure modes, field testing, condition monitoring 123328
MV underground power cable ccts., condition based maint. 133721
nuc. power indust. safety, intell. syst. selection 112281
oil-immersed power transformer condition monitoring syst. 77935
opt. glass micro-machining, brittle regime, in-proc. monitoring *(Japanese)* 89839
overhead transm. line volt. monitoring syst. using corona phenom. 123022
paint based piezoelec. thick-film strain sens. develop. 131888
power apparatus condition assess. for service time extension 133911
power cable syst. mgt., standardisation, prequalification, diagnostics 133719
power plant condition monitoring, modal logic reasoning 99442
power plant mach., computerized online vibr. monitoring, anal., and assess. 123188
power syst. transient induced radiation anal. for substation plant condition monitoring 78079
power system monitoring, picture display dispatch strategy *(Chinese)* 77637
power thyristors, ageing monitoring using gate current threshold 126689
power transformer insulation monitoring, condition assess. 77939
power transformer on-load tap-changer condition assess. using wavelet anal. 77930
power transformer on-load tap-changers, ageing detect. from vibr. signatures 112582
power transformer on-load tap-changers, automatic condition diagnostics 112581
power transformer overloading, economic benefit, risk eval. 112599
pumped storage power plant condition monitoring/anal./diagnosis syst. design 88641
QCM sens. array with on-chip heating, meas. mode 121022
real-time vibr. modal coords. sens. using piezoelec. array 132087
reinforced concrete stress meas., GMR & eddy current sens. 68477
rem. monitoring/diagnosis in power plant operation 88506
rem. wireless presence in field device mgt. 95945
reusable launch vehicles, Livingstone model-based syst.-level health mgt. syst. 76793
rocket engine test facility, DAQ & health monitoring syst. 111319
rolling element bearings condition monitoring by AE 131848
rot. machine condition monitoring/diagnosis by vibr. sigs. 97132
rot. machine failure diagnosis, multisens. data fusion, fuzzy ANN 123274
rot. machine fault diagnosis, vibr. anal., DSP-based FFT-analyser 112515
rotodynamic mach., wavelet transform and neural net for condition monitoring 123276
safety relevant struct. QA, nonlin. scanning laser vibrometry 114521
SAW phase shift tech. for strain meas. in harsh environ. 120734
sens. modelling, neural-network based, nonlin., monitor appl. 86773
ship hull struct. monitoring using FBG strain sens., sig. proc. 89388
smart fiber reinforced polymer rod, ductility and health monitoring 86778
smart struct. monitoring using PZT actuators & PVDF sens. 109823
condition monitoring continued
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90602
Snowy Mountains Hydro Scheme earthing syst. safety assess. 77787
SOFC field unit, condition monitoring 99987
steel crack growth monitoring using piezotransducer array 101527
struct. health monitoring, damage detect., modal damping meas. 79465
struct. health monitoring, embedded piezotransducer design 101570
struct. health monitoring by elec. resist. meas., review 114549
substation control/protection/monitoring integrat. strategies 134304
syst. ident. & struct. health monitoring, conf., Madrid, Spain (June 2000) 78468
tap changers, on-line condition monitoring 134127
thick wall pipeline, dyn. press., condition monitoring 87024
TIGER gas turbine fault diagnosis syst. 77760
TPP, optimal coal firing, flame image proc./anal. syst. 133867
vibroacoustic machine diagnostics, etalonless method 78588
WDM networks, simultaneous opt. monitoring and fiber supervision 109123
C fibre reinforced plastic, damage detect., impedance spectrosc. 114482
Si_3N_4/Si_3N_4-TiN laminates, crack propag. detect., elec. resist. 114550

conditional logic *see probabilistic logic*

conductance, electric *see electric admittance*

conductance measurement, electric *see electric admittance measurement*

conducting bodies
2D conducting targets, EM imaging, GA-BEM hybrid 72281
2D generalized exponential integral, num. eval. 72446
2D PEC scatterers, duality of integral eqn.-meas. eqn. of invariance method 72283
2D scatt. problems, FDTD anal., wavelet-based adaptive gridding algm. 72215
2D TE incident EM wave scatt., diagonal moment-matrix soln. 72267
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
3D conducting struct., stationary phase method for radiation anal. 83506
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 105695
3D EM scatt., integral eqn.-asymptotic phase method appl. 105715
3D perfectly conducting bodies, bistatic RCS 83322
3D plane-wave scatt., dual-surface CFIE 83250
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
3D struct., adaptive integral method based capacitance computation 72164
anal. of conducting cylinder embedded in complex medium above ground plane 72398
buried imperfect conductor, image reconstruction, EM scatt. 86193
buried imperfectly cond. cylinder, image reconstr. freq. depend. 107225
chiral coated conducting cylinders, RCS computation 75174
concentric conducting spherical cavity, internal EM fields 72429
cone with long. slots, plane EM waves scatt. 83229
conical slot antenna excitation 117772
continuous/grid screens in moving media, EM wave scatt. 128793
corners and edges, surface impedance boundary conditions 128685
cylinders in nonuniform elec. fields, induction charging 83131
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
EM fields inside cuboidal enclosure with conducting planes or PCBs, model 72375
EM scatt., Galerkin operators in adaptive integral method implement. 83187
EM scatt. by 3D arbitrary conducting objs., on-surface MEI 72268
EM scatt. by 3D PEC bodies, high-order MoM soln. using quadrature-based point matching 83251
EM scatt. by bodies of rev., fast algm. 72258
EM scatt. by transversely anisotropic inhomog. cylinders, FEM-FMA hybrid method 72276
EM scatt. from PEC target above or buried in lossy half space, fast multipole method 83237
EM scatt. of arbitrarily shaped cylinders, focused beam syst.-oblique incidence case 83186
EM sources in chiral medium above soft/hard boundary, image theory 93994
EM wave scatt., matrix thinning, preconditioning tech., MEI method 67990
EM wave scatt. by complex struct., recursive reduction techs. 72273
EM wave scatt. from imperfectly conducting circ. disc, full wave anal. 105716
FDTD method for simul. of transm. waves through multilayered thin conducting sheets 105714
GMT/PO approach to num. diffr. coeffs. of irregular edge on semi-infinite conductive circ.-cylinder 83199
GMT/PO approach to num. diffr. coeffs. of irregular top on conductive cone 83198
H-wave scatt., at. model *(Japanese)* 72249
imperfectly conducting bodies, EM scatt., time-domain integral eqn. anal. 83240
imperfectly conducting circ. disc, EM wave scatt. 72225
infinite perfect conducting nonlin. loaded circ. cylinder excitation calcs. 83400
INSTANT software for antenna interacts. anal. 83527
lossy edge, EM field and elec. current 93951
MEI validity 105713
metal cylinder, EMP 2D diffr. 83230
monostatic RCS, 2D PEC, AWE tech. 75077
multiple conductors, EM wave scatt., image reconstruction 94025
needles in dielec. as radar/IR reflectors 72236
parallel perfectly conducting cylinders microwave imaging 94042
PEC large scatt. problems using asymptotic phasefront extraction, efficient MoM 72231
perfectly conducting cylinder, UHF/SHF inverse scatt. 128778
perfectly conducting cylindrical struct., EM scatt. 94001
perfectly conducting slotted bicone, transient excitation 83545
permeable conducting hollow sphere, transient current distrib. EM field 83081
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
PO multifrequency scatt. fields, shape reconstruction via SVD 117649
prolate spheroid, electrostatic image theory 105673
rev., use of wavelets for soln. of EM scatt. 128734
rough perfect conducting surface scatt., Kirchoff and integral eqn. models comparison 83194
scatt. by doubly periodic gaps/cracks 72252
single/multiple region field computation, domain-decomposed MEI method 83241
slot radiators on wedge, mutual admittance 83741
target in fractal atm. turbulence, EM scatt. 72334
time domain free-space dyadic Green's fn., spherical wave expansion 72285
wedge, Weber-Schafheitlin integral 72217
wire and cylinder, EM wave scatt. 83217

conducting materials
see also conducting bodies; conducting polymers; electrolytes; superconducting materials; synthetic metals
2D conductor flaw detect., SQUIDs, boundary shape ident. 79495
AMLCD, low temp. COG bonding, printed UV curable ACA 97754
anisotropically conductive adhesive, elec. conductance 78633
defect profile ident., HTS-SQUID gradiometer use 101573
diode laser module, plastic material, EM shielding 117210
elec. conductive adhesive, metal-filled, microwave curing 113611
elec. conductive adhesive, self-alignment and contact resist. 113527
embedded crack location, EM tech. 125151
EMC, space discretising time domain methods for num. modelling of EM coupling 83386
flip-chip assembly, anisotropic conductive film, reliab. 91513
highly-conductive viscous liq. electrohydrodynamic spraying 83088
hybrid double-D sheet-inducer for SQUID-based eddy current NDT 68480
lithographic film cct., fab. proc. and appls. 91463
multi-layered arrays of conducting strips, switchable photonic band gap struct. 105724
nonlin. material charact. and source terms, FEM anal. 127302
PCB, via filling, conductive adhesive materials 115162
PCB through-hole technol., conductive ink 115163
PDP photopatternable cond. tapes, Fodel Tape-on-Substr. 109858
skin effect and hysteresis, time domain simul. 128692
surface mount conductive adhesives, contact resist. 113528
Cu-Cr-Y, rapid solidif., phys. props., Y addit. 102757

conducting polymers
see also molecular electronics; polymer electrolytes
adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
adhesives, low m.p. alloy incorporation, depletion/wetting 67600
adhesives for flip-chip appls., self-alignment capability 67604
alcohol gas sens., simult. polypyrrole-based composite film & QCM meas. 75713
ALIVH any layer interstitial via hole substr., interconnection tech. 67562
ALIVH any-layer interstitial via hole interconnect substr., insulator material 67574
alkylthiophene copolymers, reversible thermochromism, PL/EL/vis. spectra 127917
anisotropic conducting adhesive used as flex-to-card interconnection, charact. 113529
anthracene-based cpds., pulsed-laser-depos., OLED appl. 127979
arcless interruptions in low current power ccts. 115107
beam-/bridge-shaped conductive polymer microactuators fab. *(Korean)* 78109
BEDOT-pyridines based multi-colored electrochromic polymers 82038
binaphthyl-based luminesc. conjug. polymer, synthesis and charactn. 125101
bipotentiostatic uric acid sens., conducting polymer based, charact. reproducibility 132007
4-t-butyl-CuPc-PODT mol. composite material, gas sens. appl. 97428
charge carriers/excitons relax. in polymers 92577
ChemFET sens. array for organic vapour detect. 97497
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
composite film, permeation method prep., thermogravimetry/SEM 125111
conf., Nanomolecular electronics, Kobe, Japan (Dec. 2000) 100445
conf., syntheic metals, Gastein, Austria, (July 2000) 67405
conjug. dendrimer films, charge transport, electrolum. appls. 127993
conjug. mols., cond., SCF study 91495
conjug. NLO-phores and fluorophores, synthetic strategies 82801
conjug. polymer, EL liq. crysts., OLED appl. 127980
conjug. polymer, low-band gap, memory effect in I-V charact. 80520
conjug. polymer blends based high perform. blue LEDs 127998
conjug. polymer chain with chem. attached photoactive side groups, molec. curr. modulator 102852
conjug. polymer diode, voltage-modulated MM-wave spectrosc., mesoscopic charge transport 115834
conjug. polymer-based plastic solar cells, recent progress 123808
conjug. polymers, light emitting, prep., PL props. 82321
conjug. polymers, N- and S-containing, as hole-transporting layer in LED 82401
π-conjugated polymer films, random lasers 71754
DB-PPV/Alq_3 multilayer LEDs, luminous efficiency, small mol. electron transport layer effects 127992
direct methanol fuel cells electrooxidation, ternary catalysts expts. 89179
DMASB-based diodes, elec. and opt. charact., LED appls. 70028
EL materials/devices, symp., Hong Kong (Jul. 2000) 100421
electroactive polymers, compliant actuators, appls. 125102
electroactive polymers, conf., Boston, MA, USA (Nov.-Dec. 1999) 100427
electrochem. investig., polymerisation/depolymerisation 125112
electrochem. ultracapacitors, conducting polymer materials studies 123718
electronically conductive filled adhesive joints, behaviour under cyclic loading 67559
electronics, sens., adhesives, encapsulated ccts. *(Spanish)* 79446
EO modulator mater. for space environ., proton irrad. effect 93233
ethynylated polymers, synthesis & humidity sens. appl. 97179
flexible polymer LED mfg., cond. lithog. film technol. 121067
flip chip-in-package stud bump bonding proc., reduced proc. steps 80536
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
fluorene-based copolymer blends, liq. cryst. component, low threshold lasing charact. 128209
fluorinated polyphenylthiophenes, chem. synthesis, energy storage appl. 125124
fullerenol doped polyurethane elastomer actuators 104449
HDI flip chip-on-flex, base materials eval. 124359
HDI microelectronics packaging roadmap for space appls. 133228
heteroaromatic copolymers, design/synthesis 79448
N-hexylcarbazole-co-3,4-ethylenedioxythiophene copolymers, opt./electrochem. props. 92926
high-dens. PWB testing, cond. high polymer probe 91493
hyperbranched conductive polymers containing triphenylamine, prep. cond. 125107
isotropic conductive adhesive joints in flip-chip test vehicle, HF meas. 67584
isotropic conductive adhesives as SMT solder alternative 124349
isotropically conductive adhesives, nonepoxy-based polymer matrix 67560
Japan, electroconductive polymers, appls. 125120
ladder-type conjug. polymer, two step charge carrier generation 93330
LED, photooxidation mechanism 127955
LED's, freq. depend. carrier mobility 127977
light responsive polymer FET 116951

conducting polymers continued
line patterning, disposable electronic devices appl. 114461
low bandgap conjug. polymers for bulk heterojunction PV cells 127948
MDOPPV, polymer LED, photooxidation effect *(Japanese)* 116985
MDOPPV/PPy layer, PV effects 104964
MEH-PPV films on Au, GaAs, photoinduced charge carriers at surfaces/interfaces 91711
metallophthalocyanine-doped polypyrrole/Si heterojunctions, NO_x gas sens. 97454
micro-dispensing for electronics assembly, integrated engng. approach 69321
microelectronics appls., review 81409
mol. scale electronics devices, develop./testing, mol. computer 102843
multichannel neural probes, cond. polymer polypyrrole/PSS, electrochem. deposition/charactn. 125123
nanotechnology for microsystems appls. 92491
neuron-type conducting polymer device, cond. control 114455
neuron-type conducting polymer-based network-type device, props. *(Japanese)* 102850
nonlin. optic and conductive polymers, thermal heating effects 93304
octacyanophthalocyaninatoiron polymer cathode for Li secondary cell 99936
OLED, mol. doped polymer, injection controlled EL 105006
OLED, singlet/triplet energy transfer to mol. dopants 93420
oligo(phenylenevinylene) derivatives, synthesis & charactn., opt. absorpt. 82322
one-way exciton conductors, multifunctional macromols./struct. 69340
organic electronics, LED displays and ccts. *(Italian)* 79457
organic metal for nanotechnology in electronics 91500
organic semicond. TFTs, IC mfg. 103942
PANI:HCSA, elec. cond., PVDF/poly trifluoroethylene/PANI electromechanical syst., dielec. props. 125108
PANI, electrochem. charact., electrochem. supercapacitors electrode appln 100229
PANI, soluble conducting polymer, solid electrolytic capacitor *(English)* 91419
PANI composite coating, NH_3 sens., nulling opt.-transm. bridge 97433
PANI film, hole blocking layer in polymeric LED 127978
PANI films, p-aminothiophenol monolayer self-assembly, internal photoemission 127905
PANI vac. deposited films, oxid., heterog. struct. form. 125113
PANI-ABS composite film, reusable aq. ammonia sens. 75719
PANI-methoxyaniline))/μcSi:H-based PV diodes, charact. 116962
PANI-PMMA blends, elec. cond., cryomagnetic temp. sens. 86506
PANI/polyolefin blends, elec. cond. and morph. 104262
PEDT-RuO_x composite electrodes, electrochem. and impedance props., capacitor appls. 99890
PEPK films, photothermoplastic storage media, holography 117547
phosphoresc. light emitting devices 105023
photocond. polymer-NLC hybrid structs., opt. inform. proc. appl. 104832
photocond. polymers, charge carrier generation procs. 82315
PLEDs, perform. improvement using polymer solid solns. 93409
PMMA/PANI-CSA blend films, elec. conductive patterns 114460
POFB-MEH-PPV, blue light-emitting polymers synthesis, luminesc. props. 127981
POFB-PF, blue light-emitting polymers synthesis, luminesc. props. 127981
POFB-PK, blue light-emitting polymers synthesis, luminesc. props. 127981
poly(1,3,4-oxadiazole) based LED, EL, vap. deposition polymerization 127989
poly(2,2′-diphenylbiphenyl-4,4′-ylenevinylene-2″, 5″-bis(trimethylsilyl)-para-phenylenevinylene), EL/PL charact. 104910
poly(2,2'-diaminobenzyloxydisulfide) conducting polymer high-energy storage material 123772
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
poly(2-methoxy-5-dodecyloxy-p-phenylene vinylene) EL device, photooxidation 116966
poly(3,4-ethylenedioxythiophene) films, in situ cond., electrosynthesis 125106
poly(3-alkylthiophene) films, carrier transport rel. to functional nanometric interface controlled electronic devices 102854
poly(3-alkylthiophene)-based quasi-solid state PV cells charactn. 116961
poly(3-butylthiophene), electrosynthesis, semicond. props. 80778
poly(3-hexyl thiophene) MIS diodes, freq. behaviour, Mott-Schottky anal. 70025
poly(3-octylthiophene)/solid state dye-sensitized TiO_2 solar cells 123817
poly(alkoxythiophene) derivative electrodes, capacitance and cycling stabil 79459
poly(cyano-substituted-diheteroareneethylene), prep., electrochem. supercapacitor 101512
poly(cyanoterephthalylidene)s, synthesis & charactn., LEDs 90571
poly(dibenzylidenetetrathiapentalene), lin. extended TTF polymer 79450
poly(ferrocenylsilane) semicond. thin films with vap.-phase I diffusion doping, electronic props. 69606
poly(hetero-arylene-ethynylene), third order NLO coeffs. 92925
poly(N-vinyl carbazole) film:ammonium salt, enhanced electron injection & EL 127925
poly(N-vinylcarbazole)/3-(-2-methacrylate-ethoxy)carbonyl dimethylocoumarine LEDs, electrolum. 127999
poly(o-methoxyaniline) thin film FET, charact. behavior 126887
poly(p-phenylene ethynylene vinylene), pendant fullerenes, prep., opt. props. 79449
poly(p-phenylene vinylene):$InCl_3$, opt. props., photo-/electrolum., dopant effects 69618
poly(p-phenylene vinylene) derivative based electrodeposited film, fab./opt. charact. 68353
poly(p-phenylene vinylene) derivatives, light-generated polarons, light-induced ESR 91712
poly(p-phenylene vinylene)/poly(2-carboxyphenylene-1,4-diyl) bilayer film, luminesc. props. 93332
poly(p-phenylenes), ladder type, temp. depend. struct. stabil., Raman study 93439
poly(p-phenylenevinylene) derivative, charge cond. 82415
poly(phenylene pyridine) deriv. blue LED, photoluminesc. spectral narrowing 93416
poly(phenylene-dithiafulvene), synthesis & PL 127916
poly(pyridopyrazine vinylene)-polythiophene based single-layer-photodiodes, synthesis, AFM 82346
poly(silylene)s, charge carrier photogeneration/transport, polar acceptor side groups effect 71507
poly(triphenyldiamine)/nanoporous TiO_2/dye-sensitized hybrid solar cells 123816
poly-4,4′-bis(butylsulfanyl)-2,2′-bithiophene film secondary cell electrode 99904
poly-dialkoxy-p-phenylene vinylene, charge injection, temp. depend. 115344
poly-octacyanophthalocyanine, cathode material for Li batts. 112809
polyacene semicond., vulcanized, electronic, struct. props. 80781
polyacetylene heterojunction, photocurrent dens. 69649

ıducting polymers continued
polyalkylthiophene-based photodetector devices, side-chain length device perform. effects 131918
polyamide-6 films, elec. props., multistage ion implant. effects 116185
polydiacetylene nanowires by STM-induced chain polymerization on graphite 125923
polyepoxypropilcarbazol and its derivatives, doped by $V_2O_5(SbCl_5)$, dark/light I-V characts. 104899
polyethylene film, polythiophene grafting, ATR-FTIR, XPS, SEM, AFM 125110
polyfluorene derivatives, electrolum., organic tunable electrolum. diodes 71612
polyfuran, films, electrochem. synthesis/charactn 125013
polyfuran/polythiophene, films, electrochem. synthesis/charactn. 125013
polyimides, photogeneration/PV props. 115355
polyimides, triphenylamine-containing, photocond. 91709
polymer anode/small mol. interfaces, hole injection barriers 91737
polymer cathodes in Al/Ta electrolytic capacitors, perform. issues 115056
polymer film spin coating for LED displays, proc. optimisation anal. 125062
polymer-based multi-layer conductive electrode film for plastic LCD appl. 82234
polymer-fullerene PV cells, spectrosc. 100212
polymer/organo-clay EL device, carrier mobility 116965
polymeric EO modulator, conductive polymer cladding 104813
polymeric LED perform., partially oxidized Ca cathode effects eval. 93426
polynaphthalimide, new polymer for organic EL devices 71572
polyperinaphthalene films, excimer laser ablation growth, elec. cond. 114380
polyperinaphthalene thin films by laser ablation of PTCDA/Co mixture target, elec. cond. 101518
polyphenylquinoxalines/trisphenylquinoxalines films, electronic transport, OLED appl. 127986
polypyrrole and WO_3 based electrochromic device, charact. 71413
polypyrrole coated fabric polymer complexes, charge transport, EMI shielding *(Korean)* 83355
polypyrrole conducting polymer composites for gas sens., ammonia detect. 97522
polypyrrole films, Cu/Pd electroless plating metallization, XPS obs. 114392
polypyrrole films, electrochem. soft actuators 79454
polypyrrole free-grown layer, interface effects in PPV OLEDs 127997
polypyrrole pipe electrochem. actuators, cation insertion/extraction 79456
polypyrrole thin film gas sens., synthesis & sensitivity 97559
polypyrrole thin films, charge transport props., electrode material influence 69572
polypyrrole-glucose oxidase film fab., potentiometric biosens. 86680
polypyrrole/Cl^- films, electrochem. synthesis through polystyrene opal matrix 115354
polythiophene, films, electrochem. synthesis/charactn. 125013
polythiophene derivative LED with nano-sized electrode, modified SNOM setup 116980
polythiophene thin film based Josephson jns. 127475
polythiophene/pendant fullerene, electropolymerization, spectra 114466
polythiophenes, PV devices, characts. 123812
poly[(2-methoxy-5-(2′-ethyl-hexyloxy)phenylene vinylene)] Langmuir-Schaefer films, PEC appl. 90570
PoPD/PVA composite film humidity sens., AC impedance spectrosc. study 97215
porphyrin derivative LB film based LED, elec. field redistribution, EL/TOF study 127990
porphyrin/regioregular polythiophene organic solid-state solar cells 123813
PPV, elec. field induced exciton ionization 80782
PPV, organic semiconds., elec. charactn., transient current methods 69622
PPV LEDs, electron/hole traps, charge based DLTS anal. 127975
PPV thin films, vapour phase fuming sulfuric acid-doped, humidity sens. 109489
PPV-based copolymer LEDs, improved efficiency, electron transport layer effects 127995
PPV-based film synthesis, charactn. and LED appls. 127994
PPV-based ionically SAM, excited state dyn., photolum. props. 116922
PPV-based self-assembled multilayer microring LED structs., fabr. and charactn. 127960
PPV-C_{60} films, electrostatic self-assembly for PV devices 114465
PPV-oligomer based Schottky diodes, I-V characts. 71562
PTFE, graft polymerization functionalization, struct./elec. props. 81064
PVK/C_{60} composite films with photoinduced charge transfer, props. *(Chinese)* 113013
PVK/CPDHFPV/MEH-PPV LED, white light emission 93401
pyrrole, electrochem. polymerization, DEFT calc. 79451
QCM selective polypyrrole electrodes, NO_2 & gas flux sensitivity 97440
reagentless bioaffinity sens., EIS, protein immobilis. in polypyrrole 120952
resettable overcurrent and overvoltage fuses for telecom. equipt. *(German)* 91449
resins for ESD appls., packages, antistatic agents 105675
sens. array, wine aroma discrim. 97533
silicone rubber, C black filled, press. sens., wet mixing fab. 86460
siloxane conducting dendrimer, CO gas sens. 97538
single-layer polymer LED, emission zone 82388
1,3,5-tris-styryl-benzene cpds. synthesis, tunable photo-/electrolum. props. 126098
substituted thiophene oligomer, photoluminesc./electroluminesc., LED appl. 93417
template-free synthesized microtubules of conducting polymers 68440
thermoplastic isotropically conductive adhesive, contact resist. degrad. 113530
thiophene based conducting polymers, electronic QCM/quartz cryst. impedance meas. 125109
triphenylamine polymers, ethynyl/aromatic moieties, synthesis & props. 90569
unipolar conjug. polymer thin film devices, modified transport props. modelling 91866
Ag-epoxy conductive adhesive/Sn-Pb coating interface, high temp. degrad. mechanism 67561
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
C nanotube composite electron transport layer for M3EH-PPV based LED, EL/brightness 127991
C-based capacitor electrode materials, electrochem. energy storage 69270
C-poly(3-methylthiophene) hybrid supercapacitors, perform. 113040
Ca cathode, controlled oxid. during growth, polymeric LED appl. 127987
CdS nanosized particles in hyperbranched conjug. polymers, fluoresc. spectr. 126046
ITO/P3BT/Al sandwich cell, conjug. polymer with high TOF mobil. 115442
ITO/poly-DOTT/Al. Schottky-type jns., slow transient photoresponse anal. 69705
ITO/poly(3-alkylthiophene)/Al cells, photocarrier generation 123820

conducting polymers continued
p-InP/poly(pyrrole) interface, current transport 91865
Li-polymer secondary batts., novel composite cathode develop. 123733
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pt porphyrin-based conjug. dendrimer LED, electrophosphorescence control 128010
Pt-modified PANI electrodes, methanol electrocatalytic oxid. 114458
n-Si/p-PPV jns., elec. charactn. 115375
Ta capacitor failure modes, fab. technols. 115080
TiO_2 nanoporous layer dye sensitized solar cells 123822
TiO_2 organic/inorganic hybrids with substituted phthalocyanine or polythiophene, nanofabrication 134396
V_2O_{5-x}-PANI nanorods, prep., elec. resist., AFM microscopy 125118
$WO_3 \cdot H_2O$/PANI electrochromic device, electrochem. & opt. props. 82219
needle dispensing equipt. design for very high speed deposition 113468
poly(N-vinylcarbazole) LED, $LiClO_4$ doped, efficiency 116982
polysilane catenated polymer, end grafted, mol. wire, AFM 101513

conduction bands
see also Fermi level
aromatic polyimide films, partially carbonised, semicond. elec. props. 80777
computational band-struct. engng. of III-V semicond. alloys 91625
diamond:N, CVD films, metal-insulator-vac. type electron emission 91536
diamond, natural, carrier scatt. mechanisms 80639
doped QW minigap-confined states, intersubband transits., IR detector appls. 80882
dual-color injection laser based on intra-/inter-band transits. in QWs/QDs 117264
gate oxides, very thin, trap generation/breakdown procs. 69761
highly mismatched semicond. alloys, electronic struct. 125984
power VDMOSFETs, pos. gate bias stress induced instabilities 126815
quantum commun., spin-coherent semicond. photodetector 86512
QW IR photodetector-LED integrat., space charge spectrosc. 86554
reson. tunneling diodes, direct bandgap, indirect bandgap-like current flow 92423
semicond. intersubband devices, self-consistent charact. 115810
semicond. lasers, inversionless bistability, interband coherence 71788
solar cells, dye-sensitized, SPV spectrosc., electron injection 112864
solar cells, QD intermediate band, partial filling 123815
AlGaN/GaN heterostruct., elec. cond., quantum corrections 80783
$Al_{0.2}Ga_{0.8}N$/GaN heterojunction, effective mass of 2DEG 91729
AlN film, prep., DOS distrib., CPM/DLTS anal. 91631
AlN/GaN MQW, MOCVD, DUV ps time-resolved photolum. 68266
Au/(AlGa)As heterostruct., second derivative BEEM spectra 91876
Au/n-Si Schottky diodes, interface state dens. distrib. rel. to series resist. 92288
$Bi_{2-x}In_xSe_3$ single crysts., transport props. 126088
$Cd_xHg_{1-x}Te$ alloys, irrad., Fermi level pinning and elec. props. 115302
CdMnTe/CdMgTe QW quantum Hall syst., photolum. spectra, Mn conc. depend. in high mag. fields 80834
CdTe/CdS solar cells, electrodeposited, heterojunction props. 134387
$Cu(In,Ga)Se_2$ solar cells, $Zn_{1-x}Mg_xO$ window layer expts. 100174
$Cu(InGa)Se_2$ solar cells, controlled cond. band offset of window/$Cu(InGa)Se_2$ layers 78172
n-$CuInSe_2$ elec. characts., impurity band cond. effects anal. 126093
ErAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
GaAs:Be, electron-hole recomb., two-color pump-probe obs. 126036
GaAs/AlGaAs QW, D^--cond. band, transport/opt. props. 103144
GaAs/AlGaAs single V-groove quantum wire, micro-photoluminesc. *(Chinese)* 115420
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approach 91794
GaAs-AlGaAs cond.-band QW struct., intersubband transits. 69693
GaAs-AlGaAs n-N heterojunctions, band-gap offset estim. using J-V-T charact. 69647
GaAsN/GaN QWs, envelope fn. calcs., excitons 91806
GaInNP, electronic/optoelectronic material 115318
GaInNP/GaAs heterostructs., GSMBE growth, band lineup, PL study 101211
GaN MBE layers, highly resistive, elec. transport 91676
GaN based HBT, band offsets, current transport, 1/f noise 81239
n-GaN epilayers, elec. props., plasma etching, ICP plasma damage 80742
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaNAs/GaAs single QW, opt. transits., band bowing coeff. 80889
GaNP, electronic struct., pseudopotential methods 91639
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
Ge:Au, high thermoelec. power, electronic struct. calcs. 80640
Ge/Si(001) QD heterostruct., electron spatial separation 103145
HgSe:V crysts., growth, transport props. 91643
InAs, Shockley-Read-Hall recomb. rates, full-band-struct. calc. 91635
InAs/$Al_{0.6}Ga_{0.4}Sb$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InAs/AlSb IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InAs/GaAs QDs, strain, cond. band, mol. dyn. simul. 115414
InAs/Permalloy interface, spin injection & detect. 80904
InAs/ZnSe core/shell nanocryst. QDs, artificial-atom states, STM 91804
InGaAs QW lasers, gain, refr. index change, linewidth enhancement factor 128273
InGaAs/AlAsSb MQW, temp.-insensitive intersubband transits. at 1.55 μm 80848
InGaAs/GaAs, QD IR photodetector, lateral carrier transport 131910
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, confined states, QCSE 91771
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InGaAs-AlGaAs spin pol. electron source, superlattice photocathode photolumin. 110261
InGaAsN/GaAs QW lasers, localized N states effect on material gain 105264
InNAs, electronic struct., pseudopotential methods 91639
InP:Si^+, implanted, free-carrier conc., PL method 80735
$LiNbO_3$:Tb,Fe, nonvolatile/quasi-nonvolatile holographic recording 128587
Si nanoparticle colloids, thin film form., high temp. single electronics 103930
Si, non-parab. band hydrodynamical model, electron device simul. 91578
Si:Au, high thermoelec. power, electronic struct. calcs. 80640
a-Si:H, deep defect dens., amplit. modulating capacitance tech. meas. *(Korean)* 69555
a-Si:H p-i-n jn. solar cell, const. photocurrent method, simul. 112902
Si:H,F, film, polycryst., PECVD transport props. 102973
Si:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
$Si/(Ta_2O_5)_x(Al_2O_3)_{1-x}$ interface, electron traps 103185
Si/SiO_2 electron waveguides, electronic props., oxid.-induced strain 115975

conduction bands continued
Si/$ZrSiO_2$, interface band offsets, scaling trends 91900
Si(100) electron energy barriers with ultrathin stacks of SiO_2, Al_2O_3 and ZrO_2 insulators 69739
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 69811
SiC(111) growth by C_{60} decomp. on Si(111), electron spectroscopies 114269
SiGe CMOSFET tunneling currents, ultrathin gate oxide, cond.- and valence-band components 81298
$Si_{1-x}Ge_x$/Si triple barrier diodes, electron reson. tunneling 126628
$Si_{1-x-y}Ge_xC_y$/Si heterostructs., band offsets and electron transport calc. 115362
SiO_2/Si-QD/SiO_2/Si tunnel capacitor, charging dyn. *(Chinese)* 126129
n-SnO_2/Al_2O_3/Ru-dye/p-CuI PV cells, electron-hole recomb. 123804
SrS:Eu,Sm, electron traps, opt. storage *(Chinese)* 116929
$SrTiO_3$/Si(001) epitaxial heterojns., band offset and structural quality, PES obs. 69742
Ta-Ta_2O_5-MnO_2 capacitor as MIS struct. in reverse mode 115082
TiO_2 nanocrystalline PV cells, charge transport 93366
TiO_2 solar cells, organic dye-sensitized nanocryst., electrolyte effect 134403
$Ti_{1-x}V_xO_2$ graded bandgap film electrode, photoelectrochem. 103052
ZnO, green emission band, fine struct. 80677
ZnO/ITO multilayer ohmic contacts to n-type GaN isotype conjunction 69666
ZnSe/ZnMnSe heterostruct., spin-polarized transport, cond. band offset effects 91753

conduction, heat *see heat conduction*

conductivity, electrical *see electrical conductivity*

conductivity, ionic *see ionic conductivity*

conductivity, thermal *see thermal conductivity*

conductors (electric)
see also conducting bodies; overhead line conductors; wires (electric)
400 kV substation stranded conductor buses, short-cct. tests 112717
2002 Nat. Electrical Code changes, metrication, conductor sizes 123010
AC ccts. conductor resist. modelling, time domain anal. 80465
AC rly. syst., act. return conductor, EMC, personnel safety, voltage stabil. *(German)* 123979
AC rly. systs., act. return conductor *(German)* 78250
Ampere's mag. circuital law, simple rigorous two-step proof 90626
busbar elec. modelling, interconnection inductance, CAD 77131
cement-based composites, electronics, review 68416
conductive plane covered with magnetized inhomogen. plasma, EM refl. 128794
corner, coarseness error and wall proc., FDTD method *(Japanese)* 105825
corner, wall proc., FDTD method, cavity resonator *(Japanese)* 105826
current shunts, punched strips, surface-mounting component, automotive appls. *(German)* 89409
current-carrying conductor above two-layer ground, mag. field distrib. 123007
DC coil, magnet startup phase, skin effect 128717
distrib. network cable impedance calcs., parallel ccts., multi-neutral returns 112033
elec. equipt. ccts., AC dens. distrib. 77374
elec. machine winding conductors, 3-D FEM-based eddy current calc. 133930
electrodynamic systs., massive conductors, EM forces, fanout equiv. ccts. 112093
electrostatics computing, discrete charges, Monte Carlo method 93966
ESD conditions calc. between charged body/floating pot. conductor 72175
FDTD staircase-free formulation for general materials in complex geometries 83083
finite length crossing wires, induced voltage anal. 99369
HVDC filter, reactor winding, eddy current loss 134329
IC interconnects with thick conductors, capacitance/conductance calcs. 126510
loaded cavity resonator with improved spurious perform., filters 102555
loop conductor, nonzero cross sect., self-inductance 115101
LV network, neutral conductor disconnection, DDR differential protection 122953
massive copper conductor additional eddy-currents losses 112594
megaampere current elec. cct., conductors and contact connections 79643
moving conductors, eddy current problems, finite analytic element method 128680
neg. pre-stressed conductor-plane gaps sparkover, pos. switching impulse voltages 91530
parallel conductors syst., imped. boundary condition use in imped. calc. *(Slovenian)* 117723
pos. direct voltage pre-stressing rod conductor gaps, sparkover 91531
power cables crossing thermally unfavorable regions, ampacity reduction factors 133733
power electronic equipt., touch/protective conductor current meas. *(Polish)* 99831
rail launcher devices with sliding contacts, EM anal. 83185
rect. cross-sect., internal impedance 102756
rectifier output/protective conductor fault current, overcurrent protection *(Polish)* 99415
supershielding of current-carrying conductors, concentric spheres 128795
thin conductors with long. current direction, mag. field calc. 91406
thin wire and plate, 3D modeling using FEM and elec. cct. eqn. 125835
three-body indirect ESD problem expts. 128664
tubular conductor with min. act. resist. 77375
Al, parallel conductors, asymmetric cable config., power quality aspects, parallel Al conductors 99376
$LaCrO_3$-CrFe5$Y_2O_3$1 heat-resistant elec. conducting joint, brazing, SOFC 123790
Y-Ba-Cu-O, unidirectional solidif., supercond. rod current leads 116506

conduits, electric *see electric conduits*

configuration interactions
see also electron correlations
azo-dyes, multivariable anisotropic random-walk mol. devices, quantum chem. design 69336
stilbene, multivariable anisotropic random-walk mol. devices, quantum chem. design 69336

configuration management
config. method of multiple clusters for computational grid 108117
deregulated elec. market software quality tools 133478
extensible policy enforcement points 108053
field intell. instrum. software syst., integrat. technol. *(Chinese)* 109427
intranet, closed commun. group, dyn. proc. resoln. protocol *(Japanese)* 74193
IP network config. operation sequencing 108120
network commun. services, configurability and real time support 130658
PIKT, problem informant/killer tool for network monitoring 108026
tactical battlefield networks, adaptive config. mgt. archit. design 111572
urban community IS using simple IR broadcasting telecomm. protocol *(Japanese)* 107884

configuration management continued
Web server, usage of older Apple Mac computers 85259
Web-based network config. mgt. syst. 96157

confinement, plasma *see plasma confinement*

conformal antennas
arbitrary antenna arrays for mm-wave direction-finding algms., spectral estim 105929
array modeling using locally nonorthogonal FDTD 117827
automotive antennas integrated with vehicle glazing, installed perform. modelling 83619
COMWIN vest antenna, fab./testing 105873
convex circ. cylinder apertures, mutual coupling calc. using hybrid UTD-MoM method 72650
dipole antenna on partially screened layered sphere, radiation 117801
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
microstrip antenna array on cylinder, directivity patterns 72691
microstrip cylindrical antennas anal., efficient Green's fns. calc. 83566
microstrip reflectarray with line-source-feed 94184
onboard array antenna synthesis, MoM-based algm. 83752
onboard array antennas synthesis, antenna interacts. 72663
patch antennas modelling using FDTD method 105899
radiometry controlled conformal microwave array hyperthermia applicator 76622
RF UWB helmet antenna, develop. 105872
spherical array in superresolution direction finding systs. 131693
terminal/base-station antennas, Wroclaw Univ. of Technology study 117835
UWB conformal helmet antenna, design and perform. 72575
wideband conformal antenna with fractal geom. 72505

conformal coatings
dielec. interconnect capacitance, BEM-based simul. *(Chinese)* 104243
PCB conformal coating proc. optim. 115193
Cu smooth thin film deposition in deep-sub-μm trench using H atom source plasma CVD reactor 90461
Si microphone, 3D multichip microsystem encapsulation, conformal coating 104211
Si tip array, BST sol-gel ferroelec. coating, electron emission 69396
W MEMS device coating, CVD 101337

conformance testing
Alpine, user-level infrastructure for network protocol develop. 119309
army network protocols with conflicting timers, efficient test generation 107839
automotive systs. commun. links, conformance testing 134583
commun. protocol, test case generation by adaptive state exploration 107876
CORBA based network mgt. interface conformance test *(Chinese)* 119470
CORBA interoperability, test framework 130881
differentiated service networks, aggregation and conformance 73879
EFSM models of complex army protocols with inconsistencies, test generation 107843
fault ident. in networks by pass. testing 85133
IPv6 next generation Internet protocol, conformance test 130429
mode-tuned/mode-stirred reverberation chambers, local averaging 105793
MPEG-4 shape decoding 118533
Multimedia Home Platform DVB, conformance/licence testing *(German)* 131727
open SCE 130917
PRO-COW, protocol compliance on WWW 119308
protocol test seqs., optim. effects on length and fault coverage 85017
protocols, concurrent DFSMs modeled, conformance testing, nonobservable nondeterminism 95924
ramification of component selection 124303
Rohde & Schwarz's ESPI precompliance test receiver 131841
Rohde & Schwarz's PTW60, protocol tester for Bluetooth appls. 86435
Rohde and Schwarz's CRTU-G protocol analyzer 131838
SCP and SSP, multi-vendor integrat. 130908
SOCRATES on IP router fault detect. 74005
TCP conformance for network-based control 73980
TMN, mgt. inform. model, conformance test *(Chinese)* 74111
tree and tabular combined notation quality metrics 119108
unified software radio archit. 85832
V5 interface conformance test study *(Chinese)* 119368
VoIP systs., interoperability testing 74324

congestion control, telecommunication *see telecommunication congestion control*

conical antennas
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 105695
array synthesis from curvilinear radiators with account of mutual influence 117832
biconical dielec. resonator antenna for wideband appls. 94141
CLASP software suite for antenna design/optim. 83526
dielec. resonator antennas excited by coaxial probe 72545
generating line break antennas, polariz. characts. 83632
ground-penetrating radar, conical spiral antenna anal. 75182
hard corrugated conical horn anal. by method of generalised scatt. matrices 83567
horn antennas loaded with metallic discs, near-field meas. 94142
L-band EMI/sig. meas., pass. strip biconical antennas 72530
LEO satellite compact conical patch phased array antenna 83679
LEO small satellite antenna, compact phased array design 83725
MIMO channels, multimode antenna soln. 105915
multi-octave band conical spiral antenna 72464
multimode based direction finding 109326
OATS antenna factors for small anechoic chambers 128803
pass. act. L- and S-band microwave sens., marine/hydrol. 76905
perfectly conducting slotted bicone, transient excitation 83545
slot antenna excitation 117772
SF_6 GIS, PD, EM wave detect. 134275

conjugate gradient methods
1-norm quasi-min. residual variant of Bi-CGSTAB algm. for nonsymmetric lin. systs. 124660
2D ellipt. problems, domain decomp. methods, preconditioner constr. 79038
2D EM scatt., nested multigrid finite elements 105701
3D angiographies, variational image restoration 122085
3D BEM systs. of eqns., iter. techs. 79137
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
3D dielec. obj. image reconstruction using gradient-based optim. 83259
3D EM field problems, finite element & multigrid methods 83144
3D objs., fast-domain decomp. method for EM scatt. anal. 72220
3D weak-form CG-FFT/BCG-FFT methods for vol. integral eqns. 83260

njugate gradient methods continued
2000 Copper Mountain conf. on iter. methods, Boulder, CO, USA (April 2000) 100361
accelerated convergence of nonoverlapping Schwarz methods 68020
adaptive blind image regularization, recursive soft-decision PSF/neural network approach 94954
additive Schwarz methods, matrix anal. on leading term of condition no. 79019
aggregation-based domain decomp. preconditioner for groundwater flow 101025
alg. multilevel preconditioners 101064
asymptotically exact a posteriori estimators for pointwise gradient error, smooth problem and globally quasi-uniform meshes 79149
Bi-CGSTAB(L), dyn. selection of L *(Japanese)* 124667
biconjugate residual methods 101014
blind restoration of multichannel imagery, double-regularization approach 118323
blind source separation, geometric optim. methods 118811
block GMRES method augmented with eigenvectors 79025
borehole induction meas., hybrid EBA/CG-FFHT method 88099
CDMA receiver, steepest descent algm., systolic implement. 119205
CGFFT method with discontinuous FFT algm. 72166
CLUCGS and CLUCR, matrix soln. methods for general cct. simul. 79508
coarse grid accel. of parallel block preconditioner 79029
complex Gaussian quadrature estim., biconjugate gradient method 73616
composite triple layer struct., plane wave scatt. 128762
contrast enhanced opt. tomography, gradient-based nonlin. optim. methods 106495
convergence of dual-primal substructuring method 90182
convergence of nonlin. conjug. gradient methods 114083
deflation-based preconditioners 100978
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753
dual-band antennas for wireless handsets, freq.-domain finite-difference anal. 83578
dyn. nuc. med. seqs., factor anal., ambiguous solns. correction 122246
EFIE preconditioner 105732
elastic wave tomography of joint P-wave traveltime and polariz. data 76974
electrostatics, Schwarz-type finite element solver 128659
EM field anal., large sparse symmetric lin. systs. 128688
EM scatt. by 3D dielec. bodies, MoM-CGM-FFT appl. 72287
fMRI scans, elastic registration using fast DCT 98466
FQMR, flexible quasi-min. residual method with inexact preconditioning 101023
Galerkin BEM, computational lin. alg. issues 124663
generalized domain decomp. paradigm for parallel incomplete LU factorization preconditionings 79028
ground surface image reconstruction using radio ground waves 111381
HADES-CCG tomographic reconstr. tool, X-ray & neutron radiography 101610
head phantom, induced EM field reconstruction, microwave imaging 132649
image reconstruction from sparse Fourier samples, self-referencing level-set method 118257
improved conjug. gradient sq. method on parallel distributed memory archits. 124661
incomplete Cholesky decomp. of class of perturbed matrices 101024
iter. substructuring method for Maxwell's eqns. in two dimens. 83249
Lagrangian dual interior-point methods for semidefinite programs 90081
large-scale normal coord. anal. for mol. struct. 101031
MAP high-resoln. image reconstruction with multisensors, fast algm. 84263
microstrip antennas in multilayered media, full-wave anal. 72566
microstrip arrays, aperture coupled, anal. 128884
microwave devices, iter. solvers for hierarchical vector FEA 125688
microwave imaging, inversion of scatt. near-field meas. 129432
microwave imaging applied to rem. sens. using multilevel fast multipole algm. 75127
microwave tomographic imaging techs. for indust. procs. 121165
mixed pot. integral eqn. soln., fast algm., microstrip antenna appl. 72441
MM-wave patch antennas, composite double layer struct. EM scatt. 128889
modified conjug. gradient method, solving $A\underline{x}=\underline{b}$ 90078
MoM for compact large planar scatterers in homog. medium 83223
multi-pulse excitation LP synthesizer, param. re-optim. algm. 73111
multilevel ILU preconditioner on shared-memory computers 101007
multiresolution approx. inverse preconditioner 100979
near-field/aperture-field transform., equiv. mag. currents, CGFFT algm. *(Chinese)* 105661
nonlin. conjug. gradient method, new props. 114046
nonlin. interface problem in unbounded domains, soln. method 124748
optimal preconditioned eigensolver, locally optimal block preconditioned conjug. gradient method 100984
optimal preconditioners, rate of convergence estim. for conjug. gradient method 101055
orthogonal residual methods, convergence accel., residual minimization appl. 124642
parallel block preconditioner accelerated by coarse grid correction 101006
parallel preconditioning of sparse eigensolver 68084
perfect circ. cylinder conductor, scatt. anal., wavelet MOM *(Chinese)* 72257
piezoceramic material tensors ident. from elec. imped., iter. reconstr. 104328
pre-conditioned edge-preserving image deblurring/denoising 95462
preconditioned conjug. gradient approach to lin. equality constrained minimization 101056
preconditioned conjug. gradient method for elasticity, displacement decomp. and parallelization 124746
preconditioners, iter. soln. of boundary element eqns. for 3D Helmholtz eqn. 68014
preconditioners for block Toeplitz systs. based on circulant preconditioners 90086
preconditioners for domain decomp. methods 101051
preconditioning for BEM in domain decomp. 68091
preconditioning strategies for fully implicit radiation diffusion with material-energy transfer 101029
predictor-corrector interior point methods for LP, adaptive use of iter. methods 67932
PREQN, Fortran 77 subroutines for preconditioning conjug. gradient method 114089
RCS, dipole array antenna, preconditioned conjug. gradient method *(Chinese)* 109252
satellite imagery, improved neural network tech. for data dimens. reduction *(French)* 111375
Si(001) surface atom, hydrogen-terminated, etching, hydroxyl fn. *(Japanese)* 126343
sine transform matrix for solving Toeplitz matrix problems 79020
solving elasticity systs. by PCG methods 101130
SPECT reconstructions enhancement by coregistered MR data 111025

conjugate gradient methods continued
stacked actuator displacement-amplif. mechanism, topol. optim. 112727
stochastic microwave imaging in NDT, GA-based iter. procedure 101577
Stokes solvers in harmonic Velte subspace 114030
Strang-type preconditioners for systs. of LMF-based ODE codes 68021
sublinear/superlinear rate of convergence of conjug. gradient methods 67931
super-resoln. image reconstruction with multisensors, preconditioned iter. methods 94746
three-param. family of nonlin. conjug. gradient methods 78999
transient eddy current problems, motional induction effects, FI²TD algms. 83148
turbine fast valving control, ANNm conjug. gradient algm. training 77741
vert. field open MRI, convex gradient coil design 87656
VLSI large-scale power grid anal. based on preconditioned Krylov-subspace iter. methods 126960
VLSI power/ground network solver, incomplete Cholesky decomp. conjug. gradient *(Chinese)* 92432
vol. holographic data storage, field distrib. uniformisation along opt. axis 83009
voltage limit violations line outage ranking tech. 122891
wavelet-based preconditioners for dense matrices with non-smooth local features 84261
SF_6 cct. breaker, 3D elec. field calc., ICCG algm. *(Chinese)* 78047

connecting *see joining processes*

connection admission control *see telecommunication congestion control*

connectionism *see neural nets*

connectors (electric) *see electric connectors*

consecutive system reliability
1-out-of-2, G systs., common-mode failures, load-capacity interf. model 89923
2-D k-within-consecutive-r×s-out-of-m×n:F syst. reliab. 113794
acyclic consecutively connected networks reliab. eval. algm. 100666
calc., Chaudhuri bounds 89926
general shock model 89915
k-out-of-n, F syst., optimal replacement period 67673
k-out-of-n and related systs., reliab. assess., BDD 89929
lin. consecutive-k-out-of-n, F repairable syst., repair priority 67674
parallel systs., stochastic comparisons 89916
TSP and consecutive-2-out-of-n systs. 100671
weighted voting systs., limited availability volting units optim. 78719

consoles, remote *see remote consoles*

constant current modulation *see amplitude modulation*

constant current sources
deep submicron cct., DC current generation and meas. 79813
dual-ADC front end, built-in calib., DAQ appls. 114844
general BJT networks, DC solns., topol.-based method 68532
high side current meas. methodology, overcurrent protection, prog. sources 88951
integrated gate commutated thyristor, CSI 126701
ISFET/MEMFET, const. current driver 81344
loss-free resistor sources with internal loss-free resistive characts. 90721
LV high output impedance tail current source and differential amp. appl. 90739
MOSFET, charge pumping based freq.-controlled low-level current source 101763
PCS surface mount vector modulator 91235
source-measure units, automated testing role 131808
Nb, discrete-foil-type supercond. power supply, design, fab., test 112627

constants
see also elastic constants; lattice constants; optical constants
HTSC current comparator, charged particle beam meas. 70856
Lyapunov consts. for random recurrences with smooth coeffs. 90074
SQUID detector, elec. quantum metrology triangle 70896

constraint handling
CCD camera calib., constraint condition selection *(Chinese)* 97356
collaborative design, constraint-based heuristics, act. approach to proc. mgt. 124299
computer network security mgt. planning, intrusion detect. syst. 74097
convex separable minimization subj. to bounded variables 67917
differential diagnosis of faulty gates, eight-valued logic 68703
dual algm. for solving constrained optim. problems *(Chinese)* 124601
first-order optimality, degenerate index sets, generalized semi-infinite optim. 113976
indust. optimisation problems, constraint prog. and maths prog. appl. 124595
LPSAT, unified approach to RTL satisfiability 79690
multicriteria evol. optim., conf., Switzerland (2001) 89520
reliable min. param. estim. 67855
robot navig., mapping, spatial representation acquisition 106708
switching cells simul. by constraints prog. *(French)* 131129
trust region algm. for constrained nonsmooth optim. problems 100934
turbojet engines flight charact. modelling *(Chinese)* 133262

constraint programming *see constraint handling*

constraint propagation *see constraint handling*

constraint satisfaction problems *see constraint theory; operations research*

constraint theory
see also operations research
2D hierarchical compaction algm. for VLSI layout reuse *(Chinese)* 81488
ATM networks, QoS path-constrained-cost-optimized routing problem 74051
breast cancer diagnosis, CSP, neural net approach 122133
BVP, constrained domain functional variational optim. 67859
CDMA syst., interf. suppression, constrained optim. model *(Chinese)* 83444
consonant-vowel utterance recogn., neural net models 106396
constrained block coding and computational complexity theory 129204
constrained traveling salesman problem, finite size scaling and crit. transit. anal. 78936
crit. chain project mgt., project buffers estim. 89716
direct optim. method, global extremization of class of integrals 113970
divergence minimization under prior inequality constraints 128926
FIR filters, output envelope constraints, recursive design, cubic constraint approx. 73658
FIR two-channel filter bank design using constrained optim. 73665
free-form surface registration using rigid motion constraints 94586
fuzzy LP, constraint satisfaction measure 90044
fuzzy nonlin. integer program by parametric prog. 90042
high-level synthesis, scheduling, allocation, and binding problems, enhanced GA 114581
indust. optimisation problems, constraint prog. and maths prog. appl. 124595
infeasibility repair in lin. constrained program, fuzzy method 90041
Internet, multi-constrained real-time multicast routing control algm. *(Chinese)* 85092
log-sigmoid multipliers method in constrained optim. 100947

constraint theory continued
multi-objective optim. problems, interactive fuzzy satisficing approach using GA 113995
multicast routing algm., degree and delay constraints *(Chinese)* 130508
multicast routing problem, delay constraint, GA *(Chinese)* 85093
multicast routing protocol with delay/delay var. constraints 74032
multicriteria/constraint LP, interior-point method 78888
multicriteria/multi-constraint integer LP 113955
multiobjective evol. algms. constrained test problems 78968
multiobjective optim., constraint-based evol. algm. 78969
multiple pop., CSP, constraint-graph based evol. algm. 90007
nonlin. constraint max-min problems, gradient projection algm. *(Chinese)* 100928
nonlin. integer bilevel prog., optimal soln. *(Chinese)* 67890
pairwise attraction and repulsion, image segmentation 106466
Pareto constrained optim. infeasibility objective 78966
piecewise lin. fn. with lin. constraint, global optim., hybrid algm. *(Chinese)* 124593
quotient gradient methods for solving CSP 90036
radio link freq. assignment, guided GA 122752
salient pole sync. generators, hydroelectric plant, automatic optim. 123338
time-variant topol. ccts., constraint eqns. formulation 90701
unicast source routing algm., delay constrained path *(Chinese)* 85094
VLSI layout spacing, simplex algm., graph theory 92443
GaAs through-substr. via hole proc., 1000 wafers/week throughput barrier 69945

construction *see building*

construction industry
see also civil engineering
EPC projects, procurement uncertainties mgt., supply/crit. chains 89811
materials, thermal effusivity meas., thermal impedance method 97216
mobile user support for constr. indust. 130794
near-field microwave NDT, NaCl in mortar determ. 114540
online constr. project collaboration 130855
project cost control syst. design, safety model anal., IT *(Chinese)* 100527
risk mgt. of internat. projects in Russia 89756
shipbuilding planar panels visual recogn. using line features 129892
Taipower hydropower project quality inspection syst. improvement *(Chinese)* 77773

constructional engineering *see civil engineering*

consultancies
ACD syst. at Princeton Univ. computing and IT help desk 119509
Danish elec. indust., energy consultant appl. overview 133452
Romanian power project financing, consultancy role in investment attraction 111691

consumer electronics
3D home based entertainment, overview 86308
ALIVH any-layer interstitial via hole interconnect substr., insulator material 67574
AMIDEN peer-to-peer archit., networked appliances connnection 130638
ASIP SoC multimedia codesign based on multicriteria optim. 119808
audio-video content abstraction program interface for home network appls. 120540
Bluetooth radio module design using low-temp. cofired ceramic technol. 74779
Bluetooth version 1.0 spec., develop. 85634
Bluetooth wireless technol., test challenges 131252
Bluetooth/proposed evol. technols., consumer electronics appl./coverage constraints 119965
capacitor technols. for portable electronics appls. 80437
CEA-851 versatile home network, inter-cluster connectivity backbone 119608
chip size BGA packaging for high perform. memory appls. 68790
collaborative media streaming in in-home network 74232
computing/commun./e-commerce convergence 85650
CPUs, 32 bit design for handheld consumer electronic product appls. 90942
CSPs for portable consumer electronics appls. 113600
design for environ., act. disassembly using smart materials, costs 100537
digital cameras, spectral responsivity meas. method *(Japanese)* 86393
digital still photography, CCD imagers vs. CMOS image sens. 131976
disc based video recorders, MPEG-2 streams virtual editing 118328
DRAM wafer probe testing strategies, impact of market changes 102146
DVD, convergence zone 97101
DVD, multimedia redefinition 93014
DVD business/indust. appls. 97103
DVD mastering 93013
DVD recordable products, digital video storage for mass markets, silicon solns. 97102
ECHONET device adapter *(Japanese)* 85452
environ. weighted recyclability of products 100696
FR-V archit., VLIW proc. core for SoC *(Japanese)* 114795
fuzzy multimedia IT based on fuzzy control 130978
handheld wireless product remaining batt. capacity gauging 96540
HAVi/ECHONET gateway *(Japanese)* 85119
high-security cryptographic fast finite field multiplier archit. 114712
HJA, Java prog. for CE devices 120538
home telecomm. equipt., middleware emergence 75311
HomeSet user interfaces design *(German)* 86876
homog. multiprocessing and future of silicon design paradigms 125521
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 113211
inform. access services, consumer commun./mass market inform. networking 96182
Internet innovation, appliances threat 130634
low-power SRAM compiler for portable consumer electronics 102150
MEMS product commercialization, contract manufacturer perspective 116058
metal-oxide gas sens. for pollution detect., fully digital user interface cct. 109794
miniaturised consumer electronics, assembly proc. trends 67637
mobile computing/ubiquitous networking, concepts/technols./challenges 85183
MPEG video proc. in consumer systs., memory bandwidth reduction 118329
multibit ΣΔ ADC for digital audio appls., A 105 dB SNR 102295
multilayer planar printed inductors in RF consumer appls. 115095
multimedia content protection in consumer electronics devices, overview 74428
multimedia friendly home WLAN 85186
multimedia services provision 119784
pass. components, 0201 size, high-yield assembly proc. charactn. 80501
pers. digital recorders 75326
service portability of networked appliances 96101
single-CCD camera captured color images, multi-image resoln. enhancement 94822
solid-state camera systs. eval. in varying illum. conditions 86664
SV-SD70 and SV-SD01 audio players *(Japanese)* 86354
terminals, scalable video algms./QoS resource mgt. 118479

consumer electronics continued
thermally conductive plastics for portable syst. heat dissipation 89872
TV high quality consumer video proc. chip 120524
TV-Anytime metadata, preliminary spec. 75275
unified digital platform, develop. 119807
UWB technol. for wireless video networking 119868
video format conversion, picture rate conversion and de-interlacing, consume TV ICs 84285
wearable electronics integrated into clothes 120600
wireless video home-link using 60 GHz band, transmitter/receiver desig 131340
Si MEMS microphone develop. for high-vol. appls. 76972
Si OEICs in CMOS/BiCMOS technols. for DVD systs. 82437
SiGe SoC RF technol., cable modems for high-speed broadband services 11981
Ta chip capacitor, 1608 size, 6.3 WV/10 μF, face down terminals for fillet-les surface mounting 115084
Zn-air primary batt. air manager technol. advances 89058

contact angle
see also capillarity; surface tension; wetting
BGA, ellipt./round solder pads, thermal stress/strain behavior 78672
electronic packaging materials, surface energy improvement by plasma treatmen 124350
epoxy/glass fiber composites, surface hydrophobicity, thermal treatmen *(Korean)* 116186
fingering instabil. and max. rad. at high rot. Bond no. 90520
flip chip packaging, passiv. and solder mask, surface props. 113718
flip chip packaging, surface tension/adhesion 67597
fluxless wetting props. of one-side-coated under bump metall./top surface metall 113456
flying slider in HDD, oil-repellent treatment 104529
mag. storage technol., applied surface anal., review 104526
micromachine stiction, 2H-perfluorodecyltrichlorosilane coatings 70326
organic EL devices with organosilane SAM derivatized ITO electrode 116970
polycarbonate, γ-irrad., tracking resist., scintillation discharge current 81726
polyetherimide adhesion to Si wafer, Al-chelate treatment, MCM fab. 80542
polyethylene, γ-irrad., tracking resist., scintillation discharge current 81726
GaAs surface, pure water treatment and charactn., water droplet contact angle meas. 103444
Ge/Si(001) islands, UHV CVD, strain-driven alloying 68268
Ge/Si(111) QD, Ge islands, STM/AFM obs. 126162
Ni, electroless, wettability in under bump metall. with Pb free solder 67539
Si-chip-based DNA microarray, surface charactn. 69343
Si(111) surface, etching, mask jn., Monte Carlo simul. 92038
Sn-Pb-La solder alloy, Sn-rich halo form., La effect 114425
Sn-Zn Pb-free solders, flux develop. 113583

contact EMF *see contact potential*

contact fatigue *see fatigue; wear*

contact lenses
electrode, built in LED, ERG 98241

contact potential
see also contact resistance
diamond Schottky diodes, elec. AC behaviour 81192
metal/polymer contact charge transfer, contact pot. 83109
MOS struct., direct tunneling current, modified Airy fn. model 115456
organic semicond./Mg interface, orb. lineup, XPS/UPS charactn. 91873
AlGaN/GaN heterostructs., surface morph. and disloc. electronic props. 69641
AlGaN/GaN on sapphire, inhomog. contact pot. image, Kelvin probe force microscopy 91751
AlGaN/GaN/SiC, nonuniform contact pot. profile 80808
AlGaN-GaN epitaxial layers, pot. profile meas. using Kelvin probe force micros copy 92268
a-C:H,N films, PECVD prep., N incorporation and elec. props. 126082
GaN/sapphire HVPE films, interfacial region impurity band, SFM obs. 69518
$HgCr_2Se_4$, inhomog. mag. semicond., large magnetoresist. form. 91698
InAlAs-InGaAs HEMTs, pot. profile meas. using Kelvin probe force microscopy 92268
a-Si:H solar cells, conductive oxide/p⁺/i jn. improvement 123805
μc-Si:H,(B)(P) films, growth, optimum cryst. fractions for solar cells 134399

contact resistance
see also contact potential
anisotropically conductive adhesive, elec. conductance 78633
building materials, thermal effusivity meas., thermal impedance method 97216
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
DRAM, embedded, dual thickness gate oxid., ion implant. 79867
elec. conductive adhesive, self-alignment and contact resist. 113527
elec. conductive adhesives, low m.p. alloy incorporation, depletion/wetting 67600
elec. machine insulation diagnosis, anom. Δtan δ phenom. *(Japanese)* 88689
elec. theory of contacts, contact resist., DE 91446
elec. water heater using very high-temp. storage 124090
flat supercond. cables, large edge currents, coupling losses 92921
flexible tinned copper connectors, overheating, power stations, outgoing busbars 123036
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip BGA package, thermal interface material 113526
fritting contacts applicability to micromachined probe cards *(Japanese)* 125859
HDI flip chip-on-flex, base materials eval. 124359
helical-scan tape systs. MR head reliab. tests 116427
IGBT solderable metallization, device passiv. material effects 70067
inline capacitive and DC-contact MEMS shunt switches 104200
interfacial silicide-polysilicon gate resist. in MOSFETs 103881
intermittency phenom. in elec. connectors 115108
isotropic conductive adhesives as SMT solder alternative 124349
isotropically conductive adhesives, nonepoxy-based polymer matrix 67560
LCD module interconnection, chip-on-film technol. 86859
memory cell landing pad, new integrat. technol. for 0.13-μm DRAM generation 114744
MEMS series-shunt absorptive switch 80222
metal/MWNT/metal structs., electron transport, Coulomb blockade effect 102870
microbump bonding, internal stress and connection resist. 113536
microswitch, electrostatically actuated, contacts study 125860
MOS silicide form. effects on resist. of common source/drain region 126483
MOSFET, at. scale charactn. of interfaces and doping layers 92332
MOSFET matching in deep sub-μm CMOS technols., charactn. method 103889
ohmic contact, epitaxial layer sheet resist., EFM meas. 115425
permalloy cantilever based latching microelectromagnetic relays 102798

ntact resistance continued
polymer current limiter device, voltage/comp. depend., switching 133799
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, contact resist. 102185
polysilicon surface-micromachined MEMS test structs., elec./environ. reliab. charact. 104165
power cable connectors, contact resist., power distrib. 123035
power VDMOS FETs in BCDMOS technol., reliab. study 126727
PV shingle roof, push-fit elec. connector contact resist. behaviour 112994
quick-assembly elec. connectors, screw type and insulation displacement types *(German)* 91448
sliding contacts, arcing, erosion and contact resist. stabil., automotive power appls. 115102
SOFC, resist. meas., cell config. effects 112843
stack capacitor integrat. with buried O barrier using CMP of noble metals 127027
struct. health monitoring by elec. resist. meas., review 114549
substation automation technols. and advantages 99854
surface mount conductive adhesives, contact resist. 113528
thermochemical responses of sandwich panels to fire, math. model 114181
thermoplastic isotropically conductive adhesive, contact resist. degrad. 113530
wafer-level CSP, wafer proc. package, reliab. 100616
$Ag/YBa_2Cu_3O_{7-\delta}$ thin film contact, contact resist., Ag morph. 102495
$Ag\text{-}SnO_2\text{-}In_2O_3$ elec. contacts, prod. optim. 90563
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al/GaAs interface, low press. CVD, microstruct., elec. props. 115429
Al/GaN ohmic contacts, elec. charact. 91862
Al/Si/p-SiC ohmic contacts, thermal stabil., LPE 69703
Al/ZrN/Zr trilayered film on Si, seq. single-oriented growth, contact syst. prep. 81127
AlGaAs/InGaAs pHEMTs, MBE, inline sheet charge control, AlAs etch stopper for GaAs cap removal 126427
AlGaN/GaN HEMT, GaN mass transport regrowth for ohmic contacts 79278
AlGaN/GaN HEMT, technol./perform./fab., 2-inch epitaxy, microwave power appls. 81383
AlGaN-GaN HEMTs, simul. 92416
AlN/GaN MISFET, wet chem. etching prep. using hot phosphoric acid 115900
Au/Ge/Pd/n-GaSb ohmic contacts, microstruct. anal., sub-μm contacts 103165
Au/Ti/p-diamond:B ohmic contact, specific contact resist. meas., transm. line model anal. *(Chinese)* 115427
Bi-Pb-Sr-Ca-Cu-O tape, props. of resistive- and supercond.-joints 70712
$Ca_{1-x}La_xMnO_3$ thermal sprayed protective coatings for Cr-based SOFC interconnects 89270
$Ca_{1-x}Y_xMnO_3$ thermal sprayed protective coatings for Cr-based SOFC interconnects 89270
CdS-CdTe solar cells, ZnTe:Cu back contacts expts. 100179
Co/p-GaN:H interface, contact resist., RTA effects 103158
Co-silicided shallow p^+-n jn. Si-capped/$Si_{1-x}Ge_x$:B, elec./struct. props. 91875
Cr alloy SOFC interconnect material, elec. charactn. 89265
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Cu-Cr-Y, rapid solidif., phys. props., Y addit. 102757
Cu-Cu wire-plate contact combinations, fretting, AC and DC current conditions 115103
$Fe_{78}Cr_{22}$ ferritic steel foil, SOFC interconnect material 123795
GaAs power microwave transistors, MOCVD δ-doped struct. 91286
$Ga_{0.47}In_{0.53}As/Ti(Pt)$ Schottky barrier heights, Franz Keldysh oscills./diode charact. 69715
GaN LEDs, Ni/Au ohmic contacts form., annealing in O_2 ambient, oxid. 80918
n-GaN, N_2O plasma surface treatment, elec./ohmic contact props. effects 126385
n-GaN, Ti/Al ohmic contacts, microstruct. evol. with increasing anneal temp. 69721
n-GaN alloyed at low temp., surface treated, low resistive ohmic contact form. 69737
n-GaN, develop. of Al-free ohmic contact 103175
GaN edge-terminated Schottky rectifiers on quasibulk GaN substrs. 103754
n-GaN layer, ohmic perform. of ZnO/ITO/ZnO contacts 69646
p-GaN layers, Ni/Al/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
p-GaN layers, Ni/Ti/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
p-GaN, low-resist. nonalloyed ohmic contact, strained InGaN contact layer 126200
p-GaN, low-resist. thermally stable ohmic contacts, Pd/Ni metallization 115433
n-GaN substr., ohmic contacts 126198
p-GaN surface band bending, aqua regia soln. surface treatment effects, SR PES obs. 69870
p-GaN, surface-treated, elec. charact. of thermally stable Ru and Ru/Au ohmic contacts 69709
p-GaN, thermally stable Nb and Nb/Au ohmic contacts 69720
GaN:Be (Mg),O, coimplantation, ohmic contact resist. appl. 126304
GaN:Mg, blue LED, nitrogen plasma treatment, vacancies, reactivation 82419
n-GaN:Si/Ti/Al/Pt/Au ohmic contact, Pt barrier thermal stabil. 103176
p-GaN/$Al_xGa_{1-x}N$/Ti superlattices, Ti based ohmic contact resist. 80914
p-GaN/Au/Pd contacts, elec./struct. props., surface treatment 69717
n-GaN/Hf ohmic contact, surface treatment, KOH soln. 126202
GaN/InGaN LED, sapphire substrs., current crowding 127974
p-GaN/Pd contacts, elec./microstruct. changes, surface treatment 69716
p-GaN/transition metal ohmic contacts, contact resist., reliab. 80921
p-GaN/transitionmetal, transparent low resist. ohmic contact, Charactn., blue LED appls. 80915
ITO/polysilicon contacts with In & Sn diffusion barriers, TFT LCD *(Korean)* 115437
In-Sn/Ag soldered joint, $AgIn_2/Ag_2In$ transforms., thermal aging 114417
InGaN:Mg/Au/Pd(Ni), low p-type contact resist., Ni-Au/Pd-Au metallisation 80916
InGaN/GaN:Mg/Au/Pd(Ni), low p-type contact resist., Ni-Au/Pd-Au metallisation 80916
$LiCoO_2$ cathodes, MCFC, current collector, contact corros. resist. 100007
Nb_3Sn CICC terminations, contact resist. distrib. 77395
NbTi CICCs, 36-strand, control of contact resist. by strand surface coating 81947
Ni ohmic contacts to p- and n-type 4H-SiC 103180
Ni/Au/GaN, low resist. ohmic contacts, cryogenic treatment 126216
Ni/Au/p-GaN contacts, annealing effects 103161
Ni/Au/p-GaN ohmic contact, microstruct., elec. props. 69711
Ni-Cr(Cu) resistors, low value, contact resist. by transm. line model method *(Japanese)* 91409
NiO cathodes, MCFC, current collector, contact corros. resist. 100007

contact resistance continued
NiTi SMA coils optimized for elec. connectors 115109
P ion shower implant. for special power IC appls. 115571
Pd/Au/GaN, low resist. ohmic contacts, cryogenic treatment 126216
PdGe ohmic contacts to GaAs devices, proc./props. 69738
Pt/Ru/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal stabil. 80917
Pt/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal stabil. 80917
ScN/metal contacts, growth, elec. charact. 91872
a-Si p-i-n solar cells and modules, SnO_2/p and ZnO/p contact resist. and jn. props. charact. 100196
Si roller printed multicrystalline solar cells 100083
Si solar cells, high quality screen-printed contacts, rapid photo-assisted forming gas anneal 100139
a-Si:H, photoresist ashing using CF_4 gas plasma, NH_3 gas addit. 103505
Si/SiGe strained QW MODFET, cryogenic cct. 115943
$Si/TiSi_2/Ti$ syst., sputtering prep., preamorphization, salicide form. 103154
SiC:Ge, ion implantaion form., elec. charact. 91724
n-SiC/Ni ohmic contacts, ECR plasma etching and current noise meas. 91859
SiGe HBTs, Ni/Ag metallization using NiSi contact 115866
$Si_{1-x}Ge_x$ raised source and drain P-channel MOSFETs, low temp. charact. 103821
Sn plated contact, dyn. contact resist. 115105
Sn plated contact, oxide film, fretting degrad. 115104
$(Sr,Ce)MnO_3$ SOFC cathode, elec. props. 89228
$SrBi_2Ta_{2-x}Nb_xO_9/IrO_x$ capacitors, Pt top electrode, thermal stabil., elec. props. 116233
$Sr_{1-x}La_xMnO_3$ thermal sprayed protective coatings for Cr-based SOFC interconnects 89270
Ta/AlGaN/GaN, ohmic contacts for HFET, contact resist. 69706
Ta/Ti/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ti film liner, coil sputtering, IMP technol. 103473
Ti/Al/Pd/Au/n-GaN multilayer contacts, elec. charactn., metall. anal. 91870
Ti/Al/Pt/Au/GaN ohmic contacts, elec. charact. 91862
Ti/Al/Ti/Au low-resist. multilayer ohmic contact to n-GaN 81114
Ti/Au ohmic contacts to n-ZnO, elec./structural props. 91874
Ti/Ta/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
TiAlN barrier layer, $BaSrTiO_3$ thin film integrat., DRAM devices 101330
$TiSi_2/p^+$ interface, optimal B distrib. for 0.18 μm DRAM technol. 115980
$TiSi_2$-Si transit. region in contacts, elec. props., influence of Nb interposed layer 103174
W bit-line, PECVD-Ti proc., enhanced nitridation 115722
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101
WSi_x integrity, plasma ashing proc., VLSI, F base strip proc. effect on polycide film 126359
WSi_x sidewall in W-polycide gate, deform., contact resist, annealing effects 103234
$YBa_2Cu_3O_7$ supercond.-semicond. interface, quasi-particle injection device 70933
$YBa_2Cu_3O_{7-\delta}$-Au(Ag) film contacts, metallization/interconnection 127508
ZnO, plasma treated, low-resist./nonalloyed ohmic contacts 69729
ZnO/ITO multilayer ohmic contacts to n-type GaN isotype conjunction 69666

contactors
see also relays
arcless interruptions in low current power ccts. 115107
guardrails piling, automatic machine, PLC 113822
straight type polarized mag. syst., anal./calc. *(Chinese)* 112678
UL 508 comparison with IS 13947 (Part-4/Sec 1) 1993 123332
ULSI, high purity water, contamination, dissolved oxygen and total organic carbon, control *(Chinese)* 113815

contacts, electrical *see electrical contacts*

contaminated site remediation
Chernobyl NPP site solid radwaste treatment facilities *(English)* 122368
COIL size-reduction cutting of radioact.-contaminated struct. 111642
nucl. facility decommission., decontamination, radwaste minimisation anal. 122445

content-addressable storage
2D patterns detectors on simulated CAM-Brain machine, evolvable hardware tool for building neuron artificial brain 90893
analog CAM implement. with floating gate transistors *(Korean)* 102435
ASIC-embedded CAM with power-saving and design for test features 102181
banked-promotion TLB for high perform. and low power 125513
CAM-brain machines, evolvability 91164
CMOS high-speed low-power fully parallel CAM macros, design for ASIC appls. 68798
collision detect. VLSI proc., highly safe intell. vehicles, hierarchical obstacle representation *(Japanese)* 102159
Data Organizer high traffic node for tracking detector data 132462
delayed bi-directional associative memory networks, exponential stabil. 68979
digital commun., bipolar spectral associative memories appl. 74080
DNA analog vector alg. and phys. constraints on large-scale DNA-based neural network computation 69348
DSP implement. of AOM, defects detect. in textile material 90955
ECG ectopic beats detect., auto-associative neural network appl. 98217
ectopic beats, ECG, optimal archit. auto-associative neural net, one-pass training 121907
embedded proc., power efficient cache based on dual cache struct. 102161
embedded RAM fault diagnosis by syndrome compression, built-in self-diagnosis 79875
face recogn., wavelet domain associative memory 84639
H1 expt., fast high resoln. track trigger 121730
HERA H1 fast track trigger electronics 76140
holographic databases 92948
hybrid wave-pipelined bit-pattern associative VLSI router 90824
Internet differentiated services, ultra high-speed multi-layer table lookup using TCAM 119574
low-power design, power models, binary static cells 102174
MMU, fully associative TLB, CAM match cct. 125535
multidirectional associative memory with hidden layer *(Japanese)* 90901
network syst. designs with CAMs 90916
obj. orient. and shape recogn., rot. spreading associative neural network appl. 107152
opt. neuron network, photon echo with time data coding 104852
opt.-electronic shape recogn. syst. based on synergetic associative memory 118690
particle track finding, associative memory boards pipeline 121749
planar optics for proc./network appls. 128029

content-addressable storage continued
prefetching in small data cache, cache pollution reduction 125500
quotient-selected modified signed-digit division algm., optoelectronic implement. 104844
robot. fast path planning VLSI, CAM *(Japanese)* 79886
robot vision-based localization by morph. neural net 94998
shared BISR anal. for multiple embedded memories in SOC 102182
systolic Hopfield-type associative memory, specs. and FPGA implement. 102467
ternary CAM, Ultra2M and Ultra9M devices *(Italian)* 125465
ternary CAM for routing table size reduction 125481
thin hologram superposed image registration, correl. responses 127581
visual cortex, spiking associative memories, patterns 114917

content-based retrieval
approx. image message authentication codes 73392
audio database, content based class. and retrieval 106337
automatic moving obj. extraction for content-based video indexing 118775
BIRDS-I, benchmark for image retrieval using distributed systs. over internet 96140
CAMEL, Concept Annotated iMagE Libraries 94767
caption text detect. algm. on MPEG compressed video *(Chinese)* 106912
CLIMS, image retrieval using colour and wavelet features 73307
clustering tech. for content based image retrieval in image databases 106661
color and shape based image representation and retrieval *(Chinese)* 129855
color edge detector for text extraction under complex background *(Chinese)* 118756
color image, content based color signature *(Chinese)* 84173
colored pattern appearance model for image indexing 95237
colour-based facial image retrieval 118738
colour-based image retrieval procs., visual eval. 129474
content based retrieval, area morph. segmentation 94940
contour based class. of video objs. 94915
contour-based obj. recogn. using wavelet-transform 129830
databases, scale/fractal transforms 95515
digital document image networking 129802
digital video, keyframe-based user interfaces 120576
digital video server, automatic recording agent 131761
dimens. reduction 94937
distributional clustering for content-based retrieval of images/video 84291
dyn. content multimedia databases, audio signatures indexing 106353
edge representation based 94939
Electronic Roads in the Information Soc., content-based image retrieval/IP Diff-Serv 108362
face detect. for multimedia appls. 94641
gradual shot transit. detect., unified approach 106448
graph representation for objs. based on hierarchical decomp. of skeletons *(Chinese)* 107203
gray-level image reconstruction, Fourier-Mellin transform approx. 129541
group-of-frames/pictures color histogram descriptors for multimedia appls. 84288
hierarchical histograms, image-based data retrieval representation 84289
i-Broadcast syst., cross-medial broadcast program contents mgt. *(German)* 131738
IBM-Research internal prototype platform, e-Seminar lect. recording and distrib. syst. 97095
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 113211
image content characterisation for semantic similarity calc. 84559
image indexing/machine vision, color representation 95533
image retrieval, hierarchical charactn. scheme 95540
image retrieval, region-of-interest and spatial layout 95585
image retrieval through shape matching of partially occluded objs. using hierarchical content description 84617
image retrieval using color plane moment 118783
image retrieval using sketch based queries 118737
image retrieval with relevance feedback 95586
image segmentation by level set anal. 106755
indexing in MPEG-[1,-2 & 4] domains 95028
interactive image retrieval, integrated segmentation tech. 94941
JIT image browsing over Internet 107079
JPEG compressed domain, image indexing and retrieval 118646
Kullback-Leibler dist. on wavelet subbands, texture similarity meas. 94938
media database storage and retrieval conf., San Jose, CA, USA (2001) 89590
modeling method for video stream based on seq. struct. graph *(Chinese)* 129735
motion based video index syst. *(Chinese)* 73239
MPEG-7, image/video self-description scheme 74427
MPEG-7 audio, overview 83980
MPEG-7 edge histogram descriptor, relevance feedback 118782
MPEG-7 homog. texture descriptor 85393
MPEG-7 std., supported colour spaces, image retrieval efficiency 118611
MPEG-7 video content description, parametric motion models 118176
MRML, extensible commun. protocol for multimedia IRS 96258
multimedia data compression for recogn. and content-based retrieval 118701
Multimedia Description Framework, content description of audio/video documents 119777
multiple image descriptions for browsing and retrieval 94762
multiple regions-of-interest query for accessing image databases 84245
multiresolution segmentation for images with low depth of field 95473
multiresolution-histogram indexing/relevance feedback learning 95194
news and sport videos, semantic inform. extraction 129569
news content highlight via fast caption text detect. on compressed video 106866
news speech, topic segmentation using word similarity 131722
non-texture/textured images classification, region segmentation 95587
nontrivial repeating patterns discovery in music data 106736
obj. recogn., color-invariant shape moments 118654
obj. recogn. using multimodal neighbourhood signature method 129831
obj.-based video abstraction, integrated scheme 129700
panoramic/adaptive/reconfigurable interface for similarity search 94797
polygon-based bounding vol. as, spatiotemporal data model for video content access 94465
progressive content-based retrieval using tree-struct. graphs 106831
RAI multimedia catalogue, TV programme acquisition syst. *(Italian)* 86316
real-world video seqs., shot detect., lighting change problem 75315
real-world video seqs., shot detect. with multi-measures 75314
recorded sound tracks transliteration for speech recogn./searching *(German)* 73094
region shape similarity for image retrieval 94766
region-based image retrieval 84290
regions-of-interest based image retrieval with local/spatial queries 94668
segmented images class. combining neural networks and wavelet matching 118298

content-based retrieval continued
semantics-based retrieval by content 94828
shape indexing by dyn. prog. 118464
shape matching using curvature based polygonal approx. in scale-space 9551
similarity measure for color image indexing 94765
Situated Computing Framework for mobile and ubiquitous multimedia acce using small-screen devices 130954
spine X-ray images, computer-assisted retrieval of biomedical features 11097
streaming-media knowledge discovery 119778
surveillance video, content based software DEMUX 118169
template matching approach to content based image indexing by low dimen Euclidean embedding 106644
texture image subjective retrieval based on orient./color interacts. 95003
texture-based image retrieval, DFT and Zernike moments use 95584
traffic surveillance, content-based event retrieval 129815
unstructured video content-based browsing, clustering 94757
video class. based on HMM using text and faces 118732
video content-based retrieval, obj. motion trajectory indexing 118481
video data mgt., high level semantics modelling 84243
video indexing/retrieval, scene change detect. 84445
video obj. shape coding using B-spline optim. 129768
video objs. segmentation/tracking, content-based video indexing/interactiv TV/prod. systs. 94645
video retrieval by integrat. spatio-temporal/stochastic recogn. of events 95015
visual inform. modeling/mgt., logical framework 94770
wavelet-based salient points appl. 95514
Web appls., content-aware request proc., STREAMS-based TCP/IP implement customized module library 96136
Webscope-CBVR, content-based video retrieval syst. for WWW 118325

context-free grammars
see also context-free languages
1D grammar-based codes for lossless image coding 95256
network traffic model, long-tailed distrib., proc. complexity increment 73751
universal lossless data compression algms., greedy context-depend. seq. gramma transform based 129999
YK lossless data compression algm., efficient implement. archit. 107468

context-free languages
see also context-free grammars
feature-based syntactic and metric shape recogn. 73491

context-sensitive grammars
controlled syst. lang. ident., modelling, control and anom. detect. 112731
universal lossless data compression algms., greedy context-depend. seq. gramma transform based 129999
VHDL semantics handling with OO intermediate format 114587

continuing education
FACILE project, networked facilitated open and dist. learning in continuing engng. education 113351
hypermedia interactive assisted learning 100468
Internet-based dist. learning using learning by doing paradigm 78525
lifelong learning environ. requirements, UK PETIS experience 67433
mfg. learning using multi-user sync. simul. game 67444
microwave simulators, educational appls. 89647
Online Distance Learning System supporting knowledge communities 113379
professional develop. modelling 89649
professional develop. service delivery for health, education and welfare profes sionals, telemedicine 67424
radiation oncology phys., Australia & New Zealand requirements 87822
radiologist continuing professional develop. using WWW as delivery vehicle 89600
reversing decline in Britain's mfg. indust. 67462
tele-training methodologies develop. using Internet technols. 78492
telecomms. company, country-wide, continuous education 113380

continuing engineering education *see continuing education; engineering education*

continuing professional development *see continuing education*

continuous media *see multimedia systems*

continuous phase frequency shift keying *see continuous phase modulation; frequency shift keying*

continuous phase modulation
ANN CPM receiver design 120167
AWGN channels, sig. space dimens. reduction, CPM appl. 128989
AWGN/Rician channels, channel coding of serially concatenated encoders 106092
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
CPFSK coherent opt. syst., self PM effect, eval. 106030
CPFSK demodulation, carrier recovery method 94253
encoded Gaussian filtered CPM, generalized concatenation *(English)* 72753
FH packet radio with turbo TCM in partial-band interf. 108557
fibre optic sens., laser dyn.-fixed dist. meas. 75582
FM digital double errors 72744
full-response CPM generalization, power spectrum 117888
GMSK modulator using $\Delta\Sigma$ freq. discriminator-based synthesizer 108656
IF digital filters design, adaptive method 107481
IQ modulators, implement. of automatic digital compensation 125265
M-CPM with MRC diversity in Rician, Hoyt and Nakagami fading channels 106047
MPEG-4 imagery, ring convolutional trellis codes design for MAP decoding 129800
multi-h telemetry waveform, description/perform. results 106026
multichannel coherent CPFSK syst. using opt. amp., sensitivity penalty 109069
multipath-distorted/freq.-discriminated sigs., charactn. 106065
opt. direct detect. CPFSK transm. syst., self-PM 131406
opt. heterodyne syst., polariz. mode dispersion effect 74955
parallel concatenated turbo codes for CPM 83859
partitioning for SA(B,C) 128980
power/bandwidth efficient serially concatenated, iter. decoding 72819
rate l/(l+1) convolutional encoders over rings with max. free branch dist. 129139
Rayleigh space-time correl. fading channels, soft output diversity combining 131290
receiver with immunity from carrier phase deviation 94235
SCCPM, multi-user syst., iter. decoding 117957
serial concatenated, ACI suscept. 129064
shadowed satellite mobile channel, PRCPM with DPD and MRC *(Chinese)* 108973
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
trellis coded M-ary IRC CPM with lin. receiver/pre-coding, perform. 106028

ntinuous phase modulation continued
UHF secondary imagery dissemination systs., evol. 111604
Walsh sig. space, ML estim. of sym. timing/carrier phase 83805
waveform, post-distortion ang. equalizer appl. 107685

ntinuous time filters
algorithmic s-z transforms. for continuous- to discrete-time filter conversion 79517
analog median and median-type filters for continuous-time sigs. sorting 130126
BiCMOS continuous-time filter, digitally prog. 68919
bipolar log domain filters in std. CMOS proc., SPICE compatible model 80073
CCII-MOSFET continuous-time current filter synthesis 102350
CMOS 800 MHz continuous time biquadratic cell, gm-C fully differential config. 102348
CMOS bandpass continuous-time filter, freq. and Q-factor tuning 80049
CMOS configurable analogue block for continuous-time prog. OTA-C filters 102357
CMOS continuous-time filter, LV, on-chip automatic tuning 102335
CMOS continuous-time lin. phase filter with auto. tuning syst. 80076
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
CMOS dual-mode continuous-time baseband filter for GSM and WCDMA 80047
CMOS equiripple continuous-time filter, 200 MHz, design for nonlin. suppress. 125599
CMOS field prog. analog array and appl. in continuous-time OTA-C filter design 80065
CMOS GSM/WCDMA continuous-time filter, automatic tuning 102372
CMOS high-speed opamps, gain and bandwidth boosting techs., filter appls. 79581
CMOS low noise transconductor, low distort. HF fully differential design 68930
CMOS low-power gigabit Ethernet analog equalizer 85446
CMOS OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
CMOS SC ladder filter, embedded anti-aliasing 102373
CMOS tunable transconductor for continuous-time filtering appls. 80081
CMOS VHF prog. read-channel continuous-time filter with on-chip tuning 80042
digitization, weighted-sample method extensions 95696
digitizing continuous-time filters improvements, comments 119001
digitizing continuous-time filters improvements, reply to comments 119002
direct and inverse 1st-order s-z transforms., efficient algms. 73694
eighth-order CMOS low-pass filter, 30-120 MHz tuning, prog. boost 91029
fault detect. and isolation, lin. matrix inequality based filter design 84752
fully functional integrator based continuous-time filters, VHF 80045
generalised divider struct. based biquad, SC implement. 102339
hearing aid LV CMOS filter, dyn. gate biasing use 122354
HF high-Q continuous-time filters, automatic tuning scheme 68913
high-lin. digitally prog. components for continuous-time sig. proc. 91050
low-pass all-pole OTA-C filters, perform. comparison 68925
low-pass filters, mixed-sig. tuning approach 80080
low-pass leapfrog-type filter, multi-output differential difference current conveyor *(Chinese)* 68914
low-power and high-speed equalizer for mag. storage read channels 80125
low-power continuous-time integrators, dyn. range limits 91032
LV HF MOS transconductors for IF sects. 91044
LV low-power continuous-time ΣΔ ADCs, design strategy 79963
LV tunable HF filters based on floating gates and dyn. biasing techs. 68911
manoeuvring target tracking by using particle filter 131656
micropower class-AB CMOS log-domain filter, DECT appl. 91030
MOS resistive cct., MOSFET-C implement., bandwidth, noise, offset and nonlin. 102367
multiport gyrator, realization using current mirror ccts., filter appl. *(Japanese)* 80037
OTA-C filters, tuning method using GA 68926
PLL master-slave tuned filter, tuning range, computer anal. 102351
reconfigurable radio terminals, continuous-time digital filters for sample-rate conversion *(English)* 107550
third-order ellipt. lowpass filters, high-freq. fully differential CMOS OTA 102358
UHF OTA-C filters, design issues and CMOS implement. 69217
very LV CMOS companding filters, design based on MOS translinear principle 68912
wide dyn. range, divide and conquer design tech. 80046

continuous time systems
see also continuous time filters
arbitrary time-series approx. & compression, nonlin. dyn. 95622
AUV networks, optimal flow control 107777
biquad second order building block with minimised parasitic transfer zero influence 102346
CMOS continuous-time common-mode feedback amp. cct., gain partitioning, replica bias 101776
CMOS continuous-time current comparator, current-mode analog ICs 102447
CMOS continuous-time current comparator, high speed/power ratio design 68968
CMOS current comparator cct., robust high-speed and low-power design 68970
CMOS high-speed continuous-time lin. weighted voltage addit. 79598
CMOS LV continuous-time analog cct. design 90704
computational complexity for continuous time dyn. 90143
constrained missiles with autopilot lags, receding horizon guidance laws 122768
coupled continuous-time ccts., clustering phenom. 101715
discounted stochastic fluid programs, optimal control problems 78813
discrete approx., partition of threshold switching faces 67692
discrete-time and continuous-time systs., high-perform. conversions 118896
General Packet Radio Service, perform. anal. 74773
GI/M/m queues, distribs. rels. 113853
H_∞ filter design for lin. time delay systs. 130129
high-order cascaded continuous-time ΣΔ modulators, synthesis 102427
hybrid power systs., emergency freq. control *(Chinese)* 88357
induction machine params. estim. using continuous-time observer 134014
Laguerre models, optimal pole conditions satisfying interpolation constraints 129972
lin. ccts. with interval params., freq. response eval. 90644
lin. continuous-time stochastic estimators, design using covariance info. in Krein spaces 130079
LV continuous-time CMOS current amp. with dyn. biasing 79585
Markov chains in continuous time, large deviation principle 117879
mixed-sig. design, conf., Austin, TX, USA (Feb. 2001) 67361
oversampling sigma-delta converters, clock jitter effect 79970
react.-diffusion cellular nonlin. net., edge-of-chaos 101721

continuous time systems continued
second-order continuous-time Δ-Σ modulator using RTD quantizer *(Japanese)* 114825
sig. detect. using approx. Karhunen-Loeve expansions 73712
sig. proc., time series anal., aliasing benefits 119006
sigma-delta modulator 102259
sigma-delta modulator, arbitrary feedback waveform 79971
sigma-delta modulators, CAA techs. 102292
sigma-delta modulators, effect of feedback waveform 90967
turbulent vel. meas., stochastically sampled dyn. systs., spectral anal. 97844
unbalanced 3-phase systs., current control 77256
zero-sum stopping game in dyn. fuzzy syst. 100776

continuous wave radar *see CW radar*

continuously variable slope delta modulation *see delta modulation*

continuum hypothesis *see set theory*

contours, surface *see surface topography*

contracts
see also product liability
broadband fixed-wireless access 96418
Chinese elec. market financial risk evasion study *(Chinese)* 99197
elec. market-oriented transaction algm. research *(Chinese)* 122831
elec. supply contract eval. by fuzzy set-based DSS 133495
forward contracts in elec. markets *(Chinese)* 111787
French power syst. reforms overview 77152
indust. elec. customers, optimal contracts decision software 122822
optimal standing reserve utilisation, GA-based contracting strategy 99314
optimal standing reserve utilisation using GA 111776
post-deregulation AGC syst. simul./optim. 88330
primary power market, digital contract mgt. syst. *(Chinese)* 77161
Romanian wholesale elec. market metering syst. 100499
service contracts based on workflow modeling 96175
telecomms. transport capacity trading, electronic markets 130539
terrestrial transm. assets 75271
TETRA QoS mgt. with dyn. bearer selection schemes 120002
UK rly. regulatory framework 113099
UK rly. regulatory framework 113098

contrast transfer function *see optical transfer function*

control devices, electric *see electric control equipment*

control engineering
see also control engineering computing; control engineering education
IEEE SOUTHEASTCON conf., Clemson, SC, USA (March-April 2001) 78407
syst. theory, conf., Athens, OH, USA (Mar. 2001) 78472

control engineering computing
see also computerised control; control system analysis computing; control system CAD
ATM congestion control based on SELA *(Chinese)* 73818
Chinsan NPP simulator data replacement, Taiwan *(Chinese)* 112221
field bus distributed rem. control protocol, bidirectional commun. 86416
mechatronics lab. course 124278
nuc. power project mgt., cost-schedule integrat. control, MIS *(Chinese)* 88537
US sens., simul./visualisation with lattice gas model 88204
VVER 1000 control syst. upgrade/verification, Temelin plant 123119

control engineering education
500 kV automated substation simul./training syst. implement. *(Chinese)* 112716
advanced power syst. operation teaching, computer-based voltage control expt. 89641
continuing mfg. learning using multi-user sync. simul. game 67444
hydroelectric power plant operator training competence network 88632
indust. automation undergraduate lab. modular μP kit 78517
machine control discipline in Israeli senior high schools 124281
mechatronics-based motion syst. design 67446
microcontrollers learning using CAI-oriented multi-micro simul. environ. 78512
power electronics systs., control teaching syst. *(Spanish)* 67449
power network joint anti-accident training syst., design and appl. *(Chinese)* 77263
power syst. anal./simul. tools, novel implement. approach 89639
power syst. operator training simulator, protection model develop. 77565
rem. BLDCM learning lab. 78513

control equipment
see also actuators; controllers; cryostats; electric control equipment; relays; thermostats; valves; variable speed gear
33-420 kV power distrib. protection/control equipt. reliab. 133611

control facilities
colour coded displays with visual layers 97593
DB Energie, traction power supply, main control center *(German)* 123977
DB Energie traction power supply, main control center, optim. components *(German)* 123978
human perform. enhancement training 89784
load dispatch center fault disturbance recorder, operator aid 89778
power grid control, control room with virtual display 99282

control gear, electric *see electric control equipment*

control nonlinearities
see also bang-bang control; hysteresis; nonlinear systems
DC motor friction compensation, neuro-fuzzy control 88760
launch vehicle, secondary injection thrust vector control power plant lin., fuzzy logic appl. 98919

control panels *see remote consoles*

control rooms, radio *see radio studios*

control structures, program *see program control structures*

control system analysis
see also Bode diagrams; control system analysis computing; correlation methods; describing functions; frequency response; linearisation techniques; perturbation techniques; phase space methods; piecewise linear techniques; poles and zeros; root loci; sensitivity analysis; stability; state-space methods; step response; transfer functions
12 V voltage regulation modules, topol. candidates comparison 88842
AC line voltage regulator implement. using fuzzy control theory 122846
AC motor self-tuning PID adaptive speed controller 123334
AC servomotor neuro-fuzzy speed controller design 133945
AC/DC parallel tie-line local control, variable param. equiv. model *(Chinese)* 99255
act. mag. bearing control systs., fund. props. anal., transfer fn. approach 92879
act. power filter robust current tracking control design 123711
act. power harmonic filter capacitor, energy storage fuzzy control 89036
act. power harmonic filter using predicted current control 78118
analog-digital systs. description, sig. proc. and control appl. 102288
asymmetrical two-phase induction machine vector control model 123405

control system analysis continued
ATM network flow control, lin. control approach 95796
automotive air conditioner variable displacement compressors, control valve develop. *(Chinese)* 134572
automotive integrated PM starter/alternator, flux weakening control algm. 134567
bal. distrib. network general-purpose load flow tech. 122974
batch proc. startup multivariate monitoring 113811
bi-directional AC-DC thyristor converter unified control scheme 88822
BLDCM field-weakening regime using instantaneous power theory 77888
brushless DC generators voltage fluct., PWM control strategies effects *(Chinese)* 112547
brushless DC traction motors, perform. anal. studies 123974
brushless doubly-fed reluctance machines, PF control 123366
brushless refrigerator compressor motors, sensorless sinusoidal control 124123
cascaded doubly-fed induction machine, combined magnetising flux oriented control 99669
complex distrib. load flow, augmented matrix-based control scheme *(Chinese)* 111908
complex thermal cogen. plant operation optimisation 88562
computation, optimisation and control, conf., Sante Fe, NM, USA (May 1999) 67349
coupling static converter with control loop/nonlin. EM devices 125220
crane driving control charact. 134710
crane mechatronic syst. dyn. behavior investig. 89493
D-Module two-input/output filter, AC motor vector control appls. 133928
DC machine param. ident. using simple speed sens. 123495
DC motor drive combined digital speed-control schemes 113055
DC motor drive neurocontrol approach 113084
DC motor drive subordinate speed control syst., generalized state observer 113052
DC motor neuro-fuzzy speed control systs. 112545
DC servomotor drive settling time improvement using nonlin. PD controller 123942
DC-DC converter, observer-based sensorless current mode control tech. 88964
DC/DC reson. power converter feedback control design 88969
decentralized adaptive power syst. stabilizer scheme 77213
diesel-elec. locomotive double-feed induction generator, state feedback control 113103
differential drive wheeled mobile robot posn. control 100265
direct torque controlled IM drive, neural observer synthesis 89363
distorted line voltage power syst. load symmetrization apporach 111929
distrib. network parallel act. power harmonic filter control strategy 133553
distrib. network state estim. using hybrid particle swarm optim. 112030
distrib. syst. fuzzy multiobjective optimal control approach 133540
distributed PV power supply systs. implement. 123261
distributed PV power systs., fully digital control 133900
doubly-fed AC machines, starting problems study 77829
DSTATCOM capacitor voltage equalization control strategies 111829
dual-arm robot image-based visual feedback control 129451
dyn. voltage restorer based on voltage space vector PWM control 88935
EV disc PM lin. machine, optimal efficiency operations 123967
EWMA feedback quality adjustment schemes for drifting disturbances 78737
extended AC power lines operating stabil. with shunt compensation controllers 77200
extended power pools dyn. props. 77153
FACTS interphase power controller mechanism cct. anal. *(Chinese)* 88340
FACTS tuned interphase power controller, steady-state charact. *(Chinese)* 111906
FACTS UPFC controller perform. enhancement using modal anal. 111934
FACTS UPFC location for congestion mgt. 99328
FACTS UPFC scheme, power flow computation *(Chinese)* 99254
FACTS UPFC schemes, dyn. performs. comparison 111857
field-oriented hybrid PM stepper motor robust servo controller 123318
flexible manipulator sliding mode posn./vibr. fuzzy controller 134319
fluoresc. lamp ballast crest factor improvement using PFM 134606
four-level DC/DC buck converter anal. 134193
four-switch BLDCM drives, indust. appl. feasibility 89327
functional DE, num. methods and delay syst. stabil. 67721
fuzzy-logic current-sensorless feedforward act. rectifier 134160
gas turbine output freq. dependency modelling 112327
generation mix var. effects on freq. regulation requirements 99444
generators, lin. feedback controller, anal., perturb. bounds theorems *(Chinese)* 88693
grid-connected PV array, random dyn. stabil. fluctS. anal. 112381
grid-connected voltage source converters, unbalanced conditions transient operation 134223
grid-connected windmills, electromechanical interact./stabil. modelling 123254
grid-connected wound rotor induction machine, sensorless direct power control 77861
hard-switching DC/DC power converters time-varying sliding-mode control *(Chinese)* 99792
high-dyn. indust. motor drives, torsional vibrs. damping/ident. 124150
Hubei elec. power syst. LF oscill. anal. *(Chinese)* 122885
hybrid EM levitation syst. zero power levitation control scheme *(Korean)* 123951
hybrid PM stepper motor robust sliding mode posn. control scheme 88778
hydropower plant turbine governors, surge tanks fuzzy control scheme *(Chinese)* 112343
IM, adjustable speed syst. *(Chinese)* 133997
IM, robust tuning of speed loop in indirect field oriented control 123928
IM control, unknown torque, sensorless speed tracking 134028
IM control struct. model with erroneous field orient. 112529
IM drive, digital vector control syst. math. models 89348
IM drive direct torque control, inverter state selection 89364
IM drive direct torque control using enhanced inverter switching 78205
IM drive field oriented speed control, rotor flux observer 89330
IM drive H∞ field-oriented control scheme 78211
IM drive high-perform. adaptive parallel distributed compensator 123866
IM drive indirect field oriented control, slip freq. detect. 134438
IM drive loss minimization control using GAs 123865
IM drive nonlin. speed control strategy improvement 123946
IM drive rotor speed estim. using Kalman filter algms. 134439
IM drive speed control, fuzzy-logic controller, DSP syst. 89347
IM drive stator flux oriented vector start-up scheme 134440
IM DTC-based speed control, ASIC design 134051
IM full-order flux observer sensitivity anal. 88746
IM model ref. adaptive fuzzy speed control approach 123479
IM nonlin. control, parallel neural network estimator training 123459
IM PID accel. controller/pre-compensator design 134050

control system analysis continued
IM sensorless control systs. develop./anal. 123439
IM sensorless control using disturbance observer 123432
IM sensorless torque control syst. 123410
IM speed-torque charact. using speed sensorless tech. 123425
IM vector control, space-vector modulation tandem inverter 123428
image-based adaptive control, nonlin./stabil. 84137
inaccessible neutral induction machines air-gap flux posn. estim. 88744
indirect vector-controlled IM drive, PI/fuzzy estimators 123874
induction generator control syst. instabil. anal. 134561
induction machine nonlin. sliding-mode torque/flux control method 99655
induction machine params. estim. using continuous-time observer 134014
induction machine speed estim. using robust sliding mode observer 88725
induction machine stator/rotor flux-based deadbeat direct torque control 134013
induction machine vector control methods overview 88751
induction servomotor drive robust control scheme 78212
indust. load mgt. optim. using time of use tariffs 134672
integrated predictive/adaptive building HVAC/lighting control 89453
interior PM sync. machine sensorless speed control scheme 123369
interior PM sync. machine sensorless speed control scheme 113069
interior PM sync. motor drive control, stator resist. effects 134484
interior PM sync. motor drive max. torque to current control 113045
interior PM sync. motor sensorless control using Kalman filter 123377
interior PM sync. motor with adjustable PM armature flux linkage *(English)* 88699
interorbital flight programmed motions constr. method 133215
inverter flux control techs. 77985
isolated thermal power systs., wind power fluctS. impact 133888
lang. ident., modelling, control and anom. detect. 112731
LIM drive, intell. backstepping control 100237
lin. SRM robust short-dist. posn. control approach 134083
load modulation for electromechanical oscills. damping 111854
low-speed direct servomotor drive flux reversal machine characterisation 123868
mag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 89022
mag. suspen. syst., uncertainty struct. and μ-synthesis *(English)* 105692
MAGLEV syst., H_∞ control and closed loop ident. 105691
MagLev syst. 2-block/3-block H∞ control problems *(Chinese)* 100283
multi-area load freq. control using batt. energy storage 122865
multi-area optimum power flow solns., sensitivity anal. 122864
multi-area power syst., decentralized sliding mode stabilizer design 122874
multi-area power syst. PI sliding mode load freq. control scheme *(Chinese)* 88339
multi-area PSS design using combined sensitivity concept 77215
multi-cell power converter distributed control strategy 88824
multi-leg power conversion ccts. based on neutral point voltage 123622
multi-machine FACTS with UPFC, Phillips-Heffron model *(Chinese)* 77204
multi-phase buck converter voltage/current control scheme 88847
multi-phase DC/DC buck power converter voltage/current control scheme 123650
multilayer feedforward neural network-based power syst. relay protection 77528
multimachine power syst. MIMO decentralized nonlin. control scheme *(English)* 77251
multimachine power syst. nonlin. decentralized control strategy *(English)* 77233
multimachine power syst. SVC robust damping controller design 88375
multimachine power syst. turbogenerators, adaptive neurocontrol scheme 111898
multimachine power syst. turbogenerators, optimal DHP neurocontrol design 133542
multimachine PSS param. optim. using genetic local search 122890
multipulse power converters/controls for HVDC and FACTS systs. 88876
nonsalient PMSM drive sensorless control method adaptive observer 113067
nontuned interphase power controller calc. and anal. *(Chinese)* 111907
North China power syst. black start using hydroelec. generating sets *(Chinese)* 77165
NPP DMC simul. study *(Chinese)* 99483
optimal distrib. load flow using fuzzy multi-objective decisions 111819
parallel three-phase PWM buck rectifiers, control/modelling approach 134168
parallel-connected dual IM speed sensorless vector control 134023
paralleled voltage regulator modules, current-sharing control perform. 88897
partial internal model control, DC servomotor syst. 134055
plasma etch procs. modelling using lin. output neuron neural net 125915
PM AC/DC motor drives, DSP-based integral variable struct. control 123943
PM BLDCM torque ripple minim., ref. frame approach 134069
PM DC servomotor drives, sliding mode posn. control scheme 89362
PM machine control, torque ripple compensation approach 123323
PM step motor vector control syst. implement. 88777
PM sync. motor decoupling control, online params. ident. 133969
PM sync. motor drive, adaptive fuzzy logic control perform. anal. 89318
PM sync. motor drive sensorless control, sliding mode-based observers 113068
PM sync. motor drive sensorless digital control scheme 89331
PM sync. motor drive syst., const -power-loss-based operation 100264
PM sync. motor posn./speed estim. tech. 99647
PM sync. motor sensorless INFORM-based positioning drives 123365
PM sync. motors, mech. variables estim. observers 123378
pole-changing PM motor drives 134485
post-deregulation AGC syst. simul./optim. 88330
power converter parallel operation, novel droop method 88917
power convertor current regulation principles 123570
power distrib. lines dual power flow regulator *(Chinese)* 77260
power IGBT switches, flexible dv/dt/di/dt control method 126786
power network black-start DSS *(Chinese)* 122886
power quality conditioner, unified series-parallel deadbeat control 133703
power syst. act. secure economic dispatch algorithm 77217
power syst. current symmetrisation, Steinmetz syst. design study 122899
power syst. dyn. stabil. improvement by SVC/PSS coord. 111820
power syst. generator excitation control optimisation method *(Japanese)* 77249
power syst. load dispatching, transient stabil. considerations *(Chinese)* 122861
power syst. load flow regulation scheme using controllable reactance *(Chinese)* 88359
power syst. neural network inverse control scheme *(Chinese)* 77231
power syst. nonlin. control theory survey *(Chinese)* 77230
power syst. nonlin. state PI excitation controller *(Chinese)* 77236
power syst. optimal stabilizer/variable struct. controller studies 77211
power syst. optimisation, sensitivity based coherency anal. appl. 111935
power syst. oscills. damping, unidirectional alternative power generation plants control 111862
power syst. protection operation/nonviable transients direct assess. 88486
power syst. robust nonlin. controller with voltage regulation *(English)* 77232
power syst. small-sig. stabil., eigenvalues/state variables rels. *(Chinese)* 111904

ntrol system analysis continued
power syst. SSSC controllers, interface flow limit effects *(Korean)* 122867
power syst. stabil./economy improvement using GA-based control 111886
power syst. stabilising control/fault current limiting using SMES approach 77207
power syst. stabilization fuzzy logic-based PID control scheme 99300
power syst. stabilization using plane-type fuzzy control method *(English)* 88344
power syst. state estim. overview 99296
power syst. steady-state conditions, init. approx. determ. *(Russian)* 111838
power syst. transient stabil. anal., sync. machine models accuracy *(Japanese)* 88342
power syst. transient stabil. assess., crit. methods comparison *(Chinese)* 122855
power syst. transient stabil. assess. algm. using hybrid method 122909
power syst. transient stabil. assess. methods comparison *(Chinese)* 122841
power syst. transient stabil. assess. methods comparison *(Chinese)* 122882
power syst. transient stabil. contingency filtering/ranking/assess. approach 88372
power syst. transient stabil. control anal. using Lyapunov fn. 77237
power syst. transient stabil. sensitivity, time-domain simul. *(Chinese)* 111840
power syst. transient/voltage stabil. enhancement control scheme 77246
power syst. turbogenerator nonlin. optimal governor additional control *(Chinese)* 77205
power syst. unstable LF oscill. damping, load models effect 88376
power syst. voltage collapse avoidance, control actions time depend. 111867
power syst. voltage instabilities, voltage reduction emergency control 77272
power syst. voltage sag mitigation using act. series voltage injection 77224
power syst. voltage stabil., dyn. state-space anal. *(Chinese)* 99263
power syst. voltage stabil., SVC/TCSC effects anal. *(Chinese)* 122860
power syst. voltage stabil. quasi-steady-state anal. approach 111899
power syst. voltage stabil. studies, indust. loads modelling 133528
power systs. hybrid emergency control scheme 122853
power systs. operation, optim. methods survey *(Japanese)* 77248
PSS design using robust gain scheduling control theory 77214
PV modules generation control cct. 77797
PV power syst. MPPT control under nonuniform insolation 112419
PWM boost converters, discrete controllers, generic av. modeling/simul. 88865
PWM buck-boost DC-DC power converter, simultaneous control study *(Korean)* 123586
PWM converter-inverter syst., fast dyn. DC-link power-balancing scheme 99823
PWM inverter-fed induction machine, torque/stator flux control 123431
PWM rectifier fuzzy logic feedforward current scheme 123617
quadratic power flow soln. Newton-Raphson UPFC model, paper discussion/closure 133552
quasi-reson. buck PWM convertor, passivity-based adaptive controllers 123639
reactive power flow, power transformer tap changing effect 99289
real-time optimal excitation controller using online syst. ident. *(Chinese)* 122859
rectifier control charact., grid-voltage instabil. effect compensation 111903
reluctance motor salient-pole orient. methods for vector control *(Japanese)* 77842
renewable energy syst. optimal control strategy modelling 123106
reson. DC-DC buck-boost telecom. power converter, power flow control 108453
reson. DC-DC power converters, adaptive fuzzy control algm. 112658
robust coord. SVC suppl. controller design 122863
robust power syst. stabilizer design using heuristic optim. tech. 99301
robust power syst. stabilizers for dyn. stabil. enhancement 99299
robust variable-freq. flyback batt. chargers, small-sig. modelling 88867
rolling mill nonlin. roll thickness control scheme 124134
Romanian Nat. Power System operation stabil. assurance under low load 111826
rotary power flow controller, steady-state/dyn. modelling 111889
rural power syst. FMR, mechanism and countermeasures *(Chinese)* 111880
Russian unified power grid, operating freq. fluctuations. anal. 77154
SC DC-DC convertor, control design & closed-loop anal. 123634
SEIG using STATCOM, voltage control anal. 134003
sensorless AC motor drive control, saturation-induced saliencies anal. 134459
sensorless PM brushless AC motor drives, speed estim. improvement 123879
sensorless vector-controlled elec. vehicle IM drive 89394
separately-excited DC motor global speed control 112543
series act. clamped reson. DC-link inverter current control 134188
servomotor discrete time accel. control loop studies 134100
servomotor drive positioning control syst. overshoot countermeasure *(Japanese)* 100260
Shinkansen trains on-board ATC syst. control method *(Japanese)* 78243
shunt VAr compensator capacitor voltage equalisation, closed loop control 111828
simple power syst. voltage stabil., dyn. anal. 122871
single-machine three-bus power syst. electromechanical oscills. damping 111859
single-phase IM vector speed control syst. *(Korean)* 123453
single-phase PFC rectifier with wide output voltage control range 78036
single-phase PWM AC/DC power converter, fuzzy-neural controller studies 134242
single-phase PWM inverter act. filters, current-tracking method 77986
single-phase UPS inverters, H_∞ loop-shaping controller design 88958
single-stage step-up/down three-phase AC-to-DC converter modelling 88877
SMES control algms. for customer power quality improvement 78190
solar-TPP, gain-scheduled fuzzy PI control scheme 133902
South China power syst. dyn. stabil. improvement 77212
speed-controlled motor drives, freq.-generated ref. angle error 113073
squirrel cage motor lin. control under param. vars. 99670
SRM drive control, machine param. self-tuning 134480
SRM drive intell. adaptive online direct EM torque estimator 123875
SRM drive robust quantitat. speed control scheme 100263
SRM drive sensorless control, stiff syst./signature detect. concept 134445
SRM drives high-perform. posn. sensorless control 134495
SRM fully-digital PI current controller, vehicle propulsion appls. 133963
SRM passivity-based torque/speed/posn. tracking control 123379
SRM sensorless control scheme at standstill 88702
SRM speed control using adaptive sliding mode observer *(Korean)* 77841
SRM variable speed drive analog-based closed-loop sensorless control 134479
SRM vibrs. reduction using control current angles var. 123357
STATCOM nonlin. control scheme *(English)* 77234
STATCOM robust nonlin. control scheme *(Chinese)* 77235
substation voltage/VAr control, strategies and implement. modes *(Chinese)* 123683
supercond. fault current limiter for power syst. transient stabil. enhancement 77601
supercond. generator control, adaptive/fuzzy logic stabilizer comparison 77814
surface PM sync. motor, init. rotor posn. estim. 133988
switched power converter energy-based nonlin. control design 134246
sync. generator fuzzy adaptive control scheme 123395
sync. generator observer-based nonlin. control scheme 77855

control system analysis continued
sync. generator target guiding voltage control method *(Chinese)* 88697
sync. machine nonlin. adaptive optimal excitation control scheme *(Chinese)* 77840
TCSC as power syst. transient voltage stabilizing controller 111860
telecomm. controlled rectifier, periodic/chaotic responses anal. 108452
thermal power syst. dyn. operation, wind power variability impact 99588
three-level inverter-fed IM, direct torque control algm. 133994
three-phase AC/DC PWM power converter, adaptive directive neurocontrol 123643
three-phase act. power filter controller design/implement. 99889
three-phase act. power harmonic filter direct power control scheme 89030
three-phase CVCF PWM inverter, digital repetitive learning control 99826
three-phase four-wire shunt act. power filter control strategy 134331
three-phase fuzzy-controlled shunt act. power conditioners 122907
three-phase HB-type stepping motor torque vibr. suppression control *(Japanese)* 99699
three-phase hydrogenerator multirate optimal control tech. 77774
three-phase IM drive syst., fault tolerance improvement 78215
three-phase power act. harmonic filter, vector control transient behavior 123716
three-phase PWM rectifiers, current control stabil. issues 123619
three-phase single-stage step-up/down current rectifier sliding mode control 134167
three-phase space vector PWM boost power converter, digital controller design *(Korean)* 77969
three-phase UPS PWM inverter, digital voltage/current controllers 134232
three-phase variable act.-pass. reactance transient response 88361
transm. loading relief inefficiency, locational prices correction 111849
transm. network supercond. fault current limiting transformer 77581
transm. network voltage stabil. anal., paper discussion and closure 133551
transm. syst. adequacy eval., UPFC considerations 122949
turbogenerator continually online trained excitation/turbine neurocontrol scheme 112445
turbogenerator governor H_∞ robust decentralized control scheme *(Chinese)* 123325
turbogenerator robust control for power syst. stabil. improvement *(Chinese)* 77813
turbogenerator shaft torsional oscill., bifurcation anal., stable region estim. *(Chinese)* 77827
two-area power syst. fuzzy gain-scheduled PI load-freq. control 122903
two-finger variable reluctance gripper, modelling and charactn. 89014
two-finger variable reluctance gripper, posn./force control studies 134320
two-inertia syst. vibr. damping property *(Japanese)* 77818
two-machine infinite-bus power syst. steady-state stabil. limit *(Japanese)* 77250
unbalanced distrib. syst. three-phase act. power line conditioners optim. 88365
unbalanced transm. power systs., optimal real-time control 111876
unified power quality conditioner, theory, modelling, appl. 77353
unity PF PWM rectifier using digital/analog hybrid control *(Chinese)* 134241
UPFC transient anal., DC-link capacitor design appl. 122872
UPFC transient charact. for power flow var. suppression *(Japanese)* 99290
UPS inverter second order deadbeat controller design *(Korean)* 123588
utility-connected power systs. control, PLL struct. studies 133546
VAr compensation/load balancing compact control algm. 99302
vector controlled IM drive modelling, VHDL 123940
vector-controlled IM drives using random invertor switching 78206
vehicle platooning using carrier phase GPS/MM-wave radar 131700
VSI control, parasitics effects modelling 88926
wind farm perform. improvement using VAr compensation 123256
wire EDM servo control state anal. *(Chinese)* 124141
wound-rotor induction machine posn.-sensorless control algm. 99671
Nb_3Sn μ-SMES concept feasibility 78188

control system analysis computing
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 133212
3-phase 3-level neutral point clamped boost rectifier, input/output feedback lin. control 134175
500 kV transm. lines transmitting capability improvement measures *(Chinese)* 77376
act. mag. bearings, control design/simul./expts. 116500
act. power distrib. discrete variable struct. control scheme *(Chinese)* 122880
advanced mfg. systs., intell. commun. networks perform. mgt. 96052
advanced power syst. operation teaching, computer-based voltage control expt. 89641
advanced SVC using three-level NPC inverter, robust control scheme 88367
asynchronised machines as controllable FACTS devices 122950
automobile sliding mode wheel slip controller perform. enhancement 100304
autonomous vehicle vision-based road following using neural nets 129452
back-to-back act. power flow AFC modelling 122843
batt. charger PFC preregulators, optimal control scheme 78012
bulk power syst. restoration, generating units start-up optimisation 111816
chilled water plants optimal control develop. using quadratic representation 100236
DC aerospace servomotors, ZVS convertor-fed, fuzzy-based speed control 123500
DC motor real-time PID speed/posn. control scheme 134070
DC motor state estim. approach 123499
DC-DC converters, reson., fuzzy control 134324
dispersed generation power systs., intell. control methods 111864
distrib. syst. reliab. improvement using dispersed generator inform. exchange 112028
distrib. syst. service restoration improvement using Dijkstia algm. *(English)* 122960
distrib. systs. integrated volt/VAr control 111877
elec. drive control/elec. params. sizing proc. 123864
elec. drive direct torque control syst. simul. using MATLAB/SIMULINK *(Chinese)* 100257
elec. machine ANN-based posn. estimator 123494
electroheating devices simul. using computer lab. stand *(Polish)* 124094
FA-425 fly frame speed sync. control syst. simul. *(Chinese)* 124149
FACTS dyn. perform. improvement, damping controls optim./coord. 88377
FACTS OPF scheme, hybrid model 111887
FACTS series compensating device operation under line flow congestion 111884
FACTS SSR computational anal. using sample-data model *(Chinese)* 77303
FACTS TCSC devices allocation for total transm. capacity optimisation 112003
FACTS UPFC simul. techs. 111861
five-phase reluctance motor drive, harmonic injection field oriented control 134482
fuzzy logic-based extended integral load freq. control scheme 111897
generator sync. using HWIR simul. 133921

control system analysis computing continued
grid-connected induction generator, naturally-commutated AC voltage control 134001
H_∞ based robust static sync. series compensator design 111896
high-PF PWM AC/DC power converters, sensorless voltage control 123648
high-speed networks, equiv. capacity estim. using fuzzy logic 74106
hybrid EV novel drive strategy 123956
hydroelectric turbogenerator valve nonlin. robust control strategy *(Chinese)* 77769
IM drive direct torque control strategy studies 123876
IM speed sensorless control, rotor resist. ident. 134035
Impact integrated power syst. anal. package develop. 77255
induction servomotor HF mech. oscills., act. damping control 134039
induction servomotor robust adaptive nonlin. speed control 123480
intell. building EMS using LAN technol. 89316
isolated power systs. dyn. behavior, batt. energy storage systs. impact 99270
lighting controller integrat. into self-adaptive building control syst. 113126
local-based power syst. voltage collapse protection scheme 77559
manipulator two-layers feedforward posn. control syst. 123698
microcontrollers learning using CAI-oriented multi-micro simul. environ. 78512
multi-bridge PWM inverter static sync. compensator, dyn. characts. *(Korean)* 122868
multi-machine power syst. stabil., generalized Heffron-Phillips model 88355
multi-zone congestion mgt. using Lagrangian relax. 111883
multi-zone unbundled elec. markets, real-time coord. dispatch 99264
multimachine power syst. stabilizers, global tuning procedure 99303
multimachine PSS using recurrent neural net *(Japanese)* 88369
multiobjective optimal load flow based on ideal dist. minimization 122892
OO OPF 99266
phase jump voltage sags compensation, dyn. voltage restorer control strategies 88434
photoelec. lightning control, switching freq. reduction strategies 78327
PM sync. servomotor syst., feedback lin. control *(Chinese)* 112476
power syst. anal./simul. tools, novel implement. approach 89639
power syst. control simul. using distributed simul. environ. 111831
power syst. damping using fuzzy-controlled UPFC 111858
power syst. dyn. perform. anal., syst. struct. comparison 88374
power syst. fault oscill. params. calc. method *(Chinese)* 122884
power syst. load shedding optim. using dyn. modelling 122900
power syst. online decision making under contingencies 111830
power syst. stabil. multi-spectrum transform. implicit restarted Arnoldi algm. *(Chinese)* 99256
power syst. stabil./power quality eval. using phasor meas. 77226
power syst. stabilization using nonlin. state feedback neurocontrol *(Japanese)* 88341
power syst. SVC optimal control for SSR stabilisation 133554
power syst. transient stabil. assess. using fast screening algm. *(Korean)* 122889
power syst. voltage regulation/network support technols. anal. 122908
power syst. voltage stabil. enhancement, load following units selection optim. 111822
power systs. dyn. perform. anal. using vector fields normal forms 88373
pumped storage hydro station black-start regime develop. 123248
pumped storage hydro station HWIR simul. 123247
PV power syst. fuzzy logic load control scheme 112436
PWM AC motor drives, full digital sync. frame current regulator 134469
radial primary power distrib. network optimum VAr control 77332
reluctance motor variable struct. robust speed control scheme *(Chinese)* 133990
robotic hand prosthesis with adjustable power transm. mechanism 122339
sens. calib., evol., using genetic prog. on evolvable hardware 97209
sensorless squirrel cage motor control strategy for FPGA implement. 77881
series act. power filter deadbeat control appl. *(Chinese)* 99879
series voltage/harmonic compensator sync. frame-based control strategy 88435
shunt act. power harmonic filter neurocontrol scheme 78114
single-phase modular act. power harmonic filter, rule-based controller 112755
SRM controller LabVIEW implement. 88696
SRM sensorless control, on-fly phase resist. estim. 123368
SSR mitigation mechanism using TCSC *(Chinese)* 77257
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
static sync. compensator with SMES, dyn. perform. 111856
steam power plant start-up seqs. optimisation simulator *(English)* 123192
submarine cable laying proc. control scheme 125858
subtransmission power network dispatcher training simulator develop. *(Chinese)* 77300
SVC siting using dyn. variable string length GAs 99268
TCSC impedance step charact., computer simul. studies *(Chinese)* 77258
TCSC PI controller struct. anal. using Power System Blockset 99277
TCSC transient characts., two-order difference eqn. math. model *(Chinese)* 88338
TCSC transient proc., thyristor cond. angle characts. research *(Chinese)* 112752
telecomm. buck-type power converter load, input dyn. modelling 108454
three-phase line-interactive UPS syst. implement. 134221
three-phase PWM rectifier direct power control, virtual flux estim. 123618
three-phase PWM voltage-source rectifier, predictive instantaneous current control *(Japanese)* 77972
three-phase squirrel cage IM, sensorless speed control 112527
three-phase three-level NPC rectifier, adaptive nonlin. control 134174
thyristor-based brushless PM DC motor drive speed control 89328
train network simulator design based on train commun. network 134543
turboalternator transfer fn. estim. using spectral anal. 123371
turbogenerator AVR loops ident., RBF and MLP NN comparison 88695
unit commitment at freq. security condition 77266
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
UPFC-embedded power systs., load flow injection modelling approach 111821
VAV air-conditioning syst. fault-tolerant supervisory control 100334
voltage collapse contingency ranking using self-organizing hierarchical neural net 77270
voltage limit violations line outage ranking tech. 122891
VSI-based power oscill. damping scheme 133545
wind micropower induction generators, sensorless power maximization algm. 123252
wind-diesel power syst. distributed intell. load control scheme 99590

control system CAD
anaesthesia syst. design using simul. 76607
articulated public transport bus, sens. guided, state observer 131886
complex control ccts., dyn. reconfigurable implement. 101940
elec. drive control/elec. params. sizing proc. 123864
electronics mfg. mach., control syst. design and implement. 89945
IM vector control, Simulink/RTW-based real time control syst. develop. *(Korean)* 112531

control system CAD continued
micromanipulation mechanisms synthesis for bioengineering *(Chinese)* 10418
power plant simul. and control using ACSL/MMS and MATLAB/SIMULIN 77725
wind tunnel, injector powered transonic, PID controller 133211

control system synthesis
see also Bode diagrams; control system CAD; correlation methods; describing functions; frequency-domain synthesis; frequency response; linearisation techniques; perturbation techniques; phase space methods; piecewise linear techniques; poles and zeros; root loci; sensitivity analysis; stability; state-space methods; step response; transfer functions
2D control systs., learning from implement. 109496
2D diffusion eqn., control param. determ. 68030
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 13321
3-phase 3-level neutral point clamped boost rectifier, input/output feedback li control 134175
3-phase high PF boost rectifier, digital line current shaping 88872
3-phase PWM boost-buck rectifiers, power regenerating capability 134163
20 kW GTO NPC inverters, PWM switching pattern control scheme 134187
55 kW traction SRM drive, closed-loop torque control 134534
300 mm wafer fab controllers design, CPN-based approach 89948
300 MW power unit, nonlin. dyn. boiler model 133868
AC line voltage regulator implement. using fuzzy control theory 122846
AC machine control algms., optimized IC design studies 133927
AC machine direct torque control, speed estim. using wavelet transform 8867
AC motor drive sensorless speed control algms. 123888
AC motor self-tuning PID adaptive speed controller 123334
AC servomotor neuro-fuzzy speed controller design 133945
AC speed-adjustable syst., grey sliding mode controller design *(Chinese)* 134085
AC-DC power syst., modified GA, optimal PID controller 77274
acoustic duct, robust broadband control 88205
act. current rectifier, switch based, math. model & control 88939
act. filter, fuzzy controlled, optimum duty cycle design 122984
act. mag. bearing-supported rotor, integrally augmented state feedback contro 112444
act. mag. bearings, control design/simul./expts. 116500
act. power distrib. discrete variable struct. control scheme *(Chinese)* 122880
act. power filter robust current tracking control design 123711
act. power harmonic filter capacitor, energy storage fuzzy control 89036
act. power harmonic filter using predicted current control 78118
act. power harmonic filters, adaptive learning current control algm. 133704
adaptive observer-based sensorless IM drive stabilisation 134442
advanced SVC using three-level NPC inverter, robust control scheme 88367
AGV steering control/ident. using vision syst. 129448
Alpha Step two-phase hybrid stepping motor with keep-in-step control 123526
ANN-based neurocontroller for IM 77877
ATM networks, predictive congestion control, multiple sources/single buffer sce nario 73780
ATM switches, ABR explicit rate algm., stat.-learning control 73781
automobile sliding mode wheel slip controller perform. enhancement 100304
automotive air conditioner variable displacement compressors, control valve develop. *(Chinese)* 134572
automotive integrated PM starter/alternator, flux weakening control algm 134567
autonomous vehicle vision-based road following using neural nets 129452
bal. distrib. network general-purpose load flow tech. 122974
balancing machine, mag. bearings control syst. 104555
batt. charger PFC preregulators, optimal control scheme 78012
bi-directional AC-DC thyristor converter unified control scheme 88822
BLDCM field-weakening regime using instantaneous power theory 77888
boost PFC ccts., digital controller design 88828
brushless DC traction motors, perform. anal. studies 123974
brushless doubly-fed reluctance machines, PF control 123366
brushless doubly-fed reluctance machines control strategies *(English)* 77843
brushless refrigerator compressor motors, sensorless sinusoidal control 124123
buck DC-DC converter, lin. optimal feedback/load-decoupled control 112640
bulk power syst. restoration, generating units start-up optimisation 111816
cascaded doubly-fed induction machine, combined magnetising flux oriented control 99669
CD player control design, perform.-robustness trade-off 86355
chaotic systs. synchronisation, proportional plus derivative control design *(Chinese)* 117876
chilled water plants optimal control develop. using quadratic representation 100236
compact vert. XYθ table develop., PM walking drive methods *(Japanese)* 134318
complex distrib. load flow, augmented matrix-based control scheme *(Chinese)* 111908
complex thermal cogen. plant operation optimisation 88562
congestion mgt. bidding-based model using interior point methods *(Chinese)* 122856
const.-voltage const.-freq. PWM DC/AC converter, repetitive learning controller 88941
constr. mach. unstructured obj. attitude/stabil. control 134322
coupled chaotic systs., extended act.-pass. decomp. 77838
CPU power supply, valley current-mode control design 114607
crane driving control charact. 134710
crane mechatronic syst. dyn. behavior investig. 89493
current conveyor based PID controller synthesis, optimum param. tolerances 102360
DC aerospace servomotors, ZVS convertor-fed, fuzzy-based speed control 123500
DC drive, static subordinate speed control syst., state observers synthesis 100246
DC drive, subordinate speed control syst. synthesis, neg. viscous friction 100245
DC motor drive combined digital speed-control schemes 113055
DC motor drive fuzzy logic PI speed control scheme 123944
DC motor drive neurocontrol approach 113084
DC motor neuro-fuzzy speed control systs. 112545
DC motor real-time PID speed/posn. control scheme 134070
DC motor state estim. approach 123499
DC servomotor adaptive fuzzy sliding-mode controller 99689
DC servomotor digital controller auto-tuning *(Japanese)* 99678
DC servomotor drive settling time improvement using nonlin. PD controller 123942
DC servomotor speed control, adaptive fuzzy logic controller design, tabu search 134071
DC shunt motor, speed control, nonlin. control design methods eval. 88765
DC-DC converter, observer-based sensorless current mode control tech. 88964

trol system synthesis continued
DC/DC reson. power converter feedback control design 88969
decentralized adaptive power syst. stabilizer scheme 77213
decentralized power syst. load freq. control, LQR design 122879
deregulated utility environ. congestion mgt. using corrective measures 111882
diesel-elec. locomotive double-feed induction generator, state feedback control 113103
differential drive wheeled mobile robot posn. control 100265
diffused control, Xilinx FPGA for DC-DC boost convertors *(Spanish)* 101758
digital motor motion control, Windows-based develop. environ. design 123320
digital PLL, loop filters design, mixed H_∞/H_2 method 68886
direct torque controlled IM drive, neural observer synthesis 89363
discontinuous arranged LSM transfer syst., optimal drive control timing 89350
dispersed generation power systs., intell. control methods 111864
distorted line voltage power syst. load symmetrization apporach 111929
distrib. feeder load restoration using robust heuristic method 122910
distrib. network fault restoration approach using GA *(Chinese)* 99257
distrib. network parallel act. power harmonic filter control strategy 133553
distrib. syst. fuzzy multiobjective optimal control approach 133540
distrib. systs. integrated volt/VAr control 111877
distributed PV power supply systs. implement. 123261
distributed PV power systs., fully digital control 133900
double armature lin. PM DC motor closed loop posn. control 123514
doubly-fed machine pumped storage power unit control optimisation 123245
doubly-fed twin stator IM drive, control perform. eval. 78213
DSTATCOM capacitor voltage equalization control strategies 111829
dual channel DC-DC buck/boost power converters optimal control strategy 112642
dual-arm robot image-based visual feedback control 129451
dual-axis Maglev positioning syst., adaptive sliding mode controller design 128731
dual-mode ultraprecision high-speed positioning syst. develop. *(Japanese)* 134317
dual-stage HDD, fixed order H_∞ control design 81901
dyn. voltage restorer based on voltage space vector PWM control 88935
elec. machine ANN-based posn. estimator 123494
elec. market congestion dispatch scheme *(Chinese)* 122857
elec. motor drive control, neural network/genetic algm. approaches 113051
elec. scooter BLDCM torque control scheme 123957
elec. transm. grid perform. optimisation strategies *(German)* 111996
electromechanical systs. control-sig. form. 113074
electromechanical systs. PI-regulator param. min. optim. 113053
EM suspen. syst., fault tolerant controller design *(Korean)* 78309
encoderless IPM traction drive control for EV appls. 134532
FACTS, multimodel adaptive control, design params. selection 111937
FACTS devices location optimisation for congestion mgt. 99327
FACTS dyn. perform. improvement, damping controls optim./coord. 88377
FACTS OPF scheme, hybrid model 111887
FACTS series compensating device operation under line flow congestion 111884
FACTS TCSC devices allocation for total transm. capacity optimisation 112003
FACTS UPFC controller perform. enhancement using modal anal. 111934
FACTS UPFC location for congestion mgt. 99328
FACTS UPFC scheme, power flow computation *(Chinese)* 99254
field-oriented hybrid PM stepper motor robust servo controller 123318
fighter aircraft, nonlin. tuned RBF neurocontroller design 111641
five-phase reluctance motor drive, harmonic injection field oriented control 134482
flexible manipulator control, piezoelec. actuators/sens. 104448
flexible manipulator sliding mode posn./vibr. fuzzy controller 134319
fluoresc. lamp ballast crest factor improvement using PFM 134606
fluoresc. lamp electronic ballasts, toggled duty cycle current control 134617
flywheel fast-response current/torque control strategy 134424
four-switch BLDCM drives, indust. appl. feasibility 89327
free-model based power syst. stabilization scheme 111893
fuel cell-powered hybrid vehicle drive train, systematic design approach 123968
fuzzy controller design for boost switching regulator with piecewise PWM/sliding-mode control 99772
fuzzy logic-based extended integral load freq. control scheme 111897
fuzzy PSS, params. tuning method, GA, simulated annealing *(Korean)* 77268
fuzzy-logic current-sensorless feedforward act. rectifier 134160
fuzzy-logic-based CLOS guidance law design 99134
gas turbine combustors, NO_x emissions, adaptive predictive control 88599
gas turbines, advanced, rem. monitoring and control 77759
grid-connected induction generator, naturally-commutated AC voltage control 134001
grid-connected wound rotor induction machine, sensorless direct power control 77861
H_∞ based robust static sync. series compensator design 111896
hard-switching DC/DC power converters time-varying sliding-mode control *(Chinese)* 99792
high perform. vector controlled AC drives, PI vel. regulators, design and tuning 134433
high-dyn. indust. motor drives, torsional vibrs. damping/ident. 124150
high-perform. AC power supplies, sync.-frame harmonic control 77984
high-PF PWM AC/DC power converters, sensorless voltage control 123648
HV substation voltage control using OOP tech. 99862
HVDC fuzzy logic controller optimal design, GA 133593
hybrid EM levitation syst. zero power levitation control scheme *(Korean)* 123951
hybrid EV novel drive strategy 123956
hybrid PM stepper motor robust sliding mode posn. control scheme 88778
hydroelectric turbogenerator valve nonlin. robust control strategy *(Chinese)* 77769
hydropower plant turbine governors, surge tanks fuzzy control scheme *(Chinese)* 112343
IM, current-fed, load vars. H_∞ control 99676
IM, global exponential output-feedback control 112514
IM, neuro-fuzzy controller design on DSP 134053
IM, speed tracking control, max. power transfer 77867
IM adaptive vector control scheme 88720
IM control struct. model with erroneous field orient. 112529
IM digital neural current controller scheme 112528
IM direct torque control, torque-ripple reduction strategy 99672
IM direct torque/flux sliding mode control approach 123444
IM direct torque/posn. control syst. 134049
IM drive, real-time µP-based vector speed control 123920
IM drive direct torque control, inverter state selection 89364
IM drive direct torque control approach 113044
IM drive direct torque control strategy studies 123876
IM drive direct torque control using enhanced inverter switching 78205

control system synthesis continued
IM drive DTC using fuzzy variable switching sector 134502
IM drive field oriented speed control, rotor flux observer 89330
IM drive field oriented speed control scheme 123898
IM drive fuzzy Volts/Hertz control scheme 100241
IM drive $H\infty$ field-oriented control scheme 78211
IM drive high-perform. adaptive parallel distributed compensator 123866
IM drive indirect field oriented control, slip freq. detect. 134438
IM drive loss minimization control using GAs 123865
IM drive nonlin. speed control strategy improvement 123946
IM drive rotor speed estim. using Kalman filter algms. 134439
IM drive stator flux oriented vector start-up scheme 134440
IM drive TMC320C243-based torque estimator 123870
IM drives, digital control systs. 100255
IM drives, FOC, H_∞ controller design *(English)* 123852
IM drives, indirect FOC, 1 DOF and 2 DOF controllers design 123947
IM DTC-based speed control, ASIC design 134051
IM full-order flux observer sensitivity anal. 88746
IM model ref. adaptive fuzzy speed control approach 123479
IM sensorless control systs. develop./anal. 123439
IM sensorless control using disturbance observer 123432
IM sensorless torque control syst. 123410
IM speed drives, sliding mode current control 113048
IM vector control, space-vector modulation tandem inverter 123428
inaccessible neutral induction machines air-gap flux posn. estim. 88744
indirect vector-controlled IM drive, PI/fuzzy estimators 123874
induction machine nonlin. sliding-mode torque/flux control method 99655
induction machine simplified stator flux vector control method 123445
induction machine speed estim. using robust sliding mode observer 88725
induction machine stator/rotor flux-based deadbeat direct torque control 134013
induction servomotor drive robust control scheme 78212
induction servomotor drives, optimal relay vector posn. control algms. 113057
induction servomotor drives, robust posn./speed neurocontrol scheme 134498
induction servomotor HF mech. oscills., act. damping control 134039
induction servomotor robust adaptive nonlin. speed control 123480
induction servomotor syst., adaptive fuzzy sliding-mode controller design 123699
inductive ccts. current phase fuzzy control scheme 101725
indust. systs., optimal-tuning PID control schemes 133873
integrated predictive/adaptive building HVAC/lighting control 89453
intell. building EMS using LAN technol. 89316
intell. buildings, EMS/control systs. design/testing, simul. tools 89452
intell. sensorless PM sync. drives, direct axis current utilization 134443
interconnected power syst. freq. oscill. stabilis., SSSC appl. 99284
interior PM sync. machine sensorless speed control scheme 123369
interior PM sync. machine sensorless speed control scheme 113069
interior PM sync. motor drive control, stator resist. effects 134484
interior PM sync. motor sensorless control using Kalman filter 123377
interior PM sync. motor with adjustable PM armature flux linkage *(English)* 88699
interorbital flight programmed motions constr. method 133215
inverter flux control techs. 77985
inverter-fed arc welding machine, mixed I-V control scheme 89472
Italian rly., servo-actuated pantograph 100293
large-scale nonlin. OPF problems, fuzzy corrector terms 99267
laser machine positioning control using real-time dyn. characts. compensation *(Japanese)* 89838
launch vehicle, secondary injection thrust vector control power plant lin., fuzzy logic appl. 98919
LCL-filter based front-end 3-phase act. rectifier, design/control 134162
LEO satellites, mag. attitude control syst. 111310
LHD supercond. coils, H_∞ current control 71040
LIM drive, intell. backstepping control 100237
LIM servo drive, robust control, neural network uncertainty observer 78210
limb movement, paraplegics, elec. stimulation control design 133000
lin. BLDCM, precise posn. control *(Korean)* 134065
lin. SRM robust short-dist. posn. control approach 134083
machine efficiency optim. using ripple correl. control 88758
machine tool lin. motor drives, PID posn. control unified gain tuning 89474
mag. bearing syst. with flexible rail, robust H_∞ control 127412
mag. bearings, fault-tolerant control, reduced controller outputs 70566
mag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 89022
mag. suspen. syst., uncertainty struct. and µ-synthesis *(English)* 105692
Maglev nonlin. control law design/implement. 100289
MAGLEV syst., airgap deviation, variable struct. control 128730
MAGLEV syst., H_∞ control and closed loop ident. 105691
MAGLEV syst., posn. tracking, adaptive robust nonlin. control 83183
MagLev syst. 2-block/3-block H∞ control problems *(Chinese)* 100283
manipulator two-layers feedforward posn. control syst. 123698
mechatronic systs., nonlin. observer and control design 78223
miniature flywheel syst., hybrid mag. bearings H^∞ control scheme 78187
Mitsui Recycling 21 proc., automatic control syst. *(Japanese)* 89931
mobile vehicle control, ART neural network-based image proc. 129654
motor drive current control struct./algms. synthesis 113056
multi-area load freq. control using batt. energy storage 122865
multi-area power syst., decentralized sliding mode stabilizer design 122874
multi-area power syst. PI sliding mode load freq. control scheme *(Chinese)* 88339
multi-area PSS design using combined sensitivity concept 77215
multi-cell power converter distributed control strategy 88824
multi-link smart materials robots, model-free regulation 92694
multi-machine FACTS with UPFC, Phillips-Heffron model *(Chinese)* 77204
multi-machine power syst. stabil., generalized Heffron-Phillips model 88355
multi-phase buck converter voltage/current control scheme 88847
multi-phase DC/DC buck power converter voltage/current control scheme 123650
multi-zone congestion mgt. using Lagrangian relax. 111883
multi-zone unbundled elec. markets, real-time coord. dispatch 99264
multimachine power syst. MIMO decentralized nonlin. control scheme *(English)* 77251
multimachine power syst. nonlin. decentralized control strategy *(English)* 77233
multimachine power syst. stabilizers, global tuning procedure 99303
multimachine power syst. SVC robust damping controller design 88375
multimachine power syst. turbogenerators, adaptive neurocontrol scheme 111898
multimachine power syst. turbogenerators, optimal DHP neurocontrol design 133542
multimachine PSS param. optim. using genetic local search 122890
multimachine PSS using recurrent neural net *(Japanese)* 88369

control system synthesis continued
multiobjective optimal load flow based on ideal dist. minimization 122892
multiple three-level NPC inverter systs., circulating current control scheme 112652
multipulse power converters/controls for HVDC and FACTS systs. 88876
multivariable lin. systs., robust tracking under parametric uncertainty 78208
Neue Bahntechnik Paderborn, lin. motor, pitch anal./control 134537
neutral point three-phase inverters, PWM algms. develop. 112651
nonlin. chaotic Chua ccts., robust tracking control, fuzzy approach 90678
nonlin. drive systs. synthesis with low parametric perturb. sensitivity 113054
nonlin. uncertain syst. robust control design, motor appl. 134054
nonsalient PMSM drive sensorless control method adaptive observer 113067
nonstandard job-shop scheduling problem, GA-based soln. approach *(Chinese)* 67683
nontuned interphase power controller calc. and anal. *(Chinese)* 111907
normal form SISO nonlin. systs., neural network adaptive robust control 113058
NPP steam generator water level control, model predictive controller design *(Korean)* 123170
obs. subsyst., efficient in automated control syst. design *(Russian)* 97140
oil well deparaffination elec. heating installations, params. optimisation 124166
optimal distrib. load flow using fuzzy multi-objective decisions 111819
optimal fractional controllers for commensurate order systs. 73646
parallel three-phase PWM buck rectifiers, control/modelling approach 134168
parallel-connected dual IM speed sensorless vector control 134023
paraplegic standing, feedback controllers design 76661
partial internal model control, DC servomotor syst. 134055
PFP design using boost power convertor *(Chinese)* 133493
PI controller for IM indirect field oriented control, optimal design 134429
PID control, filtered, optimum multiple integrat. tuning 107507
piezo-actuated vibroacoustic absorbers, interior noise control 123696
pitch control missile autopilot, variable struct. controller design 111627
planar manipulator, globally convergent vision-based posn. controller, adaptive visual servoing problem 97373
PM AC/DC motor drives, DSP-based integral variable struct. control 123943
PM BLDCM torque ripple minim., ref. frame approach 134069
PM DC servomotor drives, sliding mode posn. control scheme 89362
PM lin. sync. servomotor drive adaptive hybrid neurocontrol scheme 123948
PM machine control, torque ripple compensation approach 123323
PM step motor vector control syst. implement. 88777
PM sync. motor, q-axis field, optimal PF control, inverse LQ design method *(Japanese)* 88713
PM sync. motor decoupling control, online params. ident. 133969
PM sync. motor drive sensorless digital control scheme 89331
PM sync. motor drive syst., const.-power-loss-based operation 100264
PM sync. motor drives, posn. sensorless speed control scheme 134494
PM sync. motor fuzzy logic controller modelling 123352
PM sync. motor high-efficiency low-torque ripple control scheme 77853
PM sync. motor posn./speed estim. tech. 99647
PM sync. motor sensorless INFORM-based positioning drives 123365
PM sync. motor speed control design using disturbance observer 133975
PM sync. motor vector speed control for CT appls. 132829
PM sync. motors, nonlin. H^∞ control 77839
PM sync. motors, saliency-based posn./speed estim. 133972
PM sync. servo motor drive, total SMC, recurrent fuzzy NN 134426
PM sync. servomotor syst., feedback lin. control *(Chinese)* 112476
PM sync. servomotor vibr. suppression control method *(Japanese)* 88698
positioning syst. with BLDCM, control design 78226
power converter parallel operation, novel droop method 88917
power convertor current regulation principles 123570
power distrib. lines dual power flow regulator *(Chinese)* 77260
power IGBT switches, flexible dv/dt/di/dt control method 126786
power network black-start DSS *(Chinese)* 122886
power quality conditioner, unified series-parallel deadbeat control 133703
power syst. act. secure economic dispatch algorithm 77217
power syst. current symmetrisation, Steinmetz syst. design study 122899
power syst. damping using fuzzy-controlled UPFC 111858
power syst. dyn. stabil. improvement by SVC/PSS coord. 111820
power syst. generator excitation control optimisation method *(Japanese)* 77249
power syst. inter-area oscills. damping using lin. matrix inequality 111823
power syst. load dispatching, transient stabil. considerations *(Chinese)* 122861
power syst. load flow algm. using optimal prog. *(Korean)* 77202
power syst. load flow regulation scheme using controllable reactance *(Chinese)* 88359
power syst. load shedding optim. using dyn. modelling 122900
power syst. neural network inverse control scheme *(Chinese)* 77231
power syst. nonlin. state PI excitation controller *(Chinese)* 77236
power syst. optimal stabilizer/variable struct. controller studies 77211
power syst. oscill. damping, SVC and ASVC, robust H_∞-optimal control *(English)* 111924
power syst. oscills. damping, multiple controllers, coord. design 122869
power syst. oscills. damping, unidirectional alternative power generation plants control 111862
power syst. robust nonlin. controller with voltage regulation *(English)* 77232
power syst. stabil./economy improvement using GA-based control 111886
power syst. stabilising control/fault current limiting using SMES approach 77207
power syst. stabilization fuzzy logic-based PID control scheme 99300
power syst. stabilization using nonlin. state feedback neurocontrol *(Japanese)* 88341
power syst. stabilization using plane-type fuzzy control method *(English)* 88344
power syst. stabilizer, adaptive fuzzy control tuning 133529
power syst. SVC optimal control for SSR stabilisation 133554
power syst. transient instabil. prediction using fast-learning algm. 111888
power syst. transient stabil. control anal. using Lyapunov fn. 77237
power syst. transient/voltage stabil. enhancement control scheme 77246
power syst. turbogenerator nonlin. optimal governor additional control *(Chinese)* 77205
power syst. VAr optim. using static voltage stabil. index 99298
power syst. VAr/voltage control using particle swarm optim. 111885
power syst. voltage instabilities, voltage reduction emergency control 77272
power syst. voltage level/VAr bal., generator leading PF impact 77216
power syst. voltage sag mitigation using act. series voltage injection 77224
power syst. voltage stabil. enhancement, load following units selection optim. 111822
power systs., decentralized suboptimal control, SMES 122878
power systs. hybrid emergency control scheme 122853
power systs. load-freq. control, smoothed switching struct. theory 122875
power systs. operation, optim. methods survey *(Japanese)* 77248
PSS design using robust gain scheduling control theory 77214
pumped storage hydro station black-start regime develop. 123248

control system synthesis continued
PV module, optimal operating point tracking syst. modeling 123833
PV modules generation control cct. 77797
PV power syst. adaptive MPPT scheme 123260
PV power syst. fuzzy logic load control scheme 112436
PV power syst. max. power point tracker studies 88653
PV power syst. MPPT control under nonuniform insolation 112419
PWM AC motor drives, full digital sync. frame current regulator 134469
PWM AC/DC power converter, high-speed source voltage sensorless contr 123615
PWM boost converters, discrete controllers, generic av. modeling/simul. 888
PWM buck-boost DC-DC power converter, simultaneous control study *(Korea* 123586
PWM converter-inverter syst., fast dyn. DC-link power-balancing scheme 998
PWM inverter-fed induction machine, torque/stator flux control 123431
PWM invertor-fed IM, fuzzy posn./speed control 123433
PWM rectifier fuzzy logic feedforward current scheme 123617
PWM voltage source rectifiers, predictive instantaneous current control schem 112644
quantitat. feedback theory-PSS, robust controller, stabil. enhancement *(Korea* 122887
quasi-reson. buck converter, large sig. modeling, regulated unified model 889
quasi-reson. buck PWM convertor, passivity-based adaptive controllers 1236
quasi-static data recovery for dyn. anals. of structural systs. 114176
radial primary power distrib. network optimum VAr control 77332
real-time optimal excitation controller using online syst. ident. *(Chinese* 122859
rectifier cct., PFC, DSP based controller design 88829
reluctance motor variable struct. robust speed control scheme *(Chinese)* 1339
renewable energy syst. optimal control strategy modelling 123106
reson. DC-DC buck-boost telecom. power converter, power flow control 1084
reson. DC-DC power converters, adaptive fuzzy control algm. 112658
robust controller design, hard constraints, vector controlled BLDCM driv 113077
robust coord. SVC suppl. controller design 122863
robust power syst. stabilizer, freq. domain-based design 111818
robust power syst. stabilizer design using heuristic optim. tech. 99301
robust power syst. stabilizers for dyn. stabil. enhancement 99299
robust variable-freq. flyback batt. chargers, small-sig. modelling 88867
rolling mill nonlin. roll thickness control scheme 124134
salient-pole PM sync. motor, sensorless speed/posn. control 133989
saturated IM, passivity-based control scheme 99673
semicond. low-speed reluctance motor open-loop speed control scheme *(Chi nese)* 99644
semicond. mfg., epoxy dispensing, proc. design/control 100562
sensorless hybrid direct torque control IM drive 134444
sensorless PM brushless AC motor drives, speed estim. improvement 123879
sensorless squirrel cage motor control strategy for FPGA implement. 77881
sensorless vector-controlled elec. vehicle IM drive 89394
separately-excited DC motor global speed control 112543
series act. clamped reson. DC-link inverter current control 134188
series act. power filter control algm. *(Korean)* 123713
series act. power filter deadbeat control appl. *(Chinese)* 99879
series act. power harmonic filter adopting hybrid control approach 78112
series voltage/harmonic compensator sync. frame-based control strategy 8843
servomotor discrete time accel. control loop studies 134100
servomotor drive positioning control syst. overshoot countermeasure *(Japanese* 100260
shunt act. power harmonic filter neurocontrol scheme 78114
shunt VAr compensator capacitor voltage equalisation, closed loop contr 111828
single vision-based mobile robot self-localisation approach 129453
single-phase IM inrush current controller design *(Korean)* 123454
single-phase IM vector speed control syst. *(Korean)* 123453
single-phase modular act. power harmonic filter, rule-based controller 112755
single-phase PFC rectifier with wide output voltage control range 78036
single-phase PWM AC/DC power converter, fuzzy-neural controller studies 134242
single-phase PWM inverter act. filters, current-tracking method 77986
single-phase UPS inverters, H_∞ loop-shaping controller design 88958
single-stage PV energy conversion syst. 99599
single-stage step-up/down three-phase AC-to-DC converter modelling 88877
skid-to-turn missiles, autopilot design, functional inversion and LMI approach 88225
small sync. generator rotor angle control scheme 123380
smart antenna design, variable geom. truss struct. 117829
SMES control algms. for customer power quality improvement 78190
SMES double-DSP controlled power conditioning syst. studies 122850
solar-TPP, gain-scheduled fuzzy PI control scheme 133902
South China power syst. dyn. stabil. improvement 77212
squirrel cage motor lin. control under param. vars. 99670
SRM, adaptive torque-ripple minimization 77852
SRM drive control, machine param. self-tuning 134480
SRM drive intell. adaptive online direct EM torque estimator 123875
SRM drive robust quantitat. speed control scheme 100263
SRM drive sensorless control, stiff syst./signature detect. concept 134445
SRM drive speed control using switching angle self-tuning 134501
SRM drives, fuzzy logic torque ripple reduction, turn-off angle compensatio 78221
SRM drives high-perform. posn. sensorless control 134495
SRM fully-digital PI current controller, vehicle propulsion appls. 133963
SRM high-perform. motion control scheme 123351
SRM modal freqs. calc. formulae for vibr./noise control 123346
SRM passivity-based torque/speed/posn. tracking control 123379
SRM sensorless control scheme at standstill 88702
SRM speed control using adaptive sliding mode observer *(Korean)* 77841
SRM variable speed drive analog-based closed-loop sensorless control 13447
SRM vibrs. reduction using control current angles var. 123357
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
STATCOM, adaptive passivity PI nested control 133541
STATCOM nonlin. control scheme *(English)* 77234
STATCOM robust nonlin. control scheme *(Chinese)* 77235
static VAR systs., adaptive voltage regulator design 111845
submarine cable laying proc. control scheme 125858
subordinate control syst. current/speed regulator design 112456
substation voltage/VAr control, strategies and implement. modes *(Chinese* 123683
subtransmission substation optimal load dispatch for loadability enhancemen 133539
supercond. generator control, adaptive/fuzzy logic stabilizer comparison 7781

ntrol system synthesis continued
surface PM LSM, init. pole-posn. estim. algm. 134079
surface-mounted PM motor vector control algm. 88683
SVC, optimal PI controller design, GA 77252
SVC controller design, nonaffine nonlin. model *(Chinese)* 89032
SVC siting using dyn. variable string length GAs 99268
switch-mode DC/DC power supply predictive dead-beat digital control scheme 88821
switched power converter energy-based nonlin. control design 134246
switched reluctance machine control, online instantaneous torque estim. 123375
switched reluctance motor, H_∞ control, design, simul. 123900
sync. generator fuzzy adaptive control scheme 123395
sync. generator fuzzy excitation stabilizer 99637
sync. generator observer-based nonlin. control scheme 77855
sync. generator stabilisation, fuzzy logic-controlled braking resistor scheme 122848
sync. generator target guiding voltage control method *(Chinese)* 88697
sync. generator voltage/freq. fuzzy control using TMS320F240 DSP 123374
sync. generators, fifth-order model, energy-based stabilizing method, Hamiltonian fn. approach 112491
sync. machine, dyn. perform., robust discrete optimal multirate techs. *(English)* 112475
sync. machine nonlin. adaptive optimal excitation control scheme *(Chinese)* 77840
sync. series SVC 48-step inverter, modelling and control design *(Chinese)* 99202
TCSC as power syst. transient voltage stabilizing controller 111860
telecomm. rectifier, multi-loop controller design 112667
telemanipulation, soft environ., bilateral control design 98597
three-level inverter-fed IM, direct torque control algm. 133994
three-level VSI capacitor voltage balancing control methods *(Chinese)* 99733
three-phase AC/DC PWM power converter, adaptive directive neurocontrol 123643
three-phase act. power filter controller design/implement. 99889
three-phase act. power harmonic filter direct power control scheme 89030
three-phase current-source act. power filter, deadbeat current control 134339
three-phase CVCF PWM inverter, digital repetitive learning control 99826
three-phase four-wire shunt act. power filter control strategy 134331
three-phase fuzzy-controlled shunt act. power conditioners 122907
three-phase HB-type stepping motor torque vibr. suppression control *(Japanese)* 99699
three-phase hydrogenerator multirate optimal control tech. 77774
three-phase IM drive syst., fault tolerance improvement 78215
three-phase inverter PWM control scheme 112670
three-phase line-interactive UPS syst. implement. 134221
three-phase power act. harmonic filter, vector control transient behavior 123716
three-phase PWM rectifier direct power control, virtual flux estim. 123618
three-phase PWM rectifiers, current control stabil. issues 123619
three-phase PWM voltage-source rectifier, predictive instantaneous current control *(Japanese)* 77972
three-phase shunt act. power filter control methods 78113
three-phase single-stage step-up/down current rectifier sliding mode control 134167
three-phase space vector PWM boost power converter, digital controller design *(Korean)* 77969
three-phase squirrel cage IM, sensorless speed control 112527
three-phase sync. motor sensorless posn. estim. approach 133967
three-phase three-level NPC rectifier, adaptive nonlin. control 134174
three-phase UPS PWM inverter, digital voltage/current controllers 134232
three-phase variable act.-pass. reactance transient response 88361
thyristor-based brushless PM DC motor drive speed control 89328
TPP superheater syst. temp. control, bilinear syst. controller design 133861
tracking-syst. control sigs. synthesis 109235
turbine-generator robust speed control, torsional stabil. consideration *(Chinese)* 112452
turbocompressor PM sync. motor sensorless vector control scheme 133973
turbofan engine controller design, nonlin. anal. 98929
turbogenerator continually online trained excitation/turbine neurocontrol scheme 112445
turbogenerator governor H_∞ robust decentralized control scheme *(Chinese)* 123325
turbogenerator integrated excitation/valve controller design, inverse syst. *(Chinese)* 88685
turbogenerator robust control for power syst. stabil. improvement *(Chinese)* 77813
two-area power syst. fuzzy gain-scheduled PI load-freq. control 122903
two-finger variable reluctance gripper, posn./force control studies 134320
two-inertia syst. vibr. damping property *(Japanese)* 77818
two-machine infinite-bus power syst. steady-state stabil. limit *(Japanese)* 77250
ultra precision positioning apparatus using laser interferometer, feedback syst. 134098
unbalanced distrib. syst. three-phase act. power line conditioners optim. 88365
unbalanced transm. power systs., optimal real-time control 111876
under-actuated dyn. rigid-body systs., visual servoing 86619
unit commitment at freq. security condition 77266
unity PF PWM rectifier using digital/analog hybrid control *(Chinese)* 134241
universal digital motor control proc. for indust. appls. 123319
unmanned vehicle, H∞ steering control syst., MR sens. 134518
UPFC prototype with energy snubber using SHE method *(Chinese)* 77203
UPFC transient charact. for power flow var. suppression *(Japanese)* 99290
UPFCs operation method for optimal voltage profile maint. *(Korean)* 77201
UPS inverter second order deadbeat controller design *(Korean)* 123588
UPS VSI, output LC filter design considering syst. response *(Korean)* 134199
US lin. piezoelec. motors, micro-positioning, learning nonlin. PID controller 77905
utility distributed reactive power control using correl. techs. 88362
VAr compensation/load balancing compact control algm. 99302
VAV air-conditioning syst. fault-tolerant supervisory control 100334
vector-controlled IM drives using random invertor switching 78206
vectored thrust aircraft advanced flight control Harrier, robust lin. param.-varying control 88233
vehicle platooning using carrier phase GPS/MM-wave radar 131700
vert. fin buffeting alleviation, strain actuation, closed-loop control tests 111306
voltage pulse stabilizers, optimal control systs. synthesis 123575
voltage pulse stabilizers optimal control systs. design *(Russian)* 90712
voltage sags mitigation using prediction tech./dyn. voltage restorer 133677
VSC based HVDC, steady-state model, controller design 112010
VSI-based power oscill. damping scheme 133545
wheeled robot, driving amongst obstacles, multi-sens.-based control strategies 75615

control system synthesis continued
wind micropower induction generators, sensorless power maximization algm. 123252
wind-diesel power syst. distributed intell. load control scheme 99590
winding systs. tension multivariable H_∞ control scheme 134520
wound-rotor induction machine posn.-sensorless control algm. 99671
zero miss dist. missile guidance synthesis via optimal tuning problem soln. 122760
Nb_3Sn μ-SMES concept feasibility 78188

control systems
see also adaptive systems; closed loop systems; delay-differential systems; delay systems; discrete time systems; distributed parameter systems; model reference adaptive control systems; multidimensional systems; multivariable control systems; nonlinear control systems; optimal control; physical instrumentation control; pointing systems; reduced order systems; sampled data systems; SCADA systems; singularly perturbed systems; time-varying systems
500 kV substation monitoring/control systs. discussion *(Chinese)* 123684
AC/DC variable-speed drives, control techs., book 123854
advanced CZ control syst., modelling requirements 90233
Boolean alg., converter ccts., min. memory vol. 102012
ccts. and systs., conf., Karuizawa, Japan (April 2000) 67370
discrete-time systs., restricted struct. optimal lin. pseudo-state filtering 130116
dual WLAN archit. based control syst., bandwidth allocation scheme 130825
elec. heat tracing, μP control, wireless commun. 134691
gas transportation facility, rem. control, Magistral-2 inform. and meas. soln. *(Russian)* 131828
high-perform. automated control systs., data protection, controlled operation-based fast methods 94355
HV/MV substations rem. control project, Italy 134306
hydroelectric power station control, Krasovskii's works 112354
IEEE elec. and electronic engineers conf., Tel-Aviv, Israel (2000) 113257
INS vs. carrier-phase DGPS for off-road vehicles control attitude determ., comparison 97027
intrinsically safe meas. transducers for control/safety systs. *(Russian)* 131857
ITC-CSCC 2000, Circuits/Systems, Computers and Communications, conf., Pusan, Korea (July 2000) 78413
metropolitan power syst. islanding protection/power balancing control syst. 77513
NPP automated control and safety systs. 133846
oil well output, real-time control syst. *(Russian)* 131802
open archit. microcontroller based distributed meas. syst. and control syst., automatic program generation 75375
pneumatic tire testing machine, DAQ, control syst. *(Spanish)* 86782
power station proc. IS, fns. and concepts *(German)* 123105
random early detect., control theoretic anal. 119373
thermal peaking power plants wireless control syst. 99529
thermionic RF gun, beam-loading compensation by feedforward control syst. 125972
wedge software for linking field devices to PC, PLC, and DCS 131825

control theory
see also adaptive control; bang-bang control; cascade control; compensation; control nonlinearities; control system analysis; control system synthesis; controllability; fuzzy control; minimum principle; observability; on-off control; optimal control; predictive control; proportional control; relay control; stability; three-term control; two-term control
best-effort routers, distributed control/resource marking 74031
differentiated-services, congestion control using nonlin. control theory 130782
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
Internet differentiated caching services, control-theoretical approach 74279
network consciousness, beyond ant-hill model 119774
perform. mgt., service level objectives achievement using control theory 130574
random early detect., control theoretic anal. 119373
Riccati alg. eqn., generalized matrix sign fn. algm. 67707
syst. theory, conf., Athens, OH, USA (Mar. 2001) 78472
TCP/IP networks, act. queue mgt. using control theoretic approach 84924
Web layout, optimal design, heavy tails/generalized coding 119742

controllability
see also stability
2D separable-denominator digital filters, stat. sensitivity, min. sensitivity struct. 91059
ATM networks, backward predictive congestion control using neural networks 96009
behavioral lin. systs. theory, extension modules concept 130021
doubly-terminated LC ladder filter, energy storage and Gramians 80035
Gotland HVDC Light project, trial/commercial operation 133589
image-based adaptive control, nonlin./stabil. 84137
ion implanters, next generation perform., Varian Control System realisation 115548
lithog. overlay controller formulation, successive patterns alignment 103564
matrix converter topol. with simple commutation 134208
moving coil lin. motor, armature field anal., posn./stroke control 88767
nonlin. diff. eqns., controllability in Banach space, nonlocal conditions 100750
plate-type ESP, conducting particle trajectories computation, BEM 83178
plate-type ESP, conducting particle trajectories controllability 128716
power syst. controllability/stabil./reliab. using power converters *(Russian)* 122894
proximal bundle method based on approx. subgradients 113990
queues with heterog. servers, monotone control 89972
RLC networks, controllability/observability over field of rational fns. 68524
Russian unified elec. power syst. reliab. improvement 88353
seq. cct. simul. based formal verification method 125453

controller area networks
articulated public transport bus, sens. guided, state observer 131886
at. multicast prog. 74188
automobiles, CAN *(Italian)* 85282
automotive commun. protocols, rapid prototyping 95887
automotive systs. commun. links, conformance testing 134583
Bluetooth, indust. sens./control radio commun. std. 96076
CAN, timing anal. of reliable real-time commun. 97157
CANopen, implement. guidelines, appl. hints 119564
composable micro-protocols, response time anal. 73958
digital control of networked stage lighting *(German)* 78326
distributed elec./electronic systs. in automobiles, multiplex systs. *(Spanish)* 134554
distributed PLC, FieldBus modules *(German)* 109448
driver assistance syst. algm. develop., embedded image proc. platform 134584
Ethernet and companion protocols in CAN 130813
field intell. instrum. software syst., integrat. technol. *(Chinese)* 109427
fly-by-wire systs. for motor cars using time triggered protocol *(German)* 89367

controller area networks continued
HERO, mobile robotic controller with wireless LAN connection *(Chinese)* 96077
i.Lon™ 1000 Internet server appl. to to linking LonWorks control network and IP based networks *(Polish)* 130657
in-vehicle networking for future automobiles *(German)* 113124
indust. cyclic-service fieldbus nets, bandwidth allocation 86419
indust. robot open-network-interface, proposal for std. 96240
intell. PLC controller based on CAN Bus *(Chinese)* 114805
IVHS, global vehicle location syst., GPS/cellular telephones 131690
Mitsubishi M32C/83 microcontroller, ISDN and automotive CAN appls. *(German)* 79925
multi-sens. driver assistance flexible archit. syst. develop. 134576
multirobot syst., multi-agent distributed control archit. *(Chinese)* 96078
oxid. ditch, integrated, DCS systematic scheme, CAN-based, sewage treatment in factories *(Chinese)* 100720
PLC networks design using rem. I/O module 130712
protocol for crit. hard real-time systs. with faults 97156
QoS anal. and prediction for control networks 96239
SSRF DeviceNet control syst. design anal. 121313
voice synthesis module based on CAN bus *(Chinese)* 118157
wireless indust. networking using CAN MAC-sublayer 130793

controllers
for computer peripheral controllers see "computer interfaces"
see also cryostats; instruments; programmable controllers; servomechanisms; thermostats
2-D/3-D whole-body PET scanning, true continuous bed motion 132945
AC regulator input PF improvement by multiplexed asymmetrical phase-control 101752
act. queue mgt. routers supporting TCP flows, controllers 119440
anaesthesia, hypnosis modelling/closed-loop control, bispectral index, isoflurane 98601
arterial unloaded situation modelling, oscillometric blood press. waveform meas. 121899
ASM-based self-checking controllers synthesis 125312
ATM switches, multiple priority per flow dual GCRA rate controller 119154
CMOS analog current-mode controller, switching power converter 88945
computation, optimisation and control, conf., Sante Fe, NM, USA (May 1999) 67349
computer networks, optimal control of queues 130870
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
constraint-driven FSM state encoding for low power 125313
DC servomotor digital controller auto-tuning *(Japanese)* 99678
DC-DC switching regulator, two-rules-based boundary layer fuzzy control 99770
DSPs for controller designs 68847
e-beam evap. syst., adaptive controller design/implement. 68197
EMI from high-speed routing between power and ground planes, diagnostic procedure 102810
fuzzy control of BLDCM by gray prediction 134073
fuzzy controllers, opt. implement. 71452
HEV drivetrain testbed, DCS, ECU code generation 124010
intell. controllers for switched capacitor filters 90699
intrinsically safe meas. transducers for control/safety systs. *(Russian)* 131857
ion implanters, next generation perform., Varian Control System realisation 115548
IP terabit switch router, archit. design 119392
media gateway control protocol description/validation using SDL/MSC 130710
microelectronic very large-scale integrated systs., adaptive optics, advanced imaging 105042
micromachined mirror arrays, adaptive optics perform. eval. 104774
motor controller, overvoltage meas. *(Italian)* 99621
Multi Remote appliance controller for pers. with disabilities 111174
neural network controlled IM, chaos detect. in vel. control 77863
neuromorphic paradigm for extrinsically evolved hybrid analog/digital device controllers 102280
opt. inter-satellite commun., wide-range fine pointing mechanism 88073
OTA-based PID controller, optimum param. tolerance calc. 125237
parallel dc-to-dc converter with av. current-balancing controllers, static and dyn. anal. 68566
perform. mgt., service level objectives achievement using control theory 130574
pipelined mixed-sig. fuzzy logic controller with linguistic hedge modifiers 68956
prepolarized MRI, pulsed electromagnet controller 98455
PWM controller, soft-switching boost PFC 99283
qtr.-car suspen. syst., fuzzy logic controller design 78317
security alarm syst. batt., charge/discharge, peripheral interface controller IC 113419
semicond. laser controller, output power/operating current intens. maint. 93612
series-connected IGBT modules, hierarchical controller archit. 90725
stochastic gradient descent controlled micromachined mirror array adaptive optics syst. 104777
syst.-on-a-chip approach for indust. robotic controller design 103992
thermal control with image proc. and fuzzy controllers 129591
thermal power station, control syst., fuzzy regulator 88561
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
VLSI parallel video/commun. controller 91004
wafer-handling systs. mgt. for 300 mm using BXi integrated controller 124445
wind tunnel test facilities, PID control based trajectory simul. 133213

controllers (computer peripherals) *see computer interfaces*

convection
act. microfluidic mixer, microparticle-liq. mixing 92497
back-to-back tape BGA packages, thermal perform. 113628
COB glob top encapsulant curing, variable freq. microwave proc. 78641
convective accelerometer, micromachining and design optim. 121026
cryst. growth modeling, conf., Hauppauge, NY, USA (Oct.2000) 89592
CZ melt, flow, ellipt. temp. contours under transverse mag. field, calcs. 90212
derivative approx., convection-diffusion two-point BVP 124731
diode-pumped solid state lasers, convective heat transfer coeffs. 105234
electronic module transient thermal anal. using simplified heat transfer coeff. model 67608
fuel cell power modules, gaseous reactant flow 89175
hot bar blade for PCB soldering, design, simul. and prototype 125893
III-V semiconds. liq. phase electroepitaxial growth, conc. profiles simul. 101445
impulsively started jet, vortex ring evol., DPIV 121291
LWR fuel rod behaviour under RIA conditions, DYN3D calc. 99507
math. cooling model for thin-wall shell under fast convective mixing of gas 124700

convection continued
MEMSIC accel. sens. using convection heating changes, wire strip *(German)* 75744
micromachined thermal accelerometer for motion/inclination/vibr. meas. 97564
mobile handset antenna, exposed human body, temp. distrib. calc. *(Chinese)* 111189
PEFC, transversal water profile in Nafion membranes 100014
plate de-icing in cold cross flow by hot fluid injection through slot, aircraft appls 88026
power transm. line conductor temp. assess. method *(English)* 112094
proc. tomography, fluid dyn. models/state estim., flow fields inaccuracies effect 106505
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
RTP, 3-D unsteady heat/fluid flow, num. anal. 126265
supercond. magnets for uniform/high mag. force field generation 71067
transport phenom. studies, holographic interferometry 132224
tropical convection, C-band polarimetric radar obs., propag. effects correction 72318
vert. Bridgman config., anal. of factors affecting interface deflection 114226
VVER nuc. power stations, Russian thermohydraulic simul. codes 77687
CO_2 crossflow indust. laser, press. loss problems 105136
Cu electrodeposition in presence of additive, simul. of shape evol. 90502
Cu electroplated layer, SU-8 microstruct., micro heat flux sens. 75754
Cu fine line direct printing using convective flow splitting 103494
Cu-Ni laser welding, transport phenom. modelling 72135
GaAs CZ growth model, convective interact./instabilities 90221
GaSb, vert. Bridgman growth, heat/momentum transfer, num. anal. 114228
InAs-GaAs, graded solute conc. method growth, microgravity 114234
Si, CZ cryst. growth, 400 mm diam., global simul. 101159
Si, CZ cryst. growth, melt convection 90229
Si FZ cryst. growth, Marangoni flow/interfaces, 3D simul. 90231
Si FZ growth in rot. mag. fields 101150
Si crysts., CZ growth, unsteady 3D turbulent melt flow, modeling anal. 90220
Si large-diam. single crysts. furnace, O reduction, heat zone simul. *(Chinese)* 68125
Si molten column, thermocapillary convection under microgravity, O_2 partial press. depend. 90214

convergence
see also convergence of numerical methods
2D branching recursions 67991
2D recursive digital filters, neural net based design 73677
AC/MTDC power syst. state estim., seq. method 88331
accelerated series for universal consts., WZ method 67694
act. mag. bearing sync. disturbance compensation 92880
act. noise control, adaptive IIR filters, classical algms. 107476
ad hoc wireless network stochastic routing 85073
adaptive DFE with complete lattice orthogonalisation 95806
adaptive exponential filter, inverse transfer fn. estim. *(Japanese)* 84720
adaptive lin. equalization algm., wavelet packets transform *(Chinese)* 130265
analog ratio spectrum cct. with adaptive Butterworth low-pass filter 80132
B-valued martingale random variables, moment convergences *(Chinese)* 124519
bandlimited sigs., convergence aspects 84648
Bayesian ICA fast algms. 107446
bilinear bilevel prog., bundle trust-region algm. 100949
blind equalization by parallel Bayesian DFE 84852
clinical PET imaging, bound generalized lin. least sq. algm. 132927
CMOS prog. BP on-chip learning neural net with learning rate adaptation *(Chinese)* 91161
complete fuzzy measure and appls. 100855
conditions for convergence of evol. algms. 113969
constrained nonlin. optim., barrier method, modified Hopfield network appl. 100963
convex envelope of fn., charactn. and approx. 100954
curvilinear paths, trust region methods, nonmonotonic back tracking, unconstrained optim. 78938
D'Yakonov fully explicit variant of iter. decomp. method 124623
deep submicron MOSFETs for RF appls., unified small sig. model 69117
delay LMS 1D and 2D adaptive digital filters, systolic archits. 68941
differential games, zero-sum, Nash soln. quadratic methods 124500
discrete systs., optimal self-tuning filtering/prediction 129978
distributed evol. digital filters, convergence behavior 91087
DS-CDMA cellular syst., dyn. allocation optim. of transmitter power 131183
DS-CDMA systs., optimal channel estim. algm. 107738
economic dispatch soln., transm. capacity constraints, direct search method 133500
EM wave multilevel finite element soln., preconditioner 128652
evol. prog., fitness-based migration operator 124589
fractal image compression coding based on generalized convergence *(Chinese)* 106848
freq.-domain ANC syst. using optimal step-sizes *(Japanese)* 107417
functional inequality constrained optim., computational discretization algms. 78892
fuzzifying topologies, limit struct., charactn. theorem 100859
fuzzy logic, convergence index of implication matrix 100745
fuzzy matrix, convergence of powers 78838
fuzzy nos., T-related, geometric mean convergence 78851
fuzzy topol., even continuity/equicontinuity 100858
fuzzy-logic-based CLOS guidance law design 99134
GA, premature convergence, preventing lack of alleles 113966
GA convergence improvement using guided crossover 78946
GA converging to globally-optimal soln. *(Chinese)* 67879
general nonlin. prog., robust trust region algm. 78939
generalized hill climbing algms., convergence anal. 100916
generator VAr limit modelling for power-flow calcs. 88679
high perform. neural network for quadratic prog. problems 124586
high-level synthesis, scheduling, allocation, and binding problems, enhanced GA 114581
HMM, max. likelihood estimator, almost sure convergence rate 78816
hybrid neural net archit. for MMIC param. ident. 91364
IM, speed sensorless FOC, full adaptive backstepping design 134040
image color quantization, competitive Hopfield neural net 73353
image color quantization by Hopfield neural net 106667
image segmentation, Gaussian mixture param. estim., iter. method 107246
immune evol. algms. 67874
invariant subspaces computation, Grassmann-Rayleigh quotient iter. 78759
iter., Fejer-monotone in Hilbert spaces, convergence 78988
least-cost power generation expansion planning, improved GA *(Chinese)* 122924
LEO satellites, mag. attitude control syst. 111310

nvergence continued
lightning strokes, ELF pulses in Earth-ionos. cavity 128770
lin. motors, output feedback adaptive robust control 88766
long-range depend. sigs., adaptive vs. robust predictors 73645
Lorenz chaotic masking, param.-adaptive identical synchroniz. 95618
low-dens. parity-check codes under Max-Log-MAP decoding, dens. evol. 117917
malignant tumors, 2D/3D images, vector convergence index filter *(Japanese)* 98140
Markov decision procs., av. cost, learning algms. 124486
Markov jump systs., min. MSE estim. 73680
MCM systs., adaptive channel estim. algm. using cyclic prefix, convergence anal. 72730
MLP-based DFE with lattice struct. 73840
mobile robots, global nearness diag. navig. 97822
monotone variational inequality problems, decomp. method 67911
monotropic prog., ε-out-of-kilter method 78907
multi-channel acoustic echo canceller, adaptive algm. accel. *(Japanese)* 95665
nonlin. diffusions, nonlin. continuous time approx. filter efficiency 73684
nonlin. filters, stabil. and approx., Hilbert projective metric, particle filters appl. 73682
nonlin. H_∞, max-plus algm., convergence/error anal. 67899
nonlin. optim., constrained, using neurofuzzy systs. 100956
novel inform. criterion, global convergence anal. 118851
obj. contour detect., fast and accurate snake model 73472
ODE BVP, iter. shooting method, feedback control appl. 100749
on-chip BP learning neural net with prog. neuron charcts. 102464
parab. stochastic PDE, time-discretization 78771
parallel concatenated codes, iter. decoding trajectories *(English)* 72838
path vector routing protocols, convergence 119279
perfectly cond. circ. cylinder, spectral-domain formulation of EM scatt. 117651
periodic sigs., param. estim., magnitude/PLL approach 130038
piecewise-lin. systs., global chaos sync. and robust filtering in noisy context 125202
PM stepper motor, neural net based posn. control 77826
point convergence index filter charact. anal. *(Japanese)* 94610
prisoner's dilemma, repeated, evol. convergence to equilib. 89974
pseudomonotone variational inequalities, proximal methods convergence 67841
quasilinear parab. eqns., DC type nonlin., generalized quasilinearization 67715
queueing networks, multidimensional refl. map with discontinuities 119247
SAMOAGA (Simulated Annealing Maintaining Optima Adaptively by Genetic Algorithm) and appls. *(Chinese)* 124579
seqs., strong mixing, nonparam. dens. derivative estim. 118945
sing. perturbed react.-diffusion eqn., high order FEA solns. 124768
single sample path based Markov reward procs., recursive approaches 100785
spacecraft attitude control using mag.-GPS dataware syst. 122476
special struct. LQ programs, parallel interior-point method 101002
stereophonic acoustic echo canceller, pre-proc. filters, convergence anal. *(Japanese)* 73674
stochastic prog., stabil. anal. 90033
strongly nonlin. systs., Kalman filtering theory, oceanographic appls. 133340
SVM analog/digital hardware realisation 102490
TCP/IP network design, stochastic approx./transaction-level 73981
terminating Markov decision procs., risk-averse objective fn. 100784
topol. mol. lattices, Urysohn separation property 100860
tri-level alternating optim., local convergence 114051
Tuy cone splitting algm., ω-subdivisions, convergence proof 100932
unconstrained and bound constrained evol. pattern search 67904
variational inequalities, multivalued, predictor-correctors 67860
variational-like inequalities, mixed, iter. soln. 67858
vehicles in platoon, automated, fault diagnostic syst. 86410
visual servoing, global/local GA, fish-catching appl. 95597
VoIP transm. in convergence network *(Polish)* 130341
ws-convergence of product measures, Prohorov's theorem extension 113862
zero-sum repeated game with random pay-offs, Bush-Mosteller learning 124483
zero-sum two-pers. differential games, first-order differential dyn. prog. algm. 124498

onvergence of numerical methods
see also numerical stability
2D boundary element calcs., self-optimizing discretization scheme 83134
2D FIR compaction filter design 95705
2D Fredholm integral eqn. of second kind, spline method 79110
2D magnetostatics, hybrid finite element/integral methods, discretization schemes 128669
3-field formulation with bubble stabilization, error estim. 79150
3D plane-wave scatt., dual-surface CFIE 83250
3D radar tracking, Kalman filter design 96926
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
3D weak-form CG-FFT/BCG-FFT methods for vol. integral eqns. 83260
3G triband probe fed printed eccentric spiral antenna for nomadic wireless devices 83616
ABR flow control, optimal struct. feedback policies 119126
abruptly ended fiber waveguide, radiation charcts. 93069
acoustic echo cancellation, freq.-selective step-size control 119076
acoustic echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
adaptive beamforming using affine projection algms. 73577
adaptive blind sig. separation using risk-sensitive criterion 84709
adaptive filter coeffs., sub-RLS algm., convergence property 130080
adaptive filter employing wavelets and sparse subfilters, perform. anal. 119024
adaptive filtering, modified fast affine projection algm. 107486
adaptive filtering, white input and convergence speed 119025
adaptive filters with LMS algms., DC bias effects 107488
adaptive line enhancement via subspace tracking 107546
adaptive LMS block Volterra filters 118997
adaptive notch filter with subband filtering, algm. convergence 95685
adaptive per-survivor proc. 107404
adaptive predistortion lin. using DSP 114856
adaptive reduced-rank interf. suppression algms., convergence/tracking 105813
adaptive spatial/temporal optimal receiver using adaptive array antenna 85869
affine projection algm. using novel subband adaptive syst. 84757
affine projection filter algm. based on M-estim. *(Chinese)* 95710
alg. CMA, asymptotic props. 95650
α-ICA algm. 107451
alternating methods, convergence results 114078
analog median and median-type filters for continuous-time sigs. sorting 130126
approx. of lower semicontinuous differential inclusions 100995
arbitration games FOA/DOA, Nash equilib., convergence anal. 113857
ARQ syst., turbo iter. decoding convergence and errors 129046

convergence of numerical methods continued
array antenna amplit. pattern, phase-only synthesis 83667
asymptotic behavior of monotone difference eqns. of higher order 90132
asynchronous CDMA, blind adaptive multiuser detect. algm. *(Chinese)* 130283
autonomous and non-autonomous ccts., harmonic bal. anal. 101705
B-valued martingale random variables, moment complete convergence *(Chinese)* 68097
Baum-Welch algm., correction to underflow algm. *(Chinese)* 129389
beam propag. algm. for opt. tapers 72425
Bi-CGSTAB(L), dyn. selection of L *(Japanese)* 124667
blind channel equalization and ε-approx. algms. 130268
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind cyclic correl.-based sym. rate estim., asymptotic anal. 117910
blind equalization, fast CMA 107700
blind multiuser interf. cancellation, max. likelihood approach 72364
blind sig. separation using higher order moments algms. 107455
blind source extraction in Gaussian noise 107430
blind source separation, convolutive decorrelation 118818
blind source separation, geometric optim. methods 118811
blind source separation, globally convergent algms. 118914
blind source separation, step-size control 118817
block preconditioned systs. arising from LMF-based ODE codes, convergence 114120
block-exact fast affine projection algm. *(Japanese)* 95663
bounces on power-/ground-planes, fast anal. 115118
boxed Green's fns., eval. using Shanks transform. 78970
CALF adaptive filtering algm. improvement 107487
cascade time-series syst., nonparametric estim. of nonlin. by multiscale approx. 73599
CDMA, low-complexity interf. mitigation on vector channels, design/anal. 105803
CDMA adaptive LMS detect. with Gram-Schmidt pre-proc. 119208
CDMA codeword optim., interf. avoidance/convergence 119204
CDMA commun., lin. complexity likelihood ascent search multiuser detectors 107607
CDMA forward link, reduced-rank adaptive MMSE equalization 108919
CDMA long code systs., multiuser channel estim. 85516
CDMA multimedia systs., nonlin. power assignment and impact on capacity 96586
CDMA multipath systs., power control/transmit diversity 85799
CDMA receivers in interchip interf., nonlin. iter. multiuser detect. and equalization 73723
CDMA space-time block coded multicarrier syst. multiuser receiver 108860
CDMA systs., wt. init. for adaptive multistage parallel interf. cancellation 84908
cell entropy inequality for fully discrete, relaxing schemes 114206
cellular radio systs., distributed power control algm. 96584
channel estim. equaliser on stationary channels 107317
circ. dielec. rod waveguide with periodic corrugations, dispersion charcts. anal. 117732
circ. waveguide, EM TE scatt. from gap 128829
CLUCGS and CLUCR, matrix soln. methods for general cct. simul. 79508
CMA-based lin. constrained blind multiuser detector, closed-form anal., comments 95724
CMA-based nonlin. blind equaliser, two-layer neural network model 119180
coarse grid accel. of parallel block preconditioner 79029
color image enhancement, stack filter design using models of human visual syst. 118241
color image interpolation with edge-enhancement 106753
complementarity problems, smoothing Newton method *(Chinese)* 124631
complex coeff. FIR filters design, LP & Chebyshev approx. *(Chinese)* 125616
constrained matrix least sq. approx. algm. 78984
constrained optim., conical combination rep. of vector 78919
continuous min. algm. 113967
convolution algms. for electronic ccts. thermal anal., props. *(Polish)* 68495
convolutive mixtures, blind source separation, preprocessing for convergence accel. 107494
coupled cavity chain, indiv. cell freq., genetic alg. 87060
coupled mixed partial diff. syst., convergent discrete soln. 79053
covariance kernels, simultaneous diagonalization approx. soln., second-order stochastic procs. 119079
crosstalk-robust struct. based on sub-band noise estim. 129368
curl-curl matrix prop. in finite element anal. with edge elements 124741
curvature-depend. motions of sets, convergence of approx. 124628
cylindrical wire antennas, MoM anal., convergence accel. methods *(Chinese)* 128861
D-convergence of Runge-Kutta methods for stiff delay diff. eqns. 79101
data assimilation, Newton method 67963
datapath routing based on decongestion metric 101655
DC motors, nonlin. models params. estim., lin. recurrent NN 99681
DC nonlin. ccts. soln., ellipsoid-based approach 79523
DCTLMS algm. with selective coeff. updating, anal. 107385
deformable models, formal framework, convergence 118261
delayless freq. domain acoustic echo cancellation 84741
Dennis-Wolkowicz method on convex fns. 114069
dens. of cubic field discriminants 114004
determinantal family of root-finding methods, computational comparison 67947
dielec. prolate spheroid, electrostatic image theory 117615
dielec. tapered rod antennas anal. 105906
difference approxs. for impulsive diff. eqns. 79052
difference scheme for conservation laws with, discontinuous flux 124720
digital commun. systs., blind max. ratio combining methods 96368
digital IIR filter design using adaptive simulated annealing 107552
digital images restoration/resoln. enhancement 106485
digital receiver phase equalization, min. phase SAW filters anal. 107541
direction set based algm. for spectral estim. 95689
discrete distribs., entropy estim. 128937
distrib. systs., loss minimization, ant colony algm. *(Korean)* 122967
DOA MLE, modified EM algm. 107393
domain decomp. for sing. perturbed parab. problem with convection-dominated term 114008
Doppler spread estim. for wireless mobile radio systs. 96452
DPSK modulation in diversity Rayleigh fading channels, optimum noncoherent multiuser detect. 72736
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
DS-CDMA blind adaptive multiuser detect. 119880
DS-CDMA multirate wideband systs., power control/rate allocation 85664
DS-CDMA radio channels, overlapping window decorrelating multiuser detector 107570

convergence of numerical methods continued
DS-CDMA sigs. in multipath channels, adaptive min.-BER lin. multiuser detect. 73722
DS-CDMA-based adaptive antenna array, online calib. algm. 105977
DS-SS commun. systs., HOS and GA-based interf. rejection filter 74541
DS-SS systs., blind channel estim./data recovery 108543
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
dual-primal substructuring method 90182
dyn. genetic algm., unbounded soln. optim. 100968
dyn. image reconstr. for proc. CT, pseudo Kalman filter algm. 106710
dyn. rate control algms. for HDR throughput optim. 119900
edge elements constr./ordering for parallel computation 128689
EEG sig. separation using adaptive-geometric methods 110650
EFIE preconditioner 105732
electronic packages, thermal/psychrometric response, num. model 113546
electrostatics, Schwarz-type finite element solver 128659
ellipt. PDEs, adaptive finite element soln., parallel domain decomp. method 90166
ellipt. PDEs, iter. methods, stopping criteria 124706
EM 3D oscills. in orthogonal branching of two rect. waveguides 80165
EM chiral/achiral transm. problems for small chirality, solns. 83207
EM devices, Pareto evol. optim., diversity enhancement tech. 83159
EM field anal., large sparse symmetric lin. systs. 128688
EM imaging of cylindrical dielec. objs. with optimal regularization param., fast inversion 117673
EM modeling of multilayer microstrip antennas/ccts. 72471
EM scatt. by 3D PEC bodies, high-order MoM soln. using quadrature-based point matching 83251
EM scatt. problems soln. by improved spectral iter. tech. 93999
EM wave scatt. from imperfectly conducting circ. disc, full wave anal. 105716
EM wave scatt./losses by thin dielec. screens, fast soln. 128749
emission tomography, MAP estim., fast EM-like methods 76563
endoscopic images, automatic boundary enhancement and detect., iris filter 76202
enhanced Godard blind equalizer based on transient phase anal. 73843
equiv. GA based on extended strings and convergence anal. 100929
Euler method in num. integrat. of react.-diffusion problems with blow-up 114099
expanded mixed finite element approach, dual-dual formulation and min. residual method 90178
exponentiated gradient algms. convergence 73594
extragradient method for variational inequality problems 100920
family of iters. with cubic order 114044
fast data transm. ISI removal, adaptive digital filter 130257
fast-converging robust adaptive arrays 94197
feedback based/fair queuing mechanisms for unresponsive traffic, comparison 130320
fictitious play matrix games, modif. 78806
FIR filter design, simult. magnitude/phase/group delay approx. 95662
fire image detect. syst. based on BP neural network *(Chinese)* 129920
fractal image coding, convergence 95174
fractional step discretizations of time depend. coeff. evol. problems, stabil. results 79070
fractionally spaced DFE with subband decorrelation 107705
fuzzy measure structural characts., convergence theorem 67791
fuzzy nos., lacunary stat. convergence 100834
fuzzy-valued random variables, graph convergence separability 100828
generalized fuzzy integral seq., convergence 124547
generalized invariant cubature formulae 68055
generalized quasi-variational-like inclusions with nonconvex functionals 100973
generation bidding algm. tutorials *(Chinese)* 77190
genetic algm. convergence anal., unified method *(English)* 90030
global convergence and implement. of NGTN method for solving large-scale sparse nonlin. prog. problems 100933
global superconvergence for blending surfaces by boundary penalty plus hybrid FEMs 124769
gradient-based algm., gradient noise reduct. by variable step-size tech. 73704
gradient-type adaptive filters, pipeline implement. 84765
grid refinement and nonlin. SOR 101133
hands-free telephony, nonlin. acoustic echo canceller 118084
head phantom, induced EM field reconstruction, microwave imaging 132649
Hermite bicubic element for eigenvalue problem of biharmonic eqn., convergence/superconvergence 79016
hierarchical overlapping coord. of lin. constrained convex design problems, convergence criteria 67885
hybrid extragradient proximal-point algm., robustness and converg. anal. 114037
hypergeometric fns. transform. 78976
IGA, improved GA, property anal. *(Chinese)* 100965
IIR gradient-based adaptive notch filter with constrained poles and zeros 130066
image restoration, partitioned separable paraboloidal surrogate coord. ascent algm. 84297
image segmentation using level set curves of complex wavelet surfaces 94838
implicit fn. theorem for locally Lipschitz fns. 100989
implicit iter. proc. for nonexpansive mappings 114029
incrementing multiobjective evol. algm. 78958
inexact perturbed Newton methods, Krylov solver appl. 67936
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
interf. canceling receiver with few operation quantities, algms. 72361
interpolation procs. in Hilbert space 67939
ISAR imaging of moving targets, robust autofocus algm. 120424
Ishikawa iter. procedures for nonlin. eqns., convergence and stabil. 114052
ISI adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sigs. 107690
iter. coupling of boundary element and FEM in elastostatics 114164
iter. decoded parallel concatenated codes, convergence behavior 129018
iter. turbo decoder anal. based on Gaussian dens. evol. 106086
Kautz filters adaptation in identifying dyn. systs., separable nonlin. least-sq. methods 107537
KLT basis vectors, blind adaptive estim. 83847
large lin. Toeplitz systs., augmented iter. method 118960
LCMP beamforming under quadratic constraint, RLS implement. 73655
limited memory space dilation/reduction algms. 67920
lin. alg. eqns., convergence accel. 67962
lin. integral eqns., weakly stable method 101109
lin. interf. cancellation multiuser receivers, convergence 131058
lin. second-degree stationary iter. methods, convergence regions and optimal params. *(Chinese)* 78983
lin. systs. of partial difference/diff. eqns. with const. coeffs., constructive soln. 124733

convergence of numerical methods continued
line spectrum freqs. calc. using quotient-difference scheme 106370
LMS algm., convergence behavior in subband adaptive filtering 73699
LMS and LMF threshold tech. 107321
LMS and logistic-lin. equalizers, adaptive combination for speed-perform improvement 119174
LMS convergence, cross-correl. p-vector influence 118873
LMS multiplierless adaptive filters using distributed arith., high-perform. VL archit. 84764
LMS noise-constrained algm. 107375
LMS step-size, dyn. adjust. based on variances of wt. fluct. 73703
log-sigmoid multipliers method in constrained optim. 100947
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
M-estim. robust adaptive filtering 119052
M-QAM nonlin. amplified sigs., fast adaptive predistorter 72728
M/G/1 queue length distrib. tail, exponential decay rate 130329
M/G/1 queues with const. retrial rate, max. orbit lengths 113855
M/M/n queue with unreliable servers, asymptotic behaviour 78790
MAI suppression by reduced-rank lin. filtering 84762
manoeuvring target ISAR imaging, time-freq. approaches 120426
MAP-based probabilistic diffusion algm. for correspondence/line field estim 94552
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulatio 94243
MEI validity 105713
meshless regular hybrid boundary node method 124735
methods of centers props. 113952
microstrip antennas, subsectional edge expansion fns. calc. 83620
microstrip patch antennas, temp. sensitivity of reson. freq., spectral-domai method 117794
microstrip step discontinuities, three sets of lengths calc. 105836
microwave device, finite element model, multigrid preconditioner 125697
microwave simul., finite element model, convergence optim. 125680
microwave toroidal cavity transducer, theory 120711
MIMO blind adaptive deconvolution, globally convergent approach 73592
mixed complementarity problems, strictly feasible eqn.-based methods 114086
mixed finite element for nonlin. hyperb. eqns., error estim. 101125
mixture noise, nonlin. RLS, error-saturation nonlin. *(Chinese)* 107409
ML sig. restoration multiplicative algms. with non-negativity constraints 7362
MM-wave broadband wireless indoor networks, combined spatial-temporal CM equalization 85465
MM-wave microstrip cct., anal. using num. short-open calib. tech. 125693
MMSE DFE, interior point least sq. estim. 85657
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuse detect. 73721
modified conjug. gradient method, solving $A\underline{x}=\underline{b}$ 90078
modified mutation operator and math. anal. *(Chinese)* 124602
modified resolvent splitting algms. for general mixed variational inequalitie 113956
MoM, grid-robust higher order vector basis fn. 83085
momentum LMS algm., tracking perform. for chirped sinusoidal sig. 119021
morph. filter design using GA 118240
multibeam interf. canceller based on order extended fast algms. 83393
multigrid methods, fast convergence, comparison with iter. methods 101081
multilayered resistive strip gratings, microwave/MM-wave scatt./absorpt 125691
multiobjective genetic algm., elitism, convergence 78955
multiobjective optim. based on micro-genetic algm. 78959
multiple jammer suppression using adaptive lin. constrained inverse QRD-RLS beamformer 84755
multispectral images, PCA, neural net 94724
multisplitting waveform relax. for lin. integral-diff.-alg. eqns. in cct. simul 67966
multistage adaptive higher-order nonlin. FIR filters, chaotic time series 80082
multivariate adaptive sampling, comput. EM anal. minimis., interpolation 102552
multivariate Pade approximants to meromorphic fn. 124616
multiwavelet thresholding, convergence 130050
network bottlenecks, distributed maxmin fair rate allocation algms. 95755
neural network match filter of chirp pulse compression 75092
Newton method convergence, Holder continuous first derivative 78996
non-homog., non-convex vector variational problems, num. approx. 113997
noncoherent LMS algm. for noncoherent seq. estim. 73830
noncoherent seq. estim. combined with noncoherent adaptive channel estim *(English)* 107719
nonconvex conservation laws, convergence rates to discrete shocks 90079
nonconvex quadratic program convergent LMI relax. 78930
nondifferentiable minimisation, block coord. descent method 78918
nonlin. ccts., wavelet bal. approach for steady-state anal. 90660
nonlin. ccts. simul., waveform relax., convergence theorem 68536
nonlin. complementarity problems, quasi-Newton method *(Japanese)* 78987
nonlin. conjug. gradient method, new props. 114046
nonlin. EM field comput., hybrid tech., triangle search method 83143
nonlin. large scale RC ccts. anal., event-driven approach 101695
nonlin. prog., inexact-restoration method, Lagrangian tangent decrease 113971
nonlin. resistive cct. anal., homotopy-based simul. 68529
nonlin. stabil. of relaxing schemes for scalar conservation laws 113996
nonlin. variational image smoothing/segmentation on multiprocessor machine, globally convergent iter. schemes 73258
nonlin. weakly damped Schrodinger eqn., finite difference solns. 101077
nonsmooth optim., Lyapunov methods, quasi-Newton algms. 67878
nonuniform mesh finite element approx., gradient recovery/error estim. 124763
nonuniform/conformal FDTD meshes, supraconvergence effects, microwave cct. simul. 91221
normalized least mean fourth algm., convergence behavior 107353
normed lin. spaces, rough convergence 100970
num. anal. of explicit one-step methods for stochastic delay diff. eqns. 90164
obj. in translation inspection, limited X-ray viewpoints 100632
OFDM, baseband adaptive predistorter perform. 72717
one-leg and lin. multistep methods for multiply stiff sing. perturb. problems 114108
opt. flow estim., image registration, local rigidity 95433
opt. imaging data, fast convergent factorial learning of low-dimens. independent manifolds 110531
opt. waveguide jns., full-vector anal., wavelet formulation finite-difference method 93129
optic flow computation using discrete wavelet anal. 106777
optic flow variational method, spatio-temporal smoothness constraint 84270
optim. of delay-differential inclusion, stabil. of approx. 100936

vergence of numerical methods continued
optimal preconditioners, rate of convergence estim. for conjug. gradient method 101055
optimal protocol, maxmin rate allocation, convergence order theory 119350
organ motion model, prostate radiotherapy serial imaging meas. 122432
orthogonal residual methods, convergence accel., residual minimization appl. 124642
orthogonal scaling fns. series expansions 114205
Pade-Legendre approximants, recursive computation 114055
parallel-cascade truncated Volterra filters, computation-efficient adaptive algm. 130131
partial response channels, turbo equalization, precoding effect on convergence 72913
particle size meas., laser scatt. tech., projection iter. algm. 121206
partitioned freq.-domain block LMS algm. 107519
pattern recogn. algms. based on space-filling curves/orthogonal expansions 84595
PDE soln. by FEM, higher order wavelet-like basis fns. appl. 79083
perceptual audio coder quantization module with PE-based algm. *(Chinese)* 94410
persistence of attractors for one-step discretization of ODE 90163
perspective view registration, new method 94703
planar near-field meas., hybrid algm. for correcting probe posn. errors 83511
plane electron beams, geometrized theory 93980
POCS efficient algms. for deterministic blind equalization of time-varying channels 73831
point estim. of simultaneous methods for solving polynomial eqns. 124677
possibility measures/integrals defined on complete lattice 67786
power syst., static anal., load-flow method *(Chinese)* 133422
power syst. voltage stabil. quasi-steady-state anal. approach 111899
preconditioners, iter. soln. of boundary element eqns. for 3D Helmholtz eqn. 68014
preconditioners for block Toeplitz systs. based on circulant preconditioners 90086
preconditioning Schur complement and Schur complement preconditioning 68003
predictive multi-stage VQ, asymptotic closed-loop design 95176
prefiltering algm., Shannon sampling point, Daubechies wavelet sampling point *(Chinese)* 95693
preservation props. by Bernstein-type operators 67973
probabilistic multihypothesis tracker using turbo coding concept 130133
product block codes, LMSE criterion based iter. decoding 129113
product integrat. method for Volterra integral eqn. with noncompact kernel 79105
pyramidal and prismatic finite elements, isoparametric mapping, invertibility 79118
Q-order of convergence 78971
QR factorization matrix inverse-free algms. for general eigenvalue problem 90090
quadratic adaptive Volterra filters, pipeline archit., NLMS algm. 91095
radiated emission source location accuracy, CISPR emission meas. syst. 105785
random meas. errors summation, indirect errors anal., MC method 86366
range image, progressive registration based on surface triangulation 106489
rate control algm. for max total user utility 119144
RBF equalizer using fast clustering algm. 107699
react.-diffusion eqn., global convergence 79055
rect. coaxial line, FT anal. 117742
Red-TOWER method for removing noise from data 107374
refl. diffusion, weak approx. 67713
relax.-based algms., lin. integral-differential-alg. eqns. 101089
ridge waveguide, FT anal. 117742
Riemann-Hilbert problems on multiply connected circ. regions 67946
RLS algm. for throughput improvement of adaptive filters, implement. 119023
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
robust quasi-Newton adaptive filtering algm. for impulse noise suppress. 95672
rot. machines, time-stepping FE anal., converg. characts. accel. 133915
RTD containing ccts., SPICE simul. 101644
SAGE algm. behaviour in 2D multi-user environ. 84673
satellite imagery, improved neural network tech. for data dimens. reduction *(French)* 111375
Secant method and divided differences Holder continuous 124703
second order ellipt. problems, high accuracy sparse FEM 79119
second order syst. nonlin. meas., 2D adaptive algm. 107561
second-order adaptive IIR notch filter for freq. detect., variable step-size LMS-like algm. 84792
semi-implicit finite vol. scheme for nonlin. diffusion eqns. in image proc. 118454
semi-lin. partial diff. eqn. weal soln. 79058
semiconvergence of block SOR method for sing. lin. systs. with p-cyclic matrices 67993
semilocal convergence theorem for Newton's method in Banach space using hypotheses on second Frechet-derivative 67950
seq. convex prog. global convergence 124604
serially concatenated code charact. matching for iter. decoding 117989
serially concatenated codes, code doping for iter. decoding convergence 129179
set-membership affine projection algm. 95687
shallow water eqns. in conservative form, duality methods 114140
Shell Sort algm., stochastic anal. 124515
shielded multiconductor lines, quasi-TEM eigenwaves params. anal. 85454
shift for accurate sing. values in differential qd algm. 124662
SMI and CMA adaptive algms., combination 108881
smooth problem, finite element soln., superconvergence anal. 79155
smoothing of Crank-Nicolson scheme for nonhomogeneous parab. problems 124727
solenoid actuator, coupled syst., interlaced nonlin. iter. 128719
spectral accel. forward-backward method for terrain profiles coverage anal. 117681
spectral reconstruction of piecewise smooth fns. 84133
speech LPC coeffs. based on predictive neuron model, new soln. method *(Chinese)* 84014
spherical product algms., integrat. of smooth fns. with one sing. point 124686
spline approx. of discontinuous multivariate fns. from scatt. data 90069
spline Petrov-Galerkin methods for periodic pseudo-diff. eqns. 124635
splitting method of high order for react.-diffusion systs. 114039
SS commun. systs., interf. rejection using RBF network *(Chinese)* 94067
stacked actuator displacement-amplif. mechanism, topol. optim. 112727
staggered Lax-Friedrichs scheme for nonlin. conservation laws on unstructured 2D grids 90180
staggered Lax-Friedrichs scheme on unstructured grids, error estim. 124613
stationary/nonstationary/hybrid iter. MoM soln. schemes 128651

convergence of numerical methods continued
stereophonic acoustic echo cancellation, comparison of adaptive algms. 118967
stochastic DE, num. scheme convergence 68023
stochastic diff. eqns., mean sq. approx. 68051
stochastic pantograph eqn., continuous Θ-methods 68049
stochastic power control with averaging 85772
Stokes solvers in harmonic Velte subspace 114030
sublinear/superlinear rate of convergence of conjug. gradient methods 67931
subspace tracking, fast normalized Oja algms. 84662
super-resoln. image reconstruction with multisensors, preconditioned iter. methods 94746
superconduct. accel. cavities, cell freq. tuning, GA anal. *(Chinese)* 110170
superconvergence of residual as error estimator in BEM, collocation, num. integrat. and error indicators 101119
superconvergent derivative recovery for intermediate finite element family 90185
superlinear convergence order of logarithmic barrier algm. 67919
surface reconstruction using level set method 118260
symbolic Newton's method extension to formula with high degree of convergence *(Japanese)* 101019
sync. machine, magnetostatics, FEM mesh generation 128675
target-directed dyn. syst. model with switching states, param. estim. 73697
teletraffic, Erlang fixed-point iter. scheme 73762
thick conducting plane, magnetostatic pot. penetration into two circ. apertures 105678
three-layer earth model, Wenner four-probe test data 133779
time-varying channels with DPSK inputs, blind DFE 84857
tomographic image reconstruction, stat., Newton-SOR method *(Japanese)* 132850
total least sq. filtering, stable simplified gradient algms. 107544
transversal adaptive filtering algm., fast converg. for impulsive environ. 95671
trust region algm. for constrained nonsmooth optim. problems 100934
turbo codes, convergence based design 129099
turbo-equalization, convergence anal. 130258
uniformly accurate finite difference approx. of sing. perturbed react.-diffusion problem using grid equidistribution 90145
universal lossless data compression with side inform. using conditional MPM grammar transform 117920
variable step size LMS adaptive filtering algm. and anal. *(Chinese)* 119054
variable wt. mixed-norm LMS-least mean fourth adaptive algm. convergence 107531
Virtex FPGA based high-perform. fine-grained pipelined LMS algm. 91102
Vlasov-Poisson syst., convergence of finite vol. scheme 124759
Volterra filter equalizers, convergence, pth-order inverse approach 95812
waveguide problems, iter. domain decomp. method 117739
wavelet filter bank with adaptive filter params. 119064
weakly guiding opt. fibers with exact boundary condition, simul. by FEM 128821
weighted mean convergence of Lagrange interpolation for exponential wts. 90075
wireless access networks, load-balancing routing 119428
wireless image transm., product coding/decoding 96381
zeros of partial sums of cos(z)/sin(z) 68094
Si, doped, nonlin. Boltzmann eqn. reduction 80670

conversion electron spectra
MAC-1 universal setup, β-spectrograms meas., image-reading syst. 98079
$Dy_{20}Fe_{80-y}Co_y$ amorph. thin films, mag. and conversion electron Mossbauer spectra 127294
β-$FeSi_2$, single-phase, ion beam direct synthesis in Fe/Si bilayers 79405
InP:Er, implanted, lattice location, emission channeling obs. 81039

convertors
see also analogue-digital conversion; digital-analogue conversion; driver circuits; frequency convertors; image convertors; impedance convertors; invertors; magnetohydrodynamic convertors; phase convertors; power convertors; solar absorber-convertors; voltage-frequency convertors
AC-DC thermal convertors, high sensitivity, thermostatic control 109417
all-opt. networks, routing with turn constraints 86030
Beta basis fn. neural network in CMOS subthreshold mode 91163
Boolean alg., converter ccts., min. memory vol. 102012
broadcast-and-select photonic ATM switch with tunable wavelength converter for wavelength reduction *(Japanese)* 109190
capacitance to freq. converter, sens. appls. using telemetry, biomedical field 121919
CMOS charge pump ccts., area efficient design 80140
CMOS dual-output switching converter for power reduct. techs., 1.8 V 125634
CMOS high speed voltage-to-current converter, lin. tech. 91128
CMOS transconductor design, 3.3 V, 80 dB SFDR up to 10 MHz 114902
CMOS voltage down converters for high-speed SRAMs 90902
coaxial single range thermal convertor, multi-jn. thin-film thermoelement 109408
current-to-voltage converter and buffer cct., parasitic capacitance 114906
digital-to-radio converter for software radio 74579
discrete-time batt. and convertor models for syst.-level low-power design 125225
high current LV current mirrors for LV analog appls. 102445
inductive divider comparator for HV thermal converters 120691
lin. displacement sens., multifunctional μP-based converter *(Russian)* 86477
lin. voltage converters, 5 V to 3.5 V with output regulators *(German)* 80139
low power protocol converter, protocol modules, selective clock suppression 90862
LV high-speed sense amp. for multilevel nonvolatile memories 90914
multi-value voltage-to-voltage converter for on-chip EEPROM prog. 114747
polyphase realisation of fractional sample rate converters 95712
redundant binary no. to two's complement conversion for parallel archits. 79801
resist. to freq. converter *(Polish)* 125636
sample-rate convertors, sampled-data control based design 80141
sparse wavelength converters, optimal placement in WDM networks *(Chinese)* 120268
SQUID op amp, current amp./current-to-voltage converter appl. 68621
symm. dual cascode voltage switch level converter for low-power appls. 79567
time interval meas. with appl. to electronic/optoelectronic ccts./systs. 110009
two-channel polarizing device for radiating syst. 114946
uniplanar subns. monocycle pulse generator/transformer for microwave appls. 80322
voltage tripler struct. with symm. stacking charge pump 68974
GaAs PHEMT MMIC, serial-to-parallel converter, spaceborne SAR 125765

convex programming
branch-and-cut algms. for bilinear matrix inequality eigenvalue problem 68005
CDMA systs., space-time-code blind receiver and neural net implement. 96391

convex programming continued
charactn. and approx. of convex envelope of fn. 100954
deregulated power market, transactions rescheduling, convex prog. appl. 88363
discrete-time syst. robust filtering, noise, uncertainty 95675
E-convex prog., optimality criteria 67897
E-convex sets/fns., comment, counterexamples 78925
FIR digital filter design with discrete coeffs., semidefinite prog. relax. 80108
flat-fading channel capacity, convex-prog. bounds 128940
fns., cone of recession and unboundedness 100907
hierarchical overlapping coord. of lin. constrained convex design problems, convergence criteria 67885
homog. convex cones, Caratheodory no., duality 78908
IC chip, datapath layout, placement refinement *(English)* 81486
inclusion-exclusion identities via closure operators 78856
Jensen inequality 124514
Lambertian reflectance and lin. subspaces 107184
lin. discrete acoustic arrays synthesis 99066
lower semicontinuous fns. in normed spaces, error bounds 100918
LP/convex prog., long-step cutting plane algm. 78897
matrix product eigenvalue problem, global optim., computational complexity anal. *(Japanese)* 100741
method of residual for solving unstable equilib. prog. problems 124584
methods of centers props. 113952
moving target, optimal ambushing search 78933
multiobjective control problems with generalized invexity, duality class 78887
multisensor target tracking fusion ident., convex optim. 84644
optimal bound for d.c. programs with convex constraints 124591
PAM waveform design using MSE criteria 117889
primal-dual constraint syst. conditioning 78906
primal-dual interior-point methods for convex optim. problems in conic form 113948
proximal bundle method based on approx. subgradients 113990
quadratic programs, continuous/integer solns. rels. 124577
quantitat. version of theorem due to Borwein-Reich-Shafrir 113960
radar syst., optimal filters for range-time sidelobe suppression 118984
range restricted scatt. data interpolation using convex combination of cubic Bezier triangles 124578
robust CDMA sig. detect. in user and interf. signature mismatch 84909
semi-infinite prog., dual parametrization method 78891
separable minimization subj. to bounded variables 67917
seq. convex prog. global convergence 124604
simple graph, weighted stabil. no., upper bound determ., quadratic prog. approach 78850
stacked actuator displacement-amplif. mechanism, topol. optim. 112727
vector optim., efficient point geom. charactn. 78904
watermarking based on duality with distributed source coding/robust optim. 94266

conveyors
belt conveyors, motorized drive pulleys 78232
capacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
copper ore transport, 20 MW downhill conveyor syst., three-level converters 134707
ESP, spherical metallic particles dyn. 83177
noncontact opt. barriers interconnected by fieldbus, heavy indust. appls. *(German)* 75403
PCB indust., high speed acid copper electroplating, current densities 91462
pneumatic conveying syst. powder flowrate meas., intell. meas. syst. 123975
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219

convolution
see also acoustic convolution
1D DHT, distributed arith. array 102227
2D complex FFT, efficient implement. of quaternion FT/convolution/correl. 129647
2D convolution algms., dedicated VLSI devices/general-purpose proc./DSPs implement. *(Polish)* 73178
2D proc. array struct. for convolution 130033
2D separable transforms computation, modular lin. arrays based distributed memory parallel archit. 90943
3D backprojected PET images, adaptive scatt. & randoms correction 122177
3D PET hybrid scatter correction, unscattered coincidences distrib. 122198
3D PET imaging, partial vol. correction, image/sinogram based algms. 122250
3D radiotherapy planning, dose distrib., MC based convolution/superposition 76736
3D vector radix algm. for 3D new Mersenne no. transform 73212
ABC, arbitrarily-shaped boundaries, time domain discrete Green's fn. method 117748
agricultural fields with surface drainage network, SAR image 133369
alg. channel decomp. MUX in space-time 107660
algms. for electronic ccts. thermal anal., props. *(Polish)* 68495
ATM networks, cell loss rate estim. 107640
ATM networks, meas.-based delay perform. estim. 73809
blind blur ident. using discrete periodic Radon transform 84356
blind convolutive mixture separation using freq.-domain Infomax 107453
blind sig. separation, overcomplete subband representation 83985
blind sig. separation of convolutive mixtures, Jacobi-like algm. 106399
blind source separation, convolutive decorrelation 118818
blurred noisy images, edge detect. problems modeling 118722
BPSK demodulation, freq. region 72742
CDMA commun. systs., blind separation of convolved mixtures 119215
CDMA mobile commun., multiband wavelet-packet spreading codes 108888
CDMA mobile systs., complete complementary code for efficient freq. usage 130306
CDMA systs., fast convolution with PN codes, FPGA implement. 79855
CGFFT method with discontinuous FFT algm. 72166
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
CMOS adder, 2D IDCT, image compression 107010
CMOS image sens., SoC, prog. analog image preprocessing 109690
CMOS prog. spatial proc. imager chip, focal plane steerable spatial filtering 75657
CMOS SC video FIR filter with analog-RAM-based delay efficient realization 102352
coherent opt. sources, blind discrim. using reticle-based opt. trackers and ICA 106824
cold FET mixer design, large-sig. model 79624
combined invariants to convolution and image rot. 95589
commun. network data transm., multi-flow models 95962
computation using no. theoretic transform modulo $K.2^N+1$ 129976
convolutive mixtures separation using HOS 84707

convolution continued
convolved non-stationary sig. separation, adaptive non-causal FIR filters 11898
deterministic sig., blind zero-forcing ident. 73826
digital matched filter for real-valued shift-orthogonal finite-length seq. *(Japanese)* 68939
discrete digital Hartley transform for computation of instantaneous power 73613
discrete-time LTI syst., convolution representation 84663
distorted image correction, Tikhonov regularisation method *(Russian)* 12981
dose calcs., geometric uncertainties incorporation with convolution, spatial invariance effect 111212
DS-SS systs., Rake receivers *(French)* 108842
DST/DCT domains, interpolation props. 94654
dyn. mixed systs., blind speech separation 118068
eddy current microscopy of graphite-epoxy composite, image proc. 68479
electron device, nonlin. discrete-time convolution model 103737
EM anal., FFT accelerated marching-on-in-time algm. 72260
EM field, dispersive medium, time domain finite element model 72154
fractional operations and time-freq. distribs. 95539
freq.-selective fading mitigation, multiband wavelet packet spreading codes with intra-code subband diversity 72933
Fresnel transform of images for watermarking appl. 95151
generalised K_N-convolution/fast Vandermonde transform, modulo arbitrary polynomial reduction, algms./multiplicative complexity 118995
Hartley no. theoretic transforms 130003
heterog. on-off sources, tight upper bound 73796
image deblurring combining total var. and wavelet packet approaches 118253
image deconvolution and noise control 118184
image registration, combined rot./convolution invariants 95452
image restoration, deconvolution in freq. domain 106734
IR real-time act. target tracking mono-chip 117017
lactate discrim. in echo-planar spectrosc. imaging, J-coupling 76441
landmine detect., EM induction imaging, modelling 77018
landmine detect., UWB ground penetrating radar, time-domain modelling 77092
lightning spherics, thin struct. anal. 117713
lin. scale invariant sigs./systs., discrete time proc. 95688
lin.-phase FIR filtering algm., multiplication complexity reduction 102387
local smoothing, adaptive Gaussian filter 129504
lossy transm. lines, triangle impulse response 117724
low-complexity cellular archit. for performing inversion and divisions 125410
lung nodule screening, scanning-beam digital X-ray syst. 76513
max. entropy image restoration revisited 84292
med. imaging, spline interpolation and other convolution-based approaches 132511
MIMO blind adaptive deconvolution, globally convergent approach 73592
MIMO channel identifiability from 2nd-order stats., matrix polynomials 8486
MIMO channels, blind ident. based on correlative coding and perform. anal. 84869
mixtures, blind source separation, preprocessing for convergence accel. 10749
MR tape head, posn. error sig. model 116347
MRI-SPECT vol. images, multimodal 3D image registration 76430
multicast networks, efficient importance sampling, Monte Carlo simul. 11911
multidimensional filter stat. anal. with non-Gaussian non-white noise 119048
multipath channel param. determ. using wavelet decomp. 84813
multirate systs., lin. phase FIR filter design based on fast convolution 130045
multispectral images, nonlin. scale-space isomorphic rep. 118211
myocardial radiotracers eval., spectral anal., impulse response fn. 132910
Newtonian operator for contrast enhancement *(French)* 106439
NMR spin syst. ident. by nonlin. adaptive filtering 73661
nonlin. cct., distributed elements, steady state anal., finite difference method 68535
normalized color difference edge detector, quaternion representation based 95520
opt. image encryption, generalized fractional convolution operation 106964
optimal adaptive proc. for domain factorised element-digitised array radar 75072
PDF defined on R^+, lower order stats. 118867
power amp. lin., adaptive predistorter, complex convolution *(Chinese)* 11996
prime-length DCT, computation through cyclic convolutions 73622
pulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 98515
pulsar synthesis, electronic music synthesis 86362
rational PDF/filtering, state-space calculus 130081
real-time image proc., convolution operation implemented in FPGA 129586
rot. machine diagnosis using blind separation of noisy harmonic sigs. 123279
satellite laser ranging, laser pulse transform. 117578
separation of convolutive mixtures using contrast fn. approach 73601
Siemens Virtual Wedge, dose distrib. calc. with constraint checking 111207
single carrier commun., training seq. vs. cyclic prefix 73834
single lens array convolution 71456
solar cell, charge collection probab. reconstruction, internal quantum efficiency 78167
source separation, constrained Cramer-Rao bounds 130002
space-variant point spread fn. model for undercorrected opt. systs. 84265
spatial CDMA for multiple antenna access, capacity/error rate anal. 74529
SPECT, dual isotope, photon crosstalk calc., downscatter correction 122176
SPECT scatter correction, collimator depend., transm. depend. convolution 122200
speech sig. enhancement in noisy environ. using two microphones 118059
spiral cone-beam CT, long obj. problem, 1-D Hilbert transforms 132797
state-space/convolution-based transient simulator for behavioral modeling of nonlin. amp. 79515
subsurface digital multifreq. EM cond. imaging syst. 84166
switch-mode power converters, large-sig. time-domain simul. 134157
time-varying natural images, sparse coding 118505
tomographic images, region of interest reconstruction using filter banks 98522
Two-Mu image-restoration algm., point-spread fn. convolution 94740
UWB SAR imagery, 2D polarimetric calib. filters 96961
video-rate range sens., depth from defocus, real-time range estim. 75661
wideband multiple transmitter/multiple receiver systs., unsupervised proc 107394

convolutional codes
see also turbo codes
accumulated woven convolutional codes, turbo-like coding schemes comparison 129197
act. tailbiting segment dist. 129221
adaptive iter. multiuser parallel decision feedback with different code rates, perform. 131292
adaptively optimized DFE 130278
ADSL DMT systs., turbo coding 129203
analog MAP decoding with binary trellises, cct.-based interp. *(English)* 72842

nvolutional codes continued
ARQ incremental-redundancy scheme in block-fading Gaussian collision channel, throughput perform. 129074
asynchronous multicarrier CDMA commun. syst., Hopfield neural net/Viterbi decoding 73868
ATM cell transm. scheme over mobile cellular networks 130194
ATM satellite traffic, throughput anal. and coding 85917
AWGN channel, complexity of breadth-first bounded dist. convolutional decoding *(English)* 72833
backward-compatible hierarchical coded modulation, labeling/decoding schemes 83801
BCJR decoders implement., wordlength var. effects 129220
BER perform. of tail-biting convolutional encoders in channels using, priori inform. *(English)* 72835
binary convolutional codes, max.-likelihood decoding, error probab. bounds 129134
binary Markov channel with memory, channel-optimized trellis-coded quantization 106143
binary Reed-Muller codes, seq. stack decoding *(English)* 72836
BLAST archits., random space-time codes and iter. decoders 131073
BLAST systs. perform., iter. detect./decoding effects 72866
block code description of convolutional codes *(English)* 72855
broadband turbo decoding, $O(\log_2 N)$-latency SISO 106085
cdma2000 syst., channel coding perform. 85626
CDMA commun., image source coding, channel coding and spreading 108739
CDMA multicode downlink in shadowed multipath fading 131282
CDMA systs., interleaver design/anal. 129015
CDMA wideband cellular networks, power control results 85745
CDMA-based LEO multi-beam multi-satellite syst. with power control, downlink perform. 74894
CDMA-based mobile satellite commun. syst. with turbo coding, outage perform. 74872
cellular systs., transmit-diversity coding 118006
COFDM systs., near optimal joint channel estim. and data detect. 74698
coherent high-speed TD-OFCDM broadband packet wireless access, multi-level modulat., hybrid ARQ 96423
combined source/channel decoding, suboptimal BER minimization *(English)* 72852
concatenated code, rect. parity-check outer code with turbo inner code 106110
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
concatenation with ISI channels, precoder design 83937
CPM, power/bandwidth efficient serially concatenated, iter. decoding 72819
CPM, serial concatenated, ACI suscept. 129064
CPM over AWGN/Rician channels, channel coding of serially concatenated encoders 106092
DAB, FEC block, low-complexity design 109347
DAVIC-compliant digital commun., high-speed coded QPSK transmitter LSI 109344
digital commun., turbo techs. overview 72908
digital commun. links, frame error estim. criterion 128994
digital radio broadcasting, punctured convolutional codes/turbo-codes 109346
digital trunking syst., traffic channel coding, perform. anal. 83905
double accumulate codes or double turbo DPSK 72820
DS-CDMA asynchronous syst. with concatenated convolutional coding, iter. multiuser detect. 107613
DS-CDMA coherent syst., MMSE interf. suppression/turbo coding 106157
DS-CDMA convolutionally coded multi-carrier systs. 107739
DS-CDMA mobile radio, concatenated channel coding, transmit power outer loop control 96425
DS-CDMA multicarrier systs., rate adaptive convolutional coding 108742
DS-CDMA PCS indoor systs. with distributed antennas, forward link perform. eval. 85744
DS-CDMA Rayleigh channel variable block 2D-CELP image transm. 108946
DS/CDMA adaptive rate convolutionally coded multicarrier syst., anal. 108809
DSP chips, market prospects, appl., archits. *(Polish)* 68838
DVB-S, general systs. concepts 75268
EDGE mobile radio syst., space-time coding 85670
electric power data transm., TCM modulation, QAM modulation, diffuse convolution coding *(Chinese)* 74072
embedded image sources in noisy channels, dyn. UEP schemes optim. 84472
entropy-coded sources, joint source-channel turbo decoding 106153
error correcting RLL codes using high rate RSC or turbo code 106159
fast Rayleigh fading channels, convolutional codes over rings *(Japanese)* 83845
FEC, convolutional and RS coding, interleaving syst., appls. *(Italian)* 83869
FHMA turbo-coded commun., iter. multiuser detect. 107614
FHMA turbo-coded commun., iter. multiuser detect. 84781
FIR channels excited by convolutionally encoded inputs, MLE 95807
fixed convolutional codes, error probab., tighter bounds 72795
fixed-point iter. decoders for concatenated codes with interleavers, design 72880
FM band terrestrial DAB, soft selection combining 120507
group-metric multiuser decoding 84892
heapmod algm. for min. free dist. computation 117983
hierarchical coded modulation systs., perform. anal. 72769
high-rate turbo codes, iter. decoding using syndrome trellis 129202
holographic memory, soft decision Viterbi decoding 104616
hypercubic ring high-dimens. code, correcting limit, geom. decoding algm. 83928
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image transm. over mobile fast-fading channels, wavelet noise cancellation/interleaving techs. 95123
image transm. over noisy channels using joint source-channel coding 95155
image watermarking, coding techs. for data hiding and capacity limit 95047
interleaved (2,1,7) convol. codes in mobile image commun. syst., perform. 72918
interleaved (2,1,7) convolutional codes perform. in mobile image commun. syst. 83894
interleaver design 72876
IR indoor rate-adaptive commun., convolutional codes and PPM 86123
IR wireless commun. systs., direction diversity, adaptive-rate code combining 108198
irregular turbo codes and unequal error protection 129123
IS-95 CDMA uplink, perform. improvement using decision feedback and suboptimal Viterbi decoding 108936
ISI channel, precoder effect on serially concatenated coding systs. 94295
ISI channels, joint turbo and modulated code encoding decoding 129215
iter. equalization of partial response channels using dens. evol., thresholds 130259
iter. turbo decoder anal., dens. evol. based 72882
iter. turbo decoder anal. based on Gaussian dens. evol. 106086

convolutional codes continued
lin. convolutional encoders, unknown constraint length/generator polynomials recovery 106101
lin. convolutional encoders in noise, constraint length/generator polynomials recovery 106102
list Viterbi algms. for continuous transm. 72897
LMS channel, fig. of merit for interleaver depth eval. 108658
low-complexity turbo-equalization for diversity channels 72932
low-dens. parity-check convolutional codes, iter. decoding perform. anal. 129154
M-ary FSK DS-CDMA, design and perform. 85770
max. wt. basis decoding 72825
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulation 94243
MDS convolutional codes constr. 83919
miniaturised low power convolutional decoders archit. 108491
MMSE chip-level equalization at cell edge 84860
mobile radio foveation-based error resilience, unequal error protection 96522
mobile radio video transm., unequal error protection 85891
modified turbo codes for perform. improvement 106099
MPEG-4 imagery, ring convolutional trellis codes design for MAP decoding 129800
multicarrier CDMA, turbo TCM and serial concatenated convolutional code in Rayleigh fading 106029
multicarrier CDMA techs. for future wideband wireless networks 108840
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multilevel codes with inner convolutional code, alg. soft decoding 129224
multilevel coding, mapping strategies in fading presence, soft decision decoding 94273
multipath Rayleigh fading channels, iter. decoding 106156
multirate convolutional codes constr. 72824
mythology of turbo codes *(English)* 72839
noisy channels, decoding bit-error probab. upper bound 129117
OFDM, FEC code, intercarrier interf. 106124
OFDM, selected mapping peak-power reduction without explicit side inform. 83804
OFDM systs., 2D iter. APP channel estim./decoding 72815
OFDM-based LMDS, perform. eval., meas. channel models 96414
OFDM-CDMA syst., channel coding aspects *(English)* 72740
optimal convolutional codes, multi-bit GF, Viterbi algm. 72921
optimum space-time convolutional codes 83940
p-adic codes, convolutional-like approach 94285
packet transm., decoder-assisted frame sync. 108581
packet transm., frame sync. of convolutionally coded systs. 94311
parallel concatenated turbo codes for CPM 83859
partial response channel, woven convolutional codes and MTR codes 129226
partial response channels, precoder design for concatenating convolutional codes 72912
partial-response channels, dist. spectra 94293
partially concatenated convolutional codes constr. 129223
partitioned and parallel concatenated convolutional codes with puncturing, comparative study 83889
peak power distortionless reduction without explicit side inform. 72765
periodic time-varying convolutional codes with Heller bound free dist. 129190
permutation trellis codes constr. 129217
PSK turbo-coded binary sig., carrier recovery cct. using periodically inserted deterministic syms. 83887
punctured convol. codes, soft decision decoding in Rayleigh channels 72868
punctured convolutional codes, min. 129066
punctured convolutional codes for unequal error protection, image transm., mobile channels *(Chinese)* 106150
punctured recursive convolutional encoders and appl. in turbo codes 117930
punctured trellis coded freq./PM in mobile satellite channels 128971
RAKE coherent combining for broadband single-carrier DS-CDMA wireless commun., expt. 74638
rate 1/(1+1) convolutional encoders over rings with max. free branch dist. 129139
Rayleigh fading channel, turbo code transfer fn. bound *(English)* 72890
Rayleigh fading channels, hybrid type-II ARQ with scheduling for packet data transm. *(English)* 73930
Rayleigh flat fast fading channels, soft decision directed MAP estim. 106087
RBF decision feedback turbo equalisation, CC-SSTTC syst. 130266
recursive space-time trellis codes for turbo coded modulation 72862
recursive systematic convolutional codes, soft-in soft-out stack decoding 129178
recursive systematic convolutional codes, twin-stack decoding 94294
reliable wireless video transm. via fading channel estim./adaptation 84394
robust multilevel coding design using soft decision decoding 94320
satellite turbo-code based commun. syst., carrier phase estim. 117954
self-correcting codes, Viterbi codecs 96316
self-timed Viterbi decoder, low power, convolutional FEC codes, ISI 83837
semi-blind OFDM channel estim. using coded pilot sig. 107680
separate coded PPM, iter. decoding of convolutional codes *(Japanese)* 117914
serial concatenated convolutional code, improved design and SOVA algm. 94322
serial concatenated TCM with rate-1 inner code 72817
serially concatenated code charact. matching for iter. decoding 117989
serially concatenated codes, code doping for iter. decoding convergence 129179
serially concatenated convolutional codes, interleaver design 129163
serially concatenated convolutional codes, iter. decoding in multipath Rayleigh fading environ. 72818
serially concatenated partial response mag. recording channels, iter. detect. 116464
sig. estim. over freq. selective fading channel, soft-output seq. algm. 108764
soft decision Viterbi decoding for convolutional codes in fading channels *(Chinese)* 106071
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
space-time bit-interleaved coded modulation over freq. selective fading channels with iter. decoding 72936
space-time turbo codes, fading channels decorrelation props./perform. anal. 72863
SPIHT error-tolerant image compression 95330
stream-oriented turbo codes 83913
switched-current Viterbi decoders, effects of sig.-depend. errors on perform. 125628
syst.-theoretic props. 117928
tail-biting codes, suboptimum MAP-decoding using dual trellis *(English)* 72843
tailbiting trellis codes, block and convolutional codes *(English)* 72853

convolutional codes continued
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
time-varying wavelet convolutional codes with bipartite trellises 129188
time-varying wireless channel prioritized packet video transm. 108538
trellis termination methods theory/perform. 72877
turbo code perform. and design trade-offs 106083
turbo codes, convergence based design 129099
turbo codes, trellis complexity anal., interleaver props./appls. 72898
turbo codes based on recursive systematic convolutional code decomp. 129225
turbo codes with non-lin. constituent codes 83858
turbo codes/serially concatenated codes with interleavers, free dist. calc., algms./appls. 72873
turbo decoding, error detect. improvement by short CRC with mean-sign-change criterion 129124
turbo equalization, jointly optimized adaptive equalization/channel decoding 107717
turbo greedy multiuser detect. 107754
turbo-coded transms., carrier phase recovery using tentative decisions 72775
turbo-single parity check codes 72895
varying channels, progressive source coding with regressive channel coding *(English)* 72892
Verdu soft demodulator, iter. coded multiuser detect. 107609
video transm. over third-generation mobile systs. 106906
Viterbi algm. for DSPs, software radio appls. *(Slovenian)* 96511
Viterbi decoder, VLSI archit., in-place path metric update 106120
W-CDMA, rate compatible punctured turbo coding 84887
W-CDMA mobile radio, reverse link site diversity, turbo/convolutional coding 108895
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
watermarking, anals. of error correction strategies for typical commun. channels 94264
wavelet-based image coder using joint source-channel coding 107106
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA single chip high speed channel decoder, design/implement. 94331
wireless fading channels, space-time trellis codes iter. decoding 108600
wireless image transm., product coding/decoding 96381
wireless microsensor networks, energy-efficient link layer, long-term environ. sens. 97567
woven codes with outer warp, vars./design/dist. props. 72874
woven convolutional codes, pipeline decoding *(English)* 72854
woven convolutional codes with outer warp and unequal error protection 129227

coolant-fuel interactions
see also fuel element failure
JAERI severe accident research, overview 123156
KAERI severe accident research program, overview 123159
NUPEC containment integrity tests, reactor accident research 123157

cooling
see also laser cooling; low-temperature production; magnetic cooling; quenching (thermal); refrigeration; supercooling; thermal management (packaging); undercooling
3D ICs, thermal anal., num. modeling 126943
10 kWh flywheel energy storage syst. HTSC mag. bearing 78181
15 kWh cryocooler cooled HTS-SMES, feasibility for power syst. stabilisation 134419
36 kV HTSC tape cables, full-scale test results 77432
36 kV/2 kA_{rms} HTS cable models for utility demons. 133743
500 MVA air-cooled generator develop. efforts 112446
absorbing opt. fiber-based heater 82096
air condition load mgt. assess. by load survey in Taipower 134660
air cooled turbogenerators, benefits compared to hydrogen cooled turbogenerators 123302
air-conditioning chiller selection considerations 124121
air-conditioning syst., classical evaporative, summer, perform., working fluid effects 100339
air-cooled gas turbine power plants, thermodyn. anal. 112317
air-cooled gas turbines blades, film/effusion cooling *(Serbian)* 123222
all-outdoor-air HVAC systs., energy saving economic anal. 99477
ALS Superbend magnet syst., supercond. dipoles 76006
anisotropic graphite heat spreaders for electronics thermal mgt. 67632
ASTER cryocooler, in-flight perform. 111399
ATLAS inner silicon tracker, fluorocarbon evaporative cooling recirculators and controls 121616
automobile direct-start asynchronous starter/generator, vector controlled 89423
automotive electronics, design for reliab., modules 124054
axial flow cooling fans, thermal design, CFD modeling 78675
back-to-back tape BGA packages, thermal perform. 113628
brushless cooling fan motor, speed control *(German)* 88774
build-up cct. carriers for electronic assemblies in aviation/spacecraft technol. *(German, English)* 76803
building cooling systs., surplus heat, freon-free absorpt. chillers 78342
building environ. simul. before desk top computers, USA, pers. memory 100331
building night-time cooling technol., prototype testing 100338
bypass orifice inverter heat pump, thermal perform. study 100340
cable-in-conduit supercond. cables, strand joints/copper location impact 77390
car transms., mechatronic control units, extreme environ. demands 100297
cascaded microchannel cooling of high power LD bars 117328
chilled water plants optimal control develop. using quadratic representation 100236
CHP-absorpt. chiller systs. for telecom. switching centres 123189
CICC stabil. margin, supercritical He flow rate/operating temp. rel. 127513
CMOS cct. av./peak temps., modified high-level synthesis effects 116037
CMOS systs., act. threshold compensation cct. 104110
CMOS VLSI digital cct. low-power design 70302
CMOS VLSI systs., low-power ccts., design flows 81505
CMS HCAL readout box, thermal design and tests 121703
combustion-resistant vegetable oil-based distribution transformer dielec. coolants 88806
commercial buildings, energy saving technols. effects eval. *(Japanese)* 113041
commercial packaged unit air-conditioner power ratings 124120
component cooling for turbine blade coatings *(German)* 88572
continuous DC-DC converters, heat and noise control in design *(Spanish)* 101757
Cool Shield EMI shielding with thermal mgt. 105815
cooperative adaptive GA, chiller optimal scheduling problem 124612
cryocooled supercond. coil syst., AC loss meas. 71061
cryocooler-cooled HTS coils, stabil. criterion 71019
cryogenic transit.-edge microbolometer/calorimeter 71141

cooling continued
CSP array cooling, CFD 78624
CZ melt. flow, ellipt. temp. contours under transverse mag. field, calcs. 9021
DC chopper systs. spec. for electrochem. appls. 77988
desktop computer cooling, min. air flow design, CFD modeling 113542
diode laser, high power, heat transfer technol. *(Chinese)* 105320
district heating network efficiency serving hot water absorpt. chillers 77744
district heating/cooling systs., Taiwanese feasibility study *(Chinese)* 77737
double-sided buried-contact solar cells, floating jn. shunts localization 10006
DRAM cells, 0.18 μm, enhanced retention time by fast-pull/fast-cool ing growth, thermal budget 125474
dyn. temp. technol. for IC proc. control 100717
electron cooling systs., intense electron beam space charge effects 72187
electronic cooling by insertion of foam materials 113531
electronic equipt. cooling, heat pipe, heat flux 78629
electronic module transient thermal anal. using simplified heat transfer coef model 67608
electronics, thermal design, overall cooling perform. assess. 124347
electrosurgery, nonsticking, pass. cooled instrums. develop. 111060
EV propulsion SRM design studies 134533
evaporative cooling towers, thermal efficiency calcs. 133862
fan, motor speed control cct. *(German)* 89460
fan-driven power electronics cooling assembly, num. optim. 78652
fan-speed control techs. in PCs, thermal-mgt. solns. 67614
fluidic interstitial thermal interface materials, thermal contact resist. 124348
gas turbine perform. limitations, large turbine cooling flows 123211
generator excitation, rectifiers reliab. improvement *(Chinese)* 88674
grooved channel, heat transfer enhancement strategies comparative eval. 13222
HDI modular packaging for space electronics appls. 133234
heat sink, immersion cooling, high-speed photography 78623
heated devices array, cooling, thermal modelling 67556
high-efficiency DC/DC converter for vehicle use, develop. 123574
high-heat-flux thermal mgt. schemes, assess. 78619
high-T_c supercond. power link design perform. 77396
high-Tc supercond. ring/magnet mag. interact. force expts. 71006
hot strip steel, transform. imaging using mag. techs. 106508
house energy consumption anal., Cyprus 113042
house thermal perform., ventilated interior courtyard effect, hot-arid regio 88533
HTS coils, cryocooler-cooled, stabil. criterion *(Korean)* 127514
HTS magnets, cond. cooled, limiting length 71020
HTSC coils, quench develop. anal., universal scaling theory 71017
HTSC mag.-levitated stepping motor improvement 77899
HTSC power transm. cable systs., AC loss/thermal considerations 77394
HTSC SQUID, pulse tube cooler, low noise cooling 70884
HTSC-SMES syst. R&D efforts 134417
hydro generator with direct water cooling, temp. rise calc. 99626
IC chip cooling, micro heat pipe array, fab., charact. *(Korean)* 124324
IC packaging thermal design, modelling approach 124371
IC substrs./heat sinks, thermal time consts. 124356
IEEE 841 squirrel cage motors, perform., operating temp. considerations 1125
IM, on-line stator resist. estim., temp. monitoring 134031
indirect water-cooled chilling systs., variable-speed pumps, adaptive contr 89464
induction heating, MF thyristor converters, elec. shock protection *(Polish* 100330
intercooling/reheat gas turbine cycles insight 77762
isothermal cuboids, laminar forced convection heat transfer, anal. mode 113543
KEK-LHC low-β quadrupoles, 1-m magnet model, quench protection heate 75965
KSTAR supercond. magnet syst., helium cooling and current feeder 71036
large supercond. solenoids modeling, scaling laws 76001
large-capacity power transformers, adaptive cooling control device *(Chinese* 112584
laser-microjet wafer dicing, water jet cooled 103946
LD package, with thermoelec. cooler, cooling, num. anal. 105331
LHC inner triplet quadrupole heat exchanger, He II heat transfer 75967
LHC IR quadrupole magnet cooling, pressurized stagnant superfluid 75966
LHD helical coils, excitation props., cryogenic stabil. 71027
liq. cooled LTCC substrs. for high power appls. 89857
low-power ASIC systs. design 115205
low-temp. supercond. magnet develops., low-temp. cryocooler effects 71059
LTCC-multilayer module design with integrated liq. cooling syst. 124354
machine tool coolant fault diagnosis by neural net 109436
mag. field sens. for LF regime *(German)* 120745
math. cooling model for thin-wall shell under fast convective mixing of ga 124700
MEMS component transient liq. phase bonding, solder magnetron sputter depos tion *(German, English)* 92526
micro channel water cooled power modules 67631
micro-channels for micro device cooling, evaporating two-phase flow mechanis 81552
microfin array, flow-induced vibr., enchanced heat transfer, computer coolin 67629
microwave transistors, charactn. techs. for temp. depend. expt. anal. 114982
mid-IR laser absorpt. spectrosc., portable multichem. sens. 109785
mil. phased-array radar IC package surface temp. gradients, convective fil coeffs. 124380
miniaturized cooling syst. for HTS antennas, develop. and vac. seal-off pro 127533
miniaturized cooling systs. for HTS antennas 71087
MS9001FA gas turbine ceramic components, perform. benefit assess. 123212
multi-chip power modules, thermal mgt. and reliab. 125942
multi-type inverter air conditioner, perform. anal. 89455
muon beam transverse ionization-cooling channel design and simul. 121334
μP packages, thermal implications of increased device functionality 90958
natural convective heat transfer coeff. meas. at electronic component surfa 121250
notebook computer cooling, integrated plate heat pipe with heat spreader 11354
notebook PC CPU cooling, packaged miniature heat pipe 79931
oil-cooled transformers, loss-of-life assess. guidelines, IEEE/IEC stds. 12356
oil-cooled transformers, overloading/loss-of-life assess. guidelines 123541
overhead conductors, forced convective cooling in breeze, wind tunnel test *(Jap anese)* 123021
package solder joint reliab. testing, computer simul. 78661
pass. resistor cooling by microwave transistor amp. 115039
PBGA solder joints, fatigue lifetime rel. to reflow conveyor speed 113545
PCB, convectively cooled, conjug. heat transfer, two-layer substr. model 8049
Peltier effect solid state heater cooler, design, eval. 113034

ling continued
peripheral array package, interfacial delamination propag., 2D/3D num. models 78634
phase rot. induction linac, thin supercond. solenoid 75935
pin fin microheat sink, thrust and frictional forces 78612
pixel detectors, mech. support/cooling 97944
planar mag. components, thermal anal. and modelling 80456
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
PM DC motors, armature sizing, cooling dependance *(German)* 112539
port wine stain birthmarks, dye laser irrad., epidermal protection 87826
portable computer design, complex heat transfer systs., geom. complex systs. 78626
power DMOSFETs, thermal networks for electro-thermal anal. 115932
power electronics heat pipe thermal behaviour from frozen startup 67647
power module integrated cooling design using CFD simul. 127075
power MOSFETs for DC/DC converters in leadless chip form *(Italian)* 126726
Power Sticks, DC/DC converters, convection cooling *(German)* 88880
power transformers, combustion-resist vegetable-oil-based dielec. coolants 99725
power transformers overload capacity assess., on-line monitoring systs. 112588
powerful laser opt. resonator elements, thermal deform., cooling methods 117318
PowerPC systs., prog. thermal mgt. interface cct. 114807
PRISM hyperspectral imager, IR imaging chain design 111328
prototype const.-efficiency amps. 120517
PWR accident, in-vessel corium retention by external RPV cooling 88546
quasi-monolithic technol. for power microwave/mm-wave ICs, static thermal design 69234
rapid cooling dual slot load locks for LCD 109854
Raytheon 95 K high efficiency cryocooler prog. for missile defence 133240
RCGCT, gate drive unit 126697
residential buildings fenestration, Italian energy rating scheme 123115
RF ablation treatment planning, blood vessel detect. 111134
salient pole sync. machine rotors, cooling/ventilation modelling 123362
scanning thermal viewer opt. systs. size calc. 86626
secondary unit substation transformers, dry/liq.-types, selection 123686
semicond. thermal meas. and mgt., conf., San Jose, CA, USA (March 2001) 78402
server fan noise, low group-delay ANC appls., adaptive cancellation 67613
simulated electronic package, optimum spacing problem 78606
simultaneous cooling/heating solar absorpt. syst. with NaOH:KOH:CsOH and H_2O-LiBr 134412
sintered miniature heat pipes, thermal perform. 124345
SOFC, multi-layered ceramic components, thermal shock resist. 99977
SOFC-GT systs., cost effective design 99988
Sofradir IR detectors, product develop. 109549
solid polymer fuel cell power syst., modelling, anal., transportation appls. 89387
space based IR surveillance & stored cryogens, adv. cryogenic technol. 133219
steel bar heat treatment proc. automation *(Polish)* 124136
Stirling cryocooler for HTSC RF filters 92916
Stirling cryogenic coolers in France, IR cameras appl. 109647
Sulzer 8RND90 diesel power installation, heat exchangers, diagnostics 99575
supercond. bulk magnet, 3-D mag. field anal. 71031
supercond. power transm. cables, coolant hydraulic charact. 88456
symm. self-ventilated IM, cooling perform. 124115
sync. generator acoustic reson. studies 133968
telecomm. network shelters, low energy air conditioning 113152
TFSOI modular proc. for CMOS power devices/ICs 104098
thermally conductive plastics for portable syst. heat dissipation 89872
thermally-assisted recording with opt. heating, comparison with conventional recording *(Japanese)* 70528
thermoelec. refrigeration syst. using PCM 100344
third-generation FPA for night-fighting equipt. for soldiers 111550
three-stage He sorption refrigerator for IR detector cooling 89462
totally enclosed fan-cooled squirrel cage severe duty motors, IEEE Standard 100350
TP-80 gas fired boiler, starting regimes optimisation 123182
transformer temp. monitor, single chip integrat., increased functionality 80461
transformers load capacity determ., multistep load graph conversion 77909
turbogenerator end-region, 3D thermal distrib., FEM *(Chinese)* 88671
two-heat-source refrigerators, charactn. *(Chinese)* 78346
ultrahigh thermal cond. module, direct solder-attach, C4 reliab. 113678
uninterruptable power supply cooling systs., design, Flotherm CAD software *(Italian)* 88955
valve regulated Pb-acid monobloc batts. in enclosures, thermal behaviour 112803
Varian E220/E500 series implanters, cooling 115567
very small scale CHP syst., heat recovery 99574
water intake, jellyfish detect., video syst. *(Japanese)* 95486
water-cooled generator stator rewinds, tech. specs. experience 123291
WAVE, wide area vert. expansion packaging proc. develop. 113508
XMM, X-Ray Multi-Mirror mission, CCD pass. cooling, low-mass multistage radiator 122528
AlGaN/GaN HEMT, technol./perform./fab., 2-inch epitaxy, microwave power appls. 81383
AlSiC liq. cooled base plate, integral pin fins, thermal charactn. 78628
Bi-2223 HTS minesweeping magnet, cond. cooled 77026
$Bi_2Sr_2CaCu_2O_8$-Ag cond.-cooled HTSC solenoid magnet syst. 71078
Bi_2Te_3 supercond. current leads, Peltier cooling 126091
CO_2 slab laser, magnetron microwave excitation 82491
Cu fine line direct printing using convective flow splitting 103494
Cu/Sn/Cu solder joints fatigue strength, thermal cycling influence 125072
Cu/SnPb, interface react., XRD 90549
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
GaAs dry etching, electrostatic chuck adaptation 69893
GaAs power MESFET, optimized electrothermal design, nonlin. 3D heat flow eqn. soln. 115969
GaAs-based HBTs, thermal mgt. and modeling 126667
Hg-based HTS loop antenna, pass. radiative cooler for spacecraft 72483
InGaAs APD, Peltier cooling and pass. quenching, single photon counting 71558
InGaAsP, solid state thermionic cooler monolithic integrat. with semicond. lasers 104744
InGaN CW MQW LD on Cu substrs., perform. charact. 128227
InSb Compact staring imager 109655
Nb_3Sn and NbTi CICC for ITER supercond. magnets 71003
Nb_3Sn cond. cooled screen for current limiter, thermal design 77599
Nb_3Sn cond.-cooled SMES coil protection anal. 78199
Nb_3Sn pancake-shaped supercond. magnets, quench phenom. modelling 71008
Nb_3Sn persistent current switch, MHD ship propulsion, switching reacts. 127543
Nb_3Sn supercond. magnet, stress control, pressurized bladders 71069

cooling continued
NbTi cryogen-free supercond. magnet develop. 71060
NbTi long length cable-in-conductor stabil., fusion reactor magnet syst. 71001
Nd:$LiYF_4$ air-cooled diode-end-pumped MOPA 71716
Nd:YAG edge-pumped slab laser design 93571
Ni-Fe toroid cores, annealing and mag. treatment params. control for high permeabilities 127374
Ni-Ti shape memory thin film, growth & charactn. 116065
SOI/Al, heavily doped, efficient electronic cooling 103168
Si micromachining microchannels heat sink, theoretical/expt. anal. 100578
Si photocell based TPV syst., Yb_2O_3 selective emitter 113025
Si sens. modules, tracking detectors, low-mass cryogenic cooling 76064
Si:O, O precip., RTA effects 80638
SiGe/Si superlattices, thin film micro refrigerators 126190
Sn-Ag-Cu solder ball bonding, microstruct. and strength props., cooling rate 69331
Ta_2O_5 dielec. reliab., thermal/elec. breakdown under both-bipolar biasing conditions 80434
TiNi SMA thin films charactn., MEMS appls. 125069
Yb:YAG edge-pumped slab laser design 93571

cooling, splat *see splat cooling*

cooling towers
see also water supply
800 MW Matra steam power plant FGD scrubber retrofit project, Hungary *(English)* 99547
evaporative cooling towers, thermal efficiency calcs. 133862
power plant cooling systs., tower fills, condenser tubing 88589
water fouling mitigation, electronic anti-fouling 123183

Cooper Hewitt lamps *see mercury vapour lamps*

Cooper pairs
see also BCS theory; Josephson effect
1D Josephson jn. arrays, Coulomb blockade 127505
Bloch oscillating transistor 70819
charge qubit, lin. microwave response 70947
heavy-fermion systs., Josephson effect study 104580
HTSC, Josephson effect study 104580
Josephson interface engineered jn., crit. current 70881
Josephson jn., quantum nano-stripe, opt. coherent control 104573
mesoscopic Josephson arrays, EM field-vortices interact. 127502
NIS jn., electronic refrigerator, heat sources 70885
single Josephson jns., coherent single-Cooper-pair tunneling, Coulomb blockade 70991
small supercond. quantum states, Cooper-pair box, noise effect 127503
supercond. machine runner diags., superconduction effects modelling *(German)* 112439
supercond. single-charge transistor in tunable dissipative environ. 127510
supercond. single-Cooper-pair box as quantum bit 116520
Al/AlO_x/Al Josephson jn., Cooper pair boxes, quantum computing appl. 70910
$YBa_2Cu_3O_{7-\delta}$ HTSC thin film antennas, THz beam generation from 1.55 μm fs laser 70620

cooperative systems
see also multi-agent systems; multi-robot systems
config. of commun. networks by anal. co-operation graphs 119478
human face detect. using fast cooperative modular neural nets 95526
multirobot syst., multi-agent distributed control archit. *(Chinese)* 96078
proxy caching, viability anal. 130693
rem. sens. image classifiers, supervised, combination based on indiv. class performs. 122723
robots, cooperative modular, automatic param. ident. 85544
team optim., max. area coverage appl. 109313

cooperative work *see groupware*

copiers *see photocopying*

coplanar strip lines *see coplanar transmission lines; strip lines*

coplanar transmission lines
see also coplanar waveguides
asymmetrical coplanar lines on double-layered substrs., anal. *(Chinese)* 94075
CMOS reverse interconnect scaling in multi-GHz amp. and oscillator design 115015
coupled CPS for microstrip fed CPS tee jn., dipole antennas 91197
CPS and CPW finite-ground discontinuities, ccts. and antennas 80167
CPS open-loop resonator, reson. charact. 69071
double-Y baluns, parasitic effects anal. 114948
ferrite based patch array, scanning improvement, time delay method 72656
ferrite based patch arrays, magneto opt. tech. for beam steering 105950
finite ground coplanar line-to-silicon micromachined diamond waveguide transit. 125782
lumped-element CPW-to-CPS transits., MMIC design 91318
method of lines based anal. of waveguide-to-microstrip/-coplanar line transits. 91218
micro-dispensing/ink jetting direct write technols., material systs. 100564
MM-wave ICs, structural problem of PC transm. lines 69209
MM-wave printed cct. devices, structural conditions for high perform. 91365
quasi-planar high Q_u dielec. resonator 3D microwave filter, CAD 80187
symmetric CPS waveguides, open-end capacit. approx. 125647
trimmingless narrowband planar HTS filters, design 92915
ultrashort elec. pulses in transm. lines, NLO generation and detect. 71335
(Ba,Sr)TiO_3, ferroelec. tunable CPW components, Ku-/K-band appls. 80177
$BaSrTiO_3$ tunable dielec. thin films, microwave permitt./loss, broadband determ. 91171
$BaSrTiO_3$-$Y_3Fe_5O_{12}$ multilayer by PLD for microwave appls. 91168
GaAs asymmetrically excited photoconductive switch, fs carrier dyn. 71544
GaAs coplanar transm. line, ps elec. pulse detect., Franz-Keldysh effect 86946
Si CPS and CPW, microwave losses, long. substr. currents 69222
Si MEMS capacitive RF switches on high resist. substrs. 116082
Si-SiGe mm-wave MMIC near-range radar sens., coplanar transm. lines, MEMS switches 115019

coplanar waveguide components
50 GHz-plus connector and termination constr. 69294
air-gap overlay struct. low-loss monolithic CPW filters 102725
bandpass filter for spurious responses suppress. and atten. poles prod. 69035
broadband CPW Marchand balun using photoimageable MLTF proc. 125656
broadband uniplanar building blocks for MMIC and hybrid mm-wave ICs 125812
conductor-backed CPW direct. coupler, varactor-tuned phase shifter appl. 69090
CPW quadrature coupler, miniaturized 20 GHz, using capacitive loading 102511
directional coupler, multiple-sect. equiv. line 69075
dual plane comb-line filter, conductor-backed CPW *(Japanese)* 91207
feedthroughs in multi-layer thin-film MCM-D, design and charactn. 69211

coplanar waveguide components continued
filter, conductor-backed design 69049
finite ground CPW directional filter, full-wave CAD-based design 69066
finite ground CPW shunt MEMS switches for switched line phase shifters 125662
flip-chip CPW W-band amp. MMICs, parasitic substr. modes suppress. 91311
HF perform. of CPW as fn. of substr. thickness, theoretical and expt. study 125789
high-order planar ring-resonator filters optimized in noise in coplanar technol. 102527
HTSC CPW bandpass filter, meander line half-wavelength resonator 71112
Lange coupler, flip-chip microwave cct. 80201
low-loss slow-wave CPW periodic struct. for filter appls. 80220
low-pass filters using micromachined overlay CPW struct. with low atten. 102579
magic-Te TX/RX integrated front-end, 3D topologies and global synthesis 91371
MCM-D CPW flip-chip Lange couplers, bumping height influence 69081
MEMS distributed W-band phase shifters, fixed-value capacitive microstrip stubs 125686
MEMS series-shunt absorptive switch 80222
MEMS wideband series switch fabricated using metal as sacrificial layer 125720
micromachined tunable CPW resonator, spiral inductor 80224
MM-wave filters, CPW struct. 69033
MM-wave filters, micromachined membrane devices 91211
MM-wave receivers modelling using extended FDTD method 83612
Mouw's hybrid jn., planar, doubly bal. star mixers, ultra-broad-band devices 80181
multi-layered CPW directional couplers, num. charactn. 69044
multilayer low temp. cofired ceramics, wideband vert. transits. 89861
neural networks modeling and parameterization, EM simul. 69065
overlapping multiple CPW stub struct. for high dens. MMICs 80383
pass. planar components, EM-based multidimens. parameterised models 102551
periodic EM bandgap struct. for finite-width conductor-backed CPWs 80191
planar dielec. waveguide filter, flip-chip module 102542
quadrature Lange couplers, multilayer thin-film MCM-D implement. 125676
reconfigurable MEMS filters, tunable lumped components design 80223
RF micromechanical switch, MMIC post-proc. 116097
RLSA, CPW planar feeding cct. design *(Chinese)* 128912
series/shunt MEMS switch geometries for X-band appls. 125663
size reduction techs. for CPW struct. 69027
symmetric broadside-coupled CPW balun, anal. and design 69091
T-jn., thin-film MCM-D, reciprocal 3-port meas. 75835
T-jns., method of lines anal. 125673
tuneable act. planar looped filter struct. optimised in noise 125684
UWB CPW-fed spiral antenna and balun for humanitarian demining 128859
$(Ba,Sr)TiO_3$, ferroelec. tunable CPW components, Ku-/K-band appls. 80177
$(Ba,Sr)TiO_3$ thin film phase shifters on sapphire/glass substrs. 91217
$Ba_{0.5}Sr_{0.5}TiO_3$ paraelectric film phase shifter 69247
$Ba_{0.6}Sr_{0.4}TiO_3$ ferroelec. thin-film based elec. tunable Ku-band CPW components 80225
$Ba_xSr_{1-x}TiO_3$ epitaxial thin film, microwave phase shifter 69125
BeO, polished, MM-wave CPW couplers & slotline transit. 102516
$Fe_{0.2}Ni_{0.8}$ CPW struct., modelling 80228
GaAs CPW MMIC, Si MEMS package 69189
GaAs/AlGaAs/GaAs quantum barrier varactor, CPW freq. tripler 114944
InP HJFET, superlattice-inserted, V-band MMIC LNA 115008
$LiNbO_3$ EO modulator, time domain opt. response, FDTD 93164
Nb quasi opt. hot-electron bolometer mixers, 2.5 THz radiation detect., heterodyne response 71118
Si CPW SPST microwave absorptive MEMS switches, surface micromachining technol. 125718
Si low resist. substr. microwave filters, polyimide interface layer, wireless ccts. 91334
Si, polycryst., photocond. and opt. controlled CPW switch 80387
YBaCuO thin films, nonlin. effects, on-wafer microwave probe station meas. 70666

coplanar waveguides
2D photonic band gap struct., microstrip line and CPW 69003
3D multilayer CPW struct. with wideband vert. interconnection, modelling 125793
30 GHz leaky MM-wave lin. slot array 94188
act. antenna using parasitic element 72459
act. concentric circ. ring microstrip antenna, dual-freq. operation 83585
antennas, CPW-fed coplanar patch and array configs, simul. and expt. study 72672
asymmetrical, charact. impedance and effective dielec. const. *(English)* 80172
asymmetrical CPW, quasistatic params. 83489
atten. characts. and sensitivity anal. 80162
back to back conductor backed CPW to microstrip transit. design 91317
broadband 3D FDTD charactn. of multiple flip-chip interconnects 100589
broadband LV RF MEMS switches, develop. 125772
broadband microstrip antenna with CPW excitation *(Japanese)* 105944
broadband microstrip to CPW transit., via-free design 91183
broadband RF amps., CPW interconnects, on-board probing, calib. tech. 91335
capacitive micromachined switch, mech. design and optimisation 127103
CMOS reverse interconnect scaling in multi-GHz amp. and oscillator design 115015
compact CPW-fed printed antennas, small ground planes, anal. and modelling 128875
conductor backed CPW with etching, mode matching 94110
conductor-backed CPW hybrid for varactor-tuned phase shifting 102441
conformal mapping transforms. for CPW coupler anal. 94093
coupled struct., quasi-TEM anal. 102496
CPS and CPW finite-ground discontinuities, ccts. and antennas 80167
CPW-to-microstrip right-angled transit. 69004
cylindrical dielec. resonator antennas, mutual coupling 83595
design-oriented meas.-based fully scalable CPW transm. line model 114932
distributed conductor-backed CPW phase/freq. shifter and appl. 102442
double-Y baluns, parasitic effects anal. 114948
dual polarised broadband CPW fed patch antennas, design study 72567
dual-freq. CPW-fed dual-slot loop antenna 105870
electrode design optim., conformal mapping 102508
elevated-CPW struct. for high-speed digital interconnects 91324
ESD protection ccts. for HF/RF appls., anal. and design 80340
FDTD anal. of CPW to rect. waveguide transit. 72423
Fermi-profile tapered slot integrated antennas for mm-wave receiver IC 72515
ferromag. metallic film planar transm. lines for microwave device appls. 127394
finite-width conductor-backed CPWs, periodic EM bandgap struct. 80191

coplanar waveguides continued
flip chip design rule develop. for multiple sig. and ground bump configs. 69
flip-chip structs. design tech. with optimised CPW patterns 69223
gap discontinuity in shielded CPW for MM-wave ICs, ANN model 125783
gap discontinuity modelling in CPW using quasistatic spectral domain meth 72419
HF perform. as fn. of substr. thickness, theoretical and expt. study 125789
HF/high speed package interconnects, meta-evol. prog. based robust mo param. extraction 126467
HTS transm. lines, nonlin. simul./charactn., harmonic bal. algms. 71124
HTSC films and devices, comparative studies of microwave nonlin. 127534
liq. complex permitt. meas., wide bandwidth, CPW cells 121166
lumped-element CPW-to-CPS transits., MMIC design 91318
mask-tuned microwave plasma gratings in semicond. CPW, bandwidth/cen freq. anal. *(English)* 125707
micromachined overlay CPW struct. with low atten., low-pass filter appl. 102
micromachined W-band pass. components for commun. appls. 69237
microwave MCM-D CPW quadrature couplers/power dividers, X-/Ku-/Ka-ba design 125801
microwave MEMS switch, fab. 92523
MM wave antennas, new considerations/challenges 128834
MM-wave ICs, structural problem of PC transm. lines 69209
mm-wave MMIC design, technol. problems 125813
MM-wave printed cct. devices, structural conditions for high perform. 9136
multilayer thin film MCM-D, CPW feedthroughs, design/charactn. 80540
normal/supercond. CPW with 100 nm line width 70807
on-wafer CPW meas. de-embedding, nonuniform transm. line model app 103967
pass. SMD, meas.-based extrinsic modeling 100583
photonic microwave generation, uni-traveling-carrier photodiode 80404
planar folded slot lens for slab-beam power combining 94179
planar IC CPW-to-waveguide transit., std. PCB proc., mm-wave appls. 9131
rect.-shaped microshield CPW on cylindrical substr. 94087
RF-microwave multilayer integrated pass. using organic syst. on package techno 102684
semicond. substr., CPW 94095
slit discontinuity, equiv. cct. model 69013
slot antenna design, simple model 83550
slot-loop antenna, CPW-fed with low cross-pol. radiation 72564
tapered slotline probe for CPW to waveguide transit. 91205
transit. and transm. line params., broadband charactn. 68999
transm. line meas., high- and low-resist. substrs. 109946
ultrahigh-speed 1.55-μm photodiodes on Si with low-loss MM-wave CP 93458
ultrashort elec. pulses in transm. lines, NLO generation and detect. 71335
uniplanar subns. monocycle pulse generator/transformer for microwave appl 80322
uniplanar transm. lines, space leakage of power 72436
valley CPW in anisotropic media, quasi-static charact. 69006
Vivaldi uniplanar four-element array, CPW fed 105925
wideband scalable elec. model for microwave/MM wave flip chip interconnec 91374
Al CPWs on Si substr., 38 GHz, loss mechanisms and hybrid mixer implemen 125790
$Ba_{0.5}Sr_{0.5}TiO_3$ epitaxial films for microwave phase shifters 80254
$Ba_{0.6}Sr_{0.4}TiO_3$ dielec. props. and microstruct., tunable phase shifter appls. 11617
$Ba_xSr_{1-x}TiO_3$ thin film permitt. meas. using CPW ccts. 70405
$BaSrTiO_3$ thin-films, electrodynamic props., CPW struct. 80159
$BaSrTiO_3$ tunable dielec. thin films, microwave permitt./loss, broadband determ 91171
$BaSrTiO_3$-$Y_3Fe_5O_{12}$ multilayer by PLD for microwave appls. 91168
GaAs uniplanar MMIC subharmonic mixer, 60 GHz, finite ground CPW 80361
GaAs-AlGaAs-GaAs quantum barrier varactor integrated with CPW, desig 69122
InAlGaAs/InGaAsP unitraveling-carrier photodiode based TW photodetecto 75540
InGaP/InGaAs HEMT TW amp. with CPW technol., 70 GHz bandwidth 12578
InP HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
InP HEMT MMIC freq. doubler, 164 GHz, design and perform. 80332
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 114992
$LiNbO_3$:Ti opt. modulators, CPW electrode charact. imped. anal. 127829
Si CPS and CPW, microwave losses, long. substr. currents 69222
Si MMIC LNA, substr. resist., EM simul. 91380
Si substr., 3D MM-wave photonic IC 80403
Si/SiGe n-MOSFET single stage amps. on CMOS grade Si substr., design 69195
$SrTiO_3$ single-cryst./thin-films, electrodynamic props., CPW struct. 80159

copolymers *see polymer blends*

copper-oxide rectifiers *see solid-state rectifiers*

coprocessors
area-efficient binary adder, novel design 102015
CalmRISC, low power microcontroller with efficient coprocessor interface 114778
CMOS QLM technol. H.263 video CODEC with protocol proc. 108489
ellipt. curve cryptographic coprocessor implement. over $GF(2^m)$ on FPGA 106225
evolvable coprocessor environ. design based on GA 114785
heterog. multiprocessor SoC, appl.-specific archit. generation 125553
indust. sens. networks, embedded networking, hardware/software design 109451
LSC87 coprocessor, transcendental fns. *(Chinese)* 68846
microcontroller, CMOS fuzzy inference coprocessor chip *(English)* 102220
modular exponentiation coprocessor in mobile telecomm. terminals 102209
MPEG-4 core profile video codecs, algorithmic complexity, motion estim., VLSI archit. 131017
MPEG-4 video, bitstream parsing coprocessor, RISC model 125522
PC cryptographic coprocessor based on TI sig. proc. and smart card syst. 118033
reconfigurable on-board payload data proc. syst., ESA develop. 98920
SoC design, dyn. reconfig. overhead mgt., minim. config. size 79707
super graphics CPU with direct unified memory controller, car inform. and control syst. 102257
traffic scheduling coprocessor with schedulability anal. capability 125536

copy protection
2D DFT, self-similar ring-shaped watermark embedding 129716
2D generalized cyclic patterns for secret watermark generation 95159
Adobe eBook security, digital rights mgt. 129244
asymmetric watermarking tech., robustness 95266
audio watermarking for copyright protection 129383
authentication with distortion constraints 129747
binary comic image, digital watermarking scheme *(Japanese)* 73406

py protection continued
blind copyright protect. watermarking scheme using Markov chaotic seqs., stat. anal. 84708
blind image watermarking, robustness 95265
blind watermarking algm. in complex wavelet domain 95268
blind watermarking algm. with semantic meaningful watermarks 106998
blind watermarking tech. using wavelet transform 129796
Boneh-Shaw fingerprinting scheme improvements 129300
CDMA techs. for embedding data in digital images 95066
channel coding/rate distortion with side inform., duality illustration 106145
chaotic image watermarking, region-based tech. 118622
color image watermarking, Gaussian pixel weighting marks in AM 118397
color image watermarking in HSI space 95373
color images, blind/readable watermarking 95059
colour images, index data embedding method using wavelet transform 129745
commercial watermarking, engng. considerations 106924
compression tolerant watermarking for image verification 95056
constraint-based watermarking for graph partitioning solns. 125362
content ID forum. standardization activities 67459
content-adaptive watermarking based on stochastic multiresolution image modeling 129710
copyright labeling of printed images 95374
copyrighted content protection against unauthorized copying, legal develop. 100481
data concealment in audio sig. using sub-band LSB coding, pipelined archit. 68833
data embedding method for disclosing betrayers in collusion attack *(Japanese)* 73346
data hiding in ordered dithered halftone images 95240
data hiding using wavelet transform and error-control coding 95070
DCT PM, robust digital watermark procedure for still images 118620
DCT watermarks, effective channel coding 95366
DCT-domain blind watermarking syst. using optimum detect. on Laplacian model 95062
digital audio sigs., novel algm. for embedding watermarks *(Chinese)* 129362
digital camera for taking evidential photographic images 118526
digital image authentication, wavelet packet/adaptive spatial transform. 95061
digital image copy protection, DCT-based 106707
digital image watermarking 95021
digital image watermarking *(Chinese)* 95346
digital image watermarking, geometric transforms. robustness 95371
digital image watermarking scheme applying wavelet transform locally 129744
digital images, improved tamper-detect. method 129764
digital video, content authentication/tamper detect. 95063
digital video frame-based watermarking 130981
digital video watermarking, MPEG-2 compressed stream *(Chinese)* 73363
digital watermark, class./estim. based attacks/benchmarks 106923
digital watermark, wavelet transform, pseudorandom seq. *(Chinese)* 129270
digital watermark embedding with local distortion attacks tolerance, hierarchical method *(Japanese)* 107035
digital watermark syst. for secondary distrib., secure *(Japanese)* 73399
digital watermarked images, noise corruption influence 84078
digital watermarking, algms./appls. 95352
digital watermarking, image authenticity by spectral components modif. 107042
digital watermarking, inform. retrieval 106922
digital watermarking of still images in wavelet transform domain 84391
digital watermarks, optimum attack/defense 107545
digital watermarks hiding using multiresolution wavelet transform 129416
digital watermarks subjected to optimum lin. filtering and additive noise, anal. 95666
duality based with distributed source coding/robust optim. 94266
DVD recordable products, digital video storage for mass markets, silicon solns. 97102
DVD-RAM audio/video discs 92991
DVD-RW disc, phys. charact., copyright protection/mgt. *(English)* 71235
dyn. decryption for copy protection of image data *(Japanese)* 129274
EBU watermarking test, summary 73421
Fourier descriptors watermarking of vector graphics images 95263
Fourier domain watermarking generalization to space/spatial-freq. domain 95393
FPGA intellectual property protection, fingerprinting techs. 114715
fractional GF(q^n) composite domain for image scrambling 73413
fragile authentication watermark for images 95060
fragile watermark tech. *(Chinese)* 106195
freq. domain chaotic watermarking of digital images 95128
Fresnel transform of images for watermarking appl. 95151
geometric-invariant robust watermarking through freq. domain constellation matching 95119
gray level image embedding, DCT-based image hiding algm. 107017
halftone image, data hiding with intens.-/connection-selection 107031
hexagonal watermark embedding in wavelet domain 84492
hiding inform. in color images using small color palettes 106901
human perceptive based robust watermarking method, digital imaging 84105
hybrid syst. for real-time lossless image compression 73393
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
iFrench, Paris-Content Distribution Service, Internet video delivery trial 130846
image authenticating watermarking, lossless multiresolution transform 129715
image authentication, digital watermarking algm. *(Chinese)* 129641
image authentication and tamper-proofing using math. morph. 129711
image authentication/integrity verification via content-based watermarks/public key cryptosystem 95372
image authentication/ownership verification, watermaking schemes 118598
image authentication/protection, multipurpose watermarking 118597
image compression, robust data hiding 95255
image compression and watermark embedding techs., interplay 129767
image compression research 118547
image regional watermarking based on histogram spec. 129476
image SS watermarking with self-sync. capabilities 95053
image watermark extraction and modified robust embedding scheme 95054
image watermarking, coding techs. for data hiding and capacity limit 95047
image watermarking, Legendre array *(Chinese)* 95244
image watermarking, resilience against attack 95051
image watermarking, role of inform. theory 94506
image watermarking algm., matched filtering *(Chinese)* 84437
image watermarking by moment invariants 95158
image watermarking by variable dimens. VQ 73374
image watermarking in presence of compression, energy allocation 95055
image watermarking using subband DCT 129712
image watermarking/data hiding, inform.-theoretic model 95365

copy protection continued
image-feature based second generation wavelet based watermarking scheme *(Chinese)* 107275
images, embedding multiple watermarks *(Chinese)* 84249
images region and data hiding based error concealment 129787
informed embedding, watermark insertion exploiting image/detector inform. 95261
joint halftoning/watermarking 95157
joint watermarking and video compression 95160
JPEG2000 coding pipeline, quantisation watermarking 118583
JPEG2000 images, scalable detect. of perceptual watermarks 118584
JPEG coded domain, watermarking using inter-block correl. 73372
JPEG images, watermarking and selective encryption algms. 84418
legal court cases, digital camera image ident. 118489
low-resoln. content-based image watermarking in wavelet domain 129776
map data watermarking using generalized sq. mask 129655
mean quantization blind watermarking for image authentication 95375
mean-quantization-based fragile watermarking for image authentication 118515
mixed sig. design watermarking for IP protection, priority decoder 68950
mixed-sig. design, conf., Austin, TX, USA (Feb. 2001) 67361
mobile multimedia commun., robust video watermarking 96261
MP3 music delivery, security methods 106367
MPEG4 obj.-based compressed video, digital watermarking algm. 84477
MPEG video streams, spatial SS watermark detect. 95057
MPEG-1 and MPEG-2 multiplexed streams, digital watermarking for copyright protection 95318
MPEG-2 coded video seqs., space/freq. masking, digital watermarking appl. 95058
MPEG-4 video data protection for multimedia fruition 84367
MPEG-4 video streams, DWT-based obj. watermarking syst. 95262
MPEG-encoded video, blind compressed domain watermarking 118623
multi-bit image watermarking, geometric distortions robustness 95376
multicast media, large-scale distributed watermarking through encryption 119798
multimedia content distrib. and reusability using watermark technol. 108428
multimedia content protection in consumer electronics devices, overview 74428
multimedia data recovery using inform. hiding 73408
multiple region-of-interest image coding with embedded watermark 107012
multiplicative watermarks, optimal detect. 118618
multiresolution proc. for robust mesh watermarking 73508
multiresolution-based adaptive image watermarking scheme 129465
muteness based audio watermarking tech. 72987
oblivious cocktail watermarking by sparse code shrinkage, regional-/global-based scheme 95264
oblivious data hiding, periodic signaling scheme 106146
oblivious digital watermarking scheme with blob-oriented spatial-domain mechanism 107033
optimal adaptive DCT watermarks 118619
optimal transform domain watermark embedding via LP 95048
perfect image watermarking possibility 107046
Philips video watermarking technol. for content protection 118462
placement watermarking of std.-cell designs, spatial domain and spectral domain 68732
PPM approach to watermark detect. and decoding 95049
printed images, copyright labeling 118605
printed images, watermarking/copyright labeling 106888
quantization index modulation, digital watermarking and inform. embedding 72779
random coding error exponent watermarking game 129039
region-based watermarking by distrib. adjustment 106900
reliable digital watermarking, successive subband quantization and human visual syst. 129763
robust audio watermarking in time domain 73031
robust blind watermarking scheme based on distributed source coding principles 130945
robust digital watermarking tech. for images 73375
robust image watermark with wavelet transform/SS techs. 106999
robust oblivious digital watermarking using image transform PM 95161
robust oblivious watermarking scheme 95118
robust watermarking, diversity and attack charactn. 118518
second-generation watermarking benchmark, attack modelling 94507
secret key watermarking with changing keys 94342
seq. cct. design, digital watermarks 102090
soln.-based watermarking tech. of satisfiability, combinat. isolation lemmas 125361
spatial-domain image watermarking 106899
speech sigs., imperceptibility in all-pass watermarking 118101
SS watermarking combining visual/detect. models 95370
still images copyright protection, self-similar chaotic watermarks 95052
Tamper Resistance Network (TRN) *(Japanese)* 130818
telemedicine, med. sig. watermarking 111292
time-domain audio watermarking subj. to psychoacoustic masking 84017
TV broadcast monitoring, real-time digital watermarking 97046
variational approach 95367
vector Gaussian watermarking game, coding capacity 129038
video watermark embedding, ROI ident. with PCA 129698
video watermarking, channel coding, soft decoding for watermark retrieval 95267
video watermarking, robust frame-based tech. 129714
video watermarking tech., adaptive multiresolution *(Chinese)* 129757
virtual components, publicly detectable protection techs., watermarking method 125443
visual data, digital watermarking trends 118617
VLSI design IP protection, constraint-based watermarking techs. 116005
watermark embedding, sig. hiding within cover image 106921
watermark robustness against affine transform *(Japanese)* 95143
watermark verification syst., zero knowledge proof *(Japanese)* 106442
watermark-removal software, geometric distortion compensation using triangular meshes 129717
watermarking, anals. of error correction strategies for typical commun. channels 94264
watermarking algm., VQ 84405
watermarking and ident. in presence of side inform. 72778
watermarking method for embedding index data into colour images using wavelet transform 95353
watermarking of std.-cell feedthroughs in mixed-sig. design 68951
watermarking of vol. data, robust, invisible, using 3D DCT 94852
watermarking scheme based on charact. of addit. among DCT coeffs. 106898
watermarking scheme using digital images 73361
watermarking schemes, geometric props. 95377

copy protection continued
watermarking syst. based on Bernoulli chaotic seqs., stat. anal. 94265
watermarking using complex wavelets with resist. to geometric distortion 118621
wavelet based image watermarking schemes, comparison 95369
wavelet domain adaptive vis. watermarking of images 129424
wavelet-based digital watermarking with halftoning tech. 107016
wavelet-based watermarking for digital images/video 95368
wavelet-based watermarking for still images tamper proofing 95162

copying *see reproduction (copying)*

copyright
asymmetric watermarking tech., robustness 95266
CDMA techs. for embedding data in digital images 95066
client-server systs., man-in-the-middle attack defence 130767
color images, blind/readable watermarking 95059
content ID forum. standardization activities 67459
content protection against unauthorized copying, legal develop. 100481
data hiding in compressed images, capacity estim. 95252
DCT PM, robust digital watermark procedure for still images 118620
DCT watermarks, effective channel coding 95366
DCT-domain blind watermarking syst. using optimum detect. on Laplacian model 95062
digital image copy protection, DCT-based 106707
digital image watermarking *(Chinese)* 95346
digital watermark, class./estim. based attacks/benchmarks 106923
digital watermarking, algms./appls. 95352
Fourier descriptors watermarking of vector graphics images 95263
geometric-invariant robust watermarking through freq. domain constellation matching 95119
global privilege mgt. infrastructure for electronic content distrib. 129315
ICT changes, impact on evol. of e-society 130528
iFrench, Paris-Content Distribution Service, Internet video delivery trial 130846
inform. security conf., Wollongong, NSW, Australia (2000) 100378
joint watermarking and video compression 95160
labeling of printed images 95374
MP3 music delivery, security methods 106367
MPEG video streams, spatial SS watermark detect. 95057
MPEG-2 coded video seqs., space/freq. masking, digital watermarking appl. 95058
MPEG-4 video streams, DWT-based obj. watermarking syst. 95262
multicast group commun. protocol, engine, and bridge for CORBA 85335
multimedia content protection in consumer electronics devices, overview 74428
multimedia data recovery using inform. hiding 73408
muteness based audio watermarking tech. 72987
perfect image watermarking possibility 107046
printed images, watermarking/copyright labeling 106888
robust audio watermarking in time domain 73031
robust image watermark with wavelet transform/SS techs. 106999
robust oblivious digital watermarking using image transform PM 95161
robust oblivious watermarking scheme 95118
SV-SD70 and SV-SD01 audio players *(Japanese)* 86354
USA law, summary 100487
video watermarking, channel coding, soft decoding for watermark retrieval 95267
watermark embedding, sig. hiding within cover image 106921
watermark for digital image authentication, wavelet packet/adaptive spatial transform. 95061
watermark robustness against affine transform *(Japanese)* 95143
wavelet based image watermarking schemes, comparison 95369
wavelet-based watermarking for digital images/video 95368
wavelet-based watermarking for still images tamper proofing 95162

CORBA *see distributed object management*

Corbino effect
see also Hall effect
diamond:B semicond. films, MR effect 91601
diamond p-type semicond. films, magnetoresist. *(English)* 125987

CORDIC *see digital arithmetic; signal processing*

cordless telephone systems
3G mobile commun. systs., DECT technol. 85786
adaptive wideband burst-by-burst wireless video telephony 85164
Bleustein-Gulyaev-Shimizu/shear horiz. SAW resonator filters using edge refls. 92711
CDMA cordless PBX with urban cellular radio, meas. of propag. params. 108759
DECT air interface, TCP/IP data transfer with multibearer capability and asymmetric flows 73922
DECT ASIC, RF interface design, mixed mode methodology 102423
DECT CMOS power amp. module with multilayer LTCC pass., 1.9 GHz 80333
DECT VCO integrated pass. using thin film MCM-D technol. 131263
DECT/GSM portable dual-mode terminal, baseband proc. 108831
Device Management Service 130926
GSM cellular systs., high service grade DECT micro/pico cell clusters deployment 96436
Home RF 96432
homog. phantom exposed to cordless phones radiation, SAR 87937
Internet mobile radio networks 85894
LCDs futuristic refinements, mobile phones appl. 121113
micropower class-AB CMOS log-domain filter, DECT appl. 91030
mobile commun., regulation challenges *(German)* 108662
multi-std. wireless appls., single-chip CMOS front-end receiver 108832
pers./inter-vehicle cordless commun. syst. for combat vehicle crewman 111564
PHS for wireless home commun. syst. *(Japanese)* 85596
PLL GFSK demodulator, perform. in multipath channel 108772
portable equipt., ZXSC100 integrated DC-DC converter chips 123580
printed antenna, wireless commun. handset terminal 72496
quadrature LC-VCO, low power/phase noise differential tuned 96498
RF transceivers, MEMS device appls. 85604
RFICs for digital cellular 2G, 3G and cordless systs., status review 120079
SPring-8, sync. beam diagnostic syst. using cordless telephones 121374
underground commun. based on ISDN and wireless access technols. 74599
W-CDMA single-chip IF transceiver IC, dyn. range variable gain amps. 131267
WLL, eval. of DECT, PACS, PHS stds. 74596
Si bipolar RF transceiver chip for DECT appl. 119957

core levels
diamond:N homoepitaxial (001) surface, ion beam nitridation, AFM/XPS 115628
Al/MF/poly(9,9-dioctyl-fluorene) (M=Cs,Li) hybrid interfaces, XPS/UPS, LED props. 116923

core levels continued
Al/MgF_2/tris-(8-hydroxyquinoline) aluminum interfaces, electronic struct., photo electron spectr. 91880
$Bi_4Ti_3O_{12}$ ferroelec. films on Si(100) with Si oxynitride ultrathin buffer laye 127171
Cu phthalocyanine/InSb(111) thin films, mol. beam deposition growth, in-sit monitoring 90337
GaAs epilayer on Si, $(NH_4)_2S$ treatment, annealing, deep levels reduction 9200
GaN epilayers, MBE, at. H_2 impact 90299
Ga_2O_3:Gd/GaAs interface comp., core level photoelectron spectrosc. 69752
Ge(100) surface, S terminated, core level photoemission spectra 69914
InAs(P)(Sb) surface, nitridation, XPS anal. 103408
InN/Si heterojunctions, MBE, hole-barrier struct. 90301
MgSe thin films, MBE growth on ZnSe/GaAs(001), core levels 68176
MnSb/GaAs MBE, Ga surface segreg., core-level photoemission spectra ob 114283
MoO_3 amorph. films, thermal coloration, metal oxid. state influence 104891
Si surfaces, Cs promoted oxid., PES peak posns. oscills. obs. 81081
Si(001) surface, init. oxid. states, Si-2p core-level spectrosc. 103420
a-$Si_{1-x}C_x$:H,Ti, films, sputtered, XPS/UPS charactn. 103063
SnO_2 thin films, laser CVD grown, O_2/H_2 exposure effects, XPS anal. 101345
$SrBi_2Ta_{0.8}Nb_{1.2}O_9$ thin films, structural charactn., Raman studies, XPS 101388
$SrTiO_3$ grain boundaries, Z-contrast STEM imaging 104299
WO_3 amorph. films, thermal coloration, metal oxid. state influence 104891
$ZnS_{1-x}Te_x$, Auger param. shift, extra-at.-relax. 103018

cores
see also magnetic cores; saturable core reactors
elec. machine insulation diagnosis, anom. Δtan δ phenom. *(Japanese)* 88689
interleaving voltage regulator modules, coupling inductors-based perform improvement 88961

cornea *see eye*

corona
see also electric breakdown; flashover
air wave type EHD pump, EHD induced fluid flow, elec. current cond. 116139
cellular polymer electret films, corona charging, enhanced piezoelec., void gas effects anal. 104398
cylindrical particles charging in monoionized elec. fields 128708
deformed water cone tip, neg. corona discharge, DC field 83161
diesel engine exhaust treatment, pulsed streamer corona reactor, RVC electrodes 76929
DR13/PEK-c guest-host polymer thin film lin. EO effect 82286
dual electrode plate MLC capacitor for HV pulse appls. 89031
electret film sens. and actuator appls., aging, reciprocity, act. sound control 111539
electret filters, polypropylene/PTFE materials, charging charact. 81645
electrolytic cell, pulsed corona discharge superposition in water *(Korean)* 115237
electronegative trace gases, corona based detector channels 97475
electrostatic powder coating proc. back corona, relative humidity effects 125064
electrostatic procs., corona wire electrode, elec. field 83130
ESP particle migration vel., particle diam., corona electrode geom. 83176
ESP wire electrode configs., corona inception studies field 72192
foil activator, interelectrode gap, corona discharge model 116140
HV meas. techs., corona assess. method, neural nets 97769
HV overhead lines/substation power equipt., corona forms defects localisation/ident. 112112
HVAC overhead transm. lines design, audible noise calc. formulae *(Korean)* 123026
indoor air cleaning, corona ionisers effectiveness 88191
ionizer air-cleaners, dust removal, ozone emission 83163
large-scale charged particle cloud, elec. field strength distrib. 69382
LLC full bridge inverter topol., plastic indust. corona generation 89478
MEEC distrib. syst., weak points, early detect., US emissions 133669
multi-phase power transm. lines corona power loss determ. 99370
muscovite mica electrostatic separation from feldspathic pegmatites 128711
needle/dielec. composite electrode systs., pulse discharge charact. 115235
nonceramic insulator polymers, SIR and EVA and blends, stress, hydrophobic stabil. 104416
nonthermal plasma reactor/ESP-based elec. air cleaner 117629
overhead transm. lines, volt. meas. using corona phenom. 123022
ozone generator, corona electrode shape/discharge gap spacing effect on conc. *(Korean)* 115278
paper insulation testing in corona environ. 70434
plasma air emissions control, pulsed power generators 99778
plume, HV overhead lines, aerosols charging 111249
PMMA periodically domain inverted poled polymer waveguide, two-step poling fab. 93756
pollution control, pulsed corona induced nonthermal plasmas, pulse generators 88189
polyethylene pellets mass flows, electrostatic charges elimination, supersonic injection 83106
polyimides, amorph. piezoelec., polariz. stabil., piezoelec. effect, curing/poling conditions 127218
polymer powder boxer charger for electrostatic powder coating appls. 128714
polymer powders, fluidization, transport procs., triboelectric charging 68378
polypropylene fabrics, electret props., HV corona 81646
powder coating corona guns, free ion conc. reduction 128712
PTFE plane insulating material surfaces, corona discharges *(German)* 127252
pulse generation cct. energy delivery to corona discharge 77979
radical shower NO_x removal syst., 2D imaging expts. 133354
secondary lightning protection syst., EM field near lightning channel 88480
self-sustained pos. corona discharge, screening effect 80545
space charge cloud discharge phenom. 83115
static surface charges neutralisation using DC corona discharge ionizer 83107
unipolar corona, Warburg law deficiencies explanation, graphical method 80552
VOPc thin film prepared on PET film, NLO props. *(Japanese)* 101175
water ozone generator, water stressed by AC voltage, elec. field 69383
NO removal charact. of corona radical shower syst. 122712
NO_x, SO_x, particulates removal by single-stage plasma-chem. proc. 133349
NO_x prod. in spark and corona discharges 83097
NO_x removal, oxid., nonthermal plasma reactors 133356
NO_x removal, pulse corona discharges, luminesc. 88190
NO_x removal using DC corona reactor over water surface 88184
SF_6/N_2 high-press. mixtures, decomp. in DC/AC corona discharge in water vapour 92611
SF_6-N_2 compressed gas mixture GIS, very fast transient overvoltages 112698
SF_6-N_2 gas mixture, creeping discharge under neg. μs pulse voltage, barrier shape effects *(Japanese)* 127153

rona continued
SF_6-N_2 mixtures, nonuniform fields predischarge phenom., lightning impulse voltages *(Korean)* 92615
β- SiC anti-corona material for electric generators *(Chinese)* 99628
ronagraphs
CCD imager, 530.3 nm, tunable Lyot filter *(Japanese)* 109662
rporate communication *see business communication*
rporate modelling
Bluetooth future scenarios, effects on value networks and business models 108637
economic mfg. qty. model with imperfect product quality 89899
iMEDIA business model of pers. interactive TV advertising 75327
trade develop., syst. dyn. model, electronic home equipt. market *(Chinese)* 89663
rporate networking *see intranets*
rrelation methods
see also acoustic correlation; correlators; decorrelation; optical correlation
2D complex FFT, efficient implement. of quaternion FT/convolution/correl. 129647
2D gray-scale image fusion by multiscale morph. 107216
2D perfect quaternary arrays 72782
3D indust. parts location, stereo vision anal. *(Japanese)* 94624
3D med. data, multirate coding 98161
3D real-time reconstruction on high resoln. FPA 94532
3D surface digitizing/modeling develop. 73213
3D texture anal., invariant feature extraction, autocorrelation fn. 94477
3D transform coding of partitioned video seqs. with matching pursuits 118572
3D vector radix algm. for 3D new Mersenne no. transform 73212
900 MHz handset diversity antenna, head/hand/shoulder effects, correl. charact. 94161
abdominal fetal ECG proc., review 110641
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive blind multiuser decorrelation detector, higher order cumulant *(Chinese)* 95827
adaptive exponential filter, inverse transfer fn. estim. *(Japanese)* 84720
adaptive filtering, white input and convergence speed 119025
adaptive intercolor error prediction codes, lossless color picture compression 129740
adaptive nulling antenna, fast follower jammer suppression *(Chinese)* 85932
ADPCM speech coding, comparison of dual autocorrelation with std. methods 106362
affine projection algm. using novel subband adaptive syst. 84757
Alexis binary seqs. with perfect correl. 83878
antenna arrays perform. in urban multipath environ. 73573
antenna meas. engng., correl. radiometers 83575
antenna response in reverberation chamber, remarks 72589
ARMA lin. infinite-variance procs., diagnostic checking 113894
array antenna meas. with rough surface reflector, anal. 105967
array denoising, new approach 110533
ASTER init. image eval. 111397
ATM backbone network, correl. traffic, expt. study 108357
atmos., near water surface, microwave refr. diagnostics 117693
ATR SAR imagery using extended max. av. correl. height filter, clutter rejection 75149
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 119468
automatic labeling of prosodic events *(English)* 73012
automatic target detectors, relative perform. 75147
automobile noise corrupted speech, binaural diverse sub-band proc. 72991
autonomous mobile agents, Markov localization, correl. appl. 107514
bandpass nonlin. RF ccts., distortion, autocorrelation anal. 108967
bianisotropic composite mediums, ellipsoidal topol./orient. diversity/correl. length 104503
binary Markov channel with memory, channel-optimized trellis-coded quantization 106143
binary seqs. with optimal autocorrelation, constr. 72797
binary source compression using turbo codes 129014
bitmap/TENCOR inspection data correl. for IC yield anal. 100624
blind channel equalization, correl. source, second-order stats. 107688
blind channel equalization with colored sources, second-order stats. based, lin. prediction 107692
blind cyclic correl.-based sym. rate estim., asymptotic anal. 117910
blind multiuser detect., second-order nonstationarity based, subspace approach 107605
blind sig. de-noising via ICA, hybrid method 107557
blind source separation, 2nd order stats. algm. optim. 118798
blind source separation, approx. joint diagonalization using non-orthogonal matrices 107427
blind source separation, geometric optim. methods 118811
blind source separation algm. using weighted time delays 118814
brain thermomapping for radiation effect diagnosis, stats. 98118
broadband power spectrum analyser, implement. & perform. eval. 120685
bubbly gas/liq. pipe flow cross-correl. meas., dual-plane ERT syst. 110056
CCD color filter array using sig. correl., color interpolation 94823
CCD images, line jitter nonuniformity, expt. study 129415
CDMA asynchronous systs., signature seq. optim. 131287
CDMA commun., complexity minimization approach for fading Gaussian channel estim. 119206
CDMA commun., lin. complexity likelihood ascent search multiuser detectors 107607
CDMA mobile commun., multiband wavelet-packet spreading codes 108888
CDMA mobile radio, digital correl. proc. use 85714
CDMA mobile systs., complete complementary code for efficient freq. usage 130306
CDMA MSS, satellite diversity 85861
CDMA multi-value spreading codes using mirror multi-rate filter banks 95833
CDMA multicarrier wireless systs., spreading codes effectiveness/perform. anal. 83895
CDMA quasi-sync. systs., seqs. generation for multicode transm. 72804
CDMA satellite systs., adaptive orthogonal code assignment 108991
CDMA sync. systs., iter. constr. of optimum signature seq. sets 85867
CDMA systs., optimal space-time block codes 106089
CDMA systs. in multiple time-scale fading channels, spatial diversity combining/power allocation 85858
CELP coding with discrete spectral modeling 84022
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
chaos-based DS-CDMA syst., optimal MAI reduction 95823
chaotic phase code for radar pulse compression 96948
ciliary cell beats, metachronal wavelength, digitised image correl. map 76402
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
correlation methods continued
cloud sounding, lidar sig. anal., multiple scatt. case 122662
coded free-space opt. commun. through atmos. turbulence channels, pairwise codeword error probab. 131621
coherent sig. detect. using polariz. averaging MUSIC algm., perform. 107585
color image correl., hypercomplex Wiener-Khintchine theorem 94706
combined projection/correl. LMS sq. algm. for channel estim. with uncoded/chaotic coded speech 129388
compressed low resoln. video, motion estim./resoln. enhancement 95201
conditionedness of correl. matrices 107360
correl. computation method for binary images based on matrix factorisation 129934
CPM sigs. over space-time correl. Rayleigh fading channels, soft output diversity combining 131290
credit-based traffic policing, correl. cell arrivals at server 73874
cyclic codes, recurrent sliding correl. decoding 72894
decision-feedback multiuser detect. with feedforward orthogonal transform. 130172
deep submicron digital ccts., functional correl. anal., crosstalk induced crit. paths 125446
deform. meas. tool, digital speckle correl. method, wavelet de-noise effects 121213
dihedral reflector faces, vis./IR wavelengths brightness correl. 117666
direct blind channel equalization, prog. canonical correl. anal. 107723
direct down-conversion receivers, IQ imbalance anal., freq. offset estim. 83813
diversity channels, efficient simul. 84672
diversity codes for differential PM in correl. Rayleigh fading channel 96510
Doppler spread estim. for wireless mobile radio systs. 96452
DPSK blind sym. estim., differential correl. approach 85542
DS-CDMA, blind ident. of co-existing sync./asynchronous users 84880
DS-CDMA, spreading seqs. over GF(p) with low correl. zone 94324
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA coded asynchronous systs., long vs. short spreading seqs. comparison 108859
DS-CDMA in fading channels, code timing acquisition by differential correl. 74792
DS-CDMA multipath channels 107755
DS-CDMA sync. with dual-antenna in unknown correl. noise 74528
DS-CDMA systs., adaptive array antennas with common correl. matrix *(Japanese)* 108822
DS-CDMA systs., code-timing sync. using space-time diversity 107767
DS-CDMA systs. in slow time-varying channels, param. estimators using modified SAGE algm. 74815
DS-CDMA systs. uplink, multiple user max. likelihood code-timing acquisition 85805
DS-CDMA wireless commun., PN code acquisition with adaptive antenna array/threshold 74668
DS-SS perform. improvement using adaptive FIR notch filter 95822
DS/CDMA inter-cell sync./asynchronous appls., CDSA fast/robust PN code acquisition *(English)* 108939
DS/SS systs., fast varying correl. multipath channel, blind adaptive estim./diversity combining 108529
DS/SS systs., rapid acquisition of PN sigs. using phase estimator 85461
dual-antenna-array wireless systs., capacity scaling 108605
dual-antenna-array wireless systs., capacity scaling 83700
dyn. group mgt. for large-scale distributed event monitoring 130556
echo canceler design, freq. domain extended correl. LMS 73015
echo canceler double-talk detector, normalized cross-correl. vector 107615
edge based stereo matching, disparity gradient based search space reduction 129899
EEG quantitat. anal., virtual training simulator-designer for tutoring students and doctors 89656
EEGs, multi-sources, multi-dimens. delay-correl. MUSIC *(Chinese)* 87436
EMAP-based speaker adaptation, robust correl. estim. 73056
entropy-coded sources, joint source-channel turbo decoding 106153
event correl. rules discovery 130682
evoked pots. latency change estim., algms. perform. comparison 76256
face recogn. using kernel eigenfaces 84611
facial feature extraction in frontal view images 107207
false alarm probab. anal. *(Chinese)* 130163
FH seq. families based on pseudorandom seqs. over GF(p) 94323
filter dens. existence for Hilbert-space valued systs. 84749
flat-fading channels, freq. offset estim. 131167
FM-CW radar level meters, correl. algm. for high-precision meas. *(English)* 121282
FMCW radar, beat sig., spectrum correl., dist. meas. 109290
foreign lang. learning assistance, speech sig. time scaling algm. 118078
freq.-selective fading mitigation, multiband wavelet packet spreading codes with intra-code subband diversity 72933
functional MRI, independent component-cross correl.-seq. epoch anal. 110906
functional MRI, tissue segmentation-assisted anal. for human motor response combining neural net and fuzzy C-means 76483
GA, fitness dist. correl. measure of difficulty 78948
generalized multiple description coding with correlating transforms 117924
genetic algms., crossover-induced linkage modeling 100948
GSM A5/1 stream cipher attack 129281
GSM/DCS mobile radio network, database alarms intell. search 131118
GSM/EDGE, mobile channels zeros distrib. 85859
guard seq. optim. for block transm. over lin. dispersive channels 73754
Hadamard unified complex transform seqs., periodic autocorrelation upper bound 128944
harmonic sigs. recovery, adaptive extrapolation algm. anal. 107351
HEMT MMIC RF yield forecasting methods 69233
heterog. network traffic modelling in wavelet domain 130325
high order correl. immune fns., spectral anal. 129997
high-resoln. quantization errors whiteness 83918
high-speed high DOF spatial normalization for human brain imaging 76206
high-speed image matching using GA-based partial template extraction *(Japanese)* 100656
human motion, higher-order spectral anal. 95544
ICA using kernel canonical correl. anal. 107450
image class. with correl., PCA 84572
image compression, resoln. progressive coding using sorting algm. 95293
image correl., real-time high-resoln. multiprocessor syst. 84282
image correspondence based on ordinal measures of assoc. 118736
image denoising, autocorrelation modeling of wavelet coeffs. 94810
image denoising via wavelet coeff. magnitude correl. adjustment 94804
image features, block motion estim. using efficient search strategy 94783
image registration, local deform., transform mapping of correl. images 73313
image registration by selective correl. coeffs. *(Japanese)* 84529

correlation methods continued
image restoration based on autocorrelation fns., regularization methods 94745
image retrieval, energy spreading transform approach 107256
image seqs., integrated segmentation and depth ordering of motion layers 129631
image similarity measure based on ordinal correl. 94935
indust. visual inspection, fast alignment search algm. 100640
instrumental variable methods, optimal wt. estim. 107420
Internet, proxy caching scheme for continuous media streams 108155
Internet traffic charactn., collaborative videoconference appl. 108431
invariant face recogn. 118720
IR indoor wireless channel charactn. by meas. 109224
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
ISI noisy channels, max. throughput loss due to narrowband interf. 84811
joint halftoning/watermarking 95157
joint source-channel decoding of correl. sources over noisy channels 106173
JPEG 2000, multiple component compression 106947
JPEG coded domain, watermarking using inter-block correl. 73372
LAN fault diagnosis syst. 130739
landmine detect., correl.-based, GPR, lin. prediction tech. 77079
landmine detect., rough surface stat. effect, FDTD tech. 73437
LEO systs., phys.-stat. shadowing correl. model 74730
LMS channel, fig. of merit for interleaver depth eval. 108658
LMS convergence, cross-correl. p-vector influence 118873
log-amplit. spectra, av. and smoothed periodograms 130007
LOS sig., time-delay estim. in multipath environ. 118966
lossless encoders with side inform., output distribs. 129166
LPI radar sig. detect. using SCF algms. *(Chinese)* 131649
M-ary/SS systs., acquisition method using correl. mapping with false alarm penalty 84779
M/G/1-G/M/1 type combined struct. chains, algorithmic soln./appls. 119251
machine tool contouring error detect., wavelets/neural nets 124391
mag. reson. spectrosc. quantitation via PCA 73579
max.-correl. navig. systs., obj. coord. meas. accuracy estim. 120434
mean-match correl. VQ image encoding algm. 118633
med. ultrasound, robust auto-focusing algm., consistent phase refs. 76351
mental activity EEG changes discrim., nonlin. measures 76264
metrical phonology eval., computational-empirical approach *(English)* 73011
microcomponents, local param. determ., thermal loading device *(German)* 81591
microwave transistors, noise modeling, wave approach, correl. effect 70174
midlatitude E_s layer, screening/limiting freq. 88139
MIMO 2nd order blind channel ident. based on correlative coding 130262
MIMO channel capacity estim. using Jensen's inequality 117885
MIMO channel capacity using exponential correl. matrix 117870
MIMO channels, blind ident. based on correlative coding and perform. anal. 84869
MIMO channels, multimode antenna soln. 105915
MIMO scatt. channel models, perform. eval. 105758
MIMO-FIR channels, white fourth-order colored sigs. driven, blind deconvolution algms. 107402
min. output energy detector and estimator, sq.-root array forms 130174
mixed chaotic seqs., combined logistic & m seqs., pseudorandom prop. *(Chinese)* 83840
MMSE optimal estimator for source codec params. using intra-frame/inter-frame correl. 131018
MMSE receivers for CDMA systs., blind startup 85476
mobile commun. systs., location param. estim. 96559
mobile radio, deterministic spatial channel models, design procedure 108905
MOSFET induced gate noise/channel thermal noise by RF noise meas., extraction/correl. 102655
motion recogn. of lower limb without marks, research 107237
MPEG-4 FAP interpolation for facial animation at 70 bits/frame 129691
MPEG-4 shape coding, fast motion estim. algm. 95084
MPSK, coherent, multichannel reception over freq. selective fading channels, perform. eval. 106045
MRC coherent receivers in Nakagami-m fading channels, perform. anal. 85507
multi-aperture SAR, proc. for fine-resoln. images of arbitrarily large extent 96965
multi-constrained optimal path selection 119424
multi-domain server farms, layered event correl. engine 130681
multi-modal image matching, variational approach 118250
multichannel image compression by bijection mappings onto zero-trees 95363
multidimensional PDF approxs. for detect./class./model order selection 119085
Nakagami channels, correl. gamma variates sum for wireless systs. perform. 131233
Nakagami correl. fading channels, stat. simul. model 108680
Nakagami fading channel, error flow charact. modeling/eval. 117984
narrow-band mobile commun. channels, vel. estim./correl. props. 108811
noisy speech recogn. methods *(Chinese)* 84054
non-circ. sources, blind separation 118819
nonlin. vector multiresolution anal. 107398
nonparametric algms. for sig. & noise characts. recovery 73675
nonstationary random effect, spectral anal. 118890
normalized least mean fourth algm., convergence behavior 107353
num. meas., fuzzy correl. 86370
OFDM commun. systs., in-band/out-band spectrum anal. using ICI cancellation methods 94248
on-line speaking rate estim. using GMM/NN approach *(English)* 73084
open quant. systs., non-Markovian dyn., time-convolution projection 106285
opt. flow stats. 73286
optimal transmit-diversity precoders for random fading channels 74824
optimum compaction FIR filters, line spectrum design 119073
p-ary d-form seqs. with ideal autocorrelation property 128945
particle image velocimetry, 2D spectral/turbulence estim. 87033
particle tracking velocimetry, correl. method based 87032
periodic excitation freq. response fn. meas., correl. I/O errors 107406
PN PSK sigs./ensembles synthesis, genetic method 83834
PN seqs. correl. props. for nonlin. channel estim. 119202
PN seqs. with low correl. zone, anal. 72798
polyphase seqs. with even/odd crosscorrelation props. 108527
power quality monitoring, wavelet transform, noise suppression algm. 77633
power systs., random procs., correl. time determ. *(Russian)* 122778
power transformer inrush ident. using improved correl. algm. *(Chinese)* 99713
predetection dual diversity in correl. Rayleigh fading, EGC/SD perform. 74555
prog. adaptive analog filters using arrays of floating-gate ccts. 68959
pulse Doppler radars, nonlin. suppression tech. for range ambiguity resoln. 96935
pulverized coal particle meas., image anal. by microscope *(Japanese)* 86977
correlation methods continued
QC, mixed bivariate response, loss fns./perform. measures 124390
QPSK seqs. over F_4 129096
quadratic receivers in Rayleigh-fading channels, asymptotic error probab. ana coherent/noncoherent space-time receivers anal. 119864
quasi-max.-likelihood multiuser detect. by semi-definite relax. 130154
R&D/mktg. role flexibility in new product develop. 113399
radar altimeter with beam, echo charact. anal./simul. *(Chinese)* 109268
radar coherent range ambiguity resoln. 99162
radar correl. clutter, Kullback-Leibler classifier *(Polish)* 120407
radar syst. multichannel filtering optim. 109284
random power spectrum analyser perform., autocorrel. fn. 120681
random sig. generation with long-range correl. 73560
randomly rough surface, modified two-scale scatt. model 83196
Rayleigh flat correl. fading, joint iter. channel estim./decoding 106155
real-time reconfigurable image recogn. syst., model-based develop. 107227
recogn. syst. output sigs., orthogonal polynomials expansion, multidimension probab. dens. charact. 73528
recurrent visual semantics discovery in consumer photographs 94831
regulated traffic streams MUX, design/perform. 119150
reliable/fast fingerprint ident. for security appls. 95512
RLS-type adaptive fast on-line sig. separation algm. 130145
ROCKET, reduced order correl. kernel estim. tech. 107389
S-band low-power correl. radar, compact design 86199
SAR, class. perform. prediction using parametric scatt. feature models 86132
SAR, interferometric coherence, two-target height effects 75132
SAR artificial clutter scenes modeling using spatial autocorrelation/group stat 86136
SAR buried objs. imaging from MoM modelled scatt. field 96904
SAR image speckle reduction using iterated struct. filters *(Chinese)* 131650
SAR rem. sens., sea-wave fractal spectrum 76904
SAR subsurface objs. detect. 122722
scale invariant face detect./class. from log-polar image 95483
second-order adaptive IIR notch filter for freq. detect., variable step-size LMS like algm. 84792
second-order blind source separation by recursive splitting of sig. subspace 118815
segmentation-based lossless compression of burn wound images 110504
seismic sig. proc., inform. anal. 88092
server proximity, network latency metrics 74211
sig. separation by complexity pursuit, nongaussianity and autocorrelation 107438
sig. time seq. shape ident. with limited receiving bandwidth 107316
Singapore, effects of wet radome on short MM-wave link 96394
single-input multiple-output time-varying channels, blind equalization 84873
sleep EEG, mobile phone EM field exposure effect 76721
small cell multipath environ., meas./predicted time dispersion/DOA comparison 117679
smart vision sens., theoretic design 121061
source-controlled channel decoding, correl. param. estim. *(English)* 72849
space-time array data simul. 107534
space-time codes perform., spatial fading correl. impact 106136
sparse vector lin. prediction with near-optimal matrix struct. 106864
spatially correl. motion seqs., estim./mode decision 129692
speaker recogn. feature using correl. dimens. 129408
spectral estim., nonnegative constraints handling 107334
speech driven in-service nonintrusive meas. device, optimum variable step-size adaptation 130617
speech LPC coeffs. based on predictive neuron model, new soln. method *(Chinese)* 84014
speech pitch detect. based on autocorrelation of root and fourth-root-power spectra *(Japanese)* 72994
speech recogn., pseudo-correl. regions/cepstral region *(German)* 73086
speech sig. charact. in pseudo-correl. regions, calc. *(German)* 73092
speech sig. intelligibility estim. against correl. interf. background 83982
SS correlators power consumption minimisation, IF samples resampling 108521
stereoscopic image pair disparity 84354
supercond. ADC testing, segmented correl. 68854
surface reconstruction tech. based on 3D triangulation enhancement 73214
sym. matching based document image compression and merging syst. 95336
sym. timing, adaptive detect. 108413
target recogn. using impulse radar, data storage reduction 96927
TCP-friendly congestion control protocols, transient behavior 119380
TDMA-based hierarchical cellular systs., mobile speed estim. 108806
telecomm. network traffic prediction by neural net ensembles 108009
temporal/correl./rate coding, unified approach 110588
ternary m-seqs. with three-valued cross-correl. fn., Welch/Niho type decimations 72781
ternary seqs. with ideal two-level autocorrelation fn., new family 83885
ternary spreading seqs. with zero correl. duration 72710
texture anal. methods comparison, Meastex/Vistex benchmarks 94573
textures with circ./ellipt. correl. struct., long-correl. image models 84275
time delay estim. using sig. subspace model 107395
time series tools, generalization 113879
TLP, transm. line pulse syst., calib., correl., stds. and new techs. 83105
tracking gate algm. based on optimal data assoc. perform. 73578
traffic modeling, techs./algms./stat. measures 73875
transmit diversity for arrays with correl. Rayleigh fading 108909
turbo codes, interleaver design 72876
UHF compact integrated diversity antenna for wireless commun. 83642
uncoded/chaotic coded speech, robust channel estim./perform. 73037
utility distributed reactive power control using correl. techs. 88362
V-BLAST syst., low complexity archit. 85505
variance-time test for long-range depend. inference, limitations 130313
vector MAC capacity region with covariance feedback 128942
VHF tropos. radar data, spaced antenna/Doppler beam steering methods 133317
VLF polarised antenna array, null steering algm. 107312
voice activity detect. and speech enhancement based on coherence using pitch inform. 118054
Volterra adaptive filter, decoupling problem, MMSE criterion *(Chinese)* 107475
wavelet-based image compression using shuffling and bit plane correl. 106952
weak-image target detect. under strong beam disturbance *(Chinese)* 73523
weapon systs., robust correl. tracker 118761
wide-band impulsive noise source, direction-finding tech. 75253
wideband meas. of time-variant indoor radio channels, moving scatterers impact *(German)* 128765
Wiener modified filter for multi-frame restoration of blurred/noisy images 129442
wireless data networks, link adaptation, perform. anal. 74811
wireless handheld terminals, spatial/polariz./pattern diversity 119937

relation methods continued
wt. parity-checks for fast correl. attack 129111
xDSL systs., crosstalk ident. 108473
xDSL systs., crosstalk ident., freq.-domain approach 108474
Yule-Walker noise-compensated eqns. soln. 73589
VO_2 bolometer based IR radiation detect., double correl. sampling tech. 120695

relation theory
see also correlators; decorrelation; information theory
2D correlative extremal navig. systs., target-localizing algms. 73527
3D ultrasound, rigid registration with MRI, generalized correl. ratio 87479
3G W-CDMA, S(2) family of low correl. quaternary seqs. 83860
adaptive array beamforming with random error in cycle freq. 107338
almost-perfect quadriphase seqs. 117867
asymptotically LRD traffic, autocorrelation fns. and verification 95749
asynchronous CDMA systs., optimal SS seqs. constructed from Gold codes 73851
asynchronous M-PSK/CDMA, generalized even-odd transforms and EOE seqs. 130286
ATR correl. perform. using Xpatch (synthetic) training data 75150
bandpass nonlin. ccts., autocorrelation anal. of spectral regrowth 79524
Bayes multiframe detector/tracker, optimal, rigid extended targets 120419
binary array set, zero correl. zone 83868
binary-phase and quadriphase chaotic spreading seq., correl. anal. *(Chinese)* 117960
blind copyright protect. watermarking scheme using Markov chaotic seqs., stat. anal. 84708
blind equalisers, white data and block encoded seqs. 119175
CDMA, max. periodic correl. of pseudo-random seqs. 107769
CDMA spreading seqs., design method *(Chinese)* 85536
CDMA systs., sum capacity, periodic correl. props. influence 107760
cellular CDMA, min. duration outage anal. for integrated services with correl. interf. 85759
cellular CDMA, outage for integrated voice data services with correl. sig. and interf. 85758
channel codes for softbit source decoding, correl. param. estim. *(English)* 72850
chaos-based asynchronous DS-CDMA systs., perform. estim. and optimisation 95824
commun. sig. blind spatial signature estimators 108917
conditional correl. attack, anal. and modifs. *(English)* 72960
cryptanalysis appls. of correl. theorems of Boolean fns. 94348
delayed sig. sampling for Signal spectrum anal. and period estim. 118838
distributed sources, DOA estim., iter. approach *(Chinese)* 73740
DS-CDMA flat fading channel blind adaptive MMSE receiver 107753
DS-SS commun., piece-wise maps design, genetic prog. 95825
extending self-similar procs., wavelet transform *(Chinese)* 100751
(F,K,l) opt. orthogonal codes, constr. from block design 83829
fixed wireless loop systs., simul. 74606
fractional operations and time-freq. distribs. 95539
fuzzy nos., correl. coeff. calc. by expected interval 113906
G/G/1 queue with Markov-modulated arrival, departure proc. approx. 113848
generalized geometric seqs. family 117868
heart, ventricular recovery index, min. invasive ident. 76226
high-order correl.-immune fns., improved nonlin. upper bound 129322
highly nonlin. syst. modeling/prediction, adaptive-neuro fuzzy inference 118956
interf. conditions, spatial/polariz. filtering 83406
Internet, collective behavior with short-range correl. between routers 96151
Internet traffic, nonlin. time series prediction methods 95763
intuitionistic fuzzy sets, correl. coeff. calc. using stat. viewpoint 113905
joint MELP turbo coding with unequal error protect. for speech sigs. 73022
M-ary/DS-SS syst., digital matched filter using real-valued shift-orthogonal finite-length seqs. 85519
med. image registration, rigid, block matching to improve robustness 87314
MPEG seqs. generation matching intra- and inter-GoP correl., Markov-based algm. 73322
multi-scale based Bayesian denoising algm., wavelet shrinkage 129459
multi-source multi-sink network, network inform. flow 130185
multipath time delay estim., multi-channel disturbance *(Chinese)* 107300
multiple Rayleigh scatt., elec. field autocorrelation fns. 128781
mutual coupling and channel imbalance, complex correl., coherent/incoherent noise calib. *(Chinese)* 109954
neural network, unsupervised lattice struct., spike correl. learning 91145
noise robust pitch extraction based on auto-correl. anal. 84066
orthogonal Oppermann seqs., family size 72829
Q-CDMA and chaotic SS CDMA systs., perform. comparison over Saleh indoor channel 74584
QoS anal. for stat. MUX with Gaussian distributed and autoregressive input 84830
quantized piecewise-affine Markov systs., tensor-based theory, map families anal. 124508
quasi-orthogonal seqs. 83896
quitting games, correl. ε-equilib. 113863
radar sig. design problem with neural network proc. 120435
random sigs. in noise, array detect. 130148
randomly chosen ensembles of n×n s-boxes, avalanche and bit independence props. 129233
regression/correl./time interval, additive-multiplicative 100798
RLS nonlin. algm., correl. mixture noise 78989
second-order bandpass Δ-Σ modulator with sinusoidal inputs, quantization error anal. 102269
sig. separation, second order stats. 107319
sig. set anal. and synthesis, constrained magnitude spectrum 95620
single freq. networks, local coverage probab. estim. 109355
speech quality objective assess., one-step strategy *(Chinese)* 106347
spreading seqs., bounds on aperiodic and odd correl. 117958
stochastic approx., violated Kushner-Clark conditions, anal. 78817
stream ciphers over GF(2^n), correl. attacks algm. 129280
sync. CDMA syst., perform. of UCHT seqs. 73848
TCP traffic simulator and self-similar traffic simul. 130433
three-state Markov chains, optimum spreading seqs., SSMA 94307
vector procs., depend., strong law of large nos. 78818
Welch-Gong transform. seq. generators 129319

correlators
see also correlation methods; correlation theory; information theory
all-lag correlator, rot. ref. code seq. 107336
CDMA2000 searcher, real-time correlator design 74719
CDMA systs., multiuser interf. cancellation using simplex algm. 84889
CDMA uplink coherent detect., dual mode channel estim. 131260
digital multimedia wireless telecomm., very-high dens. VLSI chips, low-power design 130971

correlators continued
DS PN code acquisition on Rayleigh fading channels, anal 131243
DS-CDMA systs., robust single-user detect. perform. 84918
DS-CDMA wideband syst., RAKE reception, antenna and path diversity 85868
DS/SS digital proc., multiplier-free zero-IF downconversion/decimation/multiplexed despreading 74897
fully-digital MDPSK DS/CDMA receiver, AFC algm. 107750
MMW imaging systs., wideband proc., photonic correl. 80396
multiple-target recogn. using discrete rot. FT 118695
multitime-freq. classifiers for noisy modulations 118868
recursive all-lag ref.-code correlator for generating odd correl. 73633
SS correlators power consumption minimisation 108520
SS correlators power consumption minimisation, IF samples resampling 108521
VLBI network, Chinese, high-speed FX correlator, super spectrum analyzer, prog. ASIC 86275
watermarking syst. based on Bernoulli chaotic seqs., stat. anal. 94265

correlators, optical *see optical correlation*

corrosion
see also corrosion fatigue; corrosion protection; corrosion resistance; corrosion testing; electrochemistry; stress corrosion cracking; surface chemistry
DIRC PMTs, BSG window corros. in water 115276
intermittency phenom. in elec. connectors 115108
isotropically conductive adhesives, nonepoxy-based polymer matrix 67560
portable 3D US NDT exam., kinematic anal. 125147
steel pipes, flaws detect. by SQUID planar gradiometers 68484
thermoplastic isotropically conductive adhesive, contact resist. degrad. 113530
ultra-pure proc. gas filter membranes, contamination contrib. eval. 103381
VRLA batts., ETK's experience, grid corros., temp., charging voltage 112797
VRLA batts., standby appl., water loss minimisation 112802
VVER-1000 NPP steam generators, corros. build-up prediction 123167
Ag corros./whiskers growth, power contacts, pulp and paper plants 124157
Ag-Cu whiskers growth on cct. breaker contacts in corrosive atmos. 134282
Al-Cu bimetallic cable jns. 99390
Al-Si plasma-treated IC bond pads, chem. and morph. studies 67591
Au anodic corros. in LiNbO-based opt. modulators 127824
Cr-5Fe-1Y_2O_3 SOFC-interconnectors, near-net shape powder metall. prod. 89272
Cu CMP, two-step proc., chem. induced defects reduction 126462
Fe_2O_3-Cr_2O_3-MoO_2 artificial passiv. films, electrochem./corros. props. 90259
GaAs corros./surface behavior in acidic solns. 69890
In-Sn/Ag soldered joint, $AgIn_2$/Ag_2In transforms., thermal aging 114417
InF_3-YF_3-BaF_2-SrF_2-NaF-ZnF_2-GaF_3 glasses, opt. props. and thermal stabil. 127564
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
LiNbO opt. modulators, corros. phenom., damp heat test 127826
Nb coatings on stainless steel, unbalanced magnetron sputtered, corros. props. 103319
Nd-Fe-B PM, degrad. procs. 92863
Nd-Fe-Co-Cu-Ga-Al-B magnet, corros. stabil. 127385
NdFeB sintered magnet, die upset, electrochem. corros. 127386
Ni SOFC anode, metal dusting corros. 89254
Ni-Al_2O_3 anode supported thin film SOFC develop. 99952
Ni-MH batts., AB_5 alloys, corros., decrepitation, XRD, spectrosc. 99909
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
Ni-TiO_2 anode supported thin film SOFC develop. 99952
Pb film electrodes on Cu and Al nets, electrochemical/corros. behaviour 89134
Sn-Sb/Ni/Ag-Pd, surface mount solder joint, microstruct., shear strength *(Chinese)* 100606

corrosion fatigue
steam CHP plant delivery-water heaters tube syst. damage anal. 77748

corrosion protection
see also anodisation; corrosion; corrosion protective coatings; packaging
advanced metal finishing tech. for aerospace appl., conf., Keystone, USA (Aug. 1999) 78434
AGR helical boilers, Fe transport/press. loss, chem. control 123164
amine feedwater conditioning at HKW Sud cogen. plant 88554
BWR water chem., review 123163
conducting polymers, microelectronics appls., review 81409
cut-edge corros. inhib. on coil-coated steel sheet, model electrochem. cell 112759
discolored bondpads caused by $Al(OH)_3$ form., SEM inspection, EDX, FIB 102873
drum-type high-press. boilers, corrosive damage prevention 123181
FGD, metal corros., anticorrosive materials *(Chinese)* 77730
ink jet print head prod. simul., methods 124316
SOI microproducts, MEMS devices, automotive appls. 92482
underground pipelines, corros. protection, rem. testing, external field params. 101636
AlSi-based metallisation in microelectronic devices, corros. inhib. 103488
NdFeB magnet, phosphating, corros. protection 101473
$NiMgH_x$ films, electrochromic switchable mirror electrode, kinetics 71401

corrosion protective coatings
advanced metal finishing tech. for aerospace appl., conf., Keystone, USA (Aug. 1999) 78434
flip chip PBGA packaging, OSP surface finish charactn. 113711
microelectronics materials charactn. by AES-sputter depth profiling 70248
PANI electrodeposited corros. protection layer, passivity breakdown, spectrosc. anal. 101519
PANI electrodeposited layer, corros. protection and spectrosc. anal. 101440
SAW device perform. enhancement using dielec. thin films 81763
Stellite SF6, laser cladding & rapid prototyping, proc. head 105641
C tetrahedral amorph. film by filtered cathodic arc deposition for disk overcoat 116434
a-C tetrahedral films prepared on mag. hard disks, deposition and props. 104517
CN_x film, sputtered, corros. resist., extremely high dens. mag. recording appl. 114254
CoCrPt thin film mag. recording medium, nanoscale protection 116451
CoSm based mag. media, corros. behavior 101541
Fe-Al-Si-R (R=Ce,La) heat resistant coatings, thermal-diffusion deposition 125022
Fe-Ni-$Cr_2O_3C_2$(Cr-C) electron-beam deposition wear/corros.-resisting coatings 124842
InP DFB laser, wavelength stabil., non-hermetic package 117209
Nd-Fe-B PM, electrodeposited polymers, corros. resist. 101475
Pb-Ca electrodes, Sn and Al_2O_3 plating effects on electrochem. behaviour *(Chinese)* 89065
Pb-Sb electrodes, Sn and Al_2O_3 plating effects on electrochem. behaviour *(Chinese)* 89065
Pb-acid secondary cell SnO_2-coated pos. electrodes develop. 78140

corrosion protective coatings continued
Si-PZT-PZT-Si, aspherical bimorph piezoelec. X-ray optics, design anal. 121804
TiB_2 film, sputtered, corros. resist., extremely high dens. mag. recording appl. 114254
Zn coating on steel wires, continuous mass meas. 75900

corrosion resistance
conf., Phys. props. of mag. materials, Poznan, Poland (June 2000) 89545
heat-extraction turbine erosion/corros. resist., sliding press. effect *(Russian)* 99540
inconel 617 alloy, laser surface melted, electrochem. response 117567
PEFC bipolar plates, graphite/vinyl ester composites develop. 123785
ultrananocrystalline based high resoln. MEMS technol. 104172
CO_2 laser, material surface proc., reliab., corros. resist. enhancement 83052
Co-Ni-Fe-N as-sputtered soft mag. thin films, HF characts. 127289
CoNi film, electrodeposited, struct./prop. rels. 90508
Cu elec. busbar joints, laser surface melting treatment effects 115623
Fe-Pt high-coercivity films, low-temp. in-situ DC magnetron sputtering, appls. 116255
$Fe_{78}Cr_{22}$ ferritic steel foil, SOFC interconnect material 123795
$LiCoO_2$ cathodes, MCFC, current collector, contact corros. resist. 100007
a-Mn-Ta alloys, sputtered, sputtered in H_2SO_4 solns. 90260
NdFeB magnets, corros. resist., magnetis. 101472
Ni-Fe alloy of low coercivity and improved corros. resist. in cyclic damp heat test 81808
NiFe film, electrodeposited, struct./prop. rels. 90508
NiO cathodes, MCFC, current collector, contact corros. resist. 100007
Pb-acid batt. grids manufacture by electroforming 89123
Pb-acid batts., corros.-resistant grid alloys 78150
Si-glass MEMS micropackages, corros. resist., B doping/self-induced galvanic bias 78677
SiC-SiC composites for fusion reactors, mech. props., interfacial strength 68426
$Sm_2Fe_{17}N_x$ powders, high-perform. epoxy-resin-bonded magnets, mag./thermal props. 70548

corrosion testing
aircraft materials testing, photonics techs. appl. 88043
composite insulator rods brittle fracture mechanisms assess. 133763
deep-lying flaw detect., SQUID pulsed eddy-current probe model 101630
electrochem. QCM corros. sens. 104432
fibre opt. corros. sens., electroless Ni-P deposit 75569
HV transm. lines inspection, eddy current & mag. flux leakage tech. 77440
Lamb wave group vel. meas. for plates corros. thickness gauging 101618
layer thickness thermal wave determ., pulsed ring heat source 101580
magneto-opt./eddy current imaging NDT, FEM model 101574
metal corros. monitoring, EM slow wave struct. propag. 114507
multilayer aircraft struct. inspection, rem.-field eddy-current syst. 122495
opened fibre coating strip force test 127678
precip.-hardened copper alloy messenger wire, durability eval. 78295
safety relevant struct. QA, nonlin. scanning laser vibrometry 114521
source-sample react. forces meas., EM NDE tech. 101572
substation grounding grid corros. diagnosis method 77574
underground pipelines, corros. protection, rem. testing, external field params. 101636
Au-Al corroded film, surface plasmon resons., opt. fiber sens. 86594
CoSm based mag. media, corros. behavior 101541
NdFeB magnet, phosphating, corros. protection 101473
Ni-Fe alloy of low coercivity and improved corros. resist. in cyclic damp heat test 81808

corrugated horn antennas *see horn antennas*

corundum
see also ruby
TLD-500K anion-defective corundum TLD for neutron detect. 132291
α-Al_2O_3, TLD-500 dosimetric crysts., UV absorpt. spectra, temp./shape effect 127915
α-Al_2O_3:C, high sensitivity TLD, trap-one recomb. centre model, review 127920

cosmic radiations, radiofrequency *see radiofrequency cosmic radiation*

cosmic radio waves *see radiofrequency cosmic radiation*

cosmic ray apparatus
advanced detectors, conf., La Biodola, Elba, Italy, May 2000 67400
aerogel threshold Cherenkov counter for AMS-01 spectrometer 98032
Alpha Magnetic Spectrometer expt. on International Space Station 76161
AMANDA cosmic ray detector expt. results 132312
AMS expt. in space, cosmic antimatter 132467
AMS Si tracker, cosmic-ray events 98015
AMS silicon microstrips tracker design/perform. anal. 132317
AMS spectrometer, albedo particle rejection with RICH study prototype 76162
ANTARES atmos. neutrino detector, oscill. studies 97980
ANTARES detector status, indirect dark matter searches 110301
ANTARES high energy CR neutrino detector design anal. 132313
ANTARES neutrino telescope, R&D programme status 98048
ANTARES offshore DAQ, distributed COTS-based syst. 120676
AUGER fluoresc. detector, bilinear analog compressor to adapt sig. dyn. range 76152
Auger fluoresc. detector, camera 102944
Auger fluoresc. detector prototype, analog sig. proc. syst. 110393
Auger Fluorescence Detector prototype, analog sig. proc. 68966
Auger Observatory, tech. to produce mirrors 121579
BOREXINO, tech. description 76087
Borexino read out electronics, trigger syst., detector photomultipliers 76142
Borexino real-time detector, solar neutrino flux expt. 97975
BOREXINO solar neutrino expt. status 110281
Borexino ultrapure organic scintillator detector for solar CR neutrino expts. 132314
BP-1 track-etch detectors, track form. and surface prep. 98050
CAPRICE98, balloon-borne mag. spectrometer with gas RICH and Si calorimeter for cosmic rays 76160
CAPRICE98 balloon-borne gas-RICH detector, perform. 87205
CERN L3 magnet spectrometer design for CR muon detect. expts. 132424
conf., imaging, Stockholm, Sweden (June 2000) 124186
conf., Radiation imaging detectors, Freiburg, Germany (Jul. 2000) 89569
CR-39, strange quark matter Z/β determ. 121680
CRESST dark matter expt., recent results and prospects 110280
dark matter detect., recent develop. 121435
EDELWEISS WIMP dark matter search using cryogenic Ge detector 110289
FINUDA straw tube detector, review 76034
Frejus WIMP scintillator detector, design anal. 121428
GENIUS facility for non-accelerator particle phys. 97982
GNO low energy solar neutrino flux expts., detector review 97977
grav.-wave background response of space-based interferometers 121453

cosmic ray apparatus continued
hadron calorimeter, thin, dual-readout, cosmic ray det. outside Earth's atmo 87188
HELLAZ solar neutrino project, status report on hardware and simul. 132338
hemispherical photomultipliers from Electron Tubes Inc, opt. props. 115274
high rate environ. MWPC readout chip 121631
ICARUS liq. argon CR detector expt., review 110385
KamLAND reactor neutrino oscill. expt. anal. 132311
KASCADE central detector, multiple cosmic muons meas. 98038
large vol. superheated droplet detector, control and DAQ syst. 121750
liq. Ar detectors, neutrino meas., expt. design 97981
MACRO track-etch detector, massive rare particles search 121681
massive cryogenic particle detectors, energy resoln. anal. 104591
MICROMEGAS detector in low-background astron./particle search appls 132346
MONOLITH atmos. neutrino detector, expt. design 97979
MONOLITH expt. at Gran Sasso 110302
multifragmentation, accel. driven systs., SSNTD 121678
NINA, Si detector for cosmic-ray astrophys. 76078
OPERA atmos. neutrino long baseline expt., review 110300
Pamela expt. for dark matter imaging 132340
PAMELA expt. in space 76159
Pierre Auger Cosmic Ray Observatory, fluoresc. detect. prototype, analog sig proc. 121625
Pierre Auger expt. at southern hemisphere, cosmic ray energy spectrum 13242
Pierre Auger fluoresc. detector, second-level trigger 98071
radar detect., EAS 75260
RPC carpet expt., ang. res., energy spectrum, Monte Carlo sim. *(Chinese)* 8722
Scandinavian Neutrino Workshop, Uppsala, Sweden, Feb. 2001 110299
scintillation detector, pulse shape comparator 98024
SilEye-2, in-flight perform. and cosmic ray abund. inside Mir 132356
SNO underground D_2O Cerenkov solar neutrino detector anal. 132309
solar neutrino spectrum, low energy expt., detector review 97976
solar neutron detector detect. efficiency calibrated by accelerator neutron beam 87207
SOUTHERN cosmic ray expt., large area Cherenkov detector syst. *(German* 110295
TeV γ-ray astron. apparatus/observational anal. 132425
thermal particle detectors, neutrinoless double β decay expt., review 87222
thin sampling calorimeter detector response using GEANT/FLUKA simul 132296
UHE air shower events, integrated pulse-width trigger unit 98072
water Cherenkov detector, rem. particle dens. calib. with crossing-through muon 87206
WIMP dark matter searches, detectors 132315
ZEPLIN-I, single phase liq. Xe detector for dark matter search 121542
CsI hodoscopic calorimeter for GLAST beam test engng. module, constr. an perform. 132408
GaAs solar neutrino detector 97998
Si detectors, develop. and appls. 132369
TeO_2 high-resoln. bolometers for rare events detect. 76082
Xe liq. TPC, γ-ray imaging, LXeGRIT appl. 76188

cosmology
ANTARES neutrino telescope, R&D programme status 98048
CMB observational maps, sig. imaging, power filtration anal. 107547
grav.-wave background response of space-based interferometers 121453
high energy phys., conf., Tampere, Finland, July 1999 78390
inflationary universe, holography, quant. geom./inform. theory 83776
NASA's cosmic journeys missions 122474
quantum holography, mag. reson. tomography and gravit. wavelets 82965
quasar refr. scintillation as probe of intergal. medium 120501

cosmotrons *see proton accelerators; synchrotrons*

cost-benefit analysis
AIT-II dark-field inspection tool with automatic defect class., method/cost effec tiveness 100629
ALARA concept, cost of radiation damage 87989
central cogen. units in Athens, economical approach 112298
COTS hardware/software/tools in mil. equipt., user experience 122748
distrib. businesses risk mgt., emerging aspects 133628
DSM, elec. price strategy, benefit anal. *(Chinese)* 99233
elec. power generation options, neuro-fuzzy program approach, Jordan 12311
embedded pass. component technol., cost/perform. considerations 100588
FCOB SMT assembly proc. trade-off cost anal. 115221
health telematics, physician attitudes, empirical survey 111269
high dens. packaging systs., virtual prototyping, JavaCAD tool 89882
inspection strategy optim. in electronics prod. using quality cost models/SPC 124411
integral pass. in PCBs, appl.-specific economic anal. 67611
mil. systs., procurement cycle, cost of failure 113792
modular proc. technol. for VLSI syst.-on-a-chip appls. 104080
motor vehicle electronics, quality and reliab. assurance 134573
multi-line PCB prod. effects on test economics/strategies 125911
multisite IC testing for reduced test time/costs 116007
opt. networks routing and switching, hybrid vs. router-only solns. comparison 96753
PACS, cost anal. at Turku Univ. Hospital 85263
PACS in private practice, St. Paul Radiology PACS project 98866
PCB proc. quality cost models, SPC method integrat. 115171
power market ancillary services, reserves, power syst. security/reliab. *(Chinese)* 122820
power network planning eval./cost-benefit anal. *(Chinese)* 111969
power transformer overloading, economic benefit, risk eval. 112599
ref. fab methodology for proc. cost reduction using systematic target setting 100551
residential buildings, energy conservation retrofitting, subsidized tariffs 123117
residential buildings fenestration, Italian energy rating scheme 123115
selective soldering for double-sided multilayer PCB assembly, proc. implement 115145
self-primed spin-on low-k materials testing for wafer cost of ownership optim 92124
SimWitch software tool for materials stream cost distrib. assess., FLIPAC Esprit Project 67494
SMT mfg. line test proc. optim. 125891
Snowy Mountains Hydro-Electric scheme, economic justification 123236
teleconsultation for primary-care ophthalmology and dermatology, cost study 76783
telemedicine link, low-cost, in Bangladesh, eval. of experience 76778
wafer environ. control, contamination metrology equipt., cost anal. 103525
X2000 avionics develop. program, schedule & financial risk mgt. 122519

t-benefit analysis continued
a-Si-alloy/c-Si stacked solar cells, design, technol., perform. eval. 112992
t optimal control
power syst. load shedding optim. using dyn. modelling 122900
sta Ribeiro effect *see dielectric properties*
sting
see also life cycle costing; software cost estimation
33-420 kV power distrib. protection/control equipt. reliab. 133611
110 MW combined cycle cogen. plant concept, Germany *(English)* 112330
690 V indust. distrib. networks, economic savings pot. *(English, French)* 134668
2001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Feb. 2001) 100393
act. commun. network cost model 96051
all-outdoor-air HVAC systs., energy saving economic anal. 99477
Argentinian Electric Energy Market, elec. spot pricing 122838
ATM networks, videoconferencing syst. optimum design 96251
best-effort network, bandwidth guarantees provision, call-admission/pricing 119666
bilateral contracts, elec. spot market, British/NordPool experiences 88318
border pricing protocol for inform. exchange between autonomous systs. 119275
broadband capacity upgrade strategies in residential areas, investment cost anal. 74461
Bulgaria's energy syst. transit. to market economy, barriers to change 99468
bursty traffic, differentiated services networks pricing 119670
Californian power crisis robust Electricity Value Equivalent systs. *(Chinese)* 111767
capacitive reactive power cost eval. in deregulation environ. 111760
cardiac disease diagnosis and mgt. using telehealth 133150
CDMA cellular systs., call admission control for arbitrary traffic distrib. 85752
channel capacity region per unit cost, radio resources pricing for utility maximization 128950
co-Scandinavian network elec. prices, water reservoirs influence 99217
cogeneration cost allocation, reduced exergy, available energy *(Chinese)* 77729
cogeneration operation dispatch, interactive best-compromise approach 112299
commun. network congestion pricing 119449
competition in nuc. power indust. 123121
competitive elec. markets resource adequacy, US regulator perspective 111704
competitive energy market access, functional-technol. proc. optim. 111695
competitive power exchange market, equilib. values 99221
competitive power generation market expansion planning optimisation 122933
composite power syst. outage cost assess. method *(Korean)* 77155
computer-aided tolerance synthesis with stat./optim. techs. 67504
congestion cost/OPF calc. using Internet Web program *(Korean)* 122816
congestion pricing and user adaptation 119684
corporate investment behaviour under incomplete inform. 89759
cost-efficient power distrib. network develop. overview 133650
cost-optimal LV distrib. network design, contact safety considerations 133644
cost/mgt. accounting innovations diffusion eval. 89699
customer-supplier rels., win-win principle 89774
day-ahead elec. markets auction design 88329
DCE, reliab. eval. using AHP 108238
decentralised DC/DC power supply, standardised vs. custom design 108463
dedicated access line, value added integrated telecomm. services 96011
demand pull type control methods, throughput time reduction, supply chain sync. 67691
deregulated elec. market pricing/operation by noncooperative game 77163
deregulated elec. market VAr pricing using marginal costs theory 111808
deregulated elec. markets, locational gaming model 111689
deregulated elec. markets transactions, radial equiv., quadratic prog. 133509
deregulated elec. power markets, gaming and price spikes 88328
differentiated fairness, service model/implement. 119578
DiffServ, adaptive appls. network resources pricing 119682
distrib. expansion planning, problem modelling and formulation 122935
distrib. planning optim., capacity/efficiency/reliab. improvement 133568
distrib. syst. planning, optimal feeder routing using heuristic strategy *(Korean)* 77281
distributed fuel cell power plant, economical feasibility 133909
distributed power generation for appropriate customer price response provision 112206
district heating social cost in sparsely populated countries 123177
DS-CDMA forward-link resource allocation based on pricing 96462
DSM programs economic anal./modelling in generation planning 77297
dyn. long-range power transm. planning using constrained GA 122922
economic dispatch, transm. service charge, wheeling cost, generation company 133499
economic feeder cable selection optim., risk anal. considerations 133731
economic indicators calc. accuracy, meas. uncertainty approach 78546
economic mfg. qty. model with imperfect product quality 89899
elec. energy market, power flow tracing method, theory 111784
elec. energy supply deregulation, retail competition 133456
elec. generation markets, auction mechanism anal., two-level optimisation model 99212
elec. market congestion dispatch scheme *(Chinese)* 122857
elec. market investment, cost-effectiveness calc. model *(German)* 111686
elec. market liberalisation, power syst. economic effects *(German)* 88302
elec. market liberalisation, risk mgt. decision-making 133482
elec. markets defn., arbitrage cost approach, antitrust policy 111733
elec. prod. decision making, external costs incorporation 88395
elec. transm. pricing, transm. rights scheme issues 99236
elec. utilities, efficiency measures, regulatory appl., price caps 88319
energy pricing strategy with CO_2 tax, effect on CO_2 emission mitigation 111764
engng. design quantitat./qualitat. cost estim. 100525
environ. accounting, Fujitsu's activities *(Japanese)* 78731
EU elec. power exchanges comparison 99220
European universal service obligations, current and future aspects 130535
external elec. costs estim. project *(French)* 111696
feeder capacitor allocation optim. using interactive trade-off method 112016
feeder-specific expansion investment plan, demand-side resources prioritization 77283
financial transm. right, power marketer's perspective 111748
flip-flops, design params. estim., reliab., speed and cost 102120
floating struct. fatigue maint. planning, cost/reliab. based 113422
fluid catalytic cracking plant, heat exchanger network retrofit anal. 124145
fully-open elec. market customer energy use mgt. *(Chinese)* 122832
gas turbine fuel diversification for combined cycle plant appls. *(German)* 123223
generator contrib. to line reactive power flow 77179
Germany DVB-T, implement. costs *(German)* 75272
costing continued
Greek wind energy investments, economical assess. approach 112378
home health care, low-cost telemedicine 133200
HV cct.-breaker cost-effectiveness calc. method *(German)* 112679
HVDC transm. lines, transm. pricing methods *(Chinese)* 88324
hydro-units pricing method in power market *(Chinese)* 111725
IEEE integrated network mgt., conf., Seattle, WA, USA (May 2001) 124177
IGCC power plant economics, improved gas turbine power output project 99570
indust. customers, power quality cost survey 113158
indust. power distrib. syst. planning project, Germany 133565
indust. power syst. supply quality costs anal. survey 88437
inspection strategy optim. in electronics prod. using quality cost models/SPC 124411
integrated advanced power cycles, techno-economic modelling 99571
internal European elec. markets tariff develop. 133481
Internet, reliab.-based optimal allocation of mirror servers 74400
Internet dialup service congestion-depend. pricing 85226
Internet flat-rate or usage-based network services pricing 108236
Internet pricing and commun. hist. 108235
Internet queue forming, differentiated services *(Dutch)* 85196
interruption cost anal. for elec. power customers, Greece 133442
investment decisions under economic/implement. uncertainty 89760
IP telephony, pricing strategies, comparative study 74144
IPP elec., fuel-depend. pricing, CO_2 emission limitations 111763
ISP/users, flexible pricing plan 119683
Japanese manufacturers' R&D dyn. anal. 89727
large warm-bore supercond. quadrupoles, cost scaling anal. 75953
locational marginal pricing, New Eng. elec. market perspective 111737
locational marginal pricing, transm. congestion alleviation 111747
locational-based marginal pricing, meaning and myths 111734
long-range dyn. transm. planning using constrained GA 122925
long-run marginal cost-based transm. use-of-syst. pricing, methods comparison 133436
long-term power generation fuel prices modelling/anal. *(Chinese)* 123095
min. expected cost-oriented optimal maint. planning 113421
mixed exponential pop., cost optimal burn-in tests, Bayesian calc. 89799
mobile network operators, competitive strategies *(German)* 74845
multi elevators, cost optimized maint. scheduling *(Japanese)* 134526
multi-service networks, pricing policies 119567
multicast commun. pricing, cost-based approach 108054
multicast routing problem, GA 95995
multicell wireless data network, pricing/power control 131151
multimedia content distrib. to bal. QoS and cost 96265
MV/LV distrib. systs. design coord. 133655
NASA Discovery-class mission concepts, formulation 122483
NASA Discovery-class missions, implement. approach 122484
network assisted power control for wireless data 131171
network extension method for multicast traffic increase *(Japanese)* 95977
nuc. power project mgt., cost-schedule integrat. control, MIS *(Chinese)* 88537
oncology home care vs. hospital care, cost-minimization anal. 111286
open transm. loss cost allocation, cooperative game theory 111991
optimal multicast routing, modeling and discussion 95997
optimal seq. partitioning problem using GA 78899
optimal standing reserve utilisation, GA-based contracting strategy 99314
organizational objectives adjustment optim. using matrix struct. 67491
orthopaedics, patient referral by videoconferencing, clinical effectiveness and cost anal. 111285
outpatient teleneurology cost implications 133181
PCS network, registration/interrogation costs 131143
Polish energy conservation policy under energy policy guidelines 99229
polypropylene-insulated cable cost minim. using intell. selection 91444
power delivery improvement using SMES 113035
power distrib. switchgear upgrades, capital costs optimisation 112700
power exchange scheduling, tie-line costs allocation, multi-agent approach 111781
power market clearing price forecasting, Bayesian-based class. method 111761
power plant operation/bidding, dyn. cost anal. *(Chinese)* 111791
power pool, generation companies' bidding strategies *(Chinese)* 88300
power station efficiency/capacity pot. overview *(German)* 123104
power syst. pricing issues and approaches 111735
power syst. risk mgt., condition-based maint. approaches 133449
power systs. engng., conf., Halifax, NS, Canada (July 2001) 100448
power/fuel shortages, macroeconomic losses eval. 88299
procedural inspection task, forgetting models, empirical comparison 100660
prod. tolerance anal. tailored to organisations 100518
product design costs, design eval. implications review 78572
project cost control syst. design, safety model anal., IT *(Chinese)* 100527
PV market and costs forecast, demand elasticity model 113010
PV systs. deployment accel., TEAM-UP partnership results 112396
R&D investment decision and optimal subsidy 89761
R&D real American seq. exchange options valuation 89765
radiology, low-cost PC-based image review workstation appl. 98840
real-time elec. pricing programme, USA 88304
reliab.-based optimal structural design using decoupling approach 113786
reliable district heat supply systs. design 88552
renewable energies competitiveness, external costs importance 99208
rural distrib. syst. reliab. cost/worth eval. tech. 112014
rural LV distrib. networks design using dyn. prog. 133575
rural MV radial feeder develop. optimisation 133651
short-term transm. planning, network congestion assess. 111965
SimWitch software tool for materials stream cost distrib. assess., FLIPAC Esprit Project 67494
Spanish elec. consumption profiles calc. using prediction intervals 122932
Spanish elec. sector distrib. losses eval. 133486
spill elec. price of Central China Power Net *(Chinese)* 88325
spot price calc., decoupled OPF, GA *(Chinese)* 111768
structural design specs., cost/safety optim. 113420
suppl. elec. power losses estim. from distrib. network load flow 112019
supply reliab. cost allocation under competitive generation market 99215
syst. time-between-failures, asymptotic property misinterpretation 67666
systematically-renewed struct. optimisation 113791
systs. test to DFT, model based cost optimisation tool 86398
TDM and packet tandem networks, anal. of service operations cost 74094
TDM photonic switching network, variable mux/demux, opt. time jumper 86106
technol.-regulation convergence, IP telephony case 96025
telecom. network design, reliab./cost considerations 119452
telecomm. commodity prices, stochastic models 107980
telecomms. indust. price cap impact on productive efficiency 119848
telecomms. pricing, receiver pays principle, economic anal. 85167
telecommunications service provider shifting, price regulation 85112

costing continued
teleconsultation for primary-care ophthalmology and dermatology, cost study 76783
teledermatology, real-time, societal costs compared with conventional care, cost-minimization anal. 111287
telemedicine implement. and eval. for rem. health-care, European Northern Periphery Programme Project 133183
thermal unit commitment scheduling approach, power interruption cost considerations *(Japanese)* 77739
TPP, capital constr. cost, gray forecast, optimal decision making *(Chinese)* 77728
TQM, TQM 108019
transm. cost calc., loss allocation rule *(Chinese)* 111794
transm. expansion planning kernel-oriented algm., paper discussion/closure 133577
transm. network voltage stabil. anal., paper discussion and closure 133551
transm. pricing, elec. tracing, proportionality principle 99214
transm. pricing using improved sensitivity indices 111785
transm. services pricing, reliab. benefits consideration 111992
transm. syst. voltage ancillary service, cost-based approach 133504
UK, BT's cost-of-failure anal. 74062
ultra-longhaul transm. networks, optimal network design 107973
ultra-shallow jn. form., ion implant./RTA technol. trends 103261
uncapacitated telecomms. network design, dual ascent method 85075
undergraduate engng. education, cost anal./costing model 89634
urban network power supply elec. pricing policy *(Chinese)* 111770
US Army IT mgt., installation inform. infrastructure archit. 111643
US elec. indust. deregulation, market based pricing 88307
US elec. supply indust., putting consumers first 111729
USA local loop unbundling, cost proxy model flaws 74475
usage-based transm. cost allocation methods, paper discussion/closure 133587
utility industries, credible regulatory threats, prod. design 122795
VAr-constrained real power dispatch/pricing algm. 111807
venture capital investments, binomial valuation model 89766
VoD, pricing considerations 131763
voltage sags freq./cost estim., Finnish distrib. companies 133601
Web satellite-based multicasting services, theoretical framework 130779
wheeling options selection using evol. prog.-based algm. 111775

Cotton-Mouton effect *see magneto-optical effects*

Coulomb blockade
1D Josephson jn. arrays, Coulomb blockade 127505
2D nanometer-size multijunctions, large current fluctuations. suppression 126906
disordered nm-size arrays, Coulomb blockade, threshold voltage dispersion, variance anal. 92421
double-dot qubits, adiabatic steering and determ. of dephasing rates 91798
ferromag. single-electron transistors, multiple tunnel jn., tunnel magnetoresist. 81919
mesoscopic elec. ccts., commutation rels., Coulomb blockade 70222
metal/MWNT/metal structs., electron transport, Coulomb blockade effect 102870
multigate SETs, single-electron pass-transistor logic, binary adder 125459
multiwalled carbon nanotube island with nanotube leads, Coulomb blockade 103934
nanocrystals acting as Coulomb islands, Ga^+ FIB proc. 92418
nanometer-sized arrays, Coulomb blockade, threshold voltage dispers. reduct. 126907
nanoscale Coulomb blockade memory and logic devices 81400
primary thermometer based on Coulomb blockade 75421
QD, Coulomb blockade, background charge 126172
QD, effect of inelastic scatt. on av. Coulomb-blockade peak height 91796
QD, Kondo effect, mag. field-induced 91823
quantum current std. using single electron tunnelling *(Japanese)* 86388
SET, background charge rearrangement, modelling 103931
SETs, RT, nanostructure fab. 92428
single electron memory cell, coupled multiple tunnel jn. arrays 81401
single Josephson jns., coherent single-Cooper-pair tunneling, Coulomb blockade 70991
two Coulomb blockade transistors separated by island with applied oscill. pot., characts. 92424
AlGaAs/GaAs, QD, energy relax., DC/pulse-excited current meas. 80857
Au nanoparticles assembled chem. on biomol. scaffolds, nanoscale patterns, electron transport props. 102856
C nanotube single-electron transistors at RT 91511
CdS single nanocrystal on SAM, room temp. electron transport 103038
Cr highly resistive thin-film strips for single-electron transistor 103935
GaAs dot-wire coupled structs. grown by selective area MOVPE, single electron devices appl. 101370
$GaAs/Al_{0.33}Ga_{0.67}As$ QD device, Coulomb charging 126182
GaN QD form. by self-assembling droplet epitaxy, appl. to SET 126136
Ni/NiO/Ni multiple tunnel jn., ferromag. SET *(Japanese)* 92874
PbS, single nanocrystal on 11-mercaptoundecanoic acid monolayer, single-electron tunneling 91725
SOI ultrasmall QD single-electron transistors, fab., integrat. 92420
Si Coulomb blockade devices, periodically oscill. driving pot., elec. characts. 92425
Si indiv. nanocrystals, single-electron charging effect 103114
Si nanostructures, Coulomb blockade, single-electron devices, review 69990
Si, single-electron transistor, transport props. 81402
Si single-electron transistors, Coulomb blockade oscills. obs. 126908
μc-Si:H thin film, VHF PECVD growth, struct. and transport props., SET appls. 80633
Si:P SOI nanowires, Coulomb blockade bi-directional electron pumps 126171
Si/SiO_2 Coulomb-blockade-struct., lithog., elec. characts. 126239
SiGe double QD, hole transport, cond. peak splitting 69694
SiGe heterostruct. nanowire, elec. transport props. 80858

coulometry *see electrochemical analysis*

counter accessories
see also counting circuits
gas-cylinder inversion syst. based on embedded computer 76137

counters
see also Cherenkov counters; Geiger counters; proportional counters; scintillation counters; semiconductor counters; spark counters
aspiration integrat. small ion counter, shielded collector, freq. response 87240
diamond, CVD films, particle detector appls. *(French)* 87199
low-level radioactivity counting, decision rules eval. 98818
particle counter opt. sens., standardized method 97201

counters (circuits) *see counting circuits*

counting circuits
see also coincidence circuits; pulse height analysers; scaling circuits
all-opt. digital proc. ccts., switching/regenerative memory appls. 116868
ATLAS liq. argon calorimeter, readout drivers, PU design 76105
Borexino read out electronics, trigger syst., detector photomultipliers 76142
C-PAL flip-flops, energy recovery low power design 79824
CMOS regularly struct. parallel multiplier with low-power non-binary-log counter ccts. 125426
counters with near min. counting/sampling period and hardware complexi 102056
incrementer/decrementer cct., high-speed CMOS, multiple look-ahead struc 102023
M/T digital tachometers, perform. anal. and compensation 120761
MINIBALL Ge detector array for RIB facilities 76016
polyphase interpolator for combined time-to-code convertors 76136
radionuclide activity & neutron flux stds., unified counting channels 87262
relative permitt. detector for cable insulation 77381
SFQ logic cct., resettable latch 70936

country planning *see town and country planning*

county planning *see town and country planning*

coupled circuits
AB class low noise I-V integrated charge amp. *(Polish)* 90766
arrays of oscillators, sync. stabil., universal probe 90682
BiCMOS quadrature multi-phase LC oscillators, phase noise perform., qualit factor 125821
chaotic oscillators, transm. line coupling, bifurcation 90689
Chua ccts., chaos sync., uncertainty phenom. 101723
continuous-time ccts., clustering phenom. 101715
cross-coupled relax. oscillator, quadrature rel. 79614
deep submicron technol., coupled RC trees, moment matching method 81438
diode coupled RC phase shift oscillators, chaotic phenom. anal. 125259
duplex filter tuning using time domain transforms, cross-coupled resonator 125683
dyn. 1D autonomous rings, dyn. PWL cells, equilib. points 101709
extended-range RF ident. systs., inductively coupled contactless design *(German)* 85940
folded symmetric resonator filters with source-load coupling, direct synthesi 80192
hyperchaotic ccts., sync., scalar transm. sig. 101708
hyperchaotic ccts. sync. via scalar sig. 90691
Josephson-jn. arrays coupled by distributed ccts. 70974
LCR distributed self-oscillator inductively coupled with transm.-line sect., mode 114657
mesoscopic coupled cct., quantum fluct. depend. on temp. *(Chinese)* 101726
mesoscopic elec. ccts., commutation rels., Coulomb blockade 70222
multistage amps., coupling capacitor non-ideality effects 125238
nonlin. oscillator arrays, difference pattern beam steering 101845
one-way open coupled double-scroll ccts., spatial instabil. 90681
one-way open coupled double-scroll ccts., spatiotemporal stabil. study 125631
orthopaedic implant long term monitoring, inductive power supply 122338
periodically switched nonlin. ccts., distortion anal., time-varying Volterra series 79522
PLL, sync. and pattern form. selectivity 125267
RC oscillators network, Wien-bridge ccts. *(Japanese)* 68639
RC tree networks, moment matching based model for crosstalk estim. 81456
self-switching phenom. sync. in chaotic oscillators coupled by one resistor 101714
switch-coupled relax. oscillators, superstable sync. phenom. 90784
three-stage coupled ring oscillator, quadrature output 79616
totally artificial hearts, wireless transcutaneous energy transm. syst. 76712
two-grid coupled arrays, Turing patterns control 101697
Van der Pol oscillator coupled to Duffing oscillator, dyn., analog simulators 79528
van der Pol oscillators, fully-interconnected, multimode oscills. 90783
van der Pol oscillators, phase states, wave propag. speed 101693
van der Pol oscillators, phase-inversion-waves, refl./transm. 90786
Wien bridge oscillators, coupled network, sync. 101825

coupled mode analysis
2×2 symmetric fused fiber couplers with Bragg gratings, tilt angle influence 127598
2D rect. resonator, mode coupling in bulk waves, unitary matrix 104424
ADM, multimode interf. device, grating-induced dispersion 109201
binary-phase diffr. gratings for periodic struct. fab. *(Korean)* 72074
Bragg fiber grating refl./phase responses, apodisation impact 127661
Bragg grating-assisted opt. fiber symmetric couplers, unified coupled-mode theory *(Chinese)* 116640
cascaded directional coupler-based WDM device, 4-channel/1200 GHz spacing/1550 nm, design 109180
cascaded second-order nonlin. in silica fiber, wavelength conversion study 117440
corrugated long period fibre grating torsion sens. 97284
DFB fiber lasers, multiple wavelength operation 82537
DWDM networks, opt. ADM charactn. 75022
FBG, nonlin. nonuniform & Gaussian apodised, pulse switching 105557
fiber Bragg grating, large bandwidth/short grating length, charact. 104640
fiber Bragg gratings, photosensitivity, coupled mode theory 127602
fiber grating, long-period, asymmetric transm. spectrum, removal by beam scanning method 82082
grating assisted opt. waveguide couplers 82147
grating synthesis, coupled-mode theory 127603
grating-assisted directional coupler, second-order perturb. theory 82136
innovative integrated grating-assisted ADM, design and simul. 96798
long antenna, photonic cryst. substr., radiation pattern 83499
metal-clad polymeric slab waveguide, propag. const., perturb. anal. *(Chinese)* 71330
natural single-phase, unidirectional SAW transducers, coupled-mode eqns., hybrid FEM 116214
NLC fibers, elec. controllable long-period gratings 116618
non-evanescent adiabatic directional coupler 116736
nonlin. phase-shift via second-order nonlin. cascading in silica opt. fiber 82932
NRD guide channel dropping filter 69050
oblique incidence nonpolarizing guided-mode reson. grating filter 71481
oxide-confined VCSELs, spectral linewidth model 93647
phase-shifted Bragg gratings, ultrashort light pulses transm. 127620
phase-shifted long-period grating device design, gain-flattening fiber filter appls. 93063
photorefr. media, grating translation, two beam coupling, anal. modeling 82809
photorefr. medium, nonlin. unidirectional coupler with diffusion nonlin. 82162

pled mode analysis continued
planar nonlin. waveguides with lin. grating, photonic bandgap struct., SHG 127724
planar waveguide problems, rigorous coupled wave anal. 104698
SAW devices, COM anal. 70443
semicond. lasers, multi-long. mode instabilities, coupled mode model with gain dispersion 71826
short period/long period fiber grating synthesis, Gel'fand-Levitan-Marchenko inverse scatt. method 104632
sidetap opt. fibre grating filters 127889
single-mode dispersive fibres, Raman-assisted three-wave mixing, wide-range freq. conversion 82089
spiral fiber grating mode coupling 131414
step chirped fibre grating, phase mask principle & design *(Chinese)* 127683
TM_{01} vircator, TE_{11} mode generation converters at 4 GHz 125970
ultra short two-sect. vert. directional coupler switches, extinction ratios 93108
ultra-short fused vert. directional coupler switches composed of two sects. *(Korean)* 80207
ultrashort two-sect. fused vert. coupler switch, high extinction ratio 109212
waveguide grating devices, strong backward coupling coeffs., ray-opt. determ. 104728
$BaTiO_3$ crysts., grating erasure, orthogonally polarized FWM 128431
$BaTiO_3$ high-gain photorefr. cryst., beam-fanning, multi-wave mixing model 128444
$Bi_{12}TiO_{20}$ cryst. refl. grating two-beam coupling 117417
$Er:SiO_2$ fibre amp., gain spectrum flattening, long-period grating 116895
Er-doped twin-core fibre narrow-band filter for fibre lasers 105188
n-InSb doped piezoelec. semiconds., electrostriction effect on parametric dispersion/amplif. 93792
$KTiOPO_4$ OPO spatial beam quality *(Chinese)* 128518
$KTiOPO_4/Si_3N_4/SiO_2$ anisotropic waveguide, SHG efficiency, TM case 104712
$La_3Ga_{5.5}Nb_{0.5}O_{14}$ electrode-width-diff.-reversal-of-directivity transducer 92739
$La_3Ga_5SiO_{14}$ reversal of directivity transducer, coupled-mode eqns. 92740
$LiNbO_3$, four-layered quasi-phase-matched leaky waveguides, parametric amplif. 104714
$LiNbO_3$ waveguide nonlin.-optic devices, ps pulse wavelength-conversion, num. anal. *(Japanese)* 93794
Nd:YAG microchip lasers, stable plano-spherical microcavity 82596
SiO_2-based arrayed waveguide WDM, design implement. up to 20 channels 109179

pled networks *see coupled circuits*

pled superconductor devices *see superconducting junction devices*

pled transmission lines
air-gap stacked Marchand balun for MMIC, graphical design method 80373
asymm. multielement coupled line directional couplers, design mapping 102514
asymmetric coupled lines in inhomogen. medium, S-params. and equiv. networks 72402
differential interconnects, charactn. from TDR meas. 125868
distributed interconnect networks, transm. line model based anal./simul. 90651
hairpin type coupled line bandpass filter, design method 102572
Hermite coupled transm. lines, time-domain anal. 83451
high-speed interconnects, anal. using multipoint Pade approx. 90642
high-speed large interconnect network simul., nonlin. cct. reduct. 90639
HTS coupled-line low-pass filter for broadband harmonic rejection 69084
lossless multiconductor transm. lines, nonlin. resistor termination, dyn. 101698
lossy transm. lines, triangle impulse response 117724
LTCC-MLC balun, WLAN/Bluetooth 80221
microstrip bandpass filter, three-line struct. 102541
microstrip bandpass filters, harmonic suppression, parallel coupled lines *(Chinese)* 102510
microstrip coupled lines, leaky modes, mutual coupling 83459
microstrip coupled-line filter design for WCDMA using EDA package 114949
microstrip lines, anal. using integral method 94092
microstrip ring resonator using qtr.-wave couplers 69077
Mobius resonator, modes 83487
Mouw's hybrid jn., planar, doubly bal. star mixers, ultra-broad-band devices 80181
multiconductor multilevel folded-line bandpass filters, design methodology 125677
multiple-line planar struct., two-coupled line model 83461
nonuniform coupled-lines, null point perturb. and coupling control *(Korean)* 117747
nonuniform lossless coupled transm. lines, discrete time-domain anal. 83450
nonuniform transm. lines, transient anal. 105820
nonuniformly coupled transm. line filters, design method 80025
parallel-coupled-line microstrip bandpass filter with spurious passband suppress. 102577
pass. microwave networks, line impedances calc. 69082
RF oscill. generation by EM shock wave in coupled transm. lines with anom./normal dispersion 117722
RF pass. cct. modelling, coupled lines and scalable models 114962
symmetric broadside-coupled CPW balun, anal. and design 69091
transient simul., time-domain scatt. params. 90652
V- and W-shaped shielded microstrip lines on anisotropic medium, FEM anal. 105840
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
GaAs opt. probe, coupled microstrip lines, pulse coupling meas. 125655
$Ni_{1-x}Zn_xFe_2O_4$ multilayered common-mode filter, inner coupled meander line 127397
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buried diffusions 91391

uplers (electric connectors) *see electric connectors*

uplers (waveguide) *see waveguide couplers*

upling (process) *see joining processes*

upling circuits *see coupled circuits*

urseware
biomedical engng. design courses, software aids 98115
computer-based intell. learning material for CSCL, use/reuse *(English)* 78533
DCTlab educational image compression software for digital TV course 89640
ECG interp., teaching guided by CARDIOLOG tutorial ES 100477
EEG quantitat. anal., virtual training simulator-designer for tutoring students and doctors 89656
image proc. teaching, Java vision toolkit 118450
magnetostatic anal. of BLDCM using 2D PDE solver, education 113287
MathCad, IM charactn. computer-aided multimedia education 78532
microelectronics education online courseware library using Java applets 78515
multimedia dist. learning on demand syst., IP network *(Chinese)* 119780

courseware continued
Multimedia Super Corridor, Malaysia, software develop., business-university collaboration 130938
phys. education using interactive digital video clips 75325
undergraduate power syst. anal. course, software program 124277

covariance analysis
2-MMPP traffic model, versatility anal. 73766
3D multiple view surface registration with error modeling and anal. 94525
adaptive detect. in dense target environ. 96937
bistatic STAP perform. anal. in radar appls. 96939
blind broadband source localization/separation in miniature sens. arrays 95720
broadband DOA estim. in presence of ang. spread 95727
chaotic self-similar traffic generators, discrete-time second-order random proc. 130207
closed glottis interval determ., multiresolution sig. representation 118057
digital watermark, wavelet transform, pseudorandom seq. *(Chinese)* 129270
Doppler radar target tracking, neg. correl. & optimal filters 120428
DS-CDMA, Schur-saddle fn. property 131234
edge directed interpolation 94649
EEGs, multi-sources, multi-dimens. delay-correl. MUSIC *(Chinese)* 87436
face pose/posn. robust tracking, perceptual cue fusion 84527
fluct. charactn. for opt. wave propag. in atmos. turbulence *(Chinese)* 105769
GPS receiver tracking loops, optim. and sensitivity anal. 109321
IR clutter background, wide-sense stationary props. *(Chinese)* 120911
irregularly sampled data, AR spectral estim., Burg algm. 118832
kernels, simultaneous diagonalization approx. soln., second-order stochastic procs. 119079
landmine detect., automated, multispectral imaging, iter. morph. algms. 77065
landmine under rough surface, IR signatures, diurnal cycle, simul. 76943
(max, +)-lin. systs., Poisson input, joint Laplace transform 78789
moving av. model estim., windowed periodograms 84661
moving wire-antenna radiation in plane interface presence 72534
multi-objective regression modifs. for collinearity 113878
narrow-band mobile commun. channels, vel. estim./correl. props. 108811
natural images, edge-directed interpolation 118367
network traffic modeling, discrete-time loss anal., overload probab. capture 73806
nonstationary stochastic sigs., spectral generating theorem 95631
orient. estim., conventional techs. and non-differential approach 118344
phased array radar, target tracking with adaptive sampling intervals *(Japanese)* 75214
pos. real seqs. parameterization and MA param. estim. 130031
radar detect., adaptive cosine estimator, max. invariance 109262
sample-covariance-based adaptive sonar detectors, perform. 109311
SAR interferometric images, adaptive complex-amplit. texture classifier, local phase unwrapping/feature extraction 75175
satellite radio navig. syst., covariant coord. method for object's attitude determ. 86254
sea mine detect. & class. proc. strings fusion for sonar imagery 77050
self-affine intrinsic random fns., local stationarity/simul. 73634
sinusoidal freq. estim. by second-order algms. for mixed spectra time series 118961
space-time array data simul. 107534
still image coding, hybrid method 129719
tissue harmonic imaging, spatial covariance anal. 110784
tracking, aerial manoeuvring obj., adaptive Kalman filter 88080
underwater sig. detect., biol. noise, pass. detect. perform. 75243
vector MAC capacity region with covariance feedback 128942

covariance matrices
2D generalized sidelobe canceller with partial adaptivity 129952
2D random variable, dens. fn. logarithm nonparam. approx. 113897
2D separable-denominator digital filters, stat. sensitivity, min. sensitivity struct. 91059
3D shape and motion recovery, error charactn. of factorization method 73291
3D video-based meas. syst. dyn. calib., evol. strategy 86406
4D adaptive Kalman filter for Doppler freq. tracking *(Chinese)* 119056
acoustic vector-sens. correls. in ambient noise, array proc. 111445
adaptive cancellation of selected harmonics from sig. 119053
adaptive filter for calib./estim. of redundant sigs. 84754
adaptive line enhancement via subspace tracking 107546
adaptive minor component extraction with modular struct. 107383
adaptive radar imaging in wide ang. sector 96956
adaptive reduced-rank interf. suppression with rank selection 105783
adaptive target detect. across clutter boundary, GLR/max. invariant detectors 96890
AGC Applebaum array for rejection of eigenvalue spread interfs. 94193
array sig. proc., struct. spatial interf. rejection combining 118909
AUV obstacle avoidance & path planning, multibeam forward looking sonar 78242
Bayesian sig. classifiers, soft probabilistic neural network implement. 107314
BGA substr. conducting path defects, AOI 100611
blind source separation, convolutive decorrelation 118818
brain dyn. imaging using ICA, blind source separation, review 110617
camera network design by natural selection 84284
Capon spectral estimator, efficient implement. 118882
co-channel sigs. detect. and copy, space-time proc. 108554
color obj. recogn. under different illum. 107281
computer vision params. estim., covariance inform. 94899
concatenated vector-valued fading channels, asymptotic eigenvalue distrib. 131268
direction set based algm. for spectral estim. 95689
distributed recursive state estimators, distributed Kalman filtering fusion with feedback 107508
DOA estim., subspace-based, nonparametric stats. use 107379
DOA of multiple scatt. sources 130023
DS-CDMA multipath channels, blind adaptive multiuser detect. 95839
DS-CDMA tracking mode receiver with joint channel/delay estim./MMSE detect. 131056
DS-SS sig., pseudo-random seq. blind estim. 107623
dyn. image reconstr. for proc. CT, pseudo Kalman filter algm. 106710
face encoding and recogn., topological PCA 95429
face recogn., adaptive activation fn. neural net appl. 107133
feature eval., quadratic mutual inform. 105987
filtering for lin. systs. with fractional Brownian motion 84744
FIR model-based adaptive filters, proc.-/meas.-noise covariance estim. 107493
flexible workobject localization for CAD-based robotics 94450
football match image seqs., automatic camera calib. 95449
geometric struct. with indeterminacy, gauges/gauge transforms. for uncertainty description 84262

covariance matrices continued
Gershgorin disks, detect. of source no. 118919
GLRT-based adaptive detect. algms. for range-spread targets 86160
GPS navig., enhanced accuracy, interact. multiple model estim. 131713
HF surface wave radar, shipborne, expt. anal. of sea clutter 75070
image features 106622
inform. for vision params. estim. 106547
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
isospectral flows, semi-explicit methods 124454
Kalman finite-horizon robust filter design 107525
KLT based on overlapped subframes for speaker ident. 84051
liq. dielec., complex-valued permitt. determ., regressive model 104239
Markov jump systs., min. MSE estim. 73680
matched and adaptive subspace detectors, interf. dominates noise 107602
max.-likelihood DOA estim. in unknown nonuniform noise 84668
MEG, min. var. beamformers, synthetic aperture magnetometry, MUSIC 110668
MIMO 2nd order blind channel ident. based on correlative coding 130262
mixed spectra time series, sample covariance matrix asymptotic normality, sinusoidal freqs. estim. 73567
mobile robot vision-based localization sens., sens. uncertainty field computation 97398
model-set adaptation, fuzzy Kalman filter appl. 119059
multi-carrier CDMA systs., Cramer-Rao bound for blind channel estim. 119219
multi-objective regression modifs. for collinearity 113878
multichannel autoregressive modelling, finite sample effects 129985
multispectral images, PCA, neural net 94724
MVDR beamformer for circ. arrays 107331
nonhomogeneity detector for Gaussian interf., stat. anal. 107603
nonparametric algms. for sig. & noise characts. recovery 73675
nonstationary data, optimal proc. 109309
normalization of images via covariance matrix and eigenvectors 84581
obj. posn. estim., multi-robot systs., distributed sens. fusion 95704
PCA for STAP, Kronecker product improvement 107599
perceptual color difference metric for complex images based on Mahalanobis dist. 73158
radar Doppler polarimetry, atm. rem. sens., ground clutter suppression 76880
radar secondary data ident. for sig. detect. 75170
radar signature modelling, spatial smoothing algms. 120398
radar target adaptive detect. algms. comparison 120431
robot tour guide, GPS-based localization, error-robust 97037
rot. lin. antenna arrays, superresolution direction finding 105936
SAR multi-freq. polarimetric imagery, PCA-ICA neural network model for enhancement/feature extraction 96929
second-order blind source separation by recursive splitting of sig. subspaces 118815
sidelobe canceller for reflector antenna using sig. subspace eigenvectors 117718
sig. component estim., multi-step selection procedure 96933
simultaneous MEG/EEG source anal., covariance matrix derivation 98258
sinusoidal freq. estim. by second-order algms. for mixed spectra time series 118961
smart mag. sens. design, sensitivity based covariance anal. 121057
space-time adaptive estim. data, large stationary discretes 118902
space-time transmit precoding with imperfect feedback 117948
Sparse-BEFAP, fast affine projection avoiding explicit regularisation 119078
speaker recogn. parameterizations, comparative study 118115
speech recogn. by fractals/iterated fn. systs. 118112
STAP, effects of internal clutter motion in heterog. environ. 96940
STAP algms. with mismatched steering/clutter stats., perform. charactn. 109264
stat. image obj. recogn. using mixture densities 84604
strongly nonlin. systs., Kalman filtering theory, oceanographic appls. 133340
subspace leakage environ., rapid adaptation 107388
subspace-based freq. estim., nonparametric stats. 118904
superimposed exponential sig. least sq. param. estim. 84702
sync. CDMA, multiuser detect. using probabilistic data assoc. 119210
third generation mobile radio systs., use of smart antennas 120064
time-varying channels with DPSK inputs, blind DFE 84857
two-wire thermocouples, temp. reconstr., nonlin. state estim. approach 97874
uncorrelated source detect.-estim., augmentable sparse antenna arrays 119099
vehicle detect., PCA classifier 107155
vehicle-mounted mine/UXO detect., DGPS error, EKF, fixed interval smoothing 77066
vision param. estim. given data with covariances 129621
wideband target signatures, spatial/temporal covariance props. 86129

CPFSK *see continuous phase modulation; frequency shift keying*

CPW *see coplanar waveguides*

CR-39 detectors *see solid-state nuclear track detectors*

crack detection
see also cracks
acoustic surface scatt. fields, Born approx., inverse prob. 76366
act. struct. health monitoring, FRC & steel-reinforced concrete 79467
adhesive for OTDR monitoring in dams 79474
AE calib., ref. source, conical piezoelec. transducer 101607
aircraft inspection, NDE sens. integrat., scanning/positioning modules 122497
aircraft wheel testing, rem. eddy current tech., HTS SQUID magnetometer 76799
automatic defects class. using pulse-echo tech., pattern recogn. 79488
ceramics, flaws and anoms. detect., acoustic microimaging 125145
composite materials, fracture location self-diagnosis, hollow-center optic fiber *(Chinese)* 114561
concrete crack detect., US multi-refl.-/stationary-wave models *(Japanese)* 101605
condition-depend. NDT for reactor component safety 77707
conducting material defect profile ident., HTS-SQUID gradiometer use 101573
conducting medium, embedded crack location, EM tech. 125151
covered surface cracks in metals, microwave probe detect. 101578
damage detect. meas. point selection, mutual inform. concept 86989
deep-lying flaw detect., SQUID pulsed eddy-current probe model 101630
differential TR eddy current test probe, crack shape reconstr. 101612
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
distrib. line, cracks nondestructive detect. by mag. field meas. *(Japanese)* 101539
distrib. lines, nondestructive crack detect. *(Japanese)* 68469
eddy current coil footprint assess., probab. of crack detect. 114537
eddy current probe improvement, DSP algms., autom. meas. syst. 114506
eddy current sens. using GMR/spin-depend. tunneling-based solid-state sens. 90607
eddy current testing, crack recogn., inverse neural model 125150
eddy current testing, multi-freq. excitation spectrogram method, BEM 101593

crack detection continued
eddy current testing, num. anal. by integral eqn. method 128684
eddy-current tech., probe/inducer effects 114543
eddy-current testing, GMR based sens., (sub)surface crack detect. 125144
elec. generators servicing, rotor forging crack inspection, stator repairs 996
evanescent field microwave microscopy & appls., review 101575
fast multipole boundary integral eqn. method to crack problems in 3D 680
FBG-based meas. syst. in struct. health monitoring 86780
ferromag. mater. crack detect., local mag. flux leakage field sens. 68478
fiber optic sens., anchor monitoring 75587
fibre-optic reflectometry, spatial resoln. 90600
fluxset sens. data, mag. field map calc., NDT, hybrid method 79477
green-state P/M compacts, electrothermographic crack detect. 114512
high-resist. composite layer, crack distrib., electrochem. NDT 90608
locomotive wheel integrity US inspection using EMAT systs. 99107
lossy 2D struct., crack detect., microwave imaging approach 114546
LWR press. vessels testing using US phased array techs. 77712
magneto-opt./eddy current imaging NDT, FEM model 101574
magnetostrictive delay lines based NDT, distrib. sens. 101569
metal, deep surface cracks inspection, pulsed eddy current 101571
metal crack detect./sizing, open-ended waveguide, EM field distrib. 101557
metal crack detect./sizing, surface mag. field meas., induction coils 90617
metal surface cracks detect. using small antennas, EM field change 101559
microwave nondestructive eval., global optim. tech. 121169
multilayer aircraft struct., fatigue crack charactn., US imaging 101615
multilayer aircraft struct. inspection, rem.-field eddy-current syst. 122495
natural crack in eddy current testing problem, finite element model 125142
NDT image fusion using eddy current and US meas. data 114503
neural net-based crack param., wavelet preproc. MFL sig. 101595
nonlin. acoustic techs. for NDE, freq. shifts & memory effects 114492
on-chip eddy current sens. for proximity sens./crack detect. 101619
online inspection for hidden internal defects 78691
operator perform. in blind test piece trial 114500
piezoelec. material-embedded struct., crack ident. *(Chinese)* 90604
power distrib. line, crack detect., mag. NDT 133640
rect. tight crack reconstr., eddy current impedance change 101613
single-cryst. Si microscratching tests, ductile-to-brittle transit. *(Japanese)* 684
smart MEMS material crack diagnosis, electrostatic comb test device 12515
smart struct., self-diagnosis/-repair using hollow-centre opt. fibre 114559
sodium lamp tube automatic defect detect. syst. *(Japanese)* 100315
sodium lamp tube crack detect. using laser illum. *(Japanese)* 89429
source-sample react. forces meas., EM NDE tech. 101572
spallation generated minute cracks, nonlin. US meas. 114494
steam generator tube inspection, rem. field eddy current tech. 112237
steel crack growth monitoring using piezotransducer array 101527
steel plate, reverse-side crack detect., residual mag. field method 114525
stochastic microwave imaging in NDT, GA-based iter. procedure 101577
stress eval., pulse-echo US long. wave 114544
struct. health monitoring, damage detect., modal damping meas. 79465
structural damage detect. by neural nets and FRF data reduced via principal component prediction 76976
structural integrity expt. eval., US tech., acoustoelasticity 90598
syst. ident. & struct. health monitoring, conf., Madrid, Spain (June 2000) 784
thermosonic imaging for NDE, hybrid US/IR technol. 101581
US and EM methods for crack detect. and sizing 77713
welded joints maint., fatigue, fracture, probabilistic optim. 89843
woven composite laminates, delamination detect. with embedded opt. fiber 101617
Al alloy, thickness, alloy content & crack meas., AC mag. bridge 114501
Al, slotted specimen, GMR based sens. perform. 125144
Al_2O_3 fiber reinforced plastics, health monitoring technols. 68474
AlSiC base plate power modules, chip/DCB solder joint reliab. eval. 124323
Si_3N_4 balls, subsurface Hertzian crack detect. using OCT 114564
Si_3N_4/Si_3N_4-TiN laminates, crack propag. detect., elec. resist. 114550
SnAgCu solder joints on WLP in thermal cycle testing, deform. and crack growth 113622

crack inspection *see crack detection*

cracking *see cracks; fracture*

cracking, stress corrosion *see stress corrosion cracking*

cracking, thermal stress *see thermal stress cracking*

cracks
see also crack detection; crazing; fatigue cracks; stress corrosion cracking; thermal stress cracking
BGA solder joint voiding, PCB surface pad finish/contamination impact 1137
boundary element modeling of cracks in piezoelec. solids 116151
BWR NPP struct. integrity/reliab. assess. *(Chinese)* 77693
CMOS MEMS, mech. effects of fatigue and charge 104166
comb transducers, periodic crack-model, efficiency/optimisation 88207
conference, reactor integrity engng., Tokyo, Japan (Aug. 1999) 100390
diamond film, CVD, residual stress effect, micromech. anal. 124886
diamond wafers, multicathode dc plasma-assisted CVD, thermal diffusivity 79271
diode, ceramic/plastic package, solder joint crack propag. 113664
FBGA package, mech. chip crack 113488
flip chip package with reflowable underfills, reliab. studies 113706
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
free surface effects on through cracks under impact loading 79135
garnet film, crack form., cpd. glass underlayer 127340
ident. using boundary elements and evol. algms. 68090
mixed mode I, II and III anal. of multiple cracks in plane anisotropic solids by BEM 68087
multichip mechatronic power packages, mold delamination and die fracture anal. 113644
multilayer syst., progressive cracking on thermal cycling 89874
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
nuc. power station turbines life eval./anal. *(Chinese)* 77692
peripheral array package, interfacial delamination propag., 2D/3D num. models 78634
plane anisotropic elastic media with crack surface tractions, FE calc. of contour integrals 114158
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 92145
refractory metal laser welding, deep penetration 128608
SMD solder joints for automotive devices, degrad. behavior at high temp., life predict. *(Japanese)* 89851
SOFC, multi-layered ceramic components, thermal shock resist. 99977
tension stiffening model with increasing damage for reinforced concrete 12475
thin bimaterial ceramic systs., thermally induced fracture behaviour 125079
thin-film interconnects, grain boundary crack growth 103491

ks continued
Ag metallization on co-fired MLC substr., strength of solder interface 67535
$Al_xGa_{1-x}N$:Si,Mg/GaN, mech. props., impurity doping effect 81025
AlN/SiC film syst., sublimation sandwich growth, buffer layers 114305
Au/Au wafer level thermocompression bonds, low temp. characterisation 104161
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC ribbons, sintering, AE testing 81970
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, deform.-induced damage, fast healing 70774
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, eccentric rolling, J_c 92888
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag alloy HTSC tapes, multifilamentary, J_c distrib. 70772
Cu electroplated films, adhesive strength & scratch resist. 126491
Cu/SiLK interconnect, flip-chip package, interfacial adhesion 115678
Cu/Sn/Cu solder joints fatigue strength, thermal cycling influence 125072
Cu/W interface, electromigration modeling 126436
Cu/low-k dielec. interconnects, interfacial adhesion 115707
GaInN, MQW, LED, MOCVD, PL 82427
GaN MOCVD on Si(111), stress control and appl. to HFET 68288
GaN films on (001)β-$LiGaO_2$, MOVPE, polarity, coaxial impact collision ISS, PL 69524
GaN grown on Si(111) using UHV CVD, props., step-graded AlGaN interlayer effects 124930
GaN/Si(111), MBE growth, cracking obs. 103034
Li alloys, colossal reversible vol. changes, ion batt. appl. 99921
Ni-MH batts., AB_5 alloys, corros., decrepitation, XRD, spectrosc. 99909
Si single cryst. MEMS, sub crit. crack growth, crack vel./length 104170
Si:H^+,He^+ single cryst., evol. during annealing 126273
Si(001)/SiC, 6H interfaces, wafer bonding, interface struct. 126257
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
SiO_2 PECVD films, residual stress/fracture rel. to MEMS fab. 101373
Sn-Cu Pb-free microelectronic solder joints, Sn pest 100597
Ta films on Si and SiO_2/Si substrs., struct., annealing 80976
TiN films deposited on Pa-n, crack form. due to large thermal mismatch 114252
TiO_2/organically modified silane composite, sol-gel, charactn. 71498
YMnO_3 thin films, microstruct., post-annealing, ferroelec. props. 127229
ZnO varistors nonuniformity effect on energy absorpt. capability 133806
ZrO_2-Y_2O_3 electrolyte, electrophoresis, porous doped $LaMnO_3$ cathodes, SOFC 123791

ues
see also hoists
constr. mach. unstructured obj. attitude/stabil. control 134322
container relative posn. meas. by image proc. *(Japanese)* 94627
driving control charact. 134710
mechatronic syst. dyn. behavior investig. 89493
noncontact opt. barriers interconnected by fieldbus, heavy indust. appls. *(German)* 75403
overhead power lines, accidental contact, injuries/fatalities reduction 77439

ring
see also stress corrosion cracking
covered surface cracks in metals, microwave probe detect. 101578

CW *see concurrency theory*

dit transactions
adaptive anom. detect. in transaction-oriented networks 119583
mobile prepaid service, hot billing perform. 85131

ep
see also creep fracture; creep testing; diffusion creep; irradiation induced creep; stress relaxation
BGA reliab., underfill material 113474
CSP/area array package board level reliab. 113602
CSP/BGA solder joint fatigue life, thermal cycling ramp rate effects 113579
diamond films, CVD, intrinsic stress meas., curvature meas. 124885
epoxy molding cpd., creep, packaging proc. stresses 113649
flip-chip solder fatigue, cure-depend. underfill props. 113647
HV glass/porcelain outdoor insulators contamination, breakdown strength *(German)* 133767
large-area solder joints mech. behaviour modelling 67543
lead-free solders, bump metallurgies, flip chip appls., thermal fatigue props. 113514
mag. storage, layered materials, continuous stiffness meas. 92849
metallic interconnect films, cyclic temps., crawling 103971
miniaturized interconnects, creep/contact opening electromigration failures 92104
nonlin. thermal stress and flow modeling in various electronic packages 89859
piezoelec. actuators, hysteresis and creep effects, real-time inverse feedforward controller 92679
polymer substrs. for mag. tapes, creep, shrinkage 116404
single-mode fiber optic connector, plastic ferrule, reliab. 93096
super-BGA package reliab., underfill effects 67606
ultrahigh thermal cond. module, direct solder-attach, C4 reliab. 113678
wafer-level CSP, microvia build-up layer, solder joint reliab. 113685
Cu_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
Fe-Ni-$Cr_7O_3C_2$(Cr-C) electron-beam deposition wear/corros.-resisting coatings 124842
$FeSn_2$ particle reinforced Sn-Ag solder joints, creep props. 100595
(La,Sr)MnO_3 SOFC cathode, mass transport, creep investig. 89225
$La_{0.8}Sr_{0.2}Ga_{0.85}Mg_{0.15}O_{2.825}$ SOFC electrolyte, high-temp. mech. behavior 89219
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
PZT actuator, fab., high speed AFM 81625
Pb-free solder alloys for flip chip/area array package bumping 67569
Si high-force piezoresistive force sens., max. hysteresis error 86758
Si-PZT-PZT-Si, aspherical bimorph piezoelec. X-ray optics, design anal. 121804
Sn-Ag and Castin alloy, solder interconnects, thermomechanical props. 114419
Sn-Ag solder joints, creep props. 100595
Sn-Ag(-Cu) eutectic solder joints, non-composite and particle-reinforced composite, creep 67536
Sn-Ag(-Cu) solder alloys, thermo-mech. props./creep deform. 68392
Sn-Pb eutectic solder joints in microelectronics packaging, constitutive model 113469
Sn-Pb solder material, creep damage, viscoplasticity model 114422
Sn-Pb-Ag cylindrical solder interconnects with creep, bending/twisting 78653
Sn-Pb-Ag solder alloy, thermo-mech. props./creep deform. 68392

ep fracture
fiber-solder-ferrule joints, temp. cycle tested, laser module packaging 104644
Cu_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
$FeSn_2$ particle reinforced Sn-Ag solder joints, creep props. 100595
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
Sn-Ag solder joints, creep props. 100595

creep rupture strength *see creep fracture; fracture toughness*

creep testing
Al high-current busbar terminal screw joints, creep studies *(German)* 133768
Cu_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
$FeSn_2$ particle reinforced Sn-Ag solder joints, creep props. 100595
Ni/Ni_3Al porous MCFC anodes, creep testing 123778
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
Sn-Ag solder joints, creep props. 100595
Sn-Ag(-Cu) eutectic solder joints, non-composite and particle-reinforced composite, creep 67536
Sn-Ag(-Cu) solder alloys, thermo-mech. props./creep deform. 68392
Sn-Pb-Ag solder alloy, thermo-mech. props./creep deform. 68392
$SrCo_{0.8}Fe_{0.2}O_{3-x}$ creep behavior, SOFC 123798

CREW *see concurrency theory*

critical current density (superconductivity)
air-cored supercond. sync. generator, design param. *(Korean)* 123372
coated conductors, PLD on steel substrs., transport/anisotropic props. 70594 conf., Gottingen, Germany (Jun. 2001) 113251
flat supercond. composites, time consts., AC loss, relax. meas. 81959
high current dens. requirements for practical appl., HTSC role 70587
high/low T_c supercond. for magnets & motors, microstruct. aspects 92883
HTS thin films, pass. microwave device appls. *(Chinese)* 116540
HTSC, bulk, AC loss problem 81939
HTSC thick-film Josephson transit. on alumina substr., prod. 81982
HTSC transformer, AC losses meas., flux diverters effect 77917
HTSCs, mag. flux penetration mode, AC loss charact. 127418
interface-engineered Josephson jns. with high I_cR_N products 127485
large-area HTS-coated stainless steel tapes with high crit. currents 70751
LHC supercond. magnet windings, dyn. magnetisation calcs. 75993
multifilamentary tape, transport AC loss partitioning anal. 70704
multistaged triplet type sub-cables large supercond., current distrib. 82017
multiterminal S/N mesoscopic struct., phase-coherent effects 70871
pure aluminum stabilized supercond. magnet, EM/thermal modelling 71056
RF SQUIDs, HTSC, yield/perform. improvements 70787
Rutherford cable, quench propag. vel., current redistribution effects 127527
SINIS RSFQ ccts., HF charact. 68774
slotted high-Tc SQUID magnetometer, vortices entry in double-pickup-coil config. 70788
SQUID, HTS flux dam inserted into pickup coil, props. 92892
step-edge Josephson jns., HTSC, excess current effect on SQUID perform. 70789
strip-like Josephson-jn. arrays, crit. state, demagnetizing effects 70797
supercond. coils in external mag. field, AC losses, transport current with phase difference 127521
supercond. mag. bearings, levitation forces optim. 71012
supercond. magnets, persistent currents calcs. 70996
supercond. power cable, EM behaviour 77402
transistor-like props. supercond. device 70814
Ag/Bi-2223 tapes, crit. current densities, mech. deform. techs. effects 81964
Ag/Bi-2223 tapes, self-field loss, freq./temp. depend. 127461
Ag/Bi,Pb(2223) tapes, material developments, texture 81963
Ag/RE(123) tapes, material developments, texture 81963
Ag/Tl(1223) tapes, material developments, texture 81963
Ag-sheathed $(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ multifilamentary tapes, fab., props. *(Japanese)* 127469
Ag-sheathed BSCCO tapes, eddy current loss in AC transport regime 70691
AgCu-sheathed Bi-2212 multifilamentary round wires, crit. curr. dens. 127438
BSCCO-2223 high perform. tape long length mfg. for underground power cable appl. 77418
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_{10+x}$/Ag tapes, crit. params., laser scanning tech. meas. 70731
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_10$/Ag multifilamentary tape, crit. current dens. *(Chinese)* 70739
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ Ag-sheathed tapes, crit. current dens. 104563
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ HTSC wires, develop. 127442
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ tapes, Ag-clad, evol. of core dens. during proc. 70756
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$ HTSC bulk composite with Ag wires, crit. current dens. 81933
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$/Ag textured tapes, higher harmonic responses, scaling behavior 92890
(Bi,Pb)2223/Ag tapes, powder-in-tube, I_c anisotropy, starting precursor effect 104564
Bi,Pb(2223) tapes, phase form., high crit. current dens. 70753
Bi-2212/Ag Rutherford cable, HTS SMES appl. 134420
Bi-2212/Ag prototype magnets, fabr./transport props. for 1 GHz-NMR magnet syst. 127525
Bi-2223 1.29T magnet, design, fab., perform. 92905
Bi-2223 Ag-sheathed multifilamentry tapes, scaling, anisotropic current transport props. 81951
Bi-2223 Ag-sheathed tape, anisotropic transport, percolation model 127457
Bi-2223 stabilized tapes 20 kA current lead develop. 127468
Bi-2223 stacked tapes, crit. current, self mag. field effects 81931
Bi-2223 tapes, Ag/Ag-alloyed, fab. for power engng. appl. 70736
Bi-2223 tapes, reinforced Ag sheath, oxide core additives, pinning mechanisms 127456
Bi-2223/Ag composite tapes, power dissipation with (un)twisted filaments 70690
Bi-2223/Ag sheathed tape, extended E-J charact., ang. depend. 127458
Bi-2223/Ag supercond. tapes, strain/fatigue tests 127459
Bi-2223/Ag tapes, sintering time reduction, J_c 127447
Bi-based HTS wires for high field insert coils at HOMER II facility 71070
Bi2212/Ag melt processed monocore tapes, porosity/phase purity competitiveness 81962
Bi2223 supercond. FCL, transient resist. increase, applied mag. field 77594
BiPbSrCaCuO 2212 crysts., MgO doped, Pb substitution effects on J_c 81932
BiPbSrCaCuO 2212 crysts., var. of flux pinning with Pb doping 70662
BiPbSrCaCuO 2223 sintered bulk HTSC, prep. factor to enhance J_c (15,000 A/cm^2) 81934
BiPbSrCaCuO 2223 tapes, two axial rolling under long. stress, deform., effect on microstruct. 68431
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTS tape AC losses, geom. effects calcs. 70724
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC current lead props., sinter-forging rate effect 77409
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC round-shaped strand power cable 133747
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC tape AC losses, FEM simul. 70725
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ multifilamentary Ag-sheathed wires, appl. 70737
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$:$Ca_2CuO_3$/Ag HTSC multifilamentary tapes, transport AC losses 127463
BiPbSrCaCuO/Ag 2223 HTSC tape proc., continuous cooling sintering 81967
BiPbSrCaCuO/Ag 2223 HTSC wires, sausaging and crit. current dens., drawing params. effects 70776

critical current density (superconductivity) continued
BiPbSrCaCuO/Ag HTSC 2223 tape, I-V charcts. in range of very low elec. field 81952
BiPbSrCaCuO/Ag tapes, 2212 phase, microstruct., crit. curr. dens. 127437
$Bi_{1.8}Pb_{0.4}Sr_2Ca_{2.1}Cu_3O_x$/Ag tapes with CeO_2 barriers, microstruct., elec. props. 127449
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, eccentric rolling, J_c 92888
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, jointed area J_c degrad. 70713
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, mech./transport props. 70715
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, overpressure proc., J_c 70716
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag alloy HTSC tapes, multifilamentary, J_c distrib. 70772
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC coils, winding geom. optimisation 71074
$(BiPb)_2Sr_2Ca_2Cu_3O_10$ HTSC tapes, J_c, magneto-optic imaging 70734
BiSrCaCuO 2212 ROSATwire, effect of filament size on supercond. props. 127440
BiSrCaCuO 2212 tapes, modified powder-in-tube method, high crit. current dens. 70709
BiSrCaCuO 2223 HTSC multifilament tapes, Ag alloy sheathed, engng. crit. current dens. 70708
BiSrCaCuO 2223 HTSC tape, transport E-J charcts. under bending strain, percolation model 127443
BiSrCaCuO 2223 cryocooler cooled pancake coil, quench develop., anisotropic E-J charcts. 127520
BiSrCaCuO 2223 supercond. tapes, field depend. at 77 K 70748
BiSrCaCuO 2223 tapes, OPIT fab., current paths and current carrying capability 70775
BiSrCaCuO 2223 tapes, prep., grain growth and J_c, Pb content/particle size effects 70755
BiSrCaCuO 2223/Ag-AgMg tapes, J_c distrib. 127453
BiSrCaCuO HTSC 2212 ROSATwires, two kilometer long 127441
BiSrCaCuO HTSC internally stranded RBB low AC loss tape, PITAR prep. and props. chractn. 70699
BiSrCaCuO long 2223 tapes, perform., effects of local vars. in crit. current dens. 70745
$Bi_2Sr_2Ca_2Cu_3O_{10}$ HTSC tapes, J_c and crit. stress, temp. effects anal. 81949
$Bi_2Sr_2Ca_2Cu_3O_8$ HTSC multifilamentary tapes for transformer appls. 70604
$Bi_2Sr_2Ca_2Cu_3O_x$ monocore tape, high crit. current dens., current limiting mechanisms 70633
$Bi_2Sr_2CaCu_2O_8$ composites, high crit. current dens., proc. issues 70631
$Bi_2Sr_2CaCu_2O_8$ films, anisotropic props. on tilted substrs. 70590
$Bi_2Sr_2CaCu_2O_8$ power link, transm./fault current limitation 88454
$Bi_2Sr_2CaCu_2O_8$ semi-supercond. magnet concept 71073
$Bi_2Sr_2CaCu_2O_8$ supercond. resistive current limiters 77618
$Bi_2Sr_2CaCu_2O_{8+x}$ single crysts., submicron tunneling jns., prep., props. 81978
$Bi_2Sr_2Ca_2CuO_x$ HTSC tapes, J_c and n-values, temp. effects study 81946
$Bi_2Sr_2CaCu_2O_y$ HTSC large capacity Rutherford cable, testing 71187
$Bi_2Sr_2Ca_2Cu_3O_{10}$:U tapes, in-field behaviour, enhanced flux pinning 81930
$Bi_2Sr_2CaCu_2O_8$:Pb/Ag(Ni) HTSC tapes, fab., J_c 70719
BiSrCaCuO/Ag 2223 tapes, flat rolling, sandwich rolling and pressing, magneto-opt. images 68435
BiSrCaCuO/Ag 2223 tapes, sandwich rolling and flat rolling in proc. 68432
BiSrCaCuO/Ag HTSC 2223 tapes, ^{235}U doped, vortex pinning by fission tracks 81956
BiSrCaCuO/Ag tapes, calorimetric AC loss meas. in applied mag. fields 81938
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC multifilamentary wires, current distrib. and loss reduction 127462
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, sandwich rolling deform. prep. and charactn. 81972
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag tapes, current dens. distrib. in overload conditions 70689
$Bi_2Sr_2Ca_2Cu_3O_8$/Ag HTSC tapes, high temp. sintering prep. and charactn. 70705
$Bi_2Sr_2Ca_2Cu_3O_8$/Ag HTSC tapes, twisted filaments, ceramic barriers and elec. props. 70700
$Bi_2Sr_2CaCu_2O_8$/Ag HTSC composite tapes, form./growth, J_c 70720
$Bi_2Sr_2CaCu_2O_8$/Ag HTSC tapes, Pb/La/Ti-substitution, J_c, T_c 70721
$Bi_2Sr_2CaCu_2O_{8+\delta}$/Ag HTSC tapes, electroplating prep, J_c under mag. field 70718
$Bi_2Sr_2CaCu_2O_x$/Ag ROSATwire fab. with reduced Ag content 127439
$Bi_2Sr_2CaCu_2O_x$/Ag/Ni HTSC clad tape, fab., mech. props., J_c 70735
$Bi_2Sr_2CaCu_2O_y$/Ag HTSC tapes, microstruct., supercond. T_c/J_c 70717
$Bi_2Sr_2Ca_2Cu_3O_{10}$-SrVO-Ag HTSC multifilamentary tapes, prep. and charactn. 127465
$Bi_2Sr_2Ca_2Cu_3O_8$-Ag HTSC multifilamentary tape props., resistive barrier config. effects 70702
$(Bi_2Sr_{2-x}La_xCaCu_2O_y)$/Ag tapes, microstruct., supercond. props., La substitution effect 81971
$(Hg,Re)Ba_2Ca_2Cu_3O_y$ HTSC single phase fiber fabr. for current lead appls. 70614
$HgBa_2CaCu_2O_x$ HTSC thin films, prep. 79411
$Hg_{0.8}Pb_{0.2}Ba_2Ca_2Cu_3O_{8+\delta}$ HTSC thick film growth and charactn. 70616
$(HgPb)Ba_2Ca_2Cu_3O_y$ HTSC, mag. suscept. and AC loss meas. 70615
$Hg_{0.75}Re_{0.25}Ba_2Ca_2Cu_3O_{8+\delta}$ bi-axially textured HTSC film, synthesis, J_c 68337
$(Hg_{0.8}Re_{0.2})Ba_2CaCu_2O_{6+\delta}$ HTSC thick films, fab., T_c, J_c 125038
$(La,Ca)(Ba,La,Ca)_2Cu_3O_z$, film, PLD, struct./supercond. props. 127426
$La_2CuO_{4+\delta}$ syst., metastable phase, 32K T_c 70642
$La_{1.85}Sr_{0.15}CuO_4$(100) HTSC thin films, orig. of resist. peak effect 70664
MgB_2 film, T_c, high crit. current densities 127421
MgB_2 supercond. tapes, unsintered, large transport crit. current dens. 92889
MgB_2 supercond. wires, Fe-clad, high crit. currents 81950
MgB_2 tape, Fe-clad, high-transport crit. current dens. above 30 K 127466
MgB_2 tapes/wires, powder-in-tube-processed, high transport crit. current dens. 127451
MgB_2 wires, transport behavior/crit. current densities 116513
MgB_2/Fe supercond. wires with high J_c, very fast form. 127446
$(Nb,Ta)_3Sn$ multifilamentary superconds, prep. using Osprey bronze with high Sn content 70765
$(Nb,Ta)_3Sn$ superconds. prod. by Ta-Sn core, high-field perform. and struct. 70764
Nb/Al_2O_3-Al/Nb mixer for submillimeter wave detect. 116537
Nb/Al/Nb trilayer, SNS Josephson jn. fab. 70962
Nb/Al-AlO_x/Nb tunnel jn., crit. current dens. 70829
Nb/AlO_x/Nb Josephson jns., RSFQ ccts. 70953
Nb/AlO_x/Nb supercond./insulating/supercond. fab. proc., FIB anal. 70805
Nb-Al/Al_2O_y/Al/Al_2O_y/Al-Nb SINIS supercond. ICs 70956
Nb-Ti-Ta multifilamentary supercond. tape, J_c, microstruct. 70778
$Nb_3(Al,Ge)$ multifilamentary wires, rapid-heating/quenching proc., supercond. 81955
Nb_3Al, rapid OH-quenching proc., supercond. props. 81954
Nb_3Al supercond., rapid heating-quenching proc., stabilisation, coil perform. 81994
Nb_3Al, transformed jelly-roll multifilamentary wires, supercond., rapid heating 70760
Nb_3AlCu_x multifilamentary superconds., high J_c in high fields 81953

critical current density (superconductivity) continued
NbN/AlN/NbN tunnel jns., high current dens., 1/f noise 70803
NbN/MgO/SiO_2/NbN multilayers on R-plane sapphire, on-chip fast RSFQ c 70801
NbN/Nb/AlO_x/Al/Nb/NbN overdamped jns., multilayered barriers, SFQ a 70802
Nb_3Sn 88-mm bore dipole magnet develop. for LHC 75996
Nb_3Sn Rutherford cables, accelerator magnets, strand crit. current degrad. 70
Nb_3Sn conductor containing Ga and Mg dopants, develop. 70570
Nb_3Sn epoxy impregnated supercond. solenoids, protection heater perfo 71054
Nb_3Sn filaments, comp. gradient, microstruct., prep. method influence 7076
Nb_3Sn, internal Sn composite wire, enhanced current capacity, supercond. 70
Nb_3Sn internal tin strands, ITER Toroidal Field Model Coil, heat treatm effects 127413
Nb_3Sn, internal-Sn, supercond. props., starting Cu-Sn phase effects 70569
Nb_3Sn, internal-tin conductors, charactn. 70770
Nb_3Sn, low cost high perform. conductors, high J_c 70769
Nb_3Sn strand, tokamak device, perform. var., heat treatment 82001
Nb_3Sn strands, internal tin, heat treatment optim. 68398
Nb_3Sn supercond. by powder in tube proc., Ti and Ta addits. 70571
Nb_3Sn supercond. strand with enhanced charact. for ITER 70572
Nb_3Sn supercond. wires, crit. current dens. description 70997
Nb_3Sn, supercond. wires, prep. methods, charcts. 70773
Nb_3Sn wires, internal Sn processed, influence of Ge addit. on phase form. EM props. 70757
Nb_3Sn-CuNb reinforced wires, jelly roll proc., normal zone propag., que charcts. 70762
NbTi fine filament supercond. strands, develop. for fusion reactor magnet sy 82002
NbTi/Cu multifilamentary supercond., proximity-effect-induced supercond. J_c and magnetis. 81929
$(NbW)_3Sn$ multifilamentary composite supercond. for AC use, hysteresis loss J_c 81928
Nd-Ba-Cu-O, screen-printed thick films, supercond. props. *(Japanese)* 127
Nd-Ba-Cu-O single crysts., effect of O content on flux pinning 70661
Nd-Ba-Cu-O:CeO_2,Pt HTSC, Nd-422 particle refinement, J_c 70655
(Nd-Eu-Gd)Ba_2Cu_{3-x}:Ag HTSC, melt-processed, flux pinning 70668
NdBaCuO ramp-edge jns. with interface-modified barrier 70810
$NdBa_2Cu_3O_y$ multi-seeded HTSC, morph., T_c, J_c 70653
$(Nd_{0.333}Eu_{0.333}Gd_{0.333})_{1.18}Ba_{2.1}{}_2Cu_{3.09}O_x$ filamentary superconds., J_c 70771
$Nd_{0.33}Eu_{0.33}Gd_{0.33})Ba_2Cu_3O_y$:$CeO_2$-Pt, microstruct., mag. props. 116505
Ni-Cr(V) biaxially textured tape substr. for $YBa_2Cu_3O_{7-\delta}$ HTSC films 68397
$RBa_2Cu_3O_{7-\delta}$, mixed, solubility and LPE growth 68330
$(TbBi)(SrBa)_2Ca_2Cu_3O_x$ HTSC film, two-layer electrodeposition proc. charactn. 68339
$Tl_2Ba_2Ca_1Cu_2O_8$ HTSC films on 3″ sapphire wafers, high freq. filter appls. 70
$Tl_2Ba_2CaCu_2O_8$ double sided films, dual mode cross slotted filter, growth props., MOCVD 82010
$Tl_2Ba_2CaCu_2O_8$, misaligned films, intrinsic Josephson jns. 70593
(Y,Ca)$Ba_2Cu_3O_y$ HTSC, melt growth fab., J_c, flux pinning 68411
Y-Ba-Cu-O HTSC films, long./transverse magnetis. 70647
Y-Ba-Cu-O bicrystals, low angle, crit. current hysteresis 70675
Y-Ba-Cu-O films, nanosize texture and transport props. 70663
Y-Ba-Cu-O high-current coated conductor using MOCVD and IBAD 68257
Y-Ba-Cu-O thick film, highly sensitive mag. sens. 71195
YBa_2Cu3O_x plate, mag. shielding, crit. current dens. influence 70637
YBaCuO 123 HTSC coated conductors, long length IBAD template fil 125045
YBaCuO HTSC films, soln. deposition, coated conductor fabr. and chara 68334
YBaCuO HTSC tape on Ag-Cu/Ni/Ag-Cu clad tapes, textured props. 12743
YBaCuO ac mag. induction susceptometer design 82023
YBaCuO coated IBAD tapes, transverse stress, fatigue effects 70752
YBaCuO coated conductor prep. by surface-oxid. epitaxy, long length oxide te plate 124998
YBaCuO coated conductor stabiliz. using $La_{0.7}Sr_{0.3}MnO_3$ single buffer la 127420
YBaCuO coated conductors, low cost, prep. by soln.-based techs., buffer lay 68332
YBaCuO deposition by MOCVD on metallic substrs., comparative study buffer layers 68227
YBaCuO, fab. of high-J_c tapes by epitaxial deposition on RABiTS 127432
YBaCuO film, large transport currents, magnetooptical studies 70621
YBaCuO film strips, supercurrent distrib., temp. depend., terahertz radiat imaging 127428
YBaCuO films, double-sided coating on 5-inch wafers, 3-chamber deposit syst. 68160
YBaCuO films, high current densities, fault current limiter implications 775
YBaCuO in-plane aligned tapes fabricated by inclined substr. deposition 1249
YBaCuO meander pattern conductors, fault current limiters 77587
YBaCuO multifilamentary coated supercond., decreasing transport ac los method 127424
YBaCuO ramp-edge jns. with interface-modified barrier 70810
YBaCuO superconds., MAGLEV appls. 92885
YBaCuO thin films on multilayers prepared by all-chem. soln. deposition pr 125014
$YBa_2Cu_3O_7$ HTSC, IBAD-PLD reel-to-reel continuous form. and chara 68304
$YBa_2Cu_3O_7$ HTSC deposition on metal tape substrs. and charactn. 68179
$YBa_2Cu_3O_7$ HTSC films, vortices, terahertz radiation imaging 70630
$YBa_2Cu_3O_7$ HTSC, low angle grain boundaries, high J_c capabilities 70678
$YBa_2Cu_3O_7$ HTSC, pulsed magnetis. procs., flux flow 70672
$YBa_2Cu_3O_7$, c-axis microbridges, charcts., interface role 69116
$YBa_2Cu_3O_7$ double-sided film, PLD on MgO, X-band filter charactn. 71088
$YBa_2Cu_3O_7$ film, MgO buffer layers prep. by inclined substr. deposition 68
$YBa_2Cu_3O_7$ films on Ag by MOCVD in mag. fields, growth and supercond. pr 114313
$YBa_2Cu_3O_7$ high-quality HTSC tiles, prep., mag. bearing appl. 68134
$YBa_2Cu_3O_7$ step-edge Josephson jn. dc SQUID magnetometers on sapphire s strs. 70799
$YBa_2Cu_3O_7$ supercond. tapes growth on MgO ISD buffer layers 70697
$YBa_2Cu_3O_{7-\delta}$ HTS, grain microstruct. & growth, melt-texturing 104559
$YBa_2Cu_3O_{7-\delta}$ HTSC films, dc sputtering, T_c, J_c 68159
$YBa_2Cu_3O_{7-\delta}$ HTSC long-length coated conductor prep. by surface-oxid. epita 70618
$YBa_2Cu_3O_{7-\delta}$ HTSC strip lines, supercurrent distrib., THz imaging 82011
$YBa_2Cu_3O_{7-\delta}$, high field scanning Hall probe imaging 70623
$YBa_2Cu_3O_{7-\delta}$ interface-engineered Josephson jns. optimized for high J_c 1165
$YBa_2Cu_3O_{7-\delta}$, mini-bulk magnet, trapped mag. field 116533

itical current density (superconductivity) continued
$YBa_2Cu_3O_{7-\delta}$, polycryst., bearings/elec. power devices 116508
$YBa_2Cu_3O_{7-\delta}$ power link, transm./fault current limitation 88454
$YBa_2Cu_3O_{7-\delta}$ supercond. tapes, situ high rate growth 68193
$YBa_2Cu_3O_{7-x}$ HTSC film on Ce_2O/NiO/Ni-V, J_c, thickness 70619
$YBa_2Cu_3O_{7-x}$ HTSC, melt-textured, mag. field/current distrib. 70651
$YBa_2Cu_3O_{7-x}$, film, PLD on $CeO_2/BaTiO_3$ double buffer layers, supercond. props. 70595
$YBa_2Cu_3O_{7-x}$, film, US spray pyrolysed, post annealing props. 70600
$YBa_2Cu_3O_{7-x}$ film, screening effects in supercond. FET 127509
$YBa_2Cu_3O_{7-x}$ on RABiTS, magneto-opt. imaging of transport currents 70674
$YBa_2Cu_3O_{7-x}$ ramp-edge Josephson jns. with surface-modified barriers 70812
$YBa_2Cu_3O_{7-x}$ tapes, ISD method fabr., elec. props. 127435
$YBa_2Cu_3O_{7-y}$ thin films, submicron tunneling jns., prep., props. 81978
$YBa_2Cu_3O_x$ HTSC films, continuous CVD tech., J_c 68240
$YBa_2Cu_3O_x$ HTSC plates, J_c, texture depend. 70652
$YBa_2Cu_3O_y$ HTSC, melt textured, ion irrad., surface columnar defects 70654
$YBa_2Cu_3O_y$ HTSC, melt-textured, mag. bearing/reluctance motor appl. 70650
$YBa_2Cu_3O_y$ bulk HTSC, melt-texture joining 81944
$YBa_2Cu_3O_y$ step-edge jns. DC SQUID, voltage modulation effects 70786
$YBa_2Cu_3O_y$ tape, develop. by using inclined substr. method 70750
$YBa_2Cu_3O_{7-\delta}$:Ag HTSC films, large-area PLD, device appl. 68307
$YBa_2Cu_3O_{7-\delta}$:Ca HTSC films, grain boundaries, J_c/T_c 70676
$YBa_2Cu_3O_{7-\delta}$:Ca, film, grain boundary crit. currents doping-induced enhancement 70603
$YBa_2Cu_3O_{7-\delta}$:Zn(Ag) HTSC, trapped fields 70670
$YBa_2Cu_3O_{7-x}$:Er HTSC, flux pinning, cryst. growth 70671
YBaCuO/Ag HTSC tapes prod. by oxid. of metallic precursors 70698
YBaCuO/Ag tape, transport current props. above crit. current region 70681
$YBa_2Cu_3O_7$/MgO films, high temp. supercond., inclined substr. deposition, evap. 124833
$YBa_2Cu_3O_7/NdBa_2Cu_3O_7$ single cryst. contacts, LPE growth 70584
$YBa_2Cu_3O_{7-\delta}/Eu_2O_3(Gd_2O_3)$ buffer layer HTSC, dip-coating 68341
$YBa_2Cu_3O_y$/CuNiAl(NiCr) low cost coated HTSC, nonmagnetic substrs., prep. 68349
$YBa_2Cu_3O_y/TmBa_2Cu_3O_y$ HTSC solder joints, quality estim. 127431
$YBa_2Cu_3O_y/Y_2O_3$-ZrO_2/YIG films, IBAD-YSZ template growth 68380
$YBa_2Cu_3O_{7-\delta}$-$SrRuO_3$-$LaNiO_3$-Ni conductive multilayers growth/charact., power appl. 127452
(Y)NdBaCuO films, DC sputtered, supercond. props. 70626

itical currents
see also critical current density (superconductivity); flux creep; flux flow; flux pinning
1D Josephson-jn. array, penetration depth, screening field profiles 70796
anisotropic superconds., finite element calcs. of local current distrib. 70640
conf., Gottingen, Germany (Jun. 2001) 113251
four-jn. bicryst. switch for HTSC SQUID magnetometer pickup coil 116516
HTSC magnet, advanced design approach 81991
HTSC magnet, racetrack type, shape optim. using response surface methodology 81992
HTSC multilayer conductor, effect of interlayer insulation on transport AC loss 70665
HTSC power transm. cable, design, prod. 77422
HTSC tape/cable power conductors, overcurrent expts. 77392
induction magnetometers spatial nonuniformity and errors 75828
interface-engineered Josephson jns., capacitance anal. based on equiv. cct. model 127486
Josephson interface engineered jn., crit. current 70881
mesoscopic SFIFS/SFIS jns., crit. current 81988
prog. Josephson voltage std., nonuniformity tolerance 70822
RF SQUID qubit, tipping pulse method 70946
S-N-S jns., supercurrent enhancement 70870
self-aligned supercond. nanotransistor, NOR logic gate, fab. 127484
SQUIDs with ferromag. jns., coexistence of stable/metastable 0 and π states 70867
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$/Ag, twisted supercond. tape, prep., microstruct. evol. 70696
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$/Ag-Mg-Sb HTSC tapes, I_c, strain effects 70722
Bi-Pb-Sr-Ca-Cu-O tape, props. of resistive- and supercond.-joints 70712
Bi(-Pb)-Sr-Ca-Cu-O/Ag(AgMg) HTSC tapes, I_c hysteresis 70732
Bi2223/Ag tapes, high T_c supercond. DC cable develop. *(Chinese)* 123019
BiPbSrCaCuO 2223 HTSC multifilamentary tapes, important factors affecting AC losses 127444
BiPbSrCaCuO 2223/Ag supercond. tape, crit. current ang. depend., model 127454
BiPbSrCaCuO HTSC 2223 tapes, I_c and phase characts. after heat treatment in temp. gradient 70707
BiPbSrCaCuO HTSC tapes, Ag clad, mag./elec. transport props., precursor powder props. effect 70706
BiPbSrCaCuO/Ag 2223 HTSC tape, crit. persistent current for loop 70711
BiPbSrCaCuO/Ag 2223 reacted multifilamentary tapes, supercond. joint 68421
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, I_c, precompression effects 70714
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, deform.-induced damage, fast healing 70774
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag alloy HTSC tapes, multifilamentary, J_c distrib. 70772
$(BiPb)_2Sr_2Ca_2Cu_3O_y$/Ag HTSC tapes, I_c and I_c-H behaviours, $CaCuO_2$ precursors addit. 81966
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC DC transm. power cable develop. 77424
BiSrCaCuO 2223 ring bundle barrier multifilamentary tapes, AC losses 81973
BiSrCaCuO 2223 supercond. tapes, field depend. at 77 K 70748
BiSrCaCuO conductors and magnets at high stress-strain levels 127519
$Bi_2Sr_2Ca_2Cu_3O_x$ supercond., multifilamentary tape, AC losses *(Korean)* 70612
$Bi_2Sr_2Ca_2Cu_3O_x$ tape conductors, temp. and mag. field depend. of crit. current 70747
$Bi_2Sr_2Ca_2Cu_3O_x$ tapes, compressive stress-strain-I_c props. 70606
$Bi_2Sr_2Ca_2Cu_3O_x$ tapes, crit. current, long. compressive strain 70607
$Bi_2Sr_2CaCu_2O_8$ Rutherford cables, crit. current var. as fn. of transverse stress 70660
$Bi_2Sr_2CaCu_2O_{8+x}$ HTSC, BaO_2-added, microstruct., I_c 70605
$Bi_2Sr_2CaCu_2O_y$ HTSC large capacity Rutherford cable, testing 71187
BiSrCaCuO/Ag HTSC tape processed by PIT method, interface irreg. and texture evol. 68434
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag tapes, transposed filaments, transport current losses 70695
$Bi_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC multifilamentary tape, I-V curves and local crit. current anal. 81960
$DyBa_2Cu_3O_7/La_{2/3}Ba_{1/3}MnO_3$ heterostruct., spin injection & transport 92901
$(Hg_{0.8}Re_{0.2})Ba_2CaCu_2O_{6+\delta}$ HTSC thick films, fab., T_c, J_c 125038
Nb SQUID ccts., small supercurrents, meas. 70907
Nb supercond. tunnel jn., HI detect. 71151
Nb/Al double-barrier SINIS Josephson jns., phenomenological model 70916

critical currents continued
Nb/AlO_x/Nb-Al/AlO_x/Nb stacked Josephson jns., macroscopic quantum expts. 104566
Nb-Ti-Nb SNS jn., microwave cct., voltage std. 70955
Nb_3Sn HEP accelerator high-field supercond. magnet cable develop. 75982
Nb_3Sn composites, bronze processed, microstruct., I-V characts. 70767
Nb_3Sn, multifilamentary strands for supercond. dipole magnets 70759
Nb_3Sn multifilamentary wire for accelerator magnet appls., develop. 81965
Nb_3Sn supercond. wire reinforced by jelly-rolled Nb/Cu composite, strain effects 68428
Nb_3Sn supercond. wires stabilized with Cu-Nb microcomposites, crit. current, stress/strain depend. 81948
NbTi fine filament supercond. strands, develop. for fusion reactor magnet systs. 82002
NdBaCuO ramp-edge jns. with interface-modified barrier 70810
$NdBa_2Cu_3O_7$ bicrystal Josephson jns./SQUIDs operating at 77 K 70983
$(Pb,Bi)_2Sr_2Ca_2Cu_3O_{10+x}$/Ag HTSC multifilamentary tapes, I_c 81969
$Tl_2Ba_2CaCu_2O_x$ HTSC epitaxial films, bicryst. grain boundary Josephson jns. 70794
YBaCuO Josephson jns., ramp edge modif. by ion beam irrad./heat treatment 70808
YBaCuO films, fab. of ZrO_2 ion-beam deposited cubic template films 68371
YBaCuO interface-controlled Josephson jn. fab. using Sr_2AlTaO_6 insulating layers 70809
YBaCuO, mm-wave Josephson mixer, noise decrease in small DC mag. fields 68649
YBaCuO ramp-edge jns. with interface-modified barrier 70810
YBaCuO step-edge Josephson jns. in rf-washer SQUIDs, mag. field behavior 70982
$YBa_2Cu_3O_7$ step edge Josephson jns., single-layer SQUID gradiometers 70984
$YBa_2Cu_3O_{7-\delta}$ HTSC film, surface resist., microstruct. 70648
$YBa_2Cu_3O_{7-x}$ grain boundary jns., comp. anal. 70865
$YBa_2Cu_3O_{7-x}$ thin film, hot electron bolometer 71159
$YBa_2Cu_3O_{7-y}$, SIS tunnel jns., a-axis oriented, Josephson effects 70798
YBaLaCuO ramp-edge interface modified jns. for HTS SFQ ccts. 70811

critical exponents
double-semicond. QW, mesoscopic correl., magnetotunneling spectra 91818
metallic interconnect thin films, elec. failure procs. 126433
percolation theory, materials sci./microelectronics appls. 91570
Co/CoO films, disorder-driven hysteresis-loop crit. 81804

critical field, superconducting *see superconducting critical field*

critical path analysis
see also project engineering; systems analysis
commun. networks, partially obs., FIFO queue anal. 130337
concurrent projects, crit. path ident./load balancing strategy *(Japanese)* 113438
parallel projects execution time adjustment using CPA *(Japanese)* 100530
TCP transactions 85296
TCP transactions, CPA *(English, Spanish)* 130413

critical phenomena, magnetic *see magnetic transitions*

critical temperature, superconducting *see superconducting transition temperature*

crops *see agriculture*

cross linked polyethylene insulation *see XLPE insulation*

crossed-field tubes *see microwave tubes*

crosspoint switches *see electronic switching systems; telecommunication switching*

crosstalk
see also optical crosstalk
3D audio syst., improving perform. 75328
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
adjacent interconnect lines, deep submicron technols., crosstalk eval., inductive effects 126935
ADSL, bandwidth-efficient RS coding 96305
aggressor alignment for worst-case coupling noise 103997
anal. and avoidance of cross-talk in on-chip buses 126917
analogue input ccts. for PC plug-in measuring cards *(German)* 125570
blind source separation syst. using time-delayed decorrelation, real-time implement. 118118
blue laser-assisted mag. recording, track dens. and crosstalk eval. *(English)* 70533
capacitor micromachined US transducers, finite element model 111490
CAT-5E modular jack for high-speed differential sig. interconnection, crosstalk noise reduct. 91445
cct. interconnect CAD, cross-talk driven, optim. 103999
CDMA, low-complexity interf. mitigation on vector channels, design/anal. 105803
channel routing, 3-layer HVH, min. crosstalk layer assignment, pseudo-Boolean optim. 70272
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS mixed-sig. chip, substr. coupling meas. 114892
combinat. logic blocks, coupling and noise aware delay anal. 68748
concurrent IC/package/syst. design strategy 100585
coupled microstrip lines far-end crosstalk reduction method 72386
coupled RC tree networks, moment matching based model for crosstalk estim. 81456
crosstalk-robust struct. based on sub-band noise estim. 129368
DCT for noise generation 119818
deep sub-micron technols., timing anal. with crosstalk as fixpoints on complete lattice 126986
deep submicrometer technols., crosstalk estim., coupling capacitances 81474
deep submicron crosstalk simul., freq.-depend. charact. 92456
deep submicron design, state of art and trends in parasitic extraction 104069
deep submicron digital ccts., functional correl. anal., crosstalk induced crit. paths 125446
deep submicron IC design, cct. theory and interconnect anal. 70271
deep submicron IC design, parasitic extraction 81483
deep submicron IC interconnects, crosstalk and delay estim., switching conditions 70270
deep submicron procs., crosstalk noise eval. model 81454
deep submicron SoC interconnects, high-level crosstalk defect simul. 104013
deep submicron technol., coupled RC trees, moment matching method 81438
deep submicron verification tools, crosstalk noise modeling 81439
delay insensitive SoC interconnect using 1-of-4 data encoding 79671
densely-packed random wire bundles crosstalk prediction model 83365
DFE hybrid struct. for CAP-based DSL systs., perform. 95814
digital CMOS ccts., crosstalk noise, simul. results 79688
digital VLSI, crosstalk faults, BIST *(Japanese)* 68666

crosstalk continued
DMT VDSL with impulse noise, crosstalk mitigation using multiuser detect. 130149
DMT/OFDM modulation on twisted pair cables, guard interval reduction by impulse compression 72771
domino logic design, crosstalk noise minimization 102089
DRAM memory bus with crosstalk transfer logic interface 125480
DSL perform. in Gaussian and far-end crosstalk noise environ. 96304
DSL systs., multi-user precoding for crosstalk cancellation 106144
DSLs, spectrally-shaped crosstalk-impaired, peak-energy-limited multicarrier systs. loading 131009
dual isotope SPECT imaging, crosstalk & scatter correction 122201
electronic systs. design for EM terrorism protection 83384
EM noise induction on UTP cable *(Japanese)* 74512
EM simulators, CAE, PCB and EM design problems *(Italian)* 125871
error detecting codes for detect. of crosstalk originated errors, optim. 79686
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
ferrite core, load effect, parallel 2-wire lines, equiv. cct. model *(Japanese)* 70546
Fukui/Ishikawa prefecture, 1997 Dec. 19 earthquake precursors 83394
generic RC trees, crosstalk noise estim. 125186
Gigabit Ethernet, multi-dimens. equalizer appl. 130280
global driver sizing tool, crosstalk noise 81457
HDI and microvia design for high perform. materials, dens. and stack up 69309
HDI PCB technol., influence on sig. integrity 124368
high dens. stripline packages, via fence struct. for crosstalk reduct. 102682
high-perform. displays, small spot contrast meas. 97657
high-speed digital ICs, sig. integrity, MOSFET modeling, LE-FDTD method 90835
high-speed VLSI cct. capacitive coupling noise reduction 126994
hybrid-PET, tomographic sampling charactn. using Fourier crosstalk matrix 122215
IC connection design, Maxwell eqns. *(Italian)* 81478
IC interconnect coupling, crosstalk noise, aggressor alignment 70252
IC interconnect coupling, peak noise and delay meas. 116016
IC layout, wire packing, integer prog. 70257
IC routing, pseudopin assignment, crosstalk noise control 70251
IF SAW filters, high selectivity, CDMA mobile phones 96528
image sens., very high resoln., pixel size limitations 131974
induced logical/delay faults, on-chip buses, embedded-software-based approach 101921
interconnect testing, switching activity, automated BIST synthesis 104058
large area TFT-LCD, crosstalk and flicker simul. 116829
leaky covered microstrip line, spurious radiation calc. 94104
LNA in mixed-sig. cct. environ., effects of IC packaging on perform. 68948
mag. recording, areal dens., 2D modulation code 116463
micromachined US transducer arrays, cross-talk in Si substrs. 111491
microstrip line, crosstalk, finite element model *(Japanese)* 114931
mixer operation modes, nonlin. distortions anal. 105789
mm-wave ICs, wave leakage, crosstalk and package effects 125811
mobile robot obstacle avoidance, US sens. crosstalk, coded sigs. 109981
MOSFET HF matching meas. for CMOS mixer port crosstalk determ. 102715
multi-gridding tech. for TLM method using symm. super-condensed node 105663
multi-track SAW devices, inter-channel interact. eval. 92727
multichannel biotelemetry syst., filter bank use 88011
multiconductor interconnects, freq.-depend. losses, transm.-line models 126969
multiprocessor digital syst., low-power RF clock distrib. 114852
nanometer technol., interconnect energy dissipation, minimization tech. 126990
neural network algms. for photodetector sig. distortion correction 84692
on-chip inductance in high-speed VLSI ccts., high-perform. design issues 116017
optimal all-to-all pers. exchange in class of opt. multistage networks 86107
PA-RISC μP package, design optim., elec. model 113478
package, split power planes 113671
parallel-plate environ., buried and through vias, phys.-based CAD models 124366
pass. addressed LCDs, opt. threshold voltage, ions influence 86823
PCB design, high-speed memory module *(Japanese)* 69302
PCB inductive crosstalk reduction by layout techs. 69303
PCB layout, crosstalk prediction model 102805
pseudo pin assignment with crosstalk noise control 101651
raised cosine signaling crosstalk reduction for interconnect-limited bus 126936
RF mixed-sig. cct., Faraday cage isolation struct. 126415
satellite interf. prediction, effects of ice crysts. and raindrop canting angle 109023
SDSL upstream receiver, crosstalk interf. mitigation 108471
SDSL upstream transm. with vector equalization, crosstalk mitigation 131007
sig. integrity anal. in electronics design, next-generation systs. 124294
SoC interconnect crosstalk defects testing using on-chip embedded proc. cores 126977
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
SOI substrs. with buried ground plane for substr. noise suppress., modeling 102691
SPECT, dual isotope, photon crosstalk calc., downscatter correction 122176
SPECT brain imaging, simult. Tc-99m/I-123, spectral factor anal. 122241
struct. on-chip interconnection networks, top level wires, modular design 125372
submicron IC gate-sizing for crosstalk-induced delay elimination 126923
surface EMG, crosstalk reduction tech. 87406
TDR instrumentation for ensuring sig. integrity in μP motherboards and memory 69307
TFSOI technol., isolation structs. for mixed sig. RF SOC appls. 104145
three-conductor transm. lines with ferrite core attachment, model 72392
ULSI high-speed serial commun. with error correction using 0.25 μm CMOS technol. 104112
ULSI interconnect scaling and parasitics, crosstalk noise, opt./RF interconnects 81123
ultra deep submicron ICs, power supply noise reduction, optimized distributed capacitors 70263
US transducer, ribbon-based probe cable, crosstalk 111532
US transducers, periodic lin. array, US micromachining 111531
UWB SAR imagery, 2D polarimetric calib. filters 96961
UWB SAR imagery, blind polarimetric equalization 96888
VDSL technol., RFI sources, far-end-crosstalk 85410
VDSL technol., spectral allocation, far-end-crosstalk 74473
vectored-DMT, FEXT canceling modulation scheme for coordinating users 128981
VLSI, on-chip crosstalk eval. between adjacent interconnections 70269
VLSI cct. phys. design, crosstalk minimization *(Chinese)* 68501
crosstalk continued
VLSI delay and crosstalk estim., lumped and distributed coupled RC tr moment computation 81485
VLSI design, deep-submicron interconnects 81481
VLSI inductive crosstalk, differential signaling modelling, phys. synthesis to 127011
VLSI layout anal., geom. proximate nets 81472
WDM opt. networks using erbium doped fiber amp. 96837
wire packing, crosstalk-aware chip-level track/layer assignment with integer 101652
xDSL systs., crosstalk ident. 108473
xDSL systs., crosstalk ident., freq.-domain approach 108474
zoneless autostereoscopic displays, just enough reality/microstereopsis 8689
CsI:Tl scintillator-Si-well X-ray microdetector based on deep RIE techs. 110
Cu/low-k ILD interconnects, 0.13 μm technol. node, dielec. materials select 115683
Cu-SiO_2 interconnects for high speed ccts., sig. propag. and crosstalk chara 126460
$LiNbO_3$ four-channel Bragg cell AO modulator, design and fab. 93262
Si RFICs, deep trench guard technol. to suppress coupling between induct 102690
SnO_2/Pt gas microsens. arrays, heated, chem. crosstalk 97499
YBaCuO mid-IR bolometer array, inter-pixel crosstalk 71160
$YBa_2Cu_3O_{7-\delta}$ DC SQUID magnetometer, modulation efficiency 70894
CRT *see cathode-ray tubes*
crushing
sulphur crushing operations, ESD protective measures investig. 83122
crushing strength *see compressive strength*
cryobiology *see biothermics*
cryogenic cables *see superconducting cables*
cryogenic electronics
used for low temperature operation of conventional electronics. For superconducting electronics, use "superconducting devices" or NTs as appropri
CMOS device, metall. channel length and series resist. 70105
CMOS device, STI, low temp. corner leakage charact. 70300
CMOS ICs, nanoscale technol., low temp. operation 116038
CMOS technol. scaling challenges for sub-0.1 μm generations 70303
CMOS voltage amp., readout electronics, cryogenic operation 70301
Coulomb blockade primary thermometer 75421
deep submicron MOSFETs, hot carrier degrad. at room/liq. N_2 temp. 70102
dielec. resonator filter, dual-mode operation 69060
dielec. resonator PHEMT oscillator, low noise 90797
dielec. resonators for low-temp. electronics appls. 70479
double-gate SOI MOSFETs, Hall effect meas. 126762
floating gate neuron MOS cct. perform. improvement by low temp. operati 70299
high detectivity QW IR HET photodetector, optim. at low temp. 86525
high-speed aerospace PWM control chips under cryogenic temps. 133226
LED, cryogenic operation, cold light 71604
lin. drive cryocoolers, low cost, flexure springs, US Army appls. 111554
low temp. electronics, conf., Noordwijk, Netherlands (June 2000) 67388
Mars rover microelectronics, die attachment for -120°C to +20°C thermal cycli 88075
Mars spacecraft, low temp. electronics 76815
microwave background radiat. anisotropy, low noise cryogenic preamp. 752
microwave transistors, charactn. techs. for temp. depend. expt. anal. 114982
MM-wave cryogenic IC, on-wafer testing 69230
MM-wave on-wafer testing facilities, room & cryogenic temp. 80328
MM-wave semicond. two-port network, props. at 77 K 80293
MOS floating gate neuron cct., low temp. DC charact. 68984
MOSFET, cryogenic operation, substr. current and kink anal. 70106
MOSFET, diffusion-drift transport, channel length depend. at cryogenic temp 70101
MOSFET, Unibond device, low temp. operation, LF noise 70104
nanoscale ballistic MOSFETs, low-temp. perform. 70100
nMOSFET, lin. resist., enhanced non-scaling at cryogenic temps. 70099
NMOSFETs, CMOS proc. steps impact on drain current kink at liq. He tem 70312
PHEMT, microwave receiver, cryogenic temp. operation 80303
planar silicon diode temp. sens., low-temp. current transfer 75419
polysilicon TFTs, low temp., hot carrier effects anal. using device simulat 103891
pulse tube cooler with lin. compressor, IR sens. appl. 109547
resist. bridge, cryogenic current comparator, SQUID readout 75780
RSFQ-CMOS interface syst. 70879
rutile-sapphire dielec. resonator, cryogenic microwave oscillator 69083
sapphire resonator, K-band oscillator, satellite commun. 102632
space missions, low temp. electronics 76814
spaceborne CMOS testing and optim. 76812
ultra-short gate length ultra-thin SOI MOSFET for low temp. operation 7010
very low loss wideband ferrite isolators for mm-wavelengths 91216
(Al,In)GaAs/GaAs pseudomorphic HEMTs, 1/f noise study, 4.2 K cryoelectro ics 70188
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 703
AlGaAs/InGaAs/GaAs cryoelectronic MODFET, deep levels 115940
GaAs HEMT cryogenic LNA 68604
GaAs MESFET and HEMT, low temp. microwave charact. 70190
GaAs MESFET, cryogenic charge sensitive preamplifier 68614
Ge JFETs for deep-cryogenic appls., design/fab./charactn. 70189
Ge film, cryogenic microthermometer 75748
InAlAs/InGaAs/AlGaInAs/InGaAs/InP/InAlAs HFET, low temp. impact ioni EL 70187
InGaAs/InP DHBT, cryogenic charact. 70035
InP FET radioastronomy receivers with ultra-low noise 86276
InP HEMT cryogenic LNA 68604
InP/InGaAs HBTs, elec. props./transport mechanisms, 4.2-300 K 103768
InP/InGaAs:C HBT, RF-noise params., modelling/cryogenic temp. depen 114980
Si JFET, low temp. readout electronics, bolometric detector 70203
Si MAGFET, low temp. operation 70107
Si cryogenic detectors, mip sigs., posn. resoln., review 76052
Si, irrad. detectors, Lorentz angle anal., low temp. effects 132318
Si planar resistors, temp. response curves, low-temp. hopping cond. nonohm effects 75420
Si/SiGe strained QW MODFET, cryogenic cct. 115943
6H-SiC MOS structs., shallow traps at cryogenic temp., TSC study 69759
SiGe HBTs, low RF noise optimized, cryogenic operation 70033
SiGe HBTs, vert. scaled, low-temp. collector profile design 70034
YBaCuO IR bolometer array, cryogenic CMOS readout cct. 71169

nic electronics continued
$a_2Cu_3O_{7-x}$ film, cryoelectronics appl. 127529
nic pumps *see cryopumping*
nics
e also cryogenic electronics; cryopumping; cryostats; low-temperature pro-uction; low-temperature techniques; magnetic cooling; refrigeration
S Superbend magnet syst., supercond. dipoles 76006
cryogenic grav. wave detector perform., review 127531
gg superlattice filter low temp. microrefrigerators, SIN tunnel jns. 93173
ogenic materials, conf., Rio de Janeiro, Brazil (Jun. 2000) 78412
ORE detector, solar axions/dark matter search 97267
t cycling intermediate energy ion synchrotron supercond. magnet syst. 75934
ure hadron collider accelerator design anal. 132262
h T_c supercond. filter subsystems, wireless telecomms. 71083
S coils, cryocooler-cooled, stabil. criterion *(Korean)* 127514
liv. addressable micro-mirror-arrays, space appls. 93221
rt gas solids, doped, cryogenic laser act. media pot. 82573
-detectors, lin. Stirling cryocoolers, space platform 111326
HC accelerator cryogenic syst., thermal models 132246
HC inner triplet quadrupole program status at Fermilab 75955
HD helical coils, excitation props., cryogenic stabil. 71027
w-temp. supercond. magnet develops., low-temp. cryocooler effects 71059
assive cryogenic particle detectors, energy resoln. anal. 104591
niaturized cooling syst. for HTS antennas, develop. and vac. seal-off prop. 27533
ixed-refrigerant Joule-Thomson cryocoolers used for cooling IR devices, fast ool-down 109548
UCLOTRON POLARIS cryogenic polarized D source design anal. 132284
pt. fibre perform. tests 127629
otomechanical engng., conf., Boston, MA, USA (Nov. 2000) 78462
artial core transformer operation under liq. nitrogen conditions 99730
article tracks, high-resoln. recording by in-line holography 82981
iezoelec. accelerometer, cryogenic temp., spurious transients 86981
lanck-LFI, microwave background satellite, cryogenics 97040
ulse tube cryocoolers for cooling IR sens., mil. tactical appls. 111553
ignaal-USFA cryocoolers, reliab., lifetime determining factors 100577
pace-borne IR detectors, miniature coaxial pulse tube refrigerator 111325
tirling cryocooler for HTSC RF filters 92916
upercond. magnet structural materials, Vickers hardness 125148
ysts. for supercond. magnets, review 81999
-rays calorimetric detect. 132498
ceramic TVO temp. sens., mech. stabil. 109484
fiber reinforced SiC ceramics, high-precision lightweight components for optomechanical appls. 82267
GaAs hybridized QW IR photoconductors arrays at Goddard Space Flight Center 86657
GaAs-AlGaAs MQW low background IR detectors 86551
Mo-doped solid Ar thin film lasing/luminesc. 117169
N solid films, ps laser photolysis at cryogenic temp. 72128
Nb_3Sn NMR supercond. magnets develop. 71052
NbTi NMR supercond. magnets develop. 71052
Ni/Au/GaN, low resist. ohmic contacts, cryogenic treatment 126216
O_3/N_2O cryogenic film, laser evap., hyperthermal beam for oxid./nitridation 115616
Pd/Au/GaN, low resist. ohmic contacts, cryogenic treatment 126216
Si anisotropic plasma etching, SF_6/O_2-based chem., cryogenical wafer cooling, ICP source 103370
Si cryogenic double-p detector, charge collection eff. 87190
Si dimens. stable ultra-lightweight optics for cryogenic/high-energy laser appls. 82268
Si sens. modules, tracking detectors, low-mass cryogenic cooling 76064
Tm-doped ZBLAN fiber amp., 794 nm emission 128153
$YBa_2Cu_3O_{7-\delta}$ mag. bearings, centrifuge appls. 81995
opumping
IW-630 ion implanter for 300-mm wafers, perform. 115545
pumping-speed meas., test dome design influence 132226
SRRC high flux beamline, differential pumping syst. for gas filter 132234
oscopy *see freezing*
ostats
ATLAS B0 model supercond. coil constr. 71005
cryocooled supercond. coil syst., AC loss meas. 71061
discrim. interceptor technol. prog., pass. sens. subsyst. 133408
flywheel supercond. mag. bearing, rot. loss num. anal. 78182
GFRP cryostat, Bi-2223 HTS 10 kVA power transformer, double pancake windings *(Korean)* 123544
HTSC coils, AC loss meas. with cryocooled sample 116530
HTSC transformer, AC losses meas., flux diverters effect 77917
liq. N_2 automatic filling syst., gamma detector array appl. 110312
mag. shielded insert, variable temp. regulated stage 70994
phase rot. induction linac, thin supercond. solenoid 75935
QW laser, grating feedback locked, polariz.-depend. photon-no. squeezing 93585
Stirling cycle cryostat for HPGe detector cooling, SELENE lunar mission 121775
supercond. current feeder syst. for Large Helical Device 77412
Si sens. modules, tracking detectors, low-mass cryogenic cooling 76064
Ta solid electrolytic capacitor, low temp. elec. prop. meas. 102784
yptography
see also computer installation; data privacy; public key cryptography; quantum cryptography
3D optoelectronic image proc. and recogn. 107288
128-bit symmetric block ciphers, fault-based side-channel cryptanal., concurrent error detect. 129277
512 bit RSA modulus factorization 106294
act. network infrastructures implement. using agent technol., security implications 74309
ad hoc networks, authentication scheme 83966
adaptively secure threshold cryptography, concurrency and removing erasures 106305
Adobe eBook security, digital rights mgt. 129244
advanced encryption std., generalised impossible differentials 94350
AES, implement. and fair comparison of final candidates using FPGA 129290
AES block cipher algms., FPGA perform. eval. 94341
AES final candidates using FPGAs, perform. study 106228
agent-based Bayesian forecasting model for enhanced network security 74286
algm. for solving discrete log problem on hyperelliptic curves 106295
algm. implement. perform. *(Chinese)* 94368
all-opt. cryptographic device for security appls. 129232
anonymity network archit. 129328
anonymous coin marking, privacy protection against blackmail 106264
cryptography continued
anonymous electronic auction protocols, Eng. vs. sealed bid 129329
approved location stamps 131188
artifact-metric syst. for inherent texture *(Japanese)* 129275
asynchronous Byzantine agreement using cryptography 94380
asynchronous logic, Blowfish algm. implement. 101942
attacks against cryptographic systs. *(Slovenian)* 129250
"Augmented Family of Cryptographic Parity Circuits", cryptanalysis 129306
authenticated scheme of Onion Routing *(Chinese)* 85176
authentication protocol attacks *(Chinese)* 94369
authentication syst. based on RSA encryption *(Chinese)* 106247
authenticity by typing for security protocols 83973
bit-parallel systolic architecture,low-complexity, cryptosystems appl. 102191
black side data link layer, retransmission inform. appl. 111605
blacklisting problem in broadcast distrib. syst., ECC based soln. 129257
blind signatures, cryptanal. on improved user efficient scheme 72959
block cipher security via NTE and NPCBC 129255
block cipher systs., dyn. generation of s-boxes 129239
block ciphers, group theoretic property, encryption fns. 72971
block ciphers, high order differential attack and trace attack 94363
block ciphers, polynomial-time universal security amp. 129316
block ciphers of low alg. degree 118045
BLOWFISH algm., optimal datapath design for cryptographic proc. 106288
BLOWFISH block cipher, VLSI archit. design, secure modes of operation 106208
Bluetooth equipped gadgets, usage patterns *(German)* 130844
Bluetooth security weaknesses 129345
Boneh-Shaw fingerprinting scheme improvements 129300
braid group cryptography, key agreement protocols 129285
Camellia, 128-bit block cipher suitable for multiple platforms 129307
chained chaotic oscillators for more secure commun. 72969
chained stream authentication 129314
Chameleon dyn. reconfigurable hardware-based cipher *(English)* 79849
chaos appls. in commun. and sig. proc., survey 94225
chaos education in microwaves, microwave circuitry and appls. 67452
chaos seq. generation, neural network *(Chinese)* 94352
chaos shift keying with optoelectronic encryption syst. 83955
chaotic cryptosystems based on space-discretization of chaotic maps 94361
chaotic dyn. syst. approach 83956
chaotic encryption scheme, keystream reconstruction, geometric inform. 72961
chaotic neural encryption/decryption network, design and VLSI archit. 68989
chaotic plasma pacing with, music sig. 91532
chaotic sync. commun. systs., comparative anal. *(Russian)* 94379
chaotic syst.-based solns. for data protection 106209
charactn. of security notions for probabilistic private-key encryption 72950
CHES 2000, cryptographic hardware and embedded systs., conf., Worcester, MA, USA (August 2000) 106223
CIPRESS syst., transparent access to encrypted data using OS network stack extensions 119482
Cliques protocols suites, security anal. 83970
CMOS low-power asynchronous DES chip 106243
CMOS VLSI archit. of dyn. reconfigurable hardware-based cipher 102322
code cracking problems, complexity computation 129263
combinat. characterisation of *C*-optimal authentication codes with arbitration 118008
comp. theorem for universal one-way hash fns. 106320
completeness theorems for secure two-party computation 72952
complex cryptic code systs., operations in finite GF GF(2^n) 118022
computer and commun. security, conf., Singapore (Nov. 1999) 100405
computer arith., conf., Vail, CO, USA (June 2001) 79651
conditional correl. attack, anal. and modifs. *(English)* 72960
conf., Bruges, Belgium (May 2000) 113200
conf. on inform. security, Seoul, Korea (2000) 124236
confirmer signature schemes secure against adaptive adversaries 106306
Confused Document Encrypting Scheme modified for digital inform. hiding 118017
continuous operation systolic serial pipeline multiplier 102076
continuous operation systolic serial pipeline multiplier 102077
correl. immunity, cryptographic Boolean fn. 129352
correl.-immunity of highly nonlin. Boolean fns. 106324
COS ciphers, fast block cipher design 129278
cover-free families/superimposed codes, constr./bounds/appls. to cryptography/group testing 129109
cryptanalysis appls. of correl. theorems of Boolean fns. 94348
cryptanalysis of countermeasures proposed for repairing ISO 9796-1 106299
cryptographic systs. for multimedia appls., hardware oriented anal. 129241
cryptology, INDOCRYPT 2000, conf., Calcutta, India (Dec. 2000) 78450
CryptoManiac, fast flexible archit. for secure commun. 95930
cryptosystems based on real quadratic no. fields 129324
cubic polynomial over GF(P), fast algm. to test irreducibility *(Japanese)* 72966
D-type flip-flop cct., eval. of metastabil. for random no. gen. 90869
data encryption scheme, arith. coding *(Chinese)* 118016
data encryption/decryption syst. using multi-valued logic array *(Chinese)* 106211
decision Diffie-Hellman problem, lin.-preserving reductions, cryptography 72973
denial of service in networks, cost-based framework 83953
DES encryptor/decryptor core in FPGA 106230
DFCv2 129308
difference distrib. attack on DONUT and improved DONUT 129351
differential power anal. in presence of hardware countermeasures 106235
Diffie-Hellman-based password-authenticated key exchange protocol 106301
digital image hiding technol. based on tangram and Conways' game 95069
digital signature algm., security of Lenstra's variant 106259
digital signature scheme using ellipt. curve cryptosystems 129236
digital signature schemes, lattice attacks 94357
digital signature tech. based on IC card *(Chinese)* 129246
digital signature tech. in OA syst., signature scheme, encryption, security *(Chinese)* 72957
digital signature verifiable encryption 106222
digital signature with one-time pair of keys, cryptanal., modified version 94364
digital watermark, wavelet transform, pseudorandom seq. *(Chinese)* 129270
digital watermark syst. for secondary distrib., secure *(Japanese)* 73399
directed one-time password authentication scheme based upon discrete logarithm 72968
distributed cryptographic protocols for threshold RSA signing/decrypting with no dealer 72972
distributed environ., hierarchy-based access control 129276
distributed security schemes for networks 83947
distributing trust on Internet 108313

cryptography continued
DNA-based cryptography 69358
document objs. resulting from multi-party collaborative transactions, cryptographic framework 106245
domatic no. approx. 67870
double random phase encoding encryption syst., SNR enhancement 118018
double random phase encryption digital holographic data security syst. 116580
dyn. decryption for copy protection of image data *(Japanese)* 129274
dyn. FPGA implement. of Serpent block cipher 106229
dyn. multi-threshold metering schemes 129313
dyn. traitor tracing 118046
electronic voting in large-scale distributed syst. 106292
ellipt. curve cryptographic coprocessor implement. over GF(2^m) on FPGA 106225
ellipt. curve cryptography, finite field extensions 118043
ellipt. curve cryptosystems, explicit conditions of ellipt. curve traces for FR-reduction 72975
ellipt. curve cryptosystems, fast algm. for short Lucas chains comput. 72974
ellipt. curve cryptosystems, finite fields 72977
ellipt. curve cryptosystems under FR-reduction 129355
ellipt. curve discrete logarithm problem *(Chinese)* 67704
ellipt. curve random no. generator 118030
ellipt. curves and resilient fns. 129353
encrypted CBC-MAC, decorrelation over infinite domains 129317
encryption syst. based on Hopfield neural network 118028
error correction in cryptographic syst. based on ellipt. curves 106249
Ethernet LANs, data security 119558
exposure-resilient fns. and all-or-nothing transforms 106321
fast algm. for multiplicative inversion in GF(2^m) using normal basis 83874
fast correl. attacks using parity-check eqns. 106328
Feistel ciphers with SPN round fn., security against differential and lin. cryptanalyses 129327
finite field digit-serial multiplier archit. for cryptography 79751
fixed-length homophonic coding for general source, theorem 129167
FPGA implement. of MD5 hash algm. 129240
fragile authentication watermark for images 95060
fragile watermark tech. *(Chinese)* 106195
fuzzy commitment scheme, cryptographic primitive 106216
generalized group-oriented cryptosystem with authenticated sender 106291
Gennaro-Halevi-Rabin signature scheme, security anal. 106300
global privilege mgt. infrastructure for electronic content distrib. 129315
GOST, differential cryptanalysis of reduced rounds 129326
greater-than fn., pay-per-multiplication comparison method 129304
ground glass, holographic encryption and MUX, phase conjug. readout algm. 72089
group authentication/key exchange, Chang-Wu's protocol improvement 129251
group key mgt., scalability and reliab. 118025
group key mgt. for IP multicast, model & archit. 129331
GSM A5/1 stream cipher attack 129281
hard core predicates, complexity bounds 118044
hardware design of net MUX, secure commun. *(Chinese)* 108495
HAS-V, hash fn. with variable output length 129318
HFE, security of hidden field eqns. 129293
hierarchical access control using secure filter 83946
hierarchically struct. key predistribution syst. 106199
Hierocrypt block cipher 129309
high-order correl.-immune fns., improved nonlin. upper bound 129322
high-perform. automated control systs., data protection, controlled operation-based fast methods 94355
high-radix Montgomery modular exponentiation on reconfigurable hardware 94370
high-security cryptographic fast finite field multiplier archit. 114712
higher order differential attack of black ciphers with two-block struct. 129348
highly nonlin. zigzag fns. and unbiased fns. 83963
hybrid syst. for real-time lossless image compression 73393
hyperlinking to decryption software, legality, USA 100489
ideal secret sharing schemes, comp. of matroids 118019
ident. scheme based on discrete logarithm assumption *(Chinese)* 118040
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image cryptosystems, encryption algm. based on VQ 118634
image encryption, virtual image and iter. phase retrieval 129341
image watermarking, role of inform. theory 94506
imbalance stats. 129282
internal nuclei of point sets in PG(n,q) for q odd, cryptography appl. 113911
Internet anonymous auction scheme 129358
Internet privacy, traffic anal., protocols, attacks, design issues 108256
Internet security *(Japanese)* 119625
Internet users, anonymity service using free MIX routes 106242
Internet-based med. teleconsultation syst. 133199
intranet, closed commun. group, dyn. proc. resoln. protocol *(Japanese)* 74193
inverses computing over shared secret modulus 106303
IP lookups improvement using multiple hash fns. 130352
IP packet tracing, hash-based, hardware support 95967
IS-95 CDMA, voice privacy anal. 131236
ISO/IEC 9796-1 signature scheme, chosen messages attack 106298
Java appls. using smart cards 118014
JTC with significant output images, opt. security syst. appls. 118697
KASUMI strength without FL fns. against higher order differential attack 129349
key assignment for overcoming CHW scheme incorrectness 118015
key generation from voice 83952
key mgt. for dyn. multicast groups 129254
key protection against modif. attack 83951
Latin sq. isotopy classification algm. *(Chinese)* 118039
LHL threshold group signature scheme, security limits *(Chinese)* 129267
Liaw's broadcasting cryptosystem cryptanalysis 72941
LILI keystream generator 129321
logical rels. for encryption 83976
Lyapunov eqn., lin. transform. *(Chinese)* 100740
masking against differential power anal. 106233
Mercury NTDR Information Security syst., software security and 80486 µP 108560
message recovery signature scheme based on hyperelliptic curves *(Chinese)* 129337
min.-latency secure fn. eval. 106312
MISTY1 higher order differential cryptanalysis 129350
MIX net 106327
mixed-mode chaotic cct. for chaotic commun. for analog sigs. transm. 72983
mobile code cryptographic security 83949
mobile database systs., secure access schemes 130800

cryptography continued
Mobile IP AAA infrastructure, authenticated key exchange 107851
modified chaotic cryptographic method 118029
modular exponentiation on fine-grained FPGA 125461
modulated fuzzy syst., chaotic systs., secure commun. 94372
Montgomery exponentiation with no final subtractions 106238
Montgomery multiplication, scalable algm. and implement. on coarse-reconfigurable chip 129291
Montgomery multiplier and sq. in GF(2m) 106236
MP3 music delivery, security methods 106367
multi-party key establishment protocol 129245
multi-party optimistic non-repudiation protocol 130461
multicast key distrib., lower bound 118026
multicast key mgt., probabilistic methods 106197
multicast media, large-scale distributed watermarking through encryp 119798
multicasting, push-based key distrib./rekeying protocol 94375
multimedia content protection in consumer electronics devices, overview 7
multiplicative inverses, cryptographic appls. 83967
multisignature and (T,N) threshold signature schemes *(Chinese)* 118020
multisignature schemes with message flexibility, order flexibility and order ifiability 129260
multistage secret sharing scheme based on factorization problem 106293
multivariate polynomial eqn. solving for cryptosystems 106316
music protection online and MP3 compression 84715
N-periodic seqs., lin. complexity, finite field *(Chinese)* 129338
n-way key recovery syst. by extended cryptographic timed Petri net, spec. anal. 118041
networked cryptographic devices resilient to capture 83950
NICE-Schnorr-type signatures, fast generation 129284
NIST ellipt. curves over prime fields, software implement. 129292
noisy polynomial interpolation and noisy Chinese remaindering 106297
non-repudiation fair exchange protocol with semi-trusted third party *(Chine* 106248
nonlin. Boolean fns. with cryptographic props. 106323
nonlin. secret-sharing 94360
nonsupersingular ellipt. curve cryptosystems, MOV algm. 72976
off-the-record email syst. 119520
operation-efficient subgroups of finite fields, cryptographic appls. 94377
opt. image encryption, double phase encoding, fractional FT *(Chinese)* 107
opt. image encryption, generalized fractional convolution operation 106964
optimal scalable security archits. in presence of colluding mobile traitors 72
packet switching networks, multilayer chaotic encryption for secure comm 107824
PACS images, cable modem access using Web browser over Internet 98848
parab. waveguide based all-opt. security coded key device 109197
password authentication protocol using zero-knowledge with secret coin toss 129279
password authentication using multiple servers 129298
password-authenticated key exchange protocols, efficiency improveme 129299
PC cryptographic coprocessor based on TI sig. proc. and smart card syst. 1180
perform. impact of addressing modes on encryption algms. 129333
periodic seq., lin. complexity, stat. charact. *(Chinese)* 118036
periodic seqs., k-error lin. complexity *(Chinese)* 129336
permuted kernel problem cryptanalysis 106266
pers. key generation for secure commun. syst. 94359
polariz. holograms, phase coded recording for data MUX and encryption 829
polynomial basis squaring, complexity 129312
PolyR constr., fast universal hashing with small keys and no preprocessi 129354
power anal. attacks countermeasures for Koblitz curve cryptosystems 10622
power spectrum tests of random nos. 106207
privacy enhancing technol., anonymity, unobservability and pseudonymi 108011
privacy enhancing technols. conf., Berkeley, CA, USA (2000) 100408
private bidding and auctions with oblivious third party 106221
prog. proc. cards, data security *(Polish)* 125466
proof for committed no. in interval 106319
proof procedure, cryptographic protocols 83972
protocol, data commun. *(Chinese)* 84969
protocol for digital signature of receiver being undeniable *(Chinese)* 129269
protocol insecurity with finite no. of sessions 83975
protocol verification, symbolic models 83974
protocol verifier based on Prolog rules 83971
protocols, noninterference for anal. 95918
pseudo-random fns. and factoring 72948
pseudorandom permutations and fns. 106322
q-ary shrinking generator, period and lin. complexity of seqs. *(Chinese)* 7297
query-based variant of parallel repetition theorem 106215
radiotransmission security systs., selection of key code seq. 118021
random time launching inform. hiding model *(Chinese)* 106212
randomly chosen ensembles of nxn s-boxes, avalanche and bit independence props. 129233
RC6-32/20/176 common-key block cipher, equiv. keys 129258
receipt-free voting based on homomorphic encryption 106326
Reed-Muller code, cryptographic props. of cosets of R(1, m) 72943
Reed-Muller codes, stream ciphers appls., multicovering rads. bounds 83883
rendezvous point relocation extension to PIM-SM multicast routing 130430
research in past and future, cryptography 106203
Rijndael encryption algm., cryptanalysis 106204
robust image hashing 95364
root finding interpolation attack 129325
RSA encryption proc. based on residue table for redundant binary nos. *(Japa-nese)* 68817
RSA secret exponent digits distinguished by observing modular subtractions 129346
RSA threshold signature scheme 106304
SAFER K-64 and s-boxes, perform. eval. 129234
scalable and unified multiplier archit. for finite fields GF(p) and GF(2^m) 106237
scalable anonymous connections in context of MIP and AAA 129330
SD-link for secure collaboration across private networks 85248
sealed-bid auction using hash chain 129359
second-order power anal. to attack DPA resistant software 106234
secret key exchange, random card deals, hierarchical struct. 106202
secret key exchange spanning trees by random deals of cards on hierarchical structs. 72970
secret key watermarking with changing keys 94342
secret sharing schemes with cheating detect. 72947
secret-key agreement, secrecy capacity 106313

ography continued
cure distributed computations using semi-trusted hosts and mobile agents 72956
cure e-commerce transactions, certificate-based distributed firewalls 130731
cure encryption, binary seq. lin. complexity profiles *(English)* 72964
cure image coding scheme using RNS 129701
cure multi-party computation from any lin. secret-sharing scheme 106311
cure multicast commun. using evol. heuristic algm. 107619
cure protocol transform. via expansion 106220
cure pseudo-random seq. generator strength 94345
cure radio transm. syst. using FM high dimens. chaotic oscillator 74514
cure subscription mgt. on agent based platforms 96017
curity pitfall avoidance of encryption combined with digital signatures 129243
curity-enhanced packet video with dyn. multicast throughput adjustment 85291
emsomm, scalable multiple encryption scheme for one-to-many multicast 129332
erpent encryption algm. implement. on 24-bit DSP 129283
HA-1 in encryption mode, anal. 129289
herlock for commercial high assurance network computing 108169
hort secret DL-keys, small generic hardcore subsets for discrete logarithm 72965
ignature scheme with partial message recovery, formal security proofs 129342
imply-iterated Feistel ciphers with whitening keys, strength 129288
kipjack, NSA-designed block cipher 94347
lide attacks 106329
mart card advances to link biometrics and cryptography 129340
mart card cryptographic authentication protocols 106290
mart card cryptography, attack countermeasures 106289
martcard, secure platform for IT security services 118013
ocialist millionaire problem soln. 94346
oftware implement. of ellipt. curve cryptography over binary fields 106224
oftware-hardware trade-offs, A5/1 cryptanalysis 106239
parse polynomials over finite rings, cryptographic appls. 129360
SL integrat. into JaCoWeb security framework, project/implement. 130344
tat. methods for cipher strength eval. syst. *(Japanese)* 129237
teganographic framework for ref. colour based encoding and cover image selection 106520
teganography, digital, hiding data within data 72963
teganography effects in various image formats 106331
teganography for low bit-rate wavelet based image coder 95068
tream ciphers, modes of operation 129320
tream ciphers, stat. self-sync. 118027
tream ciphers based on cascaded small s-boxes 118048
tream ciphers for GSM networks 94354
tream ciphers over GF(2^n), correl. attacks algm. 129280
tring replacement exponentiation 83965
trong-password authentication, attacks and solns. 118047
ubstation automation, broadband commun., protocols, cryptography 78092
ymmetric block ciphers based on group bases 129310
ymmetric encryption algm., neural network *(Chinese)* 129248
ynchronized chaotic commun. systs., transm. efficiency *(Chinese)* 106286
ynchronized hyperchaos, Bell inequality violations 106214
argeted advertising and consumer privacy 129302
EA, symmetric block encryption algm., VLSI implement. *(Chinese)* 129335
ETRA security 118012
etris-hashing or optimal table compression 72978
hreshold fail-stop signature schemes based on discrete logarithm 106200
hreshold signature and authenticated encryption, security of generalization 129261
ime-variant permutation generator, probabilistic cryptanalytic method 129272
iming attack against RSA with Chinese remainder theorem 106227
otally incoherent light opt. security/encryption 73420
rajectory sampling for direct traffic obs. 85299
ransport triggered configurable proc. archit., encryption algms. 102217
ree-based multicast key agreement 118031
riple encryption schemes as block cipher protection against exhaustive-key search, anal. 129271
riple-DES network encryptor 106231
WINKLE factoring device, anal. and optim. 106296
nconditionally-secure secret-key distillation based on smooth entropy *(Chinese)* 106287
niversal homophonic coding 129108
erifiable multisecret sharing scheme, (t,n)-threshold 94336
erifiable partial escrow of integer factors 130449
erifiable secret sharing complexity and multiparty computation 72953
igenere cipher, interactive cryptanalysis algm. 72984
irtual hidden network 118032
isual cryptography, improved schemes 129793
isual cryptography, known-energy neural net approach 107112
isual cryptography, neural nets 83960
LSI design IP protection, constraint-based watermarking techs. 116005
LSI proc., const. charact. power dissipation *(Japanese)* 79848
AP integrated transport layer security 96590
atermark verification syst., zero knowledge proof *(Japanese)* 106442
eil descent attack, anal. 129296
elch-Gong transform. seq. generators 129319
ireless-based authentication/anonymous channels for large scale area 130382
LAN, act. attack on token-based security protocol 95873
LAN encryption algms., hardware implement. 130714
ML and security 119537
ML security mechanisms 119538
ahalom protocol, secrecy proving, inductive method 95870
ero-knowledge proofs, membership to decision 72951

rystal chemistry
see also crystallography; stoichiometry
Ba-Mg-Al-O=Eu phosphors, point defect chem., europium cations incorporation 104933
$LaBSiO_5$:Ce(Tb) stillwellite, luminesc., cryst. chem. 116935
$Li(Mn_yFe_{1-y})PO_4$, olivine-type cryst. chem., Li batts. 4 V cathode material appl. 112813
$Li_{1-x}Ni_{1-y}Co_yO_2$ delithiated layered cathodes, structural instabil. 91542
$(Mn_yFe_{1-y})PO_4$, olivine-type cryst. chem., Li batts. 4 V cathode material appl. 112813
$SrBPO_5$:Ce(Tb) stillwellite, luminesc., cryst. chem. 116935

crystal cleavage *see specimen preparation*

crystal defects
see also defect absorption spectra; disclinations; dislocations; grain boundaries; point defects; stacking faults; twinning; voids (solid)
bulk nitride growth, related techs., conf., Brazil (Nov. 2000) 113249
Cu/TiN/6H-SiC(0001) heterostruct., epitaxial growth, PLD, XRD, TEM 114381
diamond, doping by ion implant. 115551
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
diamond, ion implant. related defects, inhib. of light element diffusion 115557
diamond and related materials, conf., Porto, Portugal (Sept. 2000) 67401
diamond CVD films, polycryst., high-speed photoconductors 82306
diamond CVD films, surface and bulk defects, conf., Diepenbeek-Hasselt, Belgium (March 2001) 113233
diamond film, microwave PECVD, Si(100) substr. *(Japanese)* 68228
diamond films, high quality CVD, for particle detect. appls., structural charact. 114331
diamond films, hot filament CVD, struct./elec./opt. props. *(English)* 125989
edge emitting LD, defect recogn., long. mode anal. 82642
FIB micro machining, vert. Ga distrib., defects, lateral contamination 115610
fluorite-/C-type oxide solid solns., lattice params., defect struct., SOFC 89237
LCD TFT prep. using high-press. annealing syst. *(Japanese)* 82239
materials sci. with ion beams, conf., Strasbourg, France (May-June 2000) 78432
nuc. detector materials, real defect conc. meas. by PICTS and SCLC methods 82311
rem. opt. fiber radiation dosimetry, review 133139
semiconds., proton/alpha particle radiation defects, doping 115494
SIMOX wafer surface defects, effects on device charact. *(Japanese)* 91888
SIMOX wafers, low dose O implant.-induced bulk and surface defects anal. 69791
SOI wafers, thermally oxidized bonded, cryst. surface defect, oxygen gettering 91907
Al-Fe, bulk metastable nanostructured alloys, effects of heating/aging 114428
Al-Zn-Mg-Cu-Zr, bulk metastable nanostructured alloys, effects of heating/aging 114428
$Al_xGa_{1-x}As$, compositional depend. of defect mobility and damage buildup 81034
As ions, implanted into Si at 850°C, anom. behaviour 80985
Au, SPE growth, ion beam induced epitaxial crystalliz. 90530
$BaTiO_3$:Y thin films, dielec. props., pulsed laser deposition 104319
BiSrCaCuO 2223 supercond. tapes, field depend. at 77 K 70748
C, single walled nanotubes, mech.-induced kinks, electronic props. 70219
CdTe epitaxial films, close-spaced sublimation growth and struct., substr. effects 80685
CdTe thin film solar cells, native defect control by close-spaced sublimation 89275
CdTe-CdS polycryst. solar cells, deep levels investig. 100185
CdTe-based solar cells, local photocurrent and resist. meas. 100118
CdZnTe, Zn fraction, microphotoluminescence mapping 80709
Cu wafer bonding, microstruct., oxide distrib. 68387
$Cu(In,Ga)Se_2$ solar cells, defect mechanisms photocapacitance anal. 100183
$Cu(In,Ga)Se_2$ solar cells, radiation induced defects expts. 112865
GaAs cleaved surface, defects, STM photoabsorption spectra 69502
GaAs epilayers on Si, bulk/surface defect passivation, RF PH_3/H_2 plasma exposure 115626
GaAs nanowires, oxide-assisted growth, opt. characts. 69662
n-GaAs, proton irrad. defects, fast relax. 103037
GaAs:Br, ion-implanted, damage prod., ion energy depend. 81038
$Ga_{1-x}Mn_xAs$ films, MBE, defect-controlled ferromag., annealing time 104486
GaN, MOCVD films, defects, monoenergetic positron beams anal. 80700
GaN films, low-energy ion assisted epitaxy and struct. 69514
GaN nanostructure, self-organized, MBE, CL, PL, SEM 91657
GaN, plasma etching, surface/bulk damage 126340
GaN:Au, ion implant., thermal annealing 81010
GaN:Mg(In), bulk and MOCVD grown, influence of Mg and In on defect form. 124894
$Hg_{1-x}Cd_xTe$ films, MBE on $Cd_{0.96}Zn_{0.04}Te(211)B$, defects 90350
InGaAs QD act. layer semicond. lasers, EL2 defects 82660
InGaN MQWs, chem. mapping 101325
p-InGaP solar cells, electron radiation induced defects recovery 112923
$La_{1-x}Ca_xCrO_{3-\delta}$, SOFC interconnect, oxygen vacancy form. 89259
$LaCr_{0.79}Mg_{0.05}Al_{0.16}O_{3-\delta}$, SOFC interconnect, oxygen vacancy form. 89259
$LaCrO_3$, Sr doped, defect induced dilations, atomistic modeling, SOFC interconnect 89261
$La_{0.80}Sr_{0.20}Cr_{0.97}V_{0.03}O_{3-\delta}$, SOFC interconnect, oxygen vacancy form. 89259
$LiNbO_3$:Zn cryst. photorefr. props., X-ray diffr. methods 82045
γ-MnO_2, effect of struct. defects on insertion behavior, comparison of H^+ and Li^+ 89098
$MnSi_{1.7}$, semicond. layers, epitaxial growth in presence of Sb flux 114280
$NdMnO_{3+\delta}$ defect struct. modeling, SOFC cathodes 89229
PZT films, domain images/retention props., electrostatic force microscopy 104309
$Pr_xCe_{1-x}O_{2-\delta}$, ceria-based gas sens. 121003
$Pr_{20}Fe_{73.5}B_5Cu_{1.5}$, bulk metastable nanostructured alloys, effects of heating/aging 114428
$PrMnO_{3+\delta}$ defect struct. modeling, SOFC cathodes 89229
Si CZ single-cryst. wafers, defect reduction/improved gettering 79177
Si, SPE growth, ion beam induced epitaxial crystalliz. 90530
Si large area multicrystalline solar cells, LBIC and IR thermography mapping 100149
Si large-diam. CZ cryst. growth, 400 mm diam. 101158
Si lattice defect passiv. by ECR hydrogenation tech. 69895
Si multicrystalline ribbon solar cells, hydrogen passiv. expts. 100057
Si, radiation defects bistability, bias depend., detector appl. 98020
Si solar cell defect monitoring, scanning PL spectrosc. 100061
Si solar cell mfg. line, EFG wafers, 15%+ efficiency cells 100080
Si solar cell p-n-jn. form., radiation defect prod. effect 112862
Si wafers, photoelasticity, scanning IR polariscope obs. 102994
Si:B, Bi ion irrad. effects on impurity redistribution 126605
Si:B CZ single crysts., superlarge defects 68131
Si:Bi (Bi_2), HI bombard., damage buildup 126307
Si:Ge, dose rate and temp. depend. of Ge range profiles, channeling implant. 81006
Si:N wafers, 300 mm, cryst. growth, grown-in defects 101157
Si/SiO_2 systs., conf., Boston, MA, USA (Nov.-Dec. 1999) 100429
p-Si(100), selective Au electrodeposition on surface defects 90510
SiC, 6H, single crysts., growth, Lely method, source material related defect distrib. 68100
SiC films, defects, opt. characterisation 126099
SiC, ion-implanted 6H, residual damage, RBS anal. 126094

crystal defects continued
SiC, plasma etching, surface/bulk damage 126340
SiC thin films on Si, seeded supersonic C_{60} beam depos. 68182
$Si_{1-x}C_x$, C ion implant./annealing form. *(Chinese)* 126318
SiC:Au, ion implant., thermal annealing 81010
3C-SiC/on-axis 6H-SiC(0001) epilayer CVD growth, substr. etching effects 69855
$Si_{1-x}Ge_x$ single- and poly-crysts., material props., nuc. detectors appl. 115342
$Si_{1-x-y}Ge_xC_y$ films, thermal oxid. kinetics, PL *(Chinese)* 126363
SiO_2 ultrathin layers, stress-induced leakage current, H^+ dispersive transport model 69741
SiO_2:F dielec. thin films, structural anals. by micro-Raman spectrosc. 92602
Ta_2O_5 anodic thin films, defects, DLTS and conductance transient investig. 116134
Ti:sapphire laser crysts., direct bonding tech., feasibility study 92936
Ti-Al-V, bulk metastable nanostructured alloys, effects of heating/aging 114428
$YBa_2Cu_3O_7$ HTSC thin films, MW props. improvement, artificial defects effects 70602
$YBa_2Cu_3O_y$ HTSC, melt textured, ion irrad., surface columnar defects 70654
$YBa_2Cu_3O_y$ bulk HTSC, melt-texture joining 81944
$Zn_{0.45}Cd_{0.55}Se$/InP MOCVD growth, surface defects, substr. deoxidization temp. effects 68223
$ZnGeP_2$ chalcopyrite defects, TEM study 80774
ZnO-based varistors, inversion boundaries, study using electron microscopy methods 69267

crystal electron states *see energy states*

crystal filters
see also surface acoustic wave filters
EM cryst. filters for rect. waveguide design 102331
tunable act. microwave filters having multilayer struct. using LTCC 102528
Al/AlN/Au film bulk acoustic resonator, W/SiO_2 multilayer reflector, filter appl. 104450
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457

crystal growth
see also crystal growth from melt; crystal growth from solution; crystal growth from vapour; crystal purification; crystallisation; dendrites; epitaxial growth
calcium strontium fluorapatite cryst., Yb^{3+} doped, cryst. growth, laser perform. *(Chinese)* 71728
chalcogenides crysts., low dimens., synthesis *(Chinese)* 90208
conf., cryst. growth/technol., Sendai, Japan, (Aug.-Sept. 2000) 100444
cryst. growth and epitaxy, conf., Vail, CO, USA (Aug 2000) 78433
electron beam technol., conf., Varna, Bulgaria (Jun. 2000) 89516
fluoride materials, growing of bulk crysts. and structuring waveguides, laser appls. 68178
kinetic cryst. growth, level set methods 94492
piezoelec. materials, conf., Montpellier, France (Oct. 2000) 78388
$AgGaSe_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
BN, cubic, growth from hexagonal graphitic BN powders 90202
$Bi_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC tape split coil magnet for Si single cryst. growth appls. 127523
C nanotube triodes, fab., high emission current dens. 80586
$CuGaS_2$ microcrystals, cryst. growth, opt./elec. props. 103090
GaAs crysts. VGF method growth, deform. twins form. study 114208
$Ga_{1-x}Mn_xN$ single cryst., powder growth method., struct./mag. props. 124802
GaN, undoped, evidence of free carrier conc. gradient along c-axis 103005
GaSe nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
GeSi alloys growth, comp. tracking, seq. Bayesian estim. 68135
InP single cryst., bulk growth, micromech. based constitutive rels. 124803
KD_2PO_4, wide-aperture opt. elements fab. using rapid growth technol. 105396
KH_2PO_4, wide-aperture opt. elements fab. using rapid growth technol. 105396
SiC, cryst. growth, doping, particle detector appl. 91714
SiC:He,N,Ti, ^{13}C enriched, 6H, 15R, low temp. PL 71524
Te nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
Tl_3AsSe_3 nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
$ZnGeP_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492

crystal growth from melt
see also liquid phase epitaxial growth; zone melting
300 mm CZ Si single crysts., growth, necks stress anal. 68117
300 mm single cryst. Si, growth technol. 68115
2-adamantylamino-5-nitropyridine, direction controlled cryst. growth, SHG 114233
advanced CZ control syst., modelling requirements 90233
borate/silicate:Yb laser materials, CZ growth 124795
Bridgman-Stockbarger semicond. cryst. growth syst., dopant distrib. 90232
cryst. growth, SoLFIDaP symposium, Belgium (Sept. 2001) 113242
cryst. originated wafer particles light scatt. expt. *(Japanese)* 97866
CZ growth, cryst.-meniscus syst. behaviour, model anal. 90218
CZ melt, flow, ellipt. temp. contours under transverse mag. field, calcs. 90212
CZ melt turbulent flow, AC/CUSP mag. fields effects, num. model 90224
CZ Si melts, mag. field config., temp. distrib. effects 68116
diamond, polycryst. materials struct./props., simul., interfacial perspective 102964
N,N′-dimethylperylene-3,4:9,10-bis(dicarboximide), single cryst. growth from melted anthracene 79192
indust. CZ melt, thermal convection, 3D num. simul. 124805
large diam. CZ-cryst. growth, Si melt flow, steady/dyn. mag. fields effects 90225
materials solidif., conf., Cambridge, MA, USA (Jun.2000) 124211
metals, polycryst. materials struct./props., simul., interfacial perspective 102964
Mir station flight modes testing for semicond. cryst. growth 68132
modeling, conf., Hauppauge, NY, USA (Oct.2000) 89592
opt. materials, cryst. growth techs., act./pass. WDM components 85982
phthalocyanines, single cryst. growth from melted anthracene 79192
rare earth oxides, refr. index/opt. dispersion meas. by small-prism tech. 87002
synthetic diamond growth from Fe-Ni-C syst. *(Chinese)* 68126
universal multizone crystallizator, liq./vapour cryst. growth 68130
vert. Bridgman config., anal. of factors affecting interface deflection 114226
vert. Bridgman growth, modeling solute segreg., free-surface tech. 114225
$AgGaS_2$, cryst. growth, lattice consts. *(Chinese)* 68127
$Al_xGa_{1-x}Sb$, CZ growth, Al segreg. phenom. 124804
$Al_xGa_{1-x}Sb$, melt growth, AlSb compositional nonuniformity 101153
BN, cubic, crysts., growth, homog. degrad. 90203
$Ba_{0.77}Ca_{0.23}TiO_3$:Rh cryst. photorefr. props. 82047
BaSrKNaNb$_5$O$_{15}$:Ce,Co, CZ growth, photorefr. effect, holographic storage 104604
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$, oriented cryst. growth by mag. melt proc. 68111
$Bi_4Si_3O_{12}$:Nd, Bridgman growth, opt. props. 101170
$Bi_2Sr_2CaCu_2O_{8+\delta}$ whiskers, synthesis tech., charactn. 68112
$Ca_4GdO(BO_3)_3$, Bridgman growth, 2D nucleation layer growth *(Chinese)* 68123

crystal growth from melt continued
$Ca_4GdO(BO_3)_3$ NLO cryst. wavelength freq. conversion 72038
$Ca_4GdO(BO_3)_3$:Nd, diode-pumped laser syst. act. media, growth, transm., luminesc. spectra 93550
$Ca_3NbGa_3Si_2O_{14}$ cryst., growth, struct., piezoelec. props. 127180
$Cd_xHg_{1-x}Te$:V crysts., Bridgman growth, transport props. 90206
CdTe, gamma detector, semicond. cryst. optim. 87277
CdTe:V(Fe) photorefr. cryst. holographic gratings, FWM 128572
CdZnTe, gamma detector, semicond. cryst. optim. 87277
CdZnTe, high-press. Bridgman grown, for EO appls. 93236
CdZnTe single crysts., growth conditions, defects 79158
$Cd_{0.80}Zn_{0.20}Te$ high resist. cryst. growth, modified Bridgman method 124806
$Cd_{1-x}Zn_xTe$, horiz./ vert. Bridgman/phys. vap. deposition, comp. 101151
$Cd_{1-x}Zn_xTe$ melt-grown crysts., complex dielec. permitt. 91641
Co_2MnX (X=Si,Ge) Heusler single crysts., growth, mag. props. 116279
CsCdBr$_3$:Dy^{3+},Yb^{3+}, cryst. growth, spectrosc. props., mid-IR laser 93542
$Cs_2Nb_4O_{11}$ cryst., growth, elec./dielec. props. 90205
$CuInS_2$ single crysts., horiz. Bridgman growth, defect props. 114210
$CuInSe_2$ crysts., elec. cond., photocond., stoichiometry effects 115336
$CuInSe_2$ solar cells using horiz. Bridgman growth method 100176
$CuInTe_2$, cryst. growth, elec. and opt. props. 115358
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
Er,Yb:$YCa_4O(BO_3)_3$ crysts., CZ method growth, spectrosc. props. 105257
GaAs CZ growth model, convective interact./instabilities 90221
GaAs, SI, HPLEC grown, elec. props. compensation *(Chinese)* 80729
GaAs, SI LEC, radiation detectors appl., materials sci. issues 90207
GaAs, cryst. growth, temp. gradient controlled LEC method 79183
GaAs large-size wafers, 150 mm, mass prod. at Freiberger 126926
GaAs, melt growth techs., computer simul. 124800
GaAs, nonradiative recomb., EL2 defect, elec. studies 80689
GaAs single cryst., vapour press. controlled CZ growth 90230
GaAs single crysts., Cz growth, layered homog., low freq. vibs. effects 90209
GaAs, vapour-press.-controlled Cz growth, melt temp./ flow field, simul. 114223
GaN single crysts. high-N_2-press. growth, doping, props. charactn. 124798
GaSb, Bridgman grown, transport procs., modelling 114224
GaSb, vert. Bridgman growth, heat/momentum transfer, num. anal. 114228
GaSb:Gd ingots, elec. & compositional props., Bridgman growth method 69523
GaSb:Mn, vert. Bridgman tech. growth, segreg., growth rate effects 91986
GaSb:Te, single cryst. growth in space 90211
GaSe, vert. Bridgman growth, radial dopant segreg. simul. 103267
$Gd_3Ga_5O_{12}$:Nd^{3+},Cr^{3+} laser single crysts., CZ growth, dopant conc. control 7918
β′-$Gd_2(MoO_4)_3$, CZ method growth, ferroelastic/ferroelec. domains obs. 127232
$Gd_{0.37}Y_{0.63}Ca_4O(BO_3)_3$ non-crit. phase-matched cryst. THG *(Chinese)* 128521
$Gd_xY_{1-x}Ca_4O(BO_3)_3$, cryst. growth, gray-track threshold 114213
$Gd_xY_{1-x}Ca_4O(BO_3)_3$, noncritically phase-matched harmonics, UV laser generation 105242
Ge:Ga single crysts., melt growth, striation under vibs., weak heat convection 114207
Ge-Si bulk single crysts. grown under continuous feeding of melt, component distrib. 90215
GeSi:P(B) single crysts., CZ prep., method, high temp. transport property 91699
$Ge_{1-x}Si_x$:B (Ga) (P), heavily impurity doped, CZ growth 79186
InAs-GaAs, graded solute conc. method growth, microgravity 114234
$In_xGa_{1-x}As$ bulk mixed cryst., rot. Bridgman growth 101167
InP cryst., LEC growth, etch pit dens. 114221
InP, high-press. mag. LEC cryst. growth, P injection 79174
InP, lattice param. deviation, horiz. Bridgman method under controlled P vap press. 69505
InP, melt growth techs., computer simul. 124800
InP single cryst., horiz. Bridgman growth, controlled P vapour press. 101166
InP:Mn eval. and use for particle detectors 121493
InP:S cryst. growth, VGF tech. 114222
InP:Ti eval. and use for particle detectors 121493
KDP, growth habit from ethylenediamine tetra acetic acid, Raman spectrum 127232
$KGd(WO_4)_2$:Nd, diode-pumped laser syst. act. media, growth, transm. & luminesc. spectra 93550
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$ crysts., growth, characterisation 117471
$K_3Li_2Nb_5O_{15}$, SHG, IR spectra *(Chinese)* 72012
$K_3Li_2Nb_5O_{15}$ crysts., ferroelec. freq. doubling material, growth and SHG props. 71211
$KLiNbO_3$, TSSG growth, blue SHG charact. 82913
$KLiNbO_3$, TSSG growth, lattice consts., SHG charact. 82912
$KLiNbO_3$ cryst. freq.-doubling props. *(Chinese)* 72002
$KLiNbO_3$ cryst., tunable SHG, CZ growth *(Chinese)* 105534
KPb_2Cl_5:Dy^{3+},Yb^{3+}, cryst. growth, spectrosc. props., mid-IR laser 93542
LaB_3O_6 single cryst., morphol., thin-layer radiation detectors 132354
$La_3Ga_{5.5}Al_{0.5}SiO_{14}$, langasite, CZ growth, piezoelec. props. 114216
$La_3Ga_5SiO_{14}$ SAW wafers, homog. charactn., BAW meas. 104279
$Li_2B_4O_7$ single cryst., Bridgman growth, struct./SAW props. 114215
$Li_2B_4O_7$ single cryst. growth, SAW device fab. 90204
$LiCaAlF_6$:Ce,Cr laser host cryst. growth methods 71203
$Li_6Gd(BO_3)_3$:Ce^{3+} neutron detectors, cryst. growth and opt. props. 132403
$Li_6Gd(Y)(BO_3)_3$:Ce^{3+} neutron detector, cryst. growth and opt. props. 121556
$LiNbO_3$ cryst. growth proc., noncritical type I birefr. phase matching 71996
$LiNbO_3$ cryst., near-stoichiometric, growth, fast photorefr. response 104605
$LiNbO_3$ near-stoichiometric crysts., photorefr. props. 93768
$LiNbO_3$:Ce,Mn(Eu)(Fe), double-doped crysts., photorefr. effect *(Chinese)* 71941
$LiNbO_3$:Er cryst. fiber, growth & charactn., PL 116548
$LiNbO_3$:Hf,Er periodically poled crysts., off-centred CZ growth, freq. conversion appls. 72039
$LiNbO_3$:Mn,Ce cryst., growth & opt. props., holographic data storage 117537
$LiNbO_3$:Y acoustic superlattice cryst., CZ growth, US waves 104394
$LiNbO_3$:Zn,Fe, CZ growth, holographic storage 104619
$LiNbO_3$:ZnO, CZ method growth, defect struct., XRD/IR/Raman spectra 127201
$LiNiO_2$, Pechini method growth, crystn. mechanism 79193
$LiSrAlF_6$:Ce,Cr laser host cryst. growth methods 71203
$LiSr_{0.8}Ca_{0.2}AlF_6$:Cr^{3+}, cryst. growth, laser props. *(Chinese)* 68124
$LiSrGaF_6$:Ce,Cr laser host cryst. growth methods 71203
$Li_xTa_{1-x}O_3$ single cryst., growth, opt. props., ferroelec. T_c 114212
$Li_6Y(BO_3)_3$:Ce^{3+} neutron detectors, cryst. growth and opt. props. 132403
$(Na_{1/2}Bi_{1/2})TiO_3$-$BaTiO_3$ cryst., growth, struct., dielec. prop. 127183
$NaBi(WO_4)_2$:Nd^{3+} single cryst., growth, polarised opt. absorpt. & PL 104597
Nd:$NaY(WO_4)_2$, CZ growth, thermal and laser props. 93536
Nd:YVO_4 single cryst. fiber growth by LHPG method 101169
Nd-Ba-Cu-O HTSC, large grain, self-seeded melt growth fab. 68133
Nd-Ba-Cu-O, large grain HTSC, top-seeded melt growth proc. growth 68113
Nd-doped 2 at% YAG laser material growth 92928

al growth from melt continued
dBa$_2$Cu$_3$O$_7$:Ag large-grain c-axis oriented bulk HTSC fabr. and mag. props. 14237
dBa$_2$Cu$_3$O$_7$-Ag HTSC, melt growth rate and solid soln. range, undercooling effects 114236
MN-PbTiO$_3$ ferroelec. complex perovskite cryst., Bridgman method growth, twinning domain 70401
oF$_2$ cryst. growth, modif. non-vac. Bridgman method, strong Cherenkov effect *(Chinese)* 124781
PbI$_2$)$_x$-(BiI$_3$)$_{1-x}$ solid solns., prep., dark cond./opt. energy gap, XRD/opt. transm. 114308
b(Mg$_{1/3}$Nb$_{2/3}$)O$_3$-PbTiO$_3$ crysts., modified Bridgman tech. growth, piezoelec. props. 127235
b(Sc$_{1/2}$Nb$_{1/2}$)O$_3$-PMN-PbTiO$_3$ single crysts., modified Bridgman growth and charactn. 79191
bWO$_4$ crysts., mass prod. for EM calorimetry, peculiarities/prospects 121538
bWO$_4$:Fe^{3+} large single cryst. CZ growth, annealing and opt. charactn. 79187
bWO$_4$:Sb crysts., effects of doping 121425
b(Zn$_{1/3}$Nb$_{2/3}$)O$_3$:Mn, cryst. growth, piezoelec. props. 127221
i, CZ cryst. growth, 400 mm diam., global simul. 101159
i, CZ cryst. growth, melt convection 90229
i, CZ cryst. growth, temp. gradient meas. 101156
i, CZ growth, dissolution rate of SiO$_2$ crucible, opt. in-situ meas. 68121
i, CZ growth, global model, O content/melt-cryst. interface thermal fluctuations 68119
i CZ growth, online diam. calib., shape estim. 114209
i, CZ growth rate rel. to growth interface temp. gradient 68118
i, CZ growth rate, temp. gradient depend. 79173
i CZ melts, temp. distrib., 3D num. simul., mag. field effects 90223
i CZ single-cryst. wafers, defect reduction/improved gettering 79177
i CZ-grown single crysts., finite difference anal. of radial P dopant distrib. 103264
i, Cz melt, surface pattern form., surface tension driven flow role 114240
i EFG multicrystalline solar cells, lifetime enhancement 100054
i FZ cryst. growth, Marangoni flow/interfaces, 3D simul. 90231
i, FZ growth, in situ electron irrad., extended defects, HREM 101155
i PV module mfg., US PV indust. R&D advances 112981
i cryst., 300 mm, growth technol. *(Chinese)* 101147
i crysts., CZ growth, unsteady 3D turbulent melt flow, modeling anal. 90220
i crysts., indust. CZ growth, multiple batch recharging 79185
i, disloc., cryst.-melt interface and melting, X-ray topography 68120
i, large diam. tube, EFG, modelling, expt. 90234
i large single crysts., FZ growth, fluid motion/resist. distrib., EM fields effects 90227
i large-diam. CZ cryst. growth, 400 mm diam. 101158
i large-diam. single crysts. furnace, O reduction, heat zone simul. *(Chinese)* 68125
i melt, O distrib. under inhomog. transverse-mag. fields 90226
i melt cryst. growth, 400 mm diam., cryst. supporting syst. 101160
i, melt grown filament, pulling rate, admissible manoeuvres 124786
i, melt growth, defect form. procs., solid-liq. interface struct. *(Japanese)* 79178
i, melt growth techs., computer simul. 124800
i molten column, thermocapillary convection under microgravity, O$_2$ partial press. depend. 90214
i, molten drop, O partial press., surface tension 124785
i, multicrystalline, EFG grown, 100 μm thick wafers/solar cells 90210
i, nucleation-site-control excimer-laser-crystn. method 79168
i, polycryst. materials struct./props., simul., interfacial perspective 102964
i ribbon growth, commercialization, growth model anal. 90219
i single cryst. growth, Bi-2223/Ag tape based HTS magnet 71068
i solar cell defect monitoring, scanning PL spectrosc. 100061
i solar cell mfg. line, EFG wafers, 15%+ efficiency cells 100080
i solar cells, problems of develop. & mfg., review 89276
i, solidif., lattice Monte Carlo simul. 115808
i thin-walled cylinders, shaped cryst. growth, EFG 79184
i, tri-cryst., characterisation, solar cell appls. 91597
i wafer fab., vac. casting, mold coating effect, solar cell appl. 114239
i:B CZ single crysts., superlarge defects 68131
p-Si:B CZ solar cells, carrier lifetime modelling 100048
i:B CZ substr., boron implant., CMOS technol. 103282
i:B, CZ wafers, minority carrier lifetime degrad. 102982
i:Ge single crysts., Cz growth in ring permanent mag. field *(Chinese)* 101146
i:N wafers, 300 mm, cryst. growth, grown-in defects 101157
i:O, CZ grown, interstitial O concs., point defect pop. 102974
i:O, CZ growth, defects, simul. 124779
i:O, melt transient O conc., CZ proc. in mag. field 124801
i:O, polycryst., EFG, deep level defects 91608
i:P, FZ cryst. growth, mag. field design 90228
i-Ge large diam. monocryst., modified CZ tech. 124782
iC, melt growth techs., computer simul. 124800
iC, solidif. from C-saturated Si melt, Raman spectr. 103086
iC:B,V,N 6H crysts., PVT growth/doping, carrier conc. 124793
iGe bulk cryst. growth from melt, uniform comp., in situ monitoring 68105
n-Bi alloys Bridgman growth in microgravity conditions, g-jitter effects anal. 90209
rBaNb$_2$O$_6$:Ce,Cu, CZ growth, phase conjug. effect 101154
r$_3$Nb$_{1-x}$Ga$_{3+(5/3)x}$Si$_2$O$_{14}$ crysts., micro-pulling-down growth and charactn. 79190
r$_3$NbGa$_3$Si$_2$O$_{14}$ cryst., growth, struct., piezoelec. props. 127180
l$_3$AsSe$_3$ cryst. for AOTF imaging, perform. 82289
lBr large vol. detectors for gamma-ray spectrosc. 121492
-Ba-Cu-O, large grain HTSC, top-seeded melt growth proc. growth 68113
AG:Er^{3+}(Yb^{3+}) cryst., eye-safe laser syst., growth & opt. homogeneity 93547
AG:Nd cryst., highly doped for microchip lasers 128215
Al$_3$(BO$_3$)$_4$:Nd, diode-pumped laser syst. act. media, growth, transm. & luminesc. spectra 93550
Y$_3$Al$_5$O$_{12}$:Nd single crysts., double crucible method growth, inclusions anal. 101171
YBa$_2$Cu$_3$O$_7$ HTSC, low angle grain boundaries, high J$_c$ capabilities 70678
YBa$_2$Cu$_3$O$_7$ HTSC melt-textured growth proc., mag. field effects, DTA obs. 79188
YBa$_2$Cu$_3$O$_7$ high-quality HTSC tiles, prep., mag. bearing appl. 68134
YBa$_2$Cu$_3$O$_{7-\delta}$, polycryst., bearings/elec. power devices 116508
YBa$_2$Cu$_3$O$_x$ HTSC thin fiber, directional solidif., growth rate effects anal. 114235
YBa$_2$Cu$_3$O$_{7-x}$:Er HTSC, flux pinning, cryst. growth 70671
YVO$_4$ raw material synthesis, prep. conditions optimisation *(Chinese)* 68128
YVO$_4$:Nd, defects in large single crysts. 90217
YVO$_4$:Nd single crysts. EFG 101168
β-Zn$_3$BPO$_7$, NLO cryst. melt growth, struct./opt. props. 101172
Zn$_{1-x}$Be$_x$Se crysts., AES, ellipsometry, photolum. studies 90213

crystal growth from melt continued
ZnO single crysts., hydrothermal/flux grown, cathodolum. microscopy 126027
ZnSe single crysts. conductive type control in vert. Bridgman method 101162
ZnSe single crysts., twin-free, Bridgman growth 79176
ZnTe large-diam. single crysts. growth by vert. gradient freezing method 101163
diamond, crysts., growth, homog. degrad. 90203

crystal growth from solution
see also liquid phase epitaxial growth
L-arginine tetrafluoroborate, high quality NLO cryst. bulk growth 79180
berlinite, α-quartz like piezoelec. material, cryst. growth from hydrothermal soln. 79167
N-(2-chlorophenyl)-(1-propanamide) nonlin. cryst., growth & charactn. 127558
diamond synthesis, phase diag., Fe-Sb(Ge) metal-solvent props. effects 114211
modeling, conf., Hauppauge, NY, USA (Oct.2000) 89592
opt. materials, cryst. growth techs., act./pass. WDM components 85982
quartz, piezoelec. crysts. on (01$\bar{1}$1) oriented seeds, growth 79160
quartz cryst., synthetic, hydrothermal growth, seed cryst. US machining 114214
quartz crysts., wedge-like, cryst. growth conditions, structural-morph. characts. 79159
symposium, chem. proc. of dielec., insulators and electronic ceramics, USA (1999) 113276
universal multizone crystallizator, liq./vapour cryst. growth 68130
vanillin crysts. growth, SHG appls. in NIR wavelength region 79181
BiB$_3$O$_6$, top-seeded growth method, NLO props. 68107
Bi$_{4-x}$La$_x$Ti$_3$O$_{12}$, cryst. growth and charactn. 124791
Bi$_2$S$_3$ nanorods, hydrothermal synth., agitation states effect 124807
CdHg(CNS)$_2$, blue-violet light SHG 72008
CdHg(SCN)$_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
CdHg(SCN)$_4$ cryst., growth mechanism of blue-violet light freq. doubling material *(Chinese)* 68122
CdS clusters in thiophenolates, synthesis, charactn. *(Chinese)* 91614
CdSe nanoparticles, γ-irrad. prep. in ethylenediamine solvent syst. 92261
CdTe:Mn nanocrystals synthesis using reverse micelles as nanoreactors 101148
CsGeCl$_3$ single cryst., soln. growth, nonlin. opt. props. 79170
CsGeCl$_3$ wide-band NLO cryst., growth conditions and props. 82055
CsTiOAsO$_4$, top seeded soln. growth 68106
Cu phthalocyanine, repeated solid solvent growth 114232
Cu seed layers, organic soln. deposition on barrier metals 92185
GaN single cryst., press.-controlled soln. growth method 101161
GaN:Mg(In), bulk and MOCVD grown, influence of Mg and In on defect form. 124894
GaPO$_4$, cryst. growth, charactn. 68109
GaPO$_4$, hydrothermal growth, anisotropic effects 79165
GaPO$_4$, hydrothermal growth, physico-chem. aspects 79164
GaPO$_4$, hydrothermal soln. growth, struct., IR obs. 79162
GaPO$_4$ single cryst. growth, growth kinetics 79161
GaPO$_4$:OH, hydrothermal soln. cryst. growth, elastic consts. 79163
Gd$_{0.2}$Y$_{0.8}$Al(BO$_3$)$_4$:Nd, laser cryst., growth and laser props. *(Chinese)* 71729
I$_2$ high power laser beams, opt. freq. conversion techs. 105069
K$_2$Al$_2$B$_2$O$_7$ NLO cryst., top-seeded growth 124778
KNbO$_3$ cryst., ferroelec., aq. soln. growth 124789
KTiOAsO$_4$, top seeded soln. growth, charactn. 68110
KTiOPO$_4$ cryst. top-seeded soln. growth for laser appls. 82881
MnHg(SCN)$_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
MnHg(SCN)$_4$(C$_2$H$_6$OS)$_2$, organometallic NLO cryst., growth, charactn. 68108
MnSi$_x$, single cryst. growth, Ga flux method, props. 114231
Ni-dithiolene complexes, synthesis, dimerized struct. and elec. props. 124799
Ni-tungstates, hydrothermal synthesis, modeling/thermodyn. calcs. 116180
PbS uniform cubic-shaped nanocrystals, hydrothermal prep. and charactn. 101152
Pb(Yb$_{1/2}$Nb$_{1/2}$)O$_3$-PbTiO$_3$, cryst. growth, dielec. props. 124790
Pb(Zn$_{1/3}$Nb$_{2/3}$)O$_3$-PbTiO$_3$, relaxor ferroelec. top seeded soln. growth 124787
Rb$_x$Cs$_{1-x}$TiOAsO$_4$, top seeded soln. growth 68106
RbTiOAsO$_4$, top seeded soln. growth 68106
Si-microarray devices, heterog. protein crystn. screening 132010
SnO$_2$:Cr single cryst., flux growth, impurity effects 124797
SrBi$_2$Ta$_2$O$_9$ ferroelec. single crysts., high-temp. soln. growth and charactn. 92659
YIG:Yb,Bi magneto-optic opt. fiber current sens., perform. testing *(Chinese)* 120877
Yb$_x$Y$_{1-x}$Al$_3$(BO$_3$)$_4$ cryst., growth, self-freq.-doubling props. 128208
ZnCd(SCN)$_4$, UV nonlin. opt. cryst., growth, OHG 82859
ZnCd(SCN)$_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
ZnHg(SCN)$_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
ZnO single cryst. growth under hydrothermal conditions 79166
ZnO single crysts., hydrothermal/flux grown, cathodolum. microscopy 126027
ZnO substrs. for homoepitaxy, eval. 101291
ZnS:Eu(Tb) nanocryst. phosphors, prep. & charactn. 104924

crystal growth from vapour
see also vapour phase epitaxial growth
anthracene cryst., phthalocyanine doped, band gap, vac. sublimation growth method 79172
cryst. growth, SoLFIDaP symposium, Belgium (Sept. 2001) 113242
diamond microcrystals hot filament CVD growth, charatn. and polishing appls. 114324
direct write appls., powder prod. route role 101525
modeling, conf., Hauppauge, NY, USA (Oct.2000) 89592
morpholinium 4-hydroxybenzoate, cryst. growth, hydration effects, SHG 79182
universal multizone crystallizator, liq./vapour cryst. growth 68130
AgGaS$_2$, cryst. growth, lattice consts. *(Chinese)* 68127
Al nanostructures, CVD, press./dose effect, cryst. growth 114365
Al$_x$Ga$_{1-x}$N hexagonal nanocryst. solids, synthesis, Raman scatt. spectra 79169
(BaPb)B$_2$O$_3$, NLO mixed borate cryst., slow evap. tech. growth, opt. props. 124792
Cd$_{1-x}$Zn$_x$Te, horiz./ vert. Bridgman/phys. vap. deposition, comp. 101151
GaN/GaN/Al$_2$O$_3$, bulk cryst. growth, sublimation, MOCVD, PL 68114
In$_x$MoSe$_2$ intercalated single cryst., growth, elec./opt. props. 115348
SiC, 6H, epitaxial layers, sublimation grown, surface morph. 68099
SiC, 6H, single crysts., growth, Lely method, source material related defect distrib. 68100
SiC PVT growth, Si liq. phase form. at crystn. front 124788
SiC, bulk growth, kinetics model, heat transfer 90235
SiC crysts., phys. vap. transport growth, proc. model 114230
SiC single crysts., defect anal., X-ray topography, sublimation growth 68102
6H-SiC single crysts., modified Lely growth params., secondary phase inclusions distrib. 79179

crystal growth from vapour continued
SiC, sublimation growth, disloc. constraint, etch back proc. 124794
SiC, sublimation growth, heat/mass transport calcs. 114229
SiC sublimation growth proc., global modeling, thermoelastic stress 90216
SiC wafer, 6H, sublimation grown, sub grain boundaries, cross polarizer study 68101
SiC:Ta crysts., deep levels, Ta incorp. during growth 126295
SiC(0001) surface, vap. cryst. growth, micropipe form. 79194
ZnSe cryst. growth by CVT, finite element code computational study 68104
ZnSe crysts., Br-doped, growth and charactn., vert. sublimation method 101164
ZnSe, sublimation method growth, elec. props. 68129
ZnSe:Al single cryst., phys. vap. transport growth/doping 101165
ZnSe:Cr^{2+} crysts., prep. conditions and IR photolum. lifetime meas. 81018
crystal hyperfine field interactions *see hyperfine interactions*
crystal imperfections *see crystal defects*
crystal oscillators
see also surface acoustic wave oscillators
flexible freq. source combining cryst. oscillator, PLL and freq. divider *(German)* 114649
high stabil. quartz cryst. oscillators *(German)* 114648
organic cpds. meas. using activated carbon coated sens. 132067
piezoelec. resonator, accel. sensitivity, design theory 116199
quartz blank, ELID grinding 81596
quartz cryst. oscillator, low power design, PSPICE 81741
quartz cryst. wafer, ArF excimer laser ablation, oscillating freq. control *(Japanese)* 79612
Syntonics LLC ultrastable oscillators for space environ. 133233
TCXO, automatic freq.-temp. test chamber 125255
VCXO, high precision, phase noise meas. using PLL-type freq. multiplier 114660
VHF fund. AT-cut resonators, inharmonic modes suppression, ellipt. electrodes 99067
crystal purification
see also zone refining
organic materials for OLED device fab., situ purification 116912
crystal resonant gamma-ray interactions *see Mossbauer effect*
crystal resonators
see also crystal oscillators; surface acoustic wave oscillators; surface acoustic wave resonators
2D rect. resonator, mode coupling in bulk waves, unitary matrix 104424
alcohol gas sens., simult. polypyrrole-based composite film & QCM meas. 75713
BAW composite resonators, parametric amplif. 104455
bicone resonator with opt. cryst., electrodynamic charact. investig., R-fn. method 117736
conf., Scanning probe microsc., Nizhny Novgorod, Russia (Feb./Mar. 2001) 89546
contoured doubly rotated quartz resonators, thickness modes anal. 116197
dielec. resonators for low-temp. electronics appls. 70479
digital quartz resonator force sens., off-centre load-insensitive 131891
doubly rotated contoured quartz resonator 116192
dual-mode reson. sens., temp. insensitive 75429
electrochem. QCM corros. sens. 104432
flexural mech. resonator, liq. dens./viscosity meas. 92689
HF quartz resonators, perform. 104447
HF thickness-shear-mode resonators, impedance anal., chem. sens. 97434
human serum albumin QCM immunosens., disposable 120953
lead-free solder plating, ionic migration, reflow proc. and flux residue, QCM method 124315
lysozyme adsorpt./conform. change on SAM obs. 121258
mol. imprinted polymer coated QCM, neutral/ion anal. fingerprints 97444
near-field microwave microscopy of thin film piezoelec. resonators 109953
olive oils, quality eval., quartz resonators and MOS chemoresistors 121015
one-chip-style quartz cryst. motion sens. with two fns. of gyro and accel. detect. 132535
piezoceramic material tensors ident. from elec. imped., iter. reconstr. 104328
piezoceramic resonators, reson. freq. stabil./domain struct. *(Polish)* 70438
piezoelec. lossy ceramics, complex freq. excitation 104301
piezoelec. resonator, accel. sensitivity, design theory 116199
piezoelec. resonator, nonlin. (in)direct THG, intermodulation method 70440
piezoelec. resonators, mode shape meas., image proc. tech. 104426
piezoelec. single resonator three-axes vibratory gyrosensor 109480
piezoelec. stack resonator, complex mater. consts., imped. reson. 104435
piezoelec. vibrator, NIC cct., Pspice simul. 92685
piezoelec. vibrator for multifunctional meas. methods, sound vel., impedance meas 86499
piezoelec. vibratory gyro-sens., double-T type vibrators, FEM anal. 92680
piezoelec. vibs., opt. excitation, detect. 92683
piezoresonator shear force microscope, probe-surface interact. 92687
PZT/alumina piezoelec. resonator, acoustic wave mass sens. 104459
QCM, network anal. based interface electronics 70441
QCM, viscoelastic fluid, extended Butterworth Van Dyke model 116198
QCM appl. to trace metals in soln. anal., overview 109731
QCM based DNA sens., immobilis. methods, genetic diagnosis 75674
QCM selective polypyrrole electrodes, NO_2 & gas flux sensitivity 97440
QCM sens. array with on-chip heating, meas. mode 121022
quartz BAW resonator, electrode config., liq. sens. 92764
quartz BAW sens., measurand-induced mech./elec. prop. changes 97438
quartz cryst. resonator, force-freq. coeff. 116200
quartz resonator, vibr. amplit. of thickness shear modes, white beam stroboscopic topography 81734
quartz resonator sens. for temp./press., thickness-shear mode 75430
quartz resonator time base & sens., environ. effects, review 104423
quartz thickness shear mode resonator electronic nose, fruit indust. appl. 132039
quartz tuning fork resonator, photolithography and selective etching 81743
quartz tuning fork resonator array, photolithography/selective etching 116205
quartz tuning fork resonators fabr., selective etching, photolithography and charactn. 115735
quartz-cryst. resonators as thermal sens., thermal stabilization cct. 120712
quartz-cryst. tuning fork, Sezawa approx., supporting wire effects 92686
quartz/langasite resonators, mass-loading effect 81735
rect. AT-cut quartz plates, bi-mesa struct., 3D vibrs. 116195
strip-type resonators, second-harmonic thickness-extensional vib. 92681
surface micromachined piezoelec. reson. beam filters 104226
thin film, acoustic props., piezoelec. thickness mode resonator 92692
thin film resonator, surface vibr., opt. mapping 92693
Al/AlN/SiO_2/Al piezoelec. acoustic thin film resonators, temp. compensation 104454
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
crystal resonators continued
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
GaP AT cut resonators, piezoelec. props. 81680
$La_3Ga_5SiO_{14}$ based high temp. nanobalance sens. 97439
$La_3Ga_5SiO_{14}$ langasite high temp. nanobalances, operation limits 110012
$LiMO_3$ (M=Ta,Nb), piezoelec. single cryst. chip resonator, high input po fracture 104429
$LiNbO_3$, opp. polarized plate, H-type single cryst. piezoelec. gyroscope 92
$LiTaO_3$, piezoelec. vib. gyroscope, fig. of merit, charge sensitivity 92682
$LnTaO_3$ piezoelec. micro-bimorph-type resonators, vibr. charact. *(Japan* 97174
PZT, thickness-shear-mode trapped-energy resonators, parallel field ex 92778
crystal surface and interface vibrations *see interface phonons; surface phonons*
crystal whiskers *see whiskers (crystal)*
crystallisation
see also crystal growth; dendrites; heat of crystallisation
Au/Cr/ZnO/Au/Cr/SiO_2, buffer electrodes effect, BAW resonator, XRD 104
Au/Ti/ZnO/Au/Ti/SiO_2, buffer electrodes effect, BAW resonator, XRD 104
bis(1.3-cyclobutylenedithio)tetrathiafulvalene, π-electron donor, conducting r cal salts 91704
chem. indust., proc. imaging & image proc., DuPont appls. 113808
N-(2-chlorophenyl)-(1-propanamide) nonlin. cryst., growth & charactn. 127
ferroelec. ceramic powder, fine grinding, crystallinity 125086
fluoride glasses, isothermal crystn. kinetics, fibre appl. 92938
high-k gate dielec. for CMOS devices, bond ionicity 100665
large-grain polysilicon-on-insulator films, high quality thermal oxide form. charact. 91899
magnetooptic films, micropatterned ridge fab., selected-area sputter epit 71388
math. models for polymer crystn. procs. 78815
oligo-phenylkene vinylene derivative in SiO_2-polymer hybrid matrix, PL pr 127919
opt. phase change recording, fractal theory, computer simul. 92998
organic LEDs, Joule heating effect, organic decomp. and gas evol. anal. *(C nese)* 128008
PECVD films for low-temp. poly-Si TFT-LCD 86813
phase-change and magneto-opt. media, real-time studies of mark form. pro *(English)* 72145
planar anode supported SOFC stacks manufacture, deform. procs. 99978
poly(n-octadecyl methacrylate), melting/real-time crystn. 90565
polyethylene/functionalized terthiophene blends, lin. polarizer appl. 104606
polysilicon, metal-induced lateral crystn. technol., device appls. 80629
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/ele props. 103243
polysilicon FPD driver ccts., low temp., RTP crystn. 97728
polysilicon MILC TFT with ultra-thin channel *(Chinese)* 115913
polysilicon TFT, channel region controlled grain growth, AMLCD appl. 868
polysilicon TFT, excimer laser crystallisation 126811
polysilicon TFT, low-temp., single-pulse excimer laser beam profile 86852
polysilicon TFT, silicide mediated crystn., large-area LCD 97732
polysilicon TFTs, laser annealed and metal-induced crystal., expt. study 701
polysilicon TFTs, low temp. excimer-laser crystallized Si, fab./charact. 1159
PZT films, magnetron sputtering, residual stresses/stress relax., MEMS ap 127096
α-quartz films, ion beam doping, epitaxial regrowth 79406
SOFC stack aluminosilicate glass ceramics sealant studies 99979
SOI MOSFET, large-grain polysilicon-on-insulator substr. 81316
Y_2O_3:Eu(Tb)(Ce) thin films, phosphor, pyrolysis, colored emissions 104935
Ag-In-Sb-Te materials, phase change opt. recording 71224
Ag-In-Sb-Te phase-change opt. recording films, crystn. 82279
Au, SPE growth, ion beam induced epitaxial crystalliz. 90530
Au/Ge bilayer films, fractal form., thickness ratio/annealing depend. 91858
B_2O_3-P_2O_5-MgO-Al_2O_3-SiO_2 low firing temp. glass-ceramics, HF multilayer chi inductors appl. 101509
(Ba,Sr)TiO_3 film, MOCVD growth, annealing proc. optimisation 70403
β-BaB_2O_4 thin films, SHG obs. 117480
$BaFe_{12}O_{19}$ thin films, mag. disk media 104523
$BaMgAl_{10}O_{17}:Eu^{2+}$ spherical phosphor prep. by aerosol pyrolysis, PDP appl 109864
$Ba_xSr_{1-x}TiO_3$ thin films, sol-gel proc., crystn. 79371
(BaSr)TiO_3 MOCVD thin films, RTA, elec. props. 70422
$BaTiO_3$, nanocrystalline perovskite powder systs., hydrothermal synthesis 6844
$BaTi_4O_9$ ceramic, Zn-B-O glass addit., sintering temperture, microwave dielec props. 68994
$BaTiO_3$:Y thin films, dielec. props., pulsed laser deposition 104319
$(Bi,La)_4Ti_3O_{12}$ MFIS-FET, ferroelec. memory 81769
Bi_2O_3-ZnO-Nb_2O_5 pyrochlore ceramic films for dielec. appls. 92589
$Bi_2Sr_2CaCu_2O_8$:Pb/Ag(Ni) HTSC tapes, fab., J_c 70719
a-$Bi_4Ti_3O_{12}$, crystn. proc., dielec. props. effects 127192
$Ca_2Al_2SiO_7$ cryst. slab waveguides from surface crystallized glass 93113
$CaBi_2Ta_2O_9$ thin films, PLD, dielec. props. 101394
CdSe nanocrysts. in a-ITO films, struct./SHG, elec. field effects 82891
$Ce_{1-x}Gd_xO_y$ films, electrophoretic and electrolytic deposition, SOFC 79396
CeO_2 films, electrophoretic and electrolytic deposition, SOFC 79396
$(Fe,Ni)_{70}Zr_{10}B_{20}$ amorph. alloy powders, mech. alloying, mag./thermodyn. props 81817
Fe-Cr-Si-B alloys, rapid solidif. by melt spinning, mag. props. 79421
Fe-V-O thin films for electrochromic smart windows, anal. electron microscopy 71415
$Fe_{62.5}Co_8Ni_7Zr_6CuNb_2B_{15}$ amorph. ribbons, nanocrystn., sens. appl. 70493
γ-Fe_2O_3 thin film, pure & Pt doped, fab., gas sens. charact. 90432
GaAs:Xe, isolated amorph. zones, implant. induced, electron-induced regrowth 81166
a-Ge on GaAs, epitaxial pulsed laser crystn. 101432
Ge-Sb-Bi-Te-B recording media for phase-change opt. disks, perform. 116591
Ge-Sb-Te films, magnetron sputtering, charactn., opt. data storage material 101195
Ge-Sb-Te materials, phase change opt. recording 71224
GeO_2-SiO_2 glass, large second-order opt. nonlin. 128523
$(GeS_x)_{98}(GaS_3)_2$:Pr glass fibre, develop. for Pr-doped fibre amp. 93087
$Ge_2Sb_2Te_5$ chalcogenide glass opt. data storage material, thermal treatment effects 92960
a-$Ge_2Sb_2Te_5$ films, laser irrad., crystn., TEM obs. 82043
GeSbTe-based phase change opt. disks, amorphization/crystn. mechanisms *(English)* 71234
GeSbTeSe:Cu(Co)(Ni)(Pb), films, crystn. kinetics *(English)* 69559

llisation continued
-Te chalcogenide glass opt. data storage material, thermal treatment effects 2960
GaAs concave disks, heterog. droplet epitaxy, In segreg. 114296
$_xO_3$:Mo films, thermal reactive evap. prep. and props., ozone effects *(Chinese)* 01303
$_2O_3$-B_2O_3-GeO_2 transparent surface crystallized glasses with stillwellite-type LaBGeO$_5$, SHG 71989
$_{0.5}Sr_{0.5}CoO_3$ thin films, chem. soln. deposition, crystn. 114395
$Ni_{0.8}Co_{0.2}O_2$ cathode material, spherical, high-dens. 123741
NiO_2, Pechini method growth, crystn. mechanism 79193
FeB alloys, metastable solidif. by drop-tube proc. 125071
/SiC interface reacts., interdiffusion pathway, XRD, TEM, EDS 115491
$_{50}Nb_{50}$/C amorph. multilayers, prep., struct., water window soft X-ray appl. 90474
_ZT amorph. film deposition, crystn., ferroelec. charactn. 114260
_ZT films crystallized from amorph. state by two-step postdeposition annealing, props. 127169
_ZT films, organic SAM template, prep./charactn. 127156
_ZT thin film, chem. soln. deposition, $PbTiO_3$ seeding layer, orient. control 79368
_ZT thin films, crystn. and roughness, annealing effects 101424
ZT films, pyroelec., dielec. props., fatigue effects 116171
ZT, nanocrystalline perovskite powder systs., hydrothermal synthesis 68447
ZT thin films, RF magnetron sputtering, struct./ferroelec. props. 124819
ZT thin films, mech. props., adhesion, SPM/SEM, MEMS 127095
ZT thin films, perovskite phase, selective nucleation, grains form., lateral growth 104292
ZT thin films prod. by oxide precursors and crystallized by conventional and RTA proc. 101460
ZT thin films, sol-gel derived, low-temp. crystn. 125017
ZT-based 4Mbit FRAM devices, retention behavior rel. to capacitor procs. 70473
$_{1-x}La_xTiO_3$ thin films, PLD, struct., dielec. props. 79360
(PbLa)TiO_3 thin films, sol-gel prep., spontaneous pyro- and piezoelec. 81700
$_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films, capacitance dens. 125853
$PbScTaO_3$ films, prep., piezoelec./pyroelec. props. 81704
$PbTiO_3$ thin film, low temp. crystn. by excimer laser irrad., XRD, SEM, EDX 101392
$PbTiO_3$ thin layers, stress effects 101427
Pd ultrathin sputtered activator layers on SnO_2, structural transforms., gas sens. appls. 109753
Pr-Fe-Co-Nb-B syst. exchange spring magnets, mag. props. *(Japanese)* 127329
SIMOX wafer, Si top layer residual O behaviour, photolum. and SIMS obs. *(Chinese)* 126245
SOI form., Ni metal induced lateral crystn., TFT appl. 125052
$Sb_{0.16}As_{0.29}Se_{0.55}$, crystn., single-scan calorimetric tech. obs. 103071
Sb_2Te_3 chalcogenide glass opt. data storage material, thermal treatment effects 92960
Si CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
Si, CZ growth, global model, O content/melt-cryst. interface thermal fluctts. 68119
a-Si LPCVD films, excimer-laser crystalliz., cryst. islands form. 115333
Si, SPE growth, ion beam induced epitaxial crystalliz. 90530
Si SPE, mol. dyn. simul., growth mechanism, defect form. 90547
Si cryst. thin-film solar cells prep. using laser crystn. 100086
Si, deep amorph. wells, crystn. by ion implant. 79415
a-Si film crystn., long-pulse excimer laser annealing 103235
Si film on NiSi, DC magnetron sputtering, microstruct. 114261
Si films, Joule heating rapid crystn., Raman scatt. 126005
a-Si films, elec. field assisted metal-induced lateral crystn. 126081
Si films, electro-ELO from liq.-metal solns. 79381
poly-Si films, epitaxial thickening by Al-induced crystallisation 90546
Si films, large-grained polycryst., ion-assisted deposition 79417
Si films, rapid crystn. using elec.-current-induced joule heating 68362
Si films, supercooled liq., solid nucleation/growth modelling 114397
Si films/amorph., Ni induced lateral crystn., elec. field effects 125053
a-Si, ion beam induced epitaxial crystn., point defects role 80759
a-Si, mechanism of metal induced lateral crystn. *(Chinese)* 114238
Si, microcryst., amorph.-cryst. phase transit. during growth of thin films 114352
Si, nucleation-site-control excimer-laser-crystn. method 79168
μc-Si solar cells, plasma CVD, fluoride seed layer, glass substrs. 112882
a-Si solar cells status made near microcrystallinity onset 100199
a-Si structural improvement using metal-induced crystn. 69490
Si, surface treatment by excimer laser 126332
c-Si thin film solar cell minority carrier props. 100050
a-Si thin films, crystn. using viscous Ni soln. 103238
Si thin films, excimer laser crystn., TFT-LCD appl. *(Japanese)* 92347
Si thin-film solar cells, grain size and struct. engng. during Al-induced crystn. 100142
Si wafer disloc. dens. change during thermal proc., solar cells 91598
Si wafer fab., vac. casting, mold coating effect, solar cell appl. 114239
p-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
Si:B/SiO_2, through-oxide implant., SIMS anal. 103254
a-Si:H, Al-induced crystn. at 150°C 90537
a-Si:H and μc-Si:H hot wire thin films, SiH_4 flow, H_2 dilution 103073
μc-Si:H film, low temp. RPCVD growth and microstruct. 79295
a-Si:H films on SiO_2 passivated steel substrs., crystn., polysilicon TFT 103237
Si:H nanostructured films, cryst. size, temp. meas., Raman spectra 126083
a-Si:H plasma-assisted microcrystallization, PV appls., low temp. nanoscopic kinetics 82309
Si:H protocrystalline p-i-n solar cell perform., phase transits. role 100201
μc-Si:H,P films, hot-wire CVD, struct./elec./opt. props. 124966
Si:Ni polycryst. films on glass, Ni induced selective nucleation, SPE 125051
Si/SiO_2 TFT, laser crystallisation, grain struct. 70096
Si-Ge large diam. monocryst., modified CZ tech. 124782
Si-microarray devices, heterog. protein crystn. screening 132010
Si(001) amorph./cryst. interface, SPE growth, MD simul., Reply to Comment 79398
SiGe, nucleation, comp. influence, LPCVD growth, free energy 114366
a-SiGe solar cells status made near microcrystallinity onset 100199
$Si_{1-x}Ge_x$ epilayers, Ge effect on nucleation, ellipsometric spectrosc. 114415
SiGe:B films deposited by CVD at 400°C, effect in situ B doping on props. 126303
SiGe/Si layers, amorph., metastable cryst. state, CW laser irrad. 115335
SiO_2-TiO_2-Er_2O_3-P_2O_5 thin film, P effect on PL & crystallisation 92927
SnO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
$SrBi_2Ta_{0.8}Nb_{1.2}O_9$ thin films, structural charactn., Raman studies, XPS 101388
$SrBi_2(Ta_{1-x}Nb_x)_2O_9$ thin films, MOCVD, ferroelec. props. 79283

crystallisation continued
$SrBi_2Ta_2O_9$ ferroelec. thin film, prep., struct. & props. 127173
$SrBi_2Ta_2O_9$, film, as-grown, net spontaneous polaris. 70410
$SrBi_2Ta_2O_9$ one-axis-oriented film, growth, microstruct., remanent polariz. 127174
$SrBi_2Ta_2O_9$ thin films, MOCVD, film comp. effect, XRD 101334
$SrBi_2Ta_2O_9$ thin films, chem. soln. deposition, crystn. in N_2 ambient 68321
$SrBi_2Ta_2O_9$ thin films, ferroelec. props., microstruct. effects 104307
SrO-BaO-Nb_2O_5-GeO_2 tungsten-bronze glass-ceramics, crystn., dielec. props. 90562
$SrRuO_3$/(Ba,Sr)TiO_3/$SrRuO_3$ capacitors, gigabit DRAM, CVD, electrode technols. 101329
TaN thin film, growth & precursor props., MOCVD/XRD 114364
Ta_2N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
Ta_2O_5 thin film, growth & precursor props., MOCVD/XRD 114364
TaO_x top layers, buried photoresist layers etching 126410
TbFeCo MO recording films, opt./mag. props., reactive recording 127851
TiO_2 thin film, synthesis, metalorganic decomp./annealing 116133
TiO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
W-TiN/SiO_2/Si, MOS capacitors stacked gate props. 103187
$YAlO_3$:Ce single-phase phosphor, complex polymerizing react. synthesis 101524
ZnO:Li films, sol-gel method, crystn., c-axis orient. 114389
ZnS:TbF_3 phosphor films, electron-beam evap. method, crystn., thickness depend. *(Korean)* 79223
ZrF_4-LaF_3-AlF_3-GaF_3-ErF_3 glasses, devitrification, nucleation/spinodal decomp. 90582
quasibinary $A_x^{III}B_{1-x}^{III}C^V$ cpds., crystn. from supercooled liq. 124780

crystallography
see also electron diffraction crystallography; isomorphism; lattice constants; neutron diffraction crystallography; space groups; X-ray crystallography
octagonal micromachined horn antenna for submillimeter-wave appls., anal. 83643
single-cryst. Si microscratching tests, ductile-to-brittle transit. *(Japanese)* 68475
Si semicond. devices, microcrystallinity, Raman chem. imaging 70001

crystals
see also bicrystals; crystallography; dendrites; epitaxial layers; liquid crystals; whiskers (crystal)
photonic cryst. waveguides, directional couplers/de-couplers, simul./theory 127753
Ce:KNSBN cryst., holographic recording with orthogonally polarized beams 128563

CSCW *see groupware*

CSMA *see carrier sense multiple access*

CSMA/CD *see carrier sense multiple access*

CSP *see communicating sequential processes*

CSP lasers *see semiconductor lasers*

CT-2 telephone systems *see cordless telephone systems*

CTI *see computer telephony integration*

cube-connected cycle networks *see hypercube networks*

Cuk convertors *see DC-DC power convertors*

cumulants *see higher order statistics*

cuprate superconductors *see high-temperature superconductors*

Curie point *see Curie temperature; ferroelectric Curie temperature*

Curie temperature
see also ferroelectric Curie temperature
GaN:Mn epilayers, prep., magnetis., MBE 79244
giant magnetostrictive materials, recent R&D *(Japanese)* 81796
hot strip steel, transform. imaging using mag. techs. 106508
II-VI dil. mag. semiconds. for magnetoelectronics 92872
low dens. carrier ferromag. semiconds., mag. interacts. 81811
magneto-opt. recording, basic phys./current technols., review 116393
wireless sens. syst. using mag. field *(Japanese)* 109938
Co ultrathin films on flat and sputtered Pt(111) surfaces, mag. props. 70484
Co/Pt multilayer recording medium, magneto-opt. props. 93253
Co_2MnX (X=Si,Ge) Heusler single crysts., growth, mag. props. 116279
$Dy_2Fe_{17-x}Ga_x$ powder, high field magnetis. 81820
$(Fe,Ni)_{70}Zr_{10}B_{20}$ amorph. alloy powders, mech. alloying, mag./thermodyn. props. 81817
Fe-Cr-Ni, age-hardenable austenite alloy, low temp. mag. sens. 75483
Fe-Cr-Si-B alloys, rapid solidif. by melt spinning, mag. props. 79421
p-GaMnAs dil. mag. semicond., defects, first-principles study 116244
GaMnAs layers, migration-enhanced epitaxy, struct. and mag. props. 68163
GaN:Fe(Mn) epilayers, MBE, mag. props. 103009
GaN:Mn, high dose ion implant., nanoscale mag. regions 127326
$Ge_{1-x}Mn_xTe$ films, ICB deposition, charact. 79397
$HgCr_2Se_4$, inhomog. mag. semicond., large magnetoresist. form. 91698
$KLiNbO_3$, TSSG growth, lattice consts., SHG charact. 82912
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial thin film based CMR bolometer *(Chinese)* 120807
$La_{0.9}Sm_{0.1}Ni_{2.0}Co_{3.0}$ electrode alloy, electrochem. prop., magnetis. treatment 123742
Li-Mn ferrites, elec. cond. 91686
Mg-Mn ferrites, elec. and mag. props. 81834
Mn-Zn ferrites, Er substituted, thermoelec. power 80751
MnZn ferrite, mag. head, phase homog. 116320
$Nd(Fe,M)_{12}$ (M=Mo,Ti) powders, nitridation, struct./mag. props. 101474
Ni-Cr(V) biaxially textured tape substr. for $YBa_2Cu_3O_{7-\delta}$ HTSC films 68397
Ni_2MnGa alloys, mag. props. & structural phase transforms. 127319
Ni_2MnGa single cryst. thin films, MBE growth, XRD, TEM 101302
Pd/Cr/Co multilayers, mag./magneto-opt. props. 81850
$Pr_{0.85}Ca_{0.15}MnO_3$/$YBa_2Cu_3O_{7-\delta}$ MSW device, fab., charact. 127537
$Pr_2Fe_{6.8}Co_{10.2-x}M_x$ (M=Si,Ga,V), struct./mag. props. 127314
$SmCo_{7-x}Ti_x$ magnets, mag./struct. props. 127331
$Sm_2Fe_{15-x}Co_xSi_2CCu_y$, struct., permanent mag. props. 81814
$Sm_2Fe_{17}N_{2-3}$, PM, prod., nanocrystalline 116479
$Sr_2(Ta_{1-x}, Nb)_2O_7$ ferroelec. thin film, PLD 101387
YIG ultrathin films, PLD, perp. mag. anisotropy 127341

Curie-Weiss law *see magnetic susceptibility; paramagnetism*

current (electric) *see electric current*

current comparators
BiCMOS very high-speed replicating current comparator for Viterbi decoders 114898
CMOS continuous-time current comparator, current-mode analog ICs 102447
CMOS continuous-time current comparator, high speed/power ratio design 68968
CMOS current comparator cct., high-perform. *(Chinese)* 104086
CMOS current comparator cct., robust high-speed and low-power design 68970

current comparators continued
CMOS current comparator design, fully differential, LV/power, high speed 70304
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
HTSC current comparator, charged particle beam meas. 70856
low power cell, weak current operations 80136
resist. bridge, cryogenic current comparator, SQUID readout 75780
SQUID detector, elec. quantum metrology triangle 70896
current control, electric *see electric current control*
current-controlled current sources *see active networks*
current-controlled voltage sources *see active networks*
current conveyors
ARC biquadratic filters using voltage and current followers 102344
BiCMOS CCII, macromodel cct. for simul. 125595
BiCMOS current conveyor, wideband, prog. filter appl. 68920
BiCMOS high speed voltage follower, Gilbert's translinear loop 125604
bipolar low-power operational transresistance amp. based on CCI+ 101799
CCII, reduced parasitic resist., bandpass filter appl. 80039
CCII current-mode filter, act. sensitivity 91027
CCII-MOSFET continuous-time current filter synthesis 102350
CCIII first-order all-pass sect. 91042
CMOS analog 2nd generation current conveyors, VLSI design and implement. 102370
CMOS CCII, symmetric two-gain-stage voltage follower 68924
CMOS current conveyor, LV low-power cct. 80061
CMOS current conveyor design 114869
CMOS current-mode filter, modified multi-output differential difference current conveyor 68931
CMOS single resist. controlled oscillator, current conveyor 101824
CMOS unity-gain cell gyrator techs., inverting CCII 68909
continuous time low-pass leapfrog-type filter, multi-output differential difference current conveyor *(Chinese)* 68914
current-mode absol. value ccts., biasing error improvement 101754
differential difference current feedback amp. 101784
four-transistor current copy unit based current buffer *(Chinese)* 114900
full-wave rectifier, current conveyor and current mirror 90736
high current LV current mirrors for LV analog appls. 102445
high output impedance current-mode multifn. filter with dual output CCIIs 91045
insensitive current-mode universal biquad implement. using current conveyors 91037
LC bandpass filter, high-valued pass. element simul. using low-power CCIIs 91036
multifunction filter, current-mode, using CMOS dual output CCIIs/grounded pass. elements 68891
multiphase sinusoidal oscillators realisation, translinear bipolar second generation current-controlled conveyors 79619
multiport current conveyor ccts., nodal anal. 125594
PID controller, current conveyor based, synthesis, optimum param. tolerances 102360
RC chaos generator design using current conveyors 101829
RC sinusoidal oscillator using current-controlled current conveyors 90789
translinear CCII-based sinusoidal freq. doubler and full-wave rectifier 68975
universal act. current-mode filter using modified current conveyors 68918
universal current-mode filter using CCII and current followers 68923
universal immittance fn. simulators using current conveyors 91028
universal voltage-mode filter, three input/single output, operational floating current conveyors 68921
current density
see also critical current density (superconductivity); electron density
2D generalized exponential integral, num. eval. 72446
3D EM scatt., integral eqn.-asymptotic phase method appl. 105715
3D flip-chip solder joint, heat flux and current dens. 113525
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
80 V bipolar lead-acid batt. for hybrid EV 78299
500 V and 1 kV lin. power MOSFETs for 120 kW act. load 70170
AC ccts. conductor resist. modelling, time domain anal. 80465
alizarin violet based light-emitting devices, CW and pulsed mode operations 71568
aluminium prod., electrolysis cell optimisation 113166
anode-supported SOFC, anode thickness effect on perform. 99954
arbitrary-shape printed antenna modelling, multiresolution method of moment 128840
arrhythmogenic/normal human heart elec. excitation, modelling 98248
asymmetrical IGBT, I-V characts. degeneracy rel. to n-buffer layer conc. 126765
barrier-metal systs., metal ion reservoirs, IC low current dens. lines 81120
benzothiazole derivative, blue-emitting, organic EL devices appl. 104987
biomag. inverse field problem, extended sources reconstruction techs. 87457
biomag. inverse field problem, min. norm estims. multi-channel-SQUID sens. 121981
bipolar cascade VCSELs, scaling behavior 105341
bipotentiostatic uric acid sens., conducting polymer based, charact. reproducibility 132007
BJMOSFET, DC charact. graphs, current dens. *(Chinese)* 92331
bulk-barrier diodes, DC elec. behavior model 103755
busbar elec. modelling, interconnection inductance, CAD 77131
carbazole-naphthalimide dyads, single-layer EL device 82372
CMOS voltage limiter/regulator design 68585
CNS stimulation microelectrodes, current dens. & elec. field, FEM model 87885
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
contactless meter of DC, aviation appl. 122522
CRT cathodes, thermionic and cold cathodes, current dens., brightness effects 91566
diamond:P field emitters in triode-type field emission arrays, fab. and charact. 80587
diamond, nanostructured, electron field emission 102905
diamond CVD cold cathode with high current dens. and low threshold field 91539
diamond films, plasma CVD, struct., elec. props., Schottky devices 126209
diamond/CdTe inverted heterojunction thin film solar cell 134385
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
diode cascade VCSEL, cavity region reduced current spreading 82691
direct hydrocarbon PEMFC, acetals electrooxidation 134373
direct methanol fuel cell perform., anode flow charact. 89162
direct methanol fuel cells electrooxidation, ternary catalysts expts. 89179
dual electrode plate MLC capacitor for HV pulse appls. 89031
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
ECG/MCG spatiotemporal anal., current dens. estim., forward model 110619
current density continued
eddy currents modeling, mag. Reynolds no. consideration 128695
EDLCs, elec. double layer capacitors, aq. dil. HCl soln. *(English)* 100223
EEG-/MEG-data, spatio-temporal current dens. reconstruction 76324
elec. cond. meas., param. distrib. reconstruction 97781
elec. equipt. ccts., AC dens. distrib. 77374
elec. impedance proc. tomography, internal struct./electrodes model 109924
elec. impedance tomography syst., electrode struct. optimum design 110616
electron beams, small-orbit, spiralling, current dens. profiles, anal. form 69445
electron gun with ferroelec. material cathode, current dens. *(Chinese)* 1029
electroplating baths, current dens. meas. methods 89477
ELF EM fields interact. with humans, power/inform. aspects 87949
EM scatt. by 3D arbitrary conducting objs., on-surface MEI 72268
EMAT, EM acoustic transducers, US pulse magnitude, FEM determ. 99094
embedded DRAM, low temp. capacitor technol., dielec. stack film 114772
EMG sig. detected by surface electrodes, precise simul. approach 76293
Eng. past-tense prod., double-dissoc., event-related pots. 132586
FED indicator using screen-printed C nanotube emitters 86826
field emission devices, F-N rels., model 115252
field emission props. comparison for diamond/carbon nanotubes 115242
flip chip solder bumps, electromigration failure, voids effects 92137
gyrotron operation, electron emission azimuthal inhomog. effect 91546
HBT reliab. eval., thermal resist. and current accel. exponent 126662
HF AC cable, coaxial shells, mag. induction, current-dens. distrib. 123013
HTSC films and devices, comparative studies of microwave nonlin. 127534
HTSC plate shielding current dens. spatial distrib. calcs. 71185
Hull cell, secondary current distrib. anal. 112757
human body, induced currents, power syst. elec./mag. fields 98747
human body elec. fields resulting from 60-Hz contact currents 111192
IC interconnect, current dens. 116018
IC plasma etch damage, charging pot./current densities, substr. connection effe 103432
IGBT, anal. model, applied terminal voltages 115849
IM, 3D time-stepping FEA, equiv. mag. cct. 133998
immersion mag. lenses, optim. design for projection electron beam lithog. *(Chinese)* 105693
induction heating HF transformer, current dens., num. models 113147
interaural time/intens. disparities responses, differences between N1 wav 76286
laminated iron core inductors, eddy-current power loss 99721
latch-up immunized lateral trench IGBT, p+ diverter struct., smart power 115870
LDMOSFET with double epi-layer/trench electrodes, num. anal. 81308
LF elec. fields, dosimetry in child/adult models 111241
LF meas. inhomog. mag. fields in human body, induced current dens. deter 76720
long feed channels polymer electrolyte membrane fuel cell, I-V plot 112818
mag.-saturated electromech. devices, steady-state FEM anal. 123292
MCFC electrochem. materials research *(Chinese)* 134381
measuring devices simul./optimisation 86904
MEG for studying brain activity in word recogn. *(German)* 76336
megaampere current elec. cct., conductors and contact connections 79643
micro gas turbine-SOFC reactor hybrid power generation syst. 99604
microstrip array, infinite, plane wave refl. 105923
microwave FET fingers, full wave anal., semicond. phys. models 80310
mixed-FEM and BEM coupling for 2D eddy current problem 117608
mixed-reactant strip-cell direct methanol fuel cells, feasibility anal. 100023
MoM, grid-robust higher order vector basis fn. 83085
MOSFET 2D analytic distrib. models, drain/substr./gate current distribs. 11592
MRI, asymmetric zonal shim coils, systematic design 110871
MRI, current dens. distrib., mag. field meas., accuracy/limitations 98458
MRI, ellipt. magnets, inverse design method 98478
MRI magnet, compact clinical design, multilayer current dens. approach 12211
MRI tech., current dens. imaging, biological systs. appl. 132726
MSM-diode struct., Schottky barrier elec. behavior 126251
multilayer OLED, Alq_3-based, characts. 71619
nonlin. magnetostatic optim. problem, full step Newton method 128671
nonlin. normal conductor-insulator random network, crossover exponents *(Chinese)* 101704
organic EL device, electropolymerized hole-transport layer, deposition curren dens. effect 71570
organic single-layer LEDs, recomb. efficiency at high fields 127970
PANI:HCSA, elec. cond., PVDF/poly trifluoroethylene/PANI electromechanica syst., dielec. props. 125108
PCB indust., high speed acid copper electroplating, current densities 91462
PEFC, transversal water profile in Nafion membranes 100014
PEMFC, poly(perfluorosulfonic acid) membranes, water electro-osmotic drag 100011
PEMFC develop. efforts in Japan 123782
planar SOFC model calc., internal stresses studies 99982
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
poly-dialkoxy-p-phenylene vinylene, charge injection, temp. depend. 115344
polyfluorene copolymer, trap free, SCL currents, ITO hole injecting contact 75795
polyfluorene derivative polymer LEDs, barriers to electron extraction 104992
polymer LED, singlet/triplet energy transfer to mol. dopants 93420
polythiophene photoactive electrode. solid-state photoelectrochem. cell 134340
power DMOSFET, thermal behaviour, 2D computer simul. 92327
power IGBT, thermal behaviour, 2D computer simul. 92327
power MOSFET, current focusing phenom. 81322
PPV/PMA layer-by-layer assembled organic LEDs, isolating clay barrier sheets 93425
pulse-excited thin wire monopole radiation 94133
railgun perform., current dens. distrib., inductance gradient *(Korean)* 117642
rear-contacted solar cell struct. anal. 100164
saturated ferromag. rect. prism/rect. coil, 3D mag. field 105680
Schottky barrier rectifier, high current dens., using V as barrier metal 92287
semicond. field microemitter, hot electron transport, 2D quasi-hydrodynamic approach 69441
semicond. fuse ratings, harmonic currents effects 125862
shallow n^+-p-well diodes, generation lifetime from reverse generation current 126106
4H-SiC Schottky barrier diodes, I-V charact., anal. model *(Chinese)* 126641
single gate MOS controlled current saturated thyristor 103796
small-sized lateral trench electrode IGBT, improved latch-up, breakdown characts. 115869
smart power blocks, DC-DC conversion, MCM components 90735
SOFC, porous thin-film anode materials, PVD, photolithographic patterning 123794

current density continued
SOFC anodes, thermodyn. anal. of C deposition and electrochem. oxid. of methane 99999
solar cell noncontacting PV capacitive diagnostic syst. 100197
solid-state field-controlled emitters, electron emission charactn. 69413
SOS diode nanosecond superdense-current interrupters 99419
strong coupled multi-harmonic FEM EM device simul. package 83150
sucrose biosens., amperometric, mediated tri-enzyme electrode 75672
Sulzer Hexis SOFC product develop. status 89194
super-self-aligned bipolar transistor, deep selectively ion-implanted collector, high f_T/J_c *(Japanese)* 70051
supercond. septum magnet design for hypernuclear phys. expts. 75959
syst. generators shielded busbar, EM field soln. at open boundary problem 123333
temporal lobe epilepsy, interictal epileptiform activity, cortical current dens. reconstruction 121945
TFT LCD fab., ion doping syst., large area line beam form. 115535
thin-film interconnects, grain boundary crack growth 103491
transistor emitter current edge-crowding-effect, precise and approx. solns., SPICE simul. *(Chinese)* 81177
transthoracic defibrillation current dens., two-layer segmented electrode 76593
transverse flux heating, optimal inductor design, combined evol.-simplex tech. 89445
TTL method applied to finline resonators 102567
ultrathin gate oxide MOSFET, tunneling current, quantum-mech. modeling 103814
vac. arc extinguishing chambers, breaking ability eval. *(Russian)* 123672
VCSEL, comprehensive num. model, method of lines 82639
vert. field open MRI, convex gradient coil design 87656
via/line package level/wafer level tests, comparison 81131
vircator with IREB, theoretical/expt. study *(Korean)* 69448
Al interconnects, stress-induced voiding in proc. qualification, quantitat. assess. 81133
Al lines, via/polygranular cluster electromigration-induced stress interact. 92177
Al passivated line single grain strain meas. by X-ray microdiffraction during electromigration 92173
AlCu interconnects, electromigration behaviour, stress-induced voiding effects 92176
AlCu line wafer level electromigration testing, isothermal/const. current/SWEAT methods 81128
AlCu lines, electromigration 69936
AlGaAs ideal QW solar cells, theoretical model, conversion efficiencies 112858
AlGaAs-GaAs HBTs, long-term reliab., base current study 70044
AlGaInAs strained MQW lasers, high-power, recomb. mechanisms 71845
AlGaInAs/InP Bragg mirror VCSEL, design/perform. 128332
AlGaInAs-InP 1.3 μm strained MQW lasers, temp. depend. of gain characts. 82664
AlGaInAs-InP strained MQW lasers, gain charact. temp. depend. 82613
AlGaInAsP QWs, gas source MBE, laser appl. 101237
AlGaInN ridge geom. LD, lateral transverse modes anal. 93599
AlGaN/GaN HEMTs, MBE growth, high current/f_T 81364
AlGaN/GaN HEMTs, MOCVD on SiC, high-transconductance 126890
AlGaN/GaN HJFETs, full band Monte Carlo simul., theoretical comparison 81384
p-AlGaN/GaN strained cladding layer superlattice, InGaN MQW LD fab., Mg doping 81044
AlInAs-GaInAs-InP HBTs, low temp./high current lifetests 81241
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, elec. charactn. 103894
AlN MIM struct., dielec. props. 127142
Al_2O_3 MIM tunnel emitter fab. using anodic oxid. 115471
Al_2O_3 dielec. films on Si, UHV reactive at.-beam deposition 79245
Au sputtered MEMS contacts, wear investig., contact press. 104160
Au/C:H,B/n-Si heterojunction solar cells, PV props. 134383
Au/PZT/$Bi_4Ti_3O_{12}$/p-Si ferroelec. memory diode, fab./characts. 70464
$Ba(Ce_{0.8-y}Pr_yGd_{0.2})O_{2.9}$ mixed conducting cathodes, PEMFC 100010
$(BaSr)TiO_3$ thin films, D doping, annealing, capacitor elec. props. 81672
$Ba_{1-x}Sr_xTi_{1-y}Zr_yO_3$ films for DRAM, struct., elec. props. 101198
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTS tape AC losses, geom. effects calcs. 70724
$Bi_2Ti_2O_7$ films, chem. soln. decomp. prep., RTA, dielec. props. 68323
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
C based thin film electron emitters, charact. by scanning anode FEM 91537
a-C field emitters, enhancement factor, charactn. 102900
C multiwalled nanotubes, reliab. and current carrying capacity 102869
C nanotube field emission triodes, low turn-on voltage, fab., charactn. 115255
C nanotube triodes, fab., high emission current dens. 80586
C nanotubes, electron field emission 102905
C nanotubes, field-induced evap. 115240
C nanotubes, patterning technol. using photolithog. for FED appls. 69438
C single-walled nanotube, dimens. effects on field emission props. 91538
a-C:F films, ICPCVD, struct./dielec. props. 114333
n-C/p-C jn. solar cell, p-Si substr. 112906
C-nanotube-based triode-FED using gated emitter struct. 109912
$CaBi_2Ta_2O_9$ ferroelec. films, PLD, dielec. props. 79350
n-CdS/p-InP heterojunctions, transport mechanisms & PV charactn. 91734
CdSe QD, elec. pumped lasing 117175
CdTe-CdS solar cells, temp./illum. depend. jn. transport 100121
Cu electroplated interconnects, microtexture/strain 103460
Cu films, damascene electroplated, morph., filling capability 68352
Cu interconnects, electromigration threshold 69950
Cu trench/via filling by electroplating, current dens./pulse waveform effects 92178
Cu/W interface, electromigration modeling 126436
Cu/W/SiN_x multi-level damascene interconnects, electromigration 126506
Cu-SiO_2 dual-damascene interconnects, electromigration reliab. 92115
Cu-SiO_2 dual-damascene interconnects, electromigration early failure stats. 81134
Cu-TiWN multilayer interconnections, electromigration 81117
GaAs, QW GRINSCH lasers, regrowth, annealing 101292
GaAs bulk resistors for MMIC appls., highly accelerated stress failures 69266
GaAs corros./surface behavior in acidic solns. 69890
GaAs power microwave transistors, MOCVD δ-doped struct. 91286
GaAs, surface passiv., ion bombard. 115635
GaAs:Br, ion-implanted, damage prod., ion energy depend. 81038
GaAs/AlGaAs epilayers for integrated optoelectronics, MBE, GaAs-Si wafer bonding 90289
GaAs/InAs/AlAs quantum cascade lasers, pulsed mode operation 128318
GaAs-AlGaAs HBT prod. proc. technol., perform./reliab. 70043
GaAs-based QD laser progress 117290
current density continued
GaAs-based quantum cascade laser with Peltier cooled element, output charact. 71815
GaAsSb type-II QW laser gain, charge-separation effects 82623
GaInAs/InP high-power composite channel HEMT, low gate current, dc/rf perform. 70195
$Ga_xIn_{1-x}As_{1-y}N_y/GaAs$ laser struct., In/N ratio effects 93588
GaInAsP/InP wirelike laser, strain-compensated MQW struct., etched/regrown interfaces 117215
GaInN/GaN mesa-struct. LEDs, current crowding, opt. saturation effects 71578
GaIn(N)As highly strained MQW structs./lasers, MOCVD, well no. depend. 115402
GaInNAs/GaAs LDs, 1.3 μm, low threshold current operation 93670
GaInNAs/GaAsP QW, strain-compensated, GS-MBE, PL obs. 105272
GaInNAs/GaAsP/GaAs/GaInP strain-compensated QW laser structs., GSMBE growth and charactn. 101257
GaInNAsSb 1.26-μm SQW lasers, gas-source MBE growth 117222
GaInP/AlGaInP/AlGaAs/AlAs distrib. Bragg reflector VCSELs, props. 128331
GaInP/GaAs HBTs for HV operation, develop. and charactn. 125723
GaInP/GaAs hetero-bipolar transistors, LF noise modelling, 1/f-noise model 102631
$GaInP/In_xGa_{1-x}As/GaAs$ inverted delta-doped V-shaped pseudomorphic HEMT, temp. depend. 80273
GaInP-GaAs HBTs for X-band power appls., reliab. 91290
GaInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814
GaN MESFETs on (111) Si substrs., static meas. 103920
n-GaN photoelectrochemically etched surfaces, tree-like features, threading disloc., revelation 81103
GaN/InGaN LED, device perform., uniform current spreading 71595
GaN(Mg)/AlGaN(Mg) superlattice base contact layer BJT 92311
InAlAs/InGaAs/InP DHBTs, dc current gain rel. to extrinsic base design vars. 115856
InAlAs/InGaAs/InP mid-IR quantum cascade lasers, refr. index dispersion effect on perform. 105294
InAlGaAs QW laser, low threshold current dens. design, k.p method 117278
InAs QD MQW MBE growth and charactn., laser appls. 80885
InAs photodetector, MBE, current leakage 93360
InAs self-assembled quantum-dash lasers, RT operation 93653
InAs/AlSb/GaAlSb heterostruct. mm-wave zero-bias diodes, characts. 125736
InAs/GaAs QD lasers with InGaP cladding layer, solid-source MBE growth 117217
$In_{0.22}Ga_{0.78}As$, QW GRINSCH lasers, regrowth, annealing 101292
In(Ga)As/GaAs high power QD laser *(Chinese)* 93576
InGaAs/GaAs strained layer SCH SQW laser, output charact. 71805
InGaAs/InAlAs quantum cascade lasers, MBE growth and charactn. 128280
InGaAs/InAlAs quantum cascade reinforced ridge waveguide laser, output charact. *(Chinese)* 71797
InGaAs/InGaAlAs/InP strained QW lasers, LW, MBE growth 105290
$In_{0.53}Ga_{0.47}As/AlAs/InAs$, pseudomorphic RTD, MBE, elec. props. 81190
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ metamorphic tunnel diodes on GaAs 126658
InGaAs-AlGaAs SQW GRINSCH ridge waveguide laser, high-power pump operation 105316
InGaAsN QW VCSEL on GaAs substr., 1.3 μm, perform. characts. 93671
InGaAsN QW, solid source MBE growth, charactn. and laser appls. 101258
InGaAsN/GaAs VCSEL, laser threshold temp. depend. 71761
InGaAsN-GaAs LW edge emitting lasers, low threshold current dens. 117298
InGaAsP BH LD, AlInAs-oxide current blocking layer, low threshold current 93672
InGaAsP/InP-GaAs/AlAs DBRs with BH VCSELs, output charact. 105336
InGaN LDs on SiC substr., MOVPE, laser characts. 105346
InGaN MQW hexagonal microfacet lasers, room-temp. lasing by current injection 105326
InGaN narrow stripe self-pulsating LDs, optim. for DVD 71844
InGaN/GaN violet LD, low-press. MOVPE, CW operation 105349
(InGa)(NAs)/GaAs struct. emitting in 1-1.6 μm wavelength range 93661
InGaP-GaAs HBTs under temp./current stress, charactn. 70042
InGaP-GaAs-AlGaAs DHBTs, transient charact. 70045
InGaP-emitter HBTs, reliab. 70041
n-InN films, ethylene glycol in water electrolyte, photoassisted anodic etching 81101
InP based strained MQW laser structs., heterointerface optimiz., MOVPE/MOMBE 115400
InP monolithic VCSEL with air-gap Bragg reflectors, room-temp. operation 82599
InP/GaAsSb/InP NpN DHBTs, ultrahigh perform. staggered lineup 114975
InP/InGaAs/InP DHBTs, high breakdown voltage, 300 GHz F_{max} 114976
p-InP/poly(pyrrole) interface, current transport 91865
n-InSb doped piezoelec. semiconds., electrostriction effect on parametric dispersion/amplif. 93792
$LaNiO_3$ epitaxial metallic films, O-ion elec. field-induced migration, 1/f noise 115666
$La_{0.9}Sm_{0.1}Ni_{2.0}Co_{3.0}$ electrode alloy, electrochem. prop., magnetis. treatment 123742
$La(Sr)CoO_3$ SOFC cathode, microstruct. control expts. 89232
$La_{1-x}Sr_xCoO_{3-d}/La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.2}O_{3-y}$, electrode react. 100020
$La_{0.6}Sr_{0.4}MnO_{3+\delta}$-YSZ SOFC cathode, complex impedance anal. 99972
$Li/Li_{2.8}Ag_2V_4O_{11}$ batts., implantable cardioverter defibrillators 99925
Li/MoO_{3-x} thin film batts., characts. 134358
Li-ion rechargeable batt., 18650 size, advanced perform. *(Chinese)* 89069
Mo/CIS/CdS thin film interfaces, electrodeposition, PV appl. 123807
Nb thin films, third-order local nonlin. microwave response 70582
NbN/AlN/NbN tunnel jn. quasi-opt. SIS mixers for THz band 71126
Nb_3Sn-Cu CICC, ITER magnet syst., hotspot temp. 127528
Ni/6H-SiC Schottky diodes, nearly ideal breakdown volt., model/param. extract. 103762
$Ni/BaSrTiO_3/Ni/TiN/Si$, photoassisted MOCVD growth for DRAM appl. 101331
Ni-YSZ anode of solid oxide fuel cell, internal steam reforming of methane 89172
$O_2/GaAs(100)$ interface, electron-beam-induced reacts. 103419
PZT films, RF magnetron sputtering, leakage current, fatigue props. 70393
PZT thin films, chem. soln. deposition, ferroelec. props. 79367
PZT thin films, ferroelec. props., grain boundary effects, nucleation 104252
PZT thin films, perovskite phase, selective nucleation, grains form., lateral growth 104292
PZT thin films, prep., hydrothermal treatment following sol-gel deposition 125018
PZT thin films, sol-gel derived, low-temp. crystn. 125017
$Pb_{1-x}Sr_xTiO_3$ thin films, structural/elec. props., appls. 101413
$(PbSr)TiO_3$ thin films, prep., elec. props., post-annealing, DRAM appl. 116159

current density continued
$Pb_{1-3}Sr_x(Zr_{0.53}Ti_{0.47})O_3$ thin films, appls., structural/elec. props., appls. 101413
Pt/SBT/Al_2O_3/Si MFISFET, fab., memory window width 81276
Pt/$YMnO_3$/Y_2O_3/Si gate capacitor MFISFET, MOCVD prep. 81662
Si BJTs, high injection effects on noise charact. 81218
p-Si, anodization, macropore form. 115627
Si concentrator solar cells, single step photolithography proc. 100073
Si, dwell-time depend. of irrad. damage 81005
Si films, electro-ELO from liq.-metal solns. 79381
a-Si p-i-n solar cells efficiency enhancement using LP-CVD ZnO 100200
Si p-i-n struct., time depend. RT EL 105016
Si, porous, sacrificial layer, microstruct. fab., morph. 101523
Si, porous, strong photolum., anodization time, current dens. effects 103416
Si solar cells, proc. with porous Si texturing 100145
Si substr., VLSI interconnects, distributed inductance/resist. per-unit-length formulas 126509
Si textured surface prep., etching, field emission, C implant. 69433
a-Si:H based tritium-powered betavoltaic cells 113031
a-Si:H p-i-n diode params., trap cross-sect., simul. and param. extract. 70008
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 102955
$Si:Si^+/B^+$ dual implanted wafers, RTA 126115
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
Si/SiGe electron RTD with graded spacer wells 81188
SiC, 4H, jn.-barrier Schottky diodes, high forward current dens. 92280
4H-SiC APD fab. with multistep jn. extension termination 104961
SiC Schottky diodes, metal overlap edge termination, lateral current spreading 126634
4H-SiC p^+-n-n^+ avalanche diodes, elec. charactn. 92294
4H-SiC thyristors, turn-on procs., temp. depend. 70054
SiGe HBT, base transit time, model, exponential base doping, current dens. *(Chinese)* 126675
SiGe HBTs, high injection effects on noise charact. 81218
SiGe HBTs, profile design considerations for base transit time minimiz. 103769
SiGe bipolar transistors and p-i-n diodes for power switching 115883
SiGe freq.-scalable bipolar RF front-end design, LNAs and act. mixers 69224
SiO_2 ultrathin layers, stress-induced leakage current, H^+ dispersive transport model 69741
SiO_2/Si struct., elec. props. 69771
SiO_2/ZrO_2 thin gate dielec. stacks, trap-assisted tunnelling current 81637
SiON/Si film syst., liq. phase deposition, refr. index 90499
n-SnO_2/Al_2O_3/Ru-dye/p-CuI PV cells, electron-hole recomb. 123804
SnS films for PEC, cathodic electrodeposition 101398
$SrBi_2Ta_{2-x}Nb_xO_9/IrO_x$ capacitors, Pt top electrode, thermal stabil., elec. props. 116233
$SrBi_2Ta_2O_9$ for metal-ferroelec.-Si struct. without buffer layers 81695
$SrBi_2Ta_2O_9$ thin films, chem. soln. deposition, crystn. in N_2 ambient 68321
$SrBi_2Ta_2O_9$ thin films, high leakage current dens., annealing 70417
$SrBi_2Ta_2O_9$ thin films with Bi_2O_3 buffer layers by liq.-delivery MOCVD, ferroelec. props. 104334
$Sr_{0.8}Bi_{2.2}Ta_2O_9/LaAlO_3$/Si syst., prep., ferroelec. props. 92646
Ta_2O_5 films, annealing, dielec./opt. props. 116126
Tb pyrazolone complex LED, efficient single layer operation 128017
TiO_2 dye-sensitized nanoporous PEC 89042
TiO_2 solar cells, organic dye-sensitized nanocryst., electrolyte effect 134403
$V_{0.9}Mo_{0.1}O_{2.55}$ films as pos. electrode for Li batts. 89126
a-V_2O_5-P_2O_5:CuO with metallic contacts, elec. props. 126250
$YBa_2Cu_3O_7$ thin films, third-order local nonlin. microwave response 70582
$YBa_2Cu_3O_{7-\delta}$ supercond. fault current limiters, quench behavior 77610
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
Yb^{3+} complex LED, IR EL 93402
Zn electrodeposition using modified Hull anal. electrochem. cell 79377
ZnCdS, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdSe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdTe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnSe green-emitting LD, implant.-induced disordering 128246
$Zr_{0.5}Ti_{0.5}Mn_{0.4}V_{0.6}Ni_{0.85}M_{0.15}$ (M=Fe,Co,Cu,Mo,Al) electrodes, cell appl. 112792

current distribution
see also current density
3D inhomog. railgun soln. 72210
AC ccts. conductor resist. modelling, time domain anal. 80465
aluminium prod., electrolysis cell optimisation 113166
anisotropic superconds., finite element calcs. of local current distrib. 70640
antenna array pattern synthesis accomplishing tapered minor lobe distribs. 83677
antenna filamentary current distrib. and transient radiation 94132
antenna pattern approx./lin. radiator synthesis based on at. fns. 117753
antenna response in reverberation chamber, remarks 72589
array antenna pattern meas., element current reconstruction method *(Chinese)* 128908
asymmetric cable config., power quality aspects, parallel Al conductors 99376
axisymmetric solenoids and current distribs., mag. fields 117632
bal.-fed antenna syst. for handset 94154
bipolar transistor, collector p-n jn., emitter current push-out effect, avalanche multiplication 103767
broadband double-sleeve monopole antenna, modal-expansion anal. 72573
broadband printed antenna, current distrib. and input impedance 72601
cable-in-conduit supercond. cables, strand joints/copper location impact 77390
cardiac elec. activity imaging and 3D visualization 110635
cct. breaker arcing-generated complex accident anal. *(Chinese)* 123674
cellular telephone antennas affected by human body interact., current distrib. estim. 117796
circ. impedance cylinder with anisotropic surface impedance, long. EI excitation 117671
coaxial winding transformer, Faraday shielding, HF range 102792
coaxially excited cylindrical antennas, admittance correction factor 72445
coil design, source current distrib. problem, sensitivity calc. 125854
cond. modes basis fns. for efficient EM anal. of on-chip/off-chip interconnect 126961
copper electrowinning plants, multi-cct. electrolytic cells approach 124133
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
cylindrical wire antenna with flat end caps, modeling 72596
DC lin. channel MHD propulsor, coupled field anal. 123993
deflection yoke mag. field, 3D edge element method, geom. symm. 125977
digital IC package, RF meas. of current and voltage distribs. 75840
digital IC package, voltage/current distribs. estim. 70245
dipole antenna, wavelet simulator tech., moment method 94117
distributed PV power systs., fully digital control 133900
E-plane waveguide to microstrip transit. for MM-wave appls., anal./design 69001

current distribution continued
elec. equipt. ccts., AC dens. distrib. 77374
elec. machine winding conductors, 3-D FEM-based eddy current calc. 133930
elec. theory of contacts, contact resist., DE 91446
ELF antennas in conducting media, excitation 128857
EM fields determ., Maxwell's eqns. soln. 105668
EM wave scatt. by complex struct., recursive reduction techs. 72273
EM wave scatt. from imperfectly conducting circ. disc, full wave anal. 105716
fault condition, currents distrib., generator dyn. influence 111679
FDTD anal. of stacked microstrip antenna with high gain 94167
fuse link shape determ. ensuring specified current distrib. *(Russian)* 102800
H-polarized plane wave incidence, reson. scatt. from slit coupled cylindrically eccentric impedance cavity 72239
HF AC cable, coaxial shells, mag. induction, current-dens. distrib. 123013
high-power thyristor-type semicond. devices, multi-cell cct. model 126696
HTS multistrand conductors, multiphase AC loss mechanisms 77403
HTSC microwave resonators, vortex pairs and nonlin. inductance 71123
HTSC multilayer conductor, effect of interlayer insulation on transport AC loss 70665
HTSCs, mag. flux penetration mode, AC loss charact. 127418
Hull cell, secondary current distrib. anal. 112757
I-V mapping educational cct. simul. approach 78524
ident. problems in EM, effects of dyn. info. 128639
IM end-rings EM field anal. approach *(Japanese)* 77872
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
interior reson. scatt. cross sect., SVD *(Chinese)* 105722
ITER tokamak, magnetostatic reconstr., optimal probe placement 86919
lateral IGBT, current distrib., 2D anal. model 126760
layered biological media, electrode array excitation model 133078
leaky covered microstrip line, spurious radiation calc. 94104
LHC supercond. coils, persistent current calc., modified Bean model, FEM 87064
lightning protection syst. lumped/distributed cct. model comparison 77553
lin. antennas anal. and synthesis using at. fns. 117752
line source antenna, generalized Gaussian quadrature appl. to inverse problem 105851
long feed channels polymer electrolyte membrane fuel cell, I-V plot 112818
long-range radar transmitting antenna feeding network, synthesis and anal. 83686
loop antenna in cold magnetoplasma, current distrib./input impedance 72514
MEG/EEG inverse problem, spatial-temporal Bayesian inference 110667
mesh antennas for dual polariz. 83635
MoM fast calc. for printed grid array antenna anal. 83715
monopole antenna with conducting flat disk above earth, theoretical anal. 72437
MOSFET 2D analytic distrib. models, drain/substr./gate current distribs. 115922
MRI, current dens. distrib., mag. field meas., accuracy/limitations 98458
multifilamentary high T_c superconds., long. mag. field AC loss 77416
multilayered medium, embedded vert. strip, integral eqn. 83463
multistaged triplet type sub-cables large supercond., current distrib. 82017
MV distrib. syst. protection using neg. seq. current distrib. *(Chinese)* 112134
nonuniform helix diam. helical antennas 128846
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
Orchard-Elliott pattern synthesis algm. 105924
parallel-connected single-core cables, overheating, current distrib. 133716
PCB, multi-layered current eval., least sq. method *(Japanese)* 101603
permeable conducting hollow sphere, transient current distrib. EM field 83081
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
PM lin. brushless motor, air core, space harmonics field anal. 134063
polyphase cage IM inter-bar currents anal. 134016
power cable connectors, contact resist., power distrib. 123035
power device chip interconnection from wirebonding to area bonding 81255
power diode, electrothermal nonlin. dyn. 103799
power semicond. device packaging/chip interconnection, wire/area-bonding technols. 115880
rail launcher devices with sliding contacts, EM anal. 83185
railgun perform., current dens. distrib., inductance gradient *(Korean)* 117642
resistive cct. simul. based edge enhancement for image segmentation 106446
rly. autotransformer syst. meas., SIMSPOG simul. tool *(German)* 78253
RTD, large area, current instabilities, neg. differential resist. region 126913
Rutherford cables, current distrib., continuum model 77400
semicond. field microemitter, hot electron transport, 2D quasi-hydrodynamic approach 69441
semicond. fuse ratings, harmonic currents effects 125862
short dipole antenna in cold plasma, impedance anal. 128851
short LHC dipole model mag. field pattern meas. 75961
single finger grounded gate nMOSFET ESD protection devices 126816
single-phase two-winding transformers freq., distributed-param. modeling 134134
source current distrib. problem, hierarchical SA vs. Gauss-Newton scheme 83075
spherical helical antenna, input impedance and antenna gain 105903
spiral-loaded low-profile monopole antenna with parasitic elements 94152
stator winding insulation, thermal ageing, SQUID mag. field mapping 112441
straight wires, normalized current distrib./scatt. field pattern, closed-form soln. 128738
substation grounding grid, safety anal. 78087
supercond. cables, current distrib., mag. field probes location 77426
supercond. cylindrical LIM improvement 77894
supercond. magnet CICC, current distrib. modelling 71053
supercond. magnet conductor motions anal., quench perform. prediction appls. 71011
supercond. multistrand cables, nonuniform current distrib., coils 104585
switch short arc duration laws and distribs. at low current and voltage 115106
thin hexagonal loop transceiver antennas, near-/far-zone fields 83656
thin wire and plate, 3D modeling using FEM and elec. cct. eqn. 125835
transformer-type supercond. fault current limiter, trigger current level degrad. 77608
transient EM scatt., MoM soln., spatio-temporal multiresoln. anal. 105710
transthoracic defibrillation current dens., two-layer segmented electrode 76593
unipolar corona, Warburg law deficiencies explanation, graphical method 80552
vac. arc extinguishing chambers, breaking ability eval. *(Russian)* 123672
VCSEL, elec./thermal/opt.-waveguiding charact. *(Chinese)* 82673
VCSEL, transverse mode, steady current & temp. distrib. anal. *(English)* 82674
vee wire scatterer carrying TW current, RCS reduction 131627
vert. antennas in dielec. half-spaces, complex image prediction model 94145
VSTL FDTD-based power syst. surge anal. program *(Japanese)* 111676

current distribution continued
BiPbSrCaCuO, Ag-sheathed 2223 monocore tapes, current distrib. and flow in mag. fields 70763
$(BiPb)_2Sr_2Ca_2Cu_3O_8$ HTSC Hall sens. AC loss meas. calib. 77406
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag alloy HTSC tapes, multifilamentary, J_c distrib. 70772
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC cables, AC losses studies 77429
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC coils, winding geom. optimisation 71074
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag multifilamentary tapes, current distribs., AC transport losses 70742
$(BiPb)_2Sr_2Ca_2Cu_3O_8$-Ag multifilamentary HTSC tape, AC transport current loss 77405
BiSrCaCuO HTSC tapes, homog. current distrib. studies 77434
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC multifilamentary wires, current distrib. and loss reduction 127462
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag multifilamentary HTSC sheathed tapes, pickup coil meas. 70730
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag multifilamentary tapes, conductor archit., current distrib. 70694
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag tapes, transposed filaments, transport current losses 70695
GaN/InGaN LED, sapphire substrs., current crowding 127974
Nb_3Sn CICC, Central Solenoid Insert, ITER 71000
Nb_3Sn CICC terminations, contact resist. distrib. 77395
Nb_3Sn and NbTi CICC for ITER supercond. magnets 71003
Nb_3Sn twisted supercond. strands behaviour, ITER TF coil 71034
YBaCuO single-grained HTSC magnets, levitation/suspen. force calc. 71013
$YBa_2Cu_3O_{7-\delta}$ HTSC strip lines, supercurrent distrib., THz imaging 82011
$YBa_2Cu_3O_{7-x}$ HTSC, melt-textured, mag. field/current distrib. 70651

current fluctuations
see also noise
2D nanometer-size multijunctions, large current flucts. suppression 126906
ballistic ellipt. shaped quantum wire, conductance 91776
CMOS parametric matching meas., high precision, transistor noise impact 104142
DLC CVD field emission cathode, SFM 69403
double-semicond. QW, mesoscopic correl., magnetotunneling spectra 91818
field emitters, work fn., current fluct., SK chart anal. 69398
mesoscopic coupled cct., quantum fluct. depend. on temp. *(Chinese)* 101726
microbiosensor output sig. fluct., external environ. influence 75673
MOS capacitor sensitive soft breakdown triggering, meas. syst. noise 104143
nanoscale electronic devices, noise characts., quantum Monte Carlo tech. 115812
NMOS capacitors, large area, soft breakdown triggers under const. voltage stress 81527
nonlin. normal conductor-insulator random network, crossover exponents *(Chinese)* 101704
OLED, cond. phenom./degrad. monitoring, current noise meas. 71580
QD under almost periodic AC pumping, conductance flucts. 91797
QW in tilted fields, semiclassical amplit. and phase coherence times 80850
RTD, large area, current instabilities, neg. differential resist. region 126913
semicond. devices, fluct. phenom., num. modeling 92272
semimagnetic double-barrier tunneling struct., spin-polarized currents, shot-noise suppression 126148
single/coupled double quantum wires, multisublevel magnetoquantum cond. 126149
strip-like Josephson-jn. arrays, crit. state, demagnetizing effects 70797
TFT controlled C nanotube field emission devices, display appls. 115215
two-miniband superlattice, quantum beats induced by ultra-short excitation 115382
wide parab. well, commensurability oscills., in-plane mag. field 80838
AlGaAs/GaAs heterojunction, quantum Hall regime, charge screening 80794
AlGaN/GaN HFETs, gate leakage current effect on noise 81382
C nanotube electron waveguides, quantum interf. and ballistic transm. anal. 125934
C nanotubes, fab. & field emission, CVD 125953
CO_2 high-power CW indust. laser, beam stabil. 93475
GaAs, SI, traveling high-elec. field domains, current oscills. 80710
GaAs/AlAs superlattice, seq.-tunnelling, current self-oscills. 126154
GaAs/$Ga_xAl_{1-x}As$ high-mobility heterostruct., Aharonov-Bohm oscills. 91755
InAs/GaSb electron-hole syst., insulating state in mag. field, edge effects anal. 80792
Pt Spindt-type field emitters, emission characts. in CO gas ambient 69414
Si highly doped nanowires, dual-gate config., single-electron tunneling obs. 70224
Si/SiC based MIS struct., nonsteady avalanche proc., fluct.-related prop. 103214
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
Si-SiO_2 interface transit. region width, F-N tunneling current oscills. meas. 103215
SiO_2 thin film, elec. breakdown, conductive AFM 104257

current limiters
see also current limiting reactors; fault current limiters
HTS supercond. current limiters, quench conditions 77598
pass. mag. current limiter topologies 112177
polymer current limiter device, voltage/comp. depend., switching 133799
voltage stabil., modelling and syst. protection scheme 77271
YBaCuO film, large transport currents, magnetooptical studies 70621

current limiting reactors
see also current limiters
fault current limiters, thyristor controlled series compensator appl. *(Japanese)* 99420

current measurement, electric *see electric current measurement*

current mirrors
cascoded output stage mirror with accurate gain for low β transistors 80134
CMOS current-mirror amp. with compact slew rate enhancement cct. 79578
CMOS folded cascode OTA, 1 V supply, current driven bulk tech. 90762
CMOS laser driver, 1 Gbit/s, packaging, on-chip decoupling capacitor 117030
CMOS lin. OTA design using current addit./subtraction tech. 90767
CMOS tunable transconductor for continuous-time filtering appls. 80081
continuous-time sigma-delta modulators, LV current-mode integrators 79967
dual-rail multiple-valued current-mode VLSI with biasing current sources 79815
FASTEST, CMOS analog ccts., stat. eval., DC anal. 125215
full-wave rectifier, current conveyor and current mirror 90736
high current LV current mirrors for LV analog appls. 102445
high perform. current mirror for LV designs 68969
MOSFET thermal params. from electrothermal oscills. 115934
multiport gyrator, realization using current mirror ccts., filter appl. *(Japanese)* 80037
phase shifter, current-tunable using MOS internal capacits., 700 MHz 69146
switched-current bilinear integrator realised using single current-mirror 125626
transconductance ccts. 80056

current mirrors continued
UHF filters and OTAs, analog cct. design 90705
Wilson current mirror, dual-loop neg. feedback operation 79586

current-mode circuits
4-valued unary fns. synthesis using current-mode CMOS ccts., cost-table-based tech. 79814
absol. value ccts., biasing error improvement 101754
all-pass filter, current feedback amp. 102340
BiCMOS very high-speed replicating current comparator for Viterbi decoders 114898
biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
biquadratic filters using multiple-output FTFNs 68929
CCII current-mode filter, act. sensitivity 91027
CCIII first-order all-pass sect. 91042
chaotic ccts., IC design for secure commun. 101713
CMOS analog current-mode controller, switching power converter 88945
CMOS analog IC, sliding mode control, switching DC-DC power converter 88946
CMOS ccts., design based on current threshold-controllable tech. 68967
CMOS continuous-time current comparator, high speed/power ratio design 68968
CMOS current comparator cct., robust high-speed and low-power design 68970
CMOS current-mode band-gap refs. for near 1 V operation 114605
CMOS current-mode exponential-control variable-gain amp. 90759
CMOS current-mode filter, modified multi-output differential difference current conveyor 68931
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
CMOS current-mode multiplier/divider ccts. based MOS translinear principle 102437
CMOS current-mode multiport SRAM, read and write operations, energy reduction 125482
CMOS current-mode prog. CNN, low-power consumption 68986
CMOS current-mode voltage ref., temp. independent charact. 68562
CMOS DAC, 8 bit, high-speed current switching, design 102278
CMOS high-speed current-mode wave-pipelined ADC, 8 bit archit. 68866
CMOS I-V mode WTA cct. with spatial filtering, act. pixel sens. 97367
CMOS image sens., SoC, prog. analog image preprocessing 109690
CMOS LV low-power downconversion mixer, 900 MHz, 0.9 V 114997
CMOS pipelined-burst SRAM, low-power, design 102143
CMOS prog. gain amp., 100 MHz, high lin., current-mode tech. 79591
CMOS R-2R ladder D/A convertor, integral nonlin. anal. 114822
CMOS S/H IC, 1 V, 20 MS/s and 57 dB SNR 125632
CMOS sens. interface, CARIOCA current-mode feedback cct. 79635
continuous time low-pass leapfrog-type filter, multi-output differential difference current conveyor *(Chinese)* 68914
continuous-time sigma-delta modulators, LV current-mode integrators 79967
current differencing buffered amp., act. building block and appls. 91043
current-version neg. feedback biquad filter, opamp cct. 68932
dual-rail multiple-valued current-mode VLSI with biasing current sources 79815
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
ear-type multisensors, MEMS switched current mode cct. realisation 86771
ESD protection cct., input capacitance 81464
floating gate subthreshold CMOS translinear ccts., dyn. charge restoration 68960
floating gate subthreshold MOS translinear ccts., dyn. charge restoration 80128
four-transistor current copy unit based current buffer *(Chinese)* 114900
full-wave rectifier, current conveyor and current mirror 90736
fuzzy A/D converter, current-mode approach 102279
Gabor-type CNN image filters, subthreshold current mode design 102456
handwritten digit class., Hamming neural network feature extractor *(Chinese)* 91130
high output impedance current-mode multifn. filter with dual output CCIIs 91045
high-efficiency modulator for dyn. envelope tracking CDMA RF power amps. 101858
high-output-impedance multifunction filters employing min. no. of FTFNs 102368
high-speed low power ADC design, current-mode approach 90996
hysteretic WTA VLSI network, with excitatory/inhibitory coupling 102485
inductor, SC and current mode ccts. 102788
insensitive current-mode universal biquad implement. using current conveyors 91037
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
LV continuous-time CMOS current amp. with dyn. biasing 79585
micropower class-AB CMOS log-domain filter, DECT appl. 91030
mixed analog-digital systs., LV/current-mode gates 91120
multifunction filter using CMOS dual output CCIIs/grounded pass. elements 68891
multiple loop feedback multiple output OTA-C filters 102345
multiport gyrator, realization using current mirror ccts., filter appl. *(Japanese)* 80037
neurofuzzy systs., num. info. process., hardware implement. 114907
neuromorphic network, current-mode cct., CNN model 91144
nonlin. current-mode ccts., stat. anal. 114593
OFDM transceiver, FFT LSI design method, current mode cct. 85594
pipelined mixed-sig. fuzzy logic controller with linguistic hedge modifiers 68956
prog. neural network, low-power current mode ccts., AB class neuron struct. 91156
prog. transconductance amp. switched current ccts. 101777
prog. WTA neural network, current mode ccts. 114908
self-restored current mode CMOS multiple-valued logic design archit. 79819
sense amps. for high dens. DRAM and PIM archits. 102175
shunting inhib. CNN, digitally prog. current mode cct. 68954
single-resist.-controlled sinusoidal oscillator, pos. four-terminal floating nullor 125253
strong-inversion CMOS current-mode companding integrator implement. 80137
submicron CMOS technol., current mode sense amps. 68589
transconductance feedback amp. based logarithmic convertor 79592
translinear cct., sinusoidal freq. division by integer no. 114905
translinear-based multi-output four-terminal floating nullor, bipolar implement. 80079
UHF current-mode filter based on biquad of regulated cascode topol. 80078
universal act. current-mode filter using modified current conveyors 68918
universal current-mode filter using CCII and current followers 68923
very deep submicron CMOS, global interconnects, current sens. techs. 92466
GaAs MESFET current mode class-D power amps. for high efficiency RF appls. 91266
InP/Si CMOS hybrid integrated photoreceiver, alignment tolerant 120161

current-mode logic
see also emitter-coupled logic
4-valued unary fns. synthesis using current-mode CMOS ccts., cost-table-based tech. 79814
bipolar CML testability, inductive fault anal., library cell layouts 102074
bipolar current switch, nonlin. dyn. behaviour after step input 80471
CMOS MUX/DEMUX ICs using CML, 10 Gb/s, opt. link appl. 75038
monolithic switching regulator, fuzzy logic control, BCD technol. 99769
ring oscillator, oscill. freq. 101832
submicron CMOS technol., current mode sense amps. 68589
AlInAs/InGaAs HBT CML ring oscillator, sub-5 ps gate delay demo. 79845
AlInAs/InGaAs HBT IC, low-power static freq. divider 127015

current sources *see constant current sources*

current transformers
see also electric current control; electric current measurement
1 kWh SMES, supercond. persistent-current-switch, CT 78194
3-phase ZVS PWM inverter, digital control, reson. snubber, CT 134225
15 kV enclosed bus assembly, 5 kA, 60 Hz 3-phase continuous current test 133417
145 kV CT elec. field distrib., leader shields effects 112612
145 kV highly integrated gas insulated switchgear develop. 112691
adaptive differential CT protection, sampling value-based *(Chinese)* 112603
air gapped CT simul. model, generator protection appls. 112591
busbar differential protection, impedance-based CT saturation detect. algm. 133786
cascade power CT, shunt resist. selection 112609
combined opt. transformer, current and voltage sens. 123549
current-based transformer differential protection, problem statement 134130
DC-DC converter using load-current feedforward control, transient response 88986
delta-connected CT, relay protection simul. 77919
differential protection, transformer bushing, fault anal. *(Chinese)* 77920
differential relay, harmonics effect 134116
digital opt. elec. meas. syst. for power syst. *(Chinese)* 88497
dist. protection selection, Monte Carlo method 123536
EMTDC digital CT model, design, eval. 112613
gas insulated substations, I-V transformers, transient EM phenom. 134315
GIS CT, T-zone protection, μP based relay LFP-924 *(Chinese)* 112604
HV CT, equiv. cct. modelling, voltage measuring topologies 88805
IM protection using microcontrollers 112536
lin. convertor of weak currents electrometric module 86793
live tank cct. breaker nonconventional CT 112688
low impedance restricted earth fault protection 77934
nonlin. compensation in current meas./reconstr. 86905
opt. CT, sig. proc. schemes comparison 75814
orthoferrite plate, magneto-opt. CT 104838
overcurrent relay, operation with meas. CT 77456
parallel bridge rectifier feed syst., current feedback algm. *(Chinese)* 90714
phasor meas. using protection CT monitoring syst. 123089
power CT protection using saturation criterion *(Chinese)* 112602
power electronics current sens., review 97213
power line current sens. using analogue opt. data transfer 77661
power quality meas. digital instrum., calib. procedure 109835
power syst. protective relay setting program, transformer saturation effects 77483
power syst. unit protection scheme using superimposed fault currents 77504
power transm. line inspection, autonomous robot, CT principle 99368
protection relay testing automation, CT saturation effects 77566
protective relays, steady state and transient response simul. 77515
relays testing, multiple CT, real time digital simulator 77489
saturation, transforming error soln., ANN based algm. *(Chinese)* 123535
saturation, transient unbalanced current, transformer differential protection mis-operation *(Chinese)* 112607
saturation detect. algm. *(Korean)* 115093
saturation detect. using wavelet transform *(Chinese)* 77937
sync. generator stator nondifferential relay protection scheme 77849
transm. line protection, I-V transformer correction, ANN 77509
VSI HF transformer act. auxiliary reson. soft commutation snubber *(Japanese)* 99803
wideband voltage meas. using HV CT 123090
$Co_{71.3}Fe_{3.7}Si_{15}B_{10}$ amorph. wire based sensitive CT 75478

current transients *see transients*

curvature measurement
axis roundness meas., V-shaped method *(Chinese)* 89896
curved surface inspection, noncontact meas., opt. fiber sens. *(Chinese)* 97315
disabled pers. movements, opt. fiber curvature sens. 98731
electronic packages, 2D surface curvature meas. during thermal cycling 113544
fibre-optic curvature sens., light output lin. var. with bending angle *(German)* 131934
large rad. of curvature digitalization meas. by noncontact Newton's rings 97826
large-size arclength meas., noncontact ultra-accurate syst. *(Chinese)* 100623
long-period fibre gratings pair, curvature/load/chem. sens. appls. 97282
modal wave-front projection fns., min.-error norm, variational soln. 86473
pulmonary nodules, 3D curvatures, feature extraction algms. *(Japanese)* 98139
rem. addressed opt. fibre curvature sens., two-core photonic cryst. fibre sens. element 97308
roundness meas. syst., opt. V-block method, perform. eval. *(Japanese)* 97806
spherical surface curvature meas. by light refl. 97138
TWT spherical grid curvature rad. meas. 132176
wearable master device for spinal injured pers. as control device for wheelchairs 133059
X-ray downwards-deflecting mirror-bender assemblies, long trace profiler charactn. 121762
Al, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435
Cu, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435

curve fitting
see also surface fitting
2D gray-scale image fusion by multiscale morph. 107216
ADC dyn. test setup, timing jitter contribs. meas. 80013
affine-invariant detector of arbitrary shapes, generalized Hough transform *(Japanese)* 73445
amyotrophic lateral sclerosis, multislice ^1H MR spectrosc. imaging 132675
anisotropic surface texture, summit ident., directionality assess. 121191
anodically bonded interface, diffusion 91943
autonomous vehicle, real-time lane detect., image recogn. 134555
axisymm. drop shape anal. meas., CCD video camera, fast algms. 75883
B=B(H) curve approx., segment choice using spline fns. 93969
bandlimited periodic sig., nonlin. least-sq. multisine fitting algm. 118831
black-box models from input-output meas. 109399

curve fitting continued
closed planar curves, regularized autoregressive spectral estim. 107358
COBRA ATD multispectral camera response model 75624
cone spline surfaces and spatial osculating arc splines 114011
conic fitting, least-sq. orthogonal dists. 124646
cubic-spline interpolation 78994
DC motors, solar array-fed, direct selection procedure 134064
degrees of parametrizations of ellipt. curves by Shimura curves 101009
DeskScan syst., face models scanning with desktop cameras 129417
Doppler radar expanded vel.-azimuth display tech., error anal. *(Chinese)* 76865
dyn. tracking/recogn. of curves, road detect. appl. 84618
engng. surfaces morph. charactn., ISO 12085 MOTIF method 113754
fuzzy curve-tracing algm. 129422
Hermite interpolation by Pythagorean hodograph curves of degree seven 78998
HF PHEMT state fns., full extraction using time domain meas. 91259
hierarchical D-NURBS surfaces and phys.-based sculpting 67980
HiRAMBO planar curves hierarchical representation scheme 124619
implicit surface fitting using directional constraints 79012
intracardiac press. grad. mapping, Euler eqn., colour echocardiograms 98264
invariant curves of planar map Lyapunov-type no. calc. 124630
ISAR imaging, freq. sweep nonlin., curve simul. *(Chinese)* 86157
KEMET base-metal-electrode MLC chip capacitors, HALT 115079
laser resonator, auto-stabil. adjustment syst. *(Chinese)* 105393
long. road profile meas., subharmonic detrending or data-smoothing approach 86978
multi-view face pattern nonlin. mapping, Gaussian distrib. 107195
multiexponential transient spectrosc., iter. deconvolution 84739
multiple view geom. of non-planar alg. curves 106619
myocardial imaging, strain values calc. from strain rate curves 110699
myocardial perfusion, US contrast agent destruction & imaging sync. 122010
obj. location and rad. of curvature estim. using US sonar 75239
oesophagus outer wall detect., US images, data fusion, stochastic optim. 76350
pass. planar components, EM-based multidimens. parameterised models 102551
pins and vias, SPICE-compatible broadband elec. model 113520
plastic landmine detect., GPR imaging, permitt. contrast, curve evol. 77099
polynomial interpolation for implicitizing alg. curves 67960
power syst. diff.-alg. eqn. model, stabil. limits, param. space 99286
PTCR resist.-temp. curve, DP program *(Chinese)* 121146
PVDF-trifluoroethylene copolymer, pyroelec. dyn. 127210
rect. microstrip antennas, comparison of CAD formulas and expt. 72619
regular alg. curve segments, interactive design and data fitting 67955
routine thermolum. dosimetry, computerised glow curve anal. 133110
second order thermolum. glow peaks, logistic distrib. fn. 133137
shape-preserving approx. by space curves 124644
smooth fitting under genetic prog. algm. 67881
SMT placement machines, slew motion timing model estim. 89868
sonar ranging, boundary location using Hough transform 109307
subpixel accuracy analogue fast edge location meas. using CCD image 118725
superellipse detect., efficient/consistent method 118399
TCP traffic simulator and self-similar traffic simul. 130433
time-freq. distrib., Hough transform, curve extraction *(Chinese)* 84693
traffic surveillance, content-based event retrieval 129815
US surface profile determ. by spatial voting, map building 107228
Si CZ growth, online diam. calib., shape estim. 114209
Sn-Ag-Cu solder alloys, ternary eutectic comp. 114423
multilevel interconnect technol. with intra-metal air-gap for ≤0.25 μm procs 92147

custom integrated circuits *see application specific integrated circuits*

customs and excise *see tariffs*

cutting
see also arc cutting; machine tools; machining
act. sens. feedback in manual machine tool operation *(Japanese)* 89787
AMLCD glass substr. cutting, scribe-wheel dimens. effect 109857
autofocusing control for DIVX burst-cutting-area recording syst. 117562
blazed holographic opt. element fab. by ultrahigh-precision cutting 82962
carpet flooring material, invariant pattern location, unsupervised color-based perceptual organization and graph-based matching 106522
ceramic chip capacitors for automotive indust., qualification testing 89413
ceramic materials with metallized surface, laser cutting 128604
COIL size-reduction cutting of radioact.-contaminated struct. 111642
direct control of cutting tools by microtechniques 113820
dry wire EDM method in gas atmos. *(Japanese)* 134678
engng. surface texture, proc. related assess. & supervision 113759
exact algms. for large-scale unconstrained two and three staged cutting problem 67918
indust. appls. of lasers, state-of-the-art 113168
laminated rapid prototyping, octrees for material removal 105649
laser cutter for LCD patterned plate inspection syst. *(Japanese)* 83042
laser cutting, auxiliary gas outflow dyn. 83045
laser cutting, multimode, lumped param. model 105635
laser cutting proc., transient 3D computer simul., parallel comput. 105623
laser cutting quality, spatial curvature rad. effects *(Chinese)* 105652
laser fine-cutting syst., precise XY-stage syst. *(Japanese)* 72117
laser fusion cutting proc., cut kerf, supersonic gas flow modelling 93932
laser fusion cutting proc., cut kerf geom., math. modelling 93931
laser fusion cutting proc., proc. params., cut kerf quality 93933
laser machine positioning control using real-time dyn. characts. compensation *(Japanese)* 89838
laser materials proc., stds. and specs. *(Japanese)* 93917
laser materials-proc. appls., real-time beam anal. 93929
laser rock cutting & drilling in mining, high-power IR laser 105639
laser-microjet wafer dicing, water jet cooled 103946
low-temp. press.-assisted bonding technol., microchemical anal. appls. 92557
maxillofacial distraction procedures, image-based 3D planning, soft tissue implications 87791
metals cutting, exoelectron emission behavior *(Japanese)* 67537
micro milling cutters, fab. and appl. 113455
microelectronics packaging, laser proc. appls. 67551
micromanipulation med. robot, visual servo control syst. *(Chinese)* 106686
mild steel, laser-assisted oxygen cutting 72109
multifunctional Si-based microscale surgical syst. 111072
nanocomposite hybrid organo-mineral material photonic appls. 71962
nanosurfacing proc. simul., MDM guidelines 115809
opt. glass micro-machining, brittle regime, in-proc. monitoring *(Japanese)* 89839
PCB microdrilling, cutting torque noncontact meas. method *(Japanese)* 91477
semicond. wafer exposure pattern optim., 2D cutting algm. 115982
supercond. mixer ccts., whole wafer dicing/thinning techs. 71090
ultra-precision plastics cutting, surface roughness expts. *(Japanese)* 100565

utting continued
ultra-short laser pulses, machining, indust. appls. *(English)* 128616
ultrathin wafer handling/probing 126260
US vibr. cutting, magnetostrictive transducer *(Chinese)* 88216
wafer dicing proc., fully automatic syst., collaborative study 103947
water jet supported laser cutting, high momentum transfer nozzle concept 72130
wear resistant steel, microcutting, micro-molds manufacture 113463
wiresaw mfg., brittle material slicing, free abrasive machining 113459
Ar plasma jet generation, rect. reson. cavity, params. 100571
CO_2 fast-transverse-flow discharge CW laser for nuc. reactors fuel channels decommissioning 83049
CO_2 high-power indust. lasers for machine-building and metall. 83047
CO_2 lasers, CW and high repetition rate props., at. indust. appls. 83048
Fe-Si steel, grain-oriented, core loss reduction, laser scribing 127379
GaAs wafer mfg., dicing improvements for yield enhance. and throughput increase 126925
Nd:YAG diode-pumped high-power rod laser, high-efficiency operation 128187
Si cutting fluid, anal./theory *(Chinese)* 103303
Si micro-EDM machining performs., micro-Joule energy range 92555
Si, multicrystalline, EFG grown, 100 µm thick wafers/solar cells 90210
W micro-punch fab. for micro-nozzles, electrochem. etching 92547

VD *see chemical vapour deposition*

VD coatings
see also MOCVD coatings; plasma CVD coatings
carbon nanotubes, CVD growth, struct., gas press. effects 101534
diamond:B, ion-induced electron emission, effect of surface hydrogenation and sample temp. 80557
diamond:B CVD films, piezoresist., grain boundaries, device appl. 115291
diamond:B thin film, buffer layer effects on CL, CVD 79318
diamond:D CVD surfaces, D depth profiles 91583
diamond:H, polycryst. CVD films, field emission, surface roughness effect 102894
diamond:H CVD films, defect states, DLTS 80646
diamond:H surface, vibr. sum-freq. obs. 117455
diamond:N, CVD films, metal-insulator-vac. type electron emission 91536
diamond:P films, low temp. excitation spectrum 69496
diamond:P homoepitaxial n-type CVD films, phonon-assisted electronic transits. 69495
diamond, airborne optics, transit. metal oxide ARC 71500
diamond, CVD, optics for UV region 82034
diamond, CVD, sens. for charged particle detect. 121455
diamond, CVD detector, thermolum., UV light sensitivity 88005
diamond, CVD film, field & photoemission, microstruct. effect 80564
diamond, CVD films, band gap, field emission 102904
diamond, CVD films, in-line monitors for synchrotron expts. 76185
diamond, CVD films, mech./opt. props., Brillouin microscopy 80636
diamond, CVD films, particle detector appls. *(French)* 87199
diamond, CVD films, structs. with feature size <100 nm, fab. 69912
diamond, CVD films for components and emitters 114329
diamond, film, CVD synthesis from ethanol dil. in He/Ne mixtures 79291
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
diamond, particle and radiation detectors 87241
diamond, polycryst. CVD films, injection depend. long carrier lifetimes 80642
diamond, search for donors 115550
diamond(100) surfaces, CVD homoepitaxial grown, photoemission props. 91603
diamond based beam profile monitor for undulator radiation 121372
diamond coated W tips, hot filament CVD, field emission 102908
diamond coplanar CVD radiation detector, charactn. 97992
diamond CVD films, field emission, SEM/Raman obs. *(English)* 125952
diamond CVD films, gap states, thickness depend. dens. distrib. 80659
diamond CVD films, IR opt. props. charactn. 116551
diamond CVD films, polycryst., high-speed photoconductors 82306
diamond CVD films, surface and bulk defects, conf., Diepenbeek-Hasselt, Belgium (March 2001) 113233
diamond CVD films, thermochemical polishing, removal rate 92060
diamond CVD grains on dot-patterned substrs., electron field emission and surface props. 69419
diamond CVD microdosimeters 122443
diamond CVD particle detectors, trapping-detrapping behavior 87219
diamond CVD photoconductors, DUV excimer laser irrad., operational lifetime/radiation hardness 80650
diamond CVD substrs. for surface acoustic wave devices *(French)* 81756
diamond CVD thick films, etching by rare-earth cpd. ink *(English)* 126336
diamond electro-mech. micro devices, CVD, technol., perform. 116105
diamond film patterning by RIE and MEMS appls. 92562
diamond films, CVD, dens. of gap states, thickness depend., SCL current 69476
diamond films, low field-emission, charact. by SPM 80558
diamond films, oriented, deposition on noble metal *(Japanese)* 101344
diamond HFCVD film morph. control, low-energy electron bombard. 68234
diamond nanocryst. CVD thin film cold cathode devices, electron field emission characts. 69394
diamond photocathodes, CVD, surface reactivity with O/O_2 80649
diamond photoconductive device, UV detect. 86564
diamond polycryst. plates, electron-assisted hot filament CVD, SAW dispersion 80648
diamond radiation detectors, charge transport props. 132305
diamond radiation detectors, response, temp. effects 98099
diamond replica films, CVD growth dyn. anal. 101351
diamond Schottky diodes, elec. AC behaviour 81192
diamond self-supported sheets, CVD, DC elec. cond. props. 91593
diamond thin film, UV detect., subgap photocurrent response 86565
diamond/sp^2-bonded carbon nanostruct., QW field electron emission 80563
DLC CVD field emission cathode, SFM 69403
field emission from C films, struct./deposition effects 102907
fluorocarbon thin films, hot-wire CVD 124978
interconnects, conf., Burlingame, CA, USA (June 2001) 124180
LCD glass substrs. with different barrier layers, Na exchange 132104
low-temp. CVD epitaxial growth, fine control 90393
1-methoxy-8-hydroxy-9,10-anthraquinone films, hot wall epitaxy, struct./elec./opt. props. 69607
multi-wall carbon-nanotube films, CVD-grown, field-emission props., Raman spectr. 125138
multiwalled carbon nanotubes, synthesis from hydrocarbon vap., proc. params. effects 68454
noble metallization proc. using preferential metal deposition Al with methylpyrroridine alane 126454
OLED using B-doped diamond electrodes 104985
organosilicon thin films, hot-wire CVD 124978

CVD coatings continued
poly(3-hexylthiophene)-C_{60}-C nanotube nanocomposites, elec., opt. props. 115357
poly-Si thin film solar cells form. by flux method/Cat-CVD method 90391
polysilicon LPCVD films, struct. depth profiling using Raman microscopy 90360
porous poly-Si solar cells, LPCVD, texturing 112901
silicate glass, F(C) doped, low dielec. const. CVD oxides, phys./elec. charactn. 102767
silicate glass film, LPCVD, bis(tertiary-butylamino)silane precursor 124896
single-walled carbon nanotubes, gas-phase CVD in HiPco proc. 101532
SOS, solid phase epitaxially regrown, oscillatory strain relax. 79301
SOS film growth, CVD & SPE, charactn., device appl. *(English)* 79414
SPring-8 undulator beamlines, blade-type X-ray beam posn. monitors 121377
Al CVD-PVD proc. for DRAM appls. 126455
AlCu RIE metallization, SiO_2:C low-k interlevel dielec. 103476
B doped LPCVD polysilicon film, pre-annealing influ. on residual stresses 103245
B-C-N aligned nanotubes, bias assisted hot filament CVD growth, struct. 68463
$BaSnO_3$, prep./props., liquefied petroleum gas sens. appl. 109741
a-C films, kerosene vap. pyrolysis, field emission 80568
C films, nanostructured on Si tips, CVD, field emission enhancement effect 102916
C nanocrystalline CVD films, electron field emission, microstruct. 69388
C, nanostructured film, field electron emission 69411
C nanotube array, field emission, FPD *(Japanese)* 80530
C nanotube, microwave heating thermal CVD, catalyst effect 68464
C thin film cathodes, field emission lifetime, color phosphor effects 69412
a-C:H/SiO_2/Si, C diffusion/accumulation at SiO_2/Si interface 69843
C-nanotubes, thermal CVD on Fe-deposited (001) Si substrs. 68213
CdTe APCVD thin-film solar cells 100131
$CdTe_{(1-x)}S_x$ absorber films/PV devices optimisation, combinat. method 100110
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92116
Cu interconnects, sub-0.10 µm, jet electrochem. deposition plating/seed layers 81118
Cu/CVD SiOC dual-damascene interconnect, electromigration reliab. 115710
$Cu(In,Ca)Se_2$ large area films for high efficiency solar cells 126104
$CuInS_2$ thin-film solar cell growth using spray CVD 100123
$CuInSe_2$ films/solar cells, fabr. by In_2Se_3/Cu_2Se seq. evap. 90390
GaAs polycryst. layer growth for large area imaging detectors 90385
GaN high-quality UHV-CVD growth on Si(111) substr. 79279
GdBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. props. 127434
Ge films, hot-wire CVD epitaxial growth 68215
Ge/Si(001) islands, UHV CVD, strain-driven alloying 68268
HfO_2 gate insulator, high permitt., chem. vap. deposition 114356
HgCdTe, CVD on Te adsorbed Si substr., surface morphologies, annealing effect 126059
InSe films, thermal/flash evap. growth techs., charactn. 79246
NdBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. props. 127434
Ni-YSZ-Ag thin film SOFC testing 99966
Pt catalytic coating, combustion CVD, polymer electrolyte membrane, PEMFC 123784
SOI struct., multilayer thermal via incorporation and charactn. 115443
Si CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
a-Si LPCVD films, excimer-laser crystalliz., cryst. islands form. 115333
Si, UHV-CVD epitaxial growth, surface defect form. 125998
a-Si and µc-Si films deposition, Hot Wire CVD, solar cells 112881
Si cryst. thin-film solar cells on laser-perforated SiO_2 barrier layers 100090
Si epilayer, UHV/CVD growth, double layer porous silicon substr. *(Chinese)* 90355
poly-Si fine-grained p-n jn. solar cells, carrier collection 100065
Si indiv. nanocrystals, single-electron charging effect 103114
poly-Si layers, atmos. press. iodine vap. transport deposition 100067
Si nanometer-sized dot multilayers, photocond. 127903
Si, nanometer-sized hemispherical-grained, RTCVD, microstruct. evol. 124926
a-Si p-i-n solar cells efficiency enhancement using LP-CVD ZnO 100200
Si polycryst. grain struct. with single wafer CVD tech. 102956
µc-Si solar cells, absorber layers, ECR CVD grown 112894
Si solar cells, thin-film, cryst., batch-type LPCVD-syst. 100155
a-Si thin films, crystn. using viscous Ni soln. 103238
Si thin-film solar cells, SiSiC ceramics substr. infiltration/recrystn. 100069
poly-Si:B(P) LPCVD layers, thermal cond. study 115293
a-Si:H, RF CVD, laser melting, polycryst. films, PV props. 91607
a-Si:H and µc-Si:H hot wire thin films, SiH_4 flow, H_2 dilution 103073
a-Si:H films, catalytic CVD, solar-cell materials appl. 124954
Si:H films, hot-wire CVD, solar cell appls. 124981
a-Si:H hot-wire CVD films, electronic states, light-induced metastability 127907
a-Si:H n-i-p solar cells, hot-wire CVD 134407
a-Si:H photodiode, laminar-flow photo-CVD, light soaking 116957
µc-Si:H thin film solar cells, hydrogen-radical CVD, init. growth estim. 112892
a-Si:H/a-Si:H tandem solar cells. hot-wire CVD fab. 112895
a-Si:H,(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
Si:H,B(P), films, amorph./µc, hot-wire CVD, gas phase doping 126300
Si:P solar cells, high-quality homoepitaxial thin-film emitter growth 100049
Si/Al_2O_3/n+-polySi MOS capacitors, at. layer CVD, charactn. 80936
Si/SiO_2 interface, improvement of reliab. for N_2O-nitrided LPCVD oxide *(Chinese)* 103210
SiC PVT growth, Si liq. phase form. at crystn. front 124788
4H-SiC epitaxial layers, unintentionally doped, hot-wall CVD, struct./elec. props. 68239
4H-SiC n^+pp^+ struct., passiv., SIPOS-SiO_2 layer *(Chinese)* 91992
a-SiC:H dielec. diffusion barrier, Cu interconnect 115721
4H-SiC:N CVD films, cond. electrons, intrinsic mobility, valley-orbit splitting 69597
4H-SiC:V, solid source doping CVD, PL obs. 69602
3C-SiC(100), CVD on Si(100), charactn. 90423
SiGe HBT, RF lin. 103793
SiGe HBT, self-aligned SEG 103790
poly-SiGe layers, oxid. behavior, Ge content depend., gate electrode appl. 92068
SiGe microwave HBT *(English)* 92297
$Si_{0.83}Ge_{0.17}$ fully relax. disloc.-free layer, UHV/CVD growth *(Chinese)* 90354
SiGe:B films deposited by CVD at 400°C, effect in situ B doping on props. 126303
SiGe/Si MQW, UHV/CVD growth *(Chinese)* 90353
$Si_{0.70}Ge_{0.30}/Si_{0.85}Ge_{0.15}$ vert. pMOSFET, oxide/nitride gate dielec. 115936
$Si_{1-x}Ge_x$/Si(001) epitaxial islands, UHV-CVD, size distribs., crit. behaviour 101313
$Si_{1-x-y}Ge_xC_y$ films, thermal oxid. kinetics, PL *(Chinese)* 126363

CVD coatings continued
SiN film, catalytic CVD 124976
Si_3N_4, LPCVD from dichlorosilane/ammonia, single wafer RTP 90406
Si_3N_4 film, Cat-CVD, ULSI proc. appl. 124975
Si_3N_4 films, ultrathin on Si, SPM/lithog. 92030
SiN_x membrane, IR thermal imaging 104167
SiN_x membrane, LPCVD thin film, SCALPEL mask blank 103671
SiN_x passiv. films for PZT ferroelec. capacitors, catalytic CVD 124977
a-SiN:H, Cat-CVD, deep submicron MOS device appls. 124974
a-SiN/SiO_2 thin stacked dielec. syst., trap-controlled SCLC mechanism 92674
Si_3N_4/SiO_2 ultrathin RTCVD gate stacks for ULSI, post-deposition treatments 69753
SiO_2 CVD film, Al interconnection, laser ablation *(Japanese)* 83062
$SiO_2/SiO_xN_y/SiO_2$ dielec. film for flash memory by thermal oxid. of nitride 91914
SmBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. props. 127434
SnO_2 films, spray pyrolysis, gas sens. charact. 101454
SnO_2:F, film, electrostatic spray assisted vapour deposition 101457
SnTe/BaF_2(111) epilayers, hot-wall epitaxy growth, opt. props. *(Korean)* 114309
$SrBi_2Ta_2O_9$ ferroelec. capacitor, FRAM device fab. 70460
$SrBi_2Ta_2O_9$ integrated ferroelec. capacitors, stress effects of inter-level dielec. layer 70477
Ta_2O_5 CVD films based metal-oxide-metal structs., elec. props. 91925
Ta_2O_5 on CVD Ru film, DRAM capacitor appl. 115087
Ta_2O_5/HfO_2, high dielec. const. nanolaminates, at. layer deposition 92677
Ta_2O_5/ZrO_2, high dielec. const. nanolaminates, at. layer deposition 92677
TiN, APCVD, H_2 addit. effect 79326
TiN CVD gate electrode, residual Cl, gate oxide reliab. 81112
TiN, at. layer deposition, film growth rate, kinetic modeling 101220
TiN top electrode, ALD and CVD, MIS capacitor 80926
TiO_2 gate insulator, high permitt., chem. vap. deposition 114356
W film, deposition & layer props., CVD 115665
W films, chem. treatment, IC appl. 103439
W/SiO_2/Si MOS capacitors, interface passiv. using at. H 69740
W-TiN damascene metal gate CMOS technols., perform. improvement 127040
WO_3 CVD films on Si, gas sens., fab. & calib., DIP 97527
WSi_2 thin film, SiH_4/WF_6 CVD, oxide quality 103466
YBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. props. 127434
$YBa_2Cu_3O_7$ films, 2-inch-diam. double-sided, coating-pyrolysis proc. 124914
$YbBa_2Cu_4O_8$, double-sided epitaxial films, coating-pyrolysis proc. 124915
ZnO buffer layer, CVD, Cu(InGa)$(SSe)_2$ solar cells, absorber transient behaviour 100136
ZnO films, CVD, elec./opt. props. 103012
ZnO/GaN/α-Al_2O_3, high quality heteroepitaxial structs. CVD growth 79321
ZnS, CVD, microstruct./comp./opt. transparency correl. 126012
ZnTe epilayers, PL charact. on GaAs(100) substrs. 91633
ZrO_2 IBICVD thin films, microstruct., surface roughness, opt. props. 79299
ZrO_2 gate insulator, high permitt., chem. vap. deposition 114356
ZrO_2/HfO_2, high dielec. const. nanolaminates, at. layer deposition 92677
metal/Ta_2O_5/Si gate devices, elec. charact./thermal stabil. of W, WN_x, and TiN barriers 91910

CVD thin films *see CVD coatings*

CVI *see chemical vapour infiltration*

CVSDM *see delta modulation*

CW radar
2D video sig. spectrum in FMCW homodyne radar, phase noise 86151
77 GHz FMCW automotive radar, fully MMIC-based front end 131670
adaptive radar imaging in wide ang. sector 96956
antenna surface meas. using microwave holography 83516
antipersonnel mine detect., shallow depth, UWB FMCW radar 77068
automobile MM wave radar syst. *(Japanese)* 124024
automotive collision warning radar, sig. proc. 75101
autonomous cruise control radar MMICs, syst.-level simul. of noise spectra distortion 86239
coded stepped-FMCW sig. for automotive collision warning radar appls. *(Chinese)* 109292
digital filter freq. response charact., analog shaping, Doppler tracking 118991
FM-CW radar atmos. profiler, dedicated computer syst. 76902
FM-CW radar level meters, correl. algm. for high-precision meas. *(English)* 121282
FM/CW radars, ranging algm. 99171
FMCW front end for anticollision radar, low-cost X-band design 120449
FMCW radar, beat sig., spectrum correl., dist. meas. 109290
FMCW radar, sig. proc. method for switch antenna array 96949
HF ground wave radar, wideband/narrow-band compensation methods *(Chinese)* 86179
intermittent FMCW radar, microwave level gauging *(German)* 121286
intrusive/nonintrusive radar vehicle detectors for length and vel. meas. 96980
LFMCW car sens., OO algm. for range super-resoln. estim. 75080
lin. FM-CW radar, nonlin. freq. distortion anal. 75222
microwave radar, dist. meas., six-port error propag. 86214
MM wave FMCW radar imaging for portable concealed weapon detect. 109293
MM-wave lin. FMCW radar for airfield obj. imaging, develop. 86192
ocean wave obs. by CW mm-wave radar with narrow beam 99025
PHEMT LF noise model, appl. to MM-wave automotive radar chip set design 80311
radar data modeling with time series models 118879
robots, radar sens. model for 3D map building 120707
S-band low-power correl. radar, compact design 86199
seismic landmine detect. syst. using radar 88250
SFCW radar, stratified dielec. medium, microwave imaging 86916
stepped freq. SAR, imaging of objs. embedded in lossy half-space 75221
sugar cane, shredder chute, microwave radar sens. 75184
target tracking in Doppler freq. shift 86238
transient breaking waves, radar backscatt., ang. depend., PO model 76910
transient breaking waves, radar backscatt., PO model 76909
wideband CW-lin. FM radars, perform. and group delay effects 75180

cybernetics
see also artificial intelligence; biocybernetics; economic cybernetics; information theory; man-machine systems; pattern recognition
human visual behavior, top-down guided eye movements 106428

cyclic accelerators
see also cyclotrons; storage rings; synchrotrons
Univ. Maryland Electron ring 110135

cyclic codes
1-generator quasi-twisted codes and new lin. codes 129194
affine invariant and cyclic codes over p-adic nos. and finite rings 94300
binary cyclic codes which are Z_4-cyclic codes 129144
complex-valued cyclic code using FFT 83898
DNA seqs./quaternary cyclic codes 129191
duadic codes over ring Z_{2k} 72786
finite fields and fire codes 117971
IP over ATM networks, fast incremental CRC codes updates 119128
iter. reliab.-based decoding of low-dens. parity check codes 72883
length 40 binary self-dual cyclic codes 117976
lin. cyclic codes over Z_4, binary images 83910
lin. quasicyclic codes, DFT domain charactn. 129051
low dens. parity check codes, constr. 72823
low-dens. parity check codes, iter. reliab. based decoding 129177
MC-CDMA over multipath fading channel, perform. of freq.-time MMSE equalizer 107764
MDS convolutional codes constr. 83919
near-optimal codes on two-state Markovian additive channel 129189
optimal binary cyclic self-complementary codes 129082
parallel CRC computations, systematic approach 106160
parity-check matrix for special class of cyclic codes 72920
quantum codes constr. from cyclic codes over $GF(4^m)$ 129206
quasicyclic codes alg. struct. 94286
quasicyclic dyadic codes in Walsh-Hadamard domain 129052
recurrent sliding correl. decoding 72894
reliable commun., continuous error detect. 119111
spectral graphs for quasi-cyclic LDPC codes 129175
SPIHT error-tolerant image compression 95330
subspace subcode of RS codes, dimens. 129146
unitary sig. constellations for differential space-time modulation 106063
urban multipath channel, transform domain/cyclic code shift keying syst. 83942

cycloconvertors
act. UPS using HF ZVS cycloconverters 123607
high-power indust. motor drive power convertors, harmonic anal. method 77989
hoisting IM drive syst., cycloconverter based, control 100359
three-phase PWM power converters, graphical phasor anal. 123599
three-phase static PWM freq. converter struct. 123652

cyclotron autoresonance masers *see cyclotron masers*

cyclotron masers
CARM-gyrotron, travelling and near-cutoff waves excitation 105054
cyclotron-reson. maser, TW, quasi cutoff waves, cooperation 117047
electron-cyclotron maser, nonrelativistic quantum wiggler electrodynamics 117046
opp.-wave generation suppression, long. profiling 82452
particle accelerators, CARM klystron config. 110147

cyclotron resonance
see also cyclotron masers; diamagnetism
connective tissue regulation and mag. fields 98683
VENUS, supercond. ECR ion source, constr., appls. 110243
GaAs-AlGaAs QHE, edge states electron-hole-pair recomb. suppression, time-resolved FIR photocond. 80793
GaAsN/GaAs QW, effective mass and carrier recomb., opt. detect. of cyclotron reson. 69688
GaN heteroepitaxial layers, ECR-MBE growth, Si(001)/(111) substrs., substr. nitridation influence 101251
InAs/GaSb QW, 2D electron-hole syst., hybridization 126180
μc-Si solar cells, absorber layers, ECR CVD grown 112894
Xe highly charged ions prod. from liq. He free supercond. ECR ion source 87154

cyclotron resonance masers *see cyclotron masers*

cyclotrons
see also microtrons
A1900 Fragment Separator supercond. accelerator magnet studies 75978
AIC-144 isochronous cyclotron, new extraction syst. 97923
appls. and technol. of cyclotrons *(Chinese)* 110073
diagnostic radionuclides prod./appl., nuc. data 98586
EXCYT project, RIB prod., physics perspectives 110221
HF gyrotrons, develop. and appls. *(Japanese)* 91553
high-order harmonics excitation by relativistic oscillators 80597
HIRFL Separated Sector Cyclotron, RF amplit. stabilization device *(Chinese)* 87142
intense RIB facilities, post accelerator design anal. 110203
JINR U-400/400M accelerators, HI phys. 110071
K70 AVF cyclotron, beam halo form., space charge forces *(Chinese)* 110168
KCCH cyclotron magnet, highly stabilized/high precision power supply 133039
laser-driven cyclotron autoresonance accelerator 110132
microwave power transm. in space plasma, three-wave coupling 123005
multi-stage high-gradient cyclotron reson. proton accelerator concept 110158
PET cyclotron, vault room, neutron energy spectra 87266
PSI Injector 2 cyclotron, proton beam dump, surveillance protect. 87129
radioact. beams and accelerators in France 75936
six-harmonic buncher, double-drift bunching systs. in cyclotron 87059
SPIRAL facility, accelerated ISOL tech. 132278
therapy-dedicated cyclotron, proton beams RBE, cell lethality 98672
Warsaw K-160 cyclotron, design of central region 110219

cylindrical waveguides *see circular waveguides*

Czochralski method *see crystal growth from melt*

D/A conversion *see digital-analogue conversion*

DAB *see digital audio broadcasting*

dairying
bovine viral antigens detect., surface SHG based immunosensor 86687
elec. energy consumption, syst. ident. 100353
fresh cow milk somatic cell conc. determ., video-microscopy syst. 113740
very large scale vehicle routing with time windows and stochastic demand using GA with parallel fitness eval. 100962

DAMA *see demand assigned multiple access*

damage, radiation *see radiation effects*

damping
1-3 piezocomposite transducer material consts., thermal behaviour 104436
110 kV earth fault compensated syst., earth fault meas. 133813
400 kV overhead lines, elec. field dampening using spruce forest 77442
accelerometer, high lin. piezoresistance micromachining, sensitivity *(Chinese)* 97845
act.-pass. hybrid piezoelec. network, vibr. control, neg. capacitance 116203
ADRIE overcritical damped laterally moving microstructs., SOI-substrs., automotive appls. 99871
automotive vehicle engine mounting systs., survey 78311

damping continued
beam, flexible smart, act. posn. control using internal model control 68453
beam, smart composite, self-adapting vibr. control syst. 127264
beams, act. piezoelec. damping, bonding layer props. 127265
bearingless IM drives, radial force detect., feedback effects 134437
bionic robot arm with compliant actuators 87901
capacitive micromachined switch, mech. design and optimisation 127103
channel state inform. AC multimotor drive, space vector control 89344
combustion engine torque output equalisation, AC starter generator 123316
cylindrical journal bearings damping coeffs. eval. approach 112450
DC electromagnet energising proc., dyn. calc. *(Russian)* 93984
decentralized load freq. control, robust H_∞ control 111920
delay filters, insensitivity anal. *(Chinese)* 73649
distrib. network electromech. mode params. estim. using freq. meas. 112044
doubly fed IM, current control, stabil., main mag. saturation effect 123871
electronically line-shafted paper machine drives, startup/commissioning 124161
EM shock absorber for ground vehicles 93990
EM vortex flow energy dissipation TMD devices develop. *(Chinese)* 105688
extended power pools dyn. props. 77153
FACTS devices allocation, freq. response tech. 99253
FACTS dyn. perform. improvement, damping controls optim./coord. 88377
FACTS SSR computational anal. using sample-data model *(Chinese)* 77303
FACTS UPFC controller perform. enhancement using modal anal. 111934
fault current limiters, thyristor controlled series compensator appl. *(Japanese)* 99420
fibre, opt. soliton propag., nonlin. damping, saturable amps. 104657
flexible and elastically supported struct. subj. to turbulent boundary layer flow excitation 114159
flexible EM shock absorber 117641
fractals in ccts. 114584
free-model based power syst. stabilization scheme 111893
gas-line compressors, EM bearings, elastic rotor oscills. damping 104556
GIS, PD sig. propag./location, freq. components comparison 134278
HF thickness-shear-mode resonators, impedance anal., chem. sens. 97434
high-dyn. indust. motor drives, torsional vibrs. damping/ident. 124150
induction servomotor HF mech. oscills., act. damping control 134039
interconnected power syst., transient stabil. control, multiple TCSC controllers 111922
ITER TF model coil, transient behaviour, 3D FEM 105686
Jiaxing power plant, AVR param. meas., PSS field test *(Chinese)* 88503
Kii-channel HVDC link/Tachibana-bay unit, islanded syst. mode test 112008
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
large deployable space telescopes, microdynamic issues 82266
laterally moving microstruct., gas-rarefaction effects, compact damping models 81577
lin. coupled Kerr oscillators, chaotical dyn., sync. 93783
load modulation for electromechanical oscills. damping 111854
load/unload based head-disk systs., anti-surface borne particles, slider air bearing surface 116438
logarithmic decrement eval. of damped oscill., integral sig. proc. 101594
long. power syst., unstable LF oscill. damping, eigenvalue anal. 122854
machine stabil. torque coeffs. theorems for power engng. courses 89646
MAGLEV syst., posn. tracking, adaptive robust nonlin. control 83183
magnetorheologic fluid smart actuators, flow behaviour in narrow channels 104553
MEMS torsional ratcheting actuator, reliab. 89024
MIB power syst. model, heteroclinic orbit computation *(Portuguese)* 122773
micro mirror arrays for scanning appl. in laser projection syst., fab. 82192
micromachined struct., viscous damping, review 81587
microresonators, laterally-driven, influence of edge damping on quality factor *(Chinese)* 104190
microstructural press. sens., reson. mode hysteresis effect 132070
multi-area PSS design using combined sensitivity concept 77215
multi-machine FACTS with UPFC, Phillips-Heffron model *(Chinese)* 77204
multi-machine power syst., controllable series capacitor, control strategy 111879
multi-machine power syst., optimal PSS placement, relative gain array 111869
multimachine power syst., NN based PSS 88385
multimachine power syst. stabilizers, global tuning procedure 99303
multimachine power syst. SVC robust damping controller design 88375
on-substr. torsional micromirrors, rot. viscous damping *(Korean)* 116789
pass. mag. composites for beam vib. suppression 81927
PCB electronic product suspen. design, shock response spectrum 89856
piezo-actuated vibroacoustic absorbers, interior noise control 123696
piezoelec. laminate beam, multiple mode shunt damping, optimal resistive elements 81742
power lines, reliab., cascading failure risk assess., long. loading 88441
power plants stabil. perform. defn. 88388
power station transients, math. modelling 123098
power station turbogenerators, excitation, transients modelling *(Russian)* 99606
power swings damping, braking resistors control 122870
power syst. damping algm. based on phasor estim. 111892
power syst. damping using fuzzy-controlled UPFC 111858
power syst. dyn. stabil. improvement by SVC/PSS coord. 111820
power syst. generator excitation control optimisation method *(Japanese)* 77249
power syst. inter-area oscills. damping using lin. matrix inequality 111823
power syst. optimal stabilizer/variable struct. controller studies 77211
power syst. oscill. damping, SVC and ASVC, robust H_∞-optimal control *(English)* 111924
power syst. oscill. damping control, simultaneous partial pole placement 111891
power syst. oscills. damping, multiple controllers, coord. design 122869
power syst. oscills. damping, unidirectional alternative power generation plants control 111862
power syst. stabilization, sync. condenser, fast excitation control 77253
power syst. unstable LF oscill. damping, load models effect 88376
power systs., decentralized suboptimal control, SMES 122878
PSS param. design, probabilistic eigenvalue anal. *(Chinese)* 111916
rectifier-inverter systs., DC-link harmonic reson. damping 134164
rem. sig. input PSS, power transfer capability improvement 111902
road vehicle EM suspen. syst. using tubular LIM 124046
robust coord. SVC suppl. controller design 122863
robust power syst. stabilizer design using heuristic optim. tech. 99301
robust power syst. stabilizers for dyn. stabil. enhancement 99299
rotor syst. with clearances, bifurcation, nonlin. dyn. theory 99620
salient pole sync. machine permeance model develop. 123344
series-connected controllable FACTS devices, control Lyapunov fns. 133548
ship shaft generator, torsion oscills., double power supply machine *(Russian)* 123996
simultaneous inter-area decoupling/local area damping, voltage source HVDC converter 112009
single-machine three-bus power syst. electromechanical oscills. damping 111859
damping continued
smart struct. monitoring using PZT actuators & PVDF sens. 109823
SSR damping, subsynchronous freq. impedance charact. *(Chinese)* 122771
SSSC, torsional damping improvement, robust H_∞ optimal control 112749
STATCOM, nonlin. disturbance atten. control 111901
static sync. compensator with SMES, dyn. perform. 111856
static sync. series compensator, fault current limiting, syst. stabilisation 77254
static sync. series compensator integrated with batt. energy storage 112750
stepping motor braking, back-phasing damping approach 112563
struct. health monitoring, damage detect., modal damping meas. 79465
structural syst. ident., strain and translational displacements meas. outputs 97854
supercond. generator control, adaptive/fuzzy logic stabilizer comparison 77814
supercond. Maglev bogie 3-D motion, damper coils effect *(Japanese)* 89373
SVC syst., PSS design using real variable elitism GA *(Korean)* 134327
TCSC firing angle control, fuzzy controller design, tabu search 134338
thin film recording media, dyn.-thermal effects, coercivity 116377
three-phase indust. power syst. hybrid power harmonic filter 89468
tightly coupled DC SQUIDs, reson. damping via intra-coil resistors 92898
train mag. fluid-type semi-act. damper perform. improvement *(Japanese)* 113107
transient stabil., braking resistors optimal control, Lyapunov method 88387
turbogenerator modelling by noninteger order systs. 123345
turbogenerators, subtransient behaviour, massive rotor 133917
two-inertia syst. vibr. damping property *(Japanese)* 77818
UPFC, per unit model, optimal control 111874
UPFC with energy snubber, control *(Chinese)* 111905
VSI-based power oscill. damping scheme 133545
weakly connected power systs., near-optimal fuzzy logic stabilizer 122905
Xinjiang power syst., TPP caused LF power oscills., anal. *(Chinese)* 111842
Cu interconnections, microstructural anal. using ps US 92170
PZT actuator, current jump phenom., surrounding media nonlin. damping 104444
PZT ceramics, piezoelec. actuator, power consumption, capacitance 104446
Si micro-oscillator, vibr. meas., scanning LDV 97855
4H-SiC:Al, implant. damage/annealing, IR investig. 69808
YBa_2Cu3O_x plate, mag. shielding, crit. current dens. influence 70637
$YBa_2Cu_3O_{7-\delta}$ mag. bearings, centrifuge appls. 81995
YBaCuO-based mag. thrust bearing for 25 kWh flywheel, charact. 116501

dams
see also civil engineering; hydroelectric power stations
4D self-pot. tomography in near-surface geophys. exploration 88167
adhesive for OTDR monitoring in dams 79474
China's big hydroelectric dams, social and environ. issues 112356
hydroelectric power stations gate movement protection 112357
hydropower syst. flood control, stochastic approach 88636
Kadra powerhouse, Kalinadi hydroelectric project stage II 112348
Kalinadi hydroelectric project stage-II, environ. aspects 112350
Kodasalli dam, Kalinadi hydroelectric project stage II 112349
Kodasalli powerhouse, Kalinadi hydroelectric project stage II 112347
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
laser safety monitoring considerations, generalized three-point method 72148
Norwegian guidelines for risk assess. 88627
operation during floods, RIFA CBT simulator 88626
safety assess. using ES technol. 88630
safety monitoring using vibr. wire sens. 88631

dangling bonds
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
diamond {111} surfaces etched in O_2 water vap., at. struct. 115648
diamond CVD films, field emission, SEM/Raman obs. *(English)* 125952
MOS IC oxide leakage currents, Si dangling bond defect link, direct evidence 81529
MOSFET, drain jn. space charge region, interface trap passiv. 126819
polyimide surface, metal nucleus growth, photochem. react. 69937
polysilicon TFT, low-temp., hot carrier effects 81272
surface-doped diamond, pH sens., surface termination effect 87023
$Al/SiN_x:H/Si$ devices, interfacial/bulk defects, struct./elec. props., temp. effects 91901
$CoSi_2/Si$ interface, struct./electronic props., first-principles calc. 103153
Cu stressed damascene interconnection, dielec. breakdown, EL obs. 81110
GaAs:Si, delta-doped MBE layers, elec./opt. props. 69511
Ge QD, CVD growth, dielec. substr. 101310
NiAu-GaN, Schottky barrier height & surface state dens., C-V/PL meas. 126201
$NiSi_2/Si$ interface, struct./electronic props., first-principles calc. 103153
Si SR-excited epitaxy from SiH_2Cl_2, dangling-bond regeneration channels 68289
Si films, catalytic-CVD method, solar cell appl. 124964
Si lattice defect passiv. by ECR hydrogenation tech. 69895
Si, polycryst. films for solar cells, RTCVD grown, grain boundaries 68258
a-Si:H films, H exposure, dangling bond creation and free H diffusion, in situ ESR obs. 91691
a-Si:H films, catalytic CVD, solar-cell materials appl. 124954
a-Si:H, light-induced struct. changes, weak bonds, dangling bonds role 93325
a-Si:H, occupation of dangling-bond states and photocond., band tails effect 93323
a-Si:H, photo-induced structural change, photocond. degrad. *(Japanese)* 82307
a-Si:H solar cells, charged dangling bonds, short cct. current effect 103072
a-Si:H thin films, light-induced annealing effects, positron beam annihilation/FTIR spectra 80977
Si:H-terminated surfaces, UHV contactless C-V method for passivated defect-free surfaces 91577
Si/SiO_2 interface, dangling bond centers, elec. detect. EPR obs. 69765
a-Si-Ge:H alloys, global mechanism for light-induced degrad. 69553
Si-Si mol. beam homo-epitaxial growth mechanism, cryst. anisotropy *(Japanese)* 124850
SiC/SiO_2 MIS struct., interface-state dens., H_2 annealing, reply to comment 80924
SiC/SiO_2 MOS structs., interface-state dens., H_2 annealing, comment 80923
$a\text{-}SiO_2$, film, PECVD, props. thickness depend. 101365
$W\text{-}WN_x(TiN)$ metal gate electrode sputter deposition, gate dielec. charact. 70306
ZnSe/GaAs heteroepitaxy, defect form., Monte Carlo simul. 101278

dark conductivity
CCD chip, Meyer-Neldel rule for dark current 75660
diamond films, plasma CVD, struct., elec. props., Schottky devices 126209
furazano (3,4-b)piperazine thin film device, rectification, charge transport., PV props. 70026
high power photodetectors, failure mechanisms, dark currents, theoretical model 97244
homojunction interfacial work-fn. internal photoemission FIR detectors 131932
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance charactn. 126215

dark conductivity continued
metal-diamond interfaces, EO props. 86524
nonuniform QW IR photodetectors, elec. field distrib., perform. study 86544
poly(o-methoxyaniline)-based solar cell, charact. 123823
polyepoxypropilcarbazol and its derivatives, doped by $V_2O_5(SbCl_5)$, dark/light I-V charact. 104899
QW IR photodetectors, low background conditions, time-depend. effects 86549
QW/QD IR detector photo-response/dark current, theoretical modeling 86558
separate absorpt. multiplication region superlattice APD, excess noise 71555
single-color dual-band QW IR detector FPA, lab./field imaging testing 86653
solar cell modules/encapsulations, indoor study/ageing tests 134388
Al/MH-PPV/ITO diode structs., reversible PV/electrolum. effects 117015
AlGaAs/GaAs QW IR photodetectors, barrier width effect on perform. 86538
AlGaN MOCVD films, DOS distrib., transient photocurrent anal. 71515
AlGaN high-perform. back-illum. solar-blind MSM photodetectors 126256
AlGaN/AlN/GaN heterobipolar phototransistor, photoresponse, defect levels 82347
AlGaN/GaN hetero bipolar phototransistor, luminesc., photodetectors, photocurrent 82363
$Al_{0.18}GaN/GaN$ heterostruct., sub-bandgap absorpt., photocurrent spectra 91742
AlGaN-GaN heterojunctions, low-noise photodetectors 75512
$Al_xGa_{1-x}N$-based metal-semicond.-metal UV photodetectors, fab. 109579
Au-TiO_2 nanogranular films, dark specific resist. 69732
a-C:H films and assoc. heterostruct., artificial pot. relief 103121
a-CN_x films prep. by layer-by-layer method, photocond. and photolum. 71516
$Cd_{0.19}Hg_{0.81}Te$ photoresistors, sensitivity & detectivity, pulsed laser annealing effect 71546
CdSe/ZnO composite coatings, sintering, photosensitivity 101501
p-CdTe crysts., pulsed laser-stimulated SAWs 115303
CdTe thin film, vac. sublimation growth, struct./elec. props. *(Chinese)* 79222
GaAs X-ray coord. detectors, charge collection efficiency 98002
GaAs/InGaAs far-IR QW photodetectors, cutoff wavelength 86541
GaInNAs/GaAs MQW reson.-cavity-enhanced IR photodetectors 131920
GaN/$LiGaO_2$ metal/semicond./metal UV photodetectors, MBE 109564
GaN-based MSM photodetectors, transparent ITO Schottky contacts 97262
GaSb/InGaAsSb based photodiodes, band energy diag. engng. & photoresponse 71547
Ge_xSe_{1-x} thin films, semi-closed space prep. tech., struct. anal. 124859
HgCdTe PV devices, SW IR detectors appl. *(Korean)* 120790
HgCdTe growth on (552) oriented CdZnTe by MOVPE, MIR photodiode detector arrays appl. 90431
HgCdTe-based n^+-p photodiodes, charge transport 116940
InAlAs/InGaAs superlattice APD, dark current reduction 116939
InAs QDs in modulation doped AlGaAs/GaAs heterostructs., IR photodetector 120817
InAs-GaAs low dark current QD IR photodetector, AlGaAs current blocking layer 86560
In(Ga)As QDIPs, phys. model, dark current/photocurrent 120802
$In_{0.53}Ga_{0.47}As/InAlGaAs/In_{0.52}Al_{0.48}As$ metamorphic double heterojunction photodiodes 71554
InGaAsP/InAlAs asymm. superlattice struct. APD, dark current reduction 116948
InGaP:C photoconductive gate, picosecond response 127910
$In_x(OH,S)_y$ buffer layers for $Cu(In,Ga)Se_2$ solar cells 100037
$LiNbO_3$, photorefr. consts., SHG *(Korean)* 93830
$LiNbO_3$ photorefr. crysts., thermally fixed holograms develop. 128585
$LiNbO_3$:Fe, PV const./photocond., Maker fringes 128510
$LiNbO_3$:Fe photorefr. cryst., thermally fixed hologram develop. 93888
$(PbI_2)_x$-$(BiI_3)_{1-x}$ solid solns., prep., dark cond./opt. energy gap, XRD/opt. transm. 114308
Si CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
Si PIN detector, fab., planar technol. *(Chinese)* 110282
μc-Si films with CaF_2 seeding layer for TFT appls., charact. 114311
Si reson. cavity enhanced photodiode fab., epitaxy-ready reflecting substrs. 104954
Si trap detectors, biased S1337 type, lin. limits 120801
μc-Si:H films, PECVD, struct./elec. props. 103069
Si:H films, hot-wire CVD, solar cell appls. 124981
a-Si:H, hot-wire CVD, saturated defect densities 68267
Si:H, microcrystalline films, PECVD, postgrowth annealing 91946
a-Si:H n-i-p solar cells, hot-wire CVD 134407
a-Si:H photocond. PECVD layers, light-doped B infl. *(Chinese)* 82301
a-Si:H pin diodes, electron irrad., dark-photoconductivities and PL *(Chinese)* 115840
a-Si:H solar cells, current instabil. after light exposure 100032
a-Si:H thin films, hollow cathode plasma-jet reactive sputtering 101181
a-Si:H thin-film UV detectors, diode struct. 86567
a-Si:H/a-SiN:H growth by PECVD for TFT appls., wide bandgap 101350
μc-Si:H,(B)(P) films, growth, optimum cryst. fractions for solar cells 134399
Si:H,B(P), films, amorph./μc, hot-wire CVD, gas phase doping 126300
Si:H,F, film, polycryst., PECVD transport props. 102973
μc-Si:H,P films, hot-wire CVD, struct./elec./opt. props. 124966
Si/CaF_2 nanocryst. MQW, vert. transport, trapping levels 126144
a-Si/Si microcryst. superlattice, isotropy/transport props. control 126138
a-Si/c-Si heterojunction solar cells, dark I-V-T meas. 91760
p-Si/n^+-ZnO/n-ZnO/Pd diode struct., forward current suppression by light 70013
Si-$Si_{1-x}Ge_x$ heterostruct., spectral & voltage charact., LPE 80786
μc-SiC:H films, VHF-PECVD, optoelectronic & structural props. 90388
a-$Si_{1-x}C_x$:H films, prep. by hot-wire CVD and props. 124970
n-SnO_2/Al_2O_3/Ru-dye/p-CuI PV cells, electron-hole recomb. 123804
TiO_2 electrodes, local cond., AFM 103061
TiO_2, porous, transient dark/photocurrents, neg. capacitance effect 91683
$ZnGa_2O_4$:Li epilayers, enhanced UV photocond. 126092

dark space *see discharges (electric)*

Darlington transistors *see bipolar transistors*

Darrieus turbines *see wind turbines*

DASD *see magnetic disc storage*

data abstraction *see data structures*

data access *see information retrieval*

data acquisition
see also CAMAC; data handling; indicators; recorders; SCADA systems
2.488 Gbit/s opt. link for fast and reliable data readout and acquisition 96882
2-D/3-D whole-body PET scanning, true continuous bed motion 132945
2D smart detector array opt. coherence topography 73146
2D SPECT with 180° DAQ, image reconstruction, line-integral model 132897
3D shape inform., opt. methods, hybrid methodology, overview 132168
8 mm data cartridge 2D DAQ apparatus for 4π β-γ coincidence meas. 97974
11 kV paper-insulated cable condition monitoring using SOFMs 123018

data acquisition continued
16 bit snow DAQ syst. interfaced with lap top PC, design 76841
accelerometers for DAQ systs., charact., limitations 120719
ACIGA second-generation laser interferometry for grav. wave detectors 128506
adaptive US imaging using SONOLINE Elegra 110767
ADC, 10-bit, in 0.25-μm CMOS, design and test results 132451
ADC sinewave histogram testing, quasi-coherent sampling 120702
ADC testing, std. framework for IEEE-STD-1241 in MATLAB 114832
ADCs, synchronised clocks, DAQ syst. and sig. sources 80014
advanced detectors, conf., La Biodola, Elba, Italy, May 2000 67400
air quality impact studies, baseline data collection 99005
airborne mapping, GPS/INS/CCD syst., hardware-software integrat. 122623
airborne UV photon-counting radiometer with metal anode 86646
aircraft inspection, NDE sens. integrat., scanning/positioning modules 122497
ALICE DAQ syst., status/prospects 131831
ANA, Internet calib. direct to national meas. stds. 109415
analog DAQ boards with onboard proc. for PC-based tasks 120670
analog sig. meas., automatic multichannel device 86424
ANTARES offshore DAQ, distributed COTS-based syst. 120676
ASTER target obs. scenario 109475
ATLAS calorimeter, high-speed digital opt. data link, SEU 98061
ATLAS high level triggers, read-out buffer prototype 121745
ATLAS high-level triggers, ATM studies 132463
ATLAS high-level triggers, readout buffer prototype 132459
ATLAS liq. argon calorimeter, readout drivers, PU design 76105
ATLAS pixel detector, flexible ccts. 97962
automated DAQ syst. for technol. proc. monitoring, MS Excel *(Czech)* 109452
automotive electronic control modules, simul./design validation 113118
automotive hybrid IC proc. error reduction, microcontroller implement. 125918
BABAR detector level 1 calorimeter trigger design and perform. 110407
BaBar Silicon Vertex Tracker, double-sided strip detectors, review 76055
batt. mgt. systs. for increasing batt. life time 112801
beam profile monitoring syst., multivideo source image proc. 87115
Belle DAQ syst. switchless event building farm design anal. 120673
biological sigs., long-term DAQ, storage and presentation, Microsoft Windows appl. 110527
biomedical MRI, DAQ, EPI 110879
Borexino read out electronics, trigger syst., detector photomultipliers 76142
brain, single-voxel PMR spectra 87610
breast imaging, 1.75-D 1280-channel US syst. design 110703
building thermal load prediction, automated proc. using recurrent neural net 124111
cardiac MRI, left ventricular dimens. meas., real-time acquisition 132657
cardiac phantom, left ventricular vol., quantitat. gated SPECT *(Japanese)* 132954
catadioptric stereo using planar mirrors 129645
cct. noise reduction by analogue lowpass filtering and data averaging 120699
CDF online silicon vertex tracker, error handling 132458
CDF upgrade, high-speed front end data proc. for shower max. detector 121744
CERN COMPASS particle detector design anal. 132437
CERN L3 magnet spectrometer design for CR muon detect. expts. 132424
CHORUS emulsion expt., CERN, data handling 87251
CLEO-III trigger, level 1 decision and gating 121733
CLEO-III trigger design anal. 121741
clinical thermoluminesc. dosimetry, mgt. syst. 111209
CMS detector high-level triggering design 87253
CMS EM calorimeter, light-to-light readout syst. 121629
CMS event builder demonstrator, Myrinet results 131832
CMS RPC-based muon trigger syst., complete sim. study 76106
commun. satellite reception conditions, Poland 85923
component testing, fast real-time syst. *(German)* 120641
conf., SR instr., Berlin, Germany (Aug. 2000) 113247
DØ expt., impact param. trigger 110410
Data Organizer high traffic node for tracking detector data 121748
Data Organizer high traffic node for tracking detector data 132462
DC resist. imaging techs. 122546
Delaunay surface reconstruction from scatt. points 90190
DESY III beam-orbit meas. syst., review 87137
digital mammography X-ray imaging detectors design/appls. 132806
digital meas. systs. and distributed virtual instrumentation *(Italian)* 97162
discrim. based monitor for radioact. gases and vaps. 132288
discrim. interceptor technol. prog., pass. sens. subsyst. 133408
distributed intell. hierarchical syst., heat metering and control 122825
Doppler angle estim., autoregressive spectrum model 110739
dual-ADC front end, built-in calib., DAQ appls. 114844
Dubna gas filled recoil separator, DAQ syst. 120678
dyn. image reconstr. for proc. CT, pseudo Kalman filter algm. 106710
dynamic testing/analyzing syst., virtual instrumentation *(Chinese)* 75372
Earth orbiting SAR mission planning, conflict resoln. 111316
earthquake, city lifeline, wireless DAQ syst. 75384
ECG data transm., real-time, via Internet for non-clinical appls. 111294
ECG sigs. acquisition and tele-transm. via mobile phone 110512
eddy current probe improvement, DSP algms., autom. meas. syst. 114506
EEG/VEPs, acquisition, proc., knowledge-based diagnostics tools 121957
elec. defibrillation, sig. anal. systs. for optimal timing 110652
elec. impedance tomography, Matlab based data proc. & anal. syst. 98204
elec. impedance tomography DAQ, DSP based master-slave syst. *(Chinese)* 132585
elec. locomotive on-board energy meas. *(German)* 78261
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
electroheating devices simul. using computer lab. stand *(Polish)* 124094
embedded controller software and algm. develop. tool 120658
EMF stds. comparison, virtual instrum. based syst. 120646
EMI filter design, LabVIEW computerized syst. 128804
Endicott mfg. lines, unified syst. for mfg. proc. control and data collect 113806
EPICS role in DAQ and beamline control 109456
epileptic seizure detect. syst. using multiple single neuron recordings 110588
EUV detector radiometry beamline, SURF III, photodiode test appl. 109580
evoked pot. DAQ, PC controlled const. current stimulator 98201
FACTS PC-DSP-based unified control syst. design 111855
fast electrophysiological events, adaptive temporal recording, DAQ card 76
fault diagnosis in rotary mach., virtual environ. 86429
FEL beams, distributed real time control 108298
flood control/water mgt. radio DAQ syst. 120671
fMRI, real-time multiple lin. regression, time-aware acquisition/proc. 122100
foot monitoring, in-shoe multisensory DAQ syst. 87344
FPIX1, pixel-readout-chip for BTeV expt., software 87259
free-form surface, adaptive DAQ and modelling, struct.-light vision sens. a 86651

acquisition continued
free-running sampling, pulse recording 121634
Frejus WIMP scintillator detector, design anal. 121428
FT profilometry review, deformed grating images 86970
functional MRI, image distortion correction by multimodal non-rigid warping 87589
global GIS, case study 86426
gradient-echo coronary MR angiography, 3D spiral vs. Cartesian 132774
GREAT spectrometer, triggerless total data readout method 110412
GREAT spectrometer triggerless total data readout design anal. 121734
GSI UNILAC high current linac, beam diagnostics develop., review 87136
habitat monitoring using wireless commun. technol. *(English, Spanish)* 133367
hadron collider triggers, fast tracker proc. 110413
hadronic collider trigger fast tracker proc. design anal. 121738
HARP neutrino expt. design 97978
heavy-duty gas turbine radiation thermometry, meas. errors eval. 112318
hemiplegic patients, gait param. assess. by accelerometry 76221
HERA event indexing systs., software design, anal. 97159
HERA H1 fast track trigger electronics 76140
HERA-B database services, detector config., calib. 132432
HERA-B high-p_T trigger design anal. 121737
Hera-B triggering perform., design and experience 87252
HERMES expt., MWPC and electronics 98040
HERMES silicon strip detector, cooling, read-out electronics, SNR 76076
high field supercond. wigglers, mag. field stabilis. with DAQ controllers 121368
high resoln. animal PET, PVM, DAQ 122258
high speed DAQ syst. design/operation anal. for HyperCP expt. 120674
high-fiber-count networks, automated OTDRs, fully automated DAQ 82108
high-resoln. DAQ systs., transducer/sens. excitation and meas. techs. 75383
high-speed ADC, DSP-based tech. for coherently sampled seqs. gen. 120700
high-speed DAQ archit. 120680
hot wire inspection using eddy current tester with computer syst. 113742
HRV DAQ, anal. & demographic database, HEARVAAD program 98200
HVDC project, hybrid optic DC meas. syst. *(Chinese)* 99330
hybrid MSGC thermal neutron detector DAQ/histogram design anal. 132345
IC yield optim. for mature semicond. fabricators 104016
ICARUS liq. argon CR detector expt., review 110385
IM, speed estimators params. robustness 123426
IM broken rotor bar diagnosis using sliding DFT 123411
IM/DC drives for educational purposes 123939
induction/sync. motors, rotor steady-state heating, instrumentation, testing 134042
infusion devices, computerised DAQ syst., clinical support/risk mgt. 87802
instrumentation amps. protection 79573
InterDAQ data logging Internet appliance, power meas. tech. 112198
internal friction meas., high speed ADC DAQ, low phase delay *(Chinese)* 75385
IRMA tunable IR multicomponent DAQ syst. for plasma diagnostics 109455
isolation techs. for high-resoln. DAQ 86430
JT-60U D plasma diagnostics, neutron detector comparison anal. 121751
KLOE, DAQ syst. archit., mega-vol. data handling 87238
KLOE DAQ/trigger syst. design anal. 132449
KLOE distrib. event building syst., proc./data flow control 131833
KLOE trigger syst., EM calorimeter, custom electronics, efficient online monitoring 76141
landmine detect. by pulse inductive eddy current meas., high sensitivity 129987
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
large struct. integrity monitoring, embedded US sens., rem. DAQ 114527
large vol. superheated droplet detector, control and DAQ syst. 121750
LEDA beam diagnostics instrumentation, beam current anal. 87096
LEDA beam diagnostics instrumentation, beam posn. monitors 87104
LEDA BPM analog front-end electronics, design 87132
LEDA ionisation chamber beam loss monitors, review 87133
LEPS expt., DAQ syst. 120675
LF mag. flux dens. meas., sens. network design & control 131878
LHC ALICE detector design for HI phys. expts. 132357
LHC CMS microstrip silicon tracker, readout/control syst. 76104
LHC data transm., G-link, gigabit Ethernet compliant serializer 121704
LHC silicon fast frontend electronics, output shape/amplit. 76144
LHCb DAQ syst., event building in IN interface card 132464
LHCb vertex detector electronics, sync., timing 76139
LISA grav. wave detector phase meas. expt. design 131917
list-mode time stamping DAQ module prototype for coincidence meas. 110954
long-term potentiation/synaptic events anal., LTP DAQ program 121949
low-cost intell. portable MCA design anal. 121742
low-noise image acquisition via piecewise-lin. bounded-SNR imaging 86616
low-power 10 bit ADC, 0.25 μm CMOS, design/test results 121706
lower limb prosthesis, portable meas. of press., temps. and humidity 133049
LV segmentation/VRML visualization in echocardiographic images 76370
LXeGRIT, upgraded DAQ syst. 132461
LXeGRIT gamma ray imaging telescope, DAQ upgrade 121862
machine vision-based inspection systs., fund. 89900
mag. sens. noise meas., DAQ syst. 127402
MAGIC air Cherenkov telescope, image camera 132489
meas. systs. with combined analogue input/output facilities for practical education 75373
med. comprehensive anal. syst., sig./inform. proc. 76203
med. distributed DAQ syst., coding and transm. 111295
megasamples/sec region computer-aided data collection, plug-in cards, built-in web servers *(German)* 131835
meteorological radar, digital sig./image proc. 106834
microwave film bulk acoustic resonators, modified Butterworth-Van Dyke cct. 104456
mobile robots, teleoperations/rem. sens. DAQ *(German)* 120669
monopulse Doppler radar syst., high-speed DAQ/DSP 75188
MR diffusion tensor acquisition strategies optimisation, diffusion anisotropy meas. 87649
MRI, accelerated image acquisition, lin. prior-inform. 132760
MRI, fast T_1 mapping with vol. coverage 98438
MRI, radial k-space acquisitions, 2-step navigatorless correction algm. 122108
MRI, sensitivity-encoded spectrosc. imaging 132768
MRI planar strip array antenna, DAQ, parallel proces 87694
MRI spiral imaging, efficient off-reson. correction 132677
multi-jn. space power solar cells testing using balloon technols. 112963
multi-modality PET/CT scanners, modular VME or IBM PC based DAQ syst. 122259
multi-point snow temp. recording syst. 111464
multichannel measuring transducer *(Russian)* 75382
multichannel parallel sampling syst., timing skew calib. technol. *(Chinese)* 120698
multicomponent georadar data, DAQ and proc. 120441

data acquisition continued
multidetector arrays, DAQ, electronics, review 110308
multidetector arrays, DAQ, review 109454
multidetector compact DAQ syst. time encoding anal. 120677
multielectrode inductance flowmeter, mean flow vel. estim. 110062
MUROS-1 med. imaging pixel detector read-out syst. design anal. 122155
MX beamline control syst. toolkit 110468
myocardium, Gd-DTPA bolus tracking, T_1 fast acquisition relax. mapping 132696
NA48 expt. online PC farm, DAQ syst., switched fast ethernet network 76143
Network Characterization Service (NCS) 119481
neuronal recording multisite microelectrodes design, DAQ syst. 121953
NMR sigs. acquisition, undersampling tech. pot. use 132658
non-metallic media, flaws/defects detect., PC based non-destructive microwave imaging syst. 97144
nuc. sci., conf., Lyon, France, (Oct. 2000) 113217
oceanographic research vessel, low cost modular instrum. syst. 111441
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
OO substation automation design, safety, IT based intell. syst. *(Chinese)* 89008
open-loop motor speed control using LabView software 88761
OPERA atmos. neutrino long baseline expt., review 110300
orb. pattern, quantitat. imaging, electron momentum spectrom. *(Japanese)* 110420
palmar skin, impedance locus meas., computer-controlled syst. 121951
particle accel., beam posn. monitors, sig. proc. 87082
particle detectors, conf., Lyon, France (Oct. 2000) 100418
PC-based DAQ cards using 4-wire meas./multiquadrant operation 86428
PCB assembly proc., real-time factory data collection/Web reporting 115172
PCB reflow soldering proc. thermal profiling 102824
PD DAQ, prog. digital oscilloscope based syst. 120668
PEP II fast lumin. monitor syst., review 87072
PIBETA detector syst. for precision $\pi\beta$ meas. 121648
pneumatic conveying syst. powder flowrate meas., intell. meas. syst. 123975
pneumatic tire testing machine, DAQ, control syst. *(Spanish)* 86782
posn.-sensitive photomultiplier, pulse recording by free-running sampling 110404
posture improvement syst., low power accelerometer use 132996
power apparatus, testing, maint. diagnostics 133912
power plant continuous emission monitoring syst. *(Chinese)* 77678
power syst. integrated telemetry proc. approach 99440
power syst. planning, protection settings DAQ, data model 77571
pre-college enrichment program in engng., use of meas. and sens. 113375
preemptive scheduling, real-time syst. for following up of rolling mill *(French)* 86427
prog. sig.-proc. electronics, PET/SPECT/CT scanners appl. 120672
proton beam micromachining, LabVIEW scanning and control syst. 127110
proton inelastic scatt. at 0°, polariz. transfer expt. instrumentation 110190
PSI Injector 2 cyclotron, proton beam dump, surveillance protect. 87129
PTMSTD-III DAQ/analyser, DSP syst. design 68821
pulmonary gas meas., portable syst., fast lung fn. test 110522
pulmonary ventilator lin. drift eval., stat. test reliab. 98129
PV modules tilted plane reflector studies 77796
PV pumping systs., test facility/charact. meas. perform. eval. 99595
radiotherapy, virtual wedge, dosimetry/commissioning using film 111200
rangefinder/digital camera syst., real-world scene reconstruction 120900
real-time LAN codesign, stat. model and realization of access unit 85193
real-time water quality monitoring across Internet, virtual instrum. 99029
real-world scenes capturing/proc./rendering syst. 97164
rem. sens. ground stations, DAQ & archiving syst., real-time proc. 122554
reverse engng., data reduction methods from laser scanning 67516
ring Compton camera DAQ syst. design anal. 121743
road EV, advanced diagnostic syst. 89392
rocket engine test facility, DAQ & health monitoring syst. 111319
roughness stds., Australian surface roughness meas. syst. develop. 120617
sampling oscilloscope card and spectrosc. ADCs integrat. in DAQ syst. 98082
sampling rate improvement, time-interleaved data converter 131847
scintillation photomultiplier detectors, flexible DAQ board 120679
scoliosis treatment, low power wireless load monitoring syst. 111067
SCUBA dive monitor 75386
seismic sig. proc., DAQ syst. 86425
sens. agents, human behavior emulation 120667
seq. cone-beam tomography, fast/efficient method 132796
SEU phenom., transient IBIC & LBIC, data collection syst. & chamber 126606
SHENGUANG II syst., half-wave plate computer automatic controlling syst. *(Chinese)* 128371
side scan sonar and interferometric noise 76923
silicone rubber outdoor insulators, degrad., leakage current monitoring *(Korean)* 123037
single phase IM drive design and computer based fault detect. 100262
six-channel high speed radar DAQ syst., design & implement. *(Chinese)* 131834
small animal PET, prototype develop. 132991
small power engines testing, AC dynamometer syst. *(Chinese)* 75364
SMT assembly proc. enhancement using prod. defect data 115173
SMT electronics assembly, SPC/data collection, determ./implement. 115170
SNS beam loss monitor syst., design 87112
solar panels, state-of-the-art, characterisation, large area testing 112961
solid state strip detectors, transient recorder cct. for subnanosecond sigs. 76107
SPECT, AB-EMML algm., low-stats. reconstruction 132882
SPECT data iter. reconstruction using JavaSpaces 132883
spectral chem. sens., systematic profile/feature-based intell. 109737
SRRC, long. feedback syst. 87050
stand alone PV systs., fuzzy logic controller 112401
strongly nonlin. systs., Kalman filtering theory, oceanographic appls. 133340
stylus profilometry, spiral sampling for fast DAQ 121193
supercond. integrated receiver, test and control, DAQ syst. 71166
sync. machines reactances determ. from DC decay 123392
syst. accuracy description, param. minimization 109458
syst. sens. noise reduction method 131830
temp. distrib. visualiz., acoustic computerized tomography 121252
Tornado 2HD modular nonvolatile solid-state data recorder design 97161
total liq. ventilation, press.-limited respirator/lung mech. syst. 122283
travelling std. for calib. 131829
ultrasound image synthetic aperture techs., motion compensation 110804
ultrasound/MRI 3D registration & fusion, major vessels as fiducial markers 76339
UNICAT control syst. at APS 109457
vascular morph., quantitat. anal., 3D MR angiograms 122111
VIRGO grav. wave expt., astron. interferometer, review 97163
virtual ECG acquisition and class. syst. 110513

data acquisition continued
virtual instrum. for displacement meas. with resistive transducers 120647
VXIbus based four-channel gated integrator syst. *(Chinese)* 120657
WASA detector fast prog. trigger syst. design anal. 121740
Web-based acquisition, storage & retrieval of biomed. sigs. 88024
wireless DAQ, comparison of systs. 109453
CO meas. syst., neural net appl. 109439
CdTe detector, coincidence DAQ, detect. efficiency 121618
CdTe/CdZnTe spectrometers, interact. depth 121772
CdZnTe detectors, posn. sensitive, prototype Compton scatt. camera 121474
CsI, HADES RICH detector for lepton ident. expts. 132328
CsI(Tl) cryst., intrinsic radioact. background, (α,γ) discrim. *(Chinese)* 110297
CsI(Tl) detector for low energy neutrino phys., electronics and DAQ systs. 98044
He thick target, d irrad., fast neutron yield meas. 110220
NH_3 trace gas sens. by near-IR diode-laser-based overtone spectrosc. 121261
NaI(Tl), plane cryst. posn. sensitive photomultiplier tube, DAQ syst. *(Chinese)* 76026
Si microstrip sens., 2D, radiographic imaging syst. 122127
Si, vertex tracking detector design for top quark discovery expts. 132326
SiGe layer cluster tool, spectrosc. ellipsometry, integrated metrology 104038
SnO_2 toxic gas sens.-based autonomous real time air pollution monitoring syst. 133360
Zn-air batt. fuelled EV demons. program, Israel 124009

data analysis
see also data reduction
3D shape inform., opt. methods, hybrid methodology, overview 132168
3D target localization from seismic and acoustic signatures 73736
accelerated life test data modeling/anal. for multiple type stress 124311
ambulatory physiological monitor for animal welfare studies 121968
amyotrophic lateral sclerosis, multislice ^{1}H MR spectrosc. imaging 132675
automotive test data mgt. 100272
bathymetric mapping, SPOT satellite data anal. 99024
binary regression, data-set overlap meas. 113882
breast MRI, computer-based anal. of enhancement curves 98422
cardiac PET, time-activity data, wavelet transforms anal. 76568
chem. engng., fault diagnosis of multivariate systs. 107411
CHIMERA 4π multidetector array, data class. 121578
clinical mag. reson. spectrosc., freq. domain methods, review 98449
conf., Bayesian inference/max. entropy methods, Gif-sur-Yvette, France (Jul. 2000) 100410
cylinder press. peak posn. in internal combust. engine, indirect meas. 121180
dielec. track detectors, automatic image anal. syst. 121673
EEG anal., chaotic tech. appl. 87430
elec. market data representation via fuzzy regression models 133515
event data, scalable visualization 96172
factorial k-means anal. for two-way data 113881
fix-time censored test, Weibull distrib., simultaneous confidence region *(Chinese)* 78583
fMRI data anal., comparison of temporal and spatial ICA 122082
fMRI data anal. method using fast infomax-based ICA algm. 132705
functional MRI, independent component-cross correl.-seq. epoch anal. 110906
functional MRI data anal., inform. theoretic approach incorporating spatial priors 87579
functional MRI params., confidence intervals, jackknife resampling techs. 76419
fuzzy clustering based on cooccurrence matrix, data retrieval appl. 118439
gamut-mapping expt., ranked data anal. 73154
gastrointestinal sounds, multi-resoln. anal. 110499
high energy phys., conf., Tampere, Finland, July 1999 78390
hyperspectral data anal., mitigation of atmos. effects 76863
IC yield optim. for mature semicond. fabricators 104016
ICA, factor anal. preprocessing 110674
in-situ plasma etch proc. endpoint control in IC mfg. 103376
Infrared Space Observatory, ISOCAM faint obj. detect. 120928
Infrared Space Observatory, ISOCAM SW transient effects 120932
Infrared Space Observatory, ISOPHOT, deglitching methods 120930
Infrared Space Observatory, ISOPHOT transient effects 120931
interval estim. of ED_{50}, logistic dose-response curve is incorrectly assumed 78829
land mines detect., low-metallic-content, EMI data anal. 73121
meas. DP, quantum logic ccts. 86454
MEMS motion meas., computer microvision, opt. microscope, CCD camera, stroboscopic illum. 109663
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
mid/upper stratos., temp. meas., Rayleigh scatt. lidar *(Chinese)* 76881
min. message length grouping of ordered data 72711
mixed-sig. cct., syst. level testing of analog fns. 68955
power syst. control and mgt., intell. syst. appls. 77206
PTCR resist.-temp. curve, DP program *(Chinese)* 121146
RECCE mission planning 99174
reconciliation with gross errors, redundancy anal. 109395
sea ice monitoring, data assimilation-combination 111439
self-exciting point procs. using EM algm., param. estim. 86453
software tool for seismic data recorder/analyser 76842
spectral chem. sens., systematic profile/feature-based intell. 109737
surveillance, eval. of video segmentation methods 118348
terrain mapping, slope-aspect, interpolated data 122606
US NDE, data anal. using SVD of Hankel data matrix 125160
VIS-SWIR hyperspectral data anal., atmos. correction algms. 98974
wafer sort yield, robust windowing method for Poisson yield model, appl./validation 103954
workplace training program, organisational context, ATC appl. 124282
Si polycrystalline MEMS devices, W coating, crit. features testing, tension strength, fracture 104158
TiO_2-based gas microsensors for high temp. appls. 132031

data communication
see also data communication equipment; integrated voice/data communication; radio data systems
1.2 Mbit/s transceiver, improved BPSK demodulator 125266
3 Gb/s data transm. with GaAs VCSELs over PCB integrated polymer waveguides 104724
3G downlink supporting variable rate services, interf. cancellation 119988
3GPP syst., CPCH mechanisms, perform. anal. 74642
51.84 Mbit/s airborne wireless expts., HALO commun. technol. 74562
60 GHz MM waves for ITS inter-vehicle commun., propag. charact. 120058
160-Gb/s free-space transm. link 86109
ABR adaptive congestion control with act. buffer control 95766
ABR explicit-rate traffic flow control 119146

data communication continued
acoustic-based underwater commun., MAC protocol design 131623
act. networks mgt. in telecom environ. 108046
ad hoc networking, wireless network interface energy consumption 119374
ad hoc networks, data availability improvement by replica allocation *(Japanese)* 74369
ad hoc networks, replica allocation for improving data accessibility 120067
ad hoc networks, replica allocation methods considering periodic data update *(Japanese)* 107886
ad hoc wireless networks with adaptive multi-path routing, QoS improvement 74022
ad hoc wireless networks with pass. clustering, on-demand routing 85078
ad hoc wireless testbed for scalable adaptive QoS support 85880
adaptive FEC/ARQ for utility-based wireless fair scheduling, perform. improvement 131069
adaptive multicarrier wireless access syst. 85556
adaptive multimedia stream service with intell. proxy 96232
adaptive redundancy control, erasure-code-based real-time data transm. over Internet 108291
adaptive SS commun. over multipath dispersive channels 84900
ADSL-lite data DSP, four-port, SoC design 102211
Aeronautical Telecommunication Network, OSI archit. 122541
air traffic mgt. and weather info. dissemination, commun. syst. archit. 133264
all-IP 3rd generation networks, joint radio-IP resource reservation 85055
all-IP wireless networks, IP-based base stations/soft handoff 130410
AM band DAB, RS decoding algms. 120508
ARQ hybrid schemes, adaptive block encoding 129055
ATM, next generation, cell struct. 130230
ATM network, cell delineation protocol anal. 119355
ATM network, VLSI modular archit. for video streaming real-time proc. 106826
ATM networks, perform. of route inform.-based prioritization 95849
ATM networks, traffic shaping syst., PC interface fns. support 95757
ATM switching systs., packet discard schemes for differentiated services networks 107903
ATM wireless networks, adaptive FEC scheme for data traffic 117952
ATM wireless networks, DLC strategies with flexible error control 107838
ATM wireless networks, efficient QoS guaranteed MAC protocol 107809
ATV broadcasting in digital broadband distrib. environ. 109353
automatic generation of parallel CRC ccts. 101904
automatically switched transport networks, generalized MPLS-based distributed control 107915
automotive audio/video, telematics data bus technol., politics, stds. 123954
AWGN random phase channel, importance sampling 73756
AX.25 amat. packet radio as med. emergency network 111261
BC Hydro power syst. data commun. archit. 77279
Berlin City Ring, future metropolitan networks testbed 109139
best-effort networks, modeling/perform. anal. via large networks asymptotics 119421
block data transfer, improvement by adaptive protocol relay capability *(Japanese)* 119370
Bluetooth camera to Internet link, connectivity soln. 119582
Bluetooth equipped gadgets, usage patterns *(German)* 130844
Bluetooth wireless ad-hoc network form./scheduling algms. perform. 131224
Bluetooth/proposed evol. technols., consumer electronics appl./coverage constraints 119965
BPSK-based WCDMA using RAKE receivers with channel estim., downlink perform. 131240
broadband data delivery over TV networks 97105
broadband hybrid fiber radio systs., opt. techs. for beamforming and MM-wave gen. 131347
broadband satellite commun. network, perform. of on-board ATM switching scheme 107890
broadband wireless data commun., space-time open archits. 74531
Broadcast Satellite digital data broadcast service, BML authoring syst. 120083
broadcasting solns. for broadcasters 109351
buffered networks, tight bounds for tail of packet waiting time distrib. 130311
building-scatt. LMCS data transms., error rate reduction 96410
call admission control for multi-rate traffic based on total received power 74641
CATV, data services 86330
CDMA cellular syst., data traffic, truncated channel inversion based uplink power control 96507
CDMA cellular systs. with adaptive antennas, data access control 108883
CDMA channel with two-level total sig. quantization, coded orthogonal sigs reception, noise immunity 119203
CDMA data networks, downlink scheduling 73995
CDMA data users under delay/error constraints, forward link hierarchical SIR/rate control 131150
CDMA fiber-optic receiver struct., perform. anal. 74954
CDMA forward link, high data-rate service support, capacity eval. 74663
CDMA spatio-temporal receiver struct. for multi-rate appls. 119991
CDMA technol., conf., Seoul, South Korea (1999) 67372
CDPD, cellular digital packet data, perform. with timed hop and forced hop 74710
cellular data services with differentiated QoS, fair resource sharing scheme 74685
cellular data services with QoS provisioning, fair resource sharing scheduling 96492
cellular network mgt. goals, data-centric solns. 130548
cellular radio data syst., Aloha channel perform. 85622
channel capacity region per unit cost, radio resources pricing for utility maximization 128950
channel estim. and equalization with block interleavers 84868
channel protection using adaptive multi-mode error-correction coding 96562
chaotic-carrier data commun. at microwave freqs., plain scheme 85569
ChinaGBN integrated NMS, design and implement. 96038
coded OFDM/BFDM systs., predictive equalization of time-varying channels 74697
COFDM systs., near optimal joint channel estim. and data detect. 74698
collision avoidance FH in fixed wireless network with star topol. 96355
collision-free topol.-depend. channel access scheduling 107844
combined method of FM taking into account mutual delay in channel control 117906
community telemedicine services, model develop. 133184
compact mobile commun. antennas 83601
computed tomography exams. in filmless imaging department, transm. failure rate 98846
computer network anal. using event model *(Polish)* 130653
computer networks, open approach for deployment of prog. nodes 130418
concurrency control for syst. with data broadcast 130822

a communication continued
Confused Document Encrypting Scheme modified for digital inform. hiding 118017
consumer electronics, computing/commun./e-commerce convergence 85650
core networks, opt. and data layer convergence 109099
correl. Rayleigh fading channel, coded modulations compared 83817
Croatian ATM based public multiservice network 108003
cryptographic protocol, data commun. *(Chinese)* 84969
CSC2000 substation automation system, bus-bar differential protection, distributed control unit, clock sync. *(Chinese)* 99857
Data Vortex photonic packet switch archit., internal low latency interconnection network 96167
DB Regio trains, syst. diagnosis, data transm., GSM-module *(German)* 100271
de brain seq. based codes, fast decoding 83872
DECT air interface, TCP/IP data transfer with multibearer capability and asymmetric flows 73922
design practices and theories for data commun. networks 130494
digital pair line transm. syst. *(Japanese)* 85451
digital watermarking, inform. retrieval 106922
digitized power supply data, isolated serial link, microcontrollers, USART 88884
dispersed generation units connection to EDF's rem. control syst. *(English, French)* 133825
distrib. automation, commun. archit. 133608
distrib. automation syst., CDPD mobile wireless data commun. *(Chinese)* 112045
distributed media server mgt. 120563
distributed substation automation syst., serial commun. delay compensation *(Chinese)* 112714
disturbance anal. in TNB transm. syst. 77298
disturbance recorders, near real time inform. support, power syst. control 77209
DoCoMo's music distrib. service 120052
DOCSIS, enhanced services provision 75306
driver IS using DSRC *(Japanese)* 124027
DS SS sig. acquisition in freq.-selective Rayleigh and Rician channels 85756
DS-CDMA data bit rate improvement, bal. tree reconstruction method 107742
DS-CDMA mobile radio with multimedia services, downlink beamforming and data rate allocation 108713
DS-CDMA mobile stations, joint blind rate detect. and data decoding 85779
DS-CDMA multicarrier wavelet based syst., multistage interf. cancellation, perform. enhancement 105818
DS-CDMA networks, near-far resistant receiver for packet data transms. 74657
DS/CDMA forward link based on resource sharing algm., joint Erlang capacity 85660
DS/CDMA syst. with mixed multirate sources, forward-link capacity 96505
DS/CDMA wireless networks, group-based common-receiver code protocol 130363
DS/SSMA unslotted ALOHA syst. with variable length data traffic, perform. anal. 131242
DSL, problems restricting, public acceptance 74470
dual WLAN archit. based control syst., bandwidth allocation scheme 130825
dual-use standardized FQPSK, compatibility with data links and WCDMA 74709
DVB project, data broadcasting software *(German)* 97053
DWDM based broadband integrated services network archit. 120266
DWDM syst. wavelength stabilization tech. using dithering-induced AM cancellation 75056
dyn. group commun. security 130383
dyn. rate control algms. for HDR throughput optim. 119900
EBU project group P/META work on metadata exchange stds. 74081
electric power data transm., TCM modulation, QAM modulation, diffuse convolution coding *(Chinese)* 74072
end-to-end network path props. estim. *(English, Spanish)* 130415
energy efficient data commun. over fading channels 85540
enterprise IS, Internet technols. for data access 85268
Ethernet networks in substations 78095
EW equipt. simul. test syst. *(Chinese)* 111638
factory automation, multimedia appls., image/video coding 130936
fading channel with adaptive feedback equalization, variable rate data transm. 107709
fast data transm. ISI removal, adaptive digital filter 130257
fault tolerant WDM datacomm./telecomm. network designs 96112
FDD wireless access syst., ad-hoc commun. 108412
FEC/automatic retransmission requests for reliable multicast transm. 130354
FHMA turbo-coded commun., iter. multiuser detect. 107614
fiber-wireless/wireline access networks, baseband/RF opt. modulation 130995
FIR DFE for wireless data commun., fast optim. 73841
FIR filter bank transceivers with effective band separation 130055
FITCE 2001 telecomms. conf., Barcelona, Spain (Aug. 2001) 124214
fixed mobile Internet convergence 85184
flexible radio network, perform. eval. of wireless ad hoc network 85005
Foundation Fieldbus, time-crit. data transm. 131827
Foundation fieldbus data commun. timing constraints validation 119661
fragmented tactical network, optimum speed of NAD scheduler 111574
frame-based bandwidth allocation, simple shaping scheme 73798
free space opt. technol./distrib. archit. for broadband metro/local services 86115
full-duplex opt. commun., vibr. test data transm. 96684
full-scale multi-hop wireless ad hoc network testbed, quantitat. results 85541
future mobile network, tech. overview and data link control scheme 85700
future mobile radio systs., turbo-coded modulation *(English)* 74722
G/D/1/B queueing model with self-similar input traffic, perform. 84925
Gbit/s data transm., dispersion-managed solitons 131360
general mesh opt. networks, scalable distributed restoration 109118
GEO satellite multimedia syst., architectural solns. 109005
GERAN, GSM/EDGE Radio Access Network, syst. overview/perform. eval. 96413
Global Broadcast Service end-to-end services, protocols/encapsulation 111562
global satellite commun., multimedia and stored/forward data relay *(Japanese)* 96622
Global Wireless Internet, third-generation networks, pers. digital assistants 108368
Globalstar, applying IMT-2000 features 85929
GMSK sig. detect., limiter-discriminator and envelope-aided DFE 73824
go-back-N ARQ scheme over multiple parallel channels, delay perform. 85043
GPRS, channel allocation 74728
GPRS and TETRA PMR networks, NAI resoln. mechanism 85776
GPRS wireless WAN, TCP perform., effect of delays 107949
GPS based current differential protection, SDH ring commun. networks 99400
GPSR, greedy perimeter stateless routing for wireless networks 73997
GRIN polymer opt. fiber, highest data transm. worldwide *(Japanese)* 116616

data communication continued
GSM, uninterrupted data transm., health services appl. 108955
GSM cellular systs., high service grade DECT micro/pico cell clusters deployment 96436
GSM fast fading channels, blind/nonblind turbo estim. 108937
HALO stratos. aircraft for high-speed Internet access 85632
handover algm., optim. based on posn. of mobile terminals 85849
Heilongjiang power syst., east part area stabil. control syst. *(Chinese)* 111917
heterog. networks mgt. across security/coalition domains 108041
HF commun., mil. requirements for increased data rates 111607
HF commun. using spatial diversity/high data rate waveforms 108583
HFC CATV networks, upgrading for broadband interactive services 97066
high speed serial transceivers for data commun. systs. 96711
high speed wireless data access using antenna arrays 119920
high-dens. data commun., opt. interconnects role 117042
high-rate differential space-code modulation for interf. suppression 83816
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
high-speed laser mode-expander optimisation, low-cost automated fibre alignment 74939
high-speed opt. transparent networks, Q factor based monitoring 131470
Home RF 96432
hop-by-hop congestion control stabil. in data networks 74023
hot-spotted network, data transfer with prefetching 108217
HSCSD and GPRS, review of new mobile terminals *(German)* 96308
HSLAN, optoelectronics appls. & opportunities 96769
hybrid network mgt. 74093
hybrid-ARQ protocols for Gaussian collision channel, throughput 85038
IEC/IEEE train commun. network 74076
IEEE 1394 wireless home network using MM-wave technols. 108411
IEEE 802.11 ad hoc WLAN, distributed bandwidth allocation/sharing/extension protocol for multimedia 119375
IEEE 802.11 WLAN, cell planning 108207
IEEE 802.11 WLAN, distributed mechanism for power saving 107938
IEEE 802.11 WLANs perform. in Bluetooth environ. 85271
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IMT-2000, channelization code assignment scheme 85778
IMT-2000 infrastructure for mobile commun., future evol. *(Japanese)* 119996
IN SCP services platform, migration to IP-based appls. platform 130929
Indonesia, field expt. in fixed wireless CDMA IS-95 74598
indoor precoded packet wireless systs., fast code rate adaptation 96445
indust. ATM networks, point-to-multipoint ABR service, consolidation algm. 130546
indust. meas. syst. using opt.-microwave transm. syst. with SCM 75393
INFINIBAND parallel opt. data link, prog. network interface 85209
infostations wireless data network archit., multiple access issue 96471
integrated push-pull method *(Japanese)* 120505
intell. packet networks, bandwidth on demand 74104
Internet, multiresolution-multicast video distrib. 95122
Internet, perform. eval. of data transfer on multiple routes *(Japanese)* 74368
Internet, shared memory switching and virtual output queuing, robust and scalable switch 108265
Internet dial-up sessions, data transfer stats. 130799
Internet middleware technol. *(Japanese)* 119624
Internet periodic broadcast of dyn. data, time division is better than freq. division 130827
Internet protocols in space, link and routing issues 120092
Internet traffic, multifractal/self-similar nature 119572
Internet use in space, transport protocols and appls. 120091
Internet-type protocol testing in simulated small satellite environ. 119357
intrusion-resistant ad hoc routing algms., techs. 107965
IP+ATM switch router archit. for best-effort/guaranteed services, design 130501
IP mobility mgt. for airborne commun. node platform 108042
IP multicast service behaviour over next-generation satellite-terrestrial hybrid networks 130394
IP networks, bandwidth/latency monitoring 119681
IP opt. transm. *(Polish)* 120239
IP over WDM archit., joint operation under dyn. data traffic 95953
IP packet/WDM networks, joint operation 96739
IP transm. network technols., anal. 96012
IP unicast/multicast error perform. over ATM satellite link 107871
IP wide area cellular networks, proxy services incorporation 85732
IP wireless networks, centralized TDMA-based scheme for fair bandwidth allocation 130300
IP-over-ATM frame reassembly, hardware/software tradeoffs in integrated archit. 74262
IPv6 for future wireless networks 84992
IR wireless indoor commun., combating multi-path distortion 85178
IS-2000 CDMA networks, fast forward link power control perform. 85797
ISI corrupted baseband transm. systs., BER estim. formulae 96010
ISI-free FIR filterbank transceivers for freq.-selective channels 130121
IT, global, satellite roles, trends/implications 85919
IT and MIS 108020
IT security services, decomp./reconstruction *(Chinese)* 96014
iter. equalization and decoding, hybrid equalization strategies 129216
IVHS packet-switched cellular single channel radio archit. 108952
Japan, survey of satellite-based cooperative telemedical projects involving developing nations 111263
Joint Tactical Radio System 111576
Ka-band broadband aeronautical satellite commun. expts. 108989
label switching networks, cache replacement schemes 119133
large-size images, transm. via Internet, Macintosh-based software syst. 95020
LEO MSS, capacity occupation strategy for data/telephone traffic 131303
LEO satellite constellation, up/down link connection admission control/resources allocation 131316
LEO satellite network, node mobility using Mobile IPv6 130371
LEO satellite systs. for mobile data networking, technol. and economics 74867
LINUX TCP/IP protocol stack, anal./eval. 95897
littoral environ., groundwave propag. predictions (GRAPPLE) 83314
LMDS/MMDS for datacasting 119927
LOADNET project, migration of digital avionics data buses to low cost opt. data networks 133223
LOS bandlimited channel, efficient error free data transm. 111583
LV power line, high-speed data commun. using OFDM *(Chinese)* 119857
M/G/1 state-depend. type queueing anal. for congestion control 130315
MAC protocol for WDM ring networks with dyn. ADM 130455
Mars Umbilical Technology Demonstrator, capability extension 122493
MCM systs., adaptive channel estim. algm. using cyclic prefix, convergence anal. 72730
mil. radio networks, service provision feasibility 111600

data communication continued
mil. satellite broadcast syst., multicast file transfer 111606
MIL-STD-188-220B, efficient data/voice MAC algm. 111573
MIMO channel identifiability from 2nd-order stats., matrix polynomials 84863
MIMO interf.-limited cellular syst., attainable throughput 108657
MIMO systs. using multiple spreading codes, MUX scheme 107661
MIMO-EDGE mobile radio channel meas. and exptl. implement. 108914
MMTP, multimedia MUX transport protocol *(English, Spanish)* 130417
mobile ad-hoc networks, scalable unidirectional routing with zone routing protocol extensions 85060
mobile commun., future generations using broadband access methods 85696
mobile commun. systs., develop. beyond 3G 85697
Mobile IP for 3G wireless networks 85004
mobile IP using private IP addresses 130439
mobile multimedia appls., secure commun. protocol 107863
mobile multimedia networks, data transfer control during handoff 85675
mobile multimedia services, stds. and platforms 108415
mobile packet data commun. network, requirements and implement. *(Japanese)* 96556
mobile tactical commun. systs., architectural framework 111560
mobile wireless networks, adaptive bandwidth allocation using online local estim. 74712
mobile-assisted data forwarding, ad-hoc overlay addit. on fixed cellular infrastructure 85795
Mobile-IP regional environ., multicast with reliable delivery support 130437
modem protocols for analog cellular data collection systs. 85025
Moon-to-Earth high-bandwidth opt. data link 86116
motor control systs., intell. devices/networks integrat. 133942
MPEG-2 digital TV broadcast systs., synchronized data services 86296
MPSK, coherent, multichannel reception over freq. selective fading channels, perform. eval. 106045
MRC coherent receivers in Nakagami-m fading channels, perform. anal. 85507
multi-attribute data broadcast, indexing techs. for power mgt. 86297
multibeam satellite commun., CDMA and switching 109006
multicarrier m-ary/DS-CDMA systs., perform. anal. for high-data-rate transms. 108755
multicast multimedia transm. control *(Polish)* 130942
multicast routing protocol in wireless mobile networks 130419
multicast techs./archits./algms., survey 119124
multicell wireless data network, pricing/power control 131151
multimedia network systs., consistent global checkpoints 96280
multiple description codes perform. over bit error channels 129183
multiple description coding using exact discrete Radon transform 107085
multirate DS-CDMA in fading environ. 108712
multirate multicast sessions, optim. based rate control 119114
multiscale anal. and data networks 84810
multiservice multipriority networks, traffic engng. 108289
myocardial infarction patient care, data transm. from moving ambulances 133167
Nagano 1998 Winter Olympic Games telecomm. services 85125
Nakagami fading channels, NPCSMA protocol for NCPSK/QPSK, data packet transm., perform. eval. 85515
NEC IP switch router CX5210 85200
NEC IX5010/5020 carrier class edge router, new service feature 85070
network archit. for mobile commun. systs. beyond IMT-2000 131207
network archits. evol. 108255
network assisted power control for wireless data 131171
networks convergence to multiservice systs. *(German)* 85128
next generation DWDM transport, high-speed high-capacity long-haul terrestrial networking 131545
next generation mobile commun. systs., traffic engng. 96464
next-generation mobile Internet, end-to-end QoS 85028
next-generation network archit., data transm. networks *(Polish)* 119411
NLO loop mirror DEMUX, Gordon-Haus jitter 109161
noisy channels, optimal orthogonal finite order transmitter/receiver filters design 107538
nonlin. optic and conductive polymers, thermal heating effects 93304
OFDM layered space-time coded wideband archit. for dispersive wireless links 128977
OFDM multicarrier transm., freq. offset sensitivity reduction by waveshaping 83810
OFDM sig., use of interleaving to reduce peak-to-av. power ratio 73771
OFDM sig. using partial transmit seqs. with embedded side inform., peak-to-av. power ratio reduction 72732
OFDM sigs., clipping for peak power reduction 73778
OFDM systs., freq. offset blind estim. filter 106032
OFDM-CDMA syst., anal. of parallel interf. cancellation scheme 96579
OFDM-dedicated short range commun. modem, equalization 85755
on-chip integrated Si bulk-micromachined soil moisture sens. 121299
on-demand routing protocols for wireless ad hoc networks, caching strategies 73996
opt. network mgt. 108056
opt. packet-switched ring network with flexible bandwidth allocation 120276
OTDM syst., behavior description and simul. using VHDL 96831
packet data mobilisation 96557
packet networks, delay-constrained commun., semidefinite programs for code design 106169
packet switching networks, multilayer chaotic encryption for secure commun. 107824
patient admin. master-syst./clinical subsystem data transfer realised using ProtoGen/HL7 98875
PCC-OFDM with overlapping sym. periods in multipath channel, perform. 73772
pers./inter-vehicle cordless commun. syst. for combat vehicle crewman 111564
photonic access node, opt. code-based photonic add-drop MUX 131514
physiological data, efficient transm. for rem. display, lifting scheme appl. 88010
planar microlens array parallel opt. interconnects 82188
portable wireless eqpt., batt. perform. and traffic shaping 85400
power dispatch EMS, commun. syst. Blown Scan improvement *(Chinese)* 77173
power network protection systs., commun. technol. develop. 77503
power syst. automated dispatch, telecontrol, networked commun. *(Chinese)* 88356
powerline commun. principles *(German)* 108508
PPMC model optimisation for hardware implement. 125317
PRN, quasi-sync., perform. eval. 131226
public WLAN access, fixed and cellular IP access towards broadband connectivity 108206
push-based scheduling for min. latency time 85333
QoS adaptive commun., fuzzy rels. 119764
QoS guarantees for multicast traffic in heterog. multi-service networks 107899
data communication continued
QoS of data commun. systs. 108005
QoS provision in dyn. network environ. 107860
QoS source-waiting routing in networks with advanced resource reservations 130516
QoS-constrained routing, smart forwarding tech. 74037
RAC Motoring Services, mobile data/location devel. 120048
Rayleigh fading channels, hybrid type-II ARQ with scheduling for packet data transm. *(English)* 73930
receiver-initiated collision-avoidance protocol for multi-channel networks 119301
reconnaissance image data transm., airborne network 99118
relay tele-protection sig. transm., 64 kbit/s data series connection *(Chinese)* 123044
reliable commun., continuous error detect. 119111
reliable multicast congestion control 107821
rendezvous point relocation extension to PIM-SM multicast routing 130430
RMAC, Reliable Multicast using Adaptive Caching *(Japanese)* 73991
road EV, advanced diagnostic syst. 89392
robot, analog data transm., plastic opt. fiber, bending loss compensation 131344
router archits. with input-queued cell-based switching fabrics 107982
routing protocol for progressive multicast service deployment 130390
RQDMA, MAC protocol supporting QoS in IP-based broadband WLL 95859
scalable multimedia syst. for interactive surveillance and video commun. appls. 119788
self-similar network traffic charactn. through lin. scale-invariant syst. models 84809
semicond. laser, mode locked, hybrid WDM-OTDM technol. 109159
sens. networks, scalable and robust commun. using directed diffusion 75504
services opt. network archit. 120207
shortest-path data networks, optimal routing 108288
SITLink, secure and confidential commun. on leased lines 85458
smart free-space opt. interconnects, commun. links 131550
smart-antenna space-time UMTS uplink proc. for syst. capacity enhancement 108843
soft computing, advanced video/image proc. and commun. 73216
Soft-Bar network-assisted resource allocation algm. 85874
Space Internet archits. and technols. for NASA enterprises 120107
space-time systs., optimal training 108607
space-time Viterbi equalisation, sig. design/receiver dimensioning 95805
spectral image compression for data commun. 95333
standby batt. chem., telecomm./data commun. 89096
std. singlemode fibre unrepeatered Gbit/s RZ transm. by distributed Raman amplif. 74915
storage area networks in video appls. 75290
Stream Code based act. network, internetwork syst. implement./eval. 95949
streaming content, business appls. 130937
substation automation syst., Internet based commun. *(Chinese)* 99856
substation automation syst., polling protocol, field layer communicating network *(Chinese)* 123677
substation protection relay design incorporating UCA2/MMS commun. 78068
substations, homog./uniform digital protective syst. 78086
substations, standardised commun., IEC 61850 std. 78061
Switzerland, xDSL gateway to data highway *(German)* 131001
sync. chaotic response, sig. filtration 72712
systematic error-correcting codes for semi-delay-insensitive data transm. 130835
tactical commun. networks, mgt. archit. 111570
TCP, energy efficiency in local wireless environ. 107941
TCP over packet radio 84962
TCP transactions, CPA *(English, Spanish)* 130413
TCP versions for wireless environ., modular design/perform. eval. 130398
TCP-Peach, new congestion control scheme for satellite IP networks 85001
TCP/IP protocol stack, requirements for real-time commun. in wireless environ. 107904
TD-CDMA, channel estim., optimum energy partition between data/midamble 74675
TDRS Ka-band transponder demons. 109018
tele-surgery, real-time syst. 76776
Telecom Italia's broadband services 131000
telecom/datacom opt. components, key technols. 120159
telemedicine syst., wireless, multi-purpose, effect of wavelet compression on data transm. 133163
TETRA security 118012
third-generation mobile commun. 96607
transm. coord. protocol for mobile satellite messaging syst. 73949
transm. scheduling for efficient wireless utilization 120022
turbo codes in radiocommunication, memory power reduction implement. 83899
TURBO-BLAST for high-speed wireless commun. 83409
turbo-coded modulation for transmit/receive antenna diversity systs. over block fading channels 72888
TV linked content server systs. for video area networks *(German)* 75320
two stage frame dropping for scalable video transm. over data networks 107673
two-way CATV network, bidirectional data transfer rate tests 120554
UCA based IEDs for substation protection and control, config. 78090
UHF SATCOM slot-connection conflicts caused by half-duplex radio equipt. 111603
Ultrafast Photonics Collaboration, research program in photonics and data commun. 82449
ultrahigh-speed opt. TDM transm. 75013
UMTS/IMT-2000, third-generation mobile systs. 108838
underwater acoustic commun., expt. testing of pass. phase conjug. 109229
US Air Force develop. of high-altitude laser crosslink 86110
USA-wide data broadcasting service, evolving infrastructures 131724
USB, introduction *(Chinese)* 97154
user-friendly automatic polishing robot syst., rem. operation 131812
Utilities Communication Architecture, fund. 99203
UTRA, common channel access perform. 119921
variable redundancy coding for mobile channels 129057
video traffic in cellular wireless ATM network, delay jitter perform. 74693
VOD, data broadcasting/seamless channel transit. 75322
VQ for channels with memory 129182
W-band LEO satellite, Antarctic region data collection 120081
W-CDMA, optimal power distrib. for successive interf. cancellation 85812
W-CDMA, packet data access enhancement 107774
W-CDMA, rate compatible punctured turbo coding 84887
W-CDMA bursty data traffic, rate guarantee and fair access support 130446
W-CDMA mobile radio, reverse link site diversity, turbo/convolutional coding 108895
W-CDMA networks for high data rate appls., resource allocation strategies 85763

a communication continued
Walsh-Hadamard spreading/joint detect., excess signaling concept 73729
WAP archit., protocols and content formats *(German)* 119288
WCDMA single code/multi-code signalling for high rate data transm., delay spread effects, BER perform. 96465
WCDMA single-user interf. cancellation for fading channels and diversity antennas 108777
WDM client server network archit., design/anal. 74318
WDM free-space opt. wireless technol. for eight-channel video broadcast feed service 86108
WDM networks, adaptive distributed wavelength routing algm. 74989
WDM networks, multicasting protocol, perform. anal. 107859
WDM opt. high capacity networks, impact of fiber non-lin. 109137
WDM pass.-star single-hop networks, MAC protocols for real-time/data services integrat. 119293
WDM single-hop network with transceiver tuning latencies, wavelength assignment algm., perform. eval. 74988
WDM single-hop networks, hybrid multicast scheduling algm. 120236
WDM-based local networks, persistent reservation protocol for variable-length messages 73960
Web wireless mobile service, distributed proxy server syst. develop. 108157
Web-based network config. mgt. syst. 96157
wideband data transm., variable-rate modulation on Rayleigh channels *(Chinese)* 117912
wideband Internet access using cable modem systs. 109368
wideband transhorizon channel charactn. 131110
wireless ad hoc mobile network, delay-oriented routing protocol 96513
Wireless Andrew, high-speed campus-wide wireless data network 85287
wireless ATM, hybrid II ARQ schemes using punctured RS code, perform. 119286
wireless ATM, QoS oriented data-link control protocol for CBR traffic 130422
wireless ATM/AAL2 over burst error channel, perform. anal. 120075
wireless broadband access technols. 130837
wireless CDMA systs., power mgt. for IP-based data transm. 107853
wireless commun. beyond 3G *(Polish)* 120000
wireless data network perform., self-similar traffic impact 131283
wireless data networks, link adaptation, perform. anal. 74811
wireless data networks, multiple channel globally constrained power control 131053
wireless data networks, network-assisted resource mgt. 85855
wireless energy transfer for stand-alone systs., low and high power applicability 108091
wireless gateway for wireless home AV network, implement. 119902
wireless Internet, universal mobility challenge 96090
wireless Internet over LMDS, archit./expt. implement. 74595
wireless link, energy-efficient transm. via lazy packet scheduling 119897
wireless local commun., link control protocol for multimedia services 130365
wireless networks, error avoidance using link state hist. 120023
wireless packet data, packet size depend. link adaptation 74525
wireless transm. syst., quadrature coded OFDM for reduction of freq. offset effects 108688
WLAN MAC protocols for ad-hoc networks 73890
AlGaInAs laser high speed uncooled commun. systs. 74938
InGaAs-Si hybrid chip Terabit/s parallel opt. connections 71624
SiGe and ferroelec. microwave devices, data commun. 74537
$YBa_2Cu_3O_{7-x}$ film, cryoelectronics appl. 127529

a communication equipment
see also computer peripheral equipment; modems; network computers
1.2 Mbit/s transceiver, improved BPSK demodulator 125266
4-channel NWDM syst., telecom/datacom appl. 120285
30 GHz transmit/receive modules, test equipt., sens. modules *(German)* 131336
48 V power convertor archit. for datacom-telecom appls. 88850
160-channel DWDM syst., telecom/datacom appl. 120285
ambulatory physiological monitor for animal welfare studies 121968
bit-parallel raw data transm., parallel opt. transmitter and receiver 74937
Bluetooth module/single-chip device testing 74744
CDMA-based wireless data transmitter for embedded sens., machine health monitoring systs. 120112
chaotic commun. syst., transceiver chip design and CMOS implement. 96383
clinical trials, rem. data entry using WAP phones 98874
CMOS clock and data recovery cct. for serial link appls., 4 Gbit/s 125620
CMOS data commun. transceivers, at-speed testing, BIST methodology 101906
CMOS DSP-based 10BaseT/100BaseTX Ethernet transceiver 108370
CMOS RFID transponder IC design using damping cct. *(Korean)* 114886
cpd. semicond. IC technols., appls. in high data rate opt. fiber commun. 131389
digital camera images transfer to Internet viaGSM phone 119835
filter with high time jitter immunity, design 73687
freq.-hopping HF PLL synthesizer design for high-speed data commun. 80017
FSK ultra low power all-digital receiver for deep space appls. 74904
high speed link, 2 GB/s differential simult. bi-directional I/O cell 119856
high-speed fibre-optic link, opto-electronic interface inside connector 74942
IEC/ISA fieldbus, data link layer, perform. anal. 75379
IEEE 1394b receiver chip testing, jitter meas. 131826
Interbus commun. protocol, ASICs, ring-struct. data transm. interfaces *(German)* 74504
Internet electronic authentication syst. using secure device *(Japanese)* 85188
IP router archits., overview 95973
Ka/Ku-band ASTRA satellite interactive terminals, outdoor units 96632
LHC data transm., G-link, gigabit Ethernet compliant serializer 121704
low-power 8-PAM serial-transceiver in 0.5 μm digital CMOS 108506
low-power CMOS 155 Mb/s transceiver for SONET/SDH over co-ax and fibre links 109087
MEMS for light-wave network appls. 86015
network testing for design verification 108347
open syst. COTS avionics network, MIL-STD-1553 replacement 122747
opt. transceiver module adaptable to large core-diam. fiber link, packaging technols. *(Japanese)* 120154
packet-fair queueing schedulers in high speed networks, FPGA implement. 74074
parallel opt. interconnect, 128 channel config. for inter proc. commun. 116604
power supply syst. technols. *(Japanese)* 85399
reconnaissance image data transm., airborne network syst. 77033
RHiNET-2 parallel computing syst., network switch, opt. interconnection 74196
SDH network sync. supply unit 130514
seismic DP software radio receiver 122625
serial commun. cct. with optimized skew charact. 85457
SOAP (Simple Object Access Protocol) and communicating devices 119363
test automation using scripting langs. 120642
UHF data receiver IC for automotive vehicle appls. 100308

data communication equipment continued
user profiles for data recharging 108273
wedge software for linking field devices to PC, PLC, and DCS 131825
wound/stacked metallized film capacitor technols., perform. comparison 115059
X-band MMIC direct 8 PSK modulator for high data rate Earth obs. appls. 125748
AlGaAs-(In)GaAs VCSELs for opt. data link appls., high perform. 82612
InP HBT fab. for 40 Gb/s commun. systs. appls. 70047
SiGe BiCMOS 12.5 Gbaud transceiver for serial data commun. 130985

data compression
see also arithmetic codes; bandwidth compression; information theory; source coding; vector quantisation
1D grammar-based codes for lossless image coding 95256
2D DCT, shifted FT-based tensor algms. 106973
2D DCT fast algm. via distributed arith. optim. 95274
2D discrete wavelet transform with integer lifting scheme, parallel archit. 95247
2D hologram commun., image compression, wavelet anal. *(English)* 93879
2D multirate filter from 1D filter 95328
2D separable filters for optimal reconstruction of JPEG-coded images 95039
2D shape-adaptive transforms, math. formulation 129755
2D wavelet coding implement., scheduling strategies 119825
2D-multiple notch filter, blocking artifact reduction, DCT coded image 95156
3-D stereo endoscopic PACS viewer develop. 132546
3D adaptive wavelet transform/context modeling for scalable lossy to lossless video coding 95211
3D binary images representation, math. morph. 95233
3D capture, representation/manipulation of cuneiform tablets 118278
3D compression, Edgebreaker with ZipandWrap on corner-table 72940
3D fractal compression for real-time video 129772
3D generalized shape sampling method/file format for storage or indexing 95204
3D geom. compression, DPCM and var. appl. 95220
3D graphic models, error-resilient coding via adaptive mesh segmentation 95043
3D images, parallel compression implementation using PVM 118642
3D interlaced video compression, image ghosting removal 95131
3D matching pursuit enhanced wavelet transform video coding 107041
3D med. data, multirate coding 98161
3D mismatched stereoscopic inputs, human perception 84451
3D model-based visual surveillance syst. 118559
3D models with subdivision surfaces, hierarchical coding 95221
3D MR image segmentation using mixture model and morph. filtering 122080
3D polygon meshes for hierarchical representation/coding of surfaces 84452
3D RGB image compression for interactive appls. 129736
3D scalable wavelet video compression, improved color coding 118615
3D source models for content-based video coding 95269
3D TV full parallax colour integral image data compression, chrominance components sub-sampling 107095
3D wavelet scalable video compression, efficient context modeling 95102
3D wavelet transform decomp. for video compression 95317
3D wavelet video coding, boundary effects 106935
32 kbits/s real-time/dual-direction video commun. syst. for wireless channels, perform. eval. 74637
act. service for multicast video distrib. 118592
adaptable binary entropy coder 106178
adaptive contour sampling/coding using skeleton/curvature 95218
adaptive encoder for bi-level images 107062
adaptive instrum. module, space instrum. controller "Brain" through PLD 111332
adaptive intercolor error prediction codes, lossless color picture compression 129740
adaptive lin. prediction for lossless coding of greyscale images 84456
adaptive post-proc. error concealment based on video-surveillance syst. feedback 95306
adaptive video frame rate control over explicit rate networks based on channel rate prediction 106974
adaptive/proadaptive image compression 107083
alg.-integer encoding, error free computation of DCT/IDCT 107098
algm. for FT on compressed image in restricted quadtree and shading format 73394
aliasing-free space compactor design, switching theory formulation 101965
ALICE expt., image compression for silicon drift detectors 132352
ALOS/PRISM stereographic images, terrain elevation meas., JPEG 122552
ambulatory physiological monitor for animal welfare studies 121968
ANN inter-subjective model for audio quality assess. in packet networks 106359
anti-interf. algm. for wavelet image coding *(Chinese)* 73417
aperiodically embedded sync. patterns detect. 129121
approx. algm. for longest common subsequence 67974
approx. image message authentication codes 73392
approx. string matching over compressed text 107465
arbitrarily shaped image objs., transform coding, wavelet transform, lifting scheme *(Chinese)* 118599
arbitrary time-series approx. & compression, nonlin. dyn. 95622
arith. compression, tree and string langs. appl. 72919
ARQ protocols, request seqs. qualitat. modeling/compression 107470
artifacts subjective appearance, image preprocessing 84404
ASIC, space-qualified downlink image compression for commercial rem. sens. appls. 106913
asthma telepharmacy counseling, metered-dose inhaler tech. 121869
asymmetric watermarking tech., robustness 95266
ATM network, flow control for encoded video appls. 129751
ATM-based multimedia commun. syst./dist. learning appl. 96285
ATR content-based image compression 84514
attribute cluster network and fractal image compression 73354
audio transm., multilevel data compression techs. 84004
audio-video rem.-patient monitoring via Internet, privacy protection 74440
AWGN channels, error-resilient compressed images transm. using soft-input source decoding 106982
axial symmetric scans, prediction gain optimisation 95086
B-pictures bidirectional motion backward tracking for anchor pictures interframe concealment 95307
band-pass delay time charact. extrapolation using GA on DCT 73639
bandwidth-limited real-time multimedia commun., header compression 96260
battlefield biomedical appls. of telementoring 76772
bi-level image coding for digital printing using GA 73418
binary image compression, Huffman coding 95329
binary image compression FPGA-based systolic array archit. 73321
binary image optimized coding based on rect. partitioning *(Chinese)* 106958
biomedical image compression using variable order wavelets transforms/HVS charact., progressive scheme 132786
biorthogonal wavelet constr. based on human visual syst., GA *(Chinese)* 106851

data compression continued
bit-map generation for block truncation coding by neural network 84422
bitwise Huffman coding, source mapping 94291
blind image watermarking, robustness 95265
blind sig. proc. algm. for decorrelation and channel equalization 108928
blind watermarking algm. with semantic meaningful watermarks 106998
blind watermarking tech. using wavelet transform 129796
block grouping algm. for motion description encoding 107013
block matching based motion estim. algm. for DCT-based compress. 95243
block motion estim., complexity-distortion optimal search algm. 107091
block truncation coding using edginess inform. 95171
block-based adaptive lossless image coder 84454
block-based coded images, efficient similarity-based error concealment method 95305
block-coded images, blocking artifacts reduction using self-similarity 129702
blocking artifact suppression, successive structural anal. using wavelet transform 106889
blocking artifacts reduction, transform coeffs. adaptive postfiltering 73336
blocking artifacts reduction in JPEG compressed images using overcomplete wavelet representation 83944
blockwise zero mapping image coding method 95286
Boolean and order stats.-based filters, optimal predictive design 118988
boundary filter optim. for segmentation-based subband coding 95700
boundary filters, max. coding gain, ideal DC behavior, size-limited paraunitary filter banks 91055
Burrows Wheeler transform compression, sym. encoding 107464
Burrows-Wheeler transform anal., block-sorting 129011
Burrows-Wheeler transform compression, parsing strategies 106180
caption text detect. algm. on MPEG compressed video *(Chinese)* 106912
cascade coding for compressing broadband residue seqs. 72799
CDF biorthogonal wavelet filters, image compression 73427
CDMA techs. for embedding data in digital images 95066
CGH image compression/transm./reconstruction *(Japanese)* 118641
channel condition ARQ rate control for real-time wireless video under buffer constraints 95884
chaotic neural encryption/decryption network, design and VLSI archit. 68989
chest radiograph interp., JPEG compressed images vs. uncompressed images 98486
class. and fn. estim. of protein by using data compression and GA 102859
classified zerotree wavelet image coding/adaptive packetization for low-bit-rate transport 106969
classifier database compression, probab. of error metrics for best-basis selection 106003
client/server environ., software compression 108365
CMOS adder, 2D IDCT, image compression 107010
CMOS folding/interpolation A/D converter for analog interface module of TFT-LCD driver 79997
CMOS multiplier, 32×32-bit design with sign select Booth encoder 90850
CMOS RP-MDSE, portable video compression syst. 106929
CMOS VLSI single-chip encoder/decoder, dictionary search proc., LZSS algm., entropy coding *(Korean)* 108490
CNN visual μP, video compression algms. implement. 106869
coding techs./redundant transform coupling 95388
coding-optimal transform 107067
color based video segmentation using level sets 95311
color document compression, fast, scalable DSP archit. 95335
color image compression, locally adaptive resoln. method 129769
color image watermarking in HSI space 95373
color images, blind/readable watermarking 95059
color-portrait image compression tech. 95129
color-texture regions, images and video, unsupervised segmentation 106880
colored image compression using neural networks 84398
colored pattern appearance model for image indexing 95237
colour image databases using BTC for storage and retrieval 84433
colour image skeletonisation, morph. tech. 129481
colour image wavelet compression using vector morph. 118498
colour images, 2D run-length encoding techs. modifs. 107009
colour re-indexing algm. for lossless compression of digital images 118648
combined error correcting/compressing codes 129181
commercial watermarking, engng. considerations 106924
compactly supported matrix valued wavelets, biorthogonal unconditional bases 91057
complexity-regularized image denoising 73403
Compror, text compression method 106187
congestion controlled imaging linking plane protocol, database compression/expansion/mgt. protocol layer 107820
const. rate wavelet-based image compressor 108484
content-based error-resilient coding for packet video commun. 95351
content-based indexing in MPEG-[1,-2 & 4] domains 95028
content-based scalable H.263 video coding for road traffic monitoring 84431
content-based video coding, automatic obj. segmentation 118535
content-based video indexing/retrieval, scene change detect. 84445
contex-based predictive coder for lossless/near-lossless video compression 84460
context-based adaptive arith. coding, least sq. algm. 84479
contour data coding using DCT transform 107045
copyright labeling of printed images 95374
coronary angiography, image compression viability, JPEG/wavelet data reduction 110969
cosine-modulated biorthogonal IIR filter banks, speech coding 102391
cpd. image compression using adaptive wavelet transform *(English)* 84450
D-FIRE 2, combined DAB/FM receiver SoC for receiver chipset 120529
DBS networks, adaptive rate control/QoS provisioning 85920
DCT, model-based discontinuity eval. 73373
DCT approx. with lifting scheme, systematic design/appls. 106896
DCT coding, universal VLC 94270
DCT coeff. compression 107051
DCT coeffs. organization for embedded image coding 106874
DCT conditional event coding without side inform. in video compression 95087
DCT implement. with distributed arith. 118594
DCT low-complexity scalable image compression 95383
DCT quadtree-based coding, rate-complexity-distortion optim. 95379
DCT video coding via ρ-domain source modeling, low-delay rate control 95348
DCT video compression appls., prog. devices, distributed arith. *(Spanish)* 118640
DCT watermarks, effective channel coding 95366
DCT-based image coding method using random neural network 95029
DCT-based pyramid struct., significance tree image seq. coding 95212
DCT-based scalable video coding, drift mgt. 107066
data compression continued
DCT-coded picture transm. over noisy channels, transformed domain error concealment 84381
DCT-domain blind watermarking syst. using optimum detect. on Laplacian model 95062
DCT-prediction based progressive fine granularity scalable coding 95313
DCT/triangular mesh based scalable image coder 95386
DCTlab educational image compression software for digital TV course 89640
decoded fractal images, hierarchical fixed-point-seeking method 84447
decomp. of fuzzy rels. 106850
dense range images, geometric/topol. lossy compression 95192
deterministic chaos and inform. theory 106009
DFT, basis fn. truncation effects 94511
diagnostic image compression of biomedical vols. 121878
diamond zonal-based algms. for fast/efficient motion estim. 95241
DICOM extensions for narrow-band networks 106930
differential CMOS output prediction logic, 64:2 compressor realisation 90865
digital camera for taking evidential photographic images 118526
digital camera images, flexible storage 107092
digital cinema develop., large screen projection displays 86892
digital document image networking 129802
digital image compression using directional sub-block DCT 95260
digital image compression using wavelet transform with transit. matrix 106901
digital image proc. appls., conf., San Diego, CA, USA (Aug. 2000) 100401
digital image watermarking 95021
digital image watermarking *(Chinese)* 95346
digital image watermarking, geometric transforms, robustness 95371
Digital Link, high-functional digital monitor interface 86886
digital mammograms, fixed block-based lossless compression 132785
digital speech compression tools for speech recogn. and synthesis *(German)* 84003
digital TV, closed captioning transm. and display 97051
digital TV and video compression 95139
digital video, content authentication/tamper detect. 95063
digital video, objective quality eval., MPEG-2 syst. 84372
digital video, stylized text events, robust detect. 129803
digital watermark, class./estim. based attacks/benchmarks 106923
digital watermarking, algms./appls. 95352
digital watermarking, variational approach 95367
discrete time-warped FT, optimal warping fn. design 95722
distortion-rate theory for indiv. images *(Chinese)* 107026
distributed fractal image compression on PVM for million-pixel images 106861
document compression using rate-distortion optimized segmentation 73341
document recogn./retrieval conf., San Jose, CA, USA (2001) 89587
double sig. dyn. range, compressive receiver, offset method *(Chinese)* 107580
DSP systs., parameterized dataflow modeling 118850
DST/DCT domains, interpolation props. 94654
duplicate video syst. using alternate temporal sub-sampling 106875
dyn. range compression based on illum. compensation 118383
Earth obs., onboard image selection/compression 111377
EBWIC, efficient bit allocation wavelet image coder with low complexity 95071
ECG annotated database, design and devel. 132554
ECG compression, perform. eval. *(Chinese)* 87448
ECG compression algms., perform. comparison, clinical diagnosis 121967
ECG data compression using wavelets and HOS 87363
ECG sig. compression, wavelet transform. of lin. predicted error 87387
echocardiac images, robust quantization table design 98316
edge-directed prediction for natural imagelossless compression 73401
edge-preserved neural network model for image restoration 106886
EEG/VEPs, acquisition, proc., knowledge-based diagnostics tools 121957
effective inform. preservation method for binary image reduction 118493
efficient low bit-rate video-coding algm. focusing on moving regions 129694
EGPRS wireless network, multiple description/layered video transm. 95165
electronic tongue, voltammetric sens., data compression 86723
electrophoretic gels, image digitalization, automated anal. 110832
embedded image coding using zeroblocks of wavelet coeffs. and context modeling 107056
embedded quadtree-based image coding, quincunx wavelet filter design 95291
embedded RAM built-in self-diagnosis, use of syndrome compression 125479
embedded RAM fault diagnosis by syndrome compression, built-in self-diagnosis 79875
EMG surface sigs., spectral dens. compression *(French)* 132557
EMG surface sigs., spectral dens. compression, FFT methods *(French)* 132555
EMI sig. proc./source ident., wavelet packet-based tech. 72374
endoscopic video database on WWW, linking with ISDN 98841
error resilient packet video with unequal error protection 107094
error-resilient block sorting 106184
essentially nonoscillatory schemes 118624
EZW image codec based on intraband partitioning 95284
EZW image compression, multi-channel channel-optimized scheme 84474
face detect. in compressed domain 129822
face focus coding, H.263+ video coding std. 73426
face segmentation and feature tracking for videophone appl. 84642
face-assisted low-complexity video coding 95178
facial video compression, local features reconstruction 95179
fast block matching algm. based on winner-update strategy 95251
fast cosine transform, parallel algm. 100755
fast fractal image compression coding method 84364
fast fractal image encoding based on adaptive search 106883
fast motion estim., block-based motion estim. algm. 84446
feature-based image seq. compression coding 95342
FEC-based video streaming, novel approach 118644
FEC-based wireless video streaming with pre-interleaving 107071
film image resoln. meas., electronic methods *(German)* 95345
fingerprint, gray-level image, lossless compression algm. *(Chinese)* 84438
flight vehicle vibr. monitoring by PCM telemetry, data compression 98893
FLIR tactical video, space-time compression 95191
FORTE-VLC, forward tracing self-error correction VLC for wireless image coding 118567
forward-adaptive wavelet image coder design and anal. 95073
Fourier descriptors watermarking of vector graphics images 95263
Fourier domain watermarking generalization to space/spatial-freq. domain 95395
foveated video compression with optimal rate control 84449
fractal compression accel. using real-time decoder 107037
fractal encoding of distorted images, textures, atmos. effects 106867
fractal geom. and appls. 124525
fractal image coding, trigonometric approx. method 73422
fractal image coding based on adaptive matching *(Chinese)* 129686
fractal image coding comparison 84368
fractal image coding scheme 84495

a compression continued
fractal image compression, adaptive post-proc. 95173
fractal image compression, efficient decoding scheme 95169
fractal image compression, fast code enhancement with local search 95167
fractal image compression coding based on generalized convergence *(Chinese)* 106848
fractal image compression proc. for moving pictures *(Japanese)* 79947
fractal image encoder, real-time implement. 107044
fractal image encoding, wavelet transform domain searching 95133
fractional FT, image representation/compression 129789
free-form 3D obj. compression using surface signature 95024
freq.-directed run-length codes, appl. to syst.-on-a-chip test data compression 101911
Fresnel transform of images for watermarking appl. 95151
fringe-based images, 3-D gauging image data compression 84403
full-text index compression 94259
gamma-compression gamut mapping method based on concept of image-to-device 84415
gastroenterology patient record consultation, MPEG-4 scene comp. 88015
generalized array codes for wireless image commun. in fading presence 129797
generalized lapped biorthogonal transforms using lifting steps 106897
geometric compression with predictable compression ratio 95235
geometric-primitives-based compression scheme for testing systs.-on-a-chip 101913
Glicbawls, grey level image compression algm. 107080
global motion estim. using fast and robust algm. *(Chinese)* 118631
GoP MPEG video filtering and transm., frame selection algm. *(Chinese)* 118627
gray level image embedding, DCT-based image hiding algm. 107017
gray scale document images, lossless compression methods eval. 84458
gray-scale document image lossy compression, quantization 95334
group testing for wavelet packet image compression 107055
guessing games for saving energy in mobile environ. 117918
H.261 real-time software-based video codec, design/implement. 119826
H.261 video coding, quantization factor perform. 129758
H.263+ compliant video coding with packet loss resilience 118554
H.263+ std., trellis-based R-D optimal quantization 95210
H.263+ video encoder LSI for face focused videotelephony, syst.-MSPA design 74487
H.263 video encoder for VIRAM, perform. anal. 95271
H.263 video encoding optim. using single proc. computer, perform. trade-offs/benchmarking 95347
H.263 video for mobile commun., error resilient transm. 84379
H.263 video transm. over CDMA wireless networks, quality improvement 95121
H.26L video encoder on general-purpose proc., perform. 118606
hardwired distributed arith. compatible DCT/IDCT archit., image compression 95124
HDTV broadcast technol., NIST advanced technol. program project 97064
HELINET unmanned aerial vehicles for opt. Earth surveillance 99050
hexagonal watermark embedding in wavelet domain 84492
hidden picture transm., video syst., CCITT T.4 2D compression 84370
hiding in compressed images, capacity estim. 95252
hierarchical video motion estim. using neural network 95323
HIPERLAN/2 WLAN std. MPEG-2 video transm. 119785
hologram binarization, iter. stepwise quantization method 129785
HRR radar data wavelet-based compression for moving targets 109274
Huffman decoding 94269
Huffman encoded texts, pattern matching 106182
human behavior monitoring from video taken in office environ. 129812
hybrid mesh-based/block-based motion compensation archit. 95322
hybrid syst. for real-time lossless image compression 73393
hybrid VLC, wireless image transm. 108486
hybrid wavelet compression scheme for material textures 95321
HYDICE data, JPEG-2000 compression, 3D wavelets and KLT 95022
hyperspectral anal. toolset, spectral similarity scale algm. 122556
hyperspectral data compression, lossy VQ *(English)* 98960
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
hyperspectral imaging, JPEG-2000 compression, 3D wavelets and KLT 95023
I/Q sigs. compression for US diagnostic equipt. 98289
ICA for compressed vector representations 106909
IEEE data compression, conf., Snowbird, UT, USA (March 2001) 100449
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IIR filter lossy/lossless seq. transforms, image coding appl. *(Japanese)* 107030
Image Analyser, educational tool 100470
image and video coding, shape-adaptive transforms, overview 107000
image and video compression, trends 118546
image authentication/integrity verification via content-based watermarks/public key cryptosystem 95372
image class., optimal design of transform coders/quantizers 95384
image codec, fast efficient computation of cubic-spline interpolation 73370
image coding, adaptive transforms with overlapping basis fns. 106887
image coding, data decorrelation by wavelet transform 129730
image coding, lossy and lossless compression perform., finite precision wavelets 95295
image coding perform. of shape-adaptive DCT 129729
image coding using orient. adaptive lapped orthogonal transform 95381
image commun., hidden Markov sources transm. over Gaussian channels 84468
image compression, 2D discrete wavelet transform core design 73326
image compression, arith. coding archits. 129721
image compression, biorthogonal wavelet filters appl. 95190
image compression, directional wavelets appl. 107082
image compression, distributed algorithm based 2D inverse DCT *(Chinese)* 118512
image compression, entropy coders based on binary forward class. 106953
image compression, inform. entropy preserved coder, integer Haar wavelet transform, sub-block DPCM *(Chinese)* 73364
image compression, interscale/intrascale dependencies between wavelet coeffs. 95078
image compression, low-complexity/-memory entropy coder 129696
image compression, masked wavelets appls. 107087
image compression, nonseparable nonlin. decomp. appls. 95188
image compression, region-based scanning 95217
image compression, stat. sig. proc. 73356
image compression, total var. improved wavelet thresholding 95189
image compression, visual embedding of wavelet transform coeffs. 95290
image compression, wavelet adapted and visually tuned 107007
image compression, wavelet transform, zerotree encoding *(Chinese)* 129759
image compression, wavelet transform approach 95130
image compression, wavelet transform archit. 106977
image compression, wavelet upper bounds on 2D Lipschitz class and zerotrees 118560

data compression continued
image compression algm. based on dyn. stratification of submatrices and vector space 106975
image compression and decompression, fuzzy rel. eqns. 118650
image compression and visualization software environ., hierarchical grid interpolation 95019
image compression and watermark embedding techs., interplay 129767
image compression based wavelet transform *(Chinese)* 73386
image compression by Gabor expansion 84392
image compression on distributed memory archit. 106978
image compression parallel archit., DCT/IDCT 84397
image compression research 118547
image compression syst., neural net based Karhunen-Loeve based transform coding, sq. isometries appl. 107020
image compression using auto-associative neural network and embedded zero-tree coding 84423
image compression using biorthogonal nearly coiflet wavelets 95148
image compression using derivative inform. with dist. transforms 118556
image compression using implicit polynomials 118604
image compression using orthonormal finite ridgelet transform 95187
image compression using principal component neural networks 106956
image compression with geom. wavelets 95076
image compression with non-uniform block segmentation and luminance approx. using bilinear curved patches *(Japanese)* 95145
image compression/reconstr. using fuzzy relational eqns. *(Japanese)* 106976
image databases, scale/fractal transforms 95515
image encoding, dyn. memory model based optim. of scalar/vector quantizer 95273
image hiding, SVD/VQ based schems 84441
image ident. using color inform. 107295
image indexing techs., DCT domain 95045
image overhead compression by hierarchical enumerative coding 118565
image partitioning for fractal coding under rate/complexity constraints 118603
image partitions encoded with transit. points method, constrained/unconstrained simplification 95219
image proc., Mallat algm., restrained condition *(Chinese)* 95141
image quality measures, stat. anal. of sensitivity and consistency 129725
image quality optimisation for decoded images using 3D smoothing method 73319
image recompression, Q-factor reduction, quantisation error reduction 129779
image representation using histogram-based classifier, coding appl. 106876
image restoration, edge-preserving neural network model 95392
image retrieval systs., wavelet based compression 106979
image ringing-artifact removal, max.-likelihood param. estim. 95350
image seq., moving obj. segmentation, review 95238
image transform compression, subspaces of quantization artifacts 95390
image transm., error resilient sync. codeword for VLC 95299
image transm. on fixed-rate digital channels 107050
image transm. over ATM quality improvement by priority dithering 74453
image transm. over Rayleigh channels, wavelet domain diversity method 84417
image verification, compression tolerant watermarking 95056
image watermarking by moment invariants 95158
image watermarking/data hiding, inform.-theoretic model 95365
image wavelet transform coding, edge-based artifact mitigation 107078
image-feature based second generation wavelet based watermarking scheme *(Chinese)* 107275
image-intensive commun. syst. supporting pers. user requirements 118503
image/channel coding for wireless packet networks 95164
image/video compression to computer graphics 95109
images region and data hiding based error concealment 129787
integer DCTs and fast algms. 130032
interactive BIST appl., compression tech., test data vol. reduction 101909
interleaved (2,1,7) convolutional codes perform. in mobile image commun. syst. 83894
Internet, multiresolution-multicast video distrib. 95122
Internet, video coding for streaming media delivery 107075
Internet imaging conf., San Jose, CA, USA (2001) 94755
Internet packet-loss resilient video using MPEG-4 fine granular scalability 95302
Internet video, MPEG-4 based hybrid temporal-SNR scalability 96180
Internet-type protocol testing in simulated small satellite environ. 119357
intra-frame video coding using biorthogonal symmetric wavelet filters 95397
inverse Burrows-Wheeler transform, space-time tradeoffs 106181
IP lookup problem, trie-based algm. 73947
IP/UDP/RTP headers for wireless commun., multi-ref. compression 107854
IR data link, large-aperture MQW modulating retroreflector 120386
IR dual-band pass. imagery for automatic clutter rejection 95507
ISAR image compression, geometric phase appls. 86147
ITU-T video encoding stds. *(German)* 84443
JasPer, software-based JPEG-2000 codec implement. 96315
JBIG2 bi-level image coding std. 84459
JBIG2 std., dictionary design for text image compression 73402
JIT image browsing over Internet 107079
joint watermarking and video compression 95160
JPEG2000, embedded block coding 95112
JPEG2000, error resilient coding 95300
JPEG2000, multimedia digital data compression std. *(German)* 84442
JPEG2000, new compression paradigms 106936
JPEG2000 and turbo-codes for robust image transm. 84470
JPEG2000 codec, implement. on fixed-point DSP 119822
JPEG2000 coding pipeline, quantisation watermarking 118583
JPEG2000 implement. on different computer platforms 106949
JPEG2000 still image coding std., efficient region of interest coding 95114
JPEG2000 still image compression std. 106955
JPEG2000-based scalable reconstruction of image local regions 84503
JPEG 2000, multiple component compression 106947
JPEG 2000, overview/archit./aplications 95111
JPEG 2000, regions of interest encoding and reconstruction 118562
JPEG 2000, TCQ 106948
JPEG 2000, visual optim. tools 95113
JPEG 2000 file format, flexible color encoding archit. 106941
JPEG 2000 file format, imaging archit. 106939
JPEG 2000 for detected SAR imagery compression 109254
JPEG 2000 functionalities, anal. study 95116
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
JPEG 2000 next generation image compression syst. features and syntax 95115
JPEG 2000 std., DWT lossless compression, VLSI design 118527
JPEG 2000 still image coding, eval. vs. JPEG-LS, MPEG-4 VTC, JPEG 118550
JPEG 2000 still image coding vs. other stds. 106938
JPEG 2000 still image compression std. 118496

data compression continued
JPEG 2000 technol. develop. for advanced ground station archit. 95232
JPEG and wavelet comparative study for image compression 110968
JPEG bitstreams, embedded binary data extraction using std. JPEG decoder 95064
JPEG compressed domain, image indexing and retrieval 118646
JPEG compressed domain image retrieval by colour/texture 107088
JPEG compressed images, deblocking approach 106884
JPEG compression factor control, new algm. 118545
JPEG encoder IP core, embedded, memory efficient preprocessing archit. for scanner 73428
JPEG image denoising using fuzzy wavelets 118490
JPEG images, unsupervised image obj. segmentation 95378
JPEG images, watermarking and selective encryption algms. 84418
JPEG modified image compression tech. 95137
JPEG quantization table, bitmap compression hist. ident., MLE 95088
JPEG stat. model redesign, DCT coeffs. lossy mode fitting distrib. 95380
JPEG still image compression, blocking artifact free inverse DCT 95391
JPEG video rate compression on parallel single-chip digital CMOS imager, transpose memory 95272
JPEG-2000, EBCOT, embedded block coding for optimized truncation 95225
JPEG-2000 based scan-based proc. 111383
JPEG-2000 error resilience technol. 106942
JPEG-2000 image compression, point-wise extended visual masking 95075
JPEG-2000 std., computational complexity eval. 106945
JPEG-2000 technol. and testbed, summary 106937
JPEG-DCT compressed color images, quality prediction based on SCIELAB metric 106986
JPEG-LS, rate control algm. design 106885
JPEG-LS diagonal edge detect., low cost algms. 118528
JPEG/JPEG2000, memory complexity comparison 106946
JPEG/JPEG2000, multiple compression cycle perform. comparison 106943
JPEG/JPEG 2000 image coder comparison 107004
JPEG/MPEG coding perform. improvement by optimizing both compression and blocking effect elimination 84770
Ka-band broadband aeronautical satellite commun. expts. 108989
KLT basis vectors, blind adaptive estim. 83847
large-size images, transm. via Internet, Macintosh-based software syst. 95020
layered depth image compression algm. 107064
LD-CELP codec, design and implement. 119824
Lempel-Ziv based compression algms. 94260
Lempel-Ziv code with k-error protocol, av. redundancy rate 94262
Lempel-Ziv data compress. algm., unified VLSI systolic array design 90924
Lempel-Ziv data compression with long repeated strings 94258
Lempel-Ziv parsing scheme for Markovian source, av. profile 129010
Lempel-Ziv/multilevel pattern matching codes comparison 129086
length-restricted coding in static and dyn. frameworks 106167
limited-order blocksort based image compression 107089
listless wavelet zerotree image coding algm. for hardware implement. *(Chinese)* 73412
locally adaptive deblocking filter for low bit rate video 95202
lossless compression for satellite packet networks using YK algm. 107469
lossless compression of digital audio 94412
lossless data compression, perceptron based neural network predictors appl. 73576
lossless data compression via adaptive alphabet decomp. *(Japanese)* 84666
lossless ECG compression using lifting wavelet transform 110626
lossless image coding, adaptive predictor combination 118564
lossless image coding, integer-to-integer wavelet transforms 84486
lossless image coding using optimum prediction generated by local image features 106868
lossless image compression, arith. coding 95326
lossless image compression, filter banks with nonlin. lifting steps 73347
lossless image compression, lin. colour transform. coeffs. 118610
lossless image compression using adaptive integer wavelet coding 95327
lossless natural image compression using regressive anal. 118574
lossless picture compression, soft median adaptive predictor 118600
lossless still image coding using min.-rate predictors 84457
lossy context-based adaptive entropy coding, lookahead search 95385
lossy image compression, adaptive quantization and noise detect. 107090
lossy image compression, adaptive scanning methods for wavelet difference reduction 95289
lossy image compression, quincunx wavelet transform lifting scheme 95077
lossy image compression using adaptive wavelet filters 129709
lossy packet network compressed image quality measures 129790
low bit-rate video coding using space-freq. adaptive coding 129723
low power motion estim., hardware-oriented region based algm. 129770
low power multimedia syst. µP-based archits., adaptive power optim. algm. 79918
low resoln. video, motion estim./resoln. enhancement 95201
low-bit rate adaptive mesh-based motion compensation tech. 73175
low-bit-rate adaptive mesh-based motion compensation tech. 95319
low-bit-rate moving picture coding using loop filtering/post-filtering 95149
low-bit-rate perceptual audio coder, perceptual entropy-based method for sig.-adapted wavelet tree 129380
low-bit-rate speech compression for playback in speech recogn. systs. 118148
low-bit-rate video, nonlin. motion-compensated interpolation 106878
low-complexity video coder based on discrete WHT 118582
low-power digital matched filter, DS-SS sig. acquisition 68938
LZ1 compression of binary images using rectangle greedy matching tech. 107074
LZ-based image compression 95037
LZW compression optim., lossy generalizations 107086
MAGELLAN, multiway hardware-software partitioning/scheduling for latency minimization 79661
mammographic microcalcifications, optimal filter-based detect. 132814
mammography, digital, limited-error compression algms. 76547
masked wavelet coder for image compression 107057
matching pursuit video coding, dictionary approx. 95205
mean quantization blind watermarking for image authentication 95375
mean-quantization-based fragile watermarking for image authentication 118515
meas. sigs. compression algm. props. in time domain 118826
med. image compression by cosine and wavelet transforms 110788
med. images, lossless compression by hierarchical segmentation 110534
med. radiology, image compression methods 122143
med. ultrasound and X-ray image compression methods, clinical assess. 132837
media filtering syst., QoS streaming 96270
melody extraction from midi files with modified Lempel-Ziv algm. 83996
memory efficient motion estimator for three step search block-matching algm. 118540

data compression continued
mil. commun., ATM and Internet via satellite 108164
mine detect. in IR imagery, wavelet-based third-order neural network 73435
mixed raster content compression, block-threshold segmentation optim. 95198
mobile commun. systs., data compression, efficient hardware algms., prototyping 96533
mobile robot behavior acquisition using view inform. *(Japanese)* 84102
model-based interpolation of high-dimens. clustered data 95234
modulated lapped transform computation, fast algm. 84716
motion activity based wireless video quality perceptual metric 84509
motion compensation using representation of regions 118575
motion-compensated layered video coding for playback scalability 73337
motion-compensated video compression with reduced complexity encoding 73330
Motion-JPEG2000 standardization, target market 95117
moving image, future 97063
moving picture coding for scanning compatible broadcasting 118539
MP3 music delivery, security methods 106367
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
MPEG4 obj.-based compressed video, digital watermarking algm. 84477
MPEG audio encoder, fast bit allocation algm. 84021
MPEG audio Layer III decoding algm., computer simul. *(Chinese)* 94396
MPEG coded audio sigs., decoding by list output Viterbi algm. *(English)* 73029
MPEG compressed domain, B-spline curve representation of segmented obj 106530
MPEG compressed video, macroblock inform. based efficient wipe detect 106856
MPEG compressed video domain, camera motion estim. using feature points 95315
MPEG multimedia stds. (MPEG-1, MPEG-2, MPEG-4, MPEG-7, MPEG-21) *(German)* 83904
MPEG spatial scalability improvement 96317
MPEG transcoder, rate control considering drift-error propag. 95091
MPEG transcoding, restricted re-quantization rationality 95089
MPEG video, caption proc. in MC-DCT compressed domain 129699
MPEG video, MAP estimator for high resoln. video reconstruction 95200
MPEG video, picture quality investig. 73405
MPEG video coding, rate-distortion charact., hybrid models 95253
MPEG video contents, fast dissolve operations 95181
MPEG video data streams multi-channel commun., adaptive QoS control method 129799
MPEG video over Internet/wireless networks, packet coding schemes 84983
MPEG video quality objective assess., neural net approach 106911
MPEG video streaming, min. cost implement. of full VCR functionality 107102
MPEG video streams, spatial SS watermark detect. 95057
MPEG video transcoding by spatial resoln. reduction 95094
MPEG-1 and MPEG-2 multiplexed streams, digital watermarking for copyright protection 95318
MPEG-1 VoD, normal playback restart, transm. schedule writing scheme 97090
MPEG-2, remnant error concealment tech. for error recovery 95320
MPEG-2 coded video seqs., space/freq. masking, digital watermarking appl 95058
MPEG-2 compressed video, interactive playout support 84429
MPEG-2 compressed video, variance extraction 107126
MPEG-2 compressed video, wipe prod. 95182
MPEG-2 compressed VoD, interactive operation implement. 97091
MPEG-2 HDTV encoder, multiple enhanced SDTV encoding LSIs based develop. 118538
MPEG-2 image seq. coding, rate-distortion optimal fast thresholding 84380
MPEG-2 motion estim., parallel block matching tech. 107008
MPEG-2 multi-program transport stream transcoder, video rate control *(Japanese)* 129788
MPEG-2 QoS adaptive streaming based on scalable media obj. 108400
MPEG-2 real-time video encoding, adaptive GOP struct. selection 95206
MPEG-2 seqs., hierarchical transm. in noisy environ. 84378
MPEG-2 software-based high-quality encoder using scene change detect./adaptive quantization 118534
MPEG-2 time sharing MUX in CATV networks, VBR scheduling algm. 97076
MPEG-2 toolkit, compression of moving pictures for digital cinema 97058
MPEG-2 video compression, illum.-invariant algm. for subpixel-accuracy stabilization 95147
MPEG-2 video decoder, error concealment tech. 118537
MPEG-2 video editing in compressed domain with video buffer verifier requirement 95105
MPEG-2 video streams, decoding time estim. 95314
MPEG-2 video transcoding, DCT coeffs. Laplacian params. estim. for requantization 95090
MPEG-4, fuzzy theory based robust error concealment algm. 118536
MPEG-4, semiautomatic segmentation using spatio-temporal gradual region merging 118530
MPEG-4 and H.263+ for streaming video appls., perform. comparison 129780
MPEG-4 based multimedia e-mail syst. 96063
MPEG-4 camera systs., real-time practical video segmentation algm. 118531
MPEG-4 coding, joint optim. of compression/restoration 118502
MPEG-4 coding perform. improvement, compression optim./blocking effect elimination 95332
MPEG-4 coding perform. optim., post-proc. role 106858
MPEG-4 data video prioritisation over mobile networks 84377
MPEG-4 digital multimedia broadcasting appls. 119786
MPEG-4 enhanced digital TV set-top terminal, implement. 118532
MPEG-4 facial animation, audiovisual integrat. in multimedia commun. 129781
MPEG-4 FAP interpolation for facial animation at 70 bits/frame 129691
MPEG-4 FBA decoder for Web appls. using Java applet 107001
MPEG-4 imagery, ring convolutional trellis codes design for MAP decoding 129800
MPEG-4 noisy still texture image, adaptive thresholding 95382
MPEG-4 padding block hardware accelerator, high-speed pattern decoder 79950
MPEG-4 shape coding, fast motion estim. algm. 95084
MPEG-4 shape decoding, conformance test 118533
MPEG-4 sprite coding for VLBR video compression *(Japanese)* 73328
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS implement. 79949
MPEG-4 video, still texture, spatial content indexing 118733
MPEG-4 video codec for mobile multimedia appls. 119823
MPEG-4 video data protection for multimedia fruition 84367
MPEG-4 video decoder implement. on ARM7TDMI 84508
MPEG-4 video encapsulation/marking over IP differentiated services 129748
MPEG-4 video streams, DWT-based obj. watermarking syst. 95262
MPEG-4 video streams, efficient error concealment implement. 118609
MPEG-4 visual ACE profile, parallel archit. 118543

a compression continued
MPEG-4 visual texture coding using double transform coding 107014
MPEG-4 wireless video transm., FEC-based error control 85889
MPEG-7 appls., P-frame motion vectors, low-complexity global motion estim. 95180
MPEG-coded video seqs., real-time visual postprocessor 84413
MPEG-encoded video, blind compressed domain watermarking 118623
multi-bit binary arith. coding 94268
multi-bit image watermarking, geometric distortions robustness 95376
multi-rate hybrid codec and perform. eval. for image compression 85426
multi-ring/single-ring differential chain coding for telewriting appl., efficiency 118625
multi-spectral image compression on Internet 95030
multi-view image coding incorporating approx. geom. 95108
multi-viewpoint image data, model-aided coding 95223
multiband dyn. range compression (MDRC) algm., hearing aid 111182
multibase transform coding for multispectral image compression 73360
multicast layered video transm., hybrid sender/receiver driven rate control 95312
multichannel image compression by bijection mappings onto zero-trees 95363
multichannel regularized recovery of compressed video seqs. 95152
multimedia algms., syst. bus load and power reduction, med. imaging 122036
multimedia data compression for recogn. and content-based retrieval 118701
multiple description coding 118497
multiple description coding of motion fields for robust video transm. 106967
multiple description coding using exact discrete Radon transform 107085
multipoint video conferencing, region-based obj. tracking using wavelet transform 118607
multirate sig. proc. on finite fields 118626
multiresolution adaptive image pyramid based compression algm. 106984
multiresolution motion estim., hierarchical block matching algm. 95080
multispectral and hyperspectral imagery, data reduction based on catastrophe theory appl. 73385
multispectral image compression using reversible WT and KLT *(Japanese)* 73395
multispectral images, lossy compression, blockwise distortion measure 129727
multispectral rem. sens. images, lossless compress. based on SPIHT *(Chinese)* 95230
multiview image compress. using quadtree disparity estim. 107109
music protection online and MP3 compression 84715
Myrinet cluster, 3D wavelet compression by message passing 129706
near lossless image compression by relax. labeled prediction 84461
nearest VQ codeword search scheme, tighter kick-out condition 129742
nearly optimum generalized multilevel block truncation coding algm. with fast nonexhaustive search 106925
nested-multilevel redundancy exploitation for fast block matching 95082
network model coding gain for smoothed descriptions coding 129798
neural network approaches to fractal image compression/decompression 118639
neurological CT and MRI, JPEG and JPEG 2000 irreversible compression algms., eval. 98493
news content highlight via fast caption text detect. on compressed video 106866
NFS over Myrinet-based clusters for parallel multimedia appls., perform. 130711
noise-mixed PD recogn. using feedforward triple-layer neural net 116182
noisy image compression, wavelets/multiwavelets/wavelet packets/multiwavelet packets comparison 107069
non-iter. fractal image compression, variance-based domain blocks 73389
noncausal predictive lattice model for image compression 84502
nonlin. approach to sig. coding and compression, time series 95652
nonlin. multi-resoln. decomp. with appls. to image compression 95125
nonlin. predictive model evol. for lossless image compression 84416
nonlin. sig. proc. using index calculus DBNS arith. 95640
nonlin. vector multiresolution anal. 107398
nonorthogonal sig. compression iter. algm. 129988
obj. modeling and anal. based on morphable model *(Chinese)* 107202
obj.-based intra-frame wavelet video coding 129775
obj.-based motion estim./higher scalability, mesh/crack lines appl. 95196
obj.-based video, compressed domain shape proc., finite state methods 73351
oblivious cocktail watermarking by sparse code shrinkage, regional-/global-based scheme 95264
old films, low complexity cut detect. in flicker presence 106857
on-board satellite image compression, bit rate and local QC using rate/distortion criterion 118558
online image compression using SVD and adaptive VQ 118563
online rate control for video streams 129782
optimal encoding of non-stationary sources 94263
optimal L-filter for blocking artifact reduction using GA 106890
optimal multiple preset dictionaries, NP-hard problem 106179
optimal transform domain watermark embedding via LP 95048
ordered dithered halftone images, data hiding 95240
orthogonal length-3 approx. order preserving prefilters 119043
oSPIHT, embedded obj.-based SPIHT image coding 129774
osteoporotic bone, encoded FTIR microspectroscopic data visualizationy 110852
OTDM packets, simult. compression/decompression, delay line lattice 120330
pace code for arbitrarily shaped objs. 95394
packet video commun., low bit rate, rate-distortion optimal source/channel coding 84466
page segmentation and content class., document image proc. 84241
palette-based compression, efficient color re-indexing scheme 95310
panoramic video, compression issues 84490
parallel parsing of MPEG video 129733
parallelism and dictionary based data compression 94261
parametric lossless image compressors 84455
partitioned iter. fn. syst., digital imaging tool 95136
pattern matching algm. for bal. straight-line programs *(Japanese)* 84134
pattern matching for SEQUITUR 107466
PC-based editing, compositing, and graphics systs., integrat. into digital studio 97059
PCR-based fair intell. bandwidth allocation for rate adaptive video traffic 84499
PD sigs. noise removal, wavelet based 84383
perceptual spectrum quantization 106363
perform. of data compression in terms of Hausdorff dimens. 95661
pers. ident. documents, image based authentication, DCT appl. 95034
piecewise const. rate transm. and transport algm. for burstiness reduction of video stream 95033
piecewise stationary slowly varying sources, universal lossless compression 106177
planar evanescent microwave imaging NDE probes, high resoln./scan rate 101579
planetary mission image compression archit. 108485

data compression continued
portable digital video cameras, image proc., VLSI switched-current implement. 95354
portable multimedia terminals, motion compensation block IP, embedded DRAM macro 129657
posteriori quantized matching pursuit 107076
PPMC model optimisation for hardware implement. 125317
prediction-based text compression, binary coding 107471
printed images, watermarking/copyright labeling 106888
progressive compression for triangular meshes with QC 106877
progressive fine granular scalable video using advance-predicted bitplane coding 107104
progressive image transm., quadtree and shading approach 118629
progressive lossless image coding, adapted nonlin. multiresolution decomp. 129777
progressive quadtree wavelet encoder for lossy image compression 106985
progressive source coding for power constrained Gaussian channel 106852
pulse-compression radar, neural network sidelobe suppression filter 109271
pyramid image coder using histogram based classifier 84421
QccPack, open-source software library for quantization/compression/coding 107339
QMF two-channel approx. lin. phase filter bank design, image compression appl. 73383
quant. cryptography, class. inform., reversible extraction 106213
radar, geometric obj./image rels. 86131
range imagery, variational segmentation by piecewise facet models 96902
Rayleigh fading channel, compressed image commun., trellis decoding of block codes 106093
RCS modeling, data compression, comparative study 86144
real time audio systs., bit-rate reduction by psychoacoustic masking 94397
real time video compression, reduction of blocking artifacts *(Chinese)* 84440
real-time decompression of streaming video using mobile code 107077
real-time motion estim., assess. of FPGA suitability 129752
real-time software video codec based on wavelets 96323
real-time video compression, motion estim., FPGA chip implement. 129771
real-time video storage, hard disk based *(Chinese)* 95140
reconfigurable on-board payload data proc. syst., ESA develop. 98920
reconstructed test images, subjective quality, classical/advanced wavelet coders 129791
recorded sound tracks transliteration for speech recogn./searching *(German)* 73094
reduction of blocking artifacts in real time video compression *(Chinese)* 84375
redundant data filling algms. for mixed raster content layers 95197
region-based control points determ. for multivector motion description 95349
region-based image coding, image partition simplification 118571
region-of-interest coding, foreground/background bit allocation 95224
region-of-interest video coding, multiple-face tracking syst. 84465
region-selective image compression, nonuniform sampling theorem 106988
rem. sens., on-board opt. image compression 111382
rem. sensed imagery, class., lossy compression effects 111379
rem. sensed images, integrated pipelined and distributed syst. for real-time class. 133276
resoln. and frame-rate scalable subband/wavelet video coder 106970
resoln. scalable lossless progressive image coding via conditional quadrisection 95095
reversible lossless text transform for compression perform. improvement 107467
RGB image color quantization, dyn. archit. self-organizing map appl. 107022
rly. traction substation, rem. multimedia video monitoring syst. *(Chinese)* 123950
robust data hiding using psychovisual thresholding 95067
robust digital watermarking tech. for images 73375
robust error concealment algm. using iter. weighted boundary matching criterion 95304
robust high capacity data embedding 95065
robust image watermark with wavelet transform/SS techs. 106999
robust oblivious digital watermarking using image transform PM 95161
rotate-tiling image comp. method for parallel vol. rendering on distributed memory multicomputers 84369
SAR data compression techs., review 131628
SAR imagery, lossless compression using multiple-pass gradient adaptive lattice filter 109251
SAR images, joint denoising and lossless/lossy compression 129731
SAR images, open-loop adaptive filtering for speckle reduction 109242
SAR polarimetry-interferometry, theory, technol. and appl. 86207
SAR raw data, compression using method of BABC *(English)* 73295
SAR wavelet compressed imagery, ATR perform. 86187
satellite on-board front-end proc., systematic-DSP 133246
scalable embedded zero tree wavelet packet audio coding 84012
scalable video, error-resilient compression/transm. 106934
scalable video, network transm., priority dropping 95308
scalable video coding, optimal estim. for error concealment 106993
scalable video coding, switched error concealment/robust coding decisions 95303
scalable/error-resilient/high-perform. video commun. in mobile wireless environ. 95042
scene change detect. in video seqs. 106905
scene-adaptive algm., motion estim. and compensation archit. 73348
second degree operator, optimal fixed rank transform 73611
second-generation watermarking benchmark, attack modelling 94507
segmentation and range sens. using moving-aperture lens 106908
segmentation maps coding for layered obj. representations 95208
segmentation-based lossless compression of burn wound images 110504
seismic data compression based on wavelet transform, zero-tree quantization coding *(Chinese)* 98948
seq. universal coding of seqs. with limited training data 117980
SFSN model for image compression, neural net simul. 84374
shape approx. through recursive scalable layer generation 95222
shared fuse macro for multiple embedded memory ASIC devices with redundancy 102183
sig. compression using slantlet transform, efficient approach 95615
sig. detect. and shift-param. estim. with compression by orthogonal polynomials 119090
sig. filtering and shift invariant anal. using complex wavelets 84735
sig. proc., wavelets/approx./compression 118978
sig. quantization using nonlin. adaptive fns. 118870
skeleton struct., image compression algm. with perfect reconstruction 95134
skew-coord. DCT method for images, entropy coding based on Gaussian mixture distrib. model 73327
SNR scalable transcoding for video over wireless channels 95120
SoC embedded cores testing, twisted-ring counters use 101966

data compression continued
soft computing, advanced video/image proc. and commun. 73216
soft decoding for robust video transm. 84395
Space Solar Telescope, imaging syst. and DP 109699
space-qualified DSP board, data compression software 118576
spatially correl. motion seqs., estim./mode decision 129692
spectral entropy-based wideband speech coding 106373
spectral image compression for data commun. 95333
spectral satellite image compression based on wavelet transform *(Chinese)* 95344
speech coding, wavelet packet excitation sig. compression 94395
speech compression, wavelet transform appls. 94398
speech compression using LSP freqs. and wavelet transform 84024
speech compression using wavelet transform 129378
speech digitisation and compression, Windows Media Audio Format program *(German)* 106358
speech replay and compression on H/PC *(Chinese)* 94400
speech synthesis inventories, data reduction *(German)* 73091
SPIHT algm., improvement for high-speed pipeline archit. implement. *(Chinese)* 73387
SPIHT error-tolerant image compression 95330
SPIHT image compression algm., rate-distortion optim. 107060
SPIHT stripe-based lossy compression of vol. med. images 98160
SPIHT-based image compression, optimal refinement/significance map tradeoffs 106981
SS watermarking combining visual/detect. models 95370
start/stop codes 106188
STC influence on radar sig. compression quality 86150
stereo image compression approach via pixel value var. trend adaptive subspace projection 106917
stereo images, edge-preserving disparity estim./disparity-compensated intermediate view reconstruction 95239
stereoscopic image pair disparity 84354
still color pictures, quality-oriented JPEG coding 118578
still digital camera, H.26L intra mode encoder archit. 120904
still image coding, hybrid method 129719
still image compression, JPEG 2000, lifting based DWT, embedded block coding, optimized truncation 129708
still image compression syst. using wavelets, perform. anal. 73409
storage area networks in video appls. 75290
streaming thin client compression 107061
streaming/decoding archit. for stored FGS video 118529
subband and transform coder optim., theory and appls., review 84736
subband sampling, multimedia commun. 108433
subband video coding, low bit-rate, context models appl. 95207
substation rem. watching, 2D image proc., wavelet transform *(Chinese)* 73371
subthreshold log filters, LV CMOS basic building blocks 80131
surface shape meas. by phase-shifting digital holography 82999
surfaces hierarchical representation and coding, 3D polygon meshes 95250
surveillance, importance assignment for compressed image interp. 84434
sym. matching based document image compression and merging syst. 95336
symmetric-antisymmetric multiwavelet filter bank, image compression *(Chinese)* 107474
syntax-based error concealment 95146
syst.-on-a-chip, combining low-power scan testing and test data compression 125347
syst.-on-a-chip test data compression/decompression 81432
systolic array design for kernel fns. of video compression 101880
T/R-R bistatic radar syst., redundant data compression/location accuracy anal. 75103
target recogn., intell. compression, feature detect./fusion 84551
TCP/IP header compression impact on cellular syst. perform. 85737
telemedicine, accident and emergency, accuracy, effect of image resoln., compression, colour depth and display modality 133159
telemedicine, error-resilient video coding, wireless transm. media 76775
telemedicine syst., wireless, multi-purpose, effect of wavelet compression on data transm. 133163
temporal video segmentation using frame/histogram-space 106854
tetris-hashing or optimal table compression 72978
text compression for speeding up string pattern matching *(English)* 72909
text compression using fewer lexical n-grams 106189
time-domain audio watermarking subj. to psychoacoustic masking 84017
TMS32OC6201 DSP based high-speed real-time digital pulse compress. syst. *(Chinese)* 125557
TMW^{Lego} for OO image modelling 107081
Trampeg, MPEG-2 real time software transcoder for low bitrate transm. *(Japanese)* 84365
TRANSPROSE project, reconciling mobile code security with execution efficiency 96099
tree approx. and optimal encoding 118926
triangle strip compression 83863
TV linked content server syst. for video area networks *(German)* 75320
two-channel QMF filter bank, approx. lin. phase, based on allpass filters 102376
UAV-HALE surveillance syst., SAR images, autom. obj. detect. 96977
UHF secondary imagery dissemination syst., evol. 111604
ultrasound images, irreversible compression using JPEG algm., clinical eval. 98263
unified systolic array design for wavelet-based video codec 74485
universal lossless data compression algms., greedy context-depend. seq. grammar transform based 129999
universal lossless data compression with side inform. using conditional MPM grammar transform 117920
universal multi-scale matching pursuits algm. with reduced blocking effect 95387
universal prediction lemma appls. to data compression/prediction 73565
unwrapping of sigs. in transform domain 84478
unwrapping of sigs. in transform domain, sig. reconstruct./lossy image compress. appls. 95711
US Air Force develop. of high-altitude laser crosslink 86110
US data compression, real-time 76918
US images compression, space-freq. segmentation with entropy coding 98315
variable-size-block motion estim., rate distortion optim. *(Chinese)* 118511
VBR high perform. video coding algm. for fixed size storage appls. 95097
VBR hybrid coded video sources modeling/prediction, fuzzy logic perspectives 129783
VBR MPEG-2 video sources, adaptive trained neural networks for traffic prediction 118616
VBR video over ATM, rate control simplification/implement. 106971
vector Gaussian watermarking game, coding capacity 129038
vector transform algm. for image coding *(Chinese)* 95227

data compression continued
vertex coding using triangle center of gravity 118569
video, motion activity region-based descriptor 95505
video, reduced-complexity iter. post-filtering 129693
video, spatial scalability, motion vector comp. algm. 118522
video artifact estim. and meas., image anal. 118508
video coding, block-DCT based, low-complexity post-proc. for artifact reducti 95203
video coding, block-matching motion estim., low power archit. 95400
video coding, color set partitioning in hierarchical tree scheme perform. 952
video coding, content-based and perceptual bit-allocation, matching pursu 73329
video coding, DCT-based visually adaptive quantization *(Korean)* 106963
video coding, fast matching pursuit method with dist. comparison 95096
video coding, space-freq. block motion field modeling 73339
video coding, very low bitrate, mesh based 95215
video coding, VLBR, motion estim. algm. 95138
video coding, VLBR, motion-compensated 3D wavelet transform 95399
video compression, block-based motion compensation, adaptive matching crit rion 106951
video compression, displaced frame difference coding using dense motion fiel 95280
video compression, error-resilient method using multiple states 95297
video compression, future research topics 118551
video compression, localized, VQ for robot vision 84476
video compression, motion estim., low-power VLSI archit. 106926
video compression, multiresolution motion estim., interpolation filter 73425
video compression, robust region-based motion estim. 95081
video compression, wavelet coding of predictive error frames, rate-distortio anal. 95282
video compression via selective region refinement in difference frames 8539
video compression with wavelets and random neural network approxs. 1185
video connection utilization, masking in ATM networks 107108
video data, real-time recursive motion segmentation 118608
video data rep./compression, texture recogn. 95407
video enhancement, pre-/post-proc. algms. 106992
video enhancement using visual quality meas. 95199
video joint source-channel coding, distortion-rate charact. modeling 84467
video multicasting over WLAN, error control, eval. 74437
video obj. localization/tracking, semi-automatic seeded region growing algm 107032
video obj. retrieval, MPEG-4 compressed domain shape features 73377
video objs. partitioning into temporal segments using local motion inform 106855
video PLL in gait recogn. 107170
video prod. in compressed video 106904
video scalable predictive coding optim. 84448
video seq., robust transm. using double-vector motion compensation 106968
video seq. decoding for wireless networks, unified image/bitstream anal. 1185
video seqs., motion vector estim. using edge oriented block matching algn 95083
video streams, resource allocation for deterministic services 129749
video traffic in cellular wireless ATM network, delay jitter perform. 74693
video transcoder, efficient implement. 95026
video transm. over networks with no QoS guarantees, encoder buffer constraint 129750
video transm. over third-generation mobile systs. 106906
video watermarking, channel coding, soft decoding for watermark retrieva 95267
video-scaling algm. based on human perception for spatiotemporal stimuli 9533
virtual space teleconferencing, video comp. tech. *(Chinese)* 85357
ViSiCAST project, TV program sign lang. service for deaf pers. *(German* 129794
vision model based perceptual coding of digital images 84494
visual binary DP in compressed domain by finite transducers 84491
visual commun. over noisy channels, error resilience tools 129784
visual data representation, recent achievements and future develop. 118548
visual inform., isotropic vs. anisotropic encoding 106853
visually lossless data compression for real-time frame/pushbroom space imagers 106914
VLBR video coding using matching pursuit and codebook adaptation 95098
VLIW proc., code compression 102242
VLSI implement. of fractal image compression proc. for moving pictures 129753
VLSI improved arith. coding algm. *(Chinese)* 117995
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
vocoders using time-scale modified speech for low flexible bit rates 106368
VOD broadcasting protocols 119347
voice-over-IP telephony, packet switching *(German)* 108103
voiced speech, all-pole spectral modelling with highly compressed set of params. 118087
VoIP over cellular links, efficient transport 74401
vol. med. data compression based on cube splitting 110496
VQ based shear-warped vol. rendering *(Chinese)* 83873
VQ image coding using sub-vector techs. 95168
VR using concentric mosaic, constr./rendering/data compression 95362
watermark embedding, sig. hiding within cover image 106921
watermarking scheme using digital images 73361
watermarking schemes, geometric props. 95377
wavelet based image watermarking schemes, comparison 95369
wavelet block quantization tables for images, optim. algm. *(Chinese)* 95228
wavelet coding with fractals for image seqs. 84507
wavelet compression improvement with neural networks 107070
wavelet data compression, real-time monitoring syst. for large hydraulic machines 77771
wavelet image and video coding on parallel archits. 129766
wavelet image coding method using small block DCT 73362
wavelet image compression, optimal decomp. 95396
wavelet image compression, optimum quantization error feedback filter 95285
wavelet image compression, simple and efficient algm. 95287
wavelet image compression/coding scheme 106990
wavelet lifting scheme for image compress. and reconstruct., SFG approach 95355
wavelet transform footprints, catching sing. for compression/denoising 95186
wavelet transform for real-time image compression using FPGAs 84399
wavelet video-proc. technol., compression ratios, enlargements 84384
wavelet-based image codec in memory-constrained environ., design 74484
wavelet-based image compression using fixed residual value 106950
wavelet-based image compression using shuffling and bit plane correl. 106952
wavelet-based video coder via bit allocation 95041

ta compression continued
wavelet-based VLBR video coding using image warping/overlapped block motion compensation 73384
wavelet-based watermarking for digital images/video 95368
wavelet-based watermarking for still images tamper proofing 95162
wavelets/VQ based low bit-rate video compression, replenishment tech. 73338
Web graph struct. compression 107463
Web graphs compression 107462
Web layout, optimal design, heavy tails/generalized coding 119742
Web pages, delta encoding 107084
weighted centroid neural net for edge preserving image compression 118595
weld joint inspection, thermographic images compression 78693
windowing into compressed video without re-encoding 95027
wireless cellular networks, mobility-based predictive call admission control/bandwidth reservation 120018
wireless video, error resilient codec 96325
wt.-based bandwidth allocation algm. for transporting compressed video 84498
X-MatchPRO full-duplex lossless data compressor on ProASIC FPGA 102119
XML compression with multiplexed hierarchical PPM models 106842
YK data compression algms., complexity/implement./expt. results 129998
YK lossless data compression algm., efficient implement. archit. 107468
zero-tree based coders, parent-child coding gain 106183
zerotree entropy video codec, multimedia commun., intell. pixel implement. 108488
zerotree of wavelet coeffs., image compression algm. *(Chinese)* 118636
block matching displacement estim., sliding window approach 95036

ta conversion
see also analogue-digital conversion; digital-analogue conversion
all-opt. serial-parallel & parallel-serial data convertors, MZI based 93276
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
ellipt. curve cryptographic coprocessor implement. over GF(2^m) on FPGA 106225
ESSCIRC 2000, conf., Stockholm, Sweden (Sept. 2000) 89548
GIS develop., data conversion tool, automatic recognizer, manual editor 122958
high-speed data converters for commun. systs., syst. specs. 79965
highly integrated future generation software radio basestation transceivers 119956
instrumentation converters, component tolerance, Monte Carlo anal. *(Polish)* 131850
mixed-sig. design, conf., Austin, TX, USA (Feb. 2001) 67361
multiband software radio frontend design, interf. cancellation tech. 131264
photonic data conversion for ultrafast operation 68856
reconfigurable pipelined data converter 102281
temporal rels. between conditions of data conversion systs. *(Spanish)* 102273
time-interleaved analog channel, error anal. 79992

ata conversion (software) *see electronic data interchange*

ata dictionaries *see database management systems*

ata encapsulation
2-color images, secure/invisible data hiding 118602
2D DFT, self-similar ring-shaped watermark embedding 129716
act. networking, distrib. denial of service attacks repulsion 130576
authentication with distortion constraints 129747
blind watermarking algm. in complex wavelet domain 95268
chaotic image watermarking, region-based tech. 118622
CIPRESS syst., transparent access to encrypted data using OS network stack extensions 119482
color paletted images, data hiding 118221
colour images, index data embedding method using wavelet transform 129745
compressed images, capacity estim. 95252
content-adaptive watermarking based on stochastic multiresolution image modeling 129710
DCT PM, robust digital watermark procedure for still images 118620
digital image hiding technol. based on tangram and Conways' game 95069
digital images, improved tamper-detect. method 129764
digital watermarking, algms./appls. 95352
digital watermarking, inform. retrieval 106922
digital watermarks subjected to optimum lin. filtering and additive noise, anal. 95666
European digital broadcasting introduction, computer support 86303
global area multicast, protocol independent multicast group aggregation 74208
gray level image embedding, DCT-based image hiding algm. 107017
H.263 compatible video coding, data embedding algm. 107072
halftone image, data hiding with intens.-/connection-selection 107031
halftone image data hiding improvement with intens. selection 106771
image authenticating watermarking, lossless multiresolution transform 129715
image authentication and tamper-proofing using math. morph. 129711
image authentication/ownership verification, watermaking schemes 118598
image authentication/protection, multipurpose watermarking 118597
image compression, robust data hiding 95255
image hiding, SVD/VQ based schems 84441
image SS watermarking with self-sync. capabilities 95053
image watermark extraction and modified robust embedding scheme 95054
image watermarking, coding techs. for data hiding and capacity limit 95047
image watermarking, Legendre array *(Chinese)* 95244
image watermarking, resilience against attack 95051
image watermarking, role of inform. theory 94506
image watermarking in presence of compression, energy allocation 95055
image watermarking using subband DCT 129712
image watermarking/data hiding, inform.-theoretic model 95365
images, data hiding by optimal moderately-significant-bit replacement 106919
images region and data hiding based error concealment 129787
inform. embedding and source coding with side inform., duality 129228
inform. hiding using permutations 129713
JPEG2000 coding pipeline, quantisation watermarking 118583
JPEG2000 images, scalable detect. of perceptual watermarks 118584
JPEG 2000 file format, imaging archit. 106939
low-resoln. content-based image watermarking in wavelet domain 129776
mobile multimedia commun., robust video watermarking 96261
MPEG video transcoding by spatial resoln. reduction 95094
MPEG-1 and MPEG-2 multiplexed streams, digital watermarking for copyright protection 95318
multimedia data recovery using inform. hiding 73408
multiplicative watermarks, optimal detect. 118618
multiresolution-based adaptive image watermarking scheme 129465
n-way key recovery syst. by extended cryptographic timed Petri net, spec. and anal. 118041

data encapsulation continued
obj.-based systs., message causality 108152
obj.-based systs., replica mgt. 107802
oblivious data hiding, periodic signaling scheme 106146
oblivious digital watermarking scheme with blob-oriented spatial-domain mechanism 107033
optimal adaptive DCT watermarks 118619
optimal transform domain watermark embedding via LP 95048
ordered dithered halftone images 95240
printed images, copyright labeling 118605
quantization index modulation, digital watermarking and inform. embedding 72779
random coding error exponent watermarking game 129039
reliable digital watermarking, successive subband quantization and human visual syst. 129763
robust blind watermarking scheme based on distributed source coding principles 130945
robust data hiding using psychovisual thresholding 95067
robust high capacity data embedding 95065
robust watermarking, diversity and attack charactn. 118518
second-generation watermarking benchmark, attack modelling 94507
smart transducers interface design, time triggered archit. 131824
speech sigs., imperceptibility in all-pass watermarking 118101
steganography, digital, hiding data within data 72963
steganography effects in various image formats 106331
still images copyright protection, self-similar chaotic watermarks 95052
third generation systs., MPEG-4 optimal packetisation 119966
TV broadcast monitoring, real-time digital watermarking 97046
vector Gaussian watermarking game, coding capacity 129038
video watermark embedding, ROI ident. with PCA 129698
video watermarking, robust frame-based tech. 129714
virtual hidden network 118032
visual data, digital watermarking trends 118617
watermark embedding, sig. hiding within cover image 106921
watermark-removal software, geometric distortion compensation using triangular meshes 129717
watermarking and ident. in presence of side inform. 72778
watermarking based on duality with distributed source coding/robust optim. 94266
watermarking method for embedding index data into colour images using wavelet transform 95353
watermarking using complex wavelets with resist. to geometric distortion 118621
wavelet transform and error-control coding use 95070

data envelopment analysis
coal-fired elec. power generation perform., data envelopment anal. 88591
environ. efficiencies, empirical eval., pollution prevention, end-of-pipe practice 113803
prod. proc. mgt. improvement using data envelopment anal. 67506
telecomms. indust. price cap impact on productive efficiency 119848

data exchange *see electronic data interchange*

data flow analysis
2D discrete wavelet transform with integer lifting scheme, parallel archit. 95247
KLOE trigger syst., EM calorimeter, custom electronics, efficient online monitoring 76141
PACS security model 98852

data flow computing
algorithmic level DSP synthesis, symbolic alg., multimedia appls. 125551
KLOE, DAQ syst. archit., mega-vol. data handling 87238
KLOE distrib. event building syst., proc./data flow control 131833
multi-purpose vision systs. for mobile robotics 94459
multidimensional periodic scheduling, high-throughput DSP systs., two-stage soln. 114794
phased logic, arith. ccts. 125451
pipelined dataflow small micro-coded asynchronous proc. and DCT appl. 102243
sync. data-flow graphs, parallelizing via retiming 129995
telescopic search motion-estim. archit. based on data-flow optim. 68830
turbo decoder, power-efficient layered proc. archit. 79915
user profiles for data recharging 108273

data flow graphs
asynchronous distrib. control synthesis and optim., transforms. 125353
computer networks, data flow charact. 108364
datapath operators merging improve. using info. content and required precision anal. 125360
distributed asynchronous control unit, hierarchically decomposed AFSMs, CDFG 68671
DSP, configurable, bit-width optim., multi-interval anal. 102208
DSP algms. implement., automatic word length determ. method 102248
DSP systs., parameterized dataflow modeling 118850
field-prog. mixed sig. systs., analog-digital partitioning 68947
heuristic datapath allocation for multiple wordlength systs. 79711
hierarchical timing pair model for high-level synthesis 101980
high level synthesis for strong testability of operational modules *(Japanese)* 68502
high-level synthesis, power consumption, data flow graph 68503
high-level synthesis, scheduling, allocation, and binding problems, enhanced GA 114581
pipeline scheduling, normalized scheduled data flow graph appl. *(Chinese)* 68686
resource constrained async. scheduling method via DFG transform. 101971
resources sharing, synthesis algm. 125558
sync. data-flow graphs, parallelizing via retiming 129995
sync. data-flow graphs retiming, execution time reduction 118849
testable data path synthesis, GA 114731
testable data path synthesis, GA 125404
timed Petri net scheduling, branch-and-bound 78862
VHDL behavioral-level designs, verif. pattern gen. for coding error detect. *(Korean)* 114568

data flow languages *see parallel languages*

data fusion *see sensor fusion*

data gloves
3D hand pose reconstruction using specialized mappings 106556
bend angle sens., VR data glove appl. 75451
HandTalker, multimodal dialog syst., sign lang. and 3D virtual human 73110

data handling
see also associative processing; cryptography; data analysis; data privacy; data reduction; document handling; electronic data interchange; exception handling; merging; multimedia computing; sorting; string matching; symbol manipulation; table lookup; text editing
Advanced Land Observing Satellite, telemetry, tracking and command subsystem 85910
Aura project TES instrum., ground data systs./flight operations 133320
automobile laser-radar collision avoidance, microcomputer control syst. *(Chinese)* 134571
automotive test data mgt. 100272
CHORUS emulsion expt., CERN 87251
distributed machine vision syst. using Ethernet networking 113735
DVD-RAM camera, real-time recording and PC interface 120580
Flexible Image Transport System (FITS) 130628
geo-spatial image and data exploitation, automated, conf., Orlando, FL, USA (April 2000) 76942
key-variable anal. in data reconciliation, gross error detectability *(Chinese)* 109391
KLOE, DAQ syst. archit., mega-vol. data handling 87238
mobile computing location data mgt. via hybrid scheme 85638
PCB design archiving systs. 115123
reliab. calcs., fuzzy nos. use 115817
rem. sens. with self test, new opportunities for phys. transducers perform. improvement 132086
Space Solar Telescope star sens., high accuracy attitude determ. 98907
spacecraft command & data handling subsyst., level-0 telemetry collection 133241
target tracking, multi-pattern probabilistic data assoc. 107324

data hiding *see data encapsulation*

data integrity
bandwidth-conserving cache validation schemes in mobile database syst. 108134
Blum-Goldwasser's probabilistic public-key cryptosystem, digital signature *(Chinese)* 129339
BT inform. assurance programme 119541
cached Web objs., mutual consistency maint. 74250
clinical PACS, research and teaching access 89608
concurrency control for syst. with data broadcast 130822
context switch reduction tech. for real-time task sync. 84988
cryptographic protocol, data commun. *(Chinese)* 84969
dependable Internet based online auctions, hierarchically struct. 74289
Honeywell Global Home Server, home automation commun. security syst. 119711
Internet e-commerce exchange syst. trustworthiness 119586
Mercury NTDR Information Security syst., software security and 80486 μP 108560
message authentication in broadcast networks, prepositioned secret sharing scheme 118034
mobile commun. appl., parallel proc. scheme based on transaction partitioning *(Chinese)* 74839
mobile multimedia appls., secure commun. protocol 107863
optimal scalable security archits. in presence of colluding mobile traitors 72962
public key infrastructure appl. to electronic commerce *(Chinese)* 129235
quasi-consistency and caching with broadcast disks 108135
SD-link for secure collaboration across private networks 85248
seq. logic ccts., design diversity for concurrent error detect. 102045

data interchange *see electronic data interchange*

data interfaces *see electronic data interchange*

data loggers
abdominal temp., rem. meas., miniature data loggers 76215
ambulatory med. instrumentation, data logging technol. appl. 87304
CDMA-based wireless data transmitter for embedded sens., machine health monitoring systs. 120112
domestic load assess., intell. syst. 99434
environ. data loggers 132092
GPS meas. of homing pigeon flight track 86255
hemiplegic patients, gait param. assess. by accelerometry 76221
IT earthing syst., elec. network insulation, selective control *(Serbian)* 122782
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
SCUBA dive monitor 75386
sleep related respiratory disease diagnosis, home appl., cardio-respiratory biosignals 121881

data marts *see data warehouses*

data mining
3-phase squirrel cage motor, bar/end-ring connector breakage faults diagnosis 123420
adaptive intrusion detect., data mining approach 73301
aircraft engines, abnormal behavior detect., data mining appl. 76816
ART neural network with rule extraction as data mining tool 94859
axiomatization of generalized entropy of partitions 83782
breast cancer diagnosis, CSP, neural net approach 122133
custom intrusion detect. filters using data mining, develop. 111588
demand forecasting for telecomms. products from cross-sectional data 85076
dist. education, Web mining 89619
distributed simul. perform. data mining 130372
drop test anal. of electronic products, intell. data mining syst. 124298
electronic mail, automated answering syst. using inform. extraction and natural lang. generation 119516
electronic mail mining using similarity-based agents 119523
EMG, multifunctional platform develop. 98172
event correl. rules discovery 130682
event data, scalable visualization 96172
feature discovery, deterministic generative models 129737
feature subset selection by Bayesian networks, comparison with genetic and seq. algms. 118449
field quality watchdog task, data mining appl. *(Japanese)* 113771
fuzzy rules extraction by hybrid method for pattern class. 129594
GA-based algm. for searching optimal params. *(Chinese)* 106808
GSM/DCS mobile radio network, database alarms intell. search 131118
HV transm. line fault diagnosis, data mining, rough set theory, GA *(Chinese)* 123008
IC test data mining to optimize VLSI testing 70261
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IM bar/end-ring connector breakages, data mining, FEM 134033
image proc. appls. of inform. mining 84152
image recogn. and understanding systs., knowledge base constr. 95409
Internet mktg. needs bal. with consumer concerns, property rights framework 85175

data mining continued
Internet traffic pricing, incentive-compatible, consumers' private inform. extraction 96028
intrusion detect. for network connections, data mining approaches 85141
K-nearest neighbor algm. for data mining, stat. approach 95564
knowledge discovery from fMRI brain images by logical regression anal. 87
METRICS, syst. for automatic recording and predict. of design quality met 81452
mobile DSS develop. 108296
mobile phones, location query proc. via behavior based strategy 96613
multidimensional objs. visualisation and socio-economical impact to activity EC RTD databases 84182
network mgt., traffic prognosis, knowledge discovery *(German)* 119472
next generation intell. reconfigurable mobile networks, OO organic arc 130935
OLAP proxy-server archits. 85249
olfactory sig. class. by neural nets 109774
parallel data mining, dyn. rem. memory use on ATM-connected PC cluster *(J anese)* 119596
PCB defects, data mining for quality engng. 78586
pers. opt. disk library, knowledge engng. 93002
pers. paging area design based on mobile's moving behavior 120482
planar evanescent microwave imaging NDE probes, high resoln./scan r 101579
power syst. control and mgt., intell. syst. appls. 77206
power syst. data mining appl. prospects *(Chinese)* 122783
power syst. data mining technol. appls. *(Chinese)* 111919
power syst. data warehouse/data mining techs. appl. *(Chinese)* 122833
power syst. short-term load forecasting using data mining method *(Japane* 77293
power transformer database data mining, self-organising map *(English)* 1126
rem. sensed satellite data mining 74902
robust dist.-based clustering with appls. to spatial data mining 68069
semicond. mfg., data mining tool, rough set theory 67526
semicond. mfg. data mining via integrated relational database 80969
semicond. mfg. problems solved by data mining 67517
semicond. proc. steps, stat. inform., Web based mining 79509
streaming-media knowledge discovery 119778
streams, signature-based methods 119810
telecomms. network monitoring, chronicles discovering 108048
texture feature anal. using assoc. rules 107143
time series symbolization, fuzzy neural network clustering algm. 73312
time-series pattern matching using deformable Markov model templates 677
WAP log mining as monitoring tool for m-commerce *(German)* 74136
Web site traffic anal., interactive, multidimensional, using OLAWEB 10836
WWW mining, low-complexity fuzzy relational clustering 108195

data models
brain, metabolite sigs., ^{1}H mag. reson. spectra anal. 87635
digital terrain modelling & indust. surface metrol., commonalities 113755
distributed sens. arrays, source localization 77125
feedforward neural network archit. develop., factorial design 114912
ISAR imaging of moving targets, robust autofocus algm. 120424
Landsat-7 ETM+ internal calibrator, data models 122551
power syst. planning, protection settings DAQ, data model 77571
Pb-free solders database develop., NEMI project 115187

data portability *see electronic data interchange*

data preparation
see also word processing
ASIC data prep. mgt. for opt. proximity correction 101938
CATS design data transcription streamlining for memory products, mask manu facture 102157

data privacy
see also cryptography
always-on network services 130796
anonymous coin marking, privacy protection against blackmail 106264
audio-video rem.-patient monitoring via Internet, privacy protection 74440
Bluetooth equipped gadgets, usage patterns *(German)* 130844
CIPRESS syst., transparent access to encrypted data using OS network stack extensions 119482
clinical PACS, research and teaching access 89608
completeness theorems for secure two-party computation 72952
computer and commun. security, conf., Singapore (Nov. 1999) 100405
document objs. resulting from multi-party collaborative transactions, crypto graphic framework 106245
electronic commun., ties that bind, connections, comet cursors, and consen 85174
Honeywell Global Home Server, home automation commun. security syst 119711
identity mgt. syst., multilaterally secure commun. 108350
Internet, tech., economic, legal and social trends 85206
Internet electronic authentication syst. using secure device *(Japanese)* 85188
Internet privacy, traffic anal., protocols, attacks, design issues 108256
Internet telephony, Mitel Semiconductor develops. *(Spanish)* 108076
IP telephony systs., vulnerabilities and security limitations 119310
IS-95 CDMA, voice privacy anal. 131236
legal documents, transm. over Internet, security 130619
message authentication in broadcast networks, prepositioned secret sharin scheme 118034
mobile commerce, one-to-one mktg., consumer protection *(German)* 74372
mobile e-commerce, intrusion tolerance schemes 85308
mobile Internet commun. services, secure authentication infrastructure 119508
mobile multimedia appls., secure commun. protocol 107863
mobile telephony, location technol., data protection 131182
multistage secret sharing scheme based on factorization problem 106293
next generation networks, required security features 108189
Onion Routing security for anonymous Internet connections 108257
pers.-location and pers.-tracking technols., risks and policy implications 10073
privacy enhancing technol., anonymity, unobservability and pseudonymity 108011
privacy enhancing technols. conf., Berkeley, CA, USA (2000) 100408
private bidding and auctions with oblivious third party 106221
random binary blocks for security appls. 119706
randomized commun. protocol, privacy and partition arguments 95855
rem. patient monitoring, secure home appliance access 122466
retroactive data confiscation vs. proactive key escrow, equitability 106274
SD-link for secure collaboration across private networks 85248
SIMBA user alert service archit. for dependable alert delivery 108088
targeted advertising and consumer privacy 129302
video watermarking, robust frame-based tech. 129714

a privacy continued
virtual hidden network 118032
Web MIXes, syst. for anonymous and unobservable Internet access 108258
wireless mobile computing, security and privacy issues 85307
a processing (administrative) *see administrative data processing*
a processing industry *see DP industry*
a querying *see query languages; query processing*
a recording
ambulatory physiological monitor for animal welfare studies 121968
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
automotive telematics systs., safety/efficiency benefits 134590
azo-modified polymer film on liq.-cryst. cells, trans-cis photoisomerisation, opt. data recording 93020
biological sigs., long-term DAQ, storage and presentation, Microsoft Windows appl. 110527
community telemedicine services, model develop. 133184
generator-transformer unit, integrative state detect./record syst., APCI indust. computer *(Chinese)* 134121
in-car spoken dialogue recording syst. *(Japanese)* 84030
mobile obj. geographic posn. recorder, GPS/microcontroller-based *(Polish)* 131692
myocardial infarction patient care, data transm. from moving ambulances 133167
PCB reflow soldering proc. thermal profiling 102824
physiological press., method for recording, storage and anal. 110657
power system faulty waveform recording, waveform distortion, waveform recovery *(Chinese)* 77475
seismic instrumentation, Indian, recent advances 98942
Tornado 2HD modular nonvolatile solid-state data recorder design 97161
TeO_x thin film, SW recorded marks obs., AFM 127579
a reduction
see also data analysis
ALICE expt., image compression for silicon drift detectors 132352
analog DAQ boards with onboard proc. for PC-based tasks 120670
ATLAS pixel detector electronics 98065
BIRD satellite on-board thematic data proc., neural chip class. 99044
chirp-pulse microwave computerized tomography, response fn. computation 87562
compact disc, filter banks, Lie groups 109389
coronary angiography, image compression viability, JPEG/wavelet data reduction 110969
Counter Sniper, small projectile and gunfire localization syst. 107412
EOS multiangle imaging spectroradiometer, in-flight calib. 109420
factorial k-means anal. for two-way data 113881
Infrared Space Observatory, ISOCAM LW transients 120933
Infrared Space Observatory, ISOCAM SW transient effects 120932
Infrared Space Observatory, ISOCAM-LW dark current 120926
Infrared Space Observatory, ISOPHOT transient effects 120931
IR images, fuzzy c-means clustering with brFCM algm. 118488
IR imaging, appl. of ensemble learning ICA 121879
multispectral and hyperspectral imagery, data reduction based on catastrophe theory appl. 73385
reverse engng., data reduction methods from laser scanning 67516
Rosetta Lander anchoring harpoon, accelerometry meas., data reduction 76798
satellite imagery, improved neural network tech. for data dimens. reduction *(French)* 111375
space antenna, structural damage detect., neural network and freq. response fns. techs. 128872
SPECT filtered backprojection images, partial vol. effects correction 122248
speech synthesis inventories, data reduction *(German)* 73091
terrain mapping, slope-aspect, interpolated data 122606
thin delta wings, testing, thin internal strain gauge bal. 122510
ta representation *see data structures*
ta security *see security of data*
ta structures
see also abstract data types; data models; spatial data structures; tree data structures; type theory
annotated data types for addressed token passing networks 85222
apnea recogn., neural network based approach 121882
ATM network monitoring via network mgt. tool 85140
automotive parts, CAD-guided dimens. inspection, graph-based surface merging 100622
bursty access pattern, dyn. lookup scheme 130707
color image compression, locally adaptive resoln. method 129769
computer networks, open approach for deployment of prog. nodes 130418
COMVIS, commun. framework for computer vision 118309
convex-polygons, optimum packing by seq. table data struct., VLSI layout appl. 81426
cpd. eye model of proc., direction quantization 84076
digital video servers, segmented inform. dispersal 109379
direct approach for computing shortest rectilinear paths among obstacles in two-layer interconnection model 70241
distrib. automation syst. data struct. *(Chinese)* 122862
distrib. control center efficient topol. proc. 111863
dyn. Web content, class-based cache mgt. 130694
edge-based finite element techs. for nonlin. solid mech. 114175
finite element-based algms., mag. scalar pot. cuts, topol. constraints/computational complexity 72160
FPGA-based reconfigurable computers, hierarchical memory mapping 79701
fuzzy clustering based on cooccurrence matrix, data retrieval appl. 118439
Genevieve based semi-formal test generation 125368
geometric/topol. aspects of finite element algms. 68066
global convergence and implement. of NGTN method for solving large-scale sparse nonlin. prog. problems 100933
halftone image data hiding improvement with intens. selection 106771
hierarchical timing pair model for high-level synthesis 101980
image retrieval, dimens. reduction 94937
indust. DSP block, semi-formal test generation, Genevieve methodology 102202
integrated framework for transport of real-time MPEG video over ATM best effort service 96313
Internet MIBs, reverse engng. 130559
IP multicast implement. based on open shortest path first protocol 85010
layered depth image compression algm. 107064
learning database syst. for computer network mgt. fns. 119464
multi-purpose vision systs. for mobile robotics 94459
multi-viewpoint image data, model-aided coding 95223
multiresolution proc. for robust mesh watermarking 73508
data structures continued
non-slicing floorplanning algm. using corner block list topol. represent. 81429
P systs. with picture objs. 106738
partial surface reconstruction from range pictures 84148
PC-to-singlechip serial commun. based on OSI network hierarchy module *(Chinese)* 74354
qtr.-state seq. for floorplan represent., layout optim. appl. 81428
radiography, image class., hierarchic finite normal mixtures 110974
reduced ordered BDD, variable ordering by scatter search 125188
refinement, encoding/decoding 83881
SCADA/PAS/DTS integrat. graphic support syst. *(Chinese)* 77262
self-federating aviation simul. using HLA 125391
sig. proc. syst. synthesis through generalized Fibonacci interconnection topologies 130012
SLASH deterministic block placement algm. based on seq.-pair 81427
sum of pseudoproduct logic minimization using XOR gates 125432
TCP/IP protocol, QoS mapping and adaptive negotiation mechanism *(Chinese)* 84942
tetris-hashing or optimal table compression 72978
topol. encoding of 3D segmented images 94979
video data rep./compression, texture recogn. 95407
visual inform. modeling/mgt., logical framework 94770
VLSI layout topol. reuse by parametric BSG 81425
wavelet domain recogn., survey 107147
Web graph struct. compression 107463
YK data compression algms., complexity/implement./expt. results 129998
data tables *see collections of physical data*
data transfer formats *see electronic data interchange*
data transmission equipment *see data communication equipment*
data visualisation
2D cardiovascular vel. maps, visualisation with Hilbert transform 87659
3D brain vessel visualization on immersive projection syst. 87569
3D cortical surface flattening of improved 2D visualization *(Chinese)* 110876
3D med. image modeling of scatt. data based on data-depend. criteria 76524
3D med. image reconstr., vol. rendering, shear-warp transform. 94579
aberrant behavior detect. in time series for network monitoring 108025
aeronautical education course problems soln. using spreadsheet fluid dyn. 100452
aircraft maint., phase stepping shearography, improved software 122496
animal behavioral anal. by water maze tests, computerized syst. 129519
battlefield, digital, appls. of scalable sing. 3D modelling 77122
blood vessels, deformable model with single point init. for segmentation, quantification and visualization in 3D MRA 87590
C^2 systs., visualisation to support planning/assess. 99120
cardiac elec. activity imaging and 3D visualization 110635
cardiology, anatomical struct./ventricular shape, intermixed visualisation 132526
color conspicuity model for visualization 129592
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
Delaunay conforming iso-surface, skeleton extraction and noise removal 101128
distrib. syst. operation-order-sheet, visual/universal realisation *(Chinese)* 112046
DynCT real-time motion-compens. reconstr./visualis., 3D CT fluoroscopy 87737
ECG data transm., real-time, via Internet for non-clinical appls. 111294
echocardiographics images, 3D modeling and visualization of ventricles 132610
echocardiography and Doppler tissue imaging, myocardial vel. meas. 132608
EM field visualization using VR modeling lang. std. 128650
EM modeling and visualization tools using FDTD tech. 93991
endoscopic visualization systs., telesurgical perform. comparison 87798
endoscopy, virtual, WWW-based, for CT anal. of bronchial airways 110946
EthoVision, video tracking syst. for behavioral expt. automation 129520
event correl. rules discovery 130682
event data, scalable visualization 96172
fault diagnosis in rotary mach., virtual environ. 86429
fish behavior visualization using successive 3D shape modeling 73210
FlowScan, network traffic flow reporting and visualization tool 108123
fMRI data, graphical display, multidimensional space visualisation 87602
Fourier-wavelet vol. rendering by view interpolation 94495
gel-phantom absorbed dose imaging, 3D data visualis. toolkit 133133
hip joint, newborn, 3D visualization using ultrasound and automatic image segmentation 110724
IFSAR for rapid terrain visualization demons. 111628
image compression and visualization software environ., hierarchical grid interpolation 95019
image-guided surgery, computer vision 132540
interactive multimodal visualization syst., archit. 87339
Internet imaging conf., San Jose, CA, USA (2001) 94755
Landsat-7 ETM+ internal calibrator, data models 122551
LV segmentation/VRML visualization in echocardiographic images 76370
max. intens. projection, fast hierarchical algm. 98131
max. intens. projection, fast progressive method 106712
maxillofacial operation planning using VR techs. *(German)* 111076
med. comprehensive anal. syst., sig./inform. proc. 76203
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
med. sig. proc., Software Monitor appl. 87399
mil. centres and equipt., intell. agent systs. 88257
MIPAV (Medical Image Processing, Analysis and Visualization) program appl. in clinical research 110544
mobile agent executions, visualization 74222
MR guided endovascular radiological interventions 87687
multi-machine power syst. dyn. visualisation 88333
multicast stats., scalable archit. for monitoring and visualization 96169
multidimensional images extraction, visualisation, and manipulation 94978
multidimensional objs. visualisation and socio-economical impact to activity in EC RTD databases 84182
multimodality image fusion toolkit, high-speed interactive fusion 76433
multiresolution modelling of polygonal surface meshes using triangle fans 90191
network intrusion detect. via visual browser design 130598
network simul. environ. for network graphs 85067
neurosurgery, US/MRI overlay with image warping 87477
osteoporotic bone, encoded FTIR microspectroscopic data visualizationy 110852
Paks VVER-440 units, PLASMA on-line safety monitoring, EOP visualiz. module 112230
power syst. data mining appl. prospects *(Chinese)* 122783
protocol behaviour compositional constr., arbitrary channel capacity 85064
QoStat, tool for eval. of QoS capable routers 107937
radiotherapy, body surface sens./visualisation, background correction 110965
range restricted scatt. data interpolation using convex combination of cubic Bezier triangles 124578
real-time freehand 3D ultrasound syst. for image-guided surgery 110758

data visualisation continued
resource selection mechanism for complex network services 119701
retinal image digitization, optim. for improved digital proc. and visualization 110850
Smith charts program, PC assisted tutorial 83467
soft tissue deform. simul., improving triangle mesh quality with SurfaceNets method 79140
solid med. images navig. by pencils of sectioning planes 76210
SPIDER, design and provisioning tool for protected lightpaths in opt. networks 109119
splines for sig. proc. 129462
steam turbine cogen. syst. perform., spreadsheet model *(Spanish)* 133864
stereotactic neurosurg., image guided, functional database 76601
substation operation order prep., visual/self-acting universal design syst. *(Chinese)* 123678
surface reconstruction from planar sectional contours 84539
surgical interventions under video-augmented X-ray guidance, appl. to needle placement 87799
TCP/IP protocol in indust. visualisation systs. *(Polish)* 130656
thermal plasma flows, visualization and diagnostics 87031
time-varying power syst. harmonics visualisation using Morlet wavelet transform 99367
TLM, FDTD and Haar wavelet MRTD algms. for EM simul. 93956
Tropospheric Emission Spectrometer ground data syst., sci. data visualization 133323
truncation proc., asperity profile changes, interferometric microscopy 113758
turbine rotor thermal stress, pre-proc. and post-proc. in FEA, visualization *(Chinese)* 77751
US NDT data proc., 3D graphics role, adv. software environ. 114539
US phased array focal laws simul. on 3D solids, ray tracing 111544
US sens., simul./visualisation with lattice gas model 88204
ventricular shape visualization using selective vol. rendering of cardiac data sets 132518
Vesselize syst. for anal. and visualization of mag. reson. angiography 98393
Visible Man lower extremity visualization, segmentation by evol. 98143
Visual-FSSEM, unsupervised data visualization and interactive feature selection 73455
weld inspection, US data reconstr., visualis. & anal., AutoCAD(R)2000 100644
wired and wireless platforms, collaborative multimedia appls. 108405
wireless packet switching networks, computer tool for anal. and prediction 108726

data warehouses
intrusion detect. for network connections, data mining approaches 85141
middleware for unified resource mgt. 130554
next generation intell. reconfigurable mobile networks, OO organic archit. 130935
OLAP proxy-server archits. 85249
parallel data mining, dyn. rem. memory use on ATM-connected PC cluster *(Japanese)* 119596
power syst. data warehouse/data mining techs. appl. *(Chinese)* 122833
power syst. data warehouses 99182
wireless technol. appl. 131218
XML Web based motion capture data warehousing and translation syst. for collaborative animation projects 94854
GaAs MMIC yield mgt., data-driven strategy using data warehouse 115011
GaAs chip fab. facility, data-driven yield mgt. syst. 103969
GaAs vol. prod., systematics and key perform. indicators 126928

database indexing
3D generalized shape sampling method/file format for storage or indexing 95204
automatic model-based semantic obj. extraction algm. 129690
broadcast of data, power efficient, hybrid index tech. 96222
content-based indexing in MPEG-[1,-2 & 4] domains 95028
content-based video indexing/retrieval, scene change detect. 84445
digital video seqs., long transit. anal. 94769
dyn. content multimedia databases, audio signatures indexing 106353
face detect. algm. for video database appls. 94640
face detect. for multimedia appls. 94641
feature indexing in database of digitized x-rays 94912
HERA event indexing systs., software design, anal. 97159
hierarchical histograms, image-based data retrieval representation 84289
IBMAS (Internet-Based Medical Archive System) 111302
image indexing based on VQ 94468
image indexing/machine vision, color representation 95533
image retrieval, dimens. reduction 94937
image segmentation by movement estim./contour extraction 106482
Kansei retrieval syst. for distributed multimedia databases, design 96281
MPEG-7 based TV news programs indexing/retrieval 118483
parametric description of obj. motion using EMUs 94673
pollen grain images, nonlin. features extraction 121864
QoS dyn. mapping control for streaming video in relative service differentiation networks 85253
real-time multimedia obj. commun., distributed Web-based framework 85380
robust image hashing 95364
scale invariant interest points based indexing 106570
scene change detect. using, cross entropy 107129
shape indexing by dyn. prog. 118464
shapes recogn. by editing shock graphs 107174
similarity measure for color image indexing 94765
spine X-ray images, computer-assisted retrieval of biomedical features 110975
streaming-media knowledge discovery 119778
template matching approach to content based image indexing by low dimens. Euclidean embedding 106644
video indexing/retrieval, semantic concepts inference 94942
video objs. segmentation/tracking, content-based video indexing/interactive TV/prod. systs. 94645

database management systems
see also data models; database indexing; database theory; deductive databases; distributed databases; meta data; multimedia databases; object-oriented databases; relational databases; very large databases; visual databases
ad hoc network mgt. with C2 data models 88236
aircraft repair notes, free-text, inform. extraction 133204
AMPAC database, boot program for printing machine, intell. printing 94879
animal behavioral anal. by water maze tests, computerized syst. 129519
automatic labeling of prosodic events *(English)* 73012
border pricing protocol for inform. exchange between autonomous systs. 119275
cellular network mgt. goals, data-centric solns. 130548
congestion controlled imaging linking plane protocol, database compression/expansion/mgt. protocol layer 107820

database management systems continued
data organization and retrieval on parallel air channels 85566
distrib. network GIS, database design, graph protraction *(Chinese)* 112047
district power network, integrated automation syst. *(Chinese)* 77245
e-mail-based inform. sharing syst. for intra-corporate coord. 119515
ECG annotated database, design and devel. 132554
elec. utility maint. programme optim. using data mgt. 88294
EMG, multifunctional platform develop. 98172
HERA event indexing systs., software design, anal. 97159
hierarchical bus networks data mgt. 108252
Internet MIBs, reverse engng. 130559
Internet-based med. teleconsultation syst. 133199
large-scale mobility databases in cellular telephone networks, overflow elimination 74632
med. equipt., repairable, failure database/rate model 89914
metrical phonology eval., computational-empirical approach *(English)* 73011
MIB variable based fault class. for proactive mgt. 130561
mobile client-server database systs., mobile client caching with asynchronous broadcasting 84947
mobile computing location data mgt. via hybrid scheme 85638
mobile networks, location tracking, integrated strategy 97010
mobile radio, multilevel secure database, advanced transaction scheduling 131195
motor drives, LV elec. equipt. selection 78202
multidimensional objs. visualisation and socio-economical impact to activity in EC RTD databases 84182
noninsulated overhead distrib. lines, perform. enhancement 133756
occlusion models for natural images, stat. study of scale-invariant dead leaves model 118304
oil pipe erosion assess., grey target theory software 113750
on-the-fly location referencing/obj. embedding for navig. databases 134588
one-way trapdoor permutations for non-trivial single-server private inform. retrieval 107944
optimal algms. for multiple query problem on reconfigurable meshes 118721
PCN mobile database overflow resoln. with most idle replacement 131157
PCS, caching-based location mgt. 108669
PCS mobility databases restoration scheme 131158
pers. commun. service networks, dyn. database mgt. 74774
power syst. consistent reliab. database building, user-friendly tool 122786
product family, database-centred requirements mgt. and spec. 113445
RTO-Grid Florida GIS, transm. assets transfer, GPS 122826
sectorized proximity location mgt. 97009
SNMP GetPrev for efficient large MIB tables browsing 130560
speech biometrics syst. with multi-grained speaker modeling *(English)* 73096
speech sig. data banks, interrogation/maint. tools *(German)* 73089
SyncML initiative, std. for pers. data synchronisation 130841
TINA accounting archit. mgt. security 130589
Web-based patient diagnosis data mgt. syst. 132547
wireless mobile commun., delayed location registration procedure 131261
Pb-free solders database develop., NEMI project 115187

database querying *see query languages; query processing*

database theory
adaptive image database using wavelets 106763

databases *see database management systems; information services*

databases, online *see information retrieval systems; information services*

dawn chorus *see atmospherics*

DBR lasers *see distributed Bragg reflector lasers*

DBS *see direct broadcasting by satellite*

DC-AC power convertors
see also invertors
2.2 kW PWM rectifier/inverter CMV suppression 134210
2.4 MVA soft-switched modular MV drive, design considerations 134201
4 kW, 42 V induction machine-based automotive power generation scheme 134565
10 kVA offshore wind farm HVDC interconnection model 99589
10 kW PV power syst. modelling using equiv. elec. cct. method 112418
13.56 MHz current-source generator using HF CSI approach 123623
25 MVA three-level NPC inverter topol., IGBT series connection 134181
48 V telecom. power supply systs., dimensioning aspects 108450
50 kW grid-connected PV power syst., design, develop., perform. 112409
125 W high-press.-mercury lamp full-bridge reson. inverter ballast 89439
250 W high-press. mercury vap. lamps using buck-boost inverter topol. 89437
250 W metal halide lamp electronic ballast develop. 134633
500 W series-reson. DC/AC inverter for impedance-load drives 77960
±500 kVA static VAr generator, GTO dead zone compensation study *(Chinese)* 111727
AC motor ASDs, PWM operation adverse effects elimination 134475
AC motor drives, DC supplied, DC-AC conversion strategy optim. 123915
AC motor drives modelling for transients anal. appls. 134457
AC/DC/AC converter with H-bridge cascade five-level PWM inverter 78015
act. power filter perform. without compensation current detect. filter 89037
act. power filter robust current tracking control design 123711
act. power filters, expanded current sync. detect. algm. 134333
adjustable-speed sync. motors harmonic reduction 112472
advanced SVC using three-level NPC inverter, robust control scheme 88367
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
ASD ride-through syst. using CMV 123935
auxiliary reson.-commutated snubber-linked three-level IGBT ZVS VSI 134203
auxiliary reson.-commutated soft-switching inverter topol. 134200
batt. storage PV power plants, real-time monitoring/eval. 88649
bidirectional sinusoidal HF PWM inverter design 99820
BLDCM drive syst. for EV appls. 123960
boost converter, DC-AC power conversion, VSS control 114602
brushless DC traction motors, perform. anal. studies 123974
brushless doubly-fed reluctance machines, PF control 123366
brushless doubly-fed reluctance machines, pump/wind turbine appls. 133985
brushless doubly-fed reluctance machines control strategies *(English)* 77843
bypass orifice inverter heat pump, thermal perform. study 100340
cascade double Γ-CL current source reson. inverter anal. 134161
class E isolated DC/DC power converter anal. and design 88963
cold cathode fluoresc. lamps, piezoelec. transformer electronic ballast 134631
compact DC/AC inverter for large electroluminesc. lamp 99766
const.-voltage const.-freq. PWM DC/AC converter, repetitive learning controller 88941
coupling static converter with control loop/nonlin. EM devices 125220
current fed DC-AC reson. converter, dyn. ZVS direct on-line start up 123610
diesel-elec. locomotive double-feed induction generator, state feedback control 113103

C-AC power convertors continued
distributed generation syst. act. power harmonic filtering optim. *(Japanese)* 133905
distributed PV power supply systs. implement. 123261
doubly-salient PM motor flywheel for building-integrated PV power systs. 89311
DVR™ PM platform-mounted dyn. voltage restorer, field experience 77225
EconoPACK+ modular IGBT inverter design platform 77993
EconoPACK+ six-pack IGBT module invertor package 88883
EconoPACK-Plus large-capacity 6-in-1 IGBT module 126795
elec. drives, automatic nonlin. auto-tuning method, Hammerstein modeling 78219
elec. rly. vehicle brake force improvement using capacitance *(Japanese)* 78244
EMO-SR10 full flat cabin combination microwave oven *(Japanese)* 124130
EV AC motor drive soft-switching inverters comparison 134203
EV air conditioning inverter/compressor develop. *(Japanese)* 89417
EV power batt. perform. testing syst. *(Chinese)* 78125
FACTS UPFC simul. techs. 111861
fixed-speed IM PWM invertor-based ASD retrofit 134496
fluoresc. lamp ballast crest factor improvement using PFM 134606
fluoresc. lamp electronic ballast using half-bridge reson. invertor 89440
fluoresc. lamp electronic ballast with no series pass. elements 89436
fluoresc. lamp electronic ballasts, toggled duty cycle current control 134617
fluoresc. lamp electronic ballasts topologies comparison 89433
flux control techs. 77985
gas discharge lamp self-oscillating PFC electronic ballast 89438
grid-connected AC module inverters islanding prevention 112414
grid-connected PV power syst. inverters, PIC microcontroller 123262
grid-connected PV power systs., power generation mechanism 112411
grid-connected wound rotor induction machine, sensorless direct power control 77861
hard-switched inverters using CoolMOS switches, reverse recovery minim. 134176
hard/soft switched PWM invertors, conducted EMI emissions modelling 123635
HF SPWM VVVF syst. for AC machine speed control *(Chinese)* 77809
high-perform. AC power supplies, sync.-frame harmonic control 77984
high-power IGBT CSI for AC motor drive appls. 134183
high-power IGBT inverter for induction heating appls. *(German)* 112618
hybrid act. power harmonic filter topol. develop. 89034
hybrid EV novel drive strategy 123956
IGBT PWM inverter-fed IM, insulation charact. anal. 134047
IGBT PWM VSI-fed IM drives, series line termination net 123926
IGBT SPWM VSI harmonics restraint/anal. studies *(Chinese)* 88814
IGBT-based freq. converters for IM drives 112663
IM drive design, freq. converter filter charcts. optim. 113081
IM drive direct torque control, inverter state selection 89364
IM drive direct torque control approach 113044
IM drive direct torque control strategy studies 123876
IM drive direct torque control using enhanced inverter switching 78205
IM drive DTC using fuzzy variable switching sector 134502
IM DTC-based speed control, ASIC design 134051
IM param. ident. from step response *(Korean)* 123442
IM sensorless control systs. develop./anal. 123439
IM total losses/temp. rise determ. using equiv. loading methods 112498
IM vector control, space-vector modulation tandem inverter 123428
IM winding voltage distrib., PWM IGBT inverter effects 88728
inaccessible neutral induction machines air-gap flux posn. estim. 88744
induction heating current-fed inverter AFC 124100
indust. plants act. voltage correction technols. 134671
interior PM sync. motor params. determ. approach 123385
inverter topologies for IM drive vector control appls. 88988
inverter-fed AC motor drives, two-phase PWM techs. 123896
inverter-fed arc welding machine, mixed I-V control scheme 89472
inverter-fed three-phase small IM design guidelines *(Japanese)* 88723
invertor DC-link cct. fuses, harmonic power losses prediction 134230
IPM sync. motor drive response to single-phase open cct. faults 89326
LCD backlight inverter topologies anal. 134249
lin. fluoresc. lamp inductorless piezoelec. transformer electronic ballast 89435
long-dist. IM driving, overvoltages avoidance 88726
LV AC motor winding damage, PWM invertor effects studies 123324
mag. flux control PWM invertor principle/implement. *(Chinese)* 78017
manipulator two-layers feedforward posn. control syst. 123698
metal halide lamp electronic ballasts, acoustic reson. prevention 89434
micro-turbine generators, dispersed generation perform. charact. 112478
modular multilevel inverter for HV AC power supply appls. 134247
modulating fn. PWM inverters, polynomial sampling algm. 123630
multi-bridge PWM inverter static sync. compensator, dyn. charcts. *(Korean)* 122868
multi-inverter STATCOM transformer syst., equiv. short-cct. impedandance *(Chinese)* 122807
multi-level VSI optim. for MVDC transm. systs. 123625
multilevel inverters optimised space vector switching seqs. 88923
multiple three-level NPC inverter systs., circulating current control scheme 112652
multipulse power converters/controls for HVDC and FACTS systs. 88876
MV IM drive with integrated DC link choke 134474
MV power converter topologies for high-power appls. 134205
neutral point three-phase inverters, PWM algms. develop. 112651
nine-phase reluctance motor drive, perform. eval. expts. 134476
periodic PWM invertors, mixed p-z anal. approach 78003
π-LC power converter topol., immittance conversion theory-based 123624
pipeline fluid heating using PWM invertor-eddy current dual pack heater 124099
PM AC/DC motor drives, DSP-based integral variable struct. control 123943
PM sync. motor fuzzy logic controller modelling 123352
power QC using redox rechargeable batt. syst. 112063
PV modules generation control cct. 77797
PWM AC motor drives, full digital sync. frame current regulator 134469
PWM converter-inverter syst., fast dyn. DC-link power-balancing scheme 99823
PWM CSI using symmetric gate-commutated thyristor 77987
PWM CSI-fed PMSM drive expts. 123886
PWM inverter drives, motor bearing currents reduction studies 123616
PWM inverter high-power IGBT module ratings for traction appls. 78046
PWM inverter switching three-phase harmonic systs. characterisation 123569
PWM inverter-fed IM bearings, capacitively-coupled discharge currents 88740
PWM inverter-fed IM drives, conducted EMI prediction 134048
PWM inverter-fed induction machine, torque/stator flux control 123431
PWM invertor switching pattern generators, FPGA implement. 123654
PWM invertor-fed AC motor drives, HF model for EMC anal. 134453
PWM invertor-fed IM, fuzzy posn./speed control 123433
PWM invertor-fed IM acoustic noise, fan cowl influence 123408

DC-AC power convertors continued
PWM invertor-fed IM drives, shaft voltage prediction model 134454
PWM VSI-fed AC motor drives, dead-time behavior simul. 123895
PWM VSI-fed AC motor drives, hardware dead time compensation 134497
PWM VSI-fed IM drives, chopper cct. improvement 134499
quasi-reson. single-ended invertor for induction surface hardening appls. 78033
quasiresonant soft-switching PWM VSI for induction heating appls. 123638
reverse blocking IGCTs for CSI appls. 77995
rly. traction PWM voltage inverters, dead time effect simul. 123953
sensorless hybrid direct torque control IM drive 134444
sensorless-controlled AC motor drives, practical implement. issues 134489
series act. clamped reson. DC-link inverter current control 134188
series act. power harmonic filter adopting hybrid control approach 78112
series injection VSI, integrated protection approach 134182
shunt act. power harmonic filter neurocontrol scheme 78114
shunt VAr compensator capacitor voltage equalisation, closed loop control 111828
shunt-type custom power devices modelling/anal. 111738
single-chip inverter-fed IM drive concepts 134470
single-phase IM drives, literature survey 123877
single-phase inverter discontinuous/continuous PWM schemes investig. 123651
single-phase line-interactive UPS improvement 99824
single-phase modular act. power harmonic filter, rule-based controller 112755
single-phase PM motors, param. determ., math. model 123306
single-phase PWM inverter act. filters, current-tracking method 77986
single-phase two-level PWM inverters, regular-sampled harmonic elimination 99819
single-phase UPS inverters, H_∞ loop-shaping controller design 88958
single-stage push-pull electronic ballast with high input PF 100318
slip energy recovery IM drives, harmonic anal. 78207
small doubly-salient PM motor, design and anal. 112462
SMPSs, appl. and integrat. opportunities 114611
soft-switched act. clamped reson. link inverter eval. 77982
soft-switching choppers, load adaptive ZVS scheme 134189
soft-switching high-power HF inverters, parallel connection topol. 134204
space vector PWM VSI, IM appls., dead-time effects predictive compensation 77983
squirrel cage motor loads, improved weighted total harmonic distortion index 113060
STATCOM nonlin. control scheme *(English)* 77234
static sync. compensator with SMES, dyn. perform. 111856
submersible pump IM drives, inverter upgrade energy saving estim. 89360
subsonic diagonal-type MHD generator, AC power syst. interconnection 78177
substation grounding impedance meas. syst. 77670
sync. series SVC 48-step inverter, modelling and control design *(Chinese)* 99202
technol., soft switching, GTO, IGBT, IGCT 99743
telecom. inverter module with digital control for parallel operation 112671
three-level inverter-fed IM, direct torque control algm. 133994
three-level VSI capacitor voltage balancing control methods *(Chinese)* 99733
three-phase CVCF PWM inverter, digital repetitive learning control 99826
three-phase five-level double power converters, IM drive appls. 88979
three-phase four-wire distrib. systs., neutral harmonic mitigator design 133702
three-phase IM drive syst., fault tolerance improvement 78215
three-phase IM selection criteria for traction appls. 100285
three-phase indust. power syst. hybrid power harmonic filter 89468
three-phase inverter control software design archit. 88898
three-phase inverter PWM control scheme 112670
three-phase inverter PWM waveform higher harmonics elimination method *(Japanese)* 112074
three-phase power act. harmonic filter, vector control transient behavior 123716
three-phase PWM power converters, graphical phasor anal. 123599
three-phase PWM VSI IM drive, lumped param. model 123897
three-phase soft-switching VSI for energy storage appls. 112672
three-phase UPS PWM inverter, digital voltage/current controllers 134232
two-cycle autonomous inverter ccts. for HF heating appls. 78032
UPFC prototype with energy snubber using SHE method *(Chinese)* 77203
UPS inverter second order deadbeat controller design *(Korean)* 123588
UPS series reson. power converter topologies 112669
urban Maglev syst. invertors, soft-switching HV act. power filter 134529
utility distributed reactive power control using correl. techs. 88362
utility-interactive PV power network power convertor syst. *(Japanese)* 77973
utility-interactive PV power systs., simul. scheme study 133901
utility-interconnected PV inverters, barriers removal 112416
variable speed wind turbine back-to-back VSI efficiencies comparison 88873
vector-controlled IM drives using random invertor switching 78206
VSI control, parasitics effects modelling 88926
VSI HF transformer act. auxiliary reson. soft commutation snubber *(Japanese)* 99803
VSI IGBT perform., cct. parasitic impedance effect modelling 88921
VSI output LC power harmonic filter design 78115
VSI PWM-specific harmonic elimination gating sig. generation optim. 112659
VSI space vector modulator with variable clock freq. 99812
VSI-based power oscill. damping scheme 133545
VSI-based voltage sag correcting device with additional VAr compensation *(English)* 111925
VSI-fed IM drives, dual-stator windings design 134455
ZCZVT PWM full-bridge DC-AC converter, commutation cell 134179
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC axial flux-type PM sync. motor 77837

DC amplifiers
auto-zero amps., offset, drift and 1/f noise, design ideas 68607
auto-zero amps., offset, drift and 1/f noise elimination, overview 68606
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
SQUID op amp, current amp./current-to-voltage converter appl. 68621
switching power amp. for piezo-actuators, optimised design 123695
two-stage dc SQUID amp. for gravit. wave detectors, noise charactn. 127477

DC-DC power convertors
1 kW asymmetric half-bridge converter cct. optimisation 88889
2.4 MVA soft-switched modular MV drive, design considerations 134201
3-axis manipulator, microcontroller-based, PCB driller syst. appl. 123927
3-phase PWM boost-buck rectifiers, power regenerating capability 134163
5 kW boost converter, multiphase control, fuel cell energy *(French)* 134363
10 kW 800 V/48 V dual interleaved two transistor DC/DC forward converter 78045
12 V voltage regulation modules, topol. candidates comparison 88842
48 V power convertor archit. for datacom-telecom appls. 88850
150 kW soft-switched HF isolated DC-DC power converter evol. 134190
250 W high-press. mercury vap. lamps using buck-boost inverter topol. 89437

DC-DC power convertors continued
450 W single-stage PFC converter, universal-line input 88855
AC motor drives, DC supplied, DC-AC conversion strategy optim. 123915
AC/DC/AC converter with H-bridge cascade five-level PWM inverter 78015
act.-clamp couple-buck converter voltage regulator module 88843
act.-clamp DC/DC power converters using mag. switches 88915
aperiodic PWM boost converters, design rules 78040
archits., design complexity, DP appls. 88809
Athlon(R) proc. input current mode DC-DC controller 112620
automobile 42/14 V PowerNet, DC/DC converter topol. 78318
automobile electronics, DC-DC converter *(Italian)* 89420
auxiliary reson.-commutated soft-switching inverter topol. 134200
batt. storage PV power plants, real-time monitoring/eval. 88649
batt.-operated power mgt. systs., design challenges 78026
bi-directional soft-switching DC-DC power converter studies 88894
BiCMOS hybrid 4-in-1 DC-DC controller chip for PC mainboard 99797
BLDCM, C-dump converter-fed, winding mutual inductance studies *(Chinese)* 88756
boost and buck-boost low-loss converters, step-up conversion ratio, discontinuous/continuous mode 68568
boost converter, chaotic operation, stat. anal. *(English)* 112654
boost converter, PFC, large-sig. av. cct. model *(Chinese)* 90733
boost converter, qualitat. dyn. 99762
boost converter supplying DC motors, fuzzy and neuro-fuzzy designs, speed control 78100
boost multi-reson. converters modelling, num. method 112648
boost PFC cct., thermal behavior/EMI noise levels trade-off 134227
boost PFC ccts., digital controller design 88828
boost PFC converter, modeling/simul., av./sampled data models 99744
boost PWM DC-DC regulator, large-sig. stabil. 99760
boost switching regulator, piecewise PWM/sliding-mode control, fuzzy controller design 99772
buck+half bridge very-LV DC/DC power converter topol. 88891
buck and boost converters, poles and zeros for sampled-data models 99774
buck converter, chaos, bifurcation diag., PID controller 112625
buck converter, period doubling bifurcation, harmonic bal. anal. 99764
buck converter, sampled-data current-mode-control 77965
buck converter 4H-SiC/Si P-i-N diodes switching performs. 134170
buck converter power transfer with DC motor load 88987
buck DC-DC converter, lin. optimal feedback/load-decoupled control 112640
buck PWM DC-DC converter with ref. volt. modul. feedforward control, anal. 99767
buck ZVS quasi-reson. power converters, behavioral characts. eval. 77959
buck-based config. AC chopper voltage conditioner 79568
buck-forward DC-DC converter with smooth input current 78028
building integrated PV ventilation systs., MPPT 113151
capacitor/resistor integrat. for improved efficiency/miniaturisation 79553
car wiper motors, brush PMDC motor drive, fuzzy logic controller 89359
cascaded two-switch buck-boost PFC cct., current programmed control 88854
CCM boost converters, rectifier reverse-recovery problem alleviation 123598
CCM single-phase boost PFC converters, power losses eval. 134226
ccts. anal. in PFC appls. 123647
cellular base station powering, DC/DC converter, RF power amp. 108464
charact., hard switch or PWM convertors, soft or reson. convertors *(Spanish)* 79549
charact. coeffs. of DC-DC switching converters, comparison 99811
chopper systs. spec. for electrochem. appls. 77988
choppers, older rectifiers reuse/rerating 99800
class D-E reson. DC/DC converter, anal. using thinned-out method 99809
class E^2 converter with +/- output voltage 99810
class E isolated DC/DC power converter anal. and design 88963
CMOS analog current-mode controller, switching power converter 88945
CMOS analog IC, sliding mode control, switching DC-DC power converter 88946
CMOS monolithic DC/DC switch-mode boost converter dyn. PWM, embedded power mgt. 134177
CMOS PLL, voltage regulator, DC-DC capacitive converter 114668
CMOS SC power converters with integrated low dropout regulators 90726
compact fluoresc. lamp, electronic ballasts, perform. anal. 134616
compact fluoresc. lamps, high-PF single-switch electronic ballast 89430
const. freq. ZVS QRC based DC-DC SMPS, design, aerospace appls. 123606
continuous DC-DC converters, heat and noise control in design *(Spanish)* 101757
crit. mode boost PFC converter, input current eval. 88827
DC aerospace servomotors, ZVS convertor-fed, fuzzy-based speed control 123500
DC motor neuro-fuzzy speed control systs. 112545
decentralised DC/DC power supply, standardised vs. custom design 108463
design/implement., student lab. exercise 99755
diffused control, Xilinx FPGA for DC-DC boost convertors *(Spanish)* 101758
direct-voltage converter with switching capacitors, operating modes 134197
discrete-time DC-DC converter, bifurcations detectability, stochastic reson. 77990
dismounted soldier energy source options 88220
distributed power archit. *(Italian)* 88956
distributed power archits., DC-DC conversion 88885
distributed PV power supply systs. implement. 123261
double half bridge DC/DC converter, peak current mode controller 78037
doubly-salient PM motor flywheel for building-integrated PV power systs. 89311
dual channel DC-DC buck/boost power converters optimal control strategy 112642
dual channel reson. converter, sliding mode voltage control 78044
dual channel reson. DC-DC power converter bifurcation 123626
dual-bridge PWM DC-DC soft switching power converter 88892
dyn. voltage restorer prototype, design *(Korean)* 123582
EDM current mode-controlled LCC reson. DC/DC power converter 123627
elec. drives, automatic nonlin. auto-tuning method, Hammerstein modeling 78219
elec. switching networks, Cuk convertor, Euler-Lagrange model 88942
EMC anal. of power electronic converter, state variable approach 68581
feedback isolation using piezoelec. transformers 77996
fluid proc. efficiency improvement, AC motor drive converter topol. 134458
fluoresc. lamp, high PF ballast, forward half-bridge reson. inverter 134619
fly-back converter power supply redesign optimisation 112650
flyback converter, dedicated sizing tool, automatic symbolic proc. 114603
flyback converter, primary side control cct. 88866
flyback converter control using primary side voltage 99756
forward DC/DC power converters, nondissipative act. clamp topol. 123642
four-level DC/DC buck converter anal. 134193

DC-DC power convertors continued
fourth-order DC/DC PWM power converters, external characts. plotting algr 112643
full bridge ZVS DC-DC converter, MOSFET body diode reverse recovery stre 134178
fully ZVS phase-shift bidirectional DC-DC power converter 88919
fuzzy rule proc. based nonlin. control syst. 112626
fuzzy switching regulators 101761
grid-connected PV power syst. inverters, PIC microcontroller 123262
hard-switching DC/DC power converters time-varying sliding-mode contr *(Chinese)* 99792
harmonic anal. of PWM converters, nonlin. DE 101755
harmonics, EMI, EMC, time-freq. anal. *(Japanese)* 99808
HEV drivetrain testbed, DCS, ECU code generation 124010
HF mag. for switching power supplies, issues and advances 99714
HF sync. buck converter, novel reson. gate driver 88848
high current DC/DC converters using IR1176 IC for LV appls. *(German)* 8898
high performs. switching buck converter IC 78002
high-efficiency DC/DC converter for vehicle use, develop. 123574
high-input voltage regulator module design using integrated mag. 88845
high-perform. voltage regulator module for µP power supply 88844
high-PF flyback converter with ripple free input current 78041
high-power DC-to-DC converter, elec. vehicle supercapacitor appls. 123571
high-speed aerospace PWM control chips under cryogenic temps. 133226
high-speed trench gate power MOSFET for DC/DC power converter appl 70142
HTSC SMES device, DC-DC converter, liq. nitrogen temp. 71080
hysteresis-mode boost-converter input stages, high PF AC-fed power supplie 114600
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
improved full-load-range isolated ZVS-PWM DC-DC power converter 88890
inductive energy transfer, control cct. 99813
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
interleaved DC/DC power converters, sig. flow graph nonlin. modelling 12364
interleaved dual boost power converter, modelling and anal. 134245
interleaving voltage regulator modules, coupling inductors-based perform improvement 88961
isolated base drive control cct. for high power switching BJTs 68576
isolated DC-DC power converters for TWTA telecom. satellite appls. 88849
isolated output coupled inductor SEPIC power converter design procedure 8885
Leghorn funicular rly., PV syst. supply 113108
LLC series reson. DC/DC power converter, steady-state anal. 88893
load-current feedforward control, transient response 88986
lossless commutated boost converter as burn-in appl. act. load 88916
low cost DC-DC conversion devices, harmonic content, PWM and ZCS *(Italian* 79564
low pass filter, vol. optim., packaging dens. increase 125588
low power LSI power-supply scheme, multi-Vt SOI CMOS technol. 127036
low-profile low-power converter using coreless PCB isolation transformer 7795
low-profile power converter using ferrite polymer composite PCB transform 88960
low-stress buck-boost converter, universal-input PPC appls. 88853
LV power conversion, DC-DC converter for solar cell array appl. 99765
MEMS sens. microbattery power supply, fuzzy solar charge controller 86769
microbatteries, fuzzy logic-based solar charge controller 112657
microtransformers, fully integrated spiral-type, Si substr., surface micromachin ing 92525
microwave oven, voltage clamped ZVS-PWM inverter fed DC-DC converte 124128
mixed-sig. PWM DC/DC converter, proport. current feedback, single chip imple ment. 90724
mobile mil. diesel generator set, PM alternator, power conversion syst. 13391
monolithic switching regulator, fuzzy logic control, BCD technol. 99769
MOS input device, floating gate drive cct. 99816
MOSFET power switching transistor, DC/DC converter *(German)* 103812
MOSFETs for DC/DC converters in leadless chip form *(Italian)* 126726
multi-input DC/DC power converter using flux additivity approach 134191
multi-phase DC/DC buck power converter voltage/current control schem 123650
multi-phase pulsed DC voltage converters with step-up power channels 11266
multi-string PV-converter topol./control strategy 123265
multilayered ferrite cored transformer, forward-type DC-DC converter appl 88792
multimodule parallel DC-DC PWM converter systs., robust av. current-mod control 134144
multiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
multiple-output convertor, ripple current, coupled inductor effect *(Chinese* 134238
µP power delivery systs., high-current, sync. DC/DC converters 125561
natural ZVS high-power half-bridge bi-directional DC-DC converter 134192
noninverting buck-boost converter using microcontroller implement. 88875
observer-based sensorless current mode control tech. 88964
ODEs, border-collision bifurcation and corner collision 79556
parallel dc-to-dc converter with av. current-balancing controllers, static and dyn anal. 68566
parallel loaded DC/DC reson. converter with power and control cct. 68571
parallel-connected boost converters, bifurcation behaviour 68575
PCB mounting *(Italian)* 112638
PFC, use of Sepic topol. *(Spanish)* 99830
PFC cct. with modified SEPIC converter 134158
phase-shifted ZVS-PWM DC-DC power converter topol. 112673
planar inductor overcurrent detect., switching power-supplies *(Japanese* 112574
planar mag. techs./technols. 88930
portable equipt., ZXSC100 integrated DC-DC converter chips 123580
power converters, distributed power syst. perform. anal. 88899
power MOSFET packages for DC-DC power convertor appls. 103815
Power Sticks, DC/DC converters, convection cooling *(German)* 88880
power supply business models anal. 88818
power supply syst. stabil. simul. anal. 88896
PV power syst. fuzzy logic load control scheme 112436
PV power syst. max. power point tracker studies 88653
PV syst., max. power control, adaptive hill-climbing method *(Japanese)* 12325
PV-boost converter-powered DC motor-pump syst., dyn. perform. 123263
PWM boost converters, discrete controllers, generic av. modeling/simul. 8886
PWM buck and boost DC-DC converter, simultaneous digital fuzzy contr *(Korean)* 123584
PWM buck converter, RF conducted emission reduction 134148
PWM buck-boost DC-DC power converter, simultaneous control study *(Korean* 123586

-DC power convertors continued
PWM converters, lossless pass. soft switching, min. voltage stress cct. cells 77961
PWM DC-DC converter, one-cycle/charge control, sampled data model 99761
PWM DC-DC converters, modelling method *(Chinese)* 134195
PWM DC-DC converters, nonlin. control strategy *(Chinese)* 88810
PWM DC-DC converters, one-cycle control, charge control, sampled-data modeling 77962
PWM DC-DC converters, small-sig. symbolic anal. 99833
PWM DC-DC converters with feedforward, exact small-sig. anal. 112647
PWM DC-to-DC converters with random-switching control, LF noise 114617
PWM DC/DC power converter, isolated dual output topol. 134194
PWM DC/DC power converters, discontinuous cond. mode operation model 88959
PWM power converter closed loop stabil. fn. control *(English)* 99750
PWM switch model in discontinuous cond. mode 99795
PWM voltage-controlled DC-DC boost converter, chaos, quasi-periodic route 101756
PWM ZVT boost converter, dyn. model, large-sig. anal. 99832
quadratic PWM DC-DC power converters families synthesis optim. 123646
quasi-reson. buck converter, large sig. modeling, regulated unified model 88977
quasi-reson. buck PWM convertor, passivity-based adaptive controllers 123639
quasi-reson. ZVS sync. buck-converter 78030
reson., fuzzy control 134324
reson. converter with class DE tuned power oscillator 101839
reson. converter with one-switch sync. regulator 88957
reson. DC-DC buck-boost telecom. power converter, power flow control 108453
reson. DC-DC power converters, adaptive fuzzy control algm. 112658
reson. DC/DC power converters, integrated L-C-T modules limitations 77981
reson. power converter feedback control design 88969
RISC microcontroller, on-chip hybrid regulator scheme, chip standby power 125534
robust control, large-sig. model *(Chinese)* 99791
SAPFET-2 power module for DC/DC power converter appls. 70325
SC DC-DC convertor, control design & closed-loop anal. 123634
SC DC-DC convertor, monolithically integrated, BiMOS proc. *(English)* 88978
scaleable solar power bus archits., fault-tolerant, max. power tracking 88655
segmented batt. charger for high energy 28 V Li ion batt. 123645
self-lift DC-DC power converters, voltage lift tech. 99821
series reson. DC-DC converter, HV IGBT eval. 88931
server-type distributed power syst., converter topologies 99746
single phase UPS syst., AC-DC/DC-DC boost converter, half-bridge inverter 88909
single stage single switch PFC converter 90731
single-cycle DC-DC voltage converter, soft power-switch operation 99789
single-inductor multiple-output switching converters with bipolar outputs 90728
single-phase PFC rectifier with wide output voltage control range 78036
single-phase UPS, power multiprocessing conversion, high efficiency 134220
single-stage PFC, boost type input-current-shaper, topol. 77964
single-stage soft switching PWM DC-DC converters develop. 123593
single/two stage PF correction DC/DC converters, unified av. model 88826
smart power blocks, DC-DC conversion, MCM components 90735
smart power blocks for use in DC/DC converters, iPO-WIR module family *(German)* 90713
SMES double-DSP controlled power conditioning syst. studies 122850
SMPS designs verification using SPICE models 123579
SMPSs, appl. and integrat. opportunities 114611
soft switching 3 kW DC-DC converter 77997
soft-single-switched forward DC/DC power converter struct. 88914
soft-switched phase-shifted DC-DC converter, MOSFET switching stresses reduction 99738
soft-switching cells anal., generalised invariant models 99771
SOI power MOSFET, low on-resist., dyn. threshold concept, DC-DC converter 126841
solar inverter, input voltage range 112675
stand alone PV pumping plants, PV-DC/DC inverter-asynchronous motor model 112435
standalone/parallel DC-DC power converters, nonlin. stabil./dyn. anal. 88900
stepping inductance voltage regulator with fast transient loading response 88846
switch mode power supplies, PFC ICs, buck/boost/flyback *(Italian)* 79555
switch-mode DC-to-DC converters, av. PWM model, modulating fns. 88972
switch-mode DC/DC power supply predictive dead-beat digital control scheme 88821
switch-mode power converters, large-sig. time-domain simul. 134157
switched DC-DC power converters, boost cct., for AC generation 88943
switched elec. networks, quantum control techs. 79559
switched mode rectifier/inverter, adjustable input PF 123653
switched power converter energy-based nonlin. control design 134246
switching converters anal./design, symbolic approach 88973
switching DC-DC power convertor, capacitorless cct. topol. 78004
switching regulator, two-rules-based boundary layer fuzzy control 99770
switching regulator design using pseudo-coevolutionary genetic algms. 90727
technol., soft switching, GTO, IGBT, IGCT 99743
telecom. switching equipt. DC-DC power converters, conducted noise mitigation 108465
telecomm. buck-type power converter load, input dyn. modelling 108454
telecomm. DC/DC power converter, EM field immunity testing 108466
telecomm. DC/DC power convertor modules, EMI test facility 108467
telecomm. distributed DC-DC converter, PWM controller IC 96288
thick film hybrid technol. *(Spanish)* 99829
three-level ZVZCS phase-shifted DC/DC power converter topol. 88920
three-phase buck power converter lossless current sens. scheme 112622
three-wheel EV, slotless PM AC motor wheel direct drive 113097
totally artificial hearts, wireless transcutaneous energy transm. syst. 76712
transformer reson. phase-shifted PWM DC-DC converter, X-ray generator appls. 112653
ultrahigh freq. DC-to-DC converters using GaAs power switches 123594
unified forward DC-DC converter, av. model *(Chinese)* 112631
unity PF rectifier adaptive passivity-based controller 88967
UPS push-pull DC-DC converter, PCB parasitic influences, anal. 125227
utility interactive PV syst., static inverter, anal. 112422
utility-interactive PV power network power convertor syst. *(Japanese)* 77973
V^2 controlled buck regulator, modelling/design considerations 88861
variable load clamped-mode reson. DC/DC power converter design 99825
voltage regulator modules, high slew rate electronic load tests 99739
wide input range front end DC/DC converter, range winding 88858
ZCS PWM DC/DC converters, operation principle *(Korean)* 123583
ZCS SC power converters 123640
ZVS MOSFET DC/DC bridge power converter losses anal. 123649
ZVS PWM buck converter using coupled inductor 123655

DC-DC power convertors continued
ZVS-half bridge type HF reson. DC-DC power converter *(Korean)* 123589
ZVS/ZCS full bridge DC-DC converter, transformer isolation 123592
ZVT converter, small-sig. anal. improvement 88864
ZVT PWM boost converters, conducted EMI noise generation/propag. modeling 123613
ZVT PWM DC-DC boost converter, design optim. criteria 123608
ZVT-PWM boost converter for unity PF corrector appls. 68565
ZVZCS PWM full-bridge power converter topol. 99822
Ti/FeTaN planar-type film inductor HF DC-DC converter 127406

DC generators
see also homopolar generators
brushless DC generators voltage fluct., PWM control strategies effects *(Chinese)* 112547
coupled dynamos syst., chaotic behaviour control 125205
electrotherapy for patient treatment, hist. 76595
IT earthing syst., elec. network insulation, selective control *(Serbian)* 122782
lap-wound DC machines, equalizer windings design 99686
small horiz. axis wind turbine perform. anal. 77793

DC machines
see also DC generators; DC motors
ANN-based posn. estimator 123494
axial airgap machines, review 88764
efficiency optim. using ripple correl. control 88758
elec. machines and drives, conf., Cambridge, MA, USA (June 2001) 113201
external mag. field calc. from housing mag. load 99679
glass shape rotor actuator, PM excitation 99700
motor fault diagnosis using fuzzy ARTMAP *(Chinese)* 112537
param. ident. using simple speed sens. 123495
separately excited DC drive, flatness-based control 78209

DC motor drives
3-axis manipulator, microcontroller-based, PCB driller syst. appl. 123927
12-pulse converter harmonic anal., unbalanced voltage operation, voltage sags 112636
ASD testing, param. ident., pseudorandom binary seqs. 113087
BLDCM drive syst. for EV appls. 123960
boost converter supplying DC motors, fuzzy and neuro-fuzzy designs, speed control 78100
brushless servo-drive, DSP based, variable struct. model following control 123869
car wiper motors, brush PMDC motor drive, fuzzy logic controller 89359
cement kiln drives, selection criteria eval. 89482
cement plant, kiln main drive, AC and DC technols. comparison 89480
combined digital speed-control schemes 113055
direct-coupled PV water pumping, PM DC motor drive, loss charact. 124165
double salient motor, commutation torque ripple control, simul. *(Chinese)* 134068
educational use 123939
elec. machines and drives, conf., Cambridge, MA, USA (June 2001) 113201
elec. scooters, variable-winding BLDCM drive, control 123973
fault detect. using self-organizing neural nets 113085
field-weakening regime, nonlin. MIMO speed control 134446
fork lift vehicle speed control, DC motor drive, GA 134551
four-switch BLDCM drives, indust. appl. feasibility 89327
fuzzy logic PI speed control scheme 123944
gearless positional elec. drive 123903
gun/turret syst., DC motor drive, fault diagnosis, fault tolerant control 133416
HDD brushless DC spindle motors, robust torque optimisation 78220
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
indust. distrib. network high-speed VAr compensation systs. 88389
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
mechatronic drive systs. braking, DC coreless motors 88763
mine hoist DC motor drive, intell. monitoring/control syst. 124168
MRAC, dual neural network, online params. tracking *(Chinese)* 100248
multi-model param./state estim. 123941
neurocontrol approach 113084
PM AC/DC motor drives, DSP-based integral variable struct. control 123943
PM DC motor drive, neural controller, fuzzy controlled training algm. 113070
PM DC servomotor drives, sliding mode posn. control scheme 89362
polyphase brushless PM DC-machine direct drive syst., design, eval. 134447
positioning syst. with BLDCM, control design 78226
power syst. dyn. harmonics estim., FFT truncation effects 77351
PV-boost converter-powered DC motor-pump syst., dyn. perform. 123263
PWM control IC for DC motors *(German)* 89358
quasi 12-pulse rectifier for adjustable speed drive appls. 88903
robust controller design, hard constraints, vector controlled BLDCM drive 113077
sensorless BDCM drive, current-mode control, intell. commutation tuning 89334
servomotor drive settling time improvement using nonlin. PD controller 123942
shunt motor drive, neuro-fuzzy control 100253
single-phase DC drive syst. control, uniform PWM full-bridge DC-DC converter 113086
speed perform. specs. for AC/DC motor drives 100259
static subordinate speed control syst., state observers synthesis 100246
subordinate speed control syst., generalized state observer 113052
subordinate speed control syst. synthesis, neg. viscous friction 100245
table drive syst., nonlin. friction, GMDH-based modeling/compensation 113082
tele-operated unmanned vehicle, sens. fusion design 134517
thyristor-based brushless PM DC motor drive speed control 89328
two-quadrant zero-current transit. converter 99796
two-wheel drive wheelchairs, steering algm., vector control, microcontroller 133062
unidirectional three-level act. rectifier topol. for MV drive systs. 88868
unity PF buck type PWM rectifier, medium/high power DC motor drives 134166
variable-speed drives, control techs., book 123854

DC motor protection
drives for educational purposes 123939

DC motors
see also brushless DC motors; DC motor drives; DC motor protection; homopolar motors
42 V automotive powernet, small PM DC motor effects 124019
ADC, parallel sampling, electronic motor control *(German)* 114837
aerospace servomotors, ZVS convertor-fed, fuzzy-based speed control 123500
automobile rear wiper, PM DC motor noise reduction 124018
auxiliary mill duty laminated 4DN series DC motors 112540
blind pers. intell. guide-stick 111167
brush DC motors, conc. windings, soft mag. composite armatures 134067
buck converter power transfer with DC motor load 88987
commutation arc in gasoline, effect on brush wear and commutator 123486

DC motors continued
commutation spark image-monitoring method *(Chinese)* 112542
control, interfacing to computer based systs. 112546
control, neuro-fuzzy controller archit., PI regulator adaptation 99683
cooling fan, motor speed control cct. *(German)* 89460
deadzone compensator of DC motor syst. using fuzzy logic control 77884
disc-armature DC servomotors, PC winding design optim. 88754
double armature lin. PM DC motor closed loop posn. control 123514
elec. bicycle, DC motor speed control, load induction unit 123988
fishponds aeration, PV power 113181
flexible manipulator sliding mode posn./vibr. fuzzy controller 134319
friction compensation, neuro-fuzzy control 88760
fuzzy-neuro intell. fault diagnosis 78712
generalized PID controller appl. 134059
high speed trains, act. controlled pantograph 100294
indust. automation undergraduate lab. modular μP kit 78517
lin. actuator fast end-of-travel detect. 123692
lin. DC motor, coil config. for thrust improvement *(Japanese)* 112555
lin. DC motor, cylindrical moving-coil-type, efficiency charcts. 77897
maint. concerns for long operation 123497
mechatronics simul. educational software develop. 78518
multirate feedforward control, perfect tracking control 77890
nerve-cell DC posn.-servo syst., PID control motion control chip *(Chinese)* 77886
neuro-fuzzy speed control systs. 112545
nonlin. friction compensation, adaptive feedback control 88759
nonlin. models params. estim., lin. recurrent NN 99681
open-loop motor speed control using LabView software 88761
paper machines, AC/DC motors, rolls, bearing fluting 124156
partial internal model control, DC servomotor syst. 134055
PM and static commutation, rot. induced voltages 99688
PM DC motor, torque estim., num. methods 123493
PM DC motors, armature sizing, cooling dependance *(German)* 112539
pulp and paper indust., DC motors, carbon brush perform. 124159
PWM DC motor regulator IC, EMC charact. 123487
radial field PM DC motor, EMF computation with commutation phenom. effects 123491
real-time PID speed/posn. control scheme 134070
rectified-voltage DC traction motor commutation studies 89368
rot. axle ang. speed/posn. meas., pulse generator with num. count discriminator 75396
separately excited DC motor, parallel inductive R-L load, AC-DC converter supply 99684
separately-excited DC motor global speed control 112543
series DC motors field-based anal. 123490
series motors, neural networks using feedforward neural network 99680
servo motor, real-time speed control, PID-learning controller *(Korean)* 112733
servomotor adaptive fuzzy sliding-mode controller 99689
servomotor digital controller auto-tuning *(Japanese)* 99678
servomotor speed control, adaptive fuzzy logic controller design, tabu search 134071
shunt motor, speed control, nonlin. control design methods eval. 88765
solar array-fed, direct selection procedure 134064
speed stabilisation, locally optimal control 77889
state estim. approach 123499
triple armature lin. DC motor, NdFeB magnets, thermal modelling 99693
tubular lin. DC motor EM cct. synthesis 123502
tubular lin. DC motor mag. cct. field anal. 123501
twin cylinder rotary compressor with conc. winding DC motor *(Japanese)* 124131
wind tunnel, digital DC speed regulation syst. develop. 88040
Nd-Fe-B thin arc-shaped bonded magnets for dc motors, powder compacting press prep. *(English)* 92864
NdFeB/epoxy resin bonded magnet, melt-spun powder recycling, liq.-phase pyrolysis *(English)* 92865
a-Si PV-powered DC floating pump syst., irrigation water 113180

DC power transmission
see also HVDC power transmission
AC/MTDC power syst. state estim., seq. method 88331
multi-level VSI optim. for MVDC transm. systs. 123625
new energy technols. in Asian part of Russia 99537
polymeric solid dielec. DC cable, field grading, insulation props. effect 133735
power converters operation *(Russian)* 122896
substation, HF switching DC power syst., multi-level monitoring *(Chinese)* 123682
zonal naval-ship power syst., probabilistic security assess. index 113109

DC sputter deposition *see sputter deposition*
DC sputtered coatings *see sputtered coatings*
DC sputtering *see sputtering*
DC to AC invertors *see invertors*

DC transformers
power supply HF HV DC isolation transformer-rectifying module 99731

DC transmission networks
see also HVDC power transmission
HVDC transm. syst. simul., NETOMAC software *(Chinese)* 133590

DCOM *see distributed object management*
DCT *see discrete cosine transforms*
DDC *see direct digital control*
DDS *see direct digital synthesis*
deadlocks (computers) *see concurrency control; operating systems (computers); system recovery*
deBruijn networks *see hypercube networks*
debugging, computer *see computer debugging*
debugging, program *see program debugging*

Debye-Huckel theory
semicond. microscopic pot./free carrier distrib. theory, Debye Huckel approach 80628

Debye-Scherrer cameras *see cameras; X-ray apparatus; X-ray crystallography*

Debye temperature
see also specific heat
nanoscale thin dielec. films, size effect of thermal cond. *(Chinese)* 116121
poly(2,5-thienylene vinylene) films, disordered semiconds., isokinetic temp. 115346
GaAs/InAs/AlAs quantum cascade lasers, pulsed mode operation 128318
GaInAs-GaAs highly strained QW VCSEL laser, stable polariz. operation 128233
GaInNAsSb SQW CW ridge lasers, gas source MBE grown 128244

Debye temperature continued
V_2O_5-P_2O_5-TeO_2 glasses, switching, DC cond. 115334

decentralised control
500 kV substation automation syst. struct. discussion *(Chinese)* 89006
adaptive power syst. stabilizer scheme 77213
co-ordinated substation control experience in China 78067
DS-CDMA systs., power control with signature seq. adaptation 85506
ECN decentralized adaptive marking algm. 74325
extrusion proc., decentralised DCS, OO infrastructure 124437
FACTS UPFC schemes, dyn. performs. comparison 111857
load freq. control, robust H_∞ control 111920
mobile robot geometric form., vision based maint. 109702
multi-area power syst., decentralized sliding mode stabilizer design 122874
multi-area power syst. PI sliding mode load freq. control scheme *(Chine* 88339
multi-area power syst. robust decentralised freq. control *(Japanese)* 99274
multi-link smart materials robots, model-free regulation 92694
multi-machine power syst., nonlin. equilib. point controller 77222
multi-machine syst., TCSC/excitation, robust coord. control *(Chinese)* 9926
Multi-Selcon autonomous luminaire connected via networks with wireless re control *(Japanese)* 100320
multimachine power syst. MIMO decentralized nonlin. control scheme *(Englis* 77251
multimachine power syst. nonlin. decentralized control strategy *(English)* 772
multiple autonomous flight vehicles, decentralised control, inform.-theore approach 84700
neural nets, packet flow routing control, mean field approx. 107659
one-way three-coupled chaotic maps, delayed-feedback control 125207
power syst., nonlin. decentralized disturbance atten. excitation control 13354
power syst. load freq. control, LQR design 122879
power syst. robust nonlin. controller with voltage regulation *(English)* 7723
power syst. stabil./voltage control, decentralised excitation/STATCOM cont 77275
spacecraft form. flying, HWIR testbed 122505
STATCOM and generator excitation coord. control *(Chinese)* 78119
Storage Area Network systs. for video prod. *(German)* 75318
turbogenerator governor H_∞ robust decentralized control scheme *(Chines* 123325

decentralised systems *see multivariable systems*

decision circuits
GaAs depletion-mode MESFET high-speed clock recovery/decision cct. *(Ch nese)* 70319
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 749
SiGe HBT 40-Gb/s opt. receivers, AGC amp., full-wave rectifier and decisio cct. 109070

decision diagrams
see also binary decision diagrams
compact determinant decision diag. symbolic anal. of large lin. analog cct 125194
Fibonacci interconnection topologies, spectral transforms, cct. realisatio 101932
sig. proc. syst. synthesis through generalized Fibonacci interconnection topol gies 130012

decision feedback communication *see automatic repeat request*

decision feedback equalisers
1000BASE-T Gigabit Ethernet, low-power digital adaptive filter archits. 1148
1000BASE-T Gigabit Ethernet, pipelined 14-tap parallel decision-feedbac decoder 114811
adaptive Bayesian DFE for alpha-stable noise environ. 107720
adaptive canceller-equalizer, pipelined implement. of decision-aided equalisatio 108504
adaptive DFE on systolic array archit. 119173
adaptive DFE with complete lattice orthogonalisation 95806
adaptively optimized DFE for convolutional coding 130278
AR equalization with const. modulus criterion 119191
asymmetric, full-duplex commun. for indoor wireless appls. 119172
asymptotic Bayesian DFE, multiple hyperplane detector 130272
binary signalling, adaptive min.-BER DFE 107677
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind equalization by parallel Bayesian DFE 84852
broadband mobile commun., beam and null simultaneous steering S/T-equalize 108880
channel equalizer, block transm. syst. 107686
coeff. placement algm. for sparse reverberant channels 107674
commutating DFE for digital mobile radio 85726
dedicated short range commun. syst., phys. layer 119994
digital cellular radio, optimum combining diversity finite-length DFE 119967
digital equalization using neural seq. detector 119198
digital holographic opt. memory syst., hybrid error correction coding 93021
dispersive channels, joint precoders and DFE optim. *(Chinese)* 107715
DMT with insufficient cyclic prefix, channel equalization 107697
DS-CDMA commun. syst. in time-varying multipath channels, adaptive H_∞-subl weight equalizer 85521
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS-CDMA systs. under multipath fading channels, robust adaptive DFE receive 84856
EDGE, reduced complexity fractional spaced equaliser struct. 73822
EDGE 2-stage soft-output equalizer 84861
fading channel with adaptive feedback equalization, variable rate data transm 107709
FIR DFE for wireless data commun., fast optim. 73841
FIR MIMO DFE for space-time block-coded transm. over multipath fading chan nels 84878
FIR MMSE-DFE for multi-user commun. 107711
FIR-/IIR-based, design realization *(Chinese)* 95818
fractionally spaced DFE with subband decorrelation 107705
Gaussian vector multiple access channels, multiuser detect. using generalized DFE 73828
GMSK sig. detect., limiter-discriminator and envelope-aided DFE 73824
GSM/EDGE, mobile channels zeros distrib. 85859
HDTV, multi-tap high speed equalizer design *(Chinese)* 107716
high-dens. mag. recordings, neural net based bit-detect. 104530
hybrid struct. for CAP-based DSL systs., perform. 95814
IIR channel, blind equalization 130254
indoor precoded packet wireless systs., fast code rate adaptation 96445
IS-95 CDMA uplink, perform. improvement using decision feedback and sub optimal Viterbi decoding 108936
iter. DFE for coded ISI channels *(Chinese)* 130264

ision feedback equalisers continued
low-power and high-speed equalizer for mag. storage read channels 80125
M-ary ISI-corrupted PAM sig. detect., DFE using multiple-hyperplane partitioning 73839
mag. recording, decision feedback and partial response detectors, timing sensitivity 70523
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
mixed time scale recursive algms. 95702
MLP-based DFE with lattice struct. 73840
MMSE DFE, interior point least sq. estim. 85657
MMSE-DFE receiver with spatial diversity, design and anal. error perform. 85808
modified Lee algm. with soft decision-feedback and backward recursion using M-algm. 107681
multicarrier commun. systs., optimal MSE DFE 85524
multilevel coded modulation, combined equalization/decoding 83876
multiuser DFE of block-spread multirate transms. for QoS wireless networking 84862
non-Gaussian channels, robust decorrelating decision-feedback multiuser detect. 119187
nonlin. blind equalization, bilinear recursive polynomial perceptron 119178
nonlin. satellite channel, equalization combined with trellis coded/turbo TCM 108985
OFDM bandwidth-efficient indoor wireless, channel equalization 131083
OOK-CDMA indoor IR wireless commun., equalization 131622
piecewise RBF decision feedback channel equalizer, VLSI archit. 102480
PR-QMF orthogonal transform, optim. *(Chinese)* 95811
RBF decision feedback turbo equalisation, CC-SSTTC syst. 130266
reduced complexity in-phase/quadrature-phase turbo equalisation using iter. channel estim. 130276
reduced error propag. sensitivity via convex optim. 84864
SDSL upstream transm. with vector equalization, crosstalk mitigation 131007
sig.-depend. media noise mag. recording channels, decision feedback equalization 116465
slow freq. hopping syst., error code rate reduction, SW sq. root Kalman filter *(Chinese)* 74547
slowly fading multipath channels, error probab. of adaptive DFE 84876
space-time Viterbi equalisation, sig. design/receiver dimensioning 95805
sparse channels, perform. 107704
sparse time-varying channels, adaptive matching pursuit algm. for estim./equalization 107706
spatio-temporal equalization based on estim. channel response 119182
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multiuser detector 85527
tapped delay line DFE, tap spacings optim. 130252
time-varying channels with DPSK inputs, blind DFE 84857
time-varying environ. underwater acoustic commun. 120394
vectored-DMT, FEXT canceling modulation scheme for coordinating users 128981
Vertical Bell Labs Layered Space-Time (V-BLAST) archit. and generalized DFE 119181
widely lin. filtering 130270

ecision support systems
see also group decision support systems; negotiation support systems
act. server pages tech., accessing real-time data in Internet/Intranet, on-line monitoring *(Chinese)* 77727
coastal substation insulator washing timing DSS *(Japanese)* 112126
COGENT, cognitive agent for Spacecraft telemetry monitoring 76823
decentralized M-ary detect. via hierarchical binary decision fusion 83780
DiasNet, Internet tool for commun. and education in diabetes 98876
elec. network crit. condition monitoring DSS *(Italian)* 122788
elec. supply contract eval. by fuzzy set-based DSS 133495
elec. utility maint. mgt. using expert support syst. 133441
electroheat technol. retrofits anal., DSM ES, fuzzy DSS 134645
environ.-conscious products, requirement-centered design support syst. *(Japanese)* 100520
event correl. rules discovery 130682
GMCR II services indust. strategic DSS 100498
HV substation maint. decisions using diagnostic ES 134294
hydropower prod., maint./upgrading decisions tool 88625
ICU, clinical DSS, ANN 98598
indust. elec. customers, optimal contracts decision software 122822
intell. tele-healthcare environ. offering pers.-centric/wellness-maint. services 122464
mass detect., decision support by featured database visualization/modular neural networks 76503
mil. command environs., conf., San Diego, CA, USA (2000) 89528
mobile DSS develop. 108296
multimedia content distrib. to bal. QoS and cost 96265
oil-spill detect., automatic interferometric syst. 76924
ozone conc. prediction, fuzzy DSS 133364
PC assemblies, network distributed virtual design, coevolutionary agents appl. 89826
power network black-start DSS *(Chinese)* 122886
power syst. control and mgt., intell. syst. appls. 77206
power syst. data warehouse/data mining techs. appl. *(Chinese)* 122833
power syst. protection design using knowledge mgt./intell. DSS 77546
productive equipt. reliab. eval., HSEITFE computerized tool *(Spanish)* 124286
RiBAM elec. utility risk-based asset mgt. software 133477
SDHTOOL, planning survivable and cost-effective SDH networks at Chunghwa Telecom 130547
semicond. packaging assembly, case-based decision support model 113709
Smart PlantWorks power plant O&M DSS 99446
solar energy planning in urban environ. via GIS based decision support 133834
spatial elec. load forecasting, computational support tool 112055
telecomm. tariff decision 74060
Web server, perform. modeling 85254

decision tables
variable precision rough set model, probab. decision tables 113942

decision theory
see also Bayes methods; decision trees; distributed decision making; dynamic programming
adaptive ARQ, control params. decision 107918
adaptive control of av. Markov decision chains under Lyapunov stabil. condition 124506
adaptive hybrid cache coherence protocols perform. eval. 119274
aggregated limiting av. Markov decision problems 100786
AHP, interval evals. by possibility anal. 113872

decision theory continued
AHP, weighted geometric mean complex interval judgement matrix 124481
antipersonnel land mine detect., operational sens.-fusion syst. 77008
anytime contract algms., av. quality optim. over interval 100777
ATR eval. theory, survey 84643
BDD variable ordering approaches comparison 100679
call admission control, general decision model with state related hand-off rate, soln. 85730
commodity division, preference manipulation/relative utilitarianism 124496
computer network attack detect., fuzzy preference approach 108223
conceptual differences between min. and product propag. 67760
congested transm. lines reinforcement planning, decision making method 77380
continuous casting proc., steel leakage prediction 75916
controlled Markov set-chains under av. criteria 67735
decentralized M-ary detect. via hierarchical binary decision fusion 83780
demanufacturing proc. decisions using fuzzy reasoning Petri nets 100709
design education unification through decision theory 113336
design engng., multiple-criteria decision-making, preferences commun. 78570
Diffie-Hellman problem, lin.-preserving reductions, cryptography 72973
discounted stochastic fluid programs, optimal control problems 78813
DS-CDMA mobile radio, adaptive parallel interf. canceller *(Korean)* 120011
election of members to societies, electoral evol. 124493
electronic indust. work-induced stress anal. in ergonomics, fuzzy decision approach 89833
energy efficient data commun. over fading channels 85540
equivalence judgments vs. ratio judgments in decision anal. 124482
evol. multi-objective ranking with uncertainty and noise 90027
existence and uniqueness of equilib. situations in Markovian games with discounting 67736
extremization of lin. integral, stat. decision problem 78921
fault tree anal., NOT logic appl. 100678
finite-state channel messages, universal detect. 117883
fuzzy probab. to expert witnessing in warning theory 124502
game of Chicken, fuzzy approaches 100773
goal prog. formulations of ref. point method 78926
GSM cellular networks, seq. paging of mobile users, POMDP approach 74671
high speed networks, optimal admission control, dyn. prog. approach 73814
human image class., sig. detect. theory misrepresentations/model-free approach 73153
inform. protection systs., design method 83775
Internet dialup service congestion-depend. pricing 85226
IP networks, intruder location, Markov decision model 74349
iron-making technol. selection, fuzzy hierarchical decision making 67457
ISP, optimal yield mgt. 119533
likelihood ratio tests for modulation class. 106016
lin.-plus-exponential utility fn., 1-switch utility 67749
look-ahead based fuzzy decision tree induction 78803
low-level radioactivity counting, decision rules eval. 98818
marine systs. qualitat. safety modelling, fuzzy logic-based approach 78559
Markov decision procs., av. cost, learning algms. 124486
Markov decision procs. with stopping time constraint 78810
meta motion planner, navig. packages comparison problem 97369
mgt. talent eval. model using fuzzy AHP 124284
multi-objective fn. optim., Pareto-front exploration, uncertain objectives 90026
multicriteria decision making based on vague sets *(Chinese)* 100778
multicriterion problems, prioritised soft constraint search 100780
multicriterion ranking of competing alternatives, coord. meas. planning 75341
multiobjective lin. integer prog. problems scalarization 90021
multiobjective nonconvex prog. with fuzzy nos., coevolutionary GA 78932
multiple criteria decision-making, acceptable alternatives selection 113866
multiple target tracking, soft assignment algm. 107423
multistage stochastic prog., rep. scenarios 90032
mutual inform. for adaptive mixture models 100771
MV cable sizing, nonlin. loads, decision theory criteria 123015
Nash games, unique mixed strategy, dyn. choice model 67753
nested logit model spec./estim., normalisations 124499
nonlin. multiobjective optim. 78952
nonstationary seq. decision making, hidden-mode Markov decision procs. 67737
OFDM in fading channels, joint sym. detect. and channel estim. *(English)* 117907
OFDM sigs. on HF-channels, blind equalization 107611
optimistic decision-making in fuzzy environ. 67734
order params. for detecting target curves in images 118303
partially-obs. discrete-event systs., computational complexity 124501
PCB assembly proc. planning, multicriterion set-up decision 69328
PCB assembly seq., feeder assignment, Tchebyshev robot arm motion, models 89823
power syst. online decision making under contingencies 111830
preference modelling, binary rels. and choice fns. 78798
primary and secondary batts., model-based predictive diagnostics 89056
pro-act. network fault mgt. using reinforcement learning 96041
probabilistic/possibilistic Markov Decision Processes algms. 67759
project investment decision anal. for benefit pursuing/exposure preference 89700
project scope decisions empowerment using R&D content graphs 113398
QFD, future voice of the customer, fuzzy trend anal. 124407
radar k-stage sig. detect. with CFAR under parametric ambiguity 120399
radio-pulse sig. detect. against nonGaussian noise background 84786
random sigs. in noise, array detect. 130148
range images correl., shape conformity eval. 106965
rational Presburger sentences using merge routine for polyhedra *(Japanese)* 95876
repair-cost limit replacement problem, optimal policy, Lorenz transform approach 78709
repairable systs., component testing, multistage missions 100674
risk-informed PSA decision making, differential importance measure 78558
risk-sensitive decision-theoretic fault diagnosis 96023
robotic part assembly, neural/fuzzy optimal proc. model 100570
robust decision-making for engng. design 78569
rural area telecomm. networks, multicriteria hub decision making 95985
sample inform. in Bayesian anal. 124480
satellite turbo-code based commun. syst., carrier phase estim. 117954
scenario develop./decision-making under uncertainty 67738
sens. fusion, multiple integrat. and decision level 86472
single sample path based Markov reward procs., recursive approaches 100785
speaker verification, two-stage scoring normalization approach 84065
speech enhancement, soft decision 118066
store-and-forward packet switching networks, dyn. routing, distributed-inform. neural control 73805
Sugeno fuzzy model based method for meas. data proc. *(Chinese)* 109392
supply chains, efficiency loss, structural anal. *(Chinese)* 89660

decision theory continued
syst. synthesis with morph. clique problem, fusion of subsystem eval. decisions 118429
syst.-level energy consumption, event-driven power mgt., low-power states 78576
tachycardia, regular broad complex, diagnostic algms., decision theory anal. 121935
tandem queues, const. service time, optimal arrivals control 100762
telecomms. mgt., value model constr. 100495
terminating Markov decision procs., risk-averse objective fn. 100784
tolerant rough set based data class. 84095
TPP, capital constr. cost, gray forecast, optimal decision making *(Chinese)* 77728
tree-struct. multiple description VQ design 106165
trellis code decoding using bidirectional algm. 129229
turbo-coded transms., carrier phase recovery using tentative decisions 72775
vector optim. problems, interactive stabil. compromise prog. 113983
vector optimisation of complex tech. systs., fuzzy method 67856
vector random procs. recogn. for case of binary quantization 129989
weighted Markov decision procs. with perturb. 100787
ws-convergence of product measures, Prohorov's theorem extension 113862
cellular radio, health effects and precautionary principle 76719

decision trees
antenatal fetal risk assess. by US, neural nets 110823
automatic topic segmentation, prosodic and lexical cues integrat. 94434
biosignal engng., integrated intell. class. engine appl. 132519
brain tissue class. from MRI using decision-tree learning tech. 122084
chem. engng., fault diagnosis of multivariate systs. 107411
colour feature selection using decision trees, outdoor scenes obj. recogn. appl. 95549
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
document page class. via struct. based features 84084
drop test anal. of electronic products, intell. data mining syst. 124298
elec. power supply, syst. control, protection, meas., multi-agent based syst. 99393
fast online voltage security monitoring using synchronized phasor meas. 112196
Fisher nonlin. discriminant using kernels 118952
FMEA, grey theory appl. 67675
heavy-loaded distrib. feeder loss reduction, cyclic sub-tree search method *(Korean)* 122968
Henry fingerprint classifier with HMM/decision tree approach 129875
human behaviors, gender recogn., neural ensembles 107153
image content characterisation for semantic similarity calc. 84559
intonation, tree-based modeling 73050
island power systs., dyn. security assess., decision trees, NN 88386
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
local environ. mapping, robust bistatic sonar obj. class. 99096
look-ahead based fuzzy decision tree induction 78803
managing selection of transm. archit. for backbone networks 85110
multiple binary-class decision trees for obj. based image retrieval 94760
multiresolution permutation filters based on decision trees 94566
N-best proper nouns pronunciation, automatic generation 84033
optimistic decision-making in fuzzy environ. 67734
power transformer fault diagnosis using decision tree approach *(Chinese)* 77913
propositional phrase attachment *(Chinese)* 100866
Spanish speech recogn., context-depend. sublexical units 73072
Tornasol, Spanish speech recogn., integrated syst. 73112
wind power generation, AI appl. 123253
Nb-Ti supercond. wires, prod. scheduling, quality improvement 67690

decoding
see also adaptive decoding; demodulation; iterative decoding; maximum likelihood decoding; sequential decoding; Viterbi decoding
1.2 kbit/s MELP speech coding algm. and real-time implement. 94401
2D separable filters for optimal reconstruction of JPEG-coded images 95039
3D geom. compression, DPCM and var. appl. 95220
3D graphic models, error-resilient coding via adaptive mesh segmentation 95043
3D scalable wavelet video compression, improved color coding 118615
7 kHz speech and audio at 16 kbit/s, low-complexity ACELP coding 84010
32 kbits/s real-time/dual-direction video commun. syst. for wireless channels, perform. eval. 74637
64-chip OCDMA syst., superstructured fiber gratings, time-gating detect. 131364
1000BASE-T Gigabit Ethernet, pipelined 14-tap parallel decision-feedback decoder 114811
adaptable binary entropy coder 106178
adaptive iter. multiuser parallel decision feedback with different code rates, perform. 131292
adaptive per-survivor proc. 107404
adaptive/proadaptive image compression 107083
ADSL, bandwidth-efficient RS coding 96305
ADSL DMT systs., turbo coding 129203
alg.-geom. codes, polynomial representation, list decoding 72791
analog VLSI error correcting decoders, mismatch errors 106118
aperiodically embedded sync. patterns detect. 129121
architectural support for efficient multicasting in irregular networks 85290
area-efficient RS decoder, inversionless decomposed Euclidean algm. 94277
asymmetric public-key traitor tracing without trusted agents 129301
ATSC-HDTV trellis decoder, recursive metric for NTSC interf. rejection 120541
audio data coding in halftone images 118092
audio decoding, low-power MPEG I/II layer 3 decoder 84018
AWGN and Rayleigh channels, robust multilevel codes based on capacity rule 106096
AWGN channel, complexity of breadth-first bounded dist. convolutional decoding *(English)* 72833
AWGN channels, error-resilient compressed images transm. using soft-input source decoding 106982
AWGN channels, non-uniform QAM sig. shaping; turbo coding appl. *(English)* 72752
AWGN channels, optimum criterion for multilevel coding systs. 106022
batt.-powered embedded syst., energy-efficient design 68504
BCH codes decoding using back multiplication algm. 129005
BCH min. wt. decoder for double error 129003
behavioral interpolation, coding, and control 78980
binary codes constr. based on Goppa codes 118002
binary erasure channel, complexity of reliable commun. 128920
binary image optimized coding based on rect. partitioning *(Chinese)* 106958
binary Reed-Muller code R(2,5) decoding by hand and by machine 129093

decoding continued
binary symmetric channel, spectral interpolation coder, noise cancellatio 129008
BLAST perform. improvement using space-time block codes/turbo decodin 72867
BLAST-OFDM enhanced Hiperlan/2, perform. eval. 119526
blind image watermarking, robustness 95265
block codes of small lengths, min. delay decoder design 72928
block turbo codes for space-time systs. 72864
block turbo decoder design, perform.-complexity tradeoffs, VLSI 106106
block turbo decoder implement. 117992
block-coded images, blocking artifacts reduction using self-similarity 129702
broadband turbo decoding, $O(\log_2 N)$-latency SISO 106085
broadband wireless channels, soft decoding techs. 94276
cdma2000 syst., channel coding perform. 85626
CDMA, low-complexity interf. mitigation on vector channels, design/anal 105803
CDMA asynchronous orthogonal decision-feedback multiuser detector 119223
CDMA coded multiuser systs. with optimum joint multiuser decoding/detect perform. anal. 130295
CDMA fiber-optic networks incorporating multiple opt. amps. 74987
CDMA high capacity array-receiver requiring reduced pilot power 74750
CDMA multiuser detect. based on state-space estim. 108615
CDMA sigs., multi-user detect. via iter. proc. 84800
CDMA time-varying channels, unequally protected multistage VQ 85720
CDMA-based mobile satellite commun. syst. with turbo coding, outage perform 74872
CELP speech coding, soft-decision decoding of binary block codes 118094
channel codes for softbit source decoding, correl. param. estim. *(English)* 7285
channel coding/rate distortion with side inform., duality illustration 106145
chaos sync., small noise effect, inform. sig. 117962
Chinese third generation mobile commun. syst., Turbo decoder design and anal 74761
classified zerotree wavelet image coding/adaptive packetization for low-bit-rate transport 106969
CMOS differential interfaces, shared data line tech. for doubling data transfer rate per pin 114855
CMOS flash memory technol., quasi-virtual ground array, embedded appls 68799
CMOS Hermitian decoder IC, Koetter's decoding algm. 106194
CMOS QLM technol. H.263 video CODEC with protocol proc. 108489
code division random multiple access systs. with packet combining, anal 107759
code geom./decoding error probab. rel. 129119
coded modulation, random-coding-exponent-based design for multiple-sym. differential detect. 129136
coding for informed decoders 129160
combined source/channel decoding, suboptimal BER minimization *(English)* 72852
compressed video seq. decoding for wireless networks, unified image/bitstream anal. 118577
computer arith. for media sigs. proc. 90807
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
constrained m-D shift-register synthesis, fast GMD decoding, one-point alg. geom. codes *(Japanese)* 72902
contemporary cell-switched audio/video traffic, transport issues 107027
contex-based predictive coder for lossless/near-lossless video compression 84460
continuous tone image lossless coding, error diffusion method *(Japanese)* 73344
convolutional codes over partial-response channels, dist. spectra 94293
convolutionally encoded packet transm., decoder-assisted frame sync. 108581
copyright labeling of printed images 95374
cpd.-error-correcting codes, step-by-step decoding 129091
CPM over AWGN/Rician channels, channel coding of serially concatenated encoders 106092
cyclic codes, recurrent sliding correl. decoding 72894
DAB receivers, Panasonic MN66720 baseband decoder *(German)* 120518
data refinement, encoding/decoding 83881
data sync. with timing 73746
DCT coding, universal VLC 94270
DCT conditional event coding without side inform. in video compression 95087
DCT quadtree-based coding, rate-complexity-distortion optim. 95379
DCT-coded picture transm. over noisy channels, transformed domain error concealment 84381
DCT/VQ image steganography 106879
Deep Space Network turbo decoder implement. 131329
digital commun., bipolar spectral associative memories appl. 74080
digital commun. links, frame error estim. criterion 128994
digital fingerprinting codes 129135
digital MUX syst., clock sync. coding/decoding 95801
digital trunking syst., traffic channel coding, perform. anal. 83905
digital TV, closed captioning transm. and display 97051
digital TV channel video decoding, single-chip soln. 75294
digital video, flexible software decoding 129724
digital watermarking, algms./appls. 95352
distortion-rate theory for indiv. images *(Chinese)* 107026
distributed fractal image compression on PVM for million-pixel images 106863
diversity codes for differential PM in correl. Rayleigh fading channel 96510
document image decoding using linguistic constraints 95338
double random phase encryption digital holographic data security syst. 116580
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA, limits of coded transm. over fading channels *(English)* 73857
DS-CDMA freq.-selective channels, turbo code modified decoding algm. *(Chinese)* 117997
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA systs. with smart antennas, DOA estim. 96380
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
DS-SS transm. of extra inform. bits 106061
DS/CDMA turbo coded multicarrier syst. with nonuniform repetition coding, perform. 108619
duplicate video syst. using alternate temporal sub-sampling 106875
DVB single chip decoder, video proc. 119821
dyn. reconfigurable cell-array proc. for MPEG-2 video decoder 95031
E-VSB, 8T-VSB compatible syst. with improved white noise/multipath perform. 118506
edge-preserving regularization, coding artifact removal, post-proc. 84497
encoders for input-constrained channels, lower bounds 83912
ergodic chaos shift keying for digital sig. decoding 94305

oding continued
error correcting code/runlength limited code combination 94314
event error control codes, appls. 117946
extremal self-dual codes, trellis struct. and higher wts. 117965
facial video compression, local features reconstruction 95179
fading multiple-access channels, power control and access strategies *(English)* 73855
FBG for pulse shaping and pattern generation/recogn. 71269
FEC-based wireless video streaming with pre-interleaving 107071
FFH MFSK multiple access syst. decoding scheme over Rayleigh channel 107757
FH-PRN with spatially distrib. users, perform. anal. 74745
FHMA turbo-coded commun., iter. multiuser detect. 107614
fiber Bragg gratings based encoder/decoder in direct seq. opt. CDMA syst. *(Chinese)* 120310
finite fields and fire codes 117971
FIR differentiators for quantized sigs. 130124
FIR MIMO DFE for space-time block-coded transm. over multipath fading channels 84878
fixed-length homophonic coding for general source, theorem 129167
FLEX pager design, MCU and DSP on single ASIC 108492
flexible fiber Bragg grating encoder/decoder, hybrid wavelength-time opt. CDMA 131363
FORTE-VLC, forward tracing self-error correction VLC for wireless image coding 118567
fractal coding of shapes, projected IFS model based 95177
fractal image compression, adaptive post-proc. 95173
FSK mixed sig. decoder for AF appls. 68655
full rate space-time turbo codes 72889
generalized array codes for wireless image commun. in fading presence 129797
generalized error-locating codes, decoding *(English)* 72845
generalized space-time lin. precoder/decoder design using weighted MMSE criterion 106140
generalized time sharing, low-complexity capacity-achieving multiple-access 117933
GPS/GLONASS satellite IF receiver, multichannel digital filtering *(German)* 120479
graphical codes *(English)* 72832
Grobner bases over Galois rings with appl. to decoding alternant codes 72857
group-metric multiuser decoding 84892
GSM fast fading channels, blind/nonblind turbo estim. 108937
guaranteed service networks, joint smoothing/source rate selection 118601
H.263 compatible video coding, parity check error detect. 107093
H.263 video coder, interactive error resilient scheme *(Chinese)* 95035
H.263 video for mobile commun., error resilient transm. 84379
H.263-compatible error-resilient video coder 95398
H.26L video decoder optim. 107005
h-Chase decoding, testing conditions eval. method 129209
handwritten Chinese character recogn. 73424
hardware/software partitioning of embedded instruction memory decompressor 79660
HDTV advanced multimedia proc. LSI 120548
HDTV CMOS single chip video proc. 120544
HDTV decoder sync. syst., video buffer mgt. 86324
HDTV ISO/IEC 13818-1 decoders, design 120547
HDTV video decoder, syst. control, reconfigurable features 86325
hidden Markov sources, joint turbo decoding/estim. 106152
hidden picture transm., video syst., CCITT T.4 2D compression 84370
high-rate multiple-antenna code design, representation theory 119863
high-speed Booth-algm. FIR archit., A low-complexity 102402
high-speed burst-mode photonic packet commun., differential receiver 119853
high-speed pattern decoder in MPEG-4 padding block hardware accelerator 79950
high-speed RS decoder, modified Euclidean algm. block 94289
holographic CDMA for IR wireless commun. systs. appls. 82968
Huffman decoding 94269
hybrid-ARQ protocols for Gaussian collision channel, throughput 85038
hypercubic ring high-dimens. code, correcting limit, geom. decoding algm. 83928
IDCT, inverse DCT, optimized CMOS VLSI implement. *(Chinese)* 84250
IDCT based complexity scalable video decoding via data pruning 118523
IEEE data compression, conf., Snowbird, UT, USA (March 2001) 100449
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image coding DCT data, morph. representation 107096
image compression, arith. coding archits. 129721
image quality optimisation for decoded images using 3D smoothing method 73319
image watermarking, coding techs. for data hiding and capacity limit 95047
image watermarking/data hiding, inform.-theoretic model 95365
improved Reed decoding algm. *(Chinese)* 72831
in-order decoding, message arrival times inform. requirements 129176
incoherent opt. systs., depth of focus, image encoding/decoding *(Chinese)* 84376
integrated lossy/lossless image coding based on LWT and multichannel predict. 73404
interf. channels capacity, genie-aided outer bounds 130294
Internet video streaming, scalable differential JPEG 2000 wavelet video codec 106873
ISI channels, joint turbo and modulated code encoding decoding 129215
iter. receiver algm. for space-time encoded sigs. 106134
Japanese BS digital broadcast receiver 120545
Japanese news commentary cognition 118158
joint source-channel decoding by channel-coded optimal estim. *(English)* 72851
joint source/channel coding design 94303
JPEG2000, new compression paradigms 106936
JPEG2000 implement. on different computer platforms 106949
JPEG2000 still image coding std., efficient region of interest coding 95114
JPEG 2000, regions of interest encoding and reconstruction 118562
JPEG 2000, TCQ 106948
JPEG 2000 decompression tuning perform. via rounding, theory/practice 106944
JPEG bitstreams, embedded binary data extraction using std. JPEG decoder 95064
JPEG compressed domain, image indexing and retrieval 118646
JPEG-2000 error resilience technol. 106942
JPEG/JPEG2000, memory complexity comparison 106946
JPEG/MPEG coding perform. improvement by optimizing both compression and blocking effect elimination 84770
lattice decoding, ½log(1+SNR) on AWGN channel using nested codes 129116
LDPC regular-codes over PR channels, threshold 129083
Lempel-Ziv coding as tool for inform. theory *(Japanese)* 83842

decoding continued
light stripe triangulation config. color-coded opt. profilometry 86958
limited-delay lossy coding/filtering of indiv. seqs. 129140
lin. block codes, unified BER approx. 129007
lin. codes over Galois rings 72789
lin. coding on noisy channels, decoding bit-error probab. upper bound 129117
lin. UEP codes, sym.-by-sym. MAP decoding 72937
list decoding, representations of alg.-geometric codes 72808
list decoding algms. for certain concatenated codes 72810
list decoding of alg.-geometric codes, root-finding algm. 117944
LMS channel, fig. of merit for interleaver depth eval. 108658
local decoding procedures for error-correcting codes 72812
lossy image compression using adaptive wavelet filters 129709
low dens. parity check code decoder, efficient implement. tech. 128998
low dens. parity check codes, belief propag. decoding, perform. bounds 129036
low dens. parity check codes, parallel decoding archits. 106126
low dens. parity check codes decoder 106119
low dens. parity check codes for coded modulation scheme 129031
low power multimedia syst. µP-based archits., adaptive power optim. algm. 79918
low-coherence interferometric sens. based on highly birefr. fibers, detect. syst. optimisation 109595
low-dens. parity check codes over finite-state binary Markov channels, decoding 129084
low-dens. parity-check codes under Max-Log-MAP decoding, dens. evol. 117917
low-power high-speed max. a priori decoder archits., design 79917
M-PSK code constr. with good min. Euclidean dist. for AWGN channels 83848
majority-logic-like vector sym. codes, error correction perform. 83879
Mandarin connected digit speech recogn., decoding algms. 84072
MAP decoding algm. for lin. block codes using BCJR and recursive techs. 129022
MAP forward-only algms. *(Chinese)* 94332
MAP sym. decoding in channels with error bursts 83914
MDS codes, BER 72822
MDS codes, upper bounds on list decoding 72790
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
miniaturised low power convolutional decoders archit. 108491
MISO systs., channel tracking using EM algm. 131096
mobile ad hoc networks, location aware dependable multicast 108801
mobile commun., re-decode based error compensation method 95325
mobile fading channels, MLC/MSD and MLC/PDL *(Chinese)* 85854
modified MAP decoding algm. 72927
modified multistage decoding for fast freq.-hopped multiple access MFSK syst. 96375
motion-compensated layered video coding for playback scalability 73337
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
MPEG audio layer III decoder using dual-core DSP, archit./implement. 118105
MPEG audio Layer III decoding algm., computer simul. *(Chinese)* 94396
MPEG decoding, dyn. voltage scaling 95324
MPEG syst. target decoder implement. 129704
MPEG video appls. over wireless networks 130740
MPEG video proc. in consumer systs., memory bandwidth reduction 118329
MPEG video streaming, min. cost implement. of full VCR functionality 107102
MPEG-2 4:2:2 interoperability tests via satellite 74490
MPEG-2 AAC decoder, design optim. 118103
MPEG-2 decoded video restoration, deinterlacing and superresolution 95103
MPEG-2 decoding with internal resoln. scaling 118524
MPEG-2 image seq. coding, rate-distortion optimal fast thresholding 84380
MPEG-2 seqs., hierarchical transm. in noisy environ. 84378
MPEG-2 streams, real-time scheduling/admission control 106891
MPEG-2 video decoder, error concealment tech. 118537
MPEG-2 video streams, decoding time estim. 95314
MPEG-4 digital multimedia broadcasting appls. 119786
MPEG-4 enhanced digital TV set-top terminal, implement. 118532
MPEG-4 FBA decoder for Web appls. using Java applet 107001
MPEG-4 imagery, ring convolutional trellis codes design for MAP decoding 129800
MPEG-4 noisy still texture image, adaptive thresholding 95382
MPEG-4 time/freq. partial encoding, score extraction 106369
MPEG-4 video decoder implement. on ARM7TDMI 84508
MPEG-4 video streams, efficient error concealment implement. 118609
MPEG-7 HDTV program search engine, multimedia inform. auto-retrieval 86323
MPEG-audio layer III algm. for 16-bit DSP 79951
multi-bit image watermarking, geometric distortions robustness 95376
multi-source multi-sink network, network inform. flow 130185
multi-view image coding incorporating approx. geom. 95108
multiaccess scheme over flat slow fading channels, anal./simul. 84894
multilevel coded modulations based on asymmetric ASK and PSK constellations 128990
multilevel codes, multistage decoding, reliab.-based decoding algm. 129032
multilevel codes with inner convolutional code, alg. soft decoding 129224
multilevel coding design with soft decision decoding for AWGN/Rayleigh fading channels 106091
multilevel coding schemes, perform. in mobile fading channels 96538
multimedia data recovery using inform. hiding 73408
multipath fading channel, turbo coded modulation, error perform. bound 106060
multiple access networks, lossless source coding 130302
multiple burst correction RS codes, decoding 129147
multiple description coding of motion fields for robust video transm. 106967
multiple description coding using optimal biorthogonal filter banks *(English)* 72856
multiple description universal lattice-based quantizers 118005
multiple transmit antenna differential encoding/decoding schemes 119866
multiposition sig. detect. by decomp. method 107581
multirate convolutional codes constr. 72824
multistage multichannel fractional Fourier-domain filtering, opt. image encryption 118494
multiuser k-ary code for noisy multiple-access adder channel 117947
narrowband mobile radio, iter. CCI cancellation 85624
nested block decodable runlength-limited codes 72796
network VQ and fixed-rate codes 106164
neuronal activity in primary motor cortex 83882
nonbinary block codes, Chase-2/GMD decoding combination 72776
nonlin. satellite channel, equalization combined with trellis coded/turbo TCM 108985
OCDMA encoder/decoder scheme based on waveguide 74909

decoding continued
OFDM, generalized, multipath presence, transmit antenna space-time block coding 83902
OFDM, peak-factor reduction by Reed-Muller channel coding, soft decision decoding algm. 10616!
old films, low complexity cut detect. in flicker presence 106857
one-point alg.-geom. codes, fast erasure deletion generalized min. dist. decoding 129020
online rate control for video streams 129782
opt. CDMA encoder/decoder based on fibre delay line 96823
optimal encoding of non-stationary sources 94263
optimal multimedia smoothing, network calculus appl. 130955
overcomplete sig. representations, decoding algms. *(English)* 73586
p-adic codes, convolutional-like approach 94285
packet transm., frame sync. of convolutionally coded systs. 94311
parallelism and dictionary based data compression 94261
partial-prefix synchronizable codes 83915
partitioned and parallel concatenated convolutional codes with puncturing, comparative study 83889
perceptually-based robust image transm. over wireless channels 95163
permutation codes, multilevel constr., cardinality 129030
PFT, pipeline freq. transform, channel-splitting, multiple channels *(German)* 124770
pilot sym. assisted turbo codes over flat-fading channels, iter. channel estim./decoding 106154
plastic optic fiber access network based on OCDMA technol. *(Chinese)* 109132
Poisson arbitrarily varying channel capacity and decoding rules 128965
polariz.-division-MUX scheme, orthogonal polariz./bandwidth utilization 96853
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
printed images, copyright labeling 118605
printed images, watermarking/copyright labeling 106888
probabilistic appl. modeling for syst.-level perform. anal., MPEG-2 video decoder 84116
progressive image transm., quadtree and shading approach 118629
qtr.-state seq. for floorplan represent., layout optim. appl. 81428
quadratic phase systs., opt. encryption 95038
quantum key distrib. via quantum encryption 106205
quantum sigs., reliab. fn. props. 72982
RAM, low-power decoder cct. 114760
random coding error exponent watermarking game 129039
Rayleigh fading channel, GAC-based trellis decoding of block codes 94275
Rayleigh fading channels, decoding methods for multilevel coded modulation 106020
real time audio systs., bit-rate reduction by psychoacoustic masking 94397
real-time decompression of streaming video using mobile code 107077
reduced GMD decoding with threshold erasing 129207
reliab.-based decoding algms., Rayleigh fading channel, coherent detect., error perform. 129033
rem. sensed images, integrated pipelined and distributed syst. for real-time class. 133276
reversible variable-length decoding, efficient table access 94335
right decoding for channel with AGWN and binary symmetric channel with random choice of code words 72871
RISC-based DSP synthesis, compiler-friendly, perform. eval. 68839
robust front-end for speech recogn. on WWW, voice over IP recogn. 73069
RS coded DS-CDMA cellular systs., errors-and-erasures decoding 131296
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN channels, perform. anal. 108542
RS codes, decoding algm. for burst error correct. 72925
RS codes, decoding method, weakly-dual-basis *(Chinese)* 94290
RS codes, list-decoding rad. upper bounds 129092
RS codes matching with 4-DPSK block detectors 72774
RS decoder with efficient recursive cell archit. for DVD appl. 120581
RS decoders, fast algm. for computing error locator polynomial roots 72896
runlength limited codes, nested block decodable 129192
satellite images coding, real BCH codes as joint source/channel codes 73357
scalable video, error-resilient compression/transm. 106934
scalable video coding, optimal estim. for error concealment 106993
scalable video coding, switched error concealment/robust coding decisions 95303
scalable video coding with robust mode selection 84407
search and rescue, sea surface propag. 108999
secret key watermarking with changing keys 94342
secret-code encryption scheme based on max. rank dist. codes *(Chinese)* 106210
self-dual codes, min. dist. and decoding capacity anal. 129043
sentence recogn. through hybrid neuro-Markovian modeling 129403
Serbian spoken dialogue syst. for bus travel inform. retrieval 118153
set-top boxes, digital TV, protocols, decryption systs. *(German)* 120519
SFH SS commun., equalization/decoding 108674
SHF/EHF direct-conversion six-port receivers, Bayesian network decoder 108519
shortened RS codes, intrinsic block synchronisation based on alg. decoding 106107
side-hole fiber-optic sens. for dyn. hydrostatic press. meas. 97327
simulated protocol method of WAP over TCP/IP network *(Chinese)* 85031
single-loop sigma-DM, robustness anal. 83822
smooth integers for short intervals using CRT decoding 72811
SNR scalable transcoding for video over wireless channels 95120
soft-decision decoding, nonredundant error correction differential detect. 94321
softbit speech decoding with re-quantization *(English)* 73024
source-controlled channel decoding, correl. param. estim. *(English)* 72849
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
space-time block-coded OFDM for unknown freq.-selective fading channels 129012
space-time coded systs., iter. MLSE 83877
space-time coding/Kalman filtering for diversity transms. through time-selective fading channels 106088
spatio-temporal concealment tech. using boundary matching algm. and mesh-based warping 106961
speckle interferograms, wavelet transform decoding 117574
SPIHT error-tolerant image compression 95330
spin direction, optimal encoding/decoding 94297
STARS of MPEG decoder, worst-case anal. of discrete-event systs. 83835
streaming/decoding archit. for stored FGS video 118529
subjective QC based integrated error resilience technol. for video commun. *(Chinese)* 107024
subthreshold CMOS analog MAP decoder for (8, 4) Hamming code 68958
successive interf. cancellation with SISO decoding/EM channel estim. 105804
decoding continued
successive-decoding-type multiuser receivers, bandwidth-efficient multip access 74788
tailbiting trellis codes, block and convolutional codes *(English)* 72853
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. dete 107693
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decodi 108857
temporal error concealment for long-term motion-compensated prediction, pe form. 96322
temporal video segmentation using frame/histogram-space 106854
ternary codes/trades, decoding 117975
text decoding, stat. reasoning 106108
third generation mobile commun., turbo codes, decoding implement. *(Chines* 106080
three-word codes, unique/multiset/set decipherability 83908
time-multiplexed RS decoder FEC codec LSI for digital opt. transm. sys 109089
time-sync. speech recogn. using higher-order n-gramme speech models *(Ge man)* 73087
time-varying wavelet convolutional codes with bipartite trellises 129188
tree-struct. multiple description VQ design 106165
trellis code decoding using bidirectional algm. 129229
trellis codes design for source coding with side inform. at decoder 106176
trellis-coded MPSK, noncoherent detect./decoding 72757
TS-1 micro-satellite housekeeping computer, self testing of CPU *(Chines* 101926
tunable opt. orthogonal code encoder/decoder for opt. CDMA 96822
turbo codes, decoding implement. in third generation mobile commun. *(Chines* 106114
turbo codes, trellis complexity anal., interleaver props./appls. 72898
turbo codes, trellis termination methods theory/perform. 72877
turbo decoder, 32-bit fixed-point DSP implement. *(Chinese)* 117998
turbo decoder, power-efficient layered proc. archit. 79915
turbo space-time low complexity code for syst. with large no. of antennas 7285
TURBO-BLAST for high-speed wireless commun. 83409
Turbo-codes multilevel modulation and their perform. *(Chinese)* 72929
turbo-equalization, bit interleaved modulations appl. 107708
turbo-single parity check codes 72895
TV high quality consumer video proc. chip 120524
two-stage RS decoder for coded 2^m-ary QAM systs. 72917
two-user multiple-access channel using complex-valued sig., uniquely decodab code 72805
unbounded-length codes, low-memory fixed-latency encoder 106142
uniform nonlin. binary arrays, enumerative aspects/asymptotics 129078
universal channel decoders constructed from source encoders for finite-sta channels 129026
universal homophonic coding 129108
universal multi-scale matching pursuits algm. with reduced blocking effe 95387
utterance verification integrat. with stat. lang. modeling/spoken lang. understan ing 94438
V-BLAST syst., low complexity archit. 85505
variable length decoder, low-power design 106125
video decoder, multimedia sig. proc., VHDL syst.-level design 107049
video messaging over wireless networks, OO source/channel coding 73407
video obj. motion tracking, struct. vs. unstructured 2D hierarchical mesh 1297
video objs. partitioning into temporal segments using local motion inform 106855
video seq., robust transm. using double-vector motion compensation 106968
video seq. encoding/decoding using streamed 3D representation 95360
video transm., source/channel coding trade-offs 95050
video watermarking, channel coding, soft decoding for watermark retriev 95267
video watermarking, robust frame-based tech. 129714
videotelephony seq. coding using content-based hybrid DPCM/classified V 107034
VLSI archit. for turbo codes, implement. in FPGA 94327
VoIP, session description protocol stack *(Korean)* 119336
VQ/RCPC channel codes for Rayleigh fading channels, joint design 72935
W-CDMA mobile network videotelephony, decoded video quality 96523
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller wit iter. channel estim. 72355
W-CDMA reverse link, coherent adaptive antenna array diversity receive 108886
WAP over TCP/IP network, simulated protocol *(Chinese)* 84968
watermark for digital image authentication, wavelet packet/adaptive spatial trans form. 95061
watermarking and ident. in presence of side inform. 72778
watermarking based on duality with distributed source coding/robust optim 94266
wavelet coder/decoder, FPGA implement. 68754
wavelet image compression, optimal decomp. 95396
wavelet packet modulation, transm. method in pulse-wise noise *(Japanese* 106054
WCDMA appls., DSP-based high-speed turbo code decoder 96561
WCDMA single chip high speed channel decoder, design/implement. 94331
word seq. comparison for speech recogn. *(Japanese)* 118126
wt. parity-checks for fast correl. attack 129111
recording/playback MPEG-2 MPHL single chip decoder 120579
$LiNbO_3$:Fe photorefr. cryst., holographic triple random PE opt. data encryptio 93008

deconvolution
2D inverse filtering of opt. images, noise suppression 118363
3D blind image reconstruction, combined nonlin. and stat. techs. 129485
3D PET, model-based scatt. correction accuracy, MC calc. input 122178
3D PET hybrid scatter correction, unscattered coincidences distrib. 122198
4G systs., prediction and investig. of ang.-fading in urban mobile radio environ 108750
act. sonar waveform design/proc., comb waveform 109312
adaptive blind image regularization, recursive soft-decision PSF/neural networ approach 94954
adaptive multichannel blind source separation/deconvolution stabil. 118872
angle determ. precision/resoln. by coherent techs. 75098
animal positron tomograph, image generation, Monte Carlo coincident fns 132971
aperiodic model improvement using extended size deconvolution method 7320
APV25 deep sub-micron CMOS front-end chip for CMS tracker 98073
biomedical sig. ICA 121931

onvolution continued
blind data restoration, extracted filter fn. 118206
blind deconvolution of blurred images from multiple obs., GCD algm. use 129441
blind deconvolution of dyn. systs., natural gradient approach 107426
blind image deconvolution, wavelet transform-based noise reduction schemes 118223
blind image deconvolution/small-extent point-spread fns. using resultant matrices 94947
blind MIMO ident., alg. approach 107559
blind sig. separation of MIMO-FIR convolutive mixtures using syst. theory 107442
blind source recovery in static/dyn. environ., state space model 107577
blurred images, blind deconvolution by ICA 94615
bone, cancellous and cortical, imaging by US refl. tomography 122031
coherent artifacts in OCT, obs./cancellation 110838
concurrent blind deconvolution for channel equalization 130273
current-carrying lines, calibrated mag. force microscopy meas. 103455
cylindrical ^{3}He gas ionization chamber, digital waveform anal. 121637
Czech utterances, homomorphic decomp. of fund. freq. contours *(English)* 73035
DIAL, pseudo-random code-based, LWIR, QC laser, intens. modulation 111426
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633
digitally modulated sigs. with timing offsets, kurtosis 83811
distributed source charactn. via lin. prediction, deconvolution 118912
DS/CDMA systs., MIMO inverse filter criteria and blind max. ratio combining using HOS 84905
DWDM fibre gratings, new generation device design 96796
elec. guitar, obtaining more acoustic timbre by digital filtering 131779
extracted human teeth, OCT imaging, coherent artifacts cancellation 132639
FDG, fast parametric image reconstruction, dyn. PET data 132904
feedback archit. networks for blind source separation and deconvolution, training anal. 106415
fiber optic dielec. multilayer hydrophone, freq. response 111526
filtering/deconvolution, LMI-based H_2, explicit formulas 107506
fourth-order stats., trispectrum, bandwidth and deconvolution 118789
Gamma Knife beam output factor meas., detector size effect deconvolution 76741
gravity tensor gradient data, Euler deconvolution 122562
half-quadratic regularization, preconditioning and appls. 84353
HOS based blind multi-channel deconvolution 107401
image deconvolution and noise control 118184
image restoration, deconvolution in freq. domain 106734
intell. US flowmeter, improved meas. & calib. facility 121058
jump Markov lin. systs., iter. algms. for state estim. 73595
landmine detect., EM induction imaging, modelling 77018
landmine detect., UWB ground penetrating radar, time-domain modelling 77098
lin. blurred images, iter. deconvolution using nonparametric stabilizing fns. 94943
lin. prediction coding filters, source separation techs. 107558
lin. syst. noise effect reduction, coherence fn. in deconvolution 119009
mag. recording syst., situ ultra-high resoln. mag. imaging 116333
med. 3D ultrasound images, blind homomorphic deconvolution 98307
med. B-scan ultrasound images, 2D noise-robust blind deconvolution 98306
mesoscopically disordered systs., local coherence, time developing 2nd harmonic emission 93822
metal crack detect./sizing, surface mag. field meas., induction coils 90617
microwave planar device, time domain macromodel 91219
MIMO blind adaptive deconvolution, globally convergent approach 73592
MIMO blind deconvolution, cumulant-based inverse filter criteria, props./algms./appl. to DS/CDMA systs. 84853
MIMO FIR filters, blind ident., alg. approach 84766
MIMO-FIR channels, white fourth-order colored sigs. driven, blind deconvolution algms. 107402
ML sig. restoration multiplicative algms. with non-negativity constraints 73623
mobile commun. systs., location param. estim. 96559
mobile radio multipath time delay estim., HOS method 108904
model-based inverse halftoning with wavelet-vaguelette deconvolution 106449
multichannel blind deconvolution, estimating fns., semiparametric model 73744
multichannel blind deconvolution, freq. domain, adaptive spline fns. appl. 107315
multichannel blind sig. deconvolution, adaptive algms./stabil. anal. 107460
multichannel parallel sampling syst., timing skew calib. technol. *(Chinese)* 120698
multiexponential transient spectrosc., iter. deconvolution 84739
non-iter. waveform deconvolution, anal. reconstr. filters 118996
PETRRA positron camera, backprojection-space 3D scatter correction 122196
power equipt. FBG-based temp. meas., deconvolution of opt. spectra 123074
rect. tight crack reconstr., eddy current impedance change 101613
recursive digital filter model, inverse filtering tech. 130137
reson. piezoelec. transducers, broadband test sig. generation 86503
robust orthogonal adaptive deconvolution filters 91088
satellite image deconvolution using complex wavelet packets 94953
scanned pattern interferometric radar for space-based GMTI 133407
scintimammography energy resoln., ROI deconvolution, truncated SVD 122195
second order thermolum. glow peaks, logistic distrib. fn. 133137
sens. array sigs., scale-cumulant domain deconvolution 95635
Shalvi-Weinstein estimators, existence/perform. 107378
Shalvi-Weinstein receivers, domains of attraction 84854
SHG autocorrel., group vel. mismatch effect, different pulse shapes 93817
sig. proc. education, multidisciplinary approaches 130006
small animal PET, iter. image reconstruction fast algm. 87779
small-diam. tubular SOFCs, appl. of Fourier-based transforms to impedance spectra 112822
sparse deconvolution by means of GA 73603
spectrosc. MR imaging using SS prod. by oscill. gradient fields 76427
speech sig. convolutive blind source separation, AM decorrelation 107443
tooth enamel EPR dosimetry, automated spectra deconvolution routine 111224
underground imaging, shear-horiz. waves, deconvolution method 99097
unknown data channels, nonlin. blind-deconvolution 85656
US C-scan images, blind deconvolution, H_∞ ident. strategy 101589
wideband multiple transmitter/multiple receiver systs., unsupervised proc. 107394
Wiener state deconvolution filters *(Chinese)* 119033
X-ray spectrosc., DSP, software based, spectrum deconvolution 73604
AlGaInP microcavity LED, intrinsic emission spectrum, deconvolution 128022
^{3}He ionization chamber, digital waveform anal. 110344
NaI std. 3 inch detector, improved quant. gamma-ray spectrosc. 121577

decorrelation
2D image frame matching degrad., elevational motion influence 110778
adaptive beamforming using affine projection algms. 73577
adaptive blind multiuser decorrelation detector, higher order cumulant *(Chinese)* 95827
adaptive blind separation of sources using dens. estim. and simulated annealing 130150
adaptive compensation of analog front-end I/Q mismatches in digital receivers 102420
adaptive lin. equalization algm., wavelet packets transform *(Chinese)* 130265
adaptive LMS block Volterra filters 118997
array antenna meas. with rough surface reflector, anal. 105967
array denoising, new approach 110533
asynchronous CDMA with freq. offset, multiuser detect. 84787
asynchronous QPSK/DS-CDMA, multipath Rayleigh fading channels, multistage interf. cancellation, perform. 72367
blind separation of instantaneous mixture of sources via Gaussian mutual inform. criterion 73600
blind sig. proc. algm. for decorrelation and channel equalization 108928
blind source separation, convolutive decorrelation 118818
blind source separation, globally convergent algms. 118914
blind source separation based on temporal struct. of speech sigs. 118076
blind source separation syst. using time-delayed decorrelation, real-time implement. 118118
blood vel. estim. using speckle decorrelation 98325
brain dyn. imaging using ICA, blind source separation, review 110617
cardiac elastography, local cardiac muscle motion imaging 110700
CDMA, aperiodic spreading code, blind space-time channel estim. *(Chinese)* 107729
CDMA dual-rate sync. multi-carrier syst., perform. 74578
CDMA random-access networks, traffic-aided multiuser detect. 84882
CDMA receiver, steepest descent algm., systolic implement. 119205
CDMA spectral efficiency, freq.-flat fading impact 74519
CDMA-UMTS, asynchronous, sliding window decorrelating detectors 85678
CDMA/PRMA TDD protocol with decorrelating multiuser detector and adaptive permission access 95837
CMOS ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
constrained detect. for noncoherent nonlin. multiuser commun. 107606
correl.-based blood-flow vel. estim., intravascular ultrasound array catheter 110728
cumulant-based independence measures for lin. mixtures 83788
DFCv2 129308
difference distrib. attack on DONUT and improved DONUT 129351
diversity reception of nonorthogonal multipulse sigs. in multiuser Nakagami fading channels 74515
DOA tracking of coherent cyclostationary sigs. without eigendecomposition 84688
DS-CDMA radio channels, overlapping window decorrelating multiuser detector 107570
DS-CDMA sub-sym. based multiuser detector, syst. capacity 74658
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
DS-CDMA systs., throughput enhancement scheme using lin. multiuser detectors 108676
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
DS-CDMA wireless multirate syst., multipath fading channels, perform. anal. 85630
DS/CDMA multirate commun., multiuser detect. 107571
DS/CDMA systs., multiuser detect. with cell diversity 84790
DS/CDMA systs., two-stage decorrelating detector 74549
dyn. $H_2{}^{15}O$ myocardial PET, components blind separation, ICA 110995
ECG interf. suppression, interbeat/intra-beat decorrelating transforms 87454
encrypted CBC-MAC, decorrelation over infinite domains 129317
entangled light pulse propag., dispersing/absorbing channels 94209
fractionally spaced DFE with subband decorrelation 107705
Gabor expansion for stereophonic acoustic echo cancellation 95683
HFC upstream channel, multiuser detectors, S-CDMA access *(Chinese)* 107737
image coding, data decorrelation by wavelet transform 129730
JPEG 2000, multiple component compression 106947
landmine detect., automated, multispectral imaging, iter. morph. algms. 77065
lossless image compression, lin. colour transform. coeffs. 118610
microwave radiometric systs., Volosyuk-FT for optimal radio brightness image reconstruction 73284
MM wave freqs. meas. of tropos. scintillation decorrelation scale-length 83316
multi-channel acoustic echo canceller, adaptive algm. accel. *(Japanese)* 95665
multipath non-Gaussian channels, multiuser detect. 119225
multirate sync. DS-CDMA, blind adaptive decorrelating decision-feedback multiuser detect. 84906
multispectral rem. sens. images, lossless compress. based on SPIHT *(Chinese)* 95230
non zero-dispersion shifted decorrelating fiber 109152
non-Gaussian channels, robust decorrelating decision-feedback multiuser detect. 119187
overlapped wideband/narrowband/wideband/wideband sig. transm. 73715
PRN, quasi-sync., perform. eval. 131226
Rayleigh flat-fading channels, efficient suboptimum detector based on lin. prediction 73727
real-valued discrete Gabor transform for image representation 94578
receivers for unresolved multipath Ricean fading channels 131131
regularized second-order source separation 107434
rem. sens., on-board opt. image compression 111382
rot. machine diagnosis using blind separation of noisy harmonic sigs. 123279
SAR imagery, lossless compression using multiple-pass gradient adaptive lattice filter 109251
slowest descent method and appl. to seq. estim. 119183
sonoelastography, strain imaging, multi-resoln. algm. 122000
space-time decorrelating receivers in multipath fading channels *(Chinese)* 73861
space-time turbo codes, fading channels decorrelation props./perform. anal. 72863
speech sig. convolutive blind source separation, AM decorrelation 107443
speech sig. noise reduction syst. based on freq. domain adaptive filter 94386
stepped-FM radar with MUSIC algm., clutter suppression charact. *(Japanese)* 131668
stereophonic sig. decorrelation, NLMS-like adaptive filtering algm. 84001
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multiuser detector 85527
target and noise decorrelation, num. waveform design approach 96964
trabecular bone, US param., impulse response, decorrel., BUA 110714
UHF satellite commun., ionos. scintillation effects 105733

decorrelation continued
ultrasound speckle reduction, compounding approach 110776
US contrast imaging, pulse inversion & second harmonic comparison 122007
vector transform algm. for image coding *(Chinese)* 95227
wavelet-based image estim., empirical Bayes approach 106689
wavelet-based VLBR video coding using image warping/overlapped block motion compensation 73384
DECT *see cordless telephone systems*
dedicated computers *see special purpose computers*
deductive databases
fuzzy multimedia IT based on fuzzy control 130978
power syst. protection design using knowledge mgt./intell. DSS 77546
visual inform. retrieval, image representation method 118734
Web-based acquisition, storage & retrieval of biomed. sigs. 88024
deductive inference *see inference mechanisms*
deep level transient spectroscopy
see also deep levels
diamond:B,N, CVD films, elec. props., acceptor/donor defects 80644
diamond:B/Al Schottky contacts, DLTS space charge spectrosc. 80906
diamond:H CVD films, defect states, DLTS 80646
diamond CVD films, polycryst., high-speed photoconductors 82306
diamond photoconductive device, UV detect. 86564
DLC hard films, direct ion beam deposition from RF ICP source 79211
multiexponential transient spectrosc., iter. deconvolution 84739
PPV LEDs, electron/hole traps, charge based DLTS anal. 127975
SEU phenom., transient IBIC & LBIC, data collection syst. & chamber 126606
SOI struct., interface states and deep-level centers 115445
SOI-SIMNI film, multiple-step implant., elec. props. *(English)* 91881
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
Al/SiN_x:H/$In_{0.53}Ga_{0.47}As$, elec. charactn., DLTS, cond. transient techs. 103188
Al/intrinsic diamond/p^+-Si Schottky diodes, Q-DLTS/C-V meas. 92279
n-$Al_{0.24}Ga_{0.76}As$, surface states, DLTS, HEMT study 69533
$Al_{0.5}Ga_{0.5}As$:Be MBE layers, He^{++}-irrad., DLTS obs. 80706
AlGaAs/GaAs microwave power HFETs, turn-off charasts., surface effects 70191
AlGaAs/InGaAs pseudomorphic high electron transistors, effects of hot-electron stress 103919
AlGaAs/InGaAs/GaAs cryoelectronic MODFET, deep levels 115940
AlGaAs/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC charasts. 115950
$Al_{0.25}Ga_{0.75}As/In_{0.20}Ga_{0.80}As/GaAs$:Si pHEMTs, DLTS obs. 115968
AlGaN/GaN MODFET, electron trapping, dc drain current, DLTS 81362
AlN film, prep., DOS distrib., CPM/DLTS anal. 91631
Au/$BaTiO_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
Au/GaInP:Te MOCVD Schottky contact, γ-ray induced deep electron traps, DLTS anal. 115441
a-C:H films and assoc. heterostruct., artificial pot. relief 103121
CdS/$CuIn_{1-x}Ga_xSe_2$-based solar cells, DLTS 112854
CdS-CdTe solar cell perform./stabil., precontact surface chem. effects 100128
CdTe-CdS polycryst. solar cells, deep levels investig. 100185
β-$FeSi_2$/Si LED, ion beam synthesis, elec., electronic, opt. charasts. 82412
GaAs epilayer on Si, $(NH_4)_2S$ treatment, annealing, deep levels reduction 92007
GaAs epilayers, RTA, defect engng. using SiO_2/Si_3N_4 stacking layers 126024
GaAs isolation struct., backgate impedance dispersion 103437
GaAs, nonradiative recomb., EL2 defect, elec. studies 80689
GaAs/AlGaAs GRIN-SCH-SQW LD struct., deep levels, DLTS study 91826
GaAs/AlGaAs GRIN-SCH-SQW LD structs., deep levels 128300
p-GaAs/Ga(As,N)/GaAs heterostructs., deep-level defects, orig./annealing 80688
GaInP growth on misoriented substrs., solid source MBE 90291
GaN MOCVD epitaxial layers, influence of As doping on elec. props. 126016
n-GaN Schottky diodes, deep levels, DLTS 126646
n-GaN epitaxial layer, high/low-energy proton bombard., elec. charact. 91628
GaN films, near-surface traps, DLTS 91613
p^+-nGaN homojunction diodes, deep levels, DLTS 126646
GaN interfaces, Fermi level pinning, elec. admittance/DLTS correl. 124864
GaN p-i-n rectifier struct., elec. props. and deep level spectra 69643
GaN undoped epilayers, long term photocapacitance logarithmic decay behavior 81195
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
n-GaN/Pt Schottky contacts, proc.-induced electron traps, DLTS 69548
GaN/metal Schottky contacts, I-V-T charasts., barrier height effect *(Japanese)* 80891
InAs QD on GaAs, MBE, deep level defects 114295
InAs self-assembled QD, DLTS charactn. 126066
InGaAsN, deep levels, high-efficiency multi-jn. solar cells 89283
p-InGaP solar cells, electron radiation induced defects recovery 112923
InGaP solar cells, radiation hard, DLTS obs. 134408
InGaP/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC charasts. 115950
InP:Fe, heavily compensated implanted samples, $Fe^{2+/3+}$ trap conc. 91967
InP:Fe, high temp. ion implant., high Fe solubility 81013
InP:Mn eval. and use for particle detectors 121493
InP:Ti eval. and use for particle detectors 121493
p-InP:Zn, plasma-induced defects, elec. props., migration mechanism 115314
SOI, deep levels, charge/capacitance DLTS 115446
Si detectors, radiation damage 121434
Si, epitaxial multilayer structs., disloc.-related defects, DLTS obs. 102986
Si, lateral gettering of Fe and Pt by cavities induced by He implant. 81007
Si self-assembled QDs, DLTS/photorefl./time resolved PL study 126156
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:B(Ga)(O)(C) solar cells, radiation-induced defects, impurity effects 100033
Si:B,O,C, ion implanted, vacancy/interstitial depth profiles 69787
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
a-Si:H films, UV/white/sub-gap light soaking effects 104902
Si:H(He) power PIN diodes, defect effects on charact., ion implant. 115829
p^+-Si:H,B,Fe, Fe detect., DLTS, Schottky diode meas. 80655
Si:O, polycryst., defects, DLTS/IBICC characterisation 125985
p-Si/SiO_2, RF hydrogen-plasma-related defects, DLTS 69764
SiC, 3C, heteroepitaxial layers, CVD using hexamethyldisilane, deep levels 114316
p-/n-SiC, 4H, epilayers, Be implant., Be defect centers, DLTS 69595
n-SiC, 4H, epilayers, proton irrad. induced defects, DLTS 69590
SiC, 4H/6H, electron/ion irrad., intrinsic defect centers, annihilation 69810
SiC Schottky diode, radiation hardness under relativistic protons, precision alpha spectra 70014
6H-SiC Schottky diodes, elec. charactn. of deep levels 115824
SiC, epitaxial multilayer structs., disloc.-related defects, DLTS obs. 102986
SiC polytype depend., tantalum/tungsten band gap states 69596
deep level transient spectroscopy continued
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 698
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V me 68237
SiC:Ta crysts., deep levels, Ta incorp. during growth 126295
4H-SiC(1120), CVD and deep level anal. 79275
SiGe, epitaxial multilayer structs., disloc.-related defects, DLTS obs. 10298
SiGeC, epitaxial multilayer structs., disloc.-related defects, DLTS obs. 1029
SiN_x:H/InP interface, N_2 rem. plasma cleaning of InP, elec. charactn. 11544
Ta_2O_5 anodic thin films, defects, DLTS and conductance transient inves 116134
ZnO/Si heterostruct., elec. props. 103108
ZnTe:Cr^{2+} layers, MBE growth on GaAs(100), opt. charactn. 101212
deep levels
see also deep level transient spectroscopy; defect states
1-NaphDATA hole transport layers, aging-induced traps, TSC meas., LED app 69616
α-NPD hole transport layers, aging-induced traps, TSC meas., LED appls. 69
bipolar transistors, generation-recomb. noise, deep-level impurities 81220
conf., Molecular beam epitaxy, Beijing, China (Sept. 2000) 89511
diamond:S,N,B, deep donor states, doping efficiency 69497
diamond, search for donors 115550
diamond devices electron beam metallization, x-ray radiation perform. effe 102981
GaN p-n jn., forward biased, minority carrier transport enhance. 91741
MOS quantum yield expt., stress-induced leakage current correl. with hi energy oxide traps 91904
organic LEDs, C-V curves, deep hole traps, simul., modelling 71617
polymer insulators, electron traps, mol. modelling 112124
PPV LEDs, electron/hole traps, charge based DLTS anal. 127975
Schottky contact series resist., deep level impurities effects 126195
shallow n^+-p-well diodes, generation lifetime from reverse generation cur 126106
SIMNI films, multiple-steps implant., elec. props. improvements *(Chine* 126226
SIMOX SOI structs./devices, BOX, thermally activated procs. 91920
tris-(8-hydroxy) quinoline aluminum LED, quantum efficiency, temp./fi depend. 71609
XLPE, deep trapping centers, mol. modeling, luminesc. techs. 127243
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
Al/SiN_x:H/$In_{0.53}Ga_{0.47}As$, elec. charactn., DLTS, cond. transient techs. 10318
AlGaAs/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on charasts. 115950
$Al_{0.09}Ga_{0.91}N$, MOCVD, recomb. mechanisms, UV detectors response 10302
(Al)GaN:Si(Be)(Mg)(C) films, MBE, layer morph., doping efficiency 68207
AlGaN/AlN/GaN heterobipolar phototransistor, photoresponse, defect lev 82347
AlGaN/GaN HEMT, proton-irrad., dc/rf perform. 125706
AlGaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 696
AlGaN/GaN HEMTs, study of current collapse producing traps 69137
AlGaN/GaN heterojn. band offsets, photolum. and modulation spectra c 91764
$Al_{0.18}GaN/GaN$ heterostruct., sub-bandgap absorpt., photocurrent spectra 91
AlN films, pulsed sub-band-gap photoexcitation, MIM struct. obs. 93321
AlN:Si, generation-recomb. noise of DX centers 126020
a-C:H films and assoc. heterostruct., artificial pot. relief 103121
CdTe:V photorefr. material, deep levels, opt./thermal spectrosc. studies 820
CdTe/CdZnTe detectors, behavior following electron irrad. 121490
CdTe-CdS polycryst. solar cells, deep levels investig. 100185
CdZnTe:In, Te antisite defects, deep donor levels 126050
GaAs FET Schottky gate metallization, electron-beam irrad. damage 70211
GaAs MESFETs, substr.-trapping effects suppression, buried p-layers 12688
GaAs, SI, HPLEC grown, elec. props. compensation *(Chinese)* 80729
GaAs, SI LEC, radiation detectors appl., materials sci. issues 90207
GaAs, SI, internal friction, annealing effects 91653
GaAs, SI, traveling high-elec. field domains, current oscills. 80710
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 6981
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
GaAs, cryst. struct./inhomogeneities, γ-ray irrad,. props. effects, detector ap 91646
GaAs, deep defect centers, pin diode meas. 126031
GaAs detectors, charge division/collection, trapping effects, continuity eq proc. modelling 97990
GaAs epilayer on Si, $(NH_4)_2S$ treatment, annealing, deep levels reduction 92
GaAs film on Si substrs., H plasma passiv. 103414
GaAs, nonradiative recomb., EL2 defect, elec. studies 80689
GaAs:Cr epilayer structs. for X-ray imaging detectors 91645
GaAs:Fe, ps photoresponsivity, Fe hole capturing states effects 71508
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance persion 69543
GaAs/AlGaAs GRIN-SCH-SQW LD struct., deep levels, DLTS study 9182
GaAs/AlGaAs GRIN-SCH-SQW LD structs., deep levels 128300
GaAs/AlGaAs QW, exciton localization dyn., PL obs. 126165
p-GaAs/Ga(As,N)/GaAs heterostructs., deep-level defects, orig./annealing 80
$Ga_{1-x}In_xAs_ySb_{1-y}$ solid solns. by LPE, role of Pb 114383
n-GaN Schottky diodes, deep levels, DLTS 126646
GaN, cubic, p-type Mg/N-type Si doping 69830
n-GaN films, deep levels/PPC studies, MOCVD 127909
GaN high-mobility epilayer, RF plasma-assisted MBE on GaN buffer la 124846
p^+-nGaN homojunction diodes, deep levels, DLTS 126646
GaN interfaces, Fermi level pinning, elec. admittance/DLTS correl. 124864
GaN optoelectronic devices, defect dens. reduction 91675
GaN p-i-n rectifier struct., elec. props. and deep level spectra 69643
GaN surfaces/interfaces, low energy electron-excited nano-luminesc. spe 91662
GaN, transient PL, deep level defects 82323
GaN, undoped epilayers 80715
n-GaN, yellow luminesc., persistent photocond. 69507
GaN:C films, plasma assisted/ammonia MBE, elec. charasts. 80741
GaN:C films, plasma-MBE growth/doping, elec./opt. props. 126315
p-GaN:Mg MOVPE layers, deep trap anal., elec. cond., TSC and thermal ad tance spectra meas. 69546
GaN:Mg bulk single crysts., elec. props., temp. depend. 69537
GaN(:Mg) layers, elec. props., expt./theoretical investigs. 103006
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., T 127927
p-GaN:Mg/Ni contacts, Schottky barriers, memory capability 80922

ep levels continued
GaN:Mg(si) films, near band edge recomb. 80723
GaN:Mg,C,He,O epilayers, ion implant. induced defect states, elec. charactn. 81024
GaN:P films, electronic struct., PL 80727
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
GaN:Ti^+, O^+, Fe^+, Cr^+, FET struct., implant isolation, sheet resist. 126822
GaN-based LEDs, spectrally resolved electrolum. microscopy and μ-electrolum. investig. 104995
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
HgCdTe high perform. VLWIR detectors, fab. issues 75531
InAs QD memory, opt. storing and deletion of charge 92946
InAs QD on GaAs, MBE, deep level defects 114295
InGaAs/GaAs strained SQW LD, electron emission, DX centers, RTA effects 128299
InGaAsN, deep levels, high-efficiency multi-jn. solar cells 89283
InGaP/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC characts. 115950
InP:Fe, heavily compensated implanted samples, $Fe^{2+/3+}$ trap conc. 91967
InP:Ru LP-HVPE layers, elec. charact. 91659
p-InP:Zn, plasma-induced defects, elec. props., migration mechanism 115314
$LiNbO_3$:Tb,Fe, nonvolatile/quasi-nonvolatile holographic recording 128587
MgS:Eu,Ce, spectral hole burning, opt. storage 104613
SIMOX wafers, interstitial-type {311} planar defects, photolum. anal. 80656
SOI, deep levels, charge/capacitance DLTS 115446
Si, (311) defect dissolution, depth depend. 103269
Si detectors, bulk-damage effects modelling 132421
Si detectors for high-energy phys. expts., radiation damage 132372
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
Si n^+-p jn. diodes, laser annealed, trap-assisted tunneling near 77 K 92283
Si, space solar cells, proton-/electron-irrad., anom. degrad. 89280
Si:Ag solar cells, thermal failure model, depth profile anal. 89282
Si:B,O CZ solar cells, I-V characts., light-induced recomb. centres 113005
a-Si:H, deep defect dens., amplit. modulating capacitance tech. meas. *(Korean)* 69555
Si:O, polycryst., EFG, deep level defects 91608
Si:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
a-Si-Ge:H alloys, global mechanism for light-induced degrad. 69553
SiC, 3C, heteroepitaxial layers, CVD using hexamethyldisilane, deep levels 114316
p-/n-SiC, 4H, epilayers, Be implant., Be defect centers, DLTS 69595
SiC, 4H, proc. induced intrinsic deep level PL 69582
SiC, 6H, MOS struct., shallow dopant/surface levels, TSC 69758
4H-SiC HV BJT 126683
6H-SiC MOSFET, SiO_2-SiC interface deep traps, nonequilibrium field effect 70083
SiC Schottky diode, radiation hardness under relativistic protons, precision alpha spectra 70014
6H-SiC buried-gate n-channel JFETs, deep trap charactn. 103918
SiC layers on porous SiC, epitaxial/bulk growth, defect dens. reduction 125125
6H-SiC p-n jn., neutron irrad., elec. charact. *(Chinese)* 91730
SiC polytype depend., tantalum/tungsten band gap states 69596
SiC:Al,B, 4H, deep acceptors, EPR, vacancies 69798
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
4H-SiC:B crysts., B centres, DEFT 69593
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 69811
$p^+/n/n^+$ SiC:B struct., EL, opt. emission microscopy 69639
SiC:B,C, 4H polytype, B acceptors, seq. implant. effects 80995
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V meas. 68237
4H-SiC:P,C(Si), co-implant., n-type doping 103278
SiC:Ta crysts., deep levels, Ta incorp. during growth 126295
4H-SiC(1120), CVD and deep level anal. 79275
SiO_2 ultrathin films on strained Si by by O_2/NO plasma proc., trap dens. 69751
SrS:Ce ac thin-film EL devices, dyn. space charge mechanism 93390
$ZnGa_2O_4$:Li epilayers, enhanced UV photocond. 126092
ZnO, green emission band, fine struct. 80677
ZnO, plasma treated, low-resist./nonalloyed ohmic contacts 69729
ZnO sputtered films, struct. and UV photolum. obs. *(Chinese)* 126053
ZnO:Fe, excitonic procs., PL/elec. DC behaviour 126040
ZnSe single crysts., deep center luminesc., surface prep. effects 69517
ZnSe(:Sb) film, photoacoustic spectra, MOVPE 126041
ZnSeTe, MBE, deep emission electron-phonon coupling 103017
n-ZnTe:Al layers, MBE growth, struct./elec./opt. props. 90317

ep space communications *see space communication links*

ep-UV lithography *see ultraviolet lithography*

efect absorption spectra
see also impurity absorption spectra
α-Al_2O_3, TLD-500 dosimetric crysts., UV absorpt. spectra, temp./shape effect 127915
CdZnTe substrs., IR absorpt. behavior, annealing 91671
$CsLiB_6O_{10}$ cryst., UV OHG, water-assoc. surface degrad. 93819
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
GaAs cleaved surface, defects, STM photoabsorption spectra 69502
GaAs:As, ion-implanted, opt. transm. spectra 80687
p-GaSe single cryst., defect centers, annealing 91941
LiF:F_2^- color center cryst., persistent photon-gated spectral hole burning, photolum./absorpt. spectra 128459
Sb_2O_3-CuI-NaCl(NaI)($PbCl_2$)(PbI_2) glasses, prep., struct., opt. props. 92939
a-Si:H based pin solar cells, interfacial opt. spectra 100195
p-/n-SiC, 6H, 15R, LF vibr. spectrosc., localised modes, Raman spectra 69578
SiC, 6H, self-ion implanted, opt./struct. props. 81040
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807

efect states
see also colour centres; dangling bonds; deep levels; defect absorption spectra
conf., Molecular beam epitaxy, Beijing, China (Sept. 2000) 89511
copper phthalocyanine/C_{60} DH PV cells, high efficiency 100026
diamond:B,N, CVD films, elec. props., acceptor/donor defects 80644
diamond:B/Al Schottky contacts, DLTS space charge spectrosc. 80906
diamond:H CVD films, defect states, DLTS 80646
diamond:Ni,N, W8/AB5 defect levels, EPR obs. 126001
diamond:S,N,B, deep donor states, doping efficiency 69497
diamond, CVD film, field & photoemission, microstruct. effect 80564
diamond, CVD films, band gap, field emission 102904
diamond, polycryst. CVD films, injection depend. long carrier lifetimes 80642

defect states continued
diamond CVD films, polycryst., high-speed photoconductors 82306
diamond CVD films, surface and bulk defects, conf., Diepenbeek-Hasselt, Belgium (March 2001) 113233
diamond Schottky diodes, elec. AC behaviour 81192
4,4′-bis(2,2′-diphenyl vinyl)-1,1′-biphenyl multilayer blue OLEDs, ns EL spikes 105022
dual spin-valve type ferromag. double tunnel jns., annealed, charact. *(Japanese)* 92801
IIB-VI cpds., doping-limiting mechanisms, common orig. 69822
light-induced metastable defects, photocarrier lifetime, annealing 127902
MOS devices, thermal oxide degrad. kinetics under elec. stress 91890
polymer-fullerene PV cells, spectrosc. 100212
power VDMOSFETs, pos. gate bias stress induced instabilities 126815
PPV LEDs, electron/hole traps, charge based DLTS anal. 127975
QD-QW systs., shallow impurities and δ-doping, defect states anal. 115390
semiconds., carrier scatt. by disloc., review 69653
sexithiophene semicond. grain boundary , temp./gate volt. depend. transport 91715
solar cells, anom. degrad., carrier trapping 78170
submicron MOS transistor, effect of electroactive defects in gate oxide on threshold voltage 103813
tunnelling/trap dens. rel. at insulator/semicond. interfaces 103202
wide gap semiconds., doping behaviour, conf. 124204
Al/SiN_x:H/Si devices, interfacial/bulk defects, struct./elec. props., temp. effects 91901
$Al_{0.25}Ga_{0.75}As/In_{0.20}Ga_{0.80}As/GaAs$:Si pHEMTs, DLTS obs. 115968
AlGaInP/AlInP superlattices, transient photocurrent/PL, simultaneous meas. 115401
AlGaN/AlN/GaN heterobipolar phototransistor, photoresponse, defect levels 82347
AlGaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 69642
AlGaN/GaN heterostructs., surface morph. and disloc. electronic props. 69641
AlGaN/GaN/SiC, nonuniform contact pot. profile 80808
$Al_{0.18}$GaN/GaN heterostruct., sub-bandgap absorpt., photocurrent spectra 91742
AlN epitaxial layers, Al_2O_3, SiC, Si substrs., MBE growth, cathodolum. 93333
AlN films, pulsed sub-band-gap photoexcitation, MIM struct. obs. 93321
Au/GaInP:Te MOCVD Schottky contact, γ-ray induced deep electron traps, DLTS anal. 115441
$BaSrTiO_3$:Ni ceramics, O vacancies, dyn. behavior, TSC obs. 127224
ta-C films, FCVA deposition, ESR and Raman spectra charactn. 68382
C, nanostructured, field emission, sp^2 phase role 91540
CaS:Eu^{2+},(Tm^{3+}), persistent/thermoluminescent phosphors, trapping centres 104936
CdS, electronic struct., defect phys., thin film solar cells 91654
CdS nanocrystals, CuS-coated/$Cd(OH)_2$-activated, fluoresc. props. *(English)* 80730
$CdS_{0.036}Te_{0.964}$, grain boundaries, elec. activity, R-EBIC method, solar cell operation 91655
CdSe, electronic struct., defect phys., thin film solar cells 91654
CdSeS QD in glass, structural and opt. props. *(Chinese)* 126179
CdTe, electronic struct., defect phys., thin film solar cells 91654
CdTe, grain boundaries, elec. activity, R-EBIC method, solar cell operation 91655
CdTe:In(Cl), mag. suscept., paramag. props. 91644
CdZnTe:In, Te antisite defects, deep donor levels 126050
CoMgNiO oxygen sens. material, high temp. defect struct., elec. props. *(Chinese)* 75704
Cu stressed damascene interconnection, dielec. breakdown, EL obs. 81110
$CuGaSe_2$ films/single crysts., struct./elec./opt. props. 126103
Cu(In,Ga)Se_2 heterojn. solar cells, electron/proton irrad. induced defects 100031
p-$CuInSe_2$:H, hydrogenation, cond. type conversion 103409
$CuInTe_2$, cryst. growth, elec. and opt. props. 115358
GaAs, SI, traveling high-elec. field domains, current oscills. 80710
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
GaAs, deep defect centers, pin diode meas. 126031
GaAs film on Si substrs., H plasma passiv. 103414
GaAs grown on Si, passiv. of disloc. by phosphine plasma exposure 69833
GaAs:Be, electron-hole recomb., two-color pump-probe obs. 126036
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dispersion 69543
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaAs/InGaAsN/GaAs QWs, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
p-GaMnAs dil. mag. semicond., defects, first-principles study 116244
GaMnAs layers, migration-enhanced epitaxy, struct. and mag. props. 68163
GaN MOCVD films on sapphire, opt. props. improvement in situ SiN treatment 127911
n-GaN Schottky diodes, deep levels, DLTS 126646
GaN, air bridged lateral epitaxial growth, recomb. dyn. 80872
GaN epilayers, MBE grown, annealing, PL 126276
GaN epilayers, nonradiative recomb. 80718
n-GaN epitaxial layer, high/low-energy proton bombard., elec. charact. 91628
p^+-nGaN homojunction diodes, deep levels, DLTS 126646
GaN nanostructure, self-organized, MBE, CL, PL, SEM 91657
p-GaN surface band bending, aqua regia soln. surface treatment effects, SR PES obs. 69870
GaN, transient PL, deep level defects 82323
GaN, undoped epilayers 80715
GaN:H, wurtzite, Ga vacancies-H interact. 91649
p-GaN:Mg/Ni contacts, Schottky barriers, memory capability 80922
GaN:Mg,C,He,O epilayers, ion implant. induced defect states, elec. charactn. 81024
GaN:P films, electronic struct., PL 80727
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
GaN/AlGaN MQW, persistent photocurrent, PL comparison 69668
GaN/AlGaN/AlN, NH_3-MBE growth, HFET, 2DEG, sputter deposition 90307
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
β-Ga_2O_3 nanowires, catalytic synthesis and PL 71517
p-GaSe single cryst., defect centers, annealing 91941
$Gd_3Ga_5O_{12}$:Ag phosphor prep. and electrolum. characts. *(Chinese)* 116930
ITO/conjug. polymer-fullerene/Al PV cells, admittance and ESR spectra 127944
InAlGaAs/GaAs high-power diode lasers, strain-induced defects, photocurrent spectrosc. 105314
InAs (110), electron accumulation layers, near-surface region 115322
InAs, Shockley-Read-Hall recomb. rates, full-band-struct. calc. 91635

defect states continued
InGaAsN, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
InGaN, In inhomog. & emission charact., excitons 105028
InGaN/GaN MQW, airbridged lateral epitaxial growth 80872
n-InP:H, hydrogen neutralization effect, defect states 80711
p-InP:Zn, plasma-induced defects, elec. props., migration mechanism 115314
$K_3Na(SO_4)_2$:Eu TLD phosphor, correl. ESR/PL/TL studies 76725
PLZT chem.-soln.-derived thin films, imprinting behavior, thickness depend. anal. 81684
PZT sol-gel derived films, ohmic cond./activation energy, temp. depend. 92645
$Pb_{1-x}Ge_xTe$:Ga, impurity-induced photocond. 93319
SIMOX wafers, interstitial-type {311} planar defects, photolum. anal. 80656
Si, (311) defect dissolution, depth depend. 103269
Si detectors for high-energy phys. expts., radiation damage 132372
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
Si films, Joule heating rapid crystn., Raman scatt. 126005
Si films, rapid crystn. using elec.-current-induced joule heating 68362
Si oxid., at. and ionic procs., state-of-the-art calcs. 92034
Si, transit. metal impurities gettering simulator 92267
Si:Al,H, interstitial-type defect aggregations, H-enhanced self-organization 126000
Si:B, CZ wafers, minority carrier lifetime degrad. 102982
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:B(Ga)(O)(C) solar cells, radiation-induced defects, impurity effects 100033
Si:B,O,C, ion implanted, vacancy/interstitial depth profiles 69787
a-Si:H, deep defect dens., amplit. modulating capacitance tech. meas. *(Korean)* 69555
Si:H float-zone crysts., H-defect shallow donors study 69475
a-Si:H, occupation of dangling-bond states and photocond., band tails effect 93323
Si:H-terminated surfaces, UHV contactless C-V method for passivated defect-free surfaces 91577
a-Si:H,Er/c-Si PECVD struct., effect of Er on electronic traps 91743
Si:O, polycryst., defects, DLTS/IBICC characterisation 125985
Si:P, transmutation-doped γ-irrad., defect states, elec. props. 91580
Si:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
Si/CaF_2 nanocryst. MQW, vert. transport, trapping levels 126144
p-Si/SiO_2, RF hydrogen-plasma-related defects, DLTS 69764
Si/SiO_2 interface, dangling bond centers, elec. detect. EPR obs. 69765
$Si/SiO_2/Si_3N_4$ quantum wires/dots, charged insulator defects 126160
a-Si-Ge:H alloys, global mechanism for light-induced degrad. 69553
Si-SiO_2 interface transit. region width, F-N tunneling current oscills. meas. 103215
SiC, 4H, D_I bound exciton, Zeeman effect, PL 69581
n-SiC, 4H, epilayers, proton irrad. induced defects, DLTS 69590
α-SiC, 4H, intrinsic defect complexes, antisite pairs form., charge self-consistent, DEFT, LDA 69591
SiC, 6H, inversion layers, Coulomb scatt. *(Chinese)* 69760
SiC, 6H, ion implant., persistent D_{II} defect 69584
4H-SiC epilayers, hot-wall CVD, doping/trap conc. reduction 124931
SiC layers on porous SiC, epitaxial/bulk growth, defect dens. reduction 125125
4H-SiC:B crysts., B centres, DEFT 69593
SiC:H, 4H, H_2 conc., theoretical approach, vacancy-hydrogen complex 69588
SiC:O, 3C, 4H, isolated oxygen defects; elec. activity 69594
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807
a-$Si_{0.35}C_{0.65}$:H, proton irrad. thermally annealed, PL props. 93338
SiGe epitaxial layers on Si, anodic oxid., enhanced passiv. of oxide/SiGe interface 92049
nano-Si_3N_4 ion implanted QD, blue-light enhancement effect anal. *(Chinese)* 116911
SiO_2 films, PECVD on Si, defect charactn. 124905
SiO_2, ultrathin, defect generation and breakdown induced by substr. hot-hole injection 103213
SiO_2-Si interface, trapped charge imaging, noncontact AFM 80925
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795
$SrAl_2O_4$:Eu^{2+},Dy^{3+}, persistent/thermoluminescent phosphors, trapping centres 104936
$SrBi_4Ti_4O_{15}$:Mn elec. cond., controlled oxygen partial press. 104379
$SrTiO_3$ grain boundaries, Z-contrast STEM imaging 104299
$ZnGa_2O_4$:Li epilayers, enhanced UV photocond. 126092
$Zn_{1-x}Mn_xSe_{1-x}Te_y$ epilayers, dielec. props. 80767
ZnO, native defect energetics, first-principles plane-wave pseudopot. calcs. 91636
ZnO sputtered films, struct. and UV photolum. obs. *(Chinese)* 126053
ZnO-Au Schottky diodes, elec. and defect props., high energy proton bombard. effects 126212
ZnO(S), defect conc. regulation using separation layer 91638
ZnSe(:Sb) film, photoacoustic spectra, MOVPE 126041
polysilicon/SiO_2/Si structs., thermally induced (100)Si/SiO_2 interface degrad. 91915

defectoscopy *see flaw detection*

defects, crystal *see crystal defects*

defects, noncrystalline *see noncrystalline defects*

defibrillators
see also patient treatment
antitachycardia pacing for rapid VT during ICD charging 98708
atria, human, defibrillation proc. study in computer model 76682
atrial fibrillation, internal low energy cardioversion with single lead syst. 122320
atrial fibrillation organisation quantification, defibrillation efficacy increase 110610
atrioventricular defibrillator, atrial defibrillation thresholds, electrode configs. 122325
bal. biphasic defibrillation waveforms in transthoracic atrial cardioversion 87914
cardioverter defibrillator, dual-chamber implantable syst., worldwide clinical experience 111150
cardioverter defibrillators, rhythm discrim. algm., clinical eval. 111149
dual chamber arrhythmia mgt. device, far-field R wave oversensing 122343
dual threshold shocks optim., RV/LV electrodes, defibrillation simul. 87886
ECG fibrillation detect. algms., noise sensitivity 87374
elec. defibrillation, sig. anal. syst. for optimal timing 110652
endocardial electrogram class., adapted wavelet packets/neural networks 87382
entrapped pacing/defibrillator leads, excimer laser extraction 98707
hyperkalaemia diagnosed by implantable cardioverter defibrillator T wave sens. 132549
ICD pulse generator failure, electronic cct. damage by elec. overstress 122316
ICDs, inability to communicate with, underreported failure mode 76707

defibrillators continued
implantable cardioverter defibrillator emulator electrograms and surface ECG 76314
implantable cardioverter defibrillators, EGM width detect. criterion 121965
implantable cardioverter defibrillators, EMI 87905
implantable cardioverter defibrillators, supraventricular tachycardia-ventricular tachycardia discrim. algms. 111151
implantable defibrillators, pacing capture, evoked response detect., RV coil to can vector 122350
implantable defibrillators, permanent pacing, review 122351
internally grounded feedthrough capacitor, reliab./appls. 115068
Internet-based pacemaker/ICD pulse generator/lead registry 76709
MRI scanner force/torque effects on cardiac pacemakers/ICDs 87674
noninvasive electrocardiology, conf., Istanbul, Turkey (Sept. 2000) 67366
pacemaker/defibrillator lead extraction syst., ancillary tools 98705
reentry site during fibrillation induction rel. to defibrillation efficacy 111152
RV fn., stable/unstable VT, haemodynamic monitoring, future defibrillators 98124
subcutaneous array electrode, act. can implantable cardioverter defibrillator, efficacy 122323
supraventricular arrhythmias, inappropriate detect. by implantable dual chamber defibrillators 133042
transthoracic defibrillation, myocardial vector fields mapping, bipolar electrode array 98225
transthoracic defibrillation current dens., two-layer segmented electrode 76593
transthoracic defibrillation with chopping-modulated biphasic waveforms 133053
ventricular fibrillation sens./detect. by implantable defibrillators 98726
ventricular/supraventricular tachycardia discrim. by dual chamber cardioverter defibrillators 98704
virtual electrode polaris. and reentry in far field 122324
wide QRS complex tachycardia, noninvasive diagnosis, dual chamber defibrillator 121934
$Li/Li_{2.8}Ag_2V_4O_{11}$ batts., implantable cardioverter defibrillators 99925
$Li-Li_xAg_2V_4O_{11}$ batt., implantable cardioverter defibrillator power source 87880

degenerate four wave mixing *see multiwave mixing*

degenerate semiconductors
see also heavily doped semiconductors
freezeout/exhaustion prediction under nontrivial conditions 91572
Cd_2SnO_4, film, nanocryst., sol-gel prep., electrochem. props. 103089
$GeTe-Sb_2Te_3$ layered cpds., Hall coeff./elec. cond./thermoelec. power 103078
ITO:Sn sputter-depos. films, carrier dens., cryst. orient. depend. orig. 103056
SiC, 4H, free carrier diffusion, transient grating techs. 69579

delamination
act. struct. health monitoring, FRC & steel-reinforced concrete 79467
air-coupled US NDT, improved transducers 114517
automatic defects class. using pulse-echo tech., pattern recogn. 79488
BGA reliab., underfill material 113474
BGA solder joint voiding, PCB surface pad finish/contamination impact 113712
bonded struct., laser US NDE, dispersion curve, ANN appl. 114563
COB glob top encapsulant curing, variable freq. microwave proc. 78641
composite sandwich under hygrothermal/mech. loads, delamination growth *(Chinese)* 101504
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
electronic assembly QC, NDT, inspection/X-ray eval. techs. *(German, English)* 115188
flip chip BGA underfill charactn. using rigid substr. 113562
flip chip package with reflowable underfills, reliab. studies 113706
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip-chip assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
flip-chip BGA package, reliab. 113495
flip-chip component, underfill delamination, opt. microscopy 113476
flip-chip packages, interfacial delamination near solder bumps/UBM 113547
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
flip-chip underfill delamination mechanism/growth rate *(German, English)* 89865
graphite fibre reinforced epoxy, eddy current microscopy, image proc. 68479
IC package delamination NDI, MM-wave inspection syst. 113764
IC packaging, wafer surface profile impact 67612
impact damaged delaminated composite, shearography, neural fuzzy anal. 125156
interlayer-toughened fiber-reinforced composites, interlaminar fracture testing anal. 79494
metal layer/ceramic substr. buckling driven interface delamination 113616
multichip mechatronic power packages, mold delamination and die fracture anal. 113644
multilayered syst.-on-package, design against interfacial delamination 113614
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
no-flow underfills, flip chip assemblies, adhesion charactn. 67626
nonlin. acoustic techs. for NDE, freq. shifts & memory effects 114492
opened fibre coating strip force test 127678
opt. fiber segment, long. elastic wave speed and atten. meas. 127713
peripheral array package, delamination growth prediction, interfacial fracture toughness test 78635
peripheral array package, interfacial delamination propag., 2D/3D num. models 78634
plastic encapsulant, moisture induced delamination, coupling agent bonded interface degrad. 113716
plastic SMT package moisture sensitivity perform., Pb-free reflow temp. effects 113574
polyimide passiv./epoxy underfill interface, water-assisted crack growth 89867
PZT-based piezoelec. composite laminates, bending, elec. field effects 104374
rect. IC package delamination, geom. effect, fracture mech. anal. 113615
safety relevant struct. QA, nonlin. scanning laser vibrometry 114521
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90602
super-BGA package reliab., underfill effects 67606
TQFP, delamination/crack, PECVD SiN_x films, moisture-resist. props. effects *(Chinese)* 68422
two-layer struct. delamination/void/moisture detect., temporal microwave NDE 101576
underfill hot-wet adhesion improvement, adhesion promoter appl. 113734
woven composite laminates, delamination detect. with embedded opt. fiber 101617
Au/Au wafer level thermocompression bonds, low temp. characterisation 104161
Au/Cr/sapphire interfacial fracture, hybrid microcircuits, annealing 102839

amination continued
C fiber reinforced epoxy/concrete, piezoelec. transducer monitoring 68470
CeO_2:SrO, fuel cell electrolyte, electrochem. stabil. 112831
Cu electroplated films, adhesive strength & scratch resist. 126491
Cu/low-k dielec. interconnects, interfacial adhesion 115707
GaN epilayers, hydride VPE regrowth, GaN quasi substrs., XRD, PL, Raman spectra 68245
GaN films, RF reactive sputtering, laser annealing 91940
$LiNbO_3$/Pt/Ti/Au/Au integrated opt. waveguide modulator, mech. testing 82177
PZT thin films, mech. props., adhesion, SPM/SEM, MEMS 127095
Si thin films, wafer bonding, exfol. proc., IR spectrosc., X-ray imaging 126353
SiC-SiC composites for fusion reactors, mech. props., interfacial strength 68426
SiO_2/TiO_2 DBRs for VCSELs, dry and wet etch procs. for patterning 93697
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Sn-Pb flip COB solder joints, thermal fatigue failure *(Chinese)* 113673
Ta films on Si and SiO_2/Si substrs., struct., annealing 80976
ZrO_2-Y_2O_3 TBC degrad., quantitat. NDE, impedance spectrosc. 114491

launay triangulation *see mesh generation*

ay circuits
see also delay filters; delay lines; delay lock loops; phase shifters
asynchronous design styles, bundled-delay and dual-rail ccts. 79778
Chua's cct., chaos generation, small-amplit. time-delay feedback voltage 114594
CMOS adaptive filter implement. using switched-current tech., FIR transversal cct. 80120
CMOS low-jitter PLL with pseudo-differential delay elements based VCO 68657
DDS, phase interpolation, delay generator, two-step integrat. 114642
HF μP, digitally adjustable resistor for path delay charactn. 68823
LISA grav. wave background anal. using time-delay interferometry 132192
Lur'e systs. with time-delay, master-slave synchroniz. 101722
prog. transconductance amp. switched current ccts. 101777
SC resonators, LV implement., LDI and two-delay-loop stages 91040
STACEE γ-ray detector prog. digital delay/trigger syst. 121739
switched-MOSFET tech. for prog. filters operating at low-volt. supply 80070
switched-voltage delay cell with differential inputs, config. and appls. 114903
target recogn. algm. implement., time-delay neural net on TMS320C6201 *(Chinese)* 120401
TDNNs, time delay dyn. nonlin. neural networks, learning algm., appls. *(German)* 114910
time delay ccts., noise generation theory 114565
GaAs PHEMT wideband true-time delay MMIC with on-chip digital drivers 125799

ay-differential systems
asymptotic behavior of delay difference systs. 90104
convergence of Runge-Kutta methods for delay diff. eqns. 79095
delay diff. eqns., asymptotic stabil. 114116
exponential fitting of delayed recruitment/renewal eqn. 124696
neutral delay difference systs. boundedness 124707
optim. of delay-differential inclusion, stabil. of approx. 100936
oscill. criteria for delay difference eqns. 124710
oscill. for solns. of nonlin. neutral diff. eqns. with impulses 124708
pseudospectra anal., nonlin. eigenvalue problems, and lin. systs. with delays 79094
Radau IIA methods for stiff delay diff. eqns. 114130
single differential-group delay element polariz.-mode dispersion compensators, importance sampling 131615
singly diagonally implicit Runge-Kutta, delay diff. eqns. 101083
stochastic differential delay eqns., Markovian switching, stabil. robustness 67719
stochastic minelike obj. detect., nonlin. model, delay diff. eqns. 73194
strict practical stabil. of delay DE 101084

lay estimation
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
11 GHz indoor picocellular syst., assess. using propag. meas. and simul. 108757
act. array, Cramer-Rao bounds for estimating range/vel./direction 75106
adaptive multipath equalization time delay estim. with bias-removal 84801
adaptive protocol relay capability for real-time media with allowable delay *(Japanese)* 119369
adaptive transm. syst., in-service estim. scheme for radio propag. path characts. *(Chinese)* 74565
ATM broadband network, cell delay var. allocation in domestic region *(Korean)* 119147
ATM networks, meas.-based delay perform. estim. 73809
biorthogonal cosine-modulated filter banks 73698
blind source separation algm. using weighted time delays 118814
broadcast-and-select photonic ATM switch with tunable wavelength converter for wavelength reduction *(Japanese)* 109190
CDMA, aperiodic spreading code, blind space-time channel estim. *(Chinese)* 107729
CDMA commun., delay estim. using fast ICA algm. 107768
CDMA downlink wideband channel estim. algms., error robustness 131286
CMOS differential cascade voltage switch logic ccts., delay optim./energy estim. 68752
CMOS digital ccts., gate level power optim. using dual-supply voltages 125287
CMOS digital ccts., switching activity eval. using logic timing simul. 68664
combinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
combinat. logic blocks, coupling and noise aware delay anal. 68748
combined method of FM taking into account mutual delay in channel control 117906
concurrent bilateral teleoperation over Internet, time-varying commun. delay 130867
convolutionally encoded packet transm., decoder-assisted frame sync. 108581
cross-chip delay meas. and characts. of delay modeling flow, boundary scan delay chain 79736
deep submicron design, state of art and trends in parasitic extraction 104069
deep submicron IC design, cct. theory and interconnect anal. 70271
delay-constrained least-cost multicast routing, controlled region rearrangement dyn. algm. 107974
deterministic blind beamforming, identifiability in incoherent multipath with small delay spread 118915
digital baseband predistorter using calib. memory, perform. 108576
digital CMOS ccts., gate-level simul. using IDDM model 101986
digital VLSI ccts., static timing anal. incl. power supply noise effect on propag. delay 125356
domino logic ccts., coupling-aware min. delay optim. 102108
DRMA with multiple slot reservation/retransmission using exponential backoff *(Japanese)* 107883

delay estimation continued
DS-CDMA, blind ident. of co-existing sync./asynchronous users 84880
DS-CDMA, perf. of closed-loop power control for packet transm. in multipath fading 120060
DS-CDMA downlink, pilot-aided multipath delay estim. 131285
DS-CDMA in fading channels, code timing acquisition by differential correl. 74792
DS-CDMA mobile radio channel, blind space-time channel estim. 108698
DS-CDMA systs., Cramer-Rao bound for joint DOA/time delay estim. 107309
DS-CDMA systs., joint multidimensional channel param. estim. using modified SAGE algm. 74644
DS-CDMA systs. in slow time-varying channels, param. estimators using modified SAGE algm. 74815
DS-CDMA tracking mode receiver with joint channel/delay estim./MMSE detect. 131056
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
DS/CDMA, block-sync., struct. multiuser channel estim. 119981
DS/CDMA long-code systs., blind delay estim. algm. 131077
end-to-end network path props. estim. *(English, Spanish)* 130415
evoked pots. latency change estim., algms. perform. comparison 76256
far-talking speech recogn., microphone array sig. proc. 84050
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
FH systs. via multiple invariances, channel estim. 85480
FIR filter for time delay estim. 107554
FS-1016 CELP, enhancement via selective harmonic pre-emphasis 73026
general clock distrib. networks, stat. skew modeling 125290
German GPS network, real-time water vapour estim. 111427
GPS receivers, multipath delay estim. 108997
GSM evol., estim. of random access slots 108784
GSM microcellular/macrocellular systs., hyperb. posn. location 131126
HALOTIS, high accuracy logic timing simulator with delay models 79694
harmonic parameterization in N dimens., identifiability 130001
high-speed high-dens. LSIs, internal waveform obs., EO sampling prober 116000
IC behavioural modeling for timing, noise, and sig. integrity anal. 104077
IEEE 802.11 WLAN for multimedia, robust SuperPoll with chaining protocol 73921
Indian air navig. WAAS, ionos. grid point value estim. 75248
indoor multipath propag., stochastic model anal. 85766
input-queued cell-based switches, packet scheduling 119253
integrated service PRMA, anal. of voice loss ratio and data delay 95909
Internet mapping, dist. estim., alg. approach 119743
IR indoor wireless channel charactn. by meas. 109224
load-sensitive flip-flop charactn. and designs 90867
LOS sig., time-delay estim. in multipath environ. 118966
low-delay audio coder using adaptive VQ 129379
M-DCF, MAC protocol with QoS support in ad hoc network 107828
maint. engng., delay mgt. 100512
medium and high capacity wireless TDMA channels, highly efficient voice-data integrat. 73919
microcellular environ., spatiotemporal non-LOS propag. charact. *(Japanese)* 120050
mobile radio multipath time delay estim., HOS method 108904
mobile radio propag. channel MIMO meas./ident., antenna array 119960
MOS switching ccts., delay estim. algm. 80019
multicast routing based on ant algm. with delay var. constraints 74055
multichannel time delay and sig. params., global estim. via GA 73624
multipath time delay estim., multi-channel disturbance *(Chinese)* 107300
multiple acoustic source localization in reverberant environ. 119100
multiplexed video traffic, packet delay modeling 84831
NASA Ames Research Center network, simul. 96153
non-uniform substr. temp. effect on clock sig. integrity in high perform. IC designs 101991
on-chip clock wire inductance, fast bounds estim. tech. 101992
on-chip inductance in high-speed VLSI ccts., high-perform. design issues 116017
optimal buffer insertion under accurate delay models, graph based algm. 79697
packet delay differentiation, scheduling algm. *(Japanese)* 107781
precoded VBR multiuser systs., blind channel estim. 108614
pseudo-Bayesian ALOHA algm. with mixed priorities 73920
real-time lin. time-freq. transform 118958
retransmission, refl. sig. and lateral spectrum components 108574
RMS delay spread estim. from freq.-domain level crossing rate 95738
satellite ATM network, ABR congestion control algm. based on onboard proc. 96623
sig. subspace model 107395
single freq. networks, local coverage probab. estim. 109355
software radio download channel, accessing/allocation scheme perform. 85792
source separation in multipath channels, blind beamforming and max. ratio combining 84685
static CMOS master-slave flip-flop expt. 68745
stereophonic acoustic echo cancellation, comparison of adaptive algms. 118967
substr. noise in ICs, anal., models and optim. 104047
SuperPON, adaptive bandwidth allocation algm and delay perform. anal. *(Chinese)* 96731
telecomm. networks, one-way delays estim. 119118
time-freq. methods param. estim. 106335
timing closure satisfaction, delay bound determ. 101981
timing-driven VLSI layout, objective fn. modif. for efficient optimisation 103986
TOA estim. based on higher-order cumulant *(Chinese)* 73563
unequal SNR denoised commun. sigs., time difference of arrival estim. 108912
uniform circ. array, multipath param. estim. *(Chinese)* 117845
urban area quasi-MM band fixed wireless access, delay profile 85551
very deep submicron IC designs, current source cell model for delay calc. 79733
video traffic in cellular wireless ATM network, delay jitter perform. 74693
VLSI delay and crosstalk estim., lumped and distributed coupled RC trees, moment computation 81485
VLSI design, cct. delay uncertainty increase by perform. optim. 101982
W-CDMA cellular syst., delay profile meas. syst. using common pilot channel *(Japanese)* 120049
WCDMA UTRA uplink with unknown channel model order, smart antenna schemes 74688
Web clients, service time estim. using server logs *(English, Spanish)* 130414
wide-band impulsive noise source, direction-finding tech. 75253
wireless channel, TST-ESPRIT based joint DOA and delay estim. 84686
within-die param. fluct., impact on max. clock freq. distribs. 101990
WLAN OFDM systs., optimum frame/freq. sync. 119892

delay filters
see also linear phase filters
CDMA opt. commun., coherence MUX syst., generalization 86037
FIR delay LMS adaptive digital filter, systolic archit. 91084
FIR fractional delay filter, optimal synthesis in reproducing kernel Hilbert space 73650
flat-time-delay transversely coupled resonator SAW filter, parallel connected filter tracks 92716
fractional delay allpass filters, design 130041
fractional delay filters, design 91083
hybrid time filter design in flexible systs., vibr. damping *(Chinese)* 125587
IIR comb filter, harmonic interf. removal, multirate method 107491
IIR filters with variable delay, optimal design 118983
insensitivity anal. of delay filter *(Chinese)* 73649
LMS long adaptive filters, wave theory 130065
second-order sampling of wideband sigs., digital demodulation 94236
software radio receivers, simplified sig. proc. 107529
sync. filter topol., delay approx. 91026
sync. filter topologies, delay approx., Euler fn. 80059
time delay ccts., noise generation theory 114565
tunable fractional-delay allpass filter struct., closed-form design 102403
variable fractional delay 2D FIR filters, discretization-free design 84756

delay lines
see also acoustic delay lines; optical delay lines
5.3 GHz wideband indoor radio channel, empirical charactn. 105753
6-18 GHz band 6-bit digital freq. discriminator 79625
clock distrib. strategy for IP-based develop. 101943
CMOS all-digital shunt-capacitor DLL, nonlin. reduction tech. 102318
CMOS chip, sig. capture and timing meas. 102440
CMOS DAC, low-glitch interpolation cct. 102275
CMOS DDS synthesizer with digital time domain interpolator 114662
CMOS SC video FIR filter with analog-RAM-based delay efficient realization 102352
coil magnetostrictive delay line, posn./stress/field sens. 75479
DDS chip, virtual clock enhance. method using analog delay line 90778
dendritic adaptation, analog VLSI cct. basis 102482
digitally controlled oscillator using adjustable resistors, HF μP appl. 68882
FDTL-spatial/MLSE temporal equalizers in CCI, link-level simul. results 108891
Fibonacci opt. ATM switch, design and eval. 86080
flexible multichannel high-resoln. TDC ASIC 121720
FTDL-spatial/MLSE-temporal equalizer, link-level simul. using field meas. data 108890
FTDL-spatial/MLSE-temporal equalizer, perform. eval. using field meas. data 84875
lin. phase filter, design method 68890
LMS long adaptive filters, wave theory 130065
long adaptive LMS filters, wave theory, tapped-delay line type 84727
magnetostrictive delay lines based NDT, distrib. sens. 101569
MCP-based detectors, delay-line anode design, single photon detect. 109518
MCP-based detectors, delay-line anode for posn. and time sensitive read-out 121589
MEMS RF switches with metal-metal contacts, integrat. into components 125721
miniaturized magnetostrictive delay line, multilayer-like struct. 104545
multi-point clock distrib. networks, VLSI ccts., top-level high-speed distrib. 70268
parallel-plate avalanche counter for high energy light ions 132301
periodically loaded waveguide, delay line 91201
PLL GFSK demodulator, perform. in multipath channel 108772
plucked string instrums., automatic IIR anal./synthesis 120603
SC FIR filter structs., comparison based on CMOS realization and PSPICE simul. 80063
tapped delay line DFE, tap spacings optim. 130252
THz time-domain spectrosc. syst. 121245
$(Ba,Sr)TiO_3$ thin film phase shifters on sapphire/glass substrs. 91217
$Fe_{77.5}Si_{7.5}B_{15}$ amorph. wire, magnetostrictive delay line, force meas. 70564
YIG film based electronically tunable nondispersive MSW delay line 116480

delay lock loops
adaptive-lock-mode DLL cct. with duty-cycle error correction for SDRAMs 125509
clock generator using factorial DLL for video appls. 114853
CMOS all-digital shunt-capacitor DLL, nonlin. reduction tech. 102318
CMOS chip, sig. capture and timing meas. 102440
CMOS clock and data recovery cct. for serial link appls., 4 Gbit/s 125620
CMOS DLL, 1GHz synthesis, freq. multiplier tech. *(English)* 125261
CMOS fast-lock mixed-mode DLL using 2 bit SAR algm. 114889
CMOS IC, MEMS transducer, vibr.-to-elec. energy conversion 68561
CMOS low-jitter, fast-locking delay locked loop using measure and control scheme 68881
DDS chip, virtual clock enhance. method using analog delay line 90778
DS-CDMA syst. with imperfect power control, PN code tracking loop 74833
DS-SS syst., digital DLL, Doppler shift and A/D quantization 85526
DS/SS syst. with microcells, improved PN sync. using DLL 108710
fast-fading GPS multipath bias charact., validation 131698
fast-lock mixed-mode delay-locked loop 114893
flexible multichannel high-resoln. TDC ASIC 121720
mixed-sig. design, conf., Austin, TX, USA (Feb. 2001) 67361
navig. receivers, DLL meas. error due to interf. 97028
oscillatorless clock multiplication, low jitter 102321
packet-based DRAM with daisy-chained redundancy scheme, 2 GB/s, 256 Mb 125508
radar/sonar target range tracking, delay length locked loop 86181
time-delay digital tanlock loop 91005
time-delay digital tanlock loop, Gaussian noise 102308

delay systems
see also delay-differential systems
filtering of delay systs., guaranteed cost/H_∞ 130143
high-speed commun. networks congestion predictive control 130525
high-speed network H^∞ flow control, μ-synthesis 130526

delta modulation
see also delta-sigma modulation; sigma-delta modulation
AC-DC power converter, DM 99815
chirp location sigs., matched digital filtering in time domain 118972
differential modulation, non-uniform sampling companding method *(Polish)* 117902
DS-CDMA cellular mobile radio, reverse link power control improvement 108897
mobile radio devices, reconfigurable RF elements *(German)* 74785

delta-sigma modulation
see also sigma-delta modulation
2nd-order ΔΣ-modulator, wideband excitation 79975
bandpass delta-sigma modulator using SC resonator struct., 80 MHz 90966
bandpass delta-sigma modulators synthesis 79632
BiCMOS SOI ADC delta-sigma modulator, Bluetooth transceiver 102294
cascaded delta delta-sigma modulator, noise shaping, random noise proc. 90974
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
clock-jitter simul., continuous-time delta-sigma modulators 125573
CMOS oversampling ΔΣ mag. to digital converters, archit. 86447
CMOS oversampling ΔΣ mag.-to-digital converter 114847
CMOS SC band-pass biquad filter 102374
continuous-time bandpass delta-sigma converters, feedback DAC delay compensation 114817
DAC, nonlin. error modulation, spectral shaping 90989
dedicated syst.-level simul. of ΔΣ modulators 102305
Δ-Σ converters, low-power decimation filter design 68864
digital phased array beamforming, single-bit delta-sigma conversion, non-uniform oversampling 95645
electromechanical delta-sigma modulator, num. simul. 90990
first-order Δ-Σ modulator, rational cycle decoding algm. 90988
GMSK modulator using ΔΣ freq. discriminator-based synthesizer 108656
GSM 900/DCS 1800 prog. PLL-based fractional-N freq. synthesizer 91321
high-order SC Δ-Σ modulators, capacitor-area and power-consumption optim. 102291
higher order delta-sigma A/D converter with optimized stable coeffs. 68863
higher-order delta-sigma ADC, optimal design 68874
highly integrated future generation software radio basestation transceivers 119956
MASH delta-sigma modulators for wideband and multi-std. appls. 102283
mixed sig. ccts., online fault diagnosis, simplified fuzzy ARTMAP appl. 80122
multiple-feedback delta-sigma modulators with leakage, stabil. anal. 68860
noise shaping accelerometer interface circuit., two-chip implement. 131877
quadrature sampling scheme with improved image reject. for complex-IF receivers 85534
radio transmitter archits., delta-sigma modulation 74756
RF sig., digital generation, band-pass Δ-Σ modulation 101820
SC Δ-Σ modulators, high order, capacitor-area/power-consumption optim. 90970
SC-type Δ-Σ modulators, single-bit, power consumption optim. 68878
second-order bandpass Δ-Σ modulator with sinusoidal inputs, quantization error anal. 102269
second-order continuous-time Δ-Σ modulator using RTD quantizer *(Japanese)* 114825
single-bit delta-sigma modulators, quantization noise, limit cycle pattern 114818
sixth-order MASH delta-sigma modulators for wideband appls., implement 114896
SSDSIM simulator 102264
two-arm delta-sigma modulated bridge based freq. deviation meas. 121139
ultra-low noise chopper-stabilized prog. gain instrum. amp. 90976
wideband low-distortion delta-sigma ADC topol. 79959
InP transferred substr. HBT technol. continuous-time Σ-Δ A/D converter 125577

demagnetisation
see also magnetisation
antiferromag. coupled long. media, recording pot. 116290
high data rate mag. recording, mag. media switching dyn. 116381
long. recording medium, thermal decay, grain shapes 116348
long. thin film media, thermal stabil., Monte-Carlo simul. 116380
mag. recording, textured medium, transverse remanence 70516
mag. thin films, scanning SQUID microscopy 70968
magnetoelec. systs., steady mag. fields, FE and BE modelling 72198
multipole mag. drum of mag. encoder, surface mag. field distrib. 86457
over keepered medium, thermal stabil., read/write simul. *(Japanese)* 92829
particulate recording media, AC magnetis. procs. 116406
PM BLDC compact motor solns. for transient appls. 123492
polycryst. PM, thermal remagnetization, theory 92861
saturated ferromag. rect. prism/rect. coil, 3D mag. field 105680
shielded GMR read heads, demagnetization field, micromagnetic simul. 81896
strip-like Josephson-jn. arrays, crit. state, demagnetizing effects 70797
thin lin. oscillatory actuator for celluar phone, coercive force *(Japanese)* 112722
ultra-high dens. perp. recording, FIB trimmed head 116468
undulator magnets irrad. by high energy electrons, demagnetization 121366
Vicalloy, mag. wire, output voltage generation 127322
$Co_{70}Cr_{18}Pt_{12}$ perp. granular mag. media patterning, FIB, single-domain islands 116409
CoPt granular perp. recording medium, thermal demagnetiz., MO recording test 116331
CoPtCrB trilayer recording struct., magnetis., thermal stabil. 116371
Fe-Pt bulk magnets, remanence, order-disorder transform. effects 70553
GaAs 2DEG QD, paramag.-diamag. interplay 69701
GdFe rear expansion detect. magneto-opt. media, domain expansion readout *(Japanese)* 93018
$M_xFe_{3-x}O_{4\pm\delta}$, spinel, mag. disaccommodation, nonmag. divalent substitution 70495
Nd-Fe-B nanocomposites, coercivity limits 81821
Nd-Fe-B thin arc-shaped bonded magnets for dc motors, powder compaction press prep. *(English)* 92864
$Nd_2Fe_{14}B$ grains, nanostruct., mag. props. optimisation 92862
$Nd_{14.65}Fe_{79.18-x}Nb_xB_{6.17}$, high perform. sintered magnets, Nb addit. role 68391
$Nd_{3.6}P_{15.4}Fe_{83}Co_3B_5$ nanocomposite ribbons, hard mag. props. 81818
$Ni_{80}Fe_{20}$ nanostructured material, micromagnetic simul. 116243
$Ni_{81}Fe_{19}$ permalloy artificially nanostruct. films, FMR obs. 116281
$Pr_{13}Dy_3Fe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_{14}DyFe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_8Fe_{88}B_4$ ribbons, exchange-spring magnets, exchange field temp. depend 70490

demagnetisation, adiabatic *see magnetic cooling*

demand assigned multiple access
black side data link layer, retransmission inform. appl. 111605
Digital Modular Radio, CORBA-based DAMA modem 111580
geo-sync. satellite networks, dyn. channel access protocol 96615
multimedia satellite systs., on-board switching archits. 109014
satellite link, dyn. bandwidth allocation, DAMA algm. 131307
UHF SATCOM, datagram-transfer protocol 107819
UHF secondary imagery dissemination systs., evol. 111604
waveforms for integrated broadcast service 111611

demand side management
aluminium smelter indust., elec. demand modelling 134677
ceramics plant cogen. facility optim. studies 134700

hand side management continued
elec. price strategy, benefit anal. *(Chinese)* 99233
electroheat technol. retrofits anal., DSM ES, fuzzy DSS 134645
feeder-specific expansion investment plan, demand-side resources prioritization 77283
grid-connected rooftop hybrid wind-PV power syst. perform. 112371
Home Energy Management System *(Japanese)* 88295
household elec. appliances, duty cycles, total demand 124127
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 2001) 124221
peak and valley time price for indust. elec. consumers *(Chinese)* 99199
programs economic anal./modelling in generation planning 77297
residential customer preferences in DSM programmes 111804
Shanghai commercial power syst., DSM benefits anal. *(Chinese)* 78356
Slovenian energy efficiency policy 99471

modulation
see also demodulators; differential detection; heterodyne detection; modulation
2D fringe pattern demodulation, spiral phase quadrature transform 94742
2D fringe patterns, natural demodulation, self-calib. phase-shifting algm. 118358
2D smart detector array, interferometric appls. 109659
3D vision based on projection of bidimensional patterns of incoherent light 94900
16-QAM noncoherent coded modulation 94252
256-QAM CATV networks, blind equalization 107707
AC EM flowmeter with analogue sig. proc. 120764
act. integrated antennas using direct-conversion detect. 83611
adaptive modulation systs., layered demodulation without modulation inform. transm. 108770
ADSL systs., cost-effective TEQ algm. 130277
air real-time acoustic vel. meas. using LDV, PLL, demodulation 110032
AO sig. proc. techs. and facilities 127860
asynchronous CDMA sigs., channel estim. and demodulation in freq.-selective fading 119217
attitude sens. by GPS antenna on turntable 75252
BFSK sigs., demodulation by adaptive digital notch filtering 83809
BiCMOS SOI ADC delta-sigma modulator, Bluetooth transceiver 102294
bioimpedance dyn., implantable lock-in analyser, mixed-sig. ASIC 110624
BPSK demodulation, freq. region 72742
cascaded WDM fiber Bragg grating sens. elements, ring-compounded-cavity fiber laser use 86591
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA commun., delay estim. using fast ICA algm. 107768
CDMA long-code multipath syst., blind multiuser detect. 107604
CDMA multiuser demodulation, stat. mech. 84879
CDMA systs. with nonlin. modulation, noncoherent multiuser detect., nonBayesian approach 74520
cellular radio one-hop/sym. FHMA perform. 74733
chaos tracker, noncoherent detect. in digital commun. 91158
chaotic commun., inverse syst. approach 94246
chaotic commun. systs., adaptive blind equalization, EKF 107676
chaotic secure commun., transmitting/receiving terminal behaviour 73760
coherent opt. sources, blind discrim. using reticle-based opt. trackers and ICA 106824
CPFSK demodulation, carrier recovery method 94253
CPFSK opt. heterodyne syst., polariz. mode dispersion effect 74955
CPM multipath-distorted/freq.-discriminated sigs., charactn. 106065
CPM sigs. over space-time correl. Rayleigh fading channels, soft output diversity combining 131290
D-FIRE 2, combined DAB/FM receiver SoC for receiver chipset 120529
DAPSK-OFDM transms. for high date-rate digital mobile radio 85900
differential space-code modulation for interf. suppression 94244
digital opt. fibre photoplethysmograph design, DDS, DSP 110847
double DPSK perform. over LEO mobile satellite channels 74891
DPSK blind sym. estim., differential correl. approach 85542
DPSK-based distributed sample acquisition for coherently demodulated MPSK/DS-CDMA systs. 94230
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA RAKE receiver with TWCL in urban area, field test meas. 108802
DS-CDMA systs., interf. reduction for reliable sync. 130282
DS-SS sig., pseudo-random seq. blind estim. 107623
DS-SS systs., perform. anal. of GMSK chip modulation 85509
encoded Gaussian filtered CPM, generalized concatenation *(English)* 72753
fading channels, iter. decoding scheme for pilot-assisted modulation 74699
fast US detect. syst., photorefr. GaAs two-wave mixing 101551
FBG interferometric sens. demodulation, noise-induced resoln. limit 97283
FBG sens. based on long-period fiber grating *(Chinese)* 75562
FBG sens. interrogation, scanning filter, M-Z interferometer, coupler 97281
FFH syst. diversity combining, worst-case partial-band noise jamming 96396
FH-SS systs., side inform. reception 108541
FH-SSMA networks, multiuser demodulation/iter. decoding 107732
fiber Bragg grating sens. syst., interferometric demodulation tech. *(Chinese)* 120846
fiber-optic extrinsic Fabry-Perot interferometer strain sens., three-wavelength digital phase demodulation 86586
fibre opt. AE sens. develop. for NDE syst. 114531
fibre optic sens., laser dyn.-fixed dist. meas. 75582
FSK sig., real-time digital demodulation *(Chinese)* 106044
GMSK modulation, slow freq. hopping, demodulation *(Chinese)* 74548
GMSK sigs. in multipath propag. environ., freq. error meas., LVQ 106051
heterodyning demodulation tech. for spatial quadrature 110733
HF high speed FH CHESS radio, G fn. arith. study *(Chinese)* 96388
HFC network, up-stream channel, burst mode DQPSK demodulation *(Chinese)* 131002
high-rate differential space-code modulation for interf. suppression 83816
high-resoln. fiber Bragg grating sens. syst., time-domain addressing tech. *(Chinese)* 109587
IEEE 1394 wireless home networks, ASK transceivers, 60GHz-band 130757
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
in-fiber Bragg grating sens., interferometric interrogation 97312
integrated ang. speed sens. syst. design, automotive appl. 109824
LDV, quadrature demodulation tech., freq. meas. errors 97772
lin. variable differential transformers, DSP-based sig. conditioning 86489
low-coherence interferometric sens. based on highly birefr. fibers, detect. syst. optimisation 109595
M-ary/SS systs., acquisition method using correl. mapping with false alarm penalty 84779

demodulation continued
Mach-Zehnder interferometric fiber-optic hydrophone *(Chinese)* 120882
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulation 94243
MEMS filters, mitigation of cosite interf. in nonlin. receivers 107482
mobile radio differential amplit. PSK, adaptive signalling algms. 85637
multifreq. elec. impedance tomography syst., frontend archit. 87423
multimedia data transm. receivers *(German)* 74566
NCFSK demodulation, exact eval. of capture effect 72751
neonatal HRV quadratic phase couplings, stat. quantification *(English)* 87401
noncooperative demodulation, robust baud rate estimator 108558
OFDM, 2D differential demodulation 72733
OFDM bandwidth-efficient indoor wireless, channel equalization 131083
OFDM receivers, freq. domain equalization of IQ imbalance 119177
OFDM receivers, optimum Nyquist windowing 73777
OFDM sigs. on HF-channels, blind equalization 107611
opt. chaotic FM detect., asymptotic sync., drive-response syst. model 106012
optimum multiuser detect., semiblind demodulation 119216
phase noise meas., DSP approach, over-sampling 121174
precoded/vector OFDM, channel spectral nulls robustness, reduced cyclic prefix length 106013
PSK turbo-coded binary sig., carrier recovery cct. using periodically inserted deterministic syms. 83887
QAM burst demodulation, data-aided carrier freq. estim. 94254
radio sigs. demodulation, AO method 71445
RF-lightwave transmitter, high-perform., analogue fibre links 96703
second-order sampling of wideband sigs., digital demodulation 94236
self-calib. interferometric/intens.-based fibre opt. sens. 75577
self-mixing interferometry, FT method, displacement meas. 97833
servo tracking sigs. printed with litho. patterned master disk 116364
SFH high capacity high data rate networks 83856
SFH multicarrier DS-CDMA for transm. over Nakagami multipath fading channels 85538
sig. contaminated by multiplicative Gaussian noise, intens.-weighted phase-derivative stats. 118403
smart sens. closed-loop meas. channel, noise detect. algms. 109825
soft-decision decoding, nonredundant error correction differential detect. 94321
software receiver open archit., demodulation algm. *(Chinese)* 131082
space-time codes, demodulation in presence of interf. 72926
SS commun. systs., noise-like carrier generation 84650
TIRIS digital receiver module for LF RFID syst., analog front end design 96393
turbo demodulation of zero-padded OFDM transms. 106067
turbo-coded AWGN and Rayleigh fading channels, soft-decision channel-optimized VQ 83871
twin-grating fiber optic sens., demodulation algm. 75573
underwater acoustic commun., expt. testing of pass. phase conjug. 109229
US cross-correl. flow meas., modulated sig. vel. depend. charact. 110054
US cross-correl. flowmeter, demodulation, undersampling 110053
VSB/QAM/QPSK single IC for ATSC/OpenCable™ digital terminals 120526
WCDMA, optimum demodulator for STTD 108678
WCDMA UTRA uplink, joint demodulation with smart antennas *(English)* 106069
wireless airborne commun. systs., overloaded array proc. 108694
WLAN OFDM systs., optimum frame/freq. sync. 119892
zigzag sampled phase demodulation freq. synthesizer, chaotic phenom. *(Chinese)* 117892
zigzag sampled phase detect freq. synthesizer, Hopf bifurcation set, chaos *(Chinese)* 125249
$Bi_{12}TiO_{20}$ cryst. two-wave mixing, small PM detect. 82816
Er-doped fibre amp. in-line cascade, rem. in-service supervision *(Chinese)* 75051
PZT pyroelec. thick films, displacement sens., light-spot cursor 109572
SiC micromachined diaphragm/sapphire fibre optic press. sens. for high-temp. aerospace appls. 120827

demodulators
see also demodulation; discriminators; modems
1.2 Mbit/s transceiver, improved BPSK demodulator 125266
analog commun., noise-like non-Gaussian sig. demodulator 117905
BFDM/OQAM systs. based on biorthogonal modulated filter banks, design 73776
Bluetooth radio data chip, VCO and quadrature demodulator *(German)* 74166
Bragg grating fiber strain sens. demodulator 97338
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA demodulator, num. word-length optim. 101859
CMOS binary FSK demodulator for low-IF radio receivers 114669
CMOS IF FSK demodulator for Bluetooth in 0.35 μm proc. 119958
CMOS IF variable gain amp., lin. controlled gain range, temp. stabil. 125245
CMOS single-chip front-end for digital satellite broadcasting 120084
coded M-ary FSK DS CDMA, design and perform. 85770
CPM multi-h telemetry waveform, description/perform. results 106026
CPM multipath-distorted/freq.-discriminated sigs., charactn. 106065
CPM receiver with immunity from carrier phase deviation 94235
digital baseband predistorter using calib. memory, perform. 108576
DS/SS systs., PN code acquisition using signed-rank-based nonparametric detectors 107584
DVB-RCS appls., high-speed on-board multi-carrier demodulator 109012
ERSUEM-2 high-speed demodulator for Earth-resource satellites 109026
FBG sens. demodulator, fiber birefr. 109616
FBG strain sens., tunable narrow bandpass filter demodulator *(Korean)* 97316
free-space opt. interconnect syst., detector/modulator chip arrays, packaged module 113645
FSK low power receiver for space appls. 96634
FSK mixed sig. decoder for AF appls. 68655
FTTH low-power single-chip receiver IC for opt. video distrib. syst., 1.5-GHz 96293
GMSK neural network based demodulator 101873
HBT cct., design optimisation, opt. demodulator 82357
homodyne act. patch antennas, direct-conversion demodulators 128853
LF electronic gate detect., cell/bacteria/colloid counting/sizing 121867
multimode software defined radio receiver, direct conversion and low-IF *(Japanese)* 108592
on-board proc. payloads, advanced digital demodulators 109011
PLL cct., strange attractors and crisis-induced intermittency 101853
PLL GFSK demodulator, perform. in multipath channel 108772
QPSK demodulator perform. improvement for quadrature receiver with amplit./phase imbalance correction 94228

demodulators continued
sigma-delta demodulator, single stage decimator, Laguerre filters 90987
single-bit input all digital synchronizer, demodulator baseband proc., fast freq. hop 101857
super-regenerative transceiver, low-power 1 GHz, time-shared PLL control 96374
VCR digital FM demodulator 131776
Verdu soft demodulator, iter. coded multiuser detect. 107609
W-CDMA single-chip IF transceiver IC, dyn. range variable gain amps. 131267
WCDMA, optimum demodulator for STTD 108678

demography
approx. of Lotka-McKendrick eqn. with finite life-span 124693
digital radiography and film scanners, automating transit. to filmless radiology 98516
dist. learning, student receptivity, effect of technol., reputation, constraints and learning preferences 67415
home nursing in Queensland, Australia, pot. of telemedicine 111282
med. imaging modality interfacing, relay station impact 98120
med. IS, WWW-based, for collaboration between rural clinics and central hospital *(Japanese)* 76785
residential calling patterns, parametric, semi-parametric and nonparametric demand models 130609

demonstrations *see student experiments*

Dempster-Shafer theory *see inference mechanisms; uncertainty handling*

demultiplexers *see demultiplexing equipment*

demultiplexing
see also demultiplexing equipment
4×10 GHz opt. TDM, all opt. clock extraction and DEMUX 96830
80 to 10 Gbit/s DEMUX using fiber cross-PM and opt. filtering 96869
AAL2, perform. eval. with continuous time Markov proc. 108751
acoustooptic tunable filter interrogated fiber Bragg grating sens. 131959
all-opt. clock repetition-freq. division for OTDM network 109208
all-opt. DEMUX by fiber cross-PM 96852
all-opt. Gbit/s DEMUX switching windows 131569
all-opt. packet switched irregular networks, deflection routing 120332
arrayed waveguide gratings for high-channel-count WDM systs., standardized params. 127770
DWDM 3×3 opt. fiber flat fused coupler 109163
DWDM-systs., pass. opt. components 131505
EO DEMUX of 100 Gb/s OTDM data, timing tolerance 120374
etched diffr. grating planar waveguide DWDM devices *(Chinese)* 86065
FBG sens. interrogation, scanning filter, M-Z interferometer, coupler 97281
fibre optic network conf., Kharkiv., Ukraine, (May 2001) 113238
forward-pumped symmetric Mach-Zehnder interferometric switch in high speed opt. networks 120340
Gb/s all-opt. DEMUX, gain-transparent ultrafast-nonlin. interferometer 75017
Gb/s channel ultra high capacity transm., vestigial side band DEMUX 131611
Gb/s opt. TDM sig., all-opt. DEMUX/regeneration 96812
Gbit/s OTDM sig. all-opt. DEMUX expt. 75026
Gbit/s simultaneous photonic DEMUX, OTDM-to-WDM conversion, FWM 75025
HDWDM transm. lines, filters using TW resonators 131394
high dens. WDM transm. line sig. DEMUX ring opt. resonator filters 120304
hybrid gain-clamped SOA Mach-Zehnder-interferometer switch, Gbit/s OTDM DEMUX 120345
large serial fiber-optic Bragg grating sens. arrays, TDM 86577
monolithic Mach-Zehnder interferometer with integrated SOA, ultrafast all-opt. DEMUX 120318
multichannel biotelemetry syst., filter bank use 88011
multiterabit/s high spectral efficiency DWDM transm., polariz. MUX-DEMUX 86078
NLO loop mirror DEMUX, Gordon-Haus jitter 109161
nonlin. material based switches, opt. MUX-DEMUX 105556
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov. 2000) 113262
opt. time-division DEMUX using delayed interferometer 86093
OTDM and WDM systs., functionalities and expts. at COM Research Center *(English)* 109198
OTDM commun., clock recovery and DEMUX 120356
parallel input-output queued crossbar switches with no speedup, scheduling algm. 119136
phase-shifted Bragg gratings, ultrashort light pulses transm. 127620
plastic fiber Bragg grating pass. component, tunability, WDM appls. 116651
polariz. division multiplex transm., crosstalk detect. schemes 131518
polariz.-division-MUX scheme, orthogonal polariz./bandwidth utilization 96853
QD SOA, high bit-rate sig. proc. 82631
rigorous WDM receiver model, noise correl. 96813
SDH high-speed frame alignment, anal. and improvement 95800
single FBG for modern telecomms. network 131443
SOA, nonlin. propag./FWM of picosecond opt. pulses 128289
SONET/WDM single hub rings, practical traffic grooming scheme 96771
surveillance video, content based software DEMUX 118169
symmetric Mach-Zehnder type all-opt. switches for for ultrafast all-opt. sig. proc. 120317
Tbit/s polaris.-bit-interleaved TDM transm. 96845
TDM photonic switching network, variable mux/demux, opt. time jumper 86106
thin film filter MUX devices 96781
time-domain/wavelength-domain opt. preprocessing, ADC 93747
TU-DC1 BS digital CATV tuner *(Japanese)* 120558
ultrafast polariz. bistable VCSEL all-opt. DEMUX 117498
universal DEMUX of multiplexed video, software-based 118170
wavelength-demultiplexed fibre Fabry-Perot sens., high-resoln. vib. meas. 97296
WDM networks with grooming capabilities, capacity fairness 120241
WDM opt. networks with grooming capabilities, perform. anal. 96751
YAAP, Yet Another Active Platform 74225
GaAs-AlGaAs QW all-SOA NLO loop device self-switching 105555
InGaAs-InGaAsP QW waveguide-type wavelength DEMUX photodetectors 75525
$LiNbO_3$ elec. controlled vol. holograms for wavelength DEMUX systs. 128589
$LiNbO_3$ quasiphase-matched wavelength converters, all-opt. DEMUX 117438

demultiplexing equipment
see also multiplexing equipment
1-to-4 opt. TDM DEMUX, photonic ADC 86082
1D photonic cryst. dielec. stack, wavelength DEMUX 109173
2D photonic crysts., wavelength DEMUX and opt. filters, freq. anal. 82183
4-in wafer low-crosstalk arrayed-waveguide grating multi/DEMUX fab. 127804
32-channel 100-GHz-spaced DEMUX for MAN 120299
32-channel very low crosstalk arrayed-waveguide grating multi/DEMUX module 120375

demultiplexing equipment continued
40-channel multi/DEMUX, dyn. passband shape compensation 86081
80 to 10 Gbit/s DEMUX using fiber cross-PM and opt. filtering 96869
ADSL systs. supporting downstream wireline/wireless trunks, subchannel allocation 85409
all-opt. DEMUX module, switching charact. 75028
all-opt. Gbit/s DEMUX switching windows 131569
arrayed waveguide grating multi/DEMUX, design optim. *(English)* 86100
arrayed waveguide grating MUX, matrix anal. of wavelength transm. 120294
arrayed waveguide grating MUX with flat spectral response using nonuniform arrays 75030
arrayed-waveguide grating multi/DEMUX, effective refr. index design method *(Chinese)* 82166
AWG-based thermo-optic wavelength tunable filter using polymer waveguides 116722
beat-detect OTDM DEMUX 120146
bipolar current switch, nonlin. dyn. behaviour after step input 80471
broad band TDM DEMUX, fiber OPA based 86084
CMOS MUX/DEMUX ICs using CML, 10 Gb/s, opt. link appl. 75038
DWDM, opt. sources & dielec. filter type MUX/DEMUX charactn. 86053
DWDM planar waveguide DEMUX, AWG & etched grating, review 96797
Echelle grating, 32-channel 100-GHz DWDM, design, realization and packaging 96676
fiber-optic switch, polariz., opt. activity, insertion loss, interchannel crosstalk 120186
gain-transparent ultrafast nonlin. interferometer, Gb/s polariz. insensitive all-opt. DEMUX 131591
new generation devices for all-opt. commun. network 74924
grating-based wavelength division (de)multiplexers for opt. network, optimal design 120132
grating-based wavelength division (de)multiplexers for opt. networks 120298
HDTV ISO/IEC 13818-1 decoders, design 120547
highly reflective boundary vol. phase gratings, spectral selectivity 128357
hollow opt. waveguide for temp.-insensitive photonic IC 93160
hybrid SLC Solc/Fabry-Perot filter for wavelength DEMUX 75048
InP-based arrayed waveguide grating DEMUX 120378
integrated optic arrayed waveguide grating based OADM, loss-imbalance equalization 120358
interferometric ultrafast SOA-based opt. switches for high-speed networks 120240
interleave filter design based on planar lightwave cct. synthesis theory *(Japanese)* 93142
LAN multimode 200-GHz-spaced DWDM DEMUX 120286
large-scale fibre-array MUX/DEMUX 120309
metropolitan WDM network technols., echelle grating DEMUX, fab. 96670
microwave design syst. based photonic CAD tool 82172
MM/microwave 5-freq. antenna, spaceborne limb sounder 88145
MMI-/AWG-based N×N devices for WDM appls., charactn. 120123
monolithic Mach-Zehnder interferometer with integrated SOA, ultrafast all-opt. DEMUX 120318
multiple cavities Fabry-Perot narrow-bandpass interf. filters, auto-design *(Chinese)* 116889
multiple-cavity NBI filter design for WDM opt. fiber commun. syst. 116652
NLO loop mirror, counter cross-phase modul. effect *(Chinese)* 93752
NLO loop mirror DEMUX and terahertz opt. asymmetric DEMUX, noise 75021
opt. ADM based on arrayed waveguide gratings *(Chinese)* 109191
opt. ADM using free spectral range periodicity of array waveguide MUX 86059
opt. sampled ADC, PE tech., bandwidth 125571
opt. time-division DEMUX, ASLALOM, cross-talk anal. 120297
opt. time-division DEMUX using delayed interferometer 86093
OTDM commun., clock recovery and DEMUX 120356
parallel packet switch with bufferless input DEMUX, stabil. anal. 130233
pass. wavelength router & wavelength converter opt. cross-connect 109210
phased array waveguide grating multi/DEMUX, array aperture *(Chinese)* 86101
photonic packet switching, planar lightwave cct. platform technol. 120334
photonic switching integrated AO devices, multiwavelength separation 96814
RSFQ-CMOS interface syst. 70879
sinusoidal elec. drives for opt. time DEMUX 131522
SOA, cross-modulated beam phase recovery dyn., all-opt. sig. proc. appl. 105304
SOA in terahertz opt. asymmetric DEMUX, switching charact. *(Chinese)* 131519
step chirped fibre grating, phase mask principle & design *(Chinese)* 127683
symmetric Mach-Zehnder type all-opt. switches, ultrafast all-opt. sig. proc. *(Japanese)* 96780
tandem AWG filter, 1010-channel, one primary/ten secondary AWGs 71488
THz opt. asymm. DEMUX perform., freq.-detuned sig. & control pulses 75061
transparent multiwavelength opt. network error probab., opt. MUX/DEMUX 131596
ultra-high-speed NLO loop mirror DEMUX, higher order dispersion effects, anal. 109165
UWB WDM, network archits. 86059
WCDMA channel decoder, VLSI design/implement. 120072
WDM DEMUX/opt. filters using finite 2D photonic crysts., freq. domain anal. 86052
WDM MUX/DEMUX using multilayer bandpass filters 120325
WDM opt. transport networks, integrative OADM/OXC, homodyne crosstalk anal. 120251
WDM pass. grating-based single mode MUX/DEMUX 120284
WDM UWB 1000 channel network, architectural solns. 96727
WDM-opt. cross-connect, same-source crosstalk 96337
wide-band thermo-optic wavelength tunable filter using polymer arrayed waveguide grating phase-shifter 120274
GaAs/AlGaAs MQW ultrafast all-opt. DEMUX switch 96867
InGaAs/InAlAs:Be MQW ultrafast saturable absorber for all-opt. switch 120371
InGaAsP QW waveguide photodiodes arrays for WDM and fiber sens. appl. 131904
InGaAsP-InP all-opt. Mach-Zehnder DEMUX, monolithic integrat. 74948
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74923
$LiNbO_3$:Fe cryst., vol. holographic gratings for photorefr. wavelength DEMUX scheme 128590
$LiNbO_3$:Fe,Mn opt. fixed local photorefr. holograms, integrated WDM device 105611
Si wafer 400-channel arrayed-waveguide grating, DEMUX props. 75005
SiGe HBT 40 Gb/s 4:1 MUX and 1:4 DEMUX IC modules, SONET/SDH 109178
SiGe self-aligned SEG HBT static freq. divider and MUX/DEMUX, fibre link 79835
SiO_2 arrayed waveguide dyn. gain equalization filter, Mach-Zehnder interferometric DEMUX-MUX pair 131558

multiplexing equipment continued
SiON integrated opt. waveguide DEMUX, stress effect 93148
ndrites
see also crystal growth
bis-(diphenylamino)diphenylpolyene based model dendritic macromols., highly absorbing transient charge states generation 71956
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Zn-Ag_2O rechargeable cells, separation comp. eval. 89106
ndritic crystals *see dendrites*
notational semantics *see programming language semantics*
nse wavelength division multiplexing *see wavelength division multiplexing*
nsification
see also density; powders; sintering
Bragg fiber gratings, laser-induced densification, interferometric determ. 127645
dual GOI, STI proc. param. effects 81416
elec./thermal functionally graded ceramic systs. 114440
electroconsolidation proc. monitoring/control, nonintrusive US sens. 124138
green-state P/M compacts, nondestructive electrostatic dens. assess. 114534
SOG, SOG planarization proc., limits, densification steps 115618
sol-gel-derived 0-3 composite ceramics for direct write electronics appls. 102841
ultrafine powder compaction, size effects 68445
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
$Ba_{6-3x}(Nd,Bi)_{8+2x}Ti_{18}O_{54}$ solid soln., struct. and MW dielec. props. 92598
$3Ba_{0.5}Sr_{0.5}O{\cdot}2CoO{\cdot}12Fe_2O_3$, sintering, mag. props., sintering effect, HF appl. 70497
$BaTiO_3$ based capacitors, dielec. props., sintering effect 80424
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ tapes, Ag-clad, evol. of core dens. during proc. 70756
Bi_2O_3-ZnO-Nb_2O_5 microwave ceramics, effect of CuO-based oxide additives 79429
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, overpressure proc., J_c 70716
CeO_2-ZrO_2 thin film, sol-gel prep., counter electrode appl. 68320
Fe insulated powder, mag. props., AC mag. appl. 104498
β-$FeSi_2$:Cu, n-/p-type, pressureless sintering prep., thermoelec. props. 69570
$La_{0.85}Sr_{0.15}Cr_{0.95}V_{0.05}O_3$ SOFC interconnects optimisation 89263
MgCuZn ferrite, low temp. sintering and elec. and mag. props. 114429
MgO-CaO(Y_2O_3)(SrO)(ZnO)(Al_2O_3)(TiO_2)(ZrO_2) protective layer densification, AC PDP 97617
Nd-Fe-B sintered magnet, wet compaction, energy product 127382
Nd-Fe-B thin arc-shaped bonded magnets for dc motors, powder compacting press prep. *(English)* 92864
$Nd_xFe_{85-x}Co_8VB_6$ exchange-spring magnet ribbons, spark plasma sintering 127315
$(Ni_{0.60}Zn_{0.20}Cu_{0.20})Fe_2O_4/Co_2Fe_2O_4$, sintered, struct./props. 81833
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
PZT ceramics derived from oxide mixture treated by high-energy ball milling proc. 114430
PZT ceramics for US transducers, microwave sintering 101479
PZT ceramics, low temp. sintered, piezoelec. props., densification, microstruct. 104354
PZT ceramics, reactive sintering prep., high energy ball milling 90558
PZT multilayer bender type actuator, proc. 116207
PZT screen printed thick films, densification, dielec. props. 79436
PZT:Mn,W,Sb,Ni ceramics, prep., microstruct./dielec. props. 101487
$PbZr_{0.53}Ti_{0.47}O_3$ thin films, densification/evol. of stress effects 101427
$RTiNbO_6$ ceramics, prep., charactn., microwave dielec. prop. 104235
SiC:V,B, liq. phase sintered, elec./thermal conduct. 115350
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealing *(Korean)* 114436
SiN_x dual ion beam deposited H-free films, mech. and etching props. 127098
SnO_2 ceramics, chem. precip. & freeze-drying, CO gas sens. 75714
SnO_2 varistors, (Ni,Nb)-doped, elec. nonlin., Mn^{2+} effect 115037
SnO_2-CoO varistor prop., sintering sensitivity, La_2O_3 addit. effect 80748
SnO_2-based varistor, effect of La_2O_3 doping on microstruct./elec. props. 70227
TaN CVD diffusion barrier for Cu interconnects 92166
V_2O_5/Ni-Cu-Zn ferrite, V_2O_5 sintering aid addit., props. effects 70494
ZnO:Bi_2O_3, electronic ceramics, microwave sintering, varistor appl. 114446
ZnO:Bi_2O_3,Sb_2O_3,CoO,MnO, nanosized powders, sintering, elec. props. 104263
ZnO-based varistor powders, modified citrate gel techs. 68404
ZnO-based varistors, modified citrate gel routes 101497
nsimeters *see densitometry*
nsitometry
see also photometry
angiographic image seqs., simulated, layer decomp., accuracy assess. 132803
bone metastases recalcification, radio- & chemotherapy, densitometry 87852
chest radiographs, small peripheral lung cancers visibility 76549
coronarographic densitometric meas., X-ray scatt. & veiling glare 76516
coronary flow relative distrib., model & digital densitometry 87746
digital X-ray radiographic nondestructive control systs., resoln. estim. 132486
dual X-ray absorptiometry systs., bone densitometry, cross-calib. 87696
dual-energy X-ray absorptiometry, CdZnTe detector implement. 110925
film dosimetry for photons, indiv. monitoring, filters selection 87981
GAFChromic dosimetry, red acetate filter overlay 98793
Nuclear Medicine Soc., conf., Toronto, Canada (Jun 2001) 100369
osteoporosis eval., conventional radiography/dual energy X-ray absorptiometry 87756
phantom develop. for morphometric X-ray absorptiometry 87717
pulmonary emphysema, lung vol. assess. using multi-detector helical CT, comparison with pulmonary fn. tests 110952
radiochromic dye film dosimeter, transparency slide scanner 76757
radiographic film, processed, vis. dye light absorpt. props. 110963
radiographic/radiochromic film dosimetry, directional depend. 76758
X-ray films, RMS granularity meas. with commercial film scanner 132495
X-ray microtomography using interferometric phase contrast 76517
nsity
see also density control; density measurement
bone dens., tetrahedral mesh modelling of data for anatomical atlases and intens.-based image registration 87739
diamond film, microwave PECVD, Si(100) substr. *(Japanese)* 68228
elastograms, simulated, class. based on texture features 110825
elastomeric polymer dielec., strain response, electroactive polymer actuators 127215
Ka-band Doppler radar for cloud and fog obs., field eval. *(Japanese)* 75213
lanthanum crown glass, proton irrad. induced refr. index/dens. changes 71198
organic ion-implanted low-k organic SOG films, IC appls. 126466
single-cryst. Si, molar vol. meas. 75362
TSOP epoxy molding cpd. pellet wt. determ. rule 124341

density continued
X-ray tomography, discontinuous 2D dens. reconstruction algm. 121237
$AgGaS_2$, cryst. growth, lattice consts. *(Chinese)* 68127
AlN films, reactive DC magnetron sputtering prep., struct. 68153
AlN/sapphire thin films, SPE recrystn., GaN epitaxy substr. 125050
Ar-Ne filled quasi-static gas cell, high-brightness high-order harmonic generation 82840
$BiNbO_4$ based microwave dielec. ceramics, low firable, sintering, microstructs., dielec. props. 68402
BiPbSrCaCuO 2223 tapes, two axial rolling under long. stress, deform., effect on microstruct. 68431
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, overpressure proc., J_c 70716
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, sandwich rolling deform. prep. and charactn. 81972
C films, controlled ion-plasma deposition and charactn. 114401
a-C:F films, ion beam deposition, charactn. 124845
a-C:H DLC films, deposition methods for GMR heads 79293
C_3N_4 films, sputtered, struct., dens., chem. states, XPS/FTIR/X-ray reflectivity 90258
a-CN_x films, N-rich, deposition, charactn. and appls. 90411
Cs D_2 line shift, dens. depend., precise wavelength modulation refl. spectrosc. meas. 110020
Cu/Ta/Si(111) thin films, neg. bias sputtering for Ta silicidation retardation 92136
Er^{3+}:$Na_2O{\cdot}Ca_3Al_2Ge_3O_{12}$ glasses, opt. transits., freq. upconversion 71986
Fe insulated powder, mag. props., AC mag. appl. 104498
Fe-Al-Ga-P-C-B-Si glassy alloy powders, consolidation, mag. props. *(Japanese)* 81797
GaN/AlGaN/AlN, NH_3-MBE growth, HFET, 2DEG, sputter deposition 90307
Ge embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
$La_{1-x}Ln_xCrO_3$ SOFC separator eval. R&D 89264
a-Li_xWO_3 films, polaron absorpt. obs. 93312
MgO-CaO protective films, e-beam prep., annealing, AC PDP appl. 68168
$Nd_{33}Fe_{65.9-x}Nb_xB_{1.1}$ magnets, microstruct., mag. props. *(Chinese)* 127310
PMN-PNN-PZT:Ag ceramics, prep., dielec./ferroelec. props. 127205
Sb_2O_3-CuI-NaCl(NaI)($PbCl_2$)(PbI_2) glasses, prep., struct., opt. props. 92939
Si embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
Si sputtered microstructs. integrat. with pre-fabricated CMOS circuitry 104182
SiC layers on porous SiC, epitaxial/bulk growth, defect dens. reduction 125125
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealing *(Korean)* 114436
SiO_2:methyl films, CVD, struct./dielec. props. 124893
SiON gate n/pFETs, 1.6 nm, low leakage/high perform./high reliab., base SiO_2 dens. 126777
$Si_{20}Te_{80}$ glasses, phys. props., acoustooptic devices appl. 93260
(Sm,Gd)-Ba-Cu-O:Ag HTSC, melt-proc. fab., T_c 68410
$SrTiO_3$ ceramics, sintering, HV capacitor appls. 102770
$SrZrO_3$ ceramics, sintering, HV capacitor appls. 102770
TiN films, ECR plasma sputter deposition and charactn., diffusion barrier appls. 79219
YSZ-Al_2O_3 SOFC electrolyte membrane tube, prep. and appl. *(Chinese)* 89154
$Yb_xY_{1-x}Al_3(BO_3)_4$ cryst., growth, self-freq.-doubling props. 128208
ZnO nanostructured based varistor materials, impedance spectrosc. studies 115304
ZnO-based varistor powders, modified citrate gel techs. 68404
ZrO_2 sputtered thin films charactn. for gate oxide appls. 104231

density control
blended materials, moisture content and dens. control, VNS-7652M neutron-measuring and computing apparatus *(Russian)* 87196
mammographic acquisition param. effects on semi-automated quantitat. measure of breast cancer risk 98494

density measurement
see also hydrometers
air dens. and humidity sens., opt. fibre and α-ray detector 97293
batt. separators absorbency under compression 89043
bone fracture callus dens. eval., X-ray radiography & quantitat. CT 76515
film thickness/dens. meas. using combined X-ray tech. for IC metrology appls. 103952
flexural mech. resonator, liq. dens./viscosity meas. 92689
flowmeter for loading road tankers using proc. tomography 121276
granular materials, bulk dens. determ. from microwave meas. of dielec. props. 121168
green-state P/M compacts, nondestructive electrostatic dens. assess. 114534
high-resoln. gas-dens. meas. by laser heterodyne method 110011
IC interconnect metrology, rapid X-ray reflectometry appls. 115720
liq. dens., viscosity, SAW sens. anal., simultaneous meas. 97188
liq. flow SH-SAW sens. syst., liq. acoustic prop. meas. 97176
magneto-acoustic sens. for meas. of liq. temp., viscosity and dens. 76977
NSRL electron storage ring, VLS diffr. grating, groove dens. anal. *(Chinese)* 110217
QCM based DNA sens., immobilis. methods, genetic diagnosis 75674
std. in single nontoxic liq., hydrometer calib. 75357
subsea separators, level meas./control strategies 110049
thin cortical bone dens./thickness eval., clinical CT method 98536
thin film, acoustic props., piezoelec. thickness mode resonator 92692
trabecular bone, US param., impulse response, decorrel., BUA 110714
X-ray tomography, discontinuous 2D dens. reconstruction algm. 121237

density of states, electron *see electronic density of states*

dentistry
3D opt. sens., med. diagnostics appls. 76396
biomedical sigs., time-series anal. 110540
caries lesions detect. using deformable templates 87768
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
coherent artifacts in OCT, obs./cancellation 110838
dental cast shape, complete 3-D reconstruction using perceptual grouping 132634
denture mfg., robotic tooth insertion with interactive ES 98727
endodontically treated teeth, mech. perform., FEA 121868
extracted human teeth, OCT imaging, coherent artifacts cancellation 132639
freq.-domain IR photothermal radiometry & luminesc. 87532
hard tissue modif./removal using CO_2 lasers 76610
implant osseointegration, KrF laser hydroxylapatite films, Ti6Al4V alloy 76662
implants, ASIC strain gauge meas. syst. for stress monitoring 111166
intra-oral dental X-ray imaging, integrat. CMOS APS 98542
IR imaging, appl. of ensemble learning ICA 121879
laser med., conf., Florence, Italy (Oct.1999) 89496
lasers appl., conf., San Jose, CA, USA (Jan. 2001) 89542
lip contour approx. method using fn. synthesis *(Japanese)* 73443
metal implants, laser-microtextured surfaces, tissue integrat. 117596

dentistry continued
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
oral implantology, computer-aided, navig. syst. accuracy 87893
orthognathic surgery, cephalometric image anal. syst. 87747
orthognathic surgery planning with hexapod syst. *(German)* 87895
osteoblastic adhesion, implant surfaces, AFM, cytodetachment tech. 111156
periapical lesion anal., stat. textural features/neural nets 122130
periodontium, tension-deformative condition investig., bone tissue atrophy 87317
radiodiagnostic facilities, ref. doses 76767
teeth, laser irrad., surface morph., SEM, AFM 76398
teeth imaging using diagnostic US, simul. models, transducer design 110718
telemedicine, conf., Uppsala, Sweden (Jun 2001) 100362
tooth enamel, EPR biodosimetry, radiation therapy appls. 132731
tooth enamel EPR dosimetry, automated spectra deconvolution routine 111224
tooth enamel/organ doses, ESR dosimetry 111244
tooth whitening procs. using Ar^+/CuBr lasers, comparative investig. 117599
tooth-bone interface, advanced digital photoelastic investigs. 76384
US wave propag. in teeth, modeling using PSpice, comparison with FE models 98328
X-ray survey results, Canada Nat. Capital Region, 1999 to 2000 111199
Na^+ anal., gingival fluid, NASICON microsensor 86689
NdFeB PM, dental prosthetic device, mag. props. 122318
Si microstrip sens., 2D, radiographic imaging syst. 122127
Ti dental implants placement, MRI, spatial distortion 76489

depth first search *see tree searching*

depth measurement *see bathymetry; spatial variables measurement*

desalination
850 MW combined cycle power plant/desalination project, UAE 123226
hybrid wind-PV energy syst. design program 111942

desalting *see desalination*

describing functions
see also control system analysis
low-pass sigma-delta modulator, stabil. model 102261
pass. filter design, nonlin. inductance perform. estim. 91019

descriptors *see vocabulary*

design aids
see also design engineering; nomograms
biomedical engng. design courses, software aids 98115

design data management *see design engineering; visual databases*

design engineering
see also design for environment; design for manufacture; design for testability; product development; project engineering; reverse engineering; systems engineering
absol. capacitive ang. meas. syst. develop. 75892
aesthetic intell., user-centred design optimisation 78571
asymmetrical thyristor, 3.3 kV, design/test/appls. 81247
automated multicriterial selection, struct. inform. files constr. 100531
automotive components/systs., design optim. 89814
automotive electronic control modules, simul./design validation 113118
automotive electronic syst. design trends, functionality, prototype systs. 89415
automotive press. sens., design/manufacture 78314
automotive test data mgt. 100272
brushless PM motor, design optim., min. fn. calls 124293
CAE design optim. syst. reconstruction for high-intens. US syst. *(Japanese)* 67514
capstone design programs indust. projects selection 113330
capstone design teams coaching, faculty training 113321
Capstone engng. design projects to aid disabled pers. 98735
coal/pet-coke firing pipe design customisation 78580
compact MV/LV substations, Spanish technol. evol. 134292
composite distrib. insulator develop. and testing investig. 133762
conceptual design chains with basic schematics 100524
contactless power transm. for undersea robot, fund. considerations *(Japanese)* 134528
cornerstone/capstone engng. design projects selection criteria 113331
corporate strategy linking to engng. design proc. 89685
courses, motivational teaching/learning concepts 113318
CURWIN space power solar array design concept 111345
DAC benchmarking for commun. appls., syst.-oriented approach 108572
deployment, tutorial introduction 78573
differential transformer, systematization design method 115100
distrib. network planning/design, structured methodology 99349
distributed power supply systs., design aspects *(Spanish)* 112633
drive trains conceptual design, reliab. anal. implement. 100668
education, CAx role 113340
education, team perform. prediction 113346
education course assess./improvement plan 113345
education unification through decision theory 113336
electronic design quality, conf., San Jose, CA, USA (Mar. 2001) 78421
electronic packaging innovation, technol./mgt. issues 67619
electronic syst. design, perform. eval., verification technol. 78567
electronics, thermal design, overall cooling perform. assess. 124347
energy-saving solenoid control valve optimal design by genetic algm. *(Chinese)* 117636
Engage first-yr. engng. studies program 113326
Engineering Design and Communication course, interdisciplinary collaboration 113319
engng. education, conf., Claremont, CA, USA (May 1999) 113228
ethical considerations in engng. design procs. 113439
fault tolerant designs, reliab./safety assess. 124422
fluid power syst. computerised design support tool develop. 100521
gimballed electrostatic microactuator, full 3D motion charactn. 89025
hazard criteria derivation from historical knowledge 100523
heavy-duty IM design methods 123434
high-low tolerances robust design problem, math. prog. model and heuristic procedure 124297
honors capstone pollution control design course experience 113329
humane concerns 113440
hydropower plant rehabilitation, Francis turbine runners CAD 77779
IC proc. technol. requirements for 300 mm wafer transit. 115984
IM recycling, design principles 123419
indust. lin. motor design approaches 99694
indust. network design/develop. alternatives 120662
iter. design, meta-level eval. fn. reformulation strategies 100522
knitting machine, circ. warp, patterning servomechanism 100533
knowledge teaching, skill develop., attitude cultivation 113441
laser range scanner designed for min. calib. complexity 86243
mass/batch prod. products develop., design substantiation, CAD anal. 89803
mech. engng. design courses, team motivation 113322
mechatronics integrat. in second-yr. design course 113334
MEMS design for reliab. 81574
microrobots miniaturisation, design considerations and appls. *(Japanese)* 8154
microsystems, prod. trends in product design 116112
microwave filter struct., theory and design, book 78389
min. lifecycle cost design under multiple hazards 113787
MLC capacitors, capacity increase, pricing *(Spanish)* 102773
modular TPP design 99535
multiple design projects auditing, Internet-based approach 89689
multiple-criteria decision-making, preferences commun. 78570
network testing for design verification 108347
overhead material handling operation, emergency back-up syst. design 11309
packaging design concept eval., appls. of computer-vision techs. 67577
perfect-reconstruction filter banks, low-delay design using LP 107499
pers. navigator mobile multimodal commun. device design *(Slovenian)* 9651
pick-up actuator design for min. seek time 109388
plasma etching of nonvolatile materials, contamination, by-product deposition mgt. 103431
plate fin heat sinks, entropy generation minimization 78622
polysilicon microfabricated thin films, mech. props./reliab., size effect 81571
portable design, conf., San Diego, CA, USA (Jan. 2000) 124223
probe/probe card design for chip/wafer/package/PCB level testing 124305
product design/assembly planning oriented to change 78579
product family config. design, combinat. spaces 124296
project-based design education courses 113323
PS-1 substation concept for liberalized elec. markets 134307
R/C buildings cost optimal design 113788
reliab. fns. for earthquake-resistant design 113789
reliab.-based optimal structural design using decoupling approach 113786
robust decision-making for engng. design 78569
robust design, reliab.-based optim. 89813
sig. integrity anal. in electronics design, next-generation systs. 124294
small elec. motor design, size/wt. minimisation 88776
structural design education for 21st Century 113339
structural design specs., cost/safety optim. 113420
syst. design, optimum control theory 100526
syst. engng. of elec. machine components 67511
syst. wiring design and layouts, automobiles, high-level approach 80466
systematically-renewed struct. optimisation 113791
teaching, curriculum assess. using design projects 113344
teaching challenges 113338
telecomm. equipt., knowledge driven digital design syst. *(Japanese)* 96000
theory, parallel to higher education assess. 113342
tolerancing for mfg., 3D model 67512
transducer energy coupling/efficiency, power source minimization 97191
undergraduate engng. curricula, capstone design course, projects 113333
undergraduate engng. curriculum, engng. sci./design integrat. 113337
undergraduate engng. design course, group project work assess. 89636
USB/IEEE 1394 stds. enhancements, design issues 109449
vert. integrated transistor-laser struct., modified design 93665
ArF/SOR resist patterns, adhesion/cohesion anal. with AFM microtip 103637
a-C/diamond MEMS technol. 81563
GaAs power MESFET, optimized electrothermal design, nonlin. 3D heat flo eqn. soln. 115969
Si eye using MEMS micromirrors for intell. vision systs. 86603
Si microengineered gas chromatography syst., miniature injector design 10973
Si piezoresistive low-press. sens., design comparison 75509
Ta chip capacitor, 1608 size, 6.3 WV/10 µF, face down terminals for fillet-le surface mounting 115084
needle dispensing equipt. design for very high speed deposition 113468

design for environment
automotive electronics, design for reliab., environ. requirements 124053
CAD-integrated DFE workbench tool develop. 100535
cellular telephone energy consumption, product life cycle studies 108966
colour CRT and LCD monitors materials eval. 86812
config. anal. for design-for-disassembly 67513
costs, act. disassembly using smart materials, costs 100537
criteria integrat. into new product introduction proc. 100706
CRT/LCD desktop monitors, life-cycle environ. impacts 100702
Disassembly Bill of Materials std., efficient product data transfer 100540
disassembly complexity/recyclability anal. from CAD file data 100534
Eco-integrated Wall-Pack concept 119811
ecodesign priorities ranking for end-of-life scenarios 100695
elec./electronic equipt. re-usability improvement 100701
electronic packaging syst. cost anal., Internet-based educ. mater. 113370
electronic products, environ. perform. metrics comparison 100697
electronic products, remanufacturer waste streams anal., recycling 100715
electronic systs., environ. props. eval. and optimisation 113800
electronics and the environ., conf., Denver, CO, USA (May 2001) 100450
electronics firms, design for environ. programs evol. 100538
environ. conscious mfg., conf., Boston, USA (Nov. 2000) 89540
environ. friendly wafer prod., NF_3 rem. microwave plasma for chamber cleani 67525
environ.-conscious products, requirement-centered design support syst. *(Jap nese)* 100520
EPROM IC product life cycle assess. 100703
flexible disassembly tools 100689
IBM_R Demanufacturing and Asset Recovery Center overview 100688
IBM, environ. perform.-improvement, reverse logistics 100539
image scanners, environ.-friendly product develop. *(Japanese)* 78729
Intel, product ecology issues 100536
mobile phone, end-of-life environ. impact 89930
notebook PC design, environ. considerations *(Japanese)* 78728
over-consumption, challenge for ethically responsible engng. 113225
printer supplies recycling syst. *(Japanese)* 78727
product design alternatives assess. w.r.t. environ. perform./sustainability 1006
product design costs, design eval. implications review 78572
product design proc., environ. concerns integrat. 67509
product environ. care, ISO 14001, ISO 14062, IPP, EEE, ecolabel elemen 100691
product family reuse strategies, fn. degrad. and reliab. anal. using Markov cha 113799
QFD for product design based on life-cycle strategy *(Japanese)* 67515
remanufacturing activities, technol. trends, business plans 100708
semi-quantitat. environ. conscious design methodology 100707

gn for environment continued
tep-change reduction in environ. impact in creation of electronics products 78732
upply chain mgt., environ. factors, strategy, implement. 100542
yst.-level energy consumption, event-driven power mgt., low-power states 78576
ools develop., PCB reusable components extraction 100543
vebVDM, web-enabled virtual disassembly manager for electronic products 100541

gn for manufacture
see also design for testability
.4 GHz subscriber transceiver radio unit, internat. design and manufacture 67508
nalog CMOS ADC building blocks, anal. of manufacturability factors 102271
hip scale BGA packaging, high-dens., for hand-held/portable products, design for assembly 67628
CMOS HF I/O interface ccts., design-for-ESD-reliab. 104113
lividing stator core AC servomotors, mfg. technol. study *(Japanese)* 88773
DRAM trench capacitor technol., array transistor design 114768
drop test anal. of electronic products, intell. data mining syst. 124298
eDFM Web-based DFM in electronics assembly 115134
electronic product design, generalized develop. model, crit. success factors 115120
EUROPRACTICE microsystem, foundry services and design needs 92509
flexible cct. DFM, ground rules 91454
mixed-sig. IP blocks, DFM characts. and optimisation 104138
mixed-technol. VLSI systs. incl. MEMS and MOEMS, CAD issues 70322
OO inform. model for manufacturability anal. of PCB fab. 91456
opt. proximity correction, illum. syst., design manufacturability 103532
parametric timing yield estim. from static timing anal., robust design for-quality 81469
PCB DFM, assembly and fab. considerations 125875
PCB DFM, design elements overview 115121
PCB DFM modelling, proc. rule check *(Chinese)* 102811
PCB manufacturability, DFM, design flow, quality 69304
PCB manufacture, high complexity, quality/test modeling role 115175
PowerPCB, PC layout and routing program for detecting pot. prodn. defects *(German)* 80490
quality of design from IC mfg. perspective 81462
SISE parallel plate forced convection heat sinks, DFM 78621
SwampFinder product develop. tool, IC DFM 104014
through-hole technol., DFM in PCB manufacture 125889
VirMIC syst. for virtual mfg. of ICs, open framework, modeling technol. *(Chinese)* 124446
VLSI oxide CMP manufacturability, model-based dummy feature placement 81167
VLSI yield optim. design based on sub-proc.-element level redundancy *(Chinese)* 104023
$(Pb,Bi)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC/Cu hybrid current leads, design optim. for LHC appl. 71193

ign for testability
see also design for manufacture
accumulator-based bit-serial test response compaction schemes, ISCAS'85 benchmark ccts. 79738
ASIC-embedded CAM with power-saving and design for test features 102181
assignment-space exploration, testable data-path synthesis, minimizing partial scan registers 68785
asynchronous cct. testing, techs. and ATE archits. 79788
asynchronous ccts., init. tech. 125407
bipolar CML testability, inductive fault anal., library cell layouts 102074
BIST RTL data paths, testability trade-offs, 3D design space 79715
BIST strategies at register-transfer and algorithmic levels 125341
BIST-based design-for-test method, breaking correl. to improve testability 101914
boundary-scan implement. into prod. facility 78585
CMOS and BiCMOS logic ccts., fault charactn. and DFT tech. for I_{DDQ} fault detect. 125438
CMOS high-perform. ccts., test mode, arbitrarily low test freq. 102040
CMOS latches, resistive opens, delay testing, DFT 102044
CMOS MPU appls., TCAD stat. design methodology 125555
CMOS/BiCMOS ccts., fault charactn./DFT for I_{DDQ} faults detect. 125406
combinat. ccts., resynthesis for path delay fault testability 125418
communicating systs., testability anal. algm. 107981
continuous scan, test environ., fault coverage 125346
cost-effective non-scan DFT 125394
data path synthesis, GA 114731
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
DFT based methodology reduces fault-coverage anal. 101929
electronics DFT, concepts/methods/implement. techs. 125887
EXOR based ccts., factorization to enhance random pattern testability 79775
fault coverage vies for clear DFT rules 125284
IC design/test, DFT tool/ATE platform cooperation 126997
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
integrated SoC test framework 81431
interconnect testing, switching activity, automated BIST synthesis 104058
large seq. ccts., testable design, partition and resynthesis approach 102039
mixed sig. DFT/BIST automation using behavioral modeling 68952
mixed-sig. designs, syst.-level test synthesis, hierarchical test approaches 102421
multi-PLL clock distrib. archit. for GSI 91002
multiple scan chain design for two-pattern testing, seq. cct. appl. 102042
next generation mixed sig. ICs, ADCs, cct. specific failure modes, test 80117
partial scan seq. ccts., power dissipation minimisation 125283
PCB DFT, testing strategy, product life cycle conditions 125890
PCB manufacture, high complexity, quality/test modeling role 115175
PowerPC µP, anal. of testing methodologies for custom designs 102203
reconfigurable MCM syst., enhanced quality, redundant utilisation 102879
RT level test insertion using functional test metrics 68677
RTL ccts., non-scan DFT method, fixed-control testability *(Japanese)* 68712
RTL coding style effect on testability, use of RTL code analyzer 101993
RTL redesign for testability 68665
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
scan cct. testing, nonisolated random logic legacy core 90831
scan wheel, tech. for interfacing high speed scan-path with slow speed tester 101915
sigma-delta techs. for integrated test and meas. 126951

design for testability continued
SoC design, testability stds. 115992
SoC test challenges and DFT methodologies 126949
sync. seq. ccts., almost independent reset sigs., testability struct. 102041
syst.-on-a-chip, test techs. *(Italian)* 90817
syst.-on-a-chip DFT strategies 126968
systs. test to DFT, model based cost optimisation tool 86398
TACOS, testability allocation and control syst., BIST cost/quality trade-off 125332
testable data path synthesis, GA 125404
transaction-based simul./emulation archit. for functional verification 131810
unified DFT archit., IEEE 1149.1 and VSIA/IEEE P1500 compliant test access controllers 125339
very low cost testers 114686
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395

design of experiments
see also Taguchi methods
auditory cortex echo-planar fMRI, decay-sampling design 87572
auto-welding proc. quality improvement, fractional/full factorial DOE 89841
automotive flywheel balancing, factorial designs, cylindrical response 89309
axiomatic CAD, QC tools and designed expts., combination 89904
BGA solder joint voiding, PCB surface pad finish/contamination impact 113712
BLDCM, optim. techs. derived from expt. design method 134058
carcinogenesis, visually safe dose estim., optimal risk assess. 98832
CMOS analogue ICs, low-power design 116021
CMOS interconnect model, DOE and multiobjective optim. 104061
CMP removal rate uniformity control, empirical-based modeling 81085
computer-aided tolerance synthesis with stat./optim. techs. 67504
computing power, sizing fixed effects 113431
confidence interval coverage 100517
CSP solder attach reliab. optim. 113603
deep X-ray lithog., mask fab., shaped e-beam lithog. 126564
electrostatic separation procs. optim. using response surface modelling 128713
feedforward neural network archit. develop., factorial design 114912
fine pitch gold ball bonding develop., response surface methodology optimisation 91512
flip-chip BGA package, design and reliab. 113494
flip-chip BGA package, reliab. 113495
flip-chip-on-ceramic substr., packaging proc. 67633
floating gate NVMs, low temp. data retention, reliab. methodology 79897
Gray Field UV technol. for defect inspection systs., design/appl. 100630
HDD, BLDC spindle motor, unbalanced-mag.-pull optim. 123530
HDD brushless DC spindle motors, robust torque optimisation 78220
HIGFET device manufacturability enhancement using DOE/tech. knowledge 70166
high-low tolerances robust design problem, math. prog. model and heuristic procedure 124297
high-power EM, suscept. testing strategies 83439
inductive cond. meas., model selection, parametric inversion 114497
laser proc., online quality detect. & beam control, multisens. class. 117564
mag. reson. spectrosc., Cramer-Rao lower bound 98453
multiple engng. charact. consideration 89798
no-clean stencil printing proc. develop. for SMT/through-hole interconnect technols. 124339
no-flow flip chip assembly, high throughput/low cost, underfill voiding, substr. design effects 69365
noise param. meas., eval. of uncertainties 75853
nonnormal response designed expts. examples 100516
opt. coating proc. develop. time/cost reduction, increased stabil., DOE 82284
PCB defects, data mining for quality engng. 78586
PCB proc. optimisation by stat. expt. design 102826
phase shifting mask misalignment, CD var. anal. 103688
PMSM, sensorless FOC, 6 sigma tool, param. optim. 134667
post-etch dry polymer residue cleaning, stat. methods 126411
queueing model, long-memory arrival effect on perform. 124477
real-time RIE metrology techs., situ response surface proc. charactn. 92065
response surface methodology for bonding proc.design, GA 124520
satellite link, dyn. bandwidth allocation, DAMA algm. 131307
SCALPEL mask, membrane distortion 103669
semicond. fab. facility, AHMS syst., simul.-based expt. 100548
small specimen bulge test, sensitivity anal. FEM & Taguchi methods 90597
SMT electronics assembly, SPC/data collection, determ./implement. 115170
SMT mfg., quality improvement through SPC/DOE 89840
SMT mfg. line test proc. optim. 125891
solder paste stencil printing, high speed, full factorial DOE 115136
surveillance, eval. of video segmentation methods 118348
TCP traffic in satellite networks with differentiated services, QoS 107889
telemedicine studies, patient willingness to participate, effect of education 133155
telepathy tester cct. 80023
thin heat flux sens. for building appl., ASTM C 1130 calib. 97175
transformer tank shield model, 3D optim. of design variables 134111
ultrahigh reliab. establishment by fault injection expts. 113797
unreplicated factorial designs anal., step-down Lenth method 78564
unreplicated fractional factorials, location/dispersion effects confounding 78563
US testing, probab. of detect. prediction, phys./stat. model 114536
VLSI proc., robust design, DOE techs. 124442
wave soldering proc. test vehicle for continuous proc. improvement 115146
write channel front end for above 1 Gb/s recording, anal. and optim. 116471
Au ribbon bonding for IC interconnection, designed expt. for proc. eval. 80535
$(CoFe)_{70}(MoSiB)_{30}$ racetrack fluxgate sens., sensitivity & noise 120771
GaAs backside via RIE proc., high throughput, DOE 69892
GaAs/AlGaAs MQW APD, param. optim., GA 93371
InGaP-HBT emitter-mesa proc., optimized surface morph. 70039
Pb-free PWB materials/surface finishes/mfg. procs., DOE 115178
Pb-free soldering proc. param. effects anal., quality/repeatability 80504
Pb-free soldering, robust proc. develop. 91466
Pb-free wave soldering defect anal., Taguchi DOE/SPC 91482
Si anisotropic plasma etching, SF_6/O_2-based chem., cryogenical wafer cooling, ICP source 103370
Si solar cell mfg. line, EFG wafers, 15%+ efficiency cells 100080
SiC catalytic MIS Schottky diode sens. array, hydrocarbon detect. 97500
Sn-Ag-Cu-based Pb-free solder paste reflow for flip chip wafer bumping, proc. window 69367
W CMP procs., modeling and charactn. 92070

design patterns (software) *see object-oriented methods; object-oriented programming*
desk-top computers *see microcomputers*
desorption
see also electron stimulated desorption; outgassing; photon stimulated desorption; thermally stimulated desorption
diamond:N films, hot filament CVD, struct., nucleation *(Chinese)* 114355
diamond, CVD growth from methyl radicals/acetylene, (100),(111) orient. 124878
diamond covalent surfaces, at. H-induced abstraction of adsorbed D 115290
head-disk interface, lubricant bonding fraction effect 70542
IPVD feature scale evol., effects of transient diffusion 68367
poly(ferrocenylsilane) semicond. thin films with vap.-phase I diffusion doping, electronic props. 69606
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
GaAs (n11)A substrs. grown using MBE, As press. depend. of hillock morph. 90279
$GaAs_{1-x}N_x$/GaAs epilayers, MOVPE, N incorporation mechanisms 90362
GaAsSb QW VCSEL, growth and opt. props. 128264
GaInNAs/GaAs QW lasers, plasma-assisted MBE, kinetic model 71832
GaN films, MOVPE, thermal annealing, Ga droplet form. 68292
GaN, hydride VPE, $GaCl_3$ partial press. effect 68138
n–GaN:Er epilayers, ion implanted, Er^{3+} photolum. 81023
GaN:Mg films, low temp. activation, N_2 annealing with thin Ni film 80975
GaSb substr., oxide desorpt., reflectance monitoring 81095
Ge covalent surfaces, at. H-induced abstraction of adsorbed D 115290
InGaAlP epitaxial layer, LP-MOCVD growth, In comp. control, dyn. anal. *(Chinese)* 68271
InGaAs/GaAs QD, low-press. MOVPE, In comp. distrib. 124895
InP(001), two-step As-desorpt. during MOCVD, surface photoabsorption study 124872
NO_x in flue exhaust gas, adsorpt., nonthermal plasma desorpt. proc. 133351
NdFeB-type powders, intermediate mag. phases in H disproportionated state 90550
Ni, H_2-H_2O|YSZ anodic SOFC syst., modeling, simul., expts. 89246
Ni-based SOFC anodes, microstruct., electrochem. 99998
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
Pd-Ag(Ni) hybrid suspen. gate FET, coevap. prep., H_2 sens. 132051
$Pt/Bi_{4-x}La_xTi_3O_{12}/Pt$ capacitors, ferroelec. props. degrad. 125848
Si MBE, incorporation procs., pseudopotential method 90281
Si covalent surfaces, at. H-induced abstraction of adsorbed D 115290
Si films, temp. modulation mol. layer epitaxy, surface reacts. 114360
Si, temp. modulation MBE, surface morph. 79268
Si:H CVD growth, Monte Carlo model, H_2/SiH_4 gas source, desorpt. rate 90443
Si(100), at.-order thermal nitridation, subsequent Si layer growth 103314
SiH_2Cl_2 self-limited GSMBE on Si(100) 124851
SiO_2 growth by TEOS-O_2 plasma mixture, 3D Monte Carlo model 68218
SiO_2/Si struct., elec. props. 69771
SiO_xN_y, low stress films, sputtering type ECR plasma deposition, charactn. 124812
$Sm_{0.5}Sr_{0.5}CoO_3$, SOFC cathode, reacts., rate-determining steps 89235
$Sm_{0.5}Sr_{0.5}CoO_3$ porous cathodes used in SOFC, mechanism 112830
TiO_x films, PECVD, multi jet hollow cathode plasma source 68236
detection (demodulation) *see demodulation*
detector circuits
see also demodulation; demodulators; peak detectors; phase detectors
broadband microwave diode detectors, CAD using filter approxs. 125703
BTeV pixel detector, MCM 121690
CMOS digitally controlled PLL, digital phase-freq. detector 114858
CMOS high speed µP, on-die clock jitter detector 125532
CMOS low-noise analog front-end, solid-state detector interface 79636
CMOS RF power detector, logarithmic/limiting amp., GSM handset appls. 91347
CMOS SC interface cct., integrated sens. 79637
CMOS sens. interface, CARIOCA current-mode feedback cct. 79635
N bit result integer multiplier with overflow detector 90889
PET dedicated instrum., small planar detectors, improved perform. 122232
phase freq. detector for clock recovery PLL 68889
scintillation counter exponential sig. former, pulsed ADC 98070
YBaCuO HTSC detector cct. using Schottky barrier diode for bandwidth modul. 82016
detectors *see sensors*
determinants
see also matrix algebra
computation of certain determinants arising in treatment of Schrodinger's eqns. 114077
determinantal family of root-finding methods, computational comparison 67947
DFT, decomp., spectral anal. 107416
incidence matrices of SBIBDs, values of minors, growth problem appl. 89957
multistage amp. stabil., spurious sig. cancellation 101780
PSK full diversity space-time codes 129128
resultants and moving surfaces 67952
SAWs in periodic electrode arrays, harmonic admitt. and dispersion eqns., theorem 92724
Vandermonde determinants factoring, polynomial coeffs. 78745
deterministic algorithms
3-dimens. Delaunay triangulations, smoothing/cleaning up slivers 68063
adaptive L-filter based on sig. local stats., edge preservation *(Chinese)* 107268
all-opt. tree networks, sparse and limited wavelength conversion 116864
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind source separation from single obs., deterministic approach 107433
client-provider-server systs., depend. data pushing 74380
clustering for edge-cost minimization 67940
cyclotomic polynomials factoring over finite fields 79001
DS-CDMA systs., blind array sig. proc., temporal diversity 107421
evol. meta-heuristic, state justification in seq. atpg 101905
image and contours restoration 118353
integrated services networks, deterministic time-varying packet fair queueing 73870
JetStream, probabilistic contour extraction with particles 106640
multihop PRN, transm. scheduling for gossiping 85511
perturbing algm. for floorplan design using O-tree representation 101895
radio broadcasting 108523
random particles guiding by deterministic search 106550
reliab.-based optimal structural design using decoupling approach 113786
shifter/accumulator pairs in datapaths, deterministic BIST scheme 79737
deterministic algorithms continued
superimposed pulse trains with higher-order interspike intervals, determ chaos *(Japanese)* 68540
transverse flux heating, optimal inductor design, combined evol.-simplex 89445
deterministic automata
optimal prefix-free codes ending in specified pattern, uniform probab. 106168
protocols, concurrent DFSMs modeled, conformance testing, nonobser nondeterminism 95924
detonation
see also explosions; shock waves
smart airbag systs., foil resistors as electro-pyrotechnic initiators, low e 89418
detonation spraying *see spray coating techniques*
deuteron polarisation
DPOL deuteron polarimeter and syst. calib. 110347
JINR accelerator facility, deuteron beam polarimetry 110194
deuteron sources
NUCLOTRON POLARIS cryogenic polarized D source design anal. 1322
development management *see research and development management*
development systems
EHWPack, evolvable hardware environ. using SPICE simulator and field transistor array 114573
evolvable coprocessor environ. design based on GA 114785
Internet multimedia services, OO appl. develop. platforms 108363
Motorola MC9S12DP256 16-bit microcontroller, automobile appls. *(Germ* 79903
PSoC Designer integrated develop. syst. for CY8C25000 prog. SoC family *(man)* 91114
scalable hybrid verification of complex µP 125545
spaceborne payload proc., scalable reprog. modular archit., COTS 133242
SystemC, behavioral synthesis, compiler generation techs. 79674
device drivers
AMPAC database, boot program for printing machine, intell. printing 948
interchangeable virtual instrum. drivers, test syst. perform. 97141
mobile multimedia appls., wireless awareness 96284
on-line instrum. drivers, Internet resource listings 109450
PCI bus expansion card with floating point DSP, develop. *(Slovenian)* 97
SCSP eval. over TCP/IP and SCSI over fibre channel connections 130358
six-channel high speed radar DAQ syst., design & implement. *(Chinese)* 131
SSRF DeviceNet control syst. design anal. 121313
dexterous manipulators
deformable objs., robust grasping manipulation 86672
digital surgery, human-robot symbiotic interact., haptic whole arm manipul 122451
EVA gloves, space environ., SkilMate finger develop. 97207
free-floating objs., grasping, robotic gripper 97208
intuitive surgical Da Vinci syst., robotics, dexterity 122449
live objs. handling, compliant grasping force modeling 97856
MANUS, wheelchair-mounted rehabilitation robot 87932
micro grasping and micro procs., mag. parallel motion hand appl. 92574
rehabilitation mobile robot, localisation/control, close human-machine coope tion 87793
semicond. strain gauge tactile transducer, finger force meas. 109509
soft planar fingers, dyn. contact sens., opt. tactile sens. 97370
space manipulation, arm/gripper syst., posn./force control 109482
surgery, procedural compatibility, dexterity enhancement, patient safety 122
walking/carrying assistance for in-home elderlies, robot arm 87926
DFB lasers *see distributed feedback lasers*
DFE *see decision feedback equalisers*
DFT (design) *see design for testability*
DFT (transforms) *see discrete Fourier transforms*
DGPS *see Global Positioning System*
DH lasers *see semiconductor lasers*
diagnosis, patient *see patient diagnosis*
diagnostic expert systems
see "medical expert systems" for medical diagnostic expert systems
distrib. systs. fault diagnosis, AI 99337
distributed state estim. for discrete event syst. diagnosis 86396
elec. utility maint. mgt. using expert support syst. 133441
failure mode screening, fuzzy scheme 78707
fault diagnosis in rotary mach., virtual environ. 86429
helicopter main rotor blades, damage detect. tech. 111321
hierarchical inform. fusion based fault diagnosis, turbine appl. 118828
HV insulation, PD meas./eval., ES, ANN 109917
HV substation maint. decisions using diagnostic ES 134294
inform. fusion syst., archit. and design 131800
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
machine tool coolant fault diagnosis by neural net 109436
models for diagnostic, based on FMEA models/ontologies 131799
neural network model based fault prediction *(Chinese)* 88078
prognostics, using dyn. wavelet neural nets 131801
reusable launch vehicles, Livingstone model-based syst.-level health mgt. sys 76793
sens. intell. fault detect. for monitoring, diagnostics 132082
soft computing for diagnostics in equipt. service 131804
spacecraft fault diagnosis ES, temporal problem *(Chinese)* 88036
substations. T&D networks, perform. reliab., technol. solns. 78094
TIGER gas turbine continuous fault diagnosis expert syst. 75368
TIGER syst. for model based diagnosis of gas turbines 88602
transm. network, on-line fault diagnosis, fuzzy ES 111988
waveform feature extraction for perform. improvement 100659
diagnostic radiography
see also angiocardiography; computerised tomography; mammography
3-D skeletal kinematics, biplane radiograph seqs., knee appl. 87743
3D coronary reconstruction from routine single-plane coronary angiogram 132782
3D pose estim. of biological tissues by CT/fluoroscopy 98506
3D reconstruction of aorta from tomographic image seq., anal. and optimisatio 122135
3D X-ray microtomographic syst., CMOS image sens., bone imaging 132827
3D X-ray microtomographic syst. with CMOS image sens. 132834
angiographic image seqs., simulated, layer decomp., accuracy assess. 132803
angiography images, algms. for combining, comparison 110913
arteriovenous malformations, 3D reconstruction, radiosurgery, DSA 98558

nostic radiography continued
arteriovenous malformations, vol. estim. from biplane DSA images, computer program 87711
bone dens., tetrahedral mesh modelling of data for anatomical atlases and intens.-based image registration 87739
bone fracture callus dens. eval., X-ray radiography & quantitat. CT 76515
bone metastases recalcification, radio- & chemotherapy, densitometry 87852
bone mineral content assess., 3D SR microtomography images 132823
bone X-rays anal. syst. for prosthesis placement, segmentation module 76545
breast calcification segmentation from high-resoln. mammographic specimen radiographs, multi-scale algm. 98491
breast pathology assess. by MRI-mammography 2D/3D data fusion 87585
breast tissues, porcine, laser interstitial thermotherapy 98684
breast X-rays, correspondence, curved epipolar lines 132832
cardiac angiographic procedures, radiation doses 98770
Cardio Net View series, DICOM network viewer *(Japanese)* 76786
catheter 3D orient. & posn. determ., single-plane X-ray images 87698
catheter ablation procedures, cardiac electrophysiology, dose reduction 122435
chest, image quality, light-box/computer monitor, visual syst. model 122147
chest images, digital radiology, gradation proc. algm. 98517
chest radiograph interp., JPEG compressed images vs. uncompressed images 98486
chest radiographs, lung regions ident., segmentation approach 98537
chest radiographs, patient recogn. method in PACS environ. 87751
chest radiographs, ROC curve, probab. summation 110931
chest radiographs, small peripheral lung cancers visibility 76549
chest radiographs/mammograms, computer-aided diagnosis systs. 132819
chest radiography, beam tube pot. var., gonad dose, LiF:Mg,Cu,P TLDs 87970
chest radiography, tuberculosis screening, computer-aided diagnosis 87757
chest/lumbar spine screen-film radiography, clinical/phys. image quality measures 122118
coherent scatter X-ray CT med. imaging, Monte-Carlo simul. 110928
computed radiography exams., dose ref. levels 122386
computed radiography printing problems, quantitat. observer-independent soln. 98487
conf., imaging, Stockholm, Sweden (June 2000) 124186
conf., Radiation imaging detectors, Freiburg, Germany (Jul. 2000) 89569
conf., Semicond. pixel detect. for particles/X-rays, Genova, Italy (Jun. 2000) 89507
contour generation using geom. deformable models 87704
coronarographic densitometric meas., X-ray scatt. & veiling glare 76516
coronary angiography, image compression viability, JPEG/wavelet data reduction 110969
coronary vasculature, 4D quantif., angiography & US data fusion 98535
CT-SPECT combined tomographic imager, scintimammography 122150
dental radiodiagnostic facilities, ref. doses 76767
dental X-ray survey results, Canada Nat. Capital Region, 1999 to 2000 111199
DEPFET pixel sens., spectrosc./imaging perform. 97966
diaphragm motion quantification in fluoroscopy, computer program 76541
DICOM image post-proc., Microsoft Windows-based med. viewing appl. 110948
digital chest radiography, QC phantom 76559
digital chest radiography syst., flat-panel X-ray detector 98504
digital fluoroscopy equipt., image quality, tandem optics/TV-tube *(German)* 110970
digital imaging set-up, low-dose approach, phase contrast appls. 110936
digital K-edge imaging syst., electron beam transit. radiation 110959
digital mammograms, fixed block-based lossless compression 132785
digital mammography X-ray imaging detectors design/appls. 132806
digital radiographic syst. using CMOS image sens., develop./eval. 110955
digital radiographic systs., imaging props. 98540
digital radiography, scatt. correction, aperture sigs., interpolated local sampling 98555
digital radiography, X-ray scatter compensation 122125
digital radiology CRT display syst. params. 110927
digital reconstr. radiography, vol. rendering, splatting shear-warp 132824
digital self-adaptive acquisition 122137
digital subtraction peripheral angiography using image stacking, init. clinical results 98525
DIGITEXαPlus digital angiographic syst., interventional radiology *(Japanese)* 76537
DNA bands in low-contrast images, automatic edge detect. 110972
dose-area product meters, calib. freq. 87956
DSA, patient motion artifacts reduction 87764
DSA/CT/MRI optimal localis. & image fusion, Leksell frame 76504
dual head coincidence clinical camera, image correction techs. 122240
dual-energy hybrid imaging sens., single exposure radiography 110945
dual-energy X-ray absorptiometry, CdZnTe detector implement. 110925
dual-modality imaging tech. 132808
dual-screen computed radiography chest imaging, noise ratios 87754
DynCT real-time motion-compens. reconstr./visualis., 3D CT fluoroscopy 87737
ELNOS X-ray diagnostic table syst. with flat panel detector *(Japanese)* 76533
entrance surface doses, X ray procedures, Bangladesh 133119
epiphyseal/metaphyseal ROI extraction, computer-assisted bone age assess. 110912
exposure determ., 25%/cm rule validity exam. 111194
extraocular muscle borders detect. using math. morph. 76544
eye lens, radiation dosimetry, Monte Carlo simul. 122375
fiducial registration from single X-ray image for fluoroscopic guidance and radiotherapy 87738
film, processed, vis. dye light absorpt. props. 110963
film scanners and digital radiography, automating transit. to filmless radiology 98516
flat panel X-ray image sens., amorph. Se & polycryst. CdTe *(Japanese)* 122146
flat-panel X-ray detector for digital radiography & fluoroscopy *(Japanese)* 76532
fluoroscopy, Ba enema patients, radiation dose reduction by dose audit 76768
fluoroscopy, patient skin dose estim., angiographic frames, embolisation/cerebral angiograms 98771
foot phys. therapy support, biomech. tools integrat. 111048
forward-scatt. X-ray imaging, expt. validation of model 98563
functional imaging, combined modalities instrums. 132809
half-scan cone-beam CT fluoroscopy, multiple X-ray sources 98528
hand, human, X-ray irrad. simul. 98509
high press. Xe proportional tube detector for Tc-99m imaging 121525
hybrid flat-panel detector arrays for digital X-ray fluoroscopy 110917
idiopathic scoliosis, optimal 3D correction, radiograph 122120
image class., neural, hierarchical finite normal mixtures 110974
image compression by cosine and wavelet transforms 110788
image contrast enhancement, discrete wavelet transform 76543

diagnostic radiography continued
image distrib., multi-facility practice 98861
image intensifier syst. under automatic brightness control, computer model 111204
image retrieval, Web-based, using multi-scale tree VQ in wavelet domain 110977
imaging quality eval. using beam stopper 122145
indirect-detect. flat-panel detector, diagnostic appl. *(Japanese)* 87718
infectious disease screening for field med. emergencies 76381
integrated CT-SPECT syst. for small-animal imaging 110929
intens. modulated radiotherapy, collimator posn. verification, EPI 87832
intens.-modulated radiation therapy, multileaf collimator params. 111085
internal carotid artery, extracranial, spontaneous bilateral dissection with hypoglossal nerve palsy 110880
interventional cardiology procedures, skin dose/dose-area prod. values 76765
interventional radiology, dose-area prod., occupational dose assess. 122416
intra-oral dental X-ray imaging, integrat. CMOS APS 98542
intratumor injection of laser-absorbing dye, digital X-ray imaging tech. 122301
intravascular neurosurgery, telesurgery syst. 87783
JPEG and wavelet comparative study for image compression 110968
knee laxity meas., roentgen stereophotogrammetric anal., accuracy/repeatability 122132
Kumakhov optics conf., Bellingham, WA, USA, (2000) 78414
Laplace integral for watershed segmentation, radiographs appl. 98551
leaded glass polycapillary fiber optics, med. imaging scatter rejection 98557
left ventricular vols./ejection fraction, 2D echocardiography/contrast cineangiography 98269
lens distortion in opt. coupled digital X-ray imaging, comment 87758
list-mode time stamping DAQ module prototype for coincidence meas. 110954
lumbar spine CT/X-ray exams., radiation dose to uterus, ovaries, bladder 87954
lumbar spine/chest radiography, phys./clinical image quality meas. correls. 98564
lung cancer, CT based radiotherapy dose planning 87861
lung cancer diagnosis, helical CT image anal. 87766
lung carcinoma, occult, bronchoscopically-guided conformal radiotherapy 76652
lung high-resoln. CT images, cardiac motion artifacts reduction *(Japanese)* 87745
lung nodule screening, scanning-beam digital X-ray syst. 76513
lung vascular sizes, spatial distrib., 3D greyscale morph. 87702
mammogram, digital, microcalcification detect., GA 76507
mammograms, X-ray and 3D MRI data, elastic registration 98501
mammographic acquisition param. effects on semi-automated quantitat. measure of breast cancer risk 98494
mammographic imaging systs., X-ray polycapillary optics 98556
mammographic mass detect., adaptive thresholding, region growing 122154
mammography, GE DMR and full-field digital imaging, viewing conditions optim. and phantom image quality eval. 98497
mammography, radiation metrology network, calib. systs. 122153
mammography, X-ray, morph. templates for texture inform. extraction 110978
mammography automatic exposure control compens. test, phantoms 76506
mammography glass capillary X-ray antiscatter grid design 87733
mass detect., decision support by featured database visualization/modular neural networks 76503
mass detect., lesion site selection by morph. enhancement/contextual segmentation 76502
med. computerised radiography images, wavelet random noise removal *(Chinese)* 98523
med. radiology, image compression methods 122143
med. ultrasound and X-ray image compression methods, clinical assess. 132837
med. X-ray imaging, dose reduction using noise free photon counting 132807
med. X-ray imaging, perspectives 98541
med. X-ray imaging, transform-based denoising and enhancement 122138
micropattern detectors, various appl. 87198
multidetector compact DAQ syst. time encoding anal. 120677
MUROS-1 med. imaging pixel detector read-out syst. design anal. 122155
MUX-100 mobile X-ray syst., power assist cart *(Japanese)* 76535
nuc. sci., conf., Lyon, France, (Oct. 2000) 113217
opt. coupled digital X-ray imaging, lens distortion 87755
orthognathic surgery, cephalometric image anal. syst. 87747
osteoporosis eval., conventional radiography/dual energy X-ray absorptiometry 87756
osteoporosis mouse model, bone archit., 3D SR microtomography 132826
PACS, image registration and dyn. imaging 111297
PACS impact within Elmhurst Hospital Center 98836
paediatric cardiac catheterisation, radiation doses 76745
paediatric fluoroscopy, low-dose, high-quality exams. 76755
Panelcrete, Aquapanel, Betopan, Gypsoplak Superboard, diagnostic X-ray protection characts. 87969
panoramic radiography, image charact. and convenience using CCD, storage phosphor and film receptors 98500
parallel X-rays prod. with bent-cryst. monochromator/X-ray tube 132816
patient dose, radiographic tech. factors, Greek hospitals 111236
patient size, X-ray CT tech. factors, hazards 110939
penetrating radiat. syst./appl., conf., San Diego, USA (Aug. 2000) 100386
periapical lesion anal., stat. textural features/neural nets 122130
periapical lesion anal. using stat. textural features 110949
peripheral blood lymphocytes, micronuclei, angiography, excretory urography 76560
photon counting X-ray imaging syst. 122128
photon-counting digital radiography using high-press. Xe filled detectors 132812
plasma flash X-ray generator, Ce target, quasimonochromatic X-rays 110435
PLS hard X-ray beamline supercond. wiggler design anal. 132474
PLS synchrotron X-rays, phantom/animal imaging 122139
pneumoconiosis, computer-aided diagnosis using neural network 110979
pneumoconiosis, optimal scanning, display and segmentation of ILO X-ray image set 110980
pneumoconiosis rounded opacities detect. using neural net 132840
portable dual-input MCA with large memory, dual isotope diagnostics 122156
portal imaging detector for advanced radiation therapy 133035
portal imaging in radiation oncology, computed radiography appl. 98545
pregnant staff, diagnostic radiology, foetus dose, occupational exposure 133135
preoperative CT/intraoperative fluoroscopy images alignment, registration algm. 87750
prostate cancer radiotherapy, couch height-based patient set-up 98618
prostate carcinoma, conformal radiotherapy, portal imaging protocol 87862
prostate implant seed, automated localisation, fluoroscopic images, simulated annealing 98663
protective shielding thickness for diagnostic radiology rooms 76727
protein macromols. investig. by Kumakhov lens X-ray diffractometry 87734
pulmonary fissures extraction from thin-sect. CT images 98539

diagnostic radiography continued
pulmonary nodules, internal struct. image anal. 87765
pulmonary nodules class., contrast enhancement patterns 87767
quantitat. coronary angiography, centre-line extraction algms. eval. 132779
radiation exposure, retrospective dose assess. model *(German)* 111253
radiochromic film dosimetry, directional depend. 76758
radiosurgery, multimodality image fusion, arteriovenous malformations appl. 98654
radiotherapy, rem. verification, digitally reconstructed radiography, portal images 98619
ray tracing based digitally reconstructed radiographs *(Chinese)* 129540
ReFerence γ-ray refl. photocathode design anal. 132490
renal arteries, contrast-enhanced MR angiography vs. DSA 87678
renal arteries, rot. DSA, transplants appl. 76550
respiratory gating radiotherapy syst., clinical perform. eval. 87821
rheumatoid arthritis, radiography versus MRI on wrist joints *(Chinese)* 76436
rot. digital angiography syst., acute pulmonary thromboembolism 87723
scanned projection radiography, gas electron multiplier detector 76514
scintillation dosemeter, patient dosimetry, diagnostic radiology, phys. perform. eval. 87955
scintillator coated X-ray pixel detectors, imaging props. simul. 121782
scoliosis, digital radiography with scanning method, init. eval. 87762
semiinfinite media with vol. defects, thermal contact scanning anal. 132650
sentinel lymph nodes detect., compact γ camera, opt. Monte Carlo simul. 110920
seq. chest radiographs, temporal subtraction, computer-aided diagnosis 110940
Shimadzu MH-200 C-arm angiographic syst., ceiling suspens. type *(Japanese)* 76536
Shimadzu Mx8000 X-ray CT scanner, multiple slice type *(Japanese)* 76539
SimRAD Viewer/P med. imaging station develop. *(Japanese)* 76787
simulated wave propag. and traceback in vascular extraction 98414
single X-ray exposure half-value layer meas., portable electronic device 98772
slot-scan digital radiographic imaging, dual-energy detector 121770
spine X-ray images, computer-assisted retrieval of biomedical features 110975
SR X-ray transm. microtomography facility for biomed. imaging 132825
stents in angiographic images, deformable boundary detect. 110950
Subrina X-ray CT scanner design, subsecond type, Genius View software *(Japanese)* 76538
superior mesenteric arteriography, spiral-shaped iatrogenic arterial dissection risk in diagnostic angiography using power injector 110951
surgical navig., 3D, fluoroscopic X-ray image registration proc. 87740
synchrotron microangiography, angiogenic vessels visualisation, quantification, therapeutic eval. 87749
Taiwan dose guidance levels 122395
Tanzania, diagnostic radiology, patient dose reduction 76748
target of the day radiotherapy precision, computer-controlled table 87820
technol. evol., limitations & future prospects, review 110924
teleradiology, radiographers' views in Japan 76782
temporally seq. chest images, digital subtraction, rib elim. 76542
time-resolved 2D μs X-ray imaging 98559
tooth enamel, EPR biodosimetry, radiation therapy appls. 132731
tumour motion from breathing, fluoroscopic study, precise radiotherapy, lung cancer 132820
vascular imaging syst., Integris Allura, rot. angiography, 3D reconstruction 76529
vertebral trabecular bone, CT/projection radiography images, texture comparison 110966
viewing boxes, QC and luminance levels 122131
virtual holographic recogn., digital methods, med. appls. 82967
VQ/entropy coding of med. images, progressive reconstruction 110497
X'sy general radiographic syst. for GPs, compact design *(Japanese)* 76534
X-ray diagnosis source, K-fluoresc. enhanced X-ray tube 98507
X-ray films, RMS granularity meas. with commercial film scanner 132495
X-ray image intensifier-TV fluoroscopy, sig. detect. theory 87729
X-ray imaging with energy windowing 98502
X-ray mammography, patient exposure dose meas., lookup table 111243
CsI:Tl scintillator-Si-well X-ray microdetector based on deep RIE techs. 110942
CsI(Tl) thin scintillating plates, particle beam and X-ray imaging 121544
CsI(Tl) thin scintillating plates, particle beam and X-ray imaging 132399
GaAs detector, direct detect. single photon counting based syst., imaging props. 76554
GaAs monolithic X-ray imaging sens., med./synchrotron appls. 98010
HgI_2 based high-resoln. X-ray act. matrix image sens. 109669
HgI_2 thick film radiological X-ray detectors, charactn. 110926
a-Se based diagnostic imagers, sig. form. quantitat. anal. 76512
a-Se based diagnostic/portal imagers, X-ray interacts. 87701
a-Se based direct-detect. act. matrix flat panel imager, DQE 98526
Si detectors, develop. and appls. 132369
a-Si flat-panel detector, digital chest radiography, imaging 98505
Si microstrip sens., 2D, radiographic imaging syst. 122127
a-Si:H continuous-sens. imagers, crosstalk, lateral cond. effects 76558
Si:H-based stereoscopic X-ray imaging syst. for full-field digital mammography 132813
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964
Xe chambers, high-press., med. radiography appl. 76557

diagnostic reasoning
behaviour Petri model based diagnostic inference *(Chinese)* 88066
condition assess. using model-aided diagnosis 112702
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
differential diagnosis of faulty gates, eight-valued logic 68703

diagnostics, particle beam *see particle beam diagnostics*

diagnostics, plasma *see plasma diagnostics*

diagnostics, program *see program diagnostics*

diagrams
see also Bode diagrams; circuit diagrams; decision diagrams; Feynman diagrams; flowcharting; nomograms; Nyquist diagrams; phase diagrams
computer network anal. using event model *(Polish)* 130653
electronic design, component selection, timing diags. eval. and comparison, appl. of fuzzy logic 68515
mobile agent executions, visualization 74222
Petri nets, generalized stochastic, efficient soln. using canonical matrix diags. 124558
power plants, closed loop control struct., fn. diags. representation *(German)* 88510
regular sampled patterns detect., ellipt. diags. appl. 73516
semicond. devices, reliab. certification using Goldthwaite diags. 103731

diakoptics *see network topology*

dial-up links *see inter-computer links*

dialogue programming *see interactive programming*

dialogue systems *see interactive systems*

diamagnetic materials
GaAs 2DEG QD, paramag.-diamag. interplay 69701

diamagnetic resonance *see cyclotron resonance*

diamagnetism
see also cyclotron resonance; diamagnetic materials
MAGLEV, diamag. stabilized, theory 89606
porous supercond. filtration, Meissner effect, Ar/Ar-O_2 gas separation 92920

diameter measurement
3D medical images, line and sheet struct. detect. and quantification 87308
artery dimens. params. assess., high frame rate 2-D B-mode 98284
brachial artery reactivity meas., automated edge-detect. tech. 132622
chest CT, automated nodule detect., change over time assess. 122124
coronary artery reporting syst., computer-assisted diagnosis *(Japanese)* 9814
cylindrical piece meas., laser telemetry, forest caliper appl. 109993
fuel aerosol stream, drop av. diam. meas., diffr. method 109980
Ignalina nuc. power plant components, NDT activity 88549
metallic thin wire diam. meas., using Fraunhofer diffr. tech. 91441
outer diam. of rotator in operation, sens.-based meas. instrum. 75874
parallel plate specimen, inner diam. meas., pattern projection method *(Japanese)* 75862
polyester filament diam. meas. by real time opt. method *(Japanese)* 86956
small hole diam. meas., pattern projection method, theory *(Japanese)* 75878
small ring gauges diam. meas., EUROMET comparison 120623
spider's thread, diam. and refr. index determ., scatt. light pattern 86993
Nb/AlO_x/Nb supercond./insulating/supercond. fab. proc., FIB anal. 70805
Si CZ growth, online diam. calib., shape estim. 114209

diaphragms
see also valves
beam-/bridge-shaped conductive polymer microactuators fab. *(Korean)* 78109
condenser microphone, deep cavity-shaped diaphragm 86349
current-to-press. transducer, ferromag. nozzle, mag. fluid actuator 78106
extrusion melt press. meas. for food/med. appls. 100572
multiresonant diaphragms based waveguide filter, freq. response 80204
three-component capacitive force transducer design, non-std. specimens 9720
VALYDYNE diff. press. sens. dyn. prop., human airducts model ident. 11052
NiTi/Si diaphragm micropump, design, microfab. & charact. 127131
PZT diaphragm-type film actuator, fab., ferroelec./displacement props. 134326
Si diaphragms, form. by precision grinding, buckling suppress. 92548
Si micro-machined condenser microphone, single deeply corrugated diaphragm 111506
Si opt. press. sens, white light fibre interferometry 75759
Si surface & interface stress meas., photoreflectance spectrosc. 80630
Si-compatible waveguides for integrated opto-mech. press. sens. 93158
SiC micromachined diaphragm/sapphire fibre optic press. sens. for high-temp aerospace appls. 120827

diary software *see personal computing*

dichroism
see also circular dichroism
AC plasma display cell, dichroic mirror for luminance/luminous efficacy improvement 102945
azobenzene-containing polymer surface relief grating immobilization/pole alignment, photopolymerization 105464
BACH, X-ray beamline, dichroism, opt. layout 98094
dyes, lin. dichroism, LCD appl. 109868
E-polarisers, dichroic dye liq. cryst., low-leakage off-angle 104819
hard X-ray lin. dichroism imaging, polariz.-contrast images obs. 87285
integrated gain flattening waveguide filter design by Abeles computation metho 127899
methyl red doped NLC film, photoinduced gratings form. 128425
organic NLO thin films, fab., cryst. dragging method 104608
phase-locked VCSEL laser array polariz. stabil. 128412
polyethylene/functionalized terthiophene blends, lin. polarizer appl. 104606
PPV derivative polymer laser polariz. depend. threshold 82029
quasi-opt. filters by hybrid MoM/BI-RME method, efficient anal. 93294
transit. metal films, mag. anisotropy, X-ray absorpt. mag. lin. dichroism 104492
twisted nematic display, dichroic dye, opt. params. 109891
As-Ge-Se-S chalcogenide glass thin film, photoinduced birefr. 91688
CdS thin films form. by PLD, absorpt. dichroism 127573
Ge-As-S photobleached glassy films, photoinduced anisotropy 82830

dictation
commercial speech recogn. systs. for dictation, eval. *(German)* 73081
PACS impact within Elmhurst Hospital Center 98836
PACS/voice recogn. integrated syst. develop. and early experience 98867
radiology, electronic practice, speech recogn. transcription implement. 98833
radiology department, voice recogn. syst. eval. 94414
radiology workflow and patient vol., effect of PACS on technologists/radiologists 98849
speech user interfaces, multimodal error correction 73075

dictionaries
string matching techs. for low-confidence OCR word correction 94890
video encoder with matching pursuit 84506
Vietnamese document image recogn. based on HMM and linguistics 129938

die attach *see microassembling*

die bonding *see microassembling*

dielectric bodies
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gaussian beam algm. 117647
2D wavelength-size lens simul., accurate num. method 128785
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 105695
3D dielec. body reconstruction using unrelated illum. method 94003
3D dielec. obj. image reconstruction using gradient-based optim. 83259
3D dielec. targets near lossy half space, multilevel fast multipole algm. 72216
3D ground penetrating radar simulator, FDTD method 86194
3D inhomog. dielec. objs., transient EM scatt. 72269
capacitance matrix of unequal diam. dielec. coated cylinders above ground plane 72405
CGFFT method with discontinuous FFT algm. 72166
conducting cylinder embedded in complex medium above ground plane, anal. 72398
cylinder, acousto-EM scatt. behaviour 128740
cylinder, EM scatt., domain decomp. method *(Chinese)* 105707
cylinders inverse scatt., RBF NNs 128759

ctric bodies continued
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
dyadic Green's fns. for dielec. spheroid, spheroidal vector wave eigenfunction expansion 72158
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
electrostatic field interact. with fractal surfaced dielec. body 72177
EM imaging of cylindrical dielec. objs. with optimal regularization param., fast inversion 117673
EM scatt., Galerkin operators in adaptive integral method implement. 83187
EM scatt. by 3D dielec. bodies, MoM-CGM-FFT appl. 72287
EM scatt. by penetrable bodies, pot. integral eqn. method 83225
EM scatt. by penetrable bodies, pot. integral eqns. method 93993
EM scatt. by transversely anisotropic inhomog. cylinders, FEM-FMA hybrid method 72276
EM scatt. of arbitrarily shaped cylinders, focused beam syst.-oblique incidence case 83186
EM wave diffr. by magnetodielectric cylinder with anisotropic helical surface conductance 83211
EM wave diffr. by magnetodielectric cylinder with surface anisotropic helical conductance 72263
EM wave scatt. by complex struct., recursive reduction techs. 72273
EM wave scatt. by penetrable polygonal cylinder 128748
EM wave scatt./losses by thin dielec. screens, fast soln. 128749
FDTD based model for bistatic RCS prediction of single leaves/trees 83312
FDTD method for simul. of transm. waves through multilayered thin conducting sheets 105714
FDTD staircase-free formulation for general materials in complex geometries 83083
fringe integral eqn. for truncated grounded dielec. slab 105711
H-wave scatt., at. model *(Japanese)* 72249
homog. symm. dielec. bodies, EM diffr./scatt. 83231
lossy edge, EM field and elec. current 93951
low-loss inhomog. dielec., elec. field distrib. calc. 105665
Maxwell Garnett mixing rule, derivation 94024
optimal shape design, topol. optim. 104249
planar struct. with arbitrary permitt. distrib., time-domain anal. 83488
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
prolate spheroid, electrostatic image theory 117615
reson. disk in circ./rect. waveguide radiators 117678
rough dielec. surfaces, out of plane bistatic scatt. 105708
scatt. from obj. above half space, four-path model 105705
stratified arbitrarily anisotropic dielec. rough interface , EM scatt. 83189
VHF/UHF radio waves multipath propag. in 3D terrains 72313

lectric breakdown *see electric breakdown*

lectric constant *see permittivity*

lectric depolarisation
see also dielectric polarisation
ferroelec. thin films, lattice model, surface effects, depolariz. field props. 92650
FRAM, reliab., imprint effect 116234
piezoelec. transducers, pot. bandwidth broadening by partial depolarization 88206
PZT ferroelec. thin film capacitors, leakage I-V characts. 92775
$Pb_5Ge_3O_{11}$ thin film MFMOS capacitor, ferroelec. props. 104473
$SrBi_2Ta_2O_2$ ferroelec. thin film capacitors, leakage I-V characts. 92775

lectric devices
see also capacitors; dielectric resonators; ferroelectric devices; piezoelectric devices; pyroelectric devices; space-charge limited devices
all-dielec. narrow band filter's layer thickness uniformity, research *(Chinese)* 94081
broadband suspen. plate antenna with vert. grounded wall 83590
EM cryst. filters for rect. waveguide design 102331
FSS resonator elements on circ. dielec. rod antenna for mobile commun. 83622
H-plane strip-loaded hollow dielec. sectoral horn antennas for sq. radiation pattern 72539
inhomog. dielec. gratings, EM waves scatt./guiding 72262
microstrip cylindrical antennas anal., efficient Green's fns. calc. 83566
nonmetallic reflecting FZP antennas 72604
PCS phone surface-mounted chip dielec. ceramic antenna 83551
phased arrays for new millennium 128883
thick lenses, profiles calc. 82261
TW dielec. window with matching gratings, power loss calc. 80605
unipolarized generalized inhomog. TEM plane waves in differential geometric lens synthesis 93988

electric dispersion *see permittivity*

electric-filled waveguides *see dielectric-loaded waveguides*

elective function
narrow-gap semicond. QW, dielec. response in mag. field 80819
organic LEDs, C-V curves, deep hole traps, simul., modelling 71617
polystyrene thin films, spiropyran doped, dielec. relax., waveguide obs. 92586
vert. furnace in-situ spectrosc. ellipsometry, CVD appl. 67684
AlGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. model, PL 126126
AlN epitaxial film, vibr./opt. props. 126067
AlN, resist., band-gap shift, metal-nonmetal transit. 115321
a-C:H,N film, electronic struct., field emission 102906
a-C:H,N films, RF PECVD, spectrosc. props. 68286
GaAs, aged porous, IR opt. props. 69516
GaInAs/GaAsP VCSEL, photorefl. line shape symm., QW ground-state exciton energy 71760
GaN, excitonic polaritons, photoreflectance/PL spectra 80719
GaN:Si, resist., band-gap shift, metal-nonmetal transit. 115321
GaN/Si(111) films, RF sputter deposition, struct. and charactn. 69536
InAs/GaAs QD, InAs wetting layer ellipsometry at QD form. threshold 103147
$In_{0.7}Ga_{0.3}As_xP_{1-x}$ thin film surface, ellipsometry 115310
InGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. model, PL 126126
InN, resist., band-gap shift, metal-nonmetal transit. 115321
μc-Si:H film deposition on specular and textured ZnO surfaces, real time optics 90436
a-Si:H,P(B) films, DC magnetron sputtering, opt. props. 114253
SiC wafers, dielec. fn., spectrosc. ellipsometry 69587
SiC/Si(Ge) quantum dots, opt. prop., pseudopotential plane wave method 69680
SiO_2 layers for multilayer coatings, spectroellipsometric charactn. 93311
SiO_2/Si, thermal oxid. of RF H_2 plasma-cleaned Si, interface props. 69885
Ta_2O_5 layers for multilayer coatings, spectroellipsometric charactn. 93311
TiN/SiO_2/Si syst., film thickness, opt. charactn. 91886

dielectric function continued
TiO_2 layers for multilayer coatings, spectroellipsometric charactn. 93311
$Zn_{1-x}Be_xSe$ crysts., AES, ellipsometry, photolum. studies 90213
ZnO:Al(Ga) epitaxial layers, opt. props., doping effects 91979

dielectric heating
food materials, freq. & temp. depend. permitt. meas. 121148
insects, RF and microwave dielec. props. 92588
soil decontamination, EM and thermally coupled fields calc. 88179

dielectric hysteresis
antiferroelec. LCD, EO props., addressing waveforms 104829
ferroelec. capacitor, empirical modeling, dual curve-fit tech. 92774
ferroelec. capacitor, Schmitt trigger cct., SPICE model 81768
ferroelec. capacitor switching response simul., parallel element model 90913
ferroelec. capacitors, HF C-V charact. model 90912
ferroelec. thin film capacitors, cct. simul. model, AHDL implement. *(Korean)* 81786
ferroelec. thin film capacitors relax. mechanisms for FeRAM appl. 70471
ferroelec. thin films, lattice model, surface effects, depolariz. field props. 92650
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
FRAM, reliab., imprint effect 116234
FRAM cct., nonvolatile memories, true and complement bitline, reliab. *(Italian)* 79880
high-k dielec. gate materials for ULSI devices, advances/materials compatibility 104108
metal-ferroelec.-MIS memory FET, fab. & charact. 127276
multi-domain Potts polar systs., dyn. hysteresis 104382
P(VDF/TrFE) copolymers, electron irrad., ferroelec. relax. 104400
PANI:HCSA, elec. cond., PVDF/poly trifluoroethylene/PANI electromechanical syst., dielec. props. 125108
piezoceramic materials, asymmetric hysteresis, modelling 104378
piezoelec. resonator, nonlin. (in)direct THG, intermodulation method 70440
piezoelec. transducers, ferroelec. hysteresis effects, finite element anal. 104440
polymer-stabilised CLC texture films, FLC doped, electro-opt. characts. 86807
α-PVDF non-ferroelec. films, dielec. hysteresis 92585
PVDF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. props., XRD 127206
PVDF/trifluoroethylene/hexafluoropropene terpolymers, synthesis/elec. props. 125105
PZT(:Mn) sol-gel thin films, pyroelec. detectors 104478
quasi-MFISFET device, ferroelec. thin films, field-depend. polariz. model *(Korean)* 115886
(Ag,Li)(Nb,Ta)O_3 ceramics, ferroelec. props. 127176
Al/CeO_2/Si(100) MIS struct., elec. characts., insulator film orient. effects 80944
Au/PZT/$Bi_4Ti_3O_{12}$/p-Si ferroelec. memory diode, fab./characts. 70464
Au/PZT/$YBa_2Cu_3O_7$/ZrO_2-Y_2O_3 heterostruct. film, KrF excimer laser ablation, XRD 101395
Au/PZT/p-Si ferroelec. memory diode, fab./charactn. *(Chinese)* 104475
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
(Ba,Sr)TiO_3 films, permitt./microstruct. temp./elec. field response 92658
(Ba,Sr)TiO_3 thin films, epitaxial growth, ferroelec. props. 79206
$BaBi_2Nb_2O_9$ ceramics, dielec. relax. 92631
$Ba_2Bi_4Ti_5O_{18}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$BaBi_4Ti_4O_{15}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$BaSrTiO_3$ films grown by PLD on $LaAlO_3$ substrs., dielec. props. 92627
$Ba_{0.9}Sr_{0.1}TiO_3$/$LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
$BaTiO_3$ based low temp. multiphase ferroelec. films 81670
$BaTiO_3$ epitaxial film capacitors, improved ferroelec. hysteresis by 2-step deposition 92776
$BaTiO_3$ films, laser-deposited, dielec./ferroelec. props., O-content effect 81674
$BaTiO_3$ heteroepitaxial thin film capacitor, ferroelec. hysteresis loops, bistable states 70461
$BaTiO_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$BaTiO_3$ sol-gel derived ferroelec. thin films, diffuse transits., elec. cond., dielec. props. 92649
$BaTiO_3$ sol-gel derived thin film on ITO-glass, ferroelec. props. 70418
Bi layer-struct. ferroelec. single crysts., ferroelec. props. struct. depend. 127199
$Bi_{3.25}La_{0.75}Ti_3O_{12}$ film, elec. props., metal-ferroelec.-insulator-semicond. struct. appl. 104335
$Bi_{4-x}La_xTi_3O_{12}$, cryst. growth and charactn. 124791
$Bi_{4-x}La_xTi_3O_{12}$ films, chem. soln. deposited, charactn. 70402
$(Bi_{1/2}Na_{1/2})TiO_3$-$KNbO_3$ ceramics, struct./dielec. props. 127227
Bi_2SiO_5, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Bi_4Ti_3O_{12}$, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Bi_4Ti_3O_{12}$, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$Bi_4Ti_3O_{12}$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
$Bi_4Ti_3O_{12}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$Bi_4Ti_3O_{12}$:La, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
Ir/PZT/Ir capacitors, low-temp. fab. solely by MOCVD 127275
$LaNiO_3$/PZT films, enhanced fatigue property 116147
$Li_2B_4O_7$-$SrBi_2Ta_2O_9$ glass ceramic, NLO and ferroelec. behavior 82024
$LiNbO_3$ based low temp. multiphase ferroelec. films 81670
$(Na_{1/2}Bi_{1/2})TiO_3$-$BaTiO_3$ cryst., growth, struct., dielec. prop. 127183
Ni/PZT/Pt thin films, asymmetric switching behavior 81693
PLZT, H-damaged capacitors, Pt (IrO_2) top electrode, recovery characts. 104466
PLZT amorph. film deposition, crystn., ferroelec. charactn. 114260
PLZT bulk/thin film photostrictive mater. fab., actuator design 104332
PLZT, ferroelec. thin film capacitors, pulse width depend. polariz. 92773
PLZT films crystallized from amorph. state by two-step postdeposition annealing, props. 127169
PLZT thin film capacitors, elec. props., La dopant effect, 104291
PLZT:Ca(Sr) thin films for LV operation 116158
PMN-PNN-PZT:Ag ceramics, prep., dielec./ferroelec. props. 127205
PMN-PbTiO$_3$:La ceramics, large sig. minor loop behaviour 104326
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
PZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer effect 102774
PZT MOCVD thin films on multilayer Pt/Ir electrodes, reliab. props. 70412
PZT capacitor integrat. for high dens. FRAM, electrode-barrier struct. 70463
PZT compositionally graded thin films with $LaNiO_3$ electrodes, abnormal ferroelec. props. 81710
PZT diaphragm-type film actuator, fab., ferroelec./displacement props. 134326

dielectric hysteresis continued
PZT, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
PZT ferroelec. thin films, polariz./self-polariz. 127233
PZT fibers, effect of heating temp. on dielec. props. 70425
PZT films, arc-discharge reactive ion-plating, ferroelec. props. 125058
PZT films, excimer laser ablation, ferroelec. props. 127167
PZT films, one-step firing sol-gel proc., props. 79373
PZT films, sol-gel derived, mech./elec. fatigue 81705
PZT nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
PZT, piezoelec. props., influence of (Zr/Ti) ratio and Nb substitution 116144
PZT thin film, fatigue model based on thermionic field emission mechanism 127222
PZT thin film, ferroelec. prop., bipolar pulse poling & space charge field 104359
PZT thin films, (100)/(111) oriented, reactive RF sputtering, dielec. props., RTA 104369
PZT thin films, MOCVD, MEMS appls. 101348
PZT thin films, MOCVD, lower electrode structs., piezoelec. MEMS appl. 127163
PZT thin films, ferroelec. props., grain boundary effects, nucleation 104252
PZT thin films form. by using modified sol-gel solns., proc. stabil. 68356
PZT thin films, prep., hydrothermal treatment following sol-gel deposition 125018
PZT thin films prod. by oxide precursors and crystallized by conventional and RTA proc. 101460
PZT thin films, sol-gel growth, excess Pb content on microstruct./elec. props., 101412
PZT thin films with Pt/PtO_x multilayer electrode barriers for FeRAM appl. 92647
PZT:La thin films on NiTi alloys, SME, PLD 101390
PZT:La,Mg,F,Mn ceramics, dielec./piezoelec. props. 104352
PZT/Ir/ZrN struct., heteroepitaxial growth of Ir/ZrN layered electrode heteroepitaxy on (100)Si substr., ferroelec. capacitor 101186
$PZT/YBa_2Cu_3O_7/SrTiO_3/MgO/TiN/Si$ layered film, PLD, microstruct., elec. props. 104313
PZT(111) films, Ir(111) electrode effects, orient. control 101414
$Pb_5Ge_3O_{11}$ thin film MFMOS capacitor, ferroelec. props. 104473
$Pb_{0.90}La_{0.15}TiO_3$ thin films on different bottom electrodes, struct./elec. characts. 70395
$Pb_{0.9}La_{0.1}Ti_{0.975}O_3$ thin films, elec./pyroelec. props. 92632
$Pb_{1-x}La_xTiO_3$ thin films, PLD, struct., dielec. props. 79360
$(PbLa)TiO_3$ thin films, sol-gel prep., spontaneous pyro- and piezoelec. 81700
$Pb_{1.05-x}La_xTi_{1-x/4}O_3(100)$ thin films, sol gel tech., structural/microstructural charact., elec. props. 104314
$Pb(Mg_{1/3}Nb_{2/3})O_3$, ferroelec./piezoelec. props., MOCVD 104321
$Pb(Mg_{1/3}Nb_{2/3})O_3/PbTiO_3/BaTiO_3$ ceramics, high field charact., chem. additive effects 104376
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ crysts., electromechanical props., stress depend. 104341
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ epitaxial thin films grown by MOCVD 79290
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, ferroelec./piezoelec. props., MOCVD 104321
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ piezoelec. thin films, sol-gel proc. 104320
$Pb((Mg_{1/3}Nb_{2/3})_{0.7}Ti_{0.3})O_3$, ferroelec. thin films on $LaNiO_3(001)$ bottom electrodes 101185
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ thin films, prep. and elec. props. 101435
$Pb_{1-x}Sr_xTiO_3$ thin films, structural/elec. props., appls. 101413
$Pb_{1-x}Sr_x(Zr_{0.53}Ti_{0.47})O_3$ thin films, appls., structural/elec. props., appls. 101413
$PbYbNbO_3$-$PbTiO_3$ capacitor thin films, pulsed laser deposited, structural/dielec. props. 92626
$Pb(Zr,Ti)O_3$, coercive voltage, freq. depend., ferroelec. relax. 104296
$Pb(Zr,Ti)O_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$PbZrO_3$ antiferroelec. thin films, pulsed excimer laser ablation 79356
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$PbZrO_3$ thin films, ac elec. & dielec. props. 92625
$Pb(Zr_{0.32}Ti_{0.68})O_3$ film, 90° domains switching 127160
$PbZrTiO_3$ thin films, sputtered, ferroelec. capacitors 104295
$PbZrTiO_3$ ultrathin films, MOCVD grown, elec. props. 104294
$PrFeO_3$-$PbTiO_3$ solid soln., ferroelec./ferromag. props. 127226
Pt/PLZT/Pt capacitors, H-induced degrad., nanoscale investig. 104468
Pt/PZT/p-Si struct., memory props. 104476
$Pt/SBT/Al_2O_3/Si$ MFISFET, fab., memory window width 81276
Pt/SBT/polysilicon capacitors, elec. characts., memory appl. 81780
$Pt/SrBi_{2.4}Ta_2O_9/ZrO_2/Si$ MFIS-FET struct., prep., elec. props. 81277
$Pt/SrBi_2Ta_2O_9/Pt$ ferroelec. thin film capacitors, room temp. aging 125849
$Pt/SrBi_2Ta_2O_9/Pt$ film capacitors, hysteresis symm., data retention, γ-ray irrad. effect 104469
$Pt/SrBi_2Ta_2O_9/Pt/SrTa_2O_6/SiON/Si$ MFMIS-FET, NVM 81766
$Pt/YMnO_3/Y_2O_3/Si$ capacitor, pulsed C/V meas., ferroelec. 102776
$Pt/YMnO_3/Y_2O_3/Si$ gate capacitor MFISFET, MOCVD prep. 81662
Si:H-terminated surfaces, UHV contactless C-V method for passivated defect-free surfaces 91577
Si-PZT-PZT-Si, aspherical bimorph piezoelec. X-ray optics, design anal. 121804
$SrBa(Nb,Ta)_2O_6$ highly oriented film, synthesis, struct. & dielec. prop. 127175
$Sr_xBa_{1-x}Nb_2O_6$ films, PLD, dielec. props. 114378
$Sr_{0.8}Bi_{2.3}(Ta_{1-x}Nb_x)_2O_{9+\alpha}$ thin films, sol-gel prep. and elec. props. 81719
$SrBi_2Ta_{2-x}Nb_xO_9$, ferroelec. thin films, reversible/irreversible polaris., temp. depend. 104297
$SrBi_2Ta_2O_9$ capacitor films, P-MOCVD, elec. props. 81669
$SrBi_2Ta_2O_9$, coercive voltage, freq. depend., ferroelec. relax. 104296
$SrBi_2Ta_2O_9$ ferroelec. capacitors, polaris. modelling, temp. depend. 127271
$SrBi_2Ta_2O_9$ ferroelec. thin film, prep., struct. & props. 127173
$SrBi_2Ta_2O_9$ ferroelec. thin films, RIE, $Pt/SrBi_2Ta_2O_9/Pt$ ferroelec. capacitors, elec. props. 104287
$SrBi_2Ta_2O_9$ ferroelec. thin films, sol-gel precursor effect on form. 114386
$SrBi_2Ta_2O_9$, film, as-grown, net spontaneous polaris. 70410
$SrBi_2Ta_2O_9$ films, microscopic polariz.-switching, memory appl. 104367
$SrBi_2Ta_2O_9$, nano-size ferroelec. memory cells, patterning, switching 81715
$SrBi_2Ta_2O_9$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mechanism 127222
$SrBi_2Ta_2O_9$ thin films, dry etching in $Cl_2/NF_3/O_2/Ar$ ICP 104274
$SrBi_2Ta_2O_9$ thin films, dry etching, plasma chemistries 92046
$SrBi_2Ta_2O_9$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$SrBi_2Ta_2O_9$:Nb MOCVD, integrated ferroelec. capacitors, RAM 101333
$Sr_{0.8}Bi_{2.2}Ta_2O_9/LaAlO_3/Si$ syst., prep., ferroelec. props. 92646
$SrBi_2Ta_2O_9/SiON/Si$ ferroelec. MISFET, elec. props. 81275
$SrBi_2Ta_2O_9(115)$ thin film, deposition from chem. soln., crown ether 101410
$SrBi_4Ti_4O_{15}$ single crysts., dielec./ferroelec. props. 92629
dielectric hysteresis continued
$Sr_{1-x}Ca_xBi_2Ta_2O_9$ ceramics, dielec./piezoelec./ferroelec. prop. 127182
$Sr_2(Ta,Nb)_2O_7$ thin films, chem. proc., struct./elec. props. 81661
$Sr_2(Ta_{1-x}, Nb)_2O_7$ ferroelec. thin film, PLD 101387
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
$YMnO_3$ thin films, microstruct., post-annealing, ferroelec. props. 127229
ZnCdS, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdSe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdTe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557
dielectric isolation technology *see isolation technology*
dielectric liquids
see also insulating oils
air wave type EHD pump, EHD induced fluid flow, elec. current cond. 1161
aq. drops deform./break-up in elec. field 81650
bubble dyn., streamer form. in high divergent elec. field 70382
complex permitt. meas., wide bandwidth, CPW cells 121166
complex-valued permitt. determ., regressive model 104239
conductive liq. glass pipe flow, space charge dens. 83124
cyclohexane, streamer inception, sensitive charge meas. tech. 116138
insulator elec. field vector distrib., three-direction opt. meas. syst. *(Japanes* 77447
material props. in MM and submillimeter wave ranges 70380
nonpolar liqs., discharge phenom., ion conc. propag. 81651
permitt. meas. using YIG resonator with two coupling loops 86913
prebreakdown phenom. under nonuniform field, mol. struct. effects *(Japanes* 81652
twisted nematic display, dichroic dye, opt. params. 109891
N_2, liq., nanosecond breakdown 81649
dielectric-loaded antennas
circ. disk dielec. patch antenna, anal. of charact. 72620
circ. ideally conducting cylinder with dielec. layer coating and nonlin. loa 117757
circ. patch microstrip antenna 8-element circ. array in plasma 105953
circ. waveguide with dielec. coated hard/soft walls 94088
dipole antenna on partially screened layered sphere, radiation 117801
flanged parallel-plate waveguide with box-type termination, radiation prop 72584
hard corrugated conical horn anal. by method of generalised scatt. matrice 83567
heat-sink-thermal-gasket materials selection, EMI considerations 105790
hexagonal microstrip stacked antenna with dielec. cover 72520
L-band proximity-coupled patch antenna with dielec. loading 94147
microstrip antenna, dielec. loading, circ. polaris. 117778
miniature dielec.-loaded bifilar antennas for mobile commun., num. simul. pac ages 83599
MM-wave dielec. slab leaky-wave antennas 117819
repeater syst., mobile commun. cellular band, microstrip antenna 72669
slot antenna, 3D anal., polariz. current model method appl. 72609
small antennas meas. using NWA, drift error reduction/charactn. 83548
small dielec. loaded antennas, efficiency-fractional bandwidth product 11777
V-shaped narrow slots, coupling and radiation characts. using FDTD metho 128836
dielectric-loaded waveguides
see also ferrite-loaded waveguides
2D long transm. line-freq. domain treatment 102504
183-207 GHz wideband receiver based on metal dielec. waveguide 85470
anisotropic dielec. loaded waveguide, scatt. characts. anal. *(Chinese)* 94108
circ. waveguide with dielec. coated hard/soft walls 94088
complex permitt. meas., rect. waveguide, FDTD method 97784
cross-coupled dielec.-loaded waveguide filters design 80174
cylindrical metallic cavity loaded by inhomog. dielec. sample, TLM modellin 105842
cylindrical struct. with long.-inhomog. filling, Green's fns. 117749
EM 3D oscills. in orthogonal branching of two rect. waveguides 80165
equiv. cct. for coaxial discontinuities filled with dielec. materials, Marcuvitz' cct. freq. extension 91182
flanged parallel-plate waveguide with box-type termination, radiation prop 72584
H-plane Y-jn. ferrite circulator, dielec. loaded, mode matching anal. 114959
high-power cylindrical microwave applicators, propag. modeling 102753
matching/directional charact. anal. 117816
MM-wave metal-pipe rect. waveguide, photoimageable thick-film 114928
multi-mode, multi-bunch dielec. wake field resonator accel. 110131
multilayer coaxial dielec. filled waveguide, Cherenkov radiation 94080
nonreciprocal ferrite image guide, effective permitt. method 91185
ohmic losses, anal. model 80194
orthogonal waveguide jn. with anisotropic filling, reson. phenom. 114957
partially filled dielec. loaded rect. waveguide hybrid tee 72421
pass. devices and antennas, periodic struct., behavioural features 125685
periodically loaded waveguide, delay line 91201
planar struct. with arbitrary permitt. distrib., time-domain anal. 83488
plasma-filled dielec.-lined waveguide in mag. field, instabils. driven by intens beam 125651
ridged helical groove slow-wave struct. for MM-wave TWT 80609
self-similar multi-slab media with variable lacunarity for selective microwave fil ter design 102576
semi-infinite dielec. waveguide, excitation of wake field by relativistic electro bunch 117733
spatial power combining amp. array, FDTD anal. 102522
twisted waveguide accelerating struct. 110133
V-shaped narrow slots, coupling and radiation characts. using FDTD metho 128836
wake field gen., bunch stabil. 110130
X-band dielec. loaded TW accel. struct. 110145
dielectric loss angle *see dielectric losses*
dielectric loss-angle measurement *see dielectric loss measurement*
dielectric loss measurement
see also dielectric losses
EM wave absorbers, perform. anal. 72259
laminar dielec. specimen meas., split post dielec. resonator tech. 75822
microstrip line, substr. params., dielec. meas. 75846
neem oil and seed pulp, dielec. props. meas. at 2.45 GHz 86914
noncontact broadband microwave mater. charactn., low/high temp. 86936
on-line dielec. loss meas., higher-order sine fitting algm. *(Chinese)* 132133
piezoelec. lossy ceramics, complex freq. excitation 104301
power-ground decoupling dielec. films, broadband charactn. 121164
sens., elec. equipt. insulation meas. *(Chinese)* 75821
structural adhesives, dielec. cure monitoring, split post dielec. resonator 75823

ctric loss measurement continued
E$_{011}$ cylindrical cavity resonator meas. method *(Korean)* 121152
ick-film/LTCC materials for wireless appls., eval., meas. techs. 80343
TiO$_3$ single-cryst. and ceramic, microwave permitt. meas. 70429
a solid electrolytic capacitor, low temp. elec. prop. meas. 102784

ctric losses
3 kV power transm. line de-icing using dielec. losses 133757
15/22 kV HV power transformer, transient behaviour, 3D FEM modeling 112596
15/22 kV transformer, transient behaviour, 3D FEM modeling 77938
dvanced DV-MULTI build-up packaging substr., proc./struct. 124343
agonite whisker and composites, dielectric properties *(Chinese)* 92596
iamond Schottky diodes, elec. AC behaviour 81192
iamond/n$^+$-Si heterojunction, elec. charactn., enhanced tunnelling 80799
ec. machine insulation diagnosis, anom. Δtan δ phenom. *(Japanese)* 88689
M wave absorbers, perform. anal. 72259
poxy-silica composites, dielec. props., effects of humidity and thermal stress 81642
poxy/silica composites for microelectronic packaging, dielec. props. 104237
rroelec. microwave devices, elec. tuning 69124
IDI chip package substrs., dielec. materials 124370
igh-quality dielec. resonating elements, loss tangent, waveguide filters 114955
omog. dielec. material in cavity, permitt. and loss factor estim. using FEM 70370
nsects, RF and microwave dielec. props. 92588
nteract. cluster systs., energy criterion 92579
nverse tech. to eval. permitt. and loss factor of material in cavity 81636
Ku band, multi-layered meander line polarizer 72701
n. copolysiloxane LB superlattice, substituted aromatic acid side chains, dielec. props. 104236
LOS topographies in tunnels, hybrid model for propag. loss prediction *(Chinese)* 128774
osses limiting procs. in dielec. 92578
ow-temp. electronics, dielec. resonators 70479
nicromachined W-band pass. components for commun. appls. 69237
nicrowave field phonon absorpt. 121172
nicrowave materials, dielec. loss mechanisms 91176
nixtures, freq. depend. dielec. props., FEM 70378
nobile handset chassis, antenna efficiency meas., loss mechanisms 119963
nultilayer material technol. for improved sig. integrity in >5 GHz region 125694
nultilayered microstrip anal. for microstrip moisture sens. design appl. 109501
NANO XP SU-8 photoresist, THz time-domain spectrosc., dielec. props. 125642
P(VDF-TrFE) electrostrictive copolymer, electromech. coupling factor 104325
PANI:HCSA, elec. cond., PVDF/poly trifluoroethylene/PANI electromechanical syst., dielec. props. 125108
patient RF heating during MRI 133076
PCB lossy interconnects, time domain modeling, dielec. loss 80488
PCB transm. line std. waveguiding struct., sig. atten. 80489
photodiode, readout cct., dielec. polariz. noise 104945
piezoceramics charact., high vibr. levels 101488
piezoelec., extrinsic/intrinsic/dielec./mech. loss mechanisms 104370
piezoelec. resonator, nonlin. (in)direct THG, intermodulation method 70440
plasma sprayed ceramics, dielec. props. 116129
polar polymer dielec., electrothermal instabil. above T$_g$ 127239
polyethylene, TiO$_2$ filled, filler-induced chem. modifs. as dielec. probes 127253
polymeric composite dielec., polaris. influence on breakdown strength 92605
porous/nonporous fluoropolymer films, thermally stable dyn. piezoelec. 116161
power cable testing using electronic capacitor, μP-based, temp. compensation *(Japanese)* 133736
PZT amorph. thin film hydrogen gas sens. 97535
random RC networks, 1/f noise, effective network dielec. loss 68498
Schottky-contact slow-wave microstrip line, propag. charact. 80211
synthesized NRD waveguide for mm-wave substr. ICs 91322
tetrafluoroethylene/propylene/vinylidene fluoride terpolymer-silicone rubber blends, dielec. props. 116132
thin ferroelec. films for tunable planar structs., microwave dielec. charact. 81665
triple-mode dielec. monoblock bandpass filter for base station appls. 102556
TW dielec. window with matching gratings, power loss calc. 80605
Ag(Ta,Nb)O$_3$ thin-film low-loss variable interdigital capacitors 127273
AlN MIM struct., dielec. props. 127142
Al$_2$O$_3$ electrolytic capacitor dielec. films, energy loss, bias and ripple voltage effects *(English)* 99886
(Ba,Sr)TiO$_3$ films, permitt./microstruct. temp./elec. field response 92658
Ba$_{0.96}$Ca$_{0.04}$Ti$_{0.84}$Zr$_{0.16}$O$_3$:Mg thin films, metalorganic decomp., dielec. props. 70390
Ba$_{0.4}$Sr$_{0.6}$TiO$_3$, SrTiO$_3$ 92772
Ba$_{0.8}$Sr$_{0.2}$TiO$_3$ films, sol-gel proc., pyroelec. coeff. 104280
Ba$_x$Sr$_{1-x}$Ti$_{1+y}$O$_{3+z}$, MOCVD films for high freq. tunable devices 81666
(Ba$_x$Sr$_{1-x}$)Ti$_{1+y}$O$_{3+z}$ films, prep., microwave varactors, phase shifters 81664
(Ba$_x$Sr$_{1-x}$)Ti$_{1+y}$O$_{3+z}$ magnetron sputter-deposited multilayer capacitors 81667
(Ba$_x$Sr$_{1-x}$)TiO$_3$ films, MOCVD, step coverage, dielec. props. 79284
Ba$_x$Sr$_{1-x}$TiO$_3$ thin films, MOCVD in multiwafer reactor, charactn. 114362
BaSrTiO$_3$ films, sol-gel derived, grain oriented, phase shifter appl. 90486
BaSrTiO$_3$ parallel plate capacitor-based periodically loaded line phase shifter 80355
BaSrTiO$_3$ thin-films, electrodynamic props., CPW struct. 80159
BaSrTiO$_3$ tunable capacitors, enhanced dielec. props., SrRuO$_3$ buffer layer role 91175
BaSrTiO$_3$ tunable dielec. thin films, microwave permitt./loss, broadband determ. 91171
(Ba$_{0.7}$Sr$_{0.3}$)TiO$_3$:Mg,La(Nb) film, elec. props., co-dopants effects 116156
Ba$_{1-x}$Sr$_x$TiO$_3$:La thin films, growth, dielec. props. 81671
Ba$_{0.6}$Sr$_{0.4}$TiO$_3$-MgO thick films for microwave appl., electrophoretic deposition 91169
BaSrTiO$_3$-Y$_3$Fe$_5$O$_{12}$ multilayer by PLD for microwave appls. 91168
BaTiO$_3$ sol-gel derived ferroelec. thin films, diffuse transits., elec. cond., dielec. props. 92649
BaTiO$_3$:Hf,Zr, pure and doped ferroelec. ceramics, aging effects 92624
BaTiO$_3$:Y thin films, dielec. props., pulsed laser deposition 104319
BaTiO$_3$/Ba$_{0.6}$Sr$_{0.4}$TiO$_3$ polycryst. multilayered films, dielec. enhancement, Maxwell-Wagner effects 127203
BaTiO$_3$/epoxy composite film, integral capacitor, suspen. formulation 115090
BaTiO$_3$/epoxy composites, multi-doped, dielec. behaviour, PWB appl. 81675
Bi$_{4-x}$La$_x$Ti$_3$O$_{12}$, cryst. growth and charactn. 124791
Bi$_2$O$_3$-ZnO-Nb$_2$O$_5$ pyrochlore ceramic films for dielec. appls. 92589
Bi$_2$Sr$_2$CaCu$_2$O$_{8+δ}$/(Sr,Ca)$_3$Al$_2$O$_6$ HTSC/dielec. syst., T$_c$ 70374
Bi$_2$Ti$_2$O$_7$ films, chem. soln. decomp. prep., RTA, dielec. props. 68323
Bi$_2$(Zn$_{1/3}$Nb$_{2/3}$)$_2$O$_7$ electroceramics, bulk/film, dielec. props. 116173

dielectric losses continued
CaBi$_2$Ta$_2$O$_9$ ferroelec. films, PLD, dielec. props. 79350
a-Ge$_{10-x}$In$_x$Se$_{90}$ thin films, dielec. props. 92592
Ho$_2$O$_3$ films, dielec. props., MIM struct. obs. 92582
In$_2$Se$_3$ amorph. films, AC cond., dielec. props. 91693
La$_3$Ga$_5$SiO$_{14}$/Al(W)(Ta) SAW filter, electrode effect on unidirectionality 127268
LiNbO$_3$ crysts., dielec. const. and loss tangent from 90 to 147 GHz 104302
Mg-Zn-Cu ferrites prep. by sol-gel auto-combustion method, EM props. 104248
Mg$_2$SnO$_4$ ceramics, elec. charactn. 70368
MnFe$_{1.8}$Cr$_{0.2}$O$_4$-BaTiO$_3$ composites, AC cond., magnetoelec. effect 127155
Na$_{0.5}$Bi$_{0.5}$TiO$_3$-PbTiO$_3$(K$_{0.5}$Bi$_{0.5}$TiO$_3$) ceramics, relaxor props. 104348
PMN relaxor ferroelec., Ni electroplating, H-induced degrad. 127204
PMN-PNN-PZT:Ag ceramics, prep., dielec./ferroelec. props. 127205
PMN-PbTiO$_3$:La ceramics, large sig. minor loop behaviour 104326
PMN-SrTiO$_3$ syst., low-loss dielec., microstruct. 116154
PZT and PZT/PbTiO$_3$ multilayered thin films, pyroelec. props. 81702
PZT ceramics derived from oxide mixture treated by high-energy ball milling proc. 114430
PZT ceramics, piezoelec. actuator, power consumption, capacitance 104446
PZT films, excimer laser ablation, ferroelec. props. 127167
PZT, piezoelec. props., influence of (Zr/Ti) ratio and Nb substitution 116144
PZT thin films, (100)/(111) oriented, reactive RF sputtering, dielec. props., RTA 104369
PZT thin films, MOCVD, lower electrode structs., piezoelec. MEMS appl. 127163
PZT thin films, RF magnetron sputtering, struct./ferroelec. props. 124819
PZT thin films, loss factor, O$^+$ implant. effects 92635
PZT thin films, sol-gel growth, excess Pb content on microstruct./elec. props., 101412
PZT:La,Mg,F,Mn ceramics, dielec./piezoelec. props. 104352
PZT/PLZT multilayer films, polariz. correl., pyroelec. props. 81699
PZT-SiO$_2$-B$_2$O$_3$ sol-gel derived ferroelec. glass-ceramic thin films, RTA, props. 125020
PZT-based piezoelec. composite films , modified sol-gel route 114394
(Pb,La)TiO$_3$ films, elec. props. improvements on using LaNiO$_3$ bottom electrodes 70388
Pb$_{1.1}$(Al$_{1/2}$Nb$_{1/2}$)O$_3$-Pb$_{1.1}$TiO$_3$ films, chem. soln. deposition, elec. props. 81688
PbB′B″O$_3$ ferroelec. solid solns., dielec. nonlin. 70413
(PbCaLa)TiO$_3$/P(VDF/TrFE) composite based lin. pyroelec. sens. array 81788
(Pb$_{0.76}$Ca$_{0.24}$)TiO$_3$, nanocrystalline thin films, sol-gel prep., props. 101430
Pb$_{0.9}$La$_{0.1}$Ti$_{0.975}$O$_3$ thin films, elec./pyroelec. props. 92632
Pb$_{0.85}$La$_{0.15}$(Zr$_{0.52}$Ti$_{0.48}$)$_{0.96}$O$_3$ films, capacitance dens. 125853
Pb(Mg$_{1/3}$Nb$_{2/3}$)O$_3$ ceramics, sol-coated, struct.-property rels. 116181
Pb(Mg$_{1/3}$Nb$_{2/3}$)O$_3$, ferroelec./piezoelec. props., MOCVD 104321
Pb(Mg$_{1/3}$Nb$_{2/3}$)O$_3$ thin films, dielec. props., electrostrictive strain, dc field 101428
Pb(Mg$_{1/3}$Nb$_{2/3}$)O$_3$/PbTiO$_3$ ceramics, high power transduction appls., doping effects 104377
Pb(Mg$_{1/3}$Nb$_{2/3}$)O$_3$-PbTiO$_3$ epitaxial thin films grown by MOCVD 79290
Pb(Mg$_{1/3}$Nb$_{2/3}$)O$_3$-PbTiO$_3$, ferroelec./piezoelec. props., MOCVD 104321
Pb(Nb,Zr,Ti)O$_3$/(La,Sr)CoO$_3$ ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
Pb(Nb,Zr,Ti)O$_3$/Pt ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
Pb(Nb,Zr,Ti)O$_3$/SrRuO$_3$ ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
Pb(Sc$_{1/2}$Nb$_{1/2}$)O$_3$-PMN-PbTiO$_3$ single crysts., modified Bridgman growth and charactn. 79191
(PbSr)TiO$_3$ thin films, prep., elec. props., post-annealing, DRAM appl. 116159
PbTiO$_3$ single cryst., microwave dielec. props., near-field imaging 91173
PbTiO$_3$ thin film, pyroelec. detector array 81789
PbTiO$_3$-based ceramics, low temp. sintered, piezoelec. props. 81717
PbTi$_{0.6}$Zr$_{0.4}$O$_3$ films, spray pyrolysis prep., dielec. props. 90533
PbYbNbO$_3$-PbTiO$_3$ capacitor thin films, pulsed laser deposited, structural/dielec. props. 92626
Pr$_{0.85}$Ca$_{0.15}$MnO$_3$/YBa$_2$Cu$_3$O$_{7-δ}$ MSW device, fab., characts. 127537
PrFeO$_3$-PbTiO$_3$ solid soln., ferroelec./ferromag. props. 127226
n-Si/p-PPV jns., elec. charactn. 115375
SiO$_2$ thin-film, defect-induced dielec. loss, Coulomb glass 81631
SrBaTiO$_3$ thin films, microwave dielec. props., near-field imaging 91173
Sr$_{0.8}$Bi$_{2.3}$(Ta$_{1-x}$Nb$_x$)$_2$O$_{9+α}$ thin films, sol-gel prep. and elec. props. 81719
SrBi$_2$Ta$_{1.8}$V$_{0.2}$O$_9$ ferroelec., O-vacancy-related dielec. relax. 70396
SrBi$_4$Ti$_4$O$_{15}$ single crysts., dielec./ferroelec. props. 92629
SrBi$_2$(V$_{0.1}$Nb$_{0.9}$)$_2$O$_9$ ceramics, ferroelec. props., O$_2$ annealing 116165
SrTiO$_3$ epitaxial lift-off thin films, microwave dielec. tuning/losses 91172
SrTiO$_3$ single-cryst./thin-films, electrodynamic props., CPW struct. 80159
SrTiO$_3$ thin film electrode interface props., Schottky barriers 104281
SrTiO$_3$ thin films by RF-magnetron sputtering, struct., proc., property rels. 79220
SrTiO$_3$ thin films, dielec. props., tunable YBaCuO microwave filters appl. 69138
SrTiO$_3$, tunable capacitors, perform., electrode geom. effects 92772
SrTiO$_3$ tunable dielec. thin films for HTSC microwave filter appls. 82012
SrTiO$_3$/Si, RF magnetron sputtering, elec. props. 104259
Ta$_2$O$_5$ amorph. thin film, HF dielec. props. 116122
Ta$_2$O$_5$ thin-film, defect-induced dielec. loss, Coulomb glass 81631
YBa$_2$Cu$_3$O$_{7-δ}$/SrTiO$_3$ heterostruct., tunable microwave filter 71122
Zn$_{1-x}$Mn$_x$Se$_{1-x}$Te$_y$ epilayers, dielec. props. 80767
ZnO thin-film, defect-induced dielec. loss, Coulomb glass 81631
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557
Zr-Sn-Ti oxynitride thin films, enhanced dielec. props. 70379
(Zr$_{0.8}$Sn$_{0.2}$)TiO$_4$ ceramics, microstructs., microwave dielec. props., additives effects 101476
ZrTiO$_4$ films, microstruct., microwave-freq. dielec. props. 104242

dielectric materials
see also antiferroelectric materials; dielectric bodies; dielectric liquids; dielectric properties; dielectric thin films; electrets; ferroelectric materials; glass; insulating materials; insulation; piezoelectric materials
3D alumina photonic bandgap struct., simul./fab./charactn. 125646
automotive antennas integrated with vehicle glazing, installed perform. modelling 83619
broadband microstrip patch antennas on anisotropic substrs. 83588
coaxial line-circ. waveguide jn., permitt./permeab. meas. 72433
composite dielec. elec. field calc. using curved triangular surface charge method 70376
conducting needles in dielec. as radar/IR reflectors 72236
conformal dielec. interconnect capacitance, BEM-based simul. *(Chinese)* 104243
contaminated water treatment using dielec. barrier discharge *(Korean)* 78367
coupled microstrip lines far-end crosstalk reduction method 72386
electroceramics, conf., Portoroz, Slovenia (Sept. 2000) 100422
EM X-wave refl./transm. on planar air-dielec. interface, spectral anal. 83258

dielectric materials continued
EMC, space discretising time domain methods for num. modelling of EM coupling 83386
gate dielec., theoretical approach 91896
ICPADM, hist. 124203
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
infinite perfect conducting nonlin. loaded circ. cylinder excitation calcs. 83400
integrated pass. devices, large sig. dielec. charactn. meas. 86915
isolated nanoparticle circuitry fab., lensless opt. tweezing 103703
Jaumann absorbers design, adaptive GA 72333
laminar dielec. specimen meas., split post dielec. resonator tech. 75822
low dielec. const. materials, IC appls. 69927
low loss dielec. permitt. meas., MM wave whispering gallery resonator 75824
low-k dielec., dual damascene patterning, trench etch procs. 103456
methyl-cyclohexane thin films, low dielec. const. plasma polymerized, ICP PECVD deposition 101327
microelectronics reliab., conf., Munich, Germany (Nov. 2000) 100403
microstrip disk antennas with inhomog. artificial dielec. 83655
microstrip ring resonator meas. and FDTD anal. 70373
microwave field phonon absorpt. 121172
MM wave antennas, new considerations/challenges 128834
MSSW, dielec. substr./mag. loss influence on dispersion/props. 105699
multilayer diffractive coating, EM waves transform. 117645
multilayer isotropic dielec. media, PML schemes, matching conditions 117658
NANO XP SU-8 photoresist, THz time-domain spectrosc., dielec. props. 125642
NDT, MM-wave near-field refl. tech. 79484
periodic dielec. material microphotonic devices *(Japanese)* 116762
periodic semicond./dielec. multilayer in external mag. field, photonic band struct. 80389
polyimide film ILD form. for VLSI/ULSI devices 104413
polymer-ceramic nanocomposite, high-k dielec., RF embedded capacitor 115089
RF material charactn. using large-diam. coaxial air line 81638
scatt. by doubly periodic gaps/cracks 72252
self-similar multi-slab media with variable lacunarity for selective microwave filter design 102576
sintering in reducing atmos., MLCC appl. 115088
streamer dyn. in dense media, num. simul. 116124
symposium, chem. proc. of dielec., insulators and electronic ceramics, USA (1999) 113276
synthetic microwave absorbers, chirality/reson. role 105723
TE_{011} cylindrical cavity resonator props. meas. method *(Korean)* 121152
thermal mech. props., advanced metrology for rapid charact. 75895
thin film integrated capacitors, paraelectric and ferroelec. materials as dielec. 91414
three-layered PTFE sample piezoelec. transducer meas. comparison 81641
transparent materials, enhanced laser ablation, review 128593
ultra-low-k dielec. materials for advanced interconnects, eval. 69926
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626
Al_2O_3-ZnO-TiO_2 and In_2O_3-ZnO-TiO_2, microwave dielec. props. 68993
B_2O_3-P_2O_5-MgO-Al_2O_3-SiO_2 low firing temp. glass-ceramics, HF multilayer chip inductors appl. 101509
$Ba_{0.5}Sr_{0.5}TiO_3$ paraelectric film phase shifter 69247
$BaTiO_3$ dielec., AC powder EL flexible inform. display *(Korean)* 121123
CaO-Li_2O-Sm_2O_3-TiO_2 microwave dielec. ceramic, sintering temp. effects 125645
$K_{1-y}Li_yTa_{1-x}Nb_xO_3$, paraelectric phase, wavelength-selective photonic switching 128533
Mg_2SnO_4 ceramics, elec. charactn. 70368
$PbTiO_3$ tetragonal and cubic phases, dispersion curves calc. 70426
SiO-Cr black matrix for color CRT, thermo-vac. evap. deposition 86818
Ta_2O_5+TiO_2, mixed oxides, dielec. const. conc. depend. 81640
Ta_2O_5+Y_2O_3, mixed oxides, dielec. const. conc. depend. 81640
ZrO_2+SiO_2, mixed oxides, dielec. const. conc. depend. 81640
ZrO_2+Y_2O_3, mixed oxides, dielec. const. conc. depend. 81640
$(ZrO_2)_x(SiO_2)_{1-x}$ high-k gate dielec., chem./phys. limits 104422

dielectric measurement
see also dielectric loss measurement; dielectric properties; permittivity measurement
aragonite whisker and composites, dielectric properties *(Chinese)* 92596
bilamellar dielec. NDE based on elec. field-prop. rels. 101558
capacitor dielec. meas. for power electronic appls. 68574
composites, dielec. props. eval. using combined modulated scatter./near-field microwave NDT tech. 121151
const. meas., scanning nonlin. dielec. microscopy 121154
granular materials, bulk dens. determ. from microwave meas. of dielec. props. 121168
insects, RF and microwave dielec. props. 92588
integrated pass. devices, large sig. dielec. charactn. meas. 86915
oil-impregnated pressboard, moisture diffusion, interdigital sens. 127246
piezoelec./ferroelec. materials, complex meas., universal apparatus 86911
polymethylene/ferrites, dielec./mag. props. meas. up to 1 GHz *(German)* 125121
RF material charactn. using large-diam. coaxial air line 81638
RF-meas. transducers, helical sensitive elements with layered filling 109516
short-circuited rect. waveguide, liq.-filled, refl. coeff. meas. 121150
soil, intell. dielec. sens. 121059
solid dielec., space charge distrib. meas. 127144
solid insulation, LV equipt., dielec. testing 70432
space charge meas., 3D pulsed electroacoustic method 132121
tunable reson. cavity, microwave dielec. meas. 80196
UHF apparatus for water based gels in microwave phantoms 87846
XLPE insulation, space charge meas., LIPP method 104420
$BaTiO_3$ cryst., ferroelec. polariz., scanning nonlin. dielec. microscopy 121153
PZT, piezoelec. coeffs., meas. by d_{33} meter 109933
PZT thin film, ferroelec. polariz., scanning nonlin. dielec. microscopy 121153
ZnO ceramic varistors, ageing effects, dielec. spectrosc. *(Polish)* 115036

dielectric phenomena *see dielectric properties*

dielectric polarisation
see also Barkhausen effect; dielectric depolarisation
act. composites, microfab. by coextrusion hollow fibres 101526
anisotropic polymer waveguides, second and third order opt. procs. 116708
azo dye doped polymer film periodically photoisomerized waveguide, quasiphase-matched SHG 93806
azobenzene-containing polymer surface relief grating immobilization/poled alignment, photopolymerization 105464
Bragg gratings, photosensitivity and poling in glass, conf., Stuart, FL, USA (Sept. 1999) 124178

dielectric polarisation continued
cellular polymer electret films, corona charging, enhanced piezoelec., void effects anal. 104398
chalcohalogenide glasses, all-opt. poling, second order SHG nonlin. 82865
conf., Liquid crysts., chem., phys., appls., Krynica, Poland (Sep. 1999) 100
disperse orange 3 in PMMA, periodically poled waveguide, quasi-phase-match SHG 93834
DR13/PEK-c guest-host polymer thin film lin. EO effect 82286
ferroelec. capacitor, empirical modeling, dual curve-fit tech. 92774
ferroelec. capacitor switching response simul., parallel element model 9091
ferroelec. cathodes, emission vs. temp. and relevant phys. 80553
ferroelec. domains/local cryst. anisotropy, scanning nonlin. dielec. microsco 104391
ferroelec. materials, phys. insights on imprint and appl. to functional mem 70474
ferroelec. thin films, lattice model, surface effects, depolariz. field props. 926
ferroelec. thin films, piezoelec. relax., continuous charge integrat. 127178
ferroelec. thin films, polariz. switching, dyn. props. 81703
ferroelec.-gate FET memory, memorized states retention anal., leakage curr effects 81774
ferroelec./semicond. thin film portable UV dosimeter 86566
ferroelectric polymers nonelectrical poling, surface energy poling 127214
fiber Bragg gratings, photosensitivity, coupled mode theory 127602
FRAM archits., std. and chain-type, comparison 81770
glass-based Bragg waveguide gratings, poling research *(English)* 104858
hemicyanine/arachidic acid Y-type interleaving LB multilayers, mol. reorien tion *(Chinese)* 93788
hemispherical lenses, silica glass thermal poling investig. 105463
Infrasil fused silica glass, second-order nonlin., threshold conditions 105536
ionically conducting liqs., dielec. response in LF region 92580
LDPE, electrode-insulator interface, accumulated space charges, EL mea 127245
LDPE, transient surface pot., scanning electron microscope meas. of mobil 127244
losses limiting procs. in dielec. 92578
metal/ferroelec./insulator/semicond. struct., polariz. stabil. 126237
microporous systs., water inclusions, charge transport/polariz. 90584
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 1150
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 1150
NLO chromophores/crosslinked syst., host-guest 117408
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write scher 90910
opt. poled polymeric materials, photo-induced noncentrosymmetric polar 71202
oriented electrooptic polymer devices, opt. nonlin. 71411
P(VDF/TRFE) copolymer film, ultra-high dens. mol. memory fab. 81782
PANI:HCSA, elec. cond., PVDF/poly trifluoroethylene/PANI electromechani syst., dielec. props. 125108
PEK-c guest-host syst. thin films, EO coeff., in situ SHG meas. 82294
perovskite ferroelec., morphotropic phase boundary, tetragonal side, switchi anal. 116157
photochromic ferroelec. liq. cryst., opt. recording 71247
photodiode, readout cct., dielec. polariz. noise 104945
piezoceramic material tensors ident. from elec. imped., iter. reconstr. 104328
piezoceramic materials, asymmetric hysteresis, modelling 104378
piezoceramic torsional actuator, design & perform. 116202
piezoceramics, piezoelec. cracking, microstructural effects 104371
piezoelec. transducers, ferroelec. hysteresis effects, finite element anal. 1044
PMMA periodically domain inverted poled polymer waveguide, two-step poli fab. 93756
polariz. fatigue in ferroelec. films 92653
poled polymer films in F-P cavity, long. EO modulation obs. *(Chinese)* 1168
poled silica fiber third-order nonlin. 104629
poly N-vinyl-2-pyrrolidone/urethane-urea copolymer blend, nonlin. optics 720
polyimides, amorph. piezoelec., polariz. stabil., piezoelec. effect, curing/poli conditions 127218
polyimides, soluble side chains, photochromism, photoassisted poling 71205
polymeric composite dielec., polaris. influence on breakdown strength 92605
polymeric insulators, freq.-based charactn., virtual space charge model 11618
polypeptide, photoelectrofunctional, mol. orient., poling/photoconducti charact. *(Japanese)* 82302
porous low-k dielec. design, pore generation methods 115684
PVDF LB films, 2D ferroelec., phase transits., SHG obs. 81698
α-PVDF non-ferroelec. films, dielec. hysteresis 92585
PVDF-trifluoroethylene copolymer, pyroelec. dyn. 127210
PVDF-trifluoroethylene copolymers, ferroelec. phase transit., struct. 125103
PVDF-trifluoroethylene copolymers, structural/transitional props., high energ electron irrad. 125104
PVDF-trifluoroethylene/graft elastomer blends, ferroelec./piezoelec. prop 127212
PVDF/trifluoroethylene/hexafluoropropene terpolymers, synthesis/elec. prop 125105
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials high-energy dens. 115071
PZT thin films ferroelec. perform., crystallographic texture effects 104290
quartz, piezoelec. transducer dyn. in current flow, acoustic appls. 133378
quasi-MFISFET device, ferroelec. thin films, field-depend. polariz. mode *(Korean)* 115886
relaxor ferroelec., dielec. response modelling 92622
second-order nonlin. films, nonlin. depth meas. by Makers fringe tech. 82875
silica, fused, thermal/elec.-field poling, second-order suscept. mechanism *(Chi nese)* 128421
silica, thermally poled fused, charge distrib., second-order nonlin. 72040
silica fiber, thermal/elec.-field poling, electrooptic coeff. *(Chinese)* 71257
silica glass, thermally poled, second-order nonlin. dyn. 127560
silica waveguides, thermally poled, large SHG 127761
single transistor ferroelec. memory arrays, disturb free prog. scheme 79873
spin-on organic aromatic polymers, dielec. and barrier props. 104405
tetrafluoroethylene/propylene/vinylidene fluoride terpolymer-silicone rubbe blends, dielec. props. 116132
thermally poled glasses, second order suscept., quasi-phase matching condition 82792
thermally poled glasses, second-order opt. suscept., spatial control 93797
twin-hole fiber thermal poling evol. 104642
vinylidene fluoride oligomer, mol. ferroelec., AFM anal. 92648
XGA thresholdless antiferroelec. TFT-LCD, 15 in., quasi-DC driving 109877
$(Ag,Li)(Nb,Ta)O_3$ ceramics, ferroelec. props. 127176
$Ag/Pb(Zr_{0.53}Ti_{0.47})O_3/YBa_2Cu_3O_{7-\delta}$ fabrication, field effect/polaris. charact 104389

ectric polarisation continued
Ag/Pb($Zr_{0.53}Ti_{0.47}$)O_3/ultrathin-SiO_2/Si fabrication, field effect/polaris. characts. 104389
AlGaN/GaN HFET, electron transport props., electron dens., polaris. effect 81385
AlGaN/GaN/6H-SiC, surface/buried MQW, MBE, opt. emission, band bending 91778
AlInGaN QW, light emission optimisation 126189
Al_2O_3, nanolanminates, dielec. props. develop. 92676
Au/PZT/$Bi_4Ti_3O_{12}$/p-Si ferroelec. memory diode, fab./characts. 70464
Au/PZT/$YBa_2Cu_3O_7$/ZrO_2-Y_2O_3 heterostruct. film, KrF excimer laser ablation, XRD 101395
Au/PZT/p-Si ferroelec. memory diode, fab./charactn. *(Chinese)* 104475
B_2O_3-SiO_2 glass, dielec. props. 114921
$BaBi_2Nb_2O_9$ ceramics, dielec. relax. 92631
$BaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$Ba_2Bi_4Ti_5O_{18}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$BaBi_4Ti_4O_{15}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$Ba_{0.8}Sr_{0.2}TiO_3$ film, modified sol-gel proc., struct./ferroelec. props. *(Chinese)* 116141
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$Ba_{0.8}Sr_{0.2}TiO_3$ sol-gel derived pyroelec. film, IR detector appl. 104387
$BaSrTiO_3$ ferroelec. thin films, microwave dielec. dispersion, local opt. probes 92637
$BaSrTiO_3$ thin films for tunable microwave appls., microstructural archit. 91174
$Ba_{0.9}Sr_{0.1}TiO_3$/$LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
$BaTiO_3$ ceramics, ferroelec. props., poling field depend. 127223
$BaTiO_3$ cryst., ferroelec. polariz., scanning nonlin. dielec. microscopy 121153
$BaTiO_3$, displacement charge patterns, domain wall dyn. 104288
$BaTiO_3$ epitaxial film capacitors, improved ferroelec. hysteresis by 2-step deposition 92776
$BaTiO_3$ epitaxial thin film capacitors on Si substr., ferroelec. props. 70475
$BaTiO_3$, film, lattice deform., polariz., FLAPW calcs. 127190
$BaTiO_3$, film, sputtered, piezoelec. effect. 116174
$BaTiO_3$ heteroepitaxial thin film capacitor, ferroelec. hysteresis loops, bistable states 70461
$BaTiO_3$ sol-gel derived ferroelec. thin films, diffuse transits., elec. cond., dielec. props. 92649
$BaTiO_3$ sol-gel derived thin film on ITO-glass, ferroelec. props. 70418
$BaTiO_3$:Y thin films, dielec. props., pulsed laser deposition 104319
Bi layer-struct. ferroelec. single crysts., ferroelec. props. struct. depend. 127199
$Bi_{3.25}La_{0.75}Ti_3O_{12}$, fatigue-free behavior for ferroelec. capacitor appl. 81686
$Bi_{3.25}La_{0.75}Ti_3O_{12}$ film, elec. props., metal-ferroelec.-insulator-semicond. struct. appl. 104335
$Bi_{4-x}La_xTi_3O_{12}$ films, chem. soln. deposited, charactn. 70402
$Bi_{4-x}La_xTi_3O_{12}$ thin film, phys. and elec. props., effects of bottom electrodes 127172
$Bi_4Ti_3O_{12}$, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$Bi_4Ti_3O_{12}$ films, sputtered, struct./ferroelec. props. 81694
$Bi_4Ti_3O_{12}$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
$Bi_4Ti_3O_{12}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$Bi_4Ti_3O_{12}$:La, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
Bi_2WO_6 thin films, MOCVD, ferroelec. props. 90366
$CaBi_2Ta_2O_5$ thin films, PLD, dielec. props. 101394
$CaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$CaBi_2Ta_2O_9$ ferroelec. films, PLD, dielec. props. 79350
$Cd_2Nb_2O_7$ ceramics, dielec. props., DC bias effects 104339
GaAs PHEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
GaInN/GaN QW, polaris. control, epitaxially lateral overgrowth orient., cathodolum. 91853
$Ga_{1-x}In_xN$/GaN polarised QW, PL excitation spectrosc., level assignment 80716
GaN/AlGaN QW, built-in elec. field effects, TEM and photolum. studies 69681
GaN/AlGaN QW, charge storage, internal field screening 103125
GaN/AlGaN QW lasers, electronic/opt. props., spontaneous polariz. 82610
GaN/AlGaN SQ wells, intersubband transits., strain relax., screening 91851
GaN/AlGaN semicond. QW, mesoscopic capacitor effect, piezoelec. field screening 80874
Ge-As-S ADN anal., poling mechanism, SHG *(Chinese)* 117478
Ge-As-S glasses, SHG, electron beam irrad., poling mechanism 128509
GeO_2-SiO_2 opt. waveguide, thermal poling, core-cladding interface effect 116667
InGaN QW, light emission optimisation 126189
InP HEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
Ir/PZT/Ir capacitors, low-temp. fab. solely by MOCVD 127275
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$, single-cryst. fibers, domain struct. 127185
$KNbO_3$, displacement charge patterns, domain wall dyn. 104288
$KNbO_3$, ferroelec. single crysts., poling treatment and piezoelec. props. 127179
$KTiOPO_4$ OPO, fan-shaped grating 82929
$KTiOPO_4$ cryst. coherent blue/green light generation by SHG 105512
$KTiOPO_4$, partly periodically poled, efficient THG 72022
$KTiOPO_4$ periodically poled high-efficiency parametric oscill. 72030
$KTiOPO_4$, periodically poled, opt. parametric amplif., nanosecond pulse generation 72017
$KTiOPO_4$ periodically-poled cryst. tunable mid-IR light generation, gas sens. appl. 88181
$KTiOPO_4$, quasi-phase-matched SHG, vis. duration-bandwidth tuneable source 93795
$KTiOPO_4$, quasiperiodic opt. superlattice, elec. poling, switching 104393
$La_{0.5}Sr_{0.5}CoO_3$/PZT/$La_{0.5}Sr_{0.5}CoO_3$ capacitors on $SrTiO_3$/TiN buffered Si(001) 81785
(LaSr)MnO_3/$BaTiO_3$/(LaSr)TiO_3 p-i-n diode, hysteretic I-V characts. 81189
$LiNbO_3$ CW triply reson. OPO 117439
$LiNbO_3$ DFG periodically poled laser spectrometer, ambient formaldehyde detect. 88188
$LiNbO_3$ OPO, LD sync. pumped, rapid IR wavelength access 105502
$LiNbO_3$ OPO, mid-IR five opt. cycle pulse generation 82846
$LiNbO_3$, annealed proton-exchanged waveguides, quasi-phase-matched SHG *(Chinese)* 128494
$LiNbO_3$, aperiodically poled crysts., multiple wavelengths parametric amplif. 82898
$LiNbO_3$ aperiodically-poled cryst., direct freq.-doubling 82849
$LiNbO_3$ crysts., dielec. const. and loss tangent from 90 to 147 GHz 104302
$LiNbO_3$, electron-beam periodically poled, SHG 93815
$LiNbO_3$, film, sputtered, piezoelec. effect. 116174

dielectric polarisation continued
$LiNbO_3$ nonlin. $\chi^{(2)}$ photonic crysts., phase matching, harmonic generation 128493
$LiNbO_3$ periodically poled cryst., CW UV generation by SHG 82847
$LiNbO_3$ periodically poled cryst. intra-cavity OPO for mid-IR long pulse generation 82879
$LiNbO_3$, periodically poled, high efficiency mid-IR OPO 82919
$LiNbO_3$, periodically poled, high repetition rate OPO, laser pump 82922
$LiNbO_3$, periodically poled, laser pumped, opt. parametric generation 82894
$LiNbO_3$, periodically poled, narrowband THz radiation generation, tuning charact. 71984
$LiNbO_3$ periodically poled noncollinear opt. parametric procs., broadband IR generation 128496
$LiNbO_3$ periodically poled nonlin. periodic cryst. 2nd harmonic generation 93809
$LiNbO_3$ periodically poled pulsed OPO, tunable single-mode operation 128490
$LiNbO_3$, periodically poled, single-mode vis./IR OPOs 82921
$LiNbO_3$, periodically poled, sync. pumped OPO, operating charact. 105539
$LiNbO_3$ periodically poled waveguide freq. doubler using LD pumped Nd:YAG laser *(Chinese)* 117158
$LiNbO_3$ periodically poled waveguide opt.-freq. bal. mixer design 117416
$LiNbO_3$ periodically poled waveguides, propag. modes, cascaded second-order nonlin. 104713
$LiNbO_3$ segmented periodically poled cryst., quasi phase matched SHG 105514
$LiNbO_3$ sync. pumped periodically poled cryst. low-threshold mid-IR opt. parametric oscill. 82906
$LiNbO_3$, tunable narrow-band surface-emitted terahertz radiation generation 71993
$LiNbO_3$:Hf,Er periodically poled crysts., off-centred CZ growth, freq. conversion appls. 72039
$LiNbO_3$:Ti segmented waveguides, parametric generation, SHG 82868
$LiNbO_3$:Ti,Er periodically poled waveguides, nonlin. integrated opt. freq. converters 128486
$LiNbO_3$:Zn damage-resistant waveguide, parametric wavelength conversion and amplif. 93127
$LiNb(Ta)O_3$ films, prep., struct., piezoelec. props. 79205
$LiTaO_3$ periodically poled cryst., SHG UV generation 117450
$LiTaO_3$, periodically poled, quasi-CW freq. doubling in diode-pump Q-switched Nd:YVO_4 laser *(Chinese)* 82885
$LiTaO_3$, periodically poled, simultaneously efficient blue and red light generations 71975
$MgAl_2O_4$/Al(Ag) heterophase boundary, local bonding, ab initio study 103217
$(Na_{0.5}Bi_{0.5})_{1-x}M_xTiO_3$ ceramics, (M=Pb,Sr or Pb+Sr), dielec. props. near morphotropic phase boundary 70424
Na_2O-Al_2O_3-B_2O_3-SiO_2-NaCl-CuO glass, SHG, poling 128499
Nb_2O_5, nanolanminates, dielec. props. develop. 92676
Ni/PZT/Pt thin films, asymmetric switching behavior 81693
PLT(10) thin films, switching charact. 70397
PLZT amorph. film deposition, crystn., ferroelec. charactn. 114260
PLZT bulk/thin film photostrictive mater. fab., actuator design 104332
PLZT ceramics, relaxor material, lin./nonlin. dielec. const., bias elec. field effects 104345
PLZT chem.-soln.-derived thin films, imprinting behavior, thickness depend. anal. 81684
PLZT, fatigued electrostrictive samples, microcrack clouds 104362
PLZT ferroelec. capacitors, zirconia incorporation, elec. fatigue 127278
PLZT, ferroelec. thin film capacitors, pulse width depend. polariz. 92773
PLZT films crystallized from amorph. state by two-step postdeposition annealing, props. 127169
PLZT thin film capacitors, elec. props., La dopant effect, 104291
PLZT:Ca(Sr) thin films for LV operation 116158
PMN cryst., relaxor material, lin./nonlin. dielec. const., bias elec. field effects 104345
PMN-PNN-PZT:Ag ceramics, prep., dielec./ferroelec. props. 127205
PMN-PZT thin films, sol-gel prep., dielec., piezoelec. props. 92661
PZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer effect 102774
PZT MOCVD thin films on multilayer Pt/Ir electrodes, reliab. props. 70412
PZT antiferroelec. thin films on bare and RuO_2 coated steel, prep. 68355
PZT based fully MOCVD obtained epitaxial ferroelec. capacitors 70472
PZT capacitor integrat. for high dens. FRAM, electrode-barrier struct. 70463
PZT capacitor-p-n diode series connection, memory effect 81784
PZT capacitors, H-induced damage, hybrid struct. top electrodes 70462
PZT ceramic, piezoelec./dielec./elastic props., stress/DC bias effect 104327
PZT ceramics derived from oxide mixture treated by high-energy ball milling proc. 114430
PZT ceramics, macroscopic poling state spatial var., US charactn. 127230
PZT ceramics, nanocrystalline ferroelec., props. 104356
PZT ceramics, third nonlin. piezoelec. coeff., grain size depend. 127177
PZT compositionally graded thin films with $LaNiO_3$ electrodes, abnormal ferroelec. props. 81710
PZT, compression stress induced domain switching 116206
PZT deposited on textured Pt thin films, struct. and elec. props. 92660
PZT, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
PZT, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
PZT ferroelec. thin films, polariz./self-polariz. 127233
PZT films, arc-discharge reactive ion-plating, ferroelec. props. 125058
PZT films, domain images/retention props., electrostatic force microscopy 104309
PZT films, excimer laser ablation, ferroelec. props. 127167
PZT films, one-step firing sol-gel proc., props. 79373
PZT films, pyroelec., dielec. props., fatigue effects 116171
PZT films, sol-gel derived, mech./elec. fatigue 81705
PZT films, struct./ferroelec. props. on Ir/$(ZrO_2)_{1-x}(Y_2O_3)_x$/(100)Si 70399
PZT highly (111) oriented thin films deposited using nonpolymeric route 114385
PZT nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
PZT pyroelec. thick films, displacement sens., light-spot cursor 109572
PZT screen printed thick films, densification, dielec. props. 79436
PZT thin film, fatigue model based on thermionic field emission mechanism 127222
PZT thin film, ferroelec. polariz., scanning nonlin. dielec. microscopy 121153
PZT thin films, (100)/(111) oriented, reactive RF sputtering, dielec. props., RTA 104369
PZT thin films, MOCVD, MEMS appls. 101348
PZT thin films, RF magnetron sputtering, struct./ferroelec. props. 124819
PZT thin films, ferroelec. props., grain boundary effects, nucleation 104252
PZT thin films, growth and charact., ferroelec. polariz. charging of $YBa_2Cu_3O_7$ thin films 101182

dielectric polarisation continued
PZT thin films, perovskite phase, selective nucleation, grains form., lateral growth 104292
PZT thin films piezoelec./dielec. props., cryst. struct./texture 104322
PZT thin films, polariz./internal field, photoelec. obs. 81708
PZT thin films, prep. by aerosol deposition method, elec. and opt. props. 127168
PZT thin films prod. by oxide precursors and crystallized by conventional and RTA proc. 101460
PZT thin films, sol-gel growth, excess Pb content on microstruct./elec. props., 101412
PZT thin films with Pt/PtO_x multilayer electrode barriers for FeRAM appl. 92647
PZT, thin-film capacitor structs., excess PbO effect 104474
PZT wet chem. derived thin films, self-polariz. and texture 81701
PZT:La,Mg,F,Mn ceramics, dielec./piezoelec. props. 104352
PZT:Nb films, RF magnetron sputtering, ferroelec./piezoelec. props. 81707
PZT:Nd(Fe) films, polariz. components, doping effects 92628
PZT/Ir/ZrN struct., heteroepitaxial growth of Ir/ZrN layered electrode heteroepitaxy on (100)Si substr., ferroelec. capacitor 101186
PZT/PLZT multilayer films, polariz. correl., pyroelec. props. 81699
PZT/$PbTiO_3$/TiO_2/Pt, sputter deposition, orient./comp. 101192
PZT/SiO_2/Si heterostruct., interface charge distrib. effects 104388
PZT/$YBa_2Cu_3O_7$/$SrTiO_3$/MgO/TiN/Si layered film, PLD, microstruct., elec. props. 104313
PZT-$Bi_2Sr_2CuO_x$ films all-perovskite-oxide ferroelec. memory transistor 70476
PZT-SiO_2-B_2O_3 sol-gel derived ferroelec. glass-ceramic thin films, RTA, props. 125020
PZT-based 4Mbit FRAM devices, retention behavior rel. to capacitor procs. 70473
PZT(111) films, Ir(111) electrode effects, orient. control 101414
(Pb,La)TiO_3 films, elec. props. improvements on using $LaNiO_3$ bottom electrodes 70388
$Pb_{1.1}(Al_{1/2}Nb_{1/2})O_3$-$Pb_{1.1}TiO_3$ films, chem. soln. deposition, elec. props. 81688
(PbCaLa)TiO_3/P(VDF/TrFE) composite based lin. pyroelec. sens. array 81788
$(Pb_{0.76}Ca_{0.24})TiO_3$, nanocrystalline thin films, sol-gel prep., props. 101430
$Pb_5Ge_3O_{11}$ ferroelec. MFMOS capacitor, one transistor memory appl. 81776
$Pb_{0.90}La_{0.15}TiO_3$ thin films on different bottom electrodes, struct./elec. characts. 70395
$Pb_{0.9}La_{0.1}Ti_{0.975}O_3$ thin films, elec./pyroelec. props. 92632
$Pb_{1-x}La_xTiO_3$ La-graded heterostruct. films, sol-gel prep. and elec. charactn. 104401
$Pb_{1-x}La_xTiO_3$ thin films, PLD, struct., dielec. props. 79360
(PbLa)TiO_3 thin films, modified jet-vap. deposition, pyroelec. props, IR sens. appls. 70398
(PbLa)TiO_3 thin films, sol-gel prep., spontaneous pyro- and piezoelec. 81700
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substitution 104311
$Pb_{1.05-x}La_xTi_{1-x/4}O_3$(100) thin films, sol gel tech., structural/microstructural charact., elec. props. 104314
$Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics, sol-coated, struct.-property rels. 116181
$Pb(Mg_{1/3}Nb_{2/3})O_3$, ferroelec./piezoelec. props., MOCVD 104321
$Pb(Mg_{1/3}Nb_{2/3})O_3$/$PbTiO_3$/$BaTiO_3$ ceramics, high field charact., chem. additive effects 104376
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ epitaxial thin films grown by MOCVD 79290
$PbMg_{1/3}Nb_{2/3}O_3$-$PbTiO_3$, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, ferroelec./piezoelec. props., MOCVD 104321
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ piezoelec. thin films, sol-gel proc. 104320
$Pb((Mg_{1/3}Nb_{2/3})_{0.7}Ti_{0.3})O_3$, ferroelec. thin films on $LaNiO_3$(001) bottom electrodes 101185
$Pb(Nb,Zr,Ti)O_3$/(La,Sr)CoO_3 ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
$Pb(Nb,Zr,Ti)O_3$/Pt ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
$Pb(Nb,Zr,Ti)O_3$/$SrRuO_3$ ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ thin films, prep. and elec. props. 101435
$Pb_{1-x}Sr_xTiO_3$ thin films, structural/elec. props., appls. 101413
$Pb_{1-x}Sr_x(Zr_{0.53}Ti_{0.47})O_3$ thin films, appls., structural/elec. props., appls. 101413
PbTiO$_3$, elastic props., spontaneous pol., full-pot. lin. APW method 127189
$PbTiO_3$ thin film, MOCVD domain struct. at init. growth stage 104298
$PbTiO_3$/Pb(Zr,Ti)O_3/$PbTiO_3$ sandwich struct., sol-gel method, charactn. 70392
$Pb(Yb_{1/2}Nb_{1/2})O_3$-$PbTiO_3$, cryst. growth, dielec. props. 124790
PbYbNbO$_3$-$PbTiO_3$ capacitor thin films, pulsed laser deposited, structural/dielec. props. 92626
$Pb(Zn_{1/3}Nb_{2/3})O_3$ single crysts., switching currents, polaris. reversal 104372
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, switching currents, polaris. reversal 104372
$Pb(Zr,Sn,Ti)O_3$ ceramics, elec. field-induced antiferroelec.-ferroelec. transit. *(Chinese)* 116167
$Pb(Zr,Ti)O_3$, coercive voltage, freq. depend., ferroelec. relax. 104296
$Pb(Zr,Ti)O_3$ films, highly preferred, low temp. prep. 70391
$PbZrO_3$ antiferroelec. thin films, pulsed excimer laser ablation 79356
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$Pb_{1.1}((Zr_{0.52}Ti_{0.48})_{0.975}Al_{0.025})O_3$:Al thin films prep., sol-gel method 101411
$Pb(Zr_{0.32}Ti_{0.68})O_3$ film, 90° domains switching 127160
$PbZr_{0.5}Ti_{0.5}O_3$ thin films, chem. soln. deposition epitaxial growth and props. 90497
$Pb(Zr_{0.53}Ti_{0.47})O_3$ thin film orient., elec. props., chem. soln. deposition 104293
$PbZrTiO_3$ thin films, sputtered, ferroelec. capacitors 104295
$PbZrTiO_3$ ultrathin films, MOCVD grown, elec. props. 104294
$Pb(Zr_{0.53}Ti_{0.45}W_{0.01}Cd_{0.01})O_3$, film, sputtered, piezoelec. effect. 116174
$PrFeO_3$-$PbTiO_3$ solid soln., ferroelec./ferromag. props. 127226
Pt/$(BiLa)_4Ti_3O_{12}$/Pt/Ti/SiO_2/Si MFMIS struct., fab., elec. characts. 126229
Pt/PLZT/Pt capacitors, H-induced degrad., nanoscale investig. 104468
Pt/SBT/polysilicon capacitors, elec. characts., memory appl. 81780
Pt/$SrBi_2Ta_2O_9$/CeO_2/Si capacitors for ferroelec. FET, gate stacks, XRD, EDX, TEM 104472
Pt/$SrBi_2Ta_2O_9$/Pt film capacitors, hysteresis symm., data retention, γ-ray irrad. effect 104469
Pt/$SrRuO_3$/PZT/$SrRuO_3$/Pt, high endurance scalable capacitors 102771
Pt/$YMnO_3$/Y_2O_3/Si capacitor, pulsed C/V meas., ferroelec. 102776
$RbTiOAsO_4$, periodically poled, CW DFG, mid-IR trace gas detect. 82908
Si wafers, dielec. props., Debye-type profile 114921
a-SiC:H dielec. diffusion barrier, Cu interconnect 115721
a-SiC:H low-k diffusion barrier, Cu interconnect 115705
SiO_2, dielec. props. 114921
SiO_2, fused silica, model for thermal/elec.-field poling *(Chinese)* 104250
SiO_2 poled thin slab EO switch, electrostrictive consts. 105548
SiO_2 thin films, Ge-doped, second-order nonlin. optim. 93823
a-SiO_2 thin films, increased dielec. permitt. 92599

dielectric polarisation continued
SiO_2:Ge glass, photonic materials, second-order nonlin., UV-poling, Ge-E′ ce ters 71206
$Sr_{1-x}Ba_xNb_2O_6$ waveguide channels, elec. fixing, dyn. self-focusing 93120
$Sr_xBa_{1-x}Nb_2O_6$ films, PLD, dielec. props. 114378
$SrBi_2Nb_2O_9$, epitaxial films, microstruct./elec. props. 70409
$Sr_{0.8}Bi_{2.3}(Ta_{1-x}Nb_x)_2O_{9+\alpha}$ thin films, sol-gel prep. and elec. props. 81719
$SrBi_2(Ta_{1-x}Nb_x)_2O_9$ thin films, MOCVD, ferroelec. props. 79283
$SrBi_2Ta_{2-x}Nb_xO_9$, ferroelec. thin films, reversible/irreversible polaris., tem depend. 104297
$SrBi_{2.4}(Ta_{0.75}Nb_{0.25})_2O_9$, thin films, ferroelec. charact., thickness depend. 7041
$Sr_{0.8}Bi_{2.2}Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state che 104286
$SrBi_2Ta_2O_9$, A-site-modified by Ca(Ba), ferroelec. props., struct. distortic 127191
$SrBi_2Ta_2O_9$, coercive voltage, freq. depend., ferroelec. relax. 104296
$SrBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state che 104286
$SrBi_2Ta_2O_9$, epitaxial films, microstruct./elec. props. 70409
$SrBi_2Ta_2O_9$ ferroelec. capacitor for 1 V operation in NVM 114764
$SrBi_2Ta_2O_9$ ferroelec. thin film, prep., struct. & props. 127173
$SrBi_2Ta_2O_9$ ferroelec. thin films, RIE, Pt/$SrBi_2Ta_2O_9$/Pt ferroelec. capacitors, ele props. 104287
$SrBi_2Ta_2O_9$, ferroelec. thin films, effective electrostriction coeffs. charact 70427
$SrBi_2Ta_2O_9$ film, MOCVD, ferroelec. props. temp. depend. 116172
$SrBi_2Ta_2O_9$, film, as-grown, net spontaneous polaris. 70410
$SrBi_2Ta_2O_9$ films, fatigue charact., forming gas annealing effect 127157
$SrBi_2Ta_2O_9$ films, microscopic polariz.-switching, memory appl. 104367
$SrBi_2Ta_2O_9$ films prep. by metalorganic decomp. using RTA, charact. 70421
$SrBi_2Ta_2O_9$ nanosize ferroelec. struct., domain imaging, polariz. hysteresi switching 104310
$SrBi_2Ta_2O_9$, non-c-oriented ferroelec. films, PLD, epitaxial growth on SrTiO 114377
$SrBi_2Ta_2O_9$ nonstoichiometric films, relax. effects and steady-state cond. 7042
$SrBi_2Ta_2O_9$ one-axis-oriented film, growth, microstruct., remanent polari 127174
$SrBi_2Ta_2O_9$ thin film capacitors, UV irrad., switchable polariz. 104464
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mech nism 127222
$SrBi_2Ta_2O_9$ thin films, MOCVD, film comp. effect, XRD 101334
$SrBi_2Ta_2O_9$ thin films, chem. soln. deposition, crystn. in N_2 ambient 68321
$SrBi_2Ta_2O_9$ thin films, dry etching in Cl_2/NF_3/O_2/Ar ICP 104274
$SrBi_2Ta_2O_9$ thin films, ferroelec. props., microstruct. effects 104307
$SrBi_2Ta_2O_9$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orien 104316
$SrBi_2Ta_2O_9$ thin films prepared by MOD method, polariz. switching 70415
$SrBi_2Ta_2O_9$ thin films, pulse-introduced MOCVD, struct., elec. props. 104303
$SrBi_2Ta_2O_9$ thin films with Bi_2O_3 buffer layers by liq.-delivery MOCVD, fe roelec. props. 104334
$SrBi_{2.4}Ta_2O_9$, thin films, ferroelec. charact., thickness depend. 70419
$SrBi_2Ta_2O_9$:Nb MOCVD, integrated ferroelec. capacitors, RAM 101333
$SrBi_2Ta_2O_9$/SiON/Si ferroelec. MISFET, elec. props. 81275
$SrBi_2Ta_2O_9$-Bi_3TiNbO_9 ferroelec. thin films, structural study, Raman spectr XRD, AFM 104289
$SrBi_2Ta_2O_9$(115) thin film, deposition from chem. soln., crown ether 101410
$SrBi_4Ti_4O_{15}$ single crysts., dielec./ferroelec. props. 92629
$SrRuO_3$/$BaTiO_3$ epilayers, strain modif., substr. structural transit. 127306
$Sr_2(Ta_{1-x}, Nb)_2O_7$ ferroelec. thin film, PLD 101387
$SrTiO_3$ epitaxial films, strain-induced ferroelec. 70423
$SrTiO_3$ epitaxial lift-off thin films, microwave dielec. tuning/losses 91172
$SrTiO_3$-$PbZrO_3$ solid soln., ferroelec. phase transit. 104350
Ta_2O_5, nanolanminates, dielec. props. develop. 92676
Ti:sapphire diode-pumped aperiodically poled laser cavity 117151
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
ZnCdS, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdSe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdTe, ferroelec. props. in nonoxide semiconds., memory devices 104317
$Zn_{1-x}Mn_xSe_{1-x}Te_y$ epilayers, dielec. props. 80767
ZnS, CVD, microstruct./comp./opt. transparency correl. 126012
$ZnS_{1-x}Te_x$, Auger param. shift, extra-at.-relax. 103018
poly(N-vinylcarbazole) LED, $LiClO_4$ doped, efficiency 116982
reson. quasi-phase-matched freq. doubling with $KTiOPO_4$ wedged cryst. phas compensation 82877

dielectric properties
see also capacitance; dielectric depolarisation; dielectric function; dielectric hysteresis; dielectric losses; dielectric polarisation; dielectric relaxation; dielectric resonance; dipole glasses; electric strength; ferroelectricity; optical susceptibility; permittivity; photodielectric effect; piezoelectricity; plasma dielectric properties; pyroelectricity
2.0 GHz, meas. elec. near-fields of model cellular transmitters near human head models 98768
aragonite whisker and composites, dielectric properties *(Chinese)* 92596
breast cancer, 3D microwave tomography, computational modelling 110853
composites, dielec. props. eval. using combined modulated scatter./near-field microwave NDT tech. 121151
insects, RF and microwave dielec. props. 92588
laser ablation using high-energy femtosecond oscillators 128185
leather, microwave-assisted drying and moisture leveling 102752
microwave dielec. props., tuning by stacked dielec. resonators 69057
TE_{011} cylindrical cavity resonator meas. method *(Korean)* 121152
tissue, dielec. props., age, microwave freqs., dosimetry 87974
BaO-TiO_2-Nd_2O_3-La_2O_3 ceramic, struct. and dielec. props. *(Chinese)* 125088
$LiNbO_3$:Mg^{2+}(Zn^{2+})(In^{3+}), induced Li-site vacancies, NLO behavior 72000
Ta_2O_5 sputtered thin films, dielec. study 104241
ZrO_2 sputtered thin films, dielec. study 104241

dielectric relaxation
see also dielectric resonance
charge carriers/excitons relax. in polymers 92577
conf., Liquid crysts., chem., phys., appls., Krynica, Poland (Sep. 1999) 100412
diamond/n^+-Si heterojunction, elec. charactn., enhanced tunnelling 80799
discrete energy states, TSC curves, auto-separation/reconstruction 92583
electroactive polyimide, dielec. relax. spectrosc., permitt., impedance 125116
ethanol-nitrobenzene binary mixture, complex permitt. spectra, TDR 116127
ethanol-nitrotoluene binary mixture, complex permitt. spectra, TDR 116127
ferroelec. phase in antiferroelec. liq. crysts., dielec. relax. behavior 127187
ferroelec. thin film capacitors relax. mechanisms for FeRAM appl. 70471
interact. cluster systs., energy criterion 92579

tric relaxation continued
. copolysiloxane LB superlattice, substituted aromatic acid side chains, dielec. rops. 104236
sses limiting procs. in dielec. 92578
xed syst. ferroelec. relaxors, random field model 116143
xtures, freq. depend. dielec. props., FEM 70378
oetyloxy-4-(2-methylbutyloxy)carbonyl-phenylbenzoate FLC, collective dyn. nodes 92623
(VDF/TrFE) copolymers, electron irrad., ferroelec. relax. 104400
EEK, electron beam irrad., dielec. and thermal props. 92668
lyethylene, TiO_2 filled, filler-induced chem. modifs. as dielec. probes 127253
lymer electrets, mol. procs. 79460
lystyrene thin films, spiropyran doped, dielec. relax., waveguide obs. 92586
/DF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. rops., XRD 127206
ax. time distrib., nonlin. spectral fn. fits, Monte Carlo method anal. 92576
laxor ferroelec., dielec. response modelling 92622
lf-assembling polymers, H-bonded, complex dyn. 90566
SC relax., general order kinetics model 92584
$Bi_2M_2O_9$ (M=Ta,Nb) perovskites, relaxor props. 104344
$Bi_2Nb_2O_9$ ceramics, dielec. relax. 92631
$SrTiO_3$ ferroelec. thin films, microwave dielec. dispersion, local opt. probes 2637
$(Zn_{1/3}Nb_{2/3})_2O_7$ electroceramics, bulk/film, dielec. props. 116173
$_{0.5}Bi_{0.5}TiO_3$-$PbTiO_3$($K_{0.5}Bi_{0.5}TiO_3$) ceramics, relaxor props. 104348
ZT film capacitors, dielec. relax., leakage currents 70416
$N_{0.7}$-$(PbTiO_3)_{0.3}$, ferroelec. phase stabil., dielec. props. random fields effects 0389
ZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer effect 02774
ZT thin films/heterostruct., excimer laser liftoff proc. 105647
)-based relaxor ferroelec./Ag-Pd, interfacial interact., electrode formulation, ofiring mismatch 104304
$_{1/2}Nb_{1/2})O_3$ powders, chem. prep. method 114443
$_{1/3}Nb_{2/3})O_3$ thin films, dielec. props., electrostrictive strain, dc field 101428
$bMg_{1/3}Nb_{2/3}O_3)_{0.68}(PbTiO_3)_{0.32}$ relaxor ferroelec. single cryst., hyper-onic/dielec. studies 104375
$_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ cryst., indentation-induced domain switching 104395
$_{1/3}Nb_{2/3}O_3$-$PbTiO_3$ epitaxial relaxor thin films, film thickness, ielec./piezoelec. props. 101391
$_{1/2}Ta_{1/2})O_3$ cryst., ferroelec., micro-Brillouin scatt. 127194
TiO_3, elastic props., spontaneous pol., full-pot. lin. APW method 127189
$_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, relaxor ferroelec. top seeded soln. growth 124787
$(Zr,Ti)O_3$, coercive voltage, freq. depend., ferroelec. relax. 104296
ZrO_3 thin films, ac elec. & dielec. props. 92625
$Ba_{0.7}Sr_{0.3}TiO_3$-Pt thin film capacitors, H_2/deuterium induced degrad. 104467
O_2-B_2O_3-P_2O_5-TeO_2-Fe_2O_3-BaO-CaO glass, elec. relax. 92581
$Bi_2Ta_2O_9$, coercive voltage, freq. depend., ferroelec. relax. 104296
$Bi_2Ta_2O_9$ nonstoichiometric films, relax. effects and steady-state cond. 70420
$Bi_2Ta_{1.8}V_{0.2}O_9$ ferroelec., O-vacancy-related dielec. relax. 70396
TiO_3-$PbZrO_3$ solid soln., ferroelec. phase transit. 104350
solid electrolytic capacitor, low temp. elec. prop. meas. 102784

tric resonance
ee also dielectric relaxation
ad model, clinical ultra high field MRI 87596
rous/nonporous fluoropolymer films, thermally stable dyn. piezoelec. 116161
$_{6-3x}(Nd,Bi)_{8+2x}Ti_{18}O_{54}$ solid soln., struct. and MW dielec. props. 92598
O-Li_2O-Sm_2O_3-TiO_2 microwave dielec. ceramic, sintering temp. effects 25645
bSr)$(Ni_{1/2}W_{1/2})O_3$-$Pb(Mn_{1/3}Nb_{2/3})O_3$ -$Pb(Zr,Ti)O_3$ ceramics, microstruct./elec. rops. 81689
TiO_3 single cryst., microwave dielec. props., near-field imaging 91173
$BaTiO_3$ thin films, microwave dielec. props., near-field imaging 91173

tric resonator filters
band output MUX 102543
yogenic dielec. resonator filter, dual-mode operation 69060
gital cellular base station, dielec. resonator duplexer 74798
al-mode filters using metallized dielec. resonators, cellular base station appl. 02560
al-mode HE_{11} dielec. resonator microwave filters CAD 68901
brid diamond microwave filter, dielec. reson., coupled microstrip 102525
IC bandpass filter with microstrip and two ring dielec. resonators, FDTD anal. 0344
icrowave filter, sandwiched conductor dielec. resonator 102566
M-wave notch filter, slotline, dielec. resonator 69048
rrow-band band-pass filter design, software tool 102334
anar ellipt. bandpass filter using SMD type rect. DRs, design 102534
asi-planar high Q_u dielec. resonator 3D microwave filter, CAD 80187
diant microwave filter for telecoms. using high unloaded Q-factor dielec. reso-ator 125669
ndwiched conductor DR based microwave filters, improved spurious perform. 9034
rface micromachined piezoelec. reson. beam filters 104226
nable dielec. resonator bandpass filter 68906
G-mode DR based microwave and opt. network components, num. anal. 0186
-band MIC dielec. resonator bandpass filter 69055
aSmTiO dielec. resonator bandpass filter for cellular phones 85415

tric resonator oscillators
as dependant LF FET noise model for CAD, large and small sig. models 80308
ep space commun., transponding modem, DRO perform. 131332
M charactn. of DRO for inclusion in electronic simulator *(Spanish)* 102711
tegrated MM wave radio project 96349
HEMT LF noise model, appl. to MM-wave automotive radar chip set design 0311
HEMT oscillator, low noise 90797
tile-sapphire dielec. resonator, cryogenic microwave oscillator 69083
pphire resonator, K-band oscillator, satellite commun. 102632
ideband voltage-tunable DRO controlled by piezoelec. transducer 102619

tric resonators
ee also dielectric resonator filters; dielectric resonator oscillators
) dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 05695
tenna, conformal FDTD anal. 117750
tenna array, seq. rot. 128905
isymmetric antennas, scatterers and resonators, AKBOR computer code 83502
isymmetric dielec. resonators, num. study 102578
conical dielec. resonator antenna for wideband appls. 94141
rc. polaris. dielec. resonator antenna, perturbed annular slot 94174

dielectric resonators continued
circ. polarized dielec. resonator antenna excited by dual conformal strips 83657
composite microwave cavity, temp. stable design 83485
conical dielec. resonator antennas excited by coaxial probe 72545
cylindrical dielec. resonator antenna arrays 83692
cylindrical dielec. resonator antennas, mutual coupling 83595
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
digital cellular base station, dielec. resonator duplexer 74798
displaced conformal strip fed dielec. resonator antenna 72548
equilateral-triangular dielec. resonator antenna excitation using conformal strip 83652
FDTD method and Pade interpolation tech. 91213
FDTD solns. for dielec. resonator antenna problems with different feeding sigs. 128844
finite difference freq. domain anal. of whispering gallery modes 70480
FSK modulator module for 38 GHz WLAN, 156 Mbps, dielec. resonator, MMICs 91389
half vol. dielec. resonator antenna, FDTD simul. 72608
high T_c superconds., surface resist. meas., dielec. resonators 75820
high-quality dielec. resonating elements, loss tangent, waveguide filters 114955
HTSC films, intermodulation meas., one-port dielec. resonator 92917
HTSC microwave charactn., surface resist. meas. accuracy using sapphire resonator 75839
HTSC thin film, dielec. resonator, Q-factor meas. 104590
Ka band MM wave mixer image recovery *(Chinese)* 118373
Ka-band dielec. resonator antenna reflectarray 128898
Ka-band resonator autooscillating instrumentation for Q-meas. 75394
laminar dielec. specimen meas., split post dielec. resonator tech. 75822
lin. array of dielec. resonator antennas optimized for low-sidelobe appls. 72630
low loss dielec. permitt. meas., MM wave whispering gallery resonator 75824
low-temp. electronics, dielec. resonators 70479
Maxwell eqns., FDTD method 94082
microstrip patch antenna, dielec. resonator loading 72551
microwave act. resonator 127281
microwave dielec. props., tuning by stacked dielec. resonators 69057
microwave dielec. resonator, freq. tuning 80178
microwave dielec. resonator antenna anal. and design 72574
microwave field phonon absorpt. 121172
MM wave rutile resonators, whispering gallery modes 70478
multilayer cylindrical cavity, transfer matrix method 94090
multilayer spherical resonator, high quality EM oscills. 71460
opt. ray movement inside dielec. sphere, num. study 114936
PHEMT IC chip set for interactive TV, Local Multipoint distrib. *(German)* 69170
probe-fed rect. dielec. resonator antenna study 72610
rect. dielec. resonator antennas, modelling/expts. 83627
rect. dielec. resonator antennas for switching polaris. diversity receiver 83593
rect. resonator, Q-factor and reson. freq. 125664
sapphire image-type DR design for HTSC film surface resist. meas. 86910
slot-line-excited equilateral-triangular dielec. resonator antenna 72593
split cylindrical dielec. resonator antennas, bandwidth enhancement 94169
structural adhesives, dielec. cure monitoring, split post dielec. resonator 75823
TE_{111} mode in rect. dielec. resonator for antenna appl., reson. freq. determ. 80202
triangular dielec. resonator antenna excited by coaxial probe 128870
tunable dielec. resonator with ferroelec. element 102574
WG-mode DR based microwave and opt. network components, num. anal. 80186
whispering gallery resonator method for permitt. meas. 86912
$BiNbO_4$ based microwave dielec. ceramics, low firable, sintering, microstructs., dielec. props. 68402
$CaTiO_3$-$Ca(Mg_{1/3}Nb_{2/3})O_3$ with near zero temp. coeff. of reson. freq., high Q value 91177
$La_{2/3}TiO_3$-$TiNiO_3$ ceramics, prep., microwave props., microstruct. 114923
$LiNbTaTiO_3$ low sintering temp. microwave resonator ceramics, prep., props. 114924
$RTiNbO_6$ ceramics, prep., charactn., microwave dielec. prop. 104235
$SrTiO_3$ single-cryst. and ceramic, microwave permitt. meas. 70429
TiO_2 dielec. filled toroidal RF cavity resonator for high-field NMR 87652
YBaCuO film, surface resist. meas., two dielec. resonator method 75844
YBaCuO wafers and patterned microstrip resonators, power handling capabilities 69024
$YBa_2Cu_3O_7$ film, microwave surface resist. meas., dielec. resonator 70609
$YBa_2Cu_3O_y$ HTSC films, surface resist. meas. with dielec. resonator method 132130
$(Zr_{0.8}Sn_{0.2})TiO_4$ ceramics, microstructs., microwave dielec. props., additives effects 101476
$Zr_xTi_{1-x}O_4$ ceramic, comp., sinterability, microstruct., microwave dielec. props. 127154

dielectric strength *see electric strength*

dielectric susceptibility *see optical susceptibility*

dielectric thin films
see also ferroelectric thin films; insulating thin films; optical films; piezoelectric thin films
0.18-μm 3.5/6.8 nm dual gate oxide CMOS technol., effects of F on parametrics and reliab. 81506
acrylate/polyphenylene sulfide film capacitors for high temp. appls. 115085
adv. interconnect & low-k dielec., conf., San Francisco, USA (Apr. 2000) 89563
azobenzene ultrathin films, opt. switching, dielec. spectra 93835
base metal electrode dielec. comps. for thick/thin layer MLC capacitor appls. 115061
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effects 92140
binary dielec. surface-relief Bragg gratings, coated phase masks for proximity printing 82290
BME X7R/Y5V high-k dielec. for thin layer MLC capacitor appls. 80425
bondpad peeling failure in wafer fab., AES/EDX studies 103949
BOPP AC capacitor film dielec. for metallization, high temp. perform. 80449
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
BPSG pre-metal dielec. film CMP, removal rate/uniformity/defectivity 103346
cellular polymer electret films, corona charging, enhanced piezoelec., void gas effects anal. 104398
ceramic capacitors, perform. evals. for pulse-discharge appls. 123845
ceramic capacitors, voltage withstanding rating determ. 80444
ceramic chip capacitors for automotive indust., qualification testing 89413
ceramic/epoxy composite for integral capacitors, particle packing/Cu plating/permitt. 80441

dielectric thin films continued
CMOS antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
CMOS cct., high-K gate dielec., Monte Carlo simul. 104107
CMOS device/cct. ultra-thin oxide reliab., phys./predictive models 81525
CMOS front/back end plasma etch procs., fund. design limitations 104126
CMOS gate dielec. scaling limits 116034
CMOS gate high-k dielec. by liq. source misted chem. deposition 104100
CMOS gate oxide plasma proc. induced damage, transistor gate area depend. 104131
CMOS high-k dielec. layers, gate insulator layer thickness, leakage currents, reliab. 127022
CMOS image sens./IC products, prod. line cross-contamination study 104101
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS multi-oxide proc. technol., 100 nm, for SoC appls., radical nitridation 127045
CMOS proc. flow for combined three layer/self-aligned contacts 104099
CMOS scaled memory-adder systs., time delay, interconnection and dielec. materials 68842
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
CMOS SoC, 100 nm, multi-gate dielec. technol. using H pre-treatment 127044
CMOS technol., low-k inter-metal dielec., act. ccts. under wire bonding I/O pads 127031
CMOS technol. scaling challenges for sub-0.1 μm generations 70303
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
CMOS-IV SoC technol., 100 nm, for high dens. embedded memory/mixed sig. LSIs 127018
CMOSFET gate length scaling to 35 nm 126738
CMOSFET shallow n^+/p^+ jn. form. using PIII 126742
CMP removal rate uniformity control, empirical-based modeling 81085
CMP slurries, extensive pump handling effects 103380
combustion CVD-based low-k dielec. thin-film technol. for HDI PCB appls. 125904
damascene metal gate transistors, threshold voltage deviation, inorganic CVD tech. 103818
deep submicron CMOS, dielec. pockets, short-channel effects/DIBL suppression 92469
dielec. layer/ferrite film laser beam scatt. 117341
direct-tunneling gate CMOS perform./reliab., wafer orient. depend. 127043
DRAM storage node pad proc., line type self-aligned contact/oxide spacer/direct metal plug 125476
dual GOI, STI proc. param. effects 81416
ECR plasma CVD, dielec. thin film deposition, refr. index, neural-network simul. *(Chinese)* 79310
electrostatic printing-based mfg. procs. for electronics industries 101462
embedded capacitors, high-k polymer-ceramic composite for RF appls. 69273
embedded DRAM, low temp. capacitor technol., dielec. stack film 114772
ferroelec. oxides, CVD precursor design, synthesis & charactn. 114363
FIB based local deposition of dielec. for phase shift mask repair 103586
flash EEPROM cell, ONO split gate channel dielec. 79868
flash EEPROMs, thin oxide, anom. cell cond. mechanism 79894
floating MIM capacitors, charging damage 102781
FLOTOX EEPROM tunnel window form. proc. var. effects on reliab. 102142
fluoropolymer film, amorph., prep., ultra-low dielec. const. 81643
gate dielec. electron wave fn. penetration/interface scatt., simul. 126235
gate oxide, ultra-thin, ESD protection device trigger transient effects on reliab. 70118
gate oxide breakdown, param. charactn. *(Chinese)* 116137
gate oxide damage in plasma proc., historical overview/future prospects 103423
gate oxide reliab., transistor-limited const. voltage stress test 126946
gate oxide TDDB lifetime prediction under direct tunneling regime, gate voltage depend. model 126223
gate oxides, 6.8/3.5 nm, plasma damage, param. shifts/hot-carrier response/dielec. integrity 69879
gate oxides, very thin, trap generation/breakdown procs. 69761
GSI, interconnect scaling limits 104055
HDI chip package substrs., dielec. materials 124370
high quality thermal oxide on large-grain polysilicon-on-insulator films, characts. 91899
high-k gate dielec., materials eval./selection 104105
high-k gate dielec. for CMOS devices, bond ionicity 100665
high-k gate dielec. for CMOS devices, future challenges 104130
IC plasma etch damage, charging pot./current densities, substr. connection effects 103432
IC plasma/proc.-induced damage control, symposium overview 103976
IC proc. technol. requirements for 300 mm wafer transit. 115984
IC thermal proc. technol., gate dielec. scaling limits/materials 70232
IC ultra thin oxides, soft breakdown detect., noise-based trigger algm., accurate/robust 81531
ICP resist stripping, proc. modif. to avoid low-k dielec. film damage 69867
ILD PECVD induced charging damage, IC yield/reliab. effects 101375
integral pass. in PCBs, appl.-specific economic anal. 67611
integrated capacitors, paraelectric and ferroelec. materials as dielec. 91414
interconnects, conf., Burlingame, CA, USA (June 2001) 124180
interpoly dielec. deposited on nitrided poly-Si for NVM devices 115468
interpoly dielec. deposited on nitrided-polysilicon, NVM devices 79877
large-area growth, photo-induced, using excimer lamps 115977
lin. copolysiloxane LB superlattice, substituted aromatic acid side chains, dielec. props. 104236
logic/syst. LSI, front end of line technol., review 115506
low dielec. const. materials for ICs 104244
low-k_{eff} dielec., spin-on stacked films, manufacturability options 90534
low-k dielec., mater. charactn. for damascene integrat. 126463
low-k dielec. films, characterisation by ellipsometric porosimetry 92600
low-k dielec. plasma etching, ITRS roadmap requirements 92092
low-k dielec. thin film pore charact., positronium annihilation lifetime spectrosc. 92601
low-k etch/ash for Cu dual damascene 103391
low-k porous dielec., dual hard mask, Cu dual damascene fab. 115718
low-k thick film dielec., simul. model 69335
metal-dielec. color shift films *(Chinese)* 90246
metal/polysilicon CMOS gates, work fns., effects of high-k dielec. 127039
methyl silsesquioxane thin films, prep. and dielec. charactn. for IC appls. 116184
methyl-silsesquioxane films, nanoporous struct., positron obs. 104246
methylsilane/trimethylsilane-doped low k PECVD organosilicate glasses, elec. props. 104233
methylsilsesquioxane film, low-k, chem.-mech. polishing proc. 103293
MIM capacitors, fab., charging reduction 125852
dielectric thin films continued
MLC capacitors, vol.-efficient, elec. props. 80431
MLC capacitors with ultrathin dielec. layers, specs./test methods 80436
MNOS NVM technol., current status/future prospects 90904
MOS capacitors, gate oxide breakdown posn. discrim., test struct. 104082
MOS capacitors, polyoxide films for flash memories, low temp. growth 1032
MOS devices, breakdown modes and their evol. in ultra-thin gate oxide 1154
MOS IC oxide leakage currents, Si dangling bond defect link, direct eviden 81529
MOS ULSI technol., ultra-thin gate dielec., thickness meas. under inversion co dition 127064
MOSFET gate voltage scaling for TDDB under direct tunneling regime 813
MOSFET stack gate insulator struct., reduced FIBL effect 126747
multichip ultra-thin 3D stacking technol. 91522
multidielectric multiconductor hybrid ICs, closed form method of lines appro anal. 80335
multilayer material technol. for improved sig. integrity in >5 GHz region 1256
multilayered microstrip anal. for microstrip moisture sens. design appl. 1095
multilevel ULSI interconnects, thermal model incorp. via effect 126937
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismat charactn. 104125
n-MOSFET reliab., hot-carrier degrad., gate dielec. electron trapping 103833
n-MOSFET single-stage amps. with high-Q spiral inductors on polymer diele 69195
Nanoglass E polymer/Cu damascene proc., etch/clean/CMP 126451
nanometer film targets, thickness estim., picosecond X-ray pulse generation app 121858
nanoscale thin dielec. films, size effect of thermal cond. *(Chinese)* 116121
NMOSFET, ultrathin nitride/oxide stack gate dielec. technol. 70125
NMOSFET matching charact. for 0.18 μm CMOS technol., substr. voltage/oxi thickness 103857
NMOSFET plasma induced gate charging damage, source/drain jn. role 1038
nMOSFETs, ultra-thin gate oxide, breakdown softening at low inversion lay dens. 81347
Omega wafer level CSP, board level reliab. 113601
organic ion-implanted low-k organic SOG films, IC appls. 126466
organic low-k dielec., plasma etching, damascene archit. 103387
organic low-k hybrid-organic-siloxane-polymer dielec., nitridation and integra issues 92071
organosiloxane polymer, low dielec. const., metal drift behavior 115458
partially-depleted SOI CMOS technol., 0.13 μm, for low-power digital/RF app 127046
$PbTiO_3$-PMN ferroelec. ceramics/polymer composites, high dielec. con 125115
PEN capacitor dielec. films for surface mounting/high temp. appls. 80448
photosensitive epoxy by photooxidation-induced polycondensation, sensiti ity/thermal stabil. 101515
photosensitive polyimides, variable freq. microwave curing 115034
PI/CAB bilayer film humidity sens., sensitive character, temp. coeff. *(Chines* 120767
plasma etching, wafer temp. meas./control 92044
plasma related damage and proc.-induced phenom., conf., Monterey, CA, US (Nov. 2001) 100381
plasma-assisted wafer de-chucking power-lift proc. induced charging dama 104056
poly(arylether) porous low dielec. const. films, prep., dielec. obs. 68364
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 92145
polyimide and metal films, deep trench patterning 103372
polyimide films, soluble material proc. 114462
polyimides, LSI ILD 90573
polymer-ceramic nanocomposite embedded decoupling capacitor, SSN suppre sion 113503
polynorbornene low-k dielec. material, photosensitive, for packaging app 67601
polypropylene film-oil interacts., surface treatment 104419
polysilicon gate HfO_2 MOSFETs, dopant penetration effects 126778
polysilicon post-etch residue contamination in wafer fab., failu anal./elimination 103349
polysilicon/ZrO_2 gate dielec. MOSFETs for sub-qtr. micron CMOS, low tem proc. 127024
polystyrene thin films, spiropyran doped, dielec. relax., waveguide obs. 9258
porous low-k dielec. design, pore generation methods 115684
porous low-k ILD thin films, struct./props., X-ray reflectivity/SANS 91922
porous low-k ILD thin films, X-ray reflectivity/SANS, 3-phase model 92160
porous thin films, low-k, struct. and property charact. 70369
post-metal CMP cleaning with electrolyzed DI water, surface control tec 103344
power capacitors, dielec. films, space charge meas. 134332
power UMOSFETs, LV, trench geom./proc. impact on perform./reliab. 8134
power VDMOSFETs, γ-irrad., elec. charact., anal. modelling 81306
PSG, interlevel dielec. films, mech. props., Al interconnect extrusions 1265
PTFE/siloxane nanocomposite ultra low-k ILDs, high-temp. mech. beha ior/phase morph. 92153
α-PVDF non-ferroelec. films, dielec. hysteresis 92585
SAW device perform. enhancement using dielec. thin films 81763
self-aligned contact etch stop window, enhanced, using C_4F_6 chem. 103379
self-primed spin-on low-k materials testing for wafer cost of ownership optim 92124
sensitive endpoint detect. for dielec. etch 92080
silica films, mol. templated nanoporous, plasma treatments 115643
silica low-k film, methylene group incorporation, CVD, elec. props. 101320
silicate glass, F(C) doped, low dielec. const. CVD oxides, phys./elec. charac 102767
SiLK porous semicond. dielec. film, damascene interconnect 115706
siloxane porous SOG thin film, NDT 114471
siloxane-based low k materials, heat/moisture resist., IC appl. 104238
SIMOX wafer surface defects, effects on device charact. *(Japanese)* 91888
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
SOI CMOSFETs, sub-60 nm, with 1.2 nm nitride/oxide gate dielec. 126776
SOI power ICs with intell. CMOS control circuitry 81536
sol-gel-derived 0-3 composite ceramics for direct write electronics appls. 1028
spin-on organic aromatic polymers, dielec. and barrier props. 104405
spin-on porous ultralow-k dielec., single/dual damascene integrat. 115717
stacked hotplate low-temp. annealing syst. for 300 mm wafer thermal pro 80978
sub-5 nm multiple-thickness gate oxide form. by O implant., optim. 70313
sub-qtr.-micron CMOS devices, ultrathin ox/nitride gate stack, RTCVD 1270
sync. DRAM perform. improve. by lowering interconnect capacit. 125467
TaO_xN_y high-k dielec. materials 102144

ctric thin films continued
TEOS oxide on polysilicon films, stacked struct., RTA in N_2O ambient, N incorp. 103445
etrafluoromethane plasma induced damage during dry ashing/photoresist residue removal 103424
TFVL dual-inlaid metal proc., proximity dummy feature placement 126449
hermal spray techs. for meso-electronics/sens. direct write fab. 114399
hermally-enhanced rem. plasma nitrided ultrathin gate oxide, perform. 92359
hick film paste formulation, Hamaker consts. calc. in nonaqueous fluid media 102838
hick-film multilayer MCM-C interconnection using diffusion patterning technol. 67645
ransparent dielec. material for PDP front-panel, props. 97610
ULSI ICs, design and reliab. aspects of multilevel metal large-scale power line layouts 104039
ULSI TDDB charact., nitridation effects, oxide thickness depend. 104081
ltra-low k ILD materials for use in ULSI BEOL struct., mech. integrity 92431
ltra-thin gate oxide soft breakdown, plasma proc. induced damage correl. 103426
ltra-thin MOS struct., direct tunneling regime, image pot., electron transm. 81297
ltralow-k ILD materials develop., IC proc. challenges 126492
ltrathin gate dielec., proc. metrology 109994
ltrathin gate dielec. films in 0.13 µm CMOS, rem. plasma nitridation effect on integrity 81521
ltrathin gate oxide breakdown stats., phys.-based analytic approach 70385
ltrathin gate oxide CMOS with undoped selective epitaxial Si channel layer 70307
ltrathin gate oxides, soft breakdown, stat. anal. 126221
ert. MOSFETs, 40 nm, fab. within std. CMOS proc. flow 126771
ViaLUX 81, epoxy photo-dielec. dry film, microvia technol. 115165
VLSI interconnect, Cu/low-k dielec., cleaning chem. 126481
VLSI technol., systs. and appls., conf., Hsinchu, Japan (April 2001) 113284
oid-free pre-metal CVD dielec. for ULSI 90433
vafer charging metrology protocols, eval. 115803
vafer cleaning capability for increasing technol. demands 103433
vafer high-temp. PECVD charging damage prediction, current-bal. model 101376
vafer scale pattern meas. for CMP anal. 103347
Ag,AgI hollow glass waveguide, atten., thickness crit. factor 116656
Al dual-damascene interconnect via electromigration lifetime, soft low-k organic SOG ILDs 92117
Al electrolytic capacitor, composite oxide film form. *(English)* 91418
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
AlCu RIE metallization, SiO_2:C low-k interlevel dielec. 103476
AlN MIM struct., dielec. props. 127142
AlN films, DC-magnetron sputtering, dielec. props., MIS capacitor anal. 92591
Al_2O_3 dielec. films on Si, UHV reactive at.-beam deposition 79245
Al_2O_3 n-MOSFETs with Al gates, elec. charactn. 126757
Al_2O_3, nanolanminates, dielec. props. develop. 92676
Al_2O_3, noncrystalline dielec. films, PECVD, phys., elec. props. 101315
Al_2O_3 plasma-induced surface charging modif. by VUV radiation 101197
Al_2O_3-TiO_2, plasma-sprayed coating, elec. insulation behavior *(Korean)* 116189
Au nanoclusters in SiO_2 films, nanocluster sizes control, ion-beam assist. depos. 90529
Au/$BaTiO_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
Au/Si_xN_y/n-GaAs struct., N-rich PECVD dielec. fab. 124909
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
B_2O_3-SiO_2 glass, dielec. props. 114921
(Ba,Sr)TiO_3 PLD dielec. thin films, AC and DC cond. studies 81634
(Ba,Sr)TiO_3 PLD dielec. thin films, dielec. response and complex impedance spectra anal. 81632
(Ba,Sr)TiO_3 dielec. thin films, RF magnetron co-sputtering deposition and charactn. 81633
(Ba,Sr)TiO_3 thin films, Cl_2/Ar plasma etching, BCl_3 addit. effect 69857
(Ba,Sr)TiO_3:Zr-substituted thin films for integrated capacitors, elec. props. 91415
(Ba,Sr_{1-x})TiO_3 films, MOCVD, step coverage, dielec. props. 79284
Ba(Sr)TiO_3 films, HVOF/plasma deposition, dielec. props. 125046
BaSrTiO_3 thin films for tunable microwave appls., microstructural archit. 91174
(BaSr)TiO_3 thin films, hysteresis effect, alternative gate dielec. appl. 115465
BaSrTiO_3 tunable capacitors, enhanced dielec. props., $SrRuO_3$ buffer layer role 91175
$Ba_{1-x}Sr_xTi_{1-y}Zr_yO_3$ films for DRAM, struct., elec. props. 101198
BaTiO_3 high k low loss X7R dielec. aq. suspens. for BME MLC capacitor appls. 115062
BaTiO_3/SrTiO_3 PLD multilayers, structural and dielec. props. 81659
Bi_2O_3-ZnO-Nb_2O_5 pyrochlore ceramic films for dielec. appls. 92589
$Bi_2Sr_2CaCu_2O_{8+\delta}$/$(Sr,Ca)_3Al_2O_6$ HTSC/dielec. syst., T_c 70374
$Bi_2Ti_2O_7$ films, chem. soln. decomp. prep., RTA, dielec. props. 68323
$Bi_2Ti_2O_7$ thin film, chem. soln. deposition *(Chinese)* 90490
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
$Bi_2(Zn_{1/3}Nb_{2/3})_2O_7$ electroceramics, bulk/film, dielec. props. 116173
$Bi_2(Zn_{1/3}Nb_{2/3})_2O_7$ thin films, dielec. props., FTIR spectra 116131
a-C:F PECVD film characts., damascene interconnection 69954
a-C:F films, ICPCVD, struct./dielec. props. 114333
a-C:F low-k ILD thin films, thermally stable, by ICP-CVD 92152
a-C:H film in MIS struct., permitt. as fn. of thermal annealing 91895
$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
CeO_2, epitaxial dielec. thin films, controlled orient., PLD 68311
CeO_2 thin films for gate dielec. appls., microstruct., elec. props. 70372
Cu CMP proc. modules, defect class. 126502
Cu CMP technol. for ULSI multilevel metallization *(Chinese)* 103302
Cu damascene interconnect, SiO_2 dielec., electromigration 115709
Cu damascene interconnect, polymeric dielec., nanoscale deform. 115694
Cu damascene interconnection, SiO_2 dielec. barrier 115704
Cu damascene struct., AURORA inorganic low-k dielec., charactn./integrat. 92156
Cu damascene struct., methylsilane-doped low-k CVD oxide intermetal dielec. 69942
Cu dual damascene interconnect, SiO_2 IMD, electromigration reliab. 115708
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Cu interconnect features, elec. linewidth, test chip 103495
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu interconnects, air-gap fab. for low intralevel dielec. const. 92148
Cu interconnects, electromigration, confine. materials mech. props. effects 103459

dielectric thin films continued
Cu seed layers, organic soln. deposition on barrier metals 92185
Cu single/dual damascene oxide/low-k ILD interconnects, plasma charging damage issues 103486
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
Cu/CVD SiOC dual-damascene interconnect, electromigration reliab. 115710
Cu/SiLK resin dual damascene, low permitt. spin-on hardmask 126452
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu/a-C:F low-k dielec. damascence interconnection, electroplating 103475
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu/low-k ILD and Cu/ultralow-k ILD layers, CMP module integrat./proc. 126493
Cu/low-k ILD dual-damascene interconnects, surface prep. 103470
Cu/low-k ILD interconnect technol. for semicond. devices 103478
Cu/low-k ILD interconnects, 0.13 µm technol. node, dielec. materials selection 115683
Cu/low-k ILD proc. integrat. enhancement techs. 126495
Cu/low-k ILD proc. metrology, complexity/capabilities 126489
Cu/low-k dielec. interconnect schemes, thermomechanical stress anal. 126431
Cu/low-k dielec. interconnects, interfacial adhesion 115707
Cu/low-k interconnect CMOS platform, 0.13 µm, for SoC appls. 127019
Cu/low-k interconnects, deep-sub-µm, impact of vias on thermal charact. 126488
Cu/low-k wiring, interconnect module technol. 69928
Cu/methylsilane-doped low-k CVD deposited oxides, damascene process,leakage current mechanisms 126448
Cu-SiO_2 interconnects for high speed ccts., sig. propag. and crosstalk charactn. 126460
Cu-Ta-based multilevel interconnects, CMP 103479
CuAl-SiO_2 barrier/adhesion promoter-ILD interface microstruct., charactn. 103461
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packaging 125945
GaAs dry etching, electrostatic chuck adaptation 69893
GaAs mm-wave MMICs, BCB thin film layers, automotive radar and wireless commun. appl. 91304
GaAs/AlGaAs QW, SiO_x capping layers, impurity-free interdiffusion 91838
$Gd_{0.23}Si_{0.14}O_{0.63}$ gate dielec. films, thermal stabil. and diffusion anal. 127254
Ge-redistributed polysilicon-SiGe stack gate for CMOSFETs, high-perform. 126773
a-$Ge_{10-x}In_xSe_{90}$ thin films, dielec. props. 92592
H-silsesquioxane low-k ILD films, nanoporous, thermal treatment effects 92157
H-silsesquioxane low-k ILD thin films, H_2-N_2 ambient curing study 92155
H-silsesquioxane low-k dielec. material integrat. with TiN/TaN/W_2N thin film barriers 92181
H-silsesquioxane spin-on polymer low-k film, proc./props., CMP charact. 92149
H-silsesquioxane ultra low-k ILD films with tunable elec./mech. props. 92159
HfO_2 dielec. thin films, two-step RF sputter deposition and charactn. 90254
HfO_2 gate dielec., struct. and electronic props. anal., theoretical methodology 127140
HfO_2 ultra thin CVD MOSFET gate dielec., dual polysilicon gate electrodes, reliab. 126779
HfO_2 ultra-thin gate dielec. MOSFETs with TaN electrode, nitridation surface prep. 126739
HfO_2:Dy gate dielec., elec. charact. for MOSFET appls. 126748
Ho_2O_3 films, dielec. props., MIM struct. obs. 92582
$LaMg_{0.5}Ti_{0.5}O_3$-$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
MgO films in AC plasma displays, secondary-electron-emission anal. 97609
MgO films on p-GaAs(100), microstruct./elec. props. 68187
MgO films via sol-gel proc. for appl. to large-size PDPs 97608
MgO-TiO_2 protective layer for AC PDP, elec. props. 75788
$MgTiO_3$-$CaTiO_3$, plasma sprayed ceramics, dielec. props. 116129
Nb solid electrolytic capacitors, substr. materials develop. 115065
Nb_2O_5, nanolanminates, dielec. props. develop. 92676
Ni-MLC capacitors, Y5V dielec., bakeout-property rels. 80426
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
$Pb_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films, capacitance dens. 125853
$PbZrO_3$ thin films, ac elec. & dielec. props. 92625
Pr_2O_3 high-K dielec., epitaxial growth, silicon substr. 101229
SOI struct., multilayer thermal via incorporation and charactn. 115443
Si MOS nanotransistor, gate technol., DC elec. results 103827
Si, gate stack and silicides, conf., San Francisco, CA, USA (2000) 124227
Si surface plasma charging damage, reverse-act. area etching in poly-buffered STI proc. 103425
Si wafer thermal oxide trace metal contaminants, characterisation 103385
a-Si:H/a-SiN:H growth by PECVD for TFT appls., wide bandgap 101350
a-Si:H-based PIN solar cell, rough back/front transparent conductive oxide layers, simul. 78176
Si/Si_3N_4/Pt/PZT/Pt, residual stress, furnace annealing, RTA 104180
Si/SiO_2 systs., conf., Boston, MA, USA (Nov.-Dec. 1999) 100429
Si/SiO_2/Pt/PZT/Pt, residual stress, furnace annealing, RTA 104180
Si-O-N gate dielec. layers for Si microelectronics, review 103212
Si-SiO_2-Si MOS struct., gate dielec., struct. and electronic props. anal., theoretical methodology 127140
Si-SiON-SiO_2-Si MOS struct., gate dielec., struct. and electronic props. anal., theoretical methodology 127140
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
a-SiC:H dielec. diffusion barrier, Cu interconnect 115721
α-SiC:H low-k dielec., diffusion barrier, Cu dual damascene proc. 81111
a-SiC:H low-k diffusion barrier, Cu interconnect 115705
SiCOH films, ultralow-k dielec., PECVD, charactn. 90384
SiCOH-based low-k dual-phase ILD materials by PECVD 91902
$Si_{0.91}Ge_{0.09}$ strained layers, gate dielec. growth, RTP/split-N_2O tech. 92031
SiN film, catalytic CVD 124976
SiN tunnel dielec. flash memory cell, 55 Å EOT, demo. 114773
SiN ultrathin gate dielec., spin-depend. trap-assisted tunnelling current 80928
Si_3N_4 gate dielec. in P-MOSFET, JVD, intrinsic reliab. projections 103868
Si_3N_4 technols. for post-SiO_2 p-MOSFET gate dielec. in CMOS proc. 81520
Si_3N_4 ultra-thin gate dielec. p-MOSFET, hot-carrier reliab. 81357
SiN_x films, low temp. thermal CVD, for microelectronics appls. 124922
SiN_x, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
a-SiN:H, Cat-CVD, deep submicron MOS device appls. 124974
SiN_x:H films, PECVD, opt. props., IR-sens. arrays 131921
SiN_x:H gate dielec. low-temp. PECVD and charactn. 90357
SiN_x:H/Si structs., RTA, elec. props., C-V/SPV charactn. 91887
a-SiN/SiO_2 thin stacked dielec. syst., trap-controlled SCLC mechanism 92674

dielectric thin films continued
Si_3N_4/SiO_2 stacked gate dielec., at. layer deposition, p-MOSFET 101218
Si_3N_4/SiO_2 ultrathin RTCVD gate stacks for ULSI, post-deposition treatments 69753
Si_3N_4/SiON CVD stack gate dielec., reliab., base layer thickness effects 70077
a-Si_3N_4/SiON PECVD thin films, IR spectrosc. anal. 68296
Si_3N_4-SiO_2 dielec. film, photo-enhanced NDR/photo-accelerated TDDB 71506
Si_3N_4-SiON ultra-thin gate stack CMOSFETs, sub-50 nm, high perform. 126743
SiO_2 ILD, CMP, ULSI mfg. *(Chinese)* 103407
SiO_2 damage test wafer plasma etch, electron temp., trace rare gas opt. emission spectra 103428
SiO_2 dielec. CMP in ULSI multilevel metallization *(Chinese)* 103301
SiO_2, dielec. props. 114921
SiO_2 direct-write ion beam induced CVD for IC post-proc. modif./repair 115978
SiO_2 film, AFM anodic oxid., nanofabrication 81083
SiO_2 film electret, charge storage stabil. 81639
SiO_2 gate dielec. layers for Si microelectronics, review 103212
SiO_2 gate dielec. scaling, long term reliab. estim., error calc. 81417
SiO_2 gate oxide growth on plasma damaged Si surfaces, quality degrad. 103430
SiO_2 gate oxide, hole trapping and trap generation 69762
SiO_2, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiO_2, interconnect test structs., electromigration failure, materials effect 69957
SiO_2, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2 passiv. layer PECVD using IPL 2000 E/D, uniformity study 101349
SiO_2 porous low-k ILD film by photo-assisted sol-gel proc. 90523
SiO_2, silica self-assembled aerogel-like low dielec. const. films, prep. 79418
SiO_2 sol-gel derived porous layers for low-k dielec. appls. 92163
SiO_2 stressed ultrathin films, nm-scale elec. charactn., cond. AFM 80939
SiO_2 thermal growth in home-made furnace, structural charact. 103382
SiO_2 thin film, AFM growth, surface roughness 103397
SiO_2 thin film, elec. breakdown, conductive AFM 104257
SiO_2 thin film on GaAs, annealing, enhanced quality 103246
SiO_2 thin-film, defect-induced dielec. loss, Coulomb glass 81631
SiO_2 ultra low-k porous films, prep., dielec./mech. props. 114405
SiO_2 ultra-thin CMOS gate oxides, two-freq. capacitance meas. tech., limitations 104124
SiO_2 ultra-thin gate films, leakage current through multiple breakdown paths, modeling 81530
SiO_2 ultra-thin gate oxide degrad./breakdown, quantitat. H-based model 126222
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
SiO_2 ultrathin films, leakage curr. under prebreakdown, MOSFET appl. 70162
SiO_2 ultrathin films on strained Si by by O_2/NO plasma proc., trap dens. 69751
SiO_2 ultrathin gate oxide films, elec. cond., nanoscale conducting AFM study 80959
SiO_2 ultrathin gate oxides, intrinsic dielec. breakdown, thermal damage 103209
SiO_2 ultrathin oxides, failure anal., stored energy/carrier energy 127148
SiO_x thin films, reactive RF magnetron sputtering, phenomenological model 79215
SiO_x ultrathin film, low temp. form. from O radicals in Kr/O_2 plasma 103323
SiO_2:B/P_2O_5-SiO_2 glass films, defectiveness, B implant. effects 92587
SiO_2:F FSG proc. develop., Cu/damascene technol., PECVD reactors 126447
SiO_2:F dielec. thin films, structural anals. by micro-Raman spectrosc. 92602
SiO_2:F fluorinated-silicate-glass film stacks, IC interconnect interlayer dielec., cap oxides 126469
SiO_2:F for ILD appls., low dielec. const. anal. 91921
SiO_2:F glass films, prep., struct., IC appl. 114345
SiO_2:methyl films, CVD, struct./dielec. props. 124893
SiO_2/Si_3N_4 stacking layers for defect engng. in RTA GaAs epilayers using *SiO_2/Si_3N_4 stacking layers 126024
$SiO_2/SiO_xN_y/SiO_2$ dielec. film for flash memory by thermal oxid. of nitride 91914
SiO_2/ZrO_2 thin gate dielec. stacks, trap-assisted tunnelling current 81637
$SiO_x/ZrO_2(TiO_2)$ gate dielec. stacks, charge trapping in MOS capacitors 80927
SiO_x/organic composite thin films, PECVD, dielec. props. 90364
SiO_2-Bi_2O_3 sol-gel films, electron beam treatment effects 91998
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
SiO_2-xerogel nanoporous low-k ILD films, grazing incidence SAXS 92161
SiOC, PECVD layer, chem. mech. polishing 115645
SiOC PECVD low-k ILD films using SiH_4 based gas precursors for Cu damascene interconnects 92121
SiOC Z3MS low-k films, etching/stripping chemistries, optim. 115640
SiOC films, PECVD, low dielec. const. 104247
SiOC very low-k ILD film with extendibility to k<2.7, material props. 92150
SiOC-H dielec. on Cu wiring, dual damascene, wet/plasma clean 115716
SiOCH low k ILD films for <0.18 μm dual damascene appl., integrat./charactn. 92122
SiOCH low-k copper barrier films, PE-CVD deposition using HMDSO, N_2O and NH_3 126446
SiOCNH low-k copper barrier films, PE-CVD deposition using HMDSO, N_2O and NH_3 126446
SiON gate n/pFETs, 1.6 nm, low leakage/high perform./high reliab., base SiO_2 dens. 126777
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795
$Si_xO_yN_z$, RTO, nitrogen implant. 103354
SiO_xN_y PECVD films, correl. of phys. props./chem. struct., IR spectrosc. 68297
SiO_xN_y gate dielec., oxynitridation mechanism, mol. dyn. simul. 103852
SiO_xN_y thin films, low residual stress, sacrificial layer, MEMS 104171
SiO_xN_y ultrathin films, RTN, N depth profile obs. 91996
Sn-Ag-Cu Pb-free solders for pass. components, usage implications 80445
$SrBaTiO_3$ thin films, microwave dielec. props., near-field imaging 91173
$SrTiO_3$ doped thin films, high temp. cond. behavior 81635
$SrTiO_3$ epitaxial lift-off thin films, microwave dielec. tuning/losses 91172
$SrTiO_3$, gate dielec., theoretical approach 91896
$SrTiO_3$ thin films by RF-magnetron sputtering, struct., proc., property rels. 79220
$SrTiO_3$ tunable dielec. thin films for HTSC microwave filter appls. 82012
$SrTiO_3$/Si, RF magnetron sputtering, elec. props. 104259
$SrTiO_3$-Si interface, gate dielec., struct. and electronic props. anal., theoretical methodology 127140
Ta capacitor failure modes, fab. technols. 115080
Ta capacitor surge step stress testing, power-on failure mechanism prediction 115072
bcc-Ta/TaN_x gate metal-nitride-semicond. FETs, plane gate struct., <450°C proc. 126774
TaN(-polysilicon) SAG n-MOSFETs with ultra thin CVD ZrO_2 gate dielec. 126780
dielectric thin films continued
Ta_2O_5 amorph. thin film, HF dielec. props. 116122
Ta_2O_5 films, LPCVD & PECVD, struct. & elec. charactn. 104232
Ta_2O_5 films, annealing, dielec./opt. props. 116126
Ta_2O_5 gate dielec. CMOS devices, low freq. noise, reliab. 127058
Ta_2O_5 gate dielec., Si n-MOSFET, n^+-p jn. leakage characts. 69629
Ta_2O_5, nanolanminates, dielec. props. develop. 92676
Ta_2O_5 sputtered thin films, dielec. study 104241
Ta_2O_5 thin film, growth & precursor props., MOCVD/XRD 114364
Ta_2O_5 thin films on RuO_2 and Ru bottom electrodes, dielec. characts. 10423
Ta_2O_5 thin-film, defect-induced dielec. loss, Coulomb glass 81631
Ta_2O_5/poly(EDT) bilayered film, solid electrolyte capacitor *(English)* 90491
Ta_2O_5/HfO_2, high dielec. const. nanolaminates, at. layer deposition 92677
Ta_2O_5/ZrO_2, high dielec. const. nanolaminates, at. layer deposition 92677
Ti/low-k H-silsesquioxane and Ti/TEOS struct. at elevated temps., comparis study 92182
$Ti_{1-x}Al_xN$ barrier layer, narrow reson. profiling, oxid. 104283
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
TiN barriers for high-k capacitors, simul., expt. results 68253
TiO_2, heavily insulating dielec., high rate reactive sputter deposition 101190
TiO_2 thin film, synthesis, metalorganic decomp./annealing 116133
TiO_x MOCVD proc. for microelectronics appls. 90412
W/TiN/Ta_2O_5/Si syst., Ta_2O_5 gate dielec. degrad. 81647
W/WN/TaO_xN_y/SiO_2/p-Si nMOS capacitors, gate dielec. thermal stabil. 8164
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 703
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm techno 125492
W-damascene SRAM cell interconnect ILD, CMP scratch induced defects, fa ure mechanism 79891
Y_2O_3 dielec. in Al-gated MOSFET, effective electron mobility 81285
$Zn_{1-x}Mn_xSe_{1-x}Te_y$ epilayers, dielec. props. 80767
ZnO thin-film, defect-induced dielec. loss, Coulomb glass 81631
ZnO:Li ceramics/films, PLD, ferroelec./dielec. props. 104386
Zr-Sn-Ti oxynitride thin films, enhanced dielec. props. 70379
$Zr_{1-x}Al_xO_y$ films, Cl_2/BCl_3 plasma etching 103309
ZrO_2 RTCVD for MOSFET appl. 124897
ZrO_2 deposited directly on Si as alternative gate dielec. material 115464
ZrO_2 sputtered thin films charactn. for gate oxide appls. 104231
ZrO_2 sputtered thin films, dielec. study 104241
ZrO_2 thin film, high-K dielec., RTA 127133
ZrO_2 ultrathin dielecs. growth by UV O_3 oxid. on passivated Si 126225
ZrO_2/HfO_2, high dielec. const. nanolaminates, at. layer deposition 92677
ZrO_2/Si plasma deposited thin films, electron/hole trapping 127135
$ZrO_2/ZrSi_xO_y$ ultra-thin films for CMOS gate appls., high thermal stabil. 1270
$ZrO_2/ZrSiO_4$, thermally stable ultra-thin silicates, jet-vap.-deposition, CM appls. 127023
ZrO_xN_y prep. by NH_3 annealing of ZrO_2, elec. characts./thermal stabil. 9189
$(ZrO_2)_x(SiO_2)_{1-x}$ high-k gate dielec., chem./phys. limits 104422
$(ZrSn)TiO_4$ thin films via aq. polymeric precursor route 125030
$ZrTiO_4$ films, microstruct., microwave-freq. dielec. props. 104242
multilevel interconnect technol. with intra-metal air-gap for ≤0.25 μm proc 92147
dielectric waveguides
see also nonradiative dielectric waveguides; optical waveguides
3D/scalar dielec. waveguides, modal anal. 82144
circ. bent dielec. waveguides with finite cladding thickness, anal. 82142
circ. dielec. rod waveguide with periodic corrugations, dispersion characts. an 117732
double channel lossy dielec. waveguide, opt. control 69012
EM sigs. penetration into transparent inhomog. time-varying medium 12775
FDTD staircase-free formulation for general materials in complex geometri 83083
highly multimode dielec. waveguides with rough surfaces, charactn. tec 127760
inset dielec. guide coupler, field anal. 91188
isolated image guide eigenmode and elementary microstrip radiators intera study 83542
Krylov subspace algm. 94083
low-loss sapphire waveguides, 75-110 GHz, transits. to metal waveguide 801
microcompact scatt. range, EHF/THF backward/forward scatt. 83326
MM-wave beam-steering using dielec.-image-line-fed grating film 83765
MM-wave transm., book contrib. 83252
multilayer dielec. struct. with diffr. grating, EM diffr./propag. 127755
open waveguide boundary conditions for finite element modal anal. 116710
opt. fibers with ellipt. cross sect., anal. 127749
photonic band gap fiber accelerator develop. 97915
planar dielec. waveguide filter, flip-chip module 102542
probe-fed rect. dielec. resonator antenna study 72610
rect. dielec. resonator antennas, modelling/expts. 83627
rect. dielec. waveguides directional coupler characts. 83496
slab guide, effect of losses on spectral transit. of modal poles between tw Riemann sheets 94096
slab waveguide subjected to in-plane elastic wave, EM wave mode transit. 834
tapered opt. couplers between dielec. waveguides/photonic cryst. waveguid 82130
TE_{111} mode in rect. dielec. resonator for antenna appl., reson. freq. deter 80202
very low loss wideband ferrite isolators for mm-wavelengths 91216
$Ba_{0.6}Sr_{0.4}TiO_3$ dielec. props. and microstruct., tunable phase shifter appls. 1161
dielectrics *see dielectric materials*
dielectronic recombination *see ion recombination*
diesel-electric generators
biomass gasification for elec. power generation appls. 123114
Brazilian diesel power generation, rural rem. area air pollution impact 1232
cogen. syst. PM sync. generator with variable speed input 112339
Guernsey Island power syst., operating philosophy 111789
hybrid diesel/PV systs., isolated mini-grids, Northern Brazil 112394
hybrid power syst., PV array size optimisation 113002
hybrid PV batt. diesel syst., fuzzy control 112400
hybrid wind/diesel generating syst. with three-level invertor 133895
hybrid wind/diesel syst., power quality issues 133886
locomotive double-feed induction generator, state feedback control 113103
mobile mil. diesel generator set, PM alternator, power conversion syst. 1339
nuc. power station, emergency generator set, fault disturbance recorder, onli monitoring *(Chinese)* 99573
PV-diesel hybrid power systs., size optim., perform. prediction 112391
rural distrib. networks voltage support using embedded generators 99342
small alternators, digital AVR 88716
variable speed generating sets, axial flux machine integrat. 88620

sel-electric generators continued
wind-diesel power syst. distributed intell. load control scheme 99590
sel-electric locomotives
class 611/612 elec. multiple units tilting technol. innovation *(German)* 78263
double-feed induction generator, state feedback control 113103
LIREX class 618/619 diesel-elec. multiple-unit *(German)* 78259
train power busbar supply by diesel locomotives *(German)* 134511
sel-electric power stations
60 MW IPP barge mounted diesel engine power plant, Sri Lanka *(Japanese)* 123232
biomass gasification for elec. power generation appls. 123114
Brazilian diesel power generation, rural rem. area air pollution impact 123233
cogen. syst. PM sync. generator with variable speed input 112339
Guernsey Island power syst., operating philosophy 111789
hybrid wind/diesel generating syst. with three-level invertor 133895
PV-diesel hybrid power systs., size optim., perform. prediction 112391
semicond. mfg. facilities, multi-generation enhanced power quality design 113172
Sulzer 8RND90 diesel power installation, heat exchangers, diagnostics 99575
very small scale CHP syst., heat recovery 99574
wind-diesel power syst. distributed intell. load control scheme 99590
wind-diesel power systs., fuzzy logic controllers 123257
sel engines *see internal combustion engines*
sel generators *see diesel-electric generators*
sel power stations *see diesel-electric power stations*
erence amplifiers *see differential amplifiers*
erence equations
see also finite difference methods
2D digital filters, local state-space model and props. 91061
2nd-order nonlin. difference eqns. with nonlin. neutral term, oscill. of solns. 68012
adaptive second-order accurate particle image velocimetry tech. 132218
approx. for discrete perturb. 90133
asymptotic behavior of delay difference systs. 90104
asymptotic behavior of monotone difference eqns. of higher order 90132
asymptotic behavior of nonlin. difference eqns. with delays 90113
Balkan interconnection, primary freq. control *(Serbian)* 122827
bounded solns. and asymptotic stabil. of nonlin. difference eqns. in complex plane 90117
Burgers' eqn. lin. implicit time integrat. scheme 114102
convolution type discrete nonlin. integro-DE, num. stabil. 68050
delay partial difference eqns. stabil. 90116
dielec. thick lenses, profiles calc. 82261
difference ϕ-Laplacian problem with nonlin. functional boundary conditions 90128
differential-difference eqns. reducible to difference/q-difference eqns. 90130
discrete time polynomial matrices, generalized spectral factorization, quadratic difference forms 67701
discrete-time Volterra eqns., solns., asymptotic equivalence 78770
EM scatt., screen, pseudodifferential eqn. 72292
explicit soln. of certain nonlin. difference eqns. using power polynomials 101075
exponential dichotomy of difference eqns. and evol. eqns. on half-line 90105
factorization of difference operator 90140
fifth-order accurate weighted ENN difference scheme 114138
finite difference solns. of react. diffusion eqns. with continuous time delays 90114
fixed-sign solns. for syst. of higher-order difference eqns. 90122
fourth-order nonlin. oscills. of difference eqns. 90110
global stabil. of discrete competition model 101068
half-lin. difference eqns., generalized discrete Riccati eqn. and oscill. criteria 78769
half-lin. second-order difference eqns., nonoscillation criteria 90118
higher-order lin. difference eqns. oscills. 90107
IIR gradient-based adaptive notch filter with constrained poles and zeros 130066
IM param. ident. from step response *(Korean)* 123442
integrability and exact solvability of nonlin. differential-difference/difference eqns. 90131
invariants and Lyapunov fns. for nonautonomous systs. 90112
IVP for parab. eqn., 1D/2D, parallel algm. 113835
L_∞ convergence and extrapolation method of difference scheme for nonlocal parab. eqn. with natural boundary conditions 114135
lin. difference eqns. with deviating arguments, oscills. 90120
lin. systs. of partial difference/diff. eqns. with const. coeffs., constructive soln. 124733
load modulation for electromechanical oscills. damping 111854
low-pass sigma-delta modulator, stabil. model 102261
lumped element transistor cct., MRTD anal., equiv. source method 102595
matrix-free num. continuation/bifurcation 101020
multiple IR background generation for warning/search-and-track systs., modeling/simul. 88246
multiple pos. solns. to third-order discrete focal BVP 90108
neutral delay difference systs. boundedness 124707
nonautonomous lin. delay difference eqn., limits of solns. 90125
nonautonomous Volterra difference systs. with infinite delay, asymptotic props. 90134
noninvertible difference eqns., exponential forward splitting 90142
nonlin. functional difference eqns., asymptotic formulae 90126
nonlin. functional difference eqns., pos. solns. 90096
nonlin. steady-state solns., freq. domain computations 95649
nonoscillatory solns. of 2D nonlin. difference systs., class. schemes 90109
oscill. and comparison theorems for half-lin. second-order difference eqns. 101073
oscill. criteria for delay difference eqns. 124710
oscill. criterion for lin. difference eqns. with oscillating coeffs. 90150
oscill. of class of partial difference eqns. with unbounded delay 90124
oscill. of higher-order lin. difference eqns. 90138
oscill. of partial difference eqns. with continuous arguments 68013
oscill. theorems for general quasilinear second-order difference eqns. 90135
periodic solns. of difference eqns. with general periodicity 90139
pos. fixed points of nonlin. operators on ordered Banach spaces 90106
power syst. neural network inverse control scheme *(Chinese)* 77231
quasi-lin. difference eqns., pos. decreasing solns. 124712
second order diff. eqn., fuzzy BVP, difference method *(Chinese)* 114118
second-order neutral difference eqns. with max., oscillatory and asymptotic behavior 90144
second-order nonlin. partial difference eqns., oscill. theorems 90155
semicycles of solns. of nonlin. difference eqns. with several delays 90115
stochastic difference second kind Volterra eqns., solns. integrability 67720
difference equations continued
TCSC transient characts., two-order difference eqn. math. model *(Chinese)* 88338
third-order difference eqns. oscills. 90111
topol. methods for some BVP 90121
twin solns., BVP for ordinary differential and finite difference eqns. 90136
zero-stabil. of variable stepsize multistep methods, spectral rad. approach 90161
difference frequency generation (optical) *see optical frequency conversion*
differential amplifiers
see also instrumentation amplifiers
bal. amp. using 6-port power divider, S param. & power perform. 104089
C-band push-pull power amp. integrated with quasi-Yagi antenna 80259
charge-transfer amp. for ADC appl., dyn. behavior anal. 90763
class AB LV opamps and lin. transconductors 79596
CMOS current-mode filter, modified multi-output differential difference current conveyor 68931
CMOS fully bal. differential difference amp. and appls. 101798
CMOS fully differential inductorless RF bandpass amp, 1.5 V, 1 GHz 80349
CMOS fully-monolithic LNA 68594
CMOS HF amp., bandwidth charact. 101785
CMOS high-speed opamps, gain and bandwidth boosting techs., filter appls. 79581
CMOS IF bandpass amp. design, low sensitivity to temp. and proc. vars. 79604
CMOS LNA, differential amp., noise fig. 114638
CMOS LNA plus mixer, GPS appls. 70295
CMOS low-noise first-stage amp., 5.25 GHz 125742
CMOS low-power analog FIR filter, 100 MHz, PRML equalization appl. 102366
CMOS low-power sigma-delta modulator, fully-differential op amp 80007
CMOS LV act. inductor and appl. to RF bandpass amp. design 115025
CMOS rail-to-rail op amp design, 0.9 V, 0.51 μA 114622
CMOS transconductor design, 3.3 V, 80 dB SFDR up to 10 MHz 114902
CMOS transimpedance amp. with photocurrent sens. for wireless opt. commun. 120129
CMOS voltage amp., readout electronics, cryogenic operation 70301
common-mode feedback ccts. for SC stages with large common-mode input 91124
const. g_m rail-to-rail CMOS input stage with improved lin. 125242
continuous time low-pass leapfrog-type filter, multi-output differential difference current conveyor *(Chinese)* 68914
continuous-time third-order ellipt. lowpass filters, high-freq. fully differential CMOS OTA 102358
difference current feedback amp. 101784
dual-phase-controlled dyn. latched amp. for high-speed/low-power DRAMs 90899
fast-settling CMOS opamps with neg. cond. volt. gain enhancement 79580
inter- and intra-chip MOSFET perform. vars., test cct. based extract. for analog-design reliab. 104139
LV high output impedance tail current source and differential amp. appl. 90739
LV high-speed sense amp. for multilevel nonvolatile memories 90914
MMIC compact T/R switching cct. using quadrature couplers and drain-driven HPAs 102662
multiport differential microwave amps., noise matrix parameterization 125715
PEP-II B-Factory, logarithmic beam posn. monitor 87122
piezoelec. accelerometers, noise immune charge amp. 75461
pseudomorphic HFET MM-wave monolithic power amp. for mobile broadband systs. 80325
RF transmitter front-end, planar antenna and PBG 74535
RF-LDMOS lin. power amp. technol., high power/high efficiency 69231
robot, analog data transm., plastic opt. fiber, bending loss compensation 131344
S-band class AB push-pull power amp. with wideband harmonic suppression, high efficiency 91296
scalp electrode impedance, infection risk, and EEG data quality 76289
sinusoidal oscillators based on current differencing buffered amp. 101827
ultra LV floating-gate CMOS transcond. amp. 79601
unity gain opamp in 3.3 V CMOS technol. using tail current compensation 79577
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655
GaAs FET 1.8-GHz push-pull power amp. using impedance-transforming baluns 125733
GaAs power FET, ultrabroadband, W-CDMA base station appl. 91244
GaAs power HFET, high efficiency, W-CDMA base station appl. 91243
GaN HEMT, broadband push-pull microwave power amp. 114987
InAlAs/InGaAs HEMT IC, opt. commun. cct. 120166
InGaAs/InAlAs/InP HEMT MMIC amp., reliab. 115007
Si microelectrodes with on-chip electronics, preamp. noise perform. 87379
SiGe HMOSFET differential pair, output I-V charact. lin. 79597
differential calculus *see differentiation*
differential delay systems *see delay-differential systems*
differential detection
16 DAPSK sigs., decision feedback differential detect. 73708
16DAPSK sigs., flat Ricean fading channels transm., lin. prediction based decision-feedback differential detect. 107569
APSK multiple-sym. differential detect., limited search using (M,L) algm. 83824
coded modulation, random-coding-exponent-based design for multiple-sym. differential detect. 129136
DAB syst., coarse freq. offset sync. 75266
dispersive aeronautical channel, differentially-encoded MPSK, optimum detect. 83827
fading channels, coded modulation for differential encoding and non-coherent reception *(English)* 72754
high-speed burst-mode photonic packet commun., differential receiver 119853
land mobile to mobile channel, differential detect. 131125
M-CPM with MRC diversity in Rician, Hoyt and Nakagami fading channels 106047
M-DPSK receiver for Doppler-shift mobile commun. 85809
mobile commun., metric weighted diversity combining based on multiple differential phase detect. 74742
multiple access tech. for differential chaos shift keying 94240
multiple sym. differential detect. with diversity reception 73730
multiple sym. differential detect. with diversity reception 108517
multiple transmit antenna differential encoding/decoding schemes 119866
OFDM, coded modulation for noncoherent reception 106046
OFDM based on multicarrier PLL, freq. offset tracking 106031
opt. time-spreading/freq.-hopping differential OOK-CDMA syst. 74916
pass. rem. chem. vap. monitoring, FTIR spectrometer 99033
PMR, bi-directional adaptive equalizer 108762
power-insensitive wavelength monitoring by diode laser jn. voltage 96851
precoded/vector OFDM, channel spectral nulls robustness, reduced cyclic prefix length 106013

differential detection continued
soft-decision decoding, nonredundant error correction differential detect. 94321
space-time group codes design 106137
stroboscopic integrator, small sig. recording 86792

differential equations
see also boundary-value problems; difference equations; elliptic equations; Green's function methods; hyperbolic equations; integro-differential equations; linear differential equations; Navier-Stokes equations; nonlinear differential equations; parabolic equations; partial differential equations
1D isotropic dielec. medium, scatt. amplit., first-order diff. eqns. 105767
2D wavelet-like basis fns. 78773
3-phase autonomous reluctance generator, lin. math. model 123394
3-phase double-feed IM simul. in stable sync. operation 123483
3D convection and convection-diffusion problems, multigrid solver 114133
4-point spline collocation methods for solving second-order IVP 79076
2000 Copper Mountain conf. on iter. methods, Boulder, CO, USA (April 2000) 100361
abdominal aortic aneurysms, 3D image anal. 110947
adaptive multigrid solver for convection-dominated problems 114104
adjoint/selfadjoint Lie-group methods 79096
air operations, mission details control, game-theoretic LQ method 88255
alg. DE, parallel Rosenbrock methods 78775
alg. multigrid based on subdomain blocking, parallelisation 68041
asymmetric piezoelec. bimorph, admittance matrix calc. 92690
asymmetry, observer and perception problems, complexity of indiv. objs. 101082
at. fns. appl. to interpolation problems 114025
at. fns. theory appl. in antenna synthesis problems 117760
backward stochastic diff. eqns., generic props. 67712
Bessel and Neumann fitted methods, num. soln. of Schrodinger eqn. 101070
block preconditioned systs. arising from LMF-based ODE codes, convergence 114120
bordered almost block diagonal lin. systs. 124675
brushless PM motor drives, SABER simul. 123899
building blocks for odd-even multigrid with appls. to reduced systs. 79084
BVP, iter. shooting method, and feedback control appl. 100749
BVP, param.-depend. sing. 101063
capacitor sync. reluctance motor, static mech./ang. charact. *(Russian)* 123382
chaotic synchronisation in four-coupled PLL syst. 90675
chiral coated conducting cylinders, RCS computation 75174
composite Euler method for stiff stochastic diff. eqns. 90146
computational complexity for continuous time dyn. 90143
constrained nonlin. dyn. ccts., multivalued nonlin. elements, anal. 90658
constrained nonlin. optim., stabil. theory 124575
constraint partitioning for struct. in path-constrained dyn. optim. problems 124605
continuous dyn. systs., computation of Lyapunov charact. exponents 79049
continuous Runge-Kutta-Nystrom methods for IVP with periodic solns. 101100
controlled BVP, equilib. control search 100774
convergence of alg. multigrid based on smoothed aggregation 90183
convexity of carrying simplex of planar Lotka-Volterra competitive systs. 101096
CW double-hexagonal Talbot cavity with stochastic propag. phase, extraction charact. 128353
D'Yakonov fully explicit variant of iter. decomp. method 124623
D-convergence of Runge-Kutta methods for stiff delay diff. eqns. 79101
defect-oriented fault simul. and test generation for CMOS digital ccts. 79740
delay diff. eqns., asymptotic stabil. 114116
delay diff. eqns. soln. in MATLAB 68029
delay diff. eqns. soln. using intervalwise partitioning by Runge-Kutta method 68035
delay diff. eqns. using componentwise partitioning by Runge-Kutta method 101083
dielec. medium boundary, localized surface wave form./propag. 128549
difference approxs. for impulsive diff. eqns. 79052
differential-difference eqns. reducible to difference/q-difference eqns. 90130
direct reforming MCFC stack explicit dyn. model 112832
discontinuous enrichment method 124750
discrete Painleve eqns., special fn. solns. 90129
discrete retract principle for systs. of discrete eqns. 90123
discrete spectra criteria for certain classes of sing. differential and difference operators 90119
discrete-winding salient pole AC machines, phys. procs. modelling *(Russian)* 99607
discretized degenerate diffusion procs., commun. struct., Lyapunov exponents approx. 78821
dispersion-managed fibre soliton commun. systs., design and optim. 127614
drive systs. synthesis with low parametric perturb. sensitivity 123901
Duhamel's theorem and problems containing variable-scale mobile forces 79056
dye-sensitized nanocrystalline solar cells, computer simul. method 112885
dyn. electromechanical device optimisation approach 123313
dyn. systs. of polynomial type, simplification by anal. approach 124699
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
elec. theory of contacts, contact resist., DE 91446
electrostatic actuators, extended operation range, current-pulse drive 70340
element-free AMGe, general algms. for computing interpolation wts. in AMG 101035
ellipt. Fekete points sets, num. soln. approaches 68018
EM, anal. regularization method 72254
EM field formulation, math. models/num. methods 128653
evol. procs., piecewise deterministic, optimal stopping 113898
explicit pseudo two-step RKN methods with stepsize control 79072
exponential fitting multistep algms. for first-order ODEs 79087
exponential fitting of delayed recruitment/renewal eqn. 124696
exponentially-fitted methods for num. soln. of Schrodinger eqn. 124729
extrapolation methods, diff. eqns. on Lie groups 114144
fast-TCP mechanism for networks with high bandwidth-delay products, perform. anal. 95892
FEM for differential eigenvalue problems with mixed classical and (semi-)periodic boundary conditions 68082
fiber lasers lin. array in external Talbot cavity, near-/far-fields study 93498
filtering for lin. systs. with fractional Brownian motion 84744
finite element soln. improved by full clamping element fns. 124756
FIR filters, optimum discrete coeff. realization 80107
first-order impulsive functional diff. eqns. in Banach spaces 124709
flow-box theorems under structural assumptions 90162
four-stage symplectic and P-stable SDIRKN methods with dispersion of high order 90157

differential equations continued
fractional diff. eqn. time response, num. algm. *(Japanese)* 124701
fractional diff. eqns., efficient algms. 90156
functional DE, num. methods and delay syst. stabil. 67721
functional MRI, image distortion correction by multimodal non-rigid warpi 87589
Gegenbauer approx., DE, rough asymptotic behaviors 124645
general lin. methods for stiff diff. eqns. 79093
generalized inverse via Maple for solving differential eqn. systs. 79050
generator predictive out-of-step protection 77856
geophys., EM 3D modelling, nonlin. inversion 122566
GM(1,1 | τ,r), grey DE soln., matrix train 67717
Green's fns., theory/appl. 67711
heart beat sing., recurrence quantification anal. 98196
Hermite coupled transm. lines, time-domain anal. 83451
high-speed long-dist. soliton transm. links, nonlin. impulse interacts., num. mo els 120119
higher order polariz.-mode fibre dispersion effects, Jones matrix 127701
highly accurate alg. coarsening 68045
hybrid multigrid method for steady-state incompressible NS eqns. 68047
IC thin-film interconnects, electromigration modeling, void nucleation 92103
implicit Taylor methods for stiff stochastic diff. eqns. 79074
impulsive diff. eqn., strong stabil., almost periodic solns. 101102
impulsive functional diff. eqns. with infinite delays, stabil. results 79085
induction capacitance motor, math. model, SIMULINK *(Russian)* 112504
interact. Brownian motions, tagged particles, skew symmetric drifts 78814
interorbital flight programmed motions constr. method 133215
interval matrix Riccati type eqn., robust control using interval anal. 67982
involutive ordinary differential systs., higher order methods 114124
isospectral flows, semi-explicit methods 124454
IVP for nth-order lin. diff. eqns. 68040
IVPs of ODEs using power series arith., long time integrat. 124719
Jacobi interpolation approxs., sing. DE appls. 124639
large scale differential alg. systs., automatic struct. anal. 114117
lin. antennas anal. and synthesis using at. fns. 117752
lin. beam optics in solenoidal channels 110166
lin. differential-alg. eqns., waveform relax. for periodic responses deter 101022
lin. eqns. with tridiagonal Toeplitz coeff. matrices 67999
lin. least sq. error minimization using nonorthogonal basis fns. 101043
Lyapunov-Razumikhin method for impulsive functional DEs and pop. dyn. app 68017
mag. recording, head-media interact., max. principle 70543
max. flat/notch FIR filter design 107478
methacrylate piece, CO_2 laser marking, temp. distrib. 72141
midlatitude E_s layer, screening/limiting freq. 88139
mimetic methods on measure chains 90137
mixed parab.-gradient systs. 79091
MR elastography, complex-valued stiffness reconstruction, differential eqn. al inversion 122110
multi-grid parallel algm. with virtual boundary forecast domain decomp. meth 101090
multi-step methods, 2nd-derivative, contractivity props. *(Chinese)* 124722
multigrid methods, fast convergence, comparison with iter. methods 101081
multigrid solver for incompressible NS eqns. on Beowulf-class syst. 124702
multigrid-preconditioned Newton-Krylov method for incompressible NS eqn 101062
multilevel projection algm. for solving obstacle problems 68062
multimachine power systs., transient stabil. eval. methods 111881
multiple Lorentzian media, pulse propag., auxiliary DE method *(Chines* 116692
multiple minor components extraction adaptive algm. 118871
mutant HIV virus dyn., aids treatment, optimal control appl. 133002
Nakagami fading channel, error flow charact. modeling/eval. 117984
neutral diff. eqns., lin. multistep methods, num. stabil. 79097
nonlin. commun. scheme, sync., multiple attractors 129062
nonlin. dyn. sim., chaos, electronic cct. synth. 79532
nonlin. Galerkin method for react.-diffusion systs. admitting invariant regio 124690
nonlin. proc. of non-Gaussian, non-coherent sigs. in colored noise 119013
nonlin. prog., stabil. theory 67857
nonMarkovian optimal prediction 68024
nonoscillating integrals for computing inhomog. Airy fns. 79080
normally hyperb. compact invariant manifolds discretization of ODE 114109
num. anal. of explicit one-step methods for stochastic delay diff. eqns. 9016
ODE solver on multiprocessor syst. 101101
ODEs, border-collision bifurcation and corner collision 79556
one-leg and lin. multistep methods for multiply stiff sing. perturb. proble 114108
open-loop Nash equilibria coord. transforms/derivation 100775
opt. fibers, sliding-freq. filters, pulse evol. 93071
optimal fractional controllers for commensurate order systs. 73646
optimal load shedding strategy in power systs. with distributed generatio 111751
optimal robust sens. scheduling problem 75446
order 4 DIMSIMs for ODE 68027
oscill. of neutral delay parab. diff. eqns. 79047
parallel evol. modeling for nonlin. ODE 114134
parallel ODE solver adapted to oscillatory problems 90159
param. ident. for ellipt. problems 79086
param.-uniform overlapping Schwarz method for react.-diffusion problems wi boundary layers 68019
partitioning ODE systs. with, appl. to air pollution models 101069
PBG crysts., theoretical and num. description of coupled defects 125660
persistence of attractors for one-step discretization of ODE 90163
perturbed stochastic hereditary diff. eqns. with integral contractors 101071
phase multiple holographic transm. grating reconstruction props., wave inclin tion influences 72099
plane electron beams, geometrized theory 93980
plane relax. methods as multigrid smoothers 68048
Poisson eqn. with corner sing., num. results 101124
power station transients, math. modelling 123098
power station turbogenerators, excitation, transients modelling *(Russian)* 9960
power syst. diff.-alg. eqn. model, stabil. limits, param. space 99286
power syst. differential-alg. eqns., sensitivity anal., GMRES method 99285
power syst. load shedding optim. using dyn. modelling 122900
power systs., double sing.-induced bifurcation points and sing. Hopf bifurcatio 88337
preconditioning strategies for fully implicit radiation diffusion with materia energy transfer 101029

rential equations continued
-classical polynomials and q-Askey and Nikiforov-Uvarov tableaus 114131
uadratic invariants and symplectic struct. of general lin. methods 79102
uasireversion method, generalization 68025
adau IIA methods for stiff delay diff. eqns. 114130
andom 3-SAT via diff. eqns., lower bounds 114129
andom-dispersion managed fiber link, soliton stabil. 109120
ates of convergence of approx. max. likelihood estimators in Ornstein-Uhlenbeck proc. 68036
ationalized Haar fn. approach 79063
eact.-diffusion eqn., global convergence 79055
efl. diffusion, weak approx. 67713
isk sensitive nonlin. filters, robust limits 130086
obust convergence for two-grid algm. using homogenization 68016
ot. conducting disc braking torque, 3D transient mag. modelling 123289
SAW transducers, differential COM model 92722
econd order weak Runge-Kutta type methods for Ito eqns. 101104
econd-order fluid flow, algorithmic soln. 130314
ensitivity to perturb. in VSS 79036
ingle DOF simultaneous localisation and map building problem, closed form soln. 75412
low TW on finite interval for Burgers'-type eqns. 79090
mall PM motors, perform./brush commutation modelling 123524
oft/hard mag. materials, pulse-type magnetis. simul. *(Polish)* 70483
peech-sig. proc., at. fns. based wt. windows constr. 72989
pherical particles charging rate in mono-ionised elec. fields 128661
pline Petrov-Galerkin methods for periodic pseudo-diff. eqns. 124635
tep criteria of num. methods for delay diff. eqns. *(Chinese)* 79057
tiff oscillatory systs., delta jumps and white noise 79066
tochastic DE, num. scheme convergence 68023
tochastic diff. eqns., mean sq. approx. 68051
tochastic diff. eqns., second order weak explicit Runge-Kutta methods 124728
tochastic differential delay eqns., Markovian switching, stabil. robustness 67719
tochastic pantograph eqn., continuous Θ-methods 68049
Strang-type preconditioners for systs. of LMF-based ODE codes 68021
trict practical stabil. of delay DE 101084
trongly monotone and infinitely stiff evol. eqns., stabil. and error estim. 114139
tructural anal. method for differential alg. syst. 79092
urface area estim. for digitized regular solids 68022
ymbolic computation of approx. symms. for ODE 124698
ync. machine model fast periodic steady state soln. 112483
ysts. of lin. eqns., iter. approach 101040
tensor product Gauss-Lobatto points are Fekete points for cube 114186
tensor product multigrid anal. 68043
tensor product multigrid for Maxwell's eqn. with aligned anisotropy 114107
three-grid Fourier anal. for multigrid 101066
three-phase squirrel cage motor thermal params. studies 123472
time domain free-space dyadic Green's fn., spherical wave expansion 72285
transformer, init. magnetizing current, num. anal. tech. *(Japanese)* 112611
transformer substations, parallel-connected transformers, inrush current phenom. 134311
transm. line fault location, least sq. realization *(Chinese)* 123075
twin solns., BVP for ordinary differential and finite difference eqns. 90136
two-machine infinite-bus power syst. steady-state stabil. limit *(Japanese)* 77250
unbounded 2D scatt. problems, soln. by cylind. method of lines 72219
underground cable arc fault location, single terminal voltage/current data 99372
unstable manifolds for RFDEs under discretization, Euler method 101099
variable mesh spline approx. for sing. perturbed turning point problems 124633
vector optim. optimality conditions 78922
VHDL-SPICE mixed-sig. ccts., distributed event-driven simul. 125625
wake vortex detect. using radio acoustic sounding syst., num. simul. 97879
wedge, plane wave diffr., weak radiation condition 128751
Zakai filter eqn., pathwise uniqueness 84747
zero-stabil. of variable stepsize multistep methods, spectral rad. approach 90161
$LiNbO_3$:Fe,Mn, holographic storage dyn. *(Chinese)* 116565
Nb_3Sn cond.-cooled SMES coil protection anal. 78199
SF_6 HV cct. breakers, react. kinetics model 99852
Si for solar cells appls., modeling of H passiv. proc. 81080
Si, ion-beam-induced nitridation, elec. transients 69834
Si, melt grown filament, pulling rate, admissible manoeuvres 124786
SiC:N^+,Al^+ buried layer implant., interstitial diffusion, internal stress effects 69816
ZnO piezoelec. multilayers, BAW response, transm. line method 104300

ferential games
see also stochastic games
2-pers. zero-sum graph-constrained switching games 78807
air operations, mission details control, game-theoretic LQ method 88255
controlled BVP, equilib. control search 100774
hierarchical differential game under uncertainty, Nash-Slater soln. 67746
inform. uniqueness in differential games 113864
lin. differential games, simple matrices and integral constraints 67758
maximin game problem extension, inform. discrim. 67757
open-loop Nash equilibria coord. transforms/derivation 100775
optimal robust sens. scheduling problem 75446
pursuit problem under phase constraints 100779
pursuit-evasion games, switchings no. 67744
US C-scan images, blind deconvolution, H_∞ ident. strategy 101589
zero-sum differential games, Nash soln. quadratic methods 124500
zero-sum two-pers. differential games, first-order differential dyn. prog. algm. 124498

fferential GPS *see Global Positioning System*

fferential phase shift keying
16 DAPSK sigs., decision feedback differential detect. 73708
16DAPSK sigs., flat Ricean fading channels transm., lin. prediction based decision-feedback differential detect. 107569
blind sym. estim., differential correl. approach 85542
coded modulation, random-coding-exponent-based design for multiple-sym. differential detect. 129136
codes for differential signaling with many antennas 83851
convolutional double accumulate codes or double turbo DPSK 72820
DAPSK postdetection diversity receiver on Rayleigh-/Rician-fading channel 119974
DAPSK preamble-assisted transm. in digital mobile radio syst., channel estim./compensation 74737
DAPSK-OFDM transms. for high date-rate digital mobile radio 85900
decorrelation receivers for unresolved multipath Ricean fading channels 131131
dispersive aeronautical channel, differentially-encoded MPSK, optimum detect. 83827

differential phase shift keying continued
distributed sample acquisition for coherently demodulated MPSK/DS-CDMA systs. 94230
diversity codes for differential PM in correl. Rayleigh fading channel 96510
double DPSK perform. over LEO mobile satellite channels 74891
DS-CDMA mobile satellite noncoherent systs. with orthogonal sigs., perform. anal. 74651
DS-CDMA RAKE receiver with TWCL in urban area, field test meas. 108802
DS-CDMA wireless systs., noncoherent MLSE detect. of M-DPSK 107583
DS/SS sigs., noncoherent anti-interf. receivers 85517
encoded QPSK, data recovery 106076
FM band terrestrial DAB, soft selection combining 120507
FTTH, baseband and RF sigs., simultaneous modulation 130994
full-duplex 60 GHz band radio-on-fiber systs. with base station configs. 74914
fully-digital MDPSK DS/CDMA receiver, AFC algm. 107750
HFC network, up-stream channel, burst mode DQPSK demodulation *(Chinese)* 131002
ISI adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sigs. 107690
LMS channel, fig. of merit for interleaver depth eval. 108658
M-ary DPSK DS/CDMA receiver, nonphase-based freq. acquisition method 95826
M-DPSK receiver for Doppler-shift mobile commun. 85809
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulation 94243
MF-TDMA satellite systs., efficient resource allocation for QoS channels 108975
MM-wave band wireless network, impact of shadow fading 108595
MM-wave radio-on-fiber sig., opt. heterodyne detect. 131350
mobile fast fading downlink, equal gain combining DPSK multi-carrier CDMA 119952
mobile radio differential amplit. PSK, adaptive signalling algms. 85637
MPSK/MDPSK/noncoherent MPSK with MRC/SC space diversity in Nakagami-m fading channel, sym. error probab. 96463
MT-CDMA noncoherent syst. with diversity combining 131050
noncoherent LMS algm. for noncoherent seq. estim. 73830
noncoherent seq. estim. combined with noncoherent adaptive channel estim. *(English)* 107719
opt. soliton transm. syst., perform. assess. 75027
optimum noncoherent multiuser detect., DPSK modulation in diversity Rayleigh fading channels 72736
pilot sym. assisted turbo codes over flat-fading channels, iter. channel estim./decoding 106154
RS codes matching with 4-DPSK block detectors 72774
SDPSK receiver, fading channel, FFT model 120104
sig. stabil. in freq.-detuned station interf. 117904
TETRA syst., π/4-DQPSK modulation, computer simul. *(Spanish)* 96401
time-varying channels with DPSK inputs, blind DFE 84857
wideband TDMA networks, DCA, fixed cell assignment 120042
WLAN, SS syst., SAW filter, chirp π/4-DQPSK modulation 96384

differential pulse code modulation
see also delta modulation
3D geom. compression, DPCM and var. appl. 95220
ADPCM schemes, nonlin. predictive model computation 118093
ASIC, space-qualified downlink image compression for commercial rem. sens. appls. 106913
color still pictures encoding by wavelet transform/VQ 129703
hybrid syst. for real-time lossless image compression 73393
image compression, inform. entropy preserved coder, integer Haar wavelet transform, sub-block DPCM *(Chinese)* 73364
lossless image coding using optimum prediction generated by local image features 106868
low-delay audio coder using adaptive VQ 129379
near lossless image compression by relax. labeled prediction 84461
speech coding, comparison of dual autocorrelation with std. methods 106362
speech synthesis inventories, data reduction *(German)* 73091
stereo images, edge-preserving disparity estim./disparity-compensated intermediate view reconstruction 95239
VBR hybrid coded video sources modeling/prediction, fuzzy logic perspectives 129783
video scalable predictive coding optim. 84448
videotelephony seq. coding using content-based hybrid DPCM/classified VQ 107034
voice synthesis module based on CAN bus *(Chinese)* 118157
weld joint inspection, thermographic images compression 78693

differential scanning calorimetry
see also differential thermal analysis
1-3 piezocomposite transducer material consts., thermal behaviour 104436
aluminosilicate/polysiloxane network polyelectrolytes, enhanced ion mobility 123722
binaphthyl-based luminesc. conjug. polymer, synthesis and charactn. 125101
binary carbonates, liq./solid phase diags., Li batt. appls. 99935
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
conductive adhesives for flip-chip appls., self-alignment capability 67604
elec. conductive adhesive, self-alignment and contact resist. 113527
elec. conductive adhesives, low m.p. alloy incorporation, depletion/wetting 67600
epoxy/phenolic syst. underfill for FCOB appls., curing mechanism 67585
flip chip BGA packages, molded underfill material characts. 113497
flip-chip packaging, epoxy resin reworkable underfill, thermally degradable 67587
graft elastomers, electrostrictive ,dielec./mech./electromech. props., XRD, DSC, appls. 127216
no-flow underfill viscosity during reflow and rels. to solder wetting 113484
PEEK, electron beam irrad., dielec. and thermal props. 92668
plastic IC package warpage rel. to proc. conditions 113549
poly(cyanoterephthalylidene)s, synthesis & charactn., LEDs 90571
poly(N-vinylcarbazole)/PMMA blend miscibility, excimer fluoresc./photocurrent meas. 104896
poly(vinylidene-fluoride hexafluoropropylene) copolymer, electrostrictive response 127207
polyethylene/functionalized terthiophene blends, lin. polarizer appl. 104606
PVC-based polymer electrolytes, structural/thermal/electrochem. cell charact. 123721
PVDF-trifluoroethylene copolymer, pyroelec. dyn. 127210
PVDF-trifluoroethylene copolymers, ferroelec. phase transit., struct. 125103

differential scanning calorimetry continued
PVDF-trifluoroethylene copolymers, structural/transitional props., high energy electron irrad. 125104
single-pass reflow encapsulant for flip chip appl., develop. 67568
sulfonated polystyrene-PVDF blends, cation-exchange membranes, proton transport 112834
toners, quaternary ammonium charge control additive, heat treatment effect 83167
triphenylamine polymers, ethynyl/aromatic moieties, synthesis & props. 90569
ViaLUX 81, epoxy photo-dielec. dry film, microvia technol. 115165
Ag-In-Sb-Te phase-change opt. recording films, crystn. 82279
$Ag_x(As_{0.33}S_{0.67})_{100-x}$ amorph. films, opt.-induced solid state react. prep. 91689
$BaTiO_3$-based Ni-MLCC, core-shell microstruct. and elec. props., milling proc. effect 116177
β-Ga_2O_3, film, gas sens. materials charactn. 103054
Li-ion batt., PVdF-based polymer electrolytes 89075
Li-ion secondary cells, thermal abuse studies 89150
$Li[Ni_xLi_{1/3-2x/3}Mn_{2/3-x/3}]O_2$, layered cathode for Li-ion batt. 134352
$Na_{0.5}Bi_{0.5}TiO_3$-$PbTiO_3$($K_{0.5}Bi_{0.5}TiO_3$) ceramics, relaxor props. 104348
PZT ceramics, low temp. sintered, piezoelec. props., densification, microstruct. 104354
$PbK_2LiNb_5O_{15}$, ferroelec. anoms., structural changes 104272
$Sb_{0.16}As_{0.29}Se_{0.55}$, crystn., single-scan calorimetric tech. obs. 103071
Sn-Ag(-Pb) eutectic solder joint, Pb contamination effects 80507
$SrBi_2Ta_2O_9$ ferroelec. thin films, sol-gel precursor effect on form. 114386
$TiAl_3$ interfacial growth, in-situ TEM obs./num. simul. 103462
TiNi SMA thin films charactn., MEMS appls. 125069
WO_3 and polypyrrole based electrochromic device, charact. 71413
WO_3, film, gas sens. materials charactn. 103054
WO_3 powders/thick films, thermal behaviour, gas sens. appl. effects 109756
WO_3/TiO_2, film, gas sens. materials charactn. 103054
WO_3/TiO_2 powders/thick films, thermal behaviour, gas sens. appl. effects 109756
no-flow underfill materials for eutectic/Pb-free solders, high melting temp. 67586

differential thermal analysis
see also differential scanning calorimetry
multifunctional acrylate based photo-polymer, rapid direct writing, opt. interconnects and hybridisation appls. 92941
L-arginine tetrafluoroborate, high quality NLO cryst. bulk growth 79180
PZT amorph. thin film hydrogen gas sens. 97535
Al_2O_3-SiC composites, self-propag. high-temp. synthesis tech. anal. 79432
$BaSnO_3$, prep./props., liquefied petroleum gas sens. appl. 109741
$Ba_xSr_{1-x}TiO_3$ thin films, sol-gel proc., crystn. 79371
$BaTiO_3$ thin films and powders by an aq. sol-gel proc., prep., struct., dielec. props. 68336
Bi,Pb(2223) tapes, phase form., high crit. current dens. 70753
$Bi_{4-x}La_xTi_3O_{12}$, cryst. growth and charactn. 124791
CeO_2-ZrO_2 thin film, sol-gel prep., counter electrode appl. 68320
Co-Bi ferrite powders/films, sol-gel method prep., mag. props. 92788
Er_2O_3 buffer layers for YBCO/Ni coated conductors, prep. 68343
Gd_2O_3 buffer layers for YBCO/Ni coated conductors, prep. 68343
$(GeS_x)_{98}(GaS_3)_2$:Pr glass fibre, develop. for Pr-doped fibre amp. 93087
$LaGaO_3$ powders, pure and doped, chem. synthesis by amorph. citrate/EG method, oxide fuel cells appl. 123780
$La_{0.85}Sr_{0.15}CrO_3$ SOFC interconnect, sintering, characterisation 89262
$La_2Zr_2O_7$ buffer layers for YBCO/Ni coated conductors, prep. 68343
$Li_2B_4O_7$-$SrBi_2Ta_2O_9$ glass ceramic, NLO and ferroelec. behavior 82024
$LiCoO_2$ thin film cathodes, sol-gel fab., Li/$LiCoO_2$ cells 123735
$Li_xTa_{1-x}O_3$ single cryst., growth, opt. props., ferroelec. T_c 114212
Nb_2O_5-TiO_2 thin films for electrochromic devices 71405
Nd^{3+}:$Gd_{0.2}Y_{0.8}Al(BO_3)_4$, laser cryst., growth and laser props. *(Chinese)* 71729
Ni thiazolylazo dye SW opt. recording media 92965
Ni-based brazing filler mech. alloying and nanostruct. charactn. 68385
$NiZnCuFe_2O_4$ ferrite powders/films, prep., struct./mag. props. 127333
PZT fine powders prep., PVA evap. route, heat treatment and charactn. 90591
$Pb(Yb_{1/2}Nb_{1/2})O_3$-$PbTiO_3$, cryst. growth, dielec. props. 124790
$Pb(Zn_{1/3}Nb_{2/3})_{0.91}Ti_{0.09}O_3$-PbO ferroelec., pseudo-binary phase diag. 104336
$Pr_8Fe_{88}B_4$ ribbons, exchange-spring magnets, exchange field temp. depend. 70490
$Sr_3Nb_{1-x}Ga_{3+(5/3)x}Si_2O_{14}$ crysts., micro-pulling-down growth and charactn. 79190
TiO_2/organically modified silane composite, sol-gel, charactn. 71498
TiO_2-MnO films, sol-gel method, opt. props. 79389
$YBa_2Cu_3O_7$ HTSC melt-textured growth proc., mag. field effects, DTA obs. 79188
ZnO:Bi_2O_3,Sb_2O_3,CoO,MnO, nanosized powders, sintering, elec. props. 104263
ZnO:Li films, sol-gel method, crystn., c-axis orient. 114389

differential transformers
598-chips in differential transformers, transfer charact. *(Russian)* 68816
lin. variable differential transformers, DSP-based sig. conditioning 86489
LVDT posn. sens. spectral sig. proc. *(Italian)* 120693
systematization design method 115100

differentiating circuits
digital differentiating filter synthesis, random/sing. input sig. error robustness 130040
digital FIR differentiator design based on max. SNR criterion 80099
FIR differentiators for quantized sigs. 130124
FIR digital differentiators, Taylor series, tap-coeffs., type III differentiators 80090
high-resoln. digital audio, transparent differential coding 118091
higher-order digital differentiators, anal. least-sq. design 107548
LF differentiators/integrators for biomedical and seismic sigs. 109468

differentiation
see also differential equations
2nd-derivative test, uniqueness theorem 67709
boundary-element based formulations for crack shape sensitivity anal. 79112
differential calculus for p-norms of fund. matrix 114070
ECG sig. anal., Hilbert transform appl. 110595
EM fields Poisson integrals, Laplacian 3D FEA solns. 128640
FT profilometry, phase-unwrapping proc., differentiation *(English)* 75875
fuzzy complex fns. continuity/differentiation 67792
head, human, hemodynamics, 3D vol. tomographic localization 132644
integral with three params. 114147
liq.-cryst. light valve, spatial filtering phase knife, image differentiation 129639
multi-obj. tracking, engng. stats. 95713
noncompact fuzzy no. space, embedding problem 113946
stable num. differentiation 79044
vector nonconvex fn. minimisation problem 67863

diffraction
see also acoustic wave diffraction; diffraction gratings; diffractometers; el... tromagnetic wave diffraction; electron diffraction; neutron diffraction
lin. and nonlin. tomography, inverse scatt., review 129468
waveguides, explicit SW asymptotics for diffr. by finite-length discontinui... 117734

diffraction gratings
see also Bragg gratings; holographic gratings
1.5 μm wavelength distributed reflector lasers with vert. grating 82651
2-fiber full-mesh WDM bi-directional opt. MUX sect. protection rings 131...
2D mode solver integrated optics design methods 127720
2D photonic lattice reflectors, single mode laser components 117330
3D displacement measuring moire interferometer 75864
3D phase gratings for opt. sens. and image proc. for perform. of human vis... 94581
3D shape meas., LC grating pattern projection method *(Japanese)* 97813
4-in wafer low-crosstalk arrayed-waveguide grating multi/DEMUX fab. 127...
14-pin butterfly packaged fiber-grating stabilized lasers 105175
32-channel 100-GHz-spaced DEMUX for MAN 120299
32-channel very low crosstalk arrayed-waveguide grating multi/DEMUX mod... 120375
40-channel multi/DEMUX, dyn. passband shape compensation 86081
40-wavelength planar channel-dropping filter with improved crosstalk 10907...
80-channel integrated dyn. drop flat-top passband filter 131404
1650-nm wavelength band opt. fiber cable network maint. method 131377
Acid blue 7 dye soaked gelatin films, self-diffr. gratings 83006
acrylamide dye gels, dyn. opt. elements recording 104792
act. grating waveguide struct. based on semicond. materials 82146
act. polynomial gratings for soft-X-ray monochromators/spectrometers 12131...
additive-pulse mode-locked fiber laser with fiber-grating, oscill. conditions *(C... nese)* 105181
all-fiber grating-based higher order mode dispersion compensator 74950
all-fiber photonic devices and syst. for advanced opt. commun. 120184
all-opt. defection switch, photorefr. duplex two-wave mixing 93838
all-optic tunable long-period grating using double-cladding layer 116879
ALS variable-included-angle plane-grating-monochromator, undulat... spectr./microscopy 121819
anamorphic magnification using, chirped grating in grazing incidence mo... 106787
arbitrary oriented grating, specular diffracted wave polariz. control 117706
arbitrary-phase-modulated array illuminator, Talbot effect 104784
array micro-opt. elements mfg., spatial freq. compensation 93180
arrayed waveguide grating, opt. freq. monitoring 109196
arrayed waveguide grating multi/DEMUX, design optim. *(English)* 86100
arrayed waveguide grating MUX with flat spectral response using nonunifor... arrays 75030
arrayed waveguide grating wavelength tuned beam steerers 82746
arrayed waveguide gratings for high-channel-count WDM systs., standardize... params. 127770
arrayed waveguide gratings with MMI couplers, anal. and design 127766
arrayed-waveguide grating, high-speed transm. and dispersion charact. 10469...
arrayed-waveguide grating, transit. loss reduction 127764
arrayed-waveguide grating devices, photomask resoln. effect 96799
arrayed-waveguide grating full-mesh wavelength-routing WDM network 1202...
arrayed-waveguide grating multi/DEMUX, effective refr. index design meth... *(Chinese)* 82166
arrayed-waveguide grating opt. wavelength router for FTTH/FTTC syst... 120258
arrayed-waveguide grating-based feedback opt. packet switch crosstalk reductio... 120338
arrayed-waveguide layout for AWG design *(English)* 82185
asymmetric QW waveguide, quasi phase-matching, nonlin. suscept. modulatio... 93816
athermal all-polymer arrayed-waveguide grating MUX 75007
AWGs, in-band dispersion meas./control 120131
azo dye doped NLC, photorefractivity, supra-opt. nonlin. 128424
azo-dye-doped liq. cryst., polymer-enhanced diffr. 116833
azobenzene polymer films, photoinduced hexagonal symm. microstruct., DFWM *(Chinese)* 71947
azobenzene-based polymers with oligo(ethylene oxide) side chain, rapid surfac... relief form. 104595
azobenzene-containing polymer surface relief grating immobilization/pole... alignment, photopolymerization 105464
BCB diffractive struct., fab. for high-power laser appls. 104602
beatwave Fabry-Perot interferometer calib. using tunable external-cavity diod... laser *(Chinese)* 75348
bicorn single-mode waveguide filters, strong broad rejection 127890
binary distorted diffr. grating for multiplane imaging and wavefront sens... 104862
binary nematic liq. cryst. gratings, influ. of alignment, simul. 93248
birefr. dielec. grating, press. and temp. sens. 75600
bis-azodye doped polymers for opt. struct. plastic EO devices 127555
bit-parallel WDM syst., bit skew & dispersion compensation 109206
branched output arrayed-waveguide gratings, simultaneous multichannel moni... toring purposes 127769
calix[4]resorcinarene bearing azobenzene moieties as photofunctional amorph... mol., synthesis 104596
cascaded chirped fiber grating, 10 Gb/s WDM syst. dispersion compensatio... 120355
cascaded long-period fiber grating all-opt. sig. gating 82116
cascaded long-period fiber gratings, transm. spectrum, analytic expression 8208...
cascaded second-order nonlin. in silica fiber, wavelength conversion study... 117440
chirped fiber grating group time delay meas., mode-mocking tech. 116647
chirped fibre gratings for MM-wave generation & proc. appl. 91403
chirped moire fiber grating dual-channel real-time FT 131507
circ. polarised undulator beamline, BESSY II, commissioning 121754
CMOS opt. modulator, micromachining fab. 116757
coherent opt. RF channelizer, diffr. grating 125829
coherent opt. systs., superresolution improvement 129413
color-coded grating profilometry, lumin., RGB and HIS models *(Chinese)*... 73388
color-coded projection grating, 3D surface profilometry *(Chinese)* 95343
colour-coded grating 3-D profile meas./appl. 121215
combined diffr. grating-mirror syst., grazing incidence, waveguide props.... optimisation 82259
commercial aspects and appls. *(English)* 104859
compact 3D profilometer with grazing incidence diffr. optics 83027
compact opt. encoder with micromachined photodetector 86973

action gratings continued
ontinuous-profile diffr. gratings on fused SiO_2 82263
orrugated long period fibre grating torsion sens. 97284
orrugated long-period fiber grating strain/torsion/bending sens. 109605
orrugated waveguide reson. opt. filters 82149
DBR fiber grating laser, freq. stabilization using interferometric tech. 105199
DBR laser grating losses/coupling coeffs. determ., self-consistent method 105286
eformed specimen grating replication, situ moire interferometry meas. *(Chinese)* 75858
ESY XUV FEL beamline, spherical grating monochromator 105380
FB diode lasers, metropolitan area and access networks 109097
FB laser, deeply etched first-order vert. grating, 1.5 μm 128315
-DFB mid-IR angled-grating lasers 93675
iffractive optics-act. semicond. components integrat. 104747
'-N,N-dimethylamino-N-methyl-4-stilbazolium tosylate cryst., refr. index control, grating fab. 127548
iode laser extended cavity with EO prism, broadband fast freq. tuning 82757
irectional grating rosette and moire interf. tech., residual stress meas. *(Chinese)* 132187
irector struct. of cholesteric diffr. gratings 82231
ispersion compensation fiber gratings for CATV systs. *(Chinese)* 74922
ispersion-managed soliton commun. with chirped fiber gratings, group-delay ripples 93866
isplacement micro-transducer 132069
isplacement sens. with lin. CCD array for grating line subdivision 121218
isplacement sens. with nonsymmetrical double gratings 75448
ivided thin-film heater tunable dispersion equalizer, Gb/s RZ transm. appls. 96694
ivision-of-amplit. photopolarimeter for spectral polariz. meas. 109521
OE, light field generation, 3D visualization 109571
OEs design and fab. for imaging spectrometer 104861
ual-long.-mode birefr. moire DFB fiber laser sens. in rf domain 97333
DWDM adaptive dispersion compensator based on re-MUX concatenated AWG config. 120368
DWDM fibre gratings, new generation device design 96796
DWDM planar waveguide DEMUX, AWG & etched grating, review 96797
DWDM syst. wavelength stabilization tech. using dithering-induced AM cancellation 75056
Echelle grating, 32-channel 100-GHz DWDM, design, realization and packaging 96676
EO polymer based grating-assisted codirectional coupler filter 116900
Er-doped fiber amp. gain flattening equalizer using long period gratings *(Chinese)* 105183
etched diffr. grating planar waveguide DWDM devices *(Chinese)* 86065
EUV lithog. opt. charactn., phase-shifting point diffr. interferometer 69969
EUV mask, absorber props., EM simul. 126542
EUV optics, Ronchi test, shearing interferometer concept 126514
EUV transm. grating spectrometer calib. by SR 75346
evanescent interferometric lithog. 69966
external cavity LD, mode-hop free tuning by grating 117244
external plane wave waveguide grating couplers, reson. excitation anal. 93112
external-cavity diode laser with intracavity glass plate as fine-tuning device 71785
FAST-Net global interconnection syst., beam-steering, aberration anal. 93457
feedback/feedforward arrayed-waveguide grating-based opt. packet switches 119850
femtosecond modelocked fiber laser, WDM pulse generation, pulse shapers, arrayed waveguide gratings 120315
fiber Bragg gratings for WDM, phase mask stitching error study 109192
fiber grating external cavity LD, all-opt. wavelength converter *(Chinese)* 117250
fiber grating external cavity semicond. lasers with narrow linewidth high MSR *(Chinese)* 71852
long period fiber grating fab. using computer-generated holographic grating 127692
fiber grating laser, non-AR coated, packaging 105203
fiber grating semicond. laser operation, act. mode-locking regime, time-domain anal. 128236
fiber grating struct., local period var., sig. proc. techs. 127597
fiber gratings components, mixed polymer packaging, temp. sensitivity *(Chinese)* 120875
fibre acoustic gratings, strain-induced phase-matching, tunability 104626
fibre commun. conf., Anaheim, CA, USA (March 2001) 124207
fibre grating laser, wavelength stabilised, WDM syst. 105178
fibre gratings fab. by multiple short sects. phase matched concatenation 127604
fixed central wavelength chirped fiber grating fab. 93092
fixed reson. wavelength long-period grating fiber sens. 131941
flames, axisymmetric gaseous, temp. meas., Lau phase interferometry with lin. gratings 132202
flexible ref. gratings for surface inspection enhancement, Moire interferometry 97803
focusing grating couplers, rigorous 3D anal., spectral collocation method 104699
fractional Talbot effect based wavefront sens., opt. wavefront meas. 109529
FT profilometry, phase-unwrapping proc., differentiation *(English)* 75875
FT profilometry review, deformed grating images 86970
full-mesh WDM networks, arrayed-waveguide grating wavelength-routing fn. *(Japanese)* 120295
gas flow vel. meas. using laser-induced electrostrictive grating 121265
Gaussian beam diffr. by periodic screen, anal. 128753
Gbit/s OTDM transm. systs., fibre grating laser-based RZ pulse source 96808
germanosilicate glass fibers, H-loaded, O deficient centers, photosensitivity 127648
glass, all opt. poling, SHG anal. 117448
grating assisted opt. waveguide couplers 82147
grating coupler sampled reflector tunable DBR lasers 117400
grating filter center freq. tolerances in WDM opt. networks, stat. approach 109174
grating-assisted codirectional coupler filter using EO/pass. polymer waveguides 127898
grating-assisted vert. codirectional coupler filter *(Korean)* 71484
grating-based surface-emitting tapered unstable resonator laser simul. 128272
grating-based wavelength division (de)multiplexers for opt. network, optimal design 120132
grating-waveguide struct. semicond. laser fs pulse source 117367
groove wall induced opt. disk readout sig. deterioration, diffr. anal. 92983
HF gratings, DVD pickup systs. appls. 82069
high power single-mode diode DFB laser with curved-grooves diffr. grating 71801
high spatial resoln. chirped moire fibre grating strain/temp. sens. 131940

diffraction gratings continued
high-dens. integrated PLC devel. and appl. to arrayed waveguide gratings 131427
high-efficiency multilayer dielec. coated gratings, struct. params. optimisation 127891
high-perform. opt. commun. devices, hybrid integrat. technols. *(Japanese)* 93448
high-sensitivity non-birefr. Mach-Zehnder fibre interferometer, refr. index meas. 131942
high-speed directly-modulated semicond. laser modulation bandwidth, detuned external fibre grating reflector 105308
highly reflective boundary vol. phase gratings, spectral selectivity 128357
hybrid glass thin films, UV light induced surface expansion phenom. 93284
hybrid polymer-on-glass integrated DOE for wavelength discrim. 93162
hybrid polymer/glass devices and waveguides 116675
hybrid semicond. polymer reson. grating waveguide struct., fab. and props. 93134
hyperb. unstable-resonator laser, spot-array grating-outcoupler 117317
inhomog. broadened SOA gain element, fiber grating, multiwavelength pulse train generation 105433
inhomog. dielec. gratings, EM waves scatt./guiding 72262
innovative integrated grating-assisted ADM, design and simul. 96798
InP planar waveguide DWDM technol. 120377
InP-based arrayed waveguide grating DEMUX 120378
integrated optic arrayed waveguide grating based OADM, loss-imbalance equalization 120358
integrated optic dispersion slope equaliser for N×20 Gbit/s WDM transm. 74943
IRFPA, MTF meas., nondiffracting array generator 109633
λ/4 phase-shifted circ. grating DBR/DFB lasers, threshold anal. 93606
λ/4-shifted semicond. DFB devices, chirped grating effect on opt. bistability 93837
LAN multimode 200-GHz-spaced DWDM DEMUX 120286
large displacement meas., single-grating double-image method *(Chinese)* 132173
large-scale arrayed waveguide grating module, super-high-contrast planar lightwave cct. technols. 120275
laser Doppler long. displacement meas., ref. opt. struct. *(Chinese)* 109977
leaky waveguide micro channel sens. chips for opt. anal. 120744
LIGA-microspectrometer, low-cost design 116793
lin. grating DFB organic semicond. lasers, threshold current anal. 105318
lin.-chirped fiber grating dispersive element, GHz pulse train generation 93045
liq. composite molding, fiber optic flow sens. 86582
liq. cryst. pixel mirror, electronically tunable single wavelength broad-area semicond. laser 117352
liq.-cryst. diffr. gratings, asymmetric transmissive behavior, beam-steering efficiency 116830
Littman type tunable diode laser syst., external-cavity *(Korean)* 117316
local large-strain meas., noncontact opt. methods 114504
localization effects in fibers/lasers 93098
long period fiber grating/lensed fiber coupling efficiency limitation 127717
long period fiber gratings, reson. wavelength tuning 127708
long period fibre grating chirp 127642
long period fibre grating fab. by elec. arc discharge 93042
long period fibre gratings, long period grating resons. 127640
long-period dispersion tailored fiber gratings, mode coupling 131358
long-period fiber grating, asymm. transm. spectrum removal, beam scanning method 82115
long-period fiber grating design, π phase-shifts 127704
long-period fiber grating fab., arbitrary refr. index profiles 127643
long-period fiber grating fab. by elec. arc tech. 127623
long-period fiber grating fab. by FIB irrad. 82090
long-period fiber grating Mach-Zehnder interferometer based AO amplit. modulator 127856
long-period fiber grating opt. sens. with optimized sensitivity, chem. detect. 75572
long-period fiber grating sens. appls., reson. peak shift/dual peak separation 86590
long-period fiber gratings, nonflat Er gain spectrum equalization 104631
long-period fiber gratings, UV-preexposure method, transm. spectrum shift 104647
long-period fibre grating fab. by F_2-laser radiation 82091
long-period fibre gratings pair, curvature/load/chem. sens. appls. 97282
long-period grating bend-sens. fibre sens. 97307
long-period grating fiber-optic liq.-level sens. 120836
long-period grating tapered fibers, CO_2 laser microstructuring 116601
long-period gratings, fab. tech., discharge & laser exposure 93048
low-loss waveguide bends, apexes-linked circle gratings 71332
Mach-Zehnder interferometric arrayed-waveguide grating MUX/DEMUX 120376
metallic gratings, diffr. efficiency, vectorial theoretical anal. *(Chinese)* 94012
methyl red doped NLC film, photoinduced gratings form. 128425
Methyl Red dye-doped liq. crysts., photorefr.-like gratings, elec. field control 71421
metropolitan WDM network technols., echelle grating DEMUX, fab. 96670
micro deform. meas. by digital phase-shift shadow moire 121186
micro device testing by fringe projection/white-light interferometry 120612
micro opt. components fab. by high precision embossing 71366
micro optics conf., Quebec City, Que. Canada, (June 2000) 100406
micro-conical array fab. for antirefl. struct. surface 104781
micro-opt. elements with arbitrary surfaces, fab. techs. 104797
microelement testing by opt. meas. station 117534
micromachined sub-MM and MM-wave variable pol. compensator 91195
microphone, micromachined device, opt. interferometric readout 97108
microrobot posn. and speed control sens., photoetching tech. 81600
microstruct. surface detect. by 3D profilometry/projection grating method 121185
microwave phase shifter, opt. control, CFG and OFS 69253
missile fuel leaks detect. using opt. sens. 75561
MM-wave beam-steering using dielec.-image-line-fed grating film 83765
modal fiber index meas., fiber grating based 116643
MODAN-type DOE for transversal laser mode selection, commun. appls. 127874
MOEMS arrays, opt. interconnect appls. 93203
monolithically integrated wavelength selective cross connects 117036
multi-channel long period fiber gratings, controllable transm. charact. 82081
multi-DOF meas. syst. for milli-struct., diffr. grating, kinematic anal. 121222
multi-layered grating waveguide struct. for dual spectral filters 82167
multi-wavelength pulses of fiber lasers, gen. and dispersion compensation *(Chinese)* 93728
multilayer dielec. Fabry-Perot cavity, ion-implanted gratings 71463

diffraction gratings continued
multilayer dielec. struct. diffr. grating, EM wave propag. 117704
multilayer dielec. struct. with diffr. grating, EM diffr./propag. 127755
multilayer diffractive coating, EM waves transform. 117645
multilayered resistive strip gratings, microwave/MM-wave scatt./absorpt. 125691
multiple-prism grating tunable laser oscillators, tunable laser beam divergence 82778
multisection ridge waveguide DFB detuned grating lasers, high-speed opt. sig. proc. 128230
NxN arrayed waveguide grating protected opt. star-shaped ring network 96758
narrow-linewidth bandpass filters with diffractive thin-film layers 71489
twisted NLC display grating for Ronchi test config. 71424
NLC fibers, elec. controllable long-period gratings 116618
non-adaptive fibre grating equalizers 109057
noncollinear SHG phase-mismatching scheme, temporal solitons 72053
nonperiodic grating-assisted directional coupler design, iter. method 82148
NSRL electron storage ring, VLS diffr. grating, groove dens. anal. *(Chinese)* 110217
oblique incidence nonpolarizing guided-mode reson. grating filter 71481
opt. ADM based on arrayed waveguide gratings *(Chinese)* 109191
opt. design and fab., conf., Tokyo, Japan (Nov. 2000) 124215
opt. encoder higher-order sig. distortion reduction using modulated pitch grating *(Japanese)* 86461
opt. fiber grating couplers and their appls. 127653
opt. fiber gratings, num. anal. of transm. characts. 82079
opt. fiber recirculating delay line, fiber grating array 71262
opt. filters design using uniaxial dielec. gratings for arbitrary light polariz. 71468
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov. 2000) 113262
opt. lithog. lenses, wave-front aberrations meas., IC mfg. appl. 126585
opt. microlithography, effective exposure dose meas., unresolved gratings, multitone flood exposure 126589
opt. poled polymeric materials, photo-induced noncentrosymmetric polariz. 71202
opt. waveguide theory and num. modelling, conf., Prague, Czech Republic (May 2000) 100417
optoelectronics, photorefr. materials, conf., Strasbourg, France (May/June 2000) 124219
packet-by-packet wavelength conversion 72013
parallel long-period fiber gratings, evanescent-field coupling 116606
periodic gratings, asymmetrical EM wave scatt., rigorous num. anal. 117675
periodically struct. polymers, tunable laser appls. 82549
pers. recogn. syst. using fibre grating vision sens. *(Japanese)* 107145
phase grating filter, light transmittance 82281
phase grating opt. low-pass filter, OTF *(Korean)* 71486
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
phase-shifted long-period grating device design, gain-flattening fiber filter appls. 93063
phased array beam steering with limited dispersion 117346
phased array waveguide grating multi/DEMUX, array aperture *(Chinese)* 86101
phased-array antenna, polymeric waveguide ccts. for true time delay 117844
Photon Factory BL19B, quasi-periodic grating for monochromator 121306
photonic cryst. slab, exciton reson., nonlin./lin. opt. response 127563
photonic cryst. struct., band gap, FDTD method 82139
photonic crysts. and VCSELs, perfectly matched layers, eigenmode expansion, opt. modelling 104702
photonic-band-gap struct. in planar nonlin. waveguides, SHG appls. 105524
photorefr. media, grating translation, two beam coupling, anal. modeling 82809
photorefr. MQW SLM, operating speed enhancement 93229
photorefr. polymers, moving fringe space-charge field 82028
π-shifted long-period fiber grating bandpass filters for act. mode-locked Er-doped fiber lasers 116881
planar circ. grating DFB/DBR lasers, relax. oscills. anal. 93605
planar circ.-grating DBR laser, nonlin. operation 71791
planar concave grating, NxN wavelength interconnector 109182
planar lightwave cct. based functional devices, point-to-point WDM appls. 131399
planar nonlin. waveguides with lin. grating, photonic bandgap struct., SHG 127724
planar refl. grating lenses, imaging syst. 121119
planar waveguide problems, rigorous coupled wave anal. 104698
polariz. insensitive planar integrated opt. switch 117495
poly(diethylene glycol bis(allyl carbonate)) substr., opt. waveguides direct electron beam writing 93121
polyethylene material, mid-IR microelements direct laser writing 82205
polyimide film, laser ablation lithog., diffractive phase mask 126537
polymer materials, mid-IR opt. element fab. 93185
polymer-network stabilized liq. crysts., Fresnel phase zone plate 97724
polymeric DFB-structs., erasable/permanent, multicolour tunable laser emission 116741
polymeric grating-assisted codirectional coupler filter, photobleaching, post-fab. tuning 104733
polysilicon tilt-up surface micromachined micromirror switches 116780
prog. integrated opt. diffractive element 127790
QW IR polariz. sensitive photodetecting thermal imager 86654
QW laser, grating feedback locked, polariz.-depend. photon-no. squeezing 93585
relativistic diffr. electronics, reson. scatt. by gratings 115264
reson. grating refl. filters for finite beams narrow-band spectral filtering 116893
reson. grating refl. filters for normally incident Gaussian beams 104882
reson. waveguide grating, polariz. independent filtering anal. 104710
Rouard grating anal. method *(Chinese)* 93107
Sagnac interferometer, single opt. fiber grating *(Chinese)* 116892
sampled grating DBR tunable laser 117399
sandwich struct., NLO limiters, eye protection 71953
second-harmonic surface polaritons, dyn. grating quasi-phase-matched excitation 82895
second-order nonlin. fibre gratings, quasi-phase-matching curve spectral characterisation method 93810
self-seeded Fabry-Perot LD, wavelength-tunable chirp-compensated single-mode pulse generation 105427
semi-infinite periodical struct. wave diffr., axial symm. 117705
semicond. amp. tapered mode-locked integrated grating cpd. cavity laser design 71820
semicond. arrayed waveguide grating monolithically integrated multiwavelength photodetector 104947
semicond. laser, relative intens. noise reduction, modulation response using fiber grating 128388
sensitive fiber cladding struct. elements 120868

diffraction gratings continued
short period/long period fiber grating synthesis, Gel'fand-Levitan-Marchenk
inverse scatt. method 104632
shot-shifted electron-beam lithog. gratings, stitching-error reduction 126529
silica fiber grating, wavelength conversion, cascading second-order nonlin. *(Chi nese)* 116646
sillenite photorefr. crysts., two-wave mixing, diffusion recording 127571
SOA based DWDM multiwavelength light source, stabil. *(Chinese)* 109215
SOI waveguide, 2D grating coupler modelling, BPM 116666
source posn. determ. in 3D shearography, shadow Moire method 121212
spectral hole burning based RF spectrum analyzer 115029
spiral fiber grating mode coupling 131414
SR beamline components, C contamination, in situ cleaning 121753
SR gratings, design, mfg., testing 121796
stratified 3D photonic struct., light scatt. and propag., fully vectorial tech 104750
subwavelength period binary phase grating color separator 132111
superfast scanning of space with phase-modulated laser radiation 131675
surface profiler for opt. elements 117050
switchable diffr. gratings, dielec. anisotropy inversion in nematic liq. crysts 71427
Talbot interferometer time filter 116885
tandem AWG filter, 1010-channel, one primary/ten secondary AWGs 71488
Tb/s data transm. array-waveguide grating short-pulse transm. charact. 86055
temp./strain meas., act. fibre/fibre grating combination 120832
tetraethoxyorthosilicate-methacryloxypropyl trimethoxy silane hybrid network microoptical elements fab. 71364
thermally poled glasses, $\chi^{(2)}$ grating, laser-induced quasi-phase matching 82861
thermally poled glasses, second order suscept., quasi-phase matching condition 82792
thin NLC film, mW power stimulated scatt. 105461
thin-film grating polariz. converter refl. 82287
tilted fiber grating anal. by vol. current method 127624
transparent multiwavelength opt. network error probab., opt. MUX/DEMUX 131596
triangulation displacement sens., averaging method, diffr. grating 75500
tunable fiber Bragg grating fab. with independently adjustable central wavelengt and chirp 127596
tunable fiber gratings and appls. 127595
tunable phase-shifted long-period gratings by refr. index-shifting 120199
TW dielec. window with matching gratings, power loss calc. 80605
two-channel grating-based OCDMA syst., interchannel interf. noise reductio 74972
two-fiber unidirectional opt. path protection switching ring networks, OADM struct. 120354
TWT spherical grid curvature rad. meas. 132176
ultra-thin long-period grating, random grating period and amplit. errors 10465
ultrafast unidirectional beam deflection using electrooptic traveling phase gratin 93234
US transducers, capacitive micromachined, integrated opt. detect. metho 111500
UV-written gratings and waveguides, expt. charactn. methods review 127743
varied line spacing grating monochromators/spectrographs, SR 110460
vector Doppler syst., low cost, utilizing diffr.-grating transducers 110734
vert. integrated thin-film waveguides, wavelength-selective coupling 82159
virtual mesa/spoiler mid-IR angled-grating DFB laser fabricated by ion bombard 71765
virtual opt. self-healing ring network, arrayed waveguide grating 131437
virtually imaged phased array, diffr. grating rot., dyn. tunable dispersion slop compensation 131400
waveguide grating couplers, boundary var. method 104700
waveguide grating devices, strong backward coupling coeffs., ray-opt. determ 104728
waveguide grating synthesis, coupled-mode theory 127603
waveguide input grating coupler for WDM/wavelength encoding 93133
waveguide input grating couplers, TM/TE mode splitting 104701
waveguide-grating struct., guided-mode resons., filters, GA 104881
wavelength division (de)multiplexers for opt. networks, reliable grating-based 120298
WDM, planar lightwave cct. based dispersion compensation 131429
WDM local packet-switching router with single buffer, perform. improvement 120359
WDM opt. transport network cross-connection mgt. 96872
WDM pass. grating-based single mode MUX/DEMUX 120284
WDM switchless network using arrayed-waveguide grating 96843
WDM syst. opt. perform. monitoring using arrayed waveguide grating *(Korean* 120176
WDMA/TDMA switchless opt. network, differential delay compensation 96760
wide-aperture tunable semicond. laser, external waveguide-grating mirror 82630
wide-band thermo-optic wavelength tunable filter using polymer arrayed waveguide grating phase-shifter 120274
widely tunable grating-assisted co-directional coupler, fast 100-channel wave length-tunable transmitter 85980
ZLI-4792 homeotropically aligned liq. cryst., elec. switchable liq. cryst. gratin 82230
AgCl-Ag photosensitive waveguide films, s-polarized laser beam irrad., spatio temporal instabil. 104872
AgCl-Ag waveguide films, spontaneous gratings on S-polarized laser beam irrad 105462
AlGaAs/GaAs MQW slab, photorefr. grating filter 127797
AlGaInAs-InP high power tapered 1.55 μm DBR lasers 82669
Ar high-av. power polarized soft-X-ray laser beam 93468
Ar^+, Ne-like, capillary discharge-pumped soft X-ray laser 128093
As-S-(Se)-based chalcogenide glass opt. waveguides, fab./charactn. 116720
As_2S_3 thin films, polariz. depend. photoinduced surface relief micro-grating 93186
$As_{50}Se_{50}$ amorph. thin films, Ag/Au metal coated, electron/photon induced meta diffusion 93296
B/Ge co-doped photosensitive fiber with cladding mode coupling suppressio *(Chinese)* 93033
B-Ge codoped fiber long-period gratings, high-temp. sensitivity, possible fil ter/sens. appls. 93091
β-BaB_2O_4 TW nanosecond OPO close to FT limit 117441
BaF_2, ultrashort pulse self phase matched THG 71997
$BaTiO_3$ crysts., grating erasure, orthogonally polarized FWM 128431
$BaTiO_3$:Co semilinear photorefr. coherent oscillator, opt. phase transit. 12845 93760
$Bi_{12}SiO_{20}$ cubic gyrotropic photorefr. cryst., mutually phase-conjug. light wave
$Bi_{12}SiO_{20}$ photorefr. material, moving gratings nonlin. freq. response 71942
$Bi_{12}SiO_{20}$, photorefr. response kinetics 71933

iffraction gratings continued
$Bi_{12}SiO_{20}$ sillenite cryst. photorefr. gratings 92933
$Bi_{12}TiO_{20}$ cryst. refl. grating two-beam coupling 117417
$Bi_{12}TiO_{20}$ cryst. two-wave mixing, small PM detect. 82816
$Bi_{12}TiO_{20}$ cubic gyrotropic photorefr. cryst., mutually phase-conjug. light waves 93760
CO_2 electrooptically Q-switched RF excited waveguide laser with two channels *(Chinese)* 71640
CO_2 high-power laser, US beamsplitter 116853
CO_2 slab-waveguide laser, RF excited, mode control 105140
CO_2 variable reflectivity grating slab laser resonators 105387
Ce-doped lead phosphate glass, SHG 93814
Cs D_2 reson. line, diode laser freq. stabilization 120613
Er-doped externally modulated NTSC AM-VSB fiber amp. 96776
Er-doped fiber amp. with inline fiber grating laser, L-band operation 71675
Er-doped fiber amplified externally modulated NTSC AM-VSB repeater syst. 74933
Er-doped fiber grating array sens., strain and temp. meas. 109614
Er-doped fiber laser, self-Q-switched, SBS, output charact. *(Chinese)* 82522
Er-doped fibre laser, intracavity polariser based on long-period fibre grating 117109
Er-doped stable tunable dual-wavelength distributed Raman fiber laser 128173
GaAs/AlAs superlattice waveguide, QPM grating, QW intermixing 104727
GaAs/AlGaAs MQW IR photodetectors with 2D random-grating opt. couplers 86547
GaAs/AlGaAs QWIP, IR radiation transm. 131919
GaInAsP distrib.-reflector lasers with vert. aligned grating, RIE 117214
GaInAsP-InP complex coupled DFB lasers, FIB technol. based 128240
GaInN vis. lasers, materials/MOVPE technol. 93666
GaN epilayers, nonradiative recomb. proc., transient grating method 80718
GaP phase-modulated light beam wo-wave mixing under dc elec. field 71936
GaSb/InAs/AlSb mid-IR angled-grating DFB lasers, beam quality limitations 128359
Ge highly doped fiber Bragg gratings, spectral charact., temp.-induced reversible changes 82085
GeO_2-SiO_2:P_2O_5 fibers, long-period gratings fab., temp.-insensitivity 127633
InAs/GaInAs QD DFB lasers, singlemode operation 71790
InGaAs/GaAs MQW excitonic reson. photorefr. devices, vibr. meas. appls. 128456
InGaAs/GaAs/AlGaAs triple-QW GRINSCH laser, sol-gel fab., output charact. 93614
InGaAs/InGaAsP second-order DFB/DBR laser, surface-emitting single-lobe operation 82627
InGaAs-GaAs photorefr. MQW device in quantum confined Stark geom. 80880
InGaAsP discretely tunable mode-locked SOA laser, arrayed waveguide grating 128416
InGaAsP/InAsP mass-transport-grating DFB lasers for externally modulated systs. 128224
InGaAsP/InP-based act. grating waveguide struct. 93161
InP etched waveguides, monolithically integrated planar waveguide etched grating devices 82442
InP/InGaAs/InP photonic waveguide structs., Br_2-N_2 reactive beam etching 116728
InP/InGaAsP high-power lasers, output charact., opt. commun. appls. 105313
InP-based arrayed waveguide gratings, crosstalk 93070
$KNbO_3$, Gaussian beams opt. rectification, DFWM 105475
$KNbO_3$ photorefr. gratings, band-gap excitation 82049
$KTiOPO_4$ OPO, fan-shaped grating 82929
$LiNbO_3$ 2D quasi-phase-matched struct., broadband mid-IR generation 82857
$LiNbO_3$ OPO, mid-IR five opt. cycle pulse generation 82846
$LiNbO_3$, electron beam periodically poled, SHG 93815
$LiNbO_3$, feedback controlled photorefr. beam coupling, attractors and auto-oscills. 82812
$LiNbO_3$, periodically poled, laser pumped, opt. parametric generation 82894
$LiNbO_3$, periodically poled, sync. pumped OPO, operating charact. 105539
$LiNbO_3$ periodically poled waveguides, propag. modes, cascaded second-order nonlin. 104713
$LiNbO_3$ periodically poled widely tunable quasi-phase-matched OPO *(Chinese)* 128505
$LiNbO_3$ photorefr. grating form., bulk PV effect 93318
$LiNbO_3$ sync. pumped periodically poled cryst. low-threshold mid-IR opt. parametric oscill. 82906
$LiNbO_3$ waveguide quasi-phase-matched SFG device for high-efficiency opt. sampling 117456
$LiNbO_3$:Fe, PV contrib. to counter-propag. two-beam coupling 82811
$LiTaO_3$ quasi-phase-matching gratings, sub-6-fs blue pulses, freq. doubling 72019
PbO-SiO_2 glass, photoinduced refr. index change, UV irrad. 127553
Rb vap., degenerate phase conjug., polariz. selective motional holeburning 71965
Si IR micro-spectrometer based on diffr. grating 104765
Si lamellar grating struct., groove depth, opt. scatterometry 121202
Si wafer 400-channel arrayed-waveguide grating, DEMUX props. 75005
a-Si:H thin film solar cells, periodic light coupler gratings 78173
$Sn_2P_2S_6$ photorefr. recording, elec.-field enhanced beam coupling 82813
Ta_2O_5 sub-micron period grating struct., interferometric excimer laser ablation 72126
Ti:sapphire regenerative amplified femtosecond pulsed laser, sub-micron-machining, Rowland ghost effect 72116
TiO_2/ORMOSIL composite thin film waveguide, sol-gel proc. 116688
Tm^{3+}:YAG broadband accumulated spectral grating dyn., stimulated photon-echo tech. 71960
W/Si lateral multilayer gratings, (non)coplanar X-ray reflectivity 69722
Yb-doped double-clad fiber laser, high-power tunable narrow line width output 105200
Yb-doped fiber amps., optimised design, gain and noise perform. *(Chinese)* 71693
$ZnGeP_2$, narrow-linewidth middle-IR OPO 72029
[c-]Si solar cell diffr. grating struct. 100166

diffractive optical elements
see also diffraction gratings; holographic optical elements
2D free-space opt. interconnection networks, multi-order diffr. grating *(English)* 127868
achromatic fan-out diffractive syst. for white-light free-space opt. interconnects 82260
achromatic holographic opt. lens Fourier proc. 84160
Al reflective layer on SiO_2 substr., complex-AM DOE 105610

diffractive optical elements continued
all-opt. DEMUX module, switching charact. 75028
axial dual focus integrated opt. pickup syst. 116582
BCB diffractive struct., fab. for high-power laser appls. 104602
bicomponent diffr. syst., diffractive multifocal focusing 71881
binary diffractive mask digital synthesis 127848
binary distorted diffr. grating for multiplane imaging and wavefront sens. 104862
binary DOE for laser beams strength combination *(Chinese)* 82724
chromatic-dispersion compensated hybrid refr.-diffractive lens, totally incoherent opt. proc. operations 118326
commercial aspects and appls. *(English)* 104859
conf. on EO and microelectronics, Tel Aviv, Israel (Nov. 1999) 78457
continuous-profile diffr. gratings on fused SiO_2 82263
design, fab. and testing for LD divergent angles improvement 93694
design, microfabrication and testing, fiber coupling appls. 104857
design, modal comp., amplit.-phase charact. 93174
design and fab. for imaging spectrometer 104861
diffractive/refr. microoptics components develop., design, fab. and appls. 71362
dual layer digital versatile disk pickup, nematic LC lens/diffractive optical elements 71227
excimer laser fab. of low cost DOE 71459
external cavity diode laser, single mode wavelength tuning 105399
fab. for opto-electronic hybrid IS 104779
FIB direct micromachining, combined FIB/X-ray lithog. 71387
FLC SLM free-space opt. switch, computer-controlled adaptive beam steering 116837
float glass thickness meas., on-line DOE sens. meas. 124402
fluid shear stress sens. 120750
focusing grating couplers, rigorous 3D anal., spectral collocation method 104699
fuzzy controllers, opt. implement. 71452
HF gratings, DVD pickup systs. appls. 82069
high num. aperture diffractive lens vectorial effects 82269
high power beam shaping diffractive optics 117563
high-power DOE beam shaping 93923
high-speed EO ADC principle, tunable laser & DOEs 86448
hybrid diffractive/graded-index splitter prototype for fiber optics 116622
hybrid polymer-on-glass integrated DOE for wavelength discrim. 93162
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
integrat. with act. semicond. components 104747
inter-chip opt. interconnection, planar photonic cct. *(Japanese)* 117025
intra-cavity beam shaping DOE design/fab., laser material proc. appls. 72105
IR imaging, multiband opt. syst., DOE spectral filter 109641
IR-transparent opt. materials, kinoform elements fab., technol. principles 105601
IRFPA nonuniformity correction, diffractive lenslet array anal. 86621
large aperture beam smoothing DOE, hybrid optim. algm. *(Chinese)* 104856
large-aperture lightweight diffractive lens fab., astron. telescope objectives 116872
laser direct lithog. equipt., binary opt. elements mfg. *(Chinese)* 81147
LCD backlighting device, diffractive light extractor 82244
LED source diffractive optics appls. 116994
light field generation, 3D visualization 109571
MEMS feedback control, through-wafer opt. device monitoring 93209
MEMS uncooled thermal detector, opt. readout, FZP 109542
micro optics conf., Quebec City, Que. Canada, (June 2000) 100406
micro-opt. elements with arbitrary surfaces, fab. techs. 104797
micro-opt. elements with arbitrary surfaces, fab. technols. 71363
micro-optic phase/DOE, excimer laser ablation 71385
micro-optics using total internal refl. for an opt. tracking sens., develop. 116786
microdiffractive lens/VCSEL integrat., FIB direct milling 71783
microlens array based free-space opt. switches, low loss single mode fiber interconnections 120352
MODAN DOE design for laser beam charact. real-time anal. 127875
MODAN-type DOE for transversal laser mode selection, commun. appls. 127874
mode-matching graded index fiber, diffractive vortex lens design 104668
MOEMS arrays, opt. interconnect appls. 93203
multicolor illum. compact RGB planar DOE beam expander 116727
multiplex imaging micro-optics/DOE design 116775
nano-3D struct. DOE plastic opt. modules, fab. proc. 127577
opt. metrology, 3D, diffractive optics 86963
optimum triplicator, full-wave anal. 93283
optoelectronic proc., parallel archit., local image proc. 129536
pass. IR detector DOE 116873
perform. prediction from microrelief profile meas. 82262
periodic diffractive flat-top generator, excimer laser beam shaping 93693
phased array beam steering with limited dispersion 117346
photonic digital CNN, morph. nonlin. & digital cellular proc. 102457
photopolymer holographic vol. gratings, laser cavity appl. 93885
polariz. insensitive planar integrated opt. switch 117495
polariz. sensitive diffractive optics integrat. with IR photodetector arrays 104748
prog. integrated opt. diffractive element 127790
quartz diffractive microlens arrays, small F no., opt. perform. study *(Chinese)* 82190
rapid prototyping, packaging appls. 128576
refr./diffractive micro-optics opt. interconnects 116770
resolved depth step color-coded opt. profilometry 75856
retinal scanning display DOE design/fab. 121118
semicond. laser, diffractive phase element prod. thick ring-shaped output *(Chinese)* 71876
semicond. laser integrated syst., testing with CCD camera 117272
seq. arranged aperture syst., coherent beam focusing 128358
subwavelength period binary phase grating color separator 132111
transfer into GaAs, direct-write electron-beam lithog., VCSEL integrat. 105400
ultrashort pulse control by struct. opt. elem., spatiotemporal propag. 93748
vortex lens light coupled GRIN fiber 71279
waveguide grating couplers, boundary var. method 104700
wide FOV array, integrat. with photodetectors 104855
X-ray opt. custom components, nanofab. for beamline expts. 76179
zone-plate-array lithog. fab. 104780
CO_2 indust. high-power laser, radially polarized beam generation 82489
Nd:YAG laser mode shaping DOE fab. 82727
Si diffractive microlens arrays, small F no., opt. perform. study *(Chinese)* 82190

diffractometers
see also X-ray diffractometers
fuel aerosol stream, drop av. diam. meas., diffr. method 109980
pico-femtosecond image-tube photography, quantum electronics 131989

diffusion
see also biodiffusion; chemical interdiffusion; diffusion barriers; electromigration; osmosis; permeability; reaction-diffusion systems; self-diffusion; surface diffusion; thermal diffusion; turbulent diffusion
3D electrochem. deposition diffusion-controlled growth 90521
anodically bonded interface, diffusion 91943
anthracene, reversible photodimerization in polymer layer, dyn. phase hologram recording 105588
azo containing photosensitive liq. cryst. polymer film, two-wave mixing 128442
brain MRI, nonlin. diffusion for interactive multi-scale watershed segmentation 87584
buried landmine/UXO chem. signatures, weather effects 76989
BVP, constrained domain functional variational optim. 67859
chem. amplified resist, contamination sensitivity 126544
chem. amplified resists, post-exposure delay effects 103549
colour images, anisotropic diffusion, scale-space techs. 73266
conf., disordered and complex systs., London, Eng. (Jul.2000) 78460
convection-diffusion two-point BVP, derivative approx. 124731
coupled diffusion systs. with localized nonlin. reacts. 101036
cryogenic detectors, quasiparticle diffusion over several mm 98036
diamond:N, synthetic crysts., implanted N redistribution 126322
diamond, ion implant. related defects, inhib. of light element diffusion 115557
discrete FEA method for free boundary diffusion problem with absorpt. 114156
discretized degenerate diffusion procs., commun. struct., Lyapunov exponents approx. 78821
edge protection, noise suppression by anisotropic diffusion, anal. model 73525
EHV XLPE cable joints, semicond. interface dielec. strength, diffusion method *(Japanese)* 99389
electrostatic micro actuator fab., p^+ Si cantilevers, opt. devices *(Korean)* 123707
epoxy material, water and polymer chain mobility 114456
exact solns. to nonlin. diffusion eqns. obtained by decomp. method 101059
Fisher inform., irreversible phenom., stat. mech. 105992
front-end, single-wafer diffusion proc. for advanced 300-mm fab. lines 67523
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
high-temp. microwave proc., review 100327
hydrogen ventilation in batt. rooms for recombining VRLA batts. 89113
hydropower syst. flood control, stochastic approach 88636
ICP resist stripping, proc. modif. to avoid low-k dielec. film damage 69867
image segmentation, regularized EM algm. 73265
integrated sens. silicon elastic props., model *(Russian)* 75407
light pulse irrad. MEMS, defects/impurities migration 127089
locally integrable drifts, invariant measures, Khasminskii's theorem generalisation 124522
microelectronic solders, diffusional coarsening modelling 113713
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 115077
MOSFET impurity conc. profiles extraction by DCIV method 115938
MOSFETs, sub-50 nm, ultra-shallow jn. technol. for device design 103886
MQW laser mode charact. 117238
nanolithography, resist materials, metal binding SAM 92263
NMOSFET plasma induced gate charging damage, source/drain jn. role 103865
oil-impregnated pressboard, moisture diffusion, interdigital sens. 127246
OLED controllable doping, thermal transfer approach 86806
opt. fiber coating diffusion modelling 127676
organic EL device prep. using Sr electron injection layer *(Japanese)* 71571
organic LED dark spot growth behavior anal. by diffusion react. theory 93400
organosiloxane polymer, low dielec. const., metal drift behavior 115458
oxygen ion conductor, cation demixing, oxygen pot. gradient, SOFC 89220
p^+-n jns. form. by solid diffus. source, N_2O activation treat. impact on charact. 69654
parab. distributed systs., sens. structs., regional detectability 75437
PEFC electrodes, perform., diffusion layer charact. 89180
photorefr. medium, nonlin. unidirectional coupler with diffusion nonlin. 82162
plate de-icing in cold cross flow by hot fluid injection through slot, aircraft appls. 88026
PMMA microlens, proton irrad. and styrene diffusion 127816
PMOS device, N implant., gate oxide, B penetration 103208
polymer electrolyte membrane fuel cells, carbon aerogel integrat. 89187
polymer light-emitting devices, emission color patterning, maskless dye diffusion tech. *(Japanese)* 71566
polymer-coated fused silica opt. fiber humidity sens. 97310
polysilicon gate HfO_2 MOSFETs, dopant penetration effects 126778
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, contact resist. 102185
polystyrene latex mixtures, photodetectors for heterodyne direct light scatt. instrumentation 131908
PPV thin films, vapour phase fuming sulfuric acid-doped, humidity sens. 109489
proc. tomography, fluid dyn. models/state estim., flow fields inaccuracies effect 106505
reson.-cavity enhanced photodetector, impulse response, diffusion 75536
sapphire:H^+,Er^{3+}, waveguide fab., ion doping, moderate temp. diffusion technols. 127726
semi-Markov diffusion proc., first exit point, distrib. dens. 124510
semicond. component, high-power microwave pulse-duration damage effect *(Chinese)* 81165
semicond. device, implant profile, AFM/SCM imaging 103255
semicond. devices, energy drift-diffusion model, stationary solns. 103742
semicond. mfg., SEMY Statistical Machine Control 100725
semiconds., hydrodynamic/drift diffusion models, init. boundary value prob. 79062
series VRLA batts., state-of-charge bal. 89114
silicide films form. on Si, low-energy MD simul. 69999
sillenite photorefr. crysts., two-wave mixing, diffusion recording 127571
single mode opt. fibers, water diffusion, absorpt. loss depend. 116631
single-mode fibers, prod. proc., water diffusion, loss meas. 116632
Smart-Cut proc. for thin film transfer, generic nature 103276
STI, narrow device, stress and dopant redistribution effects 103389
supercond. magnets, static fringe field, NMR diffusion techs. appls. 82005
thick-film multilayer MCM-C interconnection using diffusion patterning technol. 67645
thin Si containing polymer films, two fluorinated ionic PAG diffusion/distrib., RBS, SIMS 92244
ultra-high-intens. mag. field gradient pulses for NMR spectrosc. 123636
ultra-shallow jn. form., ion implant./RTA 115531
UXO detect., explosive vap. diffusion in snow, modelling 76990
wide range coord.-sensitive photodetector, laser controlled 75546
wire bonding, robust bond model, proc. implement. 69372
XLPE cable, insulation/semicond. interface improvement, diffusion method *(Japanese)* 99374
Ag/$YBa_2Cu_3O_{7-\delta}$ thin film contact, contact resist., Ag morph. 102495
AlF_3 thin films growth on GaAs(110), struct. and chem. stabil. 114403

diffusion continued
As-S(Se):Ag(Au) amorph. films, electron irrad. refr. index change 103070
$As_{50}Se_{50}$ amorph. thin films, Ag/Au metal coated, electron/photon induced me diffusion 93296
Au, SPE growth, ion beam induced epitaxial crystalliz. 90530
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS techn modeling/appl. 126080
$BaTiO_3$ epitaxial film capacitors, improved ferroelec. hysteresis by 2-step depo tion 92776
C fibers, PAN-based, electrochem. props., rechargeable Li ion batt. anodes ap 99897
CO_2 high-power diffusion-cooled annular lasers, split-electrode config. stu 105111
CS_2 anion diffusion in neg. ion TPC 87204
CdZnTe substrs., IR absorpt. behavior, annealing 91671
CeO_2:SrO, fuel cell electrolyte, electrochem. stabil. 112831
$CoCr_{15}Pt_{13}$ perp. recording media, high M_r sq. and exchange decoupled 1162
Cr^{2+} doped polycrystal ZnSe mid-IR laser 82615
Cu electrodeposition in presence of additive, simul. of shape evol. 90502
GaAs, cryst. struct./inhomogeneities, γ-ray irrad,. props. effects, detector ap 91646
GaAs grown on Si, passiv. of disloc. by phosphine plasma exposure 69833
GaAs large diam. wafers, RTA tech., dopant diffusion/slip form. minimisati 115487
GaAs:Si,Be MBE growth, compensation 68196
GaAs/AlGaAs QW, proton implant. 93590
GaAs-AlGaAs QW laser struct., atom migration, SIMS study 93609
GaInAsN solar cells, electron diffusion length modelling 112945
GaInNAs QW, VCSEL, elemental solid source MBE 103134
Ga(In)NAs films, rf plasma MBE, VCSEL appl. 124848
GaN, ion-induced damage propag., enhanced diffusion, PL 69531
GaN:Au, ion implant., thermal annealing 81010
GaN:Be,H, Be doping, first-principles studies 91970
GaN:Er(,O) epilayers, implant. and high temp. RTA 69780
GaP:^{73}As, implant., diffusion study 126278
$Gd_3Ga_5O_{12}$:Nd^{3+},Cr^{3+} laser single crysts., CZ growth, dopant conc. control 791
Ge wafers, ion-implanted B diffusion 126305
GeO_2 impurity single mode opt. telecomm. fiber, arc fusion splicing 116636
HgCdTe, MBE growth, In doping, IR FPAs appls. *(Chinese)* 91966
$Hg_{1-x}Cd_xTe$ very LW IR photodiodes, current mechanisms 93369
$Hg_{1-x}Cd_xTe$:As, p-type dopant activation kinetics 91989
In(As)P:Zn, MOVPE based Zn diffusion, diffusion depth, hole conc. 127952
InAsP:Zn/InP(InGaAs) heterostruct., doping, photodiode appl. 115553
InP HBTs, end-of-life reliab., RF modelling 115851
p-InP:Zn, plasma-induced defects, elec. props., migration mechanism 11531
InP/InGaAs abrupt HBTs, Monte Carlo and extended drift-diffusion simul., com parison 81213
InP/InGaAs abrupt HBTs, comparison between Monte Carlo and extended dri diffusion models 70037
$K_xMn_{1-y}Co_yO_2$ reversible cathodes stabilisation, Li secondary batts. 123754
Li intercalation in porous carbon electrode, modeling 99926
Li-ion secondary cells, composite electrode diffusion modelling 89116
$LiB_{1/6}Mn_{17/6}O_4$ cathode for Li ion batt., synthesis 99903
$LiCo_{0.5}Al_{0.5}O_2$ thin film batt. cathodes, Li-ion diffusion meas. 123753
Li_xMnO_2 for rechargeable lithium batt. appls. 99934
$LiNbO_3$, Ti diffused, opt. waveguide TE/TM mode splitter, optimum desig *(Chinese)* 82156
$LiNbO_3$, annealed proton-exchanged waveguides, quasi-phase-matched SH *(Chinese)* 128494
$LiNbO_3$:H^+,Er^{3+}, waveguide fab., ion doping, moderate temp. diffusion techno 127726
$LiNbO_3$(:MgO) opt. waveguide, proton exchange fab. 116686
$LiNbO_3$:Ti near-surface waveguide layers, struct., XRD 71336
$Mg_{0.5}Ti_2(PO_4)_3$ secondary cell cathodes, electrochem. Mg insertion 123739
$Na_xMn_{1-y}Co_yO_2$ reversible cathodes stabilisation, Li secondary batts. 123754
P diffusion for impurity gettering in mc-Si wafers prod. 91599
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. mo eling/appl. 126080
Pb-free solder foils, rapid laser-beam reflow 69315
PbSnTe:In epilayers, low-temp. diffusion annealing 91939
Pt/$SrRuO_3$/PZT/$SrRuO_3$/Pt, high endurance scalable capacitors 102771
Pt-$Ba_{0.7}Sr_{0.3}TiO_3$-Pt thin film capacitors, H_2/deuterium induced degrad. 10446
Si CZ-grown single crysts., finite difference anal. of radial P dopant distri 103264
Si, SPE growth, ion beam induced epitaxial crystalliz. 90530
Si bipolar transistor, emitter diffusion depth, $TiSi_2$ form. 103792
n-Si buried contact solar cells, passivated B emitters 100140
Si devices, time-depend. charge-collection efficiency for diffusion 126624
Si emitter wrap-through solar cell fab., Al-P-codiffusion 100138
Si for solar cells appls., modeling of H passiv. proc. 81080
Si, ion implant., dopant diffusion, SIMS 126298
Si, ion implant., dopant diffusion, amorphization, atomistic modelling 91964
c-Si, ion implant., point defect diffusion and clustering 81003
Si n-web screen-printed front-surface-field solar cells, gettering, passiv. 13438
Si photoelement, blue-purple light detect. 86508
n-Si rot. disk electrode, dissolution proc. in water/ethanol/HF solns. 92079
Si solar cells, RTP emitter diffusion in indust. proc. 100143
mc-Si solar cells efficiency, P, Al diffusion, RTP 100153
Si solar cells, proc. with porous Si texturing 100145
Si surface oxid., interstitial injection rate and boundary condition anal. 11564
Si, transit. metal impurities gettering simulator 92267
Si, ultra low energy implants, interstitial defects, TED 115509
Si wafers direct bonding, diffusion layers form. 103093
Si:As, implanted As redistrib., substr. temp., annealing ambient effects 11551
Si:As, near-surface damage annealing and ultralow energy implants elec. activa tion 126275
Si:As(Ge), anom. P diffusion during postarsenic-implant. annealing 69823
Si:Au, high-energy ion-implanted, vacancy evol., Au labeling 81030
Si:B, B diffusion, HI irrad. effects 115559
Si:B, B-interstitial Si clusters, interstitial supersaturation, postimplantatio annealing 102953
Si:B, delta-doped, proton irrad., influence of B conc. on enhanced diffusio 81015
Si:B, init. anom. diffusion in superlattice wafers at low-temp. annealing 12631
Si:B, laser thermal processed, annealing, B diffusion 115480
Si:B, sub-melt laser annealing, low temp. RTA, minimised diffusion 115483
Si:B, ultralow energy implanted B, TED 69800
Si:B(As)(BF_2), low-energy ion implant., high-conc. diffusion profiles 12631
Si:B(BF_2) PMOS transistor, source/drain extension implants comparison 11589
Si:B(Sb), diffusion of B and Sb under influence of injected point defects 11549

sion continued
:B,F implanted samples, TED reduction 115512
:B,He, B-cavity gettering, He implant.-induced 126323
:B,Sb, delta-doped, B irrad. enhanced diffusion 69801
:C ion-implanted epitaxial wafers, heavy metals gettering efficiency, TXRF obs. 69788
:Co,Cu, ion implanted, contamination, elec. props. 102959
:Cu, diffusion rel. to gettering, silicide retardation effects 125996
:Er, high dose channelled implant., temp./ang. effects 91971
Si:H films, H exposure, dangling bond creation and free H diffusion, in situ ESR obs. 91691
:H films, Smart-Cut proc., proton implant., wafer bonding 115524
:He(H)(O), uniform stress effect 115558
:O, O precip., RTA effects 80638
:O, annealed under hydrostatic press., O aggregation and thermal donors 115478
:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
:Sb, dopant behavior following 8 MeV C^+ ions irrad. 102985
-poly-Si/NIDOS/SiO_2/Si capacitor, boron penetration 103195
i/SiGe/Si HBT, GSMBE growth *(Chinese)* 81235
-/n-SiC, 4H, epilayers, Be implant., Be defect centers, DLTS 69595
iC, pulsed excimer laser proc. 72124
iC:Au, ion implant., thermal annealing 81010
iC:B related defects, struct./kinetics, ab initio method 69592
H-SiC:B, selective dopant diffusion through graphite mask and jn. charactn. 69813
iC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796
iC:H,Al, 4H, passivating H-Al complex, dissoc. energy 69589
iC:N^+,Al^+ buried layer implant., interstitial diffusion, internal stress effects 69816
iC:N,Al, ion implant., defect evol., internal stress fields effects 81012
iGe HBTs, TED suppression by buried carbon layer 92313
iGe, nucleation, comp. influence, LPCVD growth, free energy 114366
iGe:B(Sb), diffusion of B and Sb under influence of injected point defects 115492
$Si_{1-x}Ge_x$:B strained epitaxial layer, boron diffusion 103281
iGe/Si microwave HBT, reliab. 126678
$Si_{1-x-y}Ge_xC_y$, B TED 91980
-SiO_2 thin films, increased dielec. permitt. 92599
SiO_2 ultrathin films, thermal growth, ion beam anal. 92058
SiO_2:B, boron diffusion, p-channel MOSFET 80988
iOC, PECVD layer, chem. mech. polishing 115645
$Sm_{0.5}Sr_{0.5}CoO_3$ porous cathodes used in SOFC, mechanism 112830
Sn-O epitaxial films on sapphire, oxid., phase transits. and elec. props. 80744
Sn-Pb solder, coarsening proc., computer modeling 101471
$SrBi_2Ta_2O_9$(115) thin film, deposition from chem. soln., crown ether 101410
$TiO_{2-\delta}$, nanocrystalline thin films, low temp. reoxidation 103441
m:YAG diode pumped laser, 2 μm 82564
V_2O_5 thin-film batt. cathodes, Li ion diffusion meas. 123758
V/SiO_2/Si MOS capacitors, interface passiv. using at. H 69740
Zn and P diffusion in $In_{0.53}Ga_{0.47}As$ TPV cells and GaSb solar cells 113028
Zn intentional doping of Cu(InGa)Se_2 solar cells 100104
ZnSe:Al single cryst., phys. vap. transport growth/doping 101165
ZnTe:Cu thin films, struct. and opt. props., Cu soln. immersion immersion time depend. anal. 103283
$ZrCr_mFe_nCo_pV_o$ electrode for Ni-MH batts., electrochem. investig. 134355

usion barriers
at. layer CVD for metal nitride growth, dual damascene barrier requirements 90460
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effects 92140
bondpad peeling failure in wafer fab., AES/EDX studies 103949
Cu/Sn/Si syst., 3D struct. form./evol., AFM, AES, SEM, EDX 114307
nterconnects, conf., Burlingame, CA, USA (June 2001) 124180
LCD glass substrs. with different barrier layers, Na exchange 132104
low-k dielec. thin film pore charact., positronium annihilation lifetime spectrosc. 92601
methylsilane/trimethylsilane-doped low k PECVD organosilicate glasses, elec. props. 104233
methylsilsesquioxane film, low-k, chem.-mech. polishing proc. 103293
Nafion membrane methanol PEFC, plasma polymerised barrier film 134361
organic ion-implanted low-k organic SOG films, IC appls. 126466
penicillin detect., capacitive EIS & enzyme FET sens. 120942
semicond. proc. research, ionised plasma appls., review 115636
stack capacitor integrat. with buried O barrier using CMP of noble metals 127027
symposium, chem. proc. of dielec., insulators and electronic ceramics, USA (1999) 113276
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
thermally-enhanced rem. plasma nitrided ultrathin gate oxide, perform. 92359
AlN, CVD, monomeric chelated amides as miscible liq. precursors 124920
Ag/Al bilayer self-encapsulation proc. kinetics model 92180
Ag-epoxy conductive adhesive/Sn-Pb coating interface, high temp. degrad. mechanism 67561
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al plug CVD-PVD proc. for sub-0.25 μm devices, via filling/Al microstruct., underlayer effects 92171
Al/TiN bilayers, 111-textured, interfacial react. pathways/kinetics, XRD and TEM study 126479
Al/TiN_x/Si(100) thin film diffusion barrier syst., XANES obs. 80901
Al/TiN(001) epitaxial diffusion barrier, annealing, interfacial react. 91933
Al/ZrN/Zr trilayered film on Si, seq. single-oriented growth, contact syst. prep. 81127
AlCu lines, electromigration 69936
AlInAs/InGaAs HEMT, diffusing F atom suppression by PH_3 plasma treatment 115949
AlN(0001) blocking layer, self-limited wurtzite-struct., form at Al/TiN(111) diffusion barriers 69539
AlON diffusion barrier form. for Ag interconnect metallization 92179
Au/TiB_2/GaAs Schottky contacts, transit. layer, transverse bulk photovoltage 69712
$(Ba_{0.7}Sr_{0.3})TiO_3$ capacitors, RF sputtered, TiN barrier layer effects 101184
$CoSi_2$/Si(100) films, SPE growth, Co/a-Si/Ti/Si multilayer react. 114413
Cu ULSI metallization barrier layers, review 69930
Cu damascene interconnect sheet resist./line width meas., test struct. issues 103497
Cu damascene interconnection, SiO_2 dielec. barrier 115704

diffusion barriers continued
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92116
Cu dual damascene interconnect, ultrathin CVD barrier/seed 115698
Cu dual-damascene interconnects, sub-0.1 μm, barrier/seed technols. 115686
Cu electroless deposition, Pt-Ag/Al_2O_3 substr., IC packaging 124325
Cu electroless deposition on Ta/SiO_2/Si substrs., displacement activation 101421
Cu electroplated film, Cu/Cu/TaN/SiO_2/Si multilayer interfacial react. 81113
Cu interconnect, effective resist. 115703
Cu interconnect electroplating, seed layer surface RTA effects anal. 115489
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu interconnects, electromigration, confine. materials mech. props. effects 103459
Cu metallization, SiN diffusion barrier, NH_3 plasma pretreatment 126478
Cu metallization, improved diffusion barrier by stuffing TiN grain boundaries with Al interlayer 126475
Cu metallization, refractory metal carbide diffusion barriers 115695
Cu seed layers, organic soln. deposition on barrier metals 92185
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
Cu/$(HSiO_{3/2})_x$/Si, sputtered Cu films, thermal reacts. 92134
Cu/CVD SiOC dual-damascene interconnect, electromigration reliab. 115710
Cu/Cu/TaN/SiO_2/Si multilayer, interfacial reacts., electroplated Cu props. 81122
Cu/SiLK metallization, TaSiN diffusion barrier 115696
Cu/SiO_2/Si, sputtered Cu films, thermal reacts. 92134
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu/Ta/Si(111) thin films, neg. bias sputtering for Ta silicidation retardation 92136
Cu/Ta/SiO_2/Si films, Ta diffusion barrier layer oxid., thermal annealing 69935
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu/$TaC_x(WC_x)$/Si metallization/diffusion barrier syst., anal. 115676
Cu/TaN_x/Si multilayers, interfacial reacts., residual oxygen effects 103321
Cu/TaN/SiO_2/Si multilayers, struct. integrity, IMP-deposited nitride thickness effect 92099
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu/low-k submicron interconnect structs., thermal stresses charactn. 126458
Cu-Al alloy/SiO_2 interfaces, evol. during bias temp. stressing 91909
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-SiO_2 dual-damascene interconnects, electromigration early failure stats. 81134
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
Cu-Ta-based multilevel interconnects, CMP 103479
Cu-TiWN multilayer interconnections, electromigration 81117
Cu-W-Si , selective MOCVD on AZ 5214-patterned substrs., IC metallisation 69952
CuAl-SiO_2 barrier/adhesion promoter-ILD interface microstruct., charactn. 103461
n-GaAs MESFET ohmic contact, TiN diffusion barrier, reliab. *(Chinese)* 81378
GaAs MESFET, ohmic contact, TiN diffusion barrier layer 115426
GaAs bulk resistors for MMIC appls., highly accelerated stress failures 69266
GaAs/TaN/Cu MESFETs, backside metallization using TaN as diffusion barrier 70194
p-GaN:Mg/Pd ohmic contact, Au diffusion barrier, elec. props. 80919
p-GaN/Pd contacts, elec./microstruct. changes, surface treatment 69716
H-silsesquioxane low-k dielec. material integrat. with TiN/TaN/W_2N thin film barriers 92181
ITO/polysilicon contacts with In & Sn diffusion barriers, TFT LCD *(Korean)* 115437
InAsP:Zn/InGaAs:Zn, MOVPE based Zn diffusion, diffusion depth 127952
InGaN/GaN MQW, In aggregation, phase separation, HRTEM 91835
Ir films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
IrO_2 films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
IrO_x/PZT/Ir capacitor, ferroelec. memory, hydrogen sensitivity 81765
N ultra-low energy ion implant. from rem. plasma source, Monte Carlo simul. 115520
Nb_3Sn supercond. by powder in tube proc., Ti and Ta addits. 70571
Ni-P electroless UBM-solder interface, Ni-Sn intermetallics,joint reliab. 113715
Ni-Ti shape memory thin film, growth & charactn. 116065
NiFe based spin valve struct., diffusion behavior 81846
PZT thick films, deposition on barrier layer covered stainless steel substrs. 101437
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
Pt/$SrBi_2Ta_2O_9$/ZrO_2/Si ferroelec. gate oxide struct., elec. props. 69755
Pt-M (M=Rh,Ir), electrode-barrier structs. for high dens. ferroelec. memories 81783
$PtRhO_x$/PtRh/$PtRhO_x$ electrode-barrier struct. for high dens. FRAM 70463
SBT/Al_2O_3/Si heterostruct., PLD, ferroelec. props. 114370
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buried diffusions 91391
c-Si thin film solar cells, substr. prep., APCVD growth and charactn. 89295
α-SiC, 4H, intrinsic defect complexes, antisite pairs form., charge self-consistent, DEFT, LDA 69591
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
a-SiC:H dielec. diffusion barrier, Cu interconnect 115721
α-SiC:H low-k dielec., diffusion barrier, Cu dual damascene proc. 81111
a-SiC:H low-k diffusion barrier, Cu interconnect 115705
SiO_2:N PECVD layer, ion implanted, barrier to Cu metallization *(English)* 103451
SiOCH low-k copper barrier films, PE-CVD deposition using HMDSO, N_2O and NH_3 126446
SiOCNH low-k copper barrier films, PE-CVD deposition using HMDSO, N_2O and NH_3 126446
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Sr/SiO_xN_y/Si(100) nanostruct., interfacial chem., XPS/SIMS obs. 126228
Ta/TaC diffusion barriers for Cu metallization on Si, reliab. 91877
Ta-C-N film, sputtered, charactn. in Cu/barrier/Si contact syst. 115674
a-Ta-nanocryst. RuO_x diffusion barrier for lower electrode of high dens. memory devices 69958
TaC_x sputtered films as diffusion barriers for Cu metallization 126471
TaN CVD diffusion barrier for Cu interconnects 92166
Ta(N) diffusion barrier, I-PVD, step coverage and continuity 115699
TaN diffusion barrier against Cu diffusion, perform. eval. using SIMS/AFM 69939
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
TaN film, RF sputtered, struct./elec. props. 101187
TaN, zero thickness copper barrier, at. layer deposition 115697
TaN_x, diffusion barrier on polymer dielec., growth. low energy N ions effects 68375

diffusion barriers continued
Ta_2N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
TaSiN ultra-thin diffusion barriers for Cu metallization, high-resoln. EDS anal. 115693
a-$TaSi_xN_y$ films, reactively sputtered, diffusion barrier layer against Cu 80913
Ti nitride thin films, low temp. CVD with hydrazine and tetrakis-(dimethylamide)titanium 124921
Ti/low-k H-silsesquioxane and Ti/TEOS struct. at elevated temps., comparison study 92182
Ti-Al diffusion barrier layers, thin film growth and oxid. procs. 92109
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvement, reservoir modeling 81132
Ti-Si-N films, RF reactive sputtering deposition characts. 68142
Ti-TiN long throw/ionized PVD liners for W-plug contact/via appls. 103469
$TiAl_3$ interfacial growth, in-situ TEM obs./num. simul. 103462
$Ti_{1-x}Al_xN$ barrier layer, narrow reson. profiling, oxid. 104283
$Ti_{1-x}Al_xN$ barrier, reactively sputtered, ^{18}O study of oxid. 126484
TiC sputtered diffusion barrier for Cu metallization, thermal stabil. 103490
TiN MOCVD diffusion barrier, CVD W integrat. 126470
TiN PVD gate thermal stabil. under RTA, impact on CMOSFET charact. 104128
TiN barrier props. during two-step annealing for (Ba,Sr)TiO_3 dielec. film 92662
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
TiN barriers for high-k capacitors, simul., expt. results 68253
TiN diffusion barrier, Cu MOCVD, plasma pretreatments effect 92112
TiN diffusion barrier, at. layer deposition method for Cu metallization 103482
TiN films, ECR plasma sputter deposition and charactn., diffusion barrier appls. 79219
TiN films, surface nitriding, H impermeability 92066
TiN_x, diffusion barrier on polymer dielec., growth. low energy N ions effects 68375
TiN/Al/TiN/SiO_2 metallization, void-containing interconnects, local Joule heating 69933
TiN/Si textured layer form. by metal PIII/deposition 114408
TiN/SiO_2/Si syst., film thickness, opt. charactn. 91886
$TiWN_x$, selective etching, electroplated Pb-Sn solder 113533
W/TiN/Ta_2O_5 gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
W/TiN/Ta_2O_5/Si syst., Ta_2O_5 gate dielec. degrad. 81647
W/W_2N/WO-based thin film CVD using volatile liq. precursors 90462
W/WN_x/Ta_2O_5 gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 70306
W-ZrN-polysilicon gate electrode config., ZrN barrier thermal stabil. 81115
WC_x diffusion barrier for Cu metallization, thermal stabil. 103467
WC_x diffusion barrier/Cu metallization syst., phys./elec. props. 81109
WC_x sputtered films as diffusion barriers for Cu metallization 126471
WN_x reactive sputter deposited barrier thin films, stress/microstruct./thermal stabil. 91878
ZnSe/GaAs interface, thermal element diffusion, SIMS anal. 69632
metal/Ta_2O_5/Si gate devices, elec. characts./thermal stabil. of W, WN_x, and TiN barriers 91910

diffusion creep
polycryst. solids, stress-driven mass transport, lattice-based micromechanical continuum formulation 69940
Cu damascene interconnect, polymeric dielec., nanoscale deform. 115694
Si, polycryst. materials struct./props., simul., interfacial perspective 102964
$SrCo_{0.8}Fe_{0.2}O_{3-x}$ creep behavior, SOFC 123798

diffusion in plasma *see plasma transport processes*

diffusivity *see diffusion*

diffusivity, thermal *see thermal diffusivity*

digital-analogue conversion
see also analogue-digital conversion; delta-sigma modulation
4 digit CMOS quaternary to analog converter with current switch and neuron MOS down-literal cct. 80009
20-bit DAC, design options, stds.-lab perform. 114823
ADV719x family video encoders, oversampling, digital noise reduction 73381
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
array nonlin., mitigation 96990
audio appls. of D/A converters, sigma-delta conversion techs. 80012
benchmarking for commun. appls., syst.-oriented approach 108572
BiCMOS multicarrier QAM-modulator for WCDMA basestation with on-chip D/A converter 101872
BS digital tuner unit for CATV syst. *(Japanese)* 131753
calibrated harmonics tracking generator, internal DSP & DAC 101851
CMOS current steering DAC design, stat. methodology 102290
CMOS DAC, 14 bit, low power, current steering archit. 90971
CMOS DAC, 8 bit, high-speed current switching, design 102278
CMOS DAC, high-speed current domain design *(Chinese)* 80015
CMOS DAC, low-glitch interpolation cct. 102275
CMOS DAC cell with ultra high gain op-amp, 10 bit, 1.8 V 79982
CMOS digital controlled oscillator 101836
CMOS digital freq. synthesizer 101817
CMOS op amp design for mixed sig. LSIs *(Japanese)* 70314
CMOS R-2R ladder D/A convertor, integral nonlin. anal. 114822
CMOS SC segmented DAC, clock jitter induced distortion 79993
color images, blind/readable watermarking 95059
correlative zero-phase fund. component notch filter for power sigs. 112082
current division network, 10-bit, stat. design, MOSIS 2-μm proc. 125582
current-steering macrocell, VLSI integrated syst. design 68873
differential bipolar quasi-pass. cyclic CMOS DAC 102303
dyn. output charact., resoln., data interfaces 80016
FROST, low-noise high-rate photon counting ASIC for X-ray appl. 68876
glitch minimization and dyn. element matching techs. 68865
high-resoln. mismatch-shaping DACs, low-complex. digital encoder config. 79994
high-speed current cell matrix CMOS DAC design and charactn. 114813
LF mag. flux dens. meas., sens. network design & control 131878
lin.-coded DACs, encoder design aspects 79996
low power CMOS 10 bit DAC for high speed appls. 102302
meas. systs. with combined analogue input/output facilities for practical education 75373
MEMS DAC, weighted-stiffness, FEA 81573
meteorological radar, digital sig./image proc. 106834
mixed-sig. IC testing, lin. model 102417
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
nonlin. error modulation, spectral shaping 90989
Nyquist-rate DAC archits. comparison 114824
photonic data conversion for ultrafast ADCs and DACs 68856

digital-analogue conversion continued
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
plug-in cards for Personal Computers *(German)* 68861
polysilicon TFT LCD data driver output buffer, VGS compens. source follow 86854
polysilicon TFT-LCD, low-power 8-bit digital data driver 86885
polysilicon TFT-LCD for mobile PC XGA display 79645
resistor matching charactn. for mixed-sig. proc. develop. using DAC 102430
resistor string DACs, design techs. for intrinsic accuracy improve. 79979
ROM-less direct digital freq. synthesizer using segmented nonlin. DAC 1018
ROTOR VLSI proc. optim. 121708
S/H distortion, anal. compens., monotonic & equiripple approx. 86449
segmented sine wave DACs for freq. synthesizers 79995
SINIS Josephson jn. chain, digital-analog converter 81985
SoftCell™, multi-carrier chip-set for software definable radio base-statio 74669
software defined radio prototypes for multimode operation 108729
static nonlin. testing of D/A converters, bit intermodulations 114828
third-generation CDMA wireless handset transmitter design, quantization issu 74754
up/down conversion by sampling *(English)* 73585
wide-range digital controlled current generator 109832
Nb supercond. SFQ pulse cct., voltage multiplier 70847

digital arithmetic
see also adders; carry logic; coprocessors; counting circuits; distributed arithmetic; dividing circuits; fixed point arithmetic; floating point arithmetic; multiplying circuits; pipeline arithmetic; redundant number systems; residue number systems; roundoff errors
2D digital filter stabil., Fornasini-Marchesini second model, overflow nonli 68935
3D vector radix algm. for 3D new Mersenne no. transform 73212
AC machine control algms., optimized IC design studies 133927
advanced sig. proc., conf., San Diego, CA, USA (Aug. 2000) 89565
alg. fns., bounds on runs of zeros and ones 79653
all-opt. digital matrix multiplication scheme with nonlin. material 127864
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 7546
asynchronous ccts. and systs., conf., Salt Lake City, UT, USA (March 200 78399
binary multiplication radix-32 and radix-256 79858
binary representation of complex nos., efficient division 79646
bit-parallel bireciprocal lattice WDF, arith. transforms. 91098
bit-parallel systolic modular multipliers 79861
bit-parallel systolic multiplier, GF(2^m) finite field 102066
bit-parallel systolic multipliers for GF(2^m) fields defined by all-one and equal spaced polynomials 79836
bit-serial arith. cct. evol. synthesis *(English)* 79851
bit-serial multiplier, low-power, GF(2^m) finite field 102020
cct. design, evol. graph generation syst., transmigration capability 102106
cct. evol. using. GA 79760
CMOS cpd. mode logic based high perform. 32×32 bit multiplier desig *(Korean)* 114698
CMOS domino logic ccts., mixed-swing methodology for MAC implemen 102118
CMOS multiplier, 32×32-bit design with sign select Booth encoder 90850
CMOS VLSI digital cct. low-power design 70302
column compression multipliers 79859
computer arith., conf., Vail, CO, USA (June 2001) 79651
computer arith. for media sigs. proc. 90807
CORDIC based FFT proc. for biomedical sig. proc., FPGA realization 1206
CORDIC proc., dyn. cct. specialization 90841
CORDIC proc. design for mixed-sig. A/D conversion 114819
cryptographic scheme, modular exponentiation on fine-grained FPGA 12546
cryptology, INDOCRYPT 2000, conf., Calcutta, India (Dec. 2000) 78450
cryptosystems based on real quadratic no. fields 129324
cube rooting, digit-recurrence algm. and logic cct. implement. 68767
DAB syst., FFT proc. 109348
design of digital filters with low power consumption 114879
DFT, DHT, DCT, and DST, VLSI array archit. 118894
digital filter synthesis based on min. signed digit representation 125615
direct-form IIR filter, modified delta operator, roundoff noise perform. 9109
DNA tilings, computation by self-assembly 69353
dyn. reduced sig. representation low power FIR filter design 114884
efficient fn. approx. for embedded and ASIC appls. 125190
elementary fns. eval. in multiprecision arith. *(French)* 67925
ellipt. curve cryptography, compact encoding of non-adjacent forms 106280
ellipt. curve cryptosystems, fast algm. for short Lucas chains comput. 72974
embedded video coding engine, archit. and design 106959
extended precision logarithmic arith. 102016
Farrow struct. based 1D and 2D FIR filters, variable cutoff freqs., design 9100
fast low-power charactn. of arith. units in deep-submicron CMOS 102115
fast Viterbi algm., new archit. 73742
few adder multiplier design, graphical methods 107480
FIR filter design, freq. response masking struct. with reduced complexity 9100
FIR filter VLSI implement., bit-level optimized carry-save addits. 114874
FIR filters, tradeoffs between RNS and two's complement syst. types 80110
floating point CORDIC proc., low power, behavioural synthesis 68822
FPGA struct. for const. coeff. multiplication *(Polish)* 114713
FPGAs, sine/cosine fns., table-based methods comparison for low-precision eva 90876
high-resoln. phase sampled interferometry using symm. no. systs. 131705
high-speed bit-parallel systolic multipliers for class of GF(2^m) 125409
high-speed Booth-algm.-FIR archit., A low-complexity 102402
IEEE SOUTHEASTCON conf., Clemson, SC, USA (March-April 2001) 7846
joint module selection and retiming with carry-save representation 114737
Koblitz curves of genus two, arith. speed up 129311
lattice filters, implement. using four operands real-multiply accumulation 689
LDI/LDD all-pass lattice filters, computational props, FPGA implements. 910
lin.-phase FIR filters, optim. using freq. response masking approach 80103
logarithmic no. syst., low-power props. 79956
logic ccts., formal verification, recurrence eqns. & equivalence checking 6870
long integers, optimised squaring, precomputed partial products 83968
low power arith. ccts., design method *(Japanese)* 79763
low power consumption arith. units, Plastic Hard Macro Technology *(Japanes* 79764
low power-delay-product multiplier with dyn. operand exchange 68782
low-complexity cellular archit. for performing inversion and divisions 12541
low-power design, use of residue and logarithmic no. systs. 114690
low-power shared division and sq.-root archit. using GST algm. 125425

ital arithmetic continued
mAgic-FPU and MADE, customizable VLIW core and modular VLIW proc. archit. description environ. 114801
Mastrovito multipliers for general irreducible polynomials, systematic design 90881
mech. checked proof of IEEE compliance of floating point arith. of AMD-K7 proc. 90932
modular exponentiation coprocessor in mobile telecomm. terminals 102209
Montgomery exponentiation with no final subtractions 106238
Montgomery multiplication, scalable algm. and implement. on coarse-grain reconfigurable chip 129291
Montgomery multiplier and sq. in GF(2m) 106236
multi-bit binary arith. coding 94268
multi-dimens. logarithmic no. syst. in DSP appls. 79957
multi-radix approach to asynchronous division, data-depend. computation time 79777
multidimensional sig. proc., 3D DHT, 3D vector radix algm. 129960
multiple operand redundant binary adder design, MOSFET technol. *(Japanese)* 114706
multiplicative inverses, cryptographic appls. 83967
multiplier design, graphical methods, digital filter appls. 101881
multiplier recoding tech., high-speed parallel multiply-accumulate archit. appl. 90853
multiplier-block based FIR filter structs. implement. on FPGA, transit. anal. 68936
multiplier-less IIR filter synthesis algms. to trade-off delay and no. of adders 91080
nonlin. sig. proc. using index calculus DBNS arith. 95640
oblivious digital watermarking scheme with blob-oriented spatial-domain mechanism 107033
online arith. for detect. in digital commun. receivers 85902
optim. of digital filters over canonical signed-digit no. space using genetic algms. 91090
optimized squaring with sliding windows 101874
optoelectronic proc., parallel archit., local image proc. 129536
parallel modified signed-digit algms. for division/sq. root/logarithmic/exponential fns. 104846
parallel multiplier archit. for low-power design 90871
parallel prefix adder design 79864
parallel saturating multioperand adder design, GSM speech coders 131019
parallel-prefix modulo 2^n+1 adders for diminished-one operands 79863
periodic orbits realisation of Bernouilli shift map in digital computer *(Chinese)* 114836
phased logic, arith. ccts. 125451
pipelined logarithmic no. syst. ALU, low power design 90872
planar waveguide devices, all-opt. no. representations and logic ccts. 127863
prefix computation and addit., optimal-depth ccts. 102084
quaternion arith., FORTRAN 90 extension, literate-prog. 117612
quotient-selected modified signed-digit division algm., optoelectronic implement. 104844
radix-2 online division using LSA organization 79865
real-time image proc., convolution operation implemented in FPGA 129586
reciprocal approx. theory with table compensation 90877
recursive digital filters, multiplierless implement. based on coeff. translation methods 91081
recursive multiplier 102082
redundant binary adder-subtractor representing each digit by hybrid 2 bits/3 bits *(Japanese)* 79774
reusable direct digital freq. synthesizers, VHDL-based design/design methodology 125585
RMS responding LCDs, restricted patterns display controller 97717
RSA cryptoprocessor, Montgomery algm. 106244
RSA implement. on systolic archit. 106284
RSA secret exponent digits distinguished by observing modular subtractions 129346
scalable and unified multiplier archit. for finite fields GF(p) and $GF(2^m)$ 106237
second-order digital filter with two's complement arith., periodic behaviours 125610
secure server-aided signature generation 106282
serial-parallel multiplier 114692
serial-serial multiplication, systolic archits., FPGA based implement. 90851
sigs., systs. and computers, conf., Pacific Grove, CA (2000) 100407
systolic serial sq. for continuous operation 114701
TI MSP430x33x microcontrollers, implement. of ellipt. curve cryptosystems 106281
timing attack against RSA with Chinese remainder theorem 106227
true single phase clock style, scalable counter archit. for pre-scaler 102024
ultra low-power DSP arith., data-dependencies, asynchronous appls. 125543
unified reconfigurable arith. proc. design, array size/bitwidth trade-off 79935
unsigned/two's complement saturating multipliers 90875
video compression using integer DCT 95209
Viterbi decoders, high speed add-compare-select scheme 114733
VLSI advanced research, conf., Salt Lake City, UT, USA (March 2001) 67360
VLSI systolic cct., $GF(2^m)$ iter. division algm. 102019
vMOS-based compressor design for parallel multipliers 68749

gital audio broadcasting
AM band DAB, RS decoding algms. 120508
Astra Digital Radio, high-quality digital audio transm. 75289
Bleustein-Gulyaev-Shimizu/shear horiz. SAW resonator filters using edge refls. 92711
blind/semiblind channel equalization for wireless broadcast channels 73845
Canada, LMCS field tests 74612
chipset develop., real-time rapid prototyping approach, behavioral synthesis 79743
component-based freq. spectrum mgt. software, implement. 85445
coverage prediction and meas. of location variability 83286
D-FIRE 2, combined DAB/FM receiver SoC for receiver chipset 120529
DRM syst., digital AM defn. and field-testing 75270
European digital broadcasting introduction, computer support 86303
European in-vehicle traffic IS 120515
FEC block, low-complexity design 109347
FFT proc. 109348
FM band terrestrial DAB, soft selection combining 120507
future prospects overview 75285
list Viterbi algms. for continuous transm. 72897
MPEG-4 digital multimedia broadcasting appls. 119786
multichannel audio coding, DAB and DVB appls. 94403
multichannel audio programme metering 118067
network ensemble planning, problems and techs. 120514

digital audio broadcasting continued
nonstationary satellite systs. DAB 75269
OFDM, 2D differential demodulation 72733
OFDM based on multicarrier PLL, freq. offset tracking 106031
OFDM syst., coarse freq. offset estim. 109343
OFDM syst., coarse freq. offset sync. 75266
OFDM-based DAB receiver, low-complexity freq.-offset sync. tech. 109360
PC-based receiver for Eureka-147 DAB 120520
quantization index modulation, digital watermarking and inform. embedding 72779
real-time occurrence monitoring, sound stream charactn. 109356
receivers, Panasonic MN66720 baseband decoder *(German)* 120518
RF single-chip front-end for digital sound broadcasting 120511
satellite digital audio radio services and digital terrestrial broadcasting 97044
single freq. network planning/coverage prediction, meas. based software design 86294
single freq. networks, local coverage probab. estim. 109355
telecommunications and broadcast networks, convergence 85701
terrestrial broadcasting, mobility/interactivity saviour 75281
transit. problems, concepts, future trends 109357
Webcasting, broadcaster's perspective 74317
WorldSpace, direct satellite DAB to bridge digital divide 120099

digital audio discs *see audio discs*

digital cash *see electronic money*

digital circuits
see also adders; decision circuits; digital filters; digital integrated circuits; digital phase locked loops; direct digital synthesis; pulse circuits; switching circuits
2/3 divider cell using phase switching tech., prescaler appl. 90857
block-level cct., fault diagnosis, neural network *(Chinese)* 114670
Boolean alg., converter ccts., min. memory vol. 102012
CAT-5E modular jack for high-speed differential sig. interconnection, crosstalk noise reduct. 91445
current transducer, nonHall effect device 120718
design teaching, prototyping hardware/software environ. 124276
differential interconnects, charactn. from TDR meas. 125868
DSP syst., coverage-directed generation of syst.-level test cases for validation 101930
dual stripline params. for multilayer PCB design 125650
equivalence checking of digital ccts. in indust. environ. *(German)* 114671
finite digital sync. ccts., 2-alg. truth tables characterisation 90863
higher-order digital differentiators, anal. least-sq. design 107548
integer multiplier, ultra-high precision, modularization *(Japanese)* 102096
mixed-sig. PCB partitioning/layout 115126
MUROS-1 med. imaging pixel detector read-out syst. design anal. 122155
neurofuzzy networks 102474
phase freq. detector for clock recovery PLL 68889
PIV syst., online adjustable digital pulse synchroniser 120919
recursive digital sinusoidal oscillator with uniform freq. spacing 90998
sig. probab. calc. in Boolean fns., graph oriented realization 68678
single-ended and differential impedance eval. in PCBs 80484
Sp2V, post-layout spice simul. accel. using Verilog gate-level modeling 114583
synthetic digital ccts., memory, structural anal. and generation 68667
unified simulator for analog/digital ccts. 125164
uniformly loaded PCB transm. lines, time jitter eqn. of NRZ sigs. 117725
universal digital clock smoothing tech., counting prognostication method *(Chinese)* 125586
upset probab. of digital ccts. 90621
wide-range digital controlled current generator 109832
a-Si technol., digital cct. stabil. 114859

digital communication
see also digital radio; digital television; ISDN; optical communication
32 kbits/s real-time/dual-direction video commun. syst. for wireless channels, perform. eval. 74637
640 Gbit/s WDM transm., spectral efficiency, short-period dispersion-managed fibre 75024
acoustic-based underwater commun., MAC protocol design 131623
adaptive channel equalization using class. trees 119188
adaptive DFE on systolic array archit. 119173
adaptive mixed-sig. narrowband interf. canceller for wireline transm. systs. 108514
adaptive threshold modulation used in pulse stuffing and pointer adjustment schemes 128974
Asia Pacific Conf. on ccts. and systs., Tianjin, China (Dec. 2000) 67378
ATM network CBR/VBR encoded digital video transport, performs. 84382
ATM networks, backward predictive congestion control using neural networks 96009
ATM traffic control, neural network training 96008
audio-visual programs cataloguing, metadata use *(German)* 131736
automatic channel equalization, digital data transm., embedded fuzzy control 96342
automatic modulation class, stat. moments/fuzzy classifier 72729
automation, drive technol. develop. 123909
backbone network QoS eval., end-to-end bit error ratio monitoring method 130596
band-limited digital transm. systs., timing jitter anal. 85127
bandlimited RZ sigs., WDM transm., dispersion-flattened transm. line 86043
bipolar spectral associative memories appl. 74080
blind adaptive optimum lin. cancellation for long code CDMA 73743
blind equalization based on fourth-order cumulants 130251
broadband hybrid fiber radio systs., opt. techs. for beamforming and MM-wave gen. 131347
broadcast-freq. relay stations, coupling loop interf. canceller 97056
BS digital broadcasting, multimedia home network systs., IP-based HSLAN *(Japanese)* 119791
capacity scheduling for data services over digital networks 119483
cascade coding for compressing broadband residue seqs. 72799
CATV, digital network testing 109370
CATV digital services 97070
CDMA techs. for embedding data in digital images 95066
channel equalization, probabilistic neural net equalizer 107713
channel estim./equalization, efficient multiplier-free implement. 73825
chaos based SS commun. systs. comparison 95737
chaos tracker, noncoherent detect. in digital commun. 91158
chaotic CDMA with FM differential chaos shift keying 107744
chaotic direct spreading seq., sync. scheme, transm. error correction *(Chinese)* 95741
Chinese integrat. into digital capitalism 74085
CMOS clock and data recovery cct. for serial link appls., 4 Gbit/s 125620

digital communication continued
CMOS DSP-based 10BaseT/100BaseTX Ethernet transceiver 108370
CMOS half-rate clock and data recovery ccts. for opt. commun. systs. 131420
CMOS MUX/DEMUX ICs using CML, 10 Gb/s, opt. link appl. 75038
COMETS 21 GHz advanced satellite broadcasting expts. 74890
commun. sci. for indiv./society, social systs. past/present/future 96074
compressed image transm. on fixed-rate digital channels 107050
Confused Document Encrypting Scheme modified for digital inform. hiding 118017
container mechanism for all-opt. network heterog. traffic transport 120323
covert commun. using digital phase modem, syst. trade-offs 72724
cpd. semicond. IC technols., appls. in high data rate opt. fiber commun. 131389
data transm. filter with high time jitter immunity, design 73687
DAVIC-compliant digital commun., high-speed coded QPSK transmitter LSI 109344
dedicated access line, value added integrated telecomm. services 96011
differential chaos shift keying, multiple access tech. 94240
differential chaos shift keying scheme with chaotic polyphase seqs. 94256
Digital Link, high-functional digital monitor interface 86886
discrete multitone commun. with principal component filter banks 128993
DSP-based chaotic commun. syst., low-cost implement. 119456
DWDM, opt. sources & dielec. filter type MUX/DEMUX charactn. 86053
DWDM transm. using directly modulated fiber Bragg-grating external-cavity laser 120290
dyn. resource allocation via video content/short-term traffic stats. 95751
electronic media, interactivity and broadband convergence highway 108435
equalization using neural seq. detector 119198
ergodic chaos shift keying for digital sig. decoding 94305
fading channels, coded modulation for differential encoding and non-coherent reception *(English)* 72754
FFSK modem, BER charact., automated meas. 128975
fibre-optic wireless secure digital network, uninterruptible self-determinate hybrid high-speed multimedia 74965
field trials of digital cct. MUX equipt. on Indian island 131026
filter banks in wireless/wireless commun. systs. 102375
FIR MMSE-DFE for multi-user commun. 107711
fractal generation, using capacitor, teaching 89605
frame error estim. criterion 128994
FSR-LPTV filtering for blind equalization and interf. rejection 130263
full-duplex 60 GHz band radio-on-fiber systs. with base station configs. 74914
fully-digital MDPSK DS/CDMA receiver, AFC algm. 107750
Gbit fibre opt. transceiver design, high-speed device fab. 85972
GPS based current differential protection, SDH ring commun. networks 99400
high speed link, 2 GB/s differential simult. bi-directional I/O cell 119856
high-speed atmos. laser digital commun. syst. 120388
high-speed fibre-optic link, opto-electronic interface inside connector 74942
high-speed opt. transparent networks, Q factor based monitoring 131470
hunting-free reframing, digital transm. scheme 72809
integrated opto-electronics for commun. appls. 120171
interf.-resistant LPTV-MMSE equalisation 119196
interleaved (2,1,7) convol. codes in mobile image commun. syst., perform. 72918
Internet, next-generation, overview and tech. challenges *(Japanese)* 119534
Internet protocols in space, link and routing issues 120092
Internet-type protocol testing in simulated small satellite environ. 119357
IS-95A CDMA syst., multi-rate detect. algm. *(Chinese)* 84795
ISI corrupted baseband transm. systs., BER estim. formulae 96010
laser commun. syst., design, work principle 120185
LOADNET project, migration of digital avionics data buses to low cost opt. data networks 133223
low-power 8-PAM serial-transceiver in 0.5 μm digital CMOS 108506
low-power CMOS 155 Mb/s transceiver for SONET/SDH over co-ax and fibre links 109087
M-QAM digital commun., adaptive equalizer, wavelet network *(Chinese)* 73842
metropolitan opt. networks using directly modulated lasers, filter concatenation 109122
microwave link utilization by capacity adaptive techs. 94044
MIMO biorthogonal partners, channel equalization appl. 130274
MLE, progressive refinement, carrier freq. recovery appl. 94231
MLE of weak cyclostationary digital commun. sigs. time/freq. differences of arrival 107329
MM-wave fibre link based on two-sect. gain-coupled DFB lasers, 40 GHz 96652
multi-level computer networks with opened opt. channels, creation in Ukraine, strategy and outlook 108377
multi-tone generator testing tech. supporting IMD and ACPR meas. 86944
multiband WDM transm. systs. using AWG and spatial phase filter, 40 Gbit/s 86044
multidimensional digital scatter media, dyn. nodal commun. 117884
multimedia wireless telecomm., very-high dens. VLSI chips, low-power design 130971
MUX syst., clock sync. coding/decoding 95801
network traffic flow fuzzy successive av. 108061
nonlin. channel equalization, reduced-complexity clustering 73827
online arith. for detect. in digital commun. receivers 85902
open syst. COTS avionics network, MIL-STD-1553 replacement 122747
opt. cct. switches and switching matrices in polymers 131590
opt. fiber LANs, Q-factor online detect. based on DSP technol. 86014
opt. orthogonal code design using GA 128999
opt. packet switch using all-opt. header proc. 85440
opt. transceiver module adaptable to large core-diam. fiber link, packaging technols. *(Japanese)* 120154
packet switching networks, multilayer chaotic encryption for secure commun. 107824
packet-fair queueing schedulers in high speed networks, FPGA implement. 74074
pair line transm. syst. *(Japanese)* 85451
phase detectors with carrier phase tracking, error floor assess., large deviations approach 130159
piecewise affine Markov maps for chaos generation in chaotic commun. 95754
PIN-AMP module using pass. alignment struct., 10 Gbit/s, develop. 120151
planetary exploration commun. syst., hybrid archit. 131325
power line carrier technol., review *(Chinese)* 74507
power line commun., LV distrib. network 74509
power syst. protection, direct digital commun. 77496
propag. phase noise and impact on future VSAT syst. design 108981
pulse shaping and jitter-free freq. error detect. and timing recovery, digital filters 73660
quadrature chaos shift keying scheme, perform. 94239
radiocommunication services, interf. effects weighting 85467
radiological image distrib. and workflow 98845

digital communication continued
RBF equalizer using fast clustering algm. 107699
real-time streams transm. 130544
receivers, multirate digital filters for timing recovery 107513
reflectance-based computer aided modelling tool for high speed/high freq. commun. systs. 108585
reverse path 97072
robust chaotic synchronisation for commun. 95753
S-CDMA and TDMA, comparison for cable modem upstream channel 84883
satellite commun. systs., optim. of discrete sig. struct. 131319
SATEX I microsatellite telemetry & command subsyst. 131305
SDH equipt. clock, DPLL, design 74940
secure commun., digitized n-scroll attractor model 94241
secure digital commun. modulation, stochastic proc. shift keying 117890
self-timed Viterbi decoder, low power, convolutional FEC codes, ISI 83837
semi-blind closed-form co-channel sigs. separation method used in smart antenna systs. 72680
shortened RS codes, intrinsic block synchronisation based on alg. decoding 106107
sine-wave modulation VMSK tech. for bandwidth efficiency improve. 83799
slow fading/carrier phase error, noisy ref. loss eval. 72743
source/channel estim. using finite alphabet property, randomised algm. 107728
speaker tracking using microphone array/camera 75329
spectrum-coding transmitting syst. with wavelets, de-noising 72814
subband and transform coder optim., theory and appls., review 84736
SuperPON, adaptive bandwidth allocation algm and delay perform. anal. *(Chinese)* 96731
surveillance systs., networked *(Polish)* 131774
sym. timing recovery scheme using two samples per sym., digital receiver 84805
T1 digital commun., transmit pulse shape, robust design 130176
TCP over ATM-UBR service, effective recovery algm. for packet losses 84836
TDMA burst transms., support vector classifier based equalizer 107722
teleradiology/teledermatology in Finnish mil. med. 76784
transform domain commun. syst., init. acquisition perform. 107625
trunking syst., discrete access perform. anal. *(Chinese)* 108010
turbo techs. overview 72908
turbo-coded transms., carrier phase recovery using tentative decisions 72775
two-stage periodically time-varying equalizer and interf. suppression 107698
ultra-wide band orthogonal digital sig. generator 73580
underwater acoustic commun., expt. testing of pass. phase conjug. 109229
underwater acoustic commun. using phase conjug. 120395
unified digital platform, develop. 119807
video-MPEG-2 intracoding conversion 118521
wavelet based multichannel commun. systs., satellite and fading commun. channels 106024
WDM to OTDM MUX using ultrafast all-opt. wavelength converter 109202
wideband Internet access using cable modem systs. 109368
wideband transhorizon channel charactn. 131110
wireless ATM network cell assignment, genetic algm. approach 95762
wireless commun., dual Gabor frames approx. and window decay 118928
wireless commun. charact. simul. 85469
X-band MMIC direct 8 PSK modulator for high data rate Earth obs. appls. 125748
CO_2 laser atm. relay digital commun. syst. 120188
GaAs PHEMT ICs for 40 Gbit/s high output voltage driver module of $LiNbO_3$ modulator 125774
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
SiGe BiCMOS 12.5 Gbaud transceiver for serial data commun. 130985
$YBa_2Cu_3O_{7-x}$ film, cryoelectronics appl. 127529

digital computers
for computer applications see under relevant applications e.g. "administrative data processing", "computerised control", "natural sciences computing"
see also Apple computers; digital systems; file servers; general purpose computers; IBM computers; mainframes; microcomputers; parallel machines; satellite computers; special purpose computers
avionic airborne digital computers/display devices *(Russian)* 133217
ITC-CSCC 2000, Circuits/Systems, Computers and Communications, conf., Pusan, Korea (July 2000) 78413

digital control
see also direct digital control; numerical control
3-level voltage-fed inverter IM drive, NN space vector PWM controller 134467
3-phase AC motor, SVPWM VSI, integrated DSP motor controller ADMC331 *(Chinese)* 99613
3-phase current-source act. power filter, current control 133706
3-phase high PF boost rectifier, digital line current shaping 88872
3-phase servo motor driver, integrated intell. power module 134452
3-phase ZVS PWM inverter, digital control, reson. snubber, CT 134225
4.4 GHz microwave thermometer with compensation of refl. coeff. 87558
5-phase IM drives, DSP-based vector control and direct torque control 123862
5-phase reluctance motor drive, DSP-based direct torque control 89336
abnormal shape meas., noncontact mag. meas. method 86948
ABR flow control, explicit fast rate computation scheme 119145
AC line voltage regulator implement. using fuzzy control theory 122846
AC machine, complex motor direct torque control, VLSI design approach 78102
AC machine control algms., optimized IC design studies 133927
AC motor, DSP control systs., CPLD *(Chinese)* 77808
AC motor drive sensorless speed control algms. 123888
AC-PWM universal motor, sensorless speed control scheme 89361
act. mag. bearings, control design/simul./expts. 116500
act. power harmonic filter, internal model control using reson. model 133715
AMLCD monitor, digital controls, VLSI implement., PanelLink 86896
anisotropic smart coatings, proper polariz. bases, digital control 131635
boost PFC ccts., digital controller design 88828
channel state inform. AC multimotor drive, space vector control 89344
complex digital oscillator with absol. periodicity 114656
DC lin. actuator fast end-of-travel detect. 123692
DC motor drive combined digital speed-control schemes 113055
DC motor drive fuzzy logic PI speed control scheme 123944
DC servomotor digital controller auto-tuning *(Japanese)* 99678
deep sig. power atten., 1-4 GHz range 80408
deep space opt. commun. link, accelerometer-assisted tracking/pointing 120393
diesel generator sets, small alternators, digital AVR 88716
distrib. systs., unbalance/fault conditions, PWM STATCOMs operation 112038
DSP controlled converter, digital PWM limit ring reduction 88863
DSP-controlled IM drives, smart sens. bearings 123884
DSP-controlled PWM VSC-based STATCOM, develop. 123715
dyn. voltage restorer, software PLL 111872
elastic mech. systs. phys. modelling using servomotor drive 100244
elec. bicycle, DC motor speed control, load induction unit 123988

ital control continued
electronically-commutated doubly-salient PM SRM perform. anal. 123370
fork lift vehicle speed control, DC motor drive, GA 134551
free-space opt. commun., fine pointing control, soft/hardware implement. 120391
high perform. vector controlled AC drives, PI vel. regulators, design and tuning 134433
high-perform. PID controllers implement., RNS and field-prog. devices appl. 125411
home appliance inverter syst., digital logic control PWM/PFC cct. design 77976
IC vac. systs., total digital control 89818
IGBT H-bridge switching converters, full-digital control board 88832
IM, DSP-based speed sensorless direct torque control *(Chinese)* 77860
IM, fuzzy logic based multimodel field oriented control 88743
IM digital neural current controller scheme 112528
IM direct torque/posn. control syst. 134049
IM drive, digital vector control syst. math. models 89348
IM drive, optimized excitation current control 134531
IM drive, PF control, DSP based six-switch converter 89329
IM drive, real-time µP-based vector speed control 123920
IM drive speed control, fuzzy-logic controller, DSP syst. 89347
IM drive syst., sensorless speed adjustment control, allied GA 78103
IM drive TMC320C243-based torque estimator 123870
IM drives, digital control systs. 100255
induction servomotor drives, robust posn./speed neurocontrol scheme 134498
induction wind power generator, 2 MW, digital electronic control *(German)* 123452
intell. buildings, EMS/control systs. design/testing, simul. tools 89452
interconnected power syst. freq. oscill. stabilis., SSSC appl. 99284
interior PM sync. machine sensorless speed control scheme 123369
interior PMSM drive, Kalman filter based vector control 89354
LD power output, digitally controlled potentiometer appl. *(German)* 82653
lin. actuator design for small movements, 3D simul. 123506
line current detect. act. filter, digital deadbeat current control 133707
mag. bearings, fault-tolerant control, reduced controller outputs 70566
mag. levitated centrifugal pump, bearingless motor, digital control 123315
mains-fed PM sync. motor, energy saving appls. 123367
manipulator two-layers feedforward posn. control syst. 123698
mechatronics-based motion syst. design 67446
megawatt output induction generator used in megawatt wind power generator, digital control *(German)* 133996
mine hoist DC motor drive, intell. monitoring/control syst. 124168
mixed sig. design, ANTRIM software *(Italian)* 80119
mixed-sig. PWM DC/DC converter, proport. current feedback, single chip implement. 90724
motor drive current control struct./algms. synthesis 113056
motor motion control, Windows-based develop. environ. design 123320
multirate feedforward control, perfect tracking control 77890
networked stage lighting *(German)* 78326
open-loop motor speed control using LabView software 88761
opt. disc drives 116586
opt. inter-satellite commun., wide-range fine pointing mechanism 88073
oscillator using adjustable resistors, HF µP appl. 68882
partially reson. act. filter, digital PWM control cct. with DSP 112081
plasma wave analyzer with digital control, polar region rocket expt. *(Japanese)* 133313
PM AC/DC motor drives, DSP-based integral variable struct. control 123943
PM BLDCM, digital controller implement. 123488
PM step motor vector control syst. implement. 88777
PM sync. motor drive sensorless digital control scheme 89331
PM sync. motor sensorless INFORM-based positioning drives 123365
PMSM, sensorless control down to zero speed 88703
PMSM, sensorless FOC, 6 sigma tool, param. optim. 134667
PMSM drive, direct torque control 113047
PMSM drives, direct torque control, ripple minimization 123880
PMSM drives, variable flux control for const. torque operation 89343
polyphase brushless PM DC-machine direct drive syst., design, eval. 134447
power conditioning, act./hybrid harmonic filters 122982
power conversion flexible archit. digital control systs. 123572
power converters, digital control strategy, IM drive 113064
power convertor current regulation principles 123570
power transformer protection, µP-based scheme develop. *(Chinese)* 112595
powered wheelchair controller using master-slave control archit. 133058
pulp mill, integrated turbine-generator digital control syst. 124151
PWM AC motor drives, full digital sync. frame current regulator 134469
PWM boost converters, discrete controllers, generic av. modeling/simul. 88865
PWM buck and boost DC-DC converter, simultaneous digital fuzzy control *(Korean)* 123584
PWM buck-boost DC-DC power converter, simultaneous control study *(Korean)* 123586
PWM voltage source rectifier, reduced-size input filter, operation 134165
real-time robot PM sync. servomotor drive control scheme 112730
rectifier cct., PFC, DSP based controller design 88829
RF MEMS variable capacitor, electrostatic digital control 102783
RF SQUID, macroscopic quantum coherence, RSFQ control cct. 70945
SANSHIN musical instrum. amusement robot control *(Japanese)* 89018
sensorless hybrid direct torque control IM drive 134444
sensorless squirrel cage motor control strategy for FPGA implement. 77881
series reson. converter controller implement. using stochastic logic 99773
servomotor drive field orientated current control scheme 123889
shunt act. harmonics filter, DSP-controlled, distrib. network *(Japanese)* 88431
Siemens LSA7 generator-transformer bank digital protection device *(Chinese)* 112457
single phase PV syst., transformerless 5-level cascaded inverter, control aspects *(English)* 99597
single-phase AC sources, high-perform. voltage regulator 78009
single-phase AC/DC integrated PWM converter, digital control 134213
SRM fully-digital PI current controller, vehicle propulsion appls. 133963
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
subband coding for high speed chips 79942
SVC control instabil., stabilisation, on-line gain adjustment fn. *(Japanese)* 89028
switch-mode DC/DC power supply predictive dead-beat digital control scheme 88821
switched reluctance machine control, online instantaneous torque estim. 123375
sync. generator voltage/freq. fuzzy control using TMS320F240 DSP 123374
synchronised motion using fieldbus-linked elec. drives 123890
telecom. inverter module with digital control for parallel operation 112671
three-phase CVCF PWM inverter, digital repetitive learning control 99826
three-phase inverter control software design archit. 88898

digital control continued
three-phase space vector PWM boost power converter, digital controller design *(Korean)* 77969
three-phase UPS PWM inverter, digital voltage/current controllers 134232
TW US motors, servo speed control using PWM 123531
Uljin PWR main control room, meas. and anal. of conducted noise 99519
unity PF PWM rectifier using digital/analog hybrid control *(Chinese)* 134241
universal digital motor control proc. for indust. appls. 123319
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
UPS multi-loop control, digital predictive voltage/current regulators 88910
visual servoing, multirate sampling, disturbance rejection 94730
VSI, current regulation, zero crossings of compensated current errors 134186
wind tunnel, digital DC speed regulation syst. develop. 88040
GaAs PHEMT wideband true-time delay MMIC with on-chip digital drivers 125799

Digital European Cordless Telephone *see cordless telephone systems*

digital filters
see also FIR filters; IIR filters; median filters; multidimensional digital filters; quadrature mirror filters; recursive filters; signal processing; stack filters; wave digital filters
1D/2D order stat. filters, FPGA design 91099
2D discrete wavelet transform with integer lifting scheme, parallel archit. 95247
2D shapes, accurate detect. 107122
3D FDTD anals., late-time instabilities suppress. 124775
3D subband/wavelet filter bank for embedded video coding using invertible motion compensation 84406
1000BASE-T Gigabit Ethernet, low-power digital adaptive filter archits. 114883
acoustic echo cancellation, low complexity nonlin. filters anal. 107484
acoustic echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
acoustic echo cancellation via low complexity nonlin. filters 73664
adaptive cancellation of selected harmonics from sig. 119053
adaptive discrete time wavelets using degenerate eigenvalues 119071
adaptive FIR digital filter, modified normalized LMS modelling algm. 118976
adaptive interpolated FIR echo canceller, low complexity 102404
ADSL and VDSL systs., improved channel model 96303
approx. lin. phase FIR low-pass filters, design 80100
arbitrary dispersive media freq.-depend. FDTD method, ABC 105696
arbitrary-band multi-path polyphase IIR filters, design 91089
Aries compact modular macro-block for digital filtering 91113
ASIC design methodology achieving 550 MHz operation 125358
asynchronous events, electronics readout based on multi-correl. double sampling 76145
asynchronous VLSI FIR filter, low-power single bit-plane archit. 68933
Bayesian iter. binary filter design 118179
BFSK sigs., demodulation by adaptive digital notch filtering 83809
biorthogonal cosine-modulated filter banks, fixed-point arith. 91053
biorthogonal nonuniform cosine-modulated filter banks with lower syst. delay 80096
biorthogonal wavelet transform, VLSI archits. based on filter bank and lifting scheme 90925
block digital filter scaling theory 107479
block transm. systs. with transmit filtering, peak-to-av. power ratio reduction 128979
boundary filters, max. coding gain, ideal DC behavior, size-limited paraunitary filter banks 91055
brain tumors automatic detect., MRI unsupervised segmentation 98405
Butterworth biorthogonal wavelets derived from discrete interpolatory splines 130123
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
CDMA, improved multistage parallel interf. cancellation for multipath fading channels 85529
cellular telephony, prediction-based time-varying filtering for speech enhancement 107485
CGH image compression/transm./reconstruction *(Japanese)* 118641
chaotic freq. hopping seq. generator, FPGAs, n-dimens. nonlin. digital filters *(Chinese)* 102411
checkerboard distortion avoidance in continuous-time domain 95678
chirp location sigs., matched digital filtering in time domain 118972
CMB observational maps, sig. imaging, power filtration anal. 107547
CMOS digitally prog. current steering semidigital FIR reconstruct. filter 80092
CMOS interpol. FIR filter, power/area efficient design for W-CDMA appl. *(Korean)* 80091
CMOS low-power digital filter IC via soft DSP 102416
color images, neural network-based text location 118751
compactly supported matrix valued wavelets, biorthogonal unconditional bases 91057
complex compact-supported orthonormal symmlets, real-valued half-band FIR filters 91108
continuous-time Hopfield neural networks for filtering of ECG sigs. 98237
converters, sample-rate, sampled-data control based design 80141
correlative zero-phase fund. component notch filter for power sigs. 112082
cosine-modulated biorthogonal IIR filter banks, speech coding 102391
CW radar target tracking in Doppler freq. shift 86238
data concealment in audio sig. using sub-band LSB coding, pipelined archit. 68833
data fusion by spectrum substitution, filter bank design 119031
data transm. filter with high time jitter immunity, design 73687
data transm. over noisy channels, optimal orthogonal finite order transmitter/receiver filters design 107538
decision-feedback carrier/timing recovery, near-optimal PLL design 119113
delay LMS 1D and 2D adaptive digital filters, systolic archits. 68941
Δ-Σ converters, low-power decimation filter design 68864
design, intra-disciplinary capstone project, design teams 124264
differentiating filter synthesis, random/sing. input sig. error robustness 130040
digitizing continuous-time filters improvements, comments 119001
digitizing continuous-time filters improvements, reply to comments 119002
direct-form delta operator-based IIR filter with min. noise gain and sensitivity 91085
direct-form IIR filter, modified delta operator, roundoff noise perform. 91093
distorted periodic sigs., phase meas., nonsynchronous multirate digital filtering 123079
distributed evol. digital filters, convergence behavior 91087
DPLL, advances and refinements 68654
DS-CDMA, noncoherent MMSE interf. suppression 130304
DS-CDMA asynchronous systs., sigs. blind detect. 107771
DS-CDMA downlink SINR maximizing RAKE receiver 108922
DSP fixed-point pulse timing based on high-precision division tech. 130070
DSP systs., combined word-length optim. and high-level synthesis 90956

digital filters continued
DSP systs. for DSL appls., design for low-power implement. 125527
DSP-RAM archit. for parallel DSP in memory, implement. 114809
DSSS receiver, prog. pipelined digital differential matched filter develop. 130109
dyn. reduced sig. representation low power FIR filter design 114884
ECG digital filters implement. as LabVIEW DLLs 110592
edge detect. by GA 95439
elec. guitar, obtaining more acoustic timbre by digital filtering 131779
ellipt. filter params., num. interpolation 119055
embedded foveation image coding 118519
emerging TV displays, image quality improvement 120522
Farrow struct. based 1D and 2D FIR filters, variable cutoff freqs., design 91065
fast data transm. ISI removal, adaptive digital filter 130257
feedforward neural net at-speed test method 102463
few adder multiplier design, graphical methods 107480
fingerprint enhancement,directional filter bank based 94949
finite wordlength FIR digital filters, optimal, design 91110
FIR biorthogonal multi-band filter banks design, anal./synthesis filters 130048
FIR canonic signed digit Chebyshev filter design 68934
FIR delay LMS adaptive digital filter, systolic archit. 91084
FIR differentiator design based on max. SNR criterion 80099
FIR differentiators for quantized sigs. 130124
FIR digital differentiators, Taylor series, tap-coeffs., type III differentiators 80090
FIR digital filter, finite wordlength coeff., branch and bound tech. 130074
FIR digital filter design with discrete coeffs., semidefinite prog. relax. 80108
FIR digital filter using one-hot coded residue representation 130042
FIR digital filters, low/high-pass and mid-pass/stop designs 114878
FIR digital filters, power dissipation reduction using quadratic RNS 102400
FIR digital filters within embedded fault tolerant hardware platform, evol. design and adaptation 102395
FIR equiripple min. phase filter design from lin. phase systs. using polynomial factorisation 73702
FIR filter design, freq. response masking struct. with reduced complexity 91068
FIR filter design, simult. magnitude/phase/group delay approx. 95662
FIR filter design combining freq. response masking and WLS-Chebyshev approaches 91069
FIR filter with discrete coeffs., optimal design 91073
FIR filters, optimum discrete coeff. realization 80107
FIR filters, testing schemes 91103
FIR filters, tradeoffs between RNS and two's complement syst. types 80110
FIR least sq. filter design using piecewise polynomial approxs. 130069
FIR low-pass lin. phase filters with equiripple passband and least-sq. stopband 102415
FIR/IIR digital filters satisfying magnitude and phase specs., comparison 91112
fixed-coeff. FIR filters, design for systs. with input clock jitter 91070
fixed-point lin. phase FIR filter design, appl. of SPT-term distrib. of CSD nos. 80109
foetal heart rate, ambulatory monitoring algm. 98256
forward and inverse DWTs, unified module archit. 90961
FPGA implement. of filters synthesized using freq. response masking tech., FPGA implement. 80102
FPGA implement. of pulse-shaping IIR filter 114882
FPGA optim., VHDL, public-domain Matlab software 102063
FPGA-based software radio syst., config. data transm. scheme *(Japanese)* 108591
fractional sample rate conversion, min. group delay block proc. 80106
freq. domain act. noise control syst. without secondary path model 119075
freq. response charact., analog shaping, Doppler tracking 118991
FSK sig., real-time digital demodulation *(Chinese)* 106044
γ-ray detect., optimal P-Z setting, spectrosc. tech. 121860
genomic sig. proc. 98157
GPS/GLONASS satellite IF receiver, multichannel digital filtering *(German)* 120479
gradient-type adaptive filters, pipeline implement. 84765
gray-scale nonlin. filter design via multiresolution apertures 129464
H_2/H_∞ mixed filtering design in multirate transmultiplexer systs., LMI approach 131025
hands-free commun. unit acoustic echo canceller *(Japanese)* 96326
heuristic synthesis, genetic prog. 91082
HF ground wave polarimetric radar, radio disturbance suppression 75073
high-rate high-resol. gamma spectrometry, adaptive digital filter 121859
high-rate high-resoln. gamma spectrometry, adaptive digital filter 110396
hybrid form FIR filter with min. cycle-time constraint, optimal design 91071
I/Q imbalance compensation, digital filter design 119047
IEEE compliant floating point MAF 101941
IF digital filters design, adaptive method 107481
IF receivers for satellite navig., multi-channel filtering *(German)* 97032
IIR filter design using adaptive simulated annealing 107552
IIR filters, computer-aided test for characterizing parasitic oscills. 130100
IIR filters design, WISE method 84723
IIR filters with symmetric impulse response, effect of zeros 130046
IIR half-band filter, multiplier-free structs., synthesis scheme 80098
IIR multiplierless ellipt. filters, cascade and parallel realizations 130073
IIR stable notch filter design with optimal pole placement 130122
illum. 3D bodies, morph. slice-based counting 118655
IM control syst., load profiling meas. & proc., clipping integrator 112517
image compression, wavelet adapted and visually tuned 107007
images with pulse interf., nonlin. filtering 106733
integer-modulated filter banks providing perfect reconstruction 119070
invariant face recogn. 118720
IQ modulators, implement. of automatic digital compensation 125265
ISI-free FIR filterbank transceivers for freq.-selective channels 130121
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 2001) 124234
Jot's reverberation algm., coeffs. computation 118063
lattice filters, implement. using four operands real-multiply accumulation 68944
lattice FIR filters, interleaved archit., hardware efficient 91109
lattice struct. for regular paraunitary lin.-phase filterbanks/M-band orthogonal symmetric wavelets 129792
LDI/LDD all-pass lattice filters, computational props, FPGA implements. 91079
lin. digital filter, estim. of quantization noise spectrum 91086
lin. phase paraunitary filter banks, lattice structs. parameterization 107527
lin.-phase FIR filters, optim. using freq. response masking approach 80103
lin.-phase paraunitary FIR filter bank design 107477
LMS adaptive FIR filters, word-length optim. 107563
LMS algm., convergence behavior in subband adaptive filtering 73699
LMS multiplierless adaptive filters using distributed arith., high-perform. VLSI archit. 84764

digital filters continued
longit. instabil. control syst., program. DSP-based multibunch fdbk. 87094
loudspeakers, Volterra filter, 2nd order nonlin. distortion elimination 131780
low complexity FIR filters using factorization of perturbed coeffs. 80084
low delay max. flat lowpass FIR digital filters, transfer fn. 80101
low pass digital filter design using multiple Pareto fronts 102396
low power consumption CMOS digital matched filter *(Japanese)* 80095
low-power digital filtering, adaptive error-cancellation, algorithmic noise-tole ance 102409
low-power digital matched filter, DS-SS sig. acquisition 68938
low-power sig. proc. in deep submicron era, algorithmic noise-tolerance 1148
M-ary/DS-SS syst., digital matched filter using real-valued shift-orthogon finite-length seqs. 85519
M-channel paraunitary filterbanks factorization 84724
magnetos. magnetometer data, wavelet anal. results 122642
matched filter for real-valued shift-orthogonal finite-length seq. *(Japanes* 68939
max. flat lowpass digital filters, response to polynomial sigs. 84767
mean field annealing based design of filters with hardware constraints 91066
min. time-bandwidth products for filter design, impulse response duration 800
min.-phase nonrecursive digital filters synthesis 102412
modulated complex lapped transform proc., design and CPLD implement. 688-
MPEG-4 coding perform. optim., post-proc. role 106858
MPEG-4 time/freq. partial encoding, score extraction 106369
MT data, wavelet filtering 122560
multimedia sig. proc., tunable/variable pass. digital filters 84758
multimode mean field annealing method for digital filter design 80085
multiplier design, graphical methods, digital filter appls. 101881
multiplier-block based FIR filter structs. implement. on FPGA, transit. ana 68936
multiplier-less IIR filter synthesis algms. to trade-off delay and no. of adde 91080
multiplierless FIR filters, systematic design algm. 80105
multirate digital filters, fractional polyphase decomp., sub-Nyquist proc. 911
MVDR filter, auxiliary-vector estimator 107536
near-surface VSP survey seismic cone penetrometer 122574
nonlin. image interpolation through extended permutation filters 94563
nonrecursive digital filter synthesis with sig.-interf. spectrum overlap 119040
nonuniform oversampled filter banks for audio appls. 106355
nonuniform sampled bandlimited sigs., digital fractional filters for sig. reco struction 95669
num. optim. for digital filter and filter bank design, review 118982
OFDM syst., alias-free subband adaptive equalizer 107710
opt. commun. networks, interf. suppression 120179
optim. methods for digital filter and filter bank design, appls. 114875
optim. over canonical signed-digit no. space using genetic algms. 91090
optimum compaction FIR filters, line spectrum design 119073
orthonormal DWTs, rapid prototyping on FPGAs 90815
orthonormal scalar wavelets/related bal. multiwavelets 84725
orthonormal symmetric wavelet bases using complex allpass filter 130120
parallel-cascade truncated Volterra filters, computation-efficient adaptive algr 130131
peak constrained least sq. FIR filters with low complexity finite precision coeff 91067
perceptual audio coding and cross channel prediction 118089
perfect reconstruction cosine modulated filters and modified DFT filter bank prototypes 80097
piecewise-lin. maps, periodic trajectories determ. 130078
power syst. harmonics, active power filter, adaptive digital filtering, harmon detect. *(Chinese)* 77356
power syst. symm. components fast estim., digital filters 111683
prog. multiplierless digital filter array for embedded SoC appls. 80083
prog. platform DWT scheduling alternatives, filtering operations 91092
pulmonary fissures extraction from thin-sect. CT images 98539
pulse shaping and jitter-free freq. error detect. and timing recovery, digital filte 73660
pulse-compression radar, neural network sidelobe suppression filter 109271
pyramid texture compression/decompression using interpolative VQ 95175
QRD-based least-sq. adaptive filters, pipelining, hybrid annihilation transfor 125613
quadratic adaptive Volterra filters, pipeline archit., NLMS algm. 91095
quantized oversampled filter banks with erasures 107567
quartz tuning-fork ang. rate microsensor, dyn. charact. compensation tec 75758
radio transmitter, adjacent channel transient power meas., wavelets 75288
rank difference based filter develop. 95443
rank order filter, prog., threshold logic 102383
receivers, multirate digital filters for timing recovery 107513
reconfigurable radio terminals, continuous-time digital filters for sample-rate co version *(English)* 107550
recursive digital filters using look-ahead denominator distrib./numerator decom 68937
reduced complexity primitive operator FIR filters for low power dissipatio 102379
reson. interband tunneling diodes, time-domain two-band model anal., digital fi ter model 103748
RF single-chip front-end for digital sound broadcasting 120511
robust orthogonal adaptive deconvolution filters 91088
second-order digital filter with two's complement arith., periodic behaviou 125610
second-order sampling of wideband sigs., digital demodulation 94236
seismic sig./coherent noise separation, migration filtering 122564
semicond. laser broad-band simul., spatial digital filter method 82640
shipborne radar sig. to clutter ratio improvement *(Japanese)* 86176
short wordlength selective IIR filters, design procedure, implement. complexi 102380
sig. proc. concept, structural subband decomp. 130092
sig. word decomposed filters, optimal filter length, subfilter coeff. wordleng assignment 102378
sigma-delta decimation filter for pacemaker appl., low power implement. 11487
sigma-delta demodulator, single stage decimator, Laguerre filters 90987
single filter freq. masking FIR filters, narrow- and wide-band designs 80104
small-feature-preserving noise-rejecting RM-KNN filters 84172
software-implemented digital filters, power anal. 102413
soil radar sounding, aperture synthesis method 88108
specular transm. channel blind multipath params. estim. 107629
speech voiced/turbulence-noise components, pitch-scaled estim. 118072
stat. optimal morph. operators 118987
subband and transform coder optim., theory and appls., review 84736
supercond. ADC, oversampling, encoder and decimation filter 70846

tal filters continued
surface profile estim. using profilometer and digital filtering 132178
symmetric/antisymmetric orthonormal length-4 multi-filters, characterisation 73666
synthesis based on min. signed digit representation 125615
telecomm. systs., digital filter banks in wireless/wireless commun. 102375
time-delay digital tanlock loop 91005
total harmonic distortion anal. simul. 77364
tracking radars, time domain synthesized binary phase code sidelobe suppression filter 75094
translation-invariant windowed nonlin. discrete filters archit. 118172
tree-struct. IIR/FIR octave-band filter banks with very low-complexity anal. filters 91060
triplet halfband filter banks, kernels, least sq. design 91056
tunable bandpass filter, synthesis/appls. 95686
tunable fractional-delay allpass filter struct., closed-form design 102403
tunable recursive bandpass filters, finite word length effects 91101
two-band model time-domain anal., digital filter model, RTD *(Japanese)* 91107
two-channel FIR filter banks with PR and low-delay, design 91054
two-channel IIR/FIR filter banks 130044
two-path polyphase IIR filter design using downhill simplex algm. 91091
two-stage radar image despeckling, local stat. Lee and sigma filtering 120396
two-state sig.-depend. rank order mean filter, stat. threshold design 94561
UHF indoor radio channels, rms delay and coherence bandwidth 74617
uncoded/chaotic coded speech, robust channel estim./perform. 73037
universal CNN cell cct. using simplicial neuro-fuzzy inferences for fast image proc. 91149
variable 1D FIR filters with arbitrary magnitude responses, design 68940
variable fractional-delay FIR digital filters, discretization-free design 102408
variable fractional-delay FIR filters, discretization-free design 91072
variable step size LMS adaptive filtering algm. and anal. *(Chinese)* 119054
vessel-like patterns detect. in noisy environ. 87549
video coding, semi-automatic semantic obj. extraction 84463
violin sound synthesis, body mode modeling and modif. 131786
VLSI prog. parallel archit. for 2D discrete wavelet transform 94771
VQ based Bayesian image filtering, MRI appl. 95193
wide-band symm. stop-band digital filters, design method *(Russian)* 114872

tal instrumentation
see also digital multimeters; digital readout; digital storage oscilloscopes; digital voltmeters
bistatic microwave intrusion detect. sens. 86930
clinical thermometers, accuracy & reliab. eval. 132508
distillation column for teaching/research, instrumentation 120666
distributed syst. for elec. power quality meas. 123085
distributed virtual instrumentation and digital meas. systs. *(Italian)* 97162
EHV transm. syst., ANN based fault locator 112204
fault locator perform., fault arc influence, time domain model 77649
fault locators, accuracy, fault arc charact. effect 112195
flight control, digital real time simul. *(Chinese)* 88042
gamma-ray spectrometry, recent advances 98087
intell. instrums. teaching, dist. learning via Internet 113368
internal friction meas., high speed ADC DAQ, low phase delay *(Chinese)* 75385
LMG95 digital display power meter for transformer meas. *(German)* 132093
M/T digital tachometers, perform. anal. and compensation 120761
microcomponents mech. props. meas. by digital holography *(German)* 83025
musical flute, virtually real, synthesis model, interface design 131781
opt. elec. meas. syst. for power syst. *(Chinese)* 88497
opt. fibre photoplethysmograph design, DDS, DSP 110847
ordnance detect. & discrim. at Fort Ord range, instrum. eval. 88229
potentiometers *(Italian)* 91410
power meas. syst., PC controlled 121137
power quality meas. digital instrum., calib. procedure 109835
relative error normalisation *(Polish)* 120638
rev. speed meas. techs., dual-mode digital rev. counter design 121226
RF spectrum monitoring with digital anal. syst. 86411
sinusoidal-encoder-based digital tachometers, probabilistic learning tech. 75777
subranging digital SQUID ammeter 75779
UIE flickermeter, digital implement., params. sensitivity anal. 109444
VVER 1000 control syst. upgrade/verification, Temelin plant 123119
wattmeters spurious errors meas. 121138
InSb FPA based mil. miniature modular integrated sight 77102

tal integrated circuits
see also BiCMOS digital integrated circuits; bipolar digital integrated circuits; cellular arrays; CMOS digital integrated circuits; field effect digital integrated circuits; integrated logic circuits; integrated memory circuits; microprocessor chips; storage management chips; very high speed integrated circuits
3G telephony, intell. chipset *(Italian)* 96496
79 dB-SNR 70 mW 18 MHz CCD front-end with fully-digital amplif. 120903
ASIC design methodology achieving 550 MHz operation 125358
ASIC obsolescence and DSP appls., intellectual property, fab. procs. 114682
autonomous decentralized low-power syst. LSI using self-instructing predictive shutdown method 125386
behavioral and gate level designs, power estim. improvement 90823
behavioral models for VLSI chips, verif. using seq. sampling tech. 101953
BGA packaging, mixed-sig. and digital ICs, radiative coupling 113519
cct.-aware on-chip inductance extraction 104075
const. divider for wideband audio decompression proc., BIST implement. *(Chinese)* 79844
crosstalk faults, BIST *(Japanese)* 68666
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
design, reusable intellectual property block verification, prog. syst. 68705
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
design error diagnosis without error model 101947
design/test, DFT tool/ATE platform cooperation 126997
DlbSIM, parallel functional logic simulator with dyn. load balancing 79695
discrete-time batt. and convertor models for syst.-level low-power design 125225
DTV TFT-LCD with integrated digital data driver 80024
embedded Internet systs. on chip *(German)* 114786
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
fast digital double relax. oscill. SQUID design 68887
field prog. syst. IC for syst. level designs 79650
FPIX1, pixel-readout-chip for BTeV expt., software 87259
freq.-hopping HF PLL synthesizer design for high-speed data commun. 80017
general clock distrib. networks, stat. skew modeling 125290
HALOTIS, high accuracy logic timing simulator with delay models 79694
hierarchical algorithmic descriptions, architectural transforms. in recursive HLS 101955

digital integrated circuits continued
hierarchical capacitance extraction algm. without multipole expansion 126993
high perform. VLSI design, CAD infrastructure 125166
high speed CMOS pulse stream neuron cct., low power design *(English)* 81504
high-speed power-conscious cct. design techs. for high-perform. computing 125280
integrated SoC test framework 81431
intra-task voltage scheduling algm. for low-energy real-time appls. 125359
JTAG based AC leakage self-test for digital VLSI ccts. 125303
latency-insensitive design 101968
lin. systs., concurrent testing 101969
logic ccts., compiler driven simul. tech. 79839
low complexity FIR filters using factorization of perturbed coeffs. 80084
low-power design, use of residue and logarithmic no. systs. 114690
MCM for video graphic accel., sig. integrity and design consideration 91521
mobile DSP, reconfigurable syst.-on-a-chip archit. 131137
multimedia digital IC reusable interface design 126948
multiplierless FIR filters, systematic design algm. 80105
MUX, low-power decomp., sig. transit. propag. 102323
non-uniform substr. temp. effect on clock sig. integrity in high perform. IC designs 101991
on-chip clock wire inductance, fast bounds estim. tech. 101992
on-chip inductance extraction via windowing for simul. efficiency 79692
on-chip inductance in high-speed VLSI ccts., high-perform. design issues 116017
opt. disc drives, digital control 116586
optimal buffer insertion under accurate delay models, graph based algm. 79697
package, RF meas. of current and voltage distribs. 75840
partial implement. in VLSI CAD, equivalence checking 125350
PCI bus, bridging ICs *(Italian)* 97152
pixel IC for X-ray spectrosc. 110399
port behavioral models, meas. transient waveforms 114675
proc. voltage scaling for energy minimization with QoS constraints 125399
prog./expandable Hamming neural network *(Chinese)* 80147
RF single-chip front-end for digital sound broadcasting 120511
RT level test insertion using functional test metrics 68677
RT-level route-and-place design methodology for interconnect optim. in DSM regime 104045
serialiser/deserialiser IC, LV differential signalling *(German)* 114857
submicron interconnect delay reduction techs. for bi-directional/uni-directional buses 125274
substr. noise, modelling and digital library creation 79746
substr. noise in ICs, anal., models and optim. 104047
super BGA, wideband model for high speed digital ccts. 89860
sync. DIC, clock distrib. network 80020
syst.-on-a-chip, cache and bus archits., power consumption 90814
syst.-on-a-chip, reconfigurable design, dual supply voltage scaling 90723
syst.-on-a-chip, test techs. *(Italian)* 90817
timing closure satisfaction, delay bound determ. 101981
timing simul. with BDDs 79693
top-down syst.-on-a-chip design for mobile radio transceivers 108837
very deep submicron IC designs, current source cell model for delay calc. 79733
VLSI, conf., Orlando, FL, USA (April 2001) 89562
VLSI ccts., static timing anal. incl. power supply noise effect on propag. delay 125356
VLSI design, architectural synthesis with interconnection cost control 101957
VLSI design, cct. delay uncertainty increase by perform. optim. 101982
VLSI digital cct., RC power bus, max. voltage drop 79732
VLSI parallel video/commun. controller 91004
VLSI technol., systs. and appls., conf., Hsinchu, Japan (April 2001) 113284
voltage/current distribs. estim. 70245
within-die param. flucts., impact on max. clock freq. distribs. 101990
0.91Pb($Zn_{1/3}Nb_{2/3}$)-0.09$PbTiO_3$ based sens./actuators, MEMS integrat. 116066
GaAs ICs, direct fault detect./anal. using EO sampling syst. 79668
GaAs digital circuitry, Schottky Barrier diode and MESFET ICs, appls. *(Italian)* 79647

digital libraries
distributed multimedia syst. QoS mgt. *(Chinese)* 96257
document image class. by modified X-Y tree encoding 129754
document image networking, digital 129802
Electronic Roads in the Information Soc., content-based image retrieval/IP Diff-Serv 108362
I2-DSI project, Internet2 distributed storage infrastructure 119555
JPEG 2000, internat. std. for binary still image coding 84489
mobile computers and wireless tools, user feedback 108685
mobile multi-agent syst. for med. image retrieval 121903
MPEG multimedia stds. (MPEG-1, MPEG-2, MPEG-4, MPEG-7, MPEG-21) *(German)* 83904
nuc. data libraries, online services, med. appls., overview 98583
RAI's multimedia catalogue *(Italian)* 86315
rare books, digital archiving, image proc. technol. appl. 106706
spoken document retrieval for langs. of Hong Kong 84053
video segmentation by integrat. of color, textual and temporal inform. 106838

digital magnetic recording
decision feedback and partial response detectors, timing sensitivity 70523
demodulation of servo tracking sigs. printed with litho. patterned master disk 116364
error correcting code/runlength limited code combination 94314
Fujitsu next-generation data storage technol. *(Japanese)* 116327
helical-scan tape syst., rotary drum, MR head, high-dens. reprod. characts. 116466
high rate turbo codes over Lorentzian channels, max. likelihood decoding bounds 83831
high-dens. mag. recording channel, turbo decoding of generator matrix code 72915
iter. decoding 72881
long. recording media, advanced, SNR improvements 116370
low-dens. parity-check codes appl. 72884
low-power and high-speed equalizer for mag. storage read channels 80125
modular partial response channel software simulator 104534
MR head, nonlin. model and readback distortions 81899
partial response channel, woven convolutional codes and MTR codes 129226
perp. double-layered media noise, head field gradient effect on transit. jitter 116469
perp. mag. recording, read channel design issues 116470
perp. patterned media, recording procs. using longit. mag. recording heads 116411
PRML systs. using rate 9/10 trellis codes, perform. eval. 106115
read-write channels, charactn. with embedded sync. 118942

digital magnetic recording continued
self-timed Viterbi decoder, low power, convolutional FEC codes, ISI 83837
serially concatenated partial response mag. recording channels, iter. detect. 116464
sig.-depend. media noise mag. recording channels, decision feedback equalization 116465
single and multiple parity codes perform. anal. 72914
switching times and transit. widths 116341
turbo product codes, perform. over partial response channels 117999
video read/write head, eddy currents 116311
write channel front end for above 1 Gb/s recording, anal. and optim. 116471
digital mammography *see mammography*
digital mobile radio *see digital radio; mobile radio*
digital money *see electronic money*
digital multimeters
see also digital voltmeters
electronic devices, prod. testing, DMM *(Italian)* 100559
KPCI PC plug-in card for DMM voltage meas. *(German)* 120640
multifunctional DMM, nonelectrical quantities meas. *(Polish)* 121066
phase meas., accurate tech. with two sampling voltmeters 109920
digital phase locked loops
advances and refinements in DPLL 68654
clock recovery PLL applicable to data stream with missing pulses 68889
CMOS all-digital PLLs, digitally controlled oscillator, std. cell library 79631
CMOS digitally controlled PLL, digital phase-freq. detector 114858
CMOS DLL, 1GHz synthesis, freq. multiplier tech. *(English)* 125261
CMOS μP, all-digital clock generator firm-core 102215
cycle-to-cycle period jitter meas. of HF clock sigs. 102312
direct digital FM, phase locked Ka-band Gunn oscillator *(Chinese)* 68638
dist. meas., perform. anal. of digital phase-tracking/measuring loop *(Chinese)* 125271
first-order, nonlin. dyn., FM 90803
freq.-hopping HF PLL synthesizer design for high-speed data commun. 80017
GFSK demodulator, perform. in multipath channel 108772
GMSK modulator using ΔΣ freq. discriminator-based synthesizer 108656
HF high-Q continuous-time filters, automatic tuning scheme 68913
high order giga-bit rate PLL, discrete z-domain anal. 79628
high-speed burst-mode photonic packet commun., differential receiver 119853
loop filters design, mixed H_∞/H_2 method 68886
multi-PLL clock distrib. archit. for GSI 91002
noncooperative demodulation, robust baud rate estimator 108558
phase jitter, low-denominator rational reson. 101854
portable high-speed clock generator, full pull-in range, HDL 91001
QAM systs., suppressed carrier synchronizer with phase jitter 120031
RF single-chip front-end for digital sound broadcasting 120511
SDH equipt. clock, DPLL, design 74940
SOI-BiCDMOS single-chip automotive LSI, air bag controller, RISC CPU 89411
spacecraft phase-locked receivers, flexible loop filter design 122527
sym. synchronisers, improved fig. of merit 130188
time-delay digital tanlock loop, Gaussian noise 102308
Si PLL freq. synthesiser in 0.8 μm bipolar prod. technol., 7.35 GHz 91006
digital radio
see also digital audio broadcasting
3G CDMA transmit adaptive arrays 85623
3G mobile commun. systs., DECT technol. 85786
3G mobile radio access stds. 96610
5.8 GHz wideband indoor radio channel perform., furniture effects 83339
5IDT long. coupled wide-band bal. SAW filter, long. multi-mode resonator 92760
155 Mbit/s data transm. at 60 GHz using 1×4 patch array antenna with opt. delay lines 108788
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive blind joint source-phase separation 130036
adaptive transm. syst., in-service estim. scheme for radio propag. path characts. *(Chinese)* 74565
all-IP syst. beyond 3G, QoS support 108816
antenna switch diplexer front-end module for GSM/DCS/PCS appls., PHEMT switches 91348
asynchronous DS-CDMA, choice of chaotic spreading seqs. 72939
asynchronous DS-CDMA syst., SS seq. design using chaotic dyn. systs. 94306
ATM wireless networks, signaling/transm./traffic mgt. 107869
ATM-based radio local loop for broadband access 74607
bandpass nonlin. RF ccts., distortion, autocorrelation anal. 108967
bandwidth division type parallel combinatory DS-CDMA syst. 130285
baseband predistorter using calib. memory, perform. 108576
BLAST-OFDM enhanced Hiperlan/2, perform. eval. 119526
blind max. ratio combining methods 96368
blind sig. proc. algm. for decorrelation and channel equalization 108928
Bluetooth computer wireless interfaces, technol. *(German)* 119590
Bluetooth packet early-late gate receiving, implement. and perform. anal. 120077
Bluetooth technol. for appliance pers. area network creation *(Spanish)* 74847
Bluetooth version 1.0 spec., develop. 85634
broadband mobile multimedia, transm. capacity 108815
broadcasting, punctured convolutional codes/turbo-codes 109346
CDMA2000 searcher, real-time correlator design 74719
CDMA sync. channel, eavesdropping, EM-based approach 95725
CDMA systs., link budget calc. 119901
CDMA systs., space-time-code blind receiver and neural net implement. 96391
CDMA systs., successive interf. cancellation receiver with neural network compensation 105817
CDMA wireless commun. link, GSM interf. detect. 83410
CDPD, cellular digital packet data, perform. with timed hop and forced hop 74710
cellular base station, dielec. resonator duplexer 74798
cellular networks, hyperb. radiolocation 96603
cellular radio, optimum combining diversity finite-length DFE 119967
chaos-based DS-CDMA, CCI, multipath propag. and receiver sync. 96403
chaotic commun. syst., transceiver chip design and CMOS implement. 96383
CMOS binary FSK demodulator for low-IF radio receivers 114669
CMOS IF FSK demodulator for Bluetooth in 0.35 μm proc. 119958
CMOS prog. freq. divider for DRRS std., 1.4 GHz/2.7 V 68883
CMU 200 universal radio commun. tester, CDMA capability 86784
coherent M-ary signaling in impulsive noise, optimum detector 85512
commutating DFE for digital mobile radio 85726
converter for software radio 74579
Correctional Service Canada, digital radio systs., trunking syst. 74840
Damson HF channel characterisation, review 105744
digital radio continued
DAPSK preamble-assisted transm. in digital mobile radio syst., chann estim./compensation 74737
DAPSK-OFDM transms. for high date-rate digital mobile radio 85900
DCS 1800 base station, receiver downconverter, silicon RFIC 120078
DCS/WLAN dual-band integrated stacked shorted patch antennas, desig 105880
Digital Modular Radio, CORBA-based DAMA modem 111580
Digital Modular Radio software defined radio, Wireless Information Transfe System 111579
direct conversion digital six-port receiver, analog carrier recovery loop 9661
direct conversion receivers for mobile radio appls. *(German)* 85865
dispersive aeronautical channel, differentially-encoded MPSK, optimum detec 83827
DPSK blind sym. estim., differential correl. approach 85542
DS-CDMA cellular syst., dyn. allocation optim. of transmitter power 131183
DSP-based ionos. radio-link using DS-CDMA and on-line channel estir 108630
DSSS high-speed adaptive receivers, parallel digital archits. 108617
EGSM/DCS1800/PCS triple-band cellular systs., integrated SAW antenn duplexer 92761
Europe, freq. spectrum mgt., internat. exchange of data 86289
FEC, convolutional and RS coding, interleaving syst., appls. *(Italian)* 83869
FH co-located systs., perform. degrad. 108540
FH-PRN with spatially distrib. users, perform. anal. 74745
FIR MIMO DFE for space-time block-coded transm. over multipath fading chan nels 84878
flat fading digital commun., instantaneous freq. estim. of received sigs. 8582
flat-fading channels, freq. offset estim. 131167
flat-time-delay transversely coupled resonator SAW filter, parallel connected fi ter tracks 92716
flexible digital receiver, decimation with lattice WDF 130139
flexible DSP, architectural eval. 108561
FM digital double errors 72744
FM-DCSK digital radio syst. simulator, MATLAB 106023
FM-DCSK syst. perform. for multipath channel, robust chaotic commun. 9640
FPGA implement. of pulse-shaping IIR filter 114882
FSK low power receiver for space appls. 96634
full-duplex voice commun. handsets over single carrier freq. 85768
future mobile radio systs., turbo-coded modulation *(English)* 74722
Gaussian noise perturbed vectors, phase angle distrib. 72745
Gaussian-MSK modulator, sigma-delta fractional-N freq. synthesis, DRRS bas 101856
GMDSS syst., digital selective calling, false alert sigs. generation 86271
GMSK modulator using ΔΣ freq. discriminator-based synthesizer 108656
GPS digital code acquisition cct., direct IF sampling *(Chinese)* 97015
GPS for measuring urban shielding charact. of mobile broadcast geostationa satellite 83261
GSM/EDGE, mobile channels zeros distrib. 85859
HF broadcasting with Digital Radio Mondiale, key tech. features 75283
HF digital commun., source separation with collocated antennas 84729
high-order QAM systs., phase noise and IMD reduction 72773
high-rate pers. area networks, channel estim. with interf. cancel. 74513
implement. issues of Digital Radio Mondiale 75284
impulse radio for MUI/ISI-resilient multiuser commun. over freq.-selective mu tipath channels 108673
IMT-2000 and beyond, radio technols. for future mobile commun. 120053
interf. avoidance commun. using wavelet domain transform. techs. 96399
IS-136 commun. syst., bitstream-based front-end for wireless speech recog 84048
ISM-band sub carrier multiplexed broadband digital microwave radio link 965
iter. decoding 72881
Joint Combat Information Terminal, software definable radio 111581
joint detect. and joint transm. in CDMA downlinks 96494
Ka band transmitter modules for LMDS equipt. mass prod., BGA/LM packag 96387
lin. precoded/coded OFDM for wireless channel fades 83815
littoral environ., groundwave propag. predictions (GRAPPLE) 83314
LMR, CCI reduction and path-diversity reception 74739
LMR, network design criteria 85601
low antenna height base station in urban area, propag. path ident. 105755
LV SC bandpass ΔΣ modulator 79633
Mercury NTDR Information Security syst., software security and 80486 108560
MIMO interf.-limited cellular syst., simul. results 74752
MM-wave broadband wireless indoor networks, combined spatial-temporal C equalization 85465
MM-wave transceivers for point-to-point radio 85618
mobile commun., metric weighted diversity combining based on multiple diffe ential phase detect. 74742
mobile handset transmitters using Tropian Polar Impact technol. 120039
mobile packet data commun. network, requirements and implement. *(Japanes* 96556
mobile radio, conf., Osnabruck, Germany (May 2000) *(German, English)* 673
mobile radio devices, reconfigurable RF elements *(German)* 74785
mobile radio systs., Doppler spread estim. 74626
mobile transceiver single chip implement., design planning 78574
modulation, generalized CMAC-based predistortion 119881
Motorola MC13760 multi-mode transceiver for mobile telephones, digital inte faces *(German)* 131250
MRSVP, resource reservation protocol for integrated services network wi mobile hosts 73917
multicarrier complex lowpass models of RF transceiver ICs, nonlin. behavi 80385
multicarrier-CDMA rake receiver, time-deskew buffer design 96495
multicode multicarrier random access 107920
multifunctional monopole antenna array for terrestrial and satellite radio app 83768
multilevel coding schemes, perform. in mobile fading channels 96538
multipath propag. environ., perform. eval. 83337
multipath-fading channels, bandwidth-efficient pilot-sym.-aided tech. 108813
Nakagami fading channel, multiple equal-power cochannel interferers, perfor anal. of max. ratio combining 74735
Near Term Digital Radio multi-hop network, collaborative planning, perfor anal. 111561
non-decision-aided carrier freq. offset estimator for digital radio receiver 963
noncooperative demodulation, robust baud rate estimator 108558
OFDM sigs. in nonlin. channels, mixed BB-IF predistortion 117893
OFDM transceiver for WLAN, 72 Mbit/s, C++ based syst. design 119580
offset-QPSK and MSK sigs., modulation params. 96359

ital radio continued
P25 digital mobile radio std., perform., propag. modeling 96595
packet based wireless commun. systs., adaptive modul. for fading channels 72749
PAM all-digital impulse radio for multiple-access through freq.-selective multipath 74662
PAM waveform design using MSE criteria 117889
pentagonal planar monopole for digital mobile terminals, bandwidth/modelling 83591
pers./inter-vehicle cordless commun. syst. for combat vehicle crewman 111564
PHS, self-organized dyn. channel assignment 96598
PHS for wireless home commun. syst. *(Japanese)* 85596
planetary exploration, space networking & protocols, HMP site 131327
power amp. lin. by adaptive polynomial predistortion 125247
predistortion-based lin. for forward-channel link broadband appl., CDMA 74704
Q-CDMA and chaotic SS CDMA systs., perform. comparison over Saleh indoor channel 74584
receiver phase equalization, min. phase SAW filters anal. 107541
RF feedforward-lin. power amps., digital commun., gradient optim. 79571
RF spectrum monitoring with digital anal. syst. 86411
RFICs for digital cellular 2G, 3G and cordless systs., status review 120079
Rice factor estim. algm. 94213
Rohde & Schwarz's SMIQ sig. generator for TETRA T1 test sigs. to std. 86788
Rohde & Schwarz HF Receiver EM010, digital VXI-based receiver 74570
Rohde & Schwarz RF low levels meas. and calib. 74569
Rohde & Schwarz ROGER GSM interf. analyser 75388
Rohde & Schwarz Universal Radio Communication Tester CMU200, GSM mobiles testing 74795
Rohde & Schwarz Universal Radio Communication Tester CMU200 74794
Rohde and Schwarz CMU 300 universal radio commun. tester 86783
satellite nonlin. digital link, PSK modulation, blind equalization 96619
SC image rejection filter for complex IF receivers 68917
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
Siemens and third-generation mobile commun. 96606
sig. estim. over freq. selective fading channel, soft-output seq. algm. 108764
slow-freq.-hopped slotted ALOHA systs. with retransm. cutoff, stabil. 131062
soft handoff between IS-95A and IS-95B/cdma2000, perform. eval. 74765
softbit speech decoding with re-quantization *(English)* 73024
SoftCell™, multi-carrier chip-set for software definable radio base-stations 74669
software defined radios, sync. improvements, diversity use 108580
software defined radios, Waveform Application Development Process 108700
software radio, software framework 96599
software receiver open archit., demodulation algm. *(Chinese)* 131082
spectrum of lin. range gate stealer electronic attack sig., digital RF memory 99152
SS correlators power consumption minimisation 108520
SS correlators power consumption minimisation, IF samples resampling 108521
SS transm., spreading waveform estim. 72725
subband arrays, perform. anal. 117854
syst. diversity on software defined radio 131061
TCC interf. canceller, FPGA implement. *(Japanese)* 108875
TCM and generalized selection combining 108602
TCP perform. over contention based wireless multi-hop network 85021
TDMA mobile radio systs., joint sig.-level and C/I-based power control 131112
TDMA systs., lin./nonlin. space diversity combining algms. 119993
TETRA security 118012
TETRA syst., $\pi/4$-DQPSK modulation, computer simul. *(Spanish)* 96401
trunking syst., traffic channel coding, perform. anal. 83905
tunnel environ., delay spread prediction, ray-tracing method 83332
turbo codes in radiocommunication, memory power reduction implement. 83899
two-stage RS decoder for coded 2^m-ary QAM systs. 72917
UHF indoor radio channels, rms delay and coherence bandwidth 74617
UMTS multimedia commun. syst. *(German)* 131251
unbiased blind separation using threshold nonlin. 84684
UTRA downlink with W-CDMA, space diversity schemes 120065
UWB impulse radio, appls. of symbolic dyn., pseudo-chaotic encoder 96382
vehicular speed response PLL using sq.-law ccts. *(Japanese)* 74793
video codec adaptation for streaming multimedia, MPEG4 std. 85416
video conferencing using multiple description coding 108391
video transport using conditional retransm. and low-delay interleaving 108634
Viterbi algm. for DSPs, software radio appls. *(Slovenian)* 96511
voltage-controlled SAW oscillators, low phase noise, digital commun. appls. 80272
W-band freq. tracing transceiver syst. with one PLL for digital commun. 74585
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short-term channel props. 74666
WCDMA systs., Kalman filter channel tracking algm. 74695
WCDMA UTRA uplink with unknown channel model order, smart antenna schemes 74688
Web wireless mobile service, distributed proxy server syst. develop. 108157
wireless ATM network, handover algm. considering user's mobility pattern 85659
wireless data network perform., self-similar traffic impact 131283
WLAN-OFDM transceivers, front-end non-idealities impact on BER perform. 74516
WLL, eval. of DECT, PACS, PHS stds. 74596
AlGaAs-InGaAs-GaAs power PHEMT, 1.2 V operation for PHS handset appl. 69118
GaAs P-HEMT MMIC for K- to Ka-band wireless commun. 74610
GaAs PHEMT SP3T T/R switch for DCS 80375
GaAs direct digital mm-wave receiver MMICs, six-port 96404

tal radiography *see radiography*

tal radiography (medical) *see diagnostic radiography*

tal readout
see also digital instrumentation
accelerometers, optimum selection for appl., guidelines 86468
ATLAS EM calorimeter, high speed digital opt. data link, SEU 121623
ATLAS Level-1 Calorimeter Trigger Pre-Processor syst., ASIC design proc. 121727
ATLAS pixel detector electronics 98065
ATLAS Transition Radiation Tracker, DTMROC time meas. chip 121632
BELLE Si vertex detector, perf., upgrade plan 98014
cryogenic particle detector, SQUID readout, digital DROS 71138
eddy current freq. output sens. for precision engng. 75458
fast digital double relax. oscill. SQUID design 68887
high rate environ. MWPC readout chip 121631
LEDA BPM analog front-end electronics, design 87132

digital readout continued
MCM-D technol. front-end digital readout perform. 121699
on-chip integrated Si bulk-micromachined soil moisture sens. 121299
opt. rotary encoders, CMOS front-end cct. 75397
PreFPIX2 chip, core archit. 121713
quartz resonator force sens., off-centre load-insensitive 131891
CdZnTe pad detector, readout ASIC, automatic baggage inspection 121480
Si pixel detectors, front-end electonics, readout chips 76108
SiGe uncooled microbolometer array, hybrid LWIR sens., CMOS readout 120885

digital signal processing *see digital signal processing chips; signal processing*

digital signal processing chips
1.2 kbit/s MELP speech coding algm. and real-time implement. 94401
1D color temp. conversion in perceived illum. 114791
1D DCT/DST generalized archit. 90923
1D DHT, distributed arith. array 102227
1D inverse Haar transform, online computing, prog. proc. 102207
1D/2D DCT image/video codec archits. 96319
2D convolution algms., dedicated VLSI devices/general-purpose proc./DSPs implement. *(Polish)* 73178
2D direct discrete wavelet transform, fast archits. 73657
2D discrete wavelet transform with integer lifting scheme, parallel archit. 95247
2D DWT archit., resource cycling, parallel distributed arith. 102244
2D motion estim. archit., complementary embedded memory banks 84264
2D separable transforms computation, modular lin. arrays based distributed memory parallel archit. 90943
3-level voltage-fed inverter IM drive, NN space vector PWM controller 134467
3-phase 4-wire power conditioner, voltage space vector PWM algm. 112637
3-phase AC motor, SVPWM VSI, integrated DSP motor controller ADMC331 *(Chinese)* 99613
3-phase current-source act. power filter, current control 133706
3-phase high PF boost rectifier, digital line current shaping 88872
3-phase servo motor driver, integrated intell. power module 134452
5-phase IM drives, DSP-based vector control and direct torque control 123862
5-phase reluctance motor drive, DSP-based direct torque control 89336
32-bit fixed-point DSP implement. of turbo decoder *(Chinese)* 117998
1000BASE-T Gigabit Ethernet, pipelined 14-tap parallel decision-feedback decoder 114811
ABC-MT-CMOS DSP core, charge pump cct., standby current 125533
AC drives, DSP appl. 112470
AC motor, DSP control systs., CPLD *(Chinese)* 77808
AC motor drive sensorless speed control algms. 123888
AC motor drives, stator fault detector, DSP controller based 123859
act. DSP message-board 85163
act. filter under harmonic power vars., transient perform. 122988
act. power harmonic filter, internal model control using reson. model 133715
adaptive parallel syst. dedicated to projective image matching 95513
adaptive predistortion lin. using DSP 114856
adaptive sig. proc. advances, totally adaptive systs. 73615
ADSL-lite data DSP, four-port, SoC design 102211
advanced 3G+ syst. support through open software radio archit. 108845
affine-based texture mapping, low power SIMD archit. 95525
algorithmic level DSP synthesis, symbolic alg., multimedia appls. 125551
analog DAQ boards with onboard proc. for PC-based tasks 120670
analog LSI design, data clustering/labeling in speech recogn. 79954
appl. specific DSPs, spill code, register constraint anal. 79930
archits. and selection criteria *(Spanish)* 90960
archits. evol., parallelism exploitation 102239
area-efficient binary adder, novel design 102015
array proc., implement. considerations 102240
ASIP core design, customizable DSP archit. 102212
ASIP SoC multimedia codesign based on multicriteria optim. 119808
ATLAS liq. argon calorimeter, readout drivers, PU design 76105
ATLAS Transition Radiation Tracker, DTMROC time meas. chip 121632
ATM network, VLSI modular archit. for video streaming real-time proc. 106826
ATR algm. on scalable Myrinet/field prog. array nodes 109297
audio multipoint proc. on DSP array 85427
automatic word length determ. method for implement. of DSP algms. 102248
Baker transform based chaotic FH seq. *(Chinese)* 117961
BELLE Si vertex detector, perf., upgrade plan 98014
binary image compression FPGA-based systolic array archit. 73321
biorthogonal wavelet transform, VLSI archits. based on filter bank and lifting scheme 90925
bistatic microwave intrusion detect. sens. 86930
bit-parallel systolic architecture,low-complexity, cryptosystems appl. 102191
BLDCM servo-drive, DSP based, variable struct. model following control 123869
blind person's US navig. aid, DSP-based, spatial hearing 133060
blind source separation syst. using time-delayed decorrelation, real-time implement. 118118
CADRE, Configurable Asynchronous DSP for Reduced Energy, low power multiported register bank 79908
CADRE, low-power, low-EMI DSP archit. for digital mobile phones 125542
calibrated harmonics tracking generator, internal DSP & DAC 101851
camera module, flip-chip interconnection 120902
car hands-free cellular radio, speech enhancement, spectral subtraction 119834
CDMA systs., fast convolution with PN codes, FPGA implement. 79855
CDSP, appl.-specific DSP for third generation wireless commun. 114792
CGH, fixed-point format *(Japanese)* 72078
CGH, phase computation by addit. 105583
channel state inform. AC multimotor drive, space vector control 89344
chaos seq. generation, neural network *(Chinese)* 94352
chaotic neural encryption/decryption network, design and VLSI archit. 68989
CMOS domino logic ccts., mixed-swing methodology for MAC implement. 102118
CMOS DSP-based 10BaseT/100BaseTX Ethernet transceiver 108370
CMOS dyn. prog. arith. array proc., DSP appls. 68819
CMOS FFT proc., VDSL transceiver 102228
CMOS image sens. camera with focal plane edge detect. 131975
CMOS inner product proc., 3D vol. rendering 102216
CMOS k-WTA/Sorting network using maskable WTA/MAX cct. 114919
CMOS low-power digital filter IC via soft DSP 102416
CMOS low-power DSP systs., narrow bus encoding 125531
CMOS multiplier, 32×32-bit design with sign select Booth encoder 90850
CMOS photodiodes for image sens., charactn. 86623
CMOS platform-based highly parallel DSP for wireless OFDM based modem 102256
CMOS VLSI digital cct. low-power design 70302

digital signal processing chips continued
CMOS wireless LAN to IEEE std. 802.11a, prog. chipset, 2.4 GHz *(German)* 74167
CMS tracker, APV25 0.25 µm CMOS readout chip 121715
color document compression, fast, scalable DSP archit. 95335
combined word-length optim. and high-level synthesis for DSP algms. 90956
component testing, fast real-time syst. *(German)* 120641
configurable, bit-width optim., multi-interval anal. 102208
configurable microcontroller or conventional DSP chip in DSP-based systs. 79928
const. rate wavelet-based image compressor 108484
controller, combined DSP and microcontroller *(German)* 102188
controller designs using DSPs 68847
converter control, digital PWM limit ring reduction 88863
core FPGA implement. for full rate/half rate GSM vocoders 74768
coreless lin. sync. motor, controller design *(Korean)* 112554
cores, hardware/software partitioning algm., register files 68852
correlative zero-phase fund. component notch filter for power sigs. 112082
D-FIRE 2, combined DAB/FM receiver SoC for receiver chipset 120529
DAB syst., FFT proc. 109348
data concealment in audio sig. using sub-band LSB coding, pipelined archit. 68833
DC motor real-time PID speed/posn. control scheme 134070
DCT proc. algm., low power order based 79948
DCT-based motion estim. algm., scalable DSP implement. 118500
DCT-based video coding, computation-distortion optimized framework 106960
DDGIPS, general image proc. syst. in robot vision 90921
DECT/GSM portable dual-mode terminal, baseband proc. 108831
dedicated sig. proc. systs., hierarchical automated design flow, layout generation 114783
Δ-Σ converters, low-power decimation filter design 68864
Dervish mine-clearance vehicle, image-seq. motion estim. 100309
digit-serial DSP archits. in deep-submicron technol., power efficient inter-module commun. 79937
discrete-time CNN image proc. *(Japanese)* 91136
dispersive medium, FDTD method *(Chinese)* 105694
DPAST eigenvector tracking algm., local stabil. anal., hardware implement. 79952
driver assistance syst. algm. develop., embedded image proc. platform 134584
DSP-driven cochlear prostheses, eight-channel-stimulator design 122353
dual channel noise cancelling syst. 84068
DVB single chip decoder, video proc. 119821
dyn. sig. analyzers, overview 131849
dyn. voltage restorer, software PLL 111872
Earth orbiting scatterometers, multiprocessor DSP 133334
elec. defibrillation, sig. anal. systs. for optimal timing 110652
elec. impedance tomography DAQ, DSP based master-slave syst. *(Chinese)* 132585
elec. scooter BLDCM torque control scheme 123957
embedded CMOS RISC proc., multimedia archit. extension 125528
embedded SRAM of µPs, µCs and DSPs, efficient BIST method 102176
embedded systs. design and verif., reuse oriented prototyping methodologies 101954
FACTS PC-DSP-based unified control syst. design 111855
fast motion estim. based on spatio-temporal Gabor filters, parallel multi-DSP archit. 94749
fiber optic gyroscope closed-loop syst., modified digital serrodyne proc. *(Korean)* 75554
fingerprint verification syst., ADSP21060 proc. 118658
fixed-point DSP pulse timing based on high-precision division tech. 130070
fixed-point implement., cepstral vocal tract modelling *(English)* 73034
FLEX pager design, MCU and DSP on single ASIC 108492
flight servos, intell., high-perform., neural net-based control, advanced mechatronic systs. design 122538
floating point CORDIC proc., low power, behavioural synthesis 68822
fork lift vehicle speed control, DC motor drive, GA 134551
forward and inverse DWTs, unified module archit. 90961
FPGA automated hardware synthesis, MATLAB appl., precision & error anal. 79705
FPGA-based adaptive tracking estim. computer 102200
FPGAs appls. to high perform. DSPs 90957
FPIX1, pixel-readout-chip for BTeV expt., software 87259
FR-V archit., VLIW proc. core for SoC *(Japanese)* 114795
fractal image compression proc. for moving pictures *(Japanese)* 79947
FSK sig., real-time digital demodulation *(Chinese)* 106044
gamma-ray tracking algms., DSP 121861
general-purpose auralizer implement. on floating-point sig. proc. 129966
Genevieve based semi-formal test generation 125368
H263+ low-power full-search block-matching motion-estim. design 96314
H.263 encoder for CIF-sized images on quad DSP syst., parallel implement. 84480
H.263 video DSP, data memory interface verification with memory simulator 114782
H.263 video encoder, implement. on scalable DSP syst. 118647
H.263 video encoder, real-time implement. on TMS320C6201 fixed point DSP 118612
Halny DSP based module for Si strip detectors readout 121692
handwriting recogn., high speed VLSI archit. 90945
HDTV, digital micro-mirror array based, second generation advanced multimedia display proc. appl. 120551
HDTV, HDD recording/playback, transport stream proc. LSI 120546
HDTV advanced multimedia proc. LSI 120548
HDTV CMOS single chip video proc. 120544
HDTV ISO/IEC 13818-1 decoders, design 120547
HDTV video sig. post-proc., erasable PLD appl. 97062
HERA H1 fast track trigger electronics 76140
heterog. multiprocessor DSP archit. for low-power audio sig. proc. appls. 90936
heuristic datapath allocation for multiple wordlength systs. 79711
high rate environ. MWPC readout chip 121631
high resoln. posn. inform. extraction from sinusoidal encoders 123694
high speed beamformer using TMS320C6201 DSP 110803
high speed visual decision maker, focal plane analog proc. array 79955
high-perform. video sig. proc. scheduling, NP-hard real-time constraints 114803
high-speed chip-matrix 1200-dpi LED printhead for digital color printer 94878
high-speed pattern decoder in MPEG-4 padding block hardware accelerator 79950
highly-parallel stereo vision VLSI proc., optimal parallel memory access scheme 68829
Hough transform algm. for FPGA implement. 94508
HW/SW codesign framework based on distributed DSP VM 125321

digital signal processing chips continued
hybrid morph. proc. units archit. for real-time video segmentation systs. 10223
hybrid SoC archit. for digital picture 125524
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (Ma 2001) 113283
IM, DSP based speed sensorless perform. eval. tool 134029
IM, DSP-based speed sensorless direct torque control *(Chinese)* 77860
IM, fuzzy logic based multimodel field oriented control 88743
IM, neuro-fuzzy controller design on DSP 134053
IM direct torque/posn. control syst. 134049
IM drive, hybrid fuzzy/PI two-stage controller 123863
IM drive, PF control, DSP based six-switch converter 89329
IM drive speed control, fuzzy-logic controller, DSP syst. 89347
IM drive TMC320C243-based torque estimator 123870
IM drives, DSP-controlled, smart sens. bearings 123884
IM vector control, Simulink/RTW-based real time control syst. develop *(Korean)* 112531
image coding, wavelet transforms, scalable DSP realisation 118499
image compression, 2D discrete wavelet transform core design 73326
image correl., real-time high-resoln. multiprocessor syst. 84282
image segmentation, fast watershed algm. and FPGA-based archit. 90934
image stabilizer, matching algm., Gray-coded bit-plane, video seq. 73205
implement. of AOM, defects detect. in textile material 90955
implicit cache simul. for DSP-kernel software anal. 68835
induction servo motor drive, DSP based, robust integral struct. control 1238
induction servomotor drives, robust posn./speed neurocontrol scheme 134498
indust. DSP block, semi-formal test generation, Genevieve methodology 1022
indust. network proc., C compiler design 130342
IP-based design, static power estim. methodology 79685
IQ modulators, implement. of automatic digital compensation 125265
ISDN systs., USB implement. in integrated access chip 119766
Japanese BS digital broadcast receiver 120545
JAZiO sig. switching technol., low-cost digital I/O for high-speed appls. 688
joint time-freq. adaptive echo canceller design 107565
JPEG2000 codec, implement. on fixed-point DSP 119822
JPEG video rate compression on parallel single-chip digital CMOS imager, tran pose memory 95272
LEDA, beam phase meas. syst. 87126
LEDA beam diagnostics instrumentation, beam current anal. 87096
LEDA beam diagnostics instrumentation, beam posn. monitors 87104
Lempel-Ziv data compress. algm., unified VLSI systolic array design 90924
LMS algm., implement. 114812
LOFAR radio-telescope using cluster computers and grid proc. 75263
logarithmic no. syst., low-power props. 79956
low power DSP core, semicustom ASIC design, batt. powered appls. 12554
low power FFT proc., coeff. ROM power consumpt. reduction 90947
low power multimedia syst. µP-based archits., adaptive power optim. algn 79918
low-bit motion detector archit., power scalability and VHDL model 95275
low-power CMOS, optimisation of real-time sig. proc. algms. 73164
low-power design tech. 102241
low-power high-speed max. a priori decoder archits., design 79917
low-power implement. of DSP systs. for DSL appls. 125527
low-power motion-estim. archit. based on early-jump-out tech. 102229
low-power sig. proc. in deep submicron era, algorithmic noise-tolerance 1148
low-power VLSI archit. for telescopic search block-matching motion estim *(Chinese)* 102219
lower limb prosthesis, portable meas. of press., temps. and humidity 133049
LVDT posn. sens. spectral sig. proc. *(Italian)* 120693
mag. levitated centrifugal pump, bearingless motor, digital control 123315
MAJC 5200 multimedia proc. µP 90950
market prospects, appl., archits. *(Polish)* 68838
media and DSP proc., CBP and ART image reconstruction algms. 114777
memory efficient motion estimator for three step search block-matching alg 118540
merged DRAM logic for video sig. proc., design metrics 102231
meteorological radar, digital sig./image proc. 106834
mobile radio channel simulator, hybrid DSP-FPGA archit. 108868
mobile radio devices, digital baseband proc., dyn. reconfigurable soln. 85898
mobile radio devices, reconfigurable RF elements *(German)* 74785
mobile radio integrated echo/noise canceller 119833
mobile telecomm. syst., SAW and digital correl. proc. 96526
modular multilevel inverter for HV AC power supply appls. 134247
modulated complex lapped transform proc., design and CPLD implement. 688
modulated freq. stepped pulse radar sig., DSP implement. 75088
monopulse Doppler radar syst., high-speed DAQ/DSP 75188
motion monitoring/class. with center-biased motion estim. 94556
motor motion control, Windows-based develop. environ. design 123320
Motorola DSP56307-based real-time acoustic echo canceller 119510
MPEG4 multimedia syst., CMOS LSI for V_{DD}-hopping, real-time feature 1022
MPEG audio layer III decoder using dual-core DSP, archit./implement. 1181
MPEG video encoding rate control, local image area defn. enhancement 952
MPEG-2 AAC decoder, design optim. 118103
MPEG-2 HDTV encoder, multiple enhanced SDTV encoding LSIs bas develop. 118538
MPEG-4 low-power/scalable soln. for wireless commun. 118645
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS imp ment. 79949
MPEG-4 visual ACE profile, parallel archit. 118543
MPEG-audio layer III algm. for 16-bit DSP 79951
multi-appl. FFT analyser, DSP archit., real-time behaviour 86408
multi-bit binary arith. coding 94268
multi-dimens. logarithmic no. syst. in DSP appls. 79957
multi-level converter, voltage-source duty-cycle modulation 134536
multiband dyn. range compression (MDRC) algm., hearing aid 111182
multiband excitation-LPC vocoder implemented by fixed-point DSP, 1.8 kb *(Chinese)* 85422
multidetector compact DAQ syst. time encoding anal. 120677
multidimensional periodic scheduling, high-throughput DSP systs., two-sta soln. 114794
multimedia digital IC reusable interface design 126948
multimedia execution hardware accelerator 90944
multimedia WLAN, advanced prototype test platform 130715
multimode software defined radio receiver, direct conversion and low-IF *(Jap nese)* 108592
µP internal-SRAM testing using zero-overhead BIST 68834
NeuroMatrix NM6403 DSP archit., vector/matrix engine 114781
noncontact ang. posn. sens. technol., differential displacement/lin. capabili 75418

l signal processing chips continued
X-2700, prog. single-chip HDTV proc. 75304
), image capture by TMS320C50 high speed digital proc. chip *(Chinese)* 3285
FDM, baseband adaptive predistorter perform. 72717
otoelectronic VLSI, archits. & technols. 117027
irtially reson. act. filter, digital PWM control cct. with DSP 112081
C cryptographic coprocessor based on TI sig. proc. and smart card syst. 118033
C-based software receiver using novel front-end technol. 108577
C-independent speech recogn. syst. using DSP 129409
CI bus expansion card with floating point DSP, develop. *(Slovenian)* 97153
rs. navigator mobile multimodal commun. device design *(Slovenian)* 96512
ipeline scheduling, normalized scheduled data flow graph appl. *(Chinese)* 58686
pelined dataflow small micro-coded asynchronous proc. and DCT appl. 102243
pelined proc., dyn. prog. approach to complex allocation 125520
xel 8×8 array IC for X-ray spectrosc. 121714
anetary mission image compression archit. 108485
LD-based DSP systs., debugging and design, staged approach 79904
M AC/DC motor drives, DSP-based integral variable struct. control 123943
M sync. motor sensorless INFORM-based positioning drives 123365
MSM, sensorless control down to zero speed 88703
MSM, sensorless FOC, 6 sigma tool, param. optim. 134667
MSM drive, direct torque control 113047
MSM drives, direct torque control, ripple minimization 123880
MSM drives, variable flux control for const. torque operation 89343
N generator, DSP 106103
olar lin. syst. for RF power amps., transmitter archit. 69213
olyphase brushless PM DC-machine direct drive syst., design, eval. 134447
olyphase channelizer chip-set, low-power design, FFT, appls. 102226
olyphase filter, sample rate conversion, Virtix FPGA technol. 102398
ortable digital video cameras, image proc., VLSI switched-current implement. 95354
ower anal. by labeled simul. 79912
ower conversion flexible archit. digital control systs. 123572
ower convertor current regulation principles 123570
ower quality monitoring, embedded syst. 86407
owered wheelchair controller using master-slave control archit. 133058
PowerPC G4 proc. with AltiVec technol. for optim. of beamforming kernels 102225
PreFPIX2 chip, core archit. 121713
proc. archits., recent develop. 79929
prog. DSP design using VLIW archit. 102205
prog. multiplierless digital filter array for embedded SoC appls. 80083
proportional counters, digital pulse proc. tech. 121636
PTMSTD-III DAQ/analyser, DSP syst. design 68821
PWM buck and boost DC-DC converter, simultaneous digital fuzzy control *(Korean)* 123584
PWM voltage source rectifier, reduced-size input filter, operation 134165
PWM VSC-based STATCOM, DSP-controlled, develop. 123715
PWM VSI IM drive, DSP based fault detect. 100254
radio receivers, flexible DSP, architectural eval. 108561
RAM archit. for parallel DSP in memory, implement. 114809
RAM parallel archit., discrete wavelet transform implement. 114810
real-time reconfigurable image recogn. syst., model-based develop. 107227
real-time robot PM sync. servomotor drive control scheme 112730
reconfigurable computing for wireless base station design 125546
reconfigurable on-board payload data proc. syst., ESA develop. 98920
rectifier cct., PFC, DSP based controller design 88829
reduced memory bandwidth real-time EZW video coder, VLSI implement. 96321
register-based multi-port perfect shuffle network 102213
relay protection, DSP-based digital testing equipt., dyn. simul. *(Chinese)* 99406
RENE, Rice Everywhere NEtwork project, multitier wireless commun. 85499
reson. sens. arrays, high-resoln. multichannel instrum. 131816
resources sharing, synthesis algm. 125558
reversible variable-length decoding, efficient table access 94335
RF sig., digital generation, band-pass Δ-Σ modulation 101820
RISC μP with DSP functionality, 32 bit, rapid prototyping 68845
RISC-based DSP synthesis, compiler-friendly, perform. eval. 68839
RLS systolic array proc. 79941
RNS converters, automatic generation, archit. level exploration, CAD tool 102218
room impulse response simul., scalable C40 multi-DSP syst. 108588
rotary encoder, digitally enhanced resoln. tech. 90997
ROTOR VLSI proc. optim. 121708
RSA cryptoprocessor, Montgomery algm. 106244
satellite on-board front-end proc., systematic-DSP 133246
self windowing for high-speed vision 118435
sensorless hybrid direct torque control IM drive 134444
Serpent encryption algm. implement. on 24-bit DSP 129283
servo, low power archit. for opt. disc 116589
servomotor drive field orientated current control scheme 123889
shunt act. harmonics filter, DSP-controlled, distrib. network *(Japanese)* 88431
sig. proc. dedicated systs., optimised archit. design *(French)* 116015
sig. strength based switching activity modeling and estim. for DSP appls. 114787
sigs., systs. and computers, conf., Pacific Grove, CA (2000) 100407
silicon retina chip for precision image spatial/temporal derivatives 109678
single-phase AC sources, high-perform. voltage regulator 78009
single-phase AC/DC integrated PWM converter, digital control 134213
smart antenna syst., DSP board, W-CDMA WLL channel 72639
smart antennas for mobile commun. systs. 83722
SMART instrums., fieldbus, safety instrumented systs. 76025
smart pixels, appl. to opt. interconnects and image proc. 117041
SMES double-DSP controlled power conditioning syst. studies 122850
SoC design, fast hardware-software co-simul. framework 79710
SoC design challenges 125526
SoC proc., hardware/software instruction set configurability 125547
SoftCell™, multi-carrier chip-set for software definable radio base-stations 74669
software defined radio prototypes for multimode operation 108729
software radio, multiprocessor archit., full-duplex real-time commun. *(Japanese)* 108874
software-defined radios, algms. for carrier and sym. sync. 119913
software-implemented digital filters, power anal. 102413
sound synthesis, transfer fn. model with nonlin. excitations 129963
spaceborne payload proc., scalable reprog. modular archit., COTS 133242
stacked A-to-D converter for increased radar sig. proc. dyn. range 96989

digital signal processing chips continued
stereo echo canceler with correct echo-path ident., input-sliding tech. 131785
still digital camera, H.26L intra mode encoder archit. 120904
superscaler DSPs as viable alternative 79905
surface PM sync. servomotor, current sensorless speed control 133974
surge impedance relay implement. scheme *(Chinese)* 123043
sync. generator voltage/freq. fuzzy control using TMS320F240 DSP 123374
sync. reluctance machine control, mag. saturation effects 123360
syst.-on-a-chip interconnect, commun.-based design, formal approach 125554
syst.-on-a-chip video encoder, proc. interfacing 106927
syst.-on-prog.-chips *(Italian)* 90927
System Canvas, design environ. for embedded DSP and telecomm. systs. 79663
target recogn. algm. implement., time-delay neural net on TMS320C6201 *(Chinese)* 120401
Terason 2000 handheld PC-based US imaging syst., SoC design 110696
three-phase ac motors, DSP-based control, A/D conversion syst. 78104
three-phase UPS PWM inverter, digital voltage/current controllers 134232
time-series fractal anal. methods, DSP-based 129946
TMS320C25 in-syst. prog., computer serial port *(Chinese)* 90931
TMS320C6201 implement. of W-CDMA syst. Viterbi decoder 102192
TMS320C64x for DMT based VDSL modem implement. 131016
TMS320C80 based digital multibeam receiver implement. for laser optoacoustic rem. sens. 75238
TMS320C80 single-chip multiprocessor, parallel image proc. appl. 79940
TMS32OC6201 DSP based high-speed real-time digital pulse compress. syst. *(Chinese)* 125557
truncated Viterbi decoder, CMOS cct. realization using pipeline tech. 125519
turbo decoder, power-efficient layered proc. archit. 79915
TV high quality consumer video proc. chip 120524
TV receivers, hybrid technol. *(Italian)* 109359
ultra low-power DSP arith., data-dependencies, asynchronous appls. 125543
ultrahigh-speed VQ, scalable lin. array archit. with data-driven control 96320
universal digital motor control proc. for indust. appls. 123319
VCR digital FM demodulator 131776
VHDL models of parallel n×n bit multiplication blocks, DSP appls. 102194
VHS VCR, μP-assisted audio sig. proc. syst. 131775
video codec adaptation for streaming multimedia, MPEG4 std. 85416
video sens. sig., high-speed great-capacity storage/proc. 86444
video sig. denoising/sharpening 118334
video windowing controller design for electronic endoscope and multimedia 75292
vision chip, appls. *(Japanese)* 94493
vision chip syst. for real time visual proc. *(Japanese)* 84088
vision chips and high-speed vision systs., fully parallel proc. archit. 129656
visually lossless data compression for real-time frame/pushbroom space imagers 106914
Viterbi algm. for DSPs, software radio appls. *(Slovenian)* 96511
Viterbi decoders, path metric memory mgt. for minimising interconnections 90926
VLIW DSP vs. superscalar implement. of baseline 11.263 video encoder 106996
VLIW proc., code compression 102242
VLSI, DSP & SOC analog integrat. in Internet era 79924
VLSI, new generation, concept/archit. 114808
VLSI design, power consumption optim., control loop 102214
VLSI prog. parallel archit. for 2D discrete wavelet transform 94771
vortex flowmeter sig. proc. syst., DSP with spectrum anal. fn. *(Chinese)* 109487
VSI, current regulation, zero crossings of compensated current errors 134186
W-CDMA downlink receiver algms. prototyping, basics and implement. 108562
W-CDMA receiver, DSP ultra low power implement. 74678
WCDMA appls., DSP-based high-speed turbo code decoder 96561
wearable electronics integrated into clothes 120600
wireless commun., DSP and power amp., synergistic design 74536
wireless commun. receiver, pipelined multiuser detector 108566
wireless SoC design infrastructure and automated chip design flow 114894
wood real-time inspection archit. 95532
Xetal, CMOS low-power high-perform. smart camera proc. chip 102230
Xilinx Virtex-E FPGA based 20-GFLOPS quadratic residue proc. 96979
zerotree image coding algm., wavelet filter *(Chinese)* 129739
recording/playback MPEG-2 MPHL single chip decoder 120579
CdZnTe detectors, digital sig. proc., clustering method 121635
CdZnTe radiation detector sig. proc., clustering method 121427
NbN DSP module, IR FPA sens. 70827
Pb-acid EV batt. charging control, charging/discharging monitoring 123987

digital signals
2D sigs., discrete orthogonal transform., iter. algm. 107473
adaptive voiced/unvoiced segmentation for Mandarin syllable *(Chinese)* 106336
array nonlin., mitigation 96990
automatic fast modulation recogn. algm., spectrum monitoring appl. implement. 106017
band-limited digital sigs., precise interpolation scheme *(Japanese)* 118943
cable mixed sig. multiplex, interact. between analog and digital distortions 97067
chaotic digital modulation schemes, state of art 94251
HTSC sampler syst., digital sig. waveform meas. 70821
motion anal., uncertainty rels. 129568
multistep param. modulation, secure digital sig. transm. 128970
narrowband digital sig. prod. by spectrum deletion and recovery *(Japanese)* 72758
NRZ sigs. in uniformly loaded PCB transm. lines, time jitter eqn. 117725
radio converter for software radio 74579
reception with background impulse and white noise 107612
telemedicine, interactive, sig. delay 122455
wireless link 85564

digital simulation of computers *see virtual machines*

digital storage
see also buffer storage; content-addressable storage; ferroelectric storage; magnetic storage; memory cards; optical storage; RAID; random-access storage; read-only storage; semiconductor storage; superconducting memory circuits
8 cm DVD-RAM video camera recorder, actuator control for disturbance suppression 120584
audio archive project 97112
Boolean alg., converter ccts., min. memory vol. 102012
camera images, flexible storage 107092
continuous media server, hierarchical storage, data replacement algm. 96310
copyrighted content protection against unauthorized copying, legal develop. 100481
disc based video recorders, MPEG-2 streams virtual editing 118328
fibre channel transm. vs. storage attached network *(German)* 96216

digital storage continued
FPGA struct. for const. coeff. multiplication *(Polish)* 114713
home mass storage and TV watching 120532
image proc., early appls., cost modeling 94840
inform. storage technol., conf., Hong Kong, China (Nov. 2000) 113234
memory compress algm. for arbitrary waveform generator *(English)* 79620
MPEG-2 compressed VoD, interactive operation implement. 97091
opt. metrology, conf., San Diego, CA, USA (July 2000) 89498

digital storage oscilloscopes
analogue cct. courses, PC sound card-based audio waveform generator 78523
antenna meas. in time and freq. domains using sampling oscilloscope 75847
coherent sampling syst. with triggered time interpolation 75775
freq. response flatness anal., accurate step generator 121065
opto-electronic probe for very-fast HV pulsed power appls. 97767
PD DAQ, prog. digital oscilloscope based syst. 120668
rem. UWB radar sigs. proc., high-speed sampling technol. *(Chinese)* 109291
safety devices anal. algm. in emergencies, digital oscillographic data 77198
space grade wires in electron environ., ESD study 133235
underground cable arc fault location, single terminal voltage/current data 99372

digital subscriber lines
10BaseS symm. Ethernet links, dedicated VDSL chipset *(German)* 74168
acoustic echo canceling trends *(Japanese)* 95607
adaptive interpolated FIR echo canceller, low complexity 102404
ADSL, access VPN syst. config. *(Japanese)* 107885
ADSL, FDM, echo cancellation, multi-channel modem fn. *(Italian)* 108469
ADSL access systs. for broadcast TV and interactive video services *(Polish)* 85413
ADSL and VDSL systs., improved channel model 96303
ADSL broadband access syst. *(Chinese)* 85411
ADSL modem, decision-making method for archit. selection 130999
ADSL systs. supporting downstream wireline/wireless trunks, subchannel allocation 85409
ADSL transm. using turbo coding 96299
ADSL-lite data DSP, four-port, SoC design 102211
ATM and differentiated services networks, ABR usage mechanisms 130213
ATM in network backbone 84835
ATM networks, ADSL-lite technol., PT Telkom Indonesia field test results 130998
ATM over ADSL IC, simul. approach for functional verification 108477
ATM-based DSL access network, voice call quality 108065
ATM-PON, opt. network unit controller, archit. design 131390
ATM/ADSL network, QoS multicast video, act. network based mgt. 131744
bandwidth-efficient RS coding in ADSL 96305
BCE's ComboBox for DTH satellite TV, DSL and pers. video recorder 75307
BiCMOS full-rate ADSL-RT analog frontend IC with integrated line driver 102428
broadband access services, Belgacom perspective 130988
broadband access services, use of DSL techs. *(Spanish)* 96307
broadband capacity upgrade strategies in residential areas, investment cost anal. 74461
broadband over inverse multiplexed xDSL modems 73812
broadband service perform. 96292
broadband wireline network transceivers, CMOS analog front-end 102429
CMOS FFT proc., VDSL transceiver 102228
CMOS line driver, DSL 79561
CMOS pipeline 15 bit 10 Msample/s ADC for ADSL appls. 79978
commercial DSL 131005
concurrent QoS-assured multicast sessions, mgt. using prog. network archit. 96048
CPE for business users 74463
CYTA ADSL field trial experience of broadband service delivery 108479
data transm. over noisy channels, optimal orthogonal finite order transmitter/receiver filters design 107538
DCT for noise generation 119818
dedicated access line, value added integrated telecomm. services 96011
DFE hybrid struct. for CAP-based DSL systs., perform. 95814
discrete multitone modulation receivers, RFI cancellation 108476
DMT receivers with selective windowing, per tone adaptive equalization 131008
DMT systs., turbo coding 129203
DMT transceivers, near-optimum channel shortening, matrix multiplication methods 107678
DMT transmitter, IFFT module, time-recursive lattice struct. 108470
DMT VDSL with impulse noise, crosstalk mitigation using multiuser detect. 130149
DMT/OFDM modulation on twisted pair cables, guard interval reduction by impulse compression 72771
DSP systs. for DSL appls., design for low-power implement. 125527
gateway syst. as LAN/WAN link, domestic and small office appl. *(Italian)* 85280
HDSL systs., waiting time jitter, power spectrum anal. 131013
IADs, Integrated Access Devices, xDSL services, hardware and software design 85412
integrated voice-data access network 96302
Internet connection and access services *(Japanese)* 130807
ISI-impaired narrow-band multiuser systs., min.-error-probab. single-user detect. 83407
MCM, channel profile selection, robust bit loading 73829
multi-user precoding for crosstalk cancellation 106144
multicarrier transceivers, BER efficient estim. 85407
multicarrier transm. systs., narrow freq. band suppression 117715
MUX of video and data sources in ATM access network 73788
network bandwidth meas. 130997
OFDM based on multicarrier PLL, freq. offset tracking 106031
perform. in Gaussian and far-end crosstalk noise environ. 96304
problems restricting public acceptance of DSL 74470
rural market success for DSL 74472
SDSL upstream receiver, crosstalk interf. mitigation 108471
SDSL upstream transm. with vector equalization, crosstalk mitigation 131007
seq. TDR for DSL diagnostics 85408
smart radio, community based music radio 85381
spectrally-shaped crosstalk-impaired, peak-energy-limited multicarrier systs. loading 131009
Switzerland, xDSL gateway to data highway *(German)* 131001
telecomms. network component testing from phys. layer to appl. layer 74491
telephone network, practical technol. 130987
telephone pair gain systs., automatic testing 119815
time-domain equalization cost-effective algm. 130277
TMS320C64x for DMT based VDSL modem implement. 131016
transparent hybrid fiber/copper approach, DSL service area enlargement 74474

digital subscriber lines continued
UK, VDSL 74469
VDSL, service splitter filter 85405
VDSL, VDSL technol., fibre-to-the-cabinet connections *(Italian)* 130986
VDSL based broadband access network 131010
VDSL for broadband access syst. *(Japanese)* 131003
VDSL technol., RFI sources, far-end-crosstalk 85410
VDSL technol., spectral allocation, far-end-crosstalk 74473
vectored-DMT, FEXT canceling modulation scheme for coordinating use 128981
Verizon's home networking 96080
video, broadband delivery via DSL networks 119803
video over BPON with integrated VDSL 108424
VoDSL, voice over DSL 74151
voice over DSL 74471
voice over DSL, revolutionary transm. syst. for small businesses 85158
voice-band modems to DSL technol. evol., overview 131012
voice/data convergence, access aspects 108468
whole program compilation for embedded software, ADSL expt. 85406
wireless/wired subscriber access 74466
xDSL broadband access services, mktg. and managing 130989
xDSL sigma-delta modulator, digital CMOS technol., top-down design 79961
xDSL systs., crosstalk ident. 108473
xDSL systs., crosstalk ident., freq.-domain approach 108474
xDSL systs. corrupted by impulse noise, error-free seconds calc. 96300

digital systems
see also computer networks; digital communication; digital computers; multi access systems; multiprocessing systems; real-time systems; smart cards
complex digital systs., logic analyzers, test instrums. 131837
discrete-time batt. and convertor models for syst.-level low-power desig 125225
microelectronics classes, design contests as class projects, worth 124271
multirate digital systs., lin. and nonlin., sig. flow graphs 90012
NPP software requirements anal., graphical approach 112225
substations, homog./uniform digital protective syst. 78086
VHDL lang., logic synthesis of digital systs. *(Spanish)* 79657

digital television
see also digital video broadcasting
8VSB DTV double-heterodyne TV tuner, phase noise anal. 120525
analog image transm. enhancement using digital side inform., wavelet-base image coding paradigm 107054
artifacts subjective appearance, image preprocessing 84404
broadband data delivery over TV networks 97105
cable set-top boxes 97069
CATV broadband network design and simul. 120555
channel video decoding, single-chip soln. 75294
CMOS VGA up-converter, digital TV tuner 90758
commercial broadcasts, automatic recogn. 73506
compact ellipt. fn. BPF, triple-mode cavities, digital TV transmitter 109358
computational video, conf., Tampa Florida (2001) 100380
concurrent QoS-assured multicast sessions, mgt. using prog. network archi 96048
DCTlab educational image compression software for digital TV course 89646
dist. education using video prod. 109386
distributed asset mgt. systs., platform 109363
DTV TFT-LCD with integrated digital data driver 80024
dyn. services mgt. using extended temporal network inform. models 130567
E-VSB, 8T-VSB compatible syst. with improved white noise/multipath perfor 118506
educational opportunities of Internet services and TV integrat. 120583
Europe, freq. spectrum mgt., internat. exchange of data 86289
FD Trinitron, digital TV sig. proc. & display technol. 86326
format conversion and display, removal of spatial and temporal alias artifact 86298
grand alliance digital TV, Viterbi algm., CPLD implement. 131731
HDTV, enhanced pers. video recorder design/implement. 120553
HDTV, multi-tap high speed equalizer design *(Chinese)* 107716
HDTV digital receiver with HDD, digital stream proc. technol. 120552
HDTV projection display for ATSC std., 61 in., large neck CRT 86327
HF sig. switching, electromech. relays, digital TV set-top boxes *(Germa* 69293
high-defn. video and digital cinema, genlock and timing regeneration for multip formats 75302
home mass storage and TV watching 120532
home telecare, digital interactive TV use, tech. framework 111289
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 11321
interactive digital TV Java environ. 86302
microdisplays and digital cinema, conf., Boston, MA, USA (Nov. 2000) 10984
moving picture defn., test pattern seq. *(Chinese)* 129760
MPEG-2 digital TV broadcast systs., synchronized data services 86296
MPEG-2 multiple programs control via digital terrestrial TV transmitters *(Ge man)* 75286
MPEG-2 toolkit, compression of moving pictures for digital cinema 97058
MPEG-4 digital multimedia broadcasting appls. 119786
MPEG-4 enhanced digital TV set-top terminal, implement. 118532
next-generation digital TV using std. Internet technols. *(Japanese)* 120533
NX-2700, prog. single-chip HDTV proc. 75304
OFDM receivers, freq. domain equalization of IQ imbalance 119177
OFDM systs., MUX guard intervals and time domain pilots 120510
pers. digital TV listings service 75299
QAM general constellations, blind carrier phase estimators, perform. anal. 9424
QoS in digital TV networking 97047
receivers, hybrid technol. *(Italian)* 109359
reception environ./channel estim. 120506
retail set-top box appl. platform archit. for digital cable network 120562
Rohde & Schwarz's NH/NV7001 air-cooled UHF TV transmitter family 13172
set-top box SOPCA's software modules, design and implement. 109362
set-top boxes 109372
sopca set-top box, software modules *(Chinese)* 75293
teletext service, XML-based content format 96064
terrestrial digital TV single chip tuner design, mixed sig. DVB-T receiver 8012
TV studios, video file mgt./clip transfer *(German)* 75319
universal DTV mastering in high resoln., multiframe rate compression-free vide recorder 86346
video, flexible software decoding 129724
video compression 95139
video watermarking for automatic audio-to-video delay correction 120534
Viper, multiprocessor SOC for advanced set-top box and digital TV syst 120536

television continued
B/QAM/QPSK single IC for ATSC/OpenCable™ digital terminals 120526
CDMA/digital TV sigs., ACI meas. via spectrum analyzer 72350
eless Internet over LMDS, archit./expt. implement. 74595
WW over DTV, broadcasting and Internet 86306
F German Broadcast Centre digital satellite news gathering *(German)* 31740
o-knowledge identity authentication scheme *(Chinese)* 109354
MESFET perform., broadcast power amp. appl. 91242

video broadcasting
DVB-T in mobile environ., majority selection and block-based diversity ception 120527
SB DTV double-heterodyne TV tuner, phase noise anal. 120525
6-QAM CATV networks, blind equalization 107707
dressable syst. for digital home terminal *(Japanese)* 131752
M networks for professional broadcast demands 109352
V broadcasting in digital broadband distrib. environ. 109353
tomation aspects 86305
nd/semiblind channel equalization for wireless broadcast channels 73845
oadband access services, Belgacom perspective 130988
oadcast Satellite digital data broadcast service, BML authoring syst. 120082
digital tuner unit for CATV syst. *(Japanese)* 131753
nada, LMCS field tests 74612
pacity scheduling for data services over digital networks 119483
ATV, MPEG-2 TS transm., HFC network *(Chinese)* 97075
ATV, transm. syst. for renewal *(Japanese)* 131754
sed captioning transm. and display in digital TV 97051
MOS HF low-power multirate SC realizations for NTSC/PAL digital video fil-ering 80041
MOS single-chip front-end for digital satellite broadcasting 120084
mponent-based freq. spectrum mgt. software, implement. 85445
ta broadcasting software *(German)* 97053
ta broadcasting solns. for broadcasters 109351
SNG auxiliary co-ordination channels 74889
VB version 2.0 *(German)* 97052
VB-RCS appls., high-speed on-board multi-carrier demodulator 109012
VB-RCS systs., terminal timing synchronisation using on-board NCR genera-ion 109016
VB-S, general systs. concepts 75268
VB-T mobile reception, channel modelling & meas. 109349
VB-T sig. meas. 86314
VB-T sig. over CATV network, phase noise requirements 86304
yn. single freq. networks 131153
nhanced DTV programs, data insertion 86300
uropean broadcasting, migration from analogue to DVB-T 75282
uropean digital broadcasting introduction, computer support 86303
uropean DVB-T equalizer in time-variant channel for digital mobile commun. 97050
UTELSAT multimedia satellites 109009
UTELSAT satellites, digital TV transm. quality monitoring 75278
EC, convolutional and RS coding, interleaving syst., appls. *(Italian)* 83869
ee universal TV networks, FUN *(German)* 131737
lly interactive digital TV appls. *(German)* 131778
uture prospects overview 75285
ermany, broadband cable networks, media law 131719
ermany DVB-T, implement. costs *(German)* 75272
IDTV, HDD recording/playback, transport stream proc. LSI 120546
IDTV advanced multimedia proc. LSI 120548
IDTV broadcast technol., NIST advanced technol. program project 97064
IDTV CMOS single chip video proc. 120544
IDTV ISO/IEC 13818-1 decoders, design 120547
eterog. and distributed resources, digital video mgt. 108398
ierarchical coded modulation, broadcast commun. on fading channels 72727
HPA nonlin. effects on freq. multiplexed OFDM sigs. 119922
nteractive digital terrestrial TV, wireless return channel/WITNESS project 120509
nteractive media content via image reuse, video clip usage 108406
nternet TV economics, new niches or mass audiences 97057
P QoS over GEO satellite systs. using MPLS 131311
apanese BS digital broadcast receiver 120545
ned. devices, EM interf. from digital TV sigs. 133194
ned. telemetry systs., EM interf. from digital TV 133195
noving picture coding for scanning compatible broadcasting 118539
MPEG2 and DVB-T sigs., meas. 86310
MPEG-2 coding efficiency and scanning format 86299
MPEG-2 MPHL single chip decoder 120579
MPEG-2 seqs., hierarchical transm. in noisy environ. 84378
multi-program broadcasting, modular joint bit-rate control syst. 75280
multichannel audio coding, DAB and DVB appls. 94403
Multimedia Home Platform DVB, conformance/licence testing *(German)* 131727
NEC's BS trans-modulation syst. *(Japanese)* 131751
news speech, topic segmentation using word similarity 131722
objective audio and video quality assess. 129477
objective quality eval., MPEG-2 syst. 84372
OFDM sigs. in nonlin. channels, mixed BB-IF predistortion 117893
OFDM systs., fuzzy adaptive sig. predistorter 129970
QoS monitoring/optimisation *(German)* 75267
real-time detect. of video scene breaks using ANOVA *(Japanese)* 118215
Rohde & Schwarz's DVQM, multichannel video quality analyzer for digital TV broadcasting 86436
Rohde & Schwarz's SFQ TV test transmitter for DVB-T diversity reception 131730
Rohde & Schwarz Digital Video Quality Analyzer 75298
Rohde & Schwarz Stream Explorer™, single-freq. networks monitoring 75274
Rohde and Schwarz DVB-T and MPEG-2 sigs. meas. 75296
Rohde and Schwarz SFQ TV test transmitter, SFQ-B5 noise generator option 86313
Rohde and Schwarz SFQ TV test transmitter for digital cable std. ITU-T/J.83B 86312
satellite broadcasting syst., turbo code technol. 106075
satellite news gathering and DVB, co-ordination channels 75300
set-top boxes, digital TV, protocols, decryption systs. *(German)* 120519
single chip decoder, video proc. 119821
single freq. network planning/coverage prediction, meas. based software design 86294
single freq. networks, local coverage probab. estim. 109355
SpaceMux, on-board mesh proc. 109013
Spanish digital TV services, market strategies analysed 131725

digital video broadcasting continued
SS broadcasting syst. spectral overlay for digital video delivery on analog TV band 108631
std. for digital satellite news gathering and other contrib. appls. by satellite *(Italian)* 86321
surgeon training via video conferencing and Internet 119769
TCP asymmetric service provision using broadband satellite, perform. 73962
telecommunications and broadcast networks, convergence 85701
teletext in digital TV 74160
teletext in digital TV *(German)* 74159
terrestrial broadcasting, channel estim. in OFDM systs. 97048
terrestrial broadcasting, mobility/interactivity saviour 75281
terrestrial digital TV broadcasting, US outlook 86307
transm. of DVB service inform. via Internet 75279
TrueCircuit LANs for video broadcasting *(German)* 74256
TV navigator 131721
UHF propag. loss for mobile reception in urban areas with horiz. and vert. polaris. *(German)* 72314
ViSiCAST project, TV program sign lang. service for deaf pers. *(German)* 129794
VOD, data broadcasting/seamless channel transit. 75322
VOD broadcasting protocols 119347
VoD syst. design for high-quality video/audio with D1 over IP 109377
Webcasting, broadcaster's perspective 74317
wireless digital TV camera 97049

digital voltmeters
flickermeter testing, calib. syst., digital logic & software control 109836
phase meas., accurate tech. with two sampling voltmeters 109920
potentiometers, advantages over mech. counterparts 121132
resist. meas. syst., input & leakage resist. anal. 109414
voltage ref. elements monitoring, predictive models 132117

digitisers *see analogue-digital conversion*

digraphs *see directed graphs*

dilatometers *see extensometers*

diluted magnetic semiconductors *see semimagnetic semiconductors*

dimer lasers *see excimer lasers*

dining philosophers problem *see concurrency control; resource allocation*

diode lasers *see semiconductor lasers*

diode sputter deposition *see sputter deposition*

diode sputtered coatings *see sputtered coatings*

diode sputtering *see sputtering*

diodes
see also plasma diodes; rectifiers; semiconductor diodes; vacuum tubes
18-pulse diode rectifier, three-phase coupled reactors 112628
crossed-field secondary emission diodes, research status 93974
diamond:B microtip field emitter cathodes, molding proc. prep. 69404
graded gain random liq. laser amp. opt. diode spectral charact. 82506
inward-emitting coaxial diode, I-V correl., 2-D modif. *(Chinese)* 115251
lin. induction accelerator electron diode, 12 MeV, optimum design *(Chinese)* 87156
magnetron diode electron vortex, num. expt. 115263
supercond. fault current limiter develop. *(Chinese)* 112173
velvet cathode diode design, uniform electron beam diagnostics *(Chinese)* 87141
C nanotube FED, num. indicator 75799
Si nanoprotrusions, field electron emission 102896

diplexers *see multiplexing equipment*

dipolar glasses *see dipole glasses*

dipole antenna arrays
2D microstrip-dipoles reconfigurable aperture antenna array gain 128892
10 GHz GaAs monolithic twin-dipole antenna FET mixer 115010
base-station-antenna radiation patterns, 3D interpolation method 72665
cellular base station dual-band printed antenna optim. 85694
cellular base-station receivers upgrade 74807
circ. antenna arrays, pattern synthesis, null form. with excitation constraints 72686
circ. array in interferometric direction-finding syst., anal. 73629
collocated orthogonal dipole antennas 72664
crossed dipole FSS array geom., GA optimisation 105942
dual band phased array antenna design for radar appls. 83712
dual-band switched-parasitic wire antenna, direction finding 72636
Earth-ionos. waveguide excitation by VLF radiators 128825
FLAPM, fuzzy logic antenna param. modifier 72658
FSS using cross dipole elements 72654
imaging riometer, high-lat. ionos. studies 88126
infinite nonlin. loaded antenna arrays, inexact Newton anal. 83670
integrated probe for phaseless plane-polar near-field meas. 128909
Ka-band dipole holographic antennas 83663
log-periodic dipole antenna design using GA *(Chinese)* 83697
microstrip reflectarray with line-source-feed 94184
MM-wave FSS, high perform. micromachined 83718
multi-layer quasi-opt. freq. doubler based on crossed dipole struct. 125687
optim., GA 83742
periodically arranged pass. dipole scatterers, waveguiding props. 94202
periodically arranged pass. dipoles line, fields 83737
phased array antenna, noise coupling determ. method 83766
photonically tuned patch/dipole MM wave arrays using selectively doped semicond. wafers 83716
planar rect. phased dipole arrays, 3D Green's fn. 117836
printed dipole and dipole arrays, radiation efficiency anal. 83702
printed dipole radiating element for wide-scanning array appl. 83709
quasi-opt. power-combining arrays, substr.-mode effects reduction 80180
RCS, dipole array antenna, preconditioned conjug. gradient method *(Chinese)* 109252
Rosetta mission, antennae for cometary nucleus sounding 83301
Rotman lens for MM-wave sens. appls., high efficiency design and simul. 72673
Square Kilometer Array project, finite array effects computation 86280

dipole antennas
see also dipole antenna arrays
3D metallic PBG struct.-based antenna, radiation pattern calc. 94119
3G systs., antenna fns. anal. 83615
act. antenna using parasitic element 72459
bal.-fed antenna syst. for handset 94154
bipolarized microwave antenna with printed dipole feed 72607
broadband balancing microstrip-coupler, optimum-shaped, even-mode suppression 91204
broadband printed antenna, current distrib. and input impedance 72601

dipole antennas continued
car dipole antenna, radiation charact. 108719
cellular telephone antennas affected by human body interact., current distrib. estim. 117796
circ. impedance cylinder with anisotropic surface impedance, long. E1 excitation 117671
coupled CPS for microstrip fed CPS tee jn., dipole antennas 91197
CPS and CPW finite-ground discontinuities, ccts. and antennas 80167
dual dipole and slot antennas, terahertz photomixers 80230
E1 antenna, EM field propag. in dielec. medium 72474
elec. small antenna radiating close to conducting plane, Q factor 83636
ELES antenna for mobile satellite terminals 83583
ELF antennas in conducting media, excitation 128857
EM far-region radiation with vert. M1 in sea 83327
EM fields of ellipt. torus knots 83086
EM wave scatt. by nonlin. antennas placed close to water surface, expt. investig. 83232
enhanced charact. using nonconventional metallic reflectors 128847
filamentary current distrib. and transient radiation 94132
finite corner antenna, directivity factor optim. 117817
folded dipole, self-balancing antenna 72544
folded loop antenna syst. for handsets based on advanced design concept 120056
georadar, slot and dipole antennas 86170
ground-penetrating radar data, amplit.-vs.-offset var. 88094
half wavelength dipole antenna, radiation impedance in terms of Bessel fns. 105921
Haughton-Mars Project 2000, mobile network field testing 131326
Hertz dipole radiation in presence of penetrable prismatic surface 83597
Hertzian dipoles, EM energy 72550
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
horiz./vert. Hertz dipoles, near-field vector pot. 128849
human body-mobile phone interact., computational EM 133079
INMARSAT-C and GPS L-band shaped beam quadrifilar helix antenna 72527
lens-coupled terahertz dipole antennas, cross-polarized ang. emission patterns 128848
medium cover, window spec., approx. calc. method 72606
MEMS RF switches with metal-metal contacts, integrat. into components 125721
metal surface cracks detect. using small antennas, EM field change 101559
microwave coagulation therapy, coaxial-dipole antenna heating 87812
mobile radio antenna charact. 117802
mobile transmit diversity for base-station antenna arrays 105934
MoM anal., vectorization using sinusoidal react. matching 72453
multiband fractal antennas, genetically engineered design 117751
partially screened layered sphere antenna, radiation 117801
PCS antenna design, miniaturization 117810
planar waveguide elec. dipole, wave excitation 83658
plasmasphere, satellite elec. field antennas, elec. stabil. 111413
precision EM field & dipole antenna stds. develop., OATS *(Japanese)* 83443
printed dipole and dipole arrays, radiation efficiency anal. 83702
printed dipole and slot antennas, input impedance and efficiency 94136
printed dipole antenna, balun, FDTD anal. 72500
printed dipole double sided elements, input impedance, terminal conditions 94140
propag. props. of pulse voltage and current, equiv. cct. method *(Chinese)* 117814
radiating dipoles in layered media, complex image tech., accuracy improvement 72438
response in reverberation chamber, remarks 72589
short dipole antenna in cold plasma, impedance anal. 128851
single-fed crossed V-dipole antenna for circ. polariz. *(Japanese)* 94166
strip dipole antenna, dielec. material cover, FDTD anal. 72555
terahertz dipole antenna mounted on photonic cryst., radiation props. 72510
transient response using summation approach in tech. 72588
triple-band dipole antenna with multiple parasitic elements 117822
ultra-wide band ground penetrating radar antennas, perform. 83618
viewer terminal appl. of handset phone, dipole antenna pattern meas. 72571
VLF antennas, EM waves excitation, curvilinear interface effects 128856
wavelet simulator tech., moment method 94117
X-band monolithic integrated twin dipole antenna mixer on GaAs substr. 69172
Nb microbolometer-microstrip dipole antenna as IR detector, FDTD vs. expt. 97230
SF_6 GIS, PD, EM wave detect. 134275

dipole coupling
NiFe/Cu/NiFe/NiO micron-width wire, dipole interact., exchange anisotropy 81835

dipole glasses
ferroelectric polymers nonelectrical poling, surface energy poling 127214

dipole moments, magnetic *see magnetic moments*

direct access storage devices *see magnetic disc storage*

direct broadcasting by satellite
9:4 DBS receiver switch in MCM-C/D technol. 120530
12 GHz satellite broadcasting wave, obs. of rain area motion 72311
adaptive rate control/QoS provisioning 85920
Astra Digital Radio, high-quality digital audio transm. 75289
broadband planar antenna, DBS reception 105930
Broadcast Satellite digital data broadcast service, BML authoring syst. 120082
Canada, LMCS field tests 74612
central server for TV program proc./playout *(German)* 75321
CMOS single-chip front-end for digital satellite broadcasting 120084
COMETS 21 GHz advanced satellite broadcasting expts. 74890
continuous G/T meas. for receiving antenna systs. in satellite broadcasting 74879
DAMA waveforms for integrated broadcast service 111611
DAVIC-compliant digital commun., high-speed coded QPSK transmitter LSI 109344
diffusion forecasting of satellite TV before product launch 109350
digital audio radio services and digital terrestrial broadcasting 97044
digital satellite news gathering and DVB, co-ordination channels 75300
digital TV and video compression 95139
DSNG auxiliary co-ordination channels 74889
DVB satellite broadcasting syst., turbo code technol. 106075
DVB version 2.0 *(German)* 97052
DVB-RCS systs., terminal timing synchronisation using on-board NCR generation 109016
DVB-S, general systs. concepts 75268
EUTELSAT multimedia satellites 109009
EUTELSAT satellites, digital TV transm. quality monitoring 75278
GBS IP multicast tunneling 107822
Global Broadcast Service end-to-end services, protocols/encapsulation 111562

direct broadcasting by satellite continued
GPS for measuring urban shielding charact. of mobile broadcast geostationa satellite 83261
Indian DBS TV, influence of US foreign DBS policy 131726
Ku-band second-order site diversity data on rainy tropical region high elevati angle path 83309
MCM-D/L/BGA integrated package with embedded pass., satellite TV demo strator 124364
mil. satellite broadcast syst., multicast file transfer 111606
MPEG-2 4:2:2 interoperability tests via satellite 74490
MPEG-2 seqs., hierarchical transm. in noisy environ. 84378
MSSW filter, magnetostatic wave saturation, transient response *(Japanes* 116487
nonstationary satellite systs. DAB 75269
Northpoint Technologies spatial diversity syst. 97045
offset FZP reflector, design method and satellite TV appl. 83562
RAI SlotFill syst. for connecting audio/video archives via idle SNG transponde 75301
reliable broadcast scheme throughput by satellite 131313
urban propag., satellite diversity broadcasting *(Japanese)* 83262
Webcasting, broadcaster's perspective 74317
WorldSpace, direct satellite DAB to bridge digital divide 120099
GaAs device technols. in Japan, current/future appls. 74082
YBaCuO HTSC antenna, satellite commun. and security syst. 71103

direct coupled amplifiers *see DC amplifiers*

direct current amplifiers *see DC amplifiers*

direct current generators *see DC generators*

direct current machines *see DC machines*

direct current motors *see DC motors*

direct current power transmission *see DC power transmission*

direct digital control
see also control systems
SRM, DDC, commutation strategy *(Chinese)* 112492

direct digital synthesis
array nonlin., mitigation 96990
capacitance displacement sens., digital synthesis technol. *(Chinese)* 86483
Chebyshev approx. based archit. 101819
clock generator, sub-ns time domain interpolator, 30-MHz 102320
CMOS DDS, low-power, self-adjusting phase interpolation 101813
CMOS DDS synthesizer with digital time domain interpolator 114662
CMOS SC bandpass filter, freq. up-translation, DDFS syst. 80048
complex digital oscillator with absol. periodicity 114656
digital phase angle std. using DDS, expt. eval. 120611
elec. impedance tomography DAQ, DSP based master-slave syst. *(Chines* 132585
ESSCIRC 2000, conf., Stockholm, Sweden (Sept. 2000) 89548
freq. synthesizers, output spectrum anal. 125248
freq.-hopping HF PLL synthesizer design for high-speed data commun. 8001
GMSK multicarrier modulator, devel. and implement. 79623
high perform. DDFS for digital video encoder *(Chinese)* 101818
inductance sens., AM meas. cct., precision improvement *(Chinese)* 109486
low power analogue-ROM based DDS with AM, 200 MHz 114895
memory compression ratio 125250
multiphase DDS sinewave generator for high-accuracy impedance comparis 120615
opt. fibre photoplethysmograph design, DDS, DSP 110847
optimisation, CORDIC algm. 125251
phase decrement type direct freq. synthesizer driven by DDS 90776
phase interpolation, delay generator, two-step integrat. 114642
pipeline direct digital freq. synthesiser using decomp. method 90999
reusable direct digital freq. synthesizers, VHDL-based design/design methodo ogy 125585
ROM-less direct digital freq. synthesizer, sine-output, 2nd-order parab. appro 68628
ROM-less direct digital freq. synthesizer using segmented nonlin. DAC 10182
segmented sine wave DACs for freq. synthesizers 79995
single-tone DDS, num. distortion, quantization operations 114645
SSB upconversion of quadrature DDS sigs. to 800to-2500-MHz band 68976
UHF bi-dyn. channel sounder for indoor meas. 85474
ultralow freq. digital synthesizer, biophys. investigs. 79621
virtual clock enhance. method for DSS chip using analog delay line 90778

direct marketing *see marketing*

direct memory access *see file organisation*

direct sequence code division multiple access *see code division multiple access; spread spectrum communication*

directed graphs
see also belief networks; binary decision diagrams; flow graphs; Petri nets
alg. modeling of ad hoc network for mobile computing 119530
bit permutation networks charactn. from line digraphs 107666
broadcasting protocol in line digraphs 107942
commun. line layout over nonuniform territory, optim. 95961
company logos class., adaptive graphical pattern recogn. 107222
Cramer rule for soln. of sparse systs. of lin. alg. eqns. 124650
cycles, orthogonal drawings in 3D space 100806
deregulated power syst., graph theory appl. 88335
deterministic radio broadcasting 108523
distrib. expansion planning, multistage globally optimal soln. 112041
distrib. expansion planning, problem modelling and formulation 122935
DNA computation for engng. optim. problems *(Chinese)* 125928
DNA simul. of Boolean ccts. 79758
document anal. results eval., graph probing method 129930
double-loop networks, complementary survey 108300
dyn. labeling based FPGA delay optim. algm. *(Chinese)* 125275
dyn. tracking/recogn. of curves, road detect. appl. 84618
encoders for input-constrained channels, lower bounds 83912
fairness in routing and load balancing 114566
faulty graph exploration agents, vertex-ant-walk method 78870
FPGA run-time reconfigurable ccts., optim. algm. 114702
greedy packet scheduling, av.-case anal. 95790
handwriting images, structural feature extraction, skeletal graphs appl. 129927
image regions/boundaries, optimal, min. ratio wt. cycles 129548
Internet, QoS path computation/hop-by-hop routing alg./algms. 119674
Internet policy/topol. impact on delayed routing convergence 119668
k-interchange tech. for optim. over permutations 124599
k-layer straightline crossing minimization, sifting speedup 100804
k-station placement problem 95791
labelled network, multiple routing strategies 78859
layered drawings of digraphs 100897

ted graphs continued
ocally finite syst. of lin. inequalities with directed multigraph struct. 67805
ocation region design in pers. commun. services 131146
nachine layouts, lin. sequencing, modified simulated annealing 67688
nax, +)-lin. systs., Poisson input, joint Laplace transform 78789
MDVA, dist.-vector multipath routing protocol 119348
nicroprogrammed proc., self-repairing execution unit 125539
nin. energy consumption broadcast subgraph complexity 95991
nin. spanning strong subdigraph problem for extended semicomplete digraphs and semicomplete bipartite digraphs 124526
nulti-traffic data network multipath routing assignment model 130465
nultiobjective optimal path algm. 67883
nultirate multicast Clos switching networks 84849
network optimisation, LP and GA appl. 100915
new-borns, artificially ventilated, blood gases values prognosis, neural based methods 133003
optimal fault-tolerant routing algm. for double-loop networks 85288
plan recogn. through goal graph anal. 73532
PRN, multihop, interf.-free time-freq. broadcast scheduling 85481
protocol insecurity with finite no. of sessions 83975
QoS delay-sensitive routing from one source to all destinations 119426
QoS multi-constrained routing, heuristic algms. 119425
queueing nets, quasireversible node state-depend. coupling 78786
queueing network, load-bal., with 2 servers 89971
queueing networks, multiclass departure proc. approxs. 113845
queueing networks, single-server fluid, conservation laws 113843
queues, single-server, network with depend. service times 89970
radio broadcast problem 130184
Ramsey nos. for tournaments 100868
rank, root and eqns. in free groups 113828
raw sets 67821
Reiter's hitting-set algm. variant 67813
roundtrip routing, compact in directed networks 90017
secure multicast commun. using evol. heuristic algm. 107619
serial prod. lines, inspection/repair stations, perform. modelling 67657
series parallel digraphs, 3D symm. detect. algm. 100816
shape approx. through recursive scalable layer generation 95222
spanning diverging forests 67818
stochastic transfer networks, flows/product form solns. 78787
store-and-forward packet switching networks, dyn. routing, distributed-inform. neural control 73805
submodular fns. minimization, combinat., strongly polynomial-time algm. 67868
symbolic cct. anal., lower bound based determinant decision diag. minimisation 125189
telecomms. networks, node disjoint paths finding algm. 130523
traffic flow, variational bounds/sensitivity anal. 119256
turbo decoding, distrib. of loop lengths in graphical models 117937
turning, surface roughness inspection by computer vision 100663
TV stations, optimal freq. assignment 120504
two-stage search for randomly appearing targets, math. model 113914
update networks and their routing strategies 85099
VLIW scheduling for energy and perform. 90937
VLSI layout, optimal sub-cct. extract. by min-cut graph 70281
Web graphs compression 107462

ection finders, radio *see radio direction-finding*

ection-of-arrival estimation
2.6 GHz DBF adaptive array antenna, DOA estim. expts. 105960
2D angle estim., ESPRIT method, uniform parallelogram array *(Chinese)* 95643
2D DOA estim. using lin. interpolation tech. for circ. array 118948
2D RAKE receiver based on space-time searching/tracking algm. 74540
2D virtual ESPRIT algm. based on sens. array geom. 107340
3G DS-CDMA systs. with array antenna, direction finding 108738
3G mobile radio systs., stochastic spatio-temporal propag. 74789
act. array, Cramer-Rao bounds for estimating range/vel./direction 75106
adaptive antenna array, DOA estim., multipath environ. 72640
adaptive array antenna, DFT and LMS hybrid adaptive algm. 105964
adaptive low complexity beamforming using split RLS algm. 73637
adaptive min. robust M-beamforming for multiple moving sources and impulse noise 95655
adaptive quantization based on database retrieval tech. 107387
adaptive spatial/temporal optimal receiver using adaptive array antenna 85869
alg. CMA, asymptotic props. 95650
angle-of-arrival meas. for mobile channel modelling *(English)* 128780
antenna array for azimuthal angle-of-arrival meas., design/eval. 83748
antenna-switching cellular base-station receivers upgrade 74807
anti-submarine warfare, multisensor mgt., data fusion 133411
AOA estim., small sens. array design 118917
arbitrary antenna arrays for mm-wave direction-finding algms., spectral estim. 105929
array antenna meas. with rough surface reflector, anal. 105967
array sig. proc., min. robust M-beamforming for moving sources 118908
array steering vector estim. improvement 118920
asynchronous multisensor tracking in clutter, Bayesian seq. MC method 133412
atmos. turbulence meas., angle of arrival fluctuations, intens. scintillations 76898
beamforming for coherent sig. reception 84652
bearings-only target motion anal. based on assoc. of dual arrays *(Chinese)* 131682
blind focusing wideband array proc. 118861
broadband DOA estim. in presence of ang. spread 95727
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA, aperiodic spreading code, blind space-time channel estim. *(Chinese)* 107729
CDMA and SDMA, spatial filter oriented adaptive spreading tech. 107745
CDMA cellular systs. with augmented antenna arrays, perform. 85587
CDMA smart antenna syst. based on DOA estim. *(Chinese)* 119224
CDMA syst., adaptive array research 83675
CDMA systs., adaptive array antenna with optimally form. beams, design 83669
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
coherent sig. detect., alternating projection algm., MDL principle 73745
computationally efficient DOA estim. of scatt. source 118921
correl. distributed sources, DOA estim., iter. approach *(Chinese)* 73740
cosθ amplit. response antenna for DOA estim. *(Japanese)* 107348
cyclostationary sigs., direction-finding method 95609
deconvolution method for charactn. of distributed sources via lin. prediction 118912
dipole circ. array in interferometric direction-finding syst., anal. 73629
distributed sources, DOA estim., generalized eigenvalue decomp. *(Chinese)* 118938

direction-of-arrival estimation continued
DOA estim. of coherent narrowband sigs. using lin. prediction, MSE-based regularization 130024
double-directional channel meas. 84655
DS-CDMA, multiuser space-time channel estim. under reduced-rank constraint 74667
DS-CDMA mobile radio channel, blind space-time channel estim. 108698
DS-CDMA systs., Cramer-Rao bound for joint DOA/time delay estim. 107309
DS-CDMA systs., dyn. groupwise successive interf. cancellation array receiver 85741
DS-CDMA systs., smart antenna testbed 128890
DS-CDMA systs. with smart antennas, DOA estim. 96380
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
DS-CDMA-based adaptive antenna array, online calib. algm. 105977
ELF/VLF-noise radiation sources, narrow-sector finding 88137
EM vector sens., source separation and tracking 107397
ESPRIT algm. for distributed source localization 118841
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
FMCW radar, sig. proc. method for switch antenna array 96949
haemorrhage, subdural and intraparenchymal intracranial, diagnosis using microwave-based detector 76416
harmonic parameterization in N dimens., identifiability 130001
HF digital commun., source separation with collocated antennas 84729
HF direction finding and array proc., colocated antennas design 83713
HF off-great-circle high lat. propag. and oblique ionogram features 83291
high resoln. computationally efficient DOA estim. algm. 84646
high-resoln. array proc. in multiple wideband chirp sigs. 107332
HRR airborne phased-array radars, clutter suppression/moving target detect./feature extraction 75160
instantaneous DOA and ang. spread estim. with MUSIC using extended array mode vector 108882
IS with antenna arrays, optimal/quasioptimal algms. of superresolution 107343
joint nominal DOA and ang. spread estim. via extension of array mode vector 108721
LCMV broadband beamforming, single interf. presence, optimal temporal wt. spacing 72986
LOS sig., time-delay estim. in multipath environ. 118966
max.-likelihood beamspace proc. for improved search/track 96884
max.-likelihood DOA estim. in unknown nonuniform noise 84668
microcellular environ., spatiotemporal non-LOS propag. charact. *(Japanese)* 120050
microphone arrays, dereverberation and noise reduction 118055
MIMO vector channel sounder meas. for smart antenna syst. eval. 120062
MLE, modified EM algm. 107393
MM-wave broadband wireless indoor networks, combined spatial-temporal CM equalization 85465
mobile computing network stations, relative direction determ., switched beam array 131342
mobile radio, DOA estim. using weighted subspace fitting 108737
mobile radio location estim., hybrid time and angle of arrival method 108675
mobile radio propag. channel MIMO meas./ident., antenna array 119960
mobile tracking with local scatt. modeling 118922
monopulse radar, DOA estim. 75076
monopulse radar, unresolved Rayleigh targets, DOA estim. 96919
multi-mode interferometer syst., wideband antenna element 120489
multimode based direction finding 109326
multiple scatt. sources 130023
multisensor target tracking, bandwidth constraints, meas. fusion 133413
multisource azimuth/elevation direction finding and polarization estim., DOA 97020
MUSIC and MODE for exploiting arrays with multiple invariances 130026
narrow-band mobile commun. channels, vel. estim./correl. props. 108811
narrowband sigs., simultaneous estim. of no. and arrival directions 118891
non-circ. source localization *(French)* 107305
non-circ. sources direction finding using polynomial rooting 107424
non-LOS multipath conditions, mobile location calc., scatterer inform. 119971
open-loop downlink beamforming, min. algm. 84710
particle filter for tracking multiple objs. 95714
pass. location method/accuracy anal. with phase difference rate meas. 131708
perturbed arrays, efficient quadratic detect. via FT techs. 84775
phased array antenna, improvement by parasitic elements 72645
planar antenna arrays, appl. in mobile commun. systs., beamforming algm. 117860
planar array smart antenna syst. with hybrid analog-digital beamforming 83758
radio emission source recogn. 107361
radioemitter coord. determ. using multipositional systs. 122763
Rayleigh targets in specular and diffuse multipath, stats. of monopulse meas. 96959
retransmission, refl. sig. and lateral spectrum components 108574
robust direction finding, game theory H_∞ approach 73581
robust subspace tracking in impulsive noise 130035
rot. lin. antenna arrays, superresolution direction finding 105936
SAGE algm. behaviour in 2D multi-user environ. 84673
satellite interf. location, RBF neural network method *(Chinese)* 72362
secondary surveillance radar sigs., MLE, identifiability, Cramer-Rao bounds 120405
self-organizing cooperative UGS network 77103
sens. gain uncertainties *(Chinese)* 107299
separable dimens. subspace method for joint sig. freqs./DOAs/sens. mutual coupling estim. 107392
sidelobe canceller for reflector antenna using sig. subspace eigenvectors 117718
sig. proc. problems, choice of prior distribs. 118965
simultaneous estim. of freq. and DOA of emitters *(Chinese)* 130016
single-card C-band receiver array, DOA estim. 73574
small cell multipath environ., meas./predicted time dispersion/DOA comparison 117679
smart antenna array calib. incl. amplit. and phase mismatch and mutual coupling 83754
space-time cochannel TDMA, DOA adaptive acquisition 108604
space-time distributed multi-path params., detect. and estim. 108544
spatial spectrum, resoln. enhancement by virtually expanded array 118918
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
STAP/adaptive antennas, pragmatic approach 84773
subspace rot. invariance algm. for DOA estim. with sens. gain uncertainties *(Chinese)* 130017
subspace-based, nonparametric stats. use 107379
subspace-based direction finding, fractional lower order stats. 95647
subspace-based method for unknown sens. gain and phase 118796
super-resoln. direction estim., antenna array perform. study *(Chinese)* 95628

direction-of-arrival estimation continued
super-resoln. estim. in switch beam smart antenna 84653
target tracking with angle-only meas. from two platforms, commun. bandwidth influence 118893
TDMA smart antenna wireless base stations, Internet controlled calib. syst. 85568
topside ionos. sounder, electron dens. distribs. 133308
track maint. and posn. estim. via ground MTI and geolocation data fusion 96942
tracking of coherent cyclostationary sigs. without eigendecomposition 84688
transmitting array antenna rem. calib., sync. orthogonal codes 105959
uncalibrated sens. array, noncircular source localization *(French)* 107304
uncorrelated source detect.-estim., augmentable sparse antenna arrays 119099
uniform circ. array, DOA and Doppler freq. estim. *(Chinese)* 95721
uniform circ. array, multipath param. estim. *(Chinese)* 117845
urban microcellular radio, spatio-temporal channel charact. 131128
US MEMS microphone lin. array, source localization 99081
vector hydrophone, near-field/far-field azimuth and elevation angle estim. 130025
VERA 3D pass. surveillance syst., accuracy anal. 75200
VHF impulsive terrestrial sigs., sources location determ. 122651
WCDMA UTRA uplink with unknown channel model order, smart antenna schemes 74688
weighted av. of sig. subspaces for robust wideband direction finding 118842
wide-band impulsive noise source, direction-finding tech. 75253
wideband antenna array beam forming cct. *(Polish)* 114963
wideband mobile radio channels charactn. using SVD-Prony algm. at 2.4 GHz 83303
wideband sig. param. estim. based on HOS 118916
widely separated subarray DOA estim. 107391
wireless channel, TST-ESPRIT based joint DOA and delay estim. 84686

directional antennas *see directive antennas*

directional couplers
see also microstrip directional couplers; millimetre wave directional couplers; optical directional couplers
asymm. multielement coupled line directional couplers, design mapping 102514
asymmetric coupled lines in inhomogen. medium, S-params. and equiv. networks 72402
broadband HF differential coupler, design methodology and hybrid struct. 114947
conductor-backed CPW direct. coupler, varactor-tuned phase shifter appl. 69090
CPW directional coupler, multiple-sect. equiv. line 69075
DRAM memory bus with crosstalk transfer logic interface 125480
hybrid-ring impedance-transforming directional couplers and power dividers *(Polish)* 69025
hyper-NRD guide to E-plane waveguide transits. and directional couplers, design 91199
MM-wave pass. cct. components, book contrib. 80208
MMIC lumped element directional coupler, single bal. mixer 125766
MMIC mixer, lin. single-bal., heterojn. interband tunnel diode 80362
multi-layered CPW directional couplers, num. charactn. 69044
nonblocking crosstalk-free photonic switching networks 131038
pass. microwave networks, line impedances calc. 69082
pseudochiral Ω-NRD directional coupler 69051
pulse-excited six-port reflectometer 75848
quadrature directional coupler, optimum compensating susceptance/posn. 102526
rect. dielec. waveguides directional coupler charact. 83496
ultra-short fused vert. directional coupler switches composed of two sects. *(Korean)* 80207
V-shaped narrow slots, coupling and radiation charact. using FDTD method 128836
WDM photonic switching networks, crosstalk reduction through wavelength assignment 96340
WG-mode DR based microwave and opt. network components, num. anal. 80186

directional patterns *see antenna radiation patterns*

directive antennas
see also horn antennas; lens antennas; loop antennas
2D complex source point beam, degrad. due to circ. dielec. radome 72457
act. antenna, MLC-polyimide substr. 83661
act. integrated retrodirective transponder for rem. info. retrieval-on-demand 108945
annular slot antenna, gain enhancement 83533
array synthesis from curvilinear radiators with account of mutual influence 117832
bidirectional antenna, input impedance eval. using probe excited rect. ring 83553
bidirectional rod antennas comprising narrow patch and parasitic elements 117853
Bluetooth access point smart antenna 85749
broadside antenna arrays, directivity approx. 120430
Cassegrain asymmetric reflector antennas 83500
CDMA networks with smart antenna, capacity anal. 131130
CDMA systs., spectral efficiency with transmit and receive antenna arrays 85662
cellular networks, mobile location algm. *(Chinese)* 97033
cellular radio, narrow-beam antennas and fractional loading factor 74732
circ. ideally conducting cylinder with dielec. layer coating and nonlin. loads 117757
circ. microstrip-patch antenna, directivity approx. 117811
conformal microstrip antenna array on cylinder, directivity patterns 72691
curved juncture cavity short backfire antenna, optim. 72684
cylindrical plasma crater, scatt. surface and radiation diag. of axial lin. source 117755
DS-CDMA cellular systs., adaptive array antenna beam pattern selection *(Japanese)* 131255
E-shaped wideband patch antennas for wireless commun. 94127
electronically scanning multifrequency antennas with controlled lenses 72469
equidistant lin. array, directional precision, multi-level amplit. shading *(Chinese)* 128907
ES for antenna directivity, design 72529
finite corner antenna, directivity factor optim. 117817
finite-size circ. polarized corner reflector antenna, radiation charact. 83594
fixed broadband wireless networks, QoS-sensitive SDTM-TDMA access 119912
Haughton-Mars Project 2000, mobile network field testing 131326
HF high lat. path commun., directional diversity and spatial filtering 85576
high-directivity planar antenna using controllable photonic bandgap material 83571
HIPERLAN syst. circ. monopole antenna array, conical beam 105962
human head SAR reduction, directional antennas for cellular phones 87938

directive antennas continued
indoor 60 GHz radio channel sounding, T/R module for high data rate comm 74546
intervehicle commun., oncoming vehicle interf. charact. 78233
IS protection, adaptive methods with directional antennas 119115
Ka band planar printed antipodal lin.-TSA 94163
leaky coaxial cables, design and calc. 117797
LEO satellite compact conical patch phased array antenna 83679
low-profile bi-directional cavity antenna with broadband impedance chara 117775
MAC protocol for mobile ad hoc networks using directional antennas 85051
medium cover, window spec., approx. calc. method 72606
metallic PBG struct. based wire antennas, design with explicit method 7257
microstrip antenna, lateral isolation, radio altimeter *(Chinese)* 128862
MM-wave commun. systs., plane antenna with optoelectronic scanning 1178
mobile computing network stations, relative direction determ., switched bea array 131342
mobile radio adaptive antenna arrays, beam-steering/directive charact. 9643
multi-channel microwave scanning radiometer antenna sub-syst. 128879
multi-layer quasi-opt. freq. doubler based on crossed dipole struct. 125687
multiple transm. & receiving syst. capacity, controlled environ. 96398
nonequidistant antenna arrays, directivity patterns synthesis 105969
PCS base station bi-directional polariz. diversity antenna 105891
periodically arranged pass. dipole scatterers, waveguiding props. 94202
planar folded slot lens for slab-beam power combining 94179
planar radiating oscillator with parasitic patch element, act. antenna arr 128899
PON retrodirective array perform., real component effects 83728
printed antennas, near-field diagnostics using equiv. mag. current approa 83746
probe-fed rect. dielec. resonator antenna study 72610
reconfigurable retrodirective/direct conversion receiver array, wireless sen 96409
reduced-size multi-octave spiral antenna 72465
retrodirective array, target tracking, act. element model 83665
retrodirective diode grid array using FWM 105938
RF front end technols. 85471
satellite orb. group, intrasystem interf. levels anal. 83405
semi-infinite quadratic prog. algm. with appls. to array pattern synthesis 726
spatial power combiner, act. reflect-array, dual-feed aperture coupled pat antennas 128900
terahertz dipole antenna mounted on photonic cryst., radiation props. 72510
UHF high-directivity patch antenna with photonic bandgap struct. 105871
W-CDMA UMTS systs., switched beam antennas, perform. and capacity 858
WCDMA systs., indoor antennas meas. 83512
wideband array-pattern design, superdirectivity and SNR constraints 94196
wideband TDMA networks, DCA, fixed cell assignment 120042
YIG ferrite circ. polarized planar array of circ. patch microstrip antennas 726

directors (programs) *see supervisory programs*

dirty superconductors
mesoscopic SFIFS/SFIS jns., crit. current 81988

disabled persons' aids *see handicapped aids*

disassemblers *see program assemblers*

disasters
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
Chernobyl nuc. reactor site, Object Shelter, aerosol distrib. 111223
counter terrorism technols. following World Trade Centre attack 133414
dam/hydro plant operation during floods, RIFA CBT simulator 88626
Lakewood area floodplain/flooding, CA, USA, IFSAR/LIDAR anal. 111442
robot operations, advanced 3D vision systs. 118164
serpentine robots, earthquake rescue, online path planning 97198

disc drives
100-kTPI HDD, Φ-shaped actuated suspen.-based piezoelec. microactuat 116461
ball bearings in HDD, defect freqs., dyn. reson. interacts. 99698
CD/DVD disc design, vibr. anal., init. stress, injection moulding 93024
CMOS G_m-C biquadratic stage for PRML read channel appl. 102337
CMOS low-power analog FIR filter, 100 MHz, PRML equalization appl. 1023
CMOS MR head preamplifier design, disk drive read elements 68610
CMOS OTA-C seventh-order lin. phase filter, HDD read channel systs. 910
conf., inform. storage & proc., Santa Clara, USA (June 2000) 89571
demodulation of servo tracking sigs. printed with litho. patterned master di 116364
digital versatile disks, discrim. method using fuzzy inference syst. 116587
disks, rot., reson. and stationary waves 70520
dual actuator type HDD, dyn. anal., design params. 92845
dual-stage actuator disk drives, improved servo perform., track follow, tra seek, and settle 116462
dual-stage actuator for HDD, discrete-time sliding mode control 99873
dual-stage HDD, fixed order H_∞ control design 81901
DVD, two-phase spindle motor 134089
electrostatic microactuator optimally designed for HDD 99874
flip chip-on-flex OnePass proc. improvement for clean products 113561
flying slider in HDD, oil-repellent treatment 104529
Fujitsu next-generation data storage technol. *(Japanese)* 116327
GMR spin valves, growth, surface/interface effects, UH-dens. data-storage ap 104522
hard disk track deviation, nanometer-scale accuracy, external posn. sens. 1164
HDD, BLDC spindle motor, unbalanced-mag.-pull optim. 123530
HDD, dyn. ramp load/unload friction testing 116452
HDD, hard disk assembly, self-servowrite clocking proc. 116459
HDD, head-disk interface, act. control 81900
HDD, head-disk interfaee tribology, accelerated testing 92843
HDD, high-bandwidth macro/microactuation 81748
HDD, high-speed mag. fluid bearing spindle motor 134096
HDD, mag. printing, proc. optim. 116360
HDD, min. posn. error sigs., controller optim. 134427
HDD, servo track writing, Printed Media technol. 116458
HDD, small acoustic chamber screening, meas. var. reduction 75914
HDD, thermal activation vol., computer simul. 116359
HDD, ultra-high-dens. perp. recording *(Japanese)* 92853
HDD actuators, prod. cost rel. to bandwidth, FEM anal. 92844
HDD BLDCM spindle vibr., eccentricity calcs. 134072
HDD brushless DC spindle motors, robust torque optimisation 78220
HDD head-disc spacing var. suppression, act. flying height control 116308
HDD slider & disc motion meas. using CD-ROM syst. 127369
HDD slider motion meas. using laser beam, 3-facet micromirror 127820
HDD spindle motor, electromechanical-coupled field anal. *(Korean)* 77900
HDD suspen. vibr. meas., US pulse-echo tech. 116309

rives continued
DD technol., superparamagnetic behaviour, patterned media 116306
DDs, ultra-high-dens. recording, mag. materials *(Japanese)* 92854
ad disk spacing var. meas. under vibr. conditions, real-time method 121182
gh num. aperture digital video recording opt. disk syst. 92971
gh-dens. disk drives, dual-stage actuator control 92857
C-1000Z digital camera iD PHOTO magneto-opt. disk drive *(Japanese)* 116593
C-1000Z digital still camera fns. *(Japanese)* 118431
EE indust. electronics conf., Pusan, South Korea (June 2001) 124208
ag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 9022
ag. disk drives, high-bandwidth servo control designs 92855
icro-optics using total internal refl. for an opt. tracking sens., develop. 116786
odified repetitive control, opt. disc tracking accuracy 92988
R/GMR-based mag. heads, ultra-high dens., constr./technol. 127373
ultilayer inplane bending piezoelec. actuator for dual-stage head-positioning control syst. 104431
ultiple disk/spindle assembly, model/low-vibr. control 92856
notechnology for microsystems appls. 92491
rmal incidence pol. interferometry for flying height and head-disk spacing neas. 121220
m. eval. of heat and fluid flow within rot. disks 81904
t-radial opt. pickup systs., push-pull track error sigs. 92980
dded slider friction, contact interface, lubricant meniscus 116437
CMCIA type-II slot, high dens./data transfer rate flexible disk drive develop. 16476
rfluoropolyether lubricant film roughness, disk drive technol. 116443
rmalloy thin films, GMR read head, electromigration-induced failure 104527
rp. recording, disk drive integrat. issues 116329
ezoelec. microactuator, high track dens. HDD appl. 134325
hart opt. storage read head for relational database appls. 92952
DI BiCMOS 800 Mbit/s write driver for HDD 114888
MR heads, removable disk drives, Zip-type flexible media, thermal asperity 16467
apezoidal multilayer in-plane bending piezoelec. actuator, deflect. charact. 92691
tra high speed scanner, compact disc drive opt. data handling 117548
tra-high dens. HDDs, head technol. to achieve more than 100 Gbits/inch^2 *(Japanese)* 116315
tra-low mag. disk head fly height control, CMOS MEMS-based electrostatic microactuator 123708
trahigh dens. HDDs, 300 Gbits/inch^2 technol. roadmap *(Japanese)* 81903
br. compensation, MEMS-based accelerometers for hard discs 92858
ygo Pegasus 2000 fly height testers, meas. uncertainty 127362
GaAs single-lateral mode LD with window-mirror struct., high-power operation 128226
u-to-Au interconnection flip-chip bonding, COS HDD assembly 113661
o-Cr film, perp. recording, ultra-high dens. HDD *(Japanese)* 70519
o-Cr perp. recording medium, ultra-high dens. HDD technol. *(Japanese)* 116475
/ZT motors/actuators/sens., HDD suspen assemblies appls. 104445
b-free PCB finish effects on final disk drive assembly proc. 115199

storage
see also magnetic disc storage; optical disc storage; RAID
CHORUS emulsion expt., CERN, data handling 87251
xedra media server, disk-striping scalability 97096
HDTV digital receiver with HDD, digital stream proc. technol. 120552
treaming video with storage area networks 119782
Web caching archits., hierarchical/distributed caching anal. 119546

harge lamps
see also arc lamps; flash lamps; fluorescent lamps; metal vapour lamps
ielec. thin film large-area growth, photo-induced, using excimer lamps 115977
lat discharge lamp for LCD backlighting, Hg-free/high luminance/high efficacy 121129
as discharge lamp self-oscillating PFC electronic ballast 89438
irimm type glow discharge lamp 125951
HF electronic ballasts, SMPS harmonic reduction topol. *(Spanish)* 89432
HID headlamp systs. for automobiles, electronic ballasts *(Japanese)* 100300
HID lamps near-cathode phenom. modelling 100317
ybrid electronic ignition ccts. for discharge lamps 124085
ndirect illum. syst., LEDs, halogen & metal halide lamps 100319
LCD backlighting, elec.-field-coupled discharge lamp 97747
ow-press. microwave plasma UV lamp, water purif./ozone appls. 134607
micromirror thin-film array for inform. displays 97759
nodelling in electronic cct. design 134628
noncontact micro soldering using light beam technol. 115167
S_2, electrodeless sulfur lamp, self-reversal effect *(Korean)* 78332
street lamp rem. supervisory syst. based on power-line carrier commun. *(Chinese)* 124089
vane-type electrodeless HID lamp prototype *(Japanese)* 124063
Ar-Cl_2 mixture UV-VUV excimer emitter, subnormal glow discharge pumping 115236
Ar(-Cl_2)/air admixture, excited N_2 mol. form., DC-glow-discharge-pumped excimer lamp 80551
KrCl capacitive-discharge excilamps, short radiation pulsewidth 134611
S lamp, plasma-quartz interact., glow spectra 124076
W cathodes, Ba_2CaWO_6 activated, topographic struct. 69392
Xe capillary discharge extreme-UV source emitting over large ang. range 134610
Xe excimer emission from pulsed microhollow cathode discharges 113127

harge lasers *see gas lasers*

harge tubes *see gas-discharge tubes*

harges (electric)
see also arcs (electric); electron avalanches; electrostatic discharge; flashover; glow discharges; high-frequency discharges; lightning; partial discharges; Penning discharges; positive column; sparks; surface discharges; Townsend discharge
11 kV paper-insulated cable condition monitoring using SOFMs 123018
AC plasma display cell, discharge characts. rel. to address electrode width, 3-D anal. 86874
AC-PDP, luminance efficiency improve. by self-erase discharge waveform 97660
aerosol particles, unipolar charging in alternating elec. field 83137
air, pos. streamer discharges, atmos. conditions, three-electrode syst. 104265
balloon-born two-sphere elec. field instrum., neural net DP *(Chinese)* 105666
base insulating constr., discharge charact., rain influence estim. *(Russian)* 123041
CDM ESD simul. using time domain air gap discharge meas. 72176

discharges (electric) continued
compressed SF_6, impulse discharge charact. 92613
contaminated water treatment using dielec. barrier discharge *(Korean)* 78367
cyclohexane, streamer inception, sensitive charge meas. tech. 116138
dielec. liqs., prebreakdown phenom. under nonuniform field, mol. struct. effects *(Japanese)* 81652
discharge gap, fast ionization wave, energy deposition, impedance depend. 80547
elec. discharge in nonuniform fields, press. effects 80548
electrodischarge excimer laser excitation syst. simul. by equiv. elec. cct. 117062
electrodischarge excimer lasers, LC-generator, model operation 117061
electrostatically charged liqs., ignition hazards theory 83112
fast capillary discharge XUV source, Blumlein generator develop. 134145
fast-flowing mol. laser gas mixture elec. discharge 82463
floating multipole discharge sterilization effect expts. *(Japanese)* 98746
fluoresc. lamp central partial darkness mechanism expts. *(Japanese)* 124065
gas cct. breaker inhomog. high-temp. SF_6 gas behaviour 112685
gas discharge plasma, distributed generator, ring resonator 80550
gas mixture, high press., elec.-discharge plasma-dens. props. 86817
gas puffing INPIStron develop. for pulsed power supply appls. *(Korean)* 78057
gliding discharge expts. at 33 kHz and 50 Hz 104240
grounded electrode discharge in charged particle cloud 116120
high current pulse capillary discharges, driver design 134146
HV pulse generation, hybrid subnanosecond modulator testing 79622
insulating oils, AC voltages, prebreakdown currents anal. 104407
ion laser, high-current, ion-acoustic instabil., lowest freq. mode, dispersion rel. 82455
light source technol., current topics review 134635
liq. dielec., bubble dyn., streamer form. in high divergent elec. field 70382
low-energy gas discharge electron source, gasdyn. window beam injection 80561
metal-dielec.-metal jn., electrothermal destruction, self-exciting proc. 80963
multipoint dielec. barrier discharge, NO/NO_x removal, narrow gap 91526
neg. streamer anal., photoionization effect, FEM *(Korean)* 115238
nonpolar liqs., discharge phenom., ion conc. propag. 81651
ozone generation in dry air using pulsed discharges with/without solid dielec. layer 104261
PDP cell, discharge proc., 2D num. simul. *(Chinese)* 80626
PDP discharge, 3-D light emission images anal. *(Korean)* 121089
PF-360 facility, needle D_2O-ice target, plasma focus discharges 80549
polycarbonate, γ-irrad., tracking resist., scintillation discharge current 81726
polyethylene, γ-irrad., tracking resist., scintillation discharge current 81726
self-sustained pos. corona discharge, screening effect 80545
silent discharge prod. by piezoelec. transformer in N_2, light emission 125949
spiral antenna inductive discharges, collisionless heating regime 117774
streamer dyn. in dense media, num. simul. 116124
streamer simul., adaptive mesh generation and FEM-FCT algm. 127150
sub-picosecond UV laser pulse filamentation, nonlin. propag. 82785
toluene decomp. using streamer discharge reactor/catalyst combination 124434
transversal self-sustained gas discharge, max. current 80544
vac. elec. discharge, accelerated nanoparticles-induced 125947
vane-type electrodeless HID lamp prototype *(Japanese)* 124063
Ar capillary discharge Z-pinch plasmas, soft X-ray laser amplif. 128071
Ar capillary discharge plasmas, X-ray laser intense pulse guiding 128072
Ar high av. power table-top soft X-ray laser, spatial coherence meas. 128073
Ar^+ ion fast capillary discharge soft X-ray laser plasma columns 128068
Ar^{8+} Ne-like collisional excitation soft X-ray laser 128096
ArF discharge-pumped excimer laser kinetic modelling 82499
Au^+ long. nanosecond discharge ion lasers 105101
C^+ soft X-ray ion laser amps., capillary discharge 128070
CO RT repetitively pulsed overtone laser 105105
CO_2 elec.-discharge lasers, act. media pop. inversion, temp. effect 128115
CO_2 high-power CW lasers for material proc. 82483
CO_2 high-power pulsed laser params. meas. *(Chinese)* 128119
CO_2 indust. repetitive-pulse laser, energy charact. 82485
CO_2 large aperture high-press. TE laser amp. gain 93478
CO_2 lasers, act. medium excitation, modeling criteria selection 105145
CO_2 multijoule TE/TEA lasers, mag.-spiker sustainer tech. 105119
CO_2:N_2:He gas laser mixture, DC plasma/HF fields interacts. 105133
Cd^+ Ni-like discharge-pumped laser 128095
Cu^+ pulse long. discharged ion lasers 105100
F laser, excited directly by sliding discharge 117073
F_2 laser, discharge pumped, high-repetition-rate operation, 1D model calc. 105132
H_2 plasma discharge cleaning 69886
Li III microcapillary plasma, lasing to ground state 128081
MgO film, AC PDP, discharge charact., posttreatment effects 69466
MnO_2-based alkaline cells, second electron discharge plateau anal. 99891
N_2 UV laser, self-sustained discharge 128110
N_2 high power co-axially excited laser, oscill./gain charact. 93489
N_2/SF_6 gas mixtures impulse creepage discharge propag. mechanisms *(Japanese)* 92616
NO_x air pollutant removal, pulsed power discharges 133359
O_2, $^1\Delta_g$ state, discharge prod., for I laser 93482
O_3, pulsed power prod., O_2/N_2 coaxial reactor 125950
O_3, pulsed power prod., nonthermal gas discharge 102887
SF_6 gas insulated transformer windings insulation, elec. discharge model 123537
SO_2 removal, dielec. barrier discharge, ammonium salts collection 133353
Tm vap. discharge step-tunable laser 82502
Xe capillary discharge extreme-UV source emitting over large ang. range 134610
XeCl electrodischarge excimer laser, pumping syst. LC-cct. 117060
XeCl long-pulse efficient laser, discharge pumped, output charact. 105129
XeCl long-pulse elec.-discharge laser, opt. inhomogeneities 117058
XeCl wide-aperture elec.-discharge excimer laser 82495

discharges (partial) *see partial discharges*

disclinations
interface controlled materials, conf., St. Petersburg, Russia (Jun. 2000) 78464
reflective TN-LCD, disclination dyn., CCD camera obs. 97684
TFT-LCD product aperture ratio, reverse tilt domain magnitude control 86831

discontinuous control systems *see sampled data systems*

discontinuous metallic thin films
nanoclusters on semicond. substrs., electronic props. 69992
Ag/Co granular multilayer, GMR, 2D mag. field sens. fab. 70515
Ag/$YBa_2Cu_3O_{7-\delta}$ thin film contact, contact resist., Ag morph. 102495
Ag-based cpd. metal island films, write-once opt. data-storage media 82059
Au multiple island layers on fiber core, sens. appls. 75558
CoCrPt:C HCP granular films with CrTi underlayer, mag. and reversal props. 127284

discontinuous metallic thin films continued
CoPt granular perp. recording medium, thermal demagnetiz., MO recording test 116331
CoPt patterned media with perpend. mag. anisotropy, fab. and props. 116265
CoPt/Cr long. media, nucleation site layer, sig./noise ratio *(Japanese)* 70525
$CoSi_2$ coherent silicide islands on Si(111), strain 103181
Cu, heteroepitaxy on Ni, nanostructures, fab., structs., review, appls. 69988
Pb/Si(111) interface, confine.-enhanced electron transport, STM/BEEM 103162

discophases *see discotic liquid crystals*

discotic liquid crystals
hexabenzocoronene DLC, self-organization for high-efficiency organic PV 104836

discrete cosine transforms
1D DCT/DST generalized archit. 90923
1D/2D DCT image/video codec archits. 96319
2D DCT, shifted FT-based tensor algms. 106973
2D DCT fast algm. via distributed arith. optim. 95274
2D shape-adaptive transforms, math. formulation 129755
2D type-IV DCT, computation 95627
2D-DCT, field prog. logic, RNS archit. 102054
2D-multiple notch filter, blocking artifact reduction, DCT coded image 95156
3D interlaced video compression, image ghosting removal 95131
3D mismatched stereoscopic inputs, human perception 84451
3D transform coding of partitioned video seqs. with matching pursuits 118572
3D TV full parallax colour integral image data compression, chrominance components sub-sampling 107095
8-point DCT/IDCT, pipeline archit., rescheduled const. geom. algms. 101142
adaptive wideband burst-by-burst wireless video telephony 85164
alg.-integer encoding, error free computation of DCT/IDCT 107098
algms. for efficient and accurate edge detect. and localization 107141
approx. with lifting scheme, systematic design/appls. 106896
artifacts subjective appearance, image preprocessing 84404
ATM network environ., scalable subband audio coding scheme 84005
ATR content-based image compression 84514
audio transm., multilevel data compression techs. 84004
automatic generation of fast discrete sig. transforms 107377
bi-level images, near exact expansion 95184
BIST RTL data paths, testability trade-offs, 3D design space 79715
blind watermarking algm. with semantic meaningful watermarks 106998
blind watermarking syst. using optimum detect. on Laplacian model 95062
block matching based motion estim. algm. for DCT-based compress. 95243
block-based video coding, blocking artifacts reduction 106859
block-coded images, blocking artifacts reduction using self-similarity 129702
CMOS adder, 2D IDCT, image compression 107010
coded picture transm. over noisy channels, transformed domain error concealment 84381
coded video seqs., picture quality meas., block visibility 73340
coding, universal VLC 94270
coeff. compression 107051
coeffs. organization for embedded image coding 106874
color-portrait image compression tech. 95129
commun. syst., noise generation, DCT algm. 101815
compressed coefficient's band-pass delay time charact. extrapolation using GA on DCT 73639
compressed video, spatial scalability, motion vector comp. algm. 118522
compression improvement by coupling coding techs./redundant transform 95388
conditional event coding without side inform. in video compression 95087
contour data coding using DCT transform 107045
data filling algms. for mixed raster content layers 95197
data hiding in compressed images, capacity estim. 95252
DCT/VQ image steganography 106879
DCTlab educational image compression software for digital TV course 89640
DCTLMS algm. with selective coeff. updating, anal. 107385
DFT, DHT, DCT, and DST, VLSI array archit. 118894
digital audio sigs., novel algm. for embedding watermarks *(Chinese)* 129362
digital image compression using directional sub-block DCT 95260
digital image copy protection, DCT-based 106707
digital images, improved tamper-detect. method 129764
digital multimedia wireless telecomm., very-high dens. VLSI chips, low-power design 130971
digital video, stylized text events, robust detect. 129803
digital video watermarking, MPEG-2 compressed stream *(Chinese)* 73363
digital video-MPEG-2 intracoding conversion 118521
digital watermarked images, noise corruption influence 84078
digital watermarking, image authenticity by spectral components modif. 107042
DSP-RAM archit. for parallel DSP in memory, implement. 114809
DST/DCT domains, interpolation props. 94654
ECG compression algms., perform. comparison, clinical diagnosis 121967
ECG interf. suppression, interbeat/intra-beat decorrelating transforms 87454
ECG sig. compression, optimized quantization of DCT coeffs. 87388
edge detect. by multiresolution discrete symmetric cosine transform 95458
efficient low bit-rate video-coding algm. focusing on moving regions 129694
embedded CMOS RISC proc., multimedia archit. extension 125528
embedded systs., memory hierarchy, energy dissipation anal., DCT 102169
face detect. in compressed domain 129822
face encoding and recogn. based on human visual model and DCT 129761
face recogn. using DCT 129856
fast algm. for computing $q^{[1]} \times q^{[2]}$ 2D-DCT *(Chinese)* 118350
fast algms. shifted in time and freq. domains of cosine/sine transforms 101141
fast cosine transform, parallel algm. 100755
fast fractal image coding in freq. domain 95132
fast multiplierless approx. 106916
fast unitary transform algms., concurrent error detect. 101140
feature detect. and concealment algm. 106932
fMRI scans, elastic registration using fast DCT 98466
fractal image coding, DCT transform *(Chinese)* 106847
fractional cosine/sine transforms 73593
frame-skipping low-complexity video transcoder 107101
GA, band-pass delay time charact. 73837
generalized array codes for wireless image commun. in fading presence 129797
gray level image embedding, DCT-based image hiding algm. 107017
H.263+ std., trellis-based R-D optimal quantization 95210
H.263 compatible video coding, data embedding algm. 107072
H.263 video encoder for VIRAM, perform. anal. 95271
H.263 video encoding optim. using single proc. computer, perform. trade-offs/benchmarking 95347
hardwired distributed arith. compatible DCT/IDCT archit., image compression 95124
holographic transform compression of images, multiple descriptors 118638

discrete cosine transforms continued
hyperspectral data compression using VQ and DCT 98950
hyperspectral rem. sens., spatial-spectral compression 99061
I/Q sigs. compression for US diagnostic equipt. 98289
ICA, subband based 107441
IDCT, inverse DCT, optimized CMOS VLSI implement. *(Chinese)* 84250
IDCT based complexity scalable video decoding via data pruning 118523
image and video coding, shape-adaptive transforms, overview 107000
image class., optimal design of transform coders/quantizers 95384
image coding, decimation/interpolation 95259
image coding, iterated transform. theory, Kohonen neural networks and D 73331
image coding DCT data, morph. representation 107096
image coding method using random neural network 95029
image coding perform. of shape-adaptive DCT 129729
image compression, directional wavelets appl. 107082
image compression, distributed algorithm based 2D inverse DCT *(Chine* 118512
image compression, low-complexity/-memory entropy coder 129696
image compression parallel archit., DCT/IDCT 84397
image denoising using hybrid wavelet/DCT method 129484
image detect. and feature anal. using DCT 84633
image indexing techs., DCT domain 95045
image quality optimisation for decoded images using 3D smoothing meth 73319
image restoration methods, review/comparison/interp. 118177
image retrieval on uncompressed/compressed domains 95195
image watermarking, coding techs. for data hiding and capacity limit 95047
image watermarking, Legendre array *(Chinese)* 95244
image watermarking algm., matched filtering *(Chinese)* 84437
image watermarking using subband DCT 129712
images, DCT coding, adaptive block sizes 84419
implement. with distributed arith. 118594
integer DCTs and fast algms. 130032
inter-frame 3D DCT subband hierarchical coding *(Chinese)* 73367
inverse DCT pipelined archit. 118501
JPEG bitstreams, embedded binary data extraction using std. JPEG deco 95064
JPEG coded domain, watermarking using inter-block correl. 73372
JPEG compressed domain, image indexing and retrieval 118646
JPEG compression factor control, new algm. 118545
JPEG images, unsupervised image obj. segmentation 95378
JPEG modified image compression tech. 95137
JPEG quantization table, bitmap compression hist. ident., MLE 95088
JPEG stat. model redesign, DCT coeffs. lossy mode fitting distrib. 95380
JPEG std. uniform quantization error modeling, appls. to seq./progressive oper tion modes 73342
JPEG still image compression, blocking artifact free inverse DCT 95391
JPEG video rate compression on parallel single-chip digital CMOS imager, tran pose memory 95272
JPEG-DCT compressed color images, quality prediction based on SCIELA metric 106986
JPEG/JPEG2000, multiple compression cycle perform. comparison 106943
low power order based DCT proc. algm. 79948
low-correl. interframe differences, DCT-Hadamard-transform coding 118516
matching pursuit video coding, dictionary approx. 95205
matrix factorizations for reversible integer mapping 117963
med. image compression by cosine and wavelet transforms 110788
med. image compression by DCT spectral similarity strategy 110525
med. ultrasound and X-ray image compression methods, clinical assess. 13281
missing block reconstruction in block coded image transm. 84510
mixed-sig. ICs, substr. coupling param. extraction, BEM *(Chinese)* 80123
model-based discontinuity eval. in DCT domain 73373
modulated lapped transform computation, fast algm. 84716
motion estim. algm., scalable DSP implement. 118500
MPEG compressed video domain, camera motion estim. using feature poin 95315
MPEG multichannel video data streams, adaptive QoS control *(Japanes* 95249
MPEG transcoder, rate control considering drift-error propag. 95091
MPEG video, caption proc. in MC-DCT compressed domain 129699
MPEG video, MAP estimator for high resoln. video reconstruction 95200
MPEG video, picture quality investig. 73405
MPEG video contents, fast dissolve operations 95181
MPEG video data streams multi-channel commun., adaptive QoS control meth 129799
MPEG video streams, spatial SS watermark detect. 95057
MPEG video transcoding by spatial resoln. reduction 95094
MPEG-2 coded video, blockiness, freq. domain meas. 106860
MPEG-2 compressed video, wipe prod. 95182
MPEG-2 image seq. coding, rate-distortion optimal fast thresholding 84380
MPEG-2 low-delay video transcoder, rate control scheme 95092
MPEG-2 QoS adaptive streaming based on scalable media obj. 108400
MPEG-2 video stream decomp., variable length decode, VHDL descriptio *(Chinese)* 96318
MPEG-2 video transcoding, DCT coeffs. Laplacian params. estim. for requa tization 95090
MPEG-2 VLSI video decoder, VHDL description and verification *(Chinese* 119820
MPEG-4 time/freq. partial encoding, score extraction 106369
MPEG-compressed videos, automatic shot change detect. 118461
MPEG-encoded video, blind compressed domain watermarking 118623
multigrid motion compensation video coder, perceptual feedback 118520
multimedia meeting documents, automatic linking by image matching 10651
multispectral images, lossy compression, blockwise distortion measure 12972
MVC, Nokia proprietary low bit rate video codec for mobile multimedia 11854
NDT of materials, DCT/DWT feature extraction/ANN class. 125146
noise generation syst. using DCT 119818
open-loop/closed-loop wavelet to DCT progressive image transcoder 95093
optimal adaptive DCT watermarks 118619
optimal L-filter for blocking artifact reduction using GA 106890
optimal transform domain watermark embedding via LP 95048
perfect reconstruction modulated filter banks with sum-of-powers-of-two coeff 73651
pers. ident. documents, image based authentication, DCT appl. 95034
phase-unwrapping algm., interferograms, circle field tv. *(Chinese)* 97820
pipelined dataflow small micro-coded asynchronous proc. and DCT app 102243
portable digital video cameras, image proc., VLSI switched-current implemen 95354

rete cosine transforms continued
power-aware video coding, dyn. parameterized archits. 95316
prediction based progressive fine granularity scalable coding 95313
prime factor algm. 129977
prime factor algm. for multidimensional DCT 107384
prime-length DCT, computation through cyclic convolutions 73622
product syst. algms. for DCT 118898
pyramid struct., significance tree image seq. coding 95212
quadtree-based coding, rate-complexity-distortion optim. 95379
quantum computing of discrete cosine/sine transforms 130008
radar image proc., local transform-based denoising 120397
real-time fingerprint ident. syst. with high discriminability *(Chinese)* 73438
real-valued discrete transform implement. by alg. integer encoding 129975
recoverable tamper proofing by secure DCT 129741
recursive implement., comparative study 100756
region-based video coding by shape adaptive DCT, prediction error regions determ. 95100
robust digital watermarking tech. for images 73375
robust high capacity data embedding 95065
robust oblivious digital watermarking using image transform PM 95161
robust oblivious watermarking scheme 95118
scalable audio coding based on hierarchical transform coding modules 84016
scalable low-complexity image compression 95383
scalable speech coder based on wavelet transform *(English)* 74486
scalable video coding, drift mgt. 107066
scalable video coding, optimal estim. for error concealment 106993
sig. Fourier spectrum anal., comparison of DFT, DCT, MDCT, DST 118876
sinusoidal and lapped transforms, multiplier-less approach 79157
skew-coord. DCT method for images, entropy coding based on Gaussian mixture distrib. model 73327
somatosensory evoked pots., parametric modelling using DCT 132572
speech enhancement, soft decision 118066
stereo image compression approach via pixel value var. trend adaptive subspace projection 106917
still image compression syst. using wavelets, perform. anal. 73409
still images, robust digital watermark procedure using DCT PM 118620
temporal video segmentation using frame/histogram-space 106854
transcoder principle, adaptive motion vector model *(Chinese)* 129059
triangular mesh based scalable image coder 95386
two-channel coding of images using spline surfaces 84385
type-IV multidimensional DCT, new fast algm. 118934
unified lossless, near-lossless, lossy coding of images based on lossless DCT *(Japanese)* 118635
VBR hybrid coded video sources modeling/prediction, fuzzy logic perspectives 129783
video, reduced-complexity iter. post-filtering 129693
video coding, adaptive postprocessors with DCT-based block class. 107018
video coding, block-DCT based, low-complexity post-proc. for artifact reduction 95203
video coding, computation-distortion optimized framework 106960
video coding, DCT pyramid using optimum bit allocation tech. 107002
video coding, DCT-based visually adaptive quantization *(Korean)* 106963
video coding, modified 3D DCT algm. *(Chinese)* 95246
video coding, VLBR, motion estim. algm. 95138
video coding via ρ-domain source modeling, low-delay rate control 95348
video compression appls., prog. devices, distributed arith. *(Spanish)* 118640
video compression using integer DCT 95209
video scalable predictive coding optim. 84448
video transport over wireless channels, rate-control scheme 74636
virtual space teleconferencing, video comp. tech. *(Chinese)* 85357
visually lossless data compression for real-time frame/pushbroom space imagers 106914
VLBR commun. video coding, auto-adaptive judgement scheme *(Chinese)* 73368
watermark-removal software, geometric distortion compensation using triangular meshes 129717
watermarking of vol. data, robust, invisible, using 3D DCT 94852
watermarking scheme based on charact. of addit. among DCT coeffs. 106898
watermarks, effective channel coding 95366
wavelet image coding method using small block DCT 73362
windowed discrete cosine/sine transforms for data shifting 107326

crete event simulation
see also time warp simulation
act. fault tolerant networks, on-line network simul. 130577
advanced mfg. systs., intell. commun. networks perform. mgt. 96052
AHDL simulator, event-driven ITA, dyn. partitioning 101645
ATM cell-relay networks, distributed simulator using Java 95773
ATM distributed simulator for network mgt. research 85138
ATM network behavior simul. 107668
ATM network simul., sync. and concurrent control 95795
batt. and convertor models for syst.-level low-power design 125225
commun. networks, distributed simul. using dyn. simul. backplane 74071
deadline scheduling for client-server systs. on Computational Grid 119704
delays in non-regenerative discrete-event stochastic systs. 100758
DSP-kernel software anal. by implicit cache simul. 68835
DWDM opt. networks, shortest path routing, adaptive wt. fns. 109136
f-ARIMA procs. anal. in broadband traffic modelling 130872
FDDI, discrete event driven *(Chinese)* 131480
groups of simul. on cluster of workstations, appl. to storage area networks 85237
IC interconnect energy model considering coupling effects 126985
IEC/ISA fieldbus, data link layer, perform. anal. 75379
IEEE1394 syst. simul. environ. and design of link layer controller 101960
Joint Tactical Radio Syst. requirements, modelling & simul. 133389
large-scale nonlin. RC ccts., rigorous event-driven anal. 101689
lin. pass. elec. ccts. with ideal diodes, event-driven simul. 79537
lin. token passing bus, computer simul. *(Chinese)* 85330
look-up-table driven logic simul., logic restructuring techs. 101952
multi-product plants capacity anal., energy consumption 124132
multimedia conferencing, interconnected networks, modelling and simul. 96282
Myrinet SANs, perform. anal., high-fidelity event-driven model 130747
NACR, new adaptive channel reservation in cellular commun. systs. 85583
packet-switched networks, traffic generator implement. framework 107657
Parallel Federates, archit. for hybrid distributed simul. 130876
parallel logic simul. method, demand driven algm. *(Japanese)* 79757
parallelised finite/discrete element simul. of multi-fracturing solids and discrete systs. 79128
room impulse response simul., scalable C40 multi-DSP syst. 108588
semicond. backend mfg., simul. based cycle time anal. 81173
semicond. fab. facility, AHMS syst., simul.-based expt. 100548

discrete event simulation continued
semicond. mfg., rapid prototyping of 300 mm fabs 81174
seq. propag. concurrent fault simul., event-driven simul. environ. adaption 79752
speculative sync. VLSI logic simul., perform. predictions 79502
sustainable e-supply chain mgt. simul., network-based optim. 100497
SWiMNet, scalable parallel simul. testbed for wireless and mobile networks 131211
syst.-level energy consumption, event-driven power mgt., low-power states 78576
TD-CDMA syst. perform., radio resource allocation policies 131148
twisted-pair cables, discontinuities and stubs, discrete time simul. model 108513
VHDL interconnections analog macromodels, timing behavior, event-driven simulators 101883
VHDL-SPICE mixed-sig. ccts., distributed event-driven simul. 125625
VLSI ccts. designs, conservative cct. simul. on multiprocessor machines 79769
WDM opt. network scheduling, traffic prediction using HMC 109140
WDM opt. networks, multimedia appls., guaranteed deterministic perform. service 74984
WF²Q+-based schedulers, comparisons and compliance with theoretical bounds 107983
wireless cellular networks models partitioning for parallel simul. of radio resource mgt. 85643
WWW proxies, optimal hash routing 74024

discrete event systems
300 mm wafer fab controllers design, CPN-based approach 89948
automation and prototyping trends, discrete event and hybrid systs. appl. 131964
decentralized discrete event systs. with delays, diagnosis 78685
distributed state estim. for discrete event syst. diagnosis 86396
hybrid power systs., emergency freq. control *(Chinese)* 88357
observer/diagnoser constr. for discrete-event systs. 78705
partially-obs. discrete-event systs., computational complexity 124501
power systs. hybrid emergency control scheme 122853
PWM boost converters, discrete controllers, generic av. modeling/simul. 88865
reentrant mfg. lines, model predictive control, real time optim. 78738
STARS of MPEG decoder, worst-case anal. of discrete-event systs. 83835
wireless commun. systs., optimal/suboptimal handoff control vars. 85591

discrete Fourier transforms
2D DCT, shifted FT-based tensor algms. 106973
2D DFT, self-similar ring-shaped watermark embedding 129716
2D direct discrete wavelet transform, fast archits. 73657
2D discrete Fourier irregular samples, closed-form image reconstruction using Good-Thomas FFT 84299
2D separable transforms computation, modular lin. arrays based distributed memory parallel archit. 90943
acoustic echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
adaptive array antenna, DFT and LMS hybrid adaptive algm. 105964
adaptive array proc. for multipath fading mitigation via filter banks 73653
ADC integral nonlin. determ., FFT test, Chebyshev polynomials 102286
automatic generation of fast discrete sig. transforms 107377
autonomous and non-autonomous ccts., harmonic bal. anal. 101705
basis fn. truncation effects 94511
bit-serial column parallel proc. archit. for CMOS sens. DFT 109692
block filter bank, perfect reconstruction condition in terms of DFT 107530
capacitive ang. posn. sens., sig. proc. by DFT 120696
CDMA techs. for embedding data in digital images 95066
cellular mobile commun., OFDM syst., freq. offset estim. 85817
CMOS FFT proc., VDSL transceiver 102228
CMOS logic power simul., stream synthesis, spectral transforms 79847
coded-excitation pulse-echo imaging, optimal transmit/receive beam synthesis 110692
COFDM pre-DFT combining space diversity assisted systs. 74550
complex-valued cyclic code using FFT 83898
data hiding in compressed images, capacity estim. 95252
DFT-modulated filter bank design for oversampled subband systs. 119045
DHT, DFT, DCT, and DST, VLSI array archit. 118894
digital image watermarking, geometric transforms. robustness 95371
digital overcurrent relay, time delay, cpd. integral algm. *(Chinese)* 77551
finite dimens. MIMO lin. syst., input-output sigs., finite length DFT 84683
finite-precision Goertzel filters used for sig. tone detect. 130153
flexible cochlear syst. based on digital model of cochlea, struct., algms. and testing 118082
fractional cosine/sine transforms 73593
fractional FT computation, weighted summation 90193
FSK low power receiver for space appls. 96634
FSK sig., real-time digital demodulation *(Chinese)* 106044
FSK ultra low power all-digital receiver for deep space appls. 74904
gas insulated substation, VFTO, test/simul. comparison *(Chinese)* 78059
genetic prog. of polynomial harmonic models using DFT 90050
GPS based phasor meas. unit, design/implement./field tests, perform. eval. 77519
GPS based synchronized phasor meas., synthetic algm. *(Chinese)* 99424
hearing aid virtual sens. arrays, robust phase shift estim. in noise 122347
HRR phys.-based moving target model, param. estim. algms. 75156
HRV spectral anal., integral PFM model, irregular sampling 87420
IIR uniform DFT filter banks, stable, causal, perfect reconstruction, design 102382
IM broken rotor bar diagnosis using sliding DFT 123411
image codec, fast efficient computation of cubic-spline interpolation 73370
image compression, directional wavelets appl. 107082
image seq. stabilisation, motion vector integrat. vs. frame posn. smoothing 129579
IPM and SPM motors, rotor eccentricity, mag. forces 134087
LDA sig. proc., no. of samples 72144
lin. quasicyclic codes, DFT domain charactn. 129051
lin. transforms., decomp., spectral anal. 107416
long. road profile meas., subharmonic detrending or data-smoothing approach 86978
low-contrast images segmentation, Fourier spectrum approx. 84153
m-D polynomial transform and discrete W transform algms. for m-D DFT *(Chinese)* 114202
magnitude retrieval, neural network approach 118897
matrix factorizations for reversible integer mapping 117963
med. X-ray imaging, transform-based denoising and enhancement 122138
microelectronic solders, diffusional coarsening modelling 113713
mixed spectra, regularized estim. using circ. Gibbs-Markov model 118844
modified DFT with doubled freq. resoln. 107333
modulated lapped transform computation, fast algm. 84716
multi-appl. FFT analyser, DSP archit., real-time behaviour 86408
multi-component sinusoidal sigs. in noise, detect./param. estim. 107601

discrete Fourier transforms continued
multicarrier transm. systs., narrow freq. band suppression 117715
multidimensional, regional, algms. for accurate efficient parallel computation 107457
multiple-target recogn. using discrete rot. FT 118695
multitone modulation channels, optimizing capacity 130053
N-point real seq. and inverse DFT of N-point complex seq. with conjug. symm. 72767
noisy speech, adaptive filtering & spectral subtraction 94421
nonuniform, error sensitivity 101135
oceanographic research vessel, low cost modular instrum. syst. 111441
OFDM bandwidth-efficient indoor wireless, channel equalization 131083
OFDM CDMA schemes, general baseband digital model/matrix representation 128992
OFDM sig., PAR, data permutation, embedded side inform. 106123
OFDM syst., alias-free subband adaptive equalizer 107710
OFDM systs., adaptive algm. for sym. timing/carrier phase estim. 128986
on-line dielec. loss meas., higher-order sine fitting algm. *(Chinese)* 132133
one-sided discrete-time Fourier/delta transforms interrelationships 78776
optimal transform for discrete Hirschman uncertainty principle 83792
PCC-OFDM, blind freq. offset estim. 106050
perfect reconstruction cosine modulated filters and modified DFT filter banks, prototypes 80097
perfect-reconstruction filter banks, low-delay design using LP 107499
perturbed arrays, efficient quadratic detect. via FT techs. 84775
phase randomisation, higher cumulants behaviour num. study 124509
phase vocoder, freq. estim. techs. 85423
pipelined archit. for multidimensional DFT 107382
plural-zone sound segreg. *(Japanese)* 94383
polynomial phase sigs., detectable params. dyn. range, multiple-lag diversities in high-order ambiguity fns. 73710
power spectrum tests of random nos. 106207
power syst. freq. calc. using digital algm. 77139
power syst. freq. estim. in shortened meas. time, DFT interpolation 123071
power syst. oscill. ident. using DFT algm. *(Korean)* 122888
power syst. protection/control, freq. tracking methods eval. 77525
power transm. line adaptive protection relaying scheme 123054
power transm. line relay protection using modified Fourier filter algm. 77522
power-law all-purpose plug-in power-law detectors for transient sigs. 130165
QMF two-channel bank design, freq. sampling 102384
radar systs., adaptive sig. proc. against pass. interf. 75119
rain-fade-slope calc. for terrestrial microwave links, DFT based method 72306
RCS modeling, data compression, comparative study 86144
Rician fading channels with Doppler shifted direct component, freq. offset compensation *(Japanese)* 108821
robust oblivious digital watermarking using image transform PM 95161
room acoustics meas., multitone sigs. appl., freq. response 110031
second order syst. nonlin. meas., 2D adaptive algm. 107561
seismic and acoustic sig. ident. algms. 73735
SFCW radar, stratified dielec. medium, microwave imaging 86916
sig. Fourier spectrum anal., comparison of DFT, DCT, MDCT, DST 118876
sig. proc., nonparametric spectrum peak discrim. 129969
single-tone DDS, num. distortion, quantization operations 114645
slow freq.-selective fading channel, MLE 73753
spatial transfer fn. of wideband wireless commun. syst., fading anal. using FDTD method 85722
speech noise reduction using modified DFT pair 83994
speech sig. noise reduction syst. based on freq. domain adaptive filter 94386
speech-sig. proc., at. fns. based wt. windows constr. 72989
stepped-FM radar with MUSIC algm., clutter suppression charact. *(Japanese)* 131668
subband adaptive filters, steady-state perform. limitations 107524
subsurface digital multifreq. EM cond. imaging syst. 84166
texture-based image retrieval, DFT and Zernike moments use 95584
time delay estim. using sig. subspace model 107395
time-domain near-field meas. of antenna by IDFT tech. *(Chinese)* 128838
time-freq.-selective channels, multicarrier syst. 85718
time-warped, optimal warping fn. design 95722
US cross-correl. flow meas., modulated sig. vel. depend. charact. 110054
vector filter banks using DFT modulation, design method 73706
video coding, perceptual PSNR for improved objective quality eval. 129726
Walsh-Cooley basis fns., synthesis and anal. 84660
warped DFT, filter design appls. 113839
Sn-Pb solder, coarsening proc., computer modeling 101471

discrete Hartley transforms
1D DHT, distributed arith. array 102227
2D DHT computation algms. 90194
DFT, DHT, DCT, and DST, VLSI array archit. 118894
digital Hartley transform for computation of instantaneous powers 73613
multidimensional sig. proc., 3D DHT, 3D vector radix algm. 129960
real-valued discrete transform implement. by alg. integer encoding 129975
sig. windowing, power computing, DHT 95658

discrete Hilbert transforms *see discrete transforms; Hilbert transforms*

discrete Radon transforms *see discrete transforms; Radon transforms*

discrete systems
see also discrete event systems; discrete time systems; sampled data systems
act. power distrib. discrete variable struct. control scheme *(Chinese)* 122880
cyclic queuing syst., ergodicity condition 124476
interf. channels capacity, genie-aided outer bounds 130294
limb movement, paraplegics, elec. stimulation control design 133000
lin. 2-stage stochastic prog., quantiles, approx. 100955
ODE BVP, iter. shooting method, feedback control appl. 100749
pole-changing PM motor drives 134485
semicond. mfg. systs., degraded behavior, Petri nets based modelling and anal. 89824
SISO networked control syst., packet switching WAN appl. 108267
sync. machine, dyn. perform., robust discrete optimal multirate techs. *(English)* 112475
translation-invariant windowed nonlin. discrete filters archit. 118172

discrete time filters
see also sampled data filters
BFDM/OQAM systs. based on biorthogonal modulated filter banks, design 73776
concentric shapes filter for image recogn. and implement. in modified DT-CNN 129866
continuous- to discrete-time filter conversion, algorithmic s-z transforms. 79517
continuous-time filters digitization, weighted-sample method extensions 95696
direct and inverse 1st-order s-z transforms., efficient algms. 73694
EKF-based chaotic sync., perform. eval. 119003

discrete time filters continued
fault detect. and isolation, lin. matrix inequality based filter design 84752
IIR filters design, WISE method 84723
L/M rate changer, filter bank struct. 84759
M-channel mixed analog/digital max. decimated filter banks, freq. response 102341
manoeuvring target tracking by using particle filter 131656
multiexponential transient spectrosc., iter. deconvolution 84739
nonlin. filtering problems, posteriori dens., piecewise Gaussian approx. 73688
stack filter design, tree representation evol. 84742
switched nonrecursive discrete-time lin.-phase FIR filters 102390
wireless fading channels, space-time transmit strategies/channel feedback generation 108960

discrete time systems
see also discrete time filters; sampled data systems
2D discrete lin. systs., stabil. testing, immittance-type tabular test 95679
$\mathcal{H}_\infty$ robust filtering for uncertain discrete-time state-delayed systs. 95697
A-map representations and asymptotically almost periodic responses 68533
adaptive control of av. Markov decision chains under Lyapunov stabil. condition 124506
analog polynomial type CNN with digital state 91150
arbitrary time-series approx. & compression, nonlin. dyn. 95622
ATM MUX with heterog. ON-OFF sources, perform. anal. 130237
ATM network congestion control by neural net 130527
ATM networks, predictive congestion control, multiple sources/single buffer scenario 73780
ATM wireless networks, QoS mgt. using large deviation principle 85736
ATRV-Jr unicycle robot, localisation in nonsmooth environ. 97835
bandpass sigma-delta modulator, nonlin. dyn. anal. 102260
CNN sampling theorem 102475
CNN syst. for toll driving 102477
const.-voltage const.-freq. PWM DC/AC converter, repetitive learning controller 88941
continuous-time and discrete-time systs., high-perform. conversions 118896
control theory, interactor matrix simple derivation/appls. *(Japanese)* 78746
DC servomotor digital controller auto-tuning *(Japanese)* 99678
DC-DC converter, bifurcations detectability, stochastic reson. 77990
DC-DC dual channel reson. converter, sliding mode voltage control 78044
delta operator based low sensitivity ladder realization for sampled data filters 102353
deployable space telescope, direct adaptive disturbance rejection and control 133222
digital musical sound synthesis by phys. modelling 131787
discounted stochastic fluid programs, optimal control problems 78813
distributed sens. network, discrete-time systs., time-varying delays, stability 130192
dual-stage actuator disk drives, improved servo perform., track follow, track seek, and settle 116462
dual-stage actuator for HDD, discrete-time sliding mode control 99873
electrocardiographic p-wave morph. class. 76308
electron device, nonlin. discrete-time convolution model 103737
energy aware sampling schemes 96446
finite dimens. MIMO lin. syst., input-output sigs., finite length DFT 84683
Geo^X/G/1 queue, preemptive resume priority 78780
Geo/G/1 queue with multiple adaptive vacations 130310
GI^X/Geom/m, modeling and anal. of discrete-time multiserver queues with batch arrivals 113847
GI-G-1 queue, continue-after-interruption and repeat-after-interruption transmit modes, perform. eval. 119236
GI/Geom/m queues, distribs. rels. 113853
H_∞ fuzzy estim. for nonlin. discrete-time dyn. systs. 130118
IM flux observer, mutual inductance sensitivity, discrete time domain 112526
integrated voice/data services in hybrid fiber/coax networks, anal. 85404
integrated voice/data WLAN, CSMA/CA protocol 74326
jump Markov lin. systs., seq. simul.-based estim. 73663
Laguerre models, optimal pole conditions satisfying interpolation constraints 129972
lin. ccts. with interval params., freq. response eval. 90644
LTI syst., convolution representation 84663
M/G/∞ procs. for modelling VBR video traffic 95844
mag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 89022
Markov jump systs., min. MSE estim. 73680
memoryless Rayleigh-fading channels, capacity 74518
mobile radio discrete-time sigs., residue-division MUX 85717
multi-WSSUS multipath channel, Markov chain/QAM fading based stat. discrete-time model 120073
multirate feedforward control, perfect tracking control 77890
noisy sinewave detect. using stochastic reson. 130146
nonlin. discrete time-varying uncertain systs., robust nonlin. H_∞ FIR filtering 84718
nonlin. steady-state solns., freq. domain computations 95649
nonlin. switched ccts., inconsistent init. conditions, discrete-time tech. 90662
one-sided discrete-time Fourier/delta transforms interrelationships 78776
optimal self-tuning filtering, smoothing, prediction 129978
piezoelec. actuators, hysteresis and creep effects, real-time inverse feedforward controller 92679
piezoelec. intell. beam state-depend. LQ vibr. control *(Chinese)* 104433
polynomial matrices, generalized spectral factorization, quadratic difference forms 67701
Poor-Verdu conjecture for reliab. fn. of channels with memory 128946
queueing systs. with general stochastic sources, anal. 119252
queues, entropy/timing capacity 130331
rapid thermal proc. temp. control, receding horizon tracking control 126264
rectifier cct., PFC, DSP based controller design 88829
relax. syst., user's condition adaptation 110560
restricted struct. optimal lin. pseudo-state filtering 130116
robot end effector, hybrid image-based visual servo control scheme 86606
robust filtering, bounded noise/param. uncertainty 95675
robust min. variance filter design, new approaches 130119
secure commun., digitized n-scroll attractor model 94241
sens. bias fault diagnosis, robust, in nonlin. systs. 86470
servomotor discrete time accel. control loop studies 134100
sig. proc., time series anal., aliasing benefits 119006
single-server queueing syst., priority assignment, multiobjective control approach 78781
SISO lin. (L,M) shift invariant syst. 84237
speech prod., phys., models and prospective appls. 129372
switched systs., discrete-time simul. method using averaging 79566

crete time systems continued
tailed tent map chaotic cct. exploiting S^2I memory elements 91122
three-phase UPS PWM inverter, digital voltage/current controllers 134232
uncertain discrete-time syst. robust Kalman filter design 84731
unknown data channels, nonlin. blind-deconvolution 85656
VSI-IM drive, PWM less current control 123402

crete transforms
see also discrete cosine transforms; discrete Fourier transforms; discrete Hartley transforms; discrete wavelet transforms
2D sigs., discrete orthogonal transform., iter. algm. 107473
blind blur ident. using discrete periodic Radon transform 84356
discretized Radon transform and spectral props. 122136
DSP concept, structural subband decomp. 130092
fast algms. shifted in time and freq. domains of cosine/sine transforms 101141
Gabor transform matrix, rank 73626
image compression by Gabor expansion 84392
image proc., local transform domain filters with varying params. 130057
lin. scale invariant sigs./systs., discrete time proc. 95688
low-complexity video coder based on discrete WHT 118582
m-D polynomial transform and discrete W transform algms. for m-D DFT *(Chinese)* 114202
multiple description coding using exact discrete Radon transform 107085
optimal transform for discrete Hirschman uncertainty principle 83792
quantum computing of discrete cosine/sine transforms 130008
real-valued discrete Gabor transform for image representation 94578
redundant transform. on binary data, appl. to image coding and transm. 84373
shifted piecewise lin. transform 124459
sig. Fourier spectrum anal., comparison of DFT, DCT, MDCT, DST 118876

crete wavelet transforms
2D discrete wavelet transform with integer lifting scheme, parallel archit. 95247
2D DWT, lifting scheme, line-based prog. archit. 100753
2D DWT archit., resource cycling, parallel distributed arith. 102244
2D nonredundant directionally selective complex wavelets 94659
3D defect charactn., multisens. fusion, wavelet basis fn. neural net 101600
3D med. data, multirate coding 98161
adaptive discrete time wavelets using degenerate eigenvalues 119071
adaptive voiced/unvoiced segmentation for Mandarin syllable *(Chinese)* 106336
arbitrarily shaped image segment representation by wavelet basis 84493
arbitrarily shaped video-obj. coding 129695
archits. based on flow graph representation 129954
array denoising, new approach 110533
ASD line-side current, discrete wavelet transform anal. 122994
asynchronous FIR filter banks for discrete wavelet transform 91105
audio sigs., wavelet shrinkage denoising, perceptual eval. 129369
blind image deconvolution, wavelet transform-based noise reduction schemes 118223
blind watermarking algm. in complex wavelet domain 95268
blocking artifacts reduction in JPEG compressed images using overcomplete wavelet representation 83944
cable aging assess., discrete wavelet transform appl. 99524
coder/decoder, FPGA implement. 68754
coding with fractals for image seqs. 84507
color images, blind/readable watermarking 95059
color still pictures encoding by wavelet transform/VQ 129703
context-based adaptive arith. coding, least sq. algm. 84479
correlative target recogn. using impulse radar, data storage reduction 96927
cpd. image compression using adaptive wavelet transform *(English)* 84450
data hiding using wavelet transform and error-control coding 95070
DC transit systs., short-cct. faults detect., DWT, ANN 78249
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
digital image compression using wavelet transform with transit. matrix 106903
digital watermarking of still images in wavelet transform domain 84391
digital watermarks hiding using multiresolution wavelet transform 129416
DSP-RAM parallel archit., discrete wavelet transform implement. 114810
DWTPer-based band preconditioners, accelerated computation 67998
ECG feature extraction using optimal mother wavelet 121974
ECG sig. compression, wavelet transform. of lin. predicted error 87387
embedded quadtree-based image coding, quincunx wavelet filter design 95291
EMI sig. proc./source ident., wavelet packet-based tech. 72374
epileptic EEG, adaptive separation of background activity and transient phenom. using math. morph. and wavelet transforms 76269
extending self-similar procs., wavelet transform *(Chinese)* 100751
face, recogn./charact. feature extraction 73512
fast Fourier-Weyl transform 118855
fast wavelet transforms, unconstrained vector length 107472
FIR filter bank transceivers with effective band separation 130055
forward and inverse DWTs, unified module archit. 90961
fractal image coding in wavelet transform domain, list-directed approach 118573
HFC, Hybrid Fiber/Coax up-stream, discrete wavelet multi-tone modulation *(Chinese)* 72766
hierarchical wavelet video coding using warping prediction 95279
HV machine insulation, PD anal., wavelet transforms 92609
HV transm. line, high impedance arcing faults detect., wavelets 77650
IM bearing damage detect. via DWT anal. of starting current transient 123448
image and video coding, shape-adaptive transforms, overview 107000
image and video coding on parallel archits. 129766
image authentication, digital watermarking algm. *(Chinese)* 129641
image coding, depth first search bit stream SPIHT algm. 106928
image coding, lossy and lossless compression perform., finite precision wavelets 95295
image coding, wavelet transforms, scalable DSP realisation 118499
image compression, 2D discrete wavelet transform core design 73326
image compression, low-complexity/-memory entropy coder 129696
image compression, optimal decomp. 95396
image compression, visual embedding of wavelet transform coeffs. 95290
image compression, wavelet adapted and visually tuned 107007
image denoising, autocorrelation modeling of wavelet coeffs. 94810
image denoising using directional filter banks 94807
image edge feature extraction algm. *(Chinese)* 95470
image filtering using scale-space continuity, wavelet-based method 73157
image sharpening/smoothing in Besov spaces, wavelet-based approach, deblurring appls. 94950
insulator PD VHF-wideband EM noise studies 112120
integer 1-D discrete wavelet transform archit. using FPGAs 114730
ISI-free FIR filterbank transceivers for freq.-selective channels 130121
JPEG2000 implement. on different computer platforms 106949
JPEG 2000 std., DWT lossless compression, VLSI design 118527
lifting based discrete wavelet transform archit. for JPEG2000 84488
lifting factorization-based discrete wavelet transform archit. design 73636

discrete wavelet transforms continued
lossless image coding, integer-to-integer wavelet transforms 84486
lossless image compression, arith. coding 95326
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 101592
matrix factorizations for reversible integer mapping 117963
motion-based video segmentation using fuzzy clustering/mixture model 84320
MPEG-4 video data protection for multimedia fruition 84367
MPEG-4 video streams, DWT-based obj. watermarking syst. 95262
MT data, wavelet filtering 122560
multi-wavelet transforms, 2D constrained, real-time struct. 107512
multichannel neural recordings, array wavelet denoising algm. 87429
multipath and underwater sound sigs., appl. of robust DWT 119087
multipath channel param. determ. using wavelet decomp. 84813
multiresolution motion estim., hierarchical block matching algm. 95080
multiresolution near-field to near-field transform for multi-region FDTD schemes 93960
multiresolution-based adaptive image watermarking scheme 129465
multiscale texture segmentation using hybrid contextual labeling tree 94835
multispectral image sharpening using wavelet transform and spatial correl. of edges 73192
natural scale selection in discrete wavelet domain using eigenvalues 129961
NDT of materials, DCT/DWT feature extraction/ANN class. 125146
nonlin. channel noise reduction/ident. using neural net 130269
optic flow computation using discrete wavelet anal. 106777
optimizing wavelet block quantization tables for images, algm. *(Chinese)* 95228
orthogonal 1D DWT, canonical and retimed RNS archits., field-PLD 102055
orthonormal DWTs, rapid prototyping on FPGAs 90815
orthonormal inverse DWT, design and FPGA implement. 86455
orthonormal symmetric wavelet bases using complex allpass filter 130120
physiological data, efficient transm. for rem. display, lifting scheme appl. 88010
planar shape representation based on multiwavelets 118785
power quality monitoring syst. using wavelet transform 77360
power transformer protection using discrete dyadic wavelet transform approach 77927
proc. control, plasma impedance matching, discrete wavelet monitoring 124441
prog. platform DWT scheduling alternatives, filtering operations 91092
radiological image contrast enhancement, discrete wavelet transform 76543
RCG ST-segment enhancement, wavelet interpolation filter 87421
reduced memory bandwidth real-time EZW video coder, VLSI implement. 96321
region-based subband/wavelet image coding 95294
reliable digital watermarking, successive subband quantization and human visual syst. 129763
RNS archit. for discrete wavelet transform computation 114700
rotated textures class. using overcomplete wavelet frames 94598
run-time support environ. for reconfigurable systs. 125421
SAR interferometric phase noise reduction using discrete wavelet transforms 75196
scalable speech coder based on wavelet transform *(English)* 74486
screening mammogram, artificial intell. algm. for tumour detect. 98512
sig. compression using slantlet transform, efficient approach 95615
sig. filtering and shift invariant anal. using complex wavelets 84735
single mode fiber opt. pulse propag., continuous/discrete wavelet transform anal. 71250
spatial video noise reduction using wavelet based freq. decomp. 90195
speech compression, wavelet transform appls. 94398
SPIHT algm. based on variable sorting thresholds 107015
stereo image wavelet-based mixed-resoln. coding 118491
still image compression, JPEG 2000, lifting based DWT, embedded block coding, optimized truncation 129708
texture segmentation based on multi-layer CNN 84147
transformers aging sig. feature extraction, discrete wavelet transform *(Korean)* 123546
transient TW fault charact., dyadic discrete wavelet transform *(Chinese)* 133778
unified systolic array design for wavelet-based video codec 74485
US flaw class. problems, domains & features selection 101599
US weld inspection sigs., LEARN++ incremental learning algm. 100634
valid speech-sound extraction, merging algm. 84073
vel. estim. and moving obj. detect. using wavelet transform and parallel Kalman filter 118394
video coding, color set partitioning in hierarchical tree scheme perform. 95242
video coding, shift-invariant motion estim. in wavelet domain 73332
video watermarking tech., adaptive multiresolution *(Chinese)* 129757
VLSI prog. parallel archit. for 2D discrete wavelet transform 94771
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033

discriminators
see also demodulators
6-18 GHz band 6-bit digital freq. discriminator 79625
ASIC, 16 channel, Si drift detector read out 121695
ATLAS Transition Radiation Tracker, DTMROC time meas. chip 121632
CCD optoelectric phase discriminator array 120906
CMOS sens. interface, CARIOCA current-mode feedback cct. 79635
cosmic rays, scintillation detector, pulse shape comparator 98024
digital FM, seq. estim. 94233
digital FM and GMSK with limiter discriminator detect., anal. of BER on seq. estim. 106041
double-threshold discriminator, low-walk, gas drift chambers appl. 76151
downlink time acquisition/tracking for man portable MDR terminal 111614
FM digital double errors 72744
FROST, low-noise high-rate photon counting ASIC for X-ray appl. 68876
Gaussian noise perturbed vectors, phase angle distrib. 72745
GMSK modulator using $\Delta\Sigma$ freq. discriminator-based synthesizer 108656
GMSK sig. detect., limiter-discriminator and envelope-aided DFE 73824
hybrid MSGC thermal neutron detector DAQ/histogram design anal. 132345
integrated readout syst. for high count rate X-ray posn. sensitive meas., Si strip det. 121709
med. X-ray imaging with energy windowing 98502
micropattern gas detector compar. for CMS expts. 132331
NEMO-3 calorimeter electronics 121693
PC based microwave phase-noise meas. syst., 1.25-2.5 GHz 109433
pixel matrix, acquisition/proc. of multiparametric inform., MCP 121698
proportional counters, digital pulse proc. tech. 121636
resistive plate chamber timing cct. front-end electronics chain 132455
resistive plate chambers timing, front-end electronics chain 121614
rot. axle ang. speed/posn. meas., pulse generator with num. count discriminator 75396
scintillating fibre detectors in high energy expts., review 132439
selective digital megaphone syst. over network line *(Spanish)* 75330

discriminators continued
time-to-amplit. convertor based TOF trigger, diff. discriminator 98069
TOF-PET tech., educational tool for demonstrating 132895
wavelength shift keying, wavelength discrim. cct. in WDM networks 96790
XPAD read-out pixel chip for X-ray counting 121711
CsI(Tl) cryst., intrinsic radioact. background, (α,γ) discrim. *(Chinese)* 110297
GaAs pixellated photon counting, med. imaging 98386
$LiBaF_3:Ce^{3+}$ scintillator, fast neutron/alpha detect. 110332
Rb time and freq. std., devel. and appl. 131793
Si pixel detector electronics for ATLAS expt. 98055

diseases
see also cancer
3-D MCG meas., cond. disease waveform anal. *(Japanese)* 110662
3D echocardiography, ventricular vol. quantification, normal/aneurysmal LV 132594
3D ultrasound imaging systs., diagnostic appls. review 76367
abdominal aortic aneurysms, 3D image anal. 110947
AIDS diagnosis, enzyme-immunoassay, amperometric detector appl. 120949
Alzheimer's disease, cortical disease progression, MRI, deform. maps 132761
Alzheimer's disease, EEG spatio-temporal patterns, synergetic anal. 87434
Alzheimer's disease, MRI, image proc., artificial neural net *(Chinese)* 98424
Alzheimer's disease, recurrent neural net-based EEG approach for early recogn. 110642
Alzheimer's disease diagnosis, brain atrophy meas. by image segmentation and fuzziness 129658
Alzheimer's disease patients, EEG, mutual inform. anal. 98187
Alzheimer type dementia, daily activity monitoring, actigraph 76304
amyotrophic lateral sclerosis, multislice ^{1}H MR spectrosc. imaging 132675
aortic regurgitation, stenotic mitral valve area calc. 98268
arterial wall regional elasticity, thickness change meas. during entire heartbeat 110821
arteries, human, 3D forward-viewing intravascular US imaging 110797
arteriovenous malformation extraction with factor anal. 98538
atherosclerosis, carotid vessel wall area meas., black blood MRI 132721
atherosclerotic vulnerable plaques diagnosis, IR/NIR fibre optic imaging 110826
auditory ossicular chain, CT virtual endoscopy *(Chinese)* 98524
Best's disease, pattern ERG, psychophys. fns. 132577
blood, opt. meas., conf., Amsterdam, Netherlands (Jul. 2000) 78375
bone tissue, pathological changes diagnostics, polariz.-correl. anal. 76407
bone X-ray tomographic microscopy projections, fractal anal. 76526
brain amyloidosis diseases, microscope image class. by filtering of amyloid plaque 121892
brain chaos, epilepsy, depression, exercise and lateralisation 132574
brain conditions, rapid class. using ANNs 87400
brain MRI, automated segmentation of cerebrospinal fluid and lateral ventricles 132778
brain MRI, Fe-rich gray matter, CPMG relax. rate 98441
brain slices, macroscopic opt. images, 3D reconstruction 87520
brain SPECT and MRI, image co-registration using anatomical features 98569
cardiac disease diagnosis and mgt. using telehealth 133150
cardiac hypertrophy, microvolt T wave alternans, elec. instabil./abnormal myocardium 110636
cardiac wall motion detect., spatiotemporal-freq. anal. 76584
caregivers of people with Alzheimer's disease, factors affecting use of telephone-based intervention 76779
carotenoid antioxidants in living human tissues, reson. Raman detect. 122042
carotid artery plaques, US images, objective grading method 122014
carotid US images anal., EcoStudio computer tool 98275
cerebral embolus ident. using rule-based ES 122016
cerebral perfusion meas., dyn. CT *(Chinese)* 122151
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
chronic renal failure, hemodialysis, electrodiagnostic test 87362
congenital heart disease, rem. diagnosis, mgt. and education 111288
coronary arteries, ultrasound charactn., temp. depend. wave speed 110810
coronary artery calcifications, vol. quantification, dual-slice spiral CT 98483
coronary artery disease and post-heart transplantation patients, value of intravascular US imaging 98343
coronary artery disease ES, SPECT images, plural neural nets *(Japanese)* 132848
coronary atherosclerotic plaque charactn., IVUS elastography/Raman spectrosc. 110808
coronary heart disease service delivery improvement, pot. for telemedicine 133175
CT-scan images, bone texture charactn. 98566
deep venous thrombosis, ultrasound elasticity imaging 110812
dementia, EEG abnormalities reflecting parietal lobe syndrome 110601
diabetes, F-wave studies, different params. comparison 98192
diabetes, tutoring syst. design considerations 98113
diabetic neuropathy, autonomic nervous syst. fn., blood flow variability anal. *(Japanese)* 132630
diabetic patients, brainstem auditory-evoked pot. exams. 87358
diabetic patients, foot press. meas., GUI/syst. 110507
diabetic patients, glycaemic control, biosensors appl. 132003
diabetic patients, sympathetic skin response waveform 110575
DICOM struct. reporting, diagnostic reports, stds., langs. *(Japanese)* 88021
dilated cardiomyopathy/ventricular arrhythmias, repolarisation abnormalities, MCG detect. 110671
Doppler myocardial imaging, normal/ischaemic myocardial fn. assess. 132593
dystrophic cardiac tissue, abnormal lipid profile, ^{1}H NMR spectrosc. 132735
echographic aiming, increased effectiveness of laser therapy 132597
EEG sig. ICA for brain tumor ident. 121928
EEG sigs., autoregressive spectral anal. using MLE 132562
EMG simul. in pathological situations, math. model 98193
emphysema, automated lung CT image eval., morph.-based concept 76525
epilepsy, brain elec. activity anal. using Boolean CNN 98215
epilepsy, persisting unilateral auditory cortex dysfunction, electrophysiology 76250
epileptic EEG spikes detect., pseudo Wigner distrib. method *(Chinese)* 110552
epileptic seizure detect. syst. using multiple single neuron recordings 110584
epileptic seizure onset, sphenoidal electrode site recording 76246
epileptic seizures, EEG sig. complexity 76247
epileptic seizures, foramen ovale/scalp EEG, simulated neuronal cell models 110602
focal atrial tachycardia, tricuspid annulus, electrophysiologic/electrocardiographic characts. 110563
foot press. images anal., plantar ulcers detect., diabetic neuropathy 121891
fundus image features extraction, diabetic retinopathy appl. 98381
glucose conc. noninvasive monitoring, OCT 98374
heart disease, phase contrast MRI, left ventricular wall motion 122091

diseases continued
heart disease assess., real-time 3D echocardiography 76378
heart failure, thigh muscles improvement by neuromuscular elec. stimulation 87803
heart rate variability, normal subjs./chagasic patients, nonlin. dyn. 98197
heart/liver tissues, acoustic prop. distribs. 98298
heartbeat-evoked brain pot., diabetic neuropathy patients appl. 87409
helminth eggs, microscopic fecal specimens, digital image proc./neural net appl 76401
hepatitis C, glucagon injection, portal blood flow vel., sonography 98267
hepatitis diagnosis, enzyme-immunoassay, amperometric detector appl. 120949
herpes simplex encephalitis, diffusion-weighted MRI findings 110882
high-power incoherent opt. radiation for interstitial thermotherapy 98687
hippocampal surface struct. in patients with unilateral mesial temporal sclerosis shape anal. 98390
hyperkalaemia diagnosed by implantable cardioverter defibrillator T wave sens 132549
hypertrophic cardiomyopathy, exercise high resoln. ECG, adaptive filterin 121958
idiopathetic Parkinson's disease, repetitive transcranial mag. stimulation 7659
idiopathic scoliosis, optimal 3D correction, radiograph 122120
image recogn. using structural graph grammar-based techs. 98144
infectious disease screening for field med. emergencies 76381
inflammatory, degenerative, traumatised joints, low-field MRI appl. 122070
intimal hyperplasia develop. study, Doppler US appl. 76372
intra-atrial reentrant tachycardia ccts., electroanatomic mapping 76243
intracranial white matter lesions, MRI, multispectral 3D segmentation 87595
intraocular diseases, CT and MRI diagnoses *(Chinese)* 76508
intravascular echography, ultrasound contrast agent, parametric mapping 11081
ischemia heart disease diagnosis, ECG wavelet transform. 98168
kidney perfusion, ultrasound contrast agents, radiofrequency proc. 76344
laryngeal pathologies detect., acoustic anal. of speech, ANN 87500
laser med., conf., Florence, Italy (Oct.1999) 89496
left ventricular diastolic fn., coronary artery disease, left atrial M-mode echo cardiography *(Chinese)* 76359
left ventricular hypertrophy, action pot. cond., reduced anisotropy 110638
liver cirrhosis diagnosis, RF echo sig., envelope charact. estim. 98296
liver disease, US diagnostic syst., fractal dimens. 110720
liver diseases diagnostic syst. based on conventional US equipt. 98293
local myocardial dysfunction caused by ischemia/reperfusion, Doppler tissu imaging *(Chinese)* 76357
lower extremity, elec. nerve stimulation, H-reflex, F-wave params. 76275
lung, regional fn. meas., non-invasive imaging using X-ray computed tomogra phy 122123
LV motion, fast estim. using subspace approx. techs. 87664
med. image compression by DCT spectral similarity strategy 110525
multiple sclerosis, ataxic symptoms meas. with graphic tablet 121890
multiple sclerosis, magnetisation transfer ratio histograms anal. 132699
multiple sclerosis detect., magnetisation transfer ratio images 98261
multiple sclerosis lesions, automated segmentation, model outlier detect. 11085
multiple sclerosis lesions, MRI, 3-D surface reconstruction using spherical ha monics 132772
multiple-sclerosis brain tissue class., stat. 3D image segmentation algm. 11090
myasthenia gravis, voluntary single fiber EMG 76249
myocardial infarction, acute, T wave alternation incidence 110561
myocardial infarction, ventricular tachycardia, magnetocardiographic intra-QR fragmentation anal. 121985
myocardial infarction survivors, prolonged QRS duration, increased QT dispersion 132548
myocardial infarction visualisation, improved MR imaging tech. 122078
myocardial ischaemia MRI, serial motion assess. by ref. tracking 122092
myocardial perfusion SPECT, coronary artery disease detect. 132902
myocardial perfusion SPECT, ES diagnostic perform. 122169
myocardium, integrated backscatt. image, 2-D cyclic var. 98277
myoglobin, skeletal muscle, quantitat. ^{1}H mag. reson. spectrosc. 132734
nailfold capillaries, taxonomy based on morph. 76382
neg. ERG, clinical incidence 98242
neurodegenerative diseases, brain MRI datasets, 3D texture anal. 76482
neurogenic thoracic outlet syndrome, electrophysiological assess. 110632
neuromuscular disorders detect., concentric-needle vs. macro EMG 98190
neurosurgery/brain stereotaxic irrad. optimisation, multimodal matching app 122285
obesity, coronary flow reserve/abdominal fat, ultrasonographic assess. 13261
ocular/body disease detect. by dyn. light scatt. 132637
opt. biopsy/in-vivo study of human skin, laser syst. 122057
osteoarthritis, articular cartilage vol./thickness, 3D FLASH MRI 87592
osteoporosis mouse model, bone archit., 3D SR microtomography 132826
osteoporotic bone, encoded FTIR microspectroscopic data visualizationy 11085
otosclerotic ears, elec. bone-cond. audiometry, Carhart notch effect 87359
Parkinson's disease, scalp pots., stimulation near subthalamic nucleus 76279
Parkinson's disease and onset/offset visual responses 110598
Parkinson's disease patients, spontaneous blinks, EMG, electro-oculogra 87361
paroxysmal supraventricular tachycardia, hemodynamic instabil., ECG ana 121966
piezoelec. quartz cryst. based veterinary diagnosis for Salmonella enteritid infection 75681
pneumoconiosis, computer-aided diagnosis using neural network 110979
pneumoconiosis, optimal scanning, display and segmentation of ILO X-r image set 110980
pneumoconiosis rounded opacities detect. using neural net 132840
pruritus, scratching movements, portable recording, PC IR link *(English)* 981
psychomotor EEG variant of Gibbs, assoc. with underlying struct. patholo 87410
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. pr *(Chinese)* 122034
pulmonary diagnostic syst. for combat casualty care, obstructive/restrictive fi charact. extraction 76337
pulmonary emphysema, lung vol. assess. using multi-detector helical CT, co parison with pulmonary fn. tests 110952
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
radiculopathy, electrophysiologic data 98182
radiological databases for telemedicine and teaching, European projects IAEV II and HERMES 111277
renography, time-series contrast-enhanced MRI, image registration 110910
retinal diseases imaging, scanning laser ophthalmoscope appl. *(Japane* 110835
retinal pathologies, expert eval. using digital image anal. 87535
retinocortical evoked pot. changes, subjs. aged 75 yrs. or more 110581
rheumatoid arthritis, therapeutic elec. stimulation, biomech. gait anal. 76604

eases continued
scalp electrode impedance, infection risk, and EEG data quality 76289
sleep disorders, polysomnogram online transfer 122460
sleep related respiratory disease diagnosis, home appl., cardio-respiratory biosignals 121881
snoring sigs., automatic pitch detect., early disease diagnosis 98339
SPECT absol. activity quantitation from projections, anal. approach 111028
SPECT collimation/syst. geom., class. tasks related to Parkinson's disease 111022
stenoses morph. eval., power Doppler US, flow phantom 121996
stenosis, tissue vibr., in vivo US meas., case study 122015
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
telepathology and rem. microscopy for intra-operative diagnoses on frozen sects. 111273
telepathology network, conceptual groundwork and eval. 111272
uremia diagnosis, electronic nose breath anal. 98127
vascular cerebral lesions, multichannel derived median nerve SEP vs. EEG 110631
ventricular repolarisation duration variability, spectral decomp. tech. *(Chinese)* 110548
ventricular tachycardia, ECG, QT dispersion bias 76242
vertebral column, functional anal. based on MRI and direct vol. rendering 87588
vol. multishot echo-planar spectrosc. imaging, brain diseases appl. 132732
wheezes, lung disease, time-freq. detect./anal. algm. 98340
^{3}He, hyperpolarized, pulmonary gas flow, dyn. spiral MRI 132762
^{131}I therapy, thyroid, Graves' disease, committed dose calc. 111245
NO breath analyser, WO_3 based chemiresistive microsens. 87348
$^{99}Tc^m$-labelled radiopharmaceuticals, Indian adult, radiation dose estim. 111235
^{99m}Tc-RP128, rheumatoid arthritis inflammation imaging, dosimetry 76723

location anchoring *see dislocation pinning*

location arrays
GaAs/InP, heterostruct., coherent/incoherent relax., HREM 126111
GaSb/GaAs, heterostruct., coherent/incoherent relax., HREM 126111
Ge films on Si(111), surfactant-mediated epitaxy, disloc. array form. 124838
$(Zn_{0.97}Mn_{0.03}Te$-GaAs based QW heterostruct., opt. injection of spin-polarized carriers 91767

location density
300 mm single cryst. Si, growth technol. 68115
diamond films, (001) polycryst., vacancy defects eliminated by H and B ions bombard. *(English)* 124873
GaN film, charactn., ELO, MOCVD 79340
insulator crysts., radiation-induced vacancy aggregation and opt. and scintillation props. 132394
low dose SIMOX wafer, struct. charactn. *(Chinese)* 126319
quartz cryst., synthetic, hydrothermal growth, seed cryst. US machining 114214
quartz crysts., wedge-like, cryst. growth conditions, structural-morph. characts. 79159
semicond. material, etch pit dens., automated opt. syst. 89887
SOS, solid phase epitaxially regrown, oscillatory strain relax. 79301
steel, plastic deform., scanning SQUID microscopy 68486
AlGaAs/GaAs single jn. solar cells, Si substr., graded GeSi buffers 112918
$Al_xGa_{1-x}N$ films, MBE, struct. quality, ordering 68208
$Al_xGa_{1-x}N$, pendeo epitaxial growth/characterisation, SEM, TEM, XRD 79330
$Al_xGa_{1-x}N$ thin films, pendeo-epitaxial growth and charact. 79296
(Al)GaN:Si(Be)(Mg)(C) films, MBE, layer morph., doping efficiency 68207
$Al_{0.13}Ga_{0.87}N$:Si(Mg), MOCVD, structural props. 126057
AlGaN/AlN/GaN heterobipolar phototransistor, photoresponse, defect levels 82347
$Al_xGa_{1-x}N$/GaN epilayers, effects on UV LED chips 82413
AlGaN-GaN HEMTs, perform. limits 92415
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, elec. charactn. 103894
AlN epilayers, MBE growth, annealing, reactive N_2 kinetic energy 124835
AlN/sapphire thin films, SPE recrystn., GaN epitaxy substr. 125050
$Ba(Mg_{1/3}Ta_{2/3})O_3$-$BaSr_4Ta_4O_{15}$ ceramics, microstruct., microwave dielec. props. 116130
$Ca_3NbGa_3Si_2O_{14}$ cryst., growth, struct., piezoelec. props. 127180
CdSe QD on ZnBeSe/GaAs epilayers, MBE, struct./PL props. 103118
p-CdTe crysts., pulsed laser-stimulated SAWs 115303
CdZnTe/Si growth, morph./cryst. quality improvement, MBE 90341
GaAs cryst. annealing proc. using VB method, disloc. dens. anal. 115486
GaAs grown on Si, passiv. of disloc. by phosphine plasma exposure 69833
GaAs metamorphic HEMT, strain relax. and disloc. filtering 103895
GaInN/GaN epilayers, MOVPE, pit form., TEM, threading disloc. 79308
GaN MBE growth, init. stage, defect form. in films 90313
GaN MOCVD on Si(111), stress control and appl. to HFET 68288
GaN MOCVD, situ normal incidence reflect. 124912
GaN, RF plasma MBE growth, post growth thermal annealing 103239
GaN, air bridged lateral epitaxial growth, recomb. dyn. 80872
GaN epilayers, RF MBE growth, threading disloc. reduction, AlN multiple layers 90297
n-GaN epilayers, disloc. dens. eval., photoassisted anodic etching 81100
GaN epilayers, disloc. props. comparison, MOCVD, MBE grown films comparisons 91622
GaN epilayers, photoenhanced wet etching in KOH-based solns. 126365
GaN epitaxial layers, plasma assisted MBE, electron mobility optimisation 90298
GaN epitaxial layers, struct./elec./opt. props. 69519
GaN epitaxy, selective area growth techs., review 103046
GaN, excitonic polaritons, photoreflectance/PL spectra 80719
GaN, facet controlled ELO, disloc. dens. reduction, low press. MOVPE 79342
GaN film growth, elec./optical/struct. props., AlN interlayers, TEM 124889
GaN film, lateral epitaxy overgrowth/growth mechanism *(Chinese)* 90386
n-GaN films, deep levels/PPC studies, MOCVD 127909
GaN films, hydride VPE, time modulated growth, disloc. suppression 68246
GaN, geom. magnetoresist., vert./lateral cond. 80704
GaN heteroepitaxial lateral overgrowth/charactn., low disloc. dens., MOVPE growth, nucleation 79335
GaN homoepitaxy by MBE *(English)* 79263
GaN, pendeo epitaxial growth/characterisation, SEM, TEM, XRD 79330
GaN single cryst., press.-controlled soln. growth method 101161
GaN thin films, pendeo-epitaxial growth and charact. 79296
GaN wurtzite film on 6H-SiC, surface superstruct., PL props. 103040
GaN:Si epilayers, MOCVD, threading disloc., nonradiative nature, PL 80717
$GaN/Al_{0.08}Ga_{0.92}N$:Si MQW grown on $Al_{0.22}Ga_{0.78}N$, low disloc. dens. 79347
GaN/AlN, QDs, QWs, MBE, UV to red light emission 90334
GaN/AlN epilayers, ammonia gas source MBE growth/charactn., sapphire substr., excitons 90305

dislocation density continued
GaN/AlN/sapphire, high-temp. AlN interlayers, crit. thickness 69770
GaN/GaInN based high power blue violet LD, epitaxial overgrowth, disloc. dens. 93596
$GaN/LiGaO_2$ metal/semicond./metal UV photodetectors, MBE 109564
α-/β-GaN/SiC/Si, heteroepitaxial growth, PL, cryst. microstruct., residual stress 90331
GaN-based blue LD 105366
GaN-based high power blue-violet LD, ELO and charactn. 82634
GaNSi substrs., hydride VPE, carrier/disloc. conc., GaN/InGaN LED fab. 68244
GaSb:Te, single cryst. growth in space 90211
GeSi/Si partially relax. heterostruct., misfit disloc. 80802
HgCdTe, MWIR, MBE growth and device proc. on large area Si substrs. 90348
HgCdTe n-on-p-type structs., RIE induced p-to-n conversion, contactless jn. contrast 93370
HgCdTe(211) epilayers, MBE grown, cross-hatch morph. charactn. 90344
In(As)P:Zn, MOVPE based Zn diffusion, diffusion depth, hole conc. 127952
InAsP:Zn/InP(InGaAs) heterostruct., doping, photodiode appl. 115553
InGaAs detectors, extended-wavelength, grown by MOVPE 120797
InGaAs/GaAs partially relax. heterostruct., misfit disloc. 80802
InGaAs/GaAs relax. graded buffer layers, threading disloc. dens. 80803
InGaN MQW laser, differential gain charact. optim., tuning 117266
InGaN, UV LED, high power, MOVPE on patterned sapphire substr. 93424
InGaN/GaN, LD growth on sapphire, morph. evol., MOCVD, disloc. 82692
InGaN/GaN MQW heterostructs., MBE, struct./PL props. 124868
InGaN/GaN, QDs, QWs, MBE, UV to red light emission 90334
InGaN/GaN QW SEL, SiO_2/ZrO_2 multilayer mirrors 71810
InGaN/GaN based LEDs/MQW LD, disloc., external quantum efficiency 93404
InGaN-based LEDs, review 105029
InGaP/GaAs single jn. solar cells, Si substr., graded GeSi buffers 112918
InN films, MBE on InN buffer layers, disloc. densities, XRD 79229
InP:S cryst. growth, VGF tech. 114222
InP-Si direct wafer bonding, cryst. defects charactn. 115475
$Li_2B_4O_7$ single cryst. growth, SAW device fab. 90204
Si nanocrystals, band struct. alterations, size-confine. effects 125999
Si strained p/p$^+$ wafers, misfit disloc. interacts., XRD 69644
Si wafer disloc. dens. change during thermal proc., solar cells 91598
Si:Al polycryst., extended high temp. Al gettering, elec. props. 126261
p/p$^+$-Si:B highly doped substr. wafers, edge treatments and misfit disloc. nucleation 102960
SiC single crysts., defect anal., X-ray topography, sublimation growth 68102
SiGe bipolar transistors and p-i-n diodes for power switching 115883
SiGe buffer layers on Si(100), growth in situ low energy H plasma prep. 79255
SiGe films, high-quality strain-relax., MBE growth with low temp. Si buffer 68204
SiGe lin. graded buffer, UHV CVD growth and charactn. *(Chinese)* 79280
SiGe/Si relax. graded buffer layers, threading disloc. dens. 80803
$Si_{1-x}Ge_x/Si(100)$ heterostruct., struct. & stabil., MBE 101283
$Sr_3NbGa_3Si_2O_{14}$ cryst., growth, struct., piezoelec. props. 127180
$YBa_2Cu_3O_{7-\delta}$-$SrTiO_3$ epitaxial films, bolometer appls., low 1/f noise 71145
ZnO, plasma-assisted MBE on $Al_2O_3(0001)$ with ultrathin MgO buffer 68165
ZnSe layers on GaAs(001), threading disloc. removal 92089
ZnSe:Al single cryst., phys. vap. transport growth/doping 101165

dislocation dipoles
mixed mode I, II and III anal. of multiple cracks in plane anisotropic solids by BEM 68087
$Al_xGa_{1-x}N$/GaN HFET, nanoscale electronic props. 103897

dislocation energy
semicond. material, etch pit dens., automated opt. syst. 89887

dislocation etching
CdSe QD on ZnBeSe/GaAs epilayers, MBE, struct./PL props. 103118
GaAs conformal layers grown on Si, self-doping near seed/layer interface 103262
GaN MOCVD films on sapphire, opt. props. improvement in situ SiN treatment 127911
GaN epitaxial layers, plasma assisted MBE, electron mobility optimisation 90298
GaN films, MOCVD/MBE, high N_2 press. growth, defects 68294
GaN/GaInN based high power blue violet LD, epitaxial overgrowth, disloc. dens. 93596
GaN-based high power blue-violet LD, ELO and charactn. 82634
InP cryst., LEC growth, etch pit dens. 114221
InP:S cryst. growth, VGF tech. 114222
$[K_{1-x}(NH_4)_x]_2SO_4$, mixed crysts., disloc. etch pits 127202
$Li_2B_4O_7$ single cryst., Bridgman growth, struct./SAW props. 114215
$Li_2B_4O_7$ single cryst. growth, SAW device fab. 90204
Si, tri-cryst., characterisation, solar cell appls. 91597
Si:Ge cryst., lattice param., X-ray topography/chem. etching obs. 69480
SiC, 4H, gas phase epitaxial growth, micropipe closing, screw disloc., structural transform. 68361

dislocation loops
GaAs:Sb films, low temp. grown, struct. transforms. 68190
p-Si, annealed 1.5 MeV B implanted, defects 103248
Si, interstitial kinetics during surface oxid., disloc. loop layer effect 81079
Si, melting, heating rate depend., oxygen precip., disloc. loops, X-ray topography 102984
Si, trapping of Al by disloc. loops 81008
Si, ultra low energy implants, interstitial defects, TED 115509
Si:As, 2D amorphized, corner defect microstruct., stress effects 126084
Si:As(Ge), anom. P diffusion during postarsenic-implant. annealing 69823
Si:B RT LED, ULSI compatability 71611
n-Si:He epitaxial wafer, high energy He implant., bubble form., disloc. 69799
n-Si:He$^+$(111) epitaxial wafer, bubble form., high energy ion implant. dose rate depend. 91604

dislocation nucleation
300 mm wafers, mech. props., slip length simul. during thermal proc. 70239
IC thin-film interconnects, electromigration modeling, void nucleation 92103
quartz cryst., synthetic, hydrothermal growth, seed cryst. US machining 114214
Si disloc. modeling, semicond. devices manufacture appls. 80661
p/p$^+$-Si:B highly doped substr. wafers, edge treatments and misfit disloc. nucleation 102960
Si:B p/p$^+$ epitaxial layers, ion implant., misfit disloc. nucleation/glide, RTA 126280
SiC(0001) surface, vap. cryst. growth, micropipe form. 79194
ZnSe films, cathodolum., disloc. bundles anal. 103028

dislocation pile-ups
GaN epitaxial layers, lateral overgrowth, MOCVD, crystallographic tilt, mask material depend. 79333
InGaAs/(Al)GaAs, MBE on GaAs, strain relax., disloc. TEM obs. 68188

dislocation pile-ups continued
Si, tri-cryst., characterisation, solar cell appls. 91597
SiGe lin. graded buffer, UHV CVD growth and charactn. *(Chinese)* 79280
SiGe/Si MQW devices for Si microelectronics 86534
dislocation pinning
InGaAs/GaAs heterostruct., interfacial coherence, lateral In segreg. 126120
dislocation scattering
used for carrier scattering by dislocations
semiconds., carrier scatt. by disloc., review 69653
GaN MBE layers, highly resistive, elec. transport 91676
dislocation sources
CdSe self-assembled QD, form. mechanism 124936
dislocations
see also "dislocation ....."
see also disclinations; edge dislocations; grain boundaries; screw dislocations
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
diamond:H,N films, nanoscopic, near-field cathodolum. 116913
Gaussian beam irrad. laser shock phenom., mol. dyn. anal. *(Japanese)* 93928
III nitrides and UV detect. 109584
power semicond. device elec. failure localization, backside emission microscopy 70071
QW lasers, highly strained, disloc. generation, X-ray topography 71808
semicond. devices, disloc.-free fab., stress sing. params. *(Japanese)* 70132
Al(Ga)N, hexagonal/cubic heterostruct., strain relax., plasma assisted MBE 79257
AlGaN/GaN heterostruct., MBE layer limitations due to lateral inhomog., disloc. 103101
AlGaN/GaN heterostructs., surface morph. and disloc. electronic props. 69641
$Al_xGa_{1-x}P$/GaP multilayers, MOVPE, struct., Raman spectra 101386
Au/Ni/n-GaN Schottky contacts, disloc. effect on I-V charact. 69727
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_{10+\delta}$/Ag HTSC tapes, grain boundaries/defects, direct at. scale imaging 68418
BiPbSrCaCuO 2212 crysts., MgO doped, Pb substitution effects on J_c 81932
$CoSi_2$ film, induced mech. stress, Si substr., appl. to MOS technol. 126219
Cu(In,Ga)Se_2 thin film surface, microstructural props., TEMS, EDS 91718
GaAs epilayers, effect of disloc. form. during growth on struct. & PL 68177
GaAs/XP (X=Ga,In), wafer bonding, at. H surface cleaning 126389
GaInN, MQW, LED, MOCVD, PL 82427
GaN, MBE layer limitations due to lateral inhomog., disloc. 103101
GaN homo-jn. LEDs, MOCVD, multiple-pair buffer layer 71601
GaN optoelectronic devices, defect dens. reduction 91675
n-GaN photoelectrochemically etched surfaces, tree-like features, threading disloc., revelation 81103
GaN self organised nanostructures, RF MBE growth, XRD, TEM 90335
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
GaN/AlGaN/AlN, NH_3-MBE growth, HFET, 2DEG, sputter deposition 90307
GaN(0001), Ga-polar, morphology depend. growth kinetics 90352
p-GaSe single cryst., defect centers, annealing 91941
Ge/Si near-IR photodetector, growth & photoresponse spectrum 97231
Ge/Si(001) islands, UHV CVD, strain-driven alloying 68268
HgCdTe 2D array technol. in UK 97257
InGaAs/SiN_x/GaAs(111)B bridge layers LPE growth, circ. trench geom. optimisation 101444
InGaAsN/InP QW struct., CBE growth, NH_3 precursor 91942
InGaN thin films, MOVPE, In rich region form. at hexagonal pits, CL, SEM 124986
InGaN/GaN MQW, growth interruption, opt./struct. props. 91813
InGaN/GaN QW struct., RTA effects, MOCVD, phase separation, PL, disloc., strain relax. 91944
MgO/Fe(001)-based multilayers, growth, struct., electronic and mag. props. 124809
SIMOX wafers, interstitial-type {311} planar defects, photolum. anal. 80656
Si, disloc., cryst.-melt interface and melting, X-ray topography 68120
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
poly-Si layers, atmos. press. iodine vap. transport deposition 100067
Si, macroporous microchannel, cylindrical pores, XRD 69479
Si solar cell defect monitoring, scanning PL spectrosc. 100061
Si:Fe(Cu), gettering by disloc., cavities 80970
Si:H,Ni/SiO_2 SIMOX, H-implant.-induced nanocavities, Ni gettering 115529
Si:O, polycryst., EFG, deep level defects 91608
$(Si_m/Ge_n)_N$ step-graded short-period superlattices, solid source MBE 79250
SiC, 4H, p-n diodes, anom. forward voltage increase, cryst. defects influence 70009
4H-SiC epitaxial layers CVD growth, substr. surface prep. effects 69873
4H-SiC, opt. props., surface and pore morph. 103324
SiC, sublimation growth, disloc. constraint, etch back proc. 124794
$Si_{1-x}Ge_x$ films, CVD epitaxy, relax. mechanisms 79302
$Si_{0.75}Ge_{0.25}$/Si(001) step-by-step MBE growth, short-period superlattice buffer effects 90267
$Si_{1-x}Ge_x$/Si heterostruct., annealing *(English)* 91731
$SrTiO_3$ grain boundaries, Z-contrast STEM imaging 104299
$TiSi_2$ film, induced mech. stress, Si substr., appl. to MOS technol. 126219
$YBa_2Cu_3O_{7-\delta}$ HTS, grain microstruct. & growth, melt-texturing 104559
$YBa_2Cu_3O_{7-\delta}$ HTSC film, strain relax. obs. 70646
ZnO films, ECR-MBE on (0001) sapphire, struct. props. 79253
dispatching
see also goods dispatch data processing; goods distribution; load dispatching
ion implant. equipt., overall effectiveness, mfg. sci. anal. 115537
taxi dispatching mgt. via GPS 100493
urban centre district heating control/monitoring dispatching syst. 112285
disperse systems
see also aerogels; aerosols; Brownian motion; colloids; dust; emulsions; foams; fog; gels; polymer dispersed liquid crystals; powders; smoke; sols; suspensions
dyn. light scatt., fast multi-tau real-time software correlator 128621
falling raindrops, radar/scatt. params. 88152
turbid media particle size anal., single opt. fiber white light detect. 120939
dispersion (wave)
see also acoustic dispersion; optical dispersion
12 GHz satellite broadcasting wave, obs. of rain area motion 72311
40 GHz 30 km slant path radiowave propag. expt., high temporal-resoln. channel charact. 83319
bounded warm plasma waveguide, beam-plasma instabil. stabilization 128819
cavity-shielded infinitely thin meander line, stratified medium, mobile commun. appl. 94109
dispersion (wave) continued
circ. dielec. rod waveguide with periodic corrugations, dispersion charcts. anal. 117732
CPW, atten. charcts. and sensitivity anal. 80162
crossed-field coaxial resonator, relativistic electrons EM generation 115261
electrodynamic struct., anal. of irregular dispersion 72211
elevated-CPW struct. for high-speed digital interconnects 91324
EM scatt. wave, modified Root-MUSIC for freq. dispersion detect. 72235
EM wave polaris. coeffs. at cutoff point, mag. declination effects 83353
fast-wave modes on PC transm. lines of open and packaged types, dispersion charcts. 94103
gridding related dispersion effects in multiresolution time domain schemes 94100
gyroelectric circ. conducting waveguides, theory 83495
helical slow-wave struct., space-harmonic effects, equiv. cct. anal. 69460
high-power cylindrical microwave applicators, propag. modeling 102753
Ka-band pulsed propag. through rain-filled atmos. 105742
microstrip transm. lines, eigenmode anal. 83476
microwave power transm. in space plasma, three-wave coupling 123005
MSSW, dielec. substr./mag. loss influence on dispersion/props. 105699
multiple V-groove guide, dispersion 105835
multiport waveguide struct. anal., higher-order FDTD method, non-orthogonal curvilinear grids 105838
natural single-phase, unidirectional SAW transducers, coupled-mode eqns., hybrid FEM 116214
nonreciprocal ferrite image guide, effective permitt. method 91185
periodic stratified media with uniaxial bianisotropy, EM wave propag. 83190
periodic strip grating on grounded dielec. slab, LF dispersion features of complex mode 91200
plane periodic slot array 83740
rect. coaxial line, FT anal. 117742
RF oscill. generation by EM shock wave in coupled transm. lines with anom./normal dispersion 117722
ridge waveguide, FT anal. 117742
sing. waves in bounded chiroplasma 72343
slotline, space leakage of power, dispersion charcts., antenna appls. 94176
soliton syst. for trans-oceanic dist. transm. 85124
split cavity oscillator, three cavities, HF charact. *(Chinese)* 83493
urban areas base station spatiotemporal dispersion, multipath propag. model 83304
dispersion hardening
partial melted joint using off eutectic lead-free reflow solders, microstruct. and mech. props. 67643
Al-Fe-V-Si, rapid solidif. proc., cooling rates, particle sizes 68394
dispersion power, rotatory *see optical rotation*
dispersion relations
see also dispersion (wave); Kramers-Kronig relations; phonons; plasma instability; plasma waves; S-matrix theory
axial monotron with rippled wall resonator, 10.5 GHz, operation/efficiency 80589
bi-gyrotropic garnet waveguide magneto-optics 127855
conf., GDH sum rules and nucleon spin struct., Mainz, Germany (Jun. 2000) 100432
dielec.-loaded ridged helical groove slow-wave struct. for MM-wave TWT 80609
finite-height photonic cryst. waveguides design, light confine., dispersion rel 104735
ICF, laser propag. into thermonucl. plasma, solitons appls. 105771
ion laser, high-current, ion-acoustic instabil., lowest freq. mode, dispersion re 82455
ion ring, rot., self-trapping 110164
multilayer dielec. struct. diffr. grating, EM wave propag. 117704
periodic boundary guiding struct., modified Yee's cell for FDTD modelin 94107
plasma-filled dielec.-lined waveguide in mag. field, instabils. driven by intens beam 125651
Raman FEL, electrostatic wiggler and annular electron beam 105374
relativistic TWT slow wave struct., geom. params. *(Chinese)* 80612
SAWs in periodic electrode arrays, harmonic admitt. and dispersion eqns., theo rem 92724
sing. waves in bounded chiroplasma 72343
superlattices, quasi-localized states, opt. transits. 80835
tapered vane loaded broad-band gyro-TWT anal. 80611
third-order nonlin. media, modulated wave group deform. 105567
GaAsN/GaN QWs, envelope fn. calcs., excitons 91806
dispersions *see disperse systems*
dispersive channels
2D pilot-sym.-aided freq. offset tracking in orthogonal multicarrier wireless syst 120038
62.4 GHz LOS indoor channels, delay spread effects 85575
adaptive SS commun. over multipath dispersive channels 84900
aeronautical channel, differentially-encoded MPSK, optimum detect. 83827
alg. channel decomp. MUX in space-time 107660
BER upper bound for single user as fn. of interfering user's sig. strength 10757
blind multiuser interf. cancellation, max. likelihood approach 72364
blind source separation and sig. class. 107400
CDMA coded dispersive wireless channels, soft iter. multisensor multius detect. 84796
CDMA multi-carrier syst. with virtual carriers over dispersive channels, subspa based blind detector 107600
digital cellular radio, optimum combining diversity finite-length DFE 11996
DS-CDMA cellular systs. in freq.-selective multipath fading channel, SIR mea 85811
DS-CDMA coded systs., turbo multiuser detect., Gibbs sampling 107770
DS-CDMA semi-blind spatio-temporal channel estim. 74659
DS-CDMA sigs., blind source extraction 85882
DS-CDMA systs., code-timing acquisition 108597
DS-CDMA systs. uplink, multiple user max. likelihood code-timing acquisiti 85805
equalizers for sparse channels, perform. 107704
fading dispersive channels, low-complexity commun. bandwidth expansi 131055
FIR MMSE-DFE for multi-user commun. 107711
freq.-selective radio channels, params. meas. using power meas. 128771
guard seq. optim. for block transm. over lin. dispersive channels 73754
H_2/H_∞ mixed filtering design in multirate transmultiplexer systs., LMI approa 131025
IR wireless channel with dielec. specular contours, charactn. 75069
joint precoders and DFE optim. *(Chinese)* 107715

spersive channels continued
Ka-band pulsed propag. through rain-filled atmos. 105742
lin. precoded/coded OFDM for wireless channel fades 83815
MC-CDMA over dispersive channel, subspace based detect. 84782
MC-CDMA over multipath fading channel, perform. of freq.-time MMSE equalizer 107764
microcellular environ., simul. results of temporal and ang. spread charact. *(Chinese)* 128773
ML deterministic algm. for blind joint channel/data estim. with multiple antennas 130004
MLSE equalizer in time-dispersive channels based on adaptive channel estimator 108761
OFDM A-law companded syst., SER anal. 72734
OFDM based on multicarrier PLL, freq. offset tracking 106031
OFDM layered space-time coded wideband archit. for dispersive wireless links 128977
OFDM offset QAM pulse shaping systs., blind channel ident. 83800
office environ., 5.25 GHz OFDM expt. study 131084
optimum multiuser detect., semiblind demodulation 119216
PLL GFSK demodulator, perform. in multipath channel 108772
radio interf. autocompensator, multipath effects 85502
Rayleigh dispersive channel commun., matched filter bounds 119877
RMS delay spread estim. from freq.-domain level crossing rate 95738
small cell multipath environ., meas./predicted time dispersion/DOA comparison 117679
space-time struct. of diffused multipath channels 131094
Steiner design for capacity enhancement of freq. hopping SS wireless systs. 85686
T1 digital commun., transmit pulse shape, robust design 130176
TCM, iter. space-time detect. for broadband wireless channels 85522
TDMA-based hierarchical cellular systs., mobile speed estim. 108806
time-freq.-selective channels, multicarrier syst. 85718
UHF indoor radio channels, rms delay and coherence bandwidth 74617
UHF LOS/nLOS time dispersion meas. in indoor radio channel 83266
urban radio propag., diffuse scatt. model 94031
wideband multiple transmitter/multiple receiver systs., unsupervised proc. 107394

placement control
act. mag. bearing control systs., fund. props. anal., transfer fn. approach 92879
adaptive laminated struct., higher-order B-spline strip models 125129
liq. interf. refractometers, displacement control, induction sens. 86492
probabilistic FEM for reliab. of strain softening media 114171
stretching for next generation lithog. masks 103508
TbDyFe giant magnetostrictive actuator, finite element model *(Chinese)* 92871

placement measurement
3D displacement measuring moire interferometer 75864
blind pers. intell. guide-stick 111167
cantilever-based fiber Bragg grating sens., simultaneous displacement/temp. meas. 86592
capacitance displacement sens., digital synthesis technol. *(Chinese)* 86483
compact opt. encoder with micromachined photodetector 86973
deform. meas. tool, digital speckle correl. method, wavelet de-noise effects 121213
deformed specimen grating replication, situ moire interferometry meas. *(Chinese)* 75858
digital servo focus displacement sens. *(Chinese)* 109517
disconnected mech. devices, high precision azimuth displacement/sync. meas. *(Chinese)* 104839
distortion monitoring syst., opt. fiber Bragg grating sens.-based *(Japanese)* 86951
eddy current freq. output sens. for precision engng. 75458
elastic modulus distrib. reconstruction, 3-D displacement vector 110817
electrostatic micro actuator fab., p^+ Si cantilevers, opt. devices *(Korean)* 123707
FBG sens., displacement meas. 120854
FBG sens., simultaneous displacement and temp. meas. 120856
fiber Bragg grating, chirp effect, temp.-independent bend sens. *(Chinese)* 75595
fiber Bragg grating sens., simultaneous displacement/temp. meas. *(Chinese)* 131948
fiber Bragg gratings, pass. interrogation of low-finesse Fabry-Perot cavities 109610
fiber-optic extrinsic Fabry-Perot interferometer strain sens., three-wavelength digital phase demodulation 86586
flexible inductive transducer, mag. resist. influenced by variable overlap area 120759
flip-chip electronic packages, quantitat. strain anal. by phase-shifting moire interferometry 121232
freq.-modulated LD, photoelectromotive force effect, displacement meas. 121178
grating displacement sens. with lin. CCD array for grating line subdivision 121218
grating-based displacement micro-transducer 132069
harmonic distortion sine wave amplit. meas. error, laser interferometer *(Chinese)* 86986
holographic vibr. fringe pattern extraction, digital camera appl. 117533
Hore sens., shift meas. range scale-up, feedback servomechanism *(Chinese)* 109488
hybrid ESPI-FEM methods, mapping correl. algm., displacements meas. appls. 118319
image displacement computation, methods comparison 94480
instrumented Charpy impact testing, direct displacement meas. 90596
ion-exchanged integrated waveguide devices, appl. fields 127779
land mine detect., hybrid elastic & EM wave tech., GPR 76999
land mine detect., near-field beamforming array, elastic waves 77056
large displacement meas., single-grating double-image method *(Chinese)* 132173
large transient mech. displacements, opt. meas. method 97824
laser Doppler effect 117582
laser Doppler long. displacement meas., ref. opt. struct. *(Chinese)* 109977
laser interferometer for moving stage straightness meas. 75882
laser interferometric syst. 109985
laser probe, spline bouncing error, noncontact meas. tech. 117591
LD-SPM interferometer, photothermal wavelength modulation, displacement meas. *(Chinese)* 109987
LHC supercond. cryodipoles, opt. interferometric displacement sens. 97815
lin. displacement meas., optoelectronic installation 86967
lin. displacement sens., multifunctional µP-based converter *(Russian)* 86477
lin. variable differential transformers, DSP-based sig. conditioning 86489
magnetooptical meas. of mech. quantities 121183

displacement measurement continued
MEMS xylophone bar magnetometer, Michelson interferometer, mag. field induced displacement meas. 109801
metal capillary splice fiber-optic macro-bending sens. *(Korean)* 120847
micro-opt. sens. syst. develop., laser microinterferometer 116794
microaccelerometer, force based displacement meas. using AFM 81572
microoptical dist. sens., deep X-ray lithog. fab. 116765
microphone membrane deform. study, multiple-wavelength interferometry 127091
micropump dyn. meas. using fibre opt. based interferometer 78108
multi-DOF meas. syst. for milli-struct., diffr. grating, kinematic anal. 121222
multiple opt. feedback LD, self-mixing interf. effects *(Chinese)* 128304
opt. components surface roughness and micro-displacement, dual laser probe testing 93942
opt. fiber sens., meas. precision *(Chinese)* 97314
opt. triangulation displacement sens., averaging method, diffr. grating 75500
opto-MEMS sens. & switches, design & fab. bottlenecks 71382
packaging whole field displacement meas. tech. using speckle interferometry 113473
panoramic holographic interferometers, metrological charact. 128568
pattern slit diffr. meas., accuracy 117588
PCB microdrilling, cutting torque noncontact meas. method *(Japanese)* 91476
phase-shifting interferometric meas. using IR laser light *(Spanish)* 86961
photorefr. cryst. based holographic camera, interferometry appl. 93900
photothermal phase-modulating LD interferometer for obj. displacement meas. 86968
piezoceramic/Al laminated plates, vibr. characts. meas. at reson. freqs. 97853
piezoelec. ceramics displacement, bending deform. correction *(Korean)* 121190
piezoelec. tube, displacement meas., fiber optic interferometry 93059
PM lin. contactless displacement sens., differential transformer operation *(German)* 75404
portable soft tissue indentor, accuracy & reliab. testing 87320
reflective intens.-modulated fibre opt. sens., obliquity effect *(Chinese)* 120845
rem. sens. 2D displacement meas., Doppler effect *(Chinese)* 86474
respiration/heart beat meas., microwave displacement meter 122068
robot, analog data transm., plastic opt. fiber, bending loss compensation 131344
scanning nonlin. dielec. microscopy, higher-order meas., vert. resoln. 109931
self-mixing interferometry, FT method, displacement meas. 97833
semicond. laser, freq. modulation, interferometric displacement sens. 117595
sens. with nonsymmetrical double gratings 75448
small displacement meas. using homodyne polariz. laser interferometer 117579
small US vibr. detect. by polariz. self-modulated photorefr. crysts. 132175
source posn. determ. in 3D shearography, shadow Moire method 121212
stenosis, tissue vibr., in vivo US meas., case study 122015
structural syst. ident., strain and translational displacements meas. outputs 97854
surface texture measuring instrum., laser interferometer 121197
thick carbon fiber/PEEK composite laminates, single moire interferometric fringe pattern 125153
tissue mimicking phantom, axial strain estim. based on acoustic shear wave *(Chinese)* 76352
tuned cct. displacement sens., eddy current method *(German)* 75402
two-coord. slope test with fibre opt. sens., math. model 120861
ultra precision positioning apparatus using laser interferometer, feedback syst. 134098
US deform. sens. 99087
US transducers, capacitive micromachined, charact. in air using opt. meas. 111499
US transducers, capacitive micromachined, displacement meas. 111497
US transducers, capacitive micromachined, integrated opt. detect. method 111500
VCSEL/REPD, interferometric sens., displacement meas. 75443
virtual instrum. for displacement meas. with resistive transducers 120647
He-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
Ni-Span-C wire based large-scale displacement sens., magnetostriction/elastic waves effects *(Japanese)* 109965
PZT pyroelec. thick films, displacement sens., light-spot cursor 109572
Si MEMS elements testing, grating & holographic interferometry 70335
$Y_{1.8}Ba_{2.4}Cu_{3.4}O_x$ HTSC-PM bearing syst., 3D vibr. 71182

display devices
see also cathode-ray tube displays; electrochromic displays; electroluminescent displays; ferroelectric displays; field emission displays; flat panel displays; liquid crystal displays
augmented reality display, adaptive brightness control 97690
birefr. electro-mechano-opt. polymer balls, light modulating material 92943
contrast-detail charact. evals. 97632
develop. trends 121068
device research, conf., Denver CO, USA (June 2000) 67376
DMD device for high-defn. home entertainment 109847
DMD projection display chip, MEMS-based technol. 86861
emerging TV displays, image quality improvement 120522
glass as crit. material in displays develop. 86798
high-perform. displays, small spot contrast meas. 97657
HomeSet user interfaces design *(German)* 86876
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 113211
microcontact printed plastic ccts. for electronic paper 69337
microcontact printing for plastic electronics/fiber optics appls. 102876
microdisplays, contrast and colorimetry meas. vs. viewing angle 109849
multiprimary display, color conversion method using matrix switching 109892
nanotechnology for microsystems appls. 92491
oxyfluoride:Tm vitroceramics/glasses, opt. props., display apl. 116919
phosphor sci. & technol., conf., San Diego, USA (Nov. 1999) 113198
projection imaging syst., geometric rectification method *(Chinese)* 84123
pulsed laser ablation, microengineering appls. 128595
scanned lin. grating light valve projection syst. 86894
SID Internat. Symposium, San Jose, USA (May 1999) 78469
transmissive LCOS microdisplays, mass prod. 109851
ITO highly cond. thin films for display appls., deposition proc. 97622
$W/W_2N/WO$-based thin film CVD using volatile liq. precursors 90462
ZBLAN:Pr^{3+},Yb^{3+} glass, up-conversion 3D vol. display 121128

display instrumentation
see also aircraft displays; cathode-ray tube displays; colour displays; computer displays; display devices; head-up displays; helmet mounted displays; large screen displays; logic analysers; oscilloscopes; screens (display); three-dimensional displays
2.5-D video avatar, develop. 73201
3D high-resoln. non-glass display with head-tracking syst. *(Japanese)* 97591
3D image generation, reconfigurable CGH 121117
automobile inform.-display using plug and play computers 100306
automotive graphical displays, single chips *(Italian)* 89419

display instrumentation continued
automotive night vision technol., safety improvement appls. 134577
axial line scanning device, display/printing appls. 86863
biaxial MEMS-based scanner, microdisplay appls. 93207
contrast discrim., image quality metrics 75786
DICOM extensions for softcopy/hardcopy display consistency 109889
digital cinema and microdisplays, conf., Boston, MA, USA (Nov. 2000) 109846
digital display interface, opt. interconnection technol. 105033
dual-axis raster-scanning laser display, thermally actuated microprojector 93206
holographic portraiture, display techs. 82984
image texture, audification/sonification 106510
JPL digital tunable color filter and beam scanner 120137
MEMS-scanner-based microdisplays, microvision 97755
microencapsulated electrophoretic rewritable sheet 109859
microlens arrays, opt. versatility, commun., display and imaging appls. 104782
microstruct. plastic optics for display appls. 109860
MOEMS, micro-opto-electro-mech. systs., opt. sens./display/storage appls. 71360
NOVA 9000, surface movement radar display and proc. syst. for ATC 98932
optimal TV display format, develop. 94535
peripheral vision simul. testing, image discrim. 97649
pneumoconiosis, optimal scanning, display and segmentation of ILO X-ray image set 110980
projection TV display, micromirror array, FEM model 71393
retinal scanning display systs., MEMS opt. scanning devices 93205
see-through head mounted HOE display 132110
Soviet-designed NPPs, safety param. display systs. 112224
tomographic med. image viewing, presentation methods 76466
viewability & measurable characts. correl. 97656
viewpoint-depend. autostereoscopic 3D display method 129567
GaN:Zn blue powder phosphor for VFD/FED, synthesis, cathodolum. 109862
a-Si:H TFT pixel electrode ccts. for act.-matrix OLED 86867
display tubes, television *see television picture tubes*
disruptive voltage *see electric breakdown*
dissemination of information *see information dissemination*
dissipation (heat) *see cooling*
dissolution *see dissolving*
dissolving
ceramic thick film struct. microfabrication using colloidal suspens./photoresist masks 104221
conductive layers in LTCC ccts., assembly props. 78657
cyclic olefin polymer resists for 193 nm lithog. 103547
fluoropolymer resist props. for 157 nm UV lithog. 103649
liq. cryst. electron beam resists, spin coating, etch rate 92241
Maanshan NPP steam generator sludge, chem. cleaning proc. *(Chinese)* 123123
α-methylstyrene polymer-based 157 nm single-layer/bilayer resists 103652
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
polyimide film, photosensitive cpd., dielec. const. 90572
polyimide film, photosensitive cpd., hyperbranched PEI 90574
polyimide film, photosensitive insulator, lithographic props. 92219
resist materials, small line-edge roughness, nanolithography 92242
semicond. wafers, chem. mech. polishing 3D wafer scale hydrodynamic modeling 81087
steel, stainless, electrochem. QCM corros. sens. meas. 104432
Ag electrodes discharge in solid electrolyte batts., computer simul. 89039
ArF neg. resist, androsterone derivative with δ-hydroxy acid, comonomer struct., dissolution 103548
C_{60} derivatives, electron beam resists, systematic study, spin coating, derivative films 92239
C_{60}/C_{70} incorp. nanocomposite resist syst., nanolithography 92238
CO_2 dilated block copolymer templates, nanostructured materials, organometallic cpds. 90581
Cu, CMP in KIO_3-based slurries 92047
Cu electrodeposition/dissolution on tetrahedral amorph. C:N 90504
Cu/SnPb, interface react., XRD 90549
CuNi substr. surface/Pb-free solder interacts. 113582
GaAs corros./surface behavior in acidic solns. 69890
GaAs p/n structs., etching, galvanic effects anal. 92064
KrF resist develop., alkaline conc. var. effects on CD 103553
$Li_{0.04}NiO_2$ pos. electrode material, Li-ion batts. 123745
MnO_2-based alkaline cells, second electron discharge plateau anal. 99891
O_2, dissolved, screen-printed amperometric sens., continuously-powered 86705
Pb-free solder alloys, interfacial reacts. 115159
Pb-free soldered interconnections, board level reliab. 115152
Si etching, galvanic cell form., sens. fab., review 103304
Si nanopillars, 3D controlled size-reduction by photoelectrochem. etching 69985
n-Si rot. disk electrode, dissolution proc. in water/ethanol/HF solns. 92079
Si wafer, surface roughening due to Cu contamination prior to ultra-thin gate oxid. 126338
Si:H, ion implant., nanocavity form. and defect interacts. 80657
Si-glass MEMS micropackages, corros. resist., B doping/self-induced galvanic bias 78677
SiO_2 CZ crucible, dissolution rate by Si melt, opt. in-situ meas. 68121
Sn-Sb/Ni/Ag-Pd, surface mount solder joint, microstruct., shear strength *(Chinese)* 100606
$SrTiO_3$, single cryst. faceting, chem. etching, AFM 126354
Ta, CMP in KIO_3-based slurries 92047
Ti device fab., two-level electrochem. micromachining 116089
Ti/Ni/Ag thin-film metallizations in solder joints, dissolution, interfacial reacts. 101469
$V_3TiNi_{0.56}Hf_{0.24}$ alloy electrode, electrochem. behaviors during charge-discharge cycling 112764
distance learning
academe, long-term impact of internet 67431
academic libraries, rem. users, ref. assistance 130543
agent based education syst., cellular phone based 131298
agent-based pers. dist. learning syst. 108163
AIMS, learning/teaching support for WWW-based education 67437
asynchronous dist. learning, presentation semantic model 130948
ATM networks, videoconferencing syst. optimum design 96251
ATM-based multimedia commun. syst./dist. learning appl. 96285
biomedical engng. MSc, all-Ireland course 98116
broadband networks for dist. education and training 108012
collaborative learning support in Internet learning space 119609
conductive adhesives for packaging, Internet course, expt. seq. 113372
conferencing software for dist. education students links to faculty 113357
disability aids senior design projects, dist. learning 78508
dist. education and impact of technol. in Europe and Japan 124243
distributed learning environ., QoS, holistic view 67422
distance learning continued
distributed TV prod. for dist. education , Uni-TV project 130982
ecosystem anal., dist. learning via Internet and satellite downlink 130631
education via Internet *(Polish)* 85323
Electronic Chalk, Java-multimedia-table for classroom and teleteaching *(German)* 130939
electronic learning, market develop. and users' aims *(German)* 113309
electronic packaging syst. cost anal., Internet-based educ. mater. 113370
engng. education support 100473
FACILE project, networked facilitated open and dist. learning in continuing engng. education 113351
FirstClass computer conferencing syst. for dist. learning *(Italian)* 130904
flexible dist. education in Sweden, ICT, proposals for reforms 113292
gigabit Ethernet network, supporting multimedia commun. 85195
hypermedia classroom, dist. learning technols. *(Slovenian)* 130742
hypermedia interactive assisted learning 100468
intell. instrums. teaching, dist. learning via Internet 113368
intell. tutoring systs. for asynchronous dist. education 113310
interactive rem. instruction syst. for heterog. network environ., software arch 124272
Internet dist. education syst., university/indust. linkage 113382
Internet-based dist. learning using learning by doing paradigm 78525
internet-based learning environ., discount usability engng. 67430
IP satellite environ., QoS guarantee, CNIT-ASI project expt. experience 748
Java applet program MOS memory simul. for act. learning environ. on WW 125483
learning on demand, hybrid sync./asynchronous approach 78520
long-dist. education via multimedia-board, CSCW appl. 108439
lower secondary schools, ICT integrat., Slovak Republic 113301
Masters Degree programs, dist. learning via Internet 78527
med. dosimetrists, dist. learning by world wide web 98820
METID e-learning portal 124273
microelectronic systs. education. conf., Las Vegas, NV, USA (June 200 124190
microelectronics dist. education course, web-based learning approach 12695
microwave CAD education tool 67454
mixed sig. IC design via dist. learning, CAD and lab. dilemma 125619
mobile robots, teleoperations/rem. sens. DAQ *(German)* 120669
multimedia dist. learning on demand syst., IP network *(Chinese)* 119780
multimedia dist. learning systs. 67421
multimedia presentation syst., distributed environ., floor control mechanis 74439
multimedia tutorial authoring, adaptation for dist. learning 100475
NDT educ. improvements, North Central Collaboration efforts 113317
network courses, WWW technol. appls. *(Chinese)* 67414
networked tools in interactive learning, future approach 67443
networks for research and education, conf., Pontignano (Nov. 2000) 100443
on-demand viewing, video presentation design 109382
Online Distance Learning System supporting knowledge communities 11337
online education delivery, directory services, GESTALT example 67428
OZ, dist. learning environ. for computer sci. education 108341
post-graduate dist. engng. students, academic advising commun. 67435
professional develop. service delivery for health, education and welfare profe sionals, telemedicine 67424
radiology teaching, dist. learning in digital environ. 89609
real-time interactive tele-exercise classroom for computer exercises over Giga Network 100453
rem. BLDCM learning lab. 78513
RSVP Unibrowser for dist. learning using videostreaming and Web 119797
satellite commun. network *(Japanese)* 78496
segmentation scheme for continuous color images 84349
semantic reliable multicast archit. for dist. learning 74406
SimulNet dist. teaching syst., Java based 78519
SimulNet educational platform, stds.-driven E-learning 78529
stereo act. vision interface, act. controlled teleconferencing syst. 118419
student assess., coursework assignment using interactive indiv. questions 674
student receptivity, effect of technol., reputation, constraints and learning prefe ences 67415
surgeon training via video conferencing and Internet 119769
sync. switching cct. education, computer aided via networking *(Polish)* 1242
syst. develop. in Ternopil Academy of Nat. Economy's Inst. of Computer Inf mation Technologies 100479
TCP/IP-based multimedia appls./services over satellite links, ASI/CNIT proje experience 85376
tele-education, face location via subregion color histograms 84530
tele-education support syst., movement recogn. of lecturer 84531
tele-educational multimedia package for teaching/modelling of digital fiber o networks 100476
tele-learning syst. design using GA 89648
tele-training methodologies develop. using Internet technols. 78492
telecomms. company, country-wide, continuous education 113380
telemedicine for dist. education 124241
telemedicine systs., multimedia DP and transm. *(Polish)* 88025
teleteaching and teleconferencing codec, IP and ATM networks 108390
teleteaching in IS, seminar-like teaching efforts *(German)* 119767
teleteaching syst., image preprocessing for content-based image coding 9525
Ukrainian telematics-based education overview 113299
video proc. and multimedia commun., conf., Zadar, Croatia (June 2001) 1132
video prod. for dist. education 109386
video streaming, education appls. 100459
video terminals for dist. learning 85365
Virtual Classroom, Internet technol. based course delivery 108106
virtual school based learning environ. creation, Finland 113293
VLSI design education, synchronized streaming media appl., Internet in re learning 124268
Web based dist. learning/teaching using DVD and Internet 109364
Web based e-educational environ. using Java technol. 100469
Web mining 89619
web-based dist. educational initiatives, metadata models 78504
Web-based dist. instruction eval. model 78516
Web-based interactive e-learning software tool for power engng. 124274
web-based microelectronics lab. within EDIT Distance Learning Network, pi implement. 124255
Web-based teaching/learning tool for engng. students 78536
Web-based training, desktop videoconferencing 113355
distance measurement
see also laser ranging
3D indust. parts location, stereo vision anal. *(Japanese)* 94624
3D mouse using US dist. meas. with AGC, design 76979

nce measurement continued
D opt. reconstruction using CMOS array of photodiodes with electronic proc. 120897
D ranging airborne US syst., composite algm. 99071
D ultrasound, vitro meas. accuracy 98271
4 GHz side-looking radar for vehicular appls. 109288
bsol. dist. meas. with fibre optic interferometer *(German)* 75885
ccurate obj. reconstruction from partial shapes for virtual worlds 84104
ircraft range estim., angle target tracking IR sens. 133220
ATRV-Jr unicycle robot, localisation in nonsmooth environ. 97835
utomotive dist. from ground meas., US sens., smart car 113110
utonomous load haul and dump truck, navig. syst. 109989
utonomous mobile robots, environ. map building, US sens. sweeping syst. 109973
utonomous mobile robots, map building, probabilistic and count methods 75871
utonomous mobile robots, self-localization, act. omni-directional range sens. syst. 97837
ar accident meas., scene images from digital camera 109975
ar-like vehicles, enhanced localization, ABS sens. and GPS data fusion 97836
ellular mobile station location estim. accuracy 97017
ellular radio positioning systs. in urban environ. 131134
iv. engng. machine localization, laser theodolite/odometer 97841
olor scannerless range imaging syst. 86242
ompact 3D profilometer with grazing incidence diffr. optics 83027
eep space network ranging syst., use of DSP technol. 133267
ense 3D surface acquisition, struct. light appl. 89908
igital phase-tracking and measuring loop for dist. meas., perform. anal. *(Chinese)* 125271
Doppler-range satellite positioning algm., geometric dilution of precision 97034
ddy-current sens., improving nonlin. response, lin. source separation 120753
ibre optic probe for simultaneous dist./vel. determ. 97300
FIDO rover, state estim. and vehicle localization, sens. fusion framework 86498
lying robot navig. using insect-inspired visual odometer 86972
lying target, dist. and attitude meas., opt. imager 109656
M/CW radars, ranging algm. 99171
FMCW radar, beat sig., spectrum correl., dist. meas. 109290
GMR sens. for contactless posn. detect., automotive appl. 75467
GPS hand-held receiver for pedestrian walking dist. meas. 132158
andoff algm., perform. anal. using dist. and RSSI meas. 108765
ead disk spacing var. meas. under vibr. conditions, real-time method 121182
ead-disk spacing meas., opt. interferometry, error anal. 92812
Hyperion robotics project, sun-sync. navig. 131970
IDMaps, global Internet host dist. estim. service 130815
ntegrated navig. systs., interval and fuzzy tech. appl. 130084
nternet mapping, dist. estim., alg. approach 119743
IR dist. sens., noise added theory based, lin. 109573
IR laser light interferometric dist. meas. techs. *(Spanish)* 86960
ter. closest point algm. 84214
Ka-band dist. sens. 75837
laser guided newsprint rolls loading syst. in ships 121210
laser material proc., focal posn. monitoring syst. 121211
laser range-finding by phase-shift meas. 109995
meas. redundancy effect 131789
microcontroller based instrums., calib. method 120625
microoptical dist. sens., deep X-ray lithog. fab. 116765
microwave radar, dist. meas., six-port error propag. 86214
mobile robot, US dist. meas. tech. 75236
mobile robot 3D struct. estim. and planning, vision and range fusion 86605
mobile robot dead-reckoning, precision-calibrated fiber optic gyroscope, sens. fusion 109593
mobile robot guaranteed 3D localization 109972
mobile robot localisation, Voronoi diags. correl. 97842
mobile robot obstacle avoidance, US sens. crosstalk, coded sigs. 109981
mobile robot positioning, small-sized solid-state accelerometer 75893
multiple-wavelength interferometry, 3D absol. dist. meas. *(German)* 75884
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
night-vision device-rangefinder based on biplanar direct-transfer image-converter tube 131980
noncontact fiber-optic dist. gauge, miniature 86581
normal incidence pol. interferometry for flying height and head-disk spacing meas. 121220
optimal handoff control incorporating delay 85789
param. separation in sens. through sig. proc. *(German)* 75401
PARTNER human-robot interface syst., adaptive annotation fn. 97838
pass. EM-acoustic detect. and ranging, data flow deciphering 130151
PC-controlled non-incremental dist. meter, comb spectrum/FM CW interferometer 121184
photoelectronic mixing device, opt. level gauging & 3D-imaging 120913
planar spiral-type microelectromagnetic dist. sens. develop. *(Japanese)* 97811
pose estim. for robotic control with 3D range data 107270
power overhead lines uprating, Israel Electric Corporation 123030
pulsed microwave radar sens., low-cost baseband, meas. appls. 109289
pulsed-Doppler radar, closely spaced airborne objs. range determ. 120409
range meas. by phases in noisy circs., de-ambiguity problem *(Chinese)* 121188
rangefinding syst. using correl. image sens. 97393
robot localization/tracking, US sens., interval anal. *(French)* 75861
robot tour guide, GPS-based localization, error-robust 97037
segmentation and range sens. using moving-aperture lens 106908
self-referenced hand-held range sens. 86643
SEM microrobot-based micromanipulation cell 81562
sonar occupancy grid constr., uncertainty method comparison 86253
sonar ranging, boundary location using Hough transform 109307
stereo vision, enhanced, using free-form surface mirrors 84336
stroboscopic stereo rangefinder 84209
twisted nematic LCD cell, cell gap meas. 82238
underwater EM pass. ranging method *(Chinese)* 72326
US surface profile determ. by spatial voting, map building 107228
UWB for navig. and commun. 120490
XIMIT, X-ray migration meas. of hip socket implants using implant models and image templates 76711

tillation
see also isotope separation
adiabatic/diabatic binary distillation, exergy simul., optimisation 124146
column for teaching/research, instrumentation 120666
Jordanian solar energy systs. eval. using fuzzy sets prog. 99594
power-generating coals, chem. fractionation, fouling props. estim. 99459

distortion, electric *see electric distortion*
distortion measurement, electric *see electric distortion measurement*
distributed algorithms
see also parallel algorithms
act. networks, flow control optim. *(Chinese)* 95946
ad hoc wireless networks, distributed fair queueing, self-coordinating approach 131120
ad hoc wireless networks, dominating-set-based routing scheme 119430
ad hoc wireless networks, topol. discovery using mobile agents 74539
adaptive early congestion notification marking, time scale decomp. 130702
adaptive fault-tolerant routing in star networks 108243
admission control for anycast flows with QoS requirements 74249
aggregate QoS enhancement through alternate routing 74039
asynchronous Byzantine agreement using cryptography 94380
best path routing for multiple QoS requirements, randomized algm. 85069
CDMA multipath systs., power control/transmit diversity 85799
cellular radio, distributed power control algms. 74736
cellular radio systs., distributed power control algm. 96584
clustering in mobile ad hoc networks, mobility based metric 74240
computer networks, delay-bounded multicast trees 107943
data allocation algms. for distributed video servers 131764
DCLC-DSF, distributed delay-constrained least-cost unicast routing heuristic *(Chinese)* 74046
delay-bounded constraint multicast routing, ant algm. *(Chinese)* 119400
delay-constrained least-cost multicast routing, distributed dyn. heuristic 85386
delay-constrained least-cost unicast routing, distributed heuristic algm. 95982
deterministic radio broadcasting 108523
disconnected ad-hoc wireless networks, message transm. to mobile users 74376
dyn. clustering algm. for ad-hoc networks, design and perform. 85234
dyn. distributed routing algm. on telecomm. networks 95981
dyn. routing using ant algm. for telecomm. networks 107968
Ethernet, real-time traffic, distributed backoff algm. 96128
game-theoretic distributed algms., routing into two parallel links 113865
image compression, distributed algorithm based 2D inverse DCT *(Chinese)* 118512
image rot. using parallel VM, implement. 118477
job selection/location policies 130713
Kalman filtering, distributed state estim. struct. *(English)* 118977
LEO satellite networks, QoS-based routing 96624
lightweight probabilistic broadcast 107924
local coteries, efficient constr. method 107636
mammogram, digital, microcalcification detect., GA 76507
max.-likelihood decoding, quantum factor graphs 117994
Mixed Power Control with Directed Assignment for interf. reduction in channelized wireless systs. 85644
mobile cellular networks, influence-based channel reservation 131198
motion estim. and segmentation using GA 84192
multicast routing algm. based on delay-bounded *(Chinese)* 74030
multicast routing in point-to-point networks 107991
multicast transms., cost sharing 74013
multihop wireless ad hoc networks, distributed topol. control for power efficient operation 131048
multihop wireless networks, new model for packet scheduling 74853
multirate multicast sessions, optim. based rate control 119114
Neko environ. for simulating/prototyping distributed algms. 107804
OBP satellites, broadcast congestion control 109015
opt. mesh networks protection/restoration, tree-based algm. 131444
optimal allocation of electronic content 120575
optimal protocol, maxmin rate allocation, convergence order theory 119350
parallel packet switch with bufferless input DEMUX, stabil. anal. 130233
power-aware connected dominating sets for efficient routing in ad hoc wireless networks 131100
priority based resource allocation strategy for distributed computing networks 119726
PRN, multihop, interf.-free time-freq. broadcast scheduling 85481
QoS routing 84817
QoS-constrained routing, smart forwarding tech. 74037
QoS-sensitive wireless mobile networks, distributed call admission control, perform. eval. 131201
rate control algm. for max total user utility 119144
real-time Internet traffic, variable rate model with QoS guarantees 108339
real-time multi-spectral image fusion 129949
robust info. network mgt. syst., graph theoretical study 74127
routing for dyn. multicasting with advance resource reservation inform. 107962
scalable gossiping, distributed algm. for high-throughput 108301
VIOS-III, distributed and parallel image proc. environ. *(Japanese)* 84086
W-CDMA cellular mobile systs., distributed power control algm. 96585
WDM networks, adaptive distributed wavelength routing algm. 74989
wireless access networks, load-balancing routing 119428
wireless networks, distributed channel probing scheme 119898
wireless packet networks, service differentiation support using distributed control 131162
WLAN, distributed fair scheduling 73994

distributed amplifiers
see also travelling wave amplifiers
20 GHz phased array antenna for GEO satellite commun. 105947
base station amp., lin. optim. 101791
class-E power amps., transm. line load network topol. and design 80263
CMOS reverse interconnect scaling in multi-GHz amp. and oscillator design 115015
dual-fed distributed power amp., FET cct. design 68593
LDMOS distributed RF power amp., base station 101779
lumped and distributed element distributed amps., comparison 68616
microwave planar array/array fed reflector 83720
multioctave amp., cascaded reactively terminated single-stage distributed, EW syst. 91238
opt. receiver distributed preamplifiers, noise anal. 120174
PHEMT MMIC nonuniform distributed power amps., design methodology 91384
PHEMT MMIC power amps., EW appls. 125762
AlGaN/GaN HEMT MMICs on SiC substrs., high-power broadband amps. 91383
GaAs HEMT MMIC UWB amp. 69187
GaAs MESFET MMIC adaptive transversal preamplifier for high speed lightwave systs. 91361
GaAs PHEMT MMIC amp. 69176
GaAs PHEMT distrib. amp. ICs for 40 Gbit/s high output voltage driver modules 125774
GaAs monolithic/hybrid integrated photoreceivers, 40 Gbit/s commun. 96708

distributed amplifiers continued
InP HEMT MMIC UWB amp. 69187
InP HEMT preamplifier, flat transimpedance gain, high-speed fiber optic commun. syst. 125240

distributed arithmetic
1D DCT/DST generalized archit. 90923
1D DHT, distributed arith. array 102227
2D DCT fast algm. via distributed arith. optim. 95274
2D DWT archit., resource cycling, parallel distributed arith. 102244
coarse-grained dyn. reconfigurable hardware archit. for wireless commun. 96529
DCT implement. with distributed arith. 118594
DCT video compression appls., prog. devices, distributed arith. *(Spanish)* 118640
fast Hadamard transform, math. model and FPGA implement. 90846
hardwired distributed arith. compatible DCT/IDCT archit., image compression 95124
IIR filter, high-speed multiplier-free realization, ROMs, elevated sig. rate 80089
LMS adaptive filters using distributed arith. *(Japanese)* 80086
LMS multiplierless adaptive filters using distributed arith., high-perform. VLSI archit. 84764
real-time image proc., convolution operation implemented in FPGA 129586
seq. datapath comp. verification, arith. transform 125396

distributed Bragg reflector lasers
1.5 μm wavelength distributed reflector lasers with vert. grating 82651
1.5-μm three-sect. DBR lasers, transient current control, tuning time reduction 105437
act. cavity VCSEL eigenmodes, optimized waist Gauss-Laguerre modes 128344
arrayed waveguide grating wavelength tuned beam steerers 82746
curved mirror deep-etched two-groove DBR lasers 71792
DWDM low cost devices 131585
elastomeric molding/stamping near-field photolithographic methods, working plastic laser fab. 78600
elec.-pumped directly-modulated tunable VCSEL, metro DWDM appls. 117397
fiber grating laser, freq. stabilization using interferometric tech. 105199
fully functional wavelength selectable DWDM transmitter 120384
grating coupler sampled reflector tunable DBR lasers 117400
grating losses/coupling coeffs. determ., self-consistent method 105286
high-speed dyn. wavelength routing SG-DBR laser, wavelength switching 120313
high-speed SG-DBR laser, fast wavelength switching, Fabry-Perot interferometeric meas. 105553
λ/4 phase-shifted circ. grating DBR/DFB lasers, threshold anal. 93606
large-area single-mode VCSELs, self-aligned surface relief 128249
modelocked DBR LD FWM conversion efficiency 109149
monolithic mode-locked LD for high-speed opt. commun., freq. control 117373
monolithically integrated EA-modulated tunable DBR lasers, HF elec. crosstalk 127832
multi-sect. laser in MM-wave fibre-wireless uplink, dyn. range charactn. 74935
multisection electro-absorpt. DBR laser, accelerated aging modelling 128269
near field data storage micro-aperture SEL, near-field charactn. 117208
planar circ. grating DFB/DBR lasers, relax. oscills. anal. 93605
planar circ.-grating DBR laser, nonlin. operation 71791
proton implanted VCSEL, ESD pulse sensitivity 128232
QW microcavity laser, spontaneous emission *(Chinese)* 93577
sampled grating DBR laser, opt. freq. synthesis over >1 THz 71914
sampled grating DBR multiwavelength laser arrays for WDM appls. 105342
sampled grating DBR tunable laser 117399
selectively-oxidized VCSELs, hybrid ion-implanted, high-power single mode operation 117188
semicond. lasers, pseudorandom wavelength hopping, sync. 93613
semicond. lasers, pulsed subharmonic opt. injection, sig. generation at MM-wave repetition rates 105335
semicond. planar microcavity, DBR effects *(Chinese)* 105383
tunable lasers for opt. networking systs., develop. 128383
ultrashort in-plane semicond. microlasers, high reflectivity microstruct. mirrors 117325
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
VCSELs, guided-mode reson. filters, single-mode operation control 105325
widely tunable DBR semicond. laser, dyn. holographically-written grating mirror 105435
AlAs/GaAs DBR, doping-induced loss, laser appl. 93616
AlGaAs high-dens. integrated VCSEL/PD QW laser arrays, uniform power distribs. 117189
AlGaAs/GaAs DBR laser mirror, RIE 128356
AlGaInAs/InP Bragg mirror VCSEL, design/perform. 128332
AlGaInAs-InP high power tapered 1.55 μm DBR lasers 82669
AlGaInN VCSEL, fab., ICP etching, dielec. mirrors 81099
AlGaInP based vis. red VCSEL, develop. & perform. 71837
AlGaN/GaN DBRs, stress engng. during MOCVD 68214
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
GaAlAs/GaAs temp. insensitive micromachined vert. cavity wavelength filter 82293
GaAlAs-GaAs 4×4 multiple wavelength micromachined filter array 93191
GaAlAs-GaAs micromachined DBR vert. cavity wavelength filter, temp. insensitive 85970
GaAs coupled-resonator VCSEL QW DBR laser, mW single-mode power 117187
GaAs/AlGaAs single-mode VCSEL growth, real-time opt. control 71840
n-GaAs-AlAs DBR laser mirrors, elec. noise characterisation 71799
GaAs-AlAs LW VCSELs 117296
GaAs-GaAlAs microaperture SEL, near-field opt. data storage appl. 128245
GaAsSb QW LW lasers, MOVPE/MBE growth 117203
GaInAs single QD edge-emitting microlasers 128239
GaInAs/AlGaAs QD edge-emitting laser, highly reflecting Bragg mirrors, output charact. 71806
GaInAs/AlGaAs ultrashort QD microlasers, fab., CW operation 105281
GaInAsP VCSEL, design and fab. 117279
GaInAsP distrib.-reflector lasers with vert. aligned grating, RIE 117214
GaInAsP/BCB DBR laser, fab., single-mode operation 93583
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photonic integrat. 105311
GaInAsP-InP complex coupled DFB lasers, FIB technol. based 128240
GaInNAs LW MQW DBR VCSELs 117299
GaInP/AlGaInP/AlGaAs/AlAs distrib. Bragg reflector VCSELs, props. 128331
GaN/(Al,Ga)N heterostruct., reactive MBE on SiC(0001) 124869
GaP/AlAs heterostruct. for DBR appls., very low temp. MBE growth 101203
InGaAlP-based low-threshold high-temp. proton-implanted red-emitting VCSELs 128248

distributed Bragg reflector lasers continued
InGaAs strained QWs, RTA selective QW disordering, monolithic integrat 126130
InGaAs/GaAs QD reson.-cavity light-emitting devices 128277
InGaAs/InGaAsP second-order DFB/DBR laser, surface-emitting single-lob operation 82627
InGaAsN QW VCSEL on GaAs substr., 1.3 μm, perform. characts. 93671
InGaAsN-GaAs LW edge emitting lasers, low threshold current dens. 117298
InGaAsP/InP-GaAs/AlAs DBRs with BH VCSELs, output charact. 105336
InGaN MQW laser, deeply etched air/nitride DBR, single mode oper. 105348
InP based electroabsorption-modulated tunable DBR laser transmitter, long-hau commun. appls. 131371
InP lasers, nanoscale patterning, FIB enhanced etching 128305
InP monolithic VCSEL with air-gap Bragg reflectors, room-temp. operatio 82599
InP/InGaAs/InP photonic waveguide structs., Br_2-N_2 reactive beam etchin 116728
InP-InGaAsP MQW DBR vert. cavity SOAs 105319
InP-InGaAsP VCSEL arrays with DBR, fab., WDM appls. 128225
InP-based BH VCSELs, 1.55 μm, low threshold current 105344
InP-lattice-matched 1.55 μm VCSEL, AlGaAsSb-AlAsSb DBR mirrors 12823
SiO_2/TiO_2 DBRs for VCSELs, dry and wet etch procs. for patterning 93697
ZnCdMgSe/InP QW, vis. LED, DBR 103135
ZnCdMgSe-based DBRs, high reflectivity symm. strained, MBE, charactn 105384
ZnCdSe/ZnMgSe, homoepitaxial distrib. Bragg structs., MBE on ZnSe substra 105297
ZnSe/ZnMgBeSe, homoepitaxial distrib. Bragg structs., MBE on ZnSe substra 105297

distributed control
see also decentralised control
110 kV substation control/protection modernisation projects, Romania 11270
250 MW TPP GKS9000 DCS *(Chinese)* 77732
300 mm wafer fab controllers design, CPN-based approach 89948
850 MW pumped storage power plant control/maint. integrat. project 112363
adaptive beam-steering/adaptive modulation-assisted DCA algms., comparisc 73587
adaptive QoS provisioning distributed call admission control 131275
AIN, decentralised databases, SCP archit. using multicasting access 130934
all-opt. networks, efficient wavelength reservation protocol for lightpath estat lishment 74990
all-opt. networks, forward reservation protocol with immediate unlock for dy lightpath establishment 95941
archit. supporting loose/close cooperation of distributed autonomous syst 74291
asynchronous distrib. control synthesis and optim., transforms. 125353
ATM networks, distributed robust traffic controller 130202
automatically switched transport networks, generalized MPLS-based distribute control 107915
best-effort routers, distributed control/resource marking 74031
BWR NPP control loop, implement. and testing *(Chinese)* 112222
CAN, at. multicast prog. 74188
CDMA syst. mobile transm. power optimal control 131297
cellular networks, prioritized handoff local-packing distributed DCA 74680
cellular wireless systs., utility-based power control 120017
channel capacity region per unit cost, radio resources pricing for utility ma imization 128950
Clos networks, 3-stage, distributed call admission control 84839
coal-fined plant, elec. syst. monitoring and control, DCS *(Chinese)* 99542
concentrating solar power plant, DCS 123267
country-wide elec. generation and distrib. syst., DCS, real-time video 133520
CPU-less robotics, distributed control of biomorphs 91501
CS-PRMA/AP, carrier sense PRMA with adaptive permission 95912
CSC2000 substation automation system, bus-bar differential protection, distri uted control unit, clock sync. *(Chinese)* 99857
DS-CDMA nonreal time data, power control/intracell scheduling 131149
EPICS, HLS control syst. *(Chinese)* 110072
EPICS role in DAQ and beamline control 109456
extrusion proc., decentralised DCS, OO infrastructure 124437
field bus distributed rem. control protocol, bidirectional commun. 86416
Foundation Fieldbus, open archit. for inform. integrat. 86422
gas/oil fired generating unit efficiency improvement, perform. monitoring 885
HEV drivetrain testbed, DCS, ECU code generation 124010
IEEE 802.11 WLAN, distributed mechanism for power saving 107938
intell. components/instrums. for control, conf., Buenos Aires, Argentina (Se 2000) 113254
intell. hierarchical syst., heat metering and control 122825
interf. suppression in distributed intell. control syst. 78736
Internet scalable mgt., navig. pattern 130558
LEO satellite channel with high dyn., generic multistep power control alg 131309
mechatronics student expts., DCS monitoring via Internet 97150
mfg. procs. control using distributed intell. 113805
mobile packet radio, service differentiation, distributed control algms. 12002
mobile wireless environ., predictive mobility support for QoS provisioni 131154
modified distributed CAC scheme and perform. 74714
multi-cell power converter distributed control strategy 88824
multicell wireless data network, pricing/power control 131151
multihop wireless ad hoc networks, distributed topol. control for power effici operation 131048
multipath packet forwarding, stable load control with load prediction 10780
multirobot syst., multi-agent distributed control archit. *(Chinese)* 96078
open archit. microcontroller based distributed meas. syst. and control syst., au matic program generation 75375
PLC, FieldBus modules *(German)* 109448
PROCONTROL P distributed control system for power plants *(Chinese)* 777
pulp/paper mill combined cycle CHP plant, steam turbine-generator add 124155
QoS provisioning for wireless networks distributed admission control, DCA p form. bounding 74729
QoS-sensitive wireless mobile networks, adaptive distributed call admission co trol 85751
robots, small, min.-resource distributed navig./mapping 121177
Siemens power plant DCS, redundant tech., teleservice *(Chinese)* 77734
smart transducers interface design, time triggered archit. 131824
substation automation syst., serial commun. delay compensation *(Chine* 112714
substations *(Chinese)* 134309

ributed control continued
voice synthesis module based on CAN bus *(Chinese)* 118157
VP restoration, novel rerouting algm. 73767
WDM wavelength routed networks, dyn. lightpath establishment 120209
wedge software for linking field devices to PC, PLC, and DCS 131825
wind tunnel, injector powered transonic, PID controller 133211
wind-diesel power syst. distributed intell. load control scheme 99590
wireless packet networks, service differentiation support using distributed control 131162
WorldFIP bus arbitrator table config., real-time engng. appls. 119660

ributed databases
see also database management systems; database theory; distributed processing; operating systems (computers); parallel databases; replicated databases
3D digital traditional Japanese crafting syst., modernisation 108158
3G mobile systs., user-related data transfer schemes 85839
act. yellow pages, pipelined resource mgt. archit. 119699
AIN, decentralised databases, SCP archit. using multicasting access 130934
bandwidth-conserving cache validation schemes in mobile database syst. 108134
cellular mobile networks, indiv. location area mgt. 108901
clinical PACS, research and teaching access 89608
data broadcast, power efficient, hybrid index tech. 96222
data distrib. mgt. strategies, perform. comparison 125389
denial of service attacks, proactive detect. using MIB traffic variables 130565
Domain Name System security extensions, public key validation 94343
gastroenterology patient record consultation, MPEG-4 scene comp. 88015
group commun., commercial Java implement. using reliable multicast 130752
HERA-B database services, detector config., calib. 132432
hierarchy-based access control 129276
IBMAS (Internet-Based Medical Archive System) 111302
Kansei retrieval syst. for distributed multimedia databases, design 96281
KLOE, DAQ syst. archit., mega-vol. data handling 87238
location mgt. for wireless networks, perform. anal. 97031
media server mgt. 120563
message efficient reliable broadcast algm. 95959
mobile ad-hoc networks, real-time database transactions mgt., power-aware tech. 130889
mobile computing, transaction model, data availability 119544
mobile data broadcast environ., broadcasted/updated cycles concurrency control tech. 130888
mobile database systs., secure access schemes 130800
mobile networks, optimal distributed location mgt. 86268
MPEG-7 SpokenContent representation 84040
network exam. syst. design based on BWD *(Chinese)* 119485
network storage, WWW-based mgt., rem. control 74130
oncology data network develop. in Germany 111257
OO feature-based model for land class. *(Chinese)* 94920
PACS, distributed archit., study status consistency and duplicate-read protection mechanism 98857
PACS archits., centralized, distributed and autonomous, perform. comparison 98860
perceived consistency, QoS guarantees 96264
storage area networks appls. 119592
transaction proc. in mobile, multi-database environ. 130733
WAN environ., database migration 96241
Web appls., content-aware request proc., STREAMS-based TCP/IP implement., customized module library 96136
Web-based acquisition, storage & retrieval of biomed. sigs. 88024

tributed decision making
decentralized quickest change detect. 73566
ground surveillance sens. self-organized task assignment 88211
IN, service interacts., dyn. detect. approaches 74424
sig. detect., finite-level quantizations 73711

tributed feedback lasers
1.55-μm DFB LD, nonlin./chaotic behavior 117407
1.5 μm wavelength distributed reflector lasers with vert. grating 82651
20 GHz ultra-short opt. pulse source, DFB-LD/pulse compression technol. generated 117396
1550-nm spot-size converter integrated DFB lasers, low-cost single-mode opt. sources appl. 109067
all-fibre Moire DFB lasers, stable multiple wavelength generation, CW output power 128132
all-opt. 3R regeneration, nonlin. dyn., long-haul transport systs. appls. 105432
all-opt. WDM-to-TDM conversion scheme with simultaneous all-opt. sync. for network nodes 120316
array, wavelength selection, MMI coupler and SOA 117232
circ. surface relief DFB organic semicond. lasers 82617
CLC, self-lasing by stimulated emission/fluoresc./DFB 82560
complex coupled lasers, lateral coupling 93659
complex-coupled DFB laser, spontaneous emission, threshold-crossing 71802
CW-cavity ring down spectrosc., ultra-sensitive atmos. trace detect. 76935
deeply etched first-order vert. grating, 1.5 μm 128315
α-DFB mid-IR angled-grating lasers 93675
DFB-LD directly modulated 2.5 Gbit/s transmitter, self PM, extinction ratio, chirp *(Korean)* 96693
DFB-LD module, temp. wavelength tuning, wavelength monitor 105330
diode laser modes, argument principle method 117178
diode laser sens. for trace gas conc. meas. 121262
diode laser WDM sigs., opt. fiber commun. 75012
diode lasers, gain-switched, pulse generation, opt. filtering effects 82661
diode lasers, metropolitan area and access networks 109097
diode lasers, single-freq. NIR devices, gas sens. 120965
directly modulated 1550 nm AM-VSB CATV systs., long-dist. transm. 86039
directly modulated DFB lasers, nonlin. distortion suppress. tech. 93719
dispersion supported transm. syst. perform., fiber nonlin., laser phase noise 96650
dual-long.-mode birefr. moire DFB fiber laser sens. in rf domain 97333
DWDM transm. using directly modulated fiber Bragg-grating external-cavity laser 120290
dye laser, polaris. dyn. 71655
dye laser, tunable narrow-band radiation generation 82507
dyn. directly modulated DFB LD nonlin. reduction 96689
elastomeric molding/stamping near-field photolithographic methods, working plastic laser fab. 78600
electroabsorption laser modulators, integrated with DFB-LD, for DWDM 127831
electroabsorption modulated DFB laser, low wavelength shift *(Chinese)* 105442
electroabsorption modulated-integrated DFB laser modules, output charact. 105343

distributed feedback lasers continued
electroabsorption modulator integrated DFB laser for WDM fiber telecomms. 116737
electroabsorption modulator integrated DFB laser modules 131434
electroabsorption modulator integrated DFB lasers, optimal wavelength detuning 116824
electroabsorption modulator integrated DFB lasers, wavelength detuning effect 82444
electroabsorption modulator integrated DFB lasers, identical epilayer method, wavelength detuning 85969
fiber lasers, multiple wavelength operation 82537
fibre DFB laser, microwave carrier generation, propag. mode matrix 80390
fibres with slowly decreasing dispersion, adiabatic enhanced compression of ultrashort pulses 128387
gain-switched DFB Bragg semicond. laser, pulse compression, chirp elimination 71772
gain-switched DFB laser, low timing jitter *(Chinese)* 105443
gain-switched distrib. feedback laser, timing jitter reduction, self-seeding *(Chinese)* 105457
Gb/s electroabsorption modulator, DFB laser integrat., long-haul opt. transm. systs. 74926
gyrotropic cubic crysts., DFB lasers, oscill. conditions 82588
high power single-mode diode DFB laser with curved-grooves diffr. grating 71801
high speed ultra-short pulse soliton source using DFB laser, 20 GHz 74941
III-V semicond.-based photonic crysts., coherent lasing action, ultrasmall integrated devices 127805
in-situ combustion diagnostics using LD absorpt. sens. 109787
index-coupled, improved spectral charact., coating tech. *(Chinese)* 82679
integrated high-speed DFB light source/RCE photodetector for WDM fiber commun. network appl. 120169
intrinsic DFB fibre laser hydrophone 131943
ion-exchanged integrated waveguide devices, appl. fields 127779
λ/4 phase-shifted circ. grating DBR/DFB lasers, threshold anal. 93606
λ/4-shifted semicond. DFB devices, chirped grating effect on opt. bistability 93837
LD microarray based wavelength selectable light source 117301
lin. grating DFB organic semicond. lasers, threshold current anal. 105318
MEH-PPV films, tuneable DFB lasing 128210
MI-DFB laser modules, modulator integrated DFB, RF impedance matching 93644
MM-wave fibre link based on two-sect. gain-coupled DFB lasers, 40 GHz 96652
MM-wave subcarrier freq. stabil. using laser heterodyne source and opt. delay line 109044
monolithic integrated single ridge stripe electroabsorption modulated DFB lasers, selective area LP-MOVPE *(Chinese)* 82654
multi-sect. DFB-lasers, HF self-pulsation domains 117394
multicarrier QAM sig. electroabsorption modulator integrated DFB laser transmitters 131376
multiple wavelength DFB fiber lasers, comprehensive num. model 71662
multiple wavelength DFB fiber lasers, dyn. anal. 117119
multisection ridge waveguide DFB detuned grating lasers, high-speed opt. sig. proc. 128230
multiwavelength laterally complex coupled DFB laser arrays, FIB lithog. fab. 128260
organic semicond. thin film, dye doped, very compact tunable laser 71818
organic solid-state dye laser, second-order DFB cavity 105159
PHELIX, PW high-energy laser for HI expts. 105162
Π/2-phase shifted DFB fiber laser chirping, single mode operation 105177
planar circ. grating DFB/DBR lasers, relax. oscills. anal. 93605
polariz. insensitive Q-switched laser opt. 3R regenerator 131418
polymeric DFB-structs., erasable/permanent, multicolour tunable laser emission 116741
quantum cascade DFB laser, mid-IR continuously tunable single-mode 105363
quantum cascade DFB laser based sens., trace gas detect. 109784
quantum cascade laser for LWIR emission 93635
reconfigurable multiwavelength pulse source, self-seeded LD 105453
RF-lightwave transmitter, high-perform., analogue fibre links 96703
Rhodamine 6G-doped solid-state laser, output wavelength temp. tuning 82508
rhodamine-B dye doped polymer DFB microchip-laser-pumped laser 117091
ridge waveguide SOA monolithically integrated with gain-coupled DFB laser, fibre-coupled power 71350
semicond. laser, pseudorandom pulsed operation, radiation line shaping, random freq. fluct. 128293
semicond. laser opt. MM-wave generation by FWM conjug. locking 91398
semicond. waveguides, opt. pulse nonlin. interacts., time-domain large-sig. model 117377
semicond.-laser based opt. PLL, phased array commun. antenna sig. source 80393
senior teaching project, WDM opt. commun. links 78488
short external opt. cavity DFB diode laser wavelength tuning 82779
single mode master/slave laser detectors, amplif. regimes 93620
single ridge waveguide electroabsorption modulated DFB laser for 2.5-Gb/s transm. 120183
SOA, all-opt. hysteresis control by cross-PM 93839
SOA/DFB laser device, ultrafast all-opt. regeneration 120134
spot-size-converted DFB laser, uncooled, 2.5 Gbit/s, pass. align. 120201
static DFB dye laser, ultrashort pulse generation 117092
truncated-well DFB lasers, facet phases, sub-threshold spectra 71793
tunable lasers for opt. networking systs., develop. 128383
two-sect. gain-coupled DFB laser, ultrafast wavelength polariz. insensitive all-opt. clock recovery 131578
two-sect. gain-coupled DFB SOA laser, Gbit/s all-opt. clock recovery 131587
two-sect. gain-coupled laser, MM-wave fiber optic link 109098
virtual mesa/spoiler mid-IR angled-grating DFB laser fabricated by ion bombard. 71765
wavelength tunable electroabsorption modulated DFB laser with thin film heater 105312
whispering gallery mode microgear cavity, FDTD simul. 117324
widely tunable laser telecomm. network archits. 120200
AlGaAs-GaAs quantum-wire gain-coupled DFB laser, MOCVD growth 71779
AlGaInAs high speed 1.3 μm DFB-LD, λ/4-shift grating 117220
Er,Yb co-doped phosphate glass waveguide DFB laser amp. fab. 93539
Er:ZBLAN microsph. laser, opt. inject., DFB semicond. laser, linewidth narrowing 117196
Er-doped fiber Bragg grating lasers, freq./intens. noise 117096
Er-doped fibre DFB lasers for sens. appl. 75576
Er-doped fibre amp. small sig. gain spectrum *(Chinese)* 82516
Er^{3+}-doped tunable DFB fiber laser, Bragg grating fab. method 105176

distributed feedback lasers continued
GaAs/AlAs single mode quantum cascade lasers, CW operation *(German)* 128322
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photonic integrat. 105311
GaInN vis. lasers, materials/MOVPE technol. 93666
GaInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814
GaSb/InAs/AlSb mid-IR angled-grating DFB lasers, beam quality limitations 128359
InAs/GaInAs QD DFB lasers, 1.3 μm, HF characts. 128256
InAs/GaInAs QD DFB lasers, singlemode operation 71790
InGaAlAs MQW DFB laser, MOVPE growth, InGaAsP/InP grating 115368
InGaAs/InGaAsP second-order DFB/DBR laser, surface-emitting single-lobe operation 82627
InGaAsP LD, rapid temp. tuning, high-press. H_2O absorpt. spectrosc. appl. 128407
InGaAsP MQW ridge waveguide EAM, selective area growth *(Chinese)* 101363
InGaAsP, monolithic integrat. DFB laser array, act. stripe angling, thin-film stripe heater *(English)* 93575
InGaAsP uncooled directly modulated RWG GC-DFB lasers, 85°C investig. 93655
InGaAsP/InAsP mass-transport-grating DFB lasers for externally modulated systs. 128224
InGaAsP/InP, laterally complex-coupled DFB lasers, gas source MBE grown 128337
InGaAsP/InP laterally coupled ridge waveguide DFB lasers, chem. sens. appls. 71767
InGaAsP-InP wide-range-tunable laterally coupled DFB lasers 128311
InGaP vis. lasers, materials/MOVPE technol. 93666
InP DFB laser, wavelength stabil., non-hermetic package 117209
InP lasers, nanoscale patterning, FIB enhanced etching 128305
InP/InGaAs/InP photonic waveguide structs., Br_2-N_2 reactive beam etching 116728
InP/InGaAsP high-power lasers, output charact., opt. commun. appls. 105313
InP-based ultra-fast electroabsorption modulator integrated DFB lasers 117226
Nd:YAG laser, self-starting, self-induced refr. index gratings 71738
Sb-based type II QW for mid-IR lasers 93660

distributed feedback oscillators *see feedback oscillators*

distributed file systems *see distributed databases; network operating systems*

distributed memory systems
see also distributed shared memory systems; workstation clusters
2D separable transforms computation, modular lin. arrays based distributed memory parallel archit. 90943
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
calcification detect. in mammograms, parallel region-growing algm. 76501
clustered wide-area systs., network perform.-aware collective commun. 119717
CTM on multiprocessor, SAR bottleneck soln. 75096
deflation-based preconditioners 100978
image compression on distributed memory archit. 106978
image proc. library on distributed-memory syst. 73117
improved conjug. gradient sq. method on parallel distributed memory archits. 124661
Lanczos algm. in distributed memory environ., external selective orthogonalization 68000
latency-tolerant partitioner for distributed computing on inform. power grid 85219
parallel congruent regions on mesh-connected computer 84331
power syst. reliab. by seq. Monte Carlo simul. 122776
rotate-tiling image comp. method for parallel vol. rendering on distributed memory multicomputers 84369
shared memory cluster with improved commun. subsystem, perform. eval. 108149
STEM-II air quality model on distributed memory syst. 133297
Web caching archits., hierarchical/distributed caching anal. 119546
Web-based metacomputing problem-solving environ. for complex appls. 108116

distributed object management
3D rem. brain mapping invocation, distributed appl., Java & VRML 88016
act. Meta-MIB for policy-based mgt. 96030
adaptive QoS-enabled middleware, formal reasoning model 108420
advanced IN, components of mgt. logic programs *(Japanese)* 74426
airport mgt. database in simul. environ. 111367
appl. server design for user service maint. in Web based environ. *(Polish)* 130645
appl. service dependencies mgt. 130690
archit. supporting loose/close cooperation of distributed autonomous systs. 74291
augmented reliable multicast CORBA Event Service 85211
B2B transactions, Simple Object Access Protocol 85266
C^2 support syst. using CORBA 77035
cellular telephone-based home appliance control syst., prototyping 108776
CIM, open systs. using NC, message spec., CORBA 130640
CLF middleware, scalability issues 130878
client server syst. advanced faults mgt., Java API 130684
clustered computers, distributed OO virtual computing environ. 130748
collaborative learning, online, constructivist, peer-to-peer, obj.-based systs. 113354
CORBA, universal commun. environ. for modern mgt. systs. *(Polish)* 130550
CORBA archit., service-component testing method 130903
CORBA based element mgt. prototype syst. 96037
CORBA based network mgt. interface conformance test *(Chinese)* 119470
CORBA interoperability, test framework 130881
CORBA lightweight components, design and implement. requirements 130407
CORBA proxy platform π^2, secure and transparent delegation support 106330
CORBA-based archit. for parallel applns., WZ matrix factorization 74414
CORBA/CMIP, distributed mgt. archit. in heterogenous TMN networks *(Polish)* 130654
cost effective service logic deployment 119562
country-wide elec. generation and distrib. syst., DCS, real-time video 133520
dependency-spheres, global transaction context for distributed objs. and messages 130879
Digital Modular Radio, CORBA-based DAMA modem 111580
distrib. control centre, data sharing, archit., experience 133612
dyn. load-balancing model based on trading service *(Chinese)* 74296
dyn. obj. relocation protocol, network status obs. 130884
ECHONET commun. middleware program, support tool for developing commun. software *(Japanese)* 85120
EMS, multi agent syst. archit. *(Chinese)* 111795
event services in high perform. systs. 119724

distributed object management continued
Flexent Element Management System using Web and obj. technols. for wireless network mgt. 74095
Grid computing environ. for enabling large scale quantum mech. simul. 108115
heavy duty material proc., laser devices and machine/robot interfaces *(German)* 93915
hybrid network mgt. 74093
IEEE inform. networking, conf., Beppu City, Japan (Jan.-Feb. 2001) 89576
IEEE integrated network mgt., conf., Seattle, WA, USA (May 2001) 124177
IIADPS model for distributed med. image proc. using CORBA 110542
IN archit. based on act. networks *(Chinese)* 108393
Internet mgt. by delegation, open source components 130670
Internet multimedia services, OO appl. develop. platforms 108363
Internet-based server-centred appls., scalability cost and reliab. meas. 119739
IP service high availability archit. 130669
Java 2 distributed obj. middleware, perform. eval. and optim. 84987
Java server objs. on rem. hosts, mobile rem. method invocation 130894
LIME, middleware for phys. and logical mobility 74278
location-aware lifecycle environ. for ubiquitous computing 108144
loosely coupled federation 108178
M^2RT algm., tool for Internet commun. channels mean message response time prediction 108237
M&M framework, mobile agents integrat. into off-the-shelf Web servers 130890
MACE, multi-agent based distributed meas. systs. in CORBA environ. 120645
MASIF compliant platforms, SNMP mgt. 130678
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
MedStage platform for inform. and commun. in healthcare 111268
mgt. concepts of distributed inform. proc. systs. *(Polish)* 130549
middleware platform mgt. based on portable interceptors 96045
middleware QoS-control archit. 85210
middleware services for interoperability in open mobile agent systs. 74312
middleware support for media streaming establishment 85371
middleware support for voting and data fusion 107407
mobile agent executions, visualization 74222
mobile CORBA develops. 130895
mobile OO-appls., generic archit. 96106
MomentA, service mgt. using mobile agents in CORBA environ. 119469
multi-layer bandwidth broker archit. 74344
multicast group commun. protocol, engine, and bridge for CORBA 85335
multimedia, distributed, objs. compensation, QoS-based method 130980
multimedia networks, expt. eval. of archit. for joint QoS control 108261
multimedia systs., QoS models and archits. *(Polish)* 130940
name mgt. archit. based on obj. rels. in large-scale distributed systs. *(Japanese)* 74365
network mgt., efficient naming service 130571
network mgt., eval. of constrained mobility for programmability 96050
network mgt. for coalition deployments 111591
network surveillance scheme, supervisor-based, middleware implement. and perform. eval. 119491
next generation intell. reconfigurable mobile networks, OO organic archit. 130935
next generation network billing service based on TINA concepts 130583
obj.-based systs., replica mgt. 107802
OO switching syst., software platform design 130204
open component-based distributed systs. develop., dyn. QoS mgt., aspect-oriented spec. 119529
Oracle Video Server admin. tool *(Polish)* 131760
parallel evol. modeling for nonlin. ODE 114134
Parlay API, validation through prototyping 130912
PCB assembly, CAPP syst., CORBA integrated technol. *(Chinese)* 124302
pers. mobility/service portability support strategies eval. 96487
phase-oriented method for developing mgt. algms. 130570
platform, Web interfaces use 130679
policy-driven agent syst. develop. and mgt. 74223
Ponder lang., policy deployment model 130755
power distrib. automation using OO agents 111928
power syst. flexible network integrated supervisory control 122844
QoS hierarchical control archit. for configurable multimedia appls. 108419
QoS mgt. framework 108376
QuO middleware, adaptive support in wide-area and embedded distributed obj appls. 74280
real-time appls. support with CORBA, policies and mechanisms eval. 85334
real-time multimedia obj. commun., distributed Web-based framework 85380
reconfigurable component based network mgt., devel. framework 130676
SafetyNet, lang.-based approach to prog. networks 74310
script wrapper for software integrat. systs. 108307
sens. inform. networking archit./appls. 108274
SHAMAN, distributed mgt. appls. environ. 130680
SI2000 version 5 product line, obj. technol. *(Slovenian)* 119471
Simple Object Access Protocol for interoperability problems on Web 74182
SNMP agent groups for network fault mgt. 74228
SOAP (Simple Object Access Protocol), simplifying distributed develop. 119263
SOAP (Simple Object Access Protocol) and communicating devices 119363
software radio, software framework 96599
SSL integrat. into JaCoWeb security framework, project/implement. 130344
Symphony infrastructure for virtual server mgt. 119723
telecomms. networks mgt., distributed obj. technol. appl. *(Chinese)* 108037
timing fault tolerance, dyn. replica selection algm. 108311
TINA accounting archit. mgt. security 130589
TINA accounting mgt. archit. based prototype 130666
TINA environ., service subscription inform. mgt. using OO middleware 130919
TINA service mgt. syst., advanced archit. develop., CORBA based approach 130883
TMN, systs. approach to 2D modeling 96029
transaction capabilities/CORBA gateway using obj. pool mechanism 130555
TransWeb, framework for transparent Web-server load balancing 130896
unmanned aerial vehicle distributed video appl., QuO QoS framework 129804
video surveillance syst., distributed platforms appl. 129513
VPN generic connection mgt. and service level agreement monitoring platform 130668
Web-appl. develop. using model/view/controller design pattern 130880
Web-based appl. server *(Chinese)* 108101

distributed operating systems *see network operating systems*

distributed parameter filters
see also strip line filters
act. filter, notch freq. adjustable using uniformly distrib. RC line 68928
micromachined overlay CPW struct. with low atten., low-pass filter appl. 102577
nonuniformly coupled transm. line filters, design method 80025

stributed parameter filters continued
pulse transm. in 200 MHz clock computer bus, spectrum mgt. by high-cut filter 80036
response and phys. symm. in filters, exploitation 80030
stributed parameter networks
see also distributed amplifiers; distributed parameter filters
2D struct., impedance grid method based algms. constr. for electrodynamic anal. 83464
ceramic capacitor, distributed SPICE cct. model 115049
CMOS reverse interconnect scaling in multi-GHz amp. and oscillator design 115015
ESD protection ccts. for HF/RF appls., anal. and design 80340
high-speed large interconnect network simul., nonlin. cct. reduct. 90639
homog. transm. line, charact. eqns., three-port elec. sigs. 68525
IC connection design, Maxwell eqns. *(Italian)* 81478
interconnect networks, transm. line model based anal./simul. 90651
Josephson-jn. arrays coupled by distributed ccts. 70974
LCR distributed self-oscillator inductively coupled with transm.-line sect., model 114657
leaky two-layer stripline, voltage defn. consistent with, charact. impedance 94105
lightning protection syst. lumped/distributed cct. model comparison 77553
lossless multiconductor transm. lines, nonlin. resistor termination, dyn. 101698
lossy multiconductor transm. lines, pass. macromodels, multiport distributed interconnects 124365
lossy power/ground planes, impedance calc., reson. effect 114589
lossy single lines, nonlin. resistors, bifurcations and chaos 101699
lumped and distributed element distributed amps., comparison 68616
microwave cct. anal. using network methods 80239
microwave ccts., S-/Y-params. calc. using time domain anal. 91228
mixed-sig. ICs, on-chip interconnects, orthogonal gridded shield, transm. charact. 91118
nonuniform multiconductor transm. lines, time-domain simul., nonzero init. conditions 101687
pass. microwave ccts., anal. by 2D and 3D FE segmentation method 80237
phys. struct., restoration, RC network theory appl. 101728
PWM invertor-fed IM drives, shaft voltage prediction model 134454
RC oscillator with distributed params., autoparametric oscills. 90796
RC oscillator with distributed params., self-oscills. anal. using piecewise-lin. approx. 101831
RC-distributed oscillator, parametric oscills. excitation 101841
RLC interconnects, anal. of on-chip inductance effects 126963
single-ended S-params., use in two-port distrib. network anal. 79520
VLSI, on-chip crosstalk eval. between adjacent interconnections 70269
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
istributed parameter systems
see also flexible structures
coal-fined plant, elec. syst. monitoring and control, DCS *(Chinese)* 99542
functional DE, num. methods and delay syst. stabil. 67721
network mgt., overviews *(Chinese)* 74110
parab. distributed systs., sens. structs., regional detectability 75437
piezolaminated anisotropic shells, selective modal control theory 104438
istributed processing
see also client-server systems; computer networks; distributed algorithms; distributed databases; distributed object management; distributed programming; message passing; mobile computing; multiprocessing programs; multiprocessing systems; network operating systems; parallel processing; pipeline processing; processor scheduling; remote procedure calls
anonymous unknown network with leader, label assignment 130812
asynchronous real-time distributed systs., adaptive commun., heuristic algms. 74283
ATM cell-relay networks, distributed simulator using Java 95773
ATM network mgt. based on distributed AI 74114
ATM network simul., sync. and concurrent control 95795
ATR, distributed image proc. 111630
automotive systs. commun. links, conformance testing 134583
batt.-powered distrib. real-time embedded systs., batt.-aware static scheduling 125176
best-effort network, core-stateless RED algm. for fairness improvement 85088
Bluetooth pers. area networks, distributed topol. constr. 120068
CANopen distributed instrums., safe design 120655
cct. tolerance and sensitivity anal., multi agent systs. 101679
cellular fuzzy proc., react.-diffusion, computational complexity 102476
cellular mobile systs., load-bal. location mgt. using quorums and dyn. hashing 131212
clustered wide-area systs., network perform.-aware collective commun. 119717
collaborative surveillance advancements 77104
commun. effects server, distributed simul. 108199
commun. network simul., JVM distributed proc. *(Chinese)* 107954
composite power syst. reliab. eval. using Monte Carlo simul. 88284
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
conf., Mesa, AZ, USA (April 2001) 67362
cost effective service logic deployment 119562
cost sharing for multicast transms. 119121
data streams, real-time, optimal smoothing schedules 96224
DDM of radio commun. based on HLA *(Chinese)* 111368
digital library distributed multimedia syst. QoS mgt. *(Chinese)* 96257
discrete event systs. with delays, diagnosis 78685
DRAM cache for high quality distributed video 85366
dyn. group mgt. for large-scale distributed event monitoring 130556
embedded systs., incremental design approach 125177
face recogn., robust, cooperative distributed image registration *(Japanese)* 73444
fine-grained distributed multimedia sync. model, enhanced fuzzy-timing Petri net 119799
fractal image compression on PVM for million-pixel images 106863
generic late-join service for distributed interactive media 130350
German TV studio, distributed TV graphics prod. *(German)* 86319
hierarchical access control using secure filter 83946
hierarchy-based access control 129276
high perform. distributed computing conf., San Francisco, CA, USA (2001) 119697
high-perform. and wide-area cluster computing, ATM and network technols. 130749
IEEE 802.11 ad hoc WLAN, distributed bandwidth allocation/sharing/extension protocol for multimedia 119375
integrated secure & fault-tolerant voting in distributed syst. 130578
IP terabit switch router, archit. design 119392
Jpure, purified Java execution environ. for controller networks 102198
distributed processing continued
k-set agreement condition in asynchronous distributed systs. 84957
LEO satellite networks, distributed geographic-based packet routing 74892
load shedding, LAN-based control 99204
LOFAR radio-telescope using cluster computers and grid proc. 75263
managing soft QoS requirements in distributed systs. 108050
MetaNet, distributed NMS for inform. delivery and planning with QoS 96049
microsystem-CAD, sever group *(Chinese)* 92501
mobile agents/GA integrat. for efficient dyn. network resource allocation 130592
mobile networks, optimal distributed location mgt. 86268
mobile telephone traffic mass meas. & anal., soft testing 119964
Mobilizer, distributed protocols for networks with mobile users 73918
modelling with queues, empirical study 119258
multimedia, sync. protocols 130960
multimedia appls., media sync./causality control 74429
multimedia content distrib. to bal. QoS and cost 96265
multimedia performs., detect., anal. and rendering of audience reacts. 130952
multimedia presentation, user-centred commun. protocols design 119794
multimedia presentation syst., distributed environ., floor control mechanism 74439
multiple camera fusion for multi-obj. tracking 95010
Multiservice Switching Forum, standardization activities 119454
network mgt. for coalition deployments 111591
network mgt. syst., agent-based, distributed action plans 74113
networked cryptographic devices resilient to capture 83950
Neyman-Pearson criterion of distributed sig. detect. 73709
obj.-causally ordered group protocol for distributed multimedia systs. 107816
OMG-MASIF-compliant mobile agent platform, modeling with RM-ODP engng. lang. 74068
open integrated IN, universal service platform 74423
operating and maint. syst. based on components, research *(Chinese)* 108015
pervasive computing, vision/challenges 108270
platform design approach for re-config. network appliances 101988
policy based mgt. archit. for large scale act. commun. systs. 108051
power network state estim. distributed proc., comments and reply 133431
power syst. control simul. using distributed simul. environ. 111831
problem determ., dyn. dependencies characterisation, act. approach 130683
protocol on the-fly re-synthesis 84985
QoS of data commun. systs. 108005
reconfigurable multimedia surveillance networks, intell. sens./software radio technols. for optimal design 108578
redundancy mgt. protocols in distributed systs., modular comp., spec. and verification 73916
reliab. eval. using AHP 108238
replication, separating from distributed commun., problems and solns. 74230
rocket engine test facility, DAQ & health monitoring syst. 111319
scalar clock-based commun.-induced checkpointing protocols, RDT prop. 130373
scoliosis treatment, low power portable EM posture monitoring syst. 111068
SDL spec., automatic translation to distributed Erlang implement. 119455
secure distributed computations using semi-trusted hosts and mobile agents 72956
sens. networks, sens. placement using coding theory 130160
short-range wireless cell, synchronizing low-cost energy aware sens. 131343
SLA monitoring and service mgt. through distributed intell. agents, generic archit. 130911
SMIL-based scenarios, protocol synthesis, distributed environ. implement. 95925
spacecraft modeling and simul. testbed, navig. validation 122503
state estim. for discrete event syst. diagnosis 86396
stereoscopic virtual environ., networked syst. 108375
strong-password authentication, attacks and solns. 118047
syst. services, survivability, redundancy 108312
TINA based perform. mgt. archit. 74124
token-passing strategy, adaptive, develop. and refinement 73956
transm. coord. protocol for mobile satellite messaging syst. 73949
virtual/real distributed environ., real time integrat. 94883
vision, real-time, intens. profile efficient computation 84337
VLSI phys. design automation, distributed and OO framework 104063
VOD large-scale interactive syst., distributed server perform. 109376
VoD systs. in broadband networks, perform. modeling 97084
VR, selectively reliable multicast protocol perform. meas. 130462
Web-based metacomputing problem-solving environ. for complex appls. 108116
distributed programming
see also parallel programming
act. networks, network inform. collection 130581
archit. supporting loose/close cooperation of distributed autonomous systs. 74291
congestion control using agent-inspired act. network resource trading model 74105
end-to-end WAN service availability 119614
HJA, Java prog. for CE devices 120538
intell. mobile agent for network mgt. *(Chinese)* 108017
Java applet program MOS memory simul. for act. learning environ. on WWW 125483
JXTA network prog. environ. 74302
large-scale simul. via distributed computing 119705
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
MEMAD, Meta-mgt. of dyn. Distributed network managers 96046
microelectronics education online courseware library using Java applets 78515
middleware support for voting and data fusion 107407
mobile agent based network mgt. appls., perform. enhancement 130591
mobile agent executions, visualization 74222
mobile agents, eval. of security schemes *(English, Spanish)* 129266
mobile agents, transparent migration 74251
mobile code, adaptive mobile appls. and network archits. 74218
mobile code cryptographic security 83949
mobile environ., sync. 74224
MomentA, service mgt. using mobile agents in CORBA environ. 119469
mutual exclusion token-permission, prioritized groups 96137
network mgt., eval. of constrained mobility for programmability 96050
network mgt. approaches, trade-offs models/anal. 130557
NOOSE, Networked Object-Oriented Security Examiner 108029
open component-based distributed systs. develop., dyn. QoS mgt., aspect-oriented spec. 119529
Parlay enhancement with mobile code technols. 130930
policy-driven agent syst. develop. and mgt. 74223
prog. networks 108174
QoS mgt. in prog. networks through mobile agents 74315

distributed programming continued
real-time decompression of streaming video using mobile code 107077
self-specializing mobile code for adaptive network services 74388
SOAP (Simple Object Access Protocol), simplifying distributed develop. 119261
software clustering algms., computation distrib. archit. 130877
TRANSPROSE project, reconciling mobile code security with execution efficiency 96099
VHDL-SPICE mixed-sig. ccts., distributed event-driven simul. 125625
Virtual Inhabited Call Centre, pers. mobile agent syst. 74146
Web server, usage of older Apple Mac computers 85259
Web-based interactive e-learning software tool for power engng. 124274
YAAP, Yet Another Active Platform 74225

distributed queue dual bus *see access protocols; metropolitan area networks*

distributed sensors
3D moving target tracking with distributed pass. sens. using EKF 73635
adaptive beacon placement, wireless sens. networks 75423
Brillouin opt. time domain reflectometer-based distributed temp. sens. 75555
Brillouin-based distributed fiber temp. sens., microwave coherent detect. 75574
coal mine & tunnel autom. alarm, distrib. opt. fibre temp. sens. 67499
collaborative sig. proc. for sens. networks 95612
digital temperature sensor and distributed temperature measuring system *(Chinese)* 120766
domain distributed intell. proc. for inform. fuselets 97584
elec. impedance tomography, smart sens., harsh environ. 121055
FBG array for distributed strain sens. 97299
FBG-based meas. syst. in struct. health monitoring 86780
fiber Bragg grating period reconstruction by time-freq. sig. anal., distributed sens. appl. 75565
fiber optic BOTDA sens., distributed strain meas. *(Korean)* 120848
fiber optic sens., anchor monitoring 75587
fibre opt. microbend sens. for smart struct., distributed detect. 75771
fibre opt. strain sens. for long struct. 109608
fibre opt. temp. sens., spatial resoln. wavelet ANN 120860
fibre optic Michelson interferometer config., group vel., dispersion coeff. 109621
fully-distributed opt. fiber polariz. props., OTDR backscatt. tech. 93056
habitat monitoring using wireless commun. technol. *(English, Spanish)* 133367
hierarchical distrib. intell. sens. instrum. syst., error compens. 120648
high nonlin. ellipt. fiber sens. 109588
high spatial resoln. chirped moire fibre grating strain/temp. sens. 131940
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
laser-US smart mould for composite parts mfg., fibre opt. US sens. 114451
LD distributed opt. fiber temp. sens. 120862
LF mag. flux dens. meas., sens. network design & control 131878
machine vision, distributed syst. using Ethernet networking 113735
meas. systs., distributed, philosophy, driving forces and teaching methods 109400
multi-point opt. fibre sens., fouling determ. in water systs. 99028
multi-sens. environ., integrat., registration 118856
multiple sens., distributed, fusion; hypotheses testing 95605
multiple unmanned aerial vehicles, decentralized data fusion, localization and map building 88048
NLOS UV commun. for distributed sens. systs. 97182
oil indust., distributed fiber grating sens. down-hole reservoir monitoring 131939
opt. fiber temp. sens., sampling correct technol. 120863
parab. distributed systs., sens. structs., regional detectability 75437
power efficient topologies for wireless sens. networks 130490
power quality meas., distributed measuring syst. 123085
press. sens. with mode-locked fiber-ring laser 75575
quasi-distributed intrinsic fiber-optic strain sens., white-light interferometry 97334
quasi-distributed white light fiber optic strain sens. 120835
Raman distributed temp. sens., fast reactor JOYO monitoring appl. 97303
real-time vibr. modal coords. sens. using piezoelec. array 132087
rocket engine test facility, DAQ & health monitoring syst. 111319
Rollinsford bridge distributed strain monitoring by Brillouin-scatt. based fiber optic sens. 97323
scalable and robust commun. using directed diffusion in sens. networks 75504
serial distrib. detect. syst., 2 bits commun. constraint, optimiz. 119102
short probe pulse SBS, transient response, distributed strain sens. appl. 97325
smart beams, piezoelec. actuator/sens., debonding effect 114477
smart struct. monitoring using PZT actuators & PVDF sens. 109823
smart transducers interface design, time triggered archit. 131824
steel crack growth monitoring using piezotransducer array 101527
target tracking with angle-only meas. from two platforms, commun. bandwidth influence 118893
task oriented distributed sens. networks, resource mgt. 97170
temp. meas., phase-shifted Bragg grating all-fibre syst., sig. separation 120830
temp. sens., fibre-optic based for oil and gas wells 120828
temp. sens., S/N characts. improvement 97302
transm. mode quasi-distributed fiber optic temp. sens. 120869
wireless microsensor networks, energy-efficient link layer, long-term environ. sens. 97567

distributed shared memory systems
Brazos software DSM syst., high speed networks 96197
cluster OS supporting parallel computing 85329
parallel and distributed CFD 85341
scalable sync.-oriented logical clock, barrier-lock clock 102313
write invalidation, multicast commun. appl. 96218

distributed tracking
face recogn., robust, cooperative distributed image registration *(Japanese)* 73444
mag. sens. based body tracker, human sport appl. 86458

distribution networks
see also building wiring; power distribution control; power distribution economics; power distribution faults; power distribution lines; power distribution planning; power distribution protection; power distribution reliability; substations; underground distribution systems; underground residential distribution systems
3-phase act. power filter, multiple single-phase VSI modules 122987
3-phase grid-connected inverters interface for alternative energy sources 134233
3-phase induction generator connected to single-phase network, harmonic effects 134000
6-35 kV distrib. networks, insulation params. calc. *(Russian)* 88425
6-35 kV networks, insulation params., continuous monitoring 88430
10 kV distrib. networks stabil., dispersed CHP/wind generators impact 133622
10 KV power network, TV ferroresonance overvoltage, digital simul. *(Chinese)* 99340
110/20 kV distrib. substation transformer, unanticipated fault studies 77944
150 kV distrib. network measuring transformers eval. 123557

distribution networks continued
2001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Feb. 2001) 100393
AC-AC inverter, build-in PFC soft-switching, unified controller 88830
act. front-end converters, act. power filters, control design 133705
act. power filters for power quality improvement, EMI filtering 112084
act.-front-end voltage/current source rectifiers operating region 123620
ambient-proportional sens. trace heating control 134640
branch-current-based distrib. state estim. algm. 77322
building power freq. mag. fields meas. from EMC viewpoint 77668
busbar layout, CSCW syst. using VRML *(Chinese)* 100501
busbar trunking systs. power freq. impedance studies *(Chinese)* 122969
cable impedance calcs., parallel ccts., multi-neutral returns 112033
cable networks quality assess. tools 133723
capacitance current meas. method *(Chinese)* 112190
capacitor transients discrim., posn. ident. 113038
cogen. syst. PM sync. generator with variable speed input 112339
combustion-resistant vegetable oil-based distribution transformer dielec. coolants 88806
commercial building power syst. harmonics, digital monitoring systs. 77347
compact HV/MV distrib. substations, gas insulated switchgear 134310
composite distrib. insulator develop. and testing investig. 133762
constr. IS downsizing, GUI appl. *(Chinese)* 112023
decentralized energy-conversion-systs. with low power output in LV networks 122962
DEWorkstation power engng. education enhancement software 78479
digital power line commun., LV distrib. network 74509
dispersed fuel cell generation systs. planning optim. *(Korean)* 123270
dispersed generating plant, 132 kV grid connection, relaying problems 77494
dispersed generation connection, flexibility/transparency enhancement 133823
dispersed generation connection to French power grids, legislation *(English, French)* 133827
dispersed generation connection to MV betworks, Praogen software *(English, French)* 133826
dispersed generation interconnection, voltage charact. improvement *(Japanese)* 133673
distributed fuel cell power plant, economical feasibility 133909
distributed generation, grid connection, switchgear 123103
distributed generation in competitive elec. markets, defn. 88315
distributed generation integrat. in distrib. network, USA 133829
distributed power generation, locational aspects 111948
distributed power generation for appropriate customer price response provision 112206
distributed power generation microgrids 112021
distributed power generation technols. in crit. elec. power infrastructure 112207
elec. rly. depot voltage unbalance anal., two-port network model *(Korean)* 123997
elec. service quality, indicator models, Argentina 133457
elec. utility deregulation, metering/billing/customer IS impacts 122802
electromechanical act. power harmonic filter 123710
embedded dispersed generation connection to distrib. networks, protection 133828
embedded generation, loss of earth detect. 77495
embedded generator, loss of earth protection detect., relay 99624
energy-efficient distrib. transformers for energy savings in EU 134128
EV loads, power distrib. syst. harmonic effects 122990
failed distrib. transformers diagnosis using neural networks 134133
Federal Republic of Yugoslavia elec. power syst. functioning *(Serbian)* 122825
feeder capacitors, branch-and-bound dispatching 77324
feeder optimal loss reduction, transformers reconnection, GA 77335
fully networked energy infrastructure, stupid network, distributed intell. 133497
German energy market liberalisation, business procs. IT support 133470
German Federations' Agreement II on distrib. network utilisation *(German)* 112017
GIS, database design, graph protraction *(Chinese)* 112047
GIS develop., data conversion tool, automatic recognizer, manual editor 122958
GIS-based distrib. simul. and anal. 133656
global elec. power mgt. syst. *(Chinese)* 133480
global voltage regulation, radial distrib. network supply quality measure 112063
grounding capacit. and fault resist. meas. in ineffectively grounded power syst. 77654
harmonic flows, load models comparison 133686
harmonic Norton models, network impedance effect 77313
heavy-loaded distrib. feeder loss reduction, cyclic sub-tree search method *(Korean)* 122968
Hungarian elec. distrib., customer satisfaction survey 133627
hybrid energy grids, CHP syst. group mgt., game theoretic anal. *(Japanese)* 99534
induction generator CHP-fed distrib. network, self-excitation phenom. 122849
inductive components, geomag. field, local disturbances effect 99351
indust. distrib. syst. harmonic reson. problems 88439
indust. distrib. systs., fast harmonic load flow method 77314
indust. plant, IM load, power quality improvement by static transfer switch 134669
indust. radial power systs., energy saving, life cycle cost design criteria 134670
inform. mgt. syst., component based design *(Chinese)* 112051
irregular shaped power distrib. planes, transm. matrix modelling method 89886
IT earthing syst., elec. network insulation, selective control *(Serbian)* 122782
last mile high speed power line commun., EMC 77333
load curve estim. using prediction intervals 112054
load forecasting method based on fuzzy modelling 112056
load profile ident., ART algm. 99245
load profiles/feeder losses, temp. effect 133674
long distrib. feeder, shunt act. filter installation considerations 133663
loss calc. method, field terminal unit inform. *(Chinese)* 112025
loss computation, DP method, durable load curve *(Chinese)* 133641
loss minimization, ant colony algm. *(Korean)* 122967
losses calc. model 133659
low-cost secondary surface power distrib. network 133598
LV distrib. network, harmonic distortion levels synthesis, ATP/EMTP 77308
LV distrib. network transient/steady-state voltage drops *(Italian)* 88426
LV power installations, indirect lightning flash induced overvoltage 77334
LV power-installation networks, lightning-induced voltages eval. 111661
LV/MV networks, harmonic distortion survey, results, corrective strategies 133603
main transformer ULTC and capacitors scheduling, simulated annealing 123544
MEEC distrib. syst., weak points, early detect., US emissions 133669
micro-turbine generators, dispersed generation perform. charact. 112478
microgrids, dispersed elec. source LV distrib. networks 112022
monitoring, short-term/long-term meas., state estim. 122963

tribution networks continued
MV cable network, fault location method 77320
MV cable sheath power losses prevention, surge arresters 133765
MV distrib. network extended load modelling software 133658
MV indust. distrib. syst. power quality assess., wavelet/FFT 133637
navy shipboard power distrib. systs. service restoration, network reconfiguration 134541
Norton equiv. model for distrib. syst. nonlin. loads 112087
optimal capacitor placement using simul. method and GA 77327
optimal load shedding strategy in power systs. with distributed generation 111751
optimal reconfiguration, algms. comparison *(Chinese)* 122966
PERTEC distrib. systs. tech. losses computation software tool 133653
petroleum indust., power distrib. over long dists., design 134692
PFC capacitor burn out calc., distrib. systs., harmonics current *(Chinese)* 89312
porcelain suspen. insulators, nonsoluble indust. dust effects *(Korean)* 123039
power delivery systs., pot. distributed generation benefits 122954
power distrib. risk mgt. in market economy 111693
power distrib. transformer core loss contrib. factors 134136
power quality improvement, voltage/harmonics compensation 133698
power quality improvement energy storage systs. overview 133697
power quality indices, defns., eval. 99352
power supply network, harmonic currents, Graez bridge rectifier *(Italian)* 99359
radial distrib. loss reduction, feeder switching, evol. prog. 77336
radial distrib. network load flow calc. using symm. components 99338
radial distrib. systs., load flow, branch-oriented techs. 133634
radial distrib. systs., optimal energy restoration *(Portuguese)* 122952
radial distrib. systs. capacitor switching, fuzzy modeling 112032
radial distrib. test feeder anal. 112035
radial MV distrib. network calc., load params. influence 112052
reactive power exchange policy/regulations 122845
regional distrib. networks, power quality eval., Czech Republic 133604
restoration, math. prog., operation strategy 77323
RTO-Grid Florida GIS, transm. assets transfer, GPS 122826
rural distrib. networks voltage support using embedded generators 99342
rural elec. power, conf., Little Rock, AR, USA (April-May 2001) 113216
shunt act. harmonics filter, DSP-controlled, distrib. network *(Japanese)* 88431
single DC reactor type supercond. FCL as power source 77597
single power distrib. transformer contingency, back-up algm. 123559
single-phase grounding line selection, grounding-current compensation, integrative device *(Chinese)* 133642
single-wire earth return distrib. syst. projects, Australia 99335
source currents computing, stat. fns. 99343
static transfer switch perform., regenerative load effect 134280
steady-state phase-coord. model 88739
substation/feeder load forecast using neural nets 133654
substations, on-line fault estim., cause-effect networks 112722
Swedish distrib. utilities tech. co-operation under deregulation 133630
three-phase four-wire distrib. syst. harmonic suppression scheme 88436
three-phase four-wire distrib. systs., neutral harmonic mitigator design 133702
three-phase voltage unbalance studies *(Chinese)* 77329
transformer load profiles modelling 134123
transformer oil dielec. strength meas. 134124
transformers loading estim. by fuzzy logic 123564
transformers/primary feeder, optimal connection, harmonic distortion 122973
transm. syst. expansion, impact on distrib., regulatory needs, Argentina 133562
trapezoidal-wave power distrib. syst., diode rectifier loads 133668
UK elec. distrib. utilities, challenges due to distributed generation 111815
ungrounded Y-connected capacitor bank, failure unit removal, syst. imbalance 100226
uni-/multigrounded distrib. systs., operation comparison 99347
university distrib. syst., power quality monitoring 133636
urban distrib. network, renewable energy generation pot. 133623
urban MV distrib. network, N-1 struct. rule *(Chinese)* 122964
US microgrid pilot demons. projects 122830
Utilities Communication Architecture, fund. 99203
utility enterprise integrat. interfaces, MultiSpeak™ spec. experience 122804
utility human resources mgt. fn. outsourcing 133632
voltage stabil., harmonics effect, ASD effect on harmonics 122847
voltage stabil., modelling and syst. protection scheme 77271
wind turbine farms, weak elec. distrib. systs. dyn. anal. 99586
wind turbines, impact on voltage quality in weak grids 133884
wind-driven induction generator, grid disconnection, transient anal. 133885

stributions, statistical *see statistical analysis; statistics*

strict heating
110 MW gas and steam heating power plant, constr., experience *(German)* 99569
EL-TO Zagreb cogen. plant, math. model 99536
energy conservation pot., Russia 99532
final energy demand forecasting, national economy restructuring programmes, Romania 122913
GT-35 gas-turbine for CHP, testing 99561
heating/cooling systs., Taiwanese feasibility study *(Chinese)* 77737
hybrid energy grids, CHP syst. group mgt., game theoretic anal. *(Japanese)* 99534
network efficiency serving hot water absorpt. chillers 77744
NHR LOCA, coolant tube rupture, expt. anal. 77696
operation planning, nonlin. 0-1 prog. 134654
Recklinghausen district heating power plant rem. control, fieldbus technol. *(German)* 123179
reliable district heat supply systs. design 88552
Romanian TPP, water chem. optim. 112284
social cost in sparsely populated countries 123177
urban centre district heating control/monitoring dispatching syst. 112285

ivacancies *see vacancies (crystal)*

iversity reception
see also fading
1X RTT CDMA systs., phase-swept/time-delay transmit diversity perform. results 85742
2.4 GHz diversity antenna for wireless handset external mounting 83637
2 and 4 transmit antennas, perform. of diversity systs. 96379
3 and 5 GHz bands spatial propag., eval. of WLL and WLAN systs. 105751
3G systs., antenna fns. anal. 83615
3G W-CDMA syst., transmit antenna diversity perform. 85668
3G W-CDMA systs., channel estim. using Kalman filter algm. 85676
8-/16-state space-time codes for 4PSK with two transmit antennas 94310
8k DVB-T in mobile environ., majority selection and block-based diversity reception 120527
12 GHz high elevation angle satellite-to-Earth propag. meas. in tropics 117676

diversity reception continued
900 MHz handset diversity antenna, head/hand/shoulder effects, correl. charact. 94161
900 MHz handset diversity antenna, head/hand/shoulder effects, effective gain charact., perform. anal. 94160
adaptive antenna array, spatial/temporal receiver, broadband wireless syst. 74534
alg. channel decomp. MUX in space-time 107660
alg. space-time codes for block fading channels 129130
array receiver with Kalman channel predictor for fast Rayleigh flat fading environ., perform. 83664
bent patch element for polariz. diversity antenna 72675
bistatic radar denial/embedded commun. via waveform diversity 99155
bit and coord. interleaved coded modulation over fading channels 72768
BLAST perform. improvement using space-time block codes/turbo decoding 72867
blind multiuser interf. cancellation, max. likelihood approach 72364
block-fading channels with multiple antennas, limiting perform. 74517
BPSK sigs. in Rayleigh fading channels, optimum selection diversity 128973
BPSK-based WCDMA using RAKE receivers with channel estim., downlink perform. 131240
broadband indoor wireless multimedia access, holographic opt. receiver front end 86121
building-scatt. LMCS data transms., error rate reduction 96410
CDMA asynchronous multicarrier syst., partial sampling MMSE interf. suppression 105805
CDMA cellular syst., soft handoff scheme, syst. load anal. 85590
CDMA commun. systs., subchip-spaced multipath diversity 74702
CDMA distributed antenna systs., reverse-link power control 85798
CDMA downlink multicarrier with space diversity, perform. 74747
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA MSS, satellite diversity 85861
CDMA multi-carrier syst. in inperfections, receiver struct. 108609
CDMA multipath systs., power control/transmit diversity 85799
CDMA multipath systs., space-time block coding 129129
CDMA RAKE receivers, channel estim. errors and Doppler diversity 108920
CDMA SIR-based power-controlled cellular syst. in multipath fading environ., reverse link capacity 74734
CDMA systs., spectral efficiency with transmit and receive antenna arrays 85662
CDMA systs. in multiple time-scale fading channels, spatial diversity combining/power allocation 85858
CDMA wideband networks, interf. subspace rejection, mixed-power operation modes 128812
CDMA-based LEO multi-beam multi-satellite syst. with power control, downlink perform. 74894
cellular commun. systs., efficiency of space-diversity reception 131219
cellular radio, dyn. freq. hopping 131246
cellular radio, outages and BER, microdiversity/macrodiversity effects 85802
cellular radio data syst., Aloha channel perform. 85622
cellular systs., transmit-diversity coding 118006
channel estim. and equalization with block interleavers 84868
closed loop transmit diversity with feedback delay, perform. 108744
code division random multiple access systs. with packet combining, anal. 107759
codes for differential PM in correl. Rayleigh fading channel 96510
codes for differential signaling with many antennas 83851
COFDM pre-DFT combining space diversity assisted systs. 74550
concatenated space-time block codes with TCM/turbo TCM/convolutional/turbo codes 72911
correl. diversity channels, efficient simul. 84672
correl. turbulent free-space opt. channels, max.-likelihood spatial-diversity reception 75066
CPM sigs. over space-time correl. Rayleigh fading channels, soft output diversity combining 131290
DAPSK postdetection diversity receiver on Rayleigh-/Rician-fading channel 119974
decorrelation receivers for unresolved multipath Ricean fading channels 131131
differential space-code modulation for interf. suppression 94244
differential space-code modulation for interf. suppression 106064
digital cellular radio, optimum combining diversity finite-length DFE 119967
digital commun. systs., blind max. ratio combining methods 96368
double antenna diagonal space-time codes/continued fractions 129104
double differential space-time block coding for time-selective fading channels 83850
doubly selective Rayleigh fading channels, one-shot detectors error perform. 130177
downlink TD-CDMA, lin. reception and multi-sens. extension 108841
DS-CDMA, coherent multi-carrier/single-carrier, broadband packet wireless access, perform. 74597
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA cellular systs., adaptive array antenna beam pattern selection *(Japanese)* 131255
DS-CDMA convolutionally coded multi-carrier systs. 107739
DS-CDMA multicarrier systs. in correl. Rayleigh fading channel *(Chinese)* 119232
DS-CDMA multicarrier systs. over multipath Nakagami fading channels, parallel code-acquisition 74748
DS-CDMA multicell syst. with base station diversity, perform. anal. 74777
DS-CDMA multidimensional multicode syst., code diversity/error detect., perform. 74790
DS-CDMA networks with multiuser receivers/spatial diversity, resource pooling/effective bandwidths 74631
DS-CDMA RAKE receiver with TWCL in urban area, field test meas. 108802
DS-CDMA systs., asynchronous multi-stage SIC detector for multipath fading channels 85819
DS-CDMA systs., blind array sig. proc., temporal diversity 107421
DS-CDMA systs., code-timing acquisition 108597
DS-CDMA systs., code-timing sync. using space-time diversity 107767
DS-CDMA systs., multi-beam combining using interf. level based weighting factor 85504
DS-CDMA systs., semi-blind spatio-temporal equalization/multiuser detect. 131132
DS-CDMA systs., smart antenna testbed 128890
DS-CDMA systs. with closed-loop power control, error probab. anal. 131180
DS-CDMA wideband syst., RAKE reception, antenna and path diversity 85868
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
DS/CDMA adaptive rate convolutionally coded multicarrier syst., anal. 108809
DS/CDMA multiple picocellular radio syst., perform. 131121
DS/CDMA multirate commun., multiuser detect. 107571
DS/CDMA systs., multiuser detect. with cell diversity 84790

diversity reception continued
DS/CDMA turbo coded multicarrier syst. with nonuniform repetition coding, perform. 108619
DS/SFH-SSMA hybrid syst. over mobile satellite log-normal shadowing channel 131304
DS/SS systs., fast varying correl. multipath channel, blind adaptive estim./diversity combining 108529
dyn. single freq. networks 131153
EDGE mobile radio syst., space-time coding 85670
ELES antenna for mobile satellite terminals 83583
fading channels, single-carrier freq. domain equalization and space-time block-coding 95809
fast freq.-hopped multiple access sigs. detect. 130164
FDD WCDMA systs., closed-loop transmit diversity 108746
FDSS and FH commun. systs., optimum self-ref. spatial diversity proc. 119903
FFH MFSK multiple access syst. decoding scheme over Rayleigh channel 107757
FFH syst. diversity combining, worst-case partial-band noise jamming 96396
FFH/BFSK with product combining, partial-band jammed Rayleigh fading channels, BER eval. 108530
FFH/BFSK with product combining over partial-band jammed Rayleigh-fading channels, BER perform. 119873
FIR MMSE-DFE for multi-user commun. 107711
FM band terrestrial DAB, soft selection combining 120507
freq.-selective fading mitigation, multiband wavelet packet spreading codes with intra-code subband diversity 72933
full rate space-time turbo codes 72889
generalised delay diversity code for freq. selective MIMO channels 128997
generalized fading channels, av. outage duration 85483
GPS for measuring urban shielding charact. of mobile broadcast geostationary satellite 83261
group-metric multiuser decoding 84892
HF commun. using spatial diversity/high data rate waveforms 108583
HF digital commun., source separation with collocated antennas 84729
HF high lat. path commun., directional diversity and spatial filtering 85576
high-capacity wireless systs., perform. comparison of space-time archit. 108771
high-rate differential space-code modulation for interf. suppression 83816
high-rate multiple-antenna code design, representation theory 119863
hybrid SC/MRC combiners, Gaussian weighting errors effect 85482
hybrid selection/max.-ratio combining, HOS of output SNR 74553
hybrid wavelet/SS syst. for broadband WLAN 108266
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
image transm. over Rayleigh channels, wavelet domain diversity method 84417
in-house IR wireless commun., very high bit rates 86122
indoor WLAN, adaptive pre-selected sector antenna transmitter diversity using DS-CDMA 108211
indoor-indoor and satellite/HAP indoor propag. effects, anal. 83269
Intelligent Hub Access System 111565
interleaved fading channel block codes, decoding error probab. bounds 117929
IR wireless commun. systs., direction diversity, adaptive-rate code combining 108198
joint predistortion/transmit diversity 74679
Ku-band second-order site diversity data on rainy tropical region high elevation angle path 83309
LEO systs., phys.-stat. shadowing correl. model 74730
lin. precoded/coded OFDM for wireless channel fades 83815
LMR, CCI reduction and path-diversity reception 74739
low-complexity turbo-equalization for diversity channels 72932
low-profile switched-beam diversity antennas using high-impedance ground planes 128877
M-ary noncoherent orthogonal FSK over Nakagami fading channels, av. BER perform. 94227
M-CPM with MRC diversity in Rician, Hoyt and Nakagami fading channels 106047
matched-/partially matched one-shot detectors perform. 74557
max. ratio diversity combining 74556
max. ratio transm., tightness of SNR gain bound 96521
MC-CDMA syst. with Rayleigh fading multipath channels 108852
MC/DS-CDMA in cellular systs., estim. of spectral efficiency 85842
MIMO channels, multimode antenna soln. 105915
MIMO channels for spatial MUX systs., charactn. 131097
MIMO systs. with space-time block coding, optimal antenna selection 108593
MIMO wireless syst., layered space-time coding/sig. proc. 119862
MISO CDMA transm. with simplified receiver for wireless commun. handsets 74791
MM wave freqs. meas. of tropos. scintillation decorrelation scale-length 83316
MM-wave band wireless network, impact of shadow fading 108595
MM-wave harmonic space diversity act. integrated array, design 72678
MMSE-DFE receiver with spatial diversity, design and anal. error perform. 85808
MMSEC-RAKE receivers with diversity branches resoln. reduction, anal./simul./appls. 85721
mobile ad-hoc wireless networks, capacity increment 131119
mobile commun., metric weighted diversity combining based on multiple differential phase detect. 74742
mobile commun. syst., polaris. diversity 74865
mobile downlink transmit diversity, feedback efficiency and robustness 85669
mobile multimedia services, propag. considerations and fading countermeasures 108978
mobile radio syst., overall perform. improvement 108730
mobile radio transmit antenna diversity systs., turbo proc. 117993
mobile terminal, polaris. diversity modelling 85693
mobile transmit diversity for base-station antenna arrays 105934
Mobile User Objective System, commun. diversity advantages 111595
mobile-satellite channel models, phys.-stat. state transit. probabilities 108977
modified printed strip monopole antenna with pol. diversity for WLAN appls. 72582
MPSK, coherent, multichannel reception over freq. selective fading channels, perform. eval. 106045
MPSK/MDPSK/noncoherent MPSK with MRC/SC space diversity in Nakagami-m fading channel, sym. error probab. 96463
MRC coherent receivers in Nakagami-m fading channels, perform. anal. 85507
MT-CDMA noncoherent syst. with diversity combining 131050
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multicarrier m-ary/DS-CDMA systs., perform. anal. for high-data-rate transms. 108755
multicode multicarrier random access 107920
multimedia WLAN, dwell adaptive fragmentation for short dwells 74204
diversity reception continued
multiple access fading channels with multiple antennas, optimal power contr 130305
multiple antenna fixed outdoor commun., multiuser diversity 85508
multiple sym. differential detect. 73730
multiple sym. differential detect. with diversity reception 108517
multiple-antenna transm., optimum coded diversity with scalar codes 83927
Nakagami channels, correl. gamma variates sum for wireless systs. perform 131233
Nakagami correl. fading channels, stat. simul. model 108680
Nakagami fading, CCI, av. error probab. of optimum combining 85747
Nakagami fading channel, multiple equal-power cochannel interferers, perform anal. of max. ratio combining 74735
Nakagami fading channel, selection diversity, perform. anal. *(Chinese)* 11987
Nakagami fading channels, generalized diversity selection combining, BER per form. 96453
Nakagami-m fading, generalized selection combining, approx. BER perform 84812
Nakagami-m fading channels, av. SNR of generalized selection combinin 107627
Nakagami-m fading environ., perform. eval. of synthetic waveguide commun 111608
Nokia WCDMA expt. syst. for macro cell meas. 83306
non-orthogonal space-time block codes, max. sym. diversity 129157
nonGEO satellite diversity based systs., hybrid channel adaptive handover 9654
nonorthogonal multipulse sigs. in multiuser Nakagami fading channels 74515
Northpoint Technologies spatial diversity syst. 97045
OFDM, generalized, multipath presence, transmit antenna space-time block coo ing 83902
OFDM mobile systs., channel estim. for multiple antenna diversity receptio 108926
OFDM mobile systs., receive diversity 96434
OFDM mobile wireless syst., reduced complexity channel estim. 108892
OFDM space-freq. coded broadband systs. 83849
OFDM syst. improvement using antenna diversity *(Chinese)* 117913
OFDM systs., space-freq. transmitter diversity 74580
OFDM systs., space-time code design 72860
OFDM systs. with multiple transmit antennas, optimum training seqs. 74814
OFDM with postdetection-combining-based macrodiversity on multipath channe 119890
OFDM-CDMA syst. with various proc. gains, perform. 74654
OFDM/SDMA-based wireless local networks, adaptive loading 74605
opt. receiver, polaris. mode dispersion mitigation 131401
optimal transmit-diversity precoders for random fading channels 74824
optimal wideband transmit antenna diversity utilizing channel state inform 108745
optimum space-time convolutional codes 83940
orthogonal multicarrier-CDMA tech. with MRC scheme on two-ray multipat fading channels 96376
orthogonal space-time block codes decoding using squaring method 129017
patch-slot composite antenna for VH-pol. diversity CDMA base stations 7267
PCS base station bi-directional polariz. diversity antenna 105891
PDC handset diversity antenna perform., head/hand/shoulder effects, diversit antenna gain 108691
PHS base station, perform. of adaptive array antenna *(Japanese)* 74843
portable planar inverted-F antenna, polariz. diversity and human body effec 120055
precoded VBR multiuser systs., blind channel estim. 108614
predetection dual diversity in correl. Rayleigh fading, EGC/SD perform. 7455
quasi-closed-loop transmit diversity systs., unitary transforms appl. 108743
quasi-orthogonal space-time block codes with partial diversity 83854
RAKE 3G CDMA receiver, implement. to cdma2000 std. 85897
RAKE coherent combining for broadband single-carrier DS-CDMA wirele commun., expt. 74638
RAKE receiver with imperfect phase estim., perform. upper bounding 10852
RAKE selective reception over Rayleigh fading channels, optimum spreadin bandwidth 85460
Rayleigh dispersive channel commun., matched filter bounds 119877
Rayleigh fading, orthogonal signaling with coding/diversity, asymptotic perfor 74552
rect. dielec. resonator antennas for switching polaris. diversity receiver 8359
recursive space-time trellis codes for turbo coded modulation 72862
robust image transm. using source adaptive modulation with diversity 73358
Rohde & Schwarz's SFQ TV test transmitter for DVB-T diversity receptio 131730
Rohde and Schwarz SFQ TV test transmitter, SFQ-B5 noise generator optio 86313
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN chan nels, perform. anal. 108542
satellite diversity broadcasting, urban propag. *(Japanese)* 83262
SC/MRC hybrid systs. on Nakagami-m channels, error rates 85484
SD/TD/CDMA systs., joint detect./pre-distortion techs. *(English)* 130147
search and rescue, sea surface propag. 108999
selection diversity, av. level crossing rate/fade duration 131052
serially concatenated space-time coding 106138
SFH multicarrier DS-CDMA for transm. over Nakagami multipath fading chan nels 85538
sigs., systs. and computers, conf., Pacific Grove, CA (2000) 100407
Singapore, W-CDMA field trial 107862
software defined radios, sync. improvements, diversity use 108580
space diversity S-ALOHA with steerable beam smart antenna arrays, perform anal. 74661
space-freq. codes for broadband fading channels 129169
space-time bit-interleaved coded modulation over freq. selective fading channe with iter. decoding 72936
space-time block codes, max. SNR approach 74521
space-time coded systs., iter. MLSE 83877
space-time codes perform., spatial fading correl. impact 106136
space-time coding with max. diversity gains over freq.-selective fading channe 129058
space-time coding/Kalman filtering for diversity transms. through time-selecti fading channels 106088
space-time diversity using orthogonal and amicable orthogonal designs 1089
space-time equalizer devel./implement. 74858
sparse channels, blind equalisation using antenna diversity 119193
spatial sig. proc. merging diversity/beamforming perceptions *(English)* 1075
STENTOR for site diversity meas. 83279
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multius detector 85527
TCM, iter. space-time detect. for broadband wireless channels 85522

ersity reception continued
TCM anal. and design with transmit diversity for wireless commun. 83826
TCM with receiver diversity, turbo space-time equalization, max.-likelihood detect. 107694
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
TDD-CDMA systs., FIR RAKE multipath diversity with antenna array 96397
TDMA cellular syst., channel ident. and interf. cancellation 131138
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decoding 108857
TDMA systs., lin./nonlin. space diversity combining algms. 119993
TDMA wireless receivers, carrier interferometry pulse shaping scheme 119211
third generation wireless systs., open loop transmit diversity schemes comparison 85750
three-branch orthogonal polaris. diversity scheme 131113
time-selective fading channels, double differential space-time block coding 119878
transmit diversity scheme for freq. selective fading channels 74561
transmit diversity space-time coded sigs. equalization 73835
transmit diversity techs., matched filter bound 131291
turbo space-time low complexity code for syst. with large no. of antennas 72858
TURBO-BLAST for high-speed wireless commun. 83409
turbo-coded modulation for transmit/receive antenna diversity systs. over block fading channels 72888
type-I hybrid bandwidth-efficient turbo-ARQ scheme, diversity combining techs. 129164
UHF compact integrated diversity antenna for wireless commun. 83642
UMTS downlink capacity with space-time block coding, realistic channel model considerations 85827
UMTS polariz. diversity perform. 85687
unitary sig. constellations for differential space-time modulation 106063
US tissue charactn., use of freq. diversity and Nakagami stats. 98329
UTRA downlink with W-CDMA, space diversity schemes 120065
UTRA TDD adaptive MMSE RAKE receiver 108916
UTRA/FDD uplink, space-time combining 74825
V-BLAST, perform. losses due to fading 85532
VHF ultrahigh-resoln. atm. radar profiling, freq. diversity 122653
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
W-CDMA, space-time antenna transmit diversity, anal. *(Chinese)* 119231
W-CDMA improvements, principles and expt. results 108839
W-CDMA mobile radio, reverse link site diversity, turbo/convolutional coding 108895
W-CDMA RAKE reception in interpath interf., combining schemes 84902
W-CDMA reverse link, coherent adaptive antenna array diversity/SINR-based fast transmit power control 74639
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108885
W-CDMA reverse link, inter-cell site diversity using two-step selection combining, expts. 74640
W-CDMA reverse link, receivers for packet transm., comparison 108884
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short-term channel props. 74666
WCDMA, uplink spatio-temporal interf. rejection combining 85831
WCDMA downlink syst., soft handover technol. *(Chinese)* 108651
WCDMA single code/multi-code signalling for high rate data transm., delay spread effects, BER perform. 96465
WCDMA single-user interf. cancellation for fading channels and diversity antennas 108777
WCDMA UTRA uplink, joint demodulation with smart antennas *(English)* 106069
wideband DS-CDMA syst. with transmit diversity, forward link capacity 85777
wireless commun., TCM and generalized selection combining 108602
wireless commun. utilizing space-time diversity 108618
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
wireless handheld terminals, spatial/polariz./pattern diversity 119937
wireless networks, cooperative diversity protocol 131093
wireless networks, energy-efficient antenna sharing/relaying 84979
wireless networks, integrated services with space-time block-coded transms. 108612
wireless terminals, antenna design for selection diversity 120054

ivertors (fusion reactors) *see fusion reactor divertors*

ivide and conquer methods
automatic functional vector generation using interact. FSM model 79741
Colif, design representation for appl.-specific multiprocessor SOCs 114577
continuous time filters, wide dyn. range, divide and conquer design tech. 80046
ischemia detect., self-organising map appl., supervised learning suppl. 76300
large seq. ccts., testable design, partition and resynthesis approach 102039
large-scale analog networks, regularity-based hierarchical symbolic anal. method 79542
logic BIST synthesis, cct. partitioning, divide-and-conquer approach 79678
low complexity (turbo) classifiers in high dimens. feature spaces 128933
microstrip patch antenna, MoM multilevel divide and conquer method 72455
min-max-boundary domain decomp. 79104
Petri nets, stochastic, large, perform. eval., divide-and-conquer approach 124557
state estim. and multi-sens. data fusion using data-based neurofuzzy local lin. proc. models 86484

ividers, frequency *see frequency dividers*

ividers, voltage *see voltage dividers*

ividing circuits
see also frequency dividers; voltage dividers
CMOS current-mode multiplier/divider ccts. based MOS translinear principle 102437
CMOS self-timed divider using fast, robust pipeline scheme, DCVSL ccts. 68760
const. divider for wideband audio decompression proc., BIST implement. *(Chinese)* 79844
current division network, 10-bit, stat. design, MOSIS 2-μm proc. 125582
double single slope multiplier cum divider 68965
elec. alignment meas., resistor ladder struct. 109982
floating point divider, accurate lin. approx. using bipartite reciprocal table 114057
high-impulse voltage measuring systs., num. EM field anal. 86900
inductive current divider, automatic compensation using op amp 68973
multi-modulus divider, low-power, in 0.6 μm digital CMOS technol. 68690

dividing circuits continued
multi-radix approach to asynchronous division, data-depend. computation time 79777
parallel series approx. for fast floating point divider 79802
VLSI systolic cct., GF(2^m) iter. division algm. 102019

DLTS *see deep level transient spectroscopy*

DMM *see digital multimeters*

DMOS integrated circuits *see MOS integrated circuits*

DNA computing *see biocomputing*

DNQR *see nuclear quadrupole resonance*

DOA estimation *see direction-of-arrival estimation*

document handling
see also document image processing; text analysis; word processing
Confused Document Encrypting Scheme modified for digital inform. hiding 118017
cryptographic framework for document objs. resulting from multi-party collaborative transactions 106245
multidimensional interval alg. with symm. for describing block layouts 94630
real-time multimedia obj. commun., distributed Web-based framework 85380
secure digital archiving of high-value data 118010

document image databases *see visual databases*

document image processing
see also image scanners
A2iA CheckReader, commercial bank check recogn. syst. 84517
adaptive encoder for bi-level images 107062
adaptive image interpolation using, multilayer neural network 118294
adaptive model-based digital halftoning incorporating image enhancement 94501
anal. results eval., graph probing method 129930
automated syst. for low-resoln. document/text images restoration 73159
automatic document anal., multi-oriented, multi-scaled pattern recogn. *(French)* 118760
bank cheques, handwritten legal amounts segmentation, feedback-based approach 129941
bar chart recogn. in document images via Hough-based model 95572
bound vol. images, distortion recovery 129674
chart anal. and recogn. in document images 129605
cheque proc., images binarization, image depend. model 129600
Chinese bank check amount recogn. and segmentation 84518
Chinese newspaper with complex layout, anal./understanding/representation 94677
class. by modified X-Y tree encoding 129754
class. of document pages using struct. based features 84084
client-server archit. for document image recogn. 95491
color document compression, fast, scalable DSP archit. 95335
color halftone descreening based on color sigma filters 95706
compression using rate-distortion optimized segmentation 73341
coplanar prefilter based image binarization 129663
cpd. image compression using adaptive wavelet transform *(English)* 84450
cursive handwriting segmentation method, character shape extraction appl. 94691
data filling algms. for mixed raster content layers 95197
digital document image networking 129802
double-sided handwritten archival documents anal., character extraction from interfering background 95446
duplex scanning, show-through cancellation 94680
effective inform. preservation method for binary image reduction 118493
fast class. using weighted distortion 94719
font clustering and class. 118338
font clustering/cluster ident. 73446
forensic studies on handwritten documents, computer based syst. 84083
form class. method, partial matching 95573
form document proc., Chinese handwritten field data extraction, gravit.-based algm. 95435
gray scale document images, lossless compression methods eval. 84458
gray-level document images, stroke-model-based character extraction 94778
gray-scale document image lossy compression, quantization 95334
handwriting indiv. validation 129929
handwriting stroke extraction, XYTC transform 129926
Hough tech. for bar charts detect./recogn. 95517
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
image matching based on component blocks 94679
image rot. 94678
image sharpening/smoothing in Besov spaces, wavelet-based approach, deblurring appls. 94950
iterated complete path search for document image decoding 95337
iterated complete path search for document image decoding 129801
JBIG2 bi-level image coding std. 84459
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
k-nearest neighbor learning, fast binary image resoln. increment 94652
linguistic constraints added to document image decoding 95338
math. expression recogn., robust method, perform. eval. 129931
mixed raster content compression, block-threshold segmentation optim. 95198
multi-band disc model for document text segmentation 94888
multidimensional interval alg. with symm. for describing block layouts 94630
multiscale image segmentation, wavelet-domain HMM 107213
multiscale sharpening/smoothing in Besov spaces with appls. to image enhancement 106776
OCR of Roman, Chinese, Arabic, Devnagari and Bangla text lines 129682
old manuscripts restoration using image proc. techs. 94597
Oriya, printed Indian script, OCR syst. 129683
page segmentation, automatic perform. eval. method 129933
page segmentation and content class., document image proc. 84241
page segmentation and text extraction from gray-scale images, microfilm 95575
page skew detect. and correction based on line continuity *(Chinese)* 106735
paper based user interface for editing documents 94885
pers. ident. documents, image based authentication, DCT appl. 95034
recogn./retrieval, documents conf., San Jose, CA, USA (2001) 89587
scanner-model-based document image improvement 94676
SFSN model for image compression, neural net simul. 84374
skew detect. and block class. of printed documents 94489
skewed document correction algm. 118231
string matching techs. for low-confidence OCR word correction 94890
sym. matching based document image compression and merging syst. 95336
table ground-truthing problem 129932
tech. document images, optimum binarization 106450
teleteaching syst., image preprocessing for content-based image coding 95258
text block segmentation using pyramid struct. 94893

document image processing continued
text segmentation of machine-printed Gurmukhi script 94889
text string detect. from mixed text/graphics images 94887
two-stage binarization approach for document images 84240
typeface ident. by obs. character image modeling 73452
Vietnamese document image recogn. based on HMM and linguistics 129938
Web layout, optimal design, heavy tails/generalized coding 119742
word extraction using irregular pyramid 94894
XML compression with multiplexed hierarchical PPM models 106842
document management systems *see document handling*
document retrieval *see information retrieval*
documentation *see information science; system documentation*
documentation, program and system *see system documentation*
DOE *see diffractive optical elements*
domains
see also electric domains; magnetic domains
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 2000) 100366
opal photonic crysts. infiltrated with chalcogenide glasses, nonlin. appl. 82031
AlGaAs quasi-phase matched waveguides fab. by GaAs/Ge/GaAs (100) sublattice reversal epitaxy 93119
AlN epitaxial growth, ECR plasma assisted MOCVD struct. 90456
$Cu(Al,Ga)(S,Se)_2$ epitaxial films, MOVPE grown, structural studies 68221
GaAs/AlAs superlattice, seq.-tunnelling, current self-oscills. 126154
GaN epilayers, N_2 helicon wave plasma assisted evap. deposition, nitridation 114411
β'-$Gd_2(MoO_4)_3$, CZ method growth, ferroelastic/ferroelec. domains obs. 127231
InGaP/GaAs epitaxial layers, super-ordered domains, diffr. anom. fine struct. 69525
PZT, fractured ferroelec. ceramics, ferroelastic domain switching, XRD anal. 104361
$YBa_2Cu_3O_{7-\delta}$ HTSC film, strain relax. obs. 70646
domestic appliances
see also ovens; refrigerators
AC-PWM universal motor, sensorless speed control scheme 89361
Bluetooth technol. for appliance pers. area network creation *(Spanish)* 74847
cellular telephone-based home appliance control syst., prototyping 108776
cyclone technol. based vac. cleaners *(Japanese)* 124129
duty cycles, total demand 124127
ECHONET commun. middleware program, support tool for developing commun. software *(Japanese)* 85120
efficiency labeling programs and stds., eval. 134664
elec. appliances, desirable props. for auditory warning sigs. ident. 113155
environ. friendly power electronics rev. in home appliances 126710
fully networked energy infrastructure, stupid network, distributed intell. 133492
handheld vac. cleaner, modifs. for noise control 78348
home automation, power line and Bluetooth for domestic appliance control *(German)* 89465
home automation, tele-Haus project with integrated microsystems 78349
Home Energy Management System *(Japanese)* 88295
Home RF 96432
household elec. appliance, PWM inverter, conducted EMI 134663
household refrigeration/air-conditioning systs., TEWI eval. *(Japanese)* 100342
household sector energy use studies 124125
IGBT gate driver, monolithic, for smart power modules, CMOS 0.8 µm/50 V proc. implement. 81538
inverter syst. for home appliances, digital logic control PWM/PFC cct. design 77976
large-sized coating parts, thixomolding technol. *(Japanese)* 89933
LF meas. inhomog. mag. fields in human body, induced current dens. determ. 76720
Living network Control Protocol for domestic appliances 134665
load assess., intell. syst. 99434
M-POWER multiple-chip power device for switching power supplies 134196
microsystem technol. in household appliances 78350
microwave ovens, energy efficiency 113156
Multi Remote appliance controller for pers. with disabilities 111174
µVNC embedded module for low-cost Internet connectivity/home appliances interconnectivity 119695
on/off control devices, EMC enhancement 78351
PMSM, sensorless FOC, 6 sigma tool, param. optim. 134667
protocol for wide area secure networked appliance commun. 130340
single phase switched reluctance motor for vac. cleaner 134666
single-phase domestic appliance IM, computer simul. 123430
smart domestic appliances control using microcontroller-based triacs 78352
Ugandan rural electrification scheme 111766
universal motor struct. using soft mag. composites 133926
vac. cleaners, universal-motors design methodology 124126
warm water bidet energy-saving pers. hygiene syst. *(Japanese)* 89444
washing machines, three-phase IM, electronic control ccts. *(German)* 89467
donor levels *see impurity states*
doping profiles
2D dopant profiling of power MOSFET, SCM appl. 126277
asymmetrical IGBT, I-V characts. degeneracy rel. to n-buffer layer conc. 126765
BiCMOS collector insert layers, highly doped, proc. develop./simul. 92478
bipolar transistor, base transit time, base doping profiles, iter. schemes 70049
bipolar transistor, base transit time, doping profile 103791
bipolar UHF power transistor, IMD, collector doping profile 126670
bipolar UHF power transistor, nonlin. distortion, doping profile 103788
Bridgman-Stockbarger semicond. cryst. growth syst., dopant distrib. 90232
CMOS, abnormal jn. profile with Co silicidation 127030
CMOS device design, sub-50 nm, expt./simul. study 126769
CMOS device downsizing below 0.1 µm, problems/solns. 104090
CMOS shallow jn. technol., International Technology Roadmap for Semiconductors perspective 104141
CMOS technol. develop., 0.35-µm, blanket/pocket anti punchthrough device designs 104091
CMOSFET, optimum halo struct. 115927
CMOSFET shallow n^+/p^+ jn. form. using PIII 126742
colour polymer organic LEDs, ink-jet dye doping, lateral dye distrib. 116988
deep submicron grooved-gate PMOSEET characts., substr. doping dens. influ. *(Chinese)* 70112
degraded short channel LDD-nMOSFETs, 2D electrostatic model, hot carriers 70081
diamond:Al(Cu), high energy ion implant., conducting layer form. 80999
diamond:D CVD surfaces, D depth profiles 91583
diamond:N, synthetic crysts., implanted N redistribution 126322
diamond:S single crysts., ion implanted, struct. props. 126290
doping profiles continued
diamond, ion implant. related defects, inhib. of light element diffusion 115557
DRAM, 512 Mb/0.12 µm design rule, long data retention time strategy 125490
DRAM buried-channel pFET device, threshold voltage 115937
dual channel injection enhanced gate transistor, 2D simul. 103837
dual ion implant. syst. for wide appls. envelope 69814
dual-gate PMOSFET, B dopant penetration/gate depletion anal. for Gbit DRAM design 102184
freezeout/exhaustion prediction under nontrivial conditions 91572
gigabit dens. DRAM cell transistor using retracted Si_3N_4-liner STI 68800
H depth profiling by refl. elastic recoil detect. anal., geometric alignment 132268
III-V semiconds., modeling of implanted B(Se) ion distrib. 115523
ion implant., computer simul., visual obs. of implant. profiles 115521
ion implant., nondestructive monitoring, positron annihilation spectrosc. 115601
ion implant. techs. for device scaling solns., perform. benefits 69806
LDD NMOSFET hot carrier degrad. phenom., W or S shape evol. 81354
MOS capacitors, C-V curves, substr. doping profile effect 69279
MOS device LV near-interface trap-assisted tunneling current meas. 80941
MOSFET, at. scale charactn. of interfaces and doping layers 92332
MOSFET, dual-gate CMOS technol., self-aligned pocket implant. 81270
MOSFET, RSCE modeling for cct. simul. 126730
MOSFET device params. extraction method for mass prod. E-T data 126801
MOSFET impurity conc. profiles extraction by DCIV method 115938
MOSFET threshold voltage, model for RSCE 115903
MOSFETs, sub-50 nm, ultra-shallow jn. technol. for device design 103886
MOSFETs with pocket implants, effective channel length extraction by C-V method 103858
multicolor polymer EL device fab. using photo-bleaching method 104973
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismatch charactn. 104125
n-MOSFET low-standby-power design effects on hot carrier reliab. 126745
nanostructured devices, elec. params. meas. *(Chinese)* 81180
nMOSFET, lin. resist., enhanced non-scaling at cryogenic temps. 70099
nMOSFET, small-sized, hot carrier reliab., doping conc. effect *(Chinese)* 81335
NMOSFET, sub-0.1-µm, with 12-nm n^+-p jn. using 5-keV As_2^+ ion implant 115884
NMOSFET matching charact. for 0.18 µm CMOS technol., substr. voltage/oxide thickness 103857
NMOSFETs, worst-case hot-carrier stress condition, LDD resist. effects 70116
oxide-bypassed VDMOS, alternative to superjunction MOS power devices 92366
p^+-n jns. form. by solid diffus. source, N_2O activation treat. impact on charact 69654
planar MOSFET technol., 25 nm, manufacturability 126768
plasma doping, simul./safer gas usage 103289
plasma immersion implant. for semicond. modif./doping, historical perspective 103286
plasma ion doping as ultra-shallow jn. fab. tool 103288
PMOSFETs, 0.15-µm, B-interstitial clustering 115885
pMOSFETs, plasma doping/low energy ion implant., elec. props. 115909
pn homojunctions, carrier transport, thermionic emission proc. 103113
pocket implanted MOSFET current gain factor length scaling, charactn. method 103893
polymer light-emitting devices, emission color patterning, maskless dye diffusion tech. *(Japanese)* 71566
polysilicon:P gate electrode in 0.5 µm CMOS devices, elec./microstruct. props 104092
polysilicon doping extraction from C-V charact., improved formula 69819
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec props. 103243
polysilicon four-terminal TFTs, improved reliab. for AMLCD appl. 92343
polysilicon gate HfO_2 MOSFETs, dopant penetration effects 126778
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, contact resist. 102185
polysilicon resistors, analog CMOS appls., LF noise current 68555
polysilicon ultrathin gate oxide MOSFETs, edge direct tunneling leakage, phys model 70157
power DMOSFET, thermal behaviour, 2D computer simul. 92327
power IGBT, thermal behaviour, 2D computer simul. 92327
power superjunction MOSFETs, breakdown voltage, analytic model 81307
QD IR detector, high sensitivity due to barrier-limited photoelectron capture 97269
RESURF LDMOS transistor, smart power technol. 126857
scanning capacit. microscopy of MOS structs., dopant quantif. error study 121142
semicond., doping profile, C-V meas. interp. 126320
semicond. device, implant profile, AFM/SCM imaging 103255
semicond. device random dopant-induced effect, randomly perturbed nonlin Poisson eqn. 126619
semicond. doping profile, C-V characts., electrochem. etching 115495
semicond. failure anal., SPM appls. 113779
shallow jn. diodes for deep sub-µm CMOS, leakage current, proc. factors effec 115822
shallow n^+-p-well diodes, generation lifetime from reverse generation curren 126106
short-channel vert. sidewall MOSFETs, proc. flow 92374
Si:N, low energy N implant., chem. anal. 91976
SIMOX, BOX synthesis, C enhance. of SiO_2 nucleation, simul./SIMS profiling 91985
small sig. ac-SPV noncontact monitoring, near surface doping for IC-proc 104034
SOI CMOSFETs, 50 nm, ultra shallow jn., by laser annealing/pre-amorphization implant. 126775
SOI LDMOST with lateral doping gradient, phys. based charge model 126845
STI, narrow device, stress and dopant redistribution effects 103389
submicron device fab., proc. induced defect control 127109
super-self-aligned bipolar transistor, deep selectively ion-implanted collector high f_T/J_c *(Japanese)* 70051
surface react. doping using gas source for ultra-shallow jn. form. 103287
T-gate recessed-channel MOSFET for sub-100 nm Si CMOS 126763
TFT LCD fab., ion doping syst., large area line beam form. 115535
three-terminal band-to-band tunneling model on GIDL in MOSFET 81300
ultra-low-energy ion implant., Monte Carlo simul. 115493
ultra-shallow jn. form. by RTA, current capability/problems 103250
ultrashallow jn. monitoring, nondestructive in-line carrier illum. syst. 103266
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
p-/n-(6H-)SiC:Al(N), intrinsic defects, electron irrad., Si displacement threshold Frenkel pairs 69797
AlGaAs:C, δ-doped layers, MOVPE, nipi superlattices for AM 90389
AlGaAs/GaAs heterojunction bipolar TED design 102603

ping profiles continued
AlGaN/GaN HEMT fab., buried p-layers 81380
AlGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
p-AlGaN/GaN strained cladding layer superlattice, InGaN MQW LD fab., Mg doping 81044
$B_{10}H_{14}$, ion implant., beam spectra/surface resist./SIMS 115533
$B_{10}H_x^+$ beamline ion implant. for shallow jn. form. 81020
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
(Ba,Sr)TiO_3:Zr-substituted thin films for integrated capacitors, elec. props. 91415
(BaSr)TiO_3 thin films, D doping, annealing, capacitor elec. props. 81672
$BaTiO_3$:Y thin films, dielec. props., pulsed laser deposition 104319
$Bi_4Si_3O_{12}$:Nd, Bridgman growth, opt. props. 101170
CaF_2:Tm, single cryst. TLD, dose response, radiation therapy appls. 133086
$CaMgSi_2O_6$:Eu phosphors, blue/red emitting, VUV excitation appls. 104937
p-CdS:Cu thin films, chem. states, depth profiles, XPS anal. 103263
CdSe:Mn QD, organometallic synthesis, spectrosc. characterisation, etching, EPR, MnSe precursor 103128
GaAs bevelled multilayer struct., doping conc. profile, micro-Raman spectra obs. 80854
GaAs, carrier profiling, scanning spreading resist. microscopy 103002
GaAs hot electron injection FETs 92414
GaAs ion-implanted E/D MESFETs, proc. optim. for RF perform. 125726
GaAs large diam. wafers, RTA tech., dopant diffusion/slip form. minimisation 115487
GaAs metamorphic HEMT-based MMIC amps., high gain/perform. 69243
GaAs multiple ion-implanted FETs, nonlin. Volterra-series anal. of IMD characts. 114973
GaAs power microwave transistors, MOCVD δ-doped struct. 91286
p-GaAs:C,Mg wafer, elec. isolation, proton ion bombard./annealing 126038
GaAs:Si, δ-doped, electronic struct., applied elec. field effects 80997
GaAs:Si(Be)(C), doping during MBE, single-port compact dopant source 103252
GaAs:Si,Be MBE growth, compensation 68196
GaAs:Si,He layers, ion-beam-induced isolation 126310
GaAs:Zn, OMVPE growth, surfactant effects on doping 69786
GaAs-AlGaAs HBT prod. proc. technol., perform./reliab. 70043
GaAs-AlGaAs PHEMTs, contactless RT charactn. by SPV spectrosc. 70205
GaAs-AlGaAs n-N heterojunctions, band-gap offset estim. using J-V-T charact. 69647
GaAs-AlGaAs-GaAs quantum barrier varactor integrated with CPW, design 69122
GaInP/GaAs HBTs for HV operation, develop. and charactn. 125723
GaInP/$In_xGa_{1-x}As$/GaAs inverted delta-doped V-shaped pseudomorphic HEMT, temp. depend. 80273
GaInP-GaAs:C HBTs, MOVPE-grown, material quality/uniformity issues 70040
GaN:Er films, PL/EL vis./IR obs., precip. 93340
GaN:Er(,O) epilayers, implant. and high temp. RTA 69780
GaN:Fe, ion implant., damage, annealing, lattice site location 81016
p-GaN:Mg, acceptor activation, microwave treatment, PL, Hall effect 81047
GaN:Mg, acceptor related recomb. centers, inhomog. spatial distrib., CL 81043
p-GaN:Mg activation, thermal annealing, oxidizing atmos. 81045
p-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
p-GaN:Mg epilayers, micro-Raman PL, MOCVD 79345
p-GaN:Mg film, MOCVD grown 126216
p-GaN:Mg films, local vibr. modes, acceptor activation/deactivation 79344
GaN:Mg thin film SAW filter with high vel./low insertion loss, MOCVD 81762
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaN:Mg/Al_2O_3, wurtzite sample, electronic Raman scatt., MBE/MOCVD growth 124862
p-GaN:Mg/Ni contacts, Schottky barriers, memory capability 80922
GaN:Mg(Si)(C)(O) films, ion implanted, SIMS/RBS-channelling obs. 115507
GaN:Pr epilayer, Pr doped, PL/CL 126329
GaN:Si films, VPE on MOCVD-GaN templates, strain, doping distrib. 68295
GaN:Si films on GaAs, MOVPE, photolum., Si doping effect 79305
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
GaN:Tb films, GSMBE, PL, RHEED, EXAFS 79260
GaN/AlGaN SQ wells, intersubband transits., strain relax., screening 91851
GaN-AlGaN-GaN UV photodiodes, highly selective 97272
GaSb:Mn, vert. Bridgman tech. growth, segreg., growth rate effects 91986
GaSe, vert. Bridgman growth, radial dopant segreg. simul. 103267
GdOBr:Tb^{3+},Ce^{3+} phosphors, green emission enhancement by co-doping 82334
Ge wafers, ion-implanted B diffusion 126305
Ge:Ga single crysts., melt growth, striation under vibs., weak heat convection 114207
Ge-redistributed polysilicon-SiGe stack gate for CMOSFETs, high-perform. 126773
HgCdTe double-layer heterojunction photodiodes, 2D anal. 82350
HgCdTe dual-band PV detectors, triple layer heterojunction design 109545
HgCdTe n-on-p-type structs., RIE induced p-to-n conversion, contactless jn. contrast 93370
In/B double pocket archit. for sub-100 nm MOSFETs 81340
In(As)P:Zn, MOVPE based Zn diffusion, diffusion depth, hole conc. 127952
InGaAs:Si/GaAs single QW, PL, delta-doped sheet posn. 126167
InGaAs/AlAsSb QW, MBE growth, Si doping 115397
InGaN/GaN DHBT, p-InGaN base, high current gain, MOCVD/plasma etching fab. 92306
InGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
InGaP/GaAs reson. tunneling bipolar transistors, multiple NDR 70038
InP CVD optoelectronic struct., scanning spreading resist. microscopy 103257
InP, carrier profiling, scanning spreading resist. microscopy 103002
InP, implant.-induced carriers/depth profiles correl., annealing 91958
InP:Fe epitaxial layers, dopant distrib., time-resolved photolum. 91670
InP:Fe,Ru,Zn films, dopant diffusion, current-volt. studies 115554
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substitution 104311
$Pb_{1.05-x}La_xTi_{1-x/4}O_3$(100) thin films, sol gel tech., structural/microstructural charact., elec. props. 104314
Si BJTs, high injection effects on noise charact. 81218
Si CZ-grown single crysts., finite difference anal. of radial P dopant distrib. 103264
Si, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115536
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buried diffusions 91391

doping profiles continued
Si bipolar transistors in 0.5-μm based BiCMOS technol., fab./charactn. 103771
Si, doping profile, opt. meas. 91947
Si, high energy ion implant., annealing, elec. act. centres 115510
Si, ion implant., dopant diffusion, SIMS 126298
Si multilayer structs., MBE growth combining solid/molten Si evap. 103132
Si p-doped multilayers, 2D dopant profiling, SCM obs. 126297
Si pn devices, PEEM, doping-induced contrast, photon energy depend. 69630
Si, polycryst. films, lightly doped, grain boundary transport props. 115298
Si polycryst. layers, epitaxial realignment, BiCMOS technol. 124888
Si, shallow acceptor center, mag. moment relax. rate, muon probe 102961
Si:Ag solar cells, thermal failure model, depth profile anal. 89282
p-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
Si:As, clustering equilib., deactivation kinetics 81017
Si:As, ion implanted shallow jn., MEIS/RBS profiling 115373
Si:As, ion-implanted, clustering/precip. anal., SIMS/EXAFS 115590
Si:As, near-surface damage annealing and ultralow energy implants elec. activation 126275
Si:B, B diffusion, HI irrad. effects 115559
Si:B, Bi ion irrad. effects on impurity redistribution 126605
Si:B, init. anom. diffusion in superlattice wafers at low-temp. annealing 126313
Si:B, laser thermal processed, annealing, B diffusion 115480
Si:B low dose low energy ion implant., noncontact in-line monitoring 115591
Si:B p/p^+ epitaxial layers, ion implant., misfit disloc. nucleation/glide, RTA 126280
Si:B polycryst. films, CVD, stress, MEMS appls. 104169
Si:B, segreg. at ang. config. of Si/SiO_2 oxid. boundary 103258
Si:B, sub-melt laser annealing, low temp. RTA, minimised diffusion 115483
Si:B, ultra low energy implant., decelerator module 115544
Si:B ultra shallow jns., sub keV ion implant. 115505
Si:B, ultralow energy implanted B, TED 69800
Si:$B_{10}H_{14}$ jns., ultra low energy ion implant. 115532
Si:B/SiO_2, through-oxide implant., SIMS anal. 103254
Si:B(As)(BF_2), low-energy ion implant., high-conc. diffusion profiles 126311
Si:B(As)(P)(Sb) ultra-shallow abrupt jns., activation/deactivation, laser annealing 115481
poly-Si:B(P) LPCVD layers, thermal cond. study 115293
Si:B,He, B-cavity gettering, He implant.-induced 126323
Si:B,O, roughness, crater bottom comp., SIMS obs. 69825
Si:B,O,C, ion implanted, vacancy/interstitial depth profiles 69787
Si:B,P,As, single-wafer implant., cross-contamination control 126284
Si:Cu, diffusion rel. to gettering, silicide retardation effects 125996
Si:Er, ion implant., IR PL emission, minority carrier lifetime 91585
Si:Er, ion-implant., range distribs. 69488
Si:Ge, reducing As to Ge cross contamination, ion implant. 126282
Si:Ge,B(P)(As) implanted wafers, laser thermal annealing, Boxer cross meas. 115488
Si:H, H-plasma-etched and H-implanted single-cryst., annealing effect 69781
Si:H crysts., H depth profiling, ERDA anal. 126324
a-Si:H films, direct patterning by NSOM 103698
a-Si:H thin film imaging technol. on glass/plastic substrs. 75629
Si:H^+,He^+ single cryst., evol. during annealing 126273
a-Si:H,(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
Si:He,N, porous Si form., MeV energy pre-implant. 80992
Si:In, halo doping by In ion implant., advanced CMOS devices 115499
Si:In, qtr. micron device implants, In cross contamination 126285
Si(:Li) space solar cells, physic/mfg. technol. evol. 134406
Si:N^+,O^+ irrad. crysts., depth selective XANES anal. 80987
Si:O, ^{18}O implant., range params. 81026
Si:P, non-mass resolved ion implanter, P dose uniformity, oxide uniformity/dimer ratio effects 115572
Si:P wafer, ion implant., channeling uniformity control 115605
Si:P,Al, HI channeling, depth distrib. 103280
Si:Yb, ion-implant., range distribs. 69488
Si/Ge Si Qw MODFET, low energy PECVD, struct./elec. charactn., TEM 124890
p^+-poly-Si/NIDOS/SiO_2/Si capacitor, boron penetration 103195
Si/$Si_{1-x}Ge_x$ deep submicron MOSFET, stepped doping profile 103870
Si-glass MEMS micropackages, corros. resist., B doping/self-induced galvanic bias 78677
Si-on-SiGe MOSFET, strained, inversion layer centroid modeling 126729
SiC, 4H, 6H, proton implant. induced intrinsic defects, EPR 69995
SiC, 6H, MOS struct., shallow dopant/surface levels, TSC 69758
4H-SiC IMPATT oscillator, design/fab./microwave charactn. 69141
SiC Schottky jn. admittance, carrier freeze-out effects 69718
SiC, atomistic simul. of ion implant. into different polytypes 115519
4H-SiC buried channel normally-off MOSFETs, high channel mobility 70127
4H-SiC p^+-n-n^+ avalanche diodes, elec. charactn. 92294
SiC polytype depend., tantalum/tungsten band gap states 69596
SiC:Al,B, 4H, deep acceptors, EPR, vacancies 69798
SiC:Al,B, 4H/6H, absorpt. meas., doping level eval. 69809
SiC:Al,B power DIMOSFET with double implanted P-well 81309
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
SiC:B epitaxial layer, diffusion 69795
6H-SiC:B, selective dopant diffusion through graphite mask and jn. charactn. 69813
4H-SiC:B,Al, impurity-controlled dopant activation, H-determined site selection 126101
SiC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796
a-SiC:H film plasma CVD by dissociating source gases separately, opt. props. *(Japanese)* 90361
n-SiC:N, 6H, micro Raman/photoluminesence study 69577
4H-SiC:N CVD films, cond. electrons, intrinsic mobility, valley-orbit splitting 69597
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V meas. 68237
SiGe HBT, base transit time, model, exponential base doping, current dens. *(Chinese)* 126675
SiGe HBT, situ GSMBE growth *(Chinese)* 81232
SiGe HBTs, high injection effects on noise charact. 81218
SiGe HBTs, low RF noise optimized, cryogenic operation 70033
SiGe HBTs, profile design considerations for base transit time minimiz. 103769
SiGe HBTs, vert. scaled, low-temp. collector profile design 70034
SiGe graded HBTs, inverse base width modulation effect, anal. model 103775
SiGe high-speed LV HBT proc., implanted collector profile optimiz. 70031
$Si_{1-x}Ge_x$ on Si(001) substr., band gap narrowing 81021
$Si_{1-x}Ge_x$:B strained epitaxial layer, boron diffusion 103281
SiO_2, ^{18}O implant., range params. 81026
SiO_2:B, boron diffusion, p-channel MOSFET 80988

doping profiles continued
SiO_2:Er, ion-implant., range distribs. 69488
SiO_2:Ge(Si) gate oxide for MOS devices, Ge(Si) nanoclusters, phys. props. 115790
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiO_2:Yb, ion-implant., range distribs. 69488
SiO_2/Si, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115536
SiO_2/Si, low energy N implant., chem. anal. 91976
SiON-based CMOS, heavily NO nitrided, analog charact. for mixed analog/digital LSIs 127048
SnO_2:Pd sens. elements for electronic detect. of methane, charactn. 109735
SnO_2:Sb(F) thin films, optimum doping content expression *(Chinese)* 103256
SnO_2:Sb(Nb)(In), dopant surface segreg., XPS anal. 103274
SnO_2-based semicond. gas sens. for combustible/pollutant gases, fab. 75727
a-V_2O_5-P_2O_5:CuO with metallic contacts, elec. props. 126250
$Y_3Fe_0(12)$:Co epitaxial films, in-plane uniaxial mag. anisotropy 92789
$YMnO_3$:Zr thin films, sol gel method, leakage current orig., heat treatment 104318
ZnCdMgSe-based DBRs, high reflectivity symm. strained, MBE, charactn. 105384
ZnO varistors, elec. degrad., additive effects *(Japanese)* 103940
ZnO-based varistors, inversion boundaries, study using electron microscopy methods 69267
ZnSe:Al single cryst., phys. vap. transport growth/doping 101165

doping, semiconductors *see semiconductor doping*

Doppler broadening
see also Doppler shift
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
digital mobile radio systs., Doppler spread estim. 74626
gamma-ray tracking algms., DSP 121861
HF high lat. path commun., directional diversity and spatial filtering 85576
HF noncontiguous channels, propag. charact. 83288
methyl-silsesquioxane films, nanoporous struct., positron obs. 104246
scatt. medium homodyne/heterodyne imaging by 2D holographic phase-sensitive detector 131915
CO_2 RF excited slab laser, optogalvanic effect 105120
Cs D_2 reson. line, diode laser freq. stabilization 120613
Ge X-ray lasers, output, Doppler shift, freq. redistrib. fn. effects 71629
He-Cd^+ hollow cathode lasers, single-mode operation, linewidth studies 105096
O_2, singlet, direct detect. by intracavity laser spectrosc. 121256
Si:O, BOX, SIMOX, positron annihilation 91969
Sr-Ba-Ti-Nb-Pb-O ferroelec. plasma cathode spectrosc. 125956

Doppler effect
see also Doppler broadening; Doppler measurement; Doppler shift
act. integrated antennas using direct-conversion detect. 83611
act. sonar waveform design/proc., comb waveform 109312
aircraft flight path estim. using freq. meas. from wide aperture acoustic array 99084
antenatal fetal risk assess. by US, neural nets 110823
binary phase coded pulse compression, time sidelobe reduction 109258
CDMA RAKE receivers, channel estim. errors and Doppler diversity 108920
CDMA wideband cellular networks, power control results 85745
Damson HF channel characterisation, review 105744
dielec. cylinder, acousto-EM scatt. behaviour 128740
displacement sens. with nonsymmetrical double gratings 75448
DS/SS systs., fast varying correl. multipath channel, blind adaptive estim./diversity combining 108529
FSK low power receiver for space appls. 96634
HF surface wave radar, shipborne, expt. anal. of sea clutter 75070
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
HRR airborne phased-array radars, clutter suppression/moving target detect./feature extraction 75160
HRR synthetic moving target profile generation using meas./modeled target data 86138
IFSAR, spotlight-mode, scatterer location direction cosine method extension 109240
intramyocardial M-mode Doppler tissue imaging anal. 98341
ionos. movements, bitemporal response fn. method 88128
leaky Lamb wave device, moving speed meas. 132180
mobile commun., spectral moment approach to vel. estim. 96440
mobile radio channels, interchannel interf. of OFDM 74696
MTI, super resoln. feature extraction 120413
narrow-band mobile commun. channels, vel. estim./correl. props. 108811
Nozomi Mars spacecraft, Doppler freq. short period vars. *(Japanese)* 97025
OFDM mobile commun. systs., intercarrier interf. self-cancellation 96546
OFDM multi-user broadband mobile channel, decision-directed tracking 97011
radar sea clutter, modelling 75071
Rayleigh dispersive channel commun., matched filter bounds 119877
Rayleigh fading channels, min. duration outages 131179
rejection filter optimisation during repetition period wobbling 130087
sea surface, multi-freq. polariz. backscatt. 72322
STAP forward-looking radar, Doppler compensation 131637
synthesized aperture, Doppler sig., obj. internal struct. scanning 84124
targeting radar with multifrequency radiation/polarizing reception, combined portrait stat. model 75164
tomographic reconstruction of homog. objs. using multi-step ART 98318
tropos. radio occultation sigs. tracking from LEO 76892
uniform circ. array, DOA and Doppler freq. estim. *(Chinese)* 95721
US time freq. images anal. using deformable models 87508
wideband transhorizon channel charactn. 131110
wireless mobile radio systs., Doppler spread estim. 96452

Doppler lidar *see Doppler radar; optical radar*

Doppler measurement
see also Doppler radar; laser Doppler anemometry
2D smart detector array, interferometric appls. 109659
acoustic imaging syst. for borehole wall, fluid flow distrib. around subsurface fractures 111545
aortic coarctation, post-operative eval., Doppler echocardiography limitations 110684
aortic haemodynamics, esophageal probe/multigate Doppler-proc. syst. 110731
aortic Windkessel fn., age, gender, cardiovascular risk factors effects 132615
arterial wall vel. and distension, US Doppler syst. 98323
atmos. opt. rem. sens., fly-eye design advances 122676
autoregressive spectrum model, Doppler angle estim. 110739
biotissues, laser-ablated, Doppler diagnostics 117601
biotissues, nonstationary mass removal by laser ablation, Doppler diagnostics 122047
blood, opt. meas., conf., Amsterdam, Netherlands (Jul. 2000) 78375

Doppler measurement continued
blood flow Doppler US sig., time-freq. anal. 98292
blood flow turbulence, pulsed-wave Doppler US, time-freq. representation 87
blood in cylindrical models, acoustic streaming, finite element simul. 11073
blood vel. estim. using speckle decorrelation 98325
cardiac fluid dyn., diastolic fn. modelling 98336
cardiac output, noninvasive determ. in small circulatory systs., limitations *(G man)* 98334
carotid arteries, 3-D power Doppler US/MR angiographic images registrat 110795
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
cerebral embolus ident. using rule-based ES 122016
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform dete using compensatory fuzzy neural nets 110801
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
cochlear blood flow meas., catheter mounted Doppler US transducers 1106
colour Doppler US accuracy, transducer, vel., Doppler angle, instrum. settin effects 87490
condensed media, femtosecond laser pulse induced mass-transfer procs., Dopp tomography 87030
contrast agents-US interact. during Doppler investigs. 132621
diabetic neuropathy, autonomic nervous syst. fn., blood flow variability an *(Japanese)* 132630
diastolic fn., peak Doppler E-wave, peak mitral annulus vel. ratio 87486
displacement meas., laser Doppler effect 117582
Doppler-range satellite positioning algm., geometric dilution of precision 97
dorsal aortic flow vel. in chick embryos of stage 16 to 28 110794
durian fruit, nondestructive maturity determ., force vibr. appl. 100355
echocardiography and Doppler tissue imaging, myocardial vel. meas. 13260
echocontrast agents, blood flow assess. by US-induced destruction 76376
echographic aiming, increased effectiveness of laser therapy 132597
exercise induced pulmonary arterial hypertension detect., Doppler echocar ography 132595
fetal breathing movement detect., modified fetal monitor/sig. proc. 110719
fetoplacental vasculature, 3D power Doppler US imaging 132611
forward-looking ring-annular US arrays, modified weighting method 12202
FPA Doppler imaging with per-pixel CW-Doppler receiver array 110736
gluteal aneurysm embolization, giant, colour Doppler sonography in follow 76364
haematoma model, acoustic streaming, colour Doppler detect. 132620
hematocrit estim. by dual-gate power Doppler 110737
hepatic cancer RF thermal ablation, ultrasonography and Doppler tech. *(Chine* 76358
hepatitis C, glucagon injection, portal blood flow vel., sonography 98267
heterodyning demodulation tech. for spatial quadrature 110733
high-spatial-resoln. blood tomographic vel. mapping by real time colour Dopp OCT 76395
in-housed damper, adaptively compensated laser Doppler vibrometer body vi 110004
Inmarsat D+ terminal develop. 77036
intimal hyperplasia develop. study, Doppler US appl. 76372
intrusive/nonintrusive radar vehicle detectors for length and vel. meas. 969
kidney kidney malignant tumor, color Doppler flow imaging diagnosis *(Chine* 76360
laryngeal phonation fn., noninvasive assess., colour Doppler US imaging 122
laser Doppler long. displacement meas., ref. opt. struct. *(Chinese)* 109977
2D laser Doppler vibrometer for vibr. amplit./freq. meas. *(Chinese)* 86984
laser velocimeter, feedback interferometry, real-time param. estim. 117580
left ventricular diastolic fn., coronary artery disease, left atrial M-mode ech cardiography *(Chinese)* 76359
lin.-array Doppler syst., steady flow, max. vel. estim. error sources 98266
local myocardial dysfunction caused by ischemia/reperfusion, Doppler tis imaging *(Chinese)* 76357
mine detect., scanning LDV vibrometer, acoustic-seismic coupling 77001
mine detect. systs., perform. assess. 73193
mitral regurgitation, 3D color Doppler reconstruction 76345
moving scatterer differentiation using trapezoid filter/pulse echo ultrasou 110732
multiply scatt. photons, low-coherence interferometric path-length-resolved D pler meas. 132646
myocardial imaging, normal/ischaemic myocardial fn. assess. 132593
NDE syst. US transducers creation, flexural waves use 88212
nephrourology, abdominal ultrasound diagnosis, hist. 87482
neurovascular coupling, cerebral autoregulation, control syst., Doppler 76341
nonstenotic internal carotid arteries, Doppler US vel. meas. 110802
obesity, coronary flow reserve/abdominal fat, ultrasonographic assess. 1326
OCT, fluid flow vel. imaging 110839
old myocardial infarction, diastolic fn., echocardiography *(Chinese)* 98304
opt. fiber segment, long. elastic wave speed and atten. meas. 127713
perimembranous ventricular septal defects, shunt quantification, proximal isov surface area 98270
phase Doppler anemometry, wavelet anal. 121228
phase Doppler particle size analyzer, light-absorbing droplet effects 86952
phase Doppler vol. flux meas. for low data rate appl. 110051
phased-array intracardiac echocardiography guided RF ablation 87503
phytoplankton, marine, biomass meas. by dual-beam laser fluoresc. Dopp cytometer 86677
porcine blood, Doppler power var. under steady/pulsatile flow 132619
prostate, normal/decreased blood flow, contrast-enhanced power Doppler ima ing 110793
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. pr *(Chinese)* 122034
pulsatile axial flow vel. waveforms in curved elastic tubes 98320
pulse inversion Doppler harmonic imaging, generalisation 122008
self-contained fan-beam acoustic Doppler current profiler 76911
skin blood perfusion, PM effects, laser Doppler flowmetry/imaging 133082
spherical/nonspherical particles, co-axial jet and swirling flow, laser-based pa cle meas. 97878
steel, structural, residual stress, acoustoelastic LDV 79483
stenoses morph. eval., power Doppler US, flow phantom 121996
tissue strain estim. using extended combined autocorrel. method 98290
torsional vibr. meas. syst., Doppler technol., sig. proc. *(Chinese)* 110007
transcranial Doppler ultrasonography, functional, test-retest reliab. 87487
transcranial Doppler US, 1 MHz transducer eval., embolic sig. detect. 9828
tumour blood flow, quantified power Doppler US, microscopic quantificat 87507
US blood flow sigs., nonlin. characts. anal. *(Chinese)* 121994
US flow vel. sig. proc. unit, flow vel. meas. *(Chinese)* 98272
vascular tree extraction from MRA/power Doppler US image vols. 76491

ppler measurement continued
vector Doppler syst., low cost, utilizing diffr.-grating transducers 110734
Al-Mg, residual stress, acoustoelastic LDV 79483
Si micro-oscillator, vibr. meas., scanning LDV 97855

ppler radar
act. opt. true airspeed sens., precursor expt. 76873
adaptive moving target detector with Wigner-Ville distrib. as Doppler filter bank, perform. 75107
adaptive sig. proc. against pass. interf. 75119
airborne SAR, moving target detect. and imaging 120402
atmos. radars, ground clutter ident. and suppression 76874
building occupants, robot-mounted through-wall radar 77039
chaotic phase code for radar pulse compression 96948
clutter Doppler spectrum, radar detect. 120422
coherent lidar high-resoln. Doppler vel. profiles retrieval 122661
compact forward-looking SAR with digital beamforming on receive only *(English)* 75210
CW radar target tracking in Doppler freq. shift 86238
detect. and ident. with uncertain target aspect, optimal transm. pulse shape 99163
diffuse/specular radar targets stat. imaging 75124
digital filter freq. response characts., analog shaping, Doppler tracking 118991
expanded vel.-azimuth display tech., error anal. *(Chinese)* 76865
fast-scan GMTI/STAP archits., perform. comparison 96991
fiber-based Doppler lidar airborne turbulence sens. *(Japanese)* 99004
FM waveform mgt. by missile-borne pulsed Doppler radar during target tracking in clutter 99166
FM-CW radar atmos. profiler, dedicated computer syst. 76902
fractional FT based target no. detect. 75190
ground penetrating radar, sig. proc. using super resoln. tech. 96951
high resoln. 3D snapshot ISAR imaging and feature extraction 96924
high-speed group targets, freq. selection in echo sig. accumulation 120411
ionos. param. diagnostics, vert. sounding method errors 133305
ISAR, high-resoln. profile, angle glint suppression *(Chinese)* 109248
ISAR imaging of moving targets, simul. 96976
Ka-band Doppler radar for cloud and fog obs., field eval. *(Japanese)* 75213
Ka-band Doppler speedometer 75202
Ka-band radar front-end, appl. to avalanche detect. 133346
land mine detect., acoustic-EM wave interact., Doppler spectrum 77057
laser act. tracking, basics & appls. 93937
long-range low-coherence pulsed Doppler lidar, ref.-beam storage 88151
lower atmos. wind profiler, wind speed estim., GA use 122638
manoeuvring target ISAR imaging, time-freq. approaches 120426
mesos.-stratos.-tropos. radar echoes interp. 133318
meteorological radar, sig. freq. shift meas. 122636
microwave Doppler radar, radiometer detector, obj. detect. 86213
microwave radio for Doppler radar sens. of vital signs 87564
midtropospheric aerosol backscatt. background mode, space-based/airborne lidars appl. 131674
MM wave pulse Doppler radar, suppression of interf. from hydrometeors 109249
monopulse Doppler radar syst., high-speed DAQ/DSP 75188
monopulse radar, unresolved Rayleigh targets, DOA estim. 96919
moving target detect. via airborne HRR phased array radar 120418
multiple targets resoln. using time range Doppler image 75192
objective anal., Barnes filter adaptation appl. 88153
ocean wave obs. by CW mm-wave radar with narrow beam 99025
polarimetry, atm. rem. sens., ground clutter suppression 76880
pulse Doppler radars, nonlin. suppression tech. for range ambiguity resoln. 96935
pulse-diverse radar, range ambiguities, nonlin. suppression 131625
pulsed HF ground wave radar, bistatic operation, noise and ocean clutter 120459
pulsed microwave radar sens., low-cost baseband, meas. appls. 109289
pulsed-Doppler radar, closely spaced airborne objs. range determ. 120409
radar data modeling with time series models 118879
respiration/heart beat meas., microwave displacement meter 122068
SAR, airborne, motion compensation 75090
SAR image proc. for moving target focusing 99158
SAR preprocessor, video prefiltering, real-time 3D modular design 86215
scanned pattern interferometric radar for space-based GMTI 133407
sea surface polarized emission meas. and wind-wave radar meas. 122688
sig. proc., time freq. anal. 75089
Singapore, satellite link rain atten. and radar meas. 83320
spilling breaker water waves, low-grazing-angle scatt. 133344
spin estim., new method 75095
STAP radar, ground moving target tracking 96905
Taiwan CAA single-Doppler obs., Typhoon Alex 1987, kinematic struct. 86233
target tracking, neg. correl. & optimal filters 120428
target-to-clutter contrast enhancement using radar Doppler polarimetry 96955
TOGA COARE, tropical oceanic squall line, 3D cloud model vs. Doppler radar data 86232
transient breaking waves, radar backscatt., PO model 76909
turbulence intens. in clouds and precip., radar meas. 76903
vel. meas. in noisy environ., Doppler-effect radar 78500
VHF tropos. radar data, spaced antenna/Doppler beam steering methods 133317
VHF/HF sea echo Doppler spectrum for finite illum. area 76916
weather radar develop. and appl. programs at Lincoln Laboratory 98994
wideband radar for ballistic missile defense and range-Doppler imaging 99141
wind, complex terrain, Doppler radar, real-time synthesis 98997
wind detect. lidar, beam scanning tech., inversion method *(Chinese)* 99002
wind Doppler lidar meas., non-Gaussian sig. in turbulent atmos. 122658
Er,Yb:phosphate glass Q-switched diode-pumped laser, coherent Doppler lidar 117137

ppler shift
see also Doppler broadening
act. array, Cramer-Rao bounds for estimating range/vel./direction 75106
atm. low elevation angle radio wave bending angles determ. 76891
biomimetic platform for studying echolocation of bats 86250
bistatic clutter control, clutter tuning 99157
CDMA uplink coherent detect., dual mode channel estim. 131260
cellular commun. using aerial platforms 96501
cellular mobile commun., OFDM syst., freq. offset estim. 85817
CW radar target tracking in Doppler freq. shift 86238
differentially coherent code acquisition in wideband jamming 108582
displacement meas. using rem. sens., Doppler effect *(Chinese)* 86474
double DPSK perform. over LEO mobile satellite channels 74891
DS-CDMA mobile satellite noncoherent systs. with orthogonal sigs., perform. anal. 74651
DS-SS syst., digital DLL, Doppler shift and A/D quantization 85526
EM wave propag., Sagnac effect 105756
fast-fading GPS multipath bias charact., validation 131698

Doppler shift continued
generalized almost-cyclostationary sigs. on multipath Doppler channels 118923
HF high lat. path commun., directional diversity and spatial filtering 85576
inter-satellite laser link acquisition syst., atom filter multi-peak/tunable charact. *(Chinese)* 109221
ionos., Doppler freq. shift meas. 83340
land mobile to mobile channel, differential detect. 131125
M-CPM with MRC diversity in Rician, Hoyt and Nakagami fading channels 106047
M-DPSK receiver for Doppler-shift mobile commun. 85809
meteorological radar, sig. freq. shift meas. 122636
mobile robot, US dist. meas. tech. 75236
mobile satellite burst commun., all-digital receiver *(Chinese)* 74898
multi-WSSUS multipath channel, Markov chain/QAM fading based stat. discrete time model 120073
multicarrier CDMA syst., difference carrier detect. with two pilots 74764
narrowband commun. sig. detect. in fast fading Ricean channel 119104
non-LOS multipath conditions, mobile location calc., scatterer inform. 119971
OFDM systs., freq. offset blind estim. filter 106032
Rician fading channels with Doppler shifted direct component, freq. offset compensation *(Japanese)* 108821
satellite pers. commun. channels, Doppler spread charact. 108979
STAP, effects of internal clutter motion in heterog. environ. 96940
time-varying multipath channels, params. estim. using chirp sigs. 130261
vehicular speed response adaptive antenna design *(Japanese)* 105971
wake vortex detect. using radio acoustic sounding syst., num. simul. 97879
wind detect. lidar, beam scanning tech., inversion method *(Chinese)* 99002
wind Doppler lidar meas., non-Gaussian sig. in turbulent atmos. 122658
Xi'an-Dalian link, 10 MHz propag. and ionos. Doppler shift 85570
GaAs, electron-plasmon scatt., plasmon freq. Doppler shift 69522
Ge X-ray lasers, output, Doppler shift, freq. redistrib. fn. effects 71629
N_2 gas flow, high-speed, laser Doppler diagnostics, spontaneous Brillouin scatt. 121266

dosemeters *see dosimeters*

dosimeters
see also dosimetry; thermoluminescent dosimeters
bubble detector, neutron meas., terrestrial and space studies 87170
calib., mixed high energy photon/electron radiation fields 122412
chem. dosimeters and water calorimeter, electron-beam dose comparis. discrepancy 76125
combination β-γ-radiometer & dose-rate meter, extended dyn. range 98030
conf., Nuclear tracks in solids, Portoroz, Slovenia (Aug./Sept. 2000) 113241
CR-39 gamma-ray irrad., depth-depend. bulk etch rate, dosimeter 121661
CR-39/85 etched detectors with alpha/neutron-induced tracks, He-Ne laser transmiss. 121662
diamond CVD microdosimeters 122443
diamond CVD radiation detectors for harsh environ. 132367
diamond detectors, 45/100 kVp therapy beams dosimetry appl. 122399
direct ion storage dosemeter, instant readout capabilities 122421
dose quantities, radiation protection, dosemeter calib. 133089
electronic dosemeters, comparison test 133106
electronic dosimetry/TLD comparison, Belgian Nuclear Research Centre 133105
electronic pers. dosemeter, calib. procedures, Monte Carlo code 133103
electronic pers. dosemeters, photon radiation perform. 122419
electronic pers. dosimetry syst., Oldbury-on-Severn power station 87997
electronic pers. neutron dosemeters, European cooperation 122420
extremity dosemeters, beta/photon fields, intercomparison 122379
ferroelec./semicond. thin film portable UV dosimeter 86566
film dosimetry for photons, indiv. monitoring, filters selection 87981
gel-phantom absorbed dose imaging, 3D data visualis. toolkit 133133
halide scintillators, recent develop. 121433
imaging plate and wavelength-shifting fibers for gamma rays and neutrons dosimetry 122403
indiv. dose meas., electronic dosemeters, UK regulatory approval 133101
indiv. electronic dosemeter, operational neutron dosimetry 122418
integrat. ion imager, DNA samples, HI doses 122441
ion chamber for high-range gamma meas. in space crit. appls. 87288
ionis. chambers, effective pt. of meas., Monte Carlo simul. 76739
low dose area, nonlin. cell resp., radiation-ind. effects form. stats. 122404
multiple personnel dosimeters, dose calc. algm. 111225
neutron pers. dosemeter, NRPB, response, MCNP calcs. 122407
p-MOSFET dosimeters, tissue-equiv. phantom response meas. 111242
parallel plate microchamber, small photon beam Bragg-Gray cavity meas. 76762
pers. dosemeters, external β-rays, EURADOS trial perform. test 122378
pers. dosemeters, perform. testing, Swedish regulation 133104
pers. electronic dosemeters, legal dosimetry 133102
pers. neutron dosemeter prototype, ion chamber/direct ion storage 122424
pers. neutron dosemeter with I silicon diode 122414
pers. neutron dosemeters develop. and first meas. in MIR 87958
PMOS dosimeter, annealing *(Chinese)* 87991
PMOS dosimeter, irrad. bias field *(Chinese)* 87990
pMOSFET dosimeter, total dose response to γ/p irrad. 111239
polyethylene-ammonium tartrate solid state ESR dosimeters, dose response/fading behaviour 87966
primary std. dosimetric equipt., current & charge meas., unified channels 86379
proportional counter for neutron detect. 87169
Radamon Rn detector, indoor meas. in Gyergyoremete, Romania 122406
radiation dosimeter consisting of leuco cryst. violet/halocarbons, develop. 110294
radiation protection dosemeters, response in mixed photon/electron fields 122413
radiochromic dye film dosimeter, transparency slide scanner 76757
radiosurgery, gamma knife, beam placement accuracy verification, BANG3 polymer gel dosimeter 98631
radiotherapy film dosimetry, photon energy spectrum, MC simul. 76740
ref. dosimeters, perturb. correction factors calc. 87975
scintillating fiber camera, space dosimetry 133144
scintillation dosemeter, patient dosimetry, diagnostic radiology, phys. perform. eval. 87955
tissue-equiv. proportional counters for BNCT/BNCEFNT dosimetry 133124
water calorimeter based absorbed dose to water std. 76738
^{192}Ir HDR brachytherapy source, polymer gel MRI dosimetry 98792
$KMgF_3:Ce^{3+}$, opt. stimulated luminesc., suitability as dosimeter 122402
NaI gamma ray spectrometer, air kerma rate, calib. 76743
Si, LET spectrometers, space-flight radiation risk, Monte Carlo anal. 110285
Si diode detectors, entrance dose meas., correction factors 76769
SiC detectors, electron/photon irrad., Schottky contacts 87220
ZnSe Shottky photodiode based UV dosimeters 133121

dosimetry
see also dosimeters; radiation detection; radiation monitoring
2.0 GHz, meas. elec. near-fields of model cellular transmitters near human head models 98768
3D computerised treatment planning syst., monitor unit calcs. 76655
3D opt. RAM based on bistable photochromism, dosimetry appls. 132368
3D PET, whole body phantom, radioact. uptake, dose/count rate optim. 122236
3D radiotherapy planning, beam wt. determ. method using GA 76644
3D radiotherapy planning, dose distrib., MC based convolution/superposition 76736
abutment dosimetry for serial tomotherapy 98811
ACRE radiation environ. control, monitor ident., metrol. support 86380
act. pers. neutron dosemeter based on microdosimetric principles, CIME 122423
adaptive radiotherapy, daily dose prescription, image feedback 87838
air kerma calib. factors and ionisation chamber correction values 111216
air kerma primary stds., low-energy X-rays, NIST & NPL comparison 75351
anal cancer, external beam radiotherapy, TLD 98781
annual occupational exposure, external ionising radiation, Poland 133097
astronauts, interplan. flights, radiation shielding, CREAM surveyor to Mars 133120
BEPC, 3W1 beamline, radiation dose level meas. 121301
beta-ray dose distribs. from ophthalmic applicators, model eye comparison 98785
beta-ray ophthalmic applicators dosimetry, different meas. methods comparison 98784
bladder carcinoma, intens. modulated radiotherapy, dyn. multileaf collimation 98635
BNCT treatment planning, removal-diffusion theory 133122
brachytherapy prostate implants, vol./dosimetric study, US/CT image fusion 98661
brachytherapy treatments, radiobiological models, clinical dosimetry 133031
brain lesions, stereotactic conformal radiotherapy, proton/photon beams, dose distribs. 87994
brain tumours, radiology & radiat. oncology data integrat., PACS 76763
breast, improved irrad. tech., 3D geom. inform./intens. modulation 76653
breast, intact, radiotherapy, virtual simul. appl. 76627
breast cancer radiotherapy, contralateral breast dose meas., superflab appl. 98825
breast cancer radiotherapy, dosimetry meas., START trial 98625
breast phantom, 3D treatment planning syst., dose algm. 76754
breast radiotherapy, interfractional patient movement, dosimetric consequences 98668
breast radiotherapy, vol. changes/set-up error effects 76760
breast radiotherapy phantom design for START trial 87808
breast tissues, porcine, laser interstitial thermotherapy 98684
breast treatment, intens.-modulated radiotherapy delivery techs. 98648
breasts, X-ray therapy, mixed energy beams/beam spoiler 111095
BWR water chem., review 123163
carcinogenesis, chronic β-irrad., threshold dose-response 76733
carcinogenesis, visually safe dose estim., optimal risk assess. 98832
cardiac angiographic procedures, radiation doses 98770
catheter ablation procedures, cardiac electrophysiology, dose reduction 122435
chem. dosimeters and water calorimeter, electron-beam dose comparis. discrepancy 76125
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
Chernobyl nuc. reactor site, Object Shelter, aerosol distrib. 111223
chest radiography, beam tube pot. var., gonad dose, LiF:Mg,Cu,P TLDs 87970
clinical electron beams, energy constancy meas. 76636
clinical electron beams, lateral bremsstrahlung dose distrib. 98644
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
clinical radiotherapy, normal tissue complication probab. calcs. 133019
clinical thermoluminesc. dosimetry, mgt. syst. 111209
CLWR-TEF tritium rem. handling building, shielding struct. design 99526
CMOS technols. and radiation tolerant design, trends 116031
computational dosimetry, advances 87968
computed radiography exams., dose ref. levels 122386
conf., advanced radiation dosimetry, Athens, Greece (July 2001) 124201
conf., imaging, Stockholm, Sweden (June 2000) 124186
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
conf. on nuc. med. imaging, Lyon, France (Oct. 2000) 100419
conformal photon-beam therapy with TM fields, Monte Carlo study 111093
conformal radiotherapy, beam orient./wts., simultaneous optimisation 111103
conformal radiotherapy, smaller penumbra region, longit. mag. field 111096
conformal stereotactic radiotherapy, phantom dosimetry, head/neck localiser frame 98760
Corvus IMRT treatment plans, target/crit. struct. doses 76732
CORVUS treatment planning dose model, basic concepts 98810
cosmic-radiation dosemeter, mil. aircraft crew 87996
CR-39, etched nuc. tracks, 3D confocal microscopy 121689
CR-39, neutron field mapping and dosimetry for radiography and other appls. 122408
CR-39 neutron detector, bulk etch rate, sample mass-change-method 87247
CR-39 track detector, neutron detect. efficiency improvement 121670
CT, radiation dose/image quality optimisation, dose savings 133134
CT exams. in Crete, Greece, European Commission ref. dose levels appl. 133148
CT fluoroscopy-guided interventional procedures, techs./radiation dose to radiologists 110971
cubic phantom, accelerator QA, dose constancy check 76751
cylindrical chambers, photon/electron beam calib., absorbed-dose 76770
DAP resin plates, fission tracks, etching time reduction 121669
dental radiodiagnostic facilities, ref. doses 76767
dental X-ray survey results, Canada Nat. Capital Region, 1999 to 2000 111199
diagnostic radiation exposure, retrospective dose assess. model *(German)* 111253
diagnostic radiography, Taiwan dose guidance levels 122395
diagnostic radiology, dose-area product meters, calib. freq. 87956
diamond photodetectors for next generation 157-nm DUV photolithography tools 86523
diaphragmal sinus, malignant pleural mesothelioma, wedge-shaped applicator 98622
digital imaging set-up, low-dose approach, phase contrast appls. 110936
digital spot mammographic unit eval. using contrast detail phantom 122122
diode dosimetry program, diode characts. changes over 4-yrs. 111214
diode temp. sensitivity, vivo patient dosimetry 122393
direct ion storage dosemeter, instant readout capabilities 122421
direct ion storage dosimeters with MOSFET devices, review 133142
dose conversion coeffs., external monoenergetic photon beams 111227
dose conversion coeffs., monoenergetic neutrons, anatomical model 111228
dose quantities, radiation protection, dosemeter calib. 133089
double-gate-controlled NPN bipolar transistors, total-dose effects 126672

dosimetry continued
dyn. arc radiosurgery field shaping, static field conformal/noncoplanar circ. ar 87868
dyn. arc radiosurgery/radiotherapy, commissioning/dose distribs. verificati 87866
dyn. multileaf collimation systs., interleaf leakage, patient motion 111104
EDF NPP maint., safety, service providers, review *(French)* 88541
electron accelerator circ./rect./sq. fields, Monte Carlo calc. 87053
electron beam radiotherapy, modulated, beam charactn., MC model 76620
electronic packages, proton dosimetry, satellite appl. 133210
electronic pers. dosemeter, internat. flights, cosmic radiation protection 9881
electronic pers. dosemeters, photon radiation perform. 122419
electronic pers. dosimetry syst., Oldbury-on-Severn power station 87997
electronic portal imager, simple clinical dosimetry model 87962
electronic solid state dosimetry, review 133141
EM field modeling in human body at low freqs., error eval. 98765
entrance surface doses, X ray procedures, Bangladesh 133119
Europe, dose registry, national databases/internat. stats. 122425
European radiotherapy centres, ESTRO-QUALity assurance network 98699
external beam conformal radiotherapy, multiobjective gradient-based do optimisation algm. 111219
external pers. dosimetry, QA programme, Slovenia 133094
external photon irrad., age-depend. protection quantities 133136
external radiation, routine dose assess., dosimetric perform. 133099
extremity dosemeters, beta/photon fields, intercomparison 122379
eye lens, radiation dosimetry, Monte Carlo simul. 122375
fence line noble gas monitoring syst., nuc. plants 133138
ferris wheel mice exposure syst., RF exposure study FDTD anal. 133127
film dosimetry for photons, indiv. monitoring, filters selection 87981
Finnish NPP workers, occupational exposures 133092
fluoroscopy, Ba enema patients, radiation dose reduction by dose audit 7676
fluoroscopy, patient skin dose estim., angiographic frames, embolisation/cerebr angiograms 98771
fractionated cranial irrad., ellipsoidal radiosurgery targets, radiobiologic mode ling 87858
GAFChromic dosimetry, red acetate filter overlay 98793
Gamma Knife beam output factor meas., detector size effect deconvoluti 76741
Gamma Knife radiosurgery optim. 76647
γ-γ coincidence meas., human counter appl., Ge detectors *(Japanese)* 13314
gel-phantom absorbed dose imaging, 3D data visualis. toolkit 133133
geometric uncertainties incorporation in dose calcs. with convolution, spat invariance effect 111212
Gulmay D3300 kilovoltage X-ray therapy unit, perform. assess. 122286
gynecological brachytherapy implants, dosimetric verification 98804
hadrons, radiation therapy, dose distrib. 98678
hand, human, X-ray irrad. simul. 98509
hand effect on cellular phone radiation 122410
head SAR due to mobile phones, interpolation/extrapolation 111221
head/neck radiotherapy, dosimetric intercomparison, QA 87810
helical tomotherapy, large-scale optimisation, 4 clinical case studies 98693
hemodialysis grafts, venous anastomosis, external-beam photon irrad. 98673
hepatic/renal interstitial radiotherapy lesions, temporal CT 76499
heterog. medium, gamma-emitting stent, dose-point-kernel 98788
heterog. phantoms, radiotherapy treatment planning dose distribs. 76753
HI beams, cancer therapy *(Chinese)* 133017
HI radiotherapy, inverse treatment planning, dose optimisation 98671
high energy proton beams, (micro)dosimetric charact. 121328
high resoln. gel-dosimetry, opt. CT, MR scanning 98789
human space flights, LEO, space radiation dosimetry 133143
HYLIFE-II ICF power plant design, accident consequences anal. 99480
IAEA occupational radiation protection programme 133088
ICRP, UNSCEAR, some distant memories 87998
image intensifier syst. under automatic brightness control, computer mod 111204
imaging plates, fast neutron and γ-ray dosimetry 122409
IMRT, forward treatment planning, "sequential" optimisation tech. 76643
IMRT, NOMOS Peacock, utilising the BEAK™ post collimation device 9884
IMRT, treatment plan optimisation method 98694
IMRT dose distribs., MLC tongue-and-groove effect 87818
indiv. dose meas., electronic dosemeters, UK regulatory approval 133101
indiv. electronic dosemeter, operational neutron dosimetry 122418
indiv. monitoring, dosimetric QA, harmonisation 133090
indiv. monitoring, Spanish approved dosimetry services, intercomparison pr gramme 122383
indiv. monitoring systs., direct ion storage/thermoluminesc. dosimetry, Interr reporting 122415
indiv. occupational radiation exposure, European harmonisation 133091
indiv. radiation monitoring, conf., Helsinki, Finland (Sep. 2000) 124170
integral dose reduction, electrons mixed with intens. modulated photon beam 87965
integrat. ion imager, DNA samples, HI doses 122441
intens. modulated radiation therapy, liq. ionization chambers *(German)* 1110
intens. modulated radiotherapy, collimator posn. verification, EPI 87832
intens. modulated radiotherapy, inverse planning, ridge fns. 133131
intens. modulated radiotherapy, neutron meas., Varian Clinac accelerator 1110
intens. modulated radiotherapy compensators, dose distrib., QA *(English)* 8781
intens. modulated radiotherapy dose delivery, dyn. multileaf collimation 1223
intens. modulated radiotherapy optimisation, recursive algm. 98696
intens. modulation radiotherapy, cancer, prescription dose 133021
intens.-modulated arc therapy, dose distrib., head/neck cancer 98690
intens.-modulated arc therapy, Monte Carlo dose verification 122429
intens.-modulated radiation therapy, beam orient. optim. algm. 98617
intens.-modulated radiation therapy, inverse planning algms. 111088
intens.-modulated radiation therapy, patient dose verification 111197
intens.-modulated radiation therapy planning, dose-space conformality 98649
intens.-modulated radiotherapy, accel. of dose calcs. 87999
intens.-modulated radiotherapy, beam-orient. optimisation, parotid gland tumou 111126
intens.-modulated radiotherapy, coplanar beam orient., computer-assisted sele tion 122397
intens.-modulated radiotherapy, dose calcs., CT scans, PEACOCK syst. 9880
intens.-modulated radiotherapy, dosimetric verification, electronic portal imagi 122369
intens.-modulated radiotherapy, QA procedures for Peacock syst. 98812
intens.-modulated stereotactic radiosurgery using dyn. micro-multileaf collim tion 111091
intermediate neutron fluence std. develop., meas. tech. *(Japanese)* 87239
interpolation/extrapolation methods and multiresolution wavelet transfor 111233

simetry continued
interstitial brachytherapy, mean central dose calc., Delaunay triangulation 88002
interstitial brachytherapy treatment plans, homog. dose distrib. 87859
interventional cardiology procedures, skin dose/dose-area prod. values 76765
interventional radiology, dose-area prod., occupational dose assess. 122416
intracavitary radiotherapy, electron cones fab., dosimetry charact. 87844
intracranial germinoma, radiotherapy with tumour vol.-based dose selection 87877
intravascular brachytherapy, beta emitters Monte Carlo-based dosimetry 98797
intravascular brachytherapy sources, Monte Carlo calc. 98800
inverse radiotherapy planning, sparse matrix operations, computational dimens. reduction 76761
ion implanters, dose control accuracy in press. compensation 115607
ion-kill dosimetry, neutron/HI therapy 133115
ionis. chamber loss of sig. charges, exposure standardisation *(Japanese)* 87992
ionis. chambers, effective pt. of meas., Monte Carlo simul. 76739
ionisation chambers calib. in air kerma length 122398
IPES simulators, high integrity radiometric protection systs., review 76135
ISS Lab module, radiation distrib., visualisation in human body 122437
JCO-Tokai crit. accident, safety mgt., review 87960
kilovoltage X-ray dosimetry, AAPM TG-61 report, formalisms/appls. 87982
kV X-ray therapy beams, surface dose increase, thin plastic wrap layer 98822
labyrinth radiation streaming, proton accelerator facility, dosimetry 133128
lanthanide complexes dispersed in enamel, UV dosimetry appl. 109562
laryngectomy stoma, medium energy electron boost, dose distrib. 76752
leg extraskeletal chondrosarcoma, intens. modulated radiotherapy plan 76633
LET spectrom. with track etched detectors, proport. counter meas. spectra correl. 121675
LF elec. fields, dosimetry in child/adult models 111241
light ion beams for radiation treatment, facility design anal. 111130
LINAC, electron beam field shaping, therapeutic misadministration 76654
linac based stereotactic radiation, phantom dosimetry/target localisation eval. 111208
linac head-scatter contrib. & photon source size, pinhole camera obs. *(German)* 87828
LINAC MLC-based intens.-modulated radiation therapy, QA 111083
linac radiation output constancy check, ionis. chamber/diode comparison *(German)* 87972
linac radiation quality QA, Plexitom phantom *(German)* 87973
low energy photon beams, ion chamber response, Monte Carlo calc., expt. verification 111202
low-energy protons dosimetry, vert.-beam facility, Munich 122442
low-level dosimetry, ionisation chamber and meas. syst. 111211
low-level radioactivity counting, decision rules eval. 98818
LR-115 2B detectors, slow neutron flux/spatial distrib. meas., radiochemical sens. 121601
lumbar spine CT/X-ray exams., radiation dose to uterus, ovaries, bladder 87954
lung cancer, CT based radiotherapy dose planning 87861
lung cancer treatment with CHARTWEL, breathing control appl. 98659
lung tumour radiotherapy, breathing/set-up errors, cumulative dose effect 111222
lung tumours, proton beam design, methodologies/tools 87865
malignant brain tumours, gamma knife stereotactic radiosurgery 133032
mammographic exposure data, QA/dosimetry, computer-based collection 110933
mammographic X-ray tube output/half value layer determ, parametric method 87716
mammography, automatic exposure control assess., GE Senographe 600 TS 132830
mammography, photon-counting X-ray imaging syst. eval. 132835
mammography, radiation metrology network, calib. systs. 122153
mammography, spectral meas. rel. to math. model spectra 76531
mammography unit automatic exposure control perform. assess. 98530
maxillofacial region, coronal reconstruction from axial helical CT data 87715
MCNP Monte Carlo code, radiation dosimetry appls., review 98826
med. dosimetrists, dist. learning by world wide web 98820
med. X-ray imaging, dose reduction using noise free photon counting 132807
megavoltage photon beams, meas. depth dose QA 98698
metallic materials, backscatt. dose, obliquely incident high-energy photon beams 87874
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
micromultileaf collimator, intens.-modulated radiosurgery/radiotherapy 111084
microwave dosimetry, non-invasive tech. 98766
MLC intens.-modulated radiotherapy, Monte Carlo simul. 111086
MLC-based IMRT dose verification, Clarkson summation algm. 76728
mobile phone user, num. dosimetry for head/hand 133126
modulated electron beam radiotherapy, Monte Carlo based planning 111118
Monte Carlo dose distrib. in radiotherapy planning, denoising 76726
multi-element TLD, pers. neutron dosimetry, ang. responses 111234
multileaf collimation, automated verification using, Siemens EPID 98627
multileaf collimator, intens. modulated radiation therapy, dose, QA 122296
multileaf collimator intens.-modulated radiation therapy, dose calc. 111195
multileaf collimator leaves, abutting, half beam blocking, intens. modulation 87978
multileaf collimator-based intens.-modulated radiotherapy, dosimetry 111196
multiple personnel dosimeters, dose calc. algm. 111225
multislice CT/cardiac CT sector reconstruction, partial scan weighting algms. 132793
MV radiotherapy, clinical ref. dosimetry, TG-51 implement. 98773
nasopharyngeal cancer, intens. modulated radiotherapy, dose planning, compensating filters 87964
nasopharyngeal carcinoma radiotherapy, dose atten. by skull base bone 88007
neutron capture therapy, absorbed dose imaging/profiling 111238
neutron pers. dosimetry, EURADOS trial perform. test 122377
NRPB PADC neutron pers. dosimetry service 122381
nuc. data and med. phys., conf., Trieste, Italy (Sep-Oct 1999) 89591
Nuclear Medicine Soc., conf., Toronto, Canada (Jun 2001) 100369
num. anthropomorphic model, radiological accidents, internal dosimetry *(English)* 98829
occupational doses anal. for different med. areas 87980
occupational exposures, dosimetry systs., Portugal 133093
occupational radiation protection dosimetry, Nigeria 111237
occupationally exposed workers, whole-body doses, Ireland 133095
organ doses, at. bomb survivors, radiation therapy 87961
organ motion, CT, radiotherapy treatment planning, dosimetry modelling 76756
organ motion effects in radiotherapy, model, serial imaging data 122431
organ motion model, prostate radiotherapy serial imaging meas. 122432
output ratio modeling in air for megavoltage photon beams 88004
p-MOSFET dosimeters, tissue-equiv. phantom response meas. 111242

dosimetry continued
paediatric cardiac catheterisation, radiation doses 76745
paediatric fluoroscopy, low-dose, high-quality exams. 76755
patient dose, radiographic tech. factors, Greek hospitals 111236
patient size, X-ray CT tech. factors, hazards 110939
pelvic malignancies, radiotherapy, inguinal node boost, collimator jaws 98637
pelvis/abdominal conformal radiotherapy anal., TCP/NTCP models 133030
peripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746
peripheral blood lymphocytes, micronuclei, angiography, excretory urography 76560
peripheral blood lymphocytes, radiotherapy, chromosome aberration anal. 76744
pers. dosemeters, external β-rays, EURADOS trial perform. test 122378
pers. dosemeters, perform. testing, Swedish regulation 133104
pers. dosimetry, Latvia, EPR, TLD 98831
pers. dosimetry service, formal accreditation, Swiss legislation 133109
pers. dosimetry service, radiation workers, Lithuania 133096
pers. electronic dosemeters, legal dosimetry 133102
pers. monitoring, occupational radiation exposure, Czech Republic 133098
pers. opt. stimulated luminesc. dosimetry, ANN appl. 87957
pers./ambient dose equiv., secondary std. chamber 133111
personnel dosimetry, photon radiation indiv. monitoring, IAEA intercomparisons 133113
PET, estrogen receptors, [^{18}F]fluoroestradiol radiation dosimetry 98758
photoacid generator appls. for γ ray detect. materials 110293
photon dosimetry, EURADOS trial perform. test 122411
photon/proton intens.-modulated radiation therapy, inverse planning 111082
point flux PL-estimators for Monte Carlo dose calcs. 111206
Polish permanent monitoring station response compar. with TLD/γ-ray detectors 121458
polymer gel dosimetry, param. selective MR-microimaging, radiotherapy appl. 122390
portable radio, near fields in front of and on far side of head model 98767
portal dosimetry, imaging plate appl., clinical X-ray beams 98821
portal imager scatter dose model, Monte Carlo validation 98819
portal imaging, dosimetric verification, review 133040
portal scatter/primary dose ratio, Monte Carlo calc. 87976
pregnant patients radiotherapy, foetal dose limitation, shielding approach 87995
pregnant staff, diagnostic radiology, foetus dose, occupational exposure 133135
primary std. dosimetric equipt., current & charge meas., unified channels 86379
prostate, dose-escalated conformal radiotherapy, multileaf collimator orient. 98636
prostate, HDR-brachytherapy, anatomy-based dose optimisation 98805
prostate, intens.-modulated radiation therapy, treatment planning protocol 76637
prostate brachytherapy, high dose rate, CT planning, catheter reconstruction 98653
prostate brachytherapy treatment planning using, std. plan 98662
prostate cancer, 3D conformal radiotherapy, bladder opacification, dose 98783
prostate cancer, conformal radiotherapy, rectal sequelae, dose-vol. 98782
prostate cancer, dose escalated conformal radiotherapy, optimal arrangement 76650
prostate cancer, HDR brachytherapy, inverse planning dose optim. 122298
prostate cancer irrad., randomised trial, accurate in vivo dosimetry 87993
prostate cancer radiotherapy, organ motion var. models, affine transform. 87839
prostate carcinoma radiotherapy, late-term rectal complications probab. 98641
prostate intens.-modulated radiotherapy, interrupted dyn. seqs. 98616
prostate patient with prosthetic hip, intens. modulated radiotherapy 76731
prostate radiotherapy, treatment chain audit, phantom design/eval. 111116
proton dose calcs., range-modulated pencil beam algm. 122427
proton pencil beam algm., patient compensators, dose computations 88001
proton/photon therapy comparison, biological models 133033
pulsed clinical proton beams, small ionization chamber dosimetry 98790
pulsed dose-rate brachytherapy, safety, training, QA 87857
pulsed plasma doping implant dose meas. syst. 115575
pulsed proton therapy, compact ridge filter, dose distribs. 98642
PWR operations, occupational dose, ALARA, non-parametric anal. 111247
radiation hormesis, doses, beneficial health effects 87987
radiation oncology treatment setup, simple, routine monitoring/correction 87843
radiation therapy, dose accuracy requirements, review 98679
radiation treatment, optimum beam posn./size 76645
radiation worker records, Korean national dose registry 111248
radiobiology, X-ray dosimetry, EULEP-EURXDOS protocol 98780
radiochromic dye film dosimeter, transparency slide scanner 76757
radiographic film, processed, vis. dye light absorpt. props. 110963
radiographic film sensitometric curve var. in high energy photon beams 88003
radiographic/radiochromic film dosimetry, directional depend. 76758
radiographs, exposure determ., 25%/cm rule validity exam. 111194
radiological risk mgt. syst. improvement, French Soc. contrib. *(French)* 98828
radiopharmaceutical biodistributions, SPECT, PET, dosimetry 98585
radiosurgery, small photon beams, output factors verification 76641
radiotherapy, 3D dosimetry, liq. scintillator, Cerenkov radiation effect 111201
radiotherapy, 3D treatment planning syst. monitor unit calc. 76630
radiotherapy, central axis depth dose curves, electron/photon energy spectra 76759
radiotherapy, CT guided, Monte Carlo simul., errors correction 76737
radiotherapy, dosimetric params. determ. for MLC using equiv. sq. methods 98778
radiotherapy, electron boost treatments, in vivo dose meas. eval. 98813
radiotherapy, electron pencil beam vars., dosimetry distribs. 98779
radiotherapy, electron-beam dose algms. eval., meas. data set 88000
radiotherapy, inverse planning, importance factors, computer-assisted selection 98691
radiotherapy, inverse planning, min. norm approach 98697
radiotherapy, inverse planning incorporating organ motion 111097
radiotherapy, MU calc. formalisms, ESTRO booklet 3 vs. NCS report 12 122293
radiotherapy, optimised treatment plans, dose homog., source strength 98803
radiotherapy, photon dose distribs. improvement, mag. fields appl. 98658
radiotherapy, photon/electron beams, apparatus for applying mag. fields 76640
radiotherapy, semicond. based in-vivo dosimetry syst. appl. 98777
radiotherapy, super-omni wedge concept verification, dose distrib. calcs. 122396
radiotherapy, treatment planning syst., CT-based dose calc., metallic prosthesis 122400
radiotherapy, virtual wedge, dosimetry/commissioning using film 111200
radiotherapy diode detectors, perform. limitations 76742
radiotherapy dose calc., Monte Carlo method *(German)* 111251
radiotherapy dose mapping syst., opt. stimulated luminesc. films 133132
radiotherapy dosimetry, portal imaging detector spectral response 133130
radiotherapy film dosimetry, photon energy spectrum, MC simul. 76740
radiotherapy inverse problem, hybrid optimisation approach 98695
radiotherapy models, conf., Como, Italy (Oct. 1999) 124200

dosimetry continued
radiotherapy treatment planning, electron dens. phantom eval. *(German)* 87971
radiotherapy treatment planning optimisation, multi-modal approach 76642
radiotherapy X-ray dose and tumour control beyond air cavities 98824
RADS database, Radiological Physics Center 87814
ref. dosimeters, perturb. correction factors calc. 87975
ref. radiation facility, dosimetry at flight altitude/in space 122438
relative dosimetry, detector line spread fns., Compton scatt. 122392
rem. opt. fiber radiation dosimetry, review 133139
restenosis, intravascular radiation therapy, soft X-ray source charactn. 87860
Romania, med. practice workers, indiv. radiation monitoring, operational qty. $H_p(10)$ 111210
routine thermolum. dosimetry, computerised glow curve anal. 133110
safety goals defn., nuc. facilities/power plants 99527
SAR, man model, parametric depend. on permitt. values 122428
SAR in infant-sized head model near portable telephone users *(Japanese)* 122444
SAR prediction, Sprague-Dawley rat, rel. to permitt. 133063
Saturne-25/-41, electron contamination sources, Monte Carlo approach 122303
scanned pencil beam apparatus, dosimetric modelling, ^{60}Co tomotherapy 76764
scintillating fiber camera, 0.25 mm^2 fibers, space dosimetry 122401
scoliosis, digital radiography with scanning method, init. eval. 87762
serial organ archit., radiotherapy, inhomog. dose distrib. 87959
serial tomotherapy, clinical delivery, dosimetric validation 87963
services, approval procedures, EU member states, Switzerland 133100
services, QA programmes, Switzerland/EU 133114
Siemens Virtual Wedge, dose distrib. calc. with constraint checking 111207
SIMOX technol., BOX microstruct. 115526
single X-ray exposure half-value layer meas., portable electronic device 98772
sinus CT, image quality/patient dose, decreasing mAs effect 76551
skin depth dose, hot particles, electron backscatt. correction 133129
sliding window intens. modulated radiotherapy, respiratory gating 87967
small photon beam Bragg-Gray cavity meas., parallel plate microchamber 76762
soft tissues, neutron imaging using med. linacs, BNCT appl. 98133
soft X-ray chambers, IPEMB very low energy dosimetry 98794
solid state microdosimetry, radiotherapy appls., review 133140
space radiation health, conf., Arona, Italy (May 2000) 124172
space station MIR, av. LET depth distrib., absorbed dose 122439
spacecraft, LEO, LET distribs. 121611
Spanish Nat. Dose Registry and Spanish radiation passbooks 122426
spiral/conventional CT, doses survey 88006
standardised helmet tech. and cribriform plate coverage 87867
std. electron cone ratio values for Varian, Siemens, Elekta accelerators 98630
stereotactic linac radiotherapy-radiosurgery unit, TLD dosimetry 122299
stereotactic radiosurg. & treatment planning, beam bouquets optim. 76617
stereotactic radiosurgery, dosimetric eval. with/without flattening filter 98801
stereotactic radiosurgery, modern linac systs., Gamma Knife obsolescence 133025
stereotactic radiosurgery dosimetry, miniature plastic scintillator detector 111240
stereotactic/IMRT plans, accurate comparison 76730
stereotactically-guided conformal radiotherapy, paediatric patients treatment syst. 122291
superheated drop detectors, electronic neutron pers. dosimetry 122422
tandem/ovoid dosimetry, dose optim. schemes 98756
Tanzania, diagnostic radiology, patient dose reduction 76748
therapeutic beam dose calcs., electron loss model with energy straggling 111205
therapy-dedicated cyclotron, proton beams RBE, cell lethality 98672
thermolum. pers. dosimetry, abnormal glow curves, algm. 133112
thoracic vertebra, 3D digital images, dosimetry, chord distribs. 98786
thorax phantom, intens. modulated irrad., pencil beam calcs. 87831
thyroid malignancies, intens. modulated radiation therapy 76729
tissue, dielec. props., age, microwave freqs., dosimetry 87974
tissue opt. props. meas., small portable spectrophotometry syst. 122058
TLD, pers. neutron dosimetry, research reactor facility 122382
TLD automated syst., pers. monitoring, Ireland 122385
TLD/electronic dosimetry comparison, Belgian Nuclear Research Centre 133105
Tokai NPP decommissioning, COSMARD project mgt. database *(Japanese)* 112229
tomotherapeutic megavoltage CT calib. 87700
tooth enamel, EPR biodosimetry, radiation therapy appls. 132731
tooth enamel EPR dosimetry, automated spectra deconvolution routine 111224
tooth enamel/organ doses, ESR dosimetry 111244
total body irrad., dose in vivo meas. accuracy 98776
total body irrad. therapy, dosimetry, compensator-rice 122388
trabecular skeleton, beta-particle dosimetry, MRI, Monte Carlo 98787
treatment planning syst. data validation, 6 MV beams modelling 122294
treatment planning systs., photon beam dose calcs. accuracy tolerances 122370
treatment planning systs., photon dose calc. perform. intercomparison 122371
treatment planning using dose-vol. feasibility search algm. 87864
trigeminal neuralgia, gamma knife radiosurgery, eye lens dose 76749
tumor, intens. modulated radiotherapy, dose distrib. model 76750
tumour motion from breathing, fluoroscopic study, precise radiotherapy, lung cancer 132820
UMW electron wedges, dosimetric eval. 98823
Univ. of Bradford mobile telephone dosimetry studies 133075
upper respiratory cavities, underdosing reduction, long. mag. field appl. 111101
Varian's high-energy ion implanters, dosimetry enhancements 115604
Varian VIISta 810 medium current implanter, dosimetry syst. 115593
VIPAR polymer gel dosimetry, wide dyn. dose range 111218
virtual wedge dosimetric behaviour with monitor units no. 87977
virtual wedge syst., dosimetric characts., ion chamber, X-/radiochromic films obs. 98775
virtual/phys. wedges, dosimetric props. comparison 98774
Voxel Monte Carlo algm., film dosimetric verification, electron beam dose distribs. *(English)* 111252
water calorimeter based absorbed dose to water std. 76738
water phantom, photon beams, PEREGRINE Monte Carlo dose calc. 98791
wedge transm. factors, depend. on blocking in high energy photon beams 98629
X-ray dosimetry, calib., correction factors, AAPM TG-61 report 87983
X-ray image intensifier-TV fluoroscopy, sig. detect. theory 87729
X-ray mammography, patient exposure dose meas., lookup table 111243
n/γ absorbed doses under crit. accident conditions at TRACY using tissue-equiv. dosimeters 133125
^{241}Am lung meas., voxelised num. phantoms, MCNP code *(English)* 98830
B neutron capture therapy, perform., safety, QA 98638
B neutron capture therapy, strongly forward-directed beams appl. 98689
^{10}B neutron capture therapy, accelerator-based, dosimetry 122394
dosimetry continued
^{11}C beams, cancer radiotherapy, spot scanning, dose distrib. 76609
^{11}C, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
CaF_2:Tm, single cryst. TLD, dose response, radiation therapy appls. 133086
^{252}Cf-based ref. neutron fields for testing moderating detect. systs. 98798
^{60}Co and higher energy photons, Canadian/French dosimetric stds. 111217
^{60}Co γ-ray sources, dose calib., ionization chamber syst. *(Japanese)* 122434
^{60}Co indust. radiography source detachment, radiation incident mgt. 133116
^{60}Co teletherapy unit, stereotactic radiosurgery, dosimetric study 98802
^{137}Cs brachytherapy source, dose rate distrib., Monte Carlo 98796
^{137}Cs sources, dose rate distribs., Monte Carlo calc. 98795
^{18}F, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
^{18}F-labeled dopamine transporter ligand, biodistribution, dosimetry 76734
GaAs epitaxial ^{10}B-coated thermal neutron detectors 121481
I contrast media, catheter-based intravascular brachytherapy, dosimetry 1223
^{125}I interstitial brachytherapy source, Monte Carlo-aided dosimetry 122295
^{125}I seed prostate implants, ultrasound guided, in-house software 98640
^{125}I seeds, prostate implant, CT-based source localization 98531
^{131}I, therapeutic dose, patient release, another indiv. exposure 98817
^{131}I therapy, thyroid, Graves' disease, committed dose calc. 111245
^{131}I-metaiodobenzylguanidine uptake, neuroblastoma SPECT imaging 76570
^{115}In^m, foil, high dose rate meas., photon activation anal. 122374
^{192}Ir HDR brachytherapy source, polymer gel MRI dosimetry 98792
^{192}Ir brachytherapy sources, beta/gamma dosimetry 133123
^{192}Ir, homog. afterloading irrad. of cylindrical surfaces, fast algm. *(Germa* 111132
^{192}Ir, intracoronary radiation therapy, re-endothelialization, T-cell infiltrati 98615
^{192}Ir, rem. after-loading high dose rate brachytherapy source 111100
^{192}Ir rem. afterloading source, air kerma strength std., room scatt. 122430
^{38}K, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
$KMgF_3$:Er(Ce), impurity activation, TLD appls. 122373
^{7}LiF:Mg,Ti TLD, glow curve, space radiation dose equiv. 98762
$Li_2B_4O_7$, TLD, indiv. monitoring, Greek AEC 122384
LiF, TLD, indiv. monitoring, Greek AEC 122384
LiF:Mg,Cu,P detectors, ENEA pers. dosemeters, beta/photon fields 122380
$MgSO_4$:Ce, hydrated, opt. stimulated luminesc., fast neutron dosimetry ap 133117
^{13}N, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
NaI gamma ray spectrometer, air kerma rate, calib. 76743
^{15}O, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
^{32}P source, endovascular brachytherapy, dose distrib., Monte Carlo study 987
^{32}P-orthophosphate, bone marrow erythroblastoid cells, micronucleus dosime 76724
^{103}Pd, prostate implant dose distribs. comparison 98806
^{103}Pd seeds, prostate implant, CT-based source localization 98531
^{106}Ru ophthalmological applicator, BANG polymer gel dosimeter, MRI 767
^{106}Ru ophthalmological applicator, dose distrib. meas., BANG gel MRI 9876
Si diode detectors, entrance dose meas., correction factors 76769
Si:B(P)(As) wafer, ion implant., therma-wave dose sensitivity 115606
SiC:H, 6H, vibr. props., H_2 ion implant., annealing effects 69794
^{90}Sr, radioact. check device, ionization chambers redundancy checks 76024
^{90}Sr/^{90}Y beta particles, phantom materials water equivalence 87876
^{99}Tc^m-labelled radiopharmaceuticals, Indian adult, radiation dose estim. 1112
^{99m}Tc-RP128, rheumatoid arthritis inflammation imaging, dosimetry 76723
^{99m}Tc-annexin V, intravenously administered, patient dosimetry 76735
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964
^{90}Y radioimmunotherapy, monoclonal antibody, biodistribution, dosime 98757
^{90}Y-citrate, bone marrow erythroblastoid cells, micronucleus dosimetry 7672

double heterostructure lasers *see semiconductor lasers*

double nuclear quadrupole resonance *see nuclear quadrupole resonance*

double refraction *see birefringence*

double refraction, electric *see electro-optical effects*

double refraction, magnetic *see magneto-optical effects*

DP industry
Bangladeshi entrepreneurial software develop. company strategies 89772
eco-labelling in IT indust. 100686
Europe's positioning in electronic syst. design methodology 78401
IBM. environ. perform. improvement, reverse logistics 100539
IBM methodology for emerging environ. requirements evaluation 100693
Internet hotels computer equipt. power supplies planning 88397
LCD-monitor markets in Europe and UK 86803
med. diagnostic imaging indust. in Japan 98148
multimedia stds. for WWW 96272
supply chain mgt. systs., state of art and vision 89748
telecomms. indust., mergers and acquisitions valuation 119448
wireless technol., mgt. issues for IT organizations 131169

DP management
see also auditing; back-up procedures; capacity management (computers); computer evaluation; computer installation; cryptography; data privacy; resource allocation; security of data; software management; software selection
collaborative technols., asynchronous and distributed proc. improvement 851
denial-of-service attack prevention methods 119462
e-mail security 130620
education wireless laptop classroom implement. 119738
faculty involvement in planning for use and integrat. of instructional and admi istrative technols. 67418
instant messaging in business commun. 74077
intranets in law firms 74192
mgt. concepts of distributed inform. proc. systs. *(Polish)* 130549
network security, managed security monitoring 119473
PACS, enterprise-wide, technol. assess. 98850
PACS, multi-imaging centre, planning 98122
PACS diffusion into radiology marketplace, adoption of alternative financi strategies 89657
PACS implement. strategy for new hospital facilities 98843
PACS implement. using appl. service providers 76777
PACS in private practice, St. Paul Radiology PACS project 98866
PACS policies and procedures develop. 98856
peer-to-peer file sharing 74171
radiology, digital equipt. acquisition and installation procedures, team appro at Mayo Clinic 98499
telemedicine's pot., barriers, incentives and possibilities in implement. pha 133162

CM *see differential pulse code modulation*
SK *see differential phase shift keying*
DB *see access protocols; metropolitan area networks*
AM chips
2.4F² memory cell technol. with stacked-surrounding gate transistor DRAM 102122
300 mm CZ wafers, intrinsic gettering 69775
300-mm equipt. semicond. mfg. tools, eval. techs. 103726
adaptive-lock-mode DLL cct. with duty-cycle error correction for SDRAMs 125509
analogue sync. mirror delay with duty cycle-correction scheme 102145
ASIC design, MOS cct. appls. *(German)* 103982
automotive graphical displays, single chips *(Italian)* 89419
bitline spacerless storage node SAC/Ru-Ta_2O_5-Ru capacitor with TiN contact plug for 0.1 μm DRAM 125475
buried-channel pFET device, threshold voltage 115937
cell capacitor with multiple-level interconnects, modeling and simul. 114743
cell transistor jn. leakage, band to defect tunneling, off-state bias-temp. stress 79887
cells, 0.18 μm, enhanced retention time by fast-pull/fast-cool ingot growth, thermal budget 125474
charge-to-breakdown/oxide thickness, N implant. effects 115895
chip size BGA packaging for high perform. memory appls. 68790
CMOS DRAM interconnect line charact., underlayer geom. effect, S-param. 114756
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
CMOS-IV SoC technol., 100 nm, for high dens. embedded memory/mixed sig. LSIs 127018
collimated swift ion microbeam, profiling using 16 M bit DRAM 103722
current-mode sense amps. for high dens. DRAM and PIM archits. 102175
D2BLP double dens. bottom leaded SDRAM stack package, develop. 113593
DDR-SDRAM, D-RDRAM and DDR-FCRAM, POPeye simulator 102177
divided word line memory, block-repair fault-tolerant archit., BISR 102134
dual gate CMOS DRAM self-aligned contact proc., tetrachlorosilane-based SiN mask films 125473
dual-gate PMOSFET, B dopant penetration/gate depletion anal. for Gbit DRAM design 102184
dual-phase-controlled dyn. latched amp. for high-speed/low-power DRAMs 90899
DUV lithog., assist feature OPC, DRAM fab. 103664
DVB single chip decoder, video proc. 119821
eDRAM, embedded DRAM technol., leakage and retention test struct. 114771
EDRAMs, design archits. 90903
embedded, dual thickness gate oxid., ion implant. 79867
embedded archit., random access operation 125488
embedded DRAM, low temp. capacitor technol., dielec. stack film 114772
embedded DRAM develop., technol., phys. design, and appl. issues 102129
embedded DRAM for network proc. world 102147
embedded DRAM macros, interface socket design methodology 114749
embedded DRAM technol., 0.15 μm logic based, with 0.425 μm² stacked cell using MIM capacitor 125491
embedded DRAM technols., jn. capacitance reduction by S/D jn. compensation implant 116028
embedded DRAMs, memory cell array opens and shorts, static/dyn. behavior 79876
embedded trench DRAMs, sub-0.10-μm, hemispherical-grain tech., LOCOS collar 102124
ESSCIRC 2000, conf., Stockholm, Sweden (Sept. 2000) 89548
fast pump-down back bias volt. generator for sub-1.5 V DRAMs 90900
ferroelec. thin films, conf., Boston, MA, USA (Nov.-Dec. 1999) 89554
giga-bit scale DRAM, memory cell transistors, RTA proc. 114745
gigabit dens. DRAM cell transistor using retracted Si_3N_4-liner STI 68800
H.263 video encoder for VIRAM, perform. anal. 95271
hidden double data transfer scheme for merged DRAM logic design 68806
high dens. DRAM, bit line coupling scheme and elec. fuse cct. 125507
high quality distributed video, DRAM cache 85366
high speed DRAMs, yield improvement, column redundancy scheme, multiple bit pre-fetch struct. 125511
high-dens. DRAMs, bipolar-voltage prog. antifuse cct., post-package bit-repair scheme 125510
high-dens. DRAMs, cell transistor scalable array archit. 125506
IC packaging for high perform. memory 124328
JAZiO sig. switching technol., low-cost digital I/O for high-speed appls. 68810
lithog. challenges of DRAM to ASIC prod. transit. 115983
LOC-TSOP memory package, warpage, epoxy mold cpds. effects 102872
logic/syst. LSI, front end of line technol., review 115506
memory bus with crosstalk transfer logic interface 125480
memory cell landing pad, new integrat. technol. for 0.13-μm DRAM generation 114744
merged DRAM-logic computing 90894
merged DRAM/logic LSIs, high-perform./low-power cache archits. *(Japanese)* 68802
micromirror array test syst., high resoln. SLM 93220
MOS high-dens. DRAM cell with built-in gain stage 68807
MOS photolithographically-friendly 6F² DRAM cell 114770
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
MPEG video proc. in consumer systs., memory bandwidth reduction 118329
μBGA packaging for high-perform. RDRAM/SDRAM appls. 125497
multilevel DRAM with adjustable cell capacity, design 114766
noble metallization proc. using preferential metal deposition Al with methylpyrroridine alane 126454
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write scheme 90910
opt. lithog., Serif and Hammerhead RETs 103535
packet-based DRAM pre-emphasis driver cct. *(Korean)* 114755
packet-based DRAM with daisy-chained redundancy scheme, 2 GB/s, 256 Mb 125508
PIII, deep trench buried-plate doping technol. appl. 115568
polysilicon 300-mm etch equipt., maturity assess. 103401
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec. props. 103243
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, contact resist. 102185
prog. BIST for embedded SDRAM, Verilog BIST modules 125478
Rambus memory module, wafer level package, microwave model 113481
reduced latency DRAM memories for cache, 3D graphics and mobile appls. *(German)* 114739
retention time distrib. prediction method 79888
shared BISR anal. for multiple embedded memories in SOC 102182
DRAM chips continued
shared fuse macro for multiple embedded memory ASIC devices with redundancy 102183
single event charge collection from angled ion strikes 114758
SoC design challenges 125526
soft error rate for high dens. DRAM cell *(Korean)* 102168
stack DRAM cell with low parasitic resist. device/poly metal gate technol. for Gbit DRAM 125489
stacked DRAM struct., parasitic capacitance from multilevel conductors 114742
stats. counter archit. anal. 130720
STI, retention time tail distrib. 125501
storage node pad proc., line type self-aligned contact/oxide spacer/direct metal plug 125476
submicron device fab., proc. induced defect control 127109
submicron DRAM cell, Shallow Trench Isolation, ion beam shadowing n-jn. optimisation 116041
sync. DRAM for space appls., 64 Mbit, testing 90919
sync. DRAM perform. improve. by lowering interconnect capacit. 125467
TEOS oxide on polysilicon films, stacked struct., RTA in N_2O ambient, N incorp. 103445
test struct., 512 Mb/0.12 μm design rule, long data retention time strategy 125490
trench capacitor, self-aligned buried strap, NFSTI technol. 114769
trench capacitor technol., array transistor design 114768
TV high quality consumer video proc. chip 120524
two metal layer tape package for improving high speed DRAM perform. 113632
video sens. sig., high-speed great-capacity storage/proc. 86444
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
VLSI technol., systs. and appls., conf., Hsinchu, Japan (April 2001) 113284
wafer fab, multichamber work cell mgt., optim. 100547
wafer probe testing strategies, impact of market changes 102146
wormhole IP over (connectionless) ATM 130500
X-ray mask, electron beam writing, image placement correction 126532
EG-2 422PML video, audio, and syst. encoder, 64-Mbit embedded DRAM, portable HDTV encoder 107111
Al CVD-PVD proc. for DRAM appls. 126455
Al via-void generation mechanism for Gbit-scale DRAM, anal. 79900
Al-05 Cu alloys, chem. mech. planarization, 1 Gb DRAM chips appl. 103360
$Ba_{0.7}Sr_{0.3}TiO_3$ thin films, anisotropic plasma etching, 4Gbit DRAM devices 104284
$BaSrTiO_3$, photoassisted MOCVD growth for DRAM appl. 101331
$Ba_{1-x}Sr_xTi_{1-y}Zr_yO_3$ films for DRAM, struct., elec. props. 101198
Cu/low-k interconnect CMOS platform, 0.13 μm, for SoC appls. 127019
Ir films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
IrO_2 films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
KrF attenuated PSM defect printability, DRAM fab. 103600
KrF lithog., DRAM fab. 103528
KrF lithog. for DRAM using tri-level resist proc., material/proc. develop. 103556
$(PbSr)TiO_3$ thin films, prep., elec. props., post-annealing, DRAM appl. 116159
$Pb_{1-x}Sr_x(Zr_{0.53}Ti_{0.47})O_3$ thin films, appls., structural/elec. props., appls. 101413
Ru rugged metal electrode, DRAM MIM capacitor 102125
Ru-$SrTiO_3$-Ru cylindrical capacitor technol. for 0.11 μm generation DRAMs 125495
Si, 300 mm wafers, batch furnace/RTP proc. prod. maturity 67522
Si, hemispherical grained for ULSI DRAM stacked capacitor, environ. O_3 effect 103448
$SrRuO_3/(Ba,Sr)TiO_3/SrRuO_3$ capacitors, gigabit DRAM, CVD, electrode technols. 101329
$SrTiO_3$ epitaxial growth on epitaxial (Ti,Al)N-Si(100) substr. using Ti-buffer layer 90248
a-Ta-nanocryst. RuO_x diffusion barrier for lower electrode of high dens. memory devices 69958
Ta_2O_5 MIM capacitor, heteroepitaxial/high dielec. const., for Gbit DRAMs 125494
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ta_2O_5 on CVD Ru film, DRAM capacitor appl. 115087
$TiSi_2/p^+$ interface, optimal B distrib. for 0.18 μm DRAM technol. 115980
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm technol. 125492
drawability *see ductility*
drawing (mechanical)
conf., adv. forming & die mfg. technol., Haeundae, S. Korea (Sept. 1999) 78431
nonslip drawing of supercond. wires 70679
opt. fiber manufacture, draw and proof testing methodology 71259
opt. fibre tip shape, foil heater pulling 82103
polyethylene/functionalized terthiophene blends, lin. polarizer appl. 104606
sheet metal deep drawing, intell. control, real-time meas. and ident. 113816
silica microstruct. photonic-cryst. fibers, design and appls. 127706
soft mag. wires, prep./mag. props./appls., overview 81794
thin durable fiber drawing of transparent material 82109
Ag-nanoparticle-dispersed fluorinated polyimide, thin flexible polariser fab. 71458
As-S-Se glass opt. fibres, prep., opt. & strength params. 93086
BiPbSrCaCuO/Ag 2223 HTSC wires, sausaging and crit. current dens., drawing params. effects 70776
BiSrCaCuO/Ag HTSC tape processed by PIT method, interface irreg. and texture evol. 68434
C-coated fiber strength 127675
Cd_3P_2 thin semicond. layered cylinder fibers, fab. methods 71249
GaLaS opt. fiber drawing in convective furnace, strength testing 127666
$(GeS_x)_{98}(GaS_3)_2$:Pr glass fibre, develop. for Pr-doped fibre amp. 93087
MgB_2 supercond. tapes, unsintered, large transport crit. current dens. 92889
$(Nb,Ta)_3Sn$ multifilamentary superconds, prep. using Osprey bronze with high Sn content 70765
Nb-Ti supercond. tapes, prep., upper crit. field anisotropy 70777
Nb-Ti supercond. wires, prod. scheduling, quality improvement 67690
Nb-Ti-Ta multifilamentary supercond. tape, J_c, microstruct. 70778
SiO_2:F,H_2 opt. fiber for DUV light 104663
drift chambers
2D micro gap wire chamber, electronic and charact. 87235
advanced detectors, conf., La Biodola, Elba, Italy, May 2000 67400
advanced planar wire grid plates prod. for microstrip gas chambers 132445
ALICE expt., image compression for silicon drift detectors 132352
ALICE SDD inner tracking syst. charact., review 76049
ATLAS Monitored Drift Tube assembly and test 121516
ATLAS muon precision chamber 121498
ATLAS Muon Spectrometer, constr. and test of precision drift chambers 121497
ATLAS muon spectrometer, constr./test of precision drift chambers 110324

drift chambers continued
ATLAS muon spectrometer, high-precision spectrosc., review 76157
ATLAS muon spectrometer, MDT chambers constr./test 76156
BABAR detector perform., May 2000 overview 87163
Belle DAQ syst. switchless event building farm design anal. 120673
Belle detector supercond. solenoid, mag. field mapping 109942
BES II, error matrix correction on charged channel *(Chinese)* 110387
CAPRICE98, balloon-borne mag. spectrometer with gas RICH and Si calorimeter for cosmic rays 76160
CDF central outer tracker, design, constr., review 76132
CERN L3 magnet spectrometer design for CR muon detect. expts. 132424
Cherenkov radiation, energy loss fluct., angular distrib. 87217
CLEO III operation 87174
CLEO-III trigger, analog and digital calorimetry 110408
CLEO-III trigger, analog and digital calorimetry 121726
CLEO-III trigger, axial and stereo tracking 121728
CLEO-III trigger, axial and stereo tracking 110409
CLEO-III trigger, level 1 decision and gating 110411
CLEO-III trigger, level 1 decision and gating 121733
CLEO-III trigger design anal. 121741
CMS alignment syst., momentum resoln., review 76057
CMS barrel muon chambers, wire ageing, X-ray irrad. tests 98039
CMS barrel muon drift chambers in high-radiation environ. 76045
CMS RPC-based muon trigger syst., complete sim. study 76106
COMPASS expt., GEM detectors for small area tracking 121501
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
conf. on particle detectors, Lyon, France (Oct. 2000) 100418
cylind.-type drift chamber, backgammon cathodes, posn./drift time rel. 121526
cylindrical drift chamber, drift-time meas., leading edge timing compensation 121515
cylindrical drift chambers, current monitor syst. on HV level 121700
cylindrical-type drift chamber, backgammon-shaped cathode pads, posn./drift time rel. 132420
D0 upgraded detector, level-2 muon trigger 121724
double GEM detector, aging study in Ar-CO_2 121502
double-threshold discriminator, low-walk, gas drift chambers appl. 76151
FINUDA straw tube detector, review 76034
future accelerator detector R&D, review 87197
gas electron multiplier, new tech. for fab. 121508
gas electron multiplier scintillation, tracking device perform. 121510
gas ionizing radiation detectors, leak microstruct., timing inform. 76043
Grand Raiden spectrometer, ion-opt. mode, vert. scatt. angle 110422
H1 expt., fast high resoln. track trigger 121730
HARP neutrino expt. design 97978
He-isobutane gas mixtures, electron life time, drift vel. 76039
HERA H1 fast track trigger electronics 76140
HERA-B, detector design, expt. status 76020
HERA-B inner tracking syst. design and constr. 121500
HERA-B muon detector design, perform. and status 76044
HERA-B outer tracker, honeycomb drift-chamber modules 87236
HERA-B Outer Tracker drift tubes, aging phenom. 121496
HERA-B tracking detectors, microstrip gas/drift chambers 121652
HERMES forward tracking chambers, constr., operation, and aging effects 110379
high-rate expt., carbon-reinforced straw modules, review 76040
JLC 3T detector, vertexing/tracking perform. anal. 110364
K2K detector perform./design anal. for neutrino oscill. expts. 132310
KLOE DAQ/trigger syst. design anal. 132449
KLOE detector, overview and K_L^0/K_S^0 decays 97987
KLOE drift chamber, Frascati DAPhiNE ϕ-factory, tracking inform. 76029
KLOE expt. status, initial results 87164
KLOE trigger syst., EM calorimeter, custom electronics, efficient online monitoring 76141
LHCb straw-tube-based drift detector outer tracker 87184
micro strip gas chambers, performance review 87237
MICROMECAS detector, spatial resoln., rate capability 76038
MICROMEGAS as, neutron beam profiler 121509
MICROMEGAS detector in low-background astron./particle search appls. 132346
micropattern gas avalanche detectors, progress in simul. 121504
micropattern gaseous detectors study and optim. for high rate appls. 121503
multi-frame detector for ultra-fast radiography with 800 MeV protons 121543
NA48 trigger supervisor, 40 MHz pipelined hardware syst. 121732
Pavia-Romal ATLAS MDT QC syst., review 76035
planar drift chambers, muon Michel params., precision meas. 76036
RHIC PHENIX HI collision expt. detect. syst. design 132358
RICH neutrino detector perform. simul. 132330
solid state drift detectors, count rate stats. 121615
VENUS vertex chamber, electron-tube tech. 121603
Si drift detectors with spiralling electron transport and reduced lateral broadening 121443

drift instability
EBTS plasma mode diagnostics, freq. scaling, EBIS expt. anal. 110276

drilling (machining) *see machining*

driver circuits
8 cm DVD-RAM video camera recorder, actuator control for disturbance suppression 120584
AC surface-discharge PDP, ramped-sq. sustain waveform, luminous effic. 86873
AMLCD monitor, digital controls, VLSI implement., PanelLink 86896
AMLCD TFT array, five-mask proc., low-cost, high-yield/perform. 86857
ASIC design of color seq. driver for LCOS microdisplay devices 114750
BiCMOS full-rate ADSL-RT analog frontend IC with integrated line driver 102428
bidirectional opt. interconnect, VCSELs, photodiodes, CMOS IC 105044
CDMA driver amp., bias control tech. for current reduction 102649
cemented doublet lens laser beam expanding syst., ICF laser driver appl. *(Chinese)* 127877
CMOS 155-Mb/s opt. wireless transmitter for indoor networks 85958
CMOS chip output buffers, switching noise reduction, design tech. 104088
CMOS controlled slew-rate output driver, design and noise reduction 91003
CMOS folding/interpolation A/D converter for analog interface module of TFT-LCD driver 79997
CMOS ground distrib. networks, max. simultan. switching noise expression 114678
CMOS I/O interface ccts., 1.2 Gb/s, 100K pos. ECL syst. compat. 68884
CMOS laser driver, 1 Gbit/s, packaging, on-chip decoupling capacitor 117030
CMOS latches, resistive opens, delay testing, DFT 102044
CMOS line driver, DSL 79561

driver circuits continued
CMOS piezoelec. cryst. driver, SPICE simul. 104439
CMOS PLL, low-power voltage control oscillator 101837
CMOS VLSI low power/low swing bus design archits. 127051
COG bonding proc., Al/PI composite bumps appl., LCD driver chip packag 78636
colour LCD controllers, SoC implements. *(Italian)* 132107
CRT deflection yokes ringing meas. 97702
current peaking CMOS IC driver designs/reson. cavity LEDs, parallel opt. in connects appls. 93456
current tunable CMOS operational transresistance amp. 125244
cw LD driver, fast overcurrent protection syst. 93611
cw LD driver syst., strong impulse interf. 93610
DC-DC power converter, MOS input device, floating gate drive cct. 99816
DTV TFT-LCD with integrated digital data driver 80024
dual full-bridge motor driver IC family for indust. motion control 114604
electronic ballast, small size and low cost for HF fluoresc. lamps *(Japane* 100314
Epson mobile phone LCD drivers, low power consumption 119985
FD Trinitron, digital TV sig. proc. & display technol. 86326
FED, MCP, moving picture, luminance 97661
FED panel syst. buildup, phosphor ageing effect 97740
fluoresc. lamp act. PFC/ballast control IC 134618
fluoresc. lamp electronic ballasts, toggled duty cycle current control 134617
FPD repair practices, TAB/PCB/polariser/backlight rework 97729
fs X-ray laser driver, opt. parametric chirped pulse amps. use 128385
gate controlled devices, snubberless operation, gate drive tech. 125221
global driver sizing tool, crosstalk noise 81457
green OLED pass. matrix display, long-life, charact. 109887
GXGA microdisplay chip, design and fab. 109909
half-bridge driver IC with newly designed HV diode 125236
HDTV projection display for ATSC std., 61 in., large neck CRT 86327
HEMT modulator driver IC, device model params. *(Chinese)* 103914
HF current-driven sync. rectifier topol. 123597
HF sync. buck converter, novel reson. gate driver 88848
high press. sodium lamps, class d LC_sC_p series-parallel reson. inverter 1240
high-perform. gate cct. driving multiple connections of insulated gate devic 90740
high-power appls., integrated power electronic building blocks 116046
HV CMOS IGBT gate driver controlling four switches 116045
hybrid integrated VCSEL/MESFET driver arrays for opt. interconnects 1050
IGBT, HV, SCALE driver *(Chinese)* 70154
IGBT drive, high power, protection cct., overcurrent *(Chinese)* 125224
IGBT gate drive cct., saturation voltage 126853
IGBT gate driver, intell. power module, HV CMOS proc. 126824
IGBT gate driver, monolithic, for smart power modules, CMOS 0.8 µm/50 proc. implement. 81538
in-building opt. LAN, high speed integrated opt. wireless transceivers 8595
integrated opt. posn. encoder syst. with phase calib. 75505
intell. power electronics modules, embedded power packaging technol. 8153
ISFET/MEMFET, const. current driver 81344
isolated base drive control cct. for high power switching BJTs 68576
Ku-band driver amp. for act. phased array appls. 117826
LADIC-CAV, prog. high-speed laser driver IC for opt. recording 114614
large AC PDP, addressing time, single scan syst. 75804
LCD backlighting, elec.-field-coupled discharge lamp 97747
LCD colour display, elec. rot. *(German)* 97715
LCD driver LSI, COF technol., reel to reel method *(Japanese)* 121125
LCD module interconnection, chip-on-film technol. 86859
LCD monitor controller IC, integrated ADCs, high perform. 86895
LCOS liq. cryst. on Si microdisplays, frame-buffering cct. 97765
LCoS liq.-cryst.-on-Si microdisplays, develop. & appls. 121100
LDMOSFET, uneven racetrack source, breakdown voltage, PDP driver 1268
LED bar graphic display, bar graphic press. meter *(Chinese)* 86848
LHC expts., lin. laser-driver array for opt. transm. 121718
low power colour reflective TFT-LCD technol. 121106
low-power asynchronous design, self-resetting logic, computing struct. 79776
low-temp. submicron polysilicon TFTs, scaling effects, SOG appls., LCD drive 97605
LV interface for TFT-LCD, low power consumption 101753
mixed sig. design, ANTRIM software *(Italian)* 80119
modulation driver, quasi-sinusoidal asymmetric current 79565
multifreq. elec. impedance tomography syst., frontend archit. 87423
multithreshold voltage technol. for low power bus archit. 101770
opt. transceiver module adaptable to large core-diam. fiber link, packagin technols. *(Japanese)* 120154
organic LED display, driver cct. *(Italian)* 86871
output driver current slew rate, novel test cct. *(Chinese)* 127057
packet-based DRAM pre-emphasis driver cct. *(Korean)* 114755
PDP drive syst., Plasma AI, image quality 86890
PDP driver, energy recovery sustain cct. design 97734
PMOS-boosted source follower, robust energy-efficient bus driver tech. 12555
polymer EO modulator, driving voltage 104812
polysilicon act. matrix organic LED display, integrated drivers 97727
polysilicon FPD driver ccts., low temp., RTP crystn. 97728
polysilicon TFT, channel region controlled grain growth, AMLCD appl. 8685
polysilicon TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
polysilicon TFT, low-temp., excimer laser long-axis scans 86851
polysilicon TFT, low-temp., single-pulse excimer laser beam profile 86852
polysilicon TFT, RF plasma & SiN, hydrogenation comparison 81264
polysilicon TFT, silicide mediated crystn., large-area LCD 97732
polysilicon TFT data drivers for SVGA TFT-LCD panel 79642
polysilicon TFT LCD data driver output buffer, VGS compens. source follow 86854
polysilicon TFT light emitting polymer high-resoln. monochrome display 9760
polysilicon TFT push-pull analogue buffer for TFT-LCD data drivers 109914
polysilicon TFT technol. for notebook displays 86804
polysilicon TFT-LCD, 7-inch full-colour design 86891
polysilicon TFT-LCD, low temp. gate insulator, photo oxid. & PECVD *(Jap nese)* 121124
polysilicon TFT-LCD, low temp. sputter deposition technol. *(English)* 12108
polysilicon TFT-LCD, low-power 8-bit digital data driver 86885
polysilicon TFT-LCD for mobile PC XGA display 79645
power amp. design for driving piezoelec. actuators *(German)* 79605
power converter piezoelec. transformers, subharmonic driving concept 88788
power IC low-side device, high speed and low power dissipation, half-bridg power output *(Chinese)* 104148
QCM, network anal. based interface electronics 70441
QSXGA superhigh defn. TFT-LCD, digital interface *(Japanese)* 121094
R-IPM series, IGBT intell. power modules, Tj detecting fn. 70146

ver circuits continued
reflective CMOS LCD light valves, fringe-field effects 97685
reverse blocking IGCTs for CSI appls. 77995
SAPFET-2 power module for DC/DC power converter appls. 70325
scan and data driver LSIs for high-resoln. and large-size AC PDPs 97736
series-connected IGBT strings, switching transients control 70152
smart PWM driver in SO-8 package for automotive solenoid controls 134601
SMT assembly, 0201″ chip component proc. implement. for reduced defects 115144
SOI BiCMOS 800 Mbit/s write driver for HDD 114888
SOI CMOS LVDS driver/receiver pair, source-body-tied transistors 125621
SOI HV power IC technol., PDP drivers 68662
split-level precharge differential logic, high-speed charge-recycling 102003
SSFLC/AFLC display, matrix addressing, multichannel waveform generator 109911
STN-LCDs, ultra low power, for mobile telecomm. appls. 97696
switching power amp. for piezo-actuators, optimised design 123695
SXGA liq.-cryst.-on-Si light valve, high-defn. video projector 86850
TFT-LCD panel, timing meas. & simul., pixel macro models 97738
three-phase inverter, IGBT output stage, driver module 112649
US transducer array, beam-forming transmit ASIC 111507
VGA TFT LCD driving cct. design *(Chinese)* 121127
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
W-band wideband low-phase-noise high-power sig. source 102589
WDM digitally controlled tunable stabilized laser transmitter 120180
worst-case IC interconnect delay noise, driver modeling and alignment 126987
XGA thresholdless antiferroelec. TFT-LCD, 15 in., quasi-DC driving 109877
ZVS half-/full-bridge converters, gate drive cct. 134212
Au-to-Au interconnection flip-chip bonding, COS HDD assembly 113661
CO_2 slab waveguide lasers, segmented RF excitation 105094
GaAs MESFET 2D 8×8 photoreceiver array and VCSEL drivers, high-throughput opt. data links 131409
GaAs PHEMT distrib. amp. ICs for 40 Gbit/s high output voltage driver modules 125774
GaAs PHEMT laser/modulator driver IC with dual-mode act. matched output buffer, 10-Gb/s 131410
GaAs PHEMT wideband true-time delay MMIC with on-chip digital drivers 125799
GaAs monolithic integrated LD driver, on-wafer testing *(Chinese)* 93578
a-Si TFT LCD of SXGA class, universal controller, interpolation algm. 97730
a-Si TFT, two-step exposure technol., reduced-mask proc. 81265
Si sputtered microcrystalline thin film fab. for TFT-LCD 79207
SiGe laser driver IC, 3.3 V, 20 Gbit/s VCSEL modulation 120202
a-SiH TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
$YBa_2Cu_3O_{7-x}$ ramp-edge jn., latching-type driver cct. 70932
ZnS:Cu phosphor based AC powder EL flexible inform. display *(Korean)* 121123

iver information systems
see also automated highways
assistance syst. algm. develop., embedded image proc. platform 134584
assistant based on lateral and long. dists. detect. 73315
automobile inform.-display using plug and play computers 100306
automobile surroundings recogn. using on-board camera *(Japanese)* 124025
DaimlerChrysler vision syst. for intell. vehicles 89422
DSRC appls. *(Japanese)* 124027
electronic road pricing vehicles, GPS based IPS, multisens. fusion 124007
European in-vehicle traffic IS 120515
flat discharge lamp for LCD backlighting, Hg-free/high luminance/high efficacy 121129
FPDs for automotive appls. 97645
in-vehicle multimedia, car manufacturer challenges 134587
intell. transport syst., car IS *(Japanese)* 124044
Internet intell. transport syst. studies *(Japanese)* 124030
InternetCAR appl. software, testing environ. design and implement. *(Japanese)* 124045
ITS inter-vehicle commun., dyn. transm. control 108824
LOCATIONWARE location-aware service platform, notification service technols. *(Japanese)* 124035
mechatronic sens. and actuators, drive-by-wire syst., safety integrity methods 124051
multi-sens. driver assistance flexible archit. syst. develop. 134576
multiple driver syst. HMI integrat. design proc. 134586
network speech interface *(Japanese)* 124036
polysilicon TFT-LCD, 7-inch full-colour design 86891
Probe Car System driver inform. proc. overview *(Japanese)* 124031
real-time vehicle tracking in image seq., digital rear-view mirror 124040
road signs detect. and tracking 95401
SPIRIT concept car, driver cockpit innovation 134591
STN LCDs for automobiles, multi-line addressing technol. appl. 97601
vehicle GPS/map matching integrated navig. syst., D-S reasoning *(Chinese)* 86265
video-based driver assistance syst., scene anal./behavior organization 94830
vigilance monitoring, skin resist.-based automatic checkout syst. 67502
vulnerable traffic participants protection, sens. fusion 124039

rivers *see driver circuits*

rives
see also clutches; electric drives; propulsion
drive-level instabilities correl. to quasi-static field testing 116415
gain-tuned harmonic drive torque sens., perform. under load and speed conditions 86466
marine reactor, in-vessel type control rod drive mechanism 123135
MEMS microengines dyn., opt. laser interferometry 112570
moving V-belt strain meas., opt. correl. & spatial filter sens. 109505
radiotelescope, VIRAC RT32, tracking-pointing syst. 97042

RO *see dielectric resonator oscillators*

rug delivery systems
anaesthesia syst. design using simul. 76607
cardiovascular sci., nanotechnol. needs, overview 132993
controlled release microchip, microreservoirs 122279
differential opt. fiber refractometer, patient monitoring on drug injection 110840
drug-pad moxibustion cauterizer, single/multiple heating-pads 133013
focal blood brain barrier opening, MRI guided focused US 111065
infusion devices, computerised DAQ syst., clinical support/risk mgt. 87802
laser transcutaneous drug delivery, model, diffusion rate 76608
liposomes, drug delivery through US cavitation 111081
living chip, cell sens., toxicity and therapeutical biomonitoring 132019
microsyringe fab. for intravascular injection, vitro test *(Korean)* 98600
MICRO.tec 2000, conf., Hannover, Germany (Sept. 2000) 113199
transdermal insulin delivery using LF US, sonophoresis 111066

drug delivery systems continued
Ni microstruct., localized electrochem. deposition, rotor electrode 116086
Si, porous, microelectronic biological implants, overview 111140

drying
acoustic humidity and gas sens. 120716
agricultural food products, disease control, microwave drying 80406
beech veneers, combined microwave and air drying 113145
electroheat technol. retrofits anal., DSM ES, fuzzy DSS 134645
leather, microwave-assisted drying and moisture leveling 102752
maple sap to maple syrup by microwave heating 100324
MEMS struct., supercritical CO_2 drying, effects of temp. on surface adhesion 104201
natural graphite, surface modif. using Al, electrochem. perf. 123729
power transformers coils solid insulation drying, LF converter 77948
proc. gas distrib. systs., moisture dry-down charact. modeling 78594
real-time mixed-traffic WLAN, prioritized CSMA 130626
slotted waveguide applicator for continuous flow grain drying 113178
sol-gel-derived 0-3 composite ceramics for direct write electronics appls. 102841
transport phenom. studies, holographic interferometry 132224
$3Al_2O_3$-$2SiO_2$ ceramic material, microwave heating, FDTD modelling 113144
$BaTiO_3$ powders, prep. using supercritical CO_2 drying of gels 79438
Cu fine line direct printing using convective flow splitting 103494
$LiAl_xMn_{2-x}O_4$, emulsion drying method, enhanced structural stabil./cycleability 90559
Si polycrystalline MEMS, friction meas. 104184
Si surface cleaning, wet etching, IC prod. 69907
SnO_2 ceramics, chem. precip. & freeze-drying, CO gas sens. 75714
ZnO varistor fabr., powder coating with mixed dopant solns. 79372

DS-CDMA *see code division multiple access; spread spectrum communication*
DSC *see differential scanning calorimetry*
DSL *see digital subscriber lines*
DSM *see demand side management*
DSO *see digital storage oscilloscopes*
DSP chips *see digital signal processing chips*
DTA *see differential thermal analysis*
dual band antennas *see multifrequency antennas*

dual codes
[52, 26, 10] binary self-dual codes with an automorphism of order 7 83865
BCH binary codes, bounds for min. dist. of duals 83920
BCH codes/duals, dist. distribs. 83933
binary formally self-dual even codes of lengths up to 16 class. 94298
binary lin. code detect. and recogn. 94288
binary Reed-Muller code R(2,5) decoding by hand and by machine 129093
Clifford groups invariants 117871
convolutional codes, block code description *(English)* 72855
covering rad. problem for ternary self-dual codes 106132
divisible code bound, character-free proof 83880
duadic codes over ring Z_{2k} 72786
even isodual codes, generalized Hamming wt. enumerators/coset wt. distribs. 129077
extremal doubly-even self-dual codes of length 40, mass determ. 117940
extremal even formally self-dual codes of lengths 20 and 22, classif. 94282
extremal self-dual codes, trellis struct. and higher wts. 117965
FT, factor graphs 129173
graphical codes *(English)* 72832
group ring codes, struct. theorems, self-dual codes appl. 117964
Hermitian self-dual codes over GF(4) 129145
Hermitian self-dual codes over GF(4) with highest known min. wts. 72785
iter. decoding, additive version of SISO algm. 129047
length 40 binary self-dual cyclic codes 117976
lin. codes, covering rad. bounds 129053
optimal ternary lin. rate 1/2 codes 83931
quantum self-dual codes and symmetric matrices 129069
quasicyclic codes alg. struct. 94286
self-dual codes, min. dist. and decoding capacity anal. 129043
self-dual codes constr. over F_p and weighing matrices 83921
tail-biting codes, suboptimum MAP-decoding using dual trellis *(English)* 72843
Type II codes over F_4 117926

dual frequency antennas *see multifrequency antennas*
dual offset reflector antennas *see offset reflector antennas*

duality (mathematics)
adaptive optimal nonlin. filtering design, duality 119061
bal. network flows, duality and struct. theory 90003
bal. network flows, polyhedral descriptions 90005
biorthogonal wavelet charactn., multiresolution anal. 118929
camera self-calib., varying focal length, 2 images 120921
CDT subproblem, dual fn. max. 79014
class of dual fuzzy dyn. programs 67848
continuous Archimedean t-norms and bounds 67824
convex program conditioning, primal-dual constraint syst. 78906
convex semi-infinite prog., dual parametrization method 78891
convex-lin. problems, multiobjective duality 100927
FIR filters with max. flat freq. response error magnitude, instantaneous freq. estimator 107502
frame pseudo-duals with appls. 118930
Galerkin FEM, a posteriori error estim., optimal control approach 124765
generalized semi-infinite optim., lin./lin. problems 100938
global optimality conditions via separation fns. 67910
homog. convex cones, Caratheodory no., duality 78908
hybrid dyn. prog./depth-first search, reliab. optim. 124594
hydrothermal power generation scheduling, stochastic prog. 99580
inform. embedding and source coding with side inform., duality 129228
inform. manifolds, Chentsov metric, dual affine connections 83786
integer prog., pth power Lagrangian method 78889
interconnection networks, dual of hypercubes 85082
large struct. semidefinite programs, inexact spectral bundle method 78762
lin. optim., primal-dual Newton method, complexity anal. 78893
lin. vector optim., parametric generalized soln. 124598
LMI of rank one, eigenvalues and Lyapunov's inequality 67700
log-sigmoid multipliers method in constrained optim. 100947
LP/convex prog., long-step cutting plane algm. 78897
Lyapunov's inequality and rank-one LMI 100735
min. fractional problems, optimality/duality condition *(Chinese)* 67889
multi-commodity flow global routing by approx. algm. 103994
multicycle ccts., self-dual self-testing, props. 79720
multiobjective control problems with generalized invexity 78887
multiobjective prog. problem, optimisation over weakly efficient set 100906
nonconvex optim., nonlin. Lagrangian theory 67892

duality (mathematics) continued
polar cones' solidness, duality and Banach spaces 67816
semidefinite optim., primal-dual method, Nesterov-Todd direction, complexity anal. 67909
semidefinite optim. problems 124603
semidefinite prog. via matrix completion, sparsity 90025
shallow water eqns. in conservative form, duality methods 114140
simple graph, weighted stabil. no., upper bound determ., quadratic prog. approach 78850
stochastic prog., primal-dual constraint aggregation 78894
tandem queues, const. service time, optimal arrivals control 100762
wireless commun., dual Gabor frames approx. and window decay 118928
ductile-brittle transition
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
ductile fracture
see also ductile-brittle transition
flip chip solder joints, fracture, isothermal cyclic shear, FEA 113689
welded joints maint., fatigue, fracture, probabilistic optim. 89843
Cu_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
$FeSn_2$ particle reinforced Sn-Ag solder joints, creep props. 100595
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
Sn-Ag solder joints, creep props. 100595
ductility
see also ductile fracture
iron, austempered, ductile, laser surface hardening, math. modeling 72110
opt. glass micro-machining, brittle regime, in-proc. monitoring *(Japanese)* 89839
single-cryst. Si microscratching tests, ductile-to-brittle transit. *(Japanese)* 68475
smart fiber reinforced polymer rod, ductility and health monitoring 86778
Nb_3Sn supercond., Ta fiber-reinforced, coil expts. 71072
Ni LIGA MEMS, microstruct. mech. props. 104176
SnBi-SnAg solder paste, mech. props., SnAg addit. effect 68399
ducts, cable *see electric conduits*
duplicating *see reproduction (copying)*
dust
atm. dust and aerosols, ground-based lidar meas. 111421
ATM for planetary appls. 109819
brush discharges, dust ignition tests 83118
CHP plant, elec. dust precipitators, power supply *(Russian)* 123187
cyclone technol. based vac. cleaners *(Japanese)* 124129
cylindrical particles charging in monoionized elec. fields 128708
distrib. porcelain suspen. insulators, nonsoluble indust. dust effects *(Korean)* 123039
elec. curtain, charged dust particles, electrodynamics, repulsion force 83166
elec. filter microsecond power supply for efficiency improvement *(Russian)* 93982
electret filters, polypropylene/PTFE materials, charging charact. 81645
environ. monitoring syst. based on ANN 88177
ESP dust particles deposition efficiency simul. 72190
ESP modelling based on fuzzy logic 83174
glacial ice, dust logging, rapid opt. method 76914
indoor air cleaning, corona ionisers effectiveness 88191
ionizer air-cleaners, dust removal, ozone emission 83163
IVA-L type dust conc. meas. laser instrum. for indust. conditions 132212
Mars Array Technology Experiment for space power solar cells 111359
pulsed energized wire-duct ESP, elec. field, charge dens., FEM 128715
removal from carpets, electrostatic enhancement of carpet powder 83100
silicone rubber outdoor insulation, material screening/eval. methods 81730
space power solar cells dust charactn. expt. for Martian operation 111358
steam power plant ESP using skewed gas flow technol. 99555
TPP pulverised fuels, explosive props. eval. 112294
dust cores *see powder cores*
dust storms *see storms*
DVB *see digital video broadcasting*
DVM *see digital voltmeters*
DWDM *see wavelength division multiplexing*
dye lasers
benzopyran derivative flashlamp-pumped dye lasers, fluoresc. props. 117093
cholesteric liq. crysts., 1D photonic band-gap and low threshold lasing 82504
coumarin CW ring laser, Ar^+-pumped, efficient stable operation 71867
cw dye tunable narrow-band UV laser syst., Cu vapour laser pumped 93491
DCM dye doped PMMA planar waveguide laser, wide band tuning *(Chinese)* 93494
DEASMPI, two-photon pumped freq. up-converted lasing props. 71647
DFB dye laser, polaris. dyn. 71655
DFB dye laser, tunable narrow-band radiation generation 82507
dipyrromethene.BF_2 complexes, efficient and stable dye laser action 93490
dye cored dendrimer in PMMA waveguides, single-mode random laser 93492
dye-doped ethylene glycol pendant drops, lasing, spatial-resolved spectral meas. 71649
trans-4-[p-(N-ethyl-N-hydroxyethylamino)styryl]-N-methylpyridinium iodide, two-photon absorbing laser material 82505
flashlamp-pumped dye laser radiation SHG 117459
graded gain random liq. laser amp. opt. diode spectral charact. 82506
high power pulsed dye laser amp., phys. design *(Chinese)* 105155
high-efficiency flashlamp-pumped dye laser, output charact. *(Japanese)* 105160
high-energy pulsed source, freq. stabilisation 71652
high-power, wavelength control, computerized syst. 82751
HMASPS dye, two-photon pumped freq. up-converted lasing props. 82037
trans-4-[p-(N-hydroxyethyl-N-ethylamino)styryl]-N-methylpyridinium p-toluene sulfonate, NLO props. 82909
image mode laser, ASE model, video projection display 97671
intens. amplif. by injection seeding *(Japanese)* 128123
Kiton-Red dye laser solns., Cu-vapour-laser excitation, photo-stabil. 71648
liq. cryst. polymer blend, lasing actions 105161
mol. sieve dye microlasers 82510
multistage pulsed dye laser syst., output power, optimisation, laser isotope separation appls. 128124
organic semicond. thin film, dye doped, very compact tunable laser 71818
organic solid-state dye laser, second-order DFB cavity 105159
perylene orange doped acrylic polymer solid-state dye laser 71653
perylene-doped polymer fiber fluoresc. spectra 93058
PMMA solid dye microcavity laser, micromolding fab. 71650
polyurethane matrix, dye laser 117089
polyurethane-based highly efficient dye laser 128128
dye lasers continued
port wine stain birthmarks, dye laser irrad., epidermal protection 87826
pyrromethene 567 dye in polymer matrix, photophysical and lasing prop 105157
pyrromethene 567 dye lasers, high-repetition-rate polymeric solid-state, pumpe by Cu-vap. laser 93493
ray trajectories in axial-symmetric inhomog. medium 117094
Rhodamine 19 autoscanned single-freq. CW dye laser 128126
Rhodamine 6G single-freq. stabilized dye jet laser, Cu-vap. laser pumpe 128125
Rhodamine 6G-doped solid-state laser, output wavelength temp. tuning 82508
Rhodamine 6G-doped spherical solid microparticles, cascade lasing 71651
Rhodamine-6G(B) dye laser solns., Cu-vapour-laser excitation, photo-stabi 71648
rhodamine-B dye doped polymer DFB microchip-laser-pumped laser 117091
self-seeded coupled-cavity pulsed tunable dye laser, competitive act. mirr 117390
single-mode dye laser syst., colored noise 117090
solid-state act. media, PMMA matrix, XeCl laser pumped, output charac 105158
soln. laser, polarised radiation, stat. props. 105156
sq. nanosecond pulse generating tunable dye laser 117388
static DFB dye laser, ultrashort pulse generation 117092
trans-4-[p-(pyrrolidinyl)styryl]-N-methylpyridinium iodide dye two-photon absorpt./lasing 71213
two-photon induced fluoresc. and up-conversion lasing *(Chinese)* 128127
$C_{18}H_{16}N_2O_2B_2F_4H_2O$, laser dye, opt. charactn. 71654
dye penetrant tests *see nondestructive testing*
dyes
see also dye lasers
5CB NLC, methyl red azo dye doped, director reorientation by short pulsed irrad 83005
Acid blue 7 dye soaked gelatin films, self-diffr. gratings 83006
acrylamide dye gels, dyn. opt. elements recording 104792
alizarin violet based light-emitting devices, CW and pulsed mode operation 71568
all-optic tunable long-period grating using double-cladding layer 116879
azo chromophore functionalized polythiophenes, NLO props. 71980
azo containing photosensitive liq. cryst. polymer film, two-wave mixing 12844
azo dye doped NLC, photorefractivity, supra-opt. nonlin. 128424
azo dye doped polymer film periodically photoisomerized waveguide quasiphase-matched SHG 93806
azo dye mol. doped thick polymer films, holographic grating generation 10559
azo-containing liq.-cryst. polymer films, controlled holographic recording 8206
azo-doped PMMA film, photo-induced birefr., bicolor image storage *(Chinese)* 93027
azo-dye-doped liq. cryst., polymer-enhanced diffr. 116833
azo-dyes, multivariable anisotropic random-walk mol. devices, quantum chem design 69336
azobenzene-doped polymer film, polarized-light-controlled holographic recordin 83035
benzopyran derivative flashlamp-pumped dye lasers, fluoresc. props. 117093
bis-azodye doped polymers for opt. struct. plastic EO devices 127555
bromophenol blue(R) dye-rosin film, holographic appls. 72085
bromothymol blue tapered film composite opt. waveguide, NH_3 sens. appl 75724
carbazole-contained polymers, spiropyran dyes doped, photochromism holographic recording and erasing 93896
carbazole-naphthalimide dyads, single-layer EL device 82372
cholesteric liq. crysts., 1D photonic band-gap and low threshold lasing 82504
colour balancing liq. cryst. filters for image pickup in TV film shooting 12784
colour polymer organic LEDs, ink-jet dye doping, lateral dye distrib. 116988
cyanine dye thin film props., high-dens. DVD-recordable appls. 92967
D-CN red organic electroluminesc. dye, design, synthesis, device appl. 116911
DCM dye doped PMMA planar waveguide laser, wide band tuning *(Chinese)* 93494
DEASMPI, two-photon pumped freq. up-converted lasing props. 71647
dil. organic solns./neat organic liqs., absol. mol. opt. Kerr-effect spectrosc 71969
disperse orange 3 in PMMA, periodically poled waveguide, quasi-phase-matched SHG 93834
Disperse Red 1 azo-dye doped cellulose acetate polymer film, holographic refl gratings 93898
doped polymer films, photochromic holographic recording 93883
double-layer organic thin film electrolum. devices, red light emission props. anal 82367
dual receptor biosensors, fluoresc. reson. energy transfer pairs 109721
dye cored dendrimer in PMMA waveguides, single-mode random laser 93492
dye lasers, high-efficiency flashlamp-pumped, output charact. *(Japanese)* 105160
dye-doped poly(N-vinylcarbazole) film/ITO/Ag electroluminesc. device, all-we fab. 71565
dye-doped polycarbonate laser filters, alexandrite laser eye-protectors 100506
E-polarisers, dichroic dye liq. cryst., low-leakage off-angle 104819
trans-4-[p-(N-ethyl-N-hydroxyethylamino)styryl]-N methylpyridinium iodide two-photon opt.-power limiting, upconverted superradiance props. 82829
trans-4-[p-(N-ethyl-N-hydroxyethylamino)styryl]-N-methylpyridinium iodide two-photon absorbing laser material 82505
fluoresc. dye opt.-fiber sens., organic solvent water content 75570
hexabenzocoronene DLC, self-organization for high-efficiency organic PV 104836
HMASPS dye, two-photon pumped freq. up-converted lasing props. 82037
trans-4-[p-(N-hydroxyethyl-N-ethylamino)styryl]-N-methylpyridinium p-toluene sulfonate, NLO props. 82909
intratumor injection of laser-absorbing dye, digital X-ray imaging tech. 12230
ionic emissive dyes doped in poly(vinylcarbazole), EL 116981
Kiton-Red dye laser solns., Cu-vapour-laser excitation, photo-stabil. 71648
LED, dye doped, EL 116997
lin. dichroism, LCD appl. 109868
liq. cryst. layer, dye-doped, pass. laser Q-switching 117348
liq. crysts., dye-doped, SHG and photorefr. effect 128487
low-power dye-sensitised solar cell modules, long-term stabil. 134405
methyl red doped NLC film, photoinduced gratings form. 128425
Methyl Red dye-doped liq. crysts., photorefr.-like gratings, elec. field contro 71421
Methyl Red-doped NLC, huge nonlin. response 105465
methylviolet-C_{18}/rhodamine-C_{18} dye-sensitized p-CuSCN photoelectrochem. cel 134341
mol. organic LEDs, guest-host act. layer, enhancing device perform. 71594

s continued
multicolour OLED fab., integrated screen/thermal transfer printing 86805
nano-struct. dye-sensitized solar cells, opt. props. 100038
NLC, dye doped, dyn. holographic grating form. 105603
NLC thin layer, dye-doped, under DC elec. field, holographic grating form. mechanism 105602
nonlin. organic chromophore doped polymer opt. fibers 93088
OLED, EL enhancement 116984
OLED, white, improved stabil. 128014
organic multilayer white LED *(Chinese)* 82409
organic semicond. thin film, dye doped, very compact tunable laser 71818
organic thin solid films for LEDs, photophysical studies 104906
organic-inorganic functionalized sol-gel materials, NLO response 128426
perylene-doped polymer fiber fluoresc. spectra 93058
phthalocyanine dye layer, CD-R disc proc. window 93001
PMMA, Disperse Red I doped photoactive film, interferometric studies 87003
poly(3-octylthiophene)/solid state dye-sensitized TiO_2 solar cells 123817
poly(triphenyldiamine)/nanoporous TiO_2/dye-sensitized hybrid solar cells 123816
poly-N-epoxypropylcarbazole:dye films, photocond., ionic forms effect 103085
polyceram dye-doped sol-gel coatings for near-IR laser protection 104895
polymer LED, phosphoresc. Pt(II)/Ir(III) dopants 117009
polymer light-emitting devices, emission color patterning, maskless dye diffusion tech. *(Japanese)* 71566
polythiophene-based solar cells, elec. and PV props. 100030
polyurethane matrix, dye laser 117089
polyurethaneacrylate films, dyed, as opt. apodizing diaphragms 117428
porphyrin dyes, meso-substituted, NLO charactn. 71955
PVK-matrix photorefr. polymer dye hole transport by EO chromophore 92931
pyrromethene 567 dye in polymer matrix, photophysical and lasing props. 105157
radiographic film, processed, vis. dye light absorpt. props. 110963
Rhodamine 19 autoscanned single-freq. CW dye laser 128126
rhodamine 6G doped boric acid glass films, nondegenerate two wave mixing 105481
Rhodamine 6G doped boric acid glass films, two beam coupling 93761
Rhodamine 6G single-freq. stabilized dye jet laser, Cu-vap. laser pumped 128125
Rhodamine 6G-doped spherical solid microparticles, cascade lasing 71651
rhodamine B doped plastic opt. fibers, side illum. induced fluoresc. 116644
Rhodamine-6G(B) dye laser solns., Cu-vapour-laser excitation, photo-stabil. 71648
Rose Bengal-Methylene Blue panchromatic ion pair for holographic recording material 82036
solar cells, dye-sensitized, SPV spectrosc., electron injection 112864
solar cells, nanocrystalline dye-sensitization, fn. and anal. formula 123799
solid-state act. media, PMMA matrix, XeCl laser pumped, output charact. 105158
soluble cond. polymer/dye composite, jn. device, elec., opt. props. 116963
Spiropyran doped polymer matrix films, photochromic react., reversible holographic recording 93781
squarylium dye film, all-opt. 2D serial-to-parallel pulse converter 82820
squarylium dye J aggregates, absorpt. bleaching, two-photon excitation proc. 93778
squarylium dye J aggregates, third-order nonlin. opt. coeffs., Z-scan tech. 127550
squarylium dye J-aggregate film, femtosecond 2D serial-to-parallel pulse converter 116874
subphthalocyanine dye opt. recording material spectral props. 92966
trans-4-[p-(pyrrolidinyl)styryl]-N-methylpyridinium iodide dye two-photon-absorpt./lasing 71213
twisted nematic display, dichroic dye, opt. params. 109891
two-photon induced fluoresc. and up-conversion lasing *(Chinese)* 128127
xanthene dye sensitised DCG holographic sensitivity 83017
CdSe nanocryst./organic dye bilayer opt. microcavities, enhanced Forster energy transfer 82187
Cr^{4+}:YAG cryst. laser, dye film saturable absorber *(Korean)* 93777
p-CuSCN hole collector/Ru bipyridyl dye coated nanocryst. TiO_2 film solar cells 100039
Ni thiazolylazo dye SW opt. recording media 92965
SnO_2 nanoporous electrode with soluble perylene deriv./cyanine dyes, wide spectral photosensit. 123819
n-SnO_2/Al_2O_3/Ru-dye/p-CuI PV cells, electron-hole recomb. 123804
SnO_2/ZnO nano-porous composite electrodes, dye-sensitized solar cell appl. 78168
TiO_2 PV devices, dye sensitised, charge recomb. and transport 100208
TiO_2 dye-sensitized solar cell by spin-coating method, sol proc. params. effect 100210
TiO_2 incorp. zeolite thin films for solar cells 89294
TiO_2 nano-porous films, electron transport and effect on dye-sensitized solar cells 100209
TiO_2 nanoporous layer dye sensitized solar cells 123822
TiO_2 porous electrode, photosensitization, porphyrin derivatives 116907
TiO_2 solar cells, organic dye-sensitized nanocryst., electrolyte effect 134403

ynamic analysis (programs) *see system monitoring*

ynamic braking *see braking*

ynamic channel allocation *see channel allocation*

ynamic nuclear polarisation
MRI low-field imager using hyperpolarised ^{129}Xe 98467

ynamic programming
see also integer programming
2D face warping using single image 73548
act. contours, motion estim. based tracking 118413
act. contours tracking, facial features appl. 95503
activity-driven clock design, CMOS sync. digital syst. 68683
adaptive bandwidth allocation based on playback tunnel to support VOD service over ATM networks 120571
adaptive parallel syst. dedicated to projective image matching 95513
algm. for optimal edge detect. in med. images 87355
all-opt. networks, regenerator placement algms. for connection establishment 74985
approx. value iter. with randomized policies 78981
Bayesian tree-struct. online transform. of HMMs, optimal model selection for speaker adaptation 106404
bid-based hydrothermal scheduling, market power assess./mitigation 88326
buffered interconnect tree optim., Lagrangian relax./dyn. prog. 126995
CDMA networks, adaptive resource allocation for network-level QoS assurance 74857

dynamic programming continued
cellular systs., perform. anal. of adaptive modulation with optimum power control 85685
class of dual fuzzy dyn. programs 67848
CMM, optimal meas. seq. planning/collision-free path 97139
combinat. DNA word design 69349
combined PV/solar heat/CHP syst., primary energy/cost reduction *(Japanese)* 112434
competitive power generation market expansion planning optimisation 122933
component-based act. network archit. 130485
constrained traveling salesman problem, polynomial algm. 113922
container ident. mark recogn. syst., image capture device *(Japanese)* 84524
defect-oriented test scheduling, polynomial-time heuristic, globally optimal solns. 81491
delay-differential inclusion optim., stabil. of approx. 100936
dependant dist. pot. source algm. for optimal path finding with analog CNN 90631
diaphragm motion quantification in fluoroscopy, computer program 76541
distrib. feeder optimal loss reduction using transformer rearrangement 77295
distrib. substation VAr/voltage control, fuzzy dyn. prog. *(Chinese)* 112042
document image decoding using iterated complete path search 95337
document image decoding using iterated complete path search 129801
DSP pipelined proc., dyn. prog. approach to complex allocation 125520
ECG beat class. by hybrid neural network 110639
economic generation scheduling method for Chinese elec. markets *(Chinese)* 112210
elec. trading at spot market prices, unit commitment decisions 111759
envelope theorems 100945
exact algms. for large-scale unconstrained two and three staged cutting problems 67918
facial expression recogn., continuous dyn. prog. appl. 107201
generation bidding algm. tutorials, dyn. prog. method *(Chinese)* 88311
georeferenced road extraction 73433
guessing games for saving energy in mobile environ. 117918
H.263 video coder, interactive error resilient scheme *(Chinese)* 95035
H.263-compatible error-resilient video coder 95398
handwritten word recogn., slant correction, 2D warping *(Japanese)* 95465
high speed networks, optimal admission control, dyn. prog. approach 73814
human gesture recogn., continuous dyn. prog. *(Japanese)* 107144
human motion recogn., view-based aspect model based on motion change *(Japanese)* 129860
hybrid dyn. prog./depth-first search, reliab. optim. 124594
hybrid form FIR filter with min. cycle-time constraint, optimal design 91071
hydrothermal power syst. Lagrangian relax.-based auction implement. improvement 111757
IC interconnect tree optim., hybrid DQP algm. 70258
improved motion stereo matching based on modified dyn. prog. 129646
indoor mobile robots, exploration and navig. 109971
indust. visual inspection, fast alignment search algm. 100640
IP networks, intruder location, Markov decision model 74349
leaf cell synthesis, 1D, transistor chaining with integrated dyn. folding 126966
main transformer ULTC and capacitors dispatch in distrib. syst. 134132
MAP and LS estim. of abrupt changes in multiplicative noise using dyn. prog. 118485
MOEPE, merged odd-even PE archit., stereo matching hardware *(Korean)* 84179
multi-scale method for re-assembly of fragmented objs. 129502
multicast routing protocol with delay/delay var. constraints 74032
multihop mobile wireless networks, route selection algms. comparison 85079
multiple handwritten word recogn. techs. fusion 84592
multiscale anal. and control of networks with fractal traffic 107787
MV/LV distrib. systs. design coord. 133655
neuro-dyn. prog., research, survey *(Chinese)* 113954
nondeterministic dyn. prog. on parallel coprocessing syst. 67850
nonGEO systs., multiple GES, freq./time slots allocation algms. 74870
obj. boundaries tracking, stabilized snake constraint 129653
obj. boundary extraction, snake algm., watershed transform 129876
optim.-based image segmentation algms. 73531
optimal allocation of electronic content 120575
optimal robust sens. scheduling problem 75446
optimistic decision-making in fuzzy environ. 67734
optimum multiuser detect., semiblind demodulation 119216
ordered data, min. message length grouping 72711
PCN, location update by dyn. prog., registration point 108790
PLAN, packet lang. for act. networks 74385
power pool, generation companies' bidding strategies *(Chinese)* 88300
power systs., robust generation mix under uncertain environ. 99319
power-conscious systs., software implement. strategies 108349
probabilistic/possibilistic Markov Decision Processes algms. 67759
QRS wave extraction in ECG based on dyn. prog. matching *(English)* 110673
recursive partitioning based placement, cut seqs., dyn. prog. approach 125454
relative fuzzy connectedness among multiple objs., image segmentation algms. 73288
resource-sharing syst., optimal CAC 119112
rural LV distrib. networks design using dyn. prog. 133575
rural MV radial feeder develop. optimisation 133651
shape indexing 118464
short term generation scheduling, dyn. prog., GA 99216
short-term thermal generation scheduling using ant colony search algms. 111946
speaker-independ. word recogn., piecewise lin. freq. warping *(Japanese)* 94416
surgical simul., versatile surface model reconstruction, serial planar contours 98602
terminating Markov decision procs., risk-averse objective fn. 100784
unit commitment determ., improved dyn. prog. method *(Chinese)* 111731
unit commitment using hybrid models approach 122921
unmanned aerial vehicle, vision based navig. 97401
video, face detect./tracking using dyn. prog. 84615
video commun., multidimensional bit-rate control 106871
video images de-interlacing using shortest path tech. 129643
video movie annotation syst., script-video assoc. 73166
VLSI cct. interconnect trees optim. 104000
VLSI low-power µP design, zero-skew gated clock routing tech. 68836
wavelet block quantization tables for images, optim. algm. *(Chinese)* 95228
wireless commun. systs., optimal/suboptimal handoff control vars. 85591
wireless data networks, multiple channel globally constrained power control 131053
wireless packet networks, multimodal dyn. multiple access 119302
worst traffic passing virtual frame regulation, anal. with dyn. prog. 130309
zero-sum two-pers. differential games, first-order differential dyn. prog. algm. 124498

dynamic RAM *see DRAM chips*

dynamic response
see also transient response
3D time domain boundary element formulation to wave propag. in poroelastic solids 79113
analog-digital systs. description, sig. proc. and control appl. 102288
Athlon(R) proc. input current mode DC-DC controller 112620
buck+half bridge very-LV DC/DC power converter topol. 88891
cable maint. robot, lin. dyn. response *(Chinese)* 113427
cerebral autoregulation assess. using time-domain cross-correl. anal. 132596
chiral-homeotropic LCD dyn. 97675
crane mechatronic syst. dyn. behavior investig. 89493
DC-DC stepping inductance voltage regulator with fast transient loading response 88846
distrib. systs., unbalance/fault conditions, PWM STATCOMs operation 112038
distributed PV power systs., fully digital control 133900
doubly-fed twin stator IM drive, control perform. eval. 78213
electrostatic microactuator optimally designed for HDD 99874
external-cavity semicond. laser, transm. perform. assess. 96685
external-cavity semicond. laser stabil., strong-feedback regime 93629
eye pupil response to light meas., novel imaging syst. 110846
gas sens., electroacoustically coupled resonator config. 132054
HDD spindle motor, electromechanical-coupled field anal. *(Korean)* 77900
HDD suspen. vibr. meas., US pulse-echo tech. 116309
heterojunction phototransistor/QW-LD integrated optoelectronic device, static/dyn. responses 71627
hybrid PM stepper motor robust sliding mode posn. control scheme 88778
IGBT H-bridge switching converters, full-digital control board 88832
IM drive, fuzzy controlled, loss minimization 123867
IM drive speed control, fuzzy-logic controller, DSP syst. 89347
IM drives, indirect FOC, 1 DOF and 2 DOF controllers design 123947
IPM and SPM motors, dyn. response, mech. and mag. coupling 134091
IPM sync. motor drive response to single-phase open cct. faults 89326
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
lin. variable differential transformers, DSP-based sig. conditioning 86489
microreactor proc. param., periodic var., modelling & simul. 116079
mixed-sig. PWM DC/DC converter, proport. current feedback, single chip implement. 90724
multi-domain opt. MEM systs., CAD framework 82203
multi-level VSI optim. for MVDC transm. systs. 123625
multimodule parallel DC-DC PWM converter systs., robust av. current-mode control 134144
PCB electronic product suspen. design, shock response spectrum 89856
PEMFC electrochem. perform., testing/modelling *(Chinese)* 78161
plumb-line-type liq. level meas. syst., dyn. anal. 121271
polymer-stabilized fast-switching IPS config. 86835
power lines, reliab., cascading failure risk assess., long. loading 88441
power systs., decentralized suboptimal control, SMES 122878
quasi-reson. DC link inverter-fed IM drives, voltage feeding algms. 123924
quick-return servomechanism, adaptive fuzzy neural network control 77903
semicond. gas sens., nonlin. dyn. response 97452
semicond. gas sens., nonlin. dyn. responses, competition effect 109765
sens. perform. specs. 97211
sensorless PM brushless AC motor drives, speed estim. improvement 123879
series act. clamped reson. DC-link inverter current control 134188
shear-stress sens., dyn. calib. using Stokes layer excitation 97171
single-phase IM vector speed control syst. *(Korean)* 123453
single-stage step-up/down three-phase AC-to-DC converter modelling 88877
STATCOM nonlin. control scheme *(English)* 77234
SVC, control/dyn. anal. using three level inverter topol. 78116
SVC, optimal PI controller design, GA 77252
SVC syst., PSS design using real variable elitism GA *(Korean)* 134327
three-phase act. power harmonic filter direct power control scheme 89030
two-area power syst. fuzzy gain-scheduled PI load-freq. control 122903
UPFC, PWM based, dyn. response, EMTP simul. *(Korean)* 77267
GeS_2/In(Sn-Bi), reflectivity dyn. response, WORM opt. disk appl. *(Japanese)* 71232
InGaAs/InGaAsP MQW scaled microdisk lasers, dyn. behavior 128279
MoO_3-V_2O_5 thin films, struct. & H_2 sens. props. 97526
Nb_3Sn μ-SMES concept feasibility 78188
Si, porous, NO_2 sens., deposition tech., electrochem. etching 97483
SnO_2 nanosized thin films, mechanochem. proc., gas sens. 97546

dynamic stability *see stability*

dynamic testing
see also fatigue testing
accelerated lifetime test methods for package technols. 124355
ADC differential nonlin. testing, exponential shaped voltage 102284
ADC dyn. test setup, timing jitter contribs. meas. 80013
ADC testing, transportable A/D box for comparative meas. 109425
bridge & highway static/dyn. testing, long-gauge FBG strain sens. 120843
dimpled BGA proc. develop. for space flight appls. 133229
drop-testing instrum., electronic boards mounted with CSPs 113466
durian fruit, nondestructive maturity determ., force vibr. appl. 100355
elec. machine vibr. class. using evol. spectrum 118880
electronic assembly stress screening using broad spectrum acoustic excitation 102832
flexible joints, micromachined, simul., dyn. testing and design 70344
HV disconnecting switches, seismic qualification *(Polish)* 99841
IC stress tests, moisture-based failure modelling 126953
micro-machined materials, Young's modulus meas. *(Chinese)* 97849
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647
power MOSFETs, static and dyn. testing 81284
press. contact IGBT, reliab. testing 70140
PTFE/siloxane nanocomposite ultra low-k ILDs, high-temp. mech. behavior/phase morph. 92153
pumps, steam turbines, vibr. eval., stds., codes *(Chinese)* 77757
PWB nonlin. reson. and stress anal., boundary condition eval. 91464
roadway luminaries, vibr. test method, ANSI std. 113134
spacecraft panel shaker random vibr. test for high-intens. acoustics simul. 98892
TMZ turbines, LP-sect., last-stage blades, vibr. tests 88598
turbogenerator, bearing dyn. props. ident. *(Chinese)* 88668
vibr. overtest problem, dual-control tech., control variables 78590
vibr. testing, force meas., appls. to modal ident. 110005
virtual instrument *(Chinese)* 75372
Li batt. safety during transport, environ. tests 89095
NdFeB, elastic modulus, intrinsic coercivity 104494
Si micromachined cantilever, Young's modulus meas. method *(Chinese)* 127100
Si press. sens., integrated reliab. test, automatic syst. 75456

dynamic testing continued
SiO_2-Au buckled composite microbridges 104185
no-flow underfill materials for eutectic/Pb-free solders, high melting tem 67586

dynamics
see also friction; kinematics; resonance; robot dynamics; surface dynamics
3-machine power syst. neurocontrol with derivative adaptive critics 111878
Bayesian inform. geom., irreversible procs., max. entropy anal. 105995
chaotic spiking oscillator, periodic pulse-train input, sync. phenom. anal. 1024
evol. dyn. game, aggregate behavior cycles 113868
flight simulators, computer-aided, design concept 111320
IM direct torque control, stabil. anal. 112506
limb movement, paraplegics, elec. stimulation control design 133000
MAGLEV syst., airgap deviation, variable struct. control 128730
manoeuvring target tracking by using particle filter 131656
MEMS vibratory rate gyroscope, syst. ident. 75766
micro assembly planning, virtual environ. 80538
piezoceramic actuator hysteresis model, voltage excitations 92695
satellite array form. flying orbit dyn. anal. for Leonardo-BRDF 122480
satellite cluster form. flying, perturbative anal. of geopotential disturbanc 122481
scroll-actuator dyn. anal. using 3D FEM *(Japanese)* 78099
skid-to-turn missiles, autopilot design, functional inversion and LMI approac 88225
solenoid valve dyn. 93985
streamer dyn. in dense media, num. simul. 116124
supercond. rotor, rot. in mag. field, dyn., elasticity effects 116515
three-phase IM drive transient behaviour optim. software 123938
under-actuated dyn. rigid-body systs., visual servoing 86619
vehicle syst. dyn., pairwise comparison matrices, data perturb. 100742
wind tunnel test facilities, PID control based trajectory simul. 133213

dynamometers
see also force measurement
IM-generator traction set develop. 134545
mech. power transm., induced eddy currents, PM machines 134466
small power engines testing, AC dynamometer syst. *(Chinese)* 75364

dynamos *see DC generators*

dynistors *see power semiconductor switches*

E-mail *see electronic mail*

ear
see also auditory evoked potentials; hearing
auditory nerve, chronic elec. stimulation, high surface area Pt electrodes 1223
auditory ossicular chain, CT virtual endoscopy *(Chinese)* 98524
brainstem auditory evoked pot. averaging, parametric filter 76266
cochlea, 2D silicon model, analogue VLSI cct. 98715
cochlear blood flow meas., catheter mounted Doppler US transducers 11069
cochlear implant., speech perception and functional benefit 76694
cochlear implant users, acoustic vowel space/CV coarticulation, hearing stat changes effects 98725
cochlear implant users, loudness perception/late auditory evoked pots. 76695
cochlear implants, elec. stimulation, pH shift 122340
digital tunable bandpass filter, synthesis/appls. 95686
fiber optic IR thermometer, human body core temp. accurate meas. 87548
flexible cochlear syst. based on digital model of cochlea, struct., algms. and tes ing 118082
HF cochlear hearing loss patients, cortical reorganisation 121977
hybrid auditory masking models 83995
malformed ears, computer assisted orthosis design syst., automatic shape modi 87884
MEMS switched current mode cct. realisation of ear-type multisensors 8677
microscale auditory syst., hyperacute directional hearing 87881
mini-endoscopes develop. for ENT disease diagnosis/treatment 122050
otiatria, mag. devices appl., implantable prostheses 76666
otosclerotic ears, elec. bone-cond. audiometry, Carhart notch effect 87359
paediatric surgery, IR ear thermometers, appl. criteria 111047

early Universe *see cosmology*

earth (electric) *see earthing*

earth (soil) *see soil*

Earth crust
see also oceanic crust
Appennines, S, complex terrain seismic exploration 122579
azimuthally anisotropic layered Earth, MT data inversion 122559
Castebarrasin anom., France, gravity inversion 88093
gravity inversion using convexity constraint 88093
Long Valley, California, magmatic unrest, finite source modelling 98966
Norris Lake Community, 1993 earthquake swarm, relative scatt. coeffs. 989
North Anatolian Fault, interseismic strain accum., satellite radar interferomet 86235
San Bernardino ground-water basin, InSAR anal. of natural recharge 111374
shallow crust, relative scatt. coeffs. determ. 98941
Socorro, New Mexico, magmatic unrest, finite source modelling 98966
Socorro magma body, NM, USA, on-going inflation radar meas. 133272
Vallee d'Ossau, France, old glacial valley ground-penetrating radar stud 122580

Earth electricity *see terrestrial electricity*

earth electrodes
110 kV Guye substation, grounding syst. design/implement. *(Chinese)* 8900
buried rod electrode, pot. distrib., grounding resist. *(Japanese)* 88489
galvanically separated grounding grids and grounding systs. determ. 112181
HV substations, earthing systs., problems, solns. *(Russian)* 112710
lengthy earthing electrodes in nonlin. V-I soils *(Russian)* 112162
substation grounding grid, safety anal. 78087
substation grounding resist. meas., measuring electrode arrangement 77624
substation grounding syst., long vert. grounding electrodes anal. 77625
wind turbine grounding modeling, soil ionization effects 112376

Earth-ionosphere waveguide
3D irregular ionos. waveguide channel, EM scatt. 128824
ELF natural noise, derived Hurst exponent 88141
ELF natural pulse in Earth ionos. cavity, time domain soln. 83293
ELF/VLF EM spectrum, modal phenom. 72330
excitation by VLF radiators 128825
lightning discharges, ELF pulses time-domain representation 122667
lightning strokes, ELF pulses in Earth-ionos. cavity 128770
mesos. lighting strokes, Schumann reson. 117689
spherical inhomog. Earth-ionos. waveguide, 10.2 kHz propag. 128823
VLF sigs. propag., total solar eclipse effects 117688
worldwide lightning mapping with ELF tomography 88142

h leakage circuit breakers *see residual current devices*
h magnetic field *see geomagnetism*
h magnetic field variations *see geomagnetic variations*
h mantle
Pacific Ocean, D″ layer fine struct., seismic obs. 111373
hermal plumes, laser-based opt. temp. meas. method in lab. 87013
h rotation
iber optic gyroscopes, INS alignment procs., angle random walk reduction 131961
hing
see also antenna earths; earth electrodes
5-35 kV distrib. networks, insulation params. calc. *(Russian)* 88425
5-35 kV networks, insulation params., continuous monitoring 88430
10 KV power network, TV ferroresonance overvoltage, digital simul. *(Chinese)* 99340
110 kV earth fault compensated syst., earth fault meas. 133813
air termination lightning protection syst. using lightning strike point 88484
all-dielec. self-supporting opt. ground wires, aeolian vibr. tests 74925
arc-fault cct. protection, faults ground-forced cable 133784
bounces on power-/ground-planes, fast anal. 115118
common mode effective power on metallic lines, reduction using thin metal plate *(Japanese)* 105801
compensated earthed network, earth-fault detect., protection, ANN 133812
compensated neutral grounded MV power systs., high impedance fault detect. 77662
counterpoise grounding resist. impulse charact. modelling *(Japanese)* 112178
cpd. earthing network grounding resist. calc. method *(Chinese)* 123053
crit. LV UPS, standby generator power ccts., selectivity 100352
DC power supply-ground insulating resist. meas. method *(Chinese)* 88949
DC traction power syst. grounding practices, North America 134535
digital fault location algm., fault grounding impedance considerations 112182
dispersed generation connection requirements, safety, protection *(English, French)* 133824
distrib. lightning surge arrester damage prevention, overhead ground wire *(Japanese)* 123061
distrib. network, single-phase grounding line selection, grounding-current compensation, integrative device *(Chinese)* 133642
distrib. network fault-based overvoltages study 112156
distrib. syst. grounding fault current detect., opt. current transducer *(Chinese)* 112049
dyn. grounding systs., neural net based features ident. 112152
earth fault feeder detect. techs. for indust. networks 133820
earth-to-earth fault location using time series wavelet neural net *(Chinese)* 112187
electronic equipt. design for ESD immunity 100670
electronic equipt. immunity, indirect ESD, transient anal. 78582
EM charact. of grounded slab/parallel-plate struct. using SDDI tech. 83253
EM fields of thin circ. loop antenna above (un)grounded multi-layered chiral slabs 72535
embedded generation, loss of earth detect. 77495
embedded generator, loss of earth protection detect., relay 99624
EMI from high-speed routing between power and ground planes, diagnostic procedure 102810
ESD protective wristband snap release, unintentional disconnect problem 89816
fast adaptive power syst. digital dist. protection 77499
faults detect. during power swings, synthetic neg. seq. vector 99429
feeder grounding fault protection based on zero seq. admittance *(Chinese)* 88477
generator exciting rotor, one point-grounding fault, ping-pong type microcomputer protection *(Chinese)* 77819
generator rotor earth fault relay protection fn. 77823
generator stator windings, ground-fault protection syst. operation 99616
GIS earthing switch induced current switching studies 112706
ground-DC power supply insulating resist. meas. apparatus *(Chinese)* 123082
grounded electrode discharge in charged particle cloud 116120
grounding syst. dyn. behavior anal. using FDTD method 112153
grounding syst. time-domain transm. line model improvement 112143
grounding systs., transient behavior, FDTD method 112141
grounding transformers, zero-series voltage calc. 99715
grounding zig-zag transformer, spec., testing 123555
high-impedance grounded systs., fault locating sigs. anal. 133819
HV substation shielded cables, transient voltages anal. software 134296
HV substations, ground pot. rise influence, urban areas 134295
HV systs., indirect contacts protection, global earthing syst., safety *(English, French)* 133771
HV/EHV transm. line, earth-fault reactance relays based on fault-component *(Chinese)* 88478
IEEE petroleum and chem. indust. conf., Toronto, Ont., Canada (Sept. 2001) 124213
ineffectively grounded power syst., grounding capacit. and fault resist. meas. 77654
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
internally grounded feedthrough capacitor, reliab./appls. 115068
lightning current conditions, perform. eval. 133777
LV ground-fault indicators operation, ASD effect 124147
methods, terms, systs. grounding, safety 133794
microwave commun. relay station, lightning protection, grounding *(Chinese)* 108539
mining power systs., earth faults, on-site safety eval. 134708
multiple-conductor power cable systs., short-cct. impedance calcs. *(German)* 133739
μP, high-speed, heat sink, grounding method 114789
MV cable sheath power losses prevention, surge arresters 133765
MV distrib. substation neutral-point grounding scheme improvement 123055
MV distrib. syst. protection using neg. seq. current distrib. *(Chinese)* 112134
MV feeder relay protection, earth fault indication algms. 77526
MV power distrib. networks, neutral grounding mode protection *(English, French)* 133770
MV power networks neutral earth connection, Italian experience 133774
neutral ungrounded power syst. selective ground-fault protection scheme 77547
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
overhead line tower short-ccts., grounding loop behaviour expts. 112128
petrochemical indust., power syst. grounding, ground fault protection 134686
petrochemical indust. grounding systs. design considerations 134694
power syst. dist. relay protection, mho/quadrilateral charact. appl. 77545
power syst. lightning protection, lightning discharges dens. study *(Russian)* 112132

earthing continued
power transformer internal earth faults simul. model 77926
power transm. line fault detect. during power swings 77537
PV power syst. ground-fault protection devices 112384
rly. substation traction current return syst./earthing studies *(German)* 78283
rural MV distrib. networks, fast fault location method 133814
safety mitigation measures, series impedance insulation 77573
Siemens high-sensitivity earth fault protection devices *(Chinese)* 77470
Siemens LSA7 generator-transformer bank digital protection device *(Chinese)* 112457
single phase fault detect. based on transient current, nonsolid grounded network appl. 77498
single point grounding for automation indust. 123052
single-phase grounding line-selection/grounding current compensation *(Chinese)* 112130
single-wire earth return distrib. syst. projects, Australia 99335
Snowy Mountains Hydro Scheme earthing syst. safety assess. 77787
substation, opt. fiber control cable grounding under lightning strike 78088
substation earthing systs. risk profiles develop. 78064
substation grounding grid corros. diagnosis method 77574
substation grounding grids, optimal design anal. for nonuniform soils 77575
substation grounding impedance meas. syst. 77670
substation grounding syst., fence interconnection, safety anal. 123689
substation LV ccts., transient overvoltages reduction measures *(Serbian)* 89009
substation MV/HV grounding systs., safety issues 134299
substations/power stations, grounding systs., multi-layer soil struct. anal. 77578
Swiss Federal Railways substations earthing meas. *(German)* 78284
systs. ionisation proc. characterisation 99414
SZITs digital ground connection indicator, lin. cct. insulation estim. *(Russian)* 90643
telecomm. cable, overhead ground wire effect on lightning-induced voltages 74503
three-layer earth model, Wenner four-probe test data 133779
three-phase utility power systs. neutral grounding, IEEE Guide 88474
three-pole single throw RF switch design with defected ground struct. 69097
thyristor series capacitor arc suppression coil studies *(Chinese)* 123065
traction power supply systs., grounding systs. anal. 78301
transm. line R and L params., freq. domain anal. 112090
transm. syst. geomag.-induced current detect./monitoring 77462
underground power transm. cables, sheath fault charactn./modelling 77384
underground transm. cables, digital dist. relaying algm. *(Korean)* 77552
ungrounded/high-resist. grounded indust. systs., fault location 99438
uni-/multigrounded distrib. systs., operation comparison 99347
unit-connected generator-transformer stator winding fault protection 77824
unit-connected generators, grounded neutral, ground-fault currents 77832
unloaded MV cable lines switching off using vac. cct.-breaker *(Polish)* 123006
wind turbine grounding systs. anal. 112375

earthquake recorders *see seismometers*

earthquakes
atmos. EM response to changing Earth currents, calc. 93971
bridge & highway static/dyn. testing, long-gauge FBG strain sens. 120843
CaPaMan robot for earthquake simul., expt. validation 98972
city lifeline, wireless DAQ syst. 75384
D-region, middle lat., electron dens. var. due to earthquakes 128769
ELF band seismic EM radiation, sig. proc. and sonification 122602
EMC, conf., Wroclaw, Poland (June 2000) 67408
finite element techs. for free-vibr. and seismic anal. of liq.-storage tanks 68076
Fukui/Ishikawa prefecture, 1997 Dec. 19 earthquake precursors 83394
Hector Mine earthquake, 1999 Oct. 16, surface displacement 122590
Japan, earthquakes and VLF subionospheric propag. anoms. 83295
Norris Lake Community, 1993 earthquake swarm, relative scatt. coeffs. 98941
precursory spread-E_s, earthquake precursors, stat. anal. 83273
R/C buildings cost optimal design 113788
reliab. fns. for earthquake-resistant design 113789
retrospective selection bias (hindsight) 111402
seafloor instrum. positioning, deform. meas. 111390
serpentine robots, earthquake rescue, online path planning 97198
Turkey, 1999 earthquakes and ionos. EM propag. disturbances 83292

EBIC
see also OBIC
copper phthalocyanine films, photosensitivity/gas sensitivity in O_2/NO_2 132065
electron microcolumn, lateral pn-jn. electron detector 121620
jn. depth determ. by charge collection probab. reconstruction 103103
semicond. barrier structs., SEM techs., EBIC, thermoacoustic detect. 103096
semicond. microstruct., beam injection assess., conf., Fukuoka, Japan (Nov. 2000) 113259
ULSI, local cross-sect. EBIC, local jn./defect delineation 116002
$CdS_{0.036}Te_{0.964}$, grain boundaries, elec. activity, R-EBIC method, solar cell operation 91655
CdTe, grain boundaries, elec. activity, R-EBIC method, solar cell operation 91655
CdTe solar cells, electron beam induced effects 100182
$Cu(InGa)Se_2$ solar cells, buried pn homojunction, intentional Zn doping 100104
GaAs epilayers on Si, bulk/surface defect passivation, RF PH_3/H_2 plasma exposure 115626
GaAs grown on Si, passiv. of disloc. by phosphine plasma exposure 69833
GaN/InGaN-on-sapphire blue LEDs, ESD-stressed, resistive current paths 127964
GaN/Ni/Au Schottky diodes on sapphire and SiC substrs. 126630
GaN-based LED, minority-carrier diffusion length 105011
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
Si:B wafers, type conversion by 3-MeV proton irrad. 91609
ZnO based varistor, grain boundary elec. charact., EBIC/SEM 115976
ZnO:Bi,Sb varistor, EBIC contrast at grain boundaries, voltage bias effect 92429

ECCM *see electronic countermeasures*

ECG *see electrocardiography*

echelles *see diffraction gratings*

echelons *see diffraction gratings*

echo
see also architectural acoustics; clutter; reverberation; sonar
3D multimodal tracking/event detect. via particle filter 95716
acoustic echo cancellation via low complexity nonlin. filters 73664
acoustic location, optimal freqs. 86245
airborne SAR, moving target detect. and imaging 120402
biomedical US RF echo modelling using power-law shot-noise model 98322
biomimetic platform for studying echolocation of bats 86250
coronary atherosclerotic plaque charactn., IVUS elastography/Raman spectrosc. 110808

echo continued
deformed media US scatt., effects on strain imaging 110820
digital phased array beamforming, single-bit delta-sigma conversion, non-uniform oversampling 95645
echographic aiming, increased effectiveness of laser therapy 132597
high-speed group targets, freq. selection in echo sig. accumulation 120411
hyperechoes, spin-echo-based refocusing MRI strategy 98427
Motorola DSP56307-based real-time acoustic echo canceller 119510
pulse-echo imaging results with 1D capacitive micromachined US transducer arrays 111502
radar altimeter with beam, echo charact. anal./simul. *(Chinese)* 109268
speech driven in-service nonintrusive meas. device, optimum variable step-size adaptation 130617
telephone channels, noninterfering meas. of network echo effects *(German)* 74153
US data compression, real-time 76918
US echoes refl. from surface under two layers, modelling and anal. 87478
US sig. detect., useful echoes ident., parallel comput. 107588
voice-over-Internet protocol, packet commun., digitised voice sigs. *(Italian)* 130602

echo cancellation *see echo suppression*

echo suppression
acoustic echo canceling trends *(Japanese)* 95607
acoustic echo cancellation, freq.-selective step-size control 119076
acoustic echo cancellation, low complexity nonlin. filters anal. 107484
acoustic echo cancellation, subband adaptive filtering with real-valued subband sigs. 119051
acoustic echo cancellation via low complexity nonlin. filters 73664
acoustic echo canceller, short-time spectral amplit. estim. *(Japanese)* 95664
adaptive interpolated FIR echo canceller, low complexity 102404
adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
ADSL, FDM, echo cancellation, multi-channel modem fn. *(Italian)* 108469
affine projection filter algm. based on M-estim. *(Chinese)* 95710
ATM-based DSL access network, voice call quality 108065
audio de-reverberation using freq.-domain center clipper 83987
block-exact fast affine projection algm. *(Japanese)* 95663
canceler design, freq. domain extended correl. LMS 73015
canceler double-talk detector, normalized cross-correl. vector 107615
car hands-free cellular radio, speech enhancement, spectral subtraction 119834
delayless freq. domain acoustic echo cancellation 84741
DSP for joint time-freq. adaptive echo canceller 107565
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
exponentiated gradient algms. convergence 73594
freq. domain step-size control in nonstationary environ. 107504
Gabor expansion for stereophonic acoustic echo cancellation 95683
GSAEC, acoustic echo cancellation embedded into generalized sidelobe canceller 118968
GSM receiver acoustic echo cancellation using simplified Volterra filters 130059
hands-free commun. unit acoustic echo canceller *(Japanese)* 96326
hands-free telephony, nonlin. acoustic echo canceller 118084
IEEE802.11 networks, CBR packetized voice transm. 130778
INCA, CMOS single chip terminal soln. for high-end telephone appls. 108483
ISDN-2B+D interface transm. module *(Chinese)* 74479
Kautz filters adaptation in identifying dyn. systs., separable nonlin. least-sq. methods 107537
LMS adaptive FIR filters, word-length optim. 107563
LMS and LMF threshold tech. 107321
LMS multiple adaptive filters in tandem, perform. 130128
microphone array syst. using iter. echo suppression method as inverse filtering 109387
mobile radio integrated echo/noise canceller 119833
modulated complex lapped transform proc., design and CPLD implement. 68844
Motorola DSP56307-based real-time acoustic echo canceller 119510
multi-channel acoustic echo canceller, adaptive algm. accel. *(Japanese)* 95665
multimedia products, voice proc. capabilities, DSP code 84028
nonlin. preprocessing of heavy tailed reverberation 130132
RBF network, step-size control for acoustic echo cancellers 118969
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
single freq. networks, local coverage probab. estim. 109355
Sparse-BEFAP, fast affine projection avoiding explicit regularisation 119078
stereo acoustic echo cancellation, nonlin. use 106342
stereo echo canceler with correct echo-path ident., input-sliding tech. 131785
stereophonic acoustic echo canceler, real-time implement. 85429
stereophonic acoustic echo cancellation, adaptive filtering algm. 119015
stereophonic acoustic echo cancellation, overview and recent solns. 130901
stereophonic acoustic echo canceller, pre-proc. filters, convergence anal. *(Japanese)* 73674
stereophonic sig. decorrelation, NLMS-like adaptive filtering algm. 84001
variable-step-size LMS algm., subband adaptive filtering, echo cancellation 95682
X-band radar sea clutter suppression on Japan coast using nonparametric CFAR techs. *(Japanese)* 133401

echocardiography
3D echocardiographic endocardial border delineation, contrast agent FS069, transesophageal studies 132613
3D echocardiography, ventricular vol. quantification, normal/aneurysmal LV 132594
3D image anal., automatic 87501
3D modeling and visualization of ventricles 132610
3D ultrasound, vitro meas. accuracy 98271
anencephalic fetus, heart rate variability anal., time series fractal dimens. 122035
aortic coarctation, post-operative eval., Doppler echocardiography limitations 110684
aortic regurgitation, stenotic mitral valve area calc. 98268
aortic valve area determ. accuracy, ejection fraction/valvular regurgitation influence 76377
automated anal. of echocardiographic apical four-chamber images 76365
blood, cardiology, diagnostic ultrasound, nonlin. native propag. 76347
cardiac fluid dyn., diastolic fn. modelling 98336
chaos anal. of US echo sigs. in cardiac diagnosis *(Japanese)* 132599
colour kinetic wall motion, broad complex tachycardia differentiation 110800
defibrillation and heart geom., meas., implications for defibrillation mechanisms 87470
diastolic fn., peak Doppler E-wave, peak mitral annulus vel. ratio 87486
Doppler myocardial imaging, normal/ischaemic myocardial fn. assess. 132593
Doppler tissue imaging and echocardiography for myocardial vel. meas. 132608
ECG-gated dyn. 3D echocardiography, temporal jitter artifacts 76343
exercise induced pulmonary arterial hypertension detect., Doppler echocardiography 132595

echocardiography continued
foetal heart rate pattern categorization using neural nets 121990
image segmentation, fuzzy, medial-guided 84106
image seq. filtering in freq. domain 132609
image synthesis and ultrasound imaging simul. 98331
images, robust quantization table design 98316
intracardiac electrophysiological study, elec. catheter positioning, transthorac echocardiography image guide *(Chinese)* 76353
intracardiac electrophysiology, coronary sinus elec. catheter positioning, 2 echocardiography image guide *(Chinese)* 76354
intracardiac press. grad. mapping, Euler eqn., colour echocardiograms 98264
intramyocardial M-mode Doppler tissue imaging anal. 98341
left ventricular diastolic fn., coronary artery disease, left atrial M-mode ech cardiography *(Chinese)* 76359
left ventricular early diastolic blood flow, load change and ischemia effects *(Chinese)* 76355
left ventricular tachycardia, RF catheter ablation, intracardiac echocardiograph 111052
left ventricular vols./ejection fraction, 2D echocardiography/contrast cineang ography 98269
LV, 3D geometric model reconstruction, almost automatic method 122025
LV segmentation/VRML visualization in echocardiographic images 76370
LV shape/motion, 3D dyn. model, deformable superquadrics 76361
LV vol. quantification, spatiotemporal anal., real-time 3-D echocardiograph 87502
med. ultrasound and X-ray image compression methods, clinical assess. 1328
mitral annular line seq. from 2D+1D precordial echocardiogram 76369
mitral regurgitation, 3D color Doppler reconstruction 76345
myocardial contrast echocardiography, perfusion imaging appl. 76379
myocardial contrast echocardiography, power Doppler, harmonic angio tec 98338
myocardial imaging, strain values calc. from strain rate curves 110699
myocardial perfusion, US contrast agent destruction & imaging sync. 12201
myocardial sig. intens., respiration influence 87484
myocardial wall motion, quantitat. regional anal. 98283
obesity, coronary flow reserve/abdominal fat, ultrasonographic assess. 13261
old myocardial infarction, diastolic fn., echocardiography *(Chinese)* 98304
partial left ventriculectomy, echocardiography hemodynamics eval. *(Chines* 76356
perfusion quantif., Levovist infusion & power Doppler image pairs 98265
perimembranous ventricular septal defects, shunt quantification, proximal isove surface area 98270
PFC emulsion blood pool contrast agent, harmonic imaging 122011
phased-array intracardiac echocardiography guided RF ablation 87503
physiological press., method for recording, storage and anal. 110657
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. pro *(Chinese)* 122034
real-time 3D echocardiography, heart disease assess. 76378
real-time 3D intracardiac echocardiography, simultaneous ECG 132612
regional deform., estim. of 3D strain from 4D cine-MRI and echocardiograph in-vivo validation 87662
strain rate imaging of beating heart using 2D speckle tracking 98327
systolic fn. estim., quantitat. tissue vel. imaging *(Chinese)* 98305
transthoracic 3D echocardiography, patient motion compensation, MRI 7634

echolocation (physiological) *see bioacoustics; mechanoception*

ECL *see emitter-coupled logic*

ECM *see electronic countermeasures*

ecology
Asian power generation prospects, environ. effect/strategy 99445
Brazilian diesel power generation, rural rem. area air pollution impact 12323
climate change mitigation with renewable/high-efficiency generation 99456
Da-Tan power plant hydraulics modelling tests, Taiwan *(Chinese)* 77676
Drosophila melanogaster, wing size params., permanent mag. field effect 987
energy/environ. R&D, sci. and technol. impact 99463
exergy efficiency and the environ., global perspective 99465
heat supply systs., energy conservation pot., Russia 99532
host-parasite model, asymptotically stable pop. coexistence 113856
hydropower develop., environ. costs 88515
hydropower plant diurnal peaking regulation, reservoir environ. impacts 886.
hydropower plants constr., ecological aspects, building work *(English)* 1123
Indian renewable energy technols. and climate change policies 99450
insect-infested forest class., video proc. algms. 99042
integrated renewable energy sources for rural communities 88523
Intel, product ecology issues 100536
mil. cockpit displays, luminance level effects on visual perform. 98909
multispectral satellite data, atmos. ocean syst. state estim. 98946
Norwegian hydroelectric power plants, environ. class. 88623
Norwegian hydropower resources, role and benefits 88622
OTEC power plant environ. impact/design optim. 99600
polymer housed surge arresters, ecological design *(English, French)* 133800
power engng., climatic effects prediction 111646
predator-prey model with allowance for memory 89978
remanufacturing activities, technol. trends, business plans 100708
renewable energies competitiveness, external costs importance 99208
renewable energy systs. CO_2 emissions reduction economic value 99449
Resurs-01 satellite 4 develop. for ecological monitoring appls. 111309
semi-quantitat. environ. conscious design methodology 100707
space junk, organization of opt. obs./DP 133208
thermal power generating facilities, environ. perform. improvement 112283
TPP, global energy-ecologic efficiency, analogy with seismic activity 77721
TRIZ model of innovation, environ. friendly solns., product creation 67677
urban area energy demand modifs. due to climate changes 99466
visual syst. of insects, modeling via autonomous mobile robots 84150
wind energy utilization, environ. impacts 99593

econometrics *see economic cybernetics*

economic cybernetics
competitive power exchange market, equilib. values 99221
cyclic games, introduction and examples 67755
firm's technol. capability accumulation, economic perspectives 89767
fiscal cost theory applied to elec. rate *(Chinese)* 111788
games with perfect inform., stable equilib. in beliefs 124479
growth, pairwise comparison matrices, data perturb. 100742
incentive models, inform. aggregation 78802
inform. uniqueness in differential games 113864
Korean energy demand, outlook and policy implications, 2000-2005 122912
power/fuel shortages, macroeconomic losses eval. 88299
Taiwan Power Company's strategy for changes in fuel markets *(Chinese)* 7717
telecomm. tariff decision 74060

onomic cybernetics continued
transm. expansion planning, investment, macroeconomic params., case study 111975
transm. expansion planning, investment programs, macroeconomic params. 111974
CO_2 emission and energy consumption scenarios, Brazil, 2010 77681

onomics
see also commerce; integrated circuit economics; investment; power system economics
2G and 3G mobile systs., perspectives till 2010 *(Polish)* 131170
3G environ., gaining/collecting revenues 131189
3G IMT-2000 mobile commun. systs., techno-economic eval. 74677
4G mobile commun. systs., possible appls. 85702
access network upgrades in USA, reasons for delay 74464
advanced telecomms. services, techno-economic modelling 131446
all-outdoor-air HVAC systs., energy saving economic anal. 99477
API for e-charging, outsource charging for content and appl. usage 130759
appl. and ISP, obstacles to merger 119599
appl. service providers, business designs, winners and losers 119600
Asia-Pacific innovations in mobile commun. 96430
asthma telepharmacy counseling, metered-dose inhaler tech. 121869
ATM networks, videoconferencing syst. optimum design 96251
ATV broadcasting in digital broadband distrib. environ. 109353
Australian digital dividing range, rigorous economic anal. 85103
B2B e-commerce trends, e-procurement/e-marketplaces *(German)* 85336
best-effort routers, distributed control/resource marking 74031
Bluetooth future scenarios, effects on value networks and business models 108637
British broadcasting indust., dyn. of indust. clustering 131723
broadband access network implement. models, techno-economic study 108478
Bulgaria's energy syst. transit. to market economy, barriers to change 99468
cancer radiotherapy, preventative maint./unscheduled downtime, economic perspective 76628
China's sci. and technol. planning syst., SWOT investig. 89769
China's telecomms. regulatory reform, effect of WTO agreements 119446
Chinese integrat. into digital capitalism 74085
Chinese mfg. indust. secondary innovation/R&D strategies 89703
CHP and absorpt. refrigeration with gas turbines, economic feasibility 88600
computer-aided tolerance synthesis with stat./optim. techs. 67504
conventional rail interoperability, single European rly. syst. 89382
converged network, value added services 119772
cooperative games, nonemptiness, limited side payments, equal treatment, and epsilon cores 113870
coronary artery disease and post-heart transplantation patients, value of intravascular US imaging 98343
corporate investment behaviour under incomplete inform. 89759
DAQ boards, travelling std. for calib. 131829
data fusion syst. engng. 86469
dedicated access line, value added integrated telecomm. services 96011
design for environ., act. disassembly using smart materials, costs 100537
distributed servers archit. for on-demand video services, cost optim. 120566
DSL CPE for business users 74463
DSP chips, market prospects, appl., archits. *(Polish)* 68838
e-commerce, IN core competencies for payment systs. 130928
e-commerce and traditional business, hybrid strategies 96069
ecodesign priorities ranking for end-of-life scenarios 100695
electronic learning, market develop. and users' aims *(German)* 113309
electronic products thermoplastics recovery, economics/logistical modeling 100713
engng. design quantitat./qualitat. cost estim. 100525
engng. investment, dyn. payout period, interpolation estim. *(Chinese)* 89659
Estonian energy sector transit., develop. trends 99225
Ethernet and SONET compared for gigabit metropolitan networks 120262
EU internat. message telephone services demand 85165
fiber access links, prospects for completion to business end users 120229
firm's technol. capability accumulation, economic perspectives 89767
fixed-mobile interconnection settlements, impact of regulatory framework 119447
floating struct. fatigue maint. planning, cost/reliab. based 113422
foreign direct investment and spillovers of technol. 113406
fuel cell, suitability for portable power source 100006
fuel cell technol., status, tech. and cost aspects *(German)* 123773
future mobile phones, design challenges from embedded systs. perspective 85903
global navig. satellite syst., political and economic dimens. 131694
GMPCS, present problems and future prospects 74901
GPRS services, billing 74622
growth enterprise market anal. and prediction 89698
health care syst., proc.-oriented supply chain mgt., JIT appl. 89751
Hungarian energy policy, energy supply safety, energy saving 99226
hybrid EV commercialization, batt. cost/life issues 89404
IBM's power supply procurement proc. overview 88820
ICT changes, impact on evol. of e-society 130528
Indian DBS TV, influence of US foreign DBS policy 131726
indicators calc. accuracy, meas. uncertainty approach 78546
Indonesia's indust. technol. develop., foreign direct investment 113413
ink-jet printing technol. appl. to display assembly/interconnect 86797
integral pass. in PCBs, appl.-specific economic anal. 125896
Internet, tech., economic, legal and social trends 85206
Internet develop., effect of entrepreneurship and public policy 85270
Internet load balancing, benefits for e-commerce 85286
Internet telephony, tech. and economic aspects 130616
Internet traffic pricing, incentive-compatible, consumers' private inform. extraction 96028
Internet TV economics, new niches or mass audiences 97057
investment decisions under economic/implement. uncertainty 89760
IR sounder technol. trends 133324
ISDN implement. costs, eval. based on survey and case studies 74416
ISP, optimal yield mgt. 119533
Japanese inform. and commun. indust. survey 130531
Japanese university-indust. R&D collaboration, empirical studies 89728
Korea's optional telephone subscription scheme 119503
large fusion power plant design, economics, theory 99482
Latin America, advanced telecomm. services deployment 130477
Latvian energy policy, energy conservation, energy sector legislation 99227
LEO satellite systs. for mobile data networking, technol. and economics 74867
life cycle profitability anal. using material/money flow simul. 100704
MEMS devices, fab., distributed prototyping environ., cost, quality issues 89828
MEMS technols. for fibre-optic telecomms. appls. 74956

economics continued
metropolitan areas, WDM archits. and economics 109103
mfg. technol. capital investment justification, integrated approach 89677
microbolometer uncooled thermal imaging sens., law enforcement appls. 109711
micromirror thin-film array for inform. displays 97759
min. expected cost-oriented optimal maint. planning 113421
min. lifecycle cost design under multiple hazards 113787
MMS, multimedia messaging service, building on success of SMS 131247
mobile telephony networks, tariffs/QoS trade-offs, integrated design approach 130612
multicast commun. pricing, cost-based approach 108054
MV cable sheath power losses prevention, surge arresters 133765
near-VOD service, syst. profit and user delay/loss tradeoff 97099
network access charging strategy, real-time bandwidth renegotiation 119474
new technol. effect on energy consumption, energy patent counts 113157
next generation network billing service based on TINA concepts 130583
non-utility generation economic implications 122799
NPP operations mgt. systs., review *(German)* 77691
nuc. merchant vessel, economic and political feasibility 100273
opt. core networks, future WAN archit. 96736
opt. network innovation toward next generation Internet 131462
opt. networking appl. in metropolitan area and access networks 96737
PACS implement. using appl. service providers 76777
Polish energy conservation policy under energy policy guidelines 99229
Polish telecomms., competitive dyn. 107996
polypropylene-insulated cable cost minim. using intell. selection 91444
power sources, design, final cost control *(Spanish)* 101759
power supply business models anal. 88818
project investment decision anal. for benefit pursuing/exposure preference 89700
R&D investment decision and optimal subsidy 89761
R&D investment decisions anal., power series expansions approach 89762
R&D investment strategy in presence of network externalities *(Chinese)* 89665
R&D real American seq. exchange options valuation 89765
radiation oncology, cost anal. for med. phys., guidelines/methods 76629
reliab.-based optimal structural design using decoupling approach 113786
residential energy consumption, energy efficiency upgrade retrofits, Canada 124112
Romania's energy efficiency promotion under transit. to market economy 99469
ROSA rotorcraft open systs. avionics 88063
sci. and technol., future, southeast Asia 113416
service sector research valuation using options theory 89764
Slovenian energy efficiency policy 99471
SME financial mgt. overview 100485
solar-hydrogen energy utilisation in UAE to maintain energy market share 88519
streaming video with storage area networks 119782
structural design specs., cost/safety optim. 113420
superscaler DSPs as viable alternative 79905
syst. time-between-failures, asymptotic property misinterpretation 67666
Taiwan CATV operators and channel providers, anti-competition issues 120557
team cooperation effect on innovation incentive *(Chinese)* 89979
technol.-regulation convergence, IP telephony case 96025
telecom. network design, reliab./cost considerations 119452
telecomm. services convergence, mapping business and technol. factors 130533
telecomms. and economic activity, Granger causality 89692
telecomms. liberalisation, indust. turmoil and R&D activities 85113
telecomms. pricing, receiver pays principle, economic anal. 85167
telecomms. tariffs, effects of liberalisation in Europe 130536
telecomms. transport capacity trading, electronic markets 130539
telecomms. vert. integrated networks competition 85111
telecommunications service provider shifting, price regulation 85112
telephone local no. portability, tech. and economic considerations 85166
Thai mfg. firms' technol. innovation, economic crisis impact 89719
TRESCOM simul. tool for cars components packaging 89421
UK mfg. indust., future mgt. challenges 67461
ultra-longhaul transm. networks, optimal network design 107973
undergraduate engng. education, cost anal./costing model 89634
US buildings sector, energy-related challenges overview 133843
US R&D mgt., business finance aspects 100483
US telephone traffic imbalances 108071
USA broadband market, recovery or relapse 74465
USA competitive LEC access charge problem and monopoly power 131006
USA Mississippi Delta region, digital divide or digital opportunity 85107
USA multimedia satellite commun., prospects 85935
venture capital investments, binomial valuation model 89766
voice network migration towards next-generation networks 130605
voice-over-IP networks, service level agreement dimensioning 130613
VOIP migration, exam. of different solns. 85162
VOIP services, call accounting/billing 119502
WDM survivable networks, capacity and revenue optim. 130470
world electronics indust., recent/future trends, Asian growth 100558
$\bar{X}$ and R/$\bar{X}$ and S charts, economic-stat. design 78683
yielded cost appl. in modeling electronic assembly procs. 124309
VO_x uncooled FPA, low cost design and appl. 75633

EDAX *see X-ray chemical analysis*

eddy current braking
anal., FEM calcs. 123297
anal., FEM calcs., appl. 123298
design, 2-D Galerkin-FEM, Upwind-FEM 113100
dyn. model, FEM 123284
mech. power transm., induced eddy currents, PM machines 134466
rail brake syst., lin. Halbach array 134525

eddy current losses
ammonia compressor, IM, stray load losses, stator/rotor slot ripple 134021
BLDCM, control loop, time stepping finite element model 134056
bulk supercond. elec. machine mag. bearings expts. 77811
direct heat induction machine for useful heat generation appls. 99653
elec. machines, annealed amorph. mag. cores, power loss, permeab. 99630
flat supercond. composites, time consts., AC loss, relax. meas. 81959
gapped HF inductors, conductive losses prediction 99724
high-speed slotless brushless PM machines, airgap flux dens. comparison *(Korean)* 133932
HTSC power cables, calorimetric losses meas. 77391
HVDC filter, reactor winding, eddy current loss 134329
inductive hyperthermia, handy excitation coil, simul. *(Japanese)* 111063
iron losses calc. in voltage fed time stepping finite elements 127376
laminated core modeling under rot. excitations, eddy currents, hysteresis 81910
laminated iron core inductors, eddy-current power loss 99721
lumped winding model, transformer models for cct. simul. 77911
mag. thick film core, fab., LIGA proc. 127378

eddy current losses continued
mag.-flux-control-type var. inductor, laminated core *(Japanese)* 112578
massive copper conductor additional eddy-currents losses 112594
miniature monolithic RF mag. sens. with MESFET circuitry 75474
multi-disc axial flux stratospheric aircraft propeller drive 133261
multifilamentary high T_c superconds., long. mag. field AC loss 77416
multifilamentary supercond. wire, eddy current loss, penalty-finite element anal. 104560
multifilamentary tape, transport AC loss partitioning anal. 70704
NMR planar inductive micro-coil detector, losses and SNR 125855
PMSM drive, eddy-current losses calc. 89355
power electronic ferrite core, DC bias, core loss *(Chinese)* 92859
power transformer sheet winding eddy current loss, freq. effects 134117
salient-pole hydro generator stator temp. field calc. *(Chinese)* 112346
Samsung supercond. test facility, AC losses/heat removal in 3D winding pack 104588
soft mag. materials, PWM inverter supply, iron losses prediction 116236
spiral inductors and transformers for RFICs, modelling 91355
spiral on-chip inductors and transformers, modeling 92435
SSTF, supercond. magnet syst., induced voltage, AC loss 71039
steel plate, 3D stray field loss model, nonlin. anal. 128694
supercond. coils in external mag. field, AC losses, transport current with phase difference 127521
supercond. tape wires with meter-class length, perp.-field losses meas. 127460
TE surface waves in absorbing layers, props., new results 128741
thin-film spiral inductors, structural design, FEM EM field simul. *(Japanese)* 104551
transformer/reactor surge current during short-ccts. 69283
tunable high Q VHF/UHF devices, ferromag. film appls., materials issues 92867
Ag/Bi-2223 tapes, self-field loss, freq./temp. depend. 127461
Bi-2223 tapes, Ag/Ag-alloyed, fab. for power engng. appl. 70736
Bi-2223 tapes stacks, magnetisation loss in perp. mag. field 127467
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ multifilamentary Ag-sheathed wires, appl. 70737
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC tape AC loss tests 77428
BiSrCaCuO 2223 ring bundle barrier multifilamentary tapes, AC losses 81973
BiSrCaCuO/Ag 2223 untwisted HTSC tapes, transverse resistivities 127445
BiSrCaCuO/Ag tapes, calorimetric AC loss meas. in applied mag. fields 81938
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag tapes, stacked, ac losses ang. depend. 127455
$Bi_2Sr_2Ca_2Cu_3O_8$/Ag HTSC untwisted multifilamentary tapes, eddy current AC loss anal. 70703
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag multifilament tapes, alternating mag. field losses 81974
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag tapes, transposed filaments, transport current losses 70695
Fe insulated powder, mag. props., AC mag. appl. 104498
Fe-Si steel, grain-oriented, core loss reduction by high-power LDs 68386
Fe-Si steel, grain-oriented, core loss reduction, laser scribing 127379
Mn-Zn ferrite, eddy current loss anal. taking account of microstruct. *(Japanese)* 104500
$MnZnFe_2O_4$ ferrite core losses, time-domain MSPM based algm. 127334
NbTi/Cu supercond. untwisted multifilamentary tapes, eddy current AC loss anal. 70703
NbTi/Cu-Mn supercond. untwisted multifilamentary tapes, eddy current AC loss anal. 70703
Nd-Fe-B magnets, proton irrad., mag. flux loss 127390
Si integrated inductors in 0.18 μm CMOS technol. for MMIC/RFICs 125777
Sm-Co magnets, proton irrad., mag. flux loss 127390
YBaCuO, meander-shaped QMG current limiting device, AC current loss 116543
YBaCuO multifilamentary coated supercond., decreasing transport ac losses method 127424
YBaCuO, supercond. bearing, mag. grad. levitation, rot. losses 116502

eddy current testing
3D defect charactn., multisens. fusion, wavelet basis fn. neural net 101600
aircraft inspection, NDE sens. integrat., scanning/positioning modules 122497
aircraft struct., NDE, multiplexed SQUID array 70965
aircraft wheel testing, rem. eddy current tech., HTS SQUID magnetometer 76799
alloy surface layer charactn., magnetometric eddy current sens. 101634
automated quantitat. defect charactn., ANN use 101596
coil footprint assess., probab. of crack detect. 114537
conducting material defect profile ident., HTS-SQUID gradiometer use 101573
conducting medium, embedded crack location, EM tech. 125151
conducting plates, hole localization, fuzzy neural approach, noninvasive eddy current meas. 125143
crack detect. and sizing tech. by US and EM methods 77713
crack meas. by eddy-currents, probe/inducer effects 114543
crack recogn., inverse neural model 125150
cylindrical eddy-current probes, spatial freq. spectra 114541
deep flaws detect. by HTS-SQUID in unshielded environ. 68483
deep-lying flaw detect., SQUID pulsed eddy-current probe model 101630
defect detect., SQUID magnetometer, eddy current NDE syst. 70949
differential TR eddy current test probe, crack shape reconstr. 101612
distrib. line, cracks nondestructive detect. by mag. field meas. *(Japanese)* 101539
electrolytic in-proc. dressing grinding, wheel state estim. 134680
EM eddy current NDT, research & technol. develop., review 68472
EM field anal., arbitrary shape excitation loops 114542
FFT integral formulation using edge-elements 79493
flaw inspection, probe impedance change, 3D FEM model 101631
fluxset sens. data, mag. field map calc., NDT, hybrid method 79477
freq. output sens. for precision engng. 75458
GMR based sens. perform., (sub)surface crack detect. 125144
graphite fibre reinforced epoxy, eddy current microscopy, image proc. 68479
hot wire inspection using eddy current tester with computer syst. 113742
11 HTS SQUID magnetometer array for eddy current NDE tech. 68485
HTSC SQUID magnetometer/planar gradiometer, eddy current NDE appl. 70790
HV transm. lines inspection, eddy current & mag. flux leakage tech. 77440
hybrid double-D sheet-inducer for SQUID-based eddy current NDT 68480
Ignalina nuc. power plant components, NDT activity 88549
in-situ comp. sens., inductive & capacitive sens. arrays 120987
inductive cond. meas., model selection, parametric inversion 114497
ISS Columbus Orbital Facility, space environ. NDT feasibility 122468
landmine detect. by pulse inductive eddy current meas., high sensitivity 129987
mag. induction tomography, biomedical and indust. uses 110666
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 101592
magneto-opt./eddy current imaging NDT, FEM model 101574
magneto-optic eddy current sens., NDT appls. 114556
magnetostrictive delay lines based NDT, distrib. sens. 101569
metal, deep surface cracks inspection, pulsed eddy current 101571
metal products flaw depth meas., EM induction & elec. pot. 101560

eddy current testing continued
MR sens. appl., thick plate testing 101633
multi-freq. eddy current test, flaw reconstr., dyn. neural net models 101597
multi-freq. excitation spectrogram method, BEM 101593
multilayer aircraft struct. inspection, rem.-field eddy-current syst. 122495
natural crack in eddy current testing problem, finite element model 125142
NDT image fusion using eddy current and US meas. data 114503
NDT of materials, DCT/DWT feature extraction/ANN class. 125146
neural net-based crack param., wavelet preproc. MFL sig. 101595
nuc. fuel rod inspection, OD rem. field eddy current probe 112249
nuc. RPV aging eval. by nondestructive techs. 77714
nuc. steam generators eddy current inspection, robotic vision 88544
num. anal. by integral eqn. method 128684
on-chip eddy current sens. for proximity sens./crack detect. 101619
PCB, inspection, image proc. tech., eddy-current testing probe *(English)* 100620
PCB inspection, ECT image proc., wavelet transform 125865
PCB inspection, ECT probe, solenoid pick-up coil 125866
PCB inspection, eddy current testing sens. 115192
planar spiral-type microelectromagnetic dist. sens. develop. *(Japanese)* 97811
probe improvement, DSP algms., autom. meas. syst. 114506
rect. tight crack reconstr., eddy current impedance change 101613
reinforced concrete stress meas., GMR & eddy current sens. 68477
scanning SQUID microscope, closed-cycle refrigerator-cooled 92900
sens., neural network models *(English)* 101538
sens. response, ill-conditioned mixtures, Bayesian anal. 110037
sens. using GMR/spin-depend. tunneling-based solid-state sens. 90607
sig. restoration, neural network model 125152
small metal particles detect. using RF SQUID planar gradiometer 114530
source-sample react. forces meas., EM NDE tech. 101572
steam generator tube eddy current testing, wavelet transform 101606
steam generator tube flaws, eddy current sig., ANN inversion 101598
steam generator tube inspection, rem. field eddy current tech. 112237
steam power plant feedwater heater tubes plugging selection 99554
steel, austenitic stainless, residual fatigue lifetime in NPPs 77706
steel, stainless, automated quantitat. defect charactn., ANN use 101596
steel pipe machined defects, mag. flux leakage sig., feature extraction 100635
steel pipes, flaws detect. by SQUID planar gradiometers 68484
steel thick plate testing, MR sens. appl. 101633
surface eddy current probe, flaw depth phase inform. 101632
weld zone defects, eddy current testing using meander probe *(Japanese)* 101540
Al alloy shot peening, magnetometric eddy current sens. 101634
Al alloy, thickness, alloy content & crack meas., AC mag. bridge 114501
Al plate, deform., high-T_c rf SQUID planar gradiometer obs. 125157
Al, slotted specimen, GMR based sens. perform. 125144
Al thick plate testing, MR sens. appl. 101633
C fiber composite, impact damage, HTS-SQUID magnetometry 70966
Ti alloy thickness meas., magnetometric eddy current sens. 101634
YBCO HTS SQUID, eddy current NDT meas. 68482
YBCO SQUIDs, eddy current probe, MM fatigue cracks obs. 68481

eddy currents
see also induction heating
3D eddy current FE anal. of electromechanical devices 88722
3D eddy current integral formulation, matrix-by-vector products 83147
3D eddy current problems with integral formulations, fast algm. 128678
3D nonlin. transient eddy current problems, multistep algm. 128683
bipolar axial mag. field vac. interrupter, iron core eddy current anal. *(Chinese)* 112682
BSS for eddy current sens. based on induction bal. principle 109531
coaxial winding transformer, Faraday shielding, HF range 102792
convergence purity magnet magnetisation anlysis studies *(Korean)* 70551
damaged IM perform. prediction, FEM appl. 133999
digital video read/write head, eddy currents 116311
direct heat induction machine for useful heat generation appls. 99653
dist. sens., improving nonlin. response, lin. source separation 120753
eddy-current brakes, dyn. model, FEM 123284
edge elements constr./ordering for parallel computation 128689
edge-element FEM, adaptive mesh generation 83146
elec. machine winding conductors, 3-D FEM-based eddy current calc. 133930
electromagnet, finite mag. cct., plane quasi-steady EM fields, FEM 72195
electron beam lithog., eddy current distrib. 103665
EM field anal., large sparse symmetric lin. systs. 128688
EM interconnect modeling, CAD approach, HF effects 70274
EPI, ghost/geometric distortion artifacts correction, multiecho ref. scan 87665
EPI, optimised distortion correction tech. 132678
equiv. source-wavelet method *(Chinese)* 93972
fault current limiter, E-type core, charcts. anal. *(Japanese)* 112159
flat force-bal. EM press. sens. for harsh environ. 75476
flywheel supercond. mag. bearing, rot. loss num. anal. 78182
hidden ferrous 3D objs., ident., finite elements, eddy currents and magnetisation 117639
HT-7U Tokamak, vac. vessel, elec. params. 132124
hybrid FEM-MOM formulations for force/torque eval., magnetostatic/eddy current problems 128668
IM, 3D time-stepping FEA, equiv. mag. cct. 133998
IM, skewed rotor bar, flux linkage 134010
IM ventilation holes shape optimisation approach *(Japanese)* 77871
induction heating, surface impedance, 3D finite element model 134646
induction heating thermal calcs. accuracy, input material data influence 78338
ITER project Toroidal Field Model Coil, eddy current/thermal anal. 70999
ITER TF model coil, transient behaviour, 3D FEM 105686
laminated core modeling under rot. excitations, eddy currents, hysteresis 81910
Landau-Lifshitz eqn. as constitutive rel. in eddy currents anal. 128691
LIM, 3D FEA 134078
LIM, flux-conc. type, mag. field distrib. 134075
low profile inclination sens. *(Japanese)* 131925
mag. field, transient anal., adaptive step time integrat. 128687
mag. recording, narrow-track single-pole head, GHz response 116350
Maglev train, supercond. magnet outer vessel, num. anal. 116534
metal detector, processed food foreign obj., SRPM method 109511
mixed-FEM and BEM coupling for 2D eddy current problem 117608
modeling, mag. Reynolds no. consideration 128695
moving conductors, eddy current problems, finite analytic element method 128680
nervous syst. mag. stimulation device optim., skin/proximity effect 98592
nonlin. eddy current problems, 3D transient anal., FEM/BEM coupling 83151
nonlin. inductive ccts., ferromag. hysteresis and eddy currents, free regimes 128681
num. field computation, conf., Graz, Austria (Sept. 2000) 78387
oil separation tank, interface level detect., HF mag. field probe 121278

dy currents continued
pipeline fluid heating using PWM invertor-eddy current dual pack heater 124099
planar spiral-type microelectromagnetic dist. sens. develop. *(Japanese)* 97811
polyphase EM devices, coupled cct.-field calc. 128723
probes anal., arbitrary shape excitation loops 114542
pulsed induction accelerator EM launcher, cct. theory-based model 72206
rail joint gap meas., shape sizes of detecting coil *(Japanese)* 109476
rot. conducting disc braking torque, 3D transient mag. modelling 123289
rot. machine eddy current fields, fast anal. method *(Japanese)* 77816
Rutherford cables, current distrib., continuum model 77400
self-consistent simul., transient heating effects, elec. devices, finite integrat. 124684
sens. nonlin. response, aperiodic stochastic reson. in blind source separation 109530
single-pole write head, nonlin. eddy current write field anal. *(Japanese)* 92817
solenoidal wound multiwinding transformers, orthogonality principle generalisation 125856
squirrel cage motor loads, improved weighted total harmonic distortion index 113060
stiff problems in eddy-current theory and regularization of Maxwell's eqns. 128690
stroke MRI, diffusion-weighted EPI, sensitivity encoding 132695
subsurface digital multifreq. EM cond. imaging syst. 84166
surface PM lin. sync. motor, thrust anal., 3D FEM *(Japanese)* 112556
thin wire and plate, 3D modeling using FEM and elec. cct. eqn. 125835
three-phase induction machines, PWM power converter-fed, losses studies 112499
transformer substation power freq. mag. shielding techs. 134298
transient eddy current problems, FDTD scheme 128679
transient eddy current problems, motional induction effects, FI²TD algms. 83148
transverse flux induction heating, galvanizing line, 3D eddy currents, temp. field 134644
tuned cct. displacement sens., eddy current method *(German)* 75402
two fields BIM and FEM for eddy currents 128682
variable transformer, eddy currents, finite element model 134118
Ag-sheathed BSCCO tapes, eddy current loss in AC transport regime 70691
Fe-Si, laminated elec. steel, field homogenization 127301
Nb_3Sn cond.-cooled SMES coil protection anal. 78199
NbTi Rutherford supercond. cables, Al-clad, resistive joints 71184
Ni magnetostrictive wire, AC field induced rot. 127317
Si substr., microstrip on-chip interconnects 126508

dy diffusion *see diffusion*

DFA *see optical fibre amplifiers*

ge-defined film fed growth *see crystal growth from melt*

ge detection
2D digital image normal vector/winding no., hole detect. appl. 118670
2D human brain MRI white matter/gray matter boundary segmentation 98412
2D mesh-based video obj. segmentation and tracking, occlusion resoln. 107282
2D occluded obj. recogn. by wavelet transform 107212
2D shape class. based on moment invariants 118704
2D shape recogn., dyadic wavelet transform 129874
2D shapes, accurate detect. 107122
3D angiographies, variational image restoration 122085
3D coded video seqs., spatio-temporal post-filtering 107040
3D echocardiographic endocardial border delineation, contrast agent FS069, transesophageal studies 132613
3D motion tracking by Kalman filtering 95424
3D reconstruction of aorta from tomographic image seq., anal. and optimisation 122135
abdominal aortic aneurysm, US image boundary recogn. validation 110676
act. contours and surfaces, smoothness measures 118251
adaptive L-filter based on sig. local stats., edge preservation *(Chinese)* 107268
adaptive multiscale detect., neighborhood entropy 73460
adaptive noise canceling and edge detect. filter 107294
affine-invariant edge completion with affine geodesics 118673
algm. on edge partition 129806
algms. for efficient and accurate edge detect. and localization 107141
algms. using struct. from motion task 107118
alternative seq. filter-edge detector, perform. eval. 73502
area-based stereo matching, boundary overreach *(Japanese)* 73139
artificial retina camera, real-time pattern recogn., Hough transform algm. 73439
artificial target segmentation method based on fractal features *(Chinese)* 118711
atherosclerotic blood vessel tracking/lumen segmentation, MRI 98411
automatic model-based semantic obj. extraction algm. 129690
automatic moving obj. extraction for content-based video indexing 118775
autonomous vehicle, real-time lane detect., image recogn. 134555
axisymm. drop shape anal. meas., CCD video camera, fast algms. 75883
battlefield biomedical imaging, vascular struct. anal. 76338
bi-level images, near exact expansion 95184
biological cell image segmentation with kernel-based dyn. clustering and ellipsoidal cell shape model 110516
biological objs. movement/motility, act. contours 87300
biomedical image act. segmentation, saliency/dissimilarity 76229
biomedical image segmentation, expert delineation learning by neural net 121896
block matching, fast search algm. 84504
block-based video coding, blocking artifacts reduction 106859
blurred noisy images, edge detect. problems modeling 118722
bone X-rays anal. syst. for prosthesis placement, segmentation module 76545
boundary automated extraction, gradient fuzzy gray-scale transform. 73557
brachial artery reactivity meas., automated edge-detect. tech. 132622
breast tissue, biomech. 3D FEM modelling, MRI data 76421
breast US images, boundary detect. algms., eval. methodology 132605
car contour extraction based on local wavelet transform modulus max. *(Chinese)* 118710
carotid US images anal., EcoStudio computer tool 98275
cellular nonlin. networks for minimization of functionals, appl. examples 91166
CMOS image sens. camera with focal plane edge detect. 131975
CMOS imager, shunting inhib. image proc. 97364
CNS tumour malignancy eval., MRI, fractal dimens. use 76494
color and shape based image representation and retrieval *(Chinese)* 129855
color edge detect., automatic isotropic tech. 118749
color edge detect., local nonuniformity perceptual assess. 107230
color edge detect. tech. based on gradient operators 118758
color edge detector based on stat. rupture tests 95521
color edge detector for text extraction under complex background *(Chinese)* 118756
color image edge detectors in multiple color spaces, comparison 94707
color image interpolation with edge-enhancement 106753

edge detection continued
color preserving image segmentation 106483
color transits. phys. nature, class. 95441
color video, fast act. obj. tracking 118378
colour edges based change detect. 84631
colour-sensitive edge detect. using hypercomplex filters 118218
concentric shapes filter for image recogn. and implement. in modified DT-CNN 129866
contact lens trauma assess., corneal images anal. 87552
content-based video representation and indexing 73316
continuity-based contour line extraction method *(Chinese)* 129850
contour coding, modified binary tree and perform. anal. 106902
corner angle estim., code chain of edge, algm. *(Chinese)* 73176
corner detect., centroid 84548
corner detect. based on generalized morph. skeleton *(Chinese)* 129808
corner detect. fast algm. using morphologic skeleton 73520
corner detect. used for calib. of X-ray device 95418
curvature-based diffusion with time-delay regularization 95434
cytoskeletal organis. in chondrocytes, temporal var., image anal. 87541
data driven Markov chain Monte Carlo, image segmentation 106604
Dempster-Shafer theory based color edge detector 95519
depth from defocus estim. in spatial domain 84556
depth-assisted edge detect. via layered scale-based smoothing 129896
detect. ellipses, geometric symm. 129428
diaphragm motion quantification in fluoroscopy, computer program 76541
digital aerial imagery, automated spatiotemporal change detect. 73432
digital image enlargement, Laplacian pyramid representation method 106502
digital snakes for extraction of discrete images boundary 73486
DNA bands in low-contrast images, automatic edge detect. 110972
double-sided handwritten archival documents anal., character extraction from interfering background 95446
dyn. prog. based algm. for optimal edge detect. in med. images 87355
dyn. tracking/recogn. of curves, road detect. appl. 84618
Earth obs., onboard image selection/compression 111377
endoscopic images, automatic boundary enhancement and detect., iris filter 76202
evol. optim. and minimization 118709
extraocular muscle borders detect. using math. morph. 76544
eye detect., fuzzy template matching, feature-param.-based judgement 95463
eyeglass face anal., symmetric obj. extraction using act. contour model 95499
Faber-Schauder wavelet transform for edge detect./image charactn. 95432
face, recogn./charact. feature extraction 73512
face localization in complex scenes, orient. template matching 95501
face recogn., modified Hausdorff dist. 84638
facial feature points, robust detect. under nonlin. illum. 107231
fast min. path act. contour model 73498
fast range image segmentation, edge detect. strategy 84228
fault diagnosis, redundancy sensitive elements, wavelet transform based *(Chinese)* 124430
female breast thermograms, edge detect. 84571
fire image detect. syst. based on BP neural network *(Chinese)* 129920
folds and cuts, how shading flows into edges 107177
free form surface 3-D edge profile meas. *(Japanese)* 97832
fundus image features extraction, diabetic retinopathy appl. 98381
fusion through consideration of image texture components 84516
fuzzy images, line segment extraction 118748
GA-based method 95439
gaze determ. via images of irises 129617
generalized fuzzy operator in edge detect., quantitat. calc. of key params. *(Chinese)* 107266
geometric act. contours, incorporation of shape priors 121886
georeferenced road extraction 73433
globular material, feature extraction and edge detect., hybrid neural network appl. *(Chinese)* 129869
gradient based progressive probabilistic Hough transform 95567
gradient vector flow fast geodesic act. contours 107137
gray level edge thinning method 84568
gray-level fingerprint image, direct minutiae extraction 95506
gray-scale images, multifractal anal. 106828
gray-scale images, straight lines detect. through regularized Hough transform 94955
Greenland ice sheet, edge detect., pass. microwave data 133337
grinding wheel surface automatic image proc. syst. develop. *(Japanese)* 129819
hand gesture recogn., vision-based, self-reliance smoothness 73539
hand-drawn shape outline capture via recursive subdivision 84570
heart deform., tagged MRI and elasticity-based region model 98409
heart region extraction in electron beam tomography images *(Korean)* 95582
Helmholtz principle approach 84603
high precision line detect., Hough transform with reverse mapping *(Japanese)* 73448
high temp. phys. prop. meas. with CCD camera, image segmentation algm. 107226
histogram image unimodal thresholding 118665
Hopfield neural net, 2D evol. operators, image edge detect. 118743
Hopfield neural network 95524
human body posture vision-based estim. by neural nets 118757
human early vision syst., CNN-based retina model 132582
hypercomplex color-sensitive smoothing filters 94524
image anal. and pattern recogn., coord. logic filters 129575
image compression based wavelet transform *(Chinese)* 73386
image compression with geom. wavelets 95076
image edge feature extraction algm. *(Chinese)* 95470
image filtering, edge protection, noise suppression by anisotropic diffusion, anal. model 73525
image filtering using scale-space continuity, wavelet-based method 73157
image meas., wavelet transform 118744
image noise elimination using nonlin. filtering strategies with edge preservation 106529
image primitive detect., 2D isotopic wavelet filter 73558
image proc., level set algm. for Mumford-Shah functional minimization 118256
image proc., math. morph. *(Chinese)* 118707
image proc., opt. wavelet transform *(Chinese)* 94602
image quality assess., perception of high-contrast blurred edges 118774
image registration and obj. recogn., affine invariant matching 84637
image representation, edge tracking thinning method 118668
image restoration stabil. by minimization of regularized objective fns. 118254
image segmentation, perceptible level lines and isoperimetric ratio 94636
image segmentation based on integrat. of Markov random fields and deformable models 84107
image segmentation by movement estim./contour extraction 106482

edge detection continued
image seqs., integrated segmentation and depth ordering of motion layers 129631
images, nonlin. enhancement in space scale domain 118234
intermediate-level vision, complexity, confusion, and perceptual grouping, curve-like representation 118766
intermediate-level vision, perceptual grouping, curve-like rep. 118662
intermediate-level vision, perceptual grouping, mapping complexity 118663
intravascular echography, ultrasound contrast agent, parametric mapping 110811
intravascular ultrasound images, modeling and segmentation *(French)* 110681
ITS, video based traffic param. extraction, integrative method, background subtraction 73483
JPEG-LS diagonal edge detect., low cost algms. 118528
knowledge-based neural network for fusing edge maps of multi-sens. images 118196
learning optimal texture edge detectors 94956
left ventricular ejection fraction determ., gated blood-pool tomography 98579
lin. band detect., Euclidean dist. transform and line segment extraction method 95436
lin. combination of weighted medians, design 107522
lip contour approx. method using fn. synthesis *(Japanese)* 73443
local stereovision matching, ADALINE neural network use 118750
localization and meas. of miniature SMC objs. 113746
lossless picture compression, soft median adaptive predictor 118600
low-bit motion estim. with edge enhanced images for lowpower MPEG encoder 95126
low-level image anal. algms., contextual perform. prediction 84605
LSI cct. video image proc., contour extraction algms. 101997
machine vision image proc. techs., review *(Italian)* 118675
malignant tumors, 2D/3D images, vector convergence index filter *(Japanese)* 98140
mammographic masses class., automated method develop. *(Japanese)* 132783
MAP and LS estim. of abrupt changes in multiplicative noise using dyn. prog. 118485
med. X-ray imaging, digital self-adaptive acquisition 122137
meteorite craters detect., possibilistic shell clustering 98952
microangiopathy, capillary image segmentation exploiting weak shape constraints 87315
microscopic images of human breast disease using competitive neural networks 121904
mimic spiral archit. 95563
mobile robot localization, image fingerprint seqs. derivation and matching 97389
mobile robot sonar, multi-echo feature detect./ident. 97008
model-based video-coding, real-time 2(1/2)-D head pose recovery 118593
modified gray level morph. gradient with accurate orient. estim./reduced noise sensitivity 107253
modified gray level morph. gradient with low threshold values/noise sensitivity, perform. 107254
morph. image proc. of bubble in laser-induced shock-wave lithotripsy 95417
motion estim., affine invariant feature set appl. 94931
motion pictures, dramatic story sects. and tempo determ. 95504
moving obj. detect. in image seqs. by perceptual edge tracking 94845
moving obj. localisation, multi-label fast marching algm. 107283
MPEG-coded video seqs., real-time visual postprocessor 84413
MPEG-compressed videos, automatic shot change detect. 118461
MR cardiac images, variational approach for segmentation of LV 122087
MR images with truncation artifacts, layer extraction tech. 132707
MRI vertebral cross-sects., image segmentation 122117
multi-resoln. corner detect. 107121
multi-resoln. mechanism for image segmentation method 84629
multifocus images, fusion, wavelet decomp. *(Chinese)* 107116
multileaf collimation, automated verification using, Siemens EPID 98627
multiple contour finding and perceptual grouping using min. paths 118672
multiple motion segmentation by edge tracking between two frames 129632
multiresolution discrete symmetric cosine transform approach 95458
multiresolution seq. edge linking for med. images *(Chinese)* 121898
multiresolution shape recovery by surface deform. 95576
multiscale edge detect., Markov random field model *(Chinese)* 73469
multispectral edge detect. based on roughness and differential Prewitt methods 118389
multispectral image sharpening using wavelet transform and spatial correl. of edges 73192
myocardial wall motion, quantitat. regional anal. 98283
n-D med. images, computationally efficient nonlin. edge preserving smoothing 132514
natural image anal. and modeling using random cascades on wavelet trees 106778
neural network face recogn. using stat. feature/skin texture params. 129823
neural network model for image restoration 106886
NOAA-AVHRR accurate image navig., contour matching approach 122689
noisy image edge detect., Java algm. *(Chinese)* 129809
noisy images, edge detector, fuzzy iter. 73482
nonlin. cellular neural filters for image proc. problem appls. 84154
normalized color difference edge detector, quaternion representation based 95520
obj. boundary extraction, snake algm., watershed transform 129876
obj. contour detect., fast and accurate snake model 73472
obj. handling robot, low-resoln. range and intens. image usage *(Japanese)* 84520
obj. recogn., modular neural network 118671
obj. segmentation, fast geodesic act. contours 118724
obj. tracking, robust model-based, edge-projected integrat. of image and model cues 129854
obj.-based video segmentation, perform. eval. metrics 118552
objectionable images detect. and filtering, Internet appl. 118730
objs. image ident. using wavelet and moment *(Chinese)* 107274
old manuscripts restoration using image proc. techs. 94597
opt. edge detector, radiotherapy machines light field 111106
opt. flow, computation of boundary-preserving estim. 129624
optimal regions/boundaries, min. ratio wt. cycles 129548
orthognathic surgery, cephalometric image anal. syst. 87747
ovarian tumour in US images, 3D image reconstruction 110790
page segmentation and text extraction from gray-scale images, microfilm 95575
parametric shape estimators perform. for 2-/3-D imaging systs. 122219
pattern fuzzy representation and edge tracking thinning 129593
pattern matching based on PCA *(English)* 84585
PET, segmented atten. correction, fuzzy inference systs. 122188
polygonal contour approx. based on relax. 129937
portal imaging methodologies, automated edge detect. 87326
pose-invariant face recogn. by face synthesis 129914

edge detection continued
pre-conditioned edge-preserving image deblurring/denoising 95462
projection-invariant pattern recogn. with logarithmic harmonic fn./wavelet transform 129805
prostate segmentation from 2D ultrasound images 110683
pseudo-dist. map for segmentation-free skeletonization of gray-scale imag 107175
pseudoautomatic lip contour detect. based on edge direction patterns 129894
pulmonary fissures extraction from thin-sect. CT images 98539
pulmonary nodule images segmentation using 1-norm minimization 118214
range image segmentation, morph. watershed 84513
range/intens. image fusion, segmentation, robust trimmed method 107217
rank difference based filter develop. 95443
Raytheon's IR Operations focal plane, adaptive IR Sensor, thinfilm analog ima proc. 109634
real and virtual edge intersection determ. in pairs of uncalibrated images 1071
real-time automated video and audio capture 118716
real-world video seqs., shot detect., lighting change problem 75315
recogn. of objs. normalized in log-polar space using Kohonen networks 1299
rect. pillar posn. detect. by image, Hough transform. *(Japanese)* 84607
region boundaries detect., one-pass algm. 94592
region detect. in image recogn., Active Net model 73450
representation/recogn., multilayer feedforward NN 129890
retinal thickness meas., OCT, Markov boundary model 132627
road extraction by using combined stat. and structural inform. *(Chinese)* 769
road network detect. in SAR images *(Chinese)* 75114
road signs detect. and tracking 95401
robot localization, edge-based features from images 95557
robot orient. in corridor, projective geom. and act. vision 73510
robust shape tracking in cluttered background 95542
rock sole fish recogn., act. contour algm. 95518
SAR, interferometric, phase unwrapping method 75130
SAR image proc., wavelet transform 86162
SAR image proc., wavelet transform based edge detector 118691
SAR imagery, terrain feature class. 133270
scanning charact. estim. from bilevel image corners 95569
sectored snakes, CT image learned-energy segmentations 118718
segmentation, color-edge extraction/seeded region growing 118723
segmentation based on circumscribed contours/region growing/clustering fusi 94544
semantic video obj. extraction using four-band watershed/partition lattice opers tors 73147
shape profile modelling with mixture of Gaussians 84619
sharpness preserving image enlargement based on ramp edge model 107215
shunting inhib. CNN, digitally prog. current mode cct. 68954
sig. anal./ident., robust, model-based 118792
sig. reconstruction from multiscale edges, spline fn. interpolation 118840
SMD, lead inspection, edge detect., wavelet transform 118708
smoothing and edge detect. by time-varying coupled nonlin. diffusion eqn 73514
Snake act. contour model for visual obj. tracking 95559
snakes-based cardiac contour extraction, automatic init. 76470
SPECT, edge detect., atten. map, backscatt. photons 122199
splines for sig. proc. 129462
stents in angiographic images, deformable boundary detect. 110950
stereo correspondence, edge-based, robust, hybrid symbiotic genetic optimisati 129884
stereo matching, disparity gradient based search space reduction 129899
stereo vision image matching by self-organizing neural net 107279
stereoscopic image self-matching without camera calib. 129900
still images, edge directed interpolation 94649
struct. environ. scenes, distortion removal and automatic calib. 129429
structural graph matching by EM algm./SVD 129872
subpixel accuracy analogue fast edge location meas. using CCD image 1187
subpixel edge detect. syst., dimens. meas., obj. localization, digital-base approaches 107277
surface reconstruction from planar sectional contours 84539
symmetric phase type filters for edge detect. *(Chinese)* 84512
sync. enlargement algm., nuc. med. image segmentation *(Chinese)* 98570
targets detect., nature texture background *(Chinese)* 95471
template matching strategies for fast face detect. 118784
terrain mapping, lin. feature changes, edge-finding 99064
texture boundary detect. using 2D Gabor elementary fns. 84098
texture-adaptive act. contour models 98134
thyroid images, computer-aided US image proc., speckle noise, least sq. appr 76380
tree groups extraction from high-resoln. digital surface models 99051
tumor boundary detect. in MR image seqs. 84636
two-phase clustering proc. for outliers detect. 95427
uncalibrated image seq. matching, 8-point algm. 107278
US images, texture edge detect., Gabor fns.-based approach 87488
vehicle license image segmentation using wavelet transform 84239
ventricular fn., MRI eval., true FISP vs. FLASH obs. 87681
vertex coding using triangle center of gravity 118569
vessel-like patterns detect. in noisy environ. 87549
video, model-based temporal obj. verification 73499
video coding, adaptive postprocessors with DCT-based block class. 107018
video coding, block-DCT based, low-complexity post-proc. for artifact reducti 95203
video coding, semi-automatic semantic obj. extraction 84463
video coding, VLBR, motion estim. algm. 95138
video image seqs., algms. for deformable lin. objs. shape change recogn. 843
video obj. extraction and shape coding using B-splines 118504
video shot boundary detect. using edge obj. tracing/tracking 118458
video temporal segmentation, gradual transits. detect. 107127
video-rate pipeline straight line extraction algm. 107125
video-telephony and conferencing, image prediction, face detect. and triangu tion appl. 118628
vision chip syst. for real time visual proc. *(Japanese)* 84088
visual tracking using Snake based on target contour inform. 129891
VLBR feature-preserving image coding 107058
vol. images, complex boundary extraction via deformable surface 73509
VQ with edge reconstruction 95495
wavelet multiscale method for edge detect. *(Chinese)* 73522
wavelet-based salient points for image retrieval 95514
weapon systs., robust correl. tracker 118761
weighted centroid neural net for edge preserving image compression 11859
wood real-time inspection archit. 95532
$Bi_{12}TiO_{20}$, image restoration and pre-proc., two-wave mixing 105479

ge dislocations
fund. Gaussian beams with edge phase disloc., SHG 82861
AlN piezoelec. polycryst. films, rf magnetron sputter deposition, SAW appl. 124818
GaInN/GaN epilayers, MOVPE, pit form., TEM, threading disloc. 79308
GaN epilayers, RF MBE growth, threading disloc. reduction, AlN multiple layers 90297
GaN epitaxial layers, struct./elec./opt. props. 69519
GaN layers, laterally overgrown, microstruct., TEM obs. 69538
GaN undoped epilayers, long term photocapacitance logarithmic decay behavior 81195
GaN:Si epilayers, MOCVD, threading disloc., nonradiative nature, PL 80717
InAlAs/InAs epitaxial bilayer film, misfit disloc. introduction 126110
InGaN MQWs, chem. mapping 101325
InN films, MBE on InN buffer layers, disloc. densities, XRD 79229
Si cryst. surfaces micromorphology, wet chem. etching 126345
ZnO layers, plasma-enhanced MBE on (0001) sapphire, defect charactn. 90308
ge extraction *see edge detection*
DIF *see electronic data interchange*
ting, text *see text editing*
M *see electrical discharge machining*
P management *see DP management*
TV *see high definition television*
ucation
see also biomedical education; computer science education; continuing education; control engineering education; distance learning; educational administrative data processing; educational aids; educational courses; educational technology; engineering education; management education; teaching; training
architects education, studio course, implications for software education 113320
autonomous students, learning strategy, concept mapping, serialistic cognitive style 67436
Bangladeshi nongovernment universities, TQM overview 89603
concurrent engng. in electronic packaging, conf., Calimanesti-Caciulata, Romania (May 2001) 124229
DVD business/indust. appls. 97103
global product develop., cross-cultural comparison, continuous learning 89805
higher education institutions IT technol. adoption proc. research 89604
intell. components/instrums. for control, conf., Buenos Aires, Argentina (Sept. 2000) 113254
John Hopkins Univ., quantum phys. model 67425
key skills develop. using inform. and commun. technols. 67439
mechatronics engng., sci. and education 78510
network IT teaching, cooperative/contributive learning model 113300
PhD program elements 113349
proc. simul. using training systs. 67447
small firm collaborative action learning, research initiative 89618
small/medium-sized organisations, innovation fostering 89690
telemedicine studies, patient willingness to participate, effect of education 133155
test/ATE manufacture, education using FPGA 109422
UK Univ. for Industry educational initiative 67445
ucational administrative data processing
Cyber Teaching Assistant for computer education course assistance 118155
LIES (Location-Independent E-mail Service) syst. implement. 119522
Microsoft Personal Web Server in LAN *(Polish)* 130652
part-time final-yr. engng. course projects, initiation/organisation/logistics 89635
radiation oncology interactive case mgt. exam., patient treatment portal design skills assess. 89607
teleteaching in IS, seminar-like teaching efforts *(German)* 119767
Wireless Andrew, high-speed campus-wide wireless data network 85287
ucational ADP *see educational administrative data processing*
ucational aids
audiovisual and multimedia images for education *(French)* 89614
computer relays, PC-based low-cost digital simulator for perform. eval. 91447
electrochem. O_2/CO_2 sens., photosynthesis studies, educational instruction tool 97507
ETA (Electronic Teaching Assistant) program for electronics education 113384
Image Analyser, educational tool 100470
lang. acquisition in classroom via DVD 120577
microwave CAD education tool 67454
multimedia teaching presentation for ISDN telecomms. protocols 100474
multimedia tutorial authoring, adaptation for dist. learning 100475
ucational computing
see also computer aided instruction; educational administrative data processing
aeronautical education course problems soln. using spreadsheet fluid dyn. 100452
caching-proxy in LAN for educational computer room *(Polish)* 130648
campus IS, integrated learning environ. 119610
cct. module CAD education 125172
clinical PACS, research and teaching access 89608
commun. patterns, computer mediated and face-to-face, education 85359
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
ecosystem anal., dist. learning via Internet and satellite downlink 130631
Electronic Chalk, Java-multimedia-table for classroom and teleteaching *(German)* 130939
FirstClass computer conferencing syst. for dist. learning *(Italian)* 130904
intranets in law schools and in legal practice, supporting organisational work 74191
meas. systs. with combined analogue input/output facilities for practical education 75373
mechatronics student expts., DCS monitoring via Internet 97150
Multimedia Information Service Center, design 74434
ND comprehensive network admin. and anal. tool 108121
real-time interactive tele-exercise classroom for computer exercises over Gigabit Network 100453
tele-education support syst., movement recogn. of lecturer 84531
undergraduate EM education using spreadsheet software 100458
video-based inform. networks for regional community creation 119776
Virtual Classroom, Internet technol. based course delivery 108106
Web based learning environ. for commun. module 113288
wireless laptop classroom implement. 119738
ucational courses
ABET Criteria 2000, chem. engng. education, environ. and ethical issues 89630
ABET Engineering Criteria 2000 for German Electrical Engineering program 89628
academe, long-term impact of internet 67431
advanced holography teaching in high school 78481
educational courses continued
analogue cct. courses, PC sound card-based audio waveform generator 78523
appl.-specific power electronics education curriculum develop. 100457
biomedical engng. MSc, all-Ireland course 98116
capstone design programs indust. projects selection 113330
CHIPDESIGN, project-oriented microelectronics course, ASIC std. cell design flow 125298
collaborative learning tools develop. on Internet 67432
computer vision education and text resources, survey 113385
computer-based educational activities, Internet support 67438
conductive adhesives for packaging, Internet course, expt. seq. 113372
control of power electronics systs., teaching syst. *(Spanish)* 67449
cornerstone/capstone engng. design projects selection criteria 113331
curriculum-integrated engng. design/product realization 113327
DCTlab educational image compression software for digital TV course 89640
design curriculum, product realization proc. integrat. 113324
design education unification through decision theory 113336
design engng. education, conf., Claremont, CA, USA (May 1999) 113228
design engng. education, team perform. prediction 113346
design engng. education course assess./improvement plan 113345
design teaching, curriculum assess. using design projects 113344
DEWorkstation power engng. education enhancement software 78479
digital cameras, CMOS image sens., graduate level educational course 131987
digital design, PLD, elec. engng. degree course 125299
digital filter design, intra-disciplinary capstone project, design teams 124264
digital inform. age course for elec. engng. students 78531
dist. education network courses, WWW technol. appls. *(Chinese)* 67414
ecosystem anal., dist. learning via Internet and satellite downlink 130631
edutainment, interactive TV and education integrat. 120535
elec. engng. education, cct. appls. of Dunn's rule 89645
elec. machines/EM teaching, OO software 123308
electronic packaging, educational course, EM simul. tool 113313
electronic packaging, graduate educational course 113315
electronic packaging educ. module develop., Sync-O-Matic software tool 113371
electronic packaging syst. cost anal., Internet-based educ. mater. 113370
electronic software engng. education, large-scale parallel-embedded appls. 124275
electronics for mechatronics students, studio teaching 89655
Eng. lang. education for specific professional needs 113308
Engage first-yr. engng. studies program 113326
engng., self-training through Internet 78505
engng. courses accreditation, Portugal 78507
engng. curricula change mgt. at Texas A&M Univ. 89633
engng. design courses, motivational teaching/learning concepts 113318
engng. design/anal. teaching challenges 113338
engng. education, conceptual understanding instructional seq. 89637
engng. education, multi-assess. portfolios knowledge mgt. 113366
engng. education expansion, bridge between technol. and society 78482
engng. orient. course, visual thinking implement. 113365
Europe engng. education 100472
first course in power engng., energy conversion approach 100463
FirstClass computer conferencing syst. for dist. learning *(Italian)* 130904
graduate automotive technol. education in energy storage systs. 113305
hardware logic verification engineers, teaching, graduate level course, The Ohio State Univ. 124280
high temp./high power electronics, WWW educational course 113314
honors capstone pollution control design course experience 113329
Hungarian elec. engn. education, professional culture develop. efforts 113364
HV field, undergraduate EM course, role of computers, expts. 113391
IEEE Societies Web-based elec. engng. education efforts 89601
IM charact. computer-aided multimedia education 78532
image proc. teaching, Java vision toolkit 118450
indust. automation undergraduate lab. modular μP kit 78517
Internet-based dist. learning using learning by doing paradigm 78525
IP-core based IC design enabled by 3D wafer bonding, research-focused project course 126958
Japanese engng. education accreditation syst. introduction 113362
laser material proc., 3D modeling and visualization 117556
learner-centred online course, sync. computer-mediated commun. systs., formative eval. 113347
learning on demand, hybrid sync./asynchronous approach 78520
lifelong learning environ. requirements, UK PETIS experience 67433
machine stabil. torque coeffs. theorems for power engng. courses 89646
Masters Degree programs, dist. learning via Internet 78527
mech. engineers undergraduate mechatronics program, Rensselaer Polytechnic Inst. 78509
mech. engng. design courses, team motivation 113322
mechatronics education, mech. design role, USA 89650
mechatronics educational course, early mech. design 89651
mechatronics educational course, Univ. of Wollongong 89652
mechatronics integrat. in second-yr. design course 113334
mechatronics lab. course 124278
mechatronics syst. design, HWIR simul., Univ. of Hartford curriculum 89654
mechatronics tertiary education in Thai universities 89653
mental health professionals, cognitive-behavioural therapy training, videoconferencing pilot study 130898
microcontrollers learning using CAI-oriented multi-micro simul. environ. 78512
microelectronic systs. education, conf., Las Vegas, NV, USA (June 2001) 124190
microelectronics dist. education course, web-based learning approach 126959
microelectronics education online courseware library using Java applets 78515
microelectronics technol., interactive course on website, animations 124258
microsyst. packaging, undergrad. educ. needs, course design 113373
microsystem packaging education, product develop. course 113316
mixed-sig. SoC design, joint university/indust. Internet-based course 124256
NDT educ. improvements, North Central Collaboration efforts 113317
networked tools in interactive learning, future approach 67443
online education delivery, directory services, GESTALT example 67428
packaging & interconnection tech., Univ. level educ., Romanian experience 113374
part-time final-yr. engng. course projects, initiation/organisation/logistics 89635
Polish computer teaching aids, curriculum policy 113304
Polish higher vocational engng. education schools experiences 113361
power electronics course teaching, building-block approach 100462
power syst. course, Internet/WWW appl. *(Chinese)* 78494
power syst. education, OPF model 133582
product-based undergraduate engng. curriculum, overseas study program 113332
Professional Issues undergraduate student education course 124247
project-based design education courses 113323

educational courses continued
PV training programs accreditation, global quality standardisation 112385
renewable energy sources training package for Arab world 88522
resource-based studies using electronic inform. resources, skills eval. 124242
RFIC multidisciplinary design, first-yr. graduate course for RF engineer training 124265
RSVP Unibrowser for dist. learning using videostreaming and Web 119797
Scandinavian ICT education, internat. comparative survey 113297
SensEdu, Internet course for teaching sensorics 113369
sig. proc. education, multidisciplinary approaches 130006
Simple RISC Computer archit. μP design, undergraduate course 125297
Slovak Univ. of Technology, microelectronics education, university-indust. cooperation 124259
SoC Masters, internat. MSc program in SoC design at KTH 124267
SoC programme, digital hardware organization course, block-oriented design 125292
social informatics and service-learning as models for teaching ethical and social issues in sci. and engng. 89629
Socware design cluster for SoC, research & education programme 126955
structural design education for 21st Century 113339
SynThesis real-world product design/business develop. course 113325
TANGOW, model for internet-based learning 67429
traditional mech. engng. curriculum, mechatronics integrat. 78511
Turkish engng. universities, internat. accreditation activities 113360
Ukrainian telematics-based education overview 113299
undergraduate algms. course, image-proc. projects 118451
undergraduate computer vision curriculum, primary source material 113386
undergraduate computer vision instruction, expt. learning 113388
undergraduate core algms. course, image related appl. 113390
undergraduate digital image proc. courses, algm. design 113387
undergraduate elec. engng. courses, indust. demands 113350
undergraduate elec. engng. degree program, elective courses comparison 100460
undergraduate EM education using spreadsheet software 100458
undergraduate engng. curricula, capstone design course, projects 113333
undergraduate engng. curriculum, engng. sci./design integrat. 113337
undergraduate engng. design course, group project work assess. 89636
undergraduate engng. education, cost anal./costing model 89634
undergraduate engng. students interdisciplinary capstone activity 113328
undergraduate engng./phys. students, learning style research 100456
undergraduate image computation course, graphics and computer vision 113389
undergraduate IT/sci./engng. degrees, appl. rates anal. 100455
undergraduate lab. in mag. recording fund. 104520
undergraduate microelectronic systs. education, CAD tools, contemporary engng. practices 124262
undergraduate power courses develop., competitive education 100461
undergraduate power supply design/anal. curriculum 100454
undergraduate power syst. anal. course, software program 124277
unified M.Eng degree course, project assignments 89620
US engng. education programmes 100471
US research student exchange consortium proposal 124252
Virtual Classroom, Internet technol. based course delivery 108106
visual interfaces to computers course 118452
VLSI design, indust.-sponsored graduate programme, IIT Delhi 124270
VLSI design education, synchronized streaming media appl., Internet in rem. learning 124268
VLSI image sens. project chip, undergraduate course, design cycle 126954
web-based dist. educational initiatives, metadata models 78504
Web-based dist. instruction eval. model 78516
Web-based multimedia technol. course, teaching/learning practice, experience report 113381

educational psychology *see education; psychology*

educational technology
see also distance learning; educational computing
advanced learning technols., conf., Madison, WI, USA (Aug. 2001) 113378
asynchronous learning networks, collaborative learning support, knowledge mgt. 113352
audiovisual and multimedia images for education *(French)* 89614
biomedical research, education and training, Web-based appls., mgt. and delivery 100478
broadband networks for dist. education and training 108012
collaborative learning, online, constructivist, peer-to-peer, obj.-based systs. 113354
collaborative learning support in Internet learning space 119609
computer conferencing syst., on- and off-campus usage by engng. students 67416
CubeSat deployer and CubeSat class PicoSatellite 122471
DiasNet, Internet tool for commun. and education in diabetes 98876
dist. education and impact of technol. in Europe and Japan 124243
dist. education network courses, WWW technol. appls. *(Chinese)* 67414
dist. education syst. develop. in Ternopil Academy of Nat. Economy's Inst. of Computer Information Technologies 100479
dist. learning technols., hypermedia classroom *(Slovenian)* 130742
dist. learning using video terminals 85365
distributed learning environ., QoS, holistic view 67422
distributed TV prod. for dist. education , Uni-TV project 130982
edutainment, interactive TV and education integrat. 120535
electronic learning, market develop. and users' aims *(German)* 113309
FACILE project, networked facilitated open and dist. learning in continuing engng. education 113351
faculty involvement in planning for use and integrat. of instructional and administrative technols. 67418
help desk staff, educational computer resource set-up 119488
high-perform. mixed-technol. LAN for education and research 108345
ICONS project, interactive learning for global education 67423
interact. control in chairperson-controlled university confs. 85354
Internet dist. education syst., university/indust. linkage 113382
Internet integrat. into educational syst. 89612
Internet services and TV integrat., educational opportunities 120583
Internet-TV integrat. for instructional delivery, design implications and issues 120588
lang. acquisition in classroom via DVD 120577
lang. learning project using OO multi user domains 119588
learner-centred online course, sync. computer-mediated commun. systs., formative eval. 113347
learning experiences, sharing through correspondence on WWW 113353
long-dist. education via multimedia-board, CSCW appl. 108439
media, conf., Geneva, Switzerland (2000) 89544
media comparison studies 100465

educational technology continued
mental health professionals, cognitive-behavioural therapy training, videoconencing pilot study 130898
Nat. Action Programme for Information/Communication Technologies in Swish schools 89611
network exam. syst. design based on BWD *(Chinese)* 119485
network mgt. technols., open source tools, university environ. 119489
networks for research and education, conf., Pontignano (Nov. 2000) 10044
Online Distance Learning System supporting knowledge communities 1133
OZ, dist. learning environ. for computer sci. education 108341
peace education project in Israeli high school, Internet-based group rels. 89
pedagogical effects of inform. and communcation technols. *(French)* 8961
pedagogical innovation and new media, transitional syst. *(French)* 89616
professional develop. service delivery for health, education and welfare profsionals, telemedicine 67424
radiologist continuing professional develop. using WWW as delivery vehi 89600
radiology teaching, dist. learning in digital environ. 89609
resource-based studies using electronic inform. resources, skills eval. 12424
RSVP Unibrowser for dist. learning using videostreaming and Web 119797
stereoscopic virtual environ., networked syst. 108375
surgeon training via video conferencing and Internet 119769
teacher mailing lists, minority activity 89613
teacher network-based commun., reflective outcomes 67417
teacher training via multipoint desktop video conferencing 119770
tele-education, face location via subregion color histograms 84530
telemedicine for dist. education 124241
teleteaching and teleconferencing codec, IP and ATM networks 108390
training technol., theoretical backgrounds 113298
video lects., Web-based courses, Internet transm. 84505
video-based learning via WWW, genres, user attitudes and prospects 11338
videoconferencing in Queensland health service 133152
Web based dist. learning/teaching using DVD and Internet 109364
Web-based multimedia technol. course, teaching/learning practice, experier report 113381
WWW technol. adoption/diffusion into mainstream teaching 113348

EDX *see X-ray chemical analysis*

EEG *see electroencephalography*

EELS *see electron energy loss spectra*

EEPROM *see EPROM*

effective mass
see also band structure
diamond:P films, low temp. excitation spectrum 69496
III-V semicond. hot-hole lasers 93650
MOS struct., insulator thickness meas., F-N tunneling *(Chinese)* 91885
MOSFET, direct tunneling hole current through ultrathin gate oxide 81263
oligothiophene single crysts., charge transport, conjug. length depend. 9171
pMOSFET, hole quantization effects, threshold voltage shift, six-band effecti mass approx. 70159
QD-QW systs., shallow impurities and δ-doping, defect states anal. 115390
QW/QD IR detector photo-response/dark current, theoretical modeling 8655
reson. tunneling diodes, direct bandgap, indirect bandgap-like current flo 92423
semicond. intersubband devices, self-consistent charact. 115810
ultrathin gate insulators MOS struct., tunneling current interf. induced oscil 91894
zinc blende/wurtzite III-V semiconds., band params., review 80686
N-AlGaAs/InGaAs/GaAs pseudomorphic QW based sub-0.25 μm gate HEM 81370
AlGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 808
$Al_{0.2}Ga_{0.8}N$/GaN heterojunction, effective mass of 2DEG 91729
CdMnTe/CdMgTe QW quantum Hall syst., photolum. spectra, Mn conc. depen in high mag. fields 80834
CdO thin films, low-press.CVD and elec. props. 90407
Cu_2O:N thin film, reactive RF magnetron sputtering 79200
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
n-$CuInSe_2$ elec. charcts., impurity band cond. effects anal. 126093
Eu chalcogenide cpds., elec. transport props. anal. 80780
GaAs 2DEG QD, paramag.-diamag. interplay 69701
GaAs quantum wire superlattice, δ-doped, QHE, SdH oscills. 91772
GaAs/$Al_xGa_{1-x}As$ asymmetric one-/two-sided QW, electron mobility 69702
GaAs/AlAs, weakly coupled superlattices, current self-oscill. freqs. 126181
GaAs/AlGaAs QW IR photodetectors, PL charactn. *(Chinese)* 75527
GaAs/AlGaAs antidots, sq. lattice, geom. reson. shift in mag. field 80836
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approa 91794
GaAsN/GaAs QW, effective mass and carrier recomb., opt. detect. of cyclotr reson. 69688
GaAsN/GaN QWs, envelope fn. calcs., excitons 91806
$GaAs_{1-x}N_x$/GaAs MQW, opt. transits., band anticrossing 115417
GaInAs/GaNAs short-period superlattices gas-source MBE growth and charac 101256
$Ga_xIn_{1-x}P/Al_{0.5}In_{0.5}P$ (110)-oriented strained QWs, opt. anisotropy, barrier heig effect 115313
GaN, bulk, polar opt. phonon scatt. and neg. Kromer-Esaki-Tsu differential co 103020
GaN, shallow levels, selective photoluminesc. spectra 91619
α-GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and ellipsometry meas. 69545
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
N-InAlAs/InGaAs/InAlAs metamorphic heterostruct. based sub-0.25 μm g HEMT 81370
InAsN film, plasma-assisted GSMBE 114276
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunction, magnetotransport 91732
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, confined states, QCSE 91771
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunctions, effective mass, quantum lifeti 103106
InGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 808
InP nanoparticles in SiO_2 thin films, prep., struct./opt. props. 80701
$MgXN_2$ (X=Si,Ge), theoretical anal., DEFT, first principle calc., LDA, gener ised gradient approx. 79023
PbSe/PbSrSe MBE MQW, band struct. and opt. props., mid-IR laser app 126139
Si/SiGe, anisotropic QW, wigner fn. formulation 126150
Sm chalcogenide cpds., elec. transport props. anal. 80780
Tm chalcogenide cpds., elec. transport props. anal. 80780
ZnSe:Al,Cl,In, shallow levels, selective photoluminesc. spectra 91619
$ZnXN_2$ (X=Ge,Si), theoretical anal., DEFT, first principle calc., LDA, generali gradient approx. 79023

G *see crystal growth from melt*
IE *see electric field integral equations*
TPOS *see EFTS*
TS
see also electronic commerce
anonymous coin marking, privacy protection against blackmail 106264
ID *see electrohydrodynamics*
IT calculations
$LiMn_2O_4$ pos. electrode, cyclic capacity, total overlap pop. anal. 112769
genfunctions *see eigenvalues and eigenfunctions*
genstructure assignment
design for proportional-integral observers, discrete-time case 114093
helicopter main rotor blades, damage detect. tech. 111321
genvalues and eigenfunctions
see also eigenstructure assignment
1D opt. struct., tight-binding approx., opt. pulse propag. 104694
2-D oscillator, correct decomp. of perturb. into amplit. and phase noise 90782
2D and 3D images, detect. of second-degree vars. 118459
2D angle estim., ESPRIT method, uniform parallelogram array *(Chinese)* 95643
2D generalized sidelobe canceller with partial adaptivity 129952
2D gray-scale image fusion by multiscale morph. 107216
2D rect. resonator, mode coupling in bulk waves, unitary matrix 104424
3D finite element EM anal., basis fns. *(Japanese)* 117606
3D surfaces, hierarchical coding using box splines 129718
2000 Copper Mountain conf. on iter. methods, Boulder, CO, USA (April 2000) 100361
AC power network s-domain models, modal anal. algms. 111668
accelerating cavities, trapped modes anal. 75948
accurate opt. flow in noisy image seqs. 106590
acoustic waveguides, local orthogonal transform., one-way anal. 83497
act.-cavity VCSEL eigenmodes, simple analytic representation 105390
adaptive discrete time wavelets using degenerate eigenvalues 119071
adaptive line enhancement via subspace tracking 107546
adaptive minor component extraction with modular struct. 107383
adaptive noise reduction filter using cascaded sandglass-type neural nets 73686
additive inverse eigenvalue problem, solvability *(Chinese)* 124672
AGC Applebaum array for rejection of eigenvalue spread interfs. 94193
alg. Lyapunov and Riccati eqns., soln. bounds 124669
AMPTE magnetopause crossings, improved boundary normal calcs. 122639
annular jet, flow anal., particle image velocimetry 121290
appearance based obj. recogn. using eigenimages 84549
ARPACK and eigs for large-scale computation of pseudospectra 101033
array antenna meas. with rough surface reflector, anal. 105967
asymmetrical double ridge waveguide, propag. charact. 72414
asymmetrical opt. rib waveguide propag. charact. 116691
ATR SAR imagery using extended max. av. correl. height filter, clutter rejection 75149
BAW thin-film composite resonator, finite element simul. 116209
Beltrami field phasors, 6×6 lin. constitutive dyadics eigenvectors 105659
BGA substr. conducting path defects, AOI 100611
blind image deconvolution/small-extent point-spread fns. using resultant matrices 94947
blind multiuser detect., second-order nonstationarity based, subspace approach 107605
blind sig. separation, PCA neural models 119082
blind source separation, high-dimens. lin. separation problems 118797
blind source separation, joint approx. diagonalization for set of eigen-matrices *(Chinese)* 107579
blind source separation using temporal predictability 84789
block eigenvalues of block partitioned matrices for matrix polynomials of commuting matrices 101052
block GMRES method augmented with eigenvectors 79025
brain, MRI, apparent diffusion tensor 87667
branch-and-cut algms. for bilinear matrix inequality eigenvalue problem 68005
CDMA systs., space-time-code blind receiver and neural net implement. 96391
channel state inform. AC multimotor drive, space vector control 89344
chaotic systs. for secure random no. gen., design tools 68537
chaotic time series prediction by RBF neural net, radar appl. 118947
charged beam in conducting pipe, parallel 3D Poisson solver 110108
chirowaveguides, EM waves charactn. 117741
Chua's eqns., cusps in strong resons. organized for degenerate Takens-Bogdanov 125203
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
circ. polarised rect. microstrip antenna anal. 83532
CNN modified archit. for Turing patterns generation 102451
coarse-to-fine texture image retrieval method 94914
coaxial cavity, structural eccentricity, eigenfrequency shift 80591
cognitive psychology, EEG data class., subspace projection techs. 98198
cointegration, multivarite time series, error-correction model 113883
combined extra-up dating/self-scaling BFGS method 114060
complex matrices, sq. roots/sign fn., iter. 78760
computation of certain determinants arising in treatment of Schrodinger's eqns. 114077
concatenated vector-valued fading channels, asymptotic eigenvalue distrib. 131268
constrained matrix least sq. approx. algm. 78984
contour recogn. in images by feature extraction using neural network 129832
contoured doubly rotated quartz resonators, thickness modes anal. 116197
converter nonintegral harmonics from AC network resonating with DC network 134217
convolutive mixtures separation using HOS 84707
Coriolis mass flowmeters, model based correction 120731
corrugated waveguide polarizers for satellite antenna feed syst., design 72704
coupled arrays of oscillators, sync. stabil., universal probe 90682
coupled diffusion systs. with localized nonlin. reacts. 101036
covariance kernels, simultaneous diagonalization approx. soln., second-order stochastic procs. 119079
curl-curl matrix prop. in finite element anal. with edge elements 124741
curved textured surface anal. by local spectral distortion 95455
cylindrical corrugated structs., pole-location-based estim. of eigenmode characts. 128826
cylindrical problem, method of lines soln., radial discretization 83454
D-stabil. necessary condition 89955
deflated iter. solver for magnetostatic FEM with large permeab. differences 93968
degenerate self-imaging Fourier filters 129634
DFT, decomp., spectral anal. 107416
dielec. loaded waveguides, 2D long transm. line-freq. domain treatment 102504
eigenvalues and eigenfunctions continued
dielec. permitt. at microwave freqs. using eigenvalue problem 72432
dielec. waveguide, Krylov subspace algm. 94083
diffr.-coupled open resonators, eigenfrequencies calc. 83490
direct blind channel equalization, prog. canonical correl. anal. 107723
direct solver for class of mixed finite element problems 79068
direction set based algm. for spectral estim. 95689
discrete fractional cosine/sine transforms 73593
discrete fractional FT computation, weighted summation 90193
discrete wavelet domain, natural scale selection using eigenvalues 129961
disk-type TW US motor and vibr. anal. *(Chinese)* 134101
disordered semicond. QWs, reson. Rayleigh scatt., radiative coupling 91824
distributed multimedia syst. sync., birth-death proc. 119804
distributed sources, DOA estim., generalized eigenvalue decomp. *(Chinese)* 118938
DOA estim., sens. gain uncertainties *(Chinese)* 107299
DOA estim. of coherent narrowband sigs. using lin. prediction, MSE-based regularization 130024
DPAST eigenvector tracking algm., local stabil. anal., hardware implement. 79952
DS-CDMA in fading channels, code timing acquisition by differential correl. 74792
DS-SS sig., pseudo-random seq. blind estim. 107623
Duralumin plate, defect detect./imaging using Lamb waves, DORT 101629
ECG, power line interf. elimination, constrained eigenfilter 87455
edge pot. images, eigen-space method *(Japanese)* 118311
eigenfrequencies of membranes of arbitrary boundary and with varying surface mass dens. 124762
eigenstructure-based direct multichannel blind image restoration 118322
EM field anal., reflective and rot. symm. model, simplification method 128649
EM field computations, wavelet transform appl. 128646
EM sources in chiral medium above soft/hard boundary, image theory 93994
EPR entangled states, swapping transform., continuous variables 107626
European interconnected elec. power syst., small sig. stabil., neural nets 111814
existence of M-matrix with prescribed spectrum 101037
face detect./facial feature extraction, efficient algm. 107220
face image, automatic extraction of eye and mouth fields using eigenfeatures and MLP 129883
face recogn., orthoface method, eigenvalues 73480
face recogn. based on eigenfaces and PCA 95406
face recogn. based on indiv. eigen-subspaces 73464
face recogn. from multi-pose image seq. 129906
facial expression recogn. approach for perform. animation 95552
facial expression recogn. by computer vision 73535
facial expressions in realistic communicating clones, view-based approach 118589
facial feature detect., color segmentation/KL transform *(Chinese)* 95431
facial models, compensation for ensemble-specific effects 129913
FDD WCDMA systs., closed-loop transmit diversity 108746
FDSS and FH commun. systs., optimum self-ref. spatial diversity proc. 119903
FEA of coupling eigenvalue problem on overlapping domains 79151
feature extraction based on canonical correl. anal. for appearance param. estim. 118292
FEM for differential eigenvalue problems with mixed classical and (semi-)periodic boundary conditions 68082
ferrite resonator in rect. waveguide fracture, EM field 117730
ferrite-loaded circ. waveguide, hybrid spectrum, explicit eigenvalue approach 94098
fibre polariz. mode dispersion, Jones matrix stat. charactn. 71302
fighter plane struct. fault detect., fault detect. filter *(Chinese)* 130085
filter, total least sq. error criterion, pos. definite matrix 80088
finite difference freq. domain anal. of whispering gallery modes 70480
finite eigenvalues elimination of 2D Roesser model by state feedbacks 90088
finite integrat. tech., discrete energy conservation/related laws 83089
finite-dimens. control of nonlin. parab. PDE systs. with time-depend. spatial domains 90087
FIR PR filterbanks with order one polyphase, eigenstructure charactn. 119000
flexible workobject localization for CAD-based robotics 94450
fluid queues driven by truncated birth-death procs., computational approach 68002
focused-gain lasers, reson. excess quantum noise 116758
FOPEN data, image enhancement techs. 99161
frontal-pose image recovery from single profile image 95500
fuzzy clustering based on cooccurrence matrix, data retrieval appl. 118439
Gabor feature classifier for face recogn. 107179
Gaussian beam illum. spheroidal particle, expansion coeffs. 72233
generalizing eigenvalue theorems to pseudospectra theorems 101032
generators dyn. coherency ident., self-organising feature maps appl. 111846
Gersgorin-type eigenvalue inclusion theorems and their sharpness 101027
Gershgorin disks, detect. of source no. 118919
GPS-SDMA syst., transmitter posn. estim. methods 85916
Green's fn. of thin circ. plate with elastically supported edge 114067
grid-connected PV array, random dyn. stabil. flucts. anal. 112381
gyroelectric circ. conducting waveguides, theory 83495
H_2/H_∞ mixed filtering design in multirate transmultiplexer systs., LMI approach 131025
H_∞ filters for unpredictable noise sources 130077
hard corrugated conical horn anal. by method of generalised scatt. matrices 83567
harmonic voltage distortions reduction using s-Domain approach 112068
heteromophic waveguide, cutoff freqs. calc. by operator theory 69015
HF surface wave radar, shipborne, expt. anal. of sea clutter 75070
high-power indust. motor drive power convertors, harmonic anal. method 77989
hollow-core dielec. waveguides, undistorted radiation beam transm., super-gaussian/sombrero fns. 116685
HOS based blind multi-channel deconvolution 107401
HRR ATR using eigen-templates with noisy obs. in unknown target scenario 86125
HST matrices, diagonalizability/eigenvectors 100736
HV cct. breaker online monitoring/fault diagnosis using RBF networks *(Chinese)* 123673
hydroelectric generating set axis orbit, automatic ident. *(Chinese)* 112447
hyperchaotic cct. with damped harmonic oscillators, ANP3/PSpice simul. 90690
ICF, laser propag. into thermonucl. plasma, solitons appls. 105771
ill-conditioned power-flow problems anal., voltage stabil. methodology 133578
image class., eigenpaxels/neural net approach 73496
image de-mixing, ICA vs principal component anal. 106484
inform. theoretic criteria for model order selection, behavior 94224
interconnected power syst. freq. oscill. stabilis., SSSC appl. 99284
interconnected power systs., stabil. anal., market dyn. 133498

eigenvalues and eigenfunctions continued
interdigital dielectrometry sens., inverse param. estim. algms. 109514
IR dual-band pass. imagery for automatic clutter rejection 95507
ISI noisy channels, max. throughput loss due to narrowband interf. 84811
isolated image guide eigenmode and elementary microstrip radiators interact. study 83542
isolated self-excited reluctance generator, min. loading resist. 77846
isolated three-phase induction generator, excitation capacitance requirement 112512
isolated word recogn., common vector approach, PCA rel. 106403
Jacobi-Davidson method for spectral calcs. in MHD 101048
Jacobi-Davidson type SVD method 101034
Kennaugh null theory extension 75172
KLT based on overlapped subframes for speaker ident. 84051
Lanczos algm. in distributed memory environ., external selective orthogonalization 68000
large deflection micromechanical 1D/2D scanning mirrors, design/fab. 93200
large-scale normal coord. anal. for mol. struct. 101031
lin. depend. during iters. of restarted block Lanczos methods 67984
line-segment grouping, eigenclustering approach 129494
LMI of rank one, eigenvalues and Lyapunov's inequality 67700
LMS convergence, cross-correl. p-vector influence 118873
long. power syst., unstable LF oscill. damping, eigenvalue anal. 122854
lossy anisotropic opt. waveguides, perfectly matched layer boundary conditions, complex FEM modal solver 104704
Lur'e systs., elementary canonical state models, synchronized chaos appl. 101711
Lyapunov's inequality and rank-one LMI 100735
magnetos. magnetometer data, wavelet anal. results 122642
MAI suppression by reduced-rank lin. filtering 84762
MAP algm. for image reconstruction *(Chinese)* 129427
matrix product eigenvalue problem, global optim., computational complexity anal. *(Japanese)* 100741
matrix products, sing. values and eigenvalues, upper and lower bounds 78750
max. likelihood framework for iter. eigendecomposition 106581
MCM time depend. temp. fields from heat cond. eqn. eigenfunctions/eigenvalues 113695
microstrip ccts., freq./time-domain modeling by modif. spectral domain approach 91392
microstrip transm. lines, eigenmode anal. 83476
microwave components eigenvalue anal. program using high order vector elements *(Korean)* 91229
microwave multilayer cct., EM model, long. decomp. 102583
microwave simulator, FEM 91230
MMSE receivers for CDMA systs., blind startup 85476
multi-objective regression modifs. for collinearity 113878
multi-wavelets from spline super-fns. with approx. order 90192
multilayered stratified gyroelectric chiral media, dyadic Green's fns. 72452
multiple texture planes, detect. using local spectral distortion 129614
multiple type-one equilib. points on stabil. boundary, generalized fixed-point homotopy method 90663
multiport broadband matching of complex n-port loads 90645
multiqudit systs., quant. entanglement swapping, Bell-type meas. 83945
multispectral images, PCA, neural net 94724
MUSIC lin. sampling algm., weakly scatt. targets, self-adjoint matrix 107363
musical instrums. and eigenvalues 114071
narrowband direction finding, sens. arrays, pattern diversity 107364
Neimark-Sacker bifurcation param. values, fixed point calc. method *(Japanese)* 68534
nMOSFET, gate-current calc., closed-/open-boundary models 92376
nonlin. ordinary differential eigenvalue problems, iter. algms. 114115
nonparametric algms. for sig. & noise characts. recovery 73675
nonparaxial Gaussian beam struct. eigenmodes 128370
normalization of images via covariance matrix and eigenvectors 84581
num. stabil. in calc. of eigenfrequencies using integral eqns. 67994
num. verification methods for solns. of ordinary and PDE 101105
one-way open coupled double-scroll ccts., spatial instabil. 90681
online image compression using SVD and adaptive VQ 118563
open waveguide boundary conditions for finite element modal anal. 116710
opt. fiber gratings, num. anal. of transm. characts. 82079
opt. fibre soliton stabil., pulse shape and freq. chirp influence 128560
optimal compaction gain by eigenvalue minimization 73700
optimal long-time $L_p(0, T)$ stabil. and semidiscrete error estim. for Volterra formulation of lin. quasistatic viscoelasticity problem 79120
optimal preconditioned eigensolver, locally optimal block preconditioned conjug. gradient method 100984
optimized piecewise-lin. systs. synthesis using similarity transform. 125196
orthogonal series dens. estim. and kernel eigenvalue problem 101054
page skew detect. and correction based on line continuity *(Chinese)* 106735
pairwise comparison matrices, data perturb. 100742
parallel preconditioning of sparse eigensolver 68084
parameterized SR algm. for symplectic (butterfly) matrices 114081
partitioned freq.-domain block LMS algm. 107519
PC transm. lines, excited near fields mysterious behavior, nonphysical soln. 80164
periodic stratified media with uniaxial bianisotropy, EM wave propag. 83190
periodic waveguide systs., axisymmetric elec. waves 83480
periodically arranged pass. dipole scatterers, waveguiding props. 94202
photonic-bandgap waveguide devices, FDTD anal. using eigenfields 116750
piecewise-lin. chaotic oscillators with prescribed eigenvalues, synthesis 114652
piecewise-lin. maps, periodic trajectories determ. 130078
planar struct. with arbitrary permitt. distrib., time-domain anal. 83488
plastic-clad parab. cylindrical waveguides, rigorous modal cutoff anal. 104723
polynomial interpolation on sphere 124638
pos. tensor factorization 106726
power markets and power systs., dyn. coupling, MATLAB software appl. *(English)* 122797
power quality problems soln. using Inherent Structure Theory of Network 112067
power syst. coherent generator groups recogn., fuzzy clustering method *(Chinese)* 88275
power syst. operating condition diagnosis, SMES 77208
power syst. oscill. damping control, simultaneous partial pole placement 111891
power syst. oscills. damping, multiple controllers, coord. design 122869
power syst. small-sig. stabil., eigenvalues/state variables rels. *(Chinese)* 111904
power syst. SVC optimal control for SSR stabilisation 133554
power syst. unstable LF oscill. damping, load models effect 88376
power systs., decentralized suboptimal control, SMES 122878
power systs., double sing.-induced bifurcation points and sing. Hopf bifurcations 88337

eigenvalues and eigenfunctions continued
preconditioners, iter. soln. of boundary element eqns. for 3D Helmholtz eq 68014
pseudospectra anal., nonlin. eigenvalue problems, and lin. systs. with dela 79094
PSS param. design, probabilistic eigenvalue anal. *(Chinese)* 111916
pulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 9851
QR factorization matrix inverse-free algms. for general eigenvalue proble 90090
quadratic receivers in Rayleigh-fading channels, asymptotic error probab. ana coherent/noncoherent space-time receivers anal. 119864
quadratic spatial multisolitons, nonlocal limit, anal. expression 128545
quasilinear ellipt. eqn., pos. entire solns. existence & multiplicity *(Chines* 79060
quaternion polynomials, zeros computation 101053
QW/QD IR detector photo-response/dark current, theoretical modeling 86558
radar meas. data vector, sig. no. computation 109243
radar target ident. using 1D scatt. centres 131641
radio transmitter ident., adaptive array algms. based on transient response *(Jap nese)* 107368
radome, radiation from loops next to sphere 94115
random scatt. media, US flaw detect./imaging, DORT method 101628
rational Chebyshev approx. of rational fns. on unit disk and on unit interv 67965
rect. plate buckling with block GMRES method 124676
reflective twisted NLC displays, polariz. eigenvectors 132106
rem. sig. input PSS, power transfer capability improvement 111902
Riccati alg. eqn., generalized matrix sign fn. algm. 67707
robust power syst. stabilizer design using heuristic optim. tech. 99301
robust recogn. and pose determ. of 3-D objs. 84573
rot. symmetric cavities, multipole theory anal. of axisymmetric modes 94086
scalar images, topol. point-sets segmentation 84126
second-order blind source separation by recursive splitting of sig. subspac 118815
SEIG feeding IM, dyn. eigenvalue anal. 112510
selectively-oxidized VCSELs, hybrid ion-implanted, high-power single mo operation 117188
self-adjoint ellipt. boundary eigenvalue problems, finite vol. methods 79153
semicond. intersubband devices, self-consistent charact. 115810
separated variable coeff. wave eqns., analytic-num. solns. with, priori er bounds 114061
shape profile modelling with mixture of Gaussians 84619
sidelobe cancellation for high rejection in SAW filters 116211
sidelobe canceller for reflector antenna using sig. subspace eigenvectors 1177
sig. component estim., multi-step selection procedure 96933
sine transform matrix for solving Toeplitz matrix problems 79020
single-machine-infinite-bus syst. Hopf bifurcation 88351
single-mode dye laser syst., colored noise 117090
slightly flattened core opt. fiber, cutoff freqs. and dispersion curves anal. 712
sonoelastography images, modal artifacts reduction 121999
South China power syst. dyn. stabil. improvement 77212
spectral calcs. in MHD using Jacobi-Davidson method 79027
spectral corrections for Sturm-Liouville problems 90154
spectral mixture anal., lin. and semi-parametric full and iterated partial unmixi 118443
speech recogn. by fractals/iterated fn. systs. 118112
speech sigs., fund. freq. estim. using MUSIC algm. 106332
spherical waveguide stat. irregular walls, EM scatt. 117743
SS transm., spreading waveform estim. 72725
SS wireless mobile commun. networks, congestion 85769
SSSC, torsional damping improvement, robust H_∞ optimal control 112749
stable localized ring-shaped solitons, self-defocusing third-order nonlin. 938
stents in angiographic images, deformable boundary detect. 110950
stochastic minelike obj. detect., nonlin. model, delay diff. eqns. 73194
Strang-type preconditioners for systs. of LMF-based ODE codes 68021
sublinear/superlinear rate of convergence of conjug. gradient methods 6793
subspace methods for face/clutter discrim. 95496
subsurface discrim. using EM induction sens., eigenvalue distrib. 88227
surface waves in piezoelec. media, left eigenvectors of Stroh matrices 7229
Sylvester and Lyapunov matrix eqns., analytic perturb. 67702
symm. exploiting Lanczos method for symmetric Toeplitz matrices 67986
symmetric band Lanczos proc. based on coupled recurrences 101030
symmetric integer matrices, exact computation of inertia 67988
symmetric interval matrices, L-stabil. margin 89959
symmetric nonnegative matrix with a prescribed spectrum, FFT based meth 124665
symplectic EM waveguide theory for Hamilton systs. *(Chinese)* 117740
sync. series SVC 48-step inverter, modelling and control design *(Chines* 99202
systolic array, parallel algm., low-power design 102210
TDD-CDMA systs., FIR RAKE multipath diversity with antenna array 9639
tensor product multigrid anal. 68043
thin hexagonal loop transceiver antennas, near-/far-zone fields 83656
three-phase induction generator, utility grid-connected, perform. anal. 11251
time-freq. kernels, discrete scale vectors and decomp. 95634
Timoshenko beam finite element dyn. models, error anal. 79142
toroidal structs., topol. coords., calcs. 100852
turbine-generator subsynchronous torsional modes, eigensystem realization alg 112459
twice differentiable spectral fns. 114066
two-mode ring laser with injected sig., dyn. props. 71865
uncorrelated source detect.-estim., augmentable sparse antenna arrays 11909
uniaxial bianisotropic media, cylind. vector wave fn. represent. of Gree dyadics 72156
uniaxial bianisotropic media, Green's dyadics eigenfunction expansion 1176
unified Lyapunov convergence of both unsupervised ICA and supervised P learning, image de-mixing 107138
uniform circ. array, DOA and Doppler freq. estim. *(Chinese)* 95721
unwrapping of sigs. in transform domain 84478
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
VCSEL, transverse mode, steady current & temp. distrib. anal. *(English)* 826
VCSEL arrays, photonic lattices, Bloch anal. 117270
vector soliton interacts., opt. fiber commun. appls. 117516
VLF polarised antenna array, null steering algm. 107312
vol. decimation using eigenvalues of Hessian matrix 95562
voltage collapse anal., vanishing eigenvalue ident. 77247
VSX ring orbit feedback syst. develop. 121347
waveguide jn. generalized scatt. matrices, props. in context of mode matchi tech. 105841

envalues and eigenfunctions continued
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short-term channel props. 74666
weakly guiding opt. fiber propag. const., eigenvalue condition 127625
weakly guiding opt. fibers with exact boundary condition, simul. by FEM 128821
Xinjiang power syst., TPP caused LF power oscills., anal. *(Chinese)* 111842
zero order prolate spheroidal fns., eigenvalues calc. 90065
InAs/GaSb cascade laser, interband tunneling 82608
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, photocurrent/transm. spectra anal. 126191
SiC, isotopically disordered, Raman spectra, phonon line broadening 69576
envectors *see eigenvalues and eigenfunctions*
SA *see system buses*
stic constants
see also elastic moduli
1-3 piezocomposite transducer material consts., thermal behaviour 104436
anisotropic material, elastic consts. from photoacoustic phase vels. 68466
anisotropic plate, rapid dispersion curve mapping, elastic prop. estim. 122742
computational design/optim. advances, MEMS appl. 116071
contoured doubly rotated quartz resonators, thickness modes anal. 116197
durian fruit, nondestructive maturity determ., force vibr. appl. 100355
estim. of elastic consts. from 3D range-flow 84231
leaky Lamb wave dispersion curves meas., coating charactn. appl. 101550
mag. tapes, dyn. mech. charactn., nanoindentation methods 114562
piezoceramics charact., high vibr. levels 101488
piezoelec. stack resonator, complex mater. consts., imped. reson. 104435
plates, thin piezoelec., buckling anal., FEM/DKQ element *(Chinese)* 127162
PVDF-trifluoroethylene/graft elastomer blends, ferroelec./piezoelec. props. 127212
semiconds., group IV/III-V, high-press. phase effects 80653
$Tb_{0.27}Dy_{0.73}Fe_{1.9}$, magnetostrictive peristaltic Terfenol-D motor, force capability 112565
tendon elastic prop. meas., US elastography 122001
time-resolved acoustic microscopy, elastic prop. meas., inverse algm. 114496
AlN thin films, growth, character. microwave filter/microsystem appls. 101196
$BaTiO_3$ theoretical/expt./appls., piezoelec. ceramics, indentation, theory, expt. 104373
GaN/AlGaN strained MQW, piezoelec. field, PL press. behavior 103140
$GaPO_4$, material consts. for BAW/SAW device appl. 81678
$GaPO_4$:OH, hydrothermal soln. cryst. growth, elastic consts. 79163
GeSbTe films, phase-change recording media, mech. props. 82033
$In_xGa_{1-x}N$, structural/elastic props. modeling, DEFT 91678
Ni coating charactn., leaky Lamb wave dispersion curves meas. 101550
PZT ceramic, piezoelec./dielec./elastic props., stress/DC bias effect 104327
PZT, piezoelec. ceramics, indentation, theory, expt. 104373
PZT-PNN piezoceramics, prep., dielec. props., transducer appl. 104353
$Pb(Sc_{1/2}Ta_{1/2})O_3$ cryst., ferroelec., micro-Brillouin scatt. 127194
$PbTiO_3$, elastic props., spontaneous pol., full-pot. lin. APW method 127189
Si membrane, elastic consts., noncontact laser meas. 125149
SiC substr., eval. for GaN heteroepitaxy 68137
stic deformation
see also bending; elasticity; electrostriction; stress-strain relations
breast tissue, biomech. 3D FEM modelling, MRI data 76421
capacitive micromachined switch, mech. design and optimisation 127103
cardiac deform., regional, estim. of 3D strain from 4D cine-MRI and echocardiography, in-vivo validation 87662
CMP proc., model for mech. wear and abrasive particle adhesion 92072
LWR fuel rod behaviour under RIA conditions, DYN3D calc. 99507
mammograms, X-ray and 3D MRI data, elastic registration 98501
micromachined elastic struct. with electrostatic actuation, bifurcation of equilibria 70348
microstruct., surface tension self-assembly, starting torque meas. 81624
piezoelec. ceramic force sens., static charact. *(Japanese)* 97190
piezoelec./ferroelec. materials, fracture, deform., review 116152
poly(vinyl alcohol)-poly(acrylic acid) gels, constitutive response, elastic deform., acidic/basic environ. 125114
polysilicon microcantilever beams, mech. props., nanoindentation *(Chinese)* 81565
rigid sphere and elastic layer bonded to rigid substr., contact modelling 78627
strain depth profiling, micro-Raman meas. 97848
surface mount LSI package, viscoelastic warpage anal. 78674
Al dual-damascene interconnect via electromigration lifetime, soft low-k organic SOG ILDs 92117
Al(Ga)N, hexagonal/cubic heterostruct., strain relax., plasma assisted MBE 79257
ArF/SOR resist patterns, adhesion/cohesion anal. with AFM microtip 103637
Si single-atom reversible recording using scanning tunnelling microscope 126590
α-SiC aligned nanorods on β-SiC particles, arc-discharge prep. 79412
lastic hysteresis
Sn-Pb solder alloy, fatigue damage accumulation model 115115
lastic limit
nucl. steam generators, tubesheets, FEM 112236
lastic moduli
see also Poisson ratio; shear modulus; Young's modulus
BGA/CSP connection durability during thermal shock, finite element modeling 100598
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
elastomeric polymer dielec., strain response, electroactive polymer actuators 127215
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
graft elastomers, electrostrictive ,dielec./mech./electromech. props., XRD, DSC, appls. 127216
hard disk coatings, charactn. of nano-wear mechanisms 68476
Li-ion batts., nanocomposite based electrolytes 123762
mag. storage, layered materials, continuous stiffness meas. 92849
mag. tapes, dyn. mech. charactn., nanoindentation methods 114562
multilayer backplane board material charactn. using acoustic wave technol. 113591
multilevel interconnection with intermetal dielec. air gaps, reliab. studies 126430
no-flow underfill encapsulant develop. formulation, epoxy resin combinations 67580
para-aramide fibres, struct. ordering, props. control 68437
perfluoropolyether lubricant, rheological props. 116445
poly(vinylidene-fluoride hexafluoropropylene) copolymer, electrostrictive response 127207
polysilicon microfabricated thin films, mech. props./reliab., size effect 81571
elastic moduli continued
porous/nonporous fluoropolymer films, thermally stable dyn. piezoelec. 116161
PSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
PVDF-trifluoroethylene/graft elastomer blends, ferroelec./piezoelec. props. 127212
single-pass reflow encapsulant for flip chip appl., develop. 67568
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
surface mount LSI package, viscoelastic warpage anal. 78674
syst.-on-package, substr. materials 113683
wafer-level packaging, photosensitive thick film, stress compensation layer 113500
Al matrix-C fibre multilayer composites fabr. and charactn. 114452
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
$BaSrTiO_3$ thin films by PLD, microstruct./props., O_2 partial press. 90466
a-C/diamond MEMS technol. 81563
Cu interconnects, electromigration, confine. materials mech. props. effects 103459
Cu/Nb_3Sn supercond. wires, RT tensile testing methods 127414
p-CuSCN semicond. in polymer channels, electrodeposition 125023
GeSbTe films, phase-change recording media, mech. props. 82033
H-silsesquioxane low-k ILD thin films, H_2-N_2 ambient curing study 92155
$LiNbO_3$/Pt/Ti/Au/Au integrated opt. waveguide modulator, mech. testing 82177
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
NdFeB, elastic modulus, intrinsic coercivity 104494
Si-C-N films deposited by microwave plasma CVD on Si with buffer layers, characts. 114332
SiC films, single-source CVD, micromechanical props. 90370
SiN_x dual ion beam deposited H-free films, mech. and etching props. 127098
SiO_2, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
SiO_2-filled epoxy molding cpds., thermal stress anal. 114453
no-flow underfill materials for eutectic/Pb-free solders, high melting temp. 67586
elastic moduli measurement
anisotropic plate, rapid dispersion curve mapping, elastic prop. estim. 122742
arterial wall cross-sect. elasticity, intravascular ultrasonography 122002
arterial wall regional elasticity, thickness change meas. during entire heartbeat 110821
arteries, elastic modulus/motion estim. using intravascular US *(Chinese)* 122033
ceramics, high-temp. Young's modulus meas., laser US 68489
composite mater. elastic moduli, Lamb wave vel., contactless method 114489
cryogel elasticity props. for calib. IVUS elasticity images 110819
epoxy-bonded layered struct., narrowband laser US NDE 114515
high-temp. elastic prop. & internal temp. distrib. meas., laser US 68489
leaky Lamb wave dispersion curves meas., coating charactn. appl. 101550
micro-beam, deflection/Young's modulus, opt. interferometry meas. 110006
micro-machined materials, Young's modulus meas. *(Chinese)* 97849
microcomponents material props. meas. *(German)* 86988
microcomponents mech. props. meas. by digital holography *(German)* 83025
polysilicon microcantilever beam bending, nanoindentation, Young's modulus *(Chinese)* 81569
portable soft tissue indentor, accuracy & reliab. testing 87320
resist. spot welding of metals, elastic props., US NDE 114510
tendon elastic prop. meas., US elastography 122001
thin-film elastic prop., laser-US method, SAW dispersion 101556
time-resolved acoustic microscopy, elastic prop. meas., inverse algm. 114496
tissue elasticity imaging, exploiting strain-hardening to increase contrast 110822
Al MEMS films, Young's modulus, yield strength, microcantilever beams *(Korean)* 114555
Ni LIGA cantilevered microposts, mech. props. eval. and failure anal. 116051
Ni coating charactn., leaky Lamb wave dispersion curves meas. 101550
Si MEMS elements testing, grating & holographic interferometry 70335
Si micromachined cantilever, Young's modulus meas. method *(Chinese)* 127100
SiN compressive thin film, mech. props., ring test struct. 104214
Si_3N_4 thin films, microbridge testing, deform., CVD 132183
TiN thin-film, elastic prop., laser-US method, SAW dispersion 101556
breast cancer assess., constrained modulus reconstruction tech. 132653
elastic waves
see also acoustic waves; Love waves; magnetoelastic waves; Rayleigh waves; seismic waves
acoustic-opt. device, transduction efficiency, binding layers effect 116862
BE iter.-solver-based substructuring algm. for 3D time-harmonic problems in elastodynamics 114166
comb transducers, periodic crack-model, efficiency/optimisation 88207
FDTD formulation for anal. of elastic wave fields in cylindrical coord. *(English)* 101143
ferroelec./polymer composites, embedded sens., actuators, composite struct. health monitoring 101528
near-surface buried struct. imaging with high-resoln. surface-wave group-vel. tomography 94683
opt. fiber segment, long. elastic wave speed and atten. meas. 127713
polymer extrusion/cure monitoring using clad polymer buffer rods 99091
slab waveguide subjected to in-plane elastic wave, EM wave mode transit. 83494
soft tissues, ultrasound-based noninvasive shear elasticity probe 110814
steel surface laser ablating, flexural wave generation 72139
time-resolved 2D pulsed elastography, LF shear wave beam forming 110815
underground imaging, shear-horiz. waves, deconvolution method 99097
GaN-on-sapphire, guided elastic waves, SAW resonators 104329
elasticity
for crack problems in elasticity see "crack-edge stress field analysis"
see also elastic constants; elastic moduli; elastoplasticity; ferroelasticity; photoelasticity
2D elastic BEM, regularized algms. for calc. of values on and near boundaries 114190
3D laminated plate finite element with high-order zig-zag sublaminate approxs. 79147
aeroelasticity, fluid-solid interacts. 92506
air-water interface, vortex pair impact, thermal signature 132228
aortic valve-sparing, finite-element anal., graft shape/stiffness influence 76597
aortic wave vel., rapid meas., in vivo eval. 98434
arterial wall cross-sect. elasticity, intravascular ultrasonography 122002
arterial wall thickness meas., US beam focal posn. optimisation 98300
arteries, elastic modulus/motion estim. using intravascular US *(Chinese)* 122033
cast Fe, porous, bonded diamond grinding wheels for flat-surface nanomachining 103714
deep venous thrombosis, ultrasound elasticity imaging 110812

elasticity continued
deterioration anal. of materials and finite elements 79134
elastograms, simulated, class. based on texture features 110825
electrostatic MEMS, lin., nonlin. and mixed-regime anal. 104192
error estim. using hypersingular integrals in BEM for lin. elasticity 101065
flexible and elastically supported struct. subj. to turbulent boundary layer flow excitation 114159
flight vehicle control, aeroservoelasticity, (non)lin. anal. 122512
fracture movement monitoring syst., fracture healing assess. aid 110529
generalized BEM for solids exhibiting nonhomogeneities 79136
Green's fn. of thin circ. plate with elastically supported edge 114067
Greens fns. for boundary element anal. of anisotropic bimaterials 68088
high-loaded wheel-rail contacts, frictional contact, speed depend. variability *(German)* 100268
hybrid interior error estimator for localized h-adaptive FEA 79126
incompressible finite element formulations convergence, patch test and inf-sup condition 79127
iter. coupling of boundary element and FEM in elastostatics 114164
large deployable space telescopes, microdynamic issues 82266
layered elastic materials, method of fund. solns. 114191
lin. elastic eqns. in unbounded domain, error estim. for finite element approx. 114184
meshless hypersingular boundary node method for 3D pot. theory and lin. elasticity problems 114149
microelectronic packaging thermal mgt., composites/materials develop. 67607
mixed mode I, II and III anal. of multiple cracks in plane anisotropic solids by BEM 68087
MR elastography, 3D subzone-based reconstruction algm. 87617
MR elastography, complex-valued stiffness reconstruction, differential eqn. alg. inversion 122110
multiscale FEM for subdivided periodic elastic struct. of composite materials 79154
nonsingular symmetric boundary element formulation for elastodynamics 114189
phase aberration effects in elastography 98288
piezoceramic material tensors ident. from elec. imped., iter. reconstr. 104328
piezoelec. material-embedded struct., crack ident. *(Chinese)* 90604
piezoelec. plates & shells, semi-anal. charactn., piecewise discretis. 125130
plane anisotropic elastic media with crack surface tractions, FE calc. of contour integrals 114158
polycryst. solids, stress-driven mass transport, lattice-based micromechanical continuum formulation 69940
preconditioned conjug. gradient method for elasticity, displacement decomp. and parallelization 124746
regular BEM for thermoelasticity/elasticity with body force 79114
regularized spectral multipole BEM for plane elasticity 68089
shape design for two- and 3D contact problems using evol. method 124737
shape design sensitivity anal. in elasticity using BEM 114192
shells,thin-wall elastic, precession vibr., aircraft engine appls. 122537
solving elasticity systs. by PCG methods 101130
sonoelastography, strain imaging, multi-resoln. algm. 122000
sonoelastography images, modal artifacts reduction 121999
supercond. rotor, rot. in mag. field, dyn., elasticity effects 116515
superconvergent method for approximating bending moment of elastic beams with hysteresis damping 79073
uniformly loaded rect. plate bending anal. with variable width corner supports 79143
Al thin interconnects, local strain meas., CBED, TEM 126437
C nanotubes, types, props. and appls. 114487
GaAs/Ge MQW, epitaxial matching, defects 80862
Ni MEMS material microstruct./elastic property modeling 104175
PZT, high-power reson. meas., elastic nonlin. effects 92652
a-Si:H hot-wire or PECVD films, elastic props. anal. 126085
SiC substr., eval. for GaN heteroepitaxy 68137
$YBa_2Cu_3O_{7-\delta}$ mag. bearings, centrifuge appls. 81995

elasto-optical effects *see photoelasticity; piezo-optical effects*

elastomers
see also rubber
automotive vehicle engine mounting systs., survey 78311
CSP reliab., elastomer thermo-mech. behavior effects 124384
electroactive polymers, conf., Boston, MA, USA (Nov.-Dec. 1999) 100427
FLC elastomers as piezoelec. devices 127219
fullerenol doped polyurethane elastomer actuators 104449
graft elastomers, electrostrictive ,dielec./mech./electromech. props., XRD, DSC, appls. 127216
large-size polymer resistors, characts. instabil. investigs. 69260
mag. particle embedded PDMS, micromachined mag. membrane micropump 89023
micropatterned solid-supported membranes, capillary micromolding 69982
MV cable, cold applied elastomeric termination systs., ZnO matrix 133737
particle-in-elastomer interconnection syst., reliab. 115110
PDMS elastomer, microfluidic network, surface patterning 116091
polymer resistors, charact. instabil. investig. *(Russian)* 69259
PVDF-trifluoroethylene/graft elastomer blends, ferroelec./piezoelec. props. 127212
QC by NMR-MOUSE, (mobile universal surface explorer) 90578
rigid sphere and elastic layer bonded to rigid substr., contact modelling 78627
silicone elastomer, 3D microfluidic interconnection 92513
silicone elastomer insulating surfaces, hydrophobic charact. *(German)* 104408

elastoplasticity
computer assisted mech. and engng. sci., conf., Sintra, Portugal (Sept. 1999) 90186
FIRE, magnet syst. structural anals. 72201

elastostatics *see elasticity*

electrets
see also dielectric devices; electrostatics
cellular polymer electret films, corona charging, enhanced piezoelec., void gas effects anal. 104398
Electrostatics 2001, conf., Koscielisko-Zakopane, Poland (June 2001) 78467
filters, polypropylene/PTFE materials, charging charact. 81645
materials, develop. 81711
polymer electrets, electromech. reponse, direct/inverse transducer consts. 127217
polymer electrets, mol. procs. 79460
polypropylene fabrics, electret props., HV corona 81646
porous/nonporous fluoropolymer films, thermally stable dyn. piezoelec. 116161
sens. and actuator appls., aging, reciprocity, act. sound control 111539
SiO_2 film electret, charge storage stabil. 81639

electric actuators
see also intelligent actuators; microactuators; micromechanical devices; pie zoelectric actuators
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 1332
crane mechatronic syst. dyn. behavior investig. 89493
DC glass shape rotor actuator, PM excitation 99700
DC lin. actuator fast end-of-travel detect. 123692
double spiral-space element electromechanical transducer, robot appls. *(Russia* 89015
dual-mode ultraprecision high-speed positioning syst. develop. *(Japane* 134317
dual-stage actuator disk drives, improved servo perform., track follow, tra seek, and settle 116462
E-Racer, joystick controlled go-kart 111175
electret film sens. and actuator appls., aging, reciprocity, act. sound cont 111539
electroactive polymer-based artificial muscle nanotechnology 98724
EM actuator, correcting cct. design, attraction force increase 89013
EM planar actuator, forces prod. investig. 123691
flexible manipulator sliding mode posn./vibr. fuzzy controller 134319
flight servos, intell., high-perform., neural net-based control, advanced mech tronic systs. design 122538
gun/turret syst., DC motor drive, fault diagnosis, fault tolerant control 13341
high speed trains, act. controlled pantograph 100294
HTSC bulk secondary lin. actuator studies 78098
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
IM direct torque/flux sliding mode control approach 123444
IM models comparison, nonlin. field oriented control appl. 123427
impedance std. calib., rem. controlled coaxial switch, pneumatic actuator 1094
indust. automation undergraduate lab. modular µP kit 78517
insulation displacement contact technol., sens./actuator syst. implications 804
lin. actuator design, anal., control 123507
lin. actuator design for small movements, 3D simul. 123506
lin. voice coil actuator params. 123515
low-cost high-force inchworm actuator develop. 134321
mag. disk drives, high-bandwidth servo control designs 92855
mag. shape memory materials for electromechanical actuator devices 89016
microcontact printing for plastic electronics/fiber optics appls. 102876
moving coil lin. oscillatory actuator, dyn. charact. *(Korean)* 134080
moving coil-type lin. oscillatory actuator, multi-pole PM arrangement *(Korea* 123690
moving coil-type lin. oscillatory actuator perform. improvement *(Korea* 77892
pick-up actuator design for min. seek time 109388
PM excited servomotors, electromech. transfer fn. of DC 77901
rail vehicle electromechanical act. suspen. actuator, PM sync. machine 1239
rail vehicles electromechanical brake syst. *(German)* 78260
rotary servo actuated by NiTi SMA wire, robust posn. regulation 134323
scroll-actuator dyn. anal. using 3D FEM *(Japanese)* 78099
servoactuators, full integrated soln. 123525
small moving magnet lin. actuator, high thrust, FEM *(Japanese)* 112729
spherical EM actuator with PM surface motor, design 99865
subreflector rotary antenna mechanism, rotary actuator 89017
thin lin. oscillatory actuator for celluar phone, coercive force *(Japanese)* 11277
transducer energy coupling/efficiency, power source minimization 97191
tubular lin. DC motor EM cct. synthesis 123502
two-finger variable reluctance gripper, modelling and charactn. 89014
two-finger variable reluctance gripper, posn./force control studies 134320
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
variable reluctance direct drive motor for robotic appls., closed-loop control strat egy 99866
PMN-$PbTiO_3$ patches charactn., plate struct. act. vibr. control 116230

electric admittance
2D chiral radome, arbitrary cross sect., EM scatt. and transm. 94034
adaptive SVC, arc furnaces voltage flicker/phase current imbalance eliminatio 122980
anisotropically conductive adhesive, elec. conductance 78633
asymmetric piezoelec. bimorph, admittance matrix calc. 92690
asymmetrical piezoelec. annular bimorph anal. using impedance/admittance ma rices 99079
band pass wave digital ladder filters, direct design 130072
bidirectional antenna, input impedance eval. using probe excited rect. ring 8355
boundary waves, effective permitt. and harmonic admittance 92730
4-t-butyl-CuPc-PODT mol. composite material, gas sens. appl. 97428
circ. polarised cross-aperture-coupled microstrip antenna, cavity model 10589
circ. polarised rect. microstrip antenna anal. 83532
coaxially excited cylindrical antennas, admittance correction factor 72445
corrugated chokes for continuous flow microwave heating systs., modal anal 69258
dendritic adaptation, analog VLSI cct. basis 102482
distrib. syst. harmonic Norton models, network impedance effect 77313
EM simulator for reson. anal. of microwave cylindrical cavity 72434
EM wave diffr. by magnetodielectric cylinder with anisotropic helical surface conductance 83211
EM wave diffr. by magnetodielectric cylinder with surface anisotropic helic conductance 72263
feeder grounding fault protection based on zero seq. admittance *(Chines* 88477
FET transconductance and speed, improvement by using graded channel 10389
Green's dyadic fns. for planar stratified bianisotropic media, unbounded/scat field representations 105712
homog. elec. long line excited by AM sig. with suppressed carrier, secondar params. 72403
IC interconnects with thick conductors, capacitance/conductance calcs. 12651
IM, HF modeling, conducted EMI, overvoltage 88747
inhomog. media shields and filters anal. 105798
Ku band, multi-layered meander line polarizer 72701
large-scale mag. coupling modelling for on-chip interconnect 126979
lin. cct. anal., root no. tech. modifs. 68523
matrices passivity enforcement, paper discussion/closure 124648
MESFETs, charactn. of IMD behavior in lin. region 80266
microstrip line on-chip interconnects on lossy Si, freq.-depend. param. 10249
MM wave IMPATT diodes, large-sig. computer simul. 70018
MOST, charge-sheet model, compact nonquasistatic extension 103823
multiport current conveyor ccts., nodal anal. 125594
n-channel enhancement mode power MOSFET, C-V/G-V charact., high temp anneal effects 103832
nanocrystals acting as Coulomb islands, Ga^+ FIB proc. 92418
one-ports impedance/two-ports S-params. meas. 86907

tric admittance continued
open-ended coaxial waveguide radiating into chiral half-space, refl. coeffs. 94111
open-ended coaxial-line probe, dimens. anal., Buckingham PI-theorem 109947
parallel double-slotted waveguide array antennas, conductance *(Chinese)* 105939
phenylene ethynylene oligomers, conductance switching 91496
phthalocyanine thin films, crosswise-substituted, halogen sens. 97531
phthalocyanine-fullerene PV devices, elec. charactn. 123826
piezoelec. stack resonator, complex mater. consts., imped. reson. 104435
planar reconfig. double stub tuner using MEMS switches 80307
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
polyaromatic hydrocarbon stacks, conductance calcs., Landauer formula 115209
polymer-fullerene PV cells, spectrosc. 100212
power flow soln. by complex admittance matrix method 122940
power network anal., connected or split network determ. 99179
PPV-based LED, charge transport props. 117016
predistorted refl.-mode hybrid prototype networks, symm. and asymmetrical characts. 68900
printed dipole and slot antennas, input impedance and efficiency 94136
RTD, displacement currents and real part of high-freq. cond. 70006
SAWs in periodic electrode arrays, harmonic admitt. and dispersion eqns., theorem 92724
seq. form first- and second-order symbolic sensitivities calc. via transimpedance method 90635
slot radiators on wedge, mutual admittance 83741
small geom. MOSFET for microwave appls., HF Y-params. anal. 69161
Smith chart solns. 94077
SOI LDMOSFETs, lin. region model, back-gate/series resist. effects 115931
SQW struct., surface pot., admittance spectra *(Chinese)* 115384
transformerless common-ground RLC networks, nonminimal realisation theorem 90650
universal immittance fn. simulators using current conveyors 91028
wall-stabilized arcs, near current zero conductances decaying procs. *(Japanese)* 123666
waveguide filter, admittance method, adjacence graph and recursive thresholding 125674
waveguide/horn radiators, matching/directional charact. anal. 117816
AlGaN-GaN MODFET, I-V characts. and output conductance, 2D anal. model 70186
Au/$Bi_2Sr_2CaCu_2O_{8+x}$ jns., c-axis transport, Andreev reflect. 127480
Au/benzene-1, 4-dithiolate/Au mol. devices, first principles transport calcs. 102842
a-C:H films and assoc. heterostruct., artificial pot. relief 103121
a-C/n-Si sputtered heterojunctions, charge carrier response time 126113
GaAs opt. biased MESFET, anal. model, unilateral power gain 115963
GaAs/$Al_{0.33}Ga_{0.67}As$ QD device, Coulomb charging 126182
GaAs/$Al_xGa_{1-x}As$ 1D channel, AFM fab., ballistic transport 69665
GaAs/AlGaAs electron Y-branch switch, switching effects between drains 70214
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaN interfaces, Fermi level pinning, elec. admittance/DLTS correl. 124864
p-GaN:Mg MOVPE layers, deep trap anal., elec. cond., TSC and thermal admittance spectra meas. 69546
GaN(:Mg) layers, elec. props., expt./theoretical investigs. 103006
ITO/conjug. polymer-fullerene/Al PV cells, admittance and ESR spectra 127944
$La_3Ga_5SiO_{14}$/Al(W)(Ta) SAW filter, electrode effect on unidirectionality 127268
Pt/PZT/p-Si struct., memory props. 104476
Si MNOS struct., disordered, saddle point cond. at high mag. field 80948
Si wafer nonequilibrium carrier recomb. lifetime by noncontact microwave tech. 125990
Si/O nine period superlattice, transport characts., quantum device appl. 91808
6H-SiC MOSFET, SiO_2-SiC interface deep traps, nonequilibrium field effect 70083
SiC Schottky jn. admittance, carrier freeze-out effects 69718
6H-SiC buried-gate n-channel JFETs, deep trap charactn. 103918
SiC:B,C, 4H polytype, B acceptors, seq. implant. effects 80995
SnO_2 sol-gel film microsens., CO response, moisture/electrode effects 97548
TiO_2 nanosized gas sens. thick films, prep./charactn. 97498

ctric admittance measurement
immittance sens. params., computing instrumentation 109930
LF electronic gate detect., cell/bacteria/colloid counting/sizing 121867
mosaic elec. props., human skin, line patterns, cross-correl. study 76296
otosclerotic ears, elec. bone-cond. audiometry, Carhart notch effect 87359
power transm. line, header point of no-loaded line *(Chinese)* 77378
preterm infants, skin cond. changes anal., software program develop. 121914
QW IR photodetector-LED integrat., space charge spectrosc. 86554
rail track as a lossy transm. line, params. meas. 89380
rail track as lossy transm. line, params. meas. simul. 89381
skin conductance meas., 3-electrode method, op amp param. influence 98203
thin-layer mater. dielec. charactn., open-ended coaxial probe dimens. 121149
transm. line power freq. params. meas. syst. *(Chinese)* 77632
CdTe thin-film solar cells, freq.-depend. complex admittance meas. 100186

ctric arc furnaces *see arc furnaces*

ctric arc welding *see arc welding*

ctric arcs *see arcs (electric)*

ctric birefringence *see electro-optical effects*

ctric breakdown
see also avalanche breakdown; discharges (electric); semiconductor device breakdown; trees (electrical); vacuum breakdown; Zener effect
3D quantum transport by supercell method, num. accel. and appls. 126914
500 kV DC extruded dielec. power cable *(Japanese)* 88442
500 kV XLPE insulated DC submarine power cable develop. *(Japanese)* 88446
air, streamer propag. and breakdown, surface profile effect 127152
air insulation strength for DC voltages, air gap bridged by flames 99421
ASIC implant charging, photoresist bake, electron flood gun effect 115582
BG dielec. charact. MIL PRF 55681 capacitors, insulation resist. degrad. 115078
biaxially oriented polypropylene film in AC high field region near breakdown, charging current *(Japanese)* 104409
ceramic capacitors, voltage withstanding rating determ. 80444
CMOS RF cct., soft breakdown and hot carrier effect 104136
CMOS SoC, 100 nm, multi-gate dielec. technol. using H pre-treatment 127044
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
compensated semicond., impurity-assisted elec. breakdown 116135
composite dielec. elec. field calc. using curved triangular surface charge method 70376
cyclohexane, streamer inception, sensitive charge meas. tech. 116138

electric breakdown continued
diamond, CVD films for components and emitters 114329
dielec., ultrafast laser materials proc., opt. breakdown modelling 83057
dielec. liqs., aq. drops deform./break-up in elec. field 81650
direct-tunneling gate CMOS perform./reliab., wafer orient. depend. 127043
DRAM, embedded, dual thickness gate oxid., ion implant. 79867
dual electrode plate MLC capacitor for HV pulse appls. 89031
dual GOI, STI proc. param. effects 81416
EHV XLPE cable joints, semicond. interface dielec. strength, diffusion method *(Japanese)* 99389
embedded decoupling capacitors, HV charact. 115067
engng. carbon nanotubes/nanotube ccts. using elec. breakdown 79471
EVA copolymer film space charge meas. in cryogenic-RT region *(Japanese)* 127249
extra-turn power transformer gaseous insulation design studies *(Korean)* 123545
gas mixture, high press., elec.-discharge plasma-dens. props. 86817
gate oxide, breakdown charact. *(Chinese)* 81653
gate oxide reliab., transistor-limited const. voltage stress test 126946
gate oxides, 6.8/3.5 nm, plasma damage, param. shifts/hot-carrier response/dielec. integrity 69879
gate oxides, very thin, trap generation/breakdown procs. 69761
generator stator windings, ground-fault protection syst. operation 99616
helical magnetocumulative generator operation, wire insulation effects 123275
HV glass/porcelain outdoor insulators contamination, breakdown strength *(German)* 133767
HV insulated wire deterioration research *(Japanese)* 133740
IC reliab., short-time tests, opt. interconnect/transistor failures, stat. models 78723
IC ultra thin oxides, soft breakdown detect., noise-based trigger algm., accurate/robust 81531
inductive heating freq. converter, insulation voltage stresses anal. *(Polish)* 99807
LDPE film, transit space charge distrib. and external cct. current up to breakdown *(Japanese)* 81731
LDPE/polypropylene copolymer blend, elec. breakdown effects 77382
metallic interconnect thin films, elec. failure procs. 126433
methyl silsesquioxane thin films, prep. and dielec. charactn. for IC appls. 116184
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 115077
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 115076
MOS capacitor, HI irrad., radiation soft breakdown, 98-300 K 103192
multi-carrier microwave breakdown in air-filled components of mobile telephone commun. systs. 104266
NMOS capacitors, large area, soft breakdown triggers under const. voltage stress 81527
oil filled transformer breakdown voltage, nonstandard lightning surge waveforms *(Japanese)* 123539
oil-filled transformer insulating papers, thermal degrad. tests *(Japanese)* 80455
PANI electrodeposited corros. protection layer, passivity breakdown, spectrosc. anal. 101519
PANI/polyolefin blends, elec. cond. and morph. 104262
$PbTiO_3$-PMN ferroelec. ceramics/polymer composites, high dielec. const. 125115
PDSOI NMOSFETs, channel hot-carrier-induced gate oxide breakdown anal. *(English)* 126804
polymer insulators, electron traps, mol. modelling 112124
polymer-ceramic nanocomposite, high-k dielec., RF embedded capacitor 115089
pos. point-barrier-plane air gap elec. strength, space charge effects 99422
power MOSFET, current focusing phenom. 81322
power transformer fault diagnosis method, oil dissolved gas anal. *(Chinese)* 77912
power transformer oil static electrification expts./modelling 99723
random wound AC motors, magnet wires, relative impulse strength 123330
rly. traction motors insulation weakness diagnosis *(German)* 113093
S band HPM pulse compression, spontaneous gas breakdown switch *(Chinese)* 102882
semicond. glazed insulator perform. tests under natural pollution 77446
short air and SF_6 gaps breakdown, insulating barriers effect 92614
silica low-k film, methylene group incorporation, CVD, elec. props. 101320
slip ring IM ASD, voltage source DC-link converter, transient behaviour 123892
small oil gaps bridged by pressboard, breakdown under AC, DC and combined AC/DC voltages 99722
SOI power ICs with intell. CMOS control circuitry 81536
SOI RESURF thin film struct., breakdown voltage *(Chinese)* 80954
solid dielec., space charge distrib. meas. 127144
solid insulation, LV equipt., dielec. testing 70432
stator bars, epoxy/mica insulation, multifactors aging, AC params. *(Chinese)* 77810
substation transformer life estim. approach 123561
thin gate oxide breakdown, param. charactn. *(Chinese)* 116137
transformer oil elec. breakdown initiation, stochastic regularities 134140
tubular plasma channel prod. with intense Bessel beams, MHD simul. 105777
ULSI TDDB charact., nitridation effects, oxide thickness depend. 104081
ultrathin gate oxide breakdown stats., phys.-based analytic approach 70385
ultrathin nitrided oxide, low press. N_2O growth, reliab. 103398
ultrathin oxide, wear-out, breakdown occurrence and failure detect. 104256
ultrathin oxide reliab., dielec. breakdown, Weibull distrib. 127147
vac. arc, laser controlled elec. breakdown *(Japanese)* 91523
XLPE cable, insulation/semicond. interface improvement, diffusion method *(Japanese)* 99374
AgW symmetric contacts, arc chamber wall material and arc gap dielec. recovery voltage 123663
AlN MIM struct., dielec. props. 127142
Al_2O_3, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
Al_2O_3-TiO_2, plasma-sprayed coating, elec. insulation behavior *(Korean)* 116189
(Ba,Sr)TiO_3:Zr-substituted thin films for integrated capacitors, elec. props. 91415
$(Ba_xSr_{1-x})Ti_{1+y}O_{3+z}$ magnetron sputter-deposited multilayer capacitors 81667
$BaSrTiO_3$ thin films for HF devices, sputter-growth procs./elec. props. 91236
$BaTiO_3$ ceramic capacitors, NDT by PD method 116228
$BaTiO_3$-based ceramic capacitors, depressed DC breakdown phenom. near Curie temp. 70459
a-C:F films, ICPCVD, struct./dielec. props. 114333
CO_2 short laser pulse generation for IR-laser chem., parametric studies 117391
Co/Al_2O_3/NiFe mag. tunnel jns., two-step rf plasma oxid. prep. 104507
Cu damascene interconnection, SiO_2 dielec. barrier 115704
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu stressed damascene interconnection, dielec. breakdown, EL obs. 81110
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
GaAs, surface passiv., ion bombard. 115635

electric breakdown continued
GaAs:Be films, MBE, defect engng., elec. props. 126032
GaN MESFETs and bulk materials, RF breakdown 103922
a-$Ge_{46}S_{54}$ films, thermoelectrical props. and memory switch phenom. 80756
HfO_2 dielec. thin films, two-step RF sputter deposition and charactn. 90254
$HfO_2/HfSiO_4/Si$ struct., $HfSiO_4$ form. react. 103193
InAs/GaAs/AlAs QDs/quantum wires, interface roughness, tunnelling 91850
InGaAsP MQW LD, SI InP:Fe, buried layer *(Chinese)* 82681
$LiNbO_3$ MFS memory capacitor, low temp. growth 116227
MgO, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
N_2 high-press. insulation, lightning impulse breakdown charact. *(Japanese)* 92618
N_2, liq., nanosecond breakdown 81649
N_2-Ne(Ar) mixtures, capacitively coupled RF discharges, breakdown 92612
NH_3-O_2 mixtures, laser-induced breakdown/ignition, NH planar LIF 132214
PZT thin films, ferroelec. props., grain boundary effects, nucleation 104252
PZT thin films, sol-gel derived, low-temp. crystn. 125017
$Pb_{1-x}La_xTiO_3$ La-graded heterostruct. films, sol-gel prep. and elec. charactn. 104401
$Pb_xSr_{1-x}TiO_3$ ceramics, dielec. energy storage 78200
$Pt/BaSrTiO_3/Pt$ MIM capacitors, dielec. const., coplanar struct. 102778
SF_6 GIS, metallic particle motion, breakdown, XLPE underground cable testing *(Japanese)* 88990
SF_6, breakdown under fast oscillating impulse voltage, photoelec. detect., GIS *(Chinese)* 99838
SF_6 particle-contaminated GIS/GITL systs. with dielec. coated electrodes 112681
SF_6 self-extinguishing cct. breaker, small current interruption 134258
SF_6-blown HV GCB, small current breaking perform. *(Korean)* 134273
Si, epitaxial growth, doping region, trench filling 126331
poly-Si gate oxide reliab. post annealing degrad. and suppression *(Chinese)* 126244
Si substr., void defects, dielec. breakdown distrib. 104254
Si transient voltage suppressors, absorpt. energy capability 112171
Si, ultra-thin gate oxide, AC anodization and RTA 126348
Si wafer, surface roughening due to Cu contamination prior to ultra-thin gate oxid. 126338
Si:B MOS-struct., through-gate implant., induced damage 115508
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si/SiO_2, GOI degrad., Cu contamination effect 91912
Si/SiO_2 interface, improvement of reliab. for N_2O-nitrided LPCVD oxide *(Chinese)* 103210
Si/SiO_2 systs., conf., Boston, MA, USA (Nov.-Dec. 1999) 100429
$Si/TiSi_2/Ti$ syst., sputtering prep., preamorphization, salicide form. 103154
Si(113) wafers, oxid., alternative IC material to Si(001) 69908
SiC, 4H, high dens. plasma via hole etching 103313
a-SiC:H low-k diffusion barrier, Cu interconnect 115705
$Si_{0.91}Ge_{0.09}$ strained layers, gate dielec. growth, RTP/split-N_2O tech. 92031
SiN_x films, ICPECVD, spectrosc. ellipsometry, etch behavior 124927
SiN_x, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiN_x:H gate dielec. low-temp. PECVD and charactn. 90357
a-SiN/SiO_2 thin stacked dielec. syst., trap-controlled SCLC mechanism 92674
Si_3N_4-SiO_2 dielec. film, photo-enhanced NDR/photo-accelerated TDDB 71506
SiO_2 direct-write ion beam induced CVD for IC post-proc. modif./repair 115978
SiO_2 film, gate oxide degrad., stress polarity effect 104255
SiO_2 gate oxide growth on plasma damaged Si surfaces, quality degrad. 103430
SiO_2, gate oxide reliab., interface roughness 104258
SiO_2, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
SiO_2 stressed ultrathin films, nm-scale elec. charactn., cond. AFM 80939
SiO_2 thin film, elec. breakdown, conductive AFM 104257
SiO_2 ultra-thin films, switching behaviour of post-breakdown cond. 115459
SiO_2, ultrathin, defect generation and breakdown induced by substr. hot-hole injection 103213
SiO_2 ultrathin films, leakage curr. under prebreakdown, MOSFET appl. 70162
SiO_2 ultrathin films, post-breakdown I-V charact., multiple snapbacks modeling 92610
SiO_2 ultrathin gate oxide films, elec. cond., nanoscale conducting AFM study 80959
SiO_2 ultrathin gate oxides, intrinsic dielec. breakdown, thermal damage 103209
SiO_2 ultrathin oxides, failure anal., stored energy/carrier energy 127148
SiO_x ultrathin film, low temp. form. from O radicals in Kr/O_2 plasma 103323
$SrTiO_3$ ceramics, sintering, HV capacitor appls. 102770
$SrTiO_3/Si$, RF magnetron sputtering, elec. props. 104259
$SrZrO_3$ ceramics, sintering, HV capacitor appls. 102770
Ta capacitor failure modes, fab. technols. 115080
Ta capacitor surge step stress testing, power-on failure mechanism prediction 115072
Ta chip capacitors, breakdown voltage, cct. resist. impact 115069
Ta_2O_5 anodic thin films, defects, DLTS and conductance transient investig. 116134
Ta_2O_5 dielec. reliab., thermal/elec. breakdown under both-bipolar biasing conditions 80434
Ta_2O_5-Si struct., gamma irrad. 91916
TiO_2 rutile capacitor, improving breakdown strength by gelcasting 114435
TiO_2-Y_2O_3-Nb_2O_5 capacitor-varistor ceramics, elec. props. 91423
TiO_2:Y_2O_3:Nb_2O_5 varistor syst., nonlin. elec. behaviour anal. 80743
$W/TiN/Ta_2O_5$ gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
$W/TiN/Ta_2O_5/Si$ syst., Ta_2O_5 gate dielec. degrad. 81647
$W/WN_x/Ta_2O_5$ gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
ZnO:Bi_2O_3,Sb_2O_3,CoO,MnO, nanosized powders, sintering, elec. props. 104263
ZrO_2 deposited directly on Si as alternative gate dielec. material 115464
ZrO_2-based ceramic insulation coatings for HTSC magnets, elec. charactn. 70437

electric cables *see cables (electric)*

electric capacity *see capacitance*

electric cells *see cells (electric)*

electric charge
see also charge injection; space charge
aerosol particles, unipolar charging in alternating elec. field 83137
Ampere's mag. circuital law, simple rigorous two-step proof 90626
antistatic floors electrostatic charactn. using equiv. cct. model 83133
bipolar charge aerosol classifier instrum. syst. 128663
charged oil metal vessels, lightning protection systs. 128665
composite dielec. elec. field calc. using curved triangular surface charge method 70376

electric charge continued
conducting-particle chains, dipole images, image charges 83101
contact charge accumulation, two-step model develop. 83138
contaminated water treatment using dielec. barrier discharge *(Korean)* 7836
corona plume, HV overhead lines, aerosols charging 111249
dielec. barrier discharge, surface charge study *(English)* 116136
diesel oil injectors, jet charging, internal electrification 83125
digital copiers/printers using electrostatic particles control 83164
electrophotographic toners, charge stabilizers 83165
electrostatic measuring techs. develop. 83126
electrostatic powder coating proc. back corona, relative humidity effects 1250
electrostatic powder coatings adhesion meas. 83127
electrostatic precipitator microsecond pulsed power supply 134231
electrostatic procs., corona wire electrode, elec. field 83130
electrostatically charged liqs., ignition hazards theory 83112
electrostatics computing, discrete charges, Monte Carlo method 93966
embedded decoupling capacitors, HV charact. 115067
ESD conditions calc. between charged body/floating pot. conductor 72175
ESD from charged cylindrical bodies-to-grounded/floating surfaces 117616
ESD protective materials perform. at low relative humidity 83121
floating-body charge monitor cct. for partially depleted SOI CMOS 127035
frictional electrification between polymer films/LB layers 83111
grounded electrode discharge in charged particle cloud 116120
impregnated paper insulation, charge evol., pulsed electroacoustic metho 112098
insulating liqs. flow electrification hazards 83123
insulator surfaces triboelectric charging review 88469
intermediate bulk containers, electrostatics requirement for explosive atmo 83116
inversion charge transfer based charge pumping device with pot. barrier 7022
layered PTFE interfacial charges meas. using step electroacoustic tech. 83128
LV distrib. networks, lightning surge protective devices 133599
metal bar probes charging by flux of particles 83110
metal/polymer contact charge transfer, contact pot. 83109
methane-air mixtures ignition from multiple capacitor discharges 83117
microelectronic devices unipolar charge induction modelling 128662
model engine lip seals, tribocharging effects expts. 83113
MOSFET drain/source charge partition under nonquasi-static switching 12675
MOST, inversion charge dens. modeling 103816
multiple dielec. multicond. systs., field computation and capacit. extract. 12866
perp. Hertz dipole, transm. fields through infinite shielding plate *(Japanese)* 128666
plate-type ESP, conducting particle trajectories computation, BEM 83178
polar coord. charge simul. method, GA-based charge arrangement 83132
polyethylene pellets mass flows, electrostatic charges elimination, supersoni injection 83106
polymer powder boxer charger for electrostatic powder coating appls. 12871
polymer powder tribocharging charact., surface props. effects 125084
polymer powders, fluidization, transport procs., triboelectric charging 68378
polypropylene fabrics, electret props., HV corona 81646
power transformer static electrification, pressboard comp. effects 134139
power transformers, oil flow electrification, pressboard charge accumulatio 88802
PTFE plane insulating material surfaces, corona discharges *(German)* 12725
pulsed energized wire-duct ESP, elec. field, charge dens., FEM 128715
SAW and BAW devices, modeling of third-order effects 92721
solid insulators, space-charge distrib. meas. by HV high-speed pulsed electr acoustic apparatus 109918
spherical particles charging rate in mono-ionised elec. fields 128661
std. sphere gaps sparkover, field utilization factor/elec. fields study *(Japanese)* 81655
stratified liq./vap. medium electrohydrodynamic induction pumping 93967
tall struct. shielding charact. against winter lightning *(Japanese)* 112151
tapered IDTs, elec. charge distrib. eval. 92713
three-body indirect ESD problem expts. 128664
toners, quaternary ammonium charge control additive, heat treatment effec 83167
$BaTiO_3$, displacement charge patterns, domain wall dyn. 104288
InGaP-GaAs HBTs, waveform charactn./modeling of dyn. charge behavio 91245
$KNbO_3$, displacement charge patterns, domain wall dyn. 104288

electric coils *see coils*

electric condensers *see capacitors*

electric conductance *see electric admittance*

electric conductance measurement *see electric admittance measurement*

electric conductors *see conductors (electric)*

electric conduits
see also cable sheathing; power cables
ACEMOLE for no-dig operations with conduits installation 131041
cable-in-conduit multi-strand supercond. simul. 77414
cable-in-conduit supercond. cables, strand joints/copper location impact 77390
duct-cable pulling forces calc., bending effects 112123
Maglifter launch assist supercond. EM catapult 76789
NbTi cable-in-conduit supercond. magnets, ramp-rate limitation expts. 71009
noncontacting cover cable conduits, Schwarz-Christoffel anal. 80468
SST-1 project NbTi-Cu cable-in-conduit superconducting cables 77397
supercond. magnet CICC, current distrib. modelling 71053
Nb_3Al multistrand supercond. fusion magnets develop. 71026
Nb_3Sn cable-in-conduit superconds. for fusion reactor appls. 77398
Nb_3Sn sub-sized cable-in-conduit supercond. cables for ITER Central Solenoi 71063
Nb_3Sn-Cu CICC, ITER magnet syst., hotspot temp. 127528

electric connectors
see also cable jointing
15 kV enclosed bus assembly, 5 kA, 60 Hz 3-phase continuous current tes 133417
15 pin D connector, transm. link radiation, common current generation 80476
36 kV/2 kA_{rms} HTS cable models for utility demons. 133743
50 GHz-plus connector and termination constr. 69294
AMP Z-pack 2 mm HM connectors, Quiet Mate contacts, nanosec. discontinuity hot-swap appl. 115112
behaviour anal. in terms of EMC 80475
BEPC DC separator HV connector, power, shunt impedance *(Chinese)* 10176
BGA backplane connector for high speed differential sigs. 115111
broadband RF amps., CPW interconnects, on-board probing, calib. tech. 91335
cable coupling atten. standardisation, future develop. 83361
cable EM shielding, primary/secondary params. 83359
CAT-5E modular jack for high-speed differential sig. interconnection, crosstalk noise reduct. 91445

tric connectors continued
component placement, 3D vision technol. appls. 115140
electronics DFT, concepts/methods/implement. techs. 125887
flexible tinned copper connectors, overheating, power stations, outgoing busbars 123036
high speed interconnection links, elec. modeling, meas. based 115113
HTS cables and terminations develop. and testing 77419
HV cable conductor temps. determ. 133725
IC design, power connector technol., low loop inductance 81448
IC testing, over rejection detect. 104007
indust. high temp. supercond. power cable, develop., testing 112104
insulated power cable installation, termination, testing, IEEE Standard 99371
insulation displacement contact technol., sens./actuator syst. implications 80480
integrated automotive components wiring/interconnecting for intell. vehicles 134594
intermittency phenom. in elec. connectors 115108
megaampere current elec. cct., conductors and contact connections 79643
micro-BGA/chip/wafer test/burn-in, high-dens. sockets 124338
moulded PBGA socket, solder joint reliab., assembly quality 113686
multi-pin connectors, circ. and rect., indust. syst. cable interconnections *(German)* 80477
multipole circ. elec. connectors for withstanding high accel. *(German)* 125861
MV cable, cold applied elastomeric termination systs., ZnO matrix 133737
narrowband ultra-low VSWR cable assemblies 69291
odd-form component assembly, develop. 115141
particle-in-elastomer interconnection syst., reliab. 115110
pin-in-paste odd form component assembly proc. 115142
power cable connectors, contact resist., power distrib. 123035
power cable on-line diagnosis, noninvasive UWB PD tech. 112101
power connector selection for syst. perform. optimisation 99385
power film capacitor terminations selection guidelines 102799
PV shingle roof, push-fit elec. connector contact resist. behaviour 112994
quick-assembly elec. connectors, screw type and insulation displacement types *(German)* 91448
ramification of component selection 124303
review of connector technol. *(Italian)* 80478
smart cards, connectors, historical evol. *(Italian)* 80479
surface mounted PC connectors using through-hole reflow to allow reflow soldering *(German)* 80518
SZITs digital ground connection indicator, lin. cct. insulation estim. *(Russian)* 90643
telecom. cable screening effectiveness, standardised EMC meas. procedures 85444
underground XLPE power cable, HF PD meas., capacitive sens. 77387
XLPE cable, composite insulator termination develop. *(Japanese)* 112127
Ag ultrathin single-cryst. nanowire arrays form. in ambient soln. phase 125075
Al-Cu bimetallic cable jns. 99390
Nb_3Sn CICC terminations, contact resist. distrib. 77395
NiTi SMA coils optimized for elec. connectors 115109

ctric control equipment
see also controllers; electric actuators; electric final control devices; electric sensing devices; electrohydraulic control equipment; electropneumatic control equipment; switches; voltage regulators
automotive air conditioner variable displacement compressors, control valve develop. *(Chinese)* 134572
automotive electronic control modules, simul./design validation 113118
brushless refrigerator compressor motors, sensorless sinusoidal control 124123
constr. mach. unstructured obj. attitude/stabil. control 134322
high-speed gearless elevator PM motor drive systs. 113105
household appliances, microsystem technol. 78350
Jiangya project sluice gate automatic control syst., reservoir dispatch, Ethernet, Profibus network *(Chinese)* 77772
lin. PM sync. motor drive control for mfg. automation appls. 89473
orthogonal-core-type var. inductor, third winding, harmonic reduction *(Japanese)* 112575
real-time robot PM sync. servomotor drive control scheme 112730
space vehicle inertial flywheel control syst. using torque servomotor *(Chinese)* 98917
textile indust./web handling, elec. control systs. 123853
ultraprecision XYθ table drive develop. using piezoelec. actuators *(Japanese)* 99864
web/strip proc. line drives, current/torque regulation specs. 124439

ctric current
see also arcs (electric); corona; critical currents; current density; current distribution; current fluctuations; eddy currents; fault currents; leakage currents; short-circuit currents
2D chiral radome, arbitrary cross sect., EM scatt. and transm. 94034
3D conducting struct., stationary phase method for radiation anal. 83506
Ampere's mag. circuital law, simple rigorous two-step proof 90626
asymmetric source/drain extension MOSFET struct. for sub-50 nm gate length CMOS devices 126740
barrel type MOVPE reactor for 6″ epitaxial wafers, device appls. 68259
biaxially oriented polypropylene film in AC high field region near breakdown, charging current *(Japanese)* 104409
biological tissues, impedance computer tomographic diagnostics using elec. current 122148
capacitor ESR reduction trend for portable electronics 115073
circ. polarized conical beam spherical slot array antenna, polariz. charact. 83676
CMOS 6T-SRAM, 130 nm technol., high dens./perform., for SoC appls. 125469
CMOS antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
CMOS regulator, low dropout, 60 μA quiesc. current/250 mA max. 81502
CMOS smart power, controlled trigger/holding voltage, protection struct. design/anal. 81540
complementary pass-transistor logic ccts., fault characterisation 102005
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
DC coil, magnet startup phase, skin effect 128717
dielec. loaded slot antenna, 3D anal., polariz. current model method appl. 72609
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
dipole antenna, transient response using summation approach in tech. 72588
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
elec. short two-conductor transm. line driven by random plane wave field, response probabilistic model 72406
electrode current normalisation techs. during polariz. expts. *(Spanish)* 78120
electron vac. diodes, SCL currents, Lagrangian revision 103727
electronics quality diagnostics using I-V charact. nonlin. 67528
EM field excited rotative two wire transm. line, response anal. 83452

electric current continued
EM fields of thin circ. loop antenna above (un)grounded multi-layered chiral slabs 72535
EM response of line elec. current source excited multiple cylindrically curved thin screens 72261
EM sigs. for deep Earth detect. 121223
EMC, current waveform, detect. through perturbing instants meas. 105779
equiv. edge currents expressions 75177
forward-boundary-integral/parab.-wave-eqn. propag. models comparison 72230
freq. extrapolation for computing antenna-platform radiation problems 105852
fringe integral eqn. for truncated grounded dielec. slab 105711
gate assoc. power transistor, current rating simul. *(Chinese)* 103804
Hermite coupled transm. lines, time-domain anal. 83451
HF EM field coupling to long terminated lines 72373
IC interconnect trees for electromigration reliab. estim. 92174
incremental length diffr. coeffs. for arbitrary cylindrical scatterers 93992
LDMOSFET, 25 kV ESD proof, with turn-on discharge MOSFET 92367
LDPE film, transit space charge distrib. and external cct. current up to breakdown *(Japanese)* 81731
lightning elec. field modelling for different channel-base current models 72172
lossy edge, EM field and elec. current 93951
MacDonald-black and anisotropic flat coating models, EM wave refl. 117668
microstrip antennas, scatt. anal., charact. modes appl. 72660
mixed-sig. PCB partitioning/layout 115126
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismatch charactn. 104125
μP power delivery systs., high-current, sync. DC/DC converters 125561
nMOSFETs, ultra-thin gate oxide, breakdown softening at low inversion layer dens. 81347
NTC thermistors for cct. in-rush current protection, thermoelectrical degrad. 69264
overhead power transm. lines, stat. currents var. 77436
patient RF heating during MRI 133076
PEC large scatt. problems using asymptotic phasefront extraction, efficient MoM 72231
perp. Hertz dipole, transm. fields through infinite shielding plate *(Japanese)* 128666
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole transport layers 105000
polysilicon thermal sprayed coatings, elec. charact. 115287
power VDMOSFETs, γ-irrad., elec. charact., anal. modelling 81306
QWIP current noise suppression at low bias voltages 97268
railgun perform., current dens. distrib., inductance gradient *(Korean)* 117642
return stroke current ident., inverse procedure 72169
reverse-biased pnipn semicond. struct., current pulses internal amplif. modeling 115374
scatt. by doubly periodic gaps/cracks 72252
shielded coil inductance 83152
sing. wire antenna kernel, efficient integral transform tech. 72536
SOI CMOSFETs, 50 nm, ultra shallow jn., by laser annealing/pre-amorphization implant. 126775
solar cell modules/encapsulations, indoor study/ageing tests 134388
split-gate flash EEPROM coupling coeff. meas. method without extra test struct. 102163
SQUIDs for IC defect location/failure anal. appls. 126998
SRAM chips, high standby current due to spurious gate reticle image printing 79901
stack DRAM cell with low parasitic resist. device/poly metal gate technol. for Gbit DRAM 125489
tall tower lightning-return strokes, current and EM fields 105795
tech. materials, impedance computer tomographic diagnostics using elec. current 122148
thick film resistor I-V charact. nonlin., material struct. effects 125841
three-phase squirrel-cage motor, inter-bar rotor current prediction model 134017
time-domain equiv. edge currents for transient scatt. 72232
vert. pMOSFET, enhanced drive current, reduced short-channel/floating body effects 126770
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626
wire fragmentation by high pulsed currents, external ccts. role 91443
wires fragmentation due to pulsed currents 91442
AlCu line wafer level electromigration testing, isothermal/const. current/SWEAT methods 81128
AlGaAs-InGaAs pseudomorphic HEMT fab. by ICP dry etching, device charact. 70210
AlGaInP vis. LEDs, reliab. 93440
AlGaN/GaN HEMTs, study of current collapse producing traps 69137
AlGaN/GaN HFET, large periphery, multigate design 81345
AlGaN/GaN MOS HFET, large periphery, multigate design 81345
AlGaN-GaN HEMTs, degrad. charact. 81394
AlGaN-GaN HEMTs for microwave power appls. 69166
AlGaN-GaN HEMTs, simul. 92416
AlInAs-GaInAs-InP HBTs, low temp./high current lifetests 81241
Au nanoclusters self assembled on Au,SiO_2 surfaces for nanocluster device fab., XPS 103704
Au nanoparticle networks, single electron charging, biopolymer templates 102857
Cu periodic reverse electroplating, waveform shape/freq. optim. 68351
GaAs-AlGaAs n-N heterojunctions, band-gap offset estim. using J-V-T charact. 69647
GaAs-Si heterog. wafer direct surface activated bonding, RT method 69777
p-GaN layers, Ni/Al/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
p-GaN layers, Ni/Ti/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
InAlAs-InGaAs-InP HEMTs from various proc. options, charactn./reliab. 92417
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
InGaN/GaN DHBT fab., MOVPE, ECR plasma etching 81238
InP surface damage, methane-H_2 RIE-induced 92094
$LaCrO_3$:Ca thin film heaters, fab./eval. *(Japanese)* 78336
$LaNiO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$LaSrCoO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$LaSrMnO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
N-MOSFET dominant interface trap generation proc. during hot-carrier stressing 81355
Pd/$Al_{0.11}Ga_{0.89}N$ Schottky diodes, thermal stabil., annealing, XRD, AFM, AES 81204
Si detectors, charge collection model 76063

electric current continued
Si strained layer NMOSFETs for CMOS technol., high perform. 126772
a-Si:H TFTs, LV/HV, modified inverted-staggered struct., wet etch fab. proc. 70134
p-Si/n+-ZnO/n-ZnO/Pd diode struct., forward current suppression by light 70013
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795

electric current control
3-phase 3-level neutral point clamped boost rectifier, input/output feedback lin. control 134175
3-phase 3-wire VSI shunt act. filter, sliding mode control in dq frame 134149
3-phase 3-wire VSI shunt act. harmonic filter, input-state feedback control 134150
3-phase 4-wire inverters, decoupled control, 4×4 transform. matrix 123601
3-phase 4-wired syst., 3-level power inverters, 3D PWM tech. 77966
3-phase act. power filter, vector based control 122985
3-phase current-source act. power filter, current control 133706
3-phase high PF boost rectifier, digital line current shaping 88872
3-phase PWM boost-buck rectifiers, power regenerating capability 134163
3-phase rectifier, AC harmonic elimination, act. filter, PWM current control 134152
3-phase servo motor driver, integrated intell. power module 134452
3-phase STATCOM, current control, harmonic elmination *(Chinese)* 99881
3-phase unipolar IM drive, MRACS current control 134465
3-phase voltage source PWM converters, DC link, single-sens. current control 78006
8/6 SRM drive, optimized waveform control 89339
20 kW GTO NPC inverters, PWM switching pattern control scheme 134187
AC motor ASDs, PWM operation adverse effects elimination 134475
AC motor drive reliab. improvement, four-leg three-phase inverter 89323
AC rly. systs., act. return conductor *(German)* 78250
AC/DC parallel tie-line local control, variable param. equiv. model *(Chinese)* 99255
AC/DC/AC converter with H-bridge cascade five-level PWM inverter 78015
act. filter, fuzzy controlled, optimum duty cycle design 122984
act. filter under harmonic power vars., transient perform. 122988
act. front-end converters, act. power filters, control design 133705
act. mag. bearing control systs., fund. props. anal., transfer fn. approach 92879
act. power filter, adaptive neural network based harmonic current compensation 112076
act. power filter robust current tracking control design 123711
act. power filters, unified const.-freq. integrat. control 77340
act. power harmonic filter, internal model control using reson. model 133715
act. power harmonic filter capacitor, energy storage fuzzy control 89036
act. power harmonic filter using predicted current control 78118
act. UPS using HF ZVS cycloconverters 123607
Alpha Step two-phase hybrid stepping motor with keep-in-step control 123526
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
ASD ride-through syst. using CMV 123935
Athlon(R) proc. input current mode DC-DC controller 112620
automatic current control systs. with PWM-1, pre-chaotic behaviour 123577
automotive integrated PM starter/alternator, flux weakening control algm. 134567
batt. charger PFC preregulators, optimal control scheme 78012
batt. chargers, optimal control, PFC preregulators 112641
bi-directional AC-DC thyristor converter unified control scheme 88822
bi-directional AC/DC converter based on neutral point diode clamped config. 134243
BLDCM optimal torque control, quadratic prog. 99687
boost converter, chaotic operation, stat. anal. *(English)* 112654
brushless PM motor drives, SABER simul. 123899
brushless PM motors, low inductance, multilevel DC link inverter 133931
brushless refrigerator compressor motors, sensorless sinusoidal control 124123
buck converter, sampled-data current-mode-control 77965
cascaded two-switch buck-boost PFC cct., current programmed control 88854
CDMA driver amp., bias control tech. for current reduction 102649
coreless lin. sync. motor, controller design *(Korean)* 112554
corrugated p-base BRT, enhanced max. controllable current charact. *(Korean)* 115874
CPU power supply, valley current-mode control design 114607
current conveyor based PID controller synthesis, optimum param. tolerances 102360
current-source-type act. rectifier, current control, transfer fn. 78008
DC-DC converter, observer-based sensorless current mode control tech. 88964
DC-DC converter using load-current feedforward control, transient response 88986
DC-fed elec. rly. vehicle, PMSM, stabil., regenerative braking *(Japanese)* 123952
distrib. network, single-phase grounding line selection, grounding-current compensation, integrative device *(Chinese)* 133642
distrib. STATCOM, voltage flicker mitigation, direct power control 133670
distrib. systs., unbalance/fault conditions, PWM STATCOMs operation 112038
distributed PV power supply systs. implement. 123261
double half bridge DC/DC converter, peak current mode controller 78037
double stator inverter fed IM ASD, current control perform. optimisation 123907
doubly fed IM, current control, stabil., main mag. saturation effect 123871
dual IM drive, reduced switch count, dual current-regulated PWM VSI 123933
elec. locomotive, SRM parallel drive syst. 124011
elec. scooter BLDCM torque control scheme 123957
embedded PM motors design criteria for sq. current control 112461
EV, axial airgap PM AC motor control 89384
fluid proc. efficiency improvement, AC motor drive converter topol. 134458
fluoresc. lamp ballast crest factor improvement using PFM 134606
fluoresc. lamp electronic ballasts, toggled duty cycle current control 134617
flyback rectifier, high PF operation, line current shaping controller 134224
flywheel fast-response current/torque control strategy 134424
four-switch BLDCM drives, indust. appl. feasibility 89327
fuzzy control of rectifying power supplies 88807
fuzzy-logic current-sensorless feedforward act. rectifier 134160
grid-connected PV, single phase inverter, fuzzy predictive current control 112421
grid-connected voltage source converters, unbalanced conditions transient operation 134223
high power PWM inverter with series act. filter, control strategy 123605
hoisting IM drive syst., cycloconverter based, control 100359

electric current control continued
HVDC link, current regulator controlled, DC side short cct. 99331
IM, sensorless IFOC, current regulators 100258
IM control struct. model with erroneous field orient. 112529
IM digital neural current controller scheme 112528
IM drive, direct torque and vector control comparison 100251
IM drive, optimized excitation current control 134531
IM drive DTC using fuzzy variable switching sector 134502
IM drives, indirect FOC, 1 DOF and 2 DOF controllers design 123947
IM nonlin. control, parallel neural network estimator training 123459
IM sensorless control systs. develop./anal. 123439
IM sensorless torque control syst. 123410
IM sliding mode output feedback speed control *(Italian)* 123399
IM speed drives, sliding mode current control 113048
IM vector control, space-vector modulation tandem inverter 123428
induction heating, dual freq. output quasi-reson. inverter *(English)* 113143
induction heating power supply with PLL, surge anal. 124098
inductive ccts. current phase fuzzy control scheme 101725
inductor-less charge pump PFC electronic ballast, lamp current feedback cont 134621
injection-current-based 3-phase rectifier, hysteresis/PWM control techs. 1341
integrated PF compensator, sliding mode controller 77359
interior PM sync. machine sensorless speed control scheme 113069
interior PM sync. motor drive max. torque to current control 113045
interior PMSM, extended flux-weakening operation, fast response torque cont 123340
interior PMSM drive, Kalman filter based vector control 89354
inverter topologies for IM drive vector control appls. 88988
inverter-fed arc welding machine, mixed I-V control scheme 89472
large IM, soft starting, torque pulsations minimisation 123457
LCL-filter based front-end 3-phase act. rectifier, design/control 134162
LHD, supercond. coils excitation, DC power syst. *(Japanese)* 92907
LHD supercond. coils, H_∞ current control 71040
lin. actuator design for small movements, 3D simul. 123506
line current detect. act. filter, digital deadbeat current control 133707
low-cost matrix converters, two-step commutation policy 78035
mag. bearings, fault-tolerant control, reduced controller outputs 70566
matrix converters, indirect modulation method, output current vector cont 134211
metal bar probes charging by flux of particles 83110
microbatteries, fuzzy logic-based solar charge controller 112657
motor drive current control struct./algms. synthesis 113056
multi-phase buck converter voltage/current control scheme 88847
multi-phase DC/DC buck power converter voltage/current control scher 123650
multi-wave/half-wave spot welding, const. current control *(Chinese)* 89475
multimodule parallel DC-DC PWM converter systs., robust av. current-mo control 134144
multiple three-level NPC inverter systs., circulating current control sche 112652
multiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
multiple-output convertor, ripple current, coupled inductor effect *(Chine* 134238
nine-phase reluctance motor drive, perform. eval. expts. 134476
oil well deparaffination elec. heating installations, params. optimisation 1241
oil wells dewaxing, elec. heating installations optimisation *(Russian)* 10036
parallel dc-to-dc converter with av. current-balancing controllers, static and dy anal. 68566
parallel three-phase PWM buck rectifiers, control/modelling approach 13416
paralleled voltage regulator modules, current-sharing control perform. 88897
pass. repulsive Maglev, concept, expt. demons. 89407
Peltier effect solid state heater cooler, design, eval. 113034
PFP design using boost power convertor *(Chinese)* 133493
PM AC motor drive multivariable PI model ref. current control 134435
PM AC/DC motor drives, DSP-based integral variable struct. control 12394
PM double sided axial field disc motor, EV direct wheel drive 89383
PM lin. sync. motor, dyn. charact., moving mesh tech. *(Korean)* 123516
PM sync. motor fuzzy logic controller modelling 123352
PM sync. motor high-efficiency low-torque ripple control scheme 77853
PMSM drives, adaptive fuzzy logic-based nonlin. robust control 134493
power capacitor current control, automatic tracking compensating syst. *(C nese)* 112753
power converter parallel operation, novel droop method 88917
power convertor current regulation principles 123570
power IGBT switches, flexible dv/dt/di/dt control method 126786
power quality conditioner, unified series-parallel deadbeat control 133703
power syst. current symmetrisation, Steinmetz syst. design study 122899
prog. AC power source, switched current topol. 99754
PWM AC motor drives, full digital sync. frame current regulator 134469
PWM AC/DC converter, predictive-fuzzy control 88970
PWM AC/DC power converter, high-speed source voltage sensorless contr 123615
PWM boost type rectifier, input output harmonic elimination, control meth 123595
PWM rectifier fuzzy logic feedforward current scheme 123617
PWM voltage source rectifier, reduced-size input filter, operation 134165
PWM voltage source rectifiers, predictive instantaneous current control sche 112644
quasi-reson. single-ended invertor for induction surface hardening appls. 780
random hysteresis PWM inverter with robust spectrum shaping 99793
rectifier cct., PFC, DSP based controller design 88829
regenerative three-phase PWM controlled VSC, control method 134215
reson. DC-DC power converters, adaptive fuzzy control algm. 112658
robust variable-freq. flyback batt. chargers, small-sig. modelling 88867
SEIG, current-controlled VSI, voltage control anal. 133993
sensorless BDCM drive, current-mode control, intell. commutation tuning 893
series act. clamped reson. DC-link inverter current control 134188
series-connected IGBT modules, hierarchical controller archit. 90725
servomotor discrete time accel. control loop studies 134100
servomotor drive field orientated current control scheme 123889
shunt VAr compensator capacitor voltage equalisation, closed loop contr 111828
single phase PV syst., transformerless 5-level cascaded inverter, control aspe *(English)* 99597
single-phase 3-level PWM inverter, harmonics alleviation, control 134251
single-phase AC/DC integrated PWM converter, digital control 134213
single-phase IM, hysteresis current controller 112532
single-phase IM inrush current controller design *(Korean)* 123454
single-phase PWM inverter act. filters, current-tracking method 77986

ric current control continued
ingle-phase three-level PWM PFC rectifier, neutral point switch clamped topol. 134252
ingle-phase UPS, power multiprocessing conversion, high efficiency 134220
ingle-phase ZVS PWM rectifier using inductor energy recovery ccts. 134244
ingle-stage PV energy conversion syst. 99599
ingle/two stage PF correction DC/DC converters, unified av. model 88826
ix-phase IM, torque dens. improvement, third harmonic current injection 134471
SMES, inverter-converter bridge energy transfer cct. 78191
pace vehicle inertial flywheel control syst. using torque servomotor *(Chinese)* 98917
pin valve bridge sens. for current meas. & control 109508
SRM ASD, torque anal. by flux linkage curves 113062
SRM drive, high resoln. angle control, encoder 134506
SRM fully-digital PI current controller, vehicle propulsion appls. 133963
SRM traction drive, optimal excitation, five-level inverter 134548
SRM vibrs. reduction using control current angles var. 123357
STATCOM, adaptive passivity PI nested control 133541
subordinate control syst. current/speed regulator design 112456
SVC using five-level PWM inverter 133514
switch-mode DC/DC power supply predictive dead-beat digital control scheme 88821
switched DC-DC power converters, boost cct., for AC generation 88943
telecom. inverter module with digital control for parallel operation 112671
telecomm. buck-type power converter load, input dyn. modelling 108454
telecomm. controlled rectifier, periodic/chaotic responses anal. 108452
telecomm. distributed DC-DC converter, PWM controller IC 96288
three-level rectifiers, PWM method for input-current harmonics control 134173
three-phase act. power filter controller design/implement. 99889
three-phase act. power harmonic filter direct power control scheme 89030
three-phase current-source act. power filter, deadbeat current control 134339
three-phase fuzzy-controlled shunt act. power conditioners 122907
three-phase IM drive syst., fault tolerance improvement 78215
three-phase inverter control software design archit. 88898
three-phase inverter PWM control scheme 112670
three-phase line-interactive UPS syst. implement. 134221
three-phase power act. harmonic filter, vector control transient behavior 123716
three-phase PWM rectifiers, current control stabil. issues 123619
three-phase PWM voltage-source rectifier, predictive instantaneous current control *(Japanese)* 77972
three-phase single-stage step-up/down current rectifier sliding mode control 134167
three-phase space vector PWM boost power converter, digital controller design *(Korean)* 77969
three-phase UPS PWM inverter, digital voltage/current controllers 134232
train mag. fluid-type semi-act. damper perform. improvement *(Japanese)* 113107
turbocompressor PM sync. motor sensorless vector control scheme 133973
unbalanced 3-phase systs., current control 77256
unified forward DC-DC converter, av. model *(Chinese)* 112631
unity PF 3-phase PWM SCR rectifier, induction heating, metal indust. 134647
unity PF PWM rectifier using digital/analog hybrid control *(Chinese)* 134241
unity-PF boost pre-regulator, control tech. 112664
UPS multi-loop control, digital predictive voltage/current regulators 88910
utility interactive PV syst., static inverter, anal. 112422
variable reluctance direct drive motor for robotic appls., closed-loop control strategy 99866
variable speed wind turbine, voltage source AC/DC/AC converter interface 112377
vector-controlled IM drives using random invertor switching 78206
VIENNA rectifier, mains voltage PI input current shaping 88870
VIENNA rectifier, operation under heavily unbalanced mains phase voltages 88871
VSC based HVDC, steady-state model, controller design 112010
VSI, current regulation, zero crossings of compensated current errors 134186
VSI-IM drive, PWM less current control 123402
VSI/CSI modulation, variable band universal flux/charge modulator 134185
web/strip proc. line drives, current/torque regulation specs. 124439
wind micropower induction generators, sensorless power maximization algm. 123252
wind-diesel power systs., fuzzy logic controllers 123257
ZVS AC-DC boost converter, energy recovery ccts. 134228
ZVS/ZCS full bridge DC-DC converter, transformer isolation 123592
Mo-Si-Mo MSM structs., photocurrent, voltage depend. under front-illum. conditions 127943
Nb_3Sn CICC terminations, contact resist. distrib. 77395

ctric current measurement
see also ammeters; galvanometers
3-phase distortion currents detect., adaptive lin. neural network *(Chinese)* 88496
3-phase servo motor driver, integrated intell. power module 134452
12.4 kV HTSC power cable installation/operation 77431
15 kV enclosed bus assembly, 5 kA, 60 Hz 3-phase continuous current test 133417
500-kV combined opt. I-V meas. syst. 75447
1100 kV overhead line, contactless surge meas., closed loops 88461
1100 kV overhead line, surge waveform, contactless meas. *(Japanese)* 112113
AC induction machine online shaft current monitoring/prediction 99666
AC-DC current transfer step-up calib./uncertainty 131797
act. power filters, unified const.-freq. integrat. control 77340
ADSS fiber-optic cable leakage current meas. sens. design 109060
air, pos. streamer discharges, atmos. conditions, three-electrode syst. 104265
arc resist. calc. 102884
arc steel melting furnace, power quality aspects 113167
automotive current meas., historical overview 78320
branch-current-based distrib. state estim. algm. 77322
broad-area vac. gap, field emission sites, aging effect 102880
built-in current sens. devices for micro-IDDQ test of VLSI chips 127008
bulk glass current sens. sensitivity, refl.-induced retardance 121135
bulk glass opt. current sens., geometric shape 120723
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
cct. breaker arcing-generated complex accident anal. *(Chinese)* 123674
CMOS dyn. I_{dd} test, current meas., energy consumption ratio 104096
CMOS SRAMs, dyn. power supply current testing for open defects 79883
combined opt. transformer, current and voltage sens. 123549
contactless meter of DC, aviation appl. 122522
current dens. measuring devices simul./optimisation 86904
current sens. completion detect., dyn. biased current sens. 109504

electric current measurement continued
current transducers, modified operating principle 75510
DC distributed power systs. stabil. margin monitoring approach 88360
DC meas., intell. instrum. 86903
deep submicron cct., DC current generation and meas. 79813
detachable bulk-optic Faraday effect current clamp design, elec. current detect. 86906
digital current transducer, nonHall effect device 120718
digital IC package, RF meas. of current and voltage distribs. 75840
digital opt. elec. meas. syst. for power syst. *(Chinese)* 88497
displacement current meas., scanning vibr. probe *(Japanese)* 121134
distrib. network capacitance current meas. method *(Chinese)* 112190
distrib. syst. grounding fault current detect., opt. current transducer *(Chinese)* 112049
distrib. transformer diagnostics, multi-channel wireless commun. *(Korean)* 123543
elec. current sens. using EM tuning 120754
electrode current normalisation techs. during polariz. expts. *(Spanish)* 78120
electroplating baths, current dens. meas. methods 89477
EMI from high-speed routing between power and ground planes, diagnostic procedure 102810
EV, axial airgap PM AC motor control 89384
FEA with Mo tip, gate insulator etching influence obs. 97706
fiber Bragg grating based elec. current sens. *(English)* 120876
fibre optic current sens., Faraday rotator mirror 75603
fibre optic current sens. using differentiating Sagnac interferometer 86588
fuse elements voltage drop/current meas. using digital techs. 123676
generator overcurrent protection, rotor thermal capacity maximisation 112453
high side current meas. methodology, overcurrent protection, prog. sources 88951
HT-7U Tokamak, vac. vessel, elec. params. 132124
HTSC current comparator, charged particle beam meas. 70856
HTSC sampler, current meas. syst. 71121
HV cable conductor temps. determ. 133725
HVDC project, hybrid optic DC meas. syst. *(Chinese)* 99330
hybrid EO/inductive current sens. for HV power syst. appls. 99436
hybrid fiber optic current sens., HV power line 120859
IGBT module, chip current imbalance meas. *(Japanese)* 81283
IM, magnetizing rotor flux determ., VSI 112535
IM, sensorless control, VSI control, ANN 133995
IM, short-cct. current calc./meas. 88749
IM control, unknown torque, sensorless speed tracking 134028
IM equiv. cct. params. determ. using GA 123478
IM neg. seq. impedance, closed rotor slot effect 134019
IM protection using microcontrollers 112536
IM/DC drives for educational purposes 123939
isosceles-triangle-shaped beam fiber Bragg grating current sens. *(Chinese)* 97277
lin. convertor of weak currents electrometric module 86793
lin. DC motor, cylindrical moving-coil-type, efficiency charcts. 77897
logarithmic electrometer, wide range, diode/temp. charcts. correction 97586
long arc in free air, dyn. model, lab. testing 102885
LV cct. breaker arc props./spectrum intens. meas. *(Japanese)* 112703
LV/MV networks, harmonic distortion survey, results, corrective strategies 133603
magneto-opt. sens., automated charactn., virtual instrum., RCD appl. 109513
magneto-optic effects and sens. based on them *(Russian)* 75406
metal bar probes charging by flux of particles 83110
miniature mag.-field probe for HF currents meas., LSI and PCB testing 86920
monolithic multi-jn. solar cells, perform. meas. methods 112942
MR current sens. microsystem with full digital calib. 75757
MV/HV overhead lines, rem. current sens. 133755
Norton equiv. model for distrib. syst. nonlin. loads 112087
on-line PD current monitor, sens. transfer charact. anal. *(Chinese)* 131893
opt. CT, sig. proc. schemes comparison 75814
opt. current sens. for harmonic anal. of current waveforms 123080
outdoor distrib. polymeric suspen. insulators, contamination effects *(Korean)* 133761
outdoor HV porcelain insulators, RTV coatings, leakage current tests 77448
overhead power line contact by mobile equipt., warning alarm 134706
overhead transm. lines, genetic based fault location algm. 133811
parallel transm. lines, fault location algm. 77647
PDP discharge, 3-D light emission images anal. *(Korean)* 121089
phasor meas. using protection CT monitoring syst. 123089
polyethylene/Kapton, elec. props., electron-beam irrad. effect 81728
power electronic equipt., touch/protective conductor current meas. *(Polish)* 99831
power electronics current sens., review 97213
power line current sens. using analogue opt. data transfer 77661
power quality meas. digital instrum., calib. procedure 109835
power thyristors, ageing monitoring using gate current threshold 126689
primary std. dosimetric equipt., current & charge meas., unified channels 86379
pump IM fault detect. using fuzzy signature anal. 134015
quantum current std. using single electron tunnelling *(Japanese)* 86388
quasilinear electrometer for wide range current meas. 97585
radial distrib. network, fault detect., matrix algm. 99432
reactive/harmonic current detect., integrated vector based reactive power defn. *(Chinese)* 99223
rly. substation traction current return syst./earthing studies *(German)* 78283
Sagnac opt. fibre current sens., temp. induced sens. drift output compensation 109599
scanning SQUID microscopy for current imaging of ICs 116001
semicond. failure anal., SPM appls. 113779
silicone rubber outdoor insulators, degrad., leakage current monitoring *(Korean)* 123037
small horiz. axis wind turbine perform. anal. 77793
smart batt. adaptive algms., normalized capacity learning methods 89145
SOFC, porous thin-film anode materials, PVD, photolithographic patterning 123794
solar cell noncontacting PV capacitive diagnostic syst. 100197
solid-state devices, low temp. DC/noise meas., automatic syst. 75376
spin valve bridge sens. for current meas. & control 109508
SQUID detector, elec. quantum metrology triangle 70896
subranging digital SQUID ammeter 75779
supercond. cables, current distrib., mag. field probes location 77426
supercond. power supply, persistent current mode, fab., operation *(Korean)* 78018
telecomm. ports disturbances meas. method 83373
three-phase buck power converter lossless current sens. scheme 112622
three-phase current sens., mag. sens. arrays, sig. proc. 109522

electric current measurement continued
three-phase IM fault detect., stator current anal. program 123476
three-phase IM fault detect. using current signature anal. 88750
three-phase induction machines, PWM power converter-fed, losses studies 112499
three-phase opt. current transducer, opt. coupler performs., Faraday effect *(English)* 75597
three-phase voltage-source PWM power converter topologies comparison *(Korean)* 123590
tractive current asymmetry factor meter *(Russian)* 134516
transformer meas. using LMG95 digital display power meter *(German)* 132093
transformer nonlin. compensation in meas./reconstr. 86905
transistors, input capacitance and input current meas. 121141
transm. line arresters eval. against winter lightning 112167
transm. line contactless surge voltage waveform meas. method 77657
transm. line fault location, HF TW meas. 77646
transm. line faults location, ANN struct. 99425
underground cable arc fault location, single terminal voltage/current data 99372
university distrib. syst., power quality monitoring 133636
water treed MV XLPE cables, NDT, on-site dielec. response methods 133727
welding robots, high speed rot. arc sens., seam tracking controller 134683
ZVT inverters, load adaptive fixed timing control 88834
Bi-based HTS wires for high field insert coils at HOMER II facility 71070
$(BiPb)_2Sr_2Ca_2Cu_3O_8$-Ag multifilamentary HTSC tape, AC transport current loss 77405
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag multifilamentary HTSC sheathed tapes, pickup coil meas. 70730
Co thin film magneto-opt. sens., freq. response 109507
$Co_{71.3}Fe_{3.7}Si_{15}B_{10}$ amorph. wire based sensitive CT 75478
$GaInP_2$/GaAs/Ge tandem space solar cells, iso-jn. dark current 112926
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_3$ -$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
$La_{0.8}Sr_{0.2}MnO_3$-$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
Nb SQUID ccts., small supercurrents, meas. 70907
Ni-YSZ porous cermet SOFC anode, electrochem. charact. 89247
Ni-YSZ-Ag thin film SOFC testing 99966
Pb-acid EV batt. charging control, charging/discharging monitoring 123987
Pb-acid and Ni-Cd batts., online AC impedance meas. tech. 89135
Si encapsulated solar cells, photothermal stabil. studies 112988
a-Si p-i-n solar cells efficiency enhancement using LP-CVD ZnO 100200
c-Si solar cells, I-V charact. expts. 112982
YIG:Yb,Bi magneto-optic opt. fiber current sens., perform. testing *(Chinese)* 120877
YIG/ring-core transformer Faraday effect current sens. 97291

electric discharges *see discharges (electric)*

electric distortion
see also fading; nonlinear distortion; reception
3-phase distortion currents detect., adaptive lin. neural network *(Chinese)* 88496
ADC hysteretic distortion detect., phase-spectrum anal. 114827
classical PLL, sig. distortion and waveform conversion 90806
click modulation/PWM, closed-form spectral anal. 90622
CMOS OTA, mobility-reduction-free low-distort. design using backgate-bias tech. 68615
CMOS SC segmented DAC, clock jitter induced distortion 79993
large weakly nonlin. microwave ccts., computer aided anal. 80233
LCD distortion, IPS-/TN- modes, foreign particles effects 97674
log-domain filter, distortion anal., Volterra series 80051
M-QAM nonlin. amplified sigs., fast adaptive predistorter 72728
microwave ADC, distortion reduction 68855
microwave component grading using vector NWA 69094
MOS resistive cct., MOSFET-C implement., bandwidth, noise, offset and nonlin. 102367
multicarrier complex lowpass models of RF transceiver ICs, nonlin. behavior 80385
multistage feedforward compensated opamps, low power and distortion 68600
noisy distorted sigs., period determ. 107355
OFDM, RF high perform. front-ends in broadband wireless access 72761
periodic sigs., phase meas., nonsynchronous multirate digital filtering 123079
periodically switched nonlin. ccts., distortion anal., time-varying Volterra series 79522
phase-manipulated sigs., distortion-stable weighted compression filters 119035
Poseidon 2 Altimeter, Jason satellite, C/Ku-band pulsed transmitters 111336
predistortion-based lin. for forward-channel link broadband appl., CDMA 74704
reflector antennas, distortion compensation techs. 117813
RF power amp. lin. with digital predistort., LUT indexing method 79602
Rice's atten., distorted sigs. reception under conc. interf., error probab. 83324
RS422/RS485 protocol for high speed commun., waveform distortions *(German)* 131043
S-series microwave power amps. for wireless telecoms. testing 91275
SCM opt. systs., distortion and noise problems 86057
SCM opt. transm. syst., clipping induced distortions *(Japanese)* 96825
wideband low-distortion delta-sigma ADC topol. 79959
WLAN-OFDM transceivers, front-end non-idealities impact on BER perform. 74516

electric distortion measurement
cable mixed sig. multiplex, interact. between analog and digital distortions 97067
CATV networks, automatic meas. of IMD 75313
co-channel distortion and noise power ratio meas. 109962
distributed environ. power quality anal., digital meas. station 112072
microwave freq. converter, multi-tone IMD meas. 102587
microwave power amps., co-channel distortion ratio, small-sig. in-band meas. 132146
multi-channel power amp., ultra-lin., IMD meas. 101792
RF power amp., memory effects, IMD meas. 101797
sinadmeter 96370
THD factor meas. uncertainty, power quality indices 109964

electric domain walls
antiferroelec. LCD, EO props., addressing waveforms 104829
ferroelec. domains/local cryst. anisotropy, scanning nonlin. dielec. microscopy 104391
ferroelec. smart materials, nonlin. props. 116150
multidomain ferroic samples, engng. 104383
piezoceramic materials, asymmetric hysteresis, modelling 104378
$BaTiO_3$, displacement charge patterns, domain wall dyn. 104288
$BaTiO_3$:Hf,Zr, pure and doped ferroelec. ceramics, aging effects 92624
$BaTiO_3$/epoxy composites, multi-doped, dielec. behaviour, PWB appl. 81675
$Bi_4Ti_3O_{12}$, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$Bi_4Ti_3O_{12}$:La, ferroelec. films, polariz., pyroelec. props., orient. effects 116169

electric domain walls continued
KH_2PO_4 ferroelec. crysts., LF dielec. dispersion 92636
$KNbO_3$, displacement charge patterns, domain wall dyn. 104288
$KNbO_3$, ferroelec. single crysts., poling treatment and piezoelec. props. 127
$KTa_{1-x}Nb_xO_3$ disordered ferroelec. crysts., dielec. const. 127234
PLZT ferroelec. capacitors, zirconia incorporation, elec. fatigue 127278
PZT ceramics, internal friction, O vacancies, domain boundaries *(Chine* 70400
PZT ceramics, third nonlin. piezoelec. coeff., grain size depend. 127177
PZT, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
PZT thin films piezoelec./dielec. props., cryst. struct./texture 104322
PZT:Nd(Fe) films, polariz. components, doping effects 92628
$Pb_{0.90}La_{0.15}TiO_3$ thin films on different bottom electrodes, struct./elec. chara 70395
$Pb_{1-x}La_xTiO_3$ La-graded heterostruct. films, sol-gel prep. and elec. charac 104401
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substi tion 104311
$PbNb_2O_6$ ceramics, anelastic relax., defect interacts. 104270
$PbTiO_3$ thin film, MOCVD domain struct. at init. growth stage 104298
RbH_2PO_4 ferroelec. crysts., LF dielec. dispersion 92636
$SrBi_2Ta_2O_9$ films, fatigue charact., forming gas annealing effect 127157

electric domains
see also electric domain walls; ferroelectric materials
cholesteric gray-scale bistable displays, pulse seq. addressing effects st 116832
ferroelec., kinetics of fatigue effect 70414
ferroelec. domain distrib. meas., scanning nonlin. dielec. microscopy 10427
ferroelec. liq. cryst., stripe-shaped domains, SLM appl. 93242
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 20 100366
metal/ferroelec./insulator/semicond. struct., polariz. stabil. 126237
MQW IR photodetectors, periodic elec.-field/charge domains, ensemble Mo Carlo particle simul. 86553
multi-domain Potts polar systs., dyn. hysteresis 104382
multidomain ferroic samples, engng. 104383
piezoceramics, piezoelec. cracking, microstructural effects 104371
polymer-stabilized FLC, microsized bistable domains, monostable V-shap switching 127840
PVDF oligomer ferroelec. thin films, structural/electronic charactn., Al 127213
PVDF-trifluoroethylene copolymers, ferroelec. phase transit., struct. 125103
PVDF/trifluoroethylene/hexafluoropropene terpolymers, synthesis/elec. pro 125105
vinylidene fluoride oligomer, mol. ferroelec., AFM anal. 92648
$Ba_{0.7}Sr_{0.3}TiO_3$ film, microdomains charactn./form. mechanism, HREM o 104384
$BaTiO_3$ ceramics, ferroelec. props., poling field depend. 127223
$BaTiO_3$, film, lattice deform., polariz., FLAPW calcs. 127190
$Bi_4Ti_3O_{12}$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, swit ing 104310
KH_2PO_4 ferroelec. crysts., LF dielec. dispersion 92636
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$, single-cryst. fibers, domain struct. 127185
$KTiOPO_4$ crysts. for NLO converters. ferroelec. domain config. 116166
$KTiOPO_4$ quasi-phase matching cryst., SHG SNOM/SFOM 82914
$KTiOPO_4$, quasiperiodic opt. superlattice, elec. poling, switching 104393
$LiNbO_3$, annealed proton-exchanged waveguides, quasi-phase-matched SH *(Chinese)* 128494
$LiNbO_3$, electron beam periodically poled, SHG 93815
$LiNbO_3$ electrooptically addressable total internal refl. switching 72044
$LiNbO_3$, ferroelec. domains, morph., scanning nonlin. dielec. microsc 104268
$LiNbO_3$ opt. superlattice, EO spectral filter 104816
$LiNbO_3$, periodically poled, high efficiency mid-IR OPO 82919
$LiNbO_3$, periodically poled, tunable narrow-band THz generation 71924
$LiNbO_3$, piezoelec./ferroelec., microstructuring for MEMS devices 70364
$LiNbO_3$:Y acoustic superlattice cryst., CZ growth, US waves 104394
MgO film grown on p-InP, microstructural & elec. props. 104397
Ni/PZT/Pt thin films, asymmetric switching behavior 81693
PLZT films, TEM investig., PLD, growth temp., pyroelec. appls. 104324
PMN-$PbTiO_3$ ferroelec. complex perovskite cryst., Bridgman method grow twinning domain 70401
PZT ceramic, piezoelec./dielec./elastic props., stress/DC bias effect 104327
PZT ceramics, Nb-doped, effects of Sr substitution 104355
PZT ceramics, internal friction, O vacancies, domain boundaries *(Chine* 70400
PZT, compression stress induced domain switching 116206
PZT, ferroelec. domains, morph., scanning nonlin. dielec. microscopy 10426
PZT films, domain images/retention props., electrostatic force microsc 104309
PZT films, ferroelec. memory devices, pulse width/voltage, bit size depe AFM 70466
PZT films, struct./ferroelec. props. on Ir/$(ZrO_2)_{1-x}(Y_2O_3)_x$/(100)Si 70399
PZT nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switch 104310
PZT single grained thin film, fatigue & data retention charact. 116148
PZT thin film, fatigue model based on thermionic field emission mechani 127222
PZT thin film, ferroelec. polariz., scanning nonlin. dielec. microscopy 1211
PZT thin film, structural charactn., SEM/HREM/XRD 116146
$(Pb,Sr)TiO_3$ epitaxial films, ferroelec. domain struct. 127197
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ cryst., indentation-induced domain switching 1043
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ relaxor ferroelec., MnO_2 addit., piezoelec. pro 104357
$PbMgNbO_3$-$PbTiO_3$ ceramics, phase conversion, morphotropic phase bound 104269
$Pb(Ni_{1/3}Nb_{2/3})O_3$-$PbZrO_3$-$PbTiO_3$ ceramics, ferroelec. domain structs., TEM o 104271
$Pb(Sc_{1/2}Nb_{1/2})O_3$, relaxor ferroelec., phase transit., chem. order influence 127
$PbTiO_3$ single cryst., domain struct., piezoresponse force microscopy 12719
$Pb(Zn_{1/3}Nb_{2/3})O_3$ single crysts., switching currents, polaris. reversal 104372
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, switching currents, polaris. reversal 104372
$Pb(Zn_{1/3}Nb_{2/3})O_3$-based ceramics, domain struct., annealing atmos. effect 1161
$Pb(Zr_{0.32}Ti_{0.68})O_3$ film, 90° domains switching 127160
$PbZr_xTi_{1-x}O_3$ epitaxial films, near-field second harmonic imaging 82915
Pt/PLZT/Pt capacitors, H-induced degrad., nanoscale investig. 104468
RbH_2PO_4 ferroelec. crysts., LF dielec. dispersion 92636
$Sr_{1-x}Ba_xNb_2O_6$ waveguide channels, elec. fixing, dyn. self-focusing 93120
$SrBi_2Ta_2O_3$ ferroelec. single crysts., high-temp. soln. growth and charactn. 926

ctric domains continued
$SrBi_2Ta_2O_9$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mechanism 127222
$Ti,Er:LiNbO_3$ quasi-phase-matched self freq. doubled waveguide lasers 93562
ctric double layer capacitors *see electrolytic capacitors*
ctric double layers *see electrochemistry*
ctric double refraction *see electro-optical effects*
ctric drives
see also clutches; electric propulsion; motor drives; variable speed drives
AC-DC converters for high precision DC drive systs. supply, fuzzy control 134159
AC/DC power systs., harmonic anal., power converters, indust. drives 123001
act. current rectifier, switch based, math. model & control 88939
belt-driven induction starter-generator, design, testing 123961
class ICE motor coach trains, elec./control equipt. *(German)* 78275
DC drive, robust tracking under parametric uncertainty 78208
dimens. under combined intermittent/short-term operating conditions 113065
double spiral-space element electromechanical transducer, robot appls. *(Russian)* 89015
high-vol. fiberoptic alignment by lin. motors 116659
indust. elec. drives for energy conserving appls. 113075
MV PWM IGBT VSI power stack topologies 89345
NC machine tools multi-axis contouring error on transient state *(Japanese)* 67689
nonlin. drive systs. synthesis with low parametric perturb. sensitivity 113054
power/energy systs., develop., conf., Marabella, Spain (Sept. 2000) 113275
pulp and paper indust., machines, power systs., conf., Portland, OR, USA (June 2001) 113258
rly. service vehicles, elec. drive technol. *(German)* 134510
rly. traction supercond. transformer 89398
robotics and automation appls. 100242
separately excited DC drive, flatness-based control 78209
seven-level neutral point clamping VSI, high power induction machine drive 112666
state-controlled high-powered elec. drive, commissioning using evol. algms. 89333
static converters, indust. and utility appls. 99747
synchronised motion using fieldbus-linked elec. drives 123890
vehicle drive, space vector PWM, over-modulation tech. *(Chinese)* 100279
ctric energy consumption *see power consumption*
ctric field effects
see also acoustoelectric effects; electric breakdown; electrical conductivity; electro-optical effects; electrochemistry; electrodynamics; electrohydrodynamics; electroluminescence; electromechanical effects; electromigration; electrophoresis; field emission; field ionisation; high field effects; magnetoelectric effects; particle optics
aerosol particles, unipolar charging in alternating elec. field 83137
bounded warm plasma waveguide, beam-plasma instabil. stabilization 128819
α-bromine-terthiophene thin films, SPV spectra 116905
cardiac myocytes, postnatal develop., elec. field stimulation 76718
crit. electronic automotive systs., high-intens. radiated field hazards 134581
dielec. liqs., aq. drops deform./break-up in elec. field 81650
EMR fluid with nanoscale composite, vibr. control 79464
human body, induced currents, power syst. elec./mag. fields 98747
LF elec. fields, dosimetry in child/adult models 111241
mol. device, electronic response to appl. voltage, tight binding calcs. 102848
multiwall carbon nanotube arrays, nanojunction struct., elec. field induced 90592
photoresistor, elec. field effect induced by He-Ne laser 69261
single water droplet on hydrophobic sheet, reson. under AC elec. field 127251
two-phase fluid, lithographically-induced self-assembly 81137
ultrashort elec. pulses, intracellular effect 133068
CdSe nanocrysts. in a-ITO films, struct./SHG, elec. field effects 82891
CdTe highly fluoresc. nanoparticles, elec. field directed layer-by-layer assembly 125037
GaAs low-dimens. systs., energy levels, elec./mag. field effects 115391
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
GaN/(Al,Ga)N MQW, carrier dyn., internal elec. field effects, orient./strain state 80864
$Pb(Mg_{1/3}Nb_{2/3})O_3$ thin films, dielec. props., electrostrictive strain, dc field 101428
Pr_6O_{11}-based ZnO ceramic varistors stabil., microstruct., elec. props., Er_2O_3 addit. effect 79427
a-Si films, elec. field assisted metal-induced lateral crystn. 126081
Si films/amorph., Ni induced lateral crystn., elec. field effects 125053
a-Si structural improvement using metal-induced crystn. 69490
SiC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796
$Si_{1-x}Ge_x$ graded channel sub-100 nm PMOSFETs, built-in longit. field effects 70161
ctric field integral equations
3D indoor radiowave propag. modeling by multilevel fast multipole algm. 72320
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
bilamellar dielec. NDE based on elec. field-prop. rels. 101558
boxed microwave cct., MoM/BI-RME anal. 102590
chiral coated conducting cylinders, RCS computation 75174
coil loaded monopole antennas, meas./computed results comparison 94170
composite dielec., elec. field by curved surface charge method, elec. flux continuity *(Japanese)* 72162
cylindrical wire antenna with flat end caps, modeling 72596
EM anal., FFT accelerated marching-on-in-time algm. 72260
EM field distrib. between finite/infinite parallel strip arrays 94035
EM scatt. by 3D dielec. bodies, MoM-CGM-FFT appl. 72287
EM scatt. by 3D PEC bodies, high-order MoM soln. using quadrature-based point matching 83251
EM scatt. from PEC target above or buried in lossy half space, fast multipole method 83237
EM scatt. problems soln. by improved spectral iter. tech. 93999
EMC std. guidelines, time-domain MoM simulator validation 83424
fast field comput. with fast multipole method, reduced comput. cost 83102
FEM weak formulation using wavelet basis fns. 124742
HTSC planar struct., microwave nonlin. response, EM simul. 71105
impedance tomography inverse problem, dual reciprocity BEM 132125
interior reson. scatt. cross sect., SVD *(Chinese)* 105722
microstrip struct. with complex media, loss inclusion via dyadic Green's fn. modifs. 102497
modeling of small wire scatterers with core 105725
MoM, grid-robust higher order vector basis fn. 83085
electric field integral equations continued
monostatic RCS, 2D PEC, AWE tech. 75077
monostatic-to-bistatic equivalence theorem, max. reliable angle 96886
multilayer printed antennas and ccts., multiresolution anal. 83507
open-ended coaxial waveguide radiating into chiral half-space, refl. coeffs. 94111
parallel perfectly conducting cylinders microwave imaging 94042
planar ccts., arbitrarily shaped, wavelet-based simul. 125695
preconditioner 105732
RCS, dipole array antenna, preconditioned conjug. gradient method *(Chinese)* 109252
reduced-size reson. microstrip patches, comparative anal. 72467
spectral accel. forward-backward method for terrain profiles coverage anal. 117681
supercond. microstrip lines, full-wave characterisation 80160
TE transient scatt. from cylinder above infinite periodic surface, decomp. method 72312
two-wire transm. line, dielec. half-space, transient response 83456
wide angle monostatic RCS pattern of cond. cylinders, fast calc. using AWE tech. *(Chinese)* 131643
electric field measurement
see also field plotting
2.0 GHz, meas. elec. near-fields of model cellular transmitters near human head models 98768
2D scatterers, microwave imaging by inverting scatt. near-field meas. 73306
400 kV overhead lines, elec. field dampening using spruce forest 77442
balloon-born electrometer, cloud high-resoln. atmos. elec. field meas. 76888
balloon-born two-sphere elec. field instrum., neural net DP *(Chinese)* 105666
bulk opt. sens., environ. effects compensation 132116
crack meas. by eddy-currents, probe/inducer effects 114543
EM field metrology, uncertainty sources *(Polish)* 121157
energy-efficient lighting, EM field levels, med. device interf. 133149
external EO measuring syst., high spatial resoln./voltage sensitivity 132120
fiber-coupled E-field sens., miniaturized design using EA modulator and PV cell array 120883
gas, elec. field, non-contact meas., Kerr effect *(Japanese)* 121131
GSM base stations, near EM field levels calc./meas. 85612
GTEM cell, TEM-mode E-field uniformity 117720
HV substations, EMI monitoring 78081
hybrid multilayer heterostruct. optoelectronic transistors, fiber coupled E-field sens. element appls. 104742
immunity testing cell using rect. resonator with conducting channel plate and capacitive gap *(Japanese)* 105800
integrated probe for phaseless plane-polar near-field meas. 128909
intell. EM field meter *(Polish)* 131813
large-scale charged particle cloud, elec. field strength distrib. 69382
liq. cryst. droplet material, elec. field sens. 120756
loop sens., elec. small, elec. field parasitic sensitivity 75445
microcell prediction model based on street arrangement/types 105765
miniaturized fiber coupled RF elec.-field sens., resoln. and sensitivity 109602
mode-stirred chamber, EM field distrib. meas. tech. 72351
modulating probe beam bal. EO detect. *(Chinese)* 93226
near field spectrum EMF metrology *(Polish)* 121133
phase sing. meas., small struct. vicinity, Linnik interf. microscope *(German)* 75812
planar near-field meas., hybrid algm. for correcting probe posn. errors 83511
polymer asymmetric Fabry-Perot film, external EO sampling 82215
portable radio, near fields in front of and on far side of head model 98767
PTF HF E-field probe for cellular phone equipt. testing 132118
radiated emission meas., TEM cell, GTEM cell, loop antennas 83426
radiated immunity testing, elec.-field uniformity in reverberation chamber 117721
ref. field nonuniformity compensation, correction factors 120628
resistive measuring cable for field-probe meas., unit step response anal. *(Japanese)* 132119
self-transmitting/self-receiving monostatic planar near-field scatt. meas. 83200
shielding devices, field reduction props., modulated scatt. meas. 83372
submicron external EO meas. syst. based on GaAs immersion lens 86899
TDMA cellular telephone, EMI with hearing aid 94055
three-layered PTFE sample piezoelec. transducer meas. comparison 81641
transient EM meas., CISAM EMP facilities, civ./MIL-STD 83425
wide angle antenna perform. meas. using small planar scanners 83525
GaAs MMIC, EO probing, CW calib. 102665
GaAs integrated electro-thermal probe 104810
GaAs opt. probe, coupled microstrip lines, pulse coupling meas. 125655
$LiNbO_3$:Ti electro-opt. coherence modulator, elec. field sens. 116723
electric field meters *see voltmeters*
electric field strength measurement *see electric field measurement*
electric fields
see also electric field effects; electric field measurement; electromagnetic fields; electromagnetic waves; field plotting; field strength measurement
2D conductor flaw detect., SQUIDs, boundary shape ident. 79495
80 kV microsecond pulser for pulsed elec. fields, design, testing 99783
145 kV CT elec. field distrib., leader shields effects 112612
Ampere's mag. circuital law, simple rigorous two-step proof 90626
balloon-born two-sphere elec. field instrum., neural net DP *(Chinese)* 105666
bicone resonator with opt. cryst., electrodynamic charact. investig., R-fn. method 117736
CDM ESD simul. using time domain air gap discharge meas. 72176
ceramic capacitors, voltage withstanding rating determ. 80444
charged oil metal vessels, lightning protection systs. 128665
composite dielec. elec. field calc. using curved triangular surface charge method 70376
computational EM appl. of meshless method 128641
conducting-particle chains, dipole images, image charges 83101
conductive cylinders in nonuniform elec. fields, induction charging 83131
conductor corners and edges, surface impedance boundary conditions 128685
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
cylindrical particles charging in monoionized elec. fields 128708
DC lin. channel MHD propulsor, coupled field anal. 123993
dielec. liqs., aq. drops deform./break-up in elec. field 81650
digital copier, electrophotographic proc., num. anal. 134697
dosimetry, interpolation/extrapolation methods and multiresolution wavelet transform 111233
double-spiral coil syst., high elec. field generation, 2D modelling 99786
DRAM, 512 Mb/0.12 μm design rule, long data retention time strategy 125490
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240

electric fields continued
eddy currents, boundary integral method coupled to FEM for E and H fields 128682
elec. field/mag. field duality in nonstandard FDTD method *(Japanese)* 93952
elec. filter microsecond power supply for efficiency improvement *(Russian)* 93982
elec. systs., power oscill., time-depend. energy var. *(Polish)* 111651
electrolytic cell, pulsed corona discharge superposition in water *(Korean)* 115237
electron gun, elec. field, 3D simul. 80576
electron motion 3D confine. anal., microelectronic vac. gauge appl. 69422
electrospun nanofibres, electrostatic field-assisted alignment 125132
ELF EM fields interact. with humans, power/inform. aspects 87949
EM dyadic Green fns., class./symm. rels. 83077
EM field modeling in human body at low freqs., error eval. 98765
EM oscill. generation/amplif. by tubular electron beam in crossed radial electrostatic/axial mag. fields 105683
EM scatt. by penetrable bodies, pot. integral eqn. method 83225
EM wave generation by electrons rot. in cross radial electrostatic/axial mag. fields in free space 83234
EM wave scatt. from imperfectly conducting circ. disc, full wave anal. 105716
epitaxial/nonepitaxial planar gate and trench gate IGBTs, turn-off behaviour 115912
ESD conditions calc. between charged body/floating pot. conductor 72175
ESP, spherical metallic particles dyn. 83177
ESP dust particles deposition efficiency simul. 72190
ESP wire electrode configs., corona inception studies field 72192
fast field comput. with fast multipole method, reduced comput. cost 83102
FDTD solns. for dielec. resonator antenna problems with different feeding sigs. 128844
field emission cathode with fractal surface struct., elec. field, computer model 105674
flexible RF applicator for viscous lossy food products heating 100354
foundry AC arc furnaces, arc modelling, arc power control 113165
Franklin lightning conductor, connecting leader initiation conditions 83095
galvanically separated grounding grids and grounding systs. determ. 112181
gas cct. breaker inhomog. high-temp. SF_6 gas behaviour 112685
graft elastomers, electrostrictive ,dielec./mech./electromech. props., XRD, DSC, appls. 127216
grounded electrode discharge in charged particle cloud 116120
half-bridge series-parallel reson. converter, EM considerations 99741
head phantom, induced EM field reconstruction, microwave imaging 132649
heteromophic waveguide, cutoff freqs. calc. by operator theory 69015
highly-conductive viscous liq. electrohydrodynamic spraying 83088
human body elec. fields resulting from 60-Hz contact currents 111192
human head, mobile phone emissions, absorpt. calcs. 133069
HV instrum. transformer ceramic insulator, 3D elec. field. anal. 88803
HV pn jn. termination, crit. elec. field, BEM 115837
HV testing board, electrostatic field, elec. field strengths *(Slovenian)* 75392
ICs, substr. coupling, modeling methods *(Polish)* 70264
IDT, Lamb waves generation, elec. field anal. *(Polish)* 121038
IGBT module technol. with high PD resist. 126790
insulating surfaces ESD characterisation 83114
integrated Mach-Zehnder modulator design, TW electrodes elec. field, FEA *(Chinese)* 71353
KEMET base-metal-electrode MLC chip capacitors, HALT 115079
knee elec. fields due to knee-thigh electrode pair 132999
layered PTFE interfacial charges meas. using step electroacoustic tech. 83128
LCD distortion, IPS-/TN- modes, foreign particles effects 97674
LDPE film, transit space charge distrib. and external cct. current up to breakdown *(Japanese)* 81731
lightning elec. field modelling for different channel-base current models 72172
lightning return stroke base modelling approaches 72173
lightning return stroke ident., field-based inverse algm. 83092
lightning return strokes, differing height, ident., field-based inverse algm. 117603
lightning return strokes inverse ident. procedure 83096
lin. electrooptic effect, wave coupling theory 105467
liq. insulator elec. field vector distrib., three-direction opt. meas. syst. *(Japanese)* 77447
low-loss inhomog. dielec., elec. field distrib. calc. 105665
Ludwig-3 defn. for lin. copolarization/cross polariz., generalization 83246
magnetron diode electron vortex, num. expt. 115263
Maxwell Garnett mixing rule, derivation 94024
micro particle manipulator fab., neg. dielectrophoretic force *(English)* 116100
microelectronic devices unipolar charge induction modelling 128662
microstrip line fed H-slots, transm. line model for field distrib. 94159
microstrip small antennas, simul. 83565
microwave components eigenvalue anal. program using high order vector elements *(Korean)* 91229
microwave materials, dielec. loss mechanisms 91176
modulated electron beam transversing RF field gap, transit time effect 72188
MoM, grid-robust higher order vector basis fn. 83085
multi-phase power transm. lines corona power loss determ. 99370
multiple dielec. multicond. systs., field computation and capacit. extract. 128660
multiple Rayleigh scatt., elec. field autocorrelation fns. 128781
muscovite mica electrostatic separation from feldspathic pegmatites 128711
MV power lines, nonionizing radiation, Slovenian environ. legislation 133751
MV syst. insulation, overhead conductors, PD, elec. field calc. 88465
neck hyperthermia, circ. phased aperture antenna EM emissions 133018
neg. streamer anal., photoionization effect, FEM *(Korean)* 115238
NPT IGBT rated overload charact. study 126789
parallel plate electrode profiles, elec. field distrib. 93962
periodic composites containing complex shaped dielec. particles, quasi-static effective permitt. 104245
perp. Hertz dipole, transm. fields through infinite shielding plate *(Japanese)* 128666
plate-type ESP, conducting particle trajectories controllability 128716
plate-type ESP, conducting particle trajectories computation, BEM 83178
pMOSFET reliab., trench edge effects 70117
porous Si/C_{60} jn., solar cells, photo-induced charge transfer 112891
pot./field generated by triangular surface charge, high-order charge dens. distrib. *(Japanese)* 83091
powder coating corona guns, free ion conc. reduction 128712
power engng. elec./mag. fields FEA 111645
power superjunction MOSFETs, breakdown voltage, analytic model 81307
pulsed energized wire-duct ESP, elec. field, charge dens., FEM 128715
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
electric fields continued
reverse-biased pnipn semicond. struct., current pulses internal amplif. 115374
secondary-electron detector efficiency, line-width meas. accuracy 721
semicond. struct. of different geom. shape, comparative anal. of transi 115814
short channel MOSFET, phys. DC model using trapezoidal Gaussia 103829
space charge cloud discharge phenom. 83115
spherical particles charging rate in mono-ionised elec. fields 128661
std. sphere gaps sparkover, field utilization factor/elec. fields study (81655
substation, opt. fiber control cable grounding under lightning strike 7
TEM transm. line with non-std. inner conductor, charact. impedance
TFSOI modular proc. for CMOS power devices/ICs 104098
three-layer earth model, Wenner four-probe test data 133779
three-layered PTFE sample piezoelec. transducer meas. comparison 8
tomographic data, direct proc. estim. using artificial neural systs. 106
TW wire antennas, transient radiation, comments 72590
unbounded dissipative media, transient field, FEM 83074
viscous fluid, conductive particle dyn. motion, DC elec. field 67680
water, elec.-field activation, space-charge polariz. 92590
water ozone generator, water stressed by AC voltage, elec. field 6938
$(BiPb)_2Sr_2Ca_2Cu_3O_8$-Ag multifilamentary HTSC tape, AC transport cu 77405
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact
GaAs-AlGaAs PHEMTs, contactless RT charactn. by SPV spectrosc.
GaN/AlGaN MQWs, ground level emission energy, internal elec. fields
GaN/AlN self-organised QD, strain distrib., built-in elec. fields, carr 91836
GaN(1100) M-plane plasma-assisted MBE on γ-$LiAlO_2$(100), nitride se free of internal electrostatic fields 101252
$KTiOPO_4$ crysts. for NLO converters, ferroelec. domain config. 11616
$LiNbO_3$:Ti opt. modulators, CPW electrode charact. imped. anal. 1278
N_2 high-press. insulation, lightning impulse breakdown charact. *(J* 92618
N_2/O_2 gas mixture PD charact. gas press. depend. *(Japanese)* 92617
NO_x prod. in spark and corona discharges 83097
SF_6 cct. breaker, 3D elec. field calc., ICCG algm. *(Chinese)* 78047
SF_6 tank type cct. breaker, double breaks anal., hybrid FEM-charg method 134257
SF_6-N_2 mixtures, nonuniform fields predischarge phenom., lightning voltages *(Korean)* 92615
electric final control devices
see also electric actuators; electric motors; switches
turbomolecular pump, integrated electronic control module 134094
electric furnaces
see also arc furnaces; resistance furnaces
ageing annealing furnaces, cascade controllers appl. *(German)* 113162
ceramics microwave heating, pot. and limitations *(German)* 113139
crucible-type induction furnaces, flow/temp. distrib. studies *(German)*
cylindrical furnace for absorpt. spectral study appls. 124110
heat treatment elec. furnace params., energy consumption effects 124135
high-speed IR kiln concept for decorative firing appls. *(German)* 1131
induction furnace, current reson. inverter, switching surge *(English)* 1
induction furnaces, EM force excitation, structural-dyn. behavior 1346
induction heated furnace charges, temp. field distribs. anal. *(Polish)* 1
induction heating current-fed inverter AFC 124100
ion nitriding devices, glow discharge energy exploitation *(Polish)* 124
JMTR, strain meas. under irrad., capsule type strain gage *(Japanese)*
large diam. epitaxial wafer develop., tech. issues 70240
pipelines/vessels, impedance/induction/skin effect heating, IEEE S 134650
shaft furnaces for heat treatment appls. *(German)* 113140
electric fuses
0.5 MV/1 GW compact twin-output pulsed power supply 99777
1-38 kV indoor AC MV switches, IEEE Standard 123667
48 V telecom. power supply systs., dimensioning aspects 108450
DC-link inverter, low-inductive fuses 78042
distrib. syst. protective device coord., distributed generation effect 1120
elements voltage drop/current meas. using digital techs. 123676
EMI signatures detect. of mines, timers, and fuses 72347
high dens. DRAM, bit line coupling scheme and elec. fuse cct. 125507
IM short-cct. fault protection using HBC fuses 134026
in-service fuse tester design and testing 99837
invertor DC-link cct. fuses, harmonic power losses prediction 134230
metal-enclosed interrupter switchgear, IEEE Standard 123668
motor drives, LV elec. equipt. selection 78202
multimeters, fuse protection *(German)* 115114
resettable overcurrent and overvoltage fuses for telecom. equipt. *(G* 91449
self-renewable and one-time fuses for electronic apparatus, SMDs (80481
semicond. fuse ratings, harmonic currents effects 125862
shape determ. of fuse link ensuring specified current distrib. *(Russian)*
shared fuse macro for multiple embedded memory ASIC devices with dancy 102183
slow-blow fuses for miniature fuse geometries *(German)* 125863
surge arresters with MV current limiting fuses, coord. 123068
Li ion batt. protection against overcharging using PPTC fuses *(German)*
Si avalanche diodes, effect on LV power network fuses behaviour 1337
electric generator control *see machine control*
electric generators
see also AC generators; DC generators; diesel-electric generators; hyd lectric generators; magnetohydrodynamic convertors; permanent magne erators; standby generators; turbogenerators
2 kWh flywheel motor-generator, PM/HTSC bearing expts. 78186
500 MVA air-cooled generator develop. efforts 112446
500 MW COTS-based TPP generator excitation syst. design 133860
ABB technol. in power elec./electronic engng. 77132
air gapped CT simul. model, generator protection appls. 112591
biomass-fuelled CHP steam power plant project, Sweden 88592
Brestanica gas power plant protection scheme 77763
cct.-breaker stresses, lab./real conditions comparison 78053
circuit breaker, num. simul. using MATLAB *(Chinese)* 133923
crit. clearing angle calc. based on syst. impedances 88381
digital generator-transformer protection, Internet-based mgt. syst. *(C* 99720

c generators continued
uble-axis excitation generator, small-power testing bench expts. 99610
ment complex power components incurred by generators *(Chinese)* 77157
citation, rectifiers reliab. improvement *(Chinese)* 88674
citation-syst. params. estim. using tabu search algm. 112209
citing rotor, one point-grounding fault, ping-pong type microcomputer protec-
on *(Chinese)* 77819
ds rewinding, aged insulation replacement 123294
ywheel energy storage syst. using HTSC mag. bearings 78183
wheel high-T_c supercond. mag. bearings, drag torque expts. 78184
rt Wayne Electric Company, historical overview 88292
turbine modeling/testing, generator reactive power limits verification 112325
nerating sets with AGC, regulation efficiency, economic compensation modes
Chinese) 122898
nerator rotor AC impedance meas. *(Chinese)* 112468
nerator-transformer short-cct. protection, switch-based insulation monitoring
9618
brid AC-DC supply generators no-load voltage waveform calc. *(Chinese)*
9736
brid EV small-scale high-speed generator vibr. anal. 100274
gral sq. generator angle index for stabil. assess. 111873
ernal combustion engine turbocharger motor-generator design 100302
feedback controller, anal., perturb. bounds theorems *(Chinese)* 88693
s of excitation, protection misoperation anal. *(Chinese)* 88482
nature flywheel syst., hybrid mag. bearings H∞ control scheme 78187
dern generator protection concepts overview 77825
lti-generator power station, power syst. stabilizers design 77210
gative seq. power directional relay, maloperation anal. *(Chinese)* 99622
ercurrent protection, rotor thermal capacity maximisation 112453
online monitoring, EM noise suppression *(Chinese)* 99627
wer overhead linemen generator backfeed protection 78547
wer plant protection/control modernisation, digital technols. 77679
wer syst. anal., time domain simul., cluster anal. 88289
wer syst. coherent generator groups recogn., fuzzy clustering method *(Chi-
ese)* 88275
wer syst. generator excitation control optimisation method *(Japanese)* 77249
wer syst. transient instabil. prediction using fast-learning algm. 111888
rchasing, spec. creation 123286
ctive power control, bus voltage control, GA 122893
al-time optimal excitation controller using online syst. ident. *(Chinese)*
2859
ter earth fault relay protection fn. 77823
or purchase, quality rotor spec. 123293
sient generator internal stator winding faults modelling *(Chinese)* 112465
ient-pole generator model for harmonic anal. 133935
rvicing, rotor forging crack inspection, stator repairs 99615
p shaft generator, torsion oscills., double power supply machine *(Russian)*
3096
mens LSA7 generator-transformer bank digital protection device *(Chinese)*
2457
all salient pole generator finite element/time stepping modelling approach
9697
cs., comparison with fund. design principles 123280
ATCOM and generator excitation coord. control *(Chinese)* 78119
or inter-turn fault protection, shifting-phase wavelet *(Chinese)* 112451
or rewind spec., writing guide 123301
ercond. generator control, adaptive/fuzzy logic stabilizer comparison 77814
ercond. generator/motor develop. , power syst. appl. *(Chinese)* 77828
ercond. generators, power syst. stabil. appls. 133919
ercond. power appl. technols., research, review 111949
ercond. power supply operational charact. anal. *(Korean)* 123587
subcritical Hopf bifurcation studies 88676
c. using HWIR simul. 133921
t. generators shielded busbar, EM field soln. at open boundary problem
3333
minals, cct. breaker installation 112449
ing spec., proof/rotor/stator testing 123287
ck-film piezoelec. micro-generator, vibr.-powered 123529
ee-phase asymmetrical load-flow calc. *(Serbian)* 88417
nsformer unit, integrative state detect./record syst. APCI indust. computer
Chinese) 134121
balanced fault conditions relay protection 77822
balanced fault protection, inrush current effect simul. *(Chinese)* 99614
lt-connected generator-transformer stator winding fault protection 77824
lt-connected generators, grounded neutral, ground-fault currents 77832
laser ablation plasma elec. current interruption, inductive energy storage
ppls. 134414
ltage stabil., generator and load dynamics effect 88382
ltage stabil., modelling and syst. protection scheme 77271
ter-cooled generator stator rewinds, tech. specs. experience 123291
discrete-foil-type supercond. power supply, design, fab., test 112627
SiC anti-corona material for electric generators *(Chinese)* 99628

c heating
*e also dielectric heating; domestic appliances; drying; electric furnaces;
ating elements; induction heating; ovens; process heating; radiofrequency
eating; resistance heating; space heating*
kV power transm. line de-icing using dielec. losses 133757
bient-proportional sens. trace heating control 134640
furnace cct. pass. higher harmonics filter perform. *(Polish)* 124104
ios. press. arc plasmas heat transfer anal. 113137
gg elec. tunable chirped fiber gratings by bulk distributed heater 116611
D modeling of elec. heat tracing 124091
nductor service life, internal temp. distribs. effects *(Polish)* 124092
ntrol/monitoring of elec. heat tracing 134639
indrical furnace for absorpt. spectral study appls. 124110
amable fluoresc. lamp life, cathode heating voltage effect 134623
ct elec. concrete curing, intell. virtual control method 100323
e pad moxibustion cauterizer, single/multiple heating-pads 133013
c.-heated room thermal comfort, wall constr. effects *(Polish)* 124113
c./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
ctroheat procs. fuzzy knowledge appl. *(Polish)* 124093
ctroheating devices simul. using computer lab. stand *(Polish)* 124094
ctroslag remelting proc for ultra-clean nickel alloys *(German)* 113159
oresc. lamp ballast, inverter, inductively coupled preheating ccts. 134620
microsensor, microhotplate platform 97556
N III MBE single wafer reactor, substr. temp. uniformity, dual-zone heater
01213
t treatment elec. furnace params., energy consumption effects *(Polish)*
4135

electric heating continued
ion nitriding devices, glow discharge energy exploitation *(Polish)* 124105
KEK-LHC low-β quadrupoles, 1-m magnet model, quench protection heaters 75965
MOSFET self-heating, lumped transient thermal model 115933
oil well deparaffination elec. heating installations, params. optimisation 124166
oil wells dewaxing, elec. heating installations optimisation *(Russian)* 100360
overhead power line fault diagnosis under glazed frost melting proc. *(Russian)* 99423
plastics, rot. moulding, elec. heating 100322
PM wind energy generator for power heating appls. *(Latvian)* 112367
polysilicon hot plate, surface micromachined, gas sens. 116069
residential water heater loads control, distrib. syst. losses reduction 112040
shaft furnaces for heat treatment appls. *(German)* 113140
stacked heating elec. water heater with hot water temp. control *(Japanese)* 89443
stacked hotplate low-temp. annealing syst. for 300 mm wafer thermal proc. 80978
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
steel bar heat treatment proc. automation *(Polish)* 124136
technol. retrofits anal., DSM ES, fuzzy DSS 134645
three-phase AC elec. arc furnaces, EM/thermal fields modelling 113149
tracing, μP control, wireless commun. 134691
warm water bidet energy-saving pers. hygiene syst. *(Japanese)* 89444
water heater using very high-temp. storage 124090
SnO_2 microhotplate gas sens., spin-on nanoparticle proc. 97496
SnO_2 microhotplate gas sens., surface state trapping model 120980
Ta capacitor failure modes, fab. technols. 115080

electric heating elements *see heating elements*

electric ignition
250 W high-press. sodium lamp electronic ballast develop. 134632
automotive airbag systs., integrated electronics for bus systs. igniters 100298
brush discharges, dust ignition tests 83118
discharge lamps, hybrid electronic ignition ccts. 124085
dual-voltage self-clamped IGBT for automotive ignition appls. 134602
electrostatically charged liqs., ignition hazards theory 83112
Electrostatics 2001, conf., Koscielisko-Zakopane, Poland (June 2001) 78467
flexible intermediate bulk containers, electrostatic ignition hazards 72174
foil resistors for smart airbag syst. electro-pyrotechnic initiators, low energy 124042
HID headlamp systs. for automobiles, electronic ballasts *(Japanese)* 100300
HID lamp ballast, single-ended reson.-type inverter 78333
hydrogen fuel vehicle engine, characts., ignition props. 134559
hydrogen fueled vehicle engine, optimisation 134558
increased safety induction machine design, develop. and testing 99665
insulating liqs. flow electrification hazards 83123
intermediate bulk containers, electrostatics requirement for explosive atmos. 83116
methane-air mixtures ignition from multiple capacitor discharges 83117
petrochemical indust. grounding systs. design considerations 134694
piezoelec. cold cathode fluoresc. lamp driver, LCD backlight 78335
smart airbag systs., foil resistors as electro-pyrotechnic initiators, low energy 89418
smart IGBT for automotive ignition appls., chip on chip technol. 134603
toroidal ferromag. core hysteresis at transient excitation 102791
Pb-acid batt. develop. and appls. 78149

electric immittance
see also electric admittance; electric impedance
nonconstant immittance plane, overlying radio wave propag. 72329
noncontact energy transfer syst. using immittance converter 123002
π-LC power converter topol., immittance conversion theory-based 123624
SC filter synthesis using higher-order SC immittance simul. ccts. 102354
universal immittance fn. simulators using current conveyors 91028
Mg_2SnO_4 ceramics, elec. charactn. 70368

electric immittance measurement
see also electric admittance measurement; electric impedance measurement
multiphase DDS sinewave generator for high-accuracy impedance comparison 120615
Pb-acid batt., discrete freq. immittance spectrosc. 89112

electric impedance
see also electric reactance; electric resistance; impedance matrix
1-3 piezocomposite transducer material consts., thermal behaviour 104436
1D microstrip PBG band stop filter 91008
2.4/5.2 GHz dual-band shorted microstrip antenna, WLAN/HIPERLAN appls. 117807
2D microstrip-dipoles reconfigurable aperture antenna array gain 128892
2D random rough surfaces, EM wave backscatt., forward-backward/spectral accel. method 128739
2D struct., impedance grid method based algms. constr. for electrodynamic anal. 83464
3-phase 2-pole induction machine diagnosis, simplified spectral approach 134030
3-port 180-degree antenna hybrid, design and appls. 117821
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
3D EM anal. of package influence on IC perform. 69248
4-element triangular microstrip array antenna for circ. polaris. 72644
15 kV enclosed bus assembly, 5 kA, 60 Hz 3-phase continuous current test 133417
150 MHz helical antenna close to human abdomen, radiation efficiency *(Japanese)* 83646
act. concentric circ. ring microstrip antenna, dual-freq. operation 83585
act. devices, wideband MM-wave matching, opt. control 102743
act. second-order BP filter design using lossy LP-BP transform. 125606
alkaline secondary batts., memory effect *(Japanese)* 89072
anisotropic smart coatings, proper polariz. bases, digital control 131635
antenna arrays, transm. line band stop filters 72653
antenna meas. in multipath waves presence 83531
aperture coupled dual band dual circ. polarized stacked microstrip antenna 94137
aperture-coupled microstrip patch antenna, anal./network modeling 83639
asymmetrical coplanar lines on double-layered substrs., anal. *(Chinese)* 94075
azimuthally corrugated lossy struct., modified equiv.-impedance approach 72426
bal.-fed antenna syst. for handset 94154
band pass wave digital ladder filters, direct design 130072
band-pass act.-RC filter, single-amp. biquad type, design 80077
band-pass filter transform., ideal transformers insertion 107562
bandwidth-compensated transimpedance amp. for multigigabit opt. receivers 101787
BAR-mode low bias high-efficiency act. transmitting patch antenna 72546

electric impedance continued
BEPC DC separator HV connector, power, shunt impedance *(Chinese)* 101769
biconical dielec. resonator antenna for wideband appls. 94141
broadband circ. polarised proximity coupled patch antenna 83613
broadband coupled-strips microstrip antenna 117782
broadband double-sleeve monopole antenna, modal-expansion anal. 72573
broadband low-profile cylindrical monopole antenna 72484
broadband printed antenna, current distrib. and input impedance 72601
broadband probe-fed patch antenna with reduced cross-polaris. radiation 83730
broadband rect. patch antenna with pair of wide slits 117783
broadband suspen. plate antenna with vert. grounded wall 83590
broadband triple gap-coupled triangular microstrip antennas 72509
buck PWM DC-DC converter with ref. volt. modul. feedforward control, anal. 99767
busbar differential protection, impedance-based CT saturation detect. algm. 133786
busbar elec. modelling, interconnection inductance, CAD 77131
busbar trunking systs. power freq. impedance studies *(Chinese)* 122969
capacitive micromachined US transducers, elec. impedance mismatch 111494
carbon cloth reinforced resorcinol formaldehyde aerogel films 79463
chiral coated conducting cylinders, RCS computation 75174
circ. impedance cylinder with anisotropic surface impedance, long. E1 excitation 117671
circ. polarised cross-aperture-coupled microstrip antenna, cavity model 105894
circ. polarised rect. microstrip antenna anal. 83532
circ. printed antenna, dimens. reduction 83589
class-F power amps., max. flat waveform operation 68623
CMOS current conveyor design 114869
coil loaded monopole antennas, meas./computed results comparison 94170
compact handset antenna, design 83719
compact microstrip antennas with ground plane loaded slots 83519
compact microstrip patch antenna with rect. slot 72507
compact pentagon microstrip antenna with circ. polariz. 117804
compact semi-disc microstrip patch antenna with improved bandwidth 94149
compensated neutral grounded MV power systs., high impedance fault detect. 77662
conductor, rect. cross-sect., internal impedance 102756
conductor backed CPW with etching, mode matching 94110
conductor corners and edges, surface impedance boundary conditions 128685
coord. overcurrent protection scheme, computer operated 99401
coreless PCB transformers, fund. struct./charact. *(Chinese)* 102787
CPW, asymmetrical, charact. impedance and effective dielec. const. *(English)* 80172
CPW/coupled struct., quasi-TEM anal. 102496
crit. clearing angle calc. based on syst. impedances 88381
current tunable CMOS operational transresistance amp. 125244
current-mode multifunction filter using CMOS dual output CCIIs/grounded pass. elements 68891
DCS base station broadband probe-fed patch antenna 131256
decade wide bandwidth integrated LNA, 0.4-8 GHz, act. antenna appl. 125784
design-oriented meas.-based fully scalable CPW transm. line model 114932
diamond:B nanoporous honeycomb electrodes for elec. double-layer capacitor appls. 102769
dielec. resonator antenna with displaced conformal strip feed 72548
differential protection stabilisation, uncertainty modeling 77561
digital fault location algm., fault grounding impedance considerations 112182
dist. protection, power swing blocking, max. line loading, Iran 99398
double-folded capacitive-fed cavity-backed microstrip antenna 117792
dual polariz. stacked microstrip patch antenna array, airborne SAR appls. 128893
dual stripline params. for multilayer PCB design 125650
dual-freq. planar printed antenna, microstrip fed, design and anal. 94150
dual-mode stepped-impedance ring resonator for bandpass filter appls. 91186
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
eddy current flaw inspection, probe impedance change, 3D FEM model 101631
electroactive polyimide, dielec. relax. spectrosc., permitt., impedance 125116
ELES antenna for mobile satellite terminals 83583
ELF sources enclosed by nonlin. ferromag. pipe, EM fields 72171
EM scatt. from 2D large-scale impedance random rough surfaces 72266
EM simulator for reson. anal. of microwave cylindrical cavity 72434
EM wave scatt. from imperfectly conducting circ. disc, full wave anal. 105716
embedded antenna in composite medium, EM anal. 83633
embedded generation, loss of earth detect. 77495
F-probe-fed broadband patch antenna 128871
FACTS dist.-protected transm. lines, apparent impedance calcs. 99326
fault current limiters, thyristor controlled series compensator appl. *(Japanese)* 99420
FDTD anal. of stacked microstrip antenna with high gain 94167
finite microstrip antennas, SEMN method and ENSEMBEL software, comparison 94146
FM-type wireless CMOS MI sens., magnetis. magneto-impedance effect in amorph. wires *(Japanese)* 109937
folded dipole, self-balancing antenna 72544
FR-4 PCBs, impedance/propag. delay charactn. 125864
fractal antenna research at Univ. of Birmingham 83569
gas sens., electroacoustically coupled resonator config. 132054
general filter sects., direct synthesis method 101685
GIS, PD sig. propag./location, freq. components comparison 134278
GMI, smart materials, mag. field sens., reviews 101531
grating-mode-type SAW resonator for VCO, fab. method and optimum electrode finger shape 127269
Green's dyadic fns. for planar stratified bianisotropic media, unbounded/scatt. field representations 105712
Green's fn. for rough surface with Dirichlet/Neumann/impedance boundary conditions 72270
ground surface image reconstruction using radio ground waves 111381
ground surface tomographic imaging, ground wave use 88097
H-polarized plane wave incidence, reson. scatt. from slit coupled cylindrically eccentric impedance cavity 72239
H-shaped microstrip patch antenna 72542
half wavelength dipole antenna, radiation impedance in terms of Bessel fns. 105921
HDI multilayers, low cost, using power mesh archit. 100599
HDI PCB technol., influence on sig. integrity 124368
helical slow-wave struct., space-harmonic effects, equiv. cct. anal. 69460
heterostruct. barrier varactors for freq. triplers, fab./charactn. 69154
HF radiowave propag. over sloping coastal land 72308
HF thickness-shear-mode resonators, impedance anal., chem. sens. 97434
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
high impedance faults, boundary protection relays 99395
electric impedance continued
high output impedance current-mode multifn. filter with dual output C 91045
high-impedance grounded systs., fault locating sigs. anal. 133819
high-speed PCBs, ground/power planes discontinuities effects 69298
Hilbert curve fractal small reson. antenna for VHF/UHF appls. 72591
hollow wedge, normally incident plane wave diffr. 117660
homog. elec. long line excited by AM sig. with suppressed carrier, second params. 72403
HTSC multilayer conductor, effect of interlayer insulation on transport AC 70665
HTSC thin film, surface impedance charactn., CAD algm. 127419
HV transm. line, high impedance arcing faults detect., wavelets 77650
HV transm. lines, dist. protection settings, capacitor insertion effects 7751
hybrid act. power filter, harmonics detect. design *(Chinese)* 112741
IEC/EN 61000-4-6 EMC tests, injection clamps appl. guidelines 83377
IM neg. seq. impedance, closed rotor slot effect 134019
induction heating, HF transformer, design, testing 113146
induction heating, surface impedance, 3D finite element model 134646
induction heating appls., nonlin. surface impedance, thermal effect 134641
infinite planar waveguide phased array antennas, scan range enhancement 94
inhomog. media shields and filters anal. 105798
inhomog. planar boundary beyond layered media, surface impedance 1176
instrum. transformer calib., impedance synthesis methods 115094
integrated lens antennas, radiation props./input imped., effect of internal re 83541
interior PM IM drive, sensorless posn. control, posn. estim. 134486
inverted trapezoidal pulse antenna improvements 94134
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance chara 126215
Josephson fluxonic diode supercond. X-ray/MM wave detector 71172
Ka-band array elements for ATM-Sat terminal antenna 72670
L-band Doherty FET power amp. with unbalanced topol., design 91265
L-band EMI/sig. meas., pass. strip biconical antennas 72530
L-probe low-cost patch antenna array 72689
L-probe-fed shorted broadband semicircular patch antenna 83649
leaky two-layer stripline, voltage defn. consistent with, charact. impeda 94105
line-charging capacitive current interruption, direct/synthetic tests 78052
LMDS band wideband microstrip patch antenna design 72613
loop antenna in cold magnetoplasma, current distrib./input impedance 7251
lossy power/ground planes, impedance calc., reson. effect 114589
low-noise act.-RC low, high and band-pass allpole filters using impedance tap ing 102369
low-profile bi-directional cavity antenna with broadband impedance chara 117775
Luebbers/Maliuzhinets wedge diffr. coeffs. in urban channel modelling, comp son 94043
LV high output impedance tail current source and differential amp. appl. 90
MacDonald-black and anisotropic flat coating models, EM wave refl. 1176
mag. component windings, broadband extended cantilever model 88966
mag.-insulated power transm. lines, effective impedance calcs. 88440
mag./metallic multilayers, 2D anal. of magnetoimpedance 81873
mains RFI filters design methodology 89035
med. transducer materials, tensor props., accurate determ. 111521
medium impedance and digital busbar protection selection *(Chinese)* 13378
microbatteries, fuzzy logic-based solar charge controller 112657
micromachined overlay CPW struct. with low atten., low-pass filter appl. 102
microstrip ccts. FDTD anal., resistive voltage source perform. 114952
microstrip circ.-slot antenna using spiral line *(Korean)* 117809
microstrip disk antennas with inhomog. artificial dielec. 83655
microstrip line, impedance of displaced slot in ground plane 72416
microstrip line on-chip interconnects on lossy Si, freq.-depend. param. 102
microstrip lines on magnetized ferrites with arbitrarily oriented bias field, f wave charactn. 69009
microstrip patch antennas, eval. of 2D react. integrals 72517
microstrip-fed slot antenna for MM-wave RFID syst. 72563
microstrip-line-fed printed wide-slot antenna, bandwidth enhancement 9412
microwave component grading using vector NWA 69094
microwave transistor, perform. charactn. in load plane via imped. params. 912
MoM for compact large planar scatterers in homog. medium 83223
multi-inverter STATCOM transformer syst., equiv. short-cct. impedandan *(Chinese)* 122807
multi-layered CPW directional couplers, num. charactn. 69044
multi-wave/half-wave spot welding, const. current control *(Chinese)* 89475
multilayered microstrip anal. for microstrip moisture sens. design appl. 1095
multiple-conductor power cable systs., short-cct. impedance calcs. *(Germa* 133739
MV cable network, fault location method 77320
MV distrib. systs., high impedance fault detect., fuzzy decision making 773
narrowband ultra-low VSWR cable assemblies 69291
no-load transformer switching surges, transient overvoltages calcs. 77931
nonuniform coupled-lines, null point perturb. and coupling control *(Kore* 117747
nonuniform helix diam. helical antennas 128846
nonuniform transm.-line approach for bends and discontinuities modeling 724
nonutility generator shaft torque under voltage sag, fault current limiter eff 99629
normal mode spherical helical antenna for mobile commun. 72580
oil containers, lightning strike, current distrib., nonlin. ground impedan 133793
organic LED, charge injection props. 105019
overhead conductor, lightning surge overvoltages, effect of snow 99384
P(VDF-TrFE) electrostrictive copolymer, electromech. coupling factor 1043
package, split power planes 113671
parallel conductors syst., imped. boundary condition use in imped. calc. *(Slo nian)* 117723
pass. microwave networks, line impedances calc. 69082
PCB decoupling capacitors, optimal placement method 69301
PCB trace width meas., automated/manual methods 69325
PCS and IMT-2000 base station wideband microstrip array antenna desi 117828
PEDT-RuO_x composite electrodes, electrochem. and impedance props., capaci appls. 99890
PEM fuel cell, CO tolerance, AC impedance spectra 89169
pentagonal planar monopole for digital mobile terminals, bandwidth/modelli 83591
photonic cryst. waveguides, 1D model theory 104656
piezoceramic inertial actuator, mech. impedance of struct. detect. 127259
piezoceramic material tensors ident. from elec. imped., iter. reconstr. 10432

ctric impedance continued
piezoelec. ceramic force sens., static charact. *(Japanese)* 97190
piezoelec. stack resonator, complex mater. consts., imped. reson. 104435
PIFA/helical antenna on different ground planes, simulated impedance bandwidths/gains/radiation patterns/SAR values 83520
PIFA/small patch struct. for mobile phones, capacitive/inductive loading influence 83623
pipelines/vessels, impedance/induction/skin effect heating, IEEE Standard 134650
planar microwave photonic bandgap struct., transm. line-periodic cct. representation 102742
planar waveguide elec. dipole, wave excitation 83658
plane periodic slot array 83740
poly(3-hexyl thiophene) MIS diodes, freq. behaviour, Mott-Schottky anal. 70025
poly-4,4′-bis(butylsulfanyl)-2,2′-bithiophene film secondary cell electrode 99904
PoPD/PVA composite film humidity sens., AC impedance spectrosc. study 97215
power syst., static anal., load-flow method *(Chinese)* 133422
power syst. cascading tripping protection, voltage stiffness effect *(Japanese)* 99413
power transformer modeling for LF simul. 112592
power transformers, fast surges simul., adequate protection measures 112587
printed dipole and slot antennas, input impedance and efficiency 94136
printed dipole double sided elements, input impedance, terminal conditions 94140
printed monopole antenna, FDTD anal. 83570
probe excited rect. cavity-backed slot antenna, input impedance 83554
probe-fed rect. dielec. resonator antenna study 72610
PWM buck converter, RF conducted emission reduction 134148
PWM DC-DC converters, small-sig. symbolic anal. 99833
quadrifilar helical antenna printed on dielec. prism, anal. 72569
QW laser struct., small-sig. impedance charact. 82625
radio propag. in urban environ., 2D ray-tracing simulator 105749
radio receiver planning, noise/intercept point calc. 119869
rect. microstrip patch antenna with metal column, input impedance 72602
rect. patch antenna on uniaxial anisotropic dielec. substr., FDTD anal. 128845
rect. plate antenna with Ω-shaped slot 128873
reson. contrawound toroidal helix antenna 94129
Rosetta spacecraft, mutual impedance probe freq. response, long Debye length mode 76800
SAB low-Q band-pass act.-RC filter, impedance tapering effects 91051
scalp electrode impedance, infection risk, and EEG data quality 76289
self-organized QDs, carrier-dyn., appl. to LW sources and detectors 91774
sens. perform. specs. 97211
short dipole antenna in cold plasma, impedance anal. 128851
short slot in impedance surface, lossy-ground plane effects on radiation 128850
single-ended and differential impedance eval. in PCBs 80484
single-phase distrib. transformers, stray impedance calc. *(Spanish)* 134129
single-phase two-winding transformers freq., distributed-param. modeling 134134
slot-coupled microstrip antenna, theoretical anal. 72518
small antenna geometries, FDTD simul. using non-uniform mesh algm. 83608
small explosive mag. flux compression generator, HV generation *(Chinese)* 88950
Smith chart solns. 94077
SOFC single cells, syst. ident. modelling approach 99980
space plasma Langmuir probes, antenna-plasma coupling effects 133303
spherical helical antenna, input impedance and antenna gain 105903
spherical waveguide stat. irregular walls, EM scatt. 117743
spiral antenna inductive discharges, collisionless heating regime 117774
SSR damping, subsynchronous freq. impedance charact. *(Chinese)* 122771
SSR mitigation using TCSC 133433
stacked microstrip patch antennas design based on simple network model 105907
stacked shorted microstrip antenna for low cross polariz./wide-band 105877
stepwise varactor struct., freq. charact. 81198
supported lipid membrane on Si electrode, elec. props. 69773
surface field scatt. by impedance polygonal cylinder, PO currents 94020
surge impedance relay, anal., perform. *(Chinese)* 112154
surge impedance relay implement. scheme *(Chinese)* 123043
TCSC, freq. response calc. *(Japanese)* 89029
TCSC, state space simul., fund. impedance charact. 112747
TCSC impedance step charact., computer simul. studies *(Chinese)* 77258
TEM feed struct. for four-arm reflector impulse radiating antennas, optim. 72513
TEM transm. line with non-std. inner conductor, charact. impedance 72397
thermoplastic polyurethane and poly(ethylene oxide) composite electrolytes 112765
thiophene based conducting polymers, electronic QCM/quartz cryst. impedance meas. 125109
tomography reconstruction algm. using EKF 129456
transformers, low impedance restricted earth fault protection 77934
triangular planar monopole antennas, EM coupling 128863
tuner, freq.-variable reson. unit cell 80247
U-slot stacked microstrip antenna, effect of shorting posts or vias 94148
UHF bodyworn antenna systs., num. anal. 72460
UHF high-directivity patch antenna with photonic bandgap struct. 105871
ultrawide band TEM antennas, radiation procs., num. simul. *(Chinese)* 105883
underground and overhead conductors, mutual impedance *(Chinese)* 133753
underground transm. cables, digital dist. relaying algm. *(Korean)* 77552
US sig. detect., useful echoes ident., parallel comput. 107588
V- and W-shaped shielded microstrip lines on anisotropic medium, FEM anal. 105840
vee wire scatterer carrying TW current, RCS reduction 131627
VHF normal mode helical antenna anal. close to human abdomen 72614
voltage pulse transm. along coaxial cable, edge distortion 123003
voltage pulses distortion in coaxial cable, UHF device power supply *(Russian)* 96343
VSI IGBT perform., cct. parasitic impedance effect modelling 88921
wedge, plane wave diffr., weak radiation condition 128751
Wheatstone bridge transducers, single-element impedance var. anal. 97192
wideband double-T-shaped microstrip-line-fed slot antenna 105911
wideband microstrip patch antenna design for LMDS band 83558
wideband planar monopole antennas, impedance bandwidth control using beveling tech. 117791
wideband printed microstrip antenna 94138
work environ. ergonomic factors effect on human body impedance *(Polish)* 67489
write channel front end for above 1 Gb/s recording, anal. and optim. 116471
AlGaAs-GaAs heterostruct.-barrier varactor diodes for 255 GHz tripling operation 91294

electric impedance continued
Au-mol. wire monolayer-Au jn., rapid electron propag. 115208
$(Ba,Sr)TiO_3$ PLD dielec. thin films, dielec. response and complex impedance spectra anal. 81632
$BaMO_3$ (M=Ti, Zr, Hf, Sn), humidity sens. materials 121298
$BaTiO_3$/Ni based MLC capacitor, dc-elec. degrad. 127280
C semi-infinite nanotube, EM wave scatt. anal. 105726
C-poly(3-methylthiophene) hybrid supercapacitors, perform. 113040
$Ce_{0.5}Gd_{0.4}O_{2\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
Co/SiO_x granular multilayers, intra and inter-plane spin depend. tunneling 127360
CoFeSiB ring shaped amorph. wires, GMI, mag. sens. 75486
$Fe_{84}Zr_7B_8Cu_1$ ribbons, effect of annealing on mag. props./magneto-impedance response 81816
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
$La_{1-x}Sr_xCoO_{3-y}/La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.2}O_{3-y}$, electrode react. 100020
$La_{1-x}Sr_xMnO_3$ based ref. electrode, potentiometric gas sens. 97525
$La_{0.6}Sr_{0.4}MnO_{3+\delta}$-YSZ SOFC cathode, complex impedance anal. 99972
$LaSrMnO_3$-Y_2O_3-ZrO_2, SOFC composite cathodes, impedance 100018
Li intercalation into graphite, symm. cell for electrochem. AC impedance 99918
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
LiCoO2, growth and studies for batt. electrodes 123770
$LiMn_2O_4$, growth and studies for batt. electrodes 123770
$LiNbO_3$:Ti opt. modulators, CPW electrode charact. imped. anal. 127829
$Li_4Ti_5O_{12}$ anode for all-solid-state, plastic, Li ion batts., prep., props. 134359
Mg/MnO_2 primary cells, ageing 89055
Mn oxyiodide thin film electrodes prepared by pulsed laser reactive deposition 99917
PLZT ferroelec. capacitors, zirconia incorporation, elec. fatigue 127278
PZT ceramic, piezoelec./dielec./elastic props., stress/DC bias effect 104327
$Sm_{0.5}Sr_{0.5}CoO_3$ porous cathodes used in SOFC, mechanism 112830
SnO_2-LaOCl mixed layers, electrostatic spray pyrolysis, gas sens. 125066
$SrBi_2Ta_2O_9$-Bi_3TiTaO_9, prep., structural behavior and ferroelec. response 81713
$SrBi_2Ta_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2(Ta_{0.9}V_{0.1})_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
a-V_2O_5-P_2O_5:CuO with metallic contacts, elec. props. 126250
$YBa_2Cu_3O_{7-\delta}$ thin films, power depend. impedance, harmonic generation 92884
$Y_{0.2}Ti_{0.18}Zr_{0.62}O_{1.9\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
Zn-Ag_2O rechargeable cells, separation comp. eval. 89106
$ZrCr_mFe_nCo_pV_q$ electrode for Ni-MH batts., electrochem. investig. 134355
ZrO_2/Pt interfacial impedance, equiv. cct. model, O_2 sens. appl. 97494
ZrO_2-Y_2O_3/Al_2O_3 composites, SOFC, modelling study 123796

electric impedance imaging
bubble column gas hold-up meas., elec. resist. tomography, ANN use 110057
bubbly gas/liq. pipe flow cross-correl. meas., dual-plane ERT syst. 110056
capacitance sens. for micro imaging in elec. tomography systs., particle detect. appl. 120738
computerized tomography, differential imaging 109921
EIT, elec. impedance tomography, applied- and induced-current, multiprocessor systs. 110622
elec. property enhanced tomography, simul. study 98206
elec. tomography in indust. appls., status 110503
EM inductance tomography, image reconstruction method 118267
engineered hydraulic barriers, elec. resist. tomography 86908
inverse EEG & MEG problem soln. using elec. impedance tomography 87431
liq./vap. two-phase flow visualization, elec. impedance tomography 132230
lymph nodes, suspected malignancy, elec. impedance scanning appl. 76310
med. & proc. impedance tomography, hist. & current develop. 110615
multifreq. elec. impedance tomography syst., frontend archit. 87423
multifrequency elec. impedance tomography for patient monitoring 121918
orthostatic fluid shift effect on bioimpedance meas. 132553
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219
proc. tomography, internal struct./electrodes model 109924
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
resist. tomography, bipolar DC pulse tech., core anal. 111389
resist. tomography, electrode array, image reconstr. *(Chinese)* 86909
resist. tomography sens., sens. field, soft field charact. *(Chinese)* 75411
resist. tomography using bidirectional current pulse tech. 109923
time-varying elec. impedance tomography image reconstr., EKF 109925
tomographic reconstr., regularis. method optim. 109927
tomography, Matlab based data proc. & anal. syst. 98204
tomography, smart sens., harsh environ. 121055
tomography DAQ, DSP based master-slave syst. *(Chinese)* 132585
tomography devices perform., quantitat. eval. *(English)* 98199
tomography image reconstr., FEM, error propag. simul 109926
tomography inverse problem, dual reciprocity BEM 132125
tomography of gravel-air-seawater mixture, neural network reconstruction 109471
tomography syst., electrode struct. optimum design 110616
two-phase flow elec. impedance imaging, sens. strategies anal. 121275
two-phase flows, sens. strategies sensitivity anal. 106507
unknown struct. tomography, inverse immersed interface anal. 132127

electric impedance measurement
see also electric impedance imaging; electric reactance measurement; electric resistance measurement
antenna testing in Taiwan, progress 72468
bioimpedance dyn., implantable lock-in analyser, mixed-sig. ASIC 110624
bioimpedance meas., orthostatic fluid shift effect 132553
bipolar supercapacitor electrodes, oxidized glassy carbon sheets 123847
busbar differential protection, impedance-based CT saturation detect. algm. 133786
busbar trunking systs. power freq. impedance studies *(Chinese)* 122969
cardiac fn. measures, impedance cardiography sig. fidelity requirements 121877
cerebrally dead adult patients, pulsatile elec. impedance response, perfusion changes 87392
charact. impedance meas. error, lossy substr. 97776
COMWIN vest antenna, fab./testing 105873
cylindrical eddy-current probes, spatial freq. spectra 114541
direct methanol fuel cell perform., anode flow charact. 89162
distrib. line, on-line impedance meter 133713
driver drowsiness detect., physiological measuring syst. *(Japanese)* 132580
dyn. biol. syst. charactn., multisine based impedance spectrosc. 110625
generator rotor AC impedance meas. *(Chinese)* 112468
haemodialysis, children, intercompartmental fluid shifts, impedance meas. 87796
harmonic oscillator appl., food sterility testing 121145
high-speed network meas. problems, appl. of TDR and VNAs 120682
IF precision refl. coeff. meas., imped. calib. stds., interpolation 120627
IF precision refl. coeff. meas., imped. stds., calib., interpolation 120626
immitance sens. params., computing instrumentation 109930

electric impedance measurement continued
immunosens. sig. transduction, chronopotentiometry, Faradaic imped. spectrosc. 97411
impedance std. calib., rem. controlled coaxial switch, pneumatic actuator 109416
interact. impedance meas., diffr. model 97778
light-addressable microelectrode chip, extracellular stimulation/recording 87450
liver graft rejection diagnosis, implant. telemetric impedance device 87449
lossy transm. lines, freq. depend. param. extraction, TDR/TDT 121167
LV AC motors, surge impedance meas., TW approach 99661
lysozyme adsorpt./conform. change on SAM obs. 121258
meshed underground cable networks, dist. protection setting 77532
NASWAVE program, standing waves display on NWA 86437
odour sens., thiol layer immobilised on Au, electrochem. imped. meas. 75715
one-ports impedance/two-ports S-params. meas. 86907
overhead lines, concrete poles, grounding lead conductor, surge impedance 99350
palmar skin, impedance locus meas., computer-controlled syst. 121951
piezoelec. vibrator for multifunctional meas. methods, sound vel., impedance meas 86499
power transformer inrush detect. using magnetizing impedance var. meas. *(Chinese)* 112605
power-ground decoupling dielec. films, broadband charactn. 121164
rail track as a lossy transm. line, params. meas. 89380
rail track as lossy transm. line, params. meas. simul. 89381
RF catheter ablation, heating efficiency prediction, bioimpedance meas. 111074
running H_2/O_2 fuel cell, filled polymeric membranes, control 123788
SOFC electrodes, polariz. procs. ident., impedance meas. 99965
solar cell AC params. meas., impedance spectrosc. setup 100040
substation grounding impedance meas. syst. 77670
thoracic elec. impedance, fluct. airway obstruction/coughing episodes monitoring 87444
tissue ischaemia monitoring using impedance spectrosc., neural networks appl. 110585
transm. line params., time domain spectrosc. meas. 109957
transplanted kidneys, rejection control, freq. depend. impedance, mixed sig. telemetry IC 98714
two-terminal, with residual correction, uncertainty anal. 132128
ultramicroelectrode arrays QC, voltammetry, EIS, electrochem. microscopy 86692
US transducers, capacitive micromachined, charact. in air using opt. meas. 111499
C fibre reinforced plastic, damage detect., impedance spectrosc. 114482
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
$(La,Sr)CuO_{3-\delta}$ SOFC electrodes, in-situ oxygen pot. meas. 89230
$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_3$ -$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
$La_{0.8}Sr_{0.2}MnO_3$-$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
Li batts., chlorinated PVC-based polymer electrolytes 89076
Li-ion batt., PVdF-based polymer electrolytes 89075
Li-ion three-electrode plastic batts., reliable impedance meas. 112811
$LiCoO_2$ cathodes, MCFC, current collector, contact corros. resist. 100007
$LiMn_2O_4$, PLD, thin film cathode, Li batts. 123755
Ni, H_2-H_2O|YSZ anodic SOFC syst., modeling, simul., expts. 89246
Ni/YSZ SOFC anodes, hydrogen oxid. rate limitations 89244
Ni-MH batts., AB_5 alloys, corros., decrepitation, XRD, spectrosc. 99909
Ni-YSZ porous cermet SOFC anode, electrochem. charact. 89247
NiO cathodes, MCFC, current collector, contact corros. resist. 100007
Pb-Sn passiv. layer perform., polariz. time/pot. effects *(Chinese)* 89066
Pb-acid and Ni-Cd batts., online AC impedance meas. tech. 89135
Pb-acid flooded batts., gassing reacts. impedance meas. 89085
Pb-acid small valve-regulated batts., dyn. charactn. 89089
Pd/ZrO_2-Y_2O_3 composites, dielec. props., EDLC 123849
SnO_2 gas sens. array, impedance charact., ANN pattern recogn. 97504
ZrO_2-Y_2O_3 TBC degrad., quantitat. NDE, impedance spectrosc. 114491

electric impedance tomography *see electric impedance imaging*

electric load *see load (electric)*

electric locomotives
see also motorcoaches
3-phase AC locomotive, rail-wheel adhesion ident. 89399
Austrian Federal Railways, traction department efforts overview *(German)* 78282
class EG 3100 Co'Co' bi-voltage elec. locomotive *(German)* 78274
Class Re 465 elec. locomotives for heavy-haul freight service 78235
Co'Co'+Co'Co' elec. twin locomotives for iron ore trains *(German)* 134509
German elec. rly. traction energy demand predictions *(German)* 78293
German Railways electrification overview, Year 2000 *(German)* 78280
ICE 3 elec. locomotive high-speed current collector *(German)* 78265
multi-syst. locomotives, traction drives, IGBT inverter, small snubber concept 89400
multi-voltage rly. vehicle reliab., MTTF/MTTR stat. uncertainty 134547
on-board energy meas. *(German)* 78261
Polish State Railways elec. traction operation overview *(German)* 78281
rly. depot voltage unbalance anal., two-port network model *(Korean)* 123997
SRM parallel drive syst. 124011
Swiss traction power supply grid, harmonics problems, EMC *(German)* 123983
three-phase IM selection criteria for traction appls. 100285
traction motors, mica-bearing polyamide insulation, life testing 100278
type-SS4 locomotive probabilistic harmonic currents modelling *(Chinese)* 78305

electric machine analysis computing
3-phase double-feed IM simul. in stable sync. operation 123483
3-phase inverter-fed IM, neural network based direct self control 123456
3-phase squirrel cage motor, bar/end-ring connector breakage faults diagnosis 123420
4-phase 8/6 SRM anal., nonlin. reluctance, SPICE model *(Japanese)* 112485
5-phase hybrid stepping motor anal., saturation effect 134088
asynchronised machines as controllable FACTS devices 122950
axial field disc-type double-sided BLDCM, PM excitation 88762
BLDCM, skewed slots, cogging torque, 2D/3D anal. methods 88757
brushless PM motor drives, SABER simul. 123899
converter-fed AC motor drives modelling for transients anal. appls. 134457
CRONE speed controller for sync. motor drives 89353
damaged IM perform. prediction, FEM appl. 133999
DC aerospace servomotors, ZVS convertor-fed, fuzzy-based speed control 123500
DC motor drive fault detect. using self-organizing neural nets 113085
DC motor drives, multi-model param./state estim. 123941
DC motor real-time PID speed/posn. control scheme 134070
DC motor state estim. approach 123499
DC motors, nonlin. models params. estim., lin. recurrent NN 99681

electric machine analysis computing continued
direct time-phase domain sync. generator model in EMTP-type packages 882
dyn. electromechanical device optimisation approach 123313
elec. drive control/elec. params. sizing proc. 123864
elec. drive direct torque control syst. simul. using MATLAB/SIMULINK *(C nese)* 100257
elec. machine ANN-based posn. estimator 123494
fault diagnosis, vibr. anal., DSP-based FFT-analyser 112515
five-phase reluctance motor drive, harmonic injection field oriented cont 134482
generator sync. using HWIR simul. 133921
grid-connected induction generator, naturally-commutated AC voltage cont 134001
HTSC bulk secondary lin. actuator studies 78098
hybrid EV novel drive strategy 123956
hydraulic generators, state params., on-line ident., ANN *(Chinese)* 123326
hydroelectric generating units, 3D dyn. simul. study *(Chinese)* 99579
IM, 3D time-stepping FEA, equiv. mag. cct. 133998
IM, DSP based speed sensorless perform. eval. tool 134029
IM, speed-sensorless vector control, NN speed estim. 78218
IM bar/end-ring connector breakages, data mining, FEM 134033
IM charact. computer-aided multimedia education 78532
IM drive direct torque control strategy studies 123876
IM end-rings EM field anal. approach *(Japanese)* 77872
IM mech. fault online diagnosis, ANN appl. 88735
IM rotor flux vector magnitude reconstruction, ANN appl. *(Polish)* 123404
IM speed sensorless control, rotor resist. ident. 134035
IM winding voltage distrib., PWM IGBT inverter effects 88728
IMs, broken rotor bar faults detect., on-line neurofuzzy approach 123422
induction capacitance motor, math. model, SIMULINK *(Russian)* 112504
induction servomotor HF mech. oscills., act. damping control 134039
induction servomotor robust adaptive nonlin. speed control 123480
inset NdFeB PM rotor three-phase AC generator perform. 123304
lap-wound DC machines, equalizer windings design 99686
large turbine-generator shafts, malsynchronization torsional torques 112471
lin. actuator design for small movements, 3D simul. 123506
motor starting calcs., Windows-based 133425
motors, fuzzy-neuro intell. fault diagnosis 78712
multiply-excited SRM, feedforward neural net-based models 88705
PM BLDCM, FEM-based torque ripple anal. 123489
PM BLDCM EM torque calc. *(Chinese)* 99685
PM machine struct. and EM params., design and anal. *(Chinese)* 133918
PM sync. servomotor syst., feedback lin. control *(Chinese)* 112476
PSpice simul. models for IM drives 113072
PWM AC motor drives, full digital sync. frame current regulator 134469
PWM invertor-fed IM drives, shaft voltage prediction model 134454
PWM VSI-fed AC motor drives, dead-time behavior simul. 123895
reluctance motor variable struct. robust speed control scheme *(Chinese)* 1339
rot. elec. machine simul., discontinuous FEM & Galerkin method 88672
salient pole sync. machine rotors, cooling/ventilation modelling 123362
sensorless squirrel cage motor control strategy for FPGA implement. 778811
single phase IM drive design and computer based fault detect. 100262
single-phase domestic appliance IM, computer simul. 123430
small PM motors, perform./brush commutation modelling 123524
SRM, cogging torque reduction, optimal pole shape design, simulated annealii 88711
SRM, dyn. simul., Matlab/Simulink environ. 123383
SRM controller LabVIEW implement. 88696
SRM modelling in MATLAB/MAPLE syst. *(Polish)* 123339
SRM sensorless control, on-fly phase resist. estim. 123368
switched reluctance machine systs., design and simul. software package 778
switched reluctance motor drives, models/simul. based on MATLAB packa 78228
switched reluctance motor operating as generator, digital simul. *(Chine* 77835
switched reluctance motor torque estimator, orthogonal neural network 8935
sync. generator, shorted field-turns, on-line NN diagnosis 77850
sync. machines reactances determ. from DC decay 123392
three-phase IM drive transient behaviour optim. software 123938
three-phase IM fault detect., stator current anal. program 123476
three-phase squirrel cage IM, sensorless speed control 112527
thyristor-based brushless PM DC motor drive speed control 89328
TORUS-type axial-flux surface-mounted PM disc machine design/anal. 1233
turboalternator transfer fn. estim. using spectral anal. 123371
vac. cleaners, universal-motors design methodology 124126
Web-based interactive e-learning software tool for power engng. 124274
wind micropower induction generators, sensorless power maximization alg 123252

electric machine CAD
automated design platform develop. 123321
compact PM motors, thermal charact. anal., Motor-CAD 123310
dyn. electromechanical device optimisation approach 123313
elec. drive control/elec. params. sizing proc. 123864
induction machine param. ident. by GA 123446
PM generator optim., neural net approach compared to FEM based sensit. an 133916
PM machine struct. and EM params., design and anal. *(Chinese)* 133918
sensorless brushless DC driver, LEQG/LTR controller design 112541
switched reluctance machine systs., design and simul. software package 778
three-phase IM drive transient behaviour optim. software 123938

electric machine control *see machine control*

electric machine testing *see machine testing*

electric machine theory *see machine theory*

electric machines
see also AC machines; brushless machines; DC machines; electric generators; electric motors; linear machines; machine bearings; machine control; machine insulation; machine testing; machine theory; machine windings; permanent magnet machines; rotors; small electric machines; stators; superconducting machines
acoustic noise/vibr. reduction design approaches 133924
annealed amorph. mag. cores, power loss, permeab. 99630
annealed amorph. mag. cores, power loss, relative permeab. 88678
automated design platform develop. 123321
axial airgap machines, conf., Birmingham, UK (May 2001) 89524
condition monitoring of rotodynamic mach., use of wavelet transform and neu net 123276
eddy-current brake anal., FEM calcs. 123297
eddy-current brake anal., FEM calcs., appl. 123298
eddy-current brakes, dyn. model, FEM 123284

ectric machines continued
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
FEA in magnetism 99608
ferro-/ferrimag. materials, losses, modified Steinmetz eqn. 92782
freq. anal. using virtual instrum. 123309
hermetically enclosed elec. machines, precision meas. *(French)* 113089
IEEE MELECON conf., Lemesos, Cyprus (May 2000) 113196
insulation diagnosis, anom. Δtan δ phenom. *(Japanese)* 88689
intermittently used machine reliab., additive nonparametric logistic regression anal. 112464
inverse problems and optim. in electromagnetism, conf., Torino, Italy (2000) 113191
Lagrange-Maxwell eqn., rot. elec. machine dyn. model anal. *(Chinese)* 88686
loaded machine shaft, dyn. stabil., axial compression, mag. tension 123277
mag.-saturated electromech. devices, steady-state FEM anal. 123292
modeling, unified wavelet-based approach 123305
num. field computation, conf., Graz, Austria (Sept. 2000) 78387
power installation automation systs., elec. machines *(Russian)* 99633
power plant automation systs., elec. machines class. 123099
power/energy systs., develop., conf., Marabella, Spain (Sept. 2000) 113275
resolver-to-digital converter, elec. machine posn. meas. 123311
robust optim., stochastic FEM 77830
robust optimisation using stochastic FEM 112460
Roebel bars in slots, vol. forces at slot boundary, EM orig. 123336
rot. conducting disc braking torque, 3D transient mag. modelling 123289
rot. elec. machines with skewed slots, multi-slice FE modeling 133913
rot. machine diagnosis using blind separation of noisy harmonic sigs. 123279
rot. machine eddy current fields, fast anal. method *(Japanese)* 77816
rot. machines, time-stepping FE anal., converg. characts. accel. 133915
rot. machines, vibr. sigs., adaptive noise control *(Spanish)* 88681
rot. machines EM field anal. using FEM *(Japanese)* 77815
rotor windings interturn short ccts. detect. 133920
soft mag. material props., punch proc. effects 123295
spatial doube-helix element based electromechanical converters 123578
spec. guidelines 123300
subordinate control syst. current/speed regulator design 112456
teaching, OO software 123308
thermal params. ident. method 77806
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
vibr. class. using evol. spectrum 118880
winding conductors, 3-D FEM-based eddy current calc. 133930

ctric motor control *see machine control*

ctric motors
see also AC motors; DC motors; fractional-horsepower motors; linear motors; micromotors; motor drives; motor protection; permanent magnet motors; piezoelectric motors; stepping motors; torque motors; traction motors
2 kWh flywheel motor-generator, PM/HTSC bearing expts. 78186
automotive air conditioner variable displacement compressors, control valve develop. *(Chinese)* 134572
burned windings removal, heat effect on mag./material charact. 123299
constr. mach. unstructured obj. attitude/stabil. control 134322
control systs., intell. devices/networks integrat. 133942
deflated iter. solver for magnetostatic FEM with large permeab. differences 93968
digital motor motion control, Windows-based develop. environ. design 123320
DSPs for controller designs 68847
dual full-bridge motor driver IC family for indust. motion control 114604
efficiency under practical conditions 88687
energy efficient motors and life cycle costing anal. 123331
FA-425 fly frame speed sync. control syst. simul. *(Chinese)* 124149
fault detect. tech. for elec. motors 78692
flywheel energy storage syst. using HTSC mag. bearings 78183
flywheel high-T_c supercond. mag. bearings, drag torque expts. 78184
HDD spindle motor, electromechanical-coupled field anal. *(Korean)* 77900
hybrid-type self-bearing small slice motor develop. 134097
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (May 2001) 113283
in-service/nonintrusive motor efficiency testing methods, lab. assess. 88677
internal combustion engine turbocharger motor-generator design 100302
low-cost high-force inchworm actuator develop. 134321
marine electromechanics trends, supercond. propeller cryomotor, cryogenerator 113104
miniature flywheel syst., hybrid mag. bearings H^∞ control scheme 78187
motor bearing systs., anti-friction rolling element, lubrication 123329
MV motors, stator failure modes, field testing, condition monitoring 123328
networked-intell. motor control systs. 133944
oil indust. fine water mist fire protection syst. 134709
PD sigs. noise removal, wavelet based 84383
petroleum indust., power distrib. over long dists., design 134692
plant equipt. failures, early detect., JIT maint. 99518
power electronic equipt., touch/protective conductor current meas. *(Polish)* 99831
pulp and paper indust., machines, power systs., conf., Portland, OR, USA (June 2001) 113258
PV water-pumping syst., daily pumped vol. determ. 124163
small elec. motor design, size/wt. minimisation 88776
smart domestic appliances control using microcontroller-based triacs 78352
starters, UL 508 comparison with IS 13947 (Part-4/Sec 1) 1993 123332
starting, service quality measures 123322
starting calcs., Windows-based 133425
starting methods, advantages, limitations 77805
supercond. generator/motor develop. , power syst. appl. *(Chinese)* 77828
supercond. motor technol. develop., HTS wire technol. 112458
syst. engng. of elec. machine components 67511
theory/operation primer, tutorial article 133943
two-inertia syst. vibr. damping property *(Japanese)* 77818
universal digital motor control proc. for indust. appls. 123319
universal motor brushes, bedding-in proc. *(German)* 112448
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
winding of toroidal coil, automation 92860

ctric networks *see networks (circuits)*

ctric noise measurement
ADC dyn. test setup, timing jitter contribs. meas. 80013
American Nat. Standard for LV elec./electronic equipt. radio-noise emissions meas. 97120
analog cct. internal noise calc./meas. for noise effects reduction 132150
bipolar transistors, LF and HF noise level rels. 70053
CMOS mixed-sig. chip, substr. coupling meas. 114892

electric noise measurement continued
co-channel distortion and noise power ratio meas. 109962
EMC, conf., Wroclaw, Poland (June 2000) 67408
EMC, current waveform, detect. through perturbing instants meas. 105779
emission meas., loop antennas, calib. 86942
fast noise meas. procedures, uncertainty 75852
freq. multipliers and dividers, testing techs. 91129
generalized act. phased array antennas, syst. charact. 94189
high sensitivity noise meas., time domain, two channel spectrum analyzer 120683
HV substations, EMI monitoring 78081
IC interconnect coupling, peak noise and delay meas. 116016
IM drives, PWM inverter-fed, HF conducted EMI modelling 123925
microwave HEMT parasitics charactn., S/noise param. meas., calib. 102635
microwave transistors, charactn. techs. for temp. depend. expt. anal. 114982
MM-wave on-wafer testing facilities, room & cryogenic temp. 80328
MOSFET HF noise param. de-embedding procedure, metal interconnect capacitive effects 103887
MOSFET induced gate noise/channel thermal noise by RF noise meas., extraction/correl. 102655
MOSFET LF noise meas. for mixed-sig. LSI & SoC, noise model *(Japanese)* 81512
nonlin. devices noise fig. meas. 121175
OLED, cond. phenom./degrad. monitoring, current noise meas. 71580
on-wafer 1/f noise meas./charactn. syst., robust 109464
pass. lin. component third harmonic testing, review 113453
PC based microwave phase-noise meas. syst., 1.25-2.5 GHz 109433
phase noise meas., DSP approach, over-sampling 121174
PHEMT meas.-based distributed noise HEMT model 80311
piezoresistor, thick film, metallic substr., excess noise 91412
power ratio meas. 109963
PWM buck converter, RF conducted emission reduction 134148
radiated emission source visualization based on CISPR meas. syst. *(Japanese)* 72379
radio transmitter, adjacent channel transient power meas., wavelets 75288
radiotransparent antenna dome, noise temp. meas. 117773
RF/microwave commun. systs., nonlin. distortion characterisation 85478
satellite broadcasting, continuous G/T meas. for receiving antenna systs. 74879
semicond. device noise charactn., extraction techs. and CAD procedure 86943
sinadmeter 96370
smart sens. closed-loop meas. channel, noise detect. algms. 109825
solid-state devices, low temp. DC/noise meas., automatic syst. 75376
substation equipt., HV network switching, conducted immunity requirements 134287
substation HV equipt. state diagnosis, HF EM noise meas. 78082
thick film resistor materials/struct., noise meas. method 125842
thick-film resistors, LF noise, quality and reliab. indicator 69333
two-port under test, noise fig. meas. uncertainty due to low gain 75851
uncertainties in noise param. meas., eval. 75853
VCXO, high precision, phase noise meas. using PLL-type freq. multiplier 114660
VLSI design, deep-submicron interconnects 81481
Wi-Fi (802.11b) and Bluetooth systs. coexistence 120008
YBaCuO resistively shunted double jn. SQUID, Josephson linewidth, temp. depend. 70972
n-GaAs-AlAs DBR laser mirrors, elec. noise characterisation 71799
NiFe/Al_2O_3/NiFe tunnel jns., noise meas. *(Japanese)* 91926

electric potential
see also contact potential; overvoltage; surface potential; voltage control; voltage measurement
anisotropically conductive adhesive, elec. conductance 78633
anticipatory effects in relativistic electromagnetism 105664
buried rod electrode, pot. distrib., grounding resist. *(Japanese)* 88489
charged oil metal vessels, lightning protection systs. 128665
composite dielec., elec. field by curved surface charge method, elec. flux continuity *(Japanese)* 72162
cylindrical problem, method of lines soln., radial discretization 83454
devitrified fused quartz, stress-induced pyroelec. props. at elevated temp. 104306
dipole antenna, transient response using summation approach in tech. 72588
elec. short two-conductor transm. line driven by random plane wave field, response probabilistic model 72406
EM scatt. by penetrable bodies, pot. integral eqn. method 83225
EM scatt. by penetrable bodies, pot. integral eqns. method 93993
EMF stds. comparison, virtual instrum. based syst. 120646
flux-linkage polarity convention proposal 93963
galvanically separated grounding grids and grounding systs. determ. 112181
gate oxide reliab., transistor-limited const. voltage stress test 126946
Hermite coupled transm. lines, time-domain anal. 83451
human-body capacitance calc. by surface charge method *(Japanese)* 128667
hybrid PM sync. machine topol. struct. 123386
microstrip cylindrical antennas anal., efficient Green's fns. calc. 83566
MoM for compact large planar scatterers in homog. medium 83223
MOSFET, 3D drift-diffusion simul., random dopant model 126620
MPIE with general elec./mag. sources, multilayered media Green's fns., Hertz pot. approach 102505
polymer resistors, charact. instabil. investig. *(Russian)* 69259
pot./field generated by triangular surface charge, high-order charge dens. distrib. *(Japanese)* 83091
radial MV distrib. network calc., load params. influence 112052
scanning Kelvin probe microsc., electrostatic pot. meas., cantilever effects 97770
semicond. devices, fluct. phenom., num. modeling 92272
semicond. microscopic pot./free carrier distrib. theory, Debye Huckel approach 80628
shielded interconnect four-line syst., mutual capacitance, inductance 69944
sing. wire antenna kernel, efficient integral transform tech. 72536
single-chamber SOFC, exothermic react. as heat source, cell perform. anal. 112820
smart composite plates, nonlin. actuation, coupled piezoelec.-mech. model 114478
smart piezoelec. beams, Bernoulli-Euler beam theory correction 114475
special pot. distrib., electrode config., tensor calculus 72163
stepwise varactor struct., freq. charact. 81198
sulfonated polystyrene-PVDF blends, cation-exchange membranes, proton transport 112834
thyristor, 6kV, direct wafer bonding prep. 126700
thyristor, base resist. controlled, trench gate struct., self-align corrugated p-base 126699
two-wire transm. line excited by oblique plane wave 94076
vector/scalar pot., general expressions 117622

electric potential continued
waste disposal seepage control sheets, damage detect. method *(Japanese)* 67678
X-ray laser lines, Gauss broadening by at. nuclei elec. pot. fluct. 117085
GaAs-AlGaAs n-N heterojunctions, band-gap offset estim. using J-V-T charact. 69647
$LaFeO_3/Y_2O_3$-ZrO_2 electrochem. NO_x sens. 109743
N_2 liq./solid composite insulation syst., PD inception, thermal bubble condition *(Japanese)* 81724
Ni ferromag. rod, effective field estim. by magnetoacoustic effect *(Japanese)* 127328
PZT piezoelec. transducers, static/dyn. electromechanical response 116204
Si microstrip detectors, guard strip concept for better field distrib. 121441
Si microstrip detectors, guard-strip concept, elec. pot. and field profiles simul. 132374
SiC, 4H, p-n diodes, anom. forward voltage increase, cryst. defects influence 70009
SiN_xO_y/Si(111) interfaces, photoinduced NLO diagnostic 82882

electric power generation
see also cogeneration; ocean thermal energy conversion; power generation control; power generation dispatch; power generation economics; power generation faults; power generation planning; power generation protection; power generation reliability; power generation scheduling; power plants; power stations; space power generation; wave power generation
36-pulse HVDC transm. for rem. sited generation 133591
2001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Feb. 2001) 100393
adequacy in deregulating elec. utility environ. 111705
Asian power generation prospects, environ. effect/strategy 99445
bulk power syst. restoration, generating units start-up optimisation 111816
clean energy delivery, power electronic devices as enabling technol. 114610
climate change mitigation with renewable/high-efficiency generation 99456
competitive generation market simul. model, paper discussion 133513
dispersed generation connection, flexibility/transparency enhancement 133823
dispersed generation connection requirements, safety, protection *(English, French)* 133824
dispersed generation connection to distrib. networks, voltage control *(English, French)* 133621
dispersed generation connection to French power grids, legislation *(English, French)* 133827
dispersed generation connection to MV betworks, Praogen software *(English, French)* 133826
dispersed generation units connection to EDF's rem. control syst. *(English, French)* 133825
dispersed-source power syst. advanced meas. syst. 77652
distrib. grids with diffuse generation, operating/planning issues 133624
distrib. network topol. influence on voltage sag propag. 99345
distrib. networks, independent generators, voltage control issues 133620
distrib. syst. dispersed generation interconnection, voltage charact. improvement *(Japanese)* 133673
distrib. syst. protective device coord., distributed generation effect 112057
distrib. syst. reliab. improvement using dispersed generator inform. exchange 112028
distributed generation, grid connection, switchgear 123103
distributed generation, impact on power syst. *(Chinese)* 122792
distributed generation approach for carbon emissions reduction 99443
distributed generation in competitive elec. markets, defn. 88315
distributed power generation 130984
distributed power generation microgrids 112021
distributed power generation technols. in crit. elec. power infrastructure 112207
embedded generation, loss of earth detect. 77495
embedded generation, loss of mains detect. algm. 77493
emerging indust. trends, insurer's perspective 122801
Estonian energy sector transit., develop. trends 99225
excitation-syst. params. estim. using tabu search algm. 112209
Federal Republic of Yugoslavia elec. power syst. functioning *(Serbian)* 122828
generator contrib. to line reactive power flow 77179
global elec. power mgt. syst. *(Chinese)* 133480
green power generation develop. in West *(Chinese)* 99195
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 2001) 124221
IEEE MELECON conf., Lemesos, Cyprus (May 2000) 113196
indust. IPP generators, utility interconnection protection 77520
interconnected power syst. governing response modeling 111752
interruptible load carrying capability 88334
Korean energy-related carbon emissions, time-series anal. 123096
LAPER rural elec. planning software *(English, French)* 133567
LV power distrib. networks capacity improvement provisions 133647
market-based generation adequacy, ISO perspective 111706
merchant power companies, compliance mgt. programs tailoring 122824
micro-turbine generators, dispersed generation perform. charact. 112478
microgrids, dispersed elec. source LV distrib. networks 112022
nonresidential green power demand, public goods/private interests 123110
optimal load shedding strategy in power systs. with distributed generation 111751
private power projects, project develop., risk mgt. 88507
rural distrib. networks voltage support using embedded generators 99342
Russian power security, regional aspects 111911
Sulzer Hexis SOFC technol., residential fuel cell syst. 89177
UK elec. distrib. utilities, challenges due to distributed generation 111815
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
US competitive wholesale elec. markets overview 111707
US elec. markets comparison for Chinese power indust. *(Chinese)* 99196
US microgrid pilot demons. projects 122830

electric properties
see also dielectric properties; electrical conductivity; flexoelectricity; photoelectricity; thermoelectricity
diamond and related materials, conf., Porto, Portugal (Sept. 2000) 67401
Rosetta mission, antennae for cometary nucleus sounding 83301
C, amorph. & nanostructured, conf., Boston, USA (Nov/Dec 1999) 67389
ITO thin films, reactive thermal evaporated, opt./elec. props., AFM study 93307

electric propulsion
see also electric drives; electric vehicles; traction
36 V Pb-acid batt., vehicle appls. 78298
55 kW traction SRM drive, closed-loop torque control 134534
ATON-thruster plasma accelerator, perform. charact. 76819
BLDCM drive syst. for EV appls. 123960
DC lin. channel MHD propulsor, coupled field anal. 123993
electrostatic thruster, microwave engine, operational charcts eval. *(Japanese)* 88076

electric propulsion continued
encoderless IPM traction drive control for EV appls. 134532
EV, IM drive design, vector control 124005
EV propulsion, IM drives, optimum speed ratio 89376
EV propulsion SRM design studies 134533
fuel cell-powered hybrid vehicle drive train, systematic design approach 123
HEV auxiliary power unit lin. alternator/engine syst. design 123963
hybrid EV commercialization, batt. cost/life issues 89404
IM-generator traction set develop. 134545
lin. EHD charged particle source, elec. space propulsion 110223
lin. sync. motor for vert. transportation, leakage and end effects study 134
lin. sync. motors, propulsion/levitation forces calc. 88771
LV SRM drives for more elec. car concepts 123966
marine electromechanics trends, supercond. propeller cryomotor, cryogener 113104
multi-level converter, voltage-source duty-cycle modulation 134536
reduced parts-count multi-level rectifiers, naval ship propulsion 134521
ship propulsion large PM sync. motors, thermal anal. 123972
SRM fully-digital PI current controller, vehicle propulsion appls. 133963
submarines, elec. propulsion systs. *(Russian)* 123995
transverse flux PM motor, cogging torque assess. 123971
vehicle AC motor drive soft-switching inverters comparison 134203
vehicle SRM sizing calcs. 124002
Ni-MH traction batt. syst., charge perform. 112789
Xe second-generation ATON-type plasma thruster, radiation and energy char 76820

electric reactance
see also capacitance; inductance
3-phase 4-wire syst., neutral current harmonics compensation by synchron machine 122978
500 MVA hydrogenerator reactance calc. using FEA 123237
automobile 42/14 V PowerNet, DC/DC converter topol. 78318
complex coeff. BPF synthesis based on real coeff. BPF 80026
ESPAR antenna, adaptive beamforming using seq. perturb. 83761
ESPAR antennas, Hamiltonian approach to reactance optim. 72679
foundry AC arc furnaces, arc modelling, arc power control 113165
HV/EHV transm. line, earth-fault reactance relays based on fault-compon *(Chinese)* 88478
inductive type HTS fault current limiter, sync. generator unit protection 133
large hydrogenerator reactance determ. using FEA/domain decomp. 133874
LDMOSFET broadband class E power amp., reactance compensation 1018
loudspeakers, low power audio amps. efficiency 120597
multi-secondaries concentric windings transformers, short-cct. reactan 123540
nonlin. transm. lines, heterostruct. barrier varactor loaded, solitons 105821
pattern control using reactively loaded loop antenna 83624
PFC AC-DC converters, energy mgt., reactance values control 99758
power distrib. lines dual power flow regulator *(Chinese)* 77260
power line reactance design air gap length calc. 111998
power syst. damping algm. based on phasor estim. 111892
power syst. load flow regulation scheme using controllable reactance *(Chine* 88359
quartz cryst. oscillator, low power design, PSPICE 81741
reson. contrawound toroidal helix antenna 94129
salient-pole generator model for harmonic anal. 133935
salient-pole sync. machines, steady-state mag. cct. anal. 123364
slotless sync. machine, supercond. field winding, reactance 88700
SSR damping, subsynchronous freq. impedance charact. *(Chinese)* 122771
static sync. series compensator, fault current limiting, syst. stabilisation 772
supercond. machine runner diags., superconduction effects modelling *(Germ* 112439
TCSC triggering algms., capacitor voltage increment control *(Chinese)* 99
three-phase variable act.-pass. reactance transient response 88361

electric reactance measurement
see also capacitance measurement; inductance measurement
cage-rotor reluctance sync. motor, params. meas. 133951
IM neg. seq. impedance, closed rotor slot effect 134019
insulation testing, 3-electrode meas. set with metal ring *(Polish)* 120689
inverter fed IM, transient reactances, rotor fixed saliencies 123911
small antennas meas. using NWA, drift error reduction/charactn. 83548
steel indust., strip speed determ., mag. contact-less sens. 132179
sync. machines reactances determ. from DC decay 123392

electric reactors *see reactors (electric)*

electric resistance
see also contact resistance; electrical resistivity; negative resistance
AC ccts. conductor resist. modelling, time domain anal. 80465
ALIVH any layer interstitial via hole substr., interconnection tech. 67562
aluminum and tantalum capacitors, polymer cathodes, ESR reduction 80450
antistatic floors electrostatic charactn. using equiv. cct. model 83133
arc resist. calc. 102884
arc resist. calc., new formula 102881
BG dielec. charact. MIL PRF 55681 capacitors, insulation resist. degrad. 115
bipolar Pb-acid batts., cladded materials, EV 89406
bipolar transistors, test struct. for parasitic resist. extraction 103782
BJT base resist./Early voltage charactn. using dual base transistor test stru 103783
buried rod electrode, pot. distrib., grounding resist. *(Japanese)* 88489
buried/surface LTCC resistors, DC/AC elec. props., long-term stabil. 12584
capacitor ESR reduction trend for portable electronics 115073
carbon cloth reinforced resorcinol formaldehyde aerogel films 79463
cascade power CT, shunt resist. selection 112609
cct. simul. based edge enhancement for image segmentation 106446
CMOS RF ccts., effects of gate resist. on perform. 69177
COB glob top encapsulant curing, variable freq. microwave proc. 78641
Cool MOS, low on-resist. MOS-gated power device, MOSFET/IGBT comp sons 115881
counterpoise grounding resist. impulse charact. modelling *(Japanese)* 1121
cpd. earthing network grounding resist. calc. method *(Chinese)* 123053
DC coil, magnet startup phase, skin effect 128717
DC power supply syst. stabil. simul. anal. 88896
deep submicron design, state of art and trends in parasitic extraction 10406
defective MLC capacitors, elec. test data anal. effectiveness 115074
distributed RLC interconnects, anal. of on-chip inductance effects 126963
elec. filter microsecond power supply for efficiency improvement *(Russi* 93982
elec. gun, reusable pulsed lin. mag. flux compressor, model *(Chinese)* 9398
fast rise time HV pulse generator, modified Marx generator *(Korean)* 1235
FDTD method for simul. of transm. waves through multilayered thin conduct sheets 105714

ctric resistance continued
ferrite ceramic chips, Cu electrode glow discharge deposition 115098
FET microwave amp., nonlin. transfer charact. anal. 125713
floating island power MOSFET struct., lateral/vert. 81310
foil resistor, zero TCR, ten-fold temp. coeff. improvement 115043
galvanically separated grounding grids and grounding systs. determ. 112181
generator stator windings, ground-fault protection syst. operation 99616
glob top encapsulants, surface insulation resist. perform., temp./humidity 67567
grounding elec. in lightning current conditions, perform. eval. 133777
Hall effect in weak mag. fields 102952
high power dens. microtransformers, fab. techs. 80458
HTSCs, phenomenological model for microwave surface resist. 70610
humidity sens. selection, capacitive/resistive/thermal cond.-based technols. 109520
IM, on-line stator resist. estim., temp. monitoring 134031
IM drive, rotor IGBT chopper control 89319
IM drive, sensorless control, on-line param. ident. 123912
IM drive, sensorless DTC, adaptive stator resist. estim. 113083
IM drives, speed sensorless vector control, nonlin. inverter model 134487
inductive heating converters, capacitive/leakage currents, hazard sources *(Polish)* 78340
isolated self-excited reluctance generator, min. loading resist. 77846
ITO/SiO_2/PET transparent conductive films, SiO_2 anchor layer, resistive touch panel appl. 109910
JMTR, strain meas. under irrad., capsule type strain gage *(Japanese)* 75894
lateral power devices. radial confine. 81259
LDMOSFET with double epi-layer/trench electrodes, num. anal. 81308
lightning return stroke base modelling approaches 72173
low-AC-resist. planar/foil wound inductors, quasidistributed gap tech. 80460
LTCC resistors, elec./stabil. props., US microscope characterisation 69263
measuring cable, resistive for field-probe meas., unit step response anal. *(Japanese)* 132119
MEMS/electronics integrated technols., co-fab. proc. seqs. 81543
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 115077
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 115076
MOSFETs, HF/small-sig. behaviour, nonquasi-static effects 69148
MOV, oxygen role at grain boundary 91407
multiple high-press. mercury discharge lamps, common bypass cct. 124080
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismatch charactn. 104125
nanospring interconnects for high-dens. appls. 67609
nMOSFET, lin. resist., enhanced non-scaling at cryogenic temps. 70099
NMOSFET fab., 70 nm, ultra-shallow n^+-p jns. using low energy As_2^+ implants. *(Korean)* 103883
NMOSFETs, worst-case hot-carrier stress condition, LDD resist. effects 70116
NTC thermistors for cct. in-rush current protection, thermoelectrical degrad. 69264
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
overhead lines, nonunit fault location method 123088
PANI-ABS composite film, reusable aq. ammonia sens. 75719
parallel MOV, current sharing improvement 125847
physiological response to music, reinforcement, neural net 110656
piezoelec. laminate beam, multiple mode shunt damping, optimal resistive elements 81742
PIII pulse modulator, elec. charact., target area/posn. effects *(Japanese)* 103268
PMSM drives, sensorless control, sliding mode observer 134462
polyethylene batt. separators optimisation 78151
polymer cathodes in Al/Ta electrolytic capacitors, perform. issues 115056
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole transport layers 105000
polyphase cage IM inter-bar currents anal. 134016
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. props. 104092
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec. props. 103243
power MOSFET PSPICE modeling method 126766
power semicond. device packaging/chip interconnection, wire/area-bonding technols. 115880
PWM inverters, diode rectifiers, electrolytic capacitors, life estim. *(Korean)* 134198
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
rect. microstrip antenna, reson. resist. calc. 72618
resist. tomography sens., sens. field, soft field charact. *(Chinese)* 75411
RF magnetron sputtering, metallic thin film props./proc. params., rels. 124820
RF MOSFETs, freq.-depend. resistive/capacitive components 80295
SC filter, LV/low-power, using cascode transistor config. 68922
self-excited slip-ring induction generators, voltage/freq. control 123414
semicond. fuse ratings, harmonic currents effects 125862
short channel MOSFET, phys. DC model using trapezoidal Gaussian surface 103829
short channel MOSFETs, anal. transit time model 103831
short-cct. power concept, flicker emission level assess. 133419
short-channel MOSFETs modelling for HF cct. simul. 103884
single-electron transistor, island background charge, I-V charact., 2D num. model 70215
slot-coupled patch antenna, input charact. improvement with strip 72462
SOI power ICs with intell. CMOS control circuitry 81536
SOI wafer plasma etched trench profile eval. using elec. test struct. for MEMS 104230
SSR damping, subsynchronous freq. impedance charact. *(Chinese)* 122771
stack DRAM cell with low parasitic resist. device/poly metal gate technol. for Gbit DRAM 125489
stun gun impulse voltage release, human body resist. *(Japanese)* 133388
supercapacitor, porous electrodes, internal electrolyte resist., voltammetry 89310
supercond. machine runner diags., superconduction effects modelling *(German)* 112439
SZITs digital ground connection indicator, lin. cct. insulation estim. *(Russian)* 90643
TFSOI modular proc. for CMOS power devices/ICs 104098
three-phase squirrel-cage motor, inter-bar rotor current prediction model 134017
transformer winding resist. losses, distrib. line losses calc. improvement *(Chinese)* 122946
trapezoid-to-simple polygon recomposition for resist. extraction 104070
tubular conductor with min. act. resist. 77375
tunable single layer phase modulated radar absorber 80154
ultra-shallow jn. form. by RTA, current capability/problems 103250
UPS push-pull DC-DC converter, PCB parasitic influences, anal. 125227

electric resistance continued
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
wound/stacked metallized film capacitor technols., perform. comparison 115059
Al electrolytic capacitors, large, service life/failure mechanisms 115081
Al-Ge alloy thin film resist. switching for resistor/capacitor downtrimming 80412
AlGaAs-GaAs DHBTs with composite collector for power amps. 103772
a-C film, electron field emission, resist. effect 80566
Cu damascene interconnect sheet resist./line width meas., test struct. issues 103497
Cu interconnect features, elec. linewidth, test chip 103495
Cu powder, monodispersed/highly cryst., for MLC capacitor electrode appls. 115064
Cu straight wires arrays form., electrodeposition 101433
Cu/W interface, electromigration modeling 126436
Cu_xS-microporous-Si struct., RT ammonia sens. 121010
GaAs MESFET IC mfg., 6 inch wafers, N-minus resist. control 127068
GaAs/AlGaAs ballistic quantum wire, four-terminal resist. 80824
GaN:Mg/AlN epilayers, ion implant., annealing, PL 126328
GaN:Ti^+, O^+, Fe^+, Cr^+, FET struct., implant isolation, sheet resist. 126822
GaN:Zn blue powder phosphor for VFD/FED, synthesis, cathodolum. 109862
Ga_2O_3 high temp. gas sens., SiO_2 top layer, H sens. mechanism 121009
InAs/Permalloy 2DEG, spin injection & spin detect. expt. 80903
InGaP/GaAs cpd. solar cell, AM0 conc. operation 112910
InGaP-GaAs-AlGaAs DHBTs, transient charact. 70045
$LaCrO_3$:Ca thin film heaters, fab./eval. *(Japanese)* 78336
$Li/Li_{2.8}Ag_2V_4O_{11}$ batts., implantable cardioverter defibrillators 99925
MgO films on p-GaAs(100), microstruct./elec. props. 68187
Nb/Nb_2O_{5-y}-interfaces, Q-drop, supercond. Nb cavities 69023
Nb_3Sn strand, tokamak device, perform. var., heat treatment 82001
NbTi Rutherford supercond. cables, Al-clad, resistive joints 71184
Ni-Cd AA-size secondary cell, internal resist. property *(Chinese)* 112778
Ni-MH AA-size secondary cell, internal resist. property *(Chinese)* 112778
$NiMn_2O_4$ spinel, decomp., quenching, TEM/XRD 114447
Si RF MOSFET small-sig. equiv. cct., substr. model, param. extract. 69120
Si microstrip detector, field oxide FET-biased, radiation effects on charact. 76128
Si microstrip detectors, double-sided, p-top and p-spray isolated, n-side interstrip resist. 121439
Si substr., IC interconnects, resist. and inductance 70279
Si substr., VLSI interconnects, distributed inductance/resist. per-unit-length formulas 126509
Si/SiGe HBTs, hot carrier effects on correl. resist. 80298
SiC conducting/insulating tracks by laser direct writing 115337
SnO_2 thin film gas sens. fab. from hydrothermally treated nanoparticles 97492
SnOx miniaturized thin film sens., O_2 plasma treatment 81601
Ta chip capacitors, <10 mΩ ESR, heat/moisture-stable 80433
Ta chip capacitors, breakdown voltage, cct. resist. impact 115069
Ta solid capacitor ESR reduction, C/Ag coatings, material/proc. optimisation 80430
Ta/TaC diffusion barriers for Cu metallization on Si, reliab. 91877
Ti-TiN long throw/ionized PVD liners for W-plug contact/via appls. 103469
TiN-Si planar jns., proximity effect 104576
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm technol. 125492
$YBa_2Cu_3O_{7-\delta}$ films, microwave props., thickness depend. 70575
$YBa_2Cu_3O_x$ epitaxial film, single-domain $YBa_2Cu_3O_x$ substr., surface resist. 80156
YSZ/NiO-YSZ thin film syst., elec. & microstructural investigs. 112849
ZrO_2 substr. with coplanar electrodes, elec. resist., model 97487

electric resistance measurement
air-core inductors, RF resist. and Q-factor determ. 69285
ammonia vapour sens. using acrylic acid doped PANI 120985
bridge instrum., cryogenic current comparator, SQUID readout 75780
bubble column gas hold-up meas., elec. resist. tomography, ANN use 110057
bubble column meas. & control, resist. tomographic imaging 121273
buried pipe, leak detect., elec. resist. tomography 109928
cable jn. monitoring syst., fault prewarning, jn. resist., insulation aging *(Chinese)* 133764
cage-rotor reluctance sync. motor, params. meas. 133951
chem. reactor, fluid mixing, ERT, augmented reality 121143
cleanroom gloves, elec. props. meas. 124312
DC power supply-ground insulating resist. meas. method *(Chinese)* 88949
diamond pyramid, metal cantilever, elec. AFM probe 132126
DVM-based resist. meas. syst., input & leakage resist. anal. 109414
elec. small antennas meas., NWA drift error reduction 105860
four-probe resist. meas. on resistive sheets with parallel electrodes, correction factor 132129
ground-DC power supply insulating resist. meas. apparatus *(Chinese)* 123082
grounding capacit. and fault resist. meas. in ineffectively grounded power syst. 77654
HTSC, surface resist. meas., probe coupling microstrip line resonator tech. 75818
HTSC film surface resist. meas., sapphire image-type DR design 86910
HTSC microwave charactn., surface resist. meas. accuracy using sapphire resonator 75839
HV substations, earthing systs., problems, solns. *(Russian)* 112710
hydrostatic press. anvil cell, electron transport meas., high pulsed mag. field 109922
impedance tomography, bipolar DC pulse tech., core anal. 111389
inductive coils, DC resist. meas. method *(Chinese)* 102790
laser resist. trim syst. *(Chinese)* 97774
low resist. meas., line resist. and jn. resist. removing *(Chinese)* 97775
multifreq. quadrature bridge for capacitance & resist. stds. 109412
multimodal proc. tomography syst. design 120736
octofilar resistors with calculable freq. depend. 120622
ohmic contact, epitaxial layer sheet resist., EFM meas. 115425
polyethylene/Kapton, elec. props., electron-beam irrad. effect 81728
PTCR resist.-temp. curve, DP program *(Chinese)* 121146
resist. to freq. converter *(Polish)* 125636
solar cell AC params. meas., impedance spectrosc. setup 100040
SQUID detector, elec. quantum metrology triangle 70896
struct. health monitoring by elec. resist. meas., review 114549
substation automation technols. and advantages 99854
substation grounding grid corros. diagnosis method 77574
substation grounding resist. meas., measuring electrode arrangement 77624
supercond. elec. resist. meas., four-probe method, error sources 97779
textile fiber proc., elec. resist. effects meas. 83129

electric resistance measurement continued
thermoelec. mater., rapid transport props. meas., low temp. 97777
three-phase squirrel cage motor thermal params. studies 123472
tomography, electrode array, image reconstr. *(Chinese)* 86909
tomography using bidirectional current pulse tech. 109923
voltohmmetry sens. principle, heavy metal determ. in aq. soln. 97443
VRLA batt. state of health prediction, ohmic techs. 89111
whole body fat, upper arm/leg elec. resist. 87393
GaAs, carrier profiling, scanning spreading resist. microscopy 103002
InP, carrier profiling, scanning spreading resist. microscopy 103002
InP devices, 2D carrier profiling, SSRM 115317
Si_3N_4/Si_3N_4-TiN laminates, crack propag. detect., elec. resist. 114550
YBaCuO elec. resist. meas., four-probe method, error sources 97779
YBaCuO film, surface resist. meas., two dielec. resonator method 75844
$YBa_2Cu_3O_7$ film, microwave surface resist. meas., dielec. resonator 70609
$YBa_2Cu_3O_{7-\delta}$ films, complex resist. meas., microwave broadband tech. 75819
$YBa_2Cu_3O_y$ HTSC films, surface resist. meas. with dielec. resonator method 132130
$YBa_2Cu_3O_y$ thin films, surface resist. meas., dielec. resonator method 70608

electric sensing devices
see also biosensors; capacitive sensors; electrochemical sensors; gas sensors; intelligent sensors; ion sensitive field effect transistors; micromechanical devices; microsensors; pyroelectric detectors
1-Wire addressable digital instrums. for environ. monitoring 88149
2D thermal flow sens. using sigma-DM 132227
3-phase enclosed GIS, very fast transients, voltage meas. *(Chinese)* 88996
3-phase voltage source PWM converters, DC link, single-sens. current control 78006
30 GHz transmit/receive modules, test equipt., sens. modules *(German)* 131336
AC EM flowmeter with analogue sig. proc. 120764
accel. sens./eval. syst. for super-low-range freq. 97843
ADSS fiber-optic cable leakage current meas. sens. design 109060
ammonia vapour sens. using acrylic acid doped PANI 120985
amorph. mag. alloys, appls. in electronic devices 104481
array of cond. C black-polymer composites for sens./discrim. of vapours 97464
automation, drive technol. develop. 123909
automotive current meas., historical overview 78320
automotive microelectronic sens., EMC/EMI limitations 124055
autonomous model race car design competition, cct. design 78522
bacteria growth monitoring, wireless rem. query reson.-cct. sens. 109723
BCDMOS smart power technol., MOSFET-based temp. sens. 116044
beam, smart composite, self-adapting vibr. control syst. 127264
beams, act. piezoelec. damping, bonding layer props. 127265
bend angle sens., VR data glove appl. 75451
bistable meas. devices, noise tuning, neuro-fuzzy approach 120649
bistatic microwave intrusion detect. sens. 86930
broadband microwave power meas. in planar ccts., waveguides taperization tech. 97180
built-in current sens. devices for micro-IDDQ test of VLSI chips 127008
circ. raster, angle posn., photoelec. phase-comparing method *(Chinese)* 97821
CMOS analogue BIST, current sens., proc. var. independent 101736
coaxial aperture elec. sens., variational principle, full-wave anal. 97195
combined-struct. semicond. gas sens. based on butane gas 109745
compressive resist. vibr. ang. accel. sens. *(Chinese)* 120768
conf., semicond. gas sens., Ustron, Poland, (Sept 2000) 100391
contactless meter of DC, aviation appl. 122522
copper phthalocyanine, film, gas sens., atmos. pollution meas. 109768
crack meas. by eddy-currents, probe/inducer effects 114543
current dens. measuring devices simul./optimisation 86904
current sens. completion detect., dyn. biased current sens. 109504
cylindrical eddy-current probes, spatial freq. spectra 114541
DAQ sens. agents, human behavior emulation 120667
DAQ systs., sens. noise reduction method 131830
diamond:B CVD films, piezoresist., grain boundaries, device appl. 115291
digital quartz resonator force sens., off-centre load-insensitive 131891
DSP-controlled IM drives, smart sens. bearings 123884
eddy-current sens., improving nonlin. response, lin. source separation 120753
elec. current sens. using EM tuning 120754
electret film sens. and actuator appls., aging, reciprocity, act. sound control 111539
electronic tongue, response, drift correction algms. 109778
electrostatic measuring techs. develop. 83126
EM inductance real-time low-cost 6D-tracker, algm. design/prototype 105681
EM induction spectrosc., buried objs. detect. and ident. 75390
EM suspen. syst., fault tolerant controller design *(Korean)* 78309
erbium bis[octakis(octyloxy)phthalocyaninato] complex, gas sensitive LB films 97509
ethynylated polymers, synthesis & humidity sens. appl. 97179
excitation and meas. techs. 86496
ferroelec. sens. advances & emerging technol., review 131881
fiber Bragg grating based elec. current sens. *(English)* 120876
flexible inductive transducer, mag. resist. influenced by variable overlap area 120759
flip-flop sens. controlled by slow-rise control pulse, simul. 125416
forane 134a/CO_2 discrim. in humidity controlled atmos., electronic nose appl. 132042
gas-line compressors, EM bearings, elastic rotor oscills. damping 104556
GIS PD meas. using nonconventional UHF sens. 78058
granular materials, microwave moisture sens., universal calib. 120751
hemiplegic patients wheelchair to bed transfer, 3D ang. sens. 76606
HF inductive posn. sens., EM FEA 131873
high temp. SOI press. sens. technol. 121263
high-resoln. DAQ systs., transducer/sens. excitation and meas. techs. 75383
hot strip steel, transform. imaging using mag. techs. 106508
hot-wire anemometer with temp. compensation 120760
HSGFET ozone sens. with dual sensitive layer operating at RT *(Chinese)* 97461
humidity sens. selection, capacitive/resistive/thermal cond.-based technols. 109520
IM control syst., load profiling meas. & proc., clipping integrator 112517
immitance sens. params., computing instrumentation 109930
inductance sens., AM meas. cct., precision improvement *(Chinese)* 109486
induction sens. for refractometer displacement control 86492
inductive array imaging of buried objs. 77109
indust. networks, sens. chip network capability/protocols 97155
indust. sens. networks, embedded networking, hardware/software design 109451
insulation displacement contact technol., sens./actuator syst. implications 80480
integrated chemiresistor array for microrobot sens. platform 75688
Intelli-FIELD electrostatic field disturbance sens. 89777
interdigital dielectrometry sens., inverse param. estim. algms. 109514

electric sensing devices continued
interferometric EM-sens. for speech articulator/user gesture meas. 120763
labour safety, near-field LF spectrum EM field meas. *(Polish)* 133072
land mines detect., low-metallic-content, EMI data anal. 73121
LAPS, light addressable potentiometric sens., CMOS analog lock-in a 109467
LF flat-type piezoelec. vibratory gyroscope, constr. 127262
lin. displacement sens., multifunctional µP-based converter *(Russian)* 864
lin. variable differential transformers, DSP-based sig. conditioning 86489
long-range surface plasmons along asymmetric struct., refractometric sens. a 97189
loop sens., elec. small, elec. field parasitic sensitivity 75445
LTCC multilayer technol. for thick film sens. appls. 131879
LVDT posn. sens. spectral sig. proc. *(Italian)* 120693
lysozyme adsorpt./conform. change on SAM obs. 121258
mag. film-coated wire sens. for composite material strain monitoring 9719
magnetostrictive delay lines based NDT, distrib. sens. 101569
metal corros. monitoring, EM slow wave struct. propag. 114507
metal phthalocyanine films, ion irrad., AFM study, gas sens. appls. 91708
metal tag recogn., smart eddy current sens., blind source separation 11880
microelectronics, devices and materials, conf., Postojna, Slovenia (Oct. 20 78447
microwave aquametry, rugged act. sens. 109523
milk rancidity monitoring by electronic nose, dyn. PCA anal. 132056
mixed-sig. sens. interface microinstrument 109818
MOS tunnel diode based on-chip temp. sens. 75433
multiturn shaft angle encoders with electronic rot. transducers *(German)* 131
nickel phthalocyanine thin films, chemiresistor-type NO gas sens. 97508
noise shaping accelerometer interface circuit., two-chip implement. 131877
noncontact ang. posn. sens. technol., differential displacement/lin. capabili 75418
odour sens. for lavatory in general domicile 97476
oil-water-gas mixture meas., microwave sens., WaterCut & MultiPhase me 88193
on-line PD current monitor, sens. transfer charact. anal. *(Chinese)* 131893
opto-electronic probe for very-fast HV pulsed power appls. 97767
osmium(IV) chloro complexes, humidity sens., thick-film technol. 75441
PANI-ABS composite film, reusable aq. ammonia sens. 75719
PANI-PMMA blends, elec. cond., cryomagnetic temp. sens. 86506
perform. augmentation of low-cost sens. 121049
piezoelec. sens. for meas. of viscosity *(German)* 75503
piezoelec. single resonator three-axes vibratory gyrosensor 109480
piezoelec. vibrator for multifunctional meas. methods, sound vel., impeda meas 86499
piezoelec. vibratory gyro-sens., double-T type vibrators, FEM anal. 92680
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
piezoresistive thick film engine cylinder press. sens. 134596
planar silicon diode temp. sens., low-temp. current transfer 75419
plasma cloud charge sens., pulse keyhole proc. control 100728
PM lin. contactless displacement sens., differential transformer operation *(G man)* 75404
PNP lateral transistor. piezojunction effect, stress sens. 109495
polymer electronics, sens., adhesives, encapsulated ccts. *(Spanish)* 79446
potentiometric immunosensor for herbicide simazine, food testing appls. 756
power electronics current sens., review 97213
press. sens., null pt. & sensitivity, applied/bridge voltage influence *(Chine* 75464
PSpice-model for CMOS-compatible stress sens. *(German)* 109498
radial distrib. syst. fault sects. ident. approach 112202
radioelectronic sens. based on ferroics, nonlin. props. 116162
resist. foil strain gauges appl. in high press. research 75498
resist. tomography, electrode array, image reconstr. *(Chinese)* 86909
reson. sens. arrays, high-resoln. multichannel instrum. 131816
self-aligned JFET proportional-to-absol. temp. sens., nonlin. response 75508
semicond. gas sens., basic aspects and challenges *(Japanese)* 86697
semicond. strain gauge tactile transducer, finger force meas. 109509
sens.-bridge-to-microcontroller interface, two-point calib. 120650
shear-stress sens., dyn. calib. using Stokes layer excitation 97171
slotline sens. for pulse EM field meas. 83380
smart buildings, multifunctional transponder-based appls./services 75770
smart cruise collision prevention syst., NEC road sens. appls. *(Japanes* 124023
smart piezoresistive press. sens., correction using microcontroller 75772
smart plates, vibr. control using discretely distributed piezoelec. quasi-mo actuators/sens. 127257
smart sig. conditioning appl. to sens. 86779
stochastic EM field determ., sens. systs. 109536
surface growth, proc., low energy beam-modified, conf., Boston, USA (No 1999) 67359
surface-doped diamond, pH sens., surface termination effect 87023
telepathy tester cct. 80023
thermal spray techs. for meso-electronics/sens. direct write fab. 114399
thick film resistor series for strain sens. 121235
thick-film sens. technol., indust. appls. *(Italian)* 120705
thin membrane US microsensor, IDT, fab. 86464
three-phase buck power converter lossless current sens. scheme 112622
three-phase voltage-source PWM power converter topologies comparis *(Korean)* 123590
transducer energy coupling/efficiency, power source minimization 97191
TrySense develop. platform for sens. systs. realization 109423
tuned cct. displacement sens., eddy current method *(German)* 75402
two-coord. automatic-tracing device for accessory size meas. *(Chinese)* 1244
underground pipelines, corros. protection, rem. testing, external field param 101636
vel. sens., dyn. param. estim., indirect meas. approach 120727
vert. thick film resistors as load sens. 120785
VR 1000 Harley-Davidson racing bike, digital speedometer, inductive sen 131863
welding robots, high speed rot. arc sens., seam tracking controller 134683
wide bandwidth time-domain EM sens. for metal target classif. 86490
wideband capacitive voltage sens. design for HVDC transm. line appls. 8850
wind sens. with integrated interface electronics 86775
wireless sens., ideal charact. for purchase guidelines 75417
PZT motors/actuators/sens., HDD suspen assemblies appls. 104445
$Sr(Ti_{1-x}Fe_x)O_{3-\delta}$ ceramics, resistive oxygen sens., elec. cond., thick films 10978
AlGaAs-GaAs micromachined sens. for microwave/mm-wave power mea 75845
C nanotubes, appl. as electromechanical sens., first-principles simul. 91507
CO-CH_4 gas mixtures, SnO_2:Pd nanocryst. films micromachined sens. array ana 132041

ctric sensing devices continued
CeO_2, high-temp. gas sens., sensitivity 75726
n-CuO/$BaTiO_3$, nanosized powders, gas sens. props., FTIR spectrometry 97431
Cu_xS film based structs., ammonia sensitivity at room temp. 109762
GaAs Hall effect sens., high accuracy, MBE grown, design/fab. 75444
GaAs micromachined power sens. with integrated receiving antenna, 60 GHz 109820
β-Ga_2O_3, film, gas sens. materials charactn. 103054
Ga_2O_3, high-temp. gas sens., sensitivity 75726
Ge:Sb pulse magnetron sputtered film, struct., thermoelec. props. 91582
In_2O_3 films, O_3/NO_2 detect. 97510
InP, film, gas sens., atmos. pollution meas. 109768
MoO_3-WO_3 gas sens. for monitoring appls. 109788
NO_2 gas sens., high-temp. elec. props. of Ni O-doped WO_3 thick films 132021
Nb_2O_5, lattice consts. and gas-sens. props., calcining temp. effect 97455
O_2, dissolved, screen-printed amperometric sens., continuously-powered 86705
O-permeable ceramic membranes for NO_x-sens. 121004
PZT pyroelec. thick films, displacement sens., light-spot cursor 109572
PZT thin-film vibrator, long. vibr. touch probe sens. 97185
$Pr_xCe_{1-x}O_{2-\delta}$, ceria-based gas sens. 121003
RuO_3/ruthenates-based thick-film resistors for strain sens., firing temp. effects 125839
Si CMOS mag. field detector using MAGOSC field sensitive oscillator 109534
Si coating thickness on rot. wafer disk, batch ion implanters, charge sens. 115603
Si flow sens., drift, biasing params. 75438
Si micromachined tin-oxide sens. based intell. detector, DSP 132040
Si piezoresistive stress sens., packaging appls. 75427
Si planar resistors, temp. response curves, low-temp. hopping cond. nonohmic effects 75420
Si sens. & ccts., piezojunction effect rel. to piezoresist., review 109479
Si spherical device, 1 mm, clustering/enabling proc. technols. 69774
Si strain gauge, single-cryst., user-friendly, high sensitivity 97563
SiGe MMICs near-range sens. for 24 GHz automotive appls. 113123
$SnMoO_4$-SnO_2 composites, elec. props., humidity sens. 87038
SnO_2, gas sens., high resoln. photoemission study 109751
SnO_2 layers, NH_3 gas-sensitivity, RTA proc. effect 86716
n-SnO_2, nanosized powders, gas sens. props., FTIR spectrometry 97431
SnO_2 thin film gas sens., prep. by PLD, characts. 97541
SnO_2:Pd films, Pd-Sn interacts., XPS, ISS, TPD studies 109752
SnO_2:Pd sens. elements for electronic detect. of methane, charactn. 109735
SnO_2:Pd thick film sens., CO consumption 109750
SnO_2:Pd(Pt), gas sens., high resoln. photoemission study 109751
SnO_2:Sb:Ni sol-gel thin film detector prep. for NO_x detect. *(Chinese)* 132025
$SrCe_{0.95}Yb_{0.05}O_{3-\alpha}$, mixed-pot. gas sens., hydrocarbon detect. 97465
$SrTiO_3$, high-temp. gas sens., sensitivity 75726
TiO_2 polymer dispersed films, room temp. gas sens. 75723
WO_3, film, gas sens. materials charactn. 103054
WO_3, ozone sens., sens. drift, meas. correction method 86710
WO_3 thin film surfaces, UHV/O_2 annealing, O loss/recovery, gas sens. 109732
WO_3/TiO_2, film, gas sens. materials charactn. 103054
YIG:Yb,Bi magneto-optic opt. fiber current sens., perform. testing *(Chinese)* 120877
YSZ, O_2 sens., CO detect., CO_2 influence 86699
Zn coating on steel wires, continuous mass meas. 75900
ZnO-$BaTiO_3$/CuO/La_2O_3 gas sens., NO_2/CO_2 monitoring 122716

ctric shocks
see also electrical faults; safety
3-phase bridge rectifier, earth faults simul., safety protection *(Polish)* 99806
electromedical apparatus safety considerations *(Italian)* 87296
EM suspen. syst., fault tolerant controller design *(Korean)* 78309
induction heating, MF thyristor converters, elec. shock protection *(Polish)* 100330
internat. elec. shock safety criteria, probabilistic aspects 67503
mining indust., elec. accidents, 1990-1999 134705
NFPA 70E elec. safety Standard changes for yr. 2000 89780
overhead power lines, accidental contact, injuries/fatalities reduction 77439
power electronic devices, elec. shock, earth- and over-current protection *(Polish)* 90738
power electronic devices, elec. shock protection, stds. *(Polish)* 90737
substation earthing systs. risk profiles develop. 78064
three-phase computer power supply networks elec. shock protection *(Polish)* 99344

ctric strength
see also electric breakdown
500 kV XLPE insulated DC submarine power cable develop. *(Japanese)* 88446
acrylate/polyphenylene sulfide film capacitors for high temp. appls. 115085
air insulation strength for DC voltages, air gap bridged by flames 99421
base insulating constr., discharge charact., rain influence estim. *(Russian)* 123041
ceramic capacitors, voltage withstanding rating determ. 80444
distrib. transformer oil dielec. strength meas. 134124
EHV XLPE cable joints, semicond. interface dielec. strength, diffusion method *(Japanese)* 99389
ESD from charged cylindrical bodies-to-grounded/floating surfaces 117616
EVA copolymer film space charge meas. in cryogenic-RT region *(Japanese)* 127249
extra-turn power transformer gaseous insulation design studies *(Korean)* 123545
extruded laminated dielec. shielded power cable joints, IEEE Standard 112119
FRP laminate ITER coil insulation, neutron irrad., dielec. strength 81727
gapped arresters, air containing ozone/nitric oxides, intensive PD, elec. strength 112172
helical magnetocumulative generator operation, wire insulation effects 123275
HV cable insulation, internal mech. stresses, elec. strength 123012
HV testing board, electrostatic field, elec. field strengths *(Slovenian)* 75392
insulating liqs., AC dielec. strength testing, stat. approach 92608
interpoly dielec. deposited on nitrided-polysilicon, NVM devices 79877
LDPE power cable insulation, metallocene catalyst expts. *(Japanese)* 88445
lightning impulse testing, humidity correction factor 92593
polymeric composite dielec., polaris. influence on breakdown strength 92605
pos. point-barrier-plane air gap elec. strength, space charge effects 99422
PTFE plane insulating material surfaces, corona discharges *(German)* 127252
secondary lightning protection syst., EM field near lightning channel 88480
semicond. glazed insulator perform. tests under natural pollution 77446
small oil gaps bridged by pressboard, breakdown under AC, DC and combined AC/DC voltages 99722
special pot. distrib., electrode config., tensor calculus 72163
transformer oil elec. breakdown initiation, stochastic regularities 134140

electric strength continued
XLPE cable, insulation/semicond. interface improvement, diffusion method *(Japanese)* 99374
AgW symmetric contacts, arc chamber wall material and arc gap dielec. recovery voltage 123663
AlN, KrF excimer treatment 72125
Al_2O_3-TiO_2, plasma-sprayed coating, elec. insulation behavior *(Korean)* 116189
$BaSrTiO_3$ films, sol-gel derived, grain oriented, phase shifter appl. 90486
N_2 high-press. insulation, lightning impulse breakdown charact. *(Japanese)* 92618
PMN-PNN-PZT:Ag ceramics, prep., dielec./ferroelec. props. 127205
SF_6 particle-contaminated GIS/GITL systs. with dielec. coated electrodes 112681
SF_6 self-extinguishing cct. breaker, small current interruption 134258
SiO_x ultrathin film, low temp. form. from O radicals in Kr/O_2 plasma 103323

electric susceptance *see electric admittance*

electric susceptibility *see optical susceptibility*

electric utilities *see electricity supply industry*

electric variables control
see also electric current control; frequency control; gain control; load dispatching; machine control; phase control; power control; voltage control
neuron-type conducting polymer device, cond. control 114455
PFC AC-DC converters, energy mgt., reactance values control 99758
PMSM drives, sensorless control, sliding mode observer 134462
SZITs digital ground connection indicator, lin. cct. insulation estim. *(Russian)* 90643
Li-ion batt., fuzzy controlled charger, act. state-of-charge controller 78159

electric variables measurement
see also attenuation measurement; capacitance measurement; charge measurement; dielectric measurement; electric admittance measurement; electric current measurement; electric distortion measurement; electric field measurement; electric immittance measurement; electric impedance measurement; electric noise measurement; electric reactance measurement; electric resistance measurement; electrical conductivity measurement; energy measurement; frequency measurement; gain measurement; high-frequency transmission line measurement; inductance measurement; phase measurement; power factor measurement; power measurement; Q-factor measurement; voltage measurement
antenna meas. in time and freq. domains using sampling oscilloscope 75847
complex natural resons. meas. of targets in free space/lossy media 83256
DC SQUIDs, operation, technol. and appls. 92894
elec. anisotropic semiconds., van der Pauw meas., finite-element anal. 86898
electronic meas. technol., fund. concepts *(Japanese)* 86363
environ. data loggers 132092
external EO measuring syst., high spatial resoln./voltage sensitivity 132120
frame rate meas. approach for real-time computer vision appls. 121176
HT-7U Tokamak, vac. vessel, elec. params. 132124
nanostructured devices, elec. params. meas. *(Chinese)* 81180
nonparametric ident. of lin. systs., resonator based 101686
physiological response to music, reinforcement, neural net 110656
semiconds., probing spin currents 86945
submicron EO meas. tech., external hemispherical probe 117589
transmittance meas. using switched pulsed multiport 75849
underground pipelines, corros. protection, rem. testing, external field params. 101636
Si epitaxial layer, lifetime charactn. by SPV meas. 102992
Si passivated emitter solar cell, minority carrier diffusion length, PV method 134401
Si wafers, minority carrier lifetime meas., collinear four-probe array *(Chinese)* 102954

electric vehicles
see also electric drives; electric locomotives; electric propulsion; motorcoaches
50 kW lab. test rig for variable speed machines, SIMULINK model 99643
55 kW traction SRM drive, closed-loop torque control 134534
80 V bipolar lead-acid batt. for hybrid EV 78299
AC motor drive soft-switching inverters comparison 134203
air conditioning inverter/compressor develop. *(Japanese)* 89417
alternative fuel vehicles, life cycle model 78246
alternative vehicle powertrains, primary energy efficiency 134538
axial airgap PM AC motor control 89384
axial-flux PM sync. machine mounted inside HEV flywheel 134530
batt. appls./develop., conf., Long Beach, CA, USA (Jan. 2001) 78449
batt.-dominant hybrid EV, syst. design requirements 89405
batt.-powered EV, retail and life cycle cost anal. 134524
batts., metal resource constraints 134354
bicycle, DC motor speed control, load induction unit 123988
bicycle BLDCM, act. EM torque harmonics compensation 123959
bipolar Pb-acid batts., cladded materials, EV 89406
BLDCM drive syst. for EV appls. 123960
Bump Around automated bumper car for children with disabilities 111176
cage rotor induction machine perform. in automotive starter-alternator appls. 77873
CEV1 EV, elec. syst. config., control seq. design 100312
charging, single-phase residential harmonic loads 113095
Child Mobility Car 111179
contactless energy transm. for EV, power syst. evol. 78303
DC-fed elec. rly. vehicle, PMSM, stabil., regenerative braking *(Japanese)* 123952
develop., patent activity, US automobile indust. 89747
dimethyl oxalate electro-oxid., direct oxid. fuel cells appls. 123776
disabled pers. elec. cart, develop. and use of 3D CAD syst. *(Japanese)* 100267
disc PM lin. machine, optimal efficiency operations 123967
drive, space vector PWM, over-modulation tech. *(Chinese)* 100279
dual IM drive, reduced switch count, dual current-regulated PWM VSI 123933
E-Racer, joystick controlled go-kart 111175
electrochem. capacitor tests for hybrid EV appls. 123717
encoderless IPM traction drive control for EV appls. 134532
energy storage technol. develop. *(Chinese)* 78231
environ. friendly elec. transport, Mexico City 123986
ethylene glycol electro-oxid., direct oxid. fuel cells appls. 123776
EV environ. eval. using dyn. traffic-flow model 78248
flywheel batt., suspen. syst., hybrid elec. and elec. vehicles 123844
fork lift truck, LV SRM drive, modified C-dump converter 134550
fork lift vehicle speed control, DC motor drive, GA 134551
fuel cell technol., status, tech. and cost aspects *(German)* 123773
fuel cell-powered hybrid vehicle drive train, systematic design approach 123968
gasoline/EV, inter-indust. proc. model 123992

electric vehicles continued
global energy generation, environ. problems mitigation, power electronics 123604
graduate automotive technol. education in energy storage systs. 113305
grid-connected hybrid EV commercialisation 89403
grid-connected hybrid EV modelling, ADVISOR package 89401
HEV, integrated starter generator, LV/HV systs. comparison 123969
HEV, small reluctance sync. machine drive, perform. 124003
HEV auxiliary power unit lin. alternator/engine syst. design 123963
HEV drivetrain testbed, DCS, ECU code generation 124010
HEV perform. and fuel economy, batt. pack effects 89402
HEV/EV SRM drive control, neural network based control 123965
HEVs, powertrain sizing, emissions influence eval. 89391
high-efficiency DC/DC converter for vehicle use, develop. 123574
high-power DC-to-DC converter, elec. vehicle supercapacitor appls. 123571
high-power dens. PMSM drive for fuel cell-powered HEV appls. 123970
HV relay unit for hybrid EV *(Japanese)* 100266
hybrid EV, batt. as load levelling device, dyn. modelling, simul. and control 100277
hybrid EV commercialization, batt. cost/life issues 89404
hybrid EV novel drive strategy 123956
hybrid EV powertrain, machine controller role 123958
hybrid EV small-scale high-speed generator vibr. anal. 100274
hybrid EV starter/generator fuzzy control expts. 134522
hybrid EVs, PM TORUS generator appl., auxiliary power unit 100288
hybrid shuttle car, solar array/batt. powered 100282
hybrid-EV, energy mgt. strategies, simul. 89393
hydrogen fuel prod., water electrolysis, elec. power requirement 134539
hydrogen transportation fuel prod., municipal solid waste gasification 134540
ICE 3 EMU, energy demand reduction, optimized vehicle control *(German)* 78276
IGBT, trench device, hybrid vehicle appl. 126867
IGBT power module in automotive traction inverter, lifetime estim. 125219
IM design using niching GA 100284
IM drive, optimized excitation current control 134531
IM drive design, vector control 124005
IM drive inverter, degrad. regimes, num. simul. *(French)* 134519
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
insulated-type automotive AC power supplies for EV *(Japanese)* 99734
intell. power unit, elec. and hybrid-EV 134552
ITS/EV City Car System intell. EV sharing syst. *(Japanese)* 124001
Li-ion elec. vehicle batts., thermal behavior anal. 123740
loads, power distrib. syst. harmonic effects 122990
LV SRM drives for more elec. car concepts 123966
mini storage systs. for elec. energy, mobile appls. 123990
motor car unit, brake force control *(Chinese)* 78307
natural ZVS high-power half-bridge bi-directional DC-DC converter 134192
onboard fuel proc. for fuel cell vehicles, microreaction technol. 123991
PEMFC electrochem. perform., testing/modelling *(Chinese)* 78161
PM double sided axial field disc motor, EV direct wheel drive 89383
PM sync. motor drives modelling for elec. vehicle appls. 123858
power batt. perform. testing syst. *(Chinese)* 78125
power sources, Chinese develop. prospects *(Chinese)* 78230
power systs., automotive batt. implications 78297
powered wheelchair controller using master-slave control archit. 133058
propulsion, IM drives, optimum speed ratio 89376
propulsion SRM design studies 134533
road EV, advanced diagnostic syst. 89392
scooter, high-perform. interior PMSM motor drive 124004
scooter BLDCM torque control scheme 123957
scooters, variable-winding BLDCM drive, control 123973
secondary cells, thermal characterisation 89133
secondary storage batts. comparison 124008
sensorless IM drive, freq.-hybrid vector control 89375
sensorless vector-controlled elec. vehicle IM drive 89394
soft switching 3 kW DC-DC converter 77997
SPEEDAM 2000, conf., Ischia, Italy (June 2000) 78442
SRM appl., driving force *(Japanese)* 113096
SRM fully-digital PI current controller, vehicle propulsion appls. 133963
SRM sizing calcs. 124002
status, prospects, batts., fuel cells *(Chinese)* 100286
switched reluctance starter/generator for more-elec. cars 124015
three-wheel EV, slotless PM AC motor wheel direct drive 113097
tram traction charact. determ. 89379
transportation commun./recharging via wireless power beam 89366
trench gate technol. MOSFET/IGBT semicond. power modules for operation up to 270 K *(German)* 70059
two-wheel drive wheelchairs, steering algm., vector control, microcontroller 133062
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
wearable master device for spinal injured pers. as control device for wheelchairs 133059
C, activated, H_2 adsorpt., modelling, transportation appl. 113090
Li-ion 28 V batt., segmented batt. charger 89115
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
Li-ion secondary cells, Mn-spinel cathode-based perform. improvements 89105
Na-$NiCl_2$ ZEBRA cells, inner struct. investig., microtomograph 99930
Ni-MH batts. for EV and HEV *(Chinese)* 113094
Ni-MH secondary batt. syst. for high-power appls. 89079
Ni-MH traction batt. syst., charge perform. 112789
Ni-metal hydride rechargeable batt., charactrs., solar vehicle appl. 112766
Pb-acid EV batt. charging control, charging/discharging monitoring 123987
Pb-acid advanced batt. designs for hybrid EV appls. 89131
Pb-acid batt. develop. and appls. 78149
Pb-acid batts., conf., Dublin, Ireland (March 2001) 67385
Pb-acid valve-regulated EV batts. 78134
Zn-air batt. fuelled EV demons. program, Israel 124009
Zn-air fuel cells, technol. and appls. 89176

electric welding
see also arc welding; electron beam welding; resistance welding
multi-wave/half-wave spot welding, const. current control *(Chinese)* 89475
periodic solid-gas rough surf., US diffr. in elec. contact weld 101542
three-phase current-source PWM rectifiers, welding machine appl. 88901

electric wiring *see wiring*

electrical conductivity
for specific types of conductivity, see NTs as appropriate, e.g. "hopping conduction", "mixed conductivity", "surface conductivity"
1D insulation, charge carrier transport/trapping, thermal stimulation 81723
3D inhomog. railgun soln. 72210

electrical conductivity continued
5.8 GHz indoor radio channel charactn. 74608
ABS resin/carbon fibers composites, resist., EMI shielding coeff. 72366
acetylene, pulsed PECVD reactor, computer controlled, polymer thin films de sition 124916
aniline, pulsed PECVD reactor, computer controlled, polymer thin films depo tion 124916
aromatic polyimide films, partially carbonised, semicond. elec. props. 8077
ballistic ellipt. shaped quantum wire, conductance 91776
BEDT-TTF salt, successive dry-wet proc. for fabricating conductive thin f 101306
charge transport hydrodynamical model, equilib. state stabil. 92274
conf., Solid cpds. of transit. elements, Stresa, Italy (Apr. 2000) 89514
1,10-decanedithiol/Au nanoparticle micro-gap devices, electronic cond. 115
diamond:B, heavily-doped, high cond., impurity states 115295
diamond:N films, highly-conducting ultrananocryst., PECVD, elec. co charactn. 102980
diamond:N nanocryst. films, PECVD, struct., electrochem. behavior 91605
diamond film, free-standing, elec. props. 80641
diamond films, doping, elec./electrochem. appl. 80637
diamond films, low field-emission, charact. by SPM 80558
diamond self-supported sheets, CVD, DC elec. cond. props. 91593
dielec. conductive liq. glass pipe flow, space charge dens. 83124
dielec. liqs., aq. drops deform./break-up in elec. field 81650
dielec. loaded rect. resonator, Q-factor and reson. freq. 125664
dielec. mixtures, freq. depend. dielec. props., FEM 70378
discharge lamps modelling in electronic cct. design 134628
dispersive medium, FDTD method *(Chinese)* 105694
DLC hard films, direct ion beam deposition from RF ICP source 79211
elec./opt. props. charactn., MOVPE 82425
electronic, mag. props. megabar press. studies in diamond cells 97786
electrostatically clean solar array panel develop. 112967
EM sigs. penetration into transparent inhomog. time-varying medium 12775
$(ET)_5Dy(NCS)_6NO_3.C_2H_5OH$ radical cation salt, prep., struct., cond. 91697
europium diphthalocyanine films, elec./opt. props. 115339
flash EEPROMs, thin oxide, anom. cell cond. mechanism 79894
fly-ash cenosphere particles, electroless Cu coating mechanism 125012
GPR, impulse syst., dispersive matched layer RBC implement., FDTD fram work 86156
head models with homog./inhomog. cond., pseudo-cond. values 87384
ICs, substr. coupling, modeling methods *(Polish)* 70264
INCONEL600 SOFC interconnect oxid., vac. deposited La-coating effect 892
insulator AC pollution flashover voltage, acid wet precip. *(Chinese)* 88467
isotropic conductive adhesives as SMT solder alternative 124349
ITO thin film, sputter deposition, single-phase target 90250
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance charac 126215
ITO/SiO_2/PET transparent conductive films, SiO_2 anchor layer, resistive tou panel appl. 109910
lanthanide bisphthalocyanine LB film sens. array, olive oil aroma 97539
LV power installations, indirect lightning flash induced overvoltage 77334
metal-free phthalocyanine thin films, elec./opt. props. 115340
metal/DLC/Si/metal heterostruct., DC cond. 91927
microporous systs., water inclusions, charge transport/polariz. 90584
microstrip struct. with complex media, loss inclusion via dyadic Green's f modifs. 102497
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 1150
MODFETs, two-channel, two-stream ballistic instabil. 92413
mol. scale electronics devices, develop./testing, mol. computer 102843
MOS devices, thermal oxide degrad. kinetics under elec. stress 91890
MOS struct., interface trap params., high-temp. cond. spectra 126232
multi-inform. array inversion using variational Born iter. method 76845
multiwall carbon nanotube heterojunctions, nonlin. transport props. 103092
neuron-type conducting polymer device, cond. control 114455
nonlin. normal conductor-insulator random network, crossover exponents *(Ch nese)* 101704
N-octadecylbenzidine-TCNQ semicond. LB films, prep., elec. props. 115343
PANI-PMMA blends, elec. cond., cryomagnetic temp. sens. 86506
PANI/polyolefin blends, elec. cond. and morph. 104262
percolation theory, materials sci./microelectronics appls. 91570
poly(methyl(phenyl)silanediyl), charge carrier transport 90567
polybenzidine semicond., thermal prep. and elec. charactn., doping effects ana 103272
polymer electrolyte membrane fuel cells, carbon aerogel integrat. 89187
polymeric solid dielec. DC cable, field grading, insulation props. effect 13373
polyperinaphthalene films, excimer laser ablation growth, elec. cond. 114380
polyperinaphthalene thin films by laser ablation of PTCDA/Co mixture targe elec. cond. 101518
polypyrrole thin films, charge transport props., electrode material influenc 69572
polysilicon thermal sprayed coatings, elec. charact. 115287
PoPD/PVA composite film humidity sens., AC impedance spectrosc. stud 97215
power semicond. devices, phys. based compact models for cct. modelling appl 81258
PPV/porous Si composite thin films, props. and LED appls. 116925
quantum wires, elec. cond., correl. roughness effects 69697
random RC networks, 1/f noise, effective network dielec. loss 68498
RF thermal ablation with NaCl soln. injection, elec. cond. effect 87878
semicond. metal oxide thin film gas sens., temp. drop on exposure to reducin gases 97518
sexithiophene semicond. grain boundary , temp./gate volt. depend. transpor 91715
shielding effectiveness of bent slots, wave penetration 105797
single-finger NMOSFETs, nonuniform bipolar cond., deep sub-μm ESD protec tion design 81348
SOFC stack aluminosilicate glass ceramics sealant studies 99979
SOFC-components, ceramics study 112844
tetra-iso-propoxyphthalocyaninato copper(II) film, gas sensitivity 75712
weakly nonlin. resistor infinite grid, input cond. fn. 90653
Ag electrodes discharge in solid electrolyte batts., computer simul. 89039
AlAsSb/InAs/Cd(Mg)Se heterostruct., MBE, elec./struct./opt. props. 69634
AlGaAs-GaAs-AlGaAs MODFET channel cond. with high doping levels 9241
AlGaN:Mg films, acceptor levels, LED obs. 69534
$Al_{1-x}In_xN$ films, plasma source MBE grown, opt./elec. props. 90311
Al_2O_3, conformal alumina thin films, CVD 124919
As_2Se_3 glass, effect of Sn, Mn and Sm addit. on props. 103062
a-AsSeGe films, elec./struct./opt. props. 80755
$(As_2Se_3)_{20}(SbSI)_{80}$, elec. cond., temp./freq. effect 103064

ctrical conductivity continued
Au nanoclusters self assembled on Au,SiO_2 surfaces for nanocluster device fab., XPS 103704
Au nanoparticle networks, single electron charging, biopolymer templates 102857
Au/C:H,B/n-Si heterojunction solar cells, PV props. 134383
Au/Ni bilayer films on Si(111) wafers, interdiffusion coeffs., cond. 103183
Au/Ti bilayer film stress, RF MEMS switches 127117
BN, cubic, electronic transport, Monte Carlo simul. *(Chinese)* 115308
a-BN_x films, opt. absorpt., elec. cond. 69554
(Ba,Sr)TiO_3 PLD dielec. thin films, AC and DC cond. studies 81634
$BaBi_4Ti_4O_{15}$:Nb(Fe), ferroelec./elec. props., doping depend. 104347
$BaTiO_3$ sol-gel derived ferroelec. thin films, diffuse transits., elec. cond., dielec. props. 92649
Bi nanowire, transport props. 103129
$Bi_{2-x}In_xSe_3$ single crysts., transport props. 126088
Bi_2Te_3 films, electrodeposition, charactn. 114390
C fiber reinforced polymer-matrix composites, capacitors appl. 68430
C fibers, vap.-grown, basic props. and their batt. appls. 99896
C films, low temp. PECVD, emission props. 90379
C magnetron sputtered thin films, microstruct. and effect on cond. 69560
C nanotubes, types, props. and appls. 114487
a-C:F films, ion beam deposition, charactn. 124845
C-based capacitor electrode materials, electrochem. energy storage 69270
$Ca_{1-x}La_xMnO_3$ thermal sprayed protective coatings for Cr-based SOFC interconnects 89270
$Ca_{3-x}Sr_xCo_4O_{9+\delta}$, synthesis and thermoelec. props. 69564
$Ca_{1-x}Y_xMnO_3$ thermal sprayed protective coatings for Cr-based SOFC interconnects 89270
$Cd_xHg_{1-x}Te$ alloys, irrad., Fermi level pinning and elec. props. 115302
CdO:F films, spray pyrolysis, chem. comp., elec. cond. mechanism 125047
CdSe fast electron irrad. thin films, cond. regimes 91651
CdTe elec. props., $CdCl_2$ effects, grain-boundary cond. theory 91656
$Ce_yFe_xCo_{4-x}Sb_{12}$ skutterudite, struct. and thermoelec. props., Fe content depend. *(Chinese)* 126090
$Ce_{0.9}Gd_{0.09}Ca_{0.01}O_2$ electrolytes for low temp. SOFC 123792
$Ce_{0.9}Gd_{0.09}Fe_{0.01}O_2$ electrolytes for low temp. SOFC 123792
$Ce_{0.9}Gd_{0.1}O_2$ electrolytes for low temp. SOFC 123792
$Ce_{0.8}Gd_{0.18}Pr_{0.02}O_2$ electrolytes for low temp. SOFC 123792
CoMgNiO oxygen sens. material, high temp. defect struct., elec. props. *(Chinese)* 75704
Cr_2O_3 layer in MIM jn., inelastic tunnelling *(Russian)* 103218
Cu electroless deposition, Pt-Ag/Al_2O_3 substr., IC packaging 124325
Cu films/damascene fine lines, resist., ULSI appl. 126501
Cu-Cr-Y, rapid solidif., phys. props., Y addit. 102757
$Cu_{0.5}Ag_{0.5}InSe_2$ thin films, elec. resist., thermopower, Hall effect meas. 91728
$CuAsSe_2$ liq. semicond., nonmetal-metal transit. 91703
$CuCr_{1-x}Mg_xO_2$ films, powders, p type cond. 69550
$CuGaS_2$ microcrystals, cryst. growth, opt./elec. props. 103090
$CuGaSe_2$ films/single crysts., struct./elec./opt. props. 126103
$CuInS_2$ thin films prepared by co-evap., incorporation of doping elements Sn, N, and P 91956
$CuInSe_2$ crysts., elec. cond., photocond., stoichiometry effects 115336
p-$CuInSe_2$:H, hydrogenation, cond. type conversion 103409
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ NTC thermistors, reliab. 102763
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ spinel-based ceramics, technol. modif. 114445
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ syst., controlled thermistor effect 102762
n-CuO/$BaTiO_3$, nanosized powders, gas sens. props., FTIR spectrometry 97431
CuO/Fe_2O_3:Li_2O, elec. props., precalcination temp. depend. 80747
Fe powders, resin insulated, mech./elec./mag. props. 104496
β-$FeSi_2$ single crysts., opt., elec. props. 91716
GaAs, spatially resolved spin-injection probab. 80690
GaAs:Be, doping, ultrafast optoelectronic device appl. 126312
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dispersion 69543
GaAs/AlGaAs, high-mobility 2D heterostruct., anisotropic disorder, DC transport 126108
GaAs/AlGaAs, narrow quantum Hall bars, absence of activation-type cond. 91758
GaN MBE layers, highly resistive, elec. transport 91676
n-GaN epilayers, elec. props., plasma etching, ICP plasma damage 80742
GaN film growth, elec./optical/struct. props., AlN interlayers, TEM 124889
GaN films, MOVPE on BP thin buffer layer on Si(100) 68293
GaN films, RF-plasma assisted MBE, multiple AlN intermediate layer 68209
GaN, low temp. transport, carrier densities, impurity sites effects 126069
GaN, polycryst. films, RF magnetron sputtering, struct. anal. 91637
GaN:Be, elec./structural anal., Raman spectrosc., high resoln. XRD 81000
p-GaN:Mg MOVPE layers, deep trap anal., elec. cond., TSC and thermal admittance spectra meas. 69546
GaN:Mg, blue LED, nitrogen plasma treatment, vacancies, reactivation 82419
GaN:Mg, multiple step RTA, enhanced p-type cond. 103236
GaN:Mg,C,He,O epilayers, ion implant. induced defect states, elec. charactn. 81024
GaN/Al(In)GaN heterostruct. 69523
Ge-Se-Tl amorph. films, elec. cond., switching props. 91694
a-$Ge_{46}S_{54}$ films, thermoelectrical props. and memory switch phenom. 80756
GeSi:P(B) single crysts., CZ prep., method, high temp. transport property 91699
HgCdTe passiv. by A^2B^6 layers, elec. props., heterostruct. charactn. 126030
HgSe polycryst. thin film, growth method 101399
ITO film, struct., conductive mechanism *(Chinese)* 80732
ITO highly cond. thin films for display appls., deposition proc. 97622
$In_{2-2x}(Cd,Sn)_{2x}O_3$, bulk phase rels., cond., transparency 80750
InGaAs self-organized QD on GaAs (311)B studied by conductive AFM tip 80855
In_xMoSe_2 intercalated single cryst., growth, elec./opt. props. 115348
InO_x thin films, chem. and optoelectronic appls. 82054
In_2O_3:Mo films, thermal reactive evap. prep. and props., ozone effects *(Chinese)* 101303
In_2O_3:Mo transparent conductive film, prep., struct./elec./opt. props. 115328
In_2O_3/SeO_2 thin films, struct., elec. and gas sens. props. 97474
α-In_2Se_3 single cryst. with In excess, elec./opt. props. 80766
$In_2(Se_{1-x}Te_x)_3$ film, synthesis, struct./elec. props. 79247
InSnO films, EM shielding effectiveness 72346
InSnO thermally evaporated thin films, elec. props. 80770
InSnO thin films, UV irrad., cond., work fn., stabil./instabil. 69551
(K_2O-Li_2O)-Fe_2O_3-P_2O_5 glass, elec. cond. eval., Raman spectra obs. 69561
$KTiOPO_4$ crysts. for NLO converters, ferroelec. domain config. 116166
(La,Ca)CrO_3 for interconnect in SOFC, durability *(Japanese)* 101478
$LaCrO_3$-CrFe5$Y_2O_3$1 heat-resistant elec. conducting joint, brazing, SOFC 123790

electrical conductivity continued
$La_3Ga_5SiO_{14}$, bulk resist./capacity/reson. freq., BAW devices, SIMS 104462
$LaNi_{0.6}Fe_{0.4}O_3$ SOFC cathode, reduced temp. operation 89236
$LaNiO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$La_{1-x}Sr_xCo_{0.98}Ni_{0.02}O_3$ perovskite-type catalytic fuel cell electrode material *(Chinese)* 112833
$LaSrCoO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$La_{0.85}Sr_{0.15}CrO_3$ SOFC interconnect, sintering, characterisation 89262
$La_{0.85}Sr_{0.15}Cr_{0.95}V_{0.05}O_3$ SOFC interconnects optimisation 89263
$LaSrMnO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$LiCoO_2$ cathodes, MCFC, current collector, contact corros. resist. 100007
$Li_{4-x}Mg_xTi_5O_{12}$ spinel electrodes, lithium batt. appl. 99923
$LiMn_2O_4$-based composite cathode, carbon black role, Li batts. 99924
$Ln_{0.85}Sr_{0.15}Cr_{0.95}Cu_{0.05}O_3$, sintering, elec,/thermal props. 90589
$Mn_{1.5}CoNi_{0.5}O_4$, elec. props., firing, O_2 partial press. depend. 114434
$MnFe_{1.8}Cr_{0.2}O_4$-$BaTiO_3$ composites, AC cond., magnetoelec. effect 127155
Mo conductive film deposition on semicond., Mo hexacarbonyl decomp. in glow discharge 90528
Mo silicide conductive film deposition on semicond., Mo hexacarbonyl decomp. in glow discharge 90528
MoO_3:Ti nanosized thin film, gas sens. 97552
Nb_3Sn supercond. wire reinforced by jelly-rolled Nb/Cu composite, strain effects 68428
Ni addit. to oxide cathodes, emission stabil., elec. cond. effects 102897
Ni complexes with extended TTF dithiolato ligands, prep., cond. 103082
Ni/Y_2O_3-ZrO_2 cermets, prep., SOFC anode appl. 101510
NiO cathodes, MCFC, current collector, contact corros. resist. 100007
$Ni(OH)_2$ cathode, surface modif., Co coated *(Chinese)* 89063
PZT ferroelec. thin films, polariz./self-polariz. 127233
PZT sol-gel derived films, ohmic cond./activation energy, temp. depend. 92645
Pb-Sn passiv. layer perform., polariz. time/pot. effects *(Chinese)* 89066
Pb-acid secondary batts., pos. electrode oxygen evol. modelling 89119
PbTe thin films, thermoelec. props., percolation transit. 69563
$PbZrO_3$ thin films, ac elec. & dielec. props. 92625
Pd/ZrO_2-Y_2O_3 composites, dielec. props., EDLC 123849
$Pr_xCe_{1-x}O_{2-\delta}$, ceria-based gas sens. 121003
Pt/PZT/Pt capacitor PZT films conductive region eval., hydrogen plasma treatment 104285
ReS_2, opt./elec. props., in-plane anisotropy 91702
$ReSe_2$, opt./elec. props., in-plane anisotropy 91702
Si devices, time-depend. charge-collection efficiency for diffusion 126624
Si films, Joule heating rapid crystn., Raman scatt. 126005
Si films, rapid crystn. using elec.-current-induced joule heating 68362
Si mesoporous nanocrysts., free charge carriers, IR absorpt. and DC elec. cond. meas. 115296
Si, nanoporous, elec. cond., charge transfer, adsorbed water effects 102979
Si, polycryst. films, lightly doped, grain boundary transport props. 115298
Si polycryst. films, temp.-depend. thermal cond. 80632
μc-Si solar cells, absorber layers, ECR CVD grown 112894
Si:B Coulomb glass, microwave ac cond. spectrum 102491
Si:B, metal-insulator transit., uniaxial stress, comment 125992
Si:B, ultra-low energy implanted, elec. activation 115289
Si:B,F films, PECVD, struct., transport props. 114337
μc-Si:H films, catalytic CVD, struct./elec./opt. props. 124965
μc-Si:H thin film solar cells, hydrogen-radical CVD, init. growth estim. 112892
Si:H/Si heterojunction, carrier transport props. *(Chinese)* 126114
nc-Si:H/Si p-n heterojunctns., elec. charactn. *(Chinese)* 69638
Si:He cond. modulation power device, localized lifetime control, transport model *(Chinese)* 115882
Si:P, moderately doped, opt. and electronic props. at terahertz freqs. 91587
Si:P nanocryst. films, low temp. transport mechanisms *(Chinese)* 115297
Si:P,H nanocryst. films, cond. props., heterojunction diodes *(Chinese)* 91575
Si/Alq/Al structs., electronic transport props. 69623
Si-C-N(:B) ceramics, struct. and transport props. 126102
SiBCN ceramics, high-temp., dopable electronic materials 69562
SiC, 6H, electron transport, Monte Carlo simul. *(Chinese)* 115349
β- SiC anti-corona material for electric generators *(Chinese)* 99628
SiC conducting/insulating tracks by laser direct writing 115337
4H-SiC epitaxial layers, unintentionally doped, hot-wall CVD, struct./elec. props. 68239
SiC:V,B, liq. phase sintered, elec./thermal conduct. 115350
a-Si_xC_y:H films, three-electrode reactor fab., amorph. semicond./amorph. insulator 124928
SiCN ceramics, high-temp., dopable electronic materials 69562
SiGe/Si QW, THz lasing mechanism 93621
SiO_2 ultrathin gate oxide films, elec. cond., nanoscale conducting AFM study 80959
SiO_x, nanoporous, elec. cond., charge transfer, adsorbed water effects 102979
$Si_{20}Te_{80}$ glasses, phys. props., acoustooptic devices appl. 93260
$SnMoO_4$-SnO_2 composites, elec. props., humidity sens. 87038
SnO_2 electroceramics with additives, elec. props. 103060
SnO_2 nanoparticles, cond., oxidizing/reducing atm. effects, STM/STS obs., sens. appl. 132043
n-SnO_2, nanosized powders, gas sens. props., FTIR spectrometry 97431
SnO_2:CuO(ZnO) gas sens., CO gas detect. 75711
$SrBi_2Ta_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2(Ta_{0.9}V_{0.1})_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2Ta_{1.8}V_{0.2}O_9$ ferroelec., O-vacancy-related dielec. relax. 70396
$SrBi_4Ti_4O_{15}$:Mn elec. cond., controlled oxygen partial press. 104379
$Sr_{1-x}La_xMnO_3$ thermal sprayed protective coatings for Cr-based SOFC interconnects 89270
$SrRuO_3$ film, laser ablation prep., struct./elec. props., capacitor obs. 79353
$Sr(Ti_{1-x}Fe_x)O_{3-\delta}$ ceramics, resistive oxygen sens., elec. cond., thick films 109780
$SrTiO_3$ doped thin films, high temp. cond. behavior 81635
V_2O_5-MoO_3 films, electron beam evaporated, elec./opt. props. 103059
WO_3 chemiresistive sens. films., stoich. & microstruct. effects 97530
WO_3 thin film gas sens., chlorine detect. 97513
WO_3:NiO thick films, high-temp. elec. props. 132021
WO_3-$Na_2O(MnO_2)(Al_2O_3)(NiO)(Co_3O_4)$ ceramics, elec. props. 90552
$Y_{1-x}Mn_{1-y}O_{3-\delta}$, ceramic route synthesis, elec. cond. meas. 114442
Y_2O_3-ZrO_2 thin film electrolyte for SOFCs, prep./characterisation 89171
$ZnFe_2O_4$-Zn_2ZrO_4, prep., struct., elec. props. 91684
$ZnGa_2O_4$:Sn, luminesc. brightness, doping effect *(Korean)* 71532
$Zn_3In_2O_6$ thin films, RF sputtering, struct. var. 79204
ZnO nanostructured based varistor materials, impedance spectrosc. studies 115304
ZnO:Al film, struct., conductive mechanism *(Chinese)* 80732
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557
ZnO/Si heterostruct., elec. props. 103108
ZnS, thin film electrolum. devices, transport props., simul. *(Chinese)* 116974

electrical conductivity continued
ZnS:Mn, doped/undoped, dc EL, elec. cond. 93336
ZnSe:Cl,Li films, MBE on GaAs, codoping effects 91954
ZnSe:Cu ceramics, opt. and elec. props. 91616
ZrO_2-Y_2O_3 electrolyte membranes, tape casting, isostatic pressing, SOFC 89202
ZrO_2-Y_2O_3/Al_2O_3 composites, SOFC, modelling study 123796
ZrO_2-Y_2O_3-TiO_2 SOFC anodes, screen printed, I-V polaris. 89245
electrical conductivity measurement
borehole induction meas., hybrid FFHT-EBA method, inverse algm. 88104
brain model, temp.-/constr.-change distrib., reconstructed permitt./cond. images 87380
capillary electrophoresis chip, cond. sens., powder blasting 92546
containerless proc. in space, thermophysical prop. meas. using EM levitation 87010
electronic, mag. props. megabar press. studies in diamond cells 97786
epoxy/glass fiber composites, surface hydrophobicity, thermal treatment *(Korean)* 116186
four-probe resist. meas. on resistive sheets with parallel electrodes, correction factor 132129
green-state P/M compacts, nondestructive electrostatic dens. assess. 114534
head tissue, regional cond. estim., improved EEG anal. 76299
high T_c superconds., surface resist. meas., dielec. resonators 75820
inductive cond. meas., model selection, parametric inversion 114497
intracranial tissues, living, cond., monopolar needle electrode 87390
Mars subsoil geophys. prospecting by TDEM 120690
microfluidic device, flow rate meas., cond. monitoring 92487
oil monitoring, slow-wave struct. appl. 121160
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
orthoferrite plate, magneto-opt. CT 104838
param. distrib. reconstruction 97781
real-time water quality monitoring across Internet, virtual instrum. 99029
soil, intell. dielec. sens. 121059
soil decontamination, EM and thermally coupled fields calc. 88179
subsurface digital multifreq. EM cond. imaging syst. 84166
UHF apparatus for water based gels in microwave phantoms 87846
well logging, 2D EM cond. imaging 88101
wet surface resist. distrib., automated meas. syst. 120651
windshield wiper motor, rain sensitive triggering syst. 124017
$Ba_2(In_{1-x}Ga_x)_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$Ba_2In_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$(Ba_{1-x}La_x)In_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$(Ba_{1-x}La_x)In_2O_{5+x}$ solid soln., ion cond. 89222
CdTe-based solar cells, local photocurrent and resist. meas. 100118
$Ce_{0.8}Gd_{0.2}O_{2-x}$ solid electrolyte, intermediate temp. SOFC 89211
$(CeO_2)_{1-n}(LaO_{1.5})_n$ SOFC electrolyte, elec. cond., grain boundaries effect 89212
Li-ion batt., PVdF-based polymer electrolytes 89075
Sc_2O_3-ZrO_2 SOFC solid electrolyte characts. 89207
$Sm_{0.5}Sr_{0.5}CoO_3$, SOFC cathode, reacts., rate-determining steps 89235
$(Sr,Ce)MnO_3$ SOFC cathode, elec. props. 89228
$SrCo_{0.8}Fe_{0.2}O_{3-\delta}$, SOFC, elec. cond., microstruct. effects 123793
ZrO_2-Sc_2O_3 SOFC electrolytes, elec. cond. studies 89206
ZrO_2-Y_2O_3 electrolyte membranes, tape casting, isostatic pressing, SOFC 89202
electrical conductivity of one-dimensional systems *see one-dimensional conductivity*
electrical conductivity of plasmas *see plasma transport processes*
electrical conductivity transitions
see also metal-insulator transition
conjug. polymer, low-band gap, memory effect in I-V charact. 80520
$BaCu_2S_2$, elec. props., phase transits. 91700
Bi:Te nanowire arrays fab., transport props., modelling 102966
C nanotubes, electron spin transport 80527
Cu complex, SCN ligand, bistable film, polarized memory effect *(Chinese)* 125094
$CuAsSe_2$ liq. semicond., nonmetal-metal transit. 91703
GaAs:Si, delta-doped MBE layers, elec./opt. props. 69511
GaAs/MnSb MBE granular thin film structs., MR switch effect *(Japanese)* 91748
a-$Ge_{46}S_{54}$ films, thermoelectrical props. and memory switch phenom. 80756
$La_{0.67}(Ca_{0.33-x}Pb_x)MnO_3$ nanopowders, MR behaviour 104485
$NiCo_2O_4$ films, spin casting, struct./elec./opt. props. 101397
Si:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
Si/SiO_2 disordered nanostructures, reson. tunneling 115451
SiO_2 stressed ultrathin films, nm-scale elec. charactn., cond. AFM 80939
SiO_2 ultra-thin films, switching behaviour of post-breakdown cond. 115459
$Sr(Ti_{1-x}Mn_x)O_y$ polycryst. films, leakage currents 127164
$TiO_{2-\delta}$, nanocrystalline thin films, low temp. reoxidation 103441
$TiCu_3S_2$, elec. props., phase transits. 91700
VO_x films, reactive magnetron sputtering, current 1/f noise level 79217
electrical contacts
see also contact potential; contact resistance; ohmic contacts; point contacts
arcless interruptions in low current power ccts. 115107
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol. 127020
CMOS proc. flow for combined three layer/self-aligned contacts 104099
compliant cantilevered spring interconnects for flip-chip packaging 113631
CSP develop. for power device appls. 115879
current limiting cct. breakers, LV devices, moving contacts, arc root commutation 123661
DC hybrid cct. breaker using integrated gate-commutated thyristors 78055
double-sided buried-contact solar cells, floating jn. shunts localization 100064
DRAM, 0.1 μm, bitline spacerless storage node SAC/Ru-Ta_2O_5-Ru capacitor with TiN contact plug 125475
DRAM storage node pad proc., line type self-aligned contact/oxide spacer/direct metal plug 125476
dual gate CMOS DRAM self-aligned contact proc., tetrachlorosilane-based SiN mask films 125473
elec. theory of contacts, contact resist., DE 91446
electron projection/e-beam direct write lithog. resists, image form. 103643
fritting contacts applicability to micromachined probe cards *(Japanese)* 125859
GTO devices, quasi 2-dimens. model develop. 126695
impedance std. calib., rem. controlled coaxial switch, pneumatic actuator 109416
inductive load-current interruption, arcing duration estim. *(Japanese)* 102797
LV switch cct. poor contact detect. method *(Japanese)* 80470
megaampere current elec. cct., conductors and contact connections 79643
nanospring interconnects for high-dens. appls. 67609
nanostruct. fab., SOI proc., SEG, etching, oxid., Si on air 126594
num. field computation, conf., Graz, Austria (Sept. 2000) 78387
planar microcontacts form. by conductive probe, differential conductance 91786
polymer electrolyte membrane fuel cells, carbon aerogel integrat. 89187
electrical contacts continued
PZT etching in MORI high dens. plasma syst., pyroelec. detector array co reliab. 103377
rail launcher devices with sliding contacts, EM anal. 83185
rear-contacted solar cell struct. anal. 100164
rigid sphere and elastic layer bonded to rigid substr., contact modelling 7
self-aligned contact etch stop window, enhanced, using C_4F_6 chem. 1033
sliding contacts, arcing, erosion and contact resist. stabil., automotive p appls. 115102
stack DRAM cell with low parasitic resist. device/poly metal gate techno Gbit DRAM 125489
stationary elec. contacts, theoretical/expt. studies 126255
substation busbar end contact heating computation 89004
switch short arc duration laws and distribs. at low current and voltage 11
switchgear contacts overheating under short-cct. currents 78049
thick film resistor I-V charact. nonlin., material struct. effects 125841
ultra fast hybrid cct. breakers with GTO and IGBT, comparison 99842
universal motor brushes, bedding-in proc. *(German)* 112448
vac. arc extinguishing chambers, breaking ability eval. *(Russian)* 123672
vac. cct. breaker high-speed cam mechanism studies 88997
very small vac. cct. breakers, internal press. meas. *(German)* 134285
VLSI cct. substr. coupling modeling, semi-anal. quasi-static approach 702
wafer-level batch packaging technol., elec. testing 113659
Ag corros./whiskers growth, power contacts, pulp and paper plants 12415
Ag-Cu whiskers growth on cct. breaker contacts in corrosive atmos. 1342
Ag-La_2O_3 contact material, prep. and props. *(Chinese)* 101505
Ag-SnO_2-In_2O_3 elec. contacts, prod. optim. 90563
Ag-W elec. contact materials, Ni addit. effects 79425
Ag-metal oxide contact, material comp. design *(Chinese)* 102796
AgW symmetric contacts, arc chamber wall material and arc gap dielec. recc voltage 123663
Al back contact form., mc-Si solar cells 100091
Au PCB finger contacts, flux spatter minimization/elimination, systematic 115202
$Bi_2Sr_2CaCu_2O_{8+x}$, SOFC contact layers, chem. compatibility 89174
$Bi_2Sr_2CuO_{6+x}$, SOFC contact layers, chem. compatibility 89174
CdS-CdTe solar cells, Ni_2P back contact material expts. 100129
CdS-CdTe solar cells, ZnTe:Cu back contacts expts. 100179
CdTe thin film solar cells, I-V charact. cross-over modeling 100120
CdTe thin-film solar cells, ZnTe:N_2 back contact insertion 100178
CdTe/CdS solar cells, Cu distrib. before/after accelerated stress testing 100
CdTe-CdS solar cells, CdO:Sn MOCVD front contact appl. 100181
Cr highly resistive thin-film strips for single-electron transistor 103935
Cr-Cu front contacts, mc-Si solar cells 100091
Cu-Cr contact materials for high power vac. interrupters *(Chinese)* 13426
Cu-Cu wire-plate contact combinations, fretting, AC and DC current condit 115103
CuCr contact, SHS-melting *(Chinese)* 80469
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packa 125945
GaAs hot electron injection FETs 92414
GaAs, p-type metal contact etching 126393
SF_6 HV/MV cct. breaker state diagnosis after short cct. 134270
Si RP-PERC high-efficiency solar cells, rear contact patterning methods 100
Si back contact buried contact solar cells, metallization wrap around electr 100076
Si screen printed back contact solar cell with selective emitter 100085
Si solar cells, efficiencies over 20%, obliquely evaporated contact tech 100078
a-Si:H TFTs, LV/HV, modified inverted-staggered struct., wet etch fab. p 70134
a-Si:H TFTs, leakage charact., front hole channel effect 70135
a-Si:H, ion beam synthesis of low resist. contacts 69710
SiC:Ge, ion implantaion form., elec. characts. 91724
a-SiC:H UV detectors, opt. props. 75548
a-SiC:H, ion beam synthesis of low resist. contacts 69710
Sn plated contact, dyn. contact resist. 115105
Sn plated contact, oxide film, fretting degrad. 115104
SnO_2 sol-gel film microsens., CO response, moisture/electrode effects 9754
a-V_2O_5-P_2O_5:CuO with metallic contacts, elec. props. 126250
W-Cu contacts, SF_6 insulated cct. breakers for high short ccts. interruption (C *man)* 134283
W-Cu contacts in vac. interrupter envelope, load current switching, elec. eros 123660
$YBa_2Cu_3O_{7-x}$, SOFC contact layers, chem. compatibility 89174
ZnTe:N back contacts, CdS/CdTe solar cells 100107
electrical contracting
project execution approaches comparison 124300
electrical discharge machining
see also spark machining
arc plasma temp. distrib., spectrosc. meas. *(Japanese)* 78362
BSG microsens. substr., microhole electrochem. discharge machining 1161
charact. anal., GM(0,N) grey model and fuzzy logic appl. 78361
combined ELID-grinding/EDM method expts. *(Japanese)* 100347
current mode-controlled LCC reson. DC/DC power converter 123627
dry wire EDM method in gas atmos. *(Japanese)* 134678
mechanism, plasma channel wave charact. *(Chinese)* 124143
micro-/nano-syst. technols., fab. techs., overview 81617
nontraditional micromachining technols., overview *(Chinese)* 92527
photomask fab., micro-EDM feasibility study 92430
piezoelec. compact displacement accumulation actuator, design/fab./test 70341
thin-electrode rapid prod. using single discharge machining *(Japanese)* 1340
wire EDM gap state monitoring *(Chinese)* 124142
wire EDM servo control state anal. *(Chinese)* 124141
Ni-Be deep-microfeature LIGA-competitive microcomponents, micro-EDM FIB micromachining 92529
Si micro-EDM machining performs., micro-Joule energy range 92555
electrical double layers *see electrochemistry*
electrical engineering
see also electrical engineering computing; electrical engineering education electronic engineering; high-voltage engineering; power engineering
AC/DC variable-speed drives, control techs., book 123854
All-Russia Electrical Engineering Inst. anniversary, hist. *(Russian)* 113267
All-Russian Scientific-Research Inst. of Electromechanics, elec. engng. materi develop. 101145
anaesthesiology and electrotechnology professions, commonalities 67463
Bernd Girod, entrepreneurial elec. engng. professor, biog. 124187
broadcasting technol., historical aspects 75277

trical engineering continued
environ. issues *(Japanese)* 99177
evol., systemic overview, South African perspective 100404
high-temp. supercond., electrodynamics, elec. engng. appls. *(Russian)* 116509
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (May 2001) 113283
Internet traffic engng. without full mesh overlaying 119669

trical engineering computing
see also automatic test software; computerised control; computerised instrumentation; electric machine analysis computing; electric machine CAD; electronic engineering computing; power engineering computing; power system analysis computing; power system CAD; radar computing
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 105695
3D eddy current problems with integral formulations, fast algm. 128678
3D EM field problems, finite element & multigrid methods 83144
3D nonlin. transient eddy current problems, multistep algm. 128683
3D waveguide components, CAD tool for wideband modeling 69063
antenna design, neural network enhanced GA 83505
arbitrary dispersive media freq.-depend. FDTD method, ABC 105696
arbitrary shape coil, mag. field calc. method, computer program 72203
balloon-born two-sphere elec. field instrum., neural net DP *(Chinese)* 105666
bang-bang servos mag. hysteresis modelling using neural nets 112734
Barnes-Hut multipole method for EM scatt., predicting computer run-time 83214
CAL of wave propag. in dielec. and opt. waveguides, interactive simul. toolbox 94008
circ. cross-sect. cylindrical metallic cavity modeling 105843
CLASP software suite for antenna design/optim. 83526
computational EM appl. of meshless method 128641
computer relays, PC-based low-cost digital simulator for perform. eval. 91447
conformal dielec. interconnect capacitance, BEM-based simul. *(Chinese)* 104243
constrained adaptive antenna arrays, uncorrelated interf. patterns space fitting using neural networks 128886
cryocooler-cooled HTS coils, stabil. criterion 71019
cylindrical particles charging in monoionized elec. fields 128708
DC electromagnet energising proc., dyn. calc. *(Russian)* 93984
DC electromagnet energizing proc. calcs. using MathCAD syst. 117631
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
design-oriented meas.-based fully scalable CPW transm. line model 114932
dielec. cylinders inverse scatt., RBF NNs 128759
diplexer design using pre-synthesized waveguide filters 102548
distributed microsystems-CAD, server group *(Chinese)* 92501
E^3-EXPERT ES for EMI rejection requirements prediction 83369
eddy current probe improvement, DSP algms., autom. meas. syst. 114506
eddy current problems, equiv. source-wavelet method *(Chinese)* 93972
eddy-current probes anal., arbitrary shape excitation loops 114542
edge elements constr./ordering for parallel computation 128689
education, magnetostatic anal. of BLDCM using 2D PDE solver 113287
elec. heat tracing, CFD modeling 124091
elec.-engng. equipt., µP control boards software 77802
electromagnetic plunger sizing, component oriented tool 117630
electrostatics computing, discrete charges, Monte Carlo method 93966
EM device CAD, multiobjective design optim. 93981
EM device design, use of ANN inverse mapping tech. 128703
EM device design, use of interval mathematics 128704
EM devices, GA optim., universal param. config. 128697
EM devices, generalized design optim. environ. 128699
EM devices, Pareto evol. optim., diversity enhancement tech. 83159
EM devices, rem. optim., WWW-based tool 128705
EM field anal., large sparse symmetric lin. systs. 128688
EM field formulation, math. models/num. methods 128653
EM field simul. tool with multiple time domain engines 93955
EM field visualization using VR modeling lang. std. 128650
EM modeling and visualization tools using FDTD tech. 93991
EM optim. problems, combined evol. strategies & approx. techs. 128642
EM parallel FDTD algm. using MPI library 72168
EM scatt., ABC/curvilinear perfectly matched layer 128735
EM wave simulator, OO design 94026
EM-based design of microwave ccts., neural inverse space mapping optim. algm. 91224
fast field comput. with fast multipole method, reduced comput. cost 83102
helical TWT beam/cct. interact. model, 3D time-depend., PIC code 91564
Helix Design for cylindrical helix antennas with matching sects. 94121
Helmholtz coil meas. syst., principle and software design *(Chinese)* 132140
HF EM simulators 93964
HF transformers, Litz wire winding, stray losses, computer anal. *(Polish)* 115097
high order modes in resonators with cylindrical symm., algm. for determ. 125671
homog. dielec. material in cavity, permitt. and loss factor estim. using FEM 70370
HTSC thin film, surface impedance charactn., CAD algm. 127419
HV instrum. transformer ceramic insulator, 3D elec. field. anal. 88803
IEEE Societies Web-based elec. engng. education efforts 89601
impedance tomography inverse problem, dual reciprocity BEM 132125
indust. lighting project savings using photom. CAD calcs. 134605
INSTANT software for antenna interacts. anal. 83527
ITER TF model coil, transient behaviour, 3D FEM 105686
ITER tokamak, magnetostatic reconstr., optimal probe placement 86919
large-scale/complex EMC problems soln. using method of moments 83362
LCD panels, colour reprod. characts., software-based compensation *(Japanese)* 121093
LHC supercond. coils, persistent current calc., modified Bean model, FEM 87064
LIGHT program, lighting anal. software, GUI 78330
long arc in free air, dyn. model, lab. testing 102885
long arc in still air, testing, modeling and simul. 102883
mag. pole shape optim., IIR-type neural network *(Japanese)* 104536
magnetic cores, nonlinear excitation charact. curve calc.,GRAPHTOOLS software *(Chinese)* 70545
magnetostatic field comput., fast integral eqn. scheme, NDE appl. 105677
magnetron injection guns, mech. tunable, design and gyrotron beam characts. 115258
metal-flanged rect.-aperture arrays anal., parallel framework 128896
microstrip antennas, design and troubleshooting using commercial EM simulators 83579

electrical engineering computing continued
microsystems and microreactors, NEXUS survey of user needs in design tools 116075
microwave components eigenvalue anal. program using high order vector elements *(Korean)* 91229
microwave heating appls., EM modelling 89447
microwave imaging inverse scatt., neural net approach 72295
miniature dielec.-loaded bifilar antennas for mobile commun., num. simul. packages 83599
MM-wave antenna systs., develop./appl. of MODTool integrated design tool 117770
motor drives, LV elec. equipt. selection 78202
multithread FDTD multiprocessor PC for anal. of microwave engng. problems 69110
multivariate anal. techs. for batt. optim./testing 89040
naval platforms, microwave EMI modelling, Mutual Interference Simulation Tool 83423
nonlin. EM field comput., hybrid tech., triangle search method 83143
nonlin. magnetostatic optim. problem, full step Newton method 128671
octagonal micromachined horn antenna for submillimeter-wave appls., anal. 83643
patch antenna design 94123
PCAAD21, antenna anal. program 128835
PCB metallic enclosure EM field penetration eval. software 83368
PD class., combined neural network and fuzzy syst. 109916
PD DAQ, prog. digital oscilloscope based syst. 120668
permitt. meas., automated amplit.-only PC based free-space syst. 109948
planar array synthesis with scatt. inverted-element locations using neural networks 128885
power combiner in MM-wave rect. waveguide cavity, global optim. CAD 80206
quaternion arith., FORTRAN 90 extension, literate-prog. 117612
rect. microstrip antennas, reson. freq. computation 117789
reflector/phased array antennas, time-domain response comparison 83552
refrigeration compressors thermodyn. perform. simul. using RBFN *(Chinese)* 134661
resist. tomography sens., sens. field, soft field charact. *(Chinese)* 75411
servo perform., internet-based ES 123693
Smith chart solns. 94077
source current distrib. problem, hierarchical SA vs. Gauss-Newton scheme 83075
space antenna, structural damage detect., neural network and freq. response fns. techs. 128872
street lamp rem. supervisory syst. based on power-line carrier commun. *(Chinese)* 124089
strong coupled multi-harmonic FEM EM device simul. package 83150
three-phase AC elec. arc furnaces, EM/thermal fields modelling 113149
TLM, FDTD and Haar wavelet MRTD algms. for EM simul. 93956
TLM multi-threaded time-domain algm., multi-proc. computer 105822
total mag. force on PM, num. calc., equiv. source methods 83149
TTL method applied to finline resonators 102567
tubular SOFC technol., computer modelling using ANSYS package 99981
undergraduate EM education, Maple V-based symbolic computation 78514
Virtual Learning Space for online elec. engng. teaching 67434
waveguide/horn radiators, matching/directional charact. anal. 117816
YGO3 for design of long Yagi arrays 128891
Si solar cells, high efficiency, thin CZ wafers 100077

electrical engineering education
see also electronic engineering education; power engineering education; telecommunication engineering education
ABET Engineering Criteria 2000 for German Electrical Engineering program 89628
analogue cct. courses, PC sound card-based audio waveform generator 78523
autonomous model race car design competition, cct. design 78522
basic concepts learning using computer tool 78530
cct. appls. of Dunn's rule 89645
computer relays, PC-based low-cost digital simulator for perform. eval. 91447
DC-DC power conversion board design/implement., student lab. exercise 99755
digital inform. age course for elec. engng. students 78531
elec. machines/EM teaching, OO software 123308
EM fields and FEM teaching, undergraduate level 83094
energy concepts in the elec. engng. curriculum, computer exercises 78484
Europe engng. education 100472
evol., systemic overview, South African perspective 100404
Hungarian elec. engn. education, professional culture develop. efforts 113364
HV field, undergraduate EM course, role of computers, expts. 113391
I-V mapping educational cct. simul. approach 78524
IEEE Societies Web-based elec. engng. education efforts 89601
indust. automation undergraduate lab. modular µP kit 78517
machine control discipline in Israeli senior high schools 124281
magnetostatic anal. of BLDCM using 2D PDE solver, education 113287
Masters Degree programs, dist. learning via Internet 78527
mechatronics-based motion syst. design 67446
microcontroller based syst. hardware-software integrat., education 124246
real-time EM field anal. syst. for engng. education 78493
SAPWIN, symbolic simulator, elec. engng. education 78521
teaching network anal. for today's classrooms 89644
teamwork education within concurrent engng. paradigm 124254
technol. education challenges and solns., Latin America 78528
undergraduate elec. engng. courses, indust. demands 113350
undergraduate elec. engng. degree program, elective courses comparison 100460
undergraduate EM education, Maple V-based symbolic computation 78514
undergraduate EM education using spreadsheet software 100458
US research student exchange consortium proposal 124252
Virtual Learning Space for online elec. engng. teaching 67434

electrical fault location *see fault location*

electrical faults
see also accidents; discharges (electric); electric distortion; fault currents; fault location; flashover; insulation; overvoltage; power system faults; testing; transients
3-phase bridge rectifier, earth faults simul., safety protection *(Polish)* 99806
110 kV/11 kV indust. transformer station overvoltages *(Serbian)* 123687
AC induction machine online shaft current monitoring/prediction 99666
brushless three-phase sync. generators, winding condition monitoring 133979
cable jn. monitoring syst., fault prewarning, jn. resist., insulation aging *(Chinese)* 133764
distrib. transformers, internal winding faults, FEA 77932
electromedical apparatus safety considerations *(Italian)* 87296
four-phase switched reluctance motor drive under lacking one phase fault condition, anal. 78216

electrical faults continued
generator rotor earth fault relay protection fn. 77823
generator unbalanced fault conditions relay protection 77822
generator unbalanced fault protection, inrush current effect simul. *(Chinese)* 99614
IC defect level estim. and model accounting for fault clustering effect 104044
IM broken bars eval. using elec. signature anal. 123455
IM broken rotor bar detect. using pattern recogn. 123424
insulation internal defaults ignition, PD model, meas. 104404
IPM sync. motor drive response to single-phase open cct. faults 89326
magnetizing winding, input impedance magnification 115096
modern generator protection concepts overview 77825
motor drive fault detect./mgt. syst. 113043
motor fault detect./protection using wavelet transforms 77820
power syst. transient stabil. anal., sync. machine models accuracy *(Japanese)* 88342
power transformer inrush detect. using magnetizing impedance var. meas. *(Chinese)* 112605
power transformer internal earth faults simul. model 77926
salient generator internal stator winding faults modelling *(Chinese)* 112465
Siemens LSA7 generator-transformer bank digital protection device *(Chinese)* 112457
Snowy Mountains Hydro Scheme earthing syst. safety assess. 77787
squirrel-cage motor rotor fault anal. using trapezoid wavelet transform *(Chinese)* 112508
substations, homog./uniform digital protective syst. 78086
sync. generator stator nondifferential relay protection scheme 77849
three-phase transformer power-based differential protection relay model 77942
transformer winding deform. diagnosis, equiv. model param. ident. *(Chinese)* 91433
transformers, long. differential protection, wiring coeffs. *(Chinese)* 99717
TV prod., fault protection *(German)* 97061
unit-connected generator-transformer stator winding fault protection 77824
water-cooled generator stator rewinds, tech. specs. experience 123291

electrical insulation *see insulation*

electrical noise *see noise*

electrical overstress *see electrostatic discharge*

electrical resistivity
see also electrical conductivity; magnetoresistance; piezoresistance; spin disorder resistivity
all-printed inorganic logic elements fabricated by liq. embossing 114704
antistatic floors electrostatic charactn. using equiv. cct. model 83133
bis(1,3-cyclobutylenedithio)tetrathiafulvalene, π-electron donor, conducting radical salts 91704
bulk nitride growth, related techs., conf., Brazil (Nov. 2000) 113249
buried heterostruct. MQW lasers, internal quantum transport effects 128329
contact-substr. coupling, fast parametric model 104043
copper phthalocyanine, film, gas sens., atmos. pollution meas. 109768
copper phthalocyanine films, electronic props., gas sens. appl. 109763
DC resist. imaging techs. 122546
diamond:Al(Cu), high energy ion implant., conducting layer form. 80999
diamond:B homoepitaxial film, growth, elec./opt. props. 115294
diamond:N electron emitter, sp^2/sp^3 ratio effect on electron emission 115248
diamond/pyrocarbon nanocomposites, low-field electron emission 69402
DuPont 8039 thick film resistors, ZrO_2-based substr. compatibility 69269
electroactive polyimide, dielec. relax. spectrosc., permitt., impedance 125116
electroceramics, conf., Portoroz, Slovenia (Sept. 2000) 100422
engineered hydraulic barriers, elec. resist. tomography 86908
flip chip-in-package, molded underfill material/proc. 113563
four-probe resist. meas. on resistive sheets with parallel electrodes, correction factor 132129
green-state P/M compacts, nondestructive electrostatic dens. assess. 114534
GSI, interconnect scaling limits 104055
indium-cerium oxide/double Ag layer systs., elec./opt. props., substr. temp./sputtering atm. effects 104878
interchip via technol., vert. syst. integrat. 126465
laser direct-write of materials for microelectronics appls. 103979
metal thin films, thickness, opt. consts. meas., spectrosc. ellipsometry 121204
metal/metal hip joints, lubrication, wear, femoral diam. 76675
metallized plastic MEMS, elec. characterisation 104173
1-methoxy-8-hydroxy-9,10-anthraquinone films, hot wall epitaxy, struct./elec./opt. props. 69607
multifilamentary tape, transport AC loss partitioning anal. 70704
nanogranular metal/insulator multilayer, read head shielding material 116433
NTC thick film thermistor elements, thermal/elec. behaviour 69268
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
percolation theory, materials sci./microelectronics appls. 91570
phonon-cooled hot electron bolometer gain/noise, hot spot mixer model 71135
plasma sprayed ceramics, dielec. props. 116129
polyethylene/Kapton, elec. props., electron-beam irrad. effect 81728
polymer current limiter device, voltage/comp. depend., switching 133799
polymer-grafted C black composite, soln. contamination sens. 132063
polypyrrole thin film gas sens., synthesis & sensitivity 97559
polysilicon thermal sprayed coatings, elec. charact. 115287
power cable insulation, ground shield semicon, resist. 112099
silica low-k film, methylene group incorporation, CVD, elec. props. 101320
silicon microwave semicond. devices, contacts 103751
silicone rubber, C black filled, press. sens., wet mixing fab. 86460
smart polymer composite thermistor, fault/short cct. current heating 125127
SOI MOSFETs, novel Si depleted material, HF props. 91919
struct. health monitoring by elec. resist. meas., review 114549
substation, opt. fiber control cable grounding under lightning strike 78088
substations/power stations, grounding systs., multi-layer soil struct. anal. 77578
textile fiber proc., elec. resist. effects meas. 83129
thermoelec. mater., rapid transport props. meas., low temp. 97777
thick film resistor series for strain sens. 121235
tunable high Q VHF/UHF devices, ferromag. film appls., materials issues 92867
whole body fat, upper arm/leg elec. resist. 87393
Ag-La_2O_3 contact material, prep. and props. *(Chinese)* 101505
Ag-W films, electroless prep., mech./elec./opt. props. 68388
AlGaAs-GaAs HEMT, 2DEG transport props., quantitat. mobility spectrum anal. 92409
AlGaInP/GaAs HBT, proton implant isolation *(Chinese)* 103785
$Al_{0.15}Ga_{0.85}N$:Mg/GaN superlattices, elec./opt. props., LED appl. 126134
AlGaN/GaN heterostruct., plasma-assisted MBE, growth/electron transport props., Ga flux effect 124855
p-AlGaN/GaN modulation doped superlattices, improved mobil./resist. 126178

electrical resistivity continued
AlGaN/GaN:Mg superlattices, p-type modulation Mg doping, resist., hole c 81046
AlGaN-GaN MODFET, 2DEG transport props., quantitat. mobility spec anal. 92409
$Al_{1-x}In_xN$ films, plasma source MBE grown, opt./elec. props. 90311
AlN, KrF excimer treatment 72125
AlN films, ion-beam-enhanced deposition, surface struct./resist. 125063
AlN, resist., band-gap shift, metal-nonmetal transit. 115321
AlN:O,C, conductive film fab., two beam PLD, XRD 90467
AlN:O,C films, two-beam PLD, ohmic character 91630
Al_2O_3-TiO_2, plasma-sprayed coating, elec. insulation behavior *(Korean)* 11
AlON diffusion barrier form. for Ag interconnect metallization 92179
Au focused electron beam induced deposition 115667
Au/C:H,B/n-Si heterojunction solar cells, PV props. 134383
Au/$YBa_2Cu_3O_7$ fault current limiters, quench distrib., meander lines re 112176
BN_x-SiN_y composite films, multisource plasma CVD synthesis 124900
$(Ba,La)TiO_3$ PTCR ceramic, CO gas sens. 97479
$(Ba,Sr)TiO_3$ porous ceramics, effect of atmos. on PTCR charact. 81714
$BaBiO_{2.77}$ varistor property promoter in ZnO ceramics 69262
$Ba_{1-x}Ca_xTi_{1.02}O_3$ ceramic, PTC thermistor, elec. props. 80410
$BaCu_2S_2$, elec. props., phase transits. 91700
$Ba_5SmTi_{3-x}Zr_xNb_7O_{30}$ ferroelec. ceramics, phase transit. 81718
$Ba_{1-x}Sr_xTiO_3$:La thin films, growth, dielec. props. 81671
$Ba_{1-x}Sr_xTiO_3$:Sb_2O_3, semicond. ceramics, PTCR effect enhancement 12632
$BaTiO_3$ PTC ceramics with low resist., Cl^- effect on props., thermistor fab. *(Chinese)* 90553
$BaTiO_3$, rare-earth and Mn substituted, occupational sites and dielec. pr 116176
Bi nanowire, transport props. 103129
Bi:Te nanowire arrays fab., transport props., modelling 102966
$(Bi_{1/2}Na_{1/2})TiO_3$ ferroelec. ceramics, elec. props., additive effects 104343
$(Bi_{1/2}Na_{1/2})TiO_3$-$KNbO_3$ ceramics, struct./dielec. props. 127227
BiPbSrCaCuO 2223 HTSC multifilamentary tapes, important factors affec AC losses 127444
$Bi_2Ru_2O_7$ thick-film resistors, firing temp. effects 80420
BiSrCaCuO/Ag 2223 untwisted HTSC tapes, transverse resistivities 12744
$(Bi_2Te_3)(Sb_2Te_3)(Bi_2Se_3)(Bi_2Te_3)$, thermoelec. pn jn. 91757
C multiwalled nanotubes, reliab. and current carrying capacity 102869
C_{60} thin film solar cells, B and P ion implant. 112905
a-C:H/Si high reverse breakdown voltage diode, RF PECVD fab. 70021
a-C:H,Si,Cr(Mo) DLC films, plasma CVD, thermostable resistor appl. 792
a-CN_x films, N-rich, deposition, charactn. and appls. 90411
CN_x thin films, elec. and structural props. 69558
$Ca_{0.7}Li_{0.3}V_2O_5$ spin-ladder, transport props. 115329
$Ca_xPb_{1-x}TiO_3$:Li^+ film, prep., humidity sens. appl. 75439
$CdAs_2$ crysts, transport props., hydrostatic press. effects 91720
$Cd_xHg_{1-x}Te$:V crysts., Bridgman growth, transport props. 90206
CdO/CdS thin films, cond. oxide layer form. during air heating 103369
CdS chem. deposited thin films under mag. field, props. modif. 68326
CdS films, electron beam, deposition, opt., elec. props. 69527
CdS films, photochem. deposition from aq. solns., elec., opt. props. 79370
CdS films, spray pyrolysis from thiourea complexes, elec./opt./struct. pr 91642
CdSe nanocrysts. in a-ITO films, struct./SHG, elec. field effects 82891
CdTe-absorber PV cells/modules, mfg. equipt., R&D 100096
CdZnTe, high resist. wafers, annealing, cryst. quality *(Chinese)* 103244
$Cd_{0.80}Zn_{0.20}Te$ high resist. cryst. growth, modified Bridgman method 12480
$CeRu_4(Os_4)P_{12}$, filled Skutterudite-type struct., thermoelec. props. 80769
Co-Ni-Fe-N as-sputtered soft mag. thin films, HF charact. 127289
Co-W-P thin films, electroless deposition for ULSI, MEMS appls. 90509
Co-Zr-O nanogranular thin films, HF soft mag. props. 127282
(CoFeB)-(SiO_2) film, mag. permeab., inductor core 127286
CoPdAlO mag. film, RF integrated inductor 127285
$CoSi_2$ form. on porous Si by high dose ion implant. 81014
Cr-Fe-Y_2O_3/brazed conductor joints, solid oxide fuel cell 89157
$CrSi_2$ films on Si(111), transport, opt., thermoelec. props. 91723
Cu complex, SCN ligand, bistable film, polarized memory effect *(Chine* 125094
Cu elec. busbar joints, laser surface melting treatment effects 115623
Cu electrodeposition from sulfate electrolytes, mechanism, effects of thiourea resist. 90494
Cu electrodeposits in fine line damascene structs., recrystn. 69955
Cu electroless deposition for ULSI 90501
Cu electroless deposition on Ta/SiO_2/Si substrs., displacement activation 101
Cu films, acid-based electroless deposition, kinetics & microstruct. 90518
Cu films, acid-based electroless deposition, react. mechanisms 90517
Cu films, damascene electroplated, morph., filling capability 68352
Cu films/damascene fine lines, resist., ULSI appl. 126501
Cu interconnect, effective resist. 115703
Cu interconnection in ULSI, electroplating technol. *(Chinese)* 126500
Cu interconnections reliab. improve., use of binary Cu-alloy films 126457
Cu line patterning, high resoln., by direct imprinting 115668
Cu line resist., linewidth depend. 115701
Cu metallic films deposited by DC magnetron sputtering 68157
Cu metallisation, electroplating, electrolyte resist. control 115715
Cu metallization, refractory metal carbide diffusion barriers 115695
Cu thin film CVD using Cypron volatile liq. precursor 114314
Cu thin films, sputter deposition, resist. meas. 126442
Cu/Cu/TaN/SiO_2/Si multilayer, interfacial reacts., electroplated Cu props. 811
Cu/Ta/Si(111) thin films, neg. bias sputtering for Ta silicidation retardati 92136
Cu/TaN/SiO_2/Si multilayers, struct. integrity, IMP-deposited nitride thickn effect 92099
Cu-Cr-Y, rapid solidif., phys. props., Y addit. 102757
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-Mo-based multilayer films for advanced metallisation, microstruct., Mo add effects 115675
$Cu_{0.5}Ag_{0.5}InSe_2$ thin films, elec. resist., thermopower, Hall effect meas. 9172
$CuInS_2$ single crysts., horiz. Bridgman growth, defect props. 114210
$CuInS_2$ thin films, spray pyrolysis, heat treatment and props., solar cell app 79374
$CuInSe_2$ solar cells using horiz. Bridgman growth method 100176
$CuInTe_2$, cryst. growth, elec. and opt. props. 115358
Cu_2O:N thin film, reactive RF magnetron sputtering 79200
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
n-$CuInSe_2$ elec. characts., impurity band cond. effects anal. 126093
ErAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
Eu chalcogenide cpds., elec. transport props. anal. 80780

trical resistivity continued
Fe insulated powder, mag. props., AC mag. appl. 104498
FeCrTaN nanocrystalline thin films for tunable high Q UHF/VHF devices 92868
$FeSi_2$ films on Si(111), transport, opt., thermoelec. props. 91723
β-$FeSi_2$:Cu, n-/p-type, pressureless sintering prep., thermoelec. props. 69570
GaAs, SI, HPLEC grown, elec. props. compensation *(Chinese)* 80729
GaAs, SI, effect of Ar^+ implant. on galvanomagnetic props. 80702
GaAs, SI, internal friction, annealing effects 91653
p-GaAs, dil. 2D hole syst., metallic behavior 126014
GaAs pure high-resist. wafers, microwave photocond. diagnostics 82313
GaAs:Be films, MBE, defect engng., elec. props. 126032
p-GaAs:C,Mg wafer, elec. isolation, proton ion bombard./annealing 126038
GaAs:Si,He layers, ion-beam-induced isolation 126310
p-GaAsSb, OMVPE, anisotropic resist., TEM obs. 126021
$Ga_{1-x}Mn_xAs$ films, MBE, defect-controlled ferromag., annealing time 104486
GaN MBE layers, highly resistive, elec. transport 91676
GaN epilayers on GaAs(110), elec./opt. props., radical beam epitaxy, TEM, PL 90333
GaN epitaxial layers, struct./elec./opt. props. 69519
GaN films grown by plasma assisted laser-induced CVD, props., influence of HI irrad. 126017
GaN thin film gas sens., MOCVD, response/recovery 86750
GaN:C films, plasma assisted/ammonia MBE, elec. characts. 80741
GaN:Mg bulk single crysts., elec. props., temp. depend. 69537
p-GaN:Mg, elec. activation, two step RTA 69785
p-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
p-GaN:Mg film, CO_2 laser annealed, optical, elec. props. 80984
GaN:Mg p-type films, temp.-depend. hole transport 126048
GaN:Mg thin film SAW filter with high vel./low insertion loss, MOCVD 81762
GaN:Mg(Si), elec./opt. props. gas source MBE 80728
p-GaN:Mg,O, activation, sheet resist., PL 80694
GaN:Si, opt. props., doping depend. 126047
GaN:Si, resist., band-gap shift, metal-nonmetal transit. 115321
n-GaN/InGaN MQW/p-AlGaN/p-GaN hexagonal microprism, selective area MOVPE, EL 82207
p-GaN/transitionmetal, transparent low resist. ohmic contact, Charactn., blue LED appls. 80915
Ga_2O_3 film, O_2 sens. appl. at high temp. 109742
β-Ga_2O_3, film, gas sens. materials charactn. 103054
GaSb:Gd ingots, elec. & compositional props., Bridgman growth method 69520
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
Ge:Sb pulse magnetron sputtered film, struct., thermoelec. props. 91582
GeSbTeSe:Cu(Co)(Ni)(Pb), films, crystn. kinetics *(English)* 69559
$Ge_{10+x}Se_{40}Te_{50-x}$ thin film, opt., elec. props. 69552
$Ge_{10+x}Se_{40}Te_{50-x}$ thin film, opt., elec. props. 91695
GeTe-Sb_2Te_3 layered cpds., Hall coeff./elec. cond./thermoelec. power 103078
GeTe-Sb_2Te_3 layered cpds., comp., elec. props. 91721
HgCdTe/Si heterostruct., laser beam epitaxy 68365
Ho_2O_3 films, dielec. props., MIM struct. obs. 92582
ITO coatings, chem. soln. deposition, proc. and elec. props. 101426
ITO films, DC/RF magnetron sputtering, elec./struct./opt. props. 79209
ITO films, PLD and props., laser irrad. effects 79358
ITO films, PLD on flexible plastic substrs. for organic LED appl. 91685
ITO films, bias RF magnetron sputtering, struct./elec./opt. props. *(Chinese)* 114244
ITO films, dc magnetron reactive sputtering, elec. props., film dens. effects 126075
ITO thin film, deposition & charactn., transparent electrode appl. 116560
ITO transparent conducting, anti-static/anti-static-anti-glare coatings on plastic substrs. 104877
ITO:Ag film, sputtered, elec./opt. props. 103057
ITO/Ag/ITO low resistivity transparent electrodes for polymer substrs. displays 103219
ITO/Ag/ITO sandwich films for simple-matrix LCD, crosstalk 86816
ITO/double Ag layer systs., elec./opt. props., substr. temp./sputtering atm. effects 104878
In metallic films deposited by DC magnetron sputtering 68157
In-Zn composite oxide/AgPd multilayer coatings for FPD, alkali durability 86822
InAsP:Zn/InP(InGaAs) heterostruct., doping, photodiode appl. 115553
$In_{1-x}Cd_xSb$ films, prep., struct. & elec. props. 91627
InGaAsP MQW LD, SI InP:Fe, buried layer *(Chinese)* 82681
In_xMoSe_2 intercalated single cryst., growth, elec./opt. props. 115348
InN, resist., band-gap shift, metal-nonmetal transit. 115321
InO_x polycryst. thin film, ozone sens. 86746
In_2O_3:Mo films, thermal reactive evap. prep. and props., ozone effects *(Chinese)* 101303
In_2O_3/SeO_2 thin films, struct., elec. and gas sens. props. 97474
InP, MeV As and P ion implanted and annealed, elec. and opt. props. 126018
n-InP, elec. isolation by ion bombard., dose depend., thermal stabil. 80734
InP, film, gas sens., atmos. pollution meas. 109768
InP, implant.-induced carriers/depth profiles correl., annealing 91958
InP, n-type/p-type, proton bombard., elec. isolation 69508
InP:Fe,Ru,Zn films, dopant diffusion, current-volt. studies 115554
InP:Ru LP-HVPE layers, elec. charact. 91659
InP:Ru growth by low-press. hydride VPE 101322
InSe films, thermal/flash evap. growth techs., charactn. 79246
InSnO thin films, dual ion beam assisted e-beam evap., phys. props. 79249
InSnO thin films for OLED, morph., elec. props. 109873
$(La,Nd)_{0.7}Sr_{0.3}MnO_3$ epitaxial films, PLD, thermal stabil., O control 79359
$LaCoO_3$ thin films, ion-beam sputtering prep., elec. props. 68149
$La_3Ga_5SiO_{14}$, bulk resist./capacity/reson. freq., BAW devices, SIMS 104462
$LaNiO_3$ epitaxial metallic films, O-ion elec. field-induced migration, 1/f noise 115666
$La_{3.5}Ru_4O_{13}$ SOFC cathode with ZrO_2-Y_2O_3 electrolyte, elec. meas./reactivity 89170
$La_{0.5}Sr_{0.5}CoO_3$, film, metallorganic chem. liq. deposition, metallic props. 125024
$La_{0.5}Sr_{0.5}CoO_3$/PZT/$La_{0.5}Sr_{0.5}CoO_3$ capacitors on $SrTiO_3$/TiN buffered Si(001) 81785
$La_{1.85}Sr_{0.15}CuO_4$(100) HTSC thin films, orig. of resist. peak effect 70664
Mg-Mn ferrites, elec. and mag. props. 81834
Mg-Zn-Cu ferrites prep. by sol-gel auto-combustion method, EM props. 104248
MgB_2 tape, Fe-clad, high-transport crit. current dens. above 30 K 127466
MgB_2 wires, transport behavior/crit. current densities 116513
MgCuZn ferrite, low temp. sintering and elec. and mag. props. 114429
$MgTi_{1-x}M_xO_3$ (M=Mn,W) ceramics, elec., dielec. props., dopant effects 116128
Mn-Ni-Fe-O NTC ceramics, aging behaviour, thermistors 101494
MoO_3-V_2O_5 thin films, struct. & H_2 sens. props. 97526
$Na_{1-x}Ca_xV_2O_5$ spin-ladder, transport props. 115329
NbN/MgO/NbN low-loss epitaxial trilayers, fab., THz appls. 71085

electrical resistivity continued
NbN/TaN_x/NbN SNS Josephson jns., PLD 70804
Nb_2O_5, lattice consts. and gas-sens. props., calcining temp. effect 97455
$Nd_{0.67}Sr_{0.33}MnO_3$ epitaxial films, microwave losses, dc transport, mag. prop. 68992
Ni/Ti/GaAs(001) films, RF magnetron sputtering, struct. anal. 124815
Ni-Ti shape memory thin film, growth & charactn. 116065
Ni-dithiolene complexes, synthesis, dimerized struct. and elec. props. 124799
$NiCo_2O_3$ films, spin casting, struct./elec./opt. props. 101397
PMN relaxor ferroelec., Ni electroplating, H-induced degrad. 127204
PMN-based relaxor ferroceramics, Ni electroplating, resist. degrad. and recovery 104308
PZT thin films, (100)/(111) oriented, reactive RF sputtering, dielec. props., RTA 104369
$Pb_2Ru_2O_{6.5}$ thick-film resistors, firing temp. effects 80420
Pd ultrathin sputtered activator layers on SnO_2, structural transforms., gas sens. appls. 109753
Pd/Ti/SiO_2/Si multi-layer syst., N absorpt., inter-diffusion, resist. change 103190
$Pr_{1-x}Ca_xMnO_{3-y}$/$YBa_2Cu_3O_7$ HTSC jns., field effect 70485
Pt-Si based O_2 sens., reactivation, surface heating & temp. meas. 97453
RBaCuO (R=rare earth), QMG grown, current limiting elements 123067
Rh focused electron beam induced deposition 115667
RuO_2 reactively sputtered films, resist./Hall effect 80752
RuO_2 thick-film resistors, firing temp. effects 80420
SOI struct. fabr. by UHV electron beam evap. and epitaxial layer transfer 80933
Sb_2Se_3 thin films, chem. bath deposition from alkaline medium, charactn. 101401
ScN(001) films, MBE, struct./elec./opt. props. 90340
Si double-sided microstrip detectors, anal. model for ohmic-side interstrip resist. 132373
Si epitaxial films, fast electron irrad., specific resist., annealing 92265
Si, highly doped polycryst., grain boundaries carrier transport 91590
Si large single crysts., FZ growth, fluid motion/resist. distrib., EM fields effects 90227
Si, low-temp. selective deposition on Si_3N_4, narrow wire form. 90382
Si, microstrip detectors, low resist. substrs., radiation damage 132285
Si, polycryst., elec. property at grain boundary by Gauss distrib. model *(Chinese)* 91606
Si, porous, patterning for integrated opt., H ion implant., RTA 92008
poly-Si solar cell, ITO electrode, synthesis & perform. 123801
Si solar cell mfg. line, EFG wafers, 15%+ efficiency cells 100080
Si solar cells, low bulk-lifetime, bulk resist. optim. 113008
Si sputtered microstructs. integrat. with pre-fabricated CMOS circuitry 104182
Si wafers, minority carrier lifetime meas., collinear four-probe array *(Chinese)* 102954
p-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
Si:As, near-surface damage annealing and ultralow energy implants elec. activation 126275
Si:As^+(B^+)(P^+) off-axis oriented wafer control during high angle implants 115599
Si:Au, acceptor behavior rel. to long-term heat treatment 102970
Si:B, RTP, shallow jn. form., sheet resist. studies 115485
Si:B polycryst. films, CVD, stress, MEMS appls. 104169
Si:B, ultra low energy implant., decelerator module 115544
Si:B wafers, supersaturated, deactivation kinetics 103247
Si:B(As)(P)(Sb) ultra-shallow abrupt jns., activation/deactivation, laser annealing 115481
Si:Ge,B(P)(As) implanted wafers, laser thermal annealing, Boxer cross meas. 115488
a-Si:H, ion beam synthesis of low resist. contacts 69710
Si/$TiSi_2$/Ti syst., sputtering prep., preamorphization, salicide form. 103154
Si-$Si_{1-x}Ge_x$ heterostruct., spectral & voltage charact., LPE 80786
4H-SiC p^+-n-n^+ avalanche diodes, elec. charactn. 92294
a-SiC:H, ion beam synthesis of low resist. contacts 69710
SiC:V,B, liq. phase sintered, elec./thermal conduct. 115350
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealing *(Korean)* 114436
$Si_{0.95}Ge_{0.05}$, heavily GaP- and P-doped, thermoelec. props. 80764
SiGe:B films deposited by CVD at 400°C, effect in situ B doping on props. 126303
SiGeC:P epilayers, low-press. CVD, P doping 80989
Si_3N_4, film, ECR assisted sputter deposition, elec. props. 127255
SiO_2 resists, electron beam lithog., single electron transistor fab. 103509
Sm chalcogenide cpds., elec. transport props. anal. 80780
SnO_2 electroceramics with additives, elec. props. 103060
SnO_2 film, nanocryst., struct./prop. rels. on (1012) sapphire 80745
SnO_2 films, microstruct., phys. props. 115327
SnO_2 films, spray pyrolysis, gas sens. charact. 101454
SnO_2 nano-gas sens., Pd/Pt/Au catalysts, perform. 132064
SnO_2 thin films, spray pyrolysis at low temp., transparent electrodes 114412
SnO_2:F mixed phase film deposited by US spraying, props. 101461
SnO_2:F thin films, sol-gel prep. from alkoxyfluorotin complex 68335
SnO_2:Os(Pd) films, sol gel proc., gas sens. devices 109775
SnO_2:Pd,Cu nanocryst. gas sens. films, doping effect on props. 97463
SnO_2:Sb thin films, hydrolysis deposition method 68324
SnS_2 films, successive ionic layer adsorpt. and react. method deposition, charactn. 68338
$SrRuO_3$/$BaTiO_3$ epilayers, strain modif., substr. structural transit. 127306
Ta capacitor ink develop. to break 10 mΩ ESR barrier 80428
TaC_x sputtered films as diffusion barriers for Cu metallization 126471
TaN CVD diffusion barrier for Cu interconnects 92166
TaN film, RF sputtered, struct./elec. props. 101187
TaN/Ta bilayer, high perform. liner for Cu-Damascene ULSI interconnects 126439
Ta_2N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ti-Si bilayers, init. reacts., in situ resist. meas. 80892
Ti-Si-N films, RF reactive sputtering deposition characts. 68142
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
TiN films, ECR plasma sputter deposition and charactn., diffusion barrier appls. 79219
TiN films deposited on Pa-n, crack form. due to large thermal mismatch 114252
TiN/Al/TiN/SiO_2 metallization, void-containing interconnects, local Joule heating 69933
TiN_x/SiO_2/Si, interface form., elec. props. 103186
TiO_2-Y_2O_3-Nb_2O_5 capacitor-varistor ceramics, elec. props. 91423
$TiSi_2$, C54 phase form. enhance. by multi-thermal-shock proc. 103450
$TiSi_2$ form. and sheet resist., Al interlayer effects 91857
$TiSi_2$/Si contacts, surface prep., chem. and thermal stabil. 92033
$Tl_2Ba_2Ca_1Cu_2O_8$ thin films, MOCVD, microwave device appls. 70574

electrical resistivity continued
$TlCu_3S_2$, elec. props., phase transits. 91700
Tm chalcogenide cpds., elec. transport props. anal. 80780
V_2O_{5-x}-PANI nanorods, prep., elec. resist., AFM microscopy 125118
VO_2-based uncooled microbolometer lin. array, design/fab. 75538
W LPCVD, selective deposition on Si 114310
W film, deposition & layer props., CVD 115665
W films, chem. treatment, IC appl. 103439
WC_x diffusion barrier for Cu metallization, thermal stabil. 103467
WC_x diffusion barrier/Cu metallization syst., phys./elec. props. 81109
WC_x sputtered films as diffusion barriers for Cu metallization 126471
WO_3, film, gas sens. materials charactn. 103054
WO_3 powders/thick films, thermal behaviour, gas sens. appl. effects 109756
WO_3 semicond., elec. props., gas sens. appl. 86711
WO_3/TiO_2, film, gas sens. materials charactn. 103054
WO_3/TiO_2 powders/thick films, thermal behaviour, gas sens. appl. effects 109756
WSi_2 film form., ion beam synthesis, charactn. 69959
$WSi_2/SiO_2/Si$ MOSFET, alternate gate metal props. 103811
Y solid solubility in $BaTiO_3$, EPMA 69627
$YBa_2Cu_3O_{7-\delta}$ films, complex resist. meas., microwave broadband tech. 75819
$YBa_2Cu_3O_{7-\delta}$ semicond. film, elec. characts., bolometer appl. *(Chinese)* 131903
Y_2O_3 sputtered films for electrochem. sens. 70375
YSi & YSi_2 layer synthesis, ion implant. & RTA, VLSI interconnect *(English)* 81125
Zn-Sn-Sb-O thin film sens., NO_2 detect. 97477
$ZnGa_2O_4:In_2O_3$ phosphor, doping-enhanced luminance 127933
ZnO epitaxial films, PLD and charactn. *(Japanese)* 68306
ZnO films, CVD, elec./opt. props. 103012
ZnO, plasma treated, low-resist./nonalloyed ohmic contacts 69729
ZnO surface textured films, expanding thermal plasma CVD, solar cell appls. 101346
ZnO texture-etched substrs. for a-Si thin film solar cells 100203
ZnO thin films, RF magnetron sputtering deposition, Cu-doping effects *(Korean)* 68158
ZnO thin films, US spray pyrolysis deposition 68360
ZnO varistors nonuniformity effect on energy absorpt. capability 133806
ZnO:Al film, sputtered, opt./IR/elec. props. 103036
ZnO:Al films, MOVPE, struct./elec./opt. props. 103044
ZnO:Al films, substr. temp. effect on struct., elec. & opt. prop. 90247
ZnO:Al films, transparent conductive, sol-gel proc. prep., elec./struct./opt. props. 103003
ZnO:Al transparent conductive films, DC magnetron reactive sputter prep. and charactn. 69504
ZnO:B films, electrochem. growth, elec. props., dimethylamine-borane conc. effects 101442
ZnO:F thin films, spray pyrolysis prep., struct./elec./opt. props. 114404
ZnO:Ga films, sol-gel prep., struct./elec. props. 114388
p-ZnO:Ga,N films, PLD, codoping fab. 91950
ZnO(S), defect conc. regulation using separation layer 91638
ZnSe, sublimation method growth, elec. props. 68129
n-ZnSe:Mg, film, elec. props., edge luminesc. 80736
n-ZnTe:Al layers, MBE growth, struct./elec./opt. props. 90317
ZnTe:Cu thin films, struct. and opt. props., Cu soln. immersion immersion time depend. anal. 103283

electrical treeing *see trees (electrical)*

electricity consumption *see power consumption*

electricity demand forecasting *see load forecasting*

electricity supply industry
1 gigabit Ethernet network design, implement. in power utility *(Chinese)* 119587
20 kV Romanian rem. radio-controlled power syst. 133521
500/230 kV autotransformer protection, utility suitability tests 77918
2000 MW cross-Channel submarine HVDC capacity auction 88309
2001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Feb. 2001) 100393
2001 Western Power Delivery Automation, conf., Spokane, WA, USA (April 2001) 67412
advanced power quality rating under deregulated market conditions 133693
African renewable energy technol. adoption, financial barriers removal 99451
AMR, meter-supplied customer inform. mgt./appl. 112186
AMR power line commun. technol. adoption 133815
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
Argentinian distrib. companies privatisation, regulatory engng. *(English, French)* 133464
Argentinian Electric Energy Market, elec. spot pricing 122838
Asian-Pacific Economic Community integrat. overview 111701
asset governance distrib. network mgt. approach 133626
asset mgt. experiences 77197
asset/capital struct. comparison in developing countries, Turkey 111803
backbone networks, multi-protocol label switching technol. 111755
BALMOREL energy sector anal. model, cogen. demand elasticity study 99250
bid-based demand contingency constrained economic dispatch 77182
bid-based hydrothermal scheduling, market power assess./mitigation 88326
bidding strategy coord. in energy and spinning reserve markets 88296
bilateral contracts, elec. spot market, British/NordPool experiences 88318
bilateral market feasibility for load following 133502
Brazilian elec. supply indust. liberalisation overview 77164
Bulgaria's energy syst. transit. to market economy, barriers to change 99468
bulk power syst. ancillary services, VAr/voltage control 111875
business proc. automation for distrib. operations mgt. 133618
California's elec. disaster anal., implications for Chines power market *(Chinese)* 111793
California elec. situation 77151
California ISO summer 2000 demand response programs overview 111744
Californian elec. crisis, anal. and lessons to be learned *(French)* 111797
Californian elec. market crisis, crit. overview *(French)* 111799
Californian elec. market failure, lessons for Asian power indust. *(Chinese)* 77188
Californian elec. market meltdown *(English)* 111798
Californian power crisis, technol. solns. 88306
Californian power crisis robust Electricity Value Equivalent systs. *(Chinese)* 111767
capacitive reactive power cost eval. in deregulation environ. 111760
Chinese elec. market, power transm./distrib. separation *(Chinese)* 77167
Chinese elec. market financial risk evasion study *(Chinese)* 99197
Chinese elec. market real-time transaction mgt. syst. *(Chinese)* 122858
Chinese multi-level elec. market approach *(Chinese)* 77166

electricity supply industry continued
Chinese nationwide power syst. interconnection/constr. overview *(China* 122834
Chinese power distrib. planning problems *(Chinese)* 111953
Chinese Three Gorges Power Market, type and trading mode *(Chinese)* 122
Chinese/Indian power plant industries, status and develop. prospects *(Germ* 123100
coal-fired elec. power generation perform., data envelopment anal. 88591
coal-fired plants, cost-effective repowering concepts *(English)* 99545
competitive elec. indust., market struct./rules/behaviour 111710
competitive elec. markets, power transactions anal., game theory 133508
competitive elec. markets resource adequacy, US regulator perspective 111
competitive energy market, ancillary services, multi-criteria optim. 111753
competitive energy market access, functional-technol. proc. optim. 111695
competitive generation market simul. model, paper discussion 133513
competitive power exchange market, equilib. values 99221
competitive power generation market expansion planning optimisation 122
competitive power market, min. power output, strategic bidding 133505
competitive power markets, US regulator's perspective 111712
computerized maint. mgt. syst. implement. 111778
congestion cost/OPF calc. using Internet Web program *(Korean)* 122816
congestion mgt. bidding-based model using interior point methods *(Chine* 122856
consumer satisfaction and power supply indicators, stat. correl. *(Engli French)* 133444
continuity of elec. supply, Italian Regulator resolns. 133446
control room human perform. enhancement training 89784
control room with virtual display, power grid 99282
coord. power network protection for optimized power supply syst. 77544
credible regulatory threats, prod. design 122795
crit. infrastructure protection, DOE energy indust. program 111717
crit. infrastructure protection, NERC program 111714
crit. infrastructure protection R&D promotion, academic initiative 111741
customer loyalty meas., elec. distributor in Hungary *(English)* 133438
customer services enhancement 99247
Cyprus energy market, renewable energy sources overview 111805
Czech energy indust., energy consumption forecasting, environ. problems 992
daily energy market, ordinal optim. based bidding strategy 133503
daily optimal economic load dispatch in elec. market, improved priority meth *(Chinese)* 77169
Danish elec. indust., energy consultant appl. overview 133452
day-ahead elec. markets auction design 88329
degenerated power market, bidding algm., time constraint, security constra *(Chinese)* 77162
delivery organizations, challenges and solns. 111713
deregulated distrib. syst. fault diagnosis using neural nets 112031
deregulated elec. market locational marginal price forecasting 111774
deregulated elec. market overview *(French)* 111796
deregulated elec. market pricing/operation by noncooperative game 77163
deregulated elec. market software quality tools 133478
deregulated elec. market VAr pricing using marginal costs theory 111808
deregulated elec. markets, locational gaming model 111689
deregulated elec. markets transactions, radial equiv., quadratic prog. 133509
deregulated elec. power markets, gaming and price spikes 88328
deregulated market, generator's output contrib. to power flow/loads 99213
deregulated power grid modelling as, customer-driven syst. 111721
deregulated power market, nonuniform reliab. 133474
deregulated power market, trade planning model *(Chinese)* 133476
deregulated power market design, economic dispatch, game theory 133510
deregulated power market voltage security methods anal. 111745
deregulated power markets, power systs. software engng. develop. 111811
deregulated power markets software architectural style 111758
deregulated power syst., counter-flow transm. loss allocation 133585
deregulated power syst., graph theory appl. 88335
deregulated power systs. elec. load flow path tracing 111756
deregulated utility environ. congestion mgt. using corrective measures 11188
deregulation, metering/billing/customer IS impacts 122802
deregulation, planning methods 122811
deregulation and IT investment 88310
differential busbar protection during measuring power transformers saturati *(Serbian)* 88483
discriminatory double-auction pricing, market power 133440
distrib. activity remuneration schemes, deregulation effects 133629
distrib. anal. software programs for syst. design/planning 122956
distrib. automation planning solns., achievable benefits 133646
distrib. automation/syst. monitoring benefits in open market 133635
distrib. businesses risk mgt., emerging aspects 133628
distrib. company, IS implement. 133472
distrib. dispatching center, Iran 133613
distrib. mgt. systs. for regional elec. companies *(English, French)* 133523
distrib. network reconfiguration and reactive power compensation 112059
distrib. regulation, price cap/yardstick competition schemes integrat., comment reply 133675
distrib. reliab. targets, microeconomic exam. 112020
distrib. services costing/pricing 88427
distrib. syst. losses calc. model 133659
distrib. utility human resources mgt. fn. outsourcing 133632
distributed generation, impact on power syst. *(Chinese)* 122792
distributed generation in competitive elec. markets, defn. 88315
distributed power generation for appropriate customer price response provisio 112206
district heating social cost in sparsely populated countries 123177
domestic tariff elec. customers, billing/accounting software develop. *(Serbian* 122829
double-cct. HV transm. line fault detect. ES 99426
Dutch elec. market, renewable portfolio std./certificates trading 99207
DVR™ PM platform-mounted dyn. voltage restorer, field experience 77225
Eastern/Central European efficient energy consumption policy problems 9947
eco-labeling, strategies, tradeoffs, envioronmental stds. 122794
economic generation scheduling method for Chinese elec. markets *(Chinese* 112210
economics, uncertainty modelling using interval mathematics 122837
efficiency measures, regulatory appl., price caps 88319
elec. energy supply deregulation, retail competition 133456
elec. network crit. condition monitoring DSS *(Italian)* 122788
elec. service quality, indicator models, Argentina 133457
Electric Power Supply Subsidiary of Brasov, planned organizational chang 133461
Electricity Pool of Eng. and Wales, operating principles 111708
electronic security technol. roadmap 111716

tricity supply industry continued
emerging competitive markets, reliab. enhancement by customer participation 111746
energy market conditions congestion mgt. scheme *(Slovenian)* 122842
energy market liberalisation, bal. scorecard syst. business approach 133454
energy utilities privatisation, energo-economical soln. overview 122840
enterprise security response programme 111715
EPRI Power Delivery Reliability Initiative overview 99205
Estonian energy sector transit., develop. trends 99225
EU accession candidate countries, energy indust. develop. tendencies 99230
EU elec. market liberalization overview 77181
EU elec. power exchanges comparison 99220
EU Electricity Directive, consequences for intersystem operation 99210
Euro-Asian elec. trade, Kazakhstan transm. corridor feasibility 111702
Euro-Asian joint elec. power infrastructure prerequisites 111698
European deregulated elec. market, renewable energy prospects *(German)* 122823
European elec. deregulation, state-owned utility exemption problems 99201
European elec. market renewable energy systs. promotion survey 99206
European elec. sector liberalisation challenges *(French)* 99251
event-driven power syst. maint. using protective relays data 77482
external elec. costs estim. project *(French)* 111696
FACTS devices location for total transfer capability enhancement 112002
FACTS usage in liberalised elec. markets 77305
fast-developing utility long-term load forecasting techs. 111943
Federal Republic of Yugoslavia elec. power syst. functioning *(Serbian)* 122828
FERC orders 888, 889 and 2000, impact on elec. utilities 111723
final energy demand forecasting, national economy restructuring programmes, Romania 122913
fiscal cost theory applied to elec. rate *(Chinese)* 111788
flow gate-based Internet for wholesale power exchange 111736
Fort Wayne Electric Company, historical overview 88292
forward contracts in elec. markets *(Chinese)* 111787
French elec. indust., collective sector-based negotiations *(French)* 111697
French power service restoration following 1999 storms *(English, French)* 133484
French power syst. reforms overview 77152
fuel inventory coord., hedging between natural gas/elec. power markets 133490
fully networked energy infrastructure, stupid network, distributed intell. 133492
fully-open elec. market customer energy use mgt. *(Chinese)* 122832
fuzzy regression models for elec. market data representation 133515
fuzzy set-based DSS for elec. supply contract eval. 133495
gas turbine fuel diversification for combined cycle plant appls. *(German)* 123223
gas turbine technol. improvements overview 99564
gas-fired cogen. develop. in Brazil 123180
generation adequacy in deregulating elec. utility environ. 111705
generation bidding algm. tutorial, LP method *(Chinese)* 99198
generation bidding algm. tutorials, dyn. prog. method *(Chinese)* 88311
generation bidding algms., merit-order method tutorial *(Chinese)* 77186
generation markets, auction mechanism anal., two-level optimisation model 99212
generator unit, competition ability index, short term elec. trade *(Chinese)* 99232
generator VAr support value assess. for transm. access 111684
German elec. indust. self-regulation, operator's view *(German)* 111688
German energy market liberalisation, business procs. IT support 133470
German Federations' Agreement II on distrib. network utilisation *(German)* 112017
German open elec. market, Java-based WWW-transm. schedule syst. 122836
GIS-based distrib. simul. and anal. 133656
green mktg. of hydroelectric power resources 77778
green power generation develop. in West *(Chinese)* 99195
grid reliab. mgt. software tools 111749
grid-connected hybrid EV commercialisation 89403
Guernsey Island power syst., operating philosophy 111789
Hokkaido, elec. demand and supply struct. 88293
Hunan elec. bidding market, inform. encryption syst. *(Chinese)* 122821
Hungarian elec. distrib., customer satisfaction survey 133627
Hungarian energy policy, energy supply safety, energy saving 99226
HV overhead power line corridors, fiber optic installations overview 88462
HV substation maint. decisions using diagnostic ES 134294
hydro-units pricing method in power market *(Chinese)* 111725
hydroelectric energy storage plants, capacity planning model *(French)* 77156
hydroelectric power prod., dam building alternatives 77777
hydrothermal power syst. Lagrangian relax.-based auction implement. improvement 111757
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 2001) 124221
imported coals, economical utilization in existing German power plants *(English)* 99461
incentive-based regulated grid companies, risk mgt. 133459
independent utilities, bilateral transaction bargaining, incomplete inform. 133435
Indian elec. consumption modelling/forecasting/anal. 122928
Indian power demand scenario forecasting 111765
Indian power syst. generation/maint. planning optim. model 99304
Indonesian solar home syst., tech./social effects estim. *(Japanese)* 133904
indust. elec. customers, optimal contracts decision software 122822
indust. IPP generators, utility interconnection protection 77520
infrastructure/interconnections/exchanges, European policy 99211
installations, efficiency, unified theory *(Spanish)* 100500
integrated plant mgt. syst. 111779
integrated power quality in distrib. equipt. 133695
integrative utility mgt. syst., software archit. 111772
inter-utilities power-exchange coord., market-oriented approach 88332
interconnected power syst., available transfer capability determ. *(Chinese)* 77189
interconnected power systs., stabil. anal., market dyn. 133498
internal European elec. markets tariff develop. 133481
Internet services overview *(German)* 111687
investment, cost-effectiveness calc. model *(German)* 111686
Iranian power distrib. sector planning overview 133631
Irish wind power prod., expected variability assess. 123255
island distrib. networks, small-scale power plant effects 122972
IT role in future energy generation/distrib./consumption 111742
Italian elec. market liberalisation effects on mgt. organisation skills 133466
Kirchhoff vs. competitive elec. markets, examples 111786
Korean elec. indust., new technol. impact 99194
large power systs., nonlin. network reduction approach 122798
Latvian energy policy, energy conservation, energy sector legislation 99227
Liaoning generation elec. market, climbing constraint algm. *(Chinese)* 122791

electricity supply industry continued
liberalisation, risk mgt. decision-making 133482
liberalised energy markets, product differentiation, nonprice competition 133451
Lithuanian energy sector, energy conservation policy 99228
load forecasting service, Internet access 133564
local elec. suppliers, integrated upgradable IS *(English, French)* 133468
locational marginal pricing, New Eng. elec. market perspective 111737
low-cost secondary surface power distrib. network 133598
LV power distrib. networks capacity improvement provisions 133647
mains elec. supply reliab., transients, complete failures, uninterrubtible power supplies *(German)* 88314
maint. mgt. using expert support syst. 133441
maint. programme optim. using data mgt. 88294
maint. strategies, reliab. impact modelling 133491
market clearing price forecasting, Bayesian-based class. method 111761
market dispatch, stabil. constraints incorporation 111690
market liberalisation, power syst. economic effects *(German)* 88302
market mgt. software, 3-tier client/server, DCOM technol. *(Chinese)* 77171
market surveillance syst. study *(Chinese)* 122818
market-based congestion mgt. using flowgate rights *(Chinese)* 111790
market-based generation adequacy, ISO perspective 111706
market-oriented transaction algm. research *(Chinese)* 122831
markets defn., arbitrage cost approach, antitrust policy 111733
MATLAB software appl. to power markets and power systs., dyn. coupling *(English)* 122797
merchant generation projects, interconnection point extension, switchyard 99246
merchant power companies, compliance mgt. programs tailoring 122824
micro CHP, pot. impact on elec. supply indust. 133855
modern elec. markets, e-commerce appl. possibilities *(Chinese)* 122819
multi-level VSI optim. for MVDC transm. systs. 123625
multi-product perspective, price-cap adjustments, unintended outcomes 122809
multi-quality tariff syst./cogen. energy market model *(Japanese)* 111800
multi-zone unbundled elec. markets, real-time coord. dispatch 99264
MV distrib. network reliab. level eval. approaches 133662
MV substations maint./refurbishment strategies 134302
MV switchgear operation safety, user instruction panels standardisation *(English, French)* 134262
MySAP.com Utilities elec. utility business mgt. software 111777
New Electricity Trading Arrangement, power flow control coord. 133501
non-utility generation economic implications 122799
Northern Ireland elec. syst. interconnection, market opening context 99234
Norwegian deregulated power market, ODEL inform. exchange format 133471
Norwegian power network sector, deregulation, trends, develop. 133460
nuc. elec. utilities, effect of SFAS no. 90 88317
open power market FACTS device optimisation *(Chinese)* 77187
open power markets FACTS devices placement approach 112004
optimal standing reserve utilisation using GA 111776
optimal transm. network expansion in competitive systs. 122926
optimal wholesale cross-border elec. trade planning, multi-agent technol. 133507
peak and valley time price for indust. elec. consumers *(Chinese)* 99199
PEM fuel cells appls. in deregulated market place 133908
planar SOFC technol., Australian develop. program 89195
Polish energy conservation policy under energy policy guidelines 99229
Polish energy sector develop. in new economic conditions 77183
Polish power distrib. companies develop. planning 133648
pool load forecasts for spot/forward elec. markets 133560
post-deregulation AGC syst. simul./optim. 88330
power consumption business mgt. syst., expert system, cognitive sci., OO technique *(Chinese)* 77170
power delivery systs., pot. distributed generation benefits 122954
power distrib. risk mgt. in market economy 111693
power distrib. syst. protective relays, appl. scope expansion 133775
power flow tracing method 111783
power flow tracing method, theory 111784
power generation expansion planning using game-theoretic model 133833
power generation indust. emerging trends, insurer's perspective 122801
power generation market, security correction algm. *(Chinese)* 111730
power infrastructure defense, multi-agent systs. adaptation 111720
Power Internet power flow control/transactions monitoring archit. 122901
power market ancillary services, reserves, power syst. security/reliab. *(Chinese)* 122820
power market congestion dispatch scheme *(Chinese)* 122857
power market data exchange using XML 111750
power market economic destabilisation for profit 111711
power market small-sig. stabil. modelling *(Chinese)* 77185
power market tech. support syst. framework *(Chinese)* 111726
power markets cascaded neural network prediction, confidence regions 111773
power plant constr. in California, simul. 122793
power plant operation/bidding, dyn. cost anal. *(Chinese)* 111791
power plants air emissions control in competitive power market 133831
power plants stabil. perform. defn. 88388
power pool, generation companies' bidding strategies *(Chinese)* 88300
power producers, project-mgt. tools appl. 99237
power station efficiency/capacity pot. overview *(German)* 123104
power supply voltage quality improvement using voltage control techs. 77358
power syst. asset mgt. using infrequent inspections 133448
power syst. data warehouse/data mining techs. appl. *(Chinese)* 122833
power syst. electronic intrusion safeguards 77277
power syst. fault situations, call handling centre, customer inform., NIE 133450
power syst. lightning protection project overview, USA 99417
power syst. MIS, syst. integrat. *(Chinese)* 99231
power syst. overload security, annual cumulative risk assess. 133571
power syst. protection design/mgt. using global resources 77460
power syst. protection develops., conf., Amsterdam, Netherlands (April 2001) 78392
power syst. protection reliab., privatised utility response 77511
power syst. restoration mgt. IS installation project 88303
power syst. voltage instabilities, voltage reduction emergency control 77272
power systs. commun. research topics 133475
power systs. engng., conf., Halifax, NS, Canada (July 2001) 100448
power systs. tech. cooperation between China and developed countries 111827
power transformer repair proc. tracking automation syst. 88793
power/fuel shortages, macroeconomic losses eval. 88299
powerline commun. technol. *(German)* 108509
Powerlink Queensland, cultural change, leadership 122800
pre-dispatch schedule in power generation market, model, algm. *(Chinese)* 77158
primary power market, digital contract mgt. syst. *(Chinese)* 77161
privatization/liberalization, Hungary 122810
proportional sharing principle extension in elec. market *(Chinese)* 111732

electricity supply industry continued
protection/local control systs. design, risk anal. approach 77512
PS-1 substation concept for liberalized elec. markets 134307
purchases mgt. using e-procurement 99209
quality depend. revenue caps, supply regulation quality model 133455
real-time elec. pricing programme, USA 88304
reformed Eng. and Wales elec. market, elec. trading, ancillary services 111709
regional Austrian utility view of elec. market deregulation 133467
renewable energies competitiveness, external costs importance 99208
renewable energy based elec. indust., energy services 111771
renewable energy in diverse elec. market 88321
renewable energy in UK liberalised elec. market 88320
residential customer preferences in DSM programmes 111804
residential PV expansion, supply anal. for competitive elec. markets 77795
resources, pollution, dyn., Pakistan 122812
restructuring, QoS/tariffs rels. 133445
restructuring in North America, supply reliab./quality 77150
RiBAM elec. utility risk-based asset mgt. software 133477
risk evasion in elec. market *(Chinese)* 88322
Romania's energy efficiency promotion under transit. to market economy 99469
Romanian CONEL power networks, neutral treatment strategy 111692
Romanian elec. power sector, efficient power market operation restrictions 111694
Romanian overhead power line modernisation concepts 112106
Romanian power distrib. network develop. strategies 133649
Romanian power project financing, consultancy role in investment attraction 111691
Romanian power sector restructuring, distrib. privatization requirements 133462
Romanian power syst. operation stabil. under light load conditions 111825
Romanian wholesale elec. market metering syst. 100499
RTO-Grid Florida GIS, transm. assets transfer, GPS 122826
rural MV distrib. networks, fast fault location method 133814
Russian energy strategy, social/economic develop. effects 123108
Russian power indust. develop. prospects 122806
safety and security issues 88345
Scottish Power's company strategy to improve power quality 77343
sector anal. in clean energy futures study 133489
security-constrained generation scheduling *(Chinese)* 111951
seq. timestep unit commitment, power syst. free market model 111762
Shandong elec. market, marginal price anal. *(Chinese)* 111769
short-term load forecasting using neural nets 111961
short-term transm. planning, network congestion assess. 111965
Singapore power quality initiatives 133678
small elec. utility, external interconnection, network aspects 99235
small/medium-sized elec. utilities, business/IT strategy alignment 133469
SMES syst. for study on utility/customer power appls. 78189
South Asia internat. power syst. interconnections, Indian experience 111699
South Korean elec. infrastructure change 111700
Southern African Power Pool overview 88305
Spanish elec. consumption profiles calc. using prediction intervals 122932
Spanish elec. sector distrib. losses eval. 133486
spinning reserve market optimal bidding strategy 133496
state/privatized elec. companies, investment differences *(English, French)* 133465
steam power plant/turbine engng. in changing elec. markets *(German)* 88571
Strategic Technology Programme, collaborative technol. develop., elec. utilities 133458
STRATEGIST software package for deregulated power market portfolio mgt. 111809
substation automation/integrat., world market survey 2000-2004 *(Serbian)* 89010
substation control/protection/monitoring integrat. strategies 134304
substation operation, MIS, Jiaxing district *(Chinese)* 89003
supply reliab. cost allocation under competitive generation market 99215
Swedish distrib. utilities tech. co-operation under deregulation 133630
Taiwan Power Company's strategy for changes in fuel markets *(Chinese)* 77174
tech. support syst., open/visualised platform *(Chinese)* 122790
Three Gorges Power Market, hierarchical struct. *(Chinese)* 111792
three-phase power syst. voltage sags, sources and mitigation 112078
three-phase utility power systs. neutral grounding, IEEE Guide 88474
trading arrangements, UK, agent-based simul. 133439
trading at spot market prices, unit commitment decisions 111759
transm. congestion mgt., transactions-based power flow anal. 111986
transm. dist. estim. for proposed location factor 99324
transm. open access, dyn. reactive power support services valuation 133583
transm. syst. voltage ancillary service, cost-based approach 133504
turbogenerator elec. params. spec., stds., grid codes 123282
Turkish EMS upgrade project overview 122897
Turkish energy facilities/nuc. power program in Year 2020 99487
UCA-based substation control syst., design and implement. 77278
Ugandan rural electrification scheme 111766
UK distrib. companies investment planning, benchmarking appl. *(English, French)* 133645
UK elec. distrib. utilities, challenges due to distributed generation 111815
UK elec. utility restructuring eval. 88291
UK elec. utility restructuring evol. 88290
UK energy syst., exergy anal. method 77193
UK NGC commissioning requirements, mgt. proc. 77176
UK power quality stds., stat. interruptions model 77346
underground power cables ampacity improvement using asset mgt. 133724
unit commitment power pool auctions, price setting/scheduling alternatives 88327
United Power Pool of Central Asia, freq. regulation, market aspects *(Russian)* 111728
urban network power supply elec. pricing policy *(Chinese)* 111770
Uruguayan cement plant power quality problems 134698
US and UK competitive elec. markets, stranded costs, recovery strategies *(Chinese)* 111685
US clean energy future scenarios 133487
US clean energy policies, market failures and barriers 133488
US competitive wholesale elec. markets overview 111707
US consumers' willingness to pay for green elec. 122796
US crit. infrastructure interdependency R&D project mgt. 111739
US DOE elec. utility vulnerability assess. activities 111718
US elec. indust. deregulation, market based pricing 88307
US elec. market deregulation, Californian experiences 88336
US elec. markets comparison for Chinese power indust. *(Chinese)* 99196
US elec. power indust. Indications, Assessment and Warning Program 111719
US elec. supply indust., putting consumers first 111729
US elec. utility indust., e-business transform. 122814

electricity supply industry continued
US elec. utility mgt., IT business solns. outsourcing 122813
US elec. utility outage mgt. syst. deployment project 122866
US Energy Infrastructure Interdependencies Program 111740
US microgrid pilot demons. projects 122830
US renewable energy supply forecasting 99453
usage-based transm. cost allocation methods, paper discussion/closure 1335
utilities, maint. procs. outsourcing 133463
utilities, power syst. fault simul., customer load demand 77172
Utilities Communication Architecture, fund. 99203
utility distributed reactive power control using correl. techs. 88362
utility enterprise integrat. interfaces, MultiSpeak™ spec. experience 122804
utility indust. computer appls. 122803
utility-interactive PV power network power convertor syst. *(Japanese)* 779
utility-interconnected PV inverters, barriers removal 112416
VAr-constrained real power dispatch/pricing algm. 111807
VefoNet elec. utility asset mgt. software syst. 133485
very short term load forecaster, electronic dispatch project, ISO New E 111981
VHV overhead line technol. and liberalised elec. supply indust. *(Germ* 99380
voltage collapse contingency ranking using self-organizing hierarchical neu net 77270
Western European elec. network, eastwards expansion 111703
wheeling options selection using evol. prog.-based algm. 111775
wholesale elec. prices, mergers impact simul. 111810
workflow automation tool experiences 133525
world-class petrochemical facility expansion challenges 100351
Zimbabwean rural electrification, PV power systs. experience 88660
NO_x emissions reduction impact on elec. prices, Indiana 88316
Pb-acid valve-regulated batts., utility installation appl. perform. 89083

electrification, static *see static electrification*

electro-oculography *see bioelectric potentials; eye*

electro-optical deflectors
axial line scanning device, display/printing appls. 86863
integrated high-power EO lens/scanner for space-based platforms 93153
liq. cryst. planar waveguide beam shifters 82223
NLC prism cells, stack-layered struct., MM-wave deflection props. 127846
polymeric waveguide prism-based EO beam deflector 116804
ultrafast unidirectional beam deflection using electrooptic traveling phase grat 93234
UV15 thin-film polymeric waveguide beam deflector 71408
$LiNbO_3$:Mg photorefr. cryst. beam deflection 116800
$LiTaO_3$, EO deflector pair pulse shaping syst. 105217

electro-optical devices
see also electro-optical deflectors; electro-optical filters; electro-optical mo ulation; electro-optical switches; electrochromic devices; light valves; liqui crystal devices; optical modulation; SEEDs
3D PDP meas., scanned point detecting syst. *(Korean)* 97590
500-kV combined opt. I-V meas. syst. 75447
act. broadband polymer stabilized liq. crysts. 86821
act. devices, wideband MM-wave matching, opt. control 102743
antiferroelec. liq. cryst. cell reflective display, opt. config. and fab. *(Kore* 93250
axial line scanning device, display/printing appls. 86863
azo-modified polymer film on liq.-cryst. cells, trans-cis photoisomerisation, o data recording 93020
back-direct electrooptic sampling instrum. spatial resoln. *(Chinese)* 75338
bis-azodye doped polymers for opt. struct. plastic EO devices 127555
bulk opt. sens., environ. effects compensation 132116
cholesteric gray-scale bistable displays, pulse seq. addressing effects stu 116832
combined opt. transformer, current and voltage sens. 123549
compact opt.-fiber variable attenuator arrays, polymer-network liq. crys 109071
conf., Liquid crysts., chem., phys., appls., Krynica, Poland (Sep. 1999) 100
copoly((4-methacryloyloxy) chalcone-cholesteryl methacrylate, photo-align vert.-alignment-LCD, EO charact. 93240
cw terahertz radiation, coherent EO detect. 97791
delay-time tunable pulsed laser sourced EO sampling syst. 97794
diazo linkages, liq. cryst. mixtures, IR appls. 127844
diffractive/refr. microoptics components develop., design, fab. and appls. 713
digital EO meas. technol., power syst. appl. *(Chinese)* 112188
diode laser extended cavity with EO prism, broadband fast freq. tuning 8275
divided thin-film heater tunable dispersion equalizer, Gb/s RZ transm. app 96694
external EO measuring syst., high spatial resoln./voltage sensitivity 132120
far-field beam shaping/beam steering by phase-retrieval-based wavefront contr 105410
fast EO liq. cryst. lens design 71420
femtosecond laser micromachining appls. for EO components 117555
femtosecond polariz. laser pulse shaping, dual-channel spectral interferomet 71895
Hartmann principle liq.-cryst. SLM, EO scanning wavefront meas. 75665
HiBall tracking syst., high-perform. wide-area opt. head tracking 73248
high-speed high-dens. LSIs, internal waveform obs., EO sampling probe 116000
integrated micromachined tunable laser using polysilicon 3-D mirror 71357
integrated opt. directional coupler array archit., opt. computing appl. 93273
IR data link, large-aperture MQW modulating retroreflector 120386
IR sounder technol. trends 133324
LCD light-guiding plate*design and fab. *(Japanese)* 93249
Mach-Zehnder modulator, EO-polymer-based 93231
Methyl Red dye-doped liq. crysts., photorefr.-like gratings, elec. field contr 71421
Michelson interferometer, low coherence fiber optics 71409
microwave IC interrogation by photonics 102747
microwave-field imaging fiber-based EO probe 109944
multidomain surface stabilized FLC display, grey scale mechanism *(Chines* 97636
NLC cell with optoelectronic feedback, self-oscills., opt. bistability 82245
twisted NLC display grating for Ronchi test config. 71424
NLC fibers, elec. controllable long-period gratings 116618
NLO side-chain soluble polyimides for EO appls., synthesis 90568
opt. waveguide devices, conductors, proximity effect 104692
organically doped sol-gel materials, electrooptical devices 71403
photosensitive aligning surf., liq. cryst. slippage director 104831
PLZT act. adjustable focus opt. correction lens, design and testing 127873

tro-optical devices continued
poly(7-phenylene vinylene) copolymers based light-emitting electrochem. cells 71574
polymer stabilized cholesteric texture reverse-mode light shutters, EO props. 109869
polymer-dispersed liq. crysts., periodic structs., EO appls. 82229
polymeric grating-assisted codirectional coupler filter, photobleaching, post-fab. tuning 104733
reflective LCD, EO, viewing charact. *(Chinese)* 71428
sig. sampling syst. with delay-time-tunable pulsed LD 71406
submicrosecond speed acoustooptic variable opt. attenuator 85979
symmetric slab waveguides, Pockels media, TE waves light transm. *(English)* 71340
terahertz tomographic imaging, EO transceiver 109961
tunable chirped fiber Bragg gratings by distributed heater 116619
unmanned airborne vehicle, thermal imager, EO sens. 109640
variable opt. attenuator based on guided wave reson. 127798
variable-wavelength switchable Bragg gratings in PDLC 93278
WDM photonic switching networks, crosstalk reduction through wavelength assignment 96340
AlGaAs-GaAs polariz. converter, electrooptic phase mismatch control 93238
$Bi_4Ge_3O_{12}$ opt. voltage transformer, temp. compensation 123550
Er^{3+}-doped tunable fiber laser, integrated optics Mach-Zehnder interferometer 82542
GaAs ICs, direct fault detect./anal. using EO sampling syst. 79668
GaAs integrated electro-thermal probe 104810
GaAs integrated polariz. converter at 1.3 μm 127783
InP based electroabsorption-modulated tunable DBR laser transmitter, long-haul commun. appls. 131371
InP opt. networking components for 40 Gbit/s and beyond, opt. subsystem 96669
$KTiOPO_4$ cryst. top-seeded soln. growth for laser appls. 82881
$LiNbO_3$ PPLN superlattice waveguide, EO TE-TM mode converter 104730
$LiNbO_3$, charged particle detect. by EO effect 87230
Si EO device, LED antifuse/photodetector integrat., sens. appls. 104745
ZnTe (110) THz-wave EO transceivers 74958

tro-optical effects
see also electroabsorption; electrochromism; electroluminescence; electroreflectance; Kerr electro-optical effect; photorefractive effect; Pockels effect; Stark effect
act. broadband polymer stabilized liq. crysts. 86821
alkyl-thiophenic monomers, functionalized with 2nd-order nonlin. chromophores, opt. characts. 117449
antiferroelec. LCD, EO props., addressing waveforms 104829
calix[4]resorcinarene bearing azobenzene moieties as photofunctional amorph. mol., synthesis 104596
carbazole group modified polymers for LEDs 71592
carbazole-based photorefr. organic glass, high diffr. efficiency, low external elec. field 82806
conf., advanced radiation dosimetry, Athens, Greece (July 2001) 124201
conf., Liquid crysts., chem., phys., appls., Krynica, Poland (Sep. 1999) 100412
DR13/PEK-c guest-host polymer thin film lin. EO effect 82286
electroactive polyimide, dielec. relax. spectrosc., permitt., impedance 125116
electronic/optoelectronic materials, Chinese research *(English)* 82300
glass, γ-ray irrad., enhanced $\chi^{(3)}$ 93772
glass ceramic laser radiation controlling elements, EO sensitivity 128479
lin. electrooptic effect, wave coupling theory 105467
lin. EO coeff. meas. of NLO polymer films 82797
liq. crysts., opt. props., conf., Humacao, Puerto Rico (Sept. 1999) 78380
mol. optics smectic antiferroelec. liq. cryst., EO props. 104823
MSM-TW photodetectors 75537
PEK-c guest-host syst. thin films, EO coeff., in situ SHG meas. 82294
photoaligned vert. alignment cell, EO characts. 93247
photochromic ferroelec. liq. cryst., opt. recording 71247
poled polymer films in F-P cavity, long. EO modulation obs. *(Chinese)* 116813
poled silica fiber third-order nonlin. 104629
poly(7-phenylene vinylene) copolymers based light-emitting electrochem. cells 71574
polyimides, photocrosslinkable nonlin. optic, synthesis and EO props. 82042
polymer-stabilised CLC texture films, FLC doped, electro-opt. characts. 86807
polymer-stabilized FLC, microsized bistable domains, monostable V-shaped switching 127840
polymer-stabilized liq. cryst. films for microwave phase control 71417
polymers, photorefr. solitons, orient. enhanced birefr./EO effects 72065
PVK-matrix photorefr. polymer dye hole transport by EO chromophore 92931
sampling syst., calib. 104811
serially grafted waveguide fab. of organic cryst. and transparent polymer 116694
side-chain methacrylate polymers, synthesis, EO props. 101520
silica fiber, thermal/elec.-field poling, electrooptic coeff. *(Chinese)* 71257
submicron EO meas. tech., external hemispherical probe 117589
temporal solitary waves, opt. rectification, EO effect 117507
transduction efficiency, binding layers effect 116862
transient spectrum meas. instrum., quantum conversion proc. *(Chinese)* 109660
twin-hole fiber thermal poling evol. 104642
ultrafast LD, delay time tuning, EO sampling 71898
ultrashort elec. pulses in transm. lines, NLO generation and detect. 71335
variable-wavelength switchable Bragg gratings in PDLC 93278
$Al_xGa_{1-x}As$ films, MBE, nonstoichiometry, reflectance obs. 126033
AlN, luminesc. spectrum, high elec. fields 91667
BN hexagonal thin films, PECVD tech. deposited, EO props. 93308
$Bi_{12}SiO_{20}$ sillenite cryst. photorefr. gratings 92933
CO_2 EO Q-switched RF-excited waveguide laser 82497
CdS/CdTe thin film solar cell, electromodulated photolum. 112853
$CsLiB_6O_{10}$ crystallites in photopolymer matrices, acoustically induced electrooptics appl. 116547
GaAs MMIC, EO probing, CW calib. 102665
p-GaAs electrodes, time-resolved photolum., drift-diffusion model 91928
GaAs monolithic integrated LD driver, on-wafer testing *(Chinese)* 93578
GaAs surface, sulfur passiv., Franz-Keldysh effect *(Chinese)* 81088
GaAs-GaAlAs photonic band gap struct., opt. switching 127833
GaN, luminesc. spectrum, high elec. fields 91667
GaP, proton bombard., external EO sampling *(Chinese)* 93225
GeO_2-SiO_2 fiber, thermally poled, electrooptic evol. modeling 116645
InGaAs/AlGaAs high-power QW lasers, high-temp. operation 105317
InGaAs/GaAs QD, self-organized, PL, elec. field effects 126163
InGaN-based LED, temp. depend. of elec.-field induced photolum. 71586
InN, luminesc. spectrum, high elec. fields 91667
$K_{1-y}Li_yTa_{1-x}Nb_xO_3$, paraelectric phase, wavelength-selective photonic switching 128533
$KNbO_3$, Gaussian beams opt. rectification, DFWM 105475

electro-optical effects continued
$KTiOPO_4$ quasi-phase matching cryst., SHG SNOM/SFOM 82914
$LiNbO_3$ periodically poled waveguides, propag. modes, cascaded second-order nonlin. 104713
$LiNbO_3$, piezoelec./ferroelec., microstructuring for MEMS devices 70364
$LiNbO_3$ waveguides, ion implanted, SHG depth depend. 82872
PLZT ceramics Fabry-Perot interferometers for vis. and mid-IR lasers 105458
$Sn_2P_2S_6$ photorefr. recording, elec.-field enhanced beam coupling 82813
$SrBaNb_{06}$ photorefractive crysts., waveguide channel elec. fixing 82052
$Sr_xBa_{1-x}Nb_2O_6$, rare-earth impurity doping, ferroelec. and photorefr. props. 128455
$SrBaNb_2O_6$ ferroelec. crysts., neg. applied field index change, interferometric meas. method 82050
$Sr_xBa_{1-x}Nb_2O_6$:Ce(Ce,La), ferroelec.-driven opt. and photorefr. props. 82802
$SrBaNbO_3$:Ce,La, opt./photorefr. props. 92932
ZnTe EO sampling by fs Ti:sapphire laser, ang. depend. 87001

electro-optical filters
arbitrary filter SLMs, optimal region of support 71472
chiral nematic Bragg filter, fibre opt. sens. WDM tech. 97305
colour balancing liq. cryst. filters for image pickup in TV film shooting 127847
FBG sens. interrogation, scanning filter, M-Z interferometer, coupler 97281
grating-assisted codirectional coupler filter using EO/pass. polymer waveguides 127898
hybrid SLC Solc/Fabry-Perot filter for wavelength DEMUX 75048
multiband polarimetric imagery acquisition, calib. aspects 75655
multichannel DWDM wavelength monitoring, temp.-tunable F-P filter 75059
NLC fibers, elec. controllable long-period gratings 116618
polymer based grating-assisted codirectional coupler filter 116900
power equipt. FBG-based temp. meas., deconvolution of opt. spectra 123074
rewritable broad-band color filters for spectral image anal. 84075
WDM tunable filters, coupled polymer waveguides and substr. removed GaAs waveguides 116663
Er-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
InGaAsP/InP-based act. grating waveguide struct. 93161
$LiNbO_3$ opt. superlattice, EO spectral filter 104816
$LiNbO_3$, vol. hologram, elec. controlled spectral filter 71491

electro-optical modulation
1-to-4 opt. TDM DEMUX, photonic ADC 86082
2D high-speed bar-code detect. syst., time-sharing laser light emission method 93943
2D photonic lattice reflectors, single mode laser components 117330
60 Gbit/s WDM-OTDM transmultiplexing using electro-absorpt. modulator 131572
all-opt. 3R regeneration, high bit rate pot. levels 109169
all-opt. 3R regeneration, nonlin. dyn., long-haul transport systs. appls. 105432
all-opt. logic AND operation of electroabsorption modulator 71447
analog externally modulated lightwave systs., distortion effects, theoretical model 109151
arbitrary filter SLMs, optimal region of support 71472
ASE-limited microwave opt. links, opt. phase conjugator perform. 74944
asymmetric vert. ARROW coupled EO polymeric modulator 127828
bal. electroabsorption modulated microwave photonic link, expt. 131454
bicone resonator with opt. cryst., electrodynamic charact. investig., R-fn. method 117736
birefr. electro-mechano-opt. polymer balls, light modulating material 92943
cascaded TW electroabsorption modulator, distributed effects model 93237
coupling loss improve. in modulators by waveguide and fiber tapering 116827
data conversion, photonic type for ultrafast ADCs and DACs 68856
DEMUX of 100 Gb/s OTDM data, timing tolerance 120374
DFB laser modules, electroabsorption modulator integrat., output charact. 105343
directly modulated 1550 nm AM-VSB CATV systs., long-dist. transm. 86039
director struct. of cholesteric diffr. gratings 82231
dispersion supported transm. syst. perform., fiber nonlin., laser phase noise 96650
dual parallel electroabsorption modulator, simultaneous IMD2/IMD3 suppression 93227
dual-freq. controlled liq. cryst. modulators, wavefront corrector appls. 104825
DWDM syst. wavelength stabilization tech. using dithering-induced AM cancellation 75056
DWDM systs., wavelength stabilization using dithering-induced AM cancellation 86097
dyn. directly modulated DFB LD nonlin. reduction 96689
elec.-pumped directly-modulated tunable VCSEL, metro DWDM appls. 117397
electroabsorption laser modulators, integrated with DFB-LD, for DWDM 127831
electroabsorption modulated DFB laser, low wavelength shift *(Chinese)* 105442
electroabsorption modulator, nonlin. suppression 71412
electroabsorption modulator integrated DFB laser for WDM fiber telecomms. 116737
electroabsorption modulator integrated DFB laser modules 131434
electroabsorption modulator integrated DFB lasers, optimal wavelength detuning 116824
electroabsorption modulator integrated DFB lasers, wavelength detuning effect 82444
electroabsorption modulators, saturation effects simul. 127835
electroabsorption waveguide, 40 Gbps wavelength conversion, cross-PM 116812
electroabsorption waveguide modulator/HBT monolithic integrat. for 1.55μm 116731
electron-beam mirror projector, light valve modulator 97741
ellipt.-core NLC fibers, light propag., BPM 116634
external EO measuring syst., high spatial resoln./voltage sensitivity 132120
eye-safe act. Q-switched microchip lasers, electro-absorbing semicond. modulators 117349
Fabry-Perot semicond. laser, subharmonic sync. modelocking, suppressed AM 71890
ferroelec./antiferroelec. liq. cryst. opt. PM 104826
fiber optic BOTDA sens., distributed strain meas. *(Korean)* 120848
fiber optic CDMA LAN, time-domain syst. model 96109
fiber-coupled E-field sens., miniaturized design using EA modulator and PV cell array 120883
fibre/waveguide lasers, controllable tuning of radiation freq. 128162
Fourier hologram storage, opt. representation of binary data *(Korean)* 116574
free electron based electron-opt. modulators 104814
freq. conversion based fiber-radio syst., opt. link, EO modulator *(Korean)* 109144
full-duplex 60 GHz band radio-on-fiber systs. with base station configs. 74914
gain-saturated SOA intens. modulation/noise suppression 128285
gas conc. monitor using solid state IR modulator 75722

electro-optical modulation continued
Gb/s electroabsorption modulator, DFB laser integrat., long-haul opt. transm. systs. 74926
Gb/s flash all-opt. ADC design 93239
Gb/s opt. duobinary transmitter, increased transm. dist. 96699
Gb/s opt. sig. generating semicond. Mach-Zehnder modulator 131604
Gbit/s heterog. fiber-wireless access networks, dual-baseband and RF modulation 119923
Gbit/s TDM data stream clock recovery, Mach-Zehnder modulator phase detect. 96807
GHz sampling rate ADC, photonics technols. 91402
gray-scale images, pattern detect. with polariz. coding, matched filtering techs. 84515
group delay ripple in dispersion compensating fiber Bragg gratings, modulator chirp 109064
guided wave opt. sens. devices, modeling and charactn. 127727
high speed ultra-short pulse soliton source using DFB laser, 20 GHz 74941
high-speed directly-modulated semicond. laser modulation bandwidth, detuned external fibre grating reflector 105308
high-speed EO ADC principle, tunable laser & DOEs 86448
high-speed EO modulators, compact model for microwave CAD environ. 93228
high-speed IOE modulation cct. 71626
high-speed Mach-Zehnder-type opt. modulators, chirp params. direct meas. 104815
highly NLO fibre loop mirror, fs pulse reshaping 117520
highly reliable 40 Gb/s electroabsorption modulator grown on InP:Fe substr. 116810
holographic disk memories, defocused Fourier plane holograms storage *(Korean)* 72075
holographic stereograms, light valve application 82996
hybrid EO oscillator, injected OTDM sig. 8×2.5 Gbit/s frame clock recovery 120357
hybrid EO/inductive current sens. for HV power syst. appls. 99436
hybrid multilayer heterostruct. optoelectronic transistors, fiber coupled E-field sens. element appls. 104742
IM/DD dispersive analog opt. links, opt. modulation, Mach-Zehnder electrooptical modulator 131456
injection-locked 10×10 coherent VCSEL array *(German)* 93645
integrated high-speed DFB light source/RCE photodetector for WDM fiber commun. network appl. 120169
integrated-optic voltage transducer for HV appls. 99437
laterally coupled diode laser short-PM scheme, dyn. behavior 128379
LEO consumables opt. tagging, MQW retromodulator array 120390
liq. cryst. fibre-optic systs. in inform. proc. 127842
liq. cryst. SLM correction element, laser energy transport adaptive syst. 104822
liq.-cryst. light valve, spatial filtering phase knife, image differentiation 129639
low-finesse Fabry-Perot cavity interrogation, WDM MUX spectral transfer fn. modulation 75432
lumped-element EO modulators, sensitivity-bandwidth product 116816
LV HF polymer EO modulators, fab. techs. 127837
Mach-Zehnder analog optic modulator, RF/microwave bandwidth 82214
Mach-Zehnder EO modulator, deep modulation index meas. using opt. spectrum analyzer 116818
Mach-Zehnder opt. modulator with variable bias, large sig. anal. 116817
Mach-Zehnder-type interferometric lumped modulator, rem. sens. appls. 127830
miniaturized fiber coupled RF elec.-field sens., resoln. and sensitivity 109602
miniaturized integrated opt. sens. design modelling, MQW microring laser use 131870
mirror surface ESPI profile meas., phase-shifting fringe anal. 132167
mixed GaAs opt. modulator and PHEMT MMIC proc. line on 150 mm wafers 125832
MM-wave fiber-wireless network, MQW electroabsorption transceiver 102748
MM-wave high-Q microphotonic EO modulator 127827
mm-wave sig. props., electrooptical upconversion, dispersive fiber transm. 131457
modulating probe beam bal. EO detect. *(Chinese)* 93226
modulator, guided wave reson. 116821
monolithic integrated single ridge stripe electroabsorption modulated DFB lasers, selective area LP-MOVPE *(Chinese)* 82654
monolithically integrated EA-modulated tunable DBR lasers, HF elec. crosstalk 127832
Moscow State Univ. Department of Physics of Oscillations research 116798
MQW electroabsorption modulator, neg. chirp operation 116808
MQW lasers, three-level SPICE model *(Chinese)* 82655
multicarrier QAM sig. electroabsorption modulator integrated DFB laser transmitters 131376
multimode interf. struct. integrated optic systs. 127800
multimode VCSEL modulation charact., very short reach commun. 117365
multisection electro-absorpt. DBR laser, accelerated aging modelling 128269
multispectral smart pixel imaging arrays, modulator design 97399
NLC cell with optoelectronic feedback, self-oscills., opt. bistability 82245
NLC-SLM, PM charact., phase-shift interf. 93245
nonlin. chromophore doped EO polymer modulators 104806
opt. BPSK modulation of 10 GHz using integrated hybrid device 82430
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov. 2000) 113262
opt. tandem SSB receiver, WDM syst., microwave filtering 131524
opto-electronic QW semicond. devices for opt. sig. proc. *(English)* 109075
oriented electrooptic polymer devices, opt. nonlin. 71411
OTDM commun., clock recovery and DEMUX 120356
OTDM syst., behavior description and simul. using VHDL 96831
oxide-confined VCSEL laser linewidth enhancement factor, gain saturation 93656
PC-CLD EO modulator, MM-wave photonic time stretching 102751
phase-modulated opt. polarimeters, calib. methods 104821
photoelectronic mixing device, opt. level gauging & 3D-imaging 120913
photonic band gap struct. semicond. lasers, output power/modulation bandwidth 117235
photonic devices, rigourous anal., FEM 85994
photonic sens. interact./perform. in space radiat. environ., review 122477
photorefr. MQW SLM, operating speed enhancement 93229
planar opt. waveguide EO coeffs. meas. method 82211
plastic opt. fibre technol. 96732
poled polymer films in F-P cavity, long. EO modulation obs. *(Chinese)* 116813
polymer asymmetric Fabry-Perot film, external EO sampling 82215
polymer double-channel EO modulators in ATR config. 116822
polymer EO modulator, driving voltage 104812
polymer EO modulator mater. for space environ., proton irrad. effect 93233
polymer integrated opt. devices, space appls. 93451
polymer LV EO modulator using attenuated total internal refl. 116802

electro-optical modulation continued
polymer pass. slab waveguide integrat. with FLC EO modulator 127806
polymeric EO modulator, conductive polymer cladding 104813
polymeric push-pull EO Mach-Zehnder modulators, 1310/1550 nm 71402
polyurethane, fiber coupled waveguide, EO modulator 116820
prog. integrated opt. diffractive element 127790
QD lasers, carrier capture/escape procs., five-level time-domain model 117
quantum cascade laser spectrosc./chem. sens. 97560
QW laser, microwave modulation with/without external opt. injection 8276
reflective light valves, polarising microscope metrology 97658
rem. laser interferometer with pseudo-heterodyne sig. proc. 131944
rewritable broad-band color filters for spectral image anal. 84075
RF fiber optic link, multi-electrode lin. EA modulator 82212
RF photonic devices and systs., conf., San Diego, CA, USA (July/Aug. 20
78427
RF PM, narrow-band phase noise meas. 82218
RTD electroabsorption modulator, elec. field switching 82216
self-pulsating self-oscillating mechanisms, opt. FSK sig. 105429
self-seeded Fabry-Perot LD, wavelength-tunable chirp-compensated single-m
pulse generation 105427
semicond. electroabsorption modulator, optimum bias 82213
Shack-Hartmann sens., dyn. range expansion using SLM array 75409
single ridge waveguide electroabsorption modulated DFB laser for 2.5-G
transm. 120183
single-electrode Mach-Zehnder electrooptic modulator, SSB suppressed-car
modulation 96698
single-mode DFB heterostruct. semicond. laser line shape spectral spre
117236
sinusoidal elec. drives for opt. time DEMUX 131522
small US vibr. detect. by polariz. self-modulated photorefr. crysts. 132175
SOA-based all-opt. pulse reshaper 105424
SOA/electroabsorption modulator in fiber ring, 10-GHz act. mode-locked pu
generation 128417
submicron external EO meas. syst. based on GaAs immersion lens 86899
surface plasmons reson. excitation for light radiation modulation 93114
time-domain/wavelength-domain opt. preprocessing, ADC 93747
TW electroabsorption modulator, vel. mismatch 82208
TW electrooptic modulator response, quantitat. anal. *(Chinese)* 127834
TW EO phase modulators, polar self-assembled chromophoric superlatti
93230
two-sect. gain-coupled DFB laser, ultrafast wavelength polariz. insensitive
opt. clock recovery 131578
two-sect. gain-coupled DFB SOA laser, Gbit/s all-opt. clock recovery 1315
UAV covert datalink, MQW modulating retroreflector 99117
ultra-high-speed opt. gate, photodiode/electroabsorpt. modulator integ
117022
ultrafast unidirectional beam deflection using electrooptic traveling phase grat
93234
vis. semicond. lasers with external light input, chaotic oscill. modes, comm
appls. 105328
wavelength tunable electroabsorption modulated DFB laser with thin film hea
105312
WDM-PON upstream channels, spectral slicing using wavelength-seeded r
SOAs 120227
wideband channelizing tunable opt. domain microwave filter 102745
ZLI-4792 homeotropically aligned liq. cryst., elec. switchable liq. cryst. grat
82230
172 mol. highly NLO chromophore, photochem. stabil., EO appls. 71921
AlGaAs-GaAs hot electron injection laser, vert. integrated transistor-laser stru
105310
$Bi_{12}TiO_{20}$ cryst. two-wave mixing, small PM detect. 82816
CdTe electrooptic modulator for CO_2 Q-switched laser pulsed beam heterod
sig. *(English)* 117067
Cs D_2 reson. line, diode laser freq. stabilization 120613
Er fibre amp., adiabatic Raman compression, vis. duration-bandwidth tunea
source 93795
GaAs MQW modulators, flip-chip bonded kinematic package, design/testi
128027
GaAs PHEMT ICs for 40 Gbit/s high output voltage driver module of LiNb
modulator 125774
GaAs PHEMT laser/modulator driver IC with dual-mode act. matched outp
buffer, 10-Gb/s 131410
GaAs monolithic optoelectronic integrated EO switch devices, carrier injecti
effects 82945
GaAs/AlGaAs MQW detectors and modulators, optoelectronic smart pix
(English) 82448
GaAs/AlGaAs opt. modulators on p-i-n rib waveguide, switching voltage red
tion 127838
GaAs/AlGaAs vert. cavity MQW modulators/photodetectors for opt. interco
nects 116803
GaAs-AlGaAs MQW electro-absorpt. modulator devices, parallel opt. interco
nects 117038
GaAs-GaAlAs photonic band gap struct., opt. switching 127833
GaAs-based self-organized QD laser modulation response, wetting layer entro
effect 105275
GaAsSb-GaAs 1.3-μm QW VCSELs, Ethernet appls. 119762
$Ga_{0.47}In_{0.53}As/Ti(Pt)$ Schottky barrier heights, Franz Keldysh oscills./dio
characts. 69715
GaInAs-AlGaInAs-AlInAs step QW high-speed Stark shift mid-IR modula
116815
GaP phase-modulated light beam wo-wave mixing under dc elec. field 7193
He-Ne laser freq. stabilis. control syst., fast PLL 93725
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
InGaAs LV MQW pin Fabry-Perot modulator, microcavity regime impact 714
InGaAs/AlGaAs MQW modulator, proton irrad. effect, free-space commu
116828
InGaAs/InAlAs MQW electroabsorption modulators, loss eval. *(Japane*
93235
InGaAs/InAlAs MQW-EA modulator, wavelength converter 116826
InGaAs/InAlAs strained MQW electro-absorpt. modulator 116809
InGaAs/InP electroabsorption modulator, NAND/NOR/EXOR all-opt. logic ga
82944
$In_{1-x}Ga_xAs/In_{1-y}Ga_yP$ MQW modulator, smart-pixel appl. 116840
$In_xGa_{1-x}As/In_yAl_{1-y}As$ electroabsorption modulators, strain-compensated 8220
InGaAs-AlAs reson. tunneling diode, semicond. waveguide optoelectro
switching 117037
InGaAs-InGaAsP diffused QW modulators/lasers 127778
InGaAs-InGaAsP multiple wavelength selective channel electro-absorpt. inte
modulators, P^{2+} ion implant. induced intermixing 93232
InGaAs-InP quantum wire opt. modulators, 1.55 μm, simul. and optim. 1167

tro-optical modulation continued
InGaAsP MQW asymmetric Fabry-Perot modulators for microwave photonic appls. 131379
InGaAsP MQW ridge waveguide EAM, selective area growth *(Chinese)* 101363
InGaAsP discretely tunable mode-locked SOA laser, arrayed waveguide grating 128416
InGaAsP/InGaAsP MQW TW electroabsorption modulator 104807
InGaAsP/InGaAsP MQW electro-absorpt. modulator, extinction ratio, structural depend. *(Korean)* 71404
InGaAsP/InGaAsP MQW electroabsorption waveguide, facet reflectivity, photocurrent 104809
InGaAsP/InP TW electroabsorption modulator, MM-wave sig. 82222
InGaAsP/InP-based act. grating waveguide struct. 93161
InP laser, EAM tuning, WDM telecomm. syst. 117231
InP:Fe substr. highly reliable Gb/s electroabsorption modulator 127836
InP/InGaAs TW electroabsorption modulators, electrode width effects 116811
InP/InGaAs/InGaAsP integrated laser-modulator device fab., post-growth proc. 117289
InP-based ultra-fast electroabsorption modulator integrated DFB lasers 117226
$KTiOPO_4$ periodically segmented waveguide, Rb/Ba ion-exchanged, fab., self-PM 116703
LiNbO opt. modulators, corros. phenom., damp heat test 127826
$LiNbO_3$ EO intens. modulators using strain-optic effects 116805
$LiNbO_3$ EO modulator, time domain opt. response, FDTD 93164
$LiNbO_3$ Fabry-Perot etalon, freq. stabilization/tuning of Ti:sapphire laser 93742
$LiNbO_3$ Mach-Zehnder external modulators in microwave opt. systs., modeling 104808
$LiNbO_3$, Ti reflective digital opt. switch, DWDM opt. network appls. 120381
$LiNbO_3$ modulator based microphotonic components for mm-wave receiver 69250
$LiNbO_3$ near-vel.-matched TW modulator fig. of merit 116807
$LiNbO_3$ opt. intens. modulator package, monitoring photodiode 71407
$LiNbO_3$ photorefr. crysts., thermally fixed holograms develop. 128585
$LiNbO_3$, piezoelec./ferroelec., microstructuring for MEMS devices 70364
$LiNbO_3$ polariz. independent EO intens. modulator 116825
$LiNbO_3$ reson.-type opt. modulator, double-stub struct. 127825
$LiNbO_3$ waveguided modulators for 40 Gbit/s and beyond 116823
$LiNbO_3$ x-cut optoelectronic device passivated by Si_3N_4 film 82221
$LiNbO_3$:Ti TW opt. modulator with phase reversal, freq. response *(Korean)* 116801
$LiNbO_3$:Ti electro-opt. coherence modulator, elec. field sens. 116723
$LiNbO_3$:Ti opt. modulator, CPW electrode, microwave propag., losses limitation 116819
$LiNbO_3$:Ti opt. modulators, CPW electrode charact. imped. anal. 127829
LiNbO-based opt. modulators, anodic Au corros. 127824
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
$LiTaO_3$ phase modulator, quasi-vel.-matching 116814
$LiTaO_3$ quasi-vel.-matched guided-wave electrooptic phase modulator opt. pulse generation 116698
Nd:YVO_4/MgO:$LiNbO_3$ monomode microchip laser mm-wave opt. transmitter for lidar-radar 131677
Si guided-wave MOEMS, fab., from technol. to appls. 127814
Si optoelectronic modulator based on Bragg mirror 82220
SiO_2 poled thin slab EO switch, electrostrictive consts. 105548
WO_3 and polypyrrole based electrochromic device, charact. 71413
$Zn_{1-x}Cd_xSe$/ZnSe QCSE photomodulator *(Chinese)* 82217

tro-optical switches
2×2 cross-point switch fab. on pass. act. reson. coupler platform 116745
AFLC cell, operation mode for high contrast ratio/fast switching time 104817
all-opt./optoelectronic conversions, telecomm. switching 86089
bistable coupled-waveguide switch using SSFLC layer 93163
Bragg mode diffr. switchable opt. element 82937
cascade switch design/fab. for large time delay synthesis 96861
cascaded TW electroabsorption modulator, distributed effects model 93237
CLC single layer refl. polarisers, elec. controlled spectrum 104820
Clos terabit EO switch archit. 120281
conducting interfaced dielec. slab waveguide guided light propag. 127767
digital switches, elec. damped comb drive 99877
electroholographic switches, Bragg grating, DWDM switching appls. 82210
epoxy resin based polymer dispersed liq. cryst., induced opt. effects 82226
fibre coupling using var.-focal-length microlenses, LC cell 93060
FLC-based self-aligning 2×2 fiber optic switch wavelength routing module 116834
JPL digital tunable color filter and beam scanner 120137
liq. cryst. EO switching approaches 116839
liq. cryst. planar waveguide beam shifters 82223
LSI silica-based thermo-optic switches *(Japanese)* 93447
modal liq. cryst. lenses, elec. addressing 93243
multi-domain opt. MEM systs., CAD framework 82203
multimode interf. struct. integrated optic systs. 127800
Nanonics NSOM/AFM 100, charact. and WDM components meas. 120133
NLC wavefront correctors, static/dyn. models 127843
packets synchroniser, AO cells & EO switch, photonic switch 120333
photonic devices, rigourous anal., FEM 85994
photonic switching systs. based on EO vol. holographic diffr. gratings, perform. 85442
photonic true-time-delay networks design for radar appl. 91395
polymer integrated opt. devices, space appls. 93451
quantum cascade laser mode-locking/gain-switching 93745
quantum switch based on coupled waveguides 92419
QW VCSEL polariz. behavior 82629
RTD electroabsorption modulator, elec. field switching 82216
rubber-stamped organic TFT/PDLC monolithic integrat. for multipixel flexible display 71426
Shack-Hartmann sens., dyn. range expansion using SLM array 75409
sinusoidal elec. drives for opt. time DEMUX 131522
smectic C* integrated Bragg grating continuously tunable filter 127885
surface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
switchable diffr. gratings, dielec. anisotropy inversion in nematic liq. crysts. 71427
three-phase thyristor bridge reson. switch *(Japanese)* 82431
transparent opt. transm. networks routing 131525
transparent SOA-based NLO loop mirror 86099
triangular-barrier RTD switching perform., illum. effects 72052
tunable opt. orthogonal code encoder/decoder for opt. CDMA 96822
very low crosstalk polymer waveguide based digital thermo-optic switch 75008
waveguide based LCD with high opt. efficiency, demo. 97745

electro-optical switches continued
CO_2 electrooptically Q-switched RF excited waveguide laser with two channels *(Chinese)* 71640
CO_2 waveguide laser, electrooptically Q-switched RF excited, tunable output charact. *(Chinese)* 105149
CdTe:Ge double phase conjug. mirror geom. EO switch 128453
CdZnTe, high-press. Bridgman grown, for EO appls. 93236
Cr:LiSrAlF$_6$ electrooptical Q-switched laser, pulse width compression with CS_2 SBS-cell *(Chinese)* 82571
GaAs monolithic optoelectronic integrated EO switch devices, carrier injection effects 82945
GaAs/AlGaAs opt. modulators on p-i-n rib waveguide, switching voltage reduction 127838
GaAs-AlGaAs MQW electro-absorpt. modulator devices, parallel opt. interconnects 117038
GaAs-GaAlAs photonic band gap struct., opt. switching 127833
ITO thin film, deposition & charactn., transparent electrode appl. 116560
InGaAs/InP electroabsorption modulator, NAND/NOR/EXOR all-opt. logic gates 82944
KD_2PO_4, freq. doubling of diode-pumped high power Nd:YAG laser *(Chinese)* 71741
$K_{1-y}Li_yTa_{1-x}Nb_xO_3$, paraelectric phase, wavelength-selective photonic switching 128533
$LiNbO_3$, Ti reflective digital opt. switch, DWDM opt. network appls. 120381
$LiNbO_3$ electrooptically addressable total internal refl. switching 72044
$LiNbO_3$ short-path-length high-speed opt. modulators 116724
$LiNbO_3$ waveguide Mach-Zehnder interferometric quasi-phase-matched sum-freq. generator 131592
$LiNbO_3$ waveguide electrooptic switches, multiwavelength opt. networks 120350
$LiNbO_3$:Ti digital opt. switches, enhanced crosstalk suppression 120349
$NiMgH_x$ films, electrochromic switchable mirror electrode, kinetics 71401
Si elec. controlled optoelectronic Y-switch, bipolar mode FET 75049
Si guided-wave MOEMS, fab., from technol. to appls. 127814
Si-on-Si waveguide struct. mode-mixing router 127803
SiO_2 poled thin slab EO switch, electrostrictive consts. 105548
WO_3·H_2O/PANI electrochromic device, electrochem. & opt. props. 82219
$Zn_{1-x}Mn_xSe$, opt. absorpt. bistability, switch charact. *(Chinese)* 71964
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557

electroabsorption
2×2 cross-point switch fab. on pass. act. reson. coupler platform 116745
60 Gbit/s WDM-OTDM transmultiplexing using electro-absorpt. modulator 131572
all-opt. logic AND operation of electroabsorption modulator 71447
cascaded TW electroabsorption modulator, distributed effects model 93237
DFB laser, electroabsorption modulated, low wavelength shift *(Chinese)* 105442
DFB laser modules, electroabsorption modulator integrat., output charact. 105343
DFB lasers, electroabsorption modulator integrated, identical epilayer method, wavelength detuning 85969
dual parallel electroabsorption modulator, simultaneous IMD2/IMD3 suppression 93227
DWDM syst. wavelength stabilization tech. using dithering-induced AM cancellation 75056
eye-safe act. Q-switched microchip lasers, electro-absorbing semicond. modulators 117349
fiber-coupled E-field sens., miniaturized design using EA modulator and PV cell array 120883
Gb/s electroabsorption modulator, DFB laser integrat., long-haul opt. transm. systs. 74926
group delay ripple in dispersion compensating fiber Bragg gratings, modulator chirp 109064
high-speed IOE modulation cct. 71626
highly NLO fibre loop mirror, fs pulse reshaping 117520
highly reliable 40 Gb/s electroabsorption modulator grown on InP:Fe substr. 116810
integrated electroabsorption modulator DFB lasers, optimal wavelength detuning 116824
integrated electroabsorption modulators for DWDM 127831
integrated high-speed DFB light source/RCE photodetector for WDM fiber commun. network appl. 120169
mesoscopic/composite materials, NLO props. 82789
miniaturized fiber coupled RF elec.-field sens., resoln. and sensitivity 109602
MM-wave fiber-wireless network, MQW electroabsorption transceiver 102748
modulator, nonlin. suppression 71412
modulator integrated DFB laser for WDM fiber telecomms. 116737
modulator integrated DFB laser modules 131434
modulator integrated DFB lasers, wavelength detuning effect 82444
modulators, saturation effects simul. 127835
monolithic integrated single ridge stripe electroabsorption modulated DFB lasers, selective area LP-MOVPE *(Chinese)* 82654
monolithically integrated EA-modulated tunable DBR lasers, HF elec. crosstalk 127832
MQW electroabsorption modulator, neg. chirp operation 116808
multicarrier QAM sig. electroabsorption modulator integrated DFB laser transmitters 131376
multisection electro-absorpt. DBR laser, accelerated aging modelling 128269
opt. BPSK modulation of 10 GHz using integrated hybrid device 82430
opto-electronic QW semicond. devices for opt. sig. proc. *(English)* 109075
OTDM commun., clock recovery and DEMUX 120356
poly N-vinyl-2-pyrrolidone/urethane-urea copolymer blend, nonlin. optics 72001
polymer LEDs with LiF/Ca/Al cathodes, blue emission, efficient electron injection 93405
polymer semiconds., polymethine dye doped, opt. absorpt., elec. field effect 115345
RF fiber optic link, multi-electrode lin. EA modulator 82212
RTD electroabsorption modulator, elec. field switching 82216
semicond. electroabsorption modulator, optimum bias 82213
single ridge waveguide electroabsorption modulated DFB laser for 2.5-Gb/s transm. 120183
SOA/electroabsorption modulator in fiber ring, 10-GHz act. mode-locked pulse generation 128417
sq. QW, electroabsorption, Coulombic coupling 103136
TW electroabsorption modulator, vel. mismatch 82208
ultra-high-speed opt. gate, photodiode/electroabsorpt. modulator integrat. 117022
variable opt. attenuator based on guided wave reson. 127798
waveguide, 40 Gbps wavelength conversion, cross-PM 116812
waveguide modulator/HBT monolithic integrat. for 1.55μm 116731

electroabsorption continued
wavelength tunable electroabsorption modulated DFB laser with thin film heater 105312
Au/Zn-phthalocyanine/Al PV cells, inner elec. field, nonideal bias depend. 93374
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
GaAs coplanar transm. line, ps elec. pulse detect., Franz-Keldysh effect 86946
GaAs, deep defect centers, pin diode meas. 126031
$Ga_{0.47}In_{0.53}As/Ti(Pt)$ Schottky barrier heights, Franz Keldysh oscills./diode characts. 69715
GaN, transient electron vel. overshoot, time-resolved electroabsorption 103007
InGaAs/GaAs MQW, photorefractivity, Franz-Keldysh geom. 82803
InGaAs/InAlAs MQW electroabsorption modulators, loss eval. *(Japanese)* 93235
InGaAs/InAlAs MQW-EA modulator, wavelength converter 116826
InGaAs/InAlAs strained MQW electro-absorpt. modulator 116809
InGaAs/InP electroabsorption modulator, NAND/NOR/EXOR all-opt. logic gates 82944
$In_xGa_{1-x}As/In_yAl_{1-y}As$ electroabsorption modulators, strain-compensated 82209
InGaAs-AlAs reson. tunneling diode, semicond. waveguide optoelectronic switching 117037
InGaAs-InGaAsP diffused QW modulators/lasers 127778
InGaAs-InGaAsP multiple wavelength selective channel electro-absorpt. intens. modulators, P^{2+} ion implant. induced intermixing 93232
InGaAsP MQW ridge waveguide EAM, selective area growth *(Chinese)* 101363
InGaAsP discretely tunable mode-locked SOA laser, arrayed waveguide grating 128416
InGaAsP/InGaAsP MQW TW electroabsorption modulator 104807
InGaAsP/InGaAsP MQW electro-absorpt. modulator, extinction ratio, structural depend. *(Korean)* 71404
InGaAsP/InGaAsP MQW electroabsorption waveguide, facet reflectivity, photocurrent 104809
InGaAsP/InP TW electroabsorption modulator, MM-wave sig. 82222
InP based electroabsorption-modulated tunable DBR laser transmitter, long-haul commun. appls. 131371
InP laser, EAM tuning, WDM telecomm. syst. 117231
InP:Fe substr. highly reliable Gb/s electroabsorption modulator 127836
InP/InGaAs TW electroabsorption modulators, electrode width effects 116811
InP/InGaAs/InGaAsP integrated laser-modulator device fab., post-growth proc. 117289
InP-based ultra-fast electroabsorption modulator integrated DFB lasers 117226
a-Si:H, light-induced struct. changes, weak bonds, dangling bonds role 93325
a-Si:H, photo-induced structural change, photocond. degrad. *(Japanese)* 82307

electroacoustic effects *see acoustoelectric effects*

electrocaloric effects *see pyroelectricity*

electrocardiography
see also bioelectric potentials; biomagnetism; cardiology
2D arrays, real time vol./intracardiac imaging, simultaneous ECG 110687
3-D display method for 12-lead ECG 121961
3D ECG model of heart elec. activity 98169
abdominal fetal ECG proc., review 110641
abnormal rhythm complexity anal., ventricular tachycardia/fibrillation *(Chinese)* 121932
abnormality detect., self-organising map quantis. error 87419
abnormality discrim., feature extraction scheme appl. 132581
activation site orig. localisation, model-based ECG imaging 76294
activation time imaging, nonlin. ill-posed problem, iter. lin. optim. 121917
adaptive canceller of 50 Hz interf., FPGA appl. 110623
age/sex effects on ECG/cardiac electrophysiological props. in adults 76312
ambulatory ECG recordings, QT params. reproducibility 76240
ambulatory physiological monitor for animal welfare studies 121968
amp., combined driven right leg/guarding ccts., stabil. conditions 110591
anal. algm., LADT-BP neural network *(Chinese)* 110553
annotated database, design and devel. 132554
antiarrhythmic class III drug therapy, sig.-av. electrocardiograph 76241
arrhythmia class. using neural networks 76274
arrhythmia detect., short-time multifractal approach using fuzzy neural network 110611
arrhythmogenic/normal human heart elec. excitation, modelling 98248
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
atrial action pot., stretch-activated channel blocker 87402
atrial activation patterns mapping after inducing contiguous RF lesions 98174
atrial activation procs., nonlin. coupling during human atrial fibrillation 110627
atrial activity enhancement, Wiener filtering with artificial neural net 98229
atrial arrhythmia discrim., subcutaneous far field electrocardiograph, R-waves 76239
atrial fibrillation, ambulatory ECG recording, circadian var. 98219
atrial fibrillation, synchronisation quantification, high-temporal resoln. algm. 98246
atrial fibrillation induction, paced sheep model, pacing protocols effect 111145
atrial fibrillation organisation, basket catheter mapping, regional patterns 121933
atrial fibrillation organisation mapping with basket catheters 121906
atrial fibrillation organisation quantification, defibrillation efficacy increase 110610
atrial fibrillation/flutter, intraatrial pacemaker stored electrograms 87437
atrial heart fibrillation modelling tool for adequate choice of sig. proc. fns. 110594
atrial premature depolarisations triggering atrial fibrillation, mapping method 76313
autonomic nervous syst.-controlled cardiac pacing 122349
beat class. by hybrid neural network 110639
beat recogn. using fuzzy hybrid neural network 132568
beat-to-beat variability in heart rate time-series anal. 76292
biological feedback sig. pattern multi-param. monitoring 98170
biomedical sig. anal., ICA techs. 132555
cardiac syncytium, elec. excitability heterog. 87403
cardioelectrical inform. of dyn. physiology/pathology, nonlin. dyn. research *(Chinese)* 110546
cardiopulmonary monitoring at home, CHIME monitor 87305
cardiovascular mortality prediction, computerized ST depression anal. 98220
cardiovascular variability sigs., freq. shift estim. 110492
cardioverter defibrillators, rhythm discrim. algm., clinical eval. 111149
catheter ablation procedures, cardiac electrophysiology, dose reduction 122435
compression, perform. eval. *(Chinese)* 87448
compression algms., perform. comparison, clinical diagnosis 121967
continuous-time Hopfield neural networks for filtering of ECG sigs. 98237
coronary artery disease diagnosis, ECG exercise test, RBF network 87422
coronary artery imaging, ECG-triggered segmented 3D true-FISP tech. 132688

electrocardiography continued
data compression using wavelets and HOS 87363
data transm., real-time, via Internet for non-clinical appls. 111294
delta wave activity ultradian oscills./heart rate variability during sleep 1105
digital filters implement. as LabVIEW DLLs 110592
dual chamber arrhythmia mgt. device, far-field R wave oversensing 12234
dual chamber pacing, atrial fibrillation detect., atrial blanking time effect 87
dyn. beat-to-beat QT-RR rels., ischaemic stroke effect 98176
ectopic atrial activity obscured by ventricular repolarisation, ECG anal. 110
ectopic beats, ECG, optimal archit. auto-associative neural net, one-pass train 121907
ectopic beats, ECG QRS detect. algms. with neural network 76258
ectopic beats, heart rate variability anal., editing methods 76238
ectopic beats detect., auto-associative neural network appl. 98217
elec. activity imaging and 3D visualization 110635
elec. defibrillation, sig. anal. systs. for optimal timing 110652
elec. stimuli, pass. current redistribution 87404
endocardial electrogram class., adapted wavelet packets/neural networks 87
epicardial/endocardial mapping, canine heart, atrial cond. props./arrhyth mechanisms 110562
epilepsy, heart rate nonlin. dyn. 98235
equipt. testing/calib., accurate prog. ECG simulator 110649
fast rot. phased array real-time 3D acquisition unit, DP 110757
feature extraction using optimal mother wavelet 121974
fibrillation detect. algms., noise sensitivity 87374
FM-FM-FSK radiotelemetry syst. for multi-sig. transm. 76773
focal atrial tachycardia, tricuspid annulus, electrophys logic/electrocardiographic characts. 110563
foetal heart rate, ambulatory monitoring algm. 98256
foetal heart-rate estim., sig. separation, adaptive algm. 110589
foetal/maternal heart rate recorder for 24 hours 98255
gated dyn. 3D echocardiography, temporal jitter artifacts 76343
heart beat sing., recurrence quantification anal. 98196
heart closed-loop pacing, atrio-ventricular cond. time, syst.-theoretical appro 133048
heart rate dyn. nonlin., neural network appl., ECG meas. 87386
heart rate variability, nonlin. features, Poincare plot geom. measures 13257
heart rate variability, normal subjs./chagasic patients, nonlin. dyn. 98197
heart rate variability anal., empirical mode decomp. appl. 110557
heart-model-based computerised ECG diagnosis limits 76305
hist., phys./engng. appls. to med. 98114
home ECG/blood press. telemonitoring centre develop. 88013
HRV adaptive spectral estim. for transient detect. 110559
HRV DAQ, anal. & demographic database, HEARVAAD program 98200
HRV spectral anal., integral PFM model, irregular sampling 87420
human ident. using ECG anal., data fusion, SIMCA class. 87413
hyperkalaemia diagnosed by implantable cardioverter defibrillator T wave se 132549
hypertrophic cardiomyopathy, exercise high resoln. ECG, adaptive filter 121958
hypertrophy, microvolt T wave alternans, elec. instabil./abnormal myocardi 110636
imaging, body surface pots., torso inhomogeneities effects 76317
imaging, noninvasive reconstruction, torso inhomogeneities effect 76318
implantable cardioverter defibrillator emulator electrograms and surface E 76314
implantable cardioverter defibrillators, EGM width detect. criterion 121965
implantable cardioverter defibrillators, supraventricular tachycardia-ventricu tachycardia discrim. algms. 111151
implantable defibrillators, pacing capture, evoked response detect., RV coil to vector 122350
implanted devices for cardiac care, mobile integrat., future advances 76223
impulse noise reduction based on lifting wavelet transform 132559
instantaneous freq., heart rate variability extraction approach 98224
interf. suppression, interbeat/intra-beat decorrelating transforms 87454
intermittent mag. field effects on pers. with elec. hypersensitivity 133081
interp., teaching guided by CARDIOLOG tutorial ES 100477
intra-atrial reentrant tachycardia ccts., electroanatomic mapping 76243
intracardiac electrophysiological study, elec. catheter positioning, transthora echocardiography image guide *(Chinese)* 76353
intracardiac electrophysiology, coronary sinus elec. catheter positioning, echocardiography image guide *(Chinese)* 76354
IPFM generated heartbeats, heart rate variability anal., interval spectrum dist tion props. 132567
ischemia detect., self-organising map appl., supervised learning suppl. 7630
ischemia heart disease diagnosis, ECG wavelet transform. 98168
late pot. detect. using higher order time-freq. 76272
local electrogram prematurity, electrode catheter, simultaneous uni/bipo recordings 87438
local sig. feature detect. by wavelet transforms 95603
lossless ECG compression using lifting wavelet transform 110626
LV, ECG-gated SPECT, ejection fraction/vol. estim. 132899
MCG/ECG exercise mapping in healthy subjs. 87458
med. sig. proc., Software Monitor appl. 87399
microcontroller-based portable multifunctional patient monitor 98205
min. invasive robotic coronary artery bypass, 3-D visualization 76599
mobile ECG transm. syst. for cardiac arrest treatment 133180
multi-lead ECG, EMG sig. elimination, enhanced SVD filter appl. *(Kore* 110613
multichannel biotelemetry syst., filter bank use 88011
multichannel compression using multichannel adaptive VQ 121962
muscular fatigue assess. during exercise, EMG sig. & HRV 76303
myocardial infarction, acute, T wave alternation incidence 110561
myocardial infarction patient care, data transm. from moving ambulan 133167
myocardial infarction survivors, prolonged QRS duration, increased QT disp sion 132548
myopotential denoising of ECG sigs. using wavelet thresholding 132552
neonatal HRV quadratic phase couplings, stat. quantification *(English)* 874
noninvasive electrocardiology, conf., Istanbul, Turkey (Sept. 2000) 67366
noninvasive imaging, source formulations 98239
nonlin. single-/multi-fractal sigs., state-space equilib. based Volterra predic 95691
P-wave dispersion, paroxysmal atrial fibrillation predictor 98222
p-wave morph. class. 76308
paced respiration, heart rate rel. to pulse transit time 121920
pacemaker, QRS detect., time lagged ANN 98716
pacemaker bradycardia detect. algm., carotid sinus syndrome patients 11114
pacemaker endocardial electrodes, polaris./evoked response sigs., intraoperat study 122317

trocardiography continued
paroxysmal supraventricular tachycardia, hemodynamic instabil., ECG anal. 121966
physiological press., method for recording, storage and anal. 110657
polymorphic arrhythmias, electrocardiographic variability anal. 110648
postinfarction scar, pace mapping, ventricular tachycardia exit sites 110564
power line interf. elimination, constrained eigenfilter 87455
Purkinje/prePurkinje pots., reentrant cct., Verapamil-sensitive idiopathic LV tachycardia 98177
QRS morph., spontaneous changes sometimes resembling torsades de pointes 110565
QRS wave recogn. using fuzzy neural networks 121954
QT dispersion, healthy subjs., gender/age impact eval. 98221
QT dispersion, manual meas., lead exclusion effect 76315
QT interval, real-time meas. algm. 87395
QT interval dispersion in ventricular beats, sustained ventricular arrhythmias 98178
rank-adaptive sig. proc., subspace based biological sig. anal. 110621
real-time 3D intracardiac echocardiography, simultaneous ECG 132612
relax. syst., user's condition adaptation 110560
respiratory distortions corrections, ECG shape improvement 98166
right atrial appendage/interatrial septum pacing, atrioventricular interval 122348
right atrium, noncontact/contact probe electrograms 87383
RV fn., stable/unstable VT, haemodynamic monitoring, future defibrillators 98124
segmentation using wavelet and HMM assoc. 121952
septal lead implant., paced QRS duration reduction, pass.-fixation leads 76708
sig. alg. separation 110655
sig. anal., Hilbert transform appl. 110595
sig. compression, optimized quantization of DCT coeffs. 87388
sig. compression, wavelet transform. of lin. predicted error 87387
sig. denoising using wavelet domain Wiener filtering 121923
sigs. acquisition and tele-transm. via mobile phone 110512
sigs. proc., min. dimens. embedding of chaotic attractor 110653
sigs. simul. for sig. proc. 110640
sigs. with little a priori inform., adaptive filtering 110620
small animals, EEG recordings, ECG interf. removal 121948
spatio-temporal image segmentation using opt. flow and clustering algm. 94961
spatiotemporal anal., current dens. estim., forward model 110619
ST-segment enhancement, wavelet interpolation filter 87421
ST-T episode detect. by isoelectric level global curvature in ECG *(Korean)* 110614
supraventricular arrhythmias, inappropriate detect. by implantable dual chamber defibrillators 133042
surface pots. detect., mapping method *(Chinese)* 110547
T-wave alternans detector, simul. study/perform. eval. 87396
tachycardia, regular broad complex, diagnostic algms., decision theory anal. 121935
telemedicine and telecare, μP syst. 110590
telemedicine syst., wireless, multi-purpose, effect of wavelet compression on data transm. 133163
telemonitoring, therapy surveillance mgt. for myocardial failure 122457
time-varying threshold integral pulse freq. modulation 110609
twins, fetal ECG separation, blind source separation 121973
variability series complexity, entropy rate, pattern class. 132569
vasovagal syncope, heart rate variability sig., time-freq. anal. 132550
vasovagal syncope patients, heart rate variability/myocardial contractility appl. 110500
ventricular fibrillation, var. in dominant period 110612
ventricular fibrillation recogn. by ECG anal. 98167
ventricular fibrillation sens./detect. by implantable defibrillators 98726
ventricular late pots., beat-to-beat detect. method 98228
ventricular multiple events, noninvasive charactn. using ECG imaging 110556
ventricular repolarisation, dyn. assess., QT lag compensation impact 98179
ventricular repolarisation dispersion, severe intraventricular cond. disturbances 121905
ventricular repolarisation duration variability, spectral decomp. tech. *(Chinese)* 110548
ventricular repolarisation in postinfarction patients, spatial aspects 98175
ventricular repolarization dispersion, ECG indices, differential modulation 76244
ventricular tachycardia, anterograde/retrograde atrial electrograms, correl. waveform anal. 76316
ventricular tachycardia, ECG, QT dispersion bias 76242
ventricular/supraventricular tachycardia discrim. by dual chamber cardioverter defibrillators 98704
virtual ECG acquisition and class. syst. 110513
wide QRS complex tachycardia, noninvasive diagnosis, dual chamber defibrillator 121934
wireless cardiorespiratory telemonitoring syst. use by elderly patients 133187
CsCl/elec. induced arrhythmia, rapidly paced heart 87439
Tl^{201} myocardial perfusion scintigraphy, surgical revascularization, ECG 98218

ctrochemical analysis
see also electrochemical sensors; electrochemistry; polarography; voltammetry (chemical analysis)
diamond nanoporous honeycomb electrodes, electrochem. charactn. 80647
DNA chip, sample manipulation *(Chinese)* 120947
electrokinetic capillary separation, LIF, micro-opt. syst. 109782
microactuator for environ. water anal., microanalytical device 121023
olive oil, rancidification proc., biosensor appl. 97414
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
poly(cyano-substituted-diheteroareneethylene), prep., electrochem. supercapacitor 101512
polythiophene/pendant fullerene, electropolymerization, spectra 114466
primary and secondary batts., model-based predictive diagnostics 89056
PVC-based polymer electrolytes, structural/thermal/electrochem. cell charact. 123721
semicond. doping profile, C-V charact., electrochem. etching 115495
transient electrochem. multi-component gas sens., O_2-$N_2O(CO_2)$ appl. 86738
voltohmmetry sens. principle, heavy metal determ. in aq. soln. 97443
AlN:C reactive DC magnetron sputtered thin films, depth element distrib. 101188
$Ba_{1-x}La_xTiO_3$, sintering, O coulometry, SOFC appl. 101498
Bi_2O_3-WO_3(MoO_3)(Nb_2O_5)/Li electrode materials, electrochem. 89103
CdS films, electrochem. ALE on Ag(111) 90519
$Ce_{0.5}Gd_{0.4}O_{2\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
CeO_2-TiO_2 thin films, DC magnetron sputter-deposition, electrochromism 90240
CeO_2-ZrO_2 thin film, sol-gel prep., counter electrode appl. 68320
$Cu_{2-\delta}S(Se)$, spontaneous thermal dissoc., transport props. 80771

electrochemical analysis continued
n-GaAs, oxide growth/stabil., coupled transient photocurrent/surface anal. 103359
GaAs:Si,Be MBE growth, compensation 68196
InAsP:Zn/InP(InGaAs) heterostruct., doping, photodiode appl. 115553
n-InP, oxide growth/stabil., coupled transient photocurrent/surface anal. 103359
$LaFeO_3/Y_2O_3$-ZrO_2 electrochem. NO_x sens. 109743
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
Mg_2SnLi_x, mechanochem. synthesis, electrochem. charact. 125076
Nd-Fe-B PM, electrodeposited polymers, corros. resist. 101475
NdFeB magnet, phosphating, corros. protection 101473
Ni, H_2-H_2O|YSZ anodic SOFC syst., modeling, simul., expts. 89246
Ni-MH batts., AB_5 alloys, corros., decrepitation, XRD, spectrosc. 99909
β-NiOO/β-$Ni(OH)_2$ electrode, cryst. struct. model misuse, Ni-Cd batts. 123734
O_2 digital solid-electrolytic gas analyzers, enhanced conc. meas. accuracy 132022
SiC nanoparticle coatings, composite electrodeposition 101405
TiN films, surface nitriding, H impermeability 92066
WO_3 films, DC magnetron sputter-deposition, electrochromism 90240
YSZ/NiO-YSZ thin film syst., elec. & microstructural investigs. 112849
$Y_{0.2}Ti_{0.18}Zr_{0.62}O_{1.9\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
ZnS films, electrochem. ALE on Ag(111) 90519

electrochemical batteries *see cells (electric)*

electrochemical devices
see also cells (electric); electrochemical analysis; electrochemical electrodes; electrochemical sensors
capacitor storage, metal-loaded activated carbon electrode, plasma CVD *(English)* 100219
diamond:B nanoporous honeycomb electrodes for elec. double-layer capacitor appls. 102769
electrophoresis microfluidic device, hot embossing proc., DNA separation/detect. appls. 92515
MEH-PPV/PEO:Li-salt blend light emitting electrochem. cells charactn. 134342
mesoporous carbons synthesis, electrochem. double-layer capacitors appl. 68449
modulation driver, quasi-sinusoidal asymmetric current 79565
poly(7-phenylene vinylene) copolymers based light-emitting electrochem. cells 71574
polypyrrole films, electrochem. soft actuators 79454
polypyrrole pipe electrochem. actuators, cation insertion/extraction 79456
C nanotube electro-mech. transducers, nano/MEMS appls. *(French)* 81564
C/a-MnO_2 electrochem. pseudocapacitor electrode, kinetic reversibility 91425
NiO_x supercapacitor, prep., props. *(Chinese)* 113036

electrochemical electrodes
see also electrochemistry
3D electrode/electrolyte interface in SOFC, FEM 112845
3D electrophoretically driven microlab., DNA hybridisation chip 86684
150 W air-feed direct methanol fuel cell stack, develop. and operation 89158
alcohol oxidase screen-printed amperometric biosens., enzyme immobilis. 75683
alkaline secondary batts., memory effect *(Japanese)* 89072
amperometric glucose sens., PFC polymer coating 109722
AMTEC power output degrad., electrodes role expts. 100217
anode-supported SOFC, anode thickness effect on perform. 99954
batt. and fuel cell materials, conf., San Francisco (April 1999) 113256
batt. appls./develop., conf., Long Beach, CA, USA (Jan. 2001) 78449
beverage glucose/ethanol amperometric sens., quinoprotein electrodes 120951
bipolar Pb-acid batts., cladded materials, EV 89406
bipolar supercapacitor electrodes, oxidized glassy carbon sheets 123847
bipotentiostatic uric acid sens., conducting polymer based, charact. reproducibility 132007
blood gas anal. micromachined sens. module, design optim. 86691
carbon cloth reinforced resorcinol formaldehyde aerogel films 79463
carbon fiber-based cathode develop. for semi-fuel cell appls. 89168
carbon-carbon composite anodes,, Li-ion batt. 89074
carbonaceous materials, effect of cross-linking of polymer precursors on electrochem. props. 134360
cellular respiration & acidification meas. with CMOS ISFET 86685
CHEMFET and solid-state electrode, multi-ion anal. 121018
cond. detector for on-chip capillary electrophoresis 109746
conducting polymer, electrochem. investig., polymerisation/depolymerisation, secondary Li batts. 125112
current normalisation techs. during polariz. expts. *(Spanish)* 78120
Danish SOFC R&D status 89191
diamond:B highly-doped electrodes, PbO_2 electrocatalysis and deposition, US effects 90503
diamond:B nanoporous honeycomb electrodes for elec. double-layer capacitor appls. 102769
diamond:B thin films, structuring and electrochem. appls. 120977
diamond:N nanocryst. films, PECVD, struct., electrochem. behavior 91605
diamond nanoporous honeycomb electrodes, electrochem. charactn. 80647
direct alcohol fuel cell, aliphatic alcohols, electrocatalytic oxid. 134375
direct hydrocarbon PEMFC, acetals electrooxidation 134373
direct methanol fuel cell perform., anode flow charact. 89162
direct methanol fuel cells, intermediates form. during methanol oxid. 134369
direct methanol fuel cells, methanol electrochem. oxid. expts. 134372
direct methanol fuel cells electrooxidation, ternary catalysts expts. 89179
direct methanol-air fuel cells, membranes, circulating electrolyte 89161
direct reforming MCFC stack explicit dyn. model 112832
DMFC platinum-based electrocatalysts, methanol oxid. mechanisms 134370
DNA electrocatalytic detect., Ru(II) complex modified C electrode 97420
DNA-covalently modified electrodes, electrochem. biosens. 75687
EDLCs, elec. double layer capacitors, aq. dil. HCl soln. *(English)* 100223
elec. double layer capacitors, polymer gel electrolytes 123848
elec. double-layer capacitors, organic electrolytes, perform. 123846
electrochem. capacitors, charact. and appls. 69272
electrochem. power sources, conf., Manchester, UK (April 2001) 78386
electrode catalytic activity effect in limiting-current-type zirconia cell sens. 109744
electrolytic cell, pulsed corona discharge superposition in water *(Korean)* 115237
enantiomers, mol. recogn., chiral discrim., electrochem. sens. 97456
ferrocene encapsulated ormosil modified electrode, GOD bioelectrochem. 97417
α-fetoprotein immunosensing, disposable amperometric glucose oxidase sens. 132014
fuel cell/batt. components, pore struct. anal., flow porometry 89163
graphite layers, intercalation mechanism of Li ions studied by NMR and impedance expts. 99933
high catalytic activity disordered hydrogen-storage alloys, Ni-metal hydride batts. appl. 89045
high-perform. SOFCs at temps. below 700°C 99958

electrochemical electrodes continued
human skin moisture sens., flat surface attachment, interconnection tech. 132008
immunosens. sig. transduction, chronopotentiometry, Faradaic imped. spectrosc. 97411
integrat. photoelectrochem. semicond. sens., sulphide ion determ. 86733
ISFET-based NAD^+-depend. enzyme sens. for lactate, PQQ biocatalyst 97419
lanthanum/strontium based perovskites, SOFC anodes, cond., stabil. 89255
lead-free solder plating, ionic migration, reflow proc. and flux residue, QCM method 124315
low-temp. direct propane polymer electrolyte membranes fuel cell 99995
MCFC electrochem. materials research *(Chinese)* 134381
MCFC generation syst. rapid load changes, perform. implications 112437
MCFC stack, pressurised operation, model 99997
mesoporous activated carbon fiber elec. double layer capacitance *(English)* 100222
metallic substr.-supported thin-film SOFCs using plasma spray techs. 99962
methanol fuel cell methanol-resistant cathodic oxygen reduction catalysts 134367
methanol gas sens. using ultramicroelectrodes, studies on sens. mechanism 120993
methanol oxid. at batt. electrochem. co-deposited Pt-Os composite electrode 123775
methylviolet-C_{18}/rhodamine-C_{18} dye-sensitized p-CuSCN photoelectrochem. cell 134341
mixed-reactant strip-cell direct methanol fuel cells, feasibility anal. 100023
mol. imprinted polymer, bovine liver clenbuterol sens., voltammetry 97421
multiparameter miniaturised sens. arrays for multiple use 86688
Nafion based electrochem. cells, voltage-conc. rels. with enhanced slopes 99993
nanostructured electrodes on plastic substrs., mfg. method 90539
NASICON based amperometric NO_2 sens., electrode react. anal. 97486
NASICON-based CO_2 sens., stabil. in humid environ., low temp. 75721
natural graphite, surface modif. using Al, electrochem. perf. 123729
nitrite and $NO(NO_2)$ determ. by anodic voltammetry at conductive diamond electrodes 97471
nonporous activated carbon electrode elec. double layer capacitor, high energy dens. *(English)* 100224
octacyanophthalocyaninatoiron polymer cathode for Li secondary cell 99936
olive oil, rancidification proc., biosensor appl. 97414
oxidase-based fibre-optic biosensors, luminol electrochemiluminescence 97407
PAN-DMSO-TBAP solid-electrolyte microamperometric CO_2 gas sens. 86737
PANI, electrochem. charact., electrochem. supercapacitors electrode appl. 100229
Pb-acid valve-regulated batt. overcharge proc. modelling 89120
PEDT-RuO_x composite electrodes, electrochem. and impedance props., capacitor appls. 99890
PEFC, binary carbon supported electrode charactn. 100021
PEFC, PEM optimisation, humidifying conditions 89184
PEFC bipolar plates, graphite/vinyl ester composites develop. 123785
PEFC electrodes, perform., diffusion layer charact. 89180
PEFC operation on reformate feed, model 100008
PEM fuel cell lightweight bipolar plate syst. expts. 89166
PEM fuel cells, CO poisoning expts. 100005
PEM fuel cells, H_3PO_4-doped polybenzimidazole membrane expts. 134371
PEM fuel cells, parametric study of cathode catalyst layer using pseudo-homog. model 134365
PEMFC, oxygen electrode, Pt-Pd/C catalyst, reducing agents *(Chinese)* 89153
PEMFC, portable power source for commun. 89159
PEMFC develop. efforts in Japan 123782
PEMFC discharge perform. expts. *(Chinese)* 78162
peroxidase-modified Au electrodes, mediatorless peroxide biosens. 86682
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
planar anode supported SOFC, perform. 99953
planar anode supported SOFC stacks manufacture, deform. procs. 99978
poly(2,2'-diaminobenzyloxydisulfide) conducting polymer high-energy storage material 123772
poly(alkoxythiophene) derivative electrodes, capacitance and cycling stabil. 79459
poly(cyano-substituted-diheteroareneethylene), prep., electrochem. supercapacitor 101512
poly-4,4'-bis(butylsulfanyl)-2,2'-bithiophene film secondary cell electrode 99904
poly-octacyanophthalocyanine, cathode material for Li batts. 112809
polyacene semicond., vulcanized, electronic, struct. props. 80781
polyacrylonitrile microcellular foam film electrodes for supercapacitors 100230
polybenzimidazole, acid-doped, solid-state H_2 sens. 86739
polyelectrolyte membrane-type fuel cell anodes, CO_{ads} oxid. expts. 134366
polymer cathodes in Al/Ta electrolytic capacitors, perform. issues 115056
polythiophene photoactive electrode, solid-state photoelectrochem. cell 134340
porous anode for SOFC, anode micro model 100016
potentiometric sens. membrane, ion-selective membrane electrode 86726
Prussian blue modified SnO_2 electrode, K^+ ion sens. 86731
PV power syst. optimum batt. design theory 77799
PVC membrane, protoporphyrin IX dimethyl ester, Zn(II) sens. 86740
rect.-type elec. double layer capacitor, high energy dens. *(English)* 100220
reduced-temp. SOFC metallic interconnects, promises and problems 89267
reduced-temp. SOFC power systs. develop. 88664
small tubular SOFC syst., CeO_2 biogas internal reforming catalyst 89252
small-tubular SOFC fab. by electrophoretic deposition tech. 99961
SOFC, anode supported, operation on direct alcohol 112827
SOFC, anode supported YSZ electrolyte, powder dens. increase at reduced temp 112848
SOFC, electrolytes, electrodes, interconnects, conf., Honolulu, HI, USA (Oct. 1999) 78471
SOFC, porous thin-film anode materials, PVD, photolithographic patterning 123794
SOFC, tape casting for dry hydrocarbons direct oxid. 100019
SOFC anode-supported tube fab. and charact. 99956
SOFC cathode degrad. by Cr-containing alloy, electrodes and electrolytes comp. depend. 100012
SOFC cathode perform. improvement using struct. electrolyte surface 99971
SOFC ceramic materials synthesis from aq. solns. 89239
SOFC ceramic membranes, oxygen generation perform. comparisons 99990
SOFC electrochem. perform. studies, anode develop. 89241
SOFC electrodes, polariz. procs. ident., impedance meas. 99965
SOFC nickel mesh methane steam reforming catalyst expts. 89253
SOFC power generation, gas species effects 99603
SOFC stack aluminosilicate glass ceramics sealant studies 99979
SOFC wet proc. develop., current status 99960
solar cell-powered high-efficiency water electrolysis R&D *(Japanese)* 134397
sucrose biosens., amperometric, mediated tri-enzyme electrode 75672
Sulzer Hexis SOFC product develop. status 89194

electrochemical electrodes continued
supercapacitor, porous electrodes, internal electrolyte resist., voltammetry 8
supercapacitor nanostructure material develop. 123719
synthesis gas prod. using SOFC technol. 99989
thermal batts., thermal-sprayed thin-film cathodes 89054
thin-film YSZ SOFC fab. and perform. 99957
tubular SOFC technol. progress 89192
UltraCap double layer capacitors, energy storage device for peak power a
78201
ultramicroelectrode arrays QC, voltammetry, EIS, electrochem. micros
86692
ultramicroelectrodes, voltammetry, Vitamin E conc. in oils & fats 109747
uracil alkyl derivatives, oxygen reduction rate on Pt catalysts 112821
urease immobilised AC conductimetric biosens., charactn., optim. 75669
voltammetric formate & glucose-6-phosphate biosens., NADH/NADPH
86686
voltohmmetry sens. principle, heavy metal determ. in aq. soln. 97443
VRLA batts., plate group, mech. press., compression effect 78136
VRLA batts., standby appl., water loss minimisation 112802
VRLA cells, neg. electrodes, perform., life, organic expander effect 78157
Ag electrodes discharge in solid electrolyte batts., computer simul. 89039
Ag-ZrO_2, Y_2O_3 stabilised, composite film electrode, O_2 sens. *(Japanese)* 132
AgO electrodes, chem. prepared, aging, Zn/AgO reserve batts. 89050
AgO watch batts., electrolyte sealing, anode can/gasket clearance *(Japan*
89049
$Ag_2V_4O_{11}$ cathodes, Li insertion, structural study, Li batts. 123760
$Al_{0.2}Ni_{3.74}Co_{0.51}Mn_{0.65}$-Mm alloys, Ni-MH batts., corros., decrepitation 9990
$Al_{0.2}Ni_{3.97}Co_{0.41}Mn_{0.64}$-Mm alloys, Ni-MH batts., corros., decrepitation 9990
$Al_{0.3}Ni_{3.55}Co_{0.75}Mn_{0.4}$-Mm alloys, Ni-MH batts., corros., decrepitation 99909
Au-mol. wire monolayer-Au jn., rapid electron propag. 115208
$Ba(Ce_{0.8-y}Pr_yGd_{0.2})O_{2.9}$ mixed conducting cathodes, PEMFC 100010
Bi_2O_3-$WO_3(MoO_3)(Nb_2O_5)$/Li electrode materials, electrochem. 89103
C activated electrodes, aq./nonaqueous electrolytes, capacitance, pore
112760
C anodes from PMAN/DVB copolymers, Li-ion batt., electrochem. perfo
123765
C black cathode porosity during Li/$SOCl_2$ batt. discharge 134356
C black cathode porosity during Li/$SOCl_2$ batt. discharge 134357
C fiber, activated, mesopore struct., elec. double layer capacitor *(English)* 91
C fibers, PAN-based, electrochem. props., rechargeable Li ion batt. anodes a
99897
C fibers, vap.-grown, basic props. and their batt. appls. 99896
C high porosity electrodes derived from mesophase pitch for elec. double-la
capacitors 91432
C, macroporous, electrochem. electrodes for Li-ion batts. 123744
C nanotubes, Li electrochem. intercalation, Li batts. anodes appl. 90593
C paste electrode with org. modified silica, Cu(II) detect. 86732
C/a-MnO_2 electrochem. pseudocapacitor electrode, kinetic reversibility 914
C-based capacitor electrode materials, electrochem. energy storage 69270
C_xF synthesized at room temp., charact./electrochem., C starting material eff
99894
CO determ., Au colloid self-assembled electrode 132032
$Ce_{0.5}Gd_{0.5}O_{2\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
CeO_2-ZrO_2 interfacial procs., SOFC, charge transfer control, nano-scale effe
99964
CeO_2-ZrO_2 thin film, sol-gel prep., counter electrode appl. 68320
CeO_2-ZrO_2-$YO_{1.5}$ syst. as electrode of SOFC, miscibility gap 99992
Cr alloy SOFC interconnect material, elec. charactn. 89265
Cr-Fe-Y_2O_3 SOFC interconnects, oxid. resist., electrochem. perform. 89266
Cu PCB electroplating proc. modelling using virtual plating technol. 125905
Cu electrode, amperometric detector, sugar and organic acid meas. 86729
Cu films, acid-copper plating bath, electrochem. studies 101404
Cu periodic reverse electroplating, waveform shape/freq. optim. 68351
Cu-As_2S_3 membrane ISE, potentiometric sulphide sens. 86734
Cu-Sn flake alloy cathode prep., Li rechargeable batt. appls. 99940
Cu-porous carbon composite elec. double layer capacitor, capacitance prop
(English) 100221
$Cu_{0.1}V_2O_5$ xerogel cathodes, metallic Cu reversible form., XAS 112775
DyNi films, form./phase control, electrochem. implant./displant. 101407
F^--sensitive electrode, multilayer *(Chinese)* 75705
Fe-Cr ferritic alloy, appl. to interconnector for planar-type SOFCs 99994
$Gd_{1-x}Sr_xMnO_3$ SOFC cathode, synthesis and charactn. 89240
IrO_2/Co_3O_4 electrode, pseudocapacitive behavior eval. 102772
K-selective membrane electrode, conductometric sens. 86730
$K_xMn_{1-y}Co_yO_2$ reversible cathodes stabilisation, Li secondary batts. 123754
(La,Sr)$CuO_{3-\delta}$ SOFC electrodes, in-situ oxygen pot. meas. 89230
(La,Sr)MnO_3 SOFC cathode, mass transport, creep investig. 89225
(La,Sr)MnO_3 cathode tubes, SOFC, ZrO_2-Y_2O_3 electrolyte films deposition
89201
(La,Sr)MnO_3-$(Ce,Gd)O_{2-x}$ composite cathodes, SOFC appl. 134380
$La_{1-x}Ca_xMnO_{3\pm\delta}$ SOFC cathode activity, oxygen nonstoichiometry effect 892
$LaCo_{0.9}Cu_{0.1}O_{3-\delta}$ SOFC electrodes, oxygen nonstoichiometry 89233
$LaCoO_3$-$LaMnO_{3\pm\delta}$-$MeCoO_x$-$MeMnO_3$ systs., phase equilibria, SOFC electrod
89234
$LaFeO_3$ electrode/solid electrolyte cell, NO_2 gas sens. 86727
$LaGaO_3$:Sr,Mg/CeO_2/NiO SOFC, power dens., anode materials 112829
$La_{1-x}Ln_xCrO_3$ SOFC separator eval. R&D 89264
$La_{1-x}Me_xCoO_{3-\delta}$ SOFC electrode material studies 89231
$LaMnO_3$ porous cathodes tubes, YSZ electrolyte film, electrophoretic depositio
89203
$LaMnO_3$ porous doped cathodes, SOFC, ZrO_2-Y_2O_3 electrolyte, electrophores
123791
$LaMnO_3$:Sr cathodes, microstruct., glass sealant material effects 89186
$LaMnO_3$:Sr electrodes of SOFCs, deposition of Cr species, air flow effe
112826
$LaMnO_3$-ZrO_2-Y_2O_3 SOFC interface anal. using SIMS 99969
$LaNi_{0.6}Fe_{0.4}O_3$ SOFC cathode, reduced temp. operation 89236
$La_{0.9}Sm_{0.1}Ni_{2.0}Co_{3.0}$ electrode alloy, electrochem. prop., magnetis. treatme
123742
$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_3$ -$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
$La_{1-x}Sr_xCo_{0.98}Ni_{0.02}O_3$ perovskite-type catalytic fuel cell electrode material *(Ch
nese)* 112833
$La_{0.5}Sr_{0.5}CoO_{3-\delta}$ thin films, O surface exchange coeff. 123781
La(Sr)CoO_3 SOFC cathode, microstruct. control expts. 89232
$La_{1-x}Sr_xCoO_{3-\delta}$/$La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.2}O_{3-y}$, electrode react. 100020
$La_{1-x}Sr_xCrO_3$ SOFC cathodes, SHS 89238
La(Sr)$Cr(Ru,Mn)O_{3-\delta}$, SOFC anodes, catalytic/electrochem. props. 134379
$La_{0.8}Sr_{0.2}Cr_{0.97}V_{0.03}O_3$ anode material for SOFC 100009
$La_{1-y}Sr_yFe_{1-x}Al_xO_{3-\delta}$ cathodes/YSZ electrolyte for SOFC, chem. stabil. 112846
$La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.13}Ni_{0.07}O_3$ intermediate-temp. SOFC electrolyte 99959

rochemical electrodes continued
$La_{0.65}Sr_{0.3}MnO_3$, SOFC cathode, HTSC contacts compatibility 89174
$La_{0.69}Sr_{0.19}MnO_{3-\delta}$ porous cathode, YSZ membrane fab., sol-gel method 89204
$La_{0.8}Sr_{0.2}MnO_3$ porous cathode substrs., YSZ electrolyte, electrophoresis 99968
$La_{1-x}Sr_xMnO_3$ based ref. electrode, potentiometric gas sens. 97525
$La_{1-x}Sr_xMnO_{3\pm\delta}$ SOFC cathode activity, oxygen nonstoichiometry effect 89223
$La_{1-x}Sr_xMnO_3$ 89238
$La_{0.6}Sr_{0.4}MnO_{3+\delta}$-YSZ SOFC cathode, complex impedance anal. 99972
$La_{0.8}Sr_{0.2}MnO_3$-$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
$(La_{0.8}Sr_{0.2})MnO_3$-ZrO_2-Y_2O_3 SOFC cathode-electrolyte interface reacts. 99970
$LaSrMnO_3$-Y_2O_3-ZrO_2, SOFC composite cathodes, impedance 100018
$La_{0.4}Sr_{0.5}Ti_{0.6}Fe_{0.4}O_{3-\delta}$, mixed cond., SOFC anode appl. 112847
Li intercalation in porous carbon electrode, modeling 99926
Li intercalation into graphite, symm. cell for electrochem. AC impedance 99918
Li ion-environ. elements correl., batt. electrode 112814
Li micro-batt. develop. for spacecraft appls. 89152
Li nanocomposite electrode materials prep., props., Li batt. anodes appl. 101502
$Li/Li_{2.8}Ag_2V_4O_{11}$ batts., implantable cardioverter defibrillators 99925
Li/MoO_{3-x} thin film batts., characts. 134358
$Li/SOCl_2$ batt. discharge, C black cathode porosity 134356
$Li/SOCl_2$ batt. discharge, C black cathode porosity 134357
Li/polymer cell composite electrodes, variables separation method 99892
Li-CF_x envelope cells develop. 89053
Li-Co-Mn oxide high-volt. pos. electrode for Li batts. 112787
Li-Ni-Co oxide electrode materials, struct., XRD 99895
Li-Ti oxide electrode materials, struct., XRD 99895
Li-ion batt., anisole electrolyte additive, effect on cycle perform. *(Chinese)* 89067
Li-ion batt. based on $LiNi_xMn_{2-x}O_4$ cathode and flake Cu-Sn microcomposite anode 99911
Li-ion batts., SONY-type, degrad. reacts. 123763
Li-ion batts., cathode/anode materials *(Chinese)* 112782
Li-ion batts. for aerospace and aircraft appls. 88071
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
Li-ion cell designs, high energy dens., electrolytes, develop. 89092
Li-ion high-power secondary cells, impedance spectrosc. studies 99944
Li-ion liq. electrolyte batts., recent develop., future prospects 89073
Li-ion polymer electrolyte batts. 89127
Li-ion prismatic cells, aircraft appls. 88065
Li-ion rechargeable batt., 18650 size, advanced perform. *(Chinese)* 89069
Li-ion secondary batts., electrolytic solns. react. on pos. electrode, ESR 99922
Li-ion secondary cells, Mn-spinel cathode-based perform. improvements 89105
Li-ion secondary cells, composite electrode diffusion modelling 89116
Li-ion secondary cells, graphite powder electrode props./struct. *(Chinese)* 78130
Li-ion secondary cells, key components safety studies using ASC 89149
Li-ion secondary cells, thermal abuse studies 89150
Li-ion three-electrode plastic batts., reliable impedance meas. 112811
Li-polymer secondary batts., novel composite cathode develop. 123733
Li-rechargeable batts., anodes, portable telecomm. devices 112806
$Li[Ni_xLi_{1/3-2x/3}Mn_{2/3-x/3}]O_2$, layered cathode for Li-ion batt. 134352
$LiAl_yCo_{1-y}O_2$ prepared via sol-gel proc., electrode perform. 123728
$LiAl_xMn_{1-x}O_2$ cathode materials, solid state synthesis, Li batts. 123750
$LiAl_xMn_{2-x}O_4$ cathode material for Li secondary cells 99946
$LiAl_xMn_{2-x}O_4$, emulsion drying method, enhanced structural stabil./cycleability 90559
$LiAl_xMn_{2-x}O_4$ material, unique Al effect, Li ion batt. cathode 99919
$LiB_{1/9}Mn_{17/9}O_4$ cathode for Li ion batt., synthesis 99903
$LiCO_3/Na_2CO3$ MCFC, perform. anal., reactive gas supply shutdown *(Japanese)* 112817
Li_2CO_3-Li_3PO_4-Al_2O_3 electrolyte/$LiMn_2O_4$ electrode CO_2-gas sens. 86736
$LiCo_{0.5}Al_{0.5}O_2$ thin film batt. cathodes, Li-ion diffusion meas. 123753
$LiCo_{1-x}Fe_xO_2$ cathode, local struct., XANES obs. 89099
$LiCo_{1-x}Ni_xO_2$ secondary cell electrode synthesis using soft chem. 123737
Li_xCoO_2 high temp. electrode/electrolyte reacts. 112771
$LiCoO_2$ for rechargeable lithium batts. 99916
$LiCoO_2$ secondary cell cathodes, intercalation in aq. alkaline electrolytes 99906
$LiCoO_2$ single cryst. particles, super crit. water synthesis, cathodes 123751
$LiCoO_2$ thin film cathodes, sol-gel fab., Li/$LiCoO_2$ cells 123735
$LiCoO_2$ two-phase Li-ion batt. cathodes, technology advances 89139
$LiCoO_2$/graphite cells, overcharge react., abuse testing 112810
$LiCoO_2$/graphite cells, cylindrical/prismatic, thermal model 112773
LiCoO2, growth and studies for batt. electrodes 123770
$LiFe_xMn_{2-x}O_4$ spinel, struct. and electrochem. props., Li batts. appls. 112774
$LiFePO_4$ for lithium batt. cathodes 90588
$Li_xIrO_y{\cdot}nH_2O$ melt-oxidized film potentiometric pH electrode, fabr. and sens. props. 97472
$LiM_xMn_{2-x}O_4$ spinels (M=CO,Ni,Fe,Ti), synthesis, electrochem. charactn. 78131
$Li_{1+x}Mg_xTi_5O_{12}$ spinel electrodes, lithium batt. appl. 99923
$Li(Mn_yFe_{1-y})PO_4$, olivine-type cryst. chem., Li batts. 4 V cathode material appl. 112813
$Li_{1+y}Mn_{2-y}O_{4-\delta}$, spinel cathode, capacity fading-struct. changes co-rel. 112772
$Li_{1.01}Mn_{1.99}O_4$ secondary cell cathodes, capacity fading studies 123738
$Li_2Mn_4O_{9-\delta}$ cathodes for Li batts., soln.-based synthesis 123746
$Li_4Mn_5O_{12}$ cathodes for Li batts., soln.-based synthesis 123746
$Li_{8/n+4}Mn_{8/n+4}O_4$ defect spinel cathode materials, solid-state Li batts. 99928
$Li_xMn_2O_4$ high temp. electrode/electrolyte reacts. 112771
$Li_xMn_2O_4$ spinel cell electrode, heat generation characts. meas. 99920
$LiMn_2O_4$ Li-ion batt. spinel material, electrochem. perform. *(Chinese)* 112781
$LiMn_2O_4$ Li-ion batt. spinel-struct. pos. material prep. *(Chinese)* 112783
$LiMn_2O_4$, PLD, thin film cathode, Li batts. 123755
$LiMn_2O_4$ cpds., pos. electrodes failure mechanism in elevated temp. cycling 99932
$LiMn_2O_4$, growth and studies for batt. electrodes 123770
$LiMn_2O_4$ nanocryst. spinel cathode for rechargeable lithium batts. 99914
$LiMn_2O_4$ pos. electrode, cyclic capacity, total overlap pop. anal. 112769
$LiMn_2O_4$-based composite cathode, carbon black role, Li batts. 99924
$Li_{1-x}Ni_{1-y}Co_yO_2$ delithiated layered cathodes, structural instabil. 91542
$LiNi_{0.3}Co_{0.2}O_2$ cathodes, Li-ion batts., in-situ X-ray diffr. 123752
$LiNi_{0.8}Co_{0.2}O_2$ cathode, Li-ion batts., in situ XAFS study 89101
$LiNi_{0.8}Co_{0.2}O_2$ cathode material, spherical, high-dens. 123741
$LiNi_{0.85}Co_{0.15}O_2$ layered Li-ion batt. cathodes, structural/chem. stabil. 89138
$LiNi_{0.91}Co_{0.09}O_2$ Li-ion secondary cell electrodes, Mg substitution expts. 99943
$LiNi_{1-x}Co_xO_2$ cathodes for Li-ion batts., synthesis, characterisation 123747
$LiNi_{1-y}Co_yO_2$ powders, sol-gel proc., Li-ion batt. cathode 123757
$Li_xNi_{0.7}Fe_{0.15}Co_{0.15}O_2$ cathode, situ XAS study 89100
$Li_{0.04}NiO_2$ pos. electrode material, Li-ion batts. 123745
$Li_xNi_{1-x}O$ electrode, electrochem. capacitor, ESD synthesis *(English)* 91421
$LiNiO_2$ 123752
LiSi-FeS_2 thermal secondary cell, cathode material cryst. struct. *(Chinese)* 112784

electrochemical electrodes continued
$Li_4Ti_5O_{12}$ anode for all-solid-state, plastic, Li ion batts., prep., props. 134359
$Li_4Ti_5O_{12}$ electrode based asymmetric hybrid nonaqueous energy storage cell 112761
$LiV_3O_{7.9}$ lithium ion batt. cathode, lithiation 123756
Mg reversible deposition procs., mechanisms, rechargeable Mg batt. syst. appls. 112788
Mg/V_2O_5 polymeric solid electrolyte, rechargeable batts. 134350
Mg-soln. phase catholyte semi-fuel cell optim. using Taguchi methods 89167
Mg_2SnLi_x, mechanochem. synthesis, electrochem. characts. 125076
$Mg_{35}Ti_{10}M_5Ni_{50}$ (M=Y,Al,Zr) H storage electrodes, electrochem. 101463
$Mg_{0.5}Ti_2(PO_4)_3$ secondary cell cathodes, electrochem. Mg insertion 123739
$MlNi_{3.7}Co_{0.75}Mn_{0.75}Ti_{0.05}$ Ni-MH secondary cell electrode alloys 99942
Mn nodule, cathode material, intercalation perform., Li-ion batt. *(Chinese)* 89068
Mn oxyiodide thin film electrodes prepared by pulsed laser reactive deposition 99917
$(Mn_yFe_{1-y})PO_4$, olivine-type cryst. chem., Li batts. 4 V cathode material appl. 112813
MnO_2, Ti surface modified, alkaline-manganese batt. 123759
MnO_2, α-/interconnected α-/γ-phases, one-step electrochem. synthesis, Li insertion 134349
MnO_2 based cathodes, particle size, alkaline primary batts. 89048
MnO_2, chem. modified, prep., rechargeability, Zn-MnO^2 batt. *(Chinese)* 89061
γ-MnO_2, effect of struct. defects on insertion behavior, comparison of H^+ and Li^+ 89098
λ-MnO_2 in Li primary batts., low temp. perform. 112762
MnO_2 powders, EPR anal. for power sources 90586
MnO_2 sol-gel derived ultracapacitor electrode materials 123720
MnO_2-based alkaline cells, second electron discharge plateau anal. 99891
MoO_3/C composite electrodes as electrochem. supercapacitors 100228
$MoSe_2$, layered semicond., electrodeposition, solar cell electrodes 90493
Na-$NiCl_2$ ZEBRA cells, inner struct. investig., microtomograph 99930
$Na_xMn_{1-y}Co_yO_2$ reversible cathodes stabilisation, Li secondary batts. 123754
$Na_{0.25}MoO_3$ anode, Li-ion batt., Li insertion, oxygen role 123766
Nb_2O_5 cathode, electrochem. lithium intercalation, Li batts. 123749
$NdMnO_{3+\delta}$ defect struct. modeling, SOFC cathodes 89229
Ni, H_2-H_2O|YSZ anodic SOFC syst., modeling, simul., expts. 89246
Ni SOFC anode, metal dusting corros. 89254
Ni composite graphite Li-ion cell electrodes, galvanostatic discharge behavior 99947
Ni hydride electrodes, sintering, elec. vehicle appl. 89128
Ni hydroxide act. material, hysteresis during cycling 112785
Ni pattern anodes used as SOFC model electrodes, electrochem. 112824
Ni porous electrode in MCFC, electrochem. perform. 100017
Ni/CeO_2-GdO_2 cermet SOFC anodes, internal fuel reforming expts. 89251
Ni/Ni_3Al porous MCFC anodes, creep testing 123778
Ni/PTFE porous anodes for alkaline fuel cells, activation 112837
Ni/Y_2O_3-ZrO_2 cermets, prep., SOFC anode appl. 101510
Ni/YSZ SOFC anodes, hydrogen oxid. rate limitations 89244
Ni/YSZ anode/$Fe_{78}Cr_{22}$ SOFC interconnect, $Fe_{78}Cr_{22}$ foil 123795
Ni/ZrO_2 anode catalyst prep., mist pyrolysis method, SOFC appl. 79441
Ni/metal-hydride batts., intermetallic cpds. as neg. electrodes 89044
Ni-Al_2O_3 anode supported thin film SOFC develop. 99952
Ni-Cd AA-size secondary cell, internal resist. property *(Chinese)* 112778
Ni-Cd alkaline batts., telecomm. appls. 112805
Ni-Cd batts. for rem. telecomm. appls. 112804
Ni-Cd low-maint. ultra-high rate secondary batt. study *(Chinese)* 78123
Ni-Cd secondary batt. perform., form. effects *(Chinese)* 78122
Ni-Cd space power batt., Ag-Hg auxiliary oxygen-absorbing electrode *(Chinese)* 112777
Ni-H cell, phase reacts., nonisothermal model 112767
Ni-MH AA-size secondary cell, internal resist. property *(Chinese)* 112778
Ni-MH alkaline batts., telecomm. appls. 112805
Ni-MH alkaline high power batts. in bipolar stack design 89080
Ni-MH batt., $MmNi_5$ based hydrogen storage alloy paste type neg. electrode 99902
Ni-MH batts., intermetallic-based metal hydride electrodes, behaviour 99901
Ni-MH secondary batt. syst. for high-power appls. 89079
Ni-MH secondary batts., pasted Ni electrodes, lanthanide oxide additives 99927
Ni-MH secondary cell H_2 storage intermetallic particles, surface modif. 99905
Ni-MH secondary cell cycling, electrode capacity changes/failures 134348
Ni-MH secondary cell hydrogen storage electrode alloys develop. 89081
Ni-MH secondary cells, $NIi(OH)_2$ electrode research *(Chinese)* 78126
Ni-MH secondary cells, $Ni(OH)_2$ electrode props. expts. 99908
Ni-MH secondary cells, advanced electrochem. materials develop. 89146
Ni-MH secondary cells, electrode electrocatalytic characts. 89082
Ni-MH secondary cells, hydrogen storage electrode alloys studies *(Chinese)* 89071
Ni-MH traction batt. syst., charge perform. 112789
Ni-SDC/La(Sr)Ga(Mg)O_3/La(Sr)CoO_3 single SOFC, perform. 99967
Ni-TiO_2 anode supported thin film SOFC develop. 99952
Ni-YSZ SOFC anode, elec. cond./microstruct. studies 89242
Ni-YSZ anode of solid oxide fuel cell, internal steam reforming of methane 89172
Ni-YSZ cermet SOFC anode materials charactn. 89249
Ni-YSZ cermet anodes in YSZ fuel cells, methane fuelled, polaris. 89173
Ni-YSZ graded cermet foils, anode substrs., planar SOFC 99955
Ni-YSZ/YDC anode based SOFC, methane/ethane oxid. 99974
Ni-Zr, amorph., catalyst, global CO_2 recycling 76925
Ni-ZrO_2 anode supported SOFC technol. demons., YSZ electrolyte 89198
Ni-ZrO_2 cermet SOFC anode, internal reforming/electrochem. perform. studies 89250
Ni-ZrO_2 cermet SOFC anode perform., ionic-cond. effect 89243
Ni-ZrO_2 cermet anodes, SOFC, internal methane reforming 89248
Ni-based SOFC anodes, microstruct., electrochem. 99998
$NiAl_2O_4$ anode material, catalytic activity, IR-SOFC methane steam reforming 89256
$MlNi_{3.65}Co_{0.75}Mn_{0.4}Al_{0.2}$ hydrogen storage alloy, Ni-MH batt., electrochem. perform. 99900
$NiMgH_x$ films, electrochromic switchable mirror electrode, kinetics 71401
NiO/YSZ thin anode supported SOFC, YSZ electrolytes 89273
NiO-YSZ anode substr. supported YSZ electrolyte flat plate SOFC 99951
$Ni(OH)_2$ cathode, surface modif., Co coated *(Chinese)* 89063
$Ni(OH)_2$ electrode mfg. technol., orthogonal tests *(Chinese)* 89064
β-NiOO/β-$Ni(OH)_2$ electrode, cryst. struct. model misuse, Ni-Cd batts. 123734
NiOOH electrodeposited films, batt. electrode appls. EQCM gravimetric and viscoelastic studies 99938
O_2 electrochem. sens., host-guest inclusion complex of calixarene and methyl viologen 75738

electrochemical electrodes continued
O_2 reduction on Teflon bonded Pt/WO_3/C electrode in H_2SO_4, fuel cell appls. 100000
Pb accumulator plates perform., compression effects, cycling expts. 78137
Pb film electrodes on Cu and Al nets, electrochemical/corros. behaviour 89134
Pb-Ca electrodes, Sn and Al_2O_3 plating effects on electrochem. behaviour *(Chinese)* 89065
Pb-Sb electrodes, Sn and Al_2O_3 plating effects on electrochem. behaviour *(Chinese)* 89065
Pb-acid advanced batt. designs for hybrid EV appls. 89131
Pb-acid batt. grids manufacture by electroforming 89123
Pb-acid batt. hybrid rubber-polyethylene separators eval. 78158
Pb-acid batt. pos. plates, semi-suspen. prep. technol. 78146
Pb-acid batt. pos. plates, semi-suspen. prep. technol. 89129
Pb-acid batts., conf., Dublin, Ireland (March 2001) 67385
Pb-acid batts., corros.-resistant grid alloys 78150
Pb-acid batts. develops. in first decade of 21st Century *(English)* 89070
Pb-acid batts., life/capacity improvements, metal control additives 89109
Pb-acid deep-cycle valve-regulated batts., specific energy improvement 89132
Pb-acid secondary batts., pos. electrode oxygen evol. modelling 89119
Pb-acid secondary cell PbO_2 electrode, situ morph. change obs. 78147
Pb-acid secondary cell SnO_2-coated pos. electrodes develop. 78140
Pb-acid secondary cells, expander materials electrochem. charactn. 78139
Pb-acid valve-regulated EV batts. 78134
Pb-acid valve-regulated batt. develop. for PV power syst. appls. 78141
Pb-acid valve-regulated batt. life improvement, electrode expts. 89130
Pb-acid valve-regulated batts., RBSM struct. design criteria 89117
Pb-acid valve-regulated batts., oxygen cycle inefficiency expts. 89118
Pb-acid valve-regulated batts., solar power appl. charge strategies 78142
Pb-acid valve-regulated cell perform., neg. expanders expts. 78145
Pb-acid valve-regulated cells, recomb. catalysts role 78144
PbO electrode, valve-regulated lead acid batt., electrochem. perform. 123743
β-PbO_2 pos. plate act. material changes over batt. lifetime 78135
PbO_2:Bi_2O_3 electrodes, effect and mechanism on Pb-acid batt. perform. 78138
Pd anodes, direct methanol fuel cell, poisoning species form. prevention 89164
$PrMnO_{3+\delta}$ defect struct. modeling, SOFC cathodes 89229
Pt anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt catalytic coating, combustion CVD, polymer electrolyte membrane, PEMFC 123784
Pt nanoparticle catalyst layers, prep., fuel cell appl. 101436
Pt nanosized catalysts for SPFC electrode, XPS/XRD 99949
Pt/Nafion electrode charact. for hydrogen sens. devices 97462
Pt-Ru anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt-Ru-W composite PEMFC electrocatalysts, anodic methanol/methanol-reformate oxid. 134376
Pt-Ru-WO_x/C catalysts synthesis, PEMFC, XRD, XPS, XFA, TEM anal. methods 134374
Pt-YSZ SOFC anode syst., CH_4-H_2O gas-mixture react. kinetics 99973
Pt-modified PANI electrodes, methanol electrocatalytic oxid. 114458
PtRu anode catalyst for PEFC, abnormal IR effects 134368
$R_{0.8}Sr_{0.2}Fe_{0.8}Co_{0.2}O_{3-x}$ (R=La,Pr,Nd,Sm,Eu,Gd), prep./charactn. 101493
RuO_2 amperometric CO_2 sens., air/seawater appl. 86721
RuO_2 electrodes, effect of Ca addit. on pseudocapacitance *(English)* 100225
RuO_2/Lipon/RuO_2/Pt thin film supercapacitor, electrochem. charactn. 91431
RuO_2-impregnated C electrodes, electrochem. capacitor appl. *(Japanese)* 91428
a-RuO_2·xH_2O/WO_3·xH_2O($Na_{0.37}WO_3$·xH_2O) composites for electrochem. capacitors 100231
Si electrodes, polyethyleneimine/electrolyte interface, pH sensitivity 120976
n-Si rot. disk electrode, dissolution proc. in water/ethanol/HF solns. 92079
a-Si:H/c-Si solar cells, sputter deposited, PV water electrolysis, H_2 prod. 100029
SiAg powders, Li insertion by mech. alloying, Li-ion batts. anode material appl. 90587
a-SiO-SnO powders synthesized by mech. milling, anode props. 99912
$Sm_{0.5}Sr_{0.5}CoO_3$, SOFC cathode, reacts., rate-determining steps 89235
$Sm_{0.5}Sr_{0.5}CoO_3$ porous cathodes used in SOFC, mechanism 112830
Sn-Li_2O thin film neg. electrode enhancement, Li batt. appls. 89124
Sn-Sb nanostructure alloy anodes, Li-ion batts. 123764
Sn-Sb-Cu nanostructure alloy anodes, Li-ion batts. 123764
SnO_2:Sb xerogel electrodes prep. and charactn. for electrochem. capacitor appls. 102768
SnO_2:Si/Li thin film batt., electrochem. cycled, microstruct. evol. 134344
SnO_2/ZnO nano-porous composite electrodes, dye-sensitized solar cell appl. 78168
SnO_2-based nanostructured anode, sol gel proc., Li-ion batt. 99931
SnO_2-carbon composites anodes for Li-ion secondary batts. 99941
SnSb nanosized alloy anode for Li-ion batts., capacity loss and capacity fading 112812
(Sr,Ce)MnO_3 SOFC cathode, elec. props. 89228
$Sr_{0.97}Ti_{0.6}Fe_{0.4}O_{3-\delta}$, mixed cond., SOFC anode appl. 112847
Ta SMT capacitors, Pb-free soldering technol. effects 115058
Ti-V-Cr BCC-type solid soln. alloy anodes, surface struct., N-MH batts. 123767
TiO_2 porous electrode, photosensitization, porphyrin derivatives 116907
$Ti_{1-x}V_xO_2$ graded bandgap film electrode, photoelectrochem. 103052
$Ti_{0.7+y+z}Zr_yCr_{1.2}V_{0.8}Ni_x$ hydrogen storage alloy dyn., Ni-MH batt. *(Chinese)* 89062
V-Ti alloy surface-modified by ballmilling proc., electrode characts. 112770
$V_{0.9}Mo_{0.1}O_{2.55}$ films as pos. electrode for Li batts. 89126
V_2O_5 cathodes, Li insertion, structural study, Li batts. 123760
V_2O_5, electrolytic, synthesis, charactn. Li insertion behavior 123748
V_2O_5 thin-film batt. cathodes, Li ion diffusion meas. 123758
V_2O_5 thin-film cathodes based all-solid-state thin-film batts., charactn. 99937
VO_x nanorolls, cathode material for rechargeable Li cells, perform. 123731
a-V_2O_5:Pt cathode films for thin film microbatteries, microstruct./electrochem. props. 134345
$VOPO_4$ based pos. electrode materials for Li batts. 89097
$V_3TiNi_{0.56}Hf_{0.24}$ alloy electrode, electrochem. behaviors during charge-discharge cycling 112764
W micro-punch fab. for micro-nozzles, electrochem. etching 92547
WO_3:V/V_2O_5:Ti double layer thin films, fabr. and electrochromic props. 114372
WO_3·H_2O/PANI electrochromic device, electrochem. & opt. props. 82219
Y_2O_3-ZrO_2, electroactive, mesoporous, confined Pt(NiO) nanoclusters, SOFC electrode 123774
Y_2O_3-ZrO_2 thin film SOFC, fab., perform. 112840
$Y_{0.2}Ti_{0.18}Zr_{0.62}O_{1.9\pm\delta}$ ceramic SOFC anodes, electrochem. charactn. 101491
Zn alkaline AAA cell configs., K_2FeO_4/$BaFeO_4$ cathodes synthesis 123725
Zn anode based alkaline primary/secondary cells, membranes 89051
Zn anodes, high-rate capability, alkaline primary cells 89052
Zn electrodeposition using modified Hull anal. electrochem. cell 79377
Zn/AgO cells, AgO cathodes additives for high-drain pulse perform. 91541

electrochemical electrodes continued
Zn-Ag_2O rechargeable cells, separation comp. eval. 89106
Zn-air Instant Power™ primary batts. for portable consumer products 89057
Zn-air batt. fuelled EV demons. program, Israel 124009
ZnO electrodeposition on ITO electrode by pot. modulation method 90495
ZnO electrodes, struct. and photoelectrochem. props. 91668
ZnO powders, high electrochem. discharge capacity, prep., struct. and perfo 68442
Zr based alloys, comp. effect on struct., Ni-MH batts. 123769
Zr-Ti-V-Mn-Ni AB_2-type H storage alloys, Cr and La doped, electrode chara 134353
$ZrCr_mFe_nCo_pV_o$ electrode for Ni-MH batts., electrochem. investig. 134355
$ZrMn_{0.5}V_{0.4}Ni_{1.1}Co_x$ Laves phase alloy electrode, electrochem. perform. 123
ZrO_2 potentiometric sens., metal oxide electrode, hydrocarbon detect. 97468
ZrO_2 substr. with coplanar electrodes, elec. resist., model 97487
ZrO_2-Y_2O_3-TiO_2 SOFC anodes, screen printed, I-V polaris. 89245
$Zr_{1-x}Ti_xCrNi$ alloy electrodes, Ni-MH batt., H_2 absorpt., electrochem. pro 99899
$Zr_{0.5}Ti_{0.5}Mn_{0.4}V_{0.6}Ni_{0.85}M_{0.15}$ (M=Fe,Co,Cu,Mo,Al) electrodes, cell appl. 1127

electrochemical machining *see electrolytic machining*

electrochemical polishing *see electrolytic polishing*

electrochemical sensors
3D electrophoretically driven microlab., DNA hybridisation chip 86684
alcohol oxidase screen-printed amperometric biosens., enzyme immobilis. 756
amino-functional copolymer coated QCM-type SO_2 sens. 97528
amperometric glucose sens., PFC polymer coating 109722
amperometric glucose sens., rMnO carbohydrate oxidase 109725
beer aftertaste detect. using lipid membrane taste sens. *(Japanese)* 97423
beverage glucose/ethanol amperometric sens., quinoprotein electrodes 12095
biosensors, recommended defns. & class. 75677
bipotentiostatic uric acid sens., conducting polymer based, charact. reproducib ity 132007
blood gas anal. micromachined sens. module, design optim. 86691
bovine liver clenbuterol sens., mol. imprinted polymer, voltammetry 97421
capillary electrophoresis microchip, radionuclide/metal detect. 86718
cellular respiration & acidification meas. with CMOS ISFET 86685
CHEMFET and solid-state electrode, multi-ion anal. 121018
cond. detector for on-chip capillary electrophoresis 109746
conf., Birmingham, UK (Feb. 2000) 113194
diamond:B thin films, structuring and electrochem. appls. 120977
diamond electrolyte-soln.-gate FET, biocompatible ion sens. 86749
DNA electrocatalytic detect., Ru(II) complex modified C electrode 97420
DNA-covalently modified electrodes, electrochem. biosens. 75687
electrochem. QCM corros. sens. 104432
electrochem./catalytic bead gas sens., review 120970
electrokinetic capillary separation, LIF, micro-opt. syst. 109782
electronic tongue, voltammetric sens., data compression 86723
electronic tongue, voltammetric sens., tea discrim. 86722
enantiomers, mol. recogn., chiral discrim., electrochem. sens. 97456
environ. gas sens. & sens. mechanisms, overview 133357
enzyme-immunoassay, amperometric detector appl., AIDS/hepatitis diagno 120949
explosives & chem. warfare agents detect., electrochem. sens. 76987
ferrocene encapsulated ormosil modified electrode, GOD bioelectrochem. 974
α-fetoprotein immunosensing, disposable amperometric glucose oxidase se 132014
glass bioanal. microchips, powder blasting, electro-osmotic flow 109726
glucose amperometric sens., microchannel integrated, fab. 120948
glucose biosens., mol. imprinted polymers, capacitive detect. 86683
Hg-electroplated-Ir microelectrode array based sens., Cd/Pb/Cu trace an 86719
human skin moisture sens., flat surface attachment, interconnection tech. 1320
hydrogel coated pH-FET SO_2 sens., surface/potentiometric prop. 86744
immunosens. sig. transduction, chronopotentiometry, Faradaic imped. spectro 97411
integrat. photoelectrochem. semicond. sens., sulphide ion determ. 86733
ISFET-based NAD^+-depend. enzyme sens. for lactate, PQQ biocatalyst 9741
lab-on-a-chip technol., microfluidic devices in chem. meas. 109781
landmine electronic chem. sens., using fluoresc. polymers 88230
methane detect., solid electrolyte based catalytic asymm. sens. 75716
methanol gas sens. using ultramicroelectrodes, studies on sens. mechani 120993
microactuator for environ. water anal., microanalytical device 121023
multiparameter miniaturised sens. arrays for multiple use 86688
Nafion membrane-based electrochem. O_2 & CO sens. 75733
NASICON based amperometric NO_2 sens., electrode react. anal. 97486
NASICON-based CO_2 sens., stabil. in humid environ., low temp. 75721
nitrite and $NO(NO_2)$ determ. by anodic voltammetry at conductive diamond el trodes 97471
O_2/CO_2 sens., photosynthesis studies, educational instruction tool 97507
odour sens., thiol layer immobilised on Au, electrochem. imped. meas. 7571
olive oil, rancidification proc., biosensor appl. 97414
olive oils, quality eval., quartz resonators and MOS chemoresistors 121015
opt. electrochem. sens., output opt. luminesc. sig. 120995
organophosphate pesticides direct determ., biosens. appl. 111470
ormosil electrocatalytic dopamine biosensor, ferrocene encapsulation 75682
OxiCarbo sens., noninvasive arterial O_2 saturation & P_{CO2} meas. 87547
oxidase-bound amperometric biosens. output charactn., dyn. model 75671
PAN-DMSO-TBAP solid-electrolyte microamperometric CO_2 gas sens. 8673
penicillin detect., capacitive EIS & enzyme FET sens. 120942
penicillin detect., EnFET, capacitive EIS sens. & LAPS comparison 120950
penicillin sens., pH ISFET-based, immobilised enzyme 86690
peroxidase-modified Au electrodes, mediatorless peroxide biosens. 86682
phosphate-selective CHEMFETs, init. selectivity and sens. durability 121017
PLD, semicond.-compatible fab. tech. 121012
polybenzimidazole, acid-doped, solid-state H_2 sens. 86739
polyethyleneimine-coated Si electrodes, pH sensitivity, potentiometric transdu ers 120976
polymer solid electrolyte, humidity sens. 120982
polypyrrole-glucose oxidase film fab., potentiometric biosens. 86680
porous thin layer electrode Coulometric type gas sens., transient response *(C nese)* 75702
potentiometric sens. membrane, ion-selective membrane electrode 86726
Prussian Blue, electrochem. charactn. using BMOSFET 121016
PVC membrane, protoporphyrin IX dimethyl ester, Zn(II) sens. 86740
QCM selective polypyrrole electrodes, NO_2 & gas flux sensitivity 97440
reagentless bioaffinity sens., EIS, protein immobilis. in polypyrrole 120952
siloxane polymer, amperometric O_2, NO and enzyme sens. 86728
solid state potentiometric chem. sens., response, surface chem. effects 10977

trochemical sensors continued
solid state potentiometric sens., oxidable gaseous species detect. 75718
sucrose biosens., amperometric, mediated tri-enzyme electrode 75672
transient electrochem. multi-component gas sens., gas mixtures detect. 75736
transient electrochem. multi-component gas sens., O_2-$N_2O(CO_2)$ appl. 86738
ultramicroelectrode arrays QC, voltammetry, EIS, electrochem. microscopy 86692
ultramicroelectrodes, voltammetry, Vitamin E conc. in oils & fats 109747
urea amperometric sens. syst., pH-stat/flow injection anal. 97413
urease immobilised AC conductimetric biosens., charactn., optim. 75669
virtual water quality tests with electronic tongue 122704
voltammetric formate & glucose-6-phosphate biosens., NADH/NADPH meas. 86686
voltohmmetry sens. principle, heavy metal determ. in aq. soln. 97443
water-quality monitor with ion selective electrodes 120988
β''-Al_2O_3 ceramic membrane, potentiometric NO sens. 97514
CdS-AgI-AsS films, PLD, stoich., electrochem. sens. appl. 97445
Cu electrode, amperometric detector, sugar and organic acid meas. 86729
Cu-As_2S_3 membrane ISE, potentiometric sulphide sens. 86734
Cu(II) in aq. media, voltammetric sens., modified C electrode 86732
F^--sensitive electrode, multilayer *(Chinese)* 75705
H_2S open-path UV spectrometric multi-gas detector 120964
In_2O_3/NASICON potentiometric sens., CO_2 detect. 86743
K^+ ion sens., Prussian blue modified SnO_2 electrode 86731
K-selective membrane electrode, conductometric sens. 86730
$LaFeO_3/Y_2O_3$-ZrO_2 electrochem. NO_x sens. 109743
$La_{1-x}Sr_xMnO_3$ based ref. electrode, potentiometric gas sens. 97525
Li_2CO_3-Li_3PO_4-Al_2O_3 electrolyte/$LiMn_2O_4$ electrode CO_2-gas sens. 86736
$Li_xIrO_y{\cdot}nH_2O$ melt-oxidized film potentiometric pH electrode, fabr. and sens. props. 97472
NO_2 gas sens., $LaFeO_3$ electrode/solid electrolyte cell 86727
NO_x potentiometric sens. based on stabilized ZrO_2 and $NiCr_2O_4$ sens. electrode 109734
Na^+ anal., gingival fluid, NASICON microsensor 86689
$NaNO_2$-attached FET type gas sens., NO_2 sensitivity 97549
O_2 electrochem. sens. for proc. gas monitoring, charactn. 86706
O_2 electrochem. sens., host-guest inclusion complex of calixarene and methyl viologen 75738
PbS-AgI-AsS films, PLD, stoich., electrochem. sens. appl. 97445
Pt/Nafion electrode charact. for hydrogen sens. devices 97462
RuO_2 amperometric CO_2 sens., air/seawater appl. 86721
Si,porous, light-addressable potentiometric sens., prep. 97448
Si, porous, potentiometric triglyceride biosens., calib. 109724
SiO_2/Si_3N_4 ISFECs, ion sensitive field effect capacitors, sensitivity, MOSFET amp. structs. 121013
Ta_2O_5 light-addressable potentiometric sens., prep. 97448
Tl-Ag-As-I-S films, PLD, stoich., electrochem. sens. appl. 97445
Y_2O_3 sputtered films for electrochem. sens. 70375
Y_2O_3-ZrO_2, mixed pot. N_2O sens., SnO_2-based sens. electrode 75717
ZrO_2 electrochem. sens., NO_x/CO_2/water vapour appl. 120969
ZrO_2 potentiometric sens., metal oxide electrode, hydrocarbon detect. 97468
ZrO_2 substr. with coplanar electrodes, elec. resist., model 97487
ZrO_2/Pt electrochem. CO sens., thick-film lamination 97501
ZrO_2/Pt interfacial impedance, equiv. cct. model, O_2 sens. appl. 97494
ZrO_2-Y_2O_3 amperometric NO sens., spinel coated, Pt electrodes 132050
ZrO_2-Y_2O_3 electrolyte based limiting current-type O_2 sens. 75735

trochemistry
see also Debye-Huckel theory; electrochemical analysis; electrochemical devices; electrochemical electrodes; electrolysis; electrophoresis; photoelectrochemistry
150 W air-feed direct methanol fuel cell stack, develop. and operation 89158
acid-breakable resins for chem.-amplified pos. electron resist matrices 103640
alumina, electrochem. prepared pore arrays for photonic-cryst. appls. 127565
amorph. fluoropolymers as insulators for reversible LV electrowetting 92670
AMTEC power output degrad., electrodes role expts. 100217
AMTEC time-depend. degrad. behavior simul. 100216
5-(9-anthryl)-1,3-diphenyl-1H-pyrazol, opt. props., LED appl. 82403
BEDOT-pyridines based multi-colored electrochromic polymers 82038
BEDT-TTF salt, successive dry-wet proc. for fabricating conductive thin film 101306
bis(1.3-cyclobutylenedithio)tetrathiafulvalene, π-electron donor, conducting radical salts 91704
carbon fiber-based cathode develop. for semi-fuel cell appls. 89168
carbonaceous materials, effect of cross-linking of polymer precursors on electrochem. props. 134360
chalcogenides crysts., low dimens., synthesis *(Chinese)* 90208
chem. amplified e-beam resists, react. mechanisms by pulse radiolysis 103520
Danish SOFC R&D status 89191
diamond:H, p-type surface cond., adsorbates 69492
dimethyl oxalate electro-oxid., direct oxid. fuel cells appls. 123776
direct methanol fuel cells, intermediates form. during methanol oxid. 134369
direct methanol fuel cells, methanol electrochem. oxid. expts. 134372
direct methanol fuel cells electrooxidation, ternary catalysts expts. 89179
direct reforming MCFC stack explicit dyn. model 112832
direct-methanol fuel cell, proton conducting membrane morph. modif. 100024
DMFC platinum-based electrocatalysts, methanol oxid. mechanisms 134370
elec. double-layer capacitors, organic electrolyte studies *(Chinese)* 113037
elec./hybrid EV secondary cells, thermal characterisation 89133
electrochem. capacitors, charact. and appls. 69272
electrode current normalisation techs. during polariz. expts. *(Spanish)* 78120
Energizer alkaline primary batts., R&D work review 89059
$(ET)_5Dy(NCS)_6NO_3{\cdot}C_2H_5OH$ radical cation salt, prep., struct., cond. 91697
ethylene glycol electro-oxid., direct oxid. fuel cells appls. 123776
European SOFC develop. status 89190
EV batts., metal resource constraints 134354
ferrocene groups linked by oligothiophene, charge transfer 102853
field-activated etch proc. for fine pitch PWB manufacture 125901
fuzzy control of rectifying power supplies 88807
N-hexylcarbazole-co-3,4-ethylenedioxythiophene copolymers, opt./electrochem. props. 92926
high-perform. SOFCs at temps. below 700°C 99958
high-temp. SOFC methane reforming *(Chinese)* 89155
inconel 617 alloy, laser surface melted, electrochem. response 117567
low-temp. direct propane polymer electrolyte membranes fuel cell 99995
MCFC electrochem. materials research *(Chinese)* 134381
MCFC generation syst. rapid load changes, perform. implications 112437
metallic substr.-supported thin-film SOFCs using plasma spray techs. 99962
methanol fuel cell methanol-resistant cathodic oxygen reduction catalysts 134367

electrochemistry continued
micro gas turbine-SOFC reactor hybrid power generation syst. 99604
microfabricated secondary batts. for rem. autonomous electronic devices 89148
mixed-reactant strip-cell direct methanol fuel cells, feasibility anal. 100023
multichannel neural probes, cond. polymer polypyrrole/PSS, electrochem. deposition/charactn. 125123
multiple anion nonvolatile acetal resists for e-beam lithog. 103641
NATIBO rechargeable batt. study overview 89093
neuron-type conducting polymer device, cond. control 114455
neuron-type conducting polymer-based network-type device, props. *(Japanese)* 102850
Ni-MH sealed secondary batt., rapid charge control method *(Chinese)* 78128
PANI films, p-aminothiophenol monolayer self-assembly, internal photoemission 127905
Pb-acid valve-regulated batt. overcharge proc. modelling 89120
PCB electrochem. migration mechanism/accel., SO_2 gas environ. *(Japanese)* 69296
PEFC, binary carbon supported electrode charactn. 100021
PEM fuel cell, cathode/anode channels mass-exchange 78163
PEM fuel cell lightweight bipolar plate syst. expts. 89166
PEM fuel cells, CO poisoning expts. 100005
PEM fuel cells, H_3PO_4-doped polybenzimidazole membrane expts. 134371
PEMFC develop. efforts in Japan 123782
PEMFC discharge perform. expts. *(Chinese)* 78162
PEMFC electrochem. perform., testing/modelling *(Chinese)* 78161
PEMFC hydrogen storage, compressibility factor/fugacity coeff. determ. 89182
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
planar SOFC model calc., internal stresses studies 99982
planar SOFC stacks, recent Japanese develop. 89189
poly(2,2'-diaminobenzyloxydisulfide) conducting polymer high-energy storage material 123772
poly(methylmethacrylate)-polyethylene oxide hybrid polymer electrolytes for Li cell appls. 99948
poly-4,4'-bis(butylsulfanyl)-2,2'-bithiophene film secondary cell electrode 99904
polybithiophene film LEDs, electropolymerization, EL props. 93428
polyelectrolyte membrane-type fuel cell anodes, CO_{ads} oxid. expts. 134366
polymer-ceramic composite electrolyte cond. enhancement for Li-ion cells 99945
polypyrrole pipe electrochem. actuators, cation insertion/extraction 79456
polypyrrole/Cl^- films, electrochem. synthesis through polystyrene opal matrix 115354
polythiophene/pendant fullerene, electropolymerization, spectra 114466
PV power syst. optimum batt. design theory 77799
pyrrole, electrochem. polymerization, DEFT calc. 79451
radioisotope batts. for long-life low-power appls. 99893
reduced-temp. SOFC metallic interconnects, promises and problems 89267
reduced-temp. SOFC power systs. develop. 88664
reflexotherapy, galvanic effects electrochem. aspects 87800
SBS front terminal pure lead VRLA batts., telecomm. appls. 112807
Siemens low-cost PEMFC develop. efforts 123783
small tubular SOFC syst., CeO_2 biogas internal reforming catalyst 89252
small-tubular SOFC fab. by electrophoretic deposition tech. 99961
SOFC, direct oxid. of liq. fuels 112825
SOFC anode-supported tube fab. and charact. 99956
SOFC anodes, thermodyn. anal. of C deposition and electrochem. oxid. of methane 99999
SOFC cathode perform. improvement using struct. electrolyte surface 99971
SOFC ceramic materials synthesis from aq. solns. 89239
SOFC ceramic membranes, oxygen generation perform. comparisons 99990
SOFC electrochem. perform. studies, anode develop. 89241
SOFC electrolyte materials, mol. dyn. calcs. *(Japanese)* 134378
SOFC heat transfer/gas flow modelling develops. 99983
SOFC nickel mesh methane steam reforming catalyst expts. 89253
SOFC power generation, gas species effects 99603
SOFC single cells, syst. ident. modelling approach 99980
SOFC stack aluminosilicate glass ceramics sealant studies 99979
SOFC testing, results and interp. 99963
SOFC wet proc. develop., current status 99960
solid acids as fuel cell electrolytes 78165
solid polymer direct methanol fuel cells, Pt alloy oxygen-reduction catalysts 89178
Sulzer Hexis SOFC product develop. status 89194
synthesis gas prod. using SOFC technol. 99989
thermoplastic polyurethane and poly(ethylene oxide) composite electrolytes 112765
thin-film SOFC proc. using colloidal spray deposition tech. 89205
thin-film YSZ SOFC fab. and perform. 99957
tubular SOFC technol., computer modelling using ANSYS package 99981
tubular SOFC technol. progress 89192
ultracapacitors, conducting polymer materials studies 123718
Al/Si/TMAH syst., etch react., electrochem. meas. 103332
Au electroless plating using electrochem. QCM, mechanism 101402
Au interconnections, electromigration/electrochem. react. failure mechanism 115673
Cd_2SnO_4, film, nanocryst., sol-gel prep., electrochem. props. 103089
CeO_2-Bi_2O_3 bilayered low-temp. SOFC electrolytes 89215
Cr alloy SOFC interconnect material, elec. charactn. 89265
Cr-Fe-Y_2O_3 SOFC interconnects, oxid. resist., electrochem. perform. 89266
Cu, CMP in KIO_3-based slurries 92047
Cu electrodeposition, review, IC appls. 79364
Fe_2O_3-Cr_2O_3-MoO_2 artificial passiv. films, electrochem./corros. props. 90259
n-GaAs nm-sized Schottky contacts, current transport and C-V charact. 91860
$Gd_yCe_{1-y}O_{2-y/2-x}$ SOFC electrolyte, ionic/elec. cond. 89208
$GdCeO_2$ SOFC electrolyte, codopant addit. effects 89209
$GdCeO_2$ powder SOFC electrolytes charactn. 89210
$Gd_{1-x}Sr_xMnO_3$ SOFC cathode, synthesis and charactn. 89240
n-InP nm-sized Schottky contacts, current transport and C-V charact. 91860
$(La,Sr)(Ga,Mg,Co,Fe)O_{3-\delta}$ SOFC electrolyte, elec./thermal props. 89216
$LaCo_{0.9}Cu_{0.1}O_{3-\delta}$ SOFC electrodes, oxygen nonstoichiometry 89233
$La_{1-x}Ln_xCrO_3$ SOFC separator eval. R&D 89264
$La_{1-x}Me_xCoO_{3-\delta}$ SOFC electrode material studies 89231
$LaMnO_3$-ZrO_2-Y_2O_3 SOFC interface anal. using SIMS 99969
$La(Sr)CoO_3$ SOFC cathode, microstruct. control expts. 89232
$La_{0.8}Sr_{0.2}Ga_{0.85-x}Co_xMg_{0.15}O_{3-\delta}$ SOFC electrolyte expts. 89218
$La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.13}Ni_{0.07}O_3$ intermediate-temp. SOFC electrolyte 99959
$La_{0.8}Sr_{0.2}Ga_{0.85}Mg_{0.15}O_{2.825}$ SOFC electrolyte, high-temp. mech. behavior 89219
$La_{0.8}Sr_{0.2}Ga_{1-y}Mg_yO_{3-\delta}$ SOFC electrolytes, proc. and cond. 89217
$La_{0.6}Sr_{0.4}MnO_{3+\delta}$-YSZ SOFC cathode, complex impedance anal. 99972
$(La_{0.8}Sr_{0.2})MnO_3$-ZrO_2-Y_2O_3 SOFC cathode-electrolyte interface reacts. 99970
Li electrochem. intercalation into raw carbon nanotubes 101533

electrochemistry continued
Li intercalation into graphite, symm. cell for electrochem. AC impedance 99918
Li micro-batt. develop. for spacecraft appls. 89152
Li secondary batts., lithium imide electrolytes/copolymer materials 89140
Li/polymer cell composite electrodes, variables separation method 99892
Li-MnO_2 9V primary batts., naval appl. safety tests 89060
Li-S Moltech prismatic secondary cells, safety, rate capability, cycling perform. 89141
Li-ion VARTA micro batts. for wireless telecomm. devices 89088
Li-ion aerospace secondary cells, perform. and safety 89151
Li-ion cells for space appls. 123724
Li-ion high-power secondary cells, impedance spectrosc. studies 99944
Li-ion liq. electrolyte batts., recent develop., future prospects 89073
Li-ion secondary cells, Mn-spinel cathode-based perform. improvements 89105
Li-ion secondary cells, composite electrode diffusion modelling 89116
Li-ion secondary cells, graphite powder electrode props./struct. *(Chinese)* 78130
Li-ion secondary cells, key components safety studies using ASC 89149
Li-ion secondary cells, thermal abuse studies 89150
Li-polymer secondary batts., novel composite cathode develop. 123733
$LiAl_xMn_{2-x}O_4$ cathode material for Li secondary cells 99946
$LiCo_{1-x}Fe_xO_2$ cathode, local struct., XANES obs. 89099
$LiCo_{1-x}Ni_xO_2$ secondary cell electrode synthesis using soft chem. 123737
$LiCoO_2$ secondary cell cathodes, intercalation in aq. alkaline electrolytes 99906
$LiCoO_2$ two-phase Li-ion batt. cathodes, technology advances 89139
$LiFePO_4$/C nanocomposites, capacity at RT at high rates 112795
$Li_{1.01}Mn_{1.99}O_4$ secondary cell cathodes, capacity fading studies 123738
$LiMn_2O_4$ Li-ion batt. spinel material, electrochem. perform. *(Chinese)* 112781
$LiMn_2O_4$ Li-ion batt. spinel-struct. pos. material prep. *(Chinese)* 112783
$LiNbO_3$ galvanic cells, open-cct. pot. expts. 112756
$LiNi_{0.85}Co_{0.15}O_2$ layered Li-ion batt. cathodes, structural/chem. stabil. 89138
$LiNi_{0.91}Co_{0.09}O_2$ Li-ion secondary cell electrodes, Mg substitution expts. 99943
$LiNiO_2$, Pechini method growth, crystn. mechanism 79193
$LiSi\text{-}FeS_2$ thermal secondary cell, cathode material cryst. struct. *(Chinese)* 112784
a-Li_xWO_3 films, polaron absorpt. obs. 93312
Mg-soln. phase catholyte semi-fuel cell optim. using Taguchi methods 89167
$Mg_{0.5}Ti_2(PO_4)_3$ secondary cell cathodes, electrochem. Mg insertion 123739
$MlNi_{3.7}Co_{0.75}Mn_{0.75}Ti_{0.05}$ Ni-MH secondary cell electrode alloys 99942
a-Mn-Ta alloys, sputtered, sputtered in H_2SO_4 solns. 90260
MnO_2 sol-gel derived ultracapacitor electrode materials 123720
Ni composite graphite Li-ion cell electrodes, galvanostatic discharge behavior 99947
Ni hydride electrodes, sintering, elec. vehicle appl. 89128
Ni/CeO_2-GdO_2 cermet SOFC anodes, internal fuel reforming expts. 89251
Ni-Cd AA-size secondary cell, internal resist. property *(Chinese)* 112778
Ni-Cd low-maint. ultra-high rate secondary batt. study *(Chinese)* 78123
Ni-Cd secondary batt. perform., form. effects *(Chinese)* 78122
Ni-Cd space power batt., Ag-Hg auxiliary oxygen-absorbing electrode *(Chinese)* 112777
Ni-MH AA-size secondary cell, internal resist. property *(Chinese)* 112778
Ni-MH VARTA micro batts. for wireless telecomm. devices 89088
Ni-MH alkaline high power batts. in bipolar stack design 89080
Ni-MH secondary batt. syst. for high-power appls. 89079
Ni-MH secondary cell H_2 storage intermetallic particles, surface modif. 99905
Ni-MH secondary cell cycling, electrode capacity changes/failures 134348
Ni-MH secondary cell hydrogen storage electrode alloys develop. 89081
Ni-MH secondary cells, $NIi(OH)_2$ electrode research *(Chinese)* 78126
Ni-MH secondary cells, $Ni(OH)_2$ electrode props. expts. 99908
Ni-MH secondary cells, advanced electrochem. materials develop. 89146
Ni-MH secondary cells, electrode electrocatalytic charcts. 89082
Ni-MH secondary cells, hydrogen storage electrode alloys studies *(Chinese)* 89071
Ni-YSZ SOFC anode, elec. cond./microstruct. studies 89242
Ni-YSZ cermet SOFC anode materials charactn. 89249
Ni-ZrO_2 cermet SOFC anode, internal reforming/electrochem. perform. studies 89250
Ni-ZrO_2 cermet SOFC anode perform., ionic-cond. effect 89243
Ni-based SOFC anodes, microstruct., electrochem. 99998
Pb-acid advanced batt. designs for hybrid EV appls. 89131
Pb-acid batt. electrochem. perform., complex additives effect *(Chinese)* 112780
Pb-acid batt. hybrid rubber-polyethylene separators eval. 78158
Pb-acid batt. pos. plates, semi-suspen. prep. technol. 78146
Pb-acid batt. pos. plates, semi-suspen. prep. technol. 89129
Pb-acid batts., conf., Dublin, Ireland (March 2001) 67385
Pb-acid batts. develops. in first decade of 21st Century *(English)* 89070
Pb-acid deep-cycle valve-regulated batts., specific energy improvement 89132
Pb-acid flooded batts., gassing reacts. impedance meas. 89085
Pb-acid secondary batt. charging method study *(Chinese)* 78129
Pb-acid secondary batts. develop. in 21st Century *(English)* 78121
Pb-acid secondary batts., pos. electrode oxygen evol. modelling 89119
Pb-acid secondary cell PbO_2 electrode, situ morph. change obs. 78147
Pb-acid secondary cell SnO_2-coated pos. electrodes develop. 78140
Pb-acid secondary cells, expander materials electrochem. charactn. 78139
Pb-acid small valve-regulated batts., dyn. charactn. 89089
Pb-acid super-high batts., latest Indian develops. 89084
Pb-acid valve-regulated EV batts. 78134
Pb-acid valve-regulated batt. develop. for PV power syst. appls. 78141
Pb-acid valve-regulated batt. electrochem. 78133
Pb-acid valve-regulated batt. life improvement, electrode expts. 89130
Pb-acid valve-regulated batt. life prolongation study *(Chinese)* 112779
Pb-acid valve-regulated batts., RBSM struct. design criteria 89117
Pb-acid valve-regulated batts., oxygen cycle inefficiency expts. 89118
Pb-acid valve-regulated batts., solar power appl. charge strategies 78142
Pb-acid valve-regulated cell perform., neg. expanders expts. 78145
Pb-acid valve-regulated cells, recomb. catalysts role 78144
Pb-acid valve-regulated stationary batts., high-rate recharge expts. 78143
Pb-acid/Ni-MH/Zn-air batt. hybrid syst. polariz. charcts. 89147
Pt/Nafion electrode charact. for hydrogen sens. devices 97462
Pt-YSZ SOFC anode syst., CH_4-H_2O gas-mixture react. kinetics 99973
Pt-modified PANI electrodes, methanol electrocatalytic oxid. 114458
PtRu anode catalyst for PEFC, abnormal IR effects 134368
PtRu/C catalyst PEM fuel cells, morph., electrochem. 100004
Ru-complex-based organic EL devices, peak wavelength control 104972
Sc_2O_3-ZrO_2 SOFC solid electrolyte charcts. 89207
Si, electrochem. etching, 3D microstruct. 116103
Si, electrochem. prepared pore arrays for photonic-cryst. appls. 127565
Si, etched, patterning method for electrochem. prod. 69861
Si galvanic etching, hypochlorite electrochem. reduction 92085
Si, porous, metal-aided electrochem. etching, PL obs. 103328
Si, porous, sacrificial layer, microstruct. fab., morph. 101523

electrochemistry continued
Si substr., alkylsilane SAM, photo/scanning probe lithog. 92245
Si wafer, surface roughening due to Cu contamination prior to ultra-thin oxid. 126338
Si(111)-H surface in dil. NH_4F soln., electrochem. ATR-FTIR spectra 103
SnO_2-carbon composites anodes for Li-ion secondary batts. 99941
Ta, CMP in KIO_3-based slurries 92047
Ti, electrochem. micromachining through laser patterned oxide film 92568
TiO_2 nanoporous layer dye sensitized solar cells 123822
TiO_2 organic/inorganic hybrids with substituted phthalocyanine or polythioph nanofabrication 134396
$Ti_{0.8}Zr_{0.2}Mn_{2-x}Cr_x$ PEMFC hydrogen resource storage props. 89181
WO_3 and polypyrrole based electrochromic device, charact. 71413
WO_3 films, electron beam deposition, electrochromism, film thickness 714
Y_2O_3-ZrO_2 thin film electrolyte for SOFCs, prep./characterisation 89171
YSZ-Al_2O_3 SOFC electrolyte membrane tube, prep. and appl. *(Chinese)* 8
Zn alkaline AAA cell configs., K_2FeO_4/$BaFeO_4$ cathodes synthesis 123725
Zn electrodeposition using modified Hull anal. electrochem. cell 79377
Zn/AgO cells, AgO cathodes additives for high-drain pulse perform. 9154
Zn-air Instant Power™ primary batts. for portable consumer products 890
Zn-air fuel cells, technol. and appls. 89176
Zn-air primary batt. air manager technol. advances 89058
$ZrMn_{0.5}V_{0.4}Ni_{1.1}Co_x$ Laves phase alloy electrode, electrochem. perform. 12
ZrO_2-Sc_2O_3 SOFC electrolytes, elec. cond. studies 89206
$Zr_{0.5}Ti_{0.5}Mn_{0.4}V_{0.6}Ni_{0.85}M_{0.15}$ (M=Fe,Co,Cu,Mo,Al) electrodes, cell appl. 112

electrochromic devices
see also electrochromic displays
polymer films and devices, situ colorimetric anal. 82039
CeO_2-ZrO_2 thin film, sol-gel prep., counter electrode appl. 68320
Fe-V-O thin films for electrochromic smart windows, anal. electron microsc 71415
Nb_2O_5-TiO_2 thin films for electrochromic devices 71405
$NiMgH_x$ films, electrochromic switchable mirror electrode, kinetics 71401
NiO electrochromic coatings, counter electrodes, structural and opt. pr 71477
TiO_2 71477
V oxide electrochromic coatings, counter electrodes, structural and opt. pr 71477
W oxide/Ni oxide tandem films based electrochromic devices 71414
W/W_2N/WO-based thin film CVD using volatile liq. precursors 90462
WO_3 electrochromic coatings, counter electrodes, structural and opt. pr 71477
WO_3-H_2O/PANI electrochromic device, electrochem. & opt. props. 82219

electrochromic displays
WO_3 and polypyrrole based electrochromic device, charact. 71413

electrochromic windows *see electrochromic devices; optical windows; solar control films*

electrochromism
BEDOT-pyridines based multi-colored electrochromic polymers 82038
CRT picture tube, variable transm. coating 80620
thiophene-based materials, photo and EL, chem./thermal stabil. 92934
CeO_2 thin films, spray pyrolysis, opt. props., electrochromism 82283
CeO_2-TiO_2 thin films, DC magnetron sputter-deposition, electrochromism 90
MoO_3 amorph. films, thermal coloration, metal oxid. state influence 10489
NiO electrochromic coatings, counter electrodes, structural and opt. pr 71477
NiO films, spray pyrolysis prep., electrochromism 127881
TiO_2 71477
V oxide electrochromic coatings, counter electrodes, structural and opt. pr 71477
WO_3 amorph. films, thermal coloration, metal oxid. state influence 104891
WO_3 electrochromic coatings, counter electrodes, structural and opt. pr 71477
WO_3 electrochromic films, rf-sputtering, residual charges, IR absorpt. 12790
WO_3 films, DC magnetron sputter-deposition, electrochromism 90240
a-WO_3 films, electrocoloration curve anal. 104607
WO_3 films, electron beam deposition, electrochromism, film thickness 7148
WO_x electrochromic films, atmos. press. CVD growth and charactn. 10134
WO_3:V/V_2O_5:Ti double layer thin films, fabr. and electrochromic props. 1143

electrodeposition
see also electrodeposits; electroplating
3D electrochem. deposition diffusion-controlled growth 90521
Al_2O_3 porous anodic films, opt. polariz. props. of electrodepositing metal *(C nese)* 127894
Damascene feature fill, electroless and electrolytic seed repair effects 12644
diamond synthesis by electrolysis of acetates 79378
glucose biosens., mol. imprinted polymers, capacitive detect. 86683
high-resist. composite layer, crack distrib., electrochem. NDT 90608
interface controlled materials, conf., St. Petersburg, Russia (Jun. 2000) 7846
mag. struct. design and synthesis, review 81793
microfabricated spark gaps, wear, erosion charcts. 70358
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
poly(p-phenylene vinylene) derivative based electrodeposited film, fab./o characts. 68353
polybithiophene, films, electrochem. polymerization, solvent effects 125027
polypyrrole-glucose oxidase film fab., potentiometric biosens. 86680
polythiophene, films, electrochem. polymerization, solvent effects 125027
shape evol. of electrodeposited bumps into deep cavities 89883
soft mag. wires, prep./mag. props./appls., overview 81794
superfilling model that predicts bump form. 92054
thick masks, rapid prototyping for through-mask electrodeposition 92231
trapped-vortex gas turbine combustor, metal fuel injector nozzle arra microfabrication 98928
Au immersion/electrolytic PCB final finishes, comparison 115177
Au on n-Si(100), C contam., electrodepos., electron-beam induced nanomaski 90511
Au on n-Si(111), local depos., scanning electrochem. microsc. 101441
Au(111)/Co^{2+}, localized electrodeposition with nanoelectrode STM tip 90507
Bi_2Se_3 thin films, electrodeposited, prep. from nonaqueous medium, chara 114384
Bi_2Te_3 films, electrodeposition, charactn. 114390
CdS QD, self assembled ordered arrays, C-V charcts. 126194
CdS films, electrochem. ALE on Ag(111) 90519
CdSe nanocrystal films, electrodeposition, pH effects 90480
CdSe, nanowire arrays, highly ordered, polycryst., electrodeposition synthes 115791
CdSe/TiO_2, screen printed/spray painted coatings, sensitization by CdSe 7938
CdTe electrodeposited film struct. and comp., deposition pot. depend. ana 125043

trodeposition continued
CdTe electrodeposition from basic aq. solns. containing ethylenediamine 90512
CdTe/CdS solar cells, electrodeposited, heterojunction props. 134387
$Ce_{1-x}Gd_xO_y$ films, electrophoretic and electrolytic deposition, SOFC 79396
CeO_2 films, electrophoretic and electrolytic deposition, SOFC 79396
Co nanowires, electrodeposition, mag. props. *(Chinese)* 125016
Co-Ni alloy nanowire array, prep., mag. props. *(Chinese)* 127311
Cu ULSI metallization barrier layers, review 69930
Cu electrodeposition from sulfate electrolytes, mechanism, effects of thiourea on resist. 90494
Cu electrodeposition in ammonia media, chloride/nitrate anions effects 90515
Cu electrodeposition in presence of additive, simul. of shape evol. 90502
Cu electrodeposition, review, IC appls. 79364
Cu electrodeposition/dissolution on tetrahedral amorph. C:N 90504
Cu films, electrodeposition, buffering agent, mass transfer model 90514
Cu interconnects, sub-0.10 μm, jet electrochem. deposition plating/seed layers 81118
Cu on TiN, electrochem. deposition, nucleation 90498
Cu selective electrodeposition on nanoscratches in Si(100), AFM obs. 115682
Cu spontaneous nonaqueous electrochem. deposition on Al and AlCu 68325
Cu straight wires arrays form., electrodeposition 101433
$CuFe_2$ cathodic electrodeposition/oxid. for $CuFe_2O_4$ thin film prep. 79366
$CuInSe_2$ thin films electrodeposit., complexing agent, citrate ions infl. 114391
$CuInSe_2$ thin films, electrodeposition mechanisms, electrochem. QCM study 90506
Cu_2S thin films, electrodeposition, struct. anal. 90496
p-CuSCN semicond. in polymer channels, electrodeposition 125023
DyNi films, form./phase control, electrochem. implant./displant. 101407
FeCoNi alloy thin film, pulsed-current electrodeposition 116266
n-GaN/Pt Schottky contacts, proc.-induced electron traps, DLTS 69548
$MoSe_2$, layered semicond., electrodeposition, solar cell electrodes 90493
Ni biaxially-textured substrs., electrodeposition, $YBa_2Cu_3O_7$ HTSC tape appl. 68342
Ni microcolumns growth behavior, localized electrochem. deposition for MEMS appls. 90488
Ni microstruct., localized electrochem. deposition, rotor electrode 116086
Ni/SiC composite plating using cationic surfactant with azobenzene group 90505
NiS thin films, SILAR, prep./charactn. 125021
PbO_2 electrocatalysis and deposition at diamond:B highly-doped electrodes, US effects 90503
Pd spontaneous nonaqueous electrochem. deposition on Al and AlCu 68325
Pt nanoparticle catalyst layers, prep., fuel cell appl. 101436
Pt nanoparticles, in situ electrochem. deposition on C, inside Nafion 100002
Pt/TiO_2, photo-electrochem. deposition, electron-beam lithog. masks 79390
a-Si film/Cu selective metallization, electrochem. contact displacement 92053
Si films, electro-ELO from liq.-metal solns. 79381
Si/Au syst., electrodeposition, electron beam-induced C masking 79369
p-Si(100), selective Au electrodeposition on surface defects 90510
Si(100) surfaces, AFM nanopatterning, selectively electrodepositing Cu 103709
SnS films for PEC, cathodic electrodeposition 101398
p-SnS-based PV cells, chem. deposition, charcts. 89278
$(TbBi)(SrBa)_2Ca_2Cu_3O_x$ HTSC film, two-layer electrodeposition proc. and charactn. 68339
(TlPb)SrCaCuO-based HTSC biaxially aligned tapes, electrodeposition and charactn. 68340
V_2O_5, electrolytic, synthesis, charactn. Li insertion behavior 123748
p-WS_2 thin film, electrodeposition/charact. 79394
Zn electrodeposition using modified Hull anal. electrochem. cell 79377
ZnO electrodeposition on ITO electrode by pot. modulation method 90495
ZnO films, electrodeposition in perchlorate medium, H_2O_2 as O precursor 90516
ZnO smooth nanoporous films, electrochem. deposition and charactn. 101406
ZnO thin films, electrodeposition on n-Si(100), struct./opt. props. 125041
ZnO:B films, electrochem. growth, elec. props., dimethylamine-borane conc. effects 101442
ZnS films, electrochem. ALE on Ag(111) 90519
ZnSe films, electrodeposition, struct./opt. props. 125042

trodeposits
see also electroplated coatings
conjug. polymer, low-band gap, memory effect in I-V charcts. 80520
PANI electrodeposited corros. protection layer, passivity breakdown, spectrosc. anal. 101519
PANI electrodeposited layer, corros. protection and spectrosc. anal. 101440
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
polypyrrole electrospotting for oligonucleotide arrays, surface plasmon reson. hybridization detect. 114396
polypyrrole films, electrochem. soft actuators 79454
Ag/Bi,Pb(2223) tapes, material developments, texture 81963
Ag/RE(123) tapes, material developments, texture 81963
Ag/Tl(1223) tapes, material developments, texture 81963
Al_2O_3, nanoporous anodic layer, Ni deposition, substr. fab. 68450
Au-Cu-Cd electrodeposited alloys, cathodic hydrogen evol. effects 90513
CdTe films, band gap shallow levels on metallic substrs. 126060
$Ce_{1-x}Gd_xO_y$ films, electrophoretic and electrolytic deposition, SOFC 79396
CeO_2 films, electrophoretic and electrolytic deposition, SOFC 79396
Co/Cu spin valves electrodeposited on Si 127356
CoNi film, electrodeposited, struct./prop. rels. 90508
Cu deposition on Si in deionized water, Si surface termination effects 92129
Cu electrodeposition from sulfate electrolytes, mechanism, effects of thiourea on resist. 90494
Cu metallic coating on HTS surfaces using electrochem. deposition 68327
Cu single-cryst. nanowire arrays, electrodeposition template synthesis 101417
$Cu(In,Ga)Se_2$ large area films for high efficiency solar cells 126104
Cu_2O electrodeposited films, opt. transits., temp. depend. anal. 126078
$Cu_{1.84}Te$, electrodeposited, threshold switching with Al point-contact electrodes 91863
$Cu_{1.91}Te$, electrodeposited, threshold switching with Al point-contact electrodes 91863
Fe nanopillars, electron beam lithog./electrodeposition 114393
ITO/PbS nanoparticle self-assembled heterojunction, elec. props. 126123
Mo/CIS/CdS thin film interfaces, electrodeposition, PV appl. 123807
Nd-Fe-B PM, electrodeposited polymers, corros. resist. 101475
Ni coating charactn., leaky Lamb wave dispersion curves meas. 101550
Ni zone plates, electrodeposition for soft X-ray microscopy 68344
Ni/Cu multilayers, electrodeposited, mag./FMR props. 81884
Ni-W thin films, perp. mag. anisotropy, microstruct. 81898
NiFe film, electrodeposited, struct./prop. rels. 90508
NiFe nanopillars, electron beam lithog./electrodeposition 114393
NiOOH electrodeposited films, batt. electrode appls. EQCM gravimetric and viscoelastic studies 99938

electrodeposits continued
Si films, electro-ELO from liq.-metal solns. 79381

electrodes
see also anodes; biomedical electrodes; cathodes; earth electrodes; electrochemical electrodes; electron tube components; microelectrodes
3-phase covered corundum arc furnace, neural supervisory control 113141
3D PDP meas., scanned point detecting syst. *(Korean)* 97590
absol. capacitive ang. meas. syst. develop. 75892
AC PDP, sustaining electrode, luminous efficiency 121097
AC/pulse film capacitor technol. for future market requirements 123714
air, pos. streamer discharges, atmos. conditions, three-electrode syst. 104265
air wave type EHD pump, EHD induced fluid flow, elec. current cond. 116139
arc furnaces, spline-based time domain anal. 134648
Au/Cr/ZnO/Au/Cr/SiO_2, buffer electrodes effect, BAW resonator, XRD 104453
Au/Ti/ZnO/Au/Ti/SiO_2, buffer electrodes effect, BAW resonator, XRD 104453
back-discharge phenom., pot. distrib. meas. using EO effect *(Japanese)* 127145
base metal electrode dielec. comps. for thick/thin layer MLC capacitor appls. 115061
biaxially oriented polypropylene film in AC high field region near breakdown, charging current *(Japanese)* 104409
bilamellar dielec. NDE based on elec. field-prop. rels. 101558
bipolar charge aerosol classifier instrum. syst. 128663
breakdown strength of high-current triggered vac. switches 78056
capacitance tomography sens., axial charcts. simul., FEA *(Chinese)* 109526
capacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
capacitive humidity sens. design/fab., interdigit electrodes *(Korean)* 120740
CCD image sens., single-layer polysilicon electrode 109713
CDM ESD simul. using time domain air gap discharge meas. 72176
ceramic capacitors, voltage withstanding rating determ. 80444
CHP plant, elec. dust precipitators, power supply *(Russian)* 123187
circ.-hybrid electrode struct. adaptive liq. cryst. lenses, aberrations, point-spread fns. 116836
combined ELID-grinding/EDM method expts. *(Japanese)* 100347
concave capacitor, $BaSrTiO_3$ thin film integrat., DRAM devices 101330
contaminated water treatment using dielec. barrier discharge *(Korean)* 78367
corona radical shower NO_x removal syst., 2D imaging expts. 133354
CPW electrode design optim., conformal mapping 102508
CRPhED units, low-temp. plasmachem. treatment, proc. model 80580
cuff electrode, nerve recording/stimulation, acute small animal expts. 98231
CZT coplanar grid detectors, stabil. and charact. 110318
deformed water cone tip, neg. corona discharge, DC field 83161
dielec. liqs., prebreakdown phenom. under nonuniform field, mol. struct. effects *(Japanese)* 81652
dielec. plate, surface discharge form., pos. impulse voltage in air *(Chinese)* 104253
dielec. strength lightning impulse testing, humidity correction factor 92593
diesel engine exhaust treatment, pulsed streamer corona reactor, RVC electrodes 76929
dual electrode plate MLC capacitor for HV pulse appls. 89031
dye-sensitized nanocrystalline solar cells, computer simul. method 112885
EDM arc plasma temp. distrib., spectrosc. meas. *(Japanese)* 78362
EEG, freely moving guinea pigs, simple meas. method 110582
EHV metal-enclosed disconnector, design, simul., testing 134277
elastomeric polymer dielec., strain response, electroactive polymer actuators 127215
elec. impedance proc. tomography, internal struct./electrodes model 109924
elec. resist. tomography, electrode array, image reconstr. *(Chinese)* 86909
elec. resist. tomography using bidirectional current pulse tech. 109923
electro-osmosis anal. method using FET models 83087
electrochem. sens., output opt. luminesc. sig. 120995
electrostatic chuck with thin ceramic insulation layer, wafer holding appls. 128707
electrostatic precipitator with barrier discharge, electrode particle collection *(Japanese)* 111473
electrostatic procs., corona wire electrode, elec. field 83130
electrostatic separation procs. optim. using response surface modelling 128713
EM device problems, GA, global optim. 128702
Enisei thermionic nuc. power syst., single-cell elec. generating channel, electrode lifetime 133225
ESP, spherical metallic particles dyn. 83177
ESP fine particles transport, electroaerodynamically induced secondary flow 83175
ESP particle migration vel., particle diam., corona electrode geom. 83176
ESP wire electrode configs., corona inception studies field 72192
extracellular recording, inexpensive high-perform. amp./electrode 87369
fast microcapillary discharge plasma charactn. using Thomson parabola ion analyser 92594
flash ERG in rodents, different recording params. eval. 98233
flat sprays induction charging for space charge generation 128710
flexible polymer LED mfg., cond. lithog. film technol. 121067
flip-chip mounting proc. develop., metallic joint using US wave energy 125936
floating electrode unidirectional SAW transducer 92701
foil activator, interelectrode gap, corona discharge model 116140
four-probe resist. meas. on resistive sheets with parallel electrodes, correction factor 132129
frictional electrification between polymer films/LB layers 83111
gas electron multiplier detector anal. in high intens. particle beams 132300
germanosilicate SMF with built in electrodes, UV laser-induced current 93061
GIS PD meas. using nonconventional UHF sens. 78058
gliding discharge expts. at 33 kHz and 50 Hz 104240
glucose, amperometric determ., biosensor fab. 86675
graphite electrode surface, 3D profile meas., light-sectioning triangulation *(Chinese)* 121207
grating-mode-type SAW resonator for VCO, fab. method and optimum electrode finger shape 127269
grounded electrode discharge in charged particle cloud 116120
HARPSS polysilicon vibr. ring gyroscope, MEMS technol., elec. isolated vert. electrodes 81575
Hefei electron storage ring injection state param. anal. *(Chinese)* 132248
high efficiency SAW convolver with suppressed parasitic refl. sigs. 92706
high luminous efficiency V-shaped electrode struct. for PDP with high Xe ratio gas 97735
high-k gate dielec., materials eval./selection 104105
IGBT, trench electrode, power IC syst. 92350
insulation testing, 3-electrode meas. set with metal ring *(Polish)* 120689
integrated Mach-Zehnder modulator design, TW electrodes elec. field, FEA *(Chinese)* 71353
interdigitated capacitors by offset lithog., cct. board manufacture 91475

electrodes continued
iron style bipolar axial mag. field vac. interrupter, static mag. field, 3D FEM *(Chinese)* 99839
KEMET base-metal-electrode MLC chip capacitors, HALT 115079
large AC PDP, addressing time, single scan syst. 75804
LC panels in projectors, cell-gap tolerance increase by slit patterns in pixel electrodes *(Korean)* 121111
LCD, wide-viewing-angle, interdigital electrodes, switching perform. 86829
liq. insulator elec. field vector distrib., three-direction opt. meas. syst. *(Japanese)* 77447
long focus electrostatic objective, electron-opt. props. 72181
long-dist. XLPE cable lines, PD detect. method *(Japanese)* 99375
low-crosstalk Gbit/s four-channel LD array, parallel opt. commun. 74936
LSAW transducer, electrode mass loading and finger resist. 92728
microdeflection LCD modes, eight-division electrodes 104835
micropixel gaseous imaging detector perform. anal. 132348
MLC capacitors, vol.-efficient, elec. props. 80431
mol. scale electronics, crit. nanolithography issues 92236
multivalent cation conducting solid electrolytes for CO_2 gas sens. 97517
muscovite mica electrostatic separation from feldspathic pegmatites 128711
needle/dielec. composite electrode systs., pulse discharge charact. 115235
neuron-type conducting polymer-based network-type device, props. *(Japanese)* 102850
OLED using B-doped diamond electrodes 104985
organic EL devices with organosilane SAM derivatized ITO electrode 116970
ozone generation in dry air using pulsed discharges with/without solid dielec. layer 104261
ozone generator, corona electrode shape/discharge gap spacing effect on conc. *(Korean)* 115278
PANI:HCSA, elec. cond., PVDF/poly trifluoroethylene/PANI electromechanical syst., dielec. props. 125108
paper insulation testing in corona environ. 70434
parallel plate electrode profiles, elec. field distrib. 93962
piezoelec. bimorph, with cut internal electrode, flexural vibrs. 116191
piezoelec. ceramics displacement, bending deform. correction *(Korean)* 121190
plate-type ESP, conducting particle trajectories controllability 128716
polar coord. charge simul. method, GA-based charge arrangement 83132
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
polymer double-channel EO modulators in ATR config. 116822
polymer light-emitting devices, emission color patterning, maskless dye diffusion tech. *(Japanese)* 71566
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. props. 104092
polysilicon capacitive microaccelerometer, unevenly distributed comb electrodes *(Korean)* 132068
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec. props. 103243
powder coating corona guns, free ion conc. reduction 128712
PZT etching in MORI high dens. plasma syst., pyroelec. detector array contact reliab. 103377
PZT films, magnetron sputtering, residual stresses/stress relax., MEMS appl. 127096
QCM selective polypyrrole electrodes, NO_2 & gas flux sensitivity 97440
quartz BAW resonator, electrode config., liq. sens. 92764
resist. steam generator three-phase electrode heating units *(Polish)* 124106
restrike free gas-blast cct. breakers design, capacitance switching 112696
RF-driven ion source in electrostatic accelerator, props. extraction *(Chinese)* 110113
SAW and BAW devices, modeling of third-order effects 92721
SAW duplexer, high power durable electrodes 92700
SAWs in periodic electrode arrays, harmonic admitt. and dispersion eqns., theorem 92724
selective bacteria detect. using dielectrophoretic impedance meas. 132533
self-blast spark gap power syst. lightning protectors *(German)* 133809
silica waveguides, thermally poled, large SHG 127761
single-electrode Mach-Zehnder electrooptic modulator, SSB suppressed-carrier modulation 96698
SMD solder joints for automotive devices, degrad. behavior at high temp., life predict. *(Japanese)* 89851
space charge cloud discharge phenom. 83115
special pot. distrib., electrode config., tensor calculus 72163
SPM based nanolithography, electrodes fab., mask patterning, local oxid. 103511
stack capacitor integrat. with buried O barrier using CMP of noble metals 127027
static surface charges neutralisation using DC corona discharge ionizer 83107
thin films, stoichiometry, interdiffusion, electrode stability, TEM 101415
thin-electrode rapid prod. using single discharge machining *(Japanese)* 134681
three-component capacitive force transducer design, non-std. specimens 97205
toluene decomp. using streamer discharge reactor/catalyst combination 124434
transformer oil elec. breakdown initiation, stochastic regularities 134140
two-electrode SOA, photodetected sig. response, sign reversal 105322
viscous fluid, conductive particle dyn. motion, DC elec. field 67680
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
waste disposal seepage control sheets, damage detect. method *(Japanese)* 67678
water surface discharge, ozone generation, Taylor cone height reduction *(Korean)* 127141
water-quality monitor with ion selective electrodes 120988
wire plate ESP, flue gas flow vel., particle image velocimetry method 83179
xerographic photoreceptor defects, SCL discharge studies 128709
AgPd alloy powders, monodispersed/low-fire, for ultra-thin MLC capacitor electrodes 80427
AgPd:$BaTiO_3$ electrode/Pb-based relaxor ferroceramic cofiring characts. 79440
AlN thin films, growth, character. microwave filter/microsystem appls. 101196
Al_2O_3 porous tape cast substr., humidity sens., electrode geom. 75497
$Al(PO_3)_3$ glass passivated MOS capacitors, metal electrode effects 102785
Au/Pt/Ti opt. module thin-film electrodes, adhesion force meas. *(Japanese)* 82432
$Ba_2Bi_4Ti_5O_{18}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$BaBi_4Ti_4O_{15}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$(Ba_{0.7}Sr_{0.3})TiO_3$ capacitors, RF sputtered, TiN barrier layer effects 101184
$BaSrTiO_3$ thin film MOCVD growth/charactn. for HF devices 90367
$BaSrTiO_3$ thin-films, electrodynamic props., CPW struct. 80159
$BaTiO_3$ added powder, electrode Ni paste props., multilayer capacitors 79428
$BaTiO_3$ high k low loss X7R dielec. aq. suspens. for BME MLC capacitor appls. 115062
electrodes continued
$Bi_4Ti_3O_{12}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104
CO_2 high power lasers, slab waveguide resonator, mode selectivity 105115
CO_2 high-power diffusion-cooled annular lasers, split-electrode config. stu 105111
Cu electrode glow discharge deposition, ferrite ceramic chips 115098
Cu end termination develop. methodology for base metal electrode based M capacitors 115086
Cu end termination electrodes for MLC chip capacitors, metal powder devel 115063
Cu metallization, sub-0.25 μm, seed-layer sputter deposition, line cusp mag tron plasma source 92164
Cu powder, monodispersed/highly cryst., for MLC capacitor electrode ap 115064
Cu termination paste develop. for Ni base metal electrode MLCs 80429
HfO_2 ultra-thin gate dielec. MOSFETs with TaN electrode, nitridation surf prep. 126739
ITO thin film, deposition & charactn., transparent electrode appl. 116560
ITO, work fn. tuning by surface mol. design, OLED appl. 93384
ITO/Ag/ITO low resistivity transparent electrodes for polymer substrs. displ 103219
Ir/TaN/SiO_2 struct., MFMOS one transistor memory, electrode/barrier therm stability 104471
$LaCrO_3$:Ca thin film heaters, fab./eval. *(Japanese)* 78336
$LaNiO_3$(001) bottom electrodes for ferroelec. films, growth, props. 101185
$La_{0.5}Sr_{0.5}CoO_3/Pb_{0.9}La_{0.1}Zr_{0.2}Ti_{0.8}/La_{0.5}Sr_{0.5}CoO_3$ capacitors, O, deficiency, vacan type defects form. 102775
Li-ion rechargeable batt., 18650 size, advanced perform. *(Chinese)* 89069
$LiNbO_3$:Ti TW opt. modulator with phase reversal, freq. response *(Kore* 116801
$LiNbO_3$:Ti opt. modulator, CPW electrode, microwave propag., losses limitat 116819
Mo gate electrode work fn. adjustment for CMOS technol. 127037
NO removal charact. of corona radical shower syst. 122712
Ni microstruct., localized electrochem. deposition, rotor electrode 116086
Ni/$BaSrTiO_3$/Ni/TiN/Si, photoassisted MOCVD growth for DRAM ap 101331
Ni-Cr(Cu) resistors, low value, contact resist. by transm. line model meth *(Japanese)* 91409
NiO electrochromic coatings, counter electrodes, structural and opt. pro 71477
O_2, dissolved, screen-printed amperometric sens., continuously-powered 867
PZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer eff 102774
PZT thin films, MOCVD, MEMS appls. 101348
PZT thin films, MOCVD, lower electrode structs., piezoelec. MEMS ap 127163
PZT/Ir/ZrN struct., heteroepitaxial growth of Ir/ZrN layered electrode hete oepitaxy on (100)Si substr., ferroelec. capacitor 101186
PZT/$PbTiO_3$/TiO_2/Pt, sputter deposition, orient./comp. 101192
PZT/$YBa_2Cu_3O_7$/$SrTiO_3$/MgO/TiN/Si layered film, PLD, microstruct., el props. 104313
$Pb(Zr_{0.52}Ti_{0.48})O_3$ capacitors, catalytic CVD method, SiN_x passiv. films, act. N exposure effects 101335
Pd-Al_2O_3 UV transparent cond. coatings for vidicon tubes, sputtering te 114258
Pt/$SrBi_2Ta_2O_9$/CeO_2/Si capacitors for ferroelec. FET, gate stacks, XRD, ED TEM 104472
Pt-M (M=Rh,Ir), electrode-barrier structs. for high dens. ferroelec. memor 81783
$PtRhO_x$/PtRh/$PtRhO_x$ electrode-barrier struct. for high dens. FRAM 70463
^{222}Rn, α-particle detect., activity anal. 111198
Ru rugged metal electrode, DRAM MIM capacitor 102125
SF_6 cct. breakers, plasma sheath num. modelling 112695
SF_6 particle-contaminated GIS/GITL systs. with dielec. coated electrod 112681
SF_6/paper insulation, PD phenom. *(Korean)* 116188
SF_6-N_2 gas mixture, creeping discharge under neg. μs pulse voltage, barrier sha effects *(Japanese)* 127153
SF_6-N_2 mixtures, nonuniform fields predischarge phenom., lightning impul voltages *(Korean)* 92615
Si cryst. thin-film solar cells prep. using laser crystn. 100086
a-Si:H thin films, VHF-PECVD, U shaped loop antenna electrode 103074
Si-PZT-PZT-Si, aspherical bimorph piezoelec. X-ray optics, design anal. 12180
SiC electrode material for pseudospark switch 88994
SnO_2 nanoporous electrode with soluble perylene deriv./cyanine dyes, wide spe tral photosensit. 123819
SnO_2 sol-gel film microsens., CO response, moisture/electrode effects 97548
SnO_2 thin films, spray pyrolysis at low temp., transparent electrodes 114412
$SrBi_2Ta_2O_9$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orien 104316
$SrRuO_3$/(Ba,Sr)TiO_3/$SrRuO_3$ capacitors, gigabit DRAM, CVD, electro technols. 101329
$SrTiO_3$ single-cryst./thin-films, electrodynamic props., CPW struct. 80159
$SrTiO_3$ thin film electrode interface props., Schottky barriers 104281
Ta capacitor failure modes, fab. technols. 115080
Ta solid capacitor ESR reduction, C/Ag coatings, material/proc. optimisati 80430
$TaSi_xN_y$ gate electrodes for dual gate CMOS devices, elec. charact. 127038
$Ti_{1-x}Al_xN$ barrier layer, narrow reson. profiling, oxid. 104283
TiN top electrode, ALD and CVD, MIS capacitor 80926
n-TiO_2 film electrodes, enhanced photocurrent 71510
TiO_2 nanocrystalline PV cells, charge transport 93366
TiO_2 wet opt. sens. electrode charact. *(Japanese)* 97173
TiO_2 71477
$TiSi_x$/poly-Si/oxide/Si transistor gate struct., memory device appl. 92135
V oxide electrochromic coatings, counter electrodes, structural and opt. prop 71477
W/W_2N/WO-based thin film CVD using volatile liq. precursors 90462
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 7030
W-ZrN-polysilicon gate electrode config., ZrN barrier thermal stabil. 81115
WO_3 electrochromic coatings, counter electrodes, structural and opt. prop 71477
WSi_x metal resistor, MIM capacitor, CMOS technol. 115040
ZnO front electrode, PECVD grown, a-Si pin solar cells 112893
ZrO_2-MgO qualified oxygen conc. cells, coprecipitation method, steelmakin proc. appl. 75737

trodynamics
see also electron beams; electron optics; electron tubes; ion beams; ion optics
2D struct., impedance grid method based algms. constr. for electrodynamic anal. 83464
3D EM field diffr. problem, integral eqn. method 72247
AC levitation/traction systs., fan-type equiv. ccts. 123976
act. semicond. struct., electrodynamics anal. 115283
axisymmetrical periodic electrodynamic structs., reson. effects during excit. by electron current 128696
B00 model coil in ATLAS Magnet Test Facility 71004
bare wire electrodynamic space tether, current-induced mag. field effects 93970
bicone resonator with opt. cryst., electrodynamic charact. investig., R-fn. method 117736
BVP, R-fn. method 117605
cell method, computational aspects 72161
circ. antenna array with helical antennas, anal. 72697
diffr.-coupled open resonators, eigenfrequencies calc. 83490
double spiral-space element electromechanical transducer, robot appls. *(Russian)* 89015
elec. curtain, charged dust particles, electrodynamics, repulsion force 83166
electron accel. concepts based on EM struct. 110079
electron bunches, ultrashort, space-charge effects 110136
electron-beam form., mag. field 3D distrib. effect 72186
EM 3D oscills. in orthogonal branching of two rect. waveguides 80165
EM field struct., first principles 117611
high-temp. supercond., electrodynamics, elec. engng. appls. *(Russian)* 116509
hybrid EM syst., for solid body accel., electroexplosive, electrothermal mechanisms 117637
IM, static/dyn. forces, partial differential energy-bal. eqns. 99659
irregular dispersion anal. of electrodynamic struct. 72211
Josephson jns., inductive cubic network, electrodynamics 104578
large orbit M-type microwave oscillator, theoretical anal. 80592
lower thermos. over Svalbard, ion-drag induced neutral instabil. 120443
mag. field ident. by charged projectiles data 117624
massive conductors, EM forces, fanout equiv. ccts. 112093
multipair bal. cables, double twisted conductors, EM radiation 85456
nanodispersible film materials, microwave radiation absorpt. 80158
Panofsky-Wenzel theorem, generalized, hybrid coupling 117623
planar struct. with arbitrary permitt. distrib., time-domain anal. 83488
RF-meas. transducers, helical sensitive elements with layered filling 109516
RLC ccts., radiative noise, fluct.-dissipation theorem 68549
short-circuited coils with cryoresistive winding, electrodynamic interact. *(Russian)* 102789
single-layer discrete surfaces, electrodynamic props. 105848
slot-waveguide line, complex waves, electrodynamic problems soln., correctness estim. 91184
space-harmonic MM-wave magnetrons with secondary emission cathode, anal. 69456
spatial doube-helix element based electromechanical converters 123578
wave scatt. amplit. by reson. bodies in free space/waveguides, investig. 83210
Nb microstrip resonator, electrodynamical params. meas. 69020
SF_6 cct. breaker, gas discharge, magneto-plasmadynamics 125948

ctroencephalography
see also bioelectric potentials; biomagnetism; brain
3D rem. brain mapping invocation, distributed appl., Java & VRML 88016
3D scalp spline Laplacian mapping from EEG, simul. & expt. 87397
5% electrode syst. for high-resoln. EEG/ERP meas. 87412
acquisition, proc., and knowledge-based diagnostics tools 121957
adaptive freq. decomp. with subsequent ES anal. 132560
adaptive human-machine interface to match human satisfaction *(Japanese)* 87367
alpha activity detect. by fuzzy reasoning 121975
alpha band power changes, unimanual/bimanual seq. movements, motor transits. 110646
alpha EEG onset detect. following eye closure, location-based techs. 110554
alpha power dens./subjective sleepiness, diurnal vars., repeated vigilance tasks 110600
Alzheimer's disease, recurrent neural net-based EEG approach for early recogn. 110642
Alzheimer's disease patients, EEG, mutual inform. anal. 98187
anaesthesia depth monitoring, auditory evoked pot. coherence estim. 87377
anaesthesia syst. design using simul. 76607
anaesthetic depth monitoring, EEG sig., symbolic dyn. 76262
anisotropic conducting media, finite vol. calc. method 132573
anticipatory attent. for upcoming stimulus, event-related desync., EEG/MEG 76268
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
attention-deficit hyperactivity disorder-boys, brain elec. fields changes 110570
attention-deficit/hyperactivity disorder, EEG, age/sex effects 98186
auditory evoked responses recording, PC syst. 76273
auditory middle latency responses, stimulus type/intens. influence 121976
auditory perception, induced electrocorticographic gamma activity 87405
automatic alignment of EEG/MEG and MRI data sets 84199
automatic artifact detect., overlapping windows, state transits. 87452
automatic sleep stage scoring, hybrid ANN & expert syst. 76261
autoregressive models, adaptive, criterion 73602
autoregressive spectral anal. of EEG sigs. by using MLE 132562
beta event-related sync. after tactile finger stimulation *(English)* 87433
β-wave AM, scaling behaviour rel. to alertness 87435
biological feedback sig. pattern multi-param. monitoring 98170
biomedical sig. anal., ICA techs. 132555
biomedical sigs., ICA for automatic noise and interf. cancellation 121929
blood flow vel./background EEG activity, cross-correl. 110491
brain conditions, rapid class. using ANNs 87400
brain map reconstruction by incorporating blind source separation 98173
brain-computer interface, five-classes, inform. transfer rate 122358
brain-computer interfaces, motor imagery control 111185
burst patterns, time-variant nonlin. phase-coupling anal. 110643
cardiovascular syst. control during sleep, lin. feedback model anal. 87394
chaos, epilepsy, depression, exercise and lateralisation 132574
chaotic tech. appl. to EEG anal. 87430
class., use as biometric 132556
cognitive brain elec. activity recording paradigms 110587
cognitive psychology, EEG data class., subspace projection techs. 98198
comodulation, QEEG anal. metric, CNS struct./functional disorders assess. 87451

electroencephalography continued
contingent neg. var., α-band event-related desynchronisation, go/no-go task 110580
cortical imaging, finite-element-based cortex pot. estim. 76237
cortical rhythms related to voluntary movements, EEG/fMR integrat. 76271
cortical source imaging from EEG, spatial filters, simul. study 98208
delta wave activity ultradian oscills./heart rate variability during sleep 110599
dementia, EEG abnormalities reflecting parietal lobe syndrome 110601
diabetic patients, brainstem auditory-evoked pot. exams. 87358
dipole source localisation, neural network/num. anal. 121969
dipole source localisation, realistic head model, electrode location errors 121947
dipoles spatial localisation in MRI 98482
driver drowsiness detect., physiological measuring syst. *(Japanese)* 132580
dyn. imaging using ICA, blind source separation, review 110617
dyslexic/normal children, alpha/beta band power changes 110572
EEG sig. separation using adaptive-geometric methods 110650
EEG sigs., cognitive task prediction using parametric spectral anal. 110634
EEG-/MEG-data, spatio-temporal current dens. reconstruction 76324
EM source anal., EEG/MEG, parametric noise covariance model 76298
Eng. past-tense prod., double-dissoc., event-related pots. 132586
epilepsy, brain elec. activity anal. using Boolean CNN 98215
epilepsy diagnosis, neural net approach using lateralized bursts of theta EEGs 98171
epileptic brain activity detect. and localization, dipole source anal. 121922
epileptic EEG, adaptive separation of background activity and transient phenom. using math. morph. and wavelet transforms 76269
epileptic EEG spikes detect., pseudo Wigner distrib. method *(Chinese)* 110552
epileptic seizure onset, sphenoidal electrode site recording 76246
epileptic seizure transit., optim. 76309
epileptic seizures, EEG sig. complexity 76247
epileptic seizures, foramen ovale/scalp EEG, simulated neuronal cell models 110602
epileptic sigs., interdependencies interp., macroscopic physiological model 110573
epileptiform activity detect., median filter, expert rule base 76263
epileptiform discharge, ANN *(Chinese)* 110551
epileptiform EEG, seizure activity isolation, ICA & dyn. embedding 76265
event-related desync./sync. during memory task, test-retest consistency 87441
event-related EEG (de)sync., time-freq. microstruct. 87417
event-related pots., between-group differences, stat. detect. 110603
event-related pots. for single trial anal., stimulus generation 98202
evoked pot. enhancement using neurophysiologically-based model 121916
evoked pots. latency change estim., algms. perform. comparison 76256
fast wavelet transform-based EEG anal. 132561
freq. and phase coupling during human inform. proc. 87389
functional brain imaging based on ERD/ERS 76302
guinea pigs, freely moving, simple EEG meas. method 110582
hand, imagined movements, recogn. from EEG, surface Laplacian/lin. classifiers 110629
head model, EEG/MEG appls. *(Chinese)* 110608
head models with homog./inhomog. cond., pseudo-cond. values 87384
head tissue, regional cond. estim., improved EEG anal. 76299
heartbeat-evoked brain pot., diabetic neuropathy patients appl. 87409
high-resoln. algm., finite resist. network model *(Chinese)* 98240
high-resoln. EEG, realistic geom. spline Laplacian estim. tech. 98189
high-resoln. imaging, equiv. source techs. 110618
historical develop., equipt., tech. & pitfalls 76267
human workload class., EEG sig. anal. 87381
ICA of EEG data shows event-related changes in oscillatory brain activity 121930
ICA of EEG sigs. for brain tumor ident. 121928
ictal EEG patterns, space-oriented segmentation/3D source reconstruction 87411
imaginary motor movement EEG class., accumulative-autocorrelation-pulse 98184
imaging, equiv. dipole layer, parametric projection filter 76236
instantaneous multivariate EEG coherence anal., adaptive autoregressive models 87414
intermittent mag. field effects on pers. with elec. hypersensitivity 133081
intersection between EEGs, generalised dimens. 121956
intraoperative EEG monitoring, educ. simul., model param. 110545
intraoperative motor evoked pots., transcranial elec. stimulation, 2 anaesthetic regimens 110607
inverse EEG & MEG problem soln. using elec. impedance tomography 87431
inverse problem, spatial-temporal Bayesian inference 110667
lateralised event-related brain pots., attention/movement-related activity overlap 76285
licking behaviour detect. during brain electrophysiological sigs. recording 98230
macrostructural charactn., nonparametric change point segmentation, sleep anal. 87371
medium rate transits., segmentation methods accuracy comparison 98252
MEG/EEG source imaging, ill-posed problem, multiresoln. approach 121960
mental activity EEG changes discrim., nonlin. measures 76264
model-based EEG/MEG, MRI brain segmentation algm. appl. 132713
mu rhythm charactn. during REM sleep 76288
multi-sources, multi-dimens. delay-correl. MUSIC *(Chinese)* 87436
multichannel EEG/event-related pot. recordings, electrolyte bridges detect. 76290
multichannel match & mismatch evoked pots., robust class. 76259
multimodality registration, EEG/MEG and MRI data sets, automatic alignment 121980
multiple microelectrode-recording syst. for human intracortical appls. 87370
narcolepsy patients, mobile phone EM field, visual event related pot. effects 133084
neocortical interacts., stat. mechs., react. times, EEG correls. 98213
nonlin. dyn. anal. in schizophrenia, embedding dimens. 87446
normal child develop., EEG age-related changes & sex differences 87442
ocular artifacts, EEG, lateralized broadband power 76245
olfactory event-related pots. in patients with brain tumours 121912
outlier detect. to identify artefacts in EEG sigs. 98212
pain, brain pot. maps, KLT anal. 98210
paragraphs auditory memory, electrophysiology, projection/activation theory of mind 87453
paralysed patients, EEG-based commun., self-initiation 76717
paroxysmal bi-parietal activity, sleep, stroboscopic light stimulation 98180
partial epileptic EEG, brain cortex inform. transm. *(Chinese)* 110567
pattern recogn. using LVQ neural networks 121955
physiological data, efficient transm. for rem. display, lifting scheme appl. 88010
premovement bereitschaftspotential, steep early neg. slopes 121940
protein kinase C role in biochem. pathways of classical conditioning 87427

electroencephalography continued
psychomotor EEG variant of Gibbs, assoc. with underlying struct. pathology 87410
quantitat. anal., virtual training simulator-designer for tutoring students and doctors 89656
quantitat. stereoelectroencephalographic inform., 3D visualisation eval. 98209
rank-adaptive sig. proc., subspace based biological sig. anal. 110621
ref. choice and related methodology issues, theoretical implications 87373
REM sleep, neural net class., spectral/nonlin. meas. 132584
REM/nonREM EEG, computer anal. in young adult/elderly subjs. 121913
respiratory movement/EEG, correl. dimens. and lin. anal. indices 110568
rhythmic pattern categorization, PLL approach 76257
saccade related EEG component, adaptive nonlin. PCA 87432
scalp EEG epileptic discharges, dipole modelling, intracerebral fields correl. 76278
scalp electrode impedance, infection risk, and EEG data quality 76289
scalp pot. fast comput., EEG forward problem, BP ANN 87398
scalp pots., stimulation near subthalamic nucleus, Parkinson's disease appl. 76279
schizophrenic patients, EEG nonlin. detect. 110579
schizophrenics, multi-channel EEG anal. during working-memory tasks 121972
senile dementia music therapy, familiar songs method, EEG 76605
sens. stimulation, coherence between random/periodic sigs. 87376
sig., epileptiform waves, automatic detect. syst. *(Chinese)* 110550
sig. nonlin. dyn., mag. field influence on brain 98245
simultaneous MEG/EEG source anal., covariance matrix derivation 98258
single trial EEG data, online class., HMM appl. 110596
sleep EEG, mobile phone EM field exposure effect 76721
sleep EEG anal., time-freq. charact. map appl. *(Chinese)* 87447
sleep EEG topography, age-depend. change 76254
sleep modelling, EOG and EEG sig. based Gaussian mixture model 121921
sleep onset, event-related pots. mismatch negativity vanishing pt. 87440
sleep spindle characts., healthy subjs., different age groups 76287
sleep spindle detect., fuzzy reasoning and autoassociative MLP methods 121924
sleep-wake estim., wrist movement, actigraphic modalities 87415
small animals, EEG recordings, ECG interf. removal 121948
source estim., dipole distrib. model 76260
source reconstruction, BEM vol. conductor models 110644
spatial resoln. of scalp EEG 87428
spatio-temporal patterns, synergetic anal., Alzheimer's disease appl. 87434
spectra, photoinduced reson. phenom. 87365
spikes/background separation, independent component anal., dipole modelling/intracranial recording 76277
spontaneous brain activity localisation, large data sets, efficient anal. 132564
steady-state responses, weighted averaging 76291
synchronism between cortical regions, stat. tech. for meas. 121964
telemetry & telemonitoring syst. develop., TDM technol. *(Chinese)* 88023
temporal lobe epilepsy, interictal epileptiform activity, cortical current dens. reconstruction 121945
temporal lobe foci lateralisation, depth vs. subdural electrodes 98188
theta band power changes in normal/dyslexic children 110571
tomography, alg. reconstruction techs., Tikhonov regularisation 98207
transabdominal foetal EEG, noninvasive extraction, interf. cancellation algm. 98254
traumatic brain injury, EEG power spectrum, MRI T_2 relax. time 121944
trends monitoring in cardiac surgery/postoperative care 98593
upper limb torque generation, cortical organization, EEG, MRI 98214
vascular cerebral lesions, multichannel derived median nerve SEP vs. EEG 110631
word/fig. categorisation, EEG changes 121910

electroforming
see also LIGA
folded E-plane filters, mass-producible cross-coupled designs 102554
graphite masks fabr. for deep/ultra-deep X-ray lithog. 81146
lin. microactuator, var. reluctance stepping motor, thin film. technol. 78110
microstruct. plastic optics for display appls. 109860
miniaturized objective lens fab. for photoelectron emission microscope 71372
nanofabrication using hot embossing lithog. and electroforming 115781
SU-8 proc. on substrs., wettability, adhesion, surface tension 102965
Al foil electrolytic capacitors, liq. contacting forming syst. *(English)* 91422
Pb-acid batt. grids manufacture by electroforming 89123

electrogasdynamics *see electrohydrodynamics*

electrogyration *see electro-optical effects; optical rotation*

electrohydraulic control equipment
brake syst., reliab./safety enhancement, simul. 134598
chopper-driven mag. actuator model 116499
hydroelectric power plant, small, electronic control module 133875
parallel piezohydraulic micromanipulator, 3D posn. control, visual servoing appl. 81749
vehicle braking syst. develop. 134575
vehicle electronics, safety, reliab., conf., Coventry, UK (June 2001) 124228

electrohydrodynamics
act. microfluidic mixer, microparticle-liq. mixing 92497
aerosol particles, unipolar charging in alternating elec. field 83137
air wave type EHD pump, EHD induced fluid flow, elec. current cond. 116139
deformed water cone tip, neg. corona discharge, DC field 83161
electro-osmosis anal. method using FET models 83087
electrostatic sprayer, aerosol space charge generation, drops, EHD instabil. 83168
Electrostatics 2001, conf., Koscielisko-Zakopane, Poland (June 2001) 78467
ESP fine particles transport, electroaerodynamically induced secondary flow 83175
highly-conductive viscous liq. electrohydrodynamic spraying 83088
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
III-V devices, electro-fluidic assembly tech. on Si 125941
lin. EHD charged particle source, elec. space propulsion 110223
single water droplet on hydrophobic sheet, reson. under AC elec. field 127251
stratified liq./vap. medium electrohydrodynamic induction pumping 93967
viscous fluid, conductive particle dyn. motion, DC elec. field 67680
TiO_2 film coated microchannels, electroosmotic flow, act. light control 70334

electrojets
equatorial electrojet, Trivandrum HF Doppler radar obs. 98976
equatorial strength, VHF scintill. over India, geomag. activity control 117684

electroless deposited coatings
Damascene feature fill, electroless and electrolytic seed repair effects 126445
flip chip under bump metallization systs. on Cu pads 113635
Ag-W films, electroless-deposited, microelectronics appl. 79385
Cu electroless deposition, Pt-Ag/Al_2O_3 substr., IC packaging 124325
Cu post-processed inductors with appl. to 2 GHz integrated VCO 69240

electroless deposited coatings continued
Cu/Ni/surface-modified poly(tetrafluoroethylene) films, electroless plating 92
Ni, electroless, wettability in under bump metall. with Pb free solder 67539
Ni/Au electroless plating, flip-chip BGA, solder joint reliab. 113723
Ni/Au surface finish, PBGA package 113666
Ni/SnBi solder interfacial react., annealing, microstruct. 101470
Ni-P electroless deposit on fibre opt. corros. sens. 75569
Ni-P(B) deposits, surface props. & solderability, electroless plating 78599
Pb-free PCB solderability preservative coatings 69318
Si, porous, fluoroboric acid stain etched, PV props. 97265

electroless deposition
Advanced DV-MULTI build-up packaging substr., proc./struct. 124343
ceramic/epoxy composite for integral capacitors, particle packing/Cu p ing/permitt. 80441
dye-doped poly(N-vinylcarbazole) film/ITO/Ag electroluminesc. device, all- fab. 71565
electronic polymers, electrostatically-generated nanofibers 68438
embedded pass. component integrat. for PWB 102827
flexible polymer LED mfg., cond. lithog. film technol. 121067
flip chip under bump metailization systs. on Cu pads 113635
fly-ash cenosphere particles, electroless Cu coating mechanism 125012
polypyrrole films, Cu/Pd electroless plating metallization, XPS obs. 114392
printable catalyst for electroless deposition in flex-cct./PCB appls. 102835
PWB surface finish proc. develop. for enhanced solder joint strength/reli 69316
solar cell-powered high-efficiency water electrolysis R&D *(Japanese)* 1343
Ag electroless deposition in Si struct. 90500
Ag nanoscopic tubes in polycarbonate particle track-etched membranes po electroless deposition 125031
Ag-W films, electroless prep., mech./elec./opt. props. 68388
Au electroless plating using electrochem. QCM, mechanism 101402
Au nanoscopic tubes in polycarbonate particle track-etched membranes po electroless deposition 125031
Au neutral electroless PCB surface finishes, wire bondability/solderabi 102834
Co, highly ordered nanoporous membranes, two-step replication prep. 1013
Co-W-P thin films, electroless deposition for ULSI, MEMS appls. 90509
Cu ULSI metallization barrier layers, review 69930
Cu electroless deposition for ULSI 90501
Cu electroless deposition on Ta/SiO_2/Si substrs., displacement activation 1014
Cu, electroless deposition, quartz cryst. microbalance study 68345
Cu, electroless seed layers for sub-0.1 μm interconnects, charactn. 126444
Cu film electroless deposition on Si:H(111), spectrosc. studies 101403
Cu films, acid-based electroless deposition, kinetics & microstruct. 90518
Cu films, acid-based electroless deposition, react. mechanisms 90517
Cu spontaneous nonaqueous electrochem. deposition on Al and AlCu 68322
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bond 124376
Ni electroless plating for MEMS appl. 114387
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
Pd spontaneous nonaqueous electrochem. deposition on Al and AlCu 68325
RuO_2/C composite supercapacitors, synthesis, props. 100232
Si, porous, fluoroboric acid stain etched, PV props. 97265
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. test 113702

electroluminescence
see also phosphors
alkylthiophene copolymers, reversible thermochromism, PL/EL/vis. spec 127917
anthracene-based cpds., pulsed-laser-depos., OLED appl. 127979
anthracene-based rotaxanes, switchable supermolecular, excimer-like electrolu 69613
5-(9-anthryl)-1,3-diphenyl-1H-pyrazol, opt. props., LED appl. 82403
benzothiazole derivative, blue-emitting, organic EL devices appl. 104987
bilayer organic LEDs, EL analytic model 93430
carbazole group modified polymers for LEDs 71592
carbazole-containing PPV, synthesis, EL devices appl. 105020
2-(9-carbazolyl)ethyl methacrylate/3-(2-methacryloylethoxycarbonyl) diethylocoumarine electrolum. diodes 128000
CMOS technol., hot carrier emission, timing probe 127059
conjug. dendrimer films, charge transport, electrolum. appls. 127993
conjug. dendrimers, struct.-property rels., electrolum., LED appl. 105021
conjug. polymer, EL liq. crysts., OLED appl. 127980
conjug. polymer blends based high perform. blue LEDs 127998
crosslinked reactive mesogens and photochem. alignment for organic polari EL 127954
D-CN red organic electroluminesc. dye, design, synthesis, device appl. 116
DB-PPV/Alq_3 multilayer LEDs, luminous efficiency, small mol. electron tra port layer effects 127992
dendrimers, optoelectronic props., OLED appl. 127985
diamond, carriers impact excitation under extremely high elec. fields 10297
diene-ester/nematic LC photopolymerised films, prep., electrolum./photol props. 116924
4,4′-bis(2,2′-diphenyl vinyl)-1,1′-biphenyl multilayer blue OLEDs, ns EL spi 105022
disordered organic LEDs, charge carrier transport/recomb. 105014
distyrylstilbenes bearing electron affinitive dendrons, blue-emitting, synt sis/charact. 105018
doped polymer LED, phosphoresc. origs. 82393
double-layer organic thin film electrolum. devices, red light emission props. a 82367
DPVBi/AlO_x/Al-based OLEDs, nanosec. electrolum. spikes at voltage turn 127996
EL polymers, electronic props. chain length effects 71529
emergency luminaries power supply *(Chinese)* 100321
energy transfer from singlet to triplet excited states in organic LED 12609
EPAR-Me rotaxane, anthracene-based supermolecular thin film systs., opt. electrolum. props. 93344
fluorene-based star-shaped mols., prep., struct., opt. props. 82320
fluorinated organometallic iridium cpds., efficient EL materials 93339
fluorine-containing polyimide in electrolum. device hole-transporting la 104988
green-blue-emitting 2,5-bis{4-[2-naphthyl(phenyl)amino]phenyl}thiophene organic EL devices 104971
heterostruct. organic LEDs, transient/steady-state behavior 128020
N-hexylcarbazole-co-3,4-ethylenedioxythiophene copolymers, opt./electroch props. 92926
hyperbranched conductive polymers containing triphenylamine, prep. co 125107

troluminescence continued
insulating polymers, AC/DC electrolum., elec. ageing implications 92671
ionic emissive dyes doped in poly(vinylcarbazole), EL 116981
LDPE, electrode-insulator interface, accumulated space charges, EL meas. 127245
liq. cryst. semiconds. as opto-electronic imaging materials *(Japanese)* 82364
liq.-cryst. poly(p-phenylene vinylene) derivatives, props./EL device appl. *(Japanese)* 71525
luminesc. materials for displays, overview, future prospects 109863
luminesc. mechanism of organic/inorganic EL, OLED/LED *(Chinese)* 117003
MEH-PPV polymer LEDs, electron-injecting/hole blocking layer 105015
MEH-PPV/organo-clay nanocomposite LED, enhanced quantum efficiency 127959
MEH-PPV/PEO:Li-salt blend light emitting electrochem. cells charactn. 134342
methacrylate/nematic LC photopolymerised films, prep., electrolum./photolum. props. 116924
mol. organic LEDs, guest-host act. layer, enhancing device perform. 71594
MOS tunneling diode, carrier lifetime meas. from EL temporal response 126627
multilayer OLED, Alq_3-based, charact. 71619
multilayer OLED, Ir complex doped, emitting efficiency optimisation 71620
multilayer organic LEDs, transient EL 69620
OLED, EL enhancement 116984
OLED, mol. doped polymer, injection controlled EL 105006
OLED, mol. doped polymer, injection controlled EL 105007
OLED, mol. materials, elec. transport 117006
OLED, transient EL 104986
OLED, triplet excitons, highly efficient phosphoresc. 91705
OLED, voltage depend. capacitances 104974
OLED, white light exciplex emission using tris-(8-hydroxyquinoline)aluminum 82375
OLED integrated on Si substr., 1.5 μm EL 93436
organic EL, influence of sensitizer, LED appl. 71610
organic EL device, exciplex light emission 126097
organic EL device prep. using Sr electron injection layer *(Japanese)* 71571
organic EL device with Ru complex layer 104982
organic EL LCD technol. 71430
organic EL material, electronic excitation energy transfer 104907
organic EL materials/devices, symp., Hong Kong (Jul. 2000) 100421
organic EL thin film fab., vac. deposition *(Japanese)* 79237
organic hetero-layer LEDs, interfacial charges, C-V meas. 69615
organic hole transport materials, trap engng. 69567
organic LED, charge injection props. 105019
organic LED, charge transport/light-emission, intermolecular interacts. effect 93419
organic LED, dye doped, EL 116997
organic LED, EL/PL perform. rel. to deposition method 127988
organic LED, STM-excited EL and spectrosc. 82386
organic LED optim., IBAD procs. and optoelectronic props. 128006
organic LEDs, luminous efficiency improvements by carrier trapping dopants 105003
organic materials for OLED device fab., situ purification 116912
organic samples, EL, time resolved PL 93388
organic solids, EL, charge recomb. mechanisms 71583
organic thin solid films for LEDs, photophysical studies 104906
oxadiazole-containing phenylene vinylene ether-linkage copolymer, white light electrolum. 93334
oxidase-based fibre-optic biosensors, luminol electrochemiluminescence 97407
phosphors, deterioration mechanism *(Chinese)* 71540
POFB-MEH-PPV, blue light-emitting polymers synthesis, luminesc. props. 127981
POFB-PF, blue light-emitting polymers synthesis, luminesc. props. 127981
POFB-PK, blue light-emitting polymers synthesis, luminesc. props. 127981
poly(1,3,4-oxadiazole) based LED, EL, vap. deposition polymerization 127989
poly(2,2′-diphenylbiphenyl-4,4′-ylenevinylene-2″, 5″-bis(trimethylsilyl)-para-phenylenevinylene), EL/PL charact. 104910
poly(2-methoxy-5-dodecyloxy-p-phenylene vinylene) EL device, photooxidation 116966
poly(3, 6-N-2-ethylhexyl carbazolyl cyanotere-phthalidene), LB films, opt. props. 121082
poly(7-phenylene vinylene) copolymers based light-emitting electrochem. cells 71574
poly(N-vinyl carbazole) film:ammonium salt, enhanced electron injection & EL 127925
poly(N-vinylcarbazole), film, evap. deposition for LED struct. 68212
poly(N-vinylcarbazole)/3-(-2-methacrylate-ethoxy)carbonyl dimethylocoumarine LEDs, electrolum. 127999
poly(N-vinylcarbazole)/poly(4,4′-dialkyl-2,2′-bithiophene) LEDs, electrolum. 71593
poly(p-phenylene vinylene):$InCl_3$, opt. props., photo-/electrolum., dopant effects 69618
poly(p-phenylene vinylene) copolymers, synthesis, LED appl. 68439
poly(p-phenylene vinylene) LED, enhanced carrier mobility, perform. 71613
poly(phenylene pyridine) deriv. blue LED, photoluminesc. spectral narrowing 93416
polybithiophene film LEDs, electropolymerization, EL props. 93428
polydiacetylene-based LEDs, bipolar charge transport, mesoscopic model 71618
polyethylene,cross-linked, charge distrib., electrolum. in dc field 127240
polyfluorene derivatives, electrolum., organic tunable electrolum. diodes 71612
polyfluorene pulse driven small area LED, enhanced perf. 93406
polymer film spin coating for LED displays, proc. optimisation anal. 125062
polymer LED, metal fluoride/Al bilayer cathodes, efficiency 93408
polymer LED, singlet/triplet energy transfer to mol. dopants 93420
polymer LEDs, perform. improvement using polymer solid solns. 93409
polymer LEDs with LiF/Ca/Al cathodes, blue emission, efficient electron injection 93405
polymer/organo-clay EL device, carrier mobility 116965
polynaphthalimide, new polymer for organic EL devices 71572
polyoxadiazole derivatives based OLEDs 71615
polystyrene/ether-PPV/phenylethynyl anthracene single-layer LED, voltage-depend. EL 82391
polythiophene derivative LED with nano-sized electrode, modified SNOM setup 116980
porphyrin derivative LB film based LED, elec. field redistribution, EL/TOF study 127990
PPV LEDs, electron/hole traps, charge based DLTS anal. 127975
PPV-based film synthesis, charactn. and LED appls. 127994
PPV-based self-assembled multilayer microring LED structs., fabr. and charactn. 127960
PPV-based stat. copolymer with glyme-like side groups, luminesc. props. 93415

electroluminescence continued
PVK-TPA-MEHPPV copolymers, electroluminesc. enhancement, OLED appl. 116917
red light organic emitting diode, overview *(Chinese)* 71597
p-sexiphenyl, enhanced electroluminesc., OLED appl. 116983
silent discharge prod. by piezoelec. transformer in N_2, light emission 125949
single-layer polymer LED, emission zone 82388
star-shaped organic light emitting materials synth./charact. 127982
1,3,5-tris-styryl-benzene cpds. synthesis, tunable photo-/electrolum. props. 126098
substituted thiophene oligomer, photoluminesc./electroluminesc., LED appl. 93417
1,3,4-thiadiazole ring liq. cryst. quaterphenyl analogue, PL/EL 92945
thiophene vynilic derivatives, polymerisation, OLED appl. 69619
thiophene-based materials, photo and EL, chem./thermal stabil. 92934
triphenylamine polymers, ethynyl/aromatic moieties, synthesis & props. 90569
tris(8-hydroxyquinoline)aluminium derivates, LED, blue/yellow emission 117000
tris-(8-hydroxy) quinoline aluminum (Alq_3) emissive layer LED, EL temp. depend. 71591
tris-(8-hydroxy) quinoline aluminum LED, quantum efficiency, temp./field depend. 71609
two-organic-layer interface recomb., electron/hole injection effects 103087
white illum. source with inorganic LED and phosphors *(Chinese)* 82376
ytterbium tris(8-hydroxyquinoline), OLED, EL 117008
Al complex, $Alq(Clq)_2$ with mixed ligands, EL behaviors 127984
Al complex with substituted 8-quinolinolate, luminesc. materials synth./charact. 127983
Al/a-Si:H,Er/Si/Al heterostruct., high-intens. electroluminesc. 116910
AlGaAs/GaAs multiperiod quantum-cascade struct., THz electroluminesc. 126145
AlGaInP/AlInP LED, fab. & perform. 117277
AlGaN MOCVD selective growth, LD struct. appl. 79328
AlGaN-based SQW LED, mW operation in UV region 82374
AlInGaN/AlInGaN MQW, pulsed ALE, LED appl. 124871
AlInGaN/InGaN MQW vert. conducting LEDs on SiC, quantum efficiency 82423
AlN:Er film, sputter deposited, photo-/cathodo-/electrolum. 91664
Au/Al_2O_3/Al MIM tunnel jns., light emission spectra *(Chinese)* 82317
Au/Si-rich SiO_2:Si(Ge)(Ar)/p-Si diodes, electrolum., ion implant. effects 128013
Au/SiO_2/Si MIS tunnel jn., neg. resist., light emission *(Chinese)* 115448
Au/SiO_2/Si MIS tunnel jns., light emission spectra *(Chinese)* 82317
Au/SiO_2/amorph. Si/SiO_2 superlattice/p-Si LEDs, electroluminesc. 71585
$BaAl_2S_4$:Eu, electrolum. films, blue emitting, at. comp., struct. 71530
C nanotube composite electron transport layer for M3EH-PPV based LED, EL/brightness 127991
C nanotube composite, electron-transport layer for organic LED 93412
a-C/a-C:H multilayers on Si, photodiode effects, EL obs. 82352
Ca cathode, controlled oxid. during growth, polymeric LED appl. 127987
CaS DCEL powder, copper-coating, fire atom absorpt. spectrosc. method *(Chinese)* 71539
CdSe QD, elec. pumped lasing 117175
Cu stressed damascene interconnection, dielec. breakdown, EL obs. 81110
Er,O-doped Si layered struct. 1.54 μm light emitting devices, MBE grown 93393
Eu complex-based LED, EL relax. behaviour anal. 128004
Eu-complex, soluble, pure red-emitting organic EL devices appl., triplet excited state 126095
Eu$(DBM)_2$(AA)phen emitting layer in organic electrolum. thin film devices *(Chinese)* 103088
β-$FeSi_2$ ion beam synthesised light emitting devices, EL 93380
β-$FeSi_2$/Si LED, ion beam synthesis, elec., electronic, opt. charact. 82412
GaAs based LD struct. with InAs QD, electroluminesc. 128323
GaAs:Si/InGaAs/AlGaAs forward-biased Schottky diode, EL obs. 128001
GaAs/AlGaAs V-groove quantum wire LED, narrow linewidth excitonic emission 93394
GaAs/AlGaAs VCSEL, laser pattern & carrier distrib., microprobe EL 71841
GaAs/AlGaAs periodic superlattice struct., quantum cascade devices, hot electron distrib. 93637
GaAs/InGaAs/AlGaAs δ-doped heterostruct., EL from forward-biased Schottky diode 82316
GaAs-based microcavity LED with InAs/GaInAs QD 117011
GaAsP/AlGaAs LD bars, polaris.-resolved EL, mounting stress 71846
GaAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
GaInN, MQW, LED, MOCVD, PL 82427
GaMnAs/GaAs/InGaAs, p-n jn. LEDs, electrolum., I-V charact. 82384
GaN homo-jn. LEDs, MOCVD, multiple-pair buffer layer 71601
GaN surfaces/interfaces, low energy electron-excited nano-luminesc. spectr. 91662
GaN:Er films, PL/EL vis./IR obs., precip. 93340
GaN:RE full color thin film electrolum. phosphor syst., multiple color capability 69530
GaN(/InGaN) LEDs, temp. depend. EL 71600
n-GaN/InGaN MQW/p-AlGaN/p-GaN hexagonal microprism, selective area MOVPE, EL 82207
GaN/InGaN multilayer EL, GaN buffer growth conditions 80890
GaN-based LEDs, spectrally resolved electrolum. microscopy and μ-electrolum. investig. 104995
Ga_2O_3:Mn thin films, TFEL devices, sol gel proc., dip coating tech. 101409
$Gd_3Ga_5O_{12}$:Ag phosphor prep. and electrolum. charact. *(Chinese)* 116930
ITO/CuPc/CBP/Bu-PBD/CsF/Al OLED, combinat. fab. 127966
ITO/MEH-PPV/Alq_3/Al monolayer/bilayer LEDs, transient electroluminesc. 71596
InAlAs/AlGaAs, self-assembled QD, luminesc., struct., growth temp. 90339
InAlAs/InGaAs/AlGaInAs/InGaAs/InP/InAlAs HFET, low temp. impact ioniz., EL 70187
InAs QD laser, oscillatory charact. temp. 105338
InAs QD with strain reducing layer, improved electrolum. 117010
InAs self-assembled QDs, struct./electrooptical charact., laser/LED appl. 91839
InAs/GaAs QD laser, dark pulse form. after nonreson. opt. pulse injection 93716
InAs/GaAs self-organized QD, excited-state lasing *(Chinese)* 105265
InAs/GaSb/AlSb intersubband light-emitting struct., emission wavelength control 82365
InAs/$InAs_xSb_{1-x}$, mid-IR LEDs, MBE growth 101266
InAsSb/InAsSbP double heterostruct., LED, electrolum. 82392
$In_{0.53}Ga_{0.47}As/GaAs_{0.5}Sb_{0.5}$ type II MQW diodes, electrolum. 105005
InGaN SQ wells, amber LED, EL/PV spectra, PL 82407
InGaN SQW blue/green LED, current-modulated electrolum. spectr. 104991
InGaN green LEDs, MOVPE growth on Si(111), charactn. 105002
InGaN green SQW LEDs on Si(111) by MOVPE 93442
InGaN, time-resolved electroluminesc., exciton recomb., LED meas. 82318

electroluminescence continued
InGaN/GaN, MOCVD growth, materials/devices, PL, EL, reviews 79304
InGaN/GaN, QDs, QWs, MBE, UV to red light emission 90334
InGaN/GaN SQW struct., green LED *(Chinese)* 93395
InGaN/GaN based LEDs/MQW LD, disloc., external quantum efficiency 93404
InGaN/GaN, blue LED, MOCVD on Si substr., AlAs seed layer 82422
InGaN/GaN blue LEDs, MOVPE, EL & PL spectra 82378
InGaN/GaN:Mg blue LEDs, MBE, characts. 71602
InGaN/SiC QW LEDs, high-brightness, growth mode, strain depend. 104998
InGaN-GaN(AlInGaN) multiquantum-well LEDs, opt. charact. 71603
InGaN-based white LED lighting, high-efficiency, illum. characts 89441
InSb multielement IR sources with alternating contrast 117005
InSnO thin films for OLED, morph., elec. props. 109873
Pt porphyrin-based conjug. dendrimer LED, electrophosphorescence control 128010
Si MOS tunnel diode, hot electron luminesc. 103207
Si MOS tunneling diodes, band-edge electroluminesc. model 93411
Si bandgap energy EL, MOS struct. EL 71590
p-Si based LED, EL, operation mechanisms 93433
Si based luminesc. material, form. mechanism using photochem. etching method 69862
Si microcavity light emitting device 93392
a-Si oxide films, Al doped, RT vis. EL 82366
Si p-i-n struct., time depend. RT EL 105016
Si p-n jns., electrolum., avalanche breakdown condition 103111
Si porous LED by std. BCD technol., yellow-orange EL 93432
Si, porous, large-area LED, double-layer metallization 128012
Si:B RT LED, ULSI compatability 71611
Si:Er, nanocomposites, IR LEDs/microcavities 71598
Si:Li,Er-based IR electrolum. devices, elec. field-induced fab. 71564
Si:O,Er MBE-grown films, electron and hole impact excitation 71520
Si/SiGe/Si:Er,O HBT light emitting devices, 1.54 μm light emission 71567
$(Si/SiO_2)_n$ multilayers and microcavities, LED appls. 93431
Si/SiO_2/Au struct., EL, RTA 71521
p-Si/β-$FeSi_2$ particles/n-Si LED, light emission, Si growth temp. effects 116996
SiC MOSFETs, 4H/6H, interface traps, light emission obs. 70097
β-SiC film, porous, electrolum. *(Chinese)* 81091
$p^+/n/n^+$ SiC:B struct., EL, opt. emission microscopy 69639
$Si_{1-y}C_y$:Er MBE-grown films, electron and hole impact excitation 71520
$Si_{1-x}Ge_x$ act. layer, Er/O-doped, MBE, LED 93434
SiO_2 on 6H-SiC, ion beam induced charge gate rupture 115805
SiO_2:Ag(Cu)(Au)(Er), opt. response, ion implanted nanoparticles, review 116552
SiO_2:Er films, Si nanoparticles, PL/EL enhancement 82319
SiO_2:Ge/Si integrated Si-based optocoupler, efficient blue light emission 93389
SiO_2:RE in MOS diodes, efficient EL 71599
SiO_xN_y, low stress films, sputtering type ECR plasma deposition, charactn. 124812
p-$SrCu_2O_2$/n-ZnO UV-emitting diodes, fab./charactn. 71588
SrS-based ACTFEL devices, electrolum. thermal quenching study 104977
Tb pyrazolone complex LED, efficient single layer operation 128017
TlInGaAs/InP DH LEDs, gas source MBE growth, temp. stable wavelength 116995
TlInGaAs/InP DH struct., GSMBE growth, WDM syst. appls. 101239
Tm complex based IR organic EL device. emission spectrum *(Chinese)* 71526
Y_2O_3-GeO_2:Mn thin film phosphor, TFEL device appl. 116927
Yb^{3+} complex LED, IR EL 93402
Zn complex with substituted 8-quinolinolate, luminesc. materials synth./charact. 127983
ZnCdMgSe/InP QW, vis. LED, DBR 103135
ZnO:Zn thin film, UV/blue luminesc., emission spectra 116932
ZnO/GaN:Mg heterostruct., edge UV luminesc., N_2 plasma annealing effects 91744
ZnS nanoparticle-doped PVCz electrolum. devices, electrolum. props. 109871
ZnS:Ag,Al phosphors in FED, dead layer, TEM anal. 104915
ZnS:Cu,Cl electrolum. phosphor, $TiO_x(SiO_x)$ film light emission life-span charact. 104939
ZnS:Er EL displays, electron energy spatial distrib. 93381
ZnS:Mn based EL device, growth & luminance, quasi-rheotaxy 104923
ZnS:Mn, doped/undoped, dc EL, elec. cond. 93336
ZnS:Mn-based ACTFEL devices, electrolum. thermal quenching study 104977
ZnS:TbOF thin films, sputter deposition, electrolum. phosphor 124816
ZnS:TbOF,Ag,Cu,Ce EL phosphor films, co-doping studies 127932
ZnS-based EL phosphors/devices, structural eval. 93348
poly(N-vinylcarbazole) LED, $LiClO_4$ doped, efficiency 116982
polysilane catenated polymer, end grafted, mol. wire, AFM 101513

electroluminescent devices
see also electroluminescent displays
AC thin-film electroluminesc. devices perf., carrier trapping time 104978
alkali metal acetate electron injection layers for organic EL devices 104981
anthracene-based cpds., pulsed-laser-depos., OLED appl. 127979
bis(8-hydroxy-5-quinolyl)-methane aluminum chelate polymer film, CVD, organic EL device appl. 127961
blue EL from polymer LED 93418
blue organic EL device 93383
blue organic electrolum. devices, design, functional monomeric layers role 104979
carbazole based EL devices, vac. evap. prep. 68211
carbazole-naphthalimide dyads, single-layer EL device 82372
2-(9-carbazolyl)ethyl methacrylate/3-(2-methacryloylethoxycarbonyl)-7-diethylocoumarine electrolum. diodes 128000
conjug. polymer, EL liq. crysts., OLED appl. 127980
D-CN red organic electroluminesc. dye, design, synthesis, device appl. 116918
DB-PPV/Alq_3 multilayer LEDs, luminous efficiency, small mol. electron transport layer effects 127992
decacyclene LB film light-emitting devices, AC/DC response 93387
dendrimers, optoelectronic props., OLED appl. 127985
double-layer organic thin film electrolum. devices, red light emission props. anal. 82367
dye-doped poly(N-vinylcarbazole) film/ITO/Ag electroluminesc. device, all-wet fab. 71565
emergency luminaries power supply *(Chinese)* 100321
N-ethylcarbazole, plasma-polymerized, organic thin film EL device 127956
EXCLUSIVE-OR optoelectronic logical syst. 104850
fluorine-containing polyimide in electrolum. device hole-transporting layer 104988
green-blue-emitting 2,5-bis{4-[2-naphthyl(phenyl)amino]phenyl}thiophene for organic EL devices 104971
8-hydroxyquinoline lanthanum LB film based double-layer EL devices 104990
indicators, struct., sealing methods 109838
LCD backlights, white EL lamps appl. 97750
liq.-cryst. poly(p-phenylene vinylene) derivatives, props./EL device appl. *(Japanese)* 71525
MEH-PPV/organo-clay nanocomposite LED, enhanced quantum efficie 127959
MEH-PPV/PEO:Li-salt blend light emitting electrochem. cells charactn. 134
multicolor polymer EL device fab. using photo-bleaching method 104973
OLED, transient EL 104986
OLED using B-doped diamond electrodes 104985
organic bilayer devices, carrier recomb. in high field, interface barriers ef *(Chinese)* 116972
organic EL device, electropolymerized hole-transport layer, deposition cur dens. effect 71570
organic EL device, vac. deposition, polarizing microscopy *(Japanese)* 116
organic EL device phosphoresc. emission *(Chinese)* 93379
organic EL device prep. using Sr electron injection layer *(Japanese)* 7157
organic EL device with Ru complex layer 104982
organic EL devices, amorph. mol. material 104980
organic EL devices, blue emitting pyrazine derivatives 93386
organic EL devices with organosilane SAM derivatized ITO electrode 1169
organic EL material, electronic excitation energy transfer 104907
organic high-perform. blue-violet-emitting EL devices 104969
organic LED, charge injection props. 105019
organic samples, EL, time resolved PL 93388
organic single layer EL device, evap. 127957
organic thin film device, EL *(Japanese)* 116969
organolanthanide-based IR LEDs, optoelectronic integrat. 93423
phthalocyanine derivatives for organic EL devices 104984
phthalocyanine EL device, NO_2 gas adsorpt. *(Japanese)* 116967
poly(2-methoxy-5-dodecyloxy-p-phenylene vinylene) EL device, photooxidat 116966
poly(p-phenylene vinylene) derivative based electrodeposited film, fab./c characts. 68353
poly(p-phenylene vinylene)/poly(2-carboxyphenylene-1,4-diyl) bilayer fi luminesc. props. 93332
poly(p-phenylenevinylene) derivative, charge cond. 82415
polymer/organo-clay EL device, carrier mobility 116965
polynaphthalimide, new polymer for organic EL devices 71572
porphyrin derivative LB film based light-emitting devices, transient chara 93382
PPV-based self-assembled multilayer microring LED structs., fabr. and charac 127960
soln. electrochemiluminescent cell using tris(phenylpyridine) iridium 12795
tris(8-hydroxyquinoline)aluminium derivates, LED, blue/yellow emissi 117000
two-organic-layer interface recomb., electron/hole injection effects 103087
Al complex, $Alq(Clq)_2$ with mixed ligands. EL behaviors 127984
Al complex with substituted 8-quinolinolate, luminesc. materials synth./chara 127983
Al/MH-PPV/ITO diode structs., reversible PV/electrolum. effects 117015
Au/Si-rich SiO_2:Si(Ge)(Ar)/p-Si diodes, electrolum., ion implant. effects 1280
C nanotubes, electronic devices/luminesc. elements *(French)* 80528
Ca cathode, controlled oxid. during growth, polymeric LED appl. 127987
Eu complex-based MQW electrolum. devices, voltage indicators 109840
Eu^{3+} polymer, organic EL device 116973
β-$FeSi_2$ ion beam synthesised light emitting devices, EL 93380
GaN, EL device, powder prep., AC operation 82370
Ga_2O_3:Mn thin films, TFEL devices, sol gel proc., dip coating tech. 101409
$Gd_3Ga_5O_{12}$:Ag phosphor prep. and electrolum. characts. *(Chinese)* 116930
ITO, work fn. tuning by surface mol. design, OLED appl. 93384
InAs/GaSb/AlSb intersubband light-emitting struct., emission wavelength cont 82365
$In_{0.15}Ga_{0.85}As$ QW based microcavity EL device charact. 104976
$In_{0.5}Ga_{0.5}As$/GaAs QD laser structs., emission wavelength, internal elec. fie depend. 105327
InGaN/GaN MQW LEDs transm. expt. in plastic opt. fiber LAN *(Japanes* 93085
LiF-ITO anode for poly(styrene sulfonate)-doped poly(3,4-ethylene dioxyt ophene) electrolum. device 104967
Ru-complex-based organic EL devices, peak wavelength control 104972
p-Si based LED, EL, operation mechanisms 93433
Si based luminesc. material, form. mechanism using photochem. etching meth 69862
a-Si oxide films, Al doped, RT vis. EL 82366
Si photo-emitters for opt. interconnects, accelerated stressing/degrad. mech nisms 82450
Si:Li,Er-based IR electrolum. devices, elec. field-induced fab. 71564
Si/O semicond.-at. superlattices, MBE grown, struct. 90273
$Si_{1-x}Ge_x$ act. layer, Er/O-doped, MBE, LED 93434
SiO_2 PECVD microstruct., laterally emitting TFEL device fab. 82371
SrS:Ce ac thin-film EL devices, dyn. space charge mechanism 93390
SrS-based ACTFEL devices, electrolum. thermal quenching study 104977
Tm complex based IR organic EL device, emission spectrum *(Chinese)* 715
Y_2O_3-GeO_2:Mn thin film phosphor, TFEL device appl. 116927
Zn complex with substituted 8-quinolinolate, luminesc. materials synth./chara 127983
$ZnGa_2O_4$:Mn TFEL device, magnetron sputtering, RTA 104968
$Zn_{1-x}Mg_xS$:Mn ACTFEL devices, green EL 82369
ZnS EL element, optoelectronic logic gate 104848
ZnS, thin film electrolum. devices, transport props., simul. *(Chinese)* 11697
ZnS, thin-film electroluminesc. devices, characts., space charge effects 1169
ZnS:Mn EL device, RF magnetron sputtering 127958
ZnS:Mn based EL device, growth & luminance, quasi-rheotaxy 104923
ZnS:Mn-based ACTFEL devices, electrolum. thermal quenching study 1049

electroluminescent displays
see also LED displays
colour LCD with switched organic EL backlighting 109905
full-colour pass.-matrix organic EL displays 121105
green-blue-emitting 2,5-bis{4-[2-naphthyl(phenyl)amino]phenyl}thiophene f organic EL devices 104971
high-resoln. EL displays, mil. appls. 86862
large, inexpensive FPDs for TV, iFire develop. 113434
miniature act. matrix EL displays, gray-shade perform. 86836
multicolor pixel patterning of light-emitting polymers by ink-jet printing 976
multicolor polymer EL device fab. using photo-bleaching method 104973
multilayer stacked EL device concept, luminance enhancement 97667
OLED, voltage depend. capacitances 104974

troluminescent displays continued
organic EL device, minority carrier mobility effects 97664
organic EL displays, future prospects *(Japanese)* 93385
organic electrolum. devices, external quantum efficiency meas. 104970
polysilicon TFT light emitting polymer high-resoln. monochrome display 97602
TFEL mol. lanthanide devices, colour purity/device efficiency 97612
CaS:Pb EL devices, high-luminance/blue-emitting characts. 109886
SiO_2 PECVD microstruct., laterally emitting TFEL device fab. 82371
SrS blue ACTFEL display, luminance-time characts., model 97670
SrS:Ce thin films for electrolum. displays, tris(cyclopentadienyl)cerium as Ce dopant source 101321
SrS:Cu,Ag ACTFEL display device, electron transport and luminance 121096
SrS:Cu,Ag/ZnS:Mn stack phosphor, white monochrome TFEL displays 109861
ZnS TFEL device, $BaTa_2O_6$ interface elec. prop., turn-on charact. 97669
ZnS:Cu phosphor based AC powder EL flexible inform. display *(Korean)* 121123
ZnS:Cu,Mn, EL display panel in aircraft cabin meters *(Chinese)* 88061
ZnS:Er EL displays, electron energy spatial distrib. 93381
ZnS:Mn laterally emitting TFEL displays, fast modelling 75806
ZnS-based EL phosphors/devices, structural eval. 93348
ZnS-based thin-film EL display, impact excitation cross sect., activator conc. 86811
ZnS_xSe_{1-x}:Mn TFEL devices, band gap engng. for improved efficiency/brightness 75796
$Zn_2Si_{0.5}Ge_{0.5}O_4$:Mn green TFEL display, high brightness 97668

trolysis
see also anodisation; electrodeposition; electroforming; electrolytic machining; electrolytic polishing
2001 Mars surveyor mission solid oxide oxygen generator 98915
aluminium prod., electrolysis cell optimisation 113166
aluminium smelter indust., elec. demand modelling 134677
chem. indust. power supply syst., harmonic filter concept 134684
copper electrowinning plants, multi-cct. electrolytic cells approach 124133
diamond, through-hole membranes, plasma etching, anodic porous alumina mask 126384
electrochem. sens., output opt. luminesc. sig. 120995
hydrogen-based renewable energy syst. for rem. commun. stations powering 88662
IC hermeticity assess. by electrolysis 67630
microsyringe fab. for intravascular injection, vitro test *(Korean)* 98600
post-metal CMP cleaning with electrolyzed DI water, surface control tech. 103344
pulsed corona discharge superposition in water *(Korean)* 115237
PV powered water electrolysis plant, hydrogen/oxygen prod. 88654
solar cell-powered high-efficiency water electrolysis R&D *(Japanese)* 134397
supercapacitor nanostructure material develop. 123719
urea amperometric sens. syst., pH-stat/flow injection anal. 97413
vehicle hydrogen fuel prod., water electrolysis, elec. power requirement 134539
water-quality monitor with ion selective electrodes 120988
$Al_{0.15}Ga_{0.85}As$/Si solar cell, water splitting, H_2 prod. 100028
DyNi films, form./phase control, electrochem. implant./displant. 101407
GaAs p/n structs., etching, galvanic effects anal. 92064
InGaP/GaAs, selectively-grown on Si, PV-photoelectrolysis cells appl. 79393
InGaP/GaAs/Si PV/PEC cells, selective heteroepitaxy, H_2 generation from sunlight 112956
Ni-Cd waste secondary batts. recycling technols. *(Chinese)* 78124
Ni-Zr, amorph., catalyst, global CO_2 recycling 76925
a-Si:H/c-Si solar cells, sputter deposited, PV water electrolysis, H_2 prod. 100029
Si(111)/organic monolayers electron beam nanoscale patterning for selective deposition 115792
ZrO_2 electrolyte technol., appls. 89200

trolytes
see also electrolysis; polymer electrolytes; solid electrolytes
3D electrode/electrolyte interface in SOFC, FEM 112845
batt. separators absorbency under compression 89043
binary carbonates, liq./solid phase diags., Li batt. appls. 99935
carbon fiber-based cathode develop. for semi-fuel cell appls. 89168
Danish SOFC R&D status 89191
direct hydrocarbon PEMFC, acetals electrooxidation 134373
elec. double-layer capacitors, organic electrolyte studies *(Chinese)* 113037
elec. double-layer capacitors, organic electrolytes, perform. 123846
electrochem. capacitors, characts. and appls. 69272
electrochem. power sources, conf., Manchester, UK (April 2001) 78386
flexural mech. resonator, liq. dens./viscosity meas. 92689
Li-ion batts., nanocomposite based electrolytes 123762
lithium organoborate with salicylic ligand, Li batt. electrolyte appl. 112790
microfabricated secondary batts. for rem. autonomous electronic devices 89148
microsyringe fab. for intravascular injection, vitro test *(Korean)* 98600
mixed-reactant strip-cell direct methanol fuel cells, feasibility anal. 100023
modified hydrogel electrolyte material for secondary cell appls. 99907
multichannel EEG/event-related pot. recordings, electrolyte bridges detect. 76290
onium salts, unsymmetrical, nonaq. electrolytes for electrochem. double-layer capacitor appls. 91430
Pb-acid valve-regulated batt. overcharge proc. modelling 89120
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
planar SOFC model calc., internal stresses studies 99982
planar SOFC stacks, recent Japanese develop. 89189
poly(2,5-di-(2-thienyl)pyrrole), electrochem. synthesis/processability 125026
poly(3,4-ethylenedioxythiophene) films, in situ cond., electrosynthesis 125106
reduced-temp. SOFC power systs. develop. 88664
Regenesys energy storage technol., regenerative fuel cells 134362
SOFC anode-supported tube fab. and charact. 99956
SOFC cathode degrad. by Cr-containing alloy, electrodes and electrolytes comp. depend. 100012
SOFC cathode perform. improvement using struct. electrolyte surface 99971
SOFC ceramic membranes, oxygen generation perform. comparisons 99990
SOFC single cells, syst. ident. modelling approach 99980
Sulzer Hexis SOFC product develop. status 89194
tubular SOFC technol. progress 89192
UltraCap double layer capacitors, energy storage device for peak power appls. 78201
VRLA, pos. grid plate single cells, gelled electrolyte, design, testing 112799
VRLA batts., AGM vs. gel technols., telecom appl. 112800
VRLA batts., plate group, mech. press., compression effect 78136
AgO watch batts., electrolyte sealing, anode can/gasket clearance *(Japanese)* 89049
Al electrolytic capacitors, large, service life/failure mechanisms 115081
Cr alloy SOFC interconnect material, elec. charactn. 89265

electrolytes continued
$La_{0.8}Sr_{0.2}Ga_{0.85-x}Co_xMg_{0.15}O_{3-\delta}$ SOFC electrolyte expts. 89218
Li ion cell, low temp. electrolyte, US Army ITAS syst. appl. 89107
Li ion cells, large, low temp. electrolyte, ITAS syst. appl. 99898
Li micro-batt. develop. for spacecraft appls. 89152
Li secondary batts., lithium imide electrolytes/copolymer materials 89140
Li-CF_x envelope cells develop. 89053
Li-ion batt., anisole electrolyte additive, effect on cycle perform. *(Chinese)* 89067
Li-ion high-power secondary cells, impedance spectrosc. studies 99944
Li-ion liq. electrolyte batts., recent develop., future prospects 89073
Li-ion prismatic cells, aircraft appls. 88065
Li-ion secondary batts., electrolytic solns. react. on pos. electrode, ESR 99922
Li-ion secondary cells, key components safety studies using ASC 89149
$LiCoO_2$ secondary cell cathodes, intercalation in aq. alkaline electrolytes 99906
$Li_{1.01}Mn_{1.99}O_4$ secondary cell cathodes, capacity fading studies 123738
$LiMn_2O_4$ spinel, improved elev. temp. cycling using compos. LiF-based electrolyte 134351
$LiPF_6$ salt assoc. in Li-ion batt. electrolyte, computer simul. 112786
Mg-soln. phase catholyte semi-fuel cell optim. using Taguchi methods 89167
Ni-Cd batts. for rem. telecomm. appls. 112804
Ni-Cd low-maint. ultra-high rate secondary batt. study *(Chinese)* 78123
Ni-MH alkaline high power batts. in bipolar stack design 89080
Ni-MH secondary cells, electrode electrocatalytic characts. 89082
Pb-acid batt., low cost cycling, electrolyte formulation 78153
Pb-acid batts., conf., Dublin, Ireland (March 2001) 67385
Pb-acid batts. develops. in first decade of 21st Century *(English)* 89070
Pb-acid small valve-regulated batts., dyn. charactn. 89089
Pb-acid valve-regulated batt. life improvement, electrode expts. 89130
Pb-acid valve-regulated batts., RBSM struct. design criteria 89117
Pb-acid valve-regulated batts., solar power appl. charge strategies 78142
PbO_2:Bi_2O_3 electrodes, effect and mechanism on Pb-acid batt. perform. 78138
Pd anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt fuel cell electrocatalyst, CO adsorpt., NMR, voltammetry 100013
Pt-Ru anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt-Ru-W composite PEMFC electrocatalysts, anodic methanol/methanol-reformate oxid. 134376
Si, porous, porosity & film thickness, electrolyte comp., anodization 92002
Ta/Nb high CV powder metall. capacitor anodes, electrolytes for anodization 115060
TiO_2 solar cells, organic dye-sensitized nanocryst., electrolyte effect 134403
Zn electrodeposition using modified Hull anal. electrochem. cell 79377

electrolytic capacitors
1608 size chip Ta capacitor, face-down terminals for fillet-less surface mounting 115053
automotive appls., reliable capacitor selection 89414
BGA assembly failures, Ta capacitor induced 113571
bipolar supercapacitor electrodes, oxidized glassy carbon sheets 123847
DECT VCO integrated pass. using thin film MCM-D technol. 131263
diamond nanoporous honeycomb electrodes, electrochem. charactn. 80647
DRAM, 0.1 μm, bitline spacerless storage node SAC/Ru-Ta_2O_5-Ru capacitor with TiN contact plug 125475
EDLCs, elec. double layer capacitors, aq. dil. HCl soln. *(English)* 100223
elec. double layer and electrolytic capacitors *(English)* 91417
elec. double layer capacitor, power storage syst. *(English)* 100218
elec. double layer capacitors, gel electrolytes containing asymmet. ammonium salt, perform. *(English)* 99885
elec. double layer capacitors, polymer gel electrolytes 123848
elec. double-layer capacitors, organic electrolyte studies *(Chinese)* 113037
elec. double-layer capacitors, organic electrolytes, perform. 123846
electrochem. capacitors, characts. and appls. 69272
electrochem. supercapacitors, electrochem. energy storage beyond batts. 80451
elevators, supercapacitor energy storage syst., soft commutated interface 134523
floating gate electrolyte-insulator-semicond. capacitor, C-V charact. 115055
large aluminum electrolytic capacitors, service life studies 134335
MCM-D/L/BGA integrated package with embedded pass., satellite TV demonstrator 124364
mesoporous activated carbon fiber elec. double layer capacitance *(English)* 100222
nonporous activated carbon electrode elec. double layer capacitor, high energy dens. *(English)* 100224
onium salts, unsymmetrical, nonaq. electrolytes for electrochem. double-layer capacitor appls. 91430
output-power leveling in solar cell and wind power gen. systs. with elec. double-layer capacitor banks *(English)* 99596
PANI, soluble conducting polymer, solid electrolytic capacitor *(English)* 91419
PEDT-RuO_x composite electrodes, electrochem. and impedance props., capacitor appls. 99890
poly(alkoxythiophene) derivative electrodes, capacitance and cycling stabil. 79459
polymer cathodes in Al/Ta electrolytic capacitors, perform. issues 115056
portable electronics appls., capacitor technols. 80437
PWM inverters, diode rectifiers, electrolytic capacitors, life estim. *(Korean)* 134198
rect.-type elec. double layer capacitor, high energy dens. *(English)* 100220
state diagnosis proc. 91424
technols./design practices for portable electronics 115070
Al electrolytic capacitor, composite oxide film form. *(English)* 91418
Al electrolytic capacitors, large, service life/failure mechanisms 115081
Al electrolytic capacitors, low inductance, freq. converter design 69280
Al foil electrolytic capacitors, liq. contacting forming syst. *(English)* 91422
Al:Bi capacitor foils, simulated proc., Bi behaviour 80439
Al_2O_3 electrolytic capacitor dielec. films, energy loss, bias and ripple voltage effects *(English)* 99886
C activated electrodes, aq./nonaqueous electrolytes, capacitance, pore size 112760
C fiber, activated, mesopore struct., elec. double layer capacitor *(English)* 91420
C high porosity electrodes derived from mesophase pitch for elec. double-layer capacitors 91432
C/a-MnO_2 electrochem. pseudocapacitor electrode, kinetic reversibility 91425
C-based capacitor electrode materials, electrochem. energy storage 69270
Cu-porous carbon composite elec. double layer capacitor, capacitance props. *(English)* 100221
IrO_2/Co_3O_4 electrode, pseudocapacitive behavior eval. 102772
$Li_xNi_{1-x}O$ electrode, electrochem. capacitor, ESD synthesis *(English)* 91421
Nb solid electrolytic capacitors, substr. materials develop. 115065
Pd/ZrO_2-Y_2O_3 composites, dielec. props., EDLC 123849

electrolytic capacitors continued
RuO_2 electrodes, effect of Ca addit. on pseudocapacitance *(English)* 100225
RuO_2-impregnated C electrodes, electrochem. capacitor appl. *(Japanese)* 91428
SnO_2:Sb xerogel electrodes prep. and charactn. for electrochem. capacitor appls. 102768
Ta SMT capacitors, Pb-free soldering technol. effects 115058
Ta capacitor MIS struct. model, transport charact./temp. depend. 80443
Ta capacitor failure modes, fab. technols. 115080
Ta capacitor ink develop. to break 10 mΩ ESR barrier 80428
Ta capacitor surge step stress testing, power-on failure mechanism prediction 115072
Ta capacitors, high CV, evol., anode sintering proc. 115057
Ta capacitors, struct., fab. and develops. *(German)* 115051
Ta chip capacitor, 1608 size, 6.3 WV/10 μF, face down terminals for fillet-less surface mounting 115084
Ta chip capacitors, <10 mΩ ESR, heat/moisture-stable 80433
Ta chip capacitors, Pb-free soldering proc. effects 80446
Ta chip capacitors, breakdown voltage, cct. resist. impact 115069
Ta solid capacitor ESR reduction, C/Ag coatings, material/proc. optimisation 80430
Ta solid capacitors, polymer/MnO_2 electrolytes, comparison review 80442
Ta solid electrolytic capacitor, low temp. elec. prop. meas. 102784
Ta surface mounted capacitors for high current appls. *(German)* 80452
Ta/Nb high CV powder metall. capacitor anodes, electrolytes for anodization 115060
Ta-Ta_2O_5-MnO_2 capacitor as MIS struct. in reverse mode 115082
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ta_2O_5 dielec. reliab., thermal/elec. breakdown under both-bipolar biasing conditions 80434
Ta_2O_5/poly(EDT) bilayered film, solid electrolyte capacitor *(English)* 90491
electrolytic conductivity of liquids *see electrical conductivity*
electrolytic deposition *see electrodeposition*
electrolytic ion mobility *see electrolysis; ion mobility*
electrolytic machining
see also electrolytic polishing
BSG microsens. substr., microhole electrochem. discharge machining 116110
in-proc. dressing grinding, wheel state estim. 134680
microspherical lens mould fab., cup-type grinding wheels & ELID 116790
Si(001) surface atom, hydrogen-terminated, etching, hydroxyl fn. *(Japanese)* 126343
steel, stainless, microelements electrochem. machining with ultrashort voltage pulses 116104
Al foil electrolytic capacitors, liq. contacting forming syst. *(English)* 91422
Si(001) surface atom etching proc. using hydroxyl fn. *(Japanese)* 126400
Si(001) surface, hydrogen-terminated, etching, mol.-dyn. simul. *(Japanese)* 126342
W micro-punch fab. for micro-nozzles, electrochem. etching 92547
electrolytic polishing
see also electrolytic machining
Al:Bi capacitor foils, simulated proc., Bi behaviour 80439
p-$Bi_{0.5}Sb_{1.5}Te_{3.0}$, electropolishing, polarography 126386
n-$Bi_2Se_{0.3}Te_{2.7}$:SbI_3, electropolishing, polarography 126386
Si, 3D integrated wafers block, bumpless, wiring by through-hole interconnections 115670
Si, electrochem. etching, 3D microstruct. 116103
Ti device fab., two-level electrochem. micromachining 116089
electromagnetic actuators
conf., Dresden, Germany (July 2000) 67404
current-to-press. transducer, ferromag. nozzle, mag. fluid actuator 78106
fuel injector, solenoid actuator, mag. aftereffect 128722
gas turbine combustors, NO_x emissions, adaptive predictive control 88599
gas turbine mag. bearings, neg. stiffness coeffs. calcs. 123216
LEO satellites, mag. attitude control syst. 111310
lin. actuator, design optim., reluctance network 117643
lin. electro-mech. actuators, synthesis, constrained optim. problem, GAs 117640
mag. actuator, out-of-plane deflection, surface micromachining 81621
mag. field driven actuators 70561
magnetorheologic fluid smart actuators, flow behaviour in narrow channels 104553
magnetostrictive transducer, actuators/sens. appls. 109827
micro grasping and micro procs., mag. parallel motion hand appl. 92574
micromachined mag. membrane micropump, mag. particle embedded PDMS 89023
micromotor for microfluidics appls. 112571
microrobot with EM micromotor *(Chinese)* 77908
moving coil lin. oscillatory actuator, inductance and armature react. 128724
opt. inter-satellite commun., wide-range fine pointing mechanism 88073
otiatria, mag. devices appl., implantable prostheses 76666
PM sens./actuators, temp. compensation, FEA 120773
rotary oscillatory actuator, 3D FEM, auto-mesh coupling 128728
SANSHIN musical instrum. amusement robot control *(Japanese)* 89018
shaker, transient anal., response surface model 128727
solenoid valve, EM actuator, multigrid simul. 83182
swimming micromachine, mag. torque driven, med. appl. 78111
Terfenol-D high-power LF magnetostrictive actuation, vibr. control 78105
THz field charactn. using Fabry-Perot-like tunneling cantilevers 97789
valveless micropump, design/testing for FIA syst. *(Chinese)* 70338
vortex flow energy dissipation TMD devices develop. *(Chinese)* 105688
TbDyFe giant magnetostrictive actuator, finite element model *(Chinese)* 92871
$YBa_2Cu_3O_{7-\delta}$ bulk array for lin. supercond. actuator 82020
electromagnetic compatibility
see also anechoic chambers (electromagnetic); electromagnetic pulse; frequency allocation
3D simul. tools, ES 72371
3D TLM method for modelling of wire lossy termination 72390
3D water-coated antenna applicator for deep-body hyperthermia 87847
95/54/EC Automotive EMC Directive, appl. guidelines 134580
AC rly. syst., act. return conductor, EMC, personnel safety, voltage stabil. *(German)* 123979
alternative local loop 85403
amat. radio antennas near-field exposure assess. 85492
ANSI C63.5/ARP958 methods of emission-antennas calib. 120630
antenna technol. and applied EM, conf., Winnipeg, Man., Canada (2000) 78440
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
assess. using TLM method 83429
automotive EMC directive for radio products utilisation 83431
automotive microelectronic sens., EMC/EMI limitations 124055
batt. charger PFC preregulators, optimal control scheme 78012
Belgian Army EMC approach 122770
electromagnetic compatibility continued
bent transm. line EM radiation studies 83367
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
broadband matched antenna array, freq.-domain, pulse simul. 83721
building power freq. mag. fields meas. from EMC viewpoint 77668
Bulgarian Navy EMC provision, E3 stds. harmonization 83418
cable coupling atten. standardisation, future develop. 83361
cable EM shielding, primary/secondary params. 83359
cable shielded screening atten. test method down to 5 MHz 83360
challenges in new millennium 72352
chambers, anechoic/semianechoic , homogenization and GO 128811
chiral multilayer printed struct., anal. 117763
CISPR/H activities on RFI protection 83381
civ.-mil. EMC standardization, NATO Working Group efforts 72382
cluster electronic equipt., EMC eval. *(Chinese)* 105784
commercial equipt. EMC risk anal. in mil. environ. 83419
complex cable systs. anal. using EM topol. 80467
connector behaviour anal. in terms of EMC 80475
controlled emissions, meas. repeatability *(Spanish)* 94068
Cool Shield EMI shielding with thermal mgt. 105815
coupled microstrip lines far-end crosstalk reduction method 72386
coupling in EMC, space discretising time domain methods for num. modelli 83386
coupling problems, transients anal., FDTD, Method of Moments 72389
crit. electronic automotive systs., high-intens. radiated field hazards 134581
current waveform, detect. through perturbing instants meas. 105779
defn. and status, future strategy 72381
densely-packed random wire bundles crosstalk prediction model 83365
desk-type contactless power station syst., perform. charact. *(Japanese)* 101
digital IC package, RF meas. of current and voltage distribs. 75840
digital power line commun., LV distrib. network 74509
digital radiocommunication services, interf. effects weighting 85467
distrib. grid, last mile high speed power line commun., EMC 77333
domestic appliances on/off control devices, EMC enhancement 78351
dual-voltage automotive elec. syst., std. EMI impulses adaptation 100311
E^3-EXPERT ES for EMI rejection requirements prediction 83369
elec. engng., environ. issues *(Japanese)* 99177
elec. rly. systs., LEMP-like effects modelling 78313
electrified rly. track cct., impulsive interf. suppression 78312
electronic equipt. immunity, indirect ESD, transient anal. 78582
EM wave/inhomogenous anisotropic media interact., FDTD anal. 83197
EMC equipt. testing for safety crit. environ. 83428
EMI control door gasket develop., door closure sound tuning 105788
EMI immunity diagnosis for PCBs using bulk current inject. test *(Japane* 91450
EMI/EMC appls., circ. wire mesh monopole antennas 72528
emission meas., loop antennas, calib. 86942
environ., current status *(Japanese)* 105807
ESD generators, std. compliance 117617
European EMC legislation initiatives 83435
European EMC standardisation bodies interface 83433
European regulations *(Italian)* 94061
EUROTEM-Antenna set-up for fully compliant emission/immunity testi 83374
externally excited transm. lines, anal./modeling using fuzzy inference for EN problems 105802
fieldbus transm. line EMC testing, simul. models 86417
FSS tunable radar absorbers 80155
GSM handset antennas, total radiated power meas. methods eval. 119959
GSM/air navig. networks, generalized EMC anal. 83403
GTEM cell, TEM-mode E-field uniformity 117720
gyromagnetic media/devices design/research, EMC/ecology problems 83396
HF EM field coupling to long terminated lines 72373
HF inverters, EMC perform. prediction 88838
high dens., high speed PCB design, sig. integrity problem 80493
high-power EM, suscept. testing strategies 83439
high-power EM transient phenom. protection, IEC standardisation 83437
HV substations, EMI monitoring 78081
hybrid elec.-opt. interconnection technol. for PCB appls. 69299
hybrid moment method-PO method improvement, PO operator eval. 128655
hybrid multilayer heterostruct. optoelectronic transistors, fiber coupled E-fie sens. element appls. 104742
IC rated EMC params. determ. using EMCpar software 83382
ICs RFI suscept., test procedures crit. assess. 72385
IEC mains harmonic emissions meas., test method and instrumentation requir ments 83404
IEC/EN 61000-4-6 EMC tests, injection clamps appl. guidelines 83377
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 200 124221
immunity testing cell using rect. resonator with conducting channel plate a capacitive gap *(Japanese)* 105800
infinite perfect conducting nonlin. loaded circ. cylinder excitation calcs. 834
instrum. cabinets for electronic systs., Rittall, environ. specs. *(German)* 675
intentional EMI, threats and protections 83438
interconnection struct., hybrid PEEC-MTL models 83453
International Amateur Radio Union work on EMC 85494
Ka-band satellite terminals standardisation 85930
large-scale/complex EMC problems soln. using method of moments 83362
LEO/MEO satellite links, polariz. cross-coupling anal. 83333
lightning elec. field modelling for different channel-base current models 721
lightning protection syst. lumped/distributed cct. model comparison 77553
low reflectivity EM energy absorbing composite materials 83221
LV distrib. syst. power line carrier approaches, EMC problems 85453
mag. related EMC/EMI, VLF fields biomag. *(Japanese)* 83354
mag. storm indicators, natural mag. fields registration instrums. 83378
mains RFI filters design methodology 89035
maritime EMC and internat. community 83432
Mathematica Version 4.1 design software, fibre optic systs., EMC and PC appls. *(German)* 90637
MCU syst. for indust. control, EMC design *(Chinese)* 124444
microelectronics 3D design/packaging, EMC-oriented 126934
microwave links used in internat. coord. 83415
microwave radio relay links, internat. coord. assess. 83414
mil./civ. E^3 requirements harmonisation 83421
mixed-sig. PCB partitioning/layout 115126
mixer operation modes, nonlin. distortions anal. 105789
mobile commun. systs., EMC control, optimal procedures 108941
mobile satellite Earth terminals, out-of-band emission limits 83417
mobile sync. generators, mech. motion-induced EMI 133970
mode-tuned/mode-stirred reverberation chambers, local averaging 105793

tromagnetic compatibility continued
modelling, anal., conf., Wroclaw, Poland (June 2000) 67408
models random procs., lin. filtration method 83397
models squaring and smoothing, stat. soln. 83370
multi-cell power converter distributed control strategy 88824
multiple-knife-edge diffr. loss estim. using logarithmic-cell-simul. 83399
µP chip-level packaging, syst. level view 68815
µP EMC testing, capacitive and mutual resist. coupling *(German)* 79943
MV switchgear LF emissions eval. studies 134265
naval environ. EMC stds. harmonisation, UK approach 83420
naval ships, upper deck EMC anal. for freqs. above 1 GHz 88253
naval ships bulkhead shielding eval., NATO stds. appl. 83427
Network Equipment Building Standards for telecom equipt. EMC reliab. 94053
network harmonic generation, HF electrotechnol. install. influence 88937
noise induction on UTP cable *(Japanese)* 74512
nonuniform transm.-line approach for bends and discontinuities modeling 72400
OATS antenna factors for small anechoic chambers 128803
opt. PCBs, opt. sig. transm. through multimode step index plastic light guides *(German)* 80491
opt. transceiver modules, radiated emission/immunity charact. eval. 72387
ordnance syst. EMP effect testing 88267
PCB, digital electronic, EMC *(Russian)* 72365
PCB EMC design, expert anal. tools 125878
PCB layout, crosstalk prediction model 102805
PCB metallic enclosure EM field penetration eval. software 83368
PCB struct., current mapping 91455
phenom. and standardisation implications overview 72384
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
power conversion syst., harmonics, EMI, EMC, time-freq. anal. *(Japanese)* 99808
power converters, conducted EMI minimisation, stray inductance minimisation 88839
power electronic converter anal., state variable approach 68581
power electronics equipt., EM environ. impact, EMI, EMC 99357
power line commun., EMI, EMC, regulatory authority's eval. 74511
power line commun. systs. eval., EMC aspects 74508
precision EM field & dipole antenna stds. develop., OATS *(Japanese)* 83443
PWM DC motor regulator IC, EMC charact. 123487
PWM DC-to-DC converters with random-switching control, LF noise 114617
PWM invertor-fed AC motor drives, HF model for EMC anal. 134453
radiated emission meas., TEM cell, GTEM cell, loop antennas 83426
radiated emission source location accuracy, CISPR emission meas. syst. 105785
radiated immunity testing, elec.-field uniformity in reverberation chamber 117721
radiated test double-polariz. transm. line device 105794
radiation hazards assess. in residential areas 83401
radio receiver selectivity estim., multi-sig. estim. 85468
radio transmitter, adjacent channel transient power meas., wavelets 75288
radiocommunication networks interf. noise, Shannon's formula reworking 72383
radiocommunications systs. in multifrequency modes 117717
rail vehicles, EMC *(German)* 78273
rect. enclosure with thick multiple apertures, shielding effectiveness 72368
rect. waveguide components, HF spurious response 83398
relay safety systs., EMC, metallic glass housings 77579
resist. welding machines, power quality and EM emissions 78363
RF conducted emissions monitoring, VXI-based digital meas. station 117716
RF-spectrum load estim. in territorial region 120503
RFI cases on co-located broadcasting sites 72388
rly. vehicles, elec. compatibility, ESCARV project results *(German)* 123982
Rohde & Schwarz's ESPI precompliance test receiver 131841
Rohde and Schwarz test cells, precompliance testing 72369
safety crit. microelectronic ccts. perform., EMC 81422
satellite orb. group, intrasystem interf. levels anal. 83405
screened radio interf. test rooms, EMC compatibility, filter charact. *(German)* 72348
SEAMCAT Spectrum Engineering Advanced Monte Carlo Analysis Tool 86291
semi-anechoic chamber BGF facility for EMI/EMC meas., latest develops. 83375
shielding gaskets, automated installation 83390
ship antenna radar band ENC perform. prediction 83422
ship radiocommunication systs., EMC anal./meas. 74588
sig. proc./source ident., wavelet packet-based tech. 72374
sig. reception against band-limited nonGaussian noise background 119872
sinusoidal absorpt. AC-DC converter, stored energy optimisation 78027
slotline sens. for pulse EM field meas. 83380
SMPS, power converters, EM energy propag. 99742
SMPS cost-effective EMC-conforming design 88815
spacecraft EM propulsion engine, plasma-microwave antenna interact. 85927
spectrum mgt. for army tactical radio operations in broadcasting bands 105786
standalone/parallel DC-DC power converters, nonlin. stabil./dyn. anal. 88900
std. guidelines, time-domain MoM simulator validation 83424
stds., ETSI activities overview 83434
structural cabling syst. lightning overvoltage studies 77554
substations, EMC assurance, EM disturbances mitigation 78083
Swiss traction power supply grid, harmonics problems, EMC *(German)* 123983
tall tower lightning-return strokes, current and EM fields 105795
tech. devices EM pulse exposure/interference immunity *(Polish)* 105780
telecom. cable screening effectiveness, standardised EMC meas. procedures 85444
telecom. switching equipt. DC-DC power converters, conducted noise mitigation 108465
telecomm. buck-type power converter load, input dyn. modelling 108454
telecomm. cable, overhead ground wire effect on lightning-induced voltages 74503
telecomm. DC/DC power converter, EM field immunity testing 108466
telecomm. DC/DC power convertor modules, EMI test facility 108467
telecomm. ports disturbances meas. method 83373
telecomm. products tech. EMC specs. 85104
TELESCON 2000, conf., Dresden, Germany (May 2000) 100425
TEM and GTEM cells, higher order modes, computer simul. 72360
TEM face-to-face horn fed pulse radiation antenna 83547
test chamber charact., amp. RF power requirement determ. 83376
test labs, user survival guide 94054
testing meas. uncertainties *(German)* 128807
TLM method, six-wire-jn. matrix model 72391
truncated chiral cylinder shielding effectiveness anal. 83366
tunable single layer phase modulated radar absorber 80154
two-winding power transformer conducted EMI propag. 88797
UMTS networks EMC problems with Russia fixed service radio relay systs. 83412

electromagnetic compatibility continued
URSI Commission E open meeting on EMC issues 83436
US Navy EM environ. effects awareness program 83430
very weak EM fields meas., induction sens. noise params. anal. 83379
VHF/UHF radio waves propag. studies in south Baltic area 83298
vibrator and microstrip antennas, side radiation reduction level, UGTD 83524
warship design proc., standardised EMC criteria implement. 88268
wireless commun., nonlin. interf./distortions, modelling 74589
wiring harness interf. suscept., probabilistic model 83364
X2 series EMI suppression capacitors, miniaturisation 115083

electromagnetic coupling
see also coupled circuits; coupled transmission lines; optical couplers; waveguide couplers
2-phase IM, time asymmetry, stator phase windings, inductive coupling 99657
3D multilayer CPW struct. with wideband vert. interconnection, modelling 125793
3D TLM method for modelling of wire lossy termination 72390
antenna, EM coupled microstrip slot type, design by FDTD equiv. cct. method 72498
antenna array calib. employing beacons/steering vector estim. 83710
aperture coupled dual band dual circ. polarized stacked microstrip antenna 94137
BGA packaging, mixed-sig. and digital ICs, radiative coupling 113519
broadband circ. polarised proximity coupled patch antenna 83613
broadband microstrip to CPW transit., via-free design 91183
cavity-backed slot antennas, coupling modeling/reduction 105889
chaotic oscillators interact. 79531
combline filters, coupling & reson. freq., non-adj. resonator effect 102518
compact ellipt. fn. BPF, triple-mode cavities, digital TV transmitter 109358
conducting strip through parallel-plate waveguide narrow slit 72179
conformal onboard array antenna synthesis, MoM-based algm. 83752
convex circ. cylinder apertures, mutual coupling calc. using hybrid UTD-MoM method 72650
cylindrical dielec. resonator antennas, mutual coupling 83595
de-coupling 96372
direct energy supply from transm. lines using mag. coupling 77435
elec. short two-conductor transm. line driven by random plane wave field, response probabilistic model 72406
EMC coupling problems, transients anal., FDTD, Method of Moments 72389
EMI estim. for shielding-enclosure eval. 105792
externally excited transm. lines, anal./modeling using fuzzy inference for EMC problems 105802
FDTD anal./design of probe-fed dual-polarized circ. stacked patch antenna 105881
FDTD anal./design of probe-fed dual-polarized circ. stacked patch antenna 72592
finite phased arrays, element charact. anal. using matrix manipulations 83751
first principles study 117611
flange-mounted ellipt. waveguide arrays, mutual coupling 83745
heat-sink-thermal-gasket materials selection, EMI considerations 105790
HF EM field coupling to long terminated lines 72373
high dens. stripline packages, via fence struct. for crosstalk reduct. 102682
human body-mobile phone interact., computational EM 133079
hybrid moment method-PO method improvement, PO operator eval. 128655
ICs, substr. coupling, modeling methods *(Polish)* 70264
infinite nonlin. loaded antenna arrays, inexact Newton anal. 83670
IPO approach, subdomains splicing tech. 72275
Josephson jn. logic device, EM coupling, FDTD anal. 70892
LEO/MEO satellite links, polariz. cross-coupling anal. 83333
lin. sync. reluctance motor, inductance, cross magnetis. 134077
line elec. current source excited multiple cylindrically curved thin screens, response anal. 72261
micromachined microstrip patch antenna with controlled mutual coupling/surface waves 117781
microstrip antenna smart mech. actuated two-layer microstrip antenna 72649
microstrip antennas, elec. cct. model and mutual coupling study using FDTD method 128860
microstrip arrays, aperture coupled, anal. 128884
microstrip high-selectivity filters, broadside couplings 125591
microwave amp. module microstrip line coupling suppression, anal. *(Japanese)* 125698
multiconductor transm. line coupling, probabilistic eval. 94058
multiresolution near-field to near-field transform for multi-region FDTD schemes 93960
nonuniform coupled-lines, null point perturb. and coupling control *(Korean)* 117747
OFDM-CDMA systs., adaptive antenna array appl. 108872
onboard array antennas synthesis, antenna interacts. 72663
open-ended waveguide array, mutual coupling 72410
open-ended-waveguides located in infinite ground plane, mutual coupling 128831
opt. tuned metallodielectric photonic band gap array/patch antenna, study 83729
periodically arranged pass. dipoles line, fields 83737
photonic cryst. waveguides, directional couplers/de-couplers, simul./theory 127753
PIFA/small patch struct. for mobile phones, capacitive/inductive loading influence 83623
polyimide layer embedded microstrip lines for 3D MMICs/MIMICs on Si, coupling reduct. 102683
printed dipole radiating element for wide-scanning array appl. 83709
quadrifilar helix antenna with parasitic helical strips 105879
rect. dielec. waveguides directional coupler charact. 83496
rect. loops in rect. coaxial cavities, mutual coupling factor 91190
RF multilayer PCB layout, EM coupling, full-wave anal. 102806
separable dimens. subspace method for joint sig. freqs./DOAs/sens. mutual coupling estim. 107392
ship radiocommunication systs., EMC anal./meas. 74588
slot radiators on wedge, mutual admittance 83741
slotted cylindrical ring resonators based small four-pole filter, realisation 102559
smart antenna array calib. incl. amplit. and phase mismatch and mutual coupling 83754
soil decontamination, EM and thermally coupled fields calc. 88179
sources in chiral medium above soft/hard boundary, image theory 93994
space discretising time domain methods for num. modelling of EM coupling in EMC 83386
Square Kilometer Array project, finite array effects computation 86280
synthetic aperture radiometer, effect of mutual coupling between antenna elements on imaging and calib. *(Chinese)* 131892
transm. line contactless surge voltage waveform meas. method 77657
transm. line study, inhomog. multilayers in external EM field *(French)* 83446

electromagnetic coupling continued
triangular planar monopole antennas, EM coupling 128863
US flaw detect. by EM acoustic transducers, inverse flaw ident. 101627
WCDMA systs., indoor antennas meas. 83512
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626
wire segments in rect. cavity, EM coupling 105890
wireless terminals, antenna design for selection diversity 120054
xDSL systs., crosstalk ident. 108473
Si integrated inductors in 0.18 μm CMOS technol. for MMIC/RFICs 125777

electromagnetic devices
see also electromagnetic actuators; electromagnetic launchers; electromagnets
acoustic transducer, FEA 133377
actuator, correcting cct. design, attraction force increase 89013
anisotropic magnetostatic problems, coupled magnetoelastic finite element formulation 83145
ANN inverse mapping tech. applied to EM design 128703
combined EM focusing systs., differential alg. method for aberrations calc. 93975
coupling static converter with control loop/nonlin. EM devices 125220
cryst. filters for rect. waveguide design 102331
design tech. of mag. systs. using space mapping algm. 128706
EM induction spectrosc., buried objs. detect. and ident. 75390
EMAT, EM acoustic transducers, US pulse magnitude, FEM determ. 99094
epoxy resin adhesive samples, shear wave vel. meas., EM acoustic transducers appl. 99093
FEM for EM problems soln. *(Spanish)* 117610
field computation, conf., Milwaukee, WI, USA (June 2000) 124175
flat force-bal. EM press. sens. for harsh environ. 75476
flexible EM shock absorber 117641
flowmeter, primary transducer, meas. error 86488
flowmeter excitation coil CAD, 3D hybrid num. model 120729
flowmeters for open channels, 2D design 75428
GA, global optim. 128702
GA optim., universal param. config. 128697
generalized design optim. environ. 128699
HF inductive posn. sens., EM FEA 131873
hot strip mill runout table, EM force appl. 100346
hot strip steel, transform. imaging using mag. techs. 106508
in-mold EM stirring in continuous casting 100345
interval mathematics use in EM design 128704
magnetomechanical US transducers, sound fields, computer modelling 99095
Mars subsoil geophys. prospecting by TDEM 120690
multielectrode inductance flowmeter, mean flow vel. estim. 110062
multiobjective design optim. 93981
num. field computation, conf., Graz, Austria (Sept. 2000) 78387
optim. problems, combined evol. strategies & approx. techs. 128642
optim. proc., sensitivity inform., clustered neuro-fuzzy models 128701
optimisation with uncertain params./tolerances in design variables 117627
parameterized template optim. of EM devices 128698
Pareto evol. optim., diversity enhancement tech. 83159
PCB assembly, flow soldering equipt., lin. EM pump *(Japanese)* 78598
planar actuator, forces prod. investig. 123691
planar spiral-type microelectromagnetic dist. sens. develop. *(Japanese)* 97811
PM motor, coupled magnetoelastic finite element model 134086
polyphase EM devices, coupled cct.-field calc. 128723
power plant automation systs., elec. machines class. 123099
rem. optim., WWW-based tool 128705
road vehicle EM suspen. syst. using tubular LIM 124046
shock absorber for ground vehicles 93990
strong coupled multi-harmonic FEM EM device simul. package 83150
Tabu search for global optim. 128700
train mag. fluid-type semi-act. damper perform. improvement *(Japanese)* 113107
vel. sens., dyn. param. estim., indirect meas. approach 120727
Al sheet, de-stacking proc., EM separator device 128729

electromagnetic energy *see electromagnetic waves*

electromagnetic field theory
see also electromagnetic waves; electromagnetism
2D FDTD anal., wave eqn. 90199
2D flat periodic nonlin. reflector, charact. 117667
3D EM field problems, finite element & multigrid methods 83144
3D finite element EM anal., basis fns. *(Japanese)* 117606
ABC and appl. to 3D TLM SCN method *(Chinese)* 72404
adaptive FEA for EM with vector tetrahedra 128645
antenna technol. and applied EM, conf., Winnipeg, Man., Canada (2000) 78440
apertured ABCD opt. syst., flattened Gaussian beams, closed-form propag. expressions 93699
arbitrary speed diffr.-free pulses 128788
cellular nonlin. networks for minimization of functionals, appl. examples 91166
charged particle beam current monitoring 87084
closed spacecraft body, EM field levels prediction, stat. approach 88038
collinear vector pot. 105667
composite dielec., elec. field by curved surface charge method, elec. flux continuity *(Japanese)* 72162
computational electromagnetism, field and cct. theory 128637
computational EM modelling, stat. approach 83079
curvilinear tetrahedral elements innovative class 72152
cylindrical microlenses, EM anal. 71359
dielec. cylinder scatt. anal. using at. model 105706
dispersive medium, time domain finite element model 72154
distributed microwave cct. anal. using network methods 80239
eddy current testing, num. anal. by integral eqn. method 128684
elec. current sens. using EM tuning 120754
elec. pot./field generated by triangular surface charge, high-order charge dens. distrib. *(Japanese)* 83091
EM fields Poisson integrals soln., Laplacian 3D FEA/num. differentiation 128640
enhanced EM theory 83156
FDTD method, high order surface impedance boundary conditions 124774
FEM gradient-based optim. algm. 72157
finite integrat. tech., discrete energy conservation/related laws 83089
finite slab Gaussian light beam, finite-difference vector BPM 82730
first principles study 117611
fourth-order FDTD scheme for 3D EM field simul. 105671
Gaussian beam illum. spheroidal particle light scatt., spheroidal wave fns. 72340
ideal boundary conditions and generalized soft-and-hard surface 72218
IEEE antennas, propag. and EM theory, conf., Beijing, China (Aug. 2000) 67407

electromagnetic field theory continued
infinite perfect conducting nonlin. loaded circ. cylinder excitation calcs. 83
light field ang. momentum, Lie alg. symm. operators 117700
lin. composite materials, inverse homogenization problem, EM constitu props. 72155
Lorentz, L., EM fields, Coulomb gauge and H.A. Lorentz 93953
lossy bianisotropic media, conditions for param. dyadics 72167
low-k_1 lithog., 3D EM field simul. 92193
magnetoelec. systs., steady mag. fields, FE and BE modelling 72198
math. models and num. methods 128653
Maxwell's eqns. soln. 105668
method of moments/GTD anal. approach 83078
moving multipoles, EM fields 117607
MRTD anal., CDF biorthogonal wavelet expansion 105720
multilayer waveguiding photonic bandgap struct., very fast accurate mode 127740
multilayered media, Green's fns. in near-field region 72244
multilayered packages, modeling of field penetration through planes 89879
multilevel finite element soln., preconditioner 128652
multiresolution near-field to near-field transform for multi-region FDTD sche 93960
multiwave Cherenkov generators, partitioned, freq. spectrum, numer. a 125973
near-field sources, modeling in FDTD method 117613
non-orthogonal FDTD algm., time step determ. 68096
nonlin. EM field comput., hybrid tech., triangle search method 83143
nonlin. media EM fields eval. using approxn. analytic method 117614
omega- and chiroferrites, constitutive tensors calc. 70496
optimal interpolation/extrapolation algm. 128654
oval-core GRIN fiber coupling, highly ellipt. field LD 127703
partially coherent EM fields, radiation efficiency 83082
partly lossy chiral media, EM BVP 93961
permeable conducting hollow sphere, transient current distrib. EM field 83
polygonal region, EM field 117735
Post constraints, comments 83099
quantum holographic teleportation, 2D opt. image reconstuction 94212
reson. cavity chain, dispersion rel. and field distrib. *(Chinese)* 117728
rot. scale-invariant EM fields 105658
scalar Hertz pot., field anal., nonhomogeneous uniaxial dielec.-mag. medi 83093
simple bodies made of neg. permeab./permitt. materials, electrodynamic pr 72246
slightly rough conducting surface, vert. polarized Gaussian beam EM s 94048
sparse symmetric lin. systs. anal. 128688
Spice-like analog simulator extension with time-domain full-wave field so 90632
static Green's fn., sing. removal 83098
teaching, undergraduate level 83094
telecomm. cable, overhead ground wire effect on lightning-induced volta 74503
thin shell syst. submitted to HF source field, modelling 128644
thin wire and plate, 3D modeling using FEM and elec. cct. eqn. 125835
transient EM wave propag., comment 117655
transient EM wave propag., nonlocal/spontaneous material responses, repl comment 117656
transm. line study, inhomog. multilayers in external EM field *(French)* 83
transverse flux induction heating, thermal field, EM forces 113148
uniaxial bianisotropic media, cylind. vector wave fn. represent. of Gree dyadics 72156
uniaxial bianisotropic media, Green's dyadics eigenfunction expansion 117
wavelet transform appl. to eigenvalue problems 128646
He-Ne laser beam focusing, beam-shape coeffs., generalized Lorenz-Mie the 71877

electromagnetic fields
see also electromagnetic field theory
2D telegraphist eqns. for anal. of circ. microstrip resonators 94094
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gauss beam algm. 117647
3 mm quasioptical resonator, EM field and energy distrib., Matlab software pa age anal. *(Chinese)* 105403
3-phase 5-limb transformer core, optimal design, simulated annealing al *(Chinese)* 99712
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chine* 105695
3D EM field problems, finite element & multigrid methods 83144
3D induction heating EM/thermal fields anal. *(English)* 124101
aerial multi-conductor transm. lines with branch, switching transient EM f 134289
anal., reflective and rot. symm. model, simplification method 128649
anal. continuation from real to complex spaces 72274
antenna, min. scatt. field calc. from pattern 83699
antenna array for azimuthal angle-of-arrival meas., design/eval. 83748
antenna/RCS anal. involving large bodies, extrapolation tech. 72470
auxiliary fns. 83076
beam-prod. fields transient decay in thin-walled tubes 72189
Beltrami field phasors, 6×6 lin. constitutive dyadics eigenvectors 105659
bianisotropic media, anal. investig. 117665
biological effects, health and safety, risk assess. 87941
BLDCM of disc type, num. simul. by coupling of mag. and elec. eqns. *(Chine* 77885
brushless doubly-fed machines, EM design features *(Chinese)* 112466
Bulgarian Navy EMC provision, E3 stds. harmonization 83418
cage-IM, no-load losses, meas. methods 112525
cage-IM, no-load losses meas. methods 77882
cellular telephones, operation zones in hospital hallways 94057
circ. cylindrical waveguide, uniaxial anisotropic medium 94084
circ. loop antenna above (un)grounded multi-layered chiral slabs, anal. 725
coherent scatt. from random medium layer with rough boundaries 94023
complex mediums characterisation, orthonormal beams appl. 105670
complex natural resons. meas. of targets in free space/lossy media 83256
complex random media in random fields, stat. charactn. 105669
composite scatt. of targets/environ. 72272
computation, conf., Milwaukee, WI, USA (June 2000) 124175
concentric conducting spherical cavity, internal EM fields 72429
conductor corner, coarseness error and wall proc., FDTD method *(Japan* 105825
conductor corner, wall proc., FDTD method, cavity resonator *(Japan* 105826

romagnetic fields continued
conical slot antenna excitation 117772
connector behaviour anal. in terms of EMC 80475
cuboidal enclosure with conducting planes or PCBs, model 72375
curvilinear tetrahedral elements innovative class 72152
cylindrical cavity with transverse annular slot/planar dielec. sheet, hybrid modes anal. 91212
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
depolarization dyadics of lossless gyrotropic media, improper integrals/Maxwell Garnett formalism 104504
direction finding, accuracy increase by three-antenna interferometer 120483
disk MHD generator perform., applied RF EM field effect *(Japanese)* 123834
distrib. between finite/infinite parallel strip arrays 94035
double-sided LIM with rotary solid steel-secondary disc 88769
dyadic Green's fn. 72170
dyadic Green's fns. for dielec. spheroid, spheroidal vector wave eigenfunction expansion 72158
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
elec. arc furnaces, EM field effects, 3D num. modeling 89446
elec. bicycle BLDCM, act. EM torque harmonics compensation 123959
elec. rly. systs., LEMP-like effects modelling 78313
elec. short two-conductor transm. line driven by random plane wave field, response probabilistic model 72406
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
electromagnet, finite mag. cct., plane quasi-steady EM fields, FEM 72195
ELF EM radiations and intrinsic EM phenom., human health issues 87947
ELF sources enclosed by nonlin. ferromag. pipe, EM fields 72171
ellipt. torus knots, props. 83086
EM far-region radiation with vert. M1 in sea 83327
EM field simul. tool with multiple time domain engines 93955
EM fields in the operating room, evoked pot. recordings disruption 98599
EM forming procs., total mag. force calc. 105662
EM vector sens., source separation and tracking 107397
EMC assess. using TLM method 83429
EMC std. guidelines, time-domain MoM simulator validation 83424
EMC test chamber characts., amp. RF power requirement determ. 83376
EMF stds., neg. human health effects 87942
energy flux unit, primary meas. std. 86382
energy-efficient lighting, EM field levels, med. device interf. 133149
environ., current status *(Japanese)* 105807
error eval. in EM field modeling in human body at low freqs. 98765
ESD, EM radiation field 83103
ESD, radiated mag. fields meas. using field sens. 75829
ESD transient EM fields, ultra wide band test syst. 87375
European EMF legislation standardisation 87943
EUV mask, absorber props., EM simul. 126542
far-field bistatic scatt. cross sect. prediction using spherical/cylindrical/planar scanned near-field data 86155
far-field meas. for mobile phones with small no. of meas. locations 132141
faulted overhead power lines, buried pipelines interf. calcs. 77438
FDTD anal. of stacked microstrip antenna with high gain 94167
FEM anal., automatic quadrilateral mesh generation using dyn. bubble syst. 128647
field strength in elec. large building, pseudo-spectral time-domain algm. *(Chinese)* 72307
forward-boundary-integral/parab.-wave-eqn. propag. models comparison 72230
gas discharge plasma, distributed generator, ring resonator 80550
Green's dyadic fns. for planar stratified bianisotropic media, unbounded/scatt. field representations 105712
Green fns./polynomial operators for problems soln. 72165
GSM 900/1800 handset terminals, built-in antennas, near-field influence 87940
GSM base stations, near EM field levels calc./meas. 85612
gyromagnetic media/devices design/research, EMC/ecology problems 83396
H-polarized wave scatt. by penetrable polygonal cylinder 128748
Helmholtz determinant operator for bianisotropic media, field decomp./factorization 72159
HF EM field coupling to long terminated lines 72373
high-impulse voltage measuring systs., num. EM field anal. 86900
HIRF penetration through apertures, FDTD vs. meas. 105791
HTSC waveguide, microwave propag. 127539
human body-power freq. field interacts., modeling accuracy 133080
human EM field exposure limitation regulations, overview 87945
human head temp. rise for cellular phones, peak SARs prescribed in safety guidelines 111193
human health depend. on geomag. activity 87946
human health hazards from EM energy emitted by ELF commun. systs. *(Polish)* 133070
HV substations, EMI monitoring 78081
hybrid moment method-PO method improvement, PO operator eval. 128655
ICs RFI suscept., test procedures crit. assess. 72385
IM end-rings EM field anal. approach *(Japanese)* 77872
IM losses calc. using nonlin. time-stepping FEM 123417
incremental length diffr. coeffs. for arbitrary cylindrical scatterers 93992
induction heating, ferromag. plate, equiv. excitation length 89448
induction heating thermal calcs. accuracy, input material data influence 78338
induction machine, liq.-metal rotor operation 124137
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
inhomog. regions, Poisson's eqn. soln. 83080
inhomogenous anisotropic media interact., FDTD anal. 83197
intensification at media interface by conc. beam 83209
interconnects, EM anal., FDTD method 92457
irregular tetrahedra for FEA in EM 128648
Japanese EM fields human exposure limitation regulations 78548
layered anisotropic media, electrodynamic problems, Green tensor fns. 117604
leaky covered microstrip line, spurious radiation calc. 94104
leaky enclosures, estim. and num. simul. of EM field 93958
leaky two-layer stripline, voltage defn. consistent with, charact. impedance 94105
lightning indirect effects modelling for transm. line protection design 88475
lightning pulse current models, EM field comparison 128797
lightning return stroke model, EMP pulse calcs., overhead line protection *(Japanese)* 112174
lightning strike dist. determ., pulse EM method 122647
lightning strike dist. determ. algm. *(Russian)* 99391
lin. elec. motor types, elec. perform. anal. comparison 123523
line elec. current source excited multiple cylindrically curved thin screens, response anal. 72261

electromagnetic fields continued
loop-coupled shielded enclosures with apertures, EM field modelling 124383
lossy edge, EM field and elec. current 93951
LV power installations, indirect lightning flash induced overvoltage 77334
LV power-installation networks, lightning-induced voltages eval. 111661
M-shaped electromagnets, forward-pass incoming armature, dyn. triggering 72196
mag.-insulated power transm. lines, effective impedance calcs. 88440
Maxwell's eqns., geometric aspects of simplicial discretization 83090
med. equipt., electronic, EMI by radio waves coming from outside the hospital 122446
metal crack detect./sizing, open-ended waveguide, EM field distrib. 101557
metallic shields, study of penetration of longit. component of EM fields 94069
metrology, uncertainty sources *(Polish)* 121157
MF and HF transmitting antennas, EM fields investig. 97055
microstrip antenna design/anal., transverse transm. line method appl. 83574
microstrip line, crosstalk, finite element model *(Japanese)* 114931
microstrip struct. with complex media, loss inclusion via dyadic Green's fn. modifs. 102497
microwave heating appls., EM modelling 89447
microwave heating problems, coupled TLM-thermal anal. in time domain 102754
microwave radiometric systs., Volosyuk-FT for optimal radio brightness image reconstruction 73284
mixed-FEM and BEM coupling for 2D eddy current problem 117608
mobile systs., radio channel investigs. 74864
mobile telephone three-element array antenna with triple-freq. operation 105975
modal scatt. at radiating apertures, near field anal. 128756
mode-stirred chamber, EM field distrib. meas. tech. 72351
moving multipoles, EM fields 117607
moving wire-antenna radiation in plane interface presence 72534
multi-gridding tech. for TLM method using symm. super-condensed node 105663
multipair bal. cables, double twisted conductors, EM radiation 85456
MV switchgear LF emissions eval. studies 134265
Nat. radio sci. conf., Mansoura, Egypt (March 2001) 124179
natural freq. extraction from multiple freq. response sample sets using fitting error 94022
naval ships, upper deck EMC anal. for freqs. above 1 GHz 88253
near-field opt. recording probe head, EM field distrib., FDTD anal. 82057
near-field/aperture-field transform., equiv. mag. currents, CGFFT algm. *(Chinese)* 105661
nonionizing radiation protection, Swiss regulation 78537
nonlin. media EM fields eval. using approxn. analytic method 117614
open delta winding vibr. motor for cellular phone appls. 134099
optim. problems, combined evol. strategies & approx. techs. 128642
pass. intermodulation scatt., time-domain PO heuristic approach 72264
PC transm. lines, excited near fields mysterious behavior, nonphysical soln. 80164
PCB metallic enclosure EM field penetration eval. software 83368
PCBs with parallel trace config., FDTD predict. of radiated emissions 69295
PEC large scatt. problems using asymptotic phasefront extraction, efficient MoM 72231
periodical arrays with small nonreciprocal inclusions, props. 72253
permitt. profile retrieval 127138
phase shift mask, EM field simulator 115749
phase-quadrature fields in enclosure, stat. depend. 93957
phenom. and standardisation implications overview 72384
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
plane wave scatt. by doubly periodic gaps/cracks 72252
PM based device, M1 model 116478
PM lin. generator EM struct., 2D FEM anal. 88770
PM lin. sync. motor, 3D EM field anal. 123513
PMSM, 3-phase transformer, coupled transient EM-thermal FEM anal. 123358
PO approx., line integral representation for diffracted fields 117674
Polish EM field human exposure limitation regulations 78549
Polish EM field metrology, effect of new power regulations *(Polish)* 131790
power converter loop near field radiation calc. method 77991
power line installations, EM fields and EMI aspects *(German)* 72349
power lines, EM field strength, radiated and near-fields *(German)* 88457
precision EM field & dipole antenna stds. develop., OATS *(Japanese)* 83443
pulsed induction accelerator EM launcher, cct. theory-based model 72206
pure aluminum stabilized supercond. magnet, EM/thermal modelling 71056
radiation hazards assess. in residential areas 83401
RCS modeling, data compression, comparative study 86144
real-time EM field anal. syst. for engng. education 78493
recovery of field over sphere from data over spiral 93954
rect. microstrip radiator, near field 105849
rect. waveguide jns. containing cylindrical posts, modeling 114939
rect. waveguide with pseudochiral Ω slab, scatt. 72431
resonators, freq. domain anal. with finite integrat. tech. 83492
return stroke current ident., inverse procedure 72169
RF field uniformity improvement of helical surface coil 72209
rot. machines, time-stepping FE anal., converg. characts. accel. 133915
rot. machines EM field anal. using FEM *(Japanese)* 77815
rotative two wire transm. line, response anal. 83452
salient-pole hydro generator stator temp. field calc. *(Chinese)* 112346
SAR image form., $N^2 \log N$ back-projection algm. 109238
scatt. by obj. in relativistic translational motion 72242
scatt. by penetrable bodies, pot. integral eqns. method 93993
scatt. from PEC target above or buried in lossy half space, fast multipole method 83237
secondary lightning protection syst., EM field near lightning channel 88480
sens. transduction, model for biological detect. of EM fields 98750
shielding devices, field reduction props., modulated scatt. meas. 83372
sigs. penetration into transparent inhomog. time-varying medium 127758
simul., conformal PML-FDTD schemes, dyn. stabil. study 83084
slot antenna radiation under semi-infinite dielec. layer 83576
slotline sens. for pulse EM field meas. 83380
soil decontamination, EM and thermally coupled fields calc. 88179
source-sample react. forces meas., EM NDE tech. 101572
sources in chiral medium above soft/hard boundary, image theory 93994
standardisation/regulation in Germany 87944
stationary induction heating of flat charges, temp. field 78339
stochastic EM field determ., sens. systs. 109536
straight wires, normalized current distrib./scatt. field pattern, closed-form soln. 128738
stroked overhead line lightning channel incoming/refl. waves modelling 88476
structural cabling syst. lightning overvoltage studies 77554

electromagnetic fields continued
tall tower lightning-return strokes, current and EM fields 105795
tapered transm. lines, charactn. using contour integral approach 72395
telecomm. DC/DC power converter, EM field immunity testing 108466
telecomm. DC/DC power convertor modules, EMI test facility 108467
TEM taper cell, transm. charact. *(Chinese)* 72256
TEM-wave transit. devices synthesis, geom. opt. Maxwell eqns. 83539
three-phase AC elec. arc furnaces, EM/thermal fields modelling 113149
three-phase two-speed RA elevator IM, EM procs. modelling 124006
time depend. inhomog. elec. large opt. waveguide, interpolating wavelet Galerkin model 93139
time domain methods, scale adaptive time steps in modified FDTD method 93959
time domain TLM field models, lumped and distributed device embedding techs. 105837
TLM, FDTD and Haar wavelet MRTD algms. for EM simul. 93956
TORUS-type axial-flux surface-mounted PM disc machine design/anal. 123303
transient EM meas., CISAM EMP facilities, civ./MIL-STD 83425
transm. line study, inhomog. multilayers in external EM field *(French)* 83446
TTL method applied to finline resonators 102567
two-channel polarizing device for radiating syst. 114946
two-phase mutually-coupled reluctance machines, dyn. simul. model 133965
undergraduate EM education, Maple V-based symbolic computation 78514
very weak EM fields meas., induction sens. noise params. anal. 83379
visualization using VRML std. 128650
VSTL FDTD-based power syst. surge anal. program *(Japanese)* 111676
waveguide with anisotropic insert, calc. 80171
waveguides, freq. domain anal. with finite integrat. tech. 83492
wide angle antenna perform. meas. using small planar scanners 83525
wideband services on copper cables, EM radiation calc. 85455
wideband target signatures, spatial/temporal covariance props. 86129
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626
wiring harness interf. suscept., probabilistic model 83364
X-wave refl./transm. on planar air-dielec. interface, spectral anal. 83258
X-waves refl./transm. in planar layered media, pulsed plane wave representation 83257
CO_2:N_2:He gas laser mixture, DC plasma/HF fields interacts. 105133

electromagnetic forces
see also magnetic forces
AC levitation/traction systs., fan-type equiv. ccts. 123976
AC supercond. coil windings vibr., AE studies 71010
asynchronous lin. short stator machine, rly. appls. 123955
bulk supercond. elec. machine mag. bearings expts. 77811
DC electromagnet switch transient proc., parameters calc. *(Russian)* 93983
DC lin. channel MHD propulsor, coupled field anal. 123993
ECT, DC current therapy for tumor compression, EM force distrib. 132998
electrodynamic systs., massive conductors, EM forces, fanout equiv. ccts. 112093
hot strip mill runout table, EM force appl. 100346
hybrid EM levitation syst. zero power levitation control scheme *(Korean)* 123951
in-mold EM stirring in continuous casting 100345
induction furnaces, EM force excitation, structural-dyn. behavior 134643
interior PM-type sync. motor link design optimisation 112487
KSTAR supercond. magnet struct. design 71037
LIM online perform. monitoring using virtual instrumentation syst. *(Korean)* 123518
lossless dielec. coated conductor, electrostatic Coulomb force calc. 83136
planar actuator, forces prod. investig. 123691
radial act. mag. bearing, anal. of lab. implement. *(Slovenian)* 70565
rail launcher devices with sliding contacts, EM anal. 83185
Roebel bars in slots, vol. forces at slot boundary, EM orig. 123336
single-phase power transformer windings, inrush current forces 134119
SMES, force-bal. coil design 78197
SMES coil, stabil. improvement, mech. losses reduction 78195
thin-electrode rapid prod. using single discharge machining *(Japanese)* 134681
three-phase thyristor bridge reson. switch *(Japanese)* 82431
transformer/reactor surge current during short-ccts. 69283
transverse flux induction heating, thermal field, EM forces 113148
transverse flux lin. switched-reluctance motor, 3D force calcs. 112557
vortex flow energy dissipation TMD devices develop. *(Chinese)* 105688

electromagnetic induction
see also inductance; magnetic forces
3D conducting struct., stationary phase method for radiation anal. 83506
1100 kV overhead line, contactless surge meas., closed loops 88461
1100 kV overhead line, surge waveform, contactless meas. *(Japanese)* 112113
aeromagnetic crossover misfits, EM induction, geological inform. 72178
array imaging of buried objs. 77109
B-field response, induction coil sens. meas., transient EM method bandwidth 117621
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
borehole induction meas., hybrid FFHT-EBA method, inverse algm. 88104
buried objs. modelling/estim., EM induction sens. 73124
buried target, wideband EMI response, model 88111
buried utility lines location, end-effector mounted pulse induction sens. 86495
circ. impedance cylinder with anisotropic surface impedance, long. El excitation 117671
contactless energy transm. for EV, power syst. evol. 78303
contactless power conversion for motors, HF transformer model 123498
contactless power/inform. transm. scheme 133581
coupling to conducting strip through parallel-plate waveguide narrow slit 72179
crack meas. by eddy-currents, probe/inducer effects 114543
deep Earth detect. 121223
direct energy supply from transm. lines using mag. coupling 77435
elec. machines, mag. field anal., Enokizono-Soda modeling *(Japanese)* 105660
elec. short two-conductor transm. line driven by random plane wave field, response probabilistic model 72406
ELF EM radiations and intrinsic EM phenom., human health issues 87947
EM field excited rotative two wire transm. line, response anal. 83452
EMI mine sens., Bayesian optimal class. 73122
faulted overhead power lines, buried pipelines interf. calcs. 77438
ferromag. substr. with nonmag. coating, thickness meas., secondary field calc. 79480
finite length crossing wires, induced voltage anal. 99369
flat sprays induction charging for space charge generation 128710
flowmeter, primary transducer, meas. error 86488
fluoresc. lamp ballast, inverter, inductively coupled preheating ccts. 134620
flux-linkage polarity convention proposal 93963

electromagnetic induction continued
forward-boundary-integral/parab.-wave-eqn. propag. models comparison 72
freq. extrapolation for computing antenna-platform radiation problems 1058
GEM-3 multifreq. EM induction data, UXO discrim. capability 88228
geoelectromagnetic disturbances, effects on technol. systs. 83440
geophys., EM 3D modelling, nonlin. inversion 122566
geophys., EM exploration, quasi-anal. approx. 122585
geophys., EM induction, nonlin. inverse methods 88115
geophys., EM induction inverse scatt., 2D profiling 88114
geophys. exploration, realizable resistive limit 122576
geophys. exploration, very early time, 3D imaging 88113
GIS earthing switch induced current switching studies 112706
grounding elec. in lightning current conditions, perform. eval. 133777
H-polarized plane wave incidence, reson. scatt. from slit coupled cylindric eccentric impedance cavity 72239
head phantom, induced EM field reconstruction, microwave imaging 13264
HF AC cable, coaxial shells, mag. induction, current-dens. distrib. 123013
HF EM field coupling to long terminated lines 72373
human body, induced currents, power syst. elec./mag. fields 98747
human body-power freq. field interacts., modeling accuracy 133080
human head, mobile phone emissions, absorpt. calcs. 133069
inductive pass. RFID technol., product lifecycle mgt. 109034
knots/symm./scatt. 117646
land mine detect. and class., stat. sig. proc. 73123
land mines detect., low-metallic-content, EMI data anal. 73121
landmine detect., EM induction imaging, modelling 77018
landmine detect., EM induction sens., human auditory discrim. 77113
landmine detect., multimode subsurface sens. & imaging 88226
landmine detect., phase-angle-based EM induction obj. discrim. 77017
landmine detect., time-domain metal detector & GPR data fusion 77060
landmine detect. & class., EMI sens., non-Gaussian noise environ. 77012
landmine detect. sens. modelling, fusion & discounting, D-S theory 77019
landmine/UXO detect., GPR/EMI/magnetometer sens. fusion 77020
LCR distributed self-oscillator inductively coupled with transm.-line sect., mo 114657
leadless format devices for EMI suppression 94062
LF meas. inhomog. mag. fields in human body, induced current dens. deter 76720
line elec. current source excited multiple cylindrically curved thin scree response anal. 72261
logging, 3D FEA, background fields effects 122600
LV cct. breaker, arc motion, mag. camera obs. 89000
LV distrib. networks, lightning surge protective devices 133599
LV power installations, indirect lightning flash induced overvoltage 77334
magneto-opt./eddy current imaging NDT, FEM model 101574
mech. power transm., induced eddy currents, PM machines 134466
metal detector, processed food foreign obj., SRPM method 109511
metal products flaw depth meas., EM induction & elec. pot. 101560
metal surface cracks detect. using small antennas, EM field change 101559
microstrip antennas, scatt. anal., charact. modes appl. 72660
multi-inform. array inversion using variational Born iter. method 76845
multisensor towed array detect. syst., buried unexploded ordnance 88231
noncontact energy transfer syst. using immittance converter 123002
oil containers, lightning strike, current distrib., nonlin. ground impedan 133793
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
ordnance detect. & discrim. at Fort Ord range, instrum. eval. 88229
pass. EM inductor, nonlin. hist.-depend. mag. behavior effects 128693
PEC large scatt. problems using asymptotic phasefront extraction, efficient Mo 72231
pipeline fluid heating using PWM invertor-eddy current dual pack heater 1240
power converter loop near field radiation calc. method 77991
pulsed induction accelerator EM launcher, cct. theory-based model 72206
PWM inverter drives, motor bearing currents reduction studies 123616
quasistatic mag. hysteresis, modeling with feed-forward neural networks 818
real-time low-cost 6D-tracker, algm. design/prototype 105681
reverse-biased pnipn semicond. struct., current pulses internal amplif. modeli 115374
shielded coil inductance 83152
source-sample react. forces meas., EM NDE tech. 101572
spectrosc., buried objs. detect. and ident. 75390
steel, sheet, CO_2 laser CW radiation surface treatment 83051
subsurface digital multifreq. EM cond. imaging syst. 84166
subsurface discrim. using EM induction sens., eigenvalue distrib. 88227
subsurface targets, time-domain EM induction, algms. 88200
TE transient scatt. from cylinder above infinite periodic surface, decomp. meth 72312
tomography, indust. and med. appls. 110666
total mag. force on PM, num. calc., equiv. source methods 83149
unexploded ordnance, EM induction discrim., review 88265
unexploded ordnance, EM induction signatures, MTADS array 88264
unexploded ordnance, wideband freq.-domain EM induction 88266
vac. arc extinguishing chambers, breaking ability eval. *(Russian)* 123672
vector/scalar pot., general expressions 117622
very weak EM fields meas., induction sens. noise params. anal. 83379
wave scatt. from imperfectly conducting circ. disc, full wave anal. 105716
wide bandwidth time-domain EM sens. for metal target classif. 86490
Fe-Si-Mn-S elec. steel sheet, mag. props., slab reheating 104495
FeSi single-oriented elec. steel, init. recrystn. texture, mag. induction 127297
Si substr., VLSI interconnects, distributed inductance/resist. per-unit-length fo mulas 126509

electromagnetic interference
see also electromagnetic pulse; radiofrequency interference; telephone inter ference; television interference
1D ATR, parametric HRR signature modeling 75154
2.2 kW PWM rectifier/inverter CMV suppression 134210
2D inter-chip opt. interconnect, opt. I/O 93453
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
95/54/EC Automotive EMC Directive, appl. guidelines 134580
ABS resin/carbon fibers composites, resist., EMI shielding coeff. 72366
AC motor ASDs, PWM operation adverse effects elimination 134475
AC regulator input PF improvement by multiplexed asymmetrical phase-contro 101752
act. power filters for power quality improvement, EMI filtering 112084
ANSI C63.5/ARP958 methods of emission-antennas calib. for EMC 120630
aperiodic PWM boost converters, design rules 78040
ATR systs., HRR data, interfering scatterers mastering 75157
automotive microelectronic sens., EMC/EMI limitations 124055
bent transm. line EM radiation studies 83367

romagnetic interference continued
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
looming mill, high-speed milling, automated control syst. *(Russian)* 85198
oost PFC cct., thermal behavior/EMI noise levels trade-off 134227
uck-forward DC-DC converter with smooth input current 78028
uried objs. modelling/estim., EM induction sens. 73124
-class ultra fast recovery diodes for high speed switching appls. 70029
able EM shielding, primary/secondary params. 83359
ardiac pacemaker, EMI shielding material effectiveness eval. *(Japanese)* 133055
CM boost converters, rectifier reverse-recovery problem alleviation 123598
Chinese power quality anal. and develop. *(Chinese)* 77355
hopper charger equipt. control cct., EMI anal. 88837
iv.-mil. EMC standardization, NATO Working Group efforts 72382
lock sig., chaos-based FM, EMI reduction 106015
losed spacecraft body, EM field levels prediction, stat. approach 88038
luster electronic equipt., EMC eval. *(Chinese)* 105784
oherent sig. proc. syst. optim. 130088
ommercial equipt. EMC risk anal. in mil. environ. 83419
ommon mode effective power on metallic lines, reduction using thin metal plate *(Japanese)* 105801
ommutator motors, minimizing influ. of current commutation on EM environ. *(Slovenian)* 123278
ompact intell. IGBT power module develop. 70138
omplex cable systs. anal. using EM topol. 80467
onducting polymers, microelectronics appls., review 81409
onnector behaviour anal. in terms of EMC 80475
ontrol door gasket develop., door closure sound tuning 105788
Cool Shield EMI shielding with thermal mgt. 105815
coupled microstrip lines far-end crosstalk reduction method 72386
crit. electronic automotive systs., high-intens. radiated field hazards 134581
crit. mode boost PFC converter, input current eval. 88827
current waveform, detect. through perturbing instants meas. 105779
cw LD driver, fast overcurrent protection syst. 93611
DC-DC converter, PCB mounting *(Italian)* 112638
densely-packed random wire bundles crosstalk prediction model 83365
desk-type contactless power station syst., perform. charact. *(Japanese)* 101765
diagnostic procedure for EMI from high-speed routing between power and ground planes 102810
digital IC package, voltage/current distribs. estim. 70245
diode laser module, plastic material, EM shielding 117210
discharge lamp HF electronic ballasts, SMPS harmonic reduction topol. *(Spanish)* 89432
domestic main wiring, power-line commun., radiated emission 74510
dual stripline params. for multilayer PCB design 125650
dual-voltage automotive elec. syst., std. EMI impulses adaptation 100311
electrified rly. track cct., impulsive interf. suppression 78312
electronic systs. design for EM terrorism protection 83384
ELF EM radiations and intrinsic EM phenom., human health issues 87947
EMC, conf., Wroclaw, Poland (June 2000) 67408
EMC challenges in new millennium 72352
EMC test chamber charact., amp. RF power requirement determ. 83376
EMC test labs, user survival guide 94054
EMC/EMI appls., circ. wire mesh monopole antennas 72528
emissions rules, regulations, and options 83445
energy-efficient lighting, EM field levels, med. device interf. 133149
environ., current status *(Japanese)* 105807
ESD, radiated mag. fields meas. using field sens. 75829
ESD-EMI induced IC proc. interruptions 103966
EUROTEM-Antenna set-up for fully compliant emission/immunity testing 83374
EV AC motor drive soft-switching inverters comparison 134203
faulted overhead power lines, buried pipelines interf. calcs. 77438
ferrite core, load effect, parallel 2-wire lines, equiv. cct. model *(Japanese)* 70546
filter design, LabVIEW computerized syst. 128804
flight control syst. reconfig., actuator failure, fault tolerance 122520
fluoresc. lamp electronic ballast using half-bridge reson. invertor 89440
force-controlled rectifier systs. common mode disturbances 77992
gate controlled devices, snubberless operation, gate drive tech. 125221
GTEM cell, TEM-mode E-field uniformity 117720
gyromagnetic media/devices design/research, EMC/ecology problems 83396
hard/soft switched PWM invertors, conducted EMI emissions modelling 123635
HCMOS proc. microcontroller operation, primary EM emission sources 79919
HDI PCB technol., influence on sig. integrity 124368
HF electronic ballast providing line freq. lamp current 124073
high dens., high speed PCB design, sig. integrity problem 80493
high-power EM, suscept. testing strategies 83439
HIRF penetration through apertures, FDTD vs. meas. 105791
household elec. appliance, PWM inverter, conducted EMI 134663
human-body capacitance calc. by surface charge method *(Japanese)* 128667
HV substations, EMI monitoring 78081
HV surge protection charact. of special-isolation transformer 112169
hysteresis-mode boost-converter input stages, high PF AC-fed power supplies 114600
IM drives, PWM inverter-fed, HF conducted EMI modelling 123925
immunity diagnosis for PCBs using bulk current inject. test *(Japanese)* 91450
immunity testing cell using rect. resonator with conducting channel plate and capacitive gap *(Japanese)* 105800
implantable cardioverter defibrillators, EMI 87905
implanted cardiac pacemakers, elec. field interf. threshold 76667
indust./traction machine drives, power electronics technol. 100275
instrumentation amps. protection 79573
insulator PD VHF-wideband EM noise studies 112120
intentional EMI, threats and protections 83438
intentional EMI mitigation requirements 83383
interf. suppression in distributed intell. control syst. 78736
internally grounded feedthrough capacitor, reliab./appls. 115068
isolated output coupled inductor SEPIC power converter design procedure 88859
L-band EMI/sig. meas., pass. strip biconical antennas 72530
leadless format devices for EMI suppression 94062
LF shielding efficiency, anal. and num. simul. 128799
LV distrib. syst. power line carrier approaches, EMC problems 85453
LV ground-fault indicators operation, ASD effect 124147
mag. related EMC/EMI, VLF fields biomag. *(Japanese)* 83354
mag. storm indicators, natural mag. fields registration instrums. 83378
maritime EMC and internat. community 83432
microelectronics 3D design/packaging, EMC-oriented 126934
microstrip ring struct. using air-gap control, reson. behavior, superstrate effects compensation 69078

electromagnetic interference continued
microwave tomographic imaging techs. for indust. procs. 121165
mitigation, dual-bridge inverter, IM 123458
Mitsubishi M16C/62 16-bit μCs with DINOR flash-on chip *(Spanish)* 102222
mobile sync. generators, mech. motion-induced EMI 133970
μP, high-speed, heat sink, grounding method 114789
μP chip-level packaging, syst. level view 68815
μP packages, thermal implications of increased device functionality 90958
MV power lines, nonionizing radiation, Slovenian environ. legislation 133751
MV switchgear LF emissions eval. studies 134265
naval platforms, microwave EMI modelling, Mutual Interference Simulation Tool 83423
naval ships bulkhead shielding eval., NATO stds. appl. 83427
OATS antenna factors for small anechoic chambers 128803
opt. transceiver modules, radiated emission/immunity charact. eval. 72387
pacemaker, QRS detect., time lagged ANN 98716
parallel double layer screen, interf. coupling 85448
pass. PCB radiation suscept. modeling, complex images method 94056
PCB design level, EMI vs. IC package technol. 125873
PCB inductive crosstalk reduction by layout techs. 69303
PCB layout, crosstalk prediction model 102805
PCB metallic enclosure EM field penetration eval. software 83368
PCB radiation suppression using mag. absorber *(Japanese)* 125869
PD meas., periodic interf. rejection, direct trap wave filter *(Chinese)* 86901
phenom. and standardisation implications overview 72384
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
polypyrrole coated fabric polymer complexes, charge transport, EMI shielding *(Korean)* 83355
power conversion syst., harmonics, EMI, EMC, time-freq. anal. *(Japanese)* 99808
power converter loop near field radiation calc. method 77991
power converters, conducted EMI minimisation, stray inductance minimisation 88839
power electronic converter anal., state variable approach 68581
power electronics equipt., EM environ. impact, EMI, EMC 99357
power line commun., EMI, EMC, regulatory authority's eval. 74511
power line installations, EM fields and EMI aspects *(German)* 72349
power quality improvement, EMI filters 112085
power syst. protection, microcomputer protection equipt., interf., anti-interf. measures *(Chinese)* 77476
PV solar elec. generators, DC output arc discharges *(German)* 133903
PWM DC-to-DC converters with random-switching control, LF noise 114617
PWM inverter-fed IM drives, conducted EMI prediction 134048
PWM invertor-fed AC motor drives, HF model for EMC anal. 134453
PWM VSI, CMV reduction, act. canceling/compensating ccts. 123566
radiated emission meas., TEM cell, GTEM cell, loop antennas 83426
radiated emission source location accuracy, CISPR emission meas. syst. 105785
radiated emission source visualization based on CISPR meas. syst. *(Japanese)* 72379
radio transmitter, adjacent channel transient power meas., wavelets 75288
rejection filter optimisation during repetition period wobbling 130087
resist. welding machines, power quality and EM emissions 78363
rly. line, combined booster/autotransformer feeding syst., Sweden *(German)* 78285
Rohde & Schwarz's ESPI precompliance test receiver 131841
Rohde and Schwarz test cells, precompliance testing 72369
SAW sens., ident., design rules 81760
semi-anechoic chamber BGF facility for EMI/EMC meas., latest develops. 83375
shielding charact. of opt.-fiber feedthroughs 72377
shielding gaskets, automated installation 83390
shielding-enclosure eval. 105792
sig. integrity anal. in electronics design, next-generation systs. 124294
sig. proc./source ident., wavelet packet-based tech. 72374
signatures detect. of mines, timers, and fuses 72347
slotline sens. for pulse EM field meas. 83380
SMPS, power converters, EM energy propag. 99742
SMPS conducted EMI, simul. and anal. *(Korean)* 123585
SMPS cost-effective EMC-conforming design 88815
software-based error detect. and correction techs. for embedded systs. 79907
structural cabling syst. lightning overvoltage studies 77554
substation equipt., HV network switching, conducted immunity requirements 134287
substation HV equipt. state diagnosis, HF EM noise meas. 78082
substations, EMC assurance, EM disturbances mitigation 78083
switching power converters, EMI effects 134253
switching power supply, common-mode noise, propag. model *(Japanese)* 68582
TDMA cellular telephone, EMI with hearing aid 94055
tech. devices EM pulse exposure/interference immunity *(Polish)* 105780
telecom. switching equipt. DC-DC power converters, conducted noise mitigation 108465
telecomm. DC/DC power convertor modules, EMI test facility 108467
telecomm. ports disturbances meas. method 83373
telecomm. products tech. EMC specs. 85104
TEM and GTEM cells, higher order modes, computer simul. 72360
three phase act. power filtering using sliding mode control 99362
traction power network, extremely low amplit. harmonics meas. *(German)* 123981
train power busbar supply by diesel locomotives *(German)* 134511
transm. line, external noise, stat. piecewise-lin. model 128817
transm. link radiation, localized defect contrib. 72372
truncated chiral cylinder shielding effectiveness anal. 83366
two-winding power transformer conducted EMI propag. 88797
Uljin PWR main control room, meas. and anal. of conducted noise 99519
URSI Commission E open meeting on EMC issues 83436
US Navy EM environ. effects awareness program 83430
very weak EM fields meas., induction sens. noise params. anal. 83379
VLSI chip, internal EM noises, 3D model 70246
wide-band impulsive noise source, direction-finding tech. 75253
wideband services on copper cables, EM radiation calc. 85455
wireless commun., nonlin. interf./distortions, modelling 74589
wiring harness interf. suscept., probabilistic model 83364
X2 series EMI suppression capacitors, miniaturisation 115083
ZCZVT PWM full-bridge DC-AC converter, commutation cell 134179
ZVT PWM boost converters, conducted EMI noise generation/propag. modeling 123613
Fe-Si alloy flake-polymer composite based EMI filter, atten. 83395
Si microphone, 3D multichip microsystem encapsulation, conformal coating 104211

electromagnetic launchers
see also railguns
hybrid EM syst., for solid body accel., electroexplosive, electrothermal mechanisms 117637
Maglifter launch assist supercond. EM catapult 76789
pulsed induction accelerator EM launcher, cct. theory-based model 72206
Al disc nonlin. guide projection using solenoid-type EM launcher *(Japanese)* 105690
electromagnetic lenses *see magnetic lenses*
electromagnetic oscillations
see also cavity resonators; lasers; masers; ring lasers
3D oscills. in orthogonal branching of two rect. waveguides 80165
anisotropic spherical cavity resonator, azimuthally homogen. oscills. study 117731
bicone resonator with opt. cryst., electrodynamic charact. investig., R-fn. method 117736
CRT deflection yokes ringing meas. 97702
cyclotron freq., high-order harmonics excitation by relativistic oscillators 80597
dielec. crysts., microwave field phonon absorpt. 121172
electrodynamic struct., anal. of irregular dispersion 72211
multilayer spherical resonator, high quality EM oscills. 71460
oscill. generation/amplif. by tubular electron beam in crossed radial electrostatic/axial mag. fields 105683
oversize axially symmetric periodic struct., microwave field pattern 102931
RF oscill. generation by EM shock wave in coupled transm. lines with anom./normal dispersion 117722
weakly guiding opt. fibers with exact boundary condition, simul. by FEM 128821
electromagnetic pulse
arbitrary speed diffr.-free pulses 128788
dielec. rod, EM pulse diffr. 128747
digital ccts., upset probab. 90621
double-exponential pulse propag. through Debye medium 72265
EAS generation of anom. RF EM pulse, ionized electrons 83352
elec. rly. systs., LEMP-like effects modelling 78313
elec. sector crit. infrastructure protection, NERC program 111714
ELF EM radiations and intrinsic EM phenom., human health issues 87947
ELF natural pulse in Earth ionos. cavity, time domain soln. 83293
EMC std. guidelines, time-domain MoM simulator validation 83424
high-power EM transient phenom. protection, IEC standardisation 83437
LEMP-excited lossy multiconductor power line dyn. anal. approach 88490
lightning discharges, ELF pulses time-domain representation 122667
lightning pulse current models, EM field comparison 128797
lightning return stroke model, EMP pulse calcs., overhead line protection *(Japanese)* 112174
lightning spherics, thin struct. anal. 117713
lightning strike dist. determ., pulse EM method 122647
lightning strokes, ELF pulses in Earth-ionos. cavity 128770
lightning-interact. problems, FDTD anal., ABC 105796
LV power-installation networks, lightning-induced voltages eval. 111661
metal cylinder, EMP 2D diffr. 83230
microwave pulses effect on PC perform., expt. study 117719
ordnance syst. EMP effect testing 88267
scalar pulses diffr. at plane apertures 105717
single chip computer syst., irrad. effects *(Chinese)* 115802
tall tower lightning-return strokes, current and EM fields 105795
TE transient scatt. from cylinder above infinite periodic surface, decomp. method 72312
tech. devices EM pulse exposure/interference immunity *(Polish)* 105780
TEM face-to-face horn fed pulse radiation antenna 83547
THz EMP refl., index of refr. meas. *(Korean)* 75902
transient EM meas., CISAM EMP facilities, civ./MIL-STD 83425
ultrawide band TEM antennas, radiation procs., num. simul. *(Chinese)* 105883
vel. in absorbing/nonlin. media, quantum mech. parallels 83248
wire frame TEM horn feedback paraboloid, high power pulse radiation antenna *(Chinese)* 117799
X-ray FEL, specs., generated pulse charact. 82699
X-wave refl./transm. on planar air-dielec. interface, spectral anal. 83258
X-waves refl./transm. in planar layered media, pulsed plane wave representation 83257
electromagnetic radiation *see electromagnetic waves*
electromagnetic shielding
see also magnetic shielding
3D FDTD anal. of door seal struct. of microwave oven with inserted sheet-type lossy material *(Japanese)* 72378
bal.-fed antenna syst. for handset 94154
bent slots, shielding effectiveness, wave penetration 105797
broad-band microwave absorbers frequency-selective surfaces, multilayered dielec. media, GA 83357
cable EM shielding, primary/secondary params. 83359
cable shielded screening atten. test method down to 5 MHz 83360
cardiac pacemaker, EMI shielding material effectiveness eval. *(Japanese)* 133055
cascaded metallic holes for EM shielding of microwave ccts., variational method 125699
CATV networks screening effectiveness, field meas. 86328
cavity-shielded infinitely thin meander line, stratified medium, mobile commun. appl. 94109
cellular telephones, operation zones in hospital hallways 94057
conducting wires and multilamina shielding use 72380
Cool Shield EMI shielding with thermal mgt. 105815
CPW-fed slot-loop antenna with low cross-pol. radiation 72564
cylindrical shell, EM shielding, boundary elements method *(Chinese)* 105778
dense shielded IC, EM anal., adaptive integral method 102695
devices, field reduction props., modulated scatt. meas. 83372
diagnostic radiology rooms, protective shielding thickness 76727
digital IC package, RF meas. of current and voltage distribs. 75840
diode laser module, plastic material, EM shielding 117210
electronic equipt. design for ESD immunity 100670
electrostatically clean solar array panel develop. 112967
EMI control door gasket develop., door closure sound tuning 105788
EMI estim. for shielding-enclosure eval. 105792
EMI from high-speed routing between power and ground planes, diagnostic procedure 102810
FDTD method for simul. of transm. waves through multilayered thin conducting sheets 105714
fields inside cuboidal enclosure with conducting planes or PCBs, model 72375
gaskets, automated installation 83390
HERA-B vertex detector, module design, R&D work 87229
electromagnetic shielding continued
HF AC cable, coaxial shells, mag. induction, current-dens. distrib. 123013
HIRF penetration through apertures, FDTD vs. meas. 105791
homog. multiconductor transm. lines, PEC and PMC walls, TEM props. 940
immunity testing cell using rect. resonator with conducting channel plate a capacitive gap *(Japanese)* 105800
inhomog. media shields and filters anal. 105798
LEMP-excited lossy multiconductor power line dyn. anal. approach 88490
LF shielding efficiency, anal. and num. simul. 128799
LHC CMS microstrip silicon tracker, readout/control syst. 76104
line elec. current source excited multiple cylindrically curved thin scree response anal. 72261
loaded perforated shields, perform. anal. 83363
loop-coupled shielded enclosures with apertures, EM field modelling 12438
M1 radiation near cylindrical ribbon or slotted cylinder 128750
mesh design for vision with shielding 104871
metallic shields, study of penetration of longit. component of EM fields 940
microstrip ring struct. using air-gap control, reson. behavior, superstrate effe compensation 69078
microwave ccts., EM shielding effect using cascaded metallic via holes 802
microwave CSP, design for reliab. of shielded vert. interconnection 125794
microwave on-wafer device meas., shielding tech. 86924
mixed-sig. ICs, on-chip interconnects, orthogonal gridded shield, trans characts. 91118
MRI, birdcage resonator, 3D FEM code 128677
multilayered cylindrical shields design using GA 72376
naval ships bulkhead shielding eval., NATO stds. appl. 83427
opt. transceiver modules, radiated emission/immunity characts. eval. 72387
opt.-fiber feedthroughs, charact. 72377
PCB metallic enclosure EM field penetration eval. software 83368
PCB RF shield rework, laser soldering appls. 91465
permeable conducting hollow sphere, transient current distrib. EM field 8308
perp. Hertz dipole, transm. fields through infinite shielding plate *(Japanes* 128666
plane wave scatt. by doubly periodic gaps/cracks 72252
polyimide layer embedded microstrip lines for 3D MMICs/MIMICs on Si, cou ling reduct. 102683
power supply HF HV DC isolation transformer-rectifying module 99731
reactor, shape optim., evol. algm. 123538
rect. enclosure with thick multiple apertures, shielding effectiveness 72368
relay safety systs., EMC, metallic glass housings 77579
screen, EM scatt., pseudodifferential eqn. 72292
seals and screening overview *(German)* 128796
spiral inductor Q enhancement, n^+-diffusion patterned ground shield 102659
steel-free reactors, EM screens, mag.-field params., power loss 99716
syst. generators shielded busbar, EM field soln. at open boundary proble 123333
telecom. cable screening effectiveness, standardised EMC meas. procedur 85444
three-port device, microwave meas., shield-based test fixture 109945
transformer tank shield model, 3D optim. of design variables 134111
truncated chiral cylinder shielding effectiveness anal. 83366
V- and W-shaped shielded microstrip lines on anisotropic medium, FEM ana 105840
vibrator and microstrip antennas, side radiation reduction level, UGTD 8352
InSnO films, EM shielding effectiveness 72346
Si on-chip spiral inductor, layout and ground shield effectiveness 69179
electromagnetic stirrers *see electromagnetic devices*
electromagnetic surface waves *see surface electromagnetic waves*
Electromagnetic Transients Program *see EMTP*
electromagnetic traps *see particle traps*
electromagnetic wave absorption
see also gamma-ray absorption; light absorption; spectra; X-ray absorption
2.0 GHz, meas. elec. near-fields of model cellular transmitters near human hea models 98768
3D FDTD anals., late-time instabilities suppress. 124775
3D waveguide/antenna struct. on curvilinear grids, nonorthogonally-oriente higher-order FDTD 69014
5.3 GHz wideband indoor radio channel, empirical charactn. 105753
12 GHz high elevation angle satellite-to-Earth propag. meas. in tropics 11767
19 GHz long-term propag. expt., first results 83307
40 GHz 30 km slant path radiowave propag. expt., high temporal-resoln. chann charact. 83319
700 GHz resistive-film wave absorber *(Japanese)* 83329
900 MHz radio propag. in underground coal mines 83325
ABC and appl. to 3D TLM SCN method *(Chinese)* 72404
act. FSS with ferroelec. substrs. 83188
aircraft interf. due to VSAT/SNG and SIT terminals 88058
anal. continuation from real to complex spaces 72274
artificially synthesized absorbing medium, refl. charact. 128736
Berenger's PML for general anisotropic media 72214
biaxial medium, anisotropic PML ABC 72248
blood-brain barrier, cell phone effects and tumor treatment 98739
boundary conditions, arbitrarily-shaped boundaries, time domain discrete Green' fn. method 117748
broad-band microwave absorbers frequency-selective surfaces, multilayered dielec. media, GA 83357
cellular telephones, operation zones in hospital hallways 94057
cholesteric absorbers for microwave freqs., circ. pol. sensitive absorpt. props 114922
closed spacecraft body, EM field levels prediction, stat. approach 88038
collimated wavepackets, long range tracking, hybrid ray-FDTD moving coord frame approach 72250
conductor-grounded lossy dielec. periodic struct., absorpt. charact. 94018
dielec. crysts., microwave field phonon absorpt. 121172
diffr. over uniform array of absorbing half-screens, generalized soln. 83243
dispersive medium, EM waves propag., anisotropic PML ABC 83202
DS-CDMA systs., joint multidimensional channel param. estim. using modifie SAGE algm. 74644
Earth-satellite links, spaceborne IR/microwave radiometry for near real-time rainfall atten. monitoring 117677
Earth-space triple-site dual polarized syst., adjacent terrestrial microwave syst interf. effects 83389
EMC chambers, anechoic and semianechoic, homogenization and GO 128811
epoxy-modified urethane rubber, C particles, MM-wave absorpt. 102492
FDTD anal. of artificially-synthesized absorbing medium 117652
FDTD solns. for dielec. resonator antenna problems with different feeding sigs 128844
ferrites for microwave absorber appls. 94028

tromagnetic wave absorption continued
folded loop antenna syst. for handsets based on advanced design concept 120056
FSS tunable radar absorbers 80155
GPR, impulse syst., dispersive matched layer RBC implement., FDTD framework 86156
GPS for measuring urban shielding charact. of mobile broadcast geostationary satellite 83261
graded-chiral Dallenbach absorbers pot. 117657
hand effect on cellular phone radiation 122410
head exposure to cellular phone helical antennas, FDTD method 133074
head MRI, UHF interacts. calc. 133077
head SAR due to mobile phones, interpolation/extrapolation 111221
high-altitude platform systs., radiowave propag. effects 74592
highly efficient ABC, BPM 94016
homog. phantom exposed to cordless phones radiation, SAR 87937
human head, mobile phone emissions, absorpt. calcs. 133069
human head SAR reduction, directional antennas for cellular phones 87938
ionos., anom. atten. during intense HF heating 105731
Jaumann absorbers design, adaptive GA 72333
Ka-band satellite systs., compensation of rain atten. 85915
Ka/V bands Earth-space links, spectral charact. of propag. impairments 83310
lightning-interact. problems, FDTD anal., ABC 105796
low reflectivity EM energy absorbing composite materials 83221
Madrid, Italsat 50 GHz beacon atten. by gases and clouds 83317
Mars, ionos., ELF/VLF EM propag. and atmos. detect. 72302
microcellular urban environ., base stations, optimal location 74849
microstrip struct. with complex media, loss inclusion via dyadic Green's fn. modifs. 102497
microwave absorbing materials 91170
microwave dosimetry, non-invasive tech. 98766
microwave propag., rain atten., path length reduction 72323
microwave/MM-wave propag., rain atten., analytic model 72316
mm-wave absorpt. in biological media, distortion by thermocouples/other objs. 111191
MM-wave patch antennas, composite double layer struct. EM scatt. 128889
mobile commun. handset, interact. of EM energy with human arm 111220
mobile phone user, num. dosimetry for head/hand 133126
multilayered absorber, perform. anal. 72259
multilayered resistive strip gratings, microwave/MM-wave scatt./absorpt. 125691
multipath propag. study combining terrain diffr./refl. 105754
nanodispersible film materials, microwave radiation absorpt. 80158
neck hyperthermia, circ. phased aperture antenna EM emissions 133018
Norway, inland/coastal areas, SHF rainfall atten. 83318
open-end microstrip transm. line fabricated on nonreciprocal ferrite substr., FDTD anal. 125648
patient RF heating during MRI 133076
perfectly matched layer ABC implement., mimetic differencing schemes 72237
pers. commun., handheld transceiver unit, human head/EM interact. anal. 83343
planar struct. with arbitrary permitt. distrib., time-domain anal. 83488
plane wave scatt. by doubly periodic gaps/cracks 72252
portable radio, near fields in front of and on far side of head model 98767
pyramidal microwave absorbers for outdoor use 72291
radiated emission source location accuracy, CISPR emission meas. syst. 105785
radiowave absorpt. by brain/eyes in human head eccentric spheres model, anal. 87950
rain scatter interf., new formulation 83387
rect. patch antenna on uniaxial anisotropic dielec. substr., FDTD anal. 128845
regional hyperthermia treatment, absorbing struct. use 76614
RF atten. rate estim. via roadside trees with extraction techs. 117687
Rice's atten., distorted sigs. reception under conc. interf., error probab. 83324
SAR in infant-sized head model near portable telephone users *(Japanese)* 122444
SAR reduced pers. commun. handset, FDTD investigs. 83706
satellite commun., ice cryst. and raindrop canting angle effects 131324
SHF/EHF airborne/satellite commun., tropos. propag. effects 83283
SHF/EHF satellite commun., propag. data stat. proc. 83284
slot antenna, receiving props., fused quartz substr. *(Japanese)* 72532
STENTOR for site diversity meas. 83279
synthetic microwave absorbers, chirality/reson. role 105723
TDMA cellular telephone, EMI with hearing aid 94055
TE surface waves in absorbing layers, props., new results 128741
TGS cryst., SW absorpt. 91178
thin dielec. screens, fast soln. 128749
time-domain discrete Green's fn. method, FDTD grid boundary characterisation 93996
tunable single layer phase modulated radar absorber 80154
UHF bodyworn antenna systs., num. anal. 72460
underwater EM pass. ranging method *(Chinese)* 72326
Univ. of Bradford mobile telephone dosimetry studies 133075
wet antenna atten. effect on propag. data stats. 105752
whip type low SAR mobile handset antenna 83603
wideband gapfiller satellite commun. link, propag. effects 108974
$Ba(CoTi)_xFe_{11.9-x}Mn_{0.1}O_{19}/Ba(CoTi)_xFe_{11.9-}$ paint 77100
ITO X-band transparent wave absorber using resistive-film for oblique incident wave 128810
InSnO films, EM shielding effectiveness 72346
Mn-Zn ferrite, recycled, mag. props. and their appls. to mag. parts *(Japanese)* 104499
Si CPW SPST microwave absorptive MEMS switches, surface micromachining technol. 125718
TiO_2-C filled epoxy resin absorber, thickness-freq. rels. *(Japanese)* 127139
$Tl_2BaCa_2Cu_2O_{8+\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893
$YBa_2Cu_3O_{7-\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893

ctromagnetic wave attenuation *see electromagnetic wave absorption; electromagnetic wave scattering*

ctromagnetic wave diffraction
see also geometrical theory of diffraction; light diffraction; physical theory of diffraction; X-ray diffraction
2D PBG struct., charactn. of diffr. anoms. 125661
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gaussian beam algm. 117647
3D EM field diffr. problem, integral eqn. method 72247
3D EM scatt., integral eqn.-asymptotic phase method appl. 105715
arbitrary oriented grating, specular diffracted wave polariz. control 117706
auxiliary contour constr., method of discrete sources 105698
band-gap struct., class./charactn./appls. 83222
chiral slab, plane-EM-wave diffr. 72293
circ. waveguide, tensor Green's fn. of lin. and point sources 83491

electromagnetic wave diffraction continued
conducting wedge, Weber-Schafheitlin integral 72217
continuous/grid screens in moving media, EM wave scatt. 128793
dielec. rod, EM pulse diffr. 128747
E-plane T-joint of rect. and H-waveguides, wave transformer 105832
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
EMI estim. for shielding-enclosure eval. 105792
equiv. edge currents expressions 75177
fringe integral eqn. for truncated grounded dielec. slab 105711
Gaussian beam diffr. by periodic screen, anal. 128753
GMT/PO approach to num. diffr. coeffs. of irregular edge on semi-infinite conductive circ.-cylinder 83199
GMT/PO approach to num. diffr. coeffs. of irregular top on conductive cone 83198
H-polarized wave scatt. by penetrable polygonal cylinder 128748
hollow wedge, normally incident plane wave diffr. 117660
homog. symm. dielec. bodies, EM diffr./scatt. 83231
impedance wedge, Wiener-Hopf anal. 94027
incremental length diffr. coeffs. for arbitrary cylindrical scatterers 93992
irregular edge of semi-infinite cone, 3D num. diffr. coeffs. calc. 128752
L-band wideband meas. of single trees, re-radiation fns. modelling 83270
LEO/MEO satellite links, polariz. cross-coupling anal. 83333
low antenna height base station in urban area, propag. path ident. 105755
magnetodielectric cylinder with anisotropic helical surface conductance 83211
magnetodielectric cylinder with surface anisotropic helical conductance 72263
math. models for problem of diffr. of H-polarized wave on irregular media interface 128737
metal cylinder, EMP 2D diffr. 83230
metallic gratings, diffr. efficiency, vectorial theoretical anal. *(Chinese)* 94012
micro-/pico-cellular mobile commun., polaris. consideration 83265
microcellular environ., scatt. by trees 83305
microoptical element plane wave diffr., effective hybrid approach 94440
mil. radio networks, service provision feasibility 111600
mountain ridges, loss calc. methods/expt. results 83268
multilayer dielec. struct. with diffr. grating, EM diffr./propag. 127755
multilayer diffractive coating, EM waves transform. 117645
multipath propag. study combining terrain diffr./refl. 105754
multiple half-plane diffr., height amplif. factor 105748
multiple-knife-edge diffr. loss estim. using logarithmic-cell-simul. 83399
ocean large-scale gravity waves due to ship motion, radar detect. 122698
open image-type slotted struct., reson./nonresonant diffr. 83238
partially coherent submillimeter-wave antenna systs., dyadic anal. 105862
periodic spatial patterns in random media, backscatt. response 99006
permitt. profile retrieval 127138
PO, line integral 72227
PO approx., line integral representation for diffracted fields 117674
quasi-opt. diffr. tomography 86938
radiowave propag., path loss simul. using MATLAB *(Chinese)* 83335
receiving antennas, polariz.-struct. anal. 105856
relativistic diffr. electronics, reson. scatt. by gratings 115264
rough boundary of arbitrary plane-layered medium 72234
scalar pulses diffr. at plane apertures 105717
scalar wave diffr. by perfectly soft infinitely thin circ. ring 128732
semi-infinite periodical struct. wave diffr., axial symm. 117705
simultaneity/causality/spectral representations 83255
slot antennas, effects of parasitic wire on coupling 117764
small cell multipath environ., meas./predicted time dispersion/DOA comparison 117679
spaceborne antenna design 117771
spacecraft EM propulsion engine, plasma-microwave antenna interact. 85927
spectral iter. tech. for EM scatt. problems 93999
surfaces with/without slicks, finite size illum. area influence 117653
terrain model improvement for target close to obstacle, low-altitude radar 96916
TM/TE waves diffr. by two balls 83191
TW spontaneous parametric down conversion, quantum structs. 105507
UHF propag. loss for mobile reception in urban areas with horiz. and vert. polaris. *(German)* 72314
VHF propag. near diffr. horizon 128768
wedge, plane wave diffr., weak radiation condition 128751
western India, double knife edge diffr. studies 105745
C semi-infinite nanotube, EM wave scatt. anal. 105726

electromagnetic wave diffusion *see electromagnetic wave scattering*

electromagnetic wave interference
see also atmospherics; electromagnetic wave interferometers; electromagnetic wave interferometry; light interference; moire fringes
CDMA systs., LP optimisation strategy 107766
doubly vibr. enhanced nonlin. spectroscs., interacts. between coherence pathways 82808
dual stripline params. for multilayer PCB design 125650
freely propag. THz pulses, destructive interf., high-resoln. spectr./opt. computing appl. 94010
GHz TEM cell, chaotic sync. secure commun. syst. *(Chinese)* 109040
smart antennas in micro-/pico-cellular propag. environ. 117842
soft X-ray propag. through straight/tapered capillaries, wave-optics treatment 83481
X-ray channeling in capillary struct., wave theory 83482

electromagnetic wave interferometers
see also electromagnetic wave interferometry; light interferometers; radiowave interferometers
cosmic grav.-wave background response of space-based interferometers 121453
FT interferometer, IR beamline BL43IR at SPring-8 121388
phase-contrast X-ray microtomography, interferometer design 76177
SR beamline at SPring-8, struct., appls. 110446
synchrotron-light interferometer for PEP-II 87091
X-ray image holography, nanometer resoln., micro-zone-plates *(Chinese)* 105578
X-ray interferometer, visibility meas., coincidence tech. 98097
YIG film-based nonlin. spin wave phase shifter, charcts. 81915

electromagnetic wave interferometry
see also light interferometry; moire fringes; radiowave interferometry
array diagnosis from near-field data, interferometric methods comparison 117830
plane-polar geom. phaseless near-field meas., integrated microstrip probe 105858
SAR interferometric phase noise reduction using discrete wavelet transforms 75196
sens. for speech articulator/user gesture meas. 120763
soft X-ray lasers, spatially coherent tabletop, mW av. power, appl. 117088
X-ray microtomography using interferometric phase contrast 76517

electromagnetic wave interferometry continued
X-ray propag. in laser-prod. plasma, electron dens. meas., interferometric method 94051
Ni-like high intens. X-ray lasers, laser plasma diagnostic appls. 128074

electromagnetic wave polarisation
see also light polarisation
1D photonic bandgap resonator antenna 83650
2.5 GHz meas. and charactn. of broadband MIMO fixed wireless channels 85753
2D complex source point beam, degrad. due to circ. dielec. radome 72457
2D generalized exponential integral, num. eval. 72446
2D random rough surfaces, EM wave backscatt., forward-backward/spectral accel. method 128739
2D Van Atta retrodirective array using dual polarized two-port sq. microstrip patches 83734
3D dielec. body reconstruction using unrelated illum. method 94003
4-element triangular microstrip array antenna for circ. polaris. 72644
4D Euclidean space anal. of EM wave polaris. 72255
900 MHz radio propag. in underground coal mines 83325
1800 MHz PCN compact dual-polarized patch antenna 72537
act. microstrip antenna array, polariz. agility *(Chinese)* 105922
act. microstrip antenna array with LNA 72693
adaptive antennas for wireless broadband commun., constraints/possibilities 83684
ALS, ellipt. polarizing undulator beamline, first commiss. results 121400
anisotropic smart coatings, proper polariz. bases, digital control 131635
antenna, min. scatt. field calc. from pattern 83699
antenna arrays with suppressed cross-polarized radiation, power param. optim. 105949
antenna-switching cellular base-station receivers upgrade 74807
aperture coupled dual band dual circ. polarized stacked microstrip antenna 94137
arbitrary-shape printed antenna modelling, multiresolution method of moment 128840
artificially disturbed ionos. plasma, aftereffects 88138
atmos. radars, ground clutter ident. and suppression 76874
bent crossed wire antenna with vert. parasitic elements, circ. polarized conical beam *(Japanese)* 117761
bifilar and quadrifilar truncated spherical helical antennas, FDTD design 117793
bipolarized microwave antenna with printed dipole feed 72607
Bluetooth commun., microwave oven dictated EMI mitigation 94063
Bohai Sea, ice detect. and classif., SAR and SSM/I obs. 76919
broadband arbitrarily-pol. planar rectenna array, charactn. 112088
broadband circ. polarised proximity coupled patch antenna 83613
broadband coupled-strips microstrip antenna 117782
broadband probe-fed patch antenna with reduced cross-polaris. radiation 83730
broadband two-layer shorted patch antenna with low cross-pol., design/anal. 72475
broadband wireless network, dense deployment techs. 85472
C-band monopulse shaped ring-focus antenna, near field 72612
Cassegrain systs., design and valid. of shaped subreflector geom. 72568
cholesteric absorbers for microwave freqs., circ. pol. sensitive absorpt. props. 114922
circ. loop antenna above (un)grounded multi-layered chiral slabs, anal. 72535
circ. monopole array, ground plane radiating lin. polarized conical beam for WLAN appls., anal. 83678
circ. pol. conical beam spherical slot array antenna, charact. 72634
circ. pol. rectenna for microwave power transm. at 5.8 GHz 112089
circ. polarised cross-aperture-coupled microstrip antenna, cavity model 105894
circ. polarised rect. microstrip antenna anal. 83532
circ. polarised undulator beamline, BESSY II, commissioning 121754
circ. polarized conical beam spherical slot array antenna, polariz. charact. 83676
circ. polarized dielec. resonator antenna excited by dual conformal strips 83657
circ. waveguide with dielec. coated hard/soft walls 94088
Clifford's geometric alg., covariant isotropic constitutive rels. 72241
coeffs. at cutoff point, mag. declination effects 83353
coherent sig. detect. using polariz. averaging MUSIC algm., perform. 107585
collocated orthogonal dipole antennas 72664
combined filtering/radiating fns. microwave device for telecom satellites 83762
compact dual-band dual-polarized microstrip antenna 83651
compact dual-freq. dual-polarized slotted microstrip patch antenna 72541
compact pentagon microstrip antenna with circ. polariz. 117804
complex layered arrays as photonic band-gap struct. 69256
complex radar objs., bistatic polariz. props. from monostatic meas. 75109
complex radar objs., polariz. props. of scatt. fields, stat. theory 75179
conducting needles in dielec. as radar/IR reflectors 72236
cone with long. slots, plane EM waves scatt. 83229
correl. interf. conditions, spatial/polariz. filtering 83406
corrugated waveguide polarizers for satellite antenna feed syst., design 72704
CPW-fed slot antenna design, simple model 83550
CPW-fed slot-loop antenna with low cross-pol. radiation 72564
crank-line antenna radiation cells, circ. polarized tilted beam form. 83756
crescent-shaped microstrip antenna, dual freq., dual polaris. 72524
crop spinach, microwave response through rem. sens. 76828
cross-mesh strip antenna on finite-size dielec. substr., anal. 72490
cylindrical/planar microstrip patch antennas and arrays for wireless commun. 83731
DCS/GPS compact dual-band microstrip patch antenna 94130
dichroic mirror, S/X/Ka-band, BWG antenna for deep space obs. 128878
dielec. loaded slot antenna, 3D anal., polariz. current model method appl. 72609
dielec. obj. above half space, four-path model 105705
diffr., impedance wedge, Wiener-Hopf anal. 94027
diffr. by rough boundary of arbitrary plane-layered medium 72234
Doppler modelling of radar sea clutter 75071
dual band sq. microstrip antenna embedded with shaped slot 72597
dual band/wideband waveguide polarizer, design and perform. 72698
dual freq. capacitor loaded sq. slot microstrip antenna 72522
dual freq. compact microstrip antenna 72525
dual polarised broadband CPW fed patch antennas, design study 72567
dual polariz. stacked microstrip patch antenna array, airborne SAR appls. 128893
dual polarized patch antennas fed by hybrid feeds 72598
dual-freq. dual-polariz. microstrip antenna, airborne SAR 72629
dual-polarized planar microstrip antenna fed by dog-bone slots 83587
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
Earth surface monitoring by radiopolarimetry, weak-contrast radiolocation targets ident. 75199
Earth-satellite slant path links depolarization, rain/ice effects 72332

electromagnetic wave polarisation continued
Earth-space triple-site dual polarized syst., adjacent terrestrial microwave interf. effects 83389
elec. short two-conductor transm. line driven by random plane wave response probabilistic model 72406
ELES antenna for mobile satellite terminals 83583
ellipt. torus knots, props. 83086
EM helical undulator for polarized X-rays 110469
EMC radiated test double-polariz. transm. line device 105794
FDTD anal./design of probe-fed dual-polarized circ. stacked patch ant 105881
FDTD anal./design of probe-fed dual-polarized circ. stacked patch ant 72592
ferrite circ. waveguide variable polarizer loaded with dielec. ring 70556
finite corner antenna, directivity factor optim. 117817
finite perfectly conducting corrugated rough surface light scatt., left-right me 83345
finite-size circ. polarized corner reflector antenna, radiation charact. 8359
fringe integral eqn. for truncated grounded dielec. slab 105711
FSS resonator elements on circ. dielec. rod antenna for mobile commun. 8
GPS dual freq. bi-orthogonally polarized antenna, design 105866
GRAAL, polarized photon beam 110183
GSM 900/1800 handset terminals, built-in antennas, near-field influence 87
H-polarized plane wave incidence, reson. scatt. from slit coupled cylindri eccentric impedance cavity 72239
H-polarized wave scatt. by penetrable polygonal cylinder 128748
H-shaped aperture wideband and high-gain strip patch antenna *(Korean)* 117
hard X-ray lin. dichroism imaging, polariz.-contrast images obs. 87285
HF digital commun., source separation with collocated antennas 84729
HF ground wave radar, multidisturbance suppress. using pol. filter *(Chin* 131645
horiz. pol. slot-array antenna on coaxial cylinder 72674
horn radiators with generating line break, polariz. characts. 83632
ideal boundary conditions and generalized soft-and-hard surface 72218
indoor 60 GHz radio channel sounding, T/R module for high data rate com 74546
inhomog. media shields and filters anal. 105798
INMARSAT-C and GPS L-band shaped beam quadrifilar helix antenna 72
integrated multibeam dual-polarised microstrip planar antenna array 10594
ionos. profile reconstruction using Faraday rot. data 122656
Ka-band array elements for ATM-Sat terminal antenna 72670
Ka-band spacecraft beacon antenna for propag. study 72466
Kennaugh null theory extension 75172
knots/symm./scatt. 117646
Ku band, multi-layered meander line polarizer 72701
L-band wideband meas. of single trees, re-radiation fns. modelling 83270
L-type aperture coupled circ. polariz. patch antenna with single feed, des 72690
lens-coupled terahertz dipole antennas, cross-polarized ang. emission patte 128848
LEO/MEO satellite links, polariz. cross-coupling anal. 83333
lightweight microstrip patch arrays for space appls., qualification *(Engl* 75209
LMCS, dual-polarized lens antenna 96411
low noise receiver front end with integrated circ. pol. patch antenna, design te 131090
low-profile dual-freq. circ. microstrip antenna, ISM bands 105885
Ludwig-3 defn. for lin. copolarization/cross polariz., generalization 83246
MacDonald-black and anisotropic flat coating models, EM wave refl. 11766
mag. anisotropic medium, EM wave propag. 83216
marine surface layer wind, microwave radiometry 98978
Maxwell Garnett mixing rule, derivation 94024
meander-line wide bandwidth circ. polarizer, optimum design method 7227
mesh antennas for dual polariz. 83635
metallic reflectors, radiation anal., Gaussian beam expansion 83606
micro-/pico-cellular mobile commun., polaris. consideration 83265
micromachined sub-MM and MM-wave variable pol. compensator 91195
microstrip antenna arrays, practical design guide 72623
microstrip antennas on high permitt. ceramic substrs./small ground planes, ex study 83529
microstrip array, infinite, plane wave refl. 105923
microstrip circ.-slot antenna using spiral line *(Korean)* 117809
MM-wave dielec. slab leaky-wave antennas 117819
MM-wave Gaussian radiation pattern antennas 117820
MM-wave ROF road-vehicle commun. syst., propag. meas. 108732
mm-wave terminal guidance radar, ang. glint suppression using polariz. agili and RCS weighting 99170
mobile commun. syst., polaris. diversity 74865
mobile terminal, polaris. diversity modelling 85693
mobile transmit diversity for base-station antenna arrays 105934
modified printed strip monopole antenna with pol. diversity for WLAN app 72582
monochromatic EM wave, geom. representation, tangential vector approa 75121
monolithic half-wave radomes, wall thickness 128913
mounting plate design for low refl. level from profiled lossy dielec. slab 940
moving target imaging in foliage using polarimetric multi-freq. antenna arr SAR 99156
Mueller matrix of two-layer eccentrically bianisotropic cylinder lin. array w double helical conductances 72251
multi-beam dual-reflector submm-wave telescope on ESA PLANCK survey fast PO simul. 75257
multi-octave band conical spiral antenna 72464
multi-panel small reconfigurable reflector antenna, num. study 117762
multifunctional monopole antenna array for terrestrial and satellite radio app 83768
multilayer printed periodic structs., appl. to antenna technol. 83774
multireflector offset antennas, cross-polariz. component elimination, beam mo anal. 105980
multisource azimuth/elevation direction finding and polarization estim., DO 97020
Nokia WCDMA expt. syst. for macro cell meas. 83306
partially coherent EM fields, radiation efficiency 83082
pass. act. L- and S-band microwave sens., marine/hydrol. 76905
pass. PCB radiation suscept. modeling, complex images method 94056
patch antenna, varactor diode loading 72502
patch radiators, radiated cross-polar levels and mutual coupling 83573
patch-slot composite antenna for VH-pol. diversity CDMA base stations 726
PCS base station, broadband dual polariz. patch antenna 72559
PCS base station bi-directional polariz. diversity antenna 105891

romagnetic wave polarisation continued
DF for sum of N lin. polarized time-harmonic plane waves 94005
eriodic strip grating on grounded dielec. slab, LF dispersion features of complex mode 91200
eriodical arrays with small nonreciprocal inclusions, props. 72253
ers. satellite commun. antenna, SAR and polaris. purity 128833
ers. satellite commun. antennas, polaris. purity/SAR investigs. using hybrid method 83584
hased antenna array element in waveguide simulator 128903
lane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
ortable planar inverted-F antenna, polariz. diversity and human body effects 120055
ortable VSAT antenna array for satellite communs., develop. 72633
rinted sq. spiral slot antenna, circ. polariz. 72557
uadrifilar helix antenna with parasitic helical strips 105879
uasi-opt. polarizer, high-precision design for Zeeman splitting obs. 86274
adial line slot array antenna, polaris. props. 72628
adio in tunnel environ., delay spread prediction, ray-tracing method 83332
adio waves in oblique ionos. sounding, limiting polariz., quasi-isotropic approx. 83274
ain-perturbed sea surface, microwave emission, third Stokes param. 122690
andom complex radar obj., modeling using on-the-av. equivalence principle 75111
andomly distributed chiral spheroids, wave polariz. scatt. and transm. property 83254
eceiving antennas, polariz.-struct. anal. 105856
ect. dielec. resonator antennas for switching polaris. diversity receiver 83593
ect. plate antenna with Ω-shaped slot 128873
reduced-size multi-octave spiral antenna 72465
eflectarrays, novel config. 94185
RF UWB helmet antenna, develop. 105872
ot. scale-invariant EM fields 105658
ough dielec. surfaces, out of plane bistatic scatt. 105708
ough sea surface, bistatic scatt., low grazing angle incidence, GFBM/SAA method 94040
SAR antenna develop. in Canada 96969
SAR polarimetric target feature extraction/image form. via semi-parametric method 75137
satellite commun., ice cryst. and raindrop canting angle effects 131324
satellite interf. prediction, effects of ice crysts. and raindrop canting angle 109023
scatt. power from random medium layer with high dielec. const. particles, soil water content detect., anal. 105718
sea surface, multi-freq. polariz. backscatt. 72322
sea surface polarized emission meas. and wind-wave radar meas. 122688
seq. rotated circ. polarized patch radiator lin. arrays, scanning props. 128910
single-channel variable pol. syst. with short switching time 75206
single-fed crossed V-dipole antenna for circ. polariz. *(Japanese)* 94166
small enclosed antenna, radiation quality factor 72585
soft X-ray plane grating monochromator, mech. design aspects 121827
sources in chiral medium above soft/hard boundary, image theory 93994
space-borne compact ortho-mode-transducer for freq. reuse appls. 72699
spectral accel. forward-backward method for terrain profiles coverage anal. 117681
SPring-8 storage ring, polarized photon beam expt. 110182
stacked circ. microstrip antennas for wideband circ. polariz. 72508
stacked shorted microstrip antenna for low cross polariz./wide-band 105877
staggered parallel plate waveguide cavities, E-polarized plane wave scatt. 83475
stratified arbitrarily anisotropic dielec. rough interface , EM scatt. 83189
surface electrophysical params., sync. fluct. of waves, optimum-estim. algms. 72245
switchable dual-band circ. polarised patch antenna with single feed 105887
targeting radar with multifrequency radiation/polarizing reception, combined portrait stat. model 75164
TE transient scatt. from cylinder above infinite periodic surface, decomp. method 72312
terrain model improvement for target close to obstacle, low-altitude radar 96916
three-branch orthogonal polaris. diversity scheme 131113
time domain free-space dyadic Green's fn., spherical wave expansion 72285
TM_{01} vircator, TE_{11} mode generation converters at 4 GHz 125970
tripole planar adaptive array 72657
Turkey, 1999 earthquakes and ionos. EM propag. disturbances 83292
two-channel polarizing device for radiating syst. 114946
two-layer printed reflectarrays design using variable size rect. patches 128894
two-wire transm. line excited by oblique plane wave 94076
UHF propag. loss for mobile reception in urban areas with horiz. and vert. polaris. *(German)* 72314
ultrawideband radar-scatt. phenom. description using models/meas. 75142
UMTS polariz. diversity perform. 85687
UWB multilayer slant lin. polarizer, GA based desing 105704
UWB P-3 and CARABAS II foliage atten. and backscatt. anal. 98969
Vivaldi uniplanar four-element array, CPW fed 105925
VLF polarised antenna array, null steering algm. 107312
wideband dual-polarised microstrip patch antenna, H-shaped coupling aperture 128842
wideband printed microstrip antenna 94138
wideband TE_{21} mode tracking corrugated horn with feed syst. 72576
wireless handheld terminals, spatial/polariz./pattern diversity 119937
X-band scatt. response of pea (Pisum sativum) for rem. sens., estim. 76839
X-wave refl./transm. on planar air-dielec. interface, spectral anal. 83258
XPD-CPA rel., depolarization due to rain 105739
AlGaN-GaN HEMTs, perform. limits 92415
Ar high-av. power polarized soft-X-ray laser beam 93468
Fe/SmCo spring magnet, mag. imaging of buried SmCo layer 81790
ITO X-band transparent wave absorber using resistive-film for oblique incident wave 128810
SF_6 GIS, PD, EM wave detect. 134275
YIG ferrite circ. polarized planar array of circ. patch microstrip antennas 72668

ctromagnetic wave propagation
see also atmospheric electromagnetic wave propagation; atmospheric light propagation; backscatter; electromagnetic wave absorption; electromagnetic wave diffraction; electromagnetic wave interference; electromagnetic wave reflection; electromagnetic wave refraction; electromagnetic wave scattering; light propagation; plasma electromagnetic wave propagation; radiowave propagation
1D anal. of microwave batch sterilization of water with continuous impedance matching 78368

electromagnetic wave propagation continued
1D large apertures, narrow-waisted Gaussian beam discretization for short-pulse radiation 117648
2D generalized exponential integral, num. eval. 72446
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gaussian beam algm. 117647
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
3D FDTD anals., late-time instabilities suppress. 124775
15 pin D connector, transm. link radiation, common current generation 80476
anal. continuation from real to complex spaces 72274
apertured ABCD opt. syst., flattened Gaussian beams, closed-form propag. expressions 93699
arbitrary dispersive media freq.-depend. FDTD method, ABC 105696
arbitrary speed diffr.-free pulses 128788
arrow wave modes, scalar wave eqn. 117698
band-gap struct., class./charactn./appls. 83222
Berenger's PML for general anisotropic media 72214
bianisotropic media, anal. investig. 117665
CAL of wave propag. in dielec. and opt. waveguides, interactive simul. toolbox 94008
chiral/achiral transm. problems for small chirality, solns. 83207
chirowaveguides, EM waves charactn. 117741
circ. impedance cylinder with anisotropic surface impedance, long. E1 excitation 117671
closed spacecraft body, EM field levels prediction, stat. approach 88038
coherent scatt. from random medium layer with rough boundaries 94023
coherent sig. detect. using polariz. averaging MUSIC algm., perform. 107585
collimated wavepackets, long range tracking, hybrid ray-FDTD moving coord. frame approach 72250
common mode effective power on metallic lines, reduction using thin metal plate *(Japanese)* 105801
complex mediums characterisation, orthonormal beams appl. 105670
complex random media in random fields, stat. charactn. 105669
CPW coupler, anal. using conformal mapping transforms. 94093
CPW on semicond. substr. 94095
cyclotron freq., high-order harmonics excitation by relativistic oscillators 80597
diagonal metal edges and their microwave appls., enhanced FDTD eqns. 69026
direction finding, accuracy increase by three-antenna interferometer 120483
dispersive media, pulsed beam propag. 72290
dispersive media with known params., wave propag., FDTD anal. 83201
dispersive medium, EM waves propag., anisotropic PML ABC 83202
distributed Schottky barrier diode transm. line, nonlin. solitary waves propag. 70020
distributed Schottky barrier transm. line, higher-dimens. effects 80897
double-exponential pulse propag. through Debye medium 72265
dyadic Green's fn. for biaxial medium 72277
E1 antenna, EM field propag. in dielec. medium 72474
EMP vel. in absorbing/nonlin. media, quantum mech. parallels 83248
FDTD anal. of artificially-synthesized absorbing medium 117652
FEL coupled-groove-waveguide periodic struct. 117312
ferrite resonator in rect. waveguide fracture, EM field 117730
ferroelec. film based slot/microstrip lines, dispersion charact. 114929
finite thickness nonuniform dielec. layer, plane EM wave propag. 83220
forward-boundary-integral/parab.-wave-eqn. propag. models comparison 72230
Green's doubly periodic fn. computation, combined method 72238
gyroelectric circ. conducting waveguides, theory 83495
helical slow-wave struct., space-harmonic effects, equiv. cct. anal. 69460
highly efficient ABC, BPM 94016
HTSC silver-doped YBCO thin film, mag. penetration depth meas. by microstrip resonator 70611
inhomog. dielec. gratings, EM waves scatt./guiding 72262
inhomogenous anisotropic media interact., FDTD anal. 83197
isotropic point source, evanescence asymptotics 117699
isotropic to anisotropic medium propag. light, total refl. 117697
layered bianisotropic struct., complete spectral Green's dyadic 83192
lin. dispersive medium, time-freq. interpret. of transient wave propag. 83212
mag. anisotropic medium, EM wave propag. 83216
Maxwell's eqns., pseudospectral time-domain algm. for cylindrical coord. 117650
microstrip antenna, probe-fed compact circ. design for circ. polariz. 72540
microstrip line-like VLSI interconnects, periodic pulse propag. 69008
mounting plate design for low refl. level from profiled lossy dielec. slab 94006
MSSW, dielec. substr./mag. loss influence on dispersion/props. 105699
multilayer dielec. struct. diffr. grating, EM wave propag. 117704
multilayer dielec. struct. with diffr. grating, EM diffr./propag. 127755
multilayer isotropic dielec. media, PML schemes, matching conditions 117658
neg. refr. index material, time-domain modelling 94011
nonplanar anisotropic PML, accuracy of FE soln. of wave propag. problem 128733
open resonator, EM theory 83226
partially coherent submillimeter-wave antenna systs., dyadic anal. 105862
PBG crysts., theoretical and num. description of coupled defects 125660
PDC handset diversity antenna perform., head/hand/shoulder effects, diversity antenna gain 108691
periodic ferrite media, wave behavior 72435
periodic stratified media with uniaxial bianisotropy, EM wave propag. 83190
periodically arranged pass. dipoles line, fields 83737
planar interface between two lossy uniaxial media, effective propag. consts. 94007
planar waveguide elec. dipole, wave excitation 83658
propag. prediction from outdoor site to indoor site *(Chinese)* 117683
pulse distortion in supercond. lines, simul. 72415
QW, scatt., neg. phase time, microwave analogy expt. 94039
rect. waveguides with pseudochiral Ω slab, propag. 83477
relativistic translational obj. motion, anal. 72242
rot. scale-invariant EM fields 105658
rough surface underground imaging, stat. approach 96896
scalar Hertz pot., field anal., nonhomogeneous uniaxial dielec.-mag. mediums 83093
simple bodies made of neg. permeab./permitt. materials, electrodynamic props. 72246
soft X-ray propag. through straight/tapered capillaries, wave-optics treatment 83481
symplectic EM waveguide theory for Hamilton systs. *(Chinese)* 117740
TEM-wave transit. devices synthesis, geom. opt. Maxwell eqns. 83539
transient EM scatt., MoM soln., spatio-temporal multiresoln. anal. 105710
transient EM wave propag., comment 117655
transient EM wave propag., nonlocal/spontaneous material responses, reply to comment 117656

electromagnetic wave propagation continued
unbounded anisotropic medium, dyadic Green's fn. in cylindrical coord. 83204
uniaxial anisotropic media EM beam propag., spatial profile global changes 94014
wide-angle nonlocal boundary conditions for parab. wave eqn. 83242
wireless IR link modelling 109223
GaAs packaged Gunn oscillator, global simul. 125722
TbFe substr. high-data-dens. near-field opt. recording, EM propag., num. simul. 92977

electromagnetic wave propagation in plasma *see plasma electromagnetic wave propagation*

electromagnetic wave reflection
see also light reflection; X-ray reflection
2.4 GHz EM wave scatt. from buildings anal. 83300
2D flat periodic nonlin. reflector, charact. 117667
2D PBG struct., charactn. of diffr. anoms. 125661
3G mobile radio systs., stochastic spatio-temporal propag. 74789
5.8 GHz indoor radio channel charactn. 74608
700 GHz resistive-film wave absorber *(Japanese)* 83329
ablating material in arc-heated plasma flow microwave transm. 128761
act. FSS with ferroelec. substrs. 83188
airborne moving target detect. using lin. phased array radar 131659
anisotropic layered media, EM wave refl. and transm., propag. matrix method *(Chinese)* 117670
anisotropic smart coatings, proper polariz. bases, digital control 131635
array antenna meas. with rough surface reflector, anal. 105967
artificially synthesized absorbing medium, refl. charact. 128736
binomial matching transformers, design methods comparison 83468
Bragg reflector with arbitrary refr. index modulation 117669
broadband waveguide rejection filters 125590
cement-matrix composites, functional props., review 68417
complex layered arrays as photonic band-gap struct. 69256
composite triple layer struct., plane wave scatt. 128762
conducting needles in dielec. as radar/IR reflectors 72236
conductive plane covered with magnetized inhomogen. plasma, EM refl. 128794
constr. materials in microwave/MM-wave bands, freq. depend. of dielec. const. 105743
D-region, middle lat., electron dens. var. due to earthquakes 128769
deep Earth detect. 121223
dielec. nonmetallic reflecting FZP antennas 72604
dielec. permitt. at microwave freqs. using eigenvalue problem 72432
dielec. reson. disk in circ./rect. waveguide radiators 117678
dielec.-loaded flanged parallel-plate waveguide with box-type termination, radiation props. 72584
dihedral reflector faces, vis./IR wavelengths brightness correl. 117666
dipole antenna, transient response using summation approach in tech. 72588
dyadic Green's fns. for dielec. spheroid, spheroidal vector wave eigenfunction expansion 72158
equiv. cct. for coaxial discontinuities filled with dielec. materials, Marcuvitz's cct. freq. extension 91182
F-region vert. sounding, HF sig. scatt. component 111404
FDTD anal. of artificially-synthesized absorbing medium 117652
field intensification at media interface by conc. beam 83209
finite phased arrays, element charact. anal. using matrix manipulations 83751
FSS anal., blazing onset, rational Krylov model-order reduction/Woodbury sing. extraction 128743
FSS tunable radar absorbers 80155
FSS using cross dipole elements 72654
GPS refl. tech., sea state and surface winds determ. 88155
Green's dyadic fns. for planar stratified bianisotropic media, unbounded/scatt. field representations 105712
ground-penetrating radar images, land mines resoln. enhancement 77087
gyrotron, single-mode operation, refl. effects 91548
HDI PCB technol., influence on sig. integrity 124368
high-speed group targets, freq. selection in echo sig. accumulation 120411
ideal boundary conditions and generalized soft-and-hard surface 72218
indoor radio, UHF propag., ray-tracing methods 74572
inhomog. media shields and filters anal. 105798
integrated lens antennas, radiation props./input imped., effect of internal refls. 83541
interferometric EM-sens. for speech articulator/user gesture meas. 120763
ionos., anom. atten. during intense HF heating 105731
ionos. inhomog. struct., refl. sig. distortion anal. 105729
Jaumann absorbers design, adaptive GA 72333
L-2M stellarator, gyrotron response to refl. microwaves 91545
L-band wideband meas. of single trees, re-radiation fns. modelling 83270
LEO/MEO satellite links, polariz. cross-coupling anal. 83333
LMDS archit., multipath propag. and LOS interf. 85552
long dist. microwave transm. between islands, feasibility anal. 85571
low antenna height base station in urban area, propag. path ident. 105755
MacDonald-black and anisotropic flat coating models, EM wave refl. 117668
material props. in MM and submillimeter wave ranges 70380
metallic reflectors, radiation anal., Gaussian beam expansion 83606
metallized rough surface, plane wave scatt. 117672
metallodielectric periodic structs., implement. by via holes in microstrip lines 69053
micro-/pico-cellular mobile commun., polaris. consideration 83265
microcellular environ., scatt. by trees 83305
microstrip antenna on finite size ground plane with small vert. edge walls, radiation pattern 83518
microstrip array, infinite, plane wave refl. 105923
microstrip reflectarray phase errors due to finite patch size 94180
microstrip reflectarrays, refl. phase props. and perform. 94186
microwave heating, energy meas. error due to reflectometer directivity 75815
MM wave flat plate antenna based on partially reflective FSS 83586
MM wave pulse Doppler radar, suppression of interf. from hydrometeors 109249
MM-wave patch antennas, composite double layer struct. EM scatt. 128889
mobile commun. in road tunnels, traffic conditions influence on channel charact. 105766
mounting plate design for low refl. level from profiled lossy dielec. slab 94006
moving pers., spectral portrait, refl. radar sig. model 75212
multi-layered arrays of conducting strips, switchable photonic band gap struct. 105724
multilayer spherical resonator, high quality EM oscills. 71460
multilayered chiral filter response at oblique incidence 72450
multipath propag. study combining terrain diffr./refl. 105754
multiscreen FSS, reduced-order modeling using Krylov-based rational interpolation 83239
nonconstant immittance plane, overlying radio wave propag. 72329

electromagnetic wave reflection continued
nonmetallic buried mines detect., semianalytic mode matching techs. 77086
nonplanar anisotropic PML, accuracy of FE soln. of wave propag. prob 128733
open chiral waveguides, step discontinuities anal., least sq. boundary resic method 102507
open-ended coaxial waveguide radiating into chiral half-space, refl. coe 94111
perfectly matched layer ABC implement., mimetic differencing schemes 72
periodical arrays with small nonreciprocal inclusions, props. 72253
permitt. profile retrieval 127138
plasma flame-like plasma sheet, EM refl. 2D study 72345
propag. prediction from outdoor site to indoor site *(Chinese)* 117683
radar refl. from surfaces with ruptures 76967
radar sig. detect. algms. using nonparametric estim. of noise distrib. fns. 86
radiosignal refl. by moving pers. 119091
resistive measuring cable for field-probe meas., unit step response anal. *(Ja nese)* 132119
retransmission, refl. sig. and lateral spectrum components 108574
SAR complex-valued images, superresolution/edge-preserving reconstruct 96895
SAR polarimetric target feature extraction/image form. via semi-paramet method 75137
scanning aperture microwave probe, near-field pattern, exptl. determ. and co puter simul. 121171
small cell multipath environ., meas./predicted time dispersion/DOA compari 117679
soil moisture meas. using meter-wave noise sig. 88166
sources in chiral medium above soft/hard boundary, image theory 93994
spherical waveguide stat. irregular walls, EM scatt. 117743
stochastic inform.-transm. systs., multiplicative interf. anal. 105814
surveillance radar, spectral portraits of propeller-driven fixed-wing/turbojet craft, expt. 75165
thick freq. selective screens, EM scatt. 83338
THz EMP refl., index of refr. meas. *(Korean)* 75902
tunable single layer phase modulated radar absorber 80154
TW dielec. window with matching gratings, power loss calc. 80605
UHF propag. loss for mobile reception in urban areas with horiz. and vert. po ris. *(German)* 72314
UHF wave propag. through periodic struct., ray-tracing/PMM hybrid approa 94038
VHF/UHF radio waves multipath propag. in 3D terrains 72313
waveguide with anisotropic insert 80171
waveguide/horn radiators, matching/directional charact. anal. 117816
wide-angle ISAR pass. imaging using smoothed pseudo Wigner-Ville distr 96958
X-, Ku-, Ka- and W-band freqs., bistatic reflectivity meas. 99169
X-wave refl./transm. on planar air-dielec. interface, spectral anal. 83258
X-waves refl./transm. in planar layered media, pulsed plane wave representati 83257
InSnO films, EM shielding effectiveness 72346
Si P-I-N diode, electron-hole plasma, MM-wave refl. 102633

electromagnetic wave refraction
see also light refraction
atm. low elevation angle radio wave bending angles determ. 76891
atmos., near water surface, microwave refr. diagnostics 117693
field intensification at media interface by conc. beam 83209
indoor radio, UHF propag., ray-tracing methods 74572
infinite current source above semi-infinite lossy ground using fictitious curre auxiliary sources/complex image theory 128745
long dist. microwave transm. between islands, feasibility anal. 85571
microwave sigs. propag. above sea, opt. visibility range, space/time stru 117692
MM-wave-beam propag. along intersatellite path crossing limb area 117691
moist tropos. radio occultation sigs. modeling/inversion 76889
OTH HF radar, ionos. distortion mitigation techs. 99130
propag. prediction from outdoor site to indoor site *(Chinese)* 117683
spherical inhomog. Earth-ionos. waveguide, 10.2 kHz propag. 128823
tropos. horiz. refr. index gradients, radio wave propag. 111408
tropos. radio occultation sigs. tracking from LEO 76892
tropos. refractivity fields determ. using GPS 83287
unipolarized generalized inhomog. TEM plane waves in differential geometr lens synthesis 93988
VHF band interf., superrefraction, ducting tropical location, Nigeria 83296
VHF propag. near diffr. horizon 128768
VHF/UHF radio waves propag. studies in south Baltic area 83298
Si planar parab. lenses 104800

electromagnetic wave scattering
see also backscatter; gamma-ray scattering; light scattering; X-ray scatterin
1D ATR, parametric HRR signature modeling 75154
1D isotropic dielec. medium, scatt. amplit., first-order diff. eqns. 105767
1D large apertures, narrow-waisted Gaussian beam discretization for short-puls radiation 117648
1D ocean-like surface, radar image studies 122695
1D time domain inverse scatt., optim. approach with edge-preserving regulariza tion 128754
1D/3D randomly Gaussian irregular media, scalar waves scatt. 83228
2.4 GHz EM wave scatt. from buildings anal. 83300
2D chiral radome, arbitrary cross sect., EM scatt. and transm. 94034
2D composite uniaxial bianisotropic cylinders, EM scatt. model 83213
2D conducting targets, EM imaging, GA-BEM hybrid 72281
2D EM scatt., nested multigrid finite elements 105701
2D flat periodic nonlin. reflector, charact. 117667
2D large scatt. problems, localized iter. generalized multipole tech. 83245
2D large-scale impedance random rough surfaces 72266
2D PEC scatterers, duality of integral eqn.-meas. eqn. of invariance metho 72283
2D random rough surfaces, EM wave backscatt., forward-backward/spectra accel. method 128739
2D randomly rough surfaces, EM wave scatt., appl. of reduced Rayleigh eqns 94021
2D scatt. problems, FDTD anal., wavelet-based adaptive gridding algm. 7221
2D scatterers, microwave imaging by inverting scatt. near-field meas. 73306
2D ships, radar scatt., rough-sea-surface influence 75205
2D target shape estim. in nonlin. inverse scatt., pass. radar appl. 86174
2D TE incident EM wave scatt., diagonal moment-matrix soln. 72267
2D telegraphist eqns. for anal. of circ. microstrip resonators 94094
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gaussia beam algm. 117647

romagnetic wave scattering continued
3D arbitrary conducting objs., on-surface MEI 72268
3D bodies RCS, pseudospectral time domain algm. 75176
3D cavity-backed aperture, EM wave scatt., FEM iter. method 72221
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
3D conducting struct., stationary phase method for radiation anal. 83506
3D conformal PML, FEM realization 105719
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 105695
3D dielec. bodies, MoM-CGM-FFT appl. 72287
3D dielec. body reconstruction using unrelated illum. method 94003
3D dielec. obj. image reconstruction using gradient-based optim. 83259
3D dielec. targets near lossy half space, multilevel fast multipole algm. 72216
3D EM scatt., integral eqn.-asymptotic phase method appl. 105715
3D FDTD anals., late-time instabilities suppress. 124775
3D ground penetrating radar simulator, FDTD method 86194
3D inhomog. dielec. objs., transient EM scatt. 72269
3D interferometric ISAR imaging, target scatt. 86237
3D invariants of moving targets 86130
3D irregular ionos. waveguide channel, EM scatt. 128824
3D objs., fast RCS calc. over freq. band *(Chinese)* 131648
3D objs., fast-domain decomp. method for EM scatt. anal. 72220
3D PEC bodies, high-order MoM soln. using quadrature-based point matching 83251
3D perfectly conducting bodies, bistatic RCS 83322
3D plane-wave scatt., dual-surface CFIE 83250
3D range migration algm. extension to cylindrical/spherical scanning geometries 131631
3D ray-based GPR simul. code 77085
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
3D weak-form CG-FFT/BCG-FFT methods for vol. integral eqns. 83260
3G mobile radio systs., stochastic spatio-temporal propag. 74789
20-50 GHz range, propag. effects and loss prediction in low-availability systs. 108982
140 GHz 30 km slant path radiowave propag. expt., high temporal-resoln. channel charact. 83319
ABC/curvilinear perfectly matched layer 128735
acid rain, theoretical study of MM-wave scatt. characts. 72327
adaptive antennas for wireless broadband commun., constraints/possibilities 83684
aircraft interf. due to VSAT/SNG and SIT terminals 88058
airfoil transient scatt. anal. and RCS reduction 86196
amplit. by reson. bodies in free space/waveguides 83210
anal. regularization method 72254
angle-of-arrival meas. for mobile channel modelling *(English)* 128780
anisotropic and composite screens, dual-series tech. for scatt. 83215
anisotropic dielec. loaded waveguide, scatt. characts. anal. *(Chinese)* 94108
anisotropic medium, EM wave scatt., dyadic Green's fn. 72228
anisotropic targets, FDTD anal. 72284
antenna, min. scatt. field calc. from pattern 83699
antenna arrays perform. in urban multipath environ. 73573
antenna surface meas. using microwave holography 83516
antenna technol. and applied EM, conf., Winnipeg, Man., Canada (2000) 78440
antenna window on medium cover, spec. determ. 72605
antenna/RCS anal. involving large bodies, extrapolation tech. 72470
arbitrarily shaped cylinders, focused beam syst.-oblique incidence case 83186
arbitrary dispersive media freq.-depend. FDTD method, ABC 105696
artificially disturbed ionos. plasma, aftereffects 88138
atm. radio wave scatt. and temp. data wavelet anal. 128779
atm. radio-acoustic/acoustic sounding, fluct. effective centers 133292
ATR, model-based, anisotropic scatt. attribution 75138
ATR systs., HRR data, interfering scatterers mastering 75157
Barnes-Hut multipole method for EM scatt., predicting computer run-time 83214
biological tissues, RF interacts., FDTD simul. 87948
bistatic radar scatt. behaviour of forested hills at grazing incidence 86191
bistatic RCS and detect., forward scatter 86216
bistatic scatt. from fractal rough surface, Monte Carlo and FEM 83193
bodies of rev., fast algm. 72258
Bohai Sea, ice detect. and classif., SAR and SSM/I obs. 76919
broadband antenna response anal. using hybrid freq. domain MoM/FDTD tech. 83625
broadband matched antenna array, freq.-domain, pulse simul. 83721
broadband wireless channels, phys. propag. model 117682
building materials, in-situ characterisation 80157
building-scatt. LMCS data transms., error rate reduction 96410
buried imperfect conductor, image reconstruction, EM scatt. 86193
buried imperfectly cond. cylinder, image reconstr. freq. depend. 107225
buried targets, rough air-ground interface, time-domain sens. 77067
chiral/achiral transm. problems for small chirality, solns. 83207
chirp step-freq. moving obj. echo real time digital generation methods 75087
circ. antenna array with helical antennas, anal. 72697
circ. waveguide, EM TE scatt. from gap 128829
coherent scatt. from random medium layer with rough boundaries 94023
collocated orthogonal dipole antennas 72664
complex natural resons. meas. of targets in free space/lossy media 83256
complex obj. EM wave scatt., recursive algm. 94002
complex radar objs., polariz. props. of scatt. fields, stat. theory 75179
complex struct., recursive reduction techs. 72273
complex targets in continuous random media, backscatt. enhancement for H-wave incidence 120436
composite scatt. of targets/environ. 72272
composite triple layer struct., plane wave scatt. 128762
composites, dielec. props. eval. using combined modulated scatter./near-field microwave NDT tech. 121151
computationally efficient DOA estim. of scatt. source 118921
conducting bodies of rev., use of wavelets for soln. of EM scatt. 128734
conducting needles in dielec. as radar/IR reflectors 72236
conducting target in fractal atm. turbulence, EM scatt. 72334
conducting wire and cylinder, EM wave scatt. 83217
cone with long. slots, plane EM waves scatt. 83229
conformal Thompson-FDTD method using MEI-ABC 83203
conical slot antenna excitation 117772
continuous/grid screens in moving media, EM wave scatt. 128793
crop spinach, microwave response through rem. sens. 76828
cylinder EM wave scatt., efficient mixed algm. 72280
cylindrical plasma crater, scatt. surface and radiation diag. of axial lin. source 117755
cylindrical target, EM ident., neural network 72294
Damson HF channel characterisation, review 105744

electromagnetic wave scattering continued
DDM/FMM based fast algm. for scatt. by multi-cylinders 72279
dielec. cylinder, acousto-EM scatt. behaviour 128740
dielec. cylinder, EM scatt., domain decomp. method *(Chinese)* 105707
dielec. cylinder scatt. anal. using at. model 105706
dielec. cylinders inverse scatt., RBF NNs 128759
dielec. obj. above half space, four-path model 105705
dielec. reson. disk in circ./rect. waveguide radiators 117678
dielec. rod, EM pulse diffr. 128747
dielec. sphere, time-freq. proc. of scatt. responses 117659
DOA of multiple scatt. sources 130023
Doppler modelling of radar sea clutter 75071
DSPN sigs. in dense scatter environ., eval. 74886
dusty plasma, intrinsic electron dens. fluct., EM scatt. 83350
dyadic Green's fns. for dielec. spheroid, spheroidal vector wave eigenfunction expansion 72158
E-plane T-joint of rect. and Il-waveguides, wave transformer 105832
Earth-space rain atten. model based on EPNet-evolved ANN 117696
echoes scatt. from turbulence and discrete scatterers, similarity 83205
EFIE preconditioner 105732
elec. large objs., pseudospectral time-domain algm. 72243
elec. large targets, RCS calc., shooting-and-bouncing rays 96885
ellipt. cylindrical wave fn. for large aspect ratios scatt. problems 72278
ellipt. torus knots, props. 83086
EMC coupling problems, transients anal., FDTD, Method of Moments 72389
EMC std. guidelines, time-domain MoM simulator validation 83424
equiv. edge currents expressions 75177
F-region vert. sounding, HF sig. scatt. component 111404
far-field bistatic scatt. cross sect. prediction using spherical/cylindrical/planar scanned near-field data 86155
fast multipole scatt. models, half-space Green's fn. eval. 94000
fast time-domain finite element-boundary integral method 128742
FDTD based model for bistatic RCS prediction of single leaves/trees 83312
FEM freq. domain EM radiation problems, multipoint Galerkin asymptotic waveform eval. for model order reduction 128746
ferrite coated cylinder, EM wave scatt., HOIBC-FMA 72224
FFT accelerated marching-on-in-time algm. 72260
finite element time domain method, appl. to scatt. problems 83218
finite perfectly conducting corrugated rough surface light scatt., left-right method 83345
foil cloud, EM bistatic scatt., Monte Carlo simul. 75171
fractional Brownian motion rough surface, EM scatt. *(Chinese)* 131629
free-space imaging with act. microwave tomographic syst. 79485
freq. extrapolation for computing antenna-platform radiation problems 105852
fringe integral eqn. for truncated grounded dielec. slab 105711
Galerkin operators in adaptive integral method implement. 83187
Gaussian beam illum. spheroidal particle, expansion coeffs. 72233
Gaussian beam illum. spheroidal particle light scatt., spheroidal wave fns. 72340
generalized radar/radiometry imaging problems 86152
GMT/PO approach to num. diffr. coeffs. of irregular edge on semi-infinite conductive circ.-cylinder 83199
GMT/PO approach to num. diffr. coeffs. of irregular top on conductive cone 83198
Green's dyadic fns. for planar stratified bianisotropic media, unbounded/scatt. field representations 105712
Green's fn. for rough surface with Dirichlet/Neumann/impedance boundary conditions 72270
ground penetrating radar, anal. model for soil modif. effects 86175
ground surface image reconstruction using radio ground waves 111381
ground surface tomographic imaging, ground wave use 88097
grounded slab/parallel-plate struct. using SDDI tech. 83253
GSM handset antennas, total radiated power meas. methods eval. 119959
GTD/UTD methods in 3D complex environ., astigmatic beam tracing 83247
H-polarized plane wave incidence, reson. scatt. from slit coupled cylindrically eccentric impedance cavity 72239
H-polarized wave scatt. by penetrable polygonal cylinder 128748
H-wave scatt., at. model *(Japanese)* 72249
head phantom, induced EM field reconstruction, microwave imaging 132649
heterog. canopy surface, SAR images simul. 76965
HF ionos. propag. channels, wideband scatt. fns. 128767
HF multimode wideband channels, scatt. fns. 83290
high-altitude platform links, rain scatter interf. levels calc. 83388
high-order mixed RWG basis fns. 93998
high-permitt. nanostructure scatterers, EM scatt. 128782
homog. symm. dielec. bodies, EM diffr./scatt. 83231
honeycomb sandwich structs., EM wave simul. by 3D vol. integral eqns. 128757
HRR phys.-based moving target model, param. estim. algms. 75156
human body-mobile phone interact., computational EM 133079
hybrid coord. FDTD scheme 105703
IEEE antennas, propag. and EM theory, conf., Beijing, China (Aug. 2000) 67407
IFSAR, spotlight-mode, scatterer location direction cosine method extension 109240
image restoration in act. sounding systs. 120403
imaging of cylindrical dielec. objs. with optimal regularization param., fast inversion 117673
imperfectly conducting bodies, EM scatt., time-domain integral eqn. anal. 83240
imperfectly conducting circ. disc, EM wave scatt. 72225
imperfectly conducting circ. disc, full wave anal. 105716
incremental length diffr. coeffs. for arbitrary cylindrical scatterers 93992
index reconstruction, resoln. improvement, total var. min. 106694
infinite current source above semi-infinite lossy ground using fictitious current auxiliary sources/complex image theory 128745
infinite nonlin. loaded antenna arrays, inexact Newton anal. 83670
infinite perfect conducting nonlin. loaded circ. cylinder excitation calcs. 83400
infinite periodic struct. with localized impurity, EM scatt. 83236
infinitely long conducting circ. cylinder, Gaussian beam far field scatt. 82722
inhomog. dielec. gratings, EM waves scatt./guiding 72262
inhomog. planar boundary beyond layered media, surface impedance 117661
integral eqns. soln., multilevel fast multipole algm. 72282
integrated X-band radar syst., dominant scatterer ident. testing 99150
interior reson. scatt. cross sect., SVD *(Chinese)* 105722
ionos., anom. atten. during intense HF heating 105731
ionos. plasma plane layer with irregularities, radio sounding 133304
IPO approach, subdomains splicing tech. 72275
ISAR imaging of moving targets, robust autofocus algm. 75140
ISAR low-resoln. radar, cross-range scaling, new method 75125
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
joint nominal DOA and ang. spread estim. via extension of array mode vector 108721

electromagnetic wave scattering continued
Kennaugh null theory extension 75172
knots/symm./scatt. 117646
land mine detect., acoustic-EM wave interact., Doppler spectrum 77057
land mine imaging & detect., inversion method, 3D grid 77006
land-mines, plastic, PDFT algm. for data eval. 128758
landmine detect., rough surface stat. effect, FDTD tech. 73437
large aspect ratio scatt. problems with ellipt. cylindrical wave fns. *(English)* 105700
large finite sized phased array antennas, scatt. prediction using FDTD 83696
lattice gas automata for EM scatt. and transm. line modelling 94004
layered anisotropic media, electrodynamic problems, Green tensor fns. 117604
layered dielec. periodic struct., EM wave scatt. 72226
layered spheroid internal/near-surface scatt. EM fields 105768
LEO/MEO satellite links, polariz. cross-coupling anal. 83333
lin. composite materials, inverse homogenization problem, EM constitutive props. 72155
line elec. current source excited multiple cylindrically curved thin screens, response anal. 72261
lossy dielec. random rough surfaces, wave scatt. 117663
lower atmos., refr. index turbulence study 117664
M1 radiation near cylindrical ribbon or slotted cylinder 128750
Madrid, Italsat 50 GHz beacon atten. by gases and clouds 83317
matrix thinning, preconditioning tech., MEI method 67990
Maxwell's eqns., pseudospectral time-domain algm. for cylindrical coord. 117650
Maxwell Garnett mixing rule, derivation 94024
meas. ABC 72223
MEI validity 105713
metallized rough surface, plane wave scatt. 117672
method of anal. regularization, num. efficiency 94009
microcellular environ., scatt. by trees 83305
microcompact scatt. range, EHF/THF backward/forward scatt. 83326
microstrip antennas, scatt. anal., charact. modes appl. 72660
microwave backscatt. model for bare soil field 76843
microwave imaging, inversion of scatt. near-field meas. 129432
microwave imaging applied to rem. sens. using multilevel fast multipole algm. 75127
microwave imaging inverse scatt., neural net approach 72295
microwave nondestructive eval., global optim. tech. 121169
microwave structs., reconstruct. procedure using 2D inverse TLM method 91223
microwave tomographic imaging techs. for indust. procs. 121165
microwave tomographic reconstruction, inverse scatt. problem 129650
MIMO channels in indoor environ. 85848
MIMO environ. capacity sensitivity 108608
MIMO scatt. channel models, perform. eval. 105758
MIMO wireless channels, capacity/perform. prediction 74560
missile head with absorbing coating, RCS, FDTD method *(Chinese)* 75112
MM-wave patch antennas, composite double layer struct. EM scatt. 128889
MM-wave propag. in strong sandstorm, multiple scatt. soln. 83264
MM-wave vegetation atten. rates, math. model 72303
mobile commun., spectral moment approach to vel. estim. 96440
mobile commun. handset, interact. of EM energy with human arm 111220
mobile radio, DOA estim. using weighted subspace fitting 108737
mobile radio commun., 3D ray tracing model 74690
mobile tracking with local scatt. modeling 118922
modal scatt. at radiating apertures, near field anal. 128756
modeling of small wire scatterers with core 105725
modified Root-MUSIC for freq. dispersion detect. of EM scatt. wave 72235
MoM, macro-element compression 128744
MoM for compact large planar scatterers in homog. medium 83223
MoM using high-order non-uniform grids 83224
MOSFET induced gate noise/channel thermal noise by RF noise meas., extraction/correl. 102655
mounting plate design for low refl. level from profiled lossy dielec. slab 94006
MRTD anal., CDF biorthogonal wavelet expansion 105720
MSTAR occluded targets recogn. 75153
Mueller matrix of two-layer eccentrically bianisotropic cylinder lin. array with double helical conductances 72251
multi-aspect scatt., wavelet coeff. charactn. by dual HMM 95608
multi-gap fractal superlattice lacunarity, wavelet anal. 128789
multi-inform. array inversion using variational Born iter. method 76845
multi-layered arrays of conducting strips, switchable photonic band gap struct. 105724
multi-WSSUS multipath channel, Markov chain/QAM fading based stat. discrete time model 120073
multielement waveguide irregularities, EM scatt. 83471
multilayer diffractive coating, EM waves transform. 117645
multilayered media, dyadic EM Green's fns. calc. 117662
multilayered medium, overlying objs. EM scatt. 72213
multilayered resistive strip gratings, microwave/MM-wave scatt./absorpt. 125691
multilayered stratified gyroelectric chiral media, dyadic Green's fns. 72452
multilevel fast multipole algm., translation matrix interpolation 105702
multiple antennas, high spectral efficiency promise 83668
multiple conductors, EM wave scatt., image reconstruction 94025
multiple Rayleigh scatt., elec. field autocorrelation fns. 128781
multisphere EM Mie scatt. soln., exptl. verification 105750
narrow-band mobile commun. channels, vel. estim./correl. props. 108811
natural freq. extraction from multiple freq. response sample sets using fitting error 94022
natural random rough surfaces, X-band radar scatt. 76907
near-field sources, modeling in FDTD method 117613
neg. index of refr., expt. scatt. data 72331
netted radar sens. 99151
non-cooperative target recogn. using radar scatt. subspace fitting anal. 131632
nonlin. antennas placed close to water surface, expt. investig. 83232
nonlin. penetrable objs., TM-case scatt., time-domain vol. integral eqn. 94017
nonlin. scatt. using multifrequency/single-freq. probing sigs. 117644
nonmetallic buried mines detect., semianalytic mode matching techs. 77086
nonuniform cold magnetized plasma column, penetrated and scatt. field distribs. 94019
Norway, inland/coastal areas, SHF rainfall atten. 83318
objs. nonlin. scatt. EM waves 105697
oblique ionos. sounding, chirp sig. struct. 88136
ocean forward scatter, dual-freq. meas. with ultrawideband radar 99167
one-way acoustic/EM wave fields, reciprocity theorems 128760
open image-type slotted struct., reson./nonresonant diffr. 83238
optimal grouping of basis fns. 72229
parallel perfectly conducting cylinders microwave imaging 94042
electromagnetic wave scattering continued
partially coherent submillimeter-wave antenna systs., dyadic anal. 105862
pass. intermodulation scatt., time-domain PO heuristic approach 72264
PCS, handheld transceiver unit, human head model/EM interact. anal. 8334
PEC large scatt. problems using asymptotic phasefront extraction, efficient M 72231
PEC target above or buried in lossy half space, fast multipole method 8323
penetrable bodies, pot. integral eqn. method 83225
penetrable bodies, pot. integral eqns. method 93993
perfect circ. cylinder conductor, scatt. anal., wavelet MOM *(Chinese)* 7225
perfectly cond. circ. cylinder, spectral-domain formulation of EM scatt. 117
perfectly conducting cylinder, UHF/SHF inverse scatt. 128778
perfectly conducting cylindrical struct., EM scatt. 94001
periodic gratings, asymmetrical EM wave scatt., rigorous num. anal. 11767
periodic spatial patterns in random media, backscatt. response 99006
periodical arrays with small nonreciprocal inclusions, props. 72253
periodically arranged pass. dipoles line, fields 83737
planar struct. with arbitrary permeab. distrib., radiowave scatt. 105740
planar struct. with arbitrary permitt. distrib., time-domain anal. 83488
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral h medium 117654
plane wave scatt. by doubly periodic gaps/cracks 72252
PO approx., line integral representation for diffracted fields 117674
PO multifrequency scatt. fields, shape reconstruction via SVD 117649
Poincare sphere, const. co-polarized echo curves 75110
polar summer mesos., nonturbulent layer struct., VHF scatt. 133315
power from random medium layer with high dielec. const. particles, soil wa content detect., anal. 105718
pulsed beam scatt. by random medium over ground 86177
radar imaging and recogn., parametric model with freq. depend. 75108
radar meas., model-based inversion of rough soil surface params. 76836
radar range profiles, relative phase inform. 75141
radar returns from raindrop roughened water surfaces, expt. study 117694
radar target ident. using 1D scatt. centres 131641
radiowave absorpt. by brain/eyes in human head eccentric spheres model, an 87950
rain atten. stats. from rain cell diams. and heights 108980
rain backscatt. props. and effects on radar perform. at MM-wave band 8332
rain scatter interf., new formulation 83387
random complex radar obj., modeling using on-the-av. equivalence princip 75111
randomly distributed chiral spheroids, wave polariz. scatt. and transm. proper 83254
randomly rough surface, modified two-scale scatt. model 83196
randomly rough surface, modified two-scale scatt. model 83195
ray shadowing by rough surface, probab. approx. through interpolation 8323
Rayleigh multipath fading channels, GQR models 83263
RCS modeling, data compression, comparative study 86144
RCS of large objs., extrapolation tech. using GA and Prony's method 75074
rect. cavity dimens. determ. from scatt. data 86189
rect. dielec. waveguides directional coupler charact. 83496
rect. waveguide with pseudochiral Ω slab, scatt. 72431
relativistic diffr. electronics, reson. scatt. by gratings 115264
relativistic translational obj. motion, anal. 72242
road surface monitoring, microwave coherent polarimeter, vel. gating 75224
rough boundary of arbitrary plane-layered medium 72234
rough dielec. surfaces, out of plane bistatic scatt. 105708
rough perfect conducting surface scatt., Kirchoff and integral eqn. models com parison 83194
rough sea surface, bistatic scatt., low grazing angle incidence, GFBM/SA method 94040
rough sea surface with breaking waves, radar sigs. scatt. 99026
rough surface, EM scatt., modified perturb. method 83235
rough surface, EM wave scatt., ray tracing 83219
rough surface underground imaging, stat. approach 96896
rough surfaces EM scatt., FDTD anal. 72289
SAR, class. perform. prediction using parametric scatt. feature models 86132
SAR ATR perform., vote-based approach, SAR ATR perform. 120416
SAR buried objs. imaging from MoM modelled scatt. field 96904
SAR high resoln. near-field images, reduced bandwidth algm. 131638
SAR imagery, matched subspace detectors for target discrim. 109267
SAR imagery, multi-aspect target detect. using HMMs/2D matching pursuit 75144
SAR imagery interp. algms. for complex building scenes 86139
SAR polarimetric target feature extraction/image form. via semi-parametri method 75137
SAR regularized imaging based on recogn.-oriented features, eval. 75126
SAR subaperture imaging, results/directions 75136
SAR subsurface objs. detect. 122722
satellite commun., ice cryst. and raindrop canting angle effects 131324
satellite interf. prediction, effects of ice crysts. and raindrop canting angle 109023
satellite pers. commun. channels, Doppler spread charact. 108979
scalar 2D inverse scatt. problems, degree of nonlin. 94015
scalar pulses diffr. at plane apertures 105717
screen, pseudodifferential eqn. 72292
sea surface, multi-freq. polariz. backscatt. 72322
self-transmitting/self-receiving monostatic planar near-field scatt. meas. 83200
shadow-corrected bistatic scatt. from random very rough surfaces 105709
sharp edge particle EM wave scatt. anal., extended boundary condition metho 83348
SHF and EHF appls., cloud atten. modelling 108983
SHF/EHF airborne/satellite commun., tropos. propag. effects 83283
SHF/EHF satellite commun., propag. data stat. proc. 83284
shielding devices, field reduction props., modulated scatt. meas. 83372
simul., conformal PML-FDTD schemes, dyn. stabil. study 83084
Singapore, effects of wet radome on short MM-wave link 96394
single axis symmetric struct., computational reduction tech. 72288
single-layer discrete surfaces, electrodynamic props. 105848
single/multiple region field computation, domain-decomposed MEI method 83241
slightly rough conducting surface, vert. polarized Gaussian beam EM scatt. 94048
small cell multipath environ., meas./predicted time dispersion/DOA comparison 117679
snowcover, microwave emission model, layered struct. 99014
soil moisture, microwave scatt. coeff., rem. sens. 94032
Southern India, rain atten. studies at 11.7 GHz 108998
space-scatt. mobile radio networks, radio sigs. dyn. range 85614

tromagnetic wave scattering continued
spectral accel. forward-backward method for terrain profiles coverage anal. 117681
spectral iter. tech. for EM scatt. problems 93999
spherical waveguide stat. irregular walls, EM scatt. 117743
spilling breaker water waves, low-grazing-angle scatt. 133344
sprite min. plasma dens. determined by VLF scatt. 76872
staggered parallel plate waveguide cavities, E-polarized plane wave scatt. 83475
stochastic inform.-transm. systs., multiplicative interf. anal. 105814
stochastic microwave imaging in NDT, GA-based iter. procedure 101577
straight wires, normalized current distrib./scatt. field pattern, closed-form soln. 128738
stratified arbitrarily anisotropic dielec. rough interface , EM scatt. 83189
subsurface sens., EM wave scatt., discrete dipole approx. 83227
surface electrophysical params., sync. fluct. of waves, optimum-estim. algms. 72245
surface field scatt. by impedance polygonal cylinder, PO currents 94020
surface integral boundary conditions, interior reson. errors detect. 83244
surfaces with/without slicks, finite size illum. area influence 117653
TE transient scatt. from cylinder above infinite periodic surface, decomp. method 72312
terrain model improvement for target close to obstacle, low-altitude radar 96916
Thaicom 3 satellite, channel capacity estim. from rain stats. 108988
Thailand, wave propag. at Ka-band 108992
thick freq. selective screens, EM scatt. 83338
thin dielec. screens, fast soln. 128749
time domain free-space dyadic Green's fn., spherical wave expansion 72285
time-domain discrete Green's fn. method, FDTD grid boundary characterisation 93996
time-domain equiv. edge currents for transient scatt. 72232
time-varying rough sea surface, EM scatt. considering distrib. of sea power spectrum *(Chinese)* 128755
transient EM wave beam scatt. modelling 83206
transversely anisotropic inhomog. cylinders, FEM-FMA hybrid method 72276
tropos. scatt. layers, multiple-freq. range imaging 122652
TV interf. from VHV overhead transm. lines, minimisation *(Chinese)* 83391
UHF wave propag. through periodic struct., ray-tracing/PMM hybrid approach 94038
ultrawideband radar-scatt. phenom. description using models/meas. 75142
unbounded 2D scatt. problems, soln. by cylind. method of lines 72219
underwater EM pass. ranging method *(Chinese)* 72326
uniform elements series, scatt., Cayley-Hamilton theorem 72427
urban area quasi-MM band fixed wireless access, delay profile 85551
urban radio propag., diffuse scatt. model 94031
UXO detect., above-ground/buried, UWB SAR, MoM & PO modelling 77069
vector Green's fns., multipole expansion, error anal., EM scatt. 94013
vee wire scatterer carrying TW current, RCS reduction 131627
vehicle telematics, antennas/propag. challenges 83522
VHF/HF sea echo Doppler spectrum for finite illum. area 76916
waveguide bends, modelling of propag. and scatt. 128830
WG-mode DR based microwave and opt. network components, num. anal. 80186
wide-angle ISAR pass. imaging using smoothed pseudo Wigner-Ville distrib. 96958
wideband meas. of time-variant indoor radio channels, moving scatterers impact *(German)* 128765
wideband target signatures, spatial/temporal covariance props. 86129
wind field characterisation with time/space high resoln. 72212
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626
wire scatterers, waveguide meas. 93997
wireless commun. systs., SDM algms. 108956
wireless systs. beyond 2000, role of antennas and propag. 85498
X-band scatt. response of pea (Pisum sativum) for rem. sens., estim. 76839
XPD-CPA rel., depolarization due to rain 105739
C semi-infinite nanotube, EM wave scatt. anal. 105726
He-Ne laser beam focusing, beam-shape coeffs., generalized Lorenz-Mie theory 71877

ctromagnetic wave transmission
see also light transmission
2D chiral radome, arbitrary cross sect., EM scatt. and transm. 94034
2D PBG struct., charactn. of diffr. anoms. 125661
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gaussian beam algm. 117647
3D airborne radome of superspheroidal shapes, discrete anal. 72703
5.8 GHz indoor radio channel charactn. 74608
act. FSS with ferroelec. substrs. 83188
angle-of-arrival meas. for mobile channel modelling *(English)* 128780
anisotropic layered media, EM wave refl. and transm., propag. matrix method *(Chinese)* 117670
blood sugar level, noninvasive monitoring by mm-wave transm. coeff. meas. *(Japanese)* 98382
chiral/achiral transm. problems for small chirality, solns. 83207
complex layered arrays as photonic band-gap struct. 69256
constr. materials in microwave/MM-wave bands, freq. depend. of dielec. const. 105743
dielec. reson. disk in circ./rect. waveguide radiators 117678
dyadic Green's fns. for dielec. spheroid, spheroidal vector wave eigenfunction expansion 72158
equiv. cct. for coaxial discontinuities filled with dielec. materials, Marcuvitz's cct. freq. extension 91182
FDTD method for simul. of transm. waves through multilayered thin conducting sheets 105714
FSS anal., blazing onset, rational Krylov model-order reduction/Woodbury sing. extraction 128743
Green's dyadic fns. for planar stratified bianisotropic media, unbounded/scatt. field representations 105712
long metallic brick wall, microwave transm. 128772
material props. in MM and submillimeter wave ranges 70380
microcellular environ., scatt. by trees 83305
MM-wave transm., book contrib. 83252
mobile commun. handset, interact. of EM energy with human arm 111220
mounting plate design for low refl. level from profiled lossy dielec. slab 94006
multi-layered arrays of conducting strips, switchable photonic band gap struct. 105724
multilayer dielec. struct. with diffr. grating, EM diffr./propag. 127755
multilayered chiral filter response at oblique incidence 72450
open chiral waveguides, step discontinuities anal., least sq. boundary residual method 102507

electromagnetic wave transmission continued
penetrable bodies, pot. integral eqns. method 93993
periodical arrays with small nonreciprocal inclusions, props. 72253
planar interface between two lossy uniaxial media, effective propag. consts. 94007
radiowaves in nonlin. transm. line, chaotic transits. 125208
RF transm. 74587
shielding effectiveness of bent slots, wave penetration 105797
TEM taper cell, transm. charact. *(Chinese)* 72256
thick freq. selective screens, EM scatt. 83338
UHF wave propag. through periodic struct., ray-tracing/PMM hybrid approach 94038
waveguide with anisotropic insert 80171
X-wave refl./transm. on planar air-dielec. interface, spectral anal. 83258
X-waves refl./transm. in planar layered media, pulsed plane wave representation 83257
$BaSrTiO_3$ thin-films, electrodynamic props., CPW struct. 80159
$SrTiO_3$ single-cryst./thin-films, electrodynamic props., CPW struct. 80159

electromagnetic waves
see also bremsstrahlung; channelling radiation; Cherenkov radiation; electromagnetic field theory; electromagnetism; gamma-rays; heat radiation; light; microwaves; radiowaves; solar radiofrequency radiation; surface electromagnetic waves; synchrotron radiation; transition radiation; whistlers; X-rays
dyadic Green's fn. 72170
ELF EM radiations and intrinsic EM phenom., human health issues 87947
generation by electrons rot. in cross radial electrostatic/axial mag. fields in free space 83234
M1 radiation near cylindrical ribbon or slotted cylinder 128750
Maxwell's eqns., pseudospectral time-domain algm. for cylindrical coord. 117650
MIKON-2000, microwaves, radar and wireless commun., conf., Wroclaw, Poland (2000) 78398
modeling and visualization tools using FDTD tech. 93991
multilayered media, Green's fns. in near-field region 72244
Nat. radio sci. conf., Mansoura, Egypt (March 2001) 124179
PCBs with parallel trace config., FDTD predict. of radiated emissions 69295
power syst. fault location using RF emissions 77641
simulator, OO design 94026
truncated chiral cylinder shielding effectiveness anal. 83366
SF_6 GIS apertures, radiated EM wave, freq. charact. 134276

electromagnetism
see also electric fields; electrodynamics; electromagnetic coupling; electromagnetic field theory; electromagnetic forces; electromagnetic induction; electromagnetic oscillations; electromagnetic waves; magnetism; Maxwell equations
3D struct., adaptive integral method based capacitance computation 72164
3D unconditionally stable graded ADI-FDTD algm., perform. 90197
Ampere's mag. circuital law, simple rigorous two-step proof 90626
anticipatory effects in relativistic electromagnetism 105664
CGFFT method with discontinuous FFT algm. 72166
Clifford's geometric alg., covariant isotropic constitutive rels. 72241
complex geom. planar structs., generalized polygonal basis fns. for EM simul. 91232
computational electromagnetism, field and cct. theory 128637
computational electromagnetism, topol. approach 72151
cylindrical microlenses, EM anal. 71359
design sensitivities for EM quantities using high-order tetrahedral vector elements 128638
earthquakes, changing Earth currents, atmos. EM response calc. 93971
elec. machines/EM teaching, OO software 123308
helicoidal single-layer cylindrical coil self-inductance eval. 80462
HV field, undergraduate EM course, role of computers, expts. 113391
ident. problems in EM, effects of dyn. info. 128639
IEEE SOUTHEASTCON conf., Clemson, SC, USA (March-April 2001) 78407
inverse problems and optim. in electromagnetism, conf., Torino, Italy (2000) 113191
microcylindrical axilens, rigorous EM anal. 82195
multithread FDTD multiprocessor PC for anal. of microwave engng. problems 69110
optimisation in EM, comparison of generalized response surface methods 117602
sensitivity anal. for optim. problems solved by stochastic methods 124583
static mag. fields, just outside long solenoid, teaching approach 83180
stationary/nonstationary/hybrid iter. MoM soln. schemes 128651
unconditionally stable alternating direction implicit MRTD method 101144
undergraduate EM education using spreadsheet software 100458

electromagnets
see also coils; superconducting magnets
ANKE, medium energy hadron phys. at COSY-Julich 87061
balancing machine, mag. bearings control syst. 104555
BL-1C Photon Factory, bending magnet beamline, monochromator perf. 121402
chaotic electromech. oscill. for mag. levitation, switching mode control 125206
DC coil, magnet startup phase, skin effect 128717
DC electromagnet, mag. hysteresis, dyn. Preisach model 105687
DC electromagnet energising proc., dyn. calc. *(Russian)* 93984
DC electromagnet energizing proc. calcs. using MathCAD syst. 117631
DC electromagnet switch transient proc., parameters calc. *(Russian)* 93983
die press model electromagnet, optimisation, distributed evol. strategy 105685
eddy currents modeling, mag. Reynolds no. consideration 128695
electromagnetic plunger sizing, component oriented tool 117630
energy-saving solenoid control valve optimal design by genetic algm. *(Chinese)* 117636
finite mag. cct., plane quasi-steady EM fields, FEM 72195
FIRE, engng. status 72200
FIRE, magnet syst. structural anals. 72201
global nonlin. optim., interval methods *(Russian)* 117634
hollow core electromagnet, waste reduction 72197
HTSC mag.-levitated stepping motor improvement 77899
hybrid EM levitation syst. zero power levitation control scheme *(Korean)* 123951
ITER TF model coil, transient behaviour, 3D FEM 105686
KCCH cyclotron magnet, highly stabilized/high precision power supply 133039
M-shaped electromagnets, forward-pass incoming armature, dyn. triggering 72196
mag. bearing syst. with flexible rail, robust H_∞ control 127412
magnetoelec. systs., steady mag. fields, FE and BE modelling 72198
NCSX coil design using GA 128721
on-chip mag. bead separator, spiral electromagnets, semi-encapsulated permalloy 116107

electromagnets continued
pass. repulsive Maglev, concept, expt. demons. 89407
prepolarized MRI, pulsed electromagnet controller 98455
radial act. mag. bearing, anal. of lab. implement. *(Slovenian)* 70565
sextupole magnets, third order Lie map *(Chinese)* 75991
shell elements for computation of mag. forces 128718
soft X-ray plane grating monochromator, mech. design aspects 121827
solenoid magnet, lightweight min.-power design optim. 128720
SPring-8, high energy synchrotron X-ray focusing 121381
SRRC, VUV bending magnet beamline perform. 121401
undulator magnets irrad. by high energy electrons, demagnetization 121366
UVSOR facility, spherical grating monochromator perform. 121829

electromechanical effects
large-aperture MOEMS Fabry-Perot tunable filter, electromechanical simul. 93217
levitation coupled re-entrant cavity syst. 93989
plates, thin piezoelec., buckling anal., FEM/DKQ element *(Chinese)* 127162
PVDF-trifluoroethylene copolymer films, electron irrad., electromech. 127208
PVDF-trifluoroethylene copolymers, structural/transitional props., high energy electron irrad. 125104
PVDF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. props., XRD 127206
PZT-based piezoelec. composite laminates, bending, elec. field effects 104374
$(Bi_{1/2}Na_{1/2})TiO_3$-$KNbO_3$ ceramics, struct./dielec. props. 127227
C nanotubes, appl. as electromechanical sens., first-principles simul. 91507
Cu interconnects, SR X-ray microdiffraction 69946
GaN, MOVPE on (0001) sapphire, SAW vel., electromechanical coupling coeff. 126010
$KTiOPO_4$, super-high electromechanical coupling SAW substrs. 92633
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ crysts., ⟨001⟩-oriented, electromechanical coupling coeff. 70387
$Pb(Zn_{1/3}Nb_{2/3})O_3$-based ceramics, domain struct., annealing atmos. effect 116160
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$Pb(ZrTiNb)O_3$, super-high electromechanical coupling SAW substrs. 92633

electrometers
see also charge measurement
balloon-born electrometer, cloud high-resoln. atmos. elec. field meas. 76888
lin. convertor of weak currents electrometric module 86793
logarithmic electrometer, wide range, diode/temp. characts. correction 97586
metal/polymer contact charge transfer, contact pot. 83109
model engine lip seals, tribocharging effects expts. 83113
primary std. dosimetric equipt., current & charge meas., unified channels 86379
quantum current std. using single electron tunnelling *(Japanese)* 86388
quasilinear electrometer for wide range current meas. 97585
self-calib. prog. mobility spectrometer, atmos. ion meas. 98995
C free-standing multiwalled nanotubes, low-noise SETs for ultrasensitive electrometers 69360

electromigration
1D continuum electromigration modeling for IC interconnect reliab. 115991
3D flip-chip solder joint, heat flux and current dens. 113525
3D voids simul. in chip metallization structs., reliab. eval. 126429
barrier-metal systs., metal ion reservoirs, IC low current dens. lines 81120
bordered/borderless contacts, electromigration lifetime, misalignment 69932
Cu damascene interconnects, localized strain meas. by CBED 92172
current-carrying lines, calibrated mag. force microscopy meas. 103455
early failures, stat. anal. 92105
flip chip solder bumps, electromigration failure, voids effects 92137
flip chip under-bump metall. conversion to intermetallics, reliab. impact 67624
flip-chip BGA package, solder bump, thermo-electromigration 113654
glass waveguide, fab., dry silver electromigration 116683
HDI microelectronics packaging roadmap for space appls. 133228
IC interconnect, current dens. 116018
IC interconnect reliab., fast wafer-level defect detect. and control 103481
IC interconnect trees for electromigration reliab. estim. 92174
IC interconnection, metallic thin film, electromechanical failure 92102
IC thin-film interconnects, electromigration modeling, void nucleation 92103
III-V semiconds. liq. phase electroepitaxial growth, conc. profiles simul. 101445
isothermal electromigration test as proc. control methodology, case study 81129
isothermal wafer-level electromigration test for metal syst. reliab. monitoring 126473
layout-driven hot-carrier degrad. minimization using logic restructuring techs. 125343
metallic lines, percolative approach to electromigration 69925
microwave power device, backflow struct. hardening metallization *(Chinese)* 92097
miniaturized interconnects, creep/contact opening electromigration failures 92104
narrow thin interconnects, void growth dyn., capillary effects, simul. 92111
PCB electrochem. migration mechanism/accel., SO_2 gas environ. *(Japanese)* 69296
peripheral I/O high quality ASICs, I/O cell placement, elec. checking methodology 81451
Permalloy thin films, GMR read head, electromigration-induced failure 104527
polycryst. solids, stress-driven mass transport, lattice-based micromechanical continuum formulation 69940
thin-film interconnects, grain boundary crack growth 103491
ULSI interconnect scaling and parasitics, crosstalk noise, opt./RF interconnects 81123
VDSM IC, full-chip reliab. simul. 126999
via line structs., electromigration tests, fast wafer level/std. package level 115680
via/line package level/wafer level tests, comparison 81131
VLSI metallization, electromigration proc. *(Chinese)* 92098
wafer level reliab./packaged electromigration tests, expt. comparison 81130
a-Al alloy based migration resistant metallization for SAW sens. 116225
Al dual-damascene interconnect via electromigration lifetime, soft low-k organic SOG ILDs 92117
Al interconnect texture, Ti underlayer effect, electromigration resist. 69953
Al interconnects, electromigration-induced stress interact. 92138
Al interconnects, stress-induced voiding in proc. qualification, quantitat. assess. 81133
Al lines, via/polygranular cluster electromigration-induced stress interact. 92177
Al multigrain thin film lines, electromigration props., grain boundary struct. 92110
Al passivated line single grain strain meas. by X-ray microdiffraction during electromigration 92173
Al passivated line test struct., sub-μm wide, grain orient./strain meas. 92175
Al-Cu interconnects, electromigration reliab., Ti(TiN) underlayers effects 126432

electromigration continued
Al-Cu lines, electromigration immunity, pre-annealing effect 115672
Al-Cu(Si) interconnects, electromigration damage, comp. effect 126434
Al-Si-Cu metallization lines, local temp. distrib., scanning thermal mic 115671
Al-based interconnect reliab., width transit. effects 92120
AlCu ULSI multilevel-metallizations, stress migration behavior 92118
AlCu interconnects, electromigration behaviour, stress-induced voiding ef 92176
AlCu line wafer level electromigration testing, isothermal/const. current/SW methods 81128
AlCu lines, electromigration 69936
AlCu passivated conductor line electromigration, Cu conc./stress evol. 921
Au interconnection, electromigration meas. tech. 126507
Au interconnections, electromigration/electrochem. react. failure mecha 115673
$BaSrTiO_3$:Ni ceramics, O vacancies, dyn. behavior, TSC obs. 127224
Cu alloy interconnect, modeling and simul. 92107
Cu damascene interconnect, SiO_2 dielec., electromigration 115709
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92
Cu damascene interconnects, recrystn. anneal, reliab./post-CMP defects 81
Cu damascene lines, grain struct., electromigration resist. 126511
Cu dual damascene interconnect, SiO_2 IMD, electromigration reliab. 1157
Cu, dual damascene interconnect, electromigration props. 115692
Cu electroless deposition, Pt-Ag/Al_2O_3 substr., IC packaging 124325
Cu electroless deposition for ULSI 90501
Cu electroplated interconnects, microtexture/strain 103460
Cu interconnect, wafer level reliab. monitor, isothermal testing 103474
Cu interconnection in ULSI, electroplating technol. *(Chinese)* 126500
Cu interconnections reliab. improve., use of binary Cu-alloy films 126457
Cu interconnects, SR X-ray microdiffraction 69946
Cu interconnects, electromigration, confine. materials mech. props. eff 103459
Cu interconnects, electromigration threshold 69950
Cu interconnects, electromigration-induced failure rate rel. to grain struct. 69
Cu line geom., interconnect microstruct., proc. params. 92123
Cu single-inlaid interconnects, electromigration failure, Blech effect 1156
Cu, sputtered, patterned using ion milling or CMP, surface electromigra 115664
Cu two-level interconnect, defects and electromigration 115691
Cu via electromigration, study of bimodal distribs. of time-to-failure 1264
Cu/CVD SiOC dual-damascene interconnect, electromigration reliab. 1157
Cu/Cu/TaN/SiO_2/Si multilayer, interfacial reacts., electroplated Cu props. 81
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu/W interface, electromigration modeling 126436
Cu/W/SiN_x multi-level damascene interconnects, electromigration 126506
Cu-SiO_2 dual-damascene interconnects, electromigration early failure st 81134
Cu-SiO_2 dual-damascene interconnects, electromigration reliab. 92115
Cu-TiWN multilayer interconnections, electromigration 81117
Cu(111) single-oriented state on SiO_2 by annealing Cu-Zr film, Cu-Zr/ZrN/Z contact thermal stabil. 103483
GaN, MBE, surface adatoms, current-induced migration 101245
$LaNiO_3$ epitaxial metallic films, O-ion elec. field-induced migration, I/f n 115666
$MoSi_2$/Al interconnect lines, electromigration, stress-induced escape 12648
Si:Li,Er-based IR electrolum. devices, elec. field-induced fab. 71564
SiO_2, interconnect test structs., electromigration failure, materials effect 69
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvem reservoir modeling 81132
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101

electromotive force *see electric potential*

electromyography
aircraft pilots, myoelec. sigs. to augment speech recogn. 110558
anaesthetised humans, motor evoked pots., neurophysiological mechanis 76281
anterior spinal cord injury, preserved neurogenic motor evoked pots. 11064
anterior tibial muscle, motor evoked pots., elec./mag. stimulation 110555
automatic sleep stage scoring, hybrid ANN & expert syst. 76261
autonomic nervous syst.-controlled cardiac pacing 122349
biological feedback sig. pattern multi-param. monitoring 98170
botulinum toxin, local appl., rem. F-wave changes 87408
cervical radiculopathies ident., electromyographic screen optimising 76321
concentric needle electrodes, sharpness eval., Al foil penetration test, EMG ap 121970
concentric-ring electrode systs., single motor unit activity, noninvasive dete 132570
continuous ergometry, mechanomyographic/electromyographic responses 98
cycling, EMG, clipless pedal vs. toe clip pedal 110633
ECG interf. suppression, interbeat/intra-beat decorrelating transforms 87454
ECG sig. denoising using wavelet domain Wiener filtering 121923
EGG, Kohonen neural net appl. 98257
EMG, multifunctional platform develop. 98172
EMG surface sigs., spectral dens. compression, FFT methods *(French)* 1325
endplate noise/spikes rel. to normal motor endplates 76323
exoskeleton robot, forearm motion recogn., EMG freq. distrib. *(Japane* 76710
face anal./synthesis 73200
fatigue assess. during exercise, EMG sig. & HRV 76303
fibres, spatially filtered extracellular pots., power spectra 87445
foot phys. therapy support, biomech. tools integrat. 111048
forearm muscles, shortening react., central set influence 98194
gait anal. lab., technol.-overview 132536
gastrointestinal myoelectrical recordings 87364
hemiplegic patients' adaptive FES switching syst. 122357
infant walking, independent gait, electromyographic charact. 76276
intramuscular/transcutaneous EMG electrodes, selectivity/sensitivity 98195
intraoperative motor evoked pots., transcranial elec. stimulation, 2 anaesthe regimens 110607
isometric muscle contraction, heat/cold appl., surface EMG 87360
jaw displacements, lateral pterygoid muscle, motor-unit activity 87416
microvolt calibrator for EMG systs. 132579
mil. press exercises, open grip, EMG 98185
min. cond. block diagnosis, useful electrophysiological test 110604
moths, ultralight biotelemetry backpack for recording EMG sigs. 76297
motor evoked pots., anaesthetised humans, neurophysiological mechanis 76280
motor output regulation between young/elderly subjs. 110577
motor unit action pots., computer simul. studies *(Chinese)* 121915

omyography continued
tor units, elec./contractile props. meas., EMG/accelerometry 98251
tor-evoked pots., muscle vibr., crossed effects 76282
lti-lead ECG, EMG sig. elimination, enhanced SVD filter appl. *(Korean)* 10613
ltichannel biotelemetry syst., filter bank use 88011
ltichannel EGG, adaptive ICA 87385
ltifunction myoelec. prosthesis, agent-based control 87899
asthenia gravis, voluntary single fiber EMG 76249
edle EMG, normal concentric, simul. by muscle model 76283
edle EMG, pain determinants 110645
urogenic thoracic outlet syndrome, electrophysiological assess. 110632
uromuscular disorders detect., concentric-needle vs. macro EMG 98190
rkinson's disease patients, spontaneous blinks, EMG, electro-oculogram 7361
inting device, EMG controlled, neural net appl. *(Japanese)* 87919
movement bereitschaftspotential, steep early neg. slopes 121940
sthetic hand control, on-line learning method 87915
bit muscle afferents, nerve-cuff recordings, joint posn. effect 122327
liculopathy, electrophysiologic data 98182
piratory syst., EMG, mouth press./airflow sigs. anal. 98247
. detected by surface electrodes, precise simul. approach 76293
. proc. syst. for human arm gesture interp. 121927
ul. in pathological situations, math. model 98193
ing, proper posn. enhancement using sEMG protocol 111054
letal muscle fibre pot., charact. freqs., bipolar recordings 76255
ep-wake estim., wrist movement, actigraphic modalities 87415
stic diplegia, prematurity/Angelman syndrome, distinct multijoint control rategies 121938
oke patients, primitive reflexes, electrophysiological assess. 110606
face EMG, automatic anal./class., parametric modelling 121950
face EMG, bispectral anal. 110654
face EMG, crosstalk reduction tech. 87406
face myoelec. sig., time-freq. params., muscle fatigue assess. 87443
face sigs., spectral dens. compression *(French)* 132557
face sigs. recorded during dyn. protocols, adaptive amplit. estim. 76270
nar muscles, motor-evoked pot., transcranial mag. stimulation 87407
nscranial mag. stimulation, evoked silent periods, graphical meas. method 21978
ipezius/serratus anterior muscles, mil. press exercises, EMG validation 110630
mors, electromyographic differentiation 121939
per extremity, myoelectrically controlled FES, pilot study 87888
per extremity motor evoked pots., modulation by cutaneous afferents 110605
per limb myoelec. prosthesis control, adaptive framework develop. 98711
per limb torque generation, cortical organization, EEG, MRI 98214
rus/foetal heart resons., labour contractions, MUSIC pseudospectral anal. 8253
rt. jump height prediction, EMG charact. and ANN appl. 132576
luntary contractions, upper/lower extremities, single motor units synchronisa-on 110576
lking motions, EMG sig. class. 132575

on accelerators
ee also microtrons
addin storage ring, approaches to lowering emittance in existing light sources 21339
addin storage ring, PM undulator 121395
.S, ellipt. polarizing undulator beamline, first commiss. results 121400
.S, synchrotron IR beamlines, spectromicroscopy and fast timing 87139
NKA SR facility, research opportunities 87140
PS, beam shut-off current monitor upgrade 87125
PS, layout for new undulator-only beamline front ends 132251
PS BESSRC-CAT bending mag. X-ray beamline design anal. 121408
PS high-heat-load beamline components, box-type explosively bonded struct. 132233
PS multipurpose undulator X-ray beamline design anal. 121407
PS Nd-Fe-B PM, ^{252}Ca neutron damage testing 97892
PS storage ring, electron beam diagnostics, mom. compaction anal. 87095
PS storage ring, X-ray BPM-based feedback syst. 87134
PS storage ring beam emittance, X-ray pinhole camera 87138
gonne Wakefield Accelerator, electron bunch train expt. 110127
tes SHR, radiative polariz. 110191
tes South Hall Ring projects 87044
am size, noninvasive meas., diamag. loop 97919
ijing τ-charm factory, ion induced instabil. *(Chinese)* 87143
EPC, 3W1 beamline, radiation dose level meas. 121301
EPC DC separator HV connector, power, shunt impedance *(Chinese)* 101769
EPC mini-β scheme, electron beam bunch length anal. *(Chinese)* 121318
EPC storage ring, bunch lengthening anal. 87073
ESSY, plane grating monochromators, absol. energy calib. 121393
ESSY II, cleaning of contaminated XUV-optics 121307
ESSY II, ellipt. polarizing insertion devices 121337
ESSY II, quasi-periodic hybrid undulator 121357
ESSY II, Russian-German soft-X-ray beamline 121828
ESSY II, source size/emittance monitoring 121373
ESSY II, U41-PGM soft X-ray microfocus beamline 121309
ESSY II, U49-1-SGM, first undulator beamline perform. 121391
ESSY II, undulator/dipole radiation, beam stabil., synchr. radiation monitors 21369
ESSY II beamlines conception, engng. aspects 121394
ESSY II ring, design and commissioning of third harmonic cavities 121335
SSY-2 supercond. wavelength shifter, mag. field stabilisation, NMR anal. 16531
-1C Photon Factory, bending magnet beamline, monochromator perf. 121402
azilian Synchrotron Light Source electron storage ring, sync. phase shift meas. 10165
SRF, beam posn. monitor, slit combination 121378
TUC-PGM beamline, commissioning results 121390
nch, sub-ps, nonintercepting meas. using coherent diffr. radiation 87121
nches, ultrashort, space-charge effects 110136
ARM klystron config. 110147
EBAF injector, beam mom. meas. by quadrupole lens 87116
EBAF upgrade, 12 GeV beam energy, Jefferson Lab., Hall D detector status 7167
annel guided laser wakefield accelerator, energy gain, beam stabil. 110125
c. electron collider apertures, beam-beam interact./lifetimes 87070
r./rect./sq. field output factors, Monte Carlo calc. 87053
LEO-III trigger design anal. 121741
LIC e^+e^- lin. collider, multi-TeV compact design 110095
LIC machine-detector interface, design anal. 110209

electron accelerators continued
commercial electron beam posn. monitor proc. syst., first turn capability 87108
Compact Storage Ring, RIB line *(Chinese)* 87144
compact storage ring, spont. coherent microwave emiss. 97917
concepts based on EM struct. 110079
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
conf., GDH sum rules and nucleon spin struct., Mainz, Germany (Jun. 2000) 100432
conf., SR instr., Berlin, Germany (Aug. 2000) 113247
CVD-diamond based beam profile monitor for undulator radiation 121372
design anal. review for future expts. 132272
DESY XUV FEL seeding beamline, wavefront propag. 121338
Dubna Electron Synchrotron project 121342
EBIS electron string mode operation, expt. design 110275
Elettra, undulator beamlines, photon beam posn. monitor 121370
ELETTRA Storage Ring, new low gap BPM syst. description and prototype tests 87109
ELETTRA UV/VUV storage ring FEL, first operation and future prospects 121303
ELSA, polarized electron beam studies, beam resons. 110189
ELSA inverted polarized electron source, beam stretching expt. 110195
ELV-8 accelerating tube, electron opt. charact. *(Chinese)* 110115
EPICS, HLS control syst. *(Chinese)* 110072
equipt. modelling, photon beams prod. from electron accelerator, Monte Carlo code 76186
eRHIC, accelerator phys. issues 87075
ESRF, beam diagnostics tool, parab. cpd. refr. lenses 121376
ESRF beamlines perf., horiz. fast electron beam posn. feedback 121371
future electron lin. collider design anal. 132264
gas avalanche pixel detectors, elec. charact. 87195
GRAAL, polarized photon beam 110183
gun charact. in TW LINAC, customs inspection systs. *(Chinese)* 80562
gun with ferroelec. material cathode, current dens. *(Chinese)* 102913
HASYLAB beamline vac. syst., residual gas analyzer syst. 132482
HASYLAB BW2 beamline, automatic alignment 132235
Hefei electron storage ring injection state param. anal. *(Chinese)* 132248
Hefei Light Source, electron optics params. meas. 121345
Hefei light source, soft X-ray beamline meas. *(Chinese)* 110097
Hefei Light Source, tune meas. syst. *(Chinese)* 87056
Hefei light source injection syst., beam posn. monitors calib. *(Chinese)* 121330
HERA Luminosity Upgrade, polarised $e^{\pm}$ beams, experience and expectations 110192
HERA-B high-p_T trigger design anal. 121737
HIγS, FEL generated gamma-ray beam 132280
high brightness X-ray sources, ultrashort pulse high power lasers *(Japanese)* 87271
high energy colliders for post-LHC era, review 87065
high energy spin polaris., expt. review 110185
high field supercond. wigglers, mag. field stabilis. with DAQ controllers 121368
high power IGBT module freq. converter, transformer-type electron accelerators 99748
high power RF sources, develop. of multiple beam guns 110142
high-brightness laser synchrotron source develop. at BNL ATF 110229
high-power TWA, symmetric/asymmetric mode interact. 110143
high-precision polarimeter at JLAB 87062
HiSOR compact storage ring, lin. undulator beamline 121397
HiSOR electron storage ring, bunch lengthening 121350
HLS storage ring, beam loss monitoring syst. 121346
HLS transport line and linac focusing power supplies control syst. 110102
hollow plasma channel wakefield accelerator, particle beam stabil. 110141
indust. electron accelerator, beam uniformity, 2D dose distrib. 121329
intense pulsed lasers, electron accel., laser polariz. direction effect *(Chinese)* 97914
intracavitary radiotherapy, electron cones fab., dosimetry characts. 87844
Japan Linear Collider, polarized electron source 110236
Jefferson Lab FELs, video distrib. and analog monitoring syst. 87260
JLC, develop. status 110094
JLC, polarized electron gun 110238
JLC mask syst. at B=3T 110206
JNC high-power/duty electron linac, reson. ring design 87069
JNC linac, beam dump for high-current electron beam 132243
KEK electron storage ring, bunch long. quadrupole-mode oscills., rf PM 75943
KEKB perform. overview 87046
Kharkov electron storage ring, compact X-ray source based on Compton scatt. 121348
KSRS, beam on-line monitoring 121375
laser accel. and intense secondary particle generation 75990
laser wakefield accelerator, emittance control 110122
laser wakefield accelerator, GeV accel. research at JAERI-APR 110118
laser wakefield accelerator expts. at LBNL 110120
LEP beam energy determ., in-line energy spectrometer, review 110103
LEP beam posn. monitors, nonlin. response anal. 87099
light sources, perform. achievements 121411
LILAC expt., status 110075
lin. collider, comparison of discrete klystron prod. RF to two-beam prod. RF 110150
lin. collider with microstruct. excited by laser, 2×200 GeV 110080
lin. colliders, electron-positron pair detector, simul. anal. 110350
lin. electron collider, X-band struct. anal., TM isolation 87074
lin. induction accelerator electron diode, 12 MeV, optimum design *(Chinese)* 87156
lin./circ. accel., arbitrary different RF's, synchroniz. 132265
linac radiation output constancy check, ionis. chamber/diode comparison *(German)* 87972
linacs, 1-8 MeV, cabinet-safe study 87048
longit. coupl.-bunch instabil. control, IIR feedback algms. 87093
longit. instabil. control syst., program. DSP-based multibunch fdbk. 87094
low emittance flat-beam electron source for lin. colliders 97935
MAX II ring, soft X-ray beam line 1411 perform. and first results 121336
med. electron accelerators, QA, BNCT comparison 98638
microorganisms inactivation, electron beam and microwave heating effects 110083
microwave inverse FEL expt., accel. results 110129
MIT-Bates Linear Accelerator Center, overview 87085
MIT-Bates Linear Accelerator Center, SHR projects, linac upgrades 87044
MIT-Bates polarized source, beam lifetime expt. 110264
Neptune Lab inverse FEL accel., electron beam focusing 110126
Neptune photoinjector commissioning/design, review 110180
New SUBARU, BL-7, undulator beamline design 121396
NewSUBARU storage ring, beam lifetime improve., vac. syst. upgrade 121358

electron accelerators continued
NewSUBARU with long undulator, first SR prod. 121792
Next Linear Collider, design progress 110204
Next Linear Collider, multi-moded pass. RF pulse compression develop. 110148
NLC, gamma-gamma interact. region design 110208
NLC, prototype RF phase and timing distrib. syst., perform. 87049
NLC advanced collimator prototypes, review 87110
NLC electron beam final focusing syst., design anal. 110214
NLC test beam, polarized fixed target expts., Moller scatt. 110210
NSLS VUV ring, coherent FIR SR obs. 87076
NSRL 200 MeV linac beam energy stabilization syst. *(Chinese)* 87066
NSRL electron storage ring, VLS diffr. grating, groove dens. anal. *(Chinese)* 110217
NSRL IR beam handling equipt., appls. *(Chinese)* 110216
NSRL klystron corridor, leaked EM noise *(Chinese)* 110111
NSRL klystron gallery, leaked EM field *(Chinese)* 97912
NSRL soft X-ray monochromator, combined multilayer diffr. grating *(Chinese)* 110098
PEP II fast lumin. monitor syst., review 87072
PEP-II, KEKB, DAΦNE, e^+e^--factories 76007
PEP-II accel. materials, SEE yields, beam dyn. 110218
PEP-II B-Factory, logarithmic beam posn. monitor 87122
PEP-II operations report 87045
PEP-II storage ring, beam posn. mis-meas., mode propag. 87135
Photon Factory BL19B, quasi-periodic grating for monochromator 121306
plasma electron accel. by 12 TW 50 fs laser pulse, num. simul. 110119
plasma focusing channels, electron beam betatron radiation 110137
PLS, microspot high resoln. beamline, spherical grating monochrom. 121826
PLS hard X-ray beamline supercond. wiggler design anal. 132474
PLS photoemission electron microscopy beamline 121830
PLS polarized electron source, photocathode test-stand design/fab. 110265
PLS storage ring, transverse beam feedback syst. 121351
PLS synchrotron X-rays, phantom/animal imaging 122139
Pohang Light Source, collimating mirror syst. of protein crystallography beamline 6B 132479
Pohang Light Source, upgraded machine perform. and beamline status 121340
polarized sources/targets, spin expt., review 110250
pulsed magnicon project for accelerator appl. 110155
recycling accelerator, hard bremsstrahlung, high-efficiency source 110246
RF damped cavity, coaxial HOM coupler using SiC ceramics 121349
Robinson instabilities with, higher-harmonic cavity 110167
RTA beam dyn., limiting cumulative transverse instabil. growth 110146
S-band/X-band integrated PWT photoelectron linacs 110128
SESAME extended spectral range SR facility in Middle East 121304
short-pulsed slow positron beam, polymer films appl. 110173
Siam Photon Laboratory, present status 121341
Siam Photon Source, reson. cavity shape optim. 75945
SLC-style beam energy spectrometer, extraction line anal. 110212
SLS, digital BPM syst. 87131
SLS, extended SX-700 type monochromator 121392
SLS linac diagnostics, commissioning results 87130
SLS storage ring support and alignment systs. 121305
soft X-ray plane grating monochromator, mech. design aspects 121827
spin polarized electron source and polarimeter, review 110249
SPring-8, constr. of beamline radiation shielding hutch 132237
SPring-8, front end and optics of IR beamline 121387
SPring-8, high energy synchrotron X-ray focusing 121381
SPring-8, IR beamline BL43IR, design and commissioning 121388
SPring-8, recent develop. of insertion devices 121353
SPring-8, soft X-ray beamline for spectrosc. 121825
SPring-8, sync. beam diagnostic syst. using cordless telephones 121374
SPring-8, transport channels of X-ray beamlines 132252
SPring-8 beamline control, network security 132236
SPring-8 beamline control syst. 132254
SPring-8 beamline interlock syst. and rfBPM interlock syst. 132253
SPring-8 beamlines, std. X-ray mirror systs. 132478
SPring-8 BL40XU high X-ray flux beamline design/status anal. 121847
SPring-8 Hyogo X-ray multiple station beamlines, TROIKA concept 121846
SPring-8 in-vac. wiggler, mag. meas. 121791
SPring-8 long in-vac. X-ray undulator, field meas./corrects. 121793
SPring-8 long undulator source X-ray beamline design 121405
SPring-8 RIKEN beamline III for coherent X-ray optics design anal. 121406
SPring-8 storage ring, polarized photon beam expt. 110182
SPring-8 storage ring, very long undulator radiation 121790
SPring-8 undulator beamlines, blade-type X-ray beam posn. monitors 121377
SPring-8 undulator beamlines, cryogenic silicon 111 cooling syst. 121404
SPring-8 very long in-vac. X-ray undulator, design of front end 132250
SPring-8 X-ray beamline commissioning anal. 121403
SPring-8 X-ray beamlines vac. syst. 132481
SR beamlines, focusing mirrors *(Chinese)* 87057
SRRC, high flux cylindrical grating monochromator undulator beamline 121816
SRRC, insertion device develop. 121354
SRRC, long. feedback syst. 87050
SRRC, VUV bending magnet beamline perform. 121401
SRRC high flux beamline, differential pumping syst. for gas filter 132234
SSRF DeviceNet control syst. design anal. 121313
SSRF electron storage ring, soft X-ray beam focusing design *(Chinese)* 110215
STELLA program, laser-driven prebuncher staged with laser accelerator 110121
storage ring, high-power RF distrib. syst., asymmetric power divider 132244
storage ring, radiative laser cooling 75944
storage ring, small, hard X-ray source 121789
storage rings, spin transport/diff., Bloch eqn. 87071
Super-ALIS compact storage ring low energy injection accel. anal. 132256
SURF III, electron beam imaging, diffr. and depths-of-field effects 87063
SURF III electron storage ring 110086
SURF III electron storage ring, expt. programs 110084
Swiss Light Source, insertion devices, phase I 121356
Swiss Light Source, photon shutter for insertion device front ends 132249
synchrotron light sources, pass. harmonic cavities, lifetime increase 87077
table top accelerator with extremely bright beam 110081
TESLA, interact. region layout, collimation and extraction 110205
TESLA, overview and objectives 97921
TESLA Compton polarimeter, design anal. 110213
TESLA electron beam dyn., expected lumin., review 110211
TESLA lin. collider, status 110093
third-gen. SR sources, cryst.-based diffr. focusing elements 121380
Tohoku Univ. storage ring light source design study 121788
two laser-driven relativistic electron accelerators, first staging 75989
ultra-high gradient plasma wakefield booster 110163
UMER electron beam injector, design, appl. 97907

electron accelerators continued
undulator field correction by in-situ sorting 97925
Univ. Maryland Electron ring 110135
Univ. Maryland Electron Ring to model HI inertial fusion drivers 97889
Univ. of Maryland electron ring, PC quadrupoles/dipoles, design/field 75949
UVSOR facility, spherical grating monochromator perform. 121829
UVSOR storage ring upgrade, new lattice design 121344
VSX light source, effects of insertion devices 121352
VSX ring orbit feedback syst. develop. 121347
VSX third generation light source, lattice design and error correction 121
VUV and X-ray FEL 117307
W-band accelerator study in KEK 110159
wake-amplif. by solid-state act. medium 110161
Wakefield electron accelerators, channel-guided laser beams, bunch qu 110124
ZEUS expt. at HERA, lumin. meas. from ep bremsstrahlung proc. 11011
ep high energy colliders, nucleon spin struct. fn. 110184
e^+e^- collider, lumin. and energy resoln. 121333
e^+e^- collider, machine implic. for detectors and phys. 110096
γ-ray beams from linac with narrow beam collimator, med. appls. 122300
Cs_2Te photocathode test, polarized RF-gun feasibil. 110239
Fe/C periodic multilayer mirrors for soft X-ray radiation 121808
GaAs photocathode, at. H cleaning, JLC appl. 110240
$^{115}In(\gamma,\gamma')^{115}In^m$, 4.3 MV DYNAMITRON photoactivation facility, review 81
Si hybrid pixel detector develop. for lin. collider vertex detector 132376
Ti/Ni periodic multilayer mirrors for soft X-ray radiation 121808
V/Al_2O_3 sputtered multilayer X-ray mirrors for water window 121806
V/Ni periodic multilayer mirrors for soft X-ray radiation 121808
Yb:S-FAP gas-cooled diode laser source for photon collider, design 105254

electron affinity
diamond, CVD film, field & photoemission, microstruct. effect 80564
diamond, nanostructured, electron field emission 102905
diamond (100), type Ia, thermally emitted neg. particles, energy distrib. 6
diamond/sp^2-bonded carbon nanostruct., QW field electron emission 8056
dielec. liqs., prebreakdown phenom. under nonuniform field, mol. struct. ef *(Japanese)* 81652
distyrylstilbenes bearing electron affinitive dendrons, blue-emitting, syn sis/charact. 105018
DLC surface, N-doped, field emission current, scanning probe obs. 80565
oligo(phenylenevinylene)s, increased electron affinity 69611
PDP, CVD diamond coating 86800
PDPs, secondary electron yield of insulator cathodes 109856
poly(fluorene)-based alternating copolymers, opt. props., synthesis 69612
poly(pyridopyrazine vinylene)-polythiophene based single-layer-photodio synthesis, AFM 82346
polymer insulators, electron traps, mol. modelling 112124
polymer LEDs with LiF/Ca/Al cathodes, blue emission, efficient electron in tion 93405
solar cells, dye-sensitized, SPV spectrosc., electron injection 112864
stilbenoid phosphors with increased electron affinity, sulfones as elec accepting groups 69610
substituted thiophene oligomer, photoluminesc./electroluminesc., LED a 93417
AlGaN/GaN emitters, field emission study, UPS, MOVPE 80577
AlN:Si heavily doped electron field emitters, phosphor, AFM 80578
C nanotubes, electron field emission 102905
a-C:H,N film, electronic struct., field emission 102906
Cs/p-GaAs(110), photoemiss., STM, STS, spin-polarized photoelectron so 110232
$Cs_2O/Si(111)$ surfaces, thermal annealing, photoemission/work-fn. meas. 126
CsO-GaAs interf., layer thickness, NEA surface form. 110234
GaAs clean/NEA surf./superlattice, SPV effect 104898
p-GaAs-(Cs,O)-vac. interface, laser-driven electron sources 110231
GaAs(Cs,O) photocathode, transm. mode stabil. *(Chinese)* 69389
HgCdTe MIS struct., subbands, reson. tunneling, 2DEG, tunneling current 69
$Si-SiO_2$-Si struct., F-N cond., barrier height determ. 69769
$SrTiO_3/Si(001)$ epitaxial heterojns., band offset and structural quality, PES 69742

electron avalanches
advanced planar wire grid plates prod. for microstrip gas chambers 132445
gas detectors, high flux operation in hostile environ., review 76130
gas ionizing radiation detectors, leak microstruct., timing inform. 76043
gaseous radiation detectors, gas anal. syst., review 76042
Ar-isobutane, MICROMEGAS detector, two-stage parallel-plate avalanche op ation 76041

electron backscattering
CVD-SEM, backscattered electron imaging, Monte Carlo simul. 79286
fast electron beam incident on semi-infinite target, diffusion model of kinetic e 93979
H depth profiling by refl. elastic recoil detect. anal., geometric alignment 132
Kharkov electron storage ring, compact X-ray source based on Compton sca 121348
PDP cathode, effective secondary electron yield 86865
SCALPEL mark detect. using Si/SiO_2 and 100 keV backscattered electr 126527
skin depth dose, hot particles, electron backscatt. correction 133129
strip electron beam source, backscattered electrons meas. 87155
X-ray tube fluoresc. output, backscatt. electrons influence, MC simul. 1104
AlCu lines, electromigration 69936
Au focused electron beam induced deposition 115667
Cu electroplated interconnects, microtexture/strain 103460
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu_6Sn_5 scalloplike layer, solder interconnections, channels stabil. 67533
GaN:Si epitaxial films, electron backscattered diffr. obs. 69544
Rh focused electron beam induced deposition 115667
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
TiN-Si planar jns., proximity effect 104576
$YBa_2Cu_3O_7$ coated tapes, Ag/Ni composite ribbons 127470
$YBa_2Cu_3O_{7-\delta}$ HTSC film, strain relax. obs. 70646
$YBa_2Cu_3O_{7-x}$ on RABiTS, magneto-opt. imaging of transport currents 70674

electron beam applications
see also electron beam deposition; electron beam lithography; electron bea machining; electron beam pumping; electron beam testing; electron beam welding; radiation therapy
4-sided electron irrad. systs., cable/pipe-like product appl. 97913
breast electron boost planning, comparison of CT and US 87879
CGH fab. by electron-beam direct-writing, image quality *(Chinese)* 105591

tron beam applications continued
oronary Ca quantification algms. reproducibility, electron beam CT 132504
lielec., surface modif. by CW electron beam 92604
ligital K-edge imaging syst., electron beam transit. radiation 110959
iber Bragg gratings for WDM, phase mask stitching error study 109192
lue gases, SO_2 removal using pulsed electron beams, NO_2 effects 112289
ntegral dose reduction, electrons mixed with intens. modulated photon beams 87965
ntracavitary radiotherapy, electron cones fab., dosimetry charact. 87844
aryngectomy stoma, medium energy electron boost, dose distrib. 76752
nodulated electron beam radiotherapy, Monte Carlo based planning 111118
MV radiotherapy, clinical ref. dosimetry, TG-51 implement. 98773
oly(diethylene glycol bis(allyl carbonate)) substr., opt. waveguides direct electron beam writing 93121
reimidized polyimides, high-dens. packaging, electron beam enhanced multilayer, planarization 78609
adiotherapy, central axis depth dose curves, electron/photon energy spectra 76759
adiotherapy, electron boost treatments, in vivo dose meas. eval. 98813
adiotherapy, electron pencil beam vars., dosimetry distribs. 98779
adiotherapy, electron-beam dose algms. eval., meas. data set 88000
adiotherapy, modulated, beam charactn., MC model 76620
adiotherapy, photon/electron beams, apparatus for applying mag. fields 76640
ib artifacts, electron beam tomography, cone beam reconstruction algm. 110515
team power plant flue gas treatment using electron beam technol. 88587
urface growth, proc., low energy beam-modified, conf., Boston, USA (Nov. 1999) 67359
herapeutic beam dose calcs., electron loss model with energy straggling 111205
MW electron wedges, dosimetric eval. 98823
Voxel Monte Carlo algm., film dosimetric verification, electron beam dose distribs. *(English)* 111252
rF lithog., cyclo-olefin/maleic anhydride type resists for sub-100 nm patterning 103551
ic-Si:B films, electron beam assisted plasma CVD, ion energy/hydrogen effects 102989

tron beam deposition
2D photonic cryst., IR filter, additive nanolithography 127893
3D additive nanolithography, electron beam induced deposition 126570
AC PDP, LaF_3-coated MgO protecting layer 86833
daptive controller design/implement. for e-beam evap. syst. 68197
iamond devices electron beam metallization, x-ray radiation perform. effects 102981
lyn. neg.-ion mixing method using high-current HI/electron beam evap. 125054
lectron beam technol., conf., Varna, Bulgaria (Jun. 2000) 89516
EL, field emitter, electron beam induced deposition 125957
metal dot arrays, hexagonally ordered, large area dense nanoscale patterning 92192
nultilayer deposition, in situ laser reflectometry, target control 114270
nultilayers/films, deposition/struct., review 90325
n-line nanolithography, electron beam induced deposition 126572
erforated thin films fab. with helical/chevron pore shapes 90336
UV15 thin-film polymeric waveguide beam deflector 71408
Ag/Co granular multilayer, GMR, 2D mag. field sens. fab. 70515
l-Al alloy based migration resistant metallization for SAW sens. 116225
Au focused electron beam induced deposition 115667
$BaAl_2S_4$:Eu, electrolum. films, blue emitting, at. comp., struct. 71530
CdS films, electron beam, deposition, opt., elec. props. 69527
Co/Pt high coercivity multilayers, growth, structural and mag. props. 81876
e-Ni-$Cr_2O_3C_2$(Cr-C) electron-beam deposition wear/corros.-resisting coatings 124842
GaAs FET Schottky gate metallization, electron-beam irrad. damage 70211
n-GaN/Pt Schottky contacts, proc.-induced electron traps, DLTS 69548
GaN-based MSM photodetectors, transparent ITO Schottky contacts 97262
Ga_2O_3:Gd/GaN capacitor, low interface state dens., C-V/G-V charactn. 69743
$Gd_3Ga_5O_{12}$:Ag phosphor prep. and electrolum. charact. *(Chinese)* 116930
Gd_2O_3 films, electron-beam evap. on Si(100), charactn. 91906
Ge, uniform nanoscale islands, form. on Si(111)-7×7 90269
HfO_2/SiO_2 high refl. coatings, laser damage and defects rels. *(Chinese)* 116890
HfO_2-SiO_2 interface in PVD coatings 127886
nSnO thin films, dual ion beam assisted e-beam evap., phys. props. 79249
MgO buffer layers, texture, $YBa_2Cu_3O_{7-x}$ deposition 68195
MgO film grown on p-InP, microstructural & elec. props. 104397
MgO films, biaxial texture, electron beam evap., $YBa_2Cu_3O_7$ HTSC appl. 68194
MgO films, inclined substr. deposition with electron-beam evap., texture develop. 124829
MgO films on p-GaAs(100), microstruct./elec. props. 68187
MgO-CaO protective films, e-beam prep., annealing, AC PDP appl. 68168
MgO-ZrO_2 protective films, electron beam prep., plasma display appl. 79254
Mo/C X-ray multilayers, ultra high-vac. electron beam deposition 90326
Mo/Si multilayer coating technol. for EUV lithog., uniformity 92201
Nd:YAG laser mode shaping DOE fab. 82727
Pd-Ag(Ni) hybrid suspen. gate FET, coevap. prep., H_2 sens. 132051
Pt/SBT/polysilicon capacitors, elec. charact., memory appl. 81780
Rh focused electron beam induced deposition 115667
Si nanocrystal based MOS struct., prep., charge retention effect 80947
Si thin films, electron-beam evap. on CeO_2/Si(111) 114266
Si/Au syst., electrodeposition, electron beam-induced C masking 79369
SiH-SiC/Pt Schottky barrier diodes, fab. & charact. *(Chinese)* 81203
SiO_2 resists, electron beam lithog., single electron transistor fab. 103509
SnS_2-SiO_2 all-dielec. omnidirectional mirror fab. 116880
$Sr_{0.8}Bi_{2.2}Ta_2O_9$/$LaAlO_3$/Si syst., prep., ferroelec. props. 92646
W_2O_5-MoO_3 films, electron beam evaporated, elec./opt. props. 103059
WO_3 films, electron beam deposition, electrochromism, film thickness 71487
$W_{1-x}Si_x$/Si multilayers, excimer laser proc., thermal stabil. 126210
YBaCuO film growth on Y_2O_3 buffered/nonbuffered $SrTiO_3$ using precursor films incl. fluorides 68180
$YBa_2Cu_3O_{7-\delta}$ supercond. tapes, situ high rate growth 68193
$YBa_2Cu_3O_{7-x}$ HTSC films, situ electron beam evap. prep. 79251
$YBa_2Cu_3O_y$/CuNiAl(NiCr) low cost coated HTSC, nonmagnetic substrs., prep. 68349
Y_2O_3-ZrO_2 anti-reflective coatings for 1.3 μm LD *(Chinese)* 82717
Y_2O_3-ZrO_2 films, IBAD prep. for highly textured Y-Ba-Cu-O HTSC 68379

tron beam effects
see also beta-ray effects; cathodoluminescence; plasma-beam interactions
l-sided electron irrad. systs., cable/pipe-like product appl. 97913
pplied electron optics conf., Moscow, Russia, Oct. 1999 67396
able insulation fusion using quadridirectional electron bombard. 102795
iamond HFCVD film morph. control, low-energy electron bombard. 68234
lielec., surface modif. by CW electron beam 92604

electron beam effects continued
efficient quasimonochromatic X-ray source with multiply crossed thin cryst. target 110455
electron beam technol., conf., Varna, Bulgaria (Jun. 2000) 89516
graphite surface, circ./hexagonal microholes, electron beam irrad. 70351
half-bridge driver IC with newly designed HV diode 125236
high-harmonic complex cavity gyrotron, gradual transit., beam-wave interact. *(Chinese)* 125969
highly charged ions generated in pinched electron beam 110244
hybrid plasma waveguide, beam-plasma interact., pulsed microwave gen. 115269
materials surfaces, electron-beam modif., instabil., relax. 91997
metal-semicond. contacts, vac. photothermal proc., noncoherent electron irrad. 80907
microorganisms inactivation, electron beam and microwave heating effects 110083
microtrenching/island form. in oxide plasma etching, electron beam charge neutralization 126406
n-MOSFETS fabricated in BiCMOS proc., radiation damage 115798
NLC advanced collimator prototypes, review 87110
orotron-type devices, weakly relativistic electron beam-spatial harmonics interact. 80601
P(VDF-TrFE) electrostrictive copolymer, electromech. coupling factor 104325
P(VDF/TrFE) copolymers, electron irrad., ferroelec. relax. 104400
PEEK, electron beam irrad., dielec. and thermal props. 92668
photonic sens. interact./perform. in space radiat. environ., review 122477
plastic opt. fiber transm. rate on irrad. 93082
polyethylene/Kapton, elec. props., electron-beam irrad. effect 81728
PVDF-trifluoroethylene copolymer films, electron irrad., electromech. 127208
PVDF-trifluoroethylene copolymers, structural/transitional props., high energy electron irrad. 125104
PVDF/trifluoroethylene copolymers, electron irrad. effects, NMR, naval transducer appl. 127209
QD, Coulomb blockade, background charge 126172
radiation-resistant solar cells for space use 89299
Raman FEL, electrostatic wiggler and annular electron beam 105374
space grade wires & cables, radiation tolerance, fast eval. tech. 122469
space grade wires in electron environ., ESD study 133235
ULSI, local cross-sect. EBIC, local jn./defect delineation 116002
undulator magnets irrad. by high energy electrons, demagnetization 121366
UV resists, 193 nm, CD degrad. during SEM inspection, mechanistic studies 103550
UV resists, 193 nm, shrinkage anal./charactn. 81141
p-/n-(6H-)SiC:Al(N), intrinsic defects, electron irrad., Si displacement threshold, Frenkel pairs 69797
Al-Be foil, electron-beam transportation, GARPUN laser expts. 105128
AlGaAs/GaAs radiation resistant concentrator solar cells with internal Bragg reflector 89304
ArF lithog., cyclo-olefin/maleic anhydride type resists for sub-100 nm patterning 103551
As-S(Se):Ag(Au) amorph. films, electron irrad. refr. index change 103070
Au on n-Si(100), C contam., electrodepos., electron-beam induced nanomasking 90511
C crossing multiwalled nanotubes, form. of connection in electron beam 101535
C nanocrystalline CVD films, electron field emission, microstruct. 69388
C_{60} derivatives, electron beam resists, systematic study, spin coating, derivative films 92239
CdSe fast electron irrad. thin films, cond. regimes 91651
CdTe/CdZnTe detectors, behavior following electron irrad. 121490
Cu(In,Ga)Se_2 heterojn. solar cells, electron/proton irrad. induced defects 100031
Cu(In,Ga)Se_2 solar cells, radiation induced defects expts. 112865
Cu(In,Ga)Se_2 thin-film space power solar cell perform. 112867
GaAlAs LED, radiation degrad. effects 105026
GaAs FET Schottky gate metallization, electron-beam irrad. damage 70211
GaAs double Schottky barrier particle detector charactn. *(Chinese)* 97937
GaAs space solar cells grown on Si substrs. 88067
GaAs:Xe, isolated amorph. zones, implant. induced, electron-induced regrowth 81166
GaAs-on-Si space solar cells, testing 112919
GaInP/GaAs MBE-grown cascade solar cells, prod. advances 112937
$Ga_{0.5}In_{0.5}P$/GaAs/Ge triple-jn. solar cells, electron irrad. effects 112960
$GaInP_2$/GaAs multijunction space solar cells, electron/proton radiation testing 112922
$GaInP_2$/GaAs space solar cells, electron/proton radiation effects anal. 112921
$GaInP_2$/GaAs/Ge multijunction space solar cells, electron/proton radiation testing 112922
GaInPa/GaAs/Ge triple solar cells, MOCVD grown, high efficiency 112917
GaN epitaxial layers, lateral overgrowth, MOCVD, crystallographic tilt, mask material depend. 79333
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
Ge islands on SiO_2 surface, electron-beam initiated Ge transfer to STM tip 81157
Ge-As-S glasses, SHG, electron beam irrad., poling mechanism 128509
Ge-As-S syst., electron-beam irrad., second order NLO effect *(Chinese)* 93827
$Ge_{20}As_{25}S_{55}$ chalcogenide glass, electron beam irrad., SHG 117472
InGaAsP LD, electron radiation effects, output charact. *(Chinese)* 105324
InGaAsP radiation resistant low bandgap multi-jn. solar cell 112855
p-InGaP solar cells, electron radiation induced defects recovery 112923
InGaP solar cells, radiation hard, DLTS obs. 134408
$InGaP_2$/GaAs/Ge space solar cells, radiation response anal./modeling 112920
$LiNbO_3$, electron beam periodically poled, SHG 93815
O_2/GaAs(100) interface, electron-beam-induced reacts. 103419
$PbWO_4$ crysts., mass prod., radiation hardness 121539
Si CVD on chlorosilane-treated SiO_2 surfaces, selective deposition using electron beam irrad. 124911
Si, FZ growth, in situ electron irrad., extended defects, HREM 101155
a-Si alloy lightweight triple-jn. solar cells, space qualification testing 112948
Si epitaxial films, fast electron irrad., specific resist., annealing 92265
Si, microcryst., influence of electron irrad. on electronic props. 82312
Si p^+-i-n photodiodes, radiation degrad. effects 105026
Si, polycryst. film and npn transistor, particle irrad. 126611
Si, space solar cells, proton-/electron-irrad., anom. degrad. 89280
Si space solar cells, radiation hardness improvement, electron irrad. 112925
Si trench space solar cells fab., improved radiation hardness 112955
a-Si:H pin diodes, electron irrad., dark-photoconductivities and PL *(Chinese)* 115840
a-Si:H solar cell dark I-V charact., electron irrad. effects 112871
SiC, 4H, 6H, C/Si damage centres, electron irrad., low temp. PL microscopy 69585

electron beam effects continued
SiC, 4H/6H, electron/ion irrad., intrinsic defect centers, annihilation 69810
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 69811
SiO_2 gate in power MOS devices, electron irrad. effects 103719
SiO_2:F fluorinated-silicate-glass film stacks, IC interconnect interlayer dielec., cap oxides 126469
SiO_2-Bi_2O_3 sol-gel films, electron beam treatment effects 91998
Ti foil, electron-beam transportation, GARPUN laser expts. 105128
W cryst. targets, positron prod. by 0.6-1.0 GeV electrons 132283
ZnMgSe, MBE growth, effect of high energy electrons during growth 90349
ZnO layer on ZnS, prolonged electron bombard., degrad. effect, AES/cathodolum. obs. 103049
ZnO-K_2SiO_3 thermal control coating opt. charact. after electron exposure *(Chinese)* 104885
ZnS:Cu,Al,Au phosphor, cathodolum. brightness, surface chem. changes, temp. effects 104943
ZnSe, MBE growth, effect of high energy electrons during growth 90349
ZnSe:Te,O semicond. scintillators behavior under high doses of ionizing radiation 132415

electron beam focusing
CEBAF injector, beam mom. meas. by quadrupole lens 87116
combined EM focusing systs., differential alg. method for aberrations calc. 93975
combined immersion mag.-electrostatic lens systs., curvilinear-axis focusing 117625
CRT colour display, electron beam profile meas. 93977
DC-RF supercond. cavity Pierce gun, design anal. *(Chinese)* 121319
double-gate field emission devices, geom. effects simul. 80582
dual gate field emitters, misaligned, electron-beam focusing & deflection 91534
dual-gate field emitter, electron beam focusing 69431
EBIS beam form./collection, beam handling equipt. design 110197
ELV-8 accelerating tube, electron opt. charact. *(Chinese)* 110115
FEA-CRT, high defn. bright monitors, focus characts. 109908
field emitter mag. sens. with steered focused electron beam 69423
folded waveguide TWTs, mm-wave high power devices *(Chinese)* 102938
gun charact. in TW LINAC, customs inspection systs. *(Chinese)* 80562
HAADF-STEM, focusing/astigmatism correction auto-tuning method 110109
helical TWT beam/cct. interact. model, 3D time-depend., PIC code 91564
helix TWT, Brillouin-flow periodic PM focusing, BWO anal. 91565
high energy dens. electron/positron beams, plasma focusing expt. 110138
IREB, corkscrew oscill. confine. by alternate solenoid field *(Chinese)* 110114
large screen color picture tubes, beam forming region/pre-focusing lens of electron gun *(Chinese)* 125979
laser wakefield accelerator, emittance control 110122
MIS-1 electron-optic syst. design anal. 110200
MM-wave TWT, focusing mag. field, design optim. 69464
NLC, interact. region layout and background estim. 110207
NLC advanced collimator prototypes, review 87110
NLC electron beam final focusing syst., design anal. 110214
nonlin. electron oscillators, stimulated radiat., electrostatic focusing 83158
one-sided multipactor saturation in crossed fields 80598
peniotron generator in PM focusing syst. 102937
projection CRT, 16 cm large neck, HDTV display appl. 109903
RF photoinjector/compressor systs., prod./synchroniz. of electron beams, ultrafast appl. 110134
S-band/X-band integrated PWT photoelectron linacs 110128
SR beamlines, focusing mirrors *(Chinese)* 87057
ThinCRTL, field emission FPD, electron focusing 97692
undulator, electron flow, long. mag. field 83154
Univ. Maryland Electron ring 110135
Au focused electron beam induced deposition 115667
BiSrCaCuO based supercond. rings, powder-pressed, pulsed mag. fields shielding 71196
Mo focusing FEA, self-aligned photolithography 125964
Rh focused electron beam induced deposition 115667

electron beam induced conductivity *see EBIC*

electron beam induced currents *see EBIC*

electron beam lithography
see also electron resists; proximity effect (lithography)
2D photonic cryst., IR filter, additive nanolithography 127893
3D additive nanolithography, electron beam induced deposition 126570
add-drop filter, planar waveguide, apodised Bragg grating 127887
anisotropic organic/inorganic resists, novel concept, electron proximity effect reduction, lithog. 92237
chem. amplified resists for mask prod. for device generations<180nm 103583
CMOS devices, sub-0.1 μm, ring oscillator ccts., fab. 81514
combined immersion mag.-electrostatic lens systs., curvilinear-axis focusing 117625
conducting polymers, microelectronics appls., review 81409
deep X-ray lithog., mask fab., shaped e-beam lithog. 126564
deoxyguanosine derivative based MSM photodetector, self-assembly fab. 75514
direct write, history, current status 92235
direct writing, intermittence effect 115775
DOE, excimer laser fab., low cost 71459
DOE fab. for opto-electronic hybrid IS 104779
DOEs design and fab. for imaging spectrometer 104861
DOEs transfer into GaAs, direct-write electron-beam lithog., VCSEL integrat. 105400
dual damascene struct., hybrid DUV-e-beam lithog. 115769
DY-7 electron beam lithog. syst. 115761
eddy current distrib. 103665
effective data compaction algm. for vector scan EB writing syst. 103627
electron beam technol., conf., Varna, Bulgaria (Jun. 2000) 89516
enhanced pattern area dens. proximity effect correction 126525
F_1-ATPase biomol. motors, precision attachment on Ni dot nano-substrs. 92538
fiber-end grating, holographic interferometry temp. sens. 121255
fine pit pattern form. by EB-writing for high dens. opt. recording 116592
hard X rays, wavelength tunable diffr. transm. lens 110424
high resoln. electron beam lithog. simul. 92190
hot-electron micro-bolometer, thermal charactn. 70909
immersion mag. lenses, optim. design for projection electron beam lithog. *(Chinese)* 105693
immersion mag. lenses in projection electron beam lithog., optim. 93987
lithog., resist hardening, fluorocarbon plasma 69974
lithographic micro-opt. element fab. technols. *(German)* 92571
low-energy, 3D PWEM simul. 115772
mask fab., beam blur 103614
mask writer, lithographic charact. 103574
MEMS technol. for NASA space missions, JPL research & facilities 98883

electron beam lithography continued
mesoscopic Josephson jn. qubits, CMOS compatible fab. methods 127501
micro-electromechanical systs. for nanoscience 70356
micro-opt. element, fab., electron beam lithog. 116787
mixed GaAs opt. modulator and PHEMT MMIC proc. line on 150 mm wa 125832
Moire pattern, SPL appl. 126586
MOSFETs, ultrashort channel, technol. for fab. 103502
multibeam electron beam direct write lithog., cold field emitters, microfabric 69973
multibeam electron lithog., field emission photocathode array 115756
multiple anion nonvolatile acetal resists for e-beam lithog. 103641
multiple electron beam lithog. 115753
nano-3D struct. DOE plastic opt. modules, fab. proc. 127577
nanoimprint lithog., direct 3D patterning 69987
nanolithography, resist materials, metal binding SAM 92263
nanostructure fab., electron beam lithog./holography, material w nanotechnology 103702
nanostructures patterned in 1 μm Shipley SPR510A resist using PRIME pr modeling and simul. 92251
on-line nanolithography, electron beam induced deposition 126572
patterned mag. particle arrays, electron beam lithog. 127324
Permalloy dots, sub-micron, nucleation and annihilation of mag. vortices 116
Permalloy dots, sub-micron, vert. magnetis. proc. 116272
photomask fab., proc. control 103619
photomask patterning, MEBES syst., substr. bulk heating 126536
polyimide film, laser ablation lithog., diffractive phase mask 126537
polymer slab waveguide 2D photonic bandgap struct. fab. 71320
polysilane-acrylic copolymers by photopolymerization, pos. e-beam resist a 101516
present state and prospect of electron beam lithog. *(Japanese)* 81139
PREVAIL e-beam stepper alpha tool 115757
projection lithog., grid lens, effective emittance 115758
projection lithog., mask. electron scatt. 115767
projection lithog., space charge neutralization 115765
projection lithog., stencil mask fab. 126539
projection lithog. mask, equiv. model 126538
projection/e-beam direct write lithog. resists, image form. 103643
PROLITH/3D and TEMPTATION simul. 103618
PROLITH/3D and TEMPTATION simul. 115776
proximity effect correction, pattern representation 115774
proximity effect correction, spatial dose distrib. 115773
resist develop. proc. 115777
SCALPEL, mask blank fab., num. simul. 126534
SCALPEL, mask membrane, image blur 115770
SCALPEL alpha electron projection lithog. tools 115754
SCALPEL mark detect. using Si/SiO_2 and 100 keV backscattered electr 126527
SCALPEL mask, CD control, large-area electron scatt. 126543
SCALPEL mask. membrane distortion 103669
secondary-electron detector efficiency, line-width meas. accuracy 72182
SET fab. tech., self-aligned proc., pillar etching, charactn. 126905
shot-shifted electron-beam lithog. gratings, stitching-error reduction 12652
silylated resists, nanoscale lithog., opt. charactn., surface imaging 92264
simul. efficient/robust algms. 115778
single electron tunneling device, four-angle evap. method 126910
SOI wafer, charging damage, scanning Maxwell-stress microscopy 80931
supercond. tunnel jn., e-beam direct writing lithog. 70831
thin single-mode opt. waveguide photonic microstruct., nanotechnology 115795
X-ray mask, electron beam writing, image placement correction 126532
X-ray masks, electron beam writing, thermal image placement errors eliminat 126524
X-ray opt. custom components, nanofab. for beamline expts. 76179
zone plate for X-ray appls. 110484
Al nanohole array fab. by direct nanoprinting technol. 104218
N-AlGaAs/InGaAs/GaAs pseudomorphic QW based sub-0.25 μm gate HE 81370
AlGaAs-InGaAs lasers, 2D-photonic cryst. mirrors based on Al_2O_3-mask 71
AlGaAs-InGaAs pseudomorphic HEMT fab. by ICP dry etching, device cha 70210
AlGaN/GaN MQW waveguides, fab. and opt. study 93103
$As_{50}Se_{50}$ amorph. thin films, Ag/Au metal coated, electron/photon induced m diffusion 93296
Au/Ni/n-GaN Schottky contacts, disloc. effect on I-V charcts. 69727
Bi nanowire, transport props. 103129
Bi scanning Hall probe microscopy on AFM tip 109797
CdTe/CdMgTe buried quantum wires, interdiffusion using patterned SiO_2 ma 80826
CdTe/CdMgTe buried single QDs using selective thermal interdiffusion 91
Co epitaxial (10$\bar{1}$0) wires, mag. domain struct. 116277
Co/Cu/Co pillar-shaped trilayers, spin-polarized current induced switch 70507
Co/Cu/Ta/CoPt submicron GMR sens., self-biased, high temp. oper. 12077
CoPt patterned media with perpend. mag. anisotropy, fab. and props. 1162
Cu interconnects, sub-0.1 μm, fab./perform. limits 92168
Fe nanopillars, electron beam lithog./electrodeposition 114393
FeNi/Fe(Ru) mag. tunnel jns., switching behaviour, mag. seed line effect 92
GaAs MMIC multiplier devices, metal beamleads, fab. techs., 200-2700 102678
GaAs P-HEMT gate improvement/control, proc. modelling/simul. 116042
GaAs PHEMT/MMIC mfg., 6″ wafer fab. facilities establishment 70212
GaAs direct digital mm-wave receiver MMICs, six-port 96404
n-GaAs nm-sized Schottky contacts, current transport and C-V charcts. 91
GaAs/AlGaAs electron Y-branch switch, switching effects between drains 70
GaAs/AlGaAs heterostruct. QD, 2DEG, single electron transport 80812
GaAs/AlGaAs heterostruct. nanoelectronic Y-branch, microwave props. 115
GaAs-AlGaAs epitaxial heterostruct. photonic cryst. waveguides 82164
GaInAsP/InP wirelike laser, strain-compensated MQW struct., etched/regro interfaces 117215
GaInAsP-InP strongly index-coupled MQW DFB lasers, wirelike act. reg 128234
GaInN vis. lasers, materials/MOVPE technol. 93666
N-InAlAs/InGaAs/InAlAs metamorphic heterostruct. based sub-0.25 μm HEMT 81370
InGaN QD, high dens., MOCVD, PL 90402
InP HEMT asymmetric T-gate recess fab., single-step patterning using 92410
n-InP nm-sized Schottky contacts, current transport and C-V charcts. 918
Nb films, electron beam lithog., RIE, supercond. props. 125074

tron beam lithography continued
Nb/Al-AlO$_x$/Nb SIS jn., space borne subMM-wave mixer 70832
Ni, mag. film, electron beam lithog. 127323
NiCr resistor, MMIC compatible, on-wafer VNA calib. 125844
NiFe nanopillars, electron beam lithog./electrodeposition 114393
Pt/TiO$_2$, photo-electrochem. deposition, electron-beam lithog. masks 79390
Si CVD on chlorosilane-treated SiO$_2$ surfaces, selective deposition using electron beam irrad. 124911
Si MOS nanotransistor, gate technol., DC elec. results 103827
Si anisotropically etched molds, fine opt. component fab. 93176
Si, deep etch model, SCALPEL mask fab. 126554
Si nanopillars, 3D controlled size-reduction by photoelectrochem. etching 69985
Si nanostructures, Coulomb blockade, single-electron devices, review 69990
Si/Au syst., electrodeposition, electron beam-induced C masking 79369
Si/SiO$_2$ Coulomb-blockade-struct., lithog., elec. characts. 126239
Si(111)/organic monolayers electron beam nanoscale patterning for selective deposition 115792
SiGe double QD, hole transport, cond. peak splitting 69694
SiN$_x$ membrane, LPCVD thin film, SCALPEL mask blank 103671
SiO$_2$, fused silica, microcone array form., antirefl. struct. surface 104874
tron beam machining
metal gated field emitter arrays, focused ion/electron beam induced react. fabr. 69425
particle and laser beam machining, energy sink charact. *(German)* 100568
tron beam pumping
monolithic-disked HV vac. interface for high-energy KrF-laser amps. 82501
CO RT repetitively pulsed overtone laser 105105
CO$_2$ laser, electron beam sustained, plasma cond. 82464
Ge$^+$ Ne-like ion laser, hot electron beam pumped 117080
HF nonchain chem. laser, energy, temporal and spectral charact. 105084
HF pulsed chem. nonchain laser, electron beam pumped, output radiation 105083
He-Ar laser, hard ioniser pumped, act. medium kinetic model 93480
KrF large-aperture laser amps., segmented electron-beam diodes for pumping 117068
KrF laser amp., electron-beam-pumped, output charact., init. testing 71635
KrF laser driver, rep-rate electron beam-pumped, electron-beam transportation expts. 105128
ctron beam resists *see electron resists*
ctron beam testing
used for testing by electron beam. For diagnostics of electron beams see particle beam diagnostics
Cu damascene interconnects, localized strain meas. by CBED 92172
IC defect inspection/metrology, proc. integrat. 100638
QW laser, sectional voltage contrast topography, Fermi energy 128268
TFT-LCD matrix testing, e-beam test technol. 121126
VLSI chip, EB/FIB integrated test syst. 127005
ctron beam welding
QC, radioscopic testing, automatic image proc. 100642
ctron beams
see also electron optics; relativistic electron beams
applied electron optics conf., Moscow, Russia, Oct. 1999 67396
APS storage ring, electron beam diagnostics, mom. compaction anal. 87095
ATLAS liq. Ar EM calorimeter, module testing, 87166
BESSY II, source size/emittance monitoring 121373
BNL EBIS high current electron/ion beam dyn. simul. 110198
BRIC charge state breeder EBIS, RIBs 110272
bunch, sub-ps, nonintercepting meas. using coherent diffr. radiation 87121
circ./rect./sq. fields of electron accelerators, Monte Carlo calc. 87053
clinical electron beams, energy constancy meas. 76636
clinical electron beams, lateral bremsstrahlung dose distrib. 98644
coaxial FEL with Bragg mirror resonators, spatially coherent radiation 117306
Compton backscatt. X-ray generation by high power dens. laser *(Chinese)* 110441
cooling systs., intense beam space charge effects 72187
crossed-field secondary emission diodes, research status 93974
CRT colour display, electron beam profile meas. 93977
cylindrical chambers, photon/electron beam calib., absorbed-dose 76770
diagnostics by Thomson scatt. 110171
Dresden EBIT, materials research ion source, low-energy highly charged ions appl. 87158
EBIS beam form./collection, beam handling equipt. design 110197
EBIS electron string mode operation, expt. design 110275
EBIS highly charged ions, at. mass, TOF anal. 110277
EBTS plasma mode diagnostics, freq. scaling, EBIS expt. anal. 110276
ELSA inverted polarized electron source, beam stretching expt. 110195
ELV-8 accelerating tube, electron opt. charact. *(Chinese)* 110115
EM oscill. generation/amplif. by tubular electron beam in crossed radial electrostatic/axial mag. fields 105683
exchange self-polaris. of electron beam 87054
fast electron beam incident on semi-infinite target, diffusion model of kinetic eqn. 93979
fast ion extraction from intense electron beams, EBIS single-turn inject. 110199
FEL coupled-groove-waveguide periodic struct. 117312
forming systs. of intense gyrotron helical electron beams, num. simul. models 125971
gas-dyn. window, stationary electron beam output 69421
GRAAL, polarized photon beam 110183
gun charact. in TW LINAC, customs inspection systs. *(Chinese)* 80562
gyroresonance devices, helical electron beam form. 72207
Hefei electron storage ring injection state param. anal. *(Chinese)* 132248
HERA Luminosity Upgrade, polarised e$^{\pm}$ beams, experience and expectations 110192
high energy spin polaris., expt. review 110185
high-brightness electron beam prod., transport, and meas. 110139
high-power beam-plasma microwave devices, electron-opt. systs. 69462
high-precision polarimeter at JLAB 87062
IMI-2 electron beam multicharge ion source 72184
intense electron beams compression, near-cathode influence on perturb. 93978
intense highly-charged ion beam prod., review 110279
ion evaporative cooling, selective RF heating, EBIS/T 110196
Japanese advanced accelerator develop., review 110181
KSRS, beam on-line monitoring 121375
light ion beams for radiation treatment, facility design anal. 111130
lin. colliders, electron-positron pair detector, simul. anal. 110350
low-energy gas discharge electron source, gasdyn. window beam injection 80561
mag. breaking radiation, LV source 83153
mag. field 3D distrib. effect on electron-beam form. 72186
magnetron guns, high-power electron beams generation 115256
electron beams continued
magnetron injection guns, mech. tunable, design and gyrotron beam characts. 115258
Mainz microtron, polarized electron source, beam lifetime expt. 110263
MIS-1 electron-optic syst. design anal. 110200
MIS-I multicharge ion source, electron-optic syst. design 72185
MIT-Bates Linear Accelerator Center, SHR projects, linac upgrades 87044
MIT-Bates polarized source, beam lifetime expt. 110264
modulated electron beam transversing RF field gap, transit time effect 72188
Neptune photoinjector commissioning/design, review 110180
NLC electron beam final focusing syst., design anal. 110214
NLC test beam, polarized fixed target expts., Moller scatt. 110210
orotron efficiency, electron-beam width effects 102932
particle accelerator design/anal. review for future expts. 132272
plane electron beams, geometrized theory 93980
plasma focusing channels, electron beam betatron radiation 110137
PLS polarized electron source, photocathode test-stand design/fab. 110265
pseudospark electron beam source for FEL, impedance match *(Chinese)* 71861
pulsed electron source, at. collisions, expt. design 110266
radiotherapy, modulated, beam charactn., MC model 76620
ref. dosimeters, perturb. correction factors calc. 87975
RHIC EBIS-based preinjector design, review 110202
short-pulsed slow positron beam, polymer films appl. 110173
size, noninvasive meas., diamag. loop 97919
SLC-style beam energy spectrometer, extraction line anal. 110212
SLS linac diagnostics, commissioning results 87130
small-orbit, spiralling, current dens. profiles, anal. formulas 69445
spin polarized electron source and polarimeter, review 110249
Super-ALIS compact storage ring low energy injection accel. anal. 132256
SURF III, electron beam imaging, diffr. and depths-of-field effects 87063
TESLA Compton polarimeter, design anal. 110213
Tokyo-EBIT, highly charged ion beams, expt. anal. 110273
TWT with vel. taper, spent beam vel. distrib. charact. 69457
velvet cathode diode design, uniform electron beam diagnostics *(Chinese)* 87141
X-ray FEL multi user facility at DESY, civ. engng. 82698
ep high energy colliders, nucleon spin struct. fn. 110184
electron bombarded semiconductor devices
SiC, 4H/6H, electron/ion irrad., intrinsic defect centers, annihilation 69810
electron bunches *see particle beam bunching*
electron capture in solids *see electron traps*
electron correlations
see also configuration interactions
conf., Jadavpur, India (Aug. 1999) 78411
double-semicond. QW, mesoscopic correl., magnetotunneling spectra 91818
QD cellular automata, correl., majority gate 70223
CdTe, doped samples, variable-range hopping, electron correl. effects 115300
GaAs, doped samples, variable-range hopping, electron correl. effects 115300
n-GaAs/Al jns., Schottky barrier, tunneling spectrosc. 103171
n-GaAs/Au jns., Schottky barrier, tunneling spectrosc. 103171
Ge, doped samples, variable-range hopping, electron correl. effects 115300
Si, doped samples, variable-range hopping, electron correl. effects 115300
Sn/Ge(111), 3×3/√3×√3 reconstructions, surface bands electron correl. effects 103166
Sn/Si(111), 3×3/√3×√3 reconstructions, surface bands electron correl. effects 103166
electron cyclotron masers *see cyclotron masers*
electron density
see also carrier density; current density
beams, small-orbit, spiralling, current dens. profiles, anal. formulas 69445
channel-guided laser wakefield accel., fast Z-pinch, opt. guide 110099
D-region, middle lat., electron dens. var. due to earthquakes 128769
double layer semicond. nanostruct., excitons, model simul. 80859
double-gate SOI MOSFETs, Hall effect meas. 126762
dusty plasma, intrinsic electron dens. fluct., EM scatt. 83350
Europe ionos., total electron content spec. and GPS 88143
global plasmas. electron dens. profile, tomography using Omega sigs./ray tracing 105737
HEMT, 2DEG, triangular pot., quantized energy level *(Chinese)* 92404
HF commun., ionos. trough effects, neural networks appl. 131088
HF short paths, sporadic E layer effects 105727
ionos., electron dens. profiles determ. from oblique ionograms 133312
ionos., total electron content prediction and meas. 117685
ionos. electron conc. determ. methods 88127
ionos. electron dens. height profiles determ., regularisation 122641
ionos. param. diagnostics, vert. sounding method errors 133305
ionos. profile reconstruction using Faraday rot. data 122656
ionos. radio propag. research 83311
ionos. tomography generalization on diverse data sources 133306
laser-solid interacts., high-intens., nonionising prepulse effects 117560
MODFETs, two-channel, two-stream ballistic instabil. 92413
MOS struct., direct tunneling current, modified Airy fn. model 115456
neg. streamer anal., photoionization effect, FEM *(Korean)* 115238
nighttime ionos. 2D struct., GPS occultation/dens. gradient method 133307
oxynitride MOSFETs, Coulomb scatt. limited electron mobility 81267
radio waves in oblique ionos. sounding, limiting polariz., quasi-isotropic approx. 83274
semicond., 1D nonisentropic hydrodynamic model, subsonic solns. 92273
SET, electron quantum wire fab. by shallow trench etching 70220
Space Shuttle exhaust, ionos. modif., plasma dens. depression 133310
sprite min. plasma dens. determined by VLF scatt. 76872
synchrotron light source, dual-energy X-ray computed tomography 98521
topside ionos. sounder, electron dens. distribs. 133308
transauroral ionos. radiopath and electron dens. 105728
UHF radar track acquisition, polar region ionos. effects 131665
underdense plasma, high intens. TW fs Ti:sapphire laser pulse propag. 128790
wide-gap semiconds., doping limits, amphoteric defect model 91949
X-ray propag. in laser-prod. plasma, electron dens. meas., interferometric method 94051
AlGaAs/GaAs heterostruct., layer-compensated selectively doped, nanolithography appl. 91733
AlGaAs/InGaAs/GaAs SQW, modulation doped, electron dens., mobility 80852
$Al_{0.2}Ga_{0.8}As/GaAs/Al_{0.2}Ga_{0.8}As$ single QW laser, pop. inversion 128298
$Al_xGa_{1-x}N$ thin film, GSMBE growth, Si(111) substr. 101207
AlGaN:Si/GaN:In heterostruct., In doping enhanced 2DEG, XRD 81048
AlGaN/GaN HFET, electron transport props., electron dens., polaris. effect 81385
AlGaN/GaN MODFET, electron trapping, dc drain current, DLTS 81362
AlGaN/GaN heterostruct. FET, 2DEG distrib., doping effects anal. 126880

electron density continued
AlGaN/GaN heterostruct., elec. cond., quantum corrections 80783
AlGaN/GaN single heterostruct. FET, electronic energy spectrum modelling 92396
AlGaN/GaN single/double HFETs, 2DEG transport props. 70198
$Al_xGa_{1-x}N$/GaN modulation-doped heterostruct., subband electron props. 91735
Ar plasma jet generation, rect. reson. cavity, params. 100571
Ar^+ ion fast capillary discharge soft X-ray laser plasma columns 128068
CdMnTe/(Cd,Mg)Te SQW 2DEG, magnetotransport meas. 80856
CdTe, excimer laser doping techs. 91978
Cu vap. laser, pulse repetition rate, metastable state and electron dens. effects 93467
Cu vapour laser, pulse repetition rate limitation rel. to prepulse electron dens. 117065
Cu-HyBrID laser, changing pulse params. 105103
$CuAsSe_2$ liq. semicond., nonmetal-metal transit. 91703
n-$CuInSe_2$ elec. characts., impurity band cond. effects anal. 126093
F_2 laser, discharge pumped, high-repetition-rate operation, 1D model calc. 105132
n-GaAs, proton irrad. defects, fast relax. 103037
GaAs/AlGaAs heterostruct., back-gated undoped, electron transport charact. 91736
GaN MBE growth using ECR N_2 plasma 124839
GaN MOCVD epitaxial films, growth, effect of dil. ammonia flow rate 79297
GaN, cubic, p-type Mg/N-type Si doping 69830
GaN, degenerate QW, polar-opt. phonon-limited transport 91816
GaN epilayer, GSMBE growth *(Chinese)* 90265
GaN film, hydride VPE grown, carrier dyn., PL 124988
GaN, undoped, evidence of free carrier conc. gradient along c-axis 103005
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
GaN/sapphire HVPE films, interfacial region impurity band, SFM obs. 69518
Ge/Si(001) QD heterostruct., electron spatial separation 103145
$Hg_{1-x}Cd_xTe$ very LW IR photodiodes, current mechanisms 93369
ITO films, RF sputtering prep., struct./elec. props. 90239
InAlAs/InGaAs highly doped metamorphic HEMTs, subband electron props. 115960
$In_{2-2x}(Cd,Sn)_{2x}O_3$, bulk phase rels., cond., transparency 80750
InGaAs/InAlAs, metamorphic HEMT on GaAs, MBE, characts. 92386
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunction, magnetotransport 91732
$In_{0.75}Ga_{0.25}As/In_{0.75}Al_{0.25}As$, gate-controlled 2DEG, large spontaneous spin splitting 69655
InGaAs-InAlAs HEMT, MBE growth, electron dens. and surface pot. 103896
InGaN/GaN LEDs, Si-doped $In_{0.3}Ga_{0.7}N$/GaN short-period superlattice tunneling contact layer 127973
InGaP(As) layers/MQW structs., solid source MBE growth, laser appls. 124867
InN/Si heterojunctions, MBE, hole-barrier struct. 90301
InP surface damage, methane-H_2 RIE-induced 92094
InP:Si^+, implanted, free-carrier conc., PL method 80735
InSb films, MBE on GaAs, magneto-resist. effect 101270
Kr^{8+} X-ray lasers, gain calcs. time hist., radiative-collisional model 128078
N plasma recomb. X-ray laser, dens. meas., emission study 128084
Ni-like transient X-ray ion lasers, hydrodynamic charact. 128065
Ni_2MnGa alloys, mag. props. & structural phase transforms. 127319
$(PbBa)(ZrTi)O_3$:Bi_2O_3 cathode electron injection for ion source improvement 104340
S^+ Ne-like hybridly pumped collisional soft x-ray laser 128067
Si MOS capacitors, gate oxide reliab., beamline implant./plasma doping 115534
Si MOSFET, short channel, local iter. Monte Carlo anal. 115926
Si MOSFETs, magnetoconductivity scaling, 2D quantum phase transit. 115902
Si wafers, surface passiv., plasma CVD SiN films 126401
a-Si:H,Er, PECVD films, electronic props. 69556
Si:P, transmutation-doped γ-irrad., defect states, elec. props. 91580
Si:P,H nanocryst. films, cond. props., heterojunction diodes *(Chinese)* 91575
Si/AlN/GaN layers, growth & elec./opt. charact., MOCVD 79298
Si/Ge Si Qw MODFET, low energy PECVD, struct./elec. charactn., TEM 124890
n-Si/$Si_{1-x}Ge_x$ HEMT struct., design, 2DEG dens. *(Chinese)* 92399
3C-SiC, donor densities/energy levels, Hall-effect meas., free carrier conc. spectrosc. 69600
n-SiC:N, 4H polytype, elec. transport props. 91726
4H-SiC:N CVD films, cond. electrons, intrinsic mobility, valley-orbit splitting 69597
n-SiC/SiO_2 MOS capacitor, fab. & elec. charactn. *(Chinese)* 102779
SiO_2 films, electron injection stressed, trapped charges nonuniform distrib. 92675
SiO_2 plasma etching chem. modeling 126379
SnO_2 epitaxial nanocrystalline film, fs PLD 90468
SnO_2 film, nanocryst., struct./prop. rels. on $(\bar{1}012)$ sapphire 80745
SnO_2 microhotplate gas sens., surface state trapping model 120980
SnO_2:Mn thin film, fab. & charactn. 79351
ZnO, excimer laser doping techs. 91978
ZnSe, excimer laser doping techs. 91978
ZnSe, sublimation method growth, elec. props. 68129
n-ZnTe:Al layers, MBE growth, struct./elec./opt. props. 90317

electron density of states *see electronic density of states*

electron detection
ALICE TRD, prototype tests 121641
ATLAS liq. Ar EM calorimeter, module testing, 87166
CMS diamond pixel sens. 97949
CMS EM calorimeter, light-to-light readout syst. 121629
dosimetric ionis. chambers, effective pt. of meas., Monte Carlo simul. 76739
electronic solid state dosimetry, review 133141
fast EELS spectrometer, MCP-based posn. sensitive detect. 98077
fast transimpedance amp. for MCP detectors, low imped. input 97360
gas electron multiplier, single electron detect. 132339
gas electron multiplier, single electron detect. by internal photocathodes 87192
gas ionizing radiation detectors, leak microstruct., timing inform. 76043
He-isobutane gas mixtures, electron life time, drift vel. 76039
LHCb-RICH project, pixel hybrid photon detectors 97965
microcolumn, lateral pn-jn. electron detector 121620
orb. pattern, quantitat. imaging, electron momentum spectrom. *(Japanese)* 110420
pixel segmented ionization chamber for therapeutical beams of photons/hadrons 76651
proportional chamber, plasma mode, EM calorimeter 87202
radiation protection dosemeters, response in mixed photon/electron fields 122413
RHIC PHENIX HI collision expt. detect. syst. design 132358

electron detection continued
RICH for HERA-B, perform. 76115
scintillating fiber camera, 0.25 mm^2 fibers, space dosimetry 122401
Shashlik calorimeter with long. segmentation, test beam results 121536
Shashlik calorimeter with long. segmentation, testbeam results 132398
shashlik calorimeter with long. segmentation for lin. collider 76098
shower detector, nuc. emulsion, calib. 87248
STEM imaging, thin annular detector 102949
tracking detector for low-energy electrons 76079
TRD, fast design for first-level triggering 76113
TRD for ALICE, prototype tests 132413
wavelength shifting fiber calorimeter/plastic scintillator bar for neutrino p 76084
$\nu_\mu \rightarrow \nu_\tau$ oscills., long baseline ν oscill. expts. 98047
BGO HPLC positron detector, human PET metabolite anal. 98572
BaF_2 scintillation crysts. charact. and detector appls. 132360
$CaF_2/CoSi_2$/Si MBE struct., 2D radiation detector matrix 87289
CsI(Tl) cryst., scintillation charact. depend. on Tl^+ concs. under e/α excita 132401
GaAs MSM photodetector and electron detector, freq. response mechan 132145
GaAs detectors, charge division/collection, trapping effects, continuity eq proc. modelling 97990
$LiNbO_3$, charged particle detect. by EO effect 87230
Pb scintillator detector, compensated hadron calorimeter, hadron, electron, Pb det. 76100
$PbWO_4$:Tb,Mo, EM calorimetry in energy regime below 1 GeV 132292
SiC detectors, electron/photon irrad., Schottky contacts 87220
Si(Li) detectors eval. by Cu plating method and X-ray anal. microscopy 132

electron device manufacture
see also electron tube manufacture; integrated circuit manufacture; semiconductor device manufacture
ceramic chip capacitors for automotive indust., qualification testing 89413
film chip capacitors, proc. technol. and mass prod. *(Japanese)* 91426
glass as crit. material in displays develop. 86798
hybrid factory, design, coord. and control 89827
ink-jet printing technol. appl. to display assembly/interconnect 86797
large-area photomasks for display appls. 75808
micro-dispensing/ink jetting direct write technols., material systs. 100564
MLC capacitors, vol.-efficient, elec. props. 80431
motion control syst. 113821
MVA TFT-LCD panels, manufacture and perform. improvements 86846
subminiature image intensifier sens. perform. improvements, 18-mm/16- 86635
telescopic piezoelec. actuators, fab., charactn. 127258
wound/stacked metallized film capacitor technols., perform. comparison 115
AgPd alloy powders, monodispersed/low-fire, for ultra-thin MLC capacitor el trodes 80427
Cu termination paste develop. for Ni base metal electrode MLCs 80429
Ta capacitors, struct., fab. and develops. *(German)* 115051
Ta solid capacitor ESR reduction, C/Ag coatings, material/proc. optimisat 80430
Zn thermally sprayed coatings for film capacitor end terminations, impro 80432

electron device noise
see also semiconductor device noise; superconducting device noise
analogue input ccts. for PC plug-in measuring cards *(German)* 125570
cardiac MRI, six-element array, SNSE coil design 132673
cardiac PET, time-activity data, wavelet transforms anal. 76568
cerebral spinal fluid, white/grey matter, MRI segmentation 87566
charge amps., low-noise, fast, cold discharge mechanism 114634
charge-sensitive preamplifier, integrated, low noise/power, fast, for APD in JF CMOS 114640
dual-screen computed radiography chest imaging, noise ratios 87754
DuPont 8039 thick film resistors, ZrO_2-based substr. compatibility 69269
freq.-doubling inverted gyrotwystron, phase deviation/pushing 125975
high precision thin-film resistors, characts. *(German)* 125836
high-speed VLSI cct. capacitive coupling noise reduction 126994
image intensified video cameras eval. 86638
image intensifier tube perform. eval. 86636
intensified cameras eval. 86639
large area APDs and monolithic arrays for scintillation det. 121584
microstrip antennas, Gunn integrated, noise 105905
MRI, noise correction, apparent diffusion coeffs. 132667
NSRL klystron corridor, leaked EM noise *(Chinese)* 110111
on-chip ESD protection, induced noise issue 127063
PIBETA detector, ADC common noise correction and zero suppression 872
piezoresistor, thick film, metallic substr., excess noise 91412
switching noise constraints effect on high-level synthesis 125624
thick film resistor materials/struct., noise meas. method 125842
thick film resistor series for strain sens. 121235
thick film strain sens., TCR and LF noise 75457
undersampled multislice fMRI data, respiration-induced noise fluct. 76449
X-ray image intensifier-TV fluoroscopy, sig. detect. theory 87729
C free-standing multiwalled nanotubes, low-noise SETs for ultrasensitive ele trometers 69360
C multiwalled nanotubes as building blocks in nanoelectronics 125935
CsI(Tl) scintillation detector, PIN photodiode readout, noise contrib. to energ resol. 87211
^{3}He posn.-sensitive ionization chamber for thermal neutrons 110330
$La_{0.67}Ca_{0.33}MnO_{3-y}$ thin-film microbridge opt. detector 120798
^{82}Rb, PET, myocardial perfusion, wavelet-based noise-reduction 76569
RuO_2/ruthenates-based thick-film resistors for strain sens., firing temp. effec 125839
TaN thin film resistors, on-chip wireless appls., mismatch/flicker noise charac 102765

electron device testing
see also electron tube testing; integrated circuit testing; semiconductor devic testing; superconducting device testing
AC film capacitor reliab. assurance using thermal anal. 69271
AC-PDP micro-cell discharges diagnosis by laser absorpt. spectrosc. 97640
base metal electrode dielec. comps. for thick/thin layer MLC capacitor appl 115061
BG dielec. charact. MIL PRF 55681 capacitors, insulation resist. degrad. 11507
BME X7R/Y5V high-k dielec. for thin layer MLC capacitor appls. 80425
buried/surface LTCC resistors, DC/AC elec. props., long-term stabil. 125840
capacitor dielec. meas. for power electronic appls. 68574
capacitor ESR reduction trend for portable electronics 115073
capacitor selection for reliable automotive appls. 89414

tron device testing continued
capacitor testing, fast measuring meter, phase components *(Chinese)* 109834
ceramic capacitors, voltage withstanding rating determ. 80444
ceramic chip capacitors for automotive indust., qualification testing 89413
defective MLC capacitors, elec. test data anal. effectiveness 115074
DuPont 8039 thick film resistors, ZrO_2-based substr. compatibility 69269
embedded capacitors, high-k polymer-ceramic composite for RF appls. 69273
embedded decoupling capacitors, HV charact. 115067
ferroelec. capacitor switching response simul., parallel element model 90913
foil resistor, zero TCR, ten-fold temp. coeff. improvement 115043
KEMET base-metal-electrode MLC chip capacitors, HALT 115079
LTCC resistors, elec./stabil. props., US microscope characterisation 69263
micro-dispensing/ink jetting direct write technols., material systs. 100564
MLC capacitors with ultrathin dielec. layers, specs./test methods 80436
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 115076
MOV surge protection devices, test methods 115042
NTC thick film thermistor elements, thermal/elec. behaviour 69268
pass. component charactn. in non-sinusoidal conditions, virtual instrum. tech. 120656
pass. electronic components, reliable in-cct. eval. 115041
pass. lin. component third harmonic testing, review 113453
smart airbag systs., foil resistors as electro-pyrotechnic initiators, low energy 89418
surface mount ceramic capacitors, AC testing 115075
tech. devices EM pulse exposure/interference immunity *(Polish)* 105780
thermocouple, fine wire, response time in air, meas. 86494
thick film resistor I-V charact. nonlin., material struct. effects 125841
thick film resistor materials/struct., noise meas. method 125842
X7R MLCC meas. using reson. excitation, lot reliab. anal. 80435
Al electrolytic capacitors, large, service life/failure mechanisms 115081
$BaSrTiO_3$ tunable capacitors, enhanced dielec. props., $SrRuO_3$ buffer layer role 91175
$BaTiO_3$ ceramic capacitors, NDT by PD method 116228
LiNbO opt. modulators, corros. phenom., damp heat test 127826
Mo field emitters with integrated focusing electrode 97705
Nb solid electrolytic capacitors, substr. materials develop. 115065
Ni-Cr foil resistor, near-zero TCR, ten-fold improvement in temp. coeff. 80416
Ni-MLC capacitors, Y5V dielec., bakeout-property rels. 80426
O_2, dissolved, screen-printed amperometric sens., continuously-powered 86705
Ta capacitor failure modes, fab. technols. 115080
Ta chip capacitor, 1608 size, 6.3 WV/10 μF, face down terminals for fillet-less surface mounting 115084
Ta chip capacitors, <10 mΩ ESR, heat/moisture-stable 80433
Ta solid capacitors, polymer/MnO_2 electrolytes, comparison review 80442
TaN thin film resistors, on-chip wireless appls., mismatch/flicker noise charact. 102765
Ta_2O_5 dielec. reliab., thermal/elec. breakdown under both-bipolar biasing conditions 80434

ctron diffraction
for electron crystallography techniques and apparatus, use "electron diffraction crystallography"
see also electron diffraction crystallography; low energy electron diffraction
Cu damascene interconnects, localized strain meas. by CBED 92172
nanodispersible film materials, microwave radiation absorpt. 80158
STEM imaging, thin annular detector 102949
ULSI device isolation struct., metal impurities behaviour 81107
Al thin interconnects, local strain meas., CBED, TEM 126437
AlN nanofibers, combustion synthesis and charactn. 68103
BN, cubic films, laser ablation deposition 90469
CO_2 dilated block copolymer templates, nanostructured materials, organometallic cpds. 90581
CdS, sq. thin flake, hydrothermal synthesis by using surfactants and thiocarbohydrate 79433
CdTe, VPE growth in temp. gradient thermal field 68185
$Cd_xZn_{1-x}Te$ VPE on GaAs substr., LRO 124857
$Cd_xZn_{1-x}Te$/GaAs heterostruct., struct., SAD/TEM obs. 115369
Co nanoparticle films depos. on a-Al_2O_3, growth/morphology 124856
Co-Ni alloy nanowire array, prep., mag. props. *(Chinese)* 127311
Cu damascene lines, grain struct., electromigration resist. 126511
Cu thin films, void form. by thermal stress conc. at twin interfaces 103464
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu_2S/Cu_2O nanowire arrays, oxide-assisted nucleation/growth 126174
Cu_6Sn_5 scalloplike layer, solder interconnections, channels stabil. 67533
Fe-V-O thin films for electrochromic smart windows, anal. electron microscopy 71415
FeTaN film, mag. recording head, sputter deposition 116310
GaAs epilayers, low temp. grown, defect props. 79235
GaN epilayers, MBE, at. H_2 impact 90299
GaN films, MOVPE on c-Al_2O_3, substr. orient. effects anal. *(Chinese)* 126054
GaN films, crack-free hexagonal, growth on AlN/Si buffer/substr. 101360
GaN:Mn, high dose ion implant., nanoscale mag. regions 127326
GaN:Si epitaxial films, electron backscattered diffr. obs. 69544
GaN(1100) M-plane plasma-assisted MBE on γ-$LiAlO_2$(100), nitride semiconds. free of internal electrostatic fields 101252
GaP:N_2^+, α-GaN phase, ion-implant. synthesis 126296
a-$Ge_2Sb_2Te_5$ films, laser irrad., crystn., TEM obs. 82043
InAs/GaAs self-assembled vert. stacked QD, interband transits. 91768
In_2O_3/SeO_2 thin films, struct., elec. and gas sens. props. 97474
$LaCrO_3$ SOFC interconnect, cryst. struct., space group determ., SAED, CBED 89257
$La_{0.5}Sr_{0.5}CoO_3$ thin films, chem. soln. deposition, crystn. 114395
MgO films, biaxial texture, electron beam evap., $YBa_2Cu_3O_7$ HTSC appl. 68194
Nd-Fe-B PM, degrad. procs. 92863
PLZT films, TEM investig., PLD, growth temp., pyroelec. appls. 104324
$Pb_nNb_2O_{5+n}$ solid soln., struct./stabilty, electron microscopy 114927
$Pb(Yb_{1/2}Ta_{1/2})O_3$-$Pb(Yb_{1/2}Nb_{1/2})O_3$ solid soln., struct./dielec. props. 127228
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ mixed cryst., Raman scatt. 127193
Si CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
a-Si:H, Al-induced crystn. at 150°C 90537
Si:H polymorphous thin films from RF plasmas of SiH_4 dil. in Ar 125059
SiC:H heteroepitaxial film growth, methane RF PIII method 90538
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
$TiSi_2$, low temp. C54 form., refractory-metal-free C40, CMOS interconnects 80972
$YBa_2Cu_3O_{7-\delta}$ HTSC film, strain relax. obs. 70646
$YBa_2Cu_3O_{7-x}$ on RABiTS, magneto-opt. imaging of transport currents 70674

electron diffraction continued
$YBa_2Cu_3O_{7-y}$ films, laser-deposited on CeO_2-buffered Al_2O_3, microstruct. obs. 127425
$ZnGeP_2$ chalcopyrite defects, TEM study 80774
ZnO based varistor, grain boundary elec. charact., EBIC/SEM 115976
ZnO thin films on Si and amorph. substrs., PLD 90476
ZnSe, polycryst. nanoparticles, MOVPE in counterflow jet reactor 125068

electron diffraction crystallography
for studies of specific materials, use "electron diffraction"
hybrid pixel detectors for electron microscopy 97426
Cu electroplated interconnects, microtexture/strain 103460
μc-Si:H films, RF glow discharge deposition, Ar-dil. SiH_4 plasma 102988

electron emission
see also Auger effect; cathodes; electron field emission; exoelectron emission; photoemission; secondary electron emission; spin polarised electron emission; thermionic electron emission; work function
diamond, CVD films for components and emitters 114329
diamond and related materials, conf., Porto, Portugal (Sept. 2000) 67401
diamond films, nanocrystalline, PECVD, electron emission 69409
gyrotron operation, electron emission azimuthal inhomog. effect 91546
SIRAD SEE facility, ion electron emission microscopy 126607
a-C:H, film, PECVD, vac. electron emission with low turn-on elec. field 91533
Co-silicide field emitter arrays from Ti/Co layers 69424
Ga, multipoint liq.-metal emitter, explosive electron emission 80574
GaAs:Er, electron emission channeling 126279
InGaAs/GaAs strained SQW LD, electron emission, DX centers, RTA effects 128299
Ni addit. to oxide cathodes, emission stabil., elec. cond. effects 102897
Si:Cu, electron emission channeling 126279
Si:Er, electron emission channeling 126279

electron energy bands *see band structure*

electron energy loss spectra
diamond nanocrystalline powder, STEM anal. 79462
fast EELS spectrometer, MCP-based posn. sensitive detect. 98077
MOSFET, at. scale charactn. of interfaces and doping layers 92332
SCALPEL, mask membrane, image blur 115770
scatt. cross sects. in electron microscopy/anal. 115279
therapeutic beam dose calcs., electron loss model with energy straggling 111205
AlN, barriers in spin-depend. tunnel jns., HREM obs. 80681
AlON, barriers in spin-depend. tunnel jns., HREM obs. 80681
a-C:F films, ion beam deposition, charactn. 124845
$C_{60}F_x$ thin films growth, STM, HREELS 114282
CN_x large-scale well aligned nanotube films, PECVD, electron field emission 79273
Co-Cr thin film mag. recording medium, nonmagnetic underlayer 116317
Cu/Ta/SiO_2/Si films, Ta diffusion barrier layer oxid., thermal annealing 69935
GaAs-(Cs,O) vac. interf., electron emiss., longit./transv. energy distrib. 110233
He Rydberg series, oscillator strength spectrum, fast EELS 98077
InAs (110), electron accumulation layers, near-surface region 115322
InP(100) surface, nitridation studied by AES and EELS 92012
La_2O_3/SiO_2/Si struct., RTA, struct., stabil., TEM/EELS obs. 91879
NiFe based spin valve struct., diffusion behavior 81846
PZT thin films, sol-gel prep., surface/interface struct. 116163
Pd epitaxy on Si(111), Pd_2Si island form., anal. UHV TEM 79270
Si nanowires, surface reactivity 80817
Si(100), Si(113) and Si(115) surfaces, alkoxy modified, water adsorpt. 92023
Si(111) surfaces, contamination, carbonization in UHV, SiC islands form. 126339
6H-SiC single crysts., modified Lely growth params., secondary phase inclusions distrib. 79179
c-SiC/Si(111) thin layer UHV growth, C incorporation, AES/LEED/EELS obs. 114306
SiGe epitaxial layers on Si, anodic oxid., enhanced passiv. of oxide/SiGe interface 92049
SiO_2/Si, close planar interfaces, symmetric interf. plasmon mode, EELS 103189
$SrTiO_3$ grain boundaries, Z-contrast STEM imaging 104299
W-coated polysilicon micromachined microengines, failure anal. 104152
ZnO, polycryst., self-assembled laser cavities, opt. props. 93631

electron energy states (condensed matter) *see electronic structure*

electron energy states of amorphous solids *see electronic structure*

electron energy states of liquid metals *see electronic structure*

electron energy states of liquid semiconductors *see electronic structure*

electron field emission
see also field emission displays; field emission electron microscopy; vacuum microelectronics
broad-area vac. gap, field emission sites, aging effect 102880
carbon fibers, field emission cathode materials, prep., appls. 102890
carbonaceous films containing Pd(Ni) nanostructures, electron emission *(English)* 80572
complex diamond cond. ceramic paste film, field emission perform. 86808
conf., diamond/related materials, Hong Kong, China (July 2000) 113231
contact discharge, sub-nanosecond HV pulse source 127151
diamond:B microtip field emitter cathodes, molding proc. prep. 69404
diamond:H, polycryst. CVD films, field emission, surface roughness effect 102894
diamond:N, CVD films, metal-insulator-vac. type electron emission 91536
diamond:N, nanostructured films, plasma CVD, electron field emission 69397
diamond:N electron emitter, sp^2/sp^3 ratio effect on electron emission 115248
diamond:N films, HFCVD modulated growth tech., doping 68272
diamond, CVD film, field & photoemission, microstruct. effect 80564
diamond, CVD films, band gap, field emission 102904
diamond, film, nanocryst., field electron emission, comp. to BN,GaN,CN 115244
diamond, nanostructured, electron field emission 102905
diamond, single cryst., fine column anisotropic etching, field emitter appl. 115246
diamond amorph. films, field electron emission, threshold field 69399
diamond coated W tips, hot filament CVD, field emission 102908
diamond CVD cold cathode with high current dens. and low threshold field 91539
diamond CVD films, field emission, SEM/Raman obs. *(English)* 125952
diamond CVD grains on dot-patterned substrs., electron field emission and surface props. 69419
diamond FEA, SAG, SOI wafer 69436
diamond films, hot filament CVD, struct./elec./opt. props. *(English)* 125989
diamond films, low field-emission, charact. by SPM 80558
diamond nanocryst. CVD thin film cold cathode devices, electron field emission charactn. 69394
diamond particles, microscopic study of field emission 80556

electron field emission continued
diamond triode FEA, anisotropic conductive film bonding 69432
diamond ultrananocrystalline films, low temp. MW PECVD growth for field emission appls. 68260
diamond/pyrocarbon nanocomposites, low-field electron emission 69402
diamond/sp^2-bonded carbon nanostruct., QW field electron emission 80563
DLC CVD field emission cathode, SFM 69403
DLC surface, N-doped, field emission current, scanning probe obs. 80565
dual gate field emitters, misaligned, electron-beam focusing & deflection 91534
dual-gate field emitter, electron beam focusing 69431
FEA, SAG electrode fab. 125967
FEL, field emitter, electron beam induced deposition 125957
ferroelec. cathodes, emission vs. temp. and relevant phys. 80553
field emission cathode with fractal surface struct., elec. field, computer model 105674
field emission devices, F-N rels., model 115252
field emission from C films, struct./deposition effects 102907
field emission props. comparison for diamond/carbon nanotubes 115242
field emitter mag. sens. with steered focused electron beam 69423
field emitters, work fn., current fluct., SK chart anal. 69398
fluct. phenom., stat. models 102901
focusing devices based field emission mag. sens. 109497
fractal surface, electron field emission props. 102902
graphite, field emission cathode materials, prep., appls. 102890
high current field emitter tips/arrays for vac. microelectronics 69427
imaging electron emission from diamond film surfaces, diamond:N/nanostruct. diamond comp. 115243
ion trap mass spectrometer, field emitter, space instrumentation 76805
lighting device, thin film cold cathode electron source, delay characts. anal. *(Chinese)* 102947
MOS electron tunneling cathodes, emission charact., field emitters 115254
multi-wall carbon-nanotube films, CVD-grown, field-emission props., Raman spectr. 125138
multibeam electron lithog., field emission photocathode array 115756
n-type semicond., field electron emission, av. energy 69400
nanocrystalline graphite field emitters, perform. anal. 102912
planar deflection syst. for field emission devices, 3D simul. 69434
poly(phenylcarbyne) films, pulsed UV laser irrad., electron field emission 102917
semicond. field microemitter, hot electron transport, 2D quasi-hydrodynamic approach 69441
single cryst. diamond particles electron field emission props. *(Japanese)* 80555
solid-state field-controlled emitters, electron emission charactn. 69413
solid-state field-controlled emitters, thin-film technol. soln. for indust. cathodes 102910
thin-film field-emission triode, analytic model 102921
thin-film metal hydrides, integrat. into FED 80585
tunnel jn. emitters, fab. method 102911
AlGaAs/GaAs, double barrier RTD, ballistic electron emission, enhanced filtering 70216
AlGaN/GaN emitters, field emission study, UPS, MOVPE 80577
AlN thin films, reactive ion beam coating 68152
AlN:Si heavily doped electron field emitters, phosphor, AFM 80578
BN films on Si substr. with cubic BN grains, field emission 69401
C, amorph. & nanostructured, conf., Boston, USA (Nov/Dec 1999) 67389
C based thin film electron emitters, charact. by scanning anode FEM 91537
C, diamond-like, field emitter array material, press. sens. appl. 102924
a-C field emitters, enhancement factor, charactn. 102900
C film containing carbon nanotubes, PLD, electron field emission props. 68314
a-C film, electron field emission, resist. effect 80566
ta-C films, electron field emission, surface morph. effect 102898
a-C films, kerosene vap. pyrolysis, field emission 80568
C films, low temp. PECVD, emission props. 90379
C films, nanostructured on Si tips, CVD, field emission enhancement effect 102916
C highly ordered monodispersed nanotube arrays, field emission prop. 69384
C, large area MWNT films, field electron emission, vac. gap depend. 80570
C magnetron sputtered thin films, microstruct. and effect on cond. 69560
C nanocluster films, cathodic vac. arc deposition, low threshold field emission 69393
C nanocrystalline CVD films, electron field emission, microstruct. 69388
C, nanostructured, field emission, sp^2 phase role 91540
C, nanostructured film, field electron emission 69411
C nanostructured films deposited by cathodic arc, field emission site densities 69387
C nanotube aligned film, local elec. field enhancement, electron emission 125958
C nanotube array membrane, Al_2O_3 porous template, field emission 69417
C nanotube cathodes, spray deposition, field emission props. 68461
C nanotube emitters, screen printing, field emission characts. 80581
C nanotube field emitter arrays on Si emitters, emission props. 125962
C nanotube films, low temp. thermal CVD, field emission appl. 114485
C nanotube, microwave heating thermal CVD, catalyst effect 68464
C nanotube tip, adsorbed water mols., field-emission, DFT 125960
C nanotube vert. aligned array, growth, field-emission obs. 102893
C nanotube vert. aligned field emitter array, CVD, high-current emission 125968
C nanotubes, CVD growth on Ni catalyst electroplating and field emission 101537
C nanotubes, electron field emission 102905
C nanotubes, electron field emission, phys. model, tunnelling 69426
C nanotubes, electron field emission, review 102903
C nanotubes, electronic devices/luminesc. elements *(French)* 80528
C nanotubes, fab. & field emission, CVD 125953
C nanotubes, field-induced evap. 115240
C nanotubes, patterning technol. using photolithog. for FED appls. 69438
C nanotubes, well-aligned uniform-sized, microwave plasma CVD growth 79468
C nanowires, local arc-discharge synthesis, field emission 69440
C self-organized nanotips, high-dens. ICP CVD and electron field emission characts. 115796
C single-walled and multiwalled nanotubes, field-emission, effects of O_2, Ar, and H_2 gases 115249
C single-walled nanotube, dimens. effects on field emission props. 91538
a-C tetrahedral films, as-deposited and N implanted, electron field emission 125959
C thin film cathodes, field emission lifetime, color phosphor effects 69412
a-C:H films, current-induced conditioning, field emission 80567
a-C:H thin films, field electron emission 102909
a-C:H,N film, electronic struct., field emission 102906
a-C:H,N films, low-temp. annealing effect, field emission 80569

electron field emission continued
a-C:M film, (M=Co,Al,Ti), filtered cathodic arc deposition, field emiss 115245
a-C-Co composite films on glass, heat treated, field emission 69410
C-nanotube-based triode-FED using gated emitter struct. 109912
CN_x large-scale well aligned nanotube films, PECVD, electron field emiss 79273
$CoSi_2$ gate electrode, MOS tunneling cathode 80554
Cu-Li alloy coatings, field emission devices 69415
GaN surfaces roughened by H plasma treatment, field emission 69385
ITO films coated dielec., field effects, electron emission 103205
KrF lasers pumping, rel.-electron-beam sources, graphite-nanofiber field emi 117069
Mo cold cathodes, microfabricated, field emission current cleaning/anneal 69428
Mo focusing FEA, self-aligned photolithography 125964
Mo microtips, field emission on O exposure, dyn. stabil. 69395
Mo tip FEA, resistive layer struct. 69437
Mo wedge emitter fab. using FIB, wet etching 69429
NbN gated field emitter array, fab. 102919
PZT thin film, fatigue model based on thermionic field emission mechani 127222
Pd/Mo field emitter tips, faceting 91535
Pt Spindt-type field emitters, emission characts. in CO gas ambient 69414
Pt/Ir field emitter tips, faceting 91535
Pt/W field emitter tips, faceting 91535
Si FEA, DLC coating, elec. charact. 69408
Si FEA, photon assisted field emission 102920
Si FEA tips, emission uniformity & work fn., ethylene effect 125965
Si, field emitter array material, press. sens. appl. 102924
Si field emitters, carrier transport, num. simul. *(Chinese)* 80571
Si nanoprotrusions, field electron emission 102896
Si, porous, cold cathode, field emission perform rel to anodiz. *(Chinese)* 693
Si, porous silicon cold cathode device, field emission charact. *(Chinese)* 693
p-Si single emitter with real surface, temp. depend. of field-emission charac 80573
Si textured surface prep., etching, field emission, C implant. 69433
Si tip, DLC coating, field emitter array 125966
Si tip array, BST sol-gel ferroelec. coating, electron emission 69396
Si tip array, nanodiamond(AlN) coating, field emission 69407
Si tip arrays, laser prep., electron field emission 80560
Si tipless gated field emitter arrays, LV electron emission 69386
Si:B implanted n$^+$-gated tip arrays, C-doped BN coating 69405
a-Si:H thin films, field electron emission 102909
Si:P high-dens. buried nanopyramid FEA, ion implant. & wet etching 80583
Si/SiO_2 field activated lateral-type polycryst. emitter, LOCOS proc. 69406
Si-C-N films deposited by microwave plasma CVD on Si with buffer layer characts. 114332
SiC, field emitter array material, press. sens. appl. 102924
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mech nism 127222
W point field electron emitters, surface erosion, He ion bombard.-induce 125961
ZnO polycryst. films by ZnSe(S) oxid., electron-emission/CL props. 104905
ZnS-based EL phosphors/devices, structural eval. 93348

electron guns
amplified sq. shaped picosecond pulse generation, RF-gun syst. 105423
arbitrarily shaped cathode electron gun, iter. solns. 72180
ASIC implant charging, photoresist bake, electron flood gun effect 115582
beam forming region and pre-focusing lens, large screen color picture tubes app *(Chinese)* 125979
BNL EBIS high current electron/ion beam dyn. simul. 110198
BRIC charge state breeder EBIS. RIBs 110272
charact. in TW electron LINAC, customs inspection systs. *(Chinese)* 80562
CIBER-X tabletop laser-driven electron & X-ray source 98103
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
CRT display spot size meas. syst., DSP *(Chinese)* 109465
CRT high defn. color display tubes, electron gun design 80575
DC-RF supercond. cavity Pierce gun, design anal. *(Chinese)* 121319
dual gate field emitters, misaligned, electron-beam focusing & deflection 9153
DUV FEL facility, S-band photocathode RF gun, design anal. *(Chinese)* 11024
dyn. colour separation CRT displays, 20 V prototype 109878
EBIS beam form./collection, beam handling equipt. design 110197
EBIS electron string mode operation, expt. design 110275
elec. field, 3D simul. 80576
ELSA inverted polarized electron source, beam stretching expt. 110195
ELV-8 accelerating tube, electron opt. charact. *(Chinese)* 110115
FEA-CRT, high defn. bright monitors, focus characts. 109908
ferroelec. cathode electron gun for high power microwave sources 102914
ferroelec. material cathode, current dens. *(Chinese)* 102913
high power RF sources, develop. of multiple beam guns 110142
high-power microwave generation, using ferroelec. cathode electron gun 10184
IMI-2 electron beam multicharge ion source 72184
intense gyrotron helical electron beams, num. simul. models of forming syst 125971
Japanese advanced accelerator develop., review 110181
JLC, polarized electron gun 110238
low-energy gas discharge electron source, gasdyn. window beam injection 8056
magnetron guns, high-power electron beams generation 115256
magnetron injection guns, mech. tunable, design and gyrotron beam charact 115258
MIS-1 electron-optic syst. design anal. 110200
MIS-I multicharge ion source, electron-optic syst. design 72185
MIT RF gun, low emittance electron beam form. 132282
MIT-Bates polarized source, beam lifetime expt. 110264
monochrome monitor, high-resoln., based on triple-gun principle 97721
Neptune photoinjector commissioning/design, review 110180
online grid-gaps inspection syst. for electron-gun manufacture 80579
orb. pattern, quantitat. imaging, electron momentum spectrom. *(Japanese)* 110420
PLS polarized electron source, photocathode test-stand design/fab. 110265
projection CRT, 16 cm large neck, HDTV display appl. 109903
projection lithog., grid lens, effective emittance 115758
pulsed electron source, at. collisions, expt. design 110266
REXEBIS post ion beam accelerator, design/commissioning 110092
RF gun, 17 GHz, low emittance electron beam form. 110226
secondary emission microwave electron gun simul. *(Chinese)* 115250
single-pass high-gain FEL, electron beam diagnostics 87089
TESLA Compton polarimeter, design anal. 110213

tron guns continued
thermionic RF gun, beam-loading compensation by feedforward control syst. 125972
Tokyo-EBIT, highly charged ion beams, expt. anal. 110273
velvet cathodes, lifetimes, I-V charact. 80559
XEBIST ion beam focusing, rel. electron beam pinch effects 110274
C nanotube-based electron gun for electron microscopy 102892
CsI-coated C fiber cathodes, lifetimes, I-V charact. 80559
Cs_2Te photocathode test, polarized RF-gun feasibil. 110239
Xe plasma electron flood gun for GSD-200E^2 high current implanter 115581

tron-hole plasma *see solid-state plasma*

tron-hole recombination
see also carrier mobility; surface recombination
1.55 μm SOA Auger recomb. heating/hot phonon effects 71798
1D insulation, charge carrier transport/trapping, thermal stimulation 81723
amine-functionalized crosslinked hybrids, full-color phosphors, sol-gel derivation 104938
asymmetrical funnel-shape QW lasers, intraband transits. 71831
bipolar transistors, generation-recomb. noise, deep-level impurities 81220
bulk-barrier diodes, DC elec. behavior model 103755
copper phthalocyanine based OLEDs, emission props. *(Korean)* 82397
diamond:B films, heavily doped, microwave cond., photocond. 125997
diamond, polycryst. CVD films, injection depend. long carrier lifetimes 80642
diamond CVD films, gap states, thickness depend. dens. distrib. 80659
diamond radiation detectors, charge transport props. 132305
4,4′-bis(2,2′-diphenyl vinyl)-1,1′-biphenyl multilayer blue OLEDs, ns EL spikes 105022
disordered organic LEDs, charge carrier transport/recomb. 105014
dual-color injection laser based on intra-/inter-band transits. in QWs/QDs 117264
heterostruct. organic LEDs, transient/steady-state behavior 128020
8-hydroxyquinoline lanthanum LB film based double-layer EL devices 104990
III-nitrides, MBE growth and device appls. 90272
LD, self-pulsing simple conditions, dimensionless rate eqns. 105333
light-induced metastable defects, photocarrier lifetime, annealing 127902
MEH-PPV/organo-clay nanocomposite LED, enhanced quantum efficiency 127959
MOS field-induced pn jns., space charge region, recomb. current meas. 80945
MOS tunneling diode, carrier lifetime meas. from EL temporal response 126627
MOSFET, radiation induced pos. charge, bias annealing *(Chinese)* 81332
MQW solar cells simul. 112957
OLED, electrophosphorescent, doped mol. organic thin film 117007
OLED, mol. doped polymer, injection controlled EL 105006
OLED, mol. doped polymer, injection controlled EL 105007
OLED, transport & recomb. simul. 117014
organic bilayer devices, carrier recomb. in high field, interface barriers effect *(Chinese)* 116972
organic LED carrier behavior anal. on hopping cond. basis, computer simul. *(Japanese)* 82404
organic solids, EL, charge recomb. mechanisms 71583
organic thin solid films for LEDs, photophysical studies 104906
p-n jns., carrier generation/recomb., current noise 126118
partially depleted SOI MOSFETs, generation/recomb. effects 103736
photo-controlled surface neg. impedance transistor, cct. model *(Chinese)* 93357
phthalocyanine EL device, NO_2 gas adsorpt. *(Japanese)* 116967
poly(3-hexylthiophene)-C_{60}-C nanotube nanocomposites, elec., opt. props. 115357
polydiacetylene-based LEDs, bipolar charge transport, mesoscopic model 71618
porphyrin derivative LB film based LED, elec. field redistribution, EL/TOF study 127990
power DMOSFET, thermal behaviour, 2D computer simul. 92327
power IGBT, thermal behaviour, 2D computer simul. 92327
PPV-based ionically SAM, excited state dyn., photolum. props. 116922
reach-through APD, drift-diffusion model 127942
SOI NMOSFET, interface traps, forward gated-diode monitoring *(English)* 126803
solar PV systs., limiting monochromatic light conversion efficiency 113006
solid state microdosimetry, radiotherapy appls., review 133140
thermolum., first-order kinetics model 116937
third-order opt. nonlin. based ultrahigh dens. opt. recording 92975
VCSEL, comprehensive num. model, method of lines 82639
AlGaAs ideal QW solar cells, theoretical model, conversion efficiencies 112858
AlGaAs/GaAs heterojunction phototransistors, emitter shoulder struct., opt. gain 82351
AlGaAs-GaAs HBTs, long-term reliab., base current study 70044
$Al_{0.09}Ga_{0.91}N$, MOCVD, recomb. mechanisms, UV detectors response 103021
AlGaN/GaN heterojn. band offsets, photolum. and modulation spectra obs. 91764
AlGaN/GaN:In,Si MQW, In-Si-codoping, MOCVD, PL 91990
AlN, luminesc. spectrum, high elec. fields 91667
AlN:O ceramics, radiation induced recomb. procs. 127921
Al_2O_3:C, irrad. temp. effect on TL sensitivity 133087
Au/SiO_2/amorph. Si/SiO_2 superlattice/p-Si LEDs, electroluminesc. 71585
$Bi_{12}SiO_{20}$ sillenite cryst. photorefr. gratings 92933
CaF_2:Cu, TLD, energy conversion efficiency, theoretical limit model 127914
CdMnTe/CdMgTe QW quantum Hall syst., photolum. spectra, Mn conc. depend. in high mag. fields 80834
CdMnTe/ZnTe MQW, ultrafast mag. polaron dyn., opt. pump-probe spectra 80832
CdS/$CuIn_{1-x}Ga_xSe_2$-based solar cells, DLTS 112854
CdS-CdTe solar cells, 1-D device nonideal behavior modeling 100117
CdS-CdTe solar cells, stress-induced degrad. anal. 100116
CdTe thin-film solar cells, ZnTe:N_2 back contact insertion 100178
CdTe/CdS solar cells, electrodeposited, heterojunction props. 134387
CdTe-CdS solar cells, temp./illum. depend. jn. transport 100121
CdTe-CdS thin-film solar cells, time-resolved PL studies 100113
Cu(In,Ga)Se_2 solar cells, $Zn_{1-x}Mg_xO$ window layer expts. 100174
Cu(In,Ga)Se_2 solar cells, defect mechanisms photocapacitance anal. 100183
Eu complex-based LED, EL relax. behaviour anal. 128004
p-GaAs base of HBT, nonthermal electrons, femtosecond energy relax. 81216
GaAs, nonradiative recomb., EL2 defect, elec. studies 80689
GaAs p-n jn. solar cell, gamma irrad., elec. characts. 134409
GaAs:Be, electron-hole recomb., two-color pump-probe obs. 126036
GaAs/AlGaAs asymm. coupled QWs, carrier transfer by interband photoexcitation 80829
GaAs/InGaAs multi-QW solar cells, dark currents characts. improvement 112951
GaAs/InGaAs/AlGaAs δ-doped heterostruct., EL from forward-biased Schottky diode 82316

electron-hole recombination continued
GaAs-AlGaAs QHE, edge states electron-hole-pair recomb. suppression, time-resolved FIR photocond. 80793
GaAsN/GaAs QW, effective mass and carrier recomb., opt. detect. of cyclotron reson. 69688
GaAsSbN/GaAs QWs, MBE growth, 1.3-1.55 μm emission appl. 101259
GaInN/GaN MQWs, varying In comp., temp. depend. carrier dyn., PL 80866
GaN, air bridged lateral epitaxial growth, recomb. dyn. 80872
GaN based HBT, band offsets, current transport, 1/f noise 81239
GaN, below gap states excitation, two wavelength excited PL 80867
GaN epilayers, nonradiative recomb. proc., transient grating method 80718
n-GaN films, deep levels/PPC studies, MOCVD 127909
GaN, luminesc. spectrum, high elec. fields 91667
GaN strain-free homoepitaxial layers, donor-bound excitons, magneto-spectrosc./luminesc. 80720
GaN:In films, carrier dyn., MOVPE, time resolved PL 80726
GaN:Mg (si) films, pure and doped, near band edge recomb., PL 80723
GaN:Mg, acceptor related recomb. centers, inhomog. spatial distrib., CL 81043
GaN:P films, electronic struct., PL 80727
GaN:Si epilayers, MOCVD, threading disloc., nonradiative nature, PL 80717
GaN/AlGaN MQW, below gap states excitation, two wavelength excited PL 80867
GaN/AlGaN semicond. QW, mesoscopic capacitor effect, piezoelec. field screening 80874
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
GaN-based LEDs, spectrally resolved electrolum. microscopy and μ-electrolum. investig. 104995
p-HgCdTe, diffusion length meas. using laser beam induced current 91672
HgCdTe n-on-p-type structs., RIE induced p-to-n conversion, contactless jn. contrast 93370
HgCdTe, passivated, interface traps from transient photoconductive decay meas. 71509
HgCdTe:As layers, MBE grown, defects, TEM anal. 91988
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
HgCdTe-based n^+-p photodiodes, charge transport 116940
ITO/MEH-PPV/Alq_3/Al monolayer/bilayer LEDs, transient electroluminesc. 71596
ITO/poly-DOTT/Al Schottky-type jns., slow transient photoresponse anal. 69705
(In,Ga)N/GaN/(Al,Ga)N laser struct., opt. gain and saturation 117240
InAs, Shockley-Read-Hall recomb. rates, full-band-struct. calc. 91635
InAs-GaInSb type-II high power high efficiency interband cascade QW lasers 93674
InGaAs/GaAs self-organized QD lasers, temp.-depend. Auger recomb. coeffs. 91807
InGaAsN QW, solid source MBE growth, charactn. and laser appls. 101258
InGaAsP MQW LD with InP:Fe lateral current blocking layers, heterobarrier leakage 93668
$In_{1-x}Ga_xAs_yP_{1-y}$ MQW heterostruct. lasers, opt. and structural props. 93624
InGaAsP/InP LD, modulation response, amplified luminesc. 117180
InGaAsP/InP QW lasers, threshold charact. 117177
InGaN/GaN DH, localized states, photoreflectance, PL, CL 91761
InGaN/GaN LDs, self-consistent simul. & anal. 105347
InGaN/GaN MQW LEDs, temp. depend. of radiative recomb. zone 82390
InGaN/GaN MQW, air bridged lateral epitaxial growth, recomb. dyn. 80872
InGaN/GaN MQW, below gap states excitation, two wavelength excited PL 80867
InGaN/GaN MQW struct., time resolved PL, MOCVD 80876
InGaN/GaN QW, indium segreg., PL, stimulated emission, phase separation 80875
InGaN/SiC MQWs, carrier lifetime, PL energy shift, QCSE, free carrier screening 80863
InGaN-based LED, temp. depend. of elec.-field induced photolum. 71586
p-InGaP solar cells, electron radiation induced defects recovery 112923
InGaP/GaAs HBT current gain charactn., heavily doped base effects anal. 115868
InGaP-GaAs HBTs under temp./current stress, charactn. 70042
InN, luminesc. spectrum, high elec. fields 91667
InP QD by GSMBE on GaP, radiative recomb. 69692
InP/InGaAs DHBT, microwave noise and small-sig. params. scaling 103777
InP/InGaAs HBTs, elec. props./transport mechanisms, 4.2-300 K 103768
InP-based multi-QW solar cells, proton irrad., EBIC, cathodolum. 112959
InSb, Auger recomb. coeff., IR-FIR dyn. plasma reflectivity 115305
$KMgF_3:Ce^{3+}$, TLD, energy conversion efficiency, theoretical limit model 127914
$LuAlO_3$:Ce, electron traps and scintillation mechanism 127924
MgO-coated nanocrystalline SnO_2, dye-sensitized solar cell, enhanced efficiency 112856
Pt porphyrin-based conjug. dendrimer LED, electrophosphorescence control 128010
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
Si epitaxial layer, lifetime charactn. by SPV meas. 102992
poly-Si fine-grained p-n jn. solar cells, carrier collection 100065
Si, gated-diode recomb.-generation current tool for characterizing bulk traps of SOI devices 91898
Si high-quality low-temp. epitaxial films, high deposition rate and props. charactn. 79416
Si, microcryst., influence of electron irrad. on electronic props. 82312
Si n^+-p jn. diodes, laser annealed, trap-assisted tunneling near 77 K 92283
Si p-n jns., electrolum., avalanche breakdown condition 103111
Si, photoconductance, carrier lifetime, injection levels 102983
a-Si pn jns., tunnelling generation-recomb. currents 91759
Si solar cell p-n-jn. form., radiation defect prod. effect 112862
p-Si:B, microcryst., recomb. at interface states, current-illuminance charact. 93322
Si:B,O CZ solar cells, I-V characts., light-induced recomb. centres 113005
p-Si:Fe,B, Fe-B pairs, acceptor level, capture cross sects. 69498
a-Si:H, femtosecond transm., exponential band tail pumping 91692
a-Si:H solar cells, limiting carrier effect 89277
a-Si:H/c-Si heterojunction solar cells, emitter/interface optim. 112898
$Si/Si_{1-c}Ge_c$ gradient mixed cryst. solar cell struct., photogenerated current response *(Chinese)* 89274
Si/SiGe/Si DHBT, neg. resist. characts., high power appls. *(Chinese)* 115867
$(Si/SiO_2)_n$ multilayers and microcavities, LED appls. 93431
p-Si/n^+-ZnO/n-ZnO/Pd diode struct., forward current suppression by light 70013
Si-CoSi shallow n^+-p jn. diodes, elec. characts., silicide layer thickness effects 115361
SiC MOSFETs, 4H/6H, interface traps, light emission obs. 70097
SiC layers on porous SiC, epitaxial/bulk growth, defect dens. reduction 125125

electron-hole recombination continued
6H-SiC p-n jn., neutron irrad., elec. charact. *(Chinese)* 91730
p+/n/n+ SiC:B struct., EL, opt. emission microscopy 69639
3C-SiC:B/α-SiC(0001), MBE growth, PL, D_I centre lines, AFM 68184
a-SiC:H, femtosecond transm., exponential band tail pumping 91692
SiC:H,B, 4H, H_2 presence, SIMS, low temp. PL spectra 69583
4H-SiC:P,C(Si), co-implant., n-type doping 103278
SiGe HBTs, differentially grown structs., optimized low-freq. noise, lateral base design 81219
a-SiGe:H, femtosecond transm., exponential band tail pumping 91692
n-SnO_2/Al_2O_3/Ru-dye/p-CuI PV cells, electron-hole recomb. 123804
SrS:Cu,Ag ACTFEL display device, electron transport and luminance 121096
TiO_2 PV devices, dye sensitised, charge recomb. and transport 100208
$Ti_{1-x}V_xO_2$ graded bandgap film electrode, photoelectrochem. 103052
VDMOSFET HI sensitivity, pre-neutron irrad. effects 81295
organic films/CdSSe interfaces, photoelectrical props. 69631
electron holography
in-line holograms, tomographic reconstruction 93875
multiple and single scatt. 93874
multiple in-line holograms, tomographic reconstruction 93876
nanostructure fab., electron beam lithog./holography, material wave nanotechnology 103702
thin films, nm-level fine struct. anal. methods *(Japanese)* 116006
electron interferometry *see particle interferometry*
electron lenses
see also aberrations; electron microscopes; electron optics; electrostatic lenses; magnetic lenses
combined EM focusing systs., differential alg. method for aberrations calc. 93975
combined immersion mag.-electrostatic lens systs., curvilinear-axis focusing 117625
CRT high defn. color display tubes, electron gun design 80575
high energy dens. electron/positron beams, plasma focusing expt. 110138
immersion mag. lenses in projection electron beam lithog., optim. 93987
IREB, corkscrew oscill. confine. by alternate solenoid field *(Chinese)* 110114
large screen color picture tubes, beam forming region/pre-focusing lens of electron gun *(Chinese)* 125979
mag. immersed lens, wide beam, curved axes aberration *(Chinese)* 105682
projection lithog., grid lens, effective emittance 115758
electron lifetime (metals) *see electron relaxation time*
electron lifetime (semiconductors) *see carrier lifetime*
electron lithography *see electron beam lithography*
electron mean free path
2D lateral superlattices, magnetotransport, smooth disorder 91815
Cu films/damascene fine lines, resist., ULSI appl. 126501
Cu line resist., linewidth depend. 115701
NiFe/InGaAs/InAlAs four-terminal struct., ballistic spin transport 126214
electron microprobe analysis *see electron probe analysis*
electron microscopes
see also electron microscopy; scanning electron microscopes; scanning-transmission electron microscopes; transmission electron microscopes
miniaturized objective lens fab. for photoelectron emission microscope 71372
electron microscopy
see also atomic force microscopy; electron microscopes; field emission electron microscopy; magnetic force microscopy; metallography; scanning electron microscopy; scanning-transmission electron microscopy; scanning tunnelling microscopy; specimen preparation; transmission electron microscopy
3D image reconstruction, translational alignment method 73268
conf., Radiation imaging detectors, Freiburg, Germany (Jul. 2000) 89569
FIB techs. for IC failure anal. appls. 70289
holography, multiple and single scatt. 93874
hybrid pixel detectors for electron microscopy 97426
Iber Braun hens, excimer laser keratectomy, postoperative corneal haze meas. 76393
in-line holograms, tomographic reconstruction 93875
lymphocytes, cancer detect., fractal dimens. anal., electron microscope images 132522
metals, laser ablation thresholds with short laser pulses 93921
microangiopathy, capillary image segmentation exploiting weak shape constraints 87315
multiple in-line holograms, tomographic reconstruction 93876
pentacene thin films, growth dyn., real-time imaging 101434
PLS photoemission electron microscopy beamline 121830
retinal damage, red diode laser exposure 98816
scatt. cross sects. in electron microscopy/anal. 115279
secondary-electron detector efficiency, line-width meas. accuracy 72182
semicond. growth, in situ electron microscopy, dyn. studies 124808
wafer profile electron microscopy, neural network reconstruction 115280
$Al_{0.3}Ga_{0.7}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
AlN, barriers in spin-depend. tunnel jns., HREM obs. 80681
AlN films, PLD, pulse duration/gas press. effects 79354
AlN films, RF-MBE, RF-MEE on SiC, structural anal. 90302
AlON, barriers in spin-depend. tunnel jns., HREM obs. 80681
$Ba_{(1-x)}Pb_xTiO_3$, hydrothermal synthesis 68414
$BaScFe_{12}O_{19}$ Sc-substituted thick films for planar integrated phase shifters 91307
C nanotubes, field-induced evap. 115240
CdTe, VPE growth in temp. gradient thermal field 68185
Co nanoparticle films depos. on a-Al_2O_3, growth/morphology 124856
Fe-V-O thin films for electrochromic smart windows, anal. electron microscopy 71415
FeTaN film, mag. recording head, sputter deposition 116310
GaAs pyramidal microstruct. on pre-patterned GaAs(001), growth optimisation 90277
GaAs:N CBE incorporation using 1,1-dimethylhydrazine 101295
GaN MBE growth on 6H-SiC(0001), low energy electron microscopy obs. 101294
GaN high-quality UHV-CVD growth on Si(111) substr. 79279
$Gd_{0.23}Si_{0.14}O_{0.63}$ gate dielec. films, thermal stabil. and diffusion anal. 127254
Ge/Si superlattices, MBE grown on Si, struct., opt. props. 124831
$In_{0.15}Ga_{0.85}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
$La_{0.5}Sr_{0.5}CoO_3$ thin films, chem. soln. deposition, crystn. 114395
Mo/Si multilayers, stress reduction, EUV lithog. appls. 127879
Si CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
Si films, low temp. PECVD deposition, biasing/substr. struct. effects 80662
Si pn devices, PEEM, doping-induced contrast, photon energy depend. 69630
Si:P,H nanocryst. films, cond. props., heterojunction diodes *(Chinese)* 91575
Si/Ti syst., silicide form. reacts., photoemission electron microscopy 115438
electron microscopy continued
Si(001)-(2×1) step-free surfaces, enhanced terrace stabil., modelling and L obs. 126418
4H-SiC, opt. props., surface and pore morph. 103324
SiO_2-coated CdS nanoparticles, photodegradation in silica gels 126398
SnO_2 films, microstruct., phys. props. 115327
$SrBi_2Ta_2O_9$ film, ferroelec., stacking faults, HREM 104273
$YBa_2Cu_3O_{7-\delta}$:Zn HTSC, T_c, flux pinning, CuO_2 site doping 70667
electron mirrors *see electron optics; mirrors*
electron mobility
bilayer organic LEDs, EL analytic model 93430
computational band-struct. engng. of III-V semicond. alloys 91625
double-gate SOI inversion layers, Monte Carlo simul., vol. inversion 6974
double-gate SOI MOSFETs, Hall effect meas. 126762
electroactive polyimide, dielec. relax. spectrosc., permitt., impedance 1251
FET high-temp. high-power technol. 103908
flash EEPROM, p-channel/n-channel, reliab. comparison 79895
gate dielec. electron wave fn. penetration/interface scatt., simul. 126235
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance chara 126215
LDPE, transient surface pot., scanning electron microscope meas. of mobi 127244
MOS diodes/capacitors, electron/hole tunneling current discrim. 81423
MOSFET, diffusion-drift transport, channel length depend. at cryogenic ter 70101
OLED, transient EL 104986
organic EL device, minority carrier mobility effects 97664
organic LED, voltage reduction 71606
organic LED carrier behavior anal. on hopping cond. basis, computer sim *(Japanese)* 82404
organic semiconds., high carrier mobility, electronic device appls. 69621
oxynitride MOSFETs, Coulomb scatt. limited electron mobility 81267
polyfluorene derivative polymer LEDs, barriers to electron extraction 1049
polyimides, triphenylamine-containing, photocond. 91709
polysilicon TFTs, laser annealed and metal-induced crystal., expt. study 70
power UMOSFETs, LV, trench geom./proc. impact on perform./reliab. 813
PPV-based LED, charge transport props. 117016
UMOSFET, charact., reliab., geom./proc. effects 81281
(Al,Ga)As high mobility electron heterostruct. wafer fused on $LiNbO_3$ 103
AlGaAs/GaAs heterostruct., layer-compensated selectively dop nanolithography appl. 91733
AlGaAs/InGaAs/GaAs SQW, modulation doped, electron dens., mobility 80
N-AlGaAs/InGaAs/GaAs pseudomorphic QW based sub-0.25 μm gate HE 81370
AlGaAs-GaAs DHBTs with composite collector for power amps. 103772
AlGaAs-GaAs HEMT, 2DEG transport props., quantitat. mobility spectrum a 92409
AlGaAs-GaAs QW 2DEG channels, dissipation, flucts./ultrafast procs. 918
AlGaAs-GaAs-AlGaAs MODFET channel cond. with high doping levels 92
$Al_xGa_{1-x}N$ thin film, GSMBE growth, Si(111) substr. 101207
AlGaN:Si/GaN:In heterostruct., In doping enhanced 2DEG, XRD 81048
AlGaN/GaN HEMT, ammonia MBE on 4H-SiC 68199
AlGaN/GaN HEMT perform. rel. to MOCVD growth termination conditi 70173
AlGaN/GaN HFET, electron transport props., electron dens., polaris. eff 81385
AlGaN/GaN HFET, fab., GSMBE, ECR plasma 81386
AlGaN/GaN epitaxial films on Si(111), AlN buffer layer growth effect 682
AlGaN/GaN heterostruct. growth, NH_3 flow effect, reactor press., 2DEG tra port props. 90449
AlGaN/GaN single/double HFETs, 2DEG transport props. 70198
$Al_xGa_{1-x}N$/GaN modulation-doped heterostruct., subband electron props. 917
AlGaN-GaN MODFET, 2DEG transport props., quantitat. mobility spectr anal. 92409
Alq_3 amorph. films, nondispersive electron transport 126089
Au/Pd/p-GaN, interfacial react., surface treatment effect, ohmic contact 811
$Bi_{12}SiO_{20}$, photorefr. response kinetics 71933
CdS single nanocrystal on SAM, room temp. electron transport 103038
p-CdTe crysts., shallow jn. form. by In diffusion, excimer laser annealing, γ- detector appl. 115309
CdZnTe pixel detectors, num. modelling of charge-sharing 121484
n-$CuInSe_2$ elec. characts., impurity band cond. effects anal. 126093
GaAs digital circuitry, Schottky Barrier diode and MESFET ICs, appls. *(Itali* 79647
n-GaAs, proton irrad. defects, fast relax. 103037
GaAs/$Al_xGa_{1-x}As$ asymmetric one-/two-sided QW, electron mobility 69702
GaAs/AlAs QW, electron mobility anisotropy, electron gas 126169
GaAs/AlGaAs heterostruct., back-gated undoped, electron transport chara 91736
GaAs-AlGaAs MBE, As-free high-temp. surface cleaning, two-step-heating s 92003
$GaAs_{0.5}Sb_{0.5}$ layers, MBE growth on (111)B InP, elec./opt. charactn. 114273
GaInAs/GaNAs short-period superlattices gas-source MBE growth and charac 101256
GaN MOCVD epitaxial films, growth, effect of dil. ammonia flow rate 7929
GaN, degenerate QW, polar-opt. phonon-limited transport 91816
GaN epilayers, RF MBE growth, threading disloc. reduction, AlN multiple laye 90297
GaN epitaxial layers, plasma assisted MBE, electron mobility optimisati 90298
GaN film growth, elec./optical/struct. props., AlN interlayers, TEM 124889
GaN film, hydride VPE grown, carrier dyn., PL 124988
GaN films, Ga-polarity, XRD, PL, Hall effect, RF-MBE growth 91621
GaN free-standing high quality templates, Hall mobility, carrier conc. 80713
GaN layers, ammonia MBE on 4H-SiC 68199
GaN optoelectronic devices, defect dens. reduction 91675
GaN selective area growth, MOVPE, PL spectra, impurity incorporation 793
GaN, transient electron vel. overshoot, time-resolved electroabsorption 1030
GaN/AlGaN/AlN, NH_3-MBE growth, HFET, 2DEG, sputter deposition 9030
GaN/AlN epilayers, ammonia gas source MBE growth/charactn., sapphire su str., excitons 90305
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion dar age 124863
GaN-based materials OMVPE growth, single step nucleation proc. 90440
HfO_2 gate insulator, high permitt., chem. vap. deposition 114356
HfO_2 ultra thin CVD MOSFET gate dielec., dual polysilicon gate electrod reliab. 126779
n-$Hg_{0.80}Mg_{0.20}Te$/CdTe MBE films, interface accumulation layer, cond. *(Chines* 115323

ron mobility continued
TO films, RF sputtering prep., struct./elec. props. 90239
N-InAlAs/InGaAs/InAlAs metamorphic heterostruct. based sub-0.25 μm gate HEMT 81370
nAlAs-InGaAs-InAlAs-InP QW 2DEG channels, dissipation, flucts./ultrafast procs. 91849
nAs/Permalloy interface, spin injection & detect. 80904
nGaAs/AlGaAs HEMT struct., PL 92385
nGaAs/AlInAs HEMT, MBE on oxide-bonded InGaAs, characts. 126897
nGaAs/InAlAs, metamorphic HEMT on GaAs, MBE, characts. 92386
nGaAs/InAlAs modulation doped heterostruct., strain relax. layer 115365
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunction, magnetotransport 91732
$In_{0.7}Ga_{0.3}As/In_{0.52}Al_{0.48}As$ pseudomorphic QW-HEMT struct., MBE growth 103898
$In_{0.74}Ga_{0.26}As/In_{0.52}Al_{0.48}As$ QW HEMT, MBE, optimized channel thickness 103909
$In_{0.75}Ga_{0.25}As/In_{0.75}Al_{0.25}As$, gate-controlled 2DEG, large spontaneous spin splitting 69655
nGaAs-InAlAs HEMT, MBE growth, electron dens. and surface pot. 103896
nGaP(As) layers/MQW structs., solid source MBE growth, laser appls. 124867
nP bulk high field carrier transport, Monte Carlo modeling 103022
nP surface damage, methane-H_2 RIE-induced 92094
nP:Fe, VGF growth, nuc. radiation detector appl. charactn. 97991
nP-InGaAs-InP QW 2DEG channels, dissipation, flucts./ultrafast procs. 91849
nSb films, MBE high-quality growth on Si(111), charactn. 68175
nSb films, MBE on GaAs, magneto-resist. effect 101270
nSb surface magnetoplasma waves, mag. field effect on excitation efficiency 80675
Si MOSFET, dil. 2D electron syst., parallel mag. field, Hall coeff. 70084
strained-Si n-MOSFETs, fab. on SGOI substrs., electron mobility enhance. 81339
Si, non-parab. band hydrodynamical model, electron device simul. 91578
Si strained layer NMOSFETs for CMOS technol., high perform. 126772
Si:B RT LED, ULSI compatability 71611
Si:B n-channel trench UMOSFETs, channel B-doping 81312
a-Si:H, TFT technol. for polyimide substrs. 103826
a-Si:H films on SiO_2 passivated steel substrs., crystn., polysilicon TFT 103237
Si:H nanocryst. TFT, catalytic CVD, stabil. 126821
a-Si:H photodiode, laminar-flow photo-CVD, light soaking 116957
a-Si:H solar cells, low temp. PECVD 100036
μc-Si:H thin film, VHF PECVD growth, struct. and transport props., SET appls. 80633
Si/Ge Si Qw MODFET, low energy PECVD, struct./elec. charactn., TEM 124890
$Si/Si_{1-x}Ge_x$ deep submicron MOSFET, stepped doping profile 103870
Si/SiO_2/steel foil TFT, direct thermal oxid. 70149
$Si-Si_{1-x}Ge_x$ heterostruct., spectral & voltage charact., LPE 80786
Si-on-SiGe-on-insulator, strained Si, by wafer bonding, MOSFET carrier mobility enhancement 126236
SiC, 6H, electron transport, Monte Carlo simul. *(Chinese)* 115349
SiC, 6H, inversion layers, Coulomb scatt. *(Chinese)* 69760
4H-SiC MOSFET inversion layer, interface states 103869
SiC MOSFETs, 4H/6H, interface traps, light emission obs. 70097
4H-SiC epilayers, hot-wall CVD, doping/trap conc. reduction 124931
2H-SiC vert. MESFET struct., Monte Carlo simul. 92395
n-SiC:N, 4H polytype, elec. transport props. 91726
4H-SiC:N CVD films, cond. electrons, intrinsic mobility, valley-orbit splitting 69597
SiGe HBTs for BiCMOS technol., stabil., reliab., material params. 81210
SiGe heterostruct. nanowire, elec. transport props. 80858
SiGe strained vert. MOSFET, hole and electron mobility 103874
$Si_{1-x-y}Ge_xC_y$ crysts., phys. props., device appl., C doping effects 69827
$Si_{1-x-y}Ge_xC_y/Si$ heterostructs., band offsets and electron transport calc. 115362
SiO_2 films, electron injection stressed, trapped charges nonuniform distrib. 92675
Ta_2O_5 gate oxide MOSFET, electron mobility, interface trapped charge dens. 126784
TiO_2 gate insulator, high permitt., chem. vap. deposition 114356
TiO_2, porous, transient dark/photocurrents, neg. capacitance effect 91683
Y_2O_3 dielec. in Al-gated MOSFET, effective electron mobility 81285
n-ZnTe:Al layers, MBE growth, struct./elec./opt. props. 90317
ZrO_2 gate insulator, high permitt., chem. vap. deposition 114356

ctron multiplier detectors
COMPASS expt., gas electron multiplier detectors 132388
conf., imaging, Stockholm, Sweden (June 2000) 124186
gas electron multiplier, develop. and appl. 132335
gas electron multiplier detector anal. in high intens. particle beams 132300
gas electron multiplier high-press. operation aiming at thermal neutron detect. 132392
gas electron multiplier operating range for portal imaging 133022
gas electron multiplier readout TPC for TESLA 110361
gas-filled detector develop. at ESRF synchrotron source 132333
gaseous radiation detectors, gas anal. syst., review 76042
GEM+MSGC detector module perform. under high intens. test π beam 132319
GEM optimisation, high rate appls., review 76033
GEM single-electron transfer efficiency, review 76032
He-isobutane gas mixtures, electron life time, drift vel. 76039
HERA-B inner tracker, GEM microstrip gas chambers, review 76133
HERA-B inner tracking syst. 110325
laser microfabricated detector design review 132349
micro strip gas chambers, performance review 87237
micropattern gaseous detectors study and optim. for high-rate appls. 132389
MSGC+GEM detectors, large scale test in high intens. hadron beam 76046
photon-counting digital radiography using high-press. Xe filled detectors 132812
portal imaging detector for advanced radiation therapy 133035
scanned projection radiography, gas electron multiplier detector 76514
scanning X-ray microscope, lab. scale, noise limited resoln. 76167
sealed gas UV-photon detector with multi-gas electron multiplier 121582
sealed gas UV-photon detector with multi-GEM multiplier 110341
sealed microstrip gas chambers operation at ILL 132390
single electron detect. by internal photocathodes 87192
soft X-ray microscopy, SR & laser plasma source, PMT detector 76166
space point resoln. for TPC tracker 110360
triple GEM detector with two-dimens. readout for LHCb expt. 132347
X-ray polarimeter for astron. appl. 121813
Ar-Xe, gas mixture, IR scintillation, electron multiplication near thin wire 76037

electron optics
see also beta-ray spectrometers; electron beam focusing; electron beams; electron holography; electrostatic lenses; ion optics; magnetic lenses; particle optics
aberration-corrected STEM, autotuning software 102950
accelerator beam-based modeling/control, particle optics 87081
applied electron optics conf., Moscow, Russia, Oct. 1999 67396
arbitrarily shaped cathode electron gun, iter. solns. 72180
color picture tubes, influence of geomag. field on perform. *(Chinese)* 125978
combined EM focusing systs., differential alg. method for aberrations calc. 93975
cooling systs., intense beam space charge effects 72187
electron-beam form., mag. field 3D distrib. effect 72186
electron-beam mirror projector, light valve modulator 97741
electrostatic quadrupole lens systs., fifth-order aperture aberration 72193
electrostatic tube lens, electron transport, insulator charging effect 93973
ELV-8 accelerating tube, electron opt. charact. *(Chinese)* 110115
gyroresonance devices, helical electron beam form. 72207
Hefei Light Source, electron optics params. meas. 121345
helical TWT beam/cct. interact. model, 3D time-depend., PIC code 91564
helix TWT, Brillouin-flow periodic PM focusing, BWO anal. 91565
high-power beam-plasma microwave devices, electron-opt. systs. 69462
high-power electron-beam valves 72208
IMI-2 electron beam multicharge ion source 72184
large orbit gyrotron with PM syst., design 91552
large screen color picture tubes, beam forming region/pre-focusing lens of electron gun *(Chinese)* 125979
lin. beam optics in solenoidal channels 110166
LINAC, electron beam field shaping, therapeutic misadministration 76654
long focus electrostatic objective, electron-opt. props. 72181
low emittance flat-beam electron source for lin. colliders 97935
low-energy ion/electron vel. map imaging, magnifying lens 93976
mag. immersed lens, wide beam, curved axes aberration *(Chinese)* 105682
microcolumn, lateral pn-jn. electron detector 121620
MIS-1 electron-optic syst. design anal. 110200
MIS-I multicharge ion source, electron-optic syst. design 72185
NLC, gamma-gamma interact. region design 110208
O-type microwave vac. tubes with LV control, beam perturb. reduction 91563
peniotron generator in PM focusing syst. 102937
planar deflection syst. for field emission devices, 3D simul. 69434
plane electron beams, geometrized theory 93980
relativistic gyrotron operating at high cyclotron harmonics 102930
SCALPEL Coulomb image deform. projection systs. 72183
secondary-electron detector efficiency, line-width meas. accuracy 72182
shadow-mask CRTs, life charact., anti-doming-material-coating 91568
solid-state field-controlled emitters, electron emission charactn. 69413
super size image intensifiers develop. 80625
TWT with vel. taper, spent beam vel. distrib. charact. 69457

electron paramagnetic resonance *see paramagnetic resonance*

electron probe analysis
high-brightness stepped-cryst. diffractor for X-ray microanal. 87287
mag. storage technol., applied surface anal., review 104526
nonuniform X-ray image sampling on electron probe *(Chinese)* 132496
$Ag_{2+\delta}Se$, microwave synthesized, magnetoresist. 69604
Al_2O_3, nanoporous anodic layer, Ni deposition, substr. fab. 68450
$(Bi_2Te_3)(Sb_2Te_3)(Bi_2Se_3)(Bi_2Te_3)$, thermoelec. pn jn. 91757
CdTe electrodeposited film struct. and comp., deposition pot. depend. anal. 125043
$CuInSe_2$ solar cells using horiz. Bridgman growth method 100176
$Cu_xNi_{1-x-y}Co_{2y}Mn_{2-y}O_4$ spinel-based ceramics, technol. modif. 114445
$Ga_{1-x}Mn_xN$ single cryst., powder growth method., struct./mag. props. 124802
Ge-Sb-Te films, magnetron sputtering, charactn., opt. data storage material 101195
ITO films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
$LiNbO_3$:Er cryst. fiber, growth & charactn., PL 116548
$LiNbO_3$:Hf,Er periodically poled crysts., off-centred CZ growth, freq. conversion appls. 72039
Ni, electroless, wettability in under bump metall. with Pb free solder 67539
PZT thin films, sol-gel growth, excess Pb content on microstruct./elec. props., 101412
Si-glass interface, anodic bonding, chem. anal. 115474
SiB single-phase film, pulsed Nd:YAG laser ablation deposition method 68310
SiC films, ICP CVD, struct. 124924
SnO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
TiO_2 thin films, at.-layer CVD from chloride precursors, charactn. 90358
TiO_xN_y films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
W cathodes, Ba_2CaWO_6 activated, topographic struct. 69392
Y solid solubility in $BaTiO_3$, EPMA 69627
$YBa_2Cu_3O_{7-\delta}$ HTS, grain microstruct. & growth, melt-texturing 104559
$YBa_2Cu_3O_{7-\delta}$:Zn HTSC, T_c, flux pinning, CuO_2 site doping 70667
ZnO ceramic varistors, degrad., EPMA, ambient sintering 80411
ZnS:Cu(Ag)(Mn) phosphor materials, microwave synthesis & charactn. 82337
Zr-Ti-V-Mn-Ni AB_2-type H storage alloys, Cr and La doped, electrode charact. 134353

electron probe microanalysis *see electron probe analysis*

electron relaxation time
AlGaAs-GaAs QW 2DEG channels, dissipation, flucts./ultrafast procs. 91849
n-GaAs, proton irrad. defects, fast relax. 103037
GaN layers, LEO, picosecond photoinduced reflectivity 124990
InAlAs-InGaAs-InAlAs-InP QW 2DEG channels, dissipation, flucts./ultrafast procs. 91849
In(Ga)As-GaAs QD EL devices, intersubband gain/stimulated emission 91840
InP-InGaAs-InP QW 2DEG channels, dissipation, flucts./ultrafast procs. 91849

electron resists
acid-breakable resins for chem.-amplified pos. electron resist matrices 103640
anisotropic organic/inorganic resists, novel concept, electron proximity effect reduction, lithog. 92237
CARL DUV-pos. resist, electron beam lithog. 126553
chem. amplified e-beam resists, react. mechanisms by pulse radiolysis 103520
chem. amplified resist, e-beam lithog., new high perform. resist 92243
chem. amplified resists for mask prod. for device generations<180nm 103583
DNQ/novolac and chem. amplified resists, mask manufacture 126547
DUV neg. tone resist, electron beam lithog. 115771
epoxy resin, chem. amplified resist, free vol. effect 126546
high resoln. electron beam lithog. simul. 92190
liq. cryst. electron beam resists, spin coating, etch rate 92241
lithographic perform. enhancement, PAB effect and solvent removal, interferometric meas. 115741
methanofullerene neg. type e-beam resists, sensitivity improvement 103642

electron resists continued
micro-conical array fab. for antirefl. struct. surface 104781
multiple anion nonvolatile acetal resists for e-beam lithog. 103641
nanocomposite resist, electron beam nanolithography 126587
nanolithography, resist materials, metal binding SAM 92263
nanolithography with scanning probe microscope 92210
nanostructure fab., electron beam lithog./holography, material wave nanotechnology 103702
NGL mask fab., chem. amplified resist 103670
opt. disc masters, electron beam recording use 92972
PHECIMA, (meth)acrylate copolymer, DUV/e-beam neg. resist 126548
photoinduced outgassing, QMS meas. 69975
photomask fab., electron beam patterning, localized resist heating 103616
polymer-inorganic resist, electron beam/X-ray/DUV lithog. 92240
polysilane-acrylic copolymers by photopolymerization, pos. e-beam resist appl. 101516
polysiloxane resist, heat- and RIE-resistant, 3D struct. for high-aspect-ratio microfab. 92225
present state and prospect of electron beam lithog. *(Japanese)* 81139
projection lithog., resist struct., Coulomb interact. 115768
projection/e-beam direct write lithog. resists, image form. 103643
resist materials, small line-edge roughness, nanolithography 92242
resist/metal bilayers, dewetting in resist stripping proc. 69986
reticle fab., JBX-9000 MV neg. tone resist 103576
SAM, nanoscale patterning, electron beam lithog. 126569
Shipley SPR510A resist, modelling/simul. of nanostructs. patterned in PRIME proc. 92251
SU8C resist, electron beam lithog., exposure, micro-optics appl. 69977
surface silylation, chem./proc. issues 103560
ZEP520 resist, fullerene-derivative incorporation, contrast enhancement 69978
ZEP520A/UVIII bilayer resist, T-gate fab. 126571
Al/Al_2O_3/Al-based mesoscopic Josephson jn. qubits, electron beam lithog. fabr. methods 116518
Au on n-Si(100), C contam., electrodepos., electron-beam induced nanomasking 90511
Au passivated nanoclusters, electron beam lithog. 126566
C_{60} derivatives, electron beam resists, systematic study, spin coating, derivative films 92239
C_{60}/C_{70} incorp. nanocomposite resist syst., nanolithography 92238
InAlAs/InGaAs HEMT fab., bilayer UVIII/PMMA resist 81371
InP HEMT asymmetric T-gate recess fab., single-step patterning using GA 92410
Nb/Al-AlO_x/Nb SIS jn., space borne subMM-wave mixer 70832
SiO_2 resists, electron beam lithog., single electron transistor fab. 103509

electron sources
4-sided electron irrad. systs., cable/pipe-like product appl. 97913
beams, relativistic, prod. by ultrashort laser pulses, characterisation 76013
CIBER-X tabletop laser-driven electron & X-ray source 98103
crossed-field secondary emission diodes, research status 93974
DC-RF supercond. cavity Pierce gun, design anal. *(Chinese)* 121319
dual gate field emitters, misaligned, electron-beam focusing & deflection 91534
dual-gate field emitter, electron beam focusing 69431
ferroelec. cathode electron gun for high power microwave sources 102914
high energy spin polaris., expt. review 110185
ion trap mass spectrometer, field emitter, space instrumentation 76805
Japan Linear Collider, polarized electron source 110236
Jefferson Lab., polarized source perform. and develop. 110262
JLC, polarized electron gun 110238
lighting device, thin film cold cathode electron source, delay characts. anal. *(Chinese)* 102947
lin. induction accelerator electron diode, 12 MeV, optimum design *(Chinese)* 87156
low emittance flat-beam electron source for lin. colliders 97935
low-energy gas discharge electron source, gasdyn. window beam injection 80561
Mainz microtron, polarized electron source, beam lifetime expt. 110263
MAMI time resolved intens. and polariz. meas. 110260
MIT RF gun, low emittance electron beam form. 132282
MIT-Bates polarized source, beam lifetime expt. 110264
PLS polarized electron source, photocathode test-stand design/fab. 110265
polarized sources/targets, spin expt., review 110250
pseudospark electron beam source for FEL, impedance match *(Chinese)* 71861
pulsed electron source, at. collisions, expt. design 110266
recent advances in electron/positron sources 110228
RF gun, 17 GHz, low emittance electron beam form. 110226
S-band/X-band integrated PWT photoelectron linacs 110128
spin phys., conf., Osaka, Japan, Oct. 2000 100435
spin polarized electron source and polarimeter, review 110249
strip electron beam source, backscattered electrons meas. 87155
TESLA electron beam dyn., expected lumin., review 110211
velvet cathode diode design, uniform electron beam diagnostics *(Chinese)* 87141
Cs/p-GaAs(110), photoemiss., STM, STS, spin-polarized photoelectron source 110232
CsO-GaAs interf., layer thickness, NEA surface form. 110234
Cs_2Te photocathode test, polarized RF-gun feasibil. 110239
GaAs S-band photogun driven by solid state GaAs pulse laser 110237
GaAs clean/NEA surf./superlattice, SPV effect 104898
GaAs photocathode, at. H cleaning, JLC appl. 110240
GaAs photocathodes, charge limit phenom. 110235
GaAs/GaAsP superlattice photocathode, MOCVD growth 101361
GaAs-(Cs,O) vac. interf., electron emiss., longit./transv. energy distrib. 110233
p-GaAs-(Cs,O)-vac. interface, laser-driven electron sources 110231
GaAs-AlGaAs superlattice, spin polarized electron photocathodes 110241
GaAs-GaAsP superlattice, spin polarized electron photocathodes 110241
I contrast media, catheter-based intravascular brachytherapy, dosimetry 122391
InGaAs-AlGaAs spin pol. electron source, superlattice photocathode photolumin. 110261
KrF lasers pumping, rel.-electron-beam sources, graphite-nanofiber field emitter 117069
Xe plasma electron flood gun for GSD-200E^2 high current implanter 115581

electron spectra
see also Auger electron spectra; conversion electron spectra; electron energy loss spectra; electron spectroscopy; inverse photoemission spectra; photoelectron spectra
beams, relativistic, prod. by ultrashort laser pulses, characterisation 76013

electron spectrometers
see also beta-ray spectrometers
fast EELS spectrometer, MCP-based posn. sensitive detect. 98077
LEP beam posn. monitors, nonlin. response anal. 87099

electron spectrometers continued
orb. pattern, quantitat. imaging, electron momentum spectrom. *(Japa* 110420
positron lifetime spectrometer stabilization 110419
SLC-style beam energy spectrometer, extraction line anal. 110212

electron spectroscopy
see also Auger electron spectroscopy; electron spectra; ESCA; photoelec spectroscopy
ballistic electron normal energy distrib. meas., three-terminal HET 75854
Elettra, undulator beamlines, photon beam posn. monitor 121370

electron spectroscopy for chemical analysis *see ESCA*

electron spin resonance *see paramagnetic resonance*

electron states, impurity *see impurity states*

electron states, interface *see interface states*

electron states, localised *see localised states*

electron states, surface *see surface states*

electron stimulated desorption
Si CVD on chlorosilane-treated SiO_2 surfaces, selective deposition using ele beam irrad. 124911
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 102
ZnMgSe, MBE growth, effect of high energy electrons during growth 903
ZnSe, MBE growth, effect of high energy electrons during growth 90349

electron-surface impact
see also electron backscattering; electron stimulated desorption
ASIC implant charging, photoresist bake, electron flood gun effect 115582
diamond HFCVD film morph. control, low-energy electron bombard. 682
one-sided multipactor saturation in crossed fields 80598
SPIDER MOSFET wafers, high power implant charging damage 115583
Cu-Al cpd. cathodes, sputtering resist. under long-term ion-electron bomb 115241
Si(111)/organic monolayers electron beam nanoscale patterning for selective e osition 115792

electron traps
see also colour centres; hole traps
1D insulation, charge carrier transport/trapping, thermal stimulation 81723
AC thin-film electroluminesc. devices perf., carrier trapping time 104978
chem. amplified e-beam resists, react. mechanisms by pulse radiolysis 103
CMOS hot-carrier-induced cct. degrad., long run reliab. problems 81510
degraded short channel LDD-nMOSFETs, 2D electrostatic model, hot carr 70081
diamond, CVD films, undoped, neutron irrad., elec. props., defect anal. 80
diamond CVD films, gap states, thickness depend. dens. distrib. 80659
diamond CVD particle detectors, trapping-detrapping behavior 87219
diamond radiation detectors, response, temp. effects 98099
discrete energy states, TSC curves, auto-separation/reconstruction 92583
DPVBi/AlO_x/Al-based OLEDs, nanosec. electrolum. spikes at voltage turn 127996
DRAM, 512 Mb/0.12 μm design rule, long data retention time strategy 125
FLOTOX EEPROM tunnel window form. proc. var. effects on reliab. 1021
gate oxides, very thin, trap generation/breakdown procs. 69761
glass, fs laser induced recording, electron/hole trapping 92976
interpoly dielec. deposited on nitrided poly-Si for NVM devices 115468
intrinsic oxide breakdown, trap generation closed-form stat. model 69768
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance charac 126215
LDD NMOSFET hot carrier degrad. phenom., W or S shape evol. 81354
MIS-1 electron-optic syst. design anal. 110200
MISFET-based memory-cell structs., nanocryst./nitride-trap devices 92375
MOS capacitors, high-energy ion irrad., thin oxide degrad. 126242
MOS device, through-the-gate implant., elec. reliab. 103196
MOS device LV near-interface trap-assisted tunneling current meas. 80941
MOS struct., interface trap params., high-temp. cond. spectra 126232
MOSFET, snapback/switching behaviour, hard breakdown 115906
MOSFET, ultrathin gate, oxide traps, PDO method *(English)* 92335
MOSFET flash EPROM devices, lateral profiling of interface traps and oxi charge, charge pumping 114763
MOSFET impurity conc. profiles extraction by DCIV method 115938
MOSFET inelastic trap-assisted tunneling SILC mechanism, percolation oxi breakdown model 115925
MOSFETs, submicron, random telegraph sigs., oxide trap props. extracti 70082
n-MOSFETS fabricated in BiCMOS proc., radiation damage 115798
multi-level flash memory, detrapping-induced threshold voltage shift, an method 125472
n-MOSFET reliab., hot-carrier degrad., gate dielec. electron trapping 10383
nMOSFETs, hot-carrier degrad., interface trap generation crit. energy 70086
octithiophene polycryst. thin film FET, grain size depend. mobility 70164
OLED, mol. materials, elec. transport 117006
organic LEDs, luminous efficiency improvements by carrier trapping dopan 105003
photorefr. harmonic gratings, electron-hole transport model 93907
phthalocyanine-fullerene PV devices, elec. charactn. 123826
poly(p-phenylenevinylene) derivative, charge cond. 82415
polymer insulators, electron traps, mol. modelling 112124
polysilicon TFT, low-temp., hot carrier effects 81272
polysilicon TFT, reliab., CMOS inverter cct. 115929
polysilicon thermal sprayed coatings, elec. charact. 115287
power VDMOSFETs, pos. gate bias stress induced instabilities 126815
PPV LEDs, electron/hole traps, charge based DLTS anal. 127975
sexithiophene polycryst. thin film FET, grain size depend. mobility 70164
sexithiophene semicond. grain boundary , temp./gate volt. depend. transpo 91715
SIMOX SOI structs./devices, BOX, thermally activated procs. 91920
SOI struct., interface states and deep-level centers 115445
SOI wafers, interface traps charactn., back-channel-type scanning charge pump ing method 115455
thin gate oxide MOSFETs, LF 1/f noise, drain current 70076
thin organic layers, photoenhanced current, Gaussian trap distrib. 93326
tris(8-hydroxyquinolato)aluminium light-emitting devices, SCLC, field/temp depend. mobility 71573
tris-8-(hydroxyquinoline) aluminum, trap dens., TSC 82325
tris-(8-hydroxy) quinoline aluminum LED, quantum efficiency, temp./fiel depend. 71609
VCSEL nonuniform carrier distrib. effects, diffusion dyn. model 71834
$Al_{0.5}Ga_{0.5}As$:Be MBE layers, He^{++}-irrad., DLTS obs. 80706
AlGaAs/GaAs power HFETs, hot-carrier-stressed devices, gate-lag effect 126873

ron traps continued
AlGaAs/InGaAs pseudomorphic high electron transistors, effects of hot-electron stress 103919
AlGaAs/InGaAs/AlGaAs PHEMT submitted to RF and DC step stresses, LF noise 126871
AlGaAs/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC characts. 115950
$Al_{0.25}Ga_{0.75}As/In_{0.20}Ga_{0.80}As/GaAs$:Si pHEMTs, DLTS obs. 115968
AlGaAs-GaAs HBTs, long-term reliab., base current study 70044
AlGaN MOCVD films, DOS distrib., transient photocurrent anal. 71515
AlGaN/GaN MODFET, electron trapping, dc drain current, DLTS 81362
AlGaN/GaN heterostruct., electronic struct., localized vars. 126122
AlGaN/GaN heterostruct., localized charge trapping behavior 126127
AlGaN-GaN HEMTs for microwave power appls. 69166
AlInAs/GaInAs/InP:Be MQW structs., low-temp. MBE growth 101236
Al_2O_3 dielec. films on Si, UHV reactive at.-beam deposition 79245
Al_2O_3:Tb,Zn(Ca) films, long lasting luminesc. 104908
Au/$BaTiO_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
Au/GaInP:Te MOCVD Schottky contact, γ-ray induced deep electron traps, DLTS anal. 115441
B_2O_3:Eu glass, X-ray irrad., RT persistent spectral hole burning 93774
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
a-C:H films and assoc. heterostruct., artificial pot. relief 103121
CaS:Eu^{2+},(Tm^{3+}), persistent/thermoluminescent phosphors, trapping centres 104936
CaS:Eu,Sm electron trapping material in light conversion agricultural film *(Chinese)* 71215
CdS/$CuIn_{1-x}Ga_xSe_2$-based solar cells, DLTS 112854
CdTe films, band gap shallow levels on metallic substrs. 126060
CdTe/CdS PV, jn. transport props., light/voltage props. 127949
CdZnTe pixel detectors, num. modelling of charge-sharing 121484
β-$FeSi_2$/Si LED, ion beam synthesis, elec., electronic, opt. characts. 82412
GaAs FET Schottky gate metallization, electron-beam irrad. damage 70211
GaAs MESFET transient model predicting trap-induced memory effects under complex digital modul. 92392
GaAs MESFETs, SPICE model for digitally modulated RF perform. characts. 80262
GaAs, SI LEC, radiation detectors appl., materials sci. issues 90207
GaAs, SI, traveling high-elec. field domains, current oscills. 80710
GaAs epilayer on Si, $(NH_4)_2S$ treatment, annealing, deep levels reduction 92007
GaAs epilayers, RTA, defect engng. using SiO_2/Si_3N_4 stacking layers 126024
GaAs isolation struct., backgate impedance dispersion 103437
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dispersion 69543
GaAs/AlGaAs QW, exciton localization dyn., PL obs. 126165
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaAsN/GaAs QW, effective mass and carrier recomb., opt. detect. of cyclotron reson. 69688
GaN MESFET, SiN_x passiv. effects 91288
GaN MOCVD epitaxial layers, influence of As doping on elec. props. 126016
n-GaN Schottky diodes, deep levels, DLTS 126646
GaN, below gap states excitation, two wavelength excited PL 80867
GaN epilayers, nonradiative recomb. proc., transient grating method 80718
n-GaN films, deep levels/PPC studies, MOCVD 127909
GaN films, near-surface traps, DLTS 91613
p^+-nGaN homojunction diodes, deep levels, DLTS 126646
GaN microwave power MESFETs, pulse charactn. of trapping/thermal effects 80312
GaN, undoped epilayers 80715
GaN undoped epilayers, long term photocapacitance logarithmic decay behavior 81195
n-GaN, yellow luminesc., persistent photocond. 69507
p-GaN:Mg MOVPE layers, deep trap anal., elec. cond., TSC and thermal admittance spectra meas. 69546
GaN:Mg,C,He,O epilayers, ion implant. induced defect states, elec. charactn. 81024
n-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
GaN/AlGaN MQW, below gap states excitation, two wavelength excited PL 80867
GaN/AlGaN heterostruct. FETs, traps, low-freq. noise spectra 126870
GaN/AlN self-organised QD, strain distrib., built-in elec. fields, carrier states 91836
n-GaN/Pt Schottky contacts, proc.-induced electron traps, DLTS 69548
HgCdTe, passivated, interface traps from transient photoconductive decay meas. 71509
HgCdTe-based n^+-p photodiodes, charge transport 116940
ITO films, rf sputtering, struct./elec. props. 103050
ITO/a-Si:H/Pd based posn. sensitive detector, carrier transport 131929
ITO/conjug. polymer-fullerene/Al PV cells, admittance and ESR spectra 127944
InAs nanodots, $Al_{0.5}Ga_{0.5}As$ matrix, charge storage effect 115395
InAs, self-assembled QD, electronic transport, hysteresis 80887
InAs/GaAs ultrathin layers, carrier capture, degenerate pump-probe tech. anal. 69676
InGaAsN, deep levels, high-efficiency multi-jn. solar cells 89283
InGaN:Zn microcrystals, Pure and doped, PL excitation spectrum, nitridation 80725
InGaN/GaN MQW, below gap states excitation, two wavelength excited PL 80867
InGaP/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC characts. 115950
InP, n-type/p-type, proton bombard., elec. isolation 69508
InP:Fe, heavily compensated implanted samples, $Fe^{2+/3+}$ trap conc. 91967
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
$(LaSr)MnO_3/SrTiO_3/(LaSr)TiO_3$ p-i-n diode, epilayer trap levels 81193
$La_{2/3}TiO_3$, perovskite, Al^{3+}, Pr^{3+} doped, PL behavior 127935
$La_2Ti_2O_7$, pyrochlore, Al^{3+}, Pr^{3+} doped, PL behavior 127935
$LiNbO_3$ near-stoichiometric crysts., photorefr. props. 93768
$LiNbO_3$:Tb,Fe, nonvolatile/quasi-nonvolatile holographic recording 128587
$LuAlO_3$:Ce, electron traps and scintillation mechanism 127924
MgS:Eu,Ce, spectral hole burning, opt. storage 104613
$MgTi_{1-x}M_xO_3$ (M=Mn,W) ceramics, elec., dielec. props., dopant effects 116128
N-MOSFET dominant interface trap generation proc. during hot-carrier stressing 81355
PZT thin film, fatigue model based on thermionic field emission mechanism 127222
Pt porphyrin-based conjug. dendrimer LED, electrophosphorescence control 128010

electron traps continued
Si NP colour detector, transient behaviour/charge anal. 75547
Si detectors, irrad. p^+-n-n^+ diodes, electron/hole sigs., temp. depend. 121463
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
poly-Si gate oxide reliab. post annealing degrad. and suppression *(Chinese)* 126244
Si, gated-diode recomb.-generation current tool for characterizing bulk traps of SOI devices 91898
Si nanocrystal based MOS struct., prep., charge retention effect 80947
Si, photoconductance, carrier lifetime, injection levels 102983
a-Si pn jns., tunnelling generation-recomb. currents 91759
Si:B MOS-struct., through-gate implant., induced damage 115508
Si:B n-channel trench UMOSFETs, channel B-doping 81312
p-Si:Fe,B, Fe-B pairs, acceptor level, capture cross sects. 69498
Si:H RF MOSFETs, proton-implanted struct., transm. line noise 91249
a-Si:H, occupation of dangling-bond states and photocond., band tails effect 93323
a-Si:H p-i-n diode params., trap cross-sect., simul. and param. extract. 70008
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 102955
$Si/(Ta_2O_5)_x(Al_2O_3)_{1-x}$ interface, electron traps 103185
p-Si/SiO_2, RF hydrogen-plasma-related defects, DLTS 69764
Si/SiO_2 interface, improvement of reliab. for N_2O-nitrided LPCVD oxide *(Chinese)* 103210
Si/SiO_2Cl_x syst., rapid thermal chlorinated oxides 92062
n-SiC, 4H, epilayers, proton irrad. induced defects, DLTS 69590
SiC, 6H, MOS struct., shallow dopant/surface levels, TSC 69758
6H-SiC MOS structs., shallow traps at cryogenic temp., TSC study 69759
SiC MOSFETs, 4H/6H, interface traps, light emission obs. 70097
6H-SiC Schottky diodes, elec. charactn. of deep levels 115824
6H-SiC buried-gate n-channel JFETs, deep trap charactn. 103918
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
$p^+/n/n^+$ SiC:B struct., EL, opt. emission microscopy 69639
SiC:H, 4H, H_2 conc., theoretical approach, vacancy-hydrogen complex 69588
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V meas. 68237
$a\text{-}Si_{0.35}C_{0.65}$:H, proton irrad. thermally annealed, PL props. 93338
4H-SiC(1120), CVD and deep level anal. 79275
SiGe HBTs, differentially grown structs., optimized low-freq. noise, lateral base design 81219
$Si_{1-x}Ge_x$/Si p-channel MOSFET, low-freq. noise characts. 115918
a-SiN/SiO_2 thin stacked dielec. syst., trap-controlled SCLC mechanism 92674
SiO_2 ultra-thin films, X-ray irrad. damage, microscopic obs. 81732
SiO_2 ultra-thin films, switching behaviour of post-breakdown cond. 115459
SiO_2:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiO_2/ZrO_2 thin gate dielec. stacks, trap-assisted tunnelling current 81637
$SiO_x/ZrO_2(TiO_2)$ gate dielec. stacks, charge trapping in MOS capacitors 80927
SiO_2-Si interface, trapped charge imaging, noncontact AFM 80925
$SrAl_2O_4$:Eu^{2+},Dy^{3+}, persistent/thermoluminescent phosphors, trapping centres 104936
$SrBi_2Ta_2O_9$ thin film capacitors, UV irrad., switchable polariz. 104464
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mechanism 127222
SrS blue ACTFEL display, luminance-time characts., model 97670
SrS:Eu,Sm, electron traps, opt. storage *(Chinese)* 116929
TaN(-polysilicon) SAG n-MOSFETs with ultra thin CVD ZrO_2 gate dielec. 126780
TiO_2 PV devices, dye sensitised, charge recomb. and transport 100208
TiO_2, porous, transient dark/photocurrents, neg. capacitance effect 91683
VDMOSFET HI sensitivity, pre-neutron irrad. effects 81295
W/TiN/SiO_2/Si MOS capacitor struct., TiN deposition method effect 103199
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
Y_2O_3/SiO_2 bilayer gate dielec. based MIS devices on Si, interfacial charge trapping 103201
ZnO-Au Schottky diodes, elec. and defect props., high energy proton bombard. effects 126212
ZrO_2/Si plasma deposited thin films, electron/hole trapping 127135

electron tube components
see also electron guns
gas-dyn. window, stationary electron beam output 69421
in-neck yokes, vac. props. of materials, inner yoke tubes appl. 91543

electron tube manufacture
CRPhED units, low-temp. plasmachem. treatment, proc. model 80580
CRT, lightweight bulb design 80618
CRT mfg. and recycling, indust. survey anal. 102918
CRT prod. technol., portable mag. characts. tester 79482
Flatron CDT, near contact exposure and interchangeable mask 97731
large-area photomasks for display appls. 75808
online grid-gaps inspection syst. for electron-gun manufacture 80579
Pd-Al_2O_3 UV transparent cond. coatings for vidicon tubes, sputtering tech. 114258

electron tube testing
advanced CW technol. gyrotrons, PM syst., design, constr. and testing 69450
CRT display prod. line convergence meas., low cost CCD sens. 97700
CRT prod. technol., portable mag. characts. tester 79482
small electron tubes, low residual press. meas., outgassing rate 69379
C thin film cathodes, field emission lifetime, color phosphor effects 69412

electron tubes
see also cold-cathode tubes; diodes; electron emission; electron wave tubes; gas-discharge tubes; microwave tubes; millimetre wave tubes; relativistic electron beam tubes; submillimetre wave tubes; triodes; UHF tubes; vacuum tubes; X-ray tubes
EBIS beam form./collection, beam handling equipt. design 110197
fast ion extraction from intense electron beams, EBIS single-turn inject. 110199
modified double-layered HTSC tube for charged particle beams 121382

electron tunnelling *see tunnelling*

electron wave interference devices *see electron waveguides*

electron wave tubes
see also travelling wave tubes
UHF electronic devices, fast cyclotron waves 69451

electron waveguides
modulated superlattices, symm. Gaussian pot. profile, band struct. *(Japanese)* 103126
C nanotube electron waveguide, Fabry-Perot interf. 80531
C nanotube electron waveguides, quantum interf. and ballistic transm. anal. 125934

electron waveguides continued
GaAs/AlGaAs electron Y-branch switch, switching effects between drains 70214
Si/SiO_2 electron waveguides, electronic props., oxid.-induced strain 115975
electronic beam steering *see beam steering*
electronic books *see electronic publishing*
electronic cash *see electronic money*
electronic commerce
see also electronic money
API for e-charging, outsource charging for content and appl. usage 130759
B2B e-commerce trends, e-procurement/e-marketplaces *(German)* 85336
broadband Internet for Web computing *(Japanese)* 130839
broadcast delivery of digital products via scheduling algms. 120516
BT response to e-business threats 119536
charact.-clustering model based on ART algm., design/implement. *(Chinese)* 108099
commun. sci. for indiv./society, social systs. past/present/future 96074
computer and commun. security, conf., Singapore (Nov. 1999) 100405
computer networks, conf. Kyrnica, Poland (Jun. 2001) *(Polish)* 113274
consumer commun./mass market inform. networking 96182
consumer electronics, computing/commun./e-commerce convergence 85650
CryptoManiac, fast flexible archit. for secure commun. 95930
Czech Republic, interactive broadband systs. and market pot. 96013
delegation protocols 130403
denial-of-service attack prevention methods 119462
dependable Internet based online auctions, hierarchically struct. 74289
deployment, project planning, time-based mgt. 89810
deregulated power markets software architectural style 111758
Deutsche Telekom's E-business in B2B environ. 130542
digital signature with one-time pair of keys, cryptanal., modified version 94364
distributed environ., problem determ., dyn. dependencies characterisation, act. approach 130683
dot.com businesses operations, quality mgt. 89739
e-commerce, tech. and market approach 130873
E-CWE (E-Commerce through Wireless dEvices) project 131237
e-mfg. for enhanced IC equipt. productivity 103960
e-mfg. opportunities in semicond. proc. 103959
elec. companies, Internet services overview *(German)* 111687
elec. utility purchases mgt. using e-procurement 99209
electronics mfg./supply chain mgt., business models 113449
FITCE 2001 telecomms. conf., Barcelona, Spain (Aug. 2001) 124214
flow gate-based Internet for wholesale power exchange 111736
heterog. systs., maximizing transactions by gateway filtering 130851
HIKARI Commerce service, convenience/security provision 120264
ICT changes, impact on evol. of e-society 130528
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 124193
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IN core competencies for payment systs. 130928
inform. security conf., Wollongong, NSW, Australia (2000) 100378
innovation/technol. mgt., conf., Singapore (Nov. 2000) 89555
Internet call center, collaborative multimedia middleware archit. 96228
Internet e-business, large scale sites, new technols. support *(Japanese)* 119626
Internet e-commerce exchange syst. trustworthiness 119586
Internet enterprise engng., zero-time framework based on T-strategy 78538
Internet load balancing, benefits for e-commerce 85286
Internet mktg. needs bal. with consumer concerns, property rights framework 85175
Internet multimedia services, OO appl. develop. platforms 108363
Internet traffic pricing, incentive-compatible, consumers' private inform. extraction 96028
Internet VoD E-commerce syst. based on multilevel video metadata 97079
IP advanced networks/services, service creation/mgt. 130569
IT, global, satellite roles, trends/implications 85919
Korea e-commerce, now/future 96214
LAN fault diagnosis syst. 130739
m-commerce customers, mobile Internet *(German)* 74846
M-Commerce security platform based on WTLS and J2ME 131266
mgt. issues regarding e-commerce and Internet 89737
mktg., community manager/knowledge importance 108183
mobile commerce, one-to-one mktg., consumer protection *(German)* 74372
mobile commerce, technols./appls. 96147
mobile e-commerce, intrusion tolerance schemes 85308
mobile e-service mage utilization 131299
mobile electronic commerce, business models and transactions 108624
modern elec. markets, e-commerce appl. possibilities *(Chinese)* 122819
multimedia content distrib. and reusability using watermark technol. 108428
NEC IP switch router CX5210 85200
Oceano-SLA based mgt. of computing utility 130575
on-the-fly signatures based on factoring 106217
pan-European wireless micro-payment syst. framework 108972
peer-to-peer networking, inform. sharing 96067
power auction protocol without revealing winning bids 95922
private bidding and auctions with oblivious third party 106221
public key infrastructure appl. to electronic commerce *(Chinese)* 129235
R&D real American seq. exchange options valuation 89765
real/virtual business mgt. for e-business, SONY trial 89736
secure e-commerce transactions, certificate-based distributed firewalls 130731
sustainable e-supply chain mgt. simul., network-based optim. 100497
teamwork education within concurrent engng. paradigm 124254
telecomms. and economic activity, Granger causality 89692
traditional business and e-commerce, hybrid strategies 96069
transactional multimedia banner as Web access point 85332
US Army installations, inform. assurance archit. 111589
US elec. utility indust., e-business transform. 122814
Virtual Inhabited Call Centre, pers. mobile agent syst. 74146
virtual SME, PRODNET Communication Infrastructure 74304
WAP clients and SET protocol for secure commerce 74162
WAP log mining as monitoring tool for m-commerce *(German)* 74136
Web site perform. scalability *(Polish)* 130312
Web syst. technol. *(Japanese)* 130840
wireless appl. protocol, mobile e-commerce appls. 84953
wireless-based authentication/anonymous channels for large scale area 130382
XML and security 119537
electronic component manufacture *see electron device manufacture*
electronic copyboards *see photocopying*
electronic counter-countermeasures *see electronic countermeasures*
electronic countermeasures
advanced fighter radar electronic protection measures 99123
foil cloud, EM bistatic scatt., Monte Carlo simul. 75171
electronic countermeasures continued
IR seekers counter-countermeasures, two-color cancellation algm. 122754
long-range UHF radars for ground control of airborne interceptors 99138
modular mission config. threat detect. sens. suite demonstrator 99128
multifunction radar-IRST integrat. in naval environ. 133410
multisource limitation of reticle-based opt. trackers 111635
netted radar sens. 99151
outfield test, contamination data distrib. *(Chinese)* 111636
phased arrays for new millennium 128883
radioinertial navig. equipt. with adaptive antenna array, jamming resist. 120
Sensor Craft multi-mission radar, STAP proc., severe clutter 122761
SS commun., software radio technol. 99122
threaten laser warning/orienting technol. *(Chinese)* 99129
electronic data interchange
see also EFTS
AIRE/CE intermediate format for IC CAD tool integrat. 68513
auto-electronics indust., Japanese-style supply chain mgt. 89749
Black Sea Tele-Diab syst. develop., implement. and clinical eval. 98877
clinical health inform. network using off-the-shelf software to safely tran med. data 111290
Disassembly Bill of Materials std., efficient product data transfer 100540
distributed asset mgt. systs., platform 109363
document objs. resulting from multi-party collaborative transactions, cry graphic framework 106245
e-diagnostics for semicond. wafer e-factory capability 70236
e-diagnostics links, SEMI GEM/SECS stds./equipt. front-end modules, r 103962
e-mfg. domino effect for IC proc. efficiency/yield/productivity enhancem 103961
e-mfg. for enhanced IC equipt. productivity 103960
e-mfg. opportunities in semicond. proc. 103959
eDFM Web-based DFM in electronics assembly 115134
elec. market, tech. support syst., open/visualised platform *(Chinese)* 12279
elec. utility deregulation, metering/billing/customer IS impacts 122802
Ethernet networks in substations 78095
filmless radiology teaching 89610
Foundation Fieldbus, open archit. for inform. integrat. 86422
Foundation fieldbus data commun. timing constraints validation 119661
IC mfg. automation software for 300 mm wafers 70237
IPC2547 std., electronics test/inspection equipt. proc. integrat. 78589
IT and MIS 108020
lightweight scalable tool sharing for Internet 130385
med. IS, WWW-based, for collaboration between rural clinics and central ho tal *(Japanese)* 76785
MedStage platform for inform. and commun. in healthcare 111268
metal stencil technol. for SMA, overview 69322
multimedia inform. delivery over wireless channels 130962
Norwegian deregulated power market, ODEL inform. exchange format 133
Parmod functional electronic materials, laser proc. 115157
patient admin. master-syst./clinical subsystem data transfer realised us ProtoGen/HL7 98875
patient immediate discharge letters, use of XML in Scotland 111266
PCB assembly proc., real-time factory data collection/Web reporting 11517
peer-to-peer file sharing 74171
power market data exchange using XML 111750
power transm. line common commun. platform concept *(Chinese)* 74506
radiology and pathology conf., Web browser-based image presentation, eval traditional film-based environ. 98835
SD-link for secure collaboration across private networks 85248
SECS/GEM IC proc. tool commun. protocols, evol. for e-mfg./300 mm wa 103963
selective soldering implement. for through-hole components 80502
Simple Object Access Protocol for interoperability problems on Web 7418
SOAP (Simple Object Access Protocol) and communicating devices 11936
TelFam telemedicine syst. for family doctor practices 111274
transcollaborative mfg. software for OEM/contract manufacturer inform. acc 89835
ubiquitous computing, scalable and self-organizing meta-data disseminat 108329
US elec. utility outage mgt. syst. deployment project 122866
vital signs monitoring from home with open systs. 111275
WorldFIP bus arbitrator table config., real-time engng. appls. 119660
electronic density of states
copper phthalocyanine films, photosensitivity/gas sensitivity in O_2/NO_2 1320
diamond CVD films, gap states, thickness depend. dens. distrib. 80659
diamond films, CVD, dens. of gap states, thickness depend., SCL current 694
DNA/C nanotube mol. films, electronic struct. self-form., charge transfer 1259
DRAM, 512 Mb/0.12 μm design rule, long data retention time strategy 1254
ferromag. tunnel jns., spin polariz. at interface and TMR 127358
high-k dielec. gate materials for ULSI devices, advances/materials compatibil 104108
metal-nitride-oxide-semicond. struct., percolation metal-insulator transit. 697
MOS struct., surface layer DOS, charge control model *(Chinese)* 80955
n-MOSFET, backsurface Ar^+ bombard. effects *(Chinese)* 103721
MOSFET, deep submicron, quantized inversion layer states 81317
n-MOSFET reliab., hot-carrier degrad., gate dielec. electron trapping 10383
nanoelectronic devices, functional charact., strain influence 115389
nonintimate Schottky jns., effective dens. of bias voltage depend. interfac states 80898
organic LED carrier behavior anal. on hopping cond. basis, computer sim *(Japanese)* 82404
pMOSFET, hole quantization effects, threshold voltage shift, six-band effect mass approx. 70159
poly(silylene)s, charge carrier photogeneration/transport, polar acceptor si groups effect 71507
polysilicon TFT, low-temp., hot carrier effects 81272
polysilicon TFTs, laser annealed and metal-induced crystal., expt. study 701
quantum struct., semicond. heterostruct. *(Chinese)* 80807
SET, background charge rearrangement, modelling 103931
TFT, bulk/interface DOS 81280
TFT, surface pot., C-V meas. 81279
Ag/n-Si Schottky barriers, ICB deposited, Fermi level pinning, microsco model 69725
Ag/n-Si Schottky jns., ICB deposited, induced interface states 69726
Ag-Si Schottky jns., ICB deposited, interface electronic struct. 80899
AlGaAs-GaAs-AlGaAs MODFET channel cond. with high doping levels 924
AlGaN MOCVD films, DOS distrib., transient photocurrent anal. 71515
AlGaN/GaN heterostruct., surface pot., scanning Kelvin probe microsco 80791

tronic density of states continued
AlN film, prep., DOS distrib., CPM/DLTS anal. 91631
Au/InP interface, forward I-V characts., Sb effects 126196
Au/n-Si Schottky diodes, interface state dens. distrib. rel. to series resist. 92288
a-BN_x films, opt. absorpt., elec. cond. 69554
$Bi_{1-x}Sb_x$ nanowires, anom. high thermoelec. fig. of merit, carrier pocket alignment 91696
$Bi_4Ti_3O_{12}$ film, electronic struct., soft-X-ray emission spectrosc. 127188
a-C:H,N film, electronic struct., field emission 102906
a-C:H,N films, PECVD prep., N incorporation and elec. props. 126082
a-C:H,N films, RF PECVD, spectrosc. props. 68286
a-CN_x films prep. by layer-by-layer method, photocond. and photolum. 71516
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
n-$CuInSe_2$ elec. characts., impurity band cond. effects anal. 126093
GaAlAs/AlAs 1D photonic band gap struct., SHG enhancement 71976
GaAs quantum wire superlattice, δ-doped, QHE, SdH oscills. 91772
p-GaAs:Be/AlGaAs QW multilayered structs., low-temp. hopping cond. over upper Hubbard band 126133
GaAs/AlGaAs, 2D variable-range hopping cond., electron-electron interact. influence 115360
$Ga_{1-x}In_xN$/GaN polarised QW, PL excitation spectrosc., level assignment 80716
GaN epilayers, surface pot., scanning Kelvin probe microscopy 80791
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
InAlGaAs QW laser, low threshold current dens. design, k.p method 117278
InAs/InAlAs heterostructs., MBE growth, props. 103104
$MgAl_2O_4$/Al(Ag) heterophase boundary, local bonding, ab initio study 103217
Si films, Joule heating rapid crystn., Raman scatt. 126005
Si solar cells, heavily doped regions DOS 100059
a-Si:H hot-wire CVD films, electronic states, light-induced metastability 127907
a-Si:H solar cells, UHV PECVD syst. prep. 78169
Si(100) electron energy barriers with ultrathin stacks of SiO_2, Al_2O_3 and ZrO_2 insulators 69739
Si(113) wafers, oxid., alternative IC material to Si(001) 69908
SiN_x PECVD films, ammonia plasma pretreatment effect 92025
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiO_2/Si(100) large clusters, silica tetrahedrons rot., quantum chem. 115633
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795
$SrBi_2Ta_2O_9$/SiON/Si ferroelec. MISFET, elec. props. 81275
W oxide/Ni oxide tandem films based electrochromic devices 71414
ZnTe/CdSe(100) interfaces, electronic struct. anal. 91740

ctronic design automation
see also circuit CAD; circuit layout CAD
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
64-point FFT design example using A|RT-Designer, OFDM radio 101138
adaptive neg. cycle detect. in dyn. graphs 100902
automated design of FSM predictors for customized proc. 90827
automated design of SOCs using cores 114685
automated multicriterial selection, struct. inform. files constr. 100531
batt.-powered distrib. real-time embedded systs., batt.-aware static scheduling 125176
batt.-powered embedded syst., energy-efficient design 68504
CAD tools *(German)* 101641
chip foundries and dawn of open intellectual property era 67518
collaborative design, constraint-based heuristics, act. approach to proc. mgt. 124299
component selection, timing diags. eval. and comparison, appl. of fuzzy logic 68515
conf., Las Vegas, NV, USA (June 2001) 124209
control flow synthesis, feasibility of omitting state reduction step *(Chinese)* 101663
digital design education infrastruct., multiple EDA tool vendors, multiple modes of tool access 125300
distributed embedded systs., incremental design approach 125177
embedded capacitors, RF elec. simul. 69276
embedded memories, design and test 102130
formal verification in EDA tools, equivalence and property checking 81449
foundry era IC design methodology, heads-up design considerations 81450
foundry perspective of syst. integrat. in IC indust., quality design and time-to-vol. 81453
FPGA-based reconfigurable systs., memory access optimisation 90837
full-feature alternating phase-shifting technol., phase-aware std.-cell design flow 125342
gimballed electrostatic microactuator, full 3D motion charactn. 89025
HDL 125170
high-speed EO modulators, compact model for microwave CAD environ. 93228
hot bar blade for PCB soldering, design, simul. and prototype 125893
hypermedia-aided design, collaboration framework for EDA appls. 125174
IC components, CAD formulas, fuzzy EM formulation 114972
laser microchemical etching, MEMS inverse stereolithography/flip-chip de-bug appls. 81628
lin. FM SAW filter, finger cut effects on perform. 127270
mag. field sens. microsystems, num. offset optim. 121033
MEMS, concurrent design, CAD tools 104196
MEMS proc. design simulators based on VRML and Java 127105
MEMS proc. phys. simul., CAD tools 92537
MEMSCAP soln., MEMS in mainstream appls., design automation tools 104195
METRICS, syst. for automatic recording and predict. of design quality metrics 81452
MOSFET models, CAD tool for benchmarking 103885
MQW lasers, three-level SPICE model *(Chinese)* 82655
multi-lingual synthesis and verification environ. 125304
open systs., design-centric methodology 91469
patterned multifunctional nanostructures, rapid prototyping 103716
PBGA, SMT solder joint reliab., CAD *(Chinese)* 78669
product family, database-centred requirements mgt. and spec. 113445
reactive closed-syst. specs. implement. 68674
RENE, Rice Everywhere NEtwork project, multitier wireless commun. 85499
RF ident. syst., commun. protocol, modularized design *(Chinese)* 120115
RF/microwave neural models, iter. multi-stage algm. for robust training 69106
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
SAW coupled resonator filters, design automation, rapid design develop. 92715
SAW ladder filters, design algm. 116223
scripting lang. capability for interoperability of EDA tools 79507
semicond. mfg. lead frame, integrated CAD/CAM syst. 126918
shield insertion and net ordering for capacitive/inductive coupling minimization 101890

electronic design automation continued
sig. proc. dedicated systs., optimised archit. design *(French)* 116015
systs. CAD design concept in concurrent engng. context 125171
virtual prototyping, EDA tools, pattern generators and logic analyzers 68699
waveguide filter and high-Q resonator design, EPFIL code 80197

electronic document handling *see document handling*

electronic engineering
see also cryogenic electronics; electronic engineering computing; electronic engineering education; high-temperature electronics; low-power electronics
instrum. engng., conf., Novosibirsk, Russia (Sept. 2000) 78420

electronic engineering computing
see also circuit analysis computing; computerised instrumentation; electronic design automation; logic CAD; logic simulation; SPICE
3D digital filtering problem, parallel algm. for num. soln. 119044
ADC testing, std. framework for IEEE-STD-1241 in MATLAB 114832
advanced MOS device, halo implant, effective channel length 92339
anisotropic graphite heat spreaders for electronics thermal mgt. 67632
AOI, optimal allocation of resources 100648
bend cells optimisation, field-seq. colour microdisplays 97713
binary pseudo-random sig. gen., overview and MATLAB routine 118827
bitmap/TENCOR inspection data correl. for IC yield anal. 100624
bulk-barrier diodes, DC elec. behavior model 103755
cascaded directional coupler-based WDM device, 4-channel/1200 GHz spacing/1550 nm, design 109180
Class 1 cleanroom design, CFD program appls. 89830
complex microwave struct., gradient computation reduction, method of moments 102501
computational design/optim. advances, MEMS appl. 116071
conductive adhesives for packaging, Internet course, expt. seq. 113372
drop test anal. of electronic products, intell. data mining syst. 124298
dye-sensitized nanocrystalline solar cells, computer simul. method 112885
e-diagnostics for semicond. wafer e-factory capability 70236
electrohydraulic brake syst., reliab./safety enhancement, simul. 134598
electron beam lithog. simul. efficient/robust algms. 115778
electrotechnology, CAI syst. *(Chinese)* 78495
ETA (Electronic Teaching Assistant) program for electronics education 113384
evanescent-mode bandpass filter, ridged waveguide, inductive strip 102519
evolvable antenna syst., syst. for evolving antennas in-situ 111331
flexible platform-based design 68695
flip-chip populated PCB rework by laser desoldering 124351
flip-flops, design params. estim., reliab., speed and cost 102120
functional test coverage maximization in ASICs using evol. algms. 92440
helix TWT, phase and gain matched operation, computational investig. *(Chinese)* 102941
high temp./high power electronics, WWW educational course 113314
hot-carrier reliab. simul., implement. in Eldo 103744
IC mfg. automation software for 300 mm wafers 70237
IC package thermal transients meas., hardware & software solns. 100605
ink jet print head prod. simul., methods 124316
large orbit gyrotron with PM syst., design 91552
laser direct writing device, software develop. *(Chinese)* 92209
laser via-hole drilling machine for ALIVH-B *(Japanese)* 92569
LCD-backlight develop., simul. tool 121109
microcontrollers learning using CAI-oriented multi-micro simul. environ. 78512
microelectronics education online courseware library using Java applets 78515
modular software for IC mfg. appls., benefits 126922
MOSFET spectrosc. charge pumping, surface pot. determ. 92353
multilayer struct., electronic package, thermal fatigue, finite element simul. 67549
nanostructures patterned in 1 μm Shipley SPR510A resist using PRIME proc., modeling and simul. 92251
Obsolescence Manager online database for electronic components *(German)* 91405
on-line instrum. drivers, Internet resource listings 109450
OO knowledge-based CAPP syst. for bare cct. boards mfg. 91468
order based diagnostic systs., rule evol. 102801
packaging, educational course, EM simul. tool 113313
packaging & interconnection tech., Univ. level educ., Romanian experience 113374
packaging educ. module develop., Sync-O-Matic software tool 113371
packaging education, IEEE/CPMT Virtual Classroom 113312
packaging syst. cost anal., Internet-based educ. mater. 113370
packaging technol., phys. procs., visual modelling 124352
PCB proc. quality cost models, SPC method integrat. 115171
planar deflection syst. for field emission devices, 3D simul. 69434
power electronics, spec. lang. standardisation, IEEE Std. 1515-2000 79551
predictive proc. simul. and stress-mediated diffusion in silicon 81172
product success/failure prediction, KBS, multiple regression models 89791
PTCR resist.-temp. curve, DP program *(Chinese)* 121146
quasi-2D phys. PHEMT model for two-tone time-domain IMD simuls. 80314
semicond. device noise charactn., extraction techs. and CAD procedure 86943
semicond. mfg. problems solved by data mining 67517
semicond. packaging assembly, case-based decision support model 113709
SiMiKo materials database for simul. of microsyst. components 116067
solder droplet printing, high precision, amplit. modulated droplet form. 67570
surface mount PCB mfg., design issues assoc. with neural net systs. 91474
syst. level electronics thermal modeling, Therminic 2000 panel summary 113694
syst.-on-a-chip test data compression/decompression 81432
test program develop., prod. floor execution speed 75365
three-port rect. microstrip unequal power divider/coupler 69079
TRESCOM simul. tool for cars components packaging 89421
UHF filters automatic computer-controlled tuning syst. 125592
VLSI CAD algms., teaching, web-based visualization tools, Java applets 125301
zone-plate-array lithog., syst. design simul., SIMD model 69970
4H-SiC power diodes, novel phys.-based cct. model 81196
CdS-CdTe solar cells, 1-D device nonideal behavior modeling 100117
Cu PCB electroplating proc. modelling using virtual plating technol. 125905
Cu(In,Ga)Se_2 solar cell transient effects, trapped charge model 100184
GaAs 6 inch wafer mfg., cost effective yield enhance. using August NSX syst. 126924
GaAs chip fab. facility, data-driven yield mgt. syst. 103969
GaAs cryst. annealing proc. using VB method, disloc. dens. anal. 115486
InP HBTs, appl. of HBTCAD software incl. HBTSIM simulator and HBTANA model 81214
Pb-free solders database develop., NEMI project 115187
Si BJT, temp. depend. large sig. CAD model and direct extract. method 91268
$YBa_2Cu_3O_{7-x}$ double-sided superconduct. thin film microstrip resonator, loss model 71119

electronic engineering education
appl.-specific power electronics education curriculum develop. 100457
cct. module CAD education 125172
chaos education in microwaves, microwave circuitry and appls. 67452
CHIPDESIGN, project-oriented microelectronics course, ASIC std. cell design flow 125298
CMP, prototyping and low vol. prod., engng. education 126920
components/packaging, computer based education/eval. 124279
conductive adhesives for packaging, Internet course, expt. seq. 113372
control of power electronics systs., teaching syst. *(Spanish)* 67449
CPU design by formal verification, lab. work of undergraduate students 125295
DC cct. theory, problem solving, ES 101648
digital cameras, CMOS image sens., graduate level educational course 131987
digital cct. design teaching, prototyping hardware/software environ. 124276
digital design, PLD, elec. engng. degree course 125299
digital design education infrastruct., multiple EDA tool vendors, multiple modes of tool access 125300
digital filter design, intra-disciplinary capstone project, design teams 124264
digital logic design and computer fund. courses, microcontrollers and FPGAs 124260
ECSAIWeb, adaptive learning environ. on WWW 100464
Electronics lab, teaching tool 67448
electrotechnology, CAI syst. *(Chinese)* 78495
ETA (Electronic Teaching Assistant) program for electronics education 113384
FPGA hardware/software co-design in embedded syst., partition decision, graduate course 125294
FPX, field prog. port extender, hardware modules, Internet routers/firewalls, CAI platform 124266
hardware logic verification engineers, teaching, graduate level course, The Ohio State Univ. 124280
hardware/software codesign senior capstone design project in computer engng. 125296
high temp./high power electronics, WWW educational course 113314
hypermedia-aided design, collaboration framework for EDA appls. 125174
IP-core based IC design enabled by 3D wafer bonding, research-focused project course 126958
logic cct. learning tool *(Japanese)* 79838
logic ccts., learning tool *(Japanese)* 114699
LSI design, education, IP database *(Japanese)* 89632
mechatronics lab. course 124278
MEMS, microsystem technols. and design, Web-based training 127106
MEMS micro-syst. proc. education, morph. and elec. charactn. 127123
MEMS press. sens., micro-syst. proc. for education, fab. 127124
MEMS proc. design simulators based on VRML and Java 127105
microcontrollers learning using CAI-oriented multi-micro simul. environ. 78512
microelectronic systs. education, conf., Las Vegas, NV, USA (June 2001) 124190
microelectronics classes, design contests as class projects, worth 124271
microelectronics education online courseware library using Java applets 78515
microelectronics technol., interactive course on website, animations 124258
microsyst. packaging, undergrad. educ. needs, course design 113373
microsystem packaging education, product develop. course 113316
microwave CAD education tool 67454
microwave cct. teaching from theory to prototype eval. 67450
microwave simulators, educational appls. 89647
mixed sig. IC design via dist. learning, CAD and lab. dilemma 125619
mixed-sig. SoC design, joint university/indust. Internet-based course 124256
MOS analog design, reuse procedure, scalable model rules 125211
MOS IC amp. design teaching to undergraduates 104006
MOSFET model with small set of params. for electronic engng. education 126767
MOSIS, IC prototyping and low vol. prod. service, educational programme 127034
multitasking teaching to electronics/computing students 124250
µP design, Abel-HDL and prog. logic cct. 113286
optoelectronic technol. education, IT age *(Japanese)* 89631
packaging, educational course, EM simul. tool 113313
packaging, graduate educational course 113315
packaging & interconnection tech., Univ. level educ., Romanian experience 113374
packaging educ. module develop., Sync-O-Matic software tool 113371
packaging education, IEEE/CPMT Virtual Classroom 113312
packaging syst. cost anal., Internet-based educ. mater. 113370
packaging technol., phys. procs., visual modelling 124352
packaging technol. teaching methods 124253
power electronics course teaching, building-block approach 100462
professional CAD environ. for IC design teaching 124269
Professional Issues undergraduate student education course 124247
RFIC multidisciplinary design, first-yr. graduate course for RF engineer training 124265
Simple RISC Computer archit. µP design, undergraduate course 125297
Slovak Univ. of Technology, microelectronics education, university-indust. cooperation 124259
SoC, systs. on a chip, multidisciplinary and collaborative design, interactive video course 126957
SoC design skills, collaboration in design team, hardware-software implement., education 124263
SoC Masters, internat. MSc program in SoC design at KTH 124267
SoC programme, digital hardware organization course, block-oriented design 125292
Socware design cluster for SoC, research & education programme 126955
software engng. education, large-scale parallel-embedded appls. 124275
studio teaching, mechatronics students 89655
switch logic tutorial tool, Boolean fns., static CMOS complex gate implement. 125293
sync. switching cct. education, computer aided via networking *(Polish)* 124244
teaching hands-on DSP with MATLAB and C31 DSK 78483
UK semicond. indust. learning network constr. 124248
undergraduate microelectronic systs. education, CAD tools, contemporary engng. practices 124262
VeriBox CBT syst. for chip design, logic synthesis, multimedia techs. 124257
VLSI design, indust.-sponsored graduate programme, IIT Delhi 124270
VLSI design education, synchronized streaming media appl., Internet in rem. learning 124268
VLSI image sens. project chip, undergraduate course, design cycle 126954
wafer-level packaging, technol./implement., education 124361
web-based microelectronics lab. within EDIT Distance Learning Network, pilot implement. 124255
Xilinx Univ. Program, university-based support environ. 124261

electronic equipment manufacture
see also printed circuit manufacture
3.4 GHz subscriber transceiver radio unit, internat. design and manufac 67508
area array packaging, high dens., high speed separable interconnect appl. s 124336
cleanroom gloves, elec. props. meas. 124312
control syst. design and implement. for mfg. mach. 89945
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquis and CBR 113447
e-commerce, electronics mfg./supply chain mgt., business models 113449
electrostatic printing-based mfg. procs. for electronics industries 101462
environ. conscious electronics manufacture, global regulations/materials conc 67679
environ. props. eval. and optimisation 113800
ESD protective wristband snap release, unintentional disconnect problem 89
human error/mistake proofing in electronics mfg. 113450
ink jet print head prod. simul., methods 124316
inspection strategies optimisation, quality cost models 113772
integrated maint. mgt. syst. 100514
large scale LCD panels, proc. using scanner-deflected UV-laser radiation 97
laser glass cutting, FPD prod. 78602
laser welding distortion in the EDFA LD pump packaging, FEA 113446
LCD prod. yield improvement, ITES opt. meas. syst. 121115
liq. cryst.-on-Si microdisplay fab. using std. foundry proc. flow 86869
microdisplays, eval. 86802
mini Hi-Fi audio products, drop-impact behavior, finite element mode 100563
MM-wave transceivers, high vol. manufacture, design challenges 85473
Mobile Technology, electronics manufacturer, IS department mgt. 78581
MR/GMR-based mag. heads, ultra-high dens., constr./technol. 127373
Nan Ya displays develop., chip-on-film/COG technols. appl. 121069
optoelectronic component assembly automation 109082
packaging innovation, technol./mgt. issues 67619
pass. components, market renaissance, overview 80409
PDP back panel fab., low-cost proc., LTCC on metal 109898
proc. improvement, failure anal./closed-loop corrective action 113448
product life-testing strategies for improved data with time/cost savings 124
relocation of electronics mfg. facility, planning 113418
simulating solder joint form., bridge in QFP and fatigue in BGA 89821
six sigma QC strategy, utilization of seven Ishikawa tools/SPC 124400
sound speaker mfg., automated QC by neuro-fuzzy approach 120599
transcollaborative mfg. software for OEM/contract manufacturer inform. ac 89835
transformer manufacture, iron loss reduction by GA/neural net 69282
vehicle elec./electronic archit., syst. integrat. requirements for OEMs 89378
world electronics indust., recent/future trends, Asian growth 100558
yielded cost appl. in modeling electronic assembly procs. 124309
Pb-free PCB finish effects on final disk drive assembly proc. 115199

electronic equipment testing
see also circuit testing; computer equipment testing; telecommunication equipment testing
accelerated life test data modeling/anal. for multiple type stress 124311
accelerated lifetime test methods for package technols. 124355
accelerated testing, methodology/stress selection/appl. 78584
ADC sinewave histogram testing, quasi-coherent sampling 120702
American Nat. Standard for LV elec./electronic equipt. radio-noise emissi meas. 97120
ANSI C63.5/ARP958 methods of emission-antennas calib. for EMC 120636
arbitrary waveform generators, eqns.-based waveform creation 132091
Atmospheric Infrared Sounder, prelaunch perform. charact. 122645
automatic defect detect., US SAM. DSP tech. 100658
automotive electronic control modules, simul./design validation 113118
automotive electronic control modules, throughput multiplier for simultane multiple testing 113116
Bluetooth mfg. test strategies formulation 131217
Bluetooth wireless technol., test challenges 131252
commercial vehicles, antilock brake syst. ECU, HWIR simul. 134599
data distrib. fitting *(Chinese)* 100557
dielec. voltage withstand high-pot. tester, safety-related features 86441
ECG equipt. testing/calib., accurate prog. ECG simulator 110649
EMC test labs, user survival guide 94054
expert error, trouble-shooting in electronics 67527
IC fab. facility automation for 300 mm wafers 103965
immunity, indirect ESD, transient anal. 78582
low-energy radiation, user protection 133145
mfg. proc. improvement, failure anal./closed-loop corrective action 113448
MIL-STD-810F Test Method Standard for Environmental Engineering Consic ations/Laboratory Tests 133415
mode-stirred chamber, EM field distrib. meas. tech. 72351
OATS antenna factors for small anechoic chambers 128803
plate fin, strip fin, and pin fin heat sinks, modeling of thermal/hydraulic perfo 78620
product life-testing strategies for improved data with time/cost savings 124
protective relays, testing methods/simul. 133791
radiated emission source location accuracy, CISPR emission meas. syst. 105
ramification of component selection 124303
Rohde and Schwarz EMI test receiver, microwave sig. generator as tracking g erator 75773
Rohde and Schwarz test cells, precompliance testing 72369
semicond. laser integrated syst., testing with CCD camera 117272
soft mag. cores, HF, core type/appl.-based testing 116477
TFT-LCD matrix testing, e-beam test technol. 121126
O_2 digital solid-electrolytic gas analyzers, enhanced conc. meas. accur 132022

electronic funds transfer systems *see EFTS*

electronic journals *see electronic mail; electronic publishing*

electronic mail
academic libraries, rem. users, ref. assistance 130543
aircraft pers. commun., in-flight technols. develops. 111311
anonymous message sending over Internet 108325
answering syst. using inform. extraction and natural lang. generation 119516
attachment opening safety assurance 96061
Canadian Army, digitization 77029
Carnivore, network surveillance syst. of FBI 119513
certified electronic mail protocol 108086
collaborative technols., asynchronous and distributed proc. improvement 851
computer-mediated commun., emoticons impact on message interp. 108090
Context Aware Messaging Service *(Japanese)* 119521

ronic mail continued
ontinuous media email, comprehensive archit. 74156
ryptographic protocol, data commun. *(Chinese)* 84969
ustomer rels. mgt., advanced technols. *(Japanese)* 119623
ducational computer resource set-up by help desk staff 119488
mail Alert System, Petri net based modelling/simul. 119517
TON/NRSWA, changes/challenges affecting street works 108087
ealth care network, regional, supported by organisational change, electronic referral and booking confirmation 111259
ealthcare inform., pers., intell. inform. struct. for composing and pushing over Internet 111300
IF links for multimedia transm. 108407
mode car navig. syst. with small GPS appliance, overview *(Japanese)* 131712
nform. sharing syst. for intra-corporate coord. 119515
nternet facsimile as office appliance 130635
nternet-based self-aware services, anoms. detect. using Bayesian networks 130688
P end-to-end services quality, defects per million service transactions measure 108182
T and MIS 108020
T-driven quality benchmarking for competitive advantage 113415
egal documents, transm. over Internet, security 130619
ibrary ref. services enhanced through technol. 119514
LIES (Location-Independent E-mail Service) syst. implement. 119522
ow-cost telemedicine syst. in developing countries 133178
ned. image transm. on low-speed networks 98853
nobile telephone prog. 119492
nodels of mail server workloads 119519
MPEG-4 based multimedia e-mail syst. 96063
NwsAlarm tool for resource perform. degrad. detect. 74411
off-the-record email syst. 119520
nline customer contact 96062
rganizational media use in Singapore 85114
oscilloscopes, stand-alone freq. meas. *(Italian)* 109839
patient immediate discharge letters, use of XML in Scotland 111266
peace education projéct in Israeli high school, Internet-based group rels. 89617
perform. mgt., service level objectives achievement using control theory 130574
post-graduate dist. engng. students, academic advising commun. 67435
radiology result receipt confirmation using digital certificates 98865
ecurity 130620
endmail/qmail e-mail relaying 130618
SIMBA user alert service archit. for dependable alert delivery 108088
similarity-based agents for e-mail mining 119523
SMTP server and client for e-mails via Internet 130754
spambots and unsolicited advertising email prevention 108089
store-and-forward teleneurology in developing countries 133176
student interact. anal. in computer-mediated commun. environ. 119518
surgeon training via video conferencing and Internet 119769
teacher mailing lists, minority activity 89613
teledermatology as commun. tool between general practitioners and dermatologists 111281
telemedicine link, low-cost, in Bangladesh, eval. of experience 76778
universal service obligations, text services 119594
unsolicited junk e-mail, methods of combating spam 74155
Virtual Classroom, Internet technol. based course delivery 108106
W-MAIL, electronic mail syst. for wearable computing environ. 74158
wireless messaging services for mobile users 74157

tronic messaging
act. DSP message-board 85163
dvanced collaboration services 108058
ASP, appl. service providers 96006
Context Aware Messaging Service *(Japanese)* 119521
dismounted soldier, combat ident. 76981
EMU, client-server syst. for syst. monitoring and event mgt. 108024
nstant message technol. based mobile service *(Japanese)* 119995
nstant messaging 85159
nstant messaging in business commun. 74077
nternet portal environ., contents gathering/delivering, messaging/XML 130869
MMS, multimedia messaging service, building on success of SMS 131247
nobile agents, transparent migration 74251
nulti-ring/single-ring differential chain coding for telewriting appl., efficiency 118625
PHS-based multihop wireless infrastructure for local communities 108902
adiology, automated exam. notification of emergency department images in PACS 98837
SIMBA user alert service archit. for dependable alert delivery 108088
TCP/IP in commun. systs. 108399
virtual home environ., unified messaging and I-centric services 130922
wireless endpoint, short message services 119709
wireless messaging services for mobile users 74157

tronic money
nonymous coin marking, privacy protection against blackmail 106264
nonymous message sending over Internet 108325
ryptology, INDOCRYPT 2000, conf., Calcutta, India (Dec. 2000) 78450
roup signatures, electronic cash appl. *(Chinese)* 94365
ogic-based reasoning of PKI trust model 129265
payment scheme for broadcast multimedia streams 130967
Terminodes project, self organization in mobile ad hoc networks 74841

tronic music
see also musical acoustics; musical instruments
daptive parametric anal. and synthesis schemes 97113
lgorithmic comp. 120602
udio sigs. scaling using freq. domain techs. 106356
Basse Donnee System eval. for theory of harmony, music *(Japanese)* 86360
ollaborative music comp. syst. over Web 130886
igital musical sound synthesis by phys. modelling 131787
igital sound synthesis, transfer fn. model with nonlin. excitations 129963
nteractive computer music, aesthetics 120601
apanese laptop performers, CD designers and techno artists 75334
OO formant synthesizer, prosodic enhancements 106419
iano sound synthesis, phys.-based, DSP methods 129965
ost-digital tendencies 75336
ulsar synthesis, electronic music synthesis 86362
SensOrg, musical cyberinstrument design, cognitive ergonomics 86359
ound synthesis syst. in Windows-based visual environ., O'kinshi *(Japanese)* 86361
iolin sound synthesis, body mode modeling and modif. 131786

electronic news gathering
aircraft interf. due to VSAT/SNG and SIT terminals 88058
digital satellite news gathering and DVB, co-ordination channels 75300
DSNG auxiliary co-ordination channels 74889
DVB std. for digital satellite news gathering and other contrib. appls. by satellite *(Italian)* 86321
DVB-S, general systs. concepts 75268
NewsEye, news video browsing and retrieval syst. 84501
RAI SlotFill syst. for connecting audio/video archives via idle SNG transponders 75301
ZDF German Broadcast Centre digital satellite news gathering *(German)* 131740

electronic office *see office automation*

electronic publishing
used for publishing on electronic media
binary comic image, digital watermarking scheme *(Japanese)* 73406
Chinese newspaper with complex layout, anal./understanding/representation 94677
document text segmentation using multi-band disc model 94888
newspaper archive, interactive vocal IRS 119498
pers. objs. ident. in four-scenes comics of Japanese newspapers 94631
scientific commun. develop., value chain considerations 119444

electronic speckle pattern interferometry
3D asymmetric temp. field meas. by real time laser interferometric tomography 121254
3D obj. recogn. digital holographic neural network 129923
3D shape meas. by digital speckle temporal seq. correl. 75865
aircraft maint., phase stepping shearography, improved software 122496
aircraft materials testing, photonics techs. appl. 88043
bending strain meas. by digital holography 125141
double-sided lithog., opt. alignment method 126560
dyn. out-of-plane deform. meas. by pulsed digital holographic interferometry 132186
heart valve bio-prostheses, lensless Fourier holographic interferometry 122062
high precision in-plane rot. meas. by tunable LD ESPI 75889
high precision wavelet denoising digital speckle correl. form. meas. tool *(Chinese)* 94490
hybrid ESPI-FEM methods, mapping correl. algm., displacements meas. appls. 118319
impact damaged delaminated composite, shearography, neural fuzzy anal. 125156
LF vibr. meas. with phase-shifting ESPI, phase errors 132185
MEMS microstruct. testing by in-line digital microscopic holography syst. 128570
micro deform. meas. by digital phase-shift shadow moire 121186
microelectronic device thermal/thermomechanical characterisation by laser probing 115987
microelement testing by opt. meas. station 117534
mirror surface ESPI profile meas., phase-shifting fringe anal. 132167
packaging whole field displacement meas. tech. using speckle interferometry 113473
piezoceramic/Al laminated plates, vibr. characts. meas. at reson. freqs. 97853
pulsed TV holography, digital speckle photography, lost interf. phase restoration 83015
upper atmos. wind vel. meas. by speckle-correl. calc. method 133285
violet semicond. lasers for ESPI 72098
wavelet transform decoding of speckle interferograms 117574

electronic structure
for general aspects of electronic structure in condensed matter only; for specific aspects use appropriate terms, e.g. "band structure", "surface states"
see also band structure; band theory; Fermi level; interface states; localised states; molecular electronic states; surface states; triplet state
polyacene semicond., vulcanized, electronic, struct. props. 80781
Si(001) surface atom, hydrogen-terminated, etching, hydroxyl fn. *(Japanese)* 126343
C films, low temp. PECVD, emission props. 90379
InGaAs/GaAs multilayer structs., MBE grown, photolum. characts. 90327
ZnSe/ZnCdSe MQW, MBE grown, refr. indices 101216

electronic structure, molecular *see molecular electronic states*

electronic switching systems
ATM access switch syst., providing flexible redundancy 131033
ATM flexible switching syst. supporting QoS 131030
ATM high capacity switches, fast round robin priority port scheduler 130220
ATM MPLS networks, VC-merge capable crossbar switch implement. 131029
ATM network voice trunking, reliable soln. 96057
ATM scalable access switches, perform. study 131032
ATM switch, traffic control mechanism based on load of output ports 119130
ATM switch core, act., reusable, rapid prototyping with PCI Pamette 96333
ATM switching syst., inter-proc. commun. network 131031
ATM systs., general switch mgt. protocol hardware implement. 131034
Batcher-Banyan internal link speeded-up packet switch, SFQ std. cell cct. design 73763
Chinese SPC telephone switch mfg. indust., innovation procs. mgt. 89730
CMOS LV pos. ECL, scalable crosspoint switch networks *(German)* 85438
hierarchic 4×4 ATM integrated switching unit, design and emulation 74497
IP scalable switching based on opt. interconnects 119847
mobile satellite commun., on-board proc. equipt. 85909
NEAXΣ^{C}X media gateway and CX3100 Internet access node 85432
NEC's CX5220 IP Switch Core Router *(Japanese)* 131035
NEC ATOMIS 16 multiservice switching syst. 85435
NEC CX3200 media gateway for Internet access 85433
NEC CX6100-SG signaling gateway 85434
NEC NEAX2000IVS^{2}/2400IPX, ToIP WAN soln. 85436
NEC NEAX2000IVS^{2}/NEAX2400IPX, ToIP LAN soln. 85437
network sync. equipt. 108500
permutation capacity of WDM switching networks with limited-range wavelength conversion 131028
ripple effect meas. of Pascal programs, telephone switching syst. 108501
Saturn, terabit packet switch using dual round-robin arbitration scheme 73789
Taphub and Easyhub switching hub series, 100 Mbit/s, office appls. *(Japanese)* 96328
telecomms. network component testing from phys. layer to appl. layer 74491
three-level connection fields, software mgt. of links 73815
Unisphere Solutions IP platform for broadband services *(Polish)* 85439
virtual router network archit., traffic engng. *(Japanese)* 119409
Weibull model for weighted distrib. of residual failure data 96242

electronic trading
group commun., commercial Java implement. using reliable multicast 130752

electronic warfare
see also electronic countermeasures; jamming
antennas for mil. systs., review from Indian perspective 77034
broadband LPI radars, target detect. and ranging 88242
broadband microwave amps., PAE, current sharing concept 80252
captive-carry HIL missile simulator, relative targeting archits. 122764
counter terrorism technols. following World Trade Centre attack 133414
data transm. in EW equipt. simul. test syst. *(Chinese)* 111638
HTSC filter, ESM channeliser 71107
intentional EMI, threats and protections 83438
microwave ADC for broadband commun. 80331
MM-wave sens., W-band radiometer 75838
multioctave amp., cascaded reactively terminated single-stage distributed, EW syst. 91238
PHEMT MMIC power amps., EW appls. 125762
radioemitter coord. determ. using multipositional systs. 122763
technol. perspective 111637

electronics industry
see also consumer electronics; domestic appliances; DP industry; electron device manufacture; electronic equipment manufacture; telecommunication
3D automated visual inspection syst. for SMT assembly 80495
ASIC indust., product develop. proc., buyer-seller rels. 89795
CAD-integrated DFE workbench tool develop. 100535
cct. board inspection, 3D vision syst., small FOV inspection 102830
character inform. technols. for electronic device simul. *(Russian)* 101671
chip foundries and dawn of open intellectual property era 67518
design for environ. programs evol. 100538
develop. time reduction, research project *(German)* 124291
environ. issues, conf., Denver, CO, USA (May 2001) 100450
Europe's positioning in electronic syst. design methodology 78401
facilities shutdown proc. due to network disturbances 134699
IBM Microelectronics, supply-chain mgt., assets/demand matching 89947
internat. R&D project eval. by multinational corporations 113401
Japanese high-tech indust. competitiveness, role of knowledge/organisation 113408
Japanese inform. and commun. indust. survey 130531
Japanese R&D globalization/public sector collaboration anal. 89729
large, inexpensive FPDs for TV, iFire develop. 113434
machine vision in indust. automation, filter tuning appl. *(Italian)* 113807
mag. levitated centrifugal pump, bearingless motor, digital control 123315
mgt. talent eval. model using fuzzy AHP 124284
mobile commun., future platform, Internet, semicond. indust. aspects 85691
OO knowledge-based CAPP syst. for bare cct. boards mfg. 91468
proc. equipt., voltage sag effects, Malaysia 133679
remanufacturing activities, technol. trends, business plans 100708
response surface methodology for bonding proc.design, GA 124520
semicond. electronics, conf., Guoman Port Dickson Resort, Malaysia (Nov. 2000) 89564
semicond. firms R&D investment/perform. 89726
semicond. indust. role in wireless commun. evol. 108684
semicond. mfg. facilities, multi-generation enhanced power quality design 113172
semicond. mfg. problems solved by data mining 67517
static charge reduction on personnel in electronic indust. 93965
supply chain demand response strategy eval. and optim. 89794
supply chain mgt., environ. factors, strategy, implement. 100542
UK semicond. indust. learning network constr. 124248
wafer plant preventive maint. activities, cognitive demands extracted using applied cognitive task anal. 89834
WebFabIS web-based microelectronics lab. inform. syst. 113451
work-induced stress anal. in ergonomics, fuzzy decision approach 89833
world electronics indust., recent/future trends, Asian growth 100558
C_2F_6 removal, ferroelec. packed-bed barrier discharge reactor 122710
GaN-based electronic/optoelectronic devices, business opportunities 70002
Pb-free solders database develop., NEMI project 115187
Pb-free technols. 113801

electrooptics *see electro-optical effects*

electroosmosis *see electrophoresis; osmosis*

electrophoresis
see also electrophoretic coating techniques
3D electrophoretically driven microlab., DNA hybridisation chip 86684
biofactory-on-a-chip technol., microfabrication proc. 97406
capillary electrophoresis chip, cond. sens., powder blasting 92546
capillary electrophoresis microchip, radionuclide/metal detect. 86718
cond. detector for on-chip capillary electrophoresis 109746
cortical rat neurons, dissociated foetal, dielectrophoretic trapping 98227
DNA chip, sample manipulation *(Chinese)* 120947
electro-osmosis anal. method using FET models 83087
electrophoretic gels, image digitalization, automated anal. 110832
EPON-based photoresist polymerization, MEMS 81570
gel electrophoresis image enhancement 118226
hepatitis C virus amplif., rapid micro-PCR syst. 81555
lab-on-a-chip technol., microfluidic devices in chem. meas. 109781
LF electronic gate detect., cell/bacteria/colloid counting/sizing 121867
low-temp. press.-assisted bonding technol., microchemical anal. appls. 92557
micro particle manipulator fab., neg. dielectrophoretic force *(English)* 116100
micro-fabricated plastic chips, hot embossing prep., DNA separation/detect. appls. 70330
microchips, LIF detect., clinical diagnostics 98348
microcontact printed plastic ccts. for electronic paper 69337
microfluidic device, flow rate meas., cond. monitoring 92487
microfluidic device, hot embossing proc., DNA separation/detect. appls. 92515
miniature and microparts, contactless transport, electrostatic feeder 83173
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
neuroelectronic interfacing with cultured multielectrode arrays 111163
PEM fuel cell, cathode/anode channels mass-exchange 78163
PEMFC, poly(perfluorosulfonic acid) membranes, water electro-osmotic drag 100011
PMMA electrophoresis microchip, DNA sample preconcentrator 70359
polymer-ceramic nanocomposites for MCM-L integral capacitors, colloidal proc. 69277
polypyrrole mixed surfactant films, multilamellar vesicles electrophoretic engulfing 90580
polystyrene latex mixtures, photodetectors for heterodyne direct light scatt. instrumentation 131908
Pyrex glass etching and bonding, micromachining technols. for capillary electrophoresis 92556
radiochromato-imager, biological/biochem. appls., tissue/body sect. autoradiography 122270

electrophoresis continued
selective bacteria detect. using dielectrophoretic impedance meas. 132533
silica electroosmotic micropumps, fab., charactn. 127132
submicron bioparticle dielectrophoretic manipulation, lab-on-chip 87298
C MWNT, 3D nanorobotic manipulations 90594
Si-microarray devices, heterog. protein crystn. screening 132010
ZrO_2-Y_2O_3 electrolyte, electrophoresis, LSM cathode substrs. 99968

electrophoretic coating techniques
polysilicon thick films by electrophoretic deposition 101438
pos. working photo resists, mfg. proc. 92186
small-tubular SOFC fab. by electrophoretic deposition tech. 99961
C, pyrolytic, deposition on porous cathode tubes, interlayer for SOFC zirc electrolyte 90424
CdTe highly fluoresc. nanoparticles, elec. field directed layer-by-layer assen 125037
$Ce_{1-x}Gd_xO_y$ films, electrophoretic and electrolytic deposition, SOFC 79396
CeO_2 films, electrophoretic and electrolytic deposition, SOFC 79396
ZrO_2-Y_2O_3 electrolyte, electrophoresis, porous doped $LaMnO_3$ cathodes, SO 123791
ZrO_2-Y_2O_3 electrolyte film, electrophoretic deposition, SOFC 89203

electrophoretic coatings
microencapsulated electrophoretic rewritable sheet 109859
phosphors, electrophoretically coated, for FED, effect of laser irrad. 97625
small-tubular SOFC fab. by electrophoretic deposition tech. 99961
$Ba_{0.6}Sr_{0.4}TiO_3$-MgO thick films for microwave appl., electrophoretic deposi 91169
$Ce_{1-x}Gd_xO_y$ films, electrophoretic and electrolytic deposition, SOFC 79396
CeO_2 films, electrophoretic and electrolytic deposition, SOFC 79396
ZnS:Ag, electrophoretically deposited phosphor, opt. charactn. 104918

electrophotography
diamond-like C coating DC-RPECVD on OPC drum, DC power depend. an laser printer appls. 68225
digital copier, electrophotographic proc., num. anal. 134697
digital copiers/printers using electrostatic particles control 83164
dry electrophotographic procs., toner to photoconductor adhesion 83171
electrophotographic color prints, predicting transmittance spectra 94867
piezoelec. cantilever, micro-mirror/laser array 116755
push-pull dithiole, fluorene acceptors as electron transport materials holography 116908
toner satellite form. in electrostatically transferred images 83172
toners, charge stabilizers 83165
toners, quaternary ammonium charge control additive, heat treatment ef 83167
xerographic photoreceptor defects, SCL discharge studies 128709
Si-based polymers, photocond., electrophotography appl. 116904
SiO_2 PECVD microstruct., laterally emitting TFEL device fab. 82371

electrophysiology *see bioelectric phenomena*

electroplated coatings
ceramic films, electrodeposition, fuel cell membranes 125039
Damascene feature fill, electroless and electrolytic seed repair effects 1264
flip-chip interconnect struct., pillar bump 113651
LeadFrameOnChip, power bus and bond-over-act.-cct. 124388
micro particle manipulator fab., neg. dielectrophoretic force *(English)* 116
organoceramic films, electrodeposition, fuel cell membranes 125039
polymeric based flexible substrs., Young's moduli, temp./aging effects 786
Au electroplated microbump, surface activated bonding 113511
Au electroplated microstruct., mech. props. meas. *(Korean)* 116099
Au-Sn pulse electrodeposited thin films, growth charactn. 125044
CdS/$CuIn_{1-x}Ga_xSe_2$-based solar cells, DLTS 112854
Co-Ni-P ferromag. MEMS, etch holes 127128
CoNiFe electroplated film, saturation induction 116267
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92
Cu damascene lines, grain struct., electromigration resist. 126511
Cu damascene proc., trench filling, grain growth 115702
Cu electrodeposits in fine line damascene structs., recrystn. 69955
Cu electroplated film, Cu/Cu/TaN/SiO_2/Si multilayer interfacial react. 8111
Cu electroplated films, adhesive strength & scratch resist. 126491
Cu electroplated films, swirl defects orig. & elimination 115714
Cu electroplated interconnects, microtexture/strain 103460
Cu electroplated layer, SU-8 microstruct., micro heat flux sens. 75754
Cu, electroplated, on-chip metallis., gap fill, microstruct., comp. 115711
Cu electroplated profiles, pattern depend. modelling, CMP 115712
Cu electroplated thin films, RT recrystn., methods/mechanisms 101416
Cu thin films, void form. by thermal stress conc. at twin interfaces 103464
Cu two-level interconnect, defects and electromigration 115691
Cu/Cu/TaN/SiO_2/Si multilayer, interfacial reacts., electroplated Cu props. 81
Cu/Ta/SiOF layered struct., crystallographic texture degrad. 92132
Cu/a-C:F low-k dielec. damascence interconnection, electroplating 103475
Ni LIGA cantilevered microposts, mech. props. eval. and failure anal. 1160
Ni MEMS material microstruct./elastic property modeling 104175
Ni catalyst, C nanotubes CVD growth and field emission 101537
Ni film, plated solder joints, interface react. 69943
Ni/SnBi solder interfacial react., annealing, microstruct. 101470
Ni-pillars, electroplated, ferromag. dots/arrays, Hall-magnetometry 116275
Si membrane, permalloy film, stress anal., Raman scatt. 127099
Sn plated contact, dyn. contact resist. 115105
Sn plated contact, oxide film, fretting degrad. 115104
Sn-Pb(Ag) electroplated solder, bump metall. 113652
Sn-Sb nanostructure alloy anodes, Li-ion batts. 123764
Sn-Sb-Cu nanostructure alloy anodes, Li-ion batts. 123764
$TiWN_x$, selective etching, electroplated Pb-Sn solder 113533

electroplating
2D X-ray antiscatter grids for mammography fab. 110967
air-channel structs. for microfluidic, MEMS and microelectronic appls., 113559
baths, current dens. meas. methods 89477
CD-R substr. groove geom. testing syst. 92984
ceramic films, electrodeposition, fuel cell membranes 125039
concave capacitor, $BaSrTiO_3$ thin film integrat., DRAM devices 101330
diamond CVD on electroplated diamond tools, multilayer struct. 68276
embedded power, hybrid MCM-based 3-D integrat. packaging technol. 8054
EPON-based photoresist polymerization, MEMS 81570
FDTD method for simul. of transm. waves through multilayered thin conduct sheets 105714
flip chip assembly, bumping, laser-driven release proc. 80537
flip chip assembly subcontracting, integrated turn-key capability 69369
graphite masks fabr. for deep/ultra-deep X-ray lithog. 81146
Hull cell, secondary current distrib. anal. 112757
interconnects, conf., Burlingame, CA, USA (June 2001) 124180

troplating continued
lin. microactuator, var. reluctance stepping motor, thin film. technol. 78110
MEMS fab., high-aspect-ratio struct. 81608
MEMS press. sens. using flip-chip on low-cost flexible substr. 121034
MEMS proc. phys. simul., CAD tools 92537
metallic struct. embedded FBG sens., prep., thermal perform. 120849
micro particle manipulator fab., neg. dielectrophoretic force *(English)* 116100
microcoils, optimised fab. proc., 3D-UV-depth lithog., electroplating 116096
microcoils fab., electroplated Cu & Permalloy, micromoulding 75764
microfabrication and micromachining proc. technol., conf., Santa Clara, USA (Sep. 2000) 89582
microstruct. 3D PCBs, fab. technol., opt. transceiver module appl. 115156
microsystems, micro- and nanofabrication proc. technols., diverse appls. 92567
MOXI microfabricated zoom lens for X-ray imaging 110449
multifunction minifab tools for syst. chip fab., design by Japanese companies 81412
organoceramic films, electrodeposition, fuel cell membranes 125039
PCB indust., high speed acid copper electroplating, current densities 91462
proton beam micromachining & electroplating, precision 3D microstruct. 104215
SU-8 resist, high-aspect-ratio microstruct. fab., Si/Cu(NiFe)(Au)(Ti) syst. 92530
Au electroplated microstruct., mech. property 104206
Au-Sn alloy, eutectic solder, electroplating 79382
Au-Sn pulse electrodeposited thin films, growth charactn. 125044
Bi_2O_3-ZnO-Nb_2O_5 multilayer capacitor, electroplating technol. 115050
$Bi_2Sr_2CaCu_2O_{8+\delta}$/Ag HTSC tapes, electroplating prep, J_c under mag. field 70718
CdHgTe films, nonaqueous electrodeposited, solar cell appl. 101439
CoNiFe, electroplating, mag. microsystems 101423
Cu DC/pulse plating for trench/via filling, optimum conditions 126490
Cu PCB electroplating proc. modelling using virtual plating technol. 125905
Cu, additive-free electroplating in high aspect ratio trenches 126443
Cu direct metallisation of polymer foils for additive flexible interconnection technol. *(German, English)* 67589
Cu dual damascene microstruct./via chain yields, annealing conditions optim. 126487
Cu dual damascene proc. defect tracing 126496
Cu electroplated film, Cu/Cu/TaN/SiO_2/Si multilayer interfacial react. 81113
Cu electroplated films, swirl defects orig. & elimination 115714
Cu, electroplated, on-chip metallis., gap fill, microstruct., comp. 115711
Cu electroplated profiles, pattern depend. modelling, CMP 115712
Cu electroplating, two-step tech., seed enhancement 115713
Cu films, acid-copper plating bath, electrochem. studies 101404
Cu films, damascene electroplated, morph., filling capability 68352
Cu films, electrodeposition, buffering agent, mass transfer model 90514
Cu interconnect electroplating, seed layer surface RTA effects anal. 115489
Cu interconnection in ULSI, electroplating technol. *(Chinese)* 126500
Cu metallisation, electroplating, electrolyte resist. control 115715
Cu metallization, sub-0.25 μm, seed-layer sputter deposition, line cusp magnetron plasma source 92164
Cu periodic reverse electroplating, waveform shape/freq. optim. 68351
Cu trench/via filling by electroplating, current dens./pulse waveform effects 92178
Cu wafer metrology for electroplating/CMP control 115689
InGaAsP/InP 1.53-1.55 μm LD, on-wafer surface implanted ps pulse 117255
Ni, 3D metallic microstruct., proton beam micromachining 127111
Ni film, plated solder joints, interface react. 69943
Ni-Cr(Cu) resistors, low value, contact resist. by transm. line model method *(Japanese)* 91409
Ni-P composite plating treatment on Mg alloy *(Japanese)* 79363
NiFe, electroplating, mag. microsystems 101423
PMN relaxor ferroelec., Ni electroplating, H-induced degrad. 127204
PMN-based relaxor ferroceramics, Ni electroplating, resist. degrad. and recovery 104308
Pb-free leadframe packages, plating chem. eval./reliab. 113700
Si:H/Cu jns., Cu electroplating, struct./elec. props. 101420
SiC nanoparticle coatings, composite electrodeposition 101405
Sn whisker form., lead-free electronics finishing 90487
Sn-Ag solder ball on effect on microstruct. of BGA joints with Au/Ni coated Cu pads 69330
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702

tropneumatic control equipment
act. gait orthosis 98721
current-to-press. transducer, ferromag. nozzle, mag. fluid actuator 78106
elec. motor car unit, brake force control *(Chinese)* 78307
impedance std. calib., rem. controlled coaxial switch, pneumatic actuator 109416
positioners, noncontact posn. meas. sens. *(German)* 121221
solenoid valve dyn. 93985

tropolishing *see electrolytic polishing*

troreflectance
anthracene cryst., phthalocyanine doped, band gap, vac. sublimation growth method 79172
cholesteric gray-scale bistable displays, pulse seq. addressing effects study 116832
reflective twisted nematic LED devices, operation mode evol. *(Chinese)* 121095
variable opt. attenuator based on guided wave reson. 127798
GaInP/GaAs HBT struct., SPV spectr., contactless electroreflectance 126684
$LiNbO_3$, vol. hologram, elec. controlled spectral filter 71491
MoS_2:Re, elec./opt. anisotropic props. 91701

troretinography
Best's disease, pattern ERG, psychophys. fns. 132577
contact lens electrode, built in LED, ERG 98241
flash ERG in rodents, different recording params. eval. 98233
human early vision syst., CNN-based retina model 132582
macular hole surgery, multifocal ERG, visual acuity 98243
multifocal m-seq. tech., visual fn. imaging 76301
neg. ERG, clinical incidence 98242
pattern ERG with contralateral corneal ref. 76311
retinal cone fn., long-term vigabatrin medication, ERG 98244
retinal model based ERG sig. modeling 87391
retinocortical evoked pot. changes, subjs. aged 75 yrs. or more 110581
NH_3-related modulation, retinal oscillatory pot., factor struct. 76252

trorheology
see also magnetorheology
electroceramic fine particle/polymer hybrids, situ proc. 101507
EMR fluid with nanoscale composite, vibr. control 79464

electrostatic accelerators
see also van de Graaff accelerators
2-MV Injector for HI fusion 97905
HI fusion source injector, adiabatic matching sect. 97906
KSTAR, circ. aperture grid accelerator for NBI *(Korean)* 87058
RF-driven ion source in electrostatic accelerator, props. extraction *(Chinese)* 110113
tubes, nonlin. optics, third order Lie map *(Chinese)* 132247

electrostatic actuators
2D opt. scanner, electrostatically actuated, surface micromachining, lin. 89020
3D self-assembling, MOEMS appl. 99878
AirJet paper mover, mesoscale MEMS device 81619
bulk micromachined electrostatic microvalve, curved-compliant struct. pneumatic tactile display 87922
comb test device, smart MEMS material crack diagnosis 125158
deformable membrane mirrors, microfab., packaging & testing 71380
emerging MEMS technols. 89848
extended operation range, current-pulse drive 70340
fab., p^+ Si cantilevers, opt. devices *(Korean)* 123707
fluorocarbon films, integrated MEMS proc., deep RIE 104205
force bal. micromachined press. sens. 109798
gimballed electrostatic microactuator, full 3D motion charactn. 89025
HAR microstruct., molding proc. 70366
large-aperture MOEMS Fabry-Perot tunable filter, electromechanical simul. 93217
mag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 89022
MEMS microengines dyn., opt. laser interferometry 112570
microactuator optimally designed for HDD 99874
microgripper technol., overview *(Chinese)* 99869
micromachined elastic struct. with electrostatic actuation, bifurcation of equilibria 70348
micromachined electrostatic micromirrors, pull-in condition eqn./modeling 116783
micromachined tunable CPW resonator, spiral inductor 80224
micromechanical relay, electrostatic actuation 92507
microsystems, micro- and nanofabrication proc. technols., diverse appls. 92567
microtechnol. & microsyst. develop. in meas. appls. 120608
microtechnol. opportunities in metrology, stds. & calib. 120609
mirror arrays for scanning appl. in laser projection syst., fab. 82192
nonlin. dyn., anal. model 81586
parallel-plate actuator, opt. moving-fibre switch 92541
parallel-plate electrostatic actuator, vert. hinges 116092
planar reconfig. double stub tuner using MEMS switches 80307
polysilicon electrostatic microactuators, torque/speed characts., on-chip anal. 99872
polysilicon MEMS, actuated microcantilevers, interferometry, test struct. nonidealities 123702
reconfigurable MEMS filters, tunable lumped components design 80223
RF MEMS devices technol. 80236
RF MEMS switch, electromechanical model 104199
RF MEMS variable capacitor, electrostatic digital control 102783
rotary microactuator, parallel-plate config. electrodes 123704
telecare med., capacitive micromachined accelerometers, neural network compensation methods 110526
ultra-low mag. disk head fly height control, CMOS MEMS-based electrostatic microactuator 123708
wideband series switch fabricated using metal as sacrificial layer 125720
X-band MEMS microstrip shunt switches, isolation bandwidth, up-state insertion loss 125682
InGaAs/InP tunable external cavity LD, MEMS rotary actuator 117300
Si MEMS capacitive RF switches on high resist. substrs. 116082
Si inverter logic gate using micromechanical switch, electrostatic force actuator 92511
Si micromachined deformable mirror, opt. wavefront compensation 104771
Si, polycrystal torsional micromirror array design, opt. binary switching, AM appls. 104762
SiON planar waveguide technol. based micro-opto-mech. 1×2 switch 116796

electrostatic coating techniques *see spray coating techniques*

electrostatic coatings *see spray coatings*

electrostatic devices
see also capacitors; dielectric devices; electrostatic accelerators; electrostatic actuators; electrostatic lenses; electrostatic motors; electrostatic precipitators
Ball semicond. MEMS technol. using spherical substrs. 116053
bipolar charge aerosol classifier instrum. syst. 128663
chuck with thin ceramic insulation layer, wafer holding appls. 128707
cylindrical particles charging in monoionized elec. fields 128708
deformed water cone tip, neg. corona discharge, DC field 83161
digital copiers/printers using electrostatic particles control 83164
Electrostatics 2001, conf., Koscielisko-Zakopane, Poland (June 2001) 78467
electrotherapy for patient treatment, hist. 76595
flat sprays induction charging for space charge generation 128710
high precision chucks for litho. appls., design apsects 115764
induction spray charging, space-charge suppression FEA 72191
inertial sens., micromachined disc, electrostatic levitation 97575
Intelli-FIELD electrostatic field disturbance sens. 89777
ionizer air-cleaners, dust removal, ozone emission 83163
MEMS, lin., nonlin. and mixed-regime anal. 104192
MeV ion beams for implant., electrostatic scanning 121383
micro-aperture electrostatic field mill based on MEMS technol. 83169
micromachined US transducer arrays, cross-talk in Si substrs. 111491
micromechanical capacitive US transducers, fab. by surface micromachining 122735
microswitch, electrostatically actuated, contacts study 125860
microwave MEMS switch, fab. 92523
miniature and microparts, contactless transport, electrostatic feeder 83173
muscovite mica electrostatic separation from feldspathic pegmatites 128711
polymer powder boxer charger for electrostatic powder coating appls. 128714
powder coating corona guns, free ion conc. reduction 128712
powder coatings, thickness/adhesive props. meas. 83170
sampling electrostatic force microscopy, PPM 105684
separation procs. optim. using response surface modelling 128713
sprayer, aerosol space charge generation, drops, EHD instabil. 83168
thruster, microwave engine, operational characts eval. *(Japanese)* 88076
toner satellite form. in electrostatically transferred images 83172
Varian E220/E500 series implanters, cooling 115567
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
water-in-oil emulsions, electrostatic coalescence, power consumption 83160

electrostatic devices continued
GaAs dry etching, electrostatic chuck adaptation 69893

electrostatic discharge
0.18-μm salicide CMOS technol., ESD protection design, substr.-triggered tech. 104114
BCD5 smart power technols., ESD protection struct. 127074
bipolar transistor, VGBNPN device, smart power ESD protection 103786
brush discharges, dust ignition tests 83118
CDM ESD simul. using time domain air gap discharge meas. 72176
charged cylindrical bodies-to-grounded/floating surfaces ESD 117616
cleanroom gloves, elec. props. meas. 124312
CMOS, eight-level metal low-k intermetal dielec., ESD protection, grounded-up bond pads 81522
CMOS CDM ESD phenom., mixed-mode transient anal. *(Korean)* 116026
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
CMOS GHz RFICs, on-chip ESD protection design using polysilicon diodes 125743
CMOS HF I/O interface ccts., design-for-ESD-reliab. 104113
CMOS IC, ESD clamp cct., stacked polysilicon diodes 104115
CMOS LNA, ESD-protected, 900 MHz, sub-1 dB NF, TQFP48 package 90760
CMOS smart power, controlled trigger/holding voltage, protection struct. design/anal. 81540
conditions calc. between charged body/floating pot. conductor 72175
conducting polymers, microelectronics appls., review 81409
conductive polymer resins for ESD appls., packages, antistatic agents 105675
electronic equipt. design for ESD immunity 100670
electronic equipt. immunity, indirect ESD, transient anal. 78582
Electrostatics 2001, conf., Koscielisko-Zakopane, Poland (June 2001) 78467
EM radiation field 83103
EOS/ESD, conf., Anaheim, CA, USA (Sept. 2000) 67377
ESD-EMI induced IC proc. interruptions 103966
flexible intermediate bulk containers, electrostatic ignition hazards 72174
full chip ESD design rule checking 104072
gate oxide, ultra-thin, ESD protection device trigger transient effects on reliab. 70118
generators, std. compliance 117617
GGNMOS and LVTSCR protection cells, ESD 126706
GMR head, ESD sensitivity 116425
human-body capacitance calc. by surface charge method *(Japanese)* 128667
HV CMOS IGBT gate driver controlling four switches 116045
IC ESD damage risk minimization, polymer technol. options 100581
ICD pulse generator failure, electronic cct. damage by elec. overstress 122316
ICs, HBM ESD testing, contact reliab. 127001
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
instrumentation amps. protection 79573
insulating surfaces ESD characterisation 83114
ionization-based ESD-control techs. for electronics assembly, safety 125902
latch-up device simul. tool, 2D, for pre-Si develop. phase 81496
layout-driven hot-carrier degrad. minimization using logic restructuring techs. 125343
LDMOS and SCRLDMOS transistors, ESD current filamentation 126833
LDMOSFET, 25 kV ESD proof, with turn-on discharge MOSFET 92367
leadless format devices for EMI suppression 94062
lightning ESD, electronic systs. risk eval. 83120
MEMS, ESD/EOS suscept., failure mode anal. 104150
metal interconnection, ESD/EOS protection cct. and I/O buffer 126505
methane-air mixtures ignition from multiple capacitor discharges 83117
microelectronic devices unipolar charge induction modelling 128662
mixed-sig. and RF ICs, ESD protection cct. in BiCMOS technol. 114890
MOSFET triggering SCRs for ESD protection ccts. 125226
NMOS devices, lateral bipolar snapback high current I-V charact., model params. extract. 70160
NMOSFET protection devices in 0.13 μm CMOS technol., hot electron/ESD stress interact. 81526
NPN bipolar transistor breakdown anal., ESD protection cct. design appl. 81242
on-chip ESD protection, induced noise issue 127063
on-chip ESD protection design, test models, failure mechanisms 104008
pad-oriented multiple-mode ESD protect. struct. and layout optim. in BiCMOS 127069
parasitic bipolar transistor model in protection MOSFET, generated-hole-depend. base resist. 81418
partially-depleted SOI salicide CMOS technol., ESD robustness of devices 116040
petrochemical indust. grounding systs. design considerations 134694
photomask handling infrastructure, UV lithog. 103675
polysilicon surface-micromachined MEMS test structs., elec./environ. reliab. charact. 104165
PowerMESH HV MOSFETs with integrated gate protect. Zener diodes *(German)* 81336
protection cct., input capacitance 81464
protection ccts. for HF/RF appls., anal. and design 80340
protection circuitry design rule checker for IC I/O cells 104071
protection device issues for IC designs, modeling methods 104073
protective materials perform. at low relative humidity 83121
protective wristband snap release, unintentional disconnect problem 89816
proton implanted VCSEL, ESD pulse sensitivity 128232
PWM inverter-fed IM bearings, capacitively-coupled discharge currents 88740
radiated mag. fields meas. using field sens. 75829
reliab. phys., conf., Orlando, FL, USA (April/May 2001) 78456
reticle ESD damage mechanisms using Canary diagnostic reticle 81142
reticles, ESD damage mechanisms, wide bandwidth transient-EMI sens. antenna 81148
RFICs, ESD-induced cct. perform. degrad. 127000
SCR ESD protection ccts., dyn. triggering 115873
semicond. device/IC ESD testing, transm. line pulsing set-up 104083
SIMOX wafers, low dose O implant.-induced bulk and surface defects anal. 69791
single finger grounded gate nMOSFET ESD protection devices 126816
single-finger NMOSFETs, nonuniform bipolar cond., deep sub-μm ESD protection design 81348
smart power ESD protection device, laser interferometric mapping 127076
space grade wires in electron environ., ESD study 133235
spin valve GMR heads, resist. as mag. perform. indicator 116426
sub-qtr.-micron CMOS, ESD protection strategy, gate-driven vs. substr.-triggered design 127026
submicrometer CMOS technols., hot carrier degrad. and ESD interact. 116022
sulphur crushing operations, ESD protective measures investig. 83122
TFSOI modular proc. for CMOS power devices/ICs 104098
three-body indirect ESD problem expts. 128664

electrostatic discharge continued
TLP, transm. line pulse syst., calib., correl., stds. and new techs. 83105
TLP meas., transm. line pulsers, ESD protection device response verif. 83104
transient EM fields, ultra wide band test syst. 87375
VGBNPN bipolar transistor, ESD protection, smart power technol. 1266
wafer level transient voltage suppression CSP for ESD protection, low cc I/O 113592
wafer-level GMR head proc., EOS indicators, floating gate EEPROM 81907
Cu multilayer interconnect struct., wire bonding/reliab. 113606
GaN/InGaN-on-sapphire blue LEDs, ESD-stressed, resistive current 127964
(In)GaN LEDs, indust. prod. on SiC 104996
InGaN/SiC QW LEDs, high-brightness, growth mode, strain depend. 10
Si controlled rectifiers, ESD protection ccts., variable holding voltage 8
a-Si:H TFTs, ESD damage threshold, time-volt. trade-off 126817
4H-SiC $p^+/n^-/n^+$ diodes, reliab., opt. emission microscopy 92286
SiGe 80 GHz prod. technol., three npn transistor types on single wafer 1

electrostatic fields *see electric fields*

electrostatic lenses
see also aberrations; focusing; particle beams
combined immersion mag.-electrostatic lens systs., curvilinear-axis fo 117625
long focus electrostatic objective, electron-opt. props. 72181
low-energy ion/electron vel. map imaging, magnifying lens 93976
NV-GSD-HE ion implanter, energy enhancement 121325
planar deflection syst. for field emission devices, 3D simul. 69434
quadrupole lens systs., fifth-order aperture aberration 72193
tube lens, electron transport, insulator charging effect 93973

electrostatic motors
electroconjugate fluids based micro motor 134104
emerging MEMS technols. 89848
MEMS microengines dyn., opt. laser interferometry 112570
micromotor technol., elec. drive design perspective 134106
polysilicon electrostatic microactuators, torque/speed charact., on-chip 99872
surface micromachined electrostatic micromotors 112569

electrostatic precipitation *see electrostatic precipitators*

electrostatic precipitators
barrier discharge type, electrode particle collection *(Japanese)* 111473
cement plant semi-dry kiln proc. conversion project, USA 89484
CHP plant, elec. dust precipitators, power supply *(Russian)* 123187
coal power plant, ESP, HV pulsed power supply *(English)* 72194
dust particles deposition efficiency simul. 72190
elec. curtain, charged dust particles, electrodynamics, repulsion force 831
elec. filter microsecond power supply for efficiency improvement *(Ru* 93982
ESP particle migration vel., particle diam., corona electrode geom. 8317
fine particles transport, electroaerodynamically induced secondary flow 8
HV pulsed power syst. *(Korean)* 117628
indust. electrostatic appls., past, present, future 83162
microsecond pulsed power supply 134231
modelling based on fuzzy logic 83174
nonthermal plasma reactor/ESP-based elec. air cleaner 117629
novel integrated desulphurisation for FGD, enhancements 88558
plate-type ESP, conducting particle trajectories computation, BEM 8317
plate-type ESP, conducting particle trajectories controllability 128716
pulsed energized wire-duct ESP, elec. field, charge dens., FEM 128715
spherical metallic particles dyn. 83177
steam power plant ESP using skewed gas flow technol. 99555
wire electrode configs., corona inception studies field 72192
wire plate ESP, flue gas flow vel., particle image velocimetry method 83
SO_2 removal, dielec. barrier discharge, ammonium salts collection 13335
SO_2 removal using wet-type nonthermal plasma reactor 133350

electrostatic waves (plasma) *see plasma electrostatic waves*

electrostatics
see also electrets; electric charge; electric fields; electrostatic devices; el trostatic discharge; static electrification; triboelectricity
2D boundary element calcs., self-optimizing discretization scheme 83134
act. pers. neutron dosemeter based on microdosimetric principles, CIME 12
adaptive h-version finite element algm. for electrostatic solver 128656
agricultural electrostatic spray appl., R&D in 20th century 89491
air, pos. streamer discharges, atmos. conditions, three-electrode syst. 1042
antistatic floors electrostatic charactn. using equiv. cct. model 83133
BEM computations, adaptive multilevel fast multipole method, Galerkin m 128658
bilamellar dielec. NDE based on elec. field-prop. rels. 101558
capacitive micromachined switch, mech. design and optimisation 127103
conducting prolate spheroid, electrostatic image theory 105673
corona wire electrode, elec. field computation 83130
cylindrical problem, method of lines soln., radial discretization 83454
dielec. conductive liq. glass pipe flow, space charge dens. 83124
dielec. liqs., aq. drops deform./break-up in elec. field 81650
dielec. prolate spheroid, electrostatic image theory 117615
discrete charges, Monte Carlo energy minimisation 93966
dust/allergen removal from carpets, electrostatic enhancement of carpet po 83100
E. coli elec. sterilization using electrostatic atomization 87951
electrostatically charged liqs., ignition hazards theory 83112
Electrostatics 2001, conf., Koscielisko-Zakopane, Poland (June 2001) 784
EM fields, modified kernel, a priori error bounds 117620
ESP dust particles deposition efficiency simul. 72190
field interact. with fractal surfaced dielec. body 72177
glass microspheres, adhesion based micromanipulation, contact geom. *(Fre* 70346
green-state P/M compacts, nondestructive electrostatic dens. assess. 11453
HV field, undergraduate EM course, role of computers, expts. 113391
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
induction spray charging, space-charge suppression FEA 72191
indust. electrostatic appls., past, present, future 83162
indust. electrostatic procs., fuzzy sets theory 83119
insulating liqs. flow electrification hazards 83123
intermediate bulk containers, electrostatics requirement for explosive at 83116
iter. coupling of boundary element and FEM in elastostatics 114164
layered dielec., rapid calc. of electrostatic Green's fns. 128657
lossless dielec. coated conductor, electrostatic Coulomb force calc. 83136
measuring techs. develop. 83126

rostatics continued
nicro-aperture electrostatic field mill based on MEMS technol. 83169
olar coord. charge simul. method, GA-based charge arrangement 83132
owder coatings adhesion meas. 83127
ower transformers, oil flow electrification, pressboard charge accumulation 88802
chwarz-type finite element solver 128659
olar array panel, electrostatically clean, develop. 112967
tatic charge reduction on personnel in electronic indust. 93965
tatic Green's fn., sing. removal 83098
tratified liq./vap. medium electrohydrodynamic induction pumping 93967
urface-pot. decay of disordered solids 83139
apered IDTs, elec. charge distrib. eval. 92713
extile fiber proc., elec. resist. effects meas. 83129
iscous fluid, conductive particle dyn. motion, DC elec. field 67680
water-in-oil emulsions, electrostatic coalescence, power consumption 83160
ZT films, domain images/retention props., electrostatic force microscopy 104309

trostriction
see also piezoelectric materials; piezoelectricity
iased electrostrictive ceramics, quasistatic coupling coeffs. 99080
Brillouin fiber lasers, soliton pulse compression 128561
Brillouin fiber ring laser, soliton compression and locking 128136
elastomeric polymer dielec., strain response, electroactive polymer actuators 127215
electroactive polymers, compliant actuators, appls. 125102
electroactive polymers, conf., Boston, MA, USA (Nov.-Dec. 1999) 100427
ferroelec. sens. advances & emerging technol., review 131881
fullerenol doped polyurethane elastomer actuators 104449
gas flow vel. meas. using laser-induced electrostrictive grating 121265
graft elastomers, electrostrictive ,dielec./mech./electromech. props., XRD, DSC, appls. 127216
P(VDF-TrFE) electrostrictive copolymer, electromech. coupling factor 104325
poly(vinyl alcohol)-poly(acrylic acid) gels, constitutive response, elastic deform., acidic/basic environ. 125114
poly(vinylidene fluoride-trifluoroethylene) highly electrostrictive networks 127161
poly(vinylidene-fluoride hexafluoropropylene) copolymer, electrostrictive response 127207
transverse fibre Brillouin effect, electrostriction prod., soliton transm. systs. 120203
AlN films, piezoelec. coeffs. 127220
CS_2-lead phthalocyanine based dual focal plane vis. opt. limiter 71954
GaN films, piezoelec. coeffs. 127220
n-InSb doped piezoelec. semiconds., electrostriction effect on parametric dispersion/amplif. 93792
PLZT, fatigued electrostrictive samples, microcrack clouds 104362
PMN-$PbTiO_3$ patches charactn., plate struct. act. vibr. control 116230
PMN-$PbTiO_3$:La ceramics, large sig. minor loop behaviour 104326
PZT, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
$Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics, sol-coated, struct.-property rels. 116181
$Pb(Mg_{1/3}Nb_{2/3})O_3$ thin films, dielec. props., electrostrictive strain, dc field 101428
$PbMg_{1/3}Nb_{2/3}O_3$-$PbTiO_3$, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
SiO_2 poled thin slab EO switch, electrostrictive consts. 105548
$SrBi_2Ta_2O_9$, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427

trothermal launchers
hybrid EM syst., for solid body accel., electroexplosive, electrothermal mechanisms 117637
temp. meas. of electrothermal-chem. launcher plasma 72205

ctroviscous effect *see electrorheology*

mental semiconductors
7×7 reconstruction, step/domain boundaries self-organisation 91612
300 mm CZ Si single crysts., growth, necks stress anal. 68117
300 mm single cryst. Si, growth technol. 68115
bacteriorhodopsin/p-Si heterostruct., SPV spectrosc. 102855
BiCMOS waveguide-based OEIC design 105048
chem. pyrolysis, nanomaterials prod. *(Chinese)* 126592
CMOS 0.18-μm logic with dual polysilicon gate, CD control 103571
colloidal cryst. assembly in Si wafers, photonic chip possibilities 102846
copper phthalocyanine films, MBE on Si:H, in-plane orient. 68203
CZ Si melts, mag. field config., temp. distrib. effects 68116
Cz-silicon solar cells efficiency improvement strategies 100082
DC mode high-sensitivity diamond detectors, particle accelerators beam-profile meas. 87221
DC-DC buck converter 4H-SiC/Si P-i-N diodes switching performs. 134170
diamond:Al(Cu), high energy ion implant., conducting layer form. 80999
diamond:B, heavily-doped, high cond., impurity states 115295
diamond:B,N, CVD films, elec. props., acceptor/donor defects 80644
diamond:B CVD films, piezoresist., grain boundaries, device appl. 115291
diamond:B films, heavily doped, microwave cond., photocond. 125997
diamond:B highly-doped electrodes, PbO_2 electrocatalysis and deposition, US effects 90503
diamond:B homoepitaxial film, growth, elec./opt. props. 115294
diamond:B semicond. films, MR effect 91601
diamond:B temp./press. sens., high-press. high-temp. appl. 86505
diamond:B thin film, buffer layer effects on CL, CVD 79318
diamond:B/Al Schottky contacts, DLTS space charge spectrosc. 80906
diamond:D CVD surfaces, D depth profiles 91583
diamond:Fe, type Ib synthetic, PL/CL obs., treatment effects 116915
diamond:H, low-resistive n-type semicond., H-related complexes 91951
diamond:H, p-type surface cond., adsorbates 69492
diamond:H, surface cond., adsorbate coverage, FTIR obs. 69494
diamond:H,N films, nanoscopic, near-field cathodolum. 116913
diamond:H CVD films, defect states, DLTS 80646
diamond:H films, surface region carrier generation 69493
diamond:H surface, vibr. sum-freq. obs. 117455
diamond:H/M (M=Au,Al) interfaces, elec. contact, spectrosc. anal. 69734
diamond:N, nanostructured films, plasma CVD, electron field emission 69397
diamond:N, synthetic crysts., implanted N redistribution 126322
diamond:N electron emitter, sp^2/sp^3 ratio effect on electron emission 115248
diamond:N films, HFCVD modulated growth tech., doping 68272
diamond:N films, highly-conducting ultrananocryst., PECVD, elec. cond. charactn. 102980
diamond:N films, hot filament CVD, struct., nucleation *(Chinese)* 114355
diamond:N homoepitaxial (001) surface, ion beam nitridation, AFM/XPS 115628
diamond:N nanocryst. films, PECVD, struct., electrochem. behavior 91605

elemental semiconductors continued
diamond:Ni,N, W8/AB5 defect levels, EPR obs. 126001
diamond:P field emitters in triode-type field emission arrays, fab. and charact. 80587
diamond:P films, low temp. excitation spectrum 69496
diamond:P homoepitaxial films, cathodolum. obs. 116914
diamond:P homoepitaxial n-type CVD films, phonon-assisted electronic transits. 69495
diamond:S,N,B, deep donor states, doping efficiency 69497
diamond:S single crysts., ion implanted, struct. props. 126290
diamond:Si film, elec./opt. props. 91602
diamond, carriers impact excitation under extremely high elec. fields 102971
diamond, crysts., growth, homog. degrad. 90203
diamond, CVD, sens. for charged particle detect. 121455
diamond, CVD film, field & photoemission, microstruct. effect 80564
diamond, CVD films, band gap, field emission 102904
diamond, CVD films, mech./opt. props., Brillouin microscopy 80636
diamond, CVD films, structs. with feature size <100 nm, fab. 69912
diamond, CVD films, undoped, neutron irrad., elec. props., defect anal. 80645
diamond, CVD films for components and emitters 114329
diamond, CVD growth from methyl radicals/acetylene, (100),(111) orient. 124878
diamond, DC-arc jet CVD syst., N addit. effects 68281
diamond, doping by ion implant. 115551
diamond, film, CVD synthesis from ethanol dil. in He/Ne mixtures 79291
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
diamond, ion implant. related defects, inhib. of light element diffusion 115557
diamond, ion-implanted, graphitization, variable range hopping cond. 91987
diamond, large area and flat film prep. *(English)* 124874
diamond, low-resist. wide band-gap, codoping method 126314
diamond, LPCVD synthesis, substr. effects 90409
diamond, microwave PECVD synthesis, influence of press. on nucleation *(English)* 124877
diamond, microwave plasma CVD reactor, num. modeling 68277
diamond, mol. adsorbates, p-type surface doping and cond., first-principles study 126002
diamond, natural, carrier scatt. mechanisms 80639
diamond, particle and radiation detectors 87241
diamond, plasma CVD on large-area Si substr., coaxial microwave plasma generator 90404
diamond, polycryst. CVD films, injection depend. long carrier lifetimes 80642
diamond, search for donors 115550
diamond, sens. appls. *(French)* 86698
diamond, single-phase thin films, PLD, homoepitaxial growth 79355
diamond, smooth films on SiO_2, hot-filament CVD 101311
diamond, surface channel MISFET, MESFET, HF appls. 126838
diamond, surface-channel MESFET, 2D device simul. 81363
diamond, through-hole membranes, plasma etching, anodic porous alumina mask 126384
diamond(100) surfaces, CVD homoepitaxial grown, photoemission props. 91603
diamond(111) CVD growth steps, C-species incorporation and surface migration modelling 115807
diamond {111} surfaces etched in O_2 water vap., at. struct. 115648
diamond (100) by Cat-CVD, surface chem. reacts. 124972
diamond amorph. films, field electron emission, threshold field 69399
diamond and related materials, conf., Porto, Portugal (Sept. 2000) 67401
diamond coplanar CVD radiation detector, charactn. 97992
diamond covalent surfaces, at. H-induced abstraction of adsorbed D 115290
diamond CVD, detect. of C_2 radicals in low-press. ICP source 68283
diamond CVD, localized elec. field effects, scanning tunnelling microscope appl. 124881
diamond CVD film patterning by RIE and MEMS appls. 92562
diamond CVD films, detector grade, growth, efficiency and charge collection dist. 114330
diamond CVD films, field emission, SEM/Raman obs. *(English)* 125952
diamond CVD films, gap states, thickness depend. dens. distrib. 80659
diamond CVD films, IR opt. props. charactn. 116551
diamond CVD films, polycryst., high-speed photoconductors 82306
diamond CVD films, prep., radiation detect. devices 87218
diamond CVD films, surface and bulk defects, conf., Diepenbeek-Hasselt, Belgium (March 2001) 113233
diamond CVD films, thermochemical polishing, removal rate 92060
diamond CVD on electroplated diamond tools, multilayer struct. 68276
diamond CVD particle detectors, trapping-detrapping behavior 87219
diamond CVD photoconductors, DUV excimer laser irrad., operational lifetime/radiation hardness 80650
diamond CVD radiation detectors for harsh environ. 132367
diamond CVD thick films, etching by rare-earth cpd. ink *(English)* 126336
diamond devices electron beam metallization, x-ray radiation perform. effects 102981
diamond electro-mech. micro devices, CVD, technol., perform. 116105
diamond electrolyte-soln.-gate FET, biocompatible ion sens. 86749
diamond film, CVD, residual stress effect, micromech. anal. 124886
diamond film, free-standing, elec. props. 80641
diamond film, hot-filament CVD, bias-enhanced nucleation method at low press. 68219
diamond film, microwave PECVD, Si(100) substr. *(Japanese)* 68228
diamond film, PECVD growth, bias-enhanced nucleation, DC bias voltage effects 101380
diamond film, selective PECVD on glass substr., diamond nucleation dens. enhancement 90420
diamond film gas sens., semicond. doping gases exposure effects 97470
diamond film growth, CVD-SEM, backscattered electron imaging, Monte Carlo simul. 79286
diamond film on porous Si, PL, passiv. *(English)* 125988
diamond films, (001) polycryst., vacancy defects eliminated by H and B ions bombard. *(English)* 124873
diamond films, (001) textured, deposition method 124810
diamond films, biased PECVD, diffusive ions, ion sheath region 101371
diamond films, CVD, dens. of gap states, thickness depend., SCL current 69476
diamond films, CVD, intrinsic stress meas., curvature meas. 124885
diamond films, doping, elec./electrochem. appl. 80637
diamond films, enhanced nucleation assisted by pos. DC bias 79300
diamond films, HFCVD on Si(111), β-SiC nanocryst. form., TEM 79322
diamond films, high quality CVD, for particle detect. appls., structural charact. 114331
diamond films, highly oriented, UV sens., temporal response 120799
diamond films, hot filament CVD, growth rate *(English)* 124875
diamond films, hot filament CVD, struct./elec./opt. props. *(English)* 125989

elemental semiconductors continued
diamond films, low field-emission, charact. by SPM 80558
diamond films, low-press. flat flame growth and Raman spectra charactn. 80668
diamond films, microcryst./nanocryst., microwave plasma CVD on Co-28Cr-6Mo 124884
diamond films, microwave PECVD, charactn. 124935
diamond films, microwave plasma CVD, O_2 conc. growth effects, laser Raman spectr. *(Chinese)* 101378
diamond films, microwave plasma CVD on SiO_2 masked Si *(English)* 124876
diamond films, MPACVD for surface acoustic wave filters 81757
diamond films, MW PECVD growth and charactn. 114322
diamond films, nanocryst., microwave plasma CVD synthesis, roughness anal. 114325
diamond films, nanocrystalline, PECVD, electron emission 69409
diamond films, oriented, deposition on noble metal *(Japanese)* 101344
diamond films, oriented, nucleation on non-diamond substrs. 90410
diamond films, PECVD on hexagonal GaN substr. 90372
diamond films, plasma CVD, struct., elec. props., Schottky devices 126209
diamond films, pos. DC bias-enhanced nucleation with high CH_4 conc. 101341
diamond films, rapid nucleation by pulsed laser CVD 114350
diamond films, RIE, neg. bias depend. of S and F incorporation 92069
diamond films, [100]-textured, He enhanced post-growth etching *(English)* 126337
diamond films selective deposition, hot-filament CVD using double-layer mask 114323
diamond heteroepitaxial growth on pre-deposited β-SiC oriented layer on Si(001) *(Chinese)* 101377
diamond HFCVD film morph. control, low-energy electron bombard. 68234
diamond highly oriented films, microwave plasma CVD 114327
diamond low temp. CVD deposition using halogenated precursors 68278
diamond low temp. CVD growth using CO_2/CH_4 plasmas, mol. beam mass spectrometry investig. 68284
diamond low temp. electron assisted CVD growth, Monte Carlo simul. 101367
diamond MESFET, microwave perform. 91277
diamond monochromator, perform. under extreme power loads 121760
diamond nanocrystal growth, PLD 79362
diamond nanoporous honeycomb electrodes, electrochem. charactn. 80647
diamond nucleation, biased HFCVD, Raman spectra, SEM 68282
diamond p-type semicond. films, magnetoresist. *(English)* 125987
diamond PECVD film growth, diamond film growth 101352
diamond photocathodes, CVD, surface reactivity with O/O_2 80649
diamond photoconductive device, UV detect. 86564
diamond photodetectors for next generation 157-nm DUV photolithography tools 86523
diamond polycryst. films, CVD, morph./texture 79272
diamond polycryst. films, layered struct., ex situ spectrosc. ellipsometry 91594
diamond polycryst. plates, electron-assisted hot filament CVD, SAW dispersion 80648
diamond powders, shock waves treatment, structural specificities 68448
diamond radiation detectors, charge transport props. 132305
diamond radiation detectors, response, temp. effects 98099
diamond replica films, CVD growth dyn. anal. 101351
diamond Schottky diodes, elec. AC behaviour 81192
diamond self-supported sheets, CVD, DC elec. cond. props. 91593
diamond surface doping and p-type cond., adsorbate electron transfer 126003
diamond synthesis by electrolysis of acetates 79378
diamond thin film, form. of shallow acceptor states in surface region 69470
diamond thin film, UV detect., subgap photocurrent response 86565
diamond thin films, CVD growth/nucleation, in situ ellipsometry, Raman spectra/SEM 114367
diamond thin films, plasma assisted CVD, struct. *(French)* 79281
a-diamond thin films, tensile prop., MEMS, sens. 127097
diamond tip wear mechanism, Si AFM-based micro/nano-machining 127118
diamond ultra hard film, CVD, maskless patterning, structuring 105631
diamond UV detectors for future solar phys. missions 86522
diamond wafer bonding, mol. dyn. simul. 126614
diamond wafers, DC arcjet plasma proc. 68275
diamond wafers, multicathode dc plasma-assisted CVD, thermal diffusivity 79271
diamond-based electronic/MEMS devices 102995
diamond-like C coating DC-RPECVD on OPC drum, DC power depend. anal., laser printer appls. 68225
diamond/CdTe inverted heterojunction thin film solar cell 134385
diamond/n^+-Si heterojunction, elec. charactn., enhanced tunnelling 80799
diamond/Si(100) highly oriented epitaxial film MW PECVD, pulsed bias-enhanced nucleation anal. 114335
diamond/sp^2-bonded carbon nanostruct., QW field electron emission 80563
distributed mutual inductance/resist. expressions for semicond. interconnects 103463
DLC film-Si struct. solar cells, space appl. 89300
DLC surface, N-doped, field emission current, scanning probe obs. 80565
DOE/BES-supported PV research progress 113004
elec. property, grain boundary impact, EBIC contrast 102963
electronic solid state dosimetry, review 133141
electronic stopping in Si, amorph./crystn., comprehensive model 115288
etch rate vars., proc. condition 103341
EVA-based encapsulants develop., flame retardant, fast curing, p-Si arrays 100045
finite ground coplanar line-to-silicon micromachined diamond waveguide transit. 125782
fluxless wetting props. of one-side-coated under bump metall./top surface metall. 113456
glass as crit. material in displays develop. 86798
HARPSS polysilicon vibr. ring gyroscope, MEMS technol., elec. isolated vert. electrodes 81575
HI-ETA(R) Si space power solar cells, end-of-life perform. improvement 112954
high-power semicond. devices state-of-the-art 92325
IEEE PV specialists conf., Anchorage, AK, USA (Sept. 2000) 89575
III-V devices, electro-fluidic assembly tech. on Si 125941
ion shower doping syst. for LPS-TFT LCD prod. *(Japanese)* 86868
large diam. CZ-cryst. growth, Si melt flow, steady/dyn. mag. fields effects 90225
large-grain polysilicon-on-insulator MOSFETs, unity short cct. current gain freqs. 81304
LCD TFT prep. using high-press. annealing syst. *(Japanese)* 82239
leakage faults backside localization, thermal laser stimulation 126930
LHC silicon fast frontend electronics, output shape/amplit. 76144
liq. cryst.-on-Si microdisplay fab. using std. foundry proc. flow 86869
low-quality silicon feedstock purification for solar cell fab. 100087
low-temp. polysilicon TFT LCDs for mobile appls. 132113

elemental semiconductors continued
low-temp. submicron polysilicon TFTs, scaling effects, SOG appls., LCD d 97605
mag. field sens. microsystems, num. offset optim. 121033
materials sci. in electronics, conf., Dublin, Ireland (April-June 2001) 113
MegASIC, analogue, mixed-sig. and digital ICs, IC design, foundry fac *(German)* 126929
MEMS devices, stiction-failure, aged, laser repair yields 81610
metal-$(PbZr_xTi_{1-x}O_3)$-(Ta_2O_5)-Si struct., NVM appl. 127279
metal-diamond interfaces, EO props. 86524
metall. grade Si upgrading for solar grade feedstock appls. 100046
metallophthalocyanine-doped polypyrrole/Si heterojunctions, NO_x gas 97454
micro-aperture electrostatic field mill based on MEMS technol. 83169
microelectronic indust. Raman spectrosc. anal. tech. 80519
microsystems, micro- and nanofabrication proc. technols., diverse appls. 9
microsystems, micro- and nanofabrication techs., diverse appls. 70355
monolithic multi-jn. solar cells, perform. meas. methods 112942
multi-Si struct., gettering treatments, planar homog. increase 126413
multicrystalline, EFG grown, 100 μm thick wafers/solar cells 90210
nanowires growth on Fe-patterned Si substrs. 126173
new materials/procs., MEMS appls., reviews 104204
on-chip integrated Si bulk-micromachined soil moisture sens. 121299
organic monolayers on Si(111), nanometer-scale patterning possibilities 10
PANI-methoxyaniline))/μcSi:H-based PV diodes, charact. 116962
PECVD films for low-temp. poly-Si TFT-LCD 86813
perylene-3,4,9,10-tetracarboxylic-dianhydride films on Si:H and GaAs:S 9
PMOS device, dielec. breakdown, p-polysilicon gate doping 103194
poly-Si:P gate/band gap narrowing, incomplete impurity ionization, direct tun ing leakage current 91592
poly-Si TFT, excimer laser dopant activation 126751
poly-Si thin film solar cells form. by flux method/Cat-CVD method 90391
poly/SIS/Si interface eval. by differential conductance *(Chinese)* 103223
polycryst. materials struct./props., simul., interfacial perspective 102964
polycrystal diamond particles, lapping perform. guide 69911
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. pr 104092
polysilicon, metal-induced lateral crystn. technol., device appls. 80629
polysilicon, micromachined MEMS structs., tensile strength, scale dep 116111
polysilicon, notch form. by stress enhanced spontaneous etching 126369
polysilicon, thermal oxid., changing asperity surface model 81071
polysilicon 300-mm etch equipt., maturity assess. 103401
polysilicon act. matrix organic LED display, integrated drivers 97727
polysilicon annealing using high power excimer laser 91935
polysilicon asymmetrical electrothermal microactuator 81622
polysilicon bolometer, IR FPA, membrane transfer bonding 120795
polysilicon cantilever MEMS-struct., shock load, mech. reliab. 127102
polysilicon cantilevers, surface-micromachined, repair of stiction-failed sam using laser 92550
polysilicon CMP proc. with small erosion for trench isolation proc. 10334
polysilicon doping extraction from C-V charact., improved formula 69819
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/e props. 103243
polysilicon dual gate electrode HfO_2 ultra thin CVD MOSFET gate die reliab. 126779
polysilicon electrostatic microactuators, torque/speed characts., on-chip a 99872
polysilicon etching with CF_4-added plasma, fluorocarbon polyr form./charactn. 69839
polysilicon field-emission cathodes, singly addressable arrays 102925
polysilicon film grains, excimer-laser recrystn. using nucleation seeds 9193
polysilicon films for MEMS integrat. with submicrometer CMOS proc. 925
polysilicon fine grain-sized films, SW photodetect. 131927
polysilicon four-terminal TFTs, improved reliab. for AMLCD appl. 92343
polysilicon FPD driver ccts., low temp., RTP crystn. 97728
polysilicon gate etching, 0.15 μm, in-line plasma induced charging mon 103427
polysilicon gate etching, profile evol. 69838
polysilicon gate HfO_2 MOSFETs, dopant penetration effects 126778
polysilicon gate patterning technol., nanoscale masking *(English)* 103480
polysilicon heater, CMOS microstruct., high temp. sens. 97573
polysilicon hot plate, surface micromachined, gas sens. 116069
polysilicon low-temp. TFTs, anodic oxid. on Al/glass substrs., LCDs 7012
polysilicon LPCVD films, struct. depth profiling using Raman microscopy 903
polysilicon MEMS, actuated microcantilevers, interferometry, test stru nonidealities 123702
polysilicon MEMS, alkene based monolayer coatings 104181
polysilicon MEMS, Young's modulus and fracture strength, tensile tests 1160
polysilicon micro-opt. accelerometer, micromachining fab. *(Chinese)* 82198
polysilicon microcantilever beam bending, nanoindentation, Young's modu *(Chinese)* 81569
polysilicon microcantilever beams, mech. props., nanoindentation *(Chine* 81565
polysilicon microfabricated thin films, mech. props./reliab., size effect 8157
polysilicon micromachined MEMS structs., micro nano technol. visualizati 104202
polysilicon MILC TFT with ultra-thin channel *(Chinese)* 115913
polysilicon MILC thin-film devices, indiv. grain boundary charactn. 102958
polysilicon multilayered thick films, low-stress, microsystems fab. 92553
polysilicon nonlin. resistor modeling for analog cct. design 102761
polysilicon oxide quality optim. at wafer level, BCDMOS technol. 124432
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, cont resist. 102185
polysilicon post-etch residue contamination in wafer fab., failu anal./elimination 103349
polysilicon press. sens., anisotropic etching proc., TMAH solns. *(Chine* 75463
polysilicon resistor, equiv. dyn. thermal model, inertial heat link 80417
polysilicon resistors, analog CMOS appls., LF noise current 68555
polysilicon resistors in sub-0.25 μm CMOS ULSI appls., charactn. 81519
polysilicon surface channel CMOS devices, plasma charging enhanced hot carri effect 115939
polysilicon surface-micromachined MEMS test structs., elec./environ. relia charact. 104165
polysilicon TFT, channel region controlled grain growth, AMLCD appl. 868
polysilicon TFT, excimer laser crystallisation 126811
polysilicon TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
polysilicon TFT, hot carrier degrad./kink effect 97652
polysilicon TFT, interface trap states, grain boundaries 115915

ental semiconductors continued
olysilicon TFT, low-temp., excimer laser long-axis scans 86851
olysilicon TFT, low-temp., hot carrier effects 81272
olysilicon TFT, low-temp., single-pulse excimer laser beam profile 86852
olysilicon TFT, recessed-channel struct., excimer laser crystn. 70126
olysilicon TFT, reliab., CMOS inverter cct. 115929
olysilicon TFT, self-aligned thicker sub-gate oxide near drain/source regions 126752
olysilicon TFT, silicide mediated crystn., large-area LCD 97732
olysilicon TFT, single grain boundary in channel, excimer laser annealing 103853
olysilicon TFT data drivers for SVGA TFT-LCD panel 79642
olysilicon TFT fab. by laser-induced in-situ F passiv./laser doping 92362
olysilicon TFT integrated gate-data line-crossover struct., AMLCD panel appl. 92364
olysilicon TFT LCD data driver output buffer, VGS compens. source follower 86854
olysilicon TFT low-temp. proc., ion implant. technol. 115894
olysilicon TFT push-pull analogue buffer for TFT-LCD data drivers 109914
olysilicon TFT technol. for notebook displays 86804
olysilicon TFT-LCD, 7-inch full-colour design 86891
olysilicon TFT-LCD, low temp. PECVD 124898
olysilicon TFT-LCD, low temp. sputter deposition technol. *(English)* 121081
olysilicon TFT-LCD for mobile PC XGA display 79645
olysilicon TFTs, elec. stabil., vert. amorph. silicon offset appl. 92342
olysilicon TFTs, enhanced degrad. under dyn. hot-carrier stress 126753
olysilicon TFTs, laser annealed and metal-induced crystal., expt. study 70124
olysilicon TFTs, LF noise model 92360
olysilicon TFTs, low temp., hot carrier effects anal. using device simulator 103891
olysilicon TFTs, low temp. excimer-laser crystallized Si, fab./characts. 115935
olysilicon TFTs, offset metal-induced unilaterally crystallized 92341
olysilicon TFTs with D plasma treatment, DC reliab. improve. 92344
olysilicon TFTs with SiN_x/SiO_2 dual under layer, back-channel effects 97653
olysilicon thermal actuator array, macromodel *(Chinese)* 92496
olysilicon thermal sprayed coatings, elec. charact. 115287
olysilicon thermally driven micropump, surface-micromachining, HF gas-phase etching 92561
olysilicon thick films by electrophoretic deposition 101438
olysilicon thin films, microfabricated, size effect on mech. props. 104183
olysilicon ultra-thin channel TFT technol. *(English)* 81331
olysilicon ultrathin gate oxide MOSFETs, edge direct tunneling leakage, phys. model 70157
olysilicon wafer edge die yield loss elimination for accelerometers 97579
olysilicon-ONO-Si NVM device retention reliab., two-step high temp. deuterium anneals 79892
olysilicon-SiGe stack gate, Ge-redistributed for CMOSFETs, high-perform. 126773
olysilicon/metal CMOS gates, work fns., effects of high-k dielec. 127039
n^+-polysilicon/oxide interface traps in ultrathin oxides, charact. method 91903
olysilicon/ZrO_2 gate dielec. MOSFETs for sub-qtr. micron CMOS, low temp. proc. 127024
orous poly-Si solar cells, LPCVD, texturing 112901
orous Si/C_{60} jn., solar cells, photo-induced charge transfer 112891
Powersphere Power System demons. station 111360
PPV/porous Si composite thin films, props. and LED appls. 116925
radioisotope batts. for long-life low-power appls. 99893
satellite patch antenna array/a-Si:H solar cells combination 72661
self-assembling monolayer/Si(001) syst., electronic dens. modulation, gas sens. appls. 97467
semiconds., group IV/III-V, high-press. phase effects 80653
Si:N, low energy N implant., chem. anal. 91976
Si(001) surface atom, hydrogen-terminated, etching, hydroxyl fn. *(Japanese)* 126343
Si micro-machining using small particle controlled by opt. radiation press. *(Japanese)* 81606
Si solar cells, degrad. of surface quality due to antireflective coating deposition 100144
Si substr., vapour phase etching, surface morph., temp. effects 126355
a-Si TFTs with planarized gate insulators, large-area TFT-LCD appl. 92368
silica-on-Si multi-mode interf. couplers, design params. optim., perform. *(English)* 104721
silica-on-Si waveguide fab. techs. *(English)* 104720
silicide films form. on Si, low-energy MD simul. 69999
SIMOX technol., BOX microstruct. 115526
single-cryst. Si, molar vol. meas. 75362
single-cryst. Si microscratching tests, ductile-to-brittle transit. *(Japanese)* 68475
SIPOS terminated HV planar diodes, dyn. avalanche breakdown, semi-resistive field plates 81200
SOI rib opt. waveguides, geometric struct., single mode conditions *(Chinese)* 93106
SOI technol. based planar photonic cryst. waveguides, design and charact. *(English)* 104719
SOS, solid phase epitaxially regrown, oscillatory strain relax. 79301
space power solar cell arrays, Si/multijn. technols. comparison 111344
string ribbon Si solar cells, PECVD SiN_x induced hydrogen passiv. 100056
SU-8 proc. on substrs., wettability, adhesion, surface tension 102965
SU-8 resist, high-aspect-ratio microstruct. fab., Si/Cu(NiFe)(Au)(Ti) syst. 92530
substrate alkylsilane SAM, photo/scanning probe lithog. 92245
supported lipid membrane on Si electrode, elec. props. 69773
surface (110) roughness etching, AFM, fractal, power spectrum dens., scaling anal. 103343
surface channel diamond MESFET, hydrogen-terminated surface conductive layer 115877
sustainability considerations in microelectronics indust. 81414
TFT-LCD develop. using 1 Hz/15 J excimer laser annealing 97642
ultra-thin oxides growth on Si(100) by RTO for CMOS/advanced devices 103358
ultrananocrystalline based high resoln. MEMS technol. 104172
UNICAT insertion device X-ray beamline at APS, design 110472
USITT micromachined Si sens., capacitive press. sens., reson. strain gauges 121028
UV sens. develop. using semicond. materials 110017
X-ray beam cleaner, harmonic selection/rejection, Si(111) monochromator 110464
Si film on NiSi, DC magnetron sputtering, microstruct. 114261
$Ag/Pb(Zr_{0.53}Ti_{0.47})O_3$/ultrathin-$SiO_2$/Si fabrication, field effect/polaris. characts. 104389
Ag/Si(111)-(7×7) heteroepitaxy, 2D-3D growth transit. 114268

elemental semiconductors continued
Ag/n-Si Schottky barriers, ICB deposited, Fermi level pinning, microscopic model 69725
Ag/n-Si Schottky jns., ICB deposited, induced interface states 69726
Ag-Si Schottky jns., ICB deposited, interface electronic struct. 80899
Ag-porous Si interfaces, H-stimulated changes of props. 115439
Al/CeO_2/Si(100) MIS struct., elec. characts., insulator film orient. effects 80944
Al/Si/GaAs(001) Schottky diodes, interface reacts./local interface dipoles 103753
Al/Si/TMAH syst., etch react., electrochem. meas. 103332
Al/Si/p-SiC ohmic contacts, thermal stabil., LPE 69703
Al/Si(100) nanowire growth simul., anisotropic adatom diffusion and sticking prob. anal. *(Chinese)* 81155
Al/SiN_x:H/Si devices, interfacial/bulk defects, struct./elec. props., temp. effects 91901
Al/TiN_x/Si(100) thin film diffusion barrier syst., XANES obs. 80901
Al/a-Si:H,Er/Si/Al heterostruct., high-intens. electroluminesc. 116910
Al/intrinsic diamond/p^+-Si Schottky diodes, Q-DLTS/C-V meas. 92279
Al/por-Si/Si struct., adsorpt.-based porosimetry using capacitance meas. 115424
Al-Si thermally excited vert. bimorph actuators, metal sputter depos., trench sidewalls 92551
$Al_{0.15}Ga_{0.85}As$/Si solar cell, water splitting, H_2 prod. 100028
AlGaInP/GaAs/GaInNAs/Ge 4-jn. solar cells, high efficiency 112916
AlN/Si heterointerface, laser MBE, RHEED, XPS 90332
Al_2O_3 dielec. films on Si, UHV reactive at.-beam deposition 79245
Au on n-Si(100), C contam., electrodepos., electron-beam induced nanomasking 90511
Au on n-Si(111), local depos., scanning electrochem. microsc. 101441
Au/C:H,B/n-Si heterojunction solar cells, PV props. 134383
Au/Ge bilayer films, fractal form., thickness ratio/annealing depend. 91858
Au/Ni bilayer films on Si(111) wafers, interdiffusion coeffs., cond. 103183
Au/Si-rich SiO_2:Si(Ge)(Ar)/p-Si diodes, electrolum., ion implant. effects 128013
Au/Si(111)-7×7 surface, adsorbed Au oxid. effects 103422
Au/SiO_2/Si MIS tunnel jn., neg. resist., light emission *(Chinese)* 115448
Au/SiO_2/Si MIS tunnel jns., light emission spectra *(Chinese)* 82317
Au/SiO_2/amorph. Si/SiO_2 superlattice/p-Si LEDs, electroluminesc. 71585
Au/Ti/p-diamond:B ohmic contact, specific contact resist. meas., transm. line model anal. *(Chinese)* 115427
Au/n-Si Schottky diodes, interface state dens. distrib. rel. to series resist. 92288
B doped LPCVD polysilicon film, pre-annealing influ. on residual stresses 103245
Ba/Si(111)-(3×2) reconstruction, struct. anal. 103177
$Bi_4Ti_3O_{12}$/$SrTiO_3$/$Ce_{0.12}Zr_{0.88}O_2$/Si epitaxial struct., PLD prep. 68301
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
a-C film, electron field emission, resist. effect 80566
ta-C films, FCVA deposition, ESR and Raman spectra charactn. 68382
ta-C films, electron field emission, surface morph. effect 102898
ta-C films, ion-assisted pulsed magnetron sputtering deposition 79214
a-C films, kerosene vap. pyrolysis, field emission 80568
C(:B) diamond films, surface stucture, CL, plasma CVD, Schottky jn. appl. 68274
ta-C:F ion beam deposited films growth/props. 68383
a-C:H, diamond-like C layers depos. by PACVD, 1D fluid model 90377
a-C:H films, current-induced conditioning, field emission 80567
a-C:H films, saddle-field glow discharge deposition and props. 68381
a-C:H, rf plasma deposition using methane, transmittance and reflectance spectrometry 103065
a-C:H thin films, field electron emission 102909
a-C:H/Si heterostruct., artificial pot. relief 103121
a-C:H,F films, PECVD, F incorporation 68261
a-C:H,N films, PECVD prep., N incorporation and elec. props. 126082
a-C:H,N films, RF PECVD, spectrosc. props. 68286
a-C:H,N films, low-temp. annealing effect, field emission 80569
C:P, type IIa diamond crysts., cold implant., rapid annealing effects 80998
C/Si nanocrystalline heterojunctions, elec. charactn. 91738
a-C/a-C:H multilayers on Si, photodiode effects, EL obs. 82352
a-C/n-Si sputtered heterojunctions, charge carrier response time 126113
C(100)2×1 surfaces, at. H irrad. etching, epitaxial growth enhancement, ab initio calcs. 81060
CdS-nanoparticles-porous-Si heterojunction, photolum., I-V charact. 126107
CeO_2 buffer layers, ion-plasma sputter deposition on Si 114242
CeO_2/Ge epitaxial growth, PLD, electronic/elec./struct. prop., Gibbs free energy 125001
CeO_2/Si struct., localised charge storage, electrostatic force microscopy 103191
CeO_2/Si(100) sputtered film, elec. characts. anal. 92673
Co/Si thin films, annealing, init. stage, dens. functional study 80974
Co/SiO_x/Si, SPE growth, stress effects, TEM 125049
Co/Ti/Si, SPE growth, stress effects, TEM 125049
Co-silicided shallow p^+-n jn. Si-capped/$Si_{1-x}Ge_x$:B, elec./struct. props. 91875
CoCrPtTa/Si, perp./long. composite medium *(Japanese)* 92831
$CoSi_2$ coherent silicide islands on Si(111), strain 103181
$CoSi_2$ form. on porous Si by high dose ion implant. 81014
$CoSi_2$/Si(100) films, SPE growth, Co/a-Si/Ti/Si multilayer react. 114413
$CoSi_2$/Si(111), BEEM, band struct. effects 69713
$CoSi_2$/n-Si(111) contacts form. by solid state react., Schottky barrier characts. *(English)* 103169
Cu deposition on Si in deionized water, Si surface termination effects 92129
Cu electroless deposition on Ta/SiO_2/Si substrs., displacement activation 101421
Cu film electroless deposition on Si:H(111), spectrosc. studies 101403
Cu thin films on Si, oxid., ellipsometric study 92027
Cu/$(HSiO_{3/2})_x$/Si, sputtered Cu films, thermal reacts. 92134
Cu/Cu/TaN/SiO_2/Si multilayer, interfacial reacts., electroplated Cu props. 81122
Cu/Er/Si(100), Cu metallization interact., solid-phase reacts. 81121
Cu/$ErSi_{2-x}$/Si, Cu metallization interact., solid-phase reacts. 81121
Cu/Gd/Si(100), Cu metallization interact., solid-phase reacts. 81121
Cu/SiO_2/Si, sputtered Cu films, thermal reacts. 92134
Cu/Sn/Si syst., 3D struct. form./evol., AFM, AES, SEM, EDX 114307
Cu/Ta/Si(111) thin films, neg. bias sputtering for Ta silicidation retardation 92136
Cu/$TaC_x(WC_x)$/Si metallization/diffusion barrier syst., anal. 115676
Cu/TaN_x/Si multilayers, interfacial reacts., residual oxygen effects 103321
Cu/TaN/SiO_2/Si multilayers, struct. integrity, IMP-deposited nitride thickness effect 92099
Cu-W-Si , selective MOCVD on AZ 5214-patterned substrs., IC metallisation 69952
β-$FeSi_2$, single-phase, ion beam direct synthesis in Fe/Si bilayers 79405
β-$FeSi_2$/Si LED, ion beam synthesis, elec., electronic, opt. characts. 82412
$FeSi_2$/Si heteroepitaxial syst., struct., luminesc. 103098
GaAs CPW MMIC, Si MEMS package 69189

elemental semiconductors continued
GaAs thin-film epitaxial p-n jn. solar cell charactn. 112952
GaAs/Ge MQW, epitaxial matching, defects 80862
GaAs/Ge interfaces, device-quality III-V epitaxy 89293
GaAs/Ge solar cell, AC params. meas. by impedance spectrosc. 113016
GaAs/Ge/GaAs, sublattice reversal epitaxy, nonlin. opt. devices appls. 90288
GaAs/Si solar cell, phosphine-added hydrogen plasma passiv. 112958
GaAs/Si space power solar cells, flight degrad. data 111343
GaAs-AlGaAs/Si(100) lasers, ELO MOCVD and charactn. 114315
GaAs-Ge Terra spacecraft flexible blanket solar array 112872
GaAs-Ge three-terminal tandem solar cells, charact. calcs. 112941
GaAs-Si heterog. wafer direct surface activated bonding, RT method 69777
GaAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
GaInP/GaAs/Ge multijunction concentrator cells eval. 112928
GaInP/GaAs/Ge three-jn. concentrator solar cells 112909
GaInP/GaAs/Ge triple jn. space power solar cells 112938
GaInP/GaInAs/Ge 3-jn. concentrator solar cells, high efficiency 112916
$Ga_{0.5}In_{0.5}P$/GaAs/Ge triple jn. solar cells, PV concentrator systs. 112907
$Ga_{0.5}In_{0.5}P$/GaAs/Ge triple-jn. solar cells, electron irrad. effects 112960
$GaInP_2$/GaAs/Ge Hughes 702 satellite solar cells charactn. 111348
$GaInP_2$/GaAs/Ge multijunction space solar cells, electron/proton radiation testing 112922
$GaInP_2$/GaAs/Ge tandem space solar cells, iso-jn. dark current 112926
GaInP-GaAs-Ge three-jn. solar cells studies 89285
GaInP-GaInAs-Ge metamorphic three-jn. solar cells 112912
$GaInP_2$-GaAs-InGaAsN-Ge four-jn. solar cells develop. 112913
GaInPa/GaAs/Ge triple solar cells, MOCVD grown, high efficiency 112917
GaN films, crack-free hexagonal, growth on AlN/Si buffer/substr. 101360
c-GaN:Si MBE growth on (001) GaAs substrs., PL study 103015
GaN/3C-SiC/Si(001), epilayers, single source VPE, MOCVD, RHEED, XRD, PL 90444
GaN/AlN/SiC/Si, epilayers, MOCVD, growth rate effect, surface morph., PL 90400
GaN/Si(001/111) heteroepilayers, inert N_2 mols./radical atoms/mol. ions influence, cryst. struct., ECR-MBE 90399
GaN/Si(111) films, RF sputter deposition, struct. and charactn. 69536
α-/β-GaN/SiC/Si, heteroepitaxial growth, PL, cryst. microstruct., residual stress 90331
Gd_2O_3 films, electron-beam evap. on Si(100), charactn. 91906
Ge, IR-transparent opt. materials, kinoform elements fab., technol. principles 105601
Ge JFETs for deep-cryogenic appls., design/fab./charactn. 70189
Ge QD, CVD growth, dielec. substr. 101310
Ge QD on Si(100), multistep growth, dot struct./size/dens. control 124828
Ge QD on Si(100), two-stage MBE 114302
Ge QD self-assembled on Si(001), elec. struct., comp. interdiffusion 69659
Ge QD superlattices growth, thermoelec. appls. 114303
Ge covalent surfaces, at. H-induced abstraction of adsorbed D 115290
Ge cryst. growth, microgravity expts. on Mir station 68132
Ge, doped samples, variable-range hopping, electron correl. effects 115300
n-Ge, electron-hole plasma, high-field autosolitons, emission from hot charge carriers 69477
Ge embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
Ge film, cryogenic microthermometer 75748
Ge film resist. cryogenic temp. microsensor 109811
Ge films grown on $(NH_4)_2S$-treated GaAs by MBE 101286
Ge films, hot-wire CVD epitaxial growth 68215
Ge films on Si(111), surfactant-mediated epitaxy, disloc. array form. 124838
Ge geom. struct., volt-ampere charact. anal. 115435
Ge growth mode on Si(100), buried Ge islands prescence 102977
Ge, homo- and heteroepitaxies on (100)-2×1 surfaces, single adatom diffusion 124811
a-Ge, ion implant.-induced disorder, EXAFS/Raman spectr. obs. 80758
Ge islands, CVD growth, struct. and opt. props. 101369
Ge islands on Si(100), chem. etching, photoluminesc. intens. 126170
Ge islands on Si(100), self-assembled MBE, size/shape, chem. etching effect 103411
Ge islands on SiO_2 surface, electron-beam initiated Ge transfer to STM tip 81157
Ge islands, surfactant-mediated heteroepitaxy, strained growth 68136
Ge, laser heating, thermal melting threshold, ultrafast XRD 72118
p-Ge lasers, influence of group II and III shallow acceptors on gain 93595
Ge, monolayer growth on Si(100), CAICISS anal. 90266
Ge nanocrystals on SiC(0001) surface, deposition, surface struct 68169
Ge nanocrystals, third-order opt. nonlin., pump-probe tech. 105460
Ge nanoislands in Si matrix, MBE form. and opt. props. 80666
Ge nanopyramids on Si, fab., structs., review, appls. 69988
Ge nanostructures, self-assembled, on polymer-coated Si, growth/charactn. 68358
Ge nanowires in oxidized Si V-grooves, ion beam synthesis 92250
a-Ge on GaAs, epitaxial pulsed laser crystn. 101432
poly-Ge on SOI substrs., near-IR waveguide photodetectors design and fab. 97242
Ge on Si p-i-n photodetectors for NIR, integrated design 75532
Ge oscillistor, electron-hole plasma, nonlin. chaos phenom. 69499
Ge self-assembled dots on patterned Si substrs., selectively epitaxial growth 114301
Ge self-organised dot superlattices, phonon spectrum, Raman scatt. 101230
Ge self-organized uniform QD, local struct. on Si(001) 80669
Ge solid-state modulator, thermal imaging syst. 109639
Ge substr., SiO_2 particles dry laser cleaning efficiency, meas. and modeling 103410
Ge thin-film metamorphic HEMTs, hybrid integrat. and substr. removal 125919
Ge, uniform nanoscale islands, form. on Si(111)-7×7 90269
Ge, universal multizone crystallizator, liq./vapour cryst. growth 68130
Ge wafers, ion-implanted B diffusion 126305
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
Ge:Au, high thermoelec. power, electronic struct. calcs. 80640
Ge:C, clean low-defect-dens. surfaces, in situ procs. 69840
Ge:Ga FIR photoconductor 2D array, THz imaging 109657
Ge:Ga single crysts., melt growth, striation under vibs., weak heat convection 114207
Ge:H, surface blistering, H-implant. dose effects 91968
Ge:Sb, ICP-mass spectrometry/NAA/Hall effect anal. 80660
Ge:Sb pulse magnetron sputtered film, struct., thermoelec. props. 91582
Ge:Si/Si QD, microstruct., TEM 126161
Ge/Au/Si, SPE growth, stress effects, TEM 125049
Ge/GaAs, SPE growth, stress effects, TEM 125049
Ge/Si HBT power amp. 68592
Ge/Si hetero-nanocrystal MOSFET memory, computer simul. 81318

elemental semiconductors continued
Ge/Si interlevel QD IR photodetector 75519
Ge/Si multilayers, coherent amorphization by ion beam irrad. 80658
Ge/Si near-IR photodetector, growth & photoresponse spectrum 97231
Ge/Si superlattices, MBE grown on Si, struct., opt. props. 124831
Ge/Si superlattices, self-assembled struct., X-ray reflectivity 69685
Ge/Si(001) QD heterostruct., electron spatial separation 103145
Ge/Si(001) islands, UHV CVD, strain-driven alloying 68268
Ge/Si(001) self-assembled QD, wetting layer growth kinetics effects 9178
Ge/Si(100), nanoparticles deposition on single cryst. substrs., surface smoo 68368
Ge/Si(111) QD, Ge islands, STM/AFM obs. 126162
Ge(100) substrs., self-ion-induced swelling 81032
Ge(100) surface, S terminated, core level photoemission spectra 69914
Ge(211)/Si(211) heterostruct., MBE, surfactant-mediated growth, char 101208
GeSe/Si rib opt. waveguides, geometric struct., single mode conditions *(Chi* 93106
GeSi/Si (001) struct., MBE, struct./plastic relax. 90296
GeSi/Si multiple hetero-epilayers, distrib. of carriers *(Chinese)* 103222
GeSi/Si partially relax. heterostruct., misfit disloc. 80802
$Ge_{0.2}Si_{0.8}$/Si epitaxial struct., ion beam channeling, strain relax. 69996
H/Si(100), Ba react., hydrogen termination effects, STM 91591
ITO/a-Si:H/Pd based posn. sensitive detector, carrier transport 131929
InGaP/GaAs/Ge multi-jn. solar cell efficiency improvements, epitaxia 112915
InGaP/GaAs/Ge radiation-hard triple-jn. space power solar cells 111362
InGaP/GaAs/Si PV/PEC cells, selective heteroepitaxy, H_2 generation from light 112956
$InGaP_2$/GaAs/Ge space solar cells, radiation response anal./modeling 1129
InGaP-InGaAs-Ge high-efficiency tandem solar cells 112911
InN/Si heterojunctions, MBE, hole-barrier struct. 90301
InP-Si direct wafer bonding, cryst. defects charactn. 115475
La_2O_3/SiO_2/Si struct., RTA, struct., stabil., TEM/EELS obs. 91879
^{7}Li stopping power/random energy loss/straggling into Si 80663
$LiNbO_3$/Si SAW-semicond. coupled device fab. 92758
MgF_2/CeO_2/Si, optim. for ARC on cryst. Si solar cell 123802
Mo/Mo_2C/Si/Mo_2C EUV multilayer mirrors, long-time appls., heat re 116897
Mo/Si-multilayers for EUV lithog. appls. prepared by PLD 115742
Mo/SiO_2/Si gate electrodes, work fn. engng., CMOSFET appl. 126750
Nb/Si multilayers, partially cryst., thermal stabil. 69723
$NdGaO_3$ buffer layers, ion-plasma sputter deposition on Si 114242
NiTi/Si diaphragm micropump, dyn. actuation behavior under different co tions 99875
PZT coated Si cantilevers, photoacoustic gas detector 86709
PZT films, struct./ferroelec. props. on Ir/$(ZrO_2)_{1-x}(Y_2O_3)_x$/(100)Si 70399
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
Pb/Si(111) interface, confine.-enhanced electron transport, STM/BEEM 107
Pb/Si(111), quantum wedge, tunnel current, STM 69714
Pb/Ti/Si thin films, thermal oxid., ferroelec. phase form. 92026
Pd epitaxy on Si(111), Pd_2Si island form., anal. UHV TEM 79270
Pd/Si(111) syst., laser spraying, Pd_2Si interface struct. 126205
Pt/$(BiLa)_4Ti_3O_{12}$/Pt/Ti/SiO_2/Si MFMIS struct., fab., elec. characts. 126229
Pt/$Pb_5Ge_3O_{11}$/ZrO_2/Si, sub-μm metal-ferroelec.-insulator-semicond. FET 92
Pt/SBT/Al_2O_3/Si MFISFET, fab., memory window width 81276
Pt/SiO_xN_y/Si MOS capacitors, intrinsic oxide capacitance from LCR meter m 121147
Pt/$SrBi_{2.4}Ta_2O_9/ZrO_2$/Si MFIS-FET struct., prep., elec. props. 81277
Pt/$SrBi_2Ta_2O_9/ZrO_2$/Si ferroelec. gate oxide struct., elec. props. 69755
Pt/$SrTiO_3$/Pt/Ti/SiO_2/Si capacitors, post-annealed $SrTiO_3$ thin films, prep. 68
Pt/$YMnO_3/Y_2O_3$/Si capacitor, pulsed C/V meas., ferroelec. 102776
Pt/$YMnO_3/Y_2O_3$/Si gate capacitor MFISFET, MOCVD prep. 81662
PtSi Schottky diode, barrier height reduction by ion injection doping *(Chin* 91856
PtSi-Si Schottky diode IR detectors, quantum efficiency increase 75539
SIMOX low dose wafers, energy depend., struct. props. 115528
SIMOX wafers, interstitial-type {311} planar defects, photolum. anal. 8065
SOI FETs, ion beam induced charge collection, body-tie effects 126728
SOI MOSFET, irrad., partially depleted/fully-depleted transit. *(Chinese)* 103
SOI bonded substrs., HARM proc. techs., MEMS/MOEMS 93177
SOI, deep levels, charge/capacitance DLTS 115446
SOI form., Ni metal induced lateral crystn., TFT appl. 125052
SOI, ion implant. SMART-CUT technol. 115527
SOI, low energy water ion implant. synthesis 115525
SOI struct. fabr. by UHV electron beam evap. and epitaxial layer transfer 80
SOI struct., multilayer thermal via incorporation and charactn. 115443
SOI technol., review, IC appls. *(Chinese)* 69756
SOI ultrasmall QD single-electron transistors, fab., integrat. 92420
SOI wafer fab., PIII syst. 115530
SOI/Al, heavily doped, efficient electronic cooling 103168
SOI-MOSFET, partially depleted, floating body effect, instabil. 115893
a-Se based diagnostic imagers, sig. form. quantitat. anal. 76512
a-Se based direct-detect. act. matrix flat panel imager, DQE 98526
a-Se film, flat panel X-ray image sens. *(Japanese)* 122146
a-Se film, flat-panel X-ray detector *(Japanese)* 76532
a-Se films, thermally stimulated discharge, PVF interface barrier effects 1266
Si, 2D/3D photonic-cryst. struct. fab. 127566
Si, 300 mm wafer develop., cost/technol. challenges 67520
Si, 300 mm wafer perform. for giga ULSI device procs. 70238
Si, 300 mm wafers, batch furnace/RTP proc. prod. maturity 67522
Si 3D Hall struct., integrated vector sens./mag. compass 111380
Si, 3D integrated wafers block, bumpless, wiring by through-hole interconn tions 115670
Si 4.5-sun, flat-plate concentrating PV module 112983
Si, (100),(111) surfaces, thermal nitridation, O_2-induced etching reacts., S anal. 69846
Si (111)/(100) substrs., thin SiC layer substr. coating, GaN MBE growth 101
Si, (311) defect dissolution, depth depend. 103269
Si ATM for planetary appls. 109819
Si, As^+-implanted/2D amorphized, solid-phase epitaxial regrowth, corner def generation, stress effects 101456
Si BJT neg.-conductance ccts., RFIC VCOs 101823
Si BJT, temp. depend. large sig. CAD model and direct extract. method 91
Si BJTs, high injection effects on noise charact. 81218
Si BiCMOS receiver IC supporting WCDMA, CDMA, AMPS cellular hand appls. 96483
Si CCD, elementary charge manipulation 81360
Si CMOS circuitry, oxidized porous material, low resist. substr., high freq. pro 91323

ental semiconductors continued
i CMOS fully-integrated LC VCOs at RF, neg. conductance ccts. 69214
i CMOS mag. field detector using MAGOSC field sensitive oscillator 109534
i CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515
i CPS and CPW, microwave losses, long. substr. currents 69222
i CPW SPST microwave absorptive MEMS switches, surface micromachining technol. 125718
i CVD epitaxial growth modeling from trichlorosilane on 200-/300-mm wafers 68252
oly-Si CVD growth, enhanced bulk prodn. using Si tubes, meas. and modeling 79323
i, CVD in lamp-heated single-wafer reactor 124908
i CVD on chlorosilane-treated SiO_2 surface, nucleation suppression and enhancement 124910
i CVD on chlorosilane-treated SiO_2 surfaces, selective deposition using electron beam irrad. 124911
i CVD thin films, large-area nanocryst., microstruct., elec. props. *(Chinese)* 125995
i, CZ bifacial solar cell technol. 123814
i, CZ cryst. growth, 400 mm diam., global simul. 101159
i, CZ cryst. growth, melt convection 90229
i, CZ cryst. growth, temp. gradient meas. 101156
i, CZ growth, dissolution rate of SiO_2 crucible, opt. in-situ meas. 68121
i, CZ growth, global model, O content/melt-cryst. interface thermal fluct. 68119
i CZ growth, online diam. calib., shape estim. 114209
i, CZ growth rate rel. to growth interface temp. gradient 68118
i, CZ growth rate, temp. gradient depend. 79173
i CZ melts, temp. distrib., 3D num. simul., mag. field effects 90223
i CZ single-cryst. wafers, defect reduction/improved gettering 79177
i CZ-grown single crysts., finite difference anal. of radial P dopant distrib. 103264
i Cat-CVD, wafer temp. control, apparatus eval. 124948
i Coulomb blockade devices, periodically oscill. driving pot., elec. charact. 92425
i, Cz melt, surface pattern form., surface tension driven flow role 114240
i, Cz wafers, cryst. originated particle-induced oxide breakdown 81058
i EBEP-CVD on quartz, migration of Al enhanced cryst. growth proc. from quartz to glass 90434
i, ECR plasma etching, oxide/Si selectivity 69901
i, ECR plasma oxid., Ar ion irrad. effects 69864
i EFG multicrystalline solar cells, lifetime enhancement 100054
i EO device, LED antifuse/photodetector integrat., sens. appls. 104745
i FEA, DLC coating, elec. charact. 69408
i FEA, photon assisted field emission 102920
i FEA tips, emission uniformity & work fn., ethylene effect 125965
i FZ cryst. growth, Marangoni flow/interfaces, 3D simul. 90231
i FZ growth in rot. mag. fields 101150
i, FZ growth, in situ electron irrad., extended defects, HREM 101155
i, H-induced low temp. epitaxy, ECR plasma CVD 124969
i HBT, hot carrier reliab., extrapolation model 126677
i, HTLT oxygenated detectors, radiation hardness, shallow doping impurity 76048
i Hall devices and mag. ang. sens. 109810
i Hamamatsu S1337-11 photodiodes for absol. spectral responsivity std. detectors *(Chinese)* 97250
i HighVo and POWER solar cells, props., appls. 100152
i IC foundry yield enhancement/mgt. using Iddq stress current signature 81415
i IC technol., materials introduction, contamination risk 103974
i IR micro-spectrometer based on diffr. grating 104765
i JFET, low temp. readout electronics, bolometric detector 70203
i K-band direct detect MMIC radiometer, bulk micromachining 102722
i LDMOSFETs for high-power amp. design, large-sig. model 102653
i LED, power conversion efficiency 117012
a-Si LPCVD films, excimer-laser crystalliz., cryst. islands form. 115333
i LPE thin-film solar cell characterisation 100088
i MAGFET, low temp. operation 70107
i MBE growth on SiC(0001), superstructures to islands 102976
i MBE, incorporation procs., pseudopotential method 90281
i MCP for image intensification 86632
i MECOR mech. corrugated solar cells concept 100167
i MEMS capacitive RF switches on high resist. substrs. 116082
i MEMS elements testing, grating & holographic interferometry 70335
i MEMS microphone develop. for high-vol. appls. 76972
i MEMS, wear resistant hard TiC coatings, PLD 104174
i MEMS/MOEMS for lightwave networks 92489
i MEMS/MOEMS, lightwave network appls., review 82196
i MMIC BiCMOS LNA chip sets, high-lin. for base station appls. 69180
i MMIC LNA, substr. resist., EM simul. 91380
i MNOS struct., disordered, saddle point cond. at high mag. field 80948
i MOEMS, micromachining for pass. alignment of opt. fibres 71383
i MOS capacitors, gate oxide reliab., beamline implant./plasma doping 115534
i MOS nanotransistor, gate technol., DC elec. results 103827
i MOS tunnel diode, hot electron luminesc. 103207
i MOS tunneling diodes, band-edge electroluminesc. model 93411
i MOSFET, 10 nm, fab., charact. 70153
i MOSFET, act.-matrix FEA for next-generation FEDs 97757
i MOSFET, dil. 2D electron syst., parallel mag. field, Hall coeff. 70084
i MOSFET monolithic amp., Ku-band on-chip matching network 80321
i MOSFET, short channel, local iter. Monte Carlo anal. 115926
i MOSFET, strongly correl. 2DEG, elec. props. 115907
i MOSFETs, anal. large-sig. model for nonlin. cct. simul. 69134
i MOSFETs, magnetoconductivity scaling, 2D quantum phase transit. 115902
i MOSFETs, small-sig. RF model, param. extraction, substr. effects 80283
i MOSFETs, ultra shallow jn. form., excimer laser annealing 126823
strained-Si MOSFETs with Ti/Pd/Au gate metal for MMIC appl. 80358
i, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115536
i NP colour detector, transient behaviour/charge anal. 75547
i OEICs in CMOS/BiCMOS technols. for DVD systs. 82437
i P-I-N diode, electron-hole plasma, MM-wave refl. 102633
i PCS-CDMA MMIC power amp. with impedance-controllable biasing scheme 91349
i PIN detector, fab., planar technol. *(Chinese)* 110282
i PIN photodiode, single ion hits, radiation damage 126608
i PLL freq. synthesiser in 0.8 μm bipolar prod. technol., 7.35 GHz 91006
i PV mini array assembly, flip-chip MCM technol. 82345
i PV module mfg., US PV indust. R&D advances 112981
i PV modules, 20-yr. field exposure diagnostic anal. 112972
i PV modules charactn. in rural electrification actions 112984
-aSi PV modules, grid connected syst., perform., ageing effect 112998

elemental semiconductors continued
a-Si PV modules, stabilisation/perform. charact. 112978
a-Si PV-powered DC floating pump syst., irrigation water 113180
Si QD arrays, electronic state localization, wormholes 91811
Si QD floating-gate MOSFET, memory operation 103835
Si QD in SiO_2, MOS capacitors memory effects 126241
Si QW/dots from ultrathin SOI wafers, quantum confine. effects 103133
Si RF MOSFET small-sig. equiv. cct., substr. model, param. extract. 69120
Si RFICs, deep trench guard technol. to suppress coupling between inductors 102690
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buried diffusions 91391
Si RIE in tetrafluoromethane plasma, etch depth saturation effect at high RF power 103383
Si RP-PERC high-efficiency solar cells, rear contact patterning methods 100074
Si, S-terminated surfaces for epitaxial growth of $CuInS_2$ 79265
Si SEG, edge shape, ultra-high vac. CVD 114357
Si, SI polycryst. thin films, low press. CVD 90417
Si, SI polycryst. thin films, low press. CVD, local anl. 90418
Si, SIMS depth profiling, $O_2^+(N_2^+)$ beam-induced profile broadening effects 69473
Si, SPE growth, ion beam induced epitaxial crystalliz. 90530
Si SPE, mol. dyn. simul., growth mechanism, defect form. 90547
Si SR-excited epitaxy from SiH_2Cl_2, dangling-bond regeneration channels 68289
Si Schottky diode, flip-chip mounted, I-Q mixer 102622
Si, SoC techs., reusable design flow *(Spanish)* 102223
a-Si TFT LCD of SXGA class, universal controller, interpolation algm. 97730
a-Si TFT act. pixel sens., flat panel imagers, readout cct. 131984
μc-Si TFT fab., high-dens. plasma approach 92363
p-Si TFT perform. using single-area ELA technol. 91934
a-Si TFT, tail and deep states, anal. model 126732
a-Si TFT, two-step exposure technol., reduced-mask proc. 81265
a-Si TFT-LCD pixel, EO simul. 75784
p-Si TFT-LCD, splay to bend alignment 86881
Si, UHV-CVD epitaxial growth, surface defect form. 125998
Si, US micromixer for microfluidic systs. 127081
Si US transducer, capacitive micromachined sens. 88208
Si V-groove fab. using Ta_2O_5 etch mask prepared by magnetron sputtering 103291
a-Si X-ray imager, large-area, perform., NDE appl. 120895
Si, X-ray zone plate fab. using FIB 110483
Si, aerosol-nanocrystals, floating-gate FET NVM 90896
a-Si alloy lightweight triple-jn. solar cells, space qualification testing 112948
Si, amorph./microcrystalline films, hot wire CVD 124960
a-Si and μc-Si films deposition, Hot Wire CVD, solar cells 112881
Si, anisotropic etch rate distribs. determ. *(Chinese)* 81092
Si, anisotropic etching, MST-CAD environ. 115663
Si, anisotropic etching in TMAH, front-side bulk micromachining 104216
Si anisotropic plasma etching, SF_6/O_2-based chem., cryogenical wafer cooling, ICP source 103370
Si, anisotropic trench form. by time multiplexed deep etching 103417
Si, anisotropic wet etching, rapid plasma treatment masking 103404
Si anisotropically etched molds, fine opt. component fab. 93176
p-Si, annealed 1.5 MeV B implanted, defects 103248
Si, annealed Corning code 1737 glass shrinkage obs. 97600
p-Si, anodization, macropore form. 115627
Si avalanche diodes, effect on LV power network fuses behaviour 133792
Si back contact buried contact solar cells, metallization wrap around electrodes 100076
Si back contact solar cells with screen printed metallisation 100084
p-Si based LED, EL, operation mechanisms 93433
Si based luminesc. material, form. mechanism using photochem. etching method 69862
Si, bend strength, fracture toughness, MEMS appl. 104168
Si bifacial solar cell, bulk diffusion length determ. 100092
Si bipolar GSM power transistor, large-sig. model 91269
Si bipolar LNA for WLAN appls., 5.8 GHz, design and perform. 114994
Si bipolar RF transceiver chip for DECT appl. 119957
Si bipolar VCO, high-speed opt. commun. syst. 102674
Si bipolar W-CDMA IF transceiver chip-set for UMTS mobiles 96484
Si bipolar high-IP3 RF receiver chip set for mobile radio base stations 91358
Si bipolar monolithic RF bal. down conversion mixers, noise anal. 69216
Si bipolar technol., dual-modulus prescalers 125635
Si bipolar technol., monolithic LNA 91378
Si bipolar transimpedance preamplifier, opt. receiver front-end 101809
Si bipolar transistor, emitter diffusion depth, $TiSi_2$ form. 103792
Si bipolar transistor-based microwave transceiver LO, phase noise/LF noise behavior 91285
Si bipolar transistors in 0.5-μm based BiCMOS technol., fab./charactn. 103771
Si bulk micromachining for sens. and actuators 92566
Si bulk micromachining for sens. and actuators, 3D microfabrication 75749
Si, bulk micromachining, geometric etch stop technol. 70361
Si bulk micromachining, sens./actuator appls. 81616
Si buried contact solar cells, MgF_2-CeO_2 double layer AR coatings 100168
Si buried contact solar cells, boron rear diffusion optimisation 100171
n-Si buried contact solar cells, passivated B emitters 100140
Si buried contact solar cells, rear-surface technols. 100146
Si ceramics low temp. bonding, sol-gel proc., SEM, TEM 125080
Si, chem. dry etching in fast discharge flow, etch rate enhancement 69847
Si chip-size concentrating solar cells develop. 100072
Si chip-size-packaged microphones, chip stack design 111505
Si, cleaned surface, neutral Ar impact, doubly charged sputtered ions 103405
Si, colour filter fab., thin-film layers absorpt./transmittance 97597
Si, concave refr. microlens arrays fab. by ion beam etching *(Chinese)* 71392
Si concentrator solar cells, single step photolithography proc. 100073
Si confined porous membranes, X-ray diffr. anal. 102993
Si covalent surfaces, at. H-induced abstraction of adsorbed D 115290
Si cryst., 300 mm, growth technol. *(Chinese)* 101147
Si, cryst., As ion implant. at 850°C, anom. behaviour 80985
Si, cryst., PV modules, energy bal. 112979
Si, cryst., PV modules, energy payback time 112877
Si, cryst. defect stabil., amorphization, mol.-dyn. simul. 91595
Si cryst. growth, engng. anal. of microdefect form. 79171
Si cryst. solar cells, 12 month kWh/kWp energy output testing 112985
Si cryst. solar cells, TiO_2 thin film appls. 100161
Si cryst. surfaces micromorphology, wet chem. etching 126345
Si cryst. surfaces micromorphology, wet chem. etching 126344
Si, cryst. thin films for solar cells, growth, charact. on foreign substrs. 100035
Si, cryst. thin films for solar cells, native substrs., growth, props. 100034
Si cryst. thin-film solar cells, lateral LPE growth method 100089

elemental semiconductors continued
Si cryst. thin-film solar cells on laser-perforated SiO_2 barrier layers 100090
Si cryst. thin-film solar cells prep. using laser crystn. 100086
Si crysts., CZ growth, unsteady 3D turbulent melt flow, modeling anal. 90220
Si crysts., indust. CZ growth, multiple batch recharging 79185
Si cutting fluid, anal./theory *(Chinese)* 103303
Si, deep amorph. wells, crystn. by ion implant. 79415
Si, deep etch model, SCALPEL mask fab. 126554
Si, deep etch profile in atmos. downstream plasma, Al masks 92029
Si deep etching for micro-gyroscope fabr. 81626
Si, deep etching, loading effects, MEMS appl. 92028
Si devices, uniaxial tensile-straining effects 102987
Si dew point hygrometer mirrors, surface temp. homog. optim. 109803
Si dew point hygrometer model 121297
Si diaphragms, form. by precision grinding, buckling suppress. 92548
p-Si, dielec. passiv., surface recomb. vel. 126349
Si, differential switched-current bandpass modulators anal. 79973
Si diffractive microlens arrays, small F no., opt. perform. study *(Chinese)* 82190
Si dimens. stable ultra-lightweight optics for cryogenic/high-energy laser appls. 82268
Si diode cryogenic temp. microsensor 109811
Si diode temp. sens., cryogenic appl. 121249
Si diode, three-phase inverter, AC IM 88719
Si diodes, energetic HI, single-event transient current 103758
Si, disloc., cryst.-melt interface and melting, X-ray topography 68120
Si disloc. modeling, semicond. devices manufacture appls. 80661
Si, distinguishing surface & bulk contribs. to THG 128515
Si, doped, nonlin. Boltzmann eqn. reduction 80670
Si, doped samples, variable-range hopping, electron correl. effects 115300
Si, doping profile, opt. meas. 91947
Si dot fab., self-limiting oxid. 126397
Si double-sided radiation detectors, develop. at IRST 76127
Si, dwell-time depend. of irrad. damage 81005
Si elec. controlled optoelectronic Y-switch, bipolar mode FET 75049
Si, electrochem. etching, 3D microstruct. 116103
Si, electrochem. prepared pore arrays for photonic-cryst. appls. 127565
Si, electron-hole plasma, mag. sens. 86471
Si embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
Si emitter wrap-through solar cell fab., Al-P-codiffusion 100138
Si encapsulated solar cells, photothermal stabil. studies 112988
Si, enhanced oxid. using collimated hyperthermal ozone beam 92014
Si epilayer, UHV/CVD growth, double layer porous silicon substr. *(Chinese)* 90355
Si epitaxial film solar cells, low temp. ion-assisted growth 134390
Si epitaxial films, CVD from silane, chlorosilane, reduced order model 90428
Si epitaxial films, fast electron irrad., specific resist., annealing 92265
Si, epitaxial growth, doping region, trench filling 126331
Si epitaxial growth on Si(001) and Ge(001) surfaces, orig. of roughening 114284
Si epitaxial layer, lifetime charactn. by SPV meas. 102992
Si, epitaxial multilayer structs., disloc.-related defects, DLTS obs. 102986
p/p-Si epitaxial wafers, O precip., Cu/Ni gettering efficiencies 102972
Si epitaxial wafers, monosilane gas growth, cleaning 90405
Si, etched, patterning method for electrochem. prod. 69861
Si, etching by energetic halogen beams, mol. dyn. simul. 126377
Si etching, galvanic cell form., sens. fab., review 103304
Si etching, inductive coupled plasma reactor, etch rate 103342
Si, etching yields in high dens. plasmas 126374
Si eye using MEMS micromirrors for intell. vision systs. 86603
Si, fast etching, field emission array fab., transfer-mold tech. 69904
Si, femtosecond-pulse laser machining, surface damage thresholds 93920
Si fibre MEMS microinstrument, piezoresist. meas. 104203
Si, field emitter array material, press. sens. appl. 102924
Si field emitters, carrier transport, num. simul. *(Chinese)* 80571
Si field emitters, damageless vac. sealing, CHF_3 plasma treatment 69435
a-Si film crystn., long-pulse excimer laser annealing 103235
a-Si film/Cu selective metallization, electrochem. contact displacement 92053
Si films, CVD epitaxy, low thermal budget surface cleaning/dry etching 92088
a-Si films, DC magnetron sputtering, growth front roughness 114257
Si films, Joule heating rapid crystn., Raman scatt. 126005
Si films, MEMS structural materials, tensile-mode fatigue testing 127101
Si films, catalytic CVD, NEDO project, review 124939
Si films, catalytic-CVD method, solar cell appl. 124964
a-Si films, elec. field assisted metal-induced lateral crystn. 126081
Si films, electro-ELO from liq.-metal solns. 79381
poly-Si films, epitaxial thickening by Al-induced crystallisation 90546
Si films, large-grained polycryst., ion-assisted deposition 79417
Si films, low temp. PECVD deposition, biasing/substr. struct. effects 80662
Si films, nano-/microchannel fab., column/void-network 103701
Si films, posn.-controlled giant-grain growth, phase-modulated laser annealing 102957
Si films, rapid crystn. using elec.-current-induced joule heating 68362
Si films, selective area CVD epitaxy, bilayer SiO_2/Si_3N_4 mask 101312
Si films, self-assembly, wet-chem. proc., photolum. 125994
Si films, supercooled liq., solid nucleation/growth modelling 114397
Si films, temp. modulation mol. layer epitaxy, surface reacts. 114360
a-Si films, ultra-large lateral grain growth by double laser recrystn. 114398
μc-Si films with CaF_2 seeding layer for TFT appls., charcts. 114311
Si films/amorph., Ni induced lateral crystn., elec. field effects 125053
poly-Si fine-grained p-n jn. solar cells, carrier collection 100065
a-Si flat-panel detector, digital chest radiography, imaging 98505
Si flat-plate concentrator solar cell module design 112989
Si flow sens., drift, biasing params. 75438
Si for solar cells appls., modeling of H passiv. proc. 81080
Si force-balance accelerometer, MEMS design *(Chinese)* 121040
Si forward-biased single-cryst. solar cells, impulse noise, nondestructive reliab. 112857
Si, front-side micromachined porous gas detector, NO_2 sens. appl. 109759
Si fusion bond interface, wet anisotropic etching 92036
Si galvanic etching, hypochlorite electrochem. reduction 92085
Si gas sens., low-power micromachined struct. 86704
Si gate, etching, plasma-surface interacts., XPS/TEM 126362
α-Si gate, high aspect ratio struct., etch profile control 103340
poly-Si gate oxide reliab. post annealing degrad. and suppression *(Chinese)* 126244
Si, gated-diode recomb.-generation current tool for characterizing bulk traps of SOI devices 91898
Si, graft polymerization functionalization, struct./elec. props. 81064
Si grating, at. accurate, with 5.73 nm period 115797
Si, growth rate & nonselective growth, modified GSMBE 101281
Si guided-wave MOEMS, fab., from technol. to appls. 127814

elemental semiconductors continued
Si, hemispherical grained for ULSI DRAM stacked capacitor, environ. O_3 e 103448
Si, high energy ion implant., annealing, elec. act. centres 115510
Si high-dens. micromachined interconnects, single-mode microstrip pro 102694
Si, high-dens. plasma-etching syst., level set simul. 69900
Si high-efficiency solar cells for commercializ. 123803
Si, high-energy ion implant./annealing generated vacancy clusters 102967
Si high-force piezoresistive force sens., max. hysteresis error 86758
Si high-press. sens., fusion bonding, low-cost packaging 109804
Si high-quality low-temp. epitaxial films, high deposition rate and pr charactn. 79416
Si high-valued polysilicon resistors control by hydrogenation techs. 76047
Si highly doped nanowires, dual-gate config., single-electron tunneling 70224
Si, highly doped polycryst., grain boundaries carrier transport 91590
Si, homo- and heteroepitaxies on (100)-2×1 surfaces, single adatom diffu 124811
Si homoepitaxy by MBE, at. scale morph., temp. depend. 124841
Si indiv. nanocrystals, single-electron charging effect 103114
Si ingot, carrier lifetime and diffusion length, laser tomography 80654
Si integrated inductors in 0.18 μm CMOS technol. for MMIC/RFICs 1257
Si integrated microspectrometers, low-cost syst. develop. 116754
Si integrated mm-wave micromachined band-pass filters, flip chip bonding te 125771
Si integrated spiral inductors, high-Q implement. in CMOS technol. 11502
Si, interstitial kinetics during surface oxid., disloc. loop layer effect 81079
Si intrinsic-point heater, micropropulsion appl. 104191
Si inverter logic gate using micromechanical switch, electrostatic force actu 92511
a-Si, ion beam induced epitaxial crystn., point defects role 80759
Si, ion implant., dopant diffusion, SIMS 126298
Si, ion implant., dopant diffusion, amorphization, atomistic modelling 9196
c-Si, ion implant., point defect diffusion and clustering 81003
Si, ion-beam-induced nitridation, elec. transients 69834
Si, irrad. detectors, Lorentz angle anal., low temp. effects 132318
Si lamellar grating struct., groove depth, opt. scatterometry 121202
Si large 3D photonic band gap crysts., large-scale microfabrication 92924
a-Si, large area X-ray image sens. arrays, MEMS fab. technol. 110426
Si large diam. crysts., upper yield point, temp./shear strain rate depend. 69
Si, large diam. tube, EFG, modelling, expt. 90234
Si large single crysts., FZ growth, fluid motion/resist. distrib., EM fields eff 90227
a-Si large-area MEMS fab., thick SU-8 photoresist, X-ray image sens. ar 97375
Si large-area cryst. solar cells, screen printed contacts RTP 100162
Si large-diam. CZ cryst. growth, 400 mm diam. 101158
Si large-diam. single crysts. furnace, O reduction, heat zone simul. *(Chine* 68125
Si, lateral gettering of Fe and Pt by cavities induced by He implant. 81007
Si lattice defect passiv. by ECR hydrogenation tech. 69895
Si layer, MBE low temp. growth for SiGe pseudo-substrs., positron annihilat charactn. 102975
Si layer transfer using wafer bonding/debonding 103277
Si layers, simultaneous doping with Er and O in course of MBE 115496
Si light valves, empirical model of flicker 86834
Si, low energy Cs^+ and Cl^- ion implant., SIMS investigs. 115562
Si low resist. substr. microwave filters, polyimide interface layer, wireless c 91334
Si, low temp. gas-source MBE, adsorpt. kinetics role 90316
Si, low-temp. selective deposition on Si_3N_4, narrow wire form. 90382
Si, macropore form., cryst. orient. depend., anisotropic props. 103326
Si, macroporous microchannel, cylindrical pores, XRD 69479
Si, macroporous struct., plasma and electrochem. etching 92037
Si, macroporous-based micromachining on full wafers 104217
Si, maskless etching using patterned microdischarges 92018
a-Si, mechanism of metal induced lateral crystn. *(Chinese)* 114238
Si melt, O distrib. under inhomog. transverse-mag. fields 90226
Si melt cryst. growth, 400 mm diam., cryst. supporting syst. 101160
Si, melt grown filament, pulling rate, admissible manoeuvres 124786
Si, melt growth, defect form. procs., solid-liq. interface struct. *(Japanese)* 791
Si, melt growth techs., computer simul. 124800
Si, melting, heating rate depend., oxygen precip., disloc. loops, X-ray topograp 102984
Si membrane flatness defect effects on piezoresistive press. sens. response 754
Si membrane, permalloy film, stress anal., Raman scatt. 127099
Si mesoporous nanocrysts., free charge carriers, IR absorpt. and DC elec. co meas. 115296
Si, metallic contaminants removal, post-CMP dry cleaning proc. 69851
Si, micro-/nano-syst. technols., fab. techs., overview 81617
Si micro-EDM machining performs., micro-Joule energy range 92555
Si micro-g accelerometers, closed-loop, deposited rigid electrodes, perform. li its 75756
Si micro-machined condenser microphone, single deeply corrugated diaphrag 111506
Si micro-machined reson. beam press. sensor *(Chinese)* 75750
Si micro-oscillator, vibr. meas., scanning LDV 97855
a-Si microbolometer based IR camera for unattended ground sens. 75632
Si microcalorimetric gas sens., catalyst materials 120968
Si microcavity light emitting device 93392
Si, microcryst., amorph.-cryst. phase transit. during growth of thin films 1143
Si, microcryst., influence of electron irrad. on electronic props. 82312
Si, microcrystalline films, catalytic CVD, struct., electronic props. 124958
Si, microcrystalline, hydrogen passiv. depth, carrier lifetime meas. 91610
Si microcrystalline low-cost solar cells 100081
Si, microcrystalline solar cells on plastic substrs. 100207
Si, microcrystalline thin film, large-area polysilicon TFT-LCD 90251
Si, microcrystalline, ultrafast carrier trapping, opt. pump-terahertz probe mea 102968
a-Si microdot detectors, sq.-shaped electrodes 120978
Si microelectrodes with on-chip electronics, preamp. noise perform. 87379
Si microengineered gas chromatography syst., miniature injector design 1097
Si microfabricated SIL for SNOM 116767
Si micromachined accelerometer with mixed-sig. ASIC, extremely low-nois oil/gas exploration 88119
Si micromachined ccts. for HF appls. 69098
Si micromachined fluid ang. rate sens., stream path accuracy, etching mas *(Japanese)* 109799
Si micromachined isolated diode, uncooled thermal IR detector 109543

ntal semiconductors continued
micromachined pass. struct. for MMICs, hybrid integrat., packaging technols. 15018
micromachined struct., semicond. gas sens., reliab. 97534
micromachining, effect of energy above laser-induced damage threshold 05634
micromachining for MEMS, plasma dry etching 92522
micromachining, isotropic dry etching using ClF_3 gas *(Japanese)* 81605
micromachining microchannels heat sink, theoretical/expt. anal. 100578
micromachining using high-dens. plasma source 127113
micromechanical cantilever-based biosensors, review 132015
micromechanical oscillators, autoparametric opt. drive 93172
micromechanics, MEMS/MOEMS for lightwave networks 71361
microphone, 3D multichip microsystem encapsulation, conformal coating 04211
microphone, surface and bulk micromachining 97571
microstrip detector, field oxide FET-biased, radiation effects on charact. 76128
microstrip detector with overhanging metal electrode, anal. and optimal design 97968
microstrip detectors, low resist. substrs., radiation damage 132285
microstrip detectors, multiple field-limiting ring struct. 132355
microsystems, 1D/2D mech. stress. charactn., micro-Raman spectra 81567
modulated quantum wires, phase response of quantum staircase 69682
molten column, thermocapillary convection under microgravity, O_2 partial press. depend. 90214
molten drop, O partial press., surface tension 124785
monochromator, perform. under extreme power loads 121760
monocrystalline, large-area surface treatment by low temp. ECR plasmas *(Chinese)* 91993
monocrystalline thin-film solar cells, layer transfer procs. 112852
monocrystals, chem. etching, mech. effects 126347
monolayer growth on Ge(100), CAICISS anal. 90266
multi-sens. needles, temp. sens. and ISFETs, appls. in surgery 121971
multicrystalline ribbon solar cells, hydrogen passiv. expts. 100057
multicrystalline solar cells, maskless plasma texturing tech. 100052
multicrystalline solar cells, plasma surface texturization 100159
multicrystalline solar cells, screen printed contact form. mechanisms 100170
multilayer structs., MBE growth combining solid/molten Si evap. 103132
n^+-p jn. diodes, laser annealed, trap-assisted tunneling near 77 K 92283
n-MOSFET, Ta_2O_5 gate dielec., n^+-p jn. leakage characts. 69629
trained-Si n-MOSFETs, fab. on SGOI substrs., electron mobility enhance. 81339
n-p photodiode, capacitance, color detect. 109586
n-web screen-printed front-surface-field solar cells, gettering, passiv. 134389
n±p jns., hot-carrier impact ionization PV effect 80788
nMOSFETs with gate oxide grown by low temp. plasma anodisation, noise study 81346
nanocantilevers for noncontact AFM, mech. characts. *(English)* 81604
nanocrystal MTJ device, ion beam synthesis 126911
nanocrystal arrays based MOS memory devices 127065
nanocrystal based MOS struct., prep., charge retention effect 80947
nanocrystals, band struct. alterations, size-confine. effects 125999
nanocrystals/adsorbed O superlattice, electronic transport, opt. props. 115385
nanohole array fab., self-organised porous alumina mask 126593
nanolithography, tip-surface interacts. 126584
nanometer precision positioning robots, optimized scratch drive actuators 112737
nanometer-sized dot multilayers, photocond. 127903
nanometer-sized hemispherical-grained, RTCVD, microstruct. evol. 124926
nanoparticle colloids, thin film form., high temp. single electronics 103930
nanoparticle, oxide passivated, ultraclean two-stage aerosol reactor, memory appls. 90543
nanoparticles, quantum confine., Anderson localization of carriers 104911
nanopillar cathodes, geometric enhancement factors, STM obs. 102969
nanopillars, 3D controlled size-reduction by photoelectrochem. etching 69985
nanoporous, elec. cond., charge transfer, adsorbed water effects 102979
nanoprotrusions, field electron emission 102896
nanoscale microcavities, biosensing appl. 132005
nanostructured, photoelectrochem. prep., photolum. 71519
nanostructures, Coulomb blockade, single-electron devices, review 69990
nanotechnology, scanning probe oxid. of Si_3N_4 masks 115786
nanowires, surface reactivity 80817
neutron-transmuted, elec. params. degree of homog. 102978
non-parab. band hydrodynamical model, electron device simul. 91578
nuc. radiation detectors, ion implant. 121430
nucleation-site-control excimer-laser-crystn. method 79168
on sapphire, radiation-damaged, ultrafast carrier relax. 69471
on-chip spiral inductor, layout and ground shield effectiveness 69179
opt. bench, high-speed transceiver 120128
opt. excited microresonators, models 116078
opt. microsensor, direct near-field antenna testing 109603
opt. press. sens, white light fibre interferometry 75759
optoelectronic modulator based on Bragg mirror 82220
ordered nanocryst. dot prod. by low-energy ion sputtering 69663
oxid., at. and ionic procs., state-of-the-art calcs. 92034
oxid., hyperthermal beam by laser evap. of mixed O_3/N_2O cryogenic film 115616
oxid. rate, Cl conc. effect, interfacial Si emission model 69844
oxygen plasma wafer bonding, Weibull fracture probab. method 91931
oxynitridation in N_2-N_2O atm., nitrided silicon precursors, XPS 126361
p/p^+ substrs., spiral inductors with reson. freq. of 20 GHz 69227
p^+/n and n^+/p shallow jns. form. by PIII, dopant deposition effects 115569
p^+-i-n photodiodes, radiation degrad. effects 105026
p-MOSFETs, saturation region, flicker noise, SPICE models 70111
p-doped multilayers, 2D dopant profiling, SCM obs. 126297
a-Si p-i-n diode/organic LED image sens. and display device 97733
a-Si p-i-n solar cells and modules, SnO_2/p and ZnO/p contact resist. and jn. props. charact. 100196
a-Si p-i-n solar cells efficiency enhancement using LP-CVD ZnO 100200
p-i-n struct., time depend. RT EL 105016
p-n jn., photo-induced mag. field imaging, laser SQUID microscopy 131887
p-n jns., electrolum., avalanche breakdown condition 103111
parallel/floating multijunction solar cells, comparison 78175
passivated emitter solar cell, minority carrier diffusion length, PV method 134401
passivated luminesc. porous, props. 103362
pattern on PMMA, nano mold lithog. 115726
patterned wafers, silica particles, megasonic cleaning 126387

elemental semiconductors continued
photo-emitters for opt. interconnects, accelerated stressing/degrad. mechanisms 82450
photocell based TPV syst., Yb_2O_3 selective emitter 113025
photoconductance, carrier lifetime, injection levels 102983
photodiode, design optim. 82344
photodiode, design optim. 71550
photodiodes, UV spectral sensitivity, temp. depend. 86532
photoelec. props., non-uniform deform. effect 80652
photoelement, blue-purple light detect. 86508
photondiode two-photon response *(Chinese)* 93358
a-Si, photonic-grade, hot-wire deposition 124955
piezoelec. press. sens. with integrated digital calib. ccts. *(German)* 75414
poly-Si piezoresistive cantilevers, noise and sensitivity anal. 131882
piezoresistive low-press. sens., design comparison 75509
piezoresistive press. sens., low range, dyn. calib. 109817
piezoresistive stress sens., packaging appls. 75427
a-Si pin solar cells, ZnO front electrode, PECVD grown 112893
a-Si pin thin film solar cells, texture-etched ZnO substrs. upscaling 112861
pixel detectors, double-sided guard ring struct., neutron irrad. 121456
planar parab. lenses 104800
planar resistors, temp. response curves, low-temp. hopping cond. nonohmic effects 75420
plasma assisted RT bonding, MST technol. 103241
pn devices, PEEM, doping-induced contrast, photon energy depend. 69630
a-Si pn jns., tunnelling generation-recomb. currents 91759
pn-jn. diode, elec. charact., SCM, Kelvin probe force microscopy 81194
polished wafers, nanotopography anal. techs. 75868
polished wafers, total thickness variance and site flatness, comparative study 115657
polycryst. TFT, current crowding, 1/f noise 126758
polycryst. TFT, photon-induced current 70074
polycryst., anisotropic etching in $Cl_2/CH_3Br/O_2$ plasma 103446
polycryst., built-in strain, sens. fab., surface micro machining 110003
polycryst., elec. property at grain boundary by Gauss distrib. model *(Chinese)* 91606
polycryst. film, ICP-CVD, struct., solar cell appl. 90392
polycryst. film and npn transistor, particle irrad. 126611
polycryst. films for solar cells, RTCVD grown, grain boundaries 68258
polycryst. films, form. by a-Si excimer laser annealing, lateral grain growth 115479
polycryst. films, hot-wire CVD, W/Ta catalysts 124963
polycryst. films, hot-wire CVD, struct. 124962
polycryst. films, hot-wire-assisted PECVD, struct./opt. props. 124967
polycryst. films, large grain size, catalytic chem. sputtering 124825
polycryst. films, lightly doped, grain boundary transport props. 115298
polycryst. films on polymer substrs., low temp. deposition and charactn. 101177
polycryst. films, temp.-depend. thermal cond. 80632
p-Si polycryst. gate, MOS capacitor, direct tunneling 80951
polycryst. grain struct. with single wafer CVD tech. 102956
polycryst. layers, epitaxial realignment, BiCMOS technol. 124888
polycryst. microcantilever beams, mech. props., specimen size effect 81559
polycryst., photocond. and opt. controlled CPW switch 80387
polycryst. thin film solar cells, metal-induced growth 100071
polycrystal torsional micromirror array design, opt. binary switching, AM appls. 104762
polycrystal xylophone bar magnetometer, reson. charact., torsional stiffness 109800
polycrystalline MEMS devices, W coating, crit. features testing, tension strength, fracture 104158
polycrystalline MEMS, friction meas. 104184
polycrystalline film, residual stress control, multilayer deposition, LPCVD, 101336
porous, NO_2 sens., deposition tech., electrochem. etching 97483
porous, PL enhancement by NF_3/UV photothermal surface treatment 82324
porous, anodisation form. on Si surfaces, IR spectra anal. 91999
porous, antireflective coatings for solar cells, etching, rapid thermal proc. 104875
porous, buried channel waveguide, direct laser writing 104739
porous, buried waveguides, laser local oxid. fab. 71305
porous, carriers drift mobility 80634
porous chip, DNT, TNT, HF, and nerve agents detect. 75701
porous, cold cathode, field emission perform rel to anodiz. *(Chinese)* 69391
porous films, inplane birefr., SHG phase matching 105503
porous, form. technol., galvanic internal current generation 103374
porous, form. technol. using internal current generation 126399
porous, high-temp. carbonizing, plasma proc. effects 115624
porous, implanted with N by PIII 81035
porous, integrated LEDs, fab. proc. using graded doping profiles 82396
porous, large-area LED, double-layer metallization 128012
porous, light-addressable potentiometric sens., prep. 97448
porous, metal-aided electrochem. etching, PL obs. 103328
porous, microelectronic biological implants, overview 111140
porous, patterning for integrated opt., H ion implant., RTA 92008
porous, porosity & film thickness, electrolyte comp., anodization 92002
porous, potentiometric triglyceride biosens., calib. 109724
porous, prediction of nanoscale struct. from proc. params. 126412
porous, sacrificial layer, microstruct. fab., morph. 101523
porous, scatt. effects, photoacoustic spectra 126006
porous semicond. form., anodization and electroless stain etch combination 92042
porous silicon cold cathode device, field emission charact. *(Chinese)* 69390
porous, solar cells, surface-recomb. vel. 134395
porous, strong photolum., anodization time, current dens. effects 103416
porous substr. for MOVPE growth of GaN film 69547
porous substrs., laser-assisted selective deposition of Ni patterns 90525
porous, sulfur passiv., PL/ stabil. improvement *(Chinese)* 91586
porous, surface passiv. by SiO_x, Al_2O_3 films *(Chinese)* 81090
porous, thick layer form., implanted mask, gas sens. fab. 92009
porous, thick oxidized, growth, microanal. *(Chinese)* 91991
porous, tunable opt. filter, microspectrometer 104764
porous, unoxidized and oxidized, metal/PS/c-Si photodetector 131907
porous/HF-electrolyte jn., I-V/C-V charact. 80965
power MOSFETs for microwave appl., R&D hist. review *(Japanese)* 91283
press. sens., integrated reliab. test, automatic syst. 75456
proc., PIII 81002
proc.-induced lattice distortion, double-cryst. x-ray topography 91589
pulsed high energy dens. plasma proc. surf. 90526
pulsed plasma doping, contamination control, SIMS meas. 115577

elemental semiconductors continued
Si radiation hardness, preliminary irrad. infl., detector appl. 126325
Si random reactive ion etched-textured solar cells, hemispherical reflectance 78171
Si reconfigurable antenna 83660
Si related materials, surface modif. using Cat-CVD syst. for ULSI appls. 124973
Si ribbon growth, commercialization, growth model anal. 90219
Si roller printed multicrystalline solar cells 100083
n-Si rot. disk electrode, dissolution proc. in water/ethanol/HF solns. 92079
Si screen printed back contact solar cell with selective emitter 100085
Si, selective epitaxy using at. H, substr. temp. modulation 125055
Si, selective wafer bonding, surface roughness control 92573
Si self-assembled QDs, DLTS/photorefl./time resolved PL study 126156
Si self-limiting at.-layer deposition on SiO_2 by alternate supply of Si_2H_6 and $SiCl_4$ 90309
Si semicond. devices, microcrystallinity, Raman chem. imaging 70001
Si semicond. residual stress, lifetime prediction model 125154
Si sens. & ccts., piezojunction effect rel. to piezoresist., review 109479
Si, shallow acceptor center, mag. moment relax. rate, muon probe 102961
Si, shallow donor states, central-cell corrections, strong mag. fields effects 80680
Si single cryst. MEMS, sub crit. crack growth, crack vel./length 104170
Si, single cryst. etched by TMAH soln., surface roughness 69882
Si single cryst. growth, Bi-2223/Ag tape based HTS magnet 71068
Si single cryst. reson. force sens., vac. packaging 121027
Si single cryst. surface, laser evap., conical microstruct. form. 105645
p-Si single emitter with real surface, temp. depend. of field-emission characts. 80573
Si single nanocrystals charging by conducting-tip AFM 69469
Si single-atom reversible recording using scanning tunnelling microscope 126590
Si, single-electron transistor, transport props. 81402
Si single-electron transistors, Coulomb blockade oscills. obs. 126908
Si smart pixel OE arrays, heterog. integrat. with micro-optics 117032
Si solar cell contacts form. with improved surface passiv. 100169
Si solar cell defect monitoring, scanning PL spectrosc. 100061
Si solar cell, emitter quantum efficiency, contactless photoconductance meas. 100060
Si solar cell fab., ingot lifetime meas. calib. factors 100163
Si solar cell fab. proc. monitoring, PV-reflectometer 100063
Si solar cell mfg. line, EFG wafers, 15%+ efficiency cells 100080
Si solar cell p-n-jn. form., radiation defect prod. effect 112862
Si solar cell self-doping silver coating contacts 100051
Si solar cell surface passiv. using low temp. deposited SiN_x:H 100158
Si solar cell wafers IR lifetime mapping tech. 100058
c-Si solar cells, I-V charact. expts. 112982
Si solar cells, NIR internal quantum efficiencies, thermal modifs. 100165
Si solar cells, PECVD single-layer (SiN:H) and double-layer (SiN:H/SiO_2) ARC 100147
Si solar cells, RIE texturing proc. 100160
Si solar cells, RTP emitter diffusion in indust. proc. 100143
μc-Si solar cells, absorber layers, ECR CVD grown 112894
Si solar cells, colour matched, surface texturing, Camocell technol. 100154
Si solar cells dry etching, plasma sources overview 100053
Si solar cells, efficiencies over 20%, obliquely evaporated contact technol. 100078
mc-Si solar cells efficiency, P, Al diffusion, RTP 100153
μc-Si solar cells, gas jet deposition tech. 100066
Si solar cells, heavily doped regions DOS 100059
Si solar cells, high efficiency, thin CZ wafers 100077
Si solar cells, high quality screen-printed contacts, rapid photo-assisted forming gas anneal 100139
Si solar cells, high-quality passivated rear contact struct. 100075
Si solar cells, low bulk-lifetime, bulk resist. optim. 113008
Si solar cells manufacture, cost reduction, PVMaT R&D 112969
Si solar cells, multicrystalline, 16% efficiency, mass prod. 100079
Si solar cells on Argentine SAC-A satellite, testing, radiation damage 112966
a-Si solar cells on PECVD natively textured ZnO 112860
n^+/p mc-Si solar cells, optoelectronic props., surface modif. 100151
c-Si solar cells perform., oxygen precip. role 100093
μc-Si solar cells, plasma CVD, fluoride seed layer, glass substrs. 112882
Si solar cells, problems of develop. & mfg., review 89276
Si solar cells, proc. with porous Si texturing 100145
mc-Si solar cells, simultaneous bulk H_2 passiv./selective emitter form. 100055
mc-Si solar cells, single furnace-step proc. 100091
a-Si solar cells status made near microcrystallinity onset 100199
mc-Si solar cells, synergetic effect of Al, thermally treated porous Si for bulk passiv. 92093
a-Si solar cells, temp. coeffs., light degrad. & recovery 134400
a-Si solar cells, temp. depend. of PV params. 100192
Si solar cells, thin-film, cryst., batch-type LPCVD-syst. 100155
Si solar module perform., IR water filter appl. 127950
Si solid substrs., laser ablation in water-confined environ. 105633
Si, solid-liq. interfacial tension, phys. model eval. 91588
Si, solidif., lattice Monte Carlo simul. 115808
Si, space solar cells, proton-/electron-irrad., anom. degrad. 89280
Si space solar cells, radiation hardness improvement, electron irrad. 112925
Si, spectral responsivity, temp. depend., anal. model 93359
Si specular surface, anisotropic etching, KOH soln. 126395
Si spherical device, 1 mm, clustering/enabling proc. technols. 69774
Si sputtered microcrystalline thin film fab. for TFT-LCD 79207
Si sputtered microstructs. integrat. with pre-fabricated CMOS circuitry 104182
Si sputtered tip, AFM probe, modular design 103371
Si straight nanowires, thermal CVD catalytic synthesis and charactn. 69989
Si strain gauge, single-cryst., user-friendly, high sensitivity 97563
Si strain sens., thermoelastic effect 121025
Si strained layer NMOSFETs for CMOS technol., high perform. 126772
Si strained p/p^+ wafers, misfit disloc. interacts., XRD 69644
Si, string ribbon, Al-enhanced PECVD SiN_x induced H passiv. 69917
Si string ribbon PV modules mfg. advances 112970
a-Si structural improvement using metal-induced crystn. 69490
Si, sub-0.25 μm technol., conf., Strasbourg, France (June 2000) 67399
Si, submicron diodes, impact ionization, soft threshold 104960
Si substr., 3D MM-wave photonic IC 80403
Si substr., GaAs space solar cells 112919
Si substr., GaAs space solar cells 88067
Si substr., $GaInP_2$ and GaAs solar cells, MOCVD 112946
Si substr., IC interconnects, resist. and inductance 70279
Si substr., SiO_2 particles dry laser cleaning efficiency, meas. and modeling 103410
Si substr., TiO_2 incorp. zeolite thin films for solar cells 89294

elemental semiconductors continued
Si substr., VLSI interconnects, distributed inductance/resist. per-unit-length formulas 126509
Si substr. coupling noise modeling and expt. verif. for mixed-sig. IC de 102419
Si substr., microstrip on-chip interconnects 126508
p-Si substr., n-C/p-C jn. solar cell 112906
Si substr. ringing in microfabricated US transducers 111498
Si substr., selective plasma nitridation, contrast reversed etching 126366
Si substr., temp. calib., temp. programmed desorpt. anal. 109401
Si substr., void defects, dielec. breakdown distrib. 104254
Si substrs., SiN_x films, ICPECVD, spectrosc. ellipsometry, etching 124927
Si substrs., graded GeSi buffers, high efficiency GaAs solar cells 112918
Si substrs., plasma etching patterns, surface props. 126402
Si substrs., pulsed mag. field proc. prior to thermal spray film deposition 81
Si substrs., striatal neurones, voltage-depend. membrane currents 76320
Si substrs., surface damage after $SiCl_4$ dry etch of poly-Si film 92077
Si surface & interface stress meas., photoreflectance spectrosc. 80630
Si surface, (001), Au-induced nanoscopic pattern form. 69994
Si surface, SR-induced nitrization and oxid. at low temp. 81093
Si surface cleaning, wet etching, IC prod. 69907
Si, surface cleaning/doping in BF_3 plasma during fab. of ohmic contacts 103
Si surface, etching in KOH/TMAH soln., isopropyl alcohol effect 126417
Si, surface form. by MBE, adsorbed mols. influence *(Japanese)* 79234
Si surface layer cleavage, H-induced, thermodyn. model 80996
Si surface, micro-EDM, spark erosion, microcrack form. 104213
Si surface micromachined capacitive transducer accelerometer, low stress pa aging 75747
Si surface micromachining, deep vac. cavity struct. appl. to microflow se 97568
Si surface, neg.-ion/pos.-assisted etching 115641
Si surface oxid., interstitial injection rate and boundary condition anal. 115
p-Si, surface passiv. by plasma CVD a-SiC_x:H films 126360
Si surface, passiv., quinhydrone/ethanol treatment 126394
Si surface plasma charging damage, reverse-act. area etching in poly-buffe STI proc. 103425
Si surface, reactive sputtering by F cluster impact, cluster size effect 92019
Si surface region in MOS syst., gamma-irrad., nonuniform space-charge distr 115449
Si surface, ultraprecision machining, SPV spectrosc. *(Japanese)* 69916
Si surfaces, Cs promoted oxid., PES peak posns. oscills. obs. 81081
Si surfaces, PL obs. during photoelectrochemical etching procs. 103393
Si surfaces, nano-oxid., contact/noncontact AFM studies 92017
Si suspen. wire, submicron cross-sect., micromachining 127127
Si technol./devices, develop. 103948
Si, temp. modulation MBE, surface morph. 79268
Si textured monocrystalline thin-film solar cells, porous Si proc. 89287
Si textured surface prep., etching, field emission, C implant. 69433
μc-Si, thermal PECVD, ultrafast deposition 68285
Si thick porous sacrificial layer form. using implanted mask technol., gas m rosensors 92534
Si thin base-layer solar cells, ECR PECVD growth, charactn. and modelli 113017
a-Si thin film PV modules, kWh/kWp perform. prediction 112991
a-Si thin film PV products develop. and mfg. 100044
Si, thin film doping, point defects, react.-drift-diffusion eqn. 115614
Si thin film polycryst. solar cells, quasi 3D simul. 100141
Si thin film solar cell, adhesive bonding tech. 113014
c-Si thin film solar cell minority carrier props. 100050
a-Si thin film solar cells, ZnO texture-etched substrs. prep. 100203
Si thin film solar cells fab. on Moon, in-situ elec. power generation 123268
a-Si thin film solar cells for space power appls. 112869
a-Si thin film solar cells, perform. meas., sweep rate effects 100133
c-Si thin film solar cells, perform. meas., sweep rate effects 100133
c-Si thin film solar cells, substr. prep., APCVD growth and charactn. 89295
a-Si thin film space power solar cells develop. for PowerSphere concept 1128
Si thin film technol., struct. control, Ni film prelayer 90261
poly-Si thin films, Cat-CVD prep., charactn. and solar cell appls. 124982
Si thin films, ECR plasma CVD, plasma param. effects 124879
a-Si thin films, crystn. using viscous Ni soln. 103238
Si thin films, electron-beam evap. on CeO_2/Si(111) 114266
Si thin films, excimer laser crystn., TFT-LCD appl. *(Japanese)* 92347
Si thin films, high rate deposition by hot wire cell method for solar cell app 90438
Si thin films, hot wire CVD, solar cells/TFT appls. 79320
poly-Si thin films, inductively coupled PECVD and charactn. 114312
Si thin films, low temp. epitaxial growth by hot wire cell method 125067
Si thin films, thermo-catalytic CVD, PV appls. 124979
Si thin films, wafer bonding, exfol. proc., IR spectrosc., X-ray imaging 1263
Si thin-film solar cells, SiSiC ceramics substr. infiltration/recrystn. 100069
Si thin-film solar cells, grain size and struct. engng. during Al-induced cryst 100142
a-Si thin-film solar cells, high-rate depos. by HWCVD 124957
Si thin-walled cylinders, shaped cryst. growth, EFG 79184
Si thinning and polishing, packaged devices 126335
Si tip, DLC coating, field emitter array 125966
Si tip array, BST sol-gel ferroelec. coating, electron emission 69396
Si tip array, nanodiamond(AlN) coating, field emission 69407
Si tip arrays, laser prep., electron field emission 80560
Si tipless gated field emitter arrays, LV electron emission 69386
Si transient voltage suppressors, absorpt. energy capability 112171
Si, transit. metal impurities gettering simulator 92267
Si, transmutation doped semicond., Hall effect 125986
Si, trapping of Al by disloc. loops 81008
Si trench space solar cells fab., improved radiation hardness 112955
Si, tri-cryst., characterisation, solar cell appls. 91597
Si triaxial accelerometer, integrated PZT thin film detector 109807
Si, ultra low energy implants, interstitial defects, TED 115509
Si ultra-shallow diodes, epitaxially grown, Al/Si contact 115825
Si ultra-thin ICs, dicing by thinning for improved mech. reliab. 70231
Si, ultra-thin gate oxide, AC anodization and RTA 126348
Si, ultrafast cold melting under femtosecond laser pulse, band gap collaps 80631
Si, ultrahigh-rate plasma jet chem. etching 126381
Si ultrasensitive phototransistors with punchthrough base 93368
Si ultrathin layer, SOI MOSFET devices, quantum mech. *(Japanese)* 81289
Si ultrathin layer thermal agglomeration on buried SiO_2 69757
Si, ultrathin oxide, wet oxid., MOS tunnel diode 115621
Si uniform single nanodots, laser synthesis 101451
Si, vert. furnace in situ spectrosc. ellipsometry, CVD appl. 67684

ental semiconductors continued
i, void dyn., radiation damage/impurities effects, TEM obs. 80664
i wafer, (100), precise mask align. to cryst. orient. using wet anisotropic etching 92563
i wafer CMP, mech. interacts. effects 103338
-Si wafer, OISF generation suppression, annealing 102991
i wafer cleaning methods compared at metal conc. below 1E10 atoms/cm^2 115662
i wafer, contaminants surface densities, TXRF 81407
i wafer disloc. dens. change during thermal proc., solar cells 91598
i wafer fab., nodules due to Si precip. 103950
i wafer fab., vac. casting, mold coating effect, solar cell appl. 114239
i wafer fine grinding proc., proc. params. 92006
i wafer nonequilibrium carrier recomb. lifetime by noncontact microwave tech. 125990
i wafer, small W particles removal, laser-induced plasma shock waves 81057
i wafer strength/surface morph. correl. 100593
i wafer, surface roughening due to Cu contamination prior to ultra-thin gate oxid. 126338
i wafer surfaces, Na impurities, Total Reflection X-ray Fluorescence Analysis 115284
i wafer surfaces, laser-assisted particle removal, opt. field enhancement effects 81073
i wafer surfaces, p-n jn. form./Cu deposition, electrochem. study *(Chinese)* 80966
i wafer surfaces, wet chem. treatment, microwave refl. photocond. decay meas. 82305
i wafer/glass substr., Sn-Ag(Pb) fluxless soldering 67542
i wafer-air gap-mirror struct., photocond. relax. time, nonuniform microwave field 126004
i waferboard, opt. package, Monte Carlo tolerance anal. 113491
i wafers, dielec. props., Debye-type profile 114921
i wafers direct bonding, diffusion layers form. 103093
i wafers, epitaxial growth, CMOS ICs *(English)* 79387
-Si wafers, laser IR photothermal radiometric/ELYMAT charactn. 92022
i wafers, laser-induced particle removal 126333
i wafers, minority carrier lifetime meas., collinear four-probe array *(Chinese)* 102954
i wafers, photoelasticity, scanning IR polariscope obs. 102994
c-Si wafers prod., impurity gettering by indust. phosphorus diffusion 91599
i wafers, spherical silica particles, laser cleaning eff. 81070
i wafers, surface passiv., plasma CVD SiN films 126401
i wind sens. with integrated interface electronics 86775
i wire-like submicron cryst., self-organized growth and charactn. 92249
i:Ag coupled quantum wire-dot, single-electron transport through Anderson center 69683
i:Ag solar cells, thermal failure model, depth profile anal. 89282
i:Al polycryst., extended high temp. Al gettering, elec. props. 126261
-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
i:Al,H, interstitial-type defect aggregations, H-enhanced self-organization 126000
i:As, 2D amorphized, corner defect microstruct., stress effects 126084
i:As, clustering equilib., deactivation kinetics 81017
i:As, cross-contamination reduction by beam cleaning, TXRF 126281
i:As, implanted As redistrib., substr. temp., annealing ambient effects 115513
i:As, ion implanted shallow jn., MEIS/RBS profiling 115373
i:As, ion-implanted, clustering/precip. anal., SIMS/EXAFS 115590
i:As, near-surface damage annealing and ultralow energy implants elec. activation 126275
i:As, polysilicon emitter transistor, RCA oxid. *(Chinese)* 92296
i:As/SiO_2 PMOSFET, short channel effect, halo implant effect 115916
i:As$^+$(B$^+$)(P$^+$) off-axis oriented wafer control during high angle implants 115599
i:As-based photodetectors, photoelec. charact., blocked hopping cond. 75520
i:As(B)(P), ion implant. induced contamination, Monte Carlo simul./modeling 115609
i:As(Ge), anom. P diffusion during postarsenic-implant. annealing 69823
i:As(Ge), ion implant., amorphization 115332
i:Au, acceptor behavior rel. to long-term heat treatment 102970
i:Au, high thermoelec. power, electronic struct. calcs. 80640
i:Au, high-energy ion-implanted, vacancy evol., Au labeling 81030
i:Au substrs., selective etching, micropatterned ion-implant., micromachining 92570
n-Si:Au-based V-groove p-i-n photodetectors, static and transient characts. 120793
i:B, B diffusion, HI irrad. effects 115559
i:B, B sticking coeff. on Si during vap.-phase doping 126301
i:B, B-interstitial Si clusters, interstitial supersaturation, postimplantation annealing 102953
i:B, Bi ion irrad. effects on impurity redistribution 126605
i:B CZ single crysts., superlarge defects 68131
p-Si:B CZ solar cells, carrier lifetime modelling 100048
i:B CZ substr., boron implant., CMOS technol. 103282
i:B, CZ wafers, minority carrier lifetime degrad. 102982
i:B Coulomb glass, microwave ac cond. spectrum 102491
i:B Cz wafer based diode, high dose high energy implant., CMOS technol. 115831
i:B MOS capacitor, elec. props., a-Si gate electrode, two-step nitridation effects 69767
i:B MOS-struct., through-gate implant., induced damage 115508
i:B, PIII, annealing, low-leakage p$^+$n jn. form. 80991
i:B, RTP, shallow jn. form., sheet resist. studies 115485
i:B, delta-doped, proton irrad., influence of B conc. on enhanced diffusion 81015
μc-Si:B films, electron beam assisted plasma CVD, ion energy/hydrogen effects 102989
p/p$^+$-Si:B highly doped substr. wafers, edge treatments and misfit disloc. nucleation 102960
i:B implanted n$^-$-gated tip arrays, C-doped BN coating 69405
i:B, init. anom. diffusion in superlattice wafers at low-temp. annealing 126313
i:B, laser thermal proc., sub 130 nm node shallow jns. 115484
i:B, laser thermal processed, annealing, B diffusion 115480
i:B low dose low energy ion implant., noncontact in-line monitoring 115591
i:B, low energy B implant., jn. characts., damage, pre-amorph. effects 115516
i:B, low energy B$^+$ implant., lattice damage, slow positron obs. 81027
i:B, metal-insulator transit., uniaxial stress, comment 125992
p-Si:B, microcryst., recomb. at interface states, current-illuminance charact. 93322
i:B n-channel trench UMOSFETs, channel B-doping 81312

elemental semiconductors continued
Si:B p/p$^+$ epitaxial layers, ion implant., misfit disloc. nucleation/glide, RTA 126280
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:B polycryst. films, CVD, stress, MEMS appls. 104169
p$^+$-Si:B porous layers selective anodization, X-ray synchrotron topography obs. 103449
Si:B pulsed plasma doping syst., plasma charactn. 115578
Si:B, segreg. at ang. config. of Si/SiO_2 oxid. boundary 103258
Si:B, sub-melt laser annealing, low temp. RTA, minimised diffusion 115483
Si:B, ultra low energy implant., decelerator module 115544
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91977
Si:B ultra shallow jns., sub keV ion implant. 115505
Si:B, ultra-low energy implant., damage, MEIS obs. 115511
Si:B, ultra-low energy implanted, elec. activation 115289
Si:B, ultra-shallow jn. implants, RTA, monitoring 115594
Si:B, ultralow energy implanted B, TED 69800
Si:B, vert. surface tunneling transistors, B surface phase effects 81191
Si:B very-low resist. multicrystalline solar cells, light-induced degrad. 100047
Si:B wafer, high-current single wafer implanters, beam incidence angle control 115600
Si:B wafers, supersaturated, deactivation kinetics 103247
Si:B wafers, type conversion by 3-MeV proton irrad. 91609
Si:$B_{10}H_{14}$ jns., ultra low energy ion implant. 115532
Si:B/SiO_2, through-oxide implant., SIMS anal. 103254
Si:B(Ar) vicinal surface, low-energy implants, mol. dyn. anal. 126321
Si:B(As) wafers, dose uniformity of sub-keV implants 115602
Si:B(As)(BF_2), low-energy ion implant., high-conc. diffusion profiles 126311
Si:B(As)(P) (100) wafers, low-energy implant., RTA, jn. depth, cryst. orient. effects 115515
Si:B(As)(P)(Sb) ultra-shallow abrupt jns., activation/deactivation, laser annealing 115481
Si:B(BF_2) PMOS transistor, source/drain extension implants comparison 115891
Si:B(Ga)(O)(C) solar cells, radiation-induced defects, impurity effects 100033
poly-Si:B(P) LPCVD layers, thermal cond. study 115293
Si:B(P) polycryst. resistors, mech. stress of elec. perform. 125837
Si:B(P), polysilicon thin film resistors, reliab. 125846
Si:B(P)(As) bulk-doped ref. wafers, dopant conc. meas., SIMS round-robin study 115596
Si:B(P)(As) wafer, ion implant., therma-wave dose sensitivity 115606
Si:B(Sb), diffusion of B and Sb under influence of injected point defects 115492
Si:B,F films, PECVD, struct., transport props. 114337
Si:B,F implanted samples, TED reduction 115512
Si:BF_2^+ doping charact., implant-induced defect sites, sheet resist. 103259
Si:BF_2^+, ultra-shallow jn. form. by implant., spike annealing 115517
Si:B,Fe, ultrapure float-zoned samples, Fe trace levels detect., photolum. method 69468
Si:B,Ge(P), metallic, codoping fab., first principles calcs. 91953
Si:B,He, B-cavity gettering, He implant.-induced 126323
Si:B,O CZ solar cells, I-V characts., light-induced recomb. centres 113005
Si:B,O, roughness, crater bottom comp., SIMS obs. 69825
Si:B,O,C, ion implanted, vacancy/interstitial depth profiles 69787
Si:B,P, isotopically pure, photoluminesc., bound exciton transits. 102962
Si:B,P,As, single-wafer implant., cross-contamination control 126284
Si:B,P,Mo, ion implant., Mo contamination studies 126283
Si:B,Sb, delta-doped, B irrad. enhanced diffusion 69801
Si:Bi (Bi_2), HI bombard., damage buildup 126307
Si:C, ion implant., $Si_{1-x}C_x$ form./stabil. 69803
Si:C ion-implanted epitaxial wafers, heavy metals gettering efficiency, TXRF obs. 69788
Si:C(N), low-energy ion implant., buried insulating layer form. 103253
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si:Cu, diffusion rel. to gettering, silicide retardation effects 125996
Si:Cu, electron emission channeling 126279
Si:Cu wafers, Cu particle laser removal 103352
Si:Cu(Ag)(Au), MeV ion implant., damage prod., RBS-channelling anal. 91948
Si:Cu,He, metal gettering, He implant.-induced 80980
Si:Er, Er centers optimisation for reverse biased LEDs 69489
Si:Er, PL, mid-IR induced quenching 69487
Si:Er, electron emission channeling 126279
Si:Er, high dose channelled implant., temp./ang. effects 91971
Si:Er, ion implant., IR PL emission, minority carrier lifetime 91585
Si:Er, ion-implant., range distribs. 69488
Si:Er, nanocomposites, IR LEDs/microcavities 71598
Si:Er nanocrystals, ion beam synthesis 80665
Si:Er struct., sublimation MBE method, opt. act. Er centers photolum. 69485
Si:Er/SiO_2 nanocrystals, PL, energy exchange 69483
Si:Er/SiO_2 nanocrystals, nonradiative de-excitation procs. 69482
Si:Er/SiO_2 nanocrysts., PL, broad-band/flashlamp pumping 69484
Si:Er,O, O-coimplant., donor centers form. effect 69486
Si:Er,O porous films, MBE, PL *(Chinese)* 102990
Si:Fe, ablation plasma ion implant. 69824
Si:Fe, ion implant. technol., metal contamination reduction 115608
p-Si:Fe surfaces, contamination, SCM 91600
Si:Fe(Cu), gettering by disloc., cavities 80970
p-Si:Fe,B, Fe-B pairs, acceptor level, capture cross sects. 69498
Si:Ge cryst., lattice param., X-ray topography/chem. etching obs. 69480
Si:Ge, dose rate and temp. depend. of Ge range profiles, channeling implant. 81006
a-Si:Ge films, lateral solid phase recrystn. by RTA 69778
Si:Ge, ion-beam-induced defect evol., channeling implant. study 103720
Si:Ge layers, preamorphous implants in-line charactn. 115597
Si:Ge, reducing As to Ge cross contamination, ion implant. 126282
Si:Ge single crysts., Cz growth in ring permanent mag. field *(Chinese)* 101146
Si:Ge,B(As)(P), ultra-shallow abrupt jns., Ge pre-amorphised, species depend. 115514
Si:Ge,B(P)(As) implanted wafers, laser thermal annealing, Boxer cross meas. 115488
a-Si:H, Al-induced crystn. at 150°C 90537
Si:H CVD growth, Monte Carlo model, H_2/SiH_4 gas source, desorpt. rate 90443
Si:H, H-ion implant.-induced layer splitting, layer thickness effects 69804
Si:H, H-plasma-etched and H-implanted single-cryst., annealing effect 69781
a-Si:H HV TFT, SCL currents 70163
a-Si:H MSM analogue memory switching device 115818
a-Si:H, PECVD, high rate growth, effect of substr. temp. on plasma param. 90435
Si:H, PIII, damage, defect form. 91982
a-Si:H PV modules, residential expansion, competitive elec. markets 77795
a-Si:H, RF CVD, laser melting, polycryst. films, PV props. 91607
Si:H RF MOSFETs, proton-implanted struct., transm. line noise 91249

elemental semiconductors continued
a-Si:H RF PECVD, microstructural evol., solar cell perform. 100193
a-Si:H Schottky barrier struct. based posn.-sensitive detectors 109582
a-Si:H TFT, AIM-SPICE model, param. extraction 115887
a-Si:H TFT pixel electrode ccts. for act.-matrix OLED 86867
a-Si:H TFT reflective stacked crossed guest-host LCD 97744
a-Si:H, TFT technol. for polyimide substrs. 103826
a-Si:H TFTs, ESD damage threshold, time-volt. trade-off 126817
a-Si:H TFTs, LV/HV, modified inverted-staggered struct., wet etch fab. proc. 70134
a-Si:H TFTs, leakage charact., front hole channel effect 70135
a-Si:H TFTs, plasma CVD fab. at 150°C on polyimide foil, DC-gate-bias stressing 103824
Si:H, amorph. and microcryst., hot wire CVD, review in USA 124940
a-Si:H and μc-Si:H hot wire thin films, SiH_4 flow, H_2 dilution 103073
a-Si:H based pin solar cells, interfacial opt. spectra 100195
a-Si:H based tritium-powered betavoltaic cells 113031
a-Si:H continuous-sens. imagers, crosstalk, lateral cond. effects 76558
Si:H crysts., H depth profiling, ERDA anal. 126324
a-Si:H, deep defect dens., amplit. modulating capacitance tech. meas. *(Korean)* 69555
a-Si:H deposition infl. by catalytic CVD on transparent cond. oxides 124956
a-Si:H, femtosecond transm., exponential band tail pumping 91692
μc-Si:H film deposition on specular and textured ZnO surfaces, real time optics 90436
μc-Si:H film, low temp. RPCVD growth and microstruct. 79295
a-Si:H films, Cat-CVD prep., struct. and photo-induced vol. changes 126086
a-Si:H films, H exposure, dangling bond creation and free H diffusion, in situ ESR obs. 91691
a-Si:H films, HWCVD, PECVD, growth kinetics, at. H infl. 124951
μc-Si:H films, PECVD, struct./elec. props. 103069
μc-Si:H films, RF glow discharge deposition, Ar-dil. SiH_4 plasma 102988
Si:H films, Smart-Cut proc., proton implant., wafer bonding 115524
a-Si:H films, UV/white/sub-gap light soaking effects 104902
Si:H films, amorph./microcryst., hot-wire CVD, review in Europe 124941
a-Si:H films, catalytic CVD, solar cell/TFT appls. 124950
a-Si:H films, catalytic CVD, solar-cell materials appl. 124954
μc-Si:H films, catalytic CVD, struct. props. 126087
μc-Si:H films, catalytic CVD, struct./elec./opt. props. 124965
a-Si:H films, direct patterning by NSOM 103698
a-Si:H films growth, thermocatalytic CVD, nucleation, coalescence 124952
a-Si:H films, hot wire CVD, TFT/solar cell appl. 124983
μc-Si:H films, hot-wire CVD, RF-plasma assistance 124968
a-Si:H films, hot-wire CVD, gaseous radicals, decomp. 124944
a-Si:H films, hot-wire CVD, phys./chem. 124942
a-Si:H films, hot-wire CVD scale-up, solar cell appls. 124946
Si:H films, hot-wire CVD, solar cell appls. 124981
μc-Si:H films, hot-wire CVD, struct. 124961
a-Si:H films on SiO_2 passivated steel substrs., crystn., polysilicon TFT 103237
a-Si:H films, plasma deposition, SiH_3 contrib., phys. props. 68359
Si:H float-zone crysts., H-defect shallow donors study 69475
μc-Si:H growth, control of crystallinity and orient. using in situ RHEED obs. 90437
a-Si:H hot-wire CVD films, electronic states, light-induced metastability 127907
a-Si:H, hot-wire CVD, saturated defect densities 68267
a/μc-Si:H hot-wire CVD, thin-film MEMS appl. 124949
a-Si:H hot-wire or PECVD films, elastic props. anal. 126085
a-Si:H, image sens. array, large-area, two-color 97382
Si:H, implant. induced buried nano-cavities, microstruct., opt. effects 125993
Si:H, implant. induced surf. layer exfol. 80993
a-Si:H, ion beam synthesis of low resist. contacts 69710
Si:H, ion implant., nanocavity form. and defect interacts. 80657
a-Si:H large-area thin-film solar cells, textured ZnO:Ga film props. 100202
a/μcSi:H laser-scanned p-i-n photodiode for image detect. 109658
a-Si:H, light-induced struct. changes, weak bonds, dangling bonds role 93325
Si:H, microcrystalline films, PECVD, postgrowth annealing 91946
Si:H, microcrystalline films, fast deposition by high-dens. microwave plasma, internal spoke antenna 90536
Si:H microcrystalline layers, SPV 82304
a-Si:H multilayer solar cells, degrad./annealing effects 112899
a-Si:H n-channel thin film MOSFET, threshold volt., saturation region 81313
a-Si:H n-i-p solar cells, all-hot-wire CVD 100194
Si:H nanocryst. TFT, catalytic CVD, stabil. 126821
Si:H, nanocrystalline films, hot-wire CVD, charactn. 124959
Si:H nanocrystals in silica, PL, H passiv. 93337
Si:H nanostructured films, cryst. size, temp. meas., Raman spectra 126083
a-Si:H, occupation of dangling-bond states and photocond., band tails effect 93323
a-Si:H p-i-n deposited solar cells, growth rate studies 112897
a-Si:H p-i-n diode params., trap cross-sect., simul. and param. extract. 70008
a-Si:H p-i-n imager, spatial resoln. 109674
a-Si:H p-i-n jn. solar cell, const. photocurrent method, simul. 112902
a-Si:H p-i-n solar cell charact., correl. with p/i interface 112904
μc- Si:H p-i-n solar cells using high-rate PECVD 100070
a-Si:H pass. pixel sens. for med. imaging, VHDL-AMS modeling/simul. 109719
Si:H pattern-implanted wafers, thermal/mech. separation 115292
nc-Si:H, phosphor film, PECVD, struct./opt. props. *(Chinese)* 115285
a-Si:H, photo-induced structural change, photocond. degrad. *(Japanese)* 82307
μc-Si:H, photocarrier diffusion coeff., ps laser induced grating tech. 93320
a-Si:H photocond. PECVD layers, light-doped B infl. *(Chinese)* 82301
a-Si:H photodiode, laminar-flow photo-CVD, light soaking 116957
a-Si:H, photoresist ashing using CF_4 gas plasma, NH_3 gas addit. 103505
a-Si:H pin diodes, electron irrad., dark-photoconductivities and PL *(Chinese)* 115840
a-Si:H pin solar cell device stabil. improvement 123809
Si:H, plasma immersion ion implant., H-induced surface blistering 126299
Si:H, plasma immersion ion implant., metallic contam. 126306
a-Si:H plasma-assisted microcrystallization, PV appls., low temp. nanoscopic kinetics 82309
Si:H polycryst. films, hot wire CVD, gas phase/surface kinetics 124943
Si:H polymorphous thin films from RF plasmas of SiH_4 dil. in Ar 125059
Si:H protocrystalline p-i-n solar cell perform., phase transits. role 100201
μc-Si:H single jn. solar cells 134394
a-Si:H solar cell dark I-V charact., electron irrad. effects 112871
a-Si:H solar cell thin films, light-induced degrad. props. 112884
a-Si:H solar cells, UHV PECVD syst. prep. 78169
a-Si:H solar cells, charged dangling bonds, short cct. current effect 103072
a-Si:H solar cells, current instabil. after light exposure 100032
a-Si:H solar cells, disordered struct., material props. 100041
a-Si:H solar cells, limiting carrier effect 89277

elemental semiconductors continued
a-Si:H solar cells, low temp. PECVD 100036
a-Si:H solar cells, quantum efficiency/opt. losses expts. 112886
a-Si:H solar cells using pulsed plasma CVD tech. 112900
a-Si:H sputtered thin-film posn. sensitive detectors fabr. and charactn. 972
a-Si:H struct., trap-assisted tunnelling, temp. studies 69657
Si:H, surface blistering, H-implant. dose effects 91968
Si:H surface, hydrogenation, impurity metal atoms removal 69897
a-Si:H, thermo-optic coeffs. at 1.55μm in practical optoelectronic device op tion temp. range 91690
μc-Si:H thin film, VHF PECVD growth, struct. and transport props., SET ap 80633
a-Si:H thin film imaging technol. on glass/plastic substrs. 75629
μc-Si:H thin film solar cells, hydrogen-radical CVD, init. growth estim. 112
μc-Si:H thin film solar cells, large area deposition 112896
μc-Si:H thin film solar cells, low temp. RF-PECVD 100068
a-Si:H thin film solar cells, periodic light coupler gratings 78173
a-Si:H thin films, VHF-PECVD, U shaped loop antenna electrode 103074
a-Si:H thin films, field electron emission 102909
a-Si:H thin films, hollow cathode plasma-jet reactive sputtering 101181
Si:H thin films, hot-wire CVD, solar cell appls. 124980
a-Si:H thin films, light-induced annealing effects, positron beam annih tion/FTIR spectra 80977
a-Si:H thin films on glass textured by embossing, light trapping and refl. con 100156
a-Si:H thin films, plasma CVD, elec./opt. props. *(Japanese)* 90359
a-Si:H thin-film UV detectors, diode struct. 86567
a-Si:H thin-film space power solar cells 112874
n-Si:H/Cu jns., Cu electroplating, struct./elec. props. 101420
a-Si:H/NLC interf. gratings, reversible recording 117545
Si:H/Si heterojunction, carrier transport props. *(Chinese)* 126114
nc-Si:H/Si p-n heterojunctns., elec. charactn. *(Chinese)* 69638
a-Si:H/SiN_x TFT, hot-wire CVD, device charact. 124985
a-Si:H/SiO_2 gate pH-ISFET, surface pot. temp. depend. anal. 92338
α-Si:H/ZnO solar cells on metallized polymer substrs., struct. 78166
a-Si:H/a-Si:H tandem solar cells, hot-wire CVD fab. 112895
a-Si:H/a-SiGe:H/a-SiGe:H triple-jn. solar cells, 70 MHz PECVD 112883
a-Si:H/a-SiN:H growth by PECVD for TFT appls., wide bandgap 101350
a-Si:H/c-Si heterojunction, CF_4/O_2 dry etching, solar cells 92039
a-Si:H/c-Si heterojunction solar cells, emitter/interface optim. 112898
a-Si:H/c-Si solar cells, sputter deposited, PV water electrolysis, H_2 prod. 1000
a-Si:H/μc-Si:H tandem solar cells, laser patterning 112980
a-Si:H/poly-Si stacked solar cell submodule 112974
$Si:H^+,He^+$ single cryst., evol. during annealing 126273
a-Si:H-based PIN solar cell, rough back/front transparent conductive oxide la ers, simul. 78176
n^+(a-Si:H)-i(a-$Si_{1-x}Ge_x$:H)-n^+(a-Si:H)-struct., varyband layer, C-V charac 103105
Si:H-terminated surfaces, UHV contactless C-V method for passivated defe free surfaces 91577
p-Si:H(100), native oxid., light irrad. effects 69845
Si:H(100) thin film growth, mol. dyn. simul., H coverage effect 90442
Si:H(111) surfaces, H-passivated, H_2O/NH_3 temp.-activated reacts. 69472
μc-Si:H,(B)(P) films, growth, optimum cryst. fractions for solar cells 13439
a-Si:H,(B)(P) nanocryst./amorph. films, catalytic CVD, doping 124953
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 10295
Si:H(He)/SiO_2 SOI buried layer, O precip. form. 126408
a-Si:H,(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
Si:H,B(P), films, amorph./μc, hot-wire CVD, gas phase doping 126300
p^+-Si:H,B,Fe, Fe detect., DLTS, Schottky diode meas. 80655
a-Si:H,Er/c-Si PECVD struct., effect of Er on electronic traps 91743
Si:H,F, film, polycryst., PECVD transport props. 102973
Si:H,He, layer splitting, low energy channeling effect limitation 91972
Si:H,N,O,Ni CZ wafers, intrinsic gettering, minority carrier lifetime 91930
Si:H,Ni/SiO_2 SIMOX, H-implant.-induced nanocavities, Ni gettering 115529
μc-Si:H,O films, O impurity effects, solar cell appls. 91611
Si:H,O films, PECVD, μc-Si form. region 114351
μc-Si:H,P films, hot-wire CVD, struct./elec./opt. props. 124966
a-Si:H,P p-i-n solar cells, spectral response simul. 134382
a-Si:H,P/SiN_x TFT, catalytic CVD prep. 124984
a-Si:H,P(B) films, DC magnetron sputtering, opt. props. 114253
Si:He cond. modulation power device, localized lifetime control, transport mod *(Chinese)* 115882
n-Si:He epitaxial wafer, high energy He implant., bubble form., disloc. 6979
Si:He^+, bubble form., implant. temp. effects 91962
n-Si:He^+(111) epitaxial wafer, bubble form., high energy ion implant. dose ra depend. 91604
Si:He(H)(O), uniform stress effect 115558
Si:He,N, porous Si form., MeV energy pre-implant. 80992
Si:In, halo doping by In ion implant., advanced CMOS devices 115499
Si:In, ion implant., 8250_{HT} implanter perform. 115564
Si:In, qtr. micron device implants, In cross contamination 126285
Si(:Li) space solar cells, physic/mfg. technol. evol. 134406
Si:Li,Er-based IR electrolum. devices, elec. field-induced fab. 71564
Si:Mn films, super-doped, gas source MBE growth, anom. Hall effect 90295
Si:Mn, super-doped, photo-thermal excitation GSMBE growth, for spin-photon ics appls. 124860
Si:Mo, plasma based ion implant., XPS studies *(Chinese)* 80986
Si:N blue luminesc. nanoparticles, fab., opt. props. 69491
Si:N, defect aggregation, N impact 81042
Si:N, ion implanted, N-vacancy complexes, positron annihilation spectros 91584
Si:N wafers, 300 mm, cryst. growth, grown-in defects 101157
$Si:N^+,O^+$ irrad. crysts., depth selective XANES anal. 80987
Si:N,C, high dose shallow plasma immersion ion implant. 91973
Si:N,O, O precip., TEM anal. 69783
Si:Ni polycryst. films on glass, Ni induced selective nucleation, SPE 125051
Si:O, ^{18}O implant., range params. 81026
Si:O, BOX, SIMOX, positron annihilation 91969
Si:O, CZ grown, interstitial O concs., point defect pop. 102974
Si:O, CZ growth, defects, simul. 124779
Si:O, FZ grown, O precip. in hydrogen ambience and its appl. 79175
Si:O, O precip., RTA effects 80638
Si:O, annealed under hydrostatic press., O aggregation and thermal donor 115478
Si:O, melt transient O conc., CZ proc. in mag. field 124801
Si:O, polycryst., EFG, deep level defects 91608
Si:O, polycryst., defects, DLTS/IBICC characterisation 125985
Si:O single-cryst., O recoil implant 80994
Si:O,Er MBE-grown films, electron and hole impact excitation 71520

nental semiconductors continued
Si:O,H,N, porous, passiv., PL intens. 71522
Si:P, FZ cryst. growth, mag. field design 90228
Si:P GSMBE, growth kinetics, doping mechanism 90268
Si:P, P sticking coeff. on Si during vap.-phase doping 126301
Si:P SOI nanowires, Coulomb blockade bi-directional electron pumps 126171
Si:P, bend strength, fracture toughness, MEMS appl. 104168
Si:P epilayers, CVD, doping *(Chinese)* 101309
Si:P films, sublimation MBE deposition device 68201
Si:P, heavily doped, chem. comp. changes during native oxide form. 125991
Si:P, heavily doped, oxid. rate, interfacial silicon emission model simul. 115656
Si:P high-dens. buried nanopyramid FEA, ion implant. & wet etching 80583
Si:P, ion implant. role in quantum computing 91974
n-Si:P, magnetoresist., melt doping/nuc. transmutation effect 80651
Si:P, moderately doped, opt. and electronic props. at terahertz freqs. 91587
Si:P nanocryst. films, low temp. transport mechanisms *(Chinese)* 115297
Si:P nanocrysts., ball milling, grain size distrib. and band struct. modif. 126596
Si:P, non-mass resolved ion implanter, P dose uniformity, oxide uniformity/dimer ratio effects 115572
Si:P solar cells, high-quality homoepitaxial thin-film emitter growth 100049
Si:P, transmutation-doped γ-irrad., defect states, elec. props. 91580
Si:P wafer, ion implant., channeling uniformity control 115605
Si:P(As)(Sb)(B)(Ga), high-field hopping cond., hopping domains 115286
Si:P(B)(100)/Cl etching react. and adsorpt. 103442
Si:P(Bi), pop. inversion, far-IR lasing 91581
Si:P(Ge)(As)(Si), impurity proximity gettering, trans-projected-range effect 91957
Si:P,Al, HI channeling, depth distrib. 103280
Si:P,H nanocryst. films, cond. props., heterojunction diodes *(Chinese)* 91575
Si:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
Si:S IR image converter 120890
Si:Sb bulk cryst./δ-doped layer, magnetocond., weak localization 91579
Si:Sb, dopant behavior following 8 MeV C^+ ions irrad. 102985
Si:Sb, thin layer ref. material for surface anal., charactn. 91975
Si:Yb, ion-implant., range distribs. 69488
Si/3C-SiC/Si ion beam synthesized layer, metallization 91960
Si/$(Ta_2O_5)_x(Al_2O_3)_{1-x}$ interface, electron traps 103185
Si/Ag(001) thin film deposition, AES/LEED/SEM obs. 80667
Si/Al_2O_3, thin layers solar cells, max. grain size effects 91596
Si/Al_2O_3/n+-polySi MOS capacitors, at. layer CVD, charactn. 80936
Si/Alq/Al structs., electronic transport props. 69623
Si/Au polycryst. beam MEMS struct., residual stresses 127082
Si/Au syst., electrodeposition, electron beam-induced C masking 79369
Si/C layer syst., SiC ion beam induced solid state react. 79404
Si/CaF_2 layered heterostruct., carrier dyn. modeling, neg. pulse precharging effects 80935
Si/CaF_2 nanocryst. MQW, vert. transport, trapping levels 126144
Si/$CoSi_2$ syst., interlayer mediated epitaxy, CVD Co film 90541
Si/GaAs hybrid pixel detectors, med. X-ray imaging appl. 97993
Si/Ge Si Qw MODFET, low energy PECVD, struct./elec. charactn., TEM 124890
a-Si/Ge multilayers, interdiffusion coeff. nonlin. 69689
Si/$Ge_xC_ySi_{1-x-y}$, group IV heterostruct. form. by Ge and C ion implant., appl. to HBTs 81227
Si/Ge_xSi_{1-x}, group IV heterostruct. form. by Ge and C ion implant., appl. to HBTs 81227
p^+-poly-Si/NIDOS/SiO_2/Si capacitor, boron penetration 103195
Si/$NiSi_2$/Ni syst., silicide phases, in-situ TEM obs. 80908
Si/O nine period superlattice, transport characts., quantum device appl. 91808
Si/O semicond.-at. superlattices, MBE grown, struct. 90273
Si/PZT thick film accelerometer, μP self-validation 109809
Si/SMA bimorph microactuators, internal stress control, sputter-deposition proc. 99876
a-Si/Si microcryst. superlattice, isotropy/transport props. control 126138
Si/Si:Er interface, Er^{3+} low-temp. excitation, p-n jn. form. influence 126309
Si/$Si_{0.58}Ge_{0.42}$ n-MODFETs, RF and microwave noise perform. 102650
Si/$Si_{0.8}Ge_{0.2}$ heterostruct., 2D hole gas, energy loss rates 80801
Si/$Si_{1-c}Ge_c$ gradient mixed cryst. solar cell struct., photogenerated current response *(Chinese)* 89274
n-Si/$Si_{1-x}Ge_x$ HEMT struct., design, 2DEG dens. *(Chinese)* 92399
Si/$Si_{1-x}Ge_x$ deep submicron MOSFET, stepped doping profile 103870
Si/Si_3N_4/Pt/PZT/Pt, residual stress, furnace annealing, RTA 104180
Si/Si(100) nanowire growth simul., anisotropic adatom diffusion and sticking prob. anal. *(Chinese)* 81155
Si/SiC based MIS struct., nonsteady avalanche proc., fluct.-related prop. 103214
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
Si/SiGe HBT ICs with low cost in 15 to 20 GHz range 80357
Si/SiGe HBT low-cost Ku to Ka band MMICs using commercial HBT proc. 69197
Si/SiGe HBT, microwave transformers, inductors and transm. lines 102639
Si/SiGe HBTs, hot carrier effects on correl. resist. 80298
Si/SiGe HBTs, trench-isolated , thermal resist. 81222
Si/SiGe HFETs, n- and p-type devices, technol. and characts., review 80297
Si/SiGe MODFETs, nearly body-effect free design 81389
Si/SiGe MQW, MBE/CVD growth, struct., PL props. 80861
Si/SiGe, anisotropic QW, wigner fn. formulation 126150
Si/SiGe bipolar technol. based act. mixer, 30 GHz, fab. and perform. 69198
Si/SiGe modulation-doped QW, magnetoresistivity 115388
Si/SiGe n-MOSFET single stage amps. on CMOS grade Si substr., design 69195
Si/SiGe nanostructures, nuc. spin quantum computer basic elements 91777
Si/SiGe quantum wires, inhomog. in-plane strain relax., XRD 69690
Si/SiGe strained QW MODFET, cryogenic cct. 115943
Si/SiGe/Si DHBT, neg. resist. characts., high power appls. *(Chinese)* 115867
Si/SiGe/Si HBT, GSMBE growth *(Chinese)* 81235
Si/SiGe/Si HBT struct., GSMBE growth and charactn. *(Chinese)* 126674
Si/SiGe/Si heterostruct. thermal stabil., annealing time, Si cap layer thickness effects 101285
Si/SiGe/Si n-p-n HBT, carrier depth profile, electrochem. C-V method *(English)* 81215
Si/SiGe/Si p^+/i/n^+ inter-/intraband tunneling diodes 103750
Si/SiGe/Si:Er,O HBT light emitting devices, 1.54 μm light emission 71567
Si/SiGe(C) QWs/QDs, light-emission pot. from absorpt. coeff. 127923
Si/SiO_2 Coulomb-blockade-struct., lithog., elec. characts. 126239
Si/SiO_2, GOI degrad., Cu contamination effect 91912
Si/SiO_2 MOS struct., flat-band capacitance 80949
p-Si/SiO_2, RF hydrogen-plasma-related defects, DLTS 69764
Si/SiO_2 TFT, laser crystallisation, grain struct. 70096
Si/SiO_2, anisotropic etching, aq. TMAH soln. behaviour 126416
Si/SiO_2 disordered nanostructures, reson. tunneling 115451
Si/SiO_2 double barrier structs., NDC due to reson. tunnelling 115450

elemental semiconductors continued
Si/SiO_2 electron waveguides, electronic props., oxid.-induced strain 115975
Si/SiO_2 field activated lateral-type polycryst. emitter, LOCOS proc. 69406
Si/SiO_2 interface, SILC, Monte Carlo simul. 80950
Si/SiO_2 interface, dangling bond centers, elec. detect. EPR obs. 69765
Si/SiO_2 interface, improvement of reliab. for N_2O-nitrided LPCVD oxide *(Chinese)* 103210
Si/SiO_2, interface nitridation, struct., MOSFET appls. 92082
Si/SiO_2 interface roughness, MOSFET, quantum oscills. 81319
Si/SiO_2 micromechanical oscillators, opt. pumped parametric amplif. 70336
Si/SiO_2 n-channel MOSFET low-temp. operation, interf. traps effect 126820
Si/SiO_2, oxide chem. mech. polishing, nanotopography, spectral anal. 115615
Si/SiO_2, photonic band gap cryst. fab., femtosecond laser micromachining 83041
Si/SiO_2, pregate oxide cleaning, one-step cleaning soln. 103325
a-Si/SiO_2 superlattices, sputter deposition, opt. props. *(Chinese)* 114241
Si/SiO_2 systs., conf., Boston, MA, USA (Nov.-Dec. 1999) 100429
Si/SiO_2 waveguides, CMOS-compatible, scatt. losses 116714
$(Si/SiO_2)_n$ multilayers and microcavities, LED appls. 93431
Si/SiO_2/Al MOS capacitors, ultrathin gate oxide, anom. LV tunneling current 69749
Si/SiO_2/Au struct., EL, RTA 71521
poly-Si/SiO_2/NiSi/Al stacked gate MOS struct., improved thermal stabil. and elec. reliab. 103200
Si/SiO_2/Pt/PZT/Pt, residual stress, furnace annealing, RTA 104180
Si/SiO_2/Si_3N_4 polycryst. emitter bipolar transistors/cct., very high speed *(Chinese)* 103764
Si/SiO_2/Si_3N_4 quantum wires/dots, charged insulator defects 126160
Si/SiO_2/Ta/$Ni_{80}Fe_{20}$/CoFe/Cu/CoFe/IrMn/Ta spin valves, annealing study 81851
Si/SiO_2/photoresist syst., fluorocarbon plasma selective etching 92010
Si/SiO_2/steel foil TFT, direct thermal oxid. 70149
Si/$SiO_2(ZrO_2)(ZrSi_xO_y)$/Hf(Zr) MOS capacitors, interacts. 80438
Si/SiO_xN_y MOSFET, gate oxynitride, plasma charging damage 81294
Si/Ti syst., silicide form. reacts., photoemission electron microscopy 115438
Si/$TiSi_2$/Ti syst., sputtering prep., preamorphization, salicide form. 103154
Si/$ZrSiO_2$, interface band offsets, scaling trends 91900
a-Si/a-SiGe tandem jn. thin-film solar cells, mfg. perspective 112975
a-Si/a-SiGe tandem solar cells, RF plasma CVD deposited 100198
a-Si/a-SiGe/a-SiGe triple-jn. plastic film substr. solar cells, fab. technol. 100204
p-Si/β-$FeSi_2$ particles/n-Si LED, light emission, Si growth temp. effects 116996
a-Si/c-Si HIT struct. solar cell, 20.7% efficiency 100042
a-Si/c-Si heterojunction solar cells, dark I-V-T meas. 91760
Si/giant magnetostrictive film magnetomech. bimorph resonator 82197
Si/glass anodic bonding, O plasma treatment effect 69856
p-Si/n^+-ZnO/n-ZnO/Pd diode struct., forward current suppression by light 70013
p-Si/n-InP wafer bonding, surface activated bonding method at room temp. 115366
n-Si/p-PPV jns., elec. charactn. 115375
a-Si/p-SiO:H/n-μc-Si:H solar cells conversion efficiency improvement 112880
a-Si/poly-Si based stacked solar cells, efficiency improvement 100205
Si/polyimide bilayer HFET, T-shaped gate fab. 70202
Si/polymer insulator struct., vert. anisotropic etching 81094
p-Si/porous Si/metal struct., elec. props. 126206
Si/ta-C/Al(TiN) structs., barrier temp. depend., C-V characts. 80937
$(Si_m/Ge_n)_N$ step-graded short-period superlattices, solid source MBE 79250
Si-Al thermal vert. bimorph actuator 92540
Si-CoSi shallow n^+-p jn. diodes, elec. characts., silicide layer thickness effects 115361
Si-LiNb(Ta)O_3($Gd_3Ga_5O_{12}$), Ar beam surface activated bonding 92035
Si-Si homo-epitaxial growth mechanism, substr. orient. effects *(Japanese)* 103336
Si-Si mol. beam homo-epitaxial growth mechanism, cryst. anisotropy *(Japanese)* 124850
Si-$Si_{1-x}Ge_x$ heterostruct., spectral & voltage charact., LPE 80786
Si-SiGe HBT push-push oscillator for 58 GHz in hybrid microstrip tech. 80338
Si-SiGe SOI p-MOSFETs with strained-Si channel on SiGe-on-insulator substr., SIMOX technol. 103819
Si-SiGe mm-wave MMIC near-range radar sens., coplanar transm. lines, MEMS switches 115019
Si-SiN-Cu insulator-lined substr.-via technol. with high aspect ratio, MMIC appls. 102723
Si-SiO_2 interface transit. region width, F-N tunneling current oscills. meas. 103215
Si-SiO_2-Si struct., F-N cond., barrier height determ. 69769
a-Si-alloy/c-Si stacked solar cells, design, technol., perform. eval. 112992
Si-based RFICs, effects of polysilicon shield on spiral inductors 115028
Si-based biosensors, microfabrication 86693
Si-based integrated-optic Mach-Zehnder press. sens., perform. params. 104751
Si-based opt. interconnect for sig. transm., VLSI technol. 126453
Si-based systs., lattice-mismatched thin films, conf., Castelvecchio-Pascoli, Italy (Sept. 1998) 78441
Si-bipolar monolithic IC design for opt. receivers, emitter-coupled pair ccts. 74964
Si-chip-based DNA microarray, surface charactn. 69343
Si-compatible waveguides for integrated opto-mech. press. sens. 93158
Si-containing polymer photoresists 103561
Si-electrolyte jns., near-field photocurrent mapping 80967
Si-glass MEMS micropackages, corros. resist., B doping/self-induced galvanic bias 78677
Si-glass interface, anodic bonding, chem. anal. 115474
Si-glass wafers, laser locally selective bonding 128618
Si-microarray devices, heterog. protein crystn. screening 132010
Si-nanoscale struct. fabricat., RIE, Cl-etching, He addit. infl. 115652
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
Si-on-SiGe MOSFET, strained, inversion layer centroid modeling 126729
Si-on-ceramic thin film solar cells, light trapping, monolithic array 100157
Si-on-reflector substrs., high-reflectivity, optoelectronic device appl. *(English)* 105032
Si-on-sapphire material/devices, RF appl. charactn. 91911
Si-tip FEA, field emission props. improvement 97665
Si(001) SPE growth, mol.-dyn. simul., Comment 79399
Si(001) amorph./cryst. interface, SPE growth, MD simul., Reply to Comment 79398
Si(001) anom. surface amorphization under Ar^+ ion bombard., RBS/channelling obs. 69842
Si(001), ion-beam oxid., O^+ reactive scatt. 103406
Si(001), nitridation, isotope-beam material modif. 92057
Si(001), oxid. obs. by high-resoln. RBS 92059
Si(001), oxidized V-grooves shape evol., high-dose Ge^+ ion irrad. 81078
Si(001) surface, ab initio temp. depend. studies of homoepitaxial growth 79197
Si(001) surface atom etching proc. using hydroxyl fn. *(Japanese)* 126400

elemental semiconductors continued
Si(001) surface, hydrogen-terminated, etching, mol.-dyn. simul. *(Japanese)* 126342
Si(001) surface, init. oxid. states, Si-2p core-level spectrosc. 103420
Si(001)/(111) step-free terraces, instabilities/point defects, high temp. annealing 126269
Si(001)/(111) substrs., GaN heteroepitaxial layers ECR-MBE growth 101251
Si(001)/Cu film syst., SAW phase vel. scanning method 103157
Si(001)/SiC, 6H interfaces, wafer bonding, interface struct. 126257
Si(001)-(2×1) step-free surfaces, enhanced terrace stabil., modelling and LEEM obs. 126418
Si(100), Si(113) and Si(115) surfaces, alkoxy modified, water adsorpt. 92023
Si(100), at.-order thermal nitridation, subsequent Si layer growth 103314
Si(100), carbonization proc., ion-beam bombard. 125060
Si(100) electron energy barriers with ultrathin stacks of SiO_2, Al_2O_3 and ZrO_2 insulators 69739
Si(100), laser-induced chem. etching, Cl_2 atmos., opt. fiber tip 92013
Si(100), oxid. by ozone, init. proc., STM anal. 103418
p-Si(100), selective Au electrodeposition on surface defects 90510
Si(100) stepped surface, implant-induced erosion, mol. dyn. study 69805
p-Si(100) surface, TMAH etching, chem. pre-treatment 69884
Si(100) surface, anisotropic etching 69883
Si(100) surface, native oxide growth, grazing incidence X-ray refl. and FTIR spectra 115658
Si(100) surfaces, AFM nanopatterning, selectively electrodepositing Cu 103709
Si(100) surfaces, cleaning in NH_4OH/H_2O_2, HCl/H_2O_2 aq. solns., Raman spectra 69909
Si(100), wet etching, nanoscale texturing, multicomponent SAM phase behav. 103337
Si(100)/Ru/Co/Ru/Co/Cu/Co/Ru spin valves, biquadratic coupling, GMR 81865
Si(100)-2×1 surfaces, nitridation procs., at.-scale charactn. 81052
Si(100)-wafers, anisotropic wet chem. etching, atomistic Monte-Carlo simul. and expts. 92000
Si(110) grid, ion beam proc. syst., opt. fab. 115620
Si(110), unstable etching with KOH 92021
Si(111) substr., diagnostic micromachined beams 126346
Si(111) surface, etching, mask jn., Monte Carlo simul. 92038
Si(111) surfaces, contamination, carbonization in UHV, SiC islands form. 126339
Si(111)/(001), thin oxides growth, O adsorpt. 115632
Si(111)/H-1×1 surface, init. oxid. stages, IR absorpt. obs. 103305
Si(111)/In(4×1) nanowire, at. geom., electronic struct. 91868
Si(111)/organic monolayers electron beam nanoscale patterning for selective deposition 115792
Si(111)-(7×7) surfaces, H-saturated Si clusters, STM-assisted assembling 69993
Si(111)-H surface in dil. NH_4F soln., electrochem. ATR-FTIR spectra 103443
Si(113) wafers, oxid., alternative IC material to Si(001) 69908
Si{111} surface, anisotropic wet chem. etching 115619
Si<100>, etched hexagonal ducts, flow characts. 92486
3C-SiC epitaxial growth on SOI, Si cavity suppression 90542
a-SiC:H/a-Si:H/a-SiN:H, multilayer photodiodes on Si, photocurrent multiplication 116945
3C-SiC/Si buried layers, ion beam synthesis and charactn. 81004
SiC/Si:O interface, hollow voids, elec. current heating 126105
c-SiC/Si(111) thin layer UHV growth, C incorporation, AES/LEED/EELS obs. 114306
SiC/Si(Ge) quantum dots, opt. prop., pseudopotential plane wave method 69680
SiC/SiN_x/Si struct., nitridation/rf sputtering growth, charactn. 91929
$Si_{1-x}Ge_x$ films, MBE growth instabilities on vicinal Si(001) 90322
SiGe/Ge, Ge channel modulation-doped structs., mobility, channel width depend. 80784
SiGe/Si HBT and lumped pass. components for An X-band high-power amp. 91360
SiGe/Si HBT, high power X-band operation 81206
SiGe/Si MQW, UHV/CVD growth *(Chinese)* 90353
SiGe/Si MQW devices for Si microelectronics 86534
SiGe/Si MQW p-i-n photodiodes, influence of RTA *(English)* 104958
SiGe/Si MQW reson.-cavity-enhanced photodetector 109565
SiGe/Si MQW reson.-cavity-enhanced photodetector, fab., responsivity study 120815
SiGe/Si QW, THz lasing mechanism 93621
SiGe/Si epitaxial layers, stress relax., Raman spectrosc., AFM 124832
SiGe/Si heterojunction multilayer struct., growth & charactn., MBE 101282
SiGe/Si microwave HBT, reliab. 126678
SiGe/Si multilayers, self-organized wires, X-ray studies 68189
SiGe/Si opt. channel waveguide, mapping of local stress distribs. 82157
SiGe/Si relax. graded buffer layers, threading disloc. dens. 80803
SiGe/Si source/drain struct., suppression of short-channel effect, p-channel MOSFETs 70121
SiGe/Si, strained, photodetectors, opt. absorpt. coeff. determ., phys. modelling 85993
SiGe/Si superlattices, thin film micro refrigerators 126190
Si(Ge)/$Si_{1-x}Ge_x$ multilayers, MBE grown, heteroboundaries sharpness, surface segreg. 90320
SiGe/Si(001) QD, init. growth stages, kinetic 3D island mode 126183
$Si_{0.75}Ge_{0.25}$/Si(001) step-by-step MBE growth, short-period superlattice buffer effects 90267
$Si_{1-x}Ge_x$/Si MQW struct., photocurrent spectrosc. *(Chinese)* 80877
$Si_{1-x}Ge_x$/Si heterostruct., annealing *(English)* 91731
$Si_{1-x}Ge_x$/Si p-channel MOSFET, low-freq. noise characts. 115918
$Si_{1-x}Ge_x$/Si triple barrier diodes, electron reson. tunneling 126628
$Si_{1-x}Ge_x$/Si(100) heterostruct., struct. & stabil., MBE 101283
$Si_{1-x-y}Ge_xC_y$/Si heterostructs., band offsets and electron transport calc. 115362
a-SiH TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
a-SiN_x:H/a-Si:H MIS capacitors, C-V charact. *(Korean)* 80940
SiN/SiO_2 stack, CVD, surface passiv. of buried contact solar cells 100150
Si_3N_4/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
Si_3N_4/Si/GaAs MIS capacitors, phys., elec. props. 126231
SiO_2 implanted layer on Si, AFM investig. of radiation damage distrib. 91892
SiO_2, patterned on Si, lateral strain modulations, X-ray grazing incidence diffr. 69763
SiO_2 planar thin films oxid., stress effects 126351
SiO_2 selective etching over Si and Si_3N_4, etch react. and reactive species flux in plasma 126373
SiO_2 surface /buried interface layers in Si-Si bonded wafers 103357
SiO_2:Ge/Si integrated Si-based optocoupler, efficient blue light emission 93389
SiO_2:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254
SiO_2/Si 2×2 multimode interf. couplers, design params. 104706
SiO_2/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945

elemental semiconductors continued
SiO_2/Si, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115
SiO_2/Si, close planar interfaces, symmetric interf. plasmon mode, EELS 103
SiO_2/Si device-quality interfaces, ECR-PECVD low-temp. form. 80957
SiO_2/Si fluorocarbon plasma etch selectivity and ion bombard. energy 1263
SiO_2/Si, low energy N implant., chem. anal. 91976
SiO_2/Si, thermal oxid. of RF H_2 plasma-cleaned Si, interface props. 69885
SiO_2/Si, thermal oxid., surface/interface topography changes 115625
SiO_2/Si:Er nanocryst. syst., exciton-Er energy transfer, PL 69481
SiO_2/Si:Er syst., PL obs. *(Chinese)* 127912
SiO_2/Si:Er,Y nanocryst. films, luminesc. sensitization 71527
SiO_2/Si:N deep submicron CMOS transistors, ultrathin gate oxide grow 115924
SiO_2/Si-QD/SiO_2/Si tunnel capacitor, charging dyn. *(Chinese)* 126129
SiO_2/Si(100) interface, ultrathin oxide, excess Si atoms, oxid. temp. depe 115630
SiO_2/Si(100) large clusters, silica tetrahedrons rot., quantum chem. 115633
SiO_2/TiO_2 DBRs for VCSELs, dry and wet etch procs. for patterning 9369
SiO_2-Ge-SiO_2 sandwich struct., Ge nanocryst. form., photolum. and Raman c 92252
SiO_2-Si interface, trapped charge imaging, noncontact AFM 80925
SiO_xN_y thin films, low residual stress, sacrificial layer, MEMS 104171
SiON/Si film syst., liq. phase deposition, refr. index 90499
SiO_2N_y/Si(100) interface, roughness, N atom incorporation 80943
SiO_xN_y/Si Bragg reflector for reson. cavity photodetectors *(Chinese)* 8653
Sn/Ge(111), 3×3/√3×√3 reconstructions, surface bands electron correl. effe 103166
Sn/Si(111), 3×3/√3×√3 reconstructions, surface bands electron correl. effe 103166
n-SnO_2:Ni/p-Si heterostruct., NO_2/ethanol adsorpt., C-V charact. 69635
Sr/SiO_xN_y/Si(100) nanostruct., interfacial chem., XPS/SIMS obs. 126228
$Sr_{0.8}Bi_{2.2}Ta_2O_9$/$LaAlO_3$/Si syst., prep., ferroelec. props. 92646
$SrBi_2Ta_2O_9$/SiON/Si ferroelec. MISFET, elec. props. 81275
$SrTiO_3$ buffer layers, ion-plasma sputter deposition on Si 114242
$SrTiO_3$/Si, RF magnetron sputtering, elec. props. 104259
$SrTiO_3$/Si(001) epitaxial heterojns., band offset and structural quality, PES o 69742
Ta films on Si and SiO_2/Si substrs., struct., annealing 80976
Ta-C-N film, sputtered, charactn. in Cu/barrier/Si contact syst. 115674
TaN(-polysilicon) SAG n-MOSFETs with ultra thin CVD ZrO_2 gate diel 126780
Ta_2O_5-Si struct., gamma irrad. 91916
Ti/Mo/Si, ultrathin surface/interface Mo layer, annealing 115490
Ti/Si interface, O contaminated, surface comp. after laser proc. 91938
Ti/Si(001) interface, vis./UV pulsed laser proc., XPS microscopy 103178
Ti-Si bilayers, init. reacts., in situ resist. meas. 80892
TiN/Si textured layer form. by metal PIII/deposition 114408
TiN/SiO_2/Si syst., film thickness, opt. charactn. 91886
TiN_x/SiO_2/Si, interface form., elec. props. 103186
TiN-Si planar jns., proximity effect 104576
TiO_2/Ge bilayer film, UV photoconduction 69745
TiO_2/PS/p-Si heterojunction, photonic sens. 120810
$TiSi_2$ form. and sheet resist., Al interlayer effects 91857
$TiSi_2$/Si contacts, surface prep., chem. and thermal stabil. 92033
$TiSi_x$/poly-Si/oxide/Si transistor gate struct., memory device appl. 92135
$TiSi_2$-Si transit. region in contacts, elec. props., influence of Nb interposed la 103174
W/Si lateral multilayer gratings, (non)coplanar X-ray reflectivity 69722
W/TiN/SiO_2/Si MOS capacitor struct., TiN deposition method effect 10319
W/TiN/Ta_2O_5/Si syst., Ta_2O_5 gate dielec. degrad. 81647
W/WN/TaO_xN_y/SiO_2/p-Si nMOS capacitors, gate dielec. thermal stabil. 8164
W-TiN/SiO_2/Si, MOS capacitors stacked gate props. 103187
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm techn 125492
W-ZrN-polysilicon gate electrode config., ZrN barrier thermal stabil. 81115
$W_{1-x}Si_x$/Si multilayers, excimer laser proc., thermal stabil. 126210
WSi_2/SiO_2/Si MOSFET, alternate gate metal props. 103811
ZnO, sputter deposition on Cu metallised Si substrs. 124814
ZnO/Si heterostruct., elec. props. 103108
ZnO/Si photodiodes, fab., detector photoresponse 97266
ZnO-B_2O_4:Eu fibre/Si photodiode selective UV detector 86568
ZrO_2/Si plasma deposited thin films, electron/hole trapping 127135
a-Si technol., digital cct. stabil. 114859
[c-]Si solar cell diffr. grating struct. 100166
diamond, CVD polycryst. films, elec. props. 80643
p^+ Si cantilevers, electrostatic micro actuator fab., opt. devices *(Korean)* 1237
polysilicon thin film solar cells prepared by VHF-PECVD 100214
polysilicon/SiO_2/Si structs., thermally induced (100)Si/SiO_2 interface degra 91915

elevators *see lifts*

ELF radio propagation *see radiowave propagation*

Eliashberg strong-coupling model *see strong-coupling superconductors*

ellipsometers
see also ellipsometry
automatic ellipsometer, LCD thin film, on-line monitoring *(Chinese)* 97589
purged UV spectrosc. ellipsometer, 157 nm nanolithographic materials charact isation 92246
UV spectrosc. ellipsometer, thin films and multilayers 97861
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operatio 97260

ellipsometry
see also ellipsometers; polarimetry
ANKA SR facility, research opportunities 87140
automatic ellipsometer, LCD thin film, on-line monitoring *(Chinese)* 97589
CD monitoring, normal-incidence spectrosc. ellipsometry 86947
diamond HFCVD film morph. control, low-energy electron bombard. 68234
diamond polycryst. films, layered struct., ex situ spectrosc. ellipsometry 915
diamond thin films, CVD growth/nucleation, in situ ellipsometry, Raman spe tra/SEM 114367
dielec. nm film targets, thickness estim., picosecond X-ray pulse generation app 121858
dielec. thin film large-area growth, photo-induced, using excimer lamps 1159
DLC films, 2.45 GHz microwave/13.56 MHz multi-jet RF plasma source synth sis, comp. 79407
ellipsometric imaging syst., image grabbing, image proc. *(Chinese)* 94603
grating division-of-amplit. photopolarimeter for spectral polariz. meas. 10957
liq. cryst. cell, totally refl. light anal. using renormalized ellipsometry 82237
low-k dielec. films, characterisation by ellipsometric porosimetry 92600
metal thin films, thickness, opt. consts. meas., spectrosc. ellipsometry 12120

ometry continued
pt. digital profilometry for sub-70 nm IC metrology 121209
attern writing by large-scale plasma source ion implant. syst., planar ICP source 115497
thalocyanine film opt. anisotropy 71495
ylated resists, nanoscale lithog., opt. charactn., surface imaging 92264
urface-stabilized FLCs, dyn. at alignment layer surface, total-refl. ellipsometry 75793
in films opt. charactn., general-purpose software, microelectronic appl. 79492
in films/multilayers/resists, VUV spectrosc.-ellipsometry 92222
ibochemistry in contact recording 70541
ltrathin gate dielec., proc. metrology 109994
ltrathin oxide films on Si, effective thickness meas. methods 109966
ert. furnace in-situ spectrosc. ellipsometry, CVD appl. 67684
afer inspection, nondestructive thickness meas. techs., productive availability 67654
AgO_x films, reactive sputtering, IR/Raman obs. *(Japanese)* 71214
AlGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. model, PL 126126
$Al_{1-x}In_xN$ films, MOCVD, opt. props., IR spectrosc. ellipsometry 126073
AlN epitaxial film, vibr./opt. props. 126067
ArIX capillary discharge laser, XUV reflectometry/ellipsometry 128092
BN films, sputter deposition, phase ident., multichannel ellipsometry 91629
BN/Si, IBAD, thin film growth, real-time ellipsometry 101447
C nanocrystalline CVD films, electron field emission, microstruct. 69388
C ultra-thin films, disk surfaces, variable-speed drag test, opt. surface analyzer 116436
Cu films on Si(111), ellipsometric anal. 103172
Cu interconnect oxid. and reduction anal. using spectrosc. ellipsometry 104036
Cu surface cleaning, hydrogen plasma treatment 103297
Cu surface modif. by thermal/plasma treatments 92096
Cu thin films on Si, oxid., ellipsometric study 92027
GaAs HIGFET, 0.35 µm, surface oxid. status effects on charact. 103843
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
GaAsN/InAs/GaAs superlattices, opt. consts., crit. points, free carrier effects, phonon modes 126063
GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and IR ellipsometry meas. 69545
GaN/Si(111) films, RF sputter deposition, struct. and charactn. 69536
Ge films, hot-wire CVD epitaxial growth 68215
$Ge_2Sb_{2.3}Te_5$ alloy rewritable phase-change opt. disk amorph. film thickness/refr. index determ. by ellipsometric meas. 127580
GeSi alloys growth, comp. tracking, seq. Bayesian estim. 68135
HgCdTe, MBE growth for LWIR detectors, ellipsometry comp. control 101201
HgCdTe, MBE-grown, comp. control, surface defects 101280
HgCdTe epilayers, MBE grown, comp. control, spectrosc. ellipsometry 90346
HgCdTe layers, MBE grown, comp., temp. depend., spectrosc. ellipsometry 90345
ITO films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
ITO:Ag film, sputtered, elec./opt. props. 103057
InAs/GaAs QD, InAs wetting layer ellipsometry at QD form. threshold 103147
$In_{0.7}Ga_{0.3}As_xP_{1-x}$ thin film surface, ellipsometry 115310
InGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. model, PL 126126
Nb ultrathin films, quantum size effects 82295
PbTe/BaF_2(111) epilayers, hot wall epitaxy growth, opt. props. *(Korean)* 69574
$PbTiO_3$ thin layers, stress effects 101427
$PbZr_{0.53}Ti_{0.47}O_3$ thin films, densification/evol. of stress effects 101427
SiO_2 thin-film gas sens., photom./ellipsometric methods 75692
a-Si gate, high aspect ratio struct., etch profile control 103340
Si:C(N), low-energy ion implant., buried insulating layer form. 103253
Si:Ge layers, preamorphous implants in-line charactn. 115597
a-Si:H film deposition on specular and textured ZnO surfaces, real time optics 90436
a-Si:H films, HWCVD, PECVD, growth kinetics, at. H infl. 124951
a-Si:H films, catalytic CVD, struct. props. 126087
a-Si:H films growth, thermocatalytic CVD, nucleation, coalescence 124952
Si:H protocrystalline p-i-n solar cell perform., phase transits. role 100201
a-Si:H,(B)(P) films, growth, optimum cryst. fractions for solar cells 134399
a-Si:H,P(B) films, DC magnetron sputtering, opt. props. 114253
Si/SiO_2/photoresist syst., fluorocarbon plasma selective etching 92010
Si-chip-based DNA microarray, surface charactn. 69343
2H-SiC, opt. props., surface and pore morph. 103324
SiC wafers, dielec. fn., spectrosc. ellipsometry 69587
SiGe layer cluster tool, spectrosc. ellipsometry, integrated metrology 104038
$Si_{1-x}Ge_x$ act. layer, Er/O-doped, MBE, LED 93434
$Si_{1-x}Ge_x$ epilayers, Ge effect on nucleation, ellipsometric spectrosc. 114415
$Si_{1-x-y}Ge_xC_y$ films, thermal oxid. kinetics, PL *(Chinese)* 126363
SiN_x films, ICPECVD, spectrosc. ellipsometry, etch behavior 124927
SiN_x films, low temp. thermal CVD, for microelectronics appls. 124922
SiN_x passiv. films for PZT ferroelec. capacitors, catalytic CVD 124977
SiO_2 layers for multilayer coatings, spectroellipsometric charactn. 93311
SiO_2 passiv. layer PECVD using IPL 2000 E/D, uniformity study 101349
SiO_2 porous low-k ILD film by photo-assisted sol-gel proc. 90523
SiO_2 surface /buried interface layers in Si-Si bonded wafers 103357
SiO_2 ultra-thin films fabricated with plasma oxid. tech., struct. and elec. props. *(Chinese)* 126246
SiO_2 ultrathin oxide growth, ultra-slow multicharged ion beam 103396
SiO_2:F for ILD appls., low dielec. const. anal. 91921
SiO_2/Si, thermal oxid. of RF H_2 plasma-cleaned Si, interface props. 69885
SiOC films, PECVD, low dielec. const. 104247
SiO_xN_y, low stress films, sputtering type ECR plasma deposition, charactn. 124812
SnO_2:Pd(Zr) films as SO_2 gas sens., opt. sensitivity charact. *(Chinese)* 120974
SnTe/BaF_2(111) epilayers, hot-wall epitaxy growth, opt. props. *(Korean)* 114309
$SrTiO_3$/Si, RF magnetron sputtering, elec. props. 104259
Ta(N) diffusion barrier, I-PVD, step coverage and continuity 115699
Ta_2O_5 layers for multilayer coatings, spectroellipsometric charactn. 93311
TiN/SiO_2/Si syst., film thickness, opt. charactn. 91886
TiO_2 films, annealing using vac. heater, sputter deposition 126271
TiO_2 layers for multilayer coatings, spectroellipsometric charactn. 93311
TiO_2 multilayer highly reflecting mirror, spectrosc. phase-modulated ellipsometry 71480
TiO_xN_y films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
VO_x films as SO_2 gas sens., opt. sensitivity charact. *(Chinese)* 120974
W selective CVD using SiH_4 reduction of WF_6, Si consumption 90422
$Zn_{1-x}Be_xSe$ crysts., AES, ellipsometry, photolum. studies 90213
ZnO:Al(Ga) epitaxial layers, opt. props., doping effects 91979
ZrO_2 thin film, high-K dielec., RTA 127133

elliptic equations
B-spline surface approxs. of six-sided PDE patch 67954
defect correction and domain decomp. for second-order BVP 68065
digital signature scheme using ellipt. curve cryptosystems 129236
ellipt. curve discrete logarithm problem *(Chinese)* 67704
FEA for parametrized nonlin. eqns. around turning points 90097
Fourier anal. of stabilized Q_1-Q_1 mixed finite element approx. 114169
gradient-FEM for ellipt. problems 101098
heterog. coeffs., finite vol. scheme 124730
large aspect ratio scatt. problems with ellipt. cylindrical wave fns. *(English)* 105700
locally integrable drifts, invariant measures, Khasminskii's theorem generalisation 124522
message recovery signature scheme based on hyperelliptic curves *(Chinese)* 129337
modified multigrid for 3D ellipt. eqns. with cross-derivatives 79051
nonsupersingular ellipt. curve cryptosystems, MOV algm. 72976
nonuniform mesh finite element approx., gradient recovery/error estim. 124763
num. investig. of sign-changing solns. to superlinear ellipt. eqns. on symmetric domains 90175
PDE, Tikhonov regularization 101103
PDEs, adaptive finite element soln., parallel domain decomp. method 90166
PDEs, iter. methods, stopping criteria 124706
Post-Galerkin method, based on approx. inertial manifold *(Chinese)* 124723
public-key cryptosystems, ellipt. curve, hardware-accelerated, rapid prototyping 94362
quasilinear ellipt. eqn., pos. entire solns. existence & multiplicity *(Chinese)* 79060
robust convergence for two-grid algm. using homogenization 68016
second order ellipt. problems, high accuracy sparse FEM 79119
second order lin. ellipt. eqns., transms. problems, min. estim. 67722
semi-Markov diffusion proc., first exit point, distrib. dens. 124510
semilinear ellipt. eqns., pos. entire solns. *(Chinese)* 124458
sensitivity eqn. methods for param. depend. ellipt. 114127
sieving for rational points on hyperelliptic curves 113833
stochastic PDE, Galerkin finite element techs. 124714
superconvergence/nonsuperconvergence of Shortley-Weller approxs. for Dirichlet problems 101108
thin conductors with long. current direction, mag. field calc. 91406
variational inequalities, indirect obstacle min. control 100951
Si, thin film doping, point defects, react.-drift-diffusion eqn. 115614

elliptic filters
canonical waveguide filters, full-wave design by optim. 102535
CMOS low distort. wideband act.-RC filter for base station transmitter 80044
CMOS unity-gain cell gyrator techs., inverting CCII 68909
combline resonators and filters, temp. characts. study 102532
compact ellipt. fn. BPF, triple-mode cavities, digital TV transmitter 109358
continuous-time third-order ellipt. lowpass filters, high-freq. fully differential CMOS OTA 102358
cryogenic dielec. resonator filter, dual-mode operation 69060
dielec. loaded combline filter with low insertion loss, compact design 125668
folded symmetric resonator filters with source-load coupling, direct synthesis 80192
grooved circ. waveguide dual-mode filters, anal. and design 102558
HTSC microstrip filter, quasi-lumped element design 102562
HTSC microwave filters 71092
hybrid combline/hairpin like resonator microstrip line elec. tunable filter 102530
IIR multiplierless ellipt. filters, cascade and parallel realizations 130073
log-domain ladder filter synthesis, unified matrix method 80074
log-domain ladder filters, high-order low-pass/band-pass filters, HSPICE simul. 80072
lossless floating immittance simulator employing only two FTFNs 125607
microwave filter, sandwiched conductor dielec. resonator 102566
multi-stage dual-mode cross-slotted HTSC filters for telecom appls. 82014
multilayer ellipt. filter 80032
multisection power divider, singly terminated filter design theory 102515
num. interpolation of analog/wave-digital ellipt. filter params. 119055
optimal digital IIR filter design 102393
pass. planar components, EM-based multidimens. parameterised models 102551
planar ellipt. bandpass filter using SMD type rect. DRs, design 102534
predistorted refl.-mode hybrid prototype networks, symm. and asymmetrical characts. 68900
printed inductors on alumina substrs., low-pass filter appls. 115091
sandwiched conductor DR based microwave filters, improved spurious perform. 69034
SYSCUF, automated synthesis package for switched current filters 68916
UHF band pass filter using miniaturized sq. stepped-impedance resonator *(Korean)* 114864
unbalanced lattice switched-current filters, almost phys. symm. struct. 80064
Y-Ba-Cu-O bandpass filter, quasi-ellipt. freq. response 71111
$YBa_2Cu_3O_{7-\delta}$ microstrip resonator, cross-coupled band-pass filter 71113

elliptical polarisation *see polarisation*

ELNES *see electron energy loss spectra*

elongation
see also thermal expansion
PVC insulated cable, nuc. qualification 133732
PVDF transducer, elongation, force, charge sigs. meas. 81752
wafer-level packaging, photosensitive thick film, stress compensation layer 113500
Au ribbon bonding for IC interconnection, designed expt. for proc. eval. 80535
BiSrCaCuO 2223 HTSC tapes, powder-in-tube processed, mech. props. 125091
Cu/Sn/Cu solder joints fatigue strength, thermal cycling influence 125072
Cu-Cr-Y, rapid solidif., phys. props., Y addit. 102757
Si high-force piezoresistive force sens., max. hysteresis error 86758
Si monocrystals, chem. etching, mech. effects 126347

EM surface waves *see surface electromagnetic waves*

EM traps *see particle traps*

EM waves *see electromagnetic waves*

embedded systems
2D motion estim. archit., complementary embedded memory banks 84264
ANN embedded automated inspection quality mgt. syst. for mfg. industries 113739
appl. specific DSPs, spill code, register constraint anal. 79930
appl.-specific reconfigurable RISC proc. core, embedded appls., FPGA prototyping 68849
batt.-powered distrib. real-time embedded systs., batt.-aware static scheduling 125176
batt.-powered embedded syst., energy-efficient design 68504

embedded systems continued
car requirements specs., high-quality 124056
CHES 2000, cryptographic hardware and embedded systs., conf., Worcester, MA, USA (August 2000) 106223
cluster computing technol. for embedded/real time systs. 74181
CMOS embedded low-power FIR filter 102401
CMOS µP, all-digital clock generator firm-core 102215
CMOS power-conscious proc. scheduling for real-time embedded systs. design 114775
CMOS RISC proc., multimedia archit. extension 125528
Colif, appl.-specific multiprocessor SoC design 90940
complex instrums. and meas. systs., embedded IS, generators 131815
conditional task graph allocation/scheduling, hardware/software co-synthesis 81441
cooperative voltage scaling between OS and appls. for low-power real-time systs. 114784
customized memory organization, appl.-specific designs 102133
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
dedicated systs., microcontroller DSP fns. *(Spanish)* 125518
digital sig. controller, combined DSP and microcontroller *(German)* 102188
distributed embedded systs., incremental design approach 125177
distributed fault-tolerant syst. for UMS *(Chinese)* 111338
DRAM, embedded archit., random access operation 125488
DRAM for network proc. world 102147
DRAM technol., 0.15 µm logic based, with 0.425 µm² stacked cell using MIM capacitor 125491
driver assistance syst. algm. develop., embedded image proc. platform 134584
dyn. reconfigurable archit. for embedded systs. 96532
EDRAMs, design archits. 90903
electronic software engng. education, large-scale parallel-embedded appls. 124275
energy-aware embedded systs., real-time task scheduling 127053
finite field digit-serial multiplier archit. for cryptography 79751
fixed-priority energy efficient scheduling for real-time systs. on variable voltage proc. 125235
flexible granularity automated hardware/software partitioning, high-level estim. techs. 68700
floating point CORDIC proc., low power, behavioural synthesis 68822
FPGA hardware/software co-design in embedded syst., partition decision, graduate course 125294
FPGA reconfigurable memory syst., dyn. yield anal. & enhancement 102154
FPGA-based reconfigurable systs., memory access optimisation 90837
full adder cell, low-power embedded archit. 102059
future mobile phones, design challenges from embedded systs. perspective 85903
generic wrapper archit. for multi-proc. SoC cosimulation and design 84959
H_∞ filters for unpredictable noise sources 130077
hardware-software partitioning for dyn. reconfigurable embedded systs., GA driven 114673
hardware/software partitioning of embedded instruction memory decompressor 79660
hardware/software partitioning of embedded syst. in OCAPI-xl 79659
HW/SW codesign framework based on distributed DSP VM 125321
IC designs with embedded Internet systs. *(German)* 114786
image coding, embedded *(Chinese)* 129687
image color segmentation for localization in embedded systs. 84623
indust. sens. networks, embedded networking, hardware/software design 109451
instruction-level power anal. model with data dependency, generic RISC proc. 114788
intell. sens. config./operation for microcontrollers 121052
Java machine, microcontroller appls. 114798
JTAG pipeline prog. via VME-6U interface, embedded test bus controllers *(Italian)* 86401
memory bus transaction reordering for reduced power consumption 102160
memory test models, automatic generation/validation for µP 125183
microcontroller software and algm. develop. tool 120658
mission-crit. embedded systs., power-aware scheduling, timing constraints 133227
mixed control and dataflow systs., modelling in MASCOT 125289
MPEG-4 enhanced digital TV set-top terminal, implement. 118532
multimedia DP, low cost embedded syst. 118480
multimedia syst. LSI, concurrent design environ. *(Japanese)* 84386
µP and PLD, on-chip debugging tool and embedded memory *(Italian)* 90929
µP core with support for executing byte compiled Java code 125537
networking appls., syst.-level prototyping 95971
OO modeling and co-simul. 101665
optimal digital IIR filter design 102393
partially simultaneously alive sigs., storage requirement estim., data intensive appls. 126981
particle detector gas-cylinder inversion syst. based on embedded computer 76137
pervasive computing, context-based media adaptation 130956
power efficient cache based on dual cache struct., embedded proc. 102161
power-conscious systs., software implement. strategies 108349
prefetching in small data cache, cache pollution reduction 125500
proc. in codesigns, customizable partitioned caches 79722
proc. verification environ. 90959
prog. multiplierless digital filter array for embedded SoC appls. 80083
reactive closed-syst. specs. implement. 68674
real-time reconfigurable image recogn. syst., model-based develop. 107227
reusable baseband Bluetooth IP, SoC integrat., ASIC design house 125352
reuse oriented prototyping methodologies for embedded syst. design/verif. 101954
S3C2400X indust. embedded SOC product, model checking 125367
S^3E^2S, CAD environ. for embedded electronic systs. 101902
satellite on-board front-end proc., systematic-DSP 133246
scoliosis treatment, low power portable EM posture monitoring syst. 111068
scratch-pad memory space, compiler-controlled dyn. on-chip mgt. 125373
sigma-delta techs. for integrated test and meas. 126951
simul.-guided prop. checking, multivalued AR-automata 79708
Simulink based hardware/software codesign flow/IP library 125366
SMTP server and client for e-mails via Internet 130754
SOAP (Simple Object Access Protocol) and communicating devices 119363
SoC challenges in deep submicron technol. evol. 102195
SoC design, dyn. reconfig. overhead mgt., minim. config. size 79707
SoC design, fast hardware-software co-simul. framework 79710
SoC design, gradual refinement of commun., mixed-level cosimul. 79709
SoC design methodology for 3rd millennium ICT products 101887
embedded systems continued
SoC dyn. reconfig. archit., hardware-software partitioning algm. 79706
SoC embedded cores testing, twisted-ring counters use 101966
software peripherals, CPU utilization 79906
software radio, spectrum mgt. evol. or rev. 111563
software-based error detect. and correction techs. for embedded systs. 7990
SPARC v.8 Integer Unit, proc. core design and synthesis 79945
substation HV apparatus RS485 bus-model online insulation monitoring s *(Chinese)* 89007
syst.-level device design brings new challenges 68770
systs. on a chip, embedded memory 102128
TDMA protocol, minimizing syst. modif. in incremental design approach 849
technol., phys. design, embedded DRAM develop. 102129
TI MSP430x33x microcontrollers, implement. of ellipt. curve cryptosyste 106281
tristate syst. environ., fault detect. 125173
ubiquitous computing, scalable and self-organizing meta-data disseminat 108329
VLIW embedded proc., data forwarding use for power budget reduct. 7991
whole program compilation for embedded software, ADSL expt. 85406
Xtensa configurable synthesizable core proc. for SoC designs *(Italian)* 799

EMC *see electromagnetic compatibility*

emergency power generators *see standby generators*

emergency power supply
see also uninterruptible power supplies
CHP syst., PM sync. generator, 3-phase AC/AC converter, UPS 112297
components, ccts., design *(Italian)* 88953
DEP-541 reserve power source automatic connection device, single cl microcomputer *(Chinese)* 122944
elec. instrum. standby power supplies, all-day-efficiency improvement *(Jap nese)* 78022
electrochem. power sources, conf., Manchester, UK (April 2001) 78386
standby batt. chem., telecomm./data commun. 89096
ultra low-power offline APDM-based SMPS studies 88823
VRLA batts., standby appl., water loss minimisation 112802
VRLA batts. for telecomm., technol. develop. 89087

emergency services
3D vision syst., explosives disposal & building inspection appl. 86630
AX.25 amat. packet radio as med. emergency network 111261
commercial satellites for surveillance/search/rescue 109027
free space opt. technol./distrib. archit. for broadband metro/local services 861
GMDSS syst., digital selective calling, false alert sigs. generation 86271
GSM and UMTS networks, evol. of location services 108785
GSM mobile positioning simulator 86263
helmet-mounted uncooled FPA camera/display for firefighting appls. 75648
integrated command environ. develop., lessons learned 99113
location services, enhancement of pers. safety and stimulation of business opp tunities 108783
marine search & rescue, motion images in bad conditions, obj. detect. 1066
motion image proc. techs. for obj. detect. 129454
robot operations, advanced 3D vision systs. 118164
search and rescue, sea surface propag. 108999
serpentine robots, earthquake rescue, online path planning 97198
stressed networks, prioritized resource allocation 130973
US through-the-wall surveillance syst. 111631
wireless networks, data fusion archit. for posn. estim. 109322

EMF *see electric potential*

EMG *see electromyography*

EMI *see electromagnetic interference*

emission spectra *see luminescence*

emission tomography
see also positron emission tomography; single photon emission computed tomography
2D-emission tomography prob., approx. inverse algm., regularization 76528
3-D Compton scatt. camera images, list mode EM reconstruction 132886
accelerated coord. descent methods for Bayesian reconstruction using order subsets of projection data 76575
bedside tomographic scintigraphy, diagnostic tool in intensive care and eme gency room 132810
Cramer-Rao bound 87778
depth-encoding Anger detector using scintillating fibres 132936
head motion correction in emission tomography, hybrid 3D reconstru tion/registration algm. 132851
list-mode emission tomographic image reconstruction, likelihood maximisati 132891
MAP estim., fast EM-like methods 76563
multidetector compact DAQ syst. time encoding anal. 120677
OO imaging, interface implemented in Java 132884
parametric shape estimators perform. for 2-/3-D imaging systs. 122219
scintimammography, emission tuned-aperture computed tomography 132901
small animal emission tomography, TOHR, charactn./first eval. 132965
small-animal tomographic imaging, high-resoln. semicond. camera 132967
smooth distribs. reconstruction within unsmooth circumferences from limit views 132888

emissivity
see also brightness
automated target detect. using IR multispectral anal. 88247
diamond, film, nanocryst., field electron emission, comp. to BN,GaN,CN 1152
double pass X-ray laser, focalisation, ray trace code 117051
fibre opt. two-colour pyrometer, varying emissivity surfaces temp. meas. 973
landmine detect., microwave radiometry, layered medium model 76986
landmine detect., soil temp. prediction model, IR thermography 77016
light source technol., current topics review 134635
multi-spectral thermometry, artificial neutral network DP *(Chinese)* 75918
multichannel IR pyrometer, pulsed power expt. appl. 97237
ocean surface sens., LWIR hyperspectral polarimetric imager 76915
petrochemical reformer catalyst tubes, emissivity distrib., solid integrat. sphe reflectometer 97217
surface temp. retrieval from MODIS data 111396
thermal cameras, temp. meas., internat. metrological organizations 86665
Ag X-ray laser amplif., 3D ray-tracing simul. 117083
C^{5+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
$CuCoMnO_x$ spinel coatings, sol-gel prep., solar absorber appl. 125040
Ge^{22+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
HgCdTe photodetectors with neg. luminesc. efficiencies >80% 75511
MgO:NiO matched emitter, TPV energy conversion, GaSb cells 89307
Si, CVD in lamp-heated single-wafer reactor 124908

ter-coupled logic
see also current-mode logic
ipolar current switch, nonlin. dyn. behaviour after step input 80471
MOS I/O interface ccts., 1.2 Gb/s, 100K pos. ECL syst. compat. 68884
MOS LV pos. ECL, scalable crosspoint switch networks *(German)* 85438
RAMs, internal waveform obs., EO sampling prober 116000
nAlAs/InGaAs HBT ECL static freq. divider, 75 GHz 68769
iGe HBT, self-aligned SEG 103790
iGe self-aligned SEG HBT static freq. divider and MUX/DEMUX, fibre links 79835
see electromagnetic pulse
loyees *see personnel*
loyment
see also personnel
ffective resume writing 124449
talian telecomms. indust. employment dyn. 130538
ob layoffs, job hunting 113230
orkplace training program, organisational context, ATC appl. 124282
see energy management systems
TP
54 kV transm. line arrester withstand capability reduction studies *(Japanese)* 77621
54 kV underground transm. cable, wavelet-based fault location *(Korean)* 77659
00 kV overhead line fault location, HF TW meas. 99427
00 kV power syst. switching regimes anal., ES 111930
20 kV gas insulated substation VFTOs, switching conditions effects 134314
oupled parallel transm. lines, random faults simul. *(Chinese)* 123009
ielec. insulation void, PD sigs. modeling, EMTDC 70430
igital fault locator perform., fault arc influence, time domain model 77649
igital fault locators, accuracy, fault arc charact. effect 112195
irect time-phase domain sync. generator model in EMTP-type packages 88271
istrib. lightning surge arrester damage prevention, overhead ground wire *(Japanese)* 123061
istrib. syst. power lines, noncommunication protection *(Chinese)* 88481
ouble-cct. transm. lines, fault location algms., current distrib. factor *(Korean)* 123078
arth fault feeder detect. techs. for indust. networks 133820
arth faults detect. during power swings, synthetic neg. seq. vector 99429
arth-to-earth fault location using time series wavelet neural net *(Chinese)* 112187
HV metal-enclosed disconnector, design, simul., testing 134277
HV series-compensated transm. lines, neural net-based fault location 123086
HV series-compensated transm. lines fault location using neural nets 77663
HV transm. line real-time fault detect., multi-resoln. entropy computation, Mallat algm. *(Chinese)* 133816
mbedded generation systs. voltage sag protection simul. 77491
MTDC digital CT model, design, eval. 112613
ACTS device computer simul. 112000
ACTS SSR computational anal. using sample-data model *(Chinese)* 77303
ACTS UPFC simul. techs. 111861
eeder grounding fault protection based on zero seq. admittance *(Chinese)* 88477
as insulated substations, I-V transformers, transient EM phenom. 134315
igh-speed transm. line protection using inceptive TW *(Chinese)* 112148
V power transm. line cct. breaker arc modelling 112690
V transm. line, high impedance arcing faults detect., wavelets 77650
ydropower plant transformer transfer voltage countermeasure study 99582
nsulated power cable time domain transient simul. data 112095
V distrib. network, harmonic distortion levels synthesis, ATP/EMTP 77308
nulti-bridge PWM inverter static sync. compensator, dyn. characts. *(Korean)* 122868
nulti-ended distrib. feeders, fault transient comparison tech. 77500
nulti-machine power syst. stabil., generalized Heffron-Phillips model 88355
V cable network, fault location method 77320
V distrib. syst. protection using neg. seq. current distrib. *(Chinese)* 112134
etwork voltage collapse prediction though simul. 111931
onlin. arc furnace loads anal. using EMTP 134651
onlin. generalized switching fn. model for SVC/TCSC devices *(English)* 112754
onutility generator shaft torque under voltage sag, fault current limiter effect 99629
verhead power line free air long arc simul. 99381
verhead power transm. lines, capacitance calc. methods *(Chinese)* 123024
arallel series-compensated transm. lines fault location improvement 77664
ower quality monitoring syst. using wavelet transform 77360
ower syst. anal., real-time combined analog/digital simulator 111675
ower syst. anal. software recoding, software engng. environ. 111654
ower syst. anal./simul. tools, novel implement. approach 89639
ower syst. out-of-step protection scheme, ANN-based 77558
ower syst. surge arrester modeling during EM transients 112166
ower syst. transient anal. controls, init. method 111900
ower systs., fast fault detect. techs., least sq. method 123093
ower transm. line adaptive protection relaying scheme 123054
ower transm. line fault detect. during power swings 77537
V power systs. simul. using real weather conditions 133907
adial distrib. systs., fault location, wavelets 99431
ailroad syst., supply network, train voltage distrib., power flow anal. *(Korean)* 78308
eries-compensated parallel lines, fault location 112194
ingle-phase inverter discontinuous/continuous PWM schemes investig. 123651
MES power conditioning syst., thyristor PWM converter *(Korean)* 123840
SSC, torsional damping improvement, robust H_∞ optimal control 112749
tatic transfer switch perform., regenerative load effect 134280
urge impedance relay, anal., perform. *(Chinese)* 112154
urge impedance relay algm. research *(Chinese)* 112147
aiwan rly. power supply syst., short cct. current studies 134527
hree phase Y-Y power transformer, protective relaying algm. *(Korean)* 123552
hree-phase act. power filters modelling/simul. 112743
ransformer inter-turn faults/magnetizing inrush discrim. scheme *(Korean)* 123553
ransformer saturation, temporary overvoltages calc. methods 112593
ransm. line arresters eval. against winter lightning 112167
ransm. network dyn. protection modelling syst. 77518
TW based fault location algms. comparison *(Chinese)* 123081
nderground transm. cables, digital dist. relaying algm. *(Korean)* 77552
nified power quality conditioner, wavelet transform based control algm. 133700
niversal custom power conditioner with integrated control 112039
UPFC, PWM based, dyn. response, EMTP simul. *(Korean)* 77267

EMTP continued
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
utility-interactive PV power systs., simul. scheme study 133901
wavelet transform dist. protection scheme with TW fault location *(Chinese)* 112150
wind turbine grounding modeling, soil ionization effects 112376
wind turbine grounding systs. anal. 112375
SF_6-insulated voltage transformers, saturable reactor param. selection *(Korean)* 123554

emulsions
see also nuclear track emulsions; photographic emulsions
conf., advanced radiation dosimetry, Athens, Greece (July 2001) 124201
current holographic materials available from Slavich, recent advances 82026
inclined oil-water flow, homog. vel., resist. cross correl. flowmeter 121294
inclined oil-water pipe flow, centre body, drift vel. model 121296
phosphate PTFE, fast proton conducting composite materials, fab./props. 125096
vert. upward bubbly oil-water flows, cross correl. vel. meas. 121295
water-in-oil emulsions, electrostatic coalescence, power consumption 83160
Ag halide transm.-type holograms recording in Agfa-Gevaert 8E75HD emulsions 83010
Ag-halide materials for multicolor holography, comparative study 82992
Er laser phacoemulsification/other clinical appls., 5 yrs. experience *(Italian)* 98664
$LiAl_xMn_{2-x}O_4$, emulsion drying method, enhanced structural stabil./cycleability 90559
$Zr(HPO_4)_2$-PTFE, fast proton conducting composite materials, fab./props. 125096

emulsions (nuclear track) *see nuclear track emulsions*

encapsulation
see also packaging
1D continuum electromigration modeling for IC interconnect reliab. 115991
3D stacked LSI struct., packaging technol. 113506
3M, opt. interconnect appls., high-perform. polymers 113618
advanced packaging materials, conf., Braselton, GA, USA (March 2001) 78404
air-channel structs. for microfluidic, MEMS and microelectronic appls., fab. 113559
area array solder joints, reliab. in bending 113577
BGA reliab., underfill material 113474
BGA wire bond integrity/package interfacial adhesion, plasma cleaning gas chem. effects 113568
bisphenol A epoxy/phenoxy resin encapsulant, thermosetting/thermoplastic combination 67581
cavity down BGA/flip-chip-in-package encapsulation procs. 113467
ceramic capacitors, voltage withstanding rating determ. 80444
COB glob top encapsulant curing, variable freq. microwave proc. 78641
concurrent underfill/reflow flip chip assembly, solder bump geom., forces anal. 115225
CSP proc. with reworkable underfills for mobile phone appls. 113708
CSP/flip chip underfill, multi-pass dispensing on dual parallel lanes 100584
curtain-wall-type PV module, fire-proofing encapsulation materials 112996
custom vac. encapsulations deposited by FIB direct-write CVD 104212
electronic component autom. defect detect., US SAM, DSP 100658
electronic device packaging for automotive appls. using transfer moulding proc. 113699
electronic packaging materials, surface energy improvement by plasma treatment 124350
encapsulants/underfills, gas evol. during curing/solder reflow 113714
epoxy molding cpd., flip-chip transfer molding encapsulation 113498
epoxy resin, thermally degradable, electronic packaging 113719
epoxy underfill adhesion, flip-chip packaging 113483
epoxy underfill materials, titanate/zirconate coupling agent effects 67599
epoxy/phenolic resin, no-flow underfill, non-anhydride curing syst. 113730
epoxy/phenolic syst. underfill for FCOB appls., curing mechanism 67585
EVA-based encapsulants develop., flame retardant, fast curing, p-Si arrays 100045
FCOB, FCOB, no-flow underfill materials, yield anal., proc. modeling 78667
FCOB, FCOB assemblies, field reworkable underfill materials 67627
FCOB assemblies with/without encapsulation, reliab. 78654
FCOB SMT assembly proc. trade-off cost anal. 115221
ferrocene encapsulated ormosil modified electrode, GOD bioelectrochem. 97417
flex-based two metal layer electronic packaging 67547
flip chip array packages, transfer molding encapsulation 78643
flip chip assembly and reliab. assess. via reflowable underfill 113637
flip chip assembly with reflow encapsulants 113564
flip chip attach, fluxless solder nonconductive paste tech. 125938
flip chip BGA packages, molded underfill material charact. 113497
flip chip BGA underfill charactn. using rigid substr. 113562
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
flip chip packaging, passiv. and solder mask, surface props. 113718
flip chip procs., reflowable underfill appl., design rules 113638
flip chip underfill encapsulant reliab. perform., filler settling effects 67579
flip chip underfill procs., rapid, for large to small flip chips 113704
flip chip underfill to passiv. material adhesion, environ. influence 67598
flip chip-in-package, molded underfill material/proc. 113563
flip-chip assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
flip-chip component, underfill delamination, opt. microscopy 113476
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
flip-chip mfg., solder flux/underfill compatibility 69364
flip-chip multi-layer pre-encapsul. technol. for wafer-scale underfill 113633
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
flip-chip package, single pass reflow encapsulant 113502
flip-chip packaging, epoxy resin reworkable underfill, thermally degradable 67587
flip-chip solder fatigue, cure-depend. underfill props. 113647
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
flip-chip underfill delamination mechanism/growth rate *(German, English)* 89865
flip-chip/underfill reliab., no-clean assembly proc. conditions effects 67564
FluxFill self-fluxing underfill product develop./pager product implement. 113705
FR-4 flip chip reliab., eutectic solder bumps, reduced proc. steps 89849
glob top encapsulants, surface insulation resist. perform., temp./humidity 67567
HDI modular packaging for space electronics appls. 133234
hermetic wafer bonding based on RTP, wafer-level MEMS packaging 103972
IC hermeticity assess. by electrolysis 67630
IC package encapsulation, back-end proc. overview 78662
IC plastic packages, die stress drift meas. using piezo-Hall effect 67625

encapsulation continued
implantable neuromuscular stimulators, appl. & technol., overview 76686
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
insulinoma cells encapsulation, nanoporous biocapsules, biotransport/biocompatibility considerations 133045
intell. power electronics modules, embedded power packaging technol. 81534
liq. cryst.-on-Si microdisplays, packaging proc./technol. 86872
low-power dye-sensitised solar cell modules, long-term stabil. 134405
mechatronic systs., interf.-protected electromechanical syst. design *(German)* 124301
MEMS and ICs, wafer-level SMT chip size packaging 78656
MEMS flexible encapsulated press. sens., biomechanical appls. 75760
MEMS press. sens. using flip-chip on low-cost flexible substr. 121034
microsyst. packaging concepts for harsh environ. 116085
mobile phone, CSP, reworkable underfill 113487
multilayer syst., progressive cracking on thermal cycling 89874
no-flow flip chip assembly, high throughput/low cost, underfill voiding, substr. design effects 69365
no-flow underfill, toughening agents, effect on fillet cracking 113485
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill develop. for flip chip assembly *(English)* 89866
no-flow underfill encapsulant develop. formulation, epoxy resin combinations 67580
no-flow underfill material, eutectic and lead-free solders 113499
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
no-flow underfill viscosity during reflow and rels. to solder wetting 113484
no-flow underfills, flip chip assemblies, adhesion charactn. 67626
ormosil electrocatalytic dopamine biosensor, ferrocene encapsulation 75682
PBGA, ultra-fine-pitch encapsulation 113490
PBGA on flex substr., board level reliab. 67622
PBGA package, underfill material, board-level reliab. 113662
peripheral array package, delamination growth prediction, interfacial fracture toughness test 78635
plastic encapsulant, moisture induced delamination, coupling agent bonded interface degrad. 113716
plastic encapsulant material props., effects of temp. exposure above glass transit. 67566
plastic encapsulated microcircuit reliab., molded part props., stat. monitoring 67576
plastic IC encapsulation, 3D wire sweep meas. using X-ray CT instrum. *(Japanese)* 67639
plastic-encapsulated hermetically sealed automotive electronic components, thermal study 134560
polyimide passiv./epoxy underfill interface, water-assisted crack growth 89867
polymer electronics, sens., adhesives, encapsulated ccts. *(Spanish)* 79446
polymer stud grid array, 72-pins, parametric compact thermal models 113697
polymer stud grid array CSP, flip chip assembly proc. develop., reliab. assess. 113634
reflowable underfill proc. modif. for flip-chip assembly develop. 113486
repairable CSP underfill materials for reliab. enhancement 113598
reworkable no-flow underfills for flip chip appls. 78666
reworkable underfills for area array packaging encapsulation 67563
RF packaging for space appls., micropackage to SOP, syst. on a package 124320
silica filler, no-flow underfill technol. 113501
silicone elastomer, 3D microfluidic interconnection 92513
single-pass reflow encapsulant for flip chip appl., develop. 67568
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
solar cell modules/encapsulations, indoor study/ageing tests 134388
super-BGA package reliab., underfill effects 67606
TSOP epoxy molding cpd. pellet wt. determ. rule 124341
ULSI plastic packaging, die cracking eval./improvement 100619
underfill encapsulant affected by flip chip assembly variables, adhesion 67578
underfill hot-wet adhesion improvement, adhesion promoter appl. 113734
underfill material, adhesion/reliab./reworkability study, free radical polymerization syst. 113636
underfill resin develop., flow microcalorimetry appl. 67610
wafer level packaging, WAVE wide area vert. expansion proc. implement. 113604
wafer-level CSP, encapsulated double-bump technol. 100615
wafer-level CSP, thermal stress anal. and design optim., FEM simul. 113624
wafer-level flip chip assembly, solder wetting, confining underfill 124346
wafer-level flip chip assembly, surface mount proc., solder wetting 113509
wafer-level packaging, photosensitive thick film, stress compensation layer 113500
WASPP Program, passiv. develop. for packages in harsh environ. 77013
WAVE, wide area vert. expansion packaging proc. develop. 113508
Ag/Al bilayer self-encapsulation proc. kinetics model 92180
AlN-filled underfill, high thermal cond., for flip-chip appls. 67565
Cu electroplated interconnects, microtexture/strain 103460
GaAs concentrator solar cells, LPE grown, 1000 suns operation, 26.2 % efficiency 112927
GaAs/AlGaAs surface textured LED, texture-enhanced transm. 127968
GaInP-AlGaInP thin-film 650 nm LEDs 82402
GaN, effect of N/Ge coimplantation on Ge activation 103270
Ni-P electroless UBM-solder interface, Ni-Sn intermetallics,joint reliab. 113715
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pb-free leadframe packages, plating chem. eval./reliab. 113700
Si encapsulated solar cells, photothermal stabil. studies 112988
Si high-press. sens., fusion bonding, low-cost packaging 109804
Si microphone, 3D multichip microsystem encapsulation, conformal coating 104211
SiO_2 hyperthin coatings on polymers, growth and struct. 124904
SiO_2-coated CdS nanoparticles, photodegradation in silica gels 126398
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
needle dispensing equipt. design for very high speed deposition 113468
no-flow underfill materials for eutectic/Pb-free solders, high melting temp. 67586

encapsulation of data *see data encapsulation*

enclosures *see packaging*

encoding
see also audio coding; channel coding; codecs; codes; coding errors; decoding; image coding; linear predictive coding; modulation coding; phase coding; source coding; speech coding; transform coding; vector quantisation
1.52 Tbit/s OCDM/WDM transm. expt. 75032
3-wheeled robot vehicle, camera/laser/encoder data fusion 120888
3D compression, Edgebreaker with ZipandWrap on corner-table 72940

encoding continued
3D form meas. by projecting concentric circle pattern 94901
40-Gb/s WDM ultra-high capacity systs. 86096
64-chip OCDMA syst., superstructured fiber gratings, time-gating dete 131364
adaptive silicon neuron space-rate coding 114916
arbitrary time-series approx. & compression, nonlin. dyn. 95622
architectural support for efficient multicasting in irregular networks 85290
artifact-metric syst. for inherent texture *(Japanese)* 129275
attractor basin transient stats. as pop. code for obj. representation 84542
AWGN/fading channels, error probabilities upper bounds 72934
binary commun. in squeezed channels 95746
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101
BIST, set covering model appl. to reseeding 81434
Burrows-Wheeler transform anal., block-sorting 129011
cascade coding for compressing broadband residue seqs. 72799
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
CDMA coded multiuser systs. with optimum joint multiuser decoding/dete perform. anal. 130295
CDMA fiber-optic networks incorporating multiple opt. amps. 74987
chaos sync., small noise effect, inform. sig. 117962
classical inform. transm. via quantum entanglement 128960
CMOS low-power DSP systs., narrow bus encoding 125531
CMOS multiplier, 32×32-bit design with sign select Booth encoder 90850
coherent anti-phase soliton nonlin. waveguides 93871
combinat. approach to Golomb forests 106131
combinat. DNA word design 69349
combinatorics in computer sci., conf., Palaiseau, France, Sept. 1997 100423
commun. network design by GA, perform. influencing factors 85085
commun. systs., networks and DSP, conf., Bournemouth, UK (July 2000) 783
Compror, text compression method 106187
constraint-driven FSM state encoding for low power 125313
consumer devices, multimedia services provision 119784
controlled dense coding using Greenberger-Horne-Zeilinger state 94217
controller chips, subband coding for high speed 79942
D8-15 modulation, coding table/DC control *(English)* 71244
data refinement, encoding/decoding 83881
delay insensitive SoC interconnect using 1-of-4 data encoding 79671
dense coding/quantum teleportation schemes 117973
deterministic chaos and inform. theory 106009
DFE hybrid struct. for CAP-based DSL systs., perform. 95814
diffuse wireless IR commun., power and bandwidth efficient modulation 1316
digital commun., bipolar spectral associative memories appl. 74080
digital filter optim. over canonical signed-digit no. space using genetic algm 91090
digital MUX syst., clock sync. coding/decoding 95801
digital sig. spectrum-coding transmitting syst. with wavelets, de-noising 728
direct detect. opt. receivers using RZ coding, BER reduction 120140
DNA computing, hybridization proc. 69351
DNA-based cryptography 69358
double random phase encryption digital holographic data security syst. 1165
DPSK soliton transm. syst., perform. assess. 75027
DS-CDMA interblock data rate downlinks, comparison 74664
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
DS-SS commun., piece-wise maps design, genetic prog. 95825
DS-SS transm. of extra inform. bits 106061
DSL systs., multi-user precoding for crosstalk cancellation 106144
DVD-Video std. expansion, MPEG-4 encoded content inclusion 97104
EBU project group P/META work on metadata exchange stds. 74081
EM based channel estim./data detect. using preceding frame estim. in space-ti coded sigs. 129171
entanglement, pure quantum states transform. 94210
error-correcting output coding learning machines, codeword bit error interdepe dence 117956
fast nearest-neighbor algm. based on principal axis search tree 117972
fiber Bragg gratings based encoder/decoder in direct seq. opt. CDMA syst. *(C nese)* 120310
fiber laser sens. with cavity form. by ref./sens. Bragg gratings 86596
fixed polarity Reed-Muller expansions, Reed-Muller tree-based minimisati 72924
fixed-length coding of general sources, error exponent and min. achievable ra 129028
flexible fiber Bragg grating encoder/decoder, hybrid wavelength-time o CDMA 131363
Fugue, time scales of adaptation in mobile video 96249
Gb/s opt. duobinary transmitter, increased transm. dist. 96699
generic quad-tree, storage and mgt. of similar images 106496
grand alliance digital TV, Viterbi algm., CPLD implement. 131731
Gray code clustering of wireless data for partial match queries 72828
hardware/software partitioning of embedded instruction memory decompress 79660
hierarchical pulse-coupled neural network model, temporal coding, emergent fe ture binding mechanism 102478
high resoln. posn. inform. extraction from sinusoidal encoders 123694
high-resoln. mismatch-shaping DACs, low-complex. digital encoder conf 79994
high-speed Ethernet simple link protocol, zero-overhead packet delineati scheme 119758
higher dimens. systs., quantum key distrib. using multilevel encoding 94371
hybrid syst. for real-time lossless image compression 73393
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 673
IEEE pers. wireless commun., conf., Hyderabad, India (Dec. 2000) 89556
IEEE sig. proc. in wireless commun., conf., Taiwan, China (March 2001) 784
IEEE Std 1596-1992 for LV differential sigs. for SCI 85302
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 784
IIR channel, blind equalization 130254
image texture, auto-binomial model param. estim. methods 118193
incremental motion encoder, automatic self-calib. 132164
inform. granulation, sig. quantization 107307
input-output encoding approach for functional decomp. 125318
Intel x86 archit., security vulnerabilities caused by errors 102234
interf.-immune commun., discrete pseudorandom seq. generator struct. 7293
Internet video streaming, adaptive congestion control techs. *(Chinese)* 1185
ISDN-2B+D interface transm. module *(Chinese)* 74479
ISI channels, reduced-complexity receiver capacity 118003
iter. receiver algm. for space-time encoded sigs. 106134
JPEG/MPEG coding perform. improvement by optimizing both compression a blocking effect elimination 84770
Lempel-Ziv data compression with long repeated strings 94258
length-restricted coding in static and dyn. frameworks 106167

ding continued
n. periodic time-varying filters for digital coding 130071
n.-coded DACs, encoder design aspects 79996
MDS coding & modulation schemes, modem develop., channel anal. 74522
ocal decoding procedures for error-correcting codes 72812
M/T digital tachometers, perform. anal. and compensation 120761
ed. distributed DAQ syst., coding and transm. 111295
MIMO channels, polynomial ambiguity resistant precoders, blind identifiability 106162
ixed state entanglement, optimal dense coding 118023
obile robot obstacle avoidance, US sens.-crosstalk, coded sigs. 109981
ulti-level computer networks with opened opt. channels, creation in Ukraine, strategy and outlook 108377
ulticast routing problem, GA 95995
ultilevel coding schemes, perform. in mobile fading channels 96538
ultiple description coding problems, achievable region bounds 129127
ultiple transmit/receive antennas with lin. unitary precoders 108959
ultiple-valued arith. ccts. synthesis using evol. graph generation 79841
ultiplier recoding tech., high-speed parallel multiply-accumulate archit. appl. 90853
onlin. approach to sig. coding and compression, time series 95652
onlin. commun. scheme, sync., multiple attractors 129062
onlin. material based switches, opt. MUX-DEMUX 105556
onstandard job-shop scheduling problem, GA-based soln. approach *(Chinese)* 67683
OFDM mobile wireless syst., reduced complexity channel estim. 108892
OFDM syst., two-ray multipath channel, polynomial cancellation coding 106057
pt. CDMA, coding schemes *(Chinese)* 96654
pt. CDMA encoder/decoder based on fibre delay line 96823
pt. duobinary sig. high power tolerant transm. 86098
pt. duobinary sig. transm., high power tolerant 75057
pt. encoder higher-order sig. distortion reduction using modulated pitch grating *(Japanese)* 86461
pt. fibers, multiple pulses stabil., phase-sensitive amplif., noise 104636
pt. rotary encoders, CMOS front-end cct. 75397
ptimal encoding of non-stationary sources 94263
ptimal transmit-diversity precoders for random fading channels 74824
uter diam. of rotator in operation, sens.-based meas. instrum. 75874
parab. waveguide based all-opt. security coded key device 109197
particle counter opt. sens., standardized method 97201
partition-codec archit. synthesis for low power and small area cct. design 102113
pass. acoustical animal identif., ANN/time domain sig. coding 122744
peak power distortionless reduction without explicit side inform. 72765
perfect-reconstruction filter banks, low-delay design using LP 107499
photonic packet address proc. using holographic correlator 74957
plastic optic fiber access network based on OCDMA technol. *(Chinese)* 109132
pose estim., environ. features learning 118415
pruned tree-struct. scalar quantizers mapping to companding, design 106191
QccPack, open-source software library for quantization/compression/coding 107339
QoS filter module to transmit MPEG video on heterog. environ. 84400
qtr.-state seq. for floorplan represent., layout optim. appl. 81428
quant. cryptography, class. inform., reversible extraction 106213
quantized oversampled filter banks with erasures 107567
quantum key distrib. via quantum encryption 106205
quantum sigs., reliab. fn. props. 72982
RAKE receiver with imperfect phase estim., perform. upper bounding 108528
Rayleigh fading, orthogonal signaling with coding/diversity, asymptotic perform. 74552
resolved depth step color-coded opt. profilometry 75856
return-to-zero coding polariz. division multiplex transm., PMD tolerance 120289
Rician static fading multiple-antenna wireless channel, min-capacity 128943
ring laser dyn. goniometer, angle meas., systematic errors 128628
robust front-end for speech recogn. on WWW, voice over IP recogn. 73069
rotary encoder, digitally enhanced resoln. tech. 90997
rotary encoder automatic high precision calib. syst. *(Japanese)* 132153
rotary encoder based on magneto-opt. storage method *(Japanese)* 71431
rotate-tiling image comp. method for parallel vol. rendering on distributed memory multicomputers 84369
secret-code encryption scheme based on max. rank dist. codes *(Chinese)* 106210
self-calib. cct. for opt. rotary encoder microsystems 132165
Shack-Hartmann sens., dyn. range expansion using SLM array 75409
simulated protocol method of WAP over TCP/IP network *(Chinese)* 85031
SoC embedded cores testing, twisted-ring counters use 101966
space-time coding/Kalman filtering for diversity transms. through time-selective fading channels 106088
space-time transmit precoding with imperfect feedback 117948
spin direction, optimal encoding/decoding 94297
spin directions commun., product states, finite meas. 107622
SS commun. systs., noise-like carrier generation 84650
SS multicarrier transm. chain for robust/discrete tactical commun. 111597
Steiner triple syst. point codes min. wts. 117974
sum-of-product representations for multiple-output fns., encoding method using multiple-valued logic 83901
symbolic seq. based chaotic coding and ADC appls. 72869
syst.-on-a-chip test data compression/decompression 81432
temporal/correl./rate coding, unified approach 110588
three channel DWDM syst., FWM products, dicode modulation 96833
topol. encoding of 3D segmented images 94979
transmit diversity space-time coded sigs. equalization 73835
triangle strip compression 83863
trinary signed-digit arith., encoding scheme 104847
TS-1 micro-satellite housekeeping computer, self testing of CPU *(Chinese)* 101926
tunable opt. orthogonal code encoder/decoder for opt. CDMA 96822
TW nonlin. device, phase sensitive parametric amplif. 82864
uniform asymptotics of some Abel sums arising in coding theory 106130
uniform nonlin. binary arrays, enumerative aspects/asymptotics 129078
universal homophonic coding 129108
US data compression, real-time 76918
vector Gaussian watermarking game, coding capacity 129038
vital signs monitoring from home with open systs. 111275
VLSI archit. for turbo codes, implement. in FPGA 94327
VLSI implement. of fractal image compression proc. for moving pictures 129753
VLSI improved arith. coding algm. *(Chinese)* 117995
VoIP, session description protocol stack *(Korean)* 119336
WAP over TCP/IP network, simulated protocol *(Chinese)* 84968
watermarking and ident. in presence of side inform. 72778
waveguide input grating coupler for WDM/wavelength encoding 93133

encoding continued
wavelet coder/decoder, FPGA implement. 68754
Weaire-Phelan partition, pot. optimality 129151
wireless data networks, link adaptation, perform. anal. 74811
wireless pers. multimedia commun., conf., Bangkok, Thailand (Nov. 2000) 89557
block matching displacement estim., sliding window approach 95036

encryption *see cryptography*

end effectors *see industrial manipulators; manipulators*

end-fire antennas *see antenna arrays*

end-user computing *see personal computing*

energy bands *see band structure*

energy conservation
45 W HF single-ended compact fluoresc. lamp *(Japanese)* 124071
air conditioner compact high-efficiency scroll compressor develop. *(Japanese)* 89458
air-conditioning chiller selection considerations 124121
all-outdoor-air HVAC systs., energy saving economic anal. 99477
ammonia prod. plant proc. sustainability solns. 124144
appliance/equipt./lighting efficiency labeling programs and stds., eval. 134664
Asian power generation prospects, environ. effect/strategy 99445
BLDCM mfg. technol. *(Japanese)* 99677
building energy efficiency, workmanship impact, Kuwait 123116
building humidity control using condenser/CHP heat reclamation 134659
building night-time cooling technol., prototype testing 100338
buildings, environ. sustainability assess., UAE 88532
Bulgaria's energy syst. transit. to market economy, barriers to change 99468
Californian power crisis, technol. solns. 88306
cellular telephone energy consumption, product life cycle studies 108966
Central/Eastern European energy conservation policy overview 99476
chilled water plants optimal control develop. using quadratic representation 100236
Class D voltage switching reson. inverter electronic ballast 124075
climate change mitigation with renewable/high-efficiency generation 99456
Cologne light rail network, high speed flywheel energy storage syst. *(German)* 78279
combinat. cct. testing, power consumption optimisation 79805
commercial buildings, energy saving technols. effects eval. *(Japanese)* 113041
commercial buildings, energy savings, design data, Hong Kong 123850
commercial packaged unit air-conditioner power ratings 124120
compact fluoresc. lamps for household hourly load curve improvement 134608
CS-E281A series room air-conditioner, energy saving *(Japanese)* 89459
decentralized energy-conversion-systs. with low power output in LV network 122962
developed/transform. countries copperation in energy conservation policy 99475
distrib. network reconfiguration and reactive power compensation 112059
drum-type mill motor drives, develop. status/prospects 113173
Eastern/Central European efficient energy consumption policy problems 99473
ECHONET commun. middleware program, support tool for developing commun. software *(Japanese)* 85120
efficient batt. mgt. 89046
elec. arc furnace pollution control, NIR opt. proc. sens. 110042
elec. indust. based on renewable energy, energy services 111771
elec. motors efficiency under practical conditions 88687
elec. utilities privatisation, energo-economical soln. overview 122840
electret filters, polypropylene/PTFE materials, charging charact. 81645
electroheat technol. retrofits anal., DSM ES, fuzzy DSS 134645
energy-efficient buildings, components effects anal. 133842
energy-efficient distrib. transformers for energy savings in EU 134128
energy-efficient high-perform. PM reluctance motor 112482
energy/environ. R&D, sci. and technol. roles 133840
Estonian energy sector transit., develop. trends 99225
EU accession candidate countries, energy indust. develop. tendencies 99230
European Community cogen. research programmes 112288
EV air conditioning inverter/compressor develop. *(Japanese)* 89417
finite integrat. tech., discrete energy conservation/related laws 83089
fixed-speed IM PWM invertor-based ASD retrofit 134496
fluid catalytic cracking plant, heat exchanger network retrofit anal. 124145
food indust. energy efficiency, mech. vap. recompression technol. 134702
forging indust. induction heaters, rational energy use optim. *(German)* 113161
fully-open elec. market customer energy use mgt. *(Chinese)* 122832
gas-turbine cogen. station energy efficiency indices calc. 133869
global energy generation, environ. problems mitigation, power electronics 123604
global environ. issues, power electronics role 122706
HAVi/ECHONET gateway *(Japanese)* 85119
heat supply systs., energy conservation pot., Russia 99532
HFC refrigerant mixtures R407C, comp. control, energy saving *(Japanese)* 89463
house thermal perform., ventilated interior courtyard effect, hot-arid region 88533
household microwave ovens, energy efficiency 113156
household refrigeration/air-conditioning systs., TEWI eval. *(Japanese)* 100342
Hungarian energy policy, energy supply safety, energy saving 99226
HVAC systs. economizer cycle energy perform. anal. 78341
ICE 3 EMU, energy demand reduction, optimized vehicle control *(German)* 78276
ice thermal storage type air-conditioning/hot water syst. for home *(Japanese)* 89456
IM drive, optimized excitation current control 134531
IM drives, PWM freq. converter, windings, pulsed voltage surges 123937
in-service/nonintrusive motor efficiency testing methods, lab. assess. 88677
Indian elec. consumption modelling/forecasting/anal. 122928
Indonesian small/medium scale industries, energy use, CO_2 emissions 78353
indust. elec. drives for energy conserving appls. 113075
indust. energy savings with variable speed drives 134431
indust. lighting project savings using photom. CAD calcs. 134605
indust. radial power systs., energy saving, life cycle cost design criteria 134670
integrated predictive/adaptive building HVAC/lighting control 89453
Intel, product ecology issues 100536
intell. building EMS using LAN technol. 89316
lamp-reflector combination design for energy efficient indust. lighting 89442
Latvian energy policy, energy conservation, energy sector legislation 99227
liberalised energy markets, product differentiation, nonprice competition 133451
lighting controller integrat. into self-adaptive building control syst. 113126
Lithuanian energy sector, energy conservation policy 99228
lossless commutated boost converter as burn-in appl. act. load 88916
low energy building design in high dens. urban cities 88534
low-yield borehole pumps, controllable autosynchronous closed drive 123902

energy conservation continued
LV elec. motors, research, design, manufacture at NIPTIEM, Russia 123464
mains-fed PM sync. motor, energy saving appls. 123367
Mitsui Recycling 21 proc., automatic control syst. *(Japanese)* 89931
mobile node, energy aware sampling schemes 96446
motors and life cycle costing anal. 123331
MPEG decoding, dyn. voltage scaling 95324
multifunctional buildings ice slurry-based thermal storage 134656
new technol. effect on energy consumption, energy patent counts 113157
nonlin. wave eqn., finite-difference schemes with energy conservation 114110
office refrigeration/air-conditioning systs., TEWI eval. *(Japanese)* 100343
PA-LOOK BALL dimmable compact fluoresc. lamp *(Japanese)* 124062
PA-LOOK BALL YOU self-ballasted compact fluoresc. lamps *(Japanese)* 124070
photoelec. lightning control, switching freq. reduction strategies 78327
PM assisted reluctance motor, optimum design 133983
policies, energy resources consumption reduction, Belarus 99467
Polish energy conservation policy under energy policy guidelines 99229
power syst. reactive power, concepts and defns. 77136
power/energy systs., develop., conf., Marabella, Spain (Sept. 2000) 113275
PWM DC-DC converters, modelling method *(Chinese)* 134195
PWM VSI fed IM drives, steady-state power saving, RBF neural network 113063
radiation shielding facilities, direct heat gen., energy conservation 78178
refrigerated showcases, inverter scroll condenser *(Japanese)* 124124
renewable/high-efficiency power generation for climate change mitigation 133838
residential buildings, energy conservation retrofitting, subsidized tariffs 123117
residential buildings, recycling disassembly material use, energy impacts 113798
residential buildings fenestration, Italian energy rating scheme 123115
residential energy consumption, energy efficiency upgrade retrofits, Canada 124112
Romania's energy efficiency promotion under transit. to market economy 99469
room air conditioner, filter cleaning, filter automatic raising/lowering *(Japanese)* 124118
room air conditioner energy efficiency std. implement., pot. CO_2 reduction 100336
Russian Federation energy efficiency/savings pot. 99474
school buildings, energy consumption/conservation simul., Saudi Arabia 89451
semicond. mfg. technol., energy conservation measures *(Japanese)* 89476
sens. networking, declarative ad-hoc 97183
single-phase IM inrush current controller design *(Korean)* 123454
Slovak Republic energy economy, energy conservation, environ. issues 99470
Slovenian energy efficiency policy 99471
stacked heating elec. water heater with hot water temp. control *(Japanese)* 89443
static ad hoc wireless networks, energy-efficient multicasting algms. 108623
steel mill DC furnace upgrade project results 89470
street lighting, required illuminance, high-efficacy fluoresc. lamps *(Japanese)* 124086
submersible pump IM drives, inverter upgrade energy saving estim. 89360
superconductive appls., energy conservation/CO_2 reduction pot. 116514
traction energy savings at NS Reizigers *(German)* 78277
tungsten halogen energy-efficient lamps, technol. hist. 134634
twin cylinder rotary compressor with conc. winding DC motor *(Japanese)* 124131
two-tiered mobile ad-hoc networks, clustering schemes for energy conservation 131294
UK energy syst., exergy anal. method 77193
Ukraine energy conservation policy, energy consumption efficiency 99472
urban area energy demand modifs. due to climate changes 99466
US buildings sector, energy-related challenges overview 133843
US clean energy future scenarios 133487
US indust. energy efficiency improvement, policy scenarios 133844
US Nat. Energy Policy report and contrasting view, excerpts 99447
VAV air handling unit online fault detect./diagnosis method 100335
warm water bidet energy-saving pers. hygiene syst. *(Japanese)* 89444
CO_2 emission reduction using PV and cogen. systs. *(Japanese)* 88652
NO_x removal, pulse corona discharges, luminesc. 88190
energy control *see power control*
energy dispersive X-ray analysis *see X-ray chemical analysis*
energy efficiency *see energy conservation*
energy gap
see also photonic band gap; superconducting energy gap
anthracene cryst., phthalocyanine doped, band gap, vac. sublimation growth method 79172
barrel type MOVPE reactor for 6″ epitaxial wafers, device appls. 68259
BEDOT-pyridines based multi-colored electrochromic polymers 82038
bipolar transistor, base transit time, doping profile 103791
bulk-barrier diodes, DC elec. behavior model 103755
CL display phosphors, efficiency models, band gap energy, particle/crystallite size 104926
computational band-struct. engng. of III-V semicond. alloys 91625
conjug. mols., cond., SCF study 91495
copper phthalocyanine films, electronic props., gas sens. appl. 109763
copper phthalocyanine thin films, carrier injection, STM anal. 69617
diamond, CVD film, field & photoemission, microstruct. effect 80564
diamond, CVD films, band gap, field emission 102904
diamond(100) surfaces, CVD homoepitaxial grown, photoemission props. 91603
diamond films, CVD, dens. of gap states, thickness depend., SCL current 69476
DLC hard films, direct ion beam deposition from RF ICP source 79211
electroabsorption modulators, saturation effects simul. 127835
N-ethylcarbazole, plasma-polymerized, organic thin film EL device 127956
fiber optic commun., device fab., MOVPE 85998
fluorene-based copolymer blends, liq. cryst. component, low threshold lasing characts. 128209
fluoresc. 1,2-oxazole cpd. synthesis for organic LED FPD appls. 109865
freezeout/exhaustion prediction under nontrivial conditions 91572
high-k gate dielec. for CMOS devices, future challenges 104130
high-κ gate dielec., CMOS appl. 70294
in-band-cascade solar cells, heatelectric cells, semicond. energy barriers 113011
InAsP cells for solar TPV appls. 113027
jn. diode, I-V charact., band gap and device const. 115827
liq.-cryst. poly(p-phenylene vinylene) derivatives, props./EL device appl. *(Japanese)* 71525
low bandgap conjug. polymers for bulk heterojunction PV cells 127948
MEH-PPV films on Au, GaAs, photoinduced charge carriers at surfaces/interfaces 91711
metal/ferroelec./insulator/semicond. struct., polariz. stabil. 126237
energy gap continued
metal/$Si_{1-y}Ge_xC_y$ interfaces, Fermi level posn. 69707
multiple band gap semicond./electrolyte solar energy conversion 112863
multiple band gap solar cells, nonideal recomb./transport mechanisms 112
multiwall carbon nanotube heterojunctions, nonlin. transport props. 10309
nematic liq. cryst./organic(inorganic) semicond. composite, photovol 104900
nonintimate Schottky jns., effective dens. of bias voltage depend. interf states 80898
oligophenylene thin films, n-doped, UPS, MAES studies 101231
oligothiophene modified blends, tunable white light generation, Forster tra 116921
p-n struct., wide band gap layer, reverse branch of I-V charact. 115371
PADC gamma irrad. detector, opt./elec. props. 121663
PANI composite coating, NH_3 sens., nulling opt.-transm. bridge 97433
PANI films, p-aminothiophenol monolayer self-assembly, internal photoemis 127905
PDPs, secondary electron yield of insulator cathodes 109856
photonic cryst. struct., band gap, FDTD method 82139
poly(3-butylthiophene), electrosynthesis, semicond. props. 80778
poly(cyanoterephthalylidene)s, synthesis & charactn., LEDs 90571
poly(fluorene)-based alternating copolymers, opt. props., synthesis 69612
poly(thiophene) derivative LED device, regiocontrolled synthesis & opt. pr 82395
poly-Si:P gate/band gap narrowing, incomplete impurity ionization, direct tun ing leakage current 91592
polyfluorene copolymers, synthesis, PL, laser appl. 127559
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole trans layers 105000
PPV, elec. field induced exciton ionization 80782
surface-doped diamond, pH sens., surface termination effect 87023
thiophene-isothianaphthene copolymers, PV devices, charact. 123825
zinc blende/wurtzite III-V semicond., band params., review 80686
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
Ag-Si Schottky jns., ICB deposited, interface electronic struct. 80899
Al/p-$AgGa_{0.25}In_{0.75}Se_2$ polycryst. thin film Schottky barrier diodes, charact. 70027
$Al_{0.3}Ga_{0.7}As$, MBE-grown (001) surfaces, conductance gap anom. 91617
$Al_xGa_{1-x}As$ graded-gap X-ray detector, opt. response 91647
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 70
$Al_{0.24}Ga_{0.76}As$/GaAs MQWs, photocurrent study *(Korean)* 80831
$Al_{0.36}Ga_{0.64}As$-$In_{0.5}Ga_{0.5}P$ heterojn. tunnel diode for cascade solar cells 1129
AlGaInAs-InP strained MQW lasers, gain charact. temp. depend. 82613
AlGaInP lasers emitting at 670 nm, cladding material blocklayers 93667
$Al_{1-x}Ga_xN$ refl. spectra, Kramers-Kronig anal. 91681
$Al_xGa_{1-x}N$ films, opt. phonon energies, comp. depend. 69541
$Al_xGa_{1-x}N$ thin film, GSMBE growth, Si(111) substr. 101207
AlGaN/GaN heterojn. band offsets, photolum. and modulation spectra 91764
AlGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. mo PL 126126
AlGaN/GaN microwave HFETs, AlGaN props., in situ opt. monitoring, MOV 101324
$Al_{0.14}Ga_{0.86}N/Al_{0.18}Ga_{0.82}N$ LED, transparent conductive layer, short period al superlattice, UV 82428
$Al_{0.18}GaN$/GaN heterostruct., sub-bandgap absorpt., photocurrent spectra 917
$Al_yGa_{1-y}N$/GaN cubic heterostruct., MBE, struct., vib., opt. props. 101223
$Al_yGa_{1-y}N_xAs_{1-x}$, thin films, nitride form. by N ion implant. 103275
$Al_{1-x}In_xN$ films, plasma source MBE grown, opt./elec. props. 90311
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, el charactn. 103894
AlN epitaxial film, vibr./opt. props. 126067
AlN epitaxial layers, Al_2O_3, SiC, Si substrs., MBE growth, cathodolum. 933
AlN film, prep., DOS distrib., CPM/DLTS anal. 91631
AlN films, ECR plasma-aided reactive PLD 90472
AlN, resist., band-gap shift, metal-nonmetal transit. 115321
AlN/sapphire thin films, SPE recrystn., GaN epitaxy substr. 125050
a-AsSeGe films, elec./struct./opt. props. 80755
$(As_2Se_3)_{20}(SbSI)_{80}$, elec. cond., temp./freq. effect 103064
Au/n,p-GaN Schottky diodes, I/V/T charact., inhomog. barrier influence 812
$Au_3Ga_5Se_9$, Bridgman crysts., photoelec. phenom. 82314
$Au_3In_5Se_9$, Bridgman crysts., photoelec. phenom. 82314
a-BN, films, opt. absorpt., elec. cond. 69554
Ba/Si(111)-(3×2) reconstruction, struct. anal. 103177
Bi_2Se_3 thin films, electrodeposited, prep. from nonaqueous medium, chara 114384
ta-C films, FCVA deposition, ESR and Raman spectra charactn. 68382
a-C:H films, saddle-field glow discharge deposition and props. 68381
a-C:H, rf plasma deposition using methane, transmittance and reflectance spe trometry 103065
a-C:H,N film, electronic struct., field emission 102906
a-C:H,N films, RF PECVD, spectrosc. props. 68286
a-C:H,N films, low-temp. annealing effect, field emission 80569
a-C/a-C:H multilayers on Si, photodiode effects, EL obs. 82352
a-CN_x films, N-rich, deposition, charactn. and appls. 90411
a-$C_{1-x}Si_x$:H alloys prep. by high plasma dens. source 68264
$Cd_xHg_{1-x}Te$ alloys, irrad., Fermi level pinning and elec. props. 115302
CdO thin films, low-press.CVD and elec. props. 90407
CdS chem. deposited thin films under mag. field, props. modif. 68326
CdS clusters in mordenite/MCM-41 matrices, opt. props. 126044
CdS films, CBD/CSS growth, band gap energy form. 90481
CdS films, electron beam, deposition, opt., elec. props. 69527
CdS nanoparticles, hydrothermal growth in MOR-type zeolites 125097
CdS thin films, chem. deposition, growth kinetics, mag. field effects 90492
CdS/CdTe solar cell struct., doping and intermixing, spatially resolve cathodolum. obs. 112878
CdTe films, band gap shallow levels on metallic substrs. 126060
CdTe nanocrystals, PL Stokes shift 126028
CdTe thin-film solar cells, freq.-depend. complex admittance meas. 100186
CdTe:O thin films, sputter deposition, charact., O content effect 79201
CdTe/CdMgTe buried quantum wires, interdiffusion using patterned SiO_2 mask 80826
CdTe/CdMgTe buried single QDs using selective thermal interdiffusion 9177
$Cd_{0.8}Zn_{0.2}S$ nanopillars in layered cpds., intercalation and photochem. prop 92253
CdZnTe, Zn fraction, microphotoluminescence mapping 80709
Cu(Al,Ga)(S,Se)$_2$/GaAs(001) heterointerfaces, valence band discontinuitie 69651
$CuCr_{1-x}Mg_xO_2$ films, powders, p type cond. 69550
$CuGaSe_2$ MOCVD grown polycryst. solar cells 100172

gy gap continued
Cu(In,Ga)Se_2 solar cells, $Zn_{1-x}Mg_xO$ window layer expts. 100174
Cu(In,Ga)Se_2 solar cells, defect mechanisms photocapacitance anal. 100183
Cu(In,Ga)Se_2 thin film solar cell absorbers, bandgap profiling effect 100101
Cu(InAl)Se_2 multisource evaporated thin film solar cells 100102
Cu(InGa)Se_2 solar cells, controlled cond. band offset of window/Cu(InGa)Se_2 layers 78172
CuInS$_2$ thin-film solar cells, $In(OH)_xS_y$ buffer layer growth anal. 100188
CuInTe$_2$, cryst. growth, elec. and opt. props. 115358
Cu_2O electrodeposited films, opt. transits., temp. depend. anal. 126078
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
β-FeSi$_2$ single crysts., opt., elec. props. 91716
ε-FeSi$_x$, prep., struct. opt. props. 103068
FeSi$_2$/Si heteroepitaxial syst., struct., luminesc. 103098
FeSi$_{2-x}$C$_x$ semicond. thin films, laser CVD, energy gap *(Ukrainian)* 90371
GaAs, MBE-grown (001) surfaces, conductance gap anom. 91617
GaAs film, MBE growth, Si(110) substr. tilting angle 101210
GaAs films, Franz-Keldysh effect, photoreflectance, SPV 80737
GaAs, opt. consts., dielec. film thickness metrology for comp. semicond. mfg. 126064
GaAs:As, ion-implanted, opt. transm. spectra 80687
GaAs/AlAs superlattice, ultrashort-period nonsymmetric, stimulated emission 80830
GaAs/AlGaAs QW dual-band photodetectors, interband/intersubband transits. 86542
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approach 91794
GaAs-AlGaAs n-N heterojunctions, band-gap offset estim. using J-V-T charact. 69647
GaAs-GaAs solar cells for NASA RAINBOW concentrator 112929
GaAs-Ge three-terminal tandem solar cells, charact. calcs. 112941
n-GaAs-p-$(Ge_2)_{0.02}(ZnSe)_{0.03}(GaAs)_{0.95}$ struct., photosensitivity 104897
$GaAs_{0.983}N_{0.017}$, dil. syst. N distrib., STM obs. 103000
$GaAs_{1-x}N_x$ semicond, high-efficiency solar cells 112940
GaAsN/InAs/GaAs superlattices, opt. consts., crit. points, free carrier effects, phonon modes 126063
GaAsSb type-II QW laser gain, charge-separation effects 82623
$GaAs_{0.5}Sb_{0.5}$ layers, MBE growth on (111)B InP, elec./opt. charactn. 114273
GaInAs quantum wire, self-assembly, SILO proc. 115396
GaInAs/GaInAsP laser struct., pulsed-laser-induced QW intermixing 71843
GaInAsN solar cells, electron diffusion length modelling 112945
GaInAsP VCSEL, design and fab. 117279
GaInAsSb/AlGaAsSb, triple QW diode lasers, threshold current, temp. depend. 128336
GaInAsSb/GaSb low-bandgap TPV cells advances 113023
GaInNAs and Ga(In)NP, optoelectronic materials, LEDs 105031
GaInNAs/GaAs MQWs, GS-MBE growth, opt./struct. props. 103116
GaInNAs/GaAs SQW lasers, plasma-assisted solid-source MBE growth and high-temp. characts. 82609
GaInNAs/GaAs heterostruct., photodiode, MBE growth 104944
GaInNP, electronic/optoelectronic material 115318
GaInNP/GaAs heterostructs., GSMBE growth, band lineup, PL study 101211
GaInP surfactant-enhanced OMVPE growth, photolum. spectra studies 90378
$Ga_xIn_{1-x}P$, band struct., order param. 69512
GaN, below gap states excitation, two wavelength excited PL 80867
GaN epitaxial layers, high resoln. polariton spectra, band gap temp. depend. 80722
n-GaN films, deep levels/PPC studies, MOCVD 127909
GaN films grown by plasma assisted laser-induced CVD, props., influence of HI irrad. 126017
GaN, ion-induced damage propag., enhanced diffusion, PL 69531
GaN, lateral epitaxially overgrown films, elec. props., spatial var. 91658
GaN optoelectronic devices, defect dens. reduction 91675
GaN, subband gap yellow luminesc., opt. metastability 91624
GaN surfaces/interfaces, low energy electron-excited nano-luminesc. spectr. 91662
GaN thick films, hydride VPE, CL charactn. 68250
c-GaN:Si MBE growth on (001) GaAs substrs., PL study 103015
GaN:Si, opt. props., doping depend. 126047
GaN:Si, resist., band-gap shift, metal-nonmetal transit. 115321
$GaN/Al_{0.56}Ga_{0.44}N$ superlattices, MOVPE growth, opt. props. 90451
GaN/AlGaN MQW, below gap states excitation, two wavelength excited PL 80867
GaN/AlGaN strained MQW, piezoelec. field, PL press. behavior 103140
GaN/GaAs(001), plasma-assisted NH_3 gas nitridation, struct., opt. props. 91661
GaN_xAs_{1-x} alloy, MBE growth on GaAs (100) *(English)* 90263
GaN_xAs_{1-x}, thin films, nitride form. by N ion implant. 103275
GaNAs/GaAs single QW, opt. transits., band bowing coeff. 80889
GaNP, electronic struct., pseudopotential methods 91639
n-GaP:S, PPC at low temps. 82308
Ga_xSe_y thin film buffer layers, solar cells, opt., structural, morph. props. 100135
$Gd_3PO_7:Eu^+$ phosphor, UV/VUV luminesc. props. 82331
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
$Ge_{30}Sb_{10}S_{60}$ film, thermal evap. under vac., opt. params. 80754
Ge_xSe_{1-x} thin films, semi-closed space prep. tech., struct. anal. 124859
$Ge_{10+x}Se_{40}Te_{50-x}$ thin film, opt., elec. props. 91695
$Ge_{10+x}Se_{40}Te_{50-x}$ thin film, opt., elec. props. 69552
HgCdTe double-layer heterojunction photodiodes, 2D anal. 82350
$Hg_{1-x}Cd_xTe$ very LW IR photodiodes, current mechanisms 93369
HgCdZnTe photodetectors, laser irrad., energy gap modif. 109566
$InAs_{0.4}P_{0.6}$ nanocrystals embedded in SiO_2 films, prep., opt. props. 79203
InAsSb PV structs., noncryogenic quantum detect. in mid-IR 109553
InAsSbP/InAs low-bandgap TPV cells advances 113023
$In_{0.53}Ca_{0.47}As$, MBE-grown (001) surfaces, conductance gap anom. 91617
$In_{2-2x}(Cd,Sn)_{2x}O_3$, bulk phase rels., cond., transparency 80750
$In_{0.5}(Ga_{0.73}Al_{0.27})_{0.5}P/GaAs$, double heterostruct., photoreflectance spectr. *(Korean)* 80673
InGaAs/AlGaAs QD intermediate band solar cell 112903
InGaAs/InP QW dual-band photodetectors, interband/intersubband transits. 86542
$In_xGa_{1-x}As/In_xAl_{1-x}As$ lattice-matched QW, MBE, photoluminesc. 90280
InGaAs-GaAs solar cells for NASA RAINBOW concentrator 112929
InGaAs-InGaAsP laser, QW intermixing using Ar plasma exposure 71842
InGaAs-InP solar cells for NASA RAINBOW concentrator 112929
$In_{0.04}Ga_{0.96}As_{0.99}N_{0.01}$, dil. syst. N distrib., STM obs. 103000
InGaAsP/InP MQW laser structs., enhanced band-gap blueshift, group V intermixing 71759
InGaN SQ wells, amber LED, EL/PV spectra, PL 82407

energy gap continued
InGaN films, MOCVD/MBE grown, photocond., photolum., Stokes shift 71514
InGaN layers, indium content, LEDs, PL peaks, RBS, EXAFS, EDX 128018
InGaN, tailorable band-tail, band-state model, QW laser appl. 80705
InGaN/GaN MQW, below gap states excitation, two wavelength excited PL 80867
InGaN/GaN MQW struct., PL, sapphire substrs. 91834
InGaN/GaN MQWs, PL, MOCVD, excitation dens. 80873
InGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. model, PL 126126
InGaP films, OMVPE, superlattice ordering, PL obs. 103045
InGaP-GaAs solar cells for NASA RAINBOW concentrator 112929
In_xMoSe_2 intercalated single cryst., growth, elec./opt. props. 115348
InN, resist., band-gap shift, metal-nonmetal transit. 115321
InN/Si heterojunctions, MBE, hole-barrier struct. 90301
InNAs, electronic struct., pseudopotential methods 91639
In_2O_3 film, pulsed laser ablation, synthesis/charactn. 103053
$In_x(OH,S)_y$ buffer layers for Cu(In,Ga)Se_2 solar cells 100037
InP nanoparticles in SiO_2 thin films, prep., struct./opt. props. 80701
InP:Si^+, implanted, free-carrier conc., PL method 80735
InP/InGaAs QW IR photodetectors, strain effect on operating wavelength 131911
In_xSe_y thin film buffer layers, solar cells, opt., structural, morph. props. 100135
$In_2(Se_{1-x}Te_x)_3$ film, synthesis, struct./elec. props. 79247
$MgXN_2$ (X=Si,Ge), theoretical anal., DEFT, first principle calc., LDA, generalised gradient approx. 79023
Mo/SiO_2/Si gate electrodes, work fn. engng., CMOSFET appl. 126750
$MoSe_2$, layered semicond., electrodeposition, solar cell electrodes 90493
NiS thin films, SILAR, prep./charactn. 125021
$(PbI_2)_x$-$(BiI_3)_{1-x}$ solid solns., prep., dark cond./opt. energy gap, XRD/opt. transm. 114308
$Pb_{1-x}Nd_x(Zr_{1-x}Ti_x)O_3$ films, PLD, opt. props., surface morph. 114379
Ru-complex-based organic EL devices, peak wavelength control 104972
Sb_2O_3-CuI-NaCl(NaI)($PbCl_2$)(PbI_2) glasses, prep., struct., opt. props. 92939
Sb_2Se_3 thin films, chem. bath deposition from alkaline medium, charactn. 101401
ScN thin films, plasma assisted PVD, reactive sputtering, struct., opt. props. 90540
ScN(001) films, MBE, struct./elec./opt. props. 90340
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
Si nanometer-sized dot multilayers, photocond. 127903
poly-Si solar cell, ITO electrode, synthesis & perform. 123801
Si solar cells, NIR internal quantum efficiencies, thermal modifs. 100165
Si, ultrafast cold melting under femtosecond laser pulse, band gap collapse 80631
Si:B very-low resist. multicrystalline solar cells, light-induced degrad. 100047
Si:B,P, isotopically pure, photoluminesc., bound exciton transits. 102962
a-Si:H, femtosecond transm., exponential band tail pumping 91692
nc-Si:H, phosphor film, PECVD, struct./opt. props. *(Chinese)* 115285
Si:H protocrystalline p-i-n solar cell perform., phase transits. role 100201
a-Si:H struct., trap-assisted tunnelling, temp. studies 69657
a-Si:H thin films, hollow cathode plasma-jet reactive sputtering 101181
a-Si:H thin films, plasma CVD, elec./opt. props. *(Japanese)* 90359
a-Si:H/a-SiN:H growth by PECVD for TFT appls., wide bandgap 101350
a-Si:H/c-Si heterojunction solar cells, emitter/interface optim. 112898
a-Si:H,P(B) films, DC magnetron sputtering, opt. props. 114253
Si:Li,Er-based IR electrolum. devices, elec. field-induced fab. 71564
Si:P, transmutation-doped γ-irrad., defect states, elec. props. 91580
Si/$ZrSiO_2$, interface band offsets, scaling trends 91900
Si-C-N films deposited by microwave plasma CVD on Si with buffer layers, characts. 114332
SiC, 4H, free carrier diffusion, transient grating techs. 69579
SiC polytype depend., tantalum/tungsten band gap states 69596
SiC wafers, dielec. fn., spectrosc. ellipsometry 69587
SiC:Al,B, 4H/6H, absorpt. meas., doping level eval. 69809
4H-SiC:B crysts., B centres, DEFT 69593
SiC:H, 6H, vibr. props., H_2 ion implant., annealing effects 69794
a-SiC:H alloy photolumin. wide-bandgap films deposited by Cat-CVD using acetylene 124971
a-SiC:H, femtosecond transm., exponential band tail pumping 91692
μc-SiC:H films, VHF-PECVD, optoelectronic & structural props. 90388
a-$Si_{1-x}C_x$:H films, prep. by hot-wire CVD and props. 124970
a-$Si_{1-x}C_x$:H thin films, ECR-CVD deposited, blue emission 71528
SiCN films, methylamine growth using ECR-CVD 124923
SiGe HBT RF technol., transistor noise 126671
SiGe HBT RF technol., transistor noise 103789
a-SiGe films, low temp. cond., ESR, opt. absorpt. 115331
SiGe graded band gap channel MOSFET, HF charact. 103840
$Si_{1-x}Ge_x$ on Si(001) substr., band gap narrowing 81021
a-SiGe:H component solar cell band gap grading width, perform. depend. 112888
a-SiGe:H, femtosecond transm., exponential band tail pumping 91692
a-SiGe:H films, PECVD, props. anal. 103067
a-SiGe:H films, UHV PECVD deposition params. and PV quality correl. 101385
$Si_{1-x}Ge_x$:B strained epitaxial layer, boron diffusion 103281
a-$Si_{1-x}Ge_x$:H pin X-ray detector 110428
a-$Si_{1-x}Ge_x$:H thin film solar cells, optoelectronic props. 89290
SiGe/Si source/drain struct., suppression of short-channel effect, p-channel MOSFETs 70121
$Si_{1-x}Ge_x$/Si MQW struct., photocurrent spectrosc. *(Chinese)* 80877
SiGeC HBT, UHV-CVD, bandgap, strain engng. 81207
$Si_{1-x-y}Ge_xC_y$ epilayers, UHV CVD, strain relief *(Chinese)* 79314
SiN_x films, ion-assisted deposition, ECR plasma, props. anal. 101448
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SnO_2 films, microstruct., phys. props. 115327
SnO_2 thin films, laser CVD grown, O_2/H_2 exposure effects, XPS anal. 101345
SnO_2:Pd(Zr) films as SO_2 gas sens., opt. sensitivity charact. *(Chinese)* 120974
SnS films for PEC, cathodic electrodeposition 101398
SnS_2 films, successive ionic layer adsorpt. and react. method deposition, charactn. 68338
TiO_2 films, epitaxial anatase PLD, PV response, dielec. props. 126077
TiO_2 solar cells, organic dye-sensitized nanocryst., electrolyte effect 134403
VO_x films as SO_2 gas sens., opt. sensitivity charact. *(Chinese)* 120974
V_2O_5-MoO_3 films, electron beam evaporated, elec./opt. props. 103059
p-WS_2 thin film, electrodeposition/charact. 79394
ZnBeSe mixed crysts., photoacoustic studies, two-layer approach 115326
$Zn_{1-x}Be_xSe$ crysts., AES, ellipsometry, photolum. studies 90213
$Zn_{1-x}Co_xO$ semiconds., photoacoustic spectra 103051
$Zn_3In_2O_6$ thin films, RF sputtering, struct. var. 79204

energy gap continued
ZnMgSSe/GaAs(100) photoassisted MOVPE growth, XRD and photolum. obs. 68222
ZnO epitaxial films, PLD and charactn. *(Japanese)* 68306
ZnO films, CVD, elec./opt. props. 103012
ZnO thin films, electrodeposition on n-Si(100), struct./opt. props. 125041
ZnO:Al transparent conductive films, DC magnetron reactive sputter prep. and charactn. 69504
ZnO:Al/a-pin Si_xC_{1-x}:H/Al optimized laser scanned photodiode imaging transducer 86666
ZnO-based dil. mag. semicond., magneto-opt. props. 80678
ZnS nanoparticles, hydrothermal growth in MOR-type zeolites 125097
ZnS:Cu(Ag)(Mn) phosphor materials, microwave synthesis & charactn. 82337
ZnS_xSe_{1-x}:Mn TFEL devices, band gap engng. for improved efficiency/brightness 75796
ZnSe, sublimation method growth, elec. props. 68129
ZnSe thin film buffer layers, solar cells, opt., structural, morph. props. 100135
ZnSe(:Sb) film, photoacoustic spectra, MOVPE 126041
ZnTe:Cu thin films, struct. and opt. props., Cu soln. immersion immersion time depend. anal. 103283
$ZnXN_2$ (X=Ge,Si), theoretical anal., DEFT, first principle calc., LDA, generalised gradient approx. 79023
Zr-Sn-Ti oxynitride thin films, enhanced dielec. props. 70379
ZrO_2 RTCVD for MOSFET appl. 124897

energy gap, superconducting *see superconducting energy gap*

energy level transitions, atomic *see spectra*

energy level transitions, molecular *see spectra*

energy levels *see energy states*

energy levels, molecular *see molecular electronic states*

energy levels, nuclear *see nuclear energy levels*

energy management systems
see also load management
42 V vehicle elec. syst., energy mgt. overview 78316
42 V vehicle power archits., energy storage/mgt. systs. 78315
AC/MTDC power syst. state estim., seq. method 88331
air condition load mgt. assess. by load survey in Taipower 134660
bal. distrib. network general-purpose load flow tech. 122974
central air-conditioning, energy mgt. and control syst., online optimal strategy *(Chinese)* 89461
component technol.-based EMS, design ideology *(Chinese)* 111833
deregulated power markets software architectural style 111758
distrib. automation, multimedia master station syst. design *(Chinese)* 112050
distrib. control centre syst., constr. models *(Chinese)* 99200
distributed intell. hierarchical syst., heat metering and control 122825
district power network, integrated automation syst. *(Chinese)* 77245
Egyptian Nat. Energy Control Center 88366
electric distributed object management, power market mgt. software, DCOM technol. *(Chinese)* 77171
EMS/DMS appl. software using OO technol. *(Chinese)* 77239
Ericsson EnergyMaster wireless power syst. supervision syst. 111927
FACTS devices, syst. expansion, interior-point based OPF 77306
global elec. power mgt. syst. *(Chinese)* 133480
hybrid wind-PV energy syst. design program 111942
integrative utility mgt. syst., software archit. 111772
intell. buildings, EMS/control systs. design/testing, simul. tools 89452
intell. EMS for optimum short-term scheduling 133830
isolated power systs. dyn. behavior, batt. energy storage systs. impact 99270
Liaoning power market operator syst. *(Chinese)* 88371
multi agent syst. archit. *(Chinese)* 111795
operator support systs. develop. 77269
power dispatch EMS, commun. syst. Blown Scan improvement *(Chinese)* 77173
power market tech. support syst. framework *(Chinese)* 111726
power syst. alarm proc., fuzzy ES 99241
power syst. control centers with open archits. 133534
power syst. flexible network integrated supervisory control 122844
primary energy mgt. at STEAG, hard coal procurement/handling *(English)* 99460
real-time DP method *(Chinese)* 111841
real-time elec. pricing programme, USA 88304
short-term load forecasting/class. using neural nets 122930
Turkish EMS upgrade project overview 122897
US elec. utility outage mgt. syst. deployment project 122866
very short term load forecaster, electronic dispatch project, ISO New Eng. 111981

energy measurement
see also power measurement
elec. locomotive on-board energy meas. *(German)* 78261
EM energy flux unit, primary meas. std. 86382
laser radiation pulse energy meas. using thin-wire bolometer 75535
microwave heating, energy meas. error due to reflectometer directivity 75815
multidetector compact DAQ syst. time encoding anal. 120677

energy meters *see power meters*

energy resources
see also energy conservation; fuel; nuclear power; renewable energy sources; solar energy concentrators
Asian power generation prospects, environ. effect/strategy 99445
consumption reduction, energy saving policies, Belarus 99467
Czech energy indust., energy consumption forecasting, environ. problems 99224
distributed generation approach for carbon emissions reduction 99443
ECOM control hardware/software *(Russian)* 77199
elec. sector anal. in clean energy futures study 133489
elec. supply, resources, pollution, dyn., Pakistan 122812
energy/environ. R&D, sci. and technol. impact 99463
energy/environ. R&D, sci. and technol. roles 133840
exergy efficiency and the environ., global perspective 99465
Federal Republic of Yugoslavia elec. power syst. functioning *(Serbian)* 122828
generation mix var. effects on freq. regulation requirements 99444
global energy budget, cloud microphysical params. effects 99464
Korean energy-related carbon emissions, time-series anal. 123096
photonic technol. in 21st century, new industries creation 78373
power generation energy resource/economics monitoring syst. *(Russian)* 77672
robust generation mix planning under uncertain environ. *(Japanese)* 77291
Russian energy strategy, social/economic develop. effects 123108
Russian power indust. develop. prospects 122806
Turkey, elec. power capacity investment and planning 99249
Turkish energy facilities/nuc. power program in Year 2020 99487
US buildings sector, energy-related challenges overview 133843
US clean energy future scenarios 133487

energy resources continued
US clean energy policies, market failures and barriers 133488
US Energy Infrastructure Interdependencies Program 111740
US indust. CHP promotion, pot. energy policy impact 133857
US indust. energy efficiency improvement, policy scenarios 133844
US Nat. Energy Policy report and contrasting view, excerpts 99447
CO_2 emission and energy consumption scenarios, Brazil, 2010 77681

energy states
general aspects only, for specific aspects see narrow terms as appropriate, e.g. "band structure", "excited states", "plasmons"
InGaAs/InP injection semicond. QW laser, act. region particles/quasi-partic energy states 117258
Si solar cells, NIR internal quantum efficiencies, thermal modifs. 100165

energy storage
see also capacitor storage; compressed air energy storage; inductive energ storage; mechanical energy storage; superconducting magnet energy storag thermal energy storage
10 MW compulsator for high power solid state laser beams *(Chinese)* 1236
42 V vehicle power archits., energy storage/mgt. systs. 78315
2001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Fe 2001) 100393
all-elec. transportation commun./recharging via wireless power beam 89366
ASD ride-through syst. using CMV 123935
batt. storage technols., energy vs. power capabilities 112776
cascade double Γ-CL current source reson. inverter anal. 134161
dispersed generation power systs., intell. control methods 111864
distributed power generation, storage impact on spinning reserve 88514
dyn. voltage restorer systs. topologies comparison 134222
elec. delivery organizations, challenges and solns. 111713
EV energy storage technol. develop. *(Chinese)* 78231
EV secondary storage batts. comparison 124008
FACTS UPFC schemes, dyn. performs. comparison 111857
hybrid wind/energy storage syst., impact on syst. protection/control 77792
hybrid-EV, energy mgt. strategies, simul. 89393
isolated power systs. dyn. behavior, batt. energy storage systs. impact 99270
LIREX class 618/619 diesel-elec. multiple-unit *(German)* 78259
microfabricated secondary batts. for rem. autonomous electronic devices 891
mini storage systs. for elec. energy, mobile appls. 123990
power quality problems, solns., technol. 77342
power/energy systs., develop., conf., Marabella, Spain (Sept. 2000) 113275
Regenesys energy storage technol., regenerative fuel cells 134362
renewable energy syst. optimal control strategy modelling 123106
S band HPM pulse compression, spontaneous gas breakdown switch *(Chines* 102882
single electron tunnel jn. based cct., energy conservation 79544
sinusoidal absorpt. AC-DC converter, stored energy optimisation 78027
smart airbag systs., foil resistors as electro-pyrotechnic initiators, low energ 89418
SPEEDAM 2000, conf., Ischia, Italy (June 2000) 78442
STATCOM, harmonic reson., pass. components params. selection 112745
TELESCON 2000, conf., Dresden, Germany (May 2000) 100425
voltage sags mitigation using prediction tech./dyn. voltage restorer 133677
wind power, syst. design criteria 112373
$Li_4Ti_5O_{12}$ electrode based asymmetric hybrid nonaqueous energy storage ce 112761

energy, surface *see surface energy*

engineering
see also biomedical engineering; biotechnology; civil engineering; concurren engineering; control engineering; design engineering; electrical engineering; engineering education; environmental engineering; maintenance engineering mechanical engineering; naval engineering; nuclear engineering; project engineering; systems engineering; value engineering
brand mgt., living brand 67460
DOE considering multiple engng. charact. 89798
EMC challenges in new millennium 72352
EPC projects, procurement uncertainties mgt., supply/crit. chains 89811
ethical codes, myths 113224
ethics, gender-informed 113227
ethics, virtue, conceptual and material for engng. 113226
Internet enterprise engng., zero-time framework based on T-strategy 78538
mgt. research, stat. construct validation approaches comparison 100491
over-consumption, challenge for ethically responsible engng. 113225
private finance initiative project, bidding, risk taking 78578
professional engng. license for competence certification 113229
tech. sign lang. for deaf engineers 124450
women engineers, work satisfaction, CREW project, literature review 113393

engineering computing
see also aerospace computing; chemical engineering computing; civil engineering computing; computer aided facilities layout; control engineering computing; electrical engineering computing; electronic engineering computing; engineering graphics; engineering information systems; mechanical engineering computing; naval engineering computing; nuclear engineering computing; optical engineering computing; production engineering computing; telecommunication computing; traffic engineering computing; virtual machines
automotive test data mgt. 100272
building energy syst. simul., efficient soln. strategies 100233
co-evol. design model 67865
conceptual design chains with basic schematics 100524
design, quantitat./qualitat. cost estim. 100525
design engng. education, CAx role 113340
design for reliab., engng. knowledge elicitation 100681
disabled pers. elec. cart, develop. and use of 3D CAD syst. *(Japanese)* 100267
domain integrat. in building simul., ESP-r integrated package 100332
educational and training technol., theoretical backgrounds 113298
elec.-heated room thermal comfort, wall constr. effects *(Polish)* 124113
electronics mfg., integrated maint. mgt. syst. 100514
EnergyPlus new-generation building energy simul. program develop. 100234
equipt. maint. admin. using integrated software systs. 100508
GA pop. dyn., approx., and anal. of optim. problems 113964
indiv. obs. retrospective change-point anal. program 78684
intell. control-maint.-tech. mgt. syst. anal./design *(Chinese)* 78550
investment, dyn. payout period, interpolation estim. *(Chinese)* 89659
iter. design, meta-level eval. fn. reformulation strategies 100522
mechatronics simul. educational software develop. 78518
med. equipt., repairable, failure database/rate model 89914
multiple design projects auditing, Internet-based approach 89689
oil pipe erosion assess., grey target theory software 113750
open-source prog. for project mgt. appls. 78539

neering computing continued
parametric design based on topol./geom. constraints *(Japanese)* 100515
simul. scheme for testing materials in nondestructive manner 101604
$\bar{X}$ and R/$\bar{X}$ and S charts, economic-stat. design 78683

neering education
see also control engineering education; electrical engineering education
ABET accreditation criteria, engng. education, project work 113343
ABET Criteria 2000, chem. engng. education, environ. and ethical issues 89630
academic educational confs. in Poland, objectives/perspectives 113376
accreditation, Portugal 78507
acoustics, synthesis, sig. proc. education, interactive multimedia 78501
aeronautical education course problems soln. using spreadsheet fluid dyn. 100452
American university education, conceiving engng. liberal art 89626
aspiring innovating entrepreneurs education, UK experiences review 89602
capstone design programs indust. projects selection 113330
competence recogn., Canada-France mutual recogn. agreement 113359
computational materials design, dyn. multilevel struct. 113341
computer conferencing syst., on- and off-campus usage by engng. students 67416
computer sci. and engng., learning in context 113356
conceptual understanding instructional seq. 89637
continuing professional develop. modelling 89649
cornerstone/capstone engng. design projects selection criteria 113331
cultural change, theory-in-use 113306
curricula change mgt. at Texas A&M Univ. 89633
curriculum-integrated engng. design/product realization 113327
Deakin Univ., engng., online teaching/learning 78534
design curriculum, product realization proc. integrat. 113324
design education unification through decision theory 113336
design engineers, knowledge teaching, skill develop., attitude cultivation 113441
design engng. education, CAx role 113340
design engng. education, conf., Claremont, CA, USA (May 1999) 113228
design engng. education, team perform. prediction 113346
design engng. education course assess./improvement plan 113345
design teaching, curriculum assess. using design projects 113344
developing countries, accreditation, QA 78506
disability aids senior design projects, dist. learning 78508
discourses role in multidisciplinarity 89621
dist. engng. education support 100473
educational and training technol., theoretical backgrounds 113298
Engage first-yr. engng. studies program 113326
Engineering Design and Communication course, interdisciplinary collaboration 113319
engng. design courses, motivational teaching/learning concepts 113318
engng. design theory, parallel to higher education assess. 113342
engng. design/anal. teaching challenges 113338
ethics education for engineers, indust. perspective 89622
European higher engng. education recogn./accreditation 113358
European projects impact assess. 113363
expansion, bridge between technol. and society 78482
FACILE project, networked facilitated open and dist. learning in continuing engng. education 113351
fluid mech. expt. engng. education tool 89638
graduate automotive technol. education in energy storage systs. 113305
higher education, vocational qualifications 67419
hist. of technol. teaching 78497
honors capstone pollution control design course experience 113329
IEEE SOUTHEASTCON conf., Clemson, SC, USA (March-April 2001) 78407
Image Analyser, educational tool 100470
Japanese engng. education accreditation syst. introduction 113362
learning environ. reconstruction 78498
low-cost ADC interface cct., undergraduate student educational resource 89643
Master of Engineering Program, towards faculty develop. 89625
mathematics content reassessment 100467
mech. engng. design courses, team motivation 113322
mechatronics education, mech. design role, USA 89650
mechatronics educational course, Univ. of Wollongong 89652
mechatronics integrat. in second-yr. design course 113334
mechatronics simul. educational software develop. 78518
mechatronics tertiary education in Thai universities 89653
multi-assess. portfolios knowledge mgt. 113366
multiple criteria decision-making, acceptable alternatives selection 113866
NDT educ. improvements, North Central Collaboration efforts 113317
occupational therapy, engng. students & assistive technol. interact. 87928
online tutorial effectiveness to enhance statics instruction 78485
open exam approach to student assess. in engng. education 113377
orient. course, visual thinking implement. 113365
part-time final-yr. engng. course projects, initiation/organisation/logistics 89635
Polish higher vocational engng. education schools experiences 113361
post-graduate dist. engng. students, academic advising commun. 67435
pre-college enrichment program in engng., use of meas. and sens. 113375
product design, internat. student teamwork 78566
product-based undergraduate engng. curriculum, overseas study program 113332
professionalism and imperative of sustainable develop. 89624
project-based cross-disciplinary teamwork education 113335
project-based design education courses 113323
renewable energy sources training package for Arab world 88522
self-training through Internet 78505
social and ethical practice, role of course accreditation requirements 89627
structural design education for 21st Century 113339
SynThesis real-world product design/business develop. course 113325
thermocouple time consts. meas. during engng. recruiting weekend 78491
Turkish engng. universities, internat. accreditation activities 113360
undergraduate engng. curricula, capstone design course, projects 113333
undergraduate engng. curriculum, engng. sci./design integrat. 113337
undergraduate engng. design course, group project work assess. 89636
undergraduate engng. education, cost anal./costing model 89634
undergraduate engng. students interdisciplinary capstone activity 113328
undergraduate engng./phys. students, learning style research 100456
undergraduate IT/sci./engng. degrees, appl. rates anal. 100455
US Engineering Education 1933-2000, accreditation requirements for nontechnical curriculum content 89623
US engng. education programmes 100471
women in sci./engng. education in 21st century 67426
workplace training program, organisational context, ATC appl. 124282

gineering graphics
continuity-based contour line extraction method *(Chinese)* 129850
EM field visualization using VR modeling lang. std. 128650

engineering graphics continued
EMF stds. comparison, virtual instrum. based syst. 120646
Hermite interpolation by Pythagorean hodograph curves of degree seven 78998
I-V mapping educational cct. simul. approach 78524
laser beam direct-writing device, CAD drawing exchange file *(Chinese)* 92208
logic schematics, high-speed display/graphics mgt. *(Chinese)* 79755
loop detect. in 2D engng. drawings based on node pretreatment *(Chinese)* 129816
mech. drawing, 2D, self-learning algm. of feature recogn. *(Chinese)* 73294
MM-wave antenna systs., develop./appl. of MODTool integrated design tool 117770
NUMASS, nuc. safety project WWW-based monitoring syst. 109441
Object Boundary Encoding, vectorisation algm. for engng. drawings 118677
power syst. graphical fault anal. software *(Chinese)* 77142
SCADA/PAS/DTS integrat. graphic support syst. *(Chinese)* 77262
semicond. mfg. lead frame, integrated CAD/CAM syst. 126918
turbojet engines with large constructive and geom. limitations, CAD 76817
user interface design for engng. drawing vectorization software, VHVector *(Chinese)* 129868
VLSI, multiconductor transm. line CAD, networked supercomputer implement. *(English)* 126933

engineering information systems
automated multicriterial selection, struct. inform. files constr. 100531
KALIMER NPP IS for rem. users 133849
NPP, inform. and diagnostic subsystems 112248
Obsolescence Manager online database for electronic components *(German)* 91405
power plant mgt. in competitive markets, IT solns. 77673
power plant mgt./control, integrated systs. develop. *(Chinese)* 88509
product family, database-centred requirements mgt. and spec. 113445
SiMiKo materials database for simul. of microsyst. components 116067

engineering societies *see societies*

engineering workstations
see also interactive terminals
DEWorkstation power engng. education enhancement software 78479
ISAC, fast Faraday cups, oscilloscope, bunch shape meas. 87128

engines
see also aerospace engines; heat engines; internal combustion engines; propulsion
cylinder-bore surface defect detecting syst., computer vision tech. *(Chinese)* 89895

Enhanced Small Device Interface *see peripheral interfaces*

enterprise networking *see business communication*

entertainment
see also personal computing; reservation computer systems
3D home based entertainment, overview 86308
3D video, future 86345
1994 Winter Olympic Games telecomms. 85116
2002 Salt Lake City Winter Games, network access/flexibility 85143
Athens 2004 Olympic Games, telecomms. planning 85096
computer vision syst. for tracking players in sports games 94968
digital music legislation, neutral judicial advice 131782
distributed multimedia performs., detect., anal. and rendering of audience reacts. 130952
DMD device for high-defn. home entertainment 109847
DVD, broadband entertainment bridge 93012
DVD, multimedia redefinition 93014
DVD business/indust. appls. 97103
fully interactive digital TV appls. *(German)* 131778
future mobile phones, design challenges from embedded systs. perspective 85903
iMEDIA business model of pers. interactive TV advertising 75327
Internet TV economics, new niches or mass audiences 97057
IP-multicast environ., anonymity framework 74207
Nagano 1998 Winter Olympic Games telecomm. services 85125
Olympic Games telecomms. 85115
racehorse ident. syst. using iris recogn. *(Japanese)* 84523
streaming video with storage area networks 119782
Sydney 2000 Olympic Games, telecomms. delivery 85126
unified digital platform, develop. 119807
WDM free-space opt. wireless technol. for eight-channel video broadcast feed service 86108

entropy
see also entropy codes; maximum entropy methods; minimum entropy methods
3-level thresholding, probab. partition/fuzzy c-partition 84143
arith. units in deep-submicron CMOS, fast low-power charactn. 102115
atrial activation procs., nonlin. coupling during human atrial fibrillation 110627
automatic discriminant feature extraction from stochastic proc. samples 129903
automatic seqs., entropy anal. 106000
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
bitwise Huffman coding, source mapping 94291
blind source separation using Renyi's mutual inform. 72709
carotid artery segmentation in US images, contour PDF 76371
cluster anal. by adaptive rank-order filters 107511
color edge detect., automatic isotropic tech. 118749
context-based adaptive arith. coding, least sq. algm. 84479
cpd. image compression using adaptive wavelet transform *(English)* 84450
cryptosystems based on space-discretization of chaotic maps 94361
deterministic chaos and inform. theory 106009
diffuse/specular radar targets stat. imaging 75124
discrete distribs., entropy estim. 128937
discrete queues, entropy/timing capacity 130331
distributional clustering for content-based retrieval of images/video 84291
dyn. multi-threshold metering schemes 129313
edge detect., adaptive multiscale, by neighborhood entropy 73460
EEG sig. nonlin. dyn., mag. field influence on brain 98245
electronics, thermal design, overall cooling perform. assess. 124347
entangled inform. and quantum capacity 106007
entangled light pulse propag., dispersing/absorbing channels 94209
ergodic chains, serial tests and entropy estimators 117863
feature eval., quadratic mutual inform. 105987
finite-alphabet Markov sources, Renyi divergence and entropy rates 72706
fixed-length homophonic coding for general source, theorem 129167
GA with entropy-Boltzmann samplings 90059
gray level thresholding using Havrda and Charvat entropy 106836
grey theory, difference inform. entropy 72713
ground clutter modelling, Weibull/log-Weibull/K-distrib., AIC anal. 120427

entropy continued
heart variability series complexity, entropy rate, pattern class. 132569
Huffman codes redundancy, Gallager's upper bound improvement 129168
ICA through direct estim. of mutual inform. 106350
image approx. and modelling, least stat. depend. bases 94499
image registration, min. spanning tree algm. 95440
image segmentation, color-edge extraction/seeded region growing 118723
independent component anal. estim. by neural net 119081
inflationary universe, holography, quant. geom./inform. theory 83776
inform. cost fns. 117875
inform. diags., entropy, index of coincidence and error probab. 128935
inform. theoretic entropy and randomness 94220
interactive visual dialog, act. vision based obj. recogn. 129844
ISAR imagery focusing, inform. theoretic measure 96913
L-R fuzzy nos., entropy of T-sums/T-products 113937
lang. model, eval., perplexity estim. 73047
Lempel-Ziv/multilevel pattern matching codes comparison 129086
low-level image anal. algms., contextual perform. prediction 84605
LZ78-parsing, optimal, lower bounding 106378
majorization lattice supermodular fn. 128955
Markov chains in continuous time, large deviation principle 117879
microcalcifications, extraction from digital mammograms using regional watershed 98490
min.-entropy estimator for regression problems with unknown distrib. of obs. errors 105996
mol. dimers/trimers, quantum-phase/inform.-entropy dyn. 117881
monocular vision method for camera focusing posn. *(Chinese)* 75608
multimodal image matching, local similarity measures, Shannon entropy 94963
multiple autonomous flight vehicles, decentralised control, inform.-theoretic approach 84700
multispectral image compression using reversible WT and KLT *(Japanese)* 73395
narrow-band subliminal channel, inform.-theoretic model *(Chinese)* 128959
non-Shannon-type inform. inequalities and appls. 128956
nonadditive inform. content, inform. theory 94214
nonhomogeneous scalar conservation laws finite vol. schemes 79064
OFDM params. estim., time approach 106035
OPF, entropy theory, surrogate constraint algm. *(Chinese)* 111993
opt.-pattern recogn., matched filtering generality, MED projection 95531
optimal transform for discrete Hirschman uncertainty principle 83792
optimum image thresholding via class uncertainty and region homog. 94609
phosphor materials in med. imaging radiation detectors, entropy meas. 82339
probab. distribs. families characterized by entropy 83790
probab. distribs. hierarchy, inform. geom. 83787
quantum birthday problems, geom. aspects of quantum random coding 117949
quantum channels, class. 109052
random meas. errors summation, indirect errors anal., MC method 86366
regenerative stochastic procs., entropy and mutual inform. 128969
relative entropy, stat. phys., QFT and inform. theory 83781
REM sleep, neural net class., spectral/nonlin. meas. 132584
retinal image digitization, optim. for improved digital proc. and visualization 110850
scene change detect. using, cross entropy 107129
self-organizing neural net analog cct. based on mutual inform. 80149
sparse vector subset selection, backward seq. elimination 118895
spatial entropy defn. for texture discrim. 96901
speaker ident. syst. based on wavelet transform 94419
speaker ident. using nonlin. dyn. features 129400
speech enhancement using adaptive wavelet shrinkage 129376
target recogn., intell. compression, feature detect./fusion 84551
time-freq. inform. content from Renyi entropies 73564
tree-struct. multiple description VQ design 106165
uncertainty of multi-level systs. of events 89980
unconditionally-secure secret-key distillation based on smooth entropy *(Chinese)* 106287
universal variable-to-fixed length source codes 72780
video seqs., scene cut detect. for indexing 118747
vocal disorders anal. in feature space 118049
VQ for nonlin. factorial models of opt. imaging data low-dimens. independent manifolds 84318
wire rope local flaw quantitat. test, self-adaptive wavelet packet *(Chinese)* 124405
Zador's entropy-constrained quantization theorem 106163
zerotree entropy video codec, multimedia commun., intell. pixel implement. 108488
$CdHg(SCN)_4$ cryst., growth mechanism of blue-violet light freq. doubling material *(Chinese)* 68122
GaAs-based self-organized QD laser modulation response, wetting layer entropy effect 105275
$La_{1-x}Ca_xCrO_{3-\delta}$, SOFC interconnect, oxygen vacancy form. 89259
$LaCr_{0.79}Mg_{0.05}Al_{0.16}O_{3-\delta}$, SOFC interconnect, oxygen vacancy form. 89259
$La_{0.80}Sr_{0.20}Cr_{0.97}V_{0.03}O_{3-\delta}$, SOFC interconnect, oxygen vacancy form. 89259
Pb-based adiabatic cells, Pb ions transported entropy role 113018

entropy codes
3D adaptive wavelet transform/context modeling for scalable lossy to lossless video coding 95211
3D matching pursuit enhanced wavelet transform video coding 107041
3G mobile radio, image transm. DC error correction 85888
adaptable binary entropy coder 106178
adaptive encoder for bi-level images 107062
asymptotically optimal scalable coding for min. weighted MSE 106376
block-based adaptive lossless image coder 84454
Burrows-Wheeler transform compression, parsing strategies 106180
causal source coding of stationary sources with high resoln. 129048
CMOS VLSI single-chip encoder/decoder, dictionary search proc., LZSS algm., entropy coding *(Korean)* 108490
compression encoders, tree approx. and optimal encoding 118926
DCT coding, universal VLC 94270
EBWIC, efficient bit allocation wavelet image coder with low complexity 95074
error-resilient zero-tree wavelet image coding over noisy channels 73333
gray-scale document image lossy compression, quantization 95334
H.263 appl. of variable to fixed entropy coders 117970
HIPERLAN/2 WLAN std. MPEG-2 video transm. 119785
HRR radar data wavelet-based compression for moving targets 109274
image coding, data decorrelation by wavelet transform 129730
image compression, arith. coding archits. 129721
image compression, directional wavelets appl. 107082
image compression, entropy coders based on binary forward class. 106953

entropy codes continued
image compression, inform. entropy preserved coder, integer Haar wavelet transform, sub-block DPCM *(Chinese)* 73364
image compression, low-complexity/-memory entropy coder 129696
image overhead compression by hierarchical enumerative coding 118565
image retrieval systs., wavelet based compression 106979
image/channel coding for wireless packet networks 95164
joint source-channel turbo decoding 106153
JPEG2000, error resilient coding 95300
JPEG2000, multimedia digital data compression std. *(German)* 84442
JPEG2000 implement. on different computer platforms 106949
JPEG 2000 still image compression std. 118496
JPEG modified image compression tech. 95137
JPEG stat. model redesign, DCT coeffs. lossy mode fitting distrib. 95380
lossless compression for satellite packet networks using YK algm. 107469
lossless ECG compression using lifting wavelet transform 110626
lossless image coding using optimum prediction generated by local image features 106868
lossy context-based adaptive entropy coding, lookahead search 95385
low-bit-rate perceptual audio coder, perceptual entropy-based method for sig adapted wavelet tree 129380
low-resoln. region discriminator for wavelet image coding 84360
MPEG-4 visual texture coding using double transform coding 107014
multiple description universal lattice-based quantizers 118005
optimal entropy-constrained scalar quantizers struct. 129049
optimal scalable security archits. in presence of colluding mobile traitors 7296
perceptual audio coder quantization module with PE-based algm. *(Chinese)* 94410
perceptually-based robust image transm. over wireless channels 95163
portable digital video cameras, image proc., VLSI switched-current implement 95354
reconstructed test images, subjective quality, classical/advanced wavelet code 129791
SAR imagery, lossless compression using multiple-pass gradient adaptive lattic filter 109251
scalable image coding with projection-based context modeling 95292
skew-coord. DCT method for images, entropy coding based on Gaussian mixtur distrib. model 73327
spectral entropy-based wideband speech coding 106373
stereo images, edge-preserving disparity estim./disparity-compensated intermed ate view reconstruction 95239
streaming thin client compression 107061
subband video coding, low bit-rate, context models appl. 95207
transform coding, theoretical foundations 117951
universal lossless data compression with side inform. using conditional MP grammar transform 117920
US images compression, space-freq. segmentation with entropy coding 98315
video coding, modified 3D DCT algm. *(Chinese)* 95246
video scalable predictive coding optim. 84448
visual inform., isotropic vs. anisotropic encoding 106853
VQ/entropy coding of med. images, progressive reconstruction 110497
wavelet for arbitrarily shaped video-obj. coding 129695
wavelet image compression, simple and efficient algm. 95287
wavelet-based image compression using shuffling and bit plane correl. 10695
weld joint inspection, thermographic images compression 78693

environmental degradation
see also corrosion; stress corrosion cracking
1-NaphDATA hole transport layers, aging-induced traps, TSC meas., LED appl 69616
ABET Criteria 2000, chem. engng. education, environ. and ethical issues 8963
accelerated testing, methodology/stress selection/appl. 78584
α-NPD hole transport layers, aging-induced traps, TSC meas., LED appls. 6961
automotive hybrid IC proc. error reduction, microcontroller implement. 12591
automotive press. sens., design/manufacture 78314
azobenzene-based polymers with oligo(ethylene oxide) side chain, rapid surfa relief form. 104595
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effe 92140
ceramic chip capacitors for automotive indust., qualification testing 89413
CMOS digital ICs for spacecraft appls., radiation effects, case study 133236
EL phosphors, deterioration mechanism *(Chinese)* 71540
electronically conductive filled adhesive joints, behaviour under cyclic loadi 67559
electrostatic precipitator with barrier discharge, electrode particle collecti *(Japanese)* 111473
film capacitors for automotive electronics, reliab. 113115
flip chip technol. utilization in automotive electronics, perspective 124021
flip chip underfill to passiv. material adhesion, environ. influence 67598
fluorinated soldering technol. for fluxless proc. 115148
German LWR NPPs, piping degrad., ageing-related aspects 112235
glob top encapsulants, surface insulation resist. perform., temp./humidity 6756
harsh environ. microelectronics/microsystems, research/develop. 132073
IC stress tests, moisture-based failure modelling 126953
ITO/SiO_2/PET transparent conductive films, SiO_2 anchor layer, resistive touc panel appl. 109910
MEMS packaging, issues/challenges 116056
microsyst. packaging concepts for harsh environ. 116085
microsystem packaging for high temp./harsh environ. 132075
MIL-STD-810F Test Method Standard for Environmental Engineering Conside ations/Laboratory Tests 133415
n-channel enhancement mode power MOSFET, C-V/G-V charact., high tem anneal effects 103832
NASICON-based CO_2 sens., stabil. in humid environ., low temp. 75721
organic LEDs, H_2O vap./O_2 degrad. mechanisms 105004
PCB electrochem. migration mechanism/accel., SO_2 gas environ. *(Japanes* 69296
PDC handset diversity antenna perform., head/hand/shoulder effects, diversi antenna gain 108691
plastic encapsulant material props., effects of temp. exposure above glass trans 67566
polycarbonate, γ-irrad., tracking resist., scintillation discharge current 81726
polyethylene, γ-irrad., tracking resist., scintillation discharge current 81726
polyimide passiv./epoxy underfill interface, water-assisted crack growth 8986
polymer liq. cryst. membrane filters, space appls. 93305
product family reuse strategies, fn. degrad. and reliab. anal. using Markov cha 113799
ROBOCOTS program for robust COTS IC packaging 78645
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. perform 88470

ronmental degradation continued
ilicone rubber outdoor insulation, material screening/eval. methods 81730
ingle-insertion multiple-temp. IC testing 103983
SMT laser soldering for high-temp. environ. 125914
pace based membrane antennas/reflectors, local defect study 117768
tone cultural heritage, lidar rem. sens., protective treatment detect. 122726
ransparent polymeric material in simulated space environ. 92935
WASPP Program, passiv. develop. for packages in harsh environ. 77013
Ag-epoxy conductive adhesive/Sn-Pb coating interface, high temp. degrad. mechanism 67561
CoSm based mag. media, corros. behavior 101541
Cu end termination develop. methodology for base metal electrode based MLC capacitors 115086
Cu surface modif. by thermal/plasma treatments 92096
Nd-Fe-B PM, degrad. procs. 92863
PdGe ohmic contacts to GaAs devices, proc./props. 69738
SOI piezoresistive high-press. sens. for harsh environ. 132074
Si, hemispherical grained for ULSI DRAM stacked capacitor, environ. O_3 effect 103448
Sn based Pb-free solders, long-term reliab. study 90548
Sn-Ag(-Pb) eutectic solder joint, Pb contamination effects 80507
Ta chip capacitors, <10 mΩ ESR, heat/moisture-stable 80433

ironmental engineering
see also air conditioning; cooling; ergonomics; lighting; safety; space heating; temperature control; ventilation
aircraft environ. control syst. counterflow heat exchanger, thermodyn. optim. 76791
building environ. simul. before desk top computers, USA, pers. memory 100331
building thermal load prediction, automated proc. using recurrent neural net 124111
centralized answering/home machines, environ. aspects 108084
coal-fired power plant planning, environ. considerations *(German)* 111947
computer network reliab., power supplies and climate control 119598
domain integrat. in building simul., ESP-r integrated package 100332
electronic systs., environ. props. eval. and optimisation 113800
energy/environ. R&D, sci. and technol. roles 133840
small hydroelectric power plants, engng./environ. mgt. projects *(Spanish)* 77768

ironmental factors
see also design for environment; environmental degradation; environmental engineering; environmental testing; pollution; waste disposal
accounting, Fujitsu's activities *(Japanese)* 78731
aerial opt. fiber, fast state of pol. changes under climatic conditions 109079
ageing power plant upgrading for competitiveness improvement 123097
ammonia prod. plant proc. sustainability solns. 124144
automotive PBGA assembly, board-level reliab. with SnAg Pb-free/SnPbAg solder interconnects 113572
biodegradable LSI packing materials *(Japanese)* 78725
building integrated PV syst., AC modules, telecomms. building 112423
buildings, environ. sustainability assess., UAE 88532
catalytic technol. PFC emissions control in semicond. mfg. 89932
cement indust., conf., Vancouver, BC, Canada (May 2001) 78478
centralized answering/home machines, environ. aspects 108084
centrifugal semi-aq. cleaning proc. for high-dens. package substrs. 115183
China's big hydroelectric dams, social and environ. issues 112356
combustion-resistant vegetable oil-based distribution transformer dielec. coolants 88806
composite insulator rods brittle fracture mechanisms assess. 133763
constrained economic dispatch, evol. computing techs. 99219
Czech energy indust., energy consumption forecasting, environ. problems 99224
distrib. network renewal/reinforcement, multiobjective optimisation 112053
district heating social cost in sparsely populated countries 123177
dry de-veil photoresist/etch residue removal for solvent-free cleaning 115651
dry-etching procs., perfluoro cpd. on-line monitoring 100684
DS-CDMA cellular syst., perfect power control, path-loss and fading models 74770
elec. conductive adhesive, self-alignment and contact resist. 113527
elec. eco-labeling, strategies, tradeoffs, envioronmental stds. 122794
elec. engng., environ. issues *(Japanese)* 99177
elec. transport, Mexico City 123986
electronic product design, generalized develop. model, crit. success factors 115120
electronics manufacture, environ. conscious, global regulations/materials concerns 67679
energy/environ. R&D, sci. and technol. impact 99463
environ. monitoring sens., wireless, pass., reson.-cct., design/appl. 131897
epoxy resins, molding cpds., CABGA packages 113724
epoxy/ceramic based populated PWBs, ecological comparison 100716
Estonian energy sector transit., develop. trends 99225
European semicond. indust., environ. stds. integrat. 67681
EV batts., metal resource constraints 134354
exergy efficiency and the environ., global perspective 99465
flame retardant materials for halogen-free packaging 67572
flip chip PBGA packaging, OSP surface finish charactn. 113711
flip chip-on-flex OnePass proc. improvement for clean products 113561
flip-chip assembly, lead-free solder, halogen-free microvia substr. 113676
flip-chip package, lead-free solder and under-bump metall. 113513
flip-chip/underfill reliab., no-clean assembly proc. conditions effects 67564
fuel cells, environ. issues, review 112839
Fujitsu's global environ. protection program *(Japanese)* 78724
Fujitsu used product recycling syst. *(Japanese)* 78726
geoelectromagnetic disturbances, effects on technol. systs. 83440
geothermal resource develop. and planning, Taiwan *(Chinese)* 77685
global environ. issues, power electronics role 122706
green mktg. of hydroelectric power resources 77778
HDI, PRIME proc., environ. friendly method 91472
Huizhou pumped-storage power station constr. necessity *(Chinese)* 112364
Hungarian energy policy, energy supply safety, energy saving 99226
hydropower develop., environ. costs 88515
hydropower plant diurnal peaking regulation, reservoir environ. impacts 88624
IBM methodology for emerging environ. requirements evaluation 100693
IC cleaning proc. economic/perform./environ. constraints, reconciliation 126356
integrated advanced power cycles, techno-economic modelling 99571
integrated renewable energy sources for rural communities 88523
interdigitated capacitors by offset lithog., cct. board manufacture 91475
ISO 14001 environ. mgt. syst. certification in PV indust. 100685
IT indust., eco-labelling 100686
Kalinadi hydroelectric project stage-II, environ. aspects 112350
lead free chip scale package for wireless appls., no clean solder paste 113619
lead-free soldering alternatives, environ. impact, recovery and recycling 78733

environmental factors continued
lead-free soldering alternatives, environ. impact, indust. ecology 67676
load forecasting using feedforward multilayer neural net, environ. effects 111979
low-mercury fluoresc. lamps, key mercury reduction techs. *(Japanese)* 124066
MBE platform growth technol., environ. safety 90201
merchant power companies, compliance mgt. programs tailoring 122824
multifunctional sens. for oil condition eval. *(German)* 109770
MV power lines, nonionizing radiation, Slovenian environ. legislation 133751
no-clean PCBs, solder bead elimination 102821
no-flow underfill material, eutectic and lead-free solders 113499
Norwegian hydroelectric power plants, environ. class. 88623
notebook computer housings using environ.-friendly materials *(Japanese)* 78659
OSP accelerated aging, solderability assays via three test methods 115200
OTEC power plant environ. impact/design optim. 99600
packaging/board warpage charactn., location/type/magnitude importance 124330
PCB contamination, transformer oil, immunochemical meas. 127247
PCB laminate develop. for higher proc. temp. exposures 102819
PCB manufacture, halogen-free flame-retardant materials 80496
PCB manufacture, wave soldering, water-based no-clean liq. flux 91470
PCB materials selection, perform. drivers 115127
PEN capacitor dielec. films for surface mounting/high temp. appls. 80448
photoresist coating recipe, low-vol., solvent prewet step, defect mechanisms 69968
plastic SMT package moisture sensitivity perform., Pb-free reflow temp. effects 113574
Polish energy conservation policy under energy policy guidelines 99229
polymer housed surge arresters, ecological design *(English, French)* 133800
polysiloxane foil cct. carrier technol. *(German, English)* 67590
power stations, fuel oil handling systs., BHEL experience 112303
power syst., multi-objective optimal operation, evol. prog. 88403
printer supplies recycling syst. *(Japanese)* 78727
product/proc. life cycle inventories using SAP R/3 100692
PV market and costs forecast, demand elasticity model 113010
PV modules, long-term monitoring, South Africa 112995
PWB, HDI and package substrs., halogen-free materials 91471
radiation dosimeter consisting of leuco cryst. violet/halocarbons, develop. 110294
recyclable environ.-friendly paint for plastic PC cabinets *(Japanese)* 78660
renewable energy generation economic eval., environ. factors 88531
Russian steam power plants, coal substitution implications 123198
semicond. mfg. life cycle inventory anal. 100705
semicond. wafer cleaning, chelating agent addit. 103366
sens. property drift, online calib. method 75455
SMA, lead-free, reliab., power cycling 78632
SMT soldering technol., overview 115194
Sn-Ag-Cu Pb-free solders for BGA appls., reliab./Au embrittlement 67571
solar PV power resource develop. *(Chinese)* 88516
solder fume extraction/filtration considerations 80511
solder paste stencil printing, high speed, full factorial DOE 115136
status report on environ. monitoring 113802
supercond., hist., environ. factors 70580
sustainable e-supply chain mgt. simul., network-based optim. 100497
Taiwanese NPP, marine assemblages changes *(Chinese)* 123125
tin-lead solder and brominated flame retardants alternatives, survey 100576
TMAH wastewater treatment tech., catalytic oxid., photolithography proc. 100683
TPP water treatment installations improvement 123185
TRIZ model of innovation, environ. friendly solns., product creation 67677
US Nat. Energy Policy report and contrasting view, excerpts 99447
VOC-free PCB protective coating selection 125908
wafer level area array solder bump interconnects with Pb-free/low-α solders 113594
wafer plant preventive maint. activities, cognitive demands extracted using applied cognitive task anal. 89834
wafer thinning technol. based on CMP techs. 69876
wind energy utilization, environ. impacts 99593
wind/nuc. generating capacity, worldwide/USA growth comparison 133837
Al magnet wire continuous cleaning proc., MF atmos. plasma appl. 125857
Cu BGA substr. etch treatment, solder mask adhesion 67575
CuIn Se_2 PV modules, energy bal. 112979
CuNi substr. surface/Pb-free solder interacts. 113582
Pb/halide-free green IC packaging 124363
Pb-free PCB finish effects on final disk drive assembly proc. 115199
Pb-free PCB solderability preservative coatings 69318
Pb-free PWB materials/surface finishes/mfg. procs., DOE 115178
Pb-free SMT assembly cleaning, trends/procs. 125913
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pb-free leadframe packages, plating chem. eval./reliab. 113700
Pb-free materials options for environ. friendly IC packaging 67682
Pb-free packages, board level reliab. assess. 113573
Pb-free proc., thermal effects on SMT components 91484
Pb-free reflow soldering, proc. requirements 91485
Pb-free solder alloys for flip chip/area array package bumping 67569
Pb-free solder alloys, interfacial reacts. 115159
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
Pb-free solder foils, rapid laser-beam reflow 69315
Pb-free solder paste residues, post-solder cleaning 115135
Pb-free solder pastes and PWB finishes, wetting charact. 115203
Pb-free solder spheres for BGA appls., pad finishes, shear strength 113701
Pb-free soldered interconnections, board level reliab. 115152
Pb-free soldering of OSP PCBs, wetting patterns *(German, English)* 115190
Pb-free soldering proc. conversion, prod. implement. 102823
Pb-free soldering proc. param. effects anal., quality/repeatability 80504
Pb-free soldering prod. implement., cost/energy aspects 115197
Pb-free soldering, robust proc. develop. 91466
Pb-free solders database develop., NEMI project 115187
Pb-free solders, high m.p. impact on PWB reliab. 115150
Pb-free technols. 113801
Pb-free wave soldering defect anal., Taguchi DOE/SPC 91482
Pb-free wave soldering temp. selection, wetting bal. testing 80503
a-Si PV modules, stabilisation/perform. charact. 112978
Si, cryst., PV modules, energy bal. 112979
SiO_2 etching, high-perform., environ. harmonized gas chem. *(Japanese)* 81063
Sn whisker form., lead-free electronics finishing 90487
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu Pb-free soldering implement., optimum alloy comp. 91483
Sn-Ag-Cu Pb-free solders for pass. components, usage implications 80445

environmental factors continued
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-based Pb-free solder paste reflow for flip chip wafer bumping, proc. window 69367
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag(-Cu) Pb-free solder joints, reliab. under mfg. conditions 115151
Sn-Ag(-Cu) solder alloys, thermo-mech. props./creep deform. 68392
Sn(-Cu) surface finishes for Pb-free packaging 67617
Sn-Pb-Ag solder alloy, thermo-mech. props./creep deform. 68392
SnAg lead-free solders, bulk specimens and flip-chip joints 113643
SnAgCu Pb-free solder flux vehicle selection proc. 115169
SnAgCu lead-free solders, bulk specimens and flip-chip joints 113643
$SnAg_{3.0}Cu_{0.5}$ soldering, toxicity, energy/resource consumption 100574
$SnCu_{0.75}$ soldering, toxicity, energy/resource consumption 100574
SnO_2:Pd sens. elements for electronic detect. of methane, charactn. 109735
$SnPb_{37}$ soldering, toxicity, energy/resource consumption 100574
$SnZn_9$ soldering, toxicity, energy/resource consumption 100574
Ta SMT capacitors, Pb-free soldering technol. effects 115058
Ta chip capacitors, Pb-free soldering proc. effects 80446
no-flow underfill materials for eutectic/Pb-free solders, high melting temp. 67586

environmental noise *see noise pollution*

environmental science computing
DC resist. imaging techs. 122546
forest fire smoke, AVHRR imagery, neural nets 122607
HELINET unmanned aerial vehicles for opt. Earth surveillance 99050
MTI dense-cloud mask algm. comparisons 99046
oil content online monitoring by neural nets 111472
ozone conc. prediction, fuzzy DSS 133364
rem. sens., satellite data retrievals by neural net 111484

environmental stress cracking *see environmental degradation; stress corrosion cracking*

environmental stress screening
electronic assembly stress screening using broad spectrum acoustic excitation 102832
epoxy adhesives, stress effects, packaged LTCC, mag. appls. 67548
epoxy-cured fiber optic connectors, fiber strain, in-situ strain sens. 120197
IC stress tests, moisture-based failure modelling 126953
telecomm. systs., accelerated reliab. testing, HALT/HASS 107999
Ta capacitor surge step stress testing, power-on failure mechanism prediction 115072

environmental testing
see also corrosion testing; environmental stress screening
accelerated testing, methodology/stress selection/appl. 78584
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334
cleanroom organic cpd. conc. time vars. after init. constr. 89829
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
CSP/RF package assemblies, thermal cycling testing 113597
dimpled BGA proc. develop. for space flight appls. 133229
embedded third order LC low pass Butterworth filters in MCM-L technol. 80033
encapsulants/underfills, gas evol. during curing/solder reflow 113714
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
instrum. cabinets for electronic systs., Rittall, environ. specs. *(German)* 67545
micro-dispensing/ink jetting direct write technols., material systs. 100564
MIL-STD-810F Test Method Standard for Environmental Engineering Considerations/Laboratory Tests 133415
nanoparticle liq. suspens., drop-on-demand dispensing for microelectronics manufacture 100613
nonceramic insulator polymers, SIR and EVA and blends, stress, hydrophobic stabil. 104416
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. performs. 88470
silicone rubber outdoor insulation, material screening/eval. methods 81730
single-insertion multiple-temp. IC testing 103983
solar domestic hot water syst., flat plate collector materials testing 89308
space opt. rem. sens., external thermal flux simul. *(Chinese)* 98903
spacecraft panel shaker random vibr. test for high-intens. acoustics simul. 98892
ultra-pure proc. gas filter membranes, contamination contrib. eval. 103381
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Li batt. safety during transport, environ. tests 89095
Li ion large batt. for aerospace/aircraft appl., var. temp. cycling 122525
LiNbO opt. modulators, corros. phenom., damp heat test 127826
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702

enzymes *see proteins*

EOS *see electrostatic discharge*

epitaxial growth
see also liquid phase epitaxial growth; solid phase epitaxial growth; vapour phase epitaxial growth
conf., cryst. growth/technol., Sendai, Japan, (Aug.-Sept. 2000) 100444
cpd. semiconds., conf. Monterey, CA, USA (Oct. 2000) 124237
cryst. growth and epitaxy, conf., Vail, CO, USA (Aug 2000) 78433
device nanofabrication, conf., Boston, MA (Dec. 1999) 89518
diamond, LPCVD synthesis, substr. effects 90409
electronic materials conf., Denver, CO, USA (June 2000) 67369
III-V semicond. nanoelectronics, prospects/key issues 92262
pass./act. reson. coupler platform with tapered pass. waveguide 93116
PVDF oligomer ferroelec. thin films, structural/electronic charactn., AFM 127213
stack DRAM cell with low parasitic resist. device/poly metal gate technol. for Gbit DRAM 125489
stress/strain, conf., Ile de Porquerolles, France (Oct. 2000) 78465
surfactant-mediated heteroepitaxy, strained growth 68136
thin film, level set methods 94492
thin films, stresses and mech. props., conf., Boston MA, USA (Nov.-Dec. 1999) 113277
VOPc thin film prepared on PET film, NLO props. *(Japanese)* 101175
Ag ribbons, {110} textured, prep. for biaxially aligned supercond. tapes 68396
AlAs/GaAs heterostruct., tunnel diodes, precision growth 101174
BGaInAs solar cells lattice-matched to GaAs 112914

epitaxial growth continued
$BaTiO_3$ epitaxial film capacitors, improved ferroelec. hysteresis by 2-step deposition 92776
C(100)2×1 surfaces, at. H irrad. etching, epitaxial growth enhancement, ab initio calcs. 81060
CdTe thin-film solar cells, ZnTe:N_2 back contact insertion 100178
$Cu(In,Ga)Se_2$ (220)-oriented solar cells, device perform. studies 100100
$CuInSe_2$-GaAs epitaxial solar cells, sodium additive effects 100099
GaAs thin-film epitaxial p-n jn. solar cell charactn. 112952
GaAs(110), homoepitaxy, kinetic surface structuring, model study 90236
GaInN/GaN QW, polaris. control, epitaxially lateral overgrowth orient. cathodolum. 91853
GaN, air bridged lateral epitaxial growth, recomb. dyn. 80872
GaN nanoheteroepitaxy on Si substrs. 90237
GaN optoelectronic devices, defect dens. reduction 91675
GaN/AlGaN high power/high temp. devices, review 70068
GaN/GaInN based high power blue violet LD, epitaxial overgrowth, disloc. dens. 93596
GaN-based blue LD 105366
GaN-based high power blue-violet LD, ELO and charactn. 82634
Ge, homo- and heteroepitaxies on (100)-2×1 surfaces, single adatom diffusio 124811
HgCdTe/Si heterostruct., laser beam epitaxy 68365
InGaN/GaN MQW, air bridged lateral epitaxial growth, recomb. dyn. 80872
InGaN/GaN QW SEL, SiO_2/ZrO_2 multilayer mirrors 71810
$LiNbO_3$ epitaxial film on c-sapphire substrs., opt. waveguide appls. 71313
Pr_2O_3 epitaxial growth on Si, postgrowth N_2 annealing, hexagonal to cubic phas transit. 90310
Si epitaxial film solar cells, low temp. ion-assisted growth 134390
Si, epitaxial growth, doping region, trench filling 126331
Si, homo- and heteroepitaxies on (100)-2×1 surfaces, single adatom diffusio 124811
Si monocrystalline thin-film solar cells, layer transfer procs. 112852
Si polycryst. thin film solar cells, metal-induced growth 100071
Si solar cell contacts form. with improved surface passiv. 100169
Si(001) surface, ab initio temp. depend. studies of homoepitaxial growth 7919
Si_3N_4 masks, scanning probe oxid. 115786
SiO_2, nitrided thermal oxide, self-aligned SOI MOSFET 70151
$SrTiO_3$, single cryst. faceting, chem. etching, AFM 126354
$TiSi_2$-Si transit. region in contacts, elec. props., influence of Nb interposed lay 103174
YBaCuO coated conductor prep. by surface-oxid. epitaxy, long length oxide tem plate 124998
YBaCuO, fab. of high-J_c tapes by epitaxial deposition on RABiTS 127432
$YBa_2Cu_3O_{7-\delta}$ HTSC long-length coated conductor prep. by surface-oxid. epitax 70618

epitaxial layers
see also magnetic epitaxial layers; metallic epitaxial layers; semiconductor epitaxial layers; superconducting epitaxial layers
cryst. growth and epitaxy, conf., Vail, CO, USA (Aug 2000) 78433
α-quartz films, ion beam doping, epitaxial regrowth 79406
strain depth profiling, micro-Raman meas. 97848
thin films, stresses and mech. props., conf., Boston MA, USA (Nov.-Dec. 199 113277
AlGaN/GaN heterostruct., surface pot., scanning Kelvin probe microscop 80791
$(Ba,Sr)TiO_3$ films, permitt./microstruct. temp./elec. field response 92658
$(Ba,Sr)TiO_3$ single-phase epitaxial film fabr. and microstruct. charactn. 10143
$(Ba,Sr)TiO_3$ thin films, epitaxial growth, ferroelec. props. 79206
$Ba_2Bi_4Ti_5O_{18}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orien 104316
$BaBi_4Ti_4O_{15}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orien 104316
$Ba_{0.5}Sr_{0.5}TiO_3$ epitaxial films for microwave phase shifters 80254
$Ba_{0.5}Sr_{0.5}TiO_3$ paraelectric film phase shifter 69247
$Ba_xSr_{1-x}TiO_3$ epitaxial thin film, microwave phase shifter 69125
$BaTiO_3$ epitaxial thin film capacitors on Si substr., ferroelec. props. 70475
$BaTiO_3$ film on $SrTiO_3$(001), crit. thickness evaluated by RHEED 114265
$Bi_4Ti_3O_{12}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 1043
$Bi_4Ti_3O_{12}/SrTiO_3/Ce_{0.12}Zr_{0.88}O_2$/Si epitaxial struct., PLD prep. 68301
C nanotubes growth, gas source MBE 101290
C_{60}:P, ion implant., for PV appls. 78174
CeO_2, epitaxial dielec. thin films, controlled orient., PLD 68311
GaN epilayers, surface pot., scanning Kelvin probe microscopy 80791
$Gd_xY_{1-x}Ca_4O(BO_3)_3$ films, laser MBE, at.-scale surface control/SHG 116553
$K_{1-x}Rb_xTiOPO_4$ epitaxial waveguide films, opt. props. 116878
$La_{0.5}Sr_{0.5}CoO_{3-\delta}$ thin films, O surface exchange coeff. 123781
$La_{0.5}Sr_{0.5}CoO_3$/PZT/$La_{0.5}Sr_{0.5}CoO_3$ capacitors on $SrTiO_3$/TiN buffered Si(00 81785
MgO, MOMBE, AFM/AES/TEM studies 124852
MgO films on p-GaAs(100), microstruct./elec. props. 68187
MgO/Fe(001)-based multilayers, growth, struct., electronic and mag. prop 124809
MnO_2 films, hotwall epitaxy, reactive evap., Mn isolation 114349
Nd:YAG microchip laser simul., epitaxial YAG:Cr^{4+} Q-switching layer 1173
Nd^{3+}:YAG planar waveguide lasers, fab. and output props. 71724
PZT films, struct./ferroelec. props. on Ir/$(ZrO_2)_{1-x}(Y_2O_3)_x$/(100)Si 70399
PZT thin films/heterostruct., excimer laser liftoff proc. 105647
$PbYbNbO_3$-$PbTiO_3$ capacitor thin films, pulsed laser deposited, structural/dield props. 92626
$PbZrTiO_3$ ultrathin films, MOCVD grown, elec. props. 104294
$PbZr_xTi_{1-x}O_3$ epitaxial films, near-field second harmonic imaging 82915
$SrBi_2Ta_2O_9$ MOCVD thin films, chem. stabil. 92656
$SrBi_2Ta_2O_9$, non-c-oriented ferroelec. films, PLD, epitaxial growth on SrTi 114377
$SrBi_2Ta_2O_9$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orien 104316
$SrRuO_3$ film, laser ablation prep., struct./elec. props., capacitor obs. 79353
$SrTiO_3$ epitaxial films, strain-induced ferroelec. 70423
$SrTiO_3$ epitaxial growth on epitaxial (Ti,Al)N-Si(100) substr. using Ti-buff layer 90248
$SrTiO_3$ epitaxial lift-off thin films, microwave dielec. tuning/losses 91172
$SrTiO_3$, gate dielec., theoretical approach 91896
$SrTiO_3$/Si(001) epitaxial heterojns., band offset and structural quality, PES ob 69742
YAG:Nd(Lu)(Ga) thin film laser, growth & charactn., LPE 93548
Y_2O_3/Si(001), direct heteroepitaxy, high-k gate dielec. appls. 124844

taxy *see epitaxial growth*
LD *see programmable logic devices*
MA *see electron probe analysis*
oxy insulation
see also epoxy insulators
6 kV epoxy resin solid insulation switchgear 123664
composite insulator rods brittle fracture mechanisms assess. 133763
electrostatic powder paints, TSC rel. to curing proc. 92667
epoxy/glass fiber composites, surface hydrophobicity, thermal treatment *(Korean)* 116186
FRP laminate ITER coil insulation, neutron irrad., dielec. strength 81727
hydrophobic cycloaliphatic epoxy outdoor insulation systs. 104417
PD mechanisms, spherical void, high temp. 104414
prefabricated cable joints, shrink phenom. *(Japanese)* 88466
resin, elec. tree growth, PD activity 70381
semicond. mfg., epoxy dispensing, proc. design/control 100562
stator bars, epoxy/mica insulation, multifactors aging, AC params. *(Chinese)* 77810
Nb_3Sn epoxy impregnated supercond. solenoids, protection heater perform. 71054
oxy insulators
GIS insulator barrier, shape optim. 123680
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. performs. 88470
PR *see paramagnetic resonance*
PR (insulation) *see ethylene-propylene rubber*
PR imaging
see also biomedical MRI
cartilage grown in hollow-fibre bioreactor, EPR O_2 mapping 132776
conf., advanced radiation dosimetry, Athens, Greece (July 2001) 124201
EPR/NMR simult. imaging, composite resonator, multimodal cavity 110895
L-band EPR spectrosc., tunable surface-coil-type resonator 76498
long. detect. imaging, quadrature excitation coil 98454
tooth enamel, EPR biodosimetry, radiation therapy appls. 132731
PR line breadth
PANI-PMMA blends, elec. cond., cryomagnetic temp. sens. 86506
poly(p-phenylene vinylene) derivatives, light-generated polarons, light-induced ESR 91712
YAG:Nd(Lu)(Ga) thin film laser, growth & charactn., LPE 93548
PR spectra *see paramagnetic resonance*
PR spectrometers
see also EPR spectroscopy
EPR/NMR simult. imaging, composite resonator, multimodal cavity 110895
L-band EPR spectrosc., tunable surface-coil-type resonator 76498
long. detect. imaging, quadrature excitation coil 98454
long. detected ESR magnetometer for low fields wide-range meas. 97787
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
PR spectroscopy
see also EPR spectrometers
biocompatible O_2-permeable films holding paramag. C particles, EPR oximetry 132700
digital controller, deep sig. power atten., 1-4 GHz range 80408
Gyrotron FU series, develop. and appls. 91551
HF gyrotrons, develop. and appls. *(Japanese)* 91553
L-band EPR spectrosc., tunable surface-coil-type resonator 76498
loop-gap resonator, automatic coupling control, by variable capacitor attached coupling coil 69275
MnO_2, Ti surface modified, alkaline-manganese batt. 123759
PROM
see also flash memories
amorph. nonvolatile semicondoctor memory technol. and appls. 68796
analog CAM implement. with floating gate transistors *(Korean)* 102435
analog EEPROM, high-precision, real-time write monitoring, analog sig. proc. appls. 80130
cell plasma damage, RIE chem. effects 102165
CMOS EAROM submicrometer polysilicon surface defects, form. mechanism 102155
CMOS EEPROM, PWM analog memory prog. cct. 102432
digital filter freq. response charact., analog shaping, Doppler tracking 118991
EEPROM, tunneling nitride, ECR nitrogen plasma nitridation 81054
EEPROM floating gate cell, charge sheet model 102171
EEPROM prog., time and degrad. aspects, tunnel oxide 102173
EEPROM technol., As implant dose 102127
EEPROM technol. charge pump ccts., power consumption modelling 102148
FLOTOX EEPROM tunnel window form. proc. var. effects on reliab. 102142
IC product life cycle assess. 100703
intell. sens. chips, compensation circuitry, EEPROM arrangements, neural networks *(Italian)* 132081
interchip via technol., vert. syst. integrat. 126465
interpoly dielec. deposited on nitrided-polysilicon, NVM devices 79877
key protection against modif. attack 83951
MNOS NVM technol., current status/future prospects 90904
multi-value voltage-to-voltage converter for on-chip EEPROM prog. 114747
security for prog. proc. cards *(Polish)* 125466
SONOS nonvolatile semicond. memories for space/mil. appls. 125505
Swissair 111 crash EEPROM data recovery, failure anal. techs. 79899
switched reluctance machine control, online instantaneous torque estim. 123375
sync. serial interfaces for commun., software realisation *(Polish)* 131819
TMS320C25 in-syst. prog., computer serial port *(Chinese)* 90931
Tornado 2HD modular nonvolatile solid-state data recorder design 97161
voiceband analog audio sigs., record, playback and proc. syst., coarse-fine prog. 131133
wafer-level GMR head proc., EOS indicators, floating gate EEPROM appl. 81907
SiO_2 MOS capacitors, F-N tunnelling coeffs., nitridation 115046
SiO_2:Ge(Si) gate oxide for MOS devices, Ge(Si) nanoclusters, phys. props. 115790
²PROM *see EPROM*
qualisers
see also adaptive equalisers; blind equalisers; decision feedback equalisers
16 QAM syst., anal. of neural detector based on self-organizing map 119201
AC biased audio recording LSI cct., automatic level control *(Japanese)* 97111
ADSL systs., cost-effective TEQ algm. 130277
Alexis binary seqs. with perfect correl. 83878
automatic channel equalization, digital data transm., embedded fuzzy control 96342
Bragg grating opt. fibre amps., WDM syst. gain equalization 93507
equalisers continued
broadband MMIC power amps. with compact flat gain PHEMT cells, 20-30 GHz 91385
broadband mobile radio, joint spatial/temporal equalizer 85829
CCI rejection using clustering techs. and fuzzy inference 119195
CDMA asynchronous multipath channels, blind space-time detect. 73728
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA multi-carrier syst. with virtual carriers over dispersive channels, subspace based blind detector 107600
CDMA receivers in interchip interf., nonlin. iter. multiuser detect. and equalization 73723
channel equalization, probabilistic neural net equalizer 107713
channel estim. and equalization with block interleavers 84868
channel estim. equaliser on stationary channels 107317
channel estim./equalization, efficient multiplier-free implement. 73825
CMOS ADC, high-speed subranging syst. with background equalization of sampling instants 79983
CMOS low-power analog FIR filter, 100 MHz, PRML equalization appl. 102366
CMOS mixed-sig. equalizer for Gigabit Ethernet on copper wire 108369
CMOS OTA-C graphic-equalizers with MOSFET-triode transconductors, design 86348
coded OFDM/BFDM systs., predictive equalization of time-varying channels 74697
compact opt.-fiber variable attenuator arrays, polymer-network liq. crysts. 109071
compressed coefficient's band-pass delay time charact. extrapolation using GA on DCT 73639
coupled resonators group delay equalizer, design optim. 107682
CPM waveform, post-distortion ang. equalizer appl. 107685
DCT, GA, band-pass delay time charact. 73837
digital channel equalization by alg. perceptron 119179
digital commun., turbo techs. overview 72908
digital filter banks in wireless/wireless commun. systs. 102375
digital tunable bandpass filter, synthesis/appls. 95686
distributed nonstationary proc. modeling/time-varying AR syst. ident. by wavelets 119186
divided thin-film heater tunable dispersion equalizer, Gb/s RZ transm. appls. 96694
DMT receivers, RLS-based init. for per tone equalizers 130249
DMT transceivers, near-optimum channel shortening, matrix multiplication methods 107678
DMT/OFDM modulation on twisted pair cables, guard interval reduction by impulse compression 72771
DS-CDMA asynchronous sigs. in multipath channels, blind detect. using code-constrained inverse filter criterion 84776
DS-CDMA asynchronous systs., sigs. blind detect. 107771
DS-CDMA asynchronous trellis coded systs., trellis-based multiuser receiver struct. 131098
DSL discrete multitone modulation receivers, RFI cancellation 108476
DSL systs., multi-user precoding for crosstalk cancellation 106144
DSP systs. for DSL appls., design for low-power implement. 125527
DWDM-systs., pass. opt. components 131505
EDGE mobile radio syst., space-time coding 85670
Er-doped fiber amp. gain flattening equalizer using long period gratings *(Chinese)* 105183
European DVB-T equalizer in time-variant channel for digital mobile commun. 97050
fading channels, single-carrier freq. domain equalization and space-time block-coding 95809
fast data transm. ISI removal, adaptive digital filter 130257
fast freq. hopped CDMA equalization advantages 96793
FIR H^∞ equalization 73695
freq. selective fading channel, turbo codes with multilevel modulation 106059
FTDL-spatial/MLSE-temporal equalizer, perform. eval. using field meas. data 84875
gain equalised chirped fiber Bragg gratings, gain-flattening filter technols. 82107
germanosilicate fiber Raman amp., gain optim., SRS, WDM appls. 105191
Gigabit Ethernet, multi-dimens. equalizer appl. 130280
GMSK signaling over multipath channels, turbo equalization based on Gibbs sampler 107718
GSM channel equalization with complex-valued MLP 130281
H.263-based turbo-equalised video telephony for GSM/GPRS 130279
high capacity undersea WDM transm. systs. 131549
high-resoln. digital audio, transparent differential coding 118091
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
higher-order Bode-type variable-amplit. wave digital equalizers, design 91075
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
IEEE sig. proc. in wireless commun., conf., Taiwan, China (March 2001) 78451
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
integrated optic dispersion slope equaliser for N×20 Gbit/s WDM transm. 74943
integrated traffic switching networks, blocking probab. equalisation 107669
interf.-resistant LPTV-MMSE equalisation 119196
iter. equalization and decoding, hybrid equalization strategies 129216
iter. equalization of partial response channels using dens. evol., thresholds 130259
LDPC regular codes over PR channels, threshold 129083
liq. cryst. modulated opt. harmonic amp.-gain equalizers, WDM syst. gain profile manipulation 131557
long haul WDM transm. expts. using broadband Raman amplif./highly precise gain equalization 96864
long-period fiber gratings, nonflat Er gain spectrum equalization 104631
mag. recording channels, low-dens. parity-check codes appl. 72884
MC-CDMA over dispersive channel, subspace based detect. 84782
MC-CDMA over multipath fading channel, perform. of freq.-time MMSE equalizer 107764
MC-CDMA syst. with Rayleigh fading multipath channels 108852
MEMS for light-wave network appls. 86015
microwave amplit. equalizer 69100
microwave amps., hybrid and monolithic, cct. CAD 102717
MIMO biorthogonal partners, channel equalization appl. 130274
MIMO blind deconvolution, cumulant-based inverse filter criteria, props./algms./appl. to DS/CDMA systs. 84853
MIMO equalized multipath fading channels, dist. spectrum computation 84859
MIMO lin. freq.-selective channels, finite-length space-time equalisers 107695
MIMO-FIR channels, white fourth-order colored sigs. driven, blind deconvolution algms. 107402
mixed sig. test bus, test waveform shaping by pre-equalization 102418

equalisers continued
MMSE chip-level equalization at cell edge 84860
MMSE equalizers for freq. selective multipath CDMA forward link, perform. eval. 107696
mobile radio transmit antenna diversity systs., turbo proc. 117993
modular partial response channel software simulator 104534
multi-mode fiber transm. syst., multi-path effects, adaptive equalization approach 96723
multicarrier sigs. in fast/selective Rayleigh channels, channel estim./detect. 108518
multicarrier systs., optimum equalization, unified geometric approach 130253
multipath fading channel, MLSE equalization, FIR prefilter design 107687
next-generation DWDM transport systs., dyn. gain equalization 131555
nonlin. channel equalization, reduced-complexity clustering 73827
nonlin. commun. channels, multichannel and block-based precoding for fixed point equalization 73844
nonuniform filterbank struct. for channel precoding 95668
OFDM mobile systs., receive diversity 96434
OFDM receivers, freq. domain equalization of IQ imbalance 119177
OFDM syst., two-ray multipath channel, polynomial cancellation coding 106057
OFDM/QAM sub-carrier synchronized syst., importance sampling anal. 72735
opt. transceivers, DSP techs., high-speed opt. fibre commun. 109088
OTDM systs., sync., opt. all-pass filters 120194
partial response channels, turbo equalization, precoding effect on convergence 72913
PCC-OFDM with overlapping sym. periods in multipath channel, perform. 73772
planar lightwave cct., dispersion-compensation techs. *(Japanese)* 93143
planar lightwave cct. based functional devices, point-to-point WDM appls. 131399
PN seqs. correl. props. for nonlin. channel estim. 119202
point-to-point cochannel radio relay syst., analog group delay equalizer 119930
polymer-network liq. cryst. opt. fiber variable-attenuator arrays 75018
Q-GA, modified GA for design of phase equalizers 79546
rapidly fading channels multiresolution seq. detect. 107675
RBF equalizer using fast clustering algm. 107699
rem. sens. data, radiometric equalization by laser scan data utilization 129825
SC/MMSE ISI iter. equalizers, matched filter approx. 95810
SD/TD/CDMA systs., joint detect./pre-distortion techs. *(English)* 130147
SDSL upstream receiver, crosstalk interf. mitigation 108471
serially concatenated convolutional codes, iter. decoding in multipath Rayleigh fading environ. 72818
sig. estim. over freq. selective fading channel, soft-output seq. algm. 108764
silica singlemode fibre for bent fibre dispersion slope equaliser 71276
single carrier commun., training seq. vs. cyclic prefix 73834
single carrier commun., training seq. vs. cyclic prefix 95808
SISO equalization, prior inform. evol. 130260
slanted fiber Bragg grating gain equalization filters 109160
slowest descent method and appl. to seq. estim. 119183
space-time bit-interleaved coded modulation over freq. selective fading channels with iter. decoding 72936
space-time channel tracking for multipath fast-fading channels 130275
space-time equalizer devel./implement. 74858
subband arrays, perform. anal. 117854
switched-current bilinear ladder group-delay equalisers 68915
TCM, iter. space-time detect. for broadband wireless channels 85522
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
TCM with receiver diversity, turbo space-time equalization, max.-likelihood detect. 107694
TDMA burst transms., support vector classifier based equalizer 107722
time-domain equalizer for filter bank-based multicarrier commun. 130256
transmit diversity space-time coded sigs. equalization 73835
turbo demodulation of zero-padded OFDM transms. 106067
turbo-equalization, bit interleaved modulations appl. 107708
turbo-equalization, convergence anal. 130258
ultrabroad-band Raman amps., WDM high-power LD pumping and gain equalisation 71671
UMTS channel equalization, neural nets/gradient algm. 108747
UTRA TDD, MMSE adaptive receiver 119947
VHS VCR, µP-assisted audio sig. proc. syst. 131775
Volterra filter equalizers, convergence, pth-order inverse approach 95812
W-CDMA downlink detect., Kalman-filter based chip estimator 119948
WCDMA systs., Kalman filter channel tracking algm. 74695
WDM, planar lightwave cct. based dispersion compensation 131429
WDM dispersion-compensated transm. syst. with all-pass equaliser *(Chinese)* 131561
WDM soliton pulse equalisation in twin-core fibre amps. 96875
wideband TDD CDMA syst., joint detect. tech., link level simul. *(Chinese)* 96544
wireless pers. multimedia commun., conf., Bangkok, Thailand (Nov. 2000) 89557
Er-doped WDM fibre amp. cascades, static/dyn. OSNR equalisation 96800
Er-doped dual-stage fiber amp., gain equalization by short-period Bragg gratings 96802
Er-doped fiber amp., opt. equalization filter design *(Chinese)* 120122
Er-doped ultra flat fibre amp., dyn. equaliser 131386
Si MEMS/MOEMS for lightwave networks 92489
Si micromachine lightwave networks 116781
Si micromechanics, MEMS/MOEMS for lightwave networks 71361
SiO_2 arrayed waveguide dyn. gain equalization filter, Mach-Zehnder interferometric DEMUX-MUX pair 131558

equations
for equations used in specific subjects, see the specific indexing heading
complete Brouwerian lattice, fuzzy rel. eqns. soln. 67782
pull-in condition in electrostatic micromirrors, generalized alg. eqn. 116783
sparse matrix bipartite weighted matching algm. 90092

equilibrium, chemical *see chemical equilibrium*

equilibrium constants *see chemical equilibrium*

equilibrium diagrams *see phase diagrams*

equipment evaluation
radiology, digital equipt. acquisition and installation procedures, team approach at Mayo Clinic 98499
voice recogn. syst. eval. for radiology department 94414

equipment selection
ADC, selection 79960
high-speed packaging machines, lin. motors selection software tool 99696
streaming video with storage area networks 119782

equiripple filters
see also Chebyshev filters; elliptic filters
asymmetric filters, rect. waveguide, passband and stopband reqs. 80179
eigenfilter, total least sq. error criterion, pos. definite matrix 80088
FIR equiripple min. phase filter design from lin. phase systs. using polynomial factorisation 73702
FIR low-pass lin. phase filters with equiripple passband and least-sq. stopband 102415
IIR digital filters design in complex domain 107540
IIR filters with flat passband and equiripple stopband responses, design 95695
min. phase FIR filter design from lin. phase systs. using root moments 102407
two channel QMF pseudo-perfect reconstruction IIR filter banks, smooth wavelet fns. 102389

equivalence classes
see also automata theory
Chinese monoid 113902
concurrent determ. of connected components, image proc. appl. 118400
fuzzy subgroups equivalence classes 100893
lossless data compression via adaptive alphabet decomp. *(Japanese)* 84666
multiprotocol label switching WDM-based broad-band wavelength switched IP network 75034
obj. surface reconstruction, shadows use 94741
preference modelling, binary rels. and choice fns. 78798
robot self-localization, image-based, zero phase representation in panoramic images 94572
shapes recogn. by editing shock graphs 107174
sing. lin. behaviors, AR-representations 124453
tracking/fusion algm. perform. eval., problem complexity 95616

equivalent circuits
see also network analysis; network parameters; network synthesis
2.2 kW PWM rectifier/inverter CMV suppression 134210
2D PBG structs., equiv. cct. modeling and patch antenna appl. 114954
2D struct., impedance grid method based algms. constr. for electrodynamic anal. 83464
3-D animations for power transformer/AC machine education 78535
3-phase 2-pole induction machine diagnosis, simplified spectral approach 134030
3-phase 4-wire syst., neutral current harmonics compensation by synchronous machine 122978
3-phase inverter, ZCT schemes comparison 88928
3-phase three-limb steady-state transformer model, YNZN connection 123558
3-phase unipolar IM drive, MRACS current control 134465
3D multilayer CPW struct. with wideband vert. interconnection, modelling 125793
6-35 kV distrib. networks, insulation params. calc. *(Russian)* 88425
8-way high power divider/combiner design in waveguide and planar types 69052
10 kW PV power syst. modelling using equiv. elec. cct. method 112418
250 W high-press. sodium lamp electronic ballast develop. 134632
600 V/6 kA bidirectional ZVS hybrid DC IGBT switch 134271
AC IM, speed control, 80C552 microcontroller 99668
AC levitation/traction systs., fan-type equiv. ccts. 123976
act. controlled field emitter array, display appl., cct. modeling *(Korean)* 109915
act. current rectifier, switch based, math. model & control 88939
all-inductive dual-mode filters, rect. waveguide environ. 125675
antistatic floors electrostatic charactn. using equiv. cct. model 83133
aperture-coupled microstrip patch antenna, anal./network modeling 83639
asymmetric coupled lines in inhomogen. medium, S-params. and equiv. networks 72402
asymmetrical two-phase induction machine vector control model 123405
BGA IC packages, elec. anal., equiv. cct. models 113733
BiCMOS CCII. macromodel cct. for simul. 125595
bipolar current switch, nonlin. dyn. behaviour after step input 80471
BLDCM radial force dens., PM overhang effect 112544
broadband high-power photodetector arrays for photonically implemented phased array antenna archits. 83738
cage rotor induction machine perform. in automotive starter-alternator appls. 77873
cage-rotor reluctance sync. motor, params. meas. 133951
cascade power CT, shunt resist. selection 112609
circ. polarised cross-aperture-coupled microstrip antenna, cavity model 105894
class D-E reson. DC/DC converter, anal. using thinned-out method 99809
class E power amp., nonlin. output capacit., finite DC-feed induct., design 80351
class-E amp. used as electronic ballast with dimming capability for PV appls., anal. 100313
class-E power amps., transm. line load network topol. and design 80263
class-F power amps., max. flat waveform operation 68623
clock-jitter simul., continuous-time delta-sigma modulators 125573
CMOS, 0.18 µm with deep n-well implant., RF perform. improve. 125744
CMOS latches, simulator to study metastability 101937
coaxial discontinuities filled with dielec. materials, Marcuvitz's cct. freq. extension 91182
cold cathode fluoresc. lamps, piezoelec. transformer electronic ballast 134631
cold FET, extrinsic capacitance, capacitive transm. line model 103828
complex coaxial-waveguide transits. at MM waves 91210
complex distrib. load flow, augmented matrix-based control scheme *(Chinese)* 111908
condenser-run single-phase IM, finite element anal. *(Korean)* 77870
conformal microstrips, anal. using discrete mode matching method 125653
constrained mech. syst., elec. cct. analog 114597
controlled rectifier load, transient procs. eval. *(Russian)* 77953
coreless PCB transformers, fund. struct./charact. *(Chinese)* 102787
corrugated chokes for continuous flow microwave heating systs., modal anal. 69258
CPS and CPW finite-ground discontinuities, ccts. and antennas 80167
CPW, slit discontinuity, equiv. cct. model 69013
CPW series/shunt MEMS switch geometries for X-band appls. 125663
DC-DC converters, PWM switch model in discontinuous cond. mode 99795
DC-DC power converter feedback isolation using piezoelec. transformers 77996
DC/DC reson. converter with one-switch sync. regulator 88957
deep submicron design, state of art and trends in parasitic extraction 104069
deep submicron MOSFETs, extraction method for intrinsic noise currents 91262
deep-submicron MOSFETs, empirical RF model for RFIC design appls. 69126
deregulated elec. markets transactions, radial equiv., quadratic prog. 133509
dielec. loss sens. for elec. equipt. insulation meas., equiv. cct., error compensation *(Chinese)* 75821
differential capacitance transducer, ratiometric sig. proc., SC interface 120732
dipole antennas, propag. props. of pulse voltage and current, equiv. cct. method *(Chinese)* 117814
disc-type IM, equiv. cct. params., electromech. characts. 112503

ivalent circuits continued
discharge lamps modelling in electronic cct. design 134628
distrib. network transient oscills. from voltage notching *(Japanese)* 133672
distributed amps. with lumped or distributed elements, comparison 68616
distributed microwave cct. anal. using network methods 80239
distributed RLC interconnects, anal. of on-chip inductance effects 126963
doubly-salient PM machine nonlin. variable struct. equiv. mag. cct. model *(Chinese)* 99611
DRO design, EM charactn. for inclusion in electronic simulator *(Spanish)* 102711
dual dipole and slot antennas, terahertz photomixers 80230
dual-gate lateral IGBT with gradual hole injection, anal. 103806
dual-gate MESFET, wave approach to sig. and noise modeling 70213
dual-gate MESFET DC model, large-sig. compatible 103906
earthing systs. ionisation proc. characterisation 99414
elec. machine automated design platform develop. 123321
elec. machine thermal params. ident. method 77806
elec. rly. depot voltage unbalance anal., two-port network model *(Korean)* 123997
electrodischarge excimer laser excitation syst. simul. by equiv. elec. cct. 117062
electrodischarge excimer lasers, LC-generator, model operation 117061
electrodynamic systs., massive conductors, EM forces, fanout equiv. ccts. 112093
electrothermal dyn. of ccts., mixed state-variable approach 101701
EM coupled microstrip slot antenna, design by FDTD equiv. cct. method 72498
embedded RF capacitors in low temp. cofired ceramic, modelling/testing 113641
ESD protection ccts. for HF/RF appls., anal. and design 80340
FACTS interphase power controller mechanism cct. anal. *(Chinese)* 88340
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
fast rise time HV pulse generator, modified Marx generator *(Korean)* 123591
fault current limiter, E-type core, characts. anal. *(Japanese)* 112159
ferrite core, load effect, parallel 2-wire lines, equiv. cct. model *(Japanese)* 70546
FET, nonlin. params., load-line anal., large-sig. model 92407
FET equiv. cct., parasitic capacitance, cold-FET method 103916
FET microwave amp., nonlin. transfer charact. anal. 125713
FET nonlin. device models, cct. simulators 69159
film bulk acoustic resonator duplexer for USPCS handset appl. 85906
flexurally vibr. thick bar with axial force, equiv. cct. 97186
foil activator, interelectrode gap, corona discharge model 116140
fractals in ccts. 114584
fractional freq. transm. line networks, steady-state performs. *(Chinese)* 111997
gap discontinuity in shielded CPW for MM-wave ICs, ANN model 125783
gap-coupled microstrip antenna, equiv. cct. anal. 94165
generic RC trees, crosstalk noise estim. 125186
ground-penetrating radar antenna feed models for response computation *(Korean)* 120451
hairpin type coupled line bandpass filter, design method 102572
half-bridge converters, current-doubler rectifier, unified anal. 88862
half-bridge zero current transit. reson. converter *(Chinese)* 134156
HBT, capacitance, multi-bias S-param. meas. 81229
HBT intrinsic cct. params., direct extraction, extrinsic-inductance independent approach 102626
helical slow-wave struct., space-harmonic effects, equiv. cct. anal. 69460
Helmholtz-Thevenin theorem expansion to multiterminal networks 90624
HEMT, param. extraction, optim. and parasitic extraction 70193
HEMT, stat. model, Monte Carlo method and PCA 103927
HF IC, 3D planar conducting struct., lossy Si substr. 103991
HF thickness-shear-mode resonators, impedance anal., chem. sens. 97434
HF transformer modelling, refl. coeff. tech. & S matrix 91438
high dens. stripline packages, via fence struct. for crosstalk reduct. 102682
high power microwave MESFET, temp.-depend. model, thermal FDTD method 80309
high sidelobe reject. miniature SAW filters, unidirect. and cascaded IDTs 91015
high-efficiency modulator for dyn. envelope tracking CDMA RF power amps. 101858
high-speed PCBs, ground/power planes discontinuities effects 69298
highly nonlin. ccts., modeling using total-var.-decreasing difference scheme 102601
Hodgkin-Huxley neuron model cct. implementation, PWL approach 91159
homog. elec. discharge model 102888
homopolar variable reluctance motor using axial field coil 133982
hot-wire anemometer with temp. compensation 120760
HTSC cross-coupled microstrip bandpass filter, design 127532
HV CT, equiv. cct. modelling, voltage measuring topologies 88805
hybrid EV, batt. as load levelling device, dyn. modelling, simul. and control 100277
I-V mapping educational cct. simul. approach 78524
IC power/ground network optim. based on equiv. cct. modeling 126984
IC submicron layout, interconnect delay, stat. anal. 92442
IM, 3D time-stepping FEA, equiv. mag. cct. 133998
IM cross-saturation/deep bar effects modelling 134018
IM equiv. cct. params. determ. using GA 123478
IM loads, aggregate model 77875
IM operation, supply voltage distortion effects anal. 112497
IM thermal modelling, lumped param./2-D FEA methods 123415
IM/DC drives for educational purposes 123939
immunosens. sig. transduction, chronopotentiometry, Faradaic imped. spectrosc. 97411
IMPATT diode integrated act. microstrip antenna, large sig. anal. 72519
induction generator lab. perform. test studies 123477
induction machine equiv. cct., conceptual aspects 123416
inhomog. media shields and filters anal. 105798
injection-locked MM-wave IMPATT oscillators, locking-band widening 80271
insulated-neutral LV power syst. fire safety, steady-state regimes calc. *(Russian)* 99180
integrated mag. anal./design, PFC power supply appl. 80459
interconnection struct., hybrid PEEC-MTL models 83453
interconnects, EM anal., FDTD method 92457
interface-engineered Josephson jns., capacitance anal. based on equiv. cct. model 127486
interior PM sync. motor params. determ. approach 123385
inverter-fed three-phase small IM design guidelines *(Japanese)* 88723
ionic polymer-metal composites, fund. props., review 114481
isolated self-excited reluctance generator, min. loading resist. 77846
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance charactn. 126215
Java simul., cct. design and anal. 125163
Ka-band MM-wave three-port transistor drain mixer, optimizing design *(Chinese)* 68653

equivalent circuits continued
knee elec. fields due to knee-thigh electrode pair 132999
Kurokawa-type oscillator reson. struct., equiv. cct. derivation 79613
large power systs., nonlin. network reduction approach 122798
LC oscillator, simulated, multi-input floating-gate MOSFETS 90785
LCD, wide-viewing-angle, interdigital electrodes, switching perform. 86829
lead-frame plastic CSPs, modeling for predict. of low-pass filter effects on RFICs 91336
LEMP-excited lossy multiconductor power line dyn. anal. approach 88490
lighting device, thin film cold cathode electron source, delay characts. anal. *(Chinese)* 102947
LIM, flux-conc. type, mag. field distrib. 134075
LIM anal., 3D equiv. mag. cct. network 88768
living chip, cell sens., toxicity and therapeutical biomonitoring 132019
logic cct. diagnosis by using neural networks 79842
loop-coupled shielded enclosures with apertures, EM field modelling 124383
lossy power/ground planes, impedance calc., reson. effect 114589
lumped-element CPW-to-CPS transits., MMIC design 91318
lumped-element equiv. cct., automatic synthesis using GA 79519
LV prog.-gain CMOS amp. topol., very-low temp. drift 79587
mag.-coupled tuneable inductor for wideband VFOs, 1.4-2 GHz 91363
mag.-flux-control-type transformer, voltage & react. power control *(Japanese)* 112577
MESFET microwave transistors, noise wave modeling, correl. matrix elements 102654
metal halide lamp electronic ballasts, acoustic reson. prevention 89434
metal-dielec.-metal jn., electrothermal destruction, self-exciting proc. 80963
metallodielectric periodic structs., implement. by via holes in microstrip lines 69053
MI-DFB laser modules, modulator integrated DFB, RF impedance matching 93644
microstrip antennas, elec. cct. model and mutual coupling study using FDTD method 128860
microstrip bandpass filter, aperture compensation and multipole generation 69074
microstrip line on-chip interconnects on lossy Si, freq.-depend. param. 102499
microstrip slow wave struct., opt. control, cct. model 69252
microstrip step discontinuity equiv. cct. 91192
microwave and MM-wave FETs, nonquasi-static scalable distrib. model 69163
microwave filter, automatic test and tuning syst. 102538
microwave HEMT parasitics charactn., S/noise param. meas., calib. 102635
microwave transistor, perform. charactn. in load plane via imped. params. 91284
miniature inductive adder modulator for LLNL small recirculator expt. 97900
MIS interconnects, device level equiv. cct. modelling 92447
mixed-sig. ICs, on-chip interconnects, orthogonal gridded shield, transm. characts. 91118
MMIC interconnect, differential via, CAD model 101667
mobile handset chassis, antenna efficiency meas., loss mechanisms 119963
monolithic lumped planar transformers, modelling up to 20 GHz 114996
monopole antenna with conducting flat disk above earth, theoretical anal. 72437
MOSFET, dc operating point shifts with large RF sigs. 70085
MOSFET temp. noise model, direct extraction method for params. *(Chinese)* 115914
MOSFETs, bulk Si and SOI, CMOS ULSI standby currents 103877
MOST, charge-sheet model, compact nonquasistatic extension 103823
MQW laser, modulation props., three-level model, SPICE 117382
MQW lasers, three-level SPICE model *(Chinese)* 82655
multi-inverter STATCOM transformer syst., equiv. short-cct. impedandance *(Chinese)* 122807
multiconductor interconnects, freq.-depend. losses, transm.-line models 126969
multilayer piezoelec. ceramic transducers, mech. quality factor 104425
multilayer stacked EL device concept, luminance enhancement 97667
multilayer supercond. IC, inductance calc., 3D-MLSI software package 70978
multilongitudinal mode semicond. lasers, thermal dyn., unified approach 71773
multiple segmented coupled RC interconnects of VLSI ccts., noise model 81455
multiple vias in stripline struct., lumped-element models 91189
multisection power divider, singly terminated filter design theory 102515
multistage amp.-freq. compensation, anal. 114628
narrow-band SAW resonator filter design using equiv. cct. and P-matrix models 91011
natural ZVS high-power half-bridge bi-directional DC-DC converter 134192
noise-matching networks for opt. receivers, optimum design 79518
noncontact energy transfer syst. using immittance converter 123002
nonlin. magnetostatic wave propag., equiv. cct. model 92873
nonlin. microwave ccts., simul. in SPICE based on S-params. 69164
nonlin. microwave components, freq. domain meas. & modelling tech. 86928
nonlin. network synthesis using modified Newton-Raphson method 101703
nonlin. transm. line params. effect on soliton propag., freq. tripler optim. appl. 83448
nonlin. transm. lines for MM-wave multiplication, soliton wave propag. 69142
on-chip inductors, substr. losses, charactn. 102793
on-line PD current monitor, sens. transfer charact. anal. *(Chinese)* 131893
operatively rebuilding convertor networks, PAM, tensor model 88938
optimum on-chip power distrib. networks for GSI 126940
organic LEDs, C-V curves, deep hole traps, simul., modelling 71617
overhead power line protection/adaptive autoreclosure algm. 77517
oxide semicond. gas sens., PSPICE model 97512
parallel-plate environ., buried and through vias, phys.-based CAD models 124366
parasitic bipolar transistor model in protection MOSFET, generated-hole-depend. base resist. 81418
partial core transformer operation under liq. nitrogen conditions 99730
pass. microwave device, param. extraction, full-wave PEEC 69095
PBGA and QFN package bandwidths, high-speed broadband products 113728
PCB, double-sided, elec. perform. anal. *(Chinese)* 91452
PCB DC power-bus struct., vert. discontinuities, cct. extraction, MPIE 80486
PCB perturb. modelling using FEM 69313
PCBs, capacitances/inductances extraction using exponential expansion method 69297
periodic EM bandgap struct. for finite-width conductor-backed CPWs 80191
pHEMT, small-sig. model up to 110 GHz based on GA 92389
PHEMT LF noise model, appl. to MM-wave automotive radar chip set design 80311
PHEMTs, bias-depend. large sig. modeling by pulsed meas. 91257
photoreceiving channel, sig. reception features 84783
phys. modeling of lin. systs. of eqns. 90641
phys. struct., restoration, RC network theory appl. 101728
piezoelec. MLC transducers, high-power charact. 127261
piezoelec. resonator, nonlin. (in)direct THG, intermodulation method 70440
piezoelec. stack resonator, complex mater. consts., imped. reson. 104435

equivalent circuits continued
piezoelec. transducer, transient state, vibr. vel./current waveform 127260
piezoelec. transducer excitation cct., thickness mode time-domain model 104437
piezoelec. transformers, US resonators appl., finite element simul. 92688
piezomagnetic and piezomagnetic devices, equiv. cct. models 116193
piezomagnetic plate transducers and resonators, equiv. networks 92877
PIN diode monolithic dual channel 0.5 to 20 GHz limiter 125751
pins and vias, SPICE-compatible broadband elec. model 113520
planar HTSC lumped element bandpass filter with spiral inductors 82015
planar inverted-F antenna, tuning techs., mobile commun. systs. 105888
planar microwave photonic bandgap struct., transm. line-periodic cct. representation 102742
planar multi-cell struct. integrated reactive module 124373
planar struct. with arbitrary permitt. distrib., time-domain anal. 83488
PLL jitter caused by digital switching noise in mixed-mode cct., anal. 91117
plumb-line-type liq. level meas. syst., dyn. anal. 121271
PM reluctance motor, laminated rotor, equiv. cct. *(Russian)* 112474
pole-changing PM motor drives 134485
poly-4,4′-bis(butylsulfanyl)-2,2′-bithiophene film secondary cell electrode 99904
polysilicon resistor, equiv. dyn. thermal model, inertial heat link 80417
polysilicon resistors in sub-0.25 μm CMOS ULSI appls., charactn. 81519
PoPD/PVA composite film humidity sens., AC impedance spectrosc. study 97215
power amps., polyharmonic operation, theory 68617
power Darlington transistor, electrothermal dyn. macromodel for SPICE 92328
power diode, phys.-based compact electrothermal model, cct. simul. 92329
power distrib. network, quasi-3D distributed EM model 114612
power DMOSFETs, thermal networks for electro-thermal anal. 115932
power HBTs, dyn. self-consistent electro-thermal model 115848
power quality conditioner, unified series-parallel deadbeat control 133703
power station turbogenerators, excitation, transients modelling *(Russian)* 99606
power supply cct. dyn. procs. with voltage transforms *(Russian)* 68557
power transm. line adaptive digital protection relay setting 77577
printed planar filter for 60 GHz appls., low cost design 80176
PTC thermistor, large-sig. simul. model 103738
PV panel equiv. cct., fuzzy modeling using MATLAB 112407
PWB high-speed interconnect, meander, sig. transient 115131
PWM DC-DC converters, small-sig. symbolic anal. 99833
PWM inverter-fed IM, capacitive parasitism anal. 88721
PWM ZVT boost converter, dyn. model, large-sig. anal. 99832
PZT/alumina piezoelec. resonator, acoustic wave mass sens. 104459
QCM, network anal. based interface electronics 70441
QW lasers, small-sig. equiv.-cct. model based on 3-level rate eqns. 117200
QW semicond. laser, modulation response, noise, cct. simul. *(Chinese)* 93630
rail launcher devices with sliding contacts, EM anal. 83185
Rambus memory module, wafer level package, microwave model 113481
reach-through APD, drift-diffusion model 127942
reconfigurable MEMS filters, tunable lumped components design 80223
redundant syst. with nonrepairable units/common cause failures, SPICE reliab. anal. 124427
reflectance-based computer aided modelling tool for high speed/high freq. commun. systs. 108585
reson. interband tunneling diodes, time-domain two-band model anal., digital filter model 103748
RF components, pass. SMD, meas.-based extrinsic modeling 100583
RF MEMS switch, electromechanical model 104199
RF pass. cct. modelling, coupled lines and scalable models 114962
RF SOI MOSFET, deep-submicron device, macro-model 103875
rot. machines, time-stepping FE anal., converg. characts. accel. 133915
RTD, displacement currents and real part of high-freq. cond. 70006
RTD, large area, current instabilities, neg. differential resist. region 126913
S/390 μP chip, RLC coupled noise eval. 102254
SAW ladder filters, design algm. 116223
self-excited slip-ring induction generators, voltage/freq. control 123414
self-heating of elec. ccts., modelling via thermal networks 90627
semicond. barrier structs., SEM techs., EBIC, thermoacoustic detect. 103096
semicond. synchronized microwave oscillators, power suppression mode 68643
sensorless squirrel cage motor control strategy for FPGA implement. 77881
series act. clamped reson. DC-link inverter current control 134188
series-parallel reson. converter behaviour, HF matching transformer effects 78034
short-channel nMOSFET post-hard-breakdown charact., consistent model 126746
shunt-type custom power devices modelling/anal. 111738
single phase line start PMSM, equiv. cct. 112480
single-chip CMOS T/R-MMIC frontend, 2.24 GHz 1.8 V, low loss switch 102656
single-fed crossed V-dipole antenna for circ. polariz. *(Japanese)* 94166
single-phase domestic appliance IM, computer simul. 123430
single-stage input-current-shaping power convertor cct. topologies 88962
SIPOS terminated HV planar diodes, dyn. avalanche breakdown, semi-resistive field plates 81200
slanted finger IDT SAW filters, diffr. effects anal. 91018
slot-coupled patch antenna, input charact. improvement with strip 72462
slotless-type PM lin. brushless motor design/anal. approach 123519
slow-wave struct. appl. to oil monitoring 121160
SMES double-DSP controlled power conditioning syst. studies 122850
SMES power conditioning syst., thyristor PWM converter *(Korean)* 123840
SMPS conducted EMI, simul. and anal. *(Korean)* 123585
SOFC electrodes, polariz. procs. ident., impedance meas. 99965
soft-switching PWM convertor with high PF, simul. 112629
SOI substrs. with buried ground plane for substr. noise suppress., modeling 102691
solid insulation cavity PD, Pedersen's model 104251
solid-state microwave devices in nonlin. mode, S params. calc. 102652
spiral inductors and transformers for RFICs, modelling 91355
spiral on-chip inductors and transformers, modeling 92435
split-current mag. field sensitive resistors, model anal. 131898
SQUID detector, elec. quantum metrology triangle 70896
squirrel-cage motor vibrs. anal., mag. equiv. cct., structural FEM 134038
step-down piezoelec. transformer for AC-DC converters, design, fabr. and operation 91437
straight type polarized mag. syst., anal./calc. *(Chinese)* 112678
stroked overhead line lightning channel incoming/refl. waves modelling 88476
subharmonically pumped MMIC mixer array with patch antennas, 150 GHz 80327
submicron IC layout, clock skew and time delay 101885
substr. noise, chip-level anal. with network reduct. by matrix comput. 81470
super BGA, wideband model for high speed digital ccts. 89860
switch-mode power converters, large-sig. time-domain simul. 134157

equivalent circuits continued
switched reluctance motor drive, direct model, coupled field-cct. *(Chine* 89320
switched-MOSFET tech. for prog. filters operating at low-volt. supply 8007
switching DC-DC power convertor, capacitorless cct. topol. 78004
switching regulators, design-oriented anal., transfer fns. 68587
symmetric inductors fab. in CMOS technol., T cct. topol. for broadband mod ling 91354
symmetric inductors in CMOS technol., T cct. topol. for broadband modelli 91314
sync. series SVC 48-step inverter, modelling and control design *(Chine* 99202
sync. turbogenerator, high order equiv. ccts. 99638
Taiwan rly. power supply syst., short cct. current studies 134527
three-conductor transm. lines with ferrite core attachment, model 72392
three-phase autotransformer/rectifier PFC scheme 88904
three-phase induction machines, PWM power converter-fed, losses stud 112499
three-phase power syst. harmonics, seq. ccts. study *(Chinese)* 88432
three-phase PWM power converters, graphical phasor anal. 123599
three-phase squirrel cage IM, sensorless speed control 112527
three-phase squirrel-cage motor, inter-bar rotor current prediction model 1340
three-pole single throw RF switch design with defected ground struct. 6909
three-transformer CATV divider using bead-type ferrite core, freq.-range wid ing 131757
time-varying inductive electro-mech. multiports, thermodyn. theory 90702
transformer winding deform. diagnosis, equiv. model param. ident. *(Chine* 91433
transformer/reactor surge current during short-ccts. 69283
triple-mode dielec. monoblock bandpass filter for base station appls. 10255
truncated chiral cylinder shielding effectiveness anal. 83366
tuneable irises for rect. waveguide filter, modelling 125667
turbogenerator modelling by noninteger order systs. 123345
turbogenerators, subtransient behaviour, massive rotor 133917
twisted pair cables, structural return loss modeling 108515
two-band model time-domain anal., digital filter model, RTD *(Japanese)* 911
two-transistor cct., piecewise lin. eqn., no. of solns., upper bound *(Japane* 90654
two-winding power transformer conducted EMI propag. 88797
UHF OTA-C filters, design issues and CMOS implement. 69217
uniformly loaded PCB transm. lines, time jitter eqn. of NRZ sigs. 117725
uniplanar subns. monocycle pulse generator/transformer for microwave app 80322
UPFC, per unit model, optimal control 111874
UPFC-embedded power systs., load flow injection modelling approach 1118
US transducers, capacitive micromachined, charact. in air using opt. me 111499
VCSEL, elec.-thermal-opt. equiv. cct. model 105391
vector NWA coaxial calib. components 75363
vircator, inductive storage syst. driven, PSpice simul. *(Chinese)* 115259
Vivaldi uniplanar four-element array, CPW fed 105925
VLSI on-chip interconnect modelling, full-wave PEEC time-domain meth 81475
VLSI transm. line pass. modeling, differential quadrature method 81437
voltage tripler struct. with symm. stacking charge pump 68974
waste disposal seepage control sheets, damage detect. method *(Japanese)* 676
water-filled Blumlein generator, repetitive operation 78025
waveguide discontinuities, equiv. cct. params. extraction method 72418
wide-range tunable/switchable low-loss SAW filter, design and perform. 910
wideband magic-T design in MIC technol. using FDTD method *(Chine* 125800
wideband VCO designs, generalized tuning params. 114984
Wilson current mirror, dual-loop neg. feedback operation 79586
wire segments in rect. cavity, EM coupling 105890
Yagi-type hardware neuron model, CMOS IC implement. *(Japanese)* 9113
AlGaAs/GaAs HEMT, anal. model 126879
AlGaAs/GaAs heterojunction bipolar TED design 102603
AlGaAs/GaAs power HBT, lin., C_{bc} effects 92301
AlGaN/GaN high power-dens. HEMTs on SiC, scalable large-sig. model 912
AlGaN-GaN HEMT, study of temp. depend. of IMD and lin. 91239
$BaTiO_3$/Ni based MLC capacitor, dc-elec. degrad. 127280
C fibre reinforced plastic, damage detect., impedance spectrosc. 114482
CdTe-based solar cells, local photocurrent and resist. meas. 100118
Co thin film magneto-opt. sens., freq. response 109507
CoNbZr RF integrated inductor, stray capacitance, equiv. cct. anal. *(Japane* 104541
Cu vap. laser, max. output, design and global optimizing GA *(Chinese)* 716
GaAs HV HBTs, neg. RF-resist., Gunn effect study 91247
GaAs MESFETs and HEMTs, equiv. cct. model, parasitic capacit. deter 70181
GaAs microwave FET parasitic inductances and drain resist. under act. bias c ditions 91233
GaAs multiple ion-implanted FETs, nonlin. Volterra-series anal. of IM characts. 114973
GaAs opt. biased MESFET, anal. model, unilateral power gain 115963
GaAs power MESFET, small-sig. equiv. cct., param. extraction, microwave C tools *(Chinese)* 125714
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance d persion 69543
GaAs/Ge solar cell, AC params. meas. by impedance spectrosc. 113016
GaN and GaAs-based HFETs, LF and microwave noise charact. 125728
HgCdTe PV device, I-V charact., MS interface transport *(Chinese)* 91867
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
InGaAs/GaAs multi-finger HBT, modelling incl. self-heating effects 81212
InGaAs/GaAs phototransceiver OEIC, low power, photodiode & QD microca LED 96709
InGaP/GaAs HBT, extended ledge ballasted, thermal charact. 126664
InGaP/GaAs HBT, improved large-sig. model, param. extraction 92304
InP HBT, unilateral power gain, dyn. base widening 92309
InP HBTs, appl. of HBTCAD software incl. HBTSIM simulator and HBTA model 81214
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
InP HEMT D-type flip-flop and MUX ccts., 40 Gbit/s, design tech. 90854
InP HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
InP mm-wave HEMTs, look-up table based large-sig. model, impact ionizat 114977
InP/InGaAs:C HBT, RF-noise params., modelling/cryogenic temp. depe 114980
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 1149
$LiNbO_3$:Ti opt. modulators, CPW electrode charact. imped. anal. 127829

valent circuits continued
$LiTaO_3$ piezoelec. gyroscope, temp. self-compensation 104428
PZT piezoelec. transducers, static/dyn. electromechanical response 116204
Pb-acid batt., discrete freq. immittance spectrosc. 89112
Pb-acid small valve-regulated batts., dyn. charactn. 89089
Si BJT, temp. depend. large sig. CAD model and direct extract. method 91268
Si CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515
Si LDMOSFETs for high-power amp. design, large-sig. model 102653
Si MMIC LNA, substr. resist., EM simul. 91380
Si MOSFETs, anal. large-sig. model for nonlin. cct. simul. 69134
Si MOSFETs, small-sig. RF model, param. extraction, substr. effects 80283
Si RF MOSFET small-sig. equiv. cct., substr. model, param. extract. 69120
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buried diffusions 91391
a-Si TFT-LCD pixel, EO simul. 75784
b-Si based LED, EL, operation mechanisms 93433
Si bipolar GSM power transistor, large-sig. model 91269
Si double-sided microstrip detectors, anal. model for ohmic-side interstrip resist. 132373
Si substr., microstrip on-chip interconnects 126508
a-Si:H pass. pixel sens. for med. imaging, VHDL-AMS modeling/simul. 109719
Si/CaF_2 layered heterostruct., carrier dyn. modeling, neg. pulse precharging effects 80935
Si/SiGe HBTs, hot carrier effects on correl. resist. 80298
Si-SiGe HBT push-push oscillator for 58 GHz in hybrid microstrip tech. 80338
SiGe HBT small-sig. cct. models, multibias operation, param. extract. 69162
SiGe HBTs, RF distortion anal. 91255
SiGe technol., role in microwave/MM-wave appls., HBT modeling, amp. design 80277
SiO_2 ultra-thin CMOS gate oxides, two-freq. capacitance meas. tech., limitations 104124
$Sm_{0.5}Sr_{0.5}CoO_3$ porous cathodes used in SOFC, mechanism 112830
Ta_2O_5 amorph. thin film, HF dielec. props. 116122
ZrO_2/Pt interfacial impedance, equiv. cct. model, O_2 sens. appl. 97494
able programmable read-only memory *see EPROM*
tion
110 kV compact overhead power line testing and installation 99383
overhead power lines/substations erection, residents' opposition/compensation *(Chinese)* 77441
CW *see concurrency theory*
G *see electroretinography*
nomics
see also human factors; man-machine systems; office environment
assistive technol. for the disabled, ergonomic consequences 98734
ATC, psychophysiological measures on personnel 98939
craniofacial surgery, safe robot syst. 98609
electronic indust. work-induced stress anal. in ergonomics, fuzzy decision approach 89833
en-route ATC interface redesign 98936
force platform for large human displacements 87316
mil. cockpit displays, luminance level effects on visual perform. 98909
musical cyberinstrument design, SensOrg, cognitive ergonomics 86359
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
pilot visual inform. flow syst., ergonomic factors *(Chinese)* 88062
risk assess. under Estonian law on workplace safety 89782
telephone interact. in UK households, patterns of use 96060
work environ. ergonomic factors effect on human body impedance *(Polish)* 67489
working environ., risk, safety and ergonomics 89783
tion
Da-Tan power plant hydraulics modelling tests, Taiwan *(Chinese)* 77676
pil pipe erosion assess., grey target theory software 113750
Ag-W elec. contact materials, Ni addit. effects 79425
r analysis
see also error correction; error detection
3-field formulation with bubble stabilization, error estim. 79150
3D exterior Helmholtz problem, coupled natural boundary-FEM *(Chinese)* 124761
3D lookup table method, interpolation errors on gray gradations 73155
3D multiple view surface registration with error modeling and anal. 94525
3D shape and motion recovery, error charactn. of factorization method 73291
3D shape recovery using, video camera with, gyro sens. and error anal. 118270
a posteriori, pointwise, residual-based estim. of the finite element error 114000
a posteriori error control, finite element discretisations of incompressible stationary flow 114001
adaptive array beamforming with random error in cycle freq. 107338
adaptive FEA for EM with vector tetrahedra 128645
adaptive FEM and error estim., bibliog. (1990-2000) 124757
adaptive mesh refinement in BEM 101118
adaptive sigma delta modulator, SNR perform. 79977
Alpha μP, α-particle induced soft error rates, historical trends 79953
alternating-direction charact. FEM, 3D semicond. problem with heat cond. *(Chinese)* 79115
anti-alias FFT error anal., interpolation *(English)* 107322
asymptotic formula for error in cardinal interpolation 114054
asymptotically exact a posteriori estimators for pointwise gradient error, smooth problem and globally quasi-uniform meshes 79149
asynchronous sampled data set, period domain sig. anal., sync. algm. *(Chinese)* 107408
Auchmuty's error estim. 100971
automatic lin. correction of rounding errors 113998
automatic speech recognizers, error sources investig. *(English)* 73082
automotive hybrid IC proc. error reduction, microcontroller implement. 125918
backward error anal. for LU factorisation 113999
backward error of polynomial roots 114003
bandwidth-limited real-time multimedia commun., header compression 96260
Baum-Welch algm., correction to underflow algm. *(Chinese)* 129389
binary DOE for laser beams strength combination *(Chinese)* 82724
BJT model sets, confidence limits estim. using bootstrap tech. 103784
bootstrapping error component models 113887
CDMA data users under delay/error constraints, forward link hierarchical SIR/rate control 131150
CDMA RAKE receivers, channel estim. errors and Doppler diversity 108920
CMM feature based metrology systematic error uncertainty estim. *(Japanese)* 75337
combinat. ccts. design error diagnosis without error model 101947
complexity of computing error bounds 78972
computer vision camera calib. param. estim., corresponding point method *(Korean)* 109435

error analysis continued
cone spline surfaces and spatial osculating arc splines 114011
convergence on family of iters. with cubic order 114044
D-convergence of Runge-Kutta methods for stiff delay diff. eqns. 79101
d-fold Hermite-Gauss quadrature 124617
DFT, nonuniform, error sensitivity 101135
digital differentiating filter synthesis, random/sing. input sig. error robustness 130040
digital halftoning, row-oriented error diffusion 106452
dipole circ. array in interferometric direction-finding syst., anal. 73629
discrete FEA method for free boundary diffusion problem with absorpt. 114156
Doppler radar expanded vel.-azimuth display tech., error anal. *(Chinese)* 76865
DS/CDMA cellular overlay systs., open-loop power control error anal. 85856
dual-dual mixed formulation for nonlin. exterior transm. problems 114185
DWDM syst. wavelength stabilization tech. using dithering-induced AM cancellation 75056
dyn. MRI, region of interest acquisition method 87676
edge elements on anisotropic meshes and approx. of Maxwell eqns. 114168
efficient satellite orbit determ. algm. 131300
electronics mfg., human error/mistake proofing 113450
EM fields, modified kernel, a priori error bounds 117620
EM scatt. problems, surface integral boundary conditions, interior reson. errors detect. 83244
ESIRK methods implement. for stiff IVP 68042
Euler syst. of eqns., solns. in reproducing kernel space 79103
expanded mixed finite element approach, dual-dual formulation and min. residual method 90178
explicit pseudo two-step RKN methods with stepsize control 79072
exponential fitting multistep algms. for first-order ODEs 79087
extreme UV lithog. mask, placement error, absorber pattern 92189
fast hierarchical backprojection algms., error anal./perform. 84278
fast unitary transform algms., concurrent error detect. 101140
fault-tolerant high-perform. matrix multiplication 101049
FEA of coupling eigenvalue problem on overlapping domains 79151
finite element approxs., posteriori error estimators 68071
FIR fractional delay filter, optimal synthesis in reproducing kernel Hilbert space 73650
floating point divider, accurate lin. approx. using bipartite reciprocal table 114057
FPGA automated hardware synthesis, MATLAB appl., precision & error anal. 79705
Galerkin FEM, a posteriori error estim., optimal control approach 124765
Galerkin-spectral method, error anal. 114114
general curves reconstruction using factorization and bundle adjustment 118308
generalized lin. complementarity problems, backward error anal. 100946
geometric obj. reverse engng., sens. error anal. 97814
global superconvergence for blending surfaces by boundary penalty plus hybrid FEMs 124769
GPS based synchronized phasor meas., synthetic algm. *(Chinese)* 99424
GPS meas. error simulator, ANN based *(Chinese)* 85921
GPS receiver tracking loops, optim. and sensitivity anal. 109321
gradient weighted residuals for error indicators in FEM and BEM 101122
h-adaptive mesh refinement strategy for BEM based on local error anal. 101120
head-disk spacing meas., opt. interferometry, error anal. 92812
high data rate opt. parallel proc., error anal. 84159
high-precision laser beam center meas. 71874
high-resoln. quantization errors whiteness 83918
holonomic fns. eval. near and in regular sing. 79078
HRR signatures, syntactic pattern recogn. 75161
human body-power freq. field interacts., modeling accuracy 133080
hybrid ESPI-FEM methods, mapping correl. algm., displacements meas. appls. 118319
hybrid interior error estimator for localized h-adaptive FEA 79126
hypersingular integrals in BEM for lin. elasticity 101065
IM, rotor fault detect., pattern recogn. 134032
incompressible NS eqns., first order press. stabilized FEM 124767
incompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
INS errors estim. using GPS meas. 131699
interacts. between no. theory and image anal. 73230
interleaved CMOS flash ADC, 6 bit, 900 MS/s 102300
ionos. param. diagnostics, vert. sounding method errors 133305
IP unicast/multicast error perform. over ATM satellite link 107871
IS-95 cellular CDMA location, assisted forward link triangulation proof-of-concept interim results 120493
iter. substructuring method for div-stable finite element approxs. of Oseen problem 124747
Jaumann absorbers design, adaptive GA 72333
kernel inclusions for Fredholm integral eqns. 68054
Kronrod quadrature rules, overview of computational aspects 67922
laminar dielec. specimen meas., split post dielec. resonator tech. 75822
laser interferometry, phase ambiguity elimination 117572
lin. alg. eqns., convergence accel. 67962
lin. blurred images, iter. deconvolution using nonparametric stabilizing fns. 94943
lin. elastic eqns. in unbounded domain, error estim. for finite element approx. 114184
lithog. overlay meas., model-based lot disposition algms. 81143
Local Area Augmentation System, ranging source integrity 97029
lower semicontinuous fns. in normed spaces, error bounds 100918
M/T digital tachometers, perform. anal. and compensation 120761
mag. recording storage channels, error correcting codes, applicability *(Japanese)* 70544
mag. reson. spectrosc., Cramer-Rao lower bound 98453
matrix factorizations for reversible integer mapping 117963
max. time interval error calc., effective methods 86990
mean field model, supercond. vortex dens., finite difference approx. 90064
meshless hypersingular boundary node method for 3D pot. theory and lin. elasticity problems 114149
micro-machine scanner opt. switch based on beam steering angle error anal., design criterion 127818
minimizing error near discontinuities in BEM 101123
mixed FEM for compressible Stokes problem with high Reynolds no. 79148
mixed finite element for nonlin. hyperb. eqns., error estim. 101125
mixed finite vol. methods on quadrilateral grids, overlapping covolume case 124760
MM-wave receiver, AGC loop, equiv. model, error anal. 85466
mobile IP networks, power control by Kalman filter with error margin 85879
mobile robot US positioning syst. using sonar net 97002
mortar-type Morley element method for plate bending problem 68075

error analysis continued
multiplicative Schwarz algm. with time stepping along charact. for convection diffusion eqns. 114045
musical instrum. tones synthesis, perceptual wavetable matching 83992
Nakagami fading channel, error flow charact. modeling/eval. 117984
natural freq. extraction from multiple freq. response sample sets using fitting error 94022
navig. receivers, DLL meas. error due to interf. 97028
NC machine tools multi-axis contouring error on transient state *(Japanese)* 67689
Newton-Kantorovich theorem for eqns. involving m-Frechet differentiable operators, radiative transfer appl. 79009
NLO fibre transm., split-fn. anal. method 71254
noisy channel progressive image transm., optimal protection 108014
nonhomogeneous scalar conservation laws finite vol. schemes 79064
nonlin. H_∞, max-plus algm., convergence/error anal. 67899
nonlin. power amp., error vector magnitude estim. using two-tone IMD meas. 79607
nonstandard FDTD method, 3D, num. dispersion/stabil. condition *(Japanese)* 68098
nonstandard finite element estim., appls. to 3D Poisson and Signorini problems 101117
nonuniform mesh finite element approx., gradient recovery/error estim. 124763
num. soln. of first kind integral eqn. for Helmholtz eqn. on smooth open arcs 114153
oblique incidence nonpolarizing guided-mode reson. grating filter 71481
ocean surface salinity, microwave rem. sens., error sources 76906
ODE BVP, iter. shooting method, feedback control appl. 100749
OFDM, freq. offset errors, perform. degrad. reduction 72726
open set class. using tolerance intervals 107403
optimal backward perturb. bounds for LSS problem 79013
optimal binary filter, small-sample error estim. 130068
orthogonal scaling fns. series expansions 114205
orthographic error diffusion tone scale generation method 106806
overall light-scatt. expt. accuracy, correl. anal. errors 129411
pass. electronic components, reliable in-cct. eval. 80413
period-doubling bifurcation, quasi-anal. method 90688
Petrov-Galerkin methods, nonlin. Volterra integro-DE 101078
piecing-error for sub-images, relax. algm. 73475
plate bending anal. with hr-adaptive boundary elements 114161
posteriori error estim. and adaptive mesh-refining algms. for boundary integral eqns. 101110
posteriori error estimator for mixed FEM for Reissner-Mindlin plate 114183
prefiltering algm., Shannon sampling point, Daubechies wavelet sampling point *(Chinese)* 95693
progressive image transm. in memory channels, perform. anal./optim. 106980
pure rot.-based self-calib., error anal. 106564
quadtree image form. 96899
quantitat. error anal. of color in IEEE publications 94522
RAKE receiver with imperfect phase estim., perform. upper bounding 108528
randomly chosen ensembles of nxn s-boxes, avalanche and bit independence props. 129233
regular Coulomb wave fn., error anal. for computation of zeros 78973
residual, posteriori error estim. for 2-level FE methods for NS eqns. 68074
residual VQ, Gaussian codebooks 95172
reticle defects, detect./repair/printability for 193 nm exposure 126563
rigorous and portable std. fns. 114024
robotic farm tractors, posn. meas. and control, error anal. 97030
robust video transm., long-term memory motion-compensated prediction 95166
SC integrators, gain/offset compensated/very large time const., comparison 68971
Secant method and divided differences Holder continuous 124703
second order syst. nonlin. meas., 2D adaptive algm. 107561
second-order bandpass Δ-Σ modulator with sinusoidal inputs, quantization error anal. 102269
seismic sig. proc., inform. anal. 88092
semidiscretization in time, least-sq. Galerkin methods for parab. problems 124629
sens. fusion by empirical error minimization 107325
sig. class., similarity meas. by wavelete/integra-normalizer *(Korean)* 107597
sig. proc., consistency/conditioning/stabil. issues 107376
Sleszynski-Pringsheim continued fractions approximants 90077
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
SPICE simul., freq. warping/chaotic behaviour generation 90630
staggered Lax-Friedrichs scheme on unstructured grids, error estim. 124613
stochastic PDE, Galerkin finite element techs. 124714
Stokes problem, approximating local av. of fluid velocities 68083
Stokes problem in 3D unbounded domains, spectral method 114002
strongly monotone and infinitely stiff evol. eqns., stabil. and error estim. 114139
thin absorbing film thickness/opt. consts. determ. 86996
thin absorbing film thickness/opt. consts. meas., photom. quantities, error anal. 86995
time-domain cct. simul., sensitivity anal. 101646
Timoshenko beam finite element dyn. models 79142
turbo-equalization, convergence anal. 130258
ultra-low sidelobe antenna, planar near-field meas., truncation error anal. *(Chinese)* 105857
ultra-thin long-period grating, random grating period and amplit. errors 104659
umbrella-like parab. reflector, principle error and optimal feed point 83772
variational inequalities, posteriori error anal. 79116
VBR MPEG-2 video, traffic prediction/network resources estim. 107048
vector Green's fns., multipole expansion, error anal., EM scatt. 94013
video artifact estim. and meas., image anal. 118508
Volterra filter equalizers, convergence, pth-order inverse approach 95812
vortex patch problem, cubic spline approxs. 67935
wafer pattern overlay metrology, fund. 126561
weighted av. of sig. subspaces for robust wideband direction finding 118842
wirebonding proc. control, ASTM method F.459 revision 69370
worst and av. case roundoff error anal. for FFT 114198
SiO_2 gate dielec. scaling, long term reliab. estim., error calc. 81417

error compensation
see also error correction
598-chips in differential transformers, transfer charact. *(Russian)* 68816
A/D converter error correction using Volterra filtering 125572
AC drives, rotor flux ident., integral error correction method *(Chinese)* 134436
BiCMOS bandgap ref. cct., curvature-compensated, 1 V supply 90720
block-exact fast affine projection algm. *(Japanese)* 95663
cascaded Σ-Δ modulators, integrator pole error compensation 86450
CMM coord. errors meas., vol. distrib. feature *(Chinese)* 78698

error compensation continued
CMOS A/D converter error table compensator, VLSI chip implement. 90975
CMOS image sens., bad pixels, compensation algms. 75647
CMOS pH sensitive ISFET, chip temp. sens. 86735
current-mode absol. value ccts., biasing error improvement 101754
dielec. loss sens. for elec. equipt. insulation meas., equiv. cct., error compensation *(Chinese)* 75821
dyn. weighing syst., meas. error correction, fuzzy controller *(Chinese)* 110016
electronic components mfg., motion control syst. 113821
fitting analog press. sens., compensation 109485
FOG, open-loop, thermally induced error charact. & compensation 120853
Gbit/s-based ultra-long-haul WDM systs., DSB/VSB sigs. 131613
GPS attitude determ. receiver integrated with dead reckoning *(Korean)* 109324
GPS meas. error simulator, ANN based *(Chinese)* 85921
hierarchical distrib. intell. sens. instrum. syst., error compens. 120648
HTSC magnetis. charact. meas. syst., compens. method, SQUID noise 70993
impedance meas. with residual correction, uncertainty anal. 132128
incremental motion encoder, automatic self-calib. 132164
interferometric fibre gyroscopes, error compensation 75581
inverse EEG & MEG problem soln. using elec. impedance tomography 87431
lin. using feedforward loop, 1.85 GHz, PCS base-station appls. 69127
low-power CMOS imager with charge-leakage compensated frame difference and sum output 109706
M/T digital tachometers, perform. anal. and compensation 120761
machine tool contouring error detect., wavelets/neural nets 124391
machine tool meas./inspection syst. synthesis 97168
magnetometric devices, charact. compensation in radiation 131884
micro inertial meas. units, calib. techs. *(Chinese)* 121029
mobile commun., re-decode based error compensation method 95325
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
pipelined data converters, LV/energy efficient design 90985
PMSM drives, direct torque control, ripple minimization 123880
power transm. line fault locating syst. 133821
reflector antennas, distortion compensation techs. 117813
resistor string DACs, design techs. for intrinsic accuracy improve. 79979
robot, analog data transm., plastic opt. fiber, bending loss compensation 131347
SAR phase error estim. algm., rank one phase estim. appl. *(Chinese)* 131652
SAR real-time proc., 1st order motion compensation, resample problem 75081
sens.-bridge-to-microcontroller interface, two-point calib. 120650
short-dist. free-space opt. interconnections, real-time act. alignment demon 128031
smart sig. conditioning appl. to sens. 86779
solar panel substr. planeness measuring syst., opt. triangulation method 121271
sorting networks, L_p mean comparators, theoretical props. 125630
spectrally dispersed ultrafast laser pulses for quadrature spectral interferometry detect. 75869
time base distortion, nonrandom quantis. errors, compensation 121062
VSI, current regulation, zero crossings of compensated current errors 134186
wireless network, compensation modeling for QoS support 74530
workpiece localization by meas. syst., error compensation 97147
Si high-force piezoresistive force sens., max. hysteresis error 86758

error control codes *see error correction codes*

error correction
see also forward error correction
A/D converter error correction using Volterra filtering 125572
adaptive protocol relay capability for real-time media with allowable delay *(Japanese)* 119369
adaptive-lock-mode DLL cct. with duty-cycle error correction for SDRAM 125509
airborne SAR interferometry, residual motion error correction 109294
alg. of discrete channels 117950
all-opt. logic ccts., nondegenerate FWM, polariz. props. 71446
antenna planar near field meas., error correction 83549
automated surface profiling syst., fringe-free interferometry syst., Mueller matrix error correction 89905
automotive hybrid IC proc. error reduction, microcontroller implement. 125974
BES II, error matrix correction on charged channel *(Chinese)* 110387
binary symmetric channel, spectral interpolation coder, noise cancellation 129008
CAC method based on error-corrected Chernoff bound with joint optimisation 73764
chaotic direct spreading seq., sync. scheme, transm. error correction *(Chinese)* 95741
CMOS folding/interpolation ADC design, 3.3 V, 8 bit, 200 MS/s *(Korean)* 114815
CMOS pipeline ADC, stochastic nonlin. anal. 125580
cointegration, multivarite time series, error-correction model 113883
Coriolis mass flowmeters, model based correction 120731
current phasor meas. using protection CT monitoring syst. 123089
data compression with essentially nonoscillatory schemes 118624
DIAL meas., comparison among error calcs. 120463
digital halftoning algms., error diffusion, error bounds 94576
digital holographic opt. memory syst., hybrid error correction coding 93021
DNA computing, error correction, misclassification and strand loss 69347
DoD stds.-based COTS products, modeling 111640
DSP controlled converter, digital PWM limit ring reduction 88863
dual-phase-controlled dyn. latched amp. for high-speed/low-power DRAM 90899
dyn. CRT error correction scheme, mapping phys. correction params. to image raster 97639
dyn. weighing syst., meas. error correction, fuzzy controller *(Chinese)* 110016
electronics mfg., human error/mistake proofing 113450
electronics mfg. proc. improvement, failure anal./closed-loop corrective action 113448
far-field time domain antenna meas., modelling and pattern error correction 83509
flash ADC using cellular nonlin. network 102263
freq.-selective Rayleigh fading channels, RNS based multicarrier CDMA 107747
go-back-N ARQ scheme over multiple parallel channels, delay perform. 85
hard disk track deviation, nanometer-scale accuracy, external posn. sens. 1164
hierarchical distrib. intell. sens. instrum. syst., error compens. 120648
HRR signatures, syntactic pattern recogn. 75161
IEEE Std 1241-2000 for ADC terminology and test methods 90962
image recompression, Q-factor reduction, quantisation error reduction 1297
integrat. ADCs, Volterra filtration tech., a-priori error model 114826
IP networks, mobile multicast protocol with error control 74402
IP packet services, HEC-based variable length frame, misframe improvement *(Japanese)* 130241

or correction continued
IRFPA nonuniformity correction, diffractive lenslet array anal. 86621
joint MELP turbo coding with unequal error protect. for speech sigs. 73022
laser interferometry, phase ambiguity elimination 117572
low-power digital filtering, adaptive error-cancellation, algorithmic noise-tolerance 102409
mag. recording channel, high-dens., 16/17 MTR code error correction, pattern discrim. 104521
micro inertial meas. units, calib. techs. *(Chinese)* 121029
ML polynomial time syndrome decoder to correct lin. independent errors 129094
MPEG-2, remnant error concealment tech. for error recovery 95320
MRI, image intens. inhomogeneities, retrospective correction by inform. minimization 87587
multibit ΔΣ ADC with mixed-mode DAC error correction 79968
multiple nonseparated battlefield ordnance events class., ELMO algm. 133405
multiple-ref. temporal error concealment 106192
NMR quantum proc. tomography 94315
nonlin. devices noise fig. meas. 121175
opamp gain error correction in pipelined ADCs 79999
pedestrian navig. syst., dead reckoning param. correction 131876
picture error concealment interpolation algm. based on MMSE *(Chinese)* 73365
piezo-resistive semicond.-based press. transducer, embedded digital error correction *(German)* 75743
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
pipelined ADCs, background digital error correction tech. 79981
progressive image transm., joint source-channel coding *(English)* 73390
progressive image transm. in memory channels, perform. anal./optim. 106980
QPSK modulators, microwave and MM-wave types, error correct. scheme 91310
quantum inform. proc., classical wave-optics analogy 83930
radiotherapy, CT guided, Monte Carlo simul., errors correction 76737
redundant transform. on binary data, appl. to image coding and transm. 84373
reliable multicast file transfer on inter-university satellite network 96235
renography, time-series contrast-enhanced MRI, image registration 110910
reticle error correction for lithog. tool qualification benefits and limitations 103592
RS coded DS-CDMA cellular systs., errors-and-erasures decoding 131296
scalable video streaming, wireless channel, power-optimized joint source channel coding 107107
sens. lin., BP neural networks & regression algm. *(Chinese)* 130020
SMT test/inspection tools for improved proc. control 115154
SNR scalable transcoding for video over wireless channels 95120
software-based error detect. and correction techs. for embedded systs. 79907
speech user interfaces, multimodal error correction 73075
TCP versions for wireless environ., modular design/perform. eval. 130398
telephony speech user interfaces, dialogue design, confirmation and error recovery strategies 96058
ULSI high-speed serial commun. with error correction using 0.25 μm CMOS technol. 104112
UWB radar, phase error correction, phase gradient algm. *(Chinese)* 75113
video multicasting over WLAN, error control, eval. 74437
W-CDMA, MUX and channel coding scheme, implement. algm. 107735
wavelet-based video coder via bit allocation 95041
wireless ATM, cell delineation, anal. and implement. algm. 95777
wireless ATM, QoS oriented data-link control protocol for CBR traffic 130422

or correction codes
3G mobile radio, image transm. DC error correction 85888
90° rot. invariant coded modulation syst., design *(Chinese)* 72739
adaptive ARQ, control params. decision 107918
alg. of discrete channels 117950
alg.-geom. codes, polynomial representation, list decoding 72791
AM band DAB, RS decoding algms. 120508
analog VLSI error correcting decoders, mismatch errors 106118
area-efficient RS decoder, inversionless decomposed Euclidean algm. 94277
ARQ adaptive hybrid schemes for wireless links 94292
asymptotically good quantum codes exceeding Ashikhmin-Litsyn-Tsfasman bound 83922
asymptotically good quantum codes from alg.-geometric codes 83923
asynchronous freq. hopping systs., FEC code 106112
ATM commun., smooth and adaptive forward erasure correction 84946
ATM networks, advanced cell recovery techs. 130248
ATM networks, cell delineation procedure modeling 107667
ATM networks, error concealment algms. for video packet loss 73769
ATM networks, FEC coding for real-time transport 119129
ATM noisy network links, hybrid ARQ/FEC scheme 106117
ATM perform. improvement using OOC and 2^n prime seq. code with VBR 107644
ATM wireless network, throughput enhancing techs. 96358
ATM wireless networks, bandwidth/buffer dimensioning for guaranteed QoS 96351
AWGN and Rayleigh channels, robust multilevel codes based on capacity rule 106096
AWGN channel, complexity of breadth-first bounded dist. convolutional decoding *(English)* 72833
bandlimited images, fast extrapolation/superresolution algms. 95185
BCH codes decoding using back multiplication algm. 129005
BCH min. wt. decoder for double error 129003
behavioral interpolation, coding, and control 78980
binary codes, undetected error probab. 129132
binary Reed-Muller codes, seq. stack decoding *(English)* 72836
blacklisting problem in broadcast distrib. syst., ECC based soln. 129257
blind equalisers, white data and block encoded seqs. 119175
Bluetooth, adaptive link-level error recovery mechanisms 85488
Calderbank-Shor-Steane type quantum error-correcting codes, search algm., bases 72802
CDMA ad-hoc/cellular networks, perform. comparison 74673
CDMA design through asymptotic anal., fading channels *(English)* 73856
CDMA fiber-optic commun. systs., low-rate super-orthogonal channel coding 85963
CDMA pulse-posn.-hopped syst., capacity anal. 119939
CDMA serially concatenated ECC syst., joint iter. decoding 108861
cellular radio data channels, rate-adaptive protocol 85896
CELP speech coding, soft-decision decoding of binary block codes 118094
channel protection using adaptive multi-mode error-correction coding 96562
coding for informed decoders 129160
combinat. bounds of error-correcting codes over alphabet of four elements 94299
combined error correcting/compressing codes 129181
combined Huffman code, row and column array code and phase/FM 83892
combined source/channel decoding, suboptimal BER minimization *(English)* 72852

error correction codes continued
completely transitive codes with error-correcting capability e>3, nonexistence 72793
complex-valued cyclic code using FFT 83898
compressed video seq. decoding for wireless networks, unified image/bitstream anal. 118577
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
content-adaptive watermarking based on stochastic multiresolution image modeling 129710
convolutional codes, act. tailbiting segment dist. 129221
convolutional codes, heapmod algm. for min. free dist. computation 117983
convolutional codes, max. wt. basis decoding 72825
cpd. error correcting iterated codes, decoding algm. *(Japanese)* 72905
cpd.-error-correcting codes, step-by-step decoding 129091
cryptographic syst. based on ellipt. curves, error correction 106249
(d, k) codes capable of correcting insertions/deletions of 0, upper bound on cardinality *(Japanese)* 118001
data hiding using wavelet transform and error-control coding 95070
DECT air interface, TCP/IP data transfer with multibearer capability and asymmetric flows 73922
Deep Space Network turbo decoder implement. 131329
digital commun., turbo techs. overview 72908
digital image compression using directional sub-block DCT 95260
DS-CDMA, joint despreading and iter. decoding with serially concatenated turbo code and Walsh code 83891
DS-CDMA PRN, adaptive error control 108545
dyn. error recovery mechanism and error control algms. *(Chinese)* 130424
EHF SATCOM on-the-move testbed, description 111615
electric power data transm., TCM modulation, QAM modulation, diffuse convolution coding *(Chinese)* 74072
enhanced block coded modulation using iter. decoding based on parity check codes 129067
event error control codes, appls. 117946
fast algm. for multiplicative inversion in GF(2^m) using normal basis 83874
fault-tolerant quantum computation without concatenation 94296
FEC/automatic retransmission requests for reliable multicast transm. 130354
FH-PRN with adaptive retransm. backoff, perform. 131075
finite geom. low dens. parity check codes 129035
FIR channels excited by convolutionally encoded inputs, MLE 95807
FORTE-VLC, forward tracing self-error correction VLC for wireless image coding 118567
fragile watermark tech. *(Chinese)* 106195
free-space opt. commun. through atmos. turbulence channels, pairwise codeword error probab. 131621
fuzzy commitment scheme, cryptographic primitive 106216
generalized reverse jacket transform, even length vectors, appls. 124773
Grobner bases over Galois rings with appl. to decoding alternant codes 72857
GSM, adaptive multi-rate speech service *(English)* 74723
GSM, adaptive multirate speech codec *(English)* 74721
GSM adaptive multi-rate syst., wideband speech coding *(English)* 74724
H.263 appl. of variable to fixed entropy coders 117970
H.263-compatible error-resilient video coder 95398
HIPERLAN/2 WLAN std. MPEG-2 video transm. 119785
holographic memory, soft decision Viterbi decoding 104616
hybrid error control for video transm. in wireless IP networks 107023
hybrid VLC, wireless image transm. 108486
hypercubic ring high-dimens. code, correcting limit, geom. decoding algm. 83928
image compression, robust data hiding 95255
image transm. over mobile fast-fading channels, wavelet noise cancellation/interleaving techs. 95123
image transm. over noisy channels using joint source-channel coding 95155
improved Reed decoding algm. *(Chinese)* 72831
incoherent detect. of multi-posn. sigs. 107582
interframe scalable coding using wavelet 95257
irregular turbo codes and unequal error protection 129123
ISM-band sub carrier multiplexed broadband digital microwave radio link 96530
iter. reliab.-based decoding of low-dens. parity check codes 72883
joint source-channel coding using arith. codes and TCM 106175
JPEG2000 images, scalable detect. of perceptual watermarks 118584
LDPC and turbo codes, universal belief propag. based decoding 129152
lin. block codes, unified BER approx. 129007
lin. codes, computational model 106077
lin. precoded/coded OFDM for wireless channel fades 83815
lin. UEP codes, sym.-by-sym. MAP decoding 72937
list decoding, representations of alg.-geometric codes 72808
list decoding algms. for certain concatenated codes 72810
list decoding of alg.-geometric codes, root-finding algm. 117944
list Viterbi algms. for continuous transm. 72897
local decoding procedures for error-correcting codes 72812
long-haul opt. transm. syst. FEC techs. 109168
low complexity (turbo) classifiers in high dimens. feature spaces 128933
low dens. parity check code decoder, parallel archit. 106193
low dens. parity check codes, constr. 72823
low dens. parity check codes, parallel decoding archits. 106126
low dens. parity check codes design using heuristic bit-filling algm. 129198
low-dens. parity-check codes under Max-Log-MAP decoding, dens. evol. 117917
m-ary asymmetric sym. error correcting codes, graph coloring constructed graph coloring 129174
mag. recording, single and multiple parity codes perform. anal. 72914
mag. recording channels, low-dens. parity-check codes appl. 72884
mag. recording error correcting code/runlength limited code combination 94314
mag. recording storage channels, error correcting codes, applicability *(Japanese)* 70544
majority-logic-like vector sym. codes, error correction perform. 83879
MDS codes, BER 72822
MDS codes, upper bounds on list decoding 72790
media on demand, packet loss, scalable and reliable paradigm based on FEC codes 120564
media sync. effect on appl.-level perform. 74433
min. delay decoder design 72928
mobile commun., bit-interleaved turbo-coded modulation 119950
mobile radio foveation-based error resilience, unequal error protection 96522
MPEG-2 error concealment, motion field estim. by vector rational and bilinear interpolation 118614
MPEG-4 audio-visual coding, error-resilience features and appl. to 3G multimedia terminals 96268
multilevel codes, iter. decoding 72886

error correction codes continued
multiple burst correction RS codes, decoding 129147
multiple description codes perform. over bit error channels 129183
multiple parallel concatenated single parity check codes 129199
multiuser k-ary code for noisy multiple-access adder channel 117947
narrow-band subliminal channels, carrier bits embedding 83964
neighborhoods and error-correcting commun. protocols, sample spaces with small bias 73984
OFDM, FEC code, intercarrier interf. 106124
OFDM sig., PAR, data permutation, embedded side inform. 106123
OFDM systs., carrier freq. offset effect 106039
OFDM TDD systs., adaptive interleaving 72750
office environ., 5.25 GHz OFDM expt. study 131084
opt. CDMA, modulation using ECC embedded in opt. orthogonal code 128987
optimal binary codes of length 9 and covering rad. 1 117939
output code, least sq. and estim. measures 117955
output coding learning machines, codeword bit error interdependence 117956
overcomplete sig. representations, decoding algms. *(English)* 73586
p-adic codes, convolutional-like approach 94285
packet transm., frame sync. of convolutionally coded systs. 94311
packet video with unequal error protection 107094
parallel concatenated block codes, iter. decoding, F24 coset MSP algm. 106079
parity-check codes on Rayleigh fading channels, perform. anal./code optim. 72885
partial parallel interf. cancellation using non-const. weighting factors 108552
partial response channel, woven convolutional codes and MTR codes 129226
partial response channels, turbo equalization, precoding effect on convergence 72913
partial-prefix synchronizable codes 83915
perceptually-based robust image transm. over wireless channels 95163
perfect 2-burst-correcting codes constr. 117938
polyvalent error control codes for multilevel memories 68792
pos. integer progression code which can cut off error propag. *(Japanese)* 72904
PRN, error-protection method selection 96346
projective plane and planar quantum codes 117916
public key cryptography and error correcting codes as Ising models 83961
punctured convolutional codes for unequal error protection, image transm., mobile channels *(Chinese)* 106150
$(q^2+q+2, q+2)$-arcs in projective plane PG (2, q) 113933
qubit encoding in oscillator, infinite-dimens. Hilbert space 94222
reduced GMD decoding with threshold erasing 129207
reliable commun., continuous error detect. 119111
RLL codes using high rate RSC or turbo code 106159
robust image hashing 95364
RS codes, adaptive coding and modulation for Rayleigh fading channels 128995
RS codes, decoding algm. for burst error correct. 72925
RS codes, decoding method, weakly-dual-basis *(Chinese)* 94290
RS codes, list-decoding rad. upper bounds 129092
RS codes, soft decision decoding using Fano seq. algm. 83838
satellite commun., four-state Markov model for burst error anal. 96625
secret-code encryption scheme based on max. rank dist. codes *(Chinese)* 106210
self-correcting codes, Viterbi codecs 96316
self-timed Viterbi decoder, low power, convolutional FEC codes, ISI 83837
semicond. memory error correcting/error detecting codes 125512
single-track cct. codes 117945
smooth/adaptive forward erasure correcting 119354
soft-decision decoding, nonredundant error correction differential detect. 94321
softbit speech decoding with re-quantization *(English)* 73024
SPIHT error-tolerant image compression 95330
STS-graphical invariant for perfect codes 94316
subcodes of Hamming codes, near-optimality on two-state Markovian additive channel 129021
subjective QC based integrated error resilience technol. for video commun. *(Chinese)* 107024
subjective video quality over error-prone channels, control strategy 96587
substitution insertion and deletion channels, error-correcting codes 83925
superposition coded modulation for unequal error protection, design 128991
syntax-based error concealment 95146
systematic error-correcting codes for semi-delay-insensitive data transm. 130835
systematic m-ary single-sym. error correcting codes 83841
t-error-correcting quantum code, with more than t errors, fidelity 106081
turbo codes and product-type codes meeting Gilbert-Varshamov bound *(English)* 72837
turbo product codes decoding, fast Chase algm. appl. 129016
turbo-codes as error control codes 106116
Turbo-codes multilevel modulation and their perform. *(Chinese)* 72929
two-stage RS decoder for coded 2^m-ary QAM systs. 72917
type-II hybrid ARQ protocol and appls. in slotted Aloha DS-CDMA 95914
variable redundancy coding for mobile channels 129057
video transm. over erasure channels, joint source-channel rate allocation 118613
video transm. over third-generation mobile systs. 106906
watermarking, anals. of error correction strategies for typical commun. channels 94264
wireless ATM, hybrid ARQ/FEC scheme 95915
wireless ATM, hybrid II ARQ schemes using punctured RS code, perform. 119286
wireless ATM access networks, CLR perform. of random traffic and error control 108644
wireless microsensor networks, energy-efficient link layer, long-term environ. sens. 97567
WLAN, expt. eval. of FEC on multicast audio streams 130692
woven convolutional codes with outer warp and unequal error protection 129227
Z_4-lin. Goethals codes, coset wt. distribs. 83909

error detection
see also error analysis
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
autofocusing control for DIVX burst-cutting-area recording syst. 117562
automatic generation of parallel CRC ccts. 101904
automotive network, LIN protocol *(Italian)* 113117
binary symmetric channel, spectral interpolation coder, noise cancellation 129008
concurrent bilateral teleoperation over Internet, time-varying commun. delay 130867
coronary artery reporting syst., computer-assisted diagnosis *(Japanese)* 98142
CSP/BGA packaging yield enhancement with solder flux/paste proc. control 124333
digital backbone network QoS eval., end-to-end bit error ratio monitoring method 130596
digital lin. systs., concurrent testing 101969

error detection continued
fault-tolerant software archits., fail-silence comparison by proc. duplication vs
internal error detect. for DHCP server 84989
FIR digital filter using one-hot coded residue representation 130042
future mobile network, tech. overview and data link control scheme 85700
global navig. satellite syst. integrity predict. and monitoring 131695
H.263 compatible video coding, parity check error detect. 107093
images region and data hiding based error concealment 129787
joint MELP turbo coding with unequal error protect. for speech sigs. 73022
joint source channel coding schemes comparison 106186
joint source/channel coding using arith. codes 72901
MPEG-2, remnant error concealment tech. for error recovery 95320
MPEG-2 video sig., transm. errors, reconstructed image quality 73206
µP control logic, online integrity monitoring 125378
NPPs, licensee event reports, latency, error detect. 88543
opt. profilometer, diffr. anal. and focus-error detect. scheme eval. 121217
partial implement. in VLSI CAD, equivalence checking 125350
pulse shaping and jitter-free freq. error detect. and timing recovery, digital filter
73660
REESE method for soft error detect. in µP 106147
seq. logic ccts., design diversity for concurrent error detect. 102045
SMT test/inspection tools for improved proc. control 115154
SoC, early error detect. for fault tol. and at-speed debugging 101919
software-based error detect. and correction techs. for embedded systs. 79907
star networks, CSMA with adaptive reservations by interruptions 95921
TCP versions for wireless environ., modular design/perform. eval. 130398
turbo decoding, error detect. improvement by short CRC with mean-sign-chang
criterion 129124
VHDL behavioral-level designs, verif. pattern gen. for coding error detec
(Korean) 114568
W-CDMA, MUX and channel coding scheme, implement. algm. 107735
wireless ATM, cell delineation, anal. and implement. algm. 95777
wireless video, error resilient codec 96325

error detection codes
128-bit symmetric block ciphers, fault-based side-channel cryptanal., concurre
error detect. 129277
alg. low dens. parity check codes based bandwidth efficient modulation 12913
AM band DAB, RS decoding algms. 120508
BCH codes decoding using back multiplication algm. 129005
binary codes, undetected error probab. 129132
binary lin. error detect. block codes, criteria *(English)* 72844
blind equalisers, white data and block encoded seqs. 119175
combined error correcting/compressing codes 129181
compressed video seq. decoding for wireless networks, unified image/bitstrea
anal. 118577
concatenated code design with Hamming code and 3/4 rate 4-sta
MTCM/CPFSK 106095
convolutional codes, block code description *(English)* 72855
convolutional codes, heapmod algm. for min. free dist. computation 117983
crosstalk originated error detect., error detecting codes optim. 79686
cryptographic syst. based on ellipt. curves, error correction 106249
digital backbone network QoS eval., end-to-end bit error ratio monitoring meth
130596
DS-CDMA multidimensional multicode syst., code diversity/error detect., pe
form. 74790
event error control codes, appls. 117946
generalized error-locating codes, decoding *(English)* 72845
H.263 video coder, interactive error resilient scheme *(Chinese)* 95035
H.263-compatible error-resilient video coder 95398
iter. equalization of partial response channels using dens. evol., threshol
130259
iter. reliab.-based decoding of low-dens. parity check codes 72883
joint source-channel coding using arith. codes and TCM 106175
LDPC regular codes over PR channels, threshold 129083
lin. codes, computational model 106077
list Viterbi algms. for continuous transm. 72897
low-dens. parity check codes over finite-state binary Markov channels, decodi
129084
low-dens. parity-check codes at short block lengths, heuristic search 129063
low-dens. parity-check codes decoding with probabilistic scheduling 129013
m-ary asymmetric sym. error correcting codes, graph coloring constructed gra
coloring 129174
ML-decoded low-dens. parity check codes, tangential sphere bounds on ensemb
perform. *(English)* 72840
multi-dimens. parity-check codes for bursty channels 129115
one-step majority logic decodable codes based on belief propag., iter. decodi
(English) 72841
parallel CRC computations, systematic approach 106160
parity-check codes on Rayleigh fading channels, perform. anal./code opti
72885
PRN, error-protection method selection 96346
reliable commun., continuous error detect. 119111
ring of congruence classes, probab., ISO std. *(Chinese)* 72870
semicond. memory error correcting/error detecting codes 125512
single-track cct. codes 117945
SPCP codes 106073
spectral graphs for quasi-cyclic LDPC codes 129175
systematic binary alg. block codes, iter. decoding 72826
turbo decoding, complexity reduction 120061
wt. parity-checks for fast correl. attack 129111

error handling
Alpha 21364 µP error handling syst., pre-silicon verification 125564
CDF online silicon vertex tracker, error handling 132458
robust front-end for speech recogn. on WWW, voice over IP recogn. 73069

error probability *see error statistics*

error recovery (computers) *see system recovery*

error statistics
1.52 Tbit/s OCDM/WDM transm. expt. 75032
2 and 4 transmit antennas, perform. of diversity systs. 96379
2D RAKE receiver in correl. freq.-selective Nakagami-fading 119876
4×4 opt. cross-connect archit. with micro-mech. switch and wavelength conv
sion modules 120181
4×4 wavelength interchange cross-connect and opt. ADM 96828
32 kbits/s real-time/dual-direction video commun. syst. for wireless chann
perform. eval. 74637
40 Gbit/s dispersion-managed soliton transm. with dispersion tolerance 966
51.84 Mbit/s airborne wireless expts., HALO commun. technol. 74562
60 Gbit/s WDM-OTDM transmultiplexing using electro-absorpt. modul
131572

r statistics continued
60 GHz MM waves for ITS inter-vehicle commun., propag. charact. 120058
80 to 10 Gbit/s DEMUX using fiber cross-PM and opt. filtering 96869
155 Mbit/s data transm. at 60 GHz using 1×4 patch array antenna with opt. delay lines 108788
accumulated woven convolutional codes, turbo-like coding schemes comparison 129197
adaptive ARQ, control params. decision 107918
adaptive coding/modulation, wireless systs. bandwidth-efficient multimedia commun. 83798
adaptive FEC/ARQ for utility-based wireless fair scheduling, perform. improvement 131069
adaptive MCM for wireless systs. 106066
adaptive min.-BER lin. multiuser detect. for CDMA sigs., 4-QAM 73738
adaptive spatial/temporal optimal receiver using adaptive array antenna 85869
adaptively optimized DFE for convolutional coding 130278
ADSL DMT systs., turbo coding 129203
ADSL systs. supporting downstream wireline/wireless trunks, subchannel allocation 85409
ADSL transm. using turbo coding 96299
aliasing-free space compactor design, switching theory formulation 101965
all-opt. asynchronous CDMA commun. syst. with double opt. harder-limiters *(Chinese)* 120121
all-opt. label detect. and swapping tech. 74951
AM band DAB, RS decoding algms. 120508
APSK multiple-sym. differential detect., limited search using (M,L) algm. 83824
array receiver with Kalman channel predictor for fast Rayleigh flat fading environ., perform. 83664
asynchronous CDMA systs., optimal SS seqs. constructed from Gold codes 73851
asynchronous DS-CDMA syst., hard-decision multistage interf. cancellation 108533
asynchronous DS-CDMA syst., SS seq. design using chaotic dyn. systs. 94306
asynchronous freq. hopping systs., FEC code 106112
asynchronous QPSK/DS-CDMA, multipath Rayleigh fading channels, multistage interf. cancellation, perform. 72367
ATCP, TCP for mobile ad hoc networks 85036
ATM networks with bursts of errors, perform. params. 84820
ATM noisy network links, hybrid ARQ/FEC scheme 106117
ATM wireless networks, adaptive FEC scheme for data traffic 117952
ATM wireless networks, punctured turbo codes with unequal error protection appl. 83886
ATR, anal./expt. perform.-complexity tradeoffs 109273
av. pulse rate estim. using stochastic temporal and rate codes 73561
bandwidth division type parallel combinatory DS-CDMA syst. 130285
bandwidth-limited cellular systs., dyn. freq. hopping 96571
Bent seqs. based variable-length coding for wireless advertising 129056
BER anal. of TCM schemes for CCI reduction in cellular mobile commun. 85681
BER perform. of tail-biting convolutional encoders in channels using, priori inform. *(English)* 72835
BICM-ID with sq. QAM constellations, Rayleigh fading channels, design/anal./perform. eval. 72887
binary codes, undetected error probab. 129132
binary convolutional codes, max.-likelihood decoding, error probab. bounds 129134
binary Markov channel with memory, channel-optimized trellis-coded quantization 106143
binary modulated sigs. with depend. Rician fading, coherent multichannel reception 74776
binary signalling, adaptive min.-BER DFE 107677
binary symmetric channel, decoding error probab. 118004
black side data link layer, retransmission inform. appl. 111605
BLAST-OFDM enhanced Hiperlan/2, perform. eval. 119526
blind adaptive optimum lin. cancellation for long code CDMA 73743
block turbo code, reduced search trellis decoding, perform. eval. 94278
block turbo codes for space-time systs. 72864
block-coded 4-PSK schemes for unequal error protection 117887
block-fading channels with multiple antennas, limiting perform. 74517
Bluetooth, adaptive link-level error recovery mechanisms 85488
Bluetooth piconets, cochannel interf., packet error rate upper bound 85500
BPSK, BER perform. in CCI 117915
BPSK and QPSK systs. with noisy phase ref. over Nakagami-m fading channels, av. BER 94234
BPSK sigs. in Rayleigh fading channels, optimum selection diversity 128973
BPSK W-CDMA downlink, RAKE receivers with channel estim., anal. 84913
BPSK-based WCDMA using RAKE receivers with channel estim., downlink perform. 131240
broadband const. envelope interf. suppression algm. 105782
broadband hybrid fiber radio systs., opt. techs. for beamforming and MM-wave gen. 131347
broadband mobile commun., beam and null simultaneous steering S/T-equalizer 108880
broadband wireless commun., transmit/receive spatial MUX 131199
cable mixed sig. multiplex, interact. between analog and digital distortions 97067
cascaded chirped fiber grating, 10 Gb/s WDM syst. dispersion compensation 120355
CATV quasi-sync. CDMA with high-order modulation 97077
cdma2000 mobile radio, SOVA high-perform. decoding for turbo codes 108699
CDMA, capacity doubling by in-cell seq. reuse and soft interf. cancellation 85850
CDMA, combined nonlin. MMSE beamforming and interf. cancellation 84898
CDMA, improved multistage parallel interf. cancellation for multipath fading channels 85529
CDMA asymptotically optimal receiver, perfect MAI cancellation 96357
CDMA cellular radio, lin. successive interf. cancellation 96550
CDMA channel with two-level total sig. quantization, coded orthogonal sigs. reception, noise immunity 119203
CDMA coded multiuser systs. with optimum joint multiuser decoding/detect., perform. anal. 130295
CDMA commun., lin. complexity likelihood ascent search multiuser detectors 107607
CDMA commun., spatiotemporal chaotic spreading seqs. 95834
CDMA commun. systs., subchip-spaced multipath diversity 74702
CDMA direct-detect. opt. sync. systs. with interf. canceller using group inform. codes 74920
CDMA downlink wideband channel estim. algms., error robustness 131286
CDMA fiber-optic networks incorporating multiple opt. amps. 74987
CDMA fiber-optic receiver struct., perform. anal. 74954

error statistics continued
CDMA fiber-optic systs., opt. hard limiters 96683
CDMA long code systs., multiuser channel estim. 85516
CDMA ML detect., semidefinite prog. 130289
CDMA mobile commun., grouped parallel multiuser detector 108677
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA multicarrier syst., perform. over multipath fading channel 107730
CDMA multicode downlink in shadowed multipath fading 131282
CDMA multiwavelength opt. orthogonal syst., perform. and noise 120226
CDMA perform. improvement, bias reduction using optimized partial parallel interf. cancellation factor 131122
CDMA RF sig. transms., SCM fiber-optic links, nonlin. effects 75040
CDMA sync. opt. systs. with APD and thermal noise, mark-detect. algm. 96667
CDMA sync. systs., GA assisted joint multiuser sym. detect./fading channel estim. 85459
CDMA systs., successive interf. cancellation receiver with neural network compensation 105817
CDMA systs. in Nakagami multipath fading channel, perform. 131123
CDMA systs. with multiuser receivers, optimum modulation/multicode formats 120016
CDMA wideband cellular networks, power control results 85745
cellular CDMA and TDMA over nondispersive channels, capacity 131215
cellular commun., freq. reuse dist. reduction using TCM 96493
cellular mobile IS, integrated isochronous/bursty media data, channel-state-depend. bandwidth allocation 107847
cellular radio, dyn. freq. hopping 131246
cellular radio, outages and BER, microdiversity/macrodiversity effects 85802
cellular radio data channels, rate-adaptive protocol 85896
cellular radio one-hop/sym. FHMA perform. 74733
chaotic commun. syst., transceiver chip design and CMOS implement. 96383
chaotic digital modulation schemes, state of art 94251
circulating loop simul., node archits., transm. perform. 109133
classifier database compression, probab. of error metrics for best-basis selection 106003
CMOS pipeline ADC, stochastic nonlin. anal. 125580
code geom./decoding error probab. rel. 129119
coded free-space opt. commun. through atmos. turbulence channels, pairwise codeword error probab. 131621
coded multistage detect. in correl. Rayleigh channels, perform. 119954
coded systs. over AWGN/fading channels, error probabilities upper bounds 72934
coherent OFDM syst., perform. of channel estim. using pilot syms. 106043
coherent opt. PSK systs., perform. degrad., nonnegligible loop delay time influence 131407
coherent-chaotic light conversion based delay line opt. recogniser 119852
combined source/channel decoding, suboptimal BER minimization *(English)* 72852
COMETS 21 GHz advanced satellite broadcasting expts. 74890
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
concatenated codes, bit-error probab., improved tangential sphere bound 72875
conditional model order estim. 107373
convolutional codes, max. wt. basis decoding 72825
convolutional double accumulate codes or double turbo DPSK 72820
covert commun. using digital phase modem, syst. trade-offs 72724
CPFSK coherent opt. syst., self PM effect, eval. 106030
CPFSK demodulation, carrier recovery method 94253
CPFSK opt. heterodyne syst., polariz. mode dispersion effect 74955
CPM, power/bandwidth efficient serially concatenated, iter. decoding 72819
CPM sigs., partitioning for SA(B,C) 128980
CPM waveform, post-distortion ang. equalizer appl. 107685
cryptographic syst. based on ellipt. curves, error correction 106249
DAPSK postdetection diversity receiver on Rayleigh-/Rician-fading channel 119974
DAPSK preamble-assisted transm. in digital mobile radio syst., channel estim./compensation 74737
data transm. with GaAs VCSELs over PCB integrated polymer waveguides, 3 Gbit/s 104724
decision-directed adaptive nonlin. canceller for opt. read channels 118382
decision-feedback multiuser detect. with feedforward orthogonal transform. 130172
dedicated short range commun. syst., phys. layer 119994
detecting codes, ring of congruence classes, probab., ISO std. *(Chinese)* 72870
differential chaos shift keying, multiple access tech. 94240
differential space-code modulation for interf. suppression 94244
differential space-code modulation for interf. suppression 106064
diffuse wireless IR commun., power and bandwidth efficient modulation 131620
digital backbone network QoS eval., end-to-end bit error ratio monitoring method 130596
digital commun., slow fading/carrier phase error, noisy ref. loss eval. 72743
digital commun. systs., blind max. ratio combining methods 96368
digital FM, seq. estim. 94233
digital FM and GMSK with limiter discriminator detect., anal. of BER on seq. estim. 106041
digital radio broadcasting, punctured convolutional codes/turbo-codes 109346
digital sig. reception with background impulse and white noise 107612
digital trunking syst., traffic channel coding, perform. anal. 83905
direct conversion receivers for mobile radio appls. *(German)* 85865
direct detect. opt. receivers using RZ coding, BER reduction 120140
discrete commun. channels, optimal filtering of messages with finite no. of states 119037
dispersion managed long-haul soliton transm. systs. for WDM systs. 96868
dispersion-managed WDM syst., strong patterning effects, BER, num. eval. 120117
diversity codes for differential PM in correl. Rayleigh fading channel 96510
DMT optimal ISI-free transceivers for distorted channels with colored noise 128985
DOCSIS protocols for mil. point-to-multipoint wireless links 107837
double differential space-time block coding for time-selective fading channels 83850
double DPSK perform. over LEO mobile satellite channels 74891
doubly selective Rayleigh fading channels, one-shot detectors error perform. 130177
DPSK modulation in diversity Rayleigh fading channels, optimum noncoherent multiuser detect. 72736
DS SS systs., blind channel estim. and data recovery 107422
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753
DS-CDMA, coherent multi-carrier/single-carrier, broadband packet wireless access, perform. 74597

error statistics continued
DS-CDMA, successive interf. cancellation with optimum geometric power disparity 108722
DS-CDMA asynchronous commun., GA assisted multiuser detect. 130171
DS-CDMA asynchronous syst. in Nakagami fading, precise BER calc. 74559
DS-CDMA BPSK cellular radio model using simplified improved Gaussian approx. 74786
DS-CDMA cellular radio systs. anal. 108951
DS-CDMA cellular syst., perfect power control, path-loss and fading models 74770
DS-CDMA coherent syst., MMSE interf. suppression/turbo coding 106157
DS-CDMA detect., semidefinite prog. appl. 107593
DS-CDMA mobile reverse link, variable-rate adaptive channel coding 74630
DS-CDMA mobile stations, joint blind rate detect. and data decoding 85779
DS-CDMA mobile syst., orthogonal successive interf. canceller for downlink commun. 74700
DS-CDMA mobile systs., order-adaptive filter for channel estim. 96565
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS-CDMA multicarrier systs. in correl. Rayleigh fading channel *(Chinese)* 119232
DS-CDMA multicell syst. with base station diversity, perform. anal. 74777
DS-CDMA partial parallel interf. cancellation, tracking error effect 83411
DS-CDMA PCS indoor systs. with distributed antennas, forward link perform. eval. 85744
DS-CDMA RAKE receiver with TWCL in urban area, field test meas. 108802
DS-CDMA sigs. in multipath channels, adaptive min.-BER lin. multiuser detect. 73722
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
DS-CDMA syst., closed-loop transmit diversity with feedback delay 119982
DS-CDMA syst., multicarrier signaling and RAKE receiver integrat. 131057
DS-CDMA syst. with timing errors, anal. of partial parallel interf. cancellation 108532
DS-CDMA syst. with timing errors, perform. of hard-decision parallel interf. cancellation 108534
DS-CDMA syst. with timing errors, perform. of parallel interf. cancel. *(Chinese)* 96389
DS-CDMA systs., blind array sig. proc., temporal diversity 107421
DS-CDMA systs., narrowband interf. suppression, FT-domain tech. 73852
DS-CDMA systs., robust single-user detect. perform. 84918
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS-CDMA systs. with closed-loop power control, error probab. anal. 131180
DS-CDMA systs. with multistage HD-PIC, perform. anal. 85680
DS-CDMA systs. with one-stage HD-PIC, perform. anal. 84886
DS-CDMA tracking mode receiver with joint channel/delay estim./MMSE detect. 131056
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
DS-CDMA wireless multirate syst., multipath fading channels, perform. anal. 85630
DS-CDMA wireless systs., noncoherent MLSE detect. of M-DPSK 107583
DS-SS, RAKE receiver, carrier tracking, Ricean fading 131085
DS-SS systs., blind channel estim./data recovery 108543
DS-SS systs., perform. anal. of GMSK chip modulation 85509
DS-SS systs., spectral efficiency eval., general scheme 96509
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
DS/CDMA multiple picocellular radio syst., perform. 131121
DS/CDMA pilot channel assisted syst., channel power assignment 108797
DS/FH SSMA hybrid systs., partial successive interf. cancellation 131054
DS/SFH-CDMA multirate wireless commun., multi-proc. gain anal. 107743
DS/SFH-SSMA hybrid syst. over mobile satellite log-normal shadowing channel 131304
DS/SS systs., fast varying correl. multipath channel, blind adaptive estim./diversity combining 108529
DS/SSMA band-limited commun., closed-form BER expression 108524
DS/SSMA tech. for MBC 131338
DS/SSMA unslotted ALOHA syst. with variable length data traffic, perform. anal. 131242
DS/SSMA with random spreading seqs./matched filter receiver 85803
DSL perform. in Gaussian and far-end crosstalk noise environ. 96304
DSSS high-speed adaptive receivers, parallel digital archits. 108617
DSSS systs., modified lapped transform domain median filter for narrowband interf. suppression 131066
DVB satellite broadcasting syst., turbo code technol. 106075
DWDM transm. using directly modulated fiber Bragg-grating external-cavity laser 120290
ECG sig. compression, wavelet transform. of lin. predicted error 87387
EDGE mobile radio syst., space-time coding 85670
EGPRS wireless networks, link adaptation/power control for streaming services 131161
enhanced block coded modulation using iter. decoding based on parity check codes 129067
equalizer perform., on-line eval. based on HOS 119189
event probab., seq. estim. 119097
expander codes, error probab. exponents 129070
fast Rayleigh fading channels, convolutional codes over rings *(Japanese)* 83845
FDSS and FH commun. systs., optimum self-ref. spatial diversity proc. 119903
FDTL-spatial/MLSE temporal equalizers in CCI, link-level simul. results 108891
FFH/BFSK with product combining, partial-band jammed Rayleigh fading channels, BER eval. 108530
FFH/BFSK with product combining over partial-band jammed Rayleigh-fading channels, BER perform. 119873
FFSK modem, BER charact., automated meas. 128975
FH CDMA generalized multi-carrier transceivers 107740
FH co-located systs., perform. degrad. 108540
FH-SS systs., side inform. reception 108541
FHMA turbo-coded commun., iter. multiuser detect. 107614
fiber Bragg gratings based encoder/decoder in direct seq. opt. CDMA syst. *(Chinese)* 120310
FIR channels excited by convolutionally encoded inputs, MLE 95807
FIR DFE for wireless data commun., fast optim. 73841
fixed convolutional codes, error probab., tighter bounds 72795
fixed wireless access syst., simulated tolerance for uplink sync. 85560
fixed-length coding of general sources, error exponent and min. achievable rates 129028
fixed-length homophonic coding for general source, theorem 129167
flat-fading channels, DOF in adaptive modulation 119879
FM digital double errors 72744

error statistics continued
FPGA-based software radio syst., config. data transm. scheme *(Japanes* 108591
freq. adaptive radio syst. with sounding sigs. 108649
freq. selective fading channel, turbo codes with multilevel modulation 10605
FSK low power receiver for space appls. 96634
FSK ultra low power all-digital receiver for deep space appls. 74904
FTDL-spatial/MLSE-temporal equalizer, perform. eval. using field meas. da 84875
gain-clamped EDFA power transients, influence on opt. receiver BER 93517
Gallager bounding tech. for turbo-like codes over fading channels 117982
Gaussian noise perturbed vectors, phase angle distrib. 72745
general sources fixed-length source coding, error probab. 72784
generalized error-locating codes, decoding *(English)* 72845
Gilbert-Elliott channel with interleaving/retransmission, delay anal. of blo coded transm. 94271
GMSK modulation, slow freq. hopping, demodulation *(Chinese)* 74548
group-metric multiuser decoding 84892
GSM fast fading channels, blind/nonblind turbo estim. 108937
H.263-based turbo-equalised video telephony for GSM/GPRS 130279
H.263-compatible error-resilient video coder 95398
H.324 videotelephony std., H.263 picture header recovery 119504
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
high rate turbo codes over Lorentzian channels, max. likelihood decoding boun 83831
high-dens. mag. recording channel, turbo decoding of generator matrix co 72915
high-rate differential space-code modulation for interf. suppression 83816
high-rate pers. area networks, channel estim. with interf. cancel. 74513
high-track-dens. opt. discs, radial direction partial response 71221
hole/axle dimens. meas., extreme value orient., turn back pt. error 86949
HPA nonlin. effects on freq. multiplexed OFDM sigs. 119922
hybrid AM/OFDM light ware syst., BER perform. *(Chinese)* 96301
hybrid DS-FH-SS syst., transform domain interf. suppression *(Chinese)* 1302
hybrid SC/MRC combiners, Gaussian weighting errors effect 85482
hypercubic ring high-dimens. code, correcting limit, geom. decoding algo 83928
hypothesis testing from vector-quantized data, perform. limits 128932
ideal/optimal/real/adaptive sig. receivers 108622
IEEE 802.11 WLANs perform. in Bluetooth environ. 85271
IEEE 802.11/ETSI HIPERLAN type 1 under burst noise channel, perform. com parison 96089
image transm., error resilient sync. codeword for VLC 95299
image transm. over mobile fast-fading channels, wavelet noise cancell tion/interleaving techs. 95123
image watermarking, coding techs. for data hiding and capacity limit 95047
in-house IR wireless commun., very high bit rates 86122
indoor freq. hopping picocellular networks, interf. avoidance 85514
indoor precoded packet wireless systs., fast code rate adaptation 96445
indoor wireless appls., perform. of turbo-coded MC-CDMA 108754
indoor WLAN, adaptive pre-selected sector antenna transmitter diversity usin DS-CDMA 108211
inform. diags., entropy, index of coincidence and error probab. 128935
inform. fusion, param. estim. by Bayes method 84675
instrumentation/transducers, symm./relative errors 97115
interf. avoidance commun. using wavelet domain transform. techs. 96399
interferometric ultrafast SOA-based opt. switches for high-speed networ 120240
interleaved (2,1,7) convol. codes in mobile image commun. syst., perform 72918
interleaved fading channel block codes, decoding error probab. bounds 11792
Internet-type protocol testing in simulated small satellite environ. 119357
IP radio networks, QoS provisioning, flexible fair queuing 74591
IP wireless networks with multiple classes, QoS provisioning through flexib fair queuing 74859
IR wireless commun. systs., direction diversity, adaptive-rate code combini 108198
IS-2000 CDMA networks, fast forward link power control perform. 85797
IS-95 CDMA uplink, perform. improvement using decision feedback and sub optimal Viterbi decoding 108936
IS-95 downlink SIC receiver, ML rate determ. perform. 105811
IS-95A uplink code, decoding 74628
ISI channel, precoder effect on serially concatenated coding systs. 94295
ISI channels, reduced-complexity receiver capacity 118003
ISI corrupted baseband transm. systs., BER estim. formulae 96010
ISI-free pulse better than Nyquist pulse for same excess bandwidth 117869
ISI-impaired narrow-band multiuser systs., min.-error-probab. single-user detec 83407
ISI-like channels, sym. error probab. bounds 128916
iter. algm. for calculating posterior probab./model representation 129180
iter. decoded parallel concatenated codes, convergence behavior 129018
iter. receiver algm. for space-time encoded sigs. 106134
joint MELP turbo coding with unequal error protect. for speech sigs. 73022
joint source/channel coding design 94303
lin. block codes, unified BER approx. 129007
lin. coding on noisy channels, decoding bit-error probab. upper bound 12911
lin. convolutional encoders in noise, constraint length/generator polynomia recovery 106102
lin. parallel interf. cancellation, large syst. anal. 128805
lin. parallel interf. cancellation, perform. 84797
lin. UEP codes, sym.-by-sym. MAP decoding 72937
list-of-L decoding error probab., expurgation exponent at low rates 129133
LMR, CCI reduction and path-diversity reception 74739
LMS and logistic-lin. equalizers, adaptive combination for speed-perform improvement 119174
LMS channel, fig. of merit for interleaver depth eval. 108658
low dens. parity check codes for coded modulation scheme 129031
low-dens. parity check codes over finite-state binary Markov channels, decodin 129084
low-power sig. proc. in deep submicron era, algorithmic noise-tolerance 11488
M-ary noncoherent orthogonal FSK over Nakagami fading channels, av. BE perform. 94227
M-CPM with MRC diversity in Rician, Hoyt and Nakagami fading channe 106047
M-PSK sigs., cost fn. for blind estim. 95804
M-PSK sigs., successive cancellation based multiuser detector perform. 13015
{m-QAM}^{2} modulation, BER anal. 128972
M-QAM perform. in freq. non-selective slowly fading channels 94255
machine speech recogn. systs. usability *(German)* 73076
mag. recording, single and multiple parity codes perform. anal. 72914

r statistics continued
nag. recording channels, low-dens. parity-check codes appl. 72884
nag.-induced super resoln. opt. media, PRML read channel handling nonlin. *(Japanese)* 71248
MAP forward-only algms. *(Chinese)* 94332
nap seq. method of error characts. theoretical eval. 86365
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulation 94243
MDS codes, BER 72822
measuring inform. about inform. 128927
MF-TDMA satellite systs., efficient resource allocation for QoS channels 108975
MIMO equalized multipath fading channels, dist. spectrum computation 84859
min. complexity seq. multihypothesis detect. 128923
min. complexity seq. multihypothesis detect., weak seq. tests 83779
ML decoding, approx. upper bounds on error probab. of lin. codes *(English)* 72834
ML-decoded low-dens. parity check codes, tangential sphere bounds on ensemble perform. *(English)* 72840
MM-wave band wireless network, impact of shadow fading 108595
MM-wave fibre link based on two-sect. gain-coupled DFB lasers, 40 GHz 96652
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuser detect. 73721
MMSE-DFE receiver with spatial diversity, design and anal. error perform. 85808
mobile commun., bit-interleaved turbo-coded modulation 119950
mobile commun., metric weighted diversity combining based on multiple differential phase detect. 74742
mobile on-sea terminals, medium power LD commun. 96878
mobile radio discrete-time sigs., residue-division MUX 85717
mobile radio environ., perform. assess. of adaptive equalizers 108763
mobile radio MIMO smart antennas, optim. 85863
mobile radio syst., overall perform. improvement 108730
mobile radio video transm., unequal error protection 85891
modem-based commun. using synchronized chaos 72738
modified multistage decoding for fast freq.-hopped multiple access MFSK syst. 96375
modular partial response channel software simulator 104534
moving obj. localisation, multi-label fast marching algm. 107283
MPEG-2, remnant error concealment tech. for error recovery 95320
MPEG-2 coded video seqs., space/freq. masking, digital watermarking appl. 95058
MPSK, coherent, multichannel reception over freq. selective fading channels, perform. eval. 106045
MPSK/MDPSK/noncoherent MPSK with MRC/SC space diversity in Nakagami-m fading channel, sym. error probab. 96463
MRC coherent receivers in Nakagami-m fading channels, perform. anal. 85507
MT-CDMA noncoherent syst. with diversity combining 131050
MT-CDMA sigs. receiver, two-stage MLSE 119910
multi-carrier CDMA, transmitter diversity 108775
multi-code CDMA syst. based multi-class services, access control scheme *(Chinese)* 119229
multiaccess scheme over flat slow fading channels, anal./simul. 84894
multibeam satellite commun., CDMA and switching 109006
multicarrier CDMA, turbo TCM and serial concatenated convolutional code in Rayleigh fading 106029
multicarrier CDMA in multipath fading channel, successive carriers overlapping, perform. effect 73863
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multicarrier transceivers, BER efficient estim. 85407
multifold turbo codes, BER perform. 129126
multilevel coded modulation, combined equalization/decoding 83876
multilevel codes, iter. decoding 72886
multilevel codes, multistage reliab.-based decoding algm. 129137
multimode multiservice software radio, adaptive multisampling proc. *(Japanese)* 108590
multipath fading channel, turbo coded modulation, error perform. bound 106060
multipath-fading channels, bandwidth-efficient pilot-sym.-aided tech. 108813
multiple access commun., general model 95831
multiple description codes perform. over bit error channels 129183
multiple parallel concatenated single parity check codes 129199
multiple sym. differential detect. with diversity reception 108517
multiple sym. differential detect. with diversity reception 73730
multiple turbo codes, non-parallel decoding struct. 129098
multirate DS-CDMA in fading environ. 108712
multiuser DFE of block-spread multirate transms. for QoS wireless networking 84862
mythology of turbo codes *(English)* 72839
N-best proper nouns pronunciation, automatic generation 84033
Nakagami fading, CCI, av. error probab. of optimum combining 85747
Nakagami fading channel, selection diversity, perform. anal. *(Chinese)* 119870
Nakagami fading channels, generalized diversity selection combining, BER perform. 96453
Nakagami fading channels, NPCSMA protocol for NCPSK/QPSK, data packet transm., perform. eval. 85515
Nakagami-m fading, generalized selection combining, approx. BER perform. 84812
narrow-band subliminal channels, carrier bits embedding, error-control method 83964
near-optimal codes on two-state Markovian additive channel 129189
next-generation opt. network perform., multi-tiered monitoring approach 131497
noisy channels, error-resilient zero-tree wavelet image coding 73333
non-iter. waveform deconvolution, anal. reconstr. filters 118996
nonlin. channel equalization, reduced-complexity clustering 73827
nonlin. PSK satellite syst., CCI influence on perform. 74873
nonlin. satellite channel, equalization combined with trellis coded/turbo TCM 108985
NPP safety, human error probab., human model simul. 112226
Nyquist DMSK for min. BER 106027
oblivious data hiding, periodic signaling scheme 106146
OFDM, BER perform. and optim. in tunnel entrance environ. for intell. transport systs. 108773
OFDM, joint time freq. sync. and channel estim. using one training sym. 106042
OFDM, peak-factor reduction by Reed-Muller channel coding, soft decision decoding algm. 106161
OFDM, selected mapping peak-power reduction without explicit side inform. 83804
OFDM A-law companded syst., SER anal. 72734

error statistics continued
OFDM in freq.-selective fading environ., timing sync. *(Japanese)* 108820
OFDM mobile radio syst., effect of weather radar on perform. 108214
OFDM mobile wireless syst., reduced complexity channel estim. 108892
OFDM sig., peak-to-av. power ratio reduction by interleaving 106040
OFDM sig. dyn. range limiting to reduce peak-to-av. power ratio 106056
OFDM signalling over doubly-selective fading channels, perform. anal. 72748
OFDM sigs. in nonlin. channels, mixed BB-IF predistortion 117893
OFDM sigs. on HF-channels, blind equalization 107611
OFDM sync. techs. for freq.-selective fading channels 83796
OFDM syst., two-ray multipath channel, polynomial cancellation coding 106057
OFDM systs., 2D iter. APP channel estim./decoding 72815
OFDM systs., carrier freq. offset effect 106039
OFDM systs., nonlin. distortion compensation 72731
OFDM systs., space-time code design 72860
OFDM TDD systs., adaptive interleaving 72750
OFDM with postdetection-combining-based macrodiversity on multipath channel 119890
OFDM-CDMA mobile radio syst., multipath fading channel, BER eval. 108893
OFDM-CDMA syst., anal. of parallel interf. cancellation scheme 96579
OFDM-CDMA syst. with various proc. gains, perform. 74654
OFDM/QAM sub-carrier synchronized syst., importance sampling anal. 72735
OFDM/SDMA-based wireless local networks, adaptive loading 74605
OFDMA, subcarrier allocation and power control 106036
office environ., 5.25 GHz OFDM expt. study 131084
OOK CDMA indoor IR wireless systs. on diffuse channel, perform. anal. 86124
opt. ASK coherent and PSK squeezed-state sigs., quantum detect. 119089
opt. CDMA, modulation using ECC embedded in opt. orthogonal code 128987
opt. CDMA encoder/decoder based on fibre delay line 96823
opt. direct detect. CPFSK transm. syst., self-PM 131406
opt. MAN and WAN, multi-λ packet labeling 86010
opt. orthogonal code design using GA 128999
opt. wireless commun., dual header-pulse interval modulation 86118
optimal wideband transmit antenna diversity utilizing channel state inform. 108745
optimum binary spreading seqs. of Markov chains for async. DS-CDMA systs. 129000
optimum space-time convolutional codes 83940
orthogonal multicarrier-CDMA tech. with MRC scheme on two-ray multipath fading channels 96376
packet based wireless commun. systs., adaptive modul. for fading channels 72749
parallel concatenated codes, iter. decoding trajectories *(English)* 72838
parallel concatenated TCM, perform. eval. 129024
partially coherent MC-CDMA downlink perform. in Rayleigh fading channels 108568
partitioned and parallel concatenated convolutional codes with puncturing, comparative study 83889
pass. WDM opt. rings, enhanced syst. perform., power mgt. 96767
peak power distortionless reduction without explicit side inform. 72765
pers. area networks employing CCK modulation, low-complexity channel estimator 131277
perturb. methods for cancelling multi-user interf. 128800
phased array radar, target tracking with adaptive sampling intervals *(Japanese)* 75214
PHS base station, perform. of adaptive array antenna *(Japanese)* 74843
pilot sym. assisted modulation, sync. results 83802
pilot sym. assisted turbo codes over flat-fading channels, iter. channel estim./decoding 106154
PMMA free-space micro-opt. modules, design, fab. and characterisation for photonic interconnects 127813
Poisson arbitrarily varying channel capacity and decoding rules 128965
polariz. mode dispersion compensator limitation in fiber commun. syst. *(Korean)* 74908
polariz. mode dispersion fibers, Jones transfer matrix 93101
polymer multimode waveguide backplane, 2.5 Gbit/s transm. 104731
PPM approach to watermark detect. and decoding 95049
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
PPM-CDMA commun. syst. with opt. hard-limiter 74910
PPM-CDMA sync. fiber-optic systs., interf. reduction 109042
pre-combining advanced blind multiuser detector for time and freq. selective wireless channel 119955
precision meas. uncertainties estim., ISO Guide alternative 109390
predetection dual diversity in correl. Rayleigh fading, EGC/SD perform. 74555
PRML systs. using rate 9/10 trellis codes, perform. eval. 106115
PROFIBUS token-passing protocol over error-prone links, ring stabil. 130627
propag. phase noise and impact on future VSAT syst. design 108981
PSK sigs. with channel interf., BER perform. derivation methods 85490
PSK turbo-coded binary sig., carrier recovery cct. using periodically inserted deterministic syms. 83887
pulse interval modulation-CDMA opt. wireless commun. scheme, BER 86119
pulsed sigs. class., limits 107330
punctured convol. codes, soft decision decoding in Rayleigh channels 72868
Q-CDMA and chaotic SS CDMA systs., perform. comparison over Saleh indoor channel 74584
QPSK demodulator perform. improvement for quadrature receiver with amplit./phase imbalance correction 94228
QPSK syst., bit error probab. in presence of noise and multiple sine interfs. 72772
quadratic receivers in Rayleigh-fading channels, asymptotic error probab. anal., coherent/noncoherent space-time receivers anal. 119864
quadrature chaos shift keying scheme, perform. 94239
quantum Gaussian channel, Gallager fns. and error exponents 128963
quantum inform. theory, error exponents 128962
quasi-max.-likelihood multiuser detect. by semi-definite relax. 130154
quasi-ML multiuser detector using semi-definite relax. 84791
query-based variant of parallel repetition theorem 106215
RAKE coherent combining for broadband single-carrier DS-CDMA wireless commun., expt. 74638
RAKE receiver with imperfect phase estim., perform. upper bounding 108528
RAKE selective reception over Rayleigh fading channels, optimum spreading bandwidth 85460
random meas. errors summation, indirect errors anal., MC method 86366
randomized Hopfield networks, recogn. ability 93270
rapid fading channels, space-time codes error probab. 96356
rate compatible product codes 106094
Rayleigh dispersive channel commun., matched filter bounds 119877
Rayleigh fading channel, GAC-based trellis decoding of block codes 94275

error statistics continued
Rayleigh flat-fading channels, efficient suboptimum detector based on lin. prediction 73727
real-time traffic in high bandwidth-delay products/BER networks, rate control scheme 119299
receiver bit estim., asymptotically optimal empirical fusion 130187
recursive Gram-Schmidt orthonormalization procedure and appl. to commun. 85533
recursive systematic convolutional codes, twin-stack decoding 94294
REESE method for soft error detect. in µP 106147
Rice's atten., distorted sigs. reception under conc. interf., error probab. 83324
Rice factor estim. algm. 94213
Rician fading channels with Doppler shifted direct component, freq. offset compensation *(Japanese)* 108821
robust chaotic synchronisation for commun. 95753
robust high capacity data embedding 95065
robust layered coding of video for transm. over noisy channels 107105
Rohde & Schwarz's CMU200 universal radio commun. tester for GSM BER meas. 78592
Rohde & Schwarz RF low levels meas. and calib. 74569
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN channels, perform. anal. 108542
RS codes, adaptive coding and modulation for Rayleigh fading channels 128995
RS codes matching with 4-DPSK block detectors 72774
S-CDMA and TDMA, comparison for cable modem upstream channel 84883
SAGE algm. behaviour in 2D multi-user environ. 84673
satellite commun., four-state Markov model for burst error anal. 96625
SC/MRC hybrid systs. on Nakagami-m channels, error rates 85484
scalable secure storage, half syst. is faulty 106074
SD/TD/CDMA systs., joint detect./pre-distortion techs. *(English)* 130147
selective RAKE diversity in multipath fading 74558
self-organized network, QoS routing protocol 96602
semi-blind block channel estim./sig. detect. using HMM 73731
separate coded PPM, iter. decoding of convolutional codes *(Japanese)* 117914
serially concatenated code charact. matching for iter. decoding 117989
shadowed satellite mobile channel, PRCPM with DPD and MRC *(Chinese)* 108973
SHF/EHF direct-conversion six-port receivers, Bayesian network decoder 108519
sig. detect. and shift-param. estim. with compression by orthogonal polynomials 119090
sine-wave modulation VMSK tech. for bandwidth efficiency improve. 83799
sliding window algm., interleaver design 129193
slow freq. hopping syst., error code rate reduction, SW sq. root Kalman filter *(Chinese)* 74547
slow-freq.-hopped slotted ALOHA systs. with retransm. cutoff, stabil. 131062
slowly fading multipath channels, error probab. of adaptive DFE 84876
SOA, perform. depend. on pump and sig. power of wavelength converter based on FWM 105282
SOA, single to multi wavelength conversion using ASE 131416
SOA delayed-interf. config. for all-opt. wavelength conversion 120319
SOA power equalization device, OXC nodes, BER perform. *(Chinese)* 74928
soft-decision decoding, nonredundant error correction differential detect. 94321
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
source-controlled channel decoding, correl. param. estim. *(English)* 72849
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
space-time block codes, max. SNR approach 74521
space-time block codes with partial channel state feedback, perform. anal. 83941
space-time code perform. anal. for quasi-static fading channels 129090
space-time codes, demodulation in presence of interf. 72926
space-time codes, design for large no. of receiving antennas 106158
space-time codes, outage error probab. over Rayleigh fading 129185
space-time codes perform., spatial fading correl. impact 106136
space-time coding perform. on slow Rayleigh fading channels 129131
space-time equalizer devel./implement. 74858
space-time systs., optimal training 108607
space-time trellis codes, dist. spectrum computation 83855
space-time trellis codes, measure of coding gain 129158
space-time trellis codes over quasi-static fading channels, perform. bounds 129089
space-time turbo codes, fading channels decorrelation props./perform. anal. 72863
spatial CDMA for multiple antenna access, capacity/error rate anal. 74529
spatial sig. proc. merging diversity/beamforming perceptions *(English)* 107549
spatio-temporal equalization based on estim. channel response 119182
speech recogn. confidence scoring using perturbed input feature vectors 118108
SS broadcasting syst. spectral overlay for digital video delivery on analog TV band 108631
SS commun. systs. using lapped transform, NBI excision *(Chinese)* 94066
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
SSMA ultrawideband syst. using time hopping/M-ary PPM, perform. 85462
std. Gaussian random variable and infinite variance steady random variable comparison 84677
subband and transform coder optim., theory and appls., review 84736
subcodes of Hamming codes, near-optimality on two-state Markovian additive channel 129021
subjective video quality over error-prone channels, control strategy 96587
sym. synchronisers, improved fig. of merit 130188
symmetric Mach-Zehnder type all-opt. switches for for ultrafast all-opt. sig. proc. 120317
sync. CDMA, multiuser detect. using probabilistic data assoc. 119210
sync. CDMA syst., perform. of UCHT seqs. 73848
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multiuser detector 85527
syntax-based error concealment 95146
syst. archit. for broadband fixed wireless capacity maximisation 85572
systematic binary alg. block codes, iter. decoding 72826
TCM anal. and design with transmit diversity for wireless commun. 83826
TCP over wireless networks, perform. improvement 107849
TD-CDMA MAC wideband protocol, scheduling scheme 130459
TDMA systs., lin./nonlin. space diversity combining algms. 119993
TDMA wireless receivers, carrier interferometry pulse shaping scheme 119211
terrain mapping, slope-aspect, interpolated data 122606
thin polymer storage layer dens. optim. for polariz. holograms 82975
three-state Markov chains, optimum spreading seqs., SSMA 94307
time base distortion, nonrandom quantis. errors, compensation 121062
time-interleaved analog channel, error anal. 79992
time-selective fading channels, double differential space-time block coding 119878

error statistics continued
touch screen IR sig. detect., syst. perform. 73716
touch sig. detect., optimal receiver 75810
transmit diversity for arrays with correl. Rayleigh fading 108909
transparent multiwavelength opt. network error probab., opt. MUX/DEMUX 131596
trellis coded M-ary 1RC CPM with lin. receiver/pre-coding, perform. 106028
turbo code perform. and design trade-offs 106083
turbo coded OFDM for LEO global mobile commun. satellite channels 11790
turbo codes, error floor and free dist. 129196
turbo codes, interleaver design 72876
turbo codes, tight bound on bit error probab. 83888
turbo codes, trellis termination methods theory/perform. 72877
turbo coding/unitary space-time modulation 129102
turbo decoding, complexity reduction 120061
turbo proc. in joint multi-user detect./decoding *(Chinese)* 94333
turbo product codes, perform. over partial response channels 117999
turbo space-time low complexity code for syst. with large no. of antennas 7285
two-channel time-varying filtering, min. error variance 95677
two-user multiple-access channel using complex-valued sig., uniquely decodable code 72805
UHF components selection, acceptance checking, stat. method 69228
ultra-high-Q microsphere resonators, single-mode opt. fiber coupling mechanism 104795
underwater target class., sonar bandwidth effects 77042
universal homophonic coding 129108
universal hypothesis testing, competitive Neyman-Pearson approach 128921
uplink CDMA systs., multistage multiuser detector with parallel interf. cancellation 84895
upper bound for single user as fn. of interfering user's sig. strength 107575
urban multipath channel, transform domain/cyclic code shift keying syst. 8394
UTRA downlink with W-CDMA, space diversity schemes 120065
UTRA TDD, MMSE adaptive receiver 119947
UTRA/FDD uplink, space-time combining 74825
UWB impulse radio, appls. of symbolic dyn., pseudo-chaotic encoder 96382
variable redundancy coding for mobile channels 129057
varying channels, progressive source coding with regressive channel coding *(English)* 72892
VCSEL, noise assisted binary inform. transm. 82759
VCSELs, piecewise lin. modeling 93714
vehicular speed response PLL using sq.-law ccts. *(Japanese)* 74793
verifiable partial escrow of integer factors 130449
visual target distinctness prediction, min. error gain 129862
Viterbi 4-state soft decision decoding, bit error probab., exact anal. 129118
Viterbi algm. for DSPs, software radio appls. *(Slovenian)* 96511
VQ for channels with memory 129182
W-CDMA, MUX and channel coding scheme, implement. algm. 107735
W-CDMA, optimal power distrib. for successive interf. cancellation 85812
W-CDMA cellular systs. supporting multimedia traffic, perform. eval. 84890
W-CDMA channels, multimedia transm., resource allocation with adaptive QoS 85384
W-CDMA mobile syst. uplink, channel estim. params. 96572
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108886
W-CDMA reverse link, receivers for packet transm., comparison 108884
W-CDMA syst. smart antenna, wideband multipath channel 131063
W-CDMA/OFDM for mobile multimedia commun. via LEO satellites, uplink perform. comparison 85640
Walsh-Hadamard spreading/joint detect., excess signaling concept 73729
WATM/CDMA protocol, MAC layer anal. 73899
wavelet packet modulation, transm. method in pulse-wise noise *(Japanese)* 106054
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA single code/multi-code signalling for high rate data transm., delay spread effects, BER perform. 96465
WCDMA UTRA uplink with unknown channel model order, smart antenna schemes 74688
WCDMA vehicular channels, turbo TCM error perform. 74808
WDM ring network with multiple add-drop nodes, perform. eval. 96768
wireless ATM, hybrid ARQ/FEC scheme 95915
wireless ATM, hybrid II ARQ schemes using punctured RS code, perform 119286
wireless ATM, QoS oriented data-link control protocol for CBR traffic 130422
wireless ATM access networks, CLR perform. of random traffic and error control 108644
wireless commun., transmit diversity scheme with power control 108876
wireless networks, energy-efficient antenna sharing/relaying 84979
wireless networks, integrated services with space-time block-coded transms 108612
wireless opt. channels, space-time channel coding tech. 129187
wireless packet switching networks, computer tool for anal. and prediction 108726
WLAN subchannel power controlled COFDM syst. 119889
WLAN systs., power control combined adaptive zone selection 108208
WLAN-OFDM transceivers, front-end non-idealities impact on BER perform 74516
Er fiber laser, stabilized rationally mode-locked, pulse generation, BER 105190
Er-doped fiber amps., WDM networks, power spread histograms 96721
Er-doped fiber dual-stage opt. amps., gain-locking method, WDM systs. appls 93506
GaInAs/AlInAs mid-IR quantum cascade lasers, high-speed digital data transm 128317
InGaAsN VCSELs, singlemode operation, high bit rate data transm. 71789
SiO_2 gate dielec. scaling, long term reliab. estim., error calc. 81417
$SrBaNbO_3$, digital holographic memory, modulation coding 71220

errors
see also coding errors; measurement errors; roundoff errors
2D r-adaptive FEM using error indicators 68067
3-D ultrasound, rigid registration with MR images 132598
3D unconditionally stable graded ADI-FDTD algm., perform. 90197
16 DAPSK sigs., decision feedback differential detect. 73708
algorithmic ADCs, modeling of dyn. errors 102293
all-opt. logic ccts., nondegenerate FWM, polariz. props. 71446
atrial heart fibrillation modelling tool for adequate choice of sig. proc. fns 110594
brachytherapy misadministrations, lessons to be learned 98688
breast radiotherapy, vol. changes/set-up error effects 76760
calib. algms. for antenna arrays 117859
candidate motion vectors for error concealment of video sigs. 73349

ors continued
cct. simul., fast wavelet collocation method with nonlin. companding in time domain *(Chinese)* 90634
chaotic systs. for secure random no. gen., design tools 68537
CMOS pipelined ADC, 14 bit, 20 Msamples/s, design and perform. 68870
CMOS pipelined ADC, 8 bit, 80 Msample/s with background calib. 114846
DAC, nonlin. error modulation, spectral shaping 90989
deep submicron SoC interconnects, high-level crosstalk defect simul. 104013
dual header pulse interval modulation opt. wireless commun. error perform. 75068
functional elec. stimulation, error correction, safe stimulation patterns 133006
GPS systs., simul. software tool 75254
high-dens. DVD, opt. pickups, spherical aberration detect. 71219
homog. dielec. material in cavity, permitt. and loss factor estim. using FEM 70370
hybrid extragradient proximal-point algm., robustness and converg. anal. 114037
IBM MedSpeak/Radiology software, continuous speech recogn. program eval. for radiology 73065
integrated navig. systs., using accumulated errors to realize closed-loop rectification *(Chinese)* 131710
kinoform gratings, phase-step errors from diffr. efficiencies 72079
Lagrange's undetermined multiplier lens design method, optim. proc. *(Korean)* 93281
LHC, supercond. magnets, random geometric errors 75950
lin. least sq. error minimization using nonorthogonal basis fns. 101043
long period fibre gratings, long period grating resons. 127640
lung tumour radiotherapy, breathing/set-up errors, cumulative dose effect 111222
med. imaging modality interfacing, relay station impact 98120
monthly oceanic rainfall, pass. microwave radiometry, nonsystematic errors 76867
multipath mitigating GPS receiver archits., perform. comparison 131697
opt. pattern recogn., Wigner time-freq. distrib., moments method, noise influence 129851
out-radial opt. pickup systs., push-pull track error sigs. 92980
permitt. and loss factor eval. of material in cavity, inverse tech. 81636
PET, coincidence imaging, rebinning errors due to interact. depth 132986
PET brain images, penalised discriminant anal., prediction error selection 76578
pilot-based multiuser channel estim. systs. for multipath radio environ. 84877
polaris. mode fibre dispersion compensators, BER modelling 131353
radiation oncology treatment setup, simple, routine monitoring/correction 87843
radiation therapy, dose accuracy requirements, review 98679
rigid-body point-based registration, target registration error distrib. 132503
row-oriented multiscale error diffusion tech. for digital halftoning 73196
sinusoidal freq. estim. using median filter *(Japanese)* 119057
speech-to-speech translation, contextual reasoning 106406
subspace-based calib. approach for mutual coupling among sens. in arrays *(Chinese)* 130015
successive approx. ADC, metastability errors influ. on SNR 102267
super-omni wedge concept verification, dose distrib. calcs. 122396
transversal adaptive filtering algm., fast converg. for impulsive environ. 95671
turning spindle motion errors meas. using multipoint method *(Japanese)* 132155
variable stepsize schemes, effective order methods and enhanced order comp. methods 68028
video-conferencing meetings, changing patterns of business commun. 119768
wavelet-based image-coding scheme, variable-coeff. fixed-length coding method *(Chinese)* 95154
wireless video conferencing using multiple description coding 108391
wireless video transport using conditional retransm. and low-delay interleaving 108634
X-ray masks, electron beam writing, thermal image placement errors elimination 126524
MgB_2 based digital cct., BER 102094

-ythema *see biological effects of ultraviolet radiation*
-ythrocytes *see blood*
saki diodes *see tunnel diodes*
saki effect *see tunnelling*

SCA
diamond CVD grains on dot-patterned substrs., electron field emission and surface props. 69419
diamond films, RIE, neg. bias depend. of S and F incorporation 92069
diamond heteroepitaxial growth on pre-deposited β-SiC oriented layer on Si(001) *(Chinese)* 101377
fluorocarbon plasmas, solid particle prod., correl. with polymer film deposition 124901
hard disk coatings, charactn. of nano-wear mechanisms 68476
methanol oxid. at batt. electrochem. co-deposited Pt-Os composite electrode 123775
AlSi-based metallisation in microelectronic devices, corros. inhib. 103488
C nanotubes, uniform patterned growth without surface C 101536
a-C:H DLC films, deposition methods for GMR heads 79293
C_xF synthesized at room temp., charact./electrochem., C starting material effect 99894
CeO_2 thin films as buffer layer for ferroelec. RAM appl., etch characts. 104465
CoSm based mag. media, corros. behavior 101541
$Cu(In,Ga)Se_2$-based solar cells, chem.-bath-deposited CdS, (Cd,Zn)S, ZnS, and $In(OH)_xS_y$ buffer layers 100190
FeMn/NiFe films, improvement of thermal stabil. of exchange coupling by Pt addit. 81857
Ni-P(B) deposits, surface props. & solderability, electroless plating 78599
PZT ceramics, low temp. sintered, piezoelec. props., densification, microstruct. 104354
Si oxide films prepared by RF PECVD, C impurities reduction 90363
Si, oxynitridation in N_2-N_2O atm., nitrided silicon precursors, XPS 126361
Si oxynitride films, plasma-nitrided, gate-quality, XPS study 103331
Si, porous, implanted with N by PIII 81035
Si related materials, surface modif. using Cat-CVD syst. for ULSI appls. 124973
Si:Mo, plasma based ion implant., XPS studies *(Chinese)* 80986
nc-SiC film growth, hot filament CVD 68263
SiGe epitaxial layers on Si, anodic oxid., enhanced passiv. of oxide/SiGe interface 92049
$a\text{-}Si_{1-x}Ge_x$:H thin film solar cells, optoelectronic props. 89290
SiO_2 selective etching over Si and Si_3N_4, etch react. and reactive species flux in plasma 126373
SiO_2:N PECVD layer, ion implanted, barrier to Cu metallization *(English)* 103451
SrS:Ce thin films for electrolum. displays, tris(cyclopentadienyl)cerium as Ce dopant source 101321
W at. layer deposition, kinetics of WF_6 and Si_2H_6 surface reacts. 79238

ESCA continued
WO_3 and polypyrrole based electrochromic device, charact. 71413
$YMnO_3$ ferroelec. thin films, etching mechanism in Cl_2/Ar gas chemistries 104276
Zn(Se,OH) buffer layer as heterojunction partners on $Cu(In,Ga)(S,Se)_2$ thin film solar cells 100189
Zr-Sn-Ti oxynitride thin films, enhanced dielec. props. 70379

ESD *see electrostatic discharge*
ESDI *see peripheral interfaces*
ESPI *see electronic speckle pattern interferometry*
ESPRIT *see research initiatives*
ESR *see paramagnetic resonance*
ESR imaging *see EPR imaging*
Estelle *see specification languages*

estimation theory
see also adaptive estimation; amplitude estimation; frequency estimation; information theory; maximum likelihood estimation; nonlinear estimation; parameter estimation; phase estimation; recursive estimation; sequential estimation; state estimation
3G flow-oriented multimedia networks, QoS guarantees 96450
adaptive exponential filter, inverse transfer fn. estim. *(Japanese)* 84720
adaptive noise reduction filter using cascaded sandglass-type neural nets 73686
adaptive transm. syst., in-service estim. scheme for radio propag. path characts. *(Chinese)* 74565
ADC lin. estimators, stat. efficiency 114833
area-based image matching, precise sub-pixel estim. *(Japanese)* 94613
automatic discriminant feature extraction from stochastic proc. samples 129903
autoregressive model order estim., composite hypothesis testing 100793
Bayesian sig. classifiers, soft probabilistic neural network implement. 107314
binary arith. coding and rapid probab. estim. 73325
bispectral estim., multitaper approach 118864
blind sig. separation from noisy lin. mixtures 118823
blind source separation, high-dimens. lin. separation problems 118797
blind source separation by closed-form estimators 84785
blind source separation via Gaussian mutual inform. criterion 118794
borehole wall 3D shape meas., stereo vision, increment sign correl. *(Japanese)* 75863
brain midsagittal plane extraction from coarse pathological 3D images 87307
Bussgang-zero crossing equalization, integrated HOS-SOS approach 130267
CALIBR, computer aided calib. syst. for hand-held multimeters diagnostics *(Polish)* 131817
carcinogenesis, visually safe dose estim., optimal risk assess. 98832
CDMA multiuser detect. based on state-space estim. 108615
CDMA RAKE receivers, channel estim. errors and Doppler diversity 108920
cellular telephone antennas affected by human body interact., current distrib. estim. 117796
cluster no. and influence zones estim. 118755
CMM feature based metrology systematic error uncertainty estim. *(Japanese)* 75337
color image restoration, multichannel M-filtering 94521
complex valued sigs., fast robust deflationary separation 118799
conc. multivariate outliers ident. using ang. props. 113831
concomitant variable selection in ratio method of estim. 124614
CPLD/FPGA power consumption estim./modelling 125452
cylinder press. peak posn. in internal combust. engine, indirect meas. 121180
differential chaos shift keying commun. syst. 128996
distrib. network peak load estim., fuzzy regression approach 111973
DPSK blind sym. estim., differential correl. approach 85542
DS-CDMA multirate systs., channel estim. 108918
DS-SS sig., pseudo-random seq. blind estim. 107623
DSP-based ionos. radio-link using DS-CDMA and on-line channel estim. 108630
ECG sigs. proc., min. dimens. embedding of chaotic attractor 110653
EMC models squaring and smoothing, stat. soln. 83370
epipolar geom. estim., N-dimens. tensor voting appl. 106498
ergodic chains, serial tests and entropy estimators 117863
error-correcting output code, least sq. and estim. measures 117955
fast-developing utility long-term load forecasting techs. 111943
fault detect., decentralized filter using estim., games 67660
fuzzy random variable variance/covariance, appls. 67788
GSM and UMTS mobile systs., anal. blind discrete source separation 118801
high resoln. 3D snapshot ISAR imaging and feature extraction 96924
high-rate pers. area networks, channel estim. with interf. cancel. 74513
high-speed networks, equiv. capacity estim. using fuzzy logic 74106
IC layout, congestion-driven placement algm. based on cell inflation *(English)* 103980
IC layout congestion estim./minimization during placement 104002
ICA, simultaneous mutual inform. based estim. of components and distribs. 107437
ICA in presence of Gaussian noise based on estimating fns. 107428
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image compression, wavelet upper bounds on 2D Lipschitz class and zerotrees 118560
image matching, outlier rejection by rot., ROR algm. 95474
image sig. proc., impulse noise removal *(Japanese)* 84135
independent component anal. estim. by neural net 119081
inform. fusion, param. estim. by Bayes method 84675
INS errors estim. using GPS meas. 131699
intercardinal antenna pattern based on cardinal data, estim. 117759
Internet characts. inference from moment-based estimators 119687
key-variable anal. in data reconciliation, gross error detectability *(Chinese)* 109391
land mine detect. and class., stat. sig. proc. 73123
Laplace estimator based on finite window for Markovian source, redundancy *(Japanese)* 83777
long-range elec. load forecasting, climatic effects prediction 111941
low-speed high-torque PM motors, optimum design approach 88680
Markov chains, look-ahead dens. estimators 78812
Markov sigs., joint detect./estim. systs., stat. anal., Kotel'nikov theorem 73741
MIMO channels, blind estim./equalization, multidelay whitening 107689
mobile ad hoc networks, prediction-based link availability estim. 120070
MPEG video coding, rate-distortion charact., hybrid models 95253
multicarrier sigs. in fast/selective Rayleigh channels, channel estim./detect. 108518
multiple description video coding, efficient estim. theoretic prediction 95106
multirate sig. estim., stat. inference problem 119063
multirate Wiener filter, random proc. estim. 107533
multivariate outlier detect. and robust covariance matrix estim. 113830

estimation theory continued
Mumford-Shah problem, curve evol., boundary-value stochastic procs. 94837
neural responses, functional MRI estim. and classif. 98404
noisy speech recogn., nonstationary AR HMM method 118144
non-adaptive fibre grating equalizers 109057
non-cooperative target recogn. using radar scatt. subspace fitting anal. 131632
nonhomogeneous Poisson procs., modelling and simul. 100790
nonhomogeneous scalar conservation laws finite vol. schemes 79064
nonlin. ICA using ensemble learning, theory 107448
normal proc. mean, interval estim. from rounded data 100794
OFDM and related multicarrier systs., finite-alphabet based channel estim. 106014
optimal binary filter, small-sample error estim. 130068
orient. estim., conventional techs. and non-differential approach 118344
oriented pattern curvature estim. by curvilinear models 118719
parallel load-sharing syst., counting proc. survival model 124426
parametric and nonparametric models, fitting to noisy data, Bayesian method 78986
PCA improved using Bayesian estim. 124524
pole-filtered cepstral mean subtraction method, implement. for speaker recogn. 84062
power syst. protection, symm. components ident. 123049
probabilistic models, learning VQ algm. 117969
proc. incapability index estim. relibility 113782
radar data modeling with time series models 118879
random lower semicontinuous fns., ergodic theorem 79443
repair-cost limit replacement problem, optimal policy, Lorenz transform approach 78709
Rice factor estim. algm. 94213
risk sensitive nonlin. filters, robust limits 130086
road networks estim. using archived GMTI data 133403
robust ICP registration algm. extension using M-estim. *(Japanese)* 129877
scaling exponents time constancy, stat. test 118848
self-validating sens. probab. estim. algms. 132083
sig. detect. using approx. Karhunen-Loeve expansions 73712
sigs. multidimensional multiresolution Fourier estim. 95633
single DOF simultaneous localisation and map building problem, closed form soln. 75412
smart antenna systs., low complexity array response vector estim. 105935
space-time block precoded transm., channel subspace-based estim. 108610
speech enhancement, Bayesian evidence approach 73013
stochastic procs., generalized moving continuous-discrete extrapolation 67774
surgery, image-guided using 3D ultrasound, intra-operative soft tissue deform., Bayesian estim. 87480
TOA estim. based on higher-order cumulant *(Chinese)* 73563
topographic independent component anal. 78830
UMTS, downlink interf. estim. 74624
univariate sig. denoising, VC theory 107568
video scalable predictive coding optim. 84448
VLSI routing estim., via impact model 101638
wavelet-based image estim., empirical Bayes approach 106689
wavelet-polyspectra, principles and props. 118865
wireless commun. utilizing space-time diversity 108618

etalons *see interferometers*

etching
see also crystal defects; dislocation etching; laser beam etching; sputter etching
1.5 μm wavelength distributed reflector lasers with vert. grating 82651
2.4F^2 memory cell technol. with stacked-surrounding gate transistor DRAM 102122
3D additive nanolithography, electron beam induced deposition 126570
6×6 aperture array micromachined sens.-head, opt. data storage appls. 93003
128×128 microshutter array design, lithog. proc. 93196
150 mm through substr. interconnect fab conversion for III-V wafer mfg. 126513
AA1050 Al-plates, electrograined in HNO_3(HCl), etch film/pit struct. 92081
abrasive jet machining device, precision etching 116109
ADRIE overcritical damped laterally moving microstructs., SOI-substrs., automotive appls. 99871
air-channel structs. for microfluidic, MEMS and microelectronic appls., fab. 113559
all-printed inorganic logic elements fabricated by liq. embossing 114704
alternating phase shift mask, prod. proc. and assurance method 103692
AMLCD TFT array, five-mask proc., low-cost, high-yield/perform. 86857
ammonium dichromate gelatin, enzyme etching, refr. microlens array fab. 71369
BPSG films, atmos.-press. CVD 124933
BSG microsens. substr., microhole electrochem. discharge machining 116110
bulk micromachining of SOI wafers using double-sided litho. and anisotropic wet etching 92565
C nanotubes growth, thermal chem. vap. deposition *(Korean)* 68465
cantilever probes for sub-100 nm scanning thermal microscopy, design and batch fab. 121030
CD uniformity improvement, develop proc. optim. 103623
chem. amplified pos. resist profile change, re-adhering acid effects 103552
chem. amplified resist, e-beam lithog., new high perform. resist 92243
CMOS, abnormal jn. profile with Co silicidation 127030
CMOS 0.18-μm logic with dual polysilicon gate, CD control 103571
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol. 127020
CMOS IC, spiral inductor, RF MEMS technol. 69289
CMOS proc. flow for combined three layer/self-aligned contacts 104099
CMOS-based microsens. fab. technol., packaging approaches 109802
conductor backed CPW with etching, mode matching 94110
conf., diamond/related materials, Hong Kong, China (July 2000) 113231
corrugated struct. long-period/Bragg fibre gratings, tunable coupling strength 104646
CR-39, etched nuc. tracks, 3D confocal microscopy 121689
CR-39, latent track size meas. using at. force microscope 121657
CR-39, TASTRAK/BARYOTRAK-types, track params. and depth depend. track etch rates, ^{7}Li ions 121656
CR-39 gamma-ray irrad., depth-depend. bulk etch rate, dosimeter 121661
CR-39 neutron detector, bulk etch rate, sample mass-change-method 87247
CR-39 track detector, neutron detect. efficiency improvement 121670
CR-39/85 etched detectors with alpha/neutron-induced tracks, He-Ne laser transmiss. 121662
cyclic olefin polymer resists for 193 nm lithog. 103547
DAP resin plates, fission tracks, etching time reduction 121669
DCG, microoptical elements fab. using chem. cleaving-etch method *(Chinese)* 71390
deeply etched semicond. bent waveguides, beam propag. modeling 82160

etching continued
deformable membrane mirrors, microfab., packaging & testing 71380
diamond, CVD growth from methyl radicals/acetylene, (100),(111) orien 124878
diamond {111} surfaces etched in O_2 water vap., at. struct. 115648
diamond CVD grains on dot-patterned substrs., electron field emission and su face props. 69419
diamond CVD thick films, etching by rare-earth cpd. ink *(English)* 126336
diamond films, oriented, nucleation on non-diamond substrs. 90410
diamond films, rapid nucleation by pulsed laser CVD 114350
diblock copolymers, self-assembled, semicond. capacitor fab. appl. 92015
diffr. grating planar waveguide DWDM devices *(Chinese)* 86065
N-dodecylacrylamide/tert-butyl-4-vinylphenyl carbonate copolymer LB film nano-lithographic imaging 81149
DOE, excimer laser fab., low cost 71459
DOE, rapid prototyping, packaging appls. 128576
dry de-veil photoresist/etch residue removal for solvent-free cleaning 115651
dry thin film photoresists, wet lamination for improved PWB yields/etch la 125900
elec. tunable etched cladding fiber Bragg grating filter 71470
electrophoresis microfluidic device, hot embossing proc., DNA separation/detec appls. 92515
electrophoretically deposited pos. working photo resists, mfg. proc. 92186
electrostatic chuck with thin ceramic insulation layer, wafer holding appl 128707
electrostatic micro actuator fab., p^+ Si cantilevers, opt. devices *(Korean)* 12370
engng. surface texture, proc. related assess. & supervision 113759
FEA with Mo tip, gate insulator etching influence obs. 97706
FeRAM, 1T1C, fatigue-free ref. scheme and proc.-induced damage 114741
FIB based local deposition of dielec. for phase shift mask repair 103586
fibre-chip coupling using low-loss tapered fibers 93449
fibre-optic SERS sens., with conically etched tips, prod., perform. 97317
field-activated etch proc. for fine pitch PWB manufacture 125901
fine pattern replication by EUV lithog. 103646
finite ground coplanar line-to-silicon micromachined diamond waveguide transi 125782
flexible biomed. microdevices, double-sided electrodes, neural appl. 76681
FLOTOX EEPROM tunnel window form. proc. var. effects on reliab. 10214
fluoride materials, growing of bulk crysts. and structuring waveguides, las appls. 68178
fluorinated polymer-based 157 nm resist for VUV lithog. 126558
FRAM, high dens., scalable sub-10F^2 1T1C capacitor-on-bitline cell techno 125470
fused silica glass, opt. waveguide, wet etching, microfluidic device 71333
gas sens. array syst., micro hotplate substr. fab., CMOS integrat. 97532
glass bioanal. microchips, powder blasting, electro-osmotic flow 109726
hard mask STI etch proc. for ≤0.13 μm logic technol. 103378
hard X rays, wavelength tunable diffr. transm. lens 110424
HARPSS polysilicon vibr. ring gyroscope, MEMS technol., elec. isolated ver electrodes 81575
HDI fab., laser proc. 124331
HF thickness-shear-mode resonators, impedance anal., chem. sens. 97434
HTSC thick-film Josephson transit. on alumina substr., prod. 81982
human skin moisture sens., flat surface attachment, interconnection tech. 13200
III V semicond. based VCSEL, material issues, fab. & props. 128297
III/V double barrier RTD for logic ccts. 81197
in-situ etching tech. for optoelectronic semicond. devices 69921
InP planar waveguide DWDM technol. 120377
integrated opt. cross strip interferometer 127728
ISO 14001 environ. mgt. syst. certification in PV indust. 100685
large-area single-mode VCSELs, self-aligned surface relief 128249
LED, surface-emitting, circ. corner reflector and microlens 82382
LET spectrom. with track etched detectors, proport. counter meas. spectra corre 121675
long period fiber gratings, reson. wavelength tuning 127708
low-k dielec., mater. charactn. for damascene integrat. 126463
low-k etch/ash for Cu dual damascene 103391
low-k porous dielec., dual hard mask, Cu dual damascene fab. 115718
low-thermal-budget CMOS proc. simul., Si substr. gettering efficiencies 70000
LR 115 cellulose nitrate Rn detector, aging proc. 121660
LTCC photolithographic feature fab. 124379
MCM-D packaging, wet etch stop resist eval. 69375
mech. sens. array, micromachining, dual-stage etching 75755
memory cell landing pad, new integrat. technol. for 0.13-μm DRAM generatio 114744
MEMS components, interlocking microridges, mech. strength 81578
MEMS incandescent light source, low-power, fab. technol. 100316
MEMS press. sens., micromachined structs., release etch modeling, laser scan ning microscopy 92549
MEMS press. sens. fabricated on opt. fiber 109611
MEMS proc. phys. simul., CAD tools 92537
MEMS technol. for NASA space missions, JPL research & facilities 98883
metal gated field emitter arrays, focused ion/electron beam induced react. fab 69425
metallic impurities, various substrs., removal by HF-based solns. 92087
micro cone proportional counter constr. 121514
micro mirror arrays for scanning appl. in laser projection syst., fab. 82192
micro-fabricated plastic chips, hot embossing prep., DNA separation/detec appls. 70330
microcoils, optimised fab. proc., 3D-UV-depth lithog., electroplating 116096
microcontact printing with heavyweight inks 103707
micromachine packaging technol. 116052
microrobot posn. and speed control sens., photoetching tech. 81600
mix-and-match nanoimprint/UV lithog. 92224
MMIC design using glass technol. 69246
MOSFETs, ultrashort channel, technol. for fab. 103502
multi-chamber dry etching technol. *(Japanese)* 92055
multi-layered semicond. device, TEM specimen prep. 69910
nano-hole oxide confined SEL, high-order mode selection 105307
Nanoglass E polymer/Cu damascene proc., etch/clean/CMP 126451
nanostruct. fab., SOI proc., SEG, etching, oxid., Si on air 126594
near-field aperture multi-probe fab., high dens. data storage *(Japanese)* 11657
neo-Manhattan bump interconnection for B^2IT build-up PWBs/area array I package substrs. 113703
nuc. track membranes, unconventional etch methods *(Chinese)* 87246
oblique powder blasting, 3D micromachining of brittle materials 103373
octagonal micromachined horn antenna for submillimeter-wave appls., ana 83643
on-chip microfabricated capillaries, hyper Rayleigh scatt. 93155
organosilica glass films, low-k, O plasma resist. 92050

ing continued
attern transfer, IC-compatible proc., RF-MEMS component integrat. 92558
CB trace width meas., automated/manual methods 69325
erfluoro cpds., dry-etching exhaust, Li^+ ion-attachment mass spectrom. 103318
erforated thin films fab. with helical/chevron pore shapes 90336
HEMT, enhancement-mode, lin. and saturated power amps. 70179
hotonic bandgap waveguiding struct., leaky mode propag. model 82153
hotonic cryst. slab/slab waveguide, out-of-plane scatt. 71331
hotonic crysts., 2D, waveguide-based, 3D light control 82171
hotoresist props. during high current implant., I-line vs. DUV resist comparison 126521
hotosensitive polyimide, integrat. and elec. charact. 69898
lasma etch procs. modelling using lin. output neuron neural net 125915
M-355 detectors, γ-irrad., bulk etch rate meas. methods 121686
MMA, etching, BL11 beam line for LIGA proc. at NewSUBARU 121855
MMA, surface microchannels, hot embossed/UV laser ablated, chem. mapping 127112
MMA solid dye microcavity laser, micromolding fab. 71650
olysilane-acrylic copolymers by photopolymerization, pos. e-beam resist appl. 101516
olysilicon micro-opt. accelerometer, micromachining fab. *(Chinese)* 82198
olysilicon micromachined MEMS structs., micro nano technol. visualization 104202
olysilicon post-etch residue contamination in wafer fab., failure anal./elimination 103349
olysilicon press. sens., anisotropic etching proc., TMAH solns. *(Chinese)* 75463
olysilicon thermally driven micropump, surface-micromachining, HF gas-phase etching 92561
olytungstic acid thin film composite opt. waveguide, fab. *(Japanese)* 93128
orous poly-Si solar cells, LPCVD, texturing 112901
os.-tone wafer coating materials eval. on lithog. proc. 126516
ost-etch dry polymer residue cleaning, stat. methods 126411
proc. control, plasma impedance matching, discrete wavelet monitoring 124441
proc. improvement as part of overall plan to increase fab productivity 81075
PtSi IR detector array device, microlens arrays with long focus for improving responsivity 109636
Pyrex glass etching and bonding, micromachining technols. for capillary electrophoresis 92556
quartz tuning fork resonator, photolithography and selective etching 81743
quartz tuning fork resonator array, photolithography/selective etching 116205
QW IR polariz. sensitive photodetecting thermal imager 86654
recessed trench MOSFET proc. without crit. alignments 126843
refr. beam shaping elements for opt. fiber/switching appls. 82194
resist etching, line edge roughness, metrology method 126556
sacrificial oxide removal, wet HF etching and vap. HF etching comparison 92531
self-aligned p base trench IGBT, on-state perform. enhancement 126785
semicond. doping profile, C-V charact., electrochem. etching 115495
sensitive endpoint detect. for dielec. etch 92080
SET, electron quantum wire fab. by shallow trench etching 70220
Si(001) surface atom, hydrogen-terminated, etching, hydroxyl fn. *(Japanese)* 126343
Si(110), roughness, etching, AFM, fractal, power spectrum dens., scaling anal. 103343
Si substr., vapour phase etching, surface morph., temp. effects 126355
silica opt. fibers, charactn. based on chem. etching and SEM obs. *(Japanese)* 116614
silica-on-Si waveguide fab. techs. *(English)* 104720
SIMOX structs., oxide layer charging, depth profile anal. 80958
smart nanomachining & meas. syst., semicond. diamond probe 116101
SOI-MOSFETs, low-freq. noise degrad. rel. to STI interface effects 103856
submillimeter-wave Schottky diode multipliers using substrateless tech. 102679
superfilling model that predicts bump form. 92054
surface growth, proc., low energy beam-modified, conf., Boston, USA (Nov. 1999) 67359
surface micromachining techs., overview 81607
surface microstruct. selective emitters for TPV systs. 113020
surface treatment by excimer laser 126332
Tegal 90X etchers, Triant Model Ware integrated proc. control module 100726
thermopile detector, CMOS compatible proc., front-side Si bulk etching 86764
thin-film grating polariz. converter refl. 82287
TMAH anisotropic etching mfg. proc. for MEMS micromachining 92532
twin-hole fiber thermal poling evol. 104642
under-bump metall. etching for wafer level packaging 100580
UV lithog., mask manufacture 103693
VCSEL, surface modified, single transverse mode output, optim. 82690
VCSEL array, single-mode low-impedance, integrated mode filters 117302
VCSEL-based MOEMS archit., nanofab., SNOM sens. 93178
wafer etching, microwave-excited plasma source, slot antenna *(Japanese)* 92004
wafer fab., sidewall polymer contamination during metal etching 103350
YIG films, narrow-linewidth, for heterog. integrat. 92790
ZEP520 resist, fullerene-derivative incorporation, contrast enhancement 69978
Al direct write metallizations, contact form. 103492
Al nanohole array fab. by direct nanoprinting technol. 104218
Al parting layer for field emitter arrays, fab. 69430
Al:Bi capacitor foils, simulated proc., Bi behaviour 80439
Al/Si/TMAH syst., etch react., electrochem. meas. 103332
Al-Si thermally excited vert. bimorph actuators, metal sputter depos., trench sidewalls 92551
AlGaAs/GaAs S-band HBT, fab., charact., power appl. *(Chinese)* 102602
AlGaAs/GaAs dielec. mirror, InGaAs strained layer self-positioning 81614
AlGaAs/InGaAs pHEMTs, MBE, inline sheet charge control, AlAs etch stopper for GaAs cap removal 126427
AlGaAs/InGaAs power doped-channel FETs, IMD reduct. by air-bridge gate proc. 91254
N-AlGaAs/InGaAs/GaAs pseudomorphic QW based sub-0.25 μm gate HEMT 81370
AlGaAs-InGaAs-GaAs pHEMT, microwave props., selective gate recess etching technol. 115961
AlGaInAs/InP heterostruct., in-situ etching with CBr_4 in MOCVD reactor 115638
AlGaN:Si/GaN:In heterostruct., In doping enhanced 2DEG, XRD 81048
AlGaN/GaN HEMT, SiN_x passiv., device perform. 126901
AlGaN/GaN HFET, fab./charactn., KOH based UV photoassisted wet etching 81106
AlGaN/GaN heterostruct., epitaxial FET struct., carrier props., surface treatment effects 92032
AlGaN/GaN short channel HEMT, gate recess, breakdown volt. 81387
AlN polycryst. plate from nitriding electrolytically etched Al plate 81096

etching continued
AlN:H films, chem. stabil., nitrogen plasma treatment 92045
AlN/GaN MISFET, wet chem. etching prep. using hot phosphoric acid 115900
ArF lithog., 193 nm, vinyl ether-maleic anhydride alternating polymer resist syst. 103545
ArF lithog., cyclo-olefin/maleic anhydride type resists for sub-100 nm patterning 103551
Au/Pd/p-GaN, interfacial react., surface treatment effect, ohmic contact 81105
$Au/Sr_{1-3}La_xTiO_3$, Schottky jn. fab. 80902
Be cold cathode for He-Ne laser, lifetime improvement 117087
p-$Bi_{0.5}Sb_{1.5}Te_{3.0}$, electropolishing, polarography 126386
n-$Bi_2Se_{0.3}Te_{2.7}$:SbI_3, electropolishing, polarography 126386
C, diamond-like, field emitter array material, press. sens. appl. 102924
C films, controlled ion-plasma deposition and charactn. 114401
C high porosity electrodes derived from mesophase pitch for elec. double-layer capacitors 91432
C nanotubes, uniform patterned growth without surface C 101536
C spun-on bottom ARC film for KrF/ArF lithog., pattern transfer proc. 103554
C_{60} derivatives, electron beam resists, systematic study, spin coating, derivative films 92239
a-C:F PECVD film charact., damascene interconnection 69954
C_{60}/C_{70} incorp. nanocomposite resist syst., nanolithography 92238
C_2F_6 removal, ferroelec. packed-bed barrier discharge reactor 122710
$C_{60}F_x$ thin films growth, STM, HREELS 114282
CdSe:Mn QD, organometallic synthesis, spectrosc. characterisation, etching, EPR, MnSe precursor 103128
CdTe, etching in ferricyanide soln, surface film form. 103355
CdTe/CdS solar cells, Cu distrib. before/after accelerated stress testing 100108
$Cd_{0.80}Zn_{0.20}Te$ high resist. cryst. growth, modified Bridgman method 124806
$Cd_{1-x}Zn_xTe$ crysts., DC photocond., gamma-ray detector appl. 93329
Co-Ni-P ferromag. MEMS, etch holes 127128
CoCrPtB, long. media, noise/grain size reduction by WCr seedlayer *(Japanese)* 92833
$CoSi_2$ films, etching in dil. HF solns. 92001
$CoSi_x$, advanced salicide technol., sub-0.20 μm fully-depleted SOI devices 80930
Cu BGA substr. etch treatment, solder mask adhesion 67575
Cu CMP, two-step proc., chem. induced defects reduction 126462
Cu, chem.-mech. planarization, surface chem. 101464
Cu dual damascene interconnect/low-k organic polymer, fine CD control 126450
Cu dual damascene interconnects, spin-etch planarization 103348
Cu electroless deposition on Ta/SiO_2/Si substrs., displacement activation 101421
Cu metallization, improved diffusion barrier by stuffing TiN grain boundaries with Al interlayer 126475
Cu particles, surface cleaning/etching in aq. ammonia vap., hillock form. obs. 126405
Cu/Sn/Si syst., 3D struct. form./evol., AFM, AES, SEM, EDX 114307
Cu/dry-film adhesion enhancement, PCB surface prep. chem. 102818
$CuCl_2$ waste fluid recycling technol. for PCB mfg. *(Japanese)* 80509
$Cu(In,Ga)(S,Se)_2$ solar cells, CVD ZnO buffer layers 100103
$Cu(InGa)(SSe)_2$ solar cells, absorber transient behaviour, buffer layer effects 100136
$CuInS_2$ thin films, spray pyrolysis, heat treatment and props., solar cell appls. 79374
GaAlAs/GaAs temp. insensitive micromachined vert. cavity wavelength filter 82293
GaAlAs-GaAs micromachined DBR vert. cavity wavelength filter, temp. insensitive 85970
GaAlAs-based symm. emitter-collector planar DHBT, LPE fabr. and DC charactn. 70030
GaAs HIGFET, 0.35 μm, surface oxid. status effects on charact. 103843
GaAs MMIC multiplier devices, metal beamleads, fab. techs., 200-2700 GHz 102678
GaAs RFICs in SOT-23 packages, failure anal. techs. for small plastic packages 125806
GaAs conformal VPE, reversible transport, selective etching reacts. 79266
GaAs electrochem. etching, impact on proc./mask design/device perform. 69889
GaAs film bonding on piezoelec. substr., epitaxial lift-off 92737
GaAs lift-off technol. for finer resoln./topography 115653
GaAs mfg. technol., conf., Washington, DC, USA (May 2000) 78444
GaAs p/n structs., etching, galvanic effects anal. 92064
GaAs, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
GaAs power microwave transistors, MOCVD δ-doped struct. 91286
GaAs surfaces, (100), morph./microrelief 81069
GaAs through-substr. via hole proc., 1000 wafers/week throughput barrier 69945
GaAs wafer mfg., scaling up back-side proc. 126424
GaAs:Be/$In_{0.49}Ga_{0.51}P$ HBT, growth, GSMBE 103774
GaAs/AlAs power MESFET, wet selective etch procs. 92067
GaAs/AlAs single mode quantum cascade lasers, CW operation *(German)* 128322
GaAs/AlGaAs MQW IR photodetectors with 2D random-grating opt. couplers 86547
GaAs/AlGaAs QD array, wet chem. etching *(English)* 80878
GaAs/AlGaAs QWIP, IR radiation transm. 131919
GaAs/AlGaAs electron Y-branch switch, switching effects between drains 70214
GaAs/AlGaAs heterostruct. nanoelectronic Y-branch, microwave props. 115359
GaAs/InGaAs/AlGaAs MODFETs, thin buffer layer, high transconductance 92387
GaAs(001) barriers for mag. tunnel jns., fab. 79232
GaAsP/GaAs material, buried-channel opt. waveguide fab. by CBE 93124
GaInAsP/BCB DBR laser, fab., single-mode operation 93583
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photonic integrat. 105311
GaInAsP/InP heterostruct., in-situ etching with CBr_4 in MOCVD reactor 115638
GaInP/GaAs/InGaAs V-gate MESFET, micromachined V-grooves, selective etching 103917
n-GaN Schottky diodes, high dens. plasma damage, Cl_2/Ar discharges 126645
GaN cryst., ion implanted, wet etching, photoresist 126420
GaN epilayers, ammonia MBE on (0001) sapphire, defect reduction, HFEt structs. 101225
n-GaN epilayers, disloc. dens. eval., photoassisted anodic etching 81100
GaN epilayers, photoenhanced wet etching in KOH-based solns. 126365
GaN films, MBE on GaN/AlN buffer layers, polarity anal. 79241
GaN films, selective photoenhanced electrochem. etching 103290
GaN homoepitaxy by MBE *(English)* 79263
n-GaN photoelectrochemically etched surfaces, tree-like features, threading disloc., revelation 81103
n-GaN, photoenhanced electrochem. etching 126409

etching continued
n-GaN, photoenhanced electrochem. etching using CH_3COOH soln. *(Korean)* 115617
GaN polar surface, selective etching in KOH soln. studied by XPS 126388
GaN surface ablation by fs. pulses, accumulation effects, AFM obs. 126334
GaN suspen. microstruct., photoelectrochemical etching 70349
GaN thin film material, selective chem. etching 103375
GaN:Ar(Si), patterning, ion implant.-depend. etching 69920
GaN/AlGaN QW, MOCVD, in-situ thermal etching 80821
GaN/AlGaN small-area HBT, proc. develop. 103766
GaN-based devices, etch end-point detect. using opt. emission spectrosc. 69881
GaN(111) epilayers, microstruct., selective growth, MOVPE on Si(001) 79338
GaP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
GaSb substr., oxide desorpt., reflectance monitoring 81095
GaSb/AlGaAsSb device fab., hydrofluoric acid/peroxide/tartaric acid etchant mixture *(Chinese)* 69869
Ge islands on Si(100), chem. etching, photoluminesc. intens. 126170
Ge islands on Si(100), self-assembled MBE, size/shape, chem. etching effect 103411
Ge nanowires in oxidized Si V-grooves, ion beam synthesis 92250
Ge:C, clean low-defect-dens. surfaces, in situ procs. 69840
Ge(100) surface, S terminated, core level photoemission spectra 69914
GeO_2-SiO_2 opt. waveguide, thermal poling, core-cladding interface effect 116667
GeO_2-SiO_2 thin film, photon-induced vol. expansion, Bragg grating prep. 127554
HgCdTe epilayer, surface oxid., X-ray PES *(English)* 81089
HgCdTe, etching in ferricyanide soln, surface film form. 103355
N-InAlAs/InGaAs/InAlAs metamorphic heterostruct. based sub-0.25 μm gate HEMT 81370
InAs/GaAs self-organized QD, selective growth, shadow mask tech. 114294
InGaAs VCSELs, singlemode output power enhancement, reduced spatial hole burning 71769
InGaAs edge-coupled p-i-n photodiode, etching proc. defined pseudowindow 127941
InGaAs ridge quantum wires, sub-μm pitch lin. arrays, selective MBE 115406
InGaAs/GaAs 980 nm oxide confined laser with integrated spot size converter 117288
InGaAs/InGaAsP MQW microdisk laser, ultralow threshold lasing *(English)* 82677
InGaAs/InGaAsP MQW microdisk lasers, opt. pumped, MOCVD, characts. *(Chinese)* 128313
InGaAs/InGaP HEMTs, technol. optim., anal. modelling 70200
InGaAs/InP p-i-n detector/single-mode fiber pass. coupling, micromachining 75542
InGaAs-InGaAsP MQW microdisk lasers, threshold pump power *(Chinese)* 128321
InGaAsP BH LD, AlInAs-oxide current blocking layer, low threshold current 93672
InGaAsP/AlGaAs multi-wavelength elec. pumped VCSEL, 1.5 μm, fab. 82688
InGaAsP/InP BH LD, HBr etching 117225
InGaAsP/InP cascaded microdisk resonators, opt. filter responses 71354
InGaAsSb RWG QW diode laser, pulsed anodization etching 105353
InGaAsSb mid-IR QW laser material, ridge-waveguide struct., pulsed anodization etching 115644
InGaN/GaN QW, MOCVD, in-situ thermal etching 80821
InGaP/GaAs fully self-aligned HBT proc., incorp. of alloy-through passivating-ledge proc. 126679
InGaP-HBT emitter-mesa proc., optimized surface morph. 70039
n-InN films, ethylene glycol in water electrolyte, photoassisted anodic etching 81101
InP 2D nanostructures, two-time laser holography fab. 115794
InP etched waveguides, monolithically integrated planar waveguide etched grating devices 82442
InP, implant. induced selective chem. etching 92048
InP lasers, nanoscale patterning, FIB enhanced etching 128305
InP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
n-InP, self-induced voltage oscills. during anodic etching, 3D microstruct. appl. 92052
InP substr., V-groove micromachining for p-i-n photodetector appls. 92084
InP tunable Fabry-Perot filter, involuntary underetching 82272
InP/InGaAs self-aligned HBT, crystallographically defined emitter contact technol. 115857
InP/InGaAs/InGaAsP integrated laser heterostruct., ion implant. mask fab. 93625
InP(100) surface, nitridation studied by AES and EELS 92012
$KTiOPO_4$, quasiperiodic opt. superlattice, elec. poling, switching 104393
KrF large-scale e-beam-pumped laser output window material chem. resist. 71870
KrF laser lithog., ARC materials containing isoflavone derivative chromophore 103557
LSO crysts., poly-phosphoric acid etching, PET/SPECT detectors improvement 122264
$(LaAlO_3)_{0.3}(Sr_2AlTaO_6)_{0.35}$, perovskite substrs., wet etching, AFM/RHEED 126352
$La_{0.5}Sr_{0.5}CoO_3/Pb_{0.9}La_{0.1}Zr_{0.2}Ti_{0.8}/La_{0.5}Sr_{0.5}CoO_3$ capacitors, O, deficiency, vacancy type defects form. 102775
$LiNbO_3$, electron beam periodically poled, SHG 93815
$LiNbO_3$, piezoelec./ferroelec., microstructuring for MEMS devices 70364
$LiNbO_3$/Si SAW-semicond. coupled device fab., film bonding 92736
Mo wedge emitter fab. using FIB, wet etching 69429
$NdGaO_3$, perovskite substrs., wet etching, AFM/RHEED 126352
Ni-Be deep-microfeature LIGA-competitive microcomponents, micro-EDM and FIB micromachining 92529
NiFe based mag. thin films and spin valve devices, patterning, switching props. 116300
PZT based ferroelec. thick film actuator on Si, prep. by screen-printing 127277
PZT based fully MOCVD obtained epitaxial ferroelec. capacitors 70472
PZT pyroelec. thin film IR detector props., substr. effects 131930
PZT thin films, wet etch patterning 92634
$PbTiO_3$ single cryst., domain struct., piezoresponse force microscopy 127195
Pt patterning for Si load cell, modified lift-off tech. 116098
Rn SSNT detectors, Monte Carlo simul. 121672
SOI struct. fabr. by UHV electron beam evap. and epitaxial layer transfer 80933
Si, (100),(111) surfaces, thermal nitridation, O_2-induced etching reacts., STM anal. 69846
Si, (311) defect dissolution, depth depend. 103269
Si LPE thin-film solar cell characterisation 100088
Si MCP for image intensification 86632

etching continued
Si MOEMS, micromachining for pass. alignment of opt. fibres 71383
Si MOSFET, 10 nm, fab., characts. 70153
Si V-groove fab. using Ta_2O_5 etch mask prepared by magnetron sputterin 103291
Si, anisotropic etching, MST-CAD environ. 115663
Si, anisotropic etching in TMAH, front-side bulk micromachining 104216
Si, anisotropic wet etching, rapid plasma treatment masking 103404
Si based luminesc. material, form. mechanism using photochem. etching metho 69862
Si, bulk micromachining, geometric etch stop technol. 70361
Si bulk micromachining, sens./actuator appls. 81616
Si cryst. surfaces micromorphology, wet chem. etching 126344
Si cryst. surfaces micromorphology, wet chem. etching 126345
Si, electrochem. etching, 3D microstruct. 116103
Si, etched, patterning method for electrochem. prod. 69861
Si etching, galvanic cell form., sens. fab., review 103304
Si, fast etching, field emission array fab., transfer-mold tech. 69904
Si, field emitter array material, press. sens. appl. 102924
Si films, nano-/microchannel fab., column/void-network 103701
Si fusion bond interface, wet anisotropic etching 92036
Si galvanic etching, hypochlorite electrochem. reduction 92085
Si high-press. sens., fusion bonding, low-cost packaging 109804
Si lamellar grating struct., groove depth, opt. scatterometry 121202
Si layer transfer using wafer bonding/debonding 103277
Si, macroporous microchannel, cylindrical pores, XRD 69479
Si macroporous photonic cryst. substrs. at 1.55 μm 82184
Si, macroporous struct., plasma and electrochem. etching 92037
Si, macroporous-based micromachining on full wafers 104217
Si micromachined fluid ang. rate sens., stream path accuracy, etching mask *(Japanese)* 109799
Si micromachined isolated diode, uncooled thermal IR detector 109543
Si micromachining, isotropic dry etching using ClF_3 gas *(Japanese)* 81605
Si monocrystals, chem. etching, mech. effects 126347
strained-Si n-MOSFETs, fab. on SGOI substrs., electron mobility enhance 81339
Si nanocrystal MTJ device, ion beam synthesis 126911
Si nanohole array fab., self-organised porous alumina mask 126593
Si nanoparticle colloids, thin film form., high temp. single electronics 10393
Si nanopillars, 3D controlled size-reduction by photoelectrochem. etching 6998
Si, nanostructured, photoelectrochem. prep., photolum. 71519
Si p-n jns., ion implant. fab., PV devices appl. 123806
Si, porous, NO_2 sens., deposition tech., electrochem. etching 97483
Si, porous, PL enhancement by NF_3/UV photothermal surface treatment 8233
Si, porous, anodisation form. on Si surfaces, IR spectra anal. 91999
Si, porous, antireflective coatings for solar cells, etching, rapid thermal pro 104875
Si, porous, deformable mirror, non-interferometric wave front sens. metho 104776
Si, porous, fluoroboric acid stain etched, PV props. 97265
Si, porous, form. technol., galvanic internal current generation 103374
Si, porous, form. technol. using internal current generation 126399
Si, porous, light-addressable potentiometric sens., prep. 97448
Si, porous, metal-aided electrochem. etching, PL obs. 103328
Si, porous, patterning for integrated opt., H ion implant., RTA 92008
Si, porous, porosity & film thickness, electrolyte comp., anodization 92002
Si, porous, sacrificial layer, microstruct. fab., morph. 101523
Si, porous semicond. form., anodization and electroless stain etch combinatio 92042
Si, porous, thick layer form., implanted mask, gas sens. fab. 92009
Si, single cryst. etched by TMAH soln., surface roughness 69882
poly-Si solar cell, ITO electrode, synthesis & perform. 123801
μc-Si solar cells, absorber layers, ECR CVD grown 112894
Si solar cells, proc. with porous Si texturing 100145
mc-Si solar cells, simultaneous bulk H_2 passiv./selective emitter form. 10005
Si specular surface, anisotropic etching, KOH soln. 126395
Si substr., selective plasma nitridation, contrast reversed etching 126366
Si surface, SR-induced nitrization and oxid. at low temp. 81093
Si surface cleaning, wet etching, IC prod. 69907
Si surface, etching in KOH/TMAH soln., isopropyl alcohol effect 126417
Si surface, micro-EDM, spark erosion, microcrack form. 104213
Si surface, ultraprecision machining, SPV spectrosc. *(Japanese)* 69916
Si surfaces, PL obs. during photoelectrochemical etching procs. 103393
Si suspen. wire, submicron cross-sect., micromachining 127127
Si textured surface prep., etching, field emission, C implant. 69433
Si wafer, (100), precise mask align. to cryst. orient. using wet anisotropic etchin 92563
p+Si:B wafers in aq. KOH, etch rate vars., proc. condition 103341
a-Si:H TFTs, LV/HV, modified inverted-staggered struct., wet etch fab. pro 70134
a-Si:H large-area thin-film solar cells, textured ZnO:Ga film props. 100202
Si:H pattern-implanted wafers, thermal/mech. separation 115292
a-Si:H-based PIN solar cell, rough back/front transparent conductive oxide lay ers, simul. 78176
a-Si:H_x(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
Si:He,N, porous Si form., MeV energy pre-implant. 80992
Si:P high-dens. buried nanopyramid FEA, ion implant. & wet etching 80583
Si/3C-SiC/Si ion beam synthesized layer, metallization 91960
Si/SiO_2, anisotropic etching, aq. TMAH soln. behaviour 126416
Si/polymer insulator struct., vert. anisotropic etching 81094
Si(001), oxidized V-grooves shape evol., high-dose Ge^+ ion irrad. 81078
Si(001) surface atom etching proc. using hydroxyl fn. *(Japanese)* 126400
Si(001) surface, hydrogen-terminated, etching, mol.-dyn. simul. *(Japanese* 126342
Si(100) stepped surface, implant-induced erosion, mol. dyn. study 69805
p-Si(100) surface, TMAH etching, chem. pre-treatment 69884
Si(100) surface, anisotropic etching 69883
Si(100) two-step wet anisotropic etching, obs. effects 81613
Si(100), wet etching, nanoscale texturing, multicomponent SAM phase beha 103337
Si(100)-wafers, anisotropic wet chem. etching, atomistic Monte-Carlo simul. an expts. 92000
Si(110) grid, ion beam proc. syst., opt. fab. 115620
Si(110), unstable etching with KOH 92021
Si(111) substr., diagnostic micromachined beams 126346
Si(111) surface, etching, mask jn., Monte Carlo simul. 92038
Si(111)-H surface in dil. NH_4F soln., electrochem. ATR-FTIR spectra 10344
Si{111} surface, anisotropic wet chem. etching 115619
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnec 92183

ing continued
3-SiC, epitaxial growth on Si(100) by low energy ion beam deposition 114267
4H-SiC epitaxial layers CVD growth, substr. surface prep. effects 69873
SiC, field emitter array material, press. sens. appl. 102924
4H-SiC, opt. props., surface and pore morph. 103324
SiC, sublimation growth, disloc. constraint, etch back proc. 124794
SiC, wet and dry sacrificial thermal oxid. 69913
3C-SiC/on-axis 6H-SiC(0001) epilayer CVD growth, substr. etching effects 69855
SiN MEMS membrane profile appl. to condenser microphone 92554
SiN compressive thin film, mech. props., ring test struct. 104214
SiN micromachined sens. appls., low tensile stress, wet etch procs. 97578
Si_3N_4, etching mechanism in HF-based solns. 92075
Si_3N_4 film, helicon plasma sputtering deposition, props., sputtering-gas press. effect 101183
Si_3N_4 masks, scanning probe oxid. 115786
SiN_x dual ion beam deposited H-free films, mech. and etching props. 127098
SiN_x films, ICPECVD, spectrosc. ellipsometry, etch behavior 124927
SiO_2 PECVD microstruct., laterally emitting TFEL device fab. 82371
SiO_2, etching/drying, antistiction method using harmonic excitation on microstruct. 103311
SiO_2 films, PECVD on Si, defect charactn. 124905
SiO_2 films, electron injection stressed, trapped charges nonuniform distrib. 92675
SiO_2 implanted layer on Si, AFM investig. of radiation damage distrib. 91892
SiO_2 thermal growth in home-made furnace, structural charact. 103382
SiO_2 thin film, CO_2-laser-assisted PECVD 79282
SiO_2/TiO_2 DBRs for VCSELs, dry and wet etch procs. for patterning 93697
SiO_2-Fe nanostructures, selective etching, AFM study 115661
SiO_2-Ge-SiO_2 sandwich struct., Ge nanocryst. form., photolum. and Raman obs. 92252
SiOC Z3MS low-k films, etching/stripping chemistries, optim. 115640
SiO_xN_y PECVD films, correl. of phys. props./chem. struct., IR spectrosc. 68297
SnO_2 sol-gel thin films, integrated gas microsens. fab. 97547
SnO_2 thick film ultralow power CO microsens., micromachining 97447
$SrTiO_3$, perovskite substrs., wet etching, AFM/RHEED 126352
$SrTiO_3$, single cryst. faceting, chem. etching, AFM 126354
Ta(N) diffusion barrier, I-PVD, step coverage and continuity 115699
TaO_x top layers, buried photoresist layers etching 126410
Ti device fab., two-level electrochem. micromachining 116089
$TiSi_2$ contact hole etching, LOCOS isolation, Si SEG 126504
$TiSi_2$/Si contacts, surface prep., chem. and thermal stabil. 92033
$TiWN_x$, selective etching, electroplated Pb-Sn solder 113533
W films, chem. treatment, IC appl. 103439
W micro-punch fab. for micro-nozzles, electrochem. etching 92547
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101
$YBa_2Cu_3O_{7-\delta}$-Au(Ag) film contacts, metallization/interconnection 127508
ZnO substr., μc-Si:H thin film solar cells, low temp. RF-PECVD 100068
ZnO surface micromachined piezoelec. accelerometers, design, sensitivity anals. 86754
ZnO texture-etched substrs. for a-Si thin film solar cells 100203
ZnO:Cr films, chem. spray deposition, chem. stabil., etching rate, surface morph. 126025
ZnSe layers on GaAs(001), threading disloc. removal 92089
ZnSe single crysts., twin-free, Bridgman growth 79176
ZrO_2 thin film, high-K dielec., RTA 127133

hernet *see local area networks*

nical aspects *see professional aspects*

ylene-propylene rubber
EPDM rubber insulators and bushings, basic charact. 123031

tingshausen effect *see thermomagnetic effects*

V lithography *see ultraviolet lithography*

anescent wave sensors *see fibre optic sensors*

aporation (film deposition) *see vacuum deposition*

ent calculus *see temporal logic*

ent-oriented simulation *see discrete event simulation*

ent trees *see fault trees*

ershed effect *see sunspots*

idential reasoning *see case-based reasoning*

oked potentials *see bioelectric potentials*

oked potentials, auditory *see auditory evoked potentials*

oked potentials, visual *see visual evoked potentials*

olutionary algorithms *see evolutionary computation*

olutionary computation
see also cellular automata; genetic algorithms
3D med. image registration, parallel algms. *(French)* 121871
act. networks, computational intell. techs. 119638
adaptive evol. search, stochastic dyn., pop.-based incremental learning 78916
adaptive sig. representation, evol.-based methods 73696
analogue ccts., smart, evol. design 114598
anom. behavior detect., network traffic params. optim. via evol. strategy 85228
ant colony syst. optim., dyn. weighted rule 100914
arith. cct. design, evol. graph generation syst., transmigration capability 102106
ARMA model ident., robust hybrid evol. method 130013
artificial life for image segmentation 129555
assembly, 2-robot, task seq. optim. by evol. algms. 125897
ATM network mgt., computational intell. 119480
automatic diffr. pattern recogn., neural network based 129917
best-neighbourhood-matching error concealment algm., evol. strategy *(Chinese)* 73366
bi-criterion optim. problems, multi-colony ant algms. 90029
bit-serial arith. cct. evol. synthesis *(English)* 79851
blind channel ident. using evol. prog. 107703
blind equalization, evol. prog. appl. 107701
CMOS analog act. ccts., evol. synthesis using current path based coding 125596
CMOS FPTA chip for intrinsic hardware evol. of analog electronic ccts. 101735
coevol. and symbiosis in metapopulation models *(Japanese)* 113986
cogen. systs. operation strategy under environ. constraints 77740
cogeneration operation dispatch, interactive best-compromise approach 112299
conditions for convergence of evol. algms. 113969
conf., Coex, Seoul, Korea (May 2001) 89577
convergence anal. of unconstrained and bound constrained evol. pattern search 67904
convergence props. of Bayesian evol. algms. with pop. size greater than 1 90053
cooperation, secret handshakes, and imitation in prisoners' dilemma 124497
cracks ident. using boundary elements and evol. algms. 68090
DC motor neuro-fuzzy speed control systs. 112545

evolutionary computation continued
deregulated utility environ. congestion mgt. using corrective measures 111882
diagnostics in equipt. service, soft computing methods 131804
die press model electromagnet, optimisation, distributed evol. strategy 105685
digital FPGAs, genotype-phenotype mapping 102049
distrib. syst. fuzzy multiobjective optimal control approach 133540
distributed evol. digital filters, convergence behavior 91087
DS-SS commun., piece-wise maps design, genetic prog. 95825
Earth-space rain atten. model based on EPNet-evolved ANN 117696
economic load dispatch problem using evol. computation 90051
economic power dispatch problem, modified particle swarm optimizer 133473
edge detect., evol. optim. and minimization 118709
EHWPack, evolvable hardware environ. using SPICE simulator and field prog. transistor array 114573
EM devices, Pareto evol. optim., diversity enhancement tech. 83159
EM optim. problems, combined evol. strategies & approx. techs. 128642
enterprise network topol. design, fuzzy evol. hybrid metaheuristic 95966
environ.-constrained economic dispatch, evol. computing techs. 99219
epoxy resin PD mechanisms, spherical void, high temp. 104414
ES, boundary expansion, evol. computation/intrusion detect. solns. 85231
evolvable hardware solns. for extreme temp. electronics 103717
evolving network archits. with custom computers for multi-spectral feature ident. 107193
face, lip region anal. for emotion detect., evol. 107262
face detect., color images with complex background, neural 107219
ferromag. materials transient excitation behaviour forecasting approach 104491
FIR two-channel PR filter bank with lin.-phase, design 73640
fitness-based migration operator for evol. prog. 124589
flip-flops, design params. estim., reliab., speed and cost 102120
fn. optim. problems, real-type tabu search appl. 124611
fossil fired CHP systs., economic dispatch, emission constraints 123184
functional test coverage maximization in ASICs using evol. algms. 92440
fuzzy power syst. stabilizer design, adaptive evol. algm. 122873
generation expansion planning, evol. prog. *(Korean)* 122920
hardware, evolvable, aiming to optimize cct. design 68496
heterog. cct. synthesis, evol. graph generation, terminal-colour constraint 79827
HF/high speed package interconnects, meta-evol. prog. based robust model param. extraction 126467
high-resoln. image reconstruction using hybrid evol. algm. *(English)* 84252
Hopfield neural net, 2D evol. operators, image edge detect. 118743
hybrid GA, traveling salesman problem soln. 124580
image coding, VQ, evol. simulated annealing algm. *(Chinese)* 95229
immune evol. algms. 67874
indust. elec. customers, optimal contracts decision software 122822
inhomog. opt. coatings, thin-film synthesis by evol. algm. 93309
Jack-in-the-Net, Network for Service Evolution and Emergence *(Japanese)* 74363
Kwang Yang steel works, on-line economic load dispatch program *(Korean)* 134673
learning in polynomial time in two-state general Markov model 113875
macro-micro evol. algm. migration topol., indiv. clustering 124610
Monte Carlo simul. and pop.-based optim. 89983
(μ, λ)-evol. strategy in presence of noise 90054
multi-agent search, -calculus perspective for completeness and optimality 100912
multi-objective optim., tabu-based exploratory evol. algm. 90028
multi-objective ranking with uncertainty and noise 90027
multicast routing, Steiner tree problem, heuristic evol. prog. *(Chinese)* 130498
multiobjective optimal feeder reconfiguration using evol. prog. 112012
neuromorphic paradigm for extrinsically evolved hybrid analog/digital device controllers 102280
OneMax DNA evol. computation, vitro selection 69345
partial order approach to noisy fitness fns. 90052
particle swarm optim. for reactive power and voltage control 99297
PC assemblies, network distributed virtual design, coevolutionary agents appl. 89826
power syst., multi-objective optimal operation, evol. prog. 88403
radar target ident., HMM framework neural network classifier *(Chinese)* 73479
radial distrib. loss reduction, feeder switching, evol. prog. 77336
real-time anom. detect. using soft-computing techs. 85232
restricted Pareto front in evol. multiobjective optim. 67915
retina implants, multielectrode stimulus param. optim. 111158
robot artificial cpd. eye, optimal sens. morph. 86649
robust evol. prog. with genetic drift *(Japanese)* 113987
robust evol. strategies 124596
secure multicast commun. using evol. heuristic algm. 107619
self-adaptive evol. prog. algm., multi-objective fuzzy optimal operation *(Chinese)* 88273
self-adaptive params. adaptation 124597
semicond. mfg., data mining tool, rough set theory 67526
shielded reactor, shape optim., evol. algm. 123538
short-term load forecasting using evolving wavelet-based networks 77294
signalling games, evol. learning 67752
speaker ident., coevol. approach using neural nets 73054
SS commun., broadband interf. suppression, TF mask 108537
stack filter design, tree representation evol. 84742
stereovision, indiv. evol. strategy appl. 118201
telecomm. network traffic prediction by neural net ensembles 108009
texture image retrieval based on evol. prog. *(Chinese)* 106724
transverse flux heating, optimal inductor design, combined evol.-simplex tech. 89445
vector quantizer design optim. using evol. algm. *(Chinese)* 118935
Virtex FPGA, evol. strategies and intrinsic fault tolerance 102048
Visible Man lower extremity visualization, segmentation by evol. 98143
VLSI, reconfigurable archit., evolvable hardware 68505
VLSI placement, simulated evol. algorithm adaptive bias scheme 101963
VLSI power/perform. optim., fuzzy simulated evol. 104009
voltage ref. cct., on-chip, evol. prog. design 101768
wheeling options selection using evol. prog.-based algm. 111775

evolutionary programming *see evolutionary computation*

evolutionary prototyping *see software prototyping*

EW *see electronic warfare*

EXAFS
bent Laue analyzer detect. syst., dil. fluoresc. XAFS 121757
diamond:Si film, elec./opt. props. 91602
KMC-2 X-ray beamline at BESSY II, EXAFS meas. 110470
X-ray beam cleaner, harmonic selection/rejection, Si(111) monochromator 110464

EXAFS continued
Ar, X-ray absorpt. fine struct. spectra, soft X-ray double cryst. monochromator meas. 121851
$Ba_2(In_{1-x}Ga_x)_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$Ba_2In_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$(Ba_{1-x}La_x)In_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
Ca, K edge, EXAFS, H10 materials and high temp. beamline study 121856
Cl, X-ray absorpt. fine struct. spectra, soft X-ray double cryst. monochromator meas. 121851
a-GaAs, implant.-induced struct., EXAFS 80760
$Ga_{1-x}C_x$ epitaxial films, growth, struct. characterisation 124817
$Ga_{1-x}Fe_xAs$, mag. semicond., impurities, XAFS obs. 80768
GaN, Hi-Prexx facility, prep./charactn. 68415
GaN:Tb films, GSMBE, PL, RHEED, EXAFS 79260
a-Ge, ion implant.-induced disorder, EXAFS/Raman spectr. obs. 80758
Ge self-organized uniform QD, local struct. on Si(001) 80669
InGaN epilayer, structural anal. & PL, XRD/EXAFS 103047
InGaN films, strain-relax., MOCVD grown, opt./struct. props. 126072
InGaN layers, indium content, LEDs, PL peaks, RBS, EXAFS, EDX 128018
InGaP/GaAs epitaxial layers, super-ordered domains, diffr. anom. fine struct. 69525
$In_{1-x}Mn_xAs$, mag. semicond., impurities, XAFS obs. 80768
a-InP, implant.-induced struct., EXAFS 80760
$LiNi_{0.8}Co_{0.2}O_2$ cathode, Li-ion batts., in situ XAFS study 89101
MnO_2, Ti surface modified, alkaline-manganese batt. 123759
P, X-ray absorpt. fine struct. spectra, soft X-ray double cryst. monochromator meas. 121851
$PbTiO_3/BaTiO_3$ superlattices, struct., vibr. props. 116142
Pt/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
PtMo/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
PtRu/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
S, X-ray absorpt. fine struct. spectra, soft X-ray double cryst. monochromator meas. 121851
Si, X-ray absorpt. fine struct. spectra, soft X-ray double cryst. monochromator meas. 121851
Si:As, ion-implanted, clustering/precip. anal., SIMS/EXAFS 115590
SiC:Ga, ion implanted, local struct., XAFS 69818

example-based learning *see learning by example*

excavators
buried utility lines location, end-effector mounted pulse induction sens. 86495

exception handling
see also error handling
concurrent exception handling 108355
Deep Space Station Controller, autonomous ground station control 131331
SIMBA user alert service archit. for dependable alert delivery 108088
VLIW embedded proc., data forwarding use for power budget reduct. 79916

exchanges (telephone) *see telephone exchanges*

excimer lasers
157 nm high repetition rate mini-excimer-lasers, indust. appls. 105124
AC-PDP micro-cell discharges diagnosis by laser absorpt. spectrosc. 97640
Bragg fiber gratings, laser-induced densification, interferometric determ. 127645
combustion procs. at Bremen drop tower, laser diagnostic syst. 83065
cornea/PMMA plate, excimer laser absorpt., vol. luminance appl. 117598
DUV & VUV lithog. appls. of excimer laser syst., feature scaling 115785
DUV microlithography excimer laser source 105618
electrodischarge excimer laser excitation syst. simul. by equiv. elec. cct. 117062
electrodischarge excimer lasers, LC-generator, model operation 117061
entrapped pacing/defibrillator leads, excimer laser extraction 98707
filamentation instabil. in excimer laser medium discharge 128120
gas Raman amp., SRS, output charact. *(Chinese)* 71631
high-power excimer laser, simul., design and charactn. 128052
high-power high-repetition-rate indust. excimer lasers, output charact. 105127
hollow fibers for delivery of high-power lasers 128129
inert gas solids, doped, cryogenic laser act. media pot. 82573
modifs. to resonator, laser beam emission energy/dens./shape 82706
monolithic-disked HV vac. interface for high-energy KrF-laser amps. 82501
myopia correction, excimer laser refr. surgery *(Japanese)* 111107
myopic refr. surgery, excimer laser, intraocular press. obs. 72150
notebook displays, polysilicon TFT technol. 86804
PECVD films for low-temp. poly-Si TFT-LCD 86813
periodic diffractive flat-top generator, excimer laser beam shaping 93693
plane surface top lacquer laser cleaning 72132
polysilicon annealing using high power excimer laser 91935
quartz cryst. wafer, ArF excimer laser ablation, oscillating freq. control *(Japanese)* 79612
SW source develop. for microlithog., overview 115784
TFT-LCD develop. using 1 Hz/15 J excimer laser annealing 97642
UV-induced planar lightwave cct. index changes, birefr. control 128611
AlN, KrF excimer treatment 72125
ArF discharge-pumped excimer laser kinetic modelling 82499
ArF excimer laser, excitation discharge shock waves charactn. 105138
ArF excimer lasers, long-pulse (V)UV operation 105126
F_2 excimer lasers, long-pulse (V)UV operation 105126
F_2 laser, discharge pumped, high-repetition-rate operation, 1D model calc. 105132
F_2-laser nanofabrication facility, precise photonic component shaping 128602
Kr_2^* VUV laser oscill., compact discharge device pumped 71634
Kr_2^* discharge-pumped VUV laser, stimulated emission 105125
KrF av.-power excimer laser 82480
KrF excimer TEA gas lasers, excitation discharge, floating particles influence 105131
KrF excimer laser, HV MOSFET switch, high repetition rate operation *(Japanese)* 93695
KrF excimer laser, beam shaping and homogenization using multifacet Fresnel-kinoforms 105401
KrF excimer laser syst., 6-beam, high power, ICF reactor driver appls. 105090
KrF excimer-laser syst., four-wave difference-freq. mixing in Xe 82867
KrF high-power laser for supersonic gas flows and layered media hydrodynamic instabilities study 105093
KrF large-aperture laser amps., segmented electron-beam diodes for pumping 117068
KrF large-scale e-beam-pumped laser output window material chem. resist. 71870
KrF laser amp., Stokes pulse saturated amplif., high intens. pulse generation 105092
KrF laser amp., electron-beam-pumped, output charact., init. testing 71635
KrF laser amp., intra-cavity ASE, nanosecond pulses high-energy extraction 82500
KrF laser based lidar for boundary layer water vap. meas. 76854

excimer lasers continued
KrF laser driver, rep-rate electron beam-pumped, electron-beam transport expts. 105128
KrF laser, opt. transits. between ionic and Rydberg states 117064
KrF lasers, high-power, laser-plasma interact. phys. 105091
KrF lasers pumping, rel.-electron-beam sources, graphite-nanofiber field emi 117069
N_2 high power co-axially excited laser, oscill./gain charact. 93489
Si MOSFETs, ultra shallow jn. form., excimer laser annealing 126823
p-Si TFT perform. using single-area ELA technol. 91934
Si cryst. thin-film solar cells prep. using laser crystn. 100086
Te_2 dimer gas mols. for solar pumped lasers, spectrosc. studies 82492
XeCl discharge laser with Gaussian reflectivity mirror, beam quality factor ev 105151
XeCl electrodischarge excimer laser, pumping syst. LC-cct. 117060
XeCl excimer coherence evol. impulsed lasers, beam quality 82728
XeCl excimer laser, angioplasty, cardiovascular appls. 111092
XeCl long-pulse efficient laser, discharge pumped, output charact. 105129
XeCl long-pulse elec.-discharge laser, opt. inhomogeneities 117058
XeCl oscillator-amp. laser syst., high contrast nanosecond pulse train generati 105130
XeCl wide-aperture elec.-discharge excimer laser 82495
XeF blue-green laser, opt. pumped, C-A transit., output charact. *(Chine* 71630
XeF excimer laser, C-A transit., segmented surface discharge radiation pumpi *(Chinese)* 71641
XeF lasers, C-A transits. pumping using sectioned surface discharge *(Chine* 128107

exciplex lasers *see excimer lasers*

excited states
see also ground states; metastable states; resonant states; Rydberg states; triplet state
azo-dyes, multivariable anisotropic random-walk mol. devices, quantum che design 69336
cascaded free-induction decay FWM sigs. obs. 82827
chem./biosensors, fluoresc. lifetime change detect. by optoelectronic cct. aut oscill. 120961
CL display phosphors, efficiency models, band gap energy, particle/crystall size 104926
copper phthalocyanine films, femtosecond NLO response 82831
diamond:P films, low temp. excitation spectrum 69496
doped QW minigap-confined states, intersubband transits., IR detector app 80882
energy transfer from singlet to triplet excited states in organic LED 126096
Kiton-Red dye laser solns., Cu-vapour-laser excitation, photo-stabil. 71648
LD-pumped act. media, excited state absorpt. & upconversion effects 93801
magnesium phthalocyanine films, femtosecond NLO response 82831
organometallic C_{60} derivative, self focusing-self defocusing transform. *(Chines* 117434
pentaazadentate metal complexes in tetrahydrofuran, opt.-limiting perform 71949
porphyrin dyes, meso-substituted, NLO charactn. 71955
PPV-based ionically SAM, excited state dyn., photolum. props. 116922
quantum struct. modeling with BEM 115387
Rhodamine-6G(B) dye laser solns., Cu-vapour-laser excitation, photo-stabi 71648
self-assembled QD, carrier relax., excited states 91817
stilbene, multivariable anisotropic random-walk mol. devices, quantum chem design 69336
Ag^+ Ni-like ion transient collisional excited X-ray laser 128064
AlGaAs/GaAs, QD, energy relax., DC/pulse-excited current meas. 80857
Au nanoparticle/C_{60} nanocomposite, NLO props. 117424
C_{60} and metal derivatives, opt. limiting, picosecond reverse saturable absorp 71958
C_{70} and metal derivatives, opt. limiting, picosecond reverse saturable absorp 71958
CO RT microwave-excited cw laser 105106
Cr^{2+}:$Cd^{0.55}Mn^{0.45}Te$ saturable absorber for Ho,Tm,Cr:YAG laser pass. Q-switc ing 82753
Cr^{4+}:YAG CW lasers, power perform. optim. 82558
Cr^{4+}:YAG as saturable absorber, act.-pass. mode-locking of Nd:YAG las 117426
Er,Yb-doped fiber amps., cladding-pumped, stable modeling 82518
Er:glass Q-switched lasers with Co-doped transparent glass ceramic saturab absorber 117165
Er^{3+}-doped ZBLAN microsphere whispering-gallery-mode laser 117135
Er^{4+}-doped waveguides, homog. upconversion, nonlin. quenching, anal. mod 82902
F laser, excited directly by sliding discharge 117073
GaAs low-dimens. systs., shallow-donor transits., mag. field effects 91843
$Ga_{1-x}In_xN$/GaN polarised QW, PL excitation spectrosc., level assignment 8071
GaN epilayers, ground/excited excitonic reson., magneto-opt. study 80721
GaN strain-free homoepitaxial layers, donor-bound excitons, magneto-spe trosc./luminesc. 80720
GaN:Mg/Al_2O_3, wurtzite sample, electronic Raman scatt., MBE/MOCVD grow 124862
HF laser, operation conditions, excited mols. fluoresc. meas. *(Korean)* 9348
HgCdTe MIS struct., subbands, reson. tunneling, 2DEG, tunneling current 6974
Ho:ZBLAN glass fiber laser, LD-pumped, power conversion efficiency 9352
InAs self-assembled QD amps., ultrafast gain recovery, modulation limitatio 71812
InAs self-assembled QDs, struct./electrooptical charact., laser/LED appl. 9183
InAs/GaAs self-organized QD, excited-state lasing *(Chinese)* 105265
In(Ga)As QDs, carrier dyn. rel. to lasers/microcavity light emitters 115398
InGaAs/AlGaAs bound-to-bound QW IR detector, excited-state posn. meas 91842
In(Ga)As-GaAs QD EL devices, intersubband gain/stimulated emission 9184
InGaN:Zn microcrystals, Pure and doped, PL excitation spectrum, nitridatio 80725
InGaN/GaN based-QDs, growth/phys., optoelectronic appls., PL, QD laser 90401
Nd:YAG laser, high-power CW diode pumped, output charact. 105250
Nd:YAG laser materials, ground/excited state direct pumping 82563
Pr^{3+}:ZBLANP opt. fibre sens., temp./conc. depend. 86597
SrS:Eu,Sm, electron traps, opt. storage *(Chinese)* 116929
Tm,Yb:glass fibre laser, $^1G_4$ level excitation, blue upconversion, fluoresc. 9349
Tm complex based IR organic EL device, emission spectrum *(Chinese)* 7152
Tm^{3+}:YAG broadband accumulated spectral grating dyn., stimulated photon-ech tech. 71960

ted states continued
$WSe_4(MPPh_3)_3Cl$ (M=Ag,Cu), cubane-like shaped metal clusters, excited state nonlin., opt. limiting response 128467
Yb^{3+}-doped quasi-three-level laser crysts., selection criteria 117146
ZnSeTe, MBE, deep emission electron-phonon coupling 103017

ters
10/8 SRM multiphase excitation nodes investig. 123376
200 MW class brushless supercond. generator, mag. flux-pump excitation 77821
500 MW COTS-based TPP generator excitation syst. design 133860
advanced overexcitation limiter, power syst. voltage stabil. enhancement 111852
discrete-sheet type low-Tc supercond. power supply 71194
double armature lin. PM DC motor closed loop posn. control 123514
double-axis excitation generator, small-power testing bench expts. 99610
drum-type mill motor drives, develop. status/prospects 113173
dual-pitch lin. pulse motor operating charact. 123517
gas turbine modeling/testing, generator reactive power limits verification 112325
generator excitation systs., perform. spec., interconnection requirements 123348
generator excitation-syst. params. estim. using tabu search algm. 112209
generator model validation tests, IPP perspectives, WSCC requirements 99645
generator overexcitation capability and excitation syst. limiters 112477
hybrid excitation PMSM, flux weakening 123350
hybrid excitation-type sync. machine, trial prod. 123354
hybrid PM sync. machine topol. struct. 123386
isolated three-phase induction generator, excitation capacitance requirement 112512
load side voltage stabil. neurocontrol with FACTS devices 88350
multimachine power syst. turbogenerators, optimal DHP neurocontrol design 133542
multiply-excited SRM, feedforward neural net-based models 88705
multivariable freq. response meas., nonlin. distortions effect 109919
nine-phase reluctance motor drive, perform. eval. expts. 134476
PM sync. motors, saliency-based posn./speed estim. 133972
power syst. generator excitation control optimisation method *(Japanese)* 77249
power syst. transient/voltage stabil. enhancement control scheme 77246
prog. ultra-low noise X-band exciter 91278
pulp mill, integrated turbine-generator digital control syst. 124151
pulse supercond. magnets, inverter-converter bridge energy transfer cct. *(Japanese)* 92906
PWM invertor-fed IM acoustic noise, fan cowl influence 123408
real-time optimal excitation controller using online syst. ident. *(Chinese)* 122859
SEIG transient conditions under symmetric load 123471
SEIG using STATCOM, voltage control anal. 134003
separately-excited DC motor global speed control 112543
single-machine-infinite-bus syst. Hopf bifurcation 88351
slipring IM pulsating torques generation *(German)* 112505
SRM sensorless control scheme at standstill 88702
supercond. power supply operational charact. anal. *(Korean)* 123587
surface-mounted PM machines, torque quality assess., sizing optim. 133936
sync. asynchronized turbogenerator modeling *(Russian)* 99648
sync. generator excitation systs. using IGBT power convertor 133952
sync. generator fuzzy excitation stabilizer 99637
sync. generator-exciter syst. observer-based nonlin. control 88348
sync. machine nonlin. adaptive optimal excitation control scheme *(Chinese)* 77840
temporary generator overexcited capability benefit maximisation 111850
three-phase hydrogenerator multirate optimal control tech. 77774
Nb, discrete-foil-type supercond. power supply, design, fab., test 112627

itons
2,5-dioctyloxy PPV, two-color opt. heterodyned opt. Kerr effect 117435
alkaline earth fluorides, rare earth doped, thermolum. spectra 82327
bacteriorhodopsin, exciton saturation dens. and length, FWM *(Chinese)* 71931
charge carriers/excitons relax. in polymers 92577
conjug. polymer LEDs, singlet/triplet exciton form. rates 127976
diamond:B homoepitaxial film, growth, elec./opt. props. 115294
diamond:B/diamond:P pn jn. UV LED 93438
diamond:P homoepitaxial films, cathodolum. obs. 116914
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
doped polymer LED, phosphoresc. origs. 82393
double layer semicond. nanostruct., excitons, model simul. 80859
electroabsorption modulators, saturation effects simul. 127835
heterostruct. organic LEDs, transient/steady-state behavior 128020
insulator crysts., radiation-induced vacancy aggregation and opt. and scintillation props. 132394
ladder-type conjug. polymer, two step charge carrier generation 93330
ladder-type polymer LED, hot excitons dissoc. 93422
low-noise opt. amps., polariton transit., fiber transm. systs. 85992
luminesc. mechanism of organic/inorganic EL, OLED/LED *(Chinese)* 117003
mol. wire/semicond. nanocryst. superstructs., spectrosc. props. 115214
OLED, electrophosphorescent, doped mol. organic thin film 117007
OLED, hopping cond., computer simul. *(Japanese)* 116987
OLED, triplet excitons, highly efficient phosphoresc. 91705
OLED, white light exciplex emission using tris-(8-hydroxyquinoline)aluminum 82375
OLED integrated on Si substr., 1.5 μm EL 93436
one-way exciton conductors, multifunctional macromols./struct. 69340
organic crysts., exciton spectrum, high order nonlin. 128532
organic EL device, exciplex light emission 126097
organic EL material, electronic excitation energy transfer 104907
organic LED, STM-excited EL and spectrosc. 82386
organic LED carrier behavior anal. on hopping cond. basis, computer simul. *(Japanese)* 82404
organic mol. aggregates ultrathin film, hysteresis, transm. switching 93841
organic PV devices, quantum efficiency, exciton-to-charge generation 69566
organic semicond./Mg interface, orb. lineup, XPS/UPS charactn. 91873
photonic cryst. slab, exciton reson., nonlin./lin. opt. response 127563
poly(2-methoxy-5-dodecyloxy-p-phenylene vinylene) EL device, photooxidation 116966
poly(p-phenylene vinylene)/poly(2-carboxyphenylene-1,4-diyl) bilayer film, luminesc. props. 93332
polymer LED, phosphoresc. Pt(II)/Ir(III) dopants 117009
polymer LED, singlet/triplet energy transfer to mol. dopants 93420
polymer phosphoresc. light emitting devices 105023
PPV, elec. field induced exciton ionization 80782
PPV-based ionically SAM, excited state dyn., photolum. props. 116922
QW, excitons, C-V charact. 126155
QW, quasi-2DEG, exciton states, screening 126146

excitons continued
semicond. macroatoms, field-induced Coulomb coupling, single-electron quantum devices appl. 115973
semicond. microcavity, polaritons, exciton localization 91847
semicond. quantum struct., quantum-mech. effects *(Chinese)* 91831
semicond. superlattices, DC-/THz-ac-driven, coherent phenom. *(English)* 115379
semicond.-metal interact., electron-hole/exciton diags. 103170
sq. QW, electroabsorption, Coulombic coupling 103136
thin organic layers, photoenhanced current, Gaussian trap distrib. 93326
tris-8-hydroxyquinoline aluminum films, nanoscale photophysics 115347
ytterbium tris(8-hydroxyquinoline), OLED, EL 117008
(Al)GaN:Si(Be)(Mg)(C) films, MBE, layer morph., doping efficiency 68207
AlGaN/GaN QW, magneto-PL, valence band 103124
$Al_xGa_{1-x}Sb$ films, MOCVD, elec./opt. props. 114334
AlN epitaxial layers, Al_2O_3, SiC, Si substrs., MBE growth, cathodolum. 93333
C(:B) diamond films, surface stucture, CL, plasma CVD, Schottky jn. appl. 68274
n-C_{60}/p-ZnPc interdigitated jn. for PV cell efficiency improvement 116960
CdMgTe-CdTe-CdMnTe asymm. QW, mag. polaron bifurcation, photolum. spectra anal. 80833
CdMnTe/ZnTe MQW, ultrafast mag. polaron dyn., opt. pump-probe spectra 80832
$Cd_{1-x}Mn_xTe$/CdMgTe(CdTe) MQW, MBE growth, excitons, PL obs. 103150
CdS clusters in thiophenolates, synthesis, charactn. *(Chinese)* 91614
CdS/ZnSe type-II superlattices, localized excitons, PL obs. 80823
CdTe films, MBE growth in (100) orient., GaAs(100) substrs. 101279
CdTe modulation-doped QWs, exciton/trion excitations, PL 80841
CdTe nanocrystals, PL Stokes shift 126028
$CdTe/Cd_{1-x}Mn_xTe$ QWs, excitons spin transport dyn. 80682
$CdTe/Cd_{1-x}Zn_xTe$ QW, exciton bound ionized donor impurity 115415
CdTe/CdMgTe buried quantum wires, interdiffusion using patterned SiO_2 masks 80826
CdTe/CdMgTe buried single QDs using selective thermal interdiffusion 91775
Eu complex-based LED, EL relax. behaviour anal. 128004
GaAs QW, DC biased, enhanced opt./THz freq. mixing 128498
GaAs QW, exciton-polariton propag./scatt., spectra 126184
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
GaAs microcavity, reson. excited polaritons, energy relax. 80825
GaAs, surface-wave plasma source, O-plasma damage, ashing proc. 115642
$GaAs/Al_{0.3}Ga_{0.7}As$ QW microcavity, exciton-photon coupling 93681
$GaAs/Al_xGa_{x-1}As$ MQW, excitonic transits., opt. selection rules 91795
GaAs/AlAs type-II superlattice, excitons-biexcitons, quantum stats. 69670
GaAs/AlGaAs, MQW, coherent all-opt. nonlin. polariz. switch 93843
GaAs/AlGaAs QW, exciton localization dyn., PL obs. 126165
GaAs/AlGaAs, mol. controlled semicond. resistor, exciton photoluminesc., microwave modulation 102758
$GaAs/Ga_{1-x}Al_xAs$ QW, exciton bound ionized donor impurity 115415
GaAs/GaAlAs single quantum wire, Auger mechanism carrier scatt., time-resolved microphotolum. 103004
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approach 91794
GaAs-GaAlAs photonic band gap struct., opt. switching 127833
GaAsN/GaN QWs, envelope fn. calcs., excitons 91806
GaInAs/GaAsP VCSEL, photorefl. line shape symm., QW ground-state exciton energy 71760
GaN MOCVD epitaxial films, growth, effect of dil. ammonia flow rate 79297
GaN epilayers, MBE grown, annealing, PL 126276
GaN epilayers, ground/excited excitonic reson., magneto-opt. study 80721
GaN epilayers, low press. MOVPE, PL, photoreflectance, growth temp./press. 90448
GaN epilayers, nonradiative recomb. proc., transient grating method 80718
GaN, epitaxial lateral overgrowth, growth domains, CL, micro-Raman spectra 79332
GaN epitaxial layers, high resoln. polariton spectra, band gap temp. depend. 80722
GaN, epitaxially laterally overgrown, DFWM spectr. 126022
GaN film, hydride VPE grown, carrier dyn., PL 124988
GaN films, Ga-polarity, XRD, PL, Hall effect, RF-MBE growth 91621
GaN films on SIC, PL, photocond., RIE effects 81102
GaN, hydride VPE layers, mass transport growth, opt. emission 79401
GaN layers, LEO, picosecond photoinduced reflectivity 124990
GaN layers, struct., cathodolum. 103031
GaN nanostructure, self-organized, MBE, CL, PL, SEM 91657
GaN polycryst. GSMBE layers, strong PL emission 80692
GaN, shallow levels, selective photoluminesc. spectra 91619
GaN strain-free homoepitaxial layers, donor-bound excitons, magneto-spectrosc./luminesc. 80720
GaN surface, RIE damage 126382
GaN, thin homoepitaxial film, MBE grown, confined exciton-polariton modes 68191
GaN:In films, carrier dyn., MOVPE, time resolved PL 80726
p-GaN:Mg epilayer, PL, MOVPE, SIMS 79346
GaN:P films, electronic struct., PL 80727
GaN:Si films on GaAs, MOVPE, photolum., Si doping effect 79305
GaN/AlGaN MQW, excitons/polaritons, reson. Rayleigh scatt., vert. motional narrowing 80868
GaN/AlN epilayers, ammonia gas source MBE growth/charactn., sapphire substr., excitons 90305
$GaN/AlN/SiO_2$, epilayers, hydride VPE/MOMBE hybrid growth, PL 68243
GaN/GaAlN QW, excitons, opt. pumping, temp. effect 80870
GaN/InGaN/GaN cubic double heterostruct., QD photolum. 103131
GaNAs/GaAs single QW, opt. transits., band bowing coeff. 80889
GaP/AlP type-II short-period superlattices, carrier localization, PL obs. 80840
Ge/Si(001) QD heterostruct., electron spatial separation 103145
ITO/tris(8-quinolinolato)aluminum/MgAg(Al) OLEDs, exciton dyn., PL obs. 128003
InAs QD, microdisk struct., cavity-QED 80810
InAs/GaAs QD, InAs wetting layer ellipsometry at QD form. threshold 103147
InAs/GaAs self-assembled QD, exciton energy 91785
InAs/InP self-assembled quantum wires, opt. transits., excitons 80811
InGaAs SQW, ion implanted, saturable absorber mirrors for pass. mode-locking 105485
InGaAs:Fe/InP high-speed MQW saturable absorber, FTIR/pump-probe meas. 82822
InGaAs/GaAs MQW excitonic reson. photorefr. devices, vibr. meas. appls. 128456
InGaAs/GaAs MQW, photorefractivity, Franz-Keldysh geom. 82803
InGaAs/GaAs QW, time-resolved PL in mag. fields 69698
InGaAs/InAlAs:Be MQW ultrafast saturable absorber for all-opt. switch 120320

excitons continued
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, confined states, QCSE 91771
$In_xGa_{1-x}As/In_xAl_{1-x}As$ lattice-matched QW, MBE, photoluminesc. 90280
$In_xGa_{1-x}As/In_yAl_{1-y}As$ electroabsorption modulators, strain-compensated 82209
InGaAs-InP quantum wire opt. modulators, 1.55 μm, simul. and optim. 116799
InGaAsN QW, solid source MBE growth, charactn. and laser appls. 101258
InGaAsP MQW, carrier transport, ultrafast spin dyn., polaris. switching 117500
InGaAsP QW mode locked LD, pulse charactn, two-photon absorpt. opt. gating 117374
InGaN, In inhomog. & emission charact., excitons 105028
InGaN SQ wells, amber LED, EL/PV spectra, PL 82407
InGaN, time-resolved electroluminesc., exciton recomb., LED meas. 82318
$In_{0.06}Ga_{0.94}N$ MQW LD lased at 400 nm, localized excitons 93602
InGaN:Zn microcrystals, Pure and doped, PL excitation spectrum, nitridation 80725
InGaN/GaN DH, localized states, photoreflectance, PL, CL 91761
InGaN/GaN MQW, photoluminesc., exciton localization 103122
InGaN/GaN MQW struct., PL, sapphire substrs. 91834
InGaN/GaN MQW struct., time resolved PL, MOCVD 80876
InGaN/GaN QW struct., RTA effects, MOCVD, phase separation, PL, disloc., strain relax. 91944
InGaN/GaN QW struct. emission mechanism, PL, LD, LED 80865
InGaN-based LED, temp. depend. of elec.-field induced photolum. 71586
InGaN-based light emitting devices, emission mechanism *(Japanese)* 82368
InGaP films, OMVPE, superlattice ordering, PL obs. 103045
InP nanoparticles in SiO_2 thin films, prep., struct./opt. props. 80701
MgS/ZnSe QW, zinc blende, MBE growth using ZnS source 101272
MgSe, zinc blende, MBE growth using ZnS source 101272
MoS_2:Re, elec./opt. anisotropic props. 91701
PZT thin films, loss factor, O^+ implant. effects 92635
ReS_2, opt./elec. props., in-plane anisotropy 91702
$ReSe_2$, opt./elec. props., in-plane anisotropy 91702
Si MOS tunneling diodes, band-edge electroluminesc. model 93411
Si nanocrystals, band struct. alterations, size-confine. effects 125999
Si:B,Fe, ultrapure float-zoned samples, Fe trace levels detect., photolum. method 69468
Si:B,P, isotopically pure, photoluminesc., bound exciton transits. 102962
Si:Er/SiO_2 nanocrystals, nonradiative de-excitation procs. 69482
Si/Si:Er interface, Er^{3+} low-temp. excitation. p-n jn. form. influence 126309
Si/SiGe strain-bal. MQWs on SiGe virtual substrs., opt. props. 91783
$(Si/SiO_2)_n$ multilayers and microcavities, LED appls. 93431
SiC, 4H, D_I bound exciton, Zeeman effect, PL 69581
SiC, 6H, epitaxial layers, intrinsic photocond., free exciton binding energy 71512
SiC, 6H, ion implant., persistent D_{II} defect 69584
4H-SiC epilayers, hot-wall CVD, doping/trap conc. reduction 124931
15R-SiC, valence band splitting, wavelength modulated absorpt. spectrosc., low temp. PL 69580
3C-SiC:B/α-SiC(0001), MBE growth, PL, D_I centre lines, AFM 68184
a-$Si_{0.35}C_{0.65}$:H, proton irrad. thermally annealed, PL props. 93338
SiO_2/Si:Er nanocryst. syst., exciton-Er energy transfer, PL 69481
p-$SrCu_2O_2$/n-ZnO UV-emitting diodes, fab./charactn. 71588
$Zn_{1-x}Be_xSe$ crysts., AES, ellipsometry, photolum. studies 90213
(ZnCdMn)Se/ZnSe/(ZnCd)Se semimag. double QW struct., LO-phonon assisted tunneling 80815
ZnO, polycryst., valence band splitting, PL 69528
ZnO:Al(Ga) epitaxial layers, opt. props., doping effects 91979
ZnO:Fe, excitonic procs., PL/elec. DC behaviour 126040
ZnO:N film, PE-MOCVD, impurity states, emission spectra 80739
ZnO/GaN:Mg heterostruct., edge UV luminesc., N_2 plasma annealing effects 91744
ZnO-based materials, plasma-assisted MBE, charactn. 90347
ZnSe epilayers, quality improv. by low temp. growth of ZnSe buffer layer 79327
ZnSe single crysts., twin-free, Bridgman growth 79176
ZnSe:Al,Cl,In, shallow levels, selective photoluminesc. spectra 91619
ZnSe:Cl MBE epilayers, PL, phys. mechanisms 103033
ZnTe epilayers, PL charact. on GaAs(100) substrs. 91633

executive information systems *see management information systems*

executive programs *see supervisory programs*

EXELFS *see electron energy loss spectra*

exhibitions
digital museum, on-demand exhibition 85374
inhabited TV event, network and user activity patterns 75295
libraries' and museums' role on providing access to commun. tools 74170
sci. museum exhibitions via Webcasting, live and rem. online audiences 108343

exoelectron emission
metals cutting, exoelectron emission behavior *(Japanese)* 67537
GaAs(100), fs UV laser treatment, surface modifs., surface states 69865

expanding Universe *see cosmology*

expandor-compressors *see compandors*

expansion boards *see add-on boards*

expansion chambers *see cloud chambers*

expansion, thermal *see thermal expansion*

experimental design *see design of experiments*

expert system shells
long-term load forecasting strategies using knowledge-based ES 111944

expert systems
see also aerospace expert systems; artificial intelligence; decision support systems; diagnostic expert systems; expert system shells; intelligent design assistants; medical expert systems
400 kV power syst. switching regimes anal., ES 111930
500 kV substation, automatic switching seqs. generation, ES *(Chinese)* 112711
advanced mfg. technols. justification tool develop. 67488
AMPAC database, boot program for printing machine, intell. printing 94879
antenna directivity ES, design 72529
automated event class. for multi-Gbyte/day data streams 130034
Bayes networks appl. to semantic understanding of consumer photographs 94827
boiler-turbine coord. control, rule of experts, PID-type fuzzy controller *(Chinese)* 77752
boundary expansion, evol. computation/intrusion detect. solns. 85231
cellular radio, automatic cell planning ES 74683
composite cure proc. optim. using fiber optic sens. and simul./ES 120826
CSC2000 substation automation system, bus-bar differential protection, distributed control unit, clock sync. *(Chinese)* 99857
dam safety assess. using ES technol. 88630
DC cct. theory, problem solving, ES 101648
Deep Space Station Controller, autonomous ground station control 131331
denture mfg., robotic tooth insertion with interactive ES 98727

expert systems continued
distrib. syst., min. loss config., ES develop. 99346
distrib. syst. operation-order-sheet, visual/universal realisation *(Chines* 112046
double-cct. HV transm. line fault detect. ES 99426
E³-EXPERT ES for EMI rejection requirements prediction 83369
electroheat technol. retrofits anal., DSM ES, fuzzy DSS 134645
equipt. maint. admin. using integrated software systs. 100508
eye location in facial images, hybrid neural method 129922
FA-425 fly frame speed sync. control syst. simul. *(Chinese)* 124149
facial expressions recogn. from video frames 118777
gas/oil fired generating unit efficiency improvement, perform. monitoring 885
generic restoration actions scheduling, FSM appl. 99240
hydroelectric power company, real time neuro-fuzzy prod. syst. 123242
indust. power syst. load shedding, ES prototype develop. 78355
Microexpert, ES for microwave oscillator design 68645
MPEG audio segmentation, neural multi-expert class. syst. 94384
NPP maint. auditing, ES *(Chinese)* 123124
NPP PSA, MMI eval., HEROS ES 88542
obj. class., US sens., double knowledge base fuzzy ES 73476
open access transm. network, planning, rule-based ES, math. model 133557
PCB EMC design, expert anal. tools 125878
peak load forecasting using fuzzy ES 111977
power consumption business mgt. syst., expert system, cognitive sci., OO tec nique *(Chinese)* 77170
power electronics, control using AI, review 90716
power network black-start DSS *(Chinese)* 122886
power syst. alarm proc., fuzzy ES 99241
power syst. fault calc. ES for relay coord. mgt. *(Chinese)* 123048
power transformer fault diagnosis using decision tree approach *(Chinese)* 779
primary energy mgt. at STEAG, hard coal procurement/handling *(Englis* 99460
project mgt., ES, algorithmic and factual knowledge 113444
real time ES for control of polluting emissions *(Italian)* 99038
servo perform., internet-based ES 123693
Smart PlantWorks power plant O&M DSS 99446
substation alarm MHS using ANN/ES *(Chinese)* 112708
substations, general graphic compilation syst., fault simul., training ES *(Chine* 78065
three-phase IM fault detect., stator current anal. program 123476
TIGER gas turbine fault diagnosis syst. 77760
time series pattern extraction and proc. for competitive intell. support 11845
unit commitment using hybrid models approach 122921

explanation
learning database syst. for computer network mgt. fns. 119464
load forecasting, intell. hybrid syst. 99318

explosions
see also accidents; coolant-fuel interactions; detonation; fuel element failur nuclear explosions; safety; shock waves
3D photonic lattice crysts., femtosecond laser microfabrication, multiphot proc. 105632
3D vision syst., explosives disposal & building inspection appl. 86630
brush discharges, dust ignition tests 83118
buried landmine/UXO chem. signatures transport, model comparison 76988
catalytic sens. for monitoring explosive atmos. 75707
Class I hazardous elec. installations. cold-weather effects 100510
electrostatically charged liqs., ignition hazards theory 83112
Electrostatics 2001, conf., Koscielisko-Zakopane, Poland (June 2001) 78467
EM driven cylindrical implosions, high speed laser shadowgraphy 97386
explosives & chem. warfare agents detect., electrochem. sens. 76987
explosives/chem. agents detect., sorbent coated SAW sens. 76992
Ga_2O_3 semicond. metal oxide sens. syst. for indoor air monitoring using I absorpt. 121014
gamma ray imaging, image intensifier/cooled CCD camera 120889
hazardous locations zone equipt. installation, US experiences 124287
IECEx Scheme for explosion protected apparatus. global develops. 124288
increased safety induction machine design, develop. and testing 99665
indust. electrostatic procs., fuzzy sets theory 83119
intermediate bulk containers, electrostatics requirement for explosive atm 83116
land mine vap. signature determ., sens. develop. 76997
landmine detect., polymer film amplif. fluoresc. quenching, sniffer 76993
landmine detect./location, X-ray fluoresc. tech. 88197
landmine/UXO detect., soil/air sampling, TNT & DNT anal. 76991
MEMS explosive particle detector, dissolved TNT/DNT in soil 75691
multichannel IR pyrometer, pulsed power expt. appl. 97237
nitroaromatic explosives electron capture detector, attachment react. 75690
NQR land mine detect. syst., field test results 76994
NQR landmine detect., stat. sig. proc., Bayesian algm. 76995
ordnance detect. & discrim. at Fort Ord range, instrum. eval. 88229
ordnance syst. EMP effect testing 88267
PELAN pulsed neutron portable probe for UXO & landmine ident. 111556
petrochemical indust. grounding systs. design considerations 134694
pulsed power expts., US/Russian collaboration 99775
silica glass. crossed holographic gratings, periodic nanostruct. array 105581
sulphur crushing operations, ESD protective measures investig. 83122
TNT based activated landmines, laser irrad. neutralisation 105620
TPP pulverised fuels, explosive props. eval. 112294
UXO detect., explosive vap. diffusion in snow, modelling 76990
VMG-80 magnetocumulative generator-based HV pulsed power source *(Ru sian)* 77952
Ar capillary discharge Z-pinch plasmas, soft X-ray laser amplif. 128071
Ga, multipoint liq.-metal emitter, explosive electron emission 80574
N^+ ion x-ray recomb. laser, exploding-type-pumping using thin membrane tar 117076
Si porous chip, DNT, TNT, HF, and nerve agents detect. 75701

explosive driven pulse generators *see pulse generators; pulsed power suppli*

exponential distribution
accelerated life testing, simple step-stress models inference 89831
ATM wireless networks, stochastic control of path optim. for inter-switch han offs 85729
Barron dens. estim. optim. 78832
cellular networks, service time distrib. modelling using phase-type distrib 131278
closed queueing networks with/without bottleneck, up/down-crossings 11384
digital sig. segmentation based on min. description length principle 118804
forward-link cellular DS-CDMA over freq.-selective Nakagami multipath fadi channels 131144
gastric elec. uncoupling, deterministic chaos level dyn. 87418

onential distribution continued
high-speed networks supporting multimedia, traffic charactn. 84926
mage smoothing with exponential fns. 106685
P telephony, recursive algm. for trend MLE in exponential noise 119506
S-95A and IS-95B/cdma2000, comparison of soft handoff perform. 108766
TO/diazopheny diamino glyoxime/In Schottky device, elec./impedance charactn. 126215
ight traffic in cellular syst. with mobile subscribers and appls. 119997
in. consecutive-k-out-of-n, F repairable syst., repair priority 67674
Linnik and Mittag-Leffler params., fractional moment estim. 113893
M/G/1-type queueing procs. with light-tailed increments, tail asymptotics 100761
max. likelihood trend estim. in exponential noise 107381
MaxEnt queries, seq. sampling 107356
meas. stds. comparison ref. values, nonzero-mean uncertainty distrib., MLE 109403
mixed exponential pop., cost optimal burn-in tests, Bayesian calc. 89799
mixed platform wireless handover distrib. with multimedia services 108933
modelling with queues, empirical study 119258
multiexponential transient spectrosc., iter. deconvolution 84739
optimal prediction intervals, generalized order stats. 89918
oxidase-bound amperometric biosens. output charactn., dyn. model 75671
parallel systs., stochastic comparisons 89916
PD pulse occurrence fluct. anal. using integral eqn. 70377
Poisson channel, optimal sig. selection 106006
PVDF/trifluoroethylene copolymers, ferroelec. switching, nucleation 127211
queue arrival routing for min. av. holding cost 100759
semi-Markov flow proc. queueing fluid model, bounds 84936
sens. agents, adaptive reconfiguration, distributed contract networks 131990
silica single-mode fiber, stimulated Raman scatt., commun. appl. *(Chinese)* 116609
spinal SEP anal., time-freq. distrib. tech. comparison 87424
symm. reversible VLC, theoretical bounds 117936
type II censoring, contaminated data, stat. anal. *(Chinese)* 89985
uplink-sync. multi-carrier CDMA in wireless commun., perform. 85816
GaN epilayers, nonradiative recomb. proc., transient grating method 80718

onential stability *see asymptotic stability*
osure meters *see photometers*
nded definition television *see high definition television*
nded Huckel theory calculations *see EHT calculations*
lended Industry Standard Architecture *see system buses*
nded X-ray absorption fine structure *see EXAFS*
nsometers
microsens. design, improvement & future prospects 75753
PZT inverse piezoelec. extension, noninterferometric meas. 81722
raordinary ray *see birefringence*
rapolation
2D nonlin. Fredholm integral eqns., extrapolation of Nystrom soln. 114148
airfoil transient scatt. anal. and RCS reduction 86196
all-pole modelling of speech spectra based on lin. predict. 72990
antenna/RCS anal. involving large bodies 72470
arbitrarily shaped image objs., transform coding, wavelet transform, lifting scheme *(Chinese)* 118599
arbitrarily shaped image segment representation by wavelet basis 84493
automatic sorting installation based on CCD cameras for measuring gauge diam. and ellipt. of pulp extractors 94905
bandlimited images, fast extrapolation/superresolution algms. 95185
bandlimited interpolation and extrapolation, synthetic view 129956
BVP, param.-depend. sing. 101063
CMOS antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
CMOS device/cct. ultra-thin oxide reliab., phys./predictive models 81525
compressed coefficient's band-pass delay time charact. extrapolation using GA on DCT 73639
convergence of splitting method of high order for react.-diffusion systs. 114039
diff. eqns. on Lie groups, extrapolation methods 114144
diffr.-limited images, prior scene inform. modeling/extrapolation for set theoretic restoration/super-resoln. 94655
dosimetry, interpolation/extrapolation methods and multiresolution wavelet transform 111233
EM response, optimal interpolation/extrapolation algm. 128654
epipolar geom. estim., N-dimens. tensor voting appl. 106498
exponentially-fitted Runge-Kutta methods, freq. determ. and step-length control 79088
fast summation of power series with coeffs. analytic at infinity 114035
fast wavelet transforms, unconstrained vector length 107472
freq. extrapolation for computing antenna-platform radiation problems 105852
Gaussian blur-space for deblurring/edge-preserving noise smoothing 73257
geometric sing. theory in embryology, inverting dedevelopment 76208
gradiometer, mag. meas., lab. techs. 132135
harmonic sigs. recovery, adaptive extrapolation algm. anal. 107351
head SAR due to mobile phones, interpolation/extrapolation 111221
inverse band-limited sig. prob., regularisation, Malvar-Wilson wavelets 129980
ionos. real-time charactn. using diverse data 133309
L_∞ convergence and extrapolation method of difference scheme for nonlocal parab. eqn. with natural boundary conditions 114135
lin. copolysiloxane LB superlattice, substituted aromatic acid side chains, dielec. props. 104236
Lyapunov consts. for random recurrences with smooth coeffs. 90074
microwave toroidal cavity transducer, theory 120711
milling QC, roughness recogn. by fuzzy neural net 100662
MOS device LV near-interface trap-assisted tunneling current meas. 80941
MOSFET, off-state degrad., lifetime extrapolation model 126809
multi-slice CT, nonlin. helical reconstruction algm. 132789
multilayered medium, overlying objs. EM scatt. 72213
opt. flow estim. for occlusion using extrapolation 94550
Petrov-Galerkin methods, nonlin. Volterra integro-DE 101078
polysilicon-ONO-Si NVM device retention reliab., two-step high temp. deuterium anneals 79892
power/ground plane struct., bounces, planar cct. model, APA-E algm. 78610
radar imaging, high resoln., 2D data extrapolation using AR lattice modelling 131640
rainfall patterns forecasting, regularized Gaussian mixture models *(English)* 122637
RCS GTD model, freq. extrapolation by GA 86143
RCS of large objs., extrapolation tech. using GA and Prony's method 75074
RFIC, nonlin. high-speed cct., steady-state anal. 101696
room acoustic transfer fns. estim. 85360

extrapolation continued
spline Petrov-Galerkin methods for periodic pseudo-diff. eqns. 124635
stereo images, edge-preserving disparity estim./disparity-compensated intermediate view reconstruction 95239
stochastic proc. obs. with memory under anom. noise 73689
stochastic procs., generalized moving continuous-discrete extrapolation 67774
superlinear convergence order of logarithmic barrier algm. 67919
ultrathin nitrided oxide, low press. N_2O growth, reliab. 103398
via line structs., electromigration tests, fast wafer level/std. package level 115680
GaInP-GaAs HBTs for X-band power appls., reliab. 91290
InP-InGaAs-InGaAsP DHBT proc. develop. for power appls. 92317
$LaCrO_3$, Sr doped, defect induced dilations, atomistic modeling, SOFC interconnect 89261
Si HBT, hot carrier reliab., extrapolation model 126677
SiGe HBT, hot carrier reliab., extrapolation model 126677

extraterrestrial radiofrequency radiation *see radiofrequency cosmic radiation*
extremum control *see optimal control*
extrusion
act. composites, microfab. by coextrusion hollow fibres 101526
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
chem. indust., proc. imaging & image proc., DuPont appls. 113808
coating modeling, electronics mfg. appl. 79400
decentralised DCS, OO infrastructure 124437
DVD disc params., replication procs., data-anal. method 92982
melt press. meas. for food/med. appls. 100572
polymer extrusion/cure monitoring using clad polymer buffer rods 99091
polymer/thermoplastic chalcogenide glass composites, phys./opt. props. 82041
PSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
web proc., scanning gauge data proc., 2D var. reconstr. 113810
Ag, thin films, fatigue, dyn. microbeam deflection 127093
Ag-SnO_2-In_2O_3 elec. contacts, prod. optim. 90563
Cu-Cr-Y, rapid solidif., phys. props., Y addit. 102757
GaLaS opt. fiber drawing in convective furnace, strength testing 127666
$(Nb,Ta)_3Sn$ multifilamentary superconds, prep. using Osprey bronze with high Sn content 70765
SiH_4 precursor for silica glass, interlevel dielec. films, mech. props., Al interconnect extrusions 126518

eye
see also contact lenses; electroretinography; vision; visual evoked potentials
2D image space, efficient moving obj. tracking 106506
3D eye template for eye feature extraction 84246
3D HF US images of skin and eye 98303
3D US images, high-resoln., morph. assay 110722
AcriSensor, foldable intraocular lens, integrated telemetric press, sens., glaucoma diagnosis 132545
adnexal ophthalmological exam. using telemedicine 133168
alpha EEG onset detect. following eye closure, location-based techs. 110554
artificial eye, control using EOG following real eye 98722
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
attentive foveal sens. for target tracking 109677
Autoref R-1 readings, monochromatic aberrations effect 76410
beta-ray dose distribs. from ophthalmic applicators, model eye comparison 98785
beta-ray ophthalmic applicators dosimetry, different meas. methods comparison 98784
biomarkers and biological spectral imaging, conf., San Jose, CA, USA (Jan 2001) 113265
blinking commun./control channel for disabled people, image proc. 87930
blinks, Kalman filter detect. in video-oculography, locomotion appl. 98365
BOLD contrast fMRI, activation patterns, specified-resoln. wavelet anal. 110857
cephalopod retina/visual syst. simul. by analog VLSI 103958
closed-loop adaptive optic visual aberrations correction syst. 76413
contact lens trauma assess., corneal images anal. 87552
cornea, human, laser ablation, fluoresc. surgical feedback 98633
cornea/PMMA plate, excimer laser absorpt., vol. luminance appl. 117598
DICOM use in integrat. of imaging into electronic patient record at Department of Veterans Affairs 98121
digital images, registration, vector mapping 98362
DP, cpd. eye model, direction quantization 84076
driver drowsiness detect., physiological measuring syst. *(Japanese)* 132580
electro-oculogram, human, fast oscills. recording 132578
extraocular muscle borders detect. using math. morph. 76544
extraocular muscle vol. estim. using 2D MRI 87565
extraocular muscle vol. meas. using dyn. contours 87598
face detect., general framework 73541
face ident., 1 spike per neuron, degrad. resist. 118770
face image, automatic extraction of eye and mouth fields using eigenfeatures and MLP 129883
fundus image features extraction, diabetic retinopathy appl. 98381
gaze determ. via images of irises 129617
grating sandwich struct., NLO limiters, eye protection 71953
Heidelberg Retina Tomograph, topographic meas. reproducibility, contour line size/location influence 76409
homog. phantom exposed to cordless phones radiation, SAR 87937
Hotelling transform, computerised biological objs. recogn., corneal cells appl. 98159
Hough transform/separability filter for detect. of eyes from human faces 84614
human eye, microsystem technol. 133056
hybrid neural method for locating eyes in facial images 129922
hyperspectral fundus imager, syst. concept & data proc. 98346
image sens. for testing refr. error of eyes 76408
intraocular CMOS press. sens. syst. implant, prog., on-chip micromech. sens. array 98868
intraocular diseases, CT and MRI diagnoses *(Chinese)* 76508
intraocular microsystems, retina implants, press. sens. and vision aids 133057
iris fast detect. using neural nets 129826
iris recogn. through feature vector/classifier improvement 84588
iris segmentation based on refl. and eyelash detect. model 84238
Kumakhov lens focused x-ray therapy 87835
LED med. diagnostics, oximetry and retinal imaging 87516
lens, aging human, thickness determ. from corrected Scheimpflug images 98366
lens, radiation dosimetry, Monte Carlo simul. 122375
mesograph, continuous intraocular press. monitor, telemetric syst., glaucoma diagnosis 132544
microsurgery, Er:YAG laser induced vap. bubbles 98632
motion meas., mag. search coil tech., field homog. improvement 121987

eye continued
movements, impulse-like, effects of digital filtering on gain and latency params. 87366
multifunctional Si-based microscale surgical syst. 111072
myopia correction, excimer laser refr. surgery *(Japanese)* 111107
myopic refr. surgery, excimer laser, intraocular press. obs. 72150
neovascular maculopathy, PDT/transpupillary thermotherapy *(Japanese)* 111108
objective laser eye protector defn. tests 78551
ocular artifacts, EEG, lateralized broadband power 76245
ocular/body disease detect. by dyn. light scatt. 132637
ophthalmic therapeutic laser systs., perform. required *(Japanese)* 111110
ophthalmology, CMOS microtransceivers, batt. operation 122332
optic nerve head, age-related topographical changes, scanning laser tomography 98367
Parkinson's disease patients, spontaneous blinks, EMG, electro-oculogram 87361
patient diagnosis, prisons, tele-ophthalmic syst. 122463
peripheral vision simul. testing, image discrim. 97649
pers. ident., human irises recogn., opt. transm. binary models, Fourier spectra 84561
press. monitoring, wireless syst., intra-ocular lens 122467
press. monitoring syst., wireless, hybrid IC integrated into intra-ocular lens 122459
primate/rabbit eyes, polaris. sensitive OCT, birefr. tissue 98378
proton eye radiotherapy, concepts modelling 122288
Pulsair 3000 tonometer, readings no. to ensure accuracy of av. 87340
pupil response to light meas., novel imaging syst. 110846
racehorse ident. syst. using iris recogn. *(Japanese)* 84523
radiowave absorpt. by brain/eyes in human head eccentric spheres model, anal. 87950
REM/nonREM EEG, computer anal. in young adult/elderly subjs. 121913
retina, 3D OCT images 98363
retina implant, microphotodiode arrays, elec. prop. 133043
retina implant for stimulation of ganglion cells, laser microperforation 122333
retina implants, multielectrode stimulus param. optim. 111158
retinal damage, red diode laser exposure 98816
retinal diseases imaging, scanning laser ophthalmoscope appl. *(Japanese)* 110835
retinal fs laser pulses spot size, vis. lesion threshold depend. 67501
retinal hazard eval., laser safety apparent source anal. 111190
retinal image digitization, optim. for improved digital proc. and visualization 110850
retinal layers functional imaging, laser scatt., spreading depression 87533
retinal oxygenation response to hyperoxic challenge, MRI meas. 132753
retinal pathologies, expert eval. using digital image anal. 87535
retinal photocoagulation, changes and present state *(Japanese)* 111109
retinal projections, 3D gradient echo MRI, Mn^{2+} contrast 132681
retinopathy, diabetic, abnormality detect. in automated mass screening syst. 110851
saccade related EEG component, adaptive nonlin. PCA 87432
scanning beam displays, eye safety anal., LEDs and laser appls. 97725
sector scanning US backscatt. microscope 110772
SIGMA-eye applicator, antenna arrays, interacts./transforming networks 111105
sleep EEG topography, age-depend. change 76254
sleep modelling, EOG and EEG sig. based Gaussian mixture model 121921
squint diagnosis, facial symm. estim. by stereo imaging 98345
standardised helmet tech. and cribriform plate coverage 87867
tele-ophthalmology between South Africa and UK, utilization and practical aspects 133165
tele-ophthalmology for eye disorder treatment in primary care 133166
teleconsultation for primary-care ophthalmology and dermatology, cost study 76783
trigeminal neuralgia, gamma knife radiosurgery, eye lens dose 76749
V1, computational allegory 129778
vascular branches in fundus retinal images, geom. and morph. anal. 87521
vessel-like patterns detect. in noisy environ. 87549
wavefront aberration meas. of human eye *(Japanese)* 110834
Er laser phacoemulsification/other clinical appls., 5 yrs. experience *(Italian)* 98664
^{106}Ru ophthalmological applicator, BANG polymer gel dosimeter, MRI 76771
^{106}Ru ophthalmological applicator, dose distrib. meas., BANG gel MRI 98769

F-centre lasers *see colour centre lasers*

F-centres
see also A-centres; M-centres; R-centres; Z-centres
alkaline earth fluorides, rare earth doped, thermolum. spectra 82327
imaging plate, photostimulated luminesc. *(Japanese)* 71531
α-Al_2O_3, TLD-500 dosimetric crysts., UV absorpt. spectra, temp./shape effect 127915
$Ba_{1-x}Sr_xFBr$:Eu, storage phosphors, energy transfer 127931
LiF:F_2^- color center cryst., persistent photon-gated spectral hole burning, photolum./absorpt. spectra 128459
LiF:Mg,Cu,P phosphor, prep., thermolum., ESR 116936

F_2-centres *see M-centres*

F_3-centres *see R-centres*

F_A-centres *see A-centres*

f-values *see oscillator strengths*

Fabry-Perot interferometers
1D photonic band gap syst., microwave/THz mirror 102524
act. switch, switching behaviour 105560
atmos. opt. rem. sens., fly-eye design advances 122676
aurora, thermos. param. meas. by interferometer with CCD recording 88134
beatwave interferometer calib. using tunable external-cavity diode laser *(Chinese)* 75348
differential opt. fiber refractometer, patient monitoring on drug injection 110840
distributed temp. sens., fibre-optic based for oil and gas wells 120828
external-cavity diode laser with intracavity glass plate as fine-tuning device 71785
fiber Bragg gratings, pass. interrogation of low-finesse Fabry-Perot cavities 109610
fiber-optic extrinsic Fabry-Perot interferometer strain sens., three-wavelength digital phase demodulation 86586
fiber-optic temp. sens. using low-coherence light source *(Korean)* 75598
fibre opt. AE sens. develop. for NDE syst. 114531
fibre opt. sens., transm.-type, sig. proc. algm. 120851
fibre optic sens. for machine health monitoring 120829
fibre-optic temp.-strain discrim. sens. using WDM chirped in-FBG 86575
filter time delay, short opt. pulses 96668
fs pulse train, freq./repetition rate stabilis., F-P ref. cavity 71905

Fabry-Perot interferometers continued
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
high-speed SG-DBR laser, fast wavelength switching, Fabry-Perot interferometric meas. 105553
hybrid SLC Solc/Fabry-Perot filter for wavelength DEMUX 75048
intracavity self-adapted photorefr. Fabry-Perot 128350
intrinsic Fabry-Perot fiber-optic temp. sens. 75566
multireflector reson. bandpass filter design, guided wave optics 82270
narrow linewidth OPO photoacoustic spectrosc., LIDAR/sens. appls. 72037
nonlin. Fabry-Perot resonator in opt. waveguide geom., FDTD anal. 72045
opt. components/microsystems, fab., packaging 71384
packet-by-packet wavelength conversion 72013
quartz birefr. Fabry-Perot etalon for Nd:YAG dual-freq. laser *(Chinese)* 717
refr. thin-film micro-optics, femtosecond interf. effects 82206
self-adapted laser mode filtering photorefr. Fabry-Perot interferometers 1275
self-calibrated interferometric-intens.-based opt. fiber sens. 131947
self-mixing interferometry, FT method, displacement meas. 97833
single mode telecomms. devices, high-finesse Fabry-Perot interferometer me appls. 120126
SMF Bragg grating light distrib. meas. 116625
std. telecomm. fiber refr.-index changes on tightly focused fs NIR pulse ir 104641
VIRGO grav. wave expt., astron. interferometer, review 97163
wavelength-demultiplexed fibre Fabry-Perot sens., high-resoln. vib. meas. 972
widely tunable DFB semicond. laser transmitters, WDM dyn. wavelength rout 128380
CO_2 high-power laser, controllable Fabry-Perot interferometer output mir 82488
Er doped fiber-ring laser wavelength-tuning anal. 71697
GaAs, fiber-coupled photorefr. US demodulator 93767
InGaAs/InAlAs:Be MQW ultrafast saturable absorber for all-opt. switch 120
$LiNbO_3$ Fabry-Perot etalon, freq. stabilization/tuning of Ti:sapphire laser 93
$LiNbO_3$ dielec. channel waveguides, propag. loss, Fabry-Perot reson. meth 104734
N_2 gas flow, high-speed, laser Doppler diagnostics, spontaneous Brillouin sc 121266
PLZT ceramics Fabry-Perot interferometers for vis. and mid-IR lasers 1054
Si integrated microspectrometers, low-cost syst. develop. 116754
Si opt. microsensor, direct near-field antenna testing 109603
Si opt. press. sens, white light fibre interferometry 75759
Si porous chip, DNT, TNT, HF, and nerve agents detect. 75701

Fabry-Perot resonators
1.55 μm LD transmitter, power/freq.-depend. pulse width and jitter 117199
1D photonic band gap syst., microwave/THz mirror 102524
all-opt. tunable interferometric bandpass filter, DARR loaded coupler 93146
cascaded CW Raman fiber lasers, SRS, num. modeling, optimisation 82539
chirped fiber grating group time delay meas., mode-mocking tech. 116647
CW Fabry-Perot laser opt. pulse generation, 100 GHZ 82602
external-cavity semicond. laser stabil., strong-feedback regime 93629
external-injection seeded gain-switched Fabry-Perot laser based opt. pulse g 105450
fiber Bragg gratings, pass. interrogation of low-finesse Fabry-Perot cavit 109610
fiber Bragg gratings with Fabry-Perot struct., reflectivity and group delay char 127638
fiber optic Fabry-Perot resonator, invasive press. meas. 131962
fibre Fabry-Perot laser, ring cavity, act. mode locking 117097
fibre laser with SOA gain medium, wavelength-switching, Vernier effect 935
filter based all-opt. clock extraction cct. perform. anal. 75035
integrated micromachined tunable laser using polysilicon 3-D mirror 71357
intracavity self-adapted photorefr. Fabry-Perot 128350
intrinsic Fabry-Perot fiber-optic temp. sens. 75566
large channel count wavelength-selectable 1.5 μm laser, GHz WDM app 109167
large-aperture MOEMS Fabry-Perot tunable filter, electromechanical sim 93217
low-finesse Fabry-Perot cavity interrogation, WDM MUX spectral transfer modulation 75432
MM-wave Gaussian radiation pattern antennas 117820
modulational-instabil. σ-resonator fiber laser 82517
multichannel DWDM wavelength monitoring, temp.-tunable F-P filter 7505
multilayer dielec. Fabry-Perot cavity, ion-implanted gratings 71463
multiple cavities Fabry-Perot narrow-bandpass interf. filters, auto-design *(C nese)* 116889
multisection LD, opt. phase conjug. using FWM 71825
nonlin. Fabry-Perot resonator, direct num. integrat. 72047
nonlin. Fabry-Perot resonator in opt. waveguide geom., FDTD anal. 72045
pass. FP opt. resonator, TEM_{q00} mode, line shape fn. 82704
pass./adaptive opt. equalizer for reconfigurable multiwavelength networks 966
poled polymer films in F-P cavity, long. EO modulation obs. *(Chinese)* 1168
polymer asymmetric Fabry-Perot film, external EO sampling 82215
QW laser, microwave modulation with/without external opt. injection 82766
reconfigurable multiwavelength pulse source, self-seeded LD 105453
sapphire low-loss high-reflectance coating advanced detector optics, birefr. me 116876
self-calibrated interferometric-intens.-based opt. fiber sens. 131947
semicond. lasers, multi-long. mode instabilities, coupled mode model with g dispersion 71826
semicond. lasers, pulsed subharmonic opt. injection, sig. generation at MM-w repetition rates 105335
silica tapered hollow-core fibers, freq. selective props., multiwavelength co mun. appls. 93051
SOA-planar lightwave·cct. hybrid Michelson interferometric wavelength c verter, DWDM networks 82843
stable spatial laser patterns, thermal nonlin. 117404
transparent plates, continuous laser interf. thermometry 97875
unstable plane-parallel resonators, variable-reflectivity multilayer dielec. mir 128348
VOC trace gas detect. by NIR seeded cavity ring-down spectrosc. 76940
wide stop-band/flat-pass-band opt. filters based on multi-resonators 71503
AlGaInP, microcavity LED, external quantum efficiency 128021
Er-doped fiber ring laser, widely tunable operation in C-/L-bands 71674
Er-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
Er-doped fibre ring laser, discrete & CW tuning 93732
GaAs internal photoemission reson. cavity enhanced photodetector 97274
GaAs microresonators, cavity solitons study 127812
GaAs/AlGaAs superlattices, miniband transport, ARC 103141
GaAs/AlGaAs vert. cavity MQW modulators/photodetectors for opt. inter nects 116803

ry-Perot resonators continued
GaInAs/GaAsP VCSEL, photorefl. line shape symm., QW ground-state exciton energy 71760
$Ga_xIn_{1-x}As_{1-y}N_y/GaAs$ laser struct., In/N ratio effects 93588
GaInAsP planar photonic cryst. waveguides, low propag. loss meas. 116669
Ho:ZBLAN glass fiber laser, LD-pumped, power conversion efficiency 93527
InGaAlP gain switched FP LD at 650 nm, opt. pulse param. anal. *(Korean)* 93726
InGaAs LV MQW pin Fabry-Perot modulator, microcavity regime impact 71410
InGaAsP MQW asymmetric Fabry-Perot modulators for microwave photonic appls. 131379
InGaAsP/InP wavelength selective filter with Fabry-Perot etalon resonator 116729
InGaN MQW laser, deeply etched air/nitride DBR, single mode oper. 105348
InP tunable Fabry-Perot filter, involuntary underetching 82272
$LiNbO_3$ dielec. channel waveguides, propag. loss, Fabry-Perot reson. method 104734
$LiNbO_3$ slabs, coated, photorefr. beam-fanning effects, self-pulsations 82939
$LiNbO_3$:Fe PV crysts., self-defocusing to self-focusing dyn. transit. 128471
Nd:YVO_4 ring single-freq. laser, LD end-pumped, high-power freq. stabil. *(Chinese)* 71703
Si integrated microspectrometers, low-cost syst. develop. 116754
Si opt. microsensor, direct near-field antenna testing 109603
SiGe/Si MQW reson.-cavity-enhanced top-/bottom-illum. photodetector 120800
SiN PECVD membrane, ZnS sacrificial layer, tunable Fabry-Perot cavity 116756
Yb-doped double-clad fiber laser, conversion efficiency 117122
Yb^{3+}-doped ring/line cavity fiber laser, LD pumped, output charact. *(Chinese)* 71691

recognition
2D face warping using single image 73548
2D model single view, fast face ident. under varying pose 118740
3D dist. maps, PCA 107229
3D face direction meas. by template interpolated matching *(Japanese)* 73447
3D face model creation from video 118277
3D model enhanced face recogn. 95541
act. vision, obj. tracking by adaptive color model 95594
adaptive activation fn. neural net appl. 107133
appearance-based recogn. using perceptual components 107260
Argus, digital doorman, automatic visitor ident. syst. 73473
audio-visual segmentation and cocktail party effect 73107
automatic skin-color distrib. extraction for face detect./tracking 73458
automatic white bal. for digital image containing human face 73481
body parts tracking of multiple people, new approach 95598
charact. feature extraction 73512
class., eigenpaxels/neural net approach 73496
coarse-to-fine face detect. 118693
color images, face detect. from complex scenes 118705
color images, invariant face detect., orthogonal Fourier-Mellin moments and SVM appl. 95445
color images with complex background, neural detect. 107219
color modeling and segmentation, mixture model 118753
colour-based facial image retrieval 118738
complex backgrounds, face detect., neural net based method 95472
compressed-domain face detect. 129822
computationally efficient face detect. 107190
cooperative distributed image registration for robust face recogn. *(Japanese)* 73444
cooperative modular neural nets, fast for human face detect. 95526
coupled-view act. appearance models 129912
data-driven model for monocular face tracking 107191
DCT for face recogn. 129856
detect. algms. using Markov models 107188
detect. framework, general 73541
detect. in color images and video seqs. 107292
detect. model based on dist. measure of regional feature 73463
detect./facial feature extraction, efficient algm. 107220
direct lin. discriminant anal. algm. 107223
dyn. face recogn. across multiple views 129915
eigenface and PCA based method 95406
eigensubspace-based face recogn. 73464
elastic graph matching based, SVM appl. 84609
elderly health care, 3D stereo-vision-based robot 87805
embedded HMM for face detect./recogn., max. likelihood training 84610
emotion class. based on MPEG-4 facial defn. param. set 129829
emotion recogn. from facial expression, neural net 107259
emotional state recogn. by computer vision 73535
encoding and recogn. based on human visual model and DCT 129761
energy fn. for facial feature extraction 84580
expression anal. by integrat. feature-point posns./image gray levels 95437
expression recogn., continuous dyn. prog. appl. 107201
expression recogn. based on 2D struct. of emotion 73456
expressions recogn. from video frames 118777
eye and mouth fields, automatic extraction from face image using eigenfeatures and MLP 129883
eye location in facial images, hybrid neural method 129922
eye-state action unit detect. by Gabor wavelets 73544
facial expression recogn. approach for perform. animation 95552
facial features detect. automation 129924
facial features detect. on images with multiple faces 73550
facial models, compensation for ensemble-specific effects 129913
feature detect., color segmentation/KL transform *(Chinese)* 95431
feature extraction and class., self-organising map, RBF networks 107257
feature extraction in frontal view images 107207
feature points, robust detect. under nonlin. illum. 107231
feature posn. extraction and feature geom. comparison 95425
force field transform for ear/face recogn. 84608
foreign lang. words repeating and remembering, implications for lang. teaching systs. 118077
FPGA-based hardware, ns-range recogn. speed *(Japanese)* 129821
frontal-pose image recovery from single profile image 95500
fuzzy neural nets, region-based for face detect. 118787
fuzzy-based automatic eye extraction in human face images 95535
Gabor attributes tracking for face verification 84613
Gabor feature classifier for face recogn. 107179
gaze determ. via images of irises 129617
gender class. using SVMs 95509
general face image recogn. syst. based on dual attribute graph *(Chinese)* 107205
generalized spectroface 84640
gradient-based approach, segmentation of human face 118680

face recognition continued
gravity-center template based human face feature detect. 73552
gray-scale nonlin. filter design via multiresolution apertures 129464
grayscale hit-or-miss transform based on level sets 95522
hands and face tracking in complex background using colour and motion 129902
Hausdorff dist. based human face recogn. 84632
head boundary location with 2D CW transform 84578
head detect. method based on region shield segmentation 84576
head gesture recogn. algm. 73536
head pose estim. with Gabor wavelet networks 129611
hierarchical framework for facial expression recogn. 73549
hierarchical unsupervised learning of facial expression categories 95018
Hough transform/separability filter for detect. of eyes from human faces 84614
human face, eye detect., Hough transform and separability filter *(Japanese)* 129434
human face detect., prediction-and-verification 94965
human face extraction using GA 129895
human face feature extraction via adaptive principal component extraction algm. 84577
human face recogn., facial color/motion inform. extraction *(Japanese)* 95488
human faces extraction from natural background for pers. ident. 118779
human faces recogn. based on fast computation of circ. harmonic components 73546
human skin color model using neural networks 118674
human skin colour phys.-based modelling under mixed illuminants 84596
human-friendly group conversation robot, multi-modal interface *(Japanese)* 84519
human-robot interface based on speech understanding assisted by vision 73106
i-Broadcast syst., cross-medial broadcast program contents mgt. *(German)* 131738
ident., online lin. discriminant anal. 84545
ident. using biometric charact., problems, acceptance/rejection stats. *(German)* 118107
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
image morphing, Kohonen self-organizing feature map appl. 95536
inhomog. Gibbs model of faces learning by min. entropy 107161
invariant face recogn. 118720
invariant gender ident. 107284
Japanese Sign Language, non-manual inform. recogn. 73554
Jijo-2 office robot, speech recogn., dialogue mgt., and stat. learning 129393
kernel eigenfaces appl. 84611
landmarks location and tracking, Gabor wavelet networks appl. 95450
LDA-based face verification, matching scores 129911
learning from pos. examples, face detect. 95420
library loan recording using book and face images *(Japanese)* 95487
lip region image anal. for emotion detect., evol. 107262
living human face meas. using pulsed holography 82973
localization in complex scenes, orient. template matching 95501
machine vision, conf., Bristol, UK (Sept. 2000) 124239
model calib., 3-D facial feature points automatic extraction 95497
modular neural nets, fast for human face detect. 73503
most informative regions ident. 95403
moving pictures, automatic extraction method of facial regions for occlusion faces 118780
moving window classifier 129916
MUGSHOT database, profile views, hybrid face recogn. systs. 107200
multi-pose image seq. method 129906
multi-view dyn. face model, modelling faces dyn. across views and over time 107163
multi-view face detect. and pose estim., kernel machine based learning 107187
multi-view face pattern nonlin. mapping, Gaussian distrib. 107195
multilinear models for facial emotion proc. using math. model 76475
multiple faces tracking/zooming syst. 73547
multispace Karhunen-Loeve for pattern class. 118717
neural method, 1 spike per neuron, degrad. resist. 118770
neural net facial expression recogn. syst. using unsupervised local proc. 129908
obj. recogn., color-invariant shape moments 118654
open environ. surveillance 84641
orient. and shape recogn., rot. spreading associative neural network appl. 107152
orthoface method, eigenvalues 73480
pairwise face recogn., Bayes classifier 107181
PCA and moment invariant method appl. 84635
pers. ident., human irises recogn., opt. transm. binary models, Fourier spectra 84561
pers. ident. and emotion recogn. from facial images *(Japanese)* 129859
pers. ident. syst. using isodensity maps based fast template matching algm. 118778
pose determ. by using vanishing points 129882
pose vars. 95460
pose-invariant face recogn. by face synthesis 129914
pose/posn. robust tracking, perceptual cue fusion 84527
real-time automated video and audio capture 118716
real-time embedded implement. of stereovision algm. 118679
real-time face recogn. syst. using multiple mean faces/dual mode Fisherfaces 129824
real-time face tracking under partial occlusion and illum. change 73543
real-time facial expression animation 84236
realistic human face synthesis 73551
reconition, anal., and tracking, real time systs., conf., Vancouver, BC, Canada (Jul. 2001) 100409
recurrent probabilistic dyn., face recogn. appl. 84562
robust and fast locating of lip motion *(Chinese)* 118706
robust face recogn. using automatic age normalization 107291
robust facial feature tracking 129626
robust image based 84612
rot. spreading associative neural network, recogn. perform. 84600
scale invariant face detect./class. from log-polar image 95483
second-order HMM, face recogn. appl. 84634
security entrance, face recogn. 73485
segmentation, color-edge extraction/seeded region growing 118723
segmentation and feature tracking for videophone appl. 84642
sex class. of adults' and children's faces via computational/neural net models 129552
similarity space distribs. under varying head pose 129810
skin probab. map for face detect. in colour images 84579
skin/lip chrominance based recogn. from color images 84526
Smartface, face recogn. syst., varying facial pose and expression *(Japanese)* 84522
sparse image coding with clustering, face recogn. appl. 95046
spatially weighted modified Hausdorff dist. 84638

face recognition continued
spectacles detect. for face recogn. using Bayes rules 73542
speech recogn. with 3D lip movement recogn. 118125
SVM for face recogn., global vs. component-based approach 107189
SVM on Walsh fn. space 129893
tele-education, face location via subregion color histograms 84530
teleconferencing face detect. by audio/video cues 108382
template matching, neural network verification *(Chinese)* 107114
template matching strategies for fast face detect. 118784
topological PCA appl. 95429
unconstrained scene model-based human face detect. 95498
unified Lyapunov convergence of both unsupervised ICA and supervised PCA learning, image de-mixing 107138
verification from 3D and grey level clues 107242
video, face detect./tracking using dyn. prog. 84615
video broadcast news, audio-visual speaker recogn. 120512
video coding, automatic face detect. and tracking 106892
video images, model-based varying pose face detect. and facial feature registration 129439
video-based online face recogn. using identity surfaces 107194
video-telephony and conferencing, image prediction, face detect. and triangulation appl. 118628
videoconferencing, head pose estim. by multiple cameras and microphones 74420
videotelephony seq. coding using content-based hybrid DPCM/classified VQ 107034
view-subspace anal. of multi-view face patterns 107198
virtual video tape, develop. tool for real-time motion image understanding 73434
visual and audio features fusion for pers. ident. in real video 95579
wavelet domain associative memory 84639
wearable computers, face detector, social engagement visual models 107199
Web-PICASSO, Internet implement. of facial caricature syst. PICASSO 73545

facilities layout, computer aided *see computer aided facilities layout*

facility location
stochastic prog., GA 90058
uncapacitated telecomms. network design, dual ascent method 85075

facsimile
adaptive protocol for real-time fax commun. over Internet 107874
binary ang. representation for fax documents enhancement 85171
cpd. image compression using adaptive wavelet transform *(English)* 84450
field extraction method from existing forms transm. by facsimile 129603
Internet facsimile as office appliance 130635
IT and MIS 108020
optimal multiple preset dictionaries, NP-hard problem 106179
scanner-model-based document image improvement 94676
wireless messaging services for mobile users 74157

facsimile document reproduction *see photocopying*

facsimile equipment
I/O heterog. devices, markup lang./syst. 108145

factory automation
for general papers only
see also computer integrated manufacturing; flexible manufacturing systems; industrial control; workflow management software
980 nm pump-LD module, optoelectronics module mfg., assembly automation 113608
advanced semicond. mfg., conf., Munich, Germany (April 2001) 100397
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
cpd. semicond. mfg. technol., conf., Las Vegas, NV, USA (May 2001) 113279
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
machine vision in indust. automation, filter tuning appl. *(Italian)* 113807
multimedia appls., image/video coding 130936
Web technol. appl. in factory environ. 85324

FACTS *see flexible AC transmission systems*

faculae *see solar activity*

fading
see also fading channels; multipath channels; radiowave propagation; Rayleigh channels; Rician channels; time-varying channels
asymmetric wireless commun., OFDMA/TDD packet transm. 119888
BPSK/QPSK modulation class. with unknown sig. level 106033
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA cellular radio, spatial diversity and power allocation 74806
cellular mobile commun., OFDM syst., freq. offset estim. 85817
digital microwave link utilization by capacity adaptive techs. 94044
fast-fading GPS multipath bias charact., validation 131698
FDD UMTS bands, wideband propag. meas. 83277
freq.-selective Rayleigh fading channels, RNS based multicarrier CDMA 107747
GPS for measuring urban shielding charact. of mobile broadcast geostationary satellite 83261
GPS receivers, operation, equatorial ionos. scintillations effects 120481
hybrid wavelet/SS syst. for broadband WLAN 108266
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
indoor wireless, local mean power and fading stats. 85485
Ka-band satellite systs., compensation of rain atten. 85915
LOS microwave links perform. in Cluj-Napoca County, Romania 85491
microwave LOS link, S India, multipaths 117686
microwave/MM-wave opt. links, dispersion effects reduction, SOA booster 86000
MIMO interf.-limited cellular syst., attainable throughput 108657
mobile satellite burst commun., all-digital receiver *(Chinese)* 74898
modified printed strip monopole antenna with pol. diversity for WLAN appls. 72582
Nakagami-m fading environ., perform. eval. of synthetic waveguide commun. 111608
rain fade depend. model of long-term scintill. amplit. distrib. at 12.5 GHz 72305
rain-fade-slope calc. for terrestrial microwave links, DFT based method 72306
Rice factor estim. algm. 94213
satellite interf. prediction, effects of ice crysts. and raindrop canting angle 109023
SHF/EHF airborne/satellite commun., tropos. propag. effects 83283
single-electrode Mach-Zehnder electrooptic modulator, SSB suppressed-carrier modulation 96698
space diversity in SDMA and CDMA mobile commun., neural net appl. 74778
spatial transfer fn. of wideband wireless commun. syst., fading anal. using FDTD method 85722
time-varying wireless channel prioritized packet video transm. 108538

fading continued
variant OFDM-CDMA systs. universal discrete model and lin. alg. representatio 85899
vehicular speed response adaptive antenna design *(Japanese)* 105971
wet antenna atten. effect on propag. data stats. 105752

fading channels
see also Rayleigh channels; Rician channels
2.4 GHz SS syst. meas. in modern office buildings 105763
2 and 4 transmit antennas, perform. of diversity systs. 96379
2D pilot-sym.-aided freq. offset tracking in orthogonal multicarrier wireless syst 120038
2D RAKE receiver in correl. freq.-selective Nakagami-fading 119876
3G W-CDMA systs., channel estim. using Kalman filter algm. 85676
4-PSK turbo space-time coded modulation design and perform. 72770
4G systs., prediction and investig. of ang.-fading in urban mobile radio enviro 108750
8-/16-state space-time codes for 4PSK with two transmit antennas 94310
8k DVB-T in mobile environ., majority selection and block-based diversi reception 120527
40 GHz 30 km slant path radiowave propag. expt., high temporal-resoln. chann charact. 83319
adaptive array based on subband sig. proc., develop. 73628
adaptive bit-interleaved coded modulation 119980
adaptive coding/modulation, wireless systs. bandwidth-efficient multimedia cor mun. 83798
adaptive MCM for wireless systs. 106066
adaptive modulation for multiple antenna systs. 106062
adaptive multicarrier wireless access syst. 85556
adaptive spatial/temporal optimal receiver using adaptive array antenna 8586
adaptive SS commun. over multipath dispersive channels 84900
airborne commun. links, fade depth prediction 120074
alg. space-time codes for block fading channels 129130
antenna arrays perform. in urban multipath environ. 73573
ARQ adaptive hybrid schemes for wireless links 94292
ARQ incremental-redundancy scheme in block-fading Gaussian collision cha nel, throughput perform. 129074
asynchronous CDMA sigs., channel estim. and demodulation in freq.-selecti fading 119217
asynchronous TDD systs., adaptive array for high-power CCI reduction 1088
ATM wireless networks, adaptive FEC scheme for data traffic 117952
AWGN channels, optimum criterion for multilevel coding systs. 106022
band segmented transm.-OFDM, optimum modulation assignment, subba channel status 94250
Bayesian blind/semi-blind equalisation of channels with Markov inputs 1191
bit and coord. interleaved coded modulation over fading channels 72768
BLAST algm., fast sq.-root implement. 108613
BLAST perform. improvement using space-time block codes/turbo decodi 72867
blind adaptive optimum lin. cancellation for long code CDMA 73743
blind modulation estim., noise powers, carrier freq. offset *(Japanese)* 10605
blind sig. proc. algm. for decorrelation and channel equalization 108928
blind source separation and sig. class. 107400
blind/robust space-time receiver for turbo coded syst. 106135
blind/semiblind channel equalization for wireless broadcast channels 73845
Bluetooth, adaptive link-level error recovery mechanisms 85488
BPSK and QPSK systs. with noisy phase ref. over Nakagami-m fading channe av. BER 94234
BPSK-CDMA lin. receivers, asymptotic anal. 108855
broadband radio access networks, real-time ATM, hybrid ARQ protocol 1311
broadband wireless commun., transmit/receive spatial MUX 131199
broadband wireless data commun., space-time open archits. 74531
CDMA, improved multistage parallel interf. cancellation for multipath fadi channels 85529
CDMA commun. systs., subchip-spaced multipath diversity 74702
CDMA design through asymptotic anal., fading channels *(English)* 73856
CDMA downlink multicarrier with space diversity, perform. 74747
CDMA downlink wideband channel estim. algms., error robustness 131286
CDMA long code systs., multiuser channel estim. 85516
CDMA long-code multipath syst., blind multiuser detect. 107604
CDMA mobile commun., multiband wavelet-packet spreading codes 108888
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA mobile systs., complete complementary code for efficient freq. usa 130306
CDMA MSS, satellite diversity 85861
CDMA multicarrier syst., perform. over multipath fading channel 107730
CDMA multicode downlink in shadowed multipath fading 131282
CDMA multipath systs., space-time block coding 129129
CDMA multiuser sig. set. dist. distrib. 130296
CDMA power-controlled cellular network, single freq. broadcast syst. perfor 85806
CDMA power-controlled packet-switched network, signalling protocol 1088
CDMA RAKE receivers, channel estim. errors and Doppler diversity 10892
CDMA space-time block coded multicarrier syst. multiuser receiver 10886
CDMA spectral efficiency, freq.-flat fading impact 74519
CDMA sync. channel, eavesdropping, EM-based approach 95725
CDMA systs., link budget calc. 119901
CDMA systs., space-time-code blind receiver and neural net implement. 963
CDMA systs. in multiple time-scale fading channels, spatial diversity comb ing/power allocation 85858
CDMA variable-rate packet syst., perform. anal. *(Chinese)* 95830
cellular radio data channels, rate-adaptive protocol 85896
cellular radio data syst., Aloha channel perform. 85622
cellular voice/data services, integrated multiple access control/adaptive chan coding 84976
chaotic commun. systs., adaptive blind equalization, EKF 107676
CIMA, carrier interf. in SSMA 74755
CMA adaptive array antenna syst. with single receiver using TDM 96515
coded free-space opt. commun. through atmos. turbulence channels, pairw codeword error probab. 131621
coded systs. over AWGN/fading channels, error probabilities upper boun 72934
COFDM pre-DFT combining space diversity assisted systs. 74550
coherent/differentially coherent space-time codes, alg. designs 83852
commutating DFE for digital mobile radio 85726
concatenated vector-valued fading channels, asymptotic eigenvalue distr 131268
correl. turbulent free-space opt. channels, max.-likelihood spatial-diversity rec tion 75066
Damson HF channel characterisation, review 105744

ng channels continued
differential space-code modulation for interf. suppression 106064
differential space-code modulation for interf. suppression 94244
digital cellular radio, optimum combining diversity finite-length DFE 119967
dispersive channels, joint precoders and DFE optim. *(Chinese)* 107715
dispersive channels, low-complexity commun. bandwidth expansion 131055
distributed nonstationary proc. modeling/time-varying AR syst. ident. by wavelets 119186
diversity reception of nonorthogonal multipulse sigs. in multiuser Nakagami fading channels 74515
double differential space-time block coding for time-selective fading channels 83850
double/SSB SCM sigs., PMD-induced power fading stats. 131616
downlink CDMA systs. with space-time codes and interf. cancellation 85826
downlink transmit beamforming with selective feedback 108925
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA, coherent multi-carrier/single-carrier, broadband packet wireless access, perform. 74597
DS-CDMA, multipath fading channels, slot timing MLE, bursty pilot sigs. 74703
DS-CDMA, perf. of closed-loop power control for packet transm. in multipath fading 120060
DS-CDMA asynchronous syst. in Nakagami fading, precise BER calc. 74559
DS-CDMA cellular mobile radio, reverse link power control improvement 108897
DS-CDMA cellular systs. in freq.-selective multipath fading channel, SIR meas. 85811
DS-CDMA commun. syst. in time-varying multipath channels, adaptive H_∞-subweight equalizer 85521
DS-CDMA flat fading channel blind adaptive MMSE receiver 107753
DS-CDMA in fading channels, code timing acquisition by differential correl. 74792
DS-CDMA interblock data rate downlinks, comparison 74664
DS-CDMA mobile radio, adaptive parallel interf. canceller *(Korean)* 120011
DS-CDMA mobile radio, concatenated channel coding, transmit power outer loop control 96425
DS-CDMA mobile reverse link, variable-rate adaptive channel coding 74630
DS-CDMA mobile systs., order-adaptive filter for channel estim. 96565
DS-CDMA multicarrier commun., receiver design 108661
DS-CDMA multicarrier systs. over multipath Nakagami fading channels, parallel code-acquisition 74748
DS-CDMA multidimensional multicode syst., code diversity/error detect., perform. 74790
DS-CDMA multirate/multicode systs. with long spreading codes, channel estim. 84917
DS-CDMA networks with multiuser receivers/spatial diversity, resource pooling/effective bandwidths 74631
DS-CDMA PCS indoor systs. with distributed antennas, forward link perform. eval. 85744
DS-CDMA sync. with dual-antenna in unknown correl. noise 74528
DS-CDMA syst., multicarrier signaling and RAKE receiver integrat. 131057
DS-CDMA syst. downlink, chip-based multiuser detector 96551
DS-CDMA systs., adaptive serial search PN code acquisition scheme 85757
DS-CDMA systs., asynchronous multi-stage SIC detector for multipath fading channels 85819
DS-CDMA systs., code-timing sync. using space-time diversity 107767
DS-CDMA systs., efficient blind multiuser detector 73717
DS-CDMA systs., interf. reduction for reliable sync. 130282
DS-CDMA systs., smart antenna testbed 128890
DS-CDMA systs., two-stage CMA blind multiuser detect. in multipath fading 131235
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS-CDMA systs. in slow time-varying channels, param. estimators using modified SAGE algm. 74815
DS-CDMA with lin. interf. suppression, pilot-to-data power ratio optim. 85800
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
DS/CDMA syst. with mixed multirate sources, forward-link capacity 96505
DS/CDMA systs. with pilot/traffic channels, per-survivor proc. seq. detect. 108800
DS/SFH-CDMA multirate wireless commun., multi-proc. gain anal. 107743
DS/SSMA commun. with generalized random spreading, blind adaptive multiuser detect. 84788
DSPN sigs. in dense scatter environ., eval. 74886
dual-antenna-array wireless systs., capacity scaling 108605
dyn. rate control algms. for HDR throughput optim. 119900
EDGE 2-stage soft-output equalizer 84861
energy efficient data commun. over fading channels 85540
equiv. received bandwidth for charactn. of received sig. level distrib. 120059
fast fading vector channel transmit diversity combining 108913
FDD systs., downlink space-time proc. 119046
FDD wireless systs., uplink predictive closed-loop power control 85712
FH CDMA generalized multi-carrier transceivers 107740
FH systs. via multiple invariances, channel estim. 85480
FIR MIMO DFE for space-time block-coded transm. over multipath fading channels 84878
fixed wireless access, receiving antenna, radio propag. 74615
flat fading digital commun., instantaneous freq. estim. of received sigs. 85822
flat-fading channel capacity, convex-prog. bounds 128940
flat-fading channel variable-rate adaptive trellis coded QAM 119979
flat-fading channels, freq. offset estim. 131167
FM band terrestrial DAB, soft selection combining 120507
FM-DCSK syst. perform. for multipath channel, robust chaotic commun. 96402
forward-link cellular DS-CDMA over freq.-selective Nakagami multipath fading channels 131144
freq. selective fading channels, outage probab. and space-time code design 129088
freq.-selective fading channels, space-time block-coded multiple access 85719
freq.-selective fading mitigation, multiband wavelet packet spreading codes with intra-code subband diversity 72933
Gallager bounding tech. for turbo-like codes over fading channels 117982
generalized polynomial predictor based receiver for nonselective fading channel 74554
generalized space-time lin. precoder/decoder design using weighted MMSE criterion 106140
GMSK signaling over multipath channels, turbo equalization based on Gibbs sampler 107718
group commun. protocols, QoS 74290

fading channels continued
group-metric multiuser decoding 84892
GSM 1800-based pers. telemedicine equipt. deployment, propag. issues 83278
GSM fast fading channels, blind/nonblind turbo estim. 108937
GSM/EDGE syst., adaptive PSP-MLSE receiver in fast multipath fading channels 85684
H.263 video for mobile commun., error resilient transm. 84379
HF commun. using spatial diversity/high data rate waveforms 108583
high-rate differential space-code modulation for interf. suppression 83816
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
high-speed mobile syst., OFDM, channel estim. method 131265
HMM for blind channel estim., time depend. inclusion 96508
IEEE 802.11/ETSI HIPERLAN type 1 under burst noise channel, perform. comparison 96089
IEEE 802.11a phys. layer high-speed WLAN, OFDM receiver 109033
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image transm. over mobile fast-fading channels, wavelet noise cancellation/interleaving techs. 95123
IMT-2000 syst., pilot sig. aided coherent RAKE receiver 96573
instantaneous DOA and ang. spread estim. with MUSIC using extended array mode vector 108882
iter. decoding scheme for pilot-assisted modulation 74699
iter. soft interf. cancellation for multiple antenna systs. 83408
Ka-band propag. results from Advanced Communications Technology Satellite 117695
Ka/V bands Earth-space links, spectral charact. of propag. impairments 83310
Ku-band second-order site diversity data on rainy tropical region high elevation angle path 83309
LEO satellite channel with high dyn., generic multistep power control algm. 131309
LEO systs., phys.-stat. shadowing correl. model 74730
LMR, CCI reduction and path-diversity reception 74739
LMR channels, nonlin. transmit amps., neural network modeling 74762
LOS microwaves links clear air perform., computer anal. 105764
M-ary noncoherent orthogonal FSK over Nakagami fading channels, av. BER perform. 94227
M-CPM with MRC diversity in Rician, Hoyt and Nakagami fading channels 106047
M-DPSK receiver for Doppler-shift mobile commun. 85809
M-QAM perform. in freq. non-selective slowly fading channels 94255
max. ratio transm., tightness of SNR gain bound 96521
MC DS-CDMA perform. in presence of partial band interf. 95836
MC-CDMA over multipath fading channel, perform. of freq.-time MMSE equalizer 107764
microcellular environ., spatiotemporal non-LOS propag. charact. *(Japanese)* 120050
MIMO equalized multipath fading channels, dist. spectrum computation 84859
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
MIMO lin. channels, joint decoding/channel estim. 83936
MIMO multiuser smart antenna systs., spectral efficiency optim. 83753
MIMO systs. with space-time block coding, optimal antenna selection 108593
MIMO wireless channels, capacity/perform. prediction 74560
MIMO-EDGE mobile radio channel meas. and exptl. implement. 108914
MLSE equalizer in time-dispersive channels based on adaptive channel estimator 108761
MLSE sub-optimum detector with folded state-transit. trellis preselection stage 95717
MM-wave band wireless network, impact of shadow fading 108595
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuser detect. 73721
MMSE-DFE receiver with spatial diversity, design and anal. error perform. 85808
mobile commun., hard handoffs, alternative metrics 85671
mobile commun. systs., median filtering for power estim. 85824
mobile fading channels, MLC/MSD and MLC/PDL *(Chinese)* 85854
mobile fast fading downlink, equal gain combining DPSK multi-carrier CDMA 119952
mobile multimedia services, propag. considerations and fading countermeasures 108978
mobile radio, deterministic spatial channel models, design procedure 108905
mobile radio, variant fading channel estimator with speed estim. 85677
mobile radio bandlimited procs. lin. prediction 85658
mobile radio differential amplit. PSK, adaptive signalling algms. 85637
mobile radio environ., perform. assess. of adaptive equalizers 108763
mobile radio MIMO smart antennas, optim. 85863
mobile radio transmit antenna diversity systs., turbo proc. 117993
mobile radio video transm., unequal error protection 85891
mobile satellite channels, multi-state modeling 108701
mobile satellite fading channel, stochastic differential eqn. approach 120032
mobile stratos. commun. systs., fading channel model 108752
mobile terminal, polaris. diversity modelling 85693
Mobile User Objective System, commun. diversity advantages 111595
modified Lee algm. with soft decision-feedback and backward recursion using M-algm. 107681
MPSK/MDPSK/noncoherent MPSK with MRC/SC space diversity in Nakagami-m fading channel, sym. error probab. 96463
MRC coherent receivers in Nakagami-m fading channels, perform. anal. 85507
multicarrier CDMA in multipath fading channel, successive carriers overlapping, perform. effect 73863
multicarrier CDMA syst., difference carrier detect. with two pilots 74764
multicarrier commun. systs., optimal MSE DFE 85524
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multilevel codes/iter. multistage decoding, rate design rules/practical considerations 83853
multilevel coding schemes, perform. in mobile fading channels 96538
multimode multiservice software radio, adaptive sym. timing sync. 108889
multipath channel param. determ. using wavelet decomp. 84813
multipath channels, optimal space-time multiuser detect. *(Chinese)* 119871
multipath fading channel, MLSE equalization, FIR prefilter design 107687
multipath fading channel, multifractal model *(Chinese)* 94219
multipath fading DS-CDMA channels, blind single-user array receiver for MAI cancellation 119222
multipath non-Gaussian channels, multiuser detect. 119225
multiple access fading channels with multiple antennas, optimal power control 130305
multiple antenna fixed outdoor commun., multiuser diversity 85508
multiple antennas, high spectral efficiency promise 83668

fading channels continued
multiple description codes perform. over bit error channels 129183
multiple parallel concatenated single parity check codes 129199
multiple sym. differential detect. with diversity reception 73730
multiple transmit antenna differential encoding/decoding schemes 119866
multiple-access channels, power control and access strategies *(English)* 73855
multirate DS-CDMA in fading environ. 108712
Nakagami channels, correl. gamma variates sum for wireless systs. perform. 131233
Nakagami correl. fading channels, stat. simul. model 108680
Nakagami fading, CCI, av. error probab. of optimum combining 85747
Nakagami fading channel, error flow charact. modeling/eval. 117984
Nakagami fading channel, multiple equal-power cochannel interferers, perform. anal. of max. ratio combining 74735
Nakagami fading channel, selection diversity, perform. anal. *(Chinese)* 119870
Nakagami fading channels, generalized diversity selection combining, BER perform. 96453
Nakagami fading channels, NPCSMA protocol for NCPSK/QPSK, data packet transm., perform. eval. 85515
Nakagami sig. in L Nakagami interferers, outage probab. anal. 74619
Nakagami-m fading, generalized selection combining, approx. BER perform. 84812
Nakagami-m fading channels, av. SNR of generalized selection combining 107627
NCFSK demodulation, exact eval. of capture effect 72751
noisy channel progressive image transm., optimal protection 108014
noncoherent block fading multiple antenna channel, DOF anal. 128939
noncoherent LMS algm. for noncoherent seq. estim. 73830
noncoherent multi-antenna commun., inform. theoretic limits 83778
noncoherent seq. estim. combined with noncoherent adaptive channel estim. *(English)* 107719
nonGEO satellite diversity based systs., hybrid channel adaptive handover 96541
Norway, inland/coastal areas, SHF rainfall atten. 83318
OFDM, freq. offset errors, perform. degrad. reduction 72726
OFDM, generalized, multipath presence, transmit antenna space-time block coding 83902
OFDM carrier freq. offset estimator 74741
OFDM in freq.-selective fading environ., timing sync. *(Japanese)* 108820
OFDM layered space-time coded wideband archit. for dispersive wireless links 128977
OFDM mobile systs., channel estim. for multiple antenna diversity reception 108926
OFDM multicarrier transm., freq. offset sensitivity reduction by waveshaping 83810
OFDM signalling over doubly-selective fading channels, perform. anal. 72748
OFDM sigs. nonlin. predistortion over fading channels 74567
OFDM space-freq. coded broadband systs. 83849
OFDM systs., amplit. and phase predistortion 72763
OFDM systs., efficient freq. offset estimator 119875
OFDM systs., space-freq. transmitter diversity 74580
OFDM systs., space-time code design 72860
OFDM-based LMDS, perform. eval., meas. channel models 96414
optimal transmit-diversity precoders for random fading channels 74824
orthogonal multicarrier-CDMA tech. with MRC scheme on two-ray multipath fading channels 96376
orthogonal space-time block codes, fading channel, perform. estim. *(Chinese)* 106149
packet based wireless commun. systs., adaptive modul. for fading channels 72749
pers. area networks employing CCK modulation, low-complexity channel estimator 131277
pers. CDMA commun., selective partial parallel interf. cancellation 119953
PHS base station, perform. of adaptive array antenna *(Japanese)* 74843
pilot sym. assisted turbo codes over flat-fading channels, iter. channel estim./decoding 106154
PLL GFSK demodulator, perform. in multipath channel 108772
PSK cellular radio signaling, data-aided freq. estim. 85864
punctured trellis coded freq./PM in mobile satellite channels 128971
QAM optimum receiver based on EM algm. over fading channel 131049
quasi-closed-loop transmit diversity systs., unitary transforms appl. 108743
quasi-orthogonal space-time block codes with partial diversity 83854
radio source location detect. using hyperb. posn. estim. *(Japanese)* 97024
RAKE coherent combining for broadband single-carrier DS-CDMA wireless commun., expt. 74638
rapid fading channels, space-time codes error probab. 96356
rapidly fading channels multiresolution seq. detect. 107675
rapidly fading commun. channels, ident. 119185
rate 1/(1+1) convolutional encoders over rings with max. free branch dist. 129139
RBF-based multiuser detector for multicode DS/CDMA syst. 84778
regenerative stochastic procs., entropy and mutual inform. 128969
reliable wireless video transm. via fading channel estim./adaptation 84394
robust image transm. using source adaptive modulation with diversity 73358
Rohde & Schwarz's SMIQ sig. generator, channel model simul. for 3GPP fading tests 86787
satellite CDMA systs., video transm. in generalized fading channels 108711
satellite channels, weather-induced impairments, prediction & adaptation 131306
SC/MRC hybrid systs. on Nakagami-m channels, error rates 85484
SCDMA systs. over multipath fading channels, blind fractal sig. estim. 96566
SDPSK receiver, fading channel, FFT model 120104
serially concatenated space-time coding 106138
SFH multicarrier DS-CDMA for transm. over Nakagami multipath fading channels 85538
SFH SS commun., equalization/decoding 108674
SHF/EHF satellite commun., propag. data stat. proc. 83284
sig. estim. over freq. selective fading channel, soft-output seq. algm. 108764
single carrier commun., training seq. vs. cyclic prefix 95808
single carrier commun., training seq. vs. cyclic prefix 73834
single user fading channel, queueing anal. 117882
single user/multiple access commun. over fading channels with finite buffer constraints 131072
single-carrier freq. domain equalization and space-time block-coding 95809
slow freq.-selective fading channel, MLE 73753
slowly fading multipath channels, error probab. of adaptive DFE 84876
smart-antenna space-time UMTS uplink proc. for syst. capacity enhancement 108843
SMI and CMA adaptive algms., combination 108881
SOVA decoding of concatenated convolutional encoders and CPM scheme over AWGN and fading channels 83861
space-freq. codes for broadband fading channels 129169
fading channels continued
space-time bit-interleaved coded modulation over freq. selective fading chann with iter. decoding 72936
space-time block precoded transm., channel subspace-based estim. 108610
space-time code perform. anal. for quasi-static fading channels 129090
space-time coded systs., iter. MLSE 83877
space-time codes perform., spatial fading correl. impact 106136
space-time coding with max. diversity gains over freq.-selective fading chann 129058
space-time coding/Kalman filtering for diversity transms. through time-select fading channels 106088
space-time decorrelating receivers in multipath fading channels *(Chinese)* 738
space-time diversity using orthogonal and amicable orthogonal designs 1089
space-time group codes design 106137
space-time systs., optimal training 108607
space-time TCM in slow flat fading channels, design criteria 94312
space-time trellis codes over quasi-static fading channels, perform. boun 129089
space-time turbo codes, fading channels decorrelation props./perform. an 72863
spatial CDMA for multiple antenna access, capacity/error rate anal. 74529
spatial sig. proc. merging diversity/beamforming perceptions *(English)* 1075
spatio-temporal equalization based on estim. channel response 119182
subspace-invariant detector and flat-fading channels capacity 107628
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multiu detector 85527
TCM anal. and design with transmit diversity for wireless commun. 83826
TCM for wireless ISI channels, soft detect. of modified phase precoding 1085
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. dete 107693
TCM with receiver diversity, turbo space-time equalization, max.-likelihoo detect. 107694
TCP over packet radio 84962
TCP-IP based mobile radio links, perform. eval. 74751
TDD/TCDMA real time/nonreal time traffic, channel adaptive schedul 131274
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decodi 108857
TDMA multiuser channel estim. for cochannel sigs. detect. 130284
TDMA wireless receivers, carrier interferometry pulse shaping scheme 1192
terrestrial LOS microwave links due to fast and slow fadings, strict outage ca 119931
time sharing multiple-access flat fading channels, channel capacity 107765
time-freq.-selective channels, multicarrier syst. 85718
time-reversal space-time block coding and transmit delay diversity 108911
time-selective fading channels, double differential space-time block codi 119878
transmit diversity scheme for freq. selective fading channels 74561
transmit diversity space-time coded sigs. equalization 73835
turbo codes, convergence based design 129099
turbo codes, Gallager-type bounds for mismatched decoding 129120
turbo codes on flat fading channels, adaptive iter. detect. 83857
turbo codes transm. over fading channels, iter. channel estim. 83938
turbo greedy multiuser detect. 107754
two-stage RS decoder for coded 2^m-ary QAM systs. 72917
two-state pattern-recogn. handoffs for corner-turning situations 74726
unitary sig. constellations for differential space-time modulation 106063
unknown FIR channels, universal redundant precoders for guaranteed recovery block transms. 85531
urban mobile satellite commun., propag. and syst. strategies 74731
UTRA TDD, MMSE adaptive receiver 119947
UTRA TDD, throughput of hybrid ARQ types 95911
V-BLAST, perform. losses due to fading 85532
varying channels, progressive source coding with regressive channel codin *(English)* 72892
vehicular speed response PLL using sq.-law ccts. *(Japanese)* 74793
W-CDMA channels, multimedia transm., resource allocation with adaptive Qo 85384
W-CDMA improvements, principles and expt. results 108839
W-CDMA reverse link, inter-cell site diversity using two-step selection combi ing, expts. 74640
W-CDMA syst., RLC multiple rejects ARQ for packet data service, perfor anal. 73897
wavelet based multichannel commun. systs., satellite and fading commun. cha nels 106024
wavelet packet based indoor wireless channel model 108598
WCDMA, optimum demodulator for STTD 108678
WCDMA, WMSA channel estim. tech., uplink perform. 74767
WCDMA mobile syst., fading channel, power control 74689
WCDMA single-user interf. cancellation for fading channels and diversity anten nas 108777
WCDMA systs., Kalman filter channel tracking algm. 74695
WHT/OFDM, improved OFDM transm. method for selective fading channe 83819
wireless ad hoc network, space-time block coding 108962
wireless ad-hoc network, backup node in shadowing channel 108596
wireless ATM, hybrid II ARQ schemes using punctured RS code, perfor 119286
wireless commun., transmit diversity scheme with power control 108876
wireless commun. systs., optimal/suboptimal handoff control vars. 85591
wireless data networks, link adaptation, perform. anal. 74811
wireless home link, ad-hoc node repeater for shadowing 108410
wireless MIMO channels, transmit antennas near-optimal selection 108601
wireless networks, cooperative diversity protocol 131093
wireless packet networks, multimodal dyn. multiple access 119302
wireless video conferencing using multiple description coding 108391
WLAN, token ring based, mean packet delivery time, wireless channel impac 130821
WLAN OFDM systs., optimum frame/freq. sync. 119892

failure (computers) *see system recovery*

failure analysis
see also electrical faults; fault diagnosis; fault trees; wear
1-out-of-2, G systs., common-mode failures, load-capacity interf. model 8992
2-D k-within-consecutive-r×s-out-of-m×n:F syst. reliab. 113794
2D dopant profiling of power MOSFET, SCM appl. 126277
3D voids simul. in chip metallization structs., reliab. eval. 126429
22 kV power distrib. cable condition monitoring approach 133720
342 kW roof mounted PV arrays, Georgia Tech, 4-yr. perform. assess. 11239
500 MW COTS-based TPP generator excitation syst. design 133860

ure analysis continued
AC film capacitor reliab. assurance using thermal anal. 69271
acyclic consecutively connected networks reliab. eval. algm. 100666
advanced packages, failure anal. and reliab. testing using ultrasound 78722
apparatus reliab. failure anal., MLE *(Chinese)* 78704
appl.-specific MEMS microvalves, micromachining technol. 92552
area array solder joints, reliab. in bending 113577
ASIC implant charging, photoresist bake, electron flood gun effect 115582
assembly line, soldering/solder inspection, automated syst. 113465
asymmetrical emitter turn-off thyristor convertors, abnormal failure mechanism 126694
automated elec. design anal., reliab. anal. improvement 134597
automobile body assembly line robot reliab. study *(Japanese)* 124425
automotive batts., prod. line test, failure detect., ΔV criteria 78156
automotive electronics, safety-relevant distributed systs. anal. 134582
automotive PBGA assembly, board-level reliab. with SnAg Pb-free/SnPbAg solder interconnects 113572
back side failure anal. flow for flip-chip/lead-on-chip/multi-metal-level dies 113778
BCC++ and QFN packages, solder joint reliab. 113663
BG dielec. charact. MIL PRF 55681 capacitors, insulation resist. degrad. 115078
BGA package, solder ball shear testing 113665
BGA solder joint reliab., FEA assess. methodology, prediction accuracy 113580
BGA solder joint voiding, PCB surface pad finish/contamination impact 113712
BGA/CSP connection durability during thermal shock, finite element modeling 100598
bitmap results from embedded memory, yield enhancement 102131
bivariate reliab. and availability modeling 89922
black box proc. control syst. for electronics mfg. line failure anal. 113812
bondpad peeling failure in wafer fab., AES/EDX studies 103949
C4 IC ultra-thinning, backside anal., first silicon debug 126931
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334
ceramic/epoxy composite for integral capacitors, particle packing/Cu plating/permitt. 80441
chem./nuc. industries, material issues, condition monitoring, NDT 90612
CMOS antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
CMOS devices, ultrathin oxide reliab., phys. and predictive models 116023
CMOS dyn. logic cct. testing based on charge sharing 102075
CMOS embedded memory diagnosis via test response compression 102139
CMOS ICs, weak chips, MINVDD testing, min. supply voltage value 104116
CMOS proc., 0.18 μm, $CoSi_2$ spike form. in act. contact salicidation 70293
CMOS product screening strategy for low failure rate 81524
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
CMOS SRAM, yield-limiting NMOSFET gate depletion 104106
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
commercial LV installation, failure, maint. 133818
complex MV radial distrib. network reliab. eval. algm. *(Chinese)* 77328
complex power syst. cascading faults, reliab. eval. studies *(Chinese)* 122777
composite power syst. reliab. eval. using Monte Carlo simul. 88284
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
conductive layers in LTCC ccts., assembly props. 78657
continuous DC-DC converters, heat and noise control in design *(Spanish)* 101757
CSP, stacked, cyclic bending, failure and fatigue life 113667
CSP proc. with reworkable underfills for mobile phone appls. 113708
CSP/area array package board level reliab. 113602
CSP/BGA solder joint fatigue life, thermal cycling ramp rate effects 113579
CSP/RF package assemblies, thermal cycling testing 113597
Cu damascene interconnects, localized strain meas. by CBED 92172
DØ silicon microstrip tracker, prod. and testing 121451
DDP, defect detect. and prevention software tool for life-cycle risk mgt. 113443
deep sub-micron ICs, contact elec. probing, SPM tech. 115999
deep submicrometer technols., crosstalk estim., coupling capacitances 81474
defective MLC capacitors, elec. test data anal. effectiveness 115074
design for reliab., engng. knowledge elicitation 100681
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633
dielec. voltage withstand high-pot. tester, safety-related features 86441
discolored bondpads caused by $Al(OH)_3$ form., SEM inspection, EDX, FIB 102873
distrib. networks reliab. eval., min. cut set method 122975
distrib. transformers diagnosis using neural networks 134133
DRAM, STI, retention time tail distrib. 125501
elec. heating conductor service life, internal temp. distribs. effects *(Polish)* 124092
elec. utility maint. mgt. using expert support syst. 133441
electrohydraulic brake syst., reliab./safety enhancement, simul. 134598
electron devices, conf., Bordeaux, France (Oct. 2001) 124216
electronic package, dissimilar material jn., sensitivity derivatives 113646
electronic packaging solder joint reliab., relative damage stress concept 78678
electronic power supplies reliab., airborne contaminants effects 88841
electronic product stress anal., nested FEM methodology 78720
electronic product success/failure prediction, KBS, multiple regression models 89791
electronically conductive filled adhesive joints, behaviour under cyclic loading 67559
electronics mfg. proc. improvement, failure anal./closed-loop corrective action 113448
engine failure diagnosis using wavelet transform-based sound sig. anal. *(Japanese)* 95604
EV, IM drive inverter, degrad. regimes, num. simul. *(French)* 134519
fatigue tests reliab. rule determ. 100676
FCOB, FCOB assemblies, field reworkable underfill materials 67627
FCOB, fine-pitch solder bumped technol., PCB substr. 113612
FIB techs. for IC failure anal. appls. 70289
flash cell arrays, SILC charactn. tech. 79896
flash memory read disturb reliab., appl.-specific usage model 79898
flip chip package with reflowable underfills, reliab. studies 113706
flip chip packaging defect diagnosis using acoustic microimaging 78615
flip chip under-bump metall. conversion to intermetallics, reliab. impact 67624
flip chip/chip scale interconnects, durability anal., nested FEM methodol. 78721
flip-chip BGA packages, reliab. studies, power cycling test 67550
flip-chip component, underfill delamination, opt. microscopy 113476
flip-chip solder fatigue, cure-depend. underfill props. 113647
flip-chip underfill delamination mechanism/growth rate *(German, English)* 89865
floating MIM capacitors, charging damage 102781

failure analysis continued
floating struct. fatigue maint. planning, cost/reliab. based 113422
FPGA logic blocks, BIST-based test and diagnosis 68719
FRAM retention testing, indiv. cell measuring method 79890
gas/oil supply systs. reliab. research 78706
gate-level transistor perform. charactn. by ps imaging cct. anal. 104021
global fault localization using induced voltage alteration 115996
GMR head, ESD sensitivity 116425
GO methodology shared sigs., exact quantification algm. 100669
HBT reliab. determ., eval. of beta degrad. 126681
HBT reliab. eval., thermal resist. and current accel. exponent 126662
high speed DRAMs, yield improvement, column redundancy scheme, multiple bit pre-fetch struct. 125511
high-energy HI nuc. microprobe, probe-forming lens syst. 132257
high-speed high-dens. LSIs, internal waveform obs., EO sampling prober 116000
highly accel. solder joint reliab. test using thermo-mech. deflect. syst. 91451
HV IGBT inverter source, intrinsic fail-safe capability 125231
IC, failure anal., testing interface 127006
IC interconnect reliab., fast wafer-level defect detect. and control 103481
IC interconnect trees for electromigration reliab. estim. 92174
IC interconnection, metallic thin film, electromechanical failure 92102
IC package inspection enhancement using real-time X-ray systs. 100639
IC package inspection using X-ray systs. 124403
IC plasma/proc.-induced damage control, symposium overview 103976
IC power constrained test scheduling, power profile manipulation 104052
IC reliab., short-time tests, opt. interconnect/transistor failures, stat. models 78723
IC stress tests, moisture-based failure modelling 126953
IC structural defect anal., trends 104020
IC thin-film interconnects, electromigration modeling, void nucleation 92103
IC tunneling opens diagnosis, screening and localization issues 104011
IC yield learning, line SEM inspection 100628
IC yield mgt., automated image retrieval syst., field test 100627
ICs, HBM ESD testing, contact reliab. 127001
IGBT power module in automotive traction inverter, lifetime estim. 125219
IGBT power semicond. modules, power cycling reliab. 126792
IGBT switching module systs., electrothermal anal., thermal component model 90745
in-line SEM automatic defect class. for vol. IC fab defect reduction/yield enhancement 100636
indust. distrib. syst. reliab. assess. using Six Sigma methodology 133661
indust. robots reliab. assurance 100675
intermittency phenom. in elec. connectors 115108
intermittently used machine reliab., additive nonparametric logistic regression anal. 112464
isothermal electromigration test as proc. control methodology, case study 81129
isothermal wafer-level electromigration test for metal syst. reliab. monitoring 126473
k-out-of-n nonrepairable systs., common shocks, reliab. 67664
large aluminum electrolytic capacitors, service life studies 134335
large scale infrastructure interdependencies modelling 111743
laser-SQUID microscopy for nondestructive nonelectrical-contact IC failure anal. 81497
layout-driven hot-carrier degrad. minimization using logic restructuring techs. 125343
LV power capacitors, dielec. failure anal., harmonic reson. effects 112744
mag. disc defect detect. scheme, non-destructive tech. 116473
marine systs. qualitat. safety modelling, fuzzy logic-based approach 78559
matrix FMECA, fuzzy logic appl., extended risk prioritisation 113776
MEMS, ESD/EOS suscept., failure mode anal. 104150
MEMS devices, stiction-failure, aged, laser repair yields 81610
MEMS technol. for NASA space missions, JPL research & facilities 98883
metallic interconnect thin films, elec. failure procs. 126433
microelectronics devices, failure anal., spectrosc. photon emission microscopy appl. 115997
microsystem component reliab. estim. by perform. degrad. monitoring 127087
microsystem technol., FIB appls. 92539
min. expected cost-oriented optimal maint. planning 113421
min. lifecycle cost design under multiple hazards 113787
miniaturized interconnects, creep/contact opening electromigration failures 92104
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 115076
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 115077
MOS controlled thyristor, turn-off failure anal. *(Chinese)* 92320
MOSFET, deep-submicron, reliab., stat. model 92340
moulded PBGA socket, solder joint reliab., assembly quality 113686
multi-voltage rly. vehicle reliab., MTTF/MTTR stat. uncertainty 134547
multichip BGAs, stress simul., failure anal. 78618
multilevel interconnection with intermetal dielec. air gaps, reliab. studies 126430
multivariate methods for IC proc. control/fault detect. 100723
MV elec. equipt. failure contributors, condition assess. program 123670
MV motors, stator failure modes, field testing, condition monitoring 123328
network reliab., unreliable nodes, d-min. paths search algm. 78716
no-flow underfills, flip chip assemblies, adhesion charactn. 67626
non-hermetic press. contact IGBT modules, reliab. eval. 124321
nonnormal data mean confidence interval 113781
nonrepairable fault-tolerant systs., reliab. bound, failure-dist. based method 89925
NPP, elec. equipt. reliab. verification 77689
NPP reliab. specs. distrib. using Markov graphs 88535
NPPs, licensee event reports, latency, error detect. 88543
nuc. power station turbines life eval./anal. *(Chinese)* 77692
OLED, cond. phenom./degrad. monitoring, current noise meas. 71580
Olkiluoto BWR NPP, maint. failures anal. 99492
on-chip ESD protection design, test models, failure mechanisms 104008
ordered piecewise const. failure rates, Bayesian estim. 89928
packaging design concept eval., appls. of computer-vision techs. 67577
pass. lin. component third harmonic testing, review 113453
Pb-free reflow soldering impact on electronics packages 124358
PBGA on flex substr., board level reliab. 67622
PCB solder joint assembly defect level/fault spectrum study 115155
PCB solder joint reliab., thermal expansion mismatch impact 115116
phase-shifted ZVS full bridge SMPS, MOSFET failure modes 88933
plastic SMT package moisture sensitivity perform., Pb-free reflow temp. effects 113574
polymer cathodes in Al/Ta electrolytic capacitors, perform. issues 115056
polymer housed metal oxide surge arresters durability, impulse current stresses 133801
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647

failure analysis continued
polysilicon microfabricated thin films, mech. props./reliab., size effect 81571
polysilicon post-etch residue contamination in wafer fab., failure anal./elimination 103349
power diode, electrothermal nonlin. dyn. 103799
power diodes, non-destructive tester for single event burnout 131803
power DMOSFET, thermal behaviour, 2D computer simul. 92327
power electronics reliab. perform. simul., Monte Carlo method 123628
power IGBT, thermal behaviour, 2D computer simul. 92327
power lines, reliab., cascading failure risk assess., long. loading 88441
power module design and technol. for improved power cycling capability 124322
power MOSFET, current focusing phenom. 81322
power network protection syst. hidden failures, wide-area disturbances impact 112140
power semicond. device elec. failure localization, backside emission microscopy 70071
power semicond. devices, reliab. monitoring 126708
power semicond. electronics technols. for robust high-perform. systs. develop. 81257
power syst. components stochastic wear, predictive maint. programme 88286
power syst. failures forecasting, stat. approach 88278
power syst. reliab. modelling improvements 122780
press. transducer MEMS struct., degrad. proc., temp. hysteresis 86756
pressboard/XLPE insulation failure, regression anal. 116187
proc. chamber recovery using pattern monitor wafer on inspection tool 100555
proc. control and diagnostics in semicond. mfg., conf., Santa Clara, CA, USA (Sept. 2000) 100413
proc. incapability index estim. relibility 113782
proc. maint. assess. using semi-parametric approach 100511
prod. proc. reliab. estim. using Akaike Information Criterion 113795
Profust fault tree, qty. anal. *(Chinese)* 67668
protection syst., hidden failure anal., wide-area disturbances 77556
pumped storage power plant generator step-up transformer transients 112362
PV shingle roof, push-fit elec. connector contact resist. behaviour 112994
PWB conductive filament growth, airborne radar eval. 115117
PWB nonlin. reson. and stress anal., boundary condition eval. 91464
PWB surface finish proc. develop. for enhanced solder joint strength/reliab. 69316
PWM multicell inverter, safety/short-cct. tolerance improvement 77999
QM-Y series semicond. gas sens., failure anal. *(Chinese)* 75703
R/C buildings cost optimal design 113788
redundant syst. with nonrepairable units/common cause failures, SPICE reliab. anal. 124427
reliab. fns. for earthquake-resistant design 113789
reliab. modelling, expert judgement mgt. using Bayesian belief nets 100682
reliab. modelling, Weibull params. estimators comparison 113780
reliab. phys., conf., Orlando, FL, USA (April/May 2001) 78456
reliab.-based optimal structural design using decoupling approach 113786
reliab./safety policies, rational optim. 113790
reluctance motor bearing reliab., VFD effect 124148
repairable CSP underfill materials for reliab. enhancement 113598
repairable syst. with bootstrap confidence region, expected ROCOF estim. 100680
repairable systs. reliab. modelling using Petri nets/fuzzy set theory 78715
restorable all-opt. WDM network, fast 75000
reticle ESD damage mechanisms using Canary diagnostic reticle 81142
reworkable underfills for area array packaging encapsulation 67563
risk priority eval. approach 113775
risk significance and safety significance 100502
ROBOCOTS program for robust COTS IC packaging 78645
safety crit. microelectronic ccts. perform., EMC 81422
scanning SQUID microscopy for current imaging of ICs 116001
screening of failure modes, fuzzy scheme 78707
semi-parametric PWP model robustness for log-lin. increasing failure rates 100667
semicond. device, implant profile, AFM/SCM imaging 103255
semicond. devices, reliab. certification using Goldthwaite diags. 103731
semicond. electronics, conf., Guoman Port Dickson Resort, Malaysia (Nov. 2000) 89564
semicond. failure anal., SPM 127002
semicond. failure anal., SPM appls. 113779
semicond. mfg. systs. optim., systs. approach, three-phase framework 126615
sens. failure diagnosis, inform. fusion tech. based on neural network *(Chinese)* 75425
single event burnout failure in semicond. power devices, thermal modeling 70056
smart power ESD protection device, laser interferometric mapping 127076
SMT test/inspection tools for improved proc. control 115154
SOFC, multi-layered ceramic components, thermal shock resist. 99977
SOI HV LIGBT and LDMOS, unclamped inductive switching 126851
solder fatigue theory, phys. damage mechanism-based failure criterion 79426
spin valve GMR heads, resist. as mag. perform. indicator 116426
spin valve head, accelerated stress degrad. 116424
SQUIDs for IC defect location/failure anal. appls. 126998
SRAM chips, high standby current due to spurious gate reticle image printing 79901
SRAM early failure rate reduction, dyn. voltage stressing appl. 81495
stainless-steel-particle-related burn-in failures, corrective actions 103233
steam power plant main steam pipe life assess. *(Chinese)* 88577
structural design specs., cost/safety optim. 113420
structural load probab. distrib., optimum reliab. effects 113785
sub-100 nm devices failure anals., concept anal. instrums. develop. 115998
Swissair 111 crash EEPROM data recovery, failure anal. techs. 79899
syst. time-between-failures, asymptotic property misinterpretation 67666
syst.-on-package, substr. materials 113683
syst.-reliab. prediction improvements prioritization, estim. uncertainty 89921
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
tech. risks assessment, failure mode effects anal. 89683
telecom. network design, reliab./cost considerations 119452
telecomms. network outage anal. and meas. *(Chinese)* 119450
three-phase dry-type power transformer failure anal. 77929
tree propag. initiation, fatigue failure type, simulated tree channel *(Japanese)* 127238
triac operation under transient thermal conditions, thermal fatigue reliab. 126688
ULSI, local cross-sect. EBIC, local jn./defect delineation 116002
ULSI device isolation struct., metal impurities behaviour 81107
ULSI ICs, design and reliab. aspects of multilevel metal large-scale power line layouts 104039
failure analysis continued
ULSI plastic packaging, die cracking eval./improvement 100619
ultra-thin gate oxide soft breakdown, plasma proc. induced damage corre 103426
ultrathin oxide, wear-out, breakdown occurrence and failure detect. 104256
underground distrib. cable joints overheating diagnostics *(English, Frenc* 133766
via line structs., electromigration tests, fast wafer level/std. package leve 115680
via/line package level/wafer level tests, comparison 81131
wafer fab., sidewall polymer contamination during metal etching 103350
wafer level reliab./packaged electromigration tests, expt. comparison 81130
wafer level/parametric IC test systs. for design/life cycle enhancement 10404
wafer-level CSP, wafer proc. package, reliab. 100616
Weibull distrib., limited failure-censored life test 89917
Weibull distrib., reliab. demons. testing, Bayesian anal. *(Chinese)* 124429
Weibull model for weighted distrib. of residual failure data 96242
XLPE cable insulation degrad. monitoring, PD chaotic anal. 133741
yield modeling method for design rule trade-off in interconnection substr 81479
zero-failure data, failure probab. estim. *(Chinese)* 124433
ZnO varistors, energy handling capability meas. 125843
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second leve reliab., comparison 113586
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al dual-damascene interconnect via electromigration lifetime, soft low-k organ SOG ILDs 92117
Al electrolytic capacitors, large, service life/failure mechanisms 115081
Al interconnects, stress-induced voiding in proc. qualification, quantitat. asses 81133
Al lines, via/polygranular cluster electromigration-induced stress interact. 9217
Al via-void generation mechanism for Gbit-scale DRAM. anal. 79900
Al-Cu lines, electromigration immunity, pre-annealing effect 115672
Al-Cu(Si) metallic interconnects, electromigration modelling, percolativ approach 92119
Al-based interconnect reliab., width transit. effects 92120
AlCu ULSI multilevel-metallizations, stress migration behavior 92118
AlCu interconnects, electromigration behaviour, stress-induced voiding effect 92176
AlCu line wafer level electromigration testing, isothermal/const. current/SWEA methods 81128
AlCu passivated conductor line electromigration, Cu conc./stress evol. 92143
AlGaAs/GaAs deep submicron PHEMT MMIC amps., high-reliab. Q-band per form. 125773
AlGaAs-GaAs HBTs, long-term reliab., base current study 70044
AlInAs-GaInAs-InP HBTs, low temp./high current lifetests 81241
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
AlSiC base plate power modules, chip/DCB solder joint reliab. eval. 124323
Au interconnection, electromigration meas. tech. 126507
Au interconnections, electromigration/electrochem. react. failure mechanism 115673
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol modeling/appl. 126080
Cr/Cu/Ni underbump metallization, flip-chip interconnection 113650
Cu damascene interconnects, electromigration charactn. vs. texture anal. 9211
Cu damascene interconnects, recrystn. anneal, reliab./post-CMP defects 81135
Cu, dual damascene interconnect, electromigration props. 115692
Cu dual damascene microstruct./via chain yields, annealing conditions optim 126487
Cu interconnects, electromigration-induced failure rate rel. to grain struct. 6992
Cu metallization, 0.10 μm wide lines, failure obs. by OBIRCH method 12645
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu single-inlaid interconnects, electromigration failure, Blech effect 115679
Cu two-level interconnect, defects and electromigration 115691
Cu via electromigration, study of bimodal distribs. of time-to-failure 126472
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu/$TaC_x(WC_x)$/Si metallization/diffusion barrier syst., anal. 115676
Cu-SiO_2 dual-damascene interconnects, electromigration early failure stats 81134
Cu-SiO_2 dual-damascene interconnects, electromigration reliab. 92115
Cu-TiWN multilayer interconnections, electromigration 81117
Cu_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
$FeSn_2$ particle reinforced Sn-Ag solder joints. creep props. 100595
GaAs RFICs in SOT-23 packages, failure anal. techs. for small plastic packages 125806
GaAs based HBT power amps., ident. of humidity related failure mechanisms 127017
GaAs bulk resistors for MMIC appls., highly accelerated stress failures 69266
GaAs devices, reliab. testing, vol. impacts 113777
GaAs discrete HBT devices, DC and microwave reliab. eval. 69133
GaAs-AlGaAs HBT prod. proc. technol., perform./reliab. 70043
GaInP/GaAs HBTs, MOVPE-grown, reliab. tests 115850
GaInP-GaAs HBTs for X-band power appls., reliab. 91290
InAlAs-InGaAs metamorphic HEMT MMIC technol. on GaAs substrs. 69244
InGaAs/InAlAs/InP HEMT MMIC amp., reliab. 115007
InGaAs-AlGaAs-GaAs HEMT MMIC prod. proc., 0.1 μm, for commercial Ka- band LNAs 69245
InGaN/GaN MQW LEDs, failure mechanisms rel. to fab. 93429
InGaP-emitter HBTs, reliab. 70041
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
Ni LIGA cantilevered microposts, mech. props. eval. and failure anal. 116051
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
Ni/Au surface finish, PBGA package 113666
Ni-MH secondary cell cycling, electrode capacity changes/failures 134348
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. mod eling/appl. 126080
Pb-acid secondary batts., pos. electrode oxygen evol. modelling 89119
Pb-acid valve-regulated batts., utility installation appl. perform. 89083
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp aging 67605
Pb-free solder spheres for BGA appls., pad finishes, shear strength 113701
Pb-free solders, high m.p. impact on PWB reliab. 115150
Pt-$SrBi_2Ta_2O_9$-Pt capacitor-based FRAM, imprint failure lifetime estim. 90909
Si HBT, hot carrier reliab., extrapolation model 126677
Si IC foundry yield enhancement/mgt. using Iddq stress current signature 81415
Si press. sens., integrated reliab. test, automatic syst. 75456
Si thinning and polishing, packaged devices 126335
Si wafer fab., nodules due to Si precip. 103950

lure analysis continued
SiGe HBT, hot carrier reliab., extrapolation model 126677
SiO_2 gate dielec. scaling, long term reliab. estim., error calc. 81417
SiO_2 ultrathin oxides, failure anal., stored energy/carrier energy 127148
Sn-Ag solder joints, creep props. 100595
Sn-Ag-Cu-based Pb-free solder paste reflow for flip chip wafer bumping, proc. window 69367
Sn-Pb solder alloy, fatigue damage accumulation model 115115
Ta capacitor surge step stress testing, power-on failure mechanism prediction 115072
Ta solid capacitors, polymer/MnO_2 electrolytes, comparison review 80442
Ta/TaC diffusion barriers for Cu metallization on Si, reliab. 91877
TaC_x sputtered films as diffusion barriers for Cu metallization 126471
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvement, reservoir modeling 81132
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101
W-coated polysilicon micromachined microengines, failure anal. 104152
W-damascene SRAM cell interconnect ILD, CMP scratch induced defects, failure mechanism 79891
WC_x sputtered films as diffusion barriers for Cu metallization 126471
ZnO varistors nonuniformity effect on energy absorpt. capability 133806
llout *see air pollution; radioactive pollution*
r infrared lasers *see submillimetre wave lasers*
raday effect
500-kV combined opt. I-V meas. syst. 75447
combined opt. transformer, current and voltage sens. 123549
detachable bulk-optic Faraday effect current clamp design, elec. current detect. 86906
fast imaging polarimeter for magneto-opt. investig. 71443
fibre optic current sens., Faraday rotator mirror 75603
high av. power laser Faraday rotator design 117326
inter-satellite laser link acquisition syst., atom filter multi-peak/tunable charact. *(Chinese)* 109221
ionos. profile reconstruction using Faraday rot. data 122656
local field above supercond., magneto-opt. imaging polarimetry 71443
magneto-opt. sens., automated charactn., virtual instrum., RCD appl. 109513
magneto-opt./eddy current imaging NDT, FEM model 101574
magneto-optic eddy current sens., NDT appls. 114556
magnetooptical method for light beam posn. meas. 121183
opt. CT, sig. proc. schemes comparison 75814
orthoferrite plate, magneto-opt. CT 104838
periodic mag. multilayers, magneto-optic polar Kerr effects 116842
polariz. insensitive adaptive gain profile equalizer, variable Faraday rotators 131435
rotator design for high av. power lasers 127852
Sagnac opt. fibre current sens., temp. induced sens. drift output compensation 109599
sens. based on Faraday and Kerr effects *(Russian)* 75406
sugar dissolved in water, magneto-opt. imaging polarimetry 71443
supercond. digital output interface, magneto-opt. modulator 70877
three-phase opt. current transducer, opt. coupler performs., Faraday effect *(English)* 75597
very low loss wideband ferrite isolators for mm-wavelengths 91216
$Bi_3Fe_5O_{12}$ single cryst. films, FMR 92791
(CdMnHg)(TeSe) 45° Faraday rotator for compact in-line opt. isolators, growth and charactn. *(Japanese)* 93258
$Ce_{0.6}Y_{2.4}Fe_5O_{12}$ mag. field sens., PLD 124997
Co thin film magneto-opt. sens., freq. response 109507
He-Ne laser with anisotropic cavity, magneto-induced bleaching 82456
In-BiCaVIG cryst., opt. fiber sens., AC mag. field 131935
InGaAs/GaAs QW, time-resolved PL in mag. fields 69698
K Faraday opt. filter in line-center operation 93315
Nd:YVO_4 rods dual-config. resonator, unidirectional operation 82708
Rb absorpt. line, Faraday effect-based semicond. laser-freq. stabilization 120610
TbGG cubic magneto-opt. cryst. high-power Faraday isolator 127854
YIG:Ce, fibrous single crysts., growth atmos. effect on solubility limit of Ce^{3+} ions 114217
YIG:Ce single cryst. Faraday element, mag. field sens. 120776
YIG:Yb,Bi magneto-optic opt. fiber current sens., perform. testing *(Chinese)* 120877
YIG/ring-core transformer Faraday effect current sens. 97291
$(YYbBi)_3Fe_5O_{12}$, struct./mag./magneto-opt. props., high-perform. appl. 92793
rming
see also agriculture; aquaculture; dairying
ambulatory physiological monitor for animal welfare studies 121968
INS vs. carrier-phase DGPS for off-road vehicles control attitude determ., comparison 97027
solar energy dissipation in landscape, water and vegetation mgt. 88528
st Fourier transforms
see also discrete Fourier transforms
2-D fractional Brownian motion interpolation, image proc. 129418
2D complex FFT, efficient implement. of quaternion FT/convolution/correl. 129647
2D discrete Fourier irregular samples, closed-form image reconstruction using Good-Thomas FFT 84299
2D-emission tomography prob., approx. inverse algm., regularization 76528
3-phase 2-pole induction machine diagnosis, simplified spectral approach 134030
3D eddy current problems with integral formulations, fast algm. 128678
3D machined surfaces topography, fractal geom. appl. 121200
3D vector radix algm. for 3D new Mersenne no. transform 73212
64-point FFT design example using A|RT-Designer, OFDM radio 101138
115/22 kV HV power transformer, transient behaviour, 3D FEM modeling 112596
115/22 kV transformer, transient behaviour, 3D FEM modeling 77938
adaptive clutter suppression scheme, freq. domain proc. 75082
adaptive PSS, fuzzy logic tech., freq. domain anal. 77223
adaptive radar imaging in wide ang. sector 96956
ADC testing with IEEE Std 1241-2000 114838
analogue input ccts. for PC plug-in measuring cards *(German)* 125570
antenna meas. in multipath waves presence 83531
anti-alias FFT error anal., interpolation *(English)* 107322
atrial heart fibrillation modelling tool for adequate choice of sig. proc. fns. 110594
automatic speech systs., appl. of 1/f fluct. theory 84032
axisymmetric dielec. resonators, num. study 102578
baseband sig. proc. systs., analog memory, low-power appls. 80126
beam scanning reflector antennas, BFN design for cluster feeding 117862
fast Fourier transforms continued
biomedical MRI, sensitivity encoding, arbitrary k-space trajectories 132759
borehole induction meas., hybrid EBA/CG-FFHT method 88099
BPSK demodulation, freq. region 72742
Butterworth biorthogonal wavelets derived from discrete interpolatory splines 130123
Capon spectral estimator, efficient implement. 118882
CGFFT method with discontinuous FFT algm. 72166
Chinese remainder theorem, geom. interp., MD sig. proc. 73597
circ. array antennas, DOA eval. fn. of MUSIC algm. 84703
circ. symm. double-clad fiber amp. pump absorpt. efficiency 71695
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
composite triple layer struct., plane wave scatt. 128762
conf., imaging, Stockholm, Sweden (June 2000) 124186
continuous Euler transform. for FT of slowly decaying fn. 68092
CORDIC based FFT proc. for biomedical sig. proc., FPGA realization 120694
CRT phosphor screens granularity, CCD-based charactn. 97701
DAB syst., FFT proc. 109348
delta wave activity ultradian oscills./heart rate variability during sleep 110599
delta-doped pseudomorphic HEMT struct., Franz-Keldysh oscill., FFT anal. *(Korean)* 70184
densely packed microstrip interconnects, anal. using sparse-matrix/canonical grid method 89852
dielec. resonator, FDTD method and Pade interpolation tech. 91213
dielec. tapered rod antennas anal. 105906
compact digital zoom photo-cameras for holographic interferometry 105614
DMT transmitter, IFFT module, time-recursive lattice struct. 108470
Doppler angle estim., autoregressive spectrum model 110739
DSP systs. for DSL appls., design for low-power implement. 125527
ECG, T-wave alternans detector, simul. study/perform. eval. 87396
eddy current microscopy of graphite-epoxy composite, image proc. 68479
eddy current testing, FFT integral formulation using edge-elements 79493
EEG pattern recogn. using LVQ neural networks 121955
EEG sigs., autoregressive spectral anal. using MLE 132562
EGG, Kohonen neural net appl. 98257
EM modeling of multilayer microstrip antennas/ccts. 72471
EM scatt. by 3D dielec. bodies, MoM-CGM-FFT appl. 72287
EMC anal. of power electronic converter, state variable approach 68581
EMG surface sigs., spectral dens. compression, FFT methods *(French)* 132558
engine failure diagnosis using wavelet transform-based sound sig. anal. *(Japanese)* 95604
ESD, radiated mag. fields meas. using field sens. 75829
fiber Fourier optics, single lens free-space propag. 118207
flight vehicle vibr. monitoring by PCM telemetry, data compression 98893
fractional operations and time-freq. distribs. 95539
freq. domain notch periodogram algm. 107574
FT profilometry, phase-unwrapping proc., differentiation *(English)* 75875
gauge block center length, automatic laser interf. meas. *(Chinese)* 109984
ground penetrating radar, sig. proc. using super resoln. tech. 96951
guided wave sig., dispersion effect removal, sig. proc. tech. 101587
Hermite coupled transm. lines, time-domain anal. 83451
hybrid DS-FH-SS syst., transform domain interf. suppression *(Chinese)* 130299
Hyperstone series E132XS RISC µP, extendable archit. *(German)* 125560
IM condition monitoring using PWM spectrum anal./optim. 134024
image proc., 2D hypercomplex FT decomp. into complex FT pairs 118561
improved wavelet packet decomp. algm., weak fault detect. appls. *(Chinese)* 106801
integrated optoelectronic systs. opt. field modelling, FFT-based full diffr. method 105041
interconnect, phase pole macromodel 113518
ISAR imaging of moving targets, robust autofocus algm. 120424
ISAR imaging of moving targets, robust autofocus algm. 75140
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
ITER tokamak, magnetostatic reconstr., optimal probe placement 86919
Japanese urban atmos. N_2O conc. data anal. 99039
joint time-freq. anal., gradually forgetting distrib. *(Chinese)* 95642
large area TFT-LCD, crosstalk and flicker simul. 116829
laryngeal pathologies detect., acoustic anal. of speech, ANN 87500
laser welding, QC, AE sigs. wavelet anal. 105630
local large-strain meas., noncontact opt. methods 114504
low power FFT proc., coeff. ROM power consumpt. reduction 90947
manoeuvring target ISAR imaging, time-freq. approaches 120426
matrix-vector product for confluent Cauchy-like matrices for confluent rational interpolation 67989
Maxwell's eqns., pseudospectral time-domain algm. for cylindrical coord. 117650
micromechanical device vibr. mode shapes, microscopic interferometry meas. 121230
microprism-type bent waveguides, perform. tolerance 82158
microstrip arrays, aperture coupled, anal. 128884
microwave meas., FFT and swept spectrum anal. 75843
minute cracks in sing. element, nonlin. acoustic behavior, finite element simul. 101543
mixed pot. integral eqn. soln., fast algm., microstrip antenna appl. 72441
MM-wave patch antennas, composite double layer struct. EM scatt. 128889
mobile satellite burst commun., all-digital receiver *(Chinese)* 74898
modulated complex lapped transform proc., design and CPLD implement. 68844
modulated freq. stepped pulse radar sig., DSP implement. 75088
MoM for compact large planar scatterers in homog. medium 83223
multi-channel diagnostics syst. in TDX-families sig. service equipt. 131037
multichannel array subbanding with adaptive proc., architect. 96537
multidimens. fast Pade transforms for med. MRI/CT appls. 132712
multilayered waveguide holographic storage, Fresnel diffr. patterns, FFT 104615
MV indust. distrib. syst. power quality assess., wavelet/FFT 133637
near-field/aperture-field transform., equiv. mag. currents, CGFFT algm. *(Chinese)* 105661
noisy distorted sigs., period determ. 107355
nonCartesian k-space data, direct reconstruction, nonuniform FFT 87626
nonlin. acoustic NDE, superheterodyne receivers, absol. calib. 122733
OFDM sig., use of interleaving to reduce peak-to-av. power ratio 73771
OFDM syst. improvement using antenna diversity *(Chinese)* 117913
OFDM transceiver, FFT LSI design method, current mode cct. 85594
ordnance syst. EMP effect testing 88267
particle image velocimetry, 2D spectral/turbulence estim. 87033
pass. planar microstrip cct. anal., iter. tech. 125659
periodic non-stationary sigs., comparison of spectrum estim. techs. 118829
PET cameras, irregular sampling/interact. depth, 3-D reconstruction 132953
phase difference correcting method on discrete spectrum adapting to any window fn. *(Chinese)* 107410

fast Fourier transforms continued
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
phonocardiogram sig., short-time FT anal., nonstationarity 76362
PM lin. sync. motor, 3D EM field anal. 123513
POCS-based image reconstruction from irregularly-spaced samples 95183
polyphase channelizer chip-set, low-power design, FFT, appls. 102226
portable parallel FFT, redistribution strategies 79156
power quality monitoring using staggered undersampling 112191
power syst. dyn. harmonics estim., FFT truncation effects 77351
power transformer protection using swarm-intell. trained neural network 123565
PRN-coded waveforms, radar proc. 86146
progressive image transm., lossless algm. *(Polish)* 129697
pulsed thermographic images, enhanced spatial & depth resoln. 101583
radar data modeling with time series models 118879
radar rem. sens., moving targets, SAR imaging 122615
radar target ident. using 1D scatt. centres 131641
radio receivers, flexible DSP, architectural eval. 108561
RCS, dipole array antenna, preconditioned conjug. gradient method *(Chinese)* 109252
RCS, PO integral, num. methods *(Chinese)* 131655
real-time reconfigurable image recogn. syst., model-based develop. 107227
rect. positron emission mammograph, list-mode likelihood reconstruction, image props. 132928
regularized spectral multipole BEM for plane elasticity 68089
REM/nonREM EEG, computer anal. in young adult/elderly subjs. 121913
rly. signalling equipt. compact maint. syst. develop. 78294
robot localization, edge-based features from images 95557
robust vel. estim. method in image seq. using mixed domain phase sig. 84546
rot. machine fault diagnosis, vibr. anal., DSP-based FFT-analyser 112515
SAR image form., N²logN back-projection algm. 109238
SAR imaging kernel form., Kronecker-based algms. 75122
SAR subsurface imaging, point spread fn., FFT algm. 86164
SDPSK receiver, fading channel, FFT model 120104
self-similar traffic generator based on FFT, fractal Gaussian noise 119158
semicond. gas sens., nonlin. dyn. response 97452
sig. proc., fast n-D Fourier-Heisenberg transforms 129968
silicone rubber outdoor insulators, degrad., leakage current monitoring *(Korean)* 123037
simultaneous multiple harmonics anal. using enhanced FFT-based parametric algm. 77367
squirrel cage motor, rotor bar breaking, on-line detect. *(Chinese)* 77868
steel plates, multimode Lamb wave group vel. meas., phase spectrum 101548
symmetric nonnegative matrix with a prescribed spectrum, FFT based method 124665
TD-CDMA based mobile radio systs., joint-detect. techs. comparison 107594
terrestrial broadcasting, channel estim. in OFDM systs. 97048
thin polymer storage layer dens. optim. for polariz. holograms 82975
TMS32OC6201 DSP based high-speed real-time digital pulse compress. syst. *(Chinese)* 125557
unitary transform algms., concurrent error detect. 101140
US flaw class. problems, domains & features selection 101599
US flow vel. sig. proc. unit, flow vel. meas. *(Chinese)* 98272
US FT camera for quasi-real-time imaging 88219
vel. meas. in noisy environ., Doppler-effect radar 78500
VLBI network, Chinese, high-speed FX correlator, super spectrum analyzer, prog. ASIC 86275
vortex flowmeter sig. proc. syst., DSP with spectrum anal. fn. *(Chinese)* 109487
wattmeters spurious errors meas. 121138
wavelet transforms, adaptive optics wavefront reconstruction 106675
Weyl transform 118855
wideband mobile radio channels charactn. using SVD-Prony algm. at 2.4 GHz 83303
wireless magneto-acoustic/opt. sens., temp. and viscosity meas. 131872
worst and av. case roundoff error anal. for FFT 114198
Ag:In/NiFe/Nb(Si) GMR spin valve, In contamination/Nb contact effect on struct. 127400
$Al_xGa_{1-x}N/GaN$ modulation-doped heterostruct., subband electron props. 91735
PZT motors/actuators/sens., HDD suspen assemblies appls. 104445
PZT nonlin. phase-shifting adapter, self-calib. *(Chinese)* 70439
Si, CZ cryst. growth, melt convection 90229
Si solid substrs., laser ablation in water-confined environ. 105633

fast frequency hopping *see frequency hop communication*

fast frequency shift keying *see minimum shift keying*

fast ion conductors *see solid electrolytes; superionic conductivity*

fast packet switching *see packet switching*

fastening *see joining processes*

fatigue
for thermal fatigue see "thermal stress cracking"
see also corrosion fatigue; fatigue cracks; fatigue testing
area array packaging, mech. bending fatigue reliab. 113613
area array solder joints, reliab. in bending 113577
BCC++ and QFN packages, solder joint reliab. 113663
CBGA assembly, reflow soldering, reliab. 113553
composite cylindrical shell with sq. cutout, fatigue loading considerations 124738
CSP, stacked, cyclic bending, failure and fatigue life 113667
CSP flexure-induced tensile stress effects charactn./minimization, empirical strategy 78644
CSP interconnects, cyclic bending, fatigue 113550
CSP life-time prediction, simul.-based optim. method, solder param. sensitivity 113496
CSP/area array package board level reliab. 113602
CSP/BGA solder joint fatigue life, thermal cycling ramp rate effects 113579
defect detect., SQUID magnetometer, eddy current NDE syst. 70949
electronic interconnects/packaging, material factors 69934
electronically conductive filled adhesive joints, behaviour under cyclic loading 67559
fiber optic cantilever beams, long-term reliab., sens. appls. 104638
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip-chip component, underfill delamination, opt. microscopy 113476
flip-chip package, lead-free solder and under-bump metall. 113513
flip-chip solder fatigue, cure-depend. underfill props. 113647
floating struct. fatigue maint. planning, cost/reliab. based 113422
glass-fibre-reinforced epoxy, double lap shear specimens, static/dyn. scaling expts. 79473
highly accel. solder joint reliab. test using thermo-mech. deflect. syst. 91451
IGBT modules, void free soldering proc., solder joint reliab. enhancement 67644
IGBT power semicond. modules, power cycling reliab. 126792
MEMS interconnect technols., thermo-mech. reliab., testing/FEA 127088

fatigue continued
metals, surface prestressing by laser shot peening 72107
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write schem 90910
PBGA on flex substr., board level reliab. 67622
polymeric based flexible substrs., Young's moduli, temp./aging effects 78647
power semicond. device packaging/chip interconnection, wire/area-bondin technols. 115880
solder alloy fatigue life prediction, two-scale model-based simul. 114416
solder column interposer ceramic grid array technol. for ACPI appls. 113578
solder fatigue theory, phys. damage mechanism-based failure criterion 79426
Spiropyran doped polymer matrix films, photochromic react., reversib holographic recording 93781
steel, austenitic stainless, residual fatigue lifetime in NPPs 77706
tests reliab. rule determ. 100676
traction, IGBT modules reliab. testing 89389
tree propag. initiation, fatigue failure type, simulated tree channel *(Japanese)* 127238
ultrahigh thermal cond. module, direct solder-attach, C4 reliab. 113678
underfill material, adhesion/reliab./reworkability study, free radical polymeriza tion syst. 113636
wafer level area array solder bump interconnects with Pb-free/low-α solde 113594
Bi-2223/Ag supercond. tapes, strain/fatigue tests 127459
Cu/Sn/Cu solder joints fatigue strength, thermal cycling influence 125072
PZT thin film, structural charactn., SEM/HREM/XRD 116146
Pb-free solder foils, rapid laser-beam reflow 69315
Pb-free soldered interconnections, board level reliab. 115152
Sn/Pb solder joints, thermal cycling aging, microstruct., shear/fatigue strengt intermetallic growth effects 68389
Sn-Ag Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Ag(-Cu) Pb-free solder joints, reliab. under mfg. conditions 115151
Sn-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Pb solder alloy, fatigue damage accumulation model 115115
SnBi-SnAg solder paste, mech. props., SnAg addit. effect 68399
YBaCuO coated IBAD tapes, transverse stress, fatigue effects 70752

fatigue cracks
ceramics laser machining, elastic thermal stresses minimization 72138
CSP laser rework technol., energy source perform./proc. specific package reliab 113605
high-strength opt. fibers, cyclic fatigue testing 127668
metal surface cracks detect. using small antennas, EM field change 101559
MIG welded A5083 aluminum alloys, high/low-cycle fatigue props. 124314
μBGA solder joint, vibr. fatigue, intermetallic cpds. effects 78616
multilayer aircraft struct., fatigue crack charactn., US imaging 101615
multilayer aircraft struct. inspection, rem.-field eddy-current syst. 122495
NPP service-related degrad., life prediction 77710
opened fibre coating strip force test 127678
power law crack growth theory, test glass tubes, static fatigue param. em 127670
semicond. residual stress, lifetime prediction model 125154
short glass fiber-reinforced polycarbonate notched plates, luminance measuri tech. *(Japanese)* 79476
smart MEMS material crack diagnosis, electrostatic comb test device 12515
stress eval., pulse-echo US long. wave 114544
structural integrity expt. eval., US tech., acoustoelasticity 90598
underfill polymer materials, microelectronic packaging, fatigue crack propa behavior 90577
welded joints maint., fatigue, fracture, probabilistic optim. 89843
Ag, thin films, fatigue, dyn. microbeam deflection 127093
Al alloy, thickness, alloy content & crack meas., AC mag. bridge 114501
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}/Ag$ HTSC tapes, mech./transport props. 70715
a- Ni-P microsized specimen, fatigue cracks propag., fatigue testing 101465
a-Ni-P microsized specimens, fracture behavior, cracks, fatigue precrack 1014
PZT films, sol-gel derived, mech./elec. fatigue 81705
Pb-Sn solder, fatigue crack growth, stress ratio 114420
Sn-Pb flip COB solder joints, thermal fatigue failure *(Chinese)* 113673
Sn-Pb solders, fatigue crack growth behavior 67532
YBCO SQUIDs, eddy current probe, MM fatigue cracks obs. 68481

fatigue testing
for corrosion fatigue testing, see corrosion testing
austenitic stainless steel plates, reverse-side defect detect., residual mag. fi method 114547
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effe 92140
BGA lead-free solder joints, thermal fatigue life prediction by FEA 67642
conf., fibre mech. reliab., Boston, MA, USA (Nov. 2000) 124198
cyclically loaded mag. disks texture fatigue, repeated load test *(Japanese)* 81
embedded fiber optic sens., single-fiber fragmentation test 131952
Eurofighter Typhoon struct. health & usage monitoring syst., validation 880
FCOB, FCOB assemblies, field reworkable underfill materials 67627
flip chip BGA packages, molded underfill material charact. 113497
flip-chip BGA packages, reliab. studies, power cycling test 67550
fused silica opt. fibers, coating additives, enhanced mech. reliab. 127674
glass-fibre-reinforced epoxy, double lap shear specimens, static/dyn. scali expts. 79473
high-strength opt. fibers, cyclic fatigue testing 127668
lead-free solders, bump metallurgies, flip chip appls., thermal fatigue pro 113514
μBGA solder joint, vibr. fatigue, intermetallic cpds. effects 78616
opened fibre coating strip force test 127678
piezoelec. compact displacement accumulation actuator, design/fab./test 70341
power law crack growth theory, test glass tubes, static fatigue param. e 127670
semicond. residual stress, lifetime prediction model 125154
short glass fiber-reinforced polycarbonate notched plates, luminance measur tech. *(Japanese)* 79476
silica fiber fatigue strength behavior testing 127665
silica opt. fibers, nano porous silica core/cladding, mech. props. 127667
two-point fibre bending strength meas. 127664
Ag, thin films, fatigue, dyn. microbeam deflection 127093
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}/Ag$ HTSC tapes, mech./transport props. 70715
C-coated fiber strength 127675
N:-P, amorphous, fatigue testing 101546
a- Ni-P microsized specimen, fatigue cracks propag., fatigue testing 10146
Si films, MEMS structural materials, tensile-mode fatigue testing 127101
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594

gue testing continued
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu solder joint reliab., chip size package placing condition 100573
Sn-Ag-Cu-Bi solder joint reliab., chip size package placing condition 100573
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Pb solder joint reliab., chip size package placing condition 100573
Sn-Zn-Bi solder joint reliab., chip size package placing condition 100573

lt current limiters
12 kVA sync. generator three-phase inductive HTSC fault current limiter 77620
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag-Mn 6.6 kV HTSC fault current limiter, design, testing 77619
bridge-type supercond. fault current limiter, DC reactor effect 77583
BSCCO-shielded-core reactor, resistive behaviour, fault current limiter 77591
commutation-type supercond. fault current limiter, recovery characts. 123058
DC reactor type supercond. fault current limiter, 6.6 kV power syst. 77593
dyn. series compensation devices optimal multiobjective planning 112015
E-type core, characts. anal. *(Japanese)* 112159
flux-lock high-T_c supercond. fault current limiter design guidelines 88491
flux-lock type HTSC fault current limiter design guideline 77585
high T_c supercond. coil mag. shield type fault current limiter 88493
high Tc bridge-type superconducting fault current limiter, tech. problems *(Chinese)* 123057
high-perform. mag. shield-type device supercond. fault current limiter 112175
high-Tc bulk resistive supercond. fault current limiter materials 77586
HTS fault current limiter, power syst. stabil. anal. 77595
HTS fault current limiters, tech./economic impacts on power syst. 77589
HTS fault current limiters appls. in Danish utility network 133802
HTSC fault current limiter, nonlin. I-V charact. 77582
inductive supercond. fault current limiter, quenching behaviour 77615
inductive type HTS fault current limiter, sync. generator unit protection 133803
MV power distrib. systs., novel switching technols. integrat. 133625
monutility generator shaft torque under voltage sag, fault current limiter effect 99629
power station power syst. fault-level limitation using dyn. interlocking 112160
power syst. fault current limiters integrat. for supply quality improvement 77603
power syst. high-current interruption technols. *(Japanese)* 88488
power syst. stabilising control/fault current limiting using SMES approach 77207
power syst. transient stabil., FCL mechanism anal., simul. *(Chinese)* 99271
rectifier-type supercond. fault current limiter studies 77580
refinery power plant, fault current limiters, benefits assess. 78366
rod-type HTS supercond. fault current limiter 77596
saturated DC reactor type supercond. fault current limiter 127542
series-connected resistive type supercond. fault current limiter design 88494
single DC reactor type supercond. FCL as power source 77597
smart polymer composite thermistor, fault/short cct. current heating 125127
solid-state fault current limiter, harmonic anal./improvement 123064
static sync. series compensator, fault current limiting, syst. stabilisation 77254
supercond. fault current limiter, location selection in power syst. 77614
supercond. fault current limiter, power syst. appls. 133919
supercond. fault current limiter, transient simul., ATP 112170
supercond. fault current limiter develop. *(Chinese)* 112173
supercond. fault current limiter for power syst. transient stabil. enhancement 77601
supercond. FCL, adjustable trigger current level, recovery time 77592
supercond. FCL, quenching, ultimate normal zone propag. vel. 77600
supercond. power link, transm./fault current limitation 88454
sync. generator, superconducting FCL, sudden-short-cct. charact. 77848
three-material pass. mag. current limiter 133804
three-phase power syst. supercond. fault current limiting interrupter 77602
thyristor controlled series compensator appl. *(Japanese)* 99420
transformer-type supercond. fault current limiter, trigger current level degrad. 77608
transm. network supercond. fault current limiting transformer 77581
urban distrib. systs. operation/planning optim. software tools 133652
Ag-Au/$YBa_2Cu_3O_7$ fault current limiters, quench distrib., meander lines resist. 112176
Bi-2212 HTS materials for AC current transport and fault current limitation 77617
Bi-2212 tube, internal/external mag. fields, shielding, transient response 77613
Bi-2223 based composite conductors, resistive fault current limiting appl. 70632
Bi2223 supercond. FCL, transient resist. increase, applied mag. field 77594
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC supercond. fault current limiter characts. 77606
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC three-phase fault current limiter 77605
$Bi_2Sr_2CaCu_2O_8$, fault current limiter 88492
$Bi_2Sr_2CaCu_2O_8$ supercond. fault current limiter expts. 77584
$Bi_2Sr_2CaCu_2O_8$ supercond. resistive current limiters 77618
Nb_3Sn cond. cooled screen for current limiter, thermal design 77599
RBaCuO (R=rare earth), QMG grown, current limiting elements 123067
Y-123 HTS materials for AC current transport and fault current limitation 77617
Y-Ba-Cu-O single grained supercond. rings, current limiting perform. 77588
YBaCuO HTSC bulk meanders, fault current limitation perform. 127544
YBaCuO HTSC rings and ring pairs, transient response to pulsed mag. fields 88487
YBaCuO films, high current densities, fault current limiter implications 77590
YBaCuO meander pattern conductors, fault current limiters 77587
YBaCuO, meander-shaped QMG current limiting device, AC current loss 116543
YBaCuO thin film, fault current limiter, perform. verification 77616
$YBa_2Cu_3O_7$ supercond. thin film fault current limiter charact. *(Korean)* 77604
$YBa_2Cu_3O_7$ thin films, supercond. fault current limiters 112161
$YBa_2Cu_3O_{7-\delta}$ hybrid HTSC fault current limiter, quench behaviour 77607
$YBa_2Cu_3O_{7-\delta}$, polycryst., bearings/elec. power devices 116508
$YBa_2Cu_3O_{7-\delta}$ supercond. fault current limiters, quench behavior 77610
$YBa_2Cu_3O_{7-\delta}$ thin-film supercond. fault current limiters, init. quench develop. 77609
$YBa_2Cu_3O_y$ tape, develop. by using inclined substr. method 70750
$YBa_2Cu_3O_7$/Ag SNS Josephson jn., dc supercond. fault current limiter 81984

lt currents
see also fault current limiters; flashover; leakage currents; short-circuit currents
adaptive differential CT protection, sampling value-based *(Chinese)* 112603
cct. breaker arcing-generated complex accident anal. *(Chinese)* 123674
earth fault feeder detect. techs. for indust. networks 133820
fuse elements voltage drop/current meas. using digital techs. 123676

fault currents continued
gate oxide reliab., transistor-limited const. voltage stress test 126946
GBCB interrupting duty, DC component time const. effects 112687
HV substations, earthing systs., problems, solns. *(Russian)* 112710
indust. high temp. supercond. power cable, develop., testing 112104
MV cable sheath power losses prevention, surge arresters 133765
MV power distrib. networks, neutral grounding mode protection *(English, French)* 133770
MV power networks neutral earth connection, Italian experience 133774
oriented extended chain cryst. polyethylene, treeing discharges 104411
overhead line tower short-ccts., grounding loop behaviour expts. 112128
power distrib. adaptive reclosing scheme, fault patterns class. *(Korean)* 123045
power syst. fault location using RF emissions 77641
power transformer inrush current/fault current discrim. principle *(Chinese)* 123551
power transformer inrush ident. using improved correl. algm. *(Chinese)* 99713
power transformer protection using swarm-intell. trained neural network 123565
radial distrib. network, fault detect., matrix algm. 99432
rectifier output/protective conductor fault current, overcurrent protection *(Polish)* 99415
single phase fault detect. based on transient current, nonsolid grounded network appl. 77498
SRAM chips, high standby current due to spurious gate reticle image printing 79901
three-phase computer power supply networks elec. shock protection *(Polish)* 99344
three-phase HTSC power transm. cable, fault current tests 77393
unit-connected generators, grounded neutral, ground-fault currents 77832

fault diagnosis
see also fault location; fault simulation
10 MW expt. HTGR, emergency supply, automatic control *(Chinese)* 123161
22 kV power distrib. cable condition monitoring approach 133720
AC power syst. comparison of rate of change of freq. protection 77490
accel. sens. sig. proc. by neural net 86456
accumulator-based bit-serial test response compaction schemes, ISCAS'85 benchmark ccts. 79738
ADCs, transient fault sensitivity anal. 90993
aero engine wear failure, intell. diagnostics, debris anal. based method *(Chinese)* 133259
aircraft hydraulic syst., generalized cross-sig. anom. detect. 122506
aircraft sens. failure detect., ident., and accommodation, min. resource allocating networks appl. 111305
analog cct. fault diagnosis, single-output/1-of-k neural network archits. comparison 101745
analog ccts., fault diagnosis using symbolic anal. techs. 90709
analog ccts. with tolerances, fault diagnosis using ANNs 68554
analog IC testing, DC fault dictionary 101729
analog ICs, device params., test generation based diagnosis 79538
analogue ccts., multiple fault diagnosis method 79548
analogue ccts. soft fault diagnosis, sensitivity anal. 125209
analogue piecewise lin. ccts., fault ident., homotopy approach 101744
ANN appl. to fault diagnosis in analog ccts. with tolerances 68551
artificial heart, HF mag. telemetry, sig. transm. 133046
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 119468
automated meas. systs., neural net appl. 109440
automobile real-time intell. fault diagnosis, joint time-freq. anal. based hybrid neurosystem appl. *(Chinese)* 118936
basic events ordering in fault tree, rough set 67500
behaviour Petri model based diagnostic inference *(Chinese)* 88066
bilinear systs., H_∞-suboptimal fault detect. filter 73642
bipolar CML testability, inductive fault anal., library cell layouts 102074
BIST strategies at register-transfer and algorithmic levels 125341
BIT for intell. syst. design & condition monitoring, overview 131805
blanking parts' defects diagnosis using neural ES *(Chinese)* 113768
block-level cct., fault diagnosis, neural network *(Chinese)* 114670
Bluetooth radio data syst., meas. and fault diagnosis *(German)* 96347
Booth array datapath multipliers, seq. fault testing, low-cost BIST archits. 102037
brushless three-phase sync. generators, winding condition monitoring 133979
BSS for fault detect. and machine monitoring using time or freq. domain approach 118821
bus-based prog. SoCs, IP cores, self-test methodology 101920
car IS for intell. transport systs. *(Japanese)* 124044
chem. engng., fault diagnosis of multivariate systs. 107411
classical fault models, anal. of realistic defects 79739
CMOS, full opens in interconnection paths, detectability conditions 125330
CMOS digital VLSI cct. fault detect., gate orient. effects 70305
CMOS high-perform. ccts., test mode, arbitrarily low test freq. 102040
CMOS logic open defect detect. by supply current test 79797
CMOS mfg., fault detect. using model-based PCA 104119
CMOS/BiCMOS ccts., fault charactn./DFT for I_{DDQ} faults detect. 125406
CNC manufacture, tool breakage monitoring, wavelet transform *(Chinese)* 100348
code-perturb. simul.-based hardware verification, black- and white-box approach 79725
colour counting tech. and appl. to path delay fault coverage in ICs 79742
combinat. ATPG algms., test pattern compaction, independent/compatible faults *(Korean)* 102095
combinat. cct., defect coverage, target faults, test generation 79796
combinat. cct. with fault diagnosis capability *(Japanese)* 90818
complementary pass-transistor logic ccts., fault characterisation 102005
complementary pass-transistor logic ccts., testing, single-stuck faults 102018
component replacing and replacement tests for model-based diagnosis *(Chinese)* 101925
compressor acoustic diagnosis, variable-length chromosome GA 107335
condition assess. using model-aided diagnosis 112702
continuous scan, test environ., fault coverage 125346
controlled syst. lang. ident., modelling, control and anom. detect. 112731
crosstalk-induced logical/delay faults, on-chip buses, embedded-software-based approach 101921
damage diagnosis, time series anal. of vibr. sigs. 86409
damaged IM perform. prediction, FEM appl. 133999
DC motor drive fault detect. using self-organizing neural nets 113085
DC motor fault diagnosis using fuzzy ARTMAP *(Chinese)* 112537
decentralised fault detect. filter using estim., games 67660
decentralized discrete event systs. with delays, diagnosis 78685
defect oriented fault diagnosis for semicond. memories, charge anal., theory and expts. 102138

fault diagnosis continued
defect-oriented test scheduling, polynomial-time heuristic, globally optimal solns. 81491
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
deregulated distrib. syst. fault diagnosis using neural nets 112031
detect. and isolation, lin. matrix inequality based filter design 84752
deterministic software-based self-testing of embedded proc. cores 79911
DFT scan wheel, tech. for interfacing high speed scan-path with slow speed tester 101915
differential diagnosis of faulty gates, eight-valued logic 68703
differential-press. flow sens., self-validating, wavelet transforms 120730
distrib. substation fast fault sect. estim. approach 134313
distrib. systs. fault diagnosis, AI 99337
disturbance recorders, near real time inform. support, power syst. control 77209
dominator gates, fault equivalence ident., redundancy, static/dyn. extraction 102043
double fixed-polarity Reed-Muller expressions *(English)* 79852
dyn. systs., fault detectors design, H_∞ optim. 84751
e-diagnostics links, SEMI GEM/SECS stds./equipt. front-end modules, rels. 103962
ECA + SQL, practical event correl. approach 96152
ECLIPSE, virtual telecomm. network, fault mgt. 119490
EHV transm. line, ultra-high speed nonunit protection, transient sig. mutation *(Chinese)* 133781
elec. motors, novel method for fault detect. 78692
elec. power commun. network, intell. fault diagnosis syst. 74115
elec. power syst., polymorphic phase component, fault anal. *(Chinese)* 133421
electronic components, microfocal X-ray imaging develop. 78702
electronic hardware, fault diagnosis/prediction, intell. platform mgt. interface *(German)* 113784
embedded RAM built-in self-diagnosis, use of syndrome compression 125479
embedded RAM fault diagnosis by syndrome compression, built-in self-diagnosis 79875
embedded SRAM of µPs, µCs and DSPs, efficient BIST method 102176
EMI immunity diagnosis for PCBs using bulk current inject. test *(Japanese)* 91450
engine misfire detect., crankshaft ang. vel. meas., fuzzy pattern recogn. 89408
enhanced fault model for high defect coverage 79719
failed distrib. transformers diagnosis using neural networks 134133
fighter plane struct. fault detect., fault detect. filter *(Chinese)* 130085
flip chip packaging defect diagnosis using acoustic microimaging 78615
FPGA design based on LUT, error diagnosis via pattern- and BDD based formal tech. *(Japanese)* 125278
FPGA logic blocks, BIST-based test and diagnosis 68719
FPGA-based systs., run-time reconfiguration for fault injection appls. 114711
fuzzy fault diagnosis, using knowledge expression/approx. reasoning 124428
gas turbine engine fault diagnosis using feedforward neural nets 112319
gear faults detect. using spectral anal., AR and ARMA models comparison *(French)* 123335
generator rotor earth fault relay protection fn. 77823
Genevieve based semi-formal test generation 125368
global telecomm. systs., complex fault ident. and mgt. 74284
GPS receiver autonomous integrity monitoring algm., clock bias *(Chinese)* 86266
GPS/INS integrated navig. syst., fault detect. method *(Chinese)* 76804
gun/turret syst., DC motor drive, fault diagnosis, fault tolerant control 133416
HF SPWM VVVF syst. for AC machine speed control *(Chinese)* 77809
hierarchical fault diagnosis of analog and mixed sig. ccts. 103985
hierarchical IC test approach using boundary scan test 100556
hierarchical inform. fusion based fault diagnosis, turbine appl. 118828
high dens. memory fault diagnosis algm. *(Korean)* 102158
HMM fault detect., local asymptotic approach 84753
HV cct. breaker fault diagnosis using wavelet sing. detect. *(Chinese)* 99835
HV cct. breaker online monitoring/fault diagnosis using RBF networks *(Chinese)* 123673
HV cct. breakers, fault diagnosis, RBF networks appl. *(Chinese)* 134272
HV IGBT inverter source, intrinsic fail-safe capability 125231
HV transformer impulse fault diagnosis, self-organising map, learning VQ 134108
HV transm. line fault diagnosis, data mining, rough set theory, GA *(Chinese)* 123008
HVAC cct. breaker diagnosis, qualitat. reasoning 123675
hybrid on-line vibr. diagnosis microsystem, neural class. 121046
hydroelectric generating set, condition monitoring and diagnostic syst. model 77780
hydroelectric turbine intell. cavitation diagnostics/monitoring 99581
Hyperion robotics project, sun-sync. navig. 131970
IC power constrained test scheduling, power profile manipulation 104052
IC proc. control/fault detect./event recogn. via univariate pattern recogn. 113814
IC structural defect anal., trends 104020
IM bar/end-ring connector breakages, data mining, FEM 134033
IM broken bars eval. using elec. signature anal. 123455
IM broken rotor bar detect. using pattern recogn. 123424
IM broken rotor bar diagnosis using sliding DFT 123411
IM load effect diagnostic tool using instantaneous power spectrum 99656
IM mech. fault online diagnosis, ANN appl. 88735
IM stator condition monitoring, fuzzy logic approach 123418
in-line SEM automatic defect class. for vol. IC fab defect reduction/yield enhancement 100636
indust. gas turbine start-up seqs. monitoring using multi agent syst. 88612
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
intell. buildings, EMS/control systs. design/testing, simul. tools 89452
intell. components/instrums. for control, conf., Buenos Aires, Argentina (Sept. 2000) 113254
interactive BIST appl., compression tech., test data vol. reduction 101909
isochronous testing strategy for hierarchical adaptive distributed syst.-level diagnosis 125333
large seq. ccts., testable design, partition and resynthesis approach 102039
lin. cct. fault diagnosis, bilinear transform. in 3D & 4D space 101743
lin. syst. fault diagnosis, residual generation, polynomial 100631
lin. time-invariant ccts., algm.-based fault detect. 101742
low testability analog ccts., software program for ambiguity group determ. 90640
LV CMOS ccts., I_{DDQ} testing, leakage control techs. 127033
machine tool coolant fault diagnosis by neural net 109436
machine vibr., blind separation with bilinear forms 118813
mag. induction meters, advanced diagnostics *(German)* 120783
March tests for memories, ATG algm. 102140
mixed digital and lin. analog ccts., fault diagnosis 125617
mixed sig. ccts., online fault diagnosis, simplified fuzzy ARTMAP appl. 801
mixed-sig. designs, syst.-level test synthesis, hierarchical test approaches 1024
modular systs., reliab. and diagnosis 124423
motor drive fault detect./mgt. syst. 113043
motor fault detect./protection using wavelet transforms 77820
motors, fuzzy-neuro intell. fault diagnosis 78712
multi-port memories, simul.-based test algm. gen. and port scheduling 1254
multicast stats., scalable archit. for monitoring and visualization 96169
multiple fault diagnosis of analog ccts. by locating ambiguity groups of test e 101741
multiple logic defect diagnosis, full-scan design, curable vectors 101910
multiple scan chain design for two-pattern testing, seq. cct. appl. 102042
multiple-fault diagnosis, independent choice logic appl. 99322
multivariate methods for IC proc. control/fault detect. 100723
µP internal-SRAM testing using zero-overhead BIST 68834
MV distrib. substation neutral-point grounding scheme improvement 123055
MV underground power cable ccts., condition based maint. 133721
n-detect. test generation, fault dominance appl. 101934
neighborhood pattern-sensitive fault test algms. for semicond. memories 1021
network surveillance scheme, supervisor-based, middleware implement. and p form. eval. 119491
neural network based sens., redundant technol., sens. fault diagnosis *(Chine* 121060
neural network model based fault prediction *(Chinese)* 88078
New Millennium Deep Space One spacecraft, Remote Agent autonomous contr syst. 76822
nonlin. analog ICs, optimum test stimuli, nonlin. prog., time-domain sensitivit 79539
nonlin. analogue ccts., tolerance, fault diagnosis, neural net based L_1-no optimisation 114590
nonlin. unknown syst. fault diagnosis by neural nets 100657
NPP fault diagnosis, functionally abstracted inform. presentation 112220
nuc. power station, emergency generator set, fault disturbance recorder, onli monitoring *(Chinese)* 99573
observer/diagnoser constr. for discrete-event systs. 78705
OCR readability study, algms. for testing partially damaged characters 8458
oil pipe erosion assess., grey target theory software 113750
open-source router SEU effect anal. 85122
overhead power line fault diagnosis under glazed frost melting proc. *(Russia* 99423
path delay fault diagnosis in combinat. ccts. with implicit fault enumerati 114714
path delay faults, diagnosis in at-speed environ., functionally sensitized pa 102038
pattern-depend. transit. faults, diagnostic test generation, delay fault mod 68685
PCB boundary-scan for interconnect and in-cct. prog. 115160
PLA growth faults detect., test vector generation, CNF-satisfiability probl 81447
plant equipt. failures, early detect., JIT maint. 99518
power apparatus fault diagnosis using IR imaging tech. *(Chinese)* 112438
power equipt. diagnosis/maint., Internet based virtual hospital archit. 11244
power plant condition monitoring, modal logic reasoning 99442
power plant mach., computerized online vibr. monitoring, anal., and asse 123188
power quality disturbances mitigation using fast detect. algm. 133711
power syst., wavelet transform, wavelet decomp., wavelet difference *(Chine* 99189
power syst. transients anal. using wavelet transforms 111662
power systs. off-line fault diagnosis, ANNs 99428
power transformer diagnosis/repair in power stations 112610
power transformer fault diagnosis, wavelet transform and neural net 77941
power transformer fault diagnosis method, oil dissolved gas anal. *(Chine* 77912
power transformer fault diagnosis using decision tree approach *(Chinese)* 779
power transformer impulse testing, soft-thresholding wavelet de-noising ap *(Chinese)* 112606
power transformer inrush current/fault current discrim. principle *(Chine* 123551
power transformer inrush detect. using magnetizing impedance var. meas. *(C nese)* 112605
power transformer inrush ident. using improved correl. algm. *(Chinese)* 997
power transformer on-load tap-changers, ageing detect. from vibr. signatu 112582
power transformer on-load tap-changers, automatic condition diagnost 112581
power transformer protection using discrete dyadic wavelet transform approa 77927
power transformer protection using swarm-intell. trained neural network 1235
power transformer winding deform. diagnosis methodologies *(Chinese)* 1341
PowerPC µP, false timing path ident. 79920
pro-act. network fault mgt. using reinforcement learning 96041
proc. control and diagnostics in semicond. mfg., conf., Santa Clara, CA, U (Sept. 2000) 100413
PROCONTROL P distributed control system for power plants *(Chinese)* 777
Profust fault tree, qty. anal. *(Chinese)* 67668
pseudo random BIST for detecting real defects, min. test length 104032
pump IM fault detect. using fuzzy signature anal. 134015
pumped storage power plant condition monitoring/anal./diagnosis syst. desi 88641
random limited-scan to improve random pattern testing of scan ccts. 12534
real time intell. sens. validation, Bayesian network 133872
reciprocating pumps check valves, fault diagnosis, rough set theory appl. 1189
redundancy sensitive elements, wavelet transform based *(Chinese)* 124430
rem. monitoring/diagnosis in power plant operation 88506
retiming-based test pattern generator design for BIST of data path archi 102065
ripple carry and cascaded carry lookahead adders *(Japanese)* 79854
rot. machine condition monitoring/diagnosis by vibr. sigs. 97132
rot. machine failure diagnosis, multisens. data fusion, fuzzy ANN 123274
rot. machine fault diagnosis, vibr. anal., DSP-based FFT-analyser 112515
rough set syst. diagnosis, rule extraction *(Chinese)* 100641
RTL ccts., non-scan DFT method, fixed-control testability *(Japanese)* 6871
satellite inspection robot, end-effector 100507
satisfiability-based functional delay fault testing, CNF formulas 101951
scan ccts., test compaction, at-speed testing 125345
scan chain concealment for test vol. and appl. time reduction 125433
scan-based BIST, partitioning-based diagnosis, failing scan cell ident. 79679
semicond. mfg., SEMY Statistical Machine Control 100725

lt diagnosis continued
sens. bias fault diagnosis, robust, in nonlin. systs. 86470
sens. failure diagnosis, inform. fusion tech. based on neural network *(Chinese)* 75425
sens. fault observer, optimum design, freq. domain synthesis *(Chinese)* 88035
sens. intell. fault detect. for monitoring, diagnostics 132082
sensitivity based analog fault dictionary 90711
seq. cct. test generation using state transit. diag., combinat. cct. part 114728
seq. TDR for DSL diagnostics 85408
service mgt. platform, mgt. tools 96043
shifter/accumulator pairs in datapaths, deterministic BIST scheme 79737
shifter/accumulator pairs in datapaths, deterministic BIST scheme 125331
single phase IM drive design and computer based fault detect. 100262
single-phase power transformer diff. relay protection scheme 123562
slip-ring/squirrel cage IMs, rotor asymmetry, Vienna monitoring method 123429
smart actuator, faults, self-diagnosis 123697
SNMP objs. semi-act. replication in agent groups for fault mgt. 130562
SOC design verification, port order fault model 104054
socillator test, delay test scheme for embedded ICs in boundary-scan environ. 104012
SOCRATES on IP router fault detect. 74005
sodium lamp tube automatic defect detect. syst. *(Japanese)* 100315
spacecraft fault diagnosis ES, temporal problem *(Chinese)* 88036
speed-independent async. ccts., test pattern generation 79807
SPIRIT, highly robust combinat. test generation algm. 102072
squirrel cage motor, rotor bar breaking, on-line detect. *(Chinese)* 77868
squirrel cage motors, rotor resist. estim., nonlin. observer appl. 99651
SRAM transparent testing methodology using dyn. power supply current 114738
static CMOS PLA, testable design method, IDDQ testing 79806
static compaction in sync. seq. cct., seq. reordering 79682
step response based mixed-sig. BIST approach 68953
strapdown INS based GPS integrity monitoring, pseudorange estim. *(Chinese)* 86267
substation alarm MHS using ANN/ES *(Chinese)* 112708
substation automation, digital inform. commun. methods *(Chinese)* 99853
substation transformer life estim. approach 123561
sync. generator, shorted field-turns, on-line NN diagnosis 77850
sync. generators, fault diagnosis, AHP method 133950
sync. machine winding internal faults anal. model 133980
sync. seq. ccts., BIST method for fault diagnosis 68776
technol.-tolerant I_{DDQ} method for CMOS digital IC diagnosis 101917
telecom. network fault test scheduling, risk-sensitive 74129
test generation and fault simul. methods on basis of cubic alg. for digital devices 125322
test/ATE manufacture, education using FPGA 109422
testing point selection *(Chinese)* 75339
three phase Y-Y power transformer, protective relaying algm. *(Korean)* 123552
three-phase IM broken rotor bars detect. approach 99654
three-phase IM fault detect., stator current anal. program 123476
three-phase IM fault detect. using current signature anal. 88750
three-phase IM LV stator windings fault diagnosis 123423
three-phase squirrel cage motor fault-related harmonics detect. 112500
three-phase synchronous/asynchronous motor stator winding fault diagnosis 123384
TIGER gas turbine continuous fault diagnosis expert syst. 75368
TIGER gas turbine fault diagnosis syst. 77760
TIGER syst. for model based diagnosis of gas turbines 88602
time over threshold algm. for noise reduction in perform. and fault mgt. systs. 96047
time-freq. domain fault detect. approach, parity rel. and wavelet transform appl. 84734
transducer fault detect., ANN optimisation, GA 75377
transformer inter-turn faults/magnetizing inrush discrim. scheme *(Korean)* 123553
transformer winding deform. diagnosis, equiv. model param. ident. *(Chinese)* 91433
transm. network, on-line fault diagnosis, fuzzy ES 111988
tristate syst. environ., fault detect. 125173
turbine mach. fault diagnosis, probabilistic causal network *(Chinese)* 88670
two-level LFSR high efficiency BIST scheme, asynchronous test pattern transfer 102017
two-support rotator, fault-chaos rel. test ident. 86443
ultrahigh reliab. establishment by fault injection expts. 113797
uniform march tests, optimal, memory ICs, fault coverages 102137
urban sewage networks, sens. fault diagnosis, rainfall-runoff multi-modelling 88178
VAV air handling unit online fault detect./diagnosis method 100335
vehicles in platoon, automated, fault diagnostic syst. 86410
VHDL procs., behavioral test generation 68679
VLSI, on-chip crosstalk eval. between adjacent interconnections 70269
VLSI layout anal., geom. proximate nets 81472
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
wafer fab e-Diagnostics, intellectual property, equipt. maintainability and availability 89836
wavelet transform *(Chinese)* 114204
weak sig. detect. in heavy noise, stochastic reson. theory *(Chinese)* 130162
weighted pseudo-random testing hybrid BIST, test resource partitioning scheme 101908
NbTi supercond. magnet diagnosis method using fast current discharge 71055
Si PV modules, 20-yr. field exposure diagnostic anal. 112972

ult location
see also fault simulation
3-phase IM, broken bars detect., instantaneous power spectrum 88752
11 kV underground paper-insulated power cable failure detect. 133817
22.9 kV distrib. network high-impedance fault detect. approach *(Korean)* 123077
25 kV elec. rly. overhead line maint. optim. using dist. protection 78302
110 kV urban power networks, faulty components ident. *(Chinese)* 112043
154 kV underground transm. cable, wavelet-based fault location *(Korean)* 77659
330 kV three-ended HV transm. lines, relay protection principles 77572
400 kV overhead line fault location, HF TW meas. 99427
400 kV transm. line fault locators, ANN appls. 112183
400 kV transm. syst., single ended fault location method 77651
400 kV underground power cable GPS TW fault locator 77660
AC motor drives, stator fault detector, DSP controller based 123859
adaptive non-commun. protection scheme for power lines 77379
advanced distrib. automation implement., US utilities 133616

fault location continued
AIT-II dark-field inspection tool with automatic defect class., method/cost effectiveness 100629
analog ccts. fault approach based on self-organizing feature map neural networks *(Chinese)* 101672
analogue ccts., multiple fault diagnosis method 79548
area array components, X-ray/endoscopy-based inspection techs. 124417
back side failure anal. flow for flip-chip/lead-on-chip/multi-metal-level dies 113778
BIST-based design-for-test method, breaking correl. to improve testability 101914
cable aging assess., discrete wavelet transform appl. 99524
cable automation urban distrib. cable fault location automation approach 77639
cable fault location, CFL-3 device power supply, portable solar batts. 113012
cable jn. monitoring syst., fault prewarning, jn. resist., insulation aging *(Chinese)* 133764
capacitor compensated lines, fault location, hybrid fuzzy neural network 99430
CMOS and BiCMOS logic ccts., fault charactn. and DFT tech. for I_{DDQ} fault detect. 125438
combinat. cct. path delay faults, ATPG methodology 79810
commercial LV installation, failure, maint. 133818
compensated earthed network, earth-fault detect., protection, ANN 133812
compensated neutral grounded MV power systs., high impedance fault detect. 77662
complex multi-source power distrib. syst., fault location algm. *(Chinese)* 122965
CT, dist. protection selection, Monte Carlo method 123536
DC power supply-ground insulating resist. meas. method *(Chinese)* 88949
DC transit systs., short-cct. faults detect., DWT, ANN 78249
diagnostic ES perform. improvement, waveform features 100659
differential protection stabilisation, uncertainty modeling 77561
digital fault location algm., fault grounding impedance considerations 112182
digital fault locator perform., fault arc influence, time domain model 77649
digital fault locators, accuracy, fault arc charact. effect 112195
dispersed-source power syst. advanced meas. syst. 77652
distrib. fault line selection, TW, wavelet transform 77321
distrib. network, feeder automation, fault detect., reconfiguration *(Chinese)* 88429
distrib. network, line-to-ground fault location, freq. domain anal. *(Chinese)* 133639
distrib. network directional relay protection approach 77506
distrib. network fault mgt. automation using FI-model *(English, French)* 133773
distrib. network power quality disturbances detect./location *(Chinese)* 77630
distrib. networks, fault localisation/isolation, syst. restoration 133607
distrib. syst. grounding fault current detect., opt. current transducer *(Chinese)* 112049
double cct. lines on same tower, transform. method *(Chinese)* 123027
double-cct. HV transm. line fault detect. ES 99426
double-cct. line dist. protection using multi-layered perceptrons 77562
double-cct. transm. lines, fault location algms., current distrib. factor *(Korean)* 123078
earth fault feeder detect. techs. for indust. networks 133820
earth faults detect. during power swings, synthetic neg. seq. vector 99429
earth-to-earth fault location using time series wavelet neural net *(Chinese)* 112187
EHV overhead line, transient protection, wavelet transform 77508
EHV series-compensated transm. lines, neural net-based fault location 123086
EHV series-compensated transm. lines fault location using neural nets 77663
EHV transm. line real-time fault detect., multi-resoln. entropy computation, Mallat algm. *(Chinese)* 133816
EHV transm. syst., ANN based fault locator 112204
elec. arc modelling in free air, overhead line protection appls. 77567
elec. distrib. syst. island detect./network colouring 99354
FACTS PC-DSP-based unified control syst. design 111855
feeder ccts. protection, fault generated transients propag. monitoring 77541
flash memory proc. flow develop., circ. resist residue defects 102141
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
functional test in high-dens. PCB environ. 115195
fuzzy clustering for distrib. network fault location 99336
fuzzy relational model ident. for fault detect. 67650
gas insulated substation PD signatures, condition monitoring, multi-agent paradigm 112725
gas-insulated switchgear defect detect., PD meas. 88999
generator-transformer unit, integrative state detect./record syst., APCI indust. computer *(Chinese)* 134121
Gray Field UV technol. for defect inspection systs., design/appl. 100630
ground-DC power supply insulating resist. meas. apparatus *(Chinese)* 123082
high-impedance grounded systs., fault locating sigs. anal. 133819
high-speed power transm. line protection using wavelet tech. 77560
high-speed transm. line protection, NN based fault direction detect. 123073
HV transm. line, high impedance arcing faults detect., wavelets 77650
HVAC systs. fault detect., model-based feedforward control 100333
IC board fault detect. using histogram of thermography 124398
IC defect inspection/metrology, proc. integrat. 100638
IC design/test, DFT tool/ATE platform cooperation 126997
IC yield optim. for mature semicond. fabricators 104016
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 2001) 124221
IM, fault detect./isolation, nonsinusoidal residual generation 123460
IM, rotor fault detect., pattern recogn. 134032
IM mech. faults signature anal., wavelet packet decomp. 88736
IMPACT ADC IC yield anal., multiple defect class. technols., test sample shaping 104018
improved wavelet packet decomp. algm., weak fault detect. appls. *(Chinese)* 106801
IMs, broken rotor bar faults detect., on-line neurofuzzy approach 123422
in-service OTDR supervisory DWDM syst., Mach-Zehnder fiber-grating opt. ADM 131595
interturn fault, HV winding of power transformer, detect./localization using wavelets 112601
LAN fault diagnosis syst. 130739
large-scale transm. syst. fault location estim. using GA 77644
laser-SQUID microscopy for nondestructive nonelectrical-contact IC failure anal. 81497
leakage faults backside localization, thermal laser stimulation 126930
load dispatch center fault disturbance recorder, operator aid 89778
LV distrib. systs., fault location using ANNs 99433
LV ground-fault indicators operation, ASD effect 124147
metal-clad switchgear low-level arcing faults location/detect. 78051

fault location continued
microelectronic device thermal/thermomechanical characterisation by laser probing 115987
multi-source distrib. network, multiple fault sect. location *(Chinese)* 133595
multiterminal power transm. lines, multi-ended fault location design 77643
multivariable syst. faults, set-based detect./isolation 100645
MV cable network, fault location method 77320
MV distrib. syst. protection using neg. seq. current distrib. *(Chinese)* 112134
MV distrib. systs., high impedance fault detect., fuzzy decision making 77319
MV feeder relay protection, earth fault indication algms. 77526
nonlin. analog cct., fault isolation, neural network L_1-norm 101746
nonlin. polynomial systs., robust fault detect. observers 89892
obs. for fault detect./isolation, existence conditions 100661
opt. networks, fault location methods review 120233
overhead distrib. systs. downed conductors detect. 77638
overhead line arc fault detect./location using induced VHF sferics 77665
overhead lines, nonunit fault location method 123088
overhead power distrib. line, PD posn. location syst. *(Japanese)* 133759
overhead power line, fuzzy logic-based fault locating algm. 77666
overhead power line protection/adaptive autoreclosure algm. 77517
overhead transm. lines, genetic based fault location algm. 133811
parallel series-compensated transm. lines fault location improvement 77664
parallel transm. lines, fault location algm. 77647
PCB in-cct./functional testing, cluster approach 115196
phased-array subarrays, automated testing 117841
PID feedback control, output usefulness in fault detect. 124394
power distrib. cable fault location using GIS *(Chinese)* 77383
power line current sens. using analogue opt. data transfer 77661
power line fault detect. capability, phases fault recogn. *(Russian)* 77627
power quality disturbances, automated anal. 133694
power semicond. device elec. failure localization, backside emission microscopy 70071
power stations, microcomputer based fault recording/locating syst. *(Chinese)* 133854
power syst. adaptive preventive-restoration control syst. 77273
power syst. computer-based relay protection tech. 112136
power syst. dist. relay setting, reach estim. approach 133785
power syst. dist. relays, adaptive data window tech. implement. 77501
power syst. fault diagnosis, probabilistic NN, multiple alarm proc. *(English)* 123076
power syst. fault location using RF emissions 77641
power syst. protection, conf., Bled, Slovenia (Sept. 2000) 67409
power syst. protection develops., conf., Amsterdam, Netherlands (April 2001) 78392
power system faulty waveform recording, waveform distortion, waveform recovery *(Chinese)* 77475
power systs., fast fault detect. techs., least sq. method 123093
power transformer fault class. using neural nets 77943
power transm. line adaptive protection relaying scheme 123054
power transm. line fault detect. during power swings 77537
power transm. line fault locating syst. 133821
power transm. line fault location approach *(Japanese)* 112201
power transm. line high-speed protection using wavelets 77502
proc. control subsystems, software-based self-test methodologies for perform. faults 101995
protective relays, testing methods/simul. 133791
PWM VSI IM drive, DSP based fault detect. 100254
QC cloth prod., real-time defect detect. 120886
radial distrib. network, fault detect., matrix algm. 99432
radial distrib. syst. fault sects. ident. approach 112202
radial distrib. systs., fault location, wavelets 99431
random defect-limited IC yield using deterministic model 103955
real-time AOI syst. for PCBs, image matching 124412
relay protection with extreme fault ident. 77555
relay testing platform for relay perform. 77488
risk-sensitive decision-theoretic fault diagnosis 96023
rotor windings interturn short ccts. detect. 133920
rural MV distrib. networks, fast fault location method 133814
SC filters based on allpass sects., testability 80068
scanning SQUID microscopy for current imaging of ICs 116001
series compensated lines, fault location, fuzzy logic soln. 123087
series-compensated parallel lines, fault location 112194
Siemens high-sensitivity earth fault protection devices *(Chinese)* 77470
single phase fault detect. based on transient current, nonsolid grounded network appl. 77498
single-ended power line fault location approach, paper discussion/closure 133822
SMT assembly proc. enhancement using prod. defect data 115173
SQUIDs for IC defect location/failure anal. appls. 126998
squirrel cage motor rotor fault detect. using Vienna monitoring method 88745
stand-alone intell. digital dist. relay, paper discussion/closure 133795
substation protection automation, high-speed peer-to-peer commun. 112138
surge impedance relay, TW based directional relay *(Chinese)* 112129
three-wire power distrib. network high-impedance arcing fault detector 112203
transformer oil, dissolved gas detect. using ANN *(Chinese)* 99710
transient TW fault characts., dyadic discrete wavelet transform *(Chinese)* 133778
transm. line, loop systs., faults location, Prony method, ANN 112184
transm. line fault class., RBF NN, orthogonal-least-sq. learning 133787
transm. line fault detect., class., location, ANN 77642
transm. line fault location, HF TW meas. 77646
transm. line fault location, least sq. realization *(Chinese)* 123075
transm. line fault location, self-organizing neural net 77302
transm. line fault location algm., distributed param. 77648
transm. line faults location, ANN struct. 99425
transm. line multifn. high-speed current differential relay protection 77536
transm. lines, ANN based dist. protection relays 77510
transm. lines, wavelet transform based noncommunication protection scheme *(Chinese)* 112133
transm. network fault locating syst. develop. using OO prog. 112193
transm. substation automation, PG&E's Substation 2020 project 89011
TV test pattern generator for mobile use by service engineers *(German)* 109830
TW based fault location algms. comparison *(Chinese)* 123081
TW fault location validation, wavelet transform *(Chinese)* 77631
TW fault locator experience, Eskom's transm. network 77640
UHV transm. line long. differential relay protection *(Chinese)* 77472
ULSI, local cross-sect. EBIC, local jn./defect delineation 116002
underground cable arc fault location, single terminal voltage/current data 99372
underground distrib. cable fault location *(Chinese)* 88447
underground distrib. line problems and soln. 88421
fault location continued
underground LV networks, incipient fault detect. and mgt. 133606
underground oil filled power cable fault detect. and location *(Chinese)* 7764
ungrounded/high-resist. grounded indust. systs., fault location 99438
URD network faulted cct. indicators, IEEE Guide 123070
waste disposal seepage control sheets, damage detect. method *(Japanese)* 676
wavelet transform dist. protection scheme with TW fault location *(Chines* 112150
wavelet-based online disturbance detect. for power quality appls. 112066
Cu CMP proc. modules, defect class. 126502
GaAs ICs, direct fault detect./anal. using EO sampling syst. 79668
HgCdTe opt. sens. for IC fault isolation 103984
IC yield mgt., customized AutoSAT templates in foundry environ. for better re ipe set-up 100626
W post-CMP defect inspection, recipe optim. 100637
fault simulation
3-phase bridge rectifier, earth faults simul., safety protection *(Polish)* 99806
3-phase squirrel cage motor, bar/end-ring connector breakage faults diagnos 123420
analog cct., fault detect. probab. fn. 101733
ASIC cell fault models, VITAL compliant VHDL simulation 102424
CMOS digital ccts., defect-oriented fault simul. and test generation 79740
combinat. ccts. design error diagnosis without error model 101947
combinat. MVL ccts., genetic algm. for ATPG tool 90891
concurrent simul. of large networks using various fault models 79717
DFT rules, fault coverage vies 125284
digital VLSI, crosstalk faults, BIST *(Japanese)* 68666
double-cct. transm. line relay protection simul. 77576
double-cct. transm. lines, fault location algms., current distrib. factor *(Korea* 123078
embedded DRAMs, memory cell array opens and shorts, static/dyn. behavi 79876
embedded proc., RTL fault simulator 79750
FASTNR fault simulator for lin./nonlin. DC ccts. 101664
FFM, functional fault modeling, opamp ccts., test generation 125241
flash memory disturbances, modeling and test 102135
forward-looking fault simul. for improved static compaction 114716
high-level std. 68508
hydro-generator, internal fault, main protective relay sensitivity anal. *(Chines* 88694
multicore systs. on silicon, exact fault simul., intellectual property protectio 79716
network fault simul. platform and event samples acquisition techs. for event co rel. 119477
next generation mixed sig. ICs, ADCs, cct. specific failure modes, test 80117
open-source router SEU effect anal. 85122
overhead power line, fuzzy logic-based fault locating algm. 77666
parallel, high-perform. 125181
pass. testing for fault ident. in networks 85133
power syst. anal. and protection design, dyn. phasors 77568
probabilistic event propag. for fast stat. timing anal. of VLSI 125370
relay protection, DSP-based digital testing equipt., dyn. simul. *(Chinese)* 994
RT-level fault simul. based on symbolic propag., VLSI ccts. 101922
seq. ATPG, efficient spectral techs. 79681
seq. propag. concurrent fault simul., event-driven simul. environ. adaption 7975
SoC interconnect crosstalk defects testing using on-chip embedded proc. cor 126977
substations, general graphic compilation syst., fault simul., training ES *(Chines* 78065
sync. seq. ccts., BIT pattern generation method 125393
test generation and fault simul. methods on basis of cubic alg. for digital device 125322
test seq. compaction method for seq. ccts. with reset states *(Japanese)* 7976
transm. lines, ANN based dist. protection relays 77510
VHDL transparent fault injection and simul., shared variables and linked lis 79833
fault tolerance
see also fault tolerant computing
20 GHz phased array antenna for GEO satellite commun. 105947
aircraft flight control systs., fault tolerant design, maint. planning 133224
aircraft sens. failure detect., ident., and accommodation, min. resource allocatin networks appl. 111305
all-opt. transport networks, fault and attack mgt. framework 96718
arrangement graphs with faulty vertices, embedding longest fault-free path 67800
ATM networks, multiagent-based reservation of backup VP 96133
Beacon, hierarchical network topol. monitoring syst. based on IP multicas 95919
BISRAMGEN phys. design tool for BISR RAMs 68809
concurrent engng. in electronic packaging, conf., Calimanesti-Caciulata Romania (May 2001) 124229
data commun. networks, design practices and theories 130494
dependable real-time commun. with elastic QoS, perform. eval. 107714
distributed sens. networks, research review 129990
distributed systs. security/survivability, overview 108202
divided word line memory, block-repair fault-tolerant archit., BISR 102134
drive-by-wire systs., mechatronic sens. and actuators, safety integrity method 124051
electronic white board, commun. aspects 96283
EM suspen. syst., fault tolerant controller design *(Korean)* 78309
EPLD, self-repairable, advanced self-repairing methodology 90886
fault-tolerant solar PV arrays, network anal. 89279
fibre-optic wireless secure digital network, uninterruptible self-determinat hybrid high-speed multimedia 74965
fly-by-wire systs. for motor cars using time triggered protocol *(German)* 8936
flywheel energy storage syst., 3-level neutral-point-clamped PWM inverte 134423
four-phase switched reluctance motor drive under lacking one phase fault condi tion, anal. 78216
FPGA logic blocks, BIST-based test and diagnosis 68719
fuzzy class. fault-tolerance syst. based on reliab. 78561
gun/turret syst., DC motor drive, fault diagnosis, fault tolerant control 133416
hydro power stations, control/maint. strategy, fault tolerant mode 88637
IEEE inform. networking, conf., Beppu City, Japan (Jan.-Feb. 2001) 89576
IM drives, automatic controller reconfiguration, fault tolerant operation 12385
IN archit. based on act. network technol. 96255
isochronous testing strategy for hierarchical adaptive distributed syst.-level diag nosis 125333

t tolerance continued
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
lin. time-invariant ccts., algm.-based fault detect. 101742
low cost DC-DC conversion devices, harmonic content, PWM and ZCS *(Italian)* 79564
m-out-of-n hardware bit voter, CMOS VLSI technol., fault tolerant designs 79809
mag. bearings, fault-tolerant control, reduced controller outputs 70566
MOS analogue neural networks, fault-tolerant training in presence of transistor mismatches 68988
MPLS networks, heuristic approach to service restoration 130502
multi-node label interval routing scheme, fault-tolerant table generation 95984
multicast commun., QoS, OO design 119437
multicomputer networks with partitioned dimens.-order routers 95993
multimedia satellite systs., on-board switching archits. 109014
nanotechnology trends, self-assembly/defect tolerance 92257
network reliab., challenges of innovation, competition, and complexity 96002
New Millennium Deep Space One spacecraft, Remote Agent autonomous control syst. 76822
nonlin. analog cct., fault isolation, neural network L_1-norm 101746
nonrepairable fault-tolerant systs., reliab. bound, failure-dist. based method 89925
open-source router SEU effect anal. 85122
opt. switch, survivability perform. eval. 75044
reconfigurable MCM syst., enhanced quality, redundant utilisation 102879
refining indust. AFD operation reliab. improvement 134690
reliab./safety assess. of fault tolerant designs 124422
reversible AC motor drive syst. 134219
rot. machine failure diagnosis, multisens. data fusion, fuzzy ANN 123274
scaleable solar power bus archits., fault-tolerant, max. power tracking 88655
sens. agents, adaptive reconfiguration, distributed contract networks 131990
single-source fault-tolerant multi-module power supply systs. 112623
smart sens. closed-loop meas. channel, noise detect. algms. 109825
solid-state mass memory, fault tolerant, dyn. routing syst. 102172
spatial power amp. array, fault tolerance anal. and meas. 102628
stereo video imaging, real-time, dedicated fibre-optic network implement. 109115
symmetric grid networks, single link/double link/nodal failures tolerance 85314
telecomm. network mgt., mobile agent based approach 96042
three-phase IM drive syst., fault tolerance improvement 78215
ultrahigh reliab. establishment by fault injection expts. 113797
VAV air-conditioning syst. fault-tolerant supervisory control 100334
Verbmobil MT syst., fault tolerance through redundancy *(German)* 73000
visual interfaces to computers course 118452
VP layout in ATM networks 85084
WDM burst-switched opt. networks, fault mgt. 96747
WDM opt. networks, efficient algms. for dependable connections routing 131487
X-Bone, dyn. Internet overlay deployment and mgt. syst. 85189

lt tolerant computing
see also software fault tolerance; software reliability
8051-like microcontroller, transient fault tolerance, VHDL description 125544
act. fault tolerant networks, on-line network simul. 130577
adaptive fault-tolerant routing in star networks 108243
asynchronous embryonics 102052
ATM switch, redundant path anal. *(Chinese)* 119837
ATM switches, grid-based switch fabrics 119630
byzantine agreement, new approach 108148
C4ISR distrib. inform. fusion syst., multilayer de Bruijn network *(Chinese)* 122751
computer networks and routing models *(Slovenian)* 74300
CORBA lightweight components, design and implement. requirements 130407
cored-based tree with forwarding regions, protocol for reliable multicasting in mobile ad hoc networks 119366
cost minimization of location mgt. in mobile environ. 119861
dependable proc. perform., pre-silicon perform. validation 102236
differentiated reliable connections for real time commun. in multihop networks 85394
digital video servers, segmented inform. dispersal 109379
distributed fault-tolerant syst. for UMS *(Chinese)* 111338
distributed syst. services, survivability, redundancy 108312
DWDM for Parallel Sysplex and metropolitan/storage area networks 96817
dyn. voice-over-IP firewall with IP telephony appls. 85317
error control theory based on moduli with common factors 72777
evolvable hardware solns. for extreme temp. electronics 103717
extended fault-tolerant link state routing protocol on Internet 95935
fast unitary transform algms., concurrent error detect. 101140
fault-tolerant large-scale VOD servers 86341
FIR digital filters within embedded fault tolerant hardware platform, evol. design and adaptation 102395
flight control syst. reconfig., actuator failure, fault tolerance 122520
global telecomm. systs., complex fault ident. and mgt. 74284
HARNESS and fault tolerant MPI 119718
heterog. high-perform. workstation cluster, large task graphs scheduling 130750
hierarchical automation systs. partitioning 99288
hybrid checkpoint protocol for mobile-to-mobile commun. 107805
hypercube connected rings, scalable fault-tolerant topol. for opt. networks 96816
hypercube multicomputers, cube alg. based fault-tolerant multicast routing algm. 119383
integrated secure & fault-tolerant voting in distributed syst. 130578
intrusion detect. systs., attack tolerant enhancement 108200
leader-based consensus 107891
lin. time algm. for computing ST reliab. of class of directed networks *(Chinese)* 107979
load shedding, LAN-based control 99204
location-aware lifecycle environ. for ubiquitous computing 108144
matrix-matrix multiplication 101049
microsatellite reconfigurable semi-virtual computer archit. 133244
middleware support for voting and data fusion 107407
MIN based fault-tolerant ATM switching archits. 84818
mobile computing recovery scheme based on checkpointing 96189
mobile computing systs., checkpointing scheme 85310
mobile nodes in mobile IP based systs., low cost fault tolerance 74248
multi-ref. motion compensated prediction for error resilience 84428
multicast group commun. protocol, engine, and bridge for CORBA 85335
multimedia network systs., consistent global checkpoints 96280
MultiProtocol Label Switching networks, scheme for fast restoration 85246
µP design, fault tolerant approach 102233

fault tolerant computing continued
name mgt. archit. based on obj. rels. in large-scale distributed systs. *(Japanese)* 74365
network commun. services, configurability and real time support 130658
network mgt. model for high availability *(Chinese)* 108245
on-board spacecraft electronics, reconfigurable systs., periodical test, redundancy techs. 133230
online testing, diagnosis, and fault tolerance for FPGAs in adaptive computing systs. 102047
optimal fault-tolerant routing algm. for double-loop networks 85288
Oracle Video Server admin. tool *(Polish)* 131760
parallel bus control method for dependability *(Japanese)* 119597
phase sync. on asynchronous uniform rings with odd size 85045
power plant computer control systs. dependability 88346
priority inversion avoidance on proc. of requests by act. replicated servers 108310
Raincore API for clusters of networking elements 119716
random geometric networks, random faults 74194
recovery in fault-tolerant distributed microcontrollers 102235
redundant nodes and edges, fault tolerant networks with small degree 108197
REESE method for soft error detect. in µP 106147
reliable proc. design 125523
rollback-dependency trackability, min. charactn. and protocol 73939
scalable fault-tolerant aggregation in large proc. groups 108314
self-testing of universal and fault-tolerant sets of quantum gates 68722
server-side TCP wrapping for masking connection failures 119344
SNMP objs. semi-act. replication in agent groups for fault mgt. 130562
SoC, early error detect. for fault tol. and at-speed debugging 101919
spacecraft avionics, networking intell. I/O components 133243
speech recogn. *(German)* 73077
SRAM-based FPGAs, fault tolerant archit. and routing procedure *(Chinese)* 114697
Stonehenge, fault-tolerant real-time network-attached storage device 130717
telephony speech user interfaces, dialogue design, confirmation and error recovery strategies 96058
timing fault tolerance, dyn. replica selection algm. 108311
USENIX conf. on Internet technols. and systs., San Francisco, CA, USA (March 2001) 113215
vertex-disjoint spanning trees of star network for fault-tolerance and security 107880
Virtex FPGA, evol. strategies and intrinsic fault tolerance 102048
WDM opt. networks, restoration in IP 130726
Web services, zero-loss, constr. 119744

fault trees
anal., NOT logic appl. 100678
automotive electronic component safety/reliab. requirements defn. 134574
basic events ordering, rough set approach 67500
BDD variable ordering approaches comparison 100679
CloudSat project, systematic risk mgt. approach, syst.-level fault tree 122478
component/gate importance assess. algms. 78714
drive trains conceptual design, reliab. anal. implement. 100668
drive-by-wire systs., mechatronic sens. and actuators, safety integrity methods 124051
elec. power supply, syst. control, protection, meas., multi-agent based syst. 99393
elec. utility protection/local control systs. design, risk anal. approach 77512
indust. electrostatic procs., fuzzy sets theory 83119
NPP unplanned reactor trips, DC supply syst. failure 77695
power syst. pilot protection schemes, optimal routine test intervals 77463
power transformer fault diagnosis method, oil dissolved gas anal. *(Chinese)* 77912
Profust fault tree, qty. anal. *(Chinese)* 67668
robot manipulator syst., fault-tree anal., interval methods 89919

faults, electrical *see electrical faults*

fax *see facsimile*

FD-TD analysis *see finite difference time-domain analysis*

FDDI
asynchronous real-time distributed systs., adaptive commun., heuristic algms. 74283
discrete event simul. for FDDI *(Chinese)* 131480
high-perform. mixed-technol. LAN for education and research 108345
KLOE, DAQ syst. archit., mega-vol. data handling 87238
QLA2200 adapter for Fibre Channel, cct. principle *(Chinese)* 131438

FDM *see frequency division multiplexing*

FDM/TDM translation *see transmultiplexing*

FDMA *see frequency division multiple access*

FDTD analysis *see finite difference time-domain analysis*

FEA *see finite element analysis*

feature detection *see feature extraction*

feature extraction
1D HRR target features, stat. anal. 86137
2D directional filters, new struct. for opt. flow estim. 94674
2D gray-scale image fusion by multiscale morph. 107216
2D image anal. by Tchebichef moments 106692
2D model single view, fast face ident. under varying pose 118740
2D occluded obj. recogn. by wavelet transform 107212
2D pattern matching based on generalized FT 94750
2D pseudo-Wigner distrib. for local spectra features extraction, texture anal. 106447
2D shape class. based on moment invariants 118704
2D shapes, accurate detect. 107122
2D wavelet packet based feature selection method for image recogn. 95570
3D automated segmentation and structural anal. of vascular trees using deformable models 121884
3D defect charactn., multisens. fusion, wavelet basis fn. neural net 101600
3D endoscopic images, ref.-based fast stereo matching syst. 76403
3D face synthesis based on orthogonal photos/speech-driven facial animation 95545
3D head models generation from multiple images using ellipsoid approx. for rear part 84316
3D head pose recovery for interactive VR avatars 107258
3D map feature extraction from radar and vis. rem. sensed image fusion 88091
3D med. images, global 3D rigid registration 98459
3D motion multiresolution/luminance anal. based rigid obj. segmentation method 84325
3D obj. recogn. using appearance based neural image proc. algm. 95548
3D obj. recogn. using range images, morph. feature extraction and geometric hashing 107285

feature extraction continued
3D obj. tracking using shape-encoded particle propag. 106623
3D range image, gradient based polyhedral segmentation 94696
3D real range data, principle curvatures/Darboux frame estim. 118726
3D reconstruction of aorta from tomographic image seq., anal. and optimisation 122135
3D surface reconstruction from apparent contours 129470
3D texture anal., invariant feature extraction, autocorrelation fn. 94477
3D thin-plate obj. recogn. via orthogonal AR model 129879
3D vector autoregressive coeffs. 73490
∞OH neuron model as principal component analyzer 129457
abrupt change detect., multiplicative noise, power-law time-scale contrast 129480
accurate obj. reconstruction from partial shapes for virtual worlds 84104
acoustic sigs., quick search algm. using histogram features 95719
act. digit classifiers, separability optim. approach 129533
act. vision, robust control and tracking 84117
adaptive clutter reduction and buried minelike target enhancement 77089
adaptive contour sampling/coding using skeleton/curvature 95218
adaptive filtering for image denoising 118335
adaptive image interpolation using, multilayer neural network 118294
adaptive image proc. using rank-order filters with spatial elements connectivity 106715
adaptive intrusion detect., data mining approach 73301
adaptive minor component extraction with modular struct. 107383
adjacent surface intersection for feature vol. constr. 84163
aerial image seqs., change detect. 94966
affine-invariant edge completion with affine geodesics 118673
age estim. from dyn. features of gait *(Japanese)* 95482
airborne SAR, moving target detect. and imaging 120402
AM-FM image segmentation approach 94634
analog cct. fault diagnosis, single-output/1-of-k neural network archits. comparison 101745
angiographic image seqs., simulated, layer decomp., accuracy assess. 132803
animal fibers, fuzzy pattern recogn. and class. 118487
ANN embedded automated inspection quality mgt. syst. for mfg. industries 113739
antipersonnel landmine detect., GPR, wavelet shape feature extraction 77074
appearance-based recogn. using perceptual components 107260
Arabic handwritten text-line extraction 129669
Arabic vowel/consonant segmentation using wavelet transform 73068
arteriovenous malformation extraction with factor anal. 98538
articulated HBM, hierarchical 3D pose estim. 84333
articulated shape, recogn. and visual model learning, accumulative Hopfield matching 107261
atherosclerotic blood vessel tracking/lumen segmentation, MRI 98411
auto speech recogn. syst., combined CEP vector/wavelet transform based method 73053
automated extraction of accurate 3D models from close-range photogrammetric networks 94902
automated ovarian follicle segmentation using region growing 98342
automatic class. of cells using morph. shape in peripheral blood images 98119
automatic defects class. using pulse-echo tech., pattern recogn. 79488
automatic diffr. pattern recogn., neural network based 129917
automatic discriminant feature extraction from stochastic proc. samples 129903
automatic document anal., multi-oriented, multi-scaled pattern recogn. *(French)* 118760
automatic face cloning/animation using real-time facial feature tracking/speech acquisition 73199
automatic image thresholding using hit-or-miss morph. operator 106527
automatic meas. of intens. of motion activity of video segments 94910
automatic metaphase finding, texture coarseness estim. 129898
automatic model-based semantic obj. extraction algm. 129690
automatic modulation class, stat. moments/fuzzy classifier 72729
automatic moving obj. extraction for content-based video indexing 118775
automatic robust speech recogn., multiple timescale feature combination *(English)* 73099
automatic skin-color distrib. extraction for face detect./tracking 73458
automatic sleep stage scoring, hybrid ANN & expert syst. 76261
automatic speech recognizers, error sources investig. *(English)* 73082
automatic speechreading syst., lip feature extraction 94798
automatic target detect. algms. for logically combining decision spaces 129501
automatic target detectors, relative perform. 75147
automatic tumour extraction from 2D CT images by neural computation 122126
AUV obstacle avoidance & path planning, multibeam forward looking sonar 78242
battlefield biomedical imaging, vascular struct. anal. 76338
Bayes networks appl. to semantic understanding of consumer photographs 94827
bin-picking robot syst. using 3D obj. recogn. *(Japanese)* 107249
biological image/interf. colors thickness extraction 73517
biomedical images, pattern recogn. techs. 132538
BIRD satellite on-board thematic data proc., neural chip class. 99044
blind target detect. from LADAR data 122762
block motion estim. using efficient search strategy 94783
blood cell image anal. for abnormalities 132509
boundary automated extraction, gradient fuzzy gray-scale transform. 73557
boundary chain code for defect of CCL 118422
brain midsagittal plane extraction from coarse pathological 3D images 87307
breast images, dense, microcalcification clustering, computer-aided detect. syst., contrast resoln. effects 98518
breast tumor images, feature extraction and class., artificial organisms 76201
broadcast audio sigs., real-time occurrence monitoring 109356
broken handwritten digits anal./reconstruction 94692
bronchial abnormalities, lung CT, automated detect., ERS transform 132780
building struct. recovery from high resoln. aerial imagery 73241
buried obj. detect. and ident. by radio sig. recogn. 75226
CAMEL, Concept Annotated iMagE Libraries 94767
canonical correl. anal. for appearance param. estim. 118292
capacitor compensated lines, fault location, hybrid fuzzy neural network 99430
car image recogn. using fuzzy inference method 129925
cardiac arrhythmia class. using neural networks 76274
cardiac MRI, left ventricular motion/shape anal. syst. *(Chinese)* 98401
cartridge ident. syst. for firearm authentication 73168
cell images, anal./classif., directional fractal dimens. features 87551
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform detect. using compensatory fuzzy neural nets 110801
character and video caption extraction method *(Korean)* 95581
chart anal. and recogn. in document images 129605
chem. engng., fault diagnosis of multivariate systs. 107411
chest radiographs/mammograms, computer-aided diagnosis systs. 132819
feature extraction continued
chest radiography, tuberculosis screening, computer-aided diagnosis 87757
chest X-ray helical CT images, computer-aided diagnosis syst. 98532
Chinese document categorization without dictionary support and segmentat proc. *(Chinese)* 106744
Chinese OCR using Gabor feature extraction 84248
Chinese road maps, automating data extraction/ident. 73144
chromosome feature extraction via topographic anal. *(Chinese)* 110498
chromosome images multi-feature anal. and class. 87550
chromosomes, feature extraction from 3-D confocal microscope images 132
circle size detect. by pyramidal transform data fusion 84552
cluster-based neural network, pruning method 75146
clutter-rejection tech. for FLIR imagery using dyn. ROI extraction 118685
CMOS imager with focal-plane computation, feature detect. 97365
CMOS visual sens., focal-plane computation, low-complexity algms. 73468
coffee QC using electronic nose, PCA & MLP 109828
COGENT, cognitive agent for Spacecraft telemetry monitoring 76823
color and shape based image representation and retrieval *(Chinese)* 129855
color edge detect., automatic isotropic tech. 118749
color image class. based on color and texture anal. 94964
color images, invariant face detect., orthogonal Fourier-Mellin moments SVM appl. 95445
color images, morph. operations 73160
color images, neural network-based text location 118751
color images, shading correction/segmentation 129583
color textures, learning and generating, recurrent multiple class random ne networks 118296
colour feature selection using decision trees, outdoor scenes obj. recogn. ap 95549
colour image skeletonisation, morph. tech. 129481
colour texture images class. 94591
colour-based facial image retrieval 118738
comet assay image anal., DNA strand break detect. 132531
commun. sig., modulation ident., fuzzy integral *(Chinese)* 106011
company logos class., adaptive graphical pattern recogn. 107222
complex circ. charts, inform. extraction, tachograph disks 129939
complex image/color matching/coding, spatio-chromatic filtering 95451
compressed video, motion activity region-based descriptor 95505
connected components grouping, algm. perform. 118465
contact lens trauma assess., corneal images anal. 87552
content based retrieval, area morph. segmentation 94940
content-based image retrieval, region-of-interest and spatial layout 95585
content-based image retrieval using fuzzy visual representation 118735
content-based image retrieval using sketch based queries 118737
content-based video coding, automatic obj. segmentation 118535
content-based video representation and indexing 73316
content-based video retrieval by integrat. spatio-temporal/stochastic recogn. events 95015
continuous human activity segmentation/recogn. 95600
continuous-time CNN, act. contour and skeleton models 107192
continuous-valued images, continuous dist. transform. 73505
contour coding, modified binary tree and perform. anal. 106902
contour data coding using DCT transform 107045
contour recogn. in images by feature extraction using neural network 1298
contour sects. synthesis distinguishing contours from different classes 9499
contour-based obj. recogn. using wavelet-transform 129830
conversational telephone speech transcribing, automatic algms. perform. 118
corner angle estim., code chain of edge, algm. *(Chinese)* 73176
cortex, opt. imaging, neuronal activity-driven sigs. extraction *(Japane* 132629
cortical sulci, automatic landmarking 87580
cortical sulci detect. MRI 3D curves tracking 98461
covariance matrices for image features 106622
crater detect. for autonomous landing on asteroids 118418
CT brain images, stroke lesion anal., rule-based approach 132838
CT-scan images, bone texture charactn. 98566
cursive handwriting recogn. via HMM based two-pass approach 73309
cursive handwriting segmentation method, character shape extraction ap 94691
curvature computation on free-form 3-D meshes at multiple scales 129807
curvature detect. mechanism 94475
curvature-based range image class. for obj. recogn. 95419
curved text path detect. based on fuzzy curve-tracing algorithm 129668
data-driven nonlin. diffusion for obj. segmentation 84324
database of digitized x-rays, feature indexing 94912
defect detect., SQUID magnetometer, eddy current NDE syst. 70949
deformable template model based on fuzzy alignment algm. 84319
detecting commercial breaks in real TV programs based on audiovisual info 94467
diagnostic ES perform. improvement, waveform features 100659
diffr.-limited images, prior scene inform. modeling/extrapolation for set theor restoration/super-resoln. 94655
digital aerial imagery, automated spatiotemporal change detect. 73432
digital images, pattern extraction/synthesis using hierarchical wavelet framew 94660
digital mammograms, multiresolution detect. of spiculated lesions 76530
digital mammography images, authenticity/integrity 110914
digital video frame, text detect., SVM 84193
digital video seqs., long transit. anal. 94769
digital watermark embedding with local distortion attacks tolerance, hierarchi method *(Japanese)* 107035
digital watermarking, inform. retrieval 106922
discrete curvature, chord-to-point dist. accumulation and planar curvature 95
discrim. environ. feature extract. for robust speech recogn. 94413
distortion-invariant target recogn. syst. simul., learning VQ neural netw 107234
distributional clustering for content-based retrieval of images/video 84291
document image matching based on component blocks 94679
document images, font clustering and class. 118338
driver assistant syst., lateral and long. dists. detect. 73315
DSP, configurable, bit-width optim., multi-interval anal. 102208
dubious image blocking using colour features 118390
dyn. brain PET using ICA, noninvasive extraction of input fn. from carotid art 122162
dyn. complex scene anal. with fractal embedding method *(French)* 106440
dyn. face recogn. across multiple views 129915
dyn. tracking/recogn. of curves, road detect. appl. 84618
Earth obs., onboard image selection/compression 111377
ECG abnormality discrim., feature extraction scheme appl. 132581
ECG beat class. by hybrid neural network 110639

ure extraction continued
ECG feature extraction using optimal mother wavelet 121974
ECG QRS wave recogn. using fuzzy neural networks 121954
echocardiographic 3D image anal., automatic 87501
eddy current testing, automated quantitat. defect charactn., ANN use 101596
edge based stereo matching, disparity gradient based search space reduction 129899
edge-based method for text detect. from complex document images 129670
EEG adaptive freq. decomp. with subsequent ES anal. 132560
EEG/MEG and MRI data sets, automatic alignment 84199
elastograms, simulated, class. based on texture features 110825
electronic head concept, virtual quality instrum. 97145
electronic stethoscope with diagnosis capability 87299
electrophoretic gels, image digitalization, automated anal. 110832
EMI sig. proc./source ident., wavelet packet-based tech. 72374
empirical eval. of calib. chart detector 118301
endocardial electrogram class., adapted wavelet packets/neural networks 87382
engine misfire detect., crankshaft ang. vel. meas., fuzzy pattern recogn. 89408
engng. surfaces morph. charactn., ISO 12085 MOTIF method 113754
epiphyseal/metaphyseal ROI extraction, computer-assisted bone age assess. 110912
epipolar geom. estim., N-dimens. tensor voting appl. 106498
Euclidian dist. transform values optim. by no. theory 118656
evolving network archits. with custom computers for multi-spectral feature ident. 107193
eye detect., fuzzy template matching, feature-param.-based judgement 95463
eye feature extraction using 3D eye template 84246
eye location in facial images, hybrid neural method 129922
eyeglass face anal., symmetric obj. extraction using act. contour model 95499
face, recogn./charact. feature extraction 73512
face detect. algms. using Markov face models 107188
face detect. by facets, combined bottom-up/top-down search using cpd. templates 94639
face detect. for multimedia appls. 94641
face detect. from complex scenes in color images 118705
face detect. model based on dist. measure of regional feature 73463
face detect./facial feature extraction, efficient algm. 107220
face image, automatic extraction of eye and mouth fields using eigenfeatures and MLP 129883
face model calib., 3-D facial feature points automatic extraction 95497
face recogn., generalized spectroface 84640
face recogn., modified Hausdorff dist. 84638
face recogn., wavelet domain associative memory 84639
face recogn. and class., self-organising map, RBF networks 107257
face recogn. security entrance 73485
face recogn. syst. with PCA and moment invariant method 84635
face recogn. using DCT 129856
face recogn. using feature posn. extraction and feature geom. comparison 95425
face recogn. with SVM, global vs. component-based approach 107189
face segmentation and feature tracking for videophone appl. 84642
face-color modeling and segmentation, mixture model 118753
face/facial features detect. automation 129924
faces extraction from natural background for pers. ident. 118779
facial expression anal. by integrat. feature-point posns./image gray levels 95437
facial expression recogn. based on 2D struct. of emotion 73456
facial expression transform. based on sketch image/multiscale edges 73419
facial expressions recogn. from video frames 118777
facial feature detect., color segmentation/KL transform *(Chinese)* 95431
facial feature extraction in frontal view images 107207
facial feature extraction via energy fn. 84580
facial feature points, robust detect. under nonlin. illum. 107231
facial features detect. on images with multiple faces 73550
facial features tracking in video seqs. using deformable-model-based approach 73220
facial images, most informative regions ident. 95403
facial model estim. algms. using stereo/mono image seq. 73484
facial modeling from uncalibrated image 129684
facial video compression, local features reconstruction 95179
FANN-based subsampling of color video seqs. 118222
fast min. path act. contour model 73498
fast range image segmentation, edge detect. strategy 84228
fast-learning noniterative neural network in pattern recogn. 118683
fibre optic sens., interf. pattern recogn., CGH-ANN syst. 86584
field extraction method from existing forms transm. by facsimile 129603
fingerprint enhancement,directional filter bank based 94949
fingerprint ident., automatic, curvature-based matching approach 84620
fingerprint images, fractal method for sing. detect. 73442
fingerprint recogn. using wavelet features 84344
fingerprint verification syst. using direct minutiae extraction 84569
fish behavior visualization using successive 3D shape modeling 73210
FLIR imagery, region based PCA modular clutter rejection 95510
focus based feature extraction for pallets recogn. 129840
foetal/maternal heart rate recorder for 24 hours 98255
force field transform for ear/face recogn. 84608
forensic sci., striation pattern anal. on firearm bullets 118652
form document proc., Chinese handwritten field data extraction, gravit.-based algm. 95435
fractal pattern coding, nondeterministic kinetics based feature clustering 129732
frame-based tracing of multiple objs. 95005
freq.-time mixed domain optimal filter for moving obj. extraction 106674
Fresnel transform of images for watermarking appl. 95151
fundus image features extraction, diabetic retinopathy appl. 98381
fuzzy clustering based on cooccurrence matrix, data retrieval appl. 118439
fuzzy robot navig. by human visual perception mimicking, terrain traversability 129530
fuzzy-based automatic eye extraction in human face images 95535
Gabor attributes tracking for face verification 84613
Gabor feature classifier for face recogn. 107179
Gabor-atom network radar target recogn., high-resoln. range profiles *(Chinese)* 131630
general face image recogn. syst. based on dual attribute graph *(Chinese)* 107205
geometric morph. of granular materials 73228
geophys. mapping, lin. features, directional filters 122586
georadar subsurface obj. detect. by neural nets 96967
georeferenced road extraction 73433
global motion estim. for global motion compensation coding 84482
globular material, feature extraction and edge detect., hybrid neural network appl. *(Chinese)* 129869
gradient vector flow fast geodesic act. contours 107137
gradient-based approach, segmentation of human face 118680

feature extraction continued
gravity-center template based human face feature detect. 73552
gray level edge thinning method 84568
gray-level document images, stroke-model-based character extraction 94778
gray-level fingerprint image, direct minutiae extraction 95506
gray-scale image based character recogn. algm. 95571
hand shape extraction and understanding by multiple cues fusion technol. 73540
hand-drawn sym. recogn. by primitive separation and fuzzy inference 84113
handwriting images, structural feature extraction, skeletal graphs appl. 129927
handwriting indiv. validation 129929
handwriting recogn. via feature extraction and fuzzy set theory 129679
handwriting stroke extraction, XYTC transform 129926
handwritten Chinese character recogn. via stroke-based directional feature extraction 129677
handwritten digit class., Hamming neural network feature extractor *(Chinese)* 91130
handwritten isolated word recogn. based on Mutual Information 129681
handwritten signatures, real-time verification using hybrid optoelectronic method 129587
handwritten word recogn., lexicon-driven, distributed computing 129680
harmonics extraction based on HOS spectrum decomp. 106613
head boundary location with 2D CW transform 84578
head gesture recogn. algm. 73536
head pose estim. with Gabor wavelet networks 129611
heart instantaneous freq., heart rate variability extraction approach 98224
heart region extraction in electron beam tomography images *(Korean)* 95582
helicopter sound detect., neural networks, parametric spectral representation techs. 88249
helminth eggs, microscopic fecal specimens, digital image proc./neural net appl. 76401
hemiplegic patients' adaptive FES switching syst. 122357
Henry fingerprint classifier with HMM/decision tree approach 129875
HF/high speed package interconnects, meta-evol. prog. based robust model param. extraction 126467
hierarchical approach to pattern matching for indust. appls. 94580
hierarchical framework for facial expression recogn. 73549
hierarchical model based human motion tracking 95543
hierarchical motion hist. images for recognizing human motion 95601
hierarchical pulse-coupled neural network model, temporal coding, emergent feature binding mechanism 102478
high resoln. 3D snapshot ISAR imaging and feature extraction 96924
high-bandwidth sens. syst., advanced proc. hardware & algms. 95414
high-speed high DOF spatial normalization for human brain imaging 76206
high-speed line detect. method using Hough transform in local area 118434
higher-order spectra invariants for shape recogn. 118666
HMM based speech audio/visual features fusion 94390
HMM-based visual speech recogn., normalized training 94435
Hough transform filter array for opt. feature extraction *(Korean)* 73441
Hough transform/automatic gradient threshold for line extraction 106445
Hough transform/separability filter for detect. of eyes from human faces 84614
HRR airborne phased-array radars, clutter suppression/moving target detect./feature extraction 75160
HRR moving signatures ident. with ATR belief data assoc. filter 86126
HRR phys.-based moving target model, param. estim. algms. 75156
huge feature sets, feature selection 106618
human body posture vision-based estim. by neural nets 118757
human dyn. mapping, stance posture control, feature extraction *(Japanese)* 75879
human face, paralinguistic features extraction method *(English)* 84281
human face detect., prediction-and-verification 94965
human face extraction using GA 129895
human face feature extraction via adaptive principal component extraction algm. 84577
human face orient. estim. using symm. and feature points anal. 73459
human face recogn., facial color/motion inform. extraction *(Japanese)* 95488
human faces recogn. based on fast computation of circ. harmonic components 73546
human head movement from image seq. 84176
human ident. using ECG anal., data fusion, SIMCA class. 87413
human motion recogn., view-based aspect model based on motion change *(Japanese)* 129860
human motion tracking/anal., unified framework 95013
HVDC systs. monitoring using wavelet multi-resoln. anal. 133592
hybrid on-line vibr. diagnosis microsystem, neural class. 121046
hybrid perceptual image proc. using interpolating wavelets 98162
hyperspectral data class., feature extraction 99057
hyperspectral imagery, matrix factorization algms. for band selection 76953
hyperspectral images, charactn. and delineation of plumes, clouds, and fires 75622
hyperspectral images, projection pursuit target detect. 98956
hyperspectral rem. sens., feature selection algm. 99056
hyperspectral target detect., subpixel, lin. mixing 98957
IC image proc., neocognitron neural net 102836
ICA, sparse priors on mixing matrix 118243
ICA features of colour and stereo images 118244
ICA-based speech features for speech coding and noise reduction 118088
ice images proc. interface for automatic features extraction 106783
ident. of large aircraft, shape based 94772
IM, rotor fault detect., pattern recogn. 134032
image anal. and pattern recogn., coord. logic filters 129575
image anal. using select-only morph. operators 94448
image and contours restoration 118353
image and video coding, shape-adaptive transforms, overview 107000
image approx. and modelling, least stat. depend. bases 94499
image authentication/integrity verification via content-based watermarks/public key cryptosystem 95372
image class., neural nets comparison 73466
image class. by local inform., independent component anal. 118772
image coding, VQ, embedded optim. constraints 118507
image contrast enhancement by wavelet based homomorphic filtering *(Chinese)* 84251
image databases, fast multiresolution feature matching algm. for exhaustive search 73149
image databases, scale/fractal transforms 95515
image detect. and feature anal. using DCT 84633
image edge feature extraction algm. *(Chinese)* 95470
image feature-preserving flows, stochastic DE view 94560
image fusion by steerable pyramid 84589
image ident. using color inform. 107295
image indexing techs., DCT domain 95045

feature extraction continued
image indexing/machine vision, color representation 95533
image matching, outlier rejection by rot., ROR algm. 95474
image matching, perceptually important colors extraction/similarity meas. 84453
image proc., line fitting using Hough-like procedure 73304
image proc., Markov obj. procs. 73240
image proc., math. morph. *(Chinese)* 118707
image proc., neural-net/ActiveX integrated environ. 106704
image refinement, wavelet-based tech. 118484
image region extraction using multiple act. contour models 94842
image registration and obj. recogn., affine invariant matching 84637
image representation using histogram-based classifier, coding appl. 106876
image restoration, edge-preserving neural network model 95392
image restoration by objective fn. minimization with non-smooth data-fidelity terms 118249
image retrieval, energy spreading transform approach 107256
image retrieval, hierarchical charactn. scheme 95540
image retrieval, multiresolution-histogram indexing/relevance feedback learning 95194
image retrieval in distributed multimedia syst. 106846
image retrieval on uncompressed/compressed domains 95195
image retrieval through shape matching of partially occluded objs. using hierarchical content description 84617
image retrieval using color plane moment 118783
image segmentation, color-edge extraction/seeded region growing 118723
image segmentation and obj. recogn. by Bayesian grouping 95550
image segmentation using probabilistic PCA and ICA subspace mixture models 129615
image seq. compression coding 95342
image seq. segmentation, multiple feature clustering 118191
image seqs., integrated segmentation and depth ordering of motion layers 129631
image seqs., motion anal. and class. with directional Gaussian derivatives 94748
image seqs., nonlin. correl. for multiple objs. motion estim. 129412
image texture description using complex wavelet transform 94667
image texture feature extraction using 2D GA 73170
image-feature based second generation wavelet based watermarking scheme *(Chinese)* 107275
image-proc. photorefr. ccts., two-beam coupling modules 94738
images, nonlin. enhancement in space scale domain 118234
images combination with diverse focuses using spatial freq. 118759
images nonlin. combined spatial-freq. domain filtering 118657
impact damaged delaminated composite, shearography, neural fuzzy anal. 125156
indiv. ident. using lip shape as password *(Japanese)* 106819
indust. image proc., real-time behaviour, multivariate approach 113745
indust. image texture anal., multivariate anal. using PCA 118678
indust. proc. monitoring & SPC, multivariate image anal. 113809
integrated feature anal. and fuzzy rule-based syst. ident. in neuro-fuzzy paradigm 84255
intell. character recogn., stat. approach 95565
interactive image segmentation using multiple color spaces *(Chinese)* 107206
intra-pulse modulated sigs., feature extraction using time-freq. anal. 109233
invariant obj. detect. by evidence accumulation/Gabor features 73518
IR images, computing textural features based on co-occurrence matrix 129584
IR images, human false target detect. decision behavior 118727
IR recogn. of objs., high-capacity hardware 111625
IR/MMW automatic two-stage image registration algm. for concealed weapons detect. 118398
iris recogn. through feature vector/classifier improvement 84588
IS-136 commun. syst., bitstream-based front-end for wireless speech recogn. 84048
ISAR imaging of moving targets, robust autofocus algm. 120424
ITS, video based traffic param. extraction, integrative method, background subtraction 73483
Japanese news commentary cognition 118158
Japanese phoneme, stat. feature extraction, universal constraint *(Japanese)* 84044
JetStream, probabilistic contour extraction with particles 106640
Jijo-2 office robot, speech recogn., dialogue mgt., and stat. learning 129393
Joint Feature Distributions for image correspondence 106609
joint time-freq. anal. based hybrid neurosystem appl. *(Chinese)* 118936
JPEG 2000 next generation image compression syst. features and syntax 95115
JPEG bitstreams, embedded binary data extraction using std. JPEG decoder 95064
Kannada handwritten characters, on-line recogn. using wavelet features/neural classifier 95468
kansei-keyword extraction from japanese film scenario using sensitivity inform. 129662
Kullback-Leibler dist. on wavelet subbands, texture similarity meas. 94938
land mine detect., acoustic-LDV syst., shape discrim. 77003
land mine detect., HMM/morph. neural networks 77083
landmine detect., autom., multiple features, GPR & acoustic data 77064
landmine detect., automated, multispectral imaging, iter. morph. algms. 77065
landmine detect., data fusion & Dempster-Shafer evidential reasoning 77062
landmine detect., forward-looking GPR eval., target recogn. algms. 77078
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
landmine detect./discrim., single-waterjet-induced thermal profile 77015
landmine discrim., sens.-specific data proc. & unsupervised clustering 73471
landuse class., SAR/INSAR data and opt. imagery fusion *(English)* 76964
large screw threads, shape recovery and anal. 84229
laser proc., online quality detect. & beam control, multisens. class. 117564
lin. band detect., Euclidean dist. transform and line segment extraction method 95436
lip contour extraction using deformable model 95502
local environ. mapping, robust bistatic sonar obj. class. 99096
local sig. feature detect. by wavelet transforms 95603
local stereovision matching, ADALINE neural network use 118750
long image seqs., motion segmentation 129619
loop detect. in 2D engng. drawings based on node pretreatment *(Chinese)* 129816
lossless image coding using optimum prediction generated by local image features 106868
lung adenocarcinoma, tissue colour images anal. 87350
lung cancer diagnosis, helical CT image anal. 87766
LV segmentation in cardiac MR images 110874
M-band wavelet transform, adaptive approach to unsupervised texture segmentation 106512
machine tool coolant fault diagnosis by neural net 109436
machine vision image proc. techs., review *(Italian)* 118675

feature extraction continued
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 101
mammogram microcalcifications, unsupervised detect. 87349
mammographic image segmentation, tissue-mixture model, Markov rand fields 98548
mammographic mass charactn., spiculation measures/morph. features 98527
mammographic mass detect., adaptive thresholding, region growing 122154
mammographic masses class., automated method develop. *(Japanese)* 1327
mammographic microcalcifications, optimal filter-based detect. 132814
map-based mobile robot dyn. localization, optimal pose estimator, EKF comp son 97834
mass detect., decision support by featured database visualization/modular ne networks 76503
mean orient. estim. methods, study of introduced bias 118340
mech. drawing, 2D, self-learning algm. of feature recogn. *(Chinese)* 7329
med. diagnostic US, robot-assisted, user interface 98332
med. sig. proc., Software Monitor appl. 87399
med. US images, fuzzy boundary extraction algm. *(Chinese)* 110680
meteorite craters detect., possibilistic shell clustering 98952
meteorological image archives, query-by-shape 122668
micro device prod. automation, flat image recogn. tech. 92575
microcalcification detect. by multi-scale methods and stat. techs. 98496
microcalcification detect. in digital mammograms, perform., effect of charact different image sets 98520
microcalcifications, extraction from digital mammograms using regional wa shed 98490
microscopic images of human breast disease using competitive neural netwo 121904
mine detect., acoustic/seismic laser Doppler vibrometer assess. 76998
mixed sig. ccts., online fault diagnosis, simplified fuzzy ARTMAP appl. 80
mobile robot localization, image fingerprint seqs. derivation and matching 97
mobile robot sonar, multi-echo feature detect./ident. 97008
morph. filter with region expansion, minute convex regions extraction 1105
motion estim., affine invariant feature set appl. 94931
motion estim. with incomplete inform. using omni-directional vision 94671
motion pictures, dramatic story sects. and tempo determ. 95504
motion recogn. of lower limb without marks, research 107237
motion-based video segmentation using fuzzy clustering/mixture model 843
motor unit action pots., computer simul. studies *(Chinese)* 121915
mountain areas extraction by wavelet transform, ridge lines detect. ap *(English)* 109270
moving image foreground extraction 129580
moving obj. high-speed tracking algm. 129447
moving obj. time-to-contact estim., point tracking *(Chinese)* 118401
moving obj. tracking, inform. extraction 94466
moving pictures, automatic extraction method of facial regions for occlus faces 118780
moving target detect. syst. from IR image using GA *(Japanese)* 129820
moving vehicles detect. from acoustic sig. proc. 73620
MPEG compressed domain, B-spline curve representation of segmented 106530
MPEG compressed video domain, camera motion estim. using feature po 95315
MPEG video quality objective assess., neural net approach 106911
MPEG-2 compressed video, variance extraction 107126
MPEG-4, semiautomatic segmentation using spatio-temporal gradual reg merging 118530
MPEG-4 video, still texture, spatial content indexing 118733
MPEG-7 homog. texture descriptor 85393
MPEG-7 metadata for video transcoding, motion and difficulty hints 95340
MPEG-7 sound-recogn. tools 84041
MPEG-7 std., color/texture descriptors 84387
MPEG-7 visual motion descriptors 84139
MPEG-7 visual std. for content description, overview 84138
MPEG-coded video seqs., real-time visual postprocessor 84413
MPEG-compressed videos, automatic shot change detect. 118461
MSTAR occluded targets recogn. 75153
MTI, super resoln. feature extraction 120413
multi-ping mine hunting data, classifiers comparison & optim. metric 7704
multi-resoln. corner detect. 107121
multi-slit rangefinder develop. *(Japanese)* 84090
multi-view face detect. and pose estim., kernel machine based learning 107
multi-view face pattern nonlin. mapping, Gaussian distrib. 107195
multidimensional images extraction, visualisation, and manipulation 94978
multiframe orient. determ., lin. epipolar algm. 94528
multimodal ICA, feature extraction from multiple inform. sources 94776
multimodal speech recogn., visual features use 84035
multiobject behavior recogn. by selective attention 73529
multiple camera fusion for multi-obj. tracking 95010
multiple classifiers combination by clustering and selection 118425
multiple image descriptions for browsing and retrieval 94762
multiple objs. detect. in partial occlusion, class./tracking approach 118771
multiple regions-of-interest query for accessing image databases 84245
multiresolution-based adaptive image watermarking scheme 129465
multiseeded segmentation using fuzzy connectedness 84532
multisensor aerial images, class-scale space segmentation 94503
multispectral, hyperspectral, and ultraspectral image proc. algms., conf., Orlan FL, USA, April 2000 67365
multispectral imagery, GA combining new and existing image proc. tools 73
multispectral imagery, parallel hybrid evol. algm. 95413
multiview extensive partition operators for semantic video obj. extraction 94
multiview image synthesis, hierarchical genetic disparity estim. algm. 9470
myocardial blood flow, dyn. PET, factor/cluster anal. appl. 132909
nasal papilloma diagnosis, Gd-enhanced MRI, spatiotemporal neural net 98
navy theatre-wide missile defence, sig. discrim. using fuzzy class. algm. 77
NDT of materials, DCT/DWT feature extraction/ANN class. 125146
neonatal seizures, video recordings, motion strength/motor activity sigs. extr tion 132628
neural class. of Lamb wave US weld testing sigs. 79486
neural net-based crack param., wavelet preproc. MFL sig. 101595
neural network face recogn. using stat. feature/skin texture params. 129823
neuro-fuzzy paradigm for mach. condition health monitoring 106429
neurological disorders diagnosis, human gait/posture anal. 98360
news and sport videos, semantic inform. extraction 129569
non-rigid image registration, inter-subj., mixed variable optim. approach 76
non-texture/textured images classification, region segmentation 95587
nonlin. image simplification via levelings/reconstruction filters, PDE appro 94718
nonrigid objs. discrim., motion/segmentation 118752
nontrivial repeating patterns discovery in music data 106736

ture extraction continued
obj. boundaries tracking, stabilized snake constraint 129653
obj. boundary segmentation, fast and accurate act. contours 73317
obj. class., US sens., double knowledge base fuzzy ES 73476
obj. recogn., modular neural network 118671
obj. surface extraction from stereo degree-of-correspondence space considering occlusions 118441
obj. tracking, robust model-based, edge-projected integrat. of image and model cues 129854
obj. tracking by adaptive modeling 94790
obj. tracking by Gabor wavelet transform/golden sect. algm. 95558
obj.-based video abstraction, integrated scheme 129700
obj.-based video segmentation, perform. eval. metrics 118552
occluded scenes, multiple people tracking, multiple cameras appl. 129493
OCR of Roman, Chinese, Arabic, Devnagari and Bangla text lines 129682
off-line script recogn. syst., comparison of character n-grams and dictionaries 129665
olfactory sig. fuzzy logic based recogniser 120962
on-line speaking rate estim. using GMM/NN approach *(English)* 73084
one-step crust and skeleton extraction algm. 73243
OO feature-based model for land class. *(Chinese)* 94920
open source agenda for research linking text and image content features 129433
opt. flow estim. for occlusion using extrapolation 94550
opt.-electronic shape recogn. syst. based on synergetic associative memory 118690
Oriya, printed Indian script, OCR syst. 129683
orthogonal series dens. estim. and kernel eigenvalue problem 101054
orthonormal vector sets, regularization using coupled PDE 118248
outdoor image seqs., tracking/recognizing two-pers. interacts. 95599
page segmentation and text extraction from gray-scale images, microfilm 95575
pairwise face recogn., Bayes classifier 107181
palmprint ident. via texture based dyn. selection scheme 84567
panoramic feature-based video mosaic 94714
Pap smear test automated class. using neural nets 121887
parallel line grouping based on interval graphs 94991
parallel parsing of MPEG video 129733
parameterised moving shape extraction 129623
partitioned iter. fn. syst., digital imaging tool 95136
PCB inspection using SVM 80513
PDP prod. line inspection, morph. skeleton algm. 129458
perceptual ambiguity, neural correlates of consciousness 84563
perceptual textural features, computational measures 107124
periapical lesion anal., stat. textural features/neural nets 122130
periapical lesion anal. using stat. textural features 110949
periodic oscills. buried in white/coloured noise, ident. 76216
pers. ident. syst. using isodensity maps based fast template matching algm. 118778
pers. key generation for secure commun. syst. 94359
pers. objs. ident. in four-scenes comics of Japanese newspapers 94631
phonocardiograms, automatic denoising methods comparison 121991
planar patch extraction with noisy depth data 84222
pneumoconiosis rounded opacities detect. using neural net 132840
point distrib. model shape fitting using Kalman filter 94541
point tracking algm., 3D image reconstruction 129553
pollen grain images, nonlin. features extraction 121864
pos. tensor factorization 106726
pose estim., shape extraction, Hough transform invariance 129847
pose-invariant face recogn. by face synthesis 129914
prog. Hamming neural network feature extractor *(Chinese)* 102449
projection matrices, appls. in computer vision 106560
projection-invariant pattern recogn. with logarithmic harmonic fn./wavelet transform 129805
prostate cancer nuclei, automated detect. 121893
pulmonary fissures extraction from thin-sect. CT images 98539
pulmonary nodules, 3D curvatures, feature extraction algms. *(Japanese)* 98139
pulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 98515
pulmonary nodules class., contrast enhancement patterns 87767
pulmonary nodules detect., helical CT images, template-matching 98513
pulmonary organs, extraction and class. based on thoracic 3D CT images 110962
pure rot.-based self-calib., error anal. 106564
QC cloth prod., real-time defect detect. 120886
QRS wave extraction in ECG based on dyn. prog. matching *(English)* 110673
quantitat. coronary angiography, centre-line extraction algms. eval. 132779
radar image stats. modeling, terrain feature ident. 96900
radar target ident. using 1D scatt. centres 131641
radar target recogn., sig. classif. and bispectra 109259
radiological image contrast enhancement, discrete wavelet transform 76543
range/intens. image fusion, segmentation, robust trimmed method 107217
recurrent visual semantics discovery in consumer photographs 94831
reduced-rank automatic target detect./recogn. 109275
region detect. in image recogn., Active Net model 73450
region extraction based on elastic-plastic deform. model 84177
region extraction from multiple images 106568
region extraction using competition of multiple act. contour models 84175
region-based image retrieval 84290
relevant features selection in fuzzy genetic learning algm. 84257
reliable/fast fingerprint ident. for security appls. 95512
rem. sens. data, radiometric equalization by laser scan data utilization 129825
resistive cct. simul. based edge enhancement for image segmentation 106446
RF ablation treatment planning, blood vessel detect. 111134
road extraction by using combined stat. and structural inform. *(Chinese)* 76961
road network extraction from multi-band rem. sens. images *(Chinese)* 99054
road shape estim. 106539
robot localization, edge-based features from images 95557
robot manipulator visual servoing predictors, expt. study 119062
robot manipulators, motion control, visual servoing, path interpolation by homography decomp. 94732
robust and fast locating of lip motion *(Chinese)* 118706
robust automatic speech recogn. in presence of impulsive noise 84026
robust facial feature tracking 129626
robust head pose estim. by machine learning 94795
robust shape tracking in cluttered background 95542
robust sound localization using multi-source audiovisual inform. fusion 118428
robust-invariant pattern recogn. model, fuzzy ART appl. 84528
rock sole fish recogn., act. contour algm. 95518
rot. invariant texture features using dual-tree complex wavelet transform 106444
rotated textures class. using overcomplete wavelet frames 94598
rotodynamic mach., wavelet transform and neural net for condition monitoring 123276
rotorcraft, unmanned, vision syst. for landing 94996

feature extraction continued
SAR, class. perform. prediction using parametric scatt. feature models 86132
SAR digitally spotlighted subaperture image form. using high-perform. computing 75145
SAR imagery, multi-aspect target detect. using HMMs/2D matching pursuits 75144
SAR imagery, target discrim. 109277
SAR imagery, terrain feature class. 133270
SAR imagery algms., conf., Orlando, FL, USA (April 2000) 67397
SAR images, road detect. using GA with region growing concept 96909
SAR images, wavelet filtering algm. in automated lineament detect. by Hough transform 95583
SAR interferometric images, adaptive complex-amplit. texture classifier, local phase unwrapping 75175
SAR multi-freq. polarimetric imagery, PCA-ICA neural network model for enhancement/feature extraction 96929
SAR polarimetric data and self-organizing map for urban features extraction *(Japanese)* 96982
SAR polarimetric target feature extraction/image form. via semi-parametric method 75137
SAR regularized imaging based on recogn.-oriented features, eval. 75126
SAR spaceborne images, road detect. using GA 75135
SAR target detect., extended fractal features 96918
SAR target recogn., model-based Bayesian feature matching 84525
satellite imagery, panchromatic, small obj. detect. 122622
satellite imagery cloud class./temporal updating by neural net 122730
scale dependency of image derivatives for feature meas. in curvilinear struct. 118446
scale invariant face detect./class. from log-polar image 95483
schizophrenics, multi-channel EEG anal. during working-memory tasks 121972
scribble recognizer, online, eval. 106727
sea mine class., adaptive subspace-based background normaliser 77051
sea mine detect., side-scan sonar, gray-scale morph. filters 77047
sea mine detect. & class. proc. strings fusion for sonar imagery 77050
segmented images class. combining neural networks and wavelet matching 118298
semantic concepts detect. using context/audiovisual features 95017
semantic video obj. extraction using four-band watershed/partition lattice operators 73147
semantics-based retrieval by content 94828
shallow water mine class., CAD/CAC algms., sonar data fusion 77052
shallow water mine detect./class., side-scan sonar, algm. fusion 77046
shallow water mine hunting, synthetic aperture sonar, adaptive focusing 77053
shallow-water mine countermeasure, Web-centric virtual prototyping environ. 77048
shape deform., SVM regression and appl. to med. image segmentation 110509
shape feature extraction using geometric transform 73231
shape recogn. based on wavelet-transform modulus max. 73467
sheet metal parts, algms. for orthographic views with hidden entities/mfg. features inform. 113437
shipbuilding planar panels visual recogn. using line features 129892
shoeprint impressions, detect. and class. 95438
side-scan sonar imagery, robust real-time mine class. 77049
sig. anal./ident., robust, model-based 118792
sig. depicted on image, acquisition/refinement method 118476
sign lang. recogn. and lip motion via parallel multistream model 73555
signature verification online via model-guided segmentation 129678
signatures, offline forgery detect., local correspondence method 107211
simulated wave propag. and traceback in vascular extraction 98414
sleep spindle detect., fuzzy reasoning and autoassociative MLP methods 121924
small IR target detect. approach based on multiscale relative dist. image 73511
soccer image segmentation, unsupervised color texture feature extraction/selection 94708
soft-tissue lesions, automated meas. of struct. in CT and MRI, validation study 110976
somatosensory evoked pots., parametric modelling using DCT 132572
space antenna, structural damage detect., neural network and freq. response fns. techs. 128872
sparse image coding with clustering, face recogn. appl. 95046
Sparse PCA, multi-scale struct. extraction from data 106580
spatial luminance interacts. influence on perceived brightness 94870
speaker ident., feature extractor design 129404
speaker ident. syst. based on wavelet transform 94419
speaker ident. using feature concatenation 118117
speaker-independent phoneme recogn., wavelet transform for dyn. feature extraction 73039
speaker-independent speech recogn. with robust out-of-vocab. rejection 118150
specific sig. extraction with temporal struct. 107418
spectacles detect. for face recogn. using Bayes rules 73542
speech coding, higher order spectrum anal. appl. *(Chinese)* 129377
speech recogn., automatic, robust, emphasising important modulation spectrum *(Japanese)* 94418
speech recogn., complexity reduction using decimation of cepstral time trajectories 118152
speech recogn., integra-normalizer and neuro-fuzzy method 106421
speech recogn., Mel filter-like admissible wavelet packet struct. 84038
speech recogn. systs. based on lin. transforms *(German)* 73093
speech recogn. using integra-normalizer defined metric 129396
spine X-ray images, computer-assisted retrieval of biomedical features 110975
sports video annotation, visual tracking syst. 95546
ST-T episode detect. by isoelectric level global curvature in ECG *(Korean)* 110614
STAP for airborne high range resoln. phased array radar 96945
steam generator tube flaws, eddy current sig., ANN inversion 101598
steel pipe machined defects, mag. flux leakage sig., feature extraction 100635
stereo image seqs., incremental shape reconstruction 94697
stereo matching method using modified GA 107239
stereo omnidirectional syst., moving obj. extraction in all direction 84207
stereoscopic noisy image pair, occluded and common vis. areas detect. 95551
straight patterns, high resoln. positioning, Hough transform multiscale matched filtering 94474
struct. from motion problem, ambiguities reduction using inertial data 84300
struct. from motion using seq. Monte Carlo methods 106651
structural descriptions learning of graphic syms. using deformable template matching 129602
subband-HMM speaker recogn., inform. fusion 106394
subimage extraction by integer-type lifting wavelet transforms 94662
subset selection by Bayesian networks, comparison with genetic and seq. algms. 118449
surface EMG, automatic anal./class., parametric modelling 121950

feature extraction continued
surface roughness waveforms, fuzzy logic cluster anal. 86964
surgical simul., versatile surface model reconstruction, serial planar contours 98602
target detect. in IR image, discrete wavelet frames applying feature wt. *(Chinese)* 77081
target recogn., intell. compression, feature detect./fusion 84551
targets detect., nature texture background *(Chinese)* 95471
tele-education, face location via subregion color histograms 84530
tele-education support syst., movement recogn. of lecturer 84531
teleteaching syst., image preprocessing for content-based image coding 95258
terrain mapping, lin. feature changes, edge-finding 99064
terrain mapping, lin. features extraction 122621
test feature classifiers, high-generalization ability *(English)* 118463
test feature classifiers, perform. and appls. 106433
text anal. using local energy 129885
texture boundary detect. using 2D Gabor elementary fns. 84098
texture class., multiclass test feature classifier 106805
texture image retrieval based on evol. prog. *(Chinese)* 106724
texture image segmentation based on human vision perception *(Chinese)* 118351
texture segmentation, self-supervised, by complementary feature type 118664
texture segmentation based on multi-layer CNN 84147
texture segmentation using fractal signature 94596
texture segmentation using moving av. modeling approach 94637
texture-adaptive act. contour models 98134
texture-based image retrieval, DFT and Zernike moments use 95584
textured image segmentation based on fractal/filtering 107218
time series pattern extraction and proc. for competitive intell. support 118457
time-freq. space charactn. based on stat. criteria 118883
topographic ICA, depend. struct. visualization 118825
touching numeral segmentation, water reservoir based approach 129942
Trace transform and appls. 106497
traffic video surveillance, vehicle extraction and tracking 129475
transabdominal foetal EEG, noninvasive extraction, interf. cancellation algm. 98254
transform domain feature detect. and concealment algm. 106932
transformers aging sig. feature extraction, discrete wavelet transform *(Korean)* 123546
tree groups extraction from high-resoln. digital surface models 99051
turning, surface roughness inspection by computer vision 100663
two-param. Fisher criterion for feature extraction methods 106432
two-stage texture segmentation using complementary features 94832
uncalibrated image pairs, planar homography detect. 129901
unconstrained handwritten text recogn., vocab. size and lang. models 129667
uncorrelated optimal discriminant vectors 106696
underwater environ. reconstruction environ. by robust pre-aligned ICP 88203
underwater robot, concurrent mapping and localisation 109305
underwater target class., sonar bandwidth effects 77042
underwater target class. in changing environ., adaptive feature mapping 77044
underwater target discrim., neural network class. paradigms 77045
underwater target recogn., feature fusion classifier *(Chinese)* 84584
underwater vehicle posn. meas. by image mosaicking 97839
unsupervised texture segmentation using dominant image modulations 106754
urban map, road network extraction using center line *(Japanese)* 106817
urban regions automatic extraction, SPOT satellite imagery 99052
US flaw class. problems, domains & features selection 101599
US images, speckle noise modelling, neural approach 118246
US sig. class., neural net based multidimens. sig. proc. 101591
US surface profile determ. by spatial voting, map building 107228
UXO remediation, sens. fusion, training algms., clutter effect 77010
vascular struct./deform., B-mode ultrasound imaging 87509
vehicle GPS/map matching integrated navig. syst., D-S reasoning *(Chinese)* 86265
vehicle no.-plate recogn. using neural nets 84593
ventricular shape visualization using selective vol. rendering of cardiac data sets 132518
video, model-based temporal obj. verification 73499
video class. based on HMM using text and faces 118732
video coding, block-DCT based, low-complexity post-proc. for artifact reduction 95203
video coding, content-based and perceptual bit-allocation, matching pursuits 73329
video coding, semi-automatic semantic obj. extraction 84463
video image seqs., algms. for deformable lin. objs. shape change recogn. 84328
video images, model-based varying pose face detect. and facial feature registration 129439
video images, people detect. for immersion in virtual space 129905
video movie annotation syst., script-video assoc. 73166
video obj. extraction and shape coding using B-splines 118504
video obj. localization/tracking, semi-automatic seeded region growing algm. 107032
video obj. retrieval, MPEG-4 compressed domain shape features 73377
video objs. generation by multiple-view extensive partition lattice operators 94826
video retrieval, temporal texture modeling *(Korean)* 106742
video seq. illum. effect descriptor 118460
video seqs., synthetic summaries using multiresolution based key frame selection in perceptually uniform color space 94647
video struct. discovery using pseudosemantic trace 94913
video summarization using reinforcement learning in eigenspace 94643
video surveillance camera moving obj. tracking algm. 106839
video temporal segmentation, gradual transits. detect. 107127
video-based online face recogn. using identity surfaces 107194
video-rate pipeline straight line extraction algm. 107125
visual inform., isotropic vs. anisotropic encoding 106853
visual inform. modeling/mgt., logical framework 94770
visual servoing control robot syst. 129449
visual target distinctness prediction, min. error gain 129862
Visual-FSSEM, unsupervised data visualization and interactive feature selection 73455
voice activity detect., chaos theory *(Chinese)* 118156
voiceless plosive class. using wavelet packet-based approaches 129364
vol. images, complex boundary extraction via deformable surface 73509
wavelet domain recogn., survey 107147
wavelet-based preconditioners for dense matrices with non-smooth local features 84261
weldment intell. US flaw class., perform. enhancement 101614
wire rope local flaw quantitat. test, self-adaptive wavelet packet *(Chinese)* 124405

feature extraction continued
wooden surface defect detect., Gabor filters, evol. algm. design 106525
word extraction using irregular pyramid 94894
writer ident. using text line based features 129928
X-rays of thorax, rib suppression, Hough transform 98484
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033
SnO_2 thick-film sens. arrays, CO-methane mixture discrim. 132044

feature maps, self-organising *see self-organising feature maps*

federated databases *see distributed databases*

feedback
see also circuit feedback; control systems; control theory; force feedback; optical feedback; state feedback
2 W PV stable opt.-powering syst. 101771
3-D laser proc., in-proc. depth meas./control *(Japanese)* 105628
3D model acquisition by tracking 2D wireframes 129499
8 cm DVD-RAM video camera recorder, actuator control for disturbance s pression 120584
16DAPSK sigs., flat Ricean fading channels transm., lin. prediction based d sion-feedback differential detect. 107569
ABR explicit-rate traffic flow control 119146
ABR flow control, optimal struct. feedback policies 119126
AC-DC thermal convertors, high sensitivity, thermostatic control 109417
act. fault tolerant networks, on-line network simul. 130577
act. noise reduction by loudspeaker with self-sens. actuation 120594
act. sens. feedback in manual machine tool operation *(Japanese)* 89787
adaptive iter. multiuser parallel decision feedback with different code rates, form. 131292
adaptive modulation for multiple antenna systs. 106062
adaptive multimedia stream service with intell. proxy 96232
adaptive output feedback control, motor friction appl. 88759
adaptive radiotherapy, daily dose prescription, image feedback 87838
adaptive VLSI central pattern generator chip for robot leg control 81411
AES, implement. and fair comparison of final candidates using FPGA 129
aggregate QoS enhancement through alternate routing 74039
agile missile guidance and autopilot systs., integrated design 122475
anaesthesia syst. design using simul. 76607
ant colony syst. optim., dyn. weighted rule 100914
AOI/real-time SPC for high-mix/low-vol. PCB mfg. 115198
ARQ perform. in satellite commun. syst. with intersatellite links 95952
arrayed-waveguide grating-based opt. packet switches 119850
ATM networks, feedback fuzzy leaky bucket 96335
ATM networks, predictive congestion control, multiple sources/single buffer s nario 73780
audiometer-telephone interface, digital feedback suppression syst. 76703
automobile act. noise control use with audio syst. 120593
autonomous vehicle lateral control by yaw rate feedback, machine vision s 134556
bal. prosthesis, micromechanical sens., vibrotactile tilt feedback 122346
bank cheques, handwritten legal amounts segmentation, feedback-based appro 129941
Barkhausen noise NDE, stress meas. stabil. in harsh environ. 114535
beam, flexible smart, act. posn. control using internal model control 68453
bearingless IM drives, radial force detect., feedback effects 134437
best-effort routers, distributed control/resource marking 74031
bi-directional AC-DC thyristor converter unified control scheme 88822
bidirectional sinusoidal HF PWM inverter design 99820
binomial congestion control algms. 119349
biological feedback sig. pattern multi-param. monitoring 98170
blind person's US navig. aid, DSP-based, spatial hearing 133060
blind source separation and deconvolution, training anal. 106415
blind source separation by redundancy reduct. in recurrent neural net 9564
broadcast-freq. relay stations, coupling loop interf. canceller 97056
brushless motor speed control, using low-resoln. sens. 134066
brushless PM motor drives, SABER simul. 123899
buck DC-DC converter, lin. optimal feedback/load-decoupled control 1126
bursty multimedia traffic, admission control schemes 119795
camera tracking syst. using self tuning regulator/visual feedback 129450
car air conditioning, mean radiant temp. sens. 124114
cardiovascular syst. control during sleep, lin. feedback model anal. 87394
cdma2000 syst., phase predistortion 108923
CDMA asynchronous orthogonal decision-feedback multiuser detector 119
CDMA with decision-feedback receivers, user QoS constraints, optimal joint design/power control 131076
centralized dyn. access probab. protocol for next generation wireless netwo 119351
chaos-based commun. scheme via robust asymptotic feedback 130180
chaotic commun., inverse syst. approach 94246
chaotic systs., sync., nonlin. observer theory 90677
clock distrib. strategy for IP-based develop. 101943
closed loop transmit diversity with feedback delay, perform. 108744
commun. over fading channel, power control 119975
compact vert. XYθ table develop., PM walking drive methods *(Japan* 134318
computer networks, fast congestion feedback with mark-front strategy 961
computerised control with adaptive rate, elastic scheduling 86412
concurrent bilateral teleoperation over Internet, time-varying commun. d 130867
congestion control for unresponsive traffic 130320
continuous-time CNN, act. contour and skeleton models 107192
continuous-time Hopfield neural networks for filtering of ECG sigs. 98237
convolutionally encoded sigs. over multipath Rayleigh fading channels, decoding 106156
coupled dynamos syst., chaotic behaviour control 125205
covert commun. using digital phase modem, syst. trade-offs 72724
crane mechatronic syst. dyn. behavior investig. 89493
cyclotron-reson. maser, TW, quasi cutoff waves, cooperation 117047
DC drive, static subordinate speed control syst., state observers synthesis 100
DC motor drive, field-weakening regime, nonlin. MIMO speed control 134
DC shunt motor, speed control, nonlin. control design methods eval. 8876
DC-DC power conversion board design/implement., student lab. exercise 99
DC-DC power converter feedback isolation using piezoelec. transformers 77
DC/DC reson. power converter feedback control design 88969
decentralized adaptive power syst. stabilizer scheme 77213
decentralized power syst. load freq. control, LQR design 122879
decentralized quickest change detect. 73566
decision-feedback multiuser detect. with feedforward orthogonal transf 130172
differential drive wheeled mobile robot posn. control 100265

back continued
istributed denial of service attacks, coord. defense scheme, on-off feedback control approach 95760
istributed recursive state estimators, distributed Kalman filtering fusion with feedback 107508
ownlink transmit beamforming with selective feedback 108925
DS-CDMA, decision feedback partial parallel interf. cancellation 105781
DS-CDMA commun., lin./DF joint detectors using periodic long codes 130170
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
DS-CDMA syst., closed-loop transmit diversity with feedback delay 119982
DS-CDMA systs. under multipath fading channels, robust adaptive DFE receiver 84856
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
ual-arm robot image-based visual feedback control 129451
lyn. image seq. anal. using fuzzy measures 106430
lyn. voltage regulator struct./control 111871
CN decentralized adaptive marking algm. 74325
DM current mode-controlled LCC reson. DC/DC power converter 123627
EG-based brain-computer interfaces, motor imagery control 111185
lec. energy meters, calib., SMPS appl. *(Slovenian)* 77656
lectromechanical delta-sigma modulator, num. simul. 90990
lectronic components mfg., motion control syst. 113821
lectrophotography, piezoelec. cantilever, micro-mirror/laser array 116755
lectrophysiological activity to cell metabolism sig. transduction, feedback regulatory biochem. pathway 87425
MG systs., microvolt calibrator 132579
mitter turn-off thyristor, forward biased safe operation area 81244
nergy efficient data commun. over fading channels 85540
A-425 fly frame speed sync. control syst. simul. *(Chinese)* 124149
ading memory, radial basis model 114592
airness enforcing with explicit network feedback in Internet 108315
DD WCDMA systs., closed-loop transmit diversity 108746
EL beams, distributed real time control 108298
ES, mag. coil, power transm. and control sig. detect. 133047
ighter aircraft, nonlin. tuned RBF neurocontroller design 111641
iltering of nonlin. stochastic feedback systs. 84746
inite-dimens. control of nonlin. parab. PDE systs. with time-depend. spatial domains 90087
lat-fading channel variable-rate adaptive trellis coded QAM 119979
lexible manipulator control, piezoelec. actuators/sens. 104448
lexible manipulator sliding mode posn./vibr. fuzzy controller 134319
lyback converter, primary side control cct. 88866
lyback converter control using primary side voltage 99756
NS muscle model ident. using Matlab Simulink 122328
gas heat pump systs., environ. friendly engine *(Japanese)* 122715
generalized proc. sharing networks, end-to-end delay bound calc. 130182
generalized proc. sharing networks, traffic charactn. 130246
generators, lin. feedback controller, anal., perturb. bounds theorems *(Chinese)* 88693
gray-scale document image lossy compression, quantization 95334
Gyrotron FU series, develop. and appls. 91551
H.263+ compliant video coding with packet loss resilience 118554
H.263-compatible error-resilient video coder 95398
HDD, head-disk interface, act. control 81900
HDD head-disc spacing var. suppression, act. flying height control 116308
hearing aids, variable step-size of LMS algm. for acoustic feedback reduct. 73017
hidden targets detect., mine-detect.-like task 77111
high perform. routers, packet scheduling algm. 130483
high power PWM inverter with series act. filter, control strategy 123605
high resoln. posn. inform. extraction from sinusoidal encoders 123694
high-dens. mag. recordings, neural net based bit-detect. 104530
high-order QAM systs., phase noise and IMD reduction 72773
high-precision wide-bandwidth micromachined tunneling accelerometer 121031
hop-by-hop congestion control stabil. in data networks 74023
Hore sens., shift meas. range scale-up, feedback servomechanism *(Chinese)* 109488
HTS DC SQUIDs and integrated SQUID electronics in liq. nitrogen, small mag. field meas. 70864
HVAC systs. fault detect., model-based feedforward control 100333
IC defect inspection/metrology, proc. integrat. 100638
idiopathic scoliosis, adolescent, postural training, audio-biofeedback appl. 111058
III-V MOCVD proc. control by UV absorpt./US conc. monitoring 101374
IIR channel, blind equalization 130254
IIR generalized polynomial predictive filters 130064
IM, 2nd.-order sliding mode control 77876
IM, global exponential output-feedback control 112514
IM drives, automatic controller reconfiguration, fault tolerant operation 123857
IM drives, indirect FOC, 1 DOF and 2 DOF controllers design 123947
IM drives, speed sensorless vector control, nonlin. inverter model 134487
IM nonlin. control, parallel neural network estimator training 123459
IM sensorless control using disturbance observer 123432
IM sensorless rotor vel. tracking control 88741
IM sliding mode output feedback speed control *(Italian)* 123399
image retrieval, multiresolution-histogram indexing/relevance feedback learning 95194
induction machine nonlin. sliding-mode torque/flux control method 99655
inductor-less charge pump PFC electronic ballast, lamp current feedback control 134621
indust. proc. monitoring & SPC, multivariate image anal. 113809
indust. servo drive, LF mech. reson. 134441
interconnected offshore power syst., IM starting, ASVC 100358
interconnected power syst., transient stabil. control, multiple TCSC controllers 111922
interior PM sync. machine sensorless speed control scheme 123369
interior PMSM drive, Kalman filter based vector control 89354
International Space Station, solar-cell orient. syst., drives control 111346
Internet, TCP/real time sources bandwidth feedback control 74271
Internet search service on multi-search engine, GA-based dyn. pers. filtering 119749
Internet servers, modeling and perform. control 85225
IP multicast service behaviour over next-generation satellite-terrestrial hybrid networks 130394
iter. turbo decoder anal., dens. evol. based 72882
iter. turbo decoder anal. based on Gaussian dens. evol. 106086

feedback continued
IVFCP flow control protocol for Internet video 73880
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
landmine detect., data fusion & Dempster-Shafer evidential reasoning 77062
lateral comb microactuator, stroke-length control, PID lin. feedback control 116059
LCD backlight inverter syst. control, mixed dimming method 86864
LILI keystream generator 129321
LIM drive, intell. backstepping control 100237
LIM servo drive, robust control, neural network uncertainty observer 78210
LIM servo-drive, nonlin. decoupled control, sliding-mode tech. 100238
lin. autonomous syst., chaos generation, dyn. nonlin. fdbk. control 79533
lin. motors, output feedback adaptive robust control 88766
lithog. overlay controller formulation, successive patterns alignment 103564
loop-gap resonator, automatic coupling control, by variable capacitor attached coupling coil 69275
low power hybrid posture monitoring syst. 132995
mag. disk drives, high-bandwidth servo control designs 92855
MAGLEV syst., H_∞ control and closed loop ident. 105691
MAGLEV syst., posn. tracking, adaptive robust nonlin. control 83183
manipulator, kinematic uncertainty, setpoint control, approx. Jacobian feedback controller 97390
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
microbolometers, stabil. conditions, nonlin. dyn., thermal runaway 97252
microfabrication device develop. for scanning electron microscope *(Japanese)* 124317
microscale adaptive optics, wave-front control with μ-mirror array and VLSI stochastic gradient descent controller 116784
Microscopic Visual Feedback syst., High Speed Vision *(Japanese)* 84089
microwave transistor, perform. charactn. in load plane via imped. params. 91284
MIMO environ. capacity sensitivity 108608
MIMO lin. channels, joint decoding/channel estim. 83936
MIS struct., avalanche-multiplication coeff., probabilistic distrib. 115453
missiles, tail-controlled, adaptive control, param. affine 77130
MM-wave subcarrier freq. stabil. using laser heterodyne source and opt. delay line 109044
MMTP, multimedia MUX transport protocol *(English, Spanish)* 130417
mobile downlink transmit diversity, feedback efficiency and robustness 85669
mobile robot dead-reckoning, precision-calibrated fiber optic gyroscope, sens. fusion 109593
Mobilizer, distributed protocols for networks with mobile users 73918
MPEG video appls. over wireless networks 130740
MPEG video sources, Markov model for feedback matching of traffic spec. params. 108421
multi-access WLAN, reliable multicast 108228
multi-machine power syst. stabilization, QFT control 133535
multi-machine syst., TCSC/excitation, robust coord. control *(Chinese)* 99262
multi-server distributed MPEG video syst. 86344
multicast flow control, feedback-sync. signaling delay anal. 119353
multiclass M/M/m queues, parallel scheduling, heavy-traffic optim. 113854
multigrid motion compensation video coder, perceptual feedback 118520
multimachine power syst. nonlin. decentralized control strategy *(English)* 77233
multimachine power syst. turbogenerators, optimal DHP neurocontrol design 133542
multiple time scale TCP perform. eval., self-similar traffic conditions 74103
multiple-level logic simul. algm. 90838
multiresolution joint source-channel coding for mobile radio channels with feedback, perform. 85682
multistage packet switching systs., distributed scheduling archit., feedback control 73794
natural-sounding vowel synthesis using nonlin. dyn. model 106414
neg.-feedback amps., freq. compensation 79576
neuromagnetic meas., high-sensitivity SQUID magnetometer, fab./characts. *(Korean)* 87456
NMR relax. peaks, marginal resoln. using UPEN and diagnostics 98475
noisy integrate-and-fire neurons, period focusing induced by network feedback in pop. 127869
nonlin. systs., semi-strict feedback form, neural network adaptive robust control 113046
normalized least mean fourth algm., convergence behavior 107353
nuc. reactor load follow capability, fuzzy adaptive robust optimal controller 123133
ODE BVP, iter. shooting method, feedback control appl. 100749
OFDM based on multicarrier PLL, freq. offset tracking 106031
one-way three-coupled chaotic maps, delayed-feedback control 125207
opt. inter-satellite commun., wide-range fine pointing mechanism 88073
orthogonal space-time block codes improvement using quantized feedback inform. 129170
orthogonal space-time block coding utilizing quantized feedback inform. 72859
parallel saturating multioperand adder design, GSM speech coders 131019
paraplegic standing, feedback controllers design 76661
PCR-based fair intell. bandwidth allocation for rate adaptive video traffic 84499
Peltier effect solid state heater cooler, design, eval. 113034
phonetic rules for pronunciation errors diagnosis *(English)* 73010
photoelec. dual base transistor, phys. model *(Chinese)* 116955
photolithography CD control automation in complex mixed technol. mfg. fab 103523
photolithography proc., CD control in semicond. mfg. 115729
photolithography proc. intell. CD control 100718
photoresist thickness uniformity, bake proc., real-time control 103567
physiological effects of noise/whole body vibrs. on rats 110506
PID feedback control, output usefulness in fault detect. 124394
piezoelec. ceramic force sens., static charact. *(Japanese)* 97190
piezolaminated anisotropic shells, selective modal control theory 104438
pilot sym. assisted turbo codes over flat-fading channels, iter. channel estim./decoding 106154
ping-pong flow control, ATM implement. 73782
pipelined reduced-state seq. estim. 72865
planar manipulator, globally convergent vision-based posn. controller, adaptive visual servoing problem 97373
PLS storage ring, transverse beam feedback syst. 121351
PM AC motor drive multivariable PI model ref. current control 134435
PM stepper motor, passivity-plus-flatness controller 112559
PM sync. motor, q-axis field, optimal PF control, inverse LQ design method *(Japanese)* 88713
PM sync. motor decoupling control, online params. ident. 133969
polyhedral/polygonal parts, motion region, attractive regions 97857
power IGBT switches, flexible dv/dt/di/dt control method 126786
power syst. load freq. control using noise-tolerable PID feedback 133555

feedback continued
power syst. nonlin. control theory survey *(Chinese)* 77230
power syst. robust nonlin. controller with voltage regulation *(English)* 77232
power syst. stabil./voltage control, decentralised excitation/STATCOM control 77275
power syst. stabilization passivity-based output feedback control 88349
power syst. turbogenerator nonlin. optimal governor additional control *(Chinese)* 77205
PRN, error-protection method selection 96346
prog. AC power source, switched current topol. 99754
progressive image transm., joint source-channel coding *(English)* 73390
prostate disease thermal treatment, MRI compatible intracavitary ultrasound array 76426
PWM buck-boost DC-DC power converter, simultaneous control study *(Korean)* 123586
QoS dyn. mapping control for streaming video in relative service differentiation networks 85253
QoS in mobile wireless networks, proactive/adaptive appls. 120044
QoS provision in dyn. network environ. 107860
quantitat. feedback theory-PSS, robust controller, stabil. enhancement *(Korean)* 122887
quasi-closed-loop transmit diversity systs., unitary transforms appl. 108743
quasi-reson. buck converter, large sig. modeling, regulated unified model 88977
queueing networks, single-server fluid, conservation laws 113843
rabbit muscle afferents, nerve-cuff recordings, joint posn. effect 122327
random early detect., control theoretic anal. 119373
random struct. Markov procs., optimal filtering and locally optimal control 67768
rate adaptive TCP, congestion control with explicit rate feedback, perform. 73946
rate control algm. for max total user utility 119144
rate-matching packet scheduler for real-rate appls. 95943
Rayleigh flat fast fading channels, soft decision directed MAP estim. 106087
real-time Internet traffic, variable rate model with QoS guarantees 108339
real-time mixed-traffic WLAN, prioritized CSMA 130626
real-time optimal excitation controller using online syst. ident. *(Chinese)* 122859
relax. syst., user's condition adaptation 110560
reliable multicast protocol with feedback suppression 95957
resoln. and frame-rate scalable subband/wavelet video coder 106970
reverse-biased pnipn semicond. struct., current pulses internal amplif. modeling 115374
RHex hexapod robot, proprioception based behavioral advances 109481
robot positioning control strategy, 3D visual servoing syst. 97391
robot trajectories tracking and design in image space, mech. and visibility constraints 97371
robust multiuser detect. 107608
robust variable-freq. flyback batt. chargers, small-sig. modelling 88867
RTP, wafer temp. control, stable nonparametric adaptive control 126267
scalable multicast rep. member selection 119306
scoliosis treatment, low power portable EM posture monitoring syst. 111068
second-order LMS-based optim. wireless channel tracking, freq. domain anal. 95660
segmentation/tracking of overlapping objs. with feedback 95009
selective attenuate feedback mechanism for handling flow diversity 73871
sensorless PM brushless AC motor drives, speed estim. improvement 123879
seq. Viterbi decoder macro, ACS-feedback method 106121
serially concatenated convolutional codes, iter. decoding in multipath Rayleigh fading environ. 72818
series-connected controllable FACTS devices, control Lyapunov fns. 133548
single-phase half bridge boost rectifier, SVM based control, PFC 123609
single-phase UPS inverters, H_∞ loop-shaping controller design 88958
SISO networked control syst., packet switching WAN appl. 108267
smart accelerometers, neural net based, for telecare med. 98130
smart composite beams, dyn. anal., approx. soln., MATLAB 125128
space-time ring TCM codes for QPSK on time-varying fast fading channels 94330
space-time transmit precoding with imperfect feedback 117948
squirrel cage motor lin. control under param. vars. 99670
SRM passivity-based torque/speed/posn. tracking control 123379
SRRC, long. feedback syst. 87050
STATCOM robust nonlin. control scheme *(Chinese)* 77235
stream ciphers, stat. self-sync. 118027
stream ciphers based on cascaded small s-boxes 118048
subband arrays, perform. anal. 117854
SVC controller design, nonaffine nonlin. model *(Chinese)* 89032
SVC using five-level PWM inverter 133514
switched reluctance machine control, online instantaneous torque estim. 123375
sync. generators, observer-based nonlin. control, syst. stabil. 88717
sync. machine nonlin. adaptive optimal excitation control scheme *(Chinese)* 77840
sync. power generator, robust lin. control 77227
TCP perform. over end-to-end rate control/stochastic available capacity 119267
TCP Vegas congestion control mechanism, duality model 119338
TDD-CDMA receivers, soft Bayesian recursive interf. cancellation/turbo decoding 108938
temporal/spatiotemporal chaos, synchron., nonlin. feedback control 114595
thermoresistive microsensors, thermal runaway, instabil. and dyn. 132072
thin-film orthogonal fluxgate mag. sens., fab. and charact. *(Japanese)* 109936
three-phase ac motors, DSP-based control, A/D conversion syst. 78104
three-phase inverter, IGBT output stage, driver module 112649
three-phase line-interactive UPS syst. implement. 134221
three-phase three-level NPC rectifier, adaptive nonlin. control 134174
TPP load control syst. simul., energy feedback sig. *(Chinese)* 77723
transmit antenna wt. adaptation with feedback, stochastic gradient algm. 84687
transverse planar transistorized microwave generator 125692
turbo codes transm. over fading channels, iter. channel estim. 83938
turbogenerator robust control for power syst. stabil. improvement *(Chinese)* 77813
two-inertia syst. vibr. damping property *(Japanese)* 77818
ultra precision positioning apparatus using laser interferometer, feedback syst. 134098
underwater target class., adaptive, multi-aspect feedback 109306
unity PF rectifier adaptive passivity-based controller 88967
unmanned air vehicle landing, vision based motion estim. and nonlin. control 109670
urea amperometric sens. syst., pH-stat/flow injection anal. 97413
vector MAC capacity region with covariance feedback 128942
vert. fin buffeting alleviation, strain actuation, closed-loop control tests 111306
video on Internet, multilevel adaptive streaming, control 86338

feedback continued
vircator klystron with external delayed feedback, oscill. conditions 91557
visual servoing, multirate sampling, disturbance rejection 94730
voice over Internet, delivery tool 96158
VSX ring orbit feedback syst. develop. 121347
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller iter. channel estim. 72355
Web servers, feedback control for guaranteeing relative delays 85348
wheeled robot, driving amongst obstacles, multi-sens.-based control strate 75615
wind tunnel, injector powered transonic, PID controller 133211
wind-farms, multi-terminal DC transm. syst., VSC 112372
wireless multimedia commun., QoS mgt., feedback control model 108853
wt.-based bandwidth allocation algm. for transporting compressed video 84
Cu wafer metrology for electroplating/CMP control 115689
GdBaCuO bolometer, SiN membrane, act. electrothermal feedback 71140
HgCdTe, MBE growth for LWIR detectors, ellipsometry comp. control 101
InGaAs/GaAs multi-finger HBT, modelling incl. self-heating effects 81212
$LiTaO_3$ piezoelec. gyroscope, temp. self-compensation 104428
Si/SiGe/Si DHBT, neg. resist. charact., high power appls. *(Chinese)* 1158

feedback amplifiers
see also operational amplifiers
act. RC oscillator, single voltage feedback op amp 90790
APS storage ring, X-ray BPM-based feedback syst. 87134
BiCMOS dyn.-range dB-lin. prog.-gain amp., GSM transceivers 125819
broadband microwave amps., PAE, current sharing concept 80252
cardiac pacemaker, sens. chain, CMOS micro-power low noise log-domain a 87894
cascaded Σ-Δ modulators, integrator pole error compensation 86450
Class D amp., low-power LV, feedback design, improved THD 79589
CMOS based smart temp. sens. & voltage refs., sig. proc. 132085
CMOS continuous-time common-mode feedback amp. cct., gain partition replica bias 101776
CMOS high-speed opamps, gain and bandwidth boosting techs., filter ap 79581
CMOS IF bandpass amp. design, low sensitivity to temp. and proc. vars. 79
CMOS IF variable gain amp., lin. controlled gain range, temp. stabil. 1252
CMOS Norton amp.-based digitally controlled VGA for low-power wirel appls. 68612
CMOS prog. gain amp., 100 MHz, high lin., current-mode tech. 79591
CMOS sens. interface, CARIOCA current-mode feedback cct. 79635
CMOS variable gain IF amp. with -67 dBc IM_3-distortion, AM/FM radio recei 125246
CMOS very high DC-gain amp., pos. feedback gain enhancement 79588
const.-output dyn. amp. for variable amplit. target tracking 75400
current conveyor based PID controller synthesis, optimum param. toleran 102360
current-feedback OTA 79593
current-mode all-pass filter, current feedback amp. 102340
current-mode sense amps. for high dens. DRAM and PIM archits. 102175
differential difference current feedback amp. 101784
dual-loop cross-coupled feedback amp., low-IF integrated receiver 101794
electronic equipt. with feedback, stabil. anal. 101806
feedforward lin. power amp., error feedback tech. 68598
field prog. analogue amp. array ICs, switched capacitance feedback ccts. *(G man)* 102431
HF neg. feedback LNA, noise anal. and design 79569
inter- and intra-chip MOSFET perform. vars., test cct. based extract. for anal design reliab. 104139
Ku-band freq.-tunable LNA using variable-capacitance elements/neg. feedb ccts. *(Japanese)* 69241
LV continuous-time CMOS current amp. with dyn. biasing 79585
microwave cct. modeling/simul., design principles 125689
multistage amp.-freq. compensation, anal. 114628
neg.-feedback amps., freq. compensation 79576
noise perform. of current-feedback amps. vs. voltage op amp 68603
prog. transconductance amp. switched current ccts. 101777
RC chaos generator design using current conveyors 101829
SAB low-Q band-pass act.-RC filter, impedance tapering effects 91051
SQUID op amp, current amp./current-to-voltage converter appl. 68621
supercond. astron. detector, RF SET readout amp. 71147
transconductance feedback amp. based logarithmic convertor 79592
UHF bandpass amps., stabil./unidirectionality 101805
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655
wideband gain block amp., design techs. 68601
wireless opt. receivers, dyn. range boosting, transimpedance amp. 109073
AlGaN/GaN HEMT high power wideband feedback amp. module 114625
Ar, Townsend secondary electron emission coeff., freq. response anal. 8054
InP-HBT differential VCO with wide tuning range, SONET/SDH fiber op appls. 91338

feedback circuits *see circuit feedback*

feedback neural nets *see recurrent neural nets*

feedback oscillators
act. RC oscillator, single voltage feedback op amp 90790
coupled RC oscillators network, Wien-bridge ccts. *(Japanese)* 68639
delayed-feedback klystron oscillator, chaotic operation 91558
fast digital double relax. oscill. SQUID design 68887
hyperchaotic ccts. sync. via scalar sig. 90691
LCR distributed self-oscillator inductively coupled with transm.-line sect., mod 114657
LDMOS transistor, high-power RF oscillator 101833
lin. open-loop S-params. 79611
long Josephson jn., soliton oscillator clock, jitter meas. 70889
monolithic grid oscillator 101835
nonlin. distributed line 101830
PHEMT MMIC coplanar feedback VCO, fab. technol. 102671
PHEMT MMIC VCO, broadband oscillator design 102668
RC oscillator, amplit. stabil., CMOS op amp *(German)* 90794
relax. oscillator with relay-hysteresis, robustness 68632
InP HBT VCO, freq. tuning range 101843

feedforward
see also feedforward neural nets
8 cm DVD-RAM video camera recorder, actuator control for disturbance su pression 120584
act. bal. mixer, lin. method 114663
adaptive feedforward lin. for RF amps., DSP archit. 90751
adaptive feedforward microwave amp. lin. using analog circuitry 91272
arrayed-waveguide grating-based opt. packet switches 119850

forward continued
bi-directional AC-DC thyristor converter unified control scheme 88822
broadband mobile radio, joint spatial/temporal equalizer 85829
buck converter, period doubling bifurcation, harmonic bal. anal. 99764
buck PWM DC-DC converter with ref. volt. modul. feedforward control, anal. 99767
carrier freq. offset estimator for burst mode commun. 72715
catenary cable tension control, fuzzy robust feedforward control 133760
channel state inform. AC multimotor drive, space vector control 89344
class-D AF power amps., distort. reduction using feedforward tech. 68624
CMOS DAC cell with ultra high gain op-amp, 10 bit, 1.8 V 79982
CMOS high-speed continuous-time lin. weighted voltage addit. 79598
CMOS I/O interface ccts., 1.2 Gb/s, 100K pos. ECL syst. compat. 68884
DC-DC converter using load-current feedforward control, transient response 88986
decision-feedback multiuser detect. with feedforward orthogonal transform. 130172
delta-sigma ADC, ultra-low noise chopper-stabilized prog. gain instrum. amp. 90976
DFE coeff. placement algm. for sparse reverberant channels 107674
digital radio receiver, non-decision-aided carrier freq. offset estimator 96395
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
DS-CDMA systs. under multipath fading channels, robust adaptive DFE receiver 84856
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
DS-SS CDMA, narrowband interf. suppression 128809
elec. energy meters, calib., SMPS appl. *(Slovenian)* 77656
electronic components mfg., motion control syst. 113821
Endicott mfg. lines, unified syst. for mfg. proc. control and data collection 113806
equalization with widely lin. filtering 130270
flow graphs, feedforward, Markov-modulated 78868
FPGA implement. of pulse-shaping IIR filter 114882
fuzzy set shape in adaptive fn. approx. 100821
fuzzy-logic current-sensorless feedforward act. rectifier 134160
generalised proc. sharing networks fed by heavy-tailed traffic flows 119243
generalized geometric seqs. family 117868
GMSK modulation based on squaring algm., sym. timing recovery 72720
HDD vibr. compensation, MEMS-based accelerometer 92858
high performs. switching buck converter IC 78002
HVAC systs. fault detect., model-based feedforward control 100333
IIR channel, blind equalization 130254
IM, sensorless IFOC, current regulators 100258
IM drive efficiency optim. fuzzy control *(Korean)* 113079
IM drives, indirect FOC, 1 DOF and 2 DOF controllers design 123947
induction servomotor drive robust control scheme 78212
integral sq. generator angle index for stabil. assess. 111873
interior PM sync. machine sensorless speed control scheme 123369
interior PM sync. motor sensorless control using Kalman filter 123377
interleaved and double-sampled ccts., feedforward approach for timing skew 68853
LCD backlight inverter syst. control, mixed dimming method 86864
LHD supercond. coils, H_∞ current control 71040
lin. PM sync. motor drive control for mfg. automation appls. 89473
lin. power amp., error feedback tech. 68598
lin. using feedforward loop, 1.85 GHz, PCS base-station appls. 69127
lithog./etch seq., feedforward control 103565
LV OTA using common mode feedforward, HF SC filter use 80055
machine tool lin. motor drives, PID posn. control unified gain tuning 89474
manipulator two-layers feedforward posn. control syst. 123698
microwave freq. doubler, fund. freq. component suppression 102584
microwave oscillators, flicker noise, feedforward power amp. appl. 102618
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
mirror power amp., baseband/RF feedforward lin. 90750
MSK-type sigs., feedforward joint phase and timing estim. 128978
multi-carrier CDMA, transmitter diversity 108775
multi-infeed HVDC systs., co-ordinated recovery strategy 112006
multirate feedforward control, perfect tracking control 77890
multistage feedforward compensated opamps, low power and distortion 68600
NC machine tools multi-axis contouring error on transient state *(Japanese)* 67689
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
non-decision-aided feedforward carrier freq. offset estimator *(Chinese)* 107763
nuc. reactor load follow capability, fuzzy adaptive robust optimal controller 123133
OFDM systs., nondata-aided ML carrier freq./phase sync. 72716
PCS, freq.-tunable feedforward amp. 74760
photolithography proc. intell. CD control 100718
piezoelec. actuators, hysteresis and creep effects, real-time inverse feedforward controller 92679
PM sync. servomotor vibr. suppression control method *(Japanese)* 88698
PMD compensator, real-time principal state charactn. 71282
power amp. with series diode lin. for cellular base stations 91251
PWM boost type rectifier, input output harmonic elimination, control method 123595
PWM DC-DC converters with feedforward, exact small-sig. anal. 112647
PWM rectifier fuzzy logic feedforward current scheme 123617
QoS dyn. mapping control for streaming video in relative service differentiation networks 85253
Rayleigh fading channel multicarrier sigs., carrier freq. offset 74551
RF feedforward-lin. power amps., digital commun., gradient optim. 79571
rotary servo actuated by NiTi SMA wire, robust posn. regulation 134323
series act. power filter deadbeat control appl. *(Chinese)* 99879
sig.-depend. media noise mag. recording channels, decision feedback equalization 116465
SOA-based opt. pulse regeneration 117268
solar-TPP, gain-scheduled fuzzy PI control scheme 133902
subharmonically mode-locked semicond. laser, pulse AM suppression 71816
SwampFinder product develop. tool, IC DFM 104014
switching regulators, design-oriented anal., transfer fns. 68587
sym. timing recovery scheme using two samples per sym., digital receiver 84805
thermionic RF gun, beam-loading compensation by feedforward control syst. 125972
three-phase HB-type stepping motor torque vibr. suppression control *(Japanese)* 99699
traction IM, rotor field oriented vector control syst. 123989
train power syst., input-series-output-parallel-connected converter 78304
UHF filters and OTAs, analog cct. design 90705
Volterra adaptive filters for act. control of nonlin. noise procs. 95703
VSI-IM drive, PWM less current control 123402
WECS power smoothing control, vector-controlled induction machine 77794
wind-farms, multi-terminal DC transm. syst., VSC 112372

feedforward neural nets
see also multilayer perceptrons; radial basis function networks
2D gravity interp., ANN appl. 122597
3-level voltage-fed inverter IM drive, NN space vector PWM controller 134467
3-phase act. power filter control using neural networks 112083
3-phase covered corundum arc furnace, neural supervisory control 113141
3D obj. class., continuous surface shadow moire tech., multilayer feedforward neural network use 129864
3D shape recovery using neural-based hybrid reflectance model 129525
affine transforms. of 3D objs. represented with neural networks 84220
animal fibers, fuzzy pattern recogn. and class. 118487
ANN CPM receiver design 120167
approximating CIECPLM97s color appearance model by means of neural networks 106730
ATM network congestion control by neural net 130527
ATM networks, neural net for bandwidth allocation of heterogen. sources 73821
automatic sleep stage scoring, hybrid ANN & expert syst. 76261
bang-bang servos mag. hysteresis modelling using neural nets 112734
Beta basis fn. neural network in CMOS subthreshold mode 91163
biosignal engng., integrated intell. class. engine appl. 132519
breast MRI, contrast enhancement curve eval. using neural net 98394
cell images, anal./classif., directional fractal dimens. features 87551
class. by single hidden layer feedforward neural nets 73252
CMA-based nonlin. blind equaliser, two-layer neural network model 119180
CMOS prog. BP on-chip learning neural net with learning rate adaptation *(Chinese)* 91161
CMOS prog. on-chip backpropag. learning neural net 91154
collimated laser beam, diffr. pattern, multi-layer feedforward neural network image proc. *(Chinese)* 129544
composite plate impact-induced damage detect. by neural nets 109429
congestion arbitration and source problem prediction using neural nets 119602
cooperative syst. team optim., max. area coverage appl. 109313
CPS synthesis, ANN model 69007
DC series motors, neural networks using feedforward neural network 99680
digital feedforward neural net at-speed test method 102463
dyn. grounding systs., neural net based features ident. 112152
eddy current testing, automated quantitat. defect charactn., ANN use 101596
edge representation/recogn., multilayer feedforward NN 129890
EEG, dipole source localisation, neural network/num. anal. 121969
EHV series-compensated transm. lines, neural net-based fault location 123086
EHV series-compensated transm. lines fault location using neural nets 77663
elec. load forecasting using trend data and feedforward neural net 122914
electronic nose, pollutant gases ident., pattern recogn. 76930
endocardial electrogram class., adapted wavelet packets/neural networks 87382
face ident., 1 spike per neuron, degrad. resist. 118770
FANN-based subsampling of color video seqs. 118222
fault diagnosis of unknown nonlin. systs., neural nets 100657
flexible parts assembly algm., visual sens. syst. 86673
flue gas O_2 content soft sens. based on neural net *(Chinese)* 75694
fuel vol. meas. in aircraft, feedforward neural nets 111329
Gabor-atom network radar target recogn., high-resoln. range profiles *(Chinese)* 131630
gas turbine engine fault diagnosis using feedforward neural nets 112319
Greek text-to-speech systs., neural networks use 106418
hierarchical inform. fusion based fault diagnosis, turbine appl. 118828
high-order efficient image subsampling 94813
highly nonlin. syst. modeling/prediction, adaptive-neuro fuzzy inference 118956
IC image proc., neocognitron neural net 102836
IM, neuro-fuzzy controller design on DSP 134053
IM drive, stator-flux-oriented vector control, space-vector PWM, neural nets 123932
IM drive with time delay, speed controller design 78214
IM drives ident., indirect vector control, ANN 113071
IM nonlin. control, parallel neural network estimator training 123459
image class. using BP scheme 94595
image retrieval based on similarity learning 94936
integrated feature anal. and fuzzy rule-based syst. ident. in neuro-fuzzy paradigm 84255
inter-subjective model for audio quality assess. in packet networks 106359
Internet traffic ident. using feedforward multilayer layer perceptron 119754
Kannada handwritten characters, on-line recogn. using wavelet features/neural classifier 95468
landmine detect., data fusion & Dempster-Shafer evidential reasoning 77062
large-set pattern class. via neural net dimens. reduction method 73310
laser welding proc. optim. using ANN, param. selection 105643
LIM drive, intell. backstepping control 100237
load forecasting using feedforward multilayer neural net, environ. effects 111979
locally recurrent neural net., Chua cct. attractors learning 79534
LOGic oriented neural nets, quantized wts., multilevel threshold neurons, backpropag. 68983
model selection and archit. develop., factorial design 114912
MPEG video quality objective assess., neural net approach 106911
multi-freq. eddy current test, flaw reconstr., dyn. neural net models 101597
multi-machine power syst. ident. by online trained neural net 111660
multilayer feedforward neural network-based power syst. relay protection 77528
multiply-excited SRM, feedforward neural net-based models 88705
N-bit parity problem, LP approach using neural nets 114913
network meas./speech quality subjective scores integrat. for control purposes 118096
noise-mixed PD recogn. using feedforward triple-layer neural net 116182
obj.-based image segmentation, perceptual importance charactn. 94788
OPF, multilayer feedforward NN approach 111989
opt. pattern recogn., cascaded lin. shift-invariant proc. 107263
pacemaker, QRS detect., time lagged ANN 98716
packet loss rate prediction using universal traffic indicator 130976
Pap smear test automated class. using neural nets 121887
pers. opt. stimulated luminesc. dosimetry, ANN appl. 87957
photolithography proc., CD control in semicond. mfg. 115729
PM DC motor drive, neural controller, fuzzy controlled training algm. 113070
PM generator optim., neural net approach compared to FEM based sensit. anal. 133916
polyphonic piano music transcription using ANN 106352

feedforward neural nets continued
power quality, 3-phase AC sigs. detect./class., ANN 122995
prediction of gaseous emissions using neural networks 99032
pulse-compression radar, neural network sidelobe suppression filter 109271
radar target class. using neural network and median filter 131626
room reverberation time determ. from speech using ANN 83990
rotary US motor, TW type, robust neurocontrol 88781
SAW feedforward ANN proc. appl. to digital modulation recogn. 92709
self-tuning dual input power syst. stabilizer, ANFIS-based 122876
snoring sig. automatic detect., simple snorers/OSAS patients 110682
spatial luminance interacts. influence on perceived brightness 94870
speech quality objective assess., one-step strategy *(Chinese)* 106347
store-and-forward packet switching networks, dyn. routing, distributed-inform. neural control 73805
SW radio commun., freq. params. predict. based on chaos and ANN 74583
text-to-speech synthesis, prosody control, ANN topol. optimisation 84042
texture segmentation using moving av. modeling approach 94637
tissue US imaging, large K distrib. params. estim., neural network approach 110789
tomographic data, direct proc. estim. using artificial neural systs. 106504
underwater target class., sonar bandwidth effects 77042
US images, speckle noise modelling, neural approach 118246
VBR hybrid coded video sources modeling/prediction, fuzzy logic perspectives 129783
VBR MPEG-2 video, traffic prediction/network resources estim. 107048
VLSI analogue spiking neural net, address domain probab. synapses 91141
VLSI neural network with digital wts. & analog multipliers 91139
VLSI wafer fab., optim., neural network *(Chinese)* 81171
waste heat recovery sect. gas turbine, feedforward neural net simul. 112323
wearable master device for spinal injured pers. as control device for wheelchairs 133059
weather radar, polariz.-diverse, clutter ident. 111423
writer ident. using text line based features 129928
zoom-lens camera, calib. from noisy data with outliers 131979

feeds, antenna *see antenna feeds*

FEL *see free electron lasers*

FEM (electron microscopy) *see field emission electron microscopy*

FEM (numerical analysis) *see finite element analysis*

fermentation
SnO_2 gas sens., gas mixture class., wine class. 120971

Fermi energy *see Fermi level*

Fermi level
antidot lattice, QHE, 2DEG nonlocal resist. 80846
copper phthalocyanine films, electronic props., gas sens. appl. 109763
diamond:B, heavily-doped, high cond., impurity states 115295
diamond films, CVD, dens. of gap states, thickness depend., SCL current 69476
diamond Schottky diodes, elec. AC behaviour 81192
freezeout/exhaustion prediction under nontrivial conditions 91572
interact. QD in nonequilib. state, AC response 69672
metal/$Si_{1-y}Ge_xC_y$ interfaces, Fermi level posn. 69707
mol. electronic devices, charge transfer, band lineup, chem., num. investig. 102847
organic/metal interface electronic struct., UV photoemission spectra, Kelvin probe method 103164
QW laser, sectional voltage contrast topography, Fermi energy 128268
QW/SOA laser design, wavelength-depend. transparent current, sens./WDM appls. 128228
reson. tunneling diodes, direct bandgap, indirect bandgap-like current flow 92423
semicond. nanowires, ballistic spin-polarized transport 91793
solar cells, anom. degrad., carrier trapping 78170
surface-doped diamond, pH sens., surface termination effect 87023
TFT, bulk/interface DOS 81280
TPD/metal interfaces, energy level alignment, band bending, Kelvin probe method 126208
wide-gap semiconds., doping limits, amphoteric defect model 91949
Ag/n-Si Schottky barriers, ICB deposited, Fermi level pinning, microscopic model 69725
n-$Al_{0.24}Ga_{0.76}As$, surface states, DLTS, HEMT study 69533
AlGaAs/InGaAs/GaAs SQW, modulation doped, electron dens., mobility 80852
AlGaN/GaN heterostruct., epitaxial FET struct., carrier props., surface treatment effects 92032
AlGaN/GaN/6H-SiC, surface/buried MQW, MBE, opt. emission, band bending 91778
Au/Si_xN_y/n-GaAs struct., N-rich PECVD dielec. fab. 124909
Au/n,p-GaN Schottky diodes, I/V/T charact., inhomog. barrier influence 81205
$Bi_{1-x}Sb_x$ nanowires, anom. high thermoelec. fig. of merit, carrier pocket alignment 91696
C nanotube electron waveguides, quantum interf. and ballistic transm. anal. 125934
C, single walled nanotubes, mech.-induced kinks, electronic props. 70219
C_{60} thin film solar cells, B and P ion implant. 112905
a-C:H,N films, PECVD prep., N incorporation and elec. props. 126082
$Cd_xHg_{1-x}Te$ alloys, irrad., Fermi level pinning and elec. props. 115302
CdS QD, self assembled ordered arrays, C-V charact. 126194
CdTe modulation-doped QWs, exciton/trion excitations, PL 80841
p-$CuInSe_2$:H, hydrogenation, cond. type conversion 103409
ErAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
GaAs films, Franz-Keldysh effect, photoreflectance, SPV 80737
n-GaAs nm-sized Schottky contacts, current transport and C-V charact. 91860
n-GaAs quantum wires, Fermi-edge sing., PL obs. 80860
GaAs surface, sulfur passiv., Franz-Keldysh effect *(Chinese)* 81088
GaAs:Si, δ-doped, electronic struct., applied elec. field effects 80997
GaAs/AlGaAs, 2D variable-range hopping cond., electron-electron interact. influence 115360
GaAs-AlGaAs cond.-band QW struct., intersubband transits. 69693
GaAs(100) surface, β-GaS passiv., surface band bending, PES obs. *(Chinese)* 81067
GaAs(100), thioacetamide passiv., struct., thermal stabil. 69836
GaMnAs-based double barrier RTD, ferromag. material emitter, spin-depend. transport 81184
GaN, MOCVD films, defects, monoenergetic positron beams anal. 80700
GaN interfaces, Fermi level pinning, elec. admittance/DLTS correl. 124864
GaN, lateral epitaxially overgrown films, elec. props., spatial var. 91658
p-GaN surface band bending, aqua regia soln. surface treatment effects, SR PES obs. 69870
GaN, surface chem., elec. props. 103292
GaN/AlGaN heterostruct., surface chem., elec. props. 103292
GaN/sapphire HVPE films, interfacial region impurity band, SFM obs. 69518

Fermi level continued
HgCdTe MIS struct., subbands, reson. tunneling, 2DEG, tunneling current 69
HgCdTe dual-band PV detectors, computer modeling 97241
HgCdTe dual-band PV detectors, triple layer heterojunction design 109545
$HgCr_2Se_4$, inhomog. mag. semicond., large magnetoresist. form. 91698
InAs/GaSb double QW, coupled electron-hole magnetotransport 115386
InAs/InAlAs heterostructs., MBE growth, props. 103104
InGaAs/InAlAs insulated gate PHEMT with Si interface control layer 8029
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunctions, effective mass, quantum lifeti 103106
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunction, magnetotransport 91732
InGaAs-InAlAs HEMT, MBE growth, electron dens. and surface pot. 1038
InGaN QW struct., high-perform. laser operation, band-states model 11726
InGaN, tailorable band-tail, band-state model, QW laser appl. 80705
InGaP/GaAs HBT current gain charactn., heavily doped base effects an 115868
n-InP nm-sized Schottky contacts, current transport and C-V charact. 9186
InP/Pd MOS Schottky diode hydrogen sens., hydrogen sensitivity 109790
K/GaAs(001), nonmetal-metal transit., modulated photovoltage changes 1031
a-Li_xWO_3 films, polaron absorpt. obs. 93312
Na/GaAs(001), nonmetal-metal transit., modulated photovoltage chang 103179
NiAu-GaN, Schottky barrier height & surface state dens., C-V/PL meas. 1262
Si nanoparticle colloids, thin film form., high temp. single electronics 1039
Si, porous/HF-electrolyte jn., I-V/C-V charact. 80965
p-Si single emitter with real surface, temp. depend. of field-emission charac 80573
Si wafer surfaces, wet chem. treatment, microwave refl. photocond. decay mea 82305
a-Si:H films, PECVD, improved stabil. 80761
a-Si:H hot-wire CVD films, electronic states, light-induced metastability 1279
a-Si:H pin diodes, ideality factor spatial effects 92285
Si:H,F, film, polycryst., PECVD transport props. 102973
Si:P nanocryst. films, low temp. transport mechanisms *(Chinese)* 115297
SiC, 4H, 6H, proton implant. induced intrinsic defects, EPR 69995
4H-SiC MOSFET inversion layer, interface states 103869
SiC:H 6H surface passiv., hydrogenation, struct., fermi level 92020
4H-SiC(0001) Schottky barrier height, metal work fn. depend. anal. 69719
a-SiGe:H films, PECVD, props. anal. 103067
SiO_2-Si interface, trapped charge imaging, noncontact AFM 80925
SnO_2 thin films, laser CVD grown, O_2/H_2 exposure effects, XPS anal. 10134

Fermi resonance
Si nanoparticle colloids, thin film form., high temp. single electronics 1039

Fermi surface
hybrid ferromag./supercond. nanostruct., electron transport 70872

ferrimagnetic materials
see also ferrites; garnets; magnetic semiconductors
human action pattern meas. using mag. IR sens. *(Japanese)* 110658
long. mag. recording, synthetic ferrimag. media 116366
long. recording media, advanced. SNR improvements 116370
losses, modified Steinmetz eqn. 92782
phase-change and magneto-opt. media, real-time studies of mark form. pro *(English)* 72145
polycryst. ferrimag. core in alternating opp. mag. fields, special features 1273
pos. GMR in ferrimag./Cu/ferrimag. films 81845
CoNi/Gd/CoNi trilayer, interlayer coupling 81861
$CrPt_3$ chem. ordered films, mag. patterning by ion-beam irrad. 104479
$Gd_xCo_{1-x}/Gd_x/Co_{1-x}$ amorph. bilayers, interlayer exch. coupling, MOKE 1273
$SrBi_2Ta_2O_9$ ferroelec. capacitor, FRAM device fab. 70460

ferrimagnetic resonance
$BaFe_{12}O_{19}$-MgO, ferrimag. reson. linewidths, pulsed laser ablation deposit 127339
$Mn_xFe_{3-x}O_4$ ferrites, ferrimag. reson., cond. 116283

ferrite circulators
distributed ferrite microstrip line circulators, coupled mode model 69093
H-plane Y-jn. ferrite circulator, dielec. loaded, mode matching anal. 114959
materials for tunable RF/microwave devices 92866
microstrip circulator with magnetized ferrite sphere, fab. and perform. 70557
MM-wave circulator, vector-FEM anal. with SOC truncation tech. 69067
$BaFe_{12}O_{19}$ polycryst. hexaferrite platelet MMIC circulators 127393
$BaFe_{11.1}Sc_{0.9}O_{19}$ polycryst. hexaferrite platelet MMIC circulators 127393
$SrFe_{12}O_{19}$ polycryst. hexaferrite platelet MMIC circulators 127393
YIG epitaxial film, microwave circulator 69046

ferrite devices
see also ferrite circulators; ferrite filters; ferrite isolators; ferrite-loaded waveguides; ferrite phase shifters; ferrite waveguides
4-cm band latching controlled ferrite power divider 116481
BLDCM, inner rotor, ferrite bonded magnet, magnetis. 134060
ceramic chips, Cu electrode glow discharge deposition 115098
core, load effect, parallel 2-wire lines, equiv. cct. model *(Japanese)* 70546
core low cost stylus profiler, high sensitivity 86976
easy-plane anisotropy field ferrite microwave devices, radiation loss 127392
gyromagnetic media/devices design/research, EMC/ecology problems 83396
magnetised film, MSSW accel. and EM waves radiation 81914
magneto opt. tech. for beam steering by ferrite based patch arrays 105950
microwave absorber appls. 94028
MM-size transformer, batch proc., miniaturized power appl. 123547
orthoferrite plate, magneto-opt. CT 104838
pager design, new formulae 83600
patch array on ferrite substr., scanning improvement, time delay method 7265
power electronic ferrite core, DC bias, core loss *(Chinese)* 92859
power ferrites, hysteresis loops, Basso-Bertotti domain-wall-motion mod 81887
resonator, elec. excitation and bianisotropic particle realisation 70555
soft mag. cores, HF, core type/appl.-based testing 116477
three-conductor transm. lines with ferrite core attachment, model 72392
three-transformer CATV divider using bead-type ferrite core, freq.-range wide ing 131757
wireless sens. syst. using mag. field *(Japanese)* 109938
LiZnTi ferrite, microstrip resonator, mag. tunability 125672
LiZnTi ferrite substr. for Cr-Cu-Au film broadband tunable resonator 69068
MgCuZn ferrite, low temp. sintering and elec. and mag. props. 114429
MnZn ferrite, core loss calc., nonsinusoidal waveforms, Steinmetz eqn. extensi 127380
$Mn_{1-x}Zn_xFe_2O_4$ wireless ac mag. markers for motion capturing 120777

ferrite filters
MSW filter in valley-type magnetis. field, amplit.-freq. charact. 104539
$Ni_{1-x}Zn_xFe_2O_4$ multilayered common-mode filter, inner coupled meander lin 127397

ite isolators
naterials for tunable RF/microwave devices 92866
onreciprocal ferrite image guide, effective permitt. method 91185
RF ferrite isolator 85475
ltra fine isolator for portable phone, implement. using LC imped. match. ccts. 80227
ltra miniature isolator with broadband isolation using ferrite gyrator 92870
ery low loss wideband ferrite isolators for mm-wavelengths 91216
ite-loaded waveguides
irc. waveguide, hybrid spectrum, explicit eigenvalue approach 94098
EA of high power differential phase shift circulators 81913
eriodic circ. waveguide, azimuthally magnetized ferrite tube 69002
esonator, gyromagnetic medium, FDTD anal. 92796
esonator in rect. waveguide fracture, EM field 117730
ite phase shifters
irc. waveguide variable polarizer loaded with dielec. ring 70556
EM scanning 3-element array with integral phase shifters 83733
errite-ferroelec. layered struct., microwave phase shifter 114940
H-plane nonreciprocal ferrite phase shifter, improved tech. 116482
igh-power microwave pulse transm., elec. length var. 116484
naterials for tunable RF/microwave devices 92866
MM-wave semicond. phase shifters, charact. 80281
eriodic circ. waveguide, azimuthally magnetized ferrite tube 69002
ymm. stripline scanning array, ferrite phase shifters 128882
emp. characts. anal. in grooved waveguide 102568
$BaScFe_{12}O_{19}$ Sc-substituted thick films for planar integrated phase shifters 91307
/BaCuO HTSC ferrite phase shifter, latching struct. 71108
$Zn_2Ba_2Fe_{12}O_{22}$, microwave ferrite phase shifter 127395
ite waveguides
see also ferrite-loaded waveguides
2D ferrite waveguide, magnetostatic modes 104547
irc. waveguide variable polarizer loaded with dielec. ring 70556
errite-ferroelec. layered struct., microwave phase shifter 114940
garnet mag. cryst., LPE growth, SEM, XRD, EDX, RHEED 125015
layered dielec./ferrite microstrip line struct., dyadic Green's fn. calcs. 80163
onreciprocal ferrite image guide, effective permitt. method 91185
pen-end microstrip transm. line fabricated on nonreciprocal ferrite substr., FDTD anal. 125648
eriodic ferrite media, wave behavior 72435
single-channel variable pol. syst. with short switching time 75206
strip-slot waveguide, strip-down magnetostatic modes 104546
YIG ferrite circ. polarized planar array of circ. patch microstrip antennas 72668
ites
see also ferrite devices
ianisotropic composite mediums, ellipsoidal topol./orient. diversity/correl. length 104503
idirectional sinusoidal HF PWM inverter design 99820
oated cylinder, EM wave scatt., HOIBC-FMA 72224
onf. on magnetism, Recife, Brazil (Aug. 2000) 113250
depolarization dyadics of lossless gyrotropic media, improper integrals/Maxwell Garnett formalism 104504
dielec./mag. props. meas. up to 1 GHz *(German)* 125121
direct write appls., powder prod. route role 101525
EM props. of periodical arrays with small nonreciprocal inclusions 72253
epitaxial garnet ferrite films, domain struct. rearrangement 81888
films, garnet-type, VBL, dark-field microscopy geometries 116284
gyromagnetic materials for microwave appls., time domain modeling using finite integrat. tech. 125643
hexagonal ferrite-based act. rings, solitons, short MM-wave radio pulses generation 102707
ow-profile power converter using ferrite polymer composite PCB transformer 88960
material props. in MM and submillimeter wave ranges 70380
materials for tunable RF/microwave devices 92866
microstrip lin. resonator cct., ferrite substr., anisotropy 69047
microstrip lines on magnetized ferrites with arbitrarily oriented bias field, full-wave charactn. 69009
MSSW, dielec. substr./mag. loss influence on dispersion/props. 105699
multilayered ferrite cored transformer, forward-type DC-DC converter appls. 88792
omega- and chiroferrites, constitutive tensors calc. 70496
power losses meas. with DC-bias for power conversion appls. 75817
RF material charactn. using large-diam. coaxial air line 81638
superhigh dens. mag. recording, prospects *(Chinese)* 92840
thin film, reactive sputtering and mag. props. 116285
wave packet, propag., nonadiabatic interact. with localized parametric pumping 92792
Ba ferrite tapes, zero field viscosity 116382
Ba ferrites, investig. of mag. force 81828
$Ba(CoTi)_xFe_{11.9-x}Mn_{0.1}O_{19}/Ba(CoTi)_xFe_{11.9-}$ paint 77100
$BaFe_{9.1}Co_{1.4}Ti_{1.5}O_{19}$, ferrites, swift HI irrad., mag. props. 81827
$BaFe_{12}O_{19}$ ferrite powder, coprecipitation prep., mag. props. 104506
$BaFe_{12}O_{19}$, ferrites, swift HI irrad., mag. props. 81827
$BaFe_{12}O_{19}$ films, nearly intrinsic FMR linewidth 127337
$BaFe_{12}O_{19}$ hexaferrite monodispersed nanoparticles, prep., mag. props. 104505
$BaFe_{12}O_{19}$ perp. film media, FeAlSi soft mag. underlayer 127353
$BaFe_{12}O_{19}$ thin film, sputter deposited, perp. mag. recording 116318
$BaFe_{12}O_{19}$ thin films, mag. disk media 104523
$BaFe_{12}O_{19}$-MgO, ferrimag. reson. linewidths, pulsed laser ablation deposition 127339
$3Ba_{0.5}Sr_{0.5}O{\cdot}2CoO{\cdot}12Fe_2O_3$, sintering, mag. props., sintering effect, HF appl. 70497
$Ba_3Zn_2Co_{2-z}Fe_{24}O_{41}$ ferrite, citrate sol-gel proc., microwave props. 92787
Co-Bi ferrite powders/films, sol-gel method prep., mag. props. 92788
$CoFe_2O_4$ epitaxial thin films, strain tuned mag. props. 92795
CuO/Fe_2O_3:Li_2O, elec. props., precalcination temp. depend. 80747
Fe_2O_3, thermal plasma proc. 90556
Li-Mn ferrites, elec. cond. 91686
$LiZnFe_2O_4$ ferrite films, microstruct., mag. props. 81826
$M_xFe_{3-x}O_{4+\delta}$, spinel, mag. disaccommodation, nonmag. divalent substitutions 70495
Mg-Mn ferrites, elec. and mag. props. 81834
Mg-Zn-Cu ferrites prep. by sol-gel auto-combustion method, EM props. 104248
MgCuZn ferrite, low temp. sintering and elec. and mag. props. 114429
Mn ferrite substr. for freq. agile rect. microstrip antenna 72521
Mn-Zn ferrite composite materials, mag. field effect on permeab. *(Japanese)* 104501
Mn-Zn ferrite, eddy current loss anal. taking account of microstruct. *(Japanese)* 104500
ferrites continued
Mn-Zn ferrite, recycled, mag. props. and their appls. to mag. parts *(Japanese)* 104499
Mn-Zn ferrites, Er substituted, thermoelec. power 80751
Mn-Zn ferrites, microstruct. depend. of AC mag. props. 127336
Mn-Zn-Ti ferrite with Fe-poor comp. sintered in N_2, mag. props. *(Japanese)* 104502
$MnFe_{1.8}Cr_{0.2}O_4$-$BaTiO_3$ composites, AC cond., magnetoelec. effect 127155
$Mn_xFe_{3-x}O_4$ ferrites, ferrimag. reson., cond. 116283
MnZn ferrite, core loss calc., nonsinusoidal waveforms, Steinmetz eqn. extension 127380
MnZn ferrite, mag. head, phase homog. 116320
MnZn ferrites, polycryst., mag. domain struct. 92786
$MnZnFe_2O_4$ ferrite core losses, time-domain MSPM based algm. 127334
$MnZnFe_2O_4$ ferrite cores, mag. props., mech. strength 127335
Ni ferrite substr. for freq. agile rect. microstrip antenna 72521
Ni-Zn ferrite, microwave charactn. under mech. stresses 86941
NiCo ferrite substr. for freq. agile rect. microstrip antenna 72521
$NiFe_2O_4$ ferrite films, RF sputtering, struct./mag. props. 79208
$NiZnCuFe_2O_4$ ferrite powders/films, prep., struct./mag. props. 127333
$(Ni_{0.60}Zn_{0.20}Cu_{0.20})Fe_2O_4/Co_2Fe_2O_4$, sintered, struct./props. 81833
$NiZnFe_2O_4$:MnO_2 ferrites, high mag. perform. 127332
Sr ferrites, ferromag. domain structs., scanning Hall probe microscopy anal. 86465
Sr ferrites, investig. of mag. force 81828
$Sr_3Co_2Fe_{24}O_{41}$ hexagonal Z ferrite, prep., mag. props. 81829
$SrFe_{12}O_{19}$ perp. film media, FeAlSi soft mag. underlayer 127353
$SrFe_2O_4$ ferrite, GaAs RT scanning Hall probe microscopy *(English)* 104515
$SrFe_{12}O_{19}$:La,Zn ferrite thin film prep., props. and mag. recording appls. *(Chinese)* 116286
$Ti_xCo_{1+x}Fe_{2-2x}O_4$ ferrite powders, struct., mag. props 92785
V_2O_5/Ni-Cu-Zn ferrite, V_2O_5 sintering aid addit., props. effects 70494
Y ferrite substr. for freq. agile rect. microstrip antenna 72521
YBaCuO, HTS microstrip resonators with ferrite component, transm. characts. 69059
YIG:Si, ferrites, swift HI irrad., mag. props. 81827
Zn-Y hexagonal ferrite thin disk, general spin wave instabil. theory 127338
$ZnFe_2O_4$, nanocryst., influence of Fe^{3+} ions at tetrahedral sites on mag. props. 81830
$ZnFe_2O_{4-\delta}$ spinel-type thin films, cluster-glass transit. temp. 81831
$ZnFe_2O_4$:Co nanoparticles, anisotropy const., FMR 81825
ferroceramics *see ferroelectric ceramics*
ferroelastic domains *see domains; ferroelasticity*
ferroelasticity
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 2000) 100366
β'-$Gd_2(MoO_4)_3$, CZ method growth, ferroelastic/ferroelec. domains obs. 127231
PZT, fractured ferroelec. ceramics, ferroelastic domain switching, XRD anal. 104361
ferroelectric capacitors
see also ceramic capacitors
chain FRAM archit., overview/trends 90908
CMOS FRAM with chain cell struct., fully planarized, 8 Mbit 125471
empirical modeling, dual curve-fit tech. 92774
FeRAM device and cct. technols. fully compatible with advanced CMOS 102179
FRAM, 1T1C technol. 116235
FRAM, high dens., scalable sub-$10F^2$ 1T1C capacitor-on-bitline cell technol. 125470
HF C-V charact. model 90912
imprint, phys. insights, appl. to ferroelec. functional memory 70474
lattice model for thin films, surface effects, depolariz. field props. 92650
LV nonvolatile SRAM with back-up ferroelec. capacitors, 512 Kbit 125485
macro model of ferroelec. capacitor for FeRAM design *(Chinese)* 114757
memory cell, single transistor/two capacitor-type, fab./charactn. 90911
memory cells, 1T2C-type, with, array struct., write and read-out operations 70467
metal-$(PbZr_xTi_{1-x}O_3)$-(Ta_2O_5)-Si struct., NVM appl. 127279
nonlin. cct. simul. using ferroelec. capacitor model 116232
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write scheme 90910
Pt-$Ba_{0.7}Sr_{0.3}TiO_3$-Pt thin film capacitors, H_2/deuterium induced degrad. 104467
PZT etching in MORI high dens. plasma syst., pyroelec. detector array contact reliab. 103377
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
Schmitt trigger cct., SPICE model 81768
switching response simul., parallel element model 90913
thin ferroelec. films for tunable planar structs., microwave dielec. characts. 81665
thin film capacitors, cct. simul. model, AHDL implement. *(Korean)* 81786
thin film capacitors relax. mechanisms for FeRAM appl. 70471
tunable ferroelec. filters with const. fractional bandwidth, design 102531
$Ag(Ta,Nb)O_3$ thin-film low-loss variable interdigital capacitors 127273
Au/PZT/$YBa_2Cu_3O_7$/ZrO_2-Y_2O_3 heterostruct. film, KrF excimer laser ablation, XRD 101395
$(Ba,Sr)TiO_3$ ferroelec. capacitor, microwave phase shifter 125717
$(Ba,Sr)TiO_3$ thin film phase shifters on sapphire/glass substrs. 91217
$BaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$Ba_{0.25}Sr_{0.75}O_3$ ferroelec. varactors, temp. coeff. of capacitance 115054
$Ba_{0.75}Sr_{0.50}O_3$ ferroelec. varactors, temp. coeff. of capacitance 115054
$Ba_{0.4}Sr_{0.6}TiO_3$, $SrTiO_3$ 92772
$Ba_{0.7}Sr_{0.3}TiO_3$ thin films, anisotropic plasma etching, 4Gbit DRAM devices 104284
$Ba_{0.8}Sr_{0.2}TiO_3$ sol-gel derived pyroelec. film, IR detector appl. 104387
$Ba_xSr_{1-x}Ti_{1+y}O_{3+z}$, MOCVD films for high freq. tunable devices 81666
$(Ba_xSr_{1-x})Ti_{1+y}O_{3+z}$ magnetron sputter-deposited multilayer capacitors 81667
$BaSrTiO_3$ parallel plate capacitor-based periodically loaded line phase shifter 80355
$BaSrTiO_3$ thin film MOCVD growth/charactn. for HF devices 90367
$BaSrTiO_3$ thin film integrat., DRAM devices 101330
$(BaSr)TiO_3$ thin films, D doping, annealing, capacitor elec. props. 81672
$BaSrTiO_3$ tunable capacitors, enhanced dielec. props., $SrRuO_3$ buffer layer role 91175
$(Ba_{0.5}Sr_{0.5})TiO_3$:Mg films, microstruct., elec. characts. 127165
$Ba_{0.9}Sr_{0.1}TiO_3/LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
$BaSrTiO_3$-$Y_3Fe_5O_{12}$ multilayer by PLD for microwave appls. 91168
$BaTiO_3$ based capacitors, dielec. props., sintering effect 80424

ferroelectric capacitors continued
$BaTiO_3$ ceramic capacitors, NDT by PD method 116228
$BaTiO_3$ epitaxial film capacitors, improved ferroelec. hysteresis by 2-step deposition 92776
$BaTiO_3$ epitaxial thin film capacitors on Si substr., ferroelec. props. 70475
$BaTiO_3$ heteroepitaxial thin film capacitor, ferroelec. hysteresis loops, bistable states 70461
$BaTiO_3$ nonlin. capacitors, situ characterisation 69278
$BaTiO_3$/Ni based MLC capacitor, dc-elec. degrad. 127280
$BaTiO_3$-based Ni-MLCC, core-shell microstruct. and elec. props., milling proc. effect 116177
$BaTiO_3$-based ceramic capacitors, depressed DC breakdown phenom. near Curie temp. 70459
$Bi_{3.25}La_{0.75}Ti_3O_{12}$, fatigue-free behavior for ferroelec. capacitor appl. 81686
Bi_2O_3-ZnO-Nb_2O_5 multilayer capacitor, electroplating technol. 115050
Bi_2SiO_5, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Bi_4Ti_3O_{12}$, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Bi_4Ti_3O_{12}$ thin films, MOCVD-grown, rel. between Bi/Ti comp. ratio and O_2 conc. for orient. control 124938
$CaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
Ir/PZT/Ir capacitors, low-temp. fab. solely by MOCVD 127275
Ir/TaN/SiO_2 struct., MFMOS one transistor memory, electrode/barrier thermal stability 104471
IrO_x/PZT/Ir capacitor, ferroelec. memory, hydrogen sensitivity 81765
$(LaBi)_2Ti_4O_{11}$, sandwich-struct. films, charged defect motion, current transients 127272
$LaNiO_3$/PZT films, enhanced fatigue property 116147
$La_{0.5}Sr_{0.5}CoO_3$/PZT/$La_{0.5}Sr_{0.5}CoO_3$ capacitors on $SrTiO_3$/TiN buffered Si(001) 81785
$La_{0.5}Sr_{0.5}CoO_3$/$Pb_{0.9}La_{0.1}Zr_{0.2}Ti_{0.8}$/$La_{0.5}Sr_{0.5}CoO_3$ capacitors, O, deficiency, vacancy type defects form. 102775
$LiNbO_3$ MFS memory capacitor, low temp. growth 116227
$NaNbO_3$ ferroelec. films for MFOS varactors, microwave perform. 91298
Ni/BaSrTiO$_3$/Ni/TiN/Si, photoassisted MOCVD growth for DRAM appl. 101331
PLZT, H-damaged capacitors, Pt (IrO_2) top electrode, recovery charact. 104466
PLZT amorph. film deposition, crystn., ferroelec. charactn. 114260
PLZT chem.-soln.-derived thin films, imprinting behavior, thickness depend. anal. 81684
PLZT ferroelec. capacitors, zirconia incorporation, elec. fatigue 127278
PLZT, ferroelec. thin film capacitors, pulse width depend. polariz. 92773
PLZT film capacitors, dielec. relax., leakage currents 70416
PLZT thin film capacitors, elec. props., La dopant effect, 104291
PZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer effect 102774
PZT actuator, fab., high speed AFM 81625
PZT based fully MOCVD obtained epitaxial ferroelec. capacitors 70472
PZT capacitor integrat. for high dens. FRAM, electrode-barrier struct. 70463
PZT capacitor-p-n diode series connection, memory effect 81784
PZT capacitors, H-induced damage, hybrid struct. top electrodes 70462
PZT deposited on textured Pt thin films, struct. and elec. props. 92660
PZT ferroelec. capacitors, SiN_x passiv. films, catalytic CVD 124977
PZT ferroelec. thin film capacitors, leakage I-V charact. 92775
PZT ferroelec. thin films, polariz./self-polariz. 127233
PZT thin film capacitors, multi-domain Potts polar systs. 104382
PZT thin films, MOCVD, MEMS appls. 101348
PZT thin films, RF magnetron sputtering, struct./ferroelec. props. 124819
PZT thin films, growth and charact., ferroelec. polariz. charging of $YBa_2Cu_3O_7$ thin films 101182
PZT thin films with Pt/PtO_x multilayer electrode barriers for FeRAM appl. 92647
PZT, thin-film capacitor structs., excess PbO effect 104474
PZT:Nd ferroelec. thin film capacitors, sol-gel coating, LSI 102777
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
PZT/Ir/ZrN struct., heteroepitaxial growth of Ir/ZrN layered electrode heteroepitaxy on (100)Si substr., ferroelec. capacitor 101186
PZT-based 4Mbit FRAM devices, retention behavior rel. to capacitor procs. 70473
$Pb_5Ge_3O_{11}$ ferroelec. MFMOS capacitor, one transistor memory appl. 81776
$Pb_5Ge_3O_{11}$ thin film MFMOS capacitor, ferroelec. props. 104473
Pb(Nb,Zr,Ti)O_3/(La,Sr)CoO_3 ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
Pb(Nb,Zr,Ti)O_3/Pt ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
Pb(Nb,Zr,Ti)O_3/$SrRuO_3$ ferroelec. thin films, leakage, contact electrodes infl., capacitor appl. 80440
$Pb_xSr_{1-x}TiO_3$ ceramics, dielec. energy storage 78200
(PbSr)TiO_3 thin films, prep., elec. props., post-annealing, DRAM appl. 116159
PbYbNbO_3-$PbTiO_3$ capacitor thin films, pulsed laser deposited, structural/dielec. props. 92626
Pb(Zr,Ti)O_3 capacitors, ozone treatment, enhanced retention charact. 116229
$Pb_{1.1}((Zr_{0.52}Ti_{0.48})_{0.975}Al_{0.025})O_3$:Al thin films prep., sol-gel method 101411
Pb($Zr_{0.52}Ti_{0.48}$)O_3 capacitors, catalytic CVD method, SiN_x passiv. films, act. NH_3 exposure effects 101335
$PbZrTiO_3$ thin films, sputtered, ferroelec. capacitors 104295
Pt/BaSrTiO_3/Pt MIM capacitors, dielec. const., coplanar struct. 102778
Pt/Bi_2SiO_5/Si, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
Pt/$Bi_{4-x}La_xTi_3O_{12}$/Pt capacitors, ferroelec. props. degrad. 125848
Pt/$Bi_4Ti_3O_{12}$/Pt/Bi_2SiO_5/Si, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
Pt/PLZT/Pt capacitors, H-induced degrad., nanoscale investig. 104468
Pt/PZT/Pt capacitor PZT films conductive region eval., hydrogen plasma treatment 104285
Pt/Pb(Zr,Ti)O_3/Pt thin film capacitors, sputtering, RIE damage 81787
Pt/SBT/polysilicon capacitors, elec. characts., memory appl. 81780
Pt/$SrBi_{2.4}Ta_2O_9$/ZrO_2/Si MFIS-FET struct., prep., elec. props. 81277
Pt/$SrBi_2Ta_2O_9$/CeO_2/Si capacitors for ferroelec. FET, gate stacks, XRD, EDX, TEM 104472
Pt/$SrBi_2Ta_2O_9$/Pt ferroelec. thin film capacitors, room temp. aging 125849
Pt/$SrBi_2Ta_2O_9$/Pt film capacitors, hysteresis symm., data retention, γ-ray irrad. effect 104469
Pt/$SrRuO_3$/PZT/$SrRuO_3$/Pt, high endurance scalable capacitors 102771
Pt/$SrTiO_3$/Pt/Ti/SiO_2/Si capacitors, post-annealed $SrTiO_3$ thin films, prep. 68143
Pt/$YMnO_3$/Y_2O_3/Si capacitor, pulsed C/V meas., ferroelec. 102776
Pt/$YMnO_3$/Y_2O_3/Si gate capacitor MFISFET, MOCVD prep. 81662
Pt-M (M=Rh,Ir), electrode-barrier structs. for high dens. ferroelec. memories 81783
Pt-$SrBi_2Ta_2O_9$-Pt capacitor-based FRAM, imprint failure lifetime estim. 90909
SBT/Al_2O_3/Si heterostruct., PLD, ferroelec. props. 114370

ferroelectric capacitors continued
$SrBi_2Ta_{2-x}Nb_xO_9/IrO_x$ capacitors, Pt top electrode, thermal stabil., elec. pr 116233
$Sr_{0.8}Bi_{2.2}Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state ch 104286
$SrBi_2Ta_2O_2$ ferroelec. thin film capacitors, leakage I-V charact. 92775
$SrBi_2Ta_2O_9$ capacitor films, P-MOCVD, elec. props. 81669
$SrBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state ch 104286
$SrBi_2Ta_2O_9$ ferroelec. capacitor, FRAM device fab. 70460
$SrBi_2Ta_2O_9$ ferroelec. capacitor for 1 V operation in NVM 114764
$SrBi_2Ta_2O_9$ ferroelec. capacitors, polaris. modelling, temp. depend. 127271
$SrBi_2Ta_2O_9$ ferroelec. thin films, RIE, Pt/$SrBi_2Ta_2O_9$/Pt ferroelec. capacitors, e props. 104287
$SrBi_2Ta_2O_9$ film piezo/leakage defects, SPM-based nanoscale investig. 9265
$SrBi_2Ta_2O_9$ films, microscopic polariz.-switching, memory appl. 104367
$SrBi_2Ta_2O_9$ integrated ferroelec. capacitors, stress effects of inter-level die layer 70477
$SrBi_2Ta_2O_9$ on Si memory effects, buffer layer depend. 81777
$SrBi_2Ta_2O_9$ thin film capacitors, UV irrad., switchable polariz. 104464
$SrBi_2Ta_2O_9$ thin films prepared by MOD method, polariz. switching 70415
$SrBi_2Ta_2O_9$ thin films with Bi_2O_3 buffer layers by liq.-delivery MOCVD, roelec. props. 104334
$SrBi_2Ta_2O_9$ very thin capacitors, interfacial layers, dielec. props. 81781
$SrBi_2Ta_2O_9$:Nb MOCVD, integrated ferroelec. capacitors, RAM 101333
$SrRuO_3$ film, laser ablation prep., struct./elec. props., capacitor obs. 79353
$SrRuO_3$/(Ba,Sr)TiO_3/$SrRuO_3$ capacitors, gigabit DRAM, CVD, electra technols. 101329
$SrTiO_3$ epitaxial growth on epitaxial (Ti,Al)N-Si(100) substr. using Ti-bu layer 90248
$SrTiO_3$ planar capacitors, microwave nonlin., heat effect 80423
$SrTiO_3$ thin films, dielec. props., tunable YBaCuO microwave filters appl. 69
$SrTiO_3$, tunable capacitors, perform., electrode geom. effects 92772
Ta_2O_5 on CVD Ru film, DRAM capacitor appl. 115087
Ti-Al diffusion barrier layers, thin film growth and oxid. procs. 92109
$YMnO_3$ based MFSFET, annealing effect, MOCVD 101328

ferroelectric ceramics
see also piezoceramics
cathodes, emission vs. temp. and relevant phys. 80553
ceramic/epoxy composite for integral capacitors, particle packing/Cu p ing/permitt. 80441
electroceramics, conf., Portoroz, Slovenia (Sept. 2000) 100422
electromechanical deform. and fracture, review 116152
ferroelec. ceramic-(porous) polymer, connectivity, electromechanical pro 104399
ferroelec./polymer composites, embedded sens., actuators, composite stru health monitoring 101528
image IR converters based on ferroelec.-semicond. thin-layer systs. 86526
$PbTiO_3$-PMN ferroelec. ceramics/polymer composites, high dielec. co 125115
PLZT act. adjustable focus opt. correction lens, design and testing 127873
polymeric composite dielec., polaris. influence on breakdown strength 9260
powder, fine grinding, crystallinity 125086
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materi high-energy dens. 115071
(Ag,Li)(Nb,Ta)O_3 ceramics, ferroelec. props. 127176
AgPd:$BaTiO_3$ electrode/Pb-based relaxor ferroceramic cofiring charact. 79
$(As_2Se_3)_{20}(SbSI)_{80}$, elec. cond., temp./freq. effect 103064
(Ba,Sr)$Sm_2Ti_4O_{12}$ ceramics, microwave dielec. props., comp. 104396
(Ba,Sr)TiO_3 films, microwave two-pole reson. struct., freq. response 80255
(Ba,Sr)TiO_3 porous ceramics, effect of atmos. on PTCR charact. 81714
$BaBi_2M_2O_9$ (M=Ta,Nb) perovskites, relaxor props. 104344
$BaBi_2Nb_2O_9$ ceramics, dielec. relax. 92631
$BaBi_4Ti_4O_{15}$:Nb(Fe), ferroelec./elec. props., doping depend. 104347
$(Ba_{1-x}Ca_x)(Ti_{0.99-y}Zr_yMn_{0.01})O_3$, microstruct., dielec. props. 104305
$Ba_{0.96}Ca_{0.04}Ti_{0.84}Zr_{0.16}O_3$:Mg thin films, metalorganic decomp., dielec. pro 70390
$Ba_xSmTi_{3-x}Zr_xNb_2O_{30}$ ferroelec. ceramics, phase transit. 81718
$Ba_{0.25}Sr_{0.75}O_3$ ferroelec. varactors, temp. coeff. of capacitance 115054
$Ba_{0.75}Sr_{0.50}O_3$ ferroelec. varactors, temp. coeff. of capacitance 115054
$Ba_{0.6}Sr_{0.4}TiO_3$ dielec. props. and microstruct., tunable phase shifter appls. 1161
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$(Ba_xSr_{1-x})Ti_{1+y}O_{3+z}$ magnetron sputter-deposited multilayer capacitors 81667
$Ba_{1-x}Sr_xTiO_3$:Sb_2O_3, semicond. ceramics, PTCR effect enhancement 126326
$BaSrTiO_3$:Ni ceramics, O vacancies, dyn. behavior, TSC obs. 127224
$Ba_{0.9}Sr_{0.1}TiO_3$/$LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
$Ba_{0.6}Sr_{0.4}TiO_3$-MgO thick films for microwave appl., electrophoretic deposit 91169
$Ba_{1-x}Sr_xTiO_3$-Al_2O_3-MgO ferroelec. composite, dielec. prop., sol-gel synthe 114448
$BaTiO_3$ based ceramics, CuO as sintering agent 68405
$BaTiO_3$ ceramics, ferroelec. props., poling field depend. 127223
$BaTiO_3$ fine powder, sol-cryst. method prep., spark-plasma-sintering 79431
$BaTiO_3$ nanocryst. powder, influence of pH value on props. 114469
$BaTiO_3$ powders, prep. using supercritical CO_2 drying of gels 79438
$BaTiO_3$, rare-earth and Mn substituted, occupational sites and dielec. pro 116176
$BaTi_4O_9$, Zn-B-O glass addit. effect on sintering temperture & microwave pr 68994
$BaTiO_3$:Hf,Zr, pure and doped ferroelec. ceramics, aging effects 92624
$BaTiO_3$/$SrTiO_3$ PLD multilayers, structural and dielec. props. 81659
$BaTiO_3$/epoxy composites, multi-doped, dielec. behaviour, PWB appl. 8167
$BaTiO_3$-$SrTiO_3$ syst., functionally graded struct., microstruct., dielec. pro 116178
$BaTiO_3$-based Ni-MLCC, core-shell microstruct. and elec. props., milling pr effect 116177
$Bi_{3.25}La_{0.75}Ti_3O_{12}$, fatigue-free behavior for ferroelec. capacitor appl. 81686
$(Bi_{1/2}Na_{1/2})TiO_3$ ferroelec. ceramics, elec. props., additive effects 104343
$(Bi_{1/2}Na_{1/2})TiO_3$-$KNbO_3$ ceramics, struct./dielec. props. 127227
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effe anal. 92630
$Bi_2(Zn_{1/3}Nb_{2/3})_2O_7$ electroceramics, bulk/film, dielec. props. 116173
$Ca(Li_{1/3}Nb_{2/3})O_{3-\delta}$ ceramics, low-temp. sintering, microwave dielec. pro 127184
$Cd_2Nb_2O_7$ ceramics, dielec. props., DC bias effects 104339
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$ crysts., growth, characterisation 117471
$KTiOPO_4$ quasi-phase matching cryst., SHG SNOM/SFOM 82914
$Li_2B_4O_7$-$SrBi_2Ta_2O_9$ glass ceramic, NLO and ferroelec. behavior 82024

oelectric ceramics continued
$(Na_{0.5}Bi_{0.5})_{1-x}M_xTiO_3$ ceramics, (M=Pb,Sr or Pb+Sr), dielec. props. near morphotropic phase boundary 70424
$Na_{0.5}Bi_{0.5}TiO_3$-$PbTiO_3$-$(K_{0.5}Bi_{0.5}TiO_3)$ ceramics, relaxor props. 104348
$NaNbO_3$ crystallite containing BSG glass-ceramic, opt. limiting behavior 93775
Ni-tungstates, hydrothermal synthesis, modeling/thermodyn. calcs. 116180
PLZT bulk/thin film photostrictive mater. fab., actuator design 104332
PLZT ceramics Fabry-Perot interferometers for vis. and mid-IR lasers 105458
PLZT ceramics, high-energy ball milling prep. 79439
PLZT ceramics, organometallic prep., microstruct. 101486
PLZT ceramics, relaxor material, lin./nonlin. dielec. const., bias elec. field effects 104345
PLZT chem.-soln.-derived thin films, imprinting behavior, thickness depend. anal. 81684
PLZT, hydrolysis/condensation of acetate precursors 79435
PLZT relaxor ceramics, nonlin. dielec. response, DC bias elec. field 104346
PLZT/$(LaSr)_2CuO_4$ perovskite ferroelec. FET, strongly modulated cond. obs. 81338
PMN-PNN-PZT:Ag ceramics, prep., dielec./ferroelec. props. 127205
PMN-$PbTiO_3$ patches charactn., plate struct. act. vibr. control 116230
PMN-$PbTiO_3$:La ceramics, large sig. minor loop behaviour 104326
PMN-based relaxor ferroceramics, Ni electroplating, resist. degrad. and recovery 104308
PZT actuator, current jump phenom., surrounding media nonlin. damping 104444
PZT capacitor integrat. for high dens. FRAM, electrode-barrier struct. 70463
PZT ceramics, Nb-doped, effects of Sr substitution 104355
PZT ceramics derived from oxide mixture treated by high-energy ball milling proc. 114430
PZT ceramics, hot-press hybrid sintering, dielec./mech. props. 125087
PZT ceramics, internal friction, O vacancies, domain boundaries *(Chinese)* 70400
PZT ceramics, nanocrystalline ferroelec., props. 104356
PZT ceramics, reactive sintering prep., high energy ball milling 90558
PZT devices and thick films, net shape fab. 114439
PZT films, RF magnetron sputtered, struct./elec. props. 81706
PZT films, sol-gel derived, mech./elec. fatigue 81705
PZT fine powders prep., PVA evap. route, heat treatment and charactn. 90591
PZT, fractured ferroelec. ceramics, ferroelastic domain switching, XRD anal. 104361
PZT, hydrolysis/condensation of acetate precursors 79435
PZT sol-gel derived films, ohmic cond./activation energy, temp. depend. 92645
PZT thin film, ferroelec. prop., bipolar pulse poling & space charge field 104359
PZT thin films with Pt/PtO_x multilayer electrode barriers for FeRAM appl. 92647
PZT:La,Mg,F,Mn ceramics, dielec./piezoelec. props. 104352
PZT:Mn,W,Sb,Ni ceramics, prep., microstruct./dielec. props. 101487
PZT:Nb ceramics, prep., microstruct., ferroelec. props. 104351
PZT-PNN piezoceramics, prep., dielec. props., transducer appl. 104353
PZT-$Pb(Ni_{1/3}Nb_{2/3})O_3$ piezoceramic, prep., med. appl. 101484
Pb based ferroelec. ceramic multilayer, Ag/Pd cofired, Ag vap. diffusion 79437
Pb complex perovskite ferroelec. ceramics, WO_3 doping, dielec. props. 81712
Pb-based relaxor ferroelec./Ag-Pd, interfacial interact., electrode formulation, cofiring mismatch 104304
$Pb[(Mg,Zn)_{1/3}(Ta_{0.8}Nb_{0.2})_{2/3}]O_3$, phase develop., dielec. props. 81692
$PbB'B''O_3$ ferroelec. solid solns., dielec. nonlin. 70413
(PbBa)(ZrTi)O_3:Bi_2O_3 cathode electron injection for ion source improvement 104340
$Pb(Fe_{1/2}Nb_{1/2})O_3$-PMN, struct., dielec. props., proc. routes 68403
$Pb(In_{1/2}Nb_{1/2})O_3$ powders, chem. prep. method 114443
(PbLa)TiO_3 thin films, modified jet-vap. deposition, pyroelec. props, IR sens. appls. 70398
$PbMg(Fe)NbO_3$ ceramics, semiwet hydroxide route, dielec. props. 125078
$Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics, sol-coated, struct.-property rels. 116181
$Pb(Mg_{1/3}Nb_{2/3})O_3$, relaxor electroceramic films, PLD 114374
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ ceramics, mech. quality factor 92651
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ relaxor ferroelec., MnO_2 addit., piezoelec. props. 104357
$PbMgNbO_3$-$PbTiO_3$ ceramics, phase conversion, morphotropic phase boundary 104269
$PbNb_2O_6$ ceramics, anelastic relax., defect interacts. 104270
$Pb(Ni_{1/3}Nb_{2/3})O_3$-$PbZrO_3$-$PbTiO_3$ ceramics, ferroelec. domain structs., TEM obs. 104271
$Pb(Sc_{1/2}Nb_{1/2})O_3$, relaxor ferroelec., phase transit., chem. order influence 127200
$Pb(Sc_{1/2}Nb_{1/2})O_3$-PMN-$PbTiO_3$ single crysts., modified Bridgman growth and charactn. 79191
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ ceramics, mech. quality factor 92651
(PbSr)$(Ni_{1/2}W_{1/2})O_3$-$Pb(Mn_{1/3}Nb_{2/3})O_3$ -$Pb(Zr,Ti)O_3$ ceramics, microstruct./elec. props. 81689
$Pb_xSr_{1-x}TiO_3$ ceramics, dielec. energy storage 78200
$PbTiO_3$-based ceramics, low temp. sintered, piezoelec. props. 81717
$Pb(Zn_{1/3}Nb_{2/3})O_3$-based ceramics, domain struct., annealing atmos. effect 116160
$Pb(Zr,Sn,Ti)O_3$ ceramics, elec. field-induced antiferroelec.-ferroelec. transit. *(Chinese)* 116167
$PbZr_{0.5}Ti_{0.5}O_3$ thin films, chem. soln. deposition epitaxial growth and props. 90497
$PbZr_xTi_{1-x}O_3$ epitaxial films, near-field second harmonic imaging 82915
$Pt/Bi_{4-x}La_xTi_3O_{12}/Pt$ capacitors, ferroelec. props. degrad. 125848
$Pt/SrBi_2Ta_2O_9/Pt$ ferroelec. thin film capacitors, room temp. aging 125849
SbSI ferroelec. electroceramics, microwave/far IR studies 104349
$Sr_{0.8}Bi_{2.3}(Ta_{1-x}Nb_x)_2O_{9+\alpha}$ thin films, sol-gel prep. and elec. props. 81719
$SrBi_2Ta_2O_9$ ferroelec. single crysts., high-temp. soln. growth and charactn. 92659
$SrBi_2Ta_2O_9$, A-site-modified by Ca(Ba), ferroelec. props., struct. distortion 127191
$SrBi_2Ta_2O_9$ capacitor films, P-MOCVD, elec. props. 81669
$SrBi_2Ta_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2Ta_2O_9$, soluble Ta(V) precursor aq. sol-gel synthesis 114444
$SrBi_2Ta_2O_9$ thin film, plasma etching, XPS/SIMS 116149
$SrBi_2(Ta_{0.9}V_{0.1})_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2Ta_{1.8}V_{0.2}O_9$ ferroelec., O-vacancy-related dielec. relax. 70396
$SrBi_2(V_{0.1}Nb_{0.9})_2O_9$ ceramics, ferroelec. props., O_2 annealing 116165
$SrTiO_3$ epitaxial films, strain-induced ferroelec. 70423
$SrTiO_3$ powders, hydrothermal prep., particle size 125083
$SrTiO_3$ single-cryst. and ceramic, microwave permitt. meas. 70429
$SrTiO_3$-$PbZrO_3$ solid soln., ferroelec. phase transit. 104350
Ta_2O_5 thin film, growth & precursor props., MOCVD/XRD 114364
$Zr_xTi_{1-x}O_4$ ceramic, comp., sinterability, microstruct., microwave dielec. props. 127154
$ZrTiO_4$ powders for microwave components, aq. synthesis and sintering 101492

ferroelectric Curie temperature
low-sintering composite MLC capacitors, X7R specif. 80454
P(VDF/TrFE) copolymers, electron irrad., ferroelec. relax. 104400
p(VDF/TrFE) ferroelec. copolymer film, transverse sound vel. 127186
PVDF/trifluoroethylene copolymers, electron irrad. effects, NMR, naval transducer appl. 127209
PVDF/trifluoroethylene/hexafluoropropene terpolymers, synthesis/elec. props. 125105
(Ba,Sr)TiO_3 films, permitt./microstruct. temp./elec. field response 92658
(Ba,Sr)TiO_3 thin films, epitaxial growth, ferroelec. props. 79206
$BaBi_4Ti_4O_{15}$:Nb(Fe), ferroelec./elec. props., doping depend. 104347
$Ba_{1-x}Ca_xTi_{1.02}O_3$ ceramic, PTC thermistor, elec. props. 80410
$BaTiO_3$, rare-earth and Mn substituted, occupational sites and dielec. props. 116176
$BaTiO_3$ thin films and powders by an aq. sol-gel proc., prep., struct., dielec. props. 68336
$BaTiO_3$:Hf,Zr, pure and doped ferroelec. ceramics, aging effects 92624
$BaTiO_3$-based ceramic capacitors, depressed DC breakdown phenom. near Curie temp. 70459
Bi layer-struct. ferroelec. single crysts., ferroelec. props. struct. depend. 127199
$(Bi_{1/2}Na_{1/2})TiO_3$ ferroelec. ceramics, elec. props., additive effects 104343
$(Bi_{1/2}Na_{1/2})TiO_3$-$KNbO_3$ ceramics, struct./dielec. props. 127227
a-$Bi_4Ti_3O_{12}$, crystn. proc., dielec. props. effects 127192
$KLiNbO_3$, TSSG growth, blue SHG charact. 82913
$Li_xTa_{1-x}O_3$ single cryst., growth, opt. props., ferroelec. T_c 114212
$(Na_{1/2}Bi_{1/2})TiO_3$-$BaTiO_3$ cryst., growth, struct., dielec. prop. 127183
PZT ceramics, Nb-doped, effects of Sr substitution 104355
PZT ceramics, hot-press hybrid sintering, dielec./mech. props. 125087
PZT ceramics, internal friction, O vacancies, domain boundaries *(Chinese)* 70400
PZT fibers, effect of heating temp. on dielec. props. 70425
PZT-$Pb(Ni_{1/3}Nb_{2/3})O_3$ piezoceramic, prep., med. appl. 101484
$Pb_{1.1}(Al_{1/2}Nb_{1/2})O_3$-$Pb_{1.1}TiO_3$ films, chem. soln. deposition, elec. props. 81688
$Pb(Fe_{1/2}Nb_{1/2})O_3$-PMN, struct., dielec. props., proc. routes 68403
$Pb_5Ge_3O_{11}$, ferroelec. films, sol-gel proc., charactn. 90483
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substitution 104311
(PbSr)$(Ni_{1/2}W_{1/2})O_3$-$Pb(Mn_{1/3}Nb_{2/3})O_3$ -$Pb(Zr,Ti)O_3$ ceramics, microstruct./elec. props. 81689
$PbTi_{0.6}Zr_{0.4}O_3$ films, spray pyrolysis prep., dielec. props. 90533
$Pb(Yb_{1/2}Nb_{1/2})O_3$-$PbTiO_3$, cryst. growth, dielec. props. 124790
$PbZrO_3$ antiferroelec. thin films, pulsed excimer laser ablation 79356
SbSI ferroelec. electroceramics, microwave/far IR studies 104349
$Sr_xBa_{1-x}Nb_2O_6$ films, PLD, dielec. props. 114378
$SrBi_2Ta_2O_9$, A-site-modified by Ca(Ba), ferroelec. props., struct. distortion 127191
$SrBi_2Ta_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_2(Ta_{0.9}V_{0.1})_2O_9$, ferroelec. ceramics, elec. impedance props. 104342
$SrBi_4Ti_4O_{15}$ single crysts., dielec./ferroelec. props. 92629
$SrBi_2(V_{0.1}Nb_{0.9})_2O_9$ ceramics, ferroelec. props., O_2 annealing 116165
$Sr_{1-x}Ca_xBi_2Ta_2O_9$ ceramics, dielec./piezoelec./ferroelec. prop. 127182

ferroelectric devices
see also ferroelectric capacitors; ferroelectric displays; ferroelectric storage
2D-area/3D-vol. holographic opt. storage nanotechnology 93877
conf., ferroelec. thin films, Boston, MA, USA (Nov.-Dec. 1999) 89554
electroactive polymers, compliant actuators, appls. 125102
electron gun for high power microwave sources 102914
ferrite-ferroelec. layered struct., microwave phase shifter 114940
ferroelec. FET, I-V charact. 81772
ferroelec.-gate FET memory, memorized states retention anal., leakage current effects 81774
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 2000) 100366
high-power microwave generation, using ferroelec. cathode electron gun 101844
image IR converters based on ferroelec.-semicond. thin-layer systs. 86526
image-memory LCD with ferroelec. film 86877
metal-$(PbZr_xTi_{1-x}O_3)$-(Ta_2O_5)-Si struct., NVM appl. 127279
metal/ferroelec./insulator/semicond. struct., polariz. stabil. 126237
metal/$SrBi_2Ta_2O_9/CeO_2$ read-disturb-free ferroelec. gate FET memory 81773
microbolometer arrays, thin film ferroelec. materials use 109540
multilayer ferroelec./continuous transverse stub phase shifters and phased antenna arrays 80306
multilayered microstrip antenna, voltage-controlled ferroelec. thin tape 128874
PZT amorph. thin film hydrogen gas sens. 97535
sens. advances & emerging technol., review 131881
smart antennas, null pattern synthesis 83769
tunable bandpass filter, K-band appls. 70465
tunable dielec. resonator with ferroelec. element 102574
tunable RF and microwave devices, materials issues, conf., Boston, MA, USA (Nov/Dec 1999) 78445
Au-BaSrTiO$_3$ thin film ferroelec. phase shifters, anal./optim. 80296
Au-SrTiO$_3$ thin film ferroelec. phase shifters, anal./optim. 80296
(Ba,Sr)TiO_3 ceramic films, microwave props., phase shifters 80253
(Ba,Sr)TiO_3 ferroelec. bolometer on micromachined Si, uncooled IR sens. 109629
$Ba_{0.6}Sr_{0.4}TiO_3$ ferroelec. thin-film based elec. tunable Ku-band CPW components 80225
$Ba_xSr_{1-x}TiO_3$, thin film tunable microwave components, current status, appls. 81663
BaSrTiO$_3$ ferroelec. tunable pre-select filter/LNA hybrid cct., perform. 91362
(Ba)SrTiO$_3$ film ferroelec. planar varactors, microwave props. 80422
BaSrTiO$_3$-based phase shifters, RT, for electronically steerable antennas 83757
$BaTiO_2$ ferroelec. packed-bed barrier discharge reactor, C_2F_6 removal 122710
PLZT/$(LaSr)_2CuO_4$ perovskite ferroelec. FET, strongly modulated cond. obs. 81338
PMN-$PbTiO_3$ patches charactn., plate struct. act. vibr. control 116230
PZT based ferroelec. thick film actuator on Si, prep. by screen-printing 127277
PZT:La thin films on NiTi alloys, SME, PLD 101390
Pb based ferroelec. ceramic multilayer, Ag/Pd cofired, Ag vap. diffusion 79437
Pb_2ScTaO_6 sputtered thin films for dielec. bolometer mode thermal detector arrays 87014
Pt/SBT/CeO_2/Si(100) gate stacks, LV ferroelec. field effect devices 81775
SiGe and ferroelec. microwave devices, data commun. 74537
$YBa_2Cu_3O_7$-$SrTiO_3$ thin film ferroelec. phase shifters, anal./optim. 80296

ferroelectric displays
alignment with hybrid LPP-photoaligned polymer networks 97643
polymer-stabilized FLCD cell, FSC matrix display 97623
reflective storage FLC display, ultralow power consumption, high-defn. *(English)* 121092

ferroelectric domains *see electric domains*
ferroelectric-filled waveguides *see dielectric-loaded waveguides*
ferroelectric hysteresis *see dielectric hysteresis*
ferroelectric liquid crystals
alignment over CMOS-based microdisplay backplanes 104828
analog SLM, dyn. complex wave-front modulation 82291
bistable coupled-waveguide switch using SSFLC layer 93163
chiral smectic C wedge-shaped confined geom., chevron texture, defects 121079
conf., ferroelec. materials and their appls., Kyoto, Japan (May-June 2001) 124199
conf., Liquid crysts., chem., phys., appls., Krynica, Poland (Sep. 1999) 100412
defect-free ferroelec. LCD, fab., C-1/C-2 uniform states 104834
dual-conjug. adaptive optics 128786
elastomers as piezoelec. devices 127219
ferroelec./antiferroelec. liq. cryst. opt. PM 104826
field seq. high-resoln. CRT using liq. cryst. colour shutter 121112
FLC SLM free-space opt. switch, computer-controlled adaptive beam steering 116837
helical ferroelec. liq. cryst. cells, 2nd harmonic generation, special phase matching 93820
large optics real-time holographic compensation in space-based opt. systs. 105605
LCD characts., surface alignment, polymer stabilisation effects 127839
multi-dimens. liq. cryst. optics, num. modelling, FDTD method 82228
multidomain surface stabilized FLC display, grey scale mechanism *(Chinese)* 97636
4-oetyloxy-4-(2-methylbutyloxy)carbonyl-phenylbenzoate FLC, collective dyn. modes 92623
photochromic ferroelec. liq. cryst., opt. recording 71247
polymer pass. slab waveguide integrat. with FLC EO modulator 127806
polymer stabilized FLC display device exhibiting V-shaped electrooptic characts. 121080
polymer-stabilised CLC texture films, FLC doped, electro-opt. characts. 86807
polymer-stabilized cholesteric texture films doped with SmC* 82232
polymer-stabilized FLC, microsized bistable domains, monostable V-shaped switching 127840
polymer-stabilized FLCD cell, FSC matrix display 97623
reflective storage FLC display, ultralow power consumption, high-defn. *(English)* 121092
reflective type opt. addressed liq. cryst. SLM, holographic correction 105607
self-aligning 2×2 fiber optic switch wavelength routing module 116834
SSFLC/AFLC display, matrix addressing, multichannel waveform generator 109911
stripe-shaped domains, SLM appl. 93242
surface stabilised ferroelec. liq. cryst. device, time-resolved X-ray scatt. 121078
surface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
surface-stabilized FLCs, dyn. at alignment layer surface, total-refl. ellipsometry 75793
zigzag-defect-free ferroelec. LCD, fab., electrooptic perform. 104833
ferroelectric materials
see also antiferroelectric materials; electric domain walls; ferroelectric ceramics; ferroelectric liquid crystals; ferroelectric semiconductors; ferroelectric thin films; ferroelectric transitions
A_2MX_4 incommensurate phase ferroelec. crysts., digital recording 127562
act. FSS with ferroelec. substrs. 83188
conf., Kyoto, Japan (May-June 2001) 124199
domain distrib. meas., scanning nonlin. dielec. microscopy 104278
domains/local cryst. anisotropy, scanning nonlin. dielec. microscopy 104391
electroactive polymers, compliant actuators, appls. 125102
electroactive polymers, conf., Boston, MA, USA (Nov.-Dec. 1999) 100427
ferroelec., nonlin. optic coeffs. 105490
ferroelec. thin films for opt. appls. 81697
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 2000) 100366
glycine phosphite crysts., ferroelec. phase transit., acoustic/dielec. anoms. 104337
metal-($PbZr_xTi_{1-x}O_3$)-(Ta_2O_5)-Si struct., NVM appl. 127279
mixed syst. ferroelec. relaxors, random field model 116143
MM and submillimeter wave range props. 70380
multidomain ferroic samples, engng. 104383
P(VDF-TrFE) electrostrictive copolymer, electromech. coupling factor 104325
P(VDF/TrFE) copolymers, electron irrad., ferroelec. relax. 104400
p(VDF/TrFE) ferroelec. copolymer film, transverse sound vel. 127186
PANI:HCSA, elec. cond., PVDF/poly trifluoroethylene/PANI electromechanical syst., dielec. props. 125108
perovskite ferroelec., morphotropic phase boundary, tetragonal side, switching anal. 116157
piezoelec./ferroelec. materials, complex meas., universal apparatus 86911
poly(vinylidene fluoride-trifluoroethylene) highly electrostrictive networks 127161
poly(vinylidene-fluoride hexafluoropropylene) copolymer, electrostrictive response 127207
polymers, electrets, materials, develop. 81711
polymers nonelectrical poling, surface energy poling 127214
PVDF ferroelec. polymer clad hollow THz waveguide 69010
PVDF LB films, 2D ferroelec., phase transits., SHG obs. 81698
PVDF-trifluoroethylene copolymer, pyroelec. dyn. 127210
PVDF-trifluoroethylene copolymer films, electron irrad., electromech. 127208
PVDF-trifluoroethylene copolymers, ferroelec. phase transit., struct. 125103
PVDF-trifluoroethylene copolymers, structural/transitional props., high energy electron irrad. 125104
PVDF-trifluoroethylene/graft elastomer blends, ferroelec./piezoelec. props. 127212
PVDF/trifluoroethylene copolymers, electron irrad. effects, NMR, naval transducer appl. 127209
PVDF/trifluoroethylene copolymers, ferroelec. switching, nucleation 127211
PVDF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. props., XRD 127206
PVDF/trifluoroethylene/hexafluoropropene terpolymers, synthesis/elec. props. 125105
pyridinium periodate ferroelec., transits., NIR FT Raman study 104368
radioelectronic sens. based on ferroics, nonlin. props. 116162
relaxor ferroelec., dielec. response modelling 92622
single cryst. piezoelec., US transducer appls. 104331
smart materials, nonlin. props. 116150
TGS cryst., SW absorpt. 91178
thin film integrated capacitors, paraelectric and ferroelec. materials as dielec. 91414
thin films, conf., Boston, MA, USA (Nov.-Dec. 1999) 89554
ferroelectric materials continued
transit. metal oxide ferromag.-ferroelec. superlattices, laser MBE *(Japane* 92799
tunable RF and microwave devices, materials issues, conf., Boston, MA, U (Nov/Dec 1999) 78445
$Ag/Pb(Zr_{0.53}Ti_{0.47})O_3/YBa_2Cu_3O_{7-\delta}$ fabrication, field effect/polaris. chara 104389
$Ag/Pb(Zr_{0.53}Ti_{0.47})O_3$/ultrathin-$SiO_2$/Si fabrication, field effect/polaris. chara 104389
$Ag(Ta,Nb)O_3$ thin-film low-loss variable interdigital capacitors 127273
$(Ba,Sr)TiO_3$ MOCVD thin films deposited on Ru electrodes, leakage curr charact. 81690
$(Ba,Sr)TiO_3$ dielec. film, two-step annealing, TiN barrier props., post-treatm temp. effect 92662
$(Ba,Sr)TiO_3$ film, MOCVD growth, annealing proc. optimisation 70403
$(Ba,Sr)TiO_3$ film, low temp. MOCVD with $Ti(mpd)(tmhd)_2$ Ti-source 1013
$(Ba,Sr)TiO_3$ film quality, MOCVD on RuO_2 bottom electrodes, thermodyn. sta 90421
$(Ba,Sr)TiO_3$ films, ICP etching, surface damage 104277
$(Ba,Sr)TiO_3$ films prepared by liq. source CVD, at. incorporation rates, surf reacts. 79285
$(Ba,Sr)TiO_3$ thin films, epitaxial growth, ferroelec. props. 79206
$(Ba,Sr)TiO_3/Y_2O_3$-ZrO_2 films, metal-ferroelec.-insulator-semicond. memo 81779
$Ba_{(1-x)}Pb_xTiO_3$, hydrothermal synthesis 68414
$BaSrKNaNb_5O_{15}$:Ce,Co, CZ growth, photorefr. effect, holographic stora 104604
$(Ba_{0.5}Sr_{0.5})TiO_3$ films, leakage current, resist. degrad. 81660
$Ba_{0.7}Sr_{0.3}TiO_3$ film, microdomains charactn./form. mechanism, HREM o 104384
$Ba_{0.7}Sr_{0.3}TiO_3$ thin films, sol-gel tech. prep., props. 104381
$Ba_{0.8}Sr_{0.2}TiO_3$ film, modified sol-gel proc., struct./ferroelec. props. *(Chine* 116141
$Ba_{0.8}Sr_{0.2}TiO_3$ sol-gel derived pyroelec. film, IR detector appl. 104387
$Ba_{1-x}Sr_xTiO_3$, film, MOCVD, uncooled IR image sens., dielec. bolometer mo 86530
$Ba_xSr_{1-x}TiO_3$, film, modified sol-gel tech. prep. 68346
$(BaSr)TiO_3$ MOCVD thin films, RTA, elec. props. 70422
$BaSrTiO_3$, ferroelec., CTS antenna array, 2D beam steering 72641
$(Ba)SrTiO_3$ film ferroelec. planar varactors, microwave props. 80422
$(BaSr)TiO_3$ films, MOCVD, oxid. react. anal. 124906
$BaSrTiO_3$ films, sol-gel derived, grain oriented, phase shifter appl. 90486
$(Ba_{0.5}Sr_{0.5})TiO_3$:Al thin films, PLD, transient anal. 92655
$(Ba_{0.5}Sr_{0.5})TiO_3$:La film, leakage current reduction by graded-layer La dopi 92621
$(Ba_{0.4}Sr_{0.4})TiO_3$:Mg films, microstruct., elec. characts. 127165
$(Ba_{0.7}Sr_{0.3})TiO_3$:Mg,La(Nb) film, elec. props., co-dopants effects 116156
$BaTiO_3$ cryst., ferroelec. polariz., scanning nonlin. dielec. microscopy 12115
$BaTiO_3$, displacement charge patterns, domain wall dyn. 104288
$BaTiO_3$, epitaxial growth on $SrTiO_3$, surface comp. deviation effects 12484
$BaTiO_3$ epitaxial thin film capacitors on Si substr., ferroelec. props. 70475
$BaTiO_3$, film, lattice deform., polariz., FLAPW calcs. 127190
$BaTiO_3$, film, sputtered, piezoelec. effect. 116174
$BaTiO_3$ films, laser-deposited, dielec./ferroelec. props., O-content effect 816
$BaTiO_3$ heteroepitaxial thin film capacitor, ferroelec. hysteresis loops, bistal states 70461
$BaTiO_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$BaTiO_3$, nanocrystalline perovskite powder systs., hydrothermal synthesis 684
$BaTiO_3$ sol-gel derived thin film on ITO-glass, ferroelec. props. 70418
$BaTiO_3$ thin film on $SrTiO_3$, MBE growth in UHV without introducing oxid 68200
$BaTiO_3$ thin films and powders by an aq. sol-gel proc., prep., struct., diele props. 68336
$BaTiO_3$ waveguides, PLD epitaxy on MgO buffer layers on sapphire 79361
$BaTiO_3/Ba_{0.6}Sr_{0.4}TiO_3$ polycryst. multilayered films, dielec. enhancement, Ma well-Wagner effects 127203
$BaTiO_3$-based ceramic capacitors, depressed DC breakdown phenom. near Cu temp. 70459
Bi layer-struct. ferroelec. single crysts., ferroelec. props. struct. depend. 1271
$Bi_{3.25}La_{0.75}Ti_3O_{12}$ film, elec. props., metal-ferroelec.-insulator-semicond. stru appl. 104335
$Bi_{4-x}La_xTi_3O_{12}$, cryst. growth and charactn. 124791
$Bi_{4-x}La_xTi_3O_{12}$ films, chem. soln. deposited, charactn. 70402
$Bi_{4-x}La_xTi_3O_{12}$ thin film, phys. and elec. props., effects of bottom electrod 127172
$Bi_{4-x}Pr_xTi_3O_{12}$, ferro-paraelectric transits., photoacoustic tech. 104267
a-$Bi_4Ti_3O_{12}$, crystn. proc., dielec. props. effects 127192
$Bi_4Ti_3O_{12}$ ferroelec. films on Si(100) with Si oxynitride ultrathin buffer lay 127171
$Bi_4Ti_3O_{12}$ film, electronic struct., soft-X-ray emission spectrosc. 127188
$Bi_4Ti_3O_{12}$ films, sputtered, struct./ferroelec. props. 81694
$Bi_4Ti_3O_{12}/Bi_2SiO_5/Si$ struct., prep. by metal organic decomp. tech. 127170
$Bi_4Ti_3O_{12}/SrTiO_3/Ce_{0.12}Zr_{0.88}O_2/Si$ epitaxial struct., PLD prep. 68301
Bi_2WO_6 thin films, MOCVD, ferroelec. props. 90366
$CaBi_2Ta_2O_9$ thin films, PLD, dielec. props. 101394
$CaBi_2Ta_2O_9$ ferroelec. films, PLD, dielec. props. 79350
$Cs_2Nb_4O_{11}$ cryst., growth, elec./dielec. props. 90205
$CsTiOAsO_4$, top seeded soln. growth 68106
β'-$Gd_2(MoO_4)_3$, CZ method growth, ferroelastic/ferroelec. domains obs. 1272
Ir/TaN/SiO_2 struct., MFMOS one transistor memory, electrode/barrier therm stability 104471
KH_2PO_4 ferroelec. crysts., LF dielec. dispersion 92636
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$, ferroelec., SHG 82886
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$, single-cryst. fibers, domain struct. 127185
$K_3Li_2Nb_5O_{15}$ crysts., ferroelec. freq. doubling material, growth and SHG prop 71211
$KLiNbO_3$, TSSG growth, blue SHG charact. 82913
$KLiNbO_3$ cryst. freq.-doubling props. *(Chinese)* 72002
$[K_{1-x}(NH_4)_x]_2SO_4$, mixed crysts., disloc. etch pits 127202
$KNbO_3$ cryst., ferroelec., aq. soln. growth 124789
$KNbO_3$, displacement charge patterns, domain wall dyn. 104288
$KNbO_3$, ferroelec. single crysts., poling treatment and piezoelec. props. 1271
$KTa_{1-y}Nb_yO_3$ disordered ferroelec. crysts., dielec. const. 127234
$KTiOAsO_4$, top seeded soln. growth, charactn. 68110
$KTiOPO_4$ crysts. for NLO converters, ferroelec. domain config. 116166
$KTiOPO_4$, quasiperiodic opt. superlattice, elec. poling, switching 104393
$(LaBi)_2Ti_4O_{11}$, sandwich-struct. films, charged defect motion, current transien 127272
$LaNiO_3$/PZT films, enhanced fatigue property 116147

roelectric materials continued
La_2O_3-B_2O_3-GeO_2 transparent surface crystallized glasses with stillwellite-type LaBGeO$_5$, SHG 71989
$La_{0.5}Sr_{0.5}CoO_3$/$Pb_{0.9}La_{0.1}Zr_{0.2}Ti_{0.8}$/$La_{0.5}Sr_{0.5}CoO_3$ capacitors, O, deficiency, vacancy type defects form. 102775
$LiNbO_3$ PPLN superlattice waveguide, EO TE-TM mode converter 104730
$LiNbO_3$, Zn-diffused low-loss damage-resistant opt. waveguides, two-step procedure 82128
$LiNbO_3$ cryst., near-stoichiometric, growth, fast photorefr. response 104605
$LiNbO_3$ crysts., dielec. const. and loss tangent from 90 to 147 GHz 104302
$LiNbO_3$, electron beam periodically poled, SHG 93815
$LiNbO_3$, ferroelec. domains, morph., scanning nonlin. dielec. microscopy 104268
$LiNbO_3$, film, sputtered, piezoelec. effect. 116174
$LiNbO_3$ films, stoichiometric, textured, PLD 79348
$LiNbO_3$ opt. superlattice, EO spectral filter 104816
$LiNbO_3$, periodically poled OPO for generating mid-IR to terahertz waves 105535
$LiNbO_3$, periodically poled, high efficiency mid-IR OPO 82919
$LiNbO_3$, periodically poled, tunable narrow-band THz generation 71924
$LiNbO_3$, piezoelec./ferroelec., microstructuring for MEMS devices 70364
$LiNbO_3$, proton exchanged Z-cut, phase comp., Raman study 71316
$LiNbO_3$ segmented periodically poled cryst., quasi phase matched SHG 105514
$LiNbO_3$ single cryst. surface, scanning nonlin. dielec. microscopy 127196
$LiNbO_3$:Er, nonvolatile two-colour holographic recording 128574
$LiNbO_3$:Er,(Ti), vap.-phase equilibration, Raman spectra 81696
$LiNbO_3$:Fe, c-axis fibers, laser heating, morphologies, air bubbles effects 104330
$LiNbO_3$:In, photodamage resist., opt. props. 104392
$LiNbO_3$:In,Fe cryst., opt. props., holographic storage props. 104618
$LiNbO_3$:MgO 1.5-μm-band quasi-phase matched wavelength converters, temp. charact. 93818
$LiNbO_3$:MgO,Yb^{3+}, CW self-pumped OPO 93798
$LiNbO_3$:Y acoustic superlattice cryst., CZ growth, US waves 104394
$LiNbO_3$:Zn,Fe, CZ growth, holographic storage 104619
$LiNbO_3$:ZnO, CZ method growth, defect struct., XRD/IR/Raman spectra 127201
$Li_xTa_{1-x}O_3$ single cryst., growth, opt. props., ferroelec. T_c 114212
$LiTaO_3$ cryst., three-fund.-colors laser scheme based on quasi-phase matching 93573
$MnFe_{1.8}Cr_{0.2}O_4$-$BaTiO_3$ composites, AC cond., magnetoelec. effect 127155
NO_x removal, oxid., nonthermal plasma reactors 133356
PLT(10) thin films, switching charact. 70397
PLZT, fatigued electrostrictive samples, microcrack clouds 104362
PLZT film capacitors, dielec. relax., leakage currents 70416
PLZT films, Pb content, crystallographic texture, ferroelec. props. 70408
PLZT films, organic SAM template, prep./charactn. 127156
PLZT thin films, crystn. and roughness, annealing effects 101424
PLZT/Pt(IrO_2) ferroelec./electrode systs., heating, interface anal. 127225
PMN cryst., relaxor material, lin./nonlin. dielec. const., bias elec. field effects 104345
PMN relaxor ferroelec., Ni electroplating, H-induced degrad. 127204
PMN-$PbTiO_3$ ferroelec. complex perovskite cryst., Bridgman method growth, twinning domain 70401
PMN-$SrTiO_3$ syst., low-loss dielec., microstruct. 116154
$PMN_{0.7}$-$(PbTiO_3)_{0.3}$, ferroelec. phase stabil., dielec. props. random fields effects 70389
PZT MOCVD thin films on multilayer Pt/Ir electrodes, reliab. props. 70412
PZT actuator, fab., high speed AFM 81625
PZT compositionally graded thin films with $LaNiO_3$ electrodes, abnormal ferroelec. props. 81710
PZT, ferroelec. domains, morph., scanning nonlin. dielec. microscopy 104268
PZT ferroelec. films, modified sol-gel prep., ferroelec./struct. props. 125032
PZT ferroelec. thin film capacitors, leakage I-V charact. 92775
PZT fibers, effect of heating temp. on dielec. props. 70425
PZT films, FeRAM fab., cross-contamination anal. 92777
PZT films, arc-discharge reactive ion-plating, ferroelec. props. 125058
PZT films, domain images/retention props., electrostatic force microscopy 104309
PZT films, excimer laser ablation, ferroelec. props. 127167
PZT films, high resoln. obs. 81679
PZT films, kinetics of fatigue effect 70414
PZT films on Si, fab. by sol-gel method using Y_2O_3 buffer layers 68354
PZT films, sol-gel derived, surface treatment memory effects 70470
PZT films, sol-gel method, external stress induced preferred-orient. 104390
PZT films, sol-gel prep., RTA induced phase transform. kinetics 81668
PZT films, struct./ferroelec. props. on Ir/$(ZrO_2)_{1-x}(Y_2O_3)_x$/(100)Si 70399
PZT, nanocrystalline perovskite powder systs., hydrothermal synthesis 68447
PZT screen printed thick films, densification, dielec. props. 79436
PZT thin film capacitors, multi-domain Potts polar systs. 104382
PZT thin film, surface layer, scanning nonlin. dielec. microscopy 127196
PZT thin films, RF magnetron sputtering, struct./ferroelec. props. 124819
PZT thin films form. by using modified sol-gel solns., proc. stabil. 68356
PZT thin films, growth and charact., ferroelec. polariz. charging of $YBa_2Cu_3O_7$ thin films 101182
PZT thin films, polariz./internal field, photoelec. obs. 81708
PZT thin films, sol-gel prep., surface/interface struct. 116163
PZT:Nb films, RF magnetron sputtering, ferroelec./piezoelec. props. 81707
PZT:Nd(Fe) films, polariz. components, doping effects 92628
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
PZT/PLZT multilayer films, polariz. correl., pyroelec. props. 81699
PZT/SiO_2/Si heterostruct., interface charge distrib. effects 104388
PZT/TiO_x/SiO_2/SiN_x/SiO_2/Si struct., AO device appls. 81758
(Pb,Sr)TiO_3 epitaxial films, ferroelec. domain struct. 127197
Pb/Ti/Si thin films, thermal oxid., ferroelec. phase form. 92026
Pb-Ti-Nb-O films, MOCVD on Pt/Ti/SiO_2/Si substr., microstruct., deposition temp. effect 90419
$Pb_5Ge_3O_{11}$ ferroelec. MFMOS capacitor, one transistor memory appl. 81776
$Pb_5Ge_3O(11)$ ferroelec. thin film, plasma etching 104275
$PbK_2LiNb_5O_{15}$, ferroelec. anoms., structural changes 104272
$Pb(Mg_{1/2}Nb_{2/3})O_3$ ultrafine perovskite powder, synthesis, fast form. proc. 90554
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ cryst., indentation-induced domain switching 104395
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ film, PLD, charactn. 104385
$Pb(Sc_{1/2}Ta_{1/2})O_3$ cryst., ferroelec., micro-Brillouin scatt. 127194
$PbScTaO_3$ films, prep., piezoelec./pyroelec. props. 81704
(PbSr)TiO_3 thin films, prep., elec. props., post-annealing, DRAM appl. 116159
(PbSr)TiO_3, elastic props., spontaneous pol., full-pot. lin. APW method 127189
$PbTiO_3$, elastic props., spontaneous pol., full-pot. lin. APW method 127189
$PbTiO_3$ single cryst., domain struct., piezoresponse force microscopy 127195
$PbTiO_3$ tetragonal and cubic phases, dispersion curves calc. 70426
$PbTiO_3$/$BaTiO_3$ superlattices, struct., vibr. props. 116142
$PbTiO_3$/Pb(Zr,Ti)O_3/$PbTiO_3$ sandwich struct., sol-gel method, charactn. 70392
$PbTi_{0.6}Zr_{0.4}O_3$ films, spray pyrolysis prep., dielec. props. 90533

ferroelectric materials continued
$Pb(Yb_{1/2}Nb_{1/2})O_3$-$PbTiO_3$, cryst. growth, dielec. props. 124790
$Pb(Yb_{1/2}Ta_{1/2})O_3$-$Pb(Yb_{1/2}Nb_{1/2})O_3$ solid soln., struct./dielec. props. 127228
$Pb(Zn_{1/3}Nb_{2/3})O_3$ single crysts., switching currents, polaris. reversal 104372
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, kinetics of fatigue effect 70414
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ mixed cryst., Raman scatt. 127193
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, relaxor ferroelec. top seeded soln. growth 124787
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, switching currents, polaris. reversal 104372
$Pb(Zn_{1/3}Nb_{2/3})_{0.91}Ti_{0.09}O_3$-PbO ferroelec., pseudo-binary phase diag. 104336
$Pb(Zr,Ti)O_3$ capacitors, ozone treatment, enhanced retention charact. 116229
$Pb(Zr,Ti)O_3$ films, alkoxide-based sol-gel proc., chem. struct. evol. 127198
$Pb(Zr,Ti)O_3$ films, highly preferred, low temp. prep. 70391
$Pb(Zr,Ti)O_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$Pb(Zr_{0.32}Ti_{0.68})O_3$ film, 90° domains switching 127160
$Pb(Zr_{0.97}Ti_{0.03})O_3$:$Nb_2O_5$ stacked thick films, tape casting, pyroelec. props. 116155
$Pb(Zr_{0.53}Ti_{0.45}W_{0.01}Cd_{0.01})O_3$, film, sputtered, piezoelec. effect. 116174
$PrFeO_3$-$PbTiO_3$ solid soln., ferroelec./ferromag. props. 127226
Pt/$(BiLa)_4Ti_3O_{12}$/Pt/Ti/SiO_2/Si MFMIS struct., fab., elec. characts. 126229
Pt/$BaSrTiO_3$/Pt MIM capacitors, dielec. const., coplanar struct. 102778
Pt/Pb(Zr,Ti)O_3/Pt thin film capacitors, sputtering, RIE damage 81787
Pt/SBT/Al_2O_3/Si MFISFET, fab., memory window width 81276
Pt/SBT/polysilicon capacitors, elec. characts., memory appl. 81780
Pt/$SrBi_{2.4}Ta_2O_9$/ZrO_2/Si MFIS-FET struct., prep., elec. props. 81277
Pt/$SrBi_2Ta_2O_9$/Pt film capacitors, hysteresis symm., data retention, γ-ray irrad. effect 104469
Pt/$SrBi_2Ta_2O_9$/ZrO_2/Si ferroelec. gate oxide struct., elec. props. 69755
Pt/$SrBi_2Ta_2O_9$/ZrO_2/Si struct., cryst. struct. & elec. props. 116226
Pt/$SrTiO_3$/Pt/Ti/SiO_2/Si capacitors, post-annealed $SrTiO_3$ thin films, prep. 68143
Pt/$YMnO_3$/Y_2O_3/Si capacitor, pulsed C/V meas., ferroelec. 102776
Pt/$YMnO_3$/Y_2O_3/Si gate capacitor MFISFET, MOCVD prep. 81662
$Rb_xCs_{1-x}TiOAsO_4$, top seeded soln. growth 68106
RbH_2PO_4 ferroelec. crysts., LF dielec. dispersion 92636
$RbTiOAsO_4$, top seeded soln. growth 68106
SBT/Al_2O_3/Si heterostruct., PLD, ferroelec. props. 114370
$Sn_2P_2S_6$ ferroelec., phase transits., uniform press./elec. field effects 116145
Sr-Ba-Ti-Nb-Pb-O ferroelec. plasma cathode spectrosc. 125956
$SrBa(Nb,Ta)_2O_6$ highly oriented film, synthesis, struct. & dielec. prop. 127175
$Sr_{1-x}Ba_xNb_2O_6$ waveguide channels, elec. fixing, dyn. self-focusing 93120
$Sr_xBa_{1-x}Nb_2O_6$, rare-earth impurity doping, ferroelec. and photorefr. props. 128455
$Sr_xBa_{1-x}Nb_2O_6$:Ce(Ce,La), ferroelec.-driven opt. and photorefr. props. 82802
$SrBaNb_2O_6$:Ce,Cu, CZ growth, phase conjug. effect 101154
$SrBaNbO_3$:Ce,La, opt./photorefr. props. 92932
$(Sr_xBa_{1-x})_{1-y}(Nb_2O_5)y$, FZ method single cryst. growth 101173
$SrBi_2Nb_2O_9$, epitaxial films, microstruct./elec. props. 70409
$SrBi_2Ta2O_9$-Bi_3TiTaO_9, prep., structural behavior and ferroelec. response 81713
$SrBi_2(Ta_{1-x}Nb_x)_2O_9$ thin films, MOCVD, ferroelec. props. 79283
$SrBi_{2.4}(Ta_{0.75}Nb_{0.25})_2O_9$, thin films, ferroelec. charact., thickness depend. 70419
$SrBi_2Ta_2O_9$ ferroelec. thin film capacitors, leakage I-V charact. 92775
$SrBi_2Ta_2O_9$, epitaxial films, microstruct./elec. props. 70409
$SrBi_2Ta_2O_9$ ferroelec. thin films, sol-gel precursor effect on form. 114386
$SrBi_2Ta_2O_9$ film, (103)-oriented ferroelec., epitaxial growth on Si(100) 81685
$SrBi_2Ta_2O_9$ film, MOCVD, ferroelec. props. temp. depend. 116172
$SrBi_2Ta_2O_9$, film, as-grown, net spontaneous polaris. 70410
$SrBi_2Ta_2O_9$ film, chem. soln. deposition, a-axis orient. control 127158
$SrBi_2Ta_2O_9$, film, epitaxial, MOCVD, residual strain anal. 70411
$SrBi_2Ta_2O_9$ film, ferroelec., stacking faults, HREM 104273
$SrBi_2Ta_2O_9$ films, fatigue charact., forming gas annealing effect 127157
$SrBi_2Ta_2O_9$ films, microscopic polariz.-switching, memory appl. 104367
$SrBi_2Ta_2O_9$ films prep. by metalorganic decomp. using RTA, charact. 70421
$SrBi_2Ta_2O_9$ for metal-ferroelec.-Si struct. without buffer layers 81695
$SrBi_2Ta_2O_9$, nano-size ferroelec. memory cells, patterning, switching 81715
$SrBi_2Ta_2O_9$ nonstoichiometric films, relax. effects and steady-state cond. 70420
$SrBi_2Ta_2O_9$ on Si memory effects, buffer layer depend. 81777
$SrBi_2Ta_2O_9$ thin films, dry etching in Cl_2/NF_3/O_2/Ar ICP 104274
$SrBi_2Ta_2O_9$ thin films, dry etching, plasma chemistries 92046
$SrBi_2Ta_2O_9$ thin films, high leakage current dens., annealing 70417
$SrBi_2Ta_2O_9$, vap.-phase oxid. during PLD 125004
$SrBi_2Ta_2O_9$ very thin capacitors, interfacial layers, dielec. props. 81781
$SrBi_{2.4}Ta_2O_9$, thin films, ferroelec. charact., thickness depend. 70419
$Sr_{0.8}Bi_{2.2}Ta_2O_9$/$LaAlO_3$/Si syst., prep., ferroelec. props. 92646
$SrBi_2Ta_2O_9$/Si_3N_4/SiO_2 MFISFET, elec. props. 70155
$SrBi_2Ta_2O_9$/SiON/Si ferroelec. MISFET, elec. props. 81275
$SrBi_4Ti_4O_{15}$ single crysts., dielec./ferroelec. props. 92629
$SrRuO_3$ film, laser ablation prep., struct./elec. props., capacitor obs. 79353
$SrRuO_3$/$BaTiO_3$ epilayers, strain modif., substr. structural transit. 127306
$Sr_2(Ta,Nb)_2O_7$ thin films, chem. proc., struct./elec. props. 81661
$Sr(Ti_{1-x}Mn_x)O_y$ polycryst. films, leakage currents 127164
$Sr_{n+1}Ti_nO_{3n+1}$, (n=1-5), Ruddlesden-Popper homologous series, MBE growth 68164
$SrTiO_3$ films, ECR-PEMOCVD growth, Sr/Ti ratio step coverage effects 70394
$SrTiO_3$ grain boundaries, Z-contrast STEM imaging 104299
$SrTiO_3$:Cr single cryst., current-driven insulator-conductor transit., NVM 70406
$YMnO_3$ ferroelec. thin films, etching mechanism in Cl_2/Ar gas chemistries 104276
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
$YMnO_3$ thin films, microstruct., post-annealing, ferroelec. props. 127229
ZnO:Li ceramics/films, PLD, ferroelec./dielec. props. 104386

ferroelectric memories *see ferroelectric storage*

ferroelectric semiconductors
$(As_2Se_3)_{20}(SbSI)_{80}$, elec. cond., temp./freq. effect 103064
(Ba,Sr)TiO_3 porous ceramics, effect of atmos. on PTCR charact. 81714
$Ba_{1-x}Ca_xTi_{1.02}O_3$ ceramic, PTC thermistor, elec. props. 80410
$BaTiO_3$ ultra-fine powders by chem. coprecipitation, phys./chem. charact. *(Chinese)* 101522
$BaTiO_3$/epoxy composites, multi-doped, dielec. behaviour, PWB appl. 81675
(LaSr)MnO_3/$BaTiO_3$/(LaSr)TiO_3 p-i-n diode, hysteretic I-V charact. 81189
PZT sol-gel derived films, ohmic cond./activation energy, temp. depend. 92645
ZnCdS, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdSe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdTe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557

ferroelectric storage
1T1C FRAM with ferro-prog. redundancy scheme 68805
1T2C-type ferroelec. memory cell, data retention 104477
1T2C-type ferroelec. memory cells with an array struct., write and read-out operations 70467

ferroelectric storage continued
capacitor switching response simul., parallel element model 90913
capacitors, HF C-V charact. model 90912
chain FRAM archit., overview/trends 90908
CMOS FRAM with chain cell struct., fully planarized, 8 Mbit 125471
electroceramics, evolving trends, recent research, review 104225
FeRAM, 1T1C, fatigue-free ref. scheme and proc.-induced damage 114741
FeRAM device and cct. technols. fully compatible with advanced CMOS 102179
ferroelec.-gate FET memory, memorized states retention anal., leakage current effects 81774
FET-type ferroelec. memories, recent progress 81771
flash memories, recent advances *(Japanese)* 79885
FRAM, 1T1C technol. 116235
FRAM, high dens., scalable sub-10F² 1T1C capacitor-on-bitline cell technol. 125470
FRAM, reliab., imprint effect 116234
FRAM archits., std. and chain-type, comparison 81770
FRAM cct., nonvolatile memories, true and complement bitline, reliab. *(Italian)* 79880
FRAM retention anal. method based on memory cell read sig. voltage meas. 102162
FRAM retention testing, indiv. cell measuring method 79890
imprint, phys. insights, appl. to ferroelec. functional memory 70474
LV nonvolatile SRAM with back-up ferroelec. capacitors, 512 Kbit 125485
LV operation FeRAM, bit-line ground sense tech. 125484
macro model of ferroelec. capacitor for FeRAM design *(Chinese)* 114757
memory cell, single transistor/two capacitor-type, fab./charactn. 90911
metal-($PbZr_xTi_{1-x}O_3$)-(Ta_2O_5)-Si struct., NVM appl. 127279
metal-ferroelec.-MIS memory FET, fab. & charact. 127276
MFIS struct., ferroelec. gate FET memory 81767
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write scheme 90910
nonvolatile ferroelec. memories, driving appls. 70469
NVM chips for airborne recce syst., evolving technol. 99111
NVM technol. 127274
P(VDF/TRFE) copolymer film, ultra-high dens. mol. memory fab. 81782
polariz. fatigue in ferroelec. films 92653
single transistor ferroelec. memory arrays, disturb free prog. scheme 79873
thin film capacitors relax. mechanisms for FeRAM appl. 70471
thin films, conf., Boston, MA, USA (Nov.-Dec. 1999) 89554
Au/PZT/$Bi_4Ti_3O_{12}$/p-Si ferroelec. memory diode, fab./charact. 70464
Au/PZT/p-Si ferroelec. memory diode, fab./charactn. *(Chinese)* 104475
(Ba,Sr)TiO_3/Y_2O_3-ZrO_2 films, metal-ferroelec.-insulator-semicond. memory 81779
$Ba_2Bi_4Ti_5O_{18}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$BaBi_4Ti_4O_{15}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$BaTiO_3$ cryst., ferroelec. polariz., scanning nonlin. dielec. microscopy 121153
$BaTiO_3$ epitaxial film capacitors, improved ferroelec. hysteresis by 2-step deposition 92776
$BaTiO_3$ epitaxial thin film capacitors on Si substr., ferroelec. props. 70475
$BaTiO_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$(Bi,La)_4Ti_3O_{12}$ MFIS-FET, ferroelec. memory 81769
$Bi_4Ti_3O_{12}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$CaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
CeO_2 thin films as buffer layer for ferroelec. RAM appl., etch charcts. 104465
Ir films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
Ir/TaN/SiO_2 struct., MFMOS one transistor memory, electrode/barrier thermal stability 104471
IrO_2 films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
IrO_x/PZT/Ir capacitor, ferroelec. memory, hydrogen sensitivity 81765
$LiNbO_3$ MFS memory capacitor, low temp. growth 116227
PLZT films, Pb content, crystallographic texture, ferroelec. props. 70408
PLZT:Ca(Sr) thin films for LV operation 116158
PZT capacitor integrat. for high dens. FRAM, electrode-barrier struct. 70463
PZT capacitor-p-n diode series connection, memory effect 81784
PZT ferroelec. capacitors, SiN_x passiv. films, catalytic CVD 124977
PZT films, FeRAM fab., cross-contamination anal. 92777
PZT films, ferroelec. memory devices, pulse width/voltage, bit size depend., AFM 70466
PZT films, high resoln. obs. 81679
PZT films, sol-gel derived, surface treatment memory effects 70470
PZT single grained thin film, fatigue & data retention charact. 116148
PZT thin film, fatigue model based on thermionic field emission mechanism 127222
PZT thin film, ferroelec. polariz., scanning nonlin. dielec. microscopy 121153
PZT thin film, ferroelec. prop., bipolar pulse poling & space charge field 104359
PZT thin films with Pt/PtO_x multilayer electrode barriers for FeRAM appl. 92647
PZT/Al_2O_3 stack gate single transistor ferroelec. memory 79884
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
PZT-$Bi_2Sr_2CuO_x$ films all-perovskite-oxide ferroelec. memory transistor 70476
PZT-based 4Mbit FRAM devices, retention behavior rel. to capacitor procs. 70473
$Pb_5Ge_3O_{11}$ metal-ferroelec.-oxide-silicon memory transistor 116231
$Pb_5Ge_3O_{11}$ thin film MFMOS capacitor, ferroelec. props. 104473
(PbSr)TiO_3 thin films, prep., elec. props., post-annealing, DRAM appl. 116159
Pb(Zr,Ti)O_3, nano-size ferroelec. memory cells, patterning, switching 81715
$Pb_{1.1}((Zr_{0.52}Ti_{0.48})_{0.975}Al_{0.025})O_3$:Al thin films prep., sol-gel method 101411
$Pb(Zr_{0.52}Ti_{0.48})O_3$ capacitors, catalytic CVD method, SiN_x passiv. films, act. NH_3 exposure effects 101335
Pt/(BiLa)$_4Ti_3O_{12}$/Pt/Ti/SiO_2/Si MFMIS struct., fab., elec. charcts. 126229
Pt/$Bi_4Ti_3O_{12}$/Pt/Bi_2SiO_5/Si MFMIS struct., data storage capability 124938
Pt/PZT/p-Si struct., memory props. 104476
Pt/$Pb_5Ge_3O_{11}$/ZrO_2/Si, sub-μm metal-ferroelec.-insulator-semicond. FET 92357
Pt/SBT/Al_2O_3/Si MFISFET, fab., memory window width 81276
Pt/SBT/CeO_2/Si(100) gate stacks, LV ferroelec. field effect devices 81775
Pt/SBT/polysilicon capacitors, elec. charcts., memory appl. 81780
Pt/$SrBi_{2.4}Ta_2O_9$/ZrO_2/Si MFIS-FET struct., prep., elec. props. 81277
Pt/$SrBi_2Ta_2O_9$/CeO_2/Si capacitors for ferroelec. FET, gate stacks, XRD, EDX, TEM 104472
Pt/$SrBi_2Ta_2O_9$/Pt film capacitors, hysteresis symm., data retention, γ-ray irrad. effect 104469
Pt/$SrBi_2Ta_2O_9$/Pt/$SrTa_2O_6$/SiON/Si MFMIS-FET, NVM 81766
Pt/$SrBi_2Ta_2O_9$/Ta_2O_5/Si MFIS-FET memory, elec. charact. 81658
Pt/$SrBi_2Ta_2O_9$/ZrO_2/Si ferroelec. gate oxide struct., elec. props. 69755
Pt/$SrBi_2Ta_2O_9$/ZrO_2/Si struct., cryst. struct. & elec. props. 116226

ferroelectric storage continued
Pt/$YMnO_3$/Y_2O_3/Si gate capacitor MFISFET, MOCVD prep. 81662
Pt-M (M=Rh,Ir), electrode-barrier structs. for high dens. ferroelec. memor 81783
Pt-$SrBi_2Ta_2O_9$-Pt capacitor-based FRAM, imprint failure lifetime estim. 909
SBT/Al_2O_3/Si heterostruct., PLD, ferroelec. props. 114370
Si-SiO_2-Ti-Pt-PZT multilayer struct., ferroelec. memory 70468
$SrBi_2(Ta_x,Nb_{1-x})_2O_9$-$Bi_2(Ta_x,Nb_{1-x})O_6$ ferroelec. memory, metal covering c 68808
$SrBi_2Ta2O_9$-Bi_3TiTaO_9, prep., structural behavior and ferroelec. response 817
$SrBi_2Ta_{2-x}Nb_xO_9$/IrO_x capacitors, Pt top electrode, thermal stabil., elec. pro 116233
$SrBi_2Ta_2O_9$ capacitor films, P-MOCVD, elec. props. 81669
$SrBi_2Ta_2O_9$ ferroelec. RAM, high dens. storage 104470
$SrBi_2Ta_2O_9$ ferroelec. capacitor for 1 V operation in NVM 114764
$SrBi_2Ta_2O_9$ film piezo/leakage defects, SPM-based nanoscale investig. 92657
$SrBi_2Ta_2O_9$ films, microscopic polariz.-switching, memory appl. 104367
$SrBi_2Ta_2O_9$, nano-size ferroelec. memory cells, patterning, switching 81715
$SrBi_2Ta_2O_9$ on Si memory effects, buffer layer depend. 81777
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mech nism 127222
$SrBi_2Ta_2O_9$ thin film, plasma etching, XPS/SIMS 116149
$SrBi_2Ta_2O_9$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orie 104316
$SrBi_2Ta_2O_9$:Nb MOCVD, integrated ferroelec. capacitors, RAM 101333
$Sr_{0.8}Bi_{2.2}Ta_2O_9$/$LaAlO_3$/Si syst., prep., ferroelec. props. 92646
$SrBi_2Ta_2O_9$/Si_3N_4/SiO_2 MFISFET, elec. props. 70155
$SrBi_2Ta_2O_9$/SiON/Si ferroelec. MISFET, elec. props. 81275
$SrRuO_3$/(Ba,Sr)TiO_3/$SrRuO_3$ capacitors, gigabit DRAM, CVD, electro technols. 101329
$Sr_2(Ta,Nb)_2O_7$ thin film, PLD, MFIS-FET memory 81657
$SrTa_2O_6$/SiON buffer layer, ferroelec. gate FET's fab./integrat. reviews 1038
$SrTiO_3$ epitaxial growth on epitaxial (Ti,Al)N-Si(100) substr. using Ti-buff layer 90248
$SrTiO_3$:Cr single cryst., current-driven insulator-conductor transit., NVM 704
a-Ta-nanocryst. RuO_x diffusion barrier for lower electrode of high dens. memo devices 69958
Ti-Al diffusion barrier layers, thin film growth and oxid. procs. 92109
$YMnO_3$ based MFSFET, annealing effect, MOCVD 101328

ferroelectric switching
antiferroelec. LCD, EO props., addressing waveforms 104829
fatigue effect, kinetics 70414
ferroelec. capacitor, empirical modeling, dual curve-fit tech. 92774
ferroelec./semicond. thin film portable UV dosimeter 86566
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 200 100366
LCD, wide-viewing-angle, interdigital electrodes, switching perform. 86829
multi-domain Potts polar systs., dyn. hysteresis 104382
perovskite ferroelec., morphotropic phase boundary, tetragonal side, switchi anal. 116157
piezoceramics, piezoelec. cracking, microstructural effects 104371
poly(vinylidene-fluoride hexafluoropropylene) copolymer, electrostricti response 127207
polymer-stabilized FLC, microsized bistable domains, monostable V-shape switching 127840
PVDF/trifluoroethylene copolymers, ferroelec. switching, nucleation 127211
reflective storage FLC display, ultralow power consumption, high-def *(English)* 121092
surface stabilised ferroelec. liq. cryst. device, time-resolved X-ray scatt. 1210
thin films, lattice model, surface effects, depolariz. field props. 92650
thin films, polariz. switching, dyn. props. 81703
XGA thresholdless antiferroelec. TFT-LCD, 15 in., quasi-DC driving 109877
$BaTiO_3$ ceramics, ferroelec. props., poling field depend. 127223
$BaTiO_3$, displacement charge patterns, domain wall dyn. 104288
$BaTiO_3$ epitaxial thin film capacitors on Si substr., ferroelec. props. 70475
$BaTiO_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$Bi_{3.25}La_{0.75}Ti_3O_{12}$, fatigue-free behavior for ferroelec. capacitor appl. 81686
$Bi_{4-x}La_xTi_3O_{12}$ thin film, phys. and elec. props., effects of bottom electrod 127172
$Bi_4Ti_3O_{12}$, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$Bi_4Ti_3O_{12}$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switch ing 104310
$Bi_4Ti_3O_{12}$:La, ferroelec. films, polariz., pyroelec. props., orient. effects 11616
$CaBi_2Ta_2O_9$ ferroelec. films, PLD, dielec. props. 79350
$KNbO_3$, displacement charge patterns, domain wall dyn. 104288
$KTiOPO_4$, quasiperiodic opt. superlattice, elec. poling, switching 104393
$LaNiO_3$/PZT films, enhanced fatigue property 116147
$LiNbO_3$ MFS memory capacitor, low temp. growth 116227
Ni/PZT/Pt thin films, asymmetric switching behavior 81693
PLT(10) thin films, switching charact. 70397
PLZT:Ca(Sr) thin films for LV operation 116158
PZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer effec 102774
PZT MOCVD thin films on multilayer Pt/Ir electrodes, reliab. props. 70412
PZT based fully MOCVD obtained epitaxial ferroelec. capacitors 70472
PZT, compression stress induced domain switching 116206
PZT, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
PZT ferroelec. thin film capacitors, leakage I-V charcts. 92775
PZT films, ferroelec. memory devices, pulse width/voltage, bit size depend AFM 70466
PZT, fractured ferroelec. ceramics, ferroelastic domain switching, XRD anal 104361
PZT nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switchin 104310
PZT single grained thin film, fatigue & data retention charact. 116148
PZT thin film, fatigue model based on thermionic field emission mechanism 127222
PZT thin film, ferroelec. prop., bipolar pulse poling & space charge field 10435
PZT thin films, growth and charact., ferroelec. polariz. charging of YBa_2Cu_3O thin films 101182
PZT thin films piezoelec./dielec. props., cryst. struct./texture 104322
PZT thin films with Pt/PtO_x multilayer electrode barriers for FeRAM appl 92647
PZT:Nd(Fe) films, polariz. components, doping effects 92628
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
PZT/$PbTiO_3$/TiO_2/Pt, sputter deposition, orient./comp. 101192
PZT-SiO_2-B_2O_3 sol-gel derived ferroelec. glass-ceramic thin films, RTA, prop 125020
$Pb(Zn_{1/3}Nb_{2/3})O_3$ single crysts., switching currents, polaris. reversal 104372

roelectric switching continued
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, switching currents, polaris. reversal 104372
$Pb(Zr,Sn,Ti)O_3$ ceramics, elec. field-induced antiferroelec.-ferroelec. transit. *(Chinese)* 116167
$Pb(Zr,Ti)O_3$, coercive voltage, freq. depend., ferroelec. relax. 104296
$Pb(Zr,Ti)O_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$PbZrO_3$ antiferroelec. thin films, pulsed excimer laser ablation 79356
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$Pb(Zr_{0.32}Ti_{0.68})O_3$ film, 90° domains switching 127160
$Pt/Bi_2SiO_5/Si$, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Pt/Bi_4Ti_3O_{12}/Pt/Bi_2SiO_5/Si$, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Pt/SBT/Al_2O_3/Si$ MFISFET, fab., memory window width 81276
$Pt/YMnO_3/Y_2O_3/Si$ gate capacitor MFISFET, MOCVD prep. 81662
$SBT/Al_2O_3/Si$ heterostruct., PLD, ferroelec. props. 114370
$Sr_xBa_{1-x}Nb_2O_6$, rare-earth impurity doping, ferroelec. and photorefr. props. 128455
$SrBaNbO_3$:Ce,La, opt./photorefr. props. 92932
$Sr_{0.8}Bi_{2.3}(Ta_{1-x}Nb_x)_2O_{9+\alpha}$ thin films, sol-gel prep. and elec. props. 81719
$SrBi_{2.4}(Ta_{0.75}Nb_{0.25})_2O_9$, thin films, ferroelec. charact., thickness depend. 70419
$SrBi_2Ta_{2-x}Nb_xO_9/IrO_x$ capacitors, Pt top electrode, thermal stabil., elec. props. 116233
$SrBi_2Ta_2O_2$ ferroelec. thin film capacitors, leakage I-V charcts. 92775
$SrBi_2Ta_2O_9$, coercive voltage, freq. depend., ferroelec. relax. 104296
$SrBi_2Ta_2O_9$ films, microscopic polariz.-switching, memory appl. 104367
$SrBi_2Ta_2O_9$ films prep. by metalorganic decomp. using RTA, charact. 70421
$SrBi_2Ta_2O_9$, nano-size ferroelec. memory cells, patterning, switching 81715
$SrBi_2Ta_2O_9$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
$SrBi_2Ta_2O_9$ thin film capacitors, UV irrad., switchable polariz. 104464
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mechanism 127222
$SrBi_2Ta_2O_9$ thin films prepared by MOD method, polariz. switching 70415
$SrBi_{2.4}Ta_2O_9$, thin films, ferroelec. charact., thickness depend. 70419
$SrTiO_3$:Cr single cryst., current-driven insulator-conductor transit., NVM 70406
$YMnO_3$ based MFSFET, annealing effect, MOCVD 101328

roelectric thin films
conf., Boston, MA, USA (Nov.-Dec. 1999) 89554
conf., Kyoto, Japan (May-June 2001) 124199
domain distrib. meas., scanning nonlin. dielec. microscopy 104278
domains/local cryst. anisotropy, scanning nonlin. dielec. microscopy 104391
electroceramics, conf., Portoroz, Slovenia (Sept. 2000) 100422
ferroelec./semicond. thin film portable UV dosimeter 86566
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 2000) 100366
films for tunable planar structs., microwave dielec. charcts. 81665
image IR converters based on ferroelec.-semicond. thin-layer systs. 86526
image-memory LCD with ferroelec. film 86877
lattice model, surface effects, depolariz. field props. 92650
long. and transverse piezoelec. d-coeffs. 81709
mag. tunable supercond. filters 92908
MEMS systs., piezoelec. films 92495
metal oxides, CVD precursor design, synthesis & charactn. 114363
metal-$(PbZr_xTi_{1-x}O_3)$-(Ta_2O_5)-Si struct., NVM appl. 127279
microbolometer arrays, thin film ferroelec. materials use 109540
microstrip antenna with ferroelec. layer 83515
microstrip lines, dispersion charact. 114929
microwave devices, elec. tuning 69124
multi-chamber dry etching technol. *(Japanese)* 92055
multilayered microstrip antenna, voltage-controlled ferroelec. thin tape 128874
opt. appls. 81697
p(VDF/TrFE) ferroelec. copolymer film, transverse sound vel. 127186
piezoelec. relax., continuous charge integrat. 127178
polariz. fatigue in ferroelec. films 92653
polariz. switching, dyn. props. 81703
polymers nonelectrical poling, surface energy poling 127214
PVDF LB films, 2D ferroelec., phase transits., SHG obs. 81698
PVDF oligomer ferroelec. thin films, structural/electronic charactn., AFM 127213
PVDF/trifluoroethylene copolymers, electron irrad. effects, NMR, naval transducer appl. 127209
PVDF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. props., XRD 127206
PZT(:Mn) sol-gel thin films, pyroelec. detectors 104478
PZT amorph. thin film hydrogen gas sens. 97535
PZT thin films, depth profile, RF glow discharge at. emission spectrosc. 104315
PZT thin films ferroelec. perform., crystallographic texture effects 104290
quasi-MFISFET device, ferroelec. thin films, field-depend. polariz. model *(Korean)* 115886
slot lines, dispersion charact. 114929
$SrBi_2Ta_2O_9$ thin film, etching props. in Cl_2 ICP *(Korean)* 116164
symposium, chem. proc. of dielec., insulators and electronic ceramics, USA (1999) 113276
thin film capacitors relax. mechanisms for FeRAM appl. 70471
thin films, stoichiometry, interdiffusion, electrode stability, TEM 101415
vinylidene fluoride oligomer, mol. ferroelec., AFM anal. 92648
$Ag/Pb(Zr_{0.53}Ti_{0.47})O_3/YBa_2Cu_3O_{7-\delta}$ fabrication, field effect/polaris. charcts. 104389
$Ag/Pb(Zr_{0.53}Ti_{0.47})O_3$/ultrathin-$SiO_2/Si$ fabrication, field effect/polaris. charcts. 104389
$Ag(Ta,Nb)O_3$ thin-film low-loss variable interdigital capacitors 127273
$Au/PZT/Bi_4Ti_3O_{12}$/p-Si ferroelec. memory diode, fab./charcts. 70464
$Au/PZT/YBa_2Cu_3O_7/ZrO_2$-$Y_2O_3$ heterostruct. film, KrF excimer laser ablation, XRD 101395
Au/PZT/p-Si ferroelec. memory diode, fab./charactn. *(Chinese)* 104475
(Ba,Sr)TiO_3 MOCVD thin films deposited on Ru electrodes, leakage current charact. 81690
(Ba,Sr)TiO_3 ceramic films, microwave props., phase shifters 80253
(Ba,Sr)TiO_3 dielec. film, two-step annealing, TiN barrier props., post-treatment temp. effect 92662
(Ba,Sr)TiO_3 ferroelec. bolometer on micromachined Si, uncooled IR sens. 109629
(Ba,Sr)TiO_3, ferroelec. thin films, PLD, charactn. 114376
(Ba,Sr)TiO_3, ferroelec. tunable CPW components, Ku-/K-band appls. 80177
(Ba,Sr)TiO_3 film, MOCVD growth, annealing proc. optimisation 70403
(Ba,Sr)TiO_3 film, low temp. MOCVD with Ti(mpd)(tmhd)$_2$ Ti-source 101319
(Ba,Sr)TiO_3 film quality, MOCVD on RuO_2 bottom electrodes, thermodyn. stabil. 90421
(Ba,Sr)TiO_3 films, ICP etching, surface damage 104277
(Ba,Sr)TiO_3 films, microwave two-pole reson. struct., freq. response 80255

ferroelectric thin films continued
(Ba,Sr)TiO_3 films, permitt./microstruct. temp./elec. field response 92658
(Ba,Sr)TiO_3 films prepared by liq. source CVD, at. incorporation rates, surface reacts. 79285
(Ba,Sr)TiO_3, high dens. dry etching with Cl_2/Ar, CH_4/H_2/Ar plasma chem., etch rates 104282
(Ba,Sr)TiO_3 single-phase epitaxial film fabr. and microstruct. charactn. 101459
(Ba,Sr)TiO_3 thin film phase shifters on sapphire/glass substrs. 91217
(Ba,Sr)TiO_3 thin films, epitaxial growth, ferroelec. props. 79206
(Ba,Sr)TiO_3/Y_2O_3-ZrO_2 films, metal-ferroelec.-insulator-semicond. memory 81779
$(Ba_xSr_{1-x})TiO_3$ capacitor tunable RF filters, bandpass and lowpass, IMD 102332
$BaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$Ba_2Bi_4Ti_5O_{18}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$BaBi_4Ti_4O_{15}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$Ba_{0.96}Ca_{0.04}Ti_{0.84}Zr_{0.16}O_3$:Mg thin films, metalorganic decomp., dielec. props. 70390
$Ba_{0.4}Sr_{0.6}TiO_3$, $SrTiO_3$ 92772
$Ba_{0.5}Sr_{0.5}TiO_3$ epitaxial films for microwave phase shifters 80254
$(Ba_{0.5}Sr_{0.5})TiO_3$ films, leakage current, resist. degrad. 81660
$Ba_{0.6}Sr_{0.4}TiO_3$ ferroelec. thin-film based elec. tunable Ku-band CPW components 80225
$Ba_{0.7}Sr_{0.3}TiO_3$ film, microdomains charactn./form. mechanism, HREM obs. 104384
$Ba_{0.7}Sr_{0.3}TiO_3$ thin films, anisotropic plasma etching, 4Gbit DRAM devices 104284
$Ba_{0.7}Sr_{0.3}TiO_3$ thin films, sol-gel tech. prep., props. 104381
$Ba_{0.8}Sr_{0.2}TiO_3$ film, modified sol-gel proc., struct./ferroelec. props. *(Chinese)* 116141
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$Ba_{0.8}Sr_{0.2}TiO_3$ sol-gel derived pyroelec. film, IR detector appl. 104387
$Ba_{1-x}Sr_xTiO_3$, film, MOCVD, uncooled IR image sens., dielec. bolometer mode 86530
$Ba_xSr_{1-x}Ti_{1+y}O_{3+z}$, MOCVD films for high freq. tunable devices 81666
$(Ba_xSr_{1-x})Ti_{1+y}O_{3+z}$ films, prep., microwave varactors, phase shifters 81664
$(Ba_xSr_{1-x})Ti_{1+y}O_{3+z}$ magnetron sputter-deposited multilayer capacitors 81667
$Ba_xSr_{1-x}TiO_3$ epitaxial thin film, microwave phase shifter 69125
$Ba_xSr_{1-x}TiO_3$, film, modified sol-gel tech. prep. 68346
$Ba_xSr_{1-x}TiO_3$ films in tunable microwave device, life cycle testing 80256
$Ba_xSr_{1-x}TiO_3$ thin film permitt. meas. using CPW ccts. 70405
$Ba_xSr_{1-x}TiO_3$, thin film tunable microwave components, current status, appls. 81663
$Ba_xSr_{1-x}TiO_3$ thin films, MOCVD in multiwafer reactor, charactn. 114362
$Ba_xSr_{1-x}TiO_3$ thin films, sol-gel proc., crystn. 79371
(BaSr)TiO_3 MOCVD thin films, RTA, elec. props. 70422
$BaSrTiO_3$ ferroelec. thin films, microwave dielec. dispersion, local opt. probes 92637
$BaSrTiO_3$ ferroelec. tunable pre-select filter/LNA hybrid cct., perform. 91362
(Ba)$SrTiO_3$ film ferroelec. planar varactors, microwave props. 80422
(BaSr)TiO_3 films, MOCVD, oxid. react. anal. 124906
$BaSrTiO_3$ films grown by PLD on $LaAlO_3$ substrs., dielec. props. 92627
$BaSrTiO_3$ films, sol-gel derived, grain oriented, phase shifter appl. 90486
$BaSrTiO_3$, photoassisted MOCVD growth for DRAM appl. 101331
$BaSrTiO_3$ thin film MOCVD growth/charactn. for HF devices 90367
$BaSrTiO_3$ thin film integrat., DRAM devices 101330
(BaSr)TiO_3 thin films, D doping, annealing, capacitor elec. props. 81672
$BaSrTiO_3$ thin films by PLD, microstruct./props., O_2 partial press. 90466
$(Ba_{0.5}Sr_{0.5})TiO_3$:Al thin films, PLD, transient anal. 92655
$(Ba_{0.5}Sr_{0.5})TiO_3$:La film, leakage current reduction by graded-layer La doping 92621
$(Ba_{0.5}Sr_{0.5})TiO_3$:Mg films, microstruct., elec. charcts. 127165
$(Ba_{0.7}Sr_{0.3})TiO_3$:Mg,La(Nb) film, elec. props., co-dopants effects 116156
$Ba_{1-x}Sr_xTiO_3$:La thin films, growth, dielec. props. 81671
$Ba_{0.9}Sr_{0.1}TiO_3/LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
$Ba_{0.6}Sr_{0.4}TiO_3$-MgO thick films for microwave appl., electrophoretic deposition 91169
$BaSrTiO_3$-$Y_3Fe_5O_{12}$ multilayer by PLD for microwave appls. 91168
$BaTiO_3$ based low temp. multiphase ferroelec. films 81670
$BaTiO_3$ dielec. films, prep. & microstruct., sol-gel/powder coating proc. 81691
$BaTiO_3$ epitaxial film capacitors, improved ferroelec. hysteresis by 2-step deposition 92776
$BaTiO_3$, epitaxial growth on $SrTiO_3$, surface comp. deviation effects 124840
$BaTiO_3$ epitaxial thin film capacitors on Si substr., ferroelec. props. 70475
$BaTiO_3$, film, lattice deform., polariz., FLAPW calcs. 127190
$BaTiO_3$ film on $SrTiO_3(001)$, crit. thickness evaluated by RHEED 114265
$BaTiO_3$, film, sputtered, piezoelec. effect. 116174
$BaTiO_3$ films, laser-deposited, dielec./ferroelec. props., O-content effect 81674
$BaTiO_3$ heteroepitaxial thin film capacitor, ferroelec. hysteresis loops, bistable states 70461
$BaTiO_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$BaTiO_3$ sol-gel derived ferroelec. thin films, diffuse transits., elec. cond., dielec. props. 92649
$BaTiO_3$ sol-gel derived thin film on ITO-glass, ferroelec. props. 70418
$BaTiO_3$ thin films and powders by an aq. sol-gel proc., prep., struct., dielec. props. 68336
$BaTiO_3$ waveguides, PLD epitaxy on MgO buffer layers on sapphire 79361
$BaTiO_3$:Y thin films, dielec. props., pulsed laser deposition 104319
$BaTiO_3/Ba_{0.6}Sr_{0.4}TiO_3$ polycryst. multilayered films, dielec. enhancement, Maxwell-Wagner effects 127203
$(Bi,La)_4Ti_3O_{12}$ MFIS-FET, ferroelec. memory 81769
$Bi_{3.25}La_{0.75}Ti_3O_{12}$ film, elec. props., metal-ferroelec.-insulator-semicond. struct. appl. 104335
$Bi_{4-x}La_xTi_3O_{12}$ films, chem. soln. deposited, charactn. 70402
$Bi_{4-x}La_xTi_3O_{12}$ thin film, phys. and elec. props., effects of bottom electrodes 127172
Bi_2SiO_5, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Bi_4Ti_3O_{12}$, MOCVD, oxygen conc., Bi/Ti comp. ratio 101332
$Bi_4Ti_3O_{12}$ ferroelec. films on Si(100) with Si oxynitride ultrathin buffer layer 127171
$Bi_4Ti_3O_{12}$, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$Bi_4Ti_3O_{12}$ film, electronic struct., soft-X-ray emission spectrosc. 127188
$Bi_4Ti_3O_{12}$ film growth on Si(100), interface control by use of ultrathin SiON buffer layer 114406
$Bi_4Ti_3O_{12}$ films, sputtered, struct./ferroelec. props. 81694
$Bi_4Ti_3O_{12}$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310

ferroelectric thin films continued
$Bi_4Ti_3O_{12}$ thin films, MOCVD-grown, rel. between Bi/Ti comp. ratio and O_2 conc. for orient. control 124938
$Bi_4Ti_3O_{12}$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$Bi_4Ti_3O_{12}$:La, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$Bi_4Ti_3O_{12}/Bi_2SiO_5/Si$ struct., prep. by metal organic decomp. tech. 127170
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
$Bi_4Ti_3O_{12}/SrTiO_3/Ce_{0.12}Zr_{0.88}O_2/Si$ epitaxial struct., PLD prep. 68301
Bi_2WO_6 thin films, MOCVD, ferroelec. props. 90366
$CaBi_2Ta_2O_5$ thin films, PLD, dielec. props. 101394
$CaBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$CaBi_2Ta_2O_9$ ferroelec. films, PLD, dielec. props. 79350
Ir/PZT/Ir capacitors, low-temp. fab. solely by MOCVD 127275
$(LaBi)_2Ti_4O_{11}$, sandwich-struct. films, charged defect motion, current transients 127272
$LaNiO_3$, high dens. dry etching with Cl_2/Ar, CH_4/H_2/Ar plasma chem., etch rates 104282
$LaNiO_3$/PZT films, enhanced fatigue property 116147
$La_{0.5}Sr_{0.5}CoO_3$ thin films, chem. soln. deposition, crystn. 114395
$LiNbO_3$ MFS memory capacitor, low temp. growth 116227
$LiNbO_3$, Zn-diffused low-loss damage-resistant opt. waveguides, two-step procedure 82128
$LiNbO_3$ based low temp. multiphase ferroelec. films 81670
$LiNbO_3$, ferroelec. domains, morph., scanning nonlin. dielec. microscopy 104268
$LiNbO_3$, film, sputtered, piezoelec. effect. 116174
$LiNbO_3$ films, stoichiometric, textured, PLD 79348
$LiNbO_3$ single cryst. surface, scanning nonlin. dielec. microscopy 127196
$LiNbO_3$:Er,(Ti), vap.-phase equilibration, Raman spectra 81696
MgO film grown on p-InP, microstructural & elec. props. 104397
$Na_{0.5}K_{0.5}NbO_3$ thin films, pulsed laser deposited 90465
$NaNbO_3$ ferroelec. films for MFOS varactors, microwave perform. 91298
Ni/PZT/Pt thin films, asymmetric switching behavior 81693
PLT(10) thin films, switching charact. 70397
PLZT, H-damaged capacitors, Pt (IrO_2) top electrode, recovery charact. 104466
PLZT amorph. film deposition, crystn., ferroelec. charactn. 114260
PLZT bulk/thin film photostrictive mater. fab., actuator design 104332
PLZT chem.-soln.-derived thin films, imprinting behavior, thickness depend. anal. 81684
PLZT, ferroelec. thin film capacitors, pulse width depend. polariz. 92773
PLZT film capacitors, dielec. relax., leakage currents 70416
PLZT films, Pb content, crystallographic texture, ferroelec. props. 70408
PLZT films, TEM investig., PLD, growth temp., pyroelec. appls. 104324
PLZT films crystallized from amorph. state by two-step postdeposition annealing, props. 127169
PLZT films, organic SAM template, prep./charactn. 127156
PLZT thin film capacitors, elec. props., La dopant effect, 104291
PLZT thin film, chem. soln. deposition, $PbTiO_3$ seeding layer, orient. control 79368
PLZT thin films, PLD, stainless steel substrs., phase form., structural props., RBS, SEM, SIMS, TEM, XRD 101389
PLZT thin films, crystn. and roughness, annealing effects 101424
PLZT thin films, sol-gel proc., microstruct., phys. props. 79384
PLZT:Ca(Sr) thin films for LV operation 116158
PMN-PZT thin films, sol-gel prep., dielec., piezoelec. props. 92661
PZT LV film capacitors, charge relax. control, Pt electrode, RuO_2 layer effect 102774
PZT MOCVD thin films on multilayer Pt/Ir electrodes, reliab. props. 70412
PZT antiferroelec. thin films on bare and RuO_2 coated steel, prep. 68355
PZT based ferroelec. thick film actuator on Si, prep. by screen-printing 127277
PZT based fully MOCVD obtained epitaxial ferroelec. capacitors 70472
PZT compositionally graded thin films with $LaNiO_3$ electrodes, abnormal ferroelec. props. 81710
PZT deposited on textured Pt thin films, struct. and elec. props. 92660
PZT diaphragm-type film actuator, fab., ferroelec./displacement props. 134326
PZT, ferroelec. domains, morph., scanning nonlin. dielec. microscopy 104268
PZT ferroelec. films, modified sol-gel prep., ferroelec./struct. props. 125032
PZT, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
PZT ferroelec. thin film capacitors, leakage I-V charact. 92775
PZT, ferroelec. thin films, PLD, charactn. 114376
PZT, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
PZT ferroelec. thin films, polariz./self-polariz. 127233
PZT film-based micromechanical/opt. devices 70333
PZT films, CSD proc., Pt bottom electrode alloying effects 90485
PZT films, FeRAM fab., cross-contamination anal. 92777
PZT films, ICP etching using TiO_2 hard mask 92663
PZT films, RF magnetron sputtered, struct./elec. props. 81706
PZT films, RF magnetron sputtering, leakage current, fatigue props. 70393
PZT films, arc-discharge reactive ion-plating, ferroelec. props. 125058
PZT films, domain images/retention props., electrostatic force microscopy 104309
PZT films, excimer laser ablation, ferroelec. props. 127167
PZT films, fatigue effect, kinetics 70414
PZT films, ferroelec. memory devices, pulse width/voltage, bit size depend., AFM 70466
PZT films, high resoln. obs. 81679
PZT films on ITO coated glass, sol-gel proc., charactn., ferroelec. LCD appl. 90484
PZT films on Si, fab. by sol-gel method using Y_2O_3 buffer layers 68354
PZT films, one-step firing sol-gel proc., props. 79373
PZT films, pyroelec., dielec. props., fatigue effects 116171
PZT films, sol-gel derived, mech./elec. fatigue 81705
PZT films, sol-gel derived, surface treatment memory effects 70470
PZT films, sol-gel method, external stress induced preferred-orient. 104390
PZT films, sol-gel prep., RTA induced phase transform. kinetics 81668
PZT films, struct./ferroelec. props. on Ir/$(ZrO_2)_{1-x}(Y_2O_3)_x$/(100)Si 70399
PZT highly (111) oriented thin films deposited using nonpolymeric route 114385
PZT nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
PZT, piezoelec. props., influence of (Zr/Ti) ratio and Nb substitution 116144
PZT pyroelec. thin film IR detector props., substr. effects 131930
PZT screen printed thick films, densification, dielec. props. 79436
PZT single grained thin film, fatigue & data retention charact. 116148
PZT sol-gel derived films, ohmic cond./activation energy, temp. depend. 92645
PZT thick films, deposition on barrier layer covered stainless steel substrs. 101437
PZT thick piezoelec. film, hydrothermally deposited, prep. and props. 125019
PZT thin film, PLD, struct. anal. 114375

ferroelectric thin films continued
PZT thin film, fatigue model based on thermionic field emission mechan 127222
PZT thin film, ferroelec. polariz., scanning nonlin. dielec. microscopy 1211
PZT thin film, ferroelec. prop., bipolar pulse poling & space charge field 104
PZT thin film, structural charactn., SEM/HREM/XRD 116146
PZT thin film, surface layer, scanning nonlin. dielec. microscopy 127196
PZT thin films, MOCVD, MEMS appls. 101348
PZT thin films, MOCVD grown on $LaNiO_3$ buffered Si, elec. props., thickn effects 92654
PZT thin films, RF magnetron sputtering, struct./ferroelec. props. 124819
PZT thin films, chem. soln. deposition, ferroelec. props. 79367
PZT thin films, ferroelec. props., grain boundary effects, nucleation 10425
PZT thin films form. by using modified sol-gel solns., proc. stabil. 68356
PZT thin films, growth and charact., ferroelec. polariz. charging of YBa_2Cu thin films 101182
PZT thin films, loss factor, O^+ implant. effects 92635
PZT thin films, perovskite phase, selective nucleation, grains form., lat growth 104292
PZT thin films piezoelec./dielec. props., cryst. struct./texture 104322
PZT thin films, polariz./internal field, photoelec. obs. 81708
PZT thin films, prep., hydrothermal treatment following sol-gel deposi 125018
PZT thin films prod. by oxide precursors and crystallized by conventional RTA proc. 101460
PZT thin films, sol-gel derived, low-temp. crystn. 125017
PZT thin films, sol-gel growth, excess Pb content on microstruct./elec. pro 101412
PZT thin films, sol-gel prep., surface/interface struct. 116163
PZT thin films, soln. derived, proc. optim., piezoelec. applns. 79376
PZT thin films, study of transverse piezoelec. coeff., texture/comp. fn. 104
PZT thin films, wet etch patterning 92634
PZT thin films with Pt/PtO_x multilayer electrode barriers for FeRAM a 92647
PZT thin films/heterostruct., excimer laser liftoff proc. 105647
PZT, thin-film capacitor structs., excess PbO effect 104474
PZT wet chem. derived thin films, self-polariz. and texture 81701
PZT:La thin films on NiTi alloys, SME, PLD 101390
PZT:Nb films, RF magnetron sputtering, ferroelec./piezoelec. props. 81707
PZT:Nd ferroelec. thin film capacitors, sol-gel coating, LSI 102777
PZT:Nd(Fe) films, polariz. components, doping effects 92628
PZT/CeO_2/SiO_2/Si struct., PLD, struct./elec. props. 81778
PZT/Ir/ZrN struct., heteroepitaxial growth of Ir/ZrN layered electrode he oepitaxy on (100)Si substr., ferroelec. capacitor 101186
PZT/PLZT multilayer films, polariz. correl., pyroelec. props. 81699
PZT/$PbTiO_3$/TiO_2/Pt, sputter deposition, orient./comp. 101192
PZT/SiO_2/Si heterostruct., interface charge distrib. effects 104388
PZT/TiO_x/SiO_2/SiN_x/SiO_2/Si struct., AO device appls. 81758
PZT/$YBa_2Cu_3O_7$/$SrTiO_3$/MgO/TiN/Si layered film, PLD, microstruct., e props. 104313
PZT-$Bi_2Sr_2CuO_x$ films all-perovskite-oxide ferroelec. memory transistor 70
PZT-based 4Mbit FRAM devices, retention behavior rel. to capacitor pr 70473
PZT-based piezoelec. composite films , modified sol-gel route 114394
PZT(111) films, Ir(111) electrode effects, orient. control 101414
$PZTO_3$ ferroelec. thin films, bimodal crystallographic texture meas. 104312
(Pb,La)$(Ca,Ti)O_3$-$La_{0.67}Sr_{0.33}MnO_6$x multilayers, ferroelec., ferromagnet 70508
(Pb,La)TiO_3 films, elec. props. improvements on using $LaNiO_3$ bottom electr 70388
(Pb,Sr)TiO_3 epitaxial films, ferroelec. domain struct. 127197
Pb/Ti/Si thin films, thermal oxid., ferroelec. phase form. 92026
Pb-Ti-Nb-O films, MOCVD on Pt/Ti/SiO_2/Si substr., microstruct., deposi temp. effect 90419
$Pb_{1.1}(Al_{1/2}Nb_{1/2})O_3$-$Pb_{1.1}TiO_3$ films, chem. soln. deposition, elec. props. 8165
$(Pb_{0.76}Ca_{0.24})TiO_3$, nanocrystalline thin films, sol-gel prep., props. 101430
$Pb_5Ge_3O_{11}$ ferroelec. MFMOS capacitor, one transistor memory appl. 8177
$Pb_5Ge_3O_{11}$, ferroelec. films, sol-gel proc., charactn. 90483
$Pb_5Ge_3O_{11}$ metal-ferroelec.-oxide-silicon memory transistor 116231
$Pb_5Ge_3O_{11}$ thin film MFMOS capacitor, ferroelec. props. 104473
$Pb_5Ge_3O(11)$ ferroelec. thin film, plasma etching 104275
$Pb_{0.90}La_{0.15}TiO_3$ thin films on different bottom electrodes, struct./elec. chara 70395
$Pb_{0.9}La_{0.1}Ti_{0.975}O_3$ thin films, elec./pyroelec. props. 92632
$Pb_{1-x}La_xTiO_3$ La-graded heterostruct. films, sol-gel prep. and elec. chara 104401
$Pb_{1-x}La_xTiO_3$ thin films, PLD, struct., dielec. props. 79360
(PbLa)TiO_3 thin films, modified jet-vap. deposition, pyroelec. props, IR s appls. 70398
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth subs tion 104311
$Pb_{1.05-x}La_xTi_{1-x/4}O_3$(100) thin films, sol gel tech., structural/microstruct charact., elec. props. 104314
$Pb(Mg_{1/3}Nb_{2/3})O_3$, ferroelec./piezoelec. props., MOCVD 104321
$Pb(Mg_{1/3}Nb_{2/3})O_3$, relaxor electroceramic films, PLD 114374
$Pb(Mg_{1/3}Nb_{2/3})O_3$ thin films, dielec. props., electrostrictive strain, dc field 101
$PbMg_{1/3}Nb_{2/3}O_3$-$PbTiO_3$ epitaxial relaxor thin films, film thickn dielec./piezoelec. props. 101391
$PbMg_{1/3}Nb_{2/3}O_3$-$PbTiO_3$, ferroelec. thin films, effective electrostriction co charactn. 70427
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$, ferroelec./piezoelec. props., MOCVD 104321
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ film, PLD, charactn. 104385
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ piezoelec. thin films, sol-gel proc. 104320
$Pb((Mg_{1/3}Nb_{2/3})_{0.7}Ti_{0.3})O_3$, ferroelec. thin films on $LaNiO_3$(001) bottom electr 101185
Pb(Nb,Zr,Ti)O_3/(La,Sr)CoO_3 ferroelec. thin films, leakage, contact electr infl., capacitor appl. 80440
Pb(Nb,Zr,Ti)O_3/Pt ferroelec. thin films, leakage, contact electrodes infl., capac appl. 80440
Pb(Nb,Zr,Ti)O_3/$SrRuO_3$ ferroelec. thin films, leakage, contact electrodes i capacitor appl. 80440
$Pb_{1-x}Nd_x(Zr_{1-y}Ti_y)O_3$ films, PLD, opt. props., surface morph. 114379
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ thin films, prep. and elec. props. 101435
Pb_2ScTaO_6 sputtered thin films for dielec. bolometer mode thermal dete arrays 87014
$PbScTaO_3$ films, prep., piezoelec./pyroelec. props. 81704
$Pb_{1-x}Sr_xTiO_3$ thin films, structural/elec. props., appls. 101413
(PbSr)TiO_3 thin films, prep., elec. props., post-annealing, DRAM appl. 116
$Pb_{1-x}Sr_x(Zr_{0.53}Ti_{0.47})O_3$ thin films, appls., structural/elec. props., appls. 1014
$PbTiO_3$ thin film, CVD, abnormal growth 68220

roelectric thin films continued
$PbTiO_3$ thin film, MOCVD domain struct. at init. growth stage 104298
$PbTiO_3$ thin film, low temp. crystn. by excimer laser irrad., XRD, SEM, EDX 101392
$PbTiO_3$ thin film, pyroelec. detector array 81789
$PbTiO_3$ thin layers, stress effects 101427
$PbTiO_3/BaTiO_3$ superlattices, $PbTiO_3$ phase transit. absence, XRD/Raman spectr. 116175
$PbTiO_3/BaTiO_3$ superlattices, struct., vibr. props. 116142
$PbTiO_3/Pb(Zr,Ti)O_3/PbTiO_3$ sandwich struct., sol-gel method, charactn. 70392
$PbTi_{0.6}Zr_{0.4}O_3$ films, spray pyrolysis prep., dielec. props. 90533
$Pb(Yb_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ films, reactive magnetron sputtering, perovskite phase 114259
$PbYbNbO_3$-$PbTiO_3$ capacitor thin films, pulsed laser deposited, structural/dielec. props. 92626
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ mesoscopic films, micro-Raman anal. 104333
$Pb(Zr,Ti)O_3$ capacitors, ozone treatment, enhanced retention charact. 116229
$Pb(Zr,Ti)O_3$, coercive voltage, freq. depend., ferroelec. relax. 104296
$Pb(Zr,Ti)O_3$ films, alkoxide-based sol-gel proc., chem. struct. evol. 127198
$Pb(Zr,Ti)O_3$ films, highly preferred, low temp. prep. 70391
$Pb(Zr,Ti)O_3$, nano-size ferroelec. memory cells, patterning, switching 81715
$PbZrO_3$ antiferroelec. thin films, pulsed excimer laser ablation 79356
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$Pb_{1.1}((Zr_{0.52}Ti_{0.48})_{0.975}Al_{0.025})O_3$:Al thin films prep., sol-gel method 101411
$Pb(Zr_{0.32}Ti_{0.68})O_3$ film, 90° domains switching 127160
$PbZr_{0.5}Ti_{0.5}O_3$ thin films, chem. soln. deposition epitaxial growth and props. 90497
$Pb(Zr_{0.52}Ti_{0.48})O_3$, ferroelec. thin films on $LaNiO_3$(001) bottom electrodes 101185
$Pb(Zr_{0.53}Ti_{0.47})O_3$ thin film orient., elec. props., chem. soln. deposition 104293
$PbZr_{0.53}Ti_{0.47}O_3$ thin films, densification/evol. of stress effects 101427
$PbZrTiO_3$ thin films, sputtered, ferroelec. capacitors 104295
$PbZrTiO_3$ ultrathin films, MOCVD grown, elec. props. 104294
$PbZr_xTi_{1-x}O_3$ epitaxial films, near-field second harmonic imaging 82915
$Pb(Zr_{0.97}Ti_{0.03})O_3$:$Nb_2O_5$ stacked thick films, tape casting, pyroelec. props. 116155
$Pb(Zr_{0.53}Ti_{0.45}W_{0.01}Cd_{0.01})O_3$, film, sputtered, piezoelec. effect. 116174
$Pt/(BiLa)_4Ti_3O_{12}/Pt/Ti/SiO_2/Si$ MFMIS struct., fab., elec. characts. 126229
Pt/PLZT/Pt capacitors, H-induced degrad., nanoscale investig. 104468
Pt/PZT/Pt capacitor PZT films conductive region eval., hydrogen plasma treatment 104285
Pt/PZT/p-Si struct., memory props. 104476
$Pt/Pb(Zr,Ti)O_3/Pt$ thin film capacitors, sputtering, RIE damage 81787
$Pt/SBT/Al_2O_3/Si$ MFISFET, fab., memory window width 81276
$Pt/SrBi_{2.4}Ta_2O_9/ZrO_2/Si$ MFIS-FET struct., prep., elec. props. 81277
$Pt/SrBi_2Ta_2O_9$ films for ferroelec. memories, Pt coverage, quantitat. XPS 81683
$Pt/SrBi_2Ta_2O_9/CeO_2/Si$ capacitors for ferroelec. FET, gate stacks, XRD, EDX, TEM 104472
$Pt/SrBi_2Ta_2O_9/Pt$ ferroelec. thin film capacitors, room temp. aging 125849
$Pt/SrBi_2Ta_2O_9/Pt$ film capacitors, hysteresis symm., data retention, γ-ray irrad. effect 104469
$Pt/SrBi_2Ta_2O_9/Ta_2O_5/Si$ MFIS-FET memory, elec. charact. 81658
$Pt/SrBi_2Ta_2O_9/ZrO_2/Si$ ferroelec. gate oxide struct., elec. props. 69755
$Pt/SrBi_2Ta_2O_9/ZrO_2/Si$ struct., cryst. struct. & elec. props. 116226
$Pt/SrTiO_3/Pt/Ti/SiO_2/Si$ capacitors, post-annealed $SrTiO_3$ thin films, prep. 68143
$Pt/YMnO_3/Y_2O_3/Si$ capacitor, pulsed C/V meas., ferroelec. 102776
$Pt/YMnO_3/Y_2O_3/Si$ gate capacitor MFISFET, MOCVD prep. 81662
$SBT/Al_2O_3/Si$ heterostruct., PLD, ferroelec. props. 114370
Si tip array, BST sol-gel ferroelec. coating, electron emission 69396
$SrBa(Nb,Ta)_2O_6$ highly oriented film, synthesis, struct. & dielec. prop. 127175
$Sr_xBa_{1-x}Nb_2O_6$ films, PLD, dielec. props. 114378
$SrBi_2Nb_2O_9$, epitaxial films, microstruct./elec. props. 70409
$SrBi_2Ta2O_9$-Bi_3TiTaO_9, prep., structural behavior and ferroelec. response 81713
$Sr_{0.8}Bi_{2.3}(Ta_{1-x}Nb_x)_2O_{9+\alpha}$ thin films, sol-gel prep. and elec. props. 81719
$SrBi_2Ta_{0.8}Nb_{1.2}O_9$ thin films, structural charactn., Raman studies, XPS 101388
$SrBi_2(Ta_{1-x}Nb_x)_2O_9$ thin films, MOCVD, ferroelec. props. 79283
$SrBi_2Ta_{2-x}Nb_xO_9$, ferroelec. thin films, reversible/irreversible polaris., temp. depend. 104297
$SrBi_2TaNbO_9$ film, RF magnetron sputter deposition, microstruct., micro Raman spectra 114262
$SrBi_{2.4}(Ta_{0.75}Nb_{0.25})_2O_9$, thin films, ferroelec. charact., thickness depend. 70419
$Sr_{0.8}Bi_{2.2}Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$SrBi_2Ta_2O_2$ ferroelec. thin film capacitors, leakage I-V characts. 92775
$SrBi_2Ta_2O_9$ MOCVD thin films, chem. stabil. 92656
$SrBi_2Ta_2O_9$ capacitor films, P-MOCVD, elec. props. 81669
$SrBi_2Ta_2O_9$, coercive voltage, freq. depend., ferroelec. relax. 104296
$SrBi_2Ta_2O_9$, cryst. struct., ferroelec. props., chem. reacts., solid state chem. 104286
$SrBi_2Ta_2O_9$, epitaxial films, microstruct./elec. props. 70409
$SrBi_2Ta_2O_9$ ferroelec. capacitor for 1 V operation in NVM 114764
$SrBi_2Ta_2O_9$ ferroelec. thin film, prep., struct. & props. 127173
$SrBi_2Ta_2O_9$ ferroelec. thin films, RIE, $Pt/SrBi_2Ta_2O_9/Pt$ ferroelec. capacitors, elec. props. 104287
$SrBi_2Ta_2O_9$, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
$SrBi_2Ta_2O_9$ ferroelec. thin films, sol-gel precursor effect on form. 114386
$SrBi_2Ta_2O_9$ film, (103)-oriented ferroelec., epitaxial growth on Si(100) 81685
$SrBi_2Ta_2O_9$ film, MOCVD, ferroelec. props. temp. depend. 116172
$SrBi_2Ta_2O_9$ film, RF magnetron sputter deposition, microstruct., micro Raman spectra 114262
$SrBi_2Ta_2O_9$, film, as-grown, net spontaneous polaris. 70410
$SrBi_2Ta_2O_9$ film, chem. soln. deposition, a-axis orient. control 127158
$SrBi_2Ta_2O_9$, film, epitaxial, MOCVD, residual strain anal. 70411
$SrBi_2Ta_2O_9$ film, ferroelec., stacking faults, HREM 104273
$SrBi_2Ta_2O_9$ film piezo/leakage defects, SPM-based nanoscale investig. 92657
$SrBi_2Ta_2O_9$ films, fatigue charact., forming gas annealing effect 127157
$SrBi_2Ta_2O_9$ films, microscopic polariz.-switching, memory appl. 104367
$SrBi_2Ta_2O_9$ films prep. by metalorganic decomp. using RTA, charact. 70421
$SrBi_2Ta_2O_9$ for metal-ferroelec.-Si struct. without buffer layers 81695
$SrBi_2Ta_2O_9$, nano-size ferroelec. memory cells, patterning, switching 81715
$SrBi_2Ta_2O_9$ nanosize ferroelec. struct., domain imaging, polariz. hysteresis, switching 104310
$SrBi_2Ta_2O_9$, non-c-oriented ferroelec. films, PLD, epitaxial growth on $SrTiO_3$ 114377
$SrBi_2Ta_2O_9$ nonstoichiometric films, relax. effects and steady-state cond. 70420
$SrBi_2Ta_2O_9$ on Si memory effects, buffer layer depend. 81777
$SrBi_2Ta_2O_9$ one-axis-oriented film, growth, microstruct., remanent polariz. 127174
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mechanism 127222

ferroelectric thin films continued
$SrBi_2Ta_2O_9$ thin film, plasma etching, XPS/SIMS 116149
$SrBi_2Ta_2O_9$ thin films, MOCVD, film comp. effect, XRD 101334
$SrBi_2Ta_2O_9$ thin films, chem. soln. deposition, crystn. in N_2 ambient 68321
$SrBi_2Ta_2O_9$ thin films, dry etching in $Cl_2/NF_3/O_2/Ar$ ICP 104274
$SrBi_2Ta_2O_9$ thin films, dry etching, plasma chemistries 92046
$SrBi_2Ta_2O_9$ thin films, ferroelec. props., microstruct. effects 104307
$SrBi_2Ta_2O_9$ thin films, high leakage current dens., annealing 70417
$SrBi_2Ta_2O_9$ thin films on $LaNiO_3$, ferroelec. props., c-orient., mixed orient. 104316
$SrBi_2Ta_2O_9$ thin films prepared by MOD method, polariz. switching 70415
$SrBi_2Ta_2O_9$ thin films, pulse-introduced MOCVD, struct., elec. props. 104303
$SrBi_2Ta_2O_9$ thin films with Bi_2O_3 buffer layers by liq.-delivery MOCVD, ferroelec. props. 104334
$SrBi_2Ta_2O_9$, vap.-phase oxid. during PLD 125004
$SrBi_2Ta_2O_9$ very thin capacitors, interfacial layers, dielec. props. 81781
$SrBi_{2.4}Ta_2O_9$, thin films, ferroelec. charact., thickness depend. 70419
$SrBi_2Ta_2O_9$:Nb MOCVD, integrated ferroelec. capacitors, RAM 101333
$Sr_{0.8}Bi_{2.2}Ta_2O_9/LaAlO_3/Si$ syst., prep., ferroelec. props. 92646
$SrBi_2Ta_2O_9/SiON/Si$ ferroelec. MISFET, elec. props. 81275
$SrBi_2Ta_2O_9$-Bi_3TiNbO_9 ferroelec. thin films, structural study, Raman spectra, XRD, AFM 104289
$SrBi_2Ta_2O_9$(115) thin film, deposition from chem. soln., crown ether 101410
$SrRuO_3$ epitaxial thin films on (001) $LaAlO_3$, microstruct. and growth mechanism 79202
$SrRuO_3$ film, laser ablation prep., struct./elec. props., capacitor obs. 79353
$SrRuO_3/(Ba,Sr)TiO_3/SrRuO_3$ capacitors, gigabit DRAM, CVD, electrode technols. 101329
$Sr_2(Ta,Nb)_2O_7$ thin film, PLD, MFIS-FET memory 81657
$Sr_2(Ta,Nb)_2O_7$ thin films, chem. proc., struct./elec. props. 81661
$Sr_2(Ta_{1-x}, Nb)_2O_7$ ferroelec. thin film, PLD 101387
$Sr(Ti_{1-x}Mn_x)O_y$ polycryst. films, leakage currents 127164
$Sr_{n+1}Ti_nO_{3n+1}$, (n=1-5), Ruddlesden-Popper homologous series, MBE growth 68164
$SrTiO_3$ epitaxial films, strain-induced ferroelec. 70423
$SrTiO_3$ epitaxial growth on epitaxial (Ti,Al)N-Si(100) substr. using Ti-buffer layer 90248
$SrTiO_3$ ferroelec. film, permitt. meas., Josephson jn. 70428
$SrTiO_3$ films, ECR-PEMOCVD growth, Sr/Ti ratio step coverage effects 70394
$SrTiO_3$ thin film electrode interface props., Schottky barriers 104281
$SrTiO_3$ thin films, dielec. props., tunable YBaCuO microwave filters appl. 69138
$SrTiO_3$, tunable capacitors, perform., electrode geom. effects 92772
Ta_2O_5 on CVD Ru film, DRAM capacitor appl. 115087
Ta_2O_5 thin film, growth & precursor props., MOCVD/XRD 114364
$YBa_2Cu_3O_7$(-$SrTiO_3$-$YBa_2Cu_3O_7$) PLD thin films on sapphire, microwave appls. 92909
$YMnO_3$ based MFSFET, annealing effect, MOCVD 101328
$YMnO_3$ ferroelec. thin films, etching mechanism in Cl_2/Ar gas chemistries 104276
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
$YMnO_3$ thin films, microstruct., post-annealing, ferroelec. props. 127229
$YMnO_3$:Zr thin films, sol gel method, leakage current orig., heat treatment 104318
ZnCdS, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdSe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdTe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnO:Li ceramics/films, PLD, ferroelec./dielec. props. 104386
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557

ferroelectric transitions
see also ferroelectric Curie temperature
ferroelec. phase in antiferroelec. liq. crysts., dielec. relax. behavior 127187
ferroic domains and mesoscopic structs., conf., Nanjing, China (May-June 2000) 100366
glycine phosphite crysts., ferroelec. phase transit., acoustic/dielec. anoms. 104337
mixed syst. ferroelec. relaxors, random field model 116143
perovskite ferroelec., morphotropic phase boundary, tetragonal side, switching anal. 116157
polymers nonelectrical poling, surface energy poling 127214
PVDF LB films, 2D ferroelec., phase transits., SHG obs. 81698
PVDF oligomer ferroelec. thin films, structural/electronic charactn., AFM 127213
PVDF-trifluoroethylene copolymer, pyroelec. dyn. 127210
PVDF-trifluoroethylene copolymer films, electron irrad., electromech. 127208
PVDF-trifluoroethylene copolymers, ferroelec. phase transit., struct. 125103
PVDF-trifluoroethylene copolymers, structural/transitional props., high energy electron irrad. 125104
PVDF/trifluoroethylene copolymers, electron irrad. effects, NMR, naval transducer appl. 127209
pyridinium periodate ferroelec., transits., NIR FT Raman study 104368
relaxor ferroelec., dielec. response modelling 92622
smart materials, nonlin. props. 116150
thin film capacitors relax. mechanisms for FeRAM appl. 70471
$(Ag,Li)(Nb,Ta)O_3$ ceramics, ferroelec. props. 127176
$BaBi_2M_2O_9$ (M=Ta,Nb) perovskites, relaxor props. 104344
$Ba_5SmTi_{3-x}Zr_xNb_7O_{30}$ ferroelec. ceramics, phase transit. 81718
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$BaTiO_3$, film, lattice deform., polariz., FLAPW calcs. 127190
$BaTiO_3$ sol-gel derived ferroelec. thin films, diffuse transits., elec. cond., dielec. props. 92649
$BaTiO_3$:Hf,Zr, pure and doped ferroelec. ceramics, aging effects 92624
$Bi_{4-x}Pr_xTi_3O_{12}$, ferro-paraelectric transits., photoacoustic tech. 104267
$Cs_2Nb_4O_{11}$ cryst., growth, elec./dielec. props. 90205
$(Na_{0.5}Bi_{0.5})_{1-x}M_xTiO_3$ ceramics, (M=Pb,Sr or Pb+Sr), dielec. props. near morphotropic phase boundary 70424
$Na_{0.5}Bi_{0.5}TiO_3$-$PbTiO_3$($K_{0.5}Bi_{0.5}TiO_3$) ceramics, relaxor props. 104348
PLZT relaxor ceramics, nonlin. dielec. response, DC bias elec. field 104346
$PMN_{0.7}$-$(PbTiO_3)_{0.3}$, ferroelec. phase stabil., dielec. props. random fields effects 70389
PZT ceramics, internal friction, O vacancies, domain boundaries *(Chinese)* 70400
PZT fibers, effect of heating temp. on dielec. props. 70425
PZT films, sol-gel prep., RTA induced phase transform. kinetics 81668
PZT:Nb ceramics, prep., microstruct., ferroelec. props. 104351
PZT/PLZT multilayer films, polariz. correl., pyroelec. props. 81699
$PbK_2LiNb_5O_{15}$, ferroelec. anoms., structural changes 104272
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substitution 104311
$Pb(Mg_{1/3}Nb_{2/3})O_3$ thin films, dielec. props., electrostrictive strain, dc field 101428

ferroelectric transitions continued
$(PbMg_{1/3}Nb_{2/3}O_3)_{0.68}(PbTiO_3)_{0.32}$ relaxor ferroelec. single cryst., hypersonic/dielec. studies 104375
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ ceramics, mech. quality factor 92651
$PbMgNbO_3$-$PbTiO_3$ ceramics, phase conversion, morphotropic phase boundary 104269
$Pb(Ni_{1/3}Nb_{2/3})O_3$-$PbZrO_3$-$PbTiO_3$ ceramics, ferroelec. domain structs., TEM obs. 104271
$Pb(Sc_{1/2}Nb_{1/2})O_3$, relaxor ferroelec., phase transit., chem. order influence 127200
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ ceramics, mech. quality factor 92651
$Pb(Sc_{1/2}Ta_{1/2})O_3$ cryst., ferroelec., micro-Brillouin scatt. 127194
$PbTiO_3$/$BaTiO_3$ superlattices, $PbTiO_3$ phase transit. absence, XRD/Raman spectr. 116175
$Pb(Yb_{1/2}Ta_{1/2})O_3$-$Pb(Yb_{1/2}Nb_{1/2})O_3$ solid soln., struct./dielec. props. 127228
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ mesoscopic films, micro-Raman anal. 104333
$Pb(Zr,Sn,Ti)O_3$ ceramics, elec. field-induced antiferroelec.-ferroelec. transit. *(Chinese)* 116167
$Pb(Zr,Ti)O_3$ capacitors, ozone treatment, enhanced retention charact. 116229
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$PbZrO_3$ thin films, ac elec. & dielec. props. 92625
$Sn_2P_2S_6$ ferroelec., phase transits., uniform press./elec. field effects 116145
$SrBa(Nb,Ta)_2O_6$ highly oriented film, synthesis, struct. & dielec. prop. 127175
$Sr_xBa_{1-x}Nb_2O_6$, rare-earth impurity doping, ferroelec. and photorefr. props. 128455
$Sr_xBa_{1-x}Nb_2O_6$:Ce(Ce,La), ferroelec.-driven opt. and photorefr. props. 82802
$SrBaNbO_3$:Ce,La, opt./photorefr. props. 92932
$SrBi_2Ta_2O_9$ film, MOCVD, ferroelec. props. temp. depend. 116172
$SrBi_2Ta_{1.8}V_{0.2}O_9$ ferroelec., O-vacancy-related dielec. relax. 70396
$SrRuO_3$/$BaTiO_3$ epilayers, strain modif., substr. structural transit. 127306
$SrTiO_3$ epitaxial films, strain-induced ferroelec. 70423
$SrTiO_3$-$PbZrO_3$ solid soln., ferroelec. phase transit. 104350
ZnO:Li ceramics/films, PLD, ferroelec./dielec. props. 104386

ferroelectricity
see also ferroelectric devices; ferroelectric materials; ferroelectric switching; ferroelectric transitions
dielec. const. meas., scanning nonlin. dielec. microscopy 121154
electron gun with ferroelec. material cathode, current dens. *(Chinese)* 102913
ferroelec. film based slot/microstrip lines, dispersion charact. 114929
nonlin. Fabry-Perot resonator, direct num. integrat. 72047

ferrofluids *see magnetic fluids*

ferroic materials *see ferroelasticity; ferroelectric materials*

ferromagnetic Curie temperature *see Curie temperature*

ferromagnetic materials
see also ferromagnetic resonance; magnetic semiconductors; soft magnetic materials
amorph. ferromag. core magnetoelastic sens., muscular activity, in vivo expt. 76234
anisotropic magnetostatic problems, coupled magnetoelastic finite element formulation 83145
crack detect., local mag. flux leakage field sens. 68478
dual spin-valve type ferromag. double tunnel jns., annealed, charact. *(Japanese)* 92801
electronic, mag. props. megabar press. studies in diamond cells 97786
ELF mag. field shields, anal. methods eval. 128801
extreme soft ferromag. materials, hysteresis loops, automatic meas. *(German)* 97788
ferromag. single-electron transistors, multiple tunnel jn., tunnel magnetoresist. 81919
films, prep. by face-to-face sputtering tech. *(English)* 79216
giant magnetostrictive materials, recent R&D *(Japanese)* 81796
glass/Ta/NiFe/MnIr/CoFe/Ta bottom-pinned spin valves, exchange enhancement 81836
granular systs., nanostruct., GMR props. 127325
hospital pillow, pot. MR hazard not detectable by hand-held magnet 132757
II-VI dil. mag. semiconds. for magnetoelectronics 92872
IV-VI mag./nonmagnetic superlattices, interlayer exchange coupling 91821
JFT-2M TF ripple expts. using ferritic steel inserts 116246
long ferromag. rod with arbitrary length coil, quasistatic/dyn. mag. permeab. 86921
losses, modified Steinmetz eqn. 92782
low dens. carrier ferromag. semiconds., mag. interacts. 81811
mag. domains, mag. soft X-ray microscopy, high resoln. imaging *(Japanese)* 70524
mag. RAM technol., GMR/tunneling magnetoresist.-based, status/future prospects 90907
mag. tunnel jns., naturally oxidized, temp. effects 127361
mag.-saturated electromech. devices, steady-state FEM anal. 123292
magnetocrystalline anisotropy, saturation magnetis., coercive force 116280
magnetoelec. systs., steady mag. fields, FE and BE modelling 72198
mesoscopic ring magnets, vortex circ. control 70499
metal/GaAs heterostruct. fab., vac. wafer bonding 103231
micromagnetic std. problem No. 4, switching dyn. and crit. behavior 81798
MR oxides, related materials, conf., Boston, USA 124235
nanocrystalline alloys, power transformers appl. for switched mode power supplies 70486
nanodispersible film materials, microwave radiation absorpt. 80158
non-collinear perp. spin valves, distributed spin transport 127355
nonlin. material charact. and source terms, FEM anal. 127302
nonoriented elec. steel sheets, num. prediction of magnetostrictive behavior 81810
patterned mag. particle arrays, electron beam lithog. 127324
permalloy, local field meas., FMR micromechanical detectors 86753
Permalloy based mag. thin film multilayers, magnetoresist. and mag. props. 116288
Permalloy dots, sub-micron, nucleation and annihilation of mag. vortices 116274
Permalloy dots, sub-micron, vert. magnetis. proc. 116272
permalloy films, perforated, mag. domain form. 104484
Permalloy microgrid, near-field opt. lithog., mag. anisotropy 81819
Permalloy nanodisks, switching behavior of vortex struct. 116271
Permalloy shield, mag. head, domain optim. 116432
Permalloy stripe, nano-size rect., HF dyn. 81802
photoemission electron microscopy for ferromag./antiferromag. materials 102951
planar spin valve, single-domain ferromag. probes, magnetoresist. 116301
planar tunable microwave devices, ferromag. composite appl. 116483
props. and appls., review 104482
quasistatic mag. hysteresis, modeling with feed-forward neural networks 81805
rare-earth iron garnet ferromag. plate, metal-loss defects, magneto-opt. visualization 90613

ferromagnetic materials continued
reactor PV steels, mag./mech. props., incremental permeab. change curve me *(Japanese)* 109939
semicond. spin electronics, review *(Japanese)* 91571
spin-valve transistor, fab., charactn., and phys. 81922
stationary induction heating of flat charges, temp. field 78339
steel, C, mag. Barkhausen noise and hysteresis loop 79487
steel, mild, Barkhausen noise stress meas., prestraining effect 79490
steel, NDT, residual magnetis. meas., elastic stress depend. 79479
steel, Ni-Mo-Cr, microstruct., fracture toughness, Barkhausen noise *(Kore* 114551
steel, plastic deform., scanning SQUID microscopy 68486
steel, residual stress & carburisation, Barkhausen noise anal. 114526
steel, stress eval., Barkhausen noise meas., CRT prod. appl. 79482
steel plate, 3D stray field loss model, nonlin. anal. 128694
steel plate, reverse-side crack detect., residual mag. field method 114525
stressed ferromag. tunnel jns., degrad. and time depend. breakdown 81858
Terfenol-D, magnetostrictive alloy, sens. and actuator material 120724
toroidal ferromag. core hysteresis at transient excitation 102791
transient excitation behaviour forecasting approach 104491
transit. metal films, mag. anisotropy, X-ray absorpt. mag. lin. dichroism 1044
transit. metal oxide ferromag.-ferroelec. superlattices, laser MBE *(Japane* 92799
transit. metal oxide superlattice, spin electronics *(Japanese)* 92797
tunable high Q VHF/UHF devices, ferromag. film appls., materials issues 928
tunnel jns., local transport props. 127327
tunnel jns., spin polariz. at interface and TMR 127358
uninterruptible power supplies, ferromag. components reduction 112668
Vicalloy, mag. wire, output voltage generation 127322
YIG films, narrow-linewidth, for heterog. integrat. 92790
Ag:In/NiFe/Nb(Si) GMR spin valve, In contamination/Nb contact effect struct. 127400
AuFe mag. multilayer, GMR, induced anisotropy, ion beam mixing *(Chine* 116296
C nanotubes, ferromag. contacted, magnetoresist. 80529
C nanotubes, ferromag. contacted multiwalled, electron spin transport 80527
$(Co,Fe)_{50}Pt_{50}$ thin films, mag./magneto-opt. props. rel. to struct. 116254
Co alloy, amorph. ferromag. wire, gyromagnetic reson., HF losses 127300
Co epitaxial (10$\bar{1}$0) wires, mag. domain struct. 116277
Co films, domain wall displacement under nanocontact current 127307
Co nanodisks, switching behavior of vortex struct. 116271
Co nanoparticles, microemulsion prep., struct./mag. props. 116282
Co nanowires, electrodeposition, mag. props. *(Chinese)* 125016
Co thin film magneto-opt. sens., freq. response 109507
Co ultrathin films on flat and sputtered Pt(111) surfaces, mag. props. 70484
$Co/Al_2O_3/Co$ mag. tunnel jns., magnetoresist., asymmetric bias voltage depen 70513
Co/CoO films, disorder-driven hysteresis-loop crit. 81804
Co/Cr/Pd multilayers, prep., struct./mag. props. *(Chinese)* 127349
Co/Cu multilayers, roughness, high-angle X-ray diffr./reflectivity 116289
Co/Cu/Co GMR spin valves, growth, structural effects 116295
Co/Cu/Co sandwiches, Fe(Ti)(Cu) capping layers, GMR obs. *(Chinese)* 705
Co/Cu/Co stack, antiferromag. coupled, thermal stabil., GMR 81866
Co/GaAs, ferromag./semicond. spin FET 81398
Co/Gd multilayers on Si-(N) substrs., struct./mag. props. 70505
Co/Pb ferromagnet/supercond. nanojunctions, spin-depend. transport 127506
Co/Pd multilayer perp. mag. recording media, C underlayer, prep. *(Japane* 90245
Co/Pd multilayers, microstruct., mag. props., seed-layer effect 81867
Co/Pd superlattice film, mag. recording, bit decay 81891
Co/Pt perp. anisotropy multilayer media, opt.-assisted recording *(Englis* 70530
Co-C ferromag. nanodot arrays prod. by direct interferometric laser annealin 116270
a-Co-C films, mag. nanodot arrays prod. by direct laser interf. lithog. 12730
Co-Cr films with perp. anisotropy, magnetis. reversal 92804
Co-Cr-Ta/Pt film perp. recording layer, magnetis. proc. *(Japanese)* 92828
Co-Cr-based mag. recording media, mag. induced phase separation 92779
Co-Fe-Hf-O films, magnetis. reversal proc. 127298
Co-Ni alloy nanowire array, prep., mag. props. *(Chinese)* 127311
Co-Ni-Fe-N as-sputtered soft mag. thin films, HF characts. 127289
Co-Ni-P ferromag. MEMS, etch holes 127128
Co-Pt/Ru thin film high-coercivity long. recording medium, mag. props. 1163
CoCr/Pt perp. multilayers, ring-type recording head, sub-ns nonArrhenius ma switch. 116391
CoCrNbPt/NiFeNb double layered perp. recording media, high recording reso 116392
$Co_{70}Cr_{18}Pt_{12}$ perp. granular mag. media patterning, FIB, single-domain islan 116409
$CoCr_{15}Pt_{13}$ perp. recording media, high M_r sq. and exchange decoupled 1162
CoCrPt-based thin film media, activation vol., intergranular mag. intera 116372
CoCrPtB(Ta)-CrX-Cr (X=Mo,W) long. media, mag. and read/write prop 116260
CoCrPtC granular films, CrI, CrMn, CrRu underlayers, mag. recording 1163
CoCrPtTa perp. mag. recording media, magnetis. state, MFM *(Japanese)* 928
CoCrPtTa thin film media, mag. anisotropy consts., comment 116247
CoCrPtTa thin film media, stacking faults, stacking faults 116257
CoCrPtTa thin film media, thermal stabil., mag. switching vol., NiP seedlay 116259
CoCrPtX media/narrow shield spin-valve GMR head syst., ultra-high-dens. lon recording *(Japanese)* 92839
CoCrTa films for hard disks, analytic soln. for mag. orient. between grai 116258
CoCrTaNi(Pt) perp. thin-film media, magnetis., film depth *(Japanese)* 9278
CoFe ultrathin free layer, spin-filter spin-valve films 70501
CoFe/Al-oxide/CoFe ferromag. tunnel jns., magnon excitation, IET spectra an 126254
$(CoFeB)$-(SiO_2) film, mag. permeab., inductor core 127286
CoFeSiB ring shaped amorph. wires, GMI, mag. sens. 75486
$a\text{-}Co_{68.25}Fe_{4.5}Si_{12.25}B_{15}$ wires/ribbons, GMI 81813
$Co_{71.3}Fe_{3.7}Si_{15}B_{10}$ amorph. wire based sensitive CT 75478
$Co_{68.5}Mn_{6.5}Si_{10}B_{15}$ amorph. microwire magnetoelastic GMI sens. 75480
Co_2MnX (X=Si,Ge) Heusler single crysts., growth, mag. props. 116279
CoNbZr RF integrated inductor, stray capacitance, equiv. cct. anal. *(Japane* 104541
CoNi film, electrodeposited, struct./prop. rels. 90508
CoNi/Gd/CoNi trilayer, interlayer coupling 81861
CoNiCrTa perp. thin-film media, columnar struct., mag. props. *(Japane* 92825

romagnetic materials continued
CoNiFe electroplated film, saturation induction 116267
CoO/Co/NiFe film with antidot array, MR, Hall resist., magnetis. 104508
CoPdAlO mag. film, RF integrated inductor 127285
CoPt nanoparticles, microemulsion prep., struct./mag. props. 116282
CoPt patterned media with perpend. mag. anisotropy, fab. and props. 116265
$Co_{27}Pt_{73}$ alloy films with perp. mag. anisotropy, grain growth 70491
$CoPt_3$ irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
CoPt/Cr long. media, nucleation site layer, sig./noise ratio *(Japanese)* 70525
CoPtCrB trilayer recording struct., magnetis., thermal stabil. 116371
CoZrNb/CoSm exchange-coupled underlayer for perp. recording media 116250
Cu interlayer coupling reduct. in bottom synthetic spin valves 81852
Cu spin valve with single/double specular oxide layers, mag./elec. props. 81838
Cu/Pb ferromagnet/supercond. nanojunctions, spin-depend. transport 127506
$DyBa_2Cu_3O_7/La_{2/3}Ba_{1/3}MnO_3$ heterostruct., spin injection & transport 92901
$Dy_{20}Fe_{80-y}Co_y$ amorph. thin films, mag. and conversion electron Mossbauer spectra 127294
$Dy_2Fe_{17-x}Ga_x$ powder, high field magnetis. 81820
$(Fe,Ni)_{70}Zr_{10}B_{20}$ amorph. alloy powders, mech. alloying, mag./thermodyn. props. 81817
α-Fe, ferromag. particles, intergrain necking, magnetis. reversal 92805
Fe film dual ion beam sputtering, uniaxial mag. anisotropy and surface morph., head appl. 127292
Fe insulated powder, mag. props., AC mag. appl. 104498
Fe interact. nm-scale particles on Permalloy, mag. meas. and num. simul. 81803
Fe microstruct., FIB-fabricated nano-constrictions, mag. props. 116276
Fe nanoparticles trapped at tips of aligned C nanotubes, mag. props. 81807
Fe nanopillars, electron beam lithog./electrodeposition 114393
Fe powders, resin insulated, mech./elec./mag. props. 104496
Fe/Ag epitaxially grown ultrathin films, wideband microwave notch filter 81916
Fe/Ag/GaAs waveguide structs., microwave bandstop filter appl. 104538
Fe/Au epitaxial multilayers, roughness,mosaic defects, high-resoln. XRD 70504
Fe/Au/Fe(001) base, n-GaAs spin-valve transistor 104543
Fe/CoNbZr multilayers prep. by Ar/H_2 mixed gas sputtering/heat treatment, permeab. 104512
Fe/Cr superlattices, exchange-spring/bias systs., multiple switching cycles stabil. 81860
Fe/Fe_2O_3 films growth on Cu(110) surface 90321
Fe/GaAs, metal film epitaxial growth, ion beam sputtering 114250
α-$Fe/Nd_2Fe_{14}B$ melt spun ribbons, reversible magnetis. 81812
α-$Fe/Nd_2Fe_{14}B$ nanocomposites, melt spinning, texture/mag. anisotropy 127308
Fe/Ni bilayers on GaAs(001), perp. magnetisation 127346
Fe-Al-Ga-P-C-B-Si glassy alloy powders, consolidation, mag. props. *(Japanese)* 81797
Fe-Al-Si-R (R=Ce,La) heat resistant coatings, thermal-diffusion deposition 125022
Fe-B-Si alloys, mag. props., Al substitution effect 104493
Fe-C, annealed low carbon sample, appl. of nonlin. Barkhausen model 127299
Fe-Co-Si-B metallic glass, induced anisotropy, magnetoelastic props. 104490
Fe-Cr-Ni, age-hardenable austenite alloy, low temp. mag. sens. 75483
Fe-Cr-Si-B alloys, rapid solidif. by melt spinning, mag. props. 79421
Fe-GaN-Fe epitaxial tunnel jns. on GaAs, transport props. 127359
Fe-N soft mag. films, high moment, reactive sputtering with in-situ plasma diagnosis 127288
Fe-N sputtered films, prep., struct., soft mag. props. 127304
Fe-Pt high-coercivity films, low-temp. in-situ DC magnetron sputtering, appls. 116255
Fe-Pt isotropic nanostructured thin films, struct. and mag. props. *(Chinese)* 116249
(Fe-Pt)-MgO composite films, sputter-deposited, perp. recording media 116336
Fe-Si, elec. steel, circ. magnetis., RSST 127321
Fe-Si, elec. steel, mag. flux dens. meas. 132138
Fe-Si, laminated elec. steel, field homogenization 127301
Fe-Si, non-oriented elec. steel, power losses 127320
Fe-Si, spray form., mag. props. 104497
Fe-Si steel, grain-oriented, core loss reduction, laser scribing 127379
Fe-Si steel, magnetostriction, laser irrad. *(Japanese)* 92783
Fe-Si-Mn-S elec. steel sheet, mag. props., slab reheating 104495
Fe-Zr-Nb-B nanocrystalline alloys, soft mag. props., core loss 81822
FeCoB co-sputtered films, high moment soft mag. materials, coercivity, saturation induction 127293
$Fe_{64}Co_{21}B_{15}$ soft amorph. ribbons, stress-depend. hysteresis, model 127287
FeCoNi alloy thin film, pulsed-current electrodeposition 116266
FeCoNi/CuBe, sensitive nonlin. GMI effect 127352
$Fe_{62.5}Co_6Ni_7Zr_6CuNb_2B_{15}$ amorph. ribbons, nanocrystn., sens. appl. 70493
$Fe_{62.5}Co_7Ni_{7.5}Zr_6CuNb_2B_{15}$, magnetoelastic resonators, vib. detect. 75484
FeCoSiB magnetostrictive film pattern strain sens., anisotropy control 120779
$Fe_{73.5}Cu_1Mo_3Si_{13.5}B_9$, large sized nanocrystalline cores, mass annealing, exothermal proc. anal. 81911
FeCuNbSiB nanostructured soft mag. materials, mag. props. and appls. 81824
nc-FeCuNbSiB soft mag. alloy flexible sheets for shielding cylinder, HTSC SQUID device appls. 128802
$Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$, large sized nanocrystalline cores, mass annealing, exothermal proc. anal. 81911
FeMn/NiFe films, improvement of thermal stabil. of exchange coupling by Pt addit. 81857
FeMoCuSiB nanocrystalline soft mag. alloy, inverter core, mag. field annealing 88887
FeNbCuBSi nanocryst. glass-coated microwires, struct. and HF mag. props., annealing effect 81815
$Fe_{0.2}Ni_{0.8}$ CPW struct., modelling 80228
$Fe_{20}Ni_{80}$, permalloy strip, magnetoimpedance elements, mag. struct., SQUID microscopy 75825
FeNi/Fe(Ru) mag. tunnel jns., switching behaviour, mag. seed line effect 92875
FePd irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
FePd, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
FePt $L1_0$ ordered films, rect. shaped domains *(Japanese)* 70489
FePt alloy films, Zr-doped, rapid ordering 81795
FePt comp. controlled nanoparticle materials, mag. props. 116251
FePt irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
FePt self-assembled nanomagnet arrays, MOKE spectra, ultrahigh dens. recording appls. 116303
FePt thin films, grain size control by Ar-ion etched Pt seed layers 116253
FePt(111) ultrathin $L1_0$ films on MgO(111) underlayer, texture control 116252
FeSi core PM motors, iron loss, mag. fields anal., FEM, E&S model 133914

ferromagnetic materials continued
FeSi, high Si content, thermomech. proc., magnetostriction and hysteresis losses 127296
FeSi single-oriented elec. steel, init. recrystn. texture, mag. induction 127297
$Fe_{77.5}Si_{7.5}B_{15}$ amorph. wire, magnetostrictive delay line, force meas. 70564
$Fe_{77.5}Si_{7.5}B_{15}$ glass covered amorph. wire, sound vel. 104489
FeSiB/Cu/FeSiB multilayers, giant magneto-impedance *(Chinese)* 127350
$Fe_{60}Sm_{40}/(Fe_{96.7}Ta_{3.3})N$ multilayer films, mag. charactn. 81864
FeTaN as-sputtered films, substr. temp. effects on mag. props. 127290
FeTaN/IrMn exchange-coupled multilayer films as soft underlayers for perp. media 127291
$Fe_{84}Zr_7B_8Cu_1$ ribbons, effect of annealing on mag. props./magneto-impedance response 81816
(Ga,Mn)As/AlAs/(Ga,Mn)As dil. mag. semicond. jns., tunneling magnetoresist. 91745
GaAs:Mn, with nanoscale mag. clusters, photo-enhanced magnetoresist. effect 80696
$GaAs/Fe(Ni_{80}Fe_{20})$ structs., spin-polarized electron transport 80894
GaAs/GaMnAs(InMnAs) ferromag./nonmagnetic heterostruct., spin-depend. phenom. 91766
GaFeAs, highly-resistive epilayers, MBE growth, magneto-opt. effects 79227
$Ga_{1-x}Fe_xAs$, mag. semicond., impurities, XAFS obs. 80768
p-GaMnAs dil. mag. semicond., defects, first-principles study 116244
GaMnAs, ferromag. epilayers on GaAs(411)A, magnetotransport props. 80762
GaMnAs ferromag.-semicond. jn., spin injection 91747
GaMnAs films, high Mn conc., low temp. MBE, charactn. 79231
GaMnAs layers, migration enhanced epitaxy at very low temp., props. 79225
GaMnAs layers, migration-enhanced epitaxy, struct. and mag. props. 68163
GaMnAs, low temp. MBE growth, Mn effects 79226
$Ga_{1-x}Mn_xAs$ films, MBE, defect-controlled ferromag., annealing time 104486
GaMnAs/(In)GaAs heterostructs., spin-depend. props. 91746
GaMnAs/AlAs/GaMnAs single-barrier ferromag. semicond. tunnel jn., magnetoresist. 80790
GaMnAs/AlAs/GaMnAs tunnel jns., anisotropic tunneling magnetoresist. obs. 80787
(GaMn)As/GaAs based ferromag./nonmagnetic semicond. LEDs, elec. spin injection 82399
GaMnAs/GaAs/InGaAs, p-n jn. LEDs, electrolum., I-V characts. 82384
GaN:Fe(Mn) epilayers, MBE, mag. props. 103009
GaN:Mn, high dose ion implant., nanoscale mag. regions 127326
GdFe rear expansion detect. magneto-opt. media, domain expansion readout *(Japanese)* 93018
GdFeCo rare-earth-rich readout layer high-dens. magneto-opt. disk, DC mag. field 116847
InAs/Permalloy 2DEG, spin injection & spin detect. expt. 80903
$In_{1-x}Mn_xAs$, mag. semicond., impurities, XAFS obs. 80768
InMnAsSb, MOMBE growth, LW region sens.-memory device appl. 101269
$(La,Nd)_{0.7}Sr_{0.3}MnO_3$ epitaxial films, PLD, thermal stabil., O control 79359
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial CMR thin films, RF magnetron sputtering deposition 79210
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial thin film based CMR bolometer *(Chinese)* 120807
$La_{0.67}Ca_{0.33}MnO_{3-y}$ thin-film microbridge opt. detector 120798
$La_{0.67}(Ca_{0.33-x}Pb_x)MnO_3$ nanopowders, MR behaviour 104485
$La_{1-x}Pb_xMnO_3$ CMR ceramics, co-precip. oxalate precursor prep. 68406
$La_{0.7}(Pb_{1-x}Sr_x)_{0.3}MnO_3$ films, CMR, bolometer/mag. sens. appls. 81800
$La_{0.9}Sm_{0.1}Ni_{2.0}Co_{3.0}$ electrode alloy, electrochem. prop., magnetis. treatment 123742
$(La_{0.7}Sr_{0.3}MnO_3/SrTiO_3)_{15}$ superlattices, pulsed liq.-injection MOCVD 101339
$La_{0.8}Sr_{0.2}MnO_3/SrTiO_3/La_{0.8}Sr_{0.2}MnO_3$ trilayer, tunneling magnetoresist. *(Japanese)* 92798
$La_{2/3}Sr_{1/3}MnO_3/SrTiO_3/YBa_2Cu_3O_{7-\delta}$ HTSC multilayers, growth, struct. 68303
Mn/Sb multilayer films, mag. props., MOKE 70512
MnAs films, MBE growth on oxide substrs. 114281
MnAs, mag. nanocrystals, MBE growth, charactn. 79233
$Mn_{0.2}Cr_{0.8}Pt_3$-based epitaxial films, struct./mag. props. *(Japanese)* 70488
MnIr/CoFe based spin valves, exchange bias enhancement, Cu underlayer, surface modif. 81848
MnSb, mag. nanocrystals, MBE growth, charactn. 79233
(Nd,Dy)-(Fe,Co)-B nanocomposite high-energy isotropic resin bonded magnets 127316
Nd-Fe-B PM, degrad. procs. 92863
Nd-Fe-B PM, electrodeposited polymers, corros. resist. 101475
Nd-Fe-B nanocomposites, coercivity limits 81821
Nd-Fe-B sintered magnet, wet compaction, energy product 127382
Nd-Fe-B thin arc-shaped bonded magnets for dc motors, powder compacting press prep. *(English)* 92864
Nd-Fe-B, undercooled, solidif., microstruct. 79424
Nd-Fe-Co-Cu-Ga-Al-B magnet, corros. stabil. 127385
Nd-Pr-Fe-B magnets, high-coercivity state generation during sintering *(Ukrainian)* 92780
$Nd(Fe,M)_{12}$ (M=Mo,Ti) powders, nitridation, struct./mag. props. 101474
$Nd_{50}Fe_{40}Al_{10}$ amorph. alloys, high-coercivity, mag. and structural props. 104487
NdFeB PM, dental prosthetic device, mag. props. 122318
NdFeB alloys, metastable solidif. by drop-tube proc. 125071
NdFeB anisotropic bonded magnet, d-HDDR powder proc. 127383
NdFeB, elastic modulus, intrinsic coercivity 104494
NdFeB films, DC magnetron sputtering, microstruct., mag. props. 127305
NdFeB magnet, phosphating, corros. protection 101473
NdFeB magnets, Sn/Al/Dy addit. effects *(Chinese)* 79422
NdFeB magnets, corros. resist., magnetis. 101472
NdFeB plastomagnetic material for MEMS *(Italian)* 127407
NdFeB sintered PMs, high perform., current status *(Chinese)* 70554
NdFeB sintered magnet, die upset, electrochem. corros. 127386
NdFeB strip-cast PM, mag. props. and microstruct. 104488
NdFeB thin film magnets, laser ablation prep., high coercivity 125008
$Nd_2Fe_{14}B$ film magnets, laser ablation synthesis 114371
$Nd_2Fe_{14}B$ films, isotropic/textured, magnetis. procs. 81823
$Nd_2Fe_{14}B$ grains, nanostruct., mag. props. optimisation 92862
$Nd_2Fe_{14}B$, polycryst., texturing by solidif. in mag. field 127330
NdFeB/epoxy resin bonded magnet, melt-spun powder recycling, liq.-phase pyrolysis *(English)* 92865
NdFeB-type magnets, use of metal hydride powder blending in prod. 68393
NdFeB-type powders, intermediate mag. phases in H disproportionated state 90550
$Nd_{13.9}(Fe_{92}Co_8)_{80.3}B_{5.5}Ga_{0.5}$, multiscale mag. domains 81809
$Nd_xFe_{85-x}Co_8VB_6$ exchange-spring magnet ribbons, spark plasma sintering 127315
$Nd_{14.65}Fe_{79.18-x}Nb_xB_{6.17}$, high perform. sintered magnets, Nb addit. role 68391
$Nd_{33}Fe_{65.9-x}Nb_xB_{1.1}$ magnets, microstruct., mag. props. *(Chinese)* 127310
$Nd_{3.6}P_{15.4}Fe_{83}Co_3B_5$ nanocomposite ribbons, hard mag. props. 81818

ferromagnetic materials continued
$Nd_{0.67}Sr_{0.33}MnO_3$ epitaxial films, microwave losses, dc transport, mag. prop. 68992
Ni ferromag. micro-rhombs, Hall-magnetometry 116273
Ni ferromag. rod, effective field estim. by magnetoacoustic effect *(Japanese)* 127328
Ni film, magnetoelastic SAW atten. & magnetoresist., annealing 127318
Ni films, domain wall displacement under nanocontact current 127307
Ni magnetostrictive wire, AC field induced rot. 127317
Ni/NiO/Ni multiple tunnel jn., ferromag. SET *(Japanese)* 92874
Ni-Cr(V) biaxially textured tape substr. for $YBa_2Cu_3O_{7-\delta}$ HTSC films 68397
Ni-Fe alloy of low coercivity and improved corros. resist. in cyclic damp heat test 81808
Ni-Fe/Al-O/Co-Fe films with tunneling magnetoresist. effect, deposition 81871
Ni-pillars, electroplated, ferromag. dots/arrays, Hall-magnetometry 116275
NiAl, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
NiFe based mag. thin films and spin valve devices, patterning, switching props. 116300
NiFe based mag. tunnel jns. oxidized by ozone, tunneling magnetoresist. 127357
NiFe film, electrodeposited, struct./prop. rels. 90508
NiFe mag. shield smoothed by gas cluster ion beam, mag. tunnel jns. 81893
NiFe nanopillars, electron beam lithog./electrodeposition 114393
$Ni_{80}Fe_{20}$, hot-electron transport, spin-valve transistor study 81921
$Ni_{80}Fe_{20}$ mesoscopic dots, magnetis. reversal dyn. 116245
$Ni_{80}Fe_{20}$ microstruct., ps time-resolved magnetis. reversal dyn. 81801
$Ni_{81}Fe_{19}$ permalloy artificially nanostruct. films, FMR obs. 116281
NiFe/Co/Al(Ta)-oxide/Co mag. tunnel jns., oxid. mech. of insulation layer 81883
NiFe/Cu/NiFe/NiO micron-width wire, dipole interact., exchange anisotropy 81835
NiFe/Cu(InAs), elec. spin injection in semicond. and metal 80905
NiFe/InAs interface, spin injection & detect. 80904
NiFe/InAs-2DEG/NiFe multiple jns., spin injection expt. 69628
NiFe/InGaAs/InAlAs four-terminal struct., ballistic spin transport 126214
NiFe/NiMn bilayer/pinned spin valve, exchange coupling *(Japanese)* 70509
NiFeCo/CoFe/Cu/CoFe/NiFeCo mag. multilayers, ion-enhanced dry etching 70502
Ni_2MnGa alloys, mag. props. & structural phase transforms. 127319
Ni_2MnGa single cryst. thin films, MBE growth, XRD, TEM 101302
NiO/Cu/NiFe trilayers, temp.-depend. of interlayer exchange bias coupling 81875
NiO/FeNi bilayer with interdiffused interface, exchange coupling 81879
(Pb,La)(Ca,Ti)O_3-$La_{0.67}Sr_{0.33}MnO_6$x multilayers, ferroelec., ferromagnetism 70508
Pd/Cr/Co multilayers, mag./magneto-opt. props. 81850
(Pr,Nd)FeB magnet, hot workability, ball milling and melt spinning 127387
Pr-Fe-Co-Nb-B syst. exchange spring magnets, mag. props. *(Japanese)* 127329
$Pr_{0.85}Ca_{0.15}MnO_3/YBa_2Cu_3O_{7-\delta}$ MSW device, fab., characts. 127537
$Pr_{1-x}Ca_xMnO_{3-y}/YBa_2Cu_3O_7$ HTSC jns., field effect 70485
$Pr_{13}Dy_2Fe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_{14}DyFe_{77}C_6B_2$, melt-spun carbides, hard mag. props. 81806
$Pr_2Fe_{14}B$ magnet, metastable phases and texture, HDDR proc. 127384
$Pr_2Fe_{14}B$ melt-spun ribbons, hard magnet characts., Mossbauer obs. 92784
$Pr_8Fe_{88}B_4$ ribbons, exchange-spring magnets, exchange field temp. depend. 70490
$Pr_{20}Fe_{73.5}B_5Cu_{1.5}$, bulk metastable nanostructured alloys, effects of heating/aging 114428
$Pr_2Fe_{6.8}Co_{10.2-x}M_x$ (M=Si,Ga,V), struct./mag. props. 127314
$Pr_8Fe_{84}M_2B_6/\alpha$-Fe (M=Cr,Nb,Ti,Zr) nanocomposites, struct./mag. props. 116261
$PrFeO_3$-$PbTiO_3$ solid soln., ferroelec./ferromag. props. 127226
$R_2Co_{17-x}Mn_x$, (R=rare earths), magnetocryst. anisotropy 127313
$RuSr_2GdCu_2O_8$ supercond. cpd., impurity phases 81937
RuTa, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
Si-Mn cube texture oriented soft mag. steel sheets, fine grain struct., prod. proc. 127295
Si(100)/Ru/Co/Ru/Co/Cu/Co/Ru spin valves, biquadratic coupling, GMR 81865
SiFe alloys, grain oriented, generalized scalar Preisach model 81799
SiFe grain oriented sheet, hysteresis model 127303
SmCo/Fe/SmCo trilayer films, mag. props. 81880
SmCoAlSi/Cr/SmCoCuTi-based multilayers, long. recording media *(Japanese)* 70510
$SmCo_{7-x}Ti_x$ magnets, mag./struct. props. 127331
$Sm_2Fe_{15-x}Co_xSi_2CCu_y$, struct., permanent mag. props. 81814
$Sm_9Fe_{65}Co_{20}V_9$, H-assisted disproportionation/recomb. 116262
$Sm_2Fe_{17}N_{2.3}$, PM, prod., nanocrystalline 116479
$Sm_{1-x}Gd_xCo_5$, mag. anisotropic ribbons, mag. props. 116248
$SrRuO_3/BaTiO_3$ epilayers, strain modif., substr. structural transit. 127306
Ta/Cu/$Ni_{79}Fe_{21}$/Cu/Ta film, induced uniaxial mag. anisotropy and film magneto-striction 127345
Tb-FeCo/FeCo multilayers, large magnetostrictive suscept. 70506
TbFeCo exchange-coupled double-layer, mag. flux reading opt. recording 104518
a-TbFeCo film, perp. recording media, magnetis. reversal *(Japanese)* 70487
TbFeCo high-magnetis. exchange-couple double-layer, mag. flux reading/opt. recording 116846
TbFeCo media, magneto-opt. recording technol. *(English)* 70531
TbFeCo perp. mag. recording material, NiP underlayer, mag. props. *(English)* 70529
TbFeCo/Pt multilayers, mag./magneto-opt. props., interface effects *(English)* 81885
TbNiFeCo combinat. thin-film libraries, magnetostrictive and magneto-opt. effects 116278
Ti/FeTaN planar-type film inductor HF DC-DC converter 127406
TiNi, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
$YBa_2Cu_3O_y/La_{0.7}Ca_{0.3}MnO_y$ HTSC multilayers, Hall effect 70639
ZnO:Ni films, fab., Ni content/carrier dens. effect on transport & mag. prop. 80698

ferromagnetic-paramagnetic transitions
see also Curie temperature
$La_{0.67}Ca_{0.33}MnO_3$ epitaxial thin film based CMR bolometer *(Chinese)* 120807
$La(Fe_xSi_{1-x})_{13}$, giant magnetostrictive materials, recent R&D *(Japanese)* 81796

ferromagnetic resonance
2D ferrite waveguide, magnetostatic modes 104547
conf., Phys. props. of mag. materials, Poznan, Poland (June 2000) 89545
FMR micromechanical detectors, local field meas. 86753
layered dielec./ferrite microstrip line struct., dyadic Green's fn. calcs. 80163

ferromagnetic resonance continued
metallic film planar transm. lines for microwave device appls. 127394
micro-size mag. strip for GHz carrier type mag. field sens. 120775
RF integrated inductors for MMICs, mobile commun. handset appl. *(Japanese)* 80319
rural power syst. FMR, mechanism and countermeasures *(Chinese)* 111880
spectrosc., micromechanical detector 86761
tunable high Q VHF/UHF devices, ferromag. film appls., materials issues 928
YIG films, narrow-linewidth, for heterog. integrat. 92790
$BaFe_{12}O_{19}$ films, nearly intrinsic FMR linewidth 127337
$Bi_3Fe_5O_{12}$ single cryst. films, FMR 92791
Fe/Ag epitaxially grown ultrathin films, wideband microwave notch filter 819
Fe/Ag/GaAs waveguide structs., microwave bandstop filter appl. 104538
$La_{0.7}(Pb_{1-x}Sr_x)_{0.3}MnO_3$ films, CMR, bolometer/mag. sens. appls. 81800
MgO/Fe(001)-based multilayers, growth, struct., electronic and mag. pro 124809
Ni/Cu multilayers, electrodeposited, mag./FMR props. 81884
$Ni_{81}Fe_{19}$ permalloy artificially nanostruct. films, FMR obs. 116281
SiO_2-Fe nanostructures, selective etching, AFM study 115661
YIG ultrathin films, PLD, perp. mag. anisotropy 127341
YIG:Ce films, prep. by RF magnetron sputter techs., struct./mag. charact. 818
$ZnFe_2O_4$:Co nanoparticles, anisotropy const., FMR 81825

ferromagnetism
see also ferromagnetic materials; ferromagnetic resonance; Ising model; sp waves
B=B(H) curve approx., segment choice using spline fns. 93969
diffusive ferromag.-supercond. struct., long-range proximity effects 70866
electron spin-based semicond. device technol. 126912
ELF sources enclosed by nonlin. ferromag. pipe, EM fields 72171
hybrid ferromag./supercond. nanostruct., electron transport 70872
hysteretic cores, supply ccts., rot. flux excitations 81909
mutual inductors with ferromag. nonlin., topol. and dyn. 91439
nonlin. ccts. with saturating ferromag. coils, anal. 101702
sandwich type ferromag. RF integrated inductor for 2 GHz range, charac 80369
sandwiches, domain duplication, overview 70492
saturated ferromag. rect. prism/rect. coil, 3D mag. field 105680
secondary substations, power-freq. mag. fields mitigation 134297
spin-valve transistor, magnetocurrent temp. depend., phenomenological mo 104549
switchable SQUID, bilayer device struct. 127476

ferrons *see magnetic polarons*

ferroresonance
see also ferroresonant circuits
3-phase const. voltage transformer based on ferroresonance, anal., desi 134115
10 KV power network, TV ferroresonance overvoltage, digital simul. *(Chine* 99340
SF_6-insulated voltage transformers, saturable reactor param. selection *(Kore* 123554

ferroresonant circuits
sensitivity anal. 90671
voltage transformer ccts., chaotic behavior, fractal dimens. methods 79529

Feshbach resonances *see resonant states*

FET *see field effect transistors*

Feynman diagrams
series related to the Euler series, Feynman diag. calc. 124683

FFT *see fast Fourier transforms*

FGD *see flue gas desulphurisation*

FGM *see functionally graded materials*

FHP motors *see fractional-horsepower motors*

FIB etching *see focused ion beam technology; sputter etching*

FIB technology *see focused ion beam technology*

fibre Bragg gratings *see Bragg gratings; optical fibres*

fibre distributed data interface *see FDDI*

fibre-in-the-loop *see optical fibre subscriber loops*

fibre laser amplifiers *see optical fibre amplifiers*

fibre lasers
see also optical fibre amplifiers
2.5-Gb/s wavelength conversion using grating fiber external cavity laser 1174
14-pin butterfly packaged fiber-grating stabilized lasers 105175
20 GHz OTDM sig., 10 GHz clock pulses extraction 120198
act. mode-locked, self-PM, time-domain ABCD matrix 93505
act. mode-locked fiber lasers, extended ABCD model, expt. validation 7168
act. opt. fiber ring resonator filter, linewidth factor, optim. *(Chinese)* 7169
ADCs, photonic type, develops. 82795
additive-pulse mode-locked fiber laser with fiber-grating, oscill. conditions *(C nese)* 105181
all-fiber photonic devices and syst. for advanced opt. commun. 120184
all-fibre Moire DFB lasers, stable multiple wavelength generation, CW outp power 128132
AM mode-locked fiber laser, detuning charact., numeric simul. 117371
B-class fiber ring laser, mode pairing and parametric self-locking 105201
Bragg gratings, photosensitivity and poling in glass, conf., Stuart, FL, USA (Se 1999) 124178
Brillouin fiber lasers, soliton pulse compression 128561
Brillouin fiber ring laser, soliton compression and locking 128136
cascaded CW Raman fiber lasers, SRS, num. modeling, optimisation 82539
cascaded Raman fibre laser for stable dual-wavelength operation 82511
cascaded WDM fiber Bragg grating sens. elements, ring-compounded-cavity fil laser use 86591
controllable tuning of radiation freq. 128162
DBR fiber grating laser, freq. stabilization using interferometric tech. 10519
DFB fiber lasers, multiple wavelength operation 82537
DFB laser, microwave carrier generation, propag. mode matrix 80390
dispersion-managed fiber ring laser, act. mode-locked, jitter, stabil. anal. 825
dual-core ring fiber laser, self-mode-locking action 105207
dual-fibre laser Doppler sens., miniaturization 109606
dual-long.-mode birefr. moire DFB fiber laser sens. in rf domain 97333
dual-wavelength cascaded Raman fiber laser, WDM coupler/Bragg gratin 105173
DWDM components testing using high-power Raman fibre lasers 120157
external reflector cpd. ring resonator for single-mode TW doped fiber la 93682
eyesafe indust. fibre lidar, rem. sens. appls. 99034
Fabry-Perot laser, ring cavity, act. mode locking 117097
FBG laser sens., SOA gain medium 109615

lasers continued
femtosecond modelocked fiber laser, WDM pulse generation, pulse shapers, arrayed waveguide gratings 120315
four port opt. switch, Brillouin-based fibre-optic sens. 105551
Gbit/s OTDM transm. systs., fibre grating laser-based RZ pulse source 96808
grating laser, non-AR coated, packaging 105203
grating laser, wavelength stabilised, WDM syst. 105178
high power multicore fiber lasers, Talbot resonator, phase-locking, self-imaging props. 71681
high-power CW Raman phosphosilicate fiber laser, output charact. 105171
high-power solid-state laser, LD pumped, output charact. and appls. 71721
high-repetition-rate fiber laser with mode locking by external opt. modulation of SOA 82515
hollow fibers for delivery of high-power lasers 128129
indust. meas. syst. using opt.-microwave transm. syst. with SCM 75393
intrinsic DFB fibre laser hydrophone 131943
in. array in external Talbot cavity, near-/far-fields study 93498
micro welding in electronics, limitations and miniaturization pot. 91514
mode locked by Sagnac interferometer with nonlin. polariz. rot. 128405
mode-locked fiber laser, OTDM sig. injection, clock recovery *(Chinese)* 96778
modulational-instabil. σ-resonator fiber laser 82517
multi-wavelength fiber ring laser, tunable act. mode locking 71684
multi-wavelength pulses of fiber lasers, gen. and dispersion compensation *(Chinese)* 93728
multichannel fiber laser systs., sync. mode-locking 71683
multicore fiber laser, combined phase locking/beam shaping by struct. mirrors 93741
multicore fiber laser emission charact., multimode interf. device self reprod. 71668
multicore fiber lasers, all-fiber phase locking setup 82775
multicore fibre laser phase locking by external mirror 117356
multiple wavelength DFB fiber lasers, comprehensive num. model 71662
multiple wavelength DFB fiber lasers, dyn. anal. 117119
nonoxide glasses, opt. appls. 104601
opt. fiber commun., optoelectronic devices appl./develop. *(Chinese)* 131440
opt. fibre components conf., Boston, MA, USA (Nov. 2000) 100388
opt. waveguide theory and num. modelling, conf., Prague, Czech Republic (May 2000) 100417
OTDM syst., behavior description and simul. using VHDL 96831
pass. mode-locked fiber soliton ring laser, subsideband generation 128393
pass. modelocked self-starting fiber laser pulse anal. using step chirped draw tower grating arrays 128389
pass. modelocking, dissipative FWM 93508
pedestal-free ultra-short pulse generation using DSF, dispersion-imbalanced non-lin. loop mirrors *(Chinese)* 117347
perylene-doped polymer fiber fluoresc. spectra 93058
PHELIX, PW high-energy laser for HI expts. 105162
phosphosilicate-core single-mode fibers, act. Raman laser medium 105169
photonics technol. appls., conf., Quebec City, Quebec, Canada (June 2000) 89534
π-shifted long-period fiber grating bandpass filters for act. mode-locked Er-doped fiber lasers 116881
Π/2-phase shifted DFB fiber laser chirping, single mode operation 105177
polariz. mode dispersion meas. by opt. freq. domain reflectometry tech. 116658
polariz.-maintaining dispersion-flattened dispersion-decreasing fiber pulse compressor 82950
Raman fiber lasers and amps., opt. fiber commun. systs. appls. 128169
Raman ring laser, multi-wavelength CW 1.55 μm operation 82521
rare-earth doped chalcogenide glass fiber, mid-wave/LW IR laser pot. 105192
rational harmonic mode locked ring fiber laser, time domain anal. 105448
ring laser, mode-locked, pulse-train uniformity and dyn. 128137
ring laser, modelocking stabil. by pulse bunching 82512
ring laser, regenerative mode-locking, pulse freq. doubling 71897
ring laser, wavelength tuning mechanism by pol. control *(Korean)* 117100
ring lasers, rational harmonically modelocked, higher-order opt. pulse generation 93523
semicond. ring lasers, all-opt. wavelength conversion 117275
semicond.-fiber ring laser, up-wavelength conversion, nondegenerate FWM *(Chinese)* 71982
sens. with cavity form. by ref./sens. Bragg gratings 86596
silica fibre Raman laser, P_2O_5- and GeO_2-doped, output charact. 93512
silica-air microstruct. opt. fibers 71289
spacing-tunable multiwavelength operation 105187
sync. mode-locked fiber laser, parametric gain modulation, soliton shaping 105206
Cs opt. at. clock, Er fiber laser microwave source 75359
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
Er,Yb-doped laser transmitters, high-bit-rate FM, pulse train stabil. 71913
Er doped fiber laser, mode-locked, gamma-ray induced responses 117129
Er fiber laser, stabilized rationally mode-locked, pulse generation, BER 105190
Er:ZBLAN fibre laser, pulsed-pumped, output charact. 71682
Er/Yb-P/Al/Si co-doped short-cavity fibre grating laser 82514
Er-doped act. mode-locked fiber laser, opt. pulse train generation 93502
Er-doped all-fiber pass. Q-switched low-threshold laser with Co^{2+}:ZnSe saturable absorber 71685
Er-doped fiber Bragg grating lasers, freq./intens. noise 117096
Er-doped fiber amp. with inline fiber grating laser, L-band operation 71675
Er-doped fiber dual-ring laser, chaotic sync. by chaotic modulation 93526
Er-doped fiber dual-ring laser, polarized mode, chaos control by lin. feedback method 117126
Er-doped fiber gain/ASE charactn. 82120
Er-doped fiber laser, act. mode locking, pulse noise meas. 105209
Er-doped fiber laser, effect of pass. Q-switching at low pumping power 82784
Er-doped fiber laser, rational harmonic act.-pass. mode-locking *(Chinese)* 93497
Er-doped fiber laser, ring cavity, SNR, WDM syst. 117110
Er-doped fiber laser, self-Q-switched, SBS, output charact. *(Chinese)* 82522
Er-doped fiber laser, self-Q-switched, pulse characters 117124
Er-doped fiber laser, stabil., pumping perturb. *(Chinese)* 105185
Er-doped fiber laser with cavity SOA, rational harmonic mode-locking, stable pulse generation 105166
Er-doped fiber lasers, 3 μm operation, med. appls. 71673
Er-doped fiber lasers, asynchronous mode-locking, integrable model 93736
Er-doped fiber ring laser, widely tunable operation in C-/L-bands 71674
Er-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wavelength operation *(Chinese)* 82523
Er-doped fiber, transversal distrib. influence, perform. optim. 104681
Er-doped fibre DFB lasers for sens. appl. 75576
Er-doped fibre characterisation, laser transient behaviour anal. 93500
Er-doped fibre dual-ring laser, chaotic systs. inverse sync. scheme anal. 105186

fibre lasers continued
Er-doped fibre laser, SBS, pass. Q-switching dyn. 105451
Er-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
Er-doped fibre laser, intracavity polariser based on long-period fibre grating 117109
Er-doped fibre laser, multichannel, soliton-like pulse generation 93731
Er-doped fibre multimode ring laser, coherence, Michelson interferometer obs. 93513
Er-doped fibre ring laser, chaos, secure commun. appl. 86054
Er-doped harmonically mode-locked fiber laser pulses, delay time tuning 105193
Er-doped mode-locked fiber laser, multiwavelength pulse generation 82536
Er-doped pulsed fiber laser, Rayleigh backscatt. SBS mechanism 93504
Er-doped single-freq. fiber laser, external light injection, freq. control charact. 71677
Er-doped single-mode tunable fiber ring laser operation, widely tunable fiber Bragg grating 128415
Er-doped subpicosecond freq.-shifted feedback fibre lasers, stable pulse operation 93503
Er-doped twin-core fibre narrow-band filter for fibre lasers 105188
Er^{3+}-doped 7 level fiber laser syst., time evol. 117128
Er^{3+}-doped CW fiber-ring laser, cascaded unbalanced Mach-Zehnder interferometers 82513
Er^{3+}-doped fiber pass. harmonic mode-locking laser, ultrashort opt. pulses generation/amplif. *(Chinese)* 105456
Er^{3+}-doped fiber, stable single-freq. fiber ring laser *(Chinese)* 117105
Er^{3+}-doped fibre quasi-ring & FBGs, dual-wavelength lasers 93514
Er^{3+}-doped fluorozirconate opt. fiber upconversion fluoresc. 117108
Er^{3+}-doped tunable DFB fiber laser, Bragg grating fab. method 105176
Er^{3+}-doped tunable fiber laser, integrated optics Mach-Zehnder interferometer 82542
Ho^{3+} doped silica fibre laser, intracavity Raman pumping 71687
Ho:ZBLAN glass fiber laser, LD-pumped, power conversion efficiency 93527
Ho^{3+}-doped silica CW 2 μm fibre laser 71669
Nd:YAG cryst. fiber laser gains, end pumped 128178
Nd-doped silica double clad fiber as powerful white light laser sources, freq. converted OPO 71667
P_2O_5-SiO_2 Raman fibre laser, three-cascaded, Bragg gratings 71688
Pr,Yb:ZBLAN vis. upconversion fiber lasers, noise suppression 82534
Tm,Yb:glass fibre laser, $^1G_4$ level excitation, blue upconversion, fluoresc. 93495
Tm^{3+},Ho^{3+}-doped ZBLAN glass fibre laser, output charact. 82520
Tm:ZBLAN blue upconversion fibre laser. pumping schemes 93515
Tm-doped aluminosilicate double-clad fibre laser 71665
Tm-doped fibre laser intracavity absorpt. spectrosc., water vapour detector appl. 76897
Yb,Er-doped fiber laser, relax. oscill. locking, microsecond pulse generation 105165
Yb^{3+} doped holey fibre based modelocked laser 71656
Yb^{3+} fiber laser, cladding pumped self-Q-switched 117125
Yb-doped 1.45 μm double-clad Raman fiber laser 128149
Yb-doped double-clad all-fiber tunable ring laser 117102
Yb-doped double-clad fiber, ASE 105168
Yb-doped double-clad fiber laser, conversion efficiency 117122
Yb-doped double-clad fiber laser, high-power tunable narrow line width output 105200
Yb-doped double-clad fiber laser in unidirectional ring cavity 105167
Yb-doped double-clad fiber laser, unidirectional ring geom., high power operation 82535
Yb-doped double-clad fibre laser, single-transverse-mode output 82519
Yb-doped double-cladding fiber broadband superfluorescent source 117123
Yb-doped fibre laser, cladding pumped, tuning range 117098
Yb-doped high power Raman fiber laser modulator, low insertion loss 105205
Yb-doped monomode silica fiber, ASE *(Chinese)* 71294
Yb-doped phase-locked multicore fiber laser array, high-brightness laser beam 71661
Yb^{3+}-doped double-clad fiber laser, optimized length *(Chinese)* 71689
Yb^{3+}-doped narrow-linewidth fiber laser, unpumped dopant fiber fn. *(Chinese)* 105182
Yb^{3+}-doped ring/line cavity fiber laser, LD pumped, output charact. *(Chinese)* 71691
Yb^{3+}-doped single-freq. fibre ring lasers *(Chinese)* 93496

fibre optic cables *see optical cables*

fibre optic gyroscopes
closed-loop syst., modified digital serrodyne proc. *(Korean)* 75554
differential optic phase tracing method *(Chinese)* 75552
I-FOG, startup time improvement 75580
INS alignment procs., angle random walk reduction 131961
interferometer fiber optic gyros, navig. appls. *(Japanese)* 97337
interferometric fibre gyroscopes, error compensation 75581
interferometric FOG ang. vel. sens., noise charact. 120852
iXsea products eval. by LRBA *(French)* 109619
mobile robot dead-reckoning, precision-calibrated fiber optic gyroscope, sens. fusion 109593
open-loop, thermally induced error charact. & compensation 120853
reconnaissance pushbroom electro-opt. sens., motion correction 99125
rly. track smoothness detect. 75586
slab deflection meas. using Sagnac effect FOG 75590
Er-doped double-pass superfluorescent fiber source for fiber-optic gyroscope 75560

fibre optic sensors
see also fibre optic gyroscopes; intelligent sensors; magneto-optical sensors; optical fibre telemetry
1.55 μm supercontinuum source high-resoln. opt. coherence-domain reflectometry 132194
2D opt. fibre microphone array, matrix-style data readout 99074
3D miniaturized surface profilometer, Young's double pinhole interferometer 109591
absol. dist. meas. with fibre optic interferometer *(German)* 75885
absorptive methane opt. fiber sens. *(Chinese)* 121000
acoustooptic tunable filter interrogated fiber Bragg grating sens. 131959
act. fibre waveguide sens., embedded structural condition monitoring 121054
adhesive for OTDR monitoring in dams 79474
AE sens. develop. for NDE syst. 114531
air dens. and humidity sens., opt. fibre and α-ray detector 97293
aircraft skin panels, embedded FBG sens., buckling anal. 88046
all-opt. Mach-Zehnder ADM, back-refl. spectrum monitoring *(Chinese)* 97278
anchor monitoring 75587
APD-based low cost photodetect. syst. for low level O_2 conc. meas. 120972
area array components, X-ray/endoscopy-based inspection techs. 124417
automation systs. components, sens., PLCs, computer appls. 113819

fibre optic sensors continued
automotive meas. appls. 120825
biological/biomedical appls., opt. sens./manipulation, conf., Taipei, Taiwan (July 2000) 89497
biomedical diagnostics, opt. spectrometry 76414
biosensor materials, conf., Boston, USA (Nov.2000) 78376
birefr. dielec. grating, press. and temp. sens. 75600
bleached Kraft pulp facility, nuc. level detect. syst. 132435
blood, opt. meas., conf., Amsterdam, Netherlands (Jul. 2000) 78375
BOTDA sens., distributed strain meas. *(Korean)* 120848
bow-tie fibre imprinted two-mode FBG grating, temp./strain sensitivity 97285
Bragg grating, chirp effect, temp.-independent bend sens. *(Chinese)* 75595
Bragg grating, chirp tuning, accelerometer appls. 97320
Bragg grating appls. in material charact. param. meas. 75593
Bragg grating array for distributed strain sens. 97299
Bragg grating based elec. current sens. *(English)* 120876
Bragg grating fiber strain sens. demodulator 97338
Bragg grating sens., simultaneous displacement/temp. meas. *(Chinese)* 131948
Bragg grating sens. array, serial TDM using tunable laser 109604
Bragg grating sens. network for spacecraft health monitoring 98888
Bragg grating sens. syst. with interferometric demodulation tech. *(Chinese)* 120846
Bragg grating sens. systs., meas. accuracy improvement 86574
Bragg grating with metal coating, tuning efficiency *(Chinese)* 71292
Bragg gratings, pass. interrogation of low-finesse Fabry-Perot cavities 109610
Bragg gratings, photosensitivity, coupled mode theory 127602
Bragg gratings, photosensitivity and poling in glass, conf., Stuart, FL, USA (Sept. 1999) 124178
Bragg gratings, stds. and metrology 127636
Bragg gratings for temp./bending sens. 97335
Bragg wavelength fiber grating sens., simultaneous strain/temp. meas. *(Chinese)* 131954
braided composites, embedded opt. fibre sens. 120880
breast imaging by diffuse opt. tomography 76411
bridge & highway static/dyn. testing, long-gauge FBG strain sens. 120843
bridge struct. health monitoring with FBG sens. 86781
Brillouin opt. time domain reflectometer-based distributed temp. sens. 75555
Brillouin spectrum estim., least sq. method repetition algm. *(Japanese)* 97329
Brillouin-based distributed fiber temp. sens., microwave coherent detect. 75574
bundle tip backscattered light intens., non-contact vibr. meas. 121233
buried Bragg grating strain sens. fiber optic coils 97324
cage motor starting, inner temp. meas., fluoresc. opt. fibre 123450
cantilever beam photonic sens., mech. & reliab. issues 86576
cantilever beams, long-term reliab., sens. appls. 104638
cantilever-based fiber Bragg grating sens., simultaneous displacement/temp. meas. 86592
cascaded WDM fiber Bragg grating sens. elements, ring-compounded-cavity fiber laser use 86591
caverned large oil tanks, fibre opt. rem. inspection 123109
chem. sens. for heavy metals meas. 75730
chem./biosensors, fluoresc. lifetime change detect. by optoelectronic cct. auto-oscill. 120961
chirped FBG fab., tapered transducers/loading 93280
chirped FBG strain sens., subcarrier phase detect. scheme 97287
chirped fiber Bragg gratings, chromatic dispersion correction 127605
civ. struct. health condition monitoring *(Chinese)* 131950
coal mine & tunnel autom. alarm, distrib. opt. fibre temp. sens. 67499
coherence-multiplexed fibre-opt. sens., press./temp. change meas. 109607
compact probe for simultaneous dist./vel. determ. 97300
composite cure proc. optim. using fiber optic sens. and simul./ES 120826
composite materials, fracture location self-diagnosis, hollow-center optic fiber *(Chinese)* 114561
composite-bonded concrete strain meas., FBG sens. 86571
concrete moisture content meas. using Mach-Zehnder interferometer 90599
conf., fibre mech. reliab., Boston, MA, USA (Nov. 2000) 124198
conf. on EO and microelectronics, Tel Aviv, Israel (Nov. 1999) 78457
conf. on sens. and control techs., Wuhan, China (June 2000) 78371
corros. sens., electroless Ni-P deposit 75569
corrugated long period fibre grating torsion sens. 97284
corrugated long-period fiber grating strain/torsion/bending sens. 109605
cracks automatic meas. using fibre-optic reflectometry 90600
cryogenic FBG temp. sens., high-sensitivity, Teflon substrs. 97298
current sens., Faraday rotator mirror 75603
current sens. using differentiating Sagnac interferometer 86588
curvature sens., light output lin. var. with bending angle *(German)* 131934
curved surface inspection, noncontact meas. *(Chinese)* 97315
D-type FBG, bending sens. 97289
dielec. multilayer hydrophone, freq. response 111526
differential opt. fiber refractometer, patient monitoring on drug injection 110840
differential press. flow sens. with FBG 109594
differentiating fibre opt. interferometer, phase compression *(Chinese)* 86587
digital opt. fibre photoplethysmograph design, DDS, DSP 110847
disabled pers. movements, opt. fiber curvature sens. 98731
distortion monitoring syst., opt. fiber Bragg grating sens.-based *(Japanese)* 86951
distributed fibre opt. strain sens. for long struct. 109608
distributed fibre opt. temp. sens., spatial resoln. wavelet ANN 120860
distributed fibre optic temp. sens. utilising spontaneous Brillouin scatt. 86595
distributed opt. fiber temp. sens., sampling correct technol. 120863
distributed press. sens. with mode-locked fiber-ring laser 75575
distributed temp. sens., fibre-optic based for oil and gas wells 120828
distributed temp. sens., S/N characts. improvement 97302
Doppler lidar airborne turbulence sens. *(Japanese)* 99004
dual temp./strain sens., fluoresc. lifetime decay & FBG 97330
dual-fibre laser Doppler sens., miniaturization 109606
dual-long.-mode birefr. moire DFB fiber laser sens. in rf domain 97333
dyn. FBG strain sens., serial arrays, simultaneous interrogation 97295
electrification meas. in power transformers 77936
elevated temp. multiplexed fiber-optic Bragg stack sens. 75557
ellipt. liq.-cryst. core polarimetric fiber-optic sens. 109601
embedded fiber optic sens., single-fiber fragmentation test 131952
end grating, holographic interferometry temp. sens. 121255
engine condition estimating fiber-optic sens. 120866
evanescent wave fibre optic sens. 120871
evanescent-field fibre optic sens. for E. coli O157:H7 122060
extrinsic Fabry-Perot interferometer strain sens., three-wavelength digital phase demodulation 86586
Fabry-Perot fibre opt. sens., transm.-type, sig. proc. algm. 120851
Fabry-Perot resonator, invasive press. meas. 131962
FBG interferometric sens. demodulation, noise-induced resoln. limit 97283

fibre optic sensors continued
FBG laser sens., SOA gain medium 109615
FBG refractometer, side-polishing, liq. optochem. sens. 97279
FBG reson. sens. using micro-cantilever beam *(Chinese)* 75563
FBG sens., 3D accel. meas. 120857
FBG sens., bending effects 75584
FBG sens., displacement meas. 120854
FBG sens., LPG and EDF, dyn. strain meas. 109613
FBG sens., simultaneous displacement and temp. meas. 120856
FBG sens., simultaneous strain and temp. meas. 120855
FBG sens., transformer oil acetylene gas content monitoring 75732
FBG sens. based on long-period fiber grating *(Chinese)* 75562
FBG sens. demodulator, fiber birefr. 109616
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
FBG sens. interrogation, scanning filter, M-Z interferometer, coupler 9728[illegible]
FBG sensor for temp. detection *(Chinese)* 75564
FBG strain sens., shaft torsion deform. meas. 75591
FBG strain sens., tunable narrow bandpass filter demodulator *(Korean)* 97[illegible]
FBG strain sens., ventilatory movements monitoring 98349
FBG strain sens. ship hull struct. monitoring, sig. proc. 89388
FBG-based meas. syst. in struct. health monitoring 86780
fiber Bragg grating period reconstruction by time-freq. sig. anal., distributed se[illegible] appl. 75565
fiber Bragg grating vibr. sens. using incoherent light 97313
fiber-based lidar, atmos. water-vap. meas. 111415
fibre-optic temp.-strain discrim. sens. using WDM chirped in-FBG 86575
field-deployable opt. tomographic syst., all-optoelectronic solns. 84190
filament wound press. vessel monitoring, embedded FBG sens. 97309
fixed reson. wavelength long-period grating fiber sens. 131941
flame monitoring, FEA 120873
flame monitoring syst., wavelet adaptive filtering wavelet transform 120867[illegible]
flowmeter calib. using spatial filtering, gravit. flow *(German)* 75602
fluid external species meas., opt. fibre sens., neural net pattern recogn. 120[illegible]
fluoresc. dye opt.-fiber sens., organic solvent water content 75570
fluoroptic temp. detect., opt. fiber microprobe 120858
FMCW opt. fiber sens., neural network based nonlin. recovering tech. *(Chine[illegible]* 75551
four port opt. switch, Brillouin-based fibre-optic sens. 105551
freq.-output fiber-optic voltage sens. for HV lines 109612
fuel gas detect. using polymer-coated plastic opt. fibers 75731
fully-distributed opt. fiber polariz. props., OTDR backscatt. tech. 93056
functionalized polydiacetylene, mol. recogn., fiber optic biosensors 75686
gas trunk pipelines, opt. fiber bidirectional strain gauge 120841
gas turbine blade fiber-optic tip-shroud deflection meas. syst. 112322
gaseous hydrocarbon distrib. meas. by NIR absorpt. tomography syst. 1100[illegible]
new generation devices for all-opt. commun. network 74924
glass-reinforced composites, curing, fiber-optic evanescent-wave fluoresc. se[illegible] model 75559
grating press. sens., train real-time tracing syst. 120878
grating sens. for simultaneous press./temp. meas. 75579
gratings components, mixed polymer packaging, temp. sensitivity *(Chine[illegible]* 120875
height meas. of telescopic gasometer, optic fiber sens. based telemetry 7538[illegible]
high nonlin. ellipt. fiber sens. 109588
high spatial resoln. chirped moire fibre grating strain/temp. sens. 131940
high temp. meas. 75585
high temp. meas. of molten steel in ladle by fiber optic sens. 75588
high-resoln. fiber Bragg grating sens. syst., time-domain addressing tech. *(C[illegible]* *nese)* 109587
high-sensitivity non-birefr. Mach-Zehnder fibre interferometer, refr. index me[illegible] 131942
high-strength proof-tested fiber Bragg grating strain sens., survival proba[illegible] 127680
high-temp. meas., fluoresc. techs. 97326
hollow fibers short-pulse FWM for highly sensitive gas-phase anal. 82072
humidity sens., food proc. indust. 120838
hybrid fiber optic current sens., HV power line 120859
in vessel nuc. fusion reactor viewing syst., amplit. modulated laser radar 1056[illegible]
in-fiber Bragg grating sens., interferometric interrogation 97312
indust. sens. syst., conf., Boston, USA (Nov. 2000) 113218
insulating oil, PD sig. detect., opt. fiber Sagnac interferometer *(Korean)* 703[illegible]
interf. pattern recogn., CGH-ANN syst. 86584
interferometer for micropump dyn. meas. 78108
interferometric fiber-optic sens., divide/combine polariz.-induced-fading elimini[illegible] tion tech. *(Chinese)* 120881
interferometric fringe projection phase-shifting 3D profilometry using freq.-mo[illegible] ulated LD 109620
interferometric hydrophone array using FDM *(Chinese)* 86249
internal combustion engine develop., opt. access/diagnostic techs. 109676
internal combustion engine develop., opt. access/diagnostic techs. 120687
intra-arterial blood flow meas. by self-mixing feedback LD 132626
intrinsic DFB fibre laser hydrophone 131943
intrinsic Fabry-Perot fiber-optic temp. sens. 75566
intrusion sens. using speckle pattern vars. from multimode opt. fiber *(Korea[illegible]* 120834
IR thermometer, human body core temp. accurate meas. 87548
isosceles-triangle-shaped beam fiber Bragg grating current sens. *(Chines[illegible]* 97277
JMTR, strain meas. under irrad., capsule type strain gage *(Japanese)* 75894[illegible]
kilometric opt. fiber interferometer, field polariz. state control 131955
lactate biosens., bacterial cytoplasmic membranes 75676
large core MMF optic sens. for high power microwave powered UV light sour[illegible] 86598
large serial fiber-optic Bragg grating sens. arrays, TDM 86577
large struct. monitoring opt. fiber sens. syst., vibr./temp. meas. 109598
large-scale multiplexed fiber optic sens. arrays for geophys. appls. 122548
laser dyn.-fixed dist. meas. 75582
laser sens. with cavity form. by ref./sens. Bragg gratings 86596
laser-US smart mould for composite parts mfg., fibre opt. US sens. 114451
LD distributed opt. fiber temp. sens. 120862
licking behaviour detect. during brain electrophysiological sigs. recording 982[illegible]
lightguide appls. conf., Krasnobrod, Poland, Oct. 1999 113244
lightweight fibre opt. microphones/accelerometers, act. sound control 75601
lin. strain matrix material embedded fibre strain sens. 86583
liq. composite molding, fiber optic flow sens. 86582
liq. cryst. fibre-optic systs. in inform. proc. 127842
long period fibre gratings, long period grating resons. 127640
long-period fiber grating Mach-Zehnder interferometer based AO amplit. modu[illegible] lator 127856

e optic sensors continued
ong-period fiber grating opt. sens. with optimized sensitivity, chem. detect. 75572
ong-period fiber grating sens. appls., reson. peak shift/dual peak separation 86590
ong-period fibre gratings pair, curvature/load/chem. sens. appls. 97282
ong-period grating bend-sens. fibre sens. 97307
ong-period grating fiber-optic liq.-level sens. 120836
ow cost LD supply for fiber optic sens. 117249
ow-coherence interferometric sens. based on highly birefr. fibers, detect. syst. optimisation 109595
luminesc. fiber optic temp. measuring syst. testing 120870
ung carcinoma, occult, bronchoscopically-guided conformal radiotherapy 76652
Mach-Zehnder interferometric fiber-optic hydrophone, demodulation *(Chinese)* 120882
nachine health monitoring 120829
nammalian cells, polarized backscatt. fiber-optic meas. 132638
nandrel fiber-optic hydrophones, press.-to-accel. responsivity ratio 97311
neas. precision improvement *(Chinese)* 97314
MEMS press. sens. fabricated on opt. fiber 109611
MEMS vibr. meas. by fiber optic sens. *(Chinese)* 75596
metal capillary splice fiber-optic macro-bending sens. *(Korean)* 120847
metal conc. in water, RT phosphoresc. opt. fiber chem. sens. 120973
metallic struct. embedded FBG sens., prep., thermal perform. 120849
methane, absorptive detect., LED/opt. fiber coupled syst. 120991
Michelson interferometer config., group vel., dispersion coeff. 109621
micro-opt. FBG sens., micromech. reson., vibr. meas. 131937
microbend sens. for smart struct., distributed detect. 75771
microbent opt. fiber for chem. sens. 131953
microoptical dist. sens., deep X-ray lithog. fab. 116765
microstruct. opt. fibre sens., design criteria 97292
microsystems, micro- and nanofabrication proc. technols., diverse appls. 92567
microwave heterodyne detect. calibrated distributed fiber temp. sens. 75556
microwave IC interrogation by photonics 102747
microwave-field imaging fiber-based EO probe 109944
mid-IR fiber-optic spectrosc., anal. appls. 97318
miniaturized fiber coupled RF elec.-field sens., resoln. and sensitivity 109602
miniaturized fiber-coupled E-field sens. using EA modulator and PV cell array 120883
missile fuel leaks detect. using opt. sens. 75561
mobile robot guidance, curvature opt. fiber whiskers 131946
MOEMS press. sens., propulsion appls. 97581
multi-channel long period fiber gratings, controllable transm. charact. 82081
multi-point opt. fibre sens., fouling determ. in water systs. 99028
multichannel fluoresc. temp. meas. syst., fibre opt. sens. 75594
multicomponent force sens., multiplexed FBG strain sens. 97286
multicomponent glass core-silica cladding opt. fibre constr. 116633
multicore flexible fiber endoscopes, pulsed digital holographic interferometry 87523
multifunctional liq. cryst. based fiber-optic sens. 120865
multilayered sol-gel pH sensitive dye coated fibre optic pH sens. 132034
multimode opt. fiber Bragg gratings sens., strain/temp. mes. 131949
multiple fibre grating sens. syst., rapid response using CDMA 97297
multiple intens.-modulated opt. fiber sens., network compensation tech. 75592
multiplexed FBG sens., gamma-neutron radiation effects obs. 97319
multiplexed opt. fiber interferometric sens. syst., opt. coherence fn. synthesis 86572
nanometric opt. fiber probe, fab. method, light transm. principle 97321
near-field fibre probe tip, mercury treatment 131936
NIR absorpt. tomography, ICE meas. appl. 121257
noncontact fiber-optic dist. gauge, miniature 86581
nonoxide glasses, opt. appls. 104601
nuc. radiation sens., fiber loss 121602
OCT, simult. refr. index & thickness meas. tech. 75908
ocular/body disease detect. by dyn. light scatt. 132637
oil indust., distributed fiber grating sens. down-hole reservoir monitoring 131939
opt. fiber segment, long. elastic wave speed and atten. meas. 127713
opt. fiber sens. for oil contamination meas., 3D fluoresc. spectrum parameterization 120879
organophosphate pesticides direct determ., biosens. appl. 111470
overview of principles and charact. 86580
oxidase-based fibre-optic biosensors, luminol electrochemiluminescence 97407
particle/droplet flow, tomographic imaging, opt. fiber sens. 97336
PDLC fiber optic sens. device, thermo-opt. effects 131945
peroxide biosens. using elec. controlled-release tech. 86681
pers. recogn. syst. using fibre grating vision sens. *(Japanese)* 107145
phosphoresc. photodetection, fibre optic and APD 120824
phosphosilicate FBG, thermal/UV presensitis., high temp. sens. appl. 97288
photom. return-path birefr. sens. based polarimetric opt. fiber refractometer 86578
photonic sens. interact./perform. in space radiat. environ., review 122477
phytoplankton, marine, biomass meas. by dual-beam laser fluoresc. Doppler cytometer 86677
pigtailed super luminesc. diode for absol. temp. meas. 82406
planar waveguide opt. chem. gas sens. with 3-layered struct. *(Russian)* 109789
plasma polymerization in gas discharge, IR fibre evanescent wave spectrosc. 68363
plastic multi-mode fibre, opt. path length, sing-around method meas., sens. appls. 127698
plastic opt. fibers, sens./short-haul commun. links appls. 71251
plastic opt. fibre lens fab., low-cost tech., proc. tomographic syst. appls. 104686
plastic opt. fibre sens., vapour phase alcohol detect. 97294
polarimetric opt. fibres with ellipt. liq.-cryst. core 97301
polariz.-sensitive OCT, biological sample birefr. props. 122041
polarized-light interferometer for high precise fab. meas. 97322
polymer clad side-polished single-mode fiber temp. sens., high-sensitivity 131957
polymer-coated fused silica opt. fiber humidity sens. 97310
power boilers, fuel oil burners, fiberoptic monitoring syst. 120872
power equipt. FBG-based temp. meas., deconvolution of opt. spectra 123074
power line current sens. using analogue opt. data transfer 77661
power transformer PD, opt. fiber sens.-based detect. 109590
pre-embedded concrete bar sens., temp. charact. 131938
press. sens. using shielded polymer-coated fiber Bragg grating 75568
pulsed surface discharges, temp. meas., opt. fibre sens. 92607
quasi-distributed intrinsic fiber-optic strain sens., white-light interferometry 97334
quasi-distributed opt. fibre pH sens., covalently bound indicator 97432
quasi-distributed white light fiber optic strain sens. 120835
radiation distrib. sens. with normal opt. fiber 121567

fibre optic sensors continued
Raman distributed temp. sens., fast reactor JOYO monitoring appl. 97303
Raman probes, self-referencing, for quantitat. anal. 86703
real time fiber optics-plastic scintillator syst. for X-ray detect. 110439
reentrant fiber opt. rot. sens., design, sensitivity and resoln. *(Chinese)* 75553
reflective intens.-modulated fibre opt. sens., obliquity effect *(Chinese)* 120845
rem. addressed opt. fibre curvature sens., two-core photonic cryst. fibre sens. element 97308
rem. laser interferometer with pseudo-heterodyne sig. proc. 131944
rem. multipoint fibre opt. gas sens., FMCW tech. & tunable laser 120989
rem. opt. fiber radiation dosimetry, review 133139
rem. temp. meas., Internet syst. 120864
respiratory depth meas. using fiber optic sens. 87536
respiratory flow meas., opt. sens., cross-correl. techs. appl. 98359
road vehicle, weigh-in-motion, interferometric opt. fiber sens. 120874
Rollinsford bridge distributed strain monitoring by Brillouin-scatt. based fiber optic sens. 97323
Sagnac opt. fibre current sens., temp. induced sens. drift output compensation 109599
sampled fiber Bragg grating, temp./refr.-index meas. 86579
sapphire-ruby single-cryst. fibre, high temp. thermometers 97304
seismic fiber optic multiplexed sens. for oil exploration and reservoir mgt. 122547
self-calib. interferometric/intens.-based fibre opt. sens. 75577
self-calibrated interferometric-intens.-based opt. fiber sens. 131947
self-referenced intens. based opt. fiber sens., Michelson sens. head config. 109597
sensitive fiber cladding struct. elements 120868
SERS sens., with conically etched tips, prod., perform. 97317
short probe pulse SBS, transient response, distributed strain sens. appl. 97325
side-hole fiber-optic sens. for dyn. hydrostatic press. meas. 97327
simultaneous distributed fibre temp.-strain sens., spontaneous Brillouin backscatt. 97290
single fiber Bragg grating, strain/temp. two params. sens. *(Chinese)* 86585
single type I fiber Bragg grating transducer, strain/temp. meas. 109596
single-mode fiber polariz. modes, fiber ring interferometer zero drift 120842
single-mode fiber-optic press. sens., self-referencing double interferometer 131958
skin cancer diagnosis, FTIR fiber optic evanescent wave spectrosc. 87529
skin tissue class., FEW-FTIR spectrosc., neural network 87537
smart fiber reinforced polymer rod, ductility and health monitoring 86778
smart material/struct. condition, fiber optic sens. syst. 90564
smart struct., self-diagnosis/-repair using hollow-centre opt. fibre 114559
SMF Bragg grating light distrib. meas. 116625
soil moisture sens. design, lab. and field meas. 97328
sol-gel derived matrices for optoelectronic appls., transmittance exam. 92942
sol-gel optodes of various shapes for indirect fiberoptic sens. 97306
Space Shuttle Discovery, hydrogen leak detect. by fiber optic sens. syst. 133218
specular tilted surface meas. by fiber-optic sens. 89910
std. telecomm. fiber refr.-index changes on tightly focused fs NIR pulse irrad. 104641
strain sens. arrays, large-scale/low-cost 75578
structural syst. ident., strain and translational displacements meas. outputs 97854
surface plasmon reson. on Ag film, SAM coating 75571
surface roughness fibre opt. sens., self-focusing fibre, fuzzy algm. 75589
surface roughness meas., fibre probe, computer proc. *(Chinese)* 75599
syntactic foam embedded fibre sens., mech. strength 131951
syst. ident. & struct. health monitoring, conf., Madrid, Spain (June 2000) 78468
TDM fiber Bragg grating sens. array crosstalk charactn. 109589
TDM gas sens. syst., forward-coupled ladder topol. 75729
TDM/DWDM large-scale multiplexed interferometric fiber-optic sens. 75567
TDR type fibre sens., Brillouin backscatt., optimum temporal pulse shape 86573
tea aroma, opt. sens. using n-tetraphenyl porphine manganese (III) chloride LB thin films 109592
temp. meas., phase-shifted Bragg grating all-fibre syst., sig. separation 120830
temp. sens., strain effect 97332
temp. sens. based on semicond. band edge absorpt. *(Chinese)* 109617
temp. sens. using low-coherence light source *(Korean)* 75598
temp.-insensitive fiber Bragg grating lin. strain meas. 131960
temp./strain meas., act. fibre/fibre grating combination 120832
temp./strain meas., fibre fluoresc./Bragg grating 120833
three-phase opt. current transducer, opt. coupler performs., Faraday effect *(English)* 75597
tilted short-period FBG coupling to cladding modes, refractometry 97280
time-resolved fluoresc. opt. fiber biosensor *(Chinese)* 97424
tomography, integrated opt. fibre-lens syst. 120840
transm. mode quasi-distributed fiber optic temp. sens. 120869
transm. props., design, sens. appls. 104623
tunable fiber gratings and appls. 127595
turbid media particle size anal., single opt. fiber white light detect. 120939
turbine engine press. sensitive paint meas., endoscopic imaging syst. 114557
twin-grating fiber optic sens., demodulation algm. 75573
twisted opt. fiber strain sens., compressive/tensile stresses and strains study *(Chinese)* 75550
two-colour pyrometer, varying emissivity surfaces temp. meas. 97331
two-coord. slope test with fibre opt. sens., math. model 120861
ultrafast device testing by near-field opt. heterodyning 97792
underground distrib. line problems and soln. 88421
underwater acoustic sens., WDM, fiber Bragg grating 131956
uniform fiber Bragg grating strain-temp. discrim. 86589
uniform period fiber Bragg grating, chirp tuning, accelerometer appl. 127714
voltage sens., dual light channel, temp. compensation 120844
wavelength detect. by opt. fiber speckle patterns 109600
wavelength-demultiplexed fibre Fabry-Perot sens., high-resoln. vib. meas. 97296
WDM tech., chiral nematic Bragg filter 97305
weapon stabilization/fire control, MEMS-based fiber optic sens. 76980
wearable master device for spinal injured pers. as control device for wheelchairs 133059
white light interferometric techs., temp./strain meas. meas. 75583
wideband sig. proc. for interferometric opt. fiber strain gauge, design 109618
woven composite laminates, delamination detect. with embedded opt. fibers 101617
X-ray streak camera, on-line temporal charactn. 121771
Al_2O_3 fiber reinforced plastics, health monitoring technols. 68474
Au multiple island layers on fiber core, sens. appls. 75558
Au-Al corroded film, surface plasmon resons., opt. fiber sens. 86594
B-Ge codoped fiber long-period gratings, high-temp. sensitivity, possible filter/sens. appls. 93091
Ca^{2+} conc., bound calcein acrylamide fibre-optic sens. 97408
$CoCl_2$, hydroxyethylcellulose film, opt. fibre humidity sens. 120839

fibre optic sensors continued
Er-doped fiber grating array sens., strain and temp. meas. 109614
Er-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wavelength operation *(Chinese)* 82523
Er-doped fibre DFB lasers for sens. appl. 75576
Er-doped opt. fibre amp. loop, micro-opt. gas sens. appl. 93499
Er-doped sapphire fibre temp. sens., using upconversion emission 120831
GaAs cryst.-based fiber-optic temp. sens. 86593
In-BiCaVIG cryst., opt. fiber sens., AC mag. field 131935
InGaAsP QW waveguide photodiodes arrays for WDM and fiber sens. appls. 131904
InP/InGaAs/InAlAs MSM/HEMT OEIC struct., GSMBE growth 101238
O_2 biosensing, sharp spectral imprint gas signature detect. 86694
O_2 meas., P22 tumor, polarographic electrode, fiber-optic sens. 87517
Pd-coated single-mode tapered fibre, opt. H_2 sens. 109609
Pr^{3+}:ZBLANP opt. fibre sens., temp./conc. depend. 86597
Si bulk micromachining for sens. and actuators 92566
Si opt. microsensor, direct near-field antenna testing 109603
Si opt. press. sens, white light fibre interferometry 75759
SiC micromachined diaphragm/sapphire fibre optic press. sens. for high-temp. aerospace appls. 120827
YIG:Yb,Bi magneto-optic opt. fiber current sens., perform. testing *(Chinese)* 120877
YIG/ring-core transformer Faraday effect current sens. 97291
$ZnO-B_2O_3$:Eu fibre/Si photodiode selective UV detector 86568
ZrO_2 solid electrolyte thin film gas-sens. opt. property, fiber sens. appls. *(Chinese)* 97430
ZrW_2O_8, temp. compensation, radial Bragg grating package, interferometric hydrophone arrays 104665

fibre optical amplifiers *see optical fibre amplifiers*

fibre optical waveguides *see optical fibres*

fibre optics *see fibre lasers; fibre optic sensors; optical fibres*

fibre reinforced composites
see also carbon fibre reinforced composites; glass fibre reinforced composites
3D laminated plate finite element with high-order zig-zag sublaminate approxs. 79147
act. composites, microfab. by coextrusion hollow fibres 101526
act. struct. health monitoring, FRC & steel-reinforced concrete 79467
cure proc. optim. using fiber optic sens. and simul./ES 120826
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
EM wave scatt. from anisotropic and composite screens, dual-series tech. 83215
European Pressurized Water Reactor containment design and testing *(English)* 99520
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
filament wound press. vessel monitoring, embedded FBG sens. 97309
high-temp. fiber reinforced cellulose transformer insulation endurance 134114
impact-induced damage detect. by neural nets 109429
multilayer struct. NDT, US tomography, iter. reconstr. 101601
piezoelec. coated fibre composites, effective props. 104363
piezoelec. composite transducers in USMT & ROSETTA comet mission 101623
plates, laminated, shear deformable, piezoelec. actuators, postbuckling anal. 127263
Al_2O_3 fiber reinforced plastics, health monitoring technols. 68474
C aerogels, planar fibre reinforced, prep., struct. and PEM fuel cell appls. 78160
Nb_3Sn supercond. reinforced by Ta cores, mech. props. 68429
PZT piezoelec. fibre/polymer matrix composites, dielec. props. 104364
SiC-SiC composites for fusion reactors, mech. props., interfacial strength 68426

fibre-to-the-building *see optical fibre subscriber loops*

fibre-to-the-curb *see optical fibre subscriber loops*

fibre-to-the-home *see optical fibre subscriber loops*

fibres
see also carbon fibres; composite materials; fibre reinforced composites; glass fibres; optical fibres; polymer fibres
1D struct., local defect detect./recogn. 118659
conf., polymers/advanced materials, Poznan, Poland (June 1999) 67383
depth-encoding Anger detector using scintillating fibres 132936
electrospun nanofibres, electrostatic field-assisted alignment 125132
fabric systs. for elec. arc thermal effects protection 67496
finite-vol. method for contact drape simul. of woven fabrics and garments 68077
hollow fibres, gas-filled, high-order harmonic generation 117465
overhead lines workers, 100% cotton clothing, ignition hazard estim. 67497
textile fiber proc., elec. resist. effects meas. 83129
AlN nanofibers, combustion synthesis and charactn. 68103
CdS film, trylene thread, PV effect 104901
$(Hg,Re)Ba_2Ca_2Cu_3O_y$ HTSC single phase fiber fabr. for current lead appls. 70614
PZT fibers, effect of heating temp. on dielec. props. 70425
Si fibre MEMS microinstrument, piezoresist. meas. 104203
$YBa_2Cu_3O_x$ HTSC thin fiber, directional solidif., growth rate effects anal. 114235

fibrinogen *see proteins*

field buses
see also controller area networks
arbitration mechanism of instrum.-oriented multiprocessor syst. *(Chinese)* 120665
CAN, PLC networks design using rem. I/O module 130712
CAN protocol perform. improvement *(Italian)* 119311
CANopen distributed instrums., safe design 120655
commun. infrastructure, character protocols *(Polish)* 131821
composable micro-protocols, response time anal. 73958
control via networks, QoS anal. and prediction 96239
digital temperature sensor and distributed temperature measuring system *(Chinese)* 120766
distillation column for teaching/research, instrumentation 120666
distributed PLC, FieldBus modules *(German)* 109448
distributed rem. control protocol, bidirectional commun. 86416
Ethernet use at low level of factory commun. systs. 119263
Foundation Fieldbus, bandwidth allocation scheme 120664
Foundation Fieldbus, open archit. for inform. integrat. 86422
Foundation Fieldbus, time-crit. data transm. 131827
Foundation fieldbus data commun. timing constraints validation 119661
Foundation Fieldbus network controller, commun. algm. *(Chinese)* 97151
HART-based instrums., I/O interfaces 131823
heavy duty material proc., laser devices and machine/robot interfaces *(German)* 93915
IEC/ISA fieldbus, data link layer, perform. anal. 75379
indust. automation, commun. networks, develop. trends *(Polish)* 74299
indust. cyclic-service fieldbus nets, bandwidth allocation 86419
indust. network design/develop. alternatives 120662

field buses continued
indust. networks, sens. chip network capability/protocols 97155
indust. sens. networks, embedded networking, hardware/software design 1094
integrated substation automation system, protection, control OO comprehens unit *(Chinese)* 99855
intell. instrum. software syst., integrat. technol. *(Chinese)* 109427
LonWorks, serial commun. *(Chinese)* 74269
MAC protocol model framework using time division and sync. *(Chinese)* 864
MAC protocols, real-time, charact. anal. 119659
mfg. procs. control using distributed intell. 113805
minifactory, distributed automation syst., high-perform. network infrastructu and protocols 108175
noncontact opt. barriers interconnected by fieldbus, heavy indust. appls. *(G man)* 75403
offshore indust. fieldbus automation technol. 89936
Profibus and Canopen systs. *(Italian)* 86421
Profibus fieldbus with deadlines, load-carrying capacity planning *(Polis* 131820
PROFIBUS token-passing protocol over error-prone links, ring stabil. 13062
Profibus-DP/IEEE 802.11 WLAN network integrat. 130709
Profibus-PA and Fieldbus Foundation fieldbuses, hardware concept *(Germa* 131822
Recklinghausen district heating power plant rem. control, fieldbus technol. *(G man)* 123179
RF spectrum monitoring with digital anal. syst. 86411
SCAN, hardware minimised low cost/low power fieldbus, low power conce 120663
SMART instrums., fieldbus, safety instrumented systs. 76025
smart transducers interface design, time triggered archit. 131824
soil, intell. dielec. sens. 121059
SSRF DeviceNet control syst. design anal. 121313
synchronised motion using fieldbus-linked elec. drives 123890
traffic scheduling coprocessor with schedulability anal. capability 125536
transm. line EMC testing, simul. models 86417
voice synthesis module based on CAN bus *(Chinese)* 118157
wedge software for linking field devices to PC, PLC, and DCS 131825
WorldFIP bus arbitrator table config., real-time engng. appls. 119660

field effect analogue integrated circuits
see also MOS analogue integrated circuits
28 GHz LMDS highly integrated MMIC chipset 131109
HEMT AGC transimpedance amp., low noise, wide input, 10-Gb/s opt. commu systs. 125239
polysilicon TFT push-pull analogue buffer for TFT-LCD data drivers 10991
Schottky jn. transistor, phys. and appls. 115966
AlGaN/GaN HEMT high power wideband feedback amp. module 114625
GaAs FET analog, RF and microwave ICs, CAD tool 80347
InP HEMT preamplifier, flat transimpedance gain, high-speed fiber optic com mun. syst. 125240
InP HEMT technol. for HF analog appls. 114974

field effect digital integrated circuits
see also field effect logic circuits; field effect memory circuits; MOS digital integrated circuits
high-accuracy digital 5 bit 0.8-2 GHz MMIC RF attenuator for cellular phon 102721
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
InP HEMT D-type flip-flop and MUX ccts., 40 Gbit/s, design tech. 90854

field effect integrated circuits
see also charge-coupled device circuits; field effect analogue integrated circuits; field effect digital integrated circuits; field effect MIMIC; field effect MMIC; HEMT integrated circuits; JFET integrated circuits; MESFET integrated circuits; MOS integrated circuits
all-polymer TFT ccts., high-resoln. ink-jet printing 103882
Bluetooth radio receiver, SOS technol., student design 96366
RF power FET technols., status and trends for RF power amp. appls. 10266
TFT-array testing for high resoln./high content AMLCDs 81494
a-Si:H TFT pixel electrode ccts. for act.-matrix OLED 86867

field effect logic circuits
see also MOS logic circuits
all-printed inorganic logic elements fabricated by liq. embossing 114704
MOBILE-based RTDs, 3-terminal, for high-speed logic appl. 90892
Schottky jn. transistor, phys. and appls. 115966
GaAs VLSI ccts., self-timed techs. for low-power digital arith. 102079
GaAs depletion-mode MESFET high-speed clock recovery/decision cct. *(Chi nese)* 70319
GaAs/AlAs vert. reson. tunneling transistor for appl. in digital logic ccts. 6876
InP RTD/HFET MOBILE depth-2 full-adder cct. 114708

field effect memory circuits
see also MOS memory circuits
MNOS NVM technol., current status/future prospects 90904

field effect MIMIC
see also field effect MMIC
10 GHz GaAs monolithic twin-dipole antenna FET mixer 115010
77 GHz FMCW automotive radar, fully MMIC-based front end 131670
HEMT mm-wave MMIC mixer modules, optimized antipodal finline transits., 7 GHz 125803
HEMT MMIC mm-wave phase shifter using complementary bias techs. 11498
HEMT MMIC vector modulator for W-band software radar techs. 109285
IEEE 1394 wireless home networks, ASK transceivers, 60GHz-band 130757
Ka band power pHEMT technol. for space power flip-chip assembly 102693
Ka-band even-harmonic quadrature resistive MMIC mixer for direct conversio receivers 91340
lin. FETs, full-wave modeling, MM wave appls. 102709
on-wafer testing facilities, room & cryogenic temp. 80328
PHEMT analog MMICs, MM-wave appls. 69185
PHEMT high gain freq. doubler for 76 GHz automotive radar 80366
PHEMT LF noise model, appl. to MM-wave automotive radar chip set desig 80311
PHEMT MMIC high-Q act. inductor for MM wave appls. 125758
PHEMT MMIC technol., MM-wave space appls. 69188
PHEMT monolithic double-bal. upconverter for MM-wave point-to-multipoi distrib. systs. 125755
pseudomorphic HFET MM-wave monolithic power amp. for mobile broadban systs. 80325
radio relay front end, 58 GHz, single chip PHEMT implement. 125797
V-band SPDT switch HEMT MMIC for high power use, high isolation 8037
W-band MMICs, design techs. for chip area reduct., amp. and automotive rada appls. 102718
AlGaAs/GaAs deep submicron PHEMT MMIC amps., high-reliab. Q-band per form. 125773

effect MIMIC continued
AlGaAs/InGaAs mm-wave Q band power pHEMT proc. technol. 115021
GaAs P-HEMT MMIC for K- to Ka-band wireless commun. 74610
GaAs PHEMT Ka-band monolithic ccts. for transceiver appls. 69208
GaAs PHEMT MM-wave push-push oscillator 102675
GaAs V-Band MMIC SPDT pass. HEMT switch using impedance transform. networks 80378
InGaP/InGaAs HEMT TW amp. with CPW technol., 70 GHz bandwidth 125786
InGaP-InGaAs HEMT monolithic resistive mixers, Q-, V- and W-band designs 80368
InP HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
InP HEMT, MM-wave on-wafer testing, room & cryogenic temp. 80328
InP HEMT MMIC amps., 85-115 GHz, ultra-low-noise design 69178
InP HEMT MMIC freq. doubler, 164 GHz, design and perform. 80332
InP HEMT ultra broadband low power MMIC amp., 1-50 GHz, design 125787
InP MMIC HEMT medium power amps., 65-145 GHz, designs 102686
InP act. device/varactor MMIC HEMT VCO, 80 GHz 102724
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 114992
InP-based monolithic HEMT diode bal. mixer for 100-140 GHz 80364

effect MMIC
see also field effect MIMIC
5.8 GHz OFDM commun., integrated transceiver module, multilayer packaging 108787
15-GHz wireless interconnect, 0.18-μm CMOS, integrated transmitters, receivers, and antennas 125776
28 GHz LMDS highly integrated MMIC chipset 131109
act. bandpass filters, lin. and noise perform. optim. 69182
adaptive radar receivers, tunable recursive act. MMIC filters, intermodulation props. 125802
adaptive transversal preamplifier for high-speed lightwave systs. 96674
antenna switch diplexer front-end module for GSM/DCS/PCS appls., PHEMT switches 91348
bal. amp. using 6-port power divider, S param. & power perform. 104089
broadband 90° power divider using all-pass act. filter 125788
broadband LV RF MEMS switches, develop. 125772
broadband MMIC power amps. with compact flat gain PHEMT cells, 20-30 GHz 91385
bulk-dyn. threshold-voltage MOSFET, 65 GHz normal-mode f_t/220 GHz overdrive mode f_t 125711
C-band highly efficient hybrid-PHEMT MMIC amp., 10 W design 125753
cellular commun., develop. of MMIC chip set and MMCM 120030
CMOS act. inductor, L-band MMIC 69286
CMOS chipset for multi-mode wireless appls., 1-10 GHz, design/perform. 102688
CMOS differential act. inductor, tunable L/Q for freqs. up to 5 GHz 91313
CMOS FSK/ASK transceiver, 900-MHz, low power, half-duplex low datarate commun. 91343
CMOS fully-integrated differential VCO for 10 GHz band operation 102701
CMOS low-noise first-stage amp., 5.25 GHz 125742
CMOS microwave oscillators on SOI substrs., design and fab. 125746
CMOS PLL, 2 GHz, gain compensation VCO, peak-to-peak jitter 102734
CMOS RF power detector, logarithmic/limiting amp., GSM handset appls. 91347
CMOS SOS switch technol., theory and characts. for RF/microwave appls. 115009
CMOS technol. scaling for wireless commun. arena 115001
CMOS transimpedance MMIC amp. design, BSIM large-sig. model, opt. commun. appl. 91339
CMOS two-stage class B power amp., 1.9 GHz, low resist. substr. 69212
CMOS VCO, Bluetooth wireless transceivers appls., accumulation mode varactors, spiral inductors 102731
CMOS VCO with inductive degeneration noise suppression, 2.2 GHz 102730
cold FET I-Q lin. vector modulator topol., monolithic X-band implement. 125750
concurrent dual-band CMOS LNA and receiver archits. 125779
decade wide bandwidth integrated LNA, 0.4-8 GHz, act. antenna appl. 125784
deep submicron MOSFETs, extraction method for intrinsic noise currents 91262
direct conversion CMOS transmitter for paging appls., 900 MHz 91344
dual-band monolithic CMOS LC-tuned VCO, switched resonator concept 102732
dual-gate p-HEMT MMIC X-band down-converter 91382
enhancement mode PHEMT power amp. MMICs, single supply, GSM/DCS appls. 91370
ETC, electronic toll collection syst., RF transceiver MMIC, surface via-hole isolation 91345
foundry RF CMOS technol., 0.18 μm, 70 GHz F_t for single chip syst. solns. 102689
GaAs HEMT MMICs based variable gain Ka-band solid-state power amp. 69183
HEMT MMIC RF yield forecasting methods 69233
high-accuracy digital 5 bit 0.8-2 GHz MMIC RF attenuator for cellular phones 102721
highly lin. CMOS RF MMIC amp. and Volterra series anal. 80386
J-band transceiver MMIC with image rejection, PHEMT implement. 125795
Ka-band 3-stage power amp., power PHEMT proc., 6W peak output 91309
Ka-band low noise down converter for space appls., PHEMT MMIC implement. 125798
Ka-band temp. compensated ring resonator VCO, adjust. using laser trimming 102719
Ku-band high-power amps. in portable user earth terminals, transm. power control scheme 80323
LNA, low-power LV FET cct. design 80336
low-K CMOS, micromachined high-Q inductors in 0.18 μm Cu interconnect 115003
low-power direct conversion receiver MMIC for broadband wireless appls. 91388
low-power direct conversion receiver module for C-band wireless appls. 96360
MESFET and HEMT microwave devices and MMICs, electrothermal model 80289
MESSENGER deep space mission, electronically scanned phased-array antenna 120109
mixed GaAs opt. modulator and PHEMT MMIC proc. line on 150 mm wafers 125832
MOSFET HF matching meas. for CMOS mixer port crosstalk determ. 102715
multi-stage LNAs, source inductor value determ., Ka-band MMIC design appl. *(Japanese)* 91301
partially-depleted SOI CMOS technol., 0.13 μm, for low-power digital/RF appls. 127046
PHEMT analog MMICs, MM-wave appls. 69185
PHEMT IC, dual-band tri-mode receiver, N(W)-CDMA systs. 96482

field effect MMIC continued
PHEMT IC chip set for interactive TV, Local Multipoint distrib. *(German)* 69170
PHEMT LNA with integrated bypass switch, 0.05-6 GHz portable wireless appls. 80382
PHEMT MMIC act. inductor 102677
PHEMT MMIC amp. design, 1-3 GHz, for transmit/receive appls. 102663
PHEMT MMIC chipset, MVDS transceiver 125763
PHEMT MMIC coplanar feedback VCO, fab. technol. 102671
PHEMT MMIC dual-freq. push-push VCO for wideband wireless appls. 125761
PHEMT MMIC nonuniform distributed power amps., design methodology 91384
PHEMT MMIC power amps., EW appls. 125762
PHEMT MMIC power module, Ka-band wireless commun. 125770
PHEMT MMIC VCO, broadband oscillator design 102668
PHEMT MMIC VCO, phase noise, LMDS appls. 102672
pHEMT technol. wideband act. downconverter MMIC, HDI 91350
PHEMT VCO MMIC with very high tuning bandwidth, design 125752
PHEMTs, wafer mfg., MMIC appls. 69238
predistortor MMIC, HJFET based design for W-CDMA handset power amp. lin. 80324
RF-CMOS, scaling impact on analog perform. 91377
single-chip CMOS T/R-MMIC frontend, 2.24 GHz 1.8 V, low loss switch 102656
Stentor satellite transmit act. antenna, Ku-band Quadri-SSPA 96617
surface-pot.-based MOS model for RF CMOS design, param. extraction techs. 102740
symmetric inductors in CMOS technol., T cct. topol. for broadband modelling 91314
vert. mesh RF capacitors in std. CMOS, design and charactn. 125778
wideband MMIC Kowari mixer/phase shifters, diode- and HEMT-based designs 91300
X-band MMIC direct 8 PSK modulator for high data rate Earth obs. appls. 125748
X-band MMIC up-converter, CAD-simul. 91381
X-band monolithic integrated twin dipole antenna mixer on GaAs substr. 69172
AlGaAs/InGaAs PHEMT, Ka-band MMIC amp. 69184
AlGaAs-GaAs 8.5/25.5 GHz act. freq. tripler MMIC 96412
AlGaN/GaN HEMT MMIC attenuator, dyn. range 125769
AlGaN/GaN HEMT MMICs on SiC substrs., high-power broadband amps. 91383
Cu full damascene metallization, sub-0.18 μm RF CMOS SoC high Q inductor and MIM capacitor appl. 125740
GaAs 3D on-chip inductors, fab., perform. and PHEMT LNA appl. 80370
GaAs FET analog, RF and microwave ICs, CAD tool 80347
GaAs HEMT MMIC MEMS switched dual-path power amp. 91359
GaAs HEMT regenerative MMIC freq. dividers for 28 and 14 GHz 125754
GaAs MESFET LTCC Ku-band transmitter module, integrated filter, satellite commun. appls. 96620
GaAs MESFET MMIC, low-power direct conversion receiver 96367
GaAs MESFET MMIC phase shifter, analogue and digital control 69205
GaAs MESFET phase shifter MMIC for C-band smart antenna combining 69200
GaAs MMIC chip-set for Ku-band radio-link transmitter 125747
GaAs MMIC downconverter for PCS front-end appls., fab. and perform. 114991
GaAs PHEMT Ka-band monolithic ccts. for transceiver appls. 69208
GaAs PHEMT MMIC amp. 69176
GaAs PHEMT MMIC power amp., CAD 69202
GaAs PHEMT MMIC requirements for satellite based commun. 115012
GaAs PHEMT MMIC, serial-to-parallel converter, spaceborne SAR 125765
GaAs PHEMT SP3T T/R switch for DCS 80375
GaAs PHEMT mixer, single bal. topol. and design methodology 125749
GaAs PHEMT power amp. MMIC, single supply design for GSM handsets 91369
GaAs PHEMT wideband true-time delay MMIC with on-chip digital drivers 125799
GaAs PHEMT/MMIC mfg., 6″ wafer fab. facilities establishment 70212
GaAs SPDT FET switches with capacitor cancelled parasitic inductance 80377
GaAs X-band MMIC power amp., on-chip temp. compensation cct. 91386
GaAs direct digital mm-wave receiver MMICs, six-port 96404
GaAs enhancement HJFET dual-mode power amp. for TDMA/CDMA handsets 114993
GaAs metamorphic HEMT-based MMIC amps., high gain/perform. 69243
GaAs microwave FET LNAs, portable radio commun. equipt., dyn. range estim. 102699
GaAs pHEMT K-band amp. for on-satellite commun. systs. 80330
GaAs power metamorphic HEMT MMIC technol., very high efficiency/low cost 69232
InAlAs-InGaAs metamorphic HEMT MMIC technol. on GaAs substrs. 69244
InGaAs metamorphic HEMT technol. for mm-wave low noise/power appls., high perform. 69168
InGaAs/AlGaAs PHEMT proc. for X-band power amp. and LNA MMICs 125804
InGaAs/InAlAs/InP HEMT MMIC amp., reliab. 115007
InGaAs-AlGaAs-GaAs HEMT MMIC prod. proc., 0.1 μm, for commercial Ka-band LNAs 69245
InP HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
InP HEMT MMIC LNA, radioastronomy 69190
InP HEMT MMIC oscillators 69191
InP HEMT MMIC requirements for satellite based commun. 115012
InP HEMT X-band/Ka-band amp. for Deep Space Network 115013
InP HEMT technol. for HF analog appls. 114974
InP HJFET, superlattice-inserted, V-band MMIC LNA 115008
InP-based RTD/HEMT microwave freq. divider IC, high-speed operation 115006
Si CMOS circuitry, oxidized porous material, low resist. substr., high freq. props. 91323
Si CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515
strained-Si MOSFETs with Ti/Pd/Au gate metal for MMIC appl. 80358
Si/SiGe n-MOSFET single stage amps. on CMOS grade Si substr., design 69195

field effect transistor circuits
used for general papers and papers where the use of field effect transistors is significant
see also HEMT circuits; JFET circuits; MESFET circuits; MOSFET circuits
act. antenna using parasitic element 72459
cold FET mixer design, large-sig. model 79624
dual-fed distributed power amp., FET cct. design 68593
high-order QAM systs., phase noise and IMD reduction 72773
microwave amp., nonlin. transfer charact. anal. 125713
microwave multistage act. freq. multiplier 91127

field effect transistor circuits continued
pass. resistor cooling by microwave transistor amp. 115039
AlGaN/GaN FET VCO, high-power RF source 101834
GaAs FET 1.8-GHz push-pull power amp. using impedance-transforming baluns 125733
GaAs FET act. balun and bal. mixer, C-band down-converter 69131
InP FET radioastronomy receivers with ultra-low noise 86276

field effect transistor switches
see also power semiconductor switches
250 W metal halide lamp electronic ballast develop. 134633
500 V and 1 kV lin. power MOSFETs for 120 kW act. load 70170
buck+half bridge very-LV DC/DC power converter topol. 88891
class-E amp., power MOSFET switch, state-space model 114630
CMOS SOS switch technol., theory and charcts. for RF/microwave appls. 115009
Cool MOS, low on-resist. MOS-gated power device, MOSFET/IGBT comparisons 115881
CoolMOST™-Schottky diode matched pair semicond. switch appls. 126781
DC/DC reson. converter with class DE tuned power oscillator 101839
E class low dv/dt PWM sync. rectifier, regulated output voltage 125234
electrodeless dimmable fluoresc. lamps, electronic ballast study 134622
epitaxial/nonepitaxial planar gate and trench gate IGBTs, turn-off behaviour 115912
fast switching CoolMOS transistor perform. 70141
fluoresc. lamp act. PFC/ballast control IC 134618
fluoresc. lamp electronic ballast using half-bridge reson. invertor 89440
forward DC/DC power converters, nondissipative act. clamp topol. 123642
full bridge ZVS DC-DC converter, MOSFET body diode reverse recovery stress 134178
fully ZVS phase-shift bidirectional DC-DC power converter 88919
gate controlled devices, snubberless operation, gate drive tech. 125221
hard-switched inverters using CoolMOS switches, reverse recovery minim. 134176
HF sync. buck converter, novel reson. gate driver 88848
high-accuracy digital 5 bit 0.8-2 GHz MMIC RF attenuator for cellular phones 102721
high-power HV power ICs for automotive appls. 78323
high-speed trench gate power MOSFET for DC/DC power converter appls. 70142
HV high current thyristors matri.x power supply for uranium enrichment 78029
HV high-current MOSFET MATRIX switch, short-cct. behavior 70143
hybrid act. power harmonic filter topol. develop. 89034
IGBT PWM inverter, partially coupled electro-thermal anal. 123656
induction heating freq. convertors, retrospective, develop. trends *(German)* 112617
LV power MOSFET, high-efficiency power converter appl. charactn. 126782
MEMS sens. microbattery power supply, fuzzy solar charge controller 86769
metal halide lamp electronic ballasts, acoustic reson. prevention 89434
microbatteries, fuzzy logic-based solar charge controller 112657
monolithic MOS bidirectional switch, on-state/transient charactn. 126783
MOSFET drain/source charge partition under nonquasi-static switching 126755
MOSFET flicker noise under switching conditions and modelling in RF appls. 115897
MOSFET power switching transistor, DC/DC converter *(German)* 103812
multi-input DC/DC power converter using flux additivity approach 134191
multi-level multi-cell switch-mode power amp. anal. 68627
PFC boost converter diode recovery optimisation soln. 77994
phase-controlled class E inverter design 90730
PHEMTs, wafer mfg., MMIC appls. 69238
PM sync. motor fuzzy logic controller modelling 123352
power MOSFET packages for DC-DC power convertor appls. 103815
power MOSFETs for HV full-bridge phase-shifted ZVS converter appls. 70167
SAPFET-2 power module for DC/DC power converter appls. 70325
single stage single switch PFC converter 90731
single-stage high-PF electronic ballast topol. 134630
soft-switching choppers, load adaptive ZVS scheme 134189
SuperFAP-G power MOSFET low-loss high-speed switch series 126796
switched current ccts., clock feed-through and charge injection 114596
ZCS SC power converters 123640
ZVS MOSFET DC/DC bridge power converter losses anal. 123649
ZVS-half bridge type HF reson. DC-DC power converter *(Korean)* 123589
AlGaN/GaN HEMT, RESURF device, HV power switching 92402
GaAs power switches, ultrahigh freq. DC-to-DC converters 123594
KrF excimer laser, HV MOSFET switch, high repetition rate operation *(Japanese)* 93695
Pb-acid batt. charger topol. using power MOSFET/Schottky bridge rectifiers 112621
SiC JFETs, turn-off/short-cct. behaviour studies 126888
SiC jn. barrier Schottky diode, switching appl. charactn. 126635

field effect transistors
see also field effect integrated circuits; field effect transistor switches; high electron mobility transistors; insulated gate field effect transistors; ion sensitive field effect transistors; junction gate field effect transistors; microwave field effect transistors; millimetre wave field effect transistors; power field effect transistors; Schottky gate field effect transistors; static induction transistors; UHF field effect transistors
2D modelling, num. anal. 103739
act. small-sig. model, cold FET intrinsic ref. plane 92270
aligned microcontact printing of biomols. on microelectronic device surfaces 80526
all-printed inorganic logic elements fabricated by liq. embossing 114704
BioFET microchip, insect antenna/FET biosensor 132020
device research, conf., Denver CO, USA (June 2000) 67376
electro-osmosis anal. method using FET models 83087
inductive ion accelerator, voltage modulation and repetitive operation 97886
MEMS surface micromachined press. sens., CMOS proc. 97574
microwave ADC for broadband commun. 80331
MOBILE-based RTDs, 3-terminal, for high-speed logic appl. 90892
octithiophene polycryst. thin film FET, grain size depend. mobility 70164
organic FETs, device charact. 115944
organic semiconds., high carrier mobility, electronic device appls. 69621
organic-inorganic hybrid materials, charcts., electronic device appls., review 80763
PPV-type pentamers, vac.-deposited/spin-cast films, field-effect mobilities 69624
quantum wire transistor, RT simul. 70217
sexithiophene polycryst. thin film FET, grain size depend. mobility 70164
single floating QD gate FET memory cell, stored charges, opt. modulation 127589
single transistor ferroelec. memory arrays, disturb free prog. scheme 79873

field effect transistors continued
spin-polarized FET, operational principle *(Japanese)* 92398
transconductance and speed, improvement by using graded channel 10389
AlGaAs-GaAs QW 2DEG channels, dissipation, flucts./ultrafast procs. 91
AlGaN/GaN HFET struct., impedance spectrosc. anal. 103905
AlGaN/GaN heterostruct. FET, 2DEG distrib., doping effects anal. 12688
AlGaN/GaN heterostruct., MBE layer limitations due to lateral inhomog., di 103101
AlGaN/GaN heterostruct., epitaxial FET struct., carrier props., surface treat effects 92032
C nanotubes, electronic devices/luminesc. elements *(French)* 80528
Co/GaAs, ferromag./semicond. spin FET 81398
GaAs FET, nonlin. model 92408
GaAs at. layer doped FET, differential capacitance profile, simple model 9
n-GaAs spin-valve transistor with, Fe/Au/Fe(001) base 104543
GaAs/AlGaAs vert. superlattice FET, miniband transport 103913
GaN, MBE layer limitations due to lateral inhomog., disloc. 103101
GaN MOCVD on Si(111), stress control and appl. to HFET 68288
GaN MOVPE, a-face/c-face sapphire substrs. FET appl. 90450
GaN materials/devices, quantum 1/f noise anal. 91677
GaN:Ti^+, O^+, Fe^+, Cr^+, FET struct., implant isolation, sheet resist. 126822
GaN/(Al,Ga)N heterostruct., reactive MBE on SiC(0001) 124869
GaN/AlGaN HFET struct., pillars, FIB etching, micro PL/Raman map 126422
GaN/AlGaN heterostruct. FETs, traps, low-freq. noise spectra 126870
GaN/AlGaN/AlN, NH_3-MBE growth, HFET, 2DEG, sputter deposition 90
InAlAs-InGaAs-InAlAs-InP QW 2DEG channels, dissipation, flucts./ultra procs. 91849
InGaAs quantum wire FET, NDR 115957
InGaAs/InAlAs quantum wire FET, NDR 115941
InGaAs/InAlAs ridge-type quantum-wire FET, quasi-1D transport chara 92394
$In_{0.15}Ga_{0.85}As$/GaAs self-organized quantum wire channel FET charcts. 103
InP-InGaAs-InP QW 2DEG channels, dissipation, flucts./ultrafast procs. 91
$Pt/SrBi_2Ta_2O_9/ZrO_2/Si$ struct., cryst. struct. & elec. props. 116226
Si elec. controlled optoelectronic Y-switch, bipolar mode FET 75049
Si microstrip detector, field oxide FET-biased, radiation effects on cha 76128
SnO_2 nanocrystalline thin film, sol-gel synthesis, gas sens. *(Chinese)* 7938
Ta/AlGaN/GaN, ohmic contacts for HFET, contact resist. 69706
Ta/Ti/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
Ti/Ta/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
$YBa_2Cu_3O_{7-x}$ film,- screening effects in supercond. FET 127509
$YMnO_3$ based MFSFET, annealing effect, MOCVD 101328

field electron microscopy *see field emission electron microscopy*

field emission
see also electron field emission; field ion emission
avionics AMLCD, field-emission lamp design 98914
electron beam lithog., direct write, hist., state of art 92235
ferroelec. materials, phys. insights on imprint and appl. to functional mem 70474
figs. of merit for field emitters deduced from F-N plots 102915
lin. EHD charged particle source, elec. space propulsion 110223
p-GaN/$Al_xGa_{1-x}N$/Ti superlattices, Ti based ohmic contact resist. 80914
InP HBTs, appl. of HBTCAD software incl. HBTSIM simulator and HBTA model 81214

field emission cathodes *see cathodes; electron field emission; vacuum microelectronics*

field emission displays
act. controlled field emitter array, display appl., cct. modeling *(Korean)* 109
act.-matrix FEA for next-generation FEDs 97757
attractive FPD, review 102922
avionics AMLCD, field-emission lamp design 98914
complex diamond cond. ceramic paste film, field emission perform. 86808
conf., display technol., Taipei, Taiwan (July 2000) 78372
current degrad. 132101
diamond:P field emitters in triode-type field emission arrays, fab. and char 80587
DLC surface, N-doped, field emission current, scanning probe obs. 80565
double-gate field emission devices, geom. effects simul. 80582
dual gate field emitters, misaligned, electron-beam focusing & deflection 91
F-N rels., model 115252
FEA with Mo tip, gate insulator etching influence obs. 97706
flat panel CRT, field emission technol. 132100
flat-panel FED, carbon nanotube cathode 75809
FPD, low energy electron emitter panel, planar cathode 97714
green phosphor, luminesc. charact. 75792
indicator using screen-printed C nanotube emitters 86826
luminance efficiency 97691
LV vac. displays, temp. field simul. 109888
MCP, moving picture, luminance 97661
nonevaporable getter, CW IR laser activation 69420
panel, press. charact. 75798
panel syst. buildup, phosphor ageing effect 97740
phosphors, electrophoretically coated, for FED, effect of laser irrad. 97625
phosphors for next-generation display devices, review *(Japanese)* 93351
RGB thin film FED phosphors, chromaticity, stabil., excitation 97613
sealed carbon nanotube design, 4.5 inch cathode 109885
sealed flat-panel FED, nondestructive real-time press. meas. method 132216
small electron tubes, low residual press. meas., outgassing rate 69379
spacer, aligning/mounting proc., electrostatic bonding *(Korean)* 75800
spacers, charging and reliab. effects 109907
TFT controlled C nanotube field emission devices, display appls. 115215
thin-film metal hydrides, integrat. into FED 80585
ThinCRTL, field emission FPD, electron focusing 97692
triode device arrays using field-emitting inks 102923
triple-jn. issues rel. to vac. insulation 69439
tubeless packaged, glass-to-glass anodic bonding 97739
under-gate triode struct. FED with carbon nanotube emitters 115253
widescreen full-color display 97753
AlO_x, porous, anodic, nanoscale field emission array by self-organisation 1029
a-C film, electron field emission, resist. effect 80566
a-C films, kerosene vap. pyrolysis, field emission 80568
C nanotube FED, num. indicator 75799
C nanotube array, field emission, FPD *(Japanese)* 80530
C nanotube cathode flat-panel struct., FED 132103
C nanotube, field emission, HV triode FPD 109894
C nanotube, field emission current calc. 97611
C nanotube field emission triodes, low turn-on voltage, fab., charactn. 1152

emission displays continued
nanotube tip, adsorbed water mols., field-emission, DFT 125960
nanotube triodes, fab., high emission current dens. 80586
nanotubes, electron field emission, review 102903
nanotubes, patterning technol. using photolithog. for FED appls. 69438
thin film cathodes, field emission lifetime, color phosphor effects 69412
C:H films, current-induced conditioning, field emission 80567
-nanotube-based triode-FED using gated emitter struct. 109912
aN:Zn blue powder phosphor for VFD/FED, synthesis, cathodolum. 109862
lo FEA, frit sealing, emission characts., ambient gas influence 97666
lo field emitters with integrated focusing electrode 97705
lo tips, LV FED, gate hole openings 75807
i, porous, cold cathode, field emission perform rel to anodiz. *(Chinese)* 69391
i, porous silicon cold cathode device, field emission charact. *(Chinese)* 69390
i-tip FEA, field emission props. improvement 97665
$Y_2B_5O_9Cl$:Eu blue-emitting thin-film phosphors, luminesc. characts. 93353
nS:Ag,Al phosphors in FED, dead layer, TEM anal. 104915
nS:Cu(Ag) phosphors synthesis using hydrazine monohydrate soln. 97629
emission electron microscopy
uried struct. in semicond., BEEM, review 115452
iamond nanocrystal growth, PLD 79362
iamond particles, microscopic study of field emission 80556
naging electron emission from diamond film surfaces, diamond:N/nanostruct. diamond comp. 115243
hotoemission electron microscopy for ferromag./antiferromag. materials 102951
in films, nm-level fine struct. anal. methods *(Japanese)* 116006
lGaAs/GaAs, double barrier RTD, ballistic electron emission, enhanced filtering 70216
u/(AlGa)As heterostruct., second derivative BEEM spectra 91876
u/Si contacts, electron injection, BEEM-induced 80895
$u/SiO_2/Si$ contacts, electron injection, BEEM-induced 80895
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
based thin film electron emitters, charact. by scanning anode FEM 91537
$CoSi_2$/Si Schottky contact, BEEM *(Chinese)* 80912
$CoSi_2$/Si(111), BEEM, band struct. effects 69713
$CoSi_2$/n-Si ultra thin epitaxial Schottky barrier contact charactn. *(Chinese)* 80911
aN thick films, hydride VPE, CL charactn. 68250
b/Si(111) interface, confine.-enhanced electron transport, STM/BEEM 103162
d/Mo field emitter tips, faceting 91535
t/Ir field emitter tips, faceting 91535
t/W field emitter tips, faceting 91535
tSi/Si Schottky contact, BEEM *(Chinese)* 80912
i films, temp. modulation mol. layer epitaxy, surface reacts. 114360
i, temp. modulation MBE, surface morph. 79268
i tip array, nanodiamond(AlN) coating, field emission 69407
iO_2, ultrathin combustion CVD layers on Zn coated steel, struct., morph. 101368
nO_2 thin film gas sens. fab. from hydrothermally treated nanoparticles 97492
nO:Li films, sol-gel method, crystn., c-axis orient. 114389
emitter arrays *see vacuum microelectronics*
intensity patterns (antenna) *see antenna radiation patterns*
ion emission
see also liquid metal ion sources
t.-size metal ion source, nanofabrication appls. 87159
ion microscopy, atom-probe *see atom probe field ion microscopy*
ionisation
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
X-ray lasers pumped by ultra-short light pulses 128083
Ar^{8+} collisionally pumped X-ray laser, computational modelling 128088
Kr^{8+} soft X-ray laser, opt.-field-induced ionization initiated transient excitation scheme 128085
Li^{2+} preformed plasma, Lyman-α transit., soft X-ray lasing 128087
N gas puff target, laser irrad., recomb. and collisional soft X-ray lasers 128086
O gas puff target, laser irrad., recomb. and collisional soft X-ray lasers 128086
Xe gas puff target, laser irrad., recomb. and collisional soft X-ray lasers 128086
Xe^{8+} femtosecond driven collisional X-ray laser, $4d^95p$-$4d^95d$ line amplif. 128082
measurement, electric *see electric field measurement*
measurement, magnetic *see magnetic field measurement*
oriented control *see machine vector control*
plotting
see also field strength measurement
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
programmable gate arrays
D color temp. conversion in perceived illum. 114791
D inverse Haar transform, online computing, prog. proc. 102207
D/2D order stat. filters, FPGA design 91099
2D FPGAs, optimum switch box designs, global routing dens. constraints 125434
2D inter-chip opt. interconnect, opt. I/O 93453
2D patterns detectors on simulated CAM-Brain machine, evolvable hardware tool for building neuron artificial brain 90893
3D FPGA, dyn. reconfigurable archit. 68720
3D laser micro-sens. integrat. control and DP in FPGA-based calculator 86767
AC machine control algms., optimized IC design studies 133927
daptive heterodyne filter 102399
daptive instrum. module, space instrum. controller "Brain" through PLD 111332
daptive multiresolution imager based on FPGA 120914
daptive parallel syst. dedicated to projective image matching 95513
daptive sig. proc. advances, totally adaptive systs. 73615
daptive tracking estim. computer 102200
AES, implement. and fair comparison of final candidates using FPGA 129290
AES block cipher algms., FPGA perform. eval. 94341
AES final candidates using FPGAs, perform. study 106228
analog MUX array, analog ccts. evol. 125629
analogue ccts., smart, evol. design 114598
appl.-specific reconfigurable RISC proc. core, embedded appls., FPGA prototyping 68849
archit. driven cct. partitioning, multiterminal nets, multifield-PGA 68778
archit. for videowall image proc. 118173
archit. supporting wide shallow memories 102117
archit.-independent run-time reconfigurable appls. framework 90843
ASIC/prog. logic hybrids develop. and manufacture 90859
associative memory boards pipeline for particle track finding 121749
asynchronous RISC proc., FPGA-based rapid prototyping 102206
field programmable gate arrays continued
ATM traffic classifier for QoS mgt., FPGA implement. 102098
ATR algm. on scalable Myrinet/field prog. array nodes 109297
automated hardware synthesis, MATLAB appl., precision & error anal. 79705
BABAR detector level 1 calorimeter trigger design and perform. 110407
BCH min. wt. decoder for double error 129003
binary image compression FPGA-based systolic array archit. 73321
biologically plausible vision systs. integrat. for controlling autonomous robots 94471
block turbo decoder implement. 117992
Bluetooth packet early-late gate receiving, implement. and perform. anal. 120077
CAM-Brain Machine, FPGA based robot neural net 91162
CAM-brain machines, evolvability 91164
cct. CAD by rewriting, Boolean vectors 101659
CDMA systs., fast convolution with PN codes, FPGA implement. 79855
CGH, fixed-point format *(Japanese)* 72078
CGH, phase computation by addit. 105583
channel equalizer, block transm. syst. 107686
channel segmentation design, multi-level matching-based algm. 68755
chaotic freq. hopping seq. generator, FPGAs, n-dimens. nonlin. digital filters *(Chinese)* 102411
chaotic freq. hopping seqs., FPGA-based generator, SS commun. 73847
chaotic neural encryption/decryption network, design and VLSI archit. 68989
Chinese third generation mobile commun. syst., Turbo decoder design and anal. 74761
CLEO-III trigger, analog and digital calorimetry 110408
CLEO-III trigger, analog and digital calorimetry 121726
CLEO-III trigger, axial and stereo tracking 121728
CLEO-III trigger, axial and stereo tracking 110409
CLEO-III trigger, level 1 decision and gating 110411
CLEO-III trigger design anal. 121741
CMOS FPGA perform., surface channel PMOSFET degrad., plasma-induced damage effects 79857
CMS calorimeter, Global Calorimeter Trigger proc. using reconfigurable logic 76147
common reuse strategy for ASICs and FPGAs 68771
complex control ccts., dyn. reconfigurable implement. 101940
configurable adapter using FPGA chip 96072
configurable arith. arrays with data-driven control 102014
const. rate wavelet-based image compressor 108484
CORDIC based FFT proc. for biomedical sig. proc., FPGA realization 120694
CORDIC proc., dyn. cct. specialization 90841
cork stopper class. using FPGAs and digital image proc. techs. 125325
cryptographic scheme, modular exponentiation on fine-grained FPGA 125461
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
DØ upgrade, level 1 central and forward tracking trigger 121731
DAB, FEC block, low-complexity design 109347
DAQ, high-speed archit. 120680
Data Organizer high traffic node for tracking detector data 132462
DDGIPS, general image proc. syst. in robot vision 90921
deep submicron cct., DC current generation and meas. 79813
design, data and proc. mgt. *(German)* 114719
design reuse strategy for syst.-level integrat. 114727
design verification, hardware tools 125380
designs, area time power estim., behavioral level 68724
diffused control, Xilinx FPGA for DC-DC boost convertors *(Spanish)* 101758
digital camcorder image stabilizer, gray-coded bit-plane block matching 131777
digital cct. design, reusable intellectual property block verification, prog. syst. 68705
digital cct. design teaching, prototyping hardware/software environ. 124276
digital cct. evol. using, GA 79760
digital filters synthesized using freq. response masking tech., FPGA implement. 80102
digital FPGAs, genotype-phenotype mapping 102049
digital logic design and computer fund. courses, microcontrollers and FPGAs 124260
digital matched filter for real-valued shift-orthogonal finite-length seq. *(Japanese)* 68939
digital phased array antenna syst. for cellular PCS band appl. 83759
driver assistance syst. algm. develop., embedded image proc. platform 134584
DSP, configurable, bit-width optim., multi-interval anal. 102208
DSP appls., high-perform. 90957
DSP core FPGA implement. for full rate/half rate GSM vocoders 74768
DSP design, prog., using VLIW archit. 102205
dyn. FPGA implement. of Serpent block cipher 106229
dyn. labeling based FPGA delay optim. algm. *(Chinese)* 125275
dyn. reconfig. FPGA partitioning, integer LP 125395
dyn. reconfigurable cell-array proc. for MPEG-2 video decoder 95031
dyn. reconfigurable FPGA placement 125400
Earth orbiting scatterometers, multiprocessor DSP 133334
ECG, adaptive canceller of 50 Hz interf., FPGA appl. 110623
efficient GF multiplier, VLSI appls. *(Chinese)* 129334
efficient routing algm. for symm. FPGAs using reliable cost metrics 68715
EHWPack, evolvable hardware environ. using SPICE simulator and field prog. transistor array 114573
ellipt. curve cryptographic coprocessor implement. over $GF(2^m)$ on FPGA 106225
embeddable FPGA archit. for ASIC designs, hardware/software soln. 102116
embedded networking appls., syst.-level prototyping 95971
embedded systs. design and verif., reuse oriented prototyping methodologies 101954
emulation syst., net assignment problem, FPLA 68766
endoscope, electronic, FPGA-based real-time image proc. syst. 76415
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut partitioning 102105
entropy-based learning hardware organization using FPGA 80150
error diagnosis for LUT-Based FPGA designs based on EXL-algm. *(Japanese)* 125278
evolvable coprocessor environ. design based on GA 114785
evolvable hardware prog. platforms, in-syst. routing strategy 102050
evolving network archits. with custom computers for multi-spectral feature ident. 107193
fast Hadamard transform, math. model and FPGA implement. 90846
fast placement syst. using macro-blocks 101939
Fast Track Trigger for H1 expt. 132457
fiber optic gyroscope closed-loop syst., modified digital serrodyne proc. *(Korean)* 75554
field-evolvable hardware based on flash memory-incorp. μP 90954
FLEX pager design, MCU and DSP on single ASIC 108492

field programmable gate arrays continued
flexible multiplication unit for FPGA logic block 102064
flexible proc. based on full-adder/D-flip-flop merged module 79772
floating-point behavioral synthesis, optim. tech. 79823
FPGA logic cct. design, video proc. algms. 118453
FPGA struct. for const. coeff. multiplication *(Polish)* 114713
FPGA to ASIC migration 68772
FPTA family of evol.-oriented reconfigurable devices 104104
FPX, field prog. port extender, hardware modules, Internet routers/firewalls, CAI platform 124266
free-running sampling, pulse recording 121634
fully functional and self-configurable multipliers, VHDL description 79812
functional decomp., sub-fn. input support sel., inform. rels. meas. 79811
generic ILP-based approaches for time-multiplexed FPGA partitioning 114717
global interconnects, parity-based BIST, design/implement. 114586
GMSK modulator using ΔΣ freq. discriminator-based synthesizer 108656
grid-connected PV power syst. inverters, PIC microcontroller 123262
H1 expt., fast high resoln. track trigger 121730
hadron collider triggers, fast tracker proc. 110413
hardware compilation for software engineers, ATM example 68500
hardware compiler realising concurrent procs. in reconfigurable logic 125168
hardware metering scheme, low overhead proofs, manufactured parts 125444
hardware-software partitioning for dyn. reconfigurable embedded systs., GA driven 114673
hardware/software co-design in embedded syst., partition decision, graduate course 125294
HDTV decoder sync. syst., video buffer mgt. 86324
header compression in Handel-C, Internet appl. and design lang. 125420
HERA H1 fast track trigger electronics 76140
heterog. FPGA under delay constraint, low power driven re-synthesis algm. 102112
hierarchical FPGA mapping, perform.-driven multi-level clustering 125441
high-bandwidth sens. syst., advanced proc. hardware & algms. 95414
high-energy phys., flexible trigger syst. 98052
high-perform. reconfigurable const. coeff. multiplier implement. 90842
high-radix Montgomery modular exponentiation on reconfigurable hardware 94370
high-speed Ethernet simple link protocol, zero-overhead packet delineation scheme 119758
Hough transform algm. for FPGA implement. 94508
HW/SW codesign framework based on distributed DSP VM 125321
hybrid field prog. archit., routing struct. 68680
hybrid PCI/VME archit. develop. for space syst. 133245
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
IEEE 802.11 WLAN, enhanced MAC implement. 130378
IIR pulse-shaping filter design 114882
IM digital neural current controller scheme 112528
IM DTC-based speed control, ASIC design 134051
image compression parallel archit., DCT/IDCT 84397
image proc. board *(Chinese)* 94606
image proc. parameterized wavelet archits. 73173
image recogn. hardware using FPGAs for ns-range recogn. speed *(Japanese)* 129821
image segmentation, fast watershed algm. and FPGA-based archit. 90934
incremental rerouting, Boolean satisfiability-based, FPGA appl. 79799
integer 1-D discrete wavelet transform archit. using FPGAs 114730
integer multipliers, 32-bit, perform. measures, FPGA synthesis comparison 68753
intellectual property protection, fingerprinting techs. 114715
Java machine, microcontroller appls. 114798
large FPGAs, cost minimization of partition. with complex resource constraints 68787
lattice gas automata, high speed computation with FPGA *(English)* 114729
LDI/LDD all-pass lattice filters, computational props, FPGA implements. 91079
logic blocks, BIST-based test and diagnosis 68719
logic blocks, lookup tables, Boolean matching 102088
logic synthesis tools, efficiency measure 68734
LUT-based FPGA synthesis, functional decomp. 79793
LUT-based FPGA technol. mapping for power minimization with optimal depth 90870
mapping timing behavior of VLSI ccts. on emulators 90873
MD5 hash algm. implement. 129240
mobile commun. systs., data compression, efficient hardware algms., prototyping 96533
mobile radio channel simulator, hybrid DSP-FPGA archit. 108868
multi-scale contours detect., algm. establishment *(French)* 118475
multi-target real-time radar detect. with FPGA and DSP *(Chinese)* 120457
multilayer-wiring VLSI area model, compact, multilayer layout for butterfly fat-tree 104028
multimedia WLAN, advanced prototype test platform 130715
multiple-output logic fns., realization by reconfigurable cascades 125462
multiplier recoding tech., high-speed parallel multiply-accumulate archit. appl. 90853
multiplier-block based FIR filter structs. implement. on FPGA, transit. anal. 68936
muon trigger syst., FPGA based 76149
netlists, archit. driven partitioning, logic emulation 79795
on-chip learning, FPGA-inspired neural nets 102466
online testing, diagnosis, and fault tolerance for FPGAs in adaptive computing systs. 102047
optim., VHDL, public-domain Matlab software 102063
optimal FPGA module placement, temporal precedence constraints 79702
optimal partitioning algm., technol.-mapped designs on single-chip emulation systs. 68781
orthogonal 1D DWT, canonical and retimed RNS archits., field-PLD 102055
orthonormal DWTs, rapid prototyping on FPGAs 90815
orthonormal inverse DWT, design and FPGA implement. 86455
packet-fair queueing schedulers in high speed networks, FPGA implement. 74074
PAMA-prog. analog MUX array 108493
parallel k-mismatching of strings using daughter-board struct. 90840
PC-based software receiver using novel front-end technol. 108577
PCI-based workstation cluster parallel opt. data links 108205
Pierre Auger fluoresc. detector, second-level trigger 98071
pipelined archit. proc. verification by behavioral-level-only HDL code 79501
pipelining considerations for FPGA case 125326
pixel clustering on custom computing machine, data truncation effect 95426
pixel purity index algm. comput., blocks of skewers, FPGA proc. 94446
place and route problems, simulated annealing, iter. procs. *(Italian)* 79831
platform design approach for re-config. network appliances 101988
field programmable gate arrays continued
polynomial approx. for powering fn. computation 125422
polyphase filter, sample rate conversion, Virtix FPGA technol. 102398
posn.-sensitive photomultiplier, pulse recording by free-running samp 110404
power consumption estim./modelling 125452
power converters, digital control strategy, IM drive 113064
prog. sig.-proc. electronics, PET/SPECT/CT scanners appl. 120672
public-key cryptosystems, ellipt. curve, hardware-accelerated, rapid prototyp 94362
PWM inverter, three-phase, FPGA based-IC design with optimized space ve modulation schemes 68573
PWM invertor switching pattern generators, FPGA implement. 123654
PWM pattern generators implement. 114736
radar receiver for soft radar 109280
radix-2 online division using LSA organization 79865
rapid prototyping methodology and platform for seamless commun. systs. 96
real-time image proc., convolution operation implemented in FPGA 12958
real-time motion estim., assess. of FPGA suitability 129752
real-time prog. *(German)* 125412
real-time reconfigurable image recogn. syst., model-based develop. 107227
real-time video compression, motion estim., FPGA chip implement. 12977
reconfigurability of FPGA, Intellectual Property design proc. 79825
reconfigurable computers, hierarchical memory mapping 79701
reconfigurable computing, business model and impact on SoC design 1253
reconfigurable computing archit., coherent compilation cycle 125369
reconfigurable computing at Xilinx 125314
reconfigurable hardware for real time image proc. 94794
reconfigurable MCM syst., enhanced quality, redundant utilisation 102879
reconfigurable memory syst., dyn. yield anal. & enhancement 102154
reconfigurable pipelined data converter 102281
reconfigurable proc. with cell-array struct. for general-purpose calc., pr method and mgt. unit 90844
reconfigurable systs., design space, reconfiguration hierarchy 125348
reconfigurable systs., memory access optimisation 90837
reconfigurable technol., FPGAs for computing and appls., conf., Boston, M USA (Nov. 2000) 89502
RENE, Rice Everywhere NEtwork project, multitier wireless commun. 854
RISC microcontroller core design 102186
RISC proc. driving in FPGA 90834
RNS to binary signed conversion archit. 102062
routing, quantitat. anal. *(French)* 68708
RS decoder with efficient recursive cell archit. for DVD appl. 120581
run-time reconfigurable ccts., optim. algm. 114702
run-time reconfiguration, dens. requirements reduction 114734
run-time reconfiguration for fault injection appls. 114711
run-time support environ. for reconfigurable systs. 125421
scheduling and placement methods for C to hardware/software compilat 90811
scintillation detector syst., 2D, for SANS expts. 132396
scintillation photomultiplier detectors, flexible DAQ board 120679
self-testing of user-programmed FPGAs based on concept of lin. segme 125323
sensorless squirrel cage motor control strategy for FPGA implement. 77881
serial-serial multiplication, systolic archits., FPGA based implement. 90851
SimpleFit, framework for analyzing design trade-offs in Raw archits. 90946
Simulink based hardware/software codesign flow/IP library 125366
sine/cosine fns., table-based methods comparison for low-precision eval. 908
six-channel high speed radar DAQ syst., design & implement. *(Chinese)* 1318
software radio syst., config. data transm. scheme *(Japanese)* 108591
software-hardware trade-offs, A5/1 cryptanalysis 106239
SONOS nonvolatile semicond. memories for space/mil. appls. 125505
spaceborne payload proc., scalable reprog. modular archit., COTS 133242
SRAM-based FPGAs, fault tolerant archit. and routing procedure *(Chine* 114697
SRM sensorless drive, mag. charact. 133956
stat. shift registering sorting archit., fair queuing algms. in high speed rout *(Chinese)* 108224
still digital camera, H.26L intra mode encoder archit. 120904
sync. handshake ccts., FPGAs, Tangram behavioral-level spec. 79783
synthesis through functional decomp. based on inform. rels. measures 1253
synthetic digital ccts., memory, structural anal. and generation 68667
syst.-level device design brings new challenges 68770
syst.-on-prog.-chips *(Italian)* 90927
systolic Hopfield-type associative memory, specs. and FPGA implement. 1024
TCC interf. canceller, FPGA implement. *(Japanese)* 108875
technol. mapping, look-up table, unified functional decomp. 68775
temporal partitioning onto reconfig. PUs, static-list scheduling algm. 101956
Term Rewriting Systems, concurrent systs., nondeterministic and asynchron behavior 101958
test/ATE manufacture, education using FPGA 109422
testing, LUT fns., delay fault testability 125424
three-phase PWM inverter, space vector modulation, FPGA-based control 68572
timing recovery, software radio receiver, FPGA implement. 68788
Tornado 2HD modular nonvolatile solid-state data recorder design 97161
toroidal neural proc. design optimized for Xilinx Virtex FPGA devices 1149
TrySense develop. platform for sens. systs. realization 109423
turbo decoder, threshold LogMAP SISO block for FPGA implement. 10609
video windowing controller design for electronic endoscope and multime 75292
Virtex FPGA, evol. strategies and intrinsic fault tolerance 102048
Virtex FPGA based high-perform. fine-grained pipelined LMS algm. 91102
VirtexDS, Virtex device simulator 90839
virtual and phys. prototyping, testing, and verification of multifunctional pr queue for single-chip multiprocessor archit. 90941
virtual components, publicly detectable protection techs., watermarking meth 125443
Viterbi decoder, FPGA implement. 94328
VLIW CPU, appl.-specific, reconfigurable, optimum extended instruction-s archit. determ. 90939
VLSI archit. for turbo codes, implement. in FPGA 94327
VLSI implement. of RS decoder 90887
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
W-CDMA downlink receiver algms. prototyping, basics and implement. 1085
wavelet coder/decoder, FPGA implement. 68754
wavelet transform for real-time image compression using FPGAs 84399
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA matched filter, FPGA implement. *(Chinese)* 95829
WCDMA single chip high speed channel decoder, design/implement. 94331

programmable gate arrays continued
Web server, functionally minimized embedded, network connectivity for small appliances 130637
Windows-based design program, Innoveda packages *(German)* 68738
wireless ATM, cell delineation, anal. and implement. algm. 95777
wireless commun. receiver, pipelined multiuser detector 108566
WLAN encryption algms., hardware implement. 130714
wood real-time inspection archit. 95532
wormhole IP over (connectionless) ATM 130500
X-MatchPRO full-duplex lossless data compressor on ProASIC FPGA 102119
Xilinx Virtex II self-addressing FIFO using FPGA features 68797
Xilinx Virtex-E FPGA based 20-GFLOPS quadratic residue proc. 96979
XVPI, portable hardware/software interface for Virtex 90812
strength measurement
see also electric field measurement; magnetic field measurement
antenna near field-far field transform., nonuniform helicoidal scanning 94144
CATV networks screening effectiveness, field meas. 86328
cellular telephones, operation zones in hospital hallways 94057
DAB networks, coverage prediction and meas. of location variability 83286
direction finding, accuracy increase by three-antenna interferometer 120483
EM environ., current status *(Japanese)* 105807
handoff algm., perform. anal. using dist. and RSSI meas. 108765
labour safety, near-field LF spectrum EM field meas. *(Polish)* 133072
microwave dosimetry, non-invasive tech. 98766
microwave sigs. propag. above sea, opt. visibility range, space/time struct. 117692
mobile train radio propag. in widely varying urban environ. 108760
MV switchgear LF emissions eval. studies 134265
Polish EM field metrology, effect of new power regulations *(Polish)* 131790
RF mapping for exposure compliance 97800
Rohde and Schwarz EB200 miniport receiver for coverage and field-strength meas. 86785
slotline sens. for pulse EM field meas. 83380
Southern India, mobile propag. path loss studies at VHF/UHF bands 108758
substation MV/HV grounding systs., safety issues 134299
UHF propag. loss for mobile reception in urban areas with horiz. and vert. polaris. *(German)* 72314
ultra-low-side-lobe antennas, planar near-field meas., multiple refl. errors *(Chinese)* 105865
very weak EM fields meas., induction sens. noise params. anal. 83379
western India, double knife edge diffr. studies 105745
field theory, electromagnetic *see electromagnetic field theory*
fields, electric *see electric fields*
fields, magnetic *see magnetic fields*
filament lamps
flickerometer, voltage wave quality, incandescent lamp lumin. *(Spanish)* 99441
halogen lamps, electronic transformer 89431
machine vision lighting, LEDs vs. fibre opt. illuminators 89886
MEMS incandescent light source, low-power, fab. technol. 100316
tungsten halogen lamps, lifetime extension, tantalum solid getter *(Japanese)* 124060
filament reinforced composites *see fibre reinforced composites*
filamentation instability
excimer laser medium discharge, filamentation instabil. 128120
file management *see file organisation*
file organisation
see also data handling; data structures; database management systems; naming services; storage management; virtual storage
Adobe eBook security, digital rights mgt. 129244
biological sigs., long-term DAQ, storage and presentation, Microsoft Windows appl. 110527
block cipher security via NTE and NPCBC 129255
colour mgt. and sig. proc. 106840
data broadcast, power efficient, hybrid index tech. 96222
digital TV studios, video file mgt./clip transfer *(German)* 75319
free-form 3-D obj. recogn. at multiple scales 129833
JPEG 2000 file format, flexible color encoding archit. 106941
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
multimedia stream proc. and commun., syst.-on-a-chip 130957
partially simultaneously alive sigs., storage requirement estim., data intensive appls. 126981
PolyR constr., fast universal hashing with small keys and no preprocessing 129354
radar syst. model 99154
RAI multimedia catalogue, TV programme acquisition syst. *(Italian)* 86316
RISC-based DSP synthesis, compiler-friendly, perform. eval. 68839
scalability of computer clusters 119752
sealed-bid auction using hash chain 129359
tetris-hashing or optimal table compression 72978
third-generation mobile systs., security for core network 119360
TMN platform techs. for develop. of large-scale commun. node systs. *(Japanese)* 74135
universal DTV mastering in high resoln., multiframe rate compression-free video recorder 86346
universal lossless data compression algms., greedy context-depend. seq. grammar transform based 129999
Web layout, optimal design, heavy tails/generalized coding 119742
WWW proxies, optimal hash routing 74024
file servers
ADTP, protocol for DP over Internet 130463
Apache, Jigsaw and Tomcat, open-source Web servers on Linux cluster platform. 130814
appl. level act. networking infrastructure 74305
appl. server design for user service maint. in Web based environ. *(Polish)* 130645
bilateral anonymity/logged Web address abuse prevention 108201
cached Web objs., mutual consistency maint. 74250
CDAA, content distrib. archit. using network-layer anycast 108330
cement plant productivity mgt. with web server technol. 85351
cluster-based Web servers with load balancing, perform. meas. *(Polish)* 130644
CryptoManiac, fast flexible archit. for secure commun. 95930
Cyber Teaching Assistant for computer education course assistance 118155
dependable Internet based online auctions, hierarchically struct. 74289
DHTTP, efficient/cache-friendly transfer protocol for Web traffic 119376
differentiated services, Quality of Web Services 119657
Director's Console, dc, live webcast control syst. 96212
DNS-based server selection effectiveness 119746
file servers continued
domain caching for live-event Web services 108331
dyn. Web content, class-based cache mgt. 130694
e-business, large scale sites, new technols. support *(Japanese)* 119626
electronic business site perform. scalability *(Polish)* 130312
Eloquent Communication 6.0 server for identifying threats or assets 108107
EQUILOAD, load balancing policy for clustered web servers 119617
gateway technols. for home network and their implement. 74231
Honeywell Global Home Server, home automation commun. security syst. 119711
Host Integration Server 2000 for legacy mainframe systs. data usage 108351
HTTP Web transfers across satellite links, latency reduction by smart proxy 85016
I2-DSI project, Internet2 distributed storage infrastructure 119555
i.Lon™ 1000 Internet server appl. to to linking LonWorks control network and IP based networks *(Polish)* 130657
independent storage units model, evol. prefetching/caching 74404
Intel x86 archit., security vulnerabilities caused by errors 102234
Internet, constrained mirror placement 119603
Internet crackers, secure access control mechanism 74116
Internet differentiated caching services, control-theoretical approach 74279
Internet multimedia, caching/streaming framework 130345
Internet security *(Japanese)* 119625
kernel-based control of persistent Web server connections 119658
lock opening/closing with image base by cellular phone via Internet 74863
M&M framework, mobile agents integrat. into off-the-shelf Web servers 130890
Markov proc. model cache algm. for network file servers 119556
MIB variable based fault class. for proactive mgt. 130561
Microsoft Personal Web Server in LAN *(Polish)* 130652
MPEG-2 QoS adaptive streaming based on scalable media obj. 108400
multi-class networks, service meas. 130698
multiple description coding 118497
NetNews servers, effective caching 74197
network exam. syst. design based on BWD *(Chinese)* 119485
OLAP proxy-server archits. 85249
online service adaptation for mobile and fixed terminal devices 108138
open archit. based networked multimedia syst. 119809
optimal service ordering for WWW server 119656
PACS, distributed archit., study status consistency and duplicate-read protection mechanism 98857
Parallel Multimedia File System based on message distrib. 130951
peer-to-peer computing 74174
Prism, Portal infrastructure for Streaming Media via Internet 108190
proxy cache consistency exploiting metadata of absent objs. 85294
Raincore API for clusters of networking elements 119716
replicated redirection service maint. in WWW-based IS 108332
rly. traction substation, rem. multimedia video monitoring syst. *(Chinese)* 123950
secure Web server, perform. anal. based on SSL 108168
SOAP (Simple Object Access Protocol), simplifying distributed develop. 119261
spambots and unsolicited advertising email prevention 108089
SSL handshake perform., improvement via batching 130440
Stonehenge, fault-tolerant real-time network-attached storage device 130717
SubDomain for parsimonious Internet server security 108127
TCP-socket, C and Java, perform. comparison, JavaNws appl. 96124
Web caching, act. refresh method 119748
Web latency reduction using ref. point caching 119741
Web server, functionally minimized embedded, network connectivity for small appliances 130637
Web server, perform. modeling 85254
Web server, usage of older Apple Mac computers 85259
Web server replica placement 119740
Web servers, feedback control for guaranteeing relative delays 85348
Web servers, traffic model and perform. eval. 119312
Web services, zero-loss, constr. 119744
WWW servers, hierarchical cache archit. 108162
WWW systs., locally distributed, load balancing algms. *(Polish)* 130647
file transfer software *see computer communications software*
filing systems (office) *see records management*
filled polymers
see also polymer dispersed liquid crystals
1-3 piezocomposite transducer material consts., thermal behaviour 104436
ABS resin/carbon fibers composites, resist., EMI shielding coeff. 72366
anisotropic conducting adhesive used as flex-to-card interconnection, charact. 113529
anisotropically conductive adhesive, elec. conductance 78633
aragonite whisker and composites, dielectric properties *(Chinese)* 92596
array of cond. C black-polymer composites for sens./discrim. of vapours 97464
ceramic/epoxy composite for integral capacitors, particle packing/Cu plating/permitt. 80441
ChemFET sens. array for organic vapour detect. 97497
conductive polymer composite film, permeation method prep., thermogravimetry/SEM 125111
elec. conductive adhesive, metal-filled, microwave curing 113611
elec. conductive adhesive, self-alignment and contact resist. 113527
elec. conductive adhesives, low m.p. alloy incorporation, depletion/wetting 67600
elec. insulation 127237
electroceramic fine particle/polymer hybrids, situ proc. 101507
electronically conductive filled adhesive joints, behaviour under cyclic loading 67559
epoxy molding cpd., flip-chip transfer molding encapsulation 113498
epoxy-modified urethane rubber, C particles, MM-wave absorpt. 102492
ferroelec./polymer composites, embedded sens., actuators, composite struct. health monitoring 101528
flip chip underfill encapsulant reliab. perform., filler settling effects 67579
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip BGA package, thermal interface material 113526
HDI flip chip-on-flex, base materials eval. 124359
inorganic-organic hybrid polymers, sol-gel, opt. interconnection 71216
integrated chemiresistor array for microrobot sens. platform 75688
interlayer-toughened fiber-reinforced composites, interlaminar fracture testing anal. 79494
isotropically conductive adhesives, nonepoxy-based polymer matrix 67560
mag. particle embedded PDMS, micromachined mag. membrane micropump 89023
MEH-PPV/organo-clay nanocomposite LED, enhanced quantum efficiency 127959

filled polymers continued
mol. imprinted polymer, bovine liver clenbuterol sens., voltammetry 97421
mol. imprinted polymer coated QCM, neutral/ion anal. fingerprints 97444
NLO chromophores/crosslinked syst., host-guest 117408
oligo-phenylkene vinylene derivative in SiO_2-polymer hybrid matrix, PL prop. 127919
organic metal for nanotechnology in electronics 91500
organic-inorganic functionalized sol-gel materials, NLO response 128426
paint based piezoelec. thick-film strain sens. develop. 131888
particulate reinforced polymer coating, wear grooves, laser profilometry 79472
$PbTiO_3$-PMN ferroelec. ceramics/polymer composites, high dielec. const. 125115
PCB, via filling, conductive adhesive materials 115162
PCB through-hole technol., conductive ink 115163
PEDT-RuO_x composite electrodes, electrochem. and impedance props., capacitor appls. 99890
PEMFC, fast proton-cond. organic-inorganic hybrid nanocomposites 112823
piezoceramic/pass. polymer phase 3-3 composites, modelling 104365
plastic encapsulated microcircuit reliab., molded part props., stat. monitoring 67576
PMMA, Disperse Red I doped photoactive film, interferometric studies 87003
PMMA opt. fibers, nonlin. organic chromophores, prep. 93088
polaris. influence on breakdown strength 92605
poly(ethylene oxide-co-epichlorohydrin)/NaI polymer electrolyte, cell appl. 79444
poly(p-phenylene vinylene)/porous GaP composite materials, LED appl. 93437
polyethylene, TiO_2 filled, filler-induced chem. modifs. as dielec. probes 127253
polyethylmethacrylate opt. fibers, nonlin. organic chromophores, prep. 93088
polymer current limiter device, voltage/comp. depend., switching 133799
polymer-ceramic nanocomposite, high-k dielec., RF embedded capacitor 115089
polymer-ceramic nanocomposite embedded decoupling capacitor, SSN suppression 113503
polymer-ceramic nanocomposite film, syst.-on-package material 113684
polymer-ceramic nanocomposites for MCM-L integral capacitors, colloidal proc. 69277
polymer-grafted C black composite, soln. contamination sens. 132063
polymer/C nanocomposite thin films, PLD, gas sens. appl. 68302
polymer/thermoplastic chalcogenide glass composites, phys./opt. props. 82041
polyperinaphthalene thin films by laser ablation of PTCDA/Co mixture target, elec. cond. 101518
PoPD/PVA composite film humidity sens., AC impedance spectrosc. study 97215
power-ground decoupling dielec. films, broadband charactn. 121164
PPV-based ionically SAM, excited state dyn., photolum. props. 116922
PPV/porous Si composite thin films, props. and LED appls. 116925
PWB, HDI and package substrs., halogen-free materials 91471
Rhodamine 6G-doped solid-state laser, output wavelength temp. tuning 82508
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. performs. 88470
silica filler, no-flow underfill technol. 113501
silicone packaging/interconnect materials, thermal props., transient plane source method 78649
silicone rubber, C black filled, press. sens., wet mixing fab. 86460
single-pass reflow encapsulant for flip chip appl., develop. 67568
struct. health monitoring, embedded piezotransducer design 101570
$Tb_{0.27}Dy_{0.73}Fe_{1.9}$, magnetostrictive peristaltic Terfenol-D motor, force capability 112565
underfill polymer materials, microelectronic packaging, fatigue crack propag. behavior 90577
underfill resin develop., flow microcalorimetry appl. 67610
Ag-epoxy conductive adhesive/Sn-Pb coating interface, high temp. degrad. mechanism 67561
Ag-filled conductive adhesive joints, ionic impurities effects 125899
AlN-filled underfill, high thermal cond., for flip-chip appls. 67565
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
$BaTiO_3$/epoxy composite film, integral capacitor, suspen. formulation 115090
$BaTiO_3$/epoxy composites, multi-doped, dielec. behaviour, PWB appl. 81675
C nanotube composite, electron-transport layer for organic LED 93412
C-black-polymer composite vap. detector arrays, landmine detect. 75689
CdS nanocrystals in Nafion perfluorinated ionomer, synthesis, struct. 80712
p-CuSCN semicond. in polymer channels, electrodeposition 125023
ITO/conjug. polymer-fullerene/Al PV cells, admittance and ESR spectra 127944
Li nanocomposite polymer electrolyte high-rate long-life rechargeable batt. 123730
NdFeB/epoxy resin bonded magnet, melt-spun powder recycling, liq.-phase pyrolysis *(English)* 92865
PZT piezoelec. fibre/polymer matrix composites, dielec. props. 104364
PZT/epoxy 2-2 composites, HF US transducer fab., tape casting 111508
R-Ba-Cu-O HTSC (R=rare earth), resin impregnation, mech. props. 81941
SiO_2-filled epoxy molding cpds., thermal stress anal. 114453
TiO_2-C filled epoxy resin absorber, thickness-freq. rels. *(Japanese)* 127139

film badges *see dosimeters*

films
see also adsorbed layers; coatings; foils; Langmuir-Blodgett films; liquid films; optical films; polymer films; thick films; thin films
carbon cloth reinforced resorcinol formaldehyde aerogel films 79463
$Li_xIrO_y{\cdot}nH_2O$ melt-oxidized film potentiometric pH electrode, fabr. and sens. props. 97472

filtering theory
see also Kalman filters; nonlinear filters; prediction theory; random processes; smoothing methods
2D digital filters, local state-space model and props. 91061
2D direct discrete wavelet transform, fast archits. 73657
2D directional filters, new struct. for opt. flow estim. 94674
2D DWT, lifting scheme, line-based prog. archit. 100753
2D FIR filters with power-of-two coeffs, design using semidefinite prog. 91062
2D FIR nonfactorable parametrized family of lossless systs., Grobner bases 130113
2D gray-scale image fusion by multiscale morph. 107216
2D half-band filters, multi-stage design using freq. response masking 91064
2D image moments, fast computation, biaxial transform 94505
2D inverse filtering of opt. images, noise suppression 118363
2D localized filter-based lin. coherent noise atten. 107510
2D nonredundant directionally selective complex wavelets 94659
2D sig., inverse filtration, regulation method 84743
2D sigs. restoration using autoregressive models 106453
2D systolic-array digital filter using local broadcast scheme, cascade form 68943
2D Volterra param. estim. using zero tolerance optimisation 84317

filtering theory continued
3D coded video seqs., spatio-temporal post-filtering 107040
3D digital filtering problem, parallel algm. for num. soln. 119044
3D FDTD anals., late-time instabilities suppress. 124775
3D filtering and lin. prediction algms. 130051
3D gated cardiac SPECT, spatiotemporal noise reduction filter 132860
3D matched filter for detect. of land mines 73125
3D mismatched stereoscopic inputs, human perception 84451
3D MR image segmentation using mixture model and morph. filtering 1220
3D multimodal tracking/event detect. via particle filter 95716
3D obj. motion and struct. recogn., contours 95459
3D polygon meshes for hierarchical representation/coding of surfaces 84452
3D SPECT, optimal non-iter. reconstr., uniform atten. 132858
4 kb/s hybrid harmonic/waveform speech coding 106366
4D adaptive Kalman filter for Doppler freq. tracking *(Chinese)* 119056
$\mathcal{H}_\infty$ robust filtering for uncertain discrete-time state-delayed systs. 95697
A/D converter error correction using Volterra filtering 125572
absol. frame displacement based image seq. stabilisation, Kalman filteri 129423
abstr. optimal lin. filtering 84750
acoustic echo cancellation, low complexity nonlin. filters anal. 107484
acoustic echo cancellation, subband adaptive filtering with real-valued subba sigs. 119051
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive cancellation of selected harmonics from sig. 119053
adaptive filter coeffs., sub-RLS algm., convergence property 130080
adaptive filter for calib./estim. of redundant sigs. 84754
adaptive filtering, white input and convergence speed 119025
adaptive filtering algms., syst. ident. 130082
adaptive filtering for image denoising 118335
adaptive FIR digital filter, modified normalized LMS modelling algm. 11897
adaptive image interpolation algm. for image/video proc. 129559
adaptive image proc. using rank-order filters with spatial elements connectivi 106715
adaptive iter. multiuser parallel decision feedback with different code rates, pe form. 131292
adaptive L-filter based on sig. local stats., edge preservation *(Chinese)* 1072
adaptive line enhancement via subspace tracking 107546
adaptive LMS block Volterra filters 118997
adaptive low complexity beamforming using split RLS algm. 73637
adaptive model for texture anal. 84315
adaptive model-based digital halftoning incorporating image enhancement 945
adaptive noise canceller with master-slave filter struct. 73644
adaptive noise reduction, thresholding neural network 73676
adaptive noise reduction filter using cascaded sandglass-type neural nets 736
adaptive notch filter with subband filtering, algm. convergence 95685
adaptive notch filters, design 130089
adaptive optimal nonlin. filtering design, duality 119061
adaptive parallel filter struct., 2-by-2 LMS algm. based, simul. *(Chines* 130108
adaptive reduced-rank interf. suppression algms., convergence/tracking 1058
adaptive reduced-rank interf. suppression with rank selection 105783
adaptive sig. representation, evol.-based methods 73696
adaptive spatial/temporal optimal receiver using adaptive array antenna 8586
adaptive Volterra param. estim. using zero tolerance optimisation 119010
affine projection filter algm. based on M-estim. *(Chinese)* 95710
air turbulence sig. simul., appl. 111324
aircraft range estim., angle target tracking IR sens. 133220
algms. for efficient and accurate edge detect. and localization 107141
all-pole modelling of speech spectra based on lin. predict. 72990
α-β filters from Kalman filters *(Japanese)* 119058
alternative seq. filter-edge detector, perform. eval. 73502
AM-FM image segmentation approach 94634
AM-FM react.-diffusion for oriented texture completion 73259
anisotropic XRD image mottling effects, energy dispersive meas. 101586
appearance-based 3D obj. recogn., perceptual components 107150
approx. lin. phase FIR low-pass filters, design 80100
arbitrary-band multi-path polyphase IIR filters, design 91089
ARCAP time-freq. representations for decision 119029
area morph. algms. 106815
ARM detect., adaptive lin. prediction error filtering *(Chinese)* 111620
ARMA model ident., self-adaptive evol. strategies 119019
array receiver with Kalman channel predictor for fast Rayleigh flat fading envi ron., perform. 83664
articulated and occluded video obj. motion tracking 129511
ATR correl. perform. using Xpatch (synthetic) training data 75150
ATR MSC HRR perform., range resoln. effects anal. 86127
ATR SAR imagery using extended max. av. correl. height filter, clutter rejectio 75149
ATR/feature-aided tracking using complex spatial filters 86128
ATRV-Jr unicycle robot, localisation in nonsmooth environ. 97835
atten./scatter-corrected ^{99m}Tc cardiac SPECT studies 111030
auditory evoked pot., time-freq. anal. using STFT-based adaptive filters 11052
auditory filter bank inversion using least sq. optim. tech. 95667
automatic target recogn., temporal data/decision level fusion 129835
automotive radar tracking, data assoc. method 131642
autonomous aircraft landing, navig. syst. design, nonlin. pass. sens., nonlin. filter ing appl. 88059
autonomous mobile agents, Markov localization, correl. appl. 107514
AUV, small, integrated GPS/INS 131691
Bayesian spatio-temporal motion detect. under varying illum. 129469
Bayesian track-before-detect particle filter 130142
behavioral ROC curves/multidimensional matched filter comparison 130076
bias-free adaptive IIR filtering algms. 73679
bilin. stochastic differential systs., suboptimal filtering 84745
bilinear systs., H_∞-suboptimal fault detect. filter 73642
binaural 360° sound localization syst., model and appl. 111515
binaural sound synthesis, interaural transfer fn. model 130052
biomedical image compression using variable order wavelets transforms/HV charact., progressive scheme 132786
biomedical sigs., adaptive orthogonal parameterisation 76205
biorthogonal cosine-modulated filter banks 73698
biorthogonal filter banks with nearly optimal time-freq. localization 119028
blind image watermarking, robustness 95265
blind MIMO ident., alg. approach 107559
blind sig. de-noising via ICA, hybrid method 107557
blind sig. separation, PCA neural models 119082
blind source recovery in static/dyn. environ., state space model 107577
blind source separation, adaptive short-time freq. domain algm. 107572
blind source separation algm. using weighted time delays 118814

ring theory continued
block truncation coding using edginess inform. 95171
blotches corruption, image seqs., restoration method *(Japanese)* 73250
Boolean and order stats.-based filters, optimal predictive design 118988
branched tube systs., param. estim. *(English)* 73003
broadband radar portraits, digital proc. in detect.-recogn. filter syst. 75169
car noise environ., speech quality and recogn. rate improve. 84027
car-like vehicles, enhanced localization, ABS sens. and GPS data fusion 97836
Cardan-Viete formulas, refl. coeffs. counterpart 95701
CCD output sig., noise reduction *(Chinese)* 97354
CDF biorthogonal wavelet filters, image compression 73427
CDMA, low-complexity interf. mitigation on vector channels, design/anal. 105803
CDMA asynchronous multipath channels, blind space-time detect. 73728
CDMA asynchronous systs., signature seq. optim. 131287
CDMA blind asynchronous channel estim./equalization, multistep lin. prediction 84851
CDMA cellular systs., adaptive interf. suppression filtering 130054
CDMA networks with smart antenna, capacity anal. 131130
CDMA overlay systs., interf. rejection using time-transform domain distrib. *(Chinese)* 96400
CDMA spatio-temporal receiver struct. for multi-rate appls. 119991
CDMA spreading seqs., design method *(Chinese)* 85536
CDMA sync. systs., GA assisted joint multiuser sym. detect./fading channel estim. 85459
CDMA syst. mobile transm. power optimal control 131297
CDMA systs. with multiuser receivers, optimum modulation/multicode formats 120016
cellular commun. syst., mobile posn. location with constrained bootstrap filter 109325
center-weighted median filters, conversion to pos. Boolean fns. 130097
checkerboard distortion avoidance in continuous-time domain 95678
chirp location sigs., matched digital filtering in time domain 118972
chromaticity diffusion 94704
circle size detect. by pyramidal transform data fusion 84552
civ. engng. machine localization, laser theodolite/odometer 97841
cluster anal. by adaptive rank-order filters 107511
coherent opt. sources, blind discrim. using reticle-based opt. trackers and ICA 106824
coherent sig. proc. syst. optim. 130088
color image filtering, fuzzy color credibility approach 94710
color image filtering distorted by impulse noise 129438
color image filtering in xyY color space 94824
color image proc., color morph. pyramid *(Chinese)* 118420
color image proc., histogram based multichannel filter 118219
color image restoration, multichannel M-filtering 94521
color preserving image segmentation 106483
colour images, anisotropic diffusion, scale-space techs. 73266
colour texture images class. 94591
colour-sensitive edge detect. using hypercomplex filters 118218
combined lin.-decision feedback seq. estim., pre-filter 84768
combined projection/correl. LMS sq. algm. for channel estim. with uncoded/chaotic coded speech 129388
commun. channel, data transm., sync. chaotic response 72712
complex image/color matching/coding, spatio-chromatic filtering 95451
complex modulation schemes, iter. multiuser detect. 128976
computational tomography, nonlin. filtering, photon diffusion 87714
computer-generated forces modelling, data fusion technol. appl. *(Chinese)* 122765
computerized tomography, 2D, reconstruction filters scaling 87771
cone beam filtered backprojection reconstruction algm. for circle-plus-two-arc orbit 87759
content based retrieval, area morph. segmentation 94940
convolutive mixtures, blind source separation, preprocessing for convergence accel. 107494
corrupted images, impulse noise removal using posn./directional inform. 118178
crease enhancement diffusion in image filtering 73269
cross-updated act. noise control syst. with online secondary path modeling 84679
curvature detect. mechanism 94475
D-Module two-input/output filter, AC motor vector control appls. 133928
data flow Petri net scheduling, branch-and-bound 78862
data fusion using multiple models 106762
DCT, recursive implement., comparative study 100756
decision-feedback multiuser detect. with feedforward orthogonal transform. 130172
deconvolution/filtering, LMI-based H_2, explicit formulas 107506
delay filters, insensitivity anal. *(Chinese)* 73649
delay LMS 1D and 2D adaptive digital filters, systolic archits. 68941
delay systs., guaranteed cost/H_∞ filtering 130143
delayless freq. domain acoustic echo cancellation 84741
Dempster-Shafer theory based color edge detector 95519
DGPS, approx. nonlin. filtering appl. 74896
differentially coherent code acquisition in wideband jamming 108582
digital baseband predistorter using calib. memory, perform. 108576
digital filter optim. over canonical signed-digit no. space using genetic algms. 91090
digital filter with hardware constraints, design by mean field anneal. 91066
digital image anal., tracking algms., sig. filtering *(German)* 84260
digital image seqs., rot. motion estim. and anal. 118392
digital PLL, loop filters design, mixed H_∞/H_2 method 68886
digital radiography, X-ray scatter compensation 122125
digital receivers, multirate digital filters for timing recovery 107513
digital sig. reception with background impulse and white noise 107612
digital watermarks, optimum attack/defense 107545
digital watermarks subjected to optimum lin. filtering and additive noise, anal. 95666
digitizing continuous-time filters improvements, comments 119001
digitizing continuous-time filters improvements, reply to comments 119002
direct and inverse 1st-order s-z transforms., efficient algms. 73694
direction set based algm. for spectral estim. 95689
discrete commun. channels, optimal filtering of messages with finite no. of states 119037
discrete multitone commun. with principal component filter banks 128993
discrete multitone modulation channels, optimizing capacity 130053
discrete nonlin. filter based on quantisation, approx. 84737
discrete nonlin. filtering problems, a posteriori dens., piecewise Gaussian approx. 73688
discrete time SISO lin. (L,M) shift invariant syst. 84237
discrete-continuous proc. estim. using Kotel'nikov theorem 119036

filtering theory continued
discrete-time syst. robust filtering, noise, uncertainty 95675
discrete-time systs., restricted struct. optimal lin. pseudo-state filtering 130116
distributed recursive state estimators, distributed Kalman filtering fusion with feedback 107508
document image binarization by coplanar prefilter 129663
document proc., image rot. 94678
Doppler radar data, spin estim., new method 75095
downlink transmit beamforming with selective feedback 108925
DS-CDMA asynchronous robust space-time multi-user receiver 74581
DS-CDMA asynchronous sigs. in multipath channels, blind detect. using code-constrained inverse filter criterion 84776
DS-CDMA asynchronous syst. in Nakagami fading, precise BER calc. 74559
DS-CDMA asynchronous syst. with concatenated convolutional coding, iter. multiuser detect. 107613
DS-CDMA asynchronous systs., Kalman filter based space-time receiver 108599
DS-CDMA commun., lin./DF joint detectors using periodic long codes 130170
DS-CDMA in fading channels, code timing acquisition by differential correl. 74792
DS-CDMA in multipath channels, blind asynchronous sig. detect. 84896
DS-CDMA radio channels, overlapping window decorrelating multiuser detector 107570
DS-CDMA RAKE receiver with TWCL in urban area, field test meas. 108802
DS-CDMA systs., adaptive narrowband interf. rejection, parallel interf. cancellers scheme 83356
DS-CDMA systs., power control with signature seq. adaptation 85506
DS-CDMA systs., reduced rank detect. schemes comparison 130161
DS-CDMA systs. under multipath fading channels, robust adaptive DFE receiver 84856
DS-CDMA tracking mode receiver with joint channel/delay estim./MMSE detect. 131056
DS-CDMA with lin. interf. suppression, pilot-to-data power ratio optim. 85800
DS-CDMA with multipath, spreading code adaptation 108828
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
DS-SS CDMA, narrowband interf. suppression 128809
DS-SS commun. systs., narrowband interf. rejection algm. 96392
DS-SS packet radio commun., serial matched-filter acquisition, AGC effect 108814
DS-SS systs., data-aided nonlin. filter for narrowband interf. rejection, closed-form results 105816
DS/SSMA band-limited commun., closed-form BER expression 108524
DSP, spectral props. of at. fns. 95707
DSP concept, structural subband decomp. 130092
DSP for joint time-freq. adaptive echo canceller 107565
DST/DCT domains, interpolation props. 94654
dual-tree complex wavelet transform with improved orthogonality/symm. props. 95680
dubious image blocking using colour features 118390
dyn. range compression based on illum. compensation 118383
dyn. systs., fault detectors design, $\mathcal{H}_\infty$ optim. 84751
ECG, power line interf. elimination, constrained eigenfilter 87455
echo cancellation, adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
echocardiographic image seq. filtering in freq. domain 132609
echocardiographics images, 3D modeling and visualization of ventricles 132610
eddy current microscopy of graphite-epoxy composite, image proc. 68479
edge detect. by multiresolution discrete symmetric cosine transform 95458
edge protection, noise suppression by anisotropic diffusion, anal. model 73525
EDGE syst., power control for wireless packet voice 74674
edge-preserving filters using layered fuzzy controllers with learning 118333
EIT algms. modif. using pipeline multiprocessor algm. 110973
elec. impedance tomography reconstruction algm. using EKF 129456
EMC models random procs., lin. filtration method 83397
EMI sig. proc./source ident., wavelet packet-based tech. 72374
enhanced RASTA filtering for speech/speaker recogn. *(Chinese)* 84056
equalization with widely lin. filtering 130270
error-free filtering under nonstationary distortions 130091
extended block-adaptive Fourier analyser, sig. component separation 118992
extended dimens. threshold filtering, concept and props. 84769
facial expression transform. based on sketch image/multiscale edges 73419
fading channels, iter. decoding scheme for pilot-assisted modulation 74699
Farrow struct. based 1D and 2D FIR filters, variable cutoff freqs., design 91065
fast motion estim. based on spatio-temporal Gabor filters, parallel multi-DSP archit. 94749
fault detect., decentralized filter using estim., games 67660
fault detect. and isolation, lin. matrix inequality based filter design 84752
FDD systs., downlink space-time proc. 119046
fiber optic gyroscopes, INS alignment procs., angle random walk reduction 131961
Fibonacci thresholding, sig. representation and morph. filters 130058
FIDO rover, state estim. and vehicle localization, sens. fusion framework 86498
fighter plane struct. fault detect., fault detect. filter *(Chinese)* 130085
fingerprint image class. by core anal. 73465
fingerprint image ridge freq. estim. by higher order spectrum 94510
fingerprint images, enhancement algm. using dyn. filter masks *(Chinese)* 118692
finite length multirate sig. proc., DC insertion symmetric extension method 95670
finite-precision Goertzel filters used for sig. tone detect. 130153
FIR digital filter design with discrete coeffs., semidefinite prog. relax. 80108
FIR digital filters, low/high-pass and mid-pass/stop designs 114878
FIR filter design, freq. response masking struct. with reduced complexity 91068
FIR filter design combining freq. response masking and WLS-Chebyshev approaches 91069
FIR filter with discrete coeffs., optimal design 91073
FIR filters, optimum discrete coeff. realization 80107
FIR filters, tradeoffs between RNS and two's complement syst. types 80110
FIR filters with max. flat freq. response error magnitude, instantaneous freq. estimator 107502
FIR fractional delay filter, optimal synthesis in reproducing kernel Hilbert space 73650
FIR freq. masking filters, narrow-band single filter 118981
FIR low-pass lin. phase filters with equiripple passband and least-sq. stopband 102415
first-order Δ-Σ modulator, rational cycle decoding algm. 90988
fixed-coeff. FIR filters, design for systs. with input clock jitter 91070
fixed-point lin. phase FIR filter design, appl. of SPT-term distrib. of CSD nos. 80109
FM superimposed sig. tracking, fake alg. Riccati eqn. 84784
football match image seqs., automatic camera calib. 95449
FPGA ccts., multi-scale contours detect., algm. establishment *(French)* 118475

filtering theory continued
fractional sample rate conversion, min. block proc. 73659
freq. domain step-size control in nonstationary environ. 107504
freq.-selective multiple access channels with adaptive QAM, resource allocation 73865
freq.-time mixed domain optimal filter for moving obj. extraction 106674
fuzzifying topologies, limit struct., charactn. theorem 100859
GA, filtered eval. fn./coevol. shared niching 67901
Gabor-type CNN image filters, subthreshold current mode design 102456
generalised K_H-convolution/fast Vandermonde transform, modulo arbitrary polynomial reduction, algms./multiplicative complexity 118995
generalized lapped biorthogonal transforms using lifting steps 106897
generalized polynomial predictor based receiver for nonselective fading channel 74554
genetically determined variable struct. multiple model estim. 118999
global fig. extraction, Hough transform, voting proc., variable-sized directional image filter *(Japanese)* 106746
goldfish species discrim. by image recogn. 84599
GoP MPEG video filtering and transm., frame selection algm. *(Chinese)* 118627
GPS integer ambiguity resoln. by particle filtering 131714
GPS navig., enhanced accuracy, interact. multiple model estim. 131713
GPS/INS integrated navig. syst., fault detect. method *(Chinese)* 76804
gradient-based algm., gradient noise reduct. by variable step-size tech. 73704
gravit.-wave detectors. aperture synthesis, deterministic sources 84763
gray and colour med. images, impulse noise reduction, random walk approach 132532
gray-level images, geometric proc., filtering/enhancement operations accel. 84294
grid-connected voltage source converter synchronisation methods 78005
GSM receiver acoustic echo cancellation using simplified Volterra filters 130059
H_∞ filter design for lin. time delay systs. 130129
H_∞ filters for unpredictable noise sources 130077
H_∞ fuzzy estim. for nonlin. discrete-time dyn. systs. 130118
HDTV, post-proc. using computationally efficient adaptive nonlin. filters 118332
head pose estim. with Gabor wavelet networks 129611
hearing aid fitting procedures eval., sig. proc. algms. 76700
HF digital commun., source separation with collocated antennas 84729
HF ground wave radar, multidisturbance suppress. using pol. filter *(Chinese)* 131645
HF sig. reconstruct. from LF sampling data based on wavelet multiresol. anal. 73631
hidden Markovian procs., smoothed functionals, recursive computation 67766
high-order bal. multiwavelets, theory/factorization/design 107521
high-resoln. phase sampled interferometry using symm. no. systs. 131705
higher-order digital differentiators, anal. least-sq. design 107548
Hilbert transform pairs of wavelet bases 73652
Hilbert-space valued systs., existence of filter dens. 84749
HMM, max. likelihood estimator, almost sure convergence rate 78816
HMM fault detect., local asymptotic approach 84753
homomorphic filtering appl. to sig. proc. 95709
Hough transform/separability filter for detect. of eyes from human faces 84614
HRR airborne phased-array radars, clutter suppression/moving target detect./feature extraction 75160
HRR ATR using eigen-templates with noisy obs. in unknown target scenario 86125
HRR moving signatures ident. with ATR belief data assoc. filter 86126
human speech sigs., local projective noise reduction scheme, nonlin. filters 94389
hybrid form FIR filter with min. cycle-time constraint, optimal design 91071
hybrid Kalman-Bucy filter struct. synthesis 119041
hybrid perceptual image proc. using interpolating wavelets 98162
hybrid systs., norm-bounded unknown nonlin., robust Kalman filter design 73683
IC defect image, math. morph. filtering *(Chinese)* 73515
ident. using fractional filter, pole behaviour 73685
IF digital filters design, adaptive method 107481
IIR comb filter, harmonic interf. removal, multirate method 107491
IIR digital filters design in complex domain 107540
IIR filters, computer-aided test for characterizing parasitic oscills. 130100
IIR generalized polynomial predictive filters 130064
IIR half-band filter, multiplier-free structs., synthesis scheme 80098
IIR recursive filters, pipelining using genetic algm. based approach 91074
IIR Volterra filtering for multisource discrim. 73670
image anal. and pattern recogn., coord. logic filters 129575
image anal. using first absol. central moment 129482
image coder enhancement using spatial noise shaping 107063
image coding, lossy and lossless compression perform., finite precision wavelets 95295
image compression, wavelet transform approach 95130
image compression using biorthogonal nearly coiflet wavelets 95148
image contrast enhancement by wavelet based homomorphic filtering *(Chinese)* 84251
image de-noising using stochastic reson. 106516
image deconvolution and noise control 118184
image denoising, autocorrelation modeling of wavelet coeffs. 94810
image denoising using directional filter banks 94807
image denoising using hybrid wavelet/DCT method 129484
image denoising using scale-adaptive lifting schemes 94806
image denoising via local-inform.-based fuzzy filters 118181
image detail prediction 94651
image enhancement, edge preserving filtering by combining CBAE/median filter 129444
image filtering using scale-space continuity, wavelet-based method 73157
image noise elimination using nonlin. filtering strategies with edge preservation 106529
image primitive detect., 2D isotopic wavelet filter 73558
image proc., fine-detail preserving filter for noise suppression 106722
image proc., local transform domain filters with varying params. 130057
image proc., switching median filters based on counter propag. networks 118235
image representation/compression with fractional FT 129789
image resoln. enhancement, adaptive algm. 106759
image restoration, multiple filters for lin. alg. systs. 118374
image restoration, recursive implement. of constrained LMS L-filters 73305
image restoration by fuzzy convex ordinary kriging 84298
image restoration by multiple image filters fusion 129560
image restoration by multiresolution non-lin. filters 118182
image restoration filters, subspace inform. criterion 119004
image restoration method using IFS 94944
image retrieval through shape matching of partially occluded objs. using hierarchical content description 84617

filtering theory continued
image segmentation, regularized EM algm. 73265
image segmentation by level set anal. 106755
image segmentation using PDEs and morph. 94502
image seq. restoration, impulse noise, adaptive 3D median filtering 73142
image sig. proc., impulse noise removal *(Japanese)* 84135
image smoothing and enhancement, modified anisotropic diffusion 118187
image watermarking algm., matched filtering *(Chinese)* 84437
images with pulse interf., nonlin. filtering 106733
impulse noise corrupted images restoration using image gradients 106721
independent gamma stats., distrib. sum 95728
inductive sens., alternative cct. configs. comparison 75487
inference, quasilikelihood, for long-memory procs. filters 119060
inform. fusion based filtering algm. and integrated navig. syst. appl. *(Chin* 130107
integrated lossy/lossless image coding based on LWT and multichannel prec 73404
interconnected power network state estim. using randomly delayed m 133511
interior PM sync. machine sensorless speed control scheme 113069
interior PM sync. motor sensorless control using Kalman filter 123377
intermediate image interpolation using polyphase weighted median filt 118186
inverse filter, chaotic dyn., param. estim. 73671
inverse filtering in a priori indeterminacy, optim. algms. 84730
inverse filters for arbitrarily focused image reconstruction from two differe focused images 84295
ISAR imaging of maneuvering targets, param. estim. of multicomponent poly mial sigs. 75084
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 20 124234
joint likelihood methods for mitigating visual tracking disturbances 95715
joint predistortion/transmit diversity 74679
JPEG 2000 foundations, modern lossy wavelet image compression tuto 118495
JPEG modified image compression tech. 95137
jump Markov lin. systs., seq. simul.-based estim. 73663
Kalman nonlin. filtering with semi-parametric Biscay distribs. 130115
Kautz filters adaptation in identifying dyn. systs., separable nonlin. least- methods 107537
L-filter robustness anal. by output distributional influence fn. 130061
landmine detect., air-soil boundary line rep., multifreq. sig. 73470
landmine detect., EM induction imaging, modelling 77018
LCMP beamforming under quadratic constraint, RLS implement. 73655
learning optimal texture edge detectors 94956
lifting factorization-based discrete wavelet transform archit. design 73636
lifting scheme design from general wavelet 95699
limited-delay lossy coding/filtering of indiv. seqs. 129140
lin. filters under PSD stabilization, optim. 118320
lin. motors, output feedback adaptive robust control 88766
lin. parallel interf. cancellation, perform. 84797
lin. phase paraunitary filter banks, lattice structs. parameterization 107527
lin. prediction coding filters, source separation techs. 107558
lin. scale invariant sigs./systs., discrete time proc. 95688
lin. syst. noise effect reduction, coherence fn. in deconvolution 119009
lin. systs. with fractional Brownian motion, filtering 84744
lin.-phase FIR filters, optim. using freq. response masking approach 80103
lin.-phase paraunitary filter banks with complex-valued freq. responses, des algm. 73705
LMS algm., convergence behavior in subband adaptive filtering 73699
LMS algm. with saturation nonlin., adaptive filter output, stochastic anal. 847
LMS complementary pair algms., perform. improvement 119016
LMS long adaptive filters, wave theory 130065
LMS multiple adaptive filters in tandem, perform. 130128
LMS step-size, dyn. adjust. based on variances of wt. fluct. 73703
local activity indicators, hard-switching adaptive image filtering 118317
long adaptive LMS filters, wave theory, tapped-delay line type 84727
long-range depend. sigs., adaptive vs. robust predictors 73645
lossless image compression, filter banks with nonlin. lifting steps 73347
lossy image compression, quincunx wavelet transform lifting scheme 95077
loudspeakers, Volterra filter, 2nd order nonlin. distortion elimination 131780
low complexity FIR filters using factorization of perturbed coeffs. 80084
low delay max. flat lowpass FIR digital filters, transfer fn. 80101
low-complexity turbo-equalization for diversity channels 72932
LPC, warped/conventional techs. comparison 84009
LPC in binary syst. for speech sig. transm. 73025
lung vascular sizes, spatial distrib., 3D greyscale morph. 87702
M-band cosine-modulated orthogonal wavelet, design method *(Chinese)* 1142
M-band wavelet transform, adaptive approach to unsupervised texture segmen tion 106512
M-estim. robust adaptive filtering 119052
M-QAM nonlin. amplified sigs., fast adaptive predistorter 72728
MAI suppression by reduced-rank lin. filtering 84762
Mallows' recursive filter class 130127
maneuvering target, online tracking, neuro-fuzzy adaptive filter, linguis method 107505
maneuvering target tracking, adaptive filter, innovation bias *(Chinese)* 1189
maneuvering target tracking, neuro-fuzzy adaptive filter 120400
manoeuvring target tracking, accel. estimator using past posns. *(Japanes* 131669
map-based mobile robot dyn. localization, optimal pose estimator, EKF compa son 97834
Markov jump systs., min. MSE estim. 73680
mass detect., lesion site selection by morph. enhancement/contextual segmen tion 76502
max. flat lowpass digital filters, response to polynomial sigs. 84767
max. flat magnitude beyond the orig. filters, nomographs 107539
med. image enhancement using complex-valued CNN filters 132539
median based impulse rejecting filters, new class 94564
median filter based realizations of robust time-freq. distribs. 107553
MEMS filters, mitigation of cosite interf. in nonlin. receivers 107482
metabolite maps reconstr. in ^{1}H-MRS imaging, time-domain tech. 87570
microstruct. meas. syst., image proc. tech. *(Chinese)* 121189
MIMO 2nd order blind channel ident. based on correlative coding 130262
MIMO blind deconvolution, cumulant-based inverse filter criteri props./algms./appl. to DS/CDMA systs. 84853
MISO CDMA transm. with simplified receiver for wireless commun. handse 74791
mixed sig. test bus, test waveform shaping by pre-equalization 102418
mixed time scale recursive algms. 95702

ing theory continued
MLE, progressive refinement, carrier freq. recovery appl. 94231
MMSE reduced-rank multiuser receiver for sync. CDMA 108526
MMSE spectral domain estimators for nonuniform syst. modeling subband adaptive filters 107566
mobile robot 3D struct. estim. and planning, vision and range fusion 86605
mobile robot dead-reckoning, precision-calibrated fiber optic gyroscope, sens. fusion 109593
mobile robot outdoor navig. syst., GPS and inertial platform 108976
modified fast vector median filter 129461
modified gray level morph. gradient with accurate orient. estim./reduced noise sensitivity 107253
modulated lapped transform computation, fast algm. 84716
morph. image filter, 3D, using spatial partitioning representations 118440
morph. opening and closing in noise, approx. 118377
motion estim. of opaque or transparent objs. using triads of Gabor filters 73203
motion estim. using spatio-temporal CW transform, new results/implement. 94669
motion estim. with incomplete inform. using omni-directional vision 94671
mountain areas extraction by wavelet transform, ridge lines detect. appl. *(English)* 109270
moving obj. time-to-contact estim., point tracking *(Chinese)* 118401
moving target tracking in scenery, change detect., ICA 106524
MPEG-4 coding perform. improvement, compression optim./blocking effect elimination 95332
MPEG-coded video seqs., real-time visual postprocessor 84413
MRF modeling in median pyramidal transform domain for denoising appls. 118974
multi mobile robot systs., large environ., simultaneous localization and map building 86497
multi-lead ECG, EMG sig. elimination, enhanced SVD filter appl. *(Korean)* 110613
multi-obj. tracking, engng. stats. 95713
multi-pulse excitation LP synthesizer, param. re-optim. algm. 73111
multi-resoln. skeletonization, shape and topol. preserving multi-valued image pyramids 94476
multi-scale corner detect., nonlin. filtering *(Chinese)* 84081
multi-spectral image spectral mixture anal., unmixing methods 118210
multi-wavelet transforms, 2D constrained, real-time struct. 107512
multi-window impulse detector for restoration filters of noise-corrupted images *(Japanese)* 118436
multicarrier CDMA in multipath fading channel, successive carriers overlapping, iperform. effect 73863
multichannel image proc. using fuzzy vector median-rational hybrid filters 118388
multicomponent sigs. anal., high-resoln. quadratic time-freq. distrib. 118998
multidimensional filter stat. anal. with non-Gaussian non-white noise 119048
multidimensional systs. stabilizability and stabilization, constructive approach 130112
multifrequency sig., adaptive interperiod proc. 86172
multipath channel param. determ. using wavelet decomp. 84813
multiple bandpass sigs. downconversion using bandpass sampling, efficient algm. 130138
multiple jammer suppression using adaptive lin. constrained inverse QRD-RLS beamformer 84755
multiple unmanned aerial vehicles, decentralized data fusion, localization and map building 88048
multiplierless FIR filters, systematic design algm. 80105
multirate lin. systs., inform. theory 128952
multirate sig. estim., stat. inference problem 119063
multirate/cascaded filters, optim. algms. 107532
multiresolution permutation filters based on decision trees 94566
multiscale image representation using B-spline approaches 129466
multisensor aerial images, class-scale space segmentation 94503
multisensor syst. target tracking filter for proc. time-delayed data *(Japanese)* 130111
multiwavelet thresholding, convergence 130050
multiwavelet-based orthogonal CDMA systs. 73849
MVDR filter, auxiliary-vector estimator 107536
N-dimens. adaptive DP syst., quadratic goal fn., second derivative estim. 73669
narrowband commun. sig. detect. in fast fading Ricean channel 119104
natural images, wavelet-based decomp. in independent resoln. levels 107039
natural images retrieval, new approach 106437
neural network match filter of chirp pulse compression 75092
neuro-fuzzy filters based on recursive proc. and genetic learning 130094
Newtonian operator for contrast enhancement *(French)* 106439
noiselike sigs., discrete/continuous params. filtering 107497
noiselike sigs., max. period recurrent pseudorandom seqs., filtering method 95708
noisy speech, adaptive filtering & spectral subtraction 94421
non-Gaussian channels, robust decorrelating decision-feedback multiuser detect. 119187
non-iter. waveform deconvolution, anal. reconstr. filters 118996
nonlin. blind equalization, bilinear recursive polynomial perceptron 119178
nonlin. cumulant based adaptive filter for image Gaussian/impulsive noise removal 129443
nonlin. diffusion and multiscale anals. 106749
nonlin. diffusions, nonlin. continuous time approx. filter efficiency 73684
nonlin. evol. eqns. simul. via cellular networks 107490
nonlin. filtering, hybrid approx. 95694
nonlin. filtering impulse noise removal from corrupted images 94805
nonlin. filtering in wavelet transform domain 94802
nonlin. filtering problems, Gaussian filters appl. 73681
nonlin. filters, stabil. and approx., Hilbert projective metric, particle filters appl. 73682
nonlin. H_∞, max-plus algm., convergence/error anal. 67899
nonlin. high-pass filtering for image noise removal 95673
nonlin. image interpolation through extended permutation filters 94563
nonlin. image noise filtering algm. based on SVD block proc. 106480
nonlin. image operators, HOS, freq. component AND-like combinations 130096
nonlin. image proc. and pattern anal., conf., San Jose, CA, USA (Jan. 2001) 113186
nonlin. image simplification via levelings/reconstruction filters, PDE approach 94718
nonlin. Kalman filter theory and wing rock motion control appl. 107496
nonlin. preprocessing of heavy tailed reverberation 130132
nonlin. proc. of non-Gaussian, non-coherent sigs. in colored noise 119013
nonlin. stochastic feedback systs., filtering 84746
nonparametric algms. for sig. & noise characts. recovery 73675
nonparametric curve estim. methods for clutter removal 120415

filtering theory continued
nonstationary data, optimal proc. 109309
nonuniform filterbank struct. for channel precoding 95668
nonuniform principal component filter banks 119007
nonuniform sampled bandlimited sigs., digital fractional filters for sig. reconstruction 95669
Nozomi Mars spacecraft, Doppler freq. short period vars. *(Japanese)* 97025
Nyquist DMSK for min. BER 106027
Nyquist/near-Nyquist pulse shaping with spectral constraints 84728
obj. posn. estim., multi-robot systs., distributed sens. fusion 95704
obj. tracking, mean shift/optimal prediction 94789
octave-band all-pass based IIR filter banks, image enhancement appls. 106479
OFDM receivers, freq. domain equalization of IQ imbalance 119177
OFI, optimal filtering algms. for source separation 107556
old film pictures, blotches correction/contrast enhancement 94685
one-point compactifications, extension struct. 124569
opt. flow estim. over extended image seq. 106830
optic flow computation using discrete wavelet anal. 106777
optimal adaptive multiuser detect. in unknown multipath channels 84771
optimal adaptive proc. for domain factorised element-digitised array radar 75072
optimal binary filter, small-sample error estim. 130068
optimal compaction gain by eigenvalue minimization 73700
optimal filters for gradient-based motion estim. 118467
optimal fractional controllers for commensurate order systs. 73646
optimal L-filter for blocking artifact reduction using GA 106890
optimal regularized image restoration using generalized-cross-validation criterion 94926
optimal robust sens. scheduling problem 75446
optimal sig. filtering in auxiliary channel of interf. var. 107515
orient. estim., conventional techs. and non-differential approach 118344
output distributional influence fn. 107523
particle filter for tracking multiple objs. 95714
partition-based median type filters for image noise suppression 73256
PCA filter in blind source separation 107555
PD wideband meas. syst., periodic interf., direct trap wave filter *(Chinese)* 132123
perceptual spectrum quantization 106363
perceptually uniform color spaces for texture anal., eval. 73500
perfect reconstruction modulated filter banks with sum-of-powers-of-two coeffs. 73651
periodic sigs., noisy meas., time derivatives, nonlin. observers 73643
phase-manipulated sigs., distortion-stable weighted compression filters 119035
PID control, filtered, optimum multiple integrat. tuning 107507
piecewise-lin. systs., global chaos sync. and robust filtering in noisy context 125202
pilot sym. assisted modulation, sync. results 83802
pipe length/temp. meas. using 2 acoustic sens. *(Japanese)* 133373
POCS-based image reconstruction from irregularly-spaced samples 95183
point convergence index filter charact. anal. *(Japanese)* 94610
point distrib. model shape fitting using Kalman filter 94541
pole-filtered cepstral mean subtraction method, implement. for speaker recogn. 84062
polyphase realisation of fractional sample rate converters 95712
power filter, act., grey prediction control 122981
power syst. harmonics meas., orthogonal filter design, improved fast Walsh transform algm. *(Korean)* 111673
prefiltering algm., Shannon sampling point, Daubechies wavelet sampling point, error anal. *(Chinese)* 95693
prefiltering/reconstruction filters for vol. rendering 106833
probabilistic data assoc. filter stabil. anal. 84732
projection-invariant pattern recogn. with logarithmic harmonic fn./wavelet transform 129805
protected telecomms. M systs. sensitivity , state and param. estim. 119034
pulse shape filter estim. in multipath context 107535
pyramidal algm. for area morph. 94721
QMF bank low delay design using init. filter approach 119005
QRD fast inverse-updates adaptive filtering algm., stabilisation 73667
QS-CDMA, timing control algm. anal. 107746
radar image proc., local transform-based denoising 120397
radar imaging, high resoln., 2D data extrapolation using AR lattice modelling 131640
radar syst. multichannel filtering optim. 109284
radar target tracking, robust persistent disturbances rejection, PI Kalman filter appl. 130140
radioinertial navig. equipt. with adaptive antenna array, jamming resist. 120485
random image fields filtering on arbitrary 2D grids, algms. 118357
random struct. Markov procs., optimal filtering and locally optimal control 67768
range images correl., shape conformity eval. 106965
rank difference based filter develop. 95443
rank-reduced matrix approxs. 84689
rational PDF/filtering, state-space calculus 130081
Rayleigh flat-fading channels, efficient suboptimum detector based on lin. prediction 73727
RCG ST-segment enhancement, wavelet interpolation filter 87421
real time audio systs., bit-rate reduction by psychoacoustic masking 94397
real-time 3D acoustic image localization algm. by embedded DSP 84141
real-time pedestrian tracking/counting using single camera 118302
reconfigurable radio terminals, continuous-time digital filters for sample-rate conversion *(English)* 107550
recursive digital filter model, inverse filtering tech. 130137
recursive digital filters, multiplierless realization 130099
recursive weighted median filters with real-valued wts., optim. algm. 94559
redundant meas., integrated proc., nonlin. algms. 75342
region-based subband/wavelet image coding 95294
region-of-interest video coding, multiple-face tracking syst. 84465
rejection filter optimisation during repetition period wobbling 130087
risk sensitive filtering, infinite dimens. spaces 84748
risk sensitive nonlin. filters, robust limits 130086
RLS pipelined adaptive filters, low computational complexity implement. 107495
RLS-Laguerre lattice adaptive filtering, error-feedback/normalized/array-based algms. 130117
road images, real-time proc., optimal moving windows method 95554
robot manipulator visual servoing predictors, expt. study 119062
robot tour guide, GPS-based localization, error-robust 97037
robots, indoor feature-based probab. sonar map building 120469
robust adaptive filtering in impulse noise, least mean M-estim. algms. 119014
robust estim. of motion and struct. using discrete H_∞ filter 94932
robust H_∞ FIR filtering with sampled-data meas. 130141

filtering theory continued
robust Kalman filter for discrete-time uncertain systs., design 84731
robust min. variance filter design, new approaches 130119
robust motion estim. using spatial Gabor filters 118393
robust optimal granulometric bandpass filters 107500
robust quasi-Newton adaptive filtering algm. for impulse noise suppress. 95672
rot. invariant texture features using dual-tree complex wavelet transform 106444
rot. machine diagnosis using blind separation of noisy harmonic sigs. 123279
rotated textures class. using overcomplete wavelet frames 94598
Saab Gripen aircraft, synthetic attitude/heading ref. 88053
SAR, airborne, motion compensation 75090
SAR ATR using digitally spotlighted phase hist. data 75151
SAR high resoln. near-field images, reduced bandwidth algm. 131638
SAR image proc., wavelet transform 86162
SAR image proc. for moving target focusing 99158
SAR image speckle reduction using iterated struct. filters *(Chinese)* 131650
SAR imagery, lossless compression using multiple-pass gradient adaptive lattice filter 109251
SAR images, MLE of look no. 86153
SAR images, open-loop adaptive filtering for speckle reduction 109242
SAR images, wavelet filtering algm. in automated lineament detect. by Hough transform 95583
SAR speckle filtering with different wavelets, anal. *(Chinese)* 75117
SAR spotlight-mode imagery, target motion compensation 96892
satellite image deconvolution using complex wavelet packets 94953
sea mine detect., side-scan sonar, gray-scale morph. filters 77047
second degree operator, optimal fixed rank transform 73611
second-order digital filter with two's complement arith., periodic behaviours 125610
second-order sampling of wideband sigs., digital demodulation 94236
segmentation/tracking of overlapping objs. with feedback 95009
self learning video filters for wavelet coded video streams 84462
sens. fusion, rough granular approach 118970
separable nonlin. least-sq. methods, systs. modelling, Kautz and Laguerre filters 107526
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
shadowed video scene clarification by multiframe averaging 118168
shape and camera estim., single camera based, EKF 106682
shape/size simultaneous discrim., opt. analogue computer develop. *(Japanese)* 107224
sig. and image denoising and segmentation approaches 84267
sig. charact.-preserving filter categories 130047
sig. class., wavelet filter design using GA 107498
sig. compression using slantlet transform, efficient approach 95615
sig. filtering and shift invariant anal. using complex wavelets 84735
sig. proc., 1D rank order stats., fast computation 130060
sig. proc., time series anal., aliasing benefits 119006
sig. proc., wavelets/approx./compression 118978
sig. recovery via adaptive Gabor coeffs. shrinking with Bayes rule *(Chinese)* 84761
sig.-depend. image noise, wavelet and pyramid filtering 130056
sigs., amplit./phase modulated, optimal estim. 73668
SIMO/MIMO FIR systs., conditional max. likelihood blind ident. 119050
single filter freq. masking FIR filters, narrow- and wide-band designs 80104
single-channel noise reduction with pitch-adaptive post-filtering 118052
single-loop sigma-DM, robustness anal. 83822
sinusoidal freq. estim., multirate filter bank appl. 107518
sinusoidal freq. estim. using median filter *(Japanese)* 119057
smart copying, audio sig. reconstruction, new approach 118065
snowfall noise elimination using time median filter *(Japanese)* 106818
software radio, sym. sync., MMSE interpolation *(Chinese)* 96373
software radio receivers, simplified sig. proc. 107529
sonoelastography, strain imaging, multi-resoln. algm. 122000
space-time array data simul. 107534
space-time coding/Kalman filtering for diversity transms. through time-selective fading channels 106088
space-time separation of radiation sources, algms. 119038
sparse aperture imaging, reconstruction and SNR considerations 118474
Sparse-BEFAP, fast affine projection avoiding explicit regularisation 119078
spatial sig. proc. merging diversity/beamforming perceptions *(English)* 107549
spatial video noise reduction using wavelet based freq. decomp. 90195
speckle interferograms, wavelet transform decoding 117574
spectral anal. of gapped data 107503
spectral chem. sens., systematic profile/feature-based intell. 109737
spectral envelope estim. of voiced sounds using penalized likelihood approach 83984
spectrally modulated interferogram anal. by recurrence nonlin. filtering method 129539
speech coding, wavelet packet excitation sig. compression 94395
speech driven in-service nonintrusive meas. device, optimum variable step-size adaptation 130617
speech enhancement through binaural neg. filtering 118979
speech recogn., Mel filter-like admissible wavelet packet struct. 84038
speech recogn., nonlin. sig. decomp. into functional series 118149
speech recogn. by dyn. synapse neural net 118123
speech sig. intelligibility estim. against correl. interf. background 83982
speech sig. recovery in white noise using adaptive Kalman filter 118050
speech sig. representation 118147
spiral cone-beam CT, long obj. problem, 1-D Hilbert transforms 132797
SS commun. systs., interf. rejection using RBF network *(Chinese)* 94067
SS commun. systs. using lapped transform, NBI excision *(Chinese)* 94066
SS multicarrier transm. chain for robust/discrete tactical commun. 111597
stable IIR 2D digital filters, design using seq. semidefinite prog. 91063
stack filter design, tree representation evol. 84742
stack filters optim. based on mirrored threshold decomp. 73656
stationary cost fn. adaptation algm., recursive approach 119012
stereophonic sig. decorrelation, NLMS-like adaptive filtering algm. 84001
stochastic fastest convergence NLMS algm., adaptive filter *(Japanese)* 73673
stochastic proc. obs. with memory under anom. noise 73689
stochastic procs., generalized moving continuous-discrete extrapolation 67774
straight patterns, high resoln. positioning, Hough transform multiscale matched filtering 94474
strongly nonlin. systs., Kalman filtering theory, oceanographic appls. 133340
subband adaptive filters, steady-state perform. limitations 107524
subband perceptual audio coding with nonideal reconstruction filters, optimum bit allocation 73021
subband-coded images, edge enhancement 73335
subimage extraction by integer-type lifting wavelet transforms 94662
subpixel interpolation and matching, empirical filter estim. 106643

filtering theory continued
SW radio commun., noise suppress. based on SVD 74583
sym. timing recovery, optimal Farrow filter coeffs. 119109
symm. interact. relatively wideband diplexers, direct design *(Chinese)* 114
symmetric-antisymmetric multiwavelet filter bank, image compression *(Chin* 107474
symmetric/antisymmetric orthonormal length-4 multi-filters, characterisat 73666
syst. fns. with min. time-bandwidth product based on higher order mome 130101
T-invariant causal lin. syst., anal. continuation, Kramers-Kronig anal. 1300
target tracking, optimal in clutter, waveforms and detect. thresholds con 84733
target-directed dyn. syst. model with switching states, param. estim. 73697
TDMA/W-CDMA and N-CDMA/W-CDMA spectrum overlaid systs., int suppression 72356
texture boundary detect. using 2D Gabor elementary fns. 84098
texture mapping by successive refinement 94648
textured image segmentation based on fractal/filtering 107218
three-phase sig. proc. using multivariable filter *(Japanese)* 73654
threshold Boolean filtering, CNN 107489
threshold filtering algm., wavelet coeffs., region relativity *(Chinese)* 10750
time series spectral models, automatic monitoring & detect. 130083
time-freq. domain fault detect. approach, parity rel. and wavelet transform ap 84734
time-varying channel tracking, robust adaptive predictive algms. 119018
time-varying recursive filters for decimation/interpolation 119008
Toeplitz block banded block systs., regularized soln. 94743
tomographic images, region of interest reconstruction using filter banks 985
total least sq. filtering, stable simplified gradient algms. 107544
tracking, aerial manoeuvring obj., adaptive Kalman filter 88080
traffic surveillance, content-based event retrieval 129815
transform domain image restoration methods, review/comparison/interp. 1181
transmit diversity techs., matched filter bound 131291
transversal adaptive filtering algm., fast converg. for impulsive environ. 956
tree-struct. IIR/FIR octave-band filter banks with very low-complexity anal. ters 91060
trellis coded M-ary 1RC CPM with lin. receiver/pre-coding, perform. 10602
two-channel meas. syst., speech sig. filtering and sync. error estim. 106349
two-channel noise reduction with pitch-adaptive post-proc. 106344
two-channel time-varying filtering, min. error variance 95677
two-channel wavelet filter banks with variable zero moments, adaptation crite 107560
two-path polyphase IIR filter design using downhill simplex algm. 91091
two-state tracking filters, seeker appls., LOS rate estim. 120420
UIE flickermeter, digital implement., params. sensitivity anal. 109444
ultrasound images, wavelet based denoising techs. 98313
ultraspherical polynomial based window fns. and appls. 78744
uncertain nonlin. systs., sampled meas., $\mathcal{H}_\infty$ filtering design 95676
uncoded/chaotic coded speech, robust channel estim./perform. 73037
underwater robot, concurrent mapping and localisation 109305
unimodal blind equalization criterion 119192
univariate sig. denoising, VC theory 107568
unwrapping of sigs. in transform domain, sig. reconstruct./lossy image compre appls. 95711
US brain images restoration method, speckle noise removal 98330
US NDT, fixed transceiver syst. sig. proc., inverse filter 125159
UWB-SAR systs., underground targets migration 96898
variable 1D FIR filters with arbitrary magnitude responses, design 68940
variable 2D recursive digital filters with guaranteed stabil., design 68942
variable fractional-delay FIR digital filters, discretization-free design 10240
variable fractional-delay FIR filters, discretization-free design 91072
variable step size LMS adaptive filtering algm. and anal. *(Chinese)* 119054
variable wt. mixed-norm LMS-least mean fourth adaptive algm. convergen 107531
variable-step-size LMS algm., subband adaptive filtering, echo cancellati 95682
vector directional filters, wt. concept introduction 84079
vector filter banks using DFT modulation, design method 73706
vector median filter for colour image proc. 94473
vector procs., depend., strong law of large nos. 78818
vel. estim. and moving obj. detect. using wavelet transform and parallel Kalm filter 118394
Verdu soft demodulator, iter. coded multiuser detect. 107609
video, reduced-complexity iter. post-filtering 129693
video coding, block-DCT based, low-complexity post-proc. for artifact reducti 95203
video de-interlacing, nonlin. techs. 94689
video objs. partitioning into temporal segments using local motion infor 106855
video seq. obj. tracking, local search N-interact. particle syst. 129581
video sig. denoising/sharpening 118334
videoconferencing, Kalman noise filtering and motion compensated video codi 95099
visual obj. tracking, probabilistic data assoc. 84128
vocal tract anal. allowing for glottal acoustic impedance *(German)* 73007
voice activity detect. and speech enhancement based on coherence using pit inform. 118054
Volterra adaptive filter, decoupling problem, MMSE criterion *(Chinese)* 1074
Volterra adaptive filters for act. control of nonlin. noise procs. 95703
vowel synthesis, online EM algm./IIR filter, neural 118120
VQ image proc. based on projection onto hypercubes 95040
watermarking syst. based on Bernoulli chaotic seqs., stat. anal. 94265
watershed-based image segmentation, joint region merging criterion 94635
wavelet filters in multi-resoln. motion estim. 129707
wavelet image compression, optimal decomp. 95396
wavelet-based VLBR video coding using image warping/overlapped blo motion compensation 73384
wavelet-coded videostreams, class. and eval. of filters 84412
Wiener generalized image reconstruction from colour sens. data using scale inv riant prior 94951
Wiener modified filter for multi-frame restoration of blurred/noisy imag 129442
Wiener spatio-temporal filtering of image seqs. using parametric motion mo 84301
Wiener state deconvolution filters *(Chinese)* 119033
wild life telemetry, moving target location, EKF convergence 85172
windblown radar ground clutter spectral shape, lin. matched filter 96921
wireless commun. posn. location, bootstrap filtering 73648

ring theory continued
wireless fading channels, space-time transmit strategies/channel feedback generation 108960
Zakai filter eqn., pathwise uniqueness 84747
CdZnTe radiation detector sig. proc., clustering method 121427
rs
see also specific filter headings, e.g. "active filters", "digital filters", "spatial filters"
2D multirate filter from 1D filter 95328
ADC sampling rates for sig. reprod./anal. 109470
analog filter design, Mathcad worksheets, FILTERD program 91007
analog filters review 114861
analogue LC filter tuning, multiobjective genetic algm. approach 91009
Asia Pacific Conf. on ccts. and systs., Tianjin, China (Dec. 2000) 67378
branched tube systs., param. estim. *(English)* 73003
broadband mobile radio, joint spatial/temporal equalizer 85829
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
chaotic phase code for radar pulse compression 96948
clutter suppression in radar by quasi-continuous complex sig. and proc. optim. 96962
cone-beam helical CT reconstruction algm. using tree-struct. filter bank *(Japanese)* 132784
crit. mode boost PFC converter, input current eval. 88827
CT, reconstruction, tree-struct. filter bank *(Japanese)* 73138
current-mode multifunction filter using CMOS dual output CCIIs/grounded pass. elements 68891
D-Module two-input/output filter, AC motor vector control appls. 133928
DAVIC-compliant digital commun., high-speed coded QPSK transmitter LSI 109344
digital FM and GMSK with limiter discriminator detect., anal. of BER on seq. estim. 106041
DS-CDMA, limits of coded transm. over fading channels *(English)* 73857
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
fluoresc. lamps, high PF electronic ballast, modified valley-fill filter 134614
H_∞ filters for unpredictable noise sources 130077
illuminant color estim. using polarizing filter, color correction appl. *(Japanese)* 73136
IM PWM drives, long feeder cables, overvoltages, modelling 134472
knockout ATM switch with batcher network for multiple priority classes, performance anal. 107650
machine vision in indust. automation, filter tuning appl. *(Italian)* 113807
mains RFI filters design methodology 89035
noisy image edge detect., Java algm. *(Chinese)* 129809
optim. of freq. filters via vertex graphs 80028
orthophotomosaic of high objs., adjustment of image contrast and brightness 129585
PD meas., periodic interf. rejection, direct trap wave filter *(Chinese)* 86901
PLL GFSK demodulator, perform. in multipath channel 108772
power line commun. de-coupling filter appl. *(German)* 74505
PWM voltage source rectifier, reduced-size input filter, operation 134165
PWM voltage source rectifiers, predictive instantaneous current control scheme 112644
radiation therapy, proton beam delivery syst., design anal. *(Chinese)* 121320
random Gaussian proc. change-point detect./estim. by brief obs. samples 129948
SFQ multistage decimation filter, Σ-Δ A/D converter 127495
symmetric phase type filters for edge detect. *(Chinese)* 84512
texture boundary detect. using 2D Gabor elementary fns. 84098
three-phase sig. proc. using multivariable filter *(Japanese)* 73654
transformer containment pits cleaning, oil-water separator syst. 88801
translinear dyn. ccts., generalized class 101683
up/down conversion by sampling *(English)* 73585
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
Fe-Si alloy flake-polymer composite based EMI filter, atten. 83395
rs, chemical *see filtration*
ation
CMP slurry flow rate/point-of-use filter life using press. transducer/flowmeter 103395
dyn. MR studies, optimal Gd-DTPA dose 132740
elec. filter microsecond power supply for efficiency improvement *(Russian)* 93982
electret filters, polypropylene/PTFE materials, charging charact. 81645
glomerular filtration rate determ., radionuclide techs., healthy volunteers 122165
microparticle filter, US standing waves & laminar flow 70342
myocardial ischemia venous lactate/glucose monitoring, ultrafiltration catheter 87347
polypropylene fabrics, electret props., HV corona 81646
porous supercond. filtration, Meissner effect, Ar/Ar-O_2 gas separation 92920
solder fume extraction/filtration considerations 80511
ultra-pure proc. gas filter membranes, contamination contrib. eval. 103381
C nanotubes, adsorpt., functionalization, confine., appls. 79469
CdS thin-film polycryst. solar cells, environ.-friendly mfg. 134391
l, atom-probe *see atom probe field ion microscopy*
line components
E-plane quasi-opt. power amp. using TEM waveguide concept 102687
HEMT mm-wave MMIC mixer modules, optimized antipodal finline transits., 77 GHz 125803
RF tunable filters, full wave anal. and simul. 102529
T-jn. finline SPDT switch, design and implement. *(Chinese)* 114953
TTL method applied to finline resonators 102567
Cu E-plane ccts., membrane-supported, fab. and realisations 91196
lines
see also fin line components
knowledge-based ANN models for finline in MM-wave IC design 80161
PHEMT 77 GHz mixer modules with finline transits. for automotive appls. 69119
nce
see also accounting; auditing; banking; budgeting; commerce; corporate modelling; costing; financial data processing; insurance; investment; stock markets
conf., disordered and complex systs., London, Eng. (Jul.2000) 78460
delegation protocols for electronic commerce 130403
EU competition law impact on public service broadcasters financing 97054
future mobile phones, design challenges from embedded systs. perspective 85903
Linnik and Mittag-Leffler params., fractional moment estim. 113893
lithog. equipt. in semicond. fab, financial considerations 92194
PACS diffusion into radiology marketplace, adoption of alternative financing strategies 89657
finance continued
private finance initiative project, bidding, risk taking 78578
secure digital archiving of high-value data 129242
SME financial mgt. overview 100485
telecomm. services convergence, mapping business and technol. factors 130533
US R&D mgt., business finance aspects 100483
financial data processing
see also bank data processing; corporate modelling; EFTS; electronic trading; insurance data processing; spreadsheet programs
bidding strategy coord. in energy and spinning reserve markets 88296
domestic tariff elec. customers, billing/accounting software develop. *(Serbian)* 122829
electronic toll collection syst. develop. using radiocommunication *(Japanese)* 123999
game model of making investment decisions 124484
Norwegian deregulated power market, ODEL inform. exchange format 133471
financial dealing systems *see electronic trading*
financial planning *see corporate modelling*
fine-pitch technology
3D chip stacking technol., ultra-fine-pitch interconnection 113523
AMLCD, low temp. COG bonding, printed UV curable ACA 97754
area array packaging, mech. bending fatigue reliab. 113613
area array rework challenges in PCB assembly 113576
BGA board-level solder joint reliab. enhancement by package modifs. 124335
BGA fine pitch package, RF elec. meas. 78631
BGA/CSP standardization, 2000 status 113599
bump-less interconnect, next generation syst. packaging 113657
CDTs, ultra fine aperture grille, opt. transmittance 97720
ceramic BGA, 1 mm pitch, reliab., design/proc. effects 113569
ceramic column grid array modules, mfg. proc. for high vol. prod. 78646
charged molten metal droplet deposition as direct write technol. 100612
chip scale BGA packaging, high-dens., for hand-held/portable products, design for assembly 67628
compliant cantilevered spring interconnects for flip-chip packaging 113631
CSP assembly reliab., thermal cycling ramp rate effect 113681
CSP attachment reliab., package constr. 113596
CSP solder paste quality/vol., impact of print params./package pitch and I/O 115223
CSP/BGA packaging yield enhancement with solder flux/paste proc. control 124333
CSP/RF package assemblies, thermal cycling testing 113597
dry thin film photoresists, wet lamination for improved PWB yields/etch lat. 125900
dual op amp, flip-chip fine package, 8-pin counts 114633
elec. conductive adhesive, self-alignment and contact resist. 113527
FBGA package, mech. chip crack 113488
FCOB, fine-pitch solder bumped technol., PCB substr. 113612
FCOB SMT assembly proc. trade-off cost anal. 115221
field-activated etch proc. for fine pitch PWB manufacture 125901
flexible nanospring interconnects, high-perform. probing, coupled thermal-elec. model 113626
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip-chip assembly proc., high-speed transfer 115218
flip-chip interconnect struct., pillar bump 113651
fpBGA packages, fine pitch BGA, ball-shear strength 78676
gold ball bonding develop., response surface methodology optimisation 91512
gravure offset printing develop. for fine line thick film ccts. 125916
HDI, nano-spring array 78655
HDI fab., laser proc. 124331
HDI PCB, microvias reliab. assess., syst.-on-a-package 113680
Hiperprint interconnect technol. for printed subassemblies, high perform./low cost 67636
IC packaging for high perform. memory 124328
nanoparticle liq. suspens., drop-on-demand dispensing for microelectronics manufacture 100613
nanospring interconnects for high-dens. appls. 67609
noncontact adhesive dispensing in SMT assembly procs., advantages 115138
partial melted joint using off eutectic lead-free reflow solders, microstruct. and mech. props. 67643
Pb-free reflow soldering impact on electronics packages 124358
PBGA, ultra-fine-pitch encapsulation 113490
PCB, via filling, conductive adhesive materials 115162
PCB X-ray inspection, 2D with oblique view at highest magnification systs. 78690
PCBs, high dens., non-contact elec. testing 80483
polymer stencils, UV laser-cut, for fine pitch wafer bumping 100587
SMT solder paste printing, overview 69323
solder droplet printing technol., high precision, principles/appls. 69366
solder stencil cleaning guidelines 91479
surface mount conductive adhesives, contact resist. 113528
syst.-on-a-package, high-dens. PWB substr., ultra-fine photoresist image form. 124382
ultra-fine line HDI for syst.-on-a-package using photoimageable polymers, low cost 67573
UV-laser photolithography for fine line HDI PCB fab. 102817
vert. thick film resistors as load sens. 120785
wafer level packaging, WAVE wide area vert. expansion proc. implement. 113604
wafer stepper, 300 mm, for bump/wafer level scale packaging appls. 126520
wire bonding in back-end assembly proc., overview 69373
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second level reliab., comparison 113586
Au immersion/electrolytic PCB final finishes, comparison 115177
Cu line patterning, high resoln., by direct imprinting 115668
Pb-free PCB solderability preservative coatings 69318
Sn-Ag-Cu lead-free solder vol. effect on intermetallic layer form., interface microstruct. 113515
fine structure
see also hyperfine structure
solar cell-powered high-efficiency water electrolysis R&D *(Japanese)* 134397
GaN high-purity hexagonal MBE films, blue photoluminesc. fine struct. 93341
GaN strain-free homoepitaxial layers, donor-bound excitons, magneto-spectrosc./luminesc. 80720
fingerprint identification
capacitive fingerprint sens. LSI, pixel-level auto. calib. cct. 131988
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
compact portable photorefr. cryst. holographic camera 83033
curvature-based matching approach 84620
digital watermark syst. for secondary distrib., secure *(Japanese)* 73399

fingerprint identification continued
direct minutiae extraction for online fingerprint verification syst. 84569
enhancement algm. for fingerprint images using dyn. filter masks *(Chinese)* 118692
fractal method for sing. detect. in fingerprint images 73442
gray-level fingerprint image, direct minutiae extraction 95506
gray-level image, lossless compression algm. *(Chinese)* 84438
Henry fingerprint classifier with HMM/decision tree approach 129875
image class. based on fractal Brownian motion 73462
image class. by core anal. 73465
image matching, plastic distortion model 95453
image postprocessing algm. 106760
palmprint ident. via texture based dyn. selection scheme 84567
principal Gabor basis fn. for fingerprint recogn. 84582
real-time fingerprint ident., opt.-electronic syst. develop. 84157
real-time fingerprint ident. syst. with high discriminability *(Chinese)* 73438
recogn. using CNNs, image preprocessing 95523
ref. point 95511
reliable/fast fingerprint ident. for security appls. 95512
verification syst., ADSP21060 proc. 118658
wavelet features based fingerprint recogn. 84344
HgCdTe multichannel MCT/PIR-fiber detectors for fast pyrometry and multispectral sens. 109555

finite automata
see also cellular automata; finite state machines; learning automata; pushdown automata
arith. compression, tree and string langs. appl. 72919
automatic seqs., entropy anal. 106000
continuous speech recogn., k-TSS lang. models 73103
electronic systs., high-speed/low-power design, cct. optim./models 126952
Las Vegas and one-way protocols, quantum and probabilistic commun. 73747
multiobject behavior recogn. by selective attention 73529
non-periodic self-affine tilings, constr. of boundaries and colorings *(Japanese)* 113903
obj.-based video, compressed domain shape proc., finite state methods 73351
optimal prefix-free codes ending in specified pattern, uniform probab. case 106168
prisoner's dilemma, repeated, evol. convergence to equilib. 89974
protocol-oriented simul. method for computer networks *(Chinese)* 73884
zero-sum repeated game with random pay-offs, Bush-Mosteller learning 124483

finite difference methods
see also finite difference time-domain analysis
2D diffusion eqn., control param. determ. 68030
3D objs., fast RCS calc. over freq. band *(Chinese)* 131648
adaptive high-order finite-difference method for nonlin. wave problems 124717
alg. and discrete Velte decomp. 114121
approx. of Lotka-McKendrick eqn. with finite life-span 124693
asymmetrical opt. rib waveguide propag. charact. 116691
attractors for discretization of Ginzburg-Landau-BBM eqns. 79099
beam propag. algm. for opt. tapers 72425
biaxial medium, anisotropic PML ABC 72248
blood vessels, photothermal coagulation, OCT, modelling 87830
bulk micromachined electrostatic microvalve, curved-compliant struct. pneumatic tactile display 87922
BVP, param.-depend. sing. 101063
capacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
cellular nonlin. networks for minimization of functionals, appl. examples 91166
cellular nonlin. networks for minimization of functionals, theoretical aspects 91165
charact. acoustic impedance meas. in Kundt tubes, finite difference algm. 87008
charged beam in conducting pipe, parallel 3D Poisson solver 110108
CMOS piezoresistive microsensor, ball bonding, proc. monitoring 109813
combline filter, CAD and optim., FD-FD GSM algm. 102512
compact finite-difference scheme for 1D heat transport eqn. 90153
concatenated waveguide sects., refl. coeff., beam propag. algms. 104703
conducting material, skin effect and hysteresis, time domain simul. 128692
convection-diffusion two-point BVP, derivative approx. 124731
convergence in discretized minimization problems 113958
cubic splines, second-order BVP 100988
DC lin. channel MHD propulsor, coupled field anal. 123993
deep-body hyperthermia, num./expt. methods for further develop. 87813
degraded short channel LDD-nMOSFETs, 2D electrostatic model, hot carriers 70081
dielec. permitt. at microwave freqs. using eigenvalue problem 72432
dielec. waveguide, Krylov subspace algm. 94083
difference scheme for conservation laws with, discontinuous flux 124720
dipole antennas, propag. props. of pulse voltage and current, equiv. cct. method *(Chinese)* 117814
disk trapped field HTSC magnet, stress distrib., shape factor 71030
distorted laser beam wavefront correction simul. 128367
double channel lossy dielec. waveguide, opt. control 69012
double-gate field emission devices, geom. effects simul. 80582
dual-band antennas for wireless handsets, freq.-domain finite-difference anal. 83578
elec. property enhanced tomography, simul. study 98206
electronic cooling by insertion of foam materials 113531
EM simulators, CAE, PCB and EM design problems *(Italian)* 125871
Euler syst. of eqns., solns. in reproducing kernel space 79103
extreme UV lithog. mask, placement error, absorber pattern 92189
fast-pulsing PIII, target temp. simul. 81169
finite slab Gaussian light beam, finite-difference vector BPM 82730
Fisher eqn., first-order and second-order, chaos-free, finite difference schemes 114137
Fisher partial DE with nonlin. diffusion, math. anal. of nonstandard finite difference scheme 124715
fourth-order finite-difference method for sing. two-point BVP 124695
generalized finite difference method for 3D viscous flow in stenotic tubes with large wall deform. and collapse 79069
grid refinement and nonlin. SOR 101133
ground-penetrating radar data, amplit.-vs.-offset var. 88094
high order modes in resonators with cylindrical symm., algm. for determ. 125671
high-order scheme design, MPDE-aided method 114111
highly efficient ABC, BPM 94016
highly nonlin. ccts., modeling using total-var.-decreasing difference scheme 102601
hollow wedge, normally incident plane wave diffr. 117660

finite difference methods continued
human nasal tracts, sound transm. charact. determ. using computer-tomograp data *(German)* 76553
HV pn jn. termination, crit. elec. field, BEM 115837
IC interconnect simul., finite difference formulation 92453
integrated optics, time-domain wave propag. scheme 116742
knee elec. fields due to knee-thigh electrode pair 132999
Kohn Laplacian operator, noncommutative group 114142
Landau-Lifshitz eqn. as constitutive rel. in eddy currents anal. 128691
laser cutting proc., transient 3D computer simul., parallel comput. 105623
layered dielec., rapid calc. of electrostatic Green's fns. 128657
layered media, general boundary condition, MRFD method for num. soln wave propag. 124688
least-sq. image resizing using finite differences 106693
lin. differential-alg. eqns., waveform relax. for periodic responses dete 101022
local nonsimilarity solns. for mixed convection boundary layer flow of micro lar fluid 101091
locally conservative Eulerian-Lagrangian finite difference method for parab. e 114122
long antenna, photonic cryst. substr., radiation pattern 83499
long-time num. computation of wave-type solns. driven by moving soun 79075
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
mean field model, supercond. vortex dens., finite difference approx. 90064
MEI validity 105713
microwave antenna, thermal therapy appls. 87836
mixed parab.-gradient systs. 79091
MOSFET self-heating, lumped transient thermal model 115933
multilayered boards, via capacitances, finite difference and FEM/DBCI pro dures 125872
multilevel algms. for finite difference discretizations on sparse grids 68026
multiple grid approach for open channel flows with strong shocks 124725
multiresolution schemes for conservation laws 90160
NGL mask fab., chem. amplified resist 103670
noniterative lin. least-sq. error method for inverse problems 114019
nonlin. cct., distributed elements, steady state anal., finite difference meth 68535
nonlin. dispersive opt. fibers, soliton seqs. computer simul. 82074
nonlin. evol. eqns. simul. via cellular networks 107490
nonlin. opt. devices anal., fast semivectorial finite diff. beam propag. meth 71927
nonlin. thermal stress and flow modeling in various electronic packages 89
nonlin. wave eqn., finite-difference schemes with energy conservation 1141
nonlin. weakly damped Schrodinger eqn., finite difference solns. 101077
num. solns. of react.-diffusion eqns. with nonlocal boundary conditions 124
opt. fiber with lin. birefr., soliton interact., coupled nonlin. Schrodinger e 104658
opt. fibers with Kerr-like nonlin., light guiding props. 104660
opt. flow estim., errors-in-variables modeling 118368
opt. wave propag., 3D wide-angle wave eqn. 71312
optim. of delay-differential inclusion, stabil. of approx. 100936
optoelectronics, finite difference BPM advances 127751
parallel preconditioning of sparse eigensolver 68084
param.-uniform overlapping Schwarz method for react.-diffusion problems w boundary layers 68019
periodic gratings, asymmetrical EM wave scatt., rigorous num. anal. 11767
photonic IC, 3D wide-angle parab. eqn. algm. 93165
piezoelec. transducers, stored energy, effective power 104443
PIFA/helical antenna on different ground planes, simulated impeda bandwidths/gains/radiation patterns/SAR values 83520
planar periodic segmented waveguides, Bloch theorem, spatial harmonics mod ling 104711
polysilicon MEMS, actuated microcantilevers, interferometry, test stru nonidealities 123702
react. diffusion eqns. with continuous time delays 90114
resist. spot welding of metals, elastic props., US NDE 114510
reverse-biased pnipn semicond. struct., current pulses internal amplif. model 115374
Shishkin-type meshes defect correction 68085
single-mode asymmetric Y-branch, microprism, power divider 116687
slotted cylindrical ring resonators based small four-pole filter, realisation 102
software in 3D images and tomography anal. 120720
SOI waveguide, 2D grating coupler modelling, BPM 116666
stable num. differentiation 79044
Stone's strongly implicit algm., parallel versions 124697
superconvergence/nonsuperconvergence of Shortley-Weller approxs. Dirichlet problems 101108
symplectic schemes for quasilinear wave eqns. of Klein-Gordon/Sine-Gord type 114136
syst. generators shielded busbar, EM field soln. at open boundary probl 123333
tapered laser cavities, opt. props. 128291
time-domain cct. simul., sensitivity anal. 101646
topol. methods for some BVP 90121
TOUTATIS RF quadrupole code for cw high power LINAC 75951
transverse flux heating, optimal inductor design, combined evol.-simplex te 89445
ultrashort two-sect. fused vert. coupler switch, high extinction ratio 109212
uniform pointwise convergence of finite difference schemes using grid equic tribution 68064
uniformly accurate finite difference approx. of sing. perturbed react.-diffus problem using grid equidistribution 90145
unsteady viscous incompressible flows, compact fourth-order finite differe scheme 124716
unstructured finite element mesh using finite difference method 90147
upwinding in method of lines 68011
US sens., simul./visualisation with lattice gas model 88204
valley CPW in anisotropic media, quasi-static charact. 69006
waveguide coupling problems, finite difference/semi-analytic beam prop model 116709
whispering gallery modes, finite difference freq. domain anal. 70480
Bi-2223/Ag tape wound 3D HTSC coil, 2D quench propag. model 71016
CdTe strip detectors, simul. of collection props. 121489
CdTe strip detectors, simul. of collection props. 110322
Fe-Si, laminated elec. steel, field homogenization 127301
GaAs X-ray pixel detectors, simulated and expt. spectrosc. perform. 98006
GaAs monolithic optoelectronic integrated EO switch devices, carrier inject effects 82945
GaAs/GaAlAs MMI opt. power splitter, opt. commun. *(English)* 93104

e difference methods continued
D$_2$-I supersonic flow chem. laser, throat-mixing syst. 105074
Si CZ-grown single crysts., finite difference anal. of radial P dopant distrib. 103264
Si, transit. metal impurities gettering simulator 92267
Si-based integrated-optic Mach-Zehnder press. sens., perform. params. 104751

e difference time-domain analysis
1D time domain inverse scatt., optim. approach with edge-preserving regularization 128754
2.45 GHz cavity-backed slot antenna perform., FDTD anal. methods 83654
2D FDTD anal. of microstrip line and opt. waveguide 105828
2D mode solver integrated optics design methods 127720
2D PBG structs., equiv. cct. modeling and patch antenna appl. 114954
2D photonic cryst. waveguiding element, multichannel WDM 86072
2D scatt. problems, FDTD anal., wavelet-based adaptive gridding algm. 72215
3D dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 105695
3D EM anal. of package influence on IC perform. 69248
3D FDTD anal. of door seal struct. of microwave oven with inserted sheet-type lossy material *(Japanese)* 72378
3D FDTD anals., late-time instabilities suppress. 124775
3D FDTD simulator in optimisation loop for automatic design of HF struct. 69109
3D ground penetrating radar simulator, FDTD method 86194
3D phase-change opt. disk structs., FDTD anal. of light-beam scatter. 82058
3D unconditionally stable graded ADI-FDTD algm., perform. 90197
3D water-coated antenna applicator for deep-body hyperthermia 87847
3D waveguide structs., nonorthogonal higher-order wavelet-oriented FDTD tech. 128818
3D waveguide/antenna struct. on curvilinear grids, nonorthogonally-oriented higher-order FDTD 69014
3D wavelet-based multiresolution anal., microstrip low pass filter appl. 69087
3D-FDTD subgridding tech. applied to mobile phone antenna radiating structs. 105916
15 pin D connector, transm. link radiation, common current generation 80476
ABC, arbitrarily-shaped boundaries, time domain discrete Green's fn. method 117748
act. microwave antenna arrays, small sig. and large sig. models 105928
aerial multi-conductor transm. lines with branch, switching transient EM field 134289
airfoil transient scatt. anal. and RCS reduction 86196
all-opt. switch using different wavelength controlling pulse 105561
antenna filamentary current distrib. and transient radiation 94132
arbitrary dispersive media freq.-depend. FDTD method, ABC 105696
ARROW-type VCSEL modal charact. anal. 93654
artificial attenuate ABC 72412
artificially synthesized absorbing medium, refl. charact. 128736
artificially-synthesized absorbing medium 117652
axisymmetric dielec. resonators, num. study 102578
Berenger's PML for general anisotropic media 72214
bifilar and quadrifilar truncated spherical helical antennas, FDTD design 117793
biological tissues, RF interacts., FDTD simul. 87948
bistatic RCS prediction of single leaves/trees 83312
blind sig. separation, overcomplete subband representation 83985
broadband 3D FDTD charactn. of multiple flip-chip interconnects 100589
broadband antenna response anal. using hybrid freq. domain MoM/FDTD tech. 83625
buried objs. acoustic detect. in 3-D fluid saturated porous media 88218
cardiac pacemaker, EMI shielding material effectiveness eval. *(Japanese)* 133055
cavity resonator, FDTD tech., Pade approx. 72408
cavity-backed slot antennas, coupling modeling/reduction 105889
CCD cell struct., opto-electronic simul., FDTD method 109705
cellular phone, human head, SAR 85615
cellular telephones, radiation efficiency, near field control around human model 74477
coaxial probe, complex permitt. meas. region 132132
collimated wavepackets, long range tracking, hybrid ray-FDTD moving coord. frame approach 72250
compact handset antenna, design 83719
compact mode-size lensing converters, integrated opt. waveguide/fibre coupling, FDTD simul. 131554
complex permitt. meas., rect. waveguide, FDTD method 97784
computational EM modelling, stat. approach 83079
concentric conducting spherical cavity, internal EM fields 72429
conductor corner, coarseness error and wall proc., FDTD method *(Japanese)* 105825
conductor corner, wall proc., FDTD method, cavity resonator *(Japanese)* 105826
conformal antenna array modeling using locally nonorthogonal FDTD 117827
conformal patch antennas modelling using FDTD method 105899
CPW to rect. waveguide transit. anal. 72423
cross-mesh strip antenna on finite-size dielec. substr., anal. 72490
curved mirror deep-etched two-groove DBR lasers 71792
cylindrical FDTD appls., nonuniform orthogonal mesh generation algm., microstrip filters 90198
diagonal metal edges and their microwave appls., enhanced FDTD eqns. 69026
dielec. materials charactn., microstrip ring resonator meas. and FDTD anal. 70373
dielec. resonator, FDTD method and Pade interpolation tech. 91213
dielec. resonator antenna, conformal FDTD anal. 117750
dielec. resonator antenna problems with different feeding sigs. 128844
dielec. struct., optimal shape design, topol. optim. 104249
dispersive media with known params., wave propag., FDTD anal. 83201
dispersive medium, EM waves propag., anisotropic PML ABC 83202
dispersive medium, FDTD method *(Chinese)* 105694
double-exponential pulse propag. through Debye medium 72265
dual band multi-layered microstrip patch antenna, FDTD modelling 83609
dual concentric conductor microwave applicators, hyperthermia at 433 MHz 76615
dual plane comb-line filter, conductor-backed CPW *(Japanese)* 91207
dual-band phones, human head, power absorpt. and temp. elevations 88009
dual-freq. planar printed antenna, microstrip fed, design and anal. 94150
dual-mode HE_{11} dielec. resonator microwave filters CAD 68901
E-shaped planar inverted-F antenna, low absorpt., triple-band cellular phones 72479
elastic wave fields anal. in cylindrical coord. *(English)* 101143
elec. field/mag. field duality in nonstandard FDTD method *(Japanese)* 93952
electrodynamics, cell method, computational aspects 72161

finite difference time-domain analysis continued
EM band-gap struct., class./charactn./appls. 83222
EM coupled microstrip slot antenna, design by FDTD equiv. cct. method 72498
EM field, 2D FDTD anal., wave eqn. 90199
EM field modeling in human body at low freqs., error eval. 98765
EM field simul., conformal PML-FDTD schemes, dyn. stabil. study 83084
EM modeling and visualization tools using FDTD tech. 93991
EM parallel FDTD algm. using MPI library 72168
EM scatt., conformal Thompson-FDTD method using MEI-ABC 83203
EM scatt., hybrid coord. FDTD scheme 105703
EM scatt. from anisotropic targets 72284
EM time domain methods, scale adaptive time steps in modified FDTD method 93959
EM wave simulator, OO design 94026
EM wave/inhomogenous anisotropic media interact. 83197
EMC, space discretising time domain methods for num. modelling of EM coupling 83386
EMC coupling problems, transients anal., FDTD, Method of Moments 72389
EMI signatures detect. of mines, timers, and fuses 72347
etched-ground microstrip transm. line of ladder shape, anal. 69054
ferris wheel mice exposure syst., RF exposure study FDTD anal. 133127
ferrite filled waveguide resonator, gyromagnetic medium, FDTD anal. 92796
ferrite resonator, elec. excitation and bianisotropic particle realisation 70555
ferrites for microwave absorber appls. 94028
field strength in elec. large building, pseudo-spectral time-domain algm. *(Chinese)* 72307
finite microstrip patch antenna, broadband anal. using FDTD 83607
finite-sized lin. phased stacked microstrip antenna arrays, FDTD anal. 83698
fourth-order FDTD scheme for 3D EM field simul. 105671
georadar, slot and dipole antennas 86170
ground penetrating radar, buried target detect., FDTD simul. 86167
ground penetrating radar, FDTD 88109
ground penetrating radar, hybrid FDTD-MoMTD simul. 86168
ground penetrating radar, pipes, dispersive soils, 3D calc. 122582
ground penetrating radar, soil response, 2D FDTD 88110
ground-penetrating radar, conical spiral antenna anal. 75182
ground-penetrating radar antenna feed models for response computation *(Korean)* 120451
grounding syst. dyn. behavior anal. using FDTD method 112153
grounding systs., transient behavior, FDTD method 112141
GTEM cell, TEM-mode E-field uniformity 117720
half vol. dielec. resonator antenna, FDTD simul. 72608
hand-held forward-looking focused array mine detect. 77084
handheld telephone complex antenna, modelling close to human tissue 117812
head exposure to cellular phone helical antennas, FDTD method 133074
head model, clinical ultra high field MRI 87596
head MRI, UHF interacts. calc. 133077
high order surface impedance boundary conditions 124774
high power microwave MESFET, temp.-depend. model, thermal FDTD method 80309
high speed ultrahigh data capacity VCSEL array opt. disk technol. *(Japanese)* 116577
high-Q coaxial resonators, band-selective extraction of reson. freqs. 94089
high-speed digital ICs, sig. integrity, MOSFET modeling, LE-FDTD method 90835
HIRF penetration through apertures, FDTD vs. meas. 105791
holey opt. fibers, splice losses, FDTD simul. 93089
homog. phantom exposed to cordless phones radiation, SAR 87937
HTSC planar microstrip ccts. on high-permitt. substrs., FDTD anal. 69086
human body-mobile phone interact., computational EM 133079
human body-power freq. field interacts., modeling accuracy 133080
human head SAR reduction, directional antennas for cellular phones 87938
hybrid FDTD wavelet-Galerkin representation of field sing. near conductive wedges 105831
hyperthermia, quasistatic zooming of FDTD $\vec{E}$-field computations 76639
IC packages, simultaneous switching noise, computer simul. 113670
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
immunity testing cell using rect. resonator with conducting channel plate and capacitive gap *(Japanese)* 105800
inhomog. guides, evanescent modes, wide-band S-param. extraction, FD-TD simul. 94106
integrated mobile phone antennas, design 83598
integrated multibeam dual-polarised microstrip planar antenna array 105948
integrated opt. device modelling by time-domain BPM 71324
interconnects, EM anal., FDTD method 92457
irises/slots in microwave structs., FDTD modeling 91208
Josephson jn. logic device, EM coupling, FDTD anal. 70892
land mine detect., acoustic method, soil poroelastic model 77005
land mine detect., elastic wave interact., 3D FDTD model 76945
land mine imaging & detect., inversion method, 3D grid 77006
landmine detect., rough surface stat. effect, FDTD tech. 73437
large finite sized phased array antennas, scatt. prediction using FDTD 83696
LCD microdisplay anal., 2D opt. simul., FDTD method 97672
leaky coaxial cable, adjustable coupling loss, mobile comms. in complex environs. 108507
lightning-interact. problems, FDTD anal., ABC 105796
lin. dispersive medium, time-freq. interpret. of transient wave propag. 83212
liq.-cryst. diffr. gratings, asymmetric transmissive behavior, beam-steering efficiency 116830
lossy nonuniform multiconductor transm. lines with complex nonlin. loads, FDTD anal. 83465
magneto-opt. disk, light beam diffr., FDTD anal. 116843
matrix pencil tech., computational efficiency 68095
Maxwell's eqns., pseudospectral time-domain algm. for cylindrical coord. 117650
Maxwell eqns., B-spline based approach 79005
Maxwell eqns., FDTD method 94082
Maxwell eqns., FDTD method, B-spline 72222
MEMS tunable capacitor modelling, MRTD and FDTD techs. 104188
MESFET, opt. control, energy-depend. phys. model 92406
metallic photonic bandgap propag. mode charactn. 72439
MIC, microstrip element, FDTD simul. tool 91379
MIC bandpass filter with microstrip and two ring dielec. resonators, FDTD anal. 80344
microstrip antenna, full-wave anal. *(Chinese)* 105867
microstrip antennas, elec. cct. model and mutual coupling study using FDTD method 128860
microstrip ccts. FDTD anal., resistive voltage source perform. 114952
microstrip dual-mode filter, full-wave design, FDTD method 69037
microstrip line discontinuity, radiation mode expansion, FDTD anal. 80168

finite difference time-domain analysis continued
microstrip line with YIG-GGG thin film substr., FDTD anal. of transm. characts. 69000
microstrip patch antenna, C-shaped slot 72497
microstrip patch antenna, superstrate and air gap, FDTD anal. *(Chinese)* 128832
microstrip ring resonator, FDTD anal. 102570
microstrip small antennas, simul. 83565
microwave and MM-wave ccts., FDTD simul. 80238
microwave antenna, thermal therapy appls. 87836
microwave capacitors, reson. props., num. modeling/expt. investig. 69105
microwave cct. simul., stabil. characts. of ABC 114935
microwave coagulation therapy, coaxial-dipole antenna heating 87812
microwave device optimal design, use of FDTD method and design sensit. anal. 125657
microwave dielec. resonator antenna anal. and design 72574
microwave FET fingers, full wave anal., semicond. phys. models 80310
microwave filter, sandwiched conductor dielec. resonator 102566
microwave filters, low-order AR models for FDTD anal. 68893
microwave heating of buried targets by non-planar EM waves 100325
microwave networks, nonuniform mesh network in FDTD computation, anal. *(Chinese)* 102600
microwave oven heated material, temp. distrib. anal. *(Japanese)* 100329
microwave planar device, time domain macromodel 91219
MIMIC, 3D EM model, FDTD method *(French)* 115024
miniature dielec.-loaded bifilar antennas for mobile commun., num. simul. packages 83599
miniaturized antennas for microwave ablation of arrhythmia causing cardiac tissues 76616
missile head with absorbing coating, RCS, FDTD method *(Chinese)* 75112
MM-wave receivers modelling using extended FDTD method 83612
MMIC, 3D design, FDTD model 102666
mobile handset antenna, exposed human body, temp. distrib. calc. *(Chinese)* 111189
mobile phone user, num. dosimetry for head/hand 133126
mobile phones peak SAR assess., head tissue complexity role 85613
multi-dimens. liq. cryst. optics, num. modelling, FDTD method 82228
multiconductor interconnects, freq.-depend. losses, transm.-line models 126969
multilayer isotropic dielec. media, PML schemes, matching conditions 117658
multilayer Lange coupler, FDTD simul. 80200
multiple Lorentzian media, pulse propag., auxiliary DE method *(Chinese)* 116692
multiport waveguide struct. anal., higher-order FDTD method, non-orthogonal curvilinear grids 105838
multiresolution near-field to near-field transform for multi-region FDTD schemes 93960
multiresolution time-domain FDTD/Haar num. stable interface, microwave structs. appl. 94101
multithread FDTD multiprocessor PC for anal. of microwave engng. problems 69110
near field optics, conf., Enschede, Netherlands (Aug. 2000) 78466
near-field opt. recording, fiber probe EM propag., 3D FDTD method *(Chinese)* 71256
near-field opt. recording probe head, EM field distrib., FDTD anal. 82057
near-field sources, modeling in FDTD method 117613
NLC stack layered cells, elec. controlled MM-wave transm. 80401
non-orthogonal FDTD algm., time step determ. 68096
nonstandard FDTD method, 3D, num. dispersion/stabil. condition *(Japanese)* 68098
nonstandard method for 3D acoustic anal., num. dispersion/stabil. *(Japanese)* 88202
nonuniform/conformal FDTD meshes, supraconvergence effects, microwave cct. simul. 91221
open-end microstrip transm. line fabricated on nonreciprocal ferrite substr. 125648
open-ended coaxial-line probe, complex permitt. meas., model 86937
opt. disk, light scatt., $(FD)^2TD$ anal. *(Japanese)* 71230
opt. waveguide jns., full-vector anal., wavelet formulation finite-difference method 93129
opt. waveguiding problems, BPM/FDTD methods 127736
patch probe-fed dual-polarized circ. stacked antenna, design 105881
pattern writing by large-scale plasma source ion implant. syst., planar ICP source 115497
PC transm. lines, excited near fields mysterious behavior, nonphysical soln. 80164
PCB radiation suppression using mag. absorber *(Japanese)* 125869
PCBs with parallel trace config., FDTD predict. of radiated emissions 69295
PCS, handheld transceiver unit, human head model/EM interact. anal. 83342
perfectly matched layer boundary condition, scalar FDTD method 71309
periodic boundary guiding struct., modified Yee's cell for FDTD modeling 94107
pers. commun., handheld transceiver unit, human head/EM interact. anal. 83343
pers. satellite commun. antenna, SAR and polaris. purity 128833
pers. satellite commun. antennas, polaris. purity/SAR investigs. using hybrid method 83584
phase shift mask, EM field simulator 115749
phase-change opt. disk struct., 3D FDTD anal. of light scatt. 127582
photonic bandgap microstrip line characts., cct. integrat. *(Chinese)* 125833
photonic bandgap opt. waveguide filter design 116899
photonic cryst. fibers, guided modes anal. using FDTD method 128828
photonic cryst. struct., band gap, FDTD method 82139
photonic cryst. struct., modelling 127750
photonic-bandgap waveguide devices, FDTD anal. using eigenfields 116750
planar ALTSA antenna, 3D FDTD simul. 117803
planar interconnect struct., FDTD-SPICE full-wave anal. 114570
planar inverted-F antenna, FDTD and TLM anal. using irregularly graded space connection 72595
planar microwave photonic bandgap struct., transm. line-periodic cct. representation 102742
planar photonic cryst., waveguide bends, NIR (non)resonant transm. spectra 127738
planar printed microstrip ccts., design and anal. using FDTD 91193
plastic landmine detect., GPR imaging, permitt. contrast, curve evol. 77099
polyimide layer embedded microstrip lines for 3D MMICs/MIMICs on Si, coupling reduct. 102683
polymer slab waveguide 2D photonic bandgap struct. fab. 71320
portable radio, near fields in front of and on far side of head model 98767
printed dipole antenna, balun, FDTD anal. 72500
printed monopole antenna, FDTD anal. 83570
probe-fed dual-polarized circ. stacked patch antenna, design/anal. 72592
pulse borehole radar, 3D simul., hybrid FDTD/PSTD method 86165

finite difference time-domain analysis continued
quadrifilar helical antenna printed on dielec. prism, anal. 72569
rect. patch antenna on uniaxial anisotropic dielec. substr. 128845
reduced order models 124776
regional hyperthermia applicator design using FDTD modelling 98624
regional hyperthermia treatment planning syst. 76613
reson. two-level medium, ultrashort light pulses, FDTD anal. 93718
right-angle waveguide bends, high index contrast materials, FDTD me 71307
rough surfaces EM scatt., FDTD anal. 72289
sandwiched conductor DR based microwave filters, improved spurious per 69034
SAR, man model, parametric depend. on permitt. values 122428
SAR prediction, Sprague-Dawley rat, rel. to permitt. 133063
SAR reduced pers. commun. handset, FDTD investigs. 83706
semicond. laser, 2D photonic cryst. mirror, Al_2O_3 mask 128306
shorted microstrip patch antennas, locally conformal FDTD anal. 105913
simul. of transm. waves through multilayered thin conducting sheets 1057
small antenna geometries, FDTD simul. using non-uniform mesh algm. 83
small aperture RLSA, inner fields visualization using FDTD 83724
soliton propag. in opt. fiber, FDTD simul. 82084
spatial power combining amp. array, FDTD anal. 102522
spatial transfer fn. of wideband wireless commun. syst., fading anal. using FI method 85722
Spice-like analog simulator extension with time-domain full-wave field so 90632
sq. microstrip fractal patch antenna, multi-band commun., FDTD anal. 836
stacked microstrip antenna with high gain 94167
staircase-free formulation for general materials in complex geometries 830
strip dipole antenna, dielec. material cover, FDTD anal. 72555
super-resoln. near-field struct. disk, near-field scatt. light 92973
symm. obj. detect., multipolarimetric reverse-time migration imaging 7707
symplectic FDTD method for solving Maxwell eqns. 128643
tapered holey fibers, guided wave spot-size, num.-aperture conversion 1165
tapered near-field fibre probes, FDTD simul. 82102
TDMA cellular telephone, EMI with hearing aid 94055
telecomm. cable, overhead ground wire effect on lightning-induced volta 74503
TEM taper cell, transm. charact. *(Chinese)* 72256
thin conductive enclosures, shielding effectiveness, ADI-FDTD simul. met 78611
thin-wire antenna, ground penetrating radar, FDTD/MoMTD anal. 83504
time-domain discrete Green's fn. method, FDTD grid boundary characterisa 93996
TLM, FDTD and Haar wavelet MRTD algms. for EM simul. 93956
transient eddy current problems, FDTD scheme 128679
transm. line study, inhomog. multilayers in external EM field *(French)* 83
transm. link radiation, localized defect contrib. 72372
transmitting-receiving integrated act. antennas, FDTD anal. 72492
triple-band dipole antenna with multiple parasitic elements 117822
two-layered patch and loop antenna with dual freq. for indoor microcellular s 72579
U-shaped planar microstrip antenna for dual-freq. mobile telephone comm 83644
UHF band pass filter using miniaturized sq. stepped-impedance resona *(Korean)* 114864
UHF bodyworn antenna systs., num. anal. 72460
UHF compact integrated diversity antenna for wireless commun. 83642
UHF high-directivity patch antenna with photonic bandgap struct. 105871
UHF indoor propag., simul. using num. tech. 128763
UHF indoor propag., wall inner struct. effects 72319
ultrawide band TEM antennas, radiation procs., num. simul. *(Chinese)* 1058
unconditionally stable alternating direction implicit MRTD method 101144
Univ. of Bradford mobile telephone dosimetry studies 133075
V-shaped narrow slots, coupling and radiation characts. using FDTD meth 128836
VCSEL with noncylindrical geom., self-consistent model 71838
Vivaldi dual-polar antennas for phased arrays with wide-angle scanning 836
VSTL FDTD-based power syst. surge anal. program *(Japanese)* 111676
waveguide, Gaussian pulse spectrum, FDTD simul. 72413
waveguide discontinuities, modal multi-resoln. time-domain tech. 102509
waveguide discontinuities, multimode anal. using generalised scatt. matrix a power waves 83478
waveguide discontinuity, excitation source, FDTD anal. *(Chinese)* 94102
wavelet-based multigrid method 101139
whip type low SAR mobile handset antenna 83603
whispering gallery mode microgear cavity, FDTD simul. 117324
wideband magic-T design in MIC technol. using FDTD method *(Chine* 125800
wire antennas embedded in scatt. dielec. medium, hybrid time-domain an method 83626
wireless terminals, antenna design for selection diversity 120054
$3Al_2O_3$-$2SiO_2$ ceramic material, microwave heating, FDTD modelling 11314
AlGaN/GaN QW, intersubband absorpt., ultrashort pulse wavelength conversio FDTD simul. 116700
GaAs lift-off thin film, time-domain pulse meas. tech. 97793
GaAs/AlGaAs QW IR photodetectors, microstrip antenna coupling 86546
InGaAs/InGaAsP microlasers, equilateral triangle resonator, rate eqn. an 117260
$LiNbO_3$ EO modulator, time domain opt. response, FDTD 93164
Nb microbolometer-microstrip dipole antenna as IR detector, FDTD vs. ex 97230
Si-based race track resonators, design using FDTD method 71349
SiO_2-based waveguide T-splitter, micron-size bending rads. 127759
TbFe substr. high-data-dens. near-field opt. recording, EM propag., num. sim 92977

finite dimensional systems *see multidimensional systems*

finite element analysis
see also finite volume methods; mesh generation
1-3 piezocomposite transducer material consts., thermal behaviour 104436
2D guided wave examples of envelope-finite element tech. 94099
2D magnetostatics, hybrid finite element/integral methods, discretization schem 128669
2D r-adaptive FEM using error indicators 68067
2D scatterers, microwave imaging by inverting scatt. near-field meas. 73306
3-field formulation with bubble stabilization, error estim. 79150
3-phase squirrel cage motor, bar/end-ring connector breakage faults diagnos 123420
3D alumina photonic bandgap struct., simul./fab./charactn. 125646

e element analysis continued
3D anisotropic opt. waveguide, approx. scalar finite-element BPM 71327
3D cavity-backed aperture, EM wave scatt., FEM iter. method 72221
3D conformal PML, FEM realization 105719
3D eddy current FE anal. of electromechanical devices 88722
3D eddy current problems with integral formulations, fast algm. 128678
3D electrode/electrolyte interface in SOFC, FEM 112845
3D exterior Helmholtz problem, coupled natural boundary-FEM *(Chinese)* 124761
3D FEM interface coupled method and engng. appl. 114160
3D finite element EM anal., basis fns. *(Japanese)* 117606
3D finite element formulation for frictional behavior of rubber on ice and concrete surfaces 79123
3D inhomog. railgun soln. 72210
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
3D laminated plate finite element with high-order zig-zag sublaminate approxs. 79147
3D matched filter for detect. of land mines 73125
3D MEMS, surface tension self-assembly, precision & tolerance 70365
3D mesh generation for arbitrary regions with cracks 68080
3D nonlin. transient eddy current problems, multistep algm. 128683
3D US imaging, 2D transducer array, finite element simul. 122737
4-phase 8/6 SRM anal., nonlin. reluctance, SPICE model *(Japanese)* 112485
5-phase hybrid stepping motor anal., saturation effect 134088
115/22 kV HV power transformer, transient behaviour, 3D FEM modeling 112596
115/22 kV transformer, transient behaviour, 3D FEM modeling 77938
145 kV CT elec. field distrib., leader shields effects 112612
400 kV substation stranded conductor buses, short-cct. tests 112717
500 MVA hydrogenerator reactance calc. using FEA 123237
a posteriori, pointwise, residual-based estim. of the finite element error 114000
a posteriori error control, finite element discretisations of incompressible stationary flow 114001
AC machines, VPI stator coils, unimpregnated ground insulation, surge testing 133941
act. composites, microfab. by coextrusion hollow fibres 101526
act. mag. bearings, control design/simul./expts. 116500
adaptive FEA for EM with vector tetrahedra 128645
adaptive h-version finite element algm. for electrostatic solver 128656
air-cored supercond. sync. generator, design param. *(Korean)* 123372
air-to-surface missile target, damage model, FEL based *(Chinese)* 99175
airborne slotted array antenna, planar magic tee jn., CAD 83666
aircraft struct. anal., OO FE modeling ES *(Chinese)* 111308
alg. and discrete Velte decomp. 114121
all-fiber antenna, piezoelec. polymer coated circ. core D-fiber, FEA 96755
alternating-direction charact. FEM, 3D semicond. problem with heat cond. *(Chinese)* 79115
aluminium prod., electrolysis cell optimisation 113166
ammonia compressor, IM, stray load losses, stator/rotor slot ripple 134021
anatomically accurate finite element grids from med. images 98156
anisotropic magnetostatic problems, coupled magnetoelastic finite element formulation 83145
anisotropic superconds., finite element calcs. of local current distrib. 70640
anisotropic/magnetooptic waveguides, FEM full vectorial beam propag. method 116712
aortic valve-sparing, finite-element anal., graft shape/stiffness influence 76597
arbitrary Lagrangian Eulerian anal. of bidirectional micro-pump using spectral elements 79144
area array packaging, mech. bending fatigue reliab. 113613
area-array packages, decomposed anal. procedure appls. 78673
asymptotically exact a posteriori estimators for pointwise gradient error, smooth problem and globally quasi-uniform meshes 79149
at. force microscope, vibrs., dyn. modelling 127267
automobile rear wiper, PM DC motor noise reduction 124018
axial airgap disc induction machines modelling 88737
axial-flux circumferential current PM AC machine studies 133938
axisymmetric point/plane electrodes, transformer oil, space charge, Kerr EO reconstr. 104260
axo-somatic boutons, motoneuron cell membrane, computer-assisted quantification 76400
ball bearings in HDD, defect freqs., dyn. reson. interacts. 99698
battlefield biomedical imaging, vascular struct. anal. 76338
BAW thin-film composite resonator, finite element simul. 116209
beam, smart composite, self-adapting vibr. control syst. 127264
BEGA, biaxial excitation generator for automobiles 78306
bent-beam electrothermal actuators, single beam and cascaded devices 81576
BGA, ellipt./round solder pads, thermal stress/strain behavior 78672
BGA lead-free solder joints, thermal fatigue life prediction by FEA 67642
BGA package, solder ball shear testing 113665
BGA packaging, mixed-sig. and digital ICs, radiative coupling 113519
BGA reliab., underfill material 113474
BGA solder joint reliab., FEA assess. methodology, prediction accuracy 113580
BGA/CSP connection durability during thermal shock, finite element modeling 100598
biaxial excitation generator for automobiles, salient pole, 3-phase 113121
biaxial medium, anisotropic PML ABC 72248
biomechanical model for soft tissue simul. in craniofacial surgery 87806
birefr. dielec. grating, press. and temp. sens. 75600
bistable micro-opt. switch, modelling, optimisation *(English)* 71398
bistatic scatt. from fractal rough surface, Monte Carlo and FEM 83193
BLDCM, control loop, time stepping finite element model 134056
BLDCM, inner rotor, ferrite bonded magnet, magnetis. 134060
BLDCM, single-phase, unequal air gap topol. 134062
BLDCM, torque optim., response surface methodology 134061
BLDCM design optim., Taguchi's methodology and FEM 134057
BLDCM radial force dens., PM overhang effect 112544
blood in cylindrical models, acoustic streaming, finite element simul. 110738
brain shift, 3D intraoperative MRI, image registration using finite-element biomechanical model 87576
broadband transducer array design, virtual prototyping, 3D model 111543
brushless PM motor, design optim., min. fn. calls 124293
buildup struct. CTE mismatch, reliab., thermal cycling, FEA 113679
buried GITL and XLPE-cable, thermal calcs. 112096
busbar elec. modelling, interconnection inductance, CAD 77131
BWR NPP struct. integrity/reliab. assess. *(Chinese)* 77693
BWRs, weld-induced residual stresses, num. modelling 77704
CAD of high-perform. slotted waveguide array antenna for maritime patrol radar appls. 86198
cage IM, inverter-fed, rotor bar loss distrib., torque anal. *(Korean)* 77883
cage-IM, no-load losses, meas. methods 112525

finite element analysis continued
cage-IM, no-load losses meas. methods 77882
cantilever type small load cell with circ. pan, 3D FEA 120715
capacitance sens. for micro imaging in elec. tomography systs., particle detect. appl. 120738
capacitance tomography sens., axial charact. simul., FEA *(Chinese)* 109526
capacitive micromachined SAW and Lamb wave transducers, FEM and normal mode modeling 92718
capacitor micromachined US transducers, finite element model 111490
cardiac elec. field simul., noninvasive diagnosis aid 98236
cavity backed antenna in conducting cone, radiation charact. 72454
cavity backed rect. patch antennas with inhomogen. chiral substrs., anal. via FEM-BEM tech. 128843
CBGA to FR4 PCB with no underfill thermal mismatch study 113732
cellular nonlin. networks for minimization of functionals, appl. examples 91166
cellular nonlin. networks for minimization of functionals, theoretical aspects 91165
cementless hip prosthesis, optim., evol. programs 122315
ceramic materials with metallized surface, laser cutting 128604
Chapelcross NPP, stress anal. of repair weld to boiler 123165
CMOS VLSI capacitance sens., particle detect. 109492
CNS stimulation microelectrodes, current dens. & elec. field, FEM model 87885
compact opt. bends, design and optim. 104741
composite BAW resonator, 3D FEM modeling 104458
composite cylindrical shell with sq. cutout, fatigue loading considerations 124738
composite plate impact-induced damage detect. by neural nets 109429
computational design/optim. advances, MEMS appl. 116071
computational modelling of viscoplastic fluids based on stabilised FEM 79129
computer assisted mech. and engng. sci., conf., Sintra, Portugal (Sept. 1999) 90186
concrete damage model for dyn. FEM appls. 124739
condenser microphone, deep cavity-shaped diaphragm 86349
condenser-run single-phase IM, finite element anal. *(Korean)* 77870
conducting material defect profile ident., HTS-SQUID gradiometer use 101573
conformal approx. of variational problems subj. to convexity constraint, non-convergence result 114173
conformal imaging with non-contacting microwave antenna array 98384
conformal mappings, finite element approxs. 101134
conical breast phantom, 3D time-resolved opt. tomography 98370
consequent pole PM machine with field weakening capability 123285
contact solvers based on domain decomp. techs. 101132
controlled-PM LSM Maglev carrier, force charact. improvement design *(Korean)* 123998
convergence of alg. multigrid based on smoothed aggregation 90183
convergence of dual-primal substructuring method 90182
convergence purity magnet magnetisation anlysis studies *(Korean)* 70551
cortical imaging, finite-element-based cortex pot. estim. 76237
coupling eigenvalue problem on overlapping domains 79151
coupling static converter with control loop/nonlin. EM devices 125220
cpd. ceramic pass. components strength investigs. 69281
CPW electrode design optim., conformal mapping 102508
crankshaft starter-alternator, transverse flux reluctance machine 89395
crit. displacement method with damage model for structural instabil. anal. 79132
cross-coupled dielec.-loaded waveguide filters design 80174
Crouzeix-Raviart type finite elements on anisotropic meshes 124751
CRT, thermionic cathode, 3D EM FEM simul. 102899
cryocooler-cooled HTS coils, stabil. criterion 71019
cryogel elasticity props. for calib. IVUS elasticity images 110819
CSP, solder joint reliab. 78638
CSP interconnects, cyclic bending, fatigue 113550
CSP life-time prediction, simul.-based optim. method, solder param. sensitivity 113496
CSP reliab., elastomer thermo-mech. behavior effects 124384
CSP/area array package board level reliab. 113602
curl-curl matrix prop. in finite element anal. with edge elements 124741
D2BLP double dens. bottom leaded SDRAM stack package, develop. 113593
damage detect. meas. point selection, mutual inform. concept 86989
damaged IM perform. prediction, FEM appl. 133999
data struct. for geometric/topol. aspects of finite element algms. 68066
DC lin. channel MHD propulsor, coupled field anal. 123993
DC-DC buck converter 4H-SiC/Si P-i-N diodes switching performs. 134170
deep-body hyperthermia, num./expt. methods for further develop. 87813
deeply etched semicond. bent waveguides, beam propag. modeling 82160
defect correction and domain decomp. for second-order BVP 68065
deflated iter. solver for magnetostatic FEM with large permeab. differences 93968
deformable modeling for characterizing biomedical shape changes 94977
deformable obj. manipulation, force/vision feedback fusion 94491
design optim. of structural steelwork using GA, FEM and syst. of design rules 79124
deterioration anal. of materials and finite elements 79134
diamond tip wear mechanism, Si AFM-based micro/nano-machining 127118
die press model electromagnet, optimisation, distributed evol. strategy 105685
dielec. loaded slot antenna, 3D anal., polariz. current model method appl. 72609
dielec. mixtures, freq. depend. dielec. props., FEM 70378
dielec. plate, complex permitt. meas., finite element anal., inverse problem 117738
differential eigenvalue problems with mixed classical and (semi-)periodic boundary conditions 68082
differential phase shift high power circulators 81913
differential press. sens., ref. channel, press. shock wave 97572
digital copier, electrophotographic proc., num. anal. 134697
digital quartz resonator force sens., off-centre load-insensitive 131891
digital video read/write head, eddy currents 116311
high av. power diode laser arrays with water cooler, thermal anal. *(Chinese)* 117253
direct solver for class of mixed finite element problems 79068
direct-drive robotic joint switched reluctance motor drive 100261
direct-drive slotless type PMSM design *(Korean)* 77854
discontinuous enrichment method 124750
discrete FEA method for free boundary diffusion problem with absorpt. 114156
discrete Hodge-operators, alg. perspective 67997
disk induction heating, pressing on shaft, optimum params. 134642
disks, piezoceramic, reson. freq. spectra with convergence tests using FEM 88209
dispersion-compensating fiber, WDM systs. LP_{01} mode, propag. soln., FEA 127616
distrib. transformers, internal winding faults, FEA 77932
divergence-free finite elements, multilevel bases 124766

finite element analysis continued
domain decomp. methods for mortar finite element discretizations of plate problems 124758
doubly salient PM motor, design anal. 123528
DRAM struct., stacked, parasitic capacitance from multilevel conductors, num. method 114742
drop-testing instrum., electronic boards mounted with CSPs 113466
dry sliding wear in metals, finite-element modeling 79130
dual threshold shocks optim., RV/LV electrodes, defibrillation simul. 87886
dual-dual mixed formulation for nonlin. exterior transm. problems 114185
dual-mode whispering gallery sapphire resonator, high-Q freq. stable realisation 80218
DWDM systs., large effective-area nonzero-dispersion fiber design 71300
dyn. electromechanical device optimisation approach 123313
dyn. frictional contact problems using variational inequalities 114178
ECT, DC current therapy for tumor compression, EM force distrib. 132998
eddy current brake design, 2-D Galerkin-FEM, Upwind-FEM 113100
eddy current flaw inspection, probe impedance change, 3D FEM model 101631
eddy current rail brake syst., lin. Halbach array 134525
eddy currents, boundary integral method coupled to FEM for E and H fields 128682
eddy-current brake anal., FEM calcs. 123297
eddy-current brake anal., FEM calcs., appl. 123298
eddy-current brakes, dyn. model, FEM 123284
edge elements constr./ordering for parallel computation 128689
edge elements on anisotropic meshes and approx. of Maxwell eqns. 114168
edge-based finite element techs. for nonlin. solid mech. 114175
education, magnetostatic anal. of BLDCM using 2D PDE solver 113287
eigenfrequencies of membranes of arbitrary boundary and with varying surface mass dens. 124762
elec. anisotropic semiconds., van der Pauw meas., finite-element anal. 86898
elec. capacitance tomography, image reconstruction 109929
elec. impedance proc. tomography, internal struct./electrodes model 109924
elec. impedance tomography image reconstr., FEM, error propag. simul 109926
elec. impedance tomography syst., electrode struct. optimum design 110616
elec. machine automated design platform develop. 123321
elec. machine robust optim., stochastic FEM 77830
elec. machine robust optimisation using stochastic FEM 112460
elec. machine winding conductors, 3-D FEM-based eddy current calc. 133930
elec. machines, FEA in magnetism 99608
elec. machines/EM teaching, OO software 123308
electro-thermal-compliant microactuator, thermal model 116068
electrohydraulic syst., chopper-driven mag. actuator model 116499
electromagnet, finite mag. cct., plane quasi-steady EM fields, FEM 72195
electron beam projection lithog., stencil mask fab. 126539
electron beam projection lithog. mask, equiv. model 126538
electronic device packaging for automotive appls. using transfer moulding proc. 113699
electronic package, dissimilar material jn., sensitivity derivatives 113646
electronic packages, 2D surface curvature meas. during thermal cycling 113544
electronic packaging solder joint reliab., relative damage stress concept 78678
electronic product stress anal., nested FEM methodology 78720
electroporation threshold determ. in vivo, rabbit liver model 98211
electropotential problems, high-order coupled FEM/BEM procedure, computational perform. 132566
electrostatic-induction spray charging, space-charge suppression FEA 72191
electrostatics, Schwarz-type finite element solver 128659
ELF mag. field shields, anal. methods eval. 128801
ELF sources enclosed by nonlin. ferromag. pipe, EM fields 72171
ellipt. eqn. with heterog. coeffs., finite vol. scheme 124730
ellipt. PDEs, adaptive finite element soln., parallel domain decomp. method 90166
ellipt. PDEs, iter. methods, stopping criteria 124706
EM acoustic transducer, FEA 133377
EM anal., fast time-domain finite element-boundary integral method 128742
EM devices, GA optim., universal param. config. 128697
EM field, dispersive medium, time domain finite element model 72154
EM field, FEM gradient-based optim. algm. 72157
EM field anal., large sparse symmetric lin. systs. 128688
EM field anal., reflective and rot. symm. model, simplification method 128649
EM field formulation, math. models/num. methods 128653
EM fields computation, curvilinear tetrahedral elements innovative class 72152
EM fields Poisson integrals, Laplacian 3D FEA solns. 128640
EM flowmeter excitation coil CAD, 3D hybrid num. model 120729
EM freq. domain radiation problems, multipoint Galerkin asymptotic waveform eval. for model order reduction 128746
EM inductance tomography, image reconstruction method 118267
EM levitation coupled re-entrant cavity syst. 93989
EM problems soln. using FEM *(Spanish)* 117610
EM quantities, design sensitivities using high-order tetrahedral vector elements 128638
EM scatt., ABC/curvilinear perfectly matched layer 128735
EM scatt. by transversely anisotropic inhomog. cylinders, FEM-FMA hybrid method 72276
EM scatt. of arbitrarily shaped cylinders, focused beam syst.-oblique incidence case 83186
EM scatt. problems, appl. of finite element time domain method 83218
EM shaker, transient anal., response surface model 128727
EM syst., reduced order finite element model 72153
EM wave multilevel finite element soln., preconditioner 128652
EM wave simulator, OO design 94026
EMAT, EM acoustic transducers, US pulse magnitude, FEM determ. 99094
embedded capacitors, RF elec. simul. 69276
embedded PM motors design criteria for sq. current control 112461
endodontically treated teeth, mech. perform., FEA 121868
epoxy molding cpd., creep, packaging proc. stresses 113649
error estim. and adaptive FEM, bibliog. (1990-2000) 124757
ESP dust particles deposition efficiency simul. 72190
EV disc PM lin. machine, optimal efficiency operations 123967
EV propulsion SRM design studies 134533
evol. problems, method of lines appl., a posteriori error estim. 124718
evol. structural optim. for connection topol. design of multi-component systs. 79125
expanded mixed finite element approach, dual-dual formulation and min. residual method 90178
explicit-implicit method for flexible-rigid multibody systs. 114179
extra-turn power transformer gaseous insulation design studies *(Korean)* 123545
fast explicit preconditioned FEA, symmetric lin. systs. 114194
faulted overhead power lines, buried pipelines interf. calcs. 77438
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850

finite element analysis continued
fiber-solder-ferrule joints, temp. cycle tested, laser module packaging 10464
finite perfectly conducting corrugated rough surface light scatt., left-right meth 83345
finline in MM-wave IC design, knowledge-based ANN models 80161
flexible and elastically supported struct. subj. to turbulent boundary layer fl excitation 114159
flexible joints, micromachined, simul., dyn. testing and design 70344
flexible nanospring interconnects, high-perform. probing, coupled thermal-el model 113626
flight vehicle control, aeroservoelasticity, (non)lin. anal. 122512
flip chip solder joints, fracture, isothermal cyclic shear, FEA 113689
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 7864
flip chip/chip scale interconnects, durability anal., nested FEM methodol. 787
flip-chip assembly, anisotropic conductive film, reliab. 91513
flip-chip BGA package, design and reliab. 113494
flip-chip BGA package, reliab. 113495
flip-chip electronic packages, quantitat. strain anal. by phase-shifting moire int ferometry 121232
flip-chip packages, interfacial delamination near solder bumps/UBM 113547
flip-chip solder fatigue, cure-depend. underfill props. 113647
fluoresc. freq.-domain photon migration, 3D unconstrained/constrained ima reconstruction 76406
flux reversal machine, automotive alternator with 42/14 V DC dual outp 113120
fluxset sens. data, mag. field map calc., NDT, hybrid method 79477
foot/ankle, computational model, develop./validation 98547
four pole sync. genset alternator, loss eval. 99639
Fourier anal. of stabilized Q_1-Q_1 mixed finite element approx. 114169
free-vibr. and seismic anal. of liq.-storage tanks 68076
full clamping element fns., finite element soln. 124756
fully discrete hp-finite elements, fast quadrature 68072
fused silica reticle, UV lithog., thermomechanical distortion 103672
Galerkin FEM, a posteriori error estim., optimal control approach 124765
Galerkin method for nonlin. hyperb. eqn. *(Chinese)* 79061
geoelectric exploration, DC resist. method 88095
GIS insulator barrier, shape optim. 123680
global superconvergence for blending surfaces by boundary penalty plus hyb FEMs 124769
global superconvergences of domain decomp. methods with nonmatching gri 79098
GMR heads, mag./mech. spacing, thermal behavior 92815
gradient weighted residuals for error indicators in FEM and BEM 101122
gradient-FEM for ellipt. problems 101098
grid refinement and nonlin. SOR 101133
guided wave opt. sens. devices, modeling and charactn. 127727
gyroscope, PM torquer 131885
H-plane nonreciprocal ferrite phase shifter, improved tech. 116482
half-wave dipole, FEM, perfectly matched layers, ABC 105859
HDD, mag. printing, proc. optim. 116360
HDD actuators, prod. cost rel. to bandwidth, FEM anal. 92844
HDD BLDCM spindle vibr., eccentricity calcs. 134072
HDD brushless DC spindle motors, robust torque optimisation 78220
HDD spindle motor, electromechanical-coupled field anal. *(Korean)* 77900
head/tape interface, digital lin. tape drive, finite element anal. 92810
heart deform., tagged MRI and elasticity-based region model 98409
heat spreader, dielec. layer, sizing 113556
hepatic bipolar RF ablation, separated multiprong electrodes 122309
heterog. math. models in num. anal. of struct. 101131
HF inductive posn. sens., EM FEA 131873
HF transformers, Litz wire winding, stray losses, computer anal. *(Polis* 115097
hidden ferrous 3D objs., ident., finite elements, eddy currents and magnetisati 117639
hierarchical basis fns. for p-version of FEM *(Spanish)* 90187
high temp. HPFF cable operation, thermo-chem. phenom. 133734
high-power dens. transverse flux lin. motor design 134084
high-speed PM brushless machine rotor resons. 123312
homog. dielec. material in cavity, permitt. and loss factor estim. using FE 70370
hot bar blade for PCB soldering, design, simul. and prototype 125893
hotplate gas sens., thermally isolated, FEM thermomechanical anal. 121002
HTS coils, cryocooler-cooled, stabil. criterion *(Korean)* 127514
HTSC bulk secondary lin. actuator studies 78098
HTSC magnet, advanced design approach 81991
HTSC plate shielding current dens. spatial distrib. calcs. 71185
HTSCs, mag. flux penetration mode, AC loss charact. 127418
HV disconnecting switches, seismic qualification *(Polish)* 99841
HVDC filter, reactor winding, eddy current loss 134329
hybrid AC-DC supply generators no-load voltage waveform calc. *(Chines* 99736
hybrid ESPI-FEM methods, mapping correl. algm., displacements meas. appl 118319
hybrid EV small-scale high-speed generator vibr. anal. 100274
hybrid FEM-MOM formulations for force/torque eval., magnetostatic/eddy cu rent problems 128668
hybrid interior error estimator for localized h-adaptive FEA 79126
hydro generator refurbishment technol., mech. anal. techs. 99625
hysteretic cores, supply ccts., rot. flux excitations 81909
IGBT module, chip current imbalance meas. *(Japanese)* 81283
IGBT modules, thermal fatigue effects, finite element modelling 70065
IGBT power module, temp. distrib., simul. model *(English)* 103802
IGBT power semicond. modules, power cycling reliab. 126792
IGBT PWM inverter, partially coupled electro-thermal anal. 123656
IM, mag. field, Preisach hysteresis and finite element models 134011
IM, skewed rotor bar, flux linkage 134010
IM, star connection, neutral point pot., 3D-2D FEM 134012
IM, strong parasitic torques, rotor eccentricity 112533
IM bar/end-ring connector breakages, data mining, FEM 134033
IM design optimisation, FEM 134002
IM end-rings EM field anal. approach *(Japanese)* 77872
IM losses calc. using nonlin. time-stepping FEM 123417
IM thermal modelling, lumped param./2-D FEA methods 123415
incompatible FEM 114195
incompressible finite element formulations convergence, patch test and inf-su condition 79127
incompressible NS eqns., first order press. stabilized FEM 124767
induction heating, surface impedance, 3D finite element model 134646
induction heating appls., nonlin. surface impedance, thermal effect 134641

e element analysis continued
induction machine torque optim., main path saturation, nonlin. model *(Chinese)* 134007
induction machines, flux angle estim., FEM, HF sig. injection 88742
infinite periodic struct. with localized impurity, EM scatt. 83236
inhomog. double-layer shields, mag. anal. at low freqs. 83371
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
inset NdFeB PM rotor three-phase AC generator perform. 123304
integrated Mach-Zehnder modulator design, TW electrodes elec. field, FEA *(Chinese)* 71353
integrated optics, time-domain wave propag. scheme 116742
interior PMSM, saturation/cross-magnetis. effects 133986
interior PMSM for flux weakening operation, anal. 133948
interstitial applicators meas., FEA computations of heating patterns 110787
IPM and SPM motors, dyn. response, mech. and mag. coupling 134091
IPM and SPM motors, rotor eccentricity, mag. forces 134087
iron losses calc. in voltage fed time stepping finite elements 127376
iron style bipolar axial mag. field vac. interrupter, static mag. field, 3D FEM *(Chinese)* 99839
irregular tetrahedra for FEA in EM 128648
iter. coupling of boundary element and FEM in elastostatics 114164
ITER project Toroidal Field Model Coil, eddy current/thermal anal. 70999
iter. substructuring method for div-stable finite element approxs. of Oseen problem 124747
iter. substructuring method for Maxwell's eqns. in two dimens. 83249
ITER TF model coil, transient behaviour, 3D FEM 105686
Ka band planar printed antipodal lin.-TSA 94163
Ka-band spacecraft beacon antenna for propag. study 72466
knee joints, artificial, fixed interface mech. effect, num. anal. *(Chinese)* 111137
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
laminated-rotor interior PM sync. machine, mech. design considerations 123343
landmine under rough surface, IR signatures, diurnal cycle, simul. 76943
lap-wound DC machines, equalizer windings design 99686
large deflection micromechanical 1D/2D scanning mirrors, design/fab. 93200
large hydrogenerator reactance determ. using FEA/domain decomp. 133874
large-scale parallel wave propag. anal. by GeoFEM 101129
laser forming thermal proc. studies *(Japanese)* 113169
laser welding distortion in the EDFA LD pump packaging, FEA 113446
LCD TAB-on-glass connection with anisotropic cond. film, mismatch 86858
least sq. moving finite elements 90184
LF flat-type piezoelec. vibratory gyroscope, constr. 127262
LF shielding efficiency, anal. and num. simul. 128799
LHC supercond. coils, persistent current calc., modified Bean model, FEM 87064
LIM, 3D FEA 134078
lin. actuator design, anal., control 123507
lin. brushless PM motor design/develop. optim. 123508
lin. elastic eqns. in unbounded domain, error estim. for finite element approx. 114184
lin. sync. motor for vert. transportation, leakage and end effects study 134074
lin. sync. reluctance motor, inductance, cross magnetis. 134077
LISA, European FEM-based limit/shakedown anal. project 77705
live objs. handling, compliant grasping force modeling 97856
liver cancer coagulation, microwave-induced thermal distrib., computer-aided dyn. simul. 87870
local exponentially fitted finite element schemes for sing. perturbed convection-diffusion problems 90177
locomotive wheel integrity US inspection using EMAT systs. 99107
lossy anisotropic opt. waveguides, perfectly matched layer boundary conditions, complex FEM modal solver 104704
low-AC-resist. planar/foil wound inductors, quasidistributed gap tech. 80460
low-speed direct servomotor drive flux reversal machine characterisation 123868
low-speed high-torque PM motors, optimum design approach 88680
LSAW transducer, electrode mass loading and finger resist. 92728
LV, finite element mech. model, gated SPECT/cine MRI 132922
LV, finite-element mech. model, gated SPECT/MRI data 111021
mag. head, high-freq. carrier-type, two-step computer simul. *(Japanese)* 92838
mag. recording, keepered medium, thermal stabil., num. simul. 116340
mag. recording, narrow-track single-pole head, GHz response 116350
mag. recording, pole-tip saturation, micromagnetic model 116351
mag. scalar pot. cuts, topol. constraints/computational complexity 72160
mag. suspen. device, design optim., surface current method 128726
mag. systs., design tech. of using space mapping algm. 128706
mag. tape head, design optim. 92848
mag. thin film disk, flying head, lubricant flow 116456
mag.-saturated electromech. devices, steady-state FEM anal. 123292
Maglev train, supercond. magnet outer vessel, num. anal. 116534
magneto-opt./eddy current imaging NDT, FEM model 101574
magnetoelec. systs., steady mag. fields, FE and BE modelling 72198
magnetomechanical US transducers, sound fields, computer modelling 99095
magnetostatic mixed problem, perturb. tech. 128676
magnetostatic problems, 3D force calc., nodal and mixed FEM, equiv. source methods 128670
malformed ears, computer assisted orthosis design syst., automatic shape modif. 87884
max. norm resolvent estim. for ellipt. finite element operators 79152
maxillofacial distraction procedures, image-based 3D planning, soft tissue implications 87791
MCM, power dissipating chips placement, fuzzy logic approach 89869
MCM package, telecomm. equipt., mech. integrity 113493
med. transducer materials, tensor props., accurate determ. 111521
MEMS, capacitance, hybrid p-element and Trefftz method 127104
MEMS, multilayer, finite element simul., automatic mesh adaptivity 81580
MEMS components, interlocking microridges, mech. strength 81578
MEMS DAC, weighted-stiffness, FEA 81573
MEMS interconnect technols., thermo-mech. reliab., testing/FEA 127088
mesoscale piezoelec. inchworm actuator with microridges 112572
metal layer/ceramic substr. buckling driven interface delamination 113616
metallic fuselage struct., AE sigs. propag. 122499
micro via-in-pad substrs., solder bumped flip chip appls., design and manufacture 89871
microcomponents material props. meas. *(German)* 86988
microelectronic struct. under uniform thermal loading, finite element modeling 115688
microfabrication technol., viscoelastic stress anal., finite element approach 81168
micromachine intracardiac ultrasound scanner, IC technol. 111495
micromachined piezoelec. US transducers, parylene diaphragm, Si substr. 111493

finite element analysis continued
micromechanical relay, electrostatic actuation 92507
microoptical element plane wave diffr., effective hybrid approach 94440
microstrip line, crosstalk, finite element model *(Japanese)* 114931
microstrip resonator with bend as deform., FEA 69017
microstrip-to-waveguide transits. anal., efficient hybrid finite elements/modal expansion 114938
microwave act. nonlin. cct., FETD algm. 102596
microwave cct. design/modeling using 3D EM optim., freq. and geom. parameterization 91227
microwave coagulation therapy, tip-split array applicator 98682
microwave combline filters, FEM anal., multiport S-param. data, cct. simulator 91214
microwave device, finite element model, multigrid preconditioner 125697
microwave devices, iter. solvers for hierarchical vector FEA 125688
microwave imaging, inversion of scatt. near-field meas. 129432
microwave pass. devices, optimal shape design method using FE time domain method 125658
microwave simul., finite element model, convergence optim. 125680
microwave simulator, FEM 91230
mid-node admissible space for 3D quadratic tetrahedral finite elements 68079
mil. phased-array radar IC package surface temp. gradients, convective film coeffs. 124380
min. stabilisation procedure for mixed FEM 114196
mini Hi-Fi audio products, drop-impact behavior, finite element modeling 100563
miniaturized antennas for microwave ablation of arrhythmia causing cardiac tissues 76616
minute cracks in sing. element, nonlin. acoustic behavior, finite element simul. 101543
MIS interconnects, device level equiv. cct. modelling 92447
mixed FEM for compressible Stokes problem with high Reynolds no. 79148
mixed finite element for nonlin. hyperb. eqns., error estim. 101125
mixed finite element modeling for dyn. of beam assemblages undergoing large overall motions in space 124740
mixed finite vol. methods on quadrilateral grids, overlapping covolume case 124760
mixed-FEM and BEM coupling for 2D eddy current problem 117608
MLC IC-BGA device reliab. 78642
MM-wave circulator, vector-FEM anal. with SOC truncation tech. 69067
MM-wave microstrip cct., anal. using num. short-open calib. tech. 125693
MMI-/AWG-based NxN devices for WDM appls., charactn. 120123
mobile gamma-radiation inspection syst., cantilever vibr. 114522
monolayer/multilayer supercond. solenoid AC losses 71062
MOSFET, ultra-short channel, quantum effects 103867
moving coil lin. oscillatory actuator, dyn. charact. *(Korean)* 134080
moving coil lin. oscillatory actuator, inductance and armature react. 128724
moving coil-type lin. oscillatory actuator, multi-pole PM arrangement *(Korean)* 123690
moving coil-type lin. oscillatory actuator perform. improvement *(Korean)* 77892
moving conductors, eddy current problems, finite analytic element method 128680
MRI, birdcage resonator, 3D FEM code 128677
MRI images, 3D heart segmentation and tracking, FEM-based deformable model 132756
multi-disc axial flux stratospheric aircraft propeller drive 133261
multi-layered CPW directional couplers, num. charactn. 69044
multichip BGAs, stress simul., failure anal. 78618
multichip mechatronic power packages, mold delamination and die fracture anal. 113644
multifilamentary supercond. wire, eddy current loss, penalty-finite element anal. 104560
multilayer struct., electronic package, thermal fatigue, finite element simul. 67549
multilayer supercond. IC, inductance calc., 3D-MLSI software package 70978
multilayer syst., progressive cracking on thermal cycling 89874
multilayered boards, via capacitances, finite difference and FEM/DBCI procedures 125872
multilayered electronic packaging, FEA, mesh sensitivity 113551
multilayered ferrite cored transformer, forward-type DC-DC converter appls. 88792
multilevel projection algm. for solving obstacle problems 68062
multilevel projection methods for nonlin. least-sq. finite element computations 67977
multiple bondwires for MM-wave packaging, wideband charactn. 69210
multiple discs in contact, num. and expt. studies 79145
multipole mag. drum of mag. encoder, surface mag. field distrib. 86457
multiscale FEM for subdivided periodic elastic struct. of composite materials 79154
multistage depressed TWT collectors, 3D FE modeling 125976
Mumford-Shah functional, num. minimization 124680
MV syst. insulation, overhead conductors, PD, elec. field calc. 88465
nanoelectronic devices, functional charact., strain influence 115389
natural crack in eddy current testing problem, finite element model 125142
natural single-phase, unidirectional SAW transducers, coupled-mode eqns., hybrid FEM 116214
NDT of materials, DCT/DWT feature extraction/ANN class. 125146
nearly H^1-optimal FEM 101127
neg. streamer anal., photoionization effect, FEM *(Korean)* 115238
Neumann-Neumann methods for vector field problems 67978
neural net-based crack param., wavelet preproc. MFL sig. 101595
neuron-electrode interface, geom. based dyn. modelling 87378
neurosurgery, image-guided, model-updated, anal. using intra-operative MRI 87784
non-lin. multi-level FEA based on multiplicative/additive corrections 68078
nonlin. anal./optimal design of reinforced concrete struct., computational platform 124753
nonlin. eddy current problems, 3D transient anal., FEM/BEM coupling 83151
nonlin. evol. eqns. simul. via cellular networks 107490
nonlin. hyperb. eqns., num. existence and uniqueness proof for solns. 114170
nonlin. inductive ccts., ferromag. hysteresis and eddy currents, free regimes 128681
nonlin. interface problem in unbounded domains, soln. method 124748
nonlin. magnetostatic optim. problem, full step Newton method 128671
nonlin. magnetostatic problems, edge element multigrid soln. 83142
nonlin. material charact. and source terms, FEM anal. 127302
nonlin. structural response, sensitivity anal. and optim. 79131
nonlin. thermal stress and flow modeling in various electronic packages 89859

finite element analysis continued
nonoriented elec. steel sheets, num. prediction of magnetostrictive behavior 81810
nonoverlapping domain decomp. method for stabilized finite element approxs. of Oseen eqns. 90176
nonplanar anisotropic PML, accuracy of FE soln. of wave propag. problem 128733
nonstandard finite element estim., appls. to 3D Poisson and Signorini problems 101117
nonuniform mesh finite element approx., gradient recovery/error estim. 124763
NRD-guide leaky-wave antennas anal. 105910
NTC thick film thermistor elements, thermal/elec. behaviour 69268
nuc. fuel rod inspection, OD rem. field eddy current probe 112249
nuc. power station turbines life eval./anal. *(Chinese)* 77692
nucl. steam generators, tubesheets, FEM 112236
num. anal. of oscills. in nonconvex problem related to image selective smoothing 129426
num. eval. of heat and fluid flow within rot. disks 81904
num. field computation, conf., Graz, Austria (Sept. 2000) 78387
num. investig. of sign-changing solns. to superlinear ellipt. eqns. on symmetric domains 90175
octagonal micromachined horn antenna for submillimeter-wave appls., anal. 83643
oilfield exploration, NMR sens., design optim. 88102
on-chip interconnects, large sig. anal. 69960
on-substr. torsional micromirrors, rot. viscous damping *(Korean)* 116789
one-chip-style quartz cryst. motion sens. with two fns. of gyro and accel. detect. 132535
open delta winding vibr. motor for cellular phone appls. 134099
open waveguide boundary conditions for finite element modal anal. 116710
opt. D-fibre antenna, radio-over-fibre distrib., FEA 74999
opt. fiber coating diffusion modelling 127676
opt. fiber probe, flame monitoring, FEA 120873
opt. fibre microclip, design optim., metamorphic develop. 71285
opt. photomask, pattern transfer distortions 126541
opt. tomography, parallel finite element and Monte Carlo methods 132633
opt. waveguide bend, design optim., FEM 71310
optim., diffuse element approx., adaptive method 124582
optimal long-time $L_p(0, T)$ stabil. and semidiscrete error estim. for Volterra formulation of lin. quasistatic viscoelasticity problem 79120
over keepered medium, thermal stabil., read/write simul. *(Japanese)* 92829
overhead power transm. lines, capacitance calc. methods *(Chinese)* 123024
overhead transm. line ampacity anal. using FEM 99382
p-Laplacian, nonconforming approx., quasi-norm a priori/a posteriori error estim. 124752
package solder joint reliab. testing, computer simul. 78661
panel loudspeaker syst. develop., design. eval. and enhancement 86357
parallel AMG for overlapping/non-overlapping domain decomp. 68046
parallel finite/discrete element anal. of multi-fracture and multi-contact phenom. 114174
parallel iter. solver based on Schur complement syst. 124745
parallel plate electrode profiles, elec. field distrib. 93962
parallel preconditioning of sparse eigensolver 68084
parallel-plate electrostatic actuator, vert. hinges 116092
parallelised finite/discrete element simul. of multi-fracturing solids and discrete systs. 79128
parametrized nonlin. eqns. around turning points 90097
partial DEs in technol. and med., computational concepts, adaptive algms., and virtual labs 79082
pass. mag. composites for beam vib. suppression 81927
pass. microwave ccts., anal. by 2D and 3D FE segmentation method 80237
patient RF heating during MRI 133076
PBGA flip-chip package, solder ball reliab. 78639
PBGAs, lead-free assembly capability, moisture blocking planes and reflow perform. 113472
PCB, wafer-level CSP, solder joint crack propag. 78637
PCB perturb. modelling using FEM 69313
PDE soln. by FEM, higher order wavelet-like basis fns. appl. 79083
pellicle-induced distortions in advanced opt. reticles, 157 nm 103591
Pentium III Xeon proc. with L2 cache, cartridge thermal design/metrol. 114799
periodic structs. for design of voluminous and planar microwave/MM-wave filters 102533
peripheral array package, delamination growth prediction, interfacial fracture toughness test 78635
permitt. and loss factor eval. of material in cavity, inverse tech. 81636
perp. mag. recording, single layered medium, head design 116358
Petrov-Galerkin methods, nonlin. Volterra integro-DE 101078
photomask fab., electron beam patterning, localized resist heating 103616
photomask patterning, MEBES syst., substr. bulk heating 126536
photonic devices, finite element models 82135
photonic devices, rigourous anal., FEM 85994
photoresist outgassing press. distrib. modeling using FEM 115731
pick-up actuator design for min. seek time 109388
piezoceramic material tensors ident. from elec. imped., iter. reconstr. 104328
piezoceramic torsional actuator, design & perform. 116202
piezoelec. accelerometer modif. based on FEM 97850
piezoelec. bending actuator for MEMS appls., basic investigs. 81568
piezoelec. coated fibre composites, effective props. 104363
piezoelec. compact displacement accumulation actuator, design/fab./testing 70341
piezoelec. microactuator, high track dens. HDD appl. 134325
piezoelec. transducer, model updating tech. 116196
piezoelec. transducers, ferroelec. hysteresis effects, finite element anal. 104440
piezoelec. transformers, US resonators appl., finite element simul. 92688
piezoelec. vibratory gyro-sens., double-T type vibrators, FEM anal. 92680
piezoelec.-ceramic bar, edge mode tactile sens. 97187
piezotransducers radiation in fluids, mixed formulation FEA/BEM Green's fn. anal. 111522
planar opt. jns., finite-element simul., boundary condition 116711
planar SOFC model calc., internal stresses studies 99982
plane anisotropic elastic media with crack surface tractions, FE calc. of contour integrals 114158
plasma etching of nonvolatile materials, contamination, by-product deposition mgt. 103431
plastic IC package warpage rel. to proc. conditions 113549
plastic injection molding proc. optim. using software tools 89845
plate-fin type heat sink, impinging air flow and heat transfer 113555
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
plates, thin piezoelec., buckling anal., FEM/DKQ element *(Chinese)* 127162
PM BLDCM, FEM-based torque ripple anal. 123489

finite element analysis continued
PM DC motor, torque estim., num. methods 123493
PM generator optim., neural net approach compared to FEM based sensit. a 133916
PM lin. brushless motor, air core, space harmonics field anal. 134063
PM lin. generator EM struct., 2D FEM anal. 88770
PM lin. sync. motor, dyn. charact., moving mesh tech. *(Korean)* 123516
PM lin. sync. motors, detent force minimization techs. *(Korean)* 77893
PM LSM design with high-thrust/normal force ratio 134081
PM machine control, torque ripple compensation approach 123323
PM machine struct. and EM params., design and anal. *(Chinese)* 133918
PM motor, cogging torque, design techs. 134090
PM motor, coupled magnetoelastic finite element model 134086
PM motor iron loss anal., 2-D mag. charact. considerations *(Japanese)* 112
PM motor torque, asymmetry effects modelling 123290
PM motors, optimal efficiency design method *(Japanese)* 77817
PM sens./actuators, temp. compensation, FEA 120773
PM supercond. bearing, air-gap mag. field homogenization 71015
PM sync. motor drives modelling for elec. vehicle appls. 123858
PM-assisted sync. reluctance machines, comparative FEA 123363
PMSM, 3-phase transformer, coupled transient EM-thermal FEM anal. 123
PMSM drive, eddy-current losses calc. 89355
Poisson eqn. with corner sing., num. results 101124
polycryst. solids, stress-driven mass transport, lattice-based micromechan continuum formulation 69940
polyethylene hip joint, elastohydrodynamic lubrication anal. 76673
polymer-ceramic nanocomposite, high-k dielec., RF embedded capacitor 115
polyphase cage IM inter-bar currents anal. 134016
polyphase cage-IM perform., inter-bar currents effect 123413
polyphase EM devices, coupled cct.-field calc. 128723
polyphase rot. induction machines, stray load losses calc. 112518
polysilicon cantilever MEMS-struct., shock load, mech. reliab. 127102
polysilicon heater, CMOS microstruct., high temp. sens. 97573
polysilicon hot plate, surface micromachined, gas sens. 116069
pos. point-barrier-plane air gap elec. strength, space charge effects 99422
posteriori error estimator for mixed FEM for Reissner-Mindlin plate 11418
posteriori error estimators 68071
power cable insulation, ground shield semicon, resist. 112099
power diode, phys.-based compact electrothermal model, cct. simul. 92329
power engng. elec./mag. fields FEA 111645
power line reactance design air gap length calc. 111998
power transformers, geomag. induced current effects 112590
power transformers, load-controlled acoustic noise, FEM/BEM calc. sche 88786
preconditioned conjug. gradient method for elasticity, displacement decomp. parallelization 124746
preconditioning for BEM in domain decomp. 68091
press. condenser microphone, elec. field force & capacitance, FEA 120728
probabilistic FEM for reliab. of strain softening media 114171
probe-fed rect. dielec. resonator antenna study 72610
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
projection TV display, micromirror array, FEM model 71393
pulsed asynchronous generator with iron-free cylindrical solid rotor, FEM sim 99650
pulsed energized wire-duct ESP, elec. field, charge dens., FEM 128715
PWB mech. loading, global/local reliab. modelling 115185
pyramidal and prismatic finite elements, isoparametric mapping, invertibil 79118
PZT-based piezoelec. composite laminates, bending, elec. field effects 1043
QMIT, quasi-monolithic integrat. technol., thermal stress simul. and me 113625
quantum wire, transm. charact., mag. field 91846
quartz tuning fork resonator array, photolithography/selective etching 11620
quartz-cryst. tuning fork, Sezawa approx., supporting wire effects 92686
quasi-monolithic integrat. technol., static thermal design 80360
quasi-monolithic technol. for power microwave/mm-wave ICs, static therm design 69234
quasi-static data recovery for dyn. anals. of structural systs. 114176
radial act. mag. bearing, anal. of lab. implement. *(Slovenian)* 70565
radiating slot in broad wall of rect. waveguide, charactn. using iter. FEM 834
rail launcher devices with sliding contacts, EM anal. 83185
rare-earth iron garnet ferromag. plate, metal-loss defects, magneto-opt. visuali tion 90613
re-entrant mode microstrip directional coupler, directivity 69070
re-entrant mode microstrip directional coupler, high directivity, FEM *(Kore* 114958
real-time EM field anal. syst. for engng. education 78493
rect. AT-cut quartz plates, bi-mesa struct., 3D vibrs. 116195
rect. dielec. resonator antennas, modelling/expts. 83627
rect. IC package delamination, geom. effect, fracture mech. anal. 113615
rect. microstrip patch antenna with metal column, input impedance 72602
recursion and matrix multiplication for lin. convex quadrilateral elemen explicit integrat. scheme 79146
residual, posteriori error estim. for 2-level FE methods for NS eqns. 68074
resist. heated FZ furnace, radiative heat transfer, FIDAP num. study 114223
resist. spot welding of metals, elastic props., US NDE 114510
resist. tomography sens., sens. field, soft field charact. *(Chinese)* 75411
reverse-engng. of finite element automobile crash model 114177
rib waveguide, modal anal., finite element and mode matching methods 1047
rot. conducting disc braking torque, 3D transient mag. modelling 123289
rot. elec. machines with skewed slots, multi-slice FE modeling 133913
rot. machines, time-stepping FE anal., converg. charcts. accel. 133915
rot. machines EM field anal. using FEM *(Japanese)* 77815
rotary oscillatory actuator, 3D FEM, auto-mesh coupling 128728
Rotman lenses anal., hybrid least sq. FEM/transfinite element method 10589
Rutherford supercond. cable coupling loss props. studies 77417
salient pole sync. machine permeance model develop. 123344
salient-pole hydro generator stator temp. field calc. *(Chinese)* 112346
sand casting proc., thermal optimisation 79122
SAW periodic struct., FEM and Green's fn. anal. 116210
SCALPEL, mask blank fab., num. simul. 126534
SCALPEL mask, membrane distortion 103669
scanning capacit. microscopy of MOS structs., dopant quantif. error stud 121142
scanning microdeformation microscope, near-field acoustic interact., FEM ana 99069
scapula bone, CT, 3DFE model, semi-automated method 76510
scroll-actuator dyn. anal. using 3D FEM *(Japanese)* 78099
second order ellipt. problems, high accuracy sparse FEM 79119
secondary-electron detector efficiency, line-width meas. accuracy 72182

element analysis continued
gmented-type sync. reluctance motor, rotor design improvement *(Korean)* 123337
lf-adjoint ellipt. boundary eigenvalue problems, finite vol. methods 79153
lf-starting PMSM, starting perform. anal., time step effect *(Japanese)* 112495
mi-unstructured grids 124749
micond. laser, expanded output-mode struct., FEM *(Chinese)* 128265
micond. laser package, opt. fibre fixing method, FEA anal. 117293
micond. wafer proc., vac. pin chuck flattening 115477
ries DC motors field-based anal. 123490
ries reson. DC-DC converter, HV IGBT eval. 88931
hape design for two- and 3D contact problems using evol. method 124737
hape sensitivity calcs. for exterior acoustics problems 79121
haped surface coil, sensitivity at 63 MHz, num. eval. 98402
hell finite element for smart piezoelec. composite plate/shell struct., act. vibr. control 121051
hells, nonlin. piezoelec. circ., free vibr. anal. 104427
hip propulsion large PM sync. motors, thermal anal. 123972
multaneously varied X-Y LIM design *(Japanese)* 112551
ng. perturbed react.-diffusion eqn., high order FEA solns. 124768
ngle-bodied humidity & temp. sens., adv. lin., design, fab. 97562
ngle-phase PM motors, param. determ., math. model 123306
ngle-pole write head, nonlin. eddy current write field anal. *(Japanese)* 92817
x-node pentagonal assumed natural strain solid-shell element 114172
x-phase IM, torque dens. improvement, third harmonic current injection 134471
kin effect, open-boundary problem, FEM/DBCI hybrid method 128686
lot antenna radiation charact., influence of metallization width 128855
lotless PMSM modelling, FEM, Lagrange multipliers, motion consideration 88701
lotless-type PM lin. brushless motor design/anal. approach 123519
mall doubly-salient PM motor, design and anal. 112462
mall moving magnet lin. actuator, high thrust, FEM *(Japanese)* 112729
mall PM motors, perform./brush commutation modelling 123524
mall salient pole generator finite element/time stepping modelling approach 99697
mall specimen bulge test, sensitivity anal. FEM & Taguchi methods 90597
mart composite plates, nonlin. actuation, coupled piezoelec.-mech. model 114478
mart piezoelec. beams, Bernoulli-Euler beam theory correction 114475
martpack low-cost power module for semicond. die, relative thermal perform. 67615
ME normally-closed gas microvalve, flow meas. 123705
MES coil, stabil. improvement, mech. losses reduction 78195
mooth problem, finite element soln., superconvergence anal. 79155
MPS transformer foils, ohmic losses calc., 2-D FEM 77967
nap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
obolev-Volterra projection for FEA of integro-diff. eqns. *(Chinese)* 124764
oftware for nonanalyst professionals 90189
oil decontamination, EM and thermally coupled fields calc. 88179
older alloys, viscoplastic deform., Anand model 114421
older joint reliab., thermal, power and bend cycling 113492
olenoid actuator, coupled syst., interlaced nonlin. iter. 128719
olenoid valve, EM actuator, multigrid simul. 83182
olid rotor pulsed asynchronous generator, FEM-based num. anal. 123437
olving elasticity systs. by PCG methods 101130
pace based membrane antennas/reflectors, local defect study 117768
pace rem. sens., thermal engng. design *(Chinese)* 98906
pherical US motor, stator develop. *(Japanese)* 88780
pindle motor, cogging torque, mag. cct. 134092
quirrel cage IM, core losses modeling, polynomial fns. 123484
quirrel cage motor, finite element thermal modeling 134045
quirrel-cage motor vibrs. anal., mag. equiv. cct., structural FEM 134038
R motor, dyn. rotor eccentricity, FEM anal. 133946
RM, cogging torque reduction, optimal pole shape design, simulated annealing 88711
RM design, finite element modelling 99641
RM design, multi-phase excitation 123361
RM modelling in MATLAB/MAPLE syst. *(Polish)* 123339
RM phase inductance charactn. using Fourier series approach 133966
SBW to PSAW conversion in SAW devices using heavy mech. loading, anal. 92725
tacked actuator displacement-amplif. mechanism, topol. optim. 112727
tacked thin dice packaging, small vol. 3D package, FEM 113507
team generator tube flaws, eddy current sig., ANN inversion 101598
team generator tube inspection, rem. field eddy current tech. 112237
teel plate, 3D stray field loss model, nonlin. anal. 128694
teel plate, piezo-transducer generated Lamb modes, FEA 101620
tep-down piezoelec. transformer for AC-DC converters, design, fabr. and operation 91437
tochastic PDE, Galerkin finite element techs. 124714
tokes problem, approximating local av. of fluid velocities 68083
treamline-diffusion method for conforming/nonconforming finite elements 114155
tretching for next generation lithog. masks 103508
trip-type resonators, second-harmonic thickness-extensional vib. 92681
trong coupled multi-harmonic FEM EM device simul. package 83150
tructural defects detect. using operational deflection shapes 90606
tructural dyn., advanced time-discontinuous Galerkin FEA method 79117
uper-BGA package reliab., underfill effects 67606
upercond. bulk magnet, 3-D mag. field anal. 71031
upercond. cylindrical LIM improvement 77894
upercond. graviinertial gauges, magnetomechanical procs. 92922
upercond. power machine round HTSC wires, coupling loss calcs. 77804
uperconvergent derivative recovery for intermediate finite element family 90185
uperconvergent method for approximating bending moment of elastic beams with hysteresis damping 79073
urface laser proc., vibr. conditioning feasibility study 117553
urface mount LSI package, viscoelastic warpage anal. 78674
urface PM lin. sync. motor, thrust anal., 3D FEM *(Japanese)* 112556
urface-mount PMSM, saturation/armature react. effects 123356
urface-mounted PM machines, torque quality assess., sizing optim. 133936
urface-mounted PM sync. motors, iron losses modelling 133987
Swiss Light Source, photon shutter for insertion device front ends 132249
switched reluctance machine systs., design and simul. software package 77857
switched reluctance motor, advanced torque control strategy 133992
switched reluctance motor drives, normal and fault conditions, fuzzy inference syst. 133958

finite element analysis continued
switched/flux switching reluctance motor drives, acoustic noise comparison 134481
sync. generator acoustic reson. studies 133968
sync. generators, AC/DC stator connections, steady-state charact. *(Chinese)* 133954
sync. machine, magnetostatics, FEM mesh generation 128675
sync. turbogenerator, high order equiv. ccts. 99638
synchrotron X-ray monochromators under heat load, cryst. compar. 121837
syst. generators shielded busbar, EM field soln. at open boundary problem 123333
syst.-on-package, substr. materials 113683
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
teaching, undergraduate level 83094
teeth imaging using diagnostic US, simul. models, transducer design 110718
tension stiffening model with increasing damage for reinforced concrete 124755
tensor product Gauss-Lobatto points are Fekete points for cube 114186
tethered satellite syst., simul., FE anal./fuzzy sets 88052
thermal stress modeling, microelectronics/photonic packaging structs., probabilistic approach 89858
thermochemical responses of sandwich panels to fire, math. model 114181
thick freq. selective screens, EM scatt. 83338
thin wire and plate, 3D modeling using FEM and elec. cct. eqn. 125835
thin-film spiral inductors, structural design, FEM EM field simul. *(Japanese)* 104551
three-phase IM, charact. anal. method 88734
time integrat. algms., freq. domain anal. 101061
time-varying elec. impedance tomography image reconstr., EKF 109925
Timoshenko beam finite element dyn. models, error anal. 79142
tomographic data, direct proc. estim. using artificial neural systs. 106504
torsional-flexural composite US transducer, TW excitation, flexural vibr. ring 99089
TORUS concept machine topologies, pre-prototyping design assess. 133937
TORUS-type axial-flux surface-mounted PM disc machine design/anal. 123303
tower of Pisa, FEA of effects of increasing angle 114180
transthoracic defibrillation current dens., two-layer segmented electrode 76593
transverse flux induction heating, galvanizing line, 3D eddy currents, temp. field 134644
transverse flux lin. switched-reluctance motor, 3D force calcs. 112557
transverse flux SRM servodrives, doubly-salient poles, FEM, mag. equiv. 113061
tree-phase transformer, nonlin./anisotropic props., FEM appl. 134110
triple-shell open-ended cylindrical shield, axial shielding factor 128798
tubular lin. DC motor mag. cct. field anal. 123501
tubular lin. IPM motor, design optimisation 123504
tubular lin. IPM motor design criteria 123505
tubular SOFC technol., computer modelling using ANSYS package 99981
turbogenerator end-region, 3D thermal distrib., FEM *(Chinese)* 88671
TW contact US motor, stator vibr., FEM anal. *(Chinese)* 77904
two-axis lin. SRM inductances determ., controlled VSI *(Slovenian)* 77896
two-axis lin. sync. reluctance motor, operating point depend. inductances 123521
two-field mixed variational principle for partially connected composite beams 114182
two-phase axial flux PM sync. machine, cogging torque 133955
two-phase mutually-coupled reluctance machines, dyn. simul. model 133965
two-phase salient pole IM, mech. perform. estim., FEM 112519
two-scale FEM foil ellipt. mixed BVP with small periodic coeffs. 114187
two-wire transm. line, dielec. half-space, transient response 83456
ULSI interconnect syst., thermal perform., simul. *(Chinese)* 126499
ultrahigh thermal cond. module, direct solder-attach, C4 reliab. 113678
unbounded dissipative media, transient field, FEM 83074
uniform pointwise convergence of finite difference schemes using grid equidistribution 68064
uniform validity of discrete Friedrichs' inequality for general nonconforming finite element spaces 101126
uniformly loaded rect. plate bending anal. with variable width corner supports 79143
unstructured finite element mesh using finite difference method 90147
US conical transformer, fiber waveguide, long. guided waves 99088
US flaw detect. by EM acoustic transducers, inverse flaw ident. 101627
US guided wave transducer, TDPRA, FEA 122738
US lin. motor, hybrid bolt-clamped Langevin type transducer 99702
US motor stator vibr., adhesive effects modelling *(Chinese)* 112567
US phased array antennas for med. imaging, micromachined chips 122021
US therapy, compact self-focusing transducers, strong pulses 111113
US transducer, piezoelec. bar, qtr.-wave matching layer 111530
US wave propag. in teeth, modeling using PSpice, comparison with FE models 98328
UXO detect., explosive vap. diffusion in snow, modelling 76990
V- and W-shaped shielded microstrip lines on anisotropic medium, FEM anal. 105840
vac. cleaners, universal-motors design methodology 124126
vane-type electrodeless HID lamp prototype *(Japanese)* 124063
variable transformer, eddy currents, finite element model 134118
variational inequalities, posteriori error anal. 79116
VCSEL, transverse mode, steady current & temp. distrib. anal. *(English)* 82674
vector finite element time-domain method, Maxwell's eqns., unstructured hexahedral grids 114154
ventricle mech., MRI, finite-element reconstruction method 98474
vert. Bridgman config., anal. of factors affecting interface deflection 114226
vert. Bridgman growth, modeling solute segreg., free-surface tech. 114225
vibroacoustography, ultrasound surgery monitoring, finite-element simul. 110752
video coding, very low bitrate, mesh based 95215
VIISta 3000 ion implanter, beam optics 121324
wafer-level CSP, thermal stress anal. and design optim., FEM simul. 113624
wafer-level CSP, wafer proc. package, reliab. 100616
waste disposal seepage control sheets, damage detect. method *(Japanese)* 67678
waveguide capacitive iris coupled lowpass filter design, use of 3D field simulators 69064
waveguide discontinuities, edge elements, hybrid MM/FEM method 117744
waveguide phased array antennas, parametric studies on WAIM sheets 94190
wavelet-Galerkin method for solving parab. eqns. in finite domains 124732
weak formulation using wavelet basis fns. 124742
weakly guiding opt. fibers with exact boundary condition, simul. 128821
weakly guiding opt. fibres with plane symm., cutoff freq. calc. 93035
Windows NT, MPI environ. assess. 130751
wirebond triangle- and T-profiles, design, linkage-spring model 113534
Al 1 μm line, fault localisation, thermal laser stimulation, 3D finite element ANSYS model anal. 127004

finite element analysis continued
Al high-current busbar terminal screw joints, creep studies *(German)* 133768
Al, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435
Al thin interconnects, local strain meas., CBED, TEM 126437
$Al_xGa_{1-x}As/GaAs$ HBT, finite element model 81228
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
$Ba_xSr_{1-x}TiO_3$ epitaxial thin film, microwave phase shifter 69125
$BaTiO_3$ theoretical/expt./appls., piezoelec. ceramics, indentation, theory, expt. 104373
Bi-2223 HTS 10 kVA power transformer, double pancake windings *(Korean)* 123544
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTS tape AC losses, geom. effects calcs. 70724
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC supercond. fault current limiter characts. 77606
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC tape AC losses, FEM simul. 70725
BiSrCaCuO 2223 HTSC multifilament tapes, Ag alloy sheathed, engng. crit. current dens. 70708
BiSrCaCuO 2223 cryocooler cooled pancake coil, quench develop., anisotropic E-J characts. 127520
BiSrCaCuO/Ag HTSC tape, num. modelling of rolling 68433
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag, multifilamentary tapes, shielding, losses in perp. AC mag. fields 70693
BiSrCaCuO-Ag HTSC tapes, thermal cond., calorimetric study, exptal. method and simul. 87012
C fibre reinforced plastic, damage detect., impedance spectrosc. 114482
a-C field emitters, enhancement factor, charactn. 102900
$CoSi_2$ film, induced mech. stress, Si substr., appl. to MOS technol. 126219
CsI scintillator, γ/β decay power, reactor safety appl. 76118
Cu, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435
Cu/SiLK interconnect, flip-chip package, interfacial adhesion 115678
Cu/W interface, electromigration modeling 126436
FeSi core PM motors, iron loss, mag. fields anal., FEM, E&S model 133914
GaAs PHEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
GaAs-GaAlAs microaperture SEL, near-field opt. data storage appl. 128245
GaSb, vert. Bridgman growth, heat/momentum transfer, num. anal. 114228
InGaAs SQW strain-modulated nanostructs., grazing-incidence XRD, photolum. 69684
$In_{0.16}Ga_{0.84}As$ QW, strain-induced lateral carrier confine., PL 115409
InP HEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
InP single cryst., bulk growth, micromech. based constitutive rels. 124803
InP tunable Fabry-Perot filter, involuntary underetching 82272
KH_2PO_4 cryst., vac. chucking influence on distortion 92937
$La_3Ga_{5.5}Nb_{0.5}O_{14}$ electrode-width-diff.-reversal-of-directivity transducer 92739
$La_3Ga_5SiO_{14}$ reversal of directivity transducer, coupled-mode eqns. 92740
$LiNbO_3$ SAW filter, freq. response, finite element model 92729
$LiNbO_3$, SAW propag. under periodic grating, dielec. overlay effect 92742
Nb_3Sn persistent current switch, MHD ship propulsion, switching reacts. 127543
Nb_3Sn-Cu CICC, ITER magnet syst., hotspot temp. 127528
NbTi long length cable-in-conductor stabil., fusion reactor magnet syst. 71001
Ni MEMS material microstruct./elastic property modeling 104175
$Ni_{80}Fe_{20}$ nanostructured material, micromagnetic simul. 116243
PLZT, fatigued electrostrictive samples, microcrack clouds 104362
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
PZT, piezoelec. ceramics, indentation, theory, expt. 104373
PZT, piezoelec. coeffs., meas. by d_{33} meter 109933
PZT, thickness-shear-mode trapped-energy resonators, parallel field excited 92778
PZT-based multilayer composite hybrid transducer, med. ultrasound 111534
$(Pb,Bi)_2Sr_2Ca_2Cu_3O_{10+x}$/Ag HTSC multifilamentary tapes, I_c 81969
SF_6 cct. breaker, gas discharge, magneto-plasmadynamics 125948
SF_6 insulated cct. breakers for high short ccts. interruption *(German)* 134283
SF_6 self-extinguishing cct. breaker, small current interruption 134258
SF_6 tank type cct. breaker, double breaks anal., hybrid FEM-charge simul. method 134257
Si diaphragms, form. by precision grinding, buckling suppress. 92548
Si high-force piezoresistive force sens., max. hysteresis error 86758
Si micro-machined condenser microphone, single deeply corrugated diaphragm 111506
Si, polycrystal torsional micromirror array design, opt. binary switching, AM appls. 104762
Si solar cell fab., ingot lifetime meas. calib. factors 100163
Si/SiGe quantum wires, inhomog. in-plane strain relax., XRD 69690
Si-Al thermal vert. bimorph actuator 92540
SiC, sublimation growth, heat/mass transport calcs. 114229
n-SiC/Ni ohmic contacts, ECR plasma etching and current noise meas. 91859
SiGe uncapped islands on Si(001), MBE, strain/comp. distrib. 101298
SiN compressive thin film, mech. props., ring test struct. 104214
SiN spacer technol., elec. detect. & stress simul. 115845
Si_3N_4 thin films, microbridge testing, deform., CVD 132183
SiO_2, patterned on Si, lateral strain modulations, X-ray grazing incidence diffr. 69763
Sn-Pb flip COB solder joints, thermal fatigue failure *(Chinese)* 113673
Sn-Pb solder material, creep damage, viscoplasticity model 114422
SnO_2 low-power thick-film gas sens. by screen-printing on micromachined hotplate 97489
TbDyFe giant magnetostrictive actuator, finite element model *(Chinese)* 92871
Ti US transducer, welding device 99092
TiN/Al/TiN/SiO_2 metallization, void-containing interconnects, local Joule heating 69933
TiNi SMA thin films charactn., MEMS appls. 125069
$TiSi_2$ film, induced mech. stress, Si substr., appl. to MOS technol. 126219
YBaCuO bulk supercond., mag. field, FEM 70586
ZnSe cryst. growth by CVT, finite element code computational study 68104
breast cancer assess., constrained modulus reconstruction tech. 132653

finite impulse response filters *see FIR filters*

finite state machines
see also finite automata
64-point FFT design example using A|RT-Designer, OFDM radio 101138
area-power optimal state assignment, complete weighted graph 114677
army network protocols with conflicting timers, efficient test generation 107839
ATM high capacity switches, fast round robin priority port scheduler 130220
automated design of FSM predictors for customized proc. 90827
automatic functional vector generation using interact. FSM model 79741
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
broadband turbo decoding, $O(\log_2 N)$-latency SISO 106085
complex control ccts., dyn. reconfigurable implement. 101940
complexity of parallelizing using parallel-prefix method 125415
constraint-driven FSM state encoding for low power 125313

finite state machines continued
control flow synthesis, feasibility of omitting state reduction step *(Chin* 101663
control intensive designs, high level synthesis, speculation techs. 125354
crosstalk originated error detect., error detecting codes optim. 79686
DCLC-DSF, distributed delay-constrained least-cost unicast routing heuri *(Chinese)* 74046
delay-constrained least-cost unicast routing, distributed heuristic algm. 959
distributed asynchronous control unit, hierarchically decomposed AFSMs, CD 68671
DNA based computers, conf., Cambridge, MA, USA (June 1999) 67371
DSP appls., floating point low power adder design 68757
dual-armed cluster tools for wafer fab., real time scheduler 81476
dyn. power mgt. tools, integrat. in IC design flow 101946
EFSM models of complex army protocols with inconsistencies, test genera 107843
embedded syst. simul.-guided prop. checking, multivalued AR-automata 79
fault ident. in networks by pass. testing 85133
fault tolerant approach to µP design 102233
FSK mixed sig. decoder for AF appls. 68655
GA based FSM synthesis, flipflop selection 125167
gated-clock FSMs, low power hand-over mechanism 90883
generic restoration actions scheduling, FSM appl. 99240
IM control syst., load profiling meas. & proc., clipping integrator 112517
LAN fault diagnosis syst. 130739
LAN time-aware fault diagnosis syst. 130685
large seq. ccts., power estim. approach, consecutive vector blocks 68780
lifting factorization-based discrete wavelet transform archit. design 73636
lin. FSM, phase shifter synthesis, pseudorandom seq. generation 90832
lossy context-based adaptive entropy coding, lookahead search 95385
low-power mixed sync./asynchronous implement., automatic FSM synthe 114694
LZ78-parsing, optimal, lower bounding 106378
mixed hardware/software systs. generation from SDL specs. 79665
nonlin. filters, finite automata reduction factors 130063
packet-switched networks, traffic generator implement. framework 107657
protocol on the-fly re-synthesis 84985
protocol testing syst., test seq. length reduction, transit. executability *(Chine* 73928
protocols, concurrent DFSMs modeled, conformance testing, nonobserva nondeterminism 95924
retimed seq. ccts., init. state computation, adaptive algm. 68786
separated-kernel image proc. using FSM, implement. for template matchi 106780
seq. ccts. synthesis on PLD based on new models of FSM 125320
SoC design methodology for 3rd millennium ICT products 101887
state assignment, low power dissipation Markov chain model, VLSI c *(Korean)* 101970
time transformed machine for high speed computer network perform. me 74273
time-variant permutation generator, probabilistic cryptanalytic method 1292
Tornasol, Spanish speech recogn., integrated syst. 73112
underwater unmanned vehicles, sonar-based guidance 131685
VHDL procs., behavioral test generation 68679

finite volume methods
contact drape simul. of woven fabrics and garments 68077
EEG problems, anisotropic conducting media, finite vol. calc. method 1325
electronic module transient thermal anal. using simplified heat transfer coe model 67608
electronic packages, thermal/psychrometric response, num. model 113546
ellipt. eqn. with heterog. coeffs., finite vol. scheme 124730
KSTAR magnet, CIC conductor, adaptive mesh finite vol. method 71038
local interconnect gap-fill optim., integrated multiscale 3D simul. 126477
microelectronic solders, diffusional coarsening modelling 113713
mixed finite vol. methods on quadrilateral grids, overlapping covolume c 124760
Newton-Krylov methods preconditioning in solidifying flow appls. 101116
num. computation of wave propag. in dyn. materials 68073
num. eval. of heat and fluid flow within rot. disks 81904
opt. fiber drawing procs., Fresnel interfaces, radiative transfer modelling 821
parallel dyn. load balancing for adaptive computing in VLSI device simul. 811
planar SOFC model calc., internal stresses studies 99982
RTP, 3-D unsteady heat/fluid flow, num. anal. 126265
self-adjoint ellipt. boundary eigenvalue problems 79153
semi-implicit finite vol. scheme for nonlin. diffusion eqns. in image pro 118454
stabil. for hyperb. problems 114157
staggered Lax-Friedrichs scheme for nonlin. conservation laws on unstructur 2D grids 90180
staggered Lax-Friedrichs scheme on unstructured grids, error estim. 124613
Vlasov-Poisson syst., convergence of finite vol. scheme 124759
Cu-Ni laser welding, transport phenom. modelling 72135
SF_6 cct. breaker, gas discharge, magneto-plasmadynamics 125948

FIR filters
2-channel FIR filter bank design, general-purpose optim. tech. 118985
2D diamond/quadrant FIR digital filter banks with sharp responses 119069
2D FIR compaction filter design 95705
2D FIR digital filters, weighted least sq. design 102414
2D FIR filters design, iter. reweighted least-sq. algm. 107517
2D FIR filters with power-of-two coeffs, design using semidefinite prog. 910
2D FIR nonfactorable parametrized family of lossless systs., Grobner bas 130113
2D non-separable paraunitary matrices and Grobner bases, FIR transfer matr 80113
2D systolic-array digital filter using local broadcast scheme, cascade form 689
2D zero-phase FIR filter, nonuniform freq. sampling 80094
3D FDTD anals., late-time instabilities suppress. 124775
act. noise control, adaptive IIR filters, classical algms. 107476
adaptive and blind adaptive DFE, design realization *(Chinese)* 95818
adaptive array antennas using modified CMA and polyphase filters *(Japanes* 130110
adaptive discrete time wavelets using degenerate eigenvalues 119071
adaptive filter employing wavelets and sparse subfilters, perform. anal. 1190
adaptive filtering algms., syst. ident. 130082
adaptive filters, non-quadratic error criteria, stabil. conditions 119011
adaptive FIR digital filter, modified normalized LMS modelling algm. 11897
adaptive FIR filter, breeder GA for syst. ident. 102397
adaptive interpolated filtering, simplified RLS algm. 119020
adaptive interpolated FIR echo canceller, low complexity 102404

filters continued
daptive moving target detector with Wigner-Ville distrib. as Doppler filter bank, perform. 75107
daptive photonic RF filters realized with adaptive Bragg gratings 80395
daptive sig. proc. advances, totally adaptive systs. 73615
pprox. lin. phase FIR low-pass filters, design 80100
AR equalization with const. modulus criterion 119191
Aries compact modular macro-block for digital filtering 91113
ASIC design methodology achieving 550 MHz operation 125358
synchronous FIR filter banks for discrete wavelet transform 91105
synchronous VLSI FIR filter, low-power single bit-plane archit. 68933
uditory brainstem responses, quality improvement, single-sweep-based methods 110597
uditory filter bank inversion using least sq. optim. tech. 95667
iorthogonal multi-band filter banks design, anal./synthesis filters 130048
iorthogonal unconditional bases of compactly supported matrix valued wavelets 101041
it-serial filter, area min. archit. 102385
lind fractionally spaced equalisation using anal. const. modules 119194
lind image deconvolution, wavelet transform-based noise reduction schemes 118223
lind MIMO ident., alg. approach 107559
lind sig. de-noising via ICA, hybrid method 107557
lind sig. separation, overcomplete subband representation 83985
lind source recovery in static/dyn. environ., state space model 107577
lock filter bank, perfect reconstruction condition in terms of DFT 107530
lock-exact fast affine projection algm. *(Japanese)* 95663
anonic signed digit Chebyshev filter design 68934
anonic signed digit filter design 107542
arry-save adder, low-power multiplier block 102058
losed glottis interval determ., multiresolution sig. representation 118057
CMOS adaptive filter implement. using switched-current tech., FIR transversal cct. 80120
CMOS digitally prog. current steering semidigital FIR reconstruct. filter 80092
CMOS embedded low-power FIR filter 102401
CMOS FIR filter chip, PRML read channels 102406
CMOS HF low-power multirate SC realizations for NTSC/PAL digital video filtering 80041
CMOS interpol. FIR filter, power/area efficient design for W-CDMA appl. *(Korean)* 80091
CMOS low-power analog FIR filter, 100 MHz, PRML equalization appl. 102366
CMOS mixed-sig. equalizer for Gigabit Ethernet on copper wire 108369
CMOS SC video FIR filter with analog-RAM-based delay efficient realization 102352
color halftone descreening based on color sigma filters 95706
combined projection/correl. LMS sq. algm. for channel estim. with uncoded/chaotic coded speech 129388
compaction filters, semidefinite prog. design with combined constraints 130102
compactly supported matrix valued wavelets, biorthogonal unconditional bases 91057
complex coeff. FIR filters design, LP & Chebyshev approx. *(Chinese)* 125616
complex compact-supported orthonormal symmlets, real-valued half-band FIR filters 91108
convolution operation on general purpose proc. 129532
convolutive mixtures, blind source separation, preprocessing for convergence accel. 107494
convolved non-stationary sig. separation, adaptive non-causal FIR filters 118980
crosstalk-robust struct. based on sub-band noise estim. 129368
CRT display spot size meas. syst., DSP *(Chinese)* 109465
data transm. over noisy channels, optimal orthogonal finite order transmitter/receiver filters design 107538
delay LMS adaptive digital filter, systolic archit. 91084
design combining freq. response masking and WLS-Chebyshev approaches 91069
design problems, simult. magnitude/phase/group delay approx. 95662
deterministic sig., blind zero-forcing ident. 73826
DFE for wireless data commun., fast optim. 73841
differentiators, Taylor series, tap-coeffs., type III differentiators 80090
differentiators for quantized sigs. 130124
digital filter, finite wordlength coeff., branch and bound tech. 130074
digital filter and filter bank design by num. optim., review 118982
digital filter and filter bank design by optim., appls. 114875
digital filter design, multimode mean field annealing approach 80085
digital filter design with discrete coeffs., semidefinite prog. relax. 80108
digital filter using one-hot coded residue representation 130042
digital filter with hardware constraints, design by mean field anneal. 91066
digital filters, low/high-pass and mid-pass/stop designs 114878
digital filters, power dissipation reduction using quadratic RNS 102400
digital filters satisfying magnitude and phase specs., comparison 91112
digital filters within embedded fault tolerant hardware platform, evol. design and adaptation 102395
digital FIR differentiator design based on max. SNR criterion 80099
digital FIR filters, testing schemes 91103
dispersive channels, joint precoders and DFE optim. *(Chinese)* 107715
distorted power meas. under nonsinusoidal & noisy conditions 121136
DS-CDMA commun., lin./DF joint detectors using periodic long codes 130170
DSP concept, structural subband decomp. 130092
DSP fixed-point pulse timing based on high-precision division tech. 130070
DSP systs. for DSL appls., design for low-power implement. 125527
DSP-RAM archit. for parallel DSP in memory, implement. 114809
dual-tree complex wavelet transform with improved orthogonality/symm. props. 95680
dyn. reduced sig. representation low power FIR filter design 114884
ECG, power line interf. elimination, constrained eigenfilter 87455
EEG brain map reconstruction by incorporating blind source separation 98173
eigenfilter, total least sq. error criterion, pos. definite matrix 80088
elec. guitar, obtaining more acoustic timbre by digital filtering 131779
equalizers for sparse channels, perform. 107704
equiripple min. phase filter design from lin. phase systs. using polynomial factorisation 73702
equiripple min. phase FIR filter design from lin. phase systs. using root moments 102407
even max. decimated pairwise FIR filter banks, symm. response 102388
extended dimens. threshold filtering, concept and props. 84769
eye movements, impulse-like, effects of digital filtering on gain and latency params. 87366
Farrow struct. based 1D and 2D FIR filters, variable cutoff freqs., design 91065
finite wordlength FIR digital filters, optimal, design 91110
fixed-coeff. FIR filters, design for systs. with input clock jitter 91070

FIR filters continued
fixed-point lin. phase FIR filter design, appl. of SPT-term distrib. of CSD nos. 80109
FPGA based digital radar receiver for soft radar 109280
fractional delay filter, optimal synthesis in reproducing kernel Hilbert space 73650
fractional sample rate conversion, min. block proc. 73659
freq. masking filters, narrow-band single filter 118981
freq.-response masking struct. with reduced complex. for filter design 91068
freq.-time mixed domain optimal filter for moving obj. extraction 106674
generalized polynomial predictor based receiver for nonselective fading channel 74554
H_∞ optimal envelope-constrained FIR filter design with uncertain input 107501
H^∞ equalization 73695
high-speed Booth-algm. FIR archit., A low-complexity 102402
homog. nonlin. digital filters 130043
hybrid form FIR filter with min. cycle-time constraint, optimal design 91071
hybrid pipelined/multiplexed filter archit. 95690
IIR generalized polynomial predictive filters 130064
image denoising, autocorrelation modeling of wavelet coeffs. 94810
image enlargement/reduction, lin.-phase FIR digital filter responses, visual eval. 73208
instantaneous freq. estimator for FIR filters with max. flat freq. response error magnitude 107502
ISI-free FIR filterbank transceivers for freq.-selective channels 130121
JPEG 2000 std., DWT lossless compression, VLSI design 118527
Ka-band pulsed propag. through rain-filled atmos. 105742
L/M rate changer, filter bank struct. 84759
lattice FIR filters, interleaved archit., hardware efficient 91109
least sq. filter design using piecewise polynomial approxs. 130069
lifting scheme design from general wavelet 95699
lin. combination of weighted medians, design 107522
lin. phase FIR filter design, sine basis fn. NN *(Chinese)* 95674
lin.-phase FIR filtering algm., multiplication complexity reduction 102387
lin.-phase FIR filters, optim. using freq. response masking approach 80103
lin.-phase paraunitary FIR filter bank design 107477
LMS adaptive FIR filters, word-length optim. 107563
low complexity FIR filters using factorization of perturbed coeffs. 80084
low delay max. flat lowpass FIR digital filters, transfer fn. 80101
low power FIR filter design for image proc. 125612
low-pass lin. phase filters with equiripple passband and least-sq. stopband 102415
low-power multiplierless archit. synthesis 102410
M-band compactly supported orthogonal symmetric interpolating scaling fns. 95698
M-channel paraunitary filterbanks factorization 84724
mag. recording, PRML read channel, adaptive FIR filtering 70517
Mallows' recursive filter class 130127
max. flat lowpass digital filters, response to polynomial sigs. 84767
max. flat/notch FIR filter design 107478
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
MIMO FIR filters, blind ident., alg. approach 84766
MMSE spectral domain estimators for nonuniform syst. modeling subband adaptive filters 107566
MMSE-DFE for multi-user commun. 107711
model-based adaptive filters, proc./meas.-noise covariance estim. 107493
multichannel array subbanding with adaptive proc., architect. 96537
multichannel sound reprod. syst. using min.-norm-soln. in freq. domain *(Japanese)* 86351
multipath fading channel, MLSE equalization, FIR prefilter design 107687
multiple description coding using optimal biorthogonal filter banks *(English)* 72856
multiplier design, graphical methods, digital filter appls. 101881
multiplier-block based FIR filter structs. implement. on FPGA, transit. anal. 68936
multiplierless cellular networks, lin.-phase filters 102377
multiplierless FIR filters, systematic design algm. 80105
multiplierless low-delay FIR and IIR wavelet filter banks with SOPOT coeffs. 119066
multirate digital filters, fractional polyphase decomp., sub-Nyquist proc. 91111
multirate systs., lin. phase FIR filter design based on fast convolution 130045
multirate Wiener filter, random proc. estim. 107533
multirate/cascaded filters, optim. algms. 107532
multistage adaptive higher-order nonlin. FIR filters, chaotic time series 80082
multiuser DFE of block-spread multirate transms. for QoS wireless networking 84862
near-perfect-reconstruction IIR QMF banks, design using FIR phase-compensation filters 130104
nonlin. discrete time-varying uncertain systs., robust nonlin. H_∞ FIR filtering 84718
nonrecursive digital filters, charact. improvement 118975
nonuniform filterbank struct. for channel precoding 95668
OFDM-OQAM conjug. syst., filter design 106019
optimal Bayesian filter, receding horizon FIR filter, suboptimal algm. 130136
optimal design of FIR filter with discrete coeffs. 91073
optimum compaction FIR filters, line spectrum design 119073
optimum discrete coeff. realization 80107
orthonormal inverse DWT, design and FPGA implement. 86455
output envelope constraints, recursive design, cubic constraint approx. 73658
PAM waveform design using MSE criteria 117889
peak constrained least sq. filters, design 107543
peak constrained least sq. FIR filters with low complexity finite precision coeffs. 91067
polyphase filter, sample rate conversion, Virtix FPGA technol. 102398
portable audio appls., act. noise controller syst., CMOS analogue implement. 97107
PR filterbanks with order one polyphase, eigenstructure charactn. 119000
predictors, adaptive general param. extension 119026
progressive lossless image coding, adapted nonlin. multiresolution decomp. 129777
pseudo QMF banks, design 102381
pulse shaping and jitter-free freq. error detect. and timing recovery, digital filters 73660
QMF bank low delay design using init. filter approach 119005
QMF two-channel approx. lin. phase filter bank design, image compression appl. 73383
radar syst., optimal filters for range-time sidelobe suppression 118984
real-time image proc., convolution operation implemented in FPGA 129586
recursive digital filter model, inverse filtering tech. 130137

FIR filters continued
reduced complexity primitive operator FIR filters for low power dissipation 102379
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
RNS and two's complement syst. FIR filters, tradeoffs 80110
robust H_∞ FIR filtering with sampled-data meas. 130141
robust orthogonal adaptive deconvolution filters 91088
SAR preprocessor, video prefiltering, real-time 3D modular design 86215
SC FIR filter structs., comparison based on CMOS realization and PSPICE simul. 80063
SC image rejection filter for complex IF receivers 68917
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
sig. word decomposed filters, optimal filter length, subfilter coeff. wordlength assignment 102378
sigma-delta decimation filter for pacemaker appl., low power implement. 114876
sigma-delta demodulator, single stage decimator, Laguerre filters 90987
SIMO/MIMO FIR systs., conditional max. likelihood blind ident. 119050
single filter freq. masking FIR filters, narrow- and wide-band designs 80104
software-implemented digital filters, power anal. 102413
space-time array data simul. 107534
speech recogn., automatic, robust, emphasising important modulation spectrum *(Japanese)* 94418
stationary cost fn. adaptation algm., recursive approach 119012
subband perceptual audio coding with nonideal reconstruction filters, optimum bit allocation 73021
switched nonrecursive discrete-time lin.-phase FIR filters 102390
TDD-CDMA systs., FIR RAKE multipath diversity with antenna array 96397
TDMA-based hierarchical cellular systs., mobile speed estim. 108806
TDNNs, time delay dyn. nonlin. neural networks, learning algm., appls. *(German)* 114910
time delay estim. 107554
time-domain equalizer for filter bank-based multicarrier commun. 130256
transceivers with effective band separation 130055
transversal adaptive filtering algm., fast converg. for impulsive environ. 95671
tree-struct. filter banks, orthogonal extension methods 119030
tree-struct. IIR/FIR octave-band filter banks with very low-complexity anal. filters 91060
two-channel filter bank design using constrained optim. 73665
two-channel FIR filter banks with PR and low-delay, design 91054
two-channel IIR/FIR filter banks 130044
two-channel low-delay filter banks using constrained optim., design 107483
two-channel PR filter bank with lin.-phase, design 73640
ultraspherical polynomial based window fns. and appls. 78744
uncoded/chaotic coded speech, robust channel estim./perform. 73037
uterus/foetal heart resons., labour contractions, MUSIC pseudospectral anal. 98253
variable 1D FIR filters with arbitrary magnitude responses, design 68940
variable fractional delay 2D FIR filters, discretization-free design 84756
variable fractional-delay FIR digital filters, discretization-free design 102408
variable fractional-delay FIR filters, discretization-free design 91072
vector color error diffusion halftoning systs., design/anal. 118370
VHDL-based implement. of area- and power-efficient filter archits. 114881
video coding, block-DCT based, low-complexity post-proc. for artifact reduction 95203
Virtex FPGA based high-perform. fine-grained pipelined LMS algm. 91102
VLSI implement., bit-level optimized carry-save addits. 114874
warped DFT, filter design appls. 113839
wideband array-pattern design, superdirectivity and SNR constraints 94196
SiON waveguide technol. compact tunable opt. devices 116746

FIR lasers *see submillimetre wave lasers*

fire retardants *see flameproofing*

fireballs (meteoric) *see meteors*

fireproofing *see flameproofing*

fires
see also accidents; safety
110/20 kV distrib. substation transformer, unanticipated fault studies 77944
ACSR conductor deterioration inspection using solenoid sens. 133752
airborne fire control radar, slowly moving target detect. *(Chinese)* 109230
antenna/chip biosensor using insect species, organic odour mols. 132011
cement plant best safe practices, USA 78562
combustion-resistant vegetable oil-based distribution transformer dielec. coolants 88806
detect., smoke turbulent charact. *(Chinese)* 113424
helmet-mounted uncooled FPA camera/display for firefighting appls. 75648
hyperspectral images, charactn. and delineation of plumes, clouds, and fires 75622
image detect. syst. based on BP neural network *(Chinese)* 129920
insulated-neutral LV power syst. fire safety, steady-state regimes calc. *(Russian)* 99180
NFPA 70E elec. safety Standard changes for yr. 2000 89780
oil indust. fine water mist fire protection syst. 134709
pool fires, multiple species meas., tunable LD spectrosc., FDM use 111479
smoke particles discrim. using IR photoelec. detect. 75534
sulphur crushing operations, ESD protective measures investig. 83122

firmware
batt. state-of-health meas., Cadex 7200 batt. analyser 89136
Bluetooth camera to Internet link, connectivity soln. 119582
Bluetooth data commun. protocol stack, controller firmware *(German)* 130629
data broadcasting software *(German)* 97053
FSP/FSU spectrum analyzers, FS-K5 firmware for GSM/EDGE meas. 86438
IEEE 802.11 WLAN, enhanced MAC implement. 130378
JTAG boundary scan test in high mix mfg. environ. 86404
microprogrammed proc., self-repairing execution unit 125539
mobile commun. systs., data compression, efficient hardware algms., prototyping 96533
Rohde and Schwarz EB200 miniport receiver for coverage and field-strength meas. 86785
service provisioning method using universal subscriber line interface card *(Japanese)* 131011
SMART instrums., fieldbus, safety instrumented systs. 76025
spectrum analyzer, sig. analyzer and firmware for EDGE meas. 86439
steam cogen. power unit, expt. dyn. charact. 112315
thermal power station operator inform. display develop. 123186

fishbone instability
conf., energetic part. mag, confine. syst., Naka, Japan (Oct.1999) 113240

fisheries *see aquaculture*

fission reactor accidents
see also coolant-fuel interactions; fuel element failure
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
Chernobyl nuc. reactor site, Object Shelter, aerosol distrib. 111223
conf., Finnish reactor safety, Espoo, Finland (Nov. 1998) 113239
conf., operating reactor safety, San Francisco, USA (Oct. 1998) 113192
European nuc. indust., lessons from TMI/Chernobyl/Tokaimura 99494
European Pressurized Water Reactor containment design and testing *(Engli* 99520
fast reactors adaptation for improved safety/waste proc. perform. 88536
HTTR modeling, fuel perform./fission gas release predictions, review 1122
Ignalina Nuclear Power Plant, effect of steam line filling with water 12314
Ignalina RBMK-1500 NPP, safety-significant events benchmarking 123143
Japan, nuc. power reactor operation/safety 112251
JCO-Tokai crit. accident, safety mgt., review 87960
Juragua VVER-440 NPP, hypothetical accident seqs. 112276
KAERI severe accident research program, overview 123159
LWR fuel rod behaviour under RIA conditions, DYN3D calc. 99507
N4 PWR NPP, computerised control room, post-accident procedure an 123150
NHR LOCA, coolant tube rupture, expt. anal. 77696
NUPEC containment integrity tests, reactor accident research 123157
Phebus FP tests for LWR accident mgt. 123158
PWR, four-loop, severe accident, SG tube thermal challenge, risks 112269
PWR accident, in-vessel corium retention by external RPV cooling 88546
PWR LOCA anal., energy redistrib. factor estim. method 112239
PWR steam-line break, two fluid hydrodyn., preconditioned Krylov soln. 885
PWRs, high-perform. annular fuel with internal cooling 99521
risk insights for nuc. reactor safety 112258
small-sized HTRs, source term estim., German safety anals. 123136
Soviet-designed reactors, symptom-based emergency operating instructio 112254
SSBWR-200, thermal-hydraulic design and accident anal. *(Chinese)* 11222
Surry Unit 1 PWR, containment H_2 removal by pass. autocatalytic recombi 123118
tooth enamel EPR dosimetry, automated spectra deconvolution routine 1112
VVER-440 condensation syst., LOCA simul., safety anal. *(German)* 12313
WWER power plants, high-energy steam/feedwater line breaks 77702

fission reactor containment
European Pressurized Water Reactor containment design and testing *(Englis* 99520
HTTR modeling, fuel perform./fission gas release predictions, review 11224
JAERI severe accident research, overview 123156
NUPEC containment integrity tests, reactor accident research 123157
Phebus FP tests for LWR accident mgt. 123158
Surry Unit 1 PWR, containment H_2 removal by pass. autocatalytic recombi 123118
VVER-440 condensation syst., LOCA simul., safety anal. *(German)* 12313

fission reactor coolants
see also coolant-fuel interactions
AGR helical boilers, Fe transport/press. loss, chem. control 123164
BREST-OD-300 reactor, two-cct. cooling installation, lead coolant 112250
BWR stabil., coolant direct energy deposition effects 99510
BWR water chem., review 123163
modular advanced reactor main coolant pump canned three-phase IM 11224

fission reactor cooling
see also fission reactor safety; nuclear reactor steam generators
1160 MW NPP reactor maint. project, Sweden *(English)* 112231
BREST-OD-300 reactor, mass transfer of Pb coolant vaps. 133851
BREST-OD-300 reactor, two-cct. cooling installation, lead coolant 112250
BWR regional instabil., TRAC/BF1-ENTREE anal., dens.-wave oscill. 99513
BWR regional instabil., TRAC/BF1-ENTREE anal., Ringhals-1 appl. 99514
conf., Finnish reactor safety, Espoo, Finland (Nov. 1998) 113239
conf., operating reactor safety, San Francisco, USA (Oct. 1998) 113192
HTGR, compact heat exchanger, heat transfer and flow props. *(Japanes* 123168
HTGR gas turbine ultrafine off-set fin syst., design anal. *(Japanese)* 12315
HTR-10, basic single loop simul., coord. control strategy *(Chinese)* 99501
HTR-10, design features, pass. safety, fuel elements *(Chinese)* 99498
HTTR modeling, fuel perform./fission gas release predictions, review 11224
Ignalina Nuclear Power Plant, effect of steam line filling with water 12314
Ignalina RBMK-1500 NPP, safety-significant events benchmarking 123143
Indian AHWR, coupled neutronic-thermohydraulic stabil., delayed neutron 99504
JAERI severe accident research, overview 123156
KALIMER LMR, 2D hot pool thermohydraulic anal., SSC-K code 133850
Korean Next Generation Reactor, feed-and-bleed operation, pilot-operated safet relief valves 99525
Krsko NPP main steamline isolation valve fault, safety anal. 123149
LMR wire-wrapped fuel assemblies, friction factor correls. 112242
LWR fuel rod behaviour under RIA conditions, DYN3D calc. 99507
modular advanced reactor main coolant pump canned three-phase IM 11224
NHR LOCA, coolant tube rupture, expt. anal. 77696
NPP feedwater syst., operational induced vibrs., root cause anal. 77703
nucl. steam generators, tubesheets, FEM 112236
NUPEC containment integrity tests, reactor accident research 123157
pumps perform., entrained air effects 112280
PWR, four-loop, severe accident, SG tube thermal challenge, risks 112269
PWR, U-tube heat transfer/flooding during reflux condensation 99522
PWR LOCA anal., energy redistrib. factor estim. method 112239
PWR steam-line break, two fluid hydrodyn., preconditioned Krylov soln. 8854
PWRs, high-perform. annular fuel with internal cooling 99521
Raman distributed temp. sens., fast reactor JOYO monitoring appl. 97303
SSBWR-200, thermal-hydraulic design and accident anal. *(Chinese)* 112228
supercritical water-cooled reactors, transient criteria, safety anal. 123139
supercritical-press. LWRs, startup thermal considerations 88550
TRIGA MARK-II, steady state/transient thermal-hydraulics 99516
VVER first loop, high-load water-lubricated radial-axial bearings for elec.-pum units 99505
VVER reactor unit thermohydraulic safety anal., review 123148
VVER-1000 NPP steam generators, corros. build-up prediction 123167
WWER power plants, high-energy steam/feedwater line breaks 77702
CsI scintillator, γ/β decay power, reactor safety appl. 76118

fission reactor core control
see also fission reactor instrumentation; fission reactor kinetics; fission reactor safety; reactivity (fission reactors)
10 MW expt. HTGR, emergency supply, automatic control *(Chinese)* 12316
Bushehr PWR, fuel mgt. optim., ANN appl. 133852

on reactor core control continued
BWR, operating experience feedback to enhance safety in Japan 123146
CNP1000 PWR computerised instrumentation-control syst., review *(Chinese)* 77711
Dukovany nuc. plant, I&C syst. refurbishment 123120
ET-RR-1 Egyptian research reactor, fuzzy logic controller 99523
FORMOSA-B BWR in-core fuel mgt. optim. code 123138
Forsmark BWR plant, reactor vessel internals replacement 88539
fuel assembly distrib. in nuc. reactor, optimisation 123162
HTR-10, basic single loop simul., coord. control strategy *(Chinese)* 99501
Ignalina NPP 2nd unit core composit. changes, QUABOX/CUBBOX code verif. 77697
KNU-2 PWR fuel loading, parallel adaptive simul. annealing scheme 99515
Loviisa NPP, advanced VVER-440 fuel assembly operation 77709
LWRs using weapons grade Pu MOX fuel, utility view 112271
marine reactor, in-vessel type control rod drive mechanism 123135
metallic-fueled FBR, pass. safety, waste incineration 99502
N4 PWR NPP, computerised control room, post-accident procedure anal. 123150
NHR LOCA, coolant tube rupture, expt. anal. 77696
NPP, inform. and diagnostic subsystems 112248
NPP unplanned reactor trips, DC supply syst. failure 77695
plant inform. mgt. tasks automation, NPP safety appl. 123147
PWR axial power distrib. control, receding horizon syst. 99503
PWR reloading pattern optim. using GA 99506
Skala-Mikro, reactor control, safety, and automatic-monitoring syst. 112246
SMART integral reactor, seismic event dyn. anal. 123169
Uljin PWR main control room, meas. and anal. of conducted noise 99519
VVER 1000 control syst. upgrade/verification, Temelin plant 123119
VVER-1000 reactors, control and safety systs. develop. 112247
water moderated/cooled reactors, moderator temp. coeff. of reactivity 112245

on reactor decommissioning
see also fission reactor safety; radiation protection; radioactive waste
Chernobyl NPP site solid radwaste treatment facilities *(English)* 122368
COIL size-reduction cutting of radioact.-contaminated struct. 111642
concrete, laser scabbling, thermoelastic anal., reactor decommissioning appls. 105629
power plant decommissioning overview *(German)* 112218
Tokai NPP decommissioning, COSMARD project mgt. database *(Japanese)* 112229
CO_2 fast-transverse-flow discharge CW laser for nuc. reactors fuel channels decommissioning 83049

on reactor design
see also fission research reactors; neutron transport theory; nuclear engineering computing
Bavarian NPPs, notifiable events, regulatory safety criteria *(German)* 77690
BREST-OD-300 reactor, two-cct. cooling installation, lead coolant 112250
CANDU DUPIC fuel-handling costs, conceptual design study 77708
CLWR-TEF tritium rem. handling building, shielding struct. design 99526
CNP1000 PWR computerised instrumentation-control syst., review *(Chinese)* 77711
conf., ANS Meeting, Milwaukee, WI, USA, (June 2000) 89551
conference, reactor integrity engng., Tokyo, Japan (Aug. 1999) 100390
deep pool reactor, economic feasibility of heat supply from simple/safe nuc. plants 77700
Dukovany VVER-440 NPP, fuel cycle and loadings 112262
European Pressurised Water Reactor protection, France-German cooperation, review *(French)* 77699
European Pressurized Water Reactor containment design and testing *(English)* 99520
generic safety issues, probabilistic risk anal. 123153
high temp. nucl. reactors, pebble fuel testing, review 123154
homog. ^{242m}Am-fueled reactor for neutron capture therapy 98621
HTGR, compact heat exchanger, heat transfer and flow props. *(Japanese)* 123168
HTGR gas turbine ultrafine off-set fin syst., design anal. *(Japanese)* 123151
HTR-10, design features, pass. safety, fuel elements *(Chinese)* 99498
Japanese LWR plant life mgt. activities, review 77718
KAERI severe accident research program, overview 123159
Kozloduy PWR upgrade, future plans, review 99511
Krsko NPP safety assess., review 123155
LISA, European FEM-based limit/shakedown anal. project 77705
LMFBR steam generator tubes, water leak detect., act. acoustic anal. *(Japanese)* 123152
Loviisa NPP, advanced VVER-440 fuel assembly operation 77709
LWR plant structural design in Japan 112232
metallic-fueled FBR, pass. safety, waste incineration 99502
N4 PWR NPP, computerised control room, post-accident procedure anal. 123150
NPP automated control and safety systs. 133846
NPP diagnostics, ANN vs. sig. pattern recogn. 88548
NPP operations mgt. systs., review *(German)* 77691
NPP service-related degrad., life prediction 77710
NPP unplanned reactor trips, DC supply syst. failure 77695
nucl. steam generators, tubesheets, FEM 112236
OECD-Halden reactor project, review 77717
PBMR NPP project, South Africa 123171
plant inform. mgt. tasks automation, NPP safety appl. 123147
PWR axial power distrib. control, receding horizon syst. 99503
PWR Pu-burning core designs, safety/operability issues 112272
PWRs, high-perform. annular fuel with internal cooling 99521
Slovenian TRIGA research reactor, epithermal neutron beam for clinical BNCT treatment 122306
SMART integral reactor, seismic event dyn. anal. 123169
supercritical water-cooled reactors, transient criteria, safety anal. 123139
supercritical-press. LWRs, startup thermal considerations 88550
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
VIPER nucl. research reactor design/maint. anal. 123175
VVER NPP modernisation, planning/implement. anal. 123126
Th-loaded crit. thermal-n expts., ^{232}Th nuc. data assess. 112238

ion reactor fuel
see also coolant-fuel interactions; fission reactor fuel preparation; fission reactor fuel reprocessing; fuel element failure; isotope separation; radioactive waste
Beznau PWRs, MOX use 123145
blended HEU fuel use in Tennessee Valley Authority reactors 112274
Bushehr PWR, fuel mgt. optim., ANN appl. 133852
BWR MOX fuel behaviour, core operation, temp./void feedback effects 112273
BWR with nondefective fuel, off-gas source estim. 123137

fission reactor fuel continued
CANDU DUPIC fuel-handling costs, conceptual design study 77708
COGEMA nucl. materials mgt., MOX fuel manufacture, review *(French)* 77698
conf., ANS Meeting, Milwaukee, WI, USA, (June 2000) 89551
conf., Finnish reactor safety, Espoo, Finland (Nov. 1998) 113239
conf., operating reactor safety, San Francisco, USA (Oct. 1998) 113192
Dukovany NPP fuel cycles, safety evals./anals. 112263
Dukovany VVER-440 NPP, fuel cycle and loadings 112262
ET-RR-1 irrad. fuel rods, actinide build-up, BAC calc. 99508
high temp. nucl. reactors, pebble fuel testing, review 123154
HTR-10, design features, pass. safety, fuel elements *(Chinese)* 99498
HTR-10 fuel loading for first crit., VSOP code anal. *(Chinese)* 99499
HTR-10 fuel mgt., burn-up allowance *(Chinese)* 99500
HTTR modeling, fuel perform./fission gas release predictions, review 112240
Ignalina NPP 1st unit reactor core, fuel assemblies, QUABOX/CUBBOX anal. *(Lithuanian)* 123140
LEU plate type research reactor fuel, burnup meas. 112244
Loviisa NPP, advanced VVER-440 fuel assembly operation 77709
LWR fuel rod behaviour under RIA conditions, DYN3D calc. 99507
LWRs using weapons grade Pu MOX fuel, utility view 112271
multipurpose fast reactor, fuel and safety characts. 112243
OECD Halden reactor project fuels testing, safety, burnup, perform. 77716
OECD-Halden reactor project, review 77717
PBMR NPP project, South Africa 123171
PWR Pu-burning core designs, safety/operability issues 112272
PWRs, high-perform. annular fuel with internal cooling 99521
rod inspection, OD rem. field eddy current probe 112249
VVER NPP fuel-rod bundles, crit. heat flux calcs. 77688
Th-loaded crit. thermal-n expts., ^{232}Th nuc. data assess. 112238

fission reactor fuel preparation
see also isotope separation
HV high current thyristors matrix power supply for uranium enrichment 78029
JCO-Tokai crit. accident, safety mgt., review 87960

fission reactor fuel reprocessing
see also isotope separation; radioactive waste
chem./nuc. industries, material issues, condition monitoring, NDT 90612
conf., ANS Meeting, Milwaukee, WI, USA, (June 2000) 89551

fission reactor instrumentation
see also fission reactor monitoring; fission reactor safety; fission research reactors; fusion reactor instrumentation
BWR NPP control loop, implement. and testing *(Chinese)* 112222
CNP1000 PWR computerised instrumentation-control syst., review *(Chinese)* 77711
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
Forsmark BWR plant, reactor vessel internals replacement 88539
ILL sealed microstrip gas chamber operation anal. 132332
JMTR, strain meas. under irrad., capsule type strain gage *(Japanese)* 75894
NPP, inform. and diagnostic subsystems 112248
NPP diagnostics, ANN vs. sig. pattern recogn. 88548
NPP software requirements anal., graphical approach 112225
self-powered neutron detectors sensitivity study 132418
SMART instrums., fieldbus, safety instrumented systs. 76025
Soviet-designed NPPs, safety param. display systs. 112224
two-phase-flow meas. using particle image velocimetry, phasic discrim. 97881
Uljin PWR main control room, meas. and anal. of conducted noise 99519
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
CsI scintillator, γ/β decay power, reactor safety appl. 76118
GaAs epitaxial ^{10}B-coated thermal neutron detectors 121481

fission reactor kinetics
see also fission reactor core control; neutron transport theory; reactivity (fission reactors)
blended HEU fuel use in Tennessee Valley Authority reactors 112274
Bushehr PWR, fuel mgt. optim., ANN appl. 133852
BWR corewide stabil., nonlin. reduced order model 88545
BWR MOX fuel behaviour, core operation, temp./void feedback effects 112273
BWR neutronic sig. conditioning using sing. syst. anal. 77694
FORMOSA-B BWR in-core fuel mgt. optim. code 123138
fuel assembly distrib. in nuc. reactor, optimisation 123162
Ignalina NPP 1st unit reactor core, fuel assemblies, QUABOX/CUBBOX anal. *(Lithuanian)* 123140
Indian AHWR, coupled neutronic-thermohydraulic stabil., delayed neutrons 99504
KNU-2 PWR fuel loading, parallel adaptive simul. annealing scheme 99515
PWR Pu-burning core designs, safety/operability issues 112272

fission reactor materials
see also fission reactor coolants; fission reactor fuel; materials handling; moderators; radioactive waste
BWRs, weld-induced residual stresses, num. modelling 77704
concrete, laser scabbling, thermoelastic anal., reactor decommissioning appls. 105629
condition-depend. NDT for reactor component safety 77707
conf., ANS Meeting, Milwaukee, WI, USA, (June 2000) 89551
conference, reactor integrity engng., Tokyo, Japan (Aug. 1999) 100390
German LWR NPPs, piping degrad., ageing-related aspects 112235
Ignalina nuc. power plant components, NDT activity 88549
Inconel PWR SG tubes, maint., probabilistic fracture mech. 112234
JMTR, strain meas. under irrad., capsule type strain gage *(Japanese)* 75894
LISA, European FEM-based limit/shakedown anal. project 77705
NPP cable ageing, nondestructive diagnosis 101568
nuc. struct. components, probab. fracture mech., Japanese activities 112233
press. vessel aging eval. by nondestructive techs. 77714
steam generator tube, eddy current test, crack shape reconstr. 101612
steam generator tube eddy current testing, wavelet transform 101606
steam generator tube flaws, eddy current sig., ANN inversion 101598
steam generator tube inspection, rem. field eddy current tech. 112237
steel, austenitic stainless, residual fatigue lifetime in NPPs 77706
steel, duplex stainless, NDT, thermoelec. power meas. 101544
WWER press. vessel, radiation damage control 112260
WWER RPVs, Czech/Slovak codes and stds., life assess. 112261

fission reactor monitoring
see also fission reactor instrumentation; fission reactor kinetics; fission reactor safety
10 MW expt. HTGR, emergency supply, automatic control *(Chinese)* 123161
BWR neutronic sig. conditioning using sing. syst. anal. 77694
Ignalina NPP 1st unit reactor core, fuel assemblies, QUABOX/CUBBOX anal. *(Lithuanian)* 123140
Loviisa NPP, advanced VVER-440 fuel assembly operation 77709
multiplexed FBG sens., gamma-neutron radiation effects obs. 97319

fission reactor monitoring continued
N4 PWR NPP, computerised control room, post-accident procedure anal. 123150
NPP, inform. and diagnostic subsystems 112248
NPP diagnostics, ANN vs. sig. pattern recogn. 88548
NPP service-related degrad., life prediction 77710
nuc. power indust. safety, intell. syst. selection 112281
Paks VVER-440 units, PLASMA on-line safety monitoring, EOP visualiz. module 112230
Raman distributed temp. sens., fast reactor JOYO monitoring appl. 97303
Skala-Mikro, reactor control, safety, and automatic-monitoring syst. 112246
CsI scintillator, γ/β decay power, reactor safety appl. 76118
GaAs epitaxial ^{10}B-coated thermal neutron detectors 121481

fission reactor operation
see also fission reactor cooling; fission reactor core control; fission reactor monitoring; fission reactor safety
Beznau PWRs, MOX use 123145
BWR NPP control loop, implement. and testing *(Chinese)* 112222
BWR water chem., review 123163
China, status of nuc. power indust. 133848
conf., ANS Meeting, Milwaukee, WI, USA, (June 2000) 89551
Dukovany NPP fuel cycles, safety evals./anals. 112263
HTR-10 fuel loading for first crit., VSOP code anal. *(Chinese)* 99499
Japan, nuc. power reactor operation/safety 112251
Japanese LWR plant life mgt. activities, review 77718
Japanese utilities, safety lessons from overseas NPPs 99495
Ling Ao PWRs, final stages of constr. 133853
Loviisa NPP, advanced VVER-440 fuel assembly operation 77709
modular advanced reactor main coolant pump canned three-phase IM 112241
NEA/IAEA operating experience studies, NPP safety 112279
NPP operations mgt. systs., review *(German)* 77691
NPP perform./safety improvements, IAEA tech./eng. appls. 123142
NPP service-related degrad., life prediction 77710
OECD Halden reactor project fuels testing, safety, burnup, perform. 77716
OECD-Halden reactor project, review 77717
Paks VVER-440 units, PLASMA on-line safety monitoring, EOP visualiz. module 112230
parallelized higher-order generalized depletion perturb. theory 99509
plant inform. mgt. tasks automation, NPP safety appl. 123147
PWR operations, occupational dose, ALARA, non-parametric anal. 111247
Soviet-designed NPPs, safety enhancement, simulators, technol. transfer 112253
Soviet-designed NPPs, safety improvements, US DOE efforts 112252
Soviet-designed NPPs, safety param. display systs. 112224
Soviet-designed reactors, symptom-based emergency operating instructions 112254
VIPER nucl. research reactor design/maint. anal. 123175
Waterford 3 PWR refuelling outage, maint., review 99512
WWER type NPP qualification 112266

fission reactor physics
see also neutron transport theory
BREST-OD-300 reactor, mass transfer of Pb coolant vaps. 133851
BWR corewide stabil., nonlin. reduced order model 88545
BWR MOX fuel behaviour, core operation, temp./void feedback effects 112273
BWR regional instabil., TRAC/BF1-ENTREE anal., dens.-wave oscill. 99513
BWR regional instabil., TRAC/BF1-ENTREE anal., Ringhals-1 appl. 99514
BWR stabil., coolant direct energy deposition effects 99510
ET-RR-1 irrad. fuel rods, actinide build-up, BAC calc. 99508
HTR-10 fuel loading for first crit., VSOP code anal. *(Chinese)* 99499
HTR-10 fuel mgt., burn-up allowance *(Chinese)* 99500
Ignalina NPP 2nd unit core composit. changes, QUABOX/CUBBOX code verif. 77697
KNU-2 PWR fuel loading, parallel adaptive simul. annealing scheme 99515
micromapping tech. for alpha/fission tracks 132441
PWR reloading pattern optim. using GA 99506
TRIGA MARK-II, steady state/transient thermal-hydraulics 99516
Th-loaded crit. thermal-n expts., ^{232}Th nuc. data assess. 112238

fission reactor safety
see also fission reactor accidents; fission reactor containment; fission reactor cooling; fission reactor core control; fission reactor instrumentation; fission reactor monitoring; reactivity (fission reactors)
10 MW expt. HTGR, emergency supply, automatic control *(Chinese)* 123161
900 MWe French NPPs, periodic safety review, plant life mgt. 112259
Bavarian NPPs, notifiable events, regulatory safety criteria *(German)* 77690
Beznau PWRs, MOX use 123145
blended HEU fuel use in Tennessee Valley Authority reactors 112274
BWR, operating experience feedback to enhance safety in Japan 123146
BWR corewide stabil., nonlin. reduced order model 88545
BWR MOX fuel behaviour, core operation, temp./void feedback effects 112273
BWR neutronic sig. conditioning using sing. syst. anal. 77694
BWR NPP struct. integrity/reliab. assess. *(Chinese)* 77693
BWR regional instabil., TRAC/BF1-ENTREE anal., dens.-wave oscill. 99513
BWR regional instabil., TRAC/BF1-ENTREE anal., Ringhals-1 appl. 99514
BWR stabil., coolant direct energy deposition effects 99510
BWR water chem., review 123163
BWR with nondefective fuel, off-gas source estim. 123137
BWRs, weld-induced residual stresses, num. modelling 77704
cable aging assess., discrete wavelet transform appl. 99524
CLWR-TEF tritium rem. handling building, shielding struct. design 99526
condition-depend. NDT for reactor component safety 77707
conf., ANS Meeting, Milwaukee, WI, USA, (June 2000) 89551
conf., Finnish reactor safety, Espoo, Finland (Nov. 1998) 113239
conf., operating reactor safety, San Francisco, USA (Oct. 1998) 113192
conference, reactor integrity engng., Tokyo, Japan (Aug. 1999) 100390
cooling pumps perform., entrained air effects 112280
deep pool reactor, economic feasibility of heat supply from simple/safe nuc. plants 77700
Duke NPPs, plant safety systs. experience, config. control 112268
Dukovany NPP, island mode operation tests, LOOSP protection 112264
Dukovany NPP fuel cycles, safety evals./anals. 112263
Dukovany VVER-440 NPP, fuel cycle and loadings 112262
EDF NPP maint., safety, service providers, review *(French)* 88541
electronic pers. dosimetry syst., Oldbury-on-Severn power station 87997
European nuc. indust., lessons from TMI/Chernobyl/Tokaimura 99494
European Pressurised Water Reactor protection, France-German cooperation, review *(French)* 77699
FORMOSA-B BWR in-core fuel mgt. optim. code 123138
generic safety issues, probabilistic risk anal. 123153
German LWR NPPs, piping degrad., ageing-related aspects 112235
German NPP sim., personnel training, safety, review *(German)* 99478

fission reactor safety continued
goals defn., nuc. facilities/power plants 99527
homog. ^{242m}Am-fueled reactor for neutron capture therapy 98621
HTGR gas turbine ultrafine off-set fin syst., design anal. *(Japanese)* 1231
HTR-10, design features, pass. safety, fuel elements *(Chinese)* 99498
human error probab., human model simul. 112226
Ignalina NPP 1st unit reactor core, fuel assemblies, QUABOX/CUBBOX *(Lithuanian)* 123140
Ignalina nuc. power plant components, NDT activity 88549
Inconel PWR SG tubes, maint., probabilistic fracture mech. 112234
Indian AHWR, coupled neutronic-thermohydraulic stabil., delayed neut 99504
JAERI severe accident research, overview 123156
Japan, nuc. power reactor operation/safety 112251
Japanese LWR plant life mgt. activities, review 77718
Japanese utilities, safety lessons from overseas NPPs 99495
JCO-Tokai crit. accident, safety mgt., review 87960
KALIMER LMR, 2D hot pool thermohydraulic anal., SSC-K code 13385
Khmelnitsky 2 and Rovno 4 NPPs modernisation 88540
Korean Next Generation Reactor, feed-and-bleed operation, pilot-operated sa relief valves 99525
Kozloduy PWR upgrade, future plans, review 99511
Krsko NPP main steamline isolation valve fault, safety anal. 123149
Krsko NPP safety assess., review 123155
Krsko PWR, degraded SG tubes maint., probabil. approaches 112270
LISA, European FEM-based limit/shakedown anal. project 77705
LMFBR steam generator tubes, water leak detect., act. acoustic anal. *(Japan* 123152
Loviisa NPP, advanced VVER-440 fuel assembly operation 77709
LWR plant structural design in Japan 112232
metallic-fueled FBR, pass. safety, waste incineration 99502
Mochovce WWER 440/V213 NPP, safety measures for reliab. 112278
multipurpose fast reactor, fuel and safety characts. 112243
NEA/IAEA operating experience studies, NPP safety 112279
NHR LOCA, coolant tube rupture, expt. anal. 77696
NPP, inform. and diagnostic subsystems 112248
NPP, PSA importance measures overview 99491
NPP automated control and safety systs. 133846
NPP cable ageing, nondestructive diagnosis 101568
NPP diagnostics, ANN vs. sig. pattern recogn. 88548
NPP feedwater syst., operational induced vibrs., root cause anal. 77703
NPP operations mgt. systs., review *(German)* 77691
NPP perform./safety improvements, IAEA tech./eng. appls. 123142
NPP PSA, MMI eval., HEROS ES 88542
NPP service-related degrad., life prediction 77710
NPP technol., quality mgt. *(German)* 99489
NPP unplanned reactor trips, DC supply syst. failure 77695
NPPs, licensee event reports, latency, error detect. 88543
nuc. power indust. safety, intell. syst. selection 112281
nuc. safety coaching culture, 360-deg assess. proc. 99496
nuc. struct. components, probab. fracture mech., Japanese activities 112233
OECD Halden reactor project fuels testing, safety, burnup, perform. 77716
OECD-Halden reactor project, review 77717
Olkiluoto BWR NPP, maint. failures anal. 99492
on-line sig. trend identif., fuzzy-logic-based methodology 99517
operating experience with NPPs 2000 *(German)* 99488
operating NPPs, decision proc. improvements for safety 112257
operating reactor safety and regulation 123144
Paks NPP, Maintenance Training Center *(English)* 99490
Paks VVER-440 units, PLASMA on-line safety monitoring, EOP visualiz. m ule 112230
PBMR NPP project, South Africa 123171
PHWR reactor, US meas. of gap between calandria tube and liq. injection sh down syst. tube 77715
plant inform. mgt. tasks automation, NPP safety appl. 123147
power plant reliab. specs. distrib. using Markov graphs 88535
power plants, safety culture, deficiencies ident. methodology 99528
power station turbines life eval./anal. *(Chinese)* 77692
press. vessel integrity, conf., Rockville, MD, USA (Jul.2000) 89513
PSA activities in Slovak Republic 112277
PSA in nuc. regulatory procedures, ILK recommendations *(German)* 12316
PWR, U-tube heat transfer/flooding during reflux condensation 99522
PWR press. vessel, fallen objs. retrieval, teleoperated robotized syst. 12312
PWR Pu-burning core designs, safety/operability issues 112272
RBMK safety-related maint. improvements, technol. transfer 112255
reliab. anal. using Petri nets 123131
risk insights for nuc. reactor safety 112258
Skala-Mikro, reactor control, safety, and automatic-monitoring syst. 112246
Slovak VVER-440 NPPs, safety upgrades and modernization 112265
SMART instrums., fieldbus, safety instrumented systs. 76025
SMART integral reactor, seismic event dyn. anal. 123169
Soviet-designed NPPs, operational safety enhancements, training 112223
Soviet-designed NPPs, safety enhancement, simulators, technol. transfer 112
Soviet-designed NPPs, safety improvements, US DOE efforts 112252
Soviet-designed NPPs, safety param. display systs. 112224
Soviet-designed reactors, multi-national safety assistance 112275
Soviet-designed reactors, symptom-based emergency operating instructi 112254
steel, austenitic stainless, residual fatigue lifetime in NPPs 77706
supercritical water-cooled reactors, transient criteria, safety anal. 123139
supercritical-press. LWRs, startup thermal considerations 88550
TEPCO activities for better safety culture after JCO accident 99497
TEPCO NPPs, safety culture enhancement by safety goal use 99493
Tokai NPP decommissioning, COSMARD project mgt. database *(Japane* 112229
TRIGA MARK-II, steady state/transient thermal-hydraulics 99516
Ukraine/Russia, in-service reactor inspection technol. improvements 112256
Ukrainian nuc. power status, load factors, radwaste issues 112227
US NRC risk informed regulatory activities, guidance develop. 112267
VIPER nucl. research reactor design/maint. anal. 123175
VVER NPP modernisation, planning/implement. anal. 123126
VVER reactor unit thermohydraulic safety anal., review 123148
VVER-1000 reactors, control and safety systs. develop. 112247
Waterford 3 PWR refuelling outage, maint., review 99512
WWER press. vessel, radiation damage control 112260
WWER RPVs, Czech/Slovak codes and stds., life assess. 112261
WWER type NPP qualification 112266
CsI scintillator, γ/β decay power, reactor safety appl. 76118

on reactor theory
see also fission reactor instrumentation; fission reactor kinetics; fission reactor physics; neutron transport theory; nuclear engineering computing
3WR NPP struct. integrity/reliab. assess. *(Chinese)* 77693
nodular advanced reactor main coolant pump canned three-phase IM 112241
arallelized higher-order generalized depletion perturb. theory 99509
ower plant reliab. specs. distrib. using Markov graphs 88535
ower station turbines life eval./anal. *(Chinese)* 77692
WR accident, in-vessel corium retention by external RPV cooling 88546
WR LOCA anal., energy redistrib. factor estim. method 112239
afety systs., reliab. anal. using Petri nets 123131
VER NPP fuel-rod bundles, crit. heat flux calcs. 77688
VER nuc. power stations, Russian thermohydraulic simul. codes 77687
VER-1000 NPP steam generators, corros. build-up prediction 123167
vater moderated/cooled reactors, moderator temp. coeff. of reactivity 112245
on reactor thermohydraulics *see fission reactor cooling*
on research reactors
see also fission reactor instrumentation
0 MW expt. HTGR, emergency supply, automatic control *(Chinese)* 123161
ET-RR-1 Egyptian research reactor, fuzzy logic controller 99523
ET-RR-1 irrad. fuel rods, actinide build-up, BAC calc. 99508
HTTR modeling, fuel perform./fission gas release predictions, review 112240
MTR, strain meas. under irrad., capsule type strain gage *(Japanese)* 75894
LEU plate type research reactor fuel, burnup meas. 112244
eutron use in nuc. med. 122167
lovenian TRIGA research reactor, epithermal neutron beam for clinical BNCT treatment 122306
TRIGA MARK-II, steady state/transient thermal-hydraulics 99516
JTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
VIPER nucl. research reactor design/maint. anal. 123175
3 neutron capture therapy, suitability of OSU research reactor 98651
GaAs epitaxial ^{10}B-coated thermal neutron detectors 121481
res *see cracks*
L *see optical fibre subscriber loops*
d point arithmetic
AMR speech codec, noise suppression syst. *(English)* 74489
orthogonal cosine-modulated filter banks, fixed-point arith. 91053
BLAST algm., fast sq.-root implement. 108613
CDMA receiver, steepest descent algm., systolic implement. 119205
CMOS inner product proc., 3D vol. rendering 102216
complex matrices, sq. roots/sign fn., iter. 78760
concatenated codes with interleavers, design of fixed-point iter. decoders 72821
differentiable mapping, compactness condition 124564
digital baseband predistorter using calib. memory, perform. 108576
DSP, configurable, bit-width optim., multi-interval anal. 102208
DSP algms. implement., automatic word length determ. method 102248
DSP core FPGA implement. for full rate/half rate GSM vocoders 74768
DSP fixed-point implement., cepstral vocal tract modelling *(English)* 73034
DSP fixed-point pulse timing based on high-precision division tech. 130070
DSP systs., combined word-length optim. and high-level synthesis 90956
FIR canonic signed digit Chebyshev filter design 68934
formal property verification, abstraction refinement, formal, simul. and hybrid engines 125430
fuzzy topol. space, variational principle/fixed point theorem 113938
IIR multiplierless ellipt. filters, cascade and parallel realizations 130073
lin. phase FIR filter design, appl. of SPT-term distrib. of CSD nos. 80109
LMS adaptive FIR filters, word-length optim. 107563
mag. recording, head-media interact., max. principle 70543
MPEG-2 AAC decoder, design optim. 118103
MPEG-audio layer III algm. for 16-bit DSP 79951
multiband excitation-LPC vocoder implemented by fixed-point DSP, 1.8 kbps *(Chinese)* 85422
Neimark-Sacker bifurcation param. values, fixed point calc. method *(Japanese)* 68534
polyphase N-path IIR struct., quantization effects 114877
quasi-equilib. problems, fixed-point theorem 113941
RISC µP with DSP functionality, 32 bit, rapid prototyping 68845
RLS systolic array proc. 79941
teletraffic, Erlang fixed-point iter. scheme 73762
tunable recursive bandpass filters, finite word length effects 91101
vector optim., existence of efficient results 100925
WDF design and implement. 125609
d point semantics *see programming language semantics*
ne sprayed coatings *see spray coatings*
ne spraying *see spray coating techniques*
neproofing
see also fires
3-phase bridge rectifier, earth faults simul., safety protection *(Polish)* 99806
brominated flame retardants alternatives survey 100576
combustion-resistant vegetable oil-based distribution transformer dielec. coolants 88806
curtain-wall-type PV module, fire-proofing encapsulation materials 112996
EM radiation protection, seals and screening *(German)* 128796
emergency power supplies, components, ccts., design *(Italian)* 88953
EVA-based encapsulants develop., flame retardant, fast curing, p-Si arrays 100045
fire-retardant cable cpds., toxicity aspects 69292
halogen-free systs., flame retardant materials for packaging 67572
increased safety induction machine design, develop. and testing 99665
PCB manufacture, halogen-free flame-retardant materials 80496
polysiloxane foil cct. carrier technol. *(German, English)* 67590
Pb/halide-free green IC packaging 124363
Sn(-Cu) surface finishes for Pb-free packaging 67617
es, solar *see solar flares*
h lamp annealing *see incoherent light annealing*
h lamps
flash-lamp-pumped solid-state lasers, prog. waveform-pulsed power source 93563
flashlamp-pumped dye laser radiation SHG 117459
high power laser amps., slab cavity cleanliness *(Chinese)* 82703
portable equipt., ZXSC100 integrated DC-DC converter chips 123580
solar panels, state-of-the-art, characterisation, large area testing 112961
^{3}He-$XeBr_2$ nuc.-pumped flashlamp sources for nuc.-pumped lasers 128047
I_2 short-pulse photolytic laser 128040
Nd:YAG laser precise microstructuring, metallic surface wear props. improvement 72121
Nd^{3+}:$GdCa_4O(BO_3)_3$ self-freq.-doubled pass. Q-switched laser 71749
Xe flashlamp tube, residual stress distrib. meas. 97851
flash lamps continued
Xe flashlamps, bright choice for illum. 113129
flash memories
32-bit microcontrollers, direct and virtual memory mgt. *(German)* 68826
32-bit microcontrollers, memory mgt. facilities, flash memory, caches *(German)* 68814
bandwidth optim., ramped gate prog. tech. 90917
bidirectional tunneling program/erase NOR-type 3D flash memory cell 79881
body-effect-assisted NOR-type multilevel cct. 79870
cell arrays, SILC charactn. tech. 79896
CMOS flash memory technol., quasi-virtual ground array, embedded appls. 68799
CMOS NOR-flash memory, low power techs. 102149
CMOS RISC µP cache memory redundancy tech., inverse-gate-electrode flash 125566
data retention of flash memory, 0.25 µm, plasma charging/mobile ion effects 102164
device technols., review 90905
disturbances, modeling and test 102135
dual floating gate flash memory cell, multilevel operation 79869
EEPROM, p-channel/n-channel, reliab. comparison 79895
EEPROM cell, ONO split gate channel dielec. 79868
erratic bit anal. 79889
field-evolvable hardware based on flash memory-incorp. µP 90954
floating gate memory cell, capacitive coupling coeffs. 102167
Hitachi divided bit-line microcontrollers with flash memory *(German)* 125559
intell. storage of pers. video files *(German)* 70518
interpoly dielec. deposited on nitrided-polysilicon, NVM devices 79877
inverse gate electrode flash technol., CMOS proc. compatible for SoC appl. 102180
inverse gate electrode flash technol., CMOS proc. compatible, for syst.-on-a chip 90906
Mitsubishi M16C/62 16-bit µCs with DINOR flash-on chip *(Spanish)* 102222
MNOS NVM technol., current status/future prospects 90904
MOS capacitors, polyoxide films for flash memories, low temp. growth 103211
MOSFET flash EPROM devices, lateral profiling of interface traps and oxide charge, charge pumping 114763
multi-level flash memory, detrapping-induced threshold voltage shift, anal. method 125472
multilevel analog flash memory, prog. method 114899
multilevel flash EEPROMs, optimized programmed threshold voltages 102123
multilevel flash memories, high-speed low-power sense comparator 68793
multilevel flash memories, program word-line voltage generator 68794
multilevel storage, channel hot electron prog. 102166
non-volatile memories for microsystems in automotive appls, reliab. 114765
NOR-type flash memory cells, data retention failure 79893
NVM chips for airborne recce syst., evolving technol. 99111
PCI bus expansion card with floating point DSP, develop. *(Slovenian)* 97153
portable devices flash memory, power consumption reduction 114753
proc. flow develop., circ. resist residue defects 102141
read disturb reliab., appl.-specific usage model 79898
recent advances *(Japanese)* 79885
reliab. of flash EEPROM by annealing after self-aligned source dry etching 90918
self-convergent MOS flash-memory prog. scheme for MV and analog data storage 102438
SoC analog non-volatile storage syst. for audio sigs. with sig. conditioning for mobile commun. devices 102436
source-side-injection cell, capacitance coupling ratio 79871
split-gate flash device, registration and proximity effect 102156
split-gate flash EEPROM coupling coeff. meas. method without extra test struct. 102163
STI, T-shaped technol. 81050
submicron CMOS technol., current mode sense amps. 68589
submicron stacked-gate flash EEPROM cell, source-bias program charact. 114751
SyncFlash memory, high perform. sync. flash device 68803
TEOS oxide on polysilicon films, stacked struct., RTA in N_2O ambient, N incorp. 103445
thin oxide flash EEPROMs, anom. cell cond. mechanism 79894
tunnel oxide nitridation, gate disturbance degrad. 79872
video sens. sig., high-speed great-capacity storage/proc. 86444
voice reprod., SAMI, ISD technol. 120592
word-line read voltage regulator for multimegabit multilevel flash memories 90915
CdS QD, self assembled ordered arrays, C-V charact. 126194
SiN tunnel dielec. flash memory cell, 55 Å EOT, demo. 114773
$SiO_2/SiO_xN_y/SiO_2$ dielec. film for flash memory by thermal oxid. of nitride 91914
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795
Xe plasma electron flood gun for GSD-200E^2 high current implanter 115581
flash photolysis *see photolysis*
flashover
275 kV AC glass insulator strings, light nonuniform pollution, flashover 123042
ceramic capacitors, voltage withstanding rating determ. 80444
composite insulators, unidentified power freq. flashover expts. *(Chinese)* 112122
dielec. strength lightning impulse testing, humidity correction factor 92593
distrib. lines, lightning performs., computational methods sensitivity 112029
distrib. porcelain suspen. insulators, nonsoluble indust. dust effects *(Korean)* 123039
FED spacers, charging and reliab. effects 109907
HV towers, mobile phone base station, safety aspects 133772
hydropower plant transformer transfer voltage countermeasure study 99582
insulator AC pollution flashover voltage, acid wet precip. *(Chinese)* 88467
neg. pre-stressed conductor-plane gaps sparkover, pos. switching impulse voltages 91530
outdoor HV porcelain insulators, RTV coatings, leakage current tests 77448
overhead distrib. line lightning overvoltage stat. eval. 112142
polluted insulators, leakage current envelope, level crossing anal. 112116
polluted porcelain insulators, dielec. behaviour studies 112115
polymer housed metal oxide surge arresters durability, impulse current stresses 133801
pos. direct voltage pre-stressing rod conductor gaps, sparkover 91531
power cable insulation, ground shield semicon, resist. 112099
std. sphere gaps sparkover, field utilization factor/elec. fields study *(Japanese)* 81655
steam-turbine generator CHP plants, lightning effects reduction 112305

flashover continued
suspen. insulator, artificially polluted, leakage current waveforms, freq. characts. 112125
C gun prototype syst. for plasma opening switches 99850
SF_6-N_2 gas mixture, creeping discharge under neg. μs pulse voltage, barrier shape effects *(Japanese)* 127153

flat panel displays
3D displays, scanning ripple illum. 97763
21st century FPD technol. *(Japanese)* 121122
AC PDP, LaF_3-coated MgO protecting layer 86833
AC PDP employing ramping reset pulse, addressing charact. 109875
AC surface-discharge PDP, ramped-sq. sustain waveform, luminous effic. 86873
ac surface-discharge plasma displays, barrier ribs effect 97641
act. matrix flat panel imagers, front-end electronics for imaging detectors 132450
act.-matrix FEA for next-generation FEDs 97757
aerospace defense displays in 21st century 98910
AMLCD, air-bridge-type gate-data-line crossover 86879
AMLCD monitor, digital controls, VLSI implement., PanelLink 86896
AMLCD TFT array, five-mask proc., low-cost, high-yield/perform. 86857
anisotropic conducting adhesive used as flex-to-card interconnection, characts. 113529
arbitrarily configurable customer tailored instrum. for vehicle appls., LCD units 124014
attractive FPD, review 102922
automotive appls. 97645
autostereoscopic 3D displays, wide FOV optics 97762
beam steering device for large-area displays 109904
clinical image review using act.-matrix LCD, comparison with CRT displays 97631
co-planar color PDPs, T-shaped electrodes, luminance and defn. 97722
colour PDP module, NEC product lineup and technol. 121104
coplanar PDP, elec. cct. anal., discharge model 86875
CRT, field emission technol. 132100
CRT studies *(Chinese)* 132108
deflection yoke design for color monitors and CRTs with flat panels 97718
diamond ultrananocrystalline films, low temp. MW PECVD growth for field emission appls. 68260
dot matrix digital display telecontrol wall calendar *(Chinese)* 86870
double-gate field emission devices, geom. effects simul. 80582
electrostatic printing-based mfg. procs. for electronics industries 101462
FEA with Mo tip, gate insulator etching influence obs. 97706
FED, carbon nanotube cathode 75809
FED, nonevaporable getter, CW IR laser activation 69420
FED indicator using screen-printed C nanotube emitters 86826
FED panel syst. buildup, phosphor ageing effect 97740
field-emission FPD, fully sealed carbon nanotube design 109885
Flatron CDT, near contact exposure and interchangeable mask 97731
fluoresc. 1,2-oxazole cpd. synthesis for organic LED FPD appls. 109865
full-colour pass.-matrix organic EL displays 121105
hand-held portable electronic products appls. 97695
hazardous-area installations, FPD 132109
holographic microstruct. for large-area appls., fab. 117532
image interpolator with image improvement 132105
integral-colour plastic LCD, polaris. control, pass. retarders 109880
ion shower doping syst. for LPS-TFT LCD prod. *(Japanese)* 86868
Korean display indust. 97596
large, inexpensive FPDs for TV, iFire develop. 113434
large-area photomasks for display appls. 75808
large-size TFT-LCD panel, air-bridge type gate-data line-crossover, sig. delay 75803
laser glass cutting, FPD prod. 78602
LCD monitor controller IC, integrated ADCs, high perform. 86895
LCD/plasma flat displays for TV/computers *(German)* 75802
liq. cryst.-on-Si microdisplay fab. using std. foundry proc. flow 86869
low energy electron emitter panel, planar cathode 97714
LVDS digital display interface 86888
med. imaging, CRT-FPD transitional challenge 97710
multicolour OLED fab., integrated screen/thermal transfer printing 86805
multilayer stacked EL device concept, luminance enhancement 97667
NIST colorimetric calib. facility for displays 97128
OLED controllable doping, thermal transfer approach 86806
OLED displays, perform. status & future prospects 121099
OLED on polymer substrs. 104975
oligothiophene modified blends, tunable white light generation, Forster transfer 116921
organic EL materials/devices, symp., Hong Kong (Jul. 2000) 100421
organic LEDs, mol. design *(Japanese)* 82414
PDP fluoresc. patterns, automated rapid defect inspection algm. 121130
PDP HDTV, color temp. improvement, driving scheme 120543
PDP technol. for large size TV screens, future perspectives 132099
PDPs, secondary electron yield of insulator cathodes 109856
phosphor screen, cathodolum., field effect diode panel sealing proc. effects 75791
pixellized displays, video proc. technology 86884
Poly-Si TFTs for plastic substrs. 97624
polysilicon annealing using high power excimer laser 91935
polysilicon FPD driver ccts., low temp., RTP crystn. 97728
polysilicon TFT, low-temp., excimer laser long-axis scans 86851
polysilicon TFT light emitting polymer high-resoln. monochrome display 97602
power LEDs, lighting appls. 82394
PPV chem. struct., side groups modif., enhanced photolum., FPD appl. 109874
QVGA LCaD panel, small-size, on-board controller, portable appl. 97655
rapid cooling dual slot load locks for LCD 109854
reflective stacked crossed guest-host TFT-driven monochrome reflective display panel, 4-inch 97709
repair practices, TAB/PCB/polariser/backlight rework 97729
retarder stack technol. for colour manipulation, polaris. control 109883
RGB thin film FED phosphors, chromaticity, stabil., excitation 97613
scan and data driver LSIs for high-resoln. and large-size AC PDPs 97736
sealed flat-panel FED, nondestructive real-time press. meas. method 132216
substr. defect detect. using homog. oriented NLC 97606
TFT LCD fab., ion doping syst., large area line beam form. 115535
TFT-LCD develop. using 1 Hz/15 J excimer laser annealing 97642
TFT-LCD panel, timing meas. & simul., pixel macro models 97738
ThinCRTL, field emission FPD, electron focusing 97692
transparent dielec. material for PDP front-panel, props. 97610
twisted nematic LCD, wide VA photoaligned plastic films 86840
X-View, flat panel real-time pixel imaging syst. for X-ray detect. 121786
AlO_x, porous, anodic, nanoscale field emission array by self-organisation 102926

flat panel displays continued
C nanotube array, field emission, FPD *(Japanese)* 80530
C nanotube cathode flat-panel struct., FED 132103
C nanotube, field emission, HV triode FPD 109894
C nanotube tip, adsorbed water mols., field-emission, DFT 125960
C nanotubes, fab. & field emission, CVD 125953
$CaAl_2O_4:Eu^{2+}$ blue-emitting phosphor films, PLD, post annealing 127936
GaN, EL device, powder prep., AC operation 82370
In-Zn composite oxide/AgPd multilayer coatings for FPD, alkali durab 86822
MgO films via sol-gel proc. for appl. to large-size PDPs 97608
MgO nonuniform erosion in AC PDP, opt. method 102946
MgO-$CaO(Y_2O_3)(SrO)(ZnO)(Al_2O_3)(TiO_2)(ZrO_2)$ protective layer densifica AC PDP 97617
MgO-ZrO_2 protective films, electron beam prep., plasma display appl. 792
Mo FEA, frit sealing, emission characts., ambient gas influence 97666
a-Se based direct-detect. act. matrix flat panel imager, DQE 98526
a-Si TFT LCD of SXGA class, universal controller, interpolation algm. 97
a-Si film crystn., long-pulse excimer laser annealing 103235
a-SiN_x:H microcavities, DBR fab. 93331
SiON thin-film opt. coatings for FPD 97627
a-Si technol., digital cct. stabil. 114859
upconversion phosphors, recent advances, new appls. 104932

flaw detection
see also crack detection
1D struct., local defect detect./recogn. 118659
2D conductor flaw detect., SQUIDs, boundary shape ident. 79495
3D computer vision, surface shape meas. and NDT 118410
3D defect charactn., multisens. fusion, wavelet basis fn. neural net 101600
advanced US techs. for eval. of materials 99100
air-coupled US NDT, improved transducers 114517
aircraft inspection, computer-aided tap test syst., mag. cam 122498
aircraft maint., phase stepping shearography, improved software 122496
aircraft struct., NDE, multiplexed SQUID array 70965
anisotropic XRD image mottling effects, energy dispersive meas. 101586
ANN embedded automated inspection quality mgt. syst. for mfg. indust 113739
B-scan US microscope for microflaw inspection/subsurface imaging 11449
BGA substr. conducting path defects, AOI 100611
CMOS ICs, weak chips, MINVDD testing, min. supply voltage value 104
conference, reactor integrity engng., Tokyo, Japan (Aug. 1999) 100390
CSP/micro-BGA proc./damage assess. with acoustic micro imaging 113585
cylinder-bore surface defect detecting syst., computer vision tech. *(Chin* 89895
defect detect., SQUID magnetometer, eddy current NDE syst. 70949
demerit method, stat. correl. 101567
dielec. materials NDT, MM-wave near-field refl. tech. 79484
Duralumin plate, defect detect./imaging using Lamb waves, DORT 101629
eddy current flaw inspection, probe impedance change, 3D FEM model 101
eddy current NDT, sig. restoration, neural network model 125152
eddy current testing, automated quantitat. defect charactn., ANN use 1015
EM eddy current NDT, research & technol. develop., review 68472
EMA probes sensitivity in flaw detect. by echo method using bulk shear wa 133384
γ-ray radar perform. with different posn. sensitive detectors 114553
green alloy compacts, thermographic inspection, ref. composite fab. 11451
HADES radiographic simul. code, capabilities & appl. 101585
high-energy film radiography, proc. param. optim., MCNP model 101584
high-energy X-ray/neutron modelling & digital imaging for NDT 101564
hot wire inspection using eddy current tester with computer syst. 113742
hybrid double-D sheet-inducer for SQUID-based eddy current NDT 68480
impact damaged delaminated composite, shearography, neural fuzzy an 125156
intell. US phased array syst. for steel NDT, optimised design 114532
ISS Columbus Orbital Facility, space environ. NDT feasibility 122468
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
large struct. integrity monitoring, embedded US sens., rem. DAQ 114527
laser welding, QC, AE sigs. wavelet anal. 105630
laser-US TOF diffr. method, photoelastic visualis., flaw depth 101555
limited access pipe inspection, US guided wave flexural mode tuning 1015
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 101
metal inclusions charactn., mag. detect. of thermoelec. currents 114523
metal products flaw depth meas., EM induction & elec. pot. 101560
metals NDT, MM-wave near-field refl. tech. 79484
microelectronic component SAM inspection, freq. domain anal. 124393
microfluidic channels, flow props. characterisation 104178
microwave nondestructive eval., global optim. tech. 121169
multi-freq. eddy current test, flaw reconstr., dyn. neural net models 101597
multilayer backplane board material charactn. using acoustic wave techn 113591
multimode dispersive Lamb waves, sig. proc., reassigned spectrum 114490
multiple beam US sens. using gas-coupled laser acoustic detect. 114528
non-metallic media, flaws/defects detect., PC based non-destructive microwa imaging syst. 97144
partially-clamped plate, flaws detect. by comparative DSPI 114560
piping, US testing of welded joints, new technols. and instrums. 133381
planar evanescent microwave imaging NDE probes, high resoln./scan r 101579
plate damage detect., optimal US pulse repetition rate, RBF network 90616
polysilicon MEMS, Young's modulus and fracture strength, tensile tests 116
portable mag. flaw detector with mag. indicator bag 79478
random scatt. media, US flaw detect./imaging, DORT method 101628
round bar US testing, angle beam immersion tech., echoes anal. 114519
safety relevant struct. QA, nonlin. scanning laser vibrometry 114521
small metal particles detect. using RF SQUID planar gradiometer 114530
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90
steam generator tube eddy current testing, wavelet transform 101606
steam generator tube flaws, eddy current sig., ANN inversion 101598
steel pipe machined defects, mag. flux leakage sig., feature extraction 1006
steel plates, multimode Lamb wave group vel. meas., phase spectrum 1015
struct. health monitoring by elec. resist. meas., review 114549
structural defects detect. using operational deflection shapes 90606
subsurface defect detect., scanning laser source laser-US tech. 114520
surface defects detect./charactn. using CNN 90609
surface eddy current probe, flaw depth phase inform. 101632
tailored blank laser welds, QC, US guided wave & EMAT use 124139
thermoelec. detect. of spherical inclusions, mag. sens. 114524
two-hole HTSC RF SQUID gradiometer for NDE *(Korean)* 70835

y detection continued
two-layer struct. delamination/void/moisture detect., temporal microwave NDE 101576
US flaw class. problems, domains & features selection 101599
US flaw detect. by EM acoustic transducers, inverse flaw ident. 101627
US NDE, data anal. using SVD of Hankel data matrix 125160
US NDE, multistage adaptive noise cancellation, adaptive LMSE filter 79489
US NDT, fixed transceiver syst. sig. proc., inverse filter 125159
US NDT data proc., 3D graphics role, adv. software environ. 114539
US testing, probab. of detect. prediction, phys./stat. model 114536
weldment intell. US flaw class., perform. enhancement 101614
wire rope local flaw quantitat. test, self-adaptive wavelet packet *(Chinese)* 124405
X-ray imaging metrology tool capability for SMT PCB assembly nondestructive inspection 113738
Al plate, laser-US TOF diffr., flaw depth 101555
Al plate, multimode dispersive Lamb wave NDT 114490
Cu, spherical inclusions, thermoelec. detect., mag. sens. 114524
NbTi/Cu wires, defects, high T_c scanning SQUID microscopy study 70680
Ti alloy, US flaw detect./imaging, microstruct. contrib. 101628
ys *see cracks; voids (solid)*
ible AC transmission systems
3-phase STATCOM, current control, harmonic elmination *(Chinese)* 99881
345 kV Taiwan transm. syst., UPFC appl. feasibility *(English)* 77265
2001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Feb. 2001) 100393
adequacy eval., UPFC considerations 122949
asynchronised machines as controllable FACTS devices 122950
bid-based demand contingency constrained economic dispatch 77182
Californian power crisis, technol. solns. 88306
compensated power transm. lines, generic multifunction protection relay 112139
conversion into HVDC, FACTS, rectifier, inverter 112005
d-statcom for reactive power/imbalance/harmonics compensation 88418
deregulated market, generator's output contrib. to power flow/loads 99213
device computer simul. 112000
device simul. methods and tools 111999
devices allocation, freq. response tech. 99253
devices location for total transfer capability enhancement 112002
devices location optimisation for congestion mgt. 99327
dist.-protected transm. lines, apparent impedance calcs. 99326
distrib. systs. control, FACTS devices, optimal allocation 112036
dyn. loads interact. with FACTS controllers 99294
dyn. perform. improvement, damping controls optim./coord. 88377
embedded FACTS devices, power flow, optimal multiplier Newton-Raphson method 133533
FACTS PC-DSP-based unified control syst. design 111855
generalized UPFC modelling in nonlin. interior point OPF 88419
interconnected power syst. freq. oscill. stabilis., SSSC appl. 99284
interior-point based OPF, syst. expansion, FACTS devices 77306
interphase power controller mechanism cct. anal. *(Chinese)* 88340
Korean elec. indust., new technol. impact 99194
liberalised elec. market usage 77305
load voltage compensation, series-shunt power converter 111921
multi-bridge PWM inverter static sync. compensator, dyn. characts. *(Korean)* 122868
multi-machine FACTS with UPFC, Phillips-Heffron model *(Chinese)* 77204
multi-machine power systs., static voltage stabil., FACTS *(Chinese)* 77244
multimodel adaptive control, design params. selection 111937
multiple embedded FACTS device power syst. load flow studies 99186
multipulse power converters/controls for HVDC and FACTS systs. 88876
New Electricity Trading Arrangement, power flow control coord. 133501
nontuned interphase power controller calc. and anal. *(Chinese)* 111907
open power market FACTS device optimisation *(Chinese)* 77187
open power markets FACTS devices placement approach 112004
opf control with UPFC *(Chinese)* 99272
OPF scheme, hybrid model 111887
optimum power flow control, UPFC 99280
port controlled Hamiltonian model of FACTS with adaptive L_2-gain control *(Chinese)* 122951
power conversion technol. for power syst. appls. *(Japanese)* 88811
power delivery improvement using SMES 113035
power swings damping, braking resistors control 122870
power syst. FACTS devices optimal location using GA 88420
power syst. growth, new technols., Japan 99178
power syst. oscill. damping, SVC and ASVC, robust H_∞-optimal control *(English)* 111924
power syst. oscills. damping, multiple controllers, coord. design 122869
power syst. security enhancement, FACTS devices location 111939
power syst. transient/voltage stabil. enhancement control scheme 77246
power system, real-time phasor meas. unit, GPS *(Chinese)* 77635
power systs., real-time digital simul., FACTS, HVDC, control, protection *(Chinese)* 122883
power systs., real-time digital simul., NETOMAC *(Chinese)* 122808
power systs. tech. cooperation between China and developed countries 111827
power transfer capability incorporating FACTS devices *(Chinese)* 77259
quadratic power flow soln. Newton-Raphson UPFC model, paper discussion/closure 133552
regulated power syst., state matrix formulation, UPFC action 99281
series compensating device operation under line flow congestion 111884
series-connected controllable FACTS devices, control Lyapunov fns. 133548
SSR computational anal. using sample-data model *(Chinese)* 77303
SSR mitigation *(Chinese)* 133538
STATCOM based transm. syst. project, Vermont 112748
STATCOM gating-pulse blocking, abnormal DC overvoltage studies 122805
static security improvement using optimal TCSC placement 112001
SVC, optimal PI controller design, GA 77252
SVC syst., PSS design using real variable elitism GA *(Korean)* 134327
sync. generator, control model 77304
TCSC as power syst. transient voltage stabilizing controller 111860
TCSC devices allocation for total transm. capacity optimisation 112003
TCSC devices location determ. using fuzzy decision making 134328
TCSC PI controller struct. anal. using Power System Blockset 99277
TCSC transient proc., thyristor cond. angle characts. research *(Chinese)* 112752
tuned interphase power controller, steady-state charact. *(Chinese)* 111906
unified power quality conditioner, theory, modelling, appl. 77353
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
UPFC, modeling, transient stabil. *(Chinese)* 77242
UPFC, per unit model, optimal control 111874
UPFC, proposal, research and appls., survey 99278
flexible AC transmission systems continued
UPFC, PWM based, dyn. response, EMTP simul. *(Korean)* 77267
UPFC capability assess. on power flow control 99275
UPFC control algm., stationary ref. frame simul. 133556
UPFC controller perform. enhancement using modal anal. 111934
UPFC effects on voltage control problems in competitive power indust. 99293
UPFC location for congestion mgt. 99328
UPFC model, robust nonlin. interior-point OPF 133518
UPFC model, stabil. calcs., decoupled watt-VAr control syst. 111933
UPFC scheme, power flow computation *(Chinese)* 99254
UPFC schemes, dyn. performs. comparison 111857
UPFC simul. techs. 111861
UPFCs operation method for optimal voltage profile maint. *(Korean)* 77201
voltage collapse prevention, FACTS devices, stabil. indicators 122906
voltage sag mitigation using dyn. voltage restorer 99358
voltage sourced inverter, transfer fn., FACTS, STATCOM, UPFC, SSSC 99732
VSI-based voltage sag correcting device with additional VAr compensation *(English)* 111925
flexible manipulators
piezoelec. actuators/sens. for posn. control 104448
sliding mode posn./vibr. fuzzy controller 134319
flexible manufacturing systems
assembly, flexible parts feeding 89837
automated odd-form component placement in PCB assembly 115182
direct PCB metalization in competitive environ. 125906
e-diagnostics links, SEMI GEM/SECS stds./equipt. front-end modules, rels. 103962
e-mfg. domino effect for IC proc. efficiency/yield/productivity enhancement 103961
e-mfg. for enhanced IC equipt. productivity 103960
e-mfg. opportunities in semicond. proc. 103959
electronics assembly productivity enhancement via smart machine set-up 69326
IC fab. facility automation for 300 mm wafers 103965
IC mfg. automation software for 300 mm wafers 70237
IC proc. integrat. for 300 mm wafer fab automation 115985
intell. 3D microstructuring with UV-laser syst., flexible mfg. 70367
micro-dispensing/ink jetting direct write technols., material systs. 100564
odd-form assembly automation, component location/handling 115143
optoelectronic component assembly automation 109082
reticle delivery automation for 300 mm fab 115737
SECS/GEM IC proc. tool commun. protocols, evol. for e-mfg./300 mm wafers 103963
selective soldering implement. for through-hole components 80502
semicond. mfg., rapid prototyping of 300 mm fabs 81174
semicond. track systs., pot. deadlock set ident. 89949
VirMIC syst. for virtual mfg. of ICs, open framework, modeling technol. *(Chinese)* 124446
wafer test automation in 300 mm environ. 116011
wafer vol. prod. fab develop. for 300 mm 124308
flexible structures
see also flexible manipulators; intelligent structures
beam, flexible smart, act. posn. control using internal model control 68453
large flexible space struct., vibr. suppression, modelling and control 81745
opt. inter-satellite commun., wide-range fine pointing mechanism 88073
Space Interferometry Mission technol. develop., status & plans 133238
flexoelectricity
ionic polymer-metal composites, fund. props., review 114481
flexural strength *see bending strength*
flexural waves *see elastic waves*
flicker noise
2D video sig. spectrum in FMCW homodyne radar, phase noise 86151
CMOS technol. scaling for wireless commun. arena 115001
CMOS VCO, Bluetooth wireless transceivers appls., accumulation mode varactors, spiral inductors 102731
dual gate oxide CMOS proc. multi-fingered MOSFETs, wireless appls., flicker noise characts. 125705
flickermeter testing, calib. syst., digital logic & software control 109836
freq.-instabil. characts. & time-sync. errors, universal formulae 75899
hybrid flat-panel detector arrays for digital X-ray fluoroscopy 110917
large area TFT-LCD, crosstalk and flicker simul. 116829
LV prog.-gain CMOS amp. topol., very-low temp. drift 79587
mag.-coupled tuneable inductor for wideband VFOs, 1.4-2 GHz 91363
microwave oscillators, flicker noise, feedforward power amp. appl. 102618
MOSFET flicker noise under switching conditions and modelling in RF appls. 115897
n-MOSFETs, channel width/length depend. flicker noise charactn. 103892
on-wafer 1/f noise meas./charactn. syst., robust 109464
polysilicon resistors, analog CMOS appls., LF noise current 68555
reduction in old films 94684
switched-current S/H cct. for LF appl., 0.6 μm, simul. & perform. 80133
SXGA liq.-cryst.-on-Si light valve, high-defn. video projector 86850
GaN RF-MBE films, intermediate-temp. buffer layers, low-freq. excess noise 115324
GaN and GaAs-based HFETs, LF and microwave noise charact. 125728
Si p-MOSFETs, saturation region, flicker noise, SPICE models 70111
SiGe HBT RF technol., transistor noise 126671
TaN thin film resistors, on-chip wireless appls., mismatch/flicker noise charact. 102765
flight control *see aerospace control*
flight simulation *see aerospace simulation*
flip-chip devices
2D fiber-based opt. interconnect 82433
3D electrophoretically driven microlab., DNA hybridisation chip 86684
3D flip-chip solder joint, heat flux and current dens. 113525
3D MM-wave IC, MEMS packaging technol. 67557
5IDT long. coupled wide-band bal. SAW filter, long. multi-mode resonator 92760
850 nm 2D selectively oxidized VCSEL arrays, flip-chip integrat. 115224
multifunctional acrylate based photo-polymer, rapid direct writing, opt. interconnects and hybridisation appls. 92941
anisotropic conductive film, reliab. 91513
area array components, X-ray/endoscopy-based inspection techs. 124417
area array packages, solder bump shape prediction algms. 78607
array packages, transfer molding encapsulation 78643
ASIC, flip-chip and wire bonded packages 113672
assembly, bumping, laser-driven release proc. 80537
assembly proc., high-speed transfer 115218
assembly subcontracting, integrated turn-key capability 69369

flip-chip devices continued
assembly syst. for prototyping/proc. investigs. 125939
assembly with reflow encapsulants 113564
assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
ATLAS pixel detector, indium bump technol., theory 97959
automotive radar sens., microstrip patch antenna array 96995
back side failure anal. flow for flip-chip/lead-on-chip/multi-metal-level dies 113778
BGA IC packages, elec. anal., equiv. cct. models 113733
BGA package, design and reliab. 113494
BGA package, reliab. 113495
BGA package, solder bump, thermo-electromigration 113654
BGA package, thermal interface material 113526
BGA packages, assembling tech. without thermal procs., flip-chip mounting 67552
BGA packages, molded underfill material charact. 113497
BGA packages, reliab. studies, power cycling test 67550
BGA underfill charactn. using rigid substr. 113562
BiCMOS VCO, 4.7 GHz, chip/MCM-D package co-design for HIPERLAN-2 transceiver appl. 131087
bidirectional opt. interconnect, VCSELs, photodiodes, CMOS IC 105044
bisphenol A epoxy/phenoxy resin encapsulant, thermosetting/thermoplastic combination 67581
bonding reliab. study of flip-chip for space appls. 125792
broadband 3D FDTD charactn. of multiple flip-chip interconnects 100589
BTeV pixel detector, MCM 121690
buildup struct. CTE mismatch, reliab., thermal cycling, FEA 113679
bumped interconnects, emerging technols. 100609
camera module, flip-chip interconnection 120902
Capacitive Micromachined Ultrasonic Transducers, low parasitic capacitance elec. interconnects 104222
cavity down BGA/flip-chip-in-package encapsulation procs. 113467
centrifugal semi-aq. cleaning proc. for high-dens. package substrs. 115183
ceramic BGA package, Pb-free solder alloy 113655
CMOS chip, organic/ceramic packages, simultaneous switching noise 113668
CMOS-based microsens. fab. technol., packaging approaches 109802
complex 3D RF packaging geometries, adaptive modeling using Haar-based MRTD algms. 125696
compliant cantilevered spring interconnects for flip-chip packaging 113631
concurrent underfill/reflow flip chip assembly, solder bump geom., forces anal. 115225
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
conductive adhesives for flip-chip appls., self-alignment capability 67604
CPW Lange coupler, flip-chip microwave cct. 80201
CPW W-band amp. MMICs, parasitic substr. modes suppress. 91311
CSP/area array package board level reliab. 113602
CSP/flip chip underfill, multi-pass dispensing on dual parallel lanes 100584
design rule develop. for multiple sig. and ground bump configs. 69174
die attach technol. in back-end proc. 69362
dual op amp, flip-chip fine package, 8-pin counts 114633
elec. conductive adhesive, self-alignment and contact resist. 113527
elec. conductive adhesives, low m.p. alloy incorporation, depletion/wetting 67600
electronic packages, quantitat. strain anal. by phase-shifting moire interferometry 121232
electronics packaging struct., microDAC strain meas. 115994
epoxy molding cpd., flip-chip transfer molding encapsulation 113498
epoxy resin, thermally degradable, electronic packaging 113719
epoxy underfill adhesion, flip-chip packaging 113483
epoxy underfill materials, titanate/zirconate coupling agent effects 67599
epoxy/phenolic syst. underfill for FCOB appls., curing mechanism 67585
ethylene glycol ether free solder paste for flip-chip appls. 113457
eye press. monitoring, wireless syst., intra-ocular lens 122467
FCOB, FCOB, no-flow underfill materials, yield anal., proc. modeling 78667
FCOB, FCOB assemblies, field reworkable underfill materials 67627
FCOB, fine-pitch solder bumped technol., PCB substr. 113612
FCOB assemblies with/without encapsulation, reliab. 78654
FCOB package, 2D surface curvature meas. during thermal cycling 113544
FCOB SMT assembly proc. trade-off cost anal. 115221
FCOF, flip chip on flex, standoff height meas., SAM nondestructive methodology 78608
flex-based two metal layer electronic packaging 67547
flexible CSP interposer substrs., laser via form. for high dens. assembly 124353
flip chip-in-package, molded underfill material/proc. 113563
flip chip-in-package stud bump bonding proc., reduced proc. steps 80536
flip chip-on-flex OnePass proc. improvement for clean products 113561
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip chip-on-organic BGA substr. carrier, assembly, eval. 125937
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip chip/wafer-level CSP, emerging packaging technols. 113698
flip-chip-on-ceramic substr., packaging proc. 67633
flip-chip-onboard package, durability anal., nested FEM methodol. 78721
flip-chip/CSP components on ceramic substrs., rapid power cycling 67621
flip-chip/underfill reliab., no-clean assembly proc. conditions effects 67564
FluxFill self-fluxing underfill product develop./pager product implement. 113705
fluxless solder nonconductive paste tech. for flip chip attach 125938
fluxless wafer solder bump reflow proc. using carboxylic acids 69368
FR-4 flip chip reliab., eutectic solder bumps, reduced proc. steps 89849
free-space opt. interconnect syst., detector/modulator chip arrays, packaged module 113645
HDI, nano-spring array 78655
HDI BGA substrs., ultra-high dens., develop. 113587
HDI flip chip-on-flex, base materials eval. 124359
HDI microelectronics packaging roadmap for space appls. 133228
HDI PCB, microvias reliab. assess., syst.-on-a-package 113680
HDI PCB organic laminate substrs., microstructural anal. 113590
HF/high speed package interconnects, meta-evol. prog. based robust model param. extraction 126467
high-perform. flip-chip struct. design tech. with optimized CPW 69223
high-productivity stud bump bonding mounting technol. *(Japanese)* 91516
Hiperprint interconnect technol. for printed subassemblies, high perform./low cost 67636
HTSC DC SQUID, external mag. field 70980
HTSC DC SQUID magnetometers, geophys. prospection 70923
HTSC DC-SQUID flip-chip magnetometers/gradiometers 70990
HTSC SQUID picovoltmeter, flip-chip flux transformer 70922
flip-chip devices continued
HTSC SQUIDs, flip-chip and integrated input coils 70959
hybrid FPA, collective flip-chip technol. 109651
IC package inspection enhancement using real-time X-ray systs. 100639
IC package inspection using X-ray systs. 124403
IC timing anal. tool, intrinsic photon emission 127007
interconnect struct., pillar bump 113651
interfacial delamination near solder bumps/UBM 113547
IPC 7525 stencil design guidelines for electronics assembly, overview 115
isotropic conductive adhesive joints in flip-chip test vehicle, HF meas. 675
isotropically conductive adhesives as interconnect materials, flip-chip test veh 113688
Ka band power pHEMT technol. for space power flip-chip assembly 10269
laser array module, packaging, flip-chip bonding 105351
laser microchemical direct write deposition/etch methods, real-world ap 103978
laser microchemical etching, MEMS inverse stereolithography/flip-chip de- appls. 81628
LCD module interconnection, chip-on-film technol. 86859
lead-free solders, bump metallurgies, flip chip appls., thermal fatigue pro 113514
leaded molded package 113658
low cost flip chip under bump metailization systs. on Cu pads 113635
low-cost flip chip package design concepts for high dens. I/O 113677
LTCC MCM substr., design of strip-line struct. and flip-chip interconne 100591
MCM for video graphic accel., sig. integrity and design consideration 9152
MCM-D CPW flip-chip Lange couplers, bumping height influence 69081
MCM-D technol. front-end digital readout perform. 121699
MEMS press. sens. using flip-chip on low-cost flexible substr. 121034
micro via-in-pad substrs., solder bumped flip chip appls., design and manufact 89871
micro-ball wafer bumping 113653
microbolometer arrays, thin film ferroelec. materials use 109540
miniaturised consumer electronics, assembly proc. trends 67637
miniaturized reliable space electronics, prod. commercialization 133232
mobile terminal, high dens. packaging 113675
MOEMS sens. integrat., positioning strategies 93222
mounting proc. develop., metallic joint using US wave energy 125936
multi-chip syst. on silicon using thin-film technol., SoC assemblies *(Germ* 67544
multi-layer pre-encapsul. technol. for wafer-scale underfill 113633
multi-mode, multi-band VCO IC using low cost BiCMOS proc. 91329
multilayered syst.-on-package, design against interfacial delamination 1136
multiprocessor digital syst., low-power RF clock distrib. 114852
no-flow flip chip assembly, high throughput/low cost, underfill voiding, sub design effects 69365
no-flow underfill, toughening agents, effect on fillet cracking 113485
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill develop. for flip chip assembly *(English)* 89866
no-flow underfill encapsulant develop. formulation, epoxy resin combinati 67580
no-flow underfill fluxing capacity, metal oxide effect 89873
no-flow underfill material, eutectic and lead-free solders 113499
no-flow underfill toughening, effect on fillet cracking 67603
no-flow underfills, flip chip assemblies, adhesion charactn. 67626
OC-192 CMOS transceivers 96692
OE-COF,optoelectronic chip on film packaging technol., flip-chip bon devices *(Japanese)* 113539
opt. beam steering using MEMS-controllable microlens array 105047
opt. transceiver for FTTH appls., optimised 96762
opt. transm. syst., high-speed MCM, flip-chip mount technol. 115230
optimum on-chip power distrib. networks for GSI 126940
optoelectronic chip on film packaging, technol. and perform. 117028
package, lead-free solder and under-bump metall. 113513
package, solder joint profile, design and reliab. 113648
package with reflowable underfills, reliab. studies 113706
packaging, acoustic micro imaging, overview/current status/future roadm 113565
packaging, epoxy resin reworkable underfill, thermally degradable 67587
packaging, passiv. and solder mask, surface props. 113718
packaging, surface tension/adhesion 67597
packaging defect diagnosis using acoustic microimaging 78615
packaging technol. rev., overview 124326
packaging technols./materials/procs., overview 67558
packaging whole field displacement meas. tech. using speckle interferome 113473
PBGA and QFN package bandwidths, high-speed broadband products 11371
PBGA flip-chip package, CFD, compact thermal model 78625
PBGA flip-chip package, solder ball reliab. 78639
PBGA package 113656
PBGA packaging, OSP surface finish charactn. 113711
PCB, wafer-level CSP, solder joint crack propag. 78637
PCB X-ray inspection, 2D with oblique view at highest magnification sys 78690
Pentium III Xeon proc. with L2 cache, cartridge thermal design/metrol. 1147
planar dielec. waveguide filter, flip-chip module 102542
PMMA free-space micro-opt. modules, design, fab. and characterisation photonic interconnects 127813
polymer stencils, UV laser-cut, for fine pitch wafer bumping 100587
polymer stud grid array CSP, flip chip assembly proc. develop., reliab. asse 113634
populated PCB rework by laser desoldering 124351
power electronics, flip-chip flex-cct. packaging 124386
power MOSFET, wafer-scale packaging 126839
reflowable underfill, flip chip assembly and reliab. assess. 113637
reflowable underfill appl., design rules 113638
reflowable underfill proc. modif. for flip-chip assembly develop. 113486
reworkable no-flow underfills for flip chip appls. 78666
reworkable underfills for area array packaging encapsulation 67563
RF MEMS variable capacitor, electrostatic digital control 102783
RF packaging for space appls., micropackage to SOP, syst. on a package 1243
SAW filter design issues for 3G cellular phones, packaging 85904
scanning SQUID microscopy for current imaging of ICs 116001
SFQ pulses using act. MCM, chip-to-chip propag. 68714
silica filler, no-flow underfill technol. 113501
single pass reflow encapsulant 113502
single-pass reflow encapsulant for flip chip appl., develop. 67568
solder bumps, electromigration failure, voids effects 92137
solder droplet printing technol., high precision, principles/appls. 69366

chip devices continued
solder fatigue, cure-depend. underfill props. 113647
solder flux/underfill compatibility in flip-chip mfg. 69364
solder joints, fracture, isothermal cyclic shear, FEA 113689
stacked thin dice packaging, small vol. 3D package, FEM 113507
stud bump bonding flip-chip technol., chip-on-flex develop. 69363
syst.-on-package, substr. materials 113683
T-G²BGA, tape gold-gold gang bond BGA, highly reliable CSP develop. 113470
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
tape-and-reel packaging technol., improved perform./reliab./cost-efficiency 124362
technol. utilization in automotive electronics, perspective 124021
thermal grease pump-out, accelerated reliab. testing 113475
ultra-thin FCOB assembly 115222
under-bump metall. conversion to intermetallics, reliab. impact 67624
underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
underfill delamination, opt. microscopy 113476
underfill delamination mechanism/growth rate *(German, English)* 89865
underfill encapsulant affected by flip chip assembly variables, adhesion 67578
underfill encapsulant reliab. perform., filler settling effects 67579
underfill material, adhesion/reliab./reworkability study, free radical polymerization syst. 113636
underfill procs., rapid for large to small flip chips 113704
underfill resin develop., flow microcalorimetry appl. 67610
underfill to passiv. material adhesion, environ. influence 67598
US flip-chip bonding, dyn. strain and chip damage 80533
VCSEL appls., high-throughput multimode fiber links/2D interchip interconnections 117201
VCSEL array, high-dens. packaging, micromachined springs 105350
wafer bumping by solder paste printing, stencil design improvement 113560
wafer bumping technol. for cost-effective packaging 67618
wafer level CSP using liq. bismaleimide polymers 124327
wafer solder bumping technols., overview 102875
wafer stepper, 300 mm, for bump/wafer level scale packaging appls. 126520
wafer-level flip chip assembly, solder wetting, confining underfill 124346
wafer-level flip chip assembly, surface mount proc., solder wetting 113509
wafer-level packaging, technol./implement., education 124361
wideband opt. receiver module, opt. video transm. syst., FM modulation *(Japanese)* 120153
wideband scalable elec. model for microwave/MM wave flip chip interconnects 91374
X-ray digital microlaminography, BGA/flip-chip inspection 67652
Al CPWs on Si substr., 38 GHz, loss mechanisms and hybrid mixer implement. 125790
AlGaInN high-power flip-chip LEDs 71581
AlN-filled underfill, high thermal cond., for flip-chip appls. 67565
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
Au electroplated microbump, surface activated bonding 113511
Au/Sn flip-chip interconnection, thermal reliab. 67641
Au-to-Au interconnection flip-chip bonding, COS HDD assembly 113661
$BaSrTiO_3$ tunable capacitors, enhanced dielec. props., $SrRuO_3$ buffer layer role 91175
Cr/Cu/Ni underbump metallization, flip-chip interconnection 113650
Cu/SiLK interconnect, flip-chip package, interfacial adhesion 115678
Fe/Ag epitaxially grown ultrathin films, wideband microwave notch filter 81916
GaAs mm-wave MMICs, BCB thin film layers, automotive radar and wireless commun. appl. 91304
GaAs monolithic/hybrid integrated photoreceivers, 40 Gbit/s commun. 96708
GaAs/AlGaAs MQW SEED array, flip-chip bonding OE smart pixels *(English)* 93224
GaAs/AlGaAs MQW detectors and modulators, optoelectronic smart pixels *(English)* 82448
GaAs/AlGaAs photonics IC for opt. beamforming in phased array antennas 82439
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
Ni/Au electroless plating, flip-chip BGA, solder joint reliab. 113723
Ni-P electroless UBM-solder interface, Ni-Sn intermetallics,joint reliab. 113715
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pb-free materials options for environ. friendly IC packaging 67682
Pb-free solder alloys for flip chip/area array package bumping 67569
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
Pb-free solder, halogen-free microvia substr. 113676
Si PV mini array assembly, flip-chip MCM technol. 82345
Si Schottky diode, flip-chip mounted, I-Q mixer 102622
Si integrated mm-wave micromachined band-pass filters, flip chip bonding techs. 125771
Si-SiGe HBT push-push oscillator for 58 GHz in hybrid microstrip tech. 80338
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
SiGe HBT UHF power amps. in flip-chip and packaged technol. 91325
Sn-Ag Pb-free solders for flip-chip interconnects 100596
Sn-Ag lead-free solders for flip-chip joints, thermal fatigue behavior 69374
Sn-Ag-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu lead-free solder vol. effect on intermetallic layer form., interface microstruct. 113515
Sn-Ag-Cu lead-free solders for flip-chip joints, thermal fatigue behavior 69374
Sn-Ag-Cu-based Pb-free solder paste reflow for flip chip wafer bumping, proc. window 69367
Sn-Au solder micro-bumps, reflow fab., flip-chip bonding 90551
Sn-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Pb flip COB solder joints, thermal fatigue failure *(Chinese)* 113673
SnAg lead-free solders, bulk specimens and flip-chip joints 113643
SnAgCu lead-free solders, bulk specimens and flip-chip joints 113643
$SrTiO_3$ thin films, dielec. props., tunable YBaCuO microwave filters appl. 69138
$TiWN_x$, selective etching, electroplated Pb-Sn solder 113533
no-flow underfill materials for eutectic/Pb-free solders, high melting temp. 67586
solder-drop printing proc. for flip chip, liq. metal droplet spreading/solidif. 80534

flip-flops
2/3 divider cell using phase switching tech., prescaler appl. 90857
3D module package, System Block Module 113524
activity-sensitive flip-flop and latch selection for reduced energy 68726
asynchronous ccts., init. tech. 125407
bit-parallel systolic modular multipliers 79861

flip-flops continued
bit-parallel systolic multipliers for GF(2^m) fields defined by all-one and equally spaced polynomials 79836
bus controller verification, imPROVE-HDL model checker appl. 79826
C-PAL flip-flops, energy recovery low power design 79824
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0.1 μm rule *(Japanese)* 68773
cascaded CMOS D flip-flop based synchronizer, perform. eval. *(Japanese)* 125403
clocked FIFO in asynchronous syst. appls., metastability perform. 102170
CMOS high-perform. ccts., test mode, arbitrarily low test freq. 102040
CMOS high-speed dual-modulus prescaler with new flip-flop *(Chinese)* 101862
CMOS latches, resistive opens, delay testing, DFT 102044
CMOS latches, simulator to study metastability 101937
CMOS latches with three stable operating points, open loop anal. 79840
CMOS low-power seq. cct. design using T flip-flops 90882
CMOS multiple-valued static memory cell 68801
CMOS prog. freq. divider for DRRS std., 1.4 GHz/2.7 V 68883
CMOS single-latch static D-type flip-flop *(Chinese)* 79843
CMOS wave steered ccts., latch count minimization and latency, integer LP 125440
CMOS/BiCMOS static latch ccts., design/meta-stable operation considerations 102046
conditional-capture flip-flop for stat. power reduction 102001
cost-effective non-scan DFT 125394
D-type flip-flop cct., eval. of metastabil. for random no. gen. 90869
DACs, glitch minimization and dyn. element matching techs. 68865
design params. estim., reliab., speed and cost 102120
differential pass-transistor clocked flip-flop for low power appl. 79770
dual-edge triggered flip-flops, timing charactn. 125184
dual-rail static edge-triggered latch with low power consumpt. 90848
dyn. bit-level systolic arrays, post-layout switch-level simul., netlist reduction 68673
flexible proc. based on full-adder/D-flip-flop merged module 79772
FSM synthesis via GA, flipflop selection 125167
high speed dyn. latch comparator with reduced offset using init. switch *(Korean)* 79837
high-dens. DRAMs, bipolar-voltage prog. antifuse cct., post-package bit-repair scheme 125510
high-speed Booth-algm. FIR archit., A low-complexity 102402
high-speed prescaler dyn. D-type flip flop 131091
HTSC RSFQ logic cct., switching probab. 70823
HTSC SFQ ccts., interface engineered Josephson jns. 70883
Josephson circ. transm. line, time jitter meas. 70825
load-sensitive flip-flop charactn. and designs 90867
long Josephson jn., soliton oscillator clock, jitter meas. 70889
low-power reduced swing single clock cct. 102101
low-power static differential double edge-triggered cct. 102100
low-swing clock double-edge triggered flip-flop for power reduction 125419
MOBILE-based RTDs, 3-terminal, for high-speed logic appl. 90892
multi-modulus divider, low-power, in 0.6 μm digital CMOS technol. 68690
multiple DC solns. determ., Spice oriented Newton homotopy method 101680
multiple scan chains in full scan module, scan chain disable, power dissipation reduction 102071
NORA dyn. CMOS ccts., clock-race conditions investig. 114732
optimal partitioning algm., technol.-mapped designs on single-chip emulation systs. 68781
robust all-opt. controlled SOA-based flip-flop 127865
sens. controlled by slow-rise control pulse 125416
seq. logic ccts., design diversity for concurrent error detect. 102045
seq. logic synthesis syst., RTL form *(Chinese)* 125276
SFQ logic cct., resettable latch 70936
SFQ multistage decimation filter, Σ-Δ A/D converter 127495
SFQ-RL logic cct., pipelined archit. 127493
SINIS RSFQ ccts., HF charact. 68774
SOA, all-opt. hysteresis control by cross-PM 93839
SoC embedded cores testing, twisted-ring counters use 101966
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
static CMOS master-slave flip-flop expt. 68745
static differential double edge-triggered flip-flop based on clock racing 90860
static latches, cosmic ray induced soft errors, scaling trends 125458
supercond. SFQ-RL cct., M-code generator 70840
supercond. single flux quantum decimation filter 70839
sync. seq. ccts., almost independent reset sigs., testability struct. 102041
three-valued D-flip-flop and shift register using multiple-jn. surface tunnel transistors 79818
token scan cell for low power testing of scan-based ccts. 68691
Virtex FPGA based high-perform. fine-grained pipelined LMS algm. 91102
wave-steered design methodology, global routing tech. 126967
InAlAs/InGaAs/InP-InAs/AlSb/GaSb HEMT RITD D-flip-flops, monostable/bistable logic element 79771
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
InP HEMT D-type flip-flop and MUX ccts., 40 Gbit/s, design tech. 90854
InP/InGaAs DHBT master-slave D-type flip-flop, ETDM syst. 79856
MgB_2 based digital cct., BER 102094
Nb Josephson IC, RSFQ cell retargeting, submicron fab. 70830
Nb-Al/Al_xO_y/Al/Al_xO_y/Al-Nb SINIS supercond. ICs 70956
NbN IC, RSFQ logic cells 70841
NbN Single Flux Quantum Circuit, fab./operating props. 126970
$YBa_2Cu_3O_{7-x}$ ramp-edge jn., RS flip-flop 70931
$YBa_2Cu_3O_{7-x}$ ramp-edge jn., latching-type driver cct. 70932

floating point arithmetic
adder, on-line testing method, abridged operation 79791
automatic lin. correction of rounding errors 113998
behavioral synthesis, optim. tech. 79823
CDMA receiver, steepest descent algm., systolic implement. 119205
CORDIC proc., low power, behavioural synthesis 68822
digital meas. instrums., relative error normalisation *(Polish)* 120638
divider, accurate lin. approx. using bipartite reciprocal table 114057
DSP algms. implement., automatic word length determ. method 102248
DSP appls., floating point low power adder design 68757
engine speed indicators, floating point electronics 124012
faithful powering computation using table look-up 79860
fast IEEE floating-point adders, design 79862
formal methods in CAD conf., Austin, TX, USA (2000) 78448
FPGA automated hardware synthesis, MATLAB appl., precision & error anal. 79705
FPGA implement. of faithful polynomial approx. for powering fn. computation 125422

floating point arithmetic continued
HCORDIC, high-radix adaptive CORDIC algm. 73570
high-perform. CPU designs, step power reduction, instruction prediction 79933
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
IEEE compliant floating point MAF 101941
leading zero anticipation and detect. 79652
mutable functional units and their appls. on µP 125556
on-the-fly range reduction 90808
parallel series approx. for fast floating point divider 79802
PCI bus expansion card with floating point DSP, develop. *(Slovenian)* 97153
PlayStation2 3D graphics calcs., Emotion Engine proc. archit. 79921
PowerPC G4 proc. with AltiVec technol. for optim. of beamforming kernels 102225
rigorous and portable std. fns. 114024
SH-4 superscalar RISC µP for SEGA Dreamcast game machine 79923
spigot algm. and root computing 67930
symmetric integer matrices, exact computation of inertia 67988
sync. machines reactances determ. from DC decay 123392
variable-correction truncated floating point multipliers 102083
worst and av. case roundoff error anal. for FFT 114198
Xilinx Virtex-E FPGA based 20-GFLOPS quadratic residue proc. 96979
floating zone method (crystal growth) *see zone melting*
floating zone refining *see zone refining*
floorplanning *see circuit layout*
floppy disc drives *see disc drives; floppy discs*
floppy discs
see also disc drives
mag. contact duplication, lithographically patterned master medium *(Japanese)* 92837
micro-optics using total internal refl. for an opt. tracking sens., develop. 116786
GaAs RT scanning Hall probe microscopy, mag. imaging appl. *(English)* 104515
flow acoustics *see aeroacoustics*
flow charts *see flowcharting*
flow control
bubble column meas. & control, resist. tomographic imaging 121273
cylinder wake, unsteady load control, force meas. 86985
differential press. flow sens. with FBG 109594
drug delivery, controlled release microchip, microreservoirs 122279
gas conc. ratio precise control in proc. chamber 113813
gas sens. mass prod., prestabilised nanopowder pulverisation coating 125065
gas turbine combustors, NO_x emissions, adaptive predictive control 88599
high-speed commun. networks congestion predictive control 130525
high-speed network H^∞ flow control, µ-synthesis 130526
hydroelectric power plant, small, electronic control module 133875
implantable mech. microsyst. develop., blood pumps 122335
liq. metering systs. design 87034
microfluidic valves, flow control at low Reynolds nos. 81549
microparticle filter, US standing waves & laminar flow 70342
microvalve, gas flow model 81579
MOVPE, bubbler dip tube designs, transport props. 114343
oil-water-gas mixture meas., microwave sens., WaterCut & MultiPhase meters 88193
particle detector gas-cylinder inversion syst. based on embedded computer 76137
semicond. proc., micromachined gas distrib. syst. 92518
vac. actuated gas delivery, metal fluoride dopant appl. 126286
wafer fab., sidewall polymer contamination during metal etching 103350
NiTi/Si diaphragm micropump, design, microfab. & characts. 127131
TiO_2 film coated microchannels, electroosmotic flow, act. light control 70334
flow control, telecommunication *see telecommunication congestion control*
flow diagrams *see flowcharting*
flow graphs
see also data flow graphs; signal flow graphs
ATC, rerouting in bad weather, dyn. network flow 98931
CSMA/CD buffered systs., perform. anal., tagged user approach 107783
digital mobile transceiver single chip implement., design planning 78574
feedforward flow graphs, Markov-modulated 78868
generalized min. realization problem on flow networks 67847
monotropic prog., ε-out-of-kilter method 78907
optimal partitioning algm., technol.-mapped designs on single-chip emulation systs. 68781
OTA-C filters, noise-flow-graph anal. 80060
Skorohod-Loynes charactn. of point procs. 78788
flow instability
BWR regional instabil., TRAC/BF1-ENTREE anal., dens.-wave oscill. 99513
BWR regional instabil., TRAC/BF1-ENTREE anal., Ringhals-1 appl. 99514
electrostatic sprayer, aerosol space charge generation, drops, EHD instabil. 83168
implicit Taylor methods for stiff stochastic diff. eqns. 79074
lower thermos. over Svalbard, ion-drag induced neutral instabil. 120443
needle-eye FZ cryst. growth, growth params./melt instabil. anal. 90222
NHR LOCA, coolant tube rupture, expt. anal. 77696
RTP, 3-D unsteady heat/fluid flow, num. anal. 126265
solder droplet printing, high precision, amplit. modulated droplet form. 67570
unsteady turbulent swirling flow, PIV/POD/vortex ident. 121292
KrF high-power laser for supersonic gas flows and layered media hydrodynamic instabilities study 105093
flow measurement
see also anemometry; blood flow measurement; flow visualisation; flowmeters; laser velocimetry
2D thermal flow sens. using sigma-DM 132227
aerodynamic flows, O_2 laser-induced fluoresc. temp. meas., errors, uncertainties 97872
air-water interface, vortex pair impact, thermal signature 132228
air/water two-phase flow, bubble rise vel., image proc. 106716
annular jet, flow anal., particle image velocimetry 121290
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF techs. 110048
axi-symmetric crit. nozzle, quasi-nonintrusive flow meas., thermocouple recovery temp. meas. *(Japanese)* 120787
clamp-on US transit time flowmeters for indust. proc. fluids 121269
coaxial liq. O_2/inert gas jets, liq. core charactn. 88077
condensed media, femtosecond laser pulse induced mass-transfer procs., Doppler tomography 87030
const. airflow rate regulator, A3-5 aerosol-particle counter appl. 87035
constituents direct meas. by spontaneous Raman imaging tech. *(Chinese)* 121259
flow measurement continued
cryopumps, pumping-speed meas., test dome design influence 132226
dense nonstationary hydrogen flows, ionization gauge operation 87036
differential press. flow sens. with FBG 109594
Doppler acoustic imaging syst. for borehole wall, fluid flow distrib. around surface fractures 111545
EM flowmeter, non-invasive, inline rheological param. monitoring *(Ger* 120714
environ. monitoring syst. based on ANN 88177
environ. wind tunnel, particle image velocimetry meas. 121285
flip chip underfill procs., rapid, for large to small flip chips 113704
fluid and flow params., micromachined thermal sens. 97570
fluid pipelines, multi-leak detect. and isolation 86462
free-falling fluid free surface flow characts., opto-coupler use 121270
fuel cell/batt. components, pore struct. anal., flow porometry 89163
gas bubble flow behaviour meas. using LDA 110055
gas bubbles meas./detect., opt. tomograph *(Polish)* 121283
gas flow calib. facility, PVTt tech., param. determ. *(Chinese)* 86480
gas flow vel. meas. using laser-induced electrostrictive grating 121265
gas mass flow calib. at BNM-LNE and PTB 121280
gas mixtures flow, hot-wire meas. 87028
gasoline engine transient air-fuel ratio control using US flowmeter 100303
helicopter blade vortex interact., background oriented schlieren method 121
hot-wire anemometer with temp. compensation 120760
hot-wire anemometry, look-up inversion method, binormal vel. fluct., metho correction 110063
impulsively started jet, vortex ring evol., DPIV 121291
inclined oil-water flow, homog. vel., resist. cross correl. flowmeter 12129
inclined oil-water pipe flow, centre body, drift vel. model 121296
intelligent flow sens. for liq. injection detect., data commun. *(Chinese)* 7
laser flowmeter for water, meas. error *(Polish)* 121284
laser gyro, act. media gas flow determ. 71639
LDA sig. proc., no. of samples 72144
liq. composite molding, fiber optic flow sens. 86582
LOS gas temp. distribs. using diode-laser absorpt. sens. 121253
microfluidic channels, flow props. characterisation 104178
microfluidic device, flow rate meas., cond. monitoring 92487
micromachined mass flow sens. for common-rail injection systs. *(Ger* 109815
microsensors, vascular flow meas. and fracture repair 132018
MRI for indust. proc. tomography 110036
multi-component flows, direct proc. estim., tomographic data, artificial ne systs. 120686
multicomponent solenoidal converter, distributed sectional inductance 72199
multielectrode inductance flowmeter, mean flow vel. estim. 110062
multiphase flow meas., elec. capacitance tomography 110058
multiple plane velocimetry, in-line digital holography 117546
NDE syst. US transducers creation, flexural waves use 88212
noncontact temp. sens., laser induced fluoresc. type, appl. to in-flight drop 87015
oil indust., distributed fiber grating sens. down-hole reservoir monitoring 131
oil monitoring, slow-wave struct. appl. 121160
Oseen-vortex flow, direct meas., digital particle images 97880
particle tracking velocimetry, super resoln., monophasic flow appl. 121289
phase Doppler particle size analyzer, light-absorbing droplet effects 86952
phase Doppler vol. flux meas. for low data rate appl. 110051
pneumatic conveying syst. powder flowrate meas., intell. meas. syst. 12397
pneumatically conveyed solids, mass flow meas., parallel-beam radiom 121293
respiratory flow meas., opt. sens., cross-correl. techs. appl. 98359
respiratory syst., EMG, mouth press./airflow sigs. anal. 98247
sediment-laden flows, US imaging method 122682
shear-stress sens., dyn. calib. using Stokes layer excitation 97171
single/two-phase media and flows, US waveguide meters *(Russian)* 75924
six-corner tangentially-fired boiler, burner region conc. field meas. *(Chin* 88575
smart thin-film flow sens., respiratory monitoring appl. 98146
SME normally-closed gas microvalve, flow meas. 123705
spherical/nonspherical particles, co-axial jet and swirling flow, laser-based pa cle meas. 97878
subsea separators, level meas./control strategies 110049
supersonic jet exhaust flow field, automatic testing syst. *(Chinese)* 131807
supersonic rect. jet, nozzle trailing edges effect on acoustic field 97869
surface hot wire for mean/fluct. wall shear stress meas. 132220
swirling flow, 3D vel. vector laser meas. method 87029
thermal flow sens., calorimetric device 86763
thermally nonequilibrium two-phase flow characts. meas. 75923
thin delta wings, testing, thin internal strain gauge bal. 122510
tomographic imaging of flow profiles *(German)* 110050
transient 3D dens. distrib. reconstruction using digital speckle tomogra 110064
transient sprays, time-resolved diffr. granulometer 87026
transport phenom. studies, holographic interferometry 132224
turbomachine passage, vel. field, LDV anal. *(German)* 97883
turbulent pipe flow, stereoscopic PIV mapping 121287
turbulent round jet, heated, temp. dissipation meas., cold-wire anemome 132222
two-phase turbulent flow, PIV treatment, direct num. simul. 121288
two-phase-flow meas. using particle image velocimetry, phasic discrim. 978
unsteady turbulent swirling flow, PIV/POD/vortex ident. 121292
US cross-correl. flow meas., modulated sig. vel. depend. charact. 110054
US cross-correl. flowmeter, demodulation, undersampling 110053
vert. upward bubbly oil-water flows, cross correl. vel. meas. 121295
von Karman Vortex Street flow meas. by frame straddling tech. 110047
wake vortex detect. using radio acoustic sounding syst., num. simul. 97879
wind sens., electronic interface, thermal sigma-DM 109812
wind sens. with integrated interface electronics 86775
wind tunnel, automatic meas., computerized syst. 88044
zero press. drop flowmeter *(Russian)* 131855
CO_2 laser, nonequilibrium turbulent gas flow, luminesc. diagnostics 105134
a-CoSiB magnetostrictive wire, hair-type air-flow sens. element *(Japane* 110046
KrF high-power laser for supersonic gas flows and layered media hydrodynam instabilities study 105093
N_2 gas flow, high-speed, laser Doppler diagnostics, spontaneous Brillouin sca 121266
Si flow sens., drift, biasing params. 75438

process charts *see flowcharting*
reattachment *see flow separation*
separation
gid simulated collapsed tube, steady turbulent flow meas. 110830
ipersonic inlet flow in air-breathing propulsion systs. for high-speed space travel appls. 111363
urbulent shear flow in thin laminar boundary layer embedded vert. fence, vel. field meas. 132217
stress *see plastic flow*
visualisation
D flow field meas. by laser PIV tech./cross-correl. method 75926
C stereo & holographic PIV in turbulence meas., conf., Mont-Saint-Aignan, France (May 2000) 113273
daptive second-order accurate particle image velocimetry tech. 132218
ir-water interface, vortex pair impact, thermal signature 132228
ubble column gas hold-up meas., elec. resist. tomography, ANN use 110057
ubble column meas. & control, resist. tomographic imaging 121273
ubbly gas/liq. pipe flow cross-correl. meas., dual-plane ERT syst. 110056
apacitance tomography for gas-solids flow charact. meas. 110059
apacitance tomography sens., axial characts. simul., FEA *(Chinese)* 109526
apacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
olor holographic interferometry recording, research activities at ISL 82994
ual modality tomography for material class. 109472
ual-plane stereoscopic particle image velocimetry for lobed jet mixing flow meas. 132219
jector co-axial flow mixing zone visualisation method 87037
lec. impedance tomography, reconstr. regularis. method optim. 109927
lec. resist. tomography using bidirectional current pulse tech. 109923
nviron. wind tunnel, particle image velocimetry meas. 121285
SP fine particles transport, electroaerodynamically induced secondary flow 83175
ield imaging and flow visualization, laser Rayleigh scatt., spectral filtering 93946
rooved channel, heat transfer enhancement strategies comparative eval. 132225
elicopter blade vortex interact., background oriented schlieren method 122509
oriz. axis wind turbine, pass. pitch-flap mech., flow 133894
mage seq. windows grey level intens. prediction using neural nets 118472
ntell. US flowmeter, improved meas. & calib. facility 121058
aser cutting, auxiliary gas outflow dyn. 83045
liq./vap. two-phase flow visualization, elec. impedance tomography 132230
mol. tagging velocimetry for moving fluid flow mapping 121279
molten steel flow distrib., EM imaging 121277
molten steel flow profiles imaging 110061
multiphase flow monitoring by computerised radioact. particle tracking 121274
oil field flows meas. using opt. fiber probes 121272
particle image & opt. flow velocimetry for turbulent flows/flames 110066
particle image velocimetry, 2D spectral/turbulence estim. 87033
particle tracking velocimetry, correl. method based 87032
particle/droplet flow, tomographic imaging, opt. fiber sens. 97336
photoresist usage during spin coating, reduction 69964
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
sq. fluidized beds using capacitance tomography 110060
thermal plasma flows, visualization and diagnostics 87031
tissue blood flux monitoring by time-space cross-correl. anal. 87515
tomography, integrated opt. fibre-lens syst. 120840
towing tank PIV meas. syst. for mean vel. and Reynolds stress meas. 132221
turbulent shear flow in thin laminar boundary layer embedded vert. fence, vel. field meas. 132217
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479
two-phase flow elec. impedance imaging, sens. strategies anal. 121275
two-phase flow void fraction meas., capacitance tomography 110052
uncertainty anal. of temp./vel. meas. by liq. cryst. visualization tech. 110065
Variable dens. flowmeter using proc. tomography 121276
wakes simul., opt. investig., bubble screen *(Chinese)* 132229
wind tunnel wall press. meas., boundary layer flow, opt. & ANN method 131889
wire plate ESP, flue gas flow vel., particle image velocimetry method 83179
Cu fine line direct printing using convective flow splitting 103494
Si molten column, thermocapillary convection under microgravity, O_2 partial press. depend. 90214
wcharting
see also programming; systems analysis
multimedia tutorial authoring, adaptation for dist. learning 100475
robust speech proc. semantics *(German)* 72998
wmeters
see also anemometers; flow measurement; laser velocimeters
AC EM flowmeter with analogue sig. proc. 120764
automotive microsens. & sens. syst., current trends 124048
clamp-on US transit time flowmeters for indust. proc. fluids 121269
closed water heating syst., flowmeter readings, bubble effect 89454
CMP slurry flow rate/point-of-use filter life using press. transducer/flowmeter 103395
condensed media, femtosecond laser pulse induced mass-transfer procs., Doppler tomography 87030
const. airflow rate regulator, A3-5 aerosol-particle counter appl. 87035
Coriolis mass flowmeters, model based correction 120731
Coriolis massflowmeters accuracy, finite medium speed of sound effect *(German)* 132231
differential-press. flow sens., self-validating, wavelet transforms 120730
EM flowmeter, non-invasive, inline rheological param. monitoring *(German)* 120714
EM flowmeter, primary transducer, meas. error 86488
EM flowmeter excitation coil CAD, 3D hybrid num. model 120729
EM flowmeters for open channels, 2D design 75428
ferroelec. sens. advances & emerging technol., review 131881
fibre optic one-point flow meter calib., spatial filtering *(German)* 75602
gas flow calib. facility, PVTt tech., param. determ. *(Chinese)* 86480
gas meter, oil sealed wet, uncertainty anal. *(Japanese)* 132223
gasoline engine transient air-fuel ratio control using US flowmeter 100303
inclined oil-water flow, homog. vel., resist. cross correl. flowmeter 121294
intell. US flowmeter, improved meas. & calib. facility 121058
laser flowmeter for water, meas. error *(Polish)* 121284
liq. composite molding, fiber optic flow sens. 86582
liq. metering systs. design 87034
meas. uncertainty, online validation using wavelet transforms 131890
metering valve flow charact. for pulse tube refrigerator 87025
micro-orifices, fluid flow modeling, micropolar fluid theory 99868
flowmeters continued
multi-phase flow meter using X-ray transm. 121281
multielectrode inductance flowmeter, mean flow vel. estim. 110062
multiphase pipelines, phase percentage determ., capacitance sens., coaxial capacitor 109532
oil-water-gas mixture meas., microwave sens., WaterCut & MultiPhase meters 88193
pneumatic conveying syst. powder flowrate meas., intell. meas. syst. 123975
respiratory flow meas., opt. sens., cross-correl. techs. appl. 98359
single/two-phase media and flows, US waveguide meters *(Russian)* 75924
US cross-correl. flow meas., modulated sig. vel. depend. charact. 110054
US cross-correl. flowmeter, demodulation, undersampling 110053
US gas mass flow metering, transit time meas. 97882
variable dens., loading road tankers, using proc. tomography 121276
vert. upward bubbly oil-water flows, cross correl. vel. meas. 121295
vortex flowmeter sig. proc. syst., DSP with spectrum anal. fn. *(Chinese)* 109487
zero press. drop flowmeter *(Russian)* 131855
Si micromachined fluid ang. rate sens., stream path accuracy, etching masks *(Japanese)* 109799
fluctuations
see also Brownian motion; current fluctuations; noise; plasma fluctuations; random processes
2D photonic lattice reflectors, single mode laser components 117330
act. opt. fiber ring resonator filter meas. by homodyne method *(Chinese)* 82100
adaptive evol. search, stochastic dyn., pop.-based incremental learning 78916
atm. monitoring using satellite-to-satellite radio links 122635
atmos. plumes, rem. sens. with MM-wave radiometer 76856
atmos. turbulence meas., angle of arrival fluctuations., intens. scintillations 76898
automatic speech systs., appl. of 1/f fluct. theory 84032
azo containing photosensitive liq. cryst. polymer film, two-wave mixing 128442
bar cryogenic grav. wave detector perform., review 127531
bidirectional ring laser with injected sig., backscatt., stat. props. *(Chinese)* 105385
Bragg grating fiber strain sens. demodulator 97338
Cherenkov radiation, energy loss fluctuations., angular distrib. 87217
cpd. cavity semicond. lasers, LF fluctuations., temporal dyn. 93754
DBR fiber grating laser, freq. stabilization using interferometric tech. 105199
diode lasers, freq. fluct. interf. measuring method *(Chinese)* 110016
distributed Raman fibre amp., double Rayleigh backscatt. 128170
distributed/lumped Raman fibre amps., transient effects, robust control scheme 131588
dual-gate PMOSFET, B dopant penetration/gate depletion anal. for Gbit DRAM design 102184
eddy current sens. response, ill-conditioned mixtures, Bayesian anal. 110037
EM rail launchers, accel. efficiency, init. state effect 117638
external cavity multi-mode semicond. laser, LF fluctuations. 105305
external cavity semicond. lasers, LF fluctuations., simple dyn. model 117257
external cavity semicond. lasers, low-freq. fluctuations., stochastic dyn., calcs. 93634
fiber grating external cavity LD, all-opt. wavelength converter *(Chinese)* 117250
fiber OPA gain fluctuations. anal. 105515
fully self-consistent semicond. hetero-jn. laser current noise model 117295
Gb/s dispersion-managed soliton transm., sync. intens. modulation control stabil. 74919
granular recording media, collective thermal fluctuations. 116385
ground-based aperture synthesis obs., atm. water vap. correction 97039
hot-wire anemometry, look-up inversion method, binormal vel. fluct., method of correction 110063
intrusion sens. using speckle pattern vars. from multimode opt. fiber *(Korean)* 120834
irradiance PDF, laser beam propag. through turbulent media 117702
Kerr nonlin. waveguides, non-classical behaviour 82833
large-scale diversified network systs., math. theory for available operation 130476
LMS step-size, dyn. adjust. based on variances of wt. fluctuations. 73703
local space vol./large space scale lidar meas., adaptive methods 120466
mag. recording, readout sig., media noise, time depend. 116383
magnetostrictive-type torque sens. for low-C steel steering shaft, basic characts. *(Japanese)* 110002
mesoscopic coupled cct., quantum fluct. depend. on temp. *(Chinese)* 101726
metal particle tape packing homog., depth-probing 104533
MIS struct., avalanche-multiplication coeff., probabilistic distrib. 115453
mol. solute, in nonpolar liq. solvent, three-pulse photon echoes, mol. theory 82826
Monte Carlo dose distrib. in radiotherapy planning, denoising 76726
multi-atom microlaser, stable photon source, subPoissonian stats. 127809
multilongitudinal mode semicond. lasers, thermal dyn., unified approach 71773
multiterabit/s high spectral efficiency DWDM transm., polariz. MUX-DEMUX 86078
NLC cell with optoelectronic feedback, self-oscills., opt. bistability 82245
NMOSFET matching charact. for 0.18 μm CMOS technol., substr. voltage/oxide thickness 103857
nonMarkovian optimal prediction 68024
one-photon micromaser, steady-state squeezing, pump phase fluctuations. 71628
opt. direct detect. CPFSK transm. syst., self-PM 131406
opt. fibers, multiple pulses stabil., phase-sensitive amplif., noise 104636
opt. wave propag. fluct. characts. in atmos. turbulence *(Chinese)* 105769
output-power leveling in solar cell and wind power gen. systs. with elec. double-layer capacitor banks *(English)* 99596
phase fluct. imaging OCT 76397
phase-sensitive parametric image amplif. 128501
photothermal phase-modulating LD interferometer for obj. displacement meas. 86968
polysilicon TFTs, LF noise model 92360
polysilicon TFTs with SiN_x/SiO_2 dual under layer, back-channel effects 97653
PSI anal. tech., FT method 84162
PV systs., state-space representation 133899
rem. laser interferometer with pseudo-heterodyne sig. proc. 131944
RLC ccts., radiative noise, fluct.-dissipation theorem 68549
self-seeded coupled-cavity pulsed tunable dye laser, competitive act. mirror 117390
semicond. devices, fluct. phenom., num. modeling 92272
semicond. laser, phase conjug. feedback, LF fluctuations. 105360
semicond. laser with phase conjug. feedback 105301
shallow-water oceanic waveguides, medium-scale diffr. tomography 111435
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
single mol. level biological probes, two-photon excitation fluoresc. correl. microscopy 75678

fluctuations continued
single-mode DFB heterostruct. semicond. laser line shape spectral spread 117236
single-mode dye laser syst., colored noise 117090
SQUID, quantum fluct., unitary evol. operator 70900
surface electrophysical params., sync. fluct. of waves, optimum-estim. algms. 72245
surface hot wire for mean/fluct. wall shear stress meas. 132220
thermionic RF gun, beam-loading compensation by feedforward control syst. 125972
unsteady turbulent swirling flow, PIV/POD/vortex ident. 121292
WDM opt. transport networks, integrative OADM/OXC, homodyne crosstalk anal. 120251
weak random screens image speckles, autocorrelation fn. properties *(Chinese)* 94919
wide-band monochromator, fiber diffr. grating meas. 116637
within-die param. fluct., impact on max. clock freq. distribs. 101990
X-ray laser lines, Gauss broadening by at. nuclei elec. pot. fluct. 117085
$BaTiO_3$:Ce photorefr. wave mixing, temporal fluct. 128433
C^{5+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
CO_2 indust. CW laser beam, spatial and temporal charact. 105141
CO_2 laser, gas dens. small-scale inhomogeneities, glow discharge thermal instabil. 82461
CdSe-based QWs, suppression of lateral fluct. 101199
CdTe/CdS heterojunctions, interface morph., annealing effects 126116
Co^{2+}-doped single-mode opt. fiber stable flatband attenuator 85975
Cr^{4+}:YAG pass. Q-switched laser, antiresonant ring fn. *(Chinese)* 105255
Er,Yb:glass single-mode laser in NIR, amplit. and freq. stabilization 105259
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
Er-doped fiber Bragg grating lasers, freq./intens. noise 117096
Er-doped fiber laser, rational harmonic act.-pass. mode-locking *(Chinese)* 93497
F_2 laser, discharge pumped, high-repetition-rate operation, 1D model calc. 105132
GaAs/AlGaAs, mol. controlled semicond. resistor, exciton photoluminesc., microwave modulation 102758
Ge^{22+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
InAsN/InGaAs/InP single QW, PL mechanism, photocond., gas source MBE growth 91805
InGaN, tailorable band-tail, band-state model, QW laser appl. 80705
InGaN/GaN/Al_2O_3 heterostruct., MBE/MOVPE growth, structural/opt. props. correl. 126125
$In_xGa_{1-x}N$/GaN LEDs, time-resolved PL 128019
$KTiOPO_4$ triply reson. OPOs, twin beams correl., single beam noise 105540
Nd:YAG LD side-pumped slab double-pass laser amp. *(Chinese)* 82555
Nd:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
$Pb(Sc_{1/2}Ta_{1/2})O_3$ cryst., ferroelec., micro-Brillouin scatt. 127194
Si, CZ growth, global model, O content/melt-cryst. interface thermal fluct. 68119
Si drift detectors, dopant conc. fluct. effects, large-scale meas. 76072
Si:O, melt transient O conc., CZ proc. in mag. field 124801
Tm,Ho:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259

flue gas desulphurisation
400 MW lignite-fired power station, FGD retrofitting experience *(English)* 123208
800 MW Matra steam power plant FGD scrubber retrofit project, Hungary *(English)* 99547
2785 MW coal-fired steam power plant FGD project, Poland 112309
boilers, LIFAC FGD proc. perform. improvement, modelling, China 88559
cleaning systs., fertiliser/stabilising landfill prod. 88560
metal corros., anticorrosive materials *(Chinese)* 77730
novel integrated desulphurisation for FGD, enhancements 88558
SO_2 removal using pulsed electron beams, NO_2 effects 112289
steam power plant flue gas cleaning efficiency improvement *(German)* 99548
steam power plant flue gas treatment using electron beam technol. 88587
T700 steam power plant FGD retrofitting project, Czech Republic *(English)* 112301
Tsuruga Thermal Power Station, FGD syst. operating results *(Japanese)* 88573
SO_2 removal, reactive sorbents, fly ash-$Ca(OH)_2$ mixture *(Chinese)* 77726

fluid composition control *see chemical variables control*

fluid composition measurement *see chemical variables measurement*

fluid instability *see flow instability*

fluidic devices
flexible fluidic actuators, appl. in med. engng. *(German)* 110486
integrated microfluidic/micro-optic systs., laser fab. 93154
microfluidic channels, flow props. characterisation 104178
microfluidic devices from soft lithog. 92508

fluidics
see also fluidic devices; microfluidics
area-based image matching, precise sub-pixel estim. *(Japanese)* 94613

fluidised beds
2000 MW lignite-burning power plant repowering project, Poland 88583
bottom zone imaging, elec. capacitance tomography 121144
capacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
chem. indust., proc. imaging & image proc., DuPont appls. 113808
Chinese biomass gasification technol. develop. overview 99452
novel integrated desulphurisation for FGD, enhancements 88558
oil shale-fired CFB boiler, perform. charact. *(Chinese)* 77722
Ospitale di Cadore biomass fired fluidised bed power plant 88555
polymer powders, fluidization, transport procs., triboelectric charging 68378
Russian fossil fuels CFBC, technol. substantiation 112312
solid fuels, coal, pet coke, biomass, cleaner technol. 99454
sq. fluidized beds using capacitance tomography 110060
steam power plant fluidized-bed coal combustion technol. *(Serbian)* 88590
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479
NO emissions from coal-fired PFBC *(Chinese)* 88574
N_2O emissions from coal-fired PFBC *(Chinese)* 88574

fluorescence
see also fluorescence spectroscopy; fluorescent lamps; fluorescent screens; nonradiative transitions; X-ray fluorescence analysis
2,5-dioctyloxy PPV, two-color opt. heterodyned opt. Kerr effect 117435
3D contrast-enhanced opt. tomography, error considerations 76412
aerodynamic flows, O_2 laser-induced fluoresc. temp. meas., errors, uncertainties 97872
autofluorescence spectrosc., oral cancer diagnosis 87514

fluorescence continued
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF te 110048
benzopyran derivative flashlamp-pumped dye lasers, fluoresc. props. 11709
benzothiazole derivative, blue-emitting, organic EL devices appl. 104987
biofluorescence sens., conf., San Jose, CA, USA (Jan.2001) 89503
biomedical optics/photonics trends, conf., Miami Beach, FL, USA (Apr. 20 100430
biosensor materials, conf., Boston, USA (Nov.2000) 78376
cage motor starting, inner temp. meas., fluoresc. opt. fibre 123450
cellular protein changes due to environ. nonionising radiation 98749
chem./biosensors, fluoresc. lifetime change detect. by optoelectronic cct. a oscill. 120961
N-(2-chlorophenyl)-(1-propanamide) nonlin. cryst., growth & charactn. 127
cholesteric liq. crysts., 1D photonic band-gap and low threshold lasing 825
chromosome images, homologue class., iter. centromere segmentation al 87519
CLC, self-lasing by stimulated emission/fluoresc./DFB 82560
colour-difference eval. using CRT display, parametric effects *(Chinese)* 73
combustion procs. at Bremen drop tower, laser diagnostic syst. 83065
conjug. polymers, low-bandgap, PV cells 123827
contrast enhanced opt. tomography, gradient-based nonlin. optim. meth 106495
cornea, human, laser ablation, fluoresc. surgical feedback 98633
corona radical shower NO_x removal syst., 2D imaging expts. 133354
CSP/BGA packaging yield enhancement with solder flux/paste proc. con 124333
CSP/BGA yield enhancement with solder flux/paste proc. control 125940
cytoskeletal organis. in chondrocytes, temporal var., image anal. 87541
distyrylstilbenes bearing electron affinitive dendrons, blue-emitting, synt sis/charact. 105018
dual receptor biosensors, fluoresc. reson. energy transfer pairs 109721
dye materials in PMMA matrix, XeCl laser pumped, output charact. 10515
dyes, two-photon induced fluoresc. and up-conversion lasing *(Chinese)* 128
ejector co-axial flow mixing zone visualisation method 87037
electrokinetic capillary separation, LIF, micro-opt. syst. 109782
electrophoretic microchips, LIF detect., clinical diagnostics 98348
emission detect., photon counting tech. param. anal. 114558
epithelial neoplasia, early detect., fluoresc. guided OCT 98376
ESRF ID 22 beamline high-resoln. X-ray imaging & tomography 76168
trans-4-[p-(N-ethyl-N-hydroxyethylamino)styryl]-N methylpyridinium iodi two-photon opt.-power limiting, upconverted superradiance props. 82829
F_1-ATPase biomol. motors, precision attachment on Ni dot nano-substrs. 925
fibre opt. dual temp./strain sens., fluoresc. lifetime decay & FBG 97330
fluoroptic temp. detect., opt. fiber microprobe 120858
freq.-domain fluoresc. microscopy, LED excitation source 116991
freq.-domain photon migration, 3D unconstrained/constrained image-reconstru tion 76406
glass-reinforced composites, curing, fiber-optic evanescent-wave fluoresc. sen model 75559
hard X-ray fluoresc. holography 72084
human bronchial tissue autofluorescence spectrum, Monte Carlo modelling *(C nese)* 98347
hybrid shuttle car, solar array/batt. powered 100282
trans-4-[p-(N-hydroxyethyl-N-ethylamino)styryl]-N-methylpyridinium p-tolue sulfonate, NLO props. 82909
immunosensor, tapered tubular opt. waveguide probe 75685
infectious disease screening for field med. emergencies 76381
lamp phosphors, VUV radiation meas. *(Japanese)* 124068
landmine detect., polymer film amplif. fluoresc. quenching, sniffer 76993
landmine electronic chem. sens., using fluoresc. polymers 88230
laser beam/tissue interacts., advanced therapeutic/diagnostic techs. 117597
laser-induced exciplex fluoresc., quantitat. vapour-liq. visualization 132215
LD-pumped act. media, excited state absorpt. & upconversion effects 93801
leaky waveguide micro channel sens. chips for opt. anal. 120744
liq. composite molding, fiber optic flow sens. 86582
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(Englis* 122059
lung tissues, human, intrinsic microscopic fluoresc. and imaging *(Chines* 132635
MAP algm. for image reconstruction *(Chinese)* 129427
mesoionic cpds., anti-Stokes fluoresc., reverse saturable absorpt. 71950
metal atom activator isolatedly fixed in matrix, new phosphor feasibility *(Jap nese)* 127930
metaphase finder, FISH dosimetry, automatic chromosomal aberration detec 122387
methane-air flame, temp. meas. using laser-induced predissociative fluores *(Chinese)* 75915
micro-total anal. syst., micro-opt. and microfluidic syst. 93168
monochromatic X-ray CT, fluoresc. X-rays excited by SR 98561
multichannel fluoresc. temp. meas. syst., fibre opt. sens. 75594
multichannel microchip electrophoresis for genetic/mol. separation detect. 9395
multicolor polymer EL device fab. using photo-bleaching method 104973
noncontact temp. sens., laser induced fluoresc. type, appl. to in-flight drople 87015
ocean bottom LIF imaging 122687
oil field flows meas. using opt. fiber probes 121272
oil pollution in water, laser-induced fluoresc., time-resolved spectra 122714
oligo(phenylenevinylene) derivatives, synthesis & charactn., opt. absorpt. 8232
oligo(phenylenevinylene) films, time-resolved polarized fluoresc. 127552
oligo(phenylenevinylene)s, increased electron affinity 69611
opt. fiber sens. for high-temp. meas., fluoresc. techs. 97326
opt. fiber sens. for oil contamination meas., 3D fluoresc. spectrum parameteriz tion 120879
opt. fiber temp. sens., strain effect 97332
opt. halide sens., fluoresc. quenching kinetics 121005
opt. peroxide biosens. using elec. controlled-release tech. 86681
organic EL device, exciplex light emission 126097
organic EL device phosphoresc. emission *(Chinese)* 93379
organic EL material, electronic excitation energy transfer 104907
organic LED, 2,5-bis(2-{4-[bis(4-methylphenyl)amino]phenyl}thiophen-5-yl amorph. mol. material 105009
organic multilayer white LED *(Chinese)* 82409
organic thin solid films for LEDs, photophysical studies 104906
oxyfluoride vitroceramics material, Er^{3+} ion up-conversion luminesc. enhance ment 117479
particle image & opt. flow velocimetry for turbulent flows/flames 110066
PDP fluoresc. patterns, automated rapid defect inspection algm. 121130
periodic microcavities, multichannel opt. waveguides form., light propag 127729

rescence continued
eripheral blood lymphocytes, chromosomal aberrations, dosimetry calib. curves 76746
erylene-doped polymer fiber fluoresc. spectra 93058
hoto-generation of acids, fluoresc. detect. in small area, near-field write-once memory 116584
hotocond. polymers, charge carrier generation procs. 82315
hotosystem II photochem. charact., airborne laser assess. 105656
hytoplankton, marine, biomass meas. by dual-beam laser fluoresc. Doppler cytometer 86677
hytoplankton photochem. charact., airborne laser test 111461
ierre Auger Cosmic Ray Observatory, fluoresc. detect. prototype, analog sig. proc. 121625
ierre Auger expt. at southern hemisphere, cosmic ray energy spectrum 132426
MMA, surface microchannels, hot embossed/UV laser ablated, chem. mapping 127112
MMA opt. fibers, nonlin. organic chromophores, prep. 93088
oly(3, 6-N-2-ethylhexyl carbazolyl cyanotere-phthalidene), LB films, opt. props. 121082
oly(fluorene)-based alternating copolymers, opt. props., synthesis 69612
oly(N-vinylcarbazole)/PMMA blend miscibility, excimer fluoresc./photocurrent meas. 104896
olyethylmethacrylate opt. fibers, nonlin. organic chromophores, prep. 93088
olypyrrole electrospotting for oligonucleotide arrays, surface plasmon reson. hybridization detect. 114396
olythiophene derivative LED with nano-sized electrode, modified SNOM setup 116980
rotein-based bio-photodiode, rectified photocurrent 102864
yrromethene 567 dye in polymer matrix, photophysical and lasing props. 105157
uasi-distributed opt. fibre pH sens., covalently bound indicator 97432
are-earth doped chalcogenide glass fiber, mid-wave/LW IR laser pot. 105192
ectal cancer, neoadjuvant treatment response predicting by laser-induced endog- enous fluoresc. 87554
efr. microlenses for fluoresc. detect. in chem. microsystems 71358
hodamine B doped plastic opt. fibers, side illum. induced fluoresc. 116644
apphire-ruby single-cryst. fibre, high temp. thermometers 97304
EM, X-ray fluoresc. imaging, pinhole relay optics 76187
ens.-friendly vehicle and roadway systs. for collision avoidance 120446
ingle mol. level biological probes, two-photon excitation fluoresc. correl. microscopy 75678
quarylium dye J aggregates, absorpt. bleaching, two-photon excitation proc. 93778
tone cultural heritage, lidar rem. sens., protective treatment detect. 122726
ynthesis of fluoresc. 1,2-oxazole cpd. synthesis for organic LED FPD appls. 109865
emp./strain meas., fibre fluoresc./Bragg grating 120833
-terphenyl based combined detectors for UV-radiation detect. 109576
hienylene/arylene copolymers, Suzuki coupling react. prep., absorpt./fluoresc. spectra 68441
hin-film integrated sens. for nanotechnol. and biomedical appls. 120752
hiophene-based materials, photo and EL, chem./thermal stabil. 92934
issue fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
issues, fast/noninvasive fluoresc. imaging using flying-spot scanner 110842
TPD-arylene copolymers, TW lasing 82548
ris(phenylquinoxaline), dye-doped, triplet-singlet energy transfer, photoinduced absorpt. spectrosc. obs. 127918
ris-8-hydroxyquinoline aluminum films, nanoscale photophysics 115347
ryptophan airborne microparticles monitoring, fluoresc. size depend. 88187
umor hypoxia, scanning beam confocal fluoresc. microscopy 98355
umour resection and PDT, integrat. of intra-operative MRI scanner and neurosurgical guidance 87786
urbine engine press. sensitive paint meas., endoscopic imaging syst. 114557
two-photon fluoresc. labels, biological imaging sensitivity 110831
viral particle detect. by aerogel-immobilized bacteria 86678
wafer contaminant location/ident. by IR microscopy/fluoresc. illum. 70230
X-ray diagnosis source, K-fluoresc. enhanced X-ray tube 98507
X-ray image sens., spectral efficiency eval., lin. conversion 76164
X-ray tube fluoresc. output, backscatt. electrons influence, MC simul. 110433
Al_2O_3:Er(Ti)(Cr) for act. integrated opt. appls. 127802
As-Ge-Ga-S:C(Pr)OH)(CS_2)(hydrocarbon) glasses, opt. props. 90583
$Bi_4Si_3O_{12}$:Nd, Bridgman growth, opt. props. 101170
C_{60}/C nanotubes, opt. limiters, mechanisms *(French)* 82823
Ca^{2+} conc., bound calcein acrylamide fibre-optic sens. 97408
$Ca_4GdO(BO_3)_3$:Nd, diode-pumped laser syst. act. media, growth, transm. & luminesc. spectra 93550
CaS:Eu,Sm electron trapping material in light conversion agricultural film *(Chinese)* 71215
CdF_2-$CdCl_2$-NaF-BaF_2-$BaCl_2$-ZnF_2:Nd glass, upconversion procs. 104909
CdS nanocrystals, CuS-coated/$Cd(OH)_2$-activated, fluoresc. props. *(English)* 80730
CdSe colloidal semicond. QD, time-gated biological imaging 87525
CdTe highly fluoresc. nanoparticles, elec. field directed layer-by-layer assembly 125037
Ce:LiLuF tuned-laser, pump-probe-gain, fluoresc. yield 117166
$(Ce_{0.67}Tb_{0.33-x})Mn_xMgAl_{11}O_{19}$ phosphor, Mn^{2+} luminesc. 127934
Cr^{4+}:YAG CW lasers, power perform. optim. 82558
Cr-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
$CsCdBr_3$:Dy^{3+},Yb^{3+}, cryst. growth, spectrosc. props., mid-IR laser 93542
Cu interconnects, SR X-ray microdiffraction 69946
Er^{3+},Cr^{3+},Yb^{3+} doped phosphate glass for eye-safe wavelength lasers 117111
Er^{3+}:Na_2O-$Ca_3Al_2Ge_3O_{12}$ glasses, opt. transits., freq. upconversion 71986
Er-doped fiber gain/ASE charactn. 82120
Er^{3+}-doped fluorozirconate opt. fiber upconversion fluoresc. 117108
Er^{4+}-doped waveguides, homog. upconversion, nonlin. quenching, anal. model 82902
Er_2O_3 nanocrystals, microemulsion prep. tech., fluoresc. 82333
GaN undoped epilayer, three-photon fluoresc., SHG obs. 82904
Ga_2S_3-La_2S_3-La_2O_3:Dy^{3+} for 1.3-μm opt.-fiber amps. 128139
$Gd_{0.8}La_{0.2}VO_4$:Nd, spectrosc./laser props. 117147
GeAsGaSe:Pr^{3+} core/clad selenide glass fiber, IR appl. 71298
HF laser, operation conditions, excited mols. fluoresc. meas. *(Korean)* 93486
^{3}He-$XeBr_2$ nuc.-pumped flashlamp sources for nuc.-pumped lasers 128047
Hg vap. lamps, monochromator wavelength calib. stds. 89428
Ho^{3+}-doped ZBLAN green emitting upconversion fiber amps. 128135
I_2 atmos. monitoring using Cu vap. pulse laser radiation 133288
$KGd(WO_4)_2$:Nd, diode-pumped laser syst. act. media, growth, transm. & luminesc. spectra 93550
KPb_2Cl_5:Dy^{3+},Yb^{3+}, cryst. growth, spectrosc. props., mid-IR laser 93542

fluorescence continued
$LiNbO_3$:Ti,Er periodically poled waveguides, nonlin. integrated opt. freq. converters 128486
NH_3-O_2 mixtures, laser-induced breakdown/ignition, NH planar LIF 132214
NO_2, atmos., LIF detect., instrum. design 111480
Na_2O-$Cd_3Al_2Si_3O_{12}$:Er^{3+} glass, opt. charactn. 71217
$NaY(WO_4)_2$:Nd, He^+ ion implant., planar opt. waveguide form., props. 127735
Nb_2O_5-SiO_2 multilayer interf. filters, artificial nose fluoresc. sens. 86504
Nd:GdGG, stimulated-emission cross-sect. meas. method 128216
Nd:$NaY(WO_4)_2$, CZ growth, thermal and laser props. 93536
Nd:YAG boule slices, laser perform., opt. props. 93540
Nd-chelate/polymer opt. fibre amplif., NIR fluoresc. bands 128151
Nd-doped 2 at% YAG laser material growth 92928
Nd^{3+}-doped chalcohalide glasses, IR-to-vis. upconversion 128495
$NdAl_3(BO_3)_4$ microchip laser cryst., opt. charactn. and laser gain modeling 93557
SiO_2-Al_2O_3-P_2O_5-Na_2O-K_2O-CaO-Er_2O_3-Yb_2O_3 glasses, act. opt. waveguides 93156
$Sr_{0.61}Ba_{0.39}Nb_2O_6$:Cr single cryst. photorefr. props. 82046
SrS:Eu,Sm, electron traps, opt. storage *(Chinese)* 116929
Te_2 dimer gas mols. for solar pumped lasers, spectrosc. studies 82492
Ti,Er:$LiNbO_3$ waveguide laser amps., ASE spectral meas. 128200
Ti:sapphire femtosecond laser, principles and appls. *(Chinese)* 117141
Ti-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
Tm,Yb:glass fibre laser, $^1G_4$ level excitation, blue upconversion, fluoresc. 93495
Tm^{3+}:KY_3F_{10} laser, spectrosc. and CW operation 82587
Tm^{3+}/Yb^{3+}-codoped phosphosilicate buried waveguides, thermal-enhanced upconversion emission 127725
Tm^{3+}-doped fluorozirconate glass, $^3H_4 \rightarrow {}^3F_4$ transit. quantum efficiency 92944
YAG:Nd(Lu)(Ga) thin film laser, growth & charactn., LPE 93548
$YAl_3(BO_3)_4$:Nd, diode-pumped laser syst. act. media, growth, transm. & luminesc. spectra 93550
$Y_{3-x}Tb_xAl_3O_{12}$ phosphors, photolum., inter-ionic interact. effect 93355
$YbY_{1-x}Al_3(BO_3)_4$ cryst., growth, self-freq.-doubling props. 128208
$ZnGeP_2$, near-IR femtosecond pumping, parametric generation 71988
ZnSe:Mn QD colloidal nanocrysts., EPR/opt. props. 91810

fluorescence spectroscopy
see also fluorescence; X-ray fluorescence analysis
biomarkers and biological spectral imaging, conf., San Jose, CA, USA (Jan 2001) 113265
coastal marine water oil pollution, laser monitoring 76938
early tumors detect., laser induced autofluorescence spectrosc., pre-computed Monte Carlo results 87540
integrated opt. microcavities for spectrosc. 127780
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
opt. biopsy/in-vivo study of human skin, laser syst. 122057
opt. sens./manipulation, biological/biomedical appls., conf., Taipei, Taiwan (July 2000) 89497
time-resolved fluoresc. opt. fiber biosensor *(Chinese)* 97424
tissue, in vivo exam., calibrated fluoresc. imaging syst. 87513
tissue fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
two-line at. LIF thermometry in sooting combustion environ. 110039
CdS nanosized particles in hyperbranched conjug. polymers, fluoresc. spectr. 126046
Nd:YAG/Cr^{4+}:YAG microchip-laser, 214.8 nm, NO detect. appl. 105253
WSi_2-Si/Ta-Si multilayers, wavelength-dispersive X-ray fluoresc. spectrometers 82274

fluorescent lamps
45 W HF single-ended compact fluoresc. lamp *(Japanese)* 124071
act. PFC/ballast control IC 134618
ballast, inverter, inductively coupled preheating ccts. 134620
ballast crest factor improvement using PFM 134606
ballasts self configuring dimming interface 134625
central partial darkness mechanism expts. *(Japanese)* 124065
Class D voltage switching reson. inverter electronic ballast 124075
class-E amp. used as electronic ballast with dimming capability, anal. 100313
cold cathode fluoresc. lamps, piezoelec. transformer electronic ballast 134631
cold-cathode fluoresc. lamp for LCD backlighting 97703
cold-cathode fluoresc. lamps, long lifetimes *(Japanese)* 124061
compact fluoresc. lamp, electronic ballasts, perform. anal. 134616
compact fluoresc. lamp market, success factors, Hungary 78331
compact fluoresc. lamps, high-PF single-switch electronic ballast 89430
compact fluoresc. lamps for household hourly load curve improvement 134608
DALI digital addressable fluorescent lighting control interface 134624
dimmable fluoresc. lamp life, cathode heating voltage effect 134623
discharge lamps, hybrid electronic ignition ccts. 124085
dyn. behaviour modelling, dimmable ballasts 134627
electrodeless dimmable fluoresc. lamps, electronic ballast study 134622
electronic ballast, self-oscillator, half-bridge inverter *(Japanese)* 125256
electronic ballast, small size and low cost for HF fluoresc. lamps *(Japanese)* 100314
electronic ballast using half-bridge reson. invertor 89440
electronic ballast with no series pass. elements 89436
electronic ballasts, toggled duty cycle current control 134617
electronic ballasts topologies comparison 89433
energy-efficient lighting, EM field levels, med. device interf. 133149
fluoresc. lamp FHC41 and lighting fixture *(Japanese)* 113130
HF ballasts/fluoresc. lamps, dyn. interact. anal., SPICE simul. 124078
HF electronic ballast providing line freq. lamp current 124073
high PF ballast, forward half-bridge reson. inverter 134619
high PF electronic ballast, modified valley-fill filter 134614
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
inductor-less charge pump PFC electronic ballast, lamp current feedback control 134621
lamp phosphors, performance/design tailoring 104929
LCD backlight unit, light-guide plate, plano-convex microreflectors 97748
LCD backlighting unit, ultrahigh luminance, monitor appl. 97749
lin. fluoresc. lamp inductorless piezoelec. transformer electronic ballast 89435
low-mercury fluoresc. lamps, key mercury reduction techs. *(Japanese)* 124066
luminesc. materials for displays, overview, future prospects 109863
model, tangent approx., electronic ballast design 134626
modelling for voltage flucts. anal. 78334
multiple lamp independent operation, voltage-fed half-bridge reson. converter 134613
multiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
PA-LOOK BALL dimmable compact fluoresc. lamp *(Japanese)* 124062
PA-LOOK BALL YOU self-ballasted compact fluoresc. lamps *(Japanese)* 124070
piezoelec. cold cathode fluoresc. lamp driver, LCD backlight 78335

fluorescent lamps continued
rapid-start fluoresc. lamps, electronic ballasts, universal protection cct. 134636
self-oscillating electronic ballast design, control syst. 134612
single-stage electronic ballast, dimming feature, design 124079
single-stage high PF electronic ballast 124081
single-stage high-PF electronic ballast topol. 134630
single-stage push-pull electronic ballast with high input PF 100318
street lighting, required illuminance, high-efficacy fluoresc. lamps *(Japanese)* 124086
T8 fluoresc. lamp ballast using piezoelec. transformer, charact. 134638
TWIN PA-LOOK twin-type circ. fluoresc. lamps *(Japanese)* 124072
$(Ba,Sr)MgA_{10}O_{17}:Eu^{2+}Mn^{2+}$ fluoresc. lamp phosphor develop. *(Japanese)* 124064
$CaMgSi_2O_6$:Eu phosphors, blue/red emitting, VUV excitation appls. 104937
Ti-phosphor fluoresc. PA-LOOK lamp, whiteness colour preception enhancement *(Japanese)* 124069

fluorescent screens
see also electroluminescence
CRT phosphor screens granularity, CCD-based charactn. 97701
photoelectronics develop. overview 86647
X-ray phosphor screens, opt. sig./gain and inform. content charact. 87748

fluoride glasses
isothermal crystn. kinetics, fibre appl. 92938
nonoxide glasses, opt. appls. 104601
oxyfluoride:Er vitroceramics, upconversion, Raman/XRD studies 116920
oxyfluoride:Tm vitroceramics/glasses, opt. props., display apl. 116919
oxyfluoride vitroceramics material, Er^{3+} ion up-conversion luminesc. enhancement 117479
CdF_2-$CdCl_2$-NaF-BaF_2-$BaCl_2$-ZnF_2:Nd glass, upconversion procs. 104909
Er,Yb:oxyfluoride glass ceramics, direct upconversion sensitization luminesc. *(Chinese)* 128491
Ho:ZBLAN glass fiber laser, LD-pumped, power conversion efficiency 93527
InF_3-YF_3-BaF_2-SrF_2-NaF-ZnF_2-GaF_3 glasses, opt. props. and thermal stabil. 127564
LiF-SiO_2 TLD, sol-gel method new mfg. proc. 111250
$Na_4As_2O_7$-BaF_2-YF_3:Nd^{3+} glass, upconversion procs., luminesc. 104593
Pr^{3+}:ZBLANP opt. fibre sens., temp./conc. depend. 86597
Tm^{3+},Ho^{3+}-doped ZBLAN glass fibre laser, output charact. 82520
Tm^{3+}-doped fluorozirconate glass, $^3H_6 \rightarrow {}^3F_4$ transit. quantum efficiency 92944
Yb^{3+} ions in oxyfluoride glass, blue cooperative up-conversion luminesc. 82884
ZBLAN:Pr^{3+},Yb^{3+} glass, up-conversion 3D vol. display 121128
ZBLANP glass waveguide, fab. 93131
ZnO nanoparticles in highly transparent MgF_2 films, green photolum. 80714
ZrF_4-LaF_3-AlF_3-GaF_3-ErF_3 glasses, devitrification, nucleation/spinodal decomp. 90582

fluorimetry *see spectrochemical analysis*

fluoroscopy *see radiography*

flush mounted antennas *see conformal antennas*

flux (magnetic) *see magnetic flux*

flux creep
see also flux pinning
high/low T_c supercond. for magnets & motors, microstruct. aspects 92883
HTS supercond. current limiters, quench conditions 77598
BiPbSrCaCuO 2212 crysts., MgO doped, Pb substitution effects on J_c 81932
BiPbSrCaCuO/Ag HTSC 2223 tape, I-V charcts. in range of very low elec. field 81952
YBa_2Cu3O_x plate, mag. shielding, crit. current dens. influence 70637
YBaCuO HTSC rings and ring pairs, transient response to pulsed mag. fields 88487
$YBa_2Cu_3O_{7-\delta}$ slot antenna coupled hot-electron bolometers, mm-wave radiation detector 127535

flux crystal growth *see crystal growth from solution*

flux flow
see also flux pinning
2D underdamped Josephson jn. arrays, Eck-like steps 70973
Cherenkov flux flow oscillator, long Josephson jn./meander-shaped stripline 69155
flat superconds., vortex vel. laws to I-V data 81935
HTSC SQUID magnetometers, low-freq. noise, flux dam effects 75492
HTSC thin films/devices, high resoln. magneto-opt. obs. 70780
isolated Abrikosov-Josephson vortex, nonlin. dyn. 92899
Josephson flux flow oscillator linewidth rel. to IV-curve superfine reson. struct. 71178
Josephson flux-flow oscillators, phase locking in non-uniform microwave fields 92904
Josephson oscillators, spectral linewidths 81981
mesoscopic Josephson arrays, EM field-vortices interact. 127502
supercond. coils in external mag. field, AC losses, transport current with phase difference 127521
supercond. tape wires with meter-class length, perp.-field losses meas. 127460
Ag/Bi-2223 tapes, self-field loss, freq./temp. depend. 127461
$(Bi,Pb)_{2.2}Sr_2Ca_{2.2-x}Pr_xCu_3O_y$/Ag sheathed tapes, enhanced flux pinning 127448
Bi-2223 Ag-sheathed tape, anisotropic transport, percolation model 127457
Bi-2223 tape coil, levitation expt. for plasma confine. device 127526
BiPbSrCaCuO/Ag 2223 HTSC tape, crit. persistent current for loop 70711
BiSrCaCuO/Ag 2223 untwisted HTSC tapes, transverse resistivities 127445
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag tapes, stacked, ac losses ang. depend. 127455
$(HgPb)Ba_2Ca_2Cu_3O_y$ HTSC, mag. suscept. and AC loss meas. 70615
Nb/Al/AlO_x/Nb, long inline Josephson jns., reson., flux flow 70568
Nb_3Sn wires, marginally stable, flux jumps suppression 70768
RBaCuO (R=rare earth), QMG grown, current limiting elements 123067
Y-Ba-Cu-O HTSC, cylindrical melt-textured, magnetothermal instabilities 70656
YBa_2Cu3O_x plate, mag. shielding, crit. current dens. influence 70637
YBaCuO Josephson jns., ramp edge modif. by ion beam irrad./heat treatment 70808
YBaCuO multifilamentary coated supercond., decreasing transport ac losses method 127424
$YBa_2Cu_3O_7$ HTSC, pulsed magnetis. procs., flux flow 70672
$YBa_2Cu_3O_{7-\delta}$ SQUID, grain boundary jn., vortex motion 70929
$YBa_2Cu_3O_{7-\delta}$ epitaxial film, microwave loss, vortex propag., surface impedance 70576
$YBa_2Cu_3O_{7-\delta}$, high field scanning Hall probe imaging 70623
$YBa_2Cu_3O_{7-x}$ SQUID magnetometers, field-induced low-freq. noise suppression by slotted flux dams 127487
$YBa_2Cu_3O_7$/$NdBa_2Cu_3O_7$ single cryst. contacts, LPE growth 70584

flux-line lattice
conf., Models and phenom. for convent. and high temp. supercond., V Italy (Jun./Jul. 1997) 100446
four-jn. bicryst. switch for HTSC SQUID magnetometer pickup coil 11
HTSC, sine-Gordon vortex states, quantum antiferromagnets 127483
HTSC thin films/devices, high resoln. magneto-opt. obs. 70780
local field above supercond., magneto-opt. imaging polarimetry 71443
mag. flux, macroscopic quantum coherent oscills., continuous weak meas.
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$/Ag-sheathed tape, vortex dyn., ac suscept. meas. 9
Bi:2223/Ag commercial tape, quasi-reversibility, vortex shaking in orth mag. fields 127430
Bi-2223/Ag sheathed tape, extended E-J charact., ang. depend. 127458
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC tapes, J_c, magneto-optic imaging 70734
$Bi_2Sr_2CaCu_2O_{8+\delta}$, irreversibility line, press. depend. 81936
κ-$(ET)_2Cu(NCS)_2$, vortex struct., Josephson plasma reson. 102493
$Hg_{0.9}Re_{0.1}Ba_2CaCu_2O_y$ SQUID, grain boundary jns. flux noise 127489
Nb films, electron beam lithog., RIE, supercond. props. 125074
YBaCuO HTS bulk/multiple electromagnets, act.-maglev syst. 116542
YBaCuO superconductive opt. flux trap memory cell 127497
$YBa_2Cu_3O_7$ HTSC films, vortices, terahertz radiation imaging 70630
$YBa_2Cu_3O_{7-\delta}$ film, grain boundary jns., direct flux noise meas. 127488
$YBa_2Cu_3O_y$ HTSC, surface impedance, power dependencies, rf field 706
$YBa_2Cu_3O_7$/$SrTiO_3$/$YBa_2Cu_3O_7$ multilayer SQUIDs, low-freq. flux noise

flux line motion *see flux flow*

flux pinning
see also flux creep; flux flow
crit. currents in superconds., conf., Gottingen, Germany (Jun. 2001) 113
flat superconds., vortex vel. laws to I-V data 81935
high current dens. requirements for practical appl., HTSC role 70587
high/low T_c supercond. for magnets & motors, microstruct. aspects 9288
HTSC microwave resonators, vortex pairs and nonlin. inductance 71123
HTSC thin films and devices, mag. imaging by scanning SQUID micro 70578
HTSC thin films/devices, high resoln. magneto-opt. obs. 70780
long Josephson jn., fluxon, AC induced damping 104570
slotted high-Tc SQUID magnetometer, vortices entry in double-pickup-coi fig. 70788
slotted HTSC SQUID magnetometer without flux dam, static mag. field 75493
supercond. thin films, trapped flux, scanning SQUID microscopy/simul.
$(Bi,Pb)_{2.2}Sr_2Ca_{2.2-x}Pr_xCu_3O_y$/Ag sheathed tapes, enhanced flux pinning 127
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ Ag-sheathed tapes, crit. current dens. 104563
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$:U/Ag supercond. tapes, phase form., thermal trea optimisation 81958
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$/Ag-sheathed tape, vortex dyn., ac suscept. meas. 928
Bi-2223 tapes, reinforced Ag sheath, oxide core additives, pinning mecha 127456
BiPbSrCaCuO 2212 crysts., var. of flux pinning with Pb doping 70662
BiPbSrCaCuO HTSC, effects of Ag_2O doping on EM props. 82018
BiPbSrCaCuO/Ag HTSC 2223 tape, I-V charcts. in range of very low elec 81952
BiPbSrCaCuO/Ag tapes, 2212 phase, microstruct., crit. curr. dens. 12743
$(BiPb)_2Sr_2Ca_2Cu_3O_y$/Ag HTSC tapes, I_c and I_c-H behaviours, $CaCuO_2$ precu addit. 81966
BiSrCaCuO 2223 HTSC tape, transport E-J charcts. under bending strain, p lation model 127443
BiSrCaCuO 2223 supercond. tapes, field depend. at 77 K 70748
BiSrCaCuO tapes, props. & flux pinning, power appl. problems 81957
$Bi_2Sr_2Ca_2Cu_3O_x$ tape conductors, temp. and mag. field depend. of crit. cu 70747
$Bi_2Sr_2CaCu_2O_{8+x}$ HTSC, BaO_2-added, microstruct., I_c 70605
$Bi_2Sr_2Ca_2Cu_3O_{10}$:U tapes, in-field behaviour, enhanced flux pinning 81930
BiSrCaCuO/Ag HTSC 2223 tapes, ^{235}U doped, vortex pinning by fission t 81956
κ-$(ET)_2Cu(NCS)_2$, vortex struct., Josephson plasma reson. 102493
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion age 124863
$(HgPb)Ba_2Ca_2Cu_3O_y$ HTSC, mag. suscept. and AC loss meas. 70615
Nb-Ti supercond. tapes, prep., upper crit. field anisotropy 70777
Nb-Ti-Ta multifilamentary supercond. tape, J_c, microstruct. 70778
Nb_3Al multifilamentary supercond. wires, rapidly heated/quenched, microst 70761
Nd-Ba-Cu-O single crysts., effect of O content on flux pinning 70661
Nd-Ba-Cu-O/Ag HTSC, melt-processed, quasi-PM 70669
(Nd-Eu-Gd)$Ba_2Cu_{3\pm x}$:Ag HTSC, melt-processed, flux pinning 70668
$NdBa_2Cu_3O_y$ HTSC film patterns, mag. flux trapping, scanning SQUID mic copy 70583
$NdBa_2Cu_3O_7$:Ag large-grain c-axis oriented bulk HTSC fabr. and mag. p 114237
R-Ba-Cu-O HTSC (R=rare earth), resin impregnation, mech. props. 81941
R-Ba-Cu-O/Ag (R=Sm, Nd), melt proc., PM perform. 116532
Sm-Ba-Cu-O/Ag HTSC, melt-processed, quasi-PM 70669
$(Y,Ca)Ba_2Cu_3O_y$ HTSC, melt growth fab., J_c, flux pinning 68411
Y-Ba-Cu-O bicrystals, low angle, crit. current hysteresis 70675
YBaCuO dc-SQUID magnetometers, noise increase in mag. fields 131874
YBaCuO film strips, supercurrent distrib., temp. depend., terahertz radia imaging 127428
YBaCuO, meander-shaped QMG current limiting device, AC current 116543
$YBa_2Cu_3O_7$ HTSC, pulsed magnetis. procs., flux flow 70672
$YBa_2Cu_3O_7$ high-quality HTSC tiles, prep., mag. bearing appl. 68134
$YBa_2Cu_3O_{7-x}$ SQUID magnetometers, field-induced low-freq. noise suppres by slotted flux dams 127487
$YBa_2Cu_3O_y$ HTSC, melt textured, ion irrad., surface columnar defects 7065
$YBa_2Cu_3O_{7-\delta}$:Zn HTSC, T_c, flux pinning, CuO_2 site doping 70667
$YBa_2Cu_3O_{7-\delta}$:Zn(Ag) HTSC, trapped fields 70670
$YBa_2Cu_3O_{7-x}$:Er HTSC, flux pinning, cryst. growth 70671
$YBa_2Cu_3O_y$/$La_{0.7}Ca_{0.3}MnO_y$ HTSC multilayers, Hall effect 70639

flux vortex flow *see flux flow*

flux vortex lattice *see flux-line lattice*

fluxgate magnetometers
amorph. mag. alloys, appls. in electronic devices 104481
austenitic stainless steel plates, residual magnetis., fatigue depend. 121159
biomag. meas., mag. noise, DC elec. railcar 132589
inertial-mag. systs., attitude defn. using laser gyros 132136
insulator core, harmonic generation 127375
LF mag. field sens. *(German)* 120745
mag. flux dens. internat. comparison, field coil transfer stds. 109406
micro-fluxgate sens., symm. closed core elements, pulse excitation 121041

ate magnetometers continued
nicro-fluxgate sens. with closed core, flat coils 75763
nicrofluxgate sens., double-sided symm. core design 109805
rdnance detect. & discrim. at Fort Ord range, instrum. eval. 88229
ngcore portable single axis mag. gradiometer, calib. 131860
upercond.-mag. hybrid magnetometers 75416
ermoelec. detect. of spherical inclusions, mag. sens. 114524
vo-axis fluxgate mag. field sens., CMOS proc. fab., perform., appl. 75477
isually impaired navig. syst. develop., sens., DGPS & digital maps 76714
$(CoFe)_{70}(MoSiB)_{30}$ racetrack fluxgate sens., sensitivity & noise 120771
id array *see flux-line lattice*
g robots *see aerospace robotics*
heels
kWh flywheel motor-generator, PM/HTSC bearing expts. 78186
-level neutral-point-clamped PWM inverter 134423
0 kWh flywheel energy storage syst. HTSC mag. bearing 78181
utomotive flywheel balancing, factorial designs, cylindrical response 89309
xial-field sync. motor, semi-anal. inductance calc. 123839
xial-flux PM sync. machine mounted inside HEV flywheel 134530
att., suspen. syst., hybrid elec./elec. vehicles 123844
elt-driven induction starter-generator, design, testing 123961
arpet mfg. plant, UPS with flywheel, design, testing 134695
Cologne light rail network, high speed flywheel energy storage syst. *(German)* 78279
oubly-salient PM motor flywheel for building-integrated PV power systs. 89311
lec. power supply, elec. energy stores, decentralised operation *(German)* 78132
nergy storage syst. using HTSC mag. bearings 78183
nergy storage syst. with horiz. axle mounted on $YBa_2Cu_3O_7$ bearings 134415
nergy storage systs. for power quality appls. 89314
nergy storage technols. comparison 89104
V energy storage technol. develop. *(Chinese)* 78231
ast-response current/torque control strategy 134424
lywheel supercond. mag. bearing, rot. loss num. anal. 78182
raduate automotive technol. education in energy storage systs. 113305
igh-power UPS rotary converter modelling/simul. 88975
igh-speed PM motor design for kinetic energy storage appls. 133925
igh-T_c supercond. mag. bearings, drag torque expts. 78184
HTSC mag. bearings, mag. forces/rot. losses anal. 78185
LiREX class 618/619 diesel-elec. multiple-unit *(German)* 78259
iniature flywheel syst., hybrid mag. bearings H^∞ control scheme 78187
lotted/slotless ring-wound PM brushless machines comparison *(Korean)* 123841
SMES/flywheel energy storage comparison 134416
pace vehicle inertial flywheel control syst. using torque servomotor *(Chinese)* 98917
tatic converters, indust. and utility appls. 99747
ltra light rail bus, flywheel powered, integrated elec. drive train 100281
WECS power smoothing control, vector-controlled induction machine 77794
Written-Pole motor, water hammer elimination, irrigation/municipal systs. 124164
$YBa_2Cu_3O_7$ high-quality HTSC tiles, prep., mag. bearing appl. 68134
YBaCuO-based mag. thrust bearing for 25 kWh flywheel, charcts. 116501
radar
2D video sig. spectrum in FMCW homodyne radar, phase noise 86151
77 GHz FMCW automotive radar, fully MMIC-based front end 131670
ct. array, Cramer-Rao bounds for estimating range/vel./direction 75106
ltimeter, high accuracy, low cost 109283
ntipersonnel mine detect., shallow depth, UWB FMCW radar 77068
utomobile MM wave radar syst. *(Japanese)* 124024
utomotive collision warning radar, sig. proc. 75101
utonomous cruise control radar MMICs, syst.-level simul. of noise spectra distortion 86239
bi-channel param. estimator for tracking radar based on nonlin. FM waveforms *(Chinese)* 131646
broadband LPI radars, target detect. and ranging 88242
chirp step-freq. moving obj. echo real time digital generation methods 75087
coded stepped-FMCW sig. for automotive collision warning radar appls. *(Chinese)* 109292
CW-FM radar level meters, correl. algm. for high-precision meas. *(English)* 121282
Doppler radar target tracking, neg. correl. & optimal filters 120428
FM-CW radar atmos. profiler, dedicated computer syst. 76902
FM/CW radars, ranging algm. 99171
FMCW front end for anticollision radar, low-cost X-band design 120449
FMCW radar, beat sig., spectrum correl., dist. meas. 109290
FMCW radar, sig. proc. method for switch antenna array 96949
HF ground wave radar, wideband/narrow-band compensation methods *(Chinese)* 86179
intermittent FMCW radar, microwave level gauging *(German)* 121286
intrusive/nonintrusive radar vehicle detectors for length and vel. meas. 96980
ISAR imaging and SAW device sig. nonlin. freq. modulation 75189
landmine detect., stepped-freq. GPR, antenna charcts. & de-embedding 77097
LFMCW car sens., OO algm. for range super-resoln. estim. 75080
lie detector using radar vital signs monitor technol. 120447
lin. FM-CW radar, nonlin. freq. distortion anal. 75222
microwave radar, dist. meas., six-port error propag. 86214
MM wave FMCW radar imaging for portable concealed weapon detect. 109293
MM-wave lin. FMCW radar for airfield obj. imaging, develop. 86192
multiple target resoln. in low resoln. ISAR *(Chinese)* 131654
PHEMT LF noise model, appl. to MM-wave automotive radar chip set design 80311
radar data modeling with time series models 118879
Rail-UWB-SAR syst., UWB with bistatic SAR imaging algm. *(Chinese)* 131647
robots, radar sens. model for 3D map building 120707
stepped-FM radar with MUSIC algm., clutter suppression charact. *(Japanese)* 131668
transient breaking waves, radar backscatt., ang. depend., PO model 76910
UWB radar, phase error correction, phase gradient algm. *(Chinese)* 75113
waveform mgt. by missile-borne pulsed Doppler radar during target tracking in clutter 99166
wideband CW-lin. FM radars, perform. and group delay effects 75180
CW radar *see CW radar; FM radar*
R *see ferromagnetic resonance*
S *see flexible manufacturing systems*
ms
elec. resist. tomography using bidirectional current pulse tech. 109923
electronic cooling by insertion of foam materials 113531
foams continued
insulating foam polymers, thermophysical params. 79452
polyacrylonitrile microcellular foam film electrodes for supercapacitors 100230
syntactic foam embedded fibre sens., mech. strength 131951
focal planes
3D real-time reconstruction on high resoln. FPA 94532
ACREO QW IR photodetector FPA 86655
adaptive optics, focal-plane image and beam quality sens., wavefront phase distortion 75064
AOTF hyperspectral imagers 75606
automated target detect. using IR multispectral anal. 88247
ballistic missile defense FPA IR sens. 88251
BGIS 2000 Ball global imaging syst. for Earth rem. sens. 122553
bicomponent diffr. syst., diffractive multifocal focusing 71881
bird alarms in full-stare IRST's 111623
bit-serial column parallel proc. archit. for CMOS sens. DFT 109692
camouflaged aircraft detect., multispectral imaging, polarimetry 77105
CMOS analogue SIMD focal-plane proc. array, smart-sens. VLSI cct. 109691
CMOS dual pixel-type imager for imaging and motion centroid localization 97361
CMOS imager LSI with focal-plane motion detectors, develop. 131998
CMOS imager with focal-plane computation, feature detect. 97365
CMOS prog. spatial proc. imager chip, focal plane steerable spatial filtering 75657
CMOS prog. spatially variant multiresolution readout, sens. focal plane 97366
CMOS visual sens., focal-plane computation, low-complexity algms. 73468
cooled IR imaging sens., Schottky barrier bolometer arrays appl. 109626
cryogenic water ice contaminants detect. & IR AI&T environ. 109627
digital camera imaging polarimeters, calib. requirements, bit depth 75654
discrim. interceptor technol. prog., pass. sens. subsyst. 133408
dual-band framing cameras, wafer-scale vis. & IR FPAs 97379
dual-band thermal imaging with pyroelec. FPA detector 75646
Fraunhofer IAF QW IR photodetector research, 2D FPA 86652
French SWIR technol. used for astron. 111327
Gabor-type CNN image filters, subthreshold current mode design 102456
helmet-mounted uncooled FPA camera/display for firefighting appls. 75648
high speed visual decision maker, focal plane analog proc. array 79955
hybrid FPA, collective flip-chip technol. 109651
hydrocarbon contaminants imaging, laser-based syst., FPA 109716
hyperspectral imaging, act. illum., white light laser source 97344
hyperspectral sens. develop., data proc. viewpoint 133281
III-V QW IR photodetector FPA, readout-IC 109642
image proc., early appls., cost modeling 94840
Infrared Space Observatory, CAM LW detector, cosmic rays 120927
Infrared Space Observatory, ISOCAM detectors response 120925
Infrared Space Observatory, ISOCAM LW transients 120933
Infrared Space Observatory, ISOCAM-LW dark current 120926
Infrared Space Observatory, SWS detectors, perform. 120819
IR FPAs, readout tech. for on-chip compensation of dark current 97363
IR real-time act. target tracking mono-chip 117017
IR sens. technol., French mil. systs. 109648
IR sounder technol. trends 133324
IRFPA, adaptive nonuniformity correction *(Chinese)* 75626
IRFPA nonuniformity correction, diffractive lenslet array anal. 86621
Irvine Sensors advanced vis./IR microcameras for dual-use appls. 109653
Jet Propulsion Laboratory QW IR photodetector research, FPA nonuniformity 86555
Landsat-7 ETM+ internal calibrator, data models 122551
large format LW MQW IR detector arrayed FPA commercialization 86661
laser-based electro-opt. sens., imaging modalities develop. 120938
LWIR hyperspectral sens. design trade space 97380
LWIR spectral polaris. signatures of mater., FTIR spectropolarimeter 75656
manmade obj. detect., multispectral sens., water vap. features 99045
MEMS motion meas., computer microvision, opt. microscope, CCD camera, stroboscopic illum. 109663
microbolometer, 320×240, uncooled IRFPA develop., a-Si 109646
microbolometer arrays, thin film ferroelec. materials use 109540
microlens array and IR detector array, hybrid integrat. 71399
MIPAS onboard ENVISAT, flight model perform., calib. & charactn. 122630
mixed-mode VLSI opt. flow sens. for in-flight control of micro air vehicle 98895
Modular Miniature Imaging Sensor, law enforcement appls. 111632
mosaic IR diode array, fig. of merit, quantum efficiency/crosstalk ratio 131931
MTF meas., nondiffracting array generator 109633
multiband polarimetric imagery acquisition, calib. aspects 75655
ocean surface sens., LWIR hyperspectral polarimetric imager 76915
pass. MM-wave imaging, FPA optimal dithering 131999
polariz. sensitive diffractive optics integrat. with IR photodetector arrays 104748
polysilicon bolometer, IR FPA, membrane transfer bonding 120795
PtSi IR detector array device, microlens arrays with long focus for improving responsivity 109636
QW IR detector imaging systs., standardized high perform. readout IC 86663
QW IR photodetectors, conf., Dana Point, CA, USA (July 2000) 89506
QW IR polariz. sensitive photodetecting thermal imager 86654
QWIPs, low-noise, FPA sens., thermal resoln. 109643
Raytheon's IR Operations focal plane, adaptive IR Sensor, thinfilm analog image proc. 109634
Raytheon 95 K high efficiency cryocooler prog. for missile defence 133240
reconnaissance pushbroom electro-opt. sens., motion correction 99125
satellite IR surveillance, high operating temp. FPA develop. 133409
shipborne pass. IRST sens. 109650
single-color dual-band QW IR detector FPA, lab./field imaging testing 86653
space based IR surveillance & stored cryogens, adv. cryogenic technol. 133219
space camera CCD focal plane, opt. assembly *(Chinese)* 98900
spacecraft attitude determ. subsyst., MEMS based Sun sens. 122532
spherical-primary orb./sub-orb. submm-wave telescopes, large detector array design 86281
spherically aberrated lens effects on laser beam quality *(Chinese)* 82736
star tracker, star image simul. software *(Chinese)* 98899
STRV-1d QW IR photodetectors, space flight technol. validation 86659
systs.-on-a-chip, CMOS technol., design tools 109635
thermal imaging syst., 20:1 zoom, athermalization *(Korean)* 120899
third-generation FPA for night-fighting equipt. for soldiers 111550
two-color QW IR photodetector FPA 86557
two-color thermal chopping thermal detector, micromachined IRFPA 86608
uncooled FPA based thermal imager, nonuniformity compensation methods 75649
uncooled IR focal plane detector for temp. meas. 75651
uncooled IR sens. technol., future advances 109628
uncooled IRFPA with SOI diode detectors, perform. 109630

focal planes continued
uncooled microbolometer based cameras, UL3 ALPHA and OMEGA 75635
uncooled microbolometer FPA, on-chip low-noise ROIC archit. 109631
unmanned airborne vehicle, thermal imager, EO sens. 109640
VLSI advanced research, conf., Salt Lake City, UT, USA (March 2001) 67360
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 70320
$(Ba,Sr)TiO_3$ ferroelec. bolometer on micromachined Si, uncooled IR sens. 109629
CS_2-lead phthalocyanine based dual focal plane vis. opt. limiter 71954
GaAs/AlGaAs MQW IR photodetectors with 2D random-grating opt. couplers 86547
GaAs/AlGaAs QWIP develop. in France 109550
GaAs-AlGaAs QW IR photodetectors, skimmed archit., FPA appls. 86556
HgCdTe 1024×1024 tactical IR staring sens. syst., MWIR perform. 111555
HgCdTe FPA, IR detect. modules, DSP technols. 111552
HgCdTe FPA, laser beam induced current tech. *(Chinese)* 120910
HgCdTe IR FPA, nonlin. response *(Chinese)* 120909
HgCdTe IR detectors & FPA, simultaneous unipolar multispectral integrated technol. 97254
HgCdTe, MBE growth, In doping, IR FPAs appls. *(Chinese)* 91966
HgCdTe growth on (552) oriented CdZnTe by MOVPE, MIR photodiode detector arrays appl. 90431
HgCdTe on sapphire, LPE, status & advancements 90522
HgCdTe p-on-n heterostruct. IR photodiodes, planar proc. charactn. 97259
HgCdTe second generation IR detectors, mass prod. challenges 97253
HgCdTe single/two-colour IR FPA, MBE, run-to-run reproducibility 109644
HgCdTe/Si MWIR FPA, fab. & perform., MBE 97395
HgCdTe-CdTe-ZnS double insulator MIS device, fab., surface passiv. *(Chinese)* 115460
InAs-GaAs normal-incidence high-temp. mid-IR vert. QD photodetector 131914
InGaAs 2D act. pixel FPA, switching and amplif. charact. 131965
InGaAs miniature IR camera for unattended imaging 75631
InSb Compact staring imager 109655
InSb FPA based mil. miniature modular integrated sight 77102
InSb FPA midwave-IR snapshot imaging spectrometer 131963
Nb supercond. tunnel jn., ASTE subMM-wave camera 75259
NbN DSP module, IR FPA sens. 70827
NbN supercond. HEB, THz low-noise receiver 104592
PbTe IR FPAs for low-cost thermal imaging, monolithic integrat. with Si 131968
PtSi FPA, monolithic integrat. with diffractive microlens array 109625
Si/HgCdTe, MBE growth for large format MWIR FPA 90342
SiGe uncooled microbolometer array, hybrid LWIR sens., CMOS readout 120885
VO_x microbolometer, uncooled focal plane sens. 109632
VO_x uncooled FPA, low cost design and appl. 75633
YBaCuO semicond. self-supporting uncooled IR microbolometers, low-thermal mass 120901
$YBa_2Cu_3O_{7-\delta}$ semicond. film, elec. characts., bolometer appl. *(Chinese)* 131903

focused ion beam etching *see focused ion beam technology; sputter etching*

focused ion beam technology
custom vac. encapsulations deposited by FIB direct-write CVD 104212
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
direct write technols., commercial appls./review 103977
discolored bondpads caused by $Al(OH)_3$ form., SEM inspection, EDX, FIB 102873
DOE, design, microfabrication and testing, fiber coupling appls. 104857
DOE, FIB direct micromachining, combined FIB/X-ray lithog. 71387
graphite microdisks, mesoscopic devices, FIB lithog. proc. 126904
IC failure anal. appls. of FIB techs. 70289
ICs, 3D TEM anal., FIB lift-out tech. 126932
liq. metal alloy ion sources for microelectronics indust., review 103229
mag. storage technol., applied surface anal., review 104526
metal gated field emitter arrays, FIB proc. 125963
metal gated field emitter arrays, focused ion/electron beam induced react. fabr. 69425
metal layer, narrow groove form., FIB etching 126396
microdiffractive lens/VCSEL integrat., FIB direct milling 71783
microlens mold, fab., FIB milling 127819
microsystem technol., FIB appls. 92539
multiwavelength laterally complex coupled DFB laser arrays, FIB lithog. fab. 128260
nanocrystals acting as Coulomb islands, Ga^+ FIB proc. 92418
nanofabrication tech. 126600
nanoscale printheads for pattern transfer, direct FIB writing using microcontact printing 115789
nontraditional micromachining technols., overview *(Chinese)* 92527
opt. MEMS device designs, fracture tests, using FIB machine 104151
perp. granular recording media, ion beam patterning effects on write-read perform. 116410
perp. mag. recording head, UHF dyn. 116356
phase shift mask repair, FIB based local deposition of dielec. 103586
polar self-assembling films, NLO props., substr. micropatterning 82030
polyimide/Cu PCB materials, laser-assisted via hole metallization 69327
polysilicon micromachined MEMS structs., micro nano technol. visualization 104202
proton beam micromachining, LabVIEW scanning and control syst. 127110
proton beam micromachining & electroplating, precision 3D microstruct. 104215
rate model of FIB induced deposition *(Chinese)* 79413
RF-driven ion source in electrostatic accelerator, props. extraction *(Chinese)* 110113
scanning MR microscopy with FIB trimmed yoke-type MR tape heads 75473
SIMOX wafers, low dose O implant.-induced bulk and surface defects anal. 69791
SOI device micromachining, accelerometer and optic fibre connector 116118
Swissair 111 crash EEPROM data recovery, failure anal. techs. 79899
ULSI, local cross-sect. EBIC, local jn./defect delineation 116002
ULSI ICs, design and reliab. aspects of multilevel metal large-scale power line layouts 104039
ultra-high dens. perp. recording, FIB trimmed head 116468
VLSI chip, EB/FIB integrated test syst. 127005
X-ray opt. custom components, nanofab. for beamline expts. 76179
X-ray zone plate fab. using FIB 110483
ArF lithog., advanced FIB mask repair technol. 103587
$Bi_2Sr_2CaCu_2O_{8+x}$ single crysts., submicron tunneling jns., prep., props. 81978
$Bi_2Sr_2CaCu_2O_x$ single cryst. whisker, intrinsic Josephson jns. 70935
Co thin films thickness, stress effect, martensitic transform. 127094
$Co/SiO_x/Si$, SPE growth, stress effects, TEM 125049

focused ion beam technology continued
Co/Ti/Si, SPE growth, stress effects, TEM 125049
$Co_{70}Cr_{18}Pt_{12}$ perp. granular mag. media patterning, FIB, single-domain isla 116409
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92
Cu electroplated interconnects, microtexture/strain 103460
Cu electroplated thin films, RT recrystn., methods/mechanisms 101416
Cu films, high press. laser pulse heating, microstructural evol. 125070
$Cu-SiO_2$ dual-damascene interconnects, electromigration reliab. 92115
GaAs surface, sputter-etching, surface flattening 69905
GaAs:Si epitaxial layers, combined FIB/MBE synthesis, carrier activation 91
GaN/AlGaN HFET struct., pillars, FIB etching, micro PL/Raman mapp 126422
Ge/Au/Si, SPE growth, stress effects, TEM 125049
Ge/GaAs, SPE growth, stress effects, TEM 125049
InGaN MQW laser, deeply etched air/nitride DBR, single mode oper. 105
InP lasers, nanoscale patterning, FIB enhanced etching 128305
InP selective growth on FIB-modified GaAs surface by hydride VPE 1144
Mo wedge emitter fab. using FIB, wet etching 69429
$Nb/AlO_x/Nb$ supercond./insulating/supercond. fab. proc., FIB anal. 70805
Nb/Cu supercond.-normal-supercond. asymmetry modulated SQUIDs 7097
Nb-Cu supercond.-normal metal bilayer, nanoscale SNS jn. 70961
Ni, 3D metallic microstruct., proton beam micromachining 127111
Ni LIGA cantilevered microposts, mech. props. eval. and failure anal. 116
Ni patterns, laser-assisted selective deposition on porous Si substrs. 90525
Ni-Be deep-microfeature LIGA-competitive microcomponents, micro-EDM FIB micromachining 92529
a- Ni-P microsized specimen, fatigue cracks propag., fatigue testing 10146
a-Ni-P microsized specimens, fracture behavior, cracks, fatigue precrack 101
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
Pd/Ge/GaAs, SPE growth, stress effects, TEM 125049
Si, dwell-time depend. of irrad. damage 81005
Si:Ge, dose rate and temp. depend. of Ge range profiles, channeling impl 81006
Si:Ge, ion-beam-induced defect evol., channeling implant. study 103720
p-Si(100), selective Au electrodeposition on surface defects 90510
SiO_2 direct-write ion beam induced CVD for IC post-proc. modif./repair 115
SiO_2, microcylindrical lenses, FIB technol. prep. 104758
$YBa_2Cu_3O_{7-\delta}$ Josephson jn., masked ion damage barrier 70880
$YBa_2Cu_3O_{7-y}$ thin films, submicron tunneling jns., prep., props. 81978

focusing
see also acoustic focusing; optical focusing; particle beam focusing; self-focusing
BESSY II, U41-PGM soft X-ray microfocus beamline 121309
BGA solder joint X-ray slicing using transm. X-ray systs./standalone softw 113584
buried land-mines, radar detect., near-field focusing 111629
catastrophe-type space-time domains, FM radio pulse struct. 117708
digital camera, combining off- and on-line calib. 84211
electrostatic quadrupole lens systs., fifth-order aperture aberration 72193
ellipt. X-ray microprobe mirrors, differential coating method 110462
ESRF X-ray microscopy facility, status report 76176
hand-held forward-looking focused array mine detect. 77084
high-dens. DVD, opt. pickups, spherical aberration detect. 71219
ISAR imagery focusing, inform. theoretic measure 96913
ISAR imaging, autofocusing tech. based on entropy minimization 75079
ISAR imaging, maneuvering target, motion compensation *(Chinese)* 10924
KB X-ray mirror pair for microfocusing 121800
Kirkpatrick-Baez microfocusing mirror syst. for synchrotron X-rays 12180
Kumakhov lens focused x-ray therapy 87835
long focus electrostatic objective, electron-opt. props. 72181
long-period fiber grating fab. by FIB irrad. 82090
micro-pore X-ray optic, high-resoln., MCP technol. based 110450
microfluidic chip, micromachined pre-focused flow switch 116093
microfocus soft X-ray source, compact high-power laser plasma 98101
microstrip antenna array, plane spiraphase focusing lens 105940
MOXI microfabricated zoom lens for X-ray imaging 110449
multiple beamforming, Rotman-type lens, ellipt. refocusing 83680
NSRF bent toroidal mirror design, adjustment/meas. *(Chinese)* 110476
NSRL electron storage ring, large aperture versatile beamline design *(Chine* 110475
plastic cpd. refr. X-ray lenses, focusing 110461
PLS, microspot high resoln. beamline, spherical grating monochrom. 12182
PLS photoemission electron microscopy beamline 121830
projection X-ray microscopy, modified SEM, enhanced contrast & 3D CT 761
sagitally-focusing double cryst. monochromator for wiggler beamline 11046
SAR imagery, moving target detect., focusing 120414
SAR imaging, buried obj. detect., adaptive focussed proc. 86212
SAR imaging based on fractional lower-order stats., high-resoln. autofocus tec 131639
SCALPEL Coulomb image deform. projection systs. 72183
SLAC linac coherent light source, short-pulse limits 105402
slag temp., meas. of surface profiles by rem. radiometric method 75850
soft X-rays microfocusing using ellipt. bent cylinder mirror 121802
SPring-8, high energy synchrotron X-ray focusing 121381
SPring-8 BL40XU high X-ray flux beamline design/status anal. 121847
SSRF electron storage ring, soft X-ray beam focusing design *(Chinese)* 1102
third-gen. SR sources, cryst.-based diffr. focusing elements 121380
UNICAT insertion device X-ray beamline at APS, design 110472
Wolter-type grazing incidence mirror for hard X-rays wavelength focusi 121805
X-ray channeling in capillary struct., wave theory 83482
XEBIST ion beam focusing, rel. electron beam pinch effects 110274
Cu electroplated interconnects, microtexture/strain 103460

foetuses *see obstetrics*

fog
785/1550 nm laser beam propag. in fog/haze for opt. wireless commun., compa son 86111
imitators for aviation appl., liq. cryst. cells 98889
Ka-band Doppler radar for cloud and fog obs., field eval. *(Japanese)* 75213
stratified media, laser sounding, multiple scatt., sig. depolarization 88147
tropos. clouds & precip. monitoring, dual-polaris. scanning lidar 98983

FOG (gyroscopes) *see fibre optic gyroscopes*

foils
activator, interelectrode gap, corona discharge model 116140
capacitance thermometer, low temp. & high mag. field use 97206
concentric needle electrodes, sharpness eval., Al foil penetration test, EMG ap 121970
edge profiles crafting in aerospace indust., occupational biomechs. eval. 11133

continued
HDI PCB foil lamination technol. 124369
lateral straggling using microbeam at CENBG 132258
neo-Manhattan bump interconnection for B²IT build-up PWBs/area array IC package substrs. 113703
polymer opt. waveguides, integrat. into PCBs 116671
resistor, electro-pyrotechnic initiator 115044
resistor, foil-type, zero TCR, ten-fold temp. coeff. improvement 115043
resistor, TCR 115045
smart airbag systs., foil resistors as electro-pyrotechnic initiators, low energy 89418
SMPS transformer foils, ohmic losses calc., 2-D FEM 77967
solenoidal wound multiwinding transformers, orthogonality principle generalisation 125856
stainless steel, hole drilling, laser ablation 72134
steel foils, sub-micron holes, femtosecond UV-laser proc. 93919
supercond. power supply, persistent current mode, fab., operation *(Korean)* 78018
three-layered PTFE sample piezoelec. transducer meas. comparison 81641
twisted nematic LCD viewing angle, in-plane-compensation foils 86838
Al:Bi capacitor foils, simulated proc., Bi behaviour 80439
Al-Be foil, electron-beam transportation, GARPUN laser expts. 105128
^{197}Au activation foils, B neutron capture therapy 98638
Co, hard X-ray lin. dichroism imaging, polariz.-contrast images obs. 87285
Cu direct metallisation of polymer foils for additive flexible interconnection technol. *(German, English)* 67589
Cu foils, Ni-coated, $Pb_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films 125853
^{63}Cu activation foils, B neutron capture therapy 98638
$Fe_{78}Cr_{22}$ ferritic steel foil, SOFC interconnect material 123795
$^{115}In^m$, foil, high dose rate meas., photon activation anal. 122374
KrF laser amp., electron-beam-pumped, output charact., init. testing 71635
^{55}Mn activation foils, B neutron capture therapy 98638
Ni-Cr foil resistor, near-zero TCR, ten-fold improvement in temp. coeff. 80416
Ni-YSZ graded cermet foils, anode substrs., planar SOFC 99955
PZT:La thin films on NiTi alloys, SME, PLD 101390
Pb-free solder foils, rapid laser-beam reflow 69315
Si membrane, elastic consts., noncontact laser meas. 125149
Si/SiO_2/steel foil TFT, direct thermal oxid. 70149
Ta:N-doped powder for MLC capacitors, anodized oxide film, struct. 114427
Ti foil, electron-beam transportation, GARPUN laser expts. 105128

kker-Planck equation
conf., energetic part. mag, confine. syst., Naka, Japan (Oct.1999) 113240
dye soln. laser, polarised radiation, stat. props. 105156
Fisher inform., irreversible phenom., stat. mech. 105992
HTSC RSFQ logic cct., switching probab. 70823
semiconds., nonlocal impact ionization, Fokker-Planck model, device appl. 91573
therapeutic beam dose calcs., electron loss model with energy straggling 111205
Vlasov- and Wigner-Poisson-Fokker-Planck systs., low/high field scaling limits 115815
e⁻ storage rings, spin transport/diff., Bloch eqn. 87071
Si, doped, nonlin. Boltzmann eqn. reduction 80670

ts *see character sets*

d processing industry
3D reconstruction for high-speed vol. meas. 106794
bacteria growth monitoring, wireless rem. query reson.-cct. sens. 109723
beef meat, fat content determ. from NMR images 106719
biological product detect., conf., Boston, USA (Nov.2000) 78377
coffee QC using electronic nose, PCA & MLP 109828
cross-mktg. products ideal candidates for robotic packaging 89876
durian fruit, nondestructive maturity determ., force vibr. appl. 100355
energy efficiency, mech. vap. recompression technol. 134702
ethylene oxide monitoring in sterilization operations, miniature IR gas analyzer 75700
extrusion melt press. meas. for food/med. appls. 100572
fibre optic humidity sens., food proc. indust. 120838
flexible RF applicator for viscous lossy food products heating 100354
food inspection by opt. methods, conf., Boston, USA, (Nov. 2000) 78378
food safety inspection, obj. class. from X-ray images 124409
fruit contact press. distrib. meas. equipt. 120643
impedance meas. using harmonic oscillator, food sterility testing 121145
intermediate products QC, spectrophotometer develop. 67653
irrad. and microwave/RF market 102755
meat sci., fat quantification, MRI/image anal. techs. testing 132716
metal detector, processed food foreign obj., SRPM method 109511
microwave dielec. heating, freq. & temp. depend. permitt. meas. 121148
olfactory sigs. recogn., supervised fuzzy C-means and k-NN algms. 86715
photoacid generator appls. for γ ray detect. materials 110293
piezoelec. quartz cryst. based veterinary diagnosis for Salmonella enteritidis infection 75681
quartz thickness shear mode resonator electronic nose, fruit indust. appl. 132039
sterilization technol. develop. using pulsed HV appl. *(Japanese)* 124162
sugar cane, shredder chute, microwave radar sens. 75184
Vitamin E conc. in oils & fats, voltammetry at ultramicroelectrodes 109747
zNose virtual chem. sens. array technol., high-resoln. olfactory images 97458

rbidden gap *see energy gap*

rce control
act. mag. bearing control systs., fund. props. anal., transfer fn. approach 92879
act. sens. feedback in manual machine tool operation *(Japanese)* 89787
automobile sliding mode wheel slip controller perform. enhancement 100304
IC testing using force control, flexible IC inserter 81498
lin. SRM robust short-dist. posn. control approach 134083
low-cost high-force inchworm actuator develop. 134321
micro grasping and micro procs., mag. parallel motion hand appl. 92574
microfabrication device develop. for scanning electron microscope *(Japanese)* 124317
micromachined press. sens., force bal. 109798
moving coil lin. motor, armature field anal., posn./stroke control 88767
RHex hexapod robot, proprioception based behavioral advances 109481
space manipulation, arm/gripper syst., posn./force control 109482
twin-frame mobile robot, 6 DOF mechanism design and control 97199
two-finger variable reluctance gripper, modelling and charactn. 89014
under-actuated dyn. rigid-body systs., visual servoing 86619
vibr. overtest problem, dual-control tech., control variables 78590
virtual surgery syst. with haptic sensation for both hands 98589
web/strip proc. line drives, current/torque regulation specs. 124439
winding systs. tension multivariable H_∞ control scheme 134520

force feedback
bone reaming, Internet force-feedback control syst. 98596
deformable obj. manipulation, force/vision feedback fusion 94491
deformable organ model, sphere-filled method, virtual surgery 98588
distributed virtual environ., best-effort multimedia networking 96273
endoscope, virtual, haptic/visual feedback, for training 98164
landmine detector operator training, motion tracking, virtual mine lane 77112
laparoscopic surgery simul., hybrid phys. deform. modelling 98607
maxillofacial operation planning using VR techs. *(German)* 111076
med. diagnostics, US, telemanipulator syst. 98333
med. robot haptic interface connection 111079
microsurgery, tissue props. and pulse meas., force feedback-based microinstrument 98595
multicomponent force sens., multiplexed FBG strain sens. 97286
planar robotic contour following, combined vision/force control at corners 95001
soft tissue mech. charactn., instrum. microgripper, force feedback 132505
tele-virtual surgery, sharing tactile sensations between Japan and Germany 98863
telemanipulation/telemetry in microenviron., via Internet 97158
telerobotic systs., virtual environ., sens. feedback assimilation 109704
virtual surgery syst. with haptic sensation for both hands 98589

force measurement
see also dynamometers; force sensors
act. human-mobile manipulator cooperation, intention recogn. 97858
actometer, force-plate, rodent locomotion, rot., spatial patterning, tremor 110502
assembly, ultra-precision, using force meas. 97859
cardiopulmonary resuscitation, act. compression decompression, quality on-line monitoring 98605
Central Solenoid Model Coil, mech. preloading studies 71025
cycling, functional elec. stimulation, test bed with force-meas. crank 87319
cylinder wake, unsteady load control, force meas. 86985
digital quartz resonator force sens., off-centre load-insensitive 131891
estim. method of tapping stylus *(Japanese)* 97847
femoral replacements, forces/moments telemetered during various activities 111154
femur, fracture healing, loads acting in intramedullary nail 111155
finger posture/shear force meas. using fingernail sens. 98163
functional reach test, elderly subjs., kinematic/dyn. anal. 76220
gait assess., low-power wireless microcontroller PC interface 111265
grip force adjustments meas., precision grip tasks, instrumented ring 110530
heart cell force transducer syst. implemented in MEMS technol. 110518
high-stiffness axial reson. probe for AFM 121032
hip contact forces/gait patterns from routine activities 110501
hydroelectric power stations gate movement protection 112357
impulsive force and press. sens. for waveform reconstruction 109537
intravascular neurosurgery, telesurgery syst. 87783
large human displacements, force platform 87316
lin. BLDCM, precise posn. control *(Korean)* 134065
live objs. handling, compliant grasping force modeling 97856
mass levitation appl. to force meas. 75897
multifunctional Si-based microscale surgical syst. 111072
optomechanical transducer with modulated pump, regenerative regime, weak classical force detect. 97200
piezoelec. bimorph sens., sensitivity anal. *(Chinese)* 75426
piezoelec. ceramic force sens., static charact. *(Japanese)* 97190
PM LSM design with high-thrust/normal force ratio 134081
portable soft tissue indentor, accuracy & reliab. testing 87320
powered orthosis control for people with muscular dystrophy 87916
PVDF transducer, elongation, force, charge sigs. meas. 81752
shear force detect. with piezoelec. bimorph cantilever for SNOM 110008
stationary plasma thruster, strain gauge based thrust meas. syst. 122508
Stewart platform based force-torque sens. 131858
stroboscopic coord. meter, threshold sensitivity 120692
transducer, impulse response meas. 97194
twin-frame mobile robot, 6 DOF mechanism design and control 97199
vibr. testing, force meas., appls. to modal ident. 110005
Au/Pt/Ti opt. module thin-film electrodes, adhesion force meas. *(Japanese)* 82432
C MWNT, 3D nanorobotic manipulations 90594

force sensors
see also force measurement
bend angle sens., VR data glove appl. 75451
digital quartz resonator force sens., off-centre load-insensitive 131891
dyn. meas. using ANN 120605
dyn. pecking mode scanned force probes, approach interacts. 132184
ferroelec. sens. advances & emerging technol., review 131881
flexurally vibr. thick bar with axial force, equiv. cct. 97186
free-floating objs., grasping, robotic gripper 97208
head-disk interact., ramp loading proc., opt. interferometer study 116440
horse hoof horn capsules, 3D deform., photogrammetric meas. 98372
impulsive force and press. sens. for waveform reconstruction 109537
intravascular neurosurgery, telesurgery syst. 87783
magnetostrictive transducer, actuators/sens. appls. 109827
MEMS xylophone bar magnetometer, Michelson interferometer, mag. field induced displacement meas. 109801
micro-obj. manipulation, robust vision syst., MINIMAN micro-robot project 86648
microaccelerometer, force based displacement meas. using AFM 81572
microsurgery, tissue props. and pulse meas., force feedback-based microinstrument 98595
multicomponent force sens., multiplexed FBG strain sens. 97286
multicomponent force/moment sens., relative expanded uncertainty 120786
nano scale interact. and manipulation, bilateral scaled teleoperation syst. develop. 90595
nanometre-scale force sens. with MEMS devices, review 109796
NMR spectrometer, MEMS force-detected, planetary exploration 121035
optomechanical transducer with modulated pump, regenerative regime, weak classical force detect. 97200
piezoelec. ceramic force sens., static charact. *(Japanese)* 97190
plumb-line-type liq. level meas. syst., dyn. anal. 121271
polyhedral/polygonal parts, motion region, attractive regions 97857
PTF sens. 120721
quartz cryst. resonator, force-freq. coeff. 116200
robotic part assembly, neural/fuzzy optimal proc. model 100570
SAW pass. device, multi-resoln. wireless force sens. syst. 116220
SEM microrobot-based micromanipulation cell 81562
semicond. strain gauge tactile transducer, finger force meas. 109509
space manipulation, arm/gripper syst., posn./force control 109482
Stewart platform based force-torque sens. 131858

force sensors continued
telerobotic systs., virtual environ., sens. feedback assimilation 109704
temp. compensation algm. 86463
three-component capacitive force transducer design, non-std. specimens 97205
twin-frame mobile robot, 6 DOF mechanism design and control 97199
vert. thick film resistors as load sens. 120785
$Fe_{77.5}Si_{7.5}B_{15}$ amorph. wire, magnetostrictive delay line, force meas. 70564
Si high-force piezoresistive force sens., max. hysteresis error 86758
Si single cryst. reson. force sens., vac. packaging 121027
microminiature force sens., thin-film Wheatstone strain gauge bridge *(German)* 75742

forecasting, technological *see technological forecasting*

forecasting theory
AMPS mobile telephone syst., improvement of base station by least sq. method 108780
ARMA(p,q) time series forecasting, 2-layer neural net 113884
Bayesian model determ. for binary-time-series data with appls. 78825
coal-fired power station NO_x emission MLP prediction model 133863
component reliab. estim., online, using neural networks and wavelets 113783
continuous min. algm. 113967
demand forecasting for telecomms. products from cross-sectional data 85076
district heating and cooling, operation planning 134654
elec. load forecasting using trend data and feedforward neural net 122914
fault prediction, neural network model based *(Chinese)* 88078
fishery sens., central prediction using CBR *(Chinese)* 108093
non-stationary time series, forecasting method, wavelet decomp. *(Chinese)* 84696
ozone conc. prediction, fuzzy DSS 133364
quasiperiodic sig., AR model, SVD 129944
satellite TV diffusion forecasting before product launch 109350
streamflow forecasting, multi-step-ahead, monthly, by neurofuzzy network model 122937
telecomm. network traffic prediction by neural net ensembles 108009
UK fluid fossil-fuels supplies/demands forecasting 99462

forestry
400 kV overhead lines, elec. field dampening using spruce forest 77442
advanced rem. sens. tech., standing timber vol. estim. 122721
cylindrical piece meas., laser telemetry, forest caliper appl. 109993
hyperspectral discrim., airborne, arid zones 99059
hyperspectral rem. sens., chlorophyll content 99060
hyperspectral rem. sens., conf., Sendai, Japan (2000) 89538
insect-infested forest class., video proc. algms. 99042
land/water resources, sustainable develop., rem. sens.-based integrated approach 111487
lidar method, tunable CO_2 9-11 μm laser 122624
lidar rem. sens., waveforms, canopy struct. 122611
rem. sens., reflectance model directional props. 111376
smoke, burning forests, AVHRR imagery, neural nets 122607
solar energy dissipation in landscape, water and vegetation mgt. 88528
tree groups extraction from high-resoln. digital surface models 99051
wooded region/agricultural region discrim. by SAR 111485

forging
conf., adv. forming & die mfg. technol., Haeundae, S. Korea (Sept. 1999) 78431
indust. induction heaters, rational energy use optim. *(German)* 113161
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC current lead props., sinter-forging rate effect 77409

formal languages
see also context-free languages; programming languages
arith. compression, tree and string langs. appl. 72919
Chinese monoid 113902
codes, syntactic congruences 72806
controlled syst. lang. ident., modelling, control and anom. detect. 112731
data commun. protocol, no. of rules needed for automaton grammar to generate finite lang. 73959
DNA computation, forbidding/enforcing 69356
hardware compiler realising concurrent procs. in reconfigurable logic 125168
logical string rewriting 102868
P systs. with commun. based on conc. 102851
set constraints/topol. in program anal., type inference 124529
splicing models separation 115213

formal logic
see also bisimulation equivalence; Boolean functions; cellular logic; computability; fuzzy logic; majority logic; multivalued logic; probabilistic logic; process algebra; recursive functions; temporal logic; threshold logic
2D lin. alg. 101045
corner detect. fast algm. using morphologic skeleton 73520
isomorph-free search in group theoretic framework 100824
logical characterisation of performability props. 100783
SPKI, logical reconstruction 83969
ultrafast nonlin. interferometer gate, GHz all-opt. XOR logic 131568
weak second order bounded arith., independence result 67942

formal specification
see also specification languages
adaptive QoS-enabled middleware, formal reasoning model 108420
C^3I syst. spec., obj. interact. approach, MIS 99121
CAD, formal methods conf., Austin, TX, USA (2000) 78448
car requirements specs., high-quality 124056
client-server, rem. eval. and mobile agent paradigms, anal. comparison 74187
commun. protocols, formal descriptions, Java 84954
CYBERCYCLER simulator for simulating biological reacts., modular approach 69352
distributed multimedia sync. model based on Petri net *(Chinese)* 85392
distributed proc. environ., cost effective service logic deployment 119562
distributed real-time appls. support with CORBA, policies and mechanisms eval. 85334
distributed systs., redundancy mgt. protocols, modular comp., spec. and verification 73916
FPGA based designs, area time power estim., behavioral level 68724
functional and timing specs. of real-time systs., modelling and eval. 85041
generic wrapper archit. for multi-proc. SoC cosimulation and design 84959
high-level hardware transforms., complete spec. and implement. methodology 68670
high-level specs., develop. cost and size estim. 79664
IN service, formal spec., feature interact. detect. *(Chinese)* 119775
indust. DSP block, semi-formal test generation, Genevieve methodology 102202
IPv6 next generation Internet protocol, conformance test 130429
logic optim. and code generation for embedded control appls. 79667
media constr. patterns, abstraction and reuse in multimedia appl. specs. 96274
mixed hardware/software systs. generation from SDL specs. 79665

formal specification continued
mobile computing protocol-based handover, formal spec. and verificati 131232
mobility stds., formal methods 73951
multicast transport protocol, formal validation 130402
multimedia syst. QoS, spec. in syst. architect lang. and inform. transport po 74431
multiple entities commun. protocol constr., compositional approach 130882
multiprocessor SoC, syst. design, validation and fast prototyping 102199
n-way key recovery syst. by extended cryptographic timed Petri net, spec. a anal. 118041
NPP software requirements anal., graphical approach 112225
OMG-MASIF-compliant mobile agent platform, modeling with RM-ODP engr lang. 74068
on-board proc. payloads, advanced digital demodulators 109011
OO RBAC model spec./enforcement 119750
open component-based distributed systs. develop., dyn. QoS mgt., aspect-o ented spec. 119529
OST X.25/FR gateway, formal model based on high level Petri net 130804
power plant control, validation of control syst. specs. 77680
product family, database-centred requirements mgt. and spec. 113445
protocol engng. from complex specs. 107896
protocol on the-fly re-synthesis 84985
reactive closed-syst. specs. implement. 68674
real-time commun. protocol using SDL for embedded SoC based on AR microcontroller 95886
semicond. mfg., rapid prototyping of 300 mm fabs 81174
service and protocol specs. comp. 95926
superposed GSPNs, compact representations of probab. distribs. 124511
telecomm. services design, conceptual models use 130540
telecomms. service description model, implement.-independent 74070
telephone service modelling, formal methodologies 119500
TMN platform techs. for develop. of large-scale commun. node systs. *(Japanes* 74135
vector controlled IM drive modelling, VHDL 123940

formal verification
see also program verification
*BMD minimisation exploiting don't care conditions 100875
applied Boolean equivalence verification and RTL static sign-off 101875
ARM CPU core verification 68696
asynchronous ccts. and systs., conf., Salt Lake City, UT, USA (March 200 78399
behavioral models for VLSI chips, verif. using seq. sampling tech. 101953
behavioral verif., high quality using stat. stopping criteria 79499
biased random instruction generation, genetic approach 90828
Boolean satisfiability problem, inactive clauses, dyn. detect., image computati algm. 125364
Boolean satisfiability procedures in formal verification of superscalar/VLIW μ 125549
bus controller verification, imPROVE-HDL model checker appl. 79826
cache coherence protocols, extensible compiler syst. 95931
CAD, formal methods conf., Austin, TX, USA (2000) 78448
co-ordinated design mgt. procs., project mgt. organisation for CAD *(Germa* 114681
code-perturb. simul.-based hardware verification, black- and white-box approa 79725
collaborative design, constraint-based heuristics, act. approach to proc. mg 124299
combinat. equivalence checking using Boolean satisfiability and BDD 79790
computer design, VLSI in computers and proc., conf., Austin, TX, USA (Sep 2001) 124212
configurable general-purpose protocol proc., spec. 73893
contrasimulation equivalence, impossible futures and determinism 119329
coverage metrics for functional validation of hardware designs 101878
CPU design by formal verification, lab. work of undergraduate students 12529
cryptographic protocol verification, symbolic models 83974
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germa (March 2001) 78400
decision algm. for rational Presburger sentences using merge routine fo polyhedra *(Japanese)* 95876
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
distributed systs., redundancy mgt. protocols, modular comp., spec. and verifica tion 73916
DSP syst., coverage-directed generation of syst.-level test cases for validatio 101930
EDA tools, equivalence and property checking 81449
electronic design, component selection, timing diags. eval. and comparison, app of fuzzy logic 68515
electronic syst. design, perform. eval., verification technol. 78567
Email Alert System, Petri net based modelling/simul. 119517
embedded networking appls., syst.-level prototyping 95971
embedded proc. verification environ. 90959
embedded syst. simul.-guided prop. checking, multivalued AR-automata 7970
embedded systs. design and verif., reuse oriented prototyping methodologie 101954
equivalence checking of digital ccts. in indust. environ. *(German)* 114671
Fairisle ATM switch fabric using FormalCheck, model checking 131027
functional and timing specs. of real-time systs., modelling and eval. 85041
functional test generation for behaviorally seq. models 79691
functional verification for virtual components 68694
group commun. protocols, QoS 74290
handwritten numeral string recogn. via two-stage HMM based syst. 129673
hardware logic verification engineers, teaching, graduate level course, The Ohi State Univ. 124280
hierarchical image computation, dyn. conjunction scheduling 125397
hypermedia documentation design for safety crit. training appls. 78503
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 12419
Intel Pentium 4 μP, validation 125550
lattice-based model checking, symbolic trajectory eval. 125398
logic ccts., formal verification, recurrence eqns. & equivalence checking 6870
MAMon, hardware/software monitor for high-level SoC verification 79727
mapping timing behavior of VLSI ccts. on emulators 90873
mixed-sig. circuitry, automated top-down design, bottom-up design verificatio 125622
mobile computing protocol-based handover, formal spec. and verificatio 131232
mobility stds., formal methods 73951
mode dependency timing charactn. method, cct. delays, timing models 12544
multi-lingual synthesis and verification environ. 125304

mal verification continued
multi-phase seq. ccts., verification method, combinat. equivalence 68723
multi-std. video and image codecs, HW-SW co-design and verification 85421
multicast transport protocol, formal validation 130402
multiple asynchronous domains, static scheduling, functional verification 125445
multiple implication checks, learning procedure, DNF, DIMACS benchmarks 79680
multiple-valued logic to test case generation for software syst. functional testing 79817
µP design using formal verification methodology 101876
MVpGen test program generation tool for complex pipeline behavior verification 125563
netlists, archit. driven partitioning, logic emulation 79795
NPP navig. syst. 88538
OO hardware spec., verification, and synthesis framework 125175
Parlay API, validation through prototyping 130912
partial implement. in VLSI CAD, equivalence checking 125350
partial-order correctness-preserving props. of delay-insensitive ccts. 79782
prod. control, plant validation 107370
property verification, abstraction refinement, formal, simul. and hybrid engines 125430
property-specific witness graph generation for guided simul. 79713
protocol behaviour compositional constr., arbitrary channel capacity 85064
protocol compiler for formal verification, pipelined FIFO-like buffer 130408
quality in IP design and implement., logic verification 79724
RISC µP with DSP functionality, 32 bit, rapid prototyping 68845
SAT, Satisfiability algm. for combinat. equivalence checking 79789
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
scalable hybrid verification of complex µP 125545
seq. cct. simul. based formal verification method 125453
seq. ccts., use of don't cares during symbolic reachability anal. 102104
service and protocol specs. comp. 95926
SoC and core verification at Motorola 125351
SoC design for verification methodology, functional verification at blockto syst. level 79726
speaker verification, two-stage scoring normalization approach 84065
stopping criteria comparison, high quality behavioral verification 79723
symbolic RTL simul., RT-level Verilog constructs, 8051 micro-controller design 125338
symbolic verification of Boolean constraints over partially specified fns. 101976
synthesized designs, verification and debugging using RTL transforms. 79712
syst.-on-a-chip interconnect, commun.-based design, formal approach 125554
temporal logic model checking of event timings, abstractions 101978
timed transit. systs., cones and foci proof tech. 119328
TITAC2 abstracted instruction cache, formal verification 102080
verification tool for complex IC design 101928
Versys2, formal verification CAD tool 101877
VHDL behavioral-level designs, verif. pattern gen. for coding error detect. *(Korean)* 114568
VHDL described replicated archits., induction-oriented verif. 68687
virtual and phys. prototyping, testing, and verification of multifunctional proc. queue for single-chip multiprocessor archit. 90941
virtual prototyping, EDA tools, pattern generators and logic analyzers 68699
VITAL VHDL gate level std., cycle-based simul. 125405
VLSI CAD, hist.-based dyn. minimization during BDD constr. 101949

rming processes
see also casting; electroforming; moulding
conf., adv. forming & die mfg. technol., Haeundae, S. Korea (Sept. 1999) 78431
crash simul. incorporating results of sheet forming anals. 124754
EM forming procs., total mag. force calc. 105662
EM metal forming systs., pulsed mag. fields generation 113170
laser forming thermal proc. studies *(Japanese)* 113169
micro opt. components fab. by high precision embossing 71366
non-contact laser forming demonstrator syst. 72108
plastic, precision laser forming, YAG laser *(Japanese)* 78596
rect. parts cold forming, optimal layout methodology, GA 113460
PZT devices and thick films, net shape fab. 114439

rmula manipulation, automated methods *see symbol manipulation*

ORTH
genetic prog. using FORTH crossover 78941

ORTRAN
parallel 2D Delaunay triangulations in HPP and MPI 79141
quaternion arith., FORTRAN 90 extension, literate-prog. 117612
TTL method applied to finline resonators 102567
wake vortex detect. using radio acoustic sounding syst., num. simul. 97879

rward error correction
see also error correction codes
adaptive and integrated video commun. for wireless ATM 129728
adaptive robust type-I hybrid ARQ scheme 85801
approx. optimal assignment for unequal loss protection 83934
ARQ adaptive hybrid schemes for wireless links 94292
ARQ hybrid schemes, adaptive block encoding 129055
asynchronous freq. hopping systs., FEC code 106112
ATM commun., smooth and adaptive forward erasure correction 84946
ATM networks, advanced cell recovery techs. 130248
ATM networks, FEC coding for real-time transport 119129
ATM noisy network links, hybrid ARQ/FEC scheme 106117
ATM satellite traffic, throughput anal. and coding 85917
ATM wireless networks, adaptive FEC scheme for data traffic 117952
ATM wireless networks, bandwidth/buffer dimensioning for guaranteed QoS 96351
ATM wireless networks, DLC strategies with flexible error control 107838
automatic retransmission requests for reliable multicast transm. 130354
Bluetooth, adaptive link-level error recovery mechanisms 85488
Bluetooth wireless ad-hoc network, asynchronous data traffic perform. 119899
broadband radio access networks, real-time ATM, hybrid ARQ protocol 131108
broadband wireless channels, soft decoding techs. 94276
C-band/L-band hybrid Raman/Er-doped inline amplified Tbit/s WDM transm. 86073
capacity eval. of freq. hopping based ad-hoc systs. 119646
CDMA serially concatenated ECC syst., joint iter. decoding 108861
CDMA sigs., multi-user detect. via iter. proc. 84800
cellular voice/data services, integrated multiple access control/adaptive channel coding 84976
code division random multiple access systs. with packet combining, anal. 107759
coded M-ary FSK DS CDMA, design and perform. 85770
DAB, FEC block, low-complexity design 109347

forward error correction continued
DBS networks, adaptive rate control/QoS provisioning 85920
distributed virtual environ., best-effort multimedia networking 96273
DS-CDMA, joint despreading and iter. decoding with serially concatenated turbo code and Walsh code 83891
DS-CDMA iter. multi-user turbo-code receiver 128814
DS-CDMA PRN, adaptive error control 108545
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
dual wavelength Raman distributed amplif. repeaterless transm. 131384
dyn. error recovery mechanism and error control algms. *(Chinese)* 130424
EHF SATCOM on-the-move testbed, description 111615
error control/media sync. effect on appl.-level perform. 74433
error resilient packet video with unequal error protection 107094
FEC/ARQ hybrid syst. using turbo codes, retransmission strategies 83893
Gilbert channel, interleaving effects 117986
GPRS, radio link control level, acknowledgment procedures 85641
H.263+ video, robust transm. over Internet 96179
H.263 video for mobile commun., error resilient transm. 84379
H.263 video transm. over CDMA wireless networks, quality improvement 95121
hybrid ARQ schemes using turbo TCM for wireless channels, perform. 83939
improved UDP protocol for video transm. over Internet-to-wireless networks 107917
Indonesia, field expt. in fixed wireless CDMA IS-95 74598
indoor precoded packet wireless systs., fast code rate adaptation 96445
integrated error mgt. for media-on-demand services 120573
integrated framework for transport of real-time MPEG video over ATM best effort service 96313
integrated terrestrial-satellite wireless networks, multimedia appls., adaptive error control 85024
Internet protocols in space, link and routing issues 120092
Internet telephony error control, audio redundancy codec combination 96059
Internet video streaming and multicast using FEC code-based multiple description coding 84409
IP telephony, queueing anal. of simple FEC schemes 119249
layered multicast scheme for video over Internet, sender-adaptive and receiver-driven scheme 108437
lin. convolutional encoders in noise, constraint length/generator polynomials recovery 106102
long haul DWDM systs., achievable capacities 131540
long-haul opt. transm. syst. FEC techs. 109168
LOS bandlimited channel, efficient error free data transm. 111583
loss-resilient H.263+ video over Internet 95150
lost packet repair based on real-time transport protocol *(Chinese)* 108290
media on demand, packet loss, scalable and reliable paradigm based on FEC codes 120564
MPEG video over Internet/wireless networks, packet coding schemes 84983
MPEG-2 content-based error-resilient scheme, AMISP 106966
MPEG-4 transport over IP/RTP 84971
MPEG-4 wireless video transm., FEC-based error control 85889
MPLS supporting IP multicast routing protocol, mechanism 74056
multiple protocol label switching scheme supporting IP multicast 95974
OFDM, FEC code, intercarrier interf. 106124
OFDM sig., PAR, data permutation, embedded side inform. 106123
opt. cross-connect nodes, simul.-based perform. comparison 131484
opt. transceivers, DSP techs., high-speed opt. fibre commun. 109088
packet based wireless commun. systs., adaptive modul. for fading channels 72749
Rayleigh correl. multipath fading channels, iter. multi-user detect. *(English)* 74781
real time audio over best effort Internet, adaptive audio tool realisation 83978
real-time commun. protocols, temporally enhanced erasure codes 107823
reliable commun., continuous error detect. 119111
reliable wireless video transm. via fading channel estim./adaptation 84394
RS codes, adaptive coding and modulation for Rayleigh fading channels 128995
satellite commun., reliable broadcast scheme throughput 131313
scalable video, error-resilient compression/transm. 106934
scalable video over Internet, network adaptive rate control with unequal loss protect. 108436
self-timed Viterbi decoder, low power, convolutional FEC codes, ISI 83837
smooth/adaptive forward erasure correcting 119354
spatio-temporal concealment tech. using boundary matching algm. and mesh-based warping 106961
spectral encoded opt. CDMA, error-free matching channel recovery 131362
Tbit/s unidirectional WDM transm., Gbit/s/channel opt. transport network interface prototype 96806
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decoding 108857
techs., convolutional and RS coding, interleaving syst., appls. *(Italian)* 83869
time-multiplexed RS decoder FEC codec LSI for digital opt. transm. systs. 109089
time-varying wireless channel prioritized packet video transm. 108538
TURBO-BLAST for high-speed wireless commun. 83409
two-stage RS decoder for coded 2^m-ary QAM systs. 72917
UTRA TDD, throughput of hybrid ARQ types 95911
varying channels, progressive source coding with regressive channel coding *(English)* 72892
very DWDM ultralong haul terrestrial RZ systs. 131548
video streaming, novel approach 118644
VLSI implement. of RS decoder 90887
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller with iter. channel estim. 72355
wireless ATM, hybrid ARQ/FEC scheme 95915
wireless ATM access networks, CLR perform. of random traffic and error control 108644
wireless packet data, packet size depend. link adaptation 74525
wireless video streaming with pre-interleaving 107071
WLAN, expt. eval. of FEC on multicast audio streams 130692

Foucault currents *see eddy currents*

four wave mixing (optical) *see multiwave mixing*

Fourier analysis
see also Fourier series; Fourier transforms; harmonic analysis; waveform analysis
1D large apertures, narrow-waisted Gaussian beam discretization for short-pulse radiation 117648
boost DCM power converter, input current waveform anal./improvement *(Japanese)* 88812
capacitance matrix of unequal diam. dielec. coated cylinders above ground plane 72405
circ. waveguide, EM TE scatt. from gap 128829

Fourier analysis continued
dispersion managed fiber link, pair opt. soliton propag., num. methods 128546
double cct. power lines fault ident. tech. 77377
dual head coincidence clinical camera, image correction techs. 122240
dyn. MRI, region of interest acquisition method 87676
eddy-current probes anal., arbitrary shape excitation loops 114542
EUV mask, absorber props., EM simul. 126542
extended block-adaptive Fourier analyser, sig. component separation 118992
GMR head response, double layered perp. medium 116344
grating-based displacement micro-transducer 132069
Green's fn. of thin circ. plate with elastically supported edge 114067
HDD spindle motor, electromechanical-coupled field anal. *(Korean)* 77900
hybrid-PET, tomographic sampling charactn. using Fourier crosstalk matrix 122215
image class. using BP scheme 94595
image mosaic constr., quasi-feature based, block matching *(English)* 94628
image obj. detect. using 2D-adaptive sampling, viper algm. 118337
integrated ang. speed sens. syst. design, automotive appl. 109824
inter-harmonics defn./meas. 99356
intramyocardial M-mode Doppler tissue imaging anal. 98341
IR imaging scanner, opt. MTF meas., digital Fourier anal. method 120915
MCG, SQUID gradiometry, noise cancellation 76334
multilayered microstrip anal. for microstrip moisture sens. design appl. 109501
nonconstant immittance plane, overlying radio wave propag. 72329
nonlin. lossless fiber, ultrashort chirped hyperb. pulses propag. 127660
opt. flow estim., image registration, local rigidity 95433
pancreaticobiliary tract, congenital anoms., MR cholangiopancreatography findings using HASTE 110884
periodic excitation freq. response fn. meas., correl. I/O errors 107406
power quality anal., time-freq. nonstationary sigs. anal. approach 112086
pulsatile axial flow vel. waveforms in curved elastic tubes 98320
recursive adaptive Fourier analyzer based on WHT 118830
ring laser dyn. goniometer, angle meas., systematic errors 128628
scale invariant face detect./class. from log-polar image 95483
sig. Fourier spectrum anal., comparison of DFT, DCT, MDCT, DST 118876
sigs. multidimensional multiresolution Fourier estim. 95633
single-loop sigma-DM, robustness anal. 83822
speech voiced/turbulence-noise components, pitch-scaled estim. 118072
spherical waveguide stat. irregular walls, EM scatt. 117743
stabilized Q_1-Q_1 mixed finite element approx. 114169
tensor product multigrid anal. 68043
three-grid Fourier anal. for multigrid 101066
US transducer radiated field, spatial freq. spectra, ball reflector 101625
wavelet transform and reconstruction formula extension to general field *(Chinese)* 101136
weakly guiding opt. fibers with exact boundary condition, simul. by FEM 128821
Si n-p photodiode, capacitance, color detect. 109586
Si:As, ion-implanted, clustering/precip. anal., SIMS/EXAFS 115590

Fourier series
boost DCM power converter, input current waveform anal./improvement *(Japanese)* 88812
circ. waveguide, EM TE scatt. from gap 128829
CMOS analogue functional elements, large-sig. anal., Fourier-series approxs. 90706
composed Pade-type approx. 114005
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
dyn. hysteresis, neural network and actual freq. transplantation 128672
EM fields of thin circ. loop antenna above (un)grounded multi-layered chiral slabs 72535
FSR-LPTV filtering for blind equalization and interf. rejection 130263
gas turbine mag. bearings, neg. stiffness coeffs. calcs. 123216
image registration, consistent, forward/reverse transforms, MRI/CT appl. 98419
incomplete sig. reconstr. by nonlin. interpolation/genetic algm. 84706
inhomog. dielec. gratings, EM waves scatt./guiding 72262
large adaptive reflector Cassegrain config. with feed-reflector 94120
lin. least sq. error minimization using nonorthogonal basis fns. 101043
microwave and MM-wave device model, Boltzmann transport eqn. 102605
MRI, asymmetric zonal shim coils, systematic design 110871
OFDM systs., fuzzy adaptive sig. predistorter 129970
opt. waveguide, Fourier series expansion, perfectly matched layer 82143
perfectly cond. circ. cylinder, spectral-domain formulation of EM scatt. 117651
periodic sigs., noisy meas., time derivatives, nonlin. observers 73643
periodic surface, computer reconstr., scatt./transm. acoustic fields 109990
plane image contour, vector representation, Fourier descriptor 73495
power syst. anal. and protection design, dyn. phasors 77568
power syst. protective algm. for decaying aperiodic component elimination *(Chinese)* 77455
QPSK demodulator perform. improvement for quadrature receiver with amplit./phase imbalance correction 94228
randomly rough surface, modified two-scale scatt. model 83195
seismic sig. proc., inform. anal. 88092
sig. detect. and shift-param. estim. with compression by orthogonal polynomials 119090
$\Sigma\Delta$ freq. synthesizers modelling/simul. 131788
spectral estim. and color appearance prediction of fluoresc. materials 73281
SRM phase inductance charactn. using Fourier series approach 133966
stochastic diff. eqns., mean sq. approx. 68051
surface biophys. params. estim. from satellite imagery 76949
thin hexagonal loop transceiver antennas, near-/far-zone fields 83656
vectorial-BPM, perfectly matched layer ABC, Fourier series expansion 94047
Cu periodic reverse electroplating, waveform shape/freq. optim. 68351

Fourier transform optics
see also Fourier transform spectroscopy
1D scanning surface meas. syst., spatio-temporal JTC 94768
2D fringe patterns, natural demodulation, self-calib. phase-shifting algm. 118358
2D inverse filtering of opt. images, noise suppression 118363
2D opt. sig.-proc. beamformer using multilayer polymeric opt. waveguide arrays 125831
3D CGH image reconstruction by 2D FT method 105580
3D curved surface, large, meas. methods 117590
3D miniaturized surface profilometer, Young's double pinhole interferometer 109591
3D shape inform., opt. methods, hybrid methodology, overview 132168
3D shapes meas., measuring precision improvement 97827
160-channel DWDM syst., telecom/datacom appl. 120285
achromatic holographic opt. lens Fourier proc. 84160
Al reflective layer on SiO_2 substr., complex-AM DOE 105610

Fourier transform optics continued
antenna array Fourier opt. proc. beamforming network 120704
array micro-opt. elements mfg., spatial freq. compensation 93180
arrayed-waveguide gratings/fiber Bragg gratings, isomorphic FT anal. 1090
azo-containing liq.-cryst. polymer films, controlled holographic recording 82
beam-shaping CGHs for coherent/partially coherent light 105586
blasted surfaces roughness meas., light scatt. method 75873
blind data restoration, extracted filter fn. 118206
causal lin. dielec., superluminal pulse propag. 82763
CGH fab. by electron-beam direct-writing, image quality *(Chinese)* 10559
CGH reconstruction by iter. Fourier method 83024
chirped moire fiber grating dual-channel real-time FT 131507
coherent hard X-rays FT holography 72081
CR-39 detectors, track dens. meas. and nuc. track differentiation 121664
diffuse obj. tilt meas. by double-exposure speckle photography, speckle fann 132151
compact digital zoom photo-cameras for holographic interferometry 105614
double random phase encryption digital holographic data security syst. 116
DP, geom. and Fourier optics approxs., triangular norms tech. 71454
dual-conjug. adaptive optics 128786
DWDM syst. wavelength splitters, FT-based Mach Zehnder interferomet 131551
dyn. 3D shape meas. by FT profilometry 121187
Engineering Test Satellite VI, laser commun. equipt., in-orbit meas. 75062
EUV lensless FT holography 83002
fast Fourier/wavelet transforms, adaptive optics wavefront reconstruct 106675
fiber Bragg gratings, dispersion, opt. freq. domain charactn. 127634
fiber Fourier optics, single lens free-space propag. 118207
FT profilometry, CCD discrete sampling, Kaize-Bessel windows *(Chine* 121208
FT profilometry review, deformed grating images 86970
fuel aerosol stream, drop av. diam. meas., diffr. method 109980
fuel aerosol stream, drop size determ., diffractive method 109979
gauge block center length, automatic laser interf. meas. *(Chinese)* 109984
gray-scale images, pattern detect. with polariz. coding, matched filtering tec 84515
herd male GA 107235
high power dens. solid-state laser, opt. components wavefront PSD meas. *(C nese)* 71868
high-aperture beam generalizations 82731
high-resoln. wavefront control syst., opt. addressed NLC SLM 109686
hologram binarization, iter. stepwise quantization method 129785
hologram matrix write/read opt. syst. 128567
hologram storage, opt. representation of binary data *(Korean)* 116574
holograms, gray level/quasi-colors 105615
holographic CDMA for IR wireless commun. systs. appls. 82968
holographic disk memories, defocused Fourier plane holograms stora *(Korean)* 72075
holographic interferometry reconstruction using DMD 83037
holography, alg. foundation 72093
image encryption, double phase encoding, fractional FT *(Chinese)* 107028
image encryption, generalized fractional convolution operation 106964
image representation/compression with fractional FT 129789
improved wavelet packet decomp. algm., weak fault detect. appls. *(Chines* 106801
infinitely long conducting circ. cylinder, Gaussian beam far field scatt. 8272
integrated optoelectronic systs. opt. field modelling, FFT-based full diffr. meth 105041
joint fractional FT correlator, fractional-order filtering, nonlin. proc. 84554
JTC, ref. PE, multiple target detect. 106933
JTC with significant output images, opt. security syst. appls. 118697
large-aperture phase-shifting interferometer for PSD fn. meas. 93306
local large-strain meas., noncontact opt. methods 114504
microdisplays, contrast and colorimetry meas. vs. viewing angle 109849
microoptical correlators, security appls. 116774
MODAN-type DOE for transversal laser mode selection, commun. app 127874
moving V-belt strain meas., opt. correl. & spatial filter sens. 109505
multibeam array antenna, spatial opt. sig. proc. 83683
multifractional correl., generalized fractional FT 73253
multilayered waveguide holographic storage, Fresnel diffr. patterns, FFT 1046
multiple-target recogn. using discrete rot. FT 118695
multistage multichannel fractional Fourier-domain filtering, opt. image encry tion 118494
non-axisymmetric filter in FT profilometry *(Chinese)* 97802
nonlin. joint fractional transform correlator, opt. pattern recogn. 84553
nonzero-order JTC in noise, peak variance minimization 73494
on-axis digital heterodyne holography, synthetic-aperture expt. in vis. 12857
opt. fiber dispersion meas. by modulation phase shift tech. 82123
particle size meas., laser scatt. tech., projection iter. algm. 121206
pers. ident., human irises recogn., opt. transm. binary models, Fourier spect 84561
phase obj. imaging, diffr. tomography reconstruction algms. 84165
phase-measuring profilometry, phase shifting, real-time calib. algm. 75613
phase-only pulse shaping, iter. FT algm. 118421
plane nonlin. filters, noise robustness for image recogn. 118741
polariz. holograms, phase coded recording for data MUX and encryption 829
profilometry, phase-unwrapping proc., differentiation *(English)* 75875
pseudo color coding fractional FT rainbow hologram, anti-counterfeiting appl *(Chinese)* 105592
PSI anal. tech., FT method 84162
quasi-monodispersive aerosol, drop sizes, diffr. meas. methods 75866
rare-earth-doped crysts., photon echoes, time-to-freq. FT 128460
real-time fingerprint ident. syst. with high discriminability *(Chinese)* 73438
ring laser dyn. goniometer, angle meas., systematic errors 128628
road sign detect., JTC, Fourier-plane nonlin. filter 107287
scale distortion-invariant pattern recogn., fractional correl. perform. *(Chines* 107209
self-mixing interferometry, FT method, displacement meas. 97833
serial transform opt. correlator design principles 94736
single-channel dispersion-managed soliton syst., phase/timing jitter, eye diags error rates 127690
SMF Kerr medium, quantum soliton time evol. 93072
soda-lime glass, Cu^+-Na^+ ion exchange channel waveguides, light propag. 9313
spatial carrier fringe pattern, phase indeterminacy in phase anal. methods *(Ch nese)* 94484
telecomm. networks, opt. neuro-fuzzy systs. 120120
thick carbon fiber/PEEK composite laminates, single moire interferometric fring pattern 125153

rier transform optics continued
hin film polymer media holographic memory card, data storage 82974
hin polymer storage layer dens. optim. for polariz. holograms 82975
hird-order suscept./nonlin. refr. index meas. by Mach-Zehnder interferometry tech. 75909
TW electrooptic modulator response, quantitat. anal. *(Chinese)* 127834
win-grating fiber optic sens., demodulation algm. 75573
ultrafast opt.-pulse train Fourier synthesis, SOA phase locking 71901
ultrafast unidirectional beam deflection using electrooptic traveling phase grating 93234
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
vectorial-BPM, perfectly matched layer ABC, Fourier series expansion 94047
vol. holographic data storage, field distrib. uniformisation along opt. axis 83009
whole opt. wavefield reconstruction by digital holography 128582
wide-field sparse-aperture imaging, space-borne surveillance appls. 122750
zonal wavefront reconstruction, wavelet transform 94751
β-BaB_2O_4 TW nanosecond OPO close to FT limit 117441
$BaTiO_3$ photorefr. phase-conjugating mirror, intracavity beam shaping, reference-less holography 128376
$Bi_{12}SO_{20}$ photorefr. JTC, rot. invariant pattern recogn. 107251
$LiNbO_3$ nonlin. cryst., transform-limited narrow-linewidth injection-seeded ns THz wave parametric generator 82850
$LiNbO_3$:MgO THz-wave parametric generator with injection seeding *(Japanese)* 105508
PZT nonlin. phase-shifting adapter, self-calib. *(Chinese)* 70439
SiC, 4H, free carrier diffusion, transient grating techs. 69579
Ti:sapphire self-mode-locked laser, femtosecond opt. pulses, time-resolved opt. gating 105459

rier transform spectrometers
see also Fourier transform spectroscopy
cirrus, FIRSC, airborne IR FT spectrometer 76875
free-space micro-opt. components & appls., overview 104788
FTIR spectrometer, pass. rem. chem. vap. monitoring 99033
hyperspectral fundus imager, syst. concept & data proc. 98346
LWIR spectral polaris. signatures of mater., FTIR spectropolarimeter 75656
MIPAS, Michelson Interferometer for Passive Atmospheric Sounding, profile retrieval 111419
MIPAS onboard ENVISAT, flight model perform., calib. & charactn. 122630
static polaris. interf. imaging spectrometer, airborne rem. sens. 98949
tropos., O_3, Aura IR satellite spectrometer 76876
tropos. chem. meas., Imaging Geostationary Fourier Transform Spectrometer 133327
tropos. emission spectrometer ground syst. 133319
Tropospheric Emission Spectrometer, ground data syst. develop. 133321
Tropospheric Emission Spectrometer ground data syst., sci. data visualization 133323

rier transform spectroscopy
see also Fourier transform spectrometers
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
ALS, synchrotron IR beamlines, spectromicroscopy and fast timing 87139
biomedical diagnostics, opt. spectrometry 76414
ion implant. proc., effluent species abatement, customized dry scrubber design 126287
mid-IR fiber-optic spectrosc., anal. appls. 97318
NSRL IR beam handling equipt., appls. *(Chinese)* 110216
organic impurities in water soln., thermal luminesc. spectrosc. meas. method 88186
osteoporotic bone, encoded FTIR microspectroscopic data visualizationy 110852
pass. rem. chem. vap. monitoring, FTIR spectrometer 99033
poly(2,2'-diaminobenzyloxydisulfide) conducting polymer high-energy storage material 123772
skin cancer diagnosis, FTIR fiber optic evanescent wave spectrosc. 87529
skin tissue class., FEW-FTIR spectrosc., neural network 87537
strong fiber Bragg grating chirp meas. by opt. freq. domain reflectometry 127639
vehicle exhaust VOC meas., extractive FTIR spectrosc. 122702
wafer inspection, nondestructive thickness meas. techs., productive availability 67654
XLPE cable, insulation/semicond. interface improvement, diffusion method *(Japanese)* 99374
HgCdTe multichannel MCT/PIR-fiber detectors for fast pyrometry and multis-pectral sens. 109555
Li-ion batt., anisole electrolyte additive, effect on cycle perform. *(Chinese)* 89067
Nb THz hot-electron bolometer mixer, microstrip-line-coupled, direct response 127540
Si, microcrystalline, hydrogen passiv. depth, carrier lifetime meas. 91610
Si, porous, sulfur passiv., PL/ stabil. improvement *(Chinese)* 91586
c-Si solar cells perform., oxygen precip. role 100093
a-Si:H thin film nip solar cells, VHF-PECVD, photo-induced degrad. 112890
a-Si:H thin films, light-induced annealing effects, positron beam annihila-tion/FTIR spectra 80977
TiO_2 incorp. zeolite thin films for solar cells 89294

rier transforms
see also fast Fourier transforms; Fourier analysis; Fourier transform optics
1D ATR, parametric HRR signature modeling 75154
1D nonminimum phase retrieval by gain sampling 107318
2D localized filter-based lin. coherent noise atten. 107510
2D pattern matching based on generalized FT 94750
2D/3D high-resoln. radar proc., time-freq. sig. anal. via transformed windowed data array 109239
3-D PET, direct Fourier reconstruction with Fourier reprojection 132933
3D acoustic scatt. from irregular fluid waveguide via BEM 79139
3D generalized shape sampling method/file format for storage or indexing 95204
3D image reconstruction, translational alignment method 73268
algm. for FT on compressed image in restricted quadtree and shading format 73394
analog cct. fault diagnosis, single-output/1-of-k neural network archits. compari-son 101745
assembly actions detect. by scene obs. 84302
attention-deficit/hyperactivity disorder, EEG, age/sex effects 98186
audio de-reverberation using freq.-domain center clipper 83987
auditory evoked pot., time-freq. anal. using STFT-based adaptive filters 110521
BLDCM radial force dens., PM overhang effect 112544
blind separation of more sources than mixtures using sparsity of short-time FT 106351
block-level cct., fault diagnosis, neural network *(Chinese)* 114670
blood flow Doppler US sig., time-freq. anal. 98292
borehole induction meas., hybrid FFHT-EBA method, inverse algm. 88104

Fourier transforms continued
Brazilian Synchrotron Light Source electron storage ring, sync. phase shift meas. 110165
breathing sigs., time-freq. anal., in vitro airway model 110675
bridge & generalised bridge fns., copy theory, binary codes *(Chinese)* 106078
broadband phase US spectrosc., phase sheet ambiguity elimination 76349
broanded periodogram, stat. anal. for continuous time stationary procs. 124460
channel distortion compensation based on handset freq. response meas. 84052
chirp sig. anal. using adaptive short-time fractional FT 118875
circ. cylindrical waveguide, uniaxial anisotropic medium 94084
color image correl., hypercomplex Wiener-Khintchine theorem 94706
commun. systs., time-varying interf. suppression using time-freq. sig. transforms 105808
complex image/color matching/coding, spatio-chromatic filtering 95451
composite materials mech. prop. estim. by impact sound freq. anal. *(Japanese)* 125092
computation compression scheme based on multifrequential approach 132802
computationally efficient DOA estim. of scatt. source 118921
conical horn antennas loaded with metallic discs, near-field meas. 94142
conical slot antenna excitation 117772
continuous scanning laser Doppler vibrometer with bow scanning compensation 132189
cosmetic treatment effects on human skin, modeling and anal. 76209
discrete time-warped FT, optimal warping fn. design 95722
distorted image correction, Tikhonov regularisation method *(Russian)* 129814
DS-CDMA systs., narrowband interf. suppression, FT-domain tech. 73852
DSP, small argument fn. approx. *(Russian)* 73562
dyadic Green's fn. for biaxial medium 72277
dyn. security assess., time-varying contingency screening 88380
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
elec. machines, mag. field anal., Enokizono-Soda modeling *(Japanese)* 105660
EM wave diffr., impedance wedge, Wiener-Hopf anal. 94027
Euler syst. of eqns., solns. in reproducing kernel space 79103
exponential ray transform, sampling conditions, nuc. imaging appl. 132866
factor graphs 129173
foreign lang. learning assistance, speech sig. time scaling algm. 118078
Fourier-Bessel pattern anal. in circ. domain, decomp. amplit. 70362
fractional FT based target no. detect. 75190
freq.-time mixed domain optimal filter for moving obj. extraction 106674
generalized series dyn. imaging 87693
genetic relax. iter. FT algm. for image reconstruction 84178
genomic sig. proc. 98157
GPS-SDMA syst., transmitter posn. estim. methods 85916
gray-level image reconstruction, Fourier-Mellin transform approx. 129541
Green's fn. for rough surface with Dirichlet/Neumann/impedance boundary conditions 72270
HAADF-STEM, focusing/astigmatism correction auto-tuning method 110109
HDSL systs., waiting time jitter, power spectrum anal. 131013
human motion, higher-order spectral anal. 95544
HV impulses, digital proc. based on time-freq. anal. 107459
hybrid BEM in time domain, acoustic calcs. 68086
hybrid Radon-Fourier tech., stat. props. 129618
image class., neural nets comparison 73466
image raw data preprocessing, Fourier-Hankel transform 118295
image reconstruction from sparse Fourier samples, self-referencing level-set method 118257
image representation/compression with fractional FT 129789
image restoration, deconvolution in freq. domain 106734
image sharpening/softening using freq. domain filters 106435
intell. US phased array syst. for steel NDT, optimised design 114532
inverse band-limited sig. prob., regularisation, Malvar-Wilson wavelets 129980
Josephson jn. tuning through quantum crit. point 92897
Ka-band pulsed propag. through rain-filled atmos. 105742
land-mines, plastic, PDFT algm. for data eval. 128758
layered dielec., rapid calc. of electrostatic Green's fns. 128657
lin. filters under PSD stabilization, optim. 118320
line source antenna, generalized Gaussian quadrature appl. to inverse problem 105851
linogram algm. for computerized tomography 98511
LMS long adaptive filters, wave theory 130065
long adaptive LMS filters, wave theory, tapped-delay line type 84727
mag. disk surface, slider dyn., take-off height 116449
magnetos. magnetometer data, wavelet anal. results 122642
MAP algm. for image reconstruction *(Chinese)* 129427
MC-CDMA syst. with Rayleigh fading multipath channels 108852
med. optoacoustic press. transients, temporal backward projection, FT methods 98350
median filter based realizations of robust time-freq. distribs. 107553
metallic photonic bandgap propag. mode charactn. 72439
metaplectic operators, integral representations, energy localization problems soln. 95636
microstrip patch antennas, eval. of 2D react. integrals 72517
microwave radiometric systs., Volosyuk-FT for optimal radio brightness image reconstruction 73284
moving av. model estim., windowed periodograms 84661
MPEG-2 coded video, blockiness, freq. domain meas. 106860
multi-sinewave sig. spectra, arbitrary spectrum test sig. generation *(German)* 132090
multiple IR background generation for warning/search-and-track systs., model-ing/simul. 88246
multiple targets resoln. using time range Doppler image 75192
multiple V-groove guide, dispersion 105835
myocardial rapid vel. distrib., tissue Doppler imaging 87485
myocardial wall tagging with undersampled projection reconstr. 76440
neonatal heart rate time series, freq. domain methods 121897
non-Gaussian composite sig., uncertainty product 73569
nondiffracting bandlimited wave solns. for US pulsed waves in imaging appls. 99108
nonlin. steady-state solns., freq. domain computations 95649
nonmetallic buried mines detect., semianalytic mode matching techs. 77086
omega-k quadtree UWB SAR focusing 96953
open-ended coaxial waveguide radiating into chiral half-space, refl. coeffs. 94111
opt. images, multi-channel correl. recogn. method 118746
outflow boundary conditions for FT 1D Vlasov-Poisson syst. 124771
periodic steady state calc., shooting methods, error minimization 125161
PET, 3D, direct Fourier reconstruction with Fourier reprojection 122271
PET, fast fully 3D image reconstruction using planograms 132880
phase correl. algm. for multicomponent images 94908
planar pure perm. mag. wigglers, SR, FT. 121794

Fourier transforms continued
PM sync. servomotor vibr. suppression control method *(Japanese)* 88698
PO multifrequency scatt. fields, shape reconstruction via SVD 117649
polycrystal diamond particles, lapping perform. guide 69911
power quality anal., time-freq. nonstationary sigs. anal. approach 112086
quadrature efficiency improvement of Laplace distrib. 114200
quasi-orthogonal seqs. 83896
radar imaging, high resoln., 2D data extrapolation using AR lattice modelling 131640
Rayleigh multipath fading channels, GQR models 83263
rect. coaxial line, FT anal. 117742
rect. piezoceramic transducers, flexural waves transm., NDE 116201
rectifier load elec. cct. transient procs. 99749
region shape similarity for image retrieval 94766
ridge waveguide, FT anal. 117742
robot visual discrim., spatio-temporal FT 120936
SAR image proc. for moving target focusing 99158
SAR rem. sens., sea-wave fractal spectrum 76904
SAR sidelobe apodization using Kaiser window 96897
self-similar network traffic generation 95748
sig. reconstruction from magnitude or phase of generalised wavelet transform 129957
simultaneity/causality/spectral representations 83255
small aperture RLSA, inner fields visualization using FDTD 83724
small-diam. tubular SOFCs, appl. of Fourier-based transforms to impedance spectra 112822
spectral state estim. and differentiation using neural nets 118858
spinal SEP anal., time-freq. distrib. tech. comparison 87424
STFT ratios, stat. props. for two-channel systs. and blind source separation 118060
sync. generator, EM transients calc., discrete method *(Russian)* 88708
T-invariant causal lin. syst., anal. continuation, Kramers-Kronig anal. 130075
time-domain equiv. edge currents for transient scatt. 72232
time-freq. methods param. estim. 106335
time-resolved acoustic microscopy, elastic prop. meas., inverse algm. 114496
transient EM wave beam scatt. modelling 83206
TTL method applied to finline resonators 102567
tumour motion from breathing, fluoroscopic study, precise radiotherapy, lung cancer 132820
two-wire transm. line, dielec. half-space, transient response 83456
ultrasound fund./harmonic lateral transmit beam shapes, vivo comparison 110770
unbounded anisotropic medium, dyadic Green's fn. in cylindrical coord. 83204
uncertainty principle for real sigs. in fractional FT domain 130029
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
video ADC, differential gain & phase testing, time-freq. anal. 114842
watermarking generalization to space/spatial-freq. domain 95393
watermarking of vector graphics images 95263
wavelet-Fourier vol. rendering by view interpolation 94495
wide-field imaging interferometry testbed for space mission support, develop. 120661
X-ray CT, cone beam reconstr., inversion formula 118268
Al plate, Lamb wave dist. & thickness meas., time-freq. anal. 101547
Ar, Townsend secondary electron emission coeff., freq. response anal. 80546
GaAs power MESFET, optimized electrothermal design, nonlin. 3D heat flow eqn. soln. 115969
InGaP/GaAs epitaxial layers, super-ordered domains, diffr. anom. fine struct. 69525
Pb-acid small valve-regulated batts., dyn. charactn. 89089
Si substr., IC interconnects, resist. and inductance 70279

fourth-generation languages *see database management systems; high level languages; programming environments; query languages; simulation languages; specification languages; user interfaces*

FPA *see focal planes*

FPGA *see field programmable gate arrays*

fractals
2D DFT, self-similar ring-shaped watermark embedding 129716
3D fractal compression for real-time video 129772
3D machined surfaces topography, fractal geom. appl. 121200
activated sludge, microscopic images based feature anal. 129460
ad hoc networks with self-similar traffic, stat. multiplexed adaptive operation 74563
aero engine wear failure, intell. diagnostics, debris anal. based method *(Chinese)* 133259
air, spark paths, 3D image capturing and proc. 84169
α-stable broadband traffic shaping/policing 119756
anencephalic fetus, heart rate variability anal., time series fractal dimens. 122035
antenna research at Univ. of Birmingham 83569
arrhythmia detect., short-time multifractal approach using fuzzy neural network 110611
artificial target segmentation method based on fractal features *(Chinese)* 118711
asymptotically LRD traffic, autocorrelation fns. and verification 95749
ATM backbone network, correl. traffic, expt. study 108357
ATM networks, flow control scheme for self-similar traffic 130746
ATM networks, self similar traffic, cell loss probab. estim., fuzzy approach 130226
ATM networksm, flow control for ABR based on chaos 95779
attribute cluster network and fractal image compression 73354
binary sketch of grey image, fractal dimens. appl. *(Chinese)* 106725
bistatic scatt. from fractal rough surface, Monte Carlo and FEM 83193
block-coded images, blocking artifacts reduction using self-similarity 129702
bone tissue, pathological changes diagnostics, polariz.-correl. anal. 76407
bone X-ray tomographic microscopy projections, fractal anal. 76526
brain MR images, tumour ident., fractal anal. approach 98480
broadband satellite multimedia networks, service mapping and QoS provisioning 109008
buried targets, rough air-ground interface, time-domain sens. 77067
Cantor ring arrays design using fractals 117837
CDMA third generation mobile commun., heavy traffic period probab. 131174
cell images, anal./classif., directional fractal dimens. features 87551
cellular commun. for different types of vehicle motion, teletraffic charact. 74648
chest radiographs/mammograms, computer-aided diagnosis systs. 132819
CNS tumour malignancy eval., MRI, fractal dimens. use 76494
coding of shapes, projected IFS model based 95177
coding scheme using ref. images 118514
composite scatt. of targets/environ. 72272
compression accel. using real-time decoder 107037
conducting target in fractal atm. turbulence, EM scatt. 72334
decoded fractal images, hierarchical fixed-point-seeking method 84447

fractals continued
digital fractal holograms, security appls. 82971
distorted images, fractal encoding, textures, atmos. effects 106867
distributed fractal image compression on PVM for million-pixel images 1068
domain block constraints in fractal image coding scheme 84495
Doppler US blood flow sigs., nonlin. charact. anal. *(Chinese)* 121994
dyn. complex scene anal. with fractal embedding method *(French)* 106440
EEG sig. nonlin. dyn., mag. field influence on brain 98245
electrostatic field interact. with fractal surfaced dielec. body 72177
engng. surfaces eval., combined fractal modelling & wavelet anal. 121201
extending self-similar procs., wavelet transform *(Chinese)* 100751
EZW image codec based on intraband partitioning 95284
fast fractal image coding in freq. domain 95132
fast fractal image compression coding method 84364
fast fractal image encoding based on adaptive search 106883
feedback ccts. anal. 114584
ferroresonant voltage transformer ccts., chaotic behavior, fractal dimens. metho 79529
field emission cathode with fractal surface struct., elec. field, computer mod 105674
fingerprint class. based on fractal Brownian motion 73462
fingerprint images, fractal method for sing. detect. 73442
FLIR seqs., stabilization, obj. detect. and tracking 94791
Fourier-Bessel pattern anal. in circ. domain, decomp. amplit. 70362
fractal generation, using capacitor, teaching 89605
fractal-shaped antennas and GSM 900/1800 appl. 128854
fractional Brownian motion rough surface, EM scatt. *(Chinese)* 131629
future of fractal geom. and appls. 124525
geoelectromagnetic disturbances, effects on technol. systs. 83440
gray-scale images, multifractal anal. 106828
heterog. network traffic modelling in wavelet domain 130325
hierarchical fractal coding based on VQ *(Chinese)* 95245
high-quality speech synthesis based on reprod. of randomness in speech si 129399
high-resoln. X-ray diffractor, geometric model, fractal props. 132497
high-speed commun. networks, extended alternating fractal renewal proc. 1 modeling traffic 84929
Hilbert curve fractal antenna, reconfigurable charact. 83508
Hilbert curve fractal antennas, self-similarity and multiband charact. 72443
Hilbert curve fractal small reson. antenna for VHF/UHF appls. 72591
horiz. scanning instrum., surface interact., length-scale fractal anal. 121192
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IFS models, inverse fractal problem, hybrid evolutive-genetic strategy 9457
image anal. and pattern recogn., coord. logic filters 129575
image coding, convergence 95174
image coding, DCT transform *(Chinese)* 106847
image coding, feature difference class. 107073
image coding, iterated transform. theory, Kohonen neural networks and DC 73331
image coding, multiple same-sized block mapping 107097
image coding, trigonometric approx. method 73422
image coding based on adaptive matching *(Chinese)* 129686
image coding comparison 84368
image coding in wavelet transform domain, list-directed approach 118573
image coding schemes using nonlin. grey scale fns. 73423
image coding with multi-scaling for brightness *(Japanese)* 73396
image compression, adaptive post-proc. 95173
image compression, efficient decoding scheme 95169
image compression, fast code enhancement with local search 95167
image compression, resoln. progressive coding using sorting algm. 95293
image compression coding based on generalized convergence *(Chinese)* 1068
image compression proc. for moving pictures *(Japanese)* 79947
image databases, scale/fractal transforms 95515
image dimens. calc., box-counting method 94472
image encoder, real-time implement. 107044
image encoding, wavelet transform domain searching 95133
image partitioning for fractal coding under rate/complexity constraints 1186
Internet network, fractal props. 119399
Internet traffic, multifractal/self-similar nature 119572
Internet traffic data, self-similar/fractal nature 96227
intrusion detect. systs., automated testing, network utilization patterns, self-sin larity 96115
liver disease, US diagnostic syst., fractal dimens. 110720
liver diseases diagnostic syst. based on conventional US equipt. 98293
long range depend. testing/estim., pitfalls 73799
long-range depend. network traffic, rate control of elastic connections 84814
lymphocytes, cancer detect., fractal dimens. anal., electron microscope imag 132522
Mandelbrot set algm., parallel proc. 84198
metallized rough surface, plane wave scatt. 117672
multi-gap fractal superlattice lacunarity, wavelet anal. 128789
multiband fractal antennas, genetically engineered design 117751
multipath fading channel, multifractal model *(Chinese)* 94219
multiple time scale TCP perform. eval., self-similar traffic conditions 74103
multiscale anal. and control of networks with fractal traffic 107787
multiscale anal. and data networks 84810
network heavy traffic modeling using α-stable self-similar procs. 95848
network simul. via self-similar procs. 74067
network traffic, long-range depend., multifractal modeling 130738
network traffic anal. tools 85192
network traffic self-similarity, TCP/IP upper-layer protocol effects 107887
non-iter. fractal image compression, variance-based domain blocks 73389
non-iter. scheme for fractal image coding 107038
non-periodic self-affine tilings, constr. of boundaries and colorings *(Japane* 113903
nonGaussian charact. and FARIMA(p,d,q) traffic models 119259
nonlin. sig. proc., approx. nearest neighbor searching 107320
nonlin. single-/multi-fractal sigs., state-space equilib. based Volterra predic 95691
opt. backscatt. enhance. from 1D rough surface, study using Monte Carlo meth 128787
opt. packet-switching routers with self-similar bursty traffic, resource allocati 86062
opt. phase change recording, fractal theory, computer simul. 92998
opt. waveguide fields, free-space waves theory 116679
opt. waveguide fields as free-space waves 82132
packet loss rate prediction using universal traffic indicator 130976
packet networks, nonstationary offered-load model 84821
partitioned iter. fn. syst., digital imaging tool 95136
pattern coding, nondeterministic kinetics based feature clustering 129732

ctals continued
planar contour reconstruction, fractal algm. *(Chinese)* 94739
polyethylene insulation, water trees, fractal anal. 127143
pseudo-Bayesian ALOHA algm. with mixed priorities 73920
quadtree-based fractal image coding using VLSI archit. 129734
radar detect., sigs. fractal anal. 86171
rem. sampling, cost effective ref. data sampling algm. 122603
Richardson plot in time series representation 100792
SAR rem. sens., sea-wave fractal spectrum 76904
SAR target detect., extended fractal features 96918
SCDMA systs. over multipath fading channels, blind fractal sig. estim. 96566
screening mammogram, artificial intell. algm. for tumour detect. 98512
segmentation-based lossless compression of burn wound images 110504
self-similar network traffic, tactical radio expts. 88235
self-similar network traffic charactn. through lin. scale-invariant syst. models 84809
self-similar network traffic generation 95748
self-similar proc. model, overview *(Chinese)* 118939
self-similar traffic, practical time-scale fitting with Markov-modulated Poisson proc. 84923
self-similar traffic generator based on FFT, fractal Gaussian noise 119158
shoeprint impressions, detect. and class. 95438
shorted fractal Sierpinski gasket antenna, quasi log periodic reson. behaviour 105886
Si(110), roughness, etching, AFM, fractal, power spectrum dens., scaling anal. 103343
Sierpinski generalized fractal multiband antenna 105863
spaceborne SAR image simul. of natural ground scene *(Chinese)* 131644
speaker ident. using nonlin. dyn. features 129400
spectral peak-detect., point-box-dimens., fractal theory *(Chinese)* 106800
speech recogn. by fractals/iterated fn. systs. 118112
speech sigs., fractal prediction in waveform coding 118100
sq. microstrip fractal patch antenna, multi-band commun., FDTD anal. 83630
stat. MUX of self-similar sources 73810
suboptimal fractal coding using iter. transform. 73334
surface, electron field emission props. 102902
TCP over packet radio 84962
TCP single source behaviour, multifractal anal. 73901
TCP traffic, multiplicative multifractal model 130405
TCP traffic simulator and self-similar traffic simul. 130433
teletraffic model based on self-similar random proc. 107630
texture images, class. using multi-scale stat. estimators of fractal params. 129622
texture segmentation using fractal signature 94596
texture-based segmentation, multifractal charactn. 94542
textured image segmentation based on fractal/filtering 107218
time-series fractal anal. methods, DSP-based 129946
time-varying rough sea surface, EM scatt. considering distrib. of sea power spectrum *(Chinese)* 128755
unstable laser modes, edge waves and fractality 128354
user behavior based network traffic model, self-similarity anal. *(Chinese)* 95740
vertebral trabecular bone, CT/projection radiography images, texture comparison 110966
vertebral trabecular bone, texture, CT images, fractal anal. 132842
WAN, jitter-based delay-boundary prediction 130816
wave transm. through, 1D fractal syst. 93159
wavelet coding with fractals for image seqs. 84507
Web client traffic, empirical distribs., synthetic traffic generation 74212
wideband conformal antenna with fractal geom. 72505
wireless data network perform., self-similar traffic impact 131283
wireless mobile networks, hyper-Erlang distrib. model appl. 85251
writer ident. using text line based features 129928
Au/Ge bilayer films, fractal form., thickness ratio/annealing depend. 91858
Co/Cu multilayers, roughness, high-angle X-ray diffr./reflectivity 116289
$CrSi_2$ layers on Si(111), growth upon high current pulsed Cr ion implant. 101450
Li-ion secondary cells, composite electrode diffusion modelling 89116

ctional-horsepower motors
BLDCM, bonded soft mag. material 99682
drives, UPS 89351
single phase line start PMSM, equiv. cct. 112480

ctional programming *see nonlinear programming*

ctionation *see distillation*

ctography
thin bimaterial ceramic systs., thermally induced fracture behaviour 125079

cture
see also brittle fracture; cracks; creep fracture; ductile-brittle transition; ductile fracture; fatigue; fracture toughness; stress corrosion cracking
300 mm CZ Si single crysts., growth, necks stress anal. 68117
BGA solder joint voiding, PCB surface pad finish/contamination impact 113712
bone fracture callus dens. eval., X-ray radiography & quantitat. CT 76515
CMOS MEMS, mech. effects of fatigue and charge 104166
compact muon solenoid conductor, effect of surface treatment on adhesion at 300 K and 4.2 K 82003
CSP laser rework technol., energy source perform./proc. specific package reliab. 113605
diamond film, CVD, residual stress effect, micromech. anal. 124886
femur, 3D meas. using clinical US, image-guided intramedullary nail fixation 87481
fiber optic cantilever beams, long-term reliab., sens. appls. 104638
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip-chip assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
HDI PCB organic laminate substrs., microstructural anal. 113590
movement monitoring syst., healing assess. aid 110529
multichip mechatronic power packages, mold delamination and die fracture anal. 113644
nonlin. anal./optimal design of reinforced concrete struct., computational platform 124753
plane anisotropic elastic media with crack surface tractions, FE calc. of contour integrals 114158
PWB surface finish proc. develop. for enhanced solder joint strength/reliab. 69316
solder joints, nondestructive intermetallics detect., high-energy XRD 113690
tension stiffening model with increasing damage for reinforced concrete 124755
thin films, stresses and mech. props., conf., Boston MA, USA (Nov.-Dec. 1999) 113277
thin-film interconnect struct., interfacial adhesion, temp. and moisture effects 126428
wires fragmentation due to pulsed currents 91442

fracture continued
woven composite laminates, delamination detect. with embedded opt. fibers 101617
Ag metallization on co-fired MLC substr., strength of solder interface 67535
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, mech./transport props. 70715
BiSrCaCuO 2223 HTSC tapes, powder-in-tube processed, mech. props. 125091
CdTe:O thin films, sputter deposition, characts., O content effect 79201
Cu/Sn-Bi solder interconnect, Bi interfacial segreg. 79420
GaAs/XP (X=Ga,In), wafer bonding, at. H surface cleaning 126389
GaN MOCVD on Si(111), stress control and appl. to HFET 68288
$LiMO_3$ (M=Ta,Nb), piezoelec. single cryst. chip resonator, high input power, fracture 104429
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
PZT, fractured ferroelec. ceramics, ferroelastic domain switching, XRD anal. 104361
Pb-Sn solder, fatigue crack growth, stress ratio 114420
Si, oxygen plasma wafer bonding, Weibull fracture probab. method 91931
Si polycryst. microcantilever beams, mech. props., specimen size effect 81559
Si wafer strength/surface morph. correl. 100593
Si wafer/glass substr., Sn-Ag(Pb) fluxless soldering 67542
SiO_2 on 6H-SiC, ion beam induced charge gate rupture 115805
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702
Sn-Sb/Ni/Ag-Pd, surface mount solder joint, microstruct., shear strength *(Chinese)* 100606

fracture strength *see fracture toughness*

fracture strength testing *see fracture toughness testing*

fracture toughness
see also notch strength
ceramics ceramics low temp. bonding, sol-gel proc., SEM, TEM 125080
condition-depend. NDT for reactor component safety 77707
a-diamond thin films, tensile prop., MEMS, sens. 127097
epoxy/phenolic resin, no-flow underfill, non-anhydride curing syst. 113730
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
interlayer-toughened fiber-reinforced composites, interlaminar fracture testing anal. 79494
MEMS device mech. props., on-chip testing 81544
micromachined Si comb device, microcrack initiation, fracture toughness 104156
multilayered syst.-on-package, design against interfacial delamination 113614
no-flow underfill, toughening agents, effect on fillet cracking 113485
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
nuc. RPV integrity, conf., Rockville, MD, USA (Jul.2000) 89513
peripheral array package, interfacial delamination propag., 2D/3D num. models 78634
polymethylsilsesquioxanes, mech. props., fracture toughness 125099
polysilicon, micromachined MEMS structs., tensile strength, scale depend. 116111
polysilicon microfabricated thin films, mech. props./reliab., size effect 81571
polysilicon thin films, microfabricated, size effect on mech. props. 104183
PZT-based piezoelec. composite laminates, bending, elec. field effects 104374
SOI, wafer direct bonding, lin. annealing method 115454
steel, Cr-Mo-V, high temp. exposure effect, nonlin. acoustic NDE 114493
steel, Ni-Mo-Cr, microstruct., fracture toughness, Barkhausen noise *(Korean)* 114551
Cu/SiLK interconnect, flip-chip package, interfacial adhesion 115678
LaB_3O_6 single cryst., morphol., thin-layer radiation detectors 132354
$MnZnFe_2O_4$ ferrite cores, mag. props., mech. strength 127335
a-Ni-P microsized specimens, fracture behavior, cracks, fatigue precrack 101466
Pb/Sn/Te, thermoelec. material joining, liq. phase diffusion bonding, toughness 103163
$Pb(Zr,Ti)O_3$/Pt piezoelec. ceramic/metal composites, elec./mech. props. 127159
Si fibre MEMS microinstrument, piezoresist. meas. 104203
Si polycrystalline MEMS devices, W coating, crit. features testing, tension strength, fracture 104158
Si ultra-thin ICs, dicing by thinning for improved mech. reliab. 70231
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealing *(Korean)* 114436
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
TiN films deposited on Pa-n, crack form. due to large thermal mismatch 114252

fracture toughness testing
see also notch testing
aluminous porcelain insulators, high-strength, microstructural reinforcement 77449
instrumented Charpy impact testing, direct displacement meas. 90596
interlayer-toughened fiber-reinforced composites, interlaminar fracture testing anal. 79494
nuc. RPV aging eval. by nondestructive techs. 77714
opt. MEMS device designs, fracture tests, using FIB machine 104151
peripheral array package, delamination growth prediction, interfacial fracture toughness test 78635
polysilicon MEMS, Young's modulus and fracture strength, tensile tests 116049
short glass fiber-reinforced polycarbonate notched plates, luminance measuring tech. *(Japanese)* 79476
smart MEMS material crack diagnosis, electrostatic comb test device 125158
steel, Cr-Mo-V, high temp. exposure effect, nonlin. acoustic NDE 114493
two-point bending ribbon opt. cable test results, Weibull probab. distrib. 125155
GaAs large-size wafers, 150 mm, mass prod. at Freiberger 126926
a-Ni-P microsized specimens, fracture behavior, cracks, fatigue precrack 101466
Si, bend strength, fracture toughness, MEMS appl. 104168
Si:P, bend strength, fracture toughness, MEMS appl. 104168

frame error rate *see error statistics*

frame relay
ATM switch, cell segmentation and reassembly, functional realization *(Chinese)* 119836
ATM/frame relay interworking, traffic param. mapping and control *(Chinese)* 107652
bandwidth allocation, simple shaping scheme 73798
Croatian ATM based public multiservice network 108003
enterprise WAN, frame relay 108192

frame relay continued
voice-over-Internet protocol, packet commun., digitised voice sigs. *(Italian)* 130602
VPN using frame relay 107795
WAN packet capture and anal. 108119
Francis turbines *see hydraulic turbines*
Franck-Condon factors
ZnSeTe, MBE, deep emission electron-phonon coupling 103017
Fraunhofer lines *see solar spectra*
Fredholm integral equations
2D Fredholm integral eqn. of second kind, spline method 79110
2D nonlin. Fredholm integral eqns., extrapolation of Nystrom soln. 114148
3D induction heating EM/thermal fields anal. *(English)* 124101
3D weak-form CG-FFT/BCG-FFT methods for vol. integral eqns. 83260
bilamellar dielec. NDE based on elec. field-prop. rels. 101558
deep-lying flaw detect., SQUID pulsed eddy-current probe model 101630
dipole antenna on partially screened layered sphere, radiation 117801
distorted image correction, Tikhonov regularisation method *(Russian)* 129814
ECG/MCG spatiotemporal anal., current dens. estim., forward model 110619
elec. equipt. ccts., AC dens. distrib. 77374
EM, anal. regularization method 72254
EM scatt. problems soln. by improved spectral iter. tech. 93999
EM wave scatt. by penetrable polygonal cylinder 128748
first kind, cubic spline max. entropy interpolation with possibly noisy data 100998
generalized radar/radiometry imaging problems 86152
ill-posed 2D Fredholm integral eqn. solvability 90170
integro-DE with Cauchy kernel 114112
kernel inclusions for Fredholm integral eqns. 68054
layered biological media, electrode array excitation model 133078
method of anal. regularization, num. efficiency 94009
rect. dielec. waveguides directional coupler characts. 83496
return stroke current ident., inverse procedure 72169
stochastic microwave imaging in NDT, GA-based iter. procedure 101577
uniformly loaded rect. plate bending anal. with variable width corner supports 79143
free electron lasers
Advanced Photon Research program at JAERI 105369
APS FEL project, insertion device, phasing tech. 105377
Beijing FEL, remagnetizing utilization of radiation damaged wiggler *(Chinese)* 128341
Beijing Free Electron Laser, saturation output, RF phase ripple, pulse form net *(Chinese)* 105052
coaxial FEL with Bragg mirror resonators, spatially coherent radiation 117306
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
coupled-groove-waveguide periodic struct. 117312
cpd. refr. lenses, high-quality imaging optics for X-ray FEL 82715
CW-mode photoinjector, freq.-converted driving laser *(Chinese)* 82750
DC-RF supercond. cavity Pierce gun, design anal. *(Chinese)* 121319
DESY XUV FEL beamline, spherical grating monochromator 105380
DESY XUV FEL seeding beamline, wavefront propag. 121338
Duke 1 GeV storage ring, NIST undulator, mag. field charactn./re-tuning/first operation 110177
DUV FEL facility, S-band photocathode RF gun, design anal. *(Chinese)* 110242
ELETTRA UV/VUV storage ring FEL, first operation and future prospects 121303
eukaryotic cell imaging by X-ray FELs 87727
EUV SASE FEL, design, appls., review 82695
FEL, num. simul., nonlin. coupled wave eqns. 117304
FEL beams, distributed real time control 108298
FEL nonlin. harmonic generation, wiggler imperfections 71859
field emitter, electron beam induced deposition 125957
helical-wiggler FEL, harmonic oscillator approach 71860
HIγS, FEL generated gamma-ray beam 132280
high-av.-power FEL for materials proc. 128594
high-gain harmonic-generation FEL, charactn. at saturation 105370
hybrid undulator design 128339
Jefferson Lab FELs, video distrib. and analog monitoring syst. 87260
large core MMF optic sens. for high power microwave powered UV light source 86598
LCLS, X-ray FEL 105379
LCLS X-ray FEL, Michelson interferometer 105381
Linac Coherent Light Source, radiation props., X-ray optics 82696
maser, dispersion eqn. 105051
materials sci., biophys. sci., materials proc., med. appls. 93680
microwave inverse FEL expt., accel. results 110129
Neptune Lab inverse FEL accel., electron beam focusing 110126
NSRL opt. klystron harmonic generation anal. *(Chinese)* 128485
opt. cavity 5D precise rem.-control adjuster *(Chinese)* 128342
opt.-klystron FEL with undulators, dyn. behaviour 105375
planar wiggler and ion-channel guiding, electron trajectories 105372
pseudospark electron beam source for FEL, impedance match *(Chinese)* 71861
Raman FEL, electrostatic wiggler and annular electron beam 105374
reflective optics, metrology instrumentation 82700
RF linac FEL, subPoisson intens. fluct. 105371
RF-linac FEL, efficiency optimiz./reduced energy spread by inverse tapering 93679
second harmonic FEL oscill. 105376
second harmonic waveguide FEL, electron bunching at large wiggler field 117303
self-ASE X-ray FEL laser saturation 82701
semicond. sci. appl. review *(Japanese)* 83044
single-pass high-gain FEL, electron beam diagnostics 87089
SLAC linac coherent light source, short-pulse limits 105402
soft X-ray single pass FEL lasers 117309
STELLA program, laser-driven prebuncher staged with laser accelerator 110121
storage ring-FEL, sawtooth instabil. suppression 128340
storage-ring FEL, local energy exchange, theory 117305
sustained saturation in FEL oscillator 105373
TESLA X-FEL undulators, photon beamlines 82697
two laser-driven relativistic electron accelerators, first staging 75989
VUV and X-ray FEL 117307
VUV coherent source storage ring based FELs in Europe 117310
VUV FEL at DESY, photon diagnostics, first lasing around 100 nm 117308
X-ray FEL, appls. 105378
X-ray FEL, model anal. 128338
X-ray FEL, specs., generated pulse charact. 82699
X-ray FEL light source, prospects and appls. 93678
X-ray FEL multi user facility at DESY, civ. engng. 82698
free electron lasers continued
X-ray FEL optics conf., San Diego, CA, USA, (July 2000) 78430
X-ray FELs, scientific goals and machine implications 105382
XUV synchrotron/laser based X-ray sources 117311
ITO film prep. by IR FEL 68242
$LiInS_2$, mid-IR SHG 2.75 to 6.0-μm, FELIX pump source 72020
free induction decay (optical) *see optical coherent transients*
free software *see public domain software*
freezing
see also refrigeration
ambient-proportional sens. trace heating control 134640
cloud water content & droplet diam., multiply scatt. lidar returns 98982
high-temp. fixed points in 1150°C to 2500°C range 120619
land mines detect. improvement by soil freezing 75832
num. emulation on simultaneous soil moisture and heat transfer under fr
ing/thawing conditions *(Chinese)* 76826
open multideck refrigerated food display cabinets, defrost control params. 78
power transm. line glaze ice loads prediction model *(Chinese)* 88458
tropos. clouds & precip. monitoring, dual-polaris. scanning lidar 98983
Al temp. std., freezing pt., Pt resist. thermometer calib. (ITS-90) 75354
Pt-C, eutectic points, metrology institute meas. 121251
Rh-C, eutectic points, metrology institute meas. 121251
Ru-C, eutectic points, metrology institute meas. 121251
Sn-Ag-Cu solder alloys, ternary eutectic comp. 114423
freight handling *see goods distribution*
Frenkel defects
bipolar transistors, neutron/ion effects 103780
p-/n-(6H-)SiC:Al(N), intrinsic defects, electron irrad., Si displacement thresh
Frenkel pairs 69797
Cu alloy interconnect, modeling and simul. 92107
Si:Au, high-energy ion-implanted, vacancy evol., Au labeling 81030
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91
W point field electron emitters, surface erosion, He ion bombard.-indu
125961
Frenkel-Poole effect *see Poole-Frenkel effect*
frequency agility
see also frequency hop communication; information theory
HFC network upstream transm., all digital packet DS-CDMA transceiver 74
IMPATT diode integrated act. microstrip antenna, large sig. anal. 72519
microstrip antenna, act., IMPATT integrated, theory 72482
patch antenna, varactor diode loading 72502
rect. microstrip antenna on ferrite substrs. 72521
small antenna, freq. agility 83535
Westerbork Synthesis Radio Telescope. Multi Frequency Front End pro
(English) 131717
$YBa_2Cu_3O_{7-\delta}/SrTiO_3$ heterostruct., tunable microwave filter 71122
frequency allocation
3D cellular networks 108667
air traffic mgt., optimum freq. resource satellite commun. 74900
bandwidth-limited energy-efficient wireless broadcasting/multicasting 1085
broadband NGSO satellite commun. systs., user equipt. antennas 96631
broadband wireless network, dense deployment techs. 85472
broadcast and new telecomms. networks, convergence 85701
Canadian federal government policy, MM-wave freq. allocation 75264
CDMA reverse link pole capacity formula generalization 131178
cellular commun., freq. reuse dist. reduction using TCM 96493
cellular mobile commun., radio channel assignment syst. *(Japanese)* 8572
cellular networks, constrained channel assignment, approx. algms. 85870
cellular radio one-hop/sym. FHMA perform. 74733
cellular radio planning, dyn./static methods 119977
COFDM systs., near optimal joint channel estim. and data detect. 74698
complex co-site constraints 75265
DCA in mobile commun. systs., computer simul. *(Slovenian)* 74836
DS-CDMA cellular two-tier systs., multi-channel access 108849
DS-CDMA voice/data systs. with limited channel elements, Erlang capacity a
74646
Earth stations, coord. area 85924
EDGE air-interface, capacity anal. 85631
EDGE syst., power control for wireless packet voice 74674
fixed channel assignment with no feasible assignment, GA *(Japanese)* 965
GSM radio network, hierarchical cellular struct. with inter-layer reuse, capa
increment 131175
HeliNet programme, high-altitude commun. platform 85942
HiperLAN/2, WLAN evol. 85227
interf.-oriented version of freq. assignment problem 131145
Internet wireless access, highly sectorized syst. 83701
intervehicle commun., oncoming vehicle interf. charact. 78233
littoral environ., groundwave propag. predictions (GRAPPLE) 83314
LMDS coding & modulation schemes, modem develop., channel anal. 7452
Mars in-situ commun., freq. bands selection for local links 131333
microcell/macrocell overlaying syst., call admission control 108807
microwave radio link interf. environ., antenna charact. 72442
MIMO interf.-limited cellular syst., attainable throughput 108657
MIMO interf.-limited cellular syst., simul. results 74752
MM-wave appls., book contrib. 80151
MM-wave fiber-wireless antenna BS, WDM opt. interface 131523
mobile commun. syst. freq. assignment by genetic algm. *(Japanese)* 9651
mobile phone systs., freq. assignment 108733
nonGEO systs., multiple GES, freq./time slots allocation algms. 74870
OFDM cellular systs. utilizing direct-spread slots, airframe extension 1312
online commun. in cellular networks 108693
opt. Internet, next-generation network archit. options 86001
opt. networks, packet addressing using RF carrier assignment 86009
plane cover multiple access for cellular syst. capacity maximization 13123
QoS provisioning for wireless networks distributed admission control, DCA
form. bounding 74729
radio link freq. assignment, guided GA 122752
RF-spectrum load estim. in territorial region 120503
satellite commun., intermodulation products reduction, generalized freq. assi
ment algm. 74871
Soft-Bar network-assisted resource allocation algm. 85874
space-borne compact ortho-mode-transducer for freq. reuse appls. 72699
syst. archit. for broadband fixed wireless capacity maximisation 85572
TDMA pers. commun. syst., carrier planning issues 131142
TV stations, optimal freq. assignment 120504
UMTS networks EMC problems with Russia fixed service radio relay sy
83412
UMTS third generation mobile radio, differences from GSM *(German)* 74

uency allocation continued
USA, recommended LMDS band plan 74613
USA LMR, FCC freq. reframing 85603
VDSL technol., spectral allocation, far-end-crosstalk 74473
Vienna Agreement '99, harmonised calc. method activities 86288
virtual cellular networks for non-uniformly distributed base stations 131139
WDM transport network, priority-based wavelength assignment algm. *(Chinese)* 120288
wideband TDMA networks, DCA, fixed cell assignment 120042
wireless multihop network, routing algm. 108963
wireless telecomm. systs., interf.-oriented version of freq. planning 108949
WLAN, spatial radio carrier reuse 108636
WRC-2000, results and prep. for conf. 85495
uency assignment *see frequency allocation*
uency changers *see frequency convertors*
uency chirp *see chirp modulation*
uency control
see also automatic frequency control
2-phase LIM MAGLEV transport syst., motion control, freq. control *(Japanese)* 89372
3-phase asynchronous motor drive, expanded functional capabilities 123936
3-phase grid-connected inverters interface for alternative energy sources 134233
back-to-back act. power flow AFC modelling 122843
Balkan interconnection, primary freq. control *(Serbian)* 122827
channel state inform. AC multimotor drive, space vector control 89344
Class D voltage switching reson. inverter electronic ballast 124075
competitive energy market, ancillary services, multi-criteria optim. 111753
decentralized load freq. control, robust H_∞ control 111920
decentralized power syst. load freq. control, LQR design 122879
diesel-elec. locomotive double-feed induction generator, state feedback control 113103
doubly fed machines, starting problems 112463
EV, sensorless IM drive, freq.-hybrid vector control 89375
fuzzy logic-based extended integral load freq. control scheme 111897
generation control perform. stds. *(Japanese)* 88343
generation mix var. effects on freq. regulation requirements 99444
Gotland HVDC Light project, trial/commercial operation 133589
hybrid power systs., emergency freq. control *(Chinese)* 88357
IM, adjustable speed syst. *(Chinese)* 133997
IM, fuzzy optimal volts/Hertz control method 123412
IM drive, hybrid fuzzy/PI two-stage controller 123863
IM drive, stator-flux-oriented vector control, space-vector PWM, neural nets 123932
IM drive fuzzy Volts/Hertz control scheme 100241
IM sensorless control by adjustable freq. controller 77865
interconnected power syst. freq. oscill. stabilis., SSSC appl. 99284
interconnected power syst. governing response modeling 111752
isolated power systs. dyn. behavior, batt. energy storage systs. impact 99270
isolated thermal power systs., wind power fluctS. impact 133888
Kii-channel HVDC link/Tachibana-bay unit, islanded syst. mode test 112008
lin. PMSM driven positioning syst., PWM inverter, robust hysteresis control 134428
load freq. control perform. assess. criteria anal. 88379
microstrip ring resonator filter, atten. pole freq. control 80183
MM-wave subcarrier freq. stabil. using laser heterodyne source and opt. delay line 109044
modulation driver, quasi-sinusoidal asymmetric current 79565
multi-area load freq. control using batt. energy storage 122865
multi-area power syst., decentralized sliding mode stabilizer design 122874
multi-area power syst. PI sliding mode load freq. control scheme *(Chinese)* 88339
multi-area power syst. robust decentralised freq. control *(Japanese)* 99274
PA-LOOK BALL dimmable compact fluoresc. lamp *(Japanese)* 124062
power syst. dyn. stabil. enhancement, doubly-fed adjustable speed machine 77220
power syst. load freq. control using noise-tolerable PID feedback 133555
power syst. stabil./control, doubly-fed rotary freq. converter modeling 77276
power systs. load-freq. control, smoothed switching struct. theory 122875
quartz cryst. wafer, ArF excimer laser ablation, oscillating freq. control *(Japanese)* 79612
quartz resonator time base & sens., environ. effects, review 104423
redox flow batt., appl. to load freq. control and power quality maint. 123272
run-of-river hydropower plant automatic generation control program *(Chinese)* 77770
self-excited slip-ring induction generators, voltage/freq. control 123414
semicond. laser in 21st century 117194
short-circuited asynchronous motor, freq.-control 123436
super-regenerative transceiver, low-power 1 GHz, time-shared PLL control 96374
sync. generator voltage/freq. fuzzy control using TMS320F240 DSP 123374
TW US motors, servo speed control using PWM 123531
two-area power syst. fuzzy gain-scheduled PI load-freq. control 122903
United Power Pool of Central Asia, freq. regulation, market aspects *(Russian)* 111728
wind-diesel power systs., fuzzy logic controllers 123257
Er-doped single-freq. fiber laser, external light injection, freq. control charact. 71677
He-Ne laser freq. stabilis. control syst., fast PLL 93725
Nb_3Sn μ-SMES concept feasibility 78188
equency convertors
see also frequency dividers; frequency multipliers; microwave frequency convertors; millimetre wave frequency convertors; mixers (circuits); optical frequency conversion; UHF frequency convertors
3-phase asynchronous single-machine freq. converters based on RA motors 123467
15 MW std. static converter for DB Energie *(German)* 78268
AC motor drive power converter, earth fault current/overcurrent protection *(Polish)* 99805
AC motor drives modelling for transients anal. appls. 134457
BAUM type std. converter for DB Energie *(German)* 78269
buck-boost AC-AC freq. converter 88976
CMOS SC bandpass filter, freq. up-translation, DDFS syst. 80048
compensated uniform transversal filters 102333
current transducers, modified operating principle 75510
DB Energie, modular std. converter, semi-portable design *(German)* 78267
DC-AC voltage converter cct., HF, network switching *(Russian)* 88952
DS/SS digital proc., multiplier-free zero-IF downconversion/decimation/multiplexed despreading 74897
FDM software radio, multichannel digital up converter 74542

frequency convertors continued
fuel-camion redeployer, freq. converter control, coal-fired power plant *(Chinese)* 77754
HF SPWM VVVF syst. for AC machine speed control *(Chinese)* 77809
high power IGBT module freq. converter, transformer-type electron accelerators 99748
IGBT-based freq. converters for IM drives 112663
IM drive design, freq. converter filter characts. optim. 113081
IM drives, PWM freq. converter, windings, pulsed voltage surges 123937
IM vector control, space-vector modulation tandem inverter 123428
induction heating, HF transformer, design, testing 113146
induction heating freq. convertors, retrospective, develop. trends *(German)* 112617
inductive heating freq. converter, insulation voltage stresses anal. *(Polish)* 99807
inverter cct., HF sect., line switching 123576
LV elec. motors, research, design, manufacture at NIPTIEM, Russia 123464
Motorola MC13760 multi-mode transceiver for mobile telephones, digital interfaces *(German)* 131250
MTT-S International Microwave Symposium, Phoenix, AZ, USA (2001) 78477
multi-phase filterless freq. converters for controllable elec. drives 112661
power converters, digital control strategy, IM drive 113064
power syst. distorted sigs. freq. anal. using Prony method 77370
power syst. stabil./control, doubly-fed rotary freq. converter modeling 77276
PWM inverter drives, AC motor transients, syst. params. interact. 123861
PWM-controlled freq. converters, transformer selection/design 112660
RF upconverter, quadrature modulator, baseband proc. 125637
software radio terminals, digital downconversion 118913
speed modulation, alternation, freq. convertors, indust. appls. *(Chinese)* 99752
three-phase static PWM freq. converter struct. 123652
up/down conversion by sampling *(English)* 73585
Al electrolytic capacitors, low inductance, freq. converter design 69280
frequency convertors, optical *see optical frequency conversion*
frequency dividers
2/3 divider cell using phase switching tech., prescaler appl. 90857
CMOS clock dividers, VHF, broadband commun. appls. 102319
CMOS prog. freq. divider for DRRS std., 1.4 GHz/2.7 V 68883
coupled PLL, sync. and pattern form. selectivity 125267
dual-phase dyn. pseudo-NMOS SOI and bulk CMOS freq. dividers 68737
flexible freq. source combining cryst. oscillator, PLL and freq. divider *(German)* 114649
fractional PLL, division factor seq. props. 125272
HF high-Q continuous-time filters, automatic tuning scheme 68913
high speed fully depleted CMOS/SOI 2000 gate SOG array *(Chinese)* 114723
incrementer/decrementer cct., high-speed CMOS, multiple look-ahead struct. 102023
microwave freq. multipliers and dividers, testing techs. 91129
PHEMT MMIC dual-freq. push-push VCO for wideband wireless appls. 125761
super high speed polysilicon emitter IC technol. *(Chinese)* 104085
translinear cct., sinusoidal freq. division by integer no. 114905
AlInAs/InGaAs HBT IC, low-power static freq. divider 127015
GaAs HEMT regenerative MMIC freq. dividers for 28 and 14 GHz 125754
InAlAs/InGaAs HBT ECL static freq. divider, 75 GHz 68769
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
InP-based RTD/HEMT microwave freq. divider IC, high-speed operation 115006
Nb Josephson IC, RSFQ cell retargeting, submicron fab. 70830
Si bipolar technol., dual-modulus prescalers 125635
Si bipolar technol., dual-modulus prescalers 102448
SiGe HBT 40 Gb/s 4:1 MUX and 1:4 DEMUX IC modules, SONET/SDH 109178
SiGe self-aligned SEG HBT static freq. divider and MUX/DEMUX, fibre links 79835
frequency division multiple access
3G mobile radio, TD-SCDMA benefits and implement. 96609
3G wireless commun., virtual connection tree over multiple access techs. 74656
asymmetric wireless commun., OFDMA/TDD packet transm. 119888
column generation models for channel assignment in cellular networks 119859
dyn. carrier allocation strategies for mobile cellular networks 119934
freq. assignment problem, interf.-oriented version 131145
freq.-selective multiple access channels with adaptive QAM, resource allocation 73865
general model for multiple access commun. 95831
generalized FH OFDMA through unknown freq.-selective multipath channels 85479
hybrid MAC protocols for multimedia wireless networks, simul. models 95938
mammalian cells, RF exposure, CDMA, FDMA, DNA damage 122433
microcells, DCA schemes for differentiated QoS 131269
multi-carrier CDM, amplit. distribs. for Hadamard/Fourier spreading 74701
multiuser transmit optim. for broadcast channels 84901
nonGEO systs., multiple GES, freq./time slots allocation algms. 74870
OFDM, peak-to-av. power reduction, optimized pilot syms. 95835
OFDMA, subcarrier allocation and power control 106036
satellite loading tools using spreadsheets 109022
smart antenna technol. for wireless commun. 117843
space-scatt. mobile radio networks, radio sigs. dyn. range 85614
UTRA-TDD and FDD syst., interf. 96563
WDMA multireflection mirror opt. filter design 109063
WDMA/TDMA switchless opt. network, differential delay compensation 96760
wireless data networks, multiple channel globally constrained power control 131053
wireless environ., prefetching protocol for continuous media streaming 130367
wireless networks, distributed channel probing scheme 119898
frequency division multiplexing
see also OFDM modulation; wavelength division multiplexing
3G mobile radio, high-speed downlink access, evol. to 4G systs. 85699
ADSL, FDM, echo cancellation, multi-channel modem fn. *(Italian)* 108469
all-opt. clock repetition-freq. division for OTDM network 109208
CNR modeling under bandwidth limitation on systs. using opt. super wideband FM tech. *(Japanese)* 74476
competitive anal. of on-line randomized call control in cellular networks 85616
composite-bonded concrete strain meas., FBG sens. 86571
downlink space-time proc. 119046
DS-CDMA cellular forward link, transmitting array antenna beamforming 108887
FDD DS-CDMA systs., downlink inter-cell interf. cancellation 108957
FDD UMTS bands, wideband propag. meas. 83277
FDD wireless systs., uplink predictive closed-loop power control 85712
fiber-optic interferometric hydrophone array using FDM *(Chinese)* 86249

frequency division multiplexing continued
fixed broadband wireless networks, QoS-sensitive SDTM-TDMA access 119912
freq.-invariant adaptive receiving/transmitting null beamforming 108871
freq.-selective fading channels, space-time block-coded multiple access 85719
HPA nonlin. effects on freq. multiplexed OFDM sigs. 119922
Internet periodic broadcast of dyn. data, time division is better than freq. division 130827
low-power digital filtering, adaptive error-cancellation, algorithmic noise-tolerance 102409
MC/DS-CDMA in cellular systs., estim. of spectral efficiency 85842
multichannel biotelemetry syst., filter bank use 88011
multiservice broadband HFC networks, DWDM opt. technols. 108113
online commun. in cellular networks 108693
pool fires, multiple species meas., tunable LD spectrosc., FDM use 111479
prototype const.-efficiency amps. 120517
software radio, multichannel digital up converter 74542
supercond. bolometer, AC voltage-biased, SQUID MUX 71128
ultra-dense DWDM syst., GHz opt. interleaver, Gbps FDM channels 109172
UMTS satellite systs., CDMA and PRMA anal. models for voice users 109032
wavelet packet modulation, transm. method in pulse-wise noise *(Japanese)* 106054
Er-doped fibre amp. in-line cascade, rem. in-service supervision *(Chinese)* 75051

frequency-domain analysis
see also frequency-domain synthesis; time-frequency analysis
1D large apertures, narrow-waisted Gaussian beam discretization for short-pulse radiation 117648
1D photonic bandgap resonator antenna 83650
2D photonic crysts., wavelength DEMUX and opt. filters, freq. anal. 82183
3D objs., fast RCS calc. over freq. band *(Chinese)* 131648
3D ray-based GPR simul. code 77085
3D surface texture rot. invariant class. by photom. stereo 129834
3D TLM method for modelling of wire lossy termination 72390
4 kb/s hybrid harmonic/waveform speech coding 106366
ABC in freq.-domain TLM method, planar ccts. appl. 105834
acoustic echo cancellation, freq.-selective step-size control 119076
act. microwave antenna arrays, small sig. and large sig. models 105928
act. noise control syst. without secondary path model 119075
adaptive clutter suppression scheme, freq. domain proc. 75082
adaptive MCM for wireless systs. 106066
adaptive PSS, fuzzy logic tech., freq. domain anal. 77223
ADC, dyn. testing, freq. domain design 102265
ADC dyn. testing, dual-tone sig. based 2D histogram 114840
ADC modelling & testing, state-of-the-art review 114839
ADC testing with IEEE Std 1241-2000 114838
airborne radar, adaptive MTI scheme in freq. domain 86178
airborne surveillance radar detect., 2D freq. domain least sq. algm. 86182
airborne surveillance radar detect., 2D least sq. algm. 84799
aircraft gas turbine, nonlin. modelling using NARMAX struct. 122536
alg. channel decomp. MUX in space-time 107660
antiarrhythmic class III drug therapy, sig.-av. electrocardiograph 76241
arc furnace harmonics/interharmonics/unbalance, freq. domain anal. 134649
atrial fibrillation organisation quantification, defibrillation efficacy increase 110610
audio sigs. scaling using freq. domain techs. 106356
auditory steady-state responses detect., phase appl. 121942
band-limited digital transm. systs., timing jitter anal. 85127
bandlimited interpolation and extrapolation, synthetic view 129956
blind inverse gamma correction 118321
blind MIMO syst. ident. based on cross-polyspectra 118809
blind source separation, adaptive short-time freq. domain algm. 107572
broadband beamforming, freq. domain adaptive filter 107492
Brokaw bandgap voltage ref., freq. anal. of power supply rejection 79562
BSS for fault detect. and machine monitoring using time or freq. domain approach 118821
building occupants, robot-mounted through-wall radar 77039
CDMA techs. for embedding data in digital images 95066
cerebral embolus ident. using rule-based ES 122016
CFAR tech. and freq.-domain partially adaptive array algm. 118899
clinical mag. reson. spectrosc., freq. domain methods, review 98449
combined directional/faulted phase selector element using incremental quantities 133788
combline filter, CAD and optim., FD-FD GSM algm. 102512
converter-fed AC motor drives modelling for transients anal. appls. 134457
convolutive mixtures separation using HOS 84707
convolved non-stationary sig. separation, adaptive non-causal FIR filters 118980
cycle-to-cycle period jitter meas. of HF clock sigs. 102312
DC power supply decoupling, capacitor charact. impact, SPICE 99737
delayless freq. domain acoustic echo cancellation 84741
diabetic feet, plantar ulcer detect., walking foot press. images 87334
dielec. loaded waveguides, 2D long transm. line-freq. domain treatment 102504
dielec. mixtures, freq. depend. dielec. props., FEM 70378
dielec. waveguide, Krylov subspace algm. 94083
dispersive media, pulsed beam propag. 72290
distrib. network, line-to-ground fault location, freq. domain anal. *(Chinese)* 133639
double channel lossy dielec. waveguide, opt. control 69012
dual-band antennas for wireless handsets, freq.-domain finite-difference anal. 83578
dyn. sig. analyzers, overview 131849
E³-EXPERT ES for EMI rejection requirements prediction 83369
echo canceler design, freq. domain extended correl. LMS 73015
echo canceler double-talk detector, normalized cross-correl. vector 107615
echocardiographic image seq. filtering in freq. domain 132609
ectopic beats, heart rate variability anal., editing methods 76238
edge detect. by multiresolution discrete symmetric cosine transform 95458
EEG, steady-state responses, weighted averaging 76291
EEG changes during word/fig. categorisation 121910
EGG, basic study for meas., electrode posns., mental stress appl. 76307
EM field simul. tool with multiple time domain engines 93955
EM response, optimal interpolation/extrapolation algm. 128654
EMC anal. of power electronic converter, state variable approach 68581
EMI mine sens., Bayesian optimal class. 73122
fast algms. shifted in time and freq. domains of cosine/sine transforms 101141
fast fractal image coding in freq. domain 95132
FBG-based meas. syst. in struct. health monitoring 86780
FEM freq. domain EM radiation problems, multipoint Galerkin asymptotic waveform eval. for model order reduction 128746
finite difference freq. domain anal. of whispering gallery modes 70480

frequency-domain analysis continued
FIR least sq. filter design using piecewise polynomial approxs. 130069
fluoresc. freq.-domain photon migration, 3D unconstrained/constrained in reconstruction 76406
foot press. images anal., plantar ulcers detect., diabetic neuropathy 12189
Fourier domain watermarking generalization to space/spatial-freq. domain 9
fractional FT based target no. detect. 75190
fractional sample rate conversion, min. group delay block proc. 80106
GEM-3 multifreq. EM induction data, UXO discrim. capability 88228
geometric-invariant robust watermarking through freq. domain constell matching 95119
georadar, slot and dipole antennas 86170
gigabit chip photodiodes, freq. response 116943
ground-penetrating radar antenna feed models for response computa *(Korean)* 120451
head-related transfer fns., spatial sound synthesis 83991
hearing aid virtual sens. arrays, robust phase shift estim. in noise 122347
heart ventricular fibrillation recogn. by ECG anal. 98167
HF ground wave radar, wideband/narrow-band compensation methods *(Chin* 86179
HF inverters, EMC perform. prediction 88838
HF transformer modelling, refl. coeff. tech. & S matrix 91438
high order giga-bit rate PLL, discrete z-domain anal. 79628
high order modes in resonators with cylindrical symm., algm. for dete 125671
high speed IM drive with harmonics, inverter 123882
high-speed coupled interconnections, multiconductor transm. lines, reduced-o models 81420
high-speed interconnects, anal. using multipoint Pade approx. 90642
histogram-based probab. multihypothesis tracking, intens.-modulated sens. 130134
HTSC spiral coils, MRI 71049
Hubei elec. power syst. LF oscill. anal. *(Chinese)* 122885
hybrid DS-FH-SS syst., transform domain interf. suppression *(Chinese)* 130
IM, star connection, neutral point pot., 3D-2D FEM 134012
image coder enhancement using spatial noise shaping 107063
image sharpening/softening using freq. domain filters 106435
images nonlin. combined spatial-freq. domain filtering 118657
images with pulse interf., nonlin. filtering 106679
induction generator control syst. instabil. anal. 134561
intell. US phased array syst. for steel NDT, optimised design 114532
inverted trapezoidal pulse antenna improvements 94134
irregular shaped power distrib. planes, transm. matrix modelling method 89
knee elec. fields due to knee-thigh electrode pair 132999
Laguerre models, optimal pole conditions satisfying interpolation constra 129972
landmine detect. by pulse inductive eddy current meas., high sensitivity 129
large nonlin. microwave ccts., sig. and noise anal., harmonic-bal. techs. 102
laryngeal pathologies detect., acoustic anal. of speech, ANN 87500
laterally moving microstruct., gas-rarefaction effects, compact damping mo 81577
limit cycle, bifurcation anal., Floquet multipliers 101706
lin. syst. noise effect reduction, coherence fn. in deconvolution 119009
long antenna, photonic cryst. substr., radiation pattern 83499
LSI cct., multi-conductor transm. line, steady-state anal. 92455
lumped winding model, transformer models for cct. simul. 77911
LVDT posn. sens. spectral sig. proc. *(Italian)* 120693
max. entropy image restoration revisited 84292
MC-CDMA syst. with Rayleigh fading multipath channels 108852
mesos.-stratos.-tropos. radar echoes interp. 133318
microelectronic component SAM inspection, freq. domain anal. 124393
microwave Class-E/Class-C/Class-F power amps., finite no. of harmon 102638
MIMO FIR channels, freq. domain space time coding 106139
MIMO freq. domain blind syst. ident. based on second-/HOS 95651
mobile radio multipath time delay estim., HOS method 108904
modified freq. domain pitch detect. algm. *(Chinese)* 94409
MOSFET, freq.-domain anal., nonquasi-static effects 81293
MPEG-2 coded video, blockiness, freq. domain meas. 106860
MT data, wavelet filtering 122560
multi-appl. FFT analyser, DSP archit., real-time behaviour 86408
multichannel sound reprod. syst. using min.-norm-soln. in freq. domain *(Jap nese)* 86351
multirate Σ-Δ modulators, lin. anal., polyphase decomp. 79988
neonatal heart rate time series, freq. domain methods 121897
neural net-based crack param., wavelet preproc. MFL sig. 101595
noise robust pitch extraction based on auto-correl. anal. 84066
nonlin. device capacitance, freq. domain meas. 80290
nonlin. device model, vectorial large-sig. meas. 70005
nonlin. image operators, HOS, freq. component AND-like combinations 1300
nonlin. microwave cct. anal., evol. computation 80242
nonlin. microwave components, freq. domain meas. & modelling tech. 8692
nonlin. steady-state solns., freq. domain computations 95649
notch periodogram algm. in freq. domain 107574
obj. shape recogn., refl. US pulse waveform inform. *(Japanese)* 84651
OFDM mobile systs., receive diversity 96434
OFDM multi-user broadband mobile channel, decision-directed tracking 970
OFDM receivers, freq. domain equalization of IQ imbalance 119177
on-chip interconnects, large sig. anal. 69960
opt. fiber Bragg gratings, dispersion, opt. freq. domain charactn. 127634
oscillator time- and freq.-domain measures, cct.-level params. 68633
partitioned freq.-domain block LMS algm. 107519
pass. solar cell test thermal model validation 123800
PBGA and QFN package bandwidths, high-speed broadband products 11372
PCB, transient anal., 3D freq. domain integral eqn. 125867
PCB decoupling capacitors, optimal placement method 69301
PD type ident. from AE freq. spectra 104402
periodically switched nonlin. ccts., distortion anal., time-varying Volterra seri 79522
perspective view registration, new method 94703
perturbed arrays, efficient quadratic detect. via FT techs. 84775
PLLs, phase noise, SSCR vs. cycle-to-cycle jitter rels. 68652
power syst. transient induced radiation anal. for substation plant condition mon toring 78079
power transformer fault diagnosis, wavelet transform and neural net 77941
power-law all-purpose plug-in power-law detectors for transient sigs. 130165
prestack migration, shot records phase encoding 122558
pulse-excited thin wire monopole radiation 94133
radar target recogn., least sq. estim. 120429
radio channels, params. meas. using power meas. 128771

uency-domain analysis continued
egularized spectral multipole BEM for plane elasticity 68089
eson. free power network design using extended adaptive voltage positioning methodology 90744
esonators, freq. domain anal. with finite integrat. tech. 83492
RF-LGA, LGA, laminate based CSP for 10 Gbit/s appls. 100590
RMS delay spread estim. from freq.-domain level crossing rate 95738
ock sole fish recogn., act. contour algm. 95518
ot. machine fault diagnosis, vibr. anal., DSP-based FFT-analyser 112515
SAW convolver, semicond. coupled, multi-strip electrodes, simul. 92738
scalable video coding, optimal estim. for error concealment 106993
scatt. from obj. above half space, four-path model 105705
sea surface, multi-freq. polariz. backscatt. 72322
second order syst. nonlin. meas., 2D adaptive algm. 107561
second-order LMS-based optim. wireless channel tracking, freq. domain anal. 95660
SFCW radar, stratified dielec. medium, microwave imaging 86916
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
shipborne radar sig. to clutter ratio improvement *(Japanese)* 86176
sig. crest factor minimisation, freq. domain method 118833
sig. integrity in µP motherboards and memory 131836
sig. proc., nonparametric spectrum peak discrim. 129969
sig. proc., time series anal., aliasing benefits 119006
single carrier commun., training seq. vs. cyclic prefix 95808
single phase unity PF rectifier, dyn. suscept., input impedance eval. 68569
single-phase distrib. transformers, stray impedance calc. *(Spanish)* 134129
slow freq.-selective fading channel, MLE 73753
small vessel blood flow imaging, HF US, time & freq. domain anal. 110741
Sparse-BEFAP, fast affine projection avoiding explicit regularisation 119078
SPICE simul., freq. warping/chaotic behaviour generation 90630
stabilizable systs., Kalman-Yakubovich-Popov lemma 90623
step-size control in nonstationary environ. 107504
stepped freq. SAR, imaging of objs. embedded in lossy half-space 75221
strong coupled multi-harmonic FEM EM device simul. package 83150
subsurface digital multifreq. EM cond. imaging syst. 84166
subsurface discrim. using EM induction sens., eigenvalue distrib. 88227
supercapacitor dyn. behavior modelling using impedance spectrosc. 134336
switched current ccts., clock feed-through and charge injection 114596
TE transient scatt. from cylinder above infinite periodic surface, decomp. method 72312
telecomm. buck-type power converter load, input dyn. modelling 108454
telecomm. controlled rectifier, periodic/chaotic responses anal. 108452
terrestrial broadcasting, channel estim. in OFDM systs. 97048
time integrat. algms., freq. domain anal. 101061
time-varying sig. detect. and ident., adaptive transform. 119086
total harmonic distortion anal. simul. 77364
transient based protection, wavelet appl. 99399
transm. line, external noise, stat. piecewise-lin. model 128817
transm. line R and L params., freq. domain anal. 112090
two-wire transm. line, dielec. half-space, transient response 83456
UHF Class-E/Class-C/Class-F power amps., finite no. of harmonics 102638
ultra-wide band orthogonal digital sig. generator 73580
US 3D imaging from small cylindrical aperture 110755
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
voice hoarseness measure, time and freq. domain anal. 132529
voluntary contractions, upper/lower extremities, single motor units synchronisation 110576
waveguides, freq. domain anal. with finite integrat. tech. 83492
wavelet image coding with zero-tree of wavelet coeffs. 129762
WDM DEMUX/opt. filters using finite 2D photonic crysts., freq. domain anal. 86052
wideband services on copper cables, EM radiation calc. 85455
xDSL systs., crosstalk ident. 108474
Ho_2O_3 films, dielec. props., MIM struct. obs. 92582
$LiNbO_3$ Mach-Zehnder external modulators in microwave opt. systs., modeling 104808
a-SiO_2 thin films, increased dielec. permitt. 92599
Ti:sapphire pass. mode-locked laser, timing jitter meas. and control *(Chinese)* 128207
$YBa_2Cu_3O_y$ HTSC, surface impedance, power dependencies, rf field 70658

quency-domain synthesis
see also frequency-domain analysis
2.4 and 1.2 kbit/s speech coder with noise pre-proc. 118099
convolutive blind sig. separation based on second order stats. using simplified mixing model 129958
FIR canonic signed digit Chebyshev filter design 68934
FIR canonic signed digit filter design 107542
image coder enhancement using spatial noise shaping 107063
indust. systs., optimal-tuning PID control schemes 133873
mixed domain optimal filter for moving obj. extraction 106674
PID control, filtered, optimum multiple integrat. tuning 107507
placement watermarking of std.-cell designs, spatial domain and spectral domain 68732
POCS-based image reconstruction from irregularly-spaced samples 95183
reactance network synthesis having step response described by sinusoid with given envelope 79498
robust power syst. stabilizer, freq. domain-based design 111818
s-expanded symbolic network fns. for computer-aided analog IC design 79545

quency doublers *see frequency multipliers*

quency estimation
1-bit quantization and table look-up proc., freq. estim. 118962
8.0/8.4 kbit/s wideband speech coder based on MELP 106361
adaptive estim. for unknown freqs. by variable sampling proc., appl. 84798
adaptive single-tone freq. estim. based on autoregressive model 119017
anti-submarine warfare, multisensor mgt., data fusion 133411
ARCAP time-freq. representations for decision 119029
BFSK sigs., demodulation by adaptive digital notch filtering 83809
Brillouin spectrum estim., least sq. method repetition algm. *(Japanese)* 97329
burst freq. sync., preamble struct. comparison 72764
carrier freq. offset blind estim. in unknown multipath 83803
carrier freq. offset estimator for burst mode commun. 72715
clinical Doppler ultrasound spectral estim., max. freq. determ. 98310
CPM receiver with immunity from carrier phase deviation 94235
DAB syst., coarse freq. offset sync. 75266
DAPSK preamble-assisted transm. in digital mobile radio syst., channel estim./compensation 74737
delayed sig. sampling for Signal spectrum anal. and period estim. 118838
digital radio receiver, non-decision-aided carrier freq. offset estimator 96395

frequency estimation continued
direct down-conversion receivers, IQ imbalance anal., freq. offset estim. 83813
direction set based algm. for spectral estim. 95689
Doppler meteorological radar, sig. freq. shift meas. 122636
Doppler radar data, spin estim., new method 75095
EM scatt. wave, modified Root-MUSIC for freq. dispersion detect. 72235
extended block-adaptive Fourier analyser, sig. component separation 118992
fingerprint image ridge freq. estim. by higher order spectrum 94510
Finnish lang., phonetic vocoder 119827
FIR filters with max. flat freq. response error magnitude, instantaneous freq. estimator 107502
flat fading digital commun., instantaneous freq. estim. of received sigs. 85822
flat-fading channels, freq. offset estim. 131167
FM nonlin. sigs. in multiplicative/additive noise, instantaneous freq. estim. 117898
frame rate meas. approach for real-time computer vision appls. 121176
FSK sig., real-time digital demodulation *(Chinese)* 106044
GPS receivers, FM jamming suppression, subspace array proc. 109327
high-resoln. array proc. in multiple wideband chirp sigs. 107332
IF, digital estim. beyond folding freq. 118806
IIR gradient-based adaptive notch filter with constrained poles and zeros 130066
IM direct torque control, inverter switching freq. prediction 77879
IM speed meas., current harmonic anal., Chirp-Z transform 112516
instantaneous freq. estim., chirplet transform based meas. method 121140
instantaneous mean freq. estim. using adaptive time-freq. distribs. 118954
laser velocimeter, feedback interferometry, real-time param. estim. 117580
LDA sig. freq. estim. 117573
lin.-array Doppler syst., steady flow, max. vel. estim. error sources 98266
low-threshold telemetry, improved carrier tracking, smoothing filter 131330
M-DPSK receiver for Doppler-shift mobile commun. 85809
MC-CDMA uplink, blind carrier freq. offset estim. 108829
mixed spectra time series, sample covariance matrix asymptotic normality, sinusoidal freqs. estim. 73567
MLE, progressive refinement, carrier freq. recovery appl. 94231
mobile commun. systs., location param. estim. 96559
mobile radio multipath time delay estim., HOS method 108904
modulation phase/freq. estim., Cramer-Rao lower bounds 117897
multicomponent sigs. anal., high-resoln. quadratic time-freq. distrib. 118998
multivariable freq. response meas., nonlin. distortions effect 109919
multiwindow time-varying spectrum with instantaneous bandwidth and freq. constraints 95648
noisy narrowband sigs., estim. and smoothing of instantaneous freq. 119074
noisy speech, pitch extraction, weighted autocorrelation 118073
non-decision-aided feedforward carrier freq. offset estimator *(Chinese)* 107763
nonlin. spectral anal. method for engng. appl., ident. *(Chinese)* 84676
notch periodogram algm. in freq. domain 107574
OFDM, freq. offset estimator 72722
OFDM based on multicarrier PLL, freq. offset tracking 106031
OFDM carrier freq. offset estimator 74741
OFDM syst., coarse freq. offset estim. 109343
OFDM syst. for power line commun., clock freq. synchronisation 106018
OFDM systs., efficient freq. offset estimator 119875
OFDM systs., freq. offset blind estim. filter 106032
OFDM systs., joint carrier phase and freq. offset tracking 117911
OFDM systs., nondata-aided ML carrier freq./phase sync. 72716
OFDM wireless systs., blind estim. of sym. timing/carrier freq. offset 83806
paired transient proc., characts. estim., input action delay 75340
PAM, PSK, or QAM waveform, Cramer-Rao bound low-SNR limit 72719
PCC-OFDM, blind freq. offset estim. 106050
periodic sigs., param. estim., magnitude/PLL approach 130038
phase vocoder, freq. estim. techs. 85423
pilot sym. assisted modulation, sync. results 83802
plural-zone sound segreg. *(Japanese)* 94383
power syst. distorted sigs. freq. anal. using Prony method 77370
power syst. freq. calc. using digital algm. 77139
power syst. freq. estim. in shortened meas. time, DFT interpolation 123071
power syst. protection/control, freq. tracking methods eval. 77525
PSK cellular radio signaling, data-aided freq. estim. 85864
PSK freq. recovery, high-perform. estim. algm. 117909
QAM burst demodulation, data-aided carrier freq. estim. 94254
radar/sonar sigs., freq. estim. against correl. non-Gaussian noise 118906
Rayleigh fading channel multicarrier sigs., carrier freq. offset 74551
Rician fading channels with Doppler shifted direct component, freq. offset compensation *(Japanese)* 108821
self ICI cancellation-based OFDM systs. with carrier freq. offset estim., perform. 106038
separable dimens. subspace method for joint sig. freqs./DOAs/sens. mutual coupling estim. 107392
sig. proc. problems, choice of prior distribs. 118965
simultaneous estim. of freq. and DOA of emitters *(Chinese)* 130016
single carrier commun., training seq. vs. cyclic prefix 73834
sinusoidal freq. estim., multirate filter bank appl. 107518
sinusoidal freq. estim. by second-order algms. for mixed spectra time series 118961
sinusoidal freq. estim. using median filter *(Japanese)* 119057
sinusoidal sigs., unknown freqs., global estim. 73662
software defined radio, blind modulation estim. with carrier freq. offset 108715
sonar, overlapping underwater sound streams, separation and fusion 119088
sparse channels, blind equalisation using antenna diversity 119193
spectrogram perform. as instantaneous freq. estimator 84647
speech sigs. spectral struct. for fund. freq. estim. 106341
speech voiced/turbulence-noise components, pitch-scaled estim. 118072
subspace-based freq. estim., nonparametric stats. 118904
time-varying multipath channels, params. estim. using chirp sigs. 130261
video coding, space-freq. block motion field modeling 73339
WLAN OFDM systs., optimum frame/freq. sync. 119892

frequency hop communication
see also spread spectrum communication
0.24 µm CMOS technol. eval. and BSIM RF modeling for Bluetooth power appls. 69171
2.4-GHz WLAN, 802.11 b/HomeRF/Bluetooth, band congestion, OFDM std. *(Italian)* 85258
ad-hoc networks, receiver-initiated channel-hopping protocol 85053
adaptive nulling antenna, fast follower jammer suppression *(Chinese)* 85932
adaptive-transm. protocol for freq.-hop wireless commun. networks 130420
asynchronous freq. hopping systs., FEC code 106112
Baker transform based chaotic FH seq. *(Chinese)* 117961
bandwidth-limited cellular systs., dyn. freq. hopping 96571
Bluetooth, indust. sens./control radio commun. std. 96076

frequency hop communication continued
Bluetooth commun., microwave oven dictated EMI mitigation 94063
Bluetooth computer wireless interfaces, technol. *(German)* 119590
Bluetooth module/single-chip device testing 74744
Bluetooth packet early-late gate receiving, implement. and perform. anal. 120077
Bluetooth pers. area networks, distributed topol. constr. 120068
Bluetooth phys. layer perform. anal. in indoor wireless network 85486
Bluetooth piconets, cochannel interf., packet error rate upper bound 85500
Bluetooth technol. for appliance pers. area network creation *(Spanish)* 74847
cct.-connection-based multihop wireless infrastructure for local communities 108964
CDMA generalized multi-carrier transceivers 107740
CDMA mobile cellular networks, adaptive array appl. 107308
cellular radio, dyn. freq. hopping 131246
cellular radio one-hop/sym. FHMA perform. 74733
cellular traffic, hybrid method using optic beam interconnects 85895
chaotic freq. hopping seq. generator, FPGAs, n-dimens. nonlin. digital filters *(Chinese)* 102411
chaotic freq. hopping seqs., FPGA-based generator, SS commun. 73847
CMOS IF FSK demodulator for Bluetooth in 0.35 μm proc. 119958
co-located systs., perform. degrad. 108540
collision avoidance FH in fixed wireless network with star topol. 96355
direct-conversion CMOS transceiver with GFSK modem for Bluetooth appl. 131197
DS-CDMA multicarrier syst. for transm. over Nakagami multipath fading channels 85538
DS/FH SSMA hybrid systs., partial successive interf. cancellation 131054
DS/SFH-CDMA multirate wireless commun., multi-proc. gain anal. 107743
DS/SFH-SSMA hybrid syst. over mobile satellite log-normal shadowing channel 131304
EDGE mobile radio syst., space-time coding 85670
fast freq.-hopped multiple access sigs. detect. 130164
fast generation of freq. hopping seqs. *(Chinese)* 73862
FDSS and FH commun. systs., optimum self-ref. spatial diversity proc. 119903
FFH CDMA multirate opt. syst. using power control 74986
FFH MFSK multiple access syst. decoding scheme over Rayleigh channel 107757
FFH syst. diversity combining, worst-case partial-band noise jamming 96396
FFH-SS commun. syst., rapid freq. change synthesizer 101814
FFH/BFSK with product combining, partial-band jammed Rayleigh fading channels, BER eval. 108530
FFH/BFSK with product combining over partial-band jammed Rayleigh-fading channels, BER perform. 119873
FFH/MFSK systs., max. likelihood multi-user detect. 84780
FH-SSMA networks, multiuser demodulation/iter. decoding 107732
FHMA turbo-coded commun., iter. multiuser detect. 107614
FHMA turbo-coded commun., iter. multiuser detect. 84781
FHSS-MA commun. syst., jointly optimal RS code rate and no. of users 96378
generalized FH OFDMA through unknown freq.-selective multipath channels 85479
GMSK modulation, slow freq. hopping, demodulation *(Chinese)* 74548
GSM radio network, hierarchical cellular struct. with inter-layer reuse, capacity increment 131175
Haughton-Mars Project 2000, mobile network field testing 131326
HF high speed FH CHESS radio, G fn. arith. study *(Chinese)* 96388
hybrid DS-FH-SS syst., transform domain interf. suppression *(Chinese)* 130299
hybrid opt. CDMA coding, freq. hopping/time spreading, struct. of coder and decoder *(Chinese)* 109130
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
indoor freq. hopping picocellular networks, interf. avoidance 85514
interf.-limited WPAN appls., adaptive freq. hopping scheme 96639
interfered channel, adaptive pass. predetect. algm. *(Chinese)* 119209
Kumar freq.-hopping seq., lin. complexity *(Chinese)* 73854
LMS shadowed Rician fading channels, multitone jamming effect 131127
mobile radio transmit antenna diversity systs., turbo proc. 117993
modified multistage decoding for fast freq.-hopped multiple access MFSK syst. 96375
multi-hop wireless networks, multicasting protocol 108549
multihop wireless network, code assignment algm. *(Chinese)* 85537
multiuser interf. suppression using optimal seqs. combined with antenna arrays 94059
OFDM multi-user syst., bit-wise interleaver 119141
OFFH-CDMA multirate syst., SIR perform. eval. 74967
opt. CDMA, asynchronous freq.-time spreading, modified prime code *(Chinese)* 117996
opt. CDMA, coding schemes *(Chinese)* 96654
opt. time-spreading/freq.-hopping differential OOK-CDMA syst. 74916
packet radio with turbo TCM in partial-band interf. 108557
PRN, transm. range control and inform. efficiency 108556
PRN with adaptive retransm. backoff, perform. 131075
PRN with spatially distrib. users, perform. anal. 74745
radio networks with partial-band interf., energy-efficient routing 84980
receiver-initiated collision-avoidance protocol for multi-channel networks 119301
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN channels, perform. anal. 108542
RS coded FH/SSMA commun., combined power/code rate adaptation 74544
seq. families based on pseudorandom seqs. over GF(p) 94323
SFH high capacity high data rate networks 83856
SFH SS commun., equalization/decoding 108674
single-bit input all digital synchronizer, demodulator baseband proc., fast freq. hop 101857
single-feed rect.-ring microstrip antenna for indoor commun. under Bluetooth protocol 117787
slow freq. hopping syst., error code rate reduction, SW sq. root Kalman filter *(Chinese)* 74547
slow-freq.-hopped slotted ALOHA systs. with retransm. cutoff, stabil. 131062
spectrum mgt. for army tactical radio operations in broadcasting bands 105786
SS systs., side inform. reception 108541
SS systs. via multiple invariances, channel estim. 85480
Steiner design for capacity enhancement of freq. hopping SS wireless systs. 85686
SW hopping network, fixed channel assignment *(Chinese)* 74720
TDMA slow freq.-hopping mobile radio, service coverage 108660
UHF freq.-hopping PLL synthesizer design for high-speed data commun. 80017
wireless networks, error avoidance using link state hist. 120023
wireless networks, routing metrics design tradeoffs 107836

frequency hop radar *see spread spectrum radar*

frequency measurement
see also atomic clocks; frequency standards
arrayed waveguide grating, opt. freq. monitoring 109196
Brillouin-based distributed fiber temp. sens., microwave coherent detect. 75
capacitor dielec. meas. for power electronic appls. 68574
diode lasers, freq. fluct. interf. measuring method *(Chinese)* 110016
distrib. network electromech. mode params. estim. using freq. meas. 11204
distributed conductor-backed CPW phase/freq. shifter and appl. 102442
DOA estim. using cosθ amplit. response antenna *(Japanese)* 107348
dual-mode reson. sens., temp. insensitive 75429
elec. machines freq. anal. using virtual instrum. 123309
endometrium, estim. in US images using recursive model 132603
IM, non-invasive slip meas. 123461
instantaneous freq. estim., chirplet transform based meas. method 121140
LDV, quadrature demodulation tech., freq. meas. errors 97772
LISA grav. wave detector drag-free control posn. sens. 132170
Mach-Zehnder EO modulator, deep modulation index meas. using opt. spectr analyzer 116818
MEMS actuators, nondestructive reson. freq. meas. 89026
microwave oscillators, cryogenic resonators for freq. fluct. meas. 79617
monocrystalline sapphire, suscept. meas. using whispering gallery modes 817
multivariable freq. response meas., nonlin. distortions effect 109919
oscilloscopes, stand-alone freq. meas. *(Italian)* 109839
overhead lines, nonunit fault location method 123088
phase difference meas., cross-talk correction, AO proc. 116854
power syst. fault location using RF emissions 77641
power syst. freq. estim. in shortened meas. time, DFT interpolation 123071
power systs. freq. relaying, αβ-transform., freq. meas. 112158
reson. sens. arrays, high-resoln. multichannel instrum. 131816
sync. generator voltage/freq. fuzzy control using TMS320F240 DSP 123374
THz field charactn. using Fabry-Perot-like tunneling cantilevers 97789
transmitter motion detect. using TDOA/FDOA meas. 97023
two-arm delta-sigma modulated bridge based freq. deviation meas. 121139
variable amplit. power sigs. freq. meas. anal. 77658
^{133}Cs thermal cell, saturated absorpt. spectrum, high-precision freq. mea 117429
Ti:sapphire mode-locked lasers, carrier-envelope phase stabilization usi microstruct. fiber 128196
ZnO ceramic varistors, ageing effects, dielec. spectrosc. *(Polish)* 115036

frequency modulated radar *see FM radar*

frequency modulation
see also FM radar; frequency shift keying; pulse compression; pulse frequency modulation
500 W series-reson. DC/AC inverter for impedance-load drives 77960
adaptive line enhancement via subspace tracking 107546
AM-FM image segmentation approach 94634
amplif. opt. fiber, pulse envelope max., supraluminal vel. 127699
AO sig. proc. techs. and facilities 127860
BiCMOS AM/FM car act. antenna with on-board batt. voltage regulator 9416
biomedical FM-FM-FSK radiotelemetry syst. for multi-sig. transm. 76773
BPSK demodulation, freq. region 72742
Carson's FM bandwidth rule lab./computer tests 83828
catastrophe-type space-time domains, FM radio pulse struct. 117708
chaotic CDMA with FM differential chaos shift keying 107744
class DE invertor, FM/PWM control, high conversion efficiency 99768
clock sig., chaos-based FM, EMI reduction 106015
CNR modeling under bandwidth limitation on systs. using opt. super wideban FM tech. *(Japanese)* 74476
coaxial gyrotron heterodyned microwave sigs., time freq. anal. 91556
combined method of FM taking into account mutual delay in channel contr 117906
commun. systs., time-varying interf. suppression using time-freq. sig. transform 105808
composite-bonded concrete strain meas., FBG sens. 86571
CPM, serial concatenated, ACI suscept. 129064
D-FIRE 2, combined DAB/FM receiver SoC for receiver chipset 120529
DAB, terrestrial, soft selection combining 120507
DAQ systs., sens. noise reduction method 131830
DCSK digital radio syst. simulator, MATLAB 106023
derivative phase of freq. sum, spectral dens. *(Russian)* 117886
detect. of FM and FSK using subtractor filter 73733
digital double errors 72744
digital FM and GMSK with limiter discriminator detect., anal. of BER on seq estim. 106041
digital synthesizer, FM sig. 79609
direct digital FM, phase locked Ka-band Gunn oscillator *(Chinese)* 68638
Doppler radar sig. proc., time freq. anal. 75089
DPLL, first-order, nonlin. dyn., FM 90803
DS-SS commun., AM-FM jammers excision, instantaneous bandwidth us 96390
DWDM systs., wavelength stabilization using dithering-induced AM cancellatio 86097
FFH modulation, AO-modulator based laser pulse shaping 105446
fiber optic interferometric fringe projection phase-shifting 3D profilometry usin freq.-modulated LD 109620
fiber-optic voltage sens., freq.-output for HV lines 109612
fibre optic probe for simultaneous dist./vel. determ. 97300
fingerprint class. 73263
FM-DCSK syst. perform. for multipath channel, robust chaotic commun. 9640
FMCW laser rangefinder, delay line tech., APD detect. 117576
FMCW opt. fiber sens., neural network based nonlin. recovering tech. *(Chinese)* 75551
freq.-modulated LD, photoelectromotive force effect, displacement meas 121178
FTTH low-power single-chip receiver IC for opt. video distrib. syst., 1.5-GH 96293
gas discharge lamp self-oscillating PFC electronic ballast 89438
Gaussian noise perturbed vectors, phase angle distrib. 72745
GPS receivers, FM jamming suppression, subspace array proc. 109327
Gyrotron FU series, develop. and appls. 91551
high-perform. RF-lightwave transmitter for analog fiber optic links 96675
HTSC magnetometer with double modulation 75436
IASI interferometer, ref. freq. stabilised laser source 122631
IIR Volterra filtering for multisource discrim. 73670
L-phase-level coherent freq./phase modulated sigs., trellis coding 83814
laser Doppler vibrometer-based mine detect., speckle noise immunity 77002
lin. FM SAW filter, finger cut effects on perform. 127270
localized spatially-modulated medium, spatial solitons interact. 105570

uency modulation continued
MM-wave analogue commun., W-band video link *(Chinese)* 131068
modulated lidar, RF modulation loss, multiple scatt., FOV effects 86241
modulation driver, quasi-sinusoidal asymmetric current 79565
MRI brain image segmentation using AM-FM model 110898
multicomponent sigs. anal., high-resoln. quadratic time-freq. distrib. 118998
multiplexed opt. fiber interferometric sens. syst., opt. coherence fn. synthesis 86572
multitime-freq. classifiers for noisy modulations 118868
NLC cell with optoelectronic feedback, self-oscills., opt. bistability 82245
noncontact fiber-optic dist. gauge, miniature 86581
nonlin. sigs. in multiplicative/additive noise, instantaneous freq. estim. 117898
nonstationary stochastic sigs., spectral generating theorem 95631
oblique ionos. sounding, chirp sig. struct. 88136
on-glass mobile antenna perform. modelling 117767
opt. chaotic FM detect., asymptotic sync., drive-response syst. model 106012
opt. direct radio-on-fiber syst., nonlin. distortion suppression 85952
opt. fibre soliton stabil., pulse shape and freq. chirp influence 128560
parametric adaptive sig. decomp. based on Gaussian elementary fns. *(Chinese)* 73614
PLL cct., strange attractors and crisis-induced intermittency 101853
Poisson channel, optimal sig. selection 106006
quantum-cascade laser, Pound-Drever-Hall freq. stabilis., rovibr. reson. 105455
radar MTI in noise FM jamming environ., perform. anal. 75102
radio sigs. demodulation, AO method 71445
react.-diffusion for oriented texture completion 73259
real sig. instantaneous freq., defn. 118805
rem. multipoint fibre opt. gas sens., FMCW tech. & tunable laser 120989
RF-lightwave transmitter, high-perform., analogue fibre links 96703
rot. axle ang. speed/posn. meas., pulse generator with num. count discriminator 75396
secure radio transm. syst. using FM high dimens. chaotic oscillator 74514
semicond. laser, freq. modulation, interferometric displacement sens. 117595
semicond. laser, relative intens. noise reduction, modulation response using fiber grating 128388
sig. reception, theoretical/expt. study of noise/distortion 120521
single-mode fiber, Gaussian freq.-modulated pulse lin. dyn. 116610
sonar, overlapping underwater sound streams, separation and fusion 119088
spectrosc. MR imaging using SS prod. by oscill. gradient fields 76427
SS broadcasting syst. spectral overlay for digital video delivery on analog TV band 108631
SS syst. spectral overlay on analog FM syst. 108629
stochastic inform.-transm. systs., multiplicative interf. anal. 105814
two-freq. generation for laser cooling, FM injection-locked LD 71912
unsupervised texture segmentation using dominant image modulations 106754
VCR digital FM demodulator 131776
voice conversion algm. based on Gaussian mixture model with dyn. freq. warping *(Japanese)* 129398
VSI, freq. modulated PWM 123629
wideband lin. FM waveforms, interf. cancellation 109241
wideband opt. receiver module, opt. video transm. syst., FM modulation *(Japanese)* 120153
wireless CMOS MI sens., FM-type, magnetis. magneto-impedance effect in amorph. wires *(Japanese)* 109937
Er,Yb-doped laser transmitters, high-bit-rate FM, pulse train stabil. 71913
Er-doped fiber amps., induced phase shift, nonlin. Schroedinger eqn. 117127
I_2 hyperfine transit., mini-Nd:YVO_4 laser stabilization, FM spectra 82557
$LiNbO_3$ Fabry-Perot etalon, freq. stabilization/tuning of Ti:sapphire laser 93742

quency modulation, optical *see frequency modulation; optical modulation*

quency multipliers
2.7 THz waveguide tripler using monolithic membrane diodes 102620
clock distrib. strategy for IP-based develop. 101943
CMOS DLL, 1GHz synthesis, freq. multiplier tech. *(English)* 125261
DLL oscillatorless clock multiplication, low jitter 102321
electron lin./circ. accel., arbitrary different RF's, synchroniz. 132265
freq.-doubling inverted gyrotwystron, phase deviation/pushing 125975
gyro TWT, phase stabil. 80614
heterostruct. barrier tripler, waveguide config., W band 102550
heterostruct. barrier varactors for freq. triplers, fab./charactn. 69154
microwave freq. doubler, fund. freq. component suppression 102584
microwave freq. multipliers and dividers, testing techs. 91129
microwave multistage act. freq. multiplier 91127
microwave sub-harmonic injection-locked bal. oscillator-doubler 91281
MM generation, high-efficiency HBV multipliers 80138
multi-layer quasi-opt. freq. doubler based on crossed dipole struct. 125687
nonlin. millimetre-wave/submillimetre-wave devices, varactors and Schottky mixers 125719
nonlin. transm. line params. effect on soliton propag., freq. tripler optim. appl. 83448
nonlin. transm. lines, heterostruct. barrier varactor loaded, solitons 105821
nonlin. transm. lines for MM-wave multiplication, soliton wave propag. 69142
PHEMT high gain freq. doubler for 76 GHz automotive radar 80366
quantum barrier varactor integrated with CPW, freq. tripler operation 69122
quasi-opt. power-combining arrays, substr.-mode effects reduction 80180
submillimeter-wave Schottky diode multipliers using substrateless tech. 102679
subMM-wave Schottky diode harmonic multiplier, self-matching model 102617
translinear CCII-based sinusoidal freq. doubler and full-wave rectifier 68975
triplers, stabil. ensuring design procedure 80367
two-terminal devices for mm-wave/THz appls., advances 91291
VCXO, high precision, phase noise meas. using PLL-type freq. multiplier 114660
W-band MMIC tripler using anti-parallel Schottky diodes, 75-110 GHz 80365
AlGaAs-GaAs 8.5/25.5 GHz act. freq. tripler MMIC 96412
AlGaAs-GaAs heterostruct.-barrier varactor diodes for 255 GHz tripling operation 91294
GaAs, MM-wave parametric instabil., freq. multiplication 69143
GaAs MMIC chip-set for Ku-band radio-link transmitter 125747
GaAs MMIC multiplier devices, metal beamleads, fab. techs., 200-2700 GHz 102678
GaAs frameless membrane monolithic cct. 1.2 THz freq. tripler 102680
GaAs/AlGaAs/GaAs quantum barrier varactor, CPW freq. tripler 114944
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416

quency re-use *see frequency allocation*

quency regulation *see frequency control*

quency response
1D discrete reactance fn., z-domain continued fraction expansion 89958
2D diamond/quadrant FIR digital filter banks with sharp responses 119069
2D FIR digital filters, weighted least sq. design 102414
2D FIR filters design, iter. reweighted least-sq. algm. 107517

frequency response continued
2D half-band filters, multi-stage design using freq. response masking 91064
2D zero-phase FIR filter, nonuniform freq. sampling 80094
3-phase AC machines, noise minimisation, control scheme modif. 123317
accelerometers for DAQ systs., charact., limitations 120719
adjustable multilayer HTS bandpass filter 68905
all-fiber antenna, piezoelec. polymer coated circ. core D-fiber, FEA 96755
all-opt. wavelength converter, cross-gain modulation, freq. response charact. *(Chinese)* 82905
antenna/RCS anal. involving large bodies, extrapolation tech. 72470
anti-aliasing filter, band-limitation effects on largest Lyapunov exponent estim. *(Japanese)* 68541
aspiration integrat. small ion counter, shielded collector, freq. response 87240
automotive dist. from ground meas., US sens., smart car 113110
backward pumped distributed Raman fibre amp., pump-sigs. cross modulation 128177
beams, act. piezoelec. damping, bonding layer props. 127265
biquadratic act. RC networks for freq. response correction *(German)* 68907
blind MIMO syst. ident. based on cross-polyspectra 118809
BOLD contrast fMRI, activation patterns, specified-resoln. wavelet anal. 110857
boundary filters, max. coding gain, ideal DC behavior, size-limited paraunitary filter banks 91055
Bragg grating arrayed opt. fiber transversal filter 127882
branch-line coupler, two-step stubs, freq. response 69069
broadband uniplanar building blocks for MMIC and hybrid mm-wave ICs 125812
channel distortion compensation based on handset freq. response meas. 84052
CMOS current-mirror amp. with compact slew rate enhancement cct. 79578
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
CMOS logic, tailoring for RF appls. 115026
CMOS low noise transconductor, low distort. HF fully differential design 68930
coherence fn. based meas., DSP techs. 131851
coherent opt. RF channelizer, diffr. grating 125829
comb-shape microresonators, act. freq. tuning by localized thermal stressing 104193
convolutive mixtures separation using HOS 84707
CPW components, neural networks modeling and parameterization, EM simul. 69065
cross-mesh strip antenna on finite-size dielec. substr., anal. 72490
CRT deflection yokes ringing meas. 97702
cw terahertz radiation, coherent EO detect. 97791
deformable membrane mirrors, microfab., packaging & testing 71380
delta operator based 2-D filter design using symm. constraints 91094
dielec. capacitors calib., high accuracy/high bandwidth method 125850
dielec. loaded combline filter with low insertion loss, compact design 125668
digital filter freq. response charact., analog shaping, Doppler tracking 118991
digital filters synthesized using freq. response masking tech., FPGA implement. 80102
digital still-picture cameras, spatial freq. response 73277
direct-form recursive SC filters, capacitance mismatch, freq. response bounds 91034
distorted power meas. under nonsinusoidal & noisy conditions 121136
dual-stage actuator disk drives, improved servo perform., track follow, track seek, and settle 116462
duplex filter tuning using time domain transforms, cross-coupled resonators 125683
durian fruit, nondestructive maturity determ., force vibr. appl. 100355
eddy current sens. nonlin. response, aperiodic stochastic reson. in blind source separation 109530
eddy current sens. response, ill-conditioned mixtures, Bayesian anal. 110037
eddy-current sens., improving nonlin. response, lin. source separation 120753
elec. machines freq. anal. using virtual instrum. 123309
electrodynamic loudspeakers, nonlin. params. estim. method 86352
EM field simul. tool with multiple time domain engines 93955
EM shaker, transient anal., response surface model 128727
EM simulator for reson. anal. of microwave cylindrical cavity 72434
embedded capacitors, RF elec. simul. 69276
entangled light pulse propag., dispersing/absorbing channels 94209
even max. decimated pairwise FIR filter banks, symm. response 102388
FACTS devices allocation, freq. response tech. 99253
fast US detect. syst., photorefr. GaAs two-wave mixing 101551
fiber optic dielec. multilayer hydrophone, freq. response 111526
filters, exploitation of response and phys. symm. 80030
finite microstrip patch antenna, broadband anal. using FDTD 83607
FIR digital filters, low/high-pass and mid-pass/stop designs 114878
FIR filter design, freq. response masking struct. with reduced complexity 91068
FIR filter design, simult. magnitude/phase/group delay approx. 95662
FIR filter design combining freq. response masking and WLS-Chebyshev approaches 91069
FIR filters with max. flat freq. response error magnitude, instantaneous freq. estimator 107502
FIR least sq. filter design using piecewise polynomial approxs. 130069
FIR low-pass lin. phase filters with equiripple passband and least-sq. stopband 102415
FIR/IIR digital filters satisfying magnitude and phase specs., comparison 91112
flat force-bal. EM press. sens. for harsh environ. 75476
GEM-3 multifreq. EM induction data, UXO discrim. capability 88228
generation mix var. effects on freq. regulation requirements 99444
gigabit chip photodiodes, freq. response 116943
gradiometer for mil. appls. 77024
ground penetrating radar, freq. response 86169
harmonic-polluted power networks, Steinmetz circuitry behavior symmetrization 133685
HDD slider & disc motion meas. using CD-ROM syst. 127369
hearing aid fitting strategies, children's amplif. requirements 98701
heterojunction phototransistor/QW-LD integrated optoelectronic device, static/dyn. responses 71627
high order giga-bit rate PLL, discrete z-domain anal. 79628
high-speed high-sensitivity photodiodes & OEIC props., review 117020
high-speed interconnect simul. using MIMO type adaptive LS method 101677
high-temp. supercond. hairpin-comb filter, cascaded struct. *(Korean)* 114865
higher-order Bode-type variable-amplit. wave digital equalizers, design 91075
Hilbert curve fractal antennas, self-similarity and multiband charact. 72443
HTSC cross-coupled microstrip bandpass filter, design 127532
HV transformer impulse fault diagnosis, self-organising map, learning VQ 134108
hybrid mobile radio/fiber systs., opt. microwave sigs. generation 131471
IIR filters design, WISE method 84723
integrated polymeric photonic devices for RF and phased array appls. 115033
Jiaxing power plant, AVR param. meas., PSS field test *(Chinese)* 88503

frequency response continued
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
landmine detect., phase-angle-based EM induction obj. discrim. 77017
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
large unmanned vehicles, GSP-based fuzzy supervised path tracking syst. 120090
lead and shield type mag. tunneling jn. head, freq. response 116418
lightwave network anal., recent develop. 74930
lin. ccts. with interval params., freq. response eval. 90644
lin. opt. link using radiation hard VCSELs for analogue front-end chip 76153
lin. phase paraunitary filter banks, lattice structs. parameterization 107527
lin. syst. noise effect reduction, coherence fn. in deconvolution 119009
lin.-phase FIR filters, optim. using freq. response masking approach 80103
lin.-phase paraunitary filter banks with complex-valued freq. responses, design algm. 73705
M-channel mixed analog/digital max. decimated filter banks, freq. response 102341
M-D IIR filters, fixed separable denominator, least-sq. design, multivariate division 102386
mag. probe coils constr. using thick-film technol. 97203
max. flat/notch FIR filter design 107478
MEMSIC accel. sens. using convection heating changes, wire strip *(German)* 75744
MI-DFB laser modules, modulator integrated DFB, RF impedance matching 93644
micro-machined materials, Young's modulus meas. *(Chinese)* 97849
micromachined mirror arrays, adaptive optics perform. eval. 104774
microposition meas., high sensitivity mag. syst. design 97204
micropower class-AB CMOS log-domain filter, DECT appl. 91030
microstrip continuous gratings as PBG struct. 80195
microstrip-to-rect. waveguide mode transformer, perform./appls. 91198
microwave cct. design/modeling using 3D EM optim., freq. and geom. parameterization 91227
microwave filters with max. flat passband response, amplit. characts. approx. *(Japanese)* 114961
MIMO freq. domain blind syst. ident. based on second-/HOS 95651
MM-wave filters, CPW struct. 69033
MM-wave FSS, high perform. micromachined 83718
mobile radio propag. channel MIMO meas./ident., antenna array 119960
mobile systs., radio channel investigs. 74864
moving V-belt strain meas., opt. correl. & spatial filter sens. 109505
MSW filter in valley-type magnetis. field, amplit.-freq. charact. 104539
multi-DOF meas. syst. for milli-struct., diffr. grating, kinematic anal. 121222
multi-machine power syst., under-excitation limiters, coord. design 111658
multi-phase DC/DC buck power converter voltage/current control scheme 123650
multichannel biotelemetry syst., filter bank use 88011
multielement tonometry sens.-based noninvasive PWV meas. syst. accuracy *(Japanese)* 132506
multimedia sig. proc., tunable/variable pass. digital filters 84758
multimode VCSEL modulation charact., very short reach commun. 117365
multimodule parallel DC-DC PWM converter systs., robust av. current-mode control 134144
multiresonant diaphragms based waveguide filter, freq. response 80204
multivariable freq. response meas., nonlin. distortions effect 109919
natural freq. extraction from multiple freq. response sample sets using fitting error 94022
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
nonrecursive digital filters, charact. improvement 118975
OFDM multi-user broadband mobile channel, decision-directed tracking 97011
OFDM syst. for power line commun., clock freq. synchronisation 106018
OFDM-OQAM conjug. syst., filter design 106019
OFDM/QAM sub-carrier synchronized syst., importance sampling anal. 72735
opt. heterodyne high-power mm-wave generation using 1.55-μm TW photodetectors 125826
opt. receiver perform., freq. response meas. techs. 96701
oscilloscope freq. response flatness anal., accurate step generator 121065
OTA-based act.-c filters, simul. & implement. 102338
p-i-n photodiode vel.-matched distributed and bal. photodetectors, RF fiber-optic link 131382
paint based piezoelec. thick-film strain sens. develop. 131888
periodic excitation freq. response fn. meas., correl. I/O errors 107406
PID control, filtered, optimum multiple integrat. tuning 107507
piezoelec. actuators, dyn. charact. anal. *(Chinese)* 99870
piezolaminated anisotropic shells, selective modal control theory 104438
PIN/QW-LD optoelectronic integrated device, phys. model 116964
planar ellipt. bandpass filter using SMD type rect. DRs, design 102534
polariz. synthesized opt. transversal FBG filter, tunable microwave freq. response 71471
Polish EM field metrology, effect of new power regulations *(Polish)* 131790
power syst. load freq. response charact. calc. *(Chinese)* 77145
power transformer winding deform. diagnosis methodologies *(Chinese)* 134138
QMF banks design, modified Chen-Lee algm. 102394
quadrature directional coupler, optimum compensating susceptance/posn. 102526
radar target freq. response data in clutter environ., scatt. center estim. *(Chinese)* 75230
radar target recogn., least sq. estim. 120429
radio interf. autocompensator, multipath effects 85502
rail-to-rail I/O CMOS op amp, 1 V, design strategy 79590
RC oscillator with distributed params., autoparametric oscills. 90796
real-time vibr. modal coords. sens. using piezoelec. array 132087
rect. piezoceramic transducers, flexural waves transm., NDE 116201
rect. waveguide with pseudochiral Ω slab, scatt. 72431
room acoustics meas., multitone sigs. appl., freq. response 110031
S/H distortion, anal. compens., monotonic & equiripple approx. 86449
SC filters based on allpass sects., testability 80068
SCM, zeptofarad resoln. sens. 75499
screened radio interf. test rooms, EMC compatibility, filter charact. *(German)* 72348
second-order sampling of wideband sigs., digital demodulation 94236
short wordlength selective IIR filters, design procedure, implement. complexity 102380
short-length lin. impedance transformer, matching characts. 83447
sig. crest factor minimisation, freq. domain method 118833
sig. word decomposed filters, optimal filter length, subfilter coeff. wordlength assignment 102378
single-chip CMOS T/R-MMIC frontend, 2.24 GHz 1.8 V, low loss switch 102656

frequency response continued
slanted finger IDT SAW filters, diffr. effects anal. 91018
smart struct. monitoring using PZT actuators & PVDF sens. 109823
software radio receivers, simplified sig. proc. 107529
solar cell AC params. meas., impedance spectrosc. setup 100040
South China power syst. dyn. stabil. improvement 77212
space antenna, structural damage detect., neural network and freq. response techs. 128872
speech in noise, intelligibility for hearing-aid users 133051
SQW laser, model and freq. response 82657
SRM unbalanced mag. force, rotor dyn. behaviour anal. 112486
standalone/parallel DC-DC power converters, nonlin. stabil./dyn. anal. 889
strong-inversion CMOS current-mode companding integrator implement. 86
suspen. substr. stripline filter design with hybrid EM simul. tools 69043
sync. machine params. ident., stand still freq. response test 123397
sync. turbogenerator, high order equiv. ccts. 99638
syst. fns. with min. time-bandwidth product based on higher order mom 130101
tapered IDTs, elec. charge distrib. eval. 92713
TCSC, freq. response calc. *(Japanese)* 89029
thermal power syst. dyn. operation, wind power variability impact 99588
thin APD freq. response, excess noise factor 93376
time integrat. algms., freq. domain anal. 101061
transformer winding deform. diagnosis, equiv. model param. ident. *(Chin* 91433
triplet halfband filter banks, kernels, least sq. design 91056
turbogenerator, bearing dyn. props. ident. *(Chinese)* 88668
turbogenerator modelling by noninteger order systs. 123345
turbulent round jet, heated, temp. dissipation meas., cold-wire anemom 132222
two-wire thermocouples, temp. reconstr., nonlin. state estim. approach 978
UHF filters automatic computer-controlled tuning syst. 125592
UHF LOS/nLOS time dispersion meas. in indoor radio channel 83266
US meas. syst. sig. anal. using wavelet transform 107354
US rotary motor prototyping, in-plane strain actuation, model 134103
variable 1D FIR filters with arbitrary magnitude responses, design 68940
variable fractional-delay FIR digital filters, discretization-free design 1024
VAV air handling unit online fault detect./diagnosis method 100335
vel. sens., dyn. param. estim., indirect meas. approach 120727
waveguide components, 3D modelling of spurious and out-of-band respo 69045
waveguide diplexer, design optim., shadow specs. 102571
wide-range tunable/switchable low-loss SAW filter, design and perform. 91
wideband voltage meas. using HV CT 123090
AlGaN/GaN high volt. HEMT, field plate on Si_3N_4 stepped insulator 1268
AlGaN/GaN power HEMTs, breakdown voltage enhance. using field p 103901
Ar, Townsend secondary electron emission coeff., freq. response anal. 805
$Bi_{12}SiO_{20}$ photorefr. material, moving gratings nonlin. freq. response 7194
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
Co thin film magneto-opt. sens., freq. response 109507
CoZrNb/CoSm exchange-coupled underlayer for perp. recording media 116
Er-doped L-band fibre amp., wavelength depend. freq. response 128156
GaAs MSM photodetector and electron detector, freq. response mechani 132145
GaAs high-speed MSM photodetectors with AlAs/GaAs DBR struct., m 86517
GaAs monolithic/hybrid integrated photoreceivers, 40 Gbit/s commun. 967
GaN:Mg thin film SAW filter with high vel./low insertion loss, MOCVD 81
InAlAs/InGaAs/InP lattice-matched/metamorphic HBT, MBE growth 1158
InGaAs strained QW lasers, freq. response 105309
InGaAs/InGaAsP MQW scaled microdisk lasers, dyn. behavior 128279
InGaAs-AlGaAs reson.-cavity separate absorpt. charge and multiplication A freq. response, model 93364
$La_3Ga_5SiO_{14}$ based high temp. nanobalance sens. 97439
$LiNbO_3$ SAW filter, freq. response, finite element model 92729
$LiNbO_3$:Ti TW opt. modulator with phase reversal, freq. response *(Kore* 116801
Nb THz hot-electron bolometer mixer, microstrip-line-coupled, direct respo 127540
O_2 high press. conc. meas. by VCSEL lasers 86714
PZT ceramic, piezoelec./dielec./elastic props., stress/DC bias effect 104327
PZT discs, modified sol-gel prep., US transducers 101480
PZT, high-power reson. meas., elastic nonlin. effects 92652
Si piezoresistive press. sens., low range, dyn. calib. 109817
SiGe HBTs, low RF noise optimized, cryogenic operation 70033
SiO_2 poled thin slab EO switch, electrostrictive consts. 105548
YBaCuO supercond. lumped-element filter with planar spiral inductors 710
YBaCuO thin films, nonlin. effects, on-wafer microwave probe station m 70666
$YBa_2Cu_3O_{7-\delta}$ films, field deployable microwave filters 91022
$YBa_2Cu_3O_{7-\delta}$ adjustable multilayer HTS bandpass taped comb-line filters 116

frequency selective surfaces
act. FSS with ferroelec. substrs. 83188
blazing onset, rational Krylov model-order reduction/Woodbury sing. extract 128743
broad-band microwave absorbers frequency-selective surfaces, multilaye dielec. media, GA 83357
concentric ring microstrip patch, freq.-selective property 72547
cross dipole elements, FSS 72654
crossed dipole FSS array geom., GA optimisation 105942
cylindrical reson. struct., sq. loop FSS 94164
dichroic mirror, S/X/Ka-band, BWG antenna for deep space obs. 128878
E-plane quasi-opt. power amp. using TEM waveguide concept 102687
EM band-gap struct., class./charactn./appls. 83222
gigahertz/terahertz appls. 105844
gridded sq. FSSs, anal. 72440
MM wave flat plate antenna based on partially reflective FSS 83586
MM-wave FSS, high perform. micromachined 83718
multilayer printed periodic structs., appl. to antenna technol. 83774
multilayered chiral filter response at oblique incidence 72450
multiscreen double sq. in multilayered medium, subsectional current appr 94114
multiscreen FSS, reduced-order modeling using Krylov-based rational interpo tion 83239
PBG-type microstrip filters with one-/two-sided patterns 102328
resonator elements on circ. dielec. rod antenna for mobile commun. 83622
tunable radar absorbers 80155

uency shift keying
AF appls., mixed sig. decoder 68655
utomatic modulation recogn. techs. using nearest neighbour rule *(Japanese)* 106055
FSK sigs., demodulation by adaptive digital notch filtering 83809
BiCMOS modulated Σ-Δ freq. synthesizers, automatic calib. 125252
iomedical FM-FM-FSK radiotelemetry syst. for multi-sig. transm. 76773
luetooth, Generic Access and Service Discovery Access profiles, GFSK *(Italian)* 85281
roadband const. envelope interf. suppression algm. 105782
apacity eval. of freq. hopping based ad-hoc systs. 119646
ellular radio one-hop/sym. FHMA perform. 74733
CMOS binary FSK demodulator for low-IF radio receivers 114669
CMOS FSK/ASK transceiver, 900-MHz, low power, half-duplex low datarate commun. 91343
CMOS IF FSK demodulator for Bluetooth in 0.35 μm proc. 119958
CMOS transceiver, Bluetooth, GFSK modulation 96364
oded M-ary FSK DS CDMA, design and perform. 85770
ombined Huffman code, row and column array code and phase/FM 83892
oncatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
oncatenated turbo-TCM for mobile satellite channels 129004
CPFSK coherent opt. syst., self PM effect, eval. 106030
CPFSK demodulation, carrier recovery method 94253
decorrelation receivers for unresolved multipath Ricean fading channels 131131
edicated short range commun. syst., phys. layer 119994
etect. of FM and FSK using subtractor filter 73733
igital FM, seq. estim. 94233
igital phase detectors with carrier phase tracking, error floor assess., large deviations approach 130159
irect conversion CMOS transmitter for paging appls., 900 MHz 91344
irect-conversion CMOS transceiver with GFSK modem for Bluetooth appl. 131197
ast freq.-hopped multiple access sigs. detect. 130164
FH MFSK multiple access syst. decoding scheme over Rayleigh channel 107757
FH/BFSK with product combining, partial-band jammed Rayleigh fading channels, BER eval. 108530
FH/BFSK with product combining over partial-band jammed Rayleigh-fading channels, BER perform. 119873
FH/MFSK systs., max. likelihood multi-user detect. 84780
FSK modem, BER charact., automated meas. 128975
FLEX pager FM/IF receiver syst. *(Chinese)* 108652
M digital double errors 72744
HF commun. using spatial diversity/high data rate waveforms 108583
F receivers for satellite navig., multi-channel filtering *(German)* 97032
Q modulators, implement. of automatic digital compensation 125265
MS shadowed Rician fading channels, multitone jamming effect 131127
OS bandlimited channel, efficient error free data transm. 111583
ow power receiver for space appls. 96634
M-ary noncoherent orthogonal FSK over Nakagami fading channels, av. BER perform. 94227
M-CPM with MRC diversity in Rician, Hoyt and Nakagami fading channels 106047
MFSK modulated sigs., class. using mean of complex envelope 117891
nodified multistage decoding for fast freq.-hopped multiple access MFSK syst. 96375
nodulator module for 38 GHz WLAN, 156 Mbps, dielec. resonator, MMICs 91389
MPEG-4 imagery, ring convolutional trellis codes design for MAP decoding 129800
MPSK/MDPSK/noncoherent MPSK with MRC/SC space diversity in Nakagami-m fading channel, sym. error probab. 96463
multichannel coherent CPFSK syst. using opt. amp., sensitivity penalty 109069
Nakagami fading channel, multiple equal-power cochannel interferers, perform. anal. of max. ratio combining 74735
Nakagami fading channels, NPCSMA protocol for NCPSK/QPSK, data packet transm., perform. eval. 85515
NCFSK demodulation, exact eval. of capture effect 72751
Nyquist QFSK, spectral efficiency 83797
pt. direct detect. CPFSK transm. syst., self-PM 131406
pt. heterodyne syst., polariz. mode dispersion effect 74955
phase/freq. estim., Cramer-Rao lower bounds 117897
PLL GFSK demodulator, perform. in multipath channel 108772
power line transceiver with reduced power consumption 131042
punctured trellis coded freq./PM in mobile satellite channels 128971
rate l/(l+1) convolutional encoders over rings with max. free branch dist. 129139
real-time digital demodulation *(Chinese)* 106044
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN channels, perform. anal. 108542
self-pulsating self-oscillating mechanisms, opt. FSK sig. 105429
superheterodyne FM-IF receiver for FSK sigs., anal. *(Chinese)* 108516
TIRIS digital receiver module for LF RFID syst., analog front end design 96393
UHF data receiver IC for automotive vehicle appls. 100308
ultra low power all-digital receiver for deep space appls. 74904
W-band freq. tracing transceiver syst. with one PLL for digital commun. 74585
Er-doped fibre amp. in-line cascade, rem. in-service supervision *(Chinese)* 75051

uency stability
see also frequency control; laser frequency stability
BiCMOS digitally controlled oscillator for clock recovery and freq. synthesis PLLs, 600 MHz 68630
CMOS transconductor g_m-C filter, cct. stabilization 80053
deep space commun., transponding modem, DRO perform. 131332
dual-mode whispering gallery sapphire resonator, high-Q freq. stable realisation 80218
dyn. security assess., time-varying contingency screening 88380
FSK modulator module for 38 GHz WLAN, 156 Mbps, dielec. resonator, MMICs 91389
GPS carrier phase meas. for freq. sync., fuzzy & PD control 86378
high stabil. quartz cryst. oscillators *(German)* 114648
interconnected power syst. freq. oscill. stabilis., SSSC appl. 99284
microwave oscillators, cryogenic resonators for freq. fluct. meas. 79617
MM-wave pulse coherent semicond. oscillator for electron spin echo spectrometer 114654
MM-wave subcarrier freq. stabil. using laser heterodyne source and opt. delay line 109044
piezoceramic resonators, reson. freq. stabil./domain struct. *(Polish)* 70438
quartz cryst. oscillator, low power design, PSPICE 81741

frequency stability continued
rutile-sapphire dielec. resonator, cryogenic microwave oscillator 69083
self-amplified high-power klystron *(Chinese)* 91549
self-oscillating mixer, low power, wireless commun. 91220
short term oscillator freq. stabil. as fn. of phase noise distrib. 114964
time-sync. errors & freq.-instabil. charact., universal formulae 75899
Rb freq. and time std., devel. and appl. 131791
Rb freq. and time std., devel. and appl. 131792
Rb time and freq. std., devel. and appl. 131794
Rb time and freq. std., devel. and appl. 131793
^{87}Rb laser-cooled fountain, juggling at. clock 97127

frequency standards
at. fountain freq. std., computerised control syst. 75358
fs pulse train, freq./repetition rate stabilis., F-P ref. cavity 71905
GPS carrier phase meas. for freq. sync., fuzzy & PD control 86378
GPS common view based primary ref. source for telecomms. networks 74078
high-power solid-state laser, LD pumped, output charact. and appls. 71721
hybrid multiple wavelength ref. fiber gratings, mol. absorpt. 131796
IASI interferometer, ref. freq. stabilised laser source 122631
LD radiation freq. synchronisation with fs Ti:sapphire laser mode freq. 117369
NIST primary freq. stds., uncertainty aspects 97125
opt. freq. stds., freq. synthesis, precision laser spectrosc. 120629
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
space-based time-freq. meas., relativistic theory 75898
stabilized laser design for opt. pumped at. freq. stds. 109409
CO_2/OsO_4 stabilized laser at 28.8 THz, absol. freq. meas. 71636
Ca opt. clock transits., absol. freq. meas. with femtosecond laser 75816
Cs D_2 reson. line, diode laser freq. stabilization 120613
Cs at. clock, freq. pulling by hyperfine σ-transit. 109402
Cs beam freq. std., opt. pumping, light shift 120620
Cs freq. stds., drift rate, aging effect 97122
Er,Yb:glass microlaser, freq. doubled, opt. freq. std. develop. 109413
Er,Yb:glass single-mode laser in NIR, amplit. and freq. stabilization 105259
Er,Yb-doped high-stabil. diode-pumped microlaser freq. locked to ^{39}K subDoppler line 86394
He-Ne laser freq. stabilis. control syst., fast PLL 93725
He-Ne/$^{127}I_2$ stabilised lasers, 633 nm, internat. comparison 109405
He-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
Hg^+ opt. clock transits., absol. freq. meas. with femtosecond laser 75816
$^{199}Hg^+$ single trapped ion based opt. clock 120631
I_2 freq. stable Raman laser, stepwise tunable secondary freq. stds. 86375
I_2 high-stabil. diode-laser-based freq. ref. 75349
Nd:YAG lasers, I_2-stabilized, absol. freq. meas. 86385
Nd:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Rb absorpt. line, Faraday effect-based semicond. laser-freq. stabilization 120610
Rb freq. and time std., devel. and appl. 131791
Rb freq. and time std., devel. and appl. 131792
Rb time and freq. std., devel. and appl. 131793
Rb time and freq. std., devel. and appl. 131794
Rb two-photon transit. freq.-doubled 1556 nm source, diode laser freq. stabilization 86373
^{87}Rb laser-cooled fountain, juggling at. clock 97127
Tm,Ho:YAG diode-pumped 2 μm opt. oscillator, spectrosc. & freq. metrol. 117159
Tm,Ho:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Tm:YAG diode-pumped 2 μm opt. oscillator, spectrosc. & freq. metrol. 117159

frequency synthesizers
see also direct digital synthesis; frequency convertors
8VSB DTV double-heterodyne TV tuner, phase noise anal. 120525
agile stored ΣΔ seq. fractional-N synthesiser 90775
BiCMOS dual-band freq. synthesizer, PCS cell phone 114643
BiCMOS modulated Σ-Δ freq. synthesizers, automatic calib. 125252
BWOs, phase lock-in of MM-/subMM-wave types, develop. and appls. 69459
charge pump PLL, pump current modulated, perform. 90804
CMOS charge-pump PLL, sample-reset loop filter 101861
CMOS digital freq. synthesizer 101817
CMOS DLL, 1GHz synthesis, freq. multiplier tech. *(English)* 125261
CMOS fractional-N freq. synthesizer, GSM/GPRS/EDGE appl. 101816
CMOS freq. synthesizer, Bluetooth technol. 90777
CMOS freq. synthesizer, charge pump, dual-path loop filter, PCS- and cellular-CDMA 125817
CMOS freq. synthesizer, LC-tuned VCO, wireless commun. 114644
CMOS phase-locked freq. synthesizers, stabilization tech., 2.4-GHz appl. 125816
CMOS PLL based on multiphase ring oscillator, interpolating inverter stages, 1.25-GHz 69226
CMOS PLL-based freq. synthesizer, wireless commun. systs., 0.9, 1.8, 1.9 and 2.4 GHz 102706
CMOS sync. oscillator, low-power design, HiperLAN syst. 101842
CMOS user prog. PLL freq. synthesizer, 1 V, GHz range design 102737
CMOS wireless receiver, on-chip filters and image rejection 131064
deep space commun., transponding modem, DRO perform. 131332
DSN spacecraft transponding modem, lin. phase modulator 131334
exponential sweep freq. generator 114661
FFH-SS commun. syst., rapid freq. change synthesizer 101814
FLL, FLL, based on CMOS F/V converter, design 91119
FM sig., digital synthesizer 79609
fractional-N freq. synthesis, spur reduction techs. 90779
fractional-N type PLL freq. synthesizer LSI for mobile commun. syst. 91331
Gaussian-MSK modulator, sigma-delta fractional-N freq. synthesis, DRRS band 101856
GMSK modulator using ΔΣ freq. discriminator-based synthesizer 108656
GSM 900/DCS 1800 prog. PLL-based fractional-N freq. synthesizer 91321
high-perform. PLL and synthesizers design 79639
high-speed prescaler dyn. D-type flip flop 131091
LMDS wideband subharmonically injection-locked freq. synthesizer 131107
low-noise synthesizer design using YIG-replacement oscillator 114983
low-power sync. oscillator in SiGe technol. for UMTS 2000 appls. 69199
Micro-RF Unit *(Japanese)* 85464
microwave freq. generation unit, space appls., downconverters/upconverters 98922
microwave freq. synthesizer, implement. and perform. anal. 69139
microwave synthesizer based on sampling-phase detector, nonlin. anal. 80315
microwave synthesizers, nonlin. dyn., stabil., phase-noise simul. 125716
Motorola MC13760 multi-mode transceiver for mobile telephones, digital interfaces *(German)* 131250
musical instrum. tones synthesis, perceptual wavetable matching 83992
musical sigs., anal. and synthesis, adaptive parametric schemes 97113
mW-level MM-wave sigs., direct optoelectronic synthesis 80405

frequency synthesizers continued
nonlin. effects and design guidelines for minimisation 91248
PLL freq. synthesiser, phase/freq. detector phase noise contrib. 90805
PLL freq. synthesizer in 0.8 μm Si bipolar prod. technol., 6.7 GHz 91320
PLLs, phase noise, SSCR vs. cycle-to-cycle jitter rels. 68652
plucked string instrums., automatic IIR anal./synthesis 120603
portable high-speed clock generator, full pull-in range, HDL 91001
prog. ultra-low noise X-band exciter 91278
pulsar synthesis, electronic music synthesis 86362
RF synthesizers, PLL switching speed and speed-up techs. 90774
sampling PLL freq. synthesizers, false lock avoidance 114646
serial input PLL freq. synthesizer design 68629
ΣΔ freq. synthesizers modelling/simul. 131788
tunable optoelectronic mm-wave freq. synthesis, opt. comb gen., uni-travelling-carrier PD 80388
UHF oscillators, low-power solid-state devices 69149
UMTS mobile commun., W-CDMA IF receiver and transmitter 108944
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
UMTS transceiver, PLL synthesizer, CMOS VLSI delay oriented waveform converter 102735
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
Xilinx Virtex II self-addressing FIFO using FPGA features 68797
zigzag sampled phase demodulation freq. synthesizer, chaotic phenom. *(Chinese)* 117892
zigzag sampled phase detect freq. synthesizer, Hopf bifurcation set, chaos *(Chinese)* 125249
Si PLL freq. synthesiser in 0.8 μm bipolar prod. technol., 7.35 GHz 91006
SiGe BiCMOS PLL freq. synthesizer, 10 GHz 115000
SiGe BiCMOS VCO and PLL freq. synthesizer for 5.7 GHz Hiperlan std. 91330
YIG PM tuned oscillator based synthesizer for LMDS LO appls. 80269

frequency triplers *see frequency multipliers*

frequency-voltage convertors *see voltage-frequency convertors*

fretting *see wear*

friction
see also stiction
3D finite element formulation for frictional behavior of rubber on ice and concrete surfaces 79123
aero engine wear failure, intell. diagnostics, debris anal. based method *(Chinese)* 133259
aperture-grille CRTs, dual dyn. vibr. suppression 80616
automobile sliding mode wheel slip controller perform. enhancement 100304
cage-IM, no-load losses, meas. methods 112525
cage-IM, no-load losses meas. methods 77882
DC drive, static subordinate speed control syst., state observers synthesis 100246
DC drive, subordinate speed control syst. synthesis, neg. viscous friction 100245
DC electromagnet energising proc., dyn. calc. *(Russian)* 93984
DC electromagnet switch transient proc., parameters calc. *(Russian)* 93983
DC motor drives, multi-model param./state estim. 123941
DC motor friction compensation, neuro-fuzzy control 88760
DC motor nonlin. friction compensation, adaptive control 88759
diamond-like C coating DC-RPECVD on OPC drum, DC power depend. anal., laser printer appls. 68225
fuel cell power modules, gaseous reactant flow 89175
gun/turret syst., DC motor drive, fault diagnosis, fault tolerant control 133416
hard disk coatings, characterization. of nano-wear mechanisms 68476
HDD, dyn. ramp load/unload friction testing 116452
HDD, head-disk interface tribology, accelerated testing 92843
head-disk interface, lubricant bonding fraction effect 70542
high-loaded wheel-rail contacts, frictional contact, speed depend. variability *(German)* 100268
hydrogen ventilation in batt. rooms for recombining VRLA batts. 89113
laparoscopic surgery simul., hybrid phys. deform. modelling 98607
lin. sync. reluctance motor, flux linkages, thrust, friction force 134082
mag. storage, layered materials, continuous stiffness meas. 92849
magneto-opt. disk, resin film, lubrication *(English)* 71243
MEMS systs., C coatings tribology 127080
MEMS tribology, overview 81545
micro-reducer, design, perform. and reliab. study, 3D micro-mechanisms 70339
mobile sync. generators, mech. motion-induced EMI 133970
NanoWalker miniature piezoactuated three-legged robot, micrometer/submicrometer step sizes, push-slip method 81750
padded slider friction, contact interface, lubricant meniscus 116437
pin fin microheat sink, thrust and frictional forces 78612
plate fin heat sinks, entropy generation minimization 78622
polyethylene acetabular cups, contact stress, wear/friction 76672
polysilicon MEMS, alkene based monolayer coatings 104181
robotic mapping of friction and roughness 97146
sheet metal deep drawing, intell. control, real-time meas. and ident. 113816
small specimen bulge test, sensitivity anal. FEM & Taguchi methods 90597
SMES coil, stabil. improvement, mech. losses reduction 78195
solder paste stencil printing, crit. factors affecting paste flow 80508
supercond. power transm. cables, coolant hydraulic charact. 88456
table drive syst., nonlin. friction, GMDH-based modeling/compensation 113082
US lin. piezoelec. motors, micro-positioning, learning nonlin. PID controller 77905
vac. cct. breaker high-speed cam mechanism studies 88997
variable struct. control toggle mechanism driven by lin. sync. motor with joint Coulomb friction 133977
windmill type US motor fab., torque, bidirectional rev. *(Korean)* 123533
Al-Si casting mold materials, surface modif. by plasma-based ion implant. *(Japanese)* 79423
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
C nanotubes, mech., friction at nanometer scale 92248
$a\text{-}C_{1-x}Si_x$:H alloys prep. by high plasma dens. source 68264
Cr_2O_3 plasma-splayed ceramic coatings, microstruct., high-temp. tribological props., additives effects 68409
Si polycrystalline MEMS, friction meas. 104184
SiN_x dual ion beam deposited H-free films, mech. and etching props. 127098

frictional electricity *see triboelectricity*
front-end processors *see satellite computers*
front-ends for online searching *see online front-ends*
FSK *see frequency shift keying*
FSS *see frequency selective surfaces*
FTTB *see optical fibre subscriber loops*
FTTC *see optical fibre subscriber loops*
FTTH *see optical fibre subscriber loops*
fuel
see also coal; fission reactor fuel; fusion reactor fuel; pulverised fuels
32 MW biomass integrated gasification-gas turbine technol. project 123224
36 MW straw-fired steam power plant project, UK 88581
117 MW peat-burning steam power station project, Ireland 88580
2000 MW lignite-burning power plant repowering project, Poland 88583
aerosol stream, drop av. diam. meas., diffr. method 109980
aerosol stream, drop size determ., diffractive method 109979
animal waste-fired steam cogen. plants 112302
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF te 110048
biomass gasification for elec. power generation appls. 123114
biomass resource facilities/conversion proc. for fuels and chem. 77683
biomass-fired fuel cells, techno-economic anal. 99605
cassava biomass fuel for power generation 77758
caverned large oil tanks, fibre opt. rem. inspection 123109
cement kiln firing, coke utilization, Hercules Cement Company experie 89486
cement kiln firing, petroleum coke utilization 89487
cement kiln firing oxygen enrichment concepts 89488
ceramics plant cogen. facility optim. studies 134700
Chinese biomass gasification technol. develop. overview 99452
cogen. power stations, elec./heat tariffs form. methods 77719
cogeneration operation dispatch, interactive best-compromise approach 112
condensing power stations, thermal efficiency, gas-expansion power units ef 88597
cryogenic fluid temp./liq. level meas. for space vehicle appls. 122514
direct methanol fuel cells, methanol electrochem. oxid. expts. 134372
forest/sawmill residues based elec. prod., Ireland 133866
gas heat pump systs., environ. friendly engine *(Japanese)* 122715
gas turbine fuel diversification for combined cycle plant appls. *(Germ* 123223
gas-turbine cogen. station energy efficiency indices calc. 133869
gasoline engine transient air-fuel ratio control using US flowmeter 100303
HEV perform. and fuel economy, batt. pack effects 89402
household sector energy consumption, Hong Kong, 1984-97 123851
hydrogen rich gas from plasmatron fuel converters, emissions reduction 133
hydrogen-based renewable energy syst. for rem. commun. stations power 88662
IGCC power plant economics, improved gas turbine power output project 99
IGCC prospects optimism, petcoke problem, clean coal 88618
indust. furnaces, fuel combustion status eval., image class. based method *(C nese)* 84118
inventory coord., hedging between natural gas/elec. power markets 133490
IPP elec., fuel-depend. pricing, CO_2 emission limitations 111763
large goods vehicles' electronic systs. overview 134589
liq. level-meter based on surface photo-charge effect 75776
long-term power generation fuel prices modelling/anal. *(Chinese)* 123095
modular TPP design 99535
municipal solid waste-fired CHP plants, UK operating experience 88582
natural gas operation of SOFC stack 99986
oil shale-fired CFB boiler, perform. charact. *(Chinese)* 77722
oil-fired power plants repowering to natural gas fired combined cycle pla 88614
Ospitale di Cadore biomass fired fluidised bed power plant 88555
power prod., probabilistic models, fuel limitations, environ. constraints 112
power stations, fuel oil handling systs., BHEL experience 112303
power syst. reliab. research, methodological aspects 88276
power/fuel shortages, macroeconomic losses eval. 88299
public liq. hydrogen filling station for automobiles, Munich Airport 99457
quasi-monodispersive aerosol, drop sizes, diffr. meas. methods 75866
reduced-temp. SOFC power systs. develop. 88664
Romanian biomass use perspectives 112212
Russian energy security requirements, oil and gas industries develop. 11221
Russian power security, regional aspects 111911
sewage sludge co-combustion in Boxberg lignite-fired power plant *(Germa* 123194
single-shaft combined-cycle units using water/fuel-oil emulsion 88617
small tubular SOFC syst., CeO_2 biogas internal reforming catalyst 89252
SOFC, natural gas fueled, zero CO_2 emissions 89199
SOFC power generation, gas species effects 99603
SOFC testing, results and interp. 99963
steam power plant boilers, three-staged fuel combustion anal. 112314
Taiwan Power Company's strategy for changes in fuel markets *(Chinese)* 771
UK fluid fossil-fuels supplies/demands forecasting 99462
vehicle hydrogen fuel prod., water electrolysis, elec. power requirement 1345
vol. meas. in aircraft, feedforward neural nets 111329
Ni-ZrO_2 cermet SOFC anode, internal reforming/electrochem. perform. stud 89250

fuel cell power plants
1 MW fuel cell power plant, distributed generation resource, Alaska 123269
10 kW pressurised tubular-type SOFC develop. 89193
25 kW planar SOFC power generation syst., Australian develop. efforts 891
biomass-fired fuel cells, techno-economic anal. 99605
CHP power plants, cost optim. 123271
dispersed fuel cell generation systs. planning optim. *(Korean)* 123270
dispersed generators allocation optim. for loss minim. 111966
distributed fuel cell power plant, economical feasibility 133909
distributed power generation microgrids 112021
distributed power generation technols. in crit. elec. power infrastructure 1122
environ. issues, review 112839
European SOFC develop. status 89190
hybrid MCFC-closed loop gas turbine power plant 99601
hydrogen-based renewable energy syst. for rem. commun. stations power 88662
ionic transport membrane technol. for oxygen separation/syngas prod. 99602
MCFC based combined cycle power plant, efficiency, pollution reduction 995
MCFC generation syst. rapid load changes, perform. implications 112437
micro gas turbine-SOFC reactor hybrid power generation syst. 99604
PEM fuel cells appls. in deregulated market place 133908

cell power plants continued
planar SOFC technol., Australian develop. program 89195
PV/PEM fuel cell power syst. for rem. telecomms. station 112392
reduced-temp. SOFC power systs. develop. 88664
SOFC power generation, gas species effects 99603
SOFC power plants develop. in US 88663
SOFCo planar SOFC products develop. status 89197
Sulzer Hexis SOFC product develop. status 89194
synthesis gas prod. using SOFC technol. 99989
tubular SOFC technol. progress 89192
Ni-YSZ anode of solid oxide fuel cell, internal steam reforming of methane 89172
cells
see also alkaline fuel cells; molten carbonate fuel cells; phosphoric acid fuel cells; proton exchange membrane fuel cells; solid oxide fuel cells
5 kW boost converter, multiphase control, fuel cell energy *(French)* 134363
50 W air-feed direct methanol fuel cell stack, develop. and operation 89158
AC motor drives, DC supplied, DC-AC conversion strategy optim. 123915
alternative fuel vehicles, life cycle model 78246
alternative vehicle powertrains, primary energy efficiency 134538
Ballard fuel cell technol. for power supplies in 21st century 89160
carbon fiber-based cathode develop. for semi-fuel cell appls. 89168
components, pore struct. anal., flow porometry 89163
direct methanol fuel cell perform., anode flow charact. 89162
direct methanol fuel cells, intermediates form. during methanol oxid. 134369
direct methanol fuel cells electrooxidation, ternary catalysts expts. 89179
direct-methanol fuel cell, proton conducting membrane morph. modif. 100024
dismounted soldier energy source options 88220
dispersed generators allocation optim. for loss minim. 111966
distributed generation, impact on power syst. *(Chinese)* 122792
distributed generation using alternative energy sources 77724
distributed power generation microgrids 112021
distributed power generation technols. in crit. elec. power infrastructure 112207
DMFC platinum-based electrocatalysts, methanol oxid. mechanisms 134370
electrochem. power sources, conf., Manchester, UK (April 2001) 78386
environ. issues, review 112839
EV, status, prospects *(Chinese)* 100286
EV energy storage technol. develop. *(Chinese)* 78231
EV power sources, Chinese develop. prospects *(Chinese)* 78230
EV secondary storage batts. comparison 124008
high-power dens. PMSM drive for fuel cell-powered HEV appls. 123970
hybrid vehicle drive train, systematic design approach 123968
hydrogen transportation fuel prod., municipal solid waste gasification 134540
methanol fuel cell methanol-resistant cathodic oxygen reduction catalysts 134367
methanol gas sens. using ultramicroelectrodes, studies on sens. mechanism 120993
methanol oxid. at batt. electrochem. co-deposited Pt-Os composite electrode 123775
MiCRO.tec 2000, conf., Hannover, Germany (Sept. 2000) 113199
mini storage systs. for elec. energy, mobile appls. 123990
mixed-reactant strip-cell direct methanol fuel cells, feasibility anal. 100023
Nafion based electrochem. cells, voltage-conc. rels. with enhanced slopes 99993
nanophase diamond, storage and release of hydrogen 100025
onboard fuel proc. for fuel cell vehicles, microreaction technol. 123991
overview and procs. 78164
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
portable power source, suitability of fuel cell 100006
power modules, gaseous reactant flow 89175
solid acids as fuel cell electrolytes 78165
technol., status, tech. and cost aspects *(German)* 123773
unmanned deep sea survey vehicles, fuel cell/batt. power supplies 89370
uracil alkyl derivatives, oxygen reduction rate on Pt catalysts 112821
H_2 generation by steam reforming of methanol over Cu-based catalysts for fuel cell appls. 134364
$La_{1-x}Sr_xCo_{0.98}Ni_{0.02}O_3$ perovskite-type catalytic fuel cell electrode material *(Chinese)* 112833
Mg-soln. phase catholyte semi-fuel cell optim. using Taguchi methods 89167
O_2 reduction on Teflon bonded $Pt/WO_3/C$ electrode in H_2SO_4, fuel cell appls. 100000
Pd anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt fuel cell electrocatalyst, CO adsorpt., NMR, voltammetry 100013
Pt nanosized catalysts for SPFC electrode, XPS/XRD 99949
Pt/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
Pt-Ru anodes, direct methanol fuel cell, poisoning species form. prevention 89164
Pt-modified PANI electrodes, methanol electrocatalytic oxid. 114458
PtMo/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
PtRu/C fuel cell electrocatalysts, struct. determ. using XAS and XRD 89165
Zn-air fuel cells, technol. and appls. 89176
cell element failure
see also coolant-fuel interactions
Phebus FP tests for LWR accident mgt. 123158
cell optimal control
hybrid EV, batt. as load levelling device, dyn. modelling, simul. and control 100277
cellment, subscription *see publishing*
cell wave rectification *see rectification*
cell wave rectifiers *see rectifying circuits*
cellerene compounds
used for doped, intercalated and substituted fullerenes
conf., syntheic metals, Gastein, Austria, (July 2000) 67405
endo-fullerenes, qubits, solid-state quantum computing appl. 125136
methano-[60]fullerene-Ag nanocomposite, opt. limiting effect 117427
methanofullerene neg. type e-beam resists, sensitivity improvement 103642
organometallic C_{60} derivative, self focusing-self defocusing transform. *(Chinese)* 117434
poly(p-phenylene ethynylene vinylene), pendant fullerenes, prep., opt. props. 79449
polythiophene/pendant fullerene, electropolymerization, spectra 114466
PPV-C_{60} films, electrostatic self-assembly for PV devices 114465
rhodamine-B cation fulleride salt, reverse saturable absorpt. 128469
ZEP520 resist, fullerene-derivative incorporation, contrast enhancement 69978
Au nanoparticle/C_{60} nanocomposite, NLO props. 117424
C_{60} and metal derivatives, opt. limiting, picosecond reverse saturable absorpt. 71958
C_{60} derivatives, electron beam resists, systematic study, spin coating, derivative films 92239

fullerene compounds continued
C_{60} derivatives, substituents effect on NLO props. 82810
C_{70} and metal derivatives, opt. limiting, picosecond reverse saturable absorpt. 71958
C_{60}-2-thioxo-1,3-dithiole cycloadduct, phase transform., NLO diagnostics 93791
C_{60}-bipyridine Fullerence based nanocomposite, opt. limiting *(Chinese)* 128465
$C_{60}F_x$ thin films growth, STM, HREELS 114282
ITO/conjug. polymer-fullerene/Al PV cells, admittance and ESR spectra 127944
fullerene devices
computational nanotechnology with carbon nanotubes and fullerenes 80532
copper phthalocyanine/C_{60} DH PV cells, high efficiency 100026
fullerenol doped polyurethane elastomer actuators 104449
local reactivity, nano-device appls. 125131
multilayers on ITO surface, rectified electron transfer 115217
phthalocyanine-fullerene PV devices, elec. charactn. 123826
polymer-fullerene PV cells, spectrosc. 100212
polymer/fullerene bulk heterojunction solar cells, inert gas atmos. 123831
polythiophene/C_{60} PV cells, charact. 123824
TFT controlled C nanotube field emission devices, display appls. 115215
C free-standing multiwalled nanotubes, low-noise SETs for ultrasensitive electrometers 69360
C nanotube cathode flat-panel struct., FED 132103
C nanotube triodes, fab., high emission current dens. 80586
C nanotubes, electron spin transport 80527
C nanotubes, electronic devices/luminesc. elements *(French)* 80528
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
C_{60} mol. transistor, memory/adder model 125932
C_{60} vibr. SET, single-electron tunneling, nanomech. props. effects 103929
C_{60}:P, ion implant., for PV appls. 78174
C_{60}/C nanotubes, opt. limiters, mechanisms *(French)* 82823
C_{60}/a-C superlattice struct. solar cell, nitrogen doping effects 112889
fullerenes
used for polyhedral C_n molecules (including their radicals and ions)
see also carbon nanotubes; fullerene compounds
4-butyloxy-4′-cyanobiphenyl doped PVK-C_{60} composites, photorefr. props. 105470
copper phthalocyanine/C_{60} DH PV cells, high efficiency 100026
2-cyclooctylamino-5-nitropyridine:C_{70}, opt. limiting effect, absorpt. saturation 128470
2-cyclooctylamino-5-nitropyridine-C_{70} syst., laser radiation opt. limitation 105482
fullerene-containing media, laser radiation NLO limiting 128463
fullerene-containing media, laser radiation opt. limitation, light-induced scatt. role 71961
fullerene-containing PDLC, thin phase holograms recording 83021
fullerene-doped polyimide struct., IR laser irrad., opt. limiting effect 105486
local reactivity, nano-device appls. 125131
multilayers on ITO surface, rectified electron transfer 115217
nanomaterials as opt. limiters, review 71957
photo-oxid. induced polycondensation resin, photo-curing depth-profile 104594
poly(3-hexylthiophene)-C_{60}-C nanotube nanocomposites, elec., opt. props. 115357
poly(ethynylene)arylenesilane opt. chromophore/C_{70} fullerene polymer nanocomposites, photorefr. effects 128435
polyimide-C_{70} syst., refr. index light-induced var., holographic data storage 105587
polymer/fullerene bulk heterojunction solar cells, inert gas atmos. 123831
polythiophene/C_{60} PV cells, charact. 123824
PVK/C_{60} composite films with photoinduced charge transfer, props. *(Chinese)* 113013
synthesis in solar furnaces *(French)* 79470
C_{60} and metal derivatives, opt. limiting, picosecond reverse saturable absorpt. 71958
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
C_{60} chains synthesis within single wall carbon nanotubes 68455
C_{60} fullerene-containing nonlin. media photodynamics 128461
C_{60} vibr. SET, single-electron tunneling, nanomech. props. effects 103929
C_{70} and metal derivatives, opt. limiting, picosecond reverse saturable absorpt. 71958
C_{70} fullerene-doped organic thin films, holographic grating recording 128571
C_{70} fullerene-doped polyimide systs., effective opt.-power-limiting materials 128464
C_{60}:P, ion implant., for PV appls. 78174
C_{60}/C nanotubes, opt. limiters, mechanisms *(French)* 82823
C_{60}/C_{70} incorp. nanocomposite resist syst., nanolithography 92238
n-C_{60}/p-ZnPc interdigitated jn. for PV cell efficiency improvement 116960
C_{60}/zinc phthalocyanine supersonic mol. beam co-deposition, optoelectronics appl. 69626
C_{60}-doped NLC films, holographic image storage 105598
C_{60}-polymer composite films, photocond. *(English)* 127901
C_{70}-doped polyimide films, ps radiation freq. conversion 93793
GaAs:C_{60}, MBE growth, migration enhanced epitaxy 90283
SiC thin films on Si, seeded supersonic C_{60} beam depos. 68182
SiC(111) growth by C_{60} decomp. on Si(111), electron spectroscopies 114269
function approximation
see also Chebyshev approximation; interpolation
3D dielec. targets near lossy half space, multilevel fast multipole algm. 72216
approx. value iter. with randomized policies 78981
asymptotic representation of Euler gamma fn. by Ramanujan 114031
at. fns. theory appl. in antenna synthesis problems 117760
Bernstein approximants and ϕ-var. of fuzzy random variable 67951
Bernstein quasi-interpolants 100997
curvature-depend. motions of sets, convergence of approx. 124628
cylindrical fns., num. calc., transitional regions, asymptotic series 124627
differential eqn. solving via rationalized Haar fns. 79063
double-beam orotron with irregular double comb, optim. using at. fns. 115260
DS/SS code acquisition using locally suboptimum rank detector 107586
DS/SS systs., PN code acquisition using signed-rank-based nonparametric detectors 107584
DSP, small argument fn. approx. *(Russian)* 73562
DSP, spectral props. of at. fns. 95707
efficient fn. approx. for embedded and ASIC appls. 125190
electrodynamics BVP, R-fn. method 117605
expansion over, rectangle of real fns. in Bernoulli polynomials and appls. 114023
fast multipole scatt. models, half-space Green's fn. eval. 94000
fuzzy set shape in adaptive fn. approx. 100821
genetics-based machine learning algm., optim. in linguistic fn. approx. 90055
hybrid perceptual image proc. using interpolating wavelets 98162

function approximation continued
implicit fn. theorem for locally Lipschitz fns. 100989
interpolational alg. polynomial expansion, iter. approach, at. fns. 114026
inversion approxs. for fns. via s-power series 114012
irises/slots in microwave structs., FDTD modeling 91208
lin. antennas anal. and synthesis using at. fns. 117752
meta-patterns and higher order meta-patterns in cellular systs. 114056
mobile radio channel simulator, hybrid DSP-FPGA archit. 108868
modified Taylor approx. of fns. with periodic behaviour 67944
MRI-SPECT vol. images, multimodal 3D image registration 76430
multidimensional PDF approxs. for detect./class./model order selection 119085
multimodal ICA, feature extraction from multiple inform. sources 94776
neuro-dyn. prog., research, survey *(Chinese)* 113954
normalized diode charact., anal. approx. 115833
O-type relativistic TWT, efficiency optim. using at. fns. 115271
OFDM systs., fuzzy adaptive sig. predistorter 129970
Pade-Legendre approximants, recursive computation 114055
penalty approxs. to stationary power-law NS problem 114128
pos. fns. factorization 128936
preservation props. by Bernstein-type operators 67973
reciprocal approx. theory with table compensation 90877
rigorous and portable std. fns. 114024
robust fn. approx., ellipsoidal fuzzy rules *(Japanese)* 101003
ROM-less direct digital freq. synthesizer, sine-output, 2nd-order parab. approx. 68628
scalp pot. fast comput., EEG forward problem, BP ANN 87398
sens., dyn. meas. using ANN 120605
smooth fitting under genetic prog. algm. 67881
stochastic approx., violated Kushner-Clark conditions, anal. 78817
SVM clssifier massively parallel archit. 102461
symbolic regression, num. robust, hybrid genetic prog. approach 79004
tomographic image reconstruction, stat., Newton-SOR method *(Japanese)* 132850
truncated Faber series, computation of fns. of matrices 114028
ultrasound speckle modeling, neuro-stat. approach 87505
zero order prolate spheroidal fns., eigenvalues calc. 90065

function evaluation
Arcangeli's discrepancy principle, modified projection scheme for ill-posed problems 100972
code geom./decoding error probab. rel. 129119
completeness theorems for secure two-party computation 72952
computing Hilbert transform of generalized Laguerre and Hermite wt. fns. 114197
dens. of cubic field discriminants 114004
DS-CDMA, Schur-saddle fn. property 131234
efficient fn. approx. for embedded and ASIC appls. 125190
entropy, majorization lattice supermodular fn. 128955
FPGAs, sine/cosine fns., table-based methods comparison for low-precision eval. 90876
min.-latency secure fn. eval. 106312
multichannel blind sig. deconvolution, adaptive algms./stabil. anal. 107460
on-the-fly range reduction 90808
optim. of fitness fns. with non-ordered params. by GA 90045
quantum sigs., reliab. fn. props. 72982
VCSEL, soliton-like topol. defects in transverse polariz. patterns 128294

function generators
see also pulse generators; signal generators; waveform generators
mag. sens. noise meas., DAQ syst. 127402
reconfigurable ANN with GA training, cct. design *(Chinese)* 102481
universal immittance fn. simulators using current conveyors 91028

function point analysis *see software cost estimation*

functional analysis
see also harmonic analysis
2nd-derivative test, uniqueness theorem 67709
center fn. on trees 113924
continuous functionals, parallel minimisation, nonlin. ccts., defn. 101692
EM theory, auxiliary fns. 83076
generalized quasi-variational-like inclusions with nonconvex functionals 100973
hypergeometric fns. transform. 78976
mappings sharing, value on finite-dimens. spaces 78975
MoM, grid-robust higher order vector basis fn. 83085
nondifferentiable minimisation, block coord. descent method 78918
nonlin. proc. of non-Gaussian, non-coherent sigs. in colored noise 119013
piezoelec. actuators, hysteresis and creep effects, real-time inverse feedforward controller 92679
sensitivity eqn. methods for param. depend. ellipt. 114127
spectral anal. for light field rendering 94570
speech recog., nonlin. decomp. into Volterra-Wiener functional series 106417
topol. preserving inside-outside fns. for simple closed curves 113934
WDM-OTN OXC network element mgt. 85129

functional equations
act. contours and surfaces, smoothness measures 118251
adaptive-rest condition spring syst., edge-preserving regularization 94952
antenna array synthesis from curvilinear radiators with account of mutual influence 117832
antenna pattern approx. by at. fns. 117754
antenna pattern approx./lin. radiator synthesis based on at. fns. 117753
at. fns. appl. to interpolation problems 114025
bicone resonator with opt. cryst., electrodynamic charact. investig., R-fn. method 117736
comonotonically additive functionals, extension/representation 67716
composite functionals, two-sided second-order epi-derivatives 100748
conical slot antenna excitation 117772
convolution type discrete nonlin. integro-DE, num. stabil. 68050
DE, num. methods and delay syst. stabil. 67721
delayed bi-directional associative memory networks, exponential stabil. 68979
diffusion snakes, stat. shape knowledge and image inform. in variational framework 118255
double-beam orotron with irregular double comb, optim. using at. fns. 115260
even order neutral differential inequalities 90102
FFH/BFSK with product combining over partial-band jammed Rayleigh-fading channels, BER perform. 119873
filtering for lin. systs. with fractional Brownian motion 84744
first-order impulsive functional diff. eqns. in Banach spaces 124709
fuzzy soln. for nonlin. fuzzy neutral functional DE, existence and uniqueness 101074
generalized scale-selection 94565
geometric act. contours, incorporation of shape priors 121886
image proc., level set algm. for Mumford-Shah functional minimization 118256

functional equations continued
impulsive functional diff. eqns. with infinite delays, stabil. results 79085
Lempel-Ziv parsing scheme for Markovian source, av. profile 129010
lin. antennas anal. and synthesis using at. fns. 117752
line spectrum estim., data-adaptive regularization method 118886
Lyapunov-Razumikhin method for impulsive functional DEs and pop. dyn. ap 68017
med. image magnification, curve evol. approach via Mumford-Shah functio 87311
multi-modal image matching, variational approach 118250
multivariate Pade approximants to meromorphic fn. 124616
Mumford-Shah functional, num. minimization 124680
Mumford-Shah functional for image segment tion/denoising/interpolation/magnification 94779
nonlin. functional difference eqns., asymptotic formulae 90126
nonlin. functional difference eqns., pos. solns. 90096
nonlin. neutral functional-DEs, dissipativity and exponentially asymptotic stab 68033
O-type relativistic TWT, efficiency optim. using at. fns. 115271
optim., functional inequality constrained, computational discretization algr 78892
PDE approach to image smoothing/magnification using Mumford-Shah fur tional 106748
semiclassical orthogonal polynomials of class (2,2) 90073
solid state wave gyro, dyn. elastic procs., num. investig. by at. fns. 114970
speech-sig. proc., at. fns. based wt. windows constr. 72989
stochastic difference second kind Volterra eqns., solns. integrability 67720
Trace transform and appls. 106497
tracking-syst. control sigs. synthesis 109235
two-variables functional eqn. oscill. 90095
uninorms and nullnorms, functional eqns. 67780
unstable manifolds for RFDEs under discretization, Euler method 101099
vector optim., ideal points, dens. theorems 100905
vector/scalar pot., general expressions 117622

functional MRI (biomedical) *see biomedical MRI*

functional neuromuscular stimulation *see neuromuscular stimulation*

functionally graded materials
broadband US transducer, graded piezoelec. const. plate, temp. gradient 1115
elec./thermal functionally graded ceramic systs. 114440
tetra-substituted porphyrin, gas sens. appls. 109793
$BaTiO_3$-$SrTiO_3$ syst., functionally graded struct., microstruct., dielec. prop 116178
$Pb_{1-x}La_xTiO_3$ La-graded heterostruct. films, sol-gel prep. and elec. charact 104401
$Si/Si_{1-c}Ge_c$ gradient mixed cryst. solar cell struct., photogenerated curre response *(Chinese)* 89274

functions
see also Bessel functions; Boolean functions; describing functions; Green's function methods; nonlinear functions; random functions; rational functions; recursive functions; switching functions; transfer functions; transforms; vert functions; Walsh functions
2D Lagrange-Yen type interpolation in Paley-Wiener fns. space 107405
2D wavelet-like basis fns. 78773
anisotropic diffusion eqn., init. conditions, sing. solns. 67718
basis fns. for 3D finite element EM anal. *(Japanese)* 117606
bone dens., tetrahedral mesh modelling of data for anatomical atlases and intens based image registration 87739
CDMA M-ary syst., complete complementary seqs. of 4-phase orthogonal sec 130307
comonotonically additive functionals, extension/representation 67716
convex fns., cone of recession and unboundedness 100907
correl. param. tuning, genetic meta-algm. 78882
digital sig. smoothing by orthogonal polynomials 130005
discrete-time $Geo^X/G/1$ queue, preemptive resume priority 78780
evol. algms., self-adaptive params. adaptation 124597
framelet explicit constr. 118932
generalized polygonal basis fns. for EM simul. of complex geom. planar struct 91232
global optimality conditions via separation fns. 67910
hyperdifferential operators and continuous fns. on fn. fields 89997
ICA model, source distrib. adaptive MLE 107445
IIR filters with variable delay, optimal design 118983
implicit fns./multi-fns. and stationary points, contingent derivatives 100854
logic fns., evol. synthesis using MUX 114679
lower semicontinuous fns. in normed spaces, error bounds 100918
LSC87 coprocessor, transcendental fns. *(Chinese)* 68846
mappings sharing, value on finite-dimens. spaces 78975
max. fn., logarithmic smoothing 100939
multivariate normal PDF value, improved bounds and simul. 89982
multivariate tight frame constr. via Kronecker products 118931
non-Lipschitzian program, marginal fn., upper subderivatives and generalize gradients 100942
one-point alg.-geom. codes, parity-check fns. 117942
orthogonal scaling fns. series expansions 114205
parametric adaptive sig. decomp. based on Gaussian elementary fns. *(Chines* 73614
quasilinear parab. eqns., DC type nonlin., generalized quasilinearization 6771
random lower semicontinuous fns., ergodic theorem 79443
sample normalization 67771
separable lower-semicontinuous piecewise-lin. fns., mixed-integer zero-one rep resentations 100921
Taylor coeffs. of analytic fns., validated bounds 113834
tomography, discrete, med. appls. 76546
ultraspherical polynomial based window fns. and appls. 78744
vol. skeleton algm. using penalized dist. fn. 106671
zero order prolate spheroidal fns., eigenvalues calc. 90065
zeta measures over fn. fields 100879

fundamental constants *see constants*

furnaces
see also electric furnaces; refractories
blast furnace, pulverized coal injection, video monitoring, image anal. 13467
blended materials, moisture content and dens. control, VNS-7652M neutron-mea suring and computing apparatus *(Russian)* 87196
boilers, LIFAC FGD proc. perform. improvement, modelling, China 88559
brown coal-fired boiler retrofitting for waste wood incineration *(German)* 9954
diffusion furnaces, thermocouples, meas. uncertainty 109515
fullerenes, synthesis in solar furnaces *(French)* 79470
indust. furnaces, fuel combustion status eval., image class. based method *(Chi nese)* 84118

naces continued
lignite fired power station furnace cleaning using water cannons 88588
low-NO_x combustion chamber optim. using CFD simul. 134652
MSW incinerator combustion chamber, bed combustion, gas flow 134653
power plant technol., CFD/CRFD appls. 133865
pulverised coal flames, concurrent temp. & soot conc. meas. 124096
reheating furnaces modeling and optim., design of simul. syst. *(Chinese)* 78337
resist. heated FZ furnace, radiative heat transfer, FIDAP num. study 114223
steam boiler furnace incident radiation fluxes determ. 123201
steam power plant boiler furnace reconstruction, requirements, tech. solns. 112313
steam power plant boilers, three-staged fuel combustion anal. 112314
TPP, optimal coal firing, flame image proc./anal. syst. 133867
wafer batch furnace proc., develop./appls. 70244
GaLaS opt. fiber drawing in convective furnace, strength testing 127666
mc-Si solar cells, single furnace-step proc. 100091
SnO_2:Sb coated Neoceram-0 glass-ceramic transparent furnace made of heat mirror 104879
TiCuAg-AlN fritless conductor syst. for power electronic appls. 68558

s, electric *see electric fuses*

ion reactor divertors
FIRE, engng. status 72200
FIRE, syst. integrat. 72202
ITER, fusion technol. develop. in JAERI 71066

ion reactor fuel
NIF fuel capsules, fluid props. meas., opt. reson. US spectrosc. 99102
TORE-SUPRA natural diamond detector, proton spectra diagnostics 121619
^{3}He-based and D-based fuels, comparis. 76818

ion reactor ignition
see also fusion reactor materials; laser fusion; plasma heating; plasma production
conf., energetic part. mag, confine. syst., Naka, Japan (Oct.1999) 113240
FIRE, magnet syst. structural anals. 72201
FIRE, syst. integrat. 72202
indirect fusion targets for HI driver, VNIIEF studies 97885
Integrated Research Experiments facility and driver, beam simul. 97890
RF linac total driver energy for HI plasma ignition, review 97910
tokamak collect. Thomson scatt. diagnostic for fusion product α-particles 117071

ion reactor instrumentation
see also fission reactor instrumentation
BC422 plastic scintillator based neutron detector for fusion burn hist. meas. 97938
Central Solenoid Model Coil, instrumentation and coil insert 75979
conf., energetic part. mag, confine. syst., Naka, Japan (Oct.1999) 113240
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
directional neutron detector for compact fast neutron camera, fusion reactor appl. 121561
high power dens. solid-state laser, opt. components wavefront PSD meas. *(Chinese)* 71868
in vessel nuc. fusion reactor viewing syst., amplit. modulated laser radar 105655
ITER, radiation-resistant WDM opt. link 131565
JT-60U D plasma diagnostics, neutron detector comparison anal. 121751
mag. probe coils constr. using thick-film technol. 97203
Nat. Ignition Facility, optic spec. rationale 104865
NIF opt. component wavefront meas. instrumentation, init. mfg. results 110024
opt. components fab. for NIF laser 104864
large plano optics mfg. facility develop. for Nat. Ignition Facility 105404
small opt. components for Nat. Ignition Facility, procurement strategy 104866
high av. power solid state laser, diode pumped, output charact., indust. appls. 105211
tokamak collect. Thomson scatt. diagnostic for fusion product α-particles 117071
TORE-SUPRA natural diamond detector, proton spectra diagnostics 121619
XeF laser amp., intra-cavity ASE, nanosecond pulses high-energy extraction 82500
XeF laser driver, rep-rate electron beam-pumped, electron-beam transportation expts. 105128
Nd:glass high-energy laser fusion PROGRESS syst. with shaped nanosecond laser pulses 105217
Nd:glass multichannel high-power laser facility, rem. control alignment 105216
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
O_2-I high-press. pulsed laser with instantaneous I generation, operational charact. 105079

ion reactor materials
see also fusion reactor divertors; fusion reactor fuel; fusion reactor targets; radioactive waste
central solenoid model coil, design principles/procedures, ITER appl. 104582
FRP laminate ITER coil insulation, neutron irrad., dielec. strength 81727
JFT-2M TF ripple expts. using ferritic steel inserts 116246
KSTAR Tokamak supercond. magnet-supporting post, low temp., structural safety assess. 81990
Samsung supercond. test facility, AC losses/heat removal in 3D winding pack 104588
TF model coil magnets, ITER R&D 104583
Nb_3Sn strand/joint develop., ITER R&D 104581
NbTi fine filament supercond. strands, develop. for fusion reactor magnet systs. 82002
SiC-SiC composites for fusion reactors, mech. props., interfacial strength 68426

ion reactor operation
feedthroughs, for high-power ICRF antenna, HV test 72700
FIRE tokamak, elec. power supply options 77980
HTSC levitation coil for fusion plasmas mag. confine. 71032
Samsung supercond. test facility, AC losses/heat removal in 3D winding pack 104588
Nb_3Al multistrand supercond. fusion magnets develop. 71026

ion reactor targets
used for inertial confinement fusion targets
ICF target materials from safety/environ. perspectives 99481

ion reactors
see also fusion reactor ignition; fusion reactor instrumentation; fusion reactor materials; fusion reactor operation; nuclear engineering; plasma heating
60 kA HTS current lead for fusion magnet appls. 77407
HTSC current feeders for large-scale supercond. coil appls. 71058
ITER full-size cable-in-conduit-supercond. tests 77399
Levitated Dipole Experiment floating coil using react-and-wind Nb_3Sn conductor 71033

fusion reactors continued
supercond. current feeder syst. for Large Helical Device 77412
Nb_3Sn cable-in-conduit superconds. for fusion reactor appls. 77398
Nb_3Sn sub-sized cable-in-conduit supercond. cables for ITER Central Solenoid 71063

fusion splicing *see optical fibre fabrication*

future developments *see technological forecasting*

Futurebus *see system buses*

futures trading *see commodity trading*

fuzzy control
3D laser color scanning syst. *(Chinese)* 109410
AC line voltage regulator implement. using fuzzy control theory 122846
AC monophase motor drive, ST52 fuzzy microcontroller 123893
AC motor self-tuning PID adaptive speed controller 123334
AC servomotor neuro-fuzzy speed controller design 133945
AC-DC converters for high precision DC drive systs. supply, fuzzy control 134159
AC-PWM universal motor, sensorless speed control scheme 89361
act. filter, fuzzy controlled, optimum duty cycle design 122984
act. power harmonic filter capacitor, energy storage fuzzy control 89036
adaptive fuzzy PSS design using GA, ANN 88383
adaptive PSS, fuzzy logic tech., freq. domain anal. 77223
adaptive QoS provisioning distributed call admission control 131275
arterial unloaded situation modelling, oscillometric blood press. waveform meas. 121899
asynchronous AC drive adaptive fuzzy neural power control 134430
ATM congestion control based on SELA *(Chinese)* 73818
ATM networks, feedback fuzzy leaky bucket 96335
ATM networks, intell. leaky bucket algms. for sustainable-cell-rate usage param. control 107775
ATM prioritised switch, fuzzy congestion controller design 73801
ATM traffic control, fuzzy logic controller 107649
ATM/IP networks, fuzzy buffer mgt. 119166
automatic channel equalization, digital data transm., embedded fuzzy control 96342
autonomous chasing robot, fuzzy control algm. 99075
batt. charging proc. control, neuro-fuzzy-genetic approach 134143
BLDCM, fuzzy control by gray prediction 134073
boost switching regulator, piecewise PWM/sliding-mode control, fuzzy controller design 99772
car wiper motors, brush PMDC motor drive, fuzzy logic controller 89359
car-following collision prevention, adaptive network fuzzy inference syst. 113119
catenary cable tension control, fuzzy robust feedforward control 133760
CDMA soft handoff thresholds, adaptation using fuzzy inference syst. 85760
cellular mobile commun., mobile station rate, base station dist. and received sig. strength 108767
chaotic systs., sig. sync. and secure commun., LMI based approach 105990
closed-loop telecommun. traffic control, fuzzy set theory/fuzzy logic 73820
CMP, optimal, neuro-fuzzy inference 92005
color image proc., histogram based multichannel filter 118219
coupled drives syst., fuzzy-genetic controller 123945
current-sensorless feedforward act. rectifier 134160
DC aerospace servomotors, ZVS convertor-fed, fuzzy-based speed control 123500
DC motor control, neuro-fuzzy controller archit., PI regulator adaptation 99683
DC motor drive fuzzy logic PI speed control scheme 123944
DC motor friction compensation, neuro-fuzzy control 88760
DC motor neuro-fuzzy speed control systs. 112545
DC servomotor adaptive fuzzy sliding-mode controller 99689
DC servomotor speed control, adaptive fuzzy logic controller design, tabu search 134071
DC shunt motor, speed control, nonlin. control design methods eval. 88765
DC shunt motor drive, neuro-fuzzy control 100253
DC-DC converters, reson., fuzzy control 134324
DC-DC switching regulator, two-rules-based boundary layer fuzzy control 99770
DC/DC converters, fuzzy rule proc. based nonlin. control syst. 112626
deadzone compensator of DC motor syst. using fuzzy logic control 77884
diesel generator sets, small alternators, digital AVR 88716
digital commun. network traffic flow fuzzy successive av. 108061
distrib. line control, load fluct. compensation, fuzzy control, SMES 77311
distrib. syst. fuzzy multiobjective optimal control approach 133540
distribution network, reconfiguration, capacitor switching coord., fuzzy GA *(Chinese)* 77317
DS-CDMA cellular mobile station power control by error approx. 108896
dyn. weighing syst., meas. error correction, fuzzy controller *(Chinese)* 110010
edge-preserving filters using layered fuzzy controllers with learning 118333
electroheat procs. fuzzy knowledge appl. *(Polish)* 124093
electromechanical systs. control-sig. form. 113074
ET-RR-1 Egyptian research reactor, fuzzy logic controller 99523
extended integral load freq. control scheme 111897
FACTS OPF scheme, hybrid model 111887
flexible manipulator sliding mode posn./vibr. fuzzy controller 134319
fork lift vehicle speed control, DC motor drive, GA 134551
GPS carrier phase meas. for freq. sync., fuzzy & PD control 86378
grid-connected PV, single phase inverter, fuzzy predictive current control 112421
hierarchical cellular syst. with fuzzy control, channel assignment/layer selection 96499
high-speed networks, fuzzy admission control scheme 130193
human visual perception mimicking for fuzzy robot navig., terrain traversability 129530
HVDC fuzzy logic controller optimal design, GA 133593
hybrid EV starter/generator fuzzy control expts. 134522
hybrid PV batt. diesel syst., fuzzy control 112400
hydropower plant turbine governors, surge tanks fuzzy control scheme *(Chinese)* 112343
hypersonic flight control, GA appl. 122539
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IM, fuzzy logic based multimodel field oriented control 88743
IM, fuzzy optimal volts/Hertz control method 123412
IM, fuzzy robust field oriented control 99662
IM, neuro-fuzzy controller design on DSP 134053
IM, PWM rectifier/inverter-fed, control strategies 123908
IM drive, fuzzy controlled, loss minimization 123867
IM drive, hybrid fuzzy/PI two-stage controller 123863
IM drive DTC using fuzzy variable switching sector 134502
IM drive efficiency optim. fuzzy control *(Korean)* 113079

fuzzy control continued
IM drive fuzzy Volts/Hertz control scheme 100241
IM drive high-perform. adaptive parallel distributed compensator 123866
IM drive speed control, fuzzy-logic controller, DSP syst. 89347
IM drives, fuzzy logic direct torque control 123918
IM indirect field oriented control, PI controller design 134429
IM model ref. adaptive fuzzy speed control approach 123479
image proc., fuzzy tunable filter based on differences between pixels 118233
indirect vector-controlled IM drive, PI/fuzzy estimators 123874
induction servomotor syst., adaptive fuzzy sliding-mode controller design 123699
inductive ccts. current phase fuzzy control scheme 101725
intell. building EMS using LAN technol. 89316
intell. components/instrums. for control, conf., Buenos Aires, Argentina (Sept. 2000) 113254
intell. posn. controller-based adaptive self-tuning drive syst. 134449
large-scale nonlin. OPF problems, fuzzy corrector terms 99267
launch vehicle, secondary injection thrust vector control power plant lin., fuzzy logic appl. 98919
load power fluct. leveling, fuzzy neural net control *(Japanese)* 111910
MEMS sens. microbattery power supply, fuzzy solar charge controller 86769
microbatteries, fuzzy logic-based solar charge controller 112657
micropumps and microvalves, fuzzy controller, chip design 116080
modelling with multivariate membership fns., gray-box ident. and control design 124736
modulated fuzzy syst., chaotic systs., secure commun. 94372
monolithic switching regulator, fuzzy logic control, BCD technol. 99769
multi-machine power syst., sync. generators, fuzzy control learning 88714
multimedia IT based on fuzzy control 130978
multivariable generalized predictive control, Takagi-Sugeno fuzzy model 111832
μP implement. 102468
nonlin. chaotic Chua ccts., robust tracking control, fuzzy approach 90678
nonlin. optim., constrained, using neurofuzzy systs. 100956
nuc. reactor load follow capability, fuzzy adaptive robust optimal controller 123133
oil fired power plant boiler, multivariable fuzzy model predictive control 99544
online ident. and control of distortion inform. flow in PCN based on fuzzy control technol. 119783
opt. implement. of fuzzy logic-based controllers 71452
optimal distrib. load flow using fuzzy multi-objective decisions 111819
paraplegic subjs. standing, ankle control, neuro-fuzzy ang. inform. extraction 87801
photolithography proc. intell. CD control 100718
pipelined mixed-sig. fuzzy logic controller with linguistic hedge modifiers 68956
PM DC motor drive, neural controller, fuzzy controlled training algm. 113070
PM sync. motor drive, adaptive fuzzy logic control perform. anal. 89318
PM sync. motor fuzzy logic controller modelling 123352
PMSM drives, adaptive fuzzy logic-based nonlin. robust control 134493
power electronics, control using AI, review 90716
power syst. damping using fuzzy-controlled UPFC 111858
power syst. stabilization fuzzy logic-based PID control scheme 99300
power syst. stabilization using plane-type fuzzy control method *(English)* 88344
power syst. stabilizer, adaptive fuzzy control tuning 133529
PSS, params. tuning method, GA, simulated annealing *(Korean)* 77268
PV power syst. fuzzy logic load control scheme 112436
PWM AC/DC converter, predictive-fuzzy control 88970
PWM buck and boost DC-DC converter, simultaneous digital fuzzy control *(Korean)* 123584
PWM invertor-fed IM, fuzzy posn./speed control 123433
PWM rectifier fuzzy logic feedforward current scheme 123617
qtr.-car suspen. syst., fuzzy logic controller design 78317
quick-return servomechanism, adaptive fuzzy neural network control 77903
rectifying power supplies, computer-based supervision 88807
reson. DC-DC power converters, adaptive fuzzy control algm. 112658
robotic part assembly, neural/fuzzy optimal proc. model 100570
rules adaptive fuzzy controller based on neural network, AC servo syst. *(Chinese)* 112732
self-tuning dual input power syst. stabilizer, ANFIS-based 122876
sens. integrat./fusion model using fuzzy inference syst. 84665
sensorless induction spindle motor drive, fuzzy NN speed controller 123904
single-phase PWM AC/DC power converter, fuzzy-neural controller studies 134242
solar-TPP, gain-scheduled fuzzy PI control scheme 133902
sound speaker mfg., automated QC by neuro-fuzzy approach 120599
spacecraft temp.-control valve, fuzzy-PID control *(Chinese)* 88055
squirrel cage motor, direct/indirect space vector control methods 123923
SRM drives, fuzzy logic torque ripple reduction, turn-off angle compensation 78221
stabil. enhancement, elec. double-layer capacitor, fuzzy switching control 111870
stand alone PV systs., fuzzy logic controller 112401
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
subband coded image quality, fuzzy control, std./fuzzy quality measure 118517
substation voltage and reactive power fuzzy control, online forecasting *(Chinese)* 99859
supercond. generator control, adaptive/fuzzy logic stabilizer comparison 77814
switching regulators 101761
sync. generator fuzzy adaptive control scheme 123395
sync. generator fuzzy excitation stabilizer 99637
sync. generator stabilisation, fuzzy logic-controlled braking resistor scheme 122848
sync. generator voltage/freq. fuzzy control using TMS320F240 DSP 123374
target tracking by hierarchical grey-fuzzy motion decision-making 84645
TCP/IP Diff-Serv, congestion control using fuzzy RED 119272
TCSC firing angle control, fuzzy controller design, tabu search 134338
thermal control with image proc. and fuzzy controllers 129591
thermal power station, control syst., fuzzy regulator 88561
thermal waste treatment, multivariable fuzzy control, neural nets *(English)* 123195
three-phase fuzzy-controlled shunt act. power conditioners 122907
three-phase space vector PWM boost power converter, digital controller design *(Korean)* 77969
traffic policing mechanism for ATM networks 95764
transformer reson. phase-shifted PWM DC-DC converter, X-ray generator appls. 112653
turbine-boiler coord. control, rule of experts, PID-type fuzzy controller *(Chinese)* 77752
turbogenerator robust control for power syst. stabil. improvement *(Chinese)* 77813

fuzzy control continued
two-area power syst. fuzzy gain-scheduled PI load-freq. control 122903
unit power plant, fuzzy-neuron intell. coord. control 112208
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77
VAV air-conditioning syst. fault-tolerant supervisory control 100334
vehicle, unmanned, fuzzy driving based on DGPS/vision 131707
W-CDMA cellular phone syst. adaptive fuzzy power control 120015
weakly connected power systs., near-optimal fuzzy logic stabilizer 122905
wind-diesel power syst. distributed intell. load control scheme 99590
wind-diesel power systs., fuzzy logic controllers 123257
WLAN, microwave oven interf., packet length fuzzy controller for perfo improvement 74323
Li-ion batt., fuzzy controlled charger, act. state-of-charge controller 78159
O_2, fuzzy control indirect calorimetric syst., premature infants 132500

fuzzy logic
advanced mfg. systs., intell. commun. networks perform. mgt. 96052
analogue ccts., smart, evol. design 114598
animal fibers, fuzzy pattern recogn. and class. 118487
approx. approach for ranking fuzzy nos. based on left and right domina 67778
ARMA order selection method with fuzzy reasoning 95610
arterial unloaded situation modelling, oscillometric blood press. waveform me 121899
ATM networks, feedback fuzzy leaky bucket 96335
ATM networks, self similar traffic, cell loss probab. estim., fuzzy appro 130226
ATM prioritised switch, fuzzy congestion controller design 73801
automatic eye extraction in human face images 95535
automatic white bal. of digital colour images using fuzzy logic 73318
automobile appls. of fuzzy logic *(Russian)* 134553
background acoustic noise fuzzy pattern class. 73052
blast noise monitor data validation using fuzzy logic 75913
boost converter supplying DC motors, fuzzy and neuro-fuzzy designs, speed c trol 78100
brain MRI, automated segmentation of cerebrospinal fluid and lateral ventric 132778
brain MRI, subcortical structs., automatic segmentation, inform. fusion 984
brain tissue vols. quantification using MRI fusion 76432
broadband telecomm. networks, QoS service, fuzzy requirement based strate 119159
building detect., fuzzy representation/grouping 95547
c-means clustering of incomplete data 129421
campus networks topol. design, evol. algm. 108213
car image recogn. using fuzzy inference method 129925
cardiac ICU, patient state monitoring, intell. alarms syst. 132530
CCI rejection using clustering techs. and fuzzy inference 119195
cellular fuzzy proc., react.-diffusion, computational complexity 102476
cellular radio, automatic cell planning ES 74683
classifier with feature selection based on fuzzy entropy 84258
CLOS guidance law, fuzzy controller design 99134
closed-loop telecommun. traffic control, fuzzy set theory/fuzzy logic 73820
cluster anal. of classified data 129590
clustering, fuzzy, based on cooccurrence matrix, data retrieval appl. 118439
color image proc., histogram based multichannel filter 118219
color interpolation algm., fuzzy-assignment-based 94877
colour image segmentation, advances and prospects 129557
colour image segmentation, hierarchical fuzzy region merging tech. 118341
combine harvester guidance, fuzzy inform. merging *(French)* 75245
comfort sens., fuzzy symbolic approach 132084
compensated neutral grounded MV power systs., high impedance fault dete 77662
composite fuzzy rel. eqns., Archimedean triangular norms based resoln. 677
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
content-based image retrieval using fuzzy visual representation 118735
continuous casting proc., steel leakage prediction 75916
control via networks, QoS anal. and prediction 96239
controllers, opt. implement. 71452
curve-tracing algm. 129422
curved text path detect. based on fuzzy curve-tracing algorithm 129668
data fusion based on sens. mgt., class. methods 86486
deadzone compensator of DC motor syst. using fuzzy logic control 77884
decision-level sens.-fusion methods for anti-personnel landmine detect. 118
decomp. of fuzzy rels. 106850
distrib. network fault location using fuzzy clustering 99336
distrib. network renewal/reinforcement, multiobjective optimisation 112053
distributed multi-sens. environ., integrat., registration 118856
double cct. power lines fault ident. tech. 77377
DP, geom. and Fourier optics approxs., triangular norms tech. 71454
dyn. image seq. anal. using fuzzy measures 106430
dyn. security assess., time-varying contingency screening 88380
ECG QRS wave recogn. using fuzzy neural networks 121954
edge-preserving interpolation, fuzzy tech. 118175
EDM charact. anal., GM(0,N) grey model and fuzzy logic appl. 78361
EEG adaptive freq. decomp. with subsequent ES anal. 132560
EEG alpha activity detect. by fuzzy reasoning 121975
EEG/VEPs, acquisition, proc., knowledge-based diagnostics tools 121957
elec. engng., neural networks/fuzzy logic appl. 124245
elec. impedance computerized tomography, differential imaging 109921
elec. market data representation via fuzzy regression models 133515
electronic design, component selection, timing diags. eval. and comparison, ap of fuzzy logic 68515
emotion class. based on MPEG-4 facial defn. param. set 129829
enterprise network topol. design, fuzzy evol. hybrid metaheuristic 95966
ESP modelling based on fuzzy logic 83174
externally excited transm. lines, anal./modeling using fuzzy inference for EM problems 105802
failure mode screening, fuzzy scheme 78707
fault detect., fuzzy relational model ident. 67650
fault diagnosis, fuzzy, using knowledge expression/approx. reasoning 12442
faulted overhead power lines, buried pipelines interf. calcs. 77438
field mobile robots, hazardous natural terrain, safe navig. 109665
FLAPM, fuzzy logic antenna param. modifier 72658
functional elec. stimulation, error correction, safe stimulation patterns 13300
fuzzified iter. algms. for perform. driven low power VLSI placement 12701
generalized nonlin. implicit quasi-variational inclusions with fuzzy mappi 67971
genetics-based machine learning algm., optim. in linguistic fn. approx. 9005
heart-model-based computerised ECG diagnosis limits 76305
hierarchical inform. fusion based fault diagnosis, turbine appl. 118828

y logic continued
igh-speed networks, equiv. capacity estim. using fuzzy logic 74106
igh-speed packet switched networks, traffic mgt. 119479
uman visual perception mimicking for fuzzy robot navig., terrain traversability 129530
C components, CAD formulas, fuzzy EM formulation 114972
M stator condition monitoring, fuzzy logic approach 123418
mage compression and decompression, fuzzy rel. eqns. 118650
mage denoising via local-inform.-based fuzzy filters 118181
mage recogn. via fuzzy logic, computing with words 118786
mage segmentation, appls. of GA, geostatistics, and fuzzy c-means clustering 106458
mpact damaged delaminated composite, shearography, neural fuzzy anal. 125156
mplication matrix, convergence index 100745
ntegrated framework for traffic control in ATM networks based on soft-computing techs. 108497
ntell. character recogn., stat. approach 95565
nter-block/inter-frame search algm. for block motion estim. 73207
nterpolation with Cartesian representation and extensibility fns. 124649
ndmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
aunch vehicle, secondary injection thrust vector control power plant lin., fuzzy logic appl. 98919
east-sq. lin. regression anal. using shape preserving operations 100990
nguistic clustering algm. for fuzzy prototype induction 129597
nguistic description of relative posns. in images 107117
oad forecasting, intell. hybrid syst. 99318
oad power fluct. leveling, fuzzy neural net control *(Japanese)* 111910
ossless picture compression, soft median adaptive predictor 118600
Mandarin telephone speech, multi-keyword spotting algm. 73041
naneuvering target, online tracking, neuro-fuzzy adaptive filter, linguistic method 107505
narine systs. qualitat. safety modelling, fuzzy logic-based approach 78559
natrix FMECA, fuzzy logic appl., extended risk prioritisation 113776
MCM, power dissipating chips placement, fuzzy logic approach 89869
nicrocontroller, CMOS fuzzy inference coprocessor chip *(English)* 102220
nicrogravity environ. on-board monitoring using nerual nets 120659
nobile commun. systs., power control methods 120004
nobile robot vision-based terrain charactn./assess. 129517
nodel struct. ident., combined cycle power plant appl. 99565
nodelling with multivariate membership fns., gray-box ident. and control design 124736
notors, fuzzy-neuro intell. fault diagnosis 78712
nulticast method for linguistic guarantee of disruption free service in mobile wireless networks 96421
nultichannel image proc. using fuzzy vector median-rational hybrid filters 118388
nultidimensional clustering and elementary detect. estim., fuzzy algm. 86154
nultidimensional images extraction, visualisation, and manipulation 94978
nultimedia IT based on fuzzy control 130978
nultimodal fn. optim., fuzzy clustering-based niching approach 124609
nultiple target tracking, soft assignment algm. 107423
nultiple-valued logic, conf., Warsaw, Poland (May 2001) 78422
nultipurpose MV distrib. systs. reconfig., fuzzy reasoning approach 133559
nultisensor data fusion mgt. based on fuzzy logic/neural network *(Chinese)* 75424
eonates/paediatric patients, distorted plethysmogram pulses detect., fuzzy syst. 87528
eural network based fuzzy logic model for target ident., design 96908
euro-fuzzy filters based on recursive proc. and genetic learning 130094
euro-motor conditions diagnosis, Daphne biorobotic syst. 98165
eurofuzzy systs., num. info. process., hardware implement. 114907
onlin. fuzzy neutral functional DE, existence and uniqueness 101074
onlin. soliton propag. anal., fuzzy mesh anal. tech. 74917
cean colour rem. sens., fuzzy logic class. 111458
esophagus outer wall detect., US images, data fusion, stochastic optim. 76350
OFDM systs., fuzzy adaptive sig. predistorter 129970
ifactory sig. fuzzy logic based recogniser 120962
mega network embedded in WDM photonic network, load balancing 108342
n-line sig. trend identif., fuzzy-logic-based methodology 99517
ap smear test automated class. using neural nets 121887
attern class. using fuzzy rules extraction by hybrid method 129594
CA and fuzzy clustering with missing values, simultaneous approach 129596
ET, segmented atten. correction, fuzzy inference systs. 122188
ossibilistic exclusion principle for tracking multiple objs. 129599
ower syst. alarm proc., fuzzy ES 99241
ower syst. fuzzy logic-based MW contingency ranking 111963
ower syst. intell. parallel controller, fuzzy linguistic rules assess. 88368
ower syst. voltage sags class./charactn. method 111647
redictive meas.-based fuzzy logic connection admission control 130190
robab. to expert witnessing in warning theory 124502
ump IM fault detect. using fuzzy signature anal. 134015
oS adaptive commun., fuzzy rels. 119764
oS routing in ad hoc networks 85089
r.-car suspen. syst., fuzzy logic controller design 78317
eal-time anom. detect. using soft-computing techs. 85232
efrigerators, perform. testing, fuzzy inference methodology 78345
einforcement learning, fuzzy, game and search appls. *(Japanese)* 113867
elevant features selection in fuzzy genetic learning algm. 84257
oad and pipe detect. within LADAR intens. images via fuzzy techs. 120468
ule-based image proc. on CNN universal machine 107139
cribble recognizer, online, eval. 106727
emi-supervised induction of fuzzy rules for image segmentation 129589
emicond. foundry fab, priority-based tool capacity allocation 89951
ens. integrat./fusion model using fuzzy inference syst. 84665
hallow water mine detect./class., side-scan sonar, algm. fusion 77046
g. detect. theory, basic postulates and formulas for analyzing human-machine iperform. 130144
eep spindle detect., fuzzy reasoning and autoassociative MLP methods 121924
peech proc. improvement using fuzzy logic approach 118163
peech recogn., integra-normalizer and neuro-fuzzy method 106421
RM drives, rotor posn. estim., robustness anal. 134508
tratified random sampling from finite pop., fuzzy random variables estim. 107347
tructural freehand pattern ident. based on drawing manner ident. 84540
ubband coded image quality, fuzzy control, std./fuzzy quality measure 118517
ugeno fuzzy model based method for meas. data proc. *(Chinese)* 109392
upervised fuzzy clustering for RBF neural networks training 129595
urface roughness waveforms, fuzzy logic cluster anal. 86964
ustainable e-supply chain mgt. simul., network-based optim. 100497

fuzzy logic continued
transformer differential protection, neural nets, fuzzy logic 123560
transitive closure and betweenness rels. 67783
type 5,6,7 and 8 fuzzy pos. implicative hyperK-ideals 124532
type-2 fuzzy sets, set operations and fuzzy logic 90014
underwater target recogn., feature fusion classifier *(Chinese)* 84584
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
UXO remediation, sens. fusion, training algms., clutter effect 77010
VBR hybrid coded video sources modeling/prediction, fuzzy logic perspectives 129783
vector optim. problems, interactive stabil. compromise prog. 113983
video segmentation, fuzzy theoretic approach, syntactic features appl. 118411
visually cluttered scene search time, fuzzy logic approach 133394
VLSI power/perform. optim., fuzzy simulated evol. 104009
VLSI std. cell placement, iter. heuristics 104057
voice networks, fuzzy logic-based diagnosis of traffic anoms. 119467
CdZnTe portable detectors, automated radioisotope ident., fuzzy logic 121628

fuzzy neural nets
3-D arm movements recogn., fuzzy rule-based approach 87923
AC servomotor neuro-fuzzy speed controller design 133945
analog IC optim., fuzzy perform. model of mismatch 101731
analogue neuro-fuzzy cct., multidimensional membership fns., CMOS implement. 102458
animal fibers, fuzzy pattern recogn. and class. 118487
arrhythmia detect., short-time multifractal approach using fuzzy neural network 110611
ATM networks, intell. leaky bucket algms. for sustainable-cell-rate usage param. control 107775
B-spline fuzzy neural networks, control appl. *(Chinese)* 77812
batt. state-of-health meas., Cadex 7200 batt. analyser 89136
bistable meas. devices, noise tuning, neuro-fuzzy approach 120649
boost converter supplying DC motors, fuzzy and neuro-fuzzy designs, speed control 78100
brain conditions, rapid class. using ANNs 87400
capacitor compensated lines, fault location, hybrid fuzzy neural network 99430
cerebral haemodynamics, neonatal, abnormal, Doppler US waveform detect. using compensatory fuzzy neural nets 110801
conducting plates, hole localization, fuzzy neural approach, noninvasive eddy current meas. 125143
continuous casting proc., steel leakage prediction 75916
DC motor control, neuro-fuzzy controller archit., PI regulator adaptation 99683
DC motor drives, multi-model param./state estim. 123941
DC motor friction compensation, neuro-fuzzy control 88760
DC motor neuro-fuzzy speed control systs. 112545
drum boiler syst. identifier, fuzzy rules extraction, GA 112291
DVD-ROM readout RF sig. equalization, ANFIS-based PRML syst. 116595
ECG beat recogn. using fuzzy hybrid neural network 132568
ECG QRS wave recogn. using fuzzy neural networks 121954
EEG sigs., cognitive task prediction using parametric spectral anal. 110634
Egyptian next-day peak load forecasting using fuzzy neural net 99308
elec. power generation options, neuro-fuzzy program approach, Jordan 123111
EM devices, optim. proc., sensitivity inform., clustered neuro-fuzzy models 128701
face detect. by region-based fuzzy neural nets 118787
filters based on recursive proc. and genetic learning 130094
Hamming classifier design and training 84575
hierarchical neuro-fuzzy call admission controller for ATM networks 96120
highly nonlin. syst. modeling/prediction, adaptive-neuro fuzzy inference 118956
hybrid 2D phase unwrapping by fuzzy clustering for SAR images 86229
hydroelectric power company, real time neuro-fuzzy prod. syst. 123242
IM, neuro-fuzzy controller design on DSP 134053
image coding, VQ, embedded optim. constraints 118507
image compression, fuzzy-ART VQ and 2D runlength encoding 73352
image enhancement, sharpening & noise reduction, fuzzy neural net 118728
image impulse noise suppression using adaptive L-Filters 106477
IMs, broken rotor bar faults detect., on-line neurofuzzy approach 123422
integrated feature anal. and fuzzy rule-based syst. ident. in neuro-fuzzy paradigm 84255
integrated navig. systs., interval and fuzzy tech. appl. 130084
load forecasting, short-term, fuzzified neural network approach 77287
load power fluct. leveling, fuzzy neural net control *(Japanese)* 111910
logic model for target ident., design 96908
LV distrib. systs., fault location using ANNs 99433
magnetostrictive actuators, hysteresis modelling and compensation 92878
maneuvering target tracking, neuro-fuzzy adaptive filter 120400
milling QC, roughness recogn. by fuzzy neural net 100662
mixed sig. ccts., online fault diagnosis, simplified fuzzy ARTMAP appl. 80122
mobile robot vision-based terrain charactn./assess. 129517
modular neural network-type CANFIS neuro-fuzzy modeling for multi-illum. color device charactn. 129660
MRI cerebral images, rule-based ES for automatic segmentation 76429
multimedia IT based on fuzzy control 130978
neuro-fuzzy paradigm for mach. condition health monitoring 106429
neurofuzzy systs., num. info. process., hardware implement. 114907
nonlin. optim., constrained, using neurofuzzy systs. 100956
obj. recogn. by sonar, fuzzy ARTMAP, mobile robot appl. 86251
ozone conc. prediction, fuzzy DSS 133364
Pap smear test automated class. using neural nets 121887
PCS mobility databases restoration scheme 131158
piezoelec. ceramic lin. US motor drive, recurrent fuzzy neural network control 99703
PM lin. sync. motor, servo drive syst., RFNN on-line gain tuning control 99863
PM sync. servo motor drive, total SMC, recurrent fuzzy NN 134426
power syst. spatial offer-and-demand forecasting, neuro-fuzzy inference systs. 111955
prostate tissue malignancy, tissue class. & elastographic imaging 121998
radar net, data fusion, self-organizing fuzzy neuron network model *(Chinese)* 109253
robust-invariant pattern recogn. model, fuzzy ART appl. 84528
rot. machine failure diagnosis, multisens. data fusion, fuzzy ANN 123274
rule-based image proc. on CNN universal machine 107139
sensorless induction spindle motor drive, fuzzy NN speed controller 123904
single-phase PWM AC/DC power converter, fuzzy-neural controller studies 134242
sound speaker mfg., automated QC by neuro-fuzzy approach 120599
speech recogn. using integra-normalizer defined metric 129396
state estim. and multi-sens. data fusion using data-based neurofuzzy local lin. proc. models 86484

fuzzy neural nets continued
streamflow forecasting, multi-step-ahead, monthly, by neurofuzzy network model 122937
sync. generator out-of-step protection with AI methods 77844
thermal waste treatment, multivariable fuzzy control, neural nets *(English)* 123195
time series symbolization, fuzzy neural network clustering algm. 73312
unit commitment using hybrid models approach 122921
universal CNN cell cct. using simplicial neuro-fuzzy inferences for fast image proc. 91149
Voice over IP, predictive playout delay adaptation 108083
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033

fuzzy set theory
2D fast MRI brain segmentation, region-based level-set snakes 110889
2D human brain MRI white matter/gray matter boundary segmentation 98412
3-level thresholding, probab. partition/fuzzy c-partition 84143
3-phase covered corundum arc furnace, neural supervisory control 113141
3D med. imaging operations 76227
abdominal organ recogn. in CT images, contextual neural net, fuzzy rules 76540
AC-DC converters for high precision DC drive systs. supply, fuzzy control 134159
act. networks, computational intell. techs. 119638
adaptive image restoration, neural learning approach, fuzzy model-based network archit. 73251
addit. of fuzzy intervals, T-sum, weakest t-norm 90015
air transportation service quality meas. using fuzzy set theory 133266
alpha-sets and alpha-continuous maps 67795
Alzheimer's disease diagnosis, brain atrophy meas. by image segmentation and fuzziness 129658
ample field for possibilistic procs. 67785
approx. approach for ranking fuzzy nos. based on left and right dominance 67778
Archimedean t-norm based fuzzy arith. 100830
arith., addit. from common-sense viewpoint 124553
ATM networks, fuzzy-based estim. of upperbound CLR for rare event anal. 107645
ATM networks, self similar traffic, cell loss probab. estim., fuzzy approach 130226
ATM prioritised switch, fuzzy congestion controller design 73801
automatic image thresholding using hit-or-miss morph. operator 106527
automobile appls. of fuzzy logic *(Russian)* 134553
BCC-alg. fuzzy ideals 100892
BCI-alg., fuzzy ideals 100890
Bernstein approximants and ϕ-var. of fuzzy random variable 67951
bi-criteria optim., fuzzy LP 67849
binary/gray-scale/fuzzy math. morphologies rels. 124543
bone X-rays anal. syst. for prosthesis placement, segmentation module 76545
brain parcellation, adaptable fuzzy C-means for improved image class. as pre-proc. procedure 98423
brain struct. segmentation, MRI, fuzzy modeling 98406
brain tissue vols. quantification using MRI fusion 76432
canonical fuzzy measure on (0, 1) 100856
car image recogn. using fuzzy inference method 129925
cerebral blood flow MRI, arterial input fn., fuzzy clustering 87654
chaotic systs., sig. sync. and secure commun., LMI based approach 105990
chromosome images, homologue class., iter. centromere segmentation algm. 87519
chromosome images multi-feature anal. and class. 87550
class of dual fuzzy dyn. programs 67848
classifiers design, two-level correction method 73617
color image filtering, fuzzy color credibility approach 94710
color image segmentation based on fuzzy math. morph. 94818
color image segmentation simplification using fuzzy attributed graph 94520
commitment scheme, cryptographic primitive 106216
commun. sig., modulation ident., fuzzy integral *(Chinese)* 106011
comonotonically additive functionals, extension/representation 67716
compactness in bifuzzy topol. spaces 67829
complete Brouwerian lattice, fuzzy rel. eqns. soln. 67782
complete fuzzy measure and appls. 100855
complex fns. continuity/differentiation 67792
composite fuzzy rel. eqns., Archimedean triangular norms based resoln. 67781
composite operators for fuzzy rel. eqn. soln. *(Japanese)* 78840
computer network attack detect., fuzzy preference approach 108223
congested transm. lines reinforcement planning, decision making method 77380
content based retrieval, area morph. segmentation 94940
content-based image retrieval using fuzzy multiple attribute relational graph 129446
continuous Archimedean t-norms and bounds 67824
contrast modif. operators for fuzzy sets 124552
convergence of powers of fuzzy matrix 78838
decomp. of fuzzy rels. 106850
deformable template model based on fuzzy alignment algm. 84319
demanufacturing proc. decisions using fuzzy reasoning Petri nets 100709
Dempster-Shafer theory mass fn. determ. by fuzzy clustering 73461
distrib. network optimal reconfiguration, algms. comparison *(Chinese)* 122966
distrib. network peak load estim., fuzzy regression approach 111973
distrib. substation VAr/voltage control, fuzzy dyn. prog. *(Chinese)* 112042
distrib. syst. service restoration improvement using Dijkstia algm. *(English)* 122960
distrib. transformers loading estim. by fuzzy logic 123564
echocardiographic 3D image anal., automatic 87501
elec. load forecasting by fuzzy Bayes predictor 111983
elec. market data representation via fuzzy regression models 133515
elec. power systs., heuristic optimisation methods 88285
elec. supply contract eval. by fuzzy set-based DSS 133495
electrified rly., harmonics elimination, hybrid filter, fuzzy set theory *(Chinese)* 78234
electroheat procs. fuzzy knowledge appl. *(Polish)* 124093
electronic head concept, virtual quality instrum. 97145
electronic indust. work-induced stress anal. in ergonomics, fuzzy decision approach 89833
embedding problem for multidimensional fuzzy no. spaces 78837
engine misfire detect., crankshaft ang. vel. meas., fuzzy pattern recogn. 89408
enterprise network topol. design, fuzzy evol. hybrid metaheuristic 95966
equivalence classes of fuzzy subgroups 100893
exchangeability and convergence for random sets 67723
f-proximities, product, fuzzy setting 67825
fault tolerance, fuzzy class. syst. based on reliab. 78561

fuzzy set theory continued
finite var., fuzzy-valued measures and fuzzy-valued Lebesgue-Stieltjes integr 67827
first countable L-fuzzy topol. spaces 100861
flexible unit maint. scheduling, uncertainties, integer prog. 88511
functional MRI, tissue segmentation-assisted anal. for human motor respon combining neural net and fuzzy C-means 76483
fuzziness in image recogn. 118700
game of Chicken, fuzzy approaches 100773
generalized fuzzy games and fuzzy equilibria 89976
generalized fuzzy integral seq., convergence 124547
generalized fuzzy operator in edge detect., quantitat. calc. of key params. *(C nese)* 107266
generalized medians, dist. aggregation operators 124541
granular fuzzy fn., normal form 124545
granular fuzzy sets, rough set/probab. aspects 113900
groups, fuzzy, operating on fuzzy sets 67794
hand-drawn sym. recogn. by primitive separation and fuzzy inference 8411
handwriting recogn. via feature extraction and fuzzy set theory 129679
Henstock integral of fuzzy-no.-valued fns. 67708
hierarchical inform. fusion based fault diagnosis, turbine appl. 118828
high-speed networks, fuzzy admission control scheme 130193
homomorphisms of poset-valued alg. 67834
hybrid 2D phase unwrapping by fuzzy clustering for SAR images 86229
hydroelectric power company, real time neuro-fuzzy prod. syst. 123242
hyperspectral image anal. tech., anom. detect. algm., Quad-AR filter 95412
hypothesis fuzzy testing, Bayesian approach 100829
IM drive, hybrid fuzzy/PI two-stage controller 123863
IM stator condition monitoring, fuzzy logic approach 123418
image coding with noise, based on fuzzy VQ 84444
image compression and decompression, fuzzy rel. eqns. 118650
image compression/reconstr. using fuzzy relational eqns. *(Japanese)* 10697
image denoising via local-inform.-based fuzzy filters 118181
image indexing/machine vision, color representation 95533
image proc., math. morph. *(Chinese)* 118707
image proc. appls. of inform. mining 84152
image recogn. via fuzzy logic, computing with words 118786
image restoration, fuzzy method & GAs, relative gray scale grade *(Chine* 84170
image restoration by fuzzy convex ordinary kriging 84298
image restoration by multiple image filters fusion 129560
image segmentation, fuzzy, medial-guided 84106
image segmentation by curve evol. with fuzzy c-means clustering 106752
image seqs., firing particle detect., fuzzy threshold 73169
image zooming at fractional scaling ratio, adaptive low complexity alg 118469
images, fuzzy, line segment extraction 118748
implicative alg., quotient struct. via fuzzy implicative filters 67833
incrementing multiobjective evol. algm. 78958
independent fuzzy random variables 100827
indistinguishability operator mapping 113945
induced I(L)-fuzzy topol. vector spaces 67830
indust. electrostatic procs., fuzzy sets theory 83119
infeasibility repair in lin. constrained program, fuzzy method 90041
inform. granulation, sig. quantization 107307
intell. character recogn., stat. approach 95565
interval and fuzzy methods in rem. sens. and satellite image proc. 129659
interval approx. of fuzzy no. 90016
interval validation methods for fuzzy set theory 124554
interval-valued fuzzy no., correl./inform. energy, comment 100835
interval-valued fuzzy sets, basic theory 124551
intuitionistic fuzzy sets, correl. coeff. calc. using stat. viewpoint 113905
intuitionistic fuzzy sets, decomposable/inform. measures 100837
IR images, fuzzy c-means clustering with brFCM algm. 118488
iron-making technol. selection, fuzzy hierarchical decision making 67457
IVP for nth-order lin. diff. eqns. 68040
Jordanian solar energy systs. eval. using fuzzy sets prog. 99594
JPEG images, unsupervised image obj. segmentation 95378
knowledge-based concurrent engng. syst. method for die and mold *(Chine* 113461
Kolmogorov's strong law for fuzzy random variables 67789
L-fuzzy lattices, types of fuzzification 100888
L-fuzzy set theory, pointwise pseudo-metrics 67826
L-fuzzy subsets, fuzzy/strong fuzzy/ultra-fuzzy/N-compactness equivale 100857
L-R fuzzy nos., entropy of T-sums/T-products 113937
lacunary stat. convergence of fuzzy nos. 100834
landmine detect., correl.-based, GPR, lin. prediction tech. 77079
laser weld quality monitoring, fuzzy pattern recogn. based syst. 105653
lattice-valued matrix game with fuzziness 124503
lin. coalitional games and their fuzzy extensions 113860
lin. fuzzy prog., constraint satisfaction measure 90044
lin. regression anal. for fuzzy input-output data 100757
linguistic description of relative posns. in images 107117
lip contour extraction using deformable model 95502
liver tumor detect., automatic, from CT images 87697
local independent components extraction, fuzzy c-varieties method *(Japane* 95606
look-ahead based fuzzy decision tree induction 78803
LR-fuzzy nos., shape preserving multiplications 100833
machine health monitoring/control by vibr. sens. 97149
maneuvering target, online tracking, neuro-fuzzy adaptive filter, lingui method 107505
matrices, fuzzy, products convergence 67705
MCM, power dissipating chips placement, fuzzy logic approach 89869
MCM component placement, optimal, fuzzy thermal modeling 115233
measurability of fuzzy-no.-valued fns. 67790
median-like aggregation, criteria importances 100822
medium-term load forecasting using neural nets/fuzzy systs. 133563
meteorite craters detect., possibilistic shell clustering 98952
mgt. talent eval. model using fuzzy AHP 124284
Michalek's fuzzy topol. spaces 113939
mobile robot localization, image fingerprint seqs. derivation and matching 97
mobile robot vision-based terrain charactn./assess. 129517
model-rels. for fuzzy memberships 113947
model-set adaptation, fuzzy Kalman filter appl. 119059
MPEG-4, fuzzy theory based robust error concealment algm. 118536
MRI, robust fuzzy image segmentation 106845
MRI brain images, connectivity-restrained multi-scale segment., fuzzy C-me 76471

zy set theory continued
multi-objective optim. problems, interactive fuzzy satisficing approach using GA 113995
multi-objective reactive power optim., fuzzy LP method 99184
multi-seeded fuzzy segmentation on face centered cubic grids 98510
multicriteria decision making based on vague sets *(Chinese)* 100778
multicriterion ranking of competing alternatives, coord. meas. planning 75341
multiobjective chance-constrained fuzzy prog. 90043
multiobjective fuzzy lin. fractional prog. problem 90040
multiobjective nonconvex prog. with fuzzy nos., coevolutionary GA 78932
multiobjective optimal feeder reconfiguration using evol. prog. 112012
multiseeded segmentation using fuzzy connectedness 84532
mutually T-related fuzzy variables, param. estims. 100831
MV distrib. systs., high impedance fault detect., fuzzy decision making 77319
n-cut cube fuzzy nos. and embedding theorem 124550
navy theatre-wide missile defence, sig. discrim. using fuzzy class. algm. 77101
nilpotent t-norm-based sum of fuzzy intervals 100832
no. space, fuzzy, compact subsets characterisation 100862
NOAA AVHRR images, class. algms. comparison 111384
noisy image edge detect., Java algm. *(Chinese)* 129809
noisy images, edge detector, fuzzy iter. 73482
non-additive set fns., vars. 67828
noncompact fuzzy no. space, embedding problem 113946
nonlin. fuzzy integer program by parametric prog. 90042
normal fuzzy R-subgroups in near-rings 67835
nos., fuzzy, correl. coeff. calc. by expected interval 113906
NPP PSA, MMI eval., HEROS ES 88542
num. meas., fuzzy correl. 86370
OFDM systs., fuzzy adaptive sig. predistorter 129970
Okumura-Hata propag. prediction model, fuzzy logic, min. sq. method 85688
olfactory sigs. recogn., supervised fuzzy C-means and k-NN algms. 86715
one-point compactifications, extension struct. 124569
OPF, complementarity condition, fuzzy second correction scheme 88414
organ class. from cross-sect. images, fuzzy c-means med. image clustering 98417
overhead power line, fuzzy logic-based fault locating algm. 77666
partition-equivalence-pseudometric one-to-one correspondences 124544
pattern fuzzy representation and edge tracking thinning 129593
perturb. of vector fields 124571
pb-contractor and solns. for nonlin. operator eqns. in fuzzy normed spaces 68009
plane geom., fuzzy, membership fns. of geom. concepts 78852
polyhedral representation of fuzzy lin. bases 78935
possibilistic mean value and variance of fuzzy nos. 90013
possibility measures/integrals defined on complete lattice 67786
posynomial geometric prog., fuzzy, primal algm. 124549
power distrib. load forecasting method based on fuzzy modelling 112056
power network planning, investment and reliab. coord., fuzzy satisfaction, genetic-annealing algm. *(Chinese)* 99317
power syst. intell. parallel controller, fuzzy linguistic rules assess. 88368
power syst. load forecasting, residual error amendment method appl. *(Chinese)* 88393
power syst. peak load demand forecasting using fuzzy class. scheme *(English, French)* 133569
power syst. reactive power optim., fuzzy model, GA *(Chinese)* 77135
power syst. reliab., geno-fuzzy optim. 111678
power syst. stabilizer design, adaptive evol. algm. 122873
predictive meas.-based fuzzy logic connection admission control 130190
predictive sens. fusion, fuzzy set tools, linguistic vectors 73584
preinvex and B-vex fuzzy mappings, generalization 67793
prime/quasi-prime fuzzy left ideals of semigroups 100891
probab. space, subjectivity/fuzziness 67787
props. of fuzzy topol. groups 100886
PV panel equiv. cct., fuzzy modeling using MATLAB 112407
QFD, future voice of the customer, fuzzy trend anal. 124407
QoS adaptive commun., fuzzy rels. 119764
quasi-arith. means limit props. 124542
quasi-concave/non-concave fuzzy multiobjective prog. 90039
quotient subgroups of fuzzy metric groups 124546
radial distrib. systs. capacitor switching, fuzzy modeling 112032
radicals of TL-ideals 67831
random fuzzy variables, unified approach 100826
random fuzzy-valued variables, graph convergence separability 100828
reachability matrix, fuzzy mathematics, successive sq. *(Chinese)* 67836
region segmentation, fuzzy method 106669
relational fuzzy eqn. with defuzzification, largest soln. 100838
reliab. calcs., fuzzy nos. use 115817
rem. sens. data, parallel fuzzy inference syst. 133370
repairable systs. reliab. modelling using Petri nets/fuzzy set theory 78715
Rician target in Rayleigh background, modeling of imprecise detect. params. as fuzzy nos. 96934
road and pipe detect. within LADAR intens. images via fuzzy techs. 120468
road signs detect. and tracking 95401
robotic part assembly, neural/fuzzy optimal proc. model 100570
rotary drying kiln, temp. meas., operating mode judgement, data fusion method, fuzzy proc. *(Chinese)* 75917
rough set theory applied to (fuzzy) ideal theory 67832
scribble recognizer, online, eval. 106727
second order diff. eqn., fuzzy BVP, difference method *(Chinese)* 114118
seismic acoustic image segmentation, fuzzy fusion of attributes 122605
self-adaptive evol. algms. 78915
self-adaptive evol. prog. algm., multi-objective fuzzy optimal operation *(Chinese)* 88273
series compensated lines, fault location, fuzzy logic soln. 123087
shape of fuzzy sets in adaptive fn. approx. 100821
shortest path problems, interacts. among paths 113943
similarity fuzzy matrix max-min transitive closure 100839
skin detect., novel adaptive colour segmentation algm. 129610
somewhat fuzzy semicontinuous/semiopen fns. 113940
sonar occupancy grid constr., uncertainty method comparison 86253
sound speaker mfg., automated QC by neuro-fuzzy approach 120599
spatial elec. load forecasting, computational support tool 112055
spatial load forecasting, small area land-use anal. *(Chinese)* 88407
spatial load forecasting, small area urban land-use anal. *(Chinese)* 88399
spectral signature separability meas., unsupervised training algms. 84144
stand alone PV systs., fuzzy logic controller 112401
std. fuzzy no. modif., diagonal method 124570
strong forms of fuzzy complete continuity 78839
structural characts. of fuzzy measure, convergence theorem 67791
subincline fuzzification of incline alg. 100889
Sugeno measure of fuzzy sets, α-cut approach in finite case 100836

fuzzy set theory continued
surface roughness fibre opt. sens., self-focusing fibre, fuzzy algm. 75589
surface roughness waveforms, fuzzy logic cluster anal. 86964
t-conorm fuzzy additives 113944
T-generalized transform. semigroups, decomp. 100733
T-related fuzzy nos., geometric mean convergence 78851
target tracking by hierarchical grey-fuzzy motion decision-making 84645
TCSC devices location determ. using fuzzy decision making 134328
telecomm. networks, opt. neuro-fuzzy systs. 120120
tethered satellite syst., simul., FE anal./fuzzy sets 88052
topol., fuzzy, even continuity/equicontinuity 100858
topol. mol. lattices, Urysohn separation property 100860
topologies, fuzzifying, limit struct., charactn. theorem 100859
transitive closure and betweenness rels. 67783
trapezoidal fuzzy sets approx. 124555
type 5,6,7 and 8 fuzzy pos. implicative hyperK-ideals 124532
type-2 fuzzy sets, set operations and fuzzy logic 90014
uncertainty theory, fuzzy optim., inequality 124556
uninorms, left and right pseudocontinuity 113904
uninorms and nullnorms, functional eqns. 67780
urban sewage networks, sens. fault diagnosis, rainfall-runoff multi-modelling 88178
variable struct. power supplies, flexibility estim., fuzzy integral 79558
variance/covariance of fuzzy random variables, appls. 67788
variational principle/fixed point theorem in fuzzy topol. space 113938
VBR hybrid coded video sources modeling/prediction, fuzzy logic perspectives 129783
vector optimisation of complex tech. systs., fuzzy method 67856
video segmentation, fuzzy theoretic approach, syntactic features appl. 118411
weakly convex fuzzy mappings, props. 100887
weighted fuzzy av., fractional prog. approach 67784
wireless ad hoc network, QoS enabled, intell. scheduling mgt. 130524
WOWA operator constr., fuzzy, shape preserving splines 78854
WOWA operator constr., fuzzy, using shape preserving splines 78853
WWW mining, low-complexity fuzzy relational clustering 108195
zero-sum stopping game in dyn. fuzzy syst. 100776
Nb-Ti supercond. wires, prod. scheduling, quality improvement 67690

fuzzy systems
see also fuzzy control; fuzzy logic; fuzzy neural nets
2D pseudo-Wigner distrib. for local spectra features extraction, texture anal. 106447
A/D converter, current-mode approach 102279
adaptive GA, crossover and mutation probab. *(Chinese)* 113968
advanced mfg. technols. justification tool develop. 67488
algms. for combined quantization/dithering 73261
ANN implement. via digital counters for wt. storage 114920
ATM network mgt., computational intell. 119480
ATM/IP networks, fuzzy buffer mgt. 119166
black-box models from input-output meas. 109399
boundary automated extraction, gradient fuzzy gray-scale transform. 73557
brain MRI, fast fuzzy clustering segmentation algm. *(Chinese)* 110859
channel-optimized soft trellis waveform coding 129065
chaotic systs., sig. sync. and secure commun., LMI based approach 105990
color image impulse noise reduction filter 130095
color images, noise atten. filtering tech. 129573
colour image proc., adaptive filters, survey 118216
DC motor fault diagnosis using fuzzy ARTMAP *(Chinese)* 112537
degraded images restoration by combined homomorphic/adaptive fuzzy multilevel median filtering *(Chinese)* 129514
diagnostics in equipt. service, soft computing methods 131804
digital versatile disks, discrim. method using fuzzy inference syst. 116587
elec. load forecasting by fuzzy Bayes predictor 111983
electroheat technol. retrofits anal., DSM ES, fuzzy DSS 134645
facial expressions recogn. from video frames 118777
fine-grained distributed multimedia sync. model, enhanced fuzzy-timing Petri net 119799
gray image segmentation and assoc., primary view perception 95477
H_∞ fuzzy estim. for nonlin. discrete-time dyn. systs. 130118
JPEG image denoising using fuzzy wavelets 118490
$L_p(\mu)$-norm approx. capability of generalized Mamdani fuzzy systs. 100991
med. US images, fuzzy boundary extraction algm. *(Chinese)* 110680
motion-based video segmentation using fuzzy clustering/mixture model 84320
multichannel image proc., impulsive noise 84266
μP implement. 102468
near lossless image compression by relax. labeled prediction 84461
neurofuzzy networks 102474
neurofuzzy systs., num. info. process., hardware implement. 114907
optimistic decision-making in fuzzy environ. 67734
pattern fuzzy representation and edge tracking thinning 129593
PD class., combined neural network and fuzzy syst. 109916
peak load forecasting using fuzzy ES 111977
Profust fault tree, qty. anal. *(Chinese)* 67668
rect. microstrip antenna, reson. freq., fuzzy inference syst. 72447
robust fn. approx., ellipsoidal fuzzy rules *(Japanese)* 101003
shape of fuzzy sets in adaptive fn. approx. 100821
supervised fuzzy/Bayesian class. of high dimens. data, comparative study 94538
switched reluctance motor drives, normal and fault conditions, fuzzy inference syst. 133958
texture segmentation using fractal signature 94596
transm. lines, fuzzy inference method appl. 72396
transm. network, on-line fault diagnosis, fuzzy ES 111988
video denoising using fuzzy-connectedness principles 84358
video image seqs., algms. for deformable lin. objs. shape change recogn. 84328
zero-sum stopping game in dyn. fuzzy syst. 100776

g-line lithography *see photolithography*

gain (amplification) *see amplification*

gain control
see also automatic gain control
CMOS current-mode exponential-control variable-gain amp. 90759
CMOS imager, shunting inhib. image proc. 97364
CMOS low-power analog FIR filter, 100 MHz, PRML equalization appl. 102366
CMOS VGA up-converter, digital TV tuner 90758
DS-CDMA, wireless packet transm., variable proc. gain control 84914
Ka-band variable gain solid-state power amp. using MMICs 69183
logarithmic compression CMOS image sens., gamma correction/gain control integrat. *(Japanese)* 120935
port controlled Hamiltonian model of FACTS with adaptive L_2-gain control *(Chinese)* 122951
pulsed TOF laser radar, wide dyn. range receiver channel 109298

gain control continued
quasilinear electrometer for wide range current meas. 97585
SoC analog non-volatile storage syst. for audio sigs. with sig. conditioning for mobile commun. devices 102436
SVC control instabil., stabilisation, on-line gain adjustment fn. *(Japanese)* 89028
ultra LV floating-gate CMOS transcond. amp. 79601
VHS VCR, μP-assisted audio sig. proc. syst. 131775
WDM transm. systs., EDFA booster amp. dyn. gain control 128174
AlGaAs-GaAs HBT variable gain power amp. for mobile WCDMA appls. 91368
Er^{3+}-doped fibre amp. temp. charact., gain control compensation 128152
GaAs/AlGaAs photonics IC for opt. beamforming in phased array antennas 82439
InGaP emitter HBT variable-gain LNA, 2 GHz mobile phone appl. 80381
InGaP emitter HBT, variable-gain LNA, mobile phone 90756
SiGe HBT amp., 900 MHz, variable gain with low noise fig. 80356

gain measurement
ADC histogram testing, IEEE Std. 1241, benefits & risks 102285
amp. accuracy improve., phase and gain error meas., self-calib. 114623
buck converter, sampled-data current-mode-control 77965
calibrated RF/IF monolithic vector analyzer for gain/phase meas. to 3 GHz 109951
generalized act. phased array antennas, syst. charact. 94189
indoor multipath propag., stochastic model anal. 85766
lightwave network anal., recent develop. 74930
satellite broadcasting, continuous G/T meas. for receiving antenna systs. 74879
two-port under test, noise fig. meas. uncertainty due to low gain 75851
Ce:$LiSr_{0.8}Ca_{0.2}AlF_6$ laser, time-resolved gain spectrum meas. 97865
InGaN/GaN/Al_2O_3 heterostruct., MBE/MOVPE growth, structural/opt. props. correl. 126125

gain regulation *see gain control*

gait analysis
3D posn. meas., gait anal. & surgical navig., calib. method *(English)* 87332
below-knee amputees, kinematics props. and energy cost 111165
bicondylar sledge prostheses, gait pattern *(German)* 98723
biomedical sigs., time-series anal. 110540
EMG sig. class. for walking motions 132575
FES for paralysed extremity fn. restoration 133061
hemiplegic patients, gait param. assess. by accelerometry 76221
hip contact forces/gait patterns from routine activities 110501
human motion, higher-order spectral anal. 95544
human motion spatial reconstruction using images of single camera 122038
infant walking, independent gait, electromyographic charact. 76276
knee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
low-power wireless microcontroller PC interface 111265
neurological disorders diagnosis, human gait/posture anal. 98360
parameterised moving shape extraction 129623
perform./outcomes, clinical meas., portable devices 76373
phase detect., reliable syst., neuroprosthetics appl. 87318
planovalgus foot, surgical rehabilitation in cerebral palsy 87794
rheumatoid arthritis, therapeutic elec. stimulation, biomech. gait anal. 76604
skeleton-based tracking, opt. motion capture reliab. increase 110849
technol. overview, gait anal. lab. 132536

Galactic radiowaves *see radiofrequency cosmic radiation*

Galerkin method
2D magnetostatics, hybrid finite element/integral methods, discretization schemes 128669
3D Galerkin integrat. without Stokes' theorem 68061
3D nonlin. transient eddy current problems, multistep algm. 128683
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
3D waveguide structs., nonorthogonal higher-order wavelet-oriented FDTD tech. 128818
3D/scalar dielec. waveguides, modal anal. 82144
anisotropic dielec. loaded waveguide, scatt. characts. anal. *(Chinese)* 94108
asymmetrical double ridge waveguide, propag. charact. 72414
BEM, computational lin. alg. issues 124663
BEM for pot. problems with nonlin. boundary conditions 79108
biological tissues, impedance computer tomographic diagnostics using elec. current 122148
boundary-element based formulations for crack shape sensitivity anal. 79112
broadband microstrip patch antennas on anisotropic substrs. 83588
BVPs, interpolating wavelet scaling fn. with lifting appl. 114053
capacitance matrix of unequal diam. dielec. coated cylinders above ground plane 72405
circ. disk dielec. patch antenna, anal. of charact. 72620
computational EM appl. of meshless method 128641
computational modelling of viscoplastic fluids based on stabilised FEM 79129
ECG/MCG spatiotemporal anal., current dens. estim., forward model 110619
eddy current rail brake syst., lin. Halbach array 134525
electrostatic BEM computations, adaptive multilevel fast multipole method, Galerkin method 128658
EM response of line elec. current source excited multiple cylindrically curved thin screens 72261
EM scatt., Galerkin operators in adaptive integral method implement. 83187
EM scatt., screen, pseudodifferential eqn. 72292
EM wave scatt. by penetrable polygonal cylinder 128748
fast field comput. with fast multipole method, reduced comput. cost 83102
FDTD wavelet-Galerkin hybrid representation of field sing. near conductive wedges 105831
FEM, posteriori error estim., optimal control approach 124765
FEM freq. domain EM radiation problems, multipoint Galerkin asymptotic waveform eval. for model order reduction 128746
FEM weak formulation using wavelet basis fns. 124742
finite-dimens. control of nonlin. parab. PDE systs. with time-depend. spatial domains 90087
fluoresc. freq.-domain photon migration, 3D unconstrained/constrained image-reconstruction 76406
fluxset sens. data, mag. field map calc., NDT, hybrid method 79477
FSS, multiscreen double sq. in multilayered medium, subsectional current approx. 94114
FSS anal., blazing onset, rational Krylov model-order reduction/Woodbury sing. extraction 128743
fully discrete hp-finite elements, fast quadrature 68072
gridded sq. FSSs, anal. 72440
h-hierarchical Galerkin BEM using Haar wavelets 101121
HF four wire dual-mode spiral antenna, CAD 72599
hybrid interior error estimator for localized h-adaptive FEA 79126
IC interconnects with thick conductors, capacitance/conductance calcs. 126510

Galerkin method continued
layered dielec./ferrite microstrip line struct., dyadic Green's fn. calcs. 8016
magnetostatic field comput., fast integral eqn. scheme, NDE appl. 105677
MEMS, dyn. simul., model reduction, neural network 70345
metal crack detect./sizing, open-ended waveguide, EM field distrib. 101557
microfabrication technol., viscoelastic stress anal., finite element appro 81168
microrelay MEMS device, dyn. anal., model reduction method 112564
microstrip patch antennas, eval. of 2D react. integrals 72517
microstrip patch antennas, parametric study using spectral domain method 72
mixed-FEM and BEM coupling for 2D eddy current problem 117608
multiconductor transm. line, MoM, Galerkin/razor blade testing 72399
multielement waveguide irregularities, EM scatt. 83471
multiscreen FSS, reduced-order modeling using Krylov-based rational interp tion 83239
nearly H^1-optimal FEM 101127
nonlin. Galerkin method for react.-diffusion systs. admitting invariant regi 124690
nonlin. gradient waveguides, misaligned beams dyn. modeling 127757
nonlin. hyperb. eqn. soln. *(Chinese)* 79061
nonuniform cold magnetized plasma column, penetrated and scatt. field distr 94019
num. soln. of nonlin. hypersingular boundary integral eqn. 90174
open-ended coaxial waveguide radiating into chiral half-space, refl. coe 94111
orthogonal residual methods, convergence accel., residual minimization a 124642
planar shielded microstrip ccts., rigorous charactn. of shielding effect 8035
printed dipole and dipole arrays, radiation efficiency anal. 83702
quantum wire, transm. charact., mag. field 91846
RCS, dipole array antenna, preconditioned conjug. gradient method *(Chin* 109252
reduced-size reson. microstrip patches, comparative anal. 72467
rigorous numerics for PDE, Kuramoto-Sivashinsky eqn. 114105
rot. elec. machine simul., discontinuous FEM & Galerkin method 88672
scatt. by doubly periodic gaps/cracks 72252
second kind integral eqns. soln. by Galerkin methods with continuous orthog wavelets 124734
semidiscretization in time, least-sq. Galerkin methods for parab. probl 124629
semilinear integrodifferential eqns., approxs. of solns. 114125
sing. perturbed react.-diffusion eqn., high order FEA solns. 124768
slot antenna radiation charact., influence of metallization width 128855
slot antenna with varying Gaussian curve slot width 105847
spline Petrov-Galerkin methods for periodic pseudo-diff. eqns. 124635
stochastic PDE, Galerkin finite element techs. 124714
structural dyn., advanced time-discontinuous Galerkin FEA method 79117
symmetric Galerkin BEM for multi-connected bodies 114162
tech. materials, impedance computer tomographic diagnostics using elec. cur 122148
thick freq. selective screens, EM scatt. 83338
thin hexagonal loop transceiver antennas, near-/far-zone fields 83656
time depend. inhomog. elec. large opt. waveguide, interpolating wavelet Gale model 93139
time marching multilevel techs. for evol. dissipative problems 90165
transverse flux induction heating, galvanizing line, 3D eddy currents, temp. 134644
vectorial-BPM, perfectly matched layer ABC, Fourier series expansion 940
wavelet-Galerkin method for solving parab. eqns. in finite domains 124732

galloping, overhead lines *see overhead line mechanical characteristics*

Galois fields
1-generator quasi-twisted codes and new lin. codes 129194
affine invariant and cyclic codes over p-adic nos. and finite rings 94300
automorphism groups of one-point codes 117943
binary codes constr. based on Goppa codes 118002
bit-level pipelined digit serial GF(2^m) multiplier 102067
bit-parallel systolic multiplier, GF(2^m) finite field 102066
bit-serial multiplier, low-power, GF(2^m) finite field 102020
CMOS platform-based highly parallel DSP for wireless OFDM based mo 102256
complex cryptic code systs., operations in finite GF GF(2^n) 118022
cryptographic syst. based on ellipt. curves, error correction 106249
DAVIC-compliant digital commun., high-speed coded QPSK transmitter 109344
decoding of lin. codes over Galois rings 72789
Diffie-Hellman public-key exchange scheme, weak private-keys *(Chin* 94366
DS-CDMA, spreading seqs. over GF(p) with low correl. zone 94324
efficient GF multiplier, VLSI appls. *(Chinese)* 129334
ellipt. curve cryptography, finite field extensions 118043
ellipt. curve cryptosystems, security & efficiency anal. *(Chinese)* 83954
extremal nonchain ternary codes of dimens. 4, wt. hierarchies 129105
fast algm. for multiplicative inversion in GF(2^m) using normal basis 83874
fast Fourier-Weyl transform 118855
FH seq. families based on pseudorandom seqs. over GF(p) 94323
finite fields and fire codes 117971
finite geom. low dens. parity check codes 129035
generalized Kerdock code and related lin. codes over Galois ring 94284
Hermitian self-dual codes over GF(4) 129145
Hermitian self-dual codes over GF(4) with highest known min. wts. 72785
high-security cryptographic fast finite field multiplier archit. 114712
hybrid arith. transform, incompletely specified quaternary fns. 100752
Kumar freq.-hopping seq., lin. complexity *(Chinese)* 73854
low dens. parity check codes *(Chinese)* 106109
Mastrovito multipliers for general irreducible polynomials, systematic de 90881
MDS codes, curves in projective spaces 117979
multiple-valued GF S/D trees for GFSOP minimization and their comple 79820
optimal convolutional codes, multi-bit GF, Viterbi algm. 72921
parallel CRC computations, systematic approach 106160
quantum codes constr. from cyclic codes over GF(4^m) 129206
Reed-Muller codes, projections onto GF(4) and multilevel constr. 117941
RS codec, finite field multiplier, custom VLSI design 108487
RS codes, turbo decoding through binary decomp. and self concatena 129044
RS decoders, fast algm. for computing error locator polynomial roots 7289
stream ciphers over GF(2^n), correl. attacks algm. 129280
systematic m-ary single-sym. error correcting codes 83841

is fields continued
ernary codes, min. wt./wt. distribs. 94280
I MSP430x33x microcontrollers, implement. of ellipt. curve cryptosystems 106281
LSI systolic cct., GF(2^m) iter. division algm. 102019
$_4$-lin. Goethals codes, coset wt. distribs. 72787
anising *see surface treatment*
anomagnetic effects
see also Hall effect; magnetoresistance; photoelectromagnetic effects; thermomagnetic effects
urvilinear quantum wire, cond. in mag. field, quantum interf. rectifier 103933
ouble-semicond. QW, mesoscopic correl., magnetotunneling spectra 91818
M-type wireless CMOS MI sens., magnetis. magneto-impedance effect in amorph. wires *(Japanese)* 109937
MI, smart materials, mag. field sens., reviews 101531
nag. QD, mag. transm. barrier and resonator 126175
nag./metallic multilayers, 2D anal. of magnetoimpedance 81873
dZnTe single crysts., growth conditions, defects 79158
Co/SiO_x granular multilayers, intra and inter-plane spin depend. tunneling 127360
eCoCrSiB, amorph., GMI strip/coil sens. 75482
$Fe_{84}Zr_7B_8Cu_1$ ribbons, effect of annealing on mag. props./magneto-impedance response 81816
GaAs/AlGaAs, open QD arrays, multiple-single dot interf. transit. 115418
GaAs-AlGaAs superlattices, suppression of electron injection in applied mag. field 69671
nSb surface magnetoplasma waves, mag. field effect on excitation efficiency 80675
Si/SiGe strained QW MODFET, cryogenic cct. 115943
anometers
ndust. obj., moving target, spatial coord. meas., laser tracking syst. 117585
D rapid scanning M3 galvanometer imaging radar *(Chinese)* 131676
e programs *see computer games*
e theory
see also differential games; information theory; stochastic games
lternating offer bargaining, perfect equilibria, effect of arbitrator 124495
rbitration games FOA/DOA, Nash equilib., convergence anal. 113857
Arthur-Merlin games derandomization under uniform assumptions 100772
av. monotonic cooperative games 113869
al. games, core struct. 124490
ilinear bilevel prog., bundle trust-region algm. 100949
ursty traffic, differentiated services networks pricing 119670
C4I defensive infrastructure for survivability against multi-mode attacks 111587
Cayley perfect designs as generalizations of perfect Mendelsohn designs 78876
entralized/distributed online games, cheat-proof playout 119298
Chicken game, fuzzy approaches 100773
coalition link form./payoff division, 1-stage model 67756
coevol. and symbiosis in metapopulation models *(Japanese)* 113986
commodity division, preference manipulation/relative utilitarianism 124496
competitive elec. markets, power transactions anal., game theory 133508
conceptual differences between min. and product propag. 67760
congestion controlled imaging linking plane protocol, database compression/expansion/mgt. protocol layer 107820
consistency principle for set-valued solns. and direction for normative game theory 124485
continuing mfg. learning using multi-user sync. simul. game 67444
cooperation, secret handshakes, and imitation in prisoners' dilemma 124497
cooperative games, nonemptiness, limited side payments, equal treatment, and epsilon cores 113870
cooperative n-pers. games, meaningful/meaningless solns. 100770
cyclic games, introduction and examples 67755
data network adaptive agent based routing 74041
David Gale's lion and man problem 67741
deregulated elec. market pricing/operation by noncooperative game 77163
deregulated elec. markets, locational gaming model 111689
deregulated elec. power markets, gaming and price spikes 88328
deregulated power market design, economic dispatch, game theory 133510
digital watermarks, optimum attack/defense 107545
distributed algms., routing into two parallel links 113865
domination search games 78809
drifting games 67748
dyn. choice model, unique mixed strategy Nash games 67753
election of members to societies, electoral evol. 124493
equilibria of lower semicontinuous games 67743
evol. dyn. game, aggregate behavior cycles 113868
existence and uniqueness of equilib. situations in Markovian games with discounting 67736
fast block matching algm. based on winner-update strategy 95251
fault detect., decentralized filter using estim., games 67660
fictitious play matrix games, modif. 78806
games-comp. dimens. 124488
generalized fuzzy games and fuzzy equilibria 89976
generalized Nash equilib. games, soln. set 124489
host-parasite model, asymptotically stable pop. coexistence 113856
hybrid energy grids, CHP syst. group mgt., game theoretic anal. *(Japanese)* 99534
IFS models, inverse fractal problem, hybrid evolutive-genetic strategy 94571
image watermarking, role of inform. theory 94506
incentive models, inform. aggregation 78802
inform. conflict conditions, strategy selection by opposing sides 85503
knowledge strategy selection in strategy mgt. *(Chinese)* 89666
lang. model, eval., perplexity estim. 73047
large nonanonymous repeated games with aggregate outcome 124492
lattice-valued matrix game with fuzziness 124503
lin. coalitional games and their fuzzy extensions 113860
lin. continuous-time stochastic estimators, design using covariance info. in Krein spaces 130079
lottery problem, Monte Carlo algm. 67739
LP models, stabil., index set approach 100944
math. game for design of interconnection networks 124487
matroid games, Shapley value, static model 78799
mil. operations, modelling and control against adversarial control 88234
model of making investment decisions 124484
modified offensive earned-run av. with steal effect for baseball 67761
multi-player prisoners dilemma game co-evol./cooperation 89975
multiperson bargaining under uncertainty, min. regret 67750
n-pers. nonzero-sum game, min. inequality, 0-diagonal quasiconcavity 67747
Nash equilib. games, Bayesian learning eval. expt. 67751
Negra/Penn treebank speech anal. systs., interrogation *(German)* 73002

game theory continued
network consciousness, beyond ant-hill model 119774
NP-completeness for calculating power indices of weighted majority games 100782
num. anal. of ruin games 113858
open transm. loss cost allocation, cooperative game theory 111991
partially observable state games, model and optimality 100781
perfect inform. games, stable equilib. in beliefs 124479
power generation expansion planning using game-theoretic model 133833
power indices props. 113871
predator-prey model with allowance for memory 89978
Prisoner's Dilemma, evol. dyn., previous results effects 89977
prisoner's dilemma, repeated, evol. convergence to equilib. 89974
pursuit problem in 3D Euclidean space, generalized solns. 67742
pushdown procs., games and model-checking 78805
quitting games, correl. ε-equilib. 113863
quitting games, multiplayer seq., equilibria 78800
random coding error exponent watermarking game 129039
real-time Internet traffic, variable rate model with QoS guarantees 108339
reinforcement learning, fuzzy, game and search appls. *(Japanese)* 113867
repeated games, stabil. of efficient outcomes 113859
robust direction finding, game theory H_∞ approach 73581
sender-receiver games, partial common interest, commun. evol. 124494
signalling games, evol. learning 67752
silent-noisy duel with two kinds of weapon 78796
sing. perturbed Nash games, Riccati eqns., LQ control 78804
sorting algm. for seq. of kings in tournament 113861
SVM for lung cancer diagnosis 87807
team cooperation effect on innovation incentive *(Chinese)* 89979
telecomms. vert. integrated networks competition 85111
three-part partition games on rectangles 67740
transm. pricing, elec. tracing, proportionality principle 99214
Tsume-shogi game, competitive co-evol. algm. *(Japanese)* 78808
ultimatum bargaining adaptive learning vs. punishment 124491
uncertainty of multi-level systs. of events 89980
update networks and their routing strategies 85099
vector Gaussian watermarking game, coding capacity 129038
wholesale elec. prices, mergers impact simul. 111810
ws-convergence of product measures, Prohorov's theorem extension 113862
Zermelo theory and early hist. of game theory 67754
zero-sum repeated game with random pay-offs, Bush-Mosteller learning 124483
zero-sum stopping game in dyn. fuzzy syst. 100776
zero-sum two pers. game with random walk, geom. methods 67745

games of skill
see also computer games; personal computing
centralized/distributed online games, cheat-proof playout 119298
computer vision syst. for tracking players in sports games 94968
Horus, shape-based robot orient. detect. and ident. 84624
networked multimedia appls., adaptive causality and media sync. control 130977
robotic soccer, self-localization using laser range finders 109998

gamma distribution
2D RAKE receiver in correl. freq.-selective Nakagami-fading 119876
capability index assess. under skewness sensitivity 113751
EM field inside leaky enclosures, estim. and num. simul. 93958
independent gamma stats., distrib. sum 95728
IR indoor wireless channel charactn. by meas. 109224
irradiance PDF, laser beam propag. through turbulent media 117702
Nakagami channels, correl. gamma variates sum for wireless systs. perform. 131233
ordered piecewise const. failure rates, Bayesian estim. 89928
preventive syst. maint., components partial monitoring, Bayesian inference 113425
satellite interf. prediction, effects of ice crysts. and raindrop canting angle 109023
sigs., clases resoln. 107345
time sharing multiple-access flat fading channels, channel capacity 107765

gamma radiation *see gamma-rays*

gamma-ray absorption
3-D PET, collimated coincidence point sources, simultaneous transm. meas. 111014
brain SPECT, dopamine receptor imaging, scatt., atten., collimator response 122173
cardiac SPECT, atten. smear, 'paradoxical' counts increase 132847
cardiac SPECT, atten./scatt. corrected, regularisation optimisation 122187
dual isotope SPECT, noise reduction, analytic atten. correction method 122174
functional brain imaging, automated PET atten. correction model 98580
PET, atten. correction, axial transm. resoln. effects 111040
PET, atten. correction using consistency conditions/3D template 132932
PET, segmented atten. correction, fuzzy inference systs. 122188
PET, whole body, segmented atten. correction, neighbourhood EM clustering 122186
PET atten. correction, 3D template & consistency conditions 122185
PET reconstruction, noise propag. from atten. correction 122192
planar/SPECT imaging, parallel Monte Carlo code 132918
SPECT, cerebral blood flow quantification, atten./scatt. correction impact 122189
SPECT, lesion detect., human-observer perform., noisy atten. maps, patient motion 122172
tumour detect. in PET oncology, atten. correction effects 122190
Ga-67 imaging, Monte Carlo simul., correction methods optimisation/eval. 132919

gamma-ray apparatus
see also gamma-ray production; gamma-ray spectrometers
astron. instrums., conf., San Diego, USA (Aug. 2000) 89532
beams from linac with narrow beam collimator, med. appls. 122300
CARTOGAM portable gamma camera functioning in photon counting mode 121784
Compton current generator, design and testing using gamma radiation/X-rays 98089
gammagraphic images, cpd. regularizer for Bayesian restoration 110443
Hybrid Portable Gamma Camera, hybrid collimation for indust. γ-imaging, spatially coded/Compton aperture data 87270
imagers and X-ray spectrometers, compact back-end module 121744
LXeGRIT gamma ray imaging telescope, DAQ upgrade 121862
mobile gamma-radiation inspection syst., cantilever vibr. 114522
ReFerence γ-ray refl. photocathode design anal. 132490
sentinel lymph nodes detect., compact γ camera, opt. Monte Carlo simul. 110920
Xe liq. TPC, γ-ray imaging, LXeGRIT appl. 76188

gamma-ray applications
see also gamma-ray apparatus; radiation therapy
beams from linac with narrow beam collimator, med. appls. 122300
bedside tomographic scintigraphy, diagnostic tool in intensive care and emergency room 132810
coal, neutron induced prompt gamma-ray anal. *(Chinese)* 77684
imaging, image intensifier/cooled CCD camera 120889
LEU plate type research reactor fuel, burnup meas. 112244
radar perform. with different posn. sensitive detectors 114553
radiosurgery, gamma knife, beam placement accuracy verification, BANG3 polymer gel dosimeter 98631
radiosurgery, treatment planning optimisation, guided evol. simulated annealing 111102
ReFerence γ-ray refl. photocathode design anal. 132490
total body irrad., dose in vivo meas. accuracy 98776

gamma-ray astronomy
EDELWEISS WIMP dark matter search using cryogenic Ge detector 110289
GLAST, beam test engng. model, Si tracker assembly 98022
GLAST beam test engng. module, Si tracker 121459
GLAST gamma-ray large area space telescope 98098
HESS telescopes for gamma-ray astron. 121814
high resoln. Compton telescopes, perform. charact. 132488
IBIS, γ-ray imaging telescope on board INTEGRAL 76192
instrumentation, conf., San Diego, USA (Aug. 2000) 89532
INTEGRAL SPI, astron. γ-ray spectrometer, imaging test setup 121778
LEGRI, low energy gamma-ray imaging telescope 76196
lens telescopes charact. 76194
LXeGRIT, upgraded DAQ syst. 132461
LXeGRIT gamma ray imaging telescope, DAQ upgrade 121862
LXeGRIT liq. xenon γ-ray imaging telescope, light trigger syst. perform. 132384
MAGIC air Cherenkov telescope, image camera 132489
MEGA telescope, Si strip detectors 121469
ReFerence γ-ray refl. photocathode design anal. 132490
SPI, Spectrometer for INTEGRAL, charact. 76191
SPI coded-mask γ-ray spectrometer, imaging test setup 132386
TeV γ-ray astron. apparatus/observational anal. 132425
CdTe high resoln. detector, imaging devices 121479
CdTe(CdZnTe) detectors, recent develop. 121767
CsI hodoscopic calorimeter for GLAST beam test engng. module 121573

gamma-ray bursts *see gamma-ray sources (astronomical)*

gamma-ray detection
3-headed γ-camera PET, resoln., detector thickness influence 122211
8 mm data cartridge 2D DAQ apparatus for 4πβ-γ coincidence meas. 97974
ADAC mol. coincidence detect. PET camera, NEMA NU-2 2000+ stds. 132952
AGATA, γ-ray tracking detectors develop. 132469
astron. instrums., conf., San Diego, USA (Aug. 2000) 89532
bleached Kraft pulp facility, nuc. level detect. syst. 132435
Blue database, high-fold γ-ray coincidence data 87269
camera detector, virtual PMTs, centroid positioning perform. improvement 122268
cameras, Monte-Carlo simul. using GEANT 132957
CARTOGAM portable gamma camera functioning in photon counting mode 121784
CARTOGAM portable gamma camera operation in photon-counting mode 132409
CMS EM calorimeter, light-to-light readout syst. 121629
collimator, medium-sensitivity rot., high-perform. radioisotopic imaging 111013
collimatorless gamma ray imaging with help of gamma-ray tracking 132351
combination β-γ-radiometer & dose-rate meter, extended dyn. range 98030
compact back-end module for multielement X-ray spectrometers and γ-ray imagers 121744
compact gamma camera design optimisation for breast imaging 132523
compact PSPMTs, imaging props. eval., discrete γ-cameras appl. 122267
conf., advanced radiation dosimetry, Athens, Greece (July 2001) 124201
conf., imaging, Stockholm, Sweden (June 2000) 124186
contraband/explosives detect., scintillation & semicond. sens. appl. 110437
cosmic-radiation dosemeter, mil. aircraft crew 87996
CR-39 gamma-ray irrad., depth-depend. bulk etch rate, dosimeter 121661
CT-SPECT, combined syst. with single CdZnTe detector 122149
diamond CVD film, thermolum., photon dosimetry 82328
diamond CVD films, prep., radiation detect. devices 87218
direct ion storage dosimeters with MOSFET devices, review 133142
dosimetric ionis. chambers, effective pt. of meas., Monte Carlo simul. 76739
dual-head γ-camera imaging, random coincidences correction 111038
EDELWEISS WIMP dark matter search using cryogenic Ge detector 110289
electronic pers. dosemeters, photon radiation perform. 122419
electronic solid state dosimetry, review 133141
EUROMET Ge γ-ray spectrometry efficiency transfer software compar. 121764
EXOGAM array for closed shell phys. 110442
ext. source γ-ray spectrom., efficiency curves, HPGe/Monte Carlo compar. 132299
fissile materials detect., meas. control complex 121520
Frejus WIMP scintillator detector, design anal. 121428
γ-γ coincidence meas., human counter appl., Ge detectors *(Japanese)* 133146
GLAST gamma-ray large area space telescope 98098
GREAT spectrometer triggerless total data readout design anal. 121734
Hlow temp. detector for CPT invariance expts. 121650
hand-held γ-cameras, reconstruction implement., surgery appl. 132983
hemispherical photomultipliers from Electron Tubes Inc, opt. props. 115274
HERA-B RICH detector perform. at high track densities 132329
high resoln. Compton telescopes, perform. charact. 132488
high spin phys., conf., Warsaw, Poland, Feb. 2001 124169
high-energy gamma-ray response, detectors modeling 98027
high-purity Ge detectors, gamma-ray spectrometry efficiency curve, semi-empirical formula 110384
high-speed γ-camera design, high-yield-pileup-event recovery method 98571
HPGe coaxial detectors, specs. 98026
HPGe detector efficiency calib. for environ. sample anal. 132298
HPGe segmented Clover γ-ray detector, rel. energies, review 110311
hybrid PET/SPECT resoln., LSO/NaI scintillators, online rebinning 122218
IBIS, γ-ray imaging telescope on board INTEGRAL 76192
II-VI materials, conf., Albuquerque, NM, USA (Oct.-Nov. 2000) 89593
imaging, apparent image form. by Compton-scatt. photons 122163
imaging plate and wavelength-shifting fibers for gamma rays and neutrons dosimetry 122403
imaging plates, fast neutron and γ-ray dosimetry 122409
indiv. monitoring, Spanish approved dosimetry services, intercomparison programme 122383
integrated CT-SPECT syst. for small-animal imaging 110929

gamma-ray detection continued
integrated HEMT-based charge amp. design and expt. 110398
intermediate neutron fluence std. develop., meas. tech. *(Japanese)* 87239
intraoperative probe, γ-ray detect., radiation safety *(French)* 76722
ion chamber for high-range gamma meas. in space crit. appls. 87288
ionis. chamber loss of sig. charges, exposure standardisation *(Japanese)* 879
ISPA-tubes with scintillating YAP:Ce windows, X & γ ray imaging 121812
large-area PSPMT based γ-imager with edge reclamation 121779
LEGRI, low energy gamma-ray imaging telescope 76196
lens telescopes charact. 76194
LSO:Ce, blue-enhanced Si photodetector spectral charactn. 132411
LXeGRIT liq. xenon γ-ray imaging telescope, light trigger syst. perform. 1323
lymphoscintigraphy handheld scintillation camera, high-resoln. 110998
MARS, γ-ray tracking array, highly segmented HPGe detector pulse sha simul./anal. 87209
MCP posn.-sensitive detectors in fast mol. beam expts. 132343
med. γ-camera collimators, quality perform., investig. comparison *(Chine* 111044
MEGHNAD multi-element HI detector array, design review 110310
microPET detectors, coincidence meas., small animal imaging scanner 1329
micropixel gaseous imaging detector perform. anal. 132348
MINIBALL Ge detector array for RIB facilities 76016
mountain rock, radionuclide distrib. visualisation syst. 121783
multidimensional precision posn.-sensitive detector develop. 121610
multiplexed APD arrays, gamma detector, readout scheme 110292
NE213 liq. scintillator, pulse-shape discrim. deterioration at high energ 121564
nuc. disarmament treaty compliance monitoring by Radiation Continuity Chec 122766
nuc. radiation sens., fiber loss 121602
optimal P-Z setting, spectrosc. tech. 121860
PADC gamma irrad. detector, opt./elec. props. 121663
penetrating radiat. syst./appl., conf., San Diego, USA (Aug. 2000) 100386
PET, APD array, monolithic Si wafers, 32-channel LSO matrix 132935
PET, block detectors, polaris. effects on scatt. normalisation 122269
PET, continuous scintillator with pixellated photodetector, design/simul. 1329
PET, depth-encoding Anger detector using scintillating fibres 122203
PET, high resoln., 32-channel LSO matrix coupled to monolithic 4×8 APD ar 122205
PET, high-resoln., granulated dual-layer detectors, Monte Carlo study 1329
PET, hybrid gamma camera imaging, septal spacing optim. 122235
PET, LSO crysts., dual APD array readout, cryst. surface treatment optimisat 122204
PET, micro cryst. element detectors, perform. charact. 132937
PET, slat collimation/cylindrical detectors, simul. using SimSET 132987
PET, small animal, posn. sensitive detector, LSO array *(English)* 87776
PET dedicated instrum., small planar detectors, improved perform. 122232
PET micro cryst. element detectors, multichannel PMT coupled 122202
PHENIX detector, gluon polariz. meas. in proton 110346
phoswich detector for continuous blood-sampling syst. 132938
phoswich/APD detectors, low-noise CMOS preamplifiers, high-resoln. P systs. 111011
photoacid generator appls. for γ ray detect. materials 110293
photodiode matrix detector, scintillator cryst. optimisation, Monte Carlo sim 132915
photomultiplier tubes, detector technol. advances 115272
pinhole SPECT of mice using LumaGEM gamma camera 111037
pixellated photodetector, continuous scintillator, design/simul. 132916
pixellated semicond. gamma camera, phys.-based model 111005
pixellated semicond. γ-camera, phys. based model 132913
РК-АГ-02 α-γ-radiometer-spectrometer, ^{241}Am proximate monitoring 98080
pMOSFET dosimeter, total dose response to γ/p irrad. 111239
Polish permanent monitoring station response compar. with TLD/γ-ray detect 121458
primary std. dosimetric equipt., current & charge meas., unified channels 86
PRISM-IRIX γ camera syst., 3-head positron coincidence detect. *(Japane* 76583
proportional chamber, plasma mode, EM calorimeter 87202
prostate imaging, compact positron tomograph, conceptual design 132950
radar perform. with different posn. sensitive detectors 114553
radiation distrib. sens. with normal opt. fiber 121567
radiation dosimeter consisting of leuco cryst. violet/halocarbons, devel 110294
radioact. sources, depth distrib., nondestructive anal. 87215
radioactivity primary std. estab., traceability syst. *(Japanese)* 86391
radiotherapy dosimetry, portal imaging detector spectral response 133130
ReFerence γ-ray refl. photocathode design anal. 132490
RHIC PHENIX HI collision expt. detect. syst. design 132358
ring Compton camera DAQ syst. design anal. 121743
scintielectronic detector with improved energy resoln. approaching ideal li 121549
scintillating fiber camera, 0.25 mm^2 fibers, space dosimetry 122401
scintillating fiber camera, space dosimetry 133144
scintillating fibre detectors in high energy expts., review 132439
scintimammography, dedicated scintillation cameras perform. 110997
selective excitation double Mossbauer spectrometer, design & perform. 981
semicond. gamma detector arrays, noise limit/spectral resoln. anal. 110454
semicond. gamma detector arrays, spectral resol. driving to noise limit 121
semicond. gamma-ray detectors, Shockley-Ramo theorem 87274
sentinel lymph nodes detect., compact γ camera, opt. Monte Carlo simul. 110
sentinel lymph nodes localisation, hand-held γ-ray imaging device 132966
sentinel node radio-guided surgery, compact γ-cameras appl. 132969
SI-01 gamma probe surveillance syst. at IFIN-HH 132470
small animal imaging, conventional γ-cameras appl. 132980
small animal SPECT imaging, high resoln. detectors develop. 132978
small γ-camera using PSPMT, NaI(Tl), CsI(Tl) and CsI(Na), perform. e 132981
small-FOV γ-cameras, optimal cryst. geom., arrays vs. disks 132992
SPI, Spectrometer for INTEGRAL, charact. 76191
SPI coded-mask γ-ray spectrometer, imaging test setup 132386
STACEE γ-ray detector prog. digital delay/trigger syst. 121739
supercond. transit. edge sens., external act. feedback bias, X-ray/γ-ray spectro ter appl. 71154
thin plastic scintillator, energy calib. method 132406
thin plastic scintillator, simple method of energy calib. 121566
thyroid, I-131 studies, high-resoln. detector syst., perform. meas. 111006
tracking algms., DSP 121861
triple-head gamma-camera PET syst., software geom. calib. method 12221
virtual PMTs, centroid positioning perform. improvement near γ-camera dete edges 111010

na-ray detection continued
lGaAs HBT, ionizing radiation detector 87223
GO/plastic scintillators, phoswich detector, continuous blood sampling 121617
aF_2 PET module, PMT coupled, gamma detect. efficiency 122208
aF_2, cryst. detector array, high energy γ-ray anal. 110309
aF_2 scintillation crysts. charact. and detector appls. 132360
C, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
ZT coplanar electrode detectors, large, stabil./charact. 121473
aF_2:Tm, single cryst. TLD, dose response, radiation therapy appls. 133086
aSO_4:Dy TL phosphor and phosphor embedded Teflon, energy depend. for X/gamma rays, MCNP4A code 132321
-CdTe crysts., shallow jn. form. by In diffusion, excimer laser annealing, γ-ray detector appl. 115309
dTe, gamma detector, semicond. cryst. optim. 87277
dTe gamma detectors, coincidence timing resoln., PET appl. 110291
dTe high resoln. detector, imaging devices 121479
dTe thin back-to-back detectors charactn. 132382
dTe thin back-to-back detectors, classical planar parallel field irrad. geom. 121476
dTe/CdZnTe spectrometers, interact. depth 121772
dTe(CdZnTe) detectors, recent develop. 121767
dZnTe 3D posn.-sensitive spectrometers 98096
dZnTe coplanar grid detector, pulse shaping tech. 121626
dZnTe detectors, capacitive Frisch grid struct. 121475
dZnTe detectors, digital sig. proc., clustering method 121635
dZnTe detectors for coincident α-γ spectrosc. 87187
dZnTe, gamma detector, semicond. cryst. optim. 87277
dZnTe pixel detectors, charge transport simul. 121483
dZnTe radiation detector sig. proc., clustering method 121427
dZnTe segmented detectors, edge and corner effects on spectra 132383
dZnTe segmented detectors, edge/corner effects 121482
dZnTe semicond. detector for X-ray/γ-ray monitoring 132417
$Cd_{1-x}Zn_xTe$ crysts., DC photocond., gamma-ray detector appl. 93329
Co and higher energy photons, Canadian/French dosimetric stds. 111217
Cs, γ-ray scatt., detector energy loss distrib. 87226
Cs, mobile gamma spectrometry, on-line stat. methods 98761
Cs specific soil activity profiles, dip γ-detector syst. 122707
sI hodoscopic calorimeter for GLAST beam test engng. module 121573
sI scintillator, γ/β decay power, reactor safety appl. 76118
sI:Tl, γ-ray scintillator detectors as hidden explosive identifiers 132342
sI(Tl), blue-enhanced Si photodetector spectral charactn. 132411
sI(Tl) scintill. with Si drift detector array, high resol. γ-imaging 121780
sI(Tl) single scintillator coupled to Si drift detectors array, gamma-ray imaging 110331
sI(Tl)/Si PIN photodiode imaging module, compact 64-pixel, IC readout, perform. 122263
F, radionuclide guided surgery, intraoperative probe perform. 76572
F, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
F-FDG scintigraphy, CDET hybrid gamma-camera, malignant melanoma recurrence *(French)* 87772
GSO PET/SPECT detector, possibility anal. 122206
GaAs bulk SI samples, radiation detector appls., review 132487
GaAs, cryst. struct./inhomogeneities, γ-ray irrad,. props. effects, detector appl. 91646
GaAs detectors, charge division/collection, trapping effects, continuity eqns., proc. modelling 97990
GaAs detectors, med. imaging appl. 97994
GaAs epitaxial ^{10}B-coated thermal neutron detectors 121481
GaAs:Cr, epitaxial detector p-i-n-struct., γ-ray/ξ-ray detector appl. 90489
Ge detector gas monitor detect. efficiency curve determ. 87276
Ge detector, high-purity, ang. response to gamma-rays, in situ meas. 76122
Ge detector peak efficiency curve shape for prompt gamma NAA 97984
Ge detector relative/absol. efficiencies, gamma-ray spectrom. appl. 98025
Ge γ-ray detectors, high purity, design criteria for pulse shape anal. 121785
Ge high-fold segmented detectors as gamma-ray tracking arrays 76017
Ge twin detector develop. and perform. 121424
Ge well-type detectors efficiency computation, anal. formulae 97969
HPGe, thirty-two-fold segmented detector, γ-ray detect. 110287
^{131}I, mobile gamma spectrometry, on-line stat. methods 98761
^{111}In, radionuclide guided surgery, intraoperative probe perform. 76572
$^{115}In^m$, foil, high dose rate meas., photon activation anal. 122374
InP bulk SI samples, radiation detector appls., review 132487
^{192}Ir brachytherapy sources, beta/gamma dosimetry 133123
^{40}K, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
LSO crysts., poly-phosphoric acid etching, PET/SPECT detectors improvement 122264
$LaBr_3$:Ce, energy resoln. of inorganic-scintillator gamma-ray detectors 132289
$LaCl_3$:Ce, energy resoln. of inorganic-scintillator gamma-ray detectors 132289
$LaCl_3$:Ce, inorganic scintillator γ-ray detector energy resoln. anal. 132344
$LaCl_3$:Ce^{3+} scintillation cryst. readout with large area APD 121554
LiF:Mg,Ti TLD, glow curve, space radiation dose equiv. 98762
$Lu_2Si_2O_7$:Ce^{3+}, inorganic scintillators, gamma ray/thermal neutron detect. 110290
N-filled ion chamber, wide-range gamma monitoring 132423
^{13}N, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
^{16}N, γ-ray meas., CdZnTe stacked detector response calc. 87275
NaI gamma ray spectrometer, air kerma rate, calib. 76743
NaI std. 3 inch detector, improved quant. gamma-ray spectrosc. 121577
NaI/LSO and YSO/LSO phoswich block detectors, efficiency, PET/SPECT appl. 122266
NaI(Tl) scintillation counters, light collection 121576
NaI(Tl) well-type detectors efficiency computation, anal. formulae 97969
$NaPO_3$-$GdPO_4$-Ce(Tb)PO_4 scintillating glasses, opt. charact. under irrad. 110334
^{15}O, radiopharmaceuticals, imaging plate sensitivity meas., PET 122164
$PbWO_4$:Tb,Mo, EM calorimetry in energy regime below 1 GeV 132292
$RbGd_2Br_7$:Ce^{3+}, inorganic scintillators, gamma ray/thermal neutron detect. 110290
Si 3D archit. sens., test results, future plans 121448
Si blue-enhanced photodetector, spectral characterisation 120805
Si detector, multiple Compton tech., gamma ray energy meas. 121596
Si detectors, develop. and appls. 132369
Si drift detectors coupled to scintillators, gamma-ray imaging detectors 76116
Si microstrip detector, field oxide FET-biased, radiation effects on charact. 76128
^{99m}Tc, radionuclide guided surgery, intraoperative probe perform. 76572
TeO_2 high-resoln. bolometers for rare events detect. 76082
TlBr crysts. for radiation detector appls., charact. 87279
TlBr large vol. detectors for gamma-ray spectrosc. 121492
Xe liq. photon detector for μ→eγ expt. at PSI 121541
Xe liq., scintillation light detect. using large area APD 121592
Xe liq. scintillator response for gamma rays 121550

gamma-ray detection continued
ZnS:Ag phoswich detectors, simultaneous α/β/γ/n counting using multi-param. tech. 121559
ZnS(Ag) phoswich detectors, simultaneous α, β/γ and n counting by dual-param. tech. 132404

gamma-ray effects
see also biological effects of gamma-rays; radiolysis
ATLAS calorimeter, high-speed digital opt. data link, SEU 98061
ATLAS SCT, radiation-hard optoelectronic data readout 98063
charge preamplifiers, P- and N-channel JFETs selection criteria as input elements 132465
CMOS act. pixel sens., radiation-induced dark current 97376
CMOS APS image sens., radiation-induced dark sig. 97377
CMOS device charact., γ radiation dose influence *(Chinese)* 103851
CR-39 gamma-ray irrad., depth-depend. bulk etch rate, dosimeter 121661
diamond, CVD detector, thermolum., UV light sensitivity 88005
double-gate-controlled NPN bipolar transistors, total-dose effects 126672
FBG in opt. satellite links, radiation-induced spectral effects 96879
glass, γ-ray irrad., enhanced $\chi^{(3)}$ 93772
hardened CC4007 chips in γ-irrad. MOSFET, temp. effects *(Chinese)* 115899
losses in opt. fibres prediction 93062
MOS struct., γ irrad., effect of ultrasound on the params. 126610
MOSFET, radiation induced pos. charge, bias annealing *(Chinese)* 81332
n-MOSFETS fabricated in BiCMOS proc., radiation damage 115798
multiplexed FBG sens., gamma-neutron radiation effects obs. 97319
PADC gamma irrad. detector, opt./elec. props. 121663
PHEMT MMIC technol., MM-wave space appls. 69188
photoacid generator appls. for γ ray detect. materials 110293
photonic sens. interact./perform. in space radiat. environ., review 122477
plastic opt. fiber transm. rate on irrad. 93082
PM-355 detectors, γ-irrad., bulk etch rate meas. methods 121686
polycarbonate, γ-irrad., tracking resist., scintillation discharge current 81726
polyethylene, γ-irrad., tracking resist., scintillation discharge current 81726
power VDMOSFETs, γ-irrad., elec. charact., anal. modelling 81306
PVC insulated cable, nuc. qualification 133732
radiation dosimeter consisting of leuco cryst. violet/halocarbons, develop. 110294
radiation shielding facilities, direct heat gen., energy conservation 78178
super self-aligned bipolar transistor, gamma ray hardness struct. *(Japanese)* 103770
unibond-SOI materials, press. sens., total dose radiation effects 121264
Au/GaInP:Te MOCVD Schottky contact, γ-ray induced deep electron traps, DLTS anal. 115441
CdSe nanoparticles, γ-irrad. prep. in ethylenediamine solvent syst. 92261
$CdWO_4$ single cryst. scintillator, doping effect on radiation hardness 121557
Ce^{3+}-doped phosphate scintillating glasses, opt. props. under irrad. 121552
Er doped fiber laser, mode-locked, gamma-ray induced responses 117129
GaAlAs LED, radiation degrad. effects 105026
GaAs MESFET, TLM struct., radiation induced resist. 115942
GaAs Schottky-barrier FET, ^{60}Co γ-radiation influence on electro-phys. props. 103921
GaAs, cryst. struct./inhomogeneities, γ-ray irrad,. props. effects, detector appl. 91646
GaAs double Schottky barrier particle detector charactn. *(Chinese)* 97937
GaAs p-n jn. solar cell, gamma irrad., elec. charact. 134409
LiF detector, self-atten. of TL light, exptl. comparis. 132322
LiF:Mg_2Ti TL detectors, supralinearity of peak 4 and 5, different Mg/Ti concs. 133118
$NaPO_3$-$GdPO_4$-Ce(Tb)PO_4 scintillating glasses, opt. charact. under irrad. 110334
$PbWO_4$ full-sized scintillation cryst. radiation hardness anal. during mass prod. 132407
$PbWO_4$ single cryst. scintillator, doping effect on radiation hardness 121557
Pt/$SrBi_2Ta_2O_9$/Pt film capacitors, hysteresis symm., data retention, γ-ray irrad. effect 104469
Si, HTLT oxygenated detectors, radiation hardness, shallow doping impurity 76048
Si microstrip detector, field oxide FET-biased, radiation effects on charact. 76128
Si p^+-i-n photodiodes, radiation degrad. effects 105026
Si, polycryst. film and npn transistor, particle irrad. 126611
Si surface region in MOS syst., gamma-irrad., nonuniform space-charge distrib. 115449
Si:P, transmutation-doped γ-irrad., defect states, elec. props. 91580
SiO_2 radiation tolerant pixel front end, BTEV design 98057
SiO_2:Co^{2+} fibre attenuators, gamma radiation-induced atten. increase 96682
Ta_2O_5-Si struct., gamma irrad. 91916
Tb^{3+}-doped phosphate scintillating glasses, opt. props. under irrad. 121552

gamma-ray production
Compton current generator, design and testing using gamma radiation/X-rays 98089
HIγS, FEL generated gamma-ray beam 132280
recycling accelerator, hard bremsstrahlung, high-efficiency source 110246
tuneable monochromatic gamma-ray source at 15 MeV linac of Gent Univ. 97934
^{192}Ir, catheter-based intravascular brachytherapy, dosimetry 122391
^{75}Se advanced second-generation gamma radiography sources 87272

gamma-ray radiography *see radiography*

gamma-ray scattering
see also Compton effect
3-D backprojected PET data, scatt./random events, adaptive correction 132929
3-D Compton scatt. camera images, list mode EM reconstruction 132886
3D PET hybrid scatter correction, unscattered coincidences distrib. 122198
brain SPECT, dopamine receptor imaging, scatt., atten., collimator response 122173
cardiac SPECT, atten./scatt. corrected, regularisation optimisation 122187
Compton scatter SPECT tomograph, image reconstr., MLE 111043
dual head coincidence imaging, scatter response, Monte Carlo simul. 122197
dual isotope SPECT imaging, crosstalk & scatter correction 122201
high-energy I-131 scatt. correction tech. incl. γ-camera scatt. 122194
PET, block detectors, polaris. effects on scatt. normalisation 122269
planar/SPECT imaging, parallel Monte Carlo code 132918
SPECT, ^{67}Ga, scatt. compensation with artificial neural nets 111032
SPECT, cerebral blood flow quantification, atten./scatt. correction impact 122189
SPECT, edge detect., atten. map, backscatt. photons 122199
SPECT, fan beam collimators, geometric, scatt., septal penetration components 132920
SPECT, scatt., collimator dependency, transm.-depend. compensation 111017
SPECT, spatially varying Compton scatt. correction method 98574

gamma-ray scattering continued
SPECT scatter correction, collimator depend., transm. depend. convolution 122200

gamma-ray sources *see gamma-ray production; radioactive sources*

gamma-ray sources (astronomical)
TeV γ-ray astron. apparatus/observational anal. 132425

gamma-ray spectra
see also gamma-ray spectroscopy; Mossbauer effect
A-bomb gamma ray spectra, radiotherapy/radiobiology simul. 111246
coal, neutron induced prompt gamma-ray anal. *(Chinese)* 77684
exotic nuclei, closed shell phys., review 110442
pulsed proton target, calorimetric-TOF tech. for particle energy spectra 98034
CdTe/CdZnTe detectors, behavior following electron irrad. 121490
CdZnTe detector, energy spectrum improvement, Euclidian dist., digital-analog hybrid sig. proc. syst. 98045
$^{115}In(\gamma,\gamma')^{115}In^{m}$, 4.3 MV DYNAMITRON photoactivation facility, review 87068
^{16}N, γ-ray meas., CdZnTe stacked detector response calc. 87275

gamma-ray spectrometers
see also gamma-ray spectra; gamma-ray spectroscopy; Mossbauer spectrometers
astron. instrums., conf., San Diego, USA (Aug. 2000) 89532
conf., imaging, Stockholm, Sweden (June 2000) 124186
CZT coplanar grid detectors, stabil. and charact. 110318
EDELWEISS WIMP dark matter search using cryogenic Ge detector 110289
GREAT spectrometer, triggerless total data readout method 110412
GREAT spectrometer triggerless total data readout design anal. 121734
high resol./energy, perform. test using laser Compton photons, MC comparis. 121777
high-rate high-resol. gamma spectrometry, adaptive digital filter 121859
high-rate high-resoln. gamma spectrometry, adaptive digital filter 110396
high-rate multielement X-ray spectrometers and γ-ray imagers, compact back-end module 110414
HPGe detector cooled by Stirling cycle cryostat, SELENE lunar mission, gamma ray spectrometer 121775
INTEGRAL SPI, astron. γ-ray spectrometer, imaging test setup 121778
large-area PSPMT based γ-imager with edge reclamation 121779
low-noise fast charge amps., cold discharge mechanism 110405
multichannel hot-electron microcalorimeter-based γ-spectrometer 110313
nuc. disarmament treaty compliance monitoring by Radiation Continuity Checker 122766
PK-AΓ-02 α-γ-radiometer-spectrometer, ^{241}Am proximate monitoring 98080
single photon resoln. time spectrometer, SNR *(Chinese)* 98092
SPI, Spectrometer for INTEGRAL, characts. 76191
SPI coded-mask γ-ray spectrometer, imaging test setup 132386
tracking algms., DSP 121861
CdTe detector pulse-shape proc., effects of inhomog. material props. 110382
CdTe detectors, digital pulse-shape proc. 132353
CdTe thin back-to-back detectors, classical planar parallel field irrad. geom. 121476
CdTe/CdZnTe spectrometers, interact. depth 121772
CdZnTe 3D posn.-sensitive spectrometers 98096
CdZnTe detectors, capacitive Frisch grid struct. 121475
CdZnTe detectors, capacitive Frisch grid struct. 110319
Ge γ-ray detectors, high purity, design criteria for pulse shape anal. 121785
Ge high-fold segmented detectors as gamma-ray tracking arrays 76017
Ge twin detector develop. and perform. 121424
NaI gamma ray spectrometer, air kerma rate, calib. 76743
TlBr large vol. detectors for gamma-ray spectrosc. 121492

gamma-ray spectroscopy
Blue database, high-fold γ-ray coincidence data 87269
cascade summing correction, generic detector charactn. templates 98084
coal, neutron induced prompt gamma-ray anal. *(Chinese)* 77684
Compton-suppressed telescope detector, low-energy gamma-ray spectrometry 98086
dead-time loss correction apparatus design/perform. anal. 132446
digital gamma-ray spectrometry, recent advances 98087
EUROMET Ge γ-ray spectrometry efficiency transfer software compar. 121764
ext. source γ-ray spectrom., efficiency curves, HPGe/Monte Carlo compar. 132299
GammaVision γ-ray spectrosc., true coincidence correction method perform. 98085
halo nuclei, magic nuclei far-off stabil., superheavy elements, GSI data 110070
high-energy gamma-ray response, detectors modeling 98027
high-purity Ge detectors, gamma-ray spectrometry efficiency curve, semi-empirical formula 110384
high-rate high-resol. gamma spectrometry, adaptive digital filter 121859
HPGe coaxial detectors, specs. 98026
HPGe detector efficiency calib. for environ. sample anal. 132298
HPGe detectors, segmented, efficiency, design criteria for pulse shape anal. 110323
HPGe segmented Clover γ-ray detector, rel. energies, review 110311
ion trap project at IGISOL, status 75941
LSO:Ce, blue-enhanced Si photodetector spectral charactn. 132411
nuc. spectrosc. systs., perform. of zero-dead-time mode of DSPEC Plus 98088
nuclide quantification GUI, librarian-driven anal. 132485
optimal P-Z setting, spectrosc. tech. 121860
radioact. sources, depth distrib., nondestructive anal. 87215
CdZnTe detector, pulse shape anal. based similarity with digital-analog fusion method 87255
CdZnTe detectors for coincident α-γ spectrosc. 87187
CdZnTe segmented detectors, edge/corner effects 121482
^{137}Cs, γ-ray scatt., detector energy loss distrib. 87226
^{137}Cs, mobile gamma spectrometry, on-line stat. methods 98761
CsI(Tl), blue-enhanced Si photodetector spectral charactn. 132411
Ge detector, high-purity, ang. response to gamma-rays, in situ meas. 76122
Ge detector, high-purity, low-energy spectrometry, shielding, ^{210}Pb determ. in air filter 76126
Ge detector relative/absol. efficiencies, gamma-ray spectrom. appl. 98025
Ge detectors, segmented, drip line nuclei studies at Center for Nuclear Study, Tokyo 132431
^{131}I, mobile gamma spectrometry, on-line stat. methods 98761
NaI std. 3 inch detector, improved quant. gamma-ray spectrosc. 121577
^{210}Pb determ. in air filter, HPGe detector low-energy spectrometry 76126
Rn emanation from Spanish/Swedish soils, ^{238}U content 121687

gamma-ray transport *see photon transport theory*

gamma-rays
Compton current generator, design and testing using gamma radiation/X-rays 98089

gamma-rays continued
heterog. medium, gamma-emitting stent, dose-point-kernel 98788
labyrinth radiation streaming, proton accelerator facility, dosimetry 133128

gamma transport theory *see photon transport theory*

garbage collection (computers) *see storage management*

garment industry *see textile industry*

garnets
includes ferrimagnetic insulators, $M_3Fe_5O_{12}$; for rock-type garnets, $MM'(SiO_4)_3$, see "minerals"
bi-gyrotropic garnet waveguide magneto-optics 127855
epitaxial garnet ferrite films, domain struct. rearrangement 81888
ferrite films, garnet-type, VBL, dark-field microscopy geometries 116284
film, crack form., cpd. glass underlayer 127340
mag. cryst., LPE growth, SEM, XRD, EDX, RHEED 125015
microstrip line with YIG-GGG thin film substr., FDTD anal. of transm. charact 69000
scintillation materials for nuc. med. appls. 111007
single domain particles, rot. aftereffect 116287
single-domain magnetooptic cell, switching rate 104837
terraced LD and garnet crysts. integrat. by wafer direct bonding 82635
thin films, dipolar spin waves, momentum relax. reversal 70498
thin films, ferromag. domain structs., scanning Hall probe microscopy ana 86465
waveguide-type amps., ultrashort opt. pulses, partial coherent props. 74961
YIG films, narrow-linewidth, for heterog. integrat. 92790
$(Bi,Lu,Nd)_3(Fe,Al)_5O_{12}$ transverse magneto-opt. phase-shift, integrated Mach Zehnder isolator 127850
$Bi_3Fe_5O_{12}$ garnets, GaAs RT scanning Hall probe microscopy *(English)* 10451
$Bi_3Fe_5O_{12}$ single cryst. films, FMR 92791
Ce:YIG magneto-opt. props. for mag. field sens. *(Japanese)* 109503
$Ce_{0.6}Y_{2.4}Fe_5O_{12}$ mag. field sens., PLD 124997
Cr^{4+}-doped Q switches for Nd-doped lasers, radiation params., operation simu 82543
GaScYIG film based MSW UHF freq. selective limiters 92869
$Gd_3Ga_5O_{12}$:Ag phosphor prep. and electrolum. characts. *(Chinese)* 116930
$Gd_3Ga_5O_{12}$:Nd laser, pass. Q switching, self-phase conjug. using $LiF:F_2^-$ 11715
$Gd_3Ga_5O_{12}$:Nd^{3+},Cr^{3+} laser single crysts., CZ growth, dopant conc. control 7918
In-BiCaVIG cryst., opt. fiber sens., AC mag. field 131935
LuAG:Er garnet cryst. all-opt. NAND logic gate 116869
Nd,Cr:GGG waveguide struct., nanosecond KrF laser deposition 128184
Nd:YAG freq.-converted pass. Q-switched ring lasers, compact UV light sourc 93564
Nd:YAG polycryst. ceramic SHG lasers for photofabrication light sourc 105228
Nd^{3+}:$(CaLi)_3Nb_{1.68}Ga_{3.2}O_{12}$ garnets, act. media for diode-pumped lasers, energ and spectral params. 128205
Nd^{3+}:$Ca_3Nb_{1.68}Ga_{3.2}O_{12}$ garnets, act. media for diode-pumped lasers, energy an spectral params. 128205
Si-LiNb(Ta)O_3($Gd_3Ga_5O_{12}$), Ar beam surface activated bonding 92035
TbGG cubic magneto-opt. cryst. high-power Faraday isolator 127854
YAG:Cr^{4+} as saturable absorber, act.-pass. mode-locking of Nd:YAG las 117426
YAG:Yb scintillating crysts., prospects for low-energy neutrino detect. 76095
$Y_{3-x}Al_5O_{12}$:Tb, thin films, cathodolum. phosphors, alkoxy sol-gel prep. 71541
$Y_3Al_5O_{12}$:Nd single crysts., double crucible method growth, inclusions ana 101171
$YBa_2Cu_3O_y/Y_2O_3$-ZrO_2/YIG films, IBAD-YSZ template growth 68380
$Y_3Fe_{(2)}$:Co epitaxial films, in-plane uniaxial mag. anisotropy 92789
YIG PM tuned oscillator based synthesizer for LMDS LO appls. 80269
YIG based mag. grating, bistable opt. element 105554
YIG epitaxial film, microwave circulator 69046
YIG film based electronically tunable nondispersive MSW delay line 116480
YIG film, progress in integrated opt. isolators 127853
YIG film-based nonlin. spin wave phase shifter, characts. 81915
YIG films, laser deposition, struct./mag. props. 92794
YIG in-plane magnetized film, anal. of excitation of MSSW/MSBVW mode 70560
YIG mag. waveguide, magnetostatic forward vol. waves *(Chinese)* 92876
YIG single cryst., microstrip line, opt. isolator-modulator 71432
YIG ultrathin films, PLD, perp. mag. anisotropy 127341
YIG:Ce, fibrous single crysts., growth atmos. effect on solubility limit of Ce ions 114217
YIG:Ce films, prep. by RF magnetron sputter techs., struct./mag. charact. 8183
YIG:Ce single cryst. Faraday element, mag. field sens. 120776
YIG:Si, ferrites, swift HI irrad., mag. props. 81827
YIG:Yb,Bi magneto-optic opt. fiber current sens., perform. testing *(Chinese* 120877
YIG/ring-core transformer Faraday effect current sens. 97291
YIG-replacement oscillator, appl. in low-noise synthesizer design 114983
$(YYbBi)_3Fe_5O_{12}$, struct./mag./magneto-opt. props., high-perform. appl. 92793

gas analysis *see chemical analysis*

gas blast circuit breakers
see also air blast circuit breakers
12 kV distrib. network compact load break switches upgrading 134259
145 kV highly integrated gas insulated switchgear develop. 112691
550 kV shunt reactor current interruption phenom. 112701
evaporating metal droplets in ablation controlled elec. arcs, modelling 91525
gas puffing INPIStron develop. for pulsed power supply appls. *(Korean)* 7805
gas-blast breakers, Weil-Dobke's synthetic short-cct. tests optimisation *(Korean* 123669
inhomog. high-temp. SF_6 gas behaviour 112685
interrupting duty, DC component time const. effects 112687
LV miniature cct. breakers, laterally enclosed arc runners, arc struct. and motio 123662
power syst. high-current interruption technols. *(Japanese)* 88488
restrike free gas-blast cct. breakers design, capacitance switching 112696
SF_6 HV/MV cct. breaker state diagnosis after short cct. 134270
SF_6 arc quenching property diagnosis using ICTP *(Japanese)* 112705
SF_6 blast cct. breakers, jet flow conditions *(German)* 134284
SF_6 cct. breaker, 3D elec. field calc., ICCG algm. *(Chinese)* 78047
SF_6 cct. breaker arc behaviour, nozzle ablation effects 112692
SF_6 cct. breakers, plasma sheath num. modelling 112695
SF_6 gas-insulated cct. breakers, operating mechanism dimens. synthesis/optim 88995
SF_6 tank type cct. breaker, double breaks anal., hybrid FEM-charge simu method 134257
SF_6-blown HV GCB, small current breaking perform. *(Korean)* 134273

breakdown *see electric breakdown*
discharge lamps *see discharge lamps*
discharge tubes
see also ion sources; mercury arc rectifiers; thyratrons
diesel engine exhaust treatment, pulsed streamer corona reactor, RVC electrodes 76929
inductive voltage adder module, pulse generator 99784
ozone generation, low-power HV HF power supply design/anal. 125982
ozone generator, corona electrode shape/discharge gap spacing effect on conc. *(Korean)* 115278
semicond. gas discharge image converter, high-speed switch-on, optimal control 109661
SIGNAL high-current pulse generator with μs plasma opening switch 78016
sodium lamp tube crack detect. using laser illum. *(Japanese)* 89429
Cu-Al cpd. cathodes, sputtering resist. under long-term ion-electron bombard. 115241
discharges *see discharges (electric)*
dynamic lasers *see gasdynamic lasers*
insulated substations
420 kV gas insulated substation VFTOs, switching conditions effects 134314
coupling-capacitor voltage transformer develop. for GIS appls. 112585
CT, T-zone protection, μP based relay LFP-924 *(Chinese)* 112604
dist. protection relay operation anal. 77492
equipt., HV network switching, conducted immunity requirements 134287
-V transformers, transient EM phenom. 134315
PD params. estim. from AE techs. 134312
PD signatures, condition monitoring, multi-agent paradigm 112725
power syst. transients anal. using wavelet transforms 111662
shape optim. of GIS insulator barrier 123680
VFTO, test/simul. comparison *(Chinese)* 78059
SF_6 GIS inspection/maint. services using voice recogn. syst. 134274
SF_6-insulated voltage transformers, saturable reactor param. selection *(Korean)* 123554
insulated switchgear
3-phase enclosed GIS, very fast transients, voltage meas. *(Chinese)* 88996
145 kV highly integrated gas insulated switchgear develop. 112691
acoustic wave propag. props./PD location ident. *(Japanese)* 112704
compact air and gas insulated switchgear develop. 123665
compact HV/MV distrib. substations, gas insulated switchgear 134310
defect detect., PD meas. 88999
earthing switch induced current switching studies 112706
Kii Channel HVDC link, thyristor valves and GIS 77307
PD meas. using nonconventional UHF sens. 78058
PD sig. propag./location, freq. components comparison 134278
power network relax. mechanism study 77669
N_2/SF_6 gas insulated 275 kV busbar, insulation design *(Japanese)* 99851
SF_6 GIS, PD, EM wave detect. 134275
SF_6 GIS apertures, radiated EM wave, freq. charact. 134276
SF_6 GIS inspection/maint. services using voice recogn. syst. 134274
SF_6 GIS, metallic particle motion, breakdown, XLPE underground cable testing *(Japanese)* 88990
SF_6, breakdown under fast oscillating impulse voltage, photoelec. detect., GIS *(Chinese)* 99838
SF_6, environ. aspects related to MV switchgear 134269
SF_6 insulated cct. breakers for high short ccts. interruption *(German)* 134283
SF_6 particle-contaminated GIS/GITL systs. with dielec. coated electrodes 112681
SF_6 tank type cct. breaker, double breaks anal., hybrid FEM-charge simul. method 134257
SF_6/N_2 insulated cct. breakers, operation *(German)* 134286
SF_6-N_2 compressed gas mixture GIS, very fast transient overvoltages 112698
SF_6-N_2 mixtures, nonuniform fields predischarge phenom., lightning impulse voltages *(Korean)* 92615
insulated transformers
SF_6 gas insulated transformer windings insulation, elec. discharge model 123537
SF_6-insulated voltage transformers, saturable reactor param. selection *(Korean)* 123554
lasers
see also chemical lasers; excimer lasers; gasdynamic lasers; ion lasers
2D flow field meas. by laser PIV tech./cross-correl. method 75926
charact. standardization *(Japanese)* 93698
conf. on EO and microelectronics, Tel Aviv, Israel (Nov. 1999) 78457
Cu vap. laser, discharge cct., capacitance, inductance, GA study *(Chinese)* 117053
decoupling NLO elements for powerful I_2 laser 128462
excimer laser medium discharge, filamentation instabil. 128120
fast-flowing mol. laser gas mixture elec. discharge 82463
gyro, act. media gas flow determ. 71639
high-power high-repetition-rate indust. excimer lasers, output charact. 105127
intracavity phase elements for specific laser mode selection 82709
Iskra-5 facility, I_2 two-pass amp. 105089
laser forming thermal proc. studies *(Japanese)* 113169
laser impulse space propulsion, laser ablation studies 133258
laser-driven rocket traction, macroparticle accel., CO_2-laser expts. 133257
methane broadband Raman amp., coaxal laser pumping, output charact. *(Chinese)* 82493
methanol-d_3 opt. pumped laser emission, SW far-IR laser cavity 82498
MIT-Bates polarized source, beam lifetime expt. 110264
monolithic-disked HV vac. interface for high-energy KrF-laser amps. 82501
MOPA, beam propag. and perturb., thermal aberrations 105407
multiple-electrode-pair laser, sync. trigger effect on output charact. *(Chinese)* 93485
nonfeedback nonresonant laser syst. control 128422
NSRL electron storage ring, VLS diffr. grating, groove dens. anal. *(Chinese)* 110217
opt. disks, scatt. meas., media noise rel. 127574
pulsed CO_2 laser with long pulse duration, power supply 128122
pyramid polygon mirror wide-band laser scanning heat treatment *(Chinese)* 93914
Raman amp., SRS, output charact. *(Chinese)* 71631
resonator mirrors, absorpt. coeffs. meas. 128355
single-mode gas laser, asymmetric limit cycle bistability 82941
soft X-ray lasers, spatially coherent tabletop, mW av. power, appl. 117088
spatiotemporal patterns from large aperture CO_2 laser, time averaging 105153
superradiant FIR laser with buffer gas, opt. pumped, energy exchange proc. 71643
tokamak collect. Thomson scatt. diagnostic for fusion product α-particles 117071

gas lasers continued
transversal self-sustained gas discharge, max. current 80544
via-hole drilling machine for ALIVH-B *(Japanese)* 92569
X-ray lithog. video based alignment, sector FZP appl. *(Japanese)* 103507
Al particles in Ar, gas dispersed medium for pulsed chem. lasers 128099
Ar fast capillary discharge, Ne-like multi-pulse soft X-ray lasing 93488
Ar-Xe high power nuc.-pumped lasers 128045
ArF excimer lasers, long-pulse (V)UV operation 105126
Au indust. sealed-off vapour lasers, develop., prod. and appl. 93479
Be cold cathode for He-Ne laser, lifetime improvement 117087
CH_2F_2 waveguide laser working in submillimetre wavelength region 71638
CO RT microwave-excited cw laser 105106
CO RT repetitively pulsed overtone laser 105105
CO first-overtone laser, multiwavelength pulsed operation 128049
CO gas discharge laser num. simul., vibr. kinetics 105107
CO laser, fund.-band and first-overtone, perform. charact. 105108
CO lasers, continuous radiation, thermostable power sens. 82479
CO mag. confined discharge laser model anal. *(Chinese)* 128101
CO overtone-transit. lasers 105104
CO pulsed first-overtone laser, highly excited vibr. transits., spectrum form. 128038
CO supersonic flow laser, RF-discharge, math. model 117070
CO_2 7-pass planar waveguide laser amp. syst., ms pulse generation, materials proc. appls. 72120
CO_2 CW fast-flow laser beam quality 82481
CO_2 CW laser, intracavity SHG in $AgGaSe_2$ 82866
CO_2 CW laser with phase-stepped mirror, uniform intens. distrib. form. 128116
CO_2 CW waveguide lasers 82471
CO_2 EO Q-switched RF-excited waveguide laser 82497
CO_2 Q switching laser, chaos control with opt. feedback 93466
CO_2 Q-switched laser, pulsed beam heterodyne sig. with CdTe electrooptic modulator *(English)* 117067
CO_2 RF excited slab laser, optogalvanic effect 105120
CO_2 RF excited waveguide laser, heterodyne Q-switched pulsed output *(Chinese)* 71909
CO_2 RF excited waveguide lasers, pulse regime operation 93476
CO_2 RF-excited waveguide lasers, spectral comp. 82467
CO_2 TEA laser, SFUR extension to ring cavity 128121
CO_2 TEA laser, US generation efficiency 114538
CO_2 TEA laser, effective freq. conversion in nonlin. crysts. 128492
CO_2 TEA laser, flat-top output mode meas., saturation effects *(Chinese)* 128106
CO_2 TEA laser pulses, time-resolved spatial profile, intracavity apertures influence 82735
CO_2 act. medium CW fast-axial-flow laser, small-scale opt. nonuniformities 82469
CO_2 annular gain region in-phase laser mode selection 105139
CO_2 compact reliable multi-channel lasers, radiation spectrum investigs. 82468
CO_2 crossflow indust. laser, press. loss problems 105136
CO_2 elec.-discharge lasers, act. media pop. inversion, temp. effect 128115
CO_2 electrooptically Q-switched RF excited waveguide laser with two channels *(Chinese)* 71640
CO_2 fast-flow indust. laser, 2D self-consistent num. model 82460
CO_2 fast-transverse-flow discharge CW laser for nuc. reactors fuel channels decommissioning 83049
CO_2 gas waveguide lasers, hollow waveguide integrated optic systs. for 10.6 micron laser radar 71347
CO_2 high power fast axial gas flow laser tube, temp. distrib. *(Chinese)* 82494
CO_2 high power laser beam meas. & control, diagnostic instrum. 93702
CO_2 high power lasers, slab waveguide resonator, mode selectivity 105115
CO_2 high power mobile laser technol. complexes, output charact. 82490
CO_2 high-power CW indust. laser, beam stabil. 93475
CO_2 high-power CW laser design, scaling laws 82462
CO_2 high-power CW lasers for material proc. 82483
CO_2 high-power amp., self-chirped picosecond pulses 82754
CO_2 high-power diffusion-cooled annular lasers, split-electrode config. study 105111
CO_2 high-power indust. lasers, appls., book 78415
CO_2 high-power indust. lasers for machine-building and metall. 83047
CO_2 high-power indust. waveguide lasers, beam output charact. 82482
CO_2 high-power laser, US beamsplitter 116853
CO_2 high-power laser, controllable Fabry-Perot interferometer output mirror 82488
CO_2 high-power laser, welding charact. of hot steel samples *(Japanese)* 93918
CO_2 high-power laser with variable reflectivity output mirrors unstable resonator, beam QC 82487
CO_2 high-power multibeam lasers, surface hardening appls. 83050
CO_2 high-power multibeam lasers with heat regenerator, output charact. 82486
CO_2 high-power pulse-repetitive RF-excited slab lasers, output charact. 105113
CO_2 high-power pulsed laser params. meas. *(Chinese)* 128119
CO_2 high-powered pulsed coherent ladar systs. for small space objs. tracking/sizing 131673
CO_2 hybrid laser, dyn. emission, math. modeling 82496
CO_2 indust. CW laser beam, spatial and temporal charact. 105141
CO_2 indust. cw laser beam, polariz. state meas. 105117
CO_2 indust. high-power laser, radially polarized beam generation 82489
CO_2 indust. laser, act. mirror resonator, Q-switch regime generation 105114
CO_2 indust. repetitive-pulse laser, energy charact. 82485
CO_2 large aperture high-press. TE laser amp. gain 93478
CO_2 laser CW radiation for sheet steel surface treatment 83051
CO_2 laser, RF to microwave excitation, electron energy control, efficiency study *(Chinese)* 82476
CO_2 laser ablation proc., polymer proc. 128610
CO_2 laser atm. relay digital commun. syst. 120188
CO_2 laser edge welding, clad profiles, coaxial powder filler nozzle 83055
CO_2 laser, electron beam sustained, plasma cond. 82464
CO_2 laser, gas dens. small-scale inhomogeneities, glow discharge thermal instabil. 82461
CO_2 laser heat treatment by rot. pyramid polygon mirror on SCM440/SNCM220 steels 83058
CO_2 laser light delivery syst., hollow bent output tips props. 82716
CO_2 laser, material surface proc., reliab., corros. resist. enhancement 83052
CO_2 laser, nonequilibrium turbulent gas flow, luminesc. diagnostics 105134
CO_2 laser phase locking, radiation exchange 71906
CO_2 laser proc., high-power, focal mirror aberration meas. 117344
CO_2 laser pulse propag. in nonlin. absorbing media 82749
CO_2 laser, pulsed doughnut-type beam spatial charactn. 82733
CO_2 laser radiation, phase-matched SHG in $CdGe(As_{1-x}P_x)_2$ cryst. 82869
CO_2 laser, slab RF-excited, unstable-waveguide resonator, output charact. 82473
CO_2 laser syst., regeneratively amplified, X-ray preionized 105123
CO_2 laser transient procs., intracavity saturable absorber 82768

gas lasers continued
CO_2 laser transm. using high-power double-layer dielec. hollow opt. fiber 127612
CO_2 laser unstable resonator mirrors, phase front compensation 128349
CO_2 laser, unstable resonators with helical mirrors 93477
CO_2 laser with hollow waveguide transm., IR refr. indices *(Chinese)* 104732
CO_2 lasers, CW and high repetition rate props., at. indust. appls. 83048
CO_2 lasers, RF α-discharges 82465
CO_2 lasers, act. medium excitation, modeling criteria selection 105145
CO_2 lasers, angioplasty, cardiovascular appls. 111092
CO_2 lasers, continuous radiation, thermostable power sens. 82479
CO_2 lasers, resonator SBS-mirrors, phase conjug. develop. 105398
CO_2 lasers, waveguide-unstable cavities, laser beam profiling 82470
CO_2 long pulse laser, simplified power supply, zero cross switching tech. 71873
CO_2 multifunctional laser with controllable spectral and temporal charact., indust./scientific appls. 82484
CO_2 multijoule TE/TEA lasers, mag.-spiker sustainer tech. 105119
CO_2 multijoule TEA lasers, mag.-spiker sustainer technol., modified overshoot mode 105118
CO_2 multikilohertz TEA laser, all-solid-state exciter driven 105116
CO_2 planar waveguide laser amp., microsecond pulses for micromachining 105112
CO_2 planar waveguide lasers, direct high-resoln. machining appls. 105110
CO_2 pulsed high-press. laser, injection seeding computer model 105121
CO_2 pulsed laser radiation/liqs. time-depend. interact. 72101
CO_2 quasi-isotropic laser, polariz. competition 71644
CO_2 rapidly tunable 2.5 kW laser, lidar/pollution monitoring appls. 76933
CO_2 sealed-off RF-excited waveguide lasers, CO_2 dissoc. 82466
CO_2 sealed-off slab lasers, all-solid-state generator excitation, output charact. 105109
CO_2 several-THz bandwidth wide-aperture laser amp., chem. HF laser pumped 105122
CO_2 short laser pulse generation for IR-laser chem., parametric studies 117391
CO_2 slab laser, magnetron microwave excitation 82491
CO_2 slab waveguide lasers, segmented RF excitation 105094
CO_2 slab-type laser, short pulse prod. *(Japanese)* 82743
CO_2 slab-waveguide laser, RF excited, mode control 105140
CO_2 slab-waveguide laser, unstable resonator WOLS signature 93685
CO_2 ultra super pulsed planar waveguide laser, direct micro-machining 70354
CO_2 variable reflectivity grating slab laser resonators 105387
CO_2 waveguide laser, electrooptically Q-switched RF excited, tunable output charact. *(Chinese)* 105149
CO_2 waveguide laser, freq. stabil. by digital tech. 82742
CO_2 waveguide lasers, RF-excited, parametrical line develop. 82472
CO_2 waveguide lin./ring laser array phase locking 128399
CO_2:N_2:He gas laser mixture, DC plasma/HF fields interacts. 105133
CO_2/OsO_4 stabilized laser at 28.8 THz, absol. freq. meas. 71636
CO-laser, pulsed, powerful e-beam sustained, act. gas mixture subsonic flow 128051
CO_2-TEA laser based LIDAR-DIAL syst. for O_3 dyn. in Madrid urban atmos. 76937
Cu freq.-doubled laser light source for fibre gratings fab. 127607
Cu high-magnification unstable laser resonator, flattened Gaussian beam concept 82732
Cu high-power vapour lasers, solid state power supplies 105097
Cu indust. sealed-off vapour lasers, develop., prod. and appl. 93479
Cu kinetically enhanced vap. lasers, plasma kinetics, repetition rate scaling 105102
Cu sealed-off vap. laser radiation, spatial/temporal charact. 128046
Cu vap. laser, black center elimination/optim. *(Chinese)* 117056
Cu vap. laser, max. output, design and global optimizing GA *(Chinese)* 71632
Cu vap. laser, output power, CAD, phys. simul. codes *(Chinese)* 82478
Cu vap. laser, pulse repetition rate, metastable state and electron dens. effects 93467
Cu vap. lasers, output charact. and appls. 105088
Cu vapour laser, pulse repetition rate limitation rel. to prepulse electron dens. 117065
Cu-HyBrID laser, changing pulse params. 105103
Cu-vap. large-bore laser, kinetic params. anal. *(Chinese)* 105152
CuBr high-PRF laser 105098
CuBr high-power laser, precision materials proc. appl. 117569
CuBr laser, precision material proc. appls. 105099
CuBr laser syst. for precision micromachining, indust. app. 105640
DF repetitively pulsed three-module elec.-discharge laser, cavity Q-factor optimisation 117057
F gas laser spectral lines, probable laser pumping mechanisms 105146
F laser, excited directly by sliding discharge 117073
F_2 excimer lasers, long-pulse (V)UV operation 105126
F_2 laser, discharge pumped, high-repetition-rate operation, 1D model calc. 105132
Fe transient Ne-like X-ray lasers, femtosecond laser pumping 71633
H_2 femtosecond-laser-pumped X-ray laser, below light speed TW excitation 71646
H_2 sync. pumped Raman laser 128043
H_2 tunable CW Raman laser, external cavity LD pumped 105154
HF TEA-TEA oscillator-amp. laser syst., gain/beam profile charact. 117072
H_2O recomb. IR lasing in supersonic plasma expansion 82474
He-Ar laser, hard ioniser pumped, act. medium kinetic model 93480
He-Ne double-freq. laser, refl. radiation injection, detect. limit 117066
He-Ne dual-freq. bireflectance mirror laser cavity 105095
He-Ne four-mirror two-freq. laser for heterodyne measuring systs. 128104
He-Ne laser, RF to microwave excitation, electron energy control, efficiency study *(Chinese)* 82476
He-Ne laser beam focusing, beam-shape coeffs., generalized Lorenz-Mie theory 71877
He-Ne laser beam power meas. 117339
He-Ne laser, bireflectance thin film laser window plate 104870
He-Ne laser freq. stabilis. control syst., fast PLL 93725
He-Ne laser, full-inner-cavity birefr. dual-freq., angle-block and freq.-stabilization *(Chinese)* 105150
He-Ne laser, increasing service life of cathodes by plasma chem. treatment 128108
He-Ne laser, laser fund. investig. 78499
He-Ne laser with anisotropic cavity, magneto-induced bleaching 82456
He-Ne lasers, DC gas discharge, falling I-V charact. 128102
He-Ne lasers, amplif. influence factor, output power 128105
He-Ne master-slave laser syst., power-related freq. shifts 117074
He-Ne three-mirror two-freq. laser with stabilized beat freq. 128103
He-Ne two-wave freq.-stabilized laser for highly sensitive airborne gas analyzer 132211
gas lasers continued
He-Ne/$^{127}I_2$ stabilised lasers, 633 nm, internat. comparison 109405
He-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
He-Ne(Kr) hollow cathode lasers, ^{3}He isotope influences 117075
^{3}He-$XeBr_2$ nuc.-pumped flashlamp sources for nuc.-pumped lasers 128047
^{3}He-Ar-Xe nuc. reactor pumped gas laser cavity *(Chinese)* 105147
Hg CW at. laser, microwave discharge pumped, output charact. *(Chinese)* 716
I_2 freq. stable Raman laser, stepwise tunable secondary freq. stds. 86375
^{39}K atoms, two-photon stimulated emission proc., laser polariz. instabilit 71637
Kr_2* discharge-pumped VUV laser, stimulated emission 105125
KrF excimer TEA gas lasers, excitation discharge, floating particles influen 105131
KrF high-energy laser amps., laser-triggered spark gap 102886
KrF laser driver, rep-rate electron beam-pumped, electron-beam transportati expts. 105128
Mo/Si multilayer coatings, X-ray laser appls. 127878
N laser arrays, phase locking, output charact. 128048
N_2 UV laser, self-sustained discharge 128110
N_2 high power co-axially excited laser, oscill./gain charact. 93489
NH_3 superradiant far-IR laser, opt. pumping 82458
NH_3 superradiant opt. pumped FIR laser with buffer gas, theoretical study 824
NH_3 two-long.-mode superradiant THz laser, Raman effect 82457
NH_3 two-longit. mode opt. pumped submm-wave laser, energy exchange pr 71642
O_2, $^1\Delta_g$ state, discharge prod., for I laser 93482
O_2-I discharge chem. laser, $O_2(a^1\Delta_g)$ RF plasma jet generator 105059
O_2-I hybrid laser, discharge singlet oxygen generator 128050
Te_2 solar-pumped dimer gas-laser amp. 117059
Tm vap. discharge step-tunable laser 82502
Xe laser, RF to microwave excitation, electron energy control, efficiency stu *(Chinese)* 82476
XeCl long-pulse efficient laser, discharge pumped, output charact. 105129
XeCl oscillator-amp. laser syst., high contrast nanosecond pulse train generati 105130
gas meters *see flowmeters*
gas pressure cables *see power cables*
gas scintillation detectors
electron multiplier scintillation, tracking device perform. 121510
microstrip plate geometries as UV photosensors with reflective photocathod simul. 110340
Pierre Auger fluoresc. detector, second-level trigger 98071
Ar gas proportional scintillation counter, UV APD scintillation readout 1215
Ar gas proportional scintillation counter with UV APD scintillation readou 132391
Ar/CF_4 and Ar chamber, press. depend. of secondary NIR scintillation 11032
Ar-tetrafluoromethane mixtures, secondary NIR scintill., press. depend. 1215
He thick target, d irrad., fast neutron yield meas. 110220
Xe gas proportional scintillation counter, UV-sensitive large-area APD 1215
Xe gas proportional scintillation counter with UV-sensitive large-area AP 110326
Xe liq.-gas double phase proportional scintillation detector for direct WIM search 121494
Xe-Ne gas mixtures, gas proportional-scintillation counters 76121
gas sensors
absorptive methane opt. fiber sens. *(Chinese)* 121000
acoustic humidity and gas sens. 120716
AHI airborne thermal IR hyperspectral imager 98896
air conditioned atmos., Forane 134a/CO_2 concs. discrim., electronic nose 1320
alcohol gas sens., simult. polypyrrole-based composite film & QCM mea 75713
all-solid-state IR gas sens., LEDs and IR detectors 120963
amino-functional copolymer coated QCM-type SO_2 sens. 97528
ammonia vapour sens. using acrylic acid doped PANI 120985
AOTF, grating, and FTS imaging spectrometers for hyperspectral rem. sen 76952
APD-based low cost photodetect. syst. for low level O_2 conc. meas. 120972
array of cond. C black-polymer composites for sens./discrim. of vapours 9746
array syst., micro hotplate substr. fab., CMOS integrat. 97532
atmos., CO_2 laser based trace gas analyzer 76927
automobile cabin ventilation control, semicond. type gas sens. 100291
automotive indust., QC, electronic nose, GC/MS syst. 121020
benzene vapour sens. using spun films of calix[4]resorcinarene derivative 120983
benzene/ethylbenzene gas quantification/gas discrim. using sens. array/AN 132029
binary gas mixture conc. meas., high sensitivity NIR laser absorpt. 109786
bromothymol blue tapered film composite opt. waveguide, NH_3 sens. app 75724
4-t-butyl-CuPc-PODT mol. composite material, gas sens. appl. 97428
cantilever array based gas sens., multicomponent anal. 132037
catalytic sens. for monitoring explosive atmos. 75707
cement plants, proc. gas anal./prod. control integrat. 78741
chem. plume tracking by robots in constrained environ. 120958
chemFET gas sens., sensit. and fab. using LB tech. *(Chinese)* 120996
CMOS-based microsens. fab. technol., packaging approaches 109802
cod fish fillet, freshness anal., electronic nose 97555
coffee QC using electronic nose, PCA & MLP 109828
combined-struct. semicond. gas sens. based on butane gas 109745
complex mixture, temporal chem. images, digital aroma technol. 86700
conc. monitor using solid state IR modulator 75722
conducting polymer sens. array, wine aroma discrim. 97533
conf., Birmingham, UK (Feb. 2000) 113194
conf., semicond. gas sens., Ustron, Poland, (Sept 2000) 100391
copper phthalocyanine, film, gas sens., atmos. pollution meas. 109768
copper phthalocyanine films, electronic props., gas sens. appl. 109763
copper phthalocyanine films, photosensitivity/gas sensitivity in O_2/NO_2 1320
diamond, sens. appls. *(French)* 86698
diamond film gas sens., semicond. doping gases exposure effects 97470
diode lasers, single-freq. NIR devices, gas sens. 120965
electroacoustically coupled resonator config. 132054
electrochem. O_2/CO_2 sens., photosynthesis studies, educational instruction to 97507
electrochem./catalytic bead gas sens., review 120970
electrode catalytic activity effect in limiting-current-type zirconia cell sen 109744
electronegative trace gases, corona based detector channels 97475
electronic gas sens., SAW, metal oxide and MOSFET types *(German)* 12099
electronic nose, Forane 134a discrim., time reduced modelling param. 97550

ensors continued
ectronic nose, gas anal. gradient microarray 132026
ectronic nose, odor conc., computerized compensation 97451
ectronic nose, pollutant gases ident., pattern recogn. 76930
ectronic olfactometer, fresh fruit juices, rapid sorting 86725
nbedded microheater element, thermally insulated dielec. membrane 132024
viron. gas sens. & sens. mechanisms, overview 133357
bium bis[octakis(octyloxy)phthalocyaninato] complex, gas sensitive LB films 97509
hylene oxide monitoring in sterilization operations, miniature IR gas analyzer 95700
haust gas anal., thick-film sens. study 121021
xplosives/chem. agents detect., sorbent coated SAW sens. 76992
xternal cavity LD design, spectrosc. opt. sens. appl. 105364
BG sens., transformer oil acetylene gas content monitoring 75732
ET sens., low power gas detect., work fn. principle 132038
bre opt. TDM gas sens. syst., forward-coupled ladder topol. 75729
ue gas O_2 content soft sens. based on neural net *(Chinese)* 75694
. and appl., review 132027
od aroma, gas sens. for baking/roasting procs., selective odorant meas. 109767
rane 134a/CO_2 discrim. in humidity controlled atmos., electronic nose appl. 132042
OZAN-II fast-response chemiluminescent airborne ozone analyzer 86707
PW and SAW sens., gas chromatography 92765
el gas detect. using polymer-coated plastic opt. fibers 75731
a_2O_3 semicond. metal oxide sens. syst. for indoor air monitoring using IR-absorpt. 121014
as-fired power-plant ignition proc., LD-based in-situ methane detect. 112338
ases for ULSI proc., impurity meas., atmos. press. ionization mass spectrometer 87022
gh overtone BAW resonator as gas sens. 75741
ollow fibers short-pulse FWM for highly sensitive gas-phase anal. 82072
otplate gas sens., thermally isolated, FEM thermomechanical anal. 121002
ISGFET ozone sens., ppb range ozone detection *(Chinese)* 120999
ISGFET ozone sens. with dual sensitive layer operating at RT *(Chinese)* 97461
ydrogel coated pH-FET SO_2 sens., surface/potentiometric prop. 86744
yperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
n-situ combustion diagnostics using LD absorpt. sens. 109787
ndust. gas discrim. syst., neural network, PLD implement. 132066
ntegrated chemiresistor array for microrobot sens. platform 75688
R gas sens., cross sensitivity reduction, GA neural network 109730
nd mine vap. signature determ., sens. develop. 76997
ndmine detect., polymer film amplif. fluoresc. quenching, sniffer 76993
ndmine electronic chem. sens., using fluoresc. polymers 88230
ndmine/UXO detect., soil/air sampling, TNT & DNT anal. 76991
nthanide bisphthalocyanine LB film sens. array, olive oil aroma 97539
rge format broadband QW IR photodetector arrays, spatially modulated prism interferometer appls. 86656
OS gas temp. distribs. using diode-laser absorpt. sens. 121253
ove-wave gas sens., polysiloxane coated, organophosphate sens. 97437
TCC multilayer technol. for thick film sens. appls. 131879
ass market gas/chem. sens., MEMS device appls. 86765
ass prod., prestabilised nanopowder pulverisation coating 125065
MEMS explosive particle detector, dissolved TNT/DNT in soil 75691
MEMS RF ion mobility spectrometer for chem. vap. detect. 109779
etal phthalocyanine films, ion irrad., AFM study, gas sens. appls. 91708
etal-oxide gas sens. for pollution detect., fully digital user interface cct. 109794
etallophthalocyanine-doped polypyrrole/Si heterojunctions, NO_x gas sens. 97454
ethane, absorptive detect., LED/opt. fiber coupled syst. 120991
ethane detect., solid electrolyte based catalytic asymm. sens. 75716
ethane trace gas flux meas., fast chem. sens., LD spectrosc. 111474
ethanol gas sens. using ultramicroelectrodes, studies on sens. mechanism 120993
icro-gas sens. array, heating power control method 97495
icromachined gas sens., heating element, temp. extraction 97459
icrosensor, microhotplate platform 97556
id-IR laser absorpt. spectrosc., portable multichem. sens. 109785
oisture, porous Al_2O_3 sens. 75930
ultichannel gas leakage monitoring syst. using CPLD chip 99040
ultifunctional indust. combustion proc. monitoring by in-situ NIR tunable diode laser syst. 109738
Nafion membrane-based electrochem. O_2 & CO sens. 75733
anocrystalline gas sensitive layer, percolation model 109766
anostruct. thick-film gas sens., fab., air pollution meas. 99030
NASICON based amperometric NO_2 sens., electrode react. anal. 97486
NASICON thick film-based CO_2 sens. prepared by sol-gel method 132059
NASICON-based CO_2 sens., stabil. in humid environ., low temp. 75721
ickel phthalocyanine thin films, chemiresistor-type NO gas sens. 97508
itrite and NO(NO_2) determ. by anodic voltammetry at conductive diamond electrodes 97471
itroaromatic explosives electron capture detector, attachment react. 75690
dor recorder, act. odor sens. syst. 86724
dour sens., thiol layer immobilised on Au, electrochem. imped. meas. 75715
il-immersed power transformer condition monitoring syst. 77935
lfactory sig. class. by neural nets 109774
lfactory sigs. recogn., supervised fuzzy C-means and k-NN algms. 86715
pt. detect. of gas in oil wells production 122549
rganic cpds. meas. using activated carbon coated sens. 132067
rganic thin films for gas/vapour sens. systs. 86701
xide semicond. gas sens., PSPICE model 97512
xide semicond. gas sens., sol-gel synthesis 120966
xygen residues meas. in gaseous nitrogen, influent fields method 110044
almitic acid LB film, gas sens., pH effect 97515
PAN-DMSO-TBAP solid-electrolyte microamperometric CO_2 gas sens. 86737
PANI composite coating, NH_3 sens., nulling opt.-transm. bridge 97433
eaches and nectarines, sensorial props., electronic nose 97553
phthalocyanine thin films, crosswise-substituted, halogen sens. 97531
pinklady apples, electronic nose sigs. and fruit quality indicators 132060
plastic opt. fibre sens., vapour phase alcohol detect. 97294
polyaniline film SO_2 sens., neural network detect. vel. *(Chinese)* 75696
polybenzimidazole, acid-doped, solid-state H_2 sens. 86739
polymer coated SAW sens., inductively coupled, organic vap. detect. 97435
polymer gate FET sens. array for organic vapour detect. 97497
polymer/C nanocomposite thin films, PLD, gas sens. appl. 68302
polypyrrole conducting polymer composites for gas sens., ammonia detect. 97522
polypyrrole thin film gas sens., synthesis & sensitivity 97559
polysilicon hot plate, surface micromachined, gas sens. 116069
polysiloxane coating, Love wave device, vap. detect. 97460

gas sensors continued
porous thin layer electrode Coulometric type gas sens., transient response *(Chinese)* 75702
porphyrin film, ChemFET sens. 97554
pulmonary gas meas., portable syst., fast lung fn. test 110522
PZT amorph. thin film hydrogen gas sens. 97535
QCM selective polypyrrole electrodes, NO_2 & gas flux sensitivity 97440
QCM sens. array with on-chip heating, meas. mode 121022
QM-Y series semicond. gas sens., failure anal. *(Chinese)* 75703
quantum cascade DFB laser based sens., trace gas detect. 109784
quantum-cascade laser, Pound-Drever-Hall freq. stabilis., rovibr. reson. 105455
quartz BAW sens., measurand-induced mech./elec. prop. changes 97438
quartz thickness shear mode resonator electronic nose, fruit indust. appl. 132039
rem. multipoint fibre opt. gas sens., FMCW tech. & tunable laser 120989
response in enclosure, species transport influence, CFD simul. 132052
sampling-and-hold electronic nose, artificial/natural odours, noise anal. 97519
sapphire substr., Pt metallis. bonding, adhesion layers 97529
SAW gas sens., design optim. 120979
SAW waveguide, narrow aperture device, gas sens. 92766
self-assembling monolayer/Si(001) syst., electronic dens. modulation, gas sens. appls. 97467
semicond. gas sens., basic aspects and challenges *(Japanese)* 86697
semicond. gas sens., nonlin. dyn. response 97452
semicond. gas sens., nonlin. dyn. responses, competition effect 109765
semicond. metal oxide thin film gas sens., temp. drop on exposure to reducing gases 97518
siloxane conducting dendrimer, CO gas sens. 97538
SOI CMOS micro-hotplate gas sens., design/simul. 121006
solid state potentiometric sens., oxidable gaseous species detect. 75718
solid-state transducers., conf., Copenhagen, Denmark (Aug. 2000) 100428
SSNTD for radon meas. *(Korean)* 120957
stable combustion-type gas sens., temp. compensation, ozone detect. 97521
tetra-iso-propoxyphthalocyaninato copper(II) film, gas sensitivity 75712
tetra-substituted porphyrin, gas sens. appls. 109793
transient electrochem. multi-component gas sens., gas mixtures detect. 75736
transient electrochem. multi-component gas sens., O_2-N_2O(CO_2) appl. 86738
tunable diode laser, cryogenic rem. sens., air pollutants 76926
two-port SAW oscillator electronics design for sens. appl. 92696
unburned methane detect. by portable diode laser gas analyzer 109739
uremia diagnosis, electronic nose breath anal. 98127
UXO detect., explosive vap. diffusion in snow, modelling 76990
vert. micromachined resistive heater for micro-gas separation column 113142
zNose virtual chem. sens. array technol., high-resoln. olfactory images 97458
Ag-ZrO_2, Y_2O_3 stabilised, composite film electrode, O_2 sens. *(Japanese)* 132035
β''-Al_2O_3 ceramic membrane, potentiometric NO sens. 97514
Au gate MOS capacitors, NO_2 sensitivity, transient response 91429
(Ba,La)TiO_3 PTCR ceramic, CO gas sens. 97479
$BaSnO_3$, prep./props., liquefied petroleum gas sens. appl. 109741
C films, humidity detecting props., surface control 109761
C nanotubes, adsorpt., functionalization, confine., appls. 79469
C nanotubes, electronic devices/luminesc. elements *(French)* 80528
C_{60} based piezoelec. cryst. membrane gas/liq. chem. sens. 97446
C-black-polymer composite vap. detector arrays, landmine detect. 75689
a-CN_x films, N-rich, deposition, charactn. and appls. 90411
CO adsorpt. on Pd clusters deposited on pyrolytically prepared SnO_2, XPS 75725
CO determ., Au colloid self-assembled electrode 132032
CO gas rem. detect. using tunable mid-IR OPO 86702
CO level meas./control syst. 109773
CO meas. syst., neural net appl. 109439
CO_2 atmos. conc., IR-ray analyzer appl. 120998
CO_2 conc. meas. in bioreactor vent gases with DFB diode lasers 121262
CO_2 gas sens. using multivalent cation conducting solid electrolytes 97517
CO-CH_4 gas mixtures, SnO_2:Pd nanocryst. films micromachined sens. array anal. 132041
CO-NO_2 mixture, semicond. gas sens., ANN model 97542
$Cd_2Sb_2O_{6.8}$ ethanol-sens. props., Mg^{2+}-doping effects 120984
CeO_2, high-temp. gas sens., sensitivity 75726
CoMgNiO oxygen sens. material, high temp. defect struct., elec. props. *(Chinese)* 75704
Co_3O_4-NiO isobutane sens., low temp. operation 97523
Cu gate metal-oxide-semiconductor capacitors, gas sens. props. 75728
n-CuO/$BaTiO_3$, nanosized powders, gas sens. props., FTIR spectrometry 97431
Cu_xS film based structs., ammonia sensitivity at room temp. 109762
Cu_xS-microporous-Si struct., RT ammonia sens. 121010
Er complex, octakis(octyloxy)phthalocyaninato-LB film, NO_2 gas sens. 109777
Er-doped opt. fibre amp. loop, micro-opt. gas sens. appl. 93499
γ-Fe_2O_3, gas sens. for H_2 and LPG *(Chinese)* 121001
γ-Fe_2O_3 thin film, pure & Pt doped, fab., gas sens. charact. 90432
α-Fe_2O_3 thin film, pure & Sn doped, PECVD, gas sens. prop. 97505
γ-Fe_2O_3 ultrafine powder, gas sensitive materials, dopant, overview *(Chinese)* 75706
γ-Fe_2O_3 ultrafine powders, doping effect of gas sensitivity *(Chinese)* 68443
α-Fe_2O_3:Al gas sens., Al effects, CO/CH_4 detect. 75709
α-Fe_2O_3-ZrO_2 amorph. solid soln., oxygen gas sens. 97536
GaN thin film gas sens., MOCVD, response/recovery 86750
GaN/AlGaN/Pt HEMTs, H_2/CO/NO/hydrocarbon gas sens. 86748
Ga_2O_3 film, O_2 sens. appl. at high temp. 109742
β-Ga_2O_3, film, gas sens. materials charactn. 103054
Ga_2O_3 gas sens., long-term stabil., power consumption 132036
Ga_2O_3 high temp. gas sens., SiO_2 top layer, H sens. mechanism 121009
Ga_2O_3, high-temp. gas sens., sensitivity 75726
β-Ga_2O_3/O_2 interact., impedance spectrosc./SIMS obs. 109755
$GdCoO_3$/MO_x heterojunction element, gas sens. props. 97502
Ge-As-Te-based gas sens. selective to low NO_2 concs. 121007
H_2S open-path UV spectrometric multi-gas detector 120964
In_2O_3 films, O_3/NO_2 detect. 97510
In_2O_3 thin film gas sens., Au or Ti surface modif. effect 132049
InO_x polycryst. thin film, ozone sens. 86746
InO_x thin films, chem. and optoelectronic appls. 82054
In_2O_3/NASICON potentiometric sens., CO_2 detect. 86743
In_2O_3/SeO_2 thin films, struct., elec. and gas sens. props. 97474
In_2O_3-based NO_x sens., highly sensitive thermal anal. 75699
InP, film, gas sens., atmos. pollution meas. 109768
p-InP pseudo Schottky barrier diode, NO_2 gas sens. 97558
InP/Pd MOS Schottky diode hydrogen sens., hydrogen sensitivity 109790
InP-monolithic resistive sens., air quality eval. 86720
KTP periodically-poled crysts., opt. nonlin. mixing, gas sens. 120994
$KTiOPO_4$ periodically-poled cryst. tunable mid-IR light generation, gas sens. appl. 88181

gas sensors continued
La_2CuO_4-SnO_2 gas sens., alcohol vap., H_2 and H_2S detect. 97557
$LaFeO_3$/Y_2O_3-ZrO_2 electrochem. NO_x sens. 109743
$La_3Ga_5SiO_{14}$ based high temp. nanobalance sens. 97439
$La_3Ga_5SiO_{14}$ langasite high temp. nanobalances, operation limits 110012
$La_{1-x}Sr_xMnO_3$ based ref. electrode, potentiometric gas sens. 97525
Li_2CO_3-Li_3PO_4-Al_2O_3 electrolyte/$LiMn_2O_4$ electrode CO_2-gas sens. 86736
$LiFeO_2$-$LiFe_5O_8$/Li^+ conducting glass ceramics/Li_2CO_3-Li_3PO_4/Au solid electrolyte CO_2 sens. 109791
$LiNbO_3$ quasi-phase-matched OPO source, IR chem. sens. 109783
$Mg_{1-2x}(Zr_{1-x}Nb_x)_4P_6O_{24}$ based cond. solid electrolyte Cl_2 gas sens. 109733
MoO_3 sputtered multilayers, prep. method, gas sens. appl. 124824
MoO_3:Ti nanosized thin film, gas sens. 97552
MoO_3-TiO_2 nanocomposite thin film, gas sens. 91687
MoO_3-TiO_2 semicond. thin film gas sens. 97543
MoO_3-TiO_2 thin film gas sens., RF sputtered & sol-gel prep. 109772
MoO_3-V_2O_5 thin films, struct. & H_2 sens. props. 97526
MoO_3-WO_3 gas sens. for monitoring appls. 109788
MoO_3-WO_3 thin-films, sol-gel prepared, O_2 gas sens. 97544
NH_3 conc. meas. in bioreactor vent gases with DFB diode lasers 121262
NH_3 sens., wireless rem. query magnetoelastic device 120981
NH_3 trace gas sens. by near-IR diode-laser-based overtone spectrosc. 121261
NO breath analyser, WO_3 based chemiresistive microsens. 87348
NO spectrosc. detect. by quantum cascade laser 86713
NO_2, atmos., LIF detect., instrum. design 111480
NO_2 gas sens., $LaFeO_3$ electrode/solid electrolyte cell 86727
NO_2 gas sens., high-temp. elec. props. of Ni O-doped WO_3 thick films 132021
NO_2 sens., Au gate MOS capacitors 121008
NO_x potentiometric sens. based on stabilized ZrO_2 and $NiCr_2O_4$ sens. electrode 109734
$NaNO_2$-attached FET type gas sens., NO_2 sensitivity 97549
Nb_2O_5, lattice consts. and gas-sens. props., calcining temp. effect 97455
Nd:YAG/Cr^{4+}:YAG microchip-laser, 214.8 nm, NO detect. appl. 105253
O_2 biosensing, sharp spectral imprint gas signature detect. 86694
O_2 digital solid-electrolytic gas analyzers, enhanced conc. meas. accuracy 132022
O_2, dissolved, screen-printed amperometric sens., continuously-powered 86705
O_2 electrochem. sens. for proc. gas monitoring, charactn. 86706
O_2 electrochem. sens., host-guest inclusion complex of calixarene and methyl viologen 75738
O_2 high press. conc. meas. by VCSEL lasers 86714
O_2 rugged gas sens., solid ref. electrode, high temp. appl. 97469
O_2, singlet, direct detect. by intracavity laser spectrosc. 121256
O-permeable ceramic membranes for NO_x-sens. 121004
PZT coated Si cantilevers, photoacoustic gas detector 86709
Pd ultrathin sputtered activator layers on SnO_2, structural transforms., gas sens. appls. 109753
Pd-Ag(Ni) hybrid suspen. gate FET, coevap. prep., H_2 sens. 132051
Pd-coated single-mode tapered fibre, opt. H_2 sens. 109609
Pd-gate MIS transistors integral hydrogen sens., metrological charact. 86708
Pr complex, bis[phthalocyaninato], charge-flow transistor NO_2 gas sens. 109776
$Pr_xCe_{1-x}O_{2-\delta}$, ceria-based gas sens. 121003
Pt IR sources for nondispersive IR gas monitors 132030
Pt layer residual stress, thin film micro-gas sens., thermal cycling 120986
Pt/GaN Schottky diodes, H_2/CO/NO/hydrocarbon gas sens. 86748
Pt/Nafion electrode charact. for hydrogen sens. devices 97462
Pt-Si based O_2 sens., reactivation, surface heating & temp. meas. 97453
Pt-WO_3 porous MISFET, CO gas sens. 86696
Pt-WO_3-Si_3N_4-SiO_2-Si-Al capacitor, NO_2 sens. charact. 97484
Rh miniaturized thin film sens. for clinical blood CO_2 gas anal. 120955
RuO_2 amperometric CO_2 sens., air/seawater appl. 86721
SO_2 gas sens., opt. sensitivity charact. of SnO_2 & VO_x films *(Chinese)* 120974
SO_2 thin-film gas sens., photom./ellipsometric methods 75692
Si, front-side micromachined porous gas detector, NO_2 sens. appl. 109759
Si gas sens., low-power micromachined struct. 86704
Si microcalorimetric gas sens., catalyst materials 120968
a-Si microdot detectors, sq.-shaped electrodes 120978
Si micromachined struct., semicond. gas sens., reliab. 97534
Si micromachined tin-oxide sens. based intell. detector, DSP 132040
Si, porous, NO_2 sens., deposition tech., electrochem. etching 97483
Si porous chip, DNT, TNT, HF, and nerve agents detect. 75701
Si, porous, thick layer form., implanted mask, gas sens. fab. 92009
Si thick porous sacrificial layer form. using implanted mask technol., gas microsensors 92534
SiC MOSFET gas sens., indust. appls. 86745
SiC based microhotplate NO_2 gas sens., high stabil. 121011
SiC catalytic MIS Schottky diode sens. array, hydrocarbon detect. 97500
SiC:Pd H_2 sens., ion beam induced surface modif. 75693
SiC/HfB_2 based low power micro gas sens. 97491
SiC/Pt diode, high-temp. H_2 sens. appl., stabil. 86747
SiC-Pd(Pt) Schottky diode, high temp. H_2 and CH_4 detect. 97540
$SmCoO_3$/MO_x heterojunction element, gas sens. props. 97502
(Sn,Ti)O_2 film, RGTO tech. deposition, gas-sens. props. 109757
SnO_2, CO adsorpt., in situ diffuse reflectance FTIR spectr. 109749
SnO_2 Pd-catalysed microwave nanoparticles, CO-CH_4 selectivity 132053
SnO_2 based gas sens. in microreactor syst., smart microfluidics 109748
SnO_2 based heterolayer gas sens., slide-off transfer printing 97481
SnO_2 based low-power thick-film gas sens., screen printing/micromachining techs. 109764
SnO_2 based n+n combined struct. gas sens. for burnable gases 132028
SnO_2 ceramics, chem. precip. & freeze-drying, CO gas sens. 75714
SnO_2 electronic nose, PSPICE simul. 97450
SnO_2 film, nanocryst., struct./prop. rels. on (1̄012) sapphire 80745
SnO_2 films, chem. prep., sulphide route, methane sensitivity, annealing temp. effects 75739
SnO_2 films, microstruct., phys. props. 115327
SnO_2 films, spray pyrolysis, gas sens. charact. 101454
SnO_2 gas sens. array, impedance charact., ANN pattern recogn. 97504
SnO_2 gas sens. array on common Si substr., NH_3 detect. 121024
SnO_2 gas sens., epitaxial growth on sapphire substr., charactn. 97488
SnO_2 gas sens., gas mixture class., wine class. 120971
SnO_2, gas sens., high resoln. photoemission study 109751
SnO_2 gas sens., long-term stabil., power consumption 132036
SnO_2 layers, NH_3 gas-sensitivity, RTA proc. effect 86716
SnO_2 low-power thick-film gas sens. by screen-printing on micromachined hotplate 97489
SnO_2 microhotplate gas sens., spin-on nanoparticle proc. 97496
SnO_2 microhotplate gas sens., surface state trapping model 120980
SnO_2 nano-gas sens., Pd/Pt/Au catalysts, perform. 132064
gas sensors continued
SnO_2, nanocrystalline, obtained by means of microwave proc., props., gas se appl. 125126
SnO_2 nanocrystalline thin film, sol-gel synthesis, gas sens. *(Chinese)* 79388
SnO_2 nanoparticle layer on Si platform, domestic gas sens. 132047
SnO_2 nanoparticles, cond., oxidizing/reducing atm. effects, STM/STS obs., se appl. 132043
SnO_2 nanoparticulate film work fn. sens., NO_2 sensitivity 132045
SnO_2 nanopowders, surface reactivity, gas sens. props., particle size influe 120959
SnO_2 nanosized powder & thick film gas sens., prep., charactn. 132048
n-SnO_2, nanosized powders, gas sens. props., FTIR spectrometry 97431
SnO_2 nanosized thin films, mechanochem. proc., gas sens. 97546
SnO_2 nanostructured films, PLD, in-situ Pt doping, gas sens. appl. 90477
SnO_2 perfectly amorph. ultrathin ALE layers, gas-sens. appls., conductome sens. 97516
SnO_2 prestabilised nanopowder pulverisation coating, gas sens. prod. 12506
SnO_2 resistive gas sens. on Si substr., parasitic fields elim. 97551
SnO_2 semicond. gas sens., surface and interface props., atomistic model an 109792
SnO_2 sens. array, VOC detect., ANN pattern recogn. 97506
SnO_2 sens. array, gas conc. quantification in unknown gas mixtures 86712
SnO_2 sens. for N_2O monitoring, catalytic decomp. 97485
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033
SnO_2 sens., wet chem. route deposition on micromachined Si substrs. 10976
SnO_2 sol-gel film microsens., CO response, moisture/electrode effects 97548
SnO_2 sol-gel thin films, integrated gas microsens. fab. 97547
SnO_2 thick film ultralow power CO microsens., micromachining 97447
SnO_2 thick-film sens. arrays, CO-methane mixture discrim. 132044
SnO_2 thin film, UV light activation, low temp. NO_2 sens. 132046
SnO_2 thin film gas sens. fab. from hydrothermally treated nanoparticles 974
SnO_2 thin film gas sens., prep. by PLD, charact. 97541
SnO_2 thin films, spray pyrolysis, gas sens. appls. 90545
SnO_2 thin/thick film gas sens. comparison, diffusion-react. model 97482
SnO_2 thin-film gas sens. mechanism, dual ion beam sputtering 97503
SnO_2 toxic gas sens.-based autonomous real time air pollution monitoring sy 133360
SnO_2:CuO(ZnO) gas sens., CO gas detect. 75711
SnO_2:Mo thin film gas sens., catalytic additives 97511
SnO_2:Os(Pd) films, sol gel proc., gas sens. devices 109775
SnO_2:Pd films, Pd-Sn interacts., XPS, ISS, TPD studies 109752
SnO_2:Pd sens. elements for electronic detect. of methane, charactn. 109735
SnO_2:Pd thick film sens., CO consumption 109750
SnO_2:Pd(Pt), gas sens., high resoln. photoemission study 109751
SnO_2:Pd,Cu nanocryst. gas sens. films, doping effect on props. 97463
SnO_2:Sb:Ni sol-gel thin film detector prep. for NO_x detect. *(Chinese)* 1320
SnO_2:Sb_2O_3-Pd-Pt gas sens., compens. element, improved selectivity 75720
SnO_2:Si films, CO & NO_2 gas sens. props. 97442
SnO_2/Pt gas microsens. arrays, heated, chem. crosstalk 97499
SnO_2/Pt mono- and multi-layer thin films, CO gas sens. 97537
SnO_2-Ca(K)(Mg) methane gas sens., impregnated powder using wet che method 97524
SnO_2-LaOCl mixed layers, electrostatic spray pyrolysis, gas sens. 125066
SnO_2-PdO nanocomposite based CO gas sens., fab. proc. 75734
SnO_2-TiO_2, gas sens. anal. 109754
SnO_2-WO_3, gas sens. anal. 109754
SnO_2-Zn_2SnO_4 composite gas sens., selective CO gas detect. 132058
SnO_2-based gas sens., thiodiglycol vapours detect., interact. mechanism 1320
SnO_2-based semicond. gas sens. for combustible/pollutant gases, fab. 75727
SnO_2-based semicond. sol-gel sens. array, air pollutants detect. 109769
SnO_2-based sens. array, odor ident. appl. 132061
SnO_2-xCr_2O_3 varistor-type NO_x sens., micro p-n jns. 109740
SnOx miniaturized thin film sens., O_2 plasma treatment 81601
$SrCe_{0.95}Yb_{0.05}O_{3-\alpha}$, mixed-pot. gas sens., hydrocarbon detect. 97465
$Sr(Ti_{1-x}Fe_x)O_{3-\delta}$ ceramics, resistive oxygen sens., elec. cond., thick films 1097
$SrTiO_3$, high-temp. gas sens., sensitivity 75726
TiO_2 nanoparticle coated quartz, CO/NO_2 adsorpt., gas sens. appl. 120960
TiO_2 nanosized gas sens. thick films, prep./charactn. 97498
TiO_2 oxygen gas sens., develop./appl. *(Chinese)* 75698
TiO_2 polymer dispersed films, room temp. gas sens. 75723
TiO_{2-x}:Pt films, prep. & oxygen sens. prop. *(Chinese)* 79386
TiO_2-Fe_2O_3 nanosized thin film, CO gas sens. 97478
TiO_2-Fe_2O_3, nanostructured thin films, RF sputtering, charactn. 90256
TiO_2-WO_3, gas sens. anal. 109754
TiO_2-based gas microsensors for high temp. appls. 132031
V_2O_5-TiO_2 nanocryst. thin-films, sol-gel prep., O_2 sens. 97545
WO_3 CVD films on Si, gas sens., fab. & calib., DIP 97527
WO_3 based heterolayer gas sens., slide-off transfer printing 97481
WO_3 based sens. array for detect. of NO_x and NH_3 97490
WO_3 chemiresistive sens. films., stoich. & microstruct. effects 97530
WO_3, film, gas sens. materials charactn. 103054
WO_3, film, nanostruct., gas sens. 109758
WO_3 films, air/vac. thermal treatments, NO_2 gas sensitivity effects 103055
WO_3 nanocrystalline thick-film gas sens., H_2S gas sensitivity at room tem 97520
WO_3, ozone sens., sens. drift, meas. correction method 86710
WO_3 powders/thick films, thermal behaviour, gas sens. appl. effects 109756
WO_3 semicond., elec. props., gas sens. appl. 86711
WO_3 sens., SO_2 sensitivity, noble metal loading effect 97480
WO_3 thin film gas sens., chlorine detect. 97513
WO_3 thin film surfaces, UHV/O_2 annealing, O loss/recovery, gas sens. 1097
WO_3/TiO_2, film, gas sens. materials charactn. 103054
WO_3/TiO_2 powders/thick films, thermal behaviour, gas sens. appl. effe 109756
WO_3-B_2O_3 glass, elec. cond., O_2 sens. props. 97457
WO_3-Bi_2O_3 thick film chemoresistor, NO gas sens. 120967
WO_3-Sb_2O_3-TeO_2 glass, elec. cond., O_2 sens. props. 97457
WO_x-SnO_2 nanosized powder & thick film gas sens., prep., charactn. 13204
Y_2O_3-ZrO_2, mixed pot. N_2O sens., SnO_2-based sens. electrode 75717
YSZ, O_2 sens., CO detect., CO_2 influence 86699
Zn-Sn-Sb-O thin film sens., NO_2 detect. 97477
ZnO-$BaTiO_3$/CuO/La_2O_3 gas sens., NO_2/CO_2 monitoring 122716
ZrO_2 electrochem. sens., NO_x/CO_2/water vapour appl. 120969
ZrO_2 electrolyte technol., appls. 89200
ZrO_2 solid electrolyte thin film gas-sens. opt. property, fiber sens. appls. *(Ch nese)* 97430
ZrO_2 substr. with coplanar electrodes, elec. resist., model 97487
ZrO_2/Pt electrochem. CO sens., thick-film lamination 97501
ZrO_2/Pt interfacial impedance, equiv. cct. model, O_2 sens. appl. 97494

sensors continued
ZrO_2-MgO qualified oxygen conc. cells, coprecipitation method, steelmaking proc. appl. 75737
ZrO_2-Y_2O_3 amperometric NO sens., spinel coated, Pt electrodes 132050
ZrO_2-Y_2O_3 based NO_x sens. using $ZnFe_2O_4$ sens. electrode 97466
ZrO_2-Y_2O_3 electrolyte based limiting current-type O_2 sens. 75735
organic films/CdSSe interfaces, photoelectrical props. 69631
source MBE *see chemical beam epitaxial growth*
supply industry *see public utilities*
surface interactions *see sorption*
technology, natural *see natural gas technology*
turbine power stations
1.5 MW low-emissions gas turbine catalytic combustion syst. 123213
13.1 MW ASE40 aeroderivative gas turbine printing plant CHP project, USA 88605
17 MW Kawasaki L20A gas turbine genset 99562
25 MW NK-37 aircraft-derivative gas turbine power project, Russia 99560
33.3 MW GT8C2 gas turbine cogen. plant project 88608
50 MW heavy-duty gas turbines, transient behavior simul. 123215
80 MW GTE-180 gas turbine power unit for combined cycle appls. 99558
250 MW IPP gas turbine power plant project, Korea 112328
air-cooled gas turbine power plants, thermodyn. anal. 112317
annular combustion syst. gas turbines, thermoacoustic improvement studies 123214
biomass gasification for elec. power generation appls. 123114
Brestanica gas power plant protection scheme 77763
cascaded humidification advanced turbine power plant study 123220
cogen. power plant concepts using advanced gas turbines *(English)* 112324
cogen. station energy efficiency indices calc. 133869
combined-cycle gas turbine power stations simulator *(English)* 123229
compact gas turbine installation 99556
gas-fired microturbine for distributed power generation appls. 88606
gas/oil fired TPPs reequipment using gas-turbine and combined-cycle technols. 112329
GT-35 gas-turbine for CHP, testing 99561
GTE-45-3 gas turbine unit develop. experience, Ukraine 99559
high-temp. advanced gas turbines, monitoring/maint. requirements 99557
hybrid MCFC-closed loop gas turbine power plant 99601
integrated advanced power cycles, techno-economic modelling 99571
intercooling/reheat gas turbine cycles insight 77762
micro gas turbine-SOFC reactor hybrid power generation syst. 99604
mirror gas turbines, exhaust heat recovery method 123210
new energy technols. in Asian part of Russia 99537
peaking units, retrofit conversion for emissions reduction 77761
perform. limitations, large turbine cooling flows 123211
rem. monitoring and control of advanced gas turbines 77759
renewable/high-efficiency power generation for climate change mitigation 133838
semicond. mfg. facilities, multi-generation enhanced power quality design 113172
Solar Turbines Titan 130 gas turbine gensets 123219
technol. improvements overview 99564
TIGER gas turbine continuous fault diagnosis expert syst. 75368
TIGER syst. for model based diagnosis of gas turbines 88602
TopHat advanced gas turbine cycle using SwirlFlash technol. 88610
turbojet engines with large constructive and geom. limitations, CAD 76817
ultra compact mini-gas turbine generating sets develop. 88604
waste heat recovery sect. gas turbine, feedforward neural net simul. 112323
NO_x emissions control using steam injection 99563
turbines
see also gas turbine power stations; turbogenerators
1.5 MW low-emissions gas turbine catalytic combustion syst. 123213
13.1 MW ASE40 aeroderivative gas turbine printing plant CHP project, USA 88605
17 MW Kawasaki L20A gas turbine genset 99562
25 MW NK-37 aircraft-derivative gas turbine power project, Russia 99560
32 MW biomass integrated gasification-gas turbine technol. project 123224
53.3 MW GT8C2 gas turbine cogen. plant project 88608
110 MW combined cycle cogen. plant concept, Germany *(English)* 112330
150 MW heavy-duty gas turbines, transient behavior simul. 123215
180 MW GTE-180 gas turbine power unit for combined cycle appls. 99558
480 MW Frame 9H gas turbine combined cycle power plant project, UK 123227
550 MW IPP gas turbine power plant project, Korea 112328
1100 MW combined cycle power plant repowering project *(Chinese)* 77764
air-cooled gas turbine power plants, thermodyn. anal. 112317
air-cooled gas turbines blades, film/effusion cooling *(Serbian)* 123222
aircraft gas turbine, nonlin. modelling using NARMAX struct. 122536
annular combustion syst. gas turbines, thermoacoustic improvement studies 123214
aviation gas turbine engines, testing automation *(Russian)* 76821
binary combined-cycle installations using advanced gas turbine units 99568
biomass gasification for elec. power generation appls. 123114
blade fiber-optic tip-shroud deflection meas. syst. 112322
cascaded humidification advanced turbine power plant study 123220
CHP and absorpt. refrigeration with gas turbines, economic feasibility 88600
cogen. power plant concepts using advanced gas turbines *(English)* 112324
cogen. station energy efficiency indices calc. 133869
cogen. stations develop., gas-turbine unit manufacturers, Europe 123221
combined cycle plants modeling for grid simul. 112335
combined cycle power plant, gas turbines, dyn. perform. predictive controller appl. 77765
combined-cycle power plants, testing, model validation 112336
combustors, NO_x emissions, adaptive predictive control 88599
compact gas turbine installation 99556
component cooling for turbine blade coatings *(German)* 88572
component thermal fatigue resist. calc. methods 88611
distributed generation, impact on power syst. *(Chinese)* 122792
dyn. model, before-turbine & post-turbine capacity *(Chinese)* 123218
EL-TO Zagreb cogen. plant, math. model 99536
elec. engng., neural networks/fuzzy logic appl. 124245
engine fault diagnosis using feedforward neural nets 112319
European Community cogen. research programmes 112288
feedwater heating combined cycle, perform. anal. *(Chinese)* 112337
fuel diversification for combined cycle plant appls. *(German)* 123223
gas-fired microturbine for distributed power generation appls. 88606
generation costs comparison with PV, Qatar 88661
generation syst. develop. in Cyprus, WASP III model 111976
GT24/GT26 gas turbines uprating, challenges and benefits 88603
GT-35 gas-turbine for CHP, testing 99561
gas turbines continued
GTE-45-3 gas turbine unit develop. experience, Ukraine 99559
heavy-duty gas turbine radiation thermometry, meas. errors eval. 112318
high-temp. advanced gas turbines, monitoring/maint. requirements 99557
HRSG optimisation, combined cycle gas turbine power plants 88616
HTGR gas turbine ultrafine off-set fin syst., design anal. *(Japanese)* 123151
hybrid MCFC-closed loop gas turbine power plant 99601
IGCC power plant economics, improved gas turbine power output project 99570
indust. gas turbine start-up seqs. monitoring using multi agent syst. 88612
intercooling/reheat gas turbine cycles insight 77762
internat. electronic interactive teaching platform 113307
ionic transport membrane technol. for oxygen separation/syngas prod. 99602
locomotive, gas turbine powered, efficiency improvement using SMES 78240
mag. bearings, neg. stiffness coeffs. calcs. 123216
micro gas turbine-SOFC reactor hybrid power generation syst. 99604
microturbine based CHP plant, regulating syst., model 133871
mini cogen. schemes in Mexico 112332
mirror gas turbines, exhaust heat recovery method 123210
Mitsubishi Heavy Industry advanced gas turbine develop., testing approaches 88609
modeling/testing, generator reactive power limits verification 112325
modeling/testing, utility experience 112326
MS9001FA gas turbine ceramic components, perform. benefit assess. 123212
natural gas pumping station heat-recovery power generation units 78369
natural gas-fuelled microturbines, economic assess., testing 133870
nonlin. model predictive control lab. expts. 112320
oil-fired power plants repowering to natural gas fired combined cycle plants 88614
output freq. dependency modelling 112327
peaking units, retrofit conversion for emissions reduction 77761
perform. limitations, large turbine cooling flows 123211
power plant mach., computerized online vibr. monitoring, anal., and assess. 123188
premixed flames, combustion anal. by image proc. 94694
pulp/paper mill combined cycle CHP plant, steam turbine-generator addit. 124155
real time intell. sens. validation, Bayesian network 133872
regenerative gas turbines, regenerative gas turbines 123217
rem. monitoring and control of advanced gas turbines 77759
renewable/high-efficiency power generation for climate change mitigation 133838
repowered thermal power station, black-start-up simul. 112333
rotary internal combustion turbine engine 99531
Russian PGU-170 single-shaft combined-cycle power unit develop. 99567
single-shaft combined-cycle units using water/fuel-oil emulsion 88617
SOFC power plants develop. in US 88663
SOFC-GT systs., cost effective design 99988
Solar Turbines Titan 130 gas turbine gensets 123219
structural health monitoring using piezoelec. act. sens. 112321
technol. improvements overview 99564
TIGER gas turbine continuous fault diagnosis expert syst. 75368
TIGER gas turbine fault diagnosis syst. 77760
TIGER syst. for model based diagnosis of gas turbines 88602
TopHat advanced gas turbine cycle using SwirlFlash technol. 88610
trapped-vortex gas turbine combustor, metal fuel injector nozzle array, microfabrication 98928
two phase flow thermosiphon heat exchanger, thermal/mech. design *(Spanish)* 88601
ultra compact mini-gas turbine generating sets develop. 88604
unburned methane detect. by portable diode laser gas analyzer 109739
W501G gas turbine prototype testing in combined cycle config. 88607
waste heat recovery sect. gas turbine, feedforward neural net simul. 112323
Fe-Al-Si-R (R=Ce,La) heat resistant coatings, thermal-diffusion deposition 125022
NO_x emissions control using steam injection 99563
gasdynamic lasers
conf., gas flow/chem./high-power lasers, Florence, Italy (Sept. 2000) 100389
gas-flow nuc.-pumped lasers, energy deposition, interferometric tech. 128111
high-power gas flow chem. lasers, press. recovery syst. 105144
CO_2 gas-dyn. laser, mobile high-power laser module, large water area oil film cleaning 105619
CO_2 high power fast axial gas flow laser tube, temp. distrib. *(Chinese)* 82494
CO_2 high-power CW lasers for material proc. 82483
DF/HF CW chem. laser, perform. depend. on flowfield params. *(Chinese)* 105148
O_2-I high-press. chem. laser, nozzle scale effect on perform. 105065
O_2-I supersonic chem. lasers, flow mixing schemes, computational modeling 105063
O_2-I supersonic laser evol. at Russian Federal Nuclear Center-VNIIEF 105064
gaseous insulation
see also air insulation; gas insulated substations; gas insulated switchgear; gas insulated transformers; SF_6 insulation
buried GITL and XLPE-cable, thermal calcs. 112096
extra-turn power transformer gaseous insulation design studies *(Korean)* 123545
mixed gas-insulated HV power transm. line project, Switzerland 88450
N_2 high-press. insulation, lightning impulse breakdown charact. *(Japanese)* 92618
N_2/SF_6 gas mixtures impulse creepage discharge propag. mechanisms *(Japanese)* 92616
gate arrays *see logic arrays*
gate turn-off devices *see thyristors*
gateways *see internetworking; network servers*
Gaussian channels
see also AWGN channels
2D chaotic dyn. systs. sync. by transm. of state inform. 94226
ARQ incremental-redundancy scheme in block-fading Gaussian collision channel, throughput perform. 129074
CDMA commun., complexity minimization approach for fading Gaussian channel estim. 119206
CDMA commun., lin. complexity likelihood ascent search multiuser detectors 107607
CDMA systs. in Nakagami multipath fading channel, perform. 131123
channel coding/rate distortion with side inform., duality illustration 106145
code geom./decoding error probab. rel. 129119
distributed nonstationary proc. modeling/time-varying AR syst. ident. by wavelets 119186
FDMA-based multiuser transmit optim. for broadcast channels 84901
FM band terrestrial DAB, soft selection combining 120507
hybrid-ARQ protocols for Gaussian collision channel, throughput 85038

Gaussian channels continued
image watermarking/data hiding, inform.-theoretic model 95365
inform. theory of large networks, achievable rate region 128951
interf. channels capacity, genie-aided outer bounds 130294
ISI channels, time-recursive max. likelihood based seq. estim. 105812
mobile radio transmit antenna diversity systs., turbo proc. 117993
multi-antenna broadcast channel, achievable rates 128949
multi-antenna channel capacity 128941
multiposition sig. detect. by decomp. method 107581
progressive source coding for power constrained Gaussian channel 106852
quantum Gaussian channel, Gallager fns. and error exponents 128963
reduced complexity in-phase/quadrature-phase turbo equalisation using iter. channel estim. 130276
vector multiple access channels, multiuser detect. using generalized DFE 73828
woven codes with outer warp, vars./design/dist. props. 72874

Gaussian distribution
3D head/hands tracking in real time by EM algm. 107197
adaptive syst. training using HOS, entropy and MSE criteria 107431
anti-submarine warfare, multisensor mgt., data fusion 133411
apertured ABCD opt. syst., flattened Gaussian beams, closed-form propag. expressions 93699
arrayed-waveguide grating multi/DEMUX, effective refr. index design method *(Chinese)* 82166
asynchronous and decentralized estim. 131900
automated event class. for multi-Gbyte/day data streams 130034
automatic diffr. pattern recogn., neural network based 129917
automatic target detectors, relative perform. 75147
AWGN channels, non-uniform QAM sig. shaping; turbo coding appl. *(English)* 72752
back-direct electrooptic sampling instrum. spatial resoln. *(Chinese)* 75338
Bayesian self-organising map for Gaussian mixtures 118739
blasted surfaces roughness meas., light scatt. method 75873
blind separation of instantaneous mixture of sources via Gaussian mutual inform. criterion 73600
blind separation of instantaneous mixtures of non stationary sources 107440
blind source separation, 2nd order stats. algm. optim. 118798
blind source separation, stat. Gaussianity measure using cumulative dens. fn. 118820
blind source separation by closed-form estimators 84785
bright targets segmentation using wavelets/adaptive thresholding 84273
CAC method based on error-corrected Chernoff bound with joint optimisation 73764
CDMA and SDMA, spatial filter oriented adaptive spreading tech. 107745
chaotic freq. hopping seq. generator, FPGAs, n-dimens. nonlin. digital filters *(Chinese)* 102411
CMS RPC-based muon trigger syst., complete sim. study 76106
coding-optimal transform 107067
colour-based facial image retrieval 118738
complex densities modelling using similarity measures 113891
covariance inform. for vision params. estim. 106547
covert commun. using digital phase modem, syst. trade-offs 72724
depend. component resampling, iter. nonlin. Gaussianization algm. 106825
dispersion-managed WDM syst., strong patterning effects, BER, num. eval. 120117
distrib. syst. three-phase voltage unbalance studies *(Chinese)* 77329
dose calcs., geometric uncertainties incorporation with convolution, spatial invariance effect 111212
double-sided handwritten archival documents anal., character extraction from interfering background 95446
DS-CDMA BPSK cellular radio model using simplified improved Gaussian approx. 74786
EHWPack, evolvable hardware environ. using SPICE simulator and field prog. transistor array 114573
face detect. in color images and video seqs. 107292
FRAM retention testing, indiv. cell measuring method 79890
Gaussianly-distributed Q-factor in opt. commun. systs. 109170
generalized distrib. for computer vision 73233
GSM cellular handsets, stats. of meas. body loss 119938
high-speed commun. networks, extended alternating fractal renewal proc. for modeling traffic 84929
HMMs for wavelet-based image denoising 94800
hybrid SC/MRC combiners, Gaussian weighting errors effect 85482
ICA used for generalized Gaussian mixture model 107447
image coding, VQ, embedded optim. constraints 118507
image intens., struct.-adaptive filtering based on polynomial regression modeling 73156
intra-cavity contacted shallow implant apertured VCSELs, gain-switching 128258
iter. equalization of partial response channels using dens. evol., thresholds 130259
landmine detect., rough surface stat. effect, FDTD tech. 73437
landmine detect., time-domain metal detector & GPR data fusion 77060
landmine detect. & class., EMI sens., non-Gaussian noise environ. 77012
LEO satellite systs., generalized Gaussian user distrib. and traffic power control 131301
LEO systs., modified traffic power control, generalized Gaussian user distrib. *(English)* 131308
limited beam, collinear AO interact., Gaussian distrib. 127861
lin. digital filter, estim. of quantization noise spectrum 91086
lin. prediction coding filters, source separation techs. 107558
line spectrum estim., data-adaptive regularization method 118886
mass detect., lesion site selection by morph. enhancement/contextual segmentation 76502
mean quantization blind watermarking for image authentication 95375
mean-quantization-based fragile watermarking for image authentication 118515
MM-wave Gaussian radiation pattern antennas 117820
MM-wave transceivers, high vol. manufacture, design challenges 85473
MMSE-DFE receiver with spatial diversity, design and anal. error perform. 85808
multi-view face pattern nonlin. mapping, Gaussian distrib. 107195
multiplicative watermarks, optimal detect. 118618
multisensor target tracking, bandwidth constraints, meas. fusion 133413
multisensory sigs., estim. of joint probab. 118937
multiservice loss systs. Monte Carlo simul. 96220
multispectral images, nonlin. scale-space isomorphic rep. 118211
natural image anal. and modeling using random cascades on wavelet trees 106778
NCFSK demodulation, exact eval. of capture effect 72751
nonlin. filtering problems, Gaussian filters appl. 73681

Gaussian distribution continued
nonlin. ICA using ensemble learning, theory 107448
nonstationary random effect, spectral anal. 118890
obj. posn. estim., multi-robot systs., distributed sens. fusion 95704
opt. coatings surface, sol-gel method, particle size and distrib. study *(Chin* 71497
opt. coatings surface, sol-gel method, particle size and distrib. *(Chinese)* 82
parallel concatenated turbo codes with non-uniform constellations 129201
parametric adaptive sig. decomp. based on Gaussian elementary fns. *(Chin* 73614
partial order approach to noisy fitness fns. 90052
PCS networks, delay bounds, paging costs reduction 85733
PCS networks, paging schemes with delay bounds as QoS constraints 131
periodic diffractive flat-top generator, excimer laser beam shaping 93693
power markets cascaded neural network prediction, confidence regions 111
QoS anal. for stat. MUX with Gaussian distributed and autoregressive in 84830
residual VQ, Gaussian codebooks 95172
robust speech recogn., missing data approach, reliab. measure 118131
rough surfaces EM scatt., FDTD anal. 72289
SAR buried objs. imaging from MoM modelled scatt. field 96904
SAR polarimetric imaging, Gaussian Markov random field model 86161
satellite image deconvolution using complex wavelet packets 94953
scene description generation, mixture distrib. param. estim. *(Japanese)* 107
seismic imaging, sing. charactn. by monoscale anal. 111391
self-validating sens. probab. estim. algms. 132083
short channel MOSFET, phys. DC model using trapezoidal Gaussian surf 103829
single-channel dispersion-managed soliton syst., phase/timing jitter, eye dia error rates 127690
skew-coord. DCT method for images, entropy coding based on Gaussian mixt distrib. model 73327
slot antenna with varying Gaussian curve slot width 105847
soft tissue perfusion, power mode rel. to press. amplit. decorrel. 132623
source-controlled channel decoding, correl. param. estim. *(English)* 72849
space-time distributed multi-path params., detect. and estim. 108544
spectral-amplit.-coding opt. CDMA syst. perform. anal. 96664
specular tilted surface meas. by fiber-optic sens. 89910
std. uncertainty & coverage probab., Bayesian eval. 109397
subspace methods for face/clutter discrim. 95496
super-Gaussian laser beam, CCD based charactn. 117345
switch short arc duration laws and distribs. at low current and voltage 1151
TDMA modified grouped-tag access protocol for RF ident. networks 85019
thin organic layers, photoenhanced current, Gaussian trap distrib. 93326
three-phase distrib. network voltage unbalance random var. modelling 1120
type-II hybrid ARQ protocol and appls. in slotted Aloha DS-CDMA 95914
ultrashort ultraintense laser syst., beam quality meas. and amendment *(Chine* 110015
ultrathin MOSFET, direct tunneling current, SiO_2/Si interface roughness effe 70092
unimodal super-Gaussian sigs., demixing of lin. mixtures based on geomet props. 118062
unsupervised texture segmentation, one-step mean shift and boundary Mark random fields 94588
US image 2D motion field parametric estim., spatially smoothed regressi model 110777
US testing, probab. of detect. prediction, phys./stat. model 114536
vascular segmentation in phase-contrast MRA. fusing speed and phase infor 87582
video images, model-based varying pose face detect. and facial feature regist tion 129439
video seqs., automatic moving obj. extraction *(Chinese)* 95430
video surveillance syst., adaptive background subtraction 84626
WDM networks, Gaussian approx. model of multiple intraband crosstalk 1091
windblown radar ground clutter spectral shape, lin. matched filter 96921
a-BN_x films, opt. absorpt., elec. cond. 69554
BiPbSrCaCuO 2223/Ag supercond. tape, crit. current ang. depend., mo 127454
GaAs X-ray pixel detectors, simulated and expt. spectrosc. perform. 98006
GaAs, hole-hole scatt. of photoexcited heavy-holes *(Chinese)* 116902
GaAs/AlGaAs single V-groove quantum wire, micro-photoluminesc. *(Chines* 115420
$LiNbO_3$:Fe PV crysts., self-defocusing to self-focusing dyn. transit. 128471
Nd:YVO_4 LD end-pumped laser, thermal lens meas. *(Chinese)* 128213
Si, polycryst., elec. property at grain boundary by Gauss distrib. model *(Chines* 91606
a-Si:H p-i-n jn. solar cell, const. photocurrent method, simul. 112902
Si/SiO_2 interface roughness, MOSFET, quantum oscills. 81319
Y_2SiO_5:Ce,Sc,La,Gd,Lu, blue phosphor, luminesc. props. 104917

Gaussian filtered minimum shift keying *see minimum shift keying*

Gaussian frequency shift keying *see frequency shift keying*

Gaussian noise
see also AWGN
2D chaotic dyn. systs. sync. by transm. of state inform. 94226
3D gated cardiac SPECT, spatiotemporal noise reduction filter 132860
acoustic sigs., quick search algm. using histogram features 95719
adaptive IIR filter, freq. detect. in noisy environ., VLSI design 102405
adaptive moving target detector with Wigner-Ville distrib. as Doppler filter ban perform. 75107
adaptive regularized noise smoothing of dense range image using direction Laplacian operators 118280
ADC lin. estimators, stat. efficiency 114833
affine F-matrix and uncertainty estim. in sense of both noise and outliers 1066
aperiodic model improvement using extended size deconvolution method 732
array sig. proc., struct. spatial interf. rejection combining 118909
asynchronous DS-CDMA syst., hard-decision multistage interf. cancellati 108533
ATM networks, flow control scheme for self-similar traffic 130746
attentive foveal sens. for target tracking 109677
automatic modulation recogn. techs. using nearest neighbour rule *(Japanes* 106055
autoregressive model order estim., composite hypothesis testing 100793
Bayesian separation of discrete sources via Gibbs sampling 118822
biomedical sigs., ICA for automatic noise and interf. cancellation 121929
blind focusing wideband array proc. 118861
blind image watermarking, robustness 95265
blind multiuser interf. cancellation, max. likelihood approach 72364
blind nonlin. channel ident., constrained hybrid GA 119176
blind source extraction in Gaussian noise 107430

ssian noise continued
lind turbo equalization in Gaussian and impulsive noise 107683
lurred noisy images, edge detect. problems modeling 118722
uried metallic mines discrim. from metallic clutter 73707
arrier freq. offset estimator for burst mode commun. 72715
ct. noise reduction by analogue lowpass filtering and data averaging 120699
DMA sig., spectral regrowth and in-channel distortion, time-domain model 107772
DMA spreading seqs., Lorenz dyn. chaotic sync. 107748
DMA uplink coherent detect., dual mode channel estim. 131260
FAR detect. of oil slicks on ocean surface by multifrequency and/or multipolarization SAR 99037
haotic commun., noisy channel 105985
haotic commun. systs., noise reduction methods 107620
olor image restoration, multichannel M-filtering 94521
olor images, noise atten. filtering tech. 129573
omplex no. codes, iter. decoding 129045
omputer vision, noise in bilinear problems 106652
onditional model order estim. 107373
orrel. waveform multiple-access channel multiuser detect. 130291
CT for noise generation 119818
igital commun., adaptive blind joint source-phase separation 130036
igital FM, seq. estim. 94233
igital FM and GMSK with limiter discriminator detect., anal. of BER on seq. estim. 106041
igital watermarked images, noise corruption influence 84078
igital watermarks subjected to optimum lin. filtering and additive noise, anal. 95666
OA estim., subspace-based, nonparametric stats. use 107379
S SS systs., blind channel estim. and data recovery 107422
S-CDMA, Schur-saddle fn. property 131234
S-CDMA coded systs., multicell uplink spectral efficiency 108856
S-CDMA sigs. in unknown colored noise, blind code timing estim. 74527
S-CDMA systs., code-timing sync. using space-time diversity 107767
S-CDMA systs., robust single-user detect. perform. 84918
SL perform. in Gaussian and far-end crosstalk noise environ. 96304
CG/MCG spatiotemporal anal., current dens. estim., forward model 110619
dge-preserving filters using layered fuzzy controllers with learning 118333
lec. impedance tomography image reconstr., FEM, error propag. simul 109926
voked pots. latency change estim., algms. perform. comparison 76256
BG interferometric sens. demodulation, noise-induced resoln. limit 97283
M nonlin. sigs. in multiplicative/additive noise, instantaneous freq. estim. 117898
burth-order stats., trispectrum, bandwidth and deconvolution 118789
ractional GF(q^a) composite domain for image scrambling 73413
lobular material, feature extraction and edge detect., hybrid neural network appl. *(Chinese)* 129869
LRT-based adaptive detect. algms. for range-spread targets 86160
ravit.-wave detectors, aperture synthesis, deterministic sources 84763
eterog. network traffic modelling in wavelet domain 130325
ierarchical radar target localization, seq. techs. 96894
ybrid AM/OFDM light ware syst., BER perform. *(Chinese)* 96301
CA, extended quasi-Newton method 113953
CA in presence of Gaussian noise based on estimating fns. 107428
mage coding with noise, based on fuzzy VQ 84444
mage denoising, autocorrelation modeling of wavelet coeffs. 94810
mage denoising using directional filter banks 94807
mage enhancement, edge preserving filtering by combining CBAE/median filter 129444
mage enhancement, self-avoiding random walk approach 118236
mage enhancement, sharpening & noise reduction, fuzzy neural net 118728
mage impulse noise suppression using adaptive L-Filters 106477
mage intens., struct.-adaptive filtering based on polynomial regression modeling 73156
mage noise elimination using nonlin. filtering strategies with edge preservation 106529
mage proc., fuzzy tunable filter based on differences between pixels 118233
mage proc., line fitting using Hough-like procedure 73304
mage restoration by fuzzy convex ordinary kriging 84298
mage restoration method using, Hopfield neural net model 94726
mages, edge detector, fuzzy iter. 73482
mpulse noise reduction based on lifting wavelet transform 132559
ncompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
nhomog. broadened systs. pulse saturation, noise suppression 84738
nterferometric FOG ang. vel. sens., noise charact. 120852
R dist. sens., noise added theory based, lin. 109573
R images, human target detect., atmos. blur/noise distortion/Wiener filter restoration 84156
SI corrupted baseband transm. systs., BER estim. formulae 96010
solated word recogn., high-perform. robust, sig. modeling 106402
ump Markov lin. systs., seq. simul.-based estim. 73663
KLT basis vectors, blind adaptive estim. 83847
andmine detect. & class., EMI sens., non-Gaussian noise environ. 77012
aser Doppler vibrometer-based mine detect., speckle noise immunity 77002
LDA sig. proc., no. of samples 72144
in. syst. noise effect reduction, coherence fn. in deconvolution 119009
LMS adaptation, optimum error nonlin. with i.i.d. input 118874
LPI radar sig. detect. using SCF algms. *(Chinese)* 131649
M-estim. robust adaptive filtering 119052
Markov sigs., joint detect./estim. systs., stat. anal., Kotel'nikov theorem 73741
microbiosensor output sig. fluct., external environ. influence 75673
nin. complexity seq. multihypothesis detect. 128923
nixed nonGaussian/Gaussian ARMA noises, harmonic retrieval, HOS 84803
vML sig. restoration multiplicative algms. with non-negativity constraints 73623
MMSE error threshold for noisy wavelet coeffs. of piecewise smooth sigs., asymptotic behavior 73588
mobile radio multipath time delay estim., HOS method 108904
MRI, noise correction, apparent diffusion coeffs. 132667
multi-antenna channel capacity 128941
multichannel 2D delta-domain lattice filter, noise removal 84140
multichannel EGG, adaptive ICA 87385
multichannel images, optimal target location 95590
multicomponent IF estim., stat. comparison in quadratic class of time-freq. distribs. 84802
multiexponential transient spectrosc., iter. deconvolution 84739
multiple conductors, EM wave scatt., image reconstruction 94025
nonhomogeneity detector for Gaussian interf., stat. anal. 107603
nonlin. cumulant based adaptive filter for image Gaussian/impulsive noise removal 129443

Gaussian noise continued
nonlin. filtering in wavelet transform domain 94802
nonlin. group-blind multiuser detect. 119983
OFDM systs., carrier freq. offset effect 106039
optimum image thresholding via class uncertainty and region homog. 94609
parametric and nonparametric models, fitting to noisy data, Bayesian method 78986
partition-based median type filters for image noise suppression 73256
pattern recogn. optimum receivers, Gaussian noise with unknown stats. 95529
periodic excitation freq. response fn. meas., correl. I/O errors 107406
perturbed vectors, phase angle distrib. 72745
planar waveguides with quadratic. nonlin. medium, opt. beam instabil. 128512
prog. Josephson voltage std., nonuniformity tolerance 70822
quadratic Volterra adaptive filters, fast RLS adaptive algms. 119022
radar k-stage sig. detect. with CFAR under parametric ambiguity 120399
radar random sigs. detect.in cpd.-Gaussian clutter/thermal noise 109244
random sigs. in noise, array detect. 130148
RLC ccts., radiative noise, fluct.-dissipation theorem 68549
robotic farm tractors, posn. meas. and control, error anal. 97030
robust speech recogn., adaptive model-based tech. 106422
robust subspace tracking in impulsive noise 130035
robust wavelet denoising 73590
scanning X-ray microscope, lab. scale, noise limited resoln. 76167
SEAMA protocol, diffusion approx. for voice/data integrat. in wireless network 85061
seismic and acoustic sig. ident. algms. 73735
self-similar network traffic generation 95748
self-similar traffic generator based on FFT, fractal Gaussian noise 119158
semi-blind block channel estim./sig. detect. using HMM 73731
sens. array sigs., scale-cumulant domain deconvolution 95635
shooting range, computer-aided meas., live shell appls. 122767
short-time stationary sigs. in additive noise/channel distortion, spectrum estim. 84670
sig. contaminated by multiplicative Gaussian noise, intens.-weighted phase-derivative stats. 118403
sig. detect. using approx. Karhunen-Loeve expansions 73712
slow freq.-selective fading channel, MLE 73753
smart sens. closed-loop meas. channel, noise detect. algms. 109825
space plasma data, time series anal. using HOS *(English)* 122678
spacecraft phase-locked receivers, flexible loop filter design 122527
speech anal. and synthesis, dyn. simul., S-fn. *(Chinese)* 73033
speech epoch detect., Cohen's class of time freq. representations 94387
STAP appls., perform. anal. of nonhomogeneity detector 96938
stereo echo canceler with correct echo-path ident., input-sliding tech. 131785
stochastic partial diff. eqn. for nonlin. diffusion 79067
subspace-based freq. estim., nonparametric stats. 118904
super-Gaussian laser beam, CCD based charactn. 117345
sync. CDMA, multiuser detect. using probabilistic data assoc. 119210
TCP-IP based mobile radio links, perform. eval. 74751
textile inspection, texture selective removal using wavelets *(Japanese)* 94625
time-delay digital tanlock loop, Gaussian noise 102308
tissue US imaging, large K distrib. params. estim., neural network approach 110789
touch sig. detect., optimal receiver 75810
ventricular multiple events, noninvasive charactn. using ECG imaging 110556
wideband sig. param. estim. based on HOS 118916

Gaussian processes
see also Gaussian channels; Gaussian distribution; Gaussian noise
1D large apertures, narrow-waisted Gaussian beam discretization for short-pulse radiation 117648
1D/3D randomly Gaussian irregular media, scalar waves scatt. 83228
2D random rough surfaces, EM wave backscatt., forward-backward/spectral accel. method 128739
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gaussian beam algm. 117647
2D Volterra param. estim. using zero tolerance optimisation 84317
3D matched filter for detect. of land mines 73125
10 Gb/s birefr. nonlin. fiber opt. pulse transm., chirp and pulse shape 131356
adaptive model for texture anal. 84315
algms. for efficient and accurate edge detect. and localization 107141
asynchronous CDMA systs., optimal SS seqs. constructed from Gold codes 73851
axial symmetric scans, prediction gain optimisation 95086
axisymmetric flattened Gaussian beam superposition scheme 82734
backward error anal. for LU factorisation 113999
Bayesian source separation, matrix element distribn., max. likelihood fn. 107591
Bayesian tree-struct. online transform. of HMMs, optimal model selection for speaker adaptation 106404
bispectral estim., multitaper approach 118864
blind ident. of 2nd order Hammerstein series 129973
blind source separation using temporal predictability 84789
blur-space for deblurring/edge-preserving noise smoothing 73257
CDMA fiber-optic networks incorporating multiple opt. amps. 74987
CDMA systs. in multiple time-scale fading channels, spatial diversity combining/power allocation 85858
CDMA time-varying channels, unequally protected multistage VQ 85720
channel-optimized soft trellis waveform coding 129065
color image restoration using cpd. Gauss-Markov random fields 118387
covariance kernels, simultaneous diagonalization approx. soln., second-order stochastic procs. 119079
data fusion using multiple models 106762
diffuse/specular radar targets stat. imaging 75124
digital image proc., Lagrange wavelets 118366
discrete nonlin. filtering problems, a posteriori dens., piecewise Gaussian approx. 73688
distributed radar obj., polariz. model 86163
distributed sens. arrays, source localization 77125
double-exponential pulse propag. through Debye medium 72265
doubly selective Rayleigh fading channels, one-shot detectors error perform. 130177
DS-CDMA coded asynchronous systs., long vs. short spreading seqs. comparison 108859
DS/SSMA systs. with aperiodic random spreading seqs., chip waveform design 108555
extended Gauss quadratures with interior interval constraint 79007
face detect. for multimedia appls. 94641
face-color modeling and segmentation, mixture model 118753
face/facial features detect. automation 129924
foreground segmentation using adaptive mixture models in color/depth 95011

Gaussian processes continued
generalized multiple description coding with correlating transforms 117924
granulometric moments, asymptotic joint normality 118754
image compression, interscale/intrascale dependencies between wavelet coeffs. 95078
image segmentation, Gaussian mixture param. estim., iter. method 107246
image smoothing with exponential fns. 106685
iter. turbo decoder anal., dens. evol. based 72882
iter. turbo decoder anal. based on Gaussian dens. evol. 106086
jump Markov lin. systs., iter. algms. for state estim. 73595
Kullback-Leibler dist. on wavelet subbands, texture similarity meas. 94938
large reflector antennas rapid anal., Gaussian beam method 83641
LDPC regular codes over PR channels, threshold 129083
lin. prediction and mel-freq. cepstrum coeffs. 83998
LMS multiple adaptive filters in tandem, perform. 130128
local smoothing, adaptive Gaussian filter 129504
lossy dielec. random rough surfaces, wave scatt. 117663
microwave radiometric systs., Volosyuk-FT for optimal radio brightness image reconstruction 73284
modular power syst. topol. assess., Gaussian pot. fns. 122785
MSK receiver under fading conditions, interfering sigs. impact 108546
multipath tree-struct. VQ 118869
multiple description coding problems, achievable region bounds 129127
multiple description coding using optimal biorthogonal filter banks *(English)* 72856
noiselike sigs., discrete/continuous params. filtering 107497
nonlin. gradient waveguides, misaligned beams dyn. modeling 127757
OCR clustering, sample distrib. modeling 94886
OFDM A-law companded syst., SER anal. 72734
on-line speaking rate estim. using GMM/NN approach *(English)* 73084
packet networks, nonstationary offered-load model 84821
PDF optimized parametric VQ for speech coding 106374
photom. sigs., stat. anal. of parametric model 118964
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
rainfall patterns forecasting, regularized Gaussian mixture models *(English)* 122637
random Gaussian proc. change-point detect./estim. by brief obs. samples 129948
Rayleigh multipath fading channels, GQR models 83263
RMS delay spread estim. from freq.-domain level crossing rate 95738
robust predictive VQ design 106166
SAR, interferometric, optimal antenna spacings 75131
scale mixtures random cascades, natural images modeling/denoising 84312
shape profile modelling with mixture of Gaussians 84619
shape-gain Gaussian quantizers, optimal rate allocation 129150
solitons in birefr. opt. fibers, dyn. 93863
source coding with min. and rate-independent search and memory complexity 106190
space-time transmit precoding with imperfect feedback 117948
spectral model for halftone color prediction 94819
speech spectrum modeling applied to spectrum coding and prediction 106375
std. Gaussian random variable and infinite variance steady random variable comparison 84677
text-independent speaker ident. by Gaussian mixture models 94420
traffic modeling, techs./algms./stat. measures 73875
tree-struct. multiple description VQ design 106165
trellis-coded residual VQ, jointly optimized 83875
uncertainty principle for real sigs. in fractional FT domain 130029
urban regions automatic extraction, SPOT satellite imagery 99052
vector Gaussian watermarking game, coding capacity 129038
vessel-like patterns detect. in noisy environ. 87549
video scalable predictive coding optim. 84448
voice conversion algm. based on Gaussian mixture model with dyn. freq. warping *(Japanese)* 129398
vowel synthesis, online EM algm./IIR filter, neural 118120
VQ for channels with memory 129182
VQ for nonlin. factorial models of opt. imaging data low-dimens. independent manifolds 84318
$KTiOPO_4$ cryst. SHG three-wave mixing, Bessel/Gaussian light beams 82729

Ge(Li) detectors *see germanium radiation detectors*

Geiger counters
combination β-γ-radiometer & dose-rate meter, extended dyn. range 98030
microcell Si APD with limited Geiger mode gain 121586

Geiger Muller counters *see Geiger counters*

gelatin
see also gels
Acid blue 7 dye soaked gelatin films, self-diffr. gratings 83006
ammonium dichromate gelatin, enzyme etching, refr. microlens array fab. 71369
bichromate gelatine refr. microlens array fab. with coding gray-tone mask *(Chinese)* 127810
DCG, microoptical elements fab. using chem. cleaving-etch method *(Chinese)* 71390
DCG, primary photochem. proc., hologram recording 93895
DCG film, fast-form. absorpt. grating 117528
DCG hologram, reprocessing, expt. research 117543
DCG refr. microlens array, gray-tone photolithography 127811
deep continuous relief micro-optic element fab. *(Chinese)* 116779
storage media for holographic opt. memory, state-of-the-art, future prospects 82969
xanthene dye sensitised DCG holographic sensitivity 83017
Ag halide sensitized gelatin, diffuse-obj. holograms, refr.-index modulation 83007

gels
see also aerogels; sol-gel processing
acrylamide dye gels, dyn. opt. elements recording 104792
cryogel elasticity props. for calib. IVUS elasticity images 110819
deformed media US scatt., effects on strain imaging 110820
elec. double layer capacitors, gel electrolytes containing asymmet. ammonium salt, perform. *(English)* 99885
elec. double layer capacitors, polymer gel electrolytes 123848
electroactive polymers, compliant actuators, appls. 125102
electroactive polymers, conf., Boston, MA, USA (Nov.-Dec. 1999) 100427
electrophoresis image enhancement 118226
electrophoretic gels, image digitalization, automated anal. 110832
glucose sens., sampling mechanism employing gel phase transit. 132057
graded-index plastic opt. fiber rods, prep. *(Chinese)* 93068
high resoln. gel-dosimetry, opt. CT, MR scanning 98789
hydrogel coated pH-FET SO_2 sens., surface/potentiometric prop. 86744
ionic polymer-metal composites, fund. props., review 114481
gels continued
Li-ion batts., nanocomposite based electrolytes 123762
liqs., complex permitt., wideband/noncontact charactn. 109932
modified hydrogel electrolyte material for secondary cell appls. 99907
neuron-type conducting polymer device, cond. control 114455
neuron-type conducting polymer-based network-type device, props. *(Japan* 102850
peat gel/water-coal slurry fuel combustion technol. 123199
poly(vinyl alcohol)-poly(acrylic acid) gels, constitutive response, elastic defor acidic/basic environ. 125114
polymer gel dosimetry, param. selective MR-microimaging, radiotherapy a 122390
radiochromato-imager, biological/biochem. appls., tissue/body sect. autoradio phy 122270
radiosurgery, gamma knife, beam placement accuracy verification, BANG3 p mer gel dosimeter 98631
UHF apparatus for water based gels in microwave phantoms 87846
VIPAR polymer gel dosimetry, wide dyn. dose range 111218
VRLA, pos. grid plate single cells, gelled electrolyte, design. testing 11279
VRLA batts., AGM vs. gel technols., telecom appl. 112800
VRLA batts., gel technol. based, telecomm. appl. 112798
VRLA batts., plate group, mech. press., compression effect 78136
C/polymer electrolyte interface in elec. double layer capacitor, props. *(Engl* 99884
^{192}Ir HDR brachytherapy source, polymer gel MRI dosimetry 98792
$La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.2}O_{2.8}$, gelcasting, proc./elec. props. 114431
Li batts., chlorinated PVC-based polymer electrolytes 89076
Li-ion cells, polymer electrolyte additives, interfacial resist. 89077
Li-ion secondary batt. gel polymeric electrolytes *(Chinese)* 78127
^{106}Ru ophthalmological applicator, BANG polymer gel dosimeter, MRI 767
^{106}Ru ophthalmological applicator, dose distrib. meas., BANG gel MRI 987
SiO_2-coated CdS nanoparticles, photodegradation in silica gels 126398
SiP-PMA/PWA hybrid gels, amorph. phosphate-Nafion hybrids, ini ganic/organic composites, fast proton conductors 125095
TiO_2 rutile capacitor, improving breakdown strength by gelcasting 114435
ZnO-based varistors, modified citrate gel routes 101497

GEMFET *see insulated gate bipolar transistors*

gender issues
engng. ethics, gender-informed 113227
IBM MedSpeak/Radiology software, continuous speech recogn. program e for radiology 73065
Norwegian teenagers, mobile telephony use 119496
speaker class., biometric 73060
telephone interact. in UK households, patterns of use 96060
women engineers, work satisfaction, CREW project, literature review 1133

general purpose computers
for computer applications see under relevant applications e.g. "administra tive data processing", "CAD", "natural sciences computing"
H.26L video encoder on general-purpose proc., perform. 118606
LOFAR radio-telescope using cluster computers and grid proc. 75263
nested-multilevel redundancy exploitation for fast block matching 95082
proc. based high-speed longest prefix match search engine 119573
sens. networks, querying/tasking 75369

General Purpose Interface Bus *see peripheral interfaces*

generalisation (artificial intelligence)
cooperative syst. team optim., max. area coverage appl. 109313
coronary artery disease diagnosis, ECG exercise test, RBF network 87422
error-correcting output code, least sq. and estim. measures 117955
face image, automatic extraction of eye and mouth fields using eigenfeatures MLP 129883
fuzziness in image recogn. 118700
image proc., neural-net/ActiveX integrated environ. 106704
LOGic oriented neural nets, quantized wts., multilevel threshold neurons, b propag. 68983
logic synthesis, Hamming clustering 101884
map data watermarking using generalized sq. mask 129655
N-bit parity problem, LP approach using neural nets 114913
test feature classifiers, high-generalization ability *(English)* 118463
underwater target discrim., neural network class. paradigms 77045
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033

generator protection *see machine protection*

generators, acoustic *see acoustic generators*

generators, electric *see electric generators*

genetic algorithms
1D resoln. improvement of images in time series by GA 118202
2D conducting targets, EM imaging, GA-BEM hybrid 72281
3D conformal radiotherapy treatment planning, optim. algms. 87833
3D functional MR image segmentation using, GA 98416
3D metallic PBG struct.-based antenna, radiation pattern calc. 94119
3D radiotherapy planning, beam wt. determ. method using GA 76644
3D video-based meas. syst. dyn. calib., evol. strategy 86406
3G triband probe fed printed eccentric spiral antenna for nomadic wire devices 83616
AC-DC power syst., modified GA, optimal PID controller 77274
act. services, QoS, distributed GA, robust adaptive control 74308
act. stereo vision syst., lines/points matching 94815
adaptive antenna arrays control with GA using dominance/diploidy 128895
adaptive FIR filter, breeder GA for syst. ident. 102397
adaptive fuzzy PSS design using GA, ANN 88383
adaptive GA and differential evol. based BP neural network for epileptic pat recogn. 94858
advanced mfg. systs., intell. commun. networks perform. mgt. 96052
analog building blocks, design methodology for optim. using genetic alg 101750
analog cct., component values design centering, parallel GA 68552
analog cct. synthesis by superimposing of sub-ccts. 101748
analog ccts., GA based design/synthesis 90710
analogue LC filter tuning, multiobjective genetic algm. approach 91009
ant's behavior, evol., genetic network prog. and genetic prog. comparison 90
antenna, nonuniformly spaced lin. array, feed syst., GA *(Japanese)* 83770
antenna design, neural network enhanced GA 83505
antenna/RCS anal. involving large bodies, extrapolation tech. 72470
antipersonnel mines, pass. IR polarimetric rem. sens., GA 88254
anytime coalition struct. generation algm. *(Chinese)* 78885
appl.-specific heterog. multiprocessor systs., power minimisation, voltage re tion 125529
area-based stereo, symbiotic genetic algms. for disparity surface approx. 106
ARMA model ident., self-adaptive evol. strategies 119019

ic algorithms continued
rayed waveguide grating MUX with flat spectral response using nonuniform urrays 75030
TM network design using GA 85431
TM SHR, capacity design, GA 84826
to-aligned fs lasers, SESAM mirrors 82756
tomated video chain optim. 118478
tomatic generation of multipath algms. in cellular nonlin. network 118299
tomatic image generation by GA for testing halftoning methods 94461
tt. charging proc. control, neuro-fuzzy-genetic approach 134143
-level image coding for digital printing 73418
ased random instruction generation, genetic approach 90828
dding strategy coord. in energy and spinning reserve markets 88296
ological cell image segmentation with kernel-based dyn. clustering and ellipsoi-dal cell shape model 110516
orthogonal wavelet constr. based on human visual syst., GA *(Chinese)* 106851
ind nonlin. channel ident., constrained hybrid GA 119176
ind source separation, GA-based ICA 73575
ind texture detect. by genetic prog. 107136
lock-level cct., fault diagnosis, neural network *(Chinese)* 114670
rain struct. segmentation, MRI, fuzzy modeling 98406
road-band microwave absorbers frequency-selective surfaces, multilayered dielec. media, GA 83357
uried imperfect conductor, image reconstruction, EM scatt. 86193
uried imperfectly cond. cylinder, image reconstr. freq. depend. 107225
AM-Brain Machine, FPGA based robot neural net 91162
AM-brain machines, evolvability 91164
mera network design by natural selection 84284
mpus networks topol. design, evol. algm. 108213
scaded hydroelectric plants, short-term scheduling, GA 123239
CS7 network, A/B plane partition problem and heuristic solns. *(Chinese)* 119451
ct. synthesis evol. using hardware-based GA 125165
DMA networks, GA for mobiles equilib. 108695
DMA sync. systs., GA assisted joint multiuser sym. detect./fading channel estim. 85459
llular multiobjective genetic algm. search directions 78956
llular radio, automatic cell planning ES 74683
hest radiographs/mammograms, computer-aided diagnosis systs. 132819
hest X-ray helical CT images, computer-aided diagnosis syst. 98532
lass. and fn. estim. of protein by using data compression and GA 102859
lustering algm. guided by descent algm. 107135
MM, optimum path planning, comparison of integer prog. model with GA model 120654
MOS analogue reinforcement neural chip, design & implement. 91140
MOS VLSI, max. power dissipation, GA *(Chinese)* 90874
NN, general class. problem 102450
o-evol. design model 67865
olour image segmentation, hierarchical fuzzy region merging tech. 118341
ombinat. MVL ccts., genetic algm. for ATPG tool 90891
ombinat. networks design problems, genetic local tuning algm. 95975
ombline filter, CAD and optim., FD-FD GSM algm. 102512
ommon genetic operators anal. 67875
ommun. network design by GA, perform. influencing factors 85085
ompact handset antenna, design 83719
ompressed coefficient's band-pass delay time charact. extrapolation using GA on DCT 73639
omputer vision, correspondence, island model parallel GA 106773
onducting material defect profile ident., HTS-SQUID gradiometer use 101573
onstrained GA optim., adaptive penalty approach 78945
onstrained VQ codebook design for noisy channels 72830
ontinuous-time OTA-C filters, tuning method using GA 68926
onvergence anal., unified method *(English)* 90030
onvergence improvement using guided crossover 78946
onvergence to globally-optimal soln. *(Chinese)* 67879
ooperative adaptive GA, chiller optimal scheduling problem 124612
orner reflector antennas, optimal design by real-coded genetic algm. 72676
orrel. param. tuning, genetic meta-algm. 78882
oupled cavity chain, indiv. cell freq., genetic alg. 87060
oupled drives syst., fuzzy-genetic controller 123945
oupled tapered slot-line antenna, optim. for sum/difference beams 72476
oupled tapered slot-line antenna with sum/difference beams 72667
racks ident. using boundary elements and evol. algms. 68090
rossed dipole FSS array geom., GA optimisation 105942
rossover operator for partially separable fns. 78944
rossover-induced linkage modeling 100948
SP, multiple pop., constraint-graph based evol. algm. 90007
u vap. laser, discharge cct., capacitance, inductance, GA study *(Chinese)* 117053
ursive word segmentation, morph. method 94693
ylindrical/planar microstrip patch antennas and arrays for wireless commun. 83731
pC machine param. ident. using simple speed sens. 123495
DCT, GA, band-pass delay time charact. 73837
eep submicron designs, power supply noise estim., vector generation 70287
esign optim. of structural steelwork using GA, FEM and syst. of design rules 79124
esigner-moderated product design approach 67505
ifferentiated QoS in appl. layer act. networks 74396
igital cct. evol. using, GA 79760
igital filter, heuristic synthesis, genetic prog. 91082
igital filter optim. over canonical signed-digit no. space using genetic algms. 91090
igital receiver phase equalization, min. phase SAW filters anal. 107541
ipole antenna array, optim., GA 83742
irect and mirror images, feature points matching by GA *(Japanese)* 84283
istrib. automation real-time-service restoration syst. develop. 133527
istrib. feeder optimal loss reduction, transformers reconnection, GA 77335
istrib. network fault restoration approach using GA *(Chinese)* 99257
istrib. network optimal reconfiguration, algms. comparison *(Chinese)* 122966
istrib. service restoration/reconfig. using tabu-genetic algm. *(Korean)* 122961
istrib. syst., optimal capacitor placement using simul. method and GA 77327
istrib. syst. planning, optimal feeder routing, adaptive GA *(Korean)* 122959
istrib. transformers/primary feeder, optimal connection, harmonic distortion 122973
istributed OS-CFAR, threshold optim. of multistatic radar systs. using GA 96947
istribution networks, reconfiguration, capacitor switching coord., fuzzy GA *(Chinese)* 77317
istrict heating and cooling, operation planning 134654

genetic algorithms continued
diversity sustaining GA 67873
DNA computing, NP-complete problems, rel. to GA *(Chinese)* 102866
drum boiler syst. identifier, fuzzy rules extraction, GA 112291
DS-CDMA asynchronous commun., GA assisted multiuser detect. 130171
DS-CDMA cellular syst., dyn. allocation optim. of transmitter power 131183
DS-SS commun. systs., HOS and GA-based interf. rejection filter 74541
dual-band switched-parasitic wire antenna, direction finding 72636
DWDM fibre networks, optimisation and cost savings 120243
dyn. genetic algm., unbounded soln. optim. 100968
dyn. long-range power transm. planning using constrained GA 122922
dyn. single machine problem, GA based scheduling syst. 78740
E-type vert. spindle coal mill syst. ident., GA 99543
ECG beat class. by hybrid neural network 110639
economic dispatch soln. using integrated parallel GA 77159
economic load dispatch problem using evol. computation 90051
edge detect. by GA 95439
efficient fn. approx. for embedded and ASIC appls. 125190
elec. market, discriminatory double-auction pricing 133440
elec. motor drive control, neural network/genetic algm. approaches 113051
elec. power market economic destabilisation for profit 111711
elec. power systs., heuristic optimisation methods 88285
electronic ccts., evol. design, CAD tools 68511
EM, GA 124581
EM device CAD, multiobjective design optim. 93981
EM device problems, GA, global optim. 128702
EM devices, GA optim., universal param. config. 128697
energy-saving solenoid control valve optimal design by genetic algm. *(Chinese)* 117636
engng. approach to GA 67906
entropy-Boltzmann sampling 90059
enzyme genetic prog. for combinat. cct. design 103993
equiv. GA based on extended strings and convergence anal. 100929
EV IM design using niching GA 100284
evol. algms. for multicriteria optim., Pareto optimal soln. 78960
evol. meta-heuristic, state justification in seq. atpg 101905
evol. strategies for optim. of microdevices 97576
evol. strategies for ridge fn. class, perform. eval. 78914
evol. strategy for global optim. of clusters in gene expression data of DNA microarrays 106459
evolvable coprocessor environ. design based on GA 114785
evolvable hardware, PLD and GA *(Chinese)* 79803
exchange-coupled mag. syst., hysteretic behaviour simul., local optim. 81886
eyeglass face anal., symmetric obj. extraction using act. contour model 95499
face detect./facial feature extraction, efficient algm. 107220
face segmentation and feature tracking for videophone appl. 84642
face/facial features detect. automation 129924
facial modeling from uncalibrated image 129684
FACTS, OPF control with UPFC *(Chinese)* 99272
FACTS TCSC devices allocation for total transm. capacity optimisation 112003
failure restoration/array synthesis 128888
fast template matching based on num. GA *(Chinese)* 118765
faulted overhead power lines, buried pipelines interf. calcs. 77438
feature subset selection by Bayesian networks, comparison with genetic and seq. algms. 118449
feeder automation, switch state combination, looped network, optim. method *(Chinese)* 99341
field-evolvable hardware based on flash memory-incorp. µP 90954
fig.-8 satellite earth station antenna, array pattern tuning method 72637
filtered eval. fn./coevol. shared niching 67901
FIR digital filters within embedded fault tolerant hardware platform, evol. design and adaptation 102395
fitness dist. correl. measure of difficulty 78948
fitness fn. for shape detect. using GA 106737
fixed channel assignment with no feasible assignment, GA *(Japanese)* 96555
flat-stator micro-/mini-motors, off-line feeding optimisation, GA 112573
flexible distrib. systs. planning optimisation using GA 122971
fn. optim. problems, real-type tabu search appl. 124611
force sens., temp. compensation algm. 86463
fork lift vehicle speed control, DC motor drive, GA 134551
form class. method, partial matching 95573
FORTH crossover in genetic prog. 78941
FPGA run-time reconfigurable ccts., optim. algm. 114702
FSM synthesis via GA, flipflop selection 125167
fuzzified iter. algms. for perform. driven low power VLSI placement 127014
fuzzy adaptive GA, crossover and mutation probab. *(Chinese)* 113968
fuzzy multimedia IT based on fuzzy control 130978
fuzzy nonlin. integer program by parametric prog. 90042
fuzzy PSS, params. tuning method, GA, simulated annealing *(Korean)* 77268
fuzzy rules extraction by hybrid method for pattern class. 129594
GA-based algm. for searching optimal params. *(Chinese)* 106808
generation scheduling, GA based hybrid techs. 111812
generator reactive power control, bus voltage control, GA 122893
GPQuick, GA software for evolving time series models 124572
GPR, impulse syst., dispersive matched layer RBC implement., FDTD framework 86156
grammars of programs, effects in genetic prog. 78881
graph decomp., heuristic procedures, hybrid GA 67812
graph nodes placement, genetic search 67838
graph thickness determ. using GA 100930
greedy-GA combined algm. for data transfer binding problems 81489
guaranteeing probab. of success using repeated runs of GA 94488
guided evol. simulated annealing, heritage factors 100969
halftone image generation, multiobjective genetic algm. 94574
hardware-software partitioning for dyn. reconfigurable embedded systs., GA driven 114673
herd male GA 107235
high-bandwidth sens. syst., advanced proc. hardware & algms. 95414
high-level synthesis, scheduling, allocation, and binding problems, enhanced GA 114581
high-speed image matching using GA-based block/pixel extraction *(Japanese)* 94774
high-speed image matching using GA-based partial template extraction *(Japanese)* 100656
household elec. appliances, duty cycles, total demand 124127
human face extraction using GA 129895
HV transm. line fault diagnosis, data mining, rough set theory, GA *(Chinese)* 123008
HVAC overhead transm. lines design, audible noise calc. formulae *(Korean)* 123026

genetic algorithms continued
HVDC fuzzy logic controller optimal design, GA 133593
hybrid GA, perform. comparison with simple GA 113965
hybrid GA, traveling salesman problem soln. 124580
hybrid pop.-based metaheuristic approaches for space allocation problem 90048
hydropower plant rehabilitation, Francis turbine runners CAD 77779
hydrothermal systs., short-term optim., evol. techs. 77148
hypersonic flight control, GA appl. 122539
hyperspectral data characterisation 106517
IFS models, inverse fractal problem, hybrid evolutive-genetic strategy 94571
IGA, improved GA, property anal. *(Chinese)* 100965
IIR recursive filters, pipelining using genetic algm. based approach 91074
IM, param. ident., least sq. and GA 88724
IM cross-saturation/deep bar effects modelling 134018
IM drive loss minimization control using GAs 123865
IM drive syst., sensorless speed adjustment control, allied GA 78103
IM equiv. cct. params. determ. using GA 123478
IM indirect field oriented control, PI controller design 134429
image enhancement based on GA *(Chinese)* 129505
image matching, optimal pixel selection, GA *(Japanese)* 73137
image proc., automated program generation syst., CBR appl. *(Japanese)* 84101
image restoration, fuzzy method & GAs, relative gray scale grade *(Chinese)* 84170
image segmentation, appls. of GA, geostatistics, and fuzzy c-means clustering 106458
image segmentation procedures optimisation, GA *(Japanese)* 84085
image seq., target detect., wavelet transform and GA *(Chinese)* 84436
image texture feature extraction using 2D GA 73170
immunoassay element modelling of opt. immunosensor 120941
incomplete sig. reconstr. by nonlin. interpolation/genetic algm. 84706
incrementing multiobjective evol. algm. 78958
independent storage units model, evol. prefetching/caching 74404
induction machine param. ident. by GA 123446
integer goal prog. solns., genetic and conventional methods comparison 78900
interconnect testing, switching activity, automated BIST synthesis 104058
Internet, genetic adaptive routing algm. 108176
Internet search service on multi-search engine, GA-based dyn. pers. filtering 119749
IP-based networks, GA for capacity planning 108033
IR gas sens., cross sensitivity reduction, GA neural network 109730
Jaumann absorbers design, adaptive GA 72333
large-scale transm. syst. fault location estim. using GA 77644
LC filter tuning, GA and simulated annealing 114860
least-cost power generation expansion planning, improved GA *(Chinese)* 122924
lin. array of dielec. resonator antennas optimized for low-sidelobe appls. 72630
lin. codes, 3D 7-ary, wt. hierarchies/GA *(Chinese)* 129060
lin. electro-mech. actuators, synthesis, constrained optim. problem, GAs 117640
link distrib. syst. design using GAs 111972
lip contour approx. method using fn. synthesis *(Japanese)* 73443
LMS adaptive FIR filters, word-length optim. 107563
log-periodic dipole antenna design using GA *(Chinese)* 83697
logic fns., evol. synthesis using MUX 114679
long-range dyn. transm. planning using constrained GA 122925
lower atmos. wind profiler, wind speed estim., GA use 122638
lumped-element equiv. cct., automatic synthesis using GA 79519
lunar satellite, orbit optimal manoeuvre calc. *(Chinese)* 98879
machine learning algm., optim. in linguistic fn. approx. 90055
magneto-opt. disk, design optim., genetic algoritm 93255
mammogram, digital, microcalcification detect., GA 76507
matching pursuit using GA in continuous space 118807
med. image registration, genetic optimisation methods *(Chinese)* 121900
metal discs induction heating, inductor optimisation, GA *(Polish)* 124109
microangiopathy, capillary image segmentation exploiting weak shape constraints 87315
microcalcifications, computer-aided detect., optimal neural network archit. 132817
microgenetic algms., hill-climbing operators, GA optim. 78913
microstrip adaptive array antenna, opt. control 83703
microwave ccts., two-stage num. synthesis 105876
microwave nondestructive eval., global optim. tech. 121169
min. cost survivable networks with bounded rings, GA 78910
mobile agents/GA integrat. for efficient dyn. network resource allocation 130592
mobile commun. syst. freq. assignment by genetic algm. *(Japanese)* 96516
mobile environ. archit., intell. genetic search and proxy caching 119713
modified mutation operator and math. anal. *(Chinese)* 124602
MOMGA-II multiobjective evol. algms. 78965
morph. filter design using GA 118240
motion estim. and segmentation using GA 84192
moving target detect. syst. from IR image using GA *(Japanese)* 129820
MTI dense-cloud mask algm. comparisons 99046
multi-input PSS using high speed GA, design method 77221
multi-max. domain determ., GA behaviour 67888
multi-objective optim. problems, interactive fuzzy satisficing approach using GA 113995
multi-player prisoners dilemma game co-evol./cooperation 89975
multi-product plants capacity anal., energy consumption 124132
multi-state syst. redundancy optim., fixed resource-requirements, unreliable sources 89924
multi-state syst. reliab. optim., universal generating fn., GA 67665
multiband fractal antennas, genetically engineered design 117751
multicast routing problem, delay constraint, GA *(Chinese)* 85093
multicast routing problem, GA 95995
multichannel time delay and sig. params., global estim. via GA 73624
multiclock selection/synthesis for control data flow graph 125286
multicriteria evol. optim., conf., Switzerland (2001) 89520
multilayered cylindrical shields design 72376
multimachine PSS param. optim. using genetic local search 122890
multimachine PSS using recurrent neural net *(Japanese)* 88369
multimodal fn. optim., fuzzy clustering-based niching approach 124609
multiobjective chance-constrained fuzzy prog. 90043
multiobjective evol. algm. archiving/elitism based selection 78962
multiobjective evol. algm. weighted aggregation 78957
multiobjective evol. algms. constrained test problems 78968
multiobjective evol. algms. selection/mutation control 78963
multiobjective evol. optim., tutorial 78953
multiobjective genetic algm., elitism, convergence 78955
multiobjective nonconvex prog. with fuzzy nos., coevolutionary GA 78932
multiobjective optim., constraint-based evol. algm. 78969
multiobjective optim. based on micro-genetic algm. 78959
genetic algorithms continued
multiobjective optim. in cct. CAD, search space 78961
multiple conductors, EM wave scatt., image reconstruction 94025
multiplierless low-delay FIR and IIR wavelet filter banks with SOPOT coe 119066
multipolyhedron reconstruction using GA via 3-view matching algm. 1295(
multipurpose parallel genetic hybrid algm. 100910
multisensor aerial images, class-scale space segmentation 94503
multispectral imagery, GA combining new and existing image proc. tools 73
multispectral imagery, parallel hybrid evol. algm. 95413
multiview image synthesis, hierarchical genetic disparity estim. algm. 9470
narrow-linewidth bandpass filters with diffractive thin-film layers 71489
NCSX coil design using GA 128721
network design techs. using adapted GA 108353
network optimisation, LP and GA appl. 100915
network perform. estim., experience based approach 108153
neural network match filter of chirp pulse compression 75092
neural networks learning with GA-based instance selection 129661
neuro-fuzzy filters based on recursive proc. and genetic learning 130094
node pair features for bisection problems 78884
noisy time-series meas. polynomial systs. reconstruction using GA 95659
nonlin. blind source separation using GA 100913
nonlin. microwave cct. anal., evol. computation 80242
nonlin. predictive model evol. for lossless image compression 84416
nonlin. prog./GA hybrid based on pattern search *(Chinese)* 90020
nonstandard job-shop scheduling problem, GA-based soln. approach *(Chine* 67683
normed space of genetic operators with appls. to scalability issues 67905
nuc. test ban verification, Israel seismic network 88270
obj. surface extraction from stereo degree-of-correspondence space consider occlusions 118441
oesophagus outer wall detect., US images, data fusion, stochastic optim. 76.
opt. orthogonal code design using GA 128999
optim. of fitness fns. with non-ordered params. by GA 90045
optimal control params. 113963
optimal L-filter for blocking artifact reduction using GA 106890
optimal seq. partitioning problem using GA 78899
optimal standing reserve utilisation, GA-based contracting strategy 99314
optimal standing reserve utilisation using GA 111776
optoelectronic MCM, optimal partitioning algm. *(Chinese)* 93443
OTF ambiguity resoln., GA, integer Gauss transform *(Chinese)* 120478
overhead transm. lines, genetic based fault location algm. 133811
overlapped block motion compensation, GA based motion optim. 84420
parallel distributed GA, crossover scheme 78911
parallel niching with niche dropping to remove redundancy 78951
parallel perfectly conducting cylinders microwave imaging 94042
Pareto constrained optim. infeasibility objective 78966
partheno-GA, schema/probab. of destruction *(English)* 90031
partitioned iter. fn. syst., digital imaging tool 95136
pattern recogn., evol. discriminant fns., variable-length chromosome GA 107
PCB assembly, GA for seq. part assignment 115132
perfect reconstruction modulated filter banks with sum-of-powers-of-two coe 73651
perfectly conducting cylinder, UHF/SHF inverse scatt. 128778
perform. anal. of GA *(Chinese)* 78886
phase-only pulse shaping, iter. FT algm. 118421
pHEMT, small-sig. model up to 110 GHz based on GA 92389
piecewise lin. fn. with lin. constraint, global optim., hybrid algm. *(Chine* 124593
PLA growth faults detect., test vector generation, CNF-satisfiability probl 81447
PM motors, optimal efficiency design method *(Japanese)* 77817
PN PSK sigs./ensembles synthesis, genetic method 83834
polar coord. charge simul. method, GA-based charge arrangement 83132
polynomial harmonic models using DFT 90050
pop. dyn. approx. and anal. of optim. problems 113964
power distrib. networks, multiobjective optim. using genetic algms. 77326
power electronics, control using AI, review 90716
power network planning, investment and reliab. coord., fuzzy satisfacti genetic-annealing algm. *(Chinese)* 99317
power plant start-up, adaptive scheduling 99242
power quality disturbances, automated anal. 133694
power syst. anal., time domain simul., cluster anal. 88289
power syst. FACTS devices optimal location using GA 88420
power syst. harmonics on-line ident./tracking, GA 122996
power syst. reactive power optim., fuzzy model, GA *(Chinese)* 77135
power syst. reliab., geno-fuzzy optim. 111678
power syst. stabil. enhancement, variable series capacitor, recurrent NN *(Ja nese)* 99291
power syst. stabil./economy improvement using GA-based control 111886
power syst. static security assess. using query-based learning 111817
power systs., NP hard problems, global optim. *(Chinese)* 77143
power transm. expansion planning, GA-based 77299
prediction based on GA *(Chinese)* 100957
premature convergence, preventing lack of alleles 113966
prisoner's dilemma, repeated, evol. convergence to equilib. 89974
prog. analog MUX array, analog ccts. evol. 125629
pulmonary nodules detect., helical CT images, template-matching 98513
PV power syst. fuzzy logic load control scheme 112436
PWM power convertor SHE switching patterns generation using GA 88924
PWR reloading pattern optim. using GA 99506
Q-GA, modified GA for design of phase equalizers 79546
QoS optim. based on adaptive GA *(Chinese)* 85106
quantitat. feedback theory-PSS, robust controller, stabil. enhancement *(Kore* 122887
quantum ccts., evol., genetic prog. 90885
radar multi-segment detect. proc., GA-based optimum design 75093
radial distrib. network power capacitor placement optimisation 133667
radial distrib. systs., optimal energy restoration *(Portuguese)* 122952
radio link freq. assignment, guided GA 122752
radio network planning, combinat. optim. algms. 108594
radiotherapy inverse problem, hybrid optimisation approach 98695
radiotherapy treatment planning optimisation, multi-modal approach 76642
random sig.-based learning/simulated annealing, hybrid GA 124606
RCS GTD model, freq. extrapolation 86143
RCS of large objs., extrapolation tech. using GA and Prony's method 7507
reactive power optim., distributed parallel GA *(Chinese)* 122772
real-coded genetic algm., optimal truss-struct. design 78943
real-time inspection of metal laminates by means of CNN 118293
reconfigurable ANN with GA training, cct. design *(Chinese)* 102481

tic algorithms continued
ect. microstrip antennas, reson. freq. computation 117789
ect. parts cold forming, optimal layout methodology, GA 113460
educed ordered BDD, variable ordering by scatter search 125188
elax. iter. FT algm. for image reconstruction 84178
elevant features selection in fuzzy genetic learning algm. 84257
eliab. optim. problems, nonlin. goal prog., GA *(Japanese)* 78708
esponse surface methodology for bonding proc.design, GA 124520
everse-current speed-changing winding design, symm. block diag., GA *(Chinese)* 88669
obust VQ for wireless channels 83903
ough GA based on interval values, rough sets 113989
SAMOAGA (Simulated Annealing Maintaining Optima Adaptively by Genetic Algorithm) and appls. *(Chinese)* 124579
SAR images, road detect. using GA with region growing concept 96909
SAR spaceborne images, road detect. 75135
SAR target servicing strategies, optimal, hybrid GA 120454
chema variance anal. and short term extinction likelihoods 78927
earch and optim. *(Spanish)* 90063
earch for 1D cellular automata using heuristics related to dyn. behavior forecast 90056
earch procs. using genetic operators 78947
econdary digit class. using key features 94891
election methods, perform. anal., χ^2 measure adaptation 67907
elective crossover recomb. operator 78950
elf-adaptive evol. algms. 78915
emicond. track systs., pot. deadlock set ident. 89949
ens. calib., evol., using genetic prog. on evolvable hardware 97209
ens. fusion rule acquisition based on environ. condition in sens. fusion syst. 131901
ens. network optim., GA convergence study 73607
eq. ccts., peak-power estim. algm., low-power ccts. 102010
equencing operator commonality, expt. 78942
eries compensated systs., power transm. losses minimisation, GA 111990
hort secret DL-keys, small generic hardcore subsets for discrete logarithm 72965
hort term generation scheduling, dyn. prog., GA 99216
hort term load forecasting, combination model, GA *(Chinese)* 122923
hort-term generation scheduling using hybrid AI/heuristic method 122927
hort-term hydro-thermal power syst. scheduling optim. 122919
hort-term unit commitment, advanced GA approach *(Chinese)* 88391
hort-time load forecasting, genetic neural network, forecasting optim. *(Chinese)* 77284
hortest route via several designated points, GA for routing 79514
ig. class., wavelet filter design using GA 107498
ig. quantization using nonlin. adaptive fns. 118870
imple GA, param. compuation 90060
imulated-annealing-type algms. 67898
mart antenna design, variable geom. truss struct. 117829
mart on-board adaptive sens., MECA electrometer 133250
mooth fitting under genetic prog. algm. 67881
olar-TPP, gain-scheduled fuzzy PI control scheme 133902
older paste printing proc. params. optimisation, multi-objective GA approach 91467
parse deconvolution by means of GA 73603
parse wavelength converters, optimal placement in WDM networks *(Chinese)* 120268
PECT, search algm., max. rect. region, obj. description 132923
pectral calib. params. learning for color inspection 106656
peech recogn. by dyn. synapse neural net 118123
pinning reserve market optimal bidding strategy 133496
pot price calc., decoupled OPF, GA *(Chinese)* 111768
RM, optimal driving condition, torque/speed control, GA-ANN 134503
S comms., NBI cancellation using chaos 95821
tat. cct. design, GA, large-scale ccts. 68512
tate-controlled high-powered elec. drive, commissioning using evol. algms. 89333
tereo correspondence, edge-based, robust, hybrid symbiotic genetic optimisation 129884
tereo correspondence using GA-based segmentation 106455
tereo image matching using GA with adaptive chromosomes 94498
tereo matching method using modified GA 107239
tochastic microwave imaging in NDT, GA-based iter. procedure 101577
tochastic prog., GA 90058
truct. total least sq., GA based 67941
ubstations, voltage/reactive power control, intell. automatic equipt. *(Chinese)* 99858
ubtransmission substation optimal load dispatch for loadability enhancement 133539
upercond. generator control, adaptive/fuzzy logic stabilizer comparison 77814
uperconduct. accel. cavities, cell freq. tuning, GA anal. *(Chinese)* 110170
uperscalar µP archits., genetic approach to design space exploration 102249
urvivable network design using hybrid of exact and GA 130464
SVC, optimal PI controller design, GA 77252
SVC siting using dyn. variable string length GAs 99268
SVC syst., PSS design using real variable elitism GA *(Korean)* 134327
witching regulator design using pseudo-coevolutionary genetic algms. 90727
ymbolic regression, num. robust, hybrid genetic prog. approach 79004
ync. seq. cct., crossover operator for GA based test pattern generator 90829
yst. reliab., weighted voting systs., optimal unit grouping 78713
ech. quality of universal motor using evol. approach 133929
ele-learning syst. design using GA 89648
elecomm. network CAD, evol. algm. approach 107986
est generation algms., evaluating/forecasting syst. 116014
estable data path synthesis, GA 114731
estable data path synthesis, GA 125404
hinned multi-ring arrays 128887
ime series modelling, meteorological data appl. 90049
ime series prediction based on genetic prog. 84680
olerant rough set based data class. 84095
orque motor design optim. using improved niching genetic algm. *(Korean)* 133933
racking radars, time domain synthesized binary phase code sidelobe suppression filter 75094
ransducer fault detect., ANN optimisation, GA 75377
ransformer core loss modeling, neural nets, GA 112614
ransformer manufacture, iron loss reduction by GA/neural net 69282
ranslation invariant operations design via neural network training 94562
ransm. network expansion planning optim., paper discussion/closure 133576
ransm. network expansion planning using GA 111945

genetic algorithms continued
transm. network fault locating syst. develop. using OO prog. 112193
Tsume-shogi game, competitive co-evol. algm. *(Japanese)* 78808
turbine mach. fault diagnosis, probabilistic causal network *(Chinese)* 88670
two-level wireless ATM network, heuristic algm. for optimal design 108646
UEGO, abstr. clustering tech. for multimodal global optim. 100908
unit commitment, Lagrangian relax., GA, comments and reply 133432
unit commitment problem, GA soln. 99243
unit commitment using hybrid models approach 122921
unsupervised niche clustering algm. for multivariate clusters and color image segmentation 129598
US images, auto-segmentation by GA 122024
UWB multilayer slant lin. polarizer, design 105704
VAr planning optim. using expert knowledge adopted genetic algm. *(Chinese)* 111968
VAr planning using GA and successive LP 77290
variable search range, perform. relative to change freq. 78949
variable struct. multiple model estim. 118999
vector evaluated GA-ICT for optimum design of wire grid model antenna 83726
vertex covering problems, hybrid GA 67808
very large scale vehicle routing with time windows and stochastic demand using GA with parallel fitness eval. 100962
video segmentation using spatiotemporal Markov random field 84195
video seq., spatiotemporal segmentation, distributed generic algms. 106697
video traffic, Genetic Algorithm for Mobiles Equilibrium 107906
Visible Human Project datasets, automatic registration methods *(Chinese)* 110919
visual servoing, global/local GA, fish-catching appl. 95597
VLIW CPU, appl.-specific, reconfigurable, optimum extended instruction-set archit. determ. 90939
VLSI cct. gate sizing problem, parallel genetic approach 70284
VLSI ccts., input vector gen. for max. intrinsic decoupling capacit. 104051
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
VLSI std. cell placement, iter. heuristics 104057
VLSI yield optim. design based on sub-proc.-element level redundancy *(Chinese)* 104023
VOD syst., optimal MPEG file placement, GA 131759
VQ based on genetic simulated annealing 106082
vulnerable multi-state systs. survivability, optimal separation of elements 78717
wafer fab. systs., modelling, scheduling, and prediction, queueing Petri net and GA appl. 100719
waveguide-grating struct., guided-mode resons., filters, GA 104881
WDM networks, novel opt. IP router archit. 96876
WDM switch-based opt. networks, amp. placement optim. 131488
wire antennas, two-stage num. synthesis 105876
wireless ATM network, design optim., GA 131225
wireless ATM network cell assignment, genetic algm. approach 95762
wireless resource mgt. using GA for mobiles equilib. 130584
wooden surface defect detect., Gabor filters, evol. algm. design 106525
YGO3 for design of long Yagi arrays 128891
AlGaAs-GaAs heterostruct.-barrier varactor diodes for 255 GHz tripling operation 91294
Cu vap. laser, black center elimination/optim. *(Chinese)* 117056
Cu vap. laser, max. output, design and global optimizing GA *(Chinese)* 71632
Er-doped fiber amp., opt. equalization filter design *(Chinese)* 120122
GaAs/AlGaAs MQW APD, param. optim., GA 93371
Ge/Si HBT power amp. 68592
InP HEMT asymmetric T-gate recess fab., single-step patterning using GA 92410

genetics
biomarkers and biological spectral imaging, conf., San Jose, CA, USA (Jan 2001) 113265
cerebral blood flow/mRNA sigs., simultaneous meas., correl. anal. 122166
chromosomal aberrations, peripheral lymphocytes, Swedish train engine drivers 98743
chromosome images, homologue class., iter. centromere segmentation algm. 87519
chromosome images multi-feature anal. and class. 87550
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
DNA seqs./quaternary cyclic codes 129191
electroporation threshold determ. in vivo, rabbit liver model 98211
lung physiology, gene expression correl. 91503
metaphase finder, FISH dosimetry, automatic chromosomal aberration detect. 122387
microbial biosensors, environ., food, fermentation appl. 120943
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
QCM based DNA sens., immobilis. methods, genetic diagnosis 75674
spot array images, robust spot fitting 98151

geodesic lenses *see integrated optics; lenses*

geodesy
airborne video precision enhanced by model based registration 94841
GPS appls., conf., Tsukuba, Japan (Oct. 1999) 113270
GPS geodetic positioning accuracy, boundary layer propag. effects 88122
Hector Mine earthquake, 1999 Oct. 16, surface displacement 122590
Long Valley, California, magmatic unrest, finite source modelling 98966
oil prod., land subsidence, satellite InSAR method 76960
satellites, LEO, onboard GPS orbit determin. *(Chinese)* 98878
seafloor instrum. positioning, deform. meas. 111390
Socorro, New Mexico, magmatic unrest, finite source modelling 98966
Tainan Tableland, SW Taiwan, uplift, SAR interferometry 122591
tectonic/fault movements, adaptive filtering of continuous GPS results 120476

geodetics *see geodesy*

geoelectricity *see terrestrial electricity*

geographic information systems
3-D GIS develops. for power transm. planning appls. 88390
airborne inventory/inspection technol. for elec. power line condition assess. 88502
battlefield IS, satellite tools 99127
Chinese road maps, automating data extraction/ident. 73144
CMOS low-power pipelined map overlaying archit. for hand held appls. 90948
cockpit terrain intervisibility displays, avionics integrat. 122518
develop., data conversion tool, automatic recognizer, manual editor 122958
digital aerial imagery, automated spatiotemporal change detect. 73432
DISTA, portable software soln. for 3D-compilation of photogrammetric image blocks 118284
distrib. control centre, data sharing, archit., experience 133612
distrib. network fault mgt. automation using FI-model *(English, French)* 133773
distrib. network GIS, database design, graph protraction *(Chinese)* 112047
elec. energy distrib. mgt. using GIS and NN *(Spanish)* 88424

geographic information systems continued
elec. equipt. on-line insulation monitoring, IS, GIS *(Chinese)* 88666
elec. market, tech. support syst., open/visualised platform *(Chinese)* 122790
elec. utility workflow automation tool experiences 133525
forestry advanced rem. sens. tech., standing timber vol. estim. 122721
georeferenced road extraction 73433
GIS-based distrib. simul. and anal. 133656
global GIS, case study 86426
Hanshou County distrib. automation project *(Chinese)* 99334
imagery archives, smart tools appl. 120697
integrated SCADA/distrib. mgt. syst., Colombia 133614
Internet intell. transport syst. studies *(Japanese)* 124030
interval and fuzzy methods in rem. sens. and satellite image proc. 129659
land/water resources, sustainable develop., rem. sens.-based integrated approach 111487
LAPER rural elec. planning software *(English, French)* 133567
LOCATIONWARE location-aware service platform, notification service technols. *(Japanese)* 124035
MV distrib. networks, voltage sag eval., AM/FM-GIS 99348
Naviewn, PDA-based GPS 75246
omni directional, real time, stereo image acquisition syst. 84146
on-the-fly location referencing/obj. embedding for navig. databases 134588
OO feature-based model for land class. *(Chinese)* 94920
power distrib. cable fault location using GIS *(Chinese)* 77383
power syst. spatial offer-and-demand forecasting, neuro-fuzzy inference systs. 111955
RAPIDS rem. sens. receiving station,agric. monitoring 122720
regional geoinformational syst., aerospace image proc., intranet network 99043
road networks estim. using archived GMTI data 133403
robust dist.-based clustering with appls. to spatial data mining 68069
RTO-Grid Florida GIS, transm. assets transfer, GPS 122826
solar energy planning in urban environ. via GIS based decision support 133834
spatial elec. load forecasting, computational support tool 112055
spatial load forecast method, rule based, GIS appl. 77282
structural lines, TINs, and DEMs 68070
telegeoprocessing/monitoring, conf., Nice Sophia-Antipolis, France (May 2000) 78424
telephone network automatic distributing software syst. with GIS technol. *(Chinese)* 108069
TPOCAST pers. inform. delivery platform *(Japanese)* 120005
visually impaired navig. syst. develop., sens., DGPS & digital maps 76714

geography
aerial photography, image seq. overlap monitoring 98944
automated image registration perform. prediction 73114
cartographic road network deform. on SPOT satellite image 99053
computer-assisted geo-spatial registration and truthing 73115
dist. learning via Internet and satellite downlink for ecosystem anal. 130631
geo-spatial image and data exploitation, automated, conf., Orlando, FL, USA (April 2000) 76942
rem. sens., robust pixel unmixing 122614
rem. sens. data, multi-source, boosting, bagging and consensus-based class. 122724
road extraction by using combined stat. and structural inform. *(Chinese)* 76961
urban regions automatic extraction, SPOT satellite imagery 99052

geology
aeromagnetic crossover misfits, EM induction, geological inform. 72178
barrier-spit geol., ground penetrating radar 122577
CSIRO-GEMOC nuc. microprobe, PIXE detect. limits for geological samples appls. 133269
delt. geol., ground penetrating radar imaging 122577
hydrogeology, airborne SAR-GPR methods, L-/P-bands 88112
lidar rem. sens., tunable CO_2 9-11 μm laser 122624
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
multipass SAR interferometry, geological anal. 86223
oil prod., land subsidence, satellite InSAR method 76960
Vallee d'Ossau, France, old glacial valley ground-penetrating radar study 122580

geomagnetic storms *see magnetic storms*

geomagnetic variations
D_{st} geomag. index, evol., global nonlin. model 122643
geoelectromagnetic disturbances, effects on technol. systs. 83440
Indian zone, VHF scintill., geomag. activity control, equatorial electrojet 117684
power supply inductive components, geomag. field, local disturbances effect 99351

geomagnetism
see also geomagnetic variations; magnetic storms; palaeomagnetism; rock magnetism
1D cond. reconstruction from dual-loop EM data 122561
3D Hall struct., integrated vector sens./mag. compass 111380
aeromagnetic crossover misfits, EM induction, geological inform. 72178
archaeology, mag. gradiometry exploration, 3D inversion 122569
azimuthally anisotropic layered Earth, MT data inversion 122559
B-field response, induction coil sens. meas., transient EM method bandwidth 117621
blood serum, zero vs. geomag. fields, Zn/Cu effects 98748
color picture tubes, influence of geomag. field on perform. *(Chinese)* 125978
earthquakes, changing Earth currents, atmos. EM response calc. 93971
GIC-saturated transformers, curren harmonics/VAr consumption anal. 112586
ionos. profile reconstruction using Faraday rot. data 122656
Mount Sakurajima, volc. activity, EM measuring syst. 133271
MT data, wavelet filtering 122560
orb. satellite lin. EM motor operating principles 111340
power transformers, geomag. induced current effects 112590
radioengineering systs., nonGaussian sig./noise accumulation 108621
shallow subsurface detect., freq.-domain EM syst. config. 88090
space plasma data, time series anal. using HOS *(English)* 122678
surface/three-component borehole mag. data, joint inversion 122563
two-axis planar flux gate sens. with multilayer struct., fab. *(Japanese)* 109935
$YBa_2Cu_3O_7$ based SQUID magnetometer, transient EM method, geomag. prospecting 81980

geometric codes
see also algebraic geometric codes
automorphism groups of one-point codes 117943
detect. systs., geom. params. sim. using OMEGA code 76014
finite geom. low dens. parity check codes 129035
geometric-primitives-based compression scheme for testing systs.-on-a-chip 101913
image compression with geom. wavelets 95076
pos. integer code, geometric progression for grouping of message length 129019

geometric Goppa codes *see geometric codes; Goppa codes*

geometric programming
floorplan area minimization using Lagrangian relax. 101896
fuzzy posynomial geometric prog., primal algm. 124549
VLSI design, floorplanning algm., Lagrangian relax. 70259

geometric reasoning *see spatial reasoning*

geometrical optics
see also geometrical theory of diffraction; ray tracing
blasted surfaces roughness meas., light scatt. method 75873
cellular telephones, operation zones in hospital hallways 94057
contact laser scalpels, emergent power distrib., Monte-Carlo simul. *(Chine*
128635
dielec. sphere, num. study of internal opt. ray movement 114936
DP, geom. and Fourier optics approxs., triangular norms tech. 71454
EMC chambers, anechoic and semianechoic, homogenization and GO 1288
generalized classical axially symmetric dual-reflector antennas 72511
geometric opt. modeling, multiple-scatt. scheme 76947
laser resonator, auto-stabil. adjustment syst. *(Chinese)* 105393
leaded glass polycapillary fiber optics, med. imaging scatter rejection 9855
low antenna height base station in urban area, propag. path ident. 105755
microcellular radio, path loss and time-delay spread for street corners 7474
microwave propag., indoor environ., GO/UTD model 83275
MM-wave antenna systs., develop./appl. of MODTool integrated design t
117770
MM-wave band ship-borne navig. radar 120444
neg. index of refr., expt. scatt. data 72331
opt. design and fab., conf., Tokyo, Japan (Nov. 2000) 124215
phase-Doppler sizing anemometer, laser light scatt. by particles *(Chine*
132181
radar refl. from surfaces with ruptures 76967
radio waves in oblique ionos. sounding, limiting polariz., quasi-isotropic appr
83274
rain-induced lidar depolarization, atmos. icing meas. 133286
surface nanostructuring, laser pulses, field enhancement effects 83053
telecomm. networks, opt. neuro-fuzzy systs. 120120
TEM-wave transit. devices synthesis, geom. opt. Maxwell eqns. 83539
VHF/UHF radio waves multipath propag. in 3D terrains 72313
ZLI-4792 homeotropically aligned liq. cryst., elec. switchable liq. cryst. grat
82230

geometrical theory of diffraction
2D HF complex radar scatt., type-discriminated GTD model *(Chinese)* 131
3D complex environ., astigmatic beam tracing 83247
900 MHz/2.1 GHz path loss/delay spread while entering tunnels, anal. 940
antenna anal., ray tracing and UTD 72456
convex circ. cylinder apertures, mutual coupling calc. using hybrid UTD-M
method 72650
E^3-EXPERT ES for EMI rejection requirements prediction 83369
EM fields anal. using method of moments/GTD 83078
finite corner antenna, directivity factor optim. 117817
finite width obstacles, propag. loss prediction model 72324
finite-size circ. polarized corner reflector antenna, radiation characts. 83594
high resoln. 3D snapshot ISAR imaging and feature extraction 96924
inddor radio, microwave WLAN, EM field distrib. 96408
indoor radio, UHF propag., ray-tracing methods 74572
indoor wireless, site-specific channel modelling accuracy 83334
LEO systs., phys.-stat. shadowing correl. model 74730
Luebbers/Maliuzhinets wedge diffr. coeffs. in urban channel modelling, comp
son 94043
microcell wireless appls., site specific propag. prediction 83341
microcellular environ., field strength estim. using UTD 74769
microcellular radio, path loss and time-delay spread for street corners 7474
microstrip antenna on finite size ground plane with small vert. edge walls, rad
tion pattern 83518
microwave propag., indoor environ., GO/UTD model 83275
mobile wireless commun. syst., infinitesimal diffr. model 85708
naval ships, upper deck EMC anal. for freqs. above 1 GHz 88253
partially coherent submillimeter-wave antenna systs., dyadic anal. 105862
pneumatic. bent mirrors for X-ray powder diffract., beam conditioning 121
probe excited rect. cavity-backed slot antenna, radiation pattern anal. 7260
radar imaging and recogn., parametric model with freq. depend. 75108
radio propag. in urban environ., 2D ray-tracing simulator 105749
ray-tracing models, radio site topographical data, base station antenna des
optimisation 83714
RCS GTD model, freq. extrapolation by GA 86143
staggered parallel plate waveguide cavities, E-polarized plane wave scatt. 83
time-domain equiv. edge currents for transient scatt. 72232
urban area quasi-MM band fixed wireless access, delay profile 85551
VHF/UHF radio waves multipath propag. in 3D terrains 72313
vibrator and microstrip antennas, side radiation reduction level, UGTD 835

geometry
see also computational geometry; geometric codes
2D SPECT with 180° DAQ, image reconstruction, line-integral model 132
3D computer vision, SVM using geometric alg. 106666
3D head tracking/head pose estim., stabilized adaptive appearance changes mo
106705
affine transforms., Hough transform gathering strategy 84590
all-fiber add/drop device, silica micro sphere whispering-gallery-mode s
120348
autonomous mobile robots, geometric world models, consistency estim. 97
autonomous robotic navig., visual landmark ident. 97383
battlefield, digital, appls. of scalable sing. 3D modelling 77122
Bayesian inform. geom., irreversible procs., max. entropy anal. 105995
boundary-labeling automaton, vertex chain code generation, geometric quanti
calc. 118632
breast pathology assess. by MRI-mammography 2D/3D data fusion 87585
CDT subproblem, dual fn. max. 79014
convergent stereo systs., disparity anal., comparative study 129492
convex set directional end, theory and appls. 100863
convex vector optim., efficient point geom. charactn. 78904
cyclic pursuit, stable polygons, mutual/nonmutual capture 78872
cyclic pursuit paths for nonmutual captures 78871
document page segmentation, automatic perform. eval. method 129933
epipolar geom. estim., N-dimens. tensor voting appl. 106498
face verification from 3D and grey level clues 107242
fractal geom. and appls. 124525
fuzzy plane geom., membership fns. of geom. concepts 78852
GPS attitude determ., Euler angle dilution of precision 120488
HiBall tracking syst., high-perform. wide-area opt. head tracking 73248
indoor robot, 2D relative motion estim., monocular images 75609

etry continued
variant subspaces computation, Grassmann-Rayleigh quotient iter. 78759
teral p-n jn. photodiodes, HF perform. 71552
ne-segment grouping, eigenclustering approach 129494
Maxwell's eqns., geometric aspects of simplicial discretization 83090
obile robot navig., visual servoing algm., epipolar geom. based 97372
notion estim., circ. motion, epipolar geom. from profiles 84130
MRI cardiac images, left ventricular segmentation 132755
MRI images, 3D heart segmentation and tracking, FEM-based deformable model 132756
multi-resoln. skeletonization, shape and topol. preserving multi-valued image pyramids 94476
etwork open loop stochastic control, simplex convexity 67731
ccluded scenes, multiple people tracking, multiple cameras appl. 129493
ptim., derivative-free nonlin., in high dimens. 67902
hotonic cryst. defect laser, geom. tuning 117395
lates, thin piezoelec., buckling anal., FEM/DKQ element *(Chinese)* 127162
OC, epipolar line bunch constraint, radial transform. *(Chinese)* 95469
obot positioning, vision-based, image features assess. 75611
calar images, topol. point-sets segmentation 84126
teel laser deep penetration welding, Marangoni effect 128605
nimodular matrix, expander defn. 100734
ascular branches in fundus retinal images, geom. and morph. anal. 87521
ero-sum two pers. game with random walk, geom. methods 67745
$BaTiO_3$ MLC capacitor geom., optim. for max. yield during binder burnout 102786
CdTe:Ge double phase conjug. mirror geom. EO switch 128453
Ge QD in Si, lateral geom. IR detectors 80883

phones *see seismometers*

physical equipment
see also atmospheric measuring apparatus; hydrological equipment; oceanographic equipment; seismometers
3D Hall struct., integrated vector sens./mag. compass 111380
6 bit snow DAQ syst. interfaced with lap top PC, design 76841
ADS40, airborne digital CCD image sens., test flights 99049
Antarctic ice borehole probe 122601
ASTER cryocooler, in-flight perform. 111399
ASTER early sci. outcome and operation status 111393
ASTER ground data syst., first data generation 111398
ASTER target obs. scenario 109475
BGIS 2000 Ball global imaging syst. for Earth rem. sens. 122553
CERES Aqua instrum. simulator for command and upload validation 122596
CERES/TERRA data validation 111395
COVIR Compact Visible and IR Radiometer, Earth/climate monitoring 133279
distributed temp. sens., fibre-optic based for oil and gas wells 120828
earthquake simul. by CaPaMan robot, expt. validation 98972
EM exploration, Spectrem II airborne EM syst. 122588
EOS multiangle imaging spectroradiometer, in-flight calib. 109420
FHTSC spinner magnetometer, rock remanent magnetisation meas. 70818
hyperspectral radiometry simul., SENSOR end-to-end simul. tool 122719
meteorite ident. by robot vision, Antarctica 107134
meteorite search by robot vision in Antarctic, outcomes 95596
opt. detect. of gas in oil wells production 122549
PARABOLA III, land/atm. bidirectional obs. 111410
rocks-minerals, XRD/XRF microanalysis instrum. 87282
seismic DP software radio receiver 122625
seismic instrumentation, Indian, recent advances 98942
shallow subsurface detect., freq.-domain EM syst. config. 88090
soil, moisture/organic matter prediction, NIR sens. 122592
static polaris. interf. imaging spectrometer, airborne rem. sens. 98949
terrain mapping, 2D Doppler microwave radiometer 98963
two-axis planar flux gate sens. with multilayer struct., fab. *(Japanese)* 109935
VHF ground elec. cond. anoms. meas. eqpt. 88096

physical prospecting
3D ground-penetrating radar simul., plane-wave theory, anisotropic media 120440
4D self-pot. tomography in near-surface geophys. exploration 88167
borehole induction logging, adaptive focusing 88100
borehole induction meas., hybrid EBA/CG-FFHT method 88099
borehole induction meas., hybrid FFHT-EBA method, inverse algm. 88104
DC resist. imaging techs. 122546
DC resist. method, 3D, finite elements 88095
elec. exploration, dc resist., dual-grid inversion 122584
elec. impedance tomography, bipolar DC pulse tech., core anal. 111389
EM 3D modelling, nonlin. inversion 122566
EM exploration, quasi-anal. approx., series 122585
EM exploration, Spectrem II airborne EM syst. 122588
EM exploration method, airborne, inversion methods 122589
EM induction exploration, nonlin. inverse methods 88115
EM induction exploration, very early time, 3D imaging 88113
EM induction inverse scatt., 2D profiling 88114
fiber-coupled THz receiver antennas 132147
ground penetrating radar, horiz. antenna over half-space 122567
ground penetrating radar, pipes, dispersive soils, 3D calc. 122582
groundwater flow, elec. self-pot. anoms., analytic solns. 88106
harsh environ. microelectronics/microsystems, research/develop. 132073
high-energy gamma-ray response, detectors modeling 98027
HTSC DC SQUID magnetometers, geophys. prospection 70923
HTSC SQUID, mag. gradiometry, geophys. exploration 70988
induction logging, 3D FEA, background fields effects 122600
LOTEM, long-offset transient EM method, mountain areas 122575
mapping, lin. feature enhancement, directional filters 122586
Mars subsoil geophys. prospecting by TDEM 120690
McConnell NiS deposit, Sudbury, radio tomography, borehole radar delineation 122587
MT method, automatic 1D inversion 122565
multi-inform. array inversion using variational Born iter. method 76845
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
oilfield exploration, NMR sens., design optim. 88102
seismic acoustic image segmentation, fuzzy fusion of attributes 122605
seismic fiber optic multiplexed sens. for oil exploration and reservoir mgt. 122547
self-pot. anoms., CW transform 88107
shallow subsurface detect., freq.-domain EM syst. config. 88090
shape reconstruction from moments, theory/algms./appls. 94747
well logging, 2D EM cond. imaging 88101
$YBa_2Cu_3O_7$ based SQUID magnetometer, transient EM method, geomag. prospecting 81980

geophysical signal processing
1D cond. reconstruction from dual-loop EM data 122561
2D adaptive sampling for obj. detect. 106835
2D gravity interp., ANN appl. 122597
2D localized filter-based lin. coherent noise atten. 107510
3D oceanographic images around land masses, wavelet-based coding 99019
3D poststack data, random noise reduction, noncausal spatial prediction filtering 122583
3D target localization from seismic and acoustic signatures 73736
3D-ACM WAVE on fixed & taut-wire moorings, directional wave spectra 76908
4D self-pot. tomography in near-surface geophys. exploration 88167
acoustic vector-sens. correls. in ambient noise, array proc. 111445
ADS40 airborne digital sens., data proc., test flight results 122718
air quality emissions, discrete Kalman filter use 133348
airborne hyperspectral imagery, unknown materials invariant tracking, model acquisition 98953
airborne mapping, GPS/INS/CCD syst., hardware-software integrat. 122623
ALOS/PRISM stereographic images, terrain elevation meas., JPEG 122552
AMPTE magnetopause crossings, improved boundary normal calcs. 122639
Antarctic ice borehole probe 122601
ASTER ground data syst., first data generation 111398
ASTER init. image eval. 111397
ASTER target obs. scenario 109475
atm. radio wave scatt. and temp. data wavelet anal. 128779
atm. water vap. estim. from GPS data 111430
atmos., CO_2 laser based trace gas analyzer 76927
atmos., radar, higher order spectral estim. 122670
azimuthally anisotropic layered Earth, MT data inversion 122559
bathymetric mapping, SPOT satellite data anal. 99024
BIRD satellite on-board thematic data proc., neural chip class. 99044
Bohai Sea, ice detect. and classif., SAR and SSM/I obs. 76919
circ. geological forms in satellite imagery, ident. 122557
cloud sounding, lidar sig. anal., multiple scatt. case 122662
coastal water quality, multiparam. inversion, hyperspectral anal. 99010
coda-envelope-inversion tech. devel. 98941
coherent lidar high-resoln. Doppler vel. profiles retrieval 122661
color aerial images, region-based segmentation, Karhunen-Loeve transform 118316
complex geophys. images, contrast enhancement/segmentation 98951
complex terrain, seismic exploration, DP 122579
composite two-layered rem. sens. image unsupervised classif. 111385
conf., sens./syst./next-generation satellites, Barcelona, Spain (Sept. 2000) 113183
D_{st} geomag. index, evol., global nonlin. model 122643
D_{st} geomag. index forecasting, adaptive nonlin. systs. ident. 122640
DC resist. imaging techs. 122546
DIAL lidar rem. sens. & spectrosc., pulsed LD use 122663
Doppler meteorological radar, sig. freq. shift meas. 122636
drill-bit sigs., blind interp. 122572
Earth orbiting scatterometers, multiprocessor DSP 133334
elec. impedance tomography, bipolar DC pulse tech., core anal. 111389
ELF band seismic EM radiation, sig. proc. and sonification 122602
ELF natural noise, derived Hurst exponent 88141
ELF/VLF-noise radiation sources, narrow-sector finding 88137
fiducial marks automatic segmentation method 73150
flooding, springtime, forecasting, rem. sens. methods 99008
forest fire smoke, AVHRR imagery, neural nets 122607
forested terrain rem. sens., SAR tomography and interferometry *(English)* 76962
forestry advanced rem. sens. tech., standing timber vol. estim. 122721
fourth-order stats., trispectrum, bandwidth and deconvolution 118789
geo-location of overhead rem. sens. FOV using synthetic maps 133280
geo-spatial image and data exploitation, automated, conf., Orlando, FL, USA (April 2000) 76942
geoacoustic param. estim., cross-rel. matched field inversion 122700
gravity data filtering using Hartley transform 122598
gravity inversion using convexity constraint 88093
gravity tensor gradient data, Euler deconvolution 122562
Greenland ice sheet, melt duration, season and melt extent determ. 133337
ground penetrating radar, imaging, Radon transform 122581
ground surface image reconstruction using radio ground waves 111381
ground surface tomographic imaging, ground wave use 88097
high-bandwidth sens. syst., advanced proc. hardware & algms. 95414
hybrid wavelet compression scheme for material textures 95321
hydrometeor, phase state, radar polarimetry 88140
hyperspectral anal. toolset, spectral similarity scale algm. 122556
hyperspectral data class., feature extraction 99057
hyperspectral data compression, lossy VQ *(English)* 98960
hyperspectral data compression using VQ and DCT 98950
hyperspectral derivative anal., efficient, wavelets 99062
hyperspectral image anal. tech., anom. detect. algm., Quad-AR filter 95412
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
hyperspectral imagery, atmos. correction algm., adjacency effect 97169
hyperspectral imagery scenes, target spectra stats. 99048
hyperspectral images, material discrim., viewing geom. 99055
hyperspectral images, projection pursuit target detect. 98956
hyperspectral imaging, airborne, georegistration 98955
hyperspectral imaging, sampled, inform. theory 98959
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
hyperspectral mixture proc., Gibbs-based partitioning 98958
hyperspectral rem. sens., feature selection algm. 99056
hyperspectral rem. sens., spatial-spectral compression 99061
hyperspectral sens. develop., data proc. viewpoint 133281
hyperspectral target detect., subpixel, lin. mixing 98957
image rectification, anisotropic spatial model method 98967
image segmentation, multisensor, Dempster-Shafer fusion 111386
imagery archives, smart tools appl. 120697
imaging spectrometry, conf., San Diego, USA (July-Aug. 2000) 89500
InSAR, SAR interferometry, perform. of multibaseline estimators *(English)* 75211
ionos. 3D struct., ionogram inversion, modular NN approach 133300
ionos. electron dens. height profiles determ., regularisation 122641
ionos. real-time charactn. using diverse data 133309
JPEG-2000 based scan-based proc. 111383
land cover class., nonparametric machine learning 122612
land cover mapping, supervised, ART neural net class. 122613
Landsat 7 on-orbit geometric calib. and perform. 76951
Landsat-7 ETM+ internal calibrator, data models 122551
landuse class., SAR/INSAR data and opt. imagery fusion *(English)* 76964
large-scale parallel wave propag. anal. by GeoFEM 101129

geophysical signal processing continued
least-sq. dip moveout and migration 122578
LF act. sonar syst., non-Rayleigh reverberation, McDaniel model 109308
lightning discharges, ELF pulses time-domain representation 122667
lightning location, range-difference and direction-finding methods 88144
limb sounder radiometry, atm. obs. inversion using NNs 133316
lower atmos. wind profiler, wind speed estim., GA use 122638
magnetos. magnetometer data, wavelet anal. results 122642
mapping, lin. feature enhancement, directional filters 122586
marine boundary layer wind, inverse method soln. 76895
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
max.-likelihood DOA estim. in unknown nonuniform noise 84668
meas. syst., irregular and adaptive sampling 88103
meteorite craters detect., possibilistic shell clustering 98952
meteorological image archives, query-by-shape 122668
microwave rem. sens., combined radar-radiometer sig. proc. 88195
moist tropos. radio occultation sigs. modeling/inversion 76889
moving target, SAR imaging methods, theory 122615
MT data, wavelet filtering 122560
MT method, automatic 1D inversion 122565
MTI dense-cloud mask algm. comparisons 99046
multi-inform. array inversion using variational Born iter. method 76845
multicomponent georadar data, DAQ and proc. 120441
multicomponent seismic data, elastic/viscoelastic imaging 122570
multispectral imagery, parallel hybrid evol. algm. 95413
multispectral satellite data, atmos. ocean syst. state estim. 98946
near-bottem sediment, multifreq. acoustic data color-encoding 122683
near-surface buried struct. imaging with high-resoln. surface-wave group-vel. tomography 94683
near-surface VSP survey seismic cone penetrometer 122574
NOAA AVHRR images, class. algms. comparison 111384
NOAA-AVHRR accurate image navig., contour matching approach 122689
ocean, hyperspectral, RBF neural nets 99020
ocean acoustic tomography data anal. using Kalman filter 99016
ocean colour rem. sens., fuzzy logic class. 111458
ocean scanning multi-spectral imager, on-orbit solar calib. meas. 99011
ocean surface sens., LWIR hyperspectral polarimetric imager 76915
ocean wave spectra retrieval from ERS SAR 133341
oceanic wind field, pencil-beam conical scanning scatterometer anal. 76896
oceanographic research vessel, low cost modular instrum. syst. 111441
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
onboard image selection/compression 111377
phase unwrapping algms., global approaches and local strategies 86227
polar summer mesos., nonturbulent layer struct., VHF scatt. 133315
polar summer mesos., nonturbulent layers, sharp gradients detect. 133314
pollution plumes, hyperspectral imagery, matched filters 99035
precip., radar rem. sens., neural net class. 76853
prestack migration, shot records phase encoding 122558
radar data objective anal., Barnes filter adaptation appl. 88153
rainfall patterns forecasting, regularized Gaussian mixture models *(English)* 122637
rem. sampling, cost effective ref. data sampling algm. 122603
rem. sens., digital image, class. coding, software simul. *(Chinese)* 95142
rem. sens., on-board opt. image compression 111382
rem. sens., robust pixel unmixing 122614
rem. sens. image classifiers, supervised, combination based on indiv. class performs. 122723
rem. sens. imagery, noise reduction, data masking and PCA 111378
rem. sensed imagery, class., lossy compression effects 111379
rem. sensed images, integrated pipelined and distributed syst. for real-time class. 133276
retrospective selection bias (hindsight) 111402
SAR, weighted multi-resoln. phase-unwrapping method 86221
SAR imagery, terrain feature class. 133270
satellite image restoration success criteria 98954
satellite imagery, panchromatic, small obj. detect. 122622
satellite weather imagery, texture-based segmentation 98984
sea ice monitoring, data assimilation-combination 111439
sea surface motion field determ. from IR imaging 133336
sea surface temp. estim., AVHRR MWIR band, MODTRAN values 133345
seabed geoacoustic param. inversion, adaptive hybrid algm. 111444
seismic 2.5-D true-amplit. migration 122571
seismic acoustic image segmentation, fuzzy fusion of attributes 122605
seismic and acoustic sig. ident. algms. 73735
seismic array proc. and D″ layer fine struct. 111373
seismic common reflecting element method 122573
seismic data compression based on wavelet transform, zero-tree quantization coding *(Chinese)* 98948
seismic DP software radio receiver 122625
seismic imaging, sing. charactn. by monoscale anal. 111391
seismic instrumentation, Indian, recent advances 98942
seismic sig. proc., DAQ syst. 86425
seismic sig./coherent noise separation, migration filtering 122564
shallow-water acoustic data anal., broadband normal-mode-propag. model 109228
small-feature-preserving noise-rejecting RM-KNN filters 84172
software tool for seismic data recorder/analyser 76842
soil moisture, microwave radiobrightness, data assimilation 111453
soil moisture, microwave radiometry, multifreq. algm. 111447
soil moisture inversion, neural network based 88163
soil radar sounding, aperture synthesis method 88108
space plasma data, time series anal. using HOS *(English)* 122678
spaceborne precip. radars, second generation 133329
spectropolarimetric imaging, field-portable imager, AOTF 97347
SPOT multispectral images, bathymetric segmentation *(French)* 122699
stratified media, laser sounding, multiple scatt., sig. depolarization 88147
Stromboli explosion quakes, neural networks for blind source separation 122594
subsurface sens. & imaging syst., unified discipline develop. 84167
subsurface targets, time-domain EM induction, algms. 88200
surface biophys. params. estim. from satellite imagery 76949
surface/three-component borehole mag. data, joint inversion 122563
terrain height map, image registration algm. 95440
terrain mapping, image coherence, smoothness membership 122608
terrain mapping, IR spectrometry, spectral mixtures 99058
terrain mapping, lin. feature changes, edge-finding 99064
terrain mapping, lin. features extraction 122621
terrain mapping, MERIS-Landsat TM sens. fusion 98962
terrain mapping, polarimetric SAR, simulated annealing 122617
terrain mapping, radar, topographic migration 122568
terrain mapping, slope-aspect, interpolated data 122606
geophysical signal processing continued
terrain mapping, spotlight SAR data focusing, 2-step 122616
time-freq. space charactn. based on stat. criteria 118883
topography modelling with SAR interferometry 122595
tropos. radio occultation sigs. tracking from LEO 76892
underwater bottom 2D topography inversion, SAR imagery 76920
unexploded ordnance, UWB SAR method 88262
upper atm. wind vel. meas., stellar scintillation patterns anal. 133283
urban scenes, vegetated areas, hyperspectral imagery 98961
US data compression, real-time 76918
VHF tropos. radar data, spaced antenna/Doppler beam steering methods 133
VIS-SWIR hyperspectral data anal., atmos. correction algms. 98974
weather radar, polariz.-diverse, clutter ident. 111423
wind, complex terrain, Doppler radar, real-time synthesis 98997
worldwide lightning mapping with ELF tomography 88142

geophysical techniques
see also atmospheric techniques; geophysical signal processing; hydrologi techniques; oceanographic techniques; terrain mapping; vegetation mappin
ADS40, airborne digital CCD image sens., test flights 99049
agricultural crops, height meas., ERS Tandem InSAR method 111488
airborne hyperspectral imagery, unknown materials invariant tracking, mo acquisition 98953
airborne laser scanning utilisation in Japan 96997
archaeology, mag. gradiometry exploration, 3D inversion 122569
barrier-spit geol., ground penetrating radar 122577
bathymetry, coastal, radar depth inversion, waves 122620
bathymetry, polarized lidar rem. sens. 122696
buried objs., mines, EM scatt., complex natural reson. 88259
buried objs., radar time-domain sens., rough surface 111387
buried target, wideband EMI response, model 88111
CERES/TERRA data validation 111395
class., SVM training, and well-log data appl. 76827
conf., computational acoustics, Rome, Italy (1999) 100384
conf., sens./syst./next-generation satellites, Barcelona, Spain (Sept. 20 113183
crops, wheat, microwave radar scatt. 122686
crops-weeds discrim., LIF 111486
CSIRO-GEMOC nuc. microprobe, PIXE detect. limits for geological samp appls. 133269
DC resist. method. 3D, finite elements 88095
delt. geol., ground penetrating radar imaging 122577
Earth obs. systs., conf., San Diego, USA (Aug. 2000) 111400
elec. exploration, dc resist., dual-grid inversion 122584
EM 3D modelling, nonlin. inversion 122566
EM exploration, quasi-anal. approx., series 122585
EM exploration, realizable resistive limit concept 122576
EM exploration, Spectrem II airborne EM syst. 122588
EM exploration method, airborne, inversion methods 122589
EM induction exploration, nonlin. inverse methods 88115
EM induction exploration, very early time, 3D imaging 88113
EM induction inverse scatt., 2D profiling 88114
field spectroradiometric data covering 0.4-2.5-μm wavelength region, post-pr 76833
forest, chlorophyll content, hyperspectral rem. sens. 99060
forest fire smoke, AVHRR imagery, neural nets 122607
forest reflectance model, directional props. 111376
geodetic deform., seafloor instrum. positioning 111390
GPS appls., conf., Tsukuba, Japan (Oct. 1999) 113270
GPS geodetic positioning accuracy, boundary layer propag. effects 88122
ground penetrating radar, FDTD 88109
ground penetrating radar, horiz. antenna over half-space 122567
ground penetrating radar, imaging, Radon transform 122581
ground penetrating radar, pipes, dispersive soils, 3D calc. 122582
ground penetrating radar, rough interface, scatt. model 88199
ground penetrating radar, soil response, 2D FDTD 88110
ground surface, IR radiation charact., heat bal. eqn. *(Chinese)* 122728
ground surface image reconstruction using radio ground waves 111381
ground temp., satellite IR radiometry rem. sens. 98964
ground-penetrating radar data, amplit.-vs.-offset var. 88094
groundwater flow, elec. self-pot. anoms., analytic solns. 88106
harsh environ. microelectronics/microsystems, research/develop. 132073
high-energy gamma-ray response, detectors modeling 98027
hydrogeology, airborne SAR-GPR methods, L-/P-bands 88112
hyperspectral data class., feature extraction 99057
hyperspectral data compression, lossy VQ *(English)* 98960
hyperspectral derivative anal., efficient, wavelets 99062
hyperspectral images, material discrim., viewing geom. 99055
hyperspectral images, projection pursuit target detect. 98956
hyperspectral imaging, airborne, georegistration 98955
hyperspectral imaging, sampled, inform. theory 98959
hyperspectral mixture proc., Gibbs-based partitioning 98958
hyperspectral rem. sens., conf., Sendai, Japan (2000) 89538
hyperspectral rem. sens., feature selection algm. 99056
hyperspectral rem. sens., spatial-spectral compression 99061
hyperspectral target detect., subpixel, lin. mixing 98957
IEM/IEMM surface scatt. model extension 98971
image rectification, anisotropic spatial model method 98967
image segmentation, multisensor, Dempster-Shafer fusion 111386
imaging spectrometry, conf., San Diego, USA (July-Aug. 2000) 89500
imaging spectroradiometers ground-ref. calib. 98947
induction logging, 3D FEA, background fields effects 122600
INSAR, SAR interferometry, act. volcano monitoring 86222
internat. Earth rem. sens., 1980-2010 overview 111371
land cover class., nonparametric machine learning 122612
land cover mapping, supervised, ART neural net class. 122613
landmine detect., EM scatt., penetrable-PEC objs. 88258
landmine detect., ground radar, HMM 88261
landmine detect. by pulse inductive eddy current meas., high sensitivity 1299
landmines, polarimetric radar interferometry, clutter 88263
Landsat 7 on-orbit geometric calib. and perform. 76951
LOTEM, long-offset transient EM method, mountain areas 122575
mapping, lin. feature enhancement, directional filters 122586
mountain rock, radionuclide distrib. visualisation syst. 121783
moving target, SAR imaging methods, theory 122615
MT method, automatic 1D inversion 122565
MT method, telephone network appl. 98965
nuc. test ban verification, Israel seismic network 88270
num. emulation on simultaneous soil moisture and heat transfer under free ing/thawing conditions *(Chinese)* 76826

ysical techniques continued
l prod., land subsidence, satellite InSAR method 76960
dar meas., model-based inversion of rough soil surface params. 76836
dar refl. from surfaces with ruptures 76967
cks, 3D fractures, microfocus X-ray computer tomography 122604
cks mech. stress monitoring, underground waveguide propag. 133273
cks-minerals, XRD/XRF microanalysis instrum. 87282
AR workshop, Florence, Italy (25-26 Feb. 1998) 78436
tellite image striping noise elimination, wavelet anal. 118313
tellite imagery, panchromatic, small obj. detect. 122622
tellites, LEO, onboard GPS orbit determin. *(Chinese)* 98878
lf-pot. anoms., CW transform 88107
ape reconstruction from moments, theory/algms./appls. 94747
il, moisture/organic matter prediction, NIR sens. 122592
il elec. params. meas. (1 kHz-1 GHz), lumped-cct. methods 122599
il radar sounding, aperture synthesis method 88108
il-vegetation temps., multiangle IR rem. sens. 111411
aceborne aerosol sens., operational rem. sens., directional effects 88120
bsurface radar, EM inversion, distorted Born approx. 111388
bsurface sens. & imaging syst., unified discipline develop. 84167
bsurface targets, time-domain EM induction, algms. 88200
rface temp. retrieval from MODIS data 111396
valbard, glaciers, valleys, fjords, ERS Tandem SAR rem. sens. 122693
EM, SQUID response, repetitive transmitter sigs. 70921
rrain mapping, 2D Doppler microwave radiometer 98963
rrain mapping, image coherence, smoothness membership 122608
rrain mapping, imaging through atmos., model 122609
rrain mapping, IR spectrometry, spectral mixtures 99058
rrain mapping, lin. feature changes, edge-finding 99064
rrain mapping, lin. features extraction 122621
rrain mapping, MERIS-Landsat TM sens. fusion 98962
rrain mapping, microwave tomography, local min. 99063
rrain mapping, multiparameter SAR discrim. 88118
rrain mapping, polarimetric SAR, simulated annealing 122617
rrain mapping, radar, multilayered lossy dielec. 122619
rrain mapping, radar, topographic migration 122568
rrain mapping, radar refl. coeff., scatt. model 122618
rrain mapping, rough surface EM scatt., BMIA-CAG method 88116
rrain mapping, SIR-C/X-SAR, calib., ground truth 88117
rrain mapping, slope-aspect, interpolated data 122606
rrain mapping, spotlight SAR data focusing, 2-step 122616
nderground imaging, shear-horiz. waves, deconvolution method 99097
nexploded ordnance, EM induction discrim., review 88265
nexploded ordnance, EM induction signatures, MTADS array 88264
nexploded ordnance, radar detect., ultrawide-bandwidth 88260
nexploded ordnance, radar polarimetric scatt. 99176
nexploded ordnance, UWB SAR method 88262
nexploded ordnance, wideband freq.-domain EM induction 88266
rban areas, bidirectional refl. model, large-scale 122610
rban scenes, vegetated areas, hyperspectral imagery 98961
egetation, arid zones, airborne hyperspectral discrim. 99059
egetation, climate responses, AVIRIS rem. sens. 98986
egetation canopies, lidar waveform modelling 122611
egetation mapping, 9-11 μm lidar method 122624
egetation opt. depth, microwave polarimetry method 111467
olcano monitoring using GPS, filtering strategies 133275
^{137}Cs specific soil activity profiles, dip γ-detector syst. 122707

hysics
recip., radar rem. sens., neural net class. 76853

hysics computing
see also computerised instrumentation; geophysical signal processing
ACUIM, atmos. correction using imbedded models 76861
erospace images proc., distributed archit. software syst. 94442
Aura project TES instrum., ground data systs./flight operations 133320
BGIS 2000 Ball global imaging syst. for Earth rem. sens. 122553
CERES Aqua instrum. simulator for command and upload validation 122596
ligital terrain modelling & indust. surface metrol., commonalities 113755
Earth's surface, dyn. procs. prediction, multispectral stereoimages 98945
arthquake simul. by CaPaMan robot, expt. validation 98972
oF2 neural network prediction models, degrad. with time 83313
forest fire smoke, AVHRR imagery, neural nets 122607
F commun., ionos. trough effects, neural networks appl. 131088
hyperspectral data anal., mitigation of atmos. effects 76863
yperspectral radiometry simul., SENSOR end-to-end simul. tool 122719
land cover class., nonparametric machine learning 122612
land cover mapping, supervised, ART neural net class. 122613
Landsat 7 on-orbit geometric calib. and perform. 76951
arge-scale parallel wave propag. anal. by GeoFEM 101129
meteorological image archives, query-by-shape 122668
micropulse imaging lidar design, computer simul. 122659
multi ISFET/FIA soil anal. syst. with automatic sample extraction 73608
nuc. test ban verification, Israel seismic network 88270
num. emulation on simultaneous soil moisture and heat transfer under freez-ing/thawing conditions *(Chinese)* 76826
ocean, hyperspectral rem. sens. 99020
pass. rem. chem. vap. monitoring, FTIR spectrometer 99033
precip., radar rem. sens., neural net class. 76853
radar meas., model-based inversion of rough soil surface params. 76836
RAPIDS rem. sens. receiving station,agric. monitoring 122720
rem. sens., satellite data retrievals by neural net 111484
rem. sens. data, parallel fuzzy inference syst. 133370
rem. sens. ground stations, DAQ & archiving syst., real-time proc. 122554
satellite imagery, improved neural network tech. for data dimens. reduction *(French)* 111375
satellite imagery cloud class./temporal updating by neural net 122730
self-calib. prog. mobility spectrometer, atmos. ion meas. 98995
shape reconstruction from moments, theory/algms./appls. 94747
snowcover, microwave radiometry, hydrol. simul. 111456
software tool for seismic data recorder/analyser 76842
soil moisture, microwave brightness temps., neural nets 111448
sonar sig. proc., decision level data fusion *(Chinese)* 131679
spaceborne instrum. radiometric calib., thermal vac. facility 122632
spectral/spatial rem. sens. and inform. content within Vis-SWIR hyperspectral imagery, thin-cloud effects 76864
STEM-II air quality model on distributed memory syst. 133297
Strategy Builder software for atmos. retrievals 133322
surface temp. and emissivity separation, atmos. compensation 76860
Terra's operational subsystems 111313
terrain mapping, polarimetric SAR, simulated annealing 122617

geophysics computing continued
tropos. emission spectrometer ground syst. 133319
Tropospheric Emission Spectrometer, ground data syst. develop. 133321
Tropospheric Emission Spectrometer ground data syst., sci. data visualization 133323
weather forecast telegram understanding, agent-based tech. 119512
weather radar, polariz.-diverse, clutter ident. 111423

geothermal power
European geothermal energy, future prospects 88621
project experience, planning criteria *(Chinese)* 88516
renewable energy policy in Lithuania 77682
resource develop. and planning, Taiwan *(Chinese)* 77685
resources for elec. generation and direct use 99577
supercritical cyclic params. optimisation 77767
utilization in Turkey 123113

geothermal power stations
European geothermal energy, future prospects 88621
solid deposits growth rates 99576
supercritical cyclic params. optimisation 77767

geriatrics
age/sex effects on ECG/cardiac electrophysiological props. in adults 76312
Alzheimer type dementia, daily activity monitoring, actigraph 76304
C-reactive protein serum diagnosis, latex piezoelec. immunoassay 98126
caregivers of people with Alzheimer's disease, factors affecting use of telephone-based intervention 76779
dementia wandering location syst., telemetry, cellular phone & GPS 76774
elderly drivers, respiration and heartbeat meas., unconstrained noninvasive method *(Japanese)* 87306
finger-ring plethysmographic sens., artifact-resistant power-efficient design 98385
functional reach test, elderly subjs., kinematic/dyn. anal. 76220
human action pattern meas. using mag. IR sens. *(Japanese)* 110658
metabolites, normally aged brain, multislice ^{1}H MR spectrosc. imaging 87625
motor output regulation between young/elderly subjs. 110577
optic nerve head, age-related topographical changes, scanning laser tomography 98367
REM/nonREM EEG, computer anal. in young adult/elderly subjs. 121913
retinocortical evoked pot. changes, subjs. aged 75 yrs. or more 110581
senile dementia music therapy, familiar songs method, EEG 76605
telematic homecare and ambulatory care platform for patients and elderly 122458
upper limb five-DOF powered orthosis, design 87917
walking/carrying assistance for in-home elderlies, robot arm 87926

germanate glasses
germano BSG, Na doped, channel planar waveguide fab., direct UV writing 127747
germanosilicate glass fibers, H-loaded, O deficient centers, photosensitivity 127648
Raman fiber lasers and amps., opt. fiber commun. systs. appls. 128169
Er:GeO_2-SiO_2 integrated planar waveguide laser array, design/fab. 117172
Er^{3+}:Na_2O·$Ca_3Al_2Ge_3O_{12}$ glasses, opt. transits., freq. upconversion 71986
F-codoped GeO_2/P_2O_5 single-mode fibers, MCVD proc., laser ultramicroscope meas. 104630
Ge-As-S syst., electron-beam irrad., second order NLO effect *(Chinese)* 93827
GeO_2-B_2O_3 co-doped core silica fiber long period grating temp. sensitivity, compositional depend. 127644
GeO_2-SiO_2 asymmetric Mach-Zehnder channel waveguide interferometers, quantum cryptography systs. 82155
GeO_2-SiO_2 glass, large second-order opt. nonlin. 128523
GeO_2-SiO_2 opt. waveguide, thermal poling, core-cladding interface effect 116667
GeO_2-SiO_2 thin film, photon-induced vol. expansion, Bragg grating prep. 127554
La_2O_3-B_2O_3-GeO_2 transparent surface crystallized glasses with stillwellite-type $LaBGeO_5$, SHG 71989
SrO-BaO-Nb_2O_5-GeO_2 tungsten-bronze glass-ceramics, crystn., dielec. props. 90562
Yb/Al-doped germanosilicate planar waveguide lasers, internal UV-written Bragg gratings 117173

germanium radiation detectors
AGATA, γ-ray tracking detectors develop. 132469
Blue database, high-fold γ-ray coincidence data 87269
collimatorless gamma ray imaging with help of gamma-ray tracking 132351
Compton camera for multi-tracer imaging, segmented Ge detectors 122207
Compton camera for multitracer imaging, Monte Carlo simul. 111012
Compton-suppressed telescope detector, low-energy gamma-ray spectrometry 98086
EDELWEISS WIMP dark matter search using cryogenic Ge detector 110289
EUROMET Ge γ-ray spectrometry efficiency transfer software compar. 121764
EXOGAM array for closed shell phys. 110442
ext. source γ-ray spectrom., efficiency curves, HPGe/Monte Carlo compar. 132299
fast neutron sensitivity, digital pulse-shape discrim. 98046
gamma detector array, liq. N_2 automatic filling syst. 110312
gamma spectrometer, high resol./energy, perform. test using laser Compton photons, MC comparis. 121777
γ-γ coincidence meas., human counter appl., Ge detectors *(Japanese)* 133146
gamma-ray spectrosc., cascade summing correction, generic detector charactn. templates 98084
gamma-ray tracking algms., DSP 121861
gas monitor with built-in Ge detector, detect. efficiency curve 87276
GENIUS facility for non-accelerator particle phys. 97982
high resoln. Compton telescopes, perform. charact. 132488
high-energy gamma-ray response, detectors modeling 98027
high-fold segmented Ge detectors as gamma-ray tracking arrays 76017
high-purity, ang. response to gamma-rays in situ meas. 76122
high-purity, full energy peak efficiency, Monte Carlo method 76124
high-purity, low-energy spectrometry, shielding, ^{210}Pb determ. in air filter 76126
high-purity Ge detectors, gamma-ray spectrometry efficiency curve, semi-empirical formula 110384
HPGe coaxial detectors, specs. 98026
HPGe detector cooled by Stirling cycle cryostat, SELENE lunar mission, gamma ray spectrometer 121775
HPGe detector efficiency calib. for environ. sample anal. 132298
HPGe detectors, highly segmented, pulse shape simul./anal., MARS γ-ray tracking array 87209
HPGe detectors, segmented, efficiency, design criteria for pulse shape anal. 110323
HPGe detectors, X-ray response near K-absorpt. edge 110298
HPGe γ-ray detectors, efficiency, design criteria for pulse shape anal. 121785

germanium radiation detectors continued
HPGe large-vol. segmented detectors, multiple pulses, 3D localiz. alg. 121624
HPGe segmented Clover γ-ray detector, rel. energies, review 110311
in situ meas., facilitating calib. of HPGe detectors 99041
Infrared Space Observatory, LWS doped Ge photo-detectors 120818
microstrip detector for posn. sensitive X-ray spectrosc. 121776
microstrip detector for posn.-sensitive X-ray spectrosc. 132385
MINIBALL Ge detector array for RIB facilities 76016
peak efficiency curve shape for prompt gamma NAA 97984
relative/absol. efficiencies, gamma-ray spectrom. appl. 98025
segmented, drip line nuclei studies at Center for Nuclear Study, Tokyo 132431
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
source peak efficiency, disk/vol. integrat. *(Japanese)* 121612
SPI, Spectrometer for INTEGRAL, characts. 76191
SPI coded-mask γ-ray spectrometer, imaging test setup 132386
strip detectors develop. for environ. remediation 121487
thermal particle detectors, neutrinoless double β decay expt., review 87222
twin Ge detector develop. and perform. 121424
well-type HPGe detectors efficiency computation, anal. formulae 97969
WIMP dark matter searches. detectors 132315
^{60}Co, whole body counting, in-vivo monitoring intercomparison 87985
^{137}Cs, whole body counting, in-vivo monitoring intercomparison 87985
Ge:Ga stressed detectors, compact 2D array for IR astron. 120821
HPGe, thirty-two-fold segmented detector, γ-ray detect. 110287

gesture recognition
3-D arm movements recogn., fuzzy rule-based approach 87923
3D head/hands tracking in real time by EM algm. 107197
act. contours tracking, facial features appl. 95503
articulated HBM, hierarchical 3D pose estim. 84333
articulated human models, real-time tracking, 3D shape-from-silhouette method 86669
at. gesture component, unsupervised learning, auto clustering, min. description length 106664
blinking commun./control channel for disabled people, image proc. 87930
body parts tracking of multiple people, new approach 95598
capturing natural hand articulation 106629
computer-vision-based HCI with back projection wall using arm gestures 129531
continuous dyn. prog. method *(Japanese)* 107144
dyn. hand gesture recogn., randomized self-organizing map algm. 73204
EMG-based sig. proc. syst. for human arm gesture interp. 121927
hand gesture contours, automated class. for gesture-based interact. and commun. 73127
hand gesture recogn., vision-based, self-reliance smoothness 73539
hand modeling/anal./recogn. 73477
hand shape extraction and understanding by multiple cues fusion technol. 73540
head gesture recogn. algm. 73536
head pose estim. with Gabor wavelet networks 129611
HMM-based visual speech recogn., normalized training 94435
human posture estim. based on stat. motion models *(Japanese)* 107146
human-friendly group conversation robot, multi-modal interface *(Japanese)* 84519
interferometric EM-sens. for speech articulator/user gesture meas. 120763
Japanese Sign Language, non-manual inform. recogn. 73554
lip contour extraction using deformable model 95502
machine vision, conf., Bristol, UK (Sept. 2000) 124239
McGurk effect from single and mixed speaker stimuli 94417
multilinear models for facial emotion proc. using math. model 76475
real-time teleconferencing, fast hand gesture recogn., stereo act. vision interface 108383
reconition, anal., and tracking, real time systs., conf., Vancouver, BC, Canada (Jul. 2001) 100409
robust shape tracking in cluttered background 95542
sign lang. recogn. and lip motion via parallel multistream model 73555
SignStream, tool for linguistic and computer vision research on visual-gestural lang. data 129549
speech recogn. with 3D lip movement recogn. 118125
Virtual Mouse, inputting device by hand gesture tracking and recogn. 73538
walking pers. gesture recogn. by reduced range image seq. 73537

gettering *see getters*

getters
see also electron tube manufacture; vacuum techniques
300 mm CZ wafers, intrinsic gettering 69775
DRAM cells, 0.18 μm, enhanced retention time by fast-pull/fast-cool ingot growth, thermal budget 125474
electron beam technol., conf., Varna, Bulgaria (Jun. 2000) 89516
FED, nonevaporable getter, CW IR laser activation 69420
FED panel syst. buildup, phosphor ageing effect 97740
low-thermal-budget CMOS proc. simul., Si substr. gettering efficiencies 70000
MEMS packaging/assembly issues 116057
MEMS/MOEMS packaging, getters as dual-purpose moisture-particle scavengers 70328
multi-Si struct., gettering treatments, planar homog. increase 126413
SIMOX, BOX synthesis, C enhance. of SiO_2 nucleation, simul./SIMS profiling 91985
small electron tubes, low residual press. meas., outgassing rate 69379
SOI wafers, thermally oxidized bonded, cryst. surface defect, oxygen gettering 91907
string ribbon Si solar cells, PECVD SiN_x induced hydrogen passiv. 100056
ULSI device isolation struct., metal impurities behaviour 81107
Si EFG multicrystalline solar cells, lifetime enhancement 100054
p/p-Si epitaxial wafers, O precip., Cu/Ni gettering efficiencies 102972
Si, lateral gettering of Fe and Pt by cavities induced by He implant. 81007
Si n-web screen-printed front-surface-field solar cells, gettering, passiv. 134389
Si proc., PIII 81002
Si solar cells, problems of develop. & mfg., review 89276
mc-Si solar cells, single furnace-step proc., Al and P gettering 100091
Si, string ribbon, Al-enhanced PECVD SiN_x induced H passiv. 69917
Si, transit. metal impurities gettering simulator 92267
mc-Si wafers prod., impurity gettering by indust. phosphorus diffusion 91599
Si:Al polycryst., extended high temp. Al gettering, elec. props. 126261
Si:B, laser thermal processed, annealing, B diffusion 115480
Si:BF_2^+ doping charact., implant-induced defect sites, sheet resist. 103259
Si:B,He, B-cavity gettering, He implant.-induced 126323
Si:C ion-implanted epitaxial wafers, heavy metals gettering efficiency, TXRF obs. 69788
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si:Cu, diffusion rel. to gettering, silicide retardation effects 125996
Si:Cu,He, metal gettering, He implant.-induced 80980

getters continued
Si:Fe(Cu), gettering by disloc., cavities 80970
Si:H, ion implant., nanocavity form. and defect interacts. 80657
Si:H,N,O,Ni CZ wafers, intrinsic gettering, minority carrier lifetime 91930
Si:H,Ni/SiO_2 SIMOX, H-implant.-induced nanocavities, Ni gettering 115529
Si:N wafers, 300 mm, cryst. growth, grown-in defects 101157
Si:P(Ge)(As)(Si), impurity proximity gettering, trans-projected-range eff 91957
SiC epilayers, defect characterisation, scanning PL spectrosc. 69586
Ta getter, tungsten halogen lamps, lifetime extension *(Japanese)* 124060

GFRP *see glass fibre reinforced plastics*

GFSK *see frequency shift keying*

ghost images, television *see television interference*

giant magnetoresistance
see also colossal magnetoresistance; spin valves
angle detect. & rot. speed sens., robust, automotive appl. 75469
carrier-type mag. field sens., HF, carrier suppressing cct. 120778
carrier-type thin-film mag. field sens., high freq., sensitivity 120782
conf., Phys. props. of mag. materials, Poznan, Poland (June 2000) 89545
dil. mag. semiconds. in spin-polarized electronics 80684
DNA array sens., mag. microbeads & GMR magnetoelectronic detect. 7566
drive-level instabilities correl. to quasi-static field testing 116415
dual-synthetic head, current dens. and stripe height 116421
eddy current sens. using GMR/spin-depend. tunneling-based solid-state se 90607
eddy-current testing, GMR based sens., (sub)surface crack detect. 125144
exchange anisotropy, interlayer exchange coupling, sens., overview 70514
exchange tab stabilized readback transducers for areal densities exceeding Gb/in^2 116430
exchange-coupled mag. syst., hysteretic behaviour simul., local optim. 8188
ferrimag./Cu/ferrimag. films, pos. GMR 81845
glass/Ta/NiFe/MnIr/CoFe/Ta bottom-pinned spin valves, exchange enhanceme 81836
granular systs., nanostruct., GMR props. 127325
head/hard disk thermal asperities, test method 92814
heads, charging damage, rel. to wafer charging in proc. equipt. 81906
heads, mag./mech. spacing, thermal behavior 92815
hybrid ferromagnet/semicond. devices, GMR induced by mag. barriers 1164
ion beam deposited spin-valve films, GMR with specular enhanc. 81837
mag. alloys and multilayered films, prep. by face-to-face sputtering tec *(English)* 79216
mag. head mfg., DUV litho. challenges 92808
mag. RAM, recent trends and technol. issues *(Japanese)* 81917
mag. RAM technol., GMR/tunneling magnetoresist.-based, status/future pro pects 90907
mag. storage technol., applied surface anal., review 104526
micro-size mag. strip for GHz carrier type mag. field sens. 120775
MR/GMR-based mag. heads, ultra-high dens., constr./technol. 127373
nanotechnology for microsystems appls. 92491
non-collinear perp. spin valves, distributed spin transport 127355
nonvolatile magnetoelectronics, sens., GMR, spin control 116485
nonvolatile reprog. logic elements, hybrid RTD-GMR ccts. 103928
novel mag. structs. and appls., symp., San Sebastian, Spain (Sep. 2000) 784
Permalloy based mag. thin film multilayers, magnetoresist. and mag. prop 116288
Permalloy thin films, GMR read head, electromigration-induced failure 1045
perp. and long. mag. recording using contact write/read tester 116396
pseudo-spin-valve device perform. for GMR RAM appl. 116493
radiation hardened memory develop. at Honeywell 125503
RAM, NVM technol. 70559
recording head, double layered perp. medium 116344
recording head, ESD sensitivity 116425
recording head, readback pulse shape model 116321
reinforced concrete stress meas., GMR & eddy current sens. 68477
robust GMR multilayers, charact. improvements by toppings 116492
robust sens. for automotive appls. 113113
sandwich sens. elements, ultralow hysteresis & self-biasing 120772
sens., pass. wireless design 86478
sens., read head transfer curve, soft error rate 116345
sens., self-heating, temp. profile 116422
sens., track width defn., ion irrad. effects 116489
sens. for contactless posn. detect., automotive appl. 75467
shape anisotropy 127399
shielded GMR read heads, demagnetization field, micromagnetic simul. 8189
soft mag. wires, prep./mag. props./appls., overview 81794
spin valve, N-ion implanted, temp. depend. of GMR profiles 127354
spin valve bridge sens. for current meas. & control 109508
spin valve films grown on oxide surfaces, phys. props. 81844
spin valve GMR heads, resist. as mag. perform. indicator 116426
spin valve multilayers, magnetoresist., planar Hall effect 81839
spin valve multilayers, two-step sputter deposition, GMR effect *(Chines* 104514
spin valve struct., anisotropic magnetoresist. effect 116490
spin valves, at. engng. using Ag as surfactant 81856
spin valves, band-struct. calcs. of specular refl. 81842
spin valves, growth, surface/interface effects, UH-dens. data-storage app 104522
spin-barrier galvanic isolations, spin transistors *(Russian)* 81532
spin-valve transistor, magnetocurrent temp. depend., phenomenological mod 104549
supercond.-mag. hybrid magnetometers 75416
thin film mag. sens., automotive appls. 75466
thin film multilayers, conf., Mumbai, India (Oct. 1999) 89573
tunneling MR heads, LEEN 104516
vert. head sens., exchange coupling, edge pinning 116417
wafer-level GMR head proc., EOS indicators, floating gate EEPROM app 81907
Ag:In/NiFe/Nb(Si) GMR spin valve, In contamination/Nb contact effect o struct. 127400
Ag/Co granular multilayer, GMR, 2D mag. field sens. fab. 70515
AuFe mag. multilayer, GMR, induced anisotropy, ion beam mixing *(Chinese* 116296
Co/Cu spin valves electrodeposited on Si 127356
Co/Cu/Co GMR spin valves, growth, structural effects 116295
Co/Cu/Co pillar-shaped trilayers, spin-polarized current induced switchin 70507
Co/Cu/Co sandwiches, Fe(Ti)(Cu) capping layers, GMR obs. *(Chinese)* 7050
Co/Cu/Co stack, antiferromag. coupled, thermal stabil., GMR 81866
Co/Cu/Ta/CoPt submicron GMR sens., self-biased, high temp. oper. 120774

t magnetoresistance continued
Co/Ta-pinned spin valves, thermal stabil. 81849
CoCrPtX media/narrow shield spin-valve GMR head syst., ultra-high-dens. long. recording *(Japanese)* 92839
CoFe spin-filter spin-valve GMR head, GMR ratio & controllable bias *(Japanese)* 92807
CoFe ultrathin free layer, spin-filter spin-valve films 70501
CoFe/Ir/CoFe artificial antiferromag. sandwich as hard mag. layer in hard-soft GMR sens. 116491
CoFe-based spin valves, giant magnetoresist., nano-oxide layers effects 81840
CoFeB-based specular spin valve films, CPP struct., giant magnetoresist. props. 81878
CoFeSiB ring shaped amorph. wires, GMI, mag. sens. 75486
$(Co_{68.25}Fe_{4.5}Si_{12.25}B_{15}$ wires/ribbons, GMI 81813
$Co_{68.5}Mn_{6.5}Si_{10}B_{15}$ amorph. microwire magnetoelastic GMI sens. 75480
Cu interlayer coupling reduct. in bottom synthetic spin valves 81852
Cu spin valve with single/double specular oxide layers, mag./elec. props. 81838
Cu-wedge spin valves, temp. depend. specular scatt. enhancement 81843
Fe/Cr GMR sens. for mK range, temp. independ. sensitivity 75485
Fe/Cr superlattice based GMR mag. field sens., NDT appl. 75472
FeCoNi/CuBe, sensitive nonlin. GMI effect 127352
FeMn-based spin valves, giant magnetoresist., nano-oxide layers effects 81841
$Fe_{20}Ni_{80}$, permalloy strip, magnetoimpedance elements, mag. struct., SQUID microscopy 75825
α-Fe_2O_3 antiferromag. layer, bottom giant MR spin valves 81923
γ-Fe_2O_3 bottom GMR spin-valves, MRAM & transpinnor charact. 116496
FeSiB/Cu/FeSiB multilayers, giant magneto-impedance *(Chinese)* 127350
GaAs:Mn, with nanoscale mag. clusters, photo-enhanced magnetoresist. effect 80696
IrMn exchange-biased double tunnel jns., bias voltage & interdiffusion 116298
IrMn/Cu/CoFe/Co(CoFe)(NiFe) spin-valves, high temp. magnetoresist. 104513
IrMn-CoFe O-enhanced spin valves, GMR enhanc. 81918
$La_{1-x}MnO_3$ GMR mag. field sens., fab., HTSC tape testing 75470
Ni film, magnetoelastic SAW atten. & magnetoresist., annealing 127318
NiFe/CoFe MRAM switching, ion beam milling param. influence 116495
NiFe/Cu/NiFe/NiO micron-width wire, dipole interact., exchange anisotropy 81835
Pt/NiFe/Au/Co/Au spin-valve transistor fab., miniaturisation, SOI wafer 70562
PtMn based synthetic spin valves using thin oxide layer, thermal stabil. 81870
Si/SiO_2/Ta/$Ni_{80}Fe_{20}$/CoFe/Cu/CoFe/IrMn/Ta spin valves, annealing study 81851
Si(100)/Ru/Co/Ru/Co/Cu/Co/Ru spin valves, biquadratic coupling, GMR 81865
Ta/Cu/$Ni_{79}Fe_{21}$/Cu/Ta film, induced uniaxial mag. anisotropy and film magnetostriction 127345
t pulsations (Earth) *see micropulsations*
see gas insulated substations; gas insulated switchgear
(information systems) *see geographic information systems*
iology
Antarctic ice borehole probe 122601
Antarctic ice sheet bal. vels., gridded datasets, 3D modelling 109279
Antarctic ice surfaces, surface elevation radar mapping 111438
David Glacier-Drygalski Ice Tongue, E Antarctica, bottom morph. 109278
dust logging, rapid opt. method 76914
Greenland ice sheet, airborne SAR interferometry, topography, penetration 86203
Greenland ice sheet, melt duration, season and melt extent determ. 133337
ice flow in NE Greenland ice stream, satellite-based SAR interferometry 109281
Jakobshavn Isbrae, Greenland, ice surfaces, radar obs. 111437
Larsen Ice Shelf, N, Antarctic, deform. pattern, radar meas. 111443
radar, ice surface types, SAR imaging 111437
snow/ice interferometric SAR sigs. penetration depth 133338
Svalbard, glaciers, valleys, fjords, ERS Tandem SAR rem. sens. 122693
s
for semiconductor glasses see "amorphous semiconductors" and "chalcogenide glasses"
see also aluminosilicate glasses; amorphous semiconductors; borate glasses; chalcogenide glasses; germanate glasses; glass ceramics; glass fibres; glass industry; glass-metal seals; halide glasses; optical glass; phosphate glasses; phosphosilicate glasses; semiconductor doped glasses; vitreous state; vitrification
275 kV AC glass insulator strings, light nonuniform pollution, flashover 123042
abrasive jet machining device, precision etching 116109
AMLCD glass substr. cutting, scribe-wheel dimens. effect 109857
annealed Corning code 1737 glass for TFT-LCD, thermal shrinkage 97600
bioanal. microchips, powder blasting, electro-osmotic flow 109726
building materials, transparent/reflective/absorbing props. expts. 114454
ceramic green sheet, micro-via proc., Nd:YAG laser ablation *(Japanese)* 83061
CMP slurry-induced metallic contaminations elimination, post-CMP cleaning proc. 103435
constrained sintering of glass/glass-ceramic/ceramic coatings on metal substrs. 101482
CRT bulb, tempered panel glass, impact strength 80619
displays develop., glass as crit. material 86798
electrostatic printing-based mfg. procs. for electronics industries 101462
float glass thickness meas., on-line DOE sens. meas. 124402
hermetic glass-Si MEMS package form. using localized Al/Si-glass bonding 113558
high dens. plasma fluorinated silicate glass deposition, plasma-induced charging damage 103232
HV glass/porcelain outdoor insulators contamination, breakdown strength *(German)* 133767
hybrid sol-gel coloured coatings, prep., proc. and props., glass design appls. 104876
Kovar-Pyrex anodically bonded samples, charact., packaging approach for MEMS devices 104164
LCD glass substrs. with different barrier layers, Na exchange 132104
mesoscopically disordered systs., local coherence, time developing 2nd harmonic emission 93822
methylsilane/trimethylsilane-doped low k PECVD organosilicate glasses, elec. props. 104233
micro-systs. technol. prod. techs., glass solder micro-appl. *(German, English)* 116108
microspheres, adhesion based micromanipulation, contact geom. *(French)* 70346
Mikroglas microstruct. glass components for microreaction technol. 114467
MMIC design using glass technol. 69246
multifunctional nanocomposites chem. and proc. for photonic appls. 68423
needle/dielec. composite electrode systs., pulse discharge charact. 115235
organic ion-implanted low-k organic SOG films, IC appls. 126466
organosilica glass films, low-k, O plasma resist. 92050

glass continued
photosensitive glass wafer microchip fabr. and thermal lens microscopy appl. 121260
RTV silicone rubber coatings modelling on glass/porcelain insulators 88464
silicate glass, F(C) doped, low dielec. const. CVD oxides, phys./elec. charactn. 102767
silicate glass film, LPCVD, bis(tertiary-butylamino)silane precursor 124896
soda-lime glass, Cu^+-Na^+ ion exchange channel waveguides, light propag. 93138
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
SU-8 proc. on substrs., wettability, adhesion, surface tension 102965
substr., poly-Si films, epitaxial thickening, Al-induced crystallisation 90546
substr., rapid cooling dual slot load locks for LCD 109854
substrs., a-Si:H thin films, VHF-PECVD, U shaped loop antenna electrode 103074
surface nanostructuring, laser pulses, field enhancement effects 83053
surface wave profile meas. using shadow image proc. *(Japanese)* 132154
transparent dielec. material for PDP front-panel, props. 97610
TV tubes, high surface compression glass 131735
two-layer struct. delamination/void/moisture detect., temporal microwave NDE 101576
wet chem. functional coatings for automotive glasses and CRTs 101425
Al dual-damascene interconnect via electromigration lifetime, soft low-k organic SOG ILDs 92117
AlGaAs-GaAs all-glass terrestrial concentrator modules, develop. progress 112935
CaF_2/glass substr., μc-Si solar cells, plasma CVD 112882
GaInP-GaInAs all-glass terrestrial concentrator modules, develop. progress 112935
Si EBEP-CVD on quartz, migration of Al enhanced cryst. growth proc. from quartz to glass 90434
Si cryst. thin-film solar cells prep. using laser crystn. 100086
Si/glass anodic bonding, O plasma treatment effect 69856
Si-glass MEMS micropackages, corros. resist., B doping/self-induced galvanic bias 78677
Si-glass interface, anodic bonding, chem. anal. 115474
Si-glass wafers, laser locally selective bonding 128618
SiO_2, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
SiO_2:Ag(Cu)(Au)(Er), opt. response, ion implanted nanoparticles, review 116552
SiO_2:F glass films, prep., struct., IC appl. 114345
SiO_2:Ge glass, photonic materials, second-order nonlin., UV-poling, Ge-E′ centers 71206
SiO_2:N planar waveguides, refr. index change, birefr. 127745
SnO_2 coated, TiO_2 incorp. zeolite thin films for solar cells 89294
TeO_2 based glass, NLO atten. at 1.3-1.5μm 93846
WO_3-Sb_2O_3-TeO_2 glass, elec. cond., O_2 sens. props. 97457

glass ceramics
AC PDP barrier-rib form., blade-deforming proc. 109899
constrained sintering of glass/glass-ceramic/ceramic coatings on metal substrs. 101482
embedded struct. form. in photostructurable glass-ceramics, UV direct-write micromachining 104229
laser radiation controlling elements, EO sensitivity 128479
LTCC tape systs., chem./structural/mech. props. 79434
micro-systs. technol. prod. techs., glass solder micro-appl. *(German, English)* 116108
multilayer devices, green tape lamination 115206
oxyfluoride:Er vitroceramics, upconversion, Raman/XRD studies 116920
oxyfluoride:Tm vitroceramics/glasses, opt. props., display apl. 116919
oxyfluoride vitroceramics material, Er^{3+} ion up-conversion luminesc. enhancement 117479
SOFC stack aluminosilicate glass ceramics sealant studies 99979
$(As_2Se_3)_{20}(SbSI)_{80}$, elec. cond., temp./freq. effect 103064
B_2O_3-P_2O_5-MgO-Al_2O_3-SiO_2 low firing temp. glass-ceramics, HF multilayer chip inductors appl. 101509
CaO-B_2O_3-SiO_2 recrystallizing glass-ceramic, stress testing for HF electronic packaging 67553
Co-doped transparent glass ceramic saturable absorber for Er:glass Q-switched lasers 117165
Er,Yb:oxyfluoride glass ceramics, direct upconversion sensitization luminesc. *(Chinese)* 128491
La_2O_3-B_2O_3-GeO_2 transparent surface crystallized glasses with stillwellite-type $LaBGeO_5$, SHG 71989
$Li_2B_4O_7$-$SrBi_2Ta_2O_9$ glass ceramic, NLO and ferroelec. behavior 82024
$NaNbO_3$ crystallite containing BSG glass-ceramic, opt. limiting behavior 93775
PZT-SiO_2-B_2O_3 sol-gel derived ferroelec. glass-ceramic thin films, RTA, props. 125020
SnO_2:Sb coated Neoceram-0 glass-ceramic transparent furnace made of heat mirror 104879
SrO-BaO-Nb_2O_5-GeO_2 tungsten-bronze glass-ceramics, crystn., dielec. props. 90562
ZrF_4-LaF_3-AlF_3-GaF_3-ErF_3 glasses, devitrification, nucleation/spinodal decomp. 90582

glass fibre reinforced composites
see also glass fibre reinforced plastics
HDI PCB organic laminate substrs., microstructural anal. 113590
insulator rods brittle fracture mechanisms assess. 133763
interlayer-toughened fiber-reinforced composites, interlaminar fracture testing anal. 79494
PCB composites, fiber glass reinforcements 125098
polymer/thermoplastic chalcogenide glass composites, phys./opt. props. 82041
R-Ba-Cu-O HTSC (R=rare earth), resin impregnation, mech. props. 81941

glass fibre reinforced plastics
ATLAS central supercond. solenoid magnet support, mech. charact. 75958
cryostat, Bi-2223 HTS 10 kVA power transformer, double pancake windings *(Korean)* 123544
double lap shear specimens, static/dyn. scaling expts. 79473
elastic moduli, Lamb wave vel., contactless method 114489
epoxy/glass fiber composites, surface hydrophobicity, thermal treatment *(Korean)* 116186
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
Kapton/R-glass-fiber laminate ITER coil insulation, neutron irrad., dielec. strength 81727
plate NDT, Lamb & SH waves, air-coupled US transducers 90601
PWB, small diam. drilling damage estim., picture proc. *(Japanese)* 102829
pyramidal microwave absorbers for outdoor use 72291
short glass fiber-reinforced polycarbonate notched plates, luminance measuring tech. *(Japanese)* 79476
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90602

glass fibre reinforced plastics continued
Terfenol-D tagged GFRP, NDE, SQUID magnetis. meas. 114529
thermochemical responses of sandwich panels to fire, math. model 114181
woven composite laminates, delamination detect. with embedded opt. fibers 101617
glass fibres
see also glass fibre reinforced composites; glass fibre reinforced plastics; optical fibres
high speed fibre optic cables, transm. capacity *(German)* 131375
leaded glass polycapillary fiber optics, med. imaging scatter rejection 98557
rem. opt. fiber radiation dosimetry, review 133139
single-coated opt. fibres, thermally/mech. induced microbending losses 127689
tightly jacketed double-coated opt. fibers, axial strain/thermal loading/hydrostatic press. 127712
P_2O_5-SiO_2 fiber, SRS & FWM 117422
glass formation *see vitrification*
glass industry
curved dielec. obj., automated spot-by-spot microwave inspection 78697
facilities shutdown proc. due to network disturbances 134699
glass-metal seals
see also electron tube manufacture
Cu_2O-Cu interface, lamps, glass sealing, Dumet, slow leak-detect. method *(Japanese)* 124067
glasses *see glass*
glassy state *see vitreous state*
Global Navigation Satellite system *see satellite navigation*
Global Orbiting Navigation Satellite System *see satellite navigation*
Global Positioning System
400 kV underground power cable GPS TW fault locator 77660
absol. positioning, noniterative algm. 75250
ad hoc networks, on-demand location aware multicast protocol 85059
adaptive filtering of continuous GPS results, tectonic/fault movements 120476
aerial photogrammetry, GPS appl., NAVSTAR constellation *(Spanish)* 88192
airborne GMTI radar posn. bias estim. 97021
airborne IR imaging, rectification, GPS and INS *(Chinese)* 120912
airborne mapping, GPS/INS/CCD syst., hardware-software integrat. 122623
AIRBUS, MLS all-weather landing syst. *(French)* 88086
ANN as GPS meas. error simulator *(Chinese)* 85921
astron. telescope, balloon-borne, GPS pointing method *(Chinese)* 88027
ATC, nonprecision instrum. approach procedure with vert. guidance 86259
atm. low elevation angle radio wave bending angles determ. 76891
atm. water vap. estim. from GPS data 111430
atmos. effects on SAR interferograms, calib. by GPS/local atmos. models 111431
attitude determ., Euler angle dilution of precision 120488
attitude determ. GPS receiver integrated with dead reckoning *(Korean)* 109324
attitude sens. by GPS antenna on turntable 75252
automatic vehicle location for transit operation 109331
automotive sector positioning technols. 120491
AUV, small, integrated GPS/INS 131691
availability of GPS, fast calc. using satellite rise and fall time *(Japanese)* 97026
battlefield IS, satellite tools 99127
beacon sigs. 119905
BiCMOS highly lin. down-conversion mixer with MCM pass. for GPS appls. 69215
Bleustein-Gulyaev-Shimizu/shear horiz. SAW resonator filters using edge refls. 92711
broadband wireless networks, dyn. guard bandwidth scheme 120019
captive-carry HIL missile simulator, relative targeting archits. 122764
car-like vehicles, enhanced localization, ABS sens. and GPS data fusion 97836
carrier phase ambiguity, geom. constraints *(Chinese)* 97014
carrier phase meas. for freq. sync., fuzzy & PD control 86378
carrier phase meas. method based on data transit. detect. 97035
CDMA, single-chip prog. transceiver PRG code 74523
cellular commun. for different types of vehicle motion, teletraffic charact. 74648
cellular handset, GPS receiver 96486
cellular radio, connection admission control, path/location use 85872
cellular radio positioning systs. in urban environ. 131134
CloudSat/Picasso-Cena, form. flying strategy 122501
CMOS LNA plus mixer, GPS appls. 70295
coastal buoy-based GPS receiver, absol. precipitable water estim. 133291
CPCC's Mojave cement plant, GPS surveying 85938
CPUs, 32 bit design for handheld consumer electronic product appls. 90942
current differential protection, GPS based, SDH ring commun. networks 99400
DCS/GPS compact dual-band microstrip patch antenna 94130
dementia wandering location syst., telemetry, cellular phone & GPS 76774
DGPS, accuracy improvement, Kalman filtering 120101
DGPS, approx. nonlin. filtering appl. 74896
DGPS and maritime operations 120492
DGPS corrections use with low power GPS receivers 131696
DGPS derived posns., datum shift effects, Egypt 96621
digital code acquisition cct., direct IF sampling *(Chinese)* 97015
digital terrain elevation data/GPS/radar altimeter for aircraft flight safety, in-flight error detect. 98911
dilution of precision calc. with and without altimeter aiding 86258
DS/SS digital proc., multiplier-free zero-IF downconversion/decimation/multiplexed despreading 74897
dual freq. bi-orthogonally polarized antenna, design 105866
electronic road pricing vehicles, GPS based IPS, multisens. fusion 124007
EM wave propag., Sagnac effect 105756
end-to-end relay testing using GPS-synchronized secondary injection 77485
ETS-VII rendezvous docking, relative GPS navig. *(Japanese)* 86262
Europe ionos., total electron content spec. and GPS 88143
F/A-18 autoland trials for aircraft carrier operations, test results 133263
fast-fading GPS multipath bias charact., validation 131698
form. flying, stochastic modeling based DGPS estim. algm. 85931
France, future of air navig. *(French)* 88085
Galileo/GPS combined navig. syst., pot. perform. levels 86256
geodetic positioning accuracy, boundary layer propag. effects 88122
geolocation and assisted GPS 74875
geophys. appls., conf., Tsukuba, Japan (Oct 1999) 113270
German GPS network, real-time water vapour estim. 111427
GPS/INS integrated navig. syst., fault detect. method *(Chinese)* 76804
GPS/MET bending angle obs., optimal estim. inverse method appl. 122679
ground/obj. movement detect. using GPS in hydroplant environment *(Serbian)* 88633
hand-held receiver for pedestrian walking dist. meas. 132158
Heilongjiang power syst., east part area stabil. control syst. *(Chinese)* 111917
Global Positioning System continued
homing pigeon flight track meas. by GPS 86255
horiz. GPS positioning accuracy meas. during 1999 solar eclipse 86260
Hyperion robotics project, sun-sync. navig. 131970
i-mode car navig. syst. with small GPS appliance, overview *(Japanese)* 13
IF receiver, multichannel digital filtering, GPS/GLONASS satellite navig. *(man)* 120479
IFSAR for rapid terrain visualization demons. 111628
Indian air navig. WAAS, ionos. grid point value estim. 75248
Inmarsat D+ terminal develop. 77036
INMARSAT-C and GPS L-band shaped beam quadrifilar helix antenna 7
INS errors estim. using GPS meas. 131699
INS vs. carrier-phase DGPS for off-road vehicles control attitude determ., parison 97027
INS/GPS integrated syst., using accumulated errors to realize closed-loop re cation *(Chinese)* 131710
integer ambiguity resoln. by particle filtering 131714
integrated navig. systs., interval and fuzzy tech. appl. 130084
interact. multiple model estim., enhanced accuracy GPS 131713
ION-F, Ionospheric Observation Nanosatellite Formation, flight software, nc simul. 122502
IS-95 cellular CDMA location, assisted forward link triangulation proof-of- cept interim results 120493
IVHS, global vehicle location syst., GPS/cellular telephones 131690
LADGPS, spatial limits increase using stratos. platforms 86257
large unmanned vehicles, GSP-based fuzzy supervised path tracking 120090
LIGO arms, precision alignment using dual-freq. DGPS 97018
local network/microwave ground-based radiometer for precipitable water va assess. 83276
location services, enhancement of pers. safety and stimulation of business op tunities 108783
location systs. for ubiquitous computing 109317
low profile inclination sens. *(Japanese)* 131925
lunar probe, close earth orbit, GPS navig. *(Chinese)* 97013
meteor., GPS occultation method, grazing points *(Chinese)* 98979
mobile ad hoc network, GPS/ant-like routing algm. 85887
mobile ad hoc networks, GPS/ant-like routing algm. 119433
mobile ad hoc networks, location aware dependable multicast 108801
mobile broadcast geostationary satellite, urban shielding charact. meas. 83
mobile obj. geographic posn. recorder, GPS/microcontroller-based *(Po* 131692
mobile robot outdoor navig. syst., GPS and inertial platform 108976
mobile satellite service handset transmitters, emissions control techs. 8341
mobile terminals localization, hybrid satellite/network method 96441
modeling and simul. in GPS *(Chinese)* 74868
multiband terminal/base-station antennas for mobile commun. 83711
multifunctional monopole antenna array for terrestrial and satellite radio ap 83768
multimode multiservice software radio, adaptive sym. timing sync. 10888
multipath delay estim. in GPS receivers 108997
multipath mitigating GPS receiver archits., perform. comparison 131697
multisensor augmented vehicle navig. syst., develop. and test 86261
Naviewn, PDA-based GPS 75246
nighttime ionos. 2D struct., GPS occultation/dens. gradient method 13330
occultation atmos. sounding, temp/humidity struct. 122666
optimum GPS satellite selection using recursive method 97022
orbit determ. for GOCE LEO mission, GPS-based 120477
Orion-Emerald, carrier DGPS for LEO form. flying 122500
OTF ambiguity resoln., GA, integer Gauss transform *(Chinese)* 120478
outdoor autonomous mobile robot 109672
pedestrian navig. syst., dead reckoning param. correction 131876
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96
phasor meas. unit, design/implement./field tests, perform. eval. 77519
phasor meas. unit for power network monitoring 77629
power syst. GPS phasor meas. units placement optim. 112192
power syst. stabil./power quality eval. using phasor meas. 77226
power system, real-time phasor meas. unit, GPS *(Chinese)* 77635
Pseudolite syst. concept for intell. transport systs. *(Japanese)* 124028
query optim. in mobile/wireless networks 130391
RAC Motoring Services, mobile data/location devel. 120048
radiosignal propag., direct, land surface refl. 83321
rapid zero-knowledge sig. acquisition, design and CMOS implement. 1317
real-time national networks, atmos. sens. 111429
receiver, interf. nulling, SS sig., adaptive antenna 74903
receiver autonomous integrity monitoring algm., clock bias *(Chinese)* 862
receiver tracking loops, optim. and sensitivity anal. 109321
receivers, DLL meas. error due to interf. 97028
receivers, FM jamming suppression, subspace array proc. 109327
receivers, operation, equatorial ionos. scintillations effects 120481
receiving antenna, radiation pattern meas., in-situ method 86269
refl. tech., sea state and surface winds determ. 88155
relative positioning of one mobile phone user to another 131703
RF mapping for exposure compliance 97800
RF transceivers, MEMS device appls. 85604
rly. freight traffic satellite-supported localisation/supervision *(German)* 782
robot tour guide, GPS-based localization, error-robust 97037
robotic farm tractors, posn. meas. and control, error anal. 97030
RTO-Grid Florida GIS, transm. assets transfer, GPS 122826
SAR, airborne, motion compensation 75090
satellite navig. systs., hist. and future prospects *(Polish)* 75249
satellite selection, Bayesian approach 131702
satellites, LEO, onboard GPS orbit determin. *(Chinese)* 98878
SDMA-GPS syst., transmitter posn. estim. methods 85916
seafloor instrum. positioning, deform. meas. 111390
seafloor positioning syst. with GPS-acoustic link, crustal dyn. 76912
simul. software tool for GPS systs. 75254
single epoch GPS ambiguity resoln. anal. *(Chinese)* 131317
single station GPS sigs., atmos. water vapour profile retrieval 76855
slant path scintillation intens. prediction using GPS data 85918
software GPS receiver for weak sigs. 109328
space-time array data simul. 107534
spaceborne autonomous GPS navig. systs. 131323
spacecraft attitude control using mag.-GPS dataware syst. 122476
spacecraft form. flying, HWIR testbed 122505
stand-alone GPS positioning/sens. fusion, pseudo-range data, lin. differen proc. *(French)* 131314
static positioning soln. 75251
strapdown INS based GPS integrity monitoring, pseudorange estim. *(Chine* 86267

l Positioning System continued
nchronized phasor meas., GPS based, synthetic algm. *(Chinese)* 99424
ipei, GPS receiver meas., precipitable water vapour, microwave radiometry
2315
ki dispatching mgt. via GPS 100493
ecomms. networks, GPS common view based primary ref. source 74078
egeoprocessing/monitoring, conf., Nice Sophia-Antipolis, France (May 2000)
8424
rminodes project, self organization in mobile ad hoc networks 74841
ne sync. meas. using GPS receiver, Internet 113289
cking freight on French rly. *(French)* 109330
ffic location IT, business develop. prospects *(Japanese)* 124034
nsionospheric propag., spaced paths sig. coherency 83315
nsm. line fault location algm., distributed param. 77648
pos. LOS water vap. meas. validation with GPS 76890
pos. refractivity fields determ. using GPS 83287
K permanent GPS network, water vapour estim., meteorol. forecasting appl.
11428
manned aerial vehicle with GPS, radar precision assess. *(Chinese)* 131658
hicle, unmanned, fuzzy driving based on DGPS/vision 131707
hicle GPS/map matching integrated navig. syst., D-S reasoning *(Chinese)*
6265
hicle platooning using carrier phase GPS/MM-wave radar 131700
hicle-mounted mine/UXO detect., DGPS error, EKF, fixed interval smoothing
7066
sually impaired navig. syst. develop., sens., DGPS & digital maps 76714
lcano monitoring using GPS, filtering strategies 133275
ide Area Augmentation System for aviation 131706
ide Area Augmentation System receivers, scintillation modeling 131321
ide area DGPS networks, integrated water vap. determ. 120088
ireless networks, data fusion archit. for posn. estim. 109322
ireless networks, internal node and shortcut based routing 74243
g thick film RF antenna fab. using direct-write techs. 117784
NASS *see satellite navigation*
s (computer I/O) *see data gloves*
curves *see thermoluminescence*
discharge deposition *see plasma deposition*
discharge lamps *see discharge lamps*
discharges
90 W high-press. sodium lamp electronic ballast develop. 134632
aotic plasma pacing with, music sig. 91532
rimm type glow discharge lamp 125951
omog. elec. discharge model 102888
T-7 supercond. Tokamak, particle removal, ICRF cleaning 127511
n nitriding devices, glow discharge energy exploitation *(Polish)* 124105
icrodischarge array UV sources, fab. 134609
ide film form., O ion sputtering, ion-beam apparatus 90253
per insulation testing in corona environ. 70434
eudospark switch with SiC electrode material 88994
ort glow discharge PDP, phys. model 86810
lent discharge prod. by piezoelec. transformer in N_2, light emission 125949
r gas, low-press., prebreakdown phenom., glow discharge form. 81654
r-Cl_2 mixture UV-VUV excimer emitter, subnormal glow discharge pumping
15236
r(-Cl_2)/air admixture, excited N_2 mol. form., DC-glow-discharge-pumped
Excimer lamp 80551
rF excimer laser, excitation discharge shock waves charactn. 105138
O_2 laser, gas dens. small-scale inhomogeneities, glow discharge thermal
nstabil. 82461
O_2 laser, nonequilibrium turbulent gas flow, luminesc. diagnostics 105134
O_2 multijoule TEA lasers, mag.-spiker sustainer technol., modified overshoot
mode 105118
e-Cd^+ hollow cathode lasers, single-mode operation, linewidth studies 105096
e-Ne lasers, DC gas discharge, falling I-V charact. 128102
r_2^* VUV laser oscill., compact discharge device pumped 71634
r_2^* discharge-pumped VUV laser, stimulated emission 105125
rF excimer TEA gas lasers, excitation discharge, floating particles influence
105131
O removal charact. of corona radical shower syst. 122712
lamp, plasma-quartz interact., glow spectra 124076
e excimer emission from pulsed microhollow cathode discharges 113127
K *see minimum shift keying*
S *see satellite navigation*
programming *see mathematical programming*
y codes
-mode blood flow imaging 110729
-mode images, coded excitation, clinical use 110774
lock coded CDMA, max.-likelihood detect. using A* algm. 129095
tremal self-dual codes, trellis struct. and higher wts. 117965
rameproof codes, efficient constr. 129110
OFDM, joint time freq. sync. and channel estim. using one training sym. 106042
OFDM 16-QAM seqs. constr. with low peak-to-mean envelope power ratio
83823
seudorandom seqs. with given probab. of unity syms., generation 83833
ynthetic transmit aperture imaging using orthogonal Golay coded excitation
110771
a-lin. Hensel lift of binary Golay code and nonlin. binary $(96,2^{37},24)$-code
72788
meters
W1B beamline X-ray monochromator develop. at BSRF 121857
onductive adhesives for flip-chip appls., self-alignment capability 67604
aylighting, bi-directional transm. distrib. fns., digital imaging 110022
lectro-goniometer model, calib. for biomech. appls. 76231
SS transfer vehicles automatic guidance, RendezVous sens. 98924
SS transfer vehicles automatic guidance, RendezVous sens. 98923
tnee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
etallic thin wire diam. meas., using Fraunhofer diffr. tech. 91441
ing laser dyn. goniometer, angle meas., systematic errors 128628
oft X-ray diffractometer for SR 110427
ideband pass. radar goniometer syst., sig. proc. 75191
-ray refractometer, hard X-ray range, charact., appl. 87273
ls dispatch data processing
ontainer ident. mark recogn. syst., image capture device *(Japanese)* 84524
ls distribution
see also goods dispatch data processing
ranes, container relative posn. meas. by image proc. *(Japanese)* 94627
emand pull type control methods, throughput time reduction, supply chain sync.
67691

goods distribution continued
GPS for tracking freight on French rly. *(French)* 109330
IBM Microelectronics, supply-chain mgt., assets/demand matching 89947
supply chain mgt. systs., state of art and vision 89748
transported perishable goods refrigeration, PV power 113154

Goppa codes
automorphism groups of one-point codes 117943
binary codes constr. based on Goppa codes 118002
binary quadratic trace Goppa codes, true dimens. 117968

government data processing
see also law administration; police data processing; public administration; town and country planning
Carnivore, network surveillance syst. of FBI 119513
Java-based smartcard, data storage extension 125496
NUMASS, nuc. safety project WWW-based monitoring syst. 109441
Sherlock for commercial high assurance network computing 108169

government policies
see also research initiatives
access network upgrades in USA, reasons for delay 74464
additional telephone lines, demand 130991
African renewable energy technol. adoption, financial barriers removal 99451
Asia, internat. telecomm. service companies and legislation 74059
Asia-Pacific innovations in mobile commun. 96430
aspiring innovating entrepreneurs education, UK experiences review 89602
asset governance distrib. network mgt. approach 133626
Australia, access to commun. 85102
Australia, universal service obligation, effect on digital dividing range 85100
Australian digital dividing range, rigorous economic anal. 85103
Austrian technol. foresight program, organization and expert profile 67470
Botswana national renewable energy policy objectives/programmes 88524
Botswana telecomms. reform, policy model for African states 107997
Californian elec. market crisis, crit. overview *(French)* 111799
Californian elec. market meltdown *(English)* 111798
Canadian federal government policy, MM-wave freq. allocation 75264
China's telecomms. regulatory reform, effect of WTO agreements 119446
Chinese government role in CAD technol. transfer 89732
Chinese integrat. into digital capitalism 74085
digital divide between rich and poor countries via low-cost IT 108001
district heating social cost in sparsely populated countries 123177
Dutch innovation policy, technol. foresight constraints/conditions 67466
elec. distributor in Hungary, customer loyalty meas. *(English)* 133438
elec. infrastructure/interconnections/exchanges, European policy 99211
elec. supply, resources, pollution, dyn., Pakistan 122812
engng. education, European projects impact assess. 113363
EU internat. message telephone services demand 85165
European universal service obligations, current and future aspects 130535
FCC organizational struct. and regulatory convergence 107998
Finnish network-based organizational innovations promotion 67478
Finnish telemedicine programs, three-yr. follow-up 85118
FITCE 2001 telecomms. conf., Barcelona, Spain (Aug. 2001) 124214
fixed-mobile interconnection settlements, impact of regulatory framework 119447
French public foresight exercises experience 67469
generation adequacy in deregulating elec. utility environ. 111705
global navig. satellite syst., political and economic dimens. 131694
household sector energy consumption, Hong Kong, 1984-97 123851
Hungarian energy policy, energy supply safety, energy saving 99226
ICONS project, interactive learning for global education 67423
ICT changes, impact on evol. of e-society 130528
Indian DBS TV, influence of US foreign DBS policy 131726
Indian PV market growth pot. 88656
Indian renewable energy technols. and climate change policies 99450
inform. society in Poland, computer networks 100367
Internet develop., effect of entrepreneurship and public policy 85270
Internet in Saudi Arabia 130817
Iranian power distrib. sector planning overview 133631
Japan's PV technol. develop. program, status, future prospects 112424
Japanese HVDC std. develop. project overview *(Japanese)* 99329
Korea's optional telephone subscription scheme 119503
Latvian energy policy, energy conservation, energy sector legislation 99227
local loop unbundling, shaping BT for broadband competition 96289
med. diagnostic imaging indust. in Japan 98148
microelectronics indust. in Malaysia, policies/R&D, review 103956
mobile phones and driving, UK perspective on government policy 78557
Mongolian 100,000 Solar House PV power syst. project 112429
multinational corporations leveraging, technopreneurship fostering, Singapore 113411
Nat. Action Programme for Information/Communication Technologies in Swedish schools 89611
national/corporate technol. strategies, total factor productivity, Korea 113410
new product develop. activity level rating metrics 89688
next generation networks, required security features 108189
next generation wireless, path to high-speed mobile multimedia services 131204
organizational media use in Singapore 85114
pers.-location and pers.-tracking technols., risks and policy implications 100732
photovoltiacs, European Commission R&D activities 112425
Polish computer teaching aids, curriculum policy 113304
Polish EM field human exposure limitation regulations 78549
Polish energy conservation policy under energy policy guidelines 99229
Polish higher vocational engng. education schools experiences 113361
Polish telecomms., competitive dyn. 107996
power plant mgt. in competitive markets, IT solns. 77673
R&D mgt., technol. foresight proc. refinement 67468
radionuclides for med. use, compliance with regulations 87979
renewable energy generation economic eval., environ. factors 88531
renewable energy policy in Lithuania 77682
Romania's energy efficiency promotion under transit. to market economy 99469
Russian energy strategy, social/economic develop. effects 123108
sci. and technol. policies assess., Philippines 113414
secure digital archiving of high-value data 129242
Slovenian energy efficiency policy 99471
Spanish digital TV services, market strategies analysed 131725
Spanish sci. and technol. policy, technol. foresight 67465
targeted advertising and consumer privacy 129302
Tasmanian Police Call Centre project, offence reporting proc. 85146
technol. foresight, seven paradoxes 67473
telecomms., liberalization, and Internet growth in Turkey 100363
telecomms. indust., mergers and acquisitions valuation 119448
telecomms. tariffs, effects of liberalisation in Europe 130536

government policies continued
telecommunications service provider shifting, price regulation 85112
telephone local no. portability, tech. and economic considerations 85166
UK, BT's local loop unbundling 74468
UK distrib. companies investment planning, benchmarking appl. *(English, French)* 133645
UK Univ. for Industry educational initiative 67445
Ukraine energy conservation policy, energy consumption efficiency 99472
universal service obligations, text services 119594
US crit. infrastructure interdependency R&D project mgt. 111739
US DOE elec. utility vulnerability assess. activities 111718
US elec. power indust. Indications, Assessment and Warning Program 111719
US Energy Infrastructure Interdependencies Program 111740
US renewable energy supply forecasting 99453
USA broadband cable market, consequences of AOL/Time Warner merger rules 74066
USA competitive LEC access charge problem and monopoly power 131006
USA LMR, FCC freq. refarming 85603
USA local loop unbundling, cost proxy model flaws 74475
USA rural Internet connectivity 85269
USA shutter control policy, commercial rem. sens. firms impact 122555
USA telecomms., tech. efficiency, allocative efficiency, incentive regulation 74063
voice network migration towards next-generation networks 130605
xDSL broadband access services, mktg. and managing 130989

GPIB *see peripheral interfaces*

GPS *see Global Positioning System*

gradient index optics
antenna array Fourier opt. proc. beamforming network 120704
asymmetrical opt. planar waveguide sens., 4×4 matrix method 116690
bit-parallel raw data transm., parallel opt. transmitter and receiver 74937
chiral nematic Bragg filter, fibre opt. sens. WDM tech. 97305
complex refr.-index profile of fiber optics 71301
fiber face quality detect. using GRIN lens interferometer *(Chinese)* 71255
focusing GRIN rod lens, LD beam shaping, endoscope appls. 122052
free-space opt. interconnection modules for 2D photonic-VLSI circuitry, microlenses and GRINs 109225
graded-index opt. fiber, waveguide modes exact dispersion eqns. derivation 104678
graded-index plastic opt. fiber rods, prep. *(Chinese)* 93068
H-ROD, versatile microoptical component 116763
hybrid diffractive/graded-index splitter prototype for fiber optics 116622
inhomog. opt. waveguide refr. index profile recovery from meas. coupling angles 121242
ion exchanged glass planar tapered waveguide sens. 127763
ion-exchanged graded-index glass waveguides, near-surface region charactn. 127545
LD radiation, high power, fast axis collimation using microlenses 82650
lens for LD beam collimation and shaping 93184
light induced GRIN waveguide in photorefr. cryst. *(Chinese)* 72064
mode-matching graded index fiber, diffractive vortex lens design 104668
multimode fiber Bragg grating fab. for narrow-spectrum VCSELs 127594
multimode interf. struct. integrated optic systs. 127800
narrow-stripe high-power LD, 980 nm, lateral beam steering 117333
near-field objective design with radial GRIN rodlens for data storage 104860
NIR absorpt. tomography, ICE meas. appl. 121257
nonlin. opt. devices anal., fast semivectorial finite diff. beam propag. method 71927
oval-core GRIN fiber coupling, highly ellipt. field LD 127703
partially spatially incoherent soliton form. multimode waveguide 74912
perfluorinated photonics polymers in high-speed telecomm. 74918
photonic digital CNN, morph. nonlin. & digital cellular proc. 102457
planar opt. waveguides, propag. consts., alg. recursion formulas 127774
planar waveguide, RI profiling, inverse WKB method 104740
polymer opt. fiber, highest data transm. worldwide *(Japanese)* 116616
refr./diffractive micro-optics opt. interconnects 116770
single mode microstruct. polymer opt. fibre fab. 127696
single-mode fiber, collimated beam coupling, lens design 116642
soda-lime glass, Cu^+-Na^+ ion exchange channel waveguides, light propag. 93138
VCSEL high-perform. syst. for different scale opt. interconnections 82663
vortex lens light coupled GRIN fiber 71279
WDM component design, crit. mfg./reliab. tolerances 96784
Ag^+-glass waveguides, GRIN profiles, thermodiffusional form. 127734
$AgCl_xBr_{1-x}$ graded-index mid-IR planar opt. waveguides 127799
AlGaAs-(In)GaAs VCSELs for opt. data link appls., high perform. 82612
GaAs, QW GRINSCH lasers, regrowth, annealing 101292
GaAs/AlGaAs GRIN-SCH-SQW LD structs., deep levels 128300
GaAs/AlGaAs epilayers for integrated optoelectronics, MBE, GaAs-Si wafer bonding 90289
GaAs/AlGaAs high power semicond. laser stack arrays, output charact. *(Chinese)* 105323
GaInAs/GaInAsP laser struct., pulsed-laser-induced QW intermixing 71843
$GaN/Al_xGa_{1-x}N$ buried layer QW high-power LD 71811
$In_{0.22}Ga_{0.78}As$, QW GRINSCH lasers, regrowth, annealing 101292
InGaAs/GaAs/AlGaAs triple-QW GRINSCH laser, sol-gel fab., output charact. 93614
InGaAs-AlGaAs SQW GRINSCH ridge waveguide laser, high-power pump operation 105316
InGaAsP MQW lasers, 1.5 μm, heterobarrier leakage effect 117204
SiO_2-TiO_2(Bi_2O_3) gradient glasses, sol-gel method fab. 116555
TiO_2-SiO_2 multilayer film narrow-bandpass filter design, stepwise GRIN profiles 116875

gradient methods
see also conjugate gradient methods
2D fast MRI brain segmentation, region-based level-set snakes 110889
3D cardiac motion estim. by point-constrained opt. flow algm. 132537
3D range image, gradient based polyhedral segmentation 94696
abdominal aortic aneurysms, 3D image anal. 110947
acoustic sig. blind separation implemented in time-freq. domain 107449
adaptive filters, pipeline implement. 84765
adaptive IIR notch filter, memoryless nonlin. gradient algm. 95684
adaptive min.-BER lin. multiuser detect. for CDMA sigs., 4-QAM 73738
adaptive minor component extraction with modular struct. 107383
approx. ML source separation using natural gradient 84793
bandlimited periodic sig., nonlin. least-sq. multisine fitting algm. 118831
Bayer pattern images, saturation-based adaptive inverse gradient interpolation 94864
binary signalling, adaptive min.-BER DFE 107677
biological objs. movement/motility, act. contours 87300

gradient methods continued
biomedical MRI, sensitivity encoding, arbitrary k-space trajectories 132759
biomedical sig. anal., ICA techs. 132555
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind deconvolution of dyn. systs., natural gradient approach 107426
blind equalization, fast CMA 107700
blind sig. separation, complex domain nonlin. fn. 95624
blind source separation, gradient-based, nonlin. fn. 107578
Boolean and order stats.-based filters, optimal predictive design 118988
brain dyn. imaging using ICA, blind source separation, review 110617
carotid artery segmentation in US images, contour PDF 76371
chromosome images, homologue class., iter. centromere segmentation al 87519
chromosome images multi-feature anal. and class. 87550
CNS tumour malignancy eval., MRI, fractal dimens. use 76494
combined blind/nonblind source separation gradient 95626
complex microwave struct., gradient computation reduction, method of mom 102501
complex refr.-index profile of fiber optics 71301
convolved non-stationary sig. separation, adaptive non-causal FIR filters 118
crosstalk-robust struct. based on sub-band noise estim. 129368
deformable models, formal framework, convergence 118261
differential source separation, num. and anal. solns. 118866
digital commun., adaptive blind joint source-phase separation 130036
DS-CDMA blind adaptive multiuser detect. 119880
DS-CDMA sigs. in multipath channels, adaptive min.-BER lin. multiuser det 73722
edge representation/recogn., multilayer feedforward NN 129890
ellipt. problems, gradient-FEM 101098
EM field, FEM gradient-based optim. algm. 72157
EM wave multilevel finite element soln., preconditioner 128652
ESPAR antenna, adaptive beamforming based on steepest gradient algm. 105
ESPAR antenna, adaptive beamforming using seq. perturb. 83761
evanescent-mode bandpass filter, ridged waveguide, inductive strip 102519
exponentiated gradient algms. convergence 73594
face detect. model based on dist. measure of regional feature 73463
feedback archit. networks for blind source separation and deconvolution, train anal. 106415
flyback converter, dedicated sizing tool, automatic symbolic proc. 114603
force sens., temp. compensation algm. 86463
fractal compression accel. using real-time decoder 107037
freq.-selective filtering using weighted myriad filters with real-valued 130125
GA convergence improvement using guided crossover 78946
genetic clustering algm. guided by descent algm. 107135
geometric act. contours, incorporation of shape priors 121886
global convergence of gradient neural networks and attractive region of equi point *(Chinese)* 124608
grey-scale images, adaptive threshold-gradient segmentation 94444
hierarchical motion hist. images for recognizing human motion 95601
Hough transform/automatic gradient threshold for line extraction 106445
hybrid extragradient proximal-point algm., robustness and converg. anal. 1140
ICA, joint matrix diagonalization 100799
IIR gradient-based adaptive notch filter with constrained poles and zeros 1300
image features, block motion estim. using efficient search strategy 94783
image reconstr. using bistable gradient neural nets 118263
image registration by maximization of combined mutual inform. and gradi inform. 84111
image segmentation using level set curves of complex wavelet surfaces 948
image smoothing scale space, translation-invariant wavelet shrinkage 84271
image-content adaptive mesh generation, new approach 84311
impulse noise corrupted images restoration using image gradients 106721
LIM drive, intell. backstepping control 100237
mean orient. estim. methods, study of introduced bias 118340
microwave filter, automatic test and tuning syst. 102538
minimisation, line search algm. avoiding small local min. 100964
MM-wave broadband wireless indoor networks, combined spatial-temporal equalization 85465
modified gray level morph. gradient with accurate orient. estim./reduced no sensitivity 107253
modified gray level morph. gradient with low threshold values/noise sensitiv perform. 107254
motion estim., multi-image gradient-based algms. 129527
MR cardiac images, variational approach for segmentation of LV 122087
multi-pulse excitation LP synthesizer, param. re-optim. algm. 73111
multicarrier systs., optimum equalization, unified geometric approach 13025
multichannel blind deconvolution, freq. domain, adaptive spline fns. ap 107315
multimodal ICA, feature extraction from multiple inform. sources 94776
multiple type-one equilib. points on stabil. boundary, generalized fixed-po homotopy method 90663
multirate digital systs., lin. and nonlin., sig. flow graphs 90012
multispectral edge detect. based on roughness and differential Prewitt meth 118389
Mumford-Shah functional for image segment tion/denoising/interpolation/magnification 94779
neural net-based crack param., wavelet preproc. MFL sig. 101595
neural network, limit cycle generator *(Japanese)* 68982
NOAA-AVHRR accurate image navig., contour matching approach 122689
nonlin. constraint max-min problems, gradient projection algm. *(Chine* 100928
nonuniform mesh finite element approx., gradient recovery/error estim. 1247
obj. boundary segmentation, fast and accurate act. contours 73317
OFDM multi-user broadband mobile channel, decision-directed tracking 970
opt. flow computation in log-mapped image plane 84342
opt. flow estim., errors-in-variables modeling 118368
opt. flow estim. over extended image seq. 106830
opt. flow with adaptive gradients, motion estim. 94553
optimal filters for gradient-based motion estim. 118467
oriented pattern curvature estim. by curvilinear models 118719
power amp. lin. by adaptive polynomial predistortion 125247
progressive probabilistic Hough transform 95567
projection gradient method for general max-min problem *(Chinese)* 67903
pseudoautomatic lip contour detect. based on edge direction patterns 12989
pulmonary nodule surrounding struct., charactn. using differential geom.-bas vector fields 87707
quotient gradient methods for solving CSP 90036
RF feedforward-lin. power amps., digital commun., gradient optim. 79571
seabed geoacoustic param. inversion, adaptive hybrid algm. 111444

nt methods continued
ıultaneous multiple harmonics anal. using enhanced FFT-based parametric igm. 77367
ake contours for multiple objs. segmentation 84350
ace-variant point spread fn. model for undercorrected opt. systs. 84265
eech recogn., codebook-based speaker adaptation *(Chinese)* 84058
CP/IP network design, stochastic approx./transaction-level 73981
th. document images, optimum binarization 106450
mporal quantum neural computer, phys. realizations 102479
al least sq. filtering, stable simplified gradient algms. 107544
nsmit antenna wt. adaptation with feedback, stochastic gradient algm. 84687
MTS channel equalization, neural nets/gradient algm. 108747
derwater target class. in changing environ., adaptive feature mapping 77044
riable step-size tech. for gradient noise reduct. in gradient-based algm. 73704
ctor color error diffusion halftoning systs., design/anal. 118370
ctor fields/gray levels filling-in by joint interpolation 94782
LSI neural network with digital wts. & analog multipliers 91139
LSI wafer fab., optim., neural network *(Chinese)* 81171
aveguide filter, automated tuning, adaptive network model 69030

ometers (gravimetric) *see gravimeters*

ometers (magnetic) *see magnetometers*

polymers *see polymer blends*

boundaries
ee also bicrystals; tilt boundaries; twin boundaries; twist boundaries
amond:B CVD films, piezoresist., grain boundaries, device appl. 115291
amond:H, polycryst. CVD films, field emission, surface roughness effect 02894
amond:N films, highly-conducting ultrananocryst., PECVD, elec. cond. haractn. 102980
amond:N nanocryst. films, PECVD, struct., electrochem. behavior 91605
amond, polycryst. CVD films, injection depend. long carrier lifetimes 80642
amond, polycryst. materials struct./props., simul., interfacial perspective 02964
amond CVD films, detector grade, growth, efficiency and charge collection ist. 114330
ectroceramics, conf., Portoroz, Slovenia (Sept. 2000) 100422
gh/low T_c supercond. for magnets & motors, microstruct. aspects 92883
rge-grain polysilicon-on-insulator films, high quality thermal oxide form. and haracts. 91899
etals, polycryst. materials struct./props., simul., interfacial perspective 102964
agnetism, spin structs., magnetis. 127283
OV, oxygen role at grain boundary 91407
itithiophene polycryst. thin film FET, grain size depend. mobility 70164
igothiophene, polycryst., TFT, charge transport props. 115908
pt. near-field fibre probe tip, mercury treatment 131936
rmalloy based mag. thin film multilayers, magnetoresist. and mag. props. 16288
olycryst. solids, stress-driven mass transport, lattice-based micromechanical ontinuum formulation 69940
olysilicon fine grain-sized films, SW photodetect. 131927
olysilicon MILC thin-film devices, indiv. grain boundary charactn. 102958
olysilicon oxide quality optim. at wafer level, BCDMOS technol. 124432
olysilicon TFT, interface trap states, grain boundaries 115915
olysilicon TFT, single grain boundary in channel, excimer laser annealing 03853
olysilicon TFTs, enhanced degrad. under dyn. hot-carrier stress 126753
olysilicon TFTs, LF noise model 92360
olysilicon TFTs, offset metal-induced unilaterally crystallized 92341
mpling-and-hold electronic nose, artificial/natural odours, noise anal. 97519
xithiophene polycryst. thin film FET, grain size depend. mobility 70164
xithiophene semicond. grain boundary , temp./gate volt. depend. transport 01715
olar cells, short-cct. current, fill factor, resistive leakage losses 134384
ntracene bicrystal, hole transport through single grain boundary 69605
lin-film interconnects, grain boundary crack growth 103491
g/$YBa_2Cu_3O_{7-\delta}$ thin film contact, contact resist., Ag morph. 102495
l-Cu lines, electromigration immunity, pre-annealing effect 115672
lN/sapphire thin films, SPE recrystn., GaN epitaxy substr. 125050
BN films, RF bias sputtering, struct. anal. 68144
Ba,Sr)TiO_3 PLD dielec. thin films, AC and DC cond. studies 81634
Ba,Sr)TiO_3 PLD dielec. thin films, dielec. response and complex impedance spectra anal. 81632
Ba,Sr)TiO_3 dielec. film, two-step annealing, TiN barrier props., post-treatment emp. effect 92662
Ba,Sr)TiO_3 porous ceramics, effect of atmos. on PTCR characts. 81714
$aBiO_{2.77}$ varistor property promoter in ZnO ceramics 69262
$Ba_{0.7}Sr_{0.3})TiO_3$:Mg,La(Nb) film, elec. props., co-dopants effects 116156
$aTiO_3$/Ni based MLC capacitor, dc-elec. degrad. 127280
iPbSrCaCuO 2223 sintered bulk HTSC, prep. factor to enhance J_c (15,000 A/cm^2) 81934
iPbSrCaCuO/Ag 2223 HTSC tape, crit. persistent current for loop 70711
$dS_{0.036}Te_{0.964}$, grain boundaries, elec. activity, R-EBIC method, solar cell operation 91655
dSe films, polycryst., SiO_2 encapsulated, In/O diffusion 115552
dTe elec. props., $CdCl_2$ effects, grain-boundary cond. theory 91656
dTe, grain boundaries, elec. activity, R-EBIC method, solar cell operation 91655
dTe-based solar cells, local photocurrent and resist. meas. 100118
$e_{0.9}Gd_{0.09}Ca_{0.01}O_2$ electrolytes for low temp. SOFC 123792
$e_{0.9}Gd_{0.09}Fe_{0.01}O_2$ electrolytes for low temp. SOFC 123792
$e_{0.9}Gd_{0.1}O_2$ electrolytes for low temp. SOFC 123792
$e_{0.8}Gd_{0.18}Pr_{0.02}O_2$ electrolytes for low temp. SOFC 123792
$CeO_2)_{1-n}(LaO_{1.5})_n$ SOFC electrolyte, elec. cond., grain boundaries effect 89212
o/Pt high coercivity multilayers, growth, structural and mag. props. 81876
oCrPt:C HCP granular films with CrTi underlayer, mag. and reversal props. 127284
u alloy interconnect, modeling and simul. 92107
u metallization, improved diffusion barrier by stuffing TiN grain boundaries with Al interlayer 126475
u thin film growth, ion-beam modif., MD simul. 68372
u/Ta/SiO_2/Si films, Ta diffusion barrier layer oxid., thermal annealing 69935
u_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
u_6Sn_5 scalloplike layer, solder interconnections, channels stabil. 67533
eAlSi low noise soft mag. under-layer for CoPtCrO double-layered perp. recording media 116398
eSn_2 particle reinforced Sn-Ag solder joints, creep props. 100595
aAs/AlGaAs ballistic quantum wire, four-terminal resist. 80824
aN MBE layers, highly resistive, elec. transport 91676

grain boundaries continued
α-/β-GaN/SiC/Si, heteroepitaxial growth, PL, cryst. microstruct., residual stress 90331
GaN/sapphire(0001), hydride VPE, thermal cond., disloc./grain boundary effects 126068
β-Ga_2O_3, film, gas sens. materials charactn. 103054
β-Ga_2O_3/O_2 interact., impedance spectrosc./SIMS obs. 109755
$Hg_{0.9}Re_{0.1}Ba_2CaCu_2O_y$ SQUID, grain boundary jns. flux noise 127489
ITO films, rf sputtering, struct./elec. props. 103050
$(La,Sr)CuO_{3-\delta}$ SOFC electrodes, in-situ oxygen pot. meas. 89230
$La_{0.67}Ba_{0.33}MnO_3$ CMR mag. sens., polycryst., fab., appl. 75471
$La_{0.67}Sr_{0.33}MnO_3$ CMR mag. sens., polycryst., fab., appl. 75471
$LiZnFe_2O_4$ ferrite films, microstruct., mag. props. 81826
MgO addits., aq. powder coating methods for boundary engineered ceramics 114441
Mn-Zn ferrite, eddy current loss anal. taking account of microstruct. *(Japanese)* 104500
Mo thin film growth, ion-beam modif., MD simul. 68372
Nb_3Al multifilamentary supercond. wires, rapidly heated/quenched, microstruct. 70761
Nd-Fe-B PM, degrad. procs. 92863
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
PZT thin films, ferroelec. props., grain boundary effects, nucleation 104252
PZT thin films, perovskite phase, selective nucleation, grains form., lateral growth 104292
PZT, thin-film capacitor structs., excess PbO effect 104474
Pb based ferroelec. ceramic multilayer, Ag/Pd cofired, Ag vap. diffusion 79437
$Pb_{1-x}La_xTiO_3$ thin films, PLD, struct., dielec. props. 79360
Pr_6O_{11}-based ZnO ceramic varistors stabil., microstruct., elec. props., Er_2O_3 addit. effect 79427
Pt/PZT/Pt capacitor PZT films conductive region eval., hydrogen plasma treatment 104285
poly-Si fine-grained p-n jn. solar cells, carrier collection 100065
Si high-valued polysilicon resistors control by hydrogenation techs. 76047
Si, highly doped polycryst., grain boundaries carrier transport 91590
Si, polycryst., elec. property at grain boundary by Gauss distrib. model *(Chinese)* 91606
Si, polycryst. films, lightly doped, grain boundary transport props. 115298
Si polycryst. films, temp.-depend. thermal cond. 80632
Si, polycryst. materials struct./props., simul., interfacial perspective 102964
poly-Si solar cell, ITO electrode, synthesis & perform. 123801
Si solar cells, problems of develop. & mfg., review 89276
Si thin film polycryst. solar cells, quasi 3D simul. 100141
poly-Si:B(P) LPCVD layers, thermal cond. study 115293
a-Si:H films, hot wire CVD, TFT/solar cell appl. 124983
Si:H, nanocrystalline films, hot-wire CVD, charactn. 124959
μc-Si:H, photocarrier diffusion coeff., ps laser induced grating tech. 93320
Si:H,F, film, polycryst., PECVD transport props. 102973
Si:O, polycryst., EFG, deep level defects 91608
4H-SiC epitaxial layers CVD growth, substr. surface prep. effects 69873
SiC wafer, 6H, sublimation grown, sub grain boundaries, cross polarizer study 68101
$SmCo_{7-x}Ti_x$ magnets, mag./struct. props. 127331
Sn-Ag solder joints, creep props. 100595
Sn-Pb solders, fatigue crack growth behavior 67532
SnO_2 epitaxial nanocrystalline film, fs PLD 90468
SnO_2 varistors, (Ni,Nb)-doped, elec. nonlin., Mn^{2+} effect 115037
SnO_2:F mixed phase film deposited by US spraying, props. 101461
SnO_2-xCr_2O_3 varistor-type NO_x sens., micro p-n jns. 109740
$SrBi_2Ta_2O_9$ MOCVD thin films, chem. stabil. 92656
$SrTiO_3$ grain boundaries, Z-contrast STEM imaging 104299
Ta/NiFe/CoFe/Cu/CoFe/PtMn/Ta spin valves, magnetoresist., interlayer diffusion 81877
Ta-C-N film, sputtered, charactn. in Cu/barrier/Si contact syst. 115674
TaC_x sputtered films as diffusion barriers for Cu metallization 126471
Ta_2N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
TiO_2-Y_2O_3-Nb_2O_5 capacitor-varistor ceramics, elec. props. 91423
$Tl_2Ba_2CaCu_2O_x$ HTSC epitaxial films, bicryst. grain boundary Josephson jns. 70794
V_2O_5/Ni-Cu-Zn ferrite, V_2O_5 sintering aid addit., props. effects 70494
WC_x diffusion barrier for Cu metallization, thermal stabil. 103467
WC_x sputtered films as diffusion barriers for Cu metallization 126471
WO_3, film, gas sens. materials charactn. 103054
WO_3/TiO_2, film, gas sens. materials charactn. 103054
Y-Ba-Cu-O bicrystals, low angle, crit. current hysteresis 70675
YBaCuO bicrystal grain boundaries, IMD and Josephson vortices 70601
YBaCuO, fab. of high-J_c tapes by epitaxial deposition on RABiTS 127432
YBaCuO grain boundary Josephson jn., RF SQUID 70958
YBaCuO, mm-wave Josephson mixer, noise decrease in small DC mag. fields 68649
YBaCuO thin films, microstrip resonators, nonlin. microwave effects 69022
$YBa_2Cu_3O_7$ HTSC film bicrystal Josephson jns., transport 70677
$YBa_2Cu_3O_7$ HTSC, low angle grain boundaries, high J_c capabilities 70678
$YBa_2Cu_3O_7$ Josephson jn. array, surface wave resonator 70934
$YBa_2Cu_3O_7$ supercond. tapes growth on MgO ISD buffer layers 70697
$YBa_2Cu_3O_{7-\delta}$ HTS, grain microstruct. & growth, melt-texturing 104559
$YBa_2Cu_3O_{7-\delta}$ HTSC film, surface resist., microstruct. 70648
$YBa_2Cu_3O_{7-\delta}$ SQUID, grain boundary jn., vortex motion 70929
$YBa_2Cu_3O_{7-\delta}$ epitaxial film, microwave loss, vortex propag., surface impedance 70576
$YBa_2Cu_3O_{7-\delta}$ film, grain boundary jns., direct flux noise meas. 127488
$YBa_2Cu_3O_{7-\delta}$, high field scanning Hall probe imaging 70623
$YBa_2Cu_3O_{7-\delta}$, polycryst., bearings/elec. power devices 116508
$YBa_2Cu_3O_{7-x}$ HTSC, melt-textured, mag. field/current distrib. 70651
$YBa_2Cu_3O_{7-x}$ Josephson MM-wave detector, dyn. range 71175
$YBa_2Cu_3O_{7-x}$ SQUID magnetometers, field-induced low-freq. noise suppression by slotted flux dams 127487
$YBa_2Cu_3O_{7-x}$ bicrystal Josephson jn., THz spectral anal. 70850
$YBa_2Cu_3O_{7-x}$ grain boundary jns., comp. anal. 70865
$YBa_2Cu_3O_{7-x}$ on RABiTS, magneto-opt. imaging of transport currents 70674
$YBa_2Cu_3O_y$ step-edge jns. DC SQUID, voltage modulation effects 70786
$YBa_2Cu_3O_{7-\delta}$:Ca HTSC films, grain boundaries, J_c/T_c 70676
$YBa_2Cu_3O_{7-\delta}$:Ca, film, grain boundary crit. currents doping-induced enhancement 70603
$Zn_{0.45}Cd_{0.55}Se$/InP MOCVD growth, surface defects, substr. deoxidization temp. effects 68223
ZnO arrester element charact. prediction, stat. approach 133808
ZnO based varistor, grain boundary elec. charact., EBIC/SEM 115976
ZnO films, CVD, elec./opt. props. 103012

grain boundaries continued
ZnO nanostructured based varistor materials, impedance spectrosc. studies 115304
ZnO, polycryst., self-assembled laser cavities, opt. props. 93631
ZnO sputtered films, struct. and UV photolum. obs. *(Chinese)* 126053
ZnO varistors, grain boundaries, photoacoustic spectrosc. 103939
ZnO:Bi,Sb varistor, EBIC contrast at grain boundaries, voltage bias effect 92429
ZnO:Pr varistors, electronic interface states at grain boundaries 102764
ZnO:SnO_2 based varistor ceramics, microstruct. & elec. prop. 101496
ZnO-based varistors, inversion boundaries, study using electron microscopy methods 69267
$ZnOBi_2O_3:Y_2O_3$ varistor ceramics, microstructural & elec. charact. 101495
ZrO_2/Pt interfacial impedance, equiv. cct. model, O_2 sens. appl. 97494
ZrO_2-SiO_2 modified pigment prodn., reflective coating, aerospace appls. 114468
ZrO_2-Y_2O_3/Al_2O_3 composites, SOFC, modelling study 123796
$(ZrSn)TiO_4$ microwave ceramics with low sintering temp., control of Zn 114449

grammars
see also context-free grammars; context-sensitive grammars; graph grammars; rewriting systems
almost instantaneous VF codes, av.-sense/competitive optimality 117922
bi-directional spelling-to-pronunciation/pronunciation-to-spelling generation 73042
Burrows-Wheeler transform compression, parsing strategies 106180
continuous speech recogn., k-TSS lang. models 73103
data commun. protocol, no. of rules needed for automaton grammar to generate finite lang. 73959
DNA computation, forbidding/enforcing 69356
enzyme genetic prog. for combinat. cct. design 103993
genetic prog., effects of program grammars 78881
high-level hardware transforms., complete spec. and implement. methodology 68670
HRR signatures, syntactic pattern recogn. 75161
Korean part-of-speech tagging based on context inform. 129375
Lempel-Ziv code with k-error protocol, av. redundancy rate 94262
Lempel-Ziv coding as tool for inform. theory *(Japanese)* 83842
Lempel-Ziv parsing scheme for Markovian source, av. profile 129010
logical string rewriting 102868
LZ78-parsing, optimal, lower bounding 106378
motion pictures, dramatic story sects. and tempo determ. 95504
natural speech proc., conf., Ilmenau, Germany (Oct. 2000) *(German)* 78383
real-world eval. of generic document recogn. method for mil. form 129604
resoln. scalable lossless progressive image coding via conditional quadrisection 95095
speech, hybrid connectionist-structural acoustical modeling 73612
speech recogn., Microsoft speech appls. prog. interfaces *(German)* 129390
speech recogn., pruned testable lang. model eval. 73073
speech recogn., robust chunk parsing with variable depth anal. *(German)* 73085
spontaneous speech, self corrections proc. *(English)* 73079
text-to-speech converters, syntax-controlled prosody generation *(German)* 73088
time-sync. speech recogn. using higher-order n-gramme speech models *(German)* 73087
top-down interactive behavioral synthesis environ., grammar based 68669
Tornasol, Spanish speech recogn., integrated syst. 73112
traffic surveillance, content-based event retrieval 129815
universal lossless data compression with side inform. using conditional MPM grammar transform 117920

granular materials
see also powders
1D Josephson-jn. array, penetration depth, screening field profiles 70796
bulk dens. determ. from microwave meas. of dielec. props. 121168
grain & seed moisture content, RF sens., on-line monitoring 110068
mag. thin films/tapes, zero field viscosity 116382
microwave moisture sens., universal calib. 120751
microwave moisture sens., universal calib. tech., permitt. fn. 120741
nanogranular metal/insulator multilayer, read head shielding material 116433
nanostructure, GMR props. 127325
recording media, collective thermal fluct. 116385
$Co_{70}Cr_{18}Pt_{12}$ perp. granular mag. media patterning, FIB, single-domain islands 116409
CoCrPtC granular films, CrI, CrMn, CrRu underlayers, mag. recording 116374
CoPtCrO granular films, perp. recording media, thermal stabil. *(Japanese)* 70526
Ni/Cu multilayers, electrodeposited, mag./FMR props. 81884
$Tl_2BaCa_2Cu_2O_{8+\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893
$YBa_2Cu_3O_{7-\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893

granular metallic thin films *see discontinuous metallic thin films*

graph colouring
2-approx. algm. for path coloring on trees of rings 100809
300 mm wafer fab controllers design, CPN-based approach 89948
cellular radio networks, randomized saturation degree heuristic for channel assignment 74727
channel assignment algm. under channel interf. constraints 85513
chromatic no. computation 67815
chromatic no. of set systs. 113927
complete uniform hypergraphs, monochromatic partitions 124548
CSP, multiple pop., constraint-graph based evol. algm. 90007
cube Ramsey nos. are polynomial 113928
DAB network ensemble planning, problems and techs. 120514
finite-dimens. T-colorings of graphs 100872
fixed channel assignment in mobile radio networks, fast constructive algm. 108965
frozen develop. in graph coloring 113913
generalized H-coloring of graphs 100819
heterog. cct. synthesis, evol. graph generation, terminal-colour constraint 79827
high-perform. video sig. proc. scheduling, NP-hard real-time constraints 114803
logic emulation syst., net assignment problem, FPLA 68766
m-ary asymmetric sym. error correcting codes 129174
max. clique extension by iter. coloring 100894
max. independent sets and coloring approx. in 3-uniform hypergraphs' 124622
min.-weighted coloring problem soln. 113925
mixed hypertrees, colouring 90006
mobile commun. syst. freq. assignment by genetic algm. *(Japanese)* 96516
non-periodic self-affine tilings, constr. of boundaries and colorings *(Japanese)* 113903
NP-completeness of 2-role assignment 67798
online edge-coloring with fixed no. of colors 100823
optimal greedy algm. for wavelength assignment in directed tree nets 75009
P_4-free colorings and P_4-bipartite graphs 78858

graph colouring continued
parameterizable error-propag. space compactors for response obs. 101912
partitions and graph colourings 100867
permutations sorting by reversals through branch-and-price 113951
QD cell network, analog computation 80813
Ramsey nos. for tournaments 100868
recursive randomized coloring and fair dice random colorings 90018
simulated annealing and graph colouring 90061
single wafer proc. IC fab., cluster tool, modelling and control 89950
SS-TDMA satellite syst. with intersatellite links, time slot assign. probl 120085
telephone systs. feature interact. mgt. by temporal CPN 85169
unifying slot assignment protocol multiple broadcast access 108709
virtual components, publicly detectable protection techs., watermarking meth 125443
WDM multicast-capable networks, general multicast scheme 86064
WDM network, opt. layer survivability for single and multiple service class 130469
WDM transport networks, computer-aided planning tool 86017

graph grammars
LEO satellite networks, QoS-based routing 96624
med. image recogn. using structural graph grammar-based techs. 98144
Petri net fluidification, semantics and steady state 78863

graph theory
see also bond graphs; directed graphs; graph colouring; reachability analysis; trees (mathematics)
2D hierarchical compaction algm. for VLSI layout reuse *(Chinese)* 81488
3D graph drawing 100899
3D obj. face recogn./reconstr., single 2D line drawing 129871
3G mobile commun., short frame turbo decoding and ML decoding 106133
A*Prune algm. for finding K shortest paths subj. to multiple constraints 119
acyclic graphs, min. congestion embedding into ladders, VLSI layout 7028
ad hoc wireless networks, admission control/power control/QoS anal. 13122
ad hoc wireless networks, dominating-set-based routing scheme 119430
ad-hoc networks, routing problem and graph theory 108682
adaptive neg. cycle detect. in dyn. graphs 100902
aggregated limiting av. Markov decision problems 100786
all shortest paths interval routing schemes, charactn. results 95963
analogue piecewise lin. ccts., fault ident., homotopy approach 101744
approx. algms. for independent sets in map graphs 124620
area/time optimizing algm. in high-level synthesis of control-based hardwa 68688
arith. cct. design, evol. graph generation syst., transmigration capability 1021
arrangement graphs with faulty vertices, embedding longest fault-free pa 67800
Arthur-Merlin games derandomization under uniform assumptions 100772
asteroidal triples of moplexes 89999
bal. bowties and trefoil decomp. of complete tripartite multigraphs 67804
bal. network flows, cycle-canceling algms. 90004
bal. network flows, duality and struct. theory 90003
bal. network flows, polyhedral descriptions 90005
bandwidth minimization problem 90008
best path routing for multiple QoS requirements, randomized algm. 85069
bipartite Toeplitz graphs characterisation 101047
bit-serial arith. cct. evol. synthesis *(English)* 79851
blood vessel tracking in CTA/CE-MRA vol. images, adaptive min. path gene tion tech. 87663
bounded cycle-cover problem 74057
budget constrained min. cost connected medians 95965
buffer location planning by network flows 101897
building energy syst. simul., efficient soln. strategies 100233
cartographic road network deform. on SPOT satellite image 99053
CCS7 network, A/B plane partition problem and heuristic solns. *(Chines* 119451
cellular networks, constrained channel assignment, approx. algms. 85870
closure graphs, min.-cut and max.-flow problems 90002
clustering based fast clock scheduling for light clock-tree 79684
clusters and hierarchies drawing 100900
CMOS combinat. ccts., av. power estim., pattern compaction tech. 102110
CMOS digital ccts., gate level power optim. using dual-supply voltages 1252
CMOS seq. ccts., power estim. using graph-based methods 114695
codes on graphs *(English)* 72832
color image segmentation simplification using fuzzy attributed graph 94520
colour re-indexing algm. for lossless compression of digital images 118648
combinat. ccts., multiple error rectification, AND/OR graphs and BDDs 687
combinatorics in computer sci., conf., Palaiseau, France, Sept. 1997 100423
commun. network, probab. connectivity *(Chinese)* 95743
commun. network reliab., Fishman's sampling plan 96003
communicating systs., testability anal. algm. 107981
concurrent determ. of connected components, image proc. appl. 118400
connected graph, ultracenter and central fringe 100895
constraint-based watermarking for graph partitioning solns. 125362
content-based image retrieval using fuzzy multiple attribute relational grap 129446
cortical sulci, automatic recogn. using cluster of neural networks 87577
cycle regular graphs need not be transitive 124539
DECIDE subcircuit extraction algm. by recursive graph ident. scheme 10168
decomp., heuristic procedures, hybrid GA 67812
degradable VLSI/WSI arrays, reconfiguration algm. based on Hopfield netwo *(Chinese)* 104024
depth-3 arith. ccts. for $S_n^2(X)$ and extensions of Graham-Pollack theorem 10098
deterministic network commun. broadcasting time determ. 107967
diagnostic March tests for memories, ATG algm. 102140
differential games, zero-sum graph-constrained switching 78807
digital cct. sig. probab. calc. in Boolean fns., graph oriented realization 6867
dist. metric, graph union based 90000
distrib. network GIS, database design, graph protraction *(Chinese)* 112047
distributed computing networks, priority based resource allocation strateg 119726
distributed sens. networks, sens. placement using coding theory 130160
domatic no. approx. 67870
domination search games 78809
drawing, conf., Colonial Williamsburg, VA, USA (Sept. 2000) 100373
DUNE multilayer gridless routing syst. with wire planning 101650
dyn. flows with supply and demand 78836
dyn. random multiple access commun., stationary regime 119234
educational proc. simul. using training systs. 67447
efficient commun. in unknown networks, broadcasting algms. 107632

h theory continued
FSM models of complex army protocols with inconsistencies, test generation 107843
ec. cct. graph, node-reduction model *(Korean)* 101640
ec. energy market, power flow tracing method, theory 111784
xact largest/smallest size of components 124624
xact two-level hazard-free sum-of-products logic minimization 79781
ce authentication based on elastic graph matching, SVM appl. 84609
st min. path act. contour model 73498
w adder multiplier design, graphical methods 107480
nite generalized quadrangles based code constr., iter. decoding 129172
ve-partitioning five-connected internally triangulated plane graphs, lin.-time algm. 124530
uid networks, stabil., Lyapunov method 78778
.-described graphs, similarity measure, probabilities-based 73504
ur-connected plane graphs, convex grid drawings 100815
PGA channel segmentation design, multi-level matching-based algm. 68755
ee product, profinite topol. and finitely generated subgroups 67843
eq. filters, optim. via vertex graphs 80028
T, factor graphs 129173
nctional MRI data anal., inform. theoretic approach incorporating spatial priors 87579
zzy-valued random variables, graph convergence separability 100828
eneral BJT networks, DC solns., topol.-based method 68532
eneric direct sparse lin. syst. solver in C++ for power syst. anal. 133426
ant component threshold for random regular graphs with edge faults 67820
ray-tone digital images, graph-like sets, regularization criteria 106683
amilton cycles containing randomly selected edges in random regular graphs 113930
euristic planar routing algm. for high perform. layouts 70277
ybrid factor graphs and adaptive equalization 130271
C layout, wire packing, integer prog. 70257
EEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
nage β-skeleton computation, fast algms. 118212
nage proc. problems, breadth-first search appl. 94781
nage registration, min. spanning tree algm. 95440
nage understanding archit. based image proc. 107238
nages, point feature matching under small nonrigid motion 129558
ndependent triangles covering given vertices of graph 100873
ndependent/connected edge dominating set problems approximability 100982
ntell. computer network nodes, perform. measures 96253
nternet infrastructure mapping techs. 119765
nternet opt. network edge radiating topol. 96712
nterval routing broadcasting, lin. message-complexity 96223
ntrusion detect. systs., graphical techs. 96229
omorphism recogn., heuristic polynomial algm. 124531
omorphism testing algm. for graphs, incidence degree seq. method and appls. *(Chinese)* 113901
er. multiuser detect. with graphical modeling 84897
-vertex-connectivity augmentation problems with degree-unchangeable vertices 67810
rge scale infrastructure interdependencies modelling 111743
EO satellite networks, QoS-based routing 74882
EO satellite networks, QoS-based routing 96624
in. eqns. with tridiagonal Toeplitz coeff. matrices 67999
cal coteries, efficient constr. method 107636
garithmic adder optimal struct. with fanout of two for minimizing area-delay product 90849
garithmic Harary graphs, reliable message broadcasting 74227
ng image seqs., motion segmentation 129619
ng-range percolation clusters on finite cycles 113929
w dens. parity check codes, belief propag. decoding, perform. bounds 129036
w dens. parity check codes constr. using Ramanujan graphs 129037
w dens. parity check codes design using heuristic bit-filling algm. 129198
w power cct. synthesis combining CMOS/pass transistor logic *(Japanese)* 79850
w power multiport memories exploration/design 114767
w power protocol converter, protocol modules, selective clock suppression 90862
w-dens. parity-check codes at short block lengths, heuristic search 129063
ax. degree six graphs, 3D orthogonal drawings, bends lower bounds 100805
ax-Bisection on planar and geometric graphs, polynomial time approx. 90019
ax.-likelihood decoding, quantum factor graphs 117994
erged inner-product proc. using modified Booth algm. 68711
in. c-broadcasting network compounding algm. 107631
in. cut-sets, undirected graph separation into sub-graphs, network reliab. 68490
in.-adder integer multipliers using carry-save adders 90852
in-max-boundary domain decomp. 79104
in.-time k-broadcasting, improved upper and lower bounds 67801
Minty's algm. for claw-free graph max. wt. stable set, revision 100865
ninus and signed domination 100814
ulti-hop wireless network, graph theory 108633
ulti-hop wireless networks, hierarchical control scheme 120026
ulti-obj. multi-dimens. homotopic deform., cellular model 94500
ulti-scale algm. for drawing graphs nicely 124537
ulti-way cct. partitioning using GBAW logic perturb. techs. 79683
ulticast key distrib., lower bound 118026
ultilevel cooperative search, cct./hypergraph partitioning problem 101899
ultiobjective prog., tutorial 78954
ultiplier design, graphical methods, digital filter appls. 101881
ultiview registration in frame space 106457
etlist partitioning, lin. ordering algm., cost fn. 79505
etwork flow with additional lin. equalities 89998
etwork open loop stochastic control, simplex convexity 67731
etwork reliab. anal., combinat. methods 130805
ode pair features for bisection problems 78884
odes placement, genetic search 67838
onlin. resistive ccts., matrix-based tech. for uniqueness anal. 68530
onterminal capacity matrices on undirected flow networks, realization problem 90089
NP-completeness of 2-role assignment 67798
NPP reliab. specs. distrib. using Markov graphs 88535
NPP software requirements anal., graphical approach 112225
bj. recogn., shape-from-shading method 84536
nline routing in convex subdivisions 100808
ptimal buffer insertion under accurate delay models, graph based algm. 79697
ptimal FPGA module placement, temporal precedence constraints 79702
ptimal irreversible dynamos in chordal rings 124538

graph theory continued
optimal protocol, maxmin rate allocation, convergence order theory 119350
optimal seq. partitioning problem using GA 78899
optimal vol. 3D orthogonal graph drawing 100807
organ segmentation, interactive, using graph cuts 87312
orthogonal graph drawing 100898
orthogonal graph layouts compaction algms. 100801
packet networks, delay-constrained commun., semidefinite programs for code design 106169
paradigm for graph recogn., cographs and dist. hereditary graphs 100869
partitioning vertices of 1-tough graphs into paths 100871
PCB assembly, robot moves sequencing, extended dyn. point spec. approach 67687
PCB/MCM design, perform. driven and shape-based routing algm. *(Chinese)* 102808
perfect, ideal and bal. matrices 89961
periodic-finite-type shift spaces 129080
planar bipartite framework, deform. 100874
planar graphs, min. cuts drawing 100803
planarity testing, neural network algm. *(Chinese)* 67822
PLAs, optimal folding using 0-1 lin. prog. 90847
polar visibility graphs 100802
power laws and network topol. generators 74019
power syst. computer-based relay protection tech. 112136
power syst. fault sect. estim., graph partition method 111669
power syst. topol. errors ident. using weighted innovation graph approach *(Chinese)* 77144
property-specific witness graph generation for guided simul. 79713
QoS source-waiting routing in networks with advanced resource reservations 130516
Ramsey theorems for spatial graphs 100870
real-time pedestrian tracking/counting using single camera 118302
reducible' networks, marginal reliab. importance computation 89927
region-based obj. recogn., multiple representations prunning 129843
ring loading problem, integer demand splitting 130499
risk-sensitive decision-theoretic fault diagnosis 96023
robust info. network mgt. syst., graph theoretical study 74127
rooted node-connectivity problems 67823
s-expanded symbolic network fns. for computer-aided analog IC design 79545
SAR, class. perform. prediction using parametric scatt. feature models 86132
SAR multiscale image segmentation using wavelet-domain hidden Markov tree models 75133
scatt. no. of noncomplete connected graph 67802
search problems in small world graph 100842
segmentation of touching handwritten Japanese characters 94892
self-timed cct. design, achieving worst-case perform. 79673
semantic concepts detect. using context/audiovisual features 95017
semi-supervised segmentation refinement, stat. act. grid method 94590
seq. cct., power mgt., computational kernel extraction 102091
seq. cct. design, digital watermarks 102090
Small-world network modeling 130791
Smith chart appls. for microwave component charact. 102592
SONET/WDM networks with 1/8 wavelength requirements, drop cost minimization 74973
sorting algm. for seq. of kings in tournament 113861
sparse matrix permutation into specific block lower-triangular form using graph decomp. 113824
spectral graphs for quasi-cyclic LDPC codes 129175
speech recog., discriminative training criteria and optim. 73064
speed-independent async. ccts., test pattern generation 79807
spherical motion encoder 97221
stabilizable systs., Kalman-Yakubovich-Popov lemma 90623
Steiner ring network design problem with revenues, models 78869
structural graph matching by EM algm./SVD 129872
structural learning from iconic representations 95444
subcircuit enumeration and class. for module ident. problem 125182
submodular/posi-modular set fn. augmentation by multigraph 67796
super restricted edge-connected graph, or-type sufficient condition *(Chinese)* 124565
sym. recogn. by error-tolerant subgraph matching 129873
symm. no. problem for trees 67814
sync. ccts., register and phase requirements, software pipelining techs. 90866
TCG, transitive closure graph-based representation for non-slicing floorplans, VLSI 127010
telecomm. commodity prices, stochastic models 107980
temporal partitioning onto reconfig. PUs, static-list scheduling algm. 101956
terminal vertex graph, planar spanning subgraph extraction 100901
tie-set graph theory and appl. to info. network mgt. 113910
toroidal structs., topol. coords., calcs. 100852
transconductance ccts. 80056
transformers load capacity determ., multistep load graph conversion 77909
trivalent Cayley graphs, diam., lower bound 68492
undirected flow networks, min. realization problem *(Japanese)* 67817
undirected graph, prize-collecting Steiner tree problem, local search with perturb. 100896
undirected multigraths simultaneous augmentation 100818
unipolar corona, Warburg law deficiencies explanation, graphical method 80552
uniquely restricted matchings 124540
vertex connectivity augmentation, near optimal algm. 100817
vertex covering problems, hybrid GA 67808
vision, self-organizing, stochastic clustering 129547
VLSI design, DUNE multilayer gridless routing syst. 70254
VLSI hypergraph partitioning, move-based heuristics 68509
VLSI layout spacing, simplex algm., graph theory 92443
VLSI multi-layer routing, constrained via minimization *(Chinese)* 116013
watermark verification syst., zero knowledge proof *(Japanese)* 106442
waveguide filter, admittance method, adjacence graph and recursive thresholding 125674
wavelength-routed networks, multicast nodes allocation 131502
Web graph struct. compression 107463
Web server replica placement 119740
weighted stabil. no., upper bound determ., quadratic prog. approach 78850
weighted vertex cover, fixed param. algms. 100811
wireless ad-hoc sens. networks, coverage problems 130704
wireless multihop network, routing algm. 108963
wireless network topol. graph, max. weighted independent set 120041
wireless sens. networks, convex posn. estim. 119909

graph transformation systems *see graph grammars*
graphic equipment, computer *see computer graphic equipment*
graphical languages *see visual languages*
graphical user interfaces
7R/E switch,, OneLink Manager element mgt. syst. 74092
ADC testing, std. framework for IEEE-STD-1241 in MATLAB 114832
aircraft maint., phase stepping shearography, improved software 122496
ANN embedded automated inspection quality mgt. syst. for mfg. industries 113739
APS-94F SLAR syst., image capture, proc. & recording syst. upgrade 99124
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
ATM network monitoring via network mgt. tool 85140
augmented reality, fast calib. scheme 109845
automated event class. for multi-Gbyte/day data streams 130034
biological sigs., long-term DAQ, storage and presentation, Microsoft Windows appl. 110527
brain parcellation, adaptable fuzzy C-means for improved image class. as pre-proc. procedure 98423
breast MRI, computer-based anal. of enhancement curves 98422
CAL of wave propag. in dielec. and opt. waveguides, interactive simul. toolbox 94008
CBIT, context-based image transm., med. appl. 84080
client-server rem. Windows-based sig. generator, design, implement. 109833
computer-vision-based HCI with back projection wall using arm gestures 129531
concentrating solar power plant, DCS 123267
coronary care units, wireless interface for monitored patients 76788
Cyber Teaching Assistant for computer education course assistance 118155
data commun. test automation using scripting langs. 120642
diabetic patients, foot press. meas., GUI/syst. 110507
DICOM image post-proc., Microsoft Windows-based med. viewing appl. 110948
digital motor motion control, Windows-based develop. environ. design 123320
digital video, keyframe-based user interfaces 120576
distrib. constr. IS downsizing, GUI appl. *(Chinese)* 112023
DynCT real-time motion-compens. reconstr./visualis., 3D CT fluoroscopy 87737
EDA tools, scripting lang. capability for interoperability 79507
EHWPack, evolvable hardware environ. using SPICE simulator and field prog. transistor array 114573
elec. cct. design and anal., Java simul. 125163
elec. impedance tomography, Matlab based data proc. & anal. syst. 98204
electronic products, CAD tools *(German)* 101641
EM modeling and visualization tools using FDTD tech. 93991
EMF stds. comparison, virtual instrum. based syst. 120646
face anal./synthesis 73200
facial soft tissue change anal., 3D measuring techs. 87522
filmless radiology teaching 89610
Flexent Element Management System using Web and obj. technols. for wireless network mgt. 74095
German open elec. market, Java-based WWW-transm. schedule syst. 122836
high resoln. animal PET, PVM, DAQ 122258
human movement study using multimedia syst. 132521
human-robot interface based on speech understanding assisted by vision 73106
hydroelectric generating units, 3D dyn. simul. study *(Chinese)* 99579
image proc., neural-net/ActiveX integrated environ. 106704
image proc. teaching, Java vision toolkit 118450
Impact integrated power syst. anal. package develop. 77255
Internet mgt. by delegation, open source components 130670
landmine detector operator training, motion tracking, virtual mine lane 77112
laser-based external corros. mapping of pipelines 105621
LIGHT program, lighting anal. software, GUI 78330
M3C framework for multiple cluster mgt. and monitoring 74410
MEMS motion meas., computer microvision, opt. microscope, CCD camera, stroboscopic illum. 109663
microcontrollers learning using CAI-oriented multi-micro simul. environ. 78512
MRUI quantitation package, Java-based GUI 98398
multimodality image fusion toolkit, high-speed interactive fusion 76433
NETDRAW, NETOMAC GUI for power engng. education, dist. protection 99410
NetworkDesigner-Artifex-OptSim, integrated software tools for high speed networks synthesis/anal. 131483
neuromuscular stimulation & recording, LabVIEW based syst. *(Chinese)* 133052
NPP fault diagnosis, functionally abstracted inform. presentation 112220
OO OPF 99266
Paks VVER-440 units, PLASMA on-line safety monitoring, EOP visualiz. module 112230
panoramic/adaptive/reconfigurable interface for similarity search 94797
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
petroleum indust., power distrib. over long dists., design 134692
power syst. consistent reliab. database building, user-friendly tool 122786
power syst. protection, graphic-interface-based breaker status simul. syst. *(Chinese)* 99408
power syst. teaching using computer aided instruction software *(Chinese)* 100466
protective relaying operation, graphics interface develop. software *(Chinese)* 123046
protective relays, steady state and transient response simul. 77515
QoStat, tool for eval. of QoS capable routers 107937
rem. sens. ground stations, DAQ & archiving syst., real-time proc. 122554
SCADA/PAS/DTS integrat. graphic support syst. *(Chinese)* 77262
Sesign, speech design tool *(Japanese)* 84031
SHAMAN, distributed mgt. appls. environ. 130680
shipboard elec. power systs., computer simul. tools anal. 100290
short-term load forecasting/class. using neural nets 122930
SI2000 version 5 product line, obj. technol. *(Slovenian)* 119471
SimRAD Viewer/P med. imaging station develop. *(Japanese)* 76787
Smith chart appls. for microwave component charact. 102592
sound synthesis syst. in Windows-based visual environ., Okinshi *(Japanese)* 86361
steam power plant graphical supervisory coal handling syst. *(Chinese)* 77756
strip casting proc., steady state control strategy 134682
substation automation, Web-embedded PLC appls. 112718
substation automation technols. and advantages 99854
talking head interface, realism, believability and acceptability 106412
Telebuddy, collective telepresence and tele-conversation through phys. avatars 108385
graphical user interfaces continued
teleoperated autonomous piezoelec. nanopositioner, coarse/coarse motion co 104430
test program develop., prod. floor execution speed 75365
thermal power station operator inform. display develop. 123186
TLM, FDTD and Haar wavelet MRTD algms. for EM simul. 93956
transm. line params. calc., GUI software 122948
transm. substation automation, PG&E's Substation 2020 project 89011
US NDT data proc., 3D graphics role, adv. software environ. 114539
US phased array focal laws simul. on 3D solids, ray tracing 111544
Vesselize syst. for anal. and visualization of mag. reson. angiography 983
Virtual Mouse, inputting device by hand gesture tracking and recogn. 735
visual interface from uncalibrated cameras for uncalibrated displays *(Japa* 73140
wet surface resist. distrib., automated meas. syst. 120651
γ-spectra nuclide quantification GUI, librarian-driven anal. 132485
graphics, computer *see computer graphics*
graphics coprocessors *see coprocessors*
graphics scanners *see image scanners*
graphite fibre reinforced composites *see carbon fibre reinforced composite*
graphite fibre reinforced plastics *see carbon fibre reinforced plastics*
graphite fibres *see carbon fibres*
graphs
see also Bode diagrams; nomograms
3-D display method for 12-lead ECG 121961
ADC histogram testing, IEEE Std. 1241, benefits & risks 102285
bar chart recogn. in document images via Hough-based model 95572
complex circ. charts, inform. extraction, tachograph disks 129939
conditional task graph allocation/scheduling, hardware/software co-synth 81441
HBT common-emitter offset voltage, Gummel-Poon model 92312
LV, 3D geometric model reconstruction, almost automatic method 122025
network simul. environ. for network graphs 85067
pers. ident. and emotion recogn. from facial images *(Japanese)* 129859
pulmonary ventilator lin. drift eval., stat. test reliab. 98129
pulse waveform anal. std., low/high state level, algms. comparison 109411
transcranial mag. stimulation, evoked silent periods, graphical meas. me 121978
gratings (diffraction) *see diffraction gratings*
gravimeters
absol. gravimeters, fifth internat. comparison, uncertainty 75361
SQUID gravity gradiometer, sensitivity 116523
SQUID gravity gradiometer, sensitivity limit, elastic interact., sens. currents masses 122593
gravimetric instruments *see gravimeters*
gravimetry *see density measurement; weighing*
gravitational radiation *see gravitational waves*
gravitational wave detectors
ACIGA second-generation laser interferometry for grav. wave detectors 128
aperture synthesis, deterministic sources 84763
bar cryogenic grav. wave detector perform., review 127531
cosmic grav.-wave background response of space-based interferometers 12
EO RF PM, narrow-band phase noise meas. 82218
Glasgow 10 m prototype gravit. wave det. using injection-locked Nd:YAG l 117138
LIGO arms, precision alignment using dual-freq. DGPS 97018
LISA grav. wave background anal. using time-delay interferometry 13219
LISA grav. wave detector drag-free control posn. sens. 132170
LISA grav. wave detector phase meas. expt. design 131917
LISA grav. wave detector space mission, review 133260
power-recycled interferometric gravit.-wave antenna control, Michelson inter ometers 128632
pump-and-sig.-reson. OPO, amplit. noise suppression 117445
sapphire low-loss high-reflectance coating advanced detector optics, birefr. m 116876
two-stage dc SQUID amp. for gravit. wave detectors, noise charactn. 1274
Virgo, mirror suspen., thermal noise limit 71871
VIRGO grav. wave expt., astron. interferometer, review 97163
Nd:YAG master-slave laser syst., gravit. wave detector GEO 600 83069
Nd:YAG monolithic non-planar ring laser freq. noise meas. 93559
gravitational waves
PSR 1913+16, gravit. wavelets, direct spinorial detect. 82965
gravity meters *see gravimeters*
gravity waves
3D-ACM WAVE on fixed & taut-wire moorings, directional wave spectra 76
lower stratos., wave activity, Rayleigh-Mie Doppler wind lidar meas. 7688
ocean large-scale gravity waves due to ship motion, radar detect. 122698
Pacific, equatorial inertia-gravity waves, TOPEX/Poseidon 99017
short oceanic gravity waves, rem. sensed reflectance, lidar implications 133
transient breaking waves, radar backscatt., ang. depend., PO model 76910
transient breaking waves, radar backscatt., PO model 76909
White Sands VHF radar obs. of wind and gravity wave activity (1991-6). 120
Gray codes
clustering of wireless data for partial match queries 72828
digital camcorder image stabilizer, Gray-coded bit-plane block matching 73
digital image stabilizer, matching algm., Gray-coded bit-plane, video seq. 73
free-form complex surfaces, non-contact 3D sens. 89909
GPS/GLONASS satellite IF receiver, multichannel digital filtering *(Germ* 120479
high-resoln. phase sampled interferometry using symm. no. systs. 131705
low-energy adaptive bus coding, Mediabench benchmark set run-time mem access traces 92108
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
sequencing algm., Gray codes for involutions 94317
single-track cct. codes 117945
spectral distrib. and shape, simultaneous meas. syst. *(Japanese)* 84521
Z_8-lin. Hensel lift of binary Golay code and nonlin. binary $(96,2^{37},24)$-c 72788
grazing incidence optics, X-ray *see X-ray optics*
Green's function methods
2D PET reconstr., point spread fn., math. model 98573
2D photonic crysts., light self-trapping, nonlin. localized modes 128472
3D airborne radome of superspheroidal shapes, discrete anal. 72703
3D dielec. targets near lossy half space, multilevel fast multipole algm. 722
3D microwave IC, EM simul. 115023
ABC, arbitrarily-shaped boundaries, time domain discrete Green's fn. meth 117748

's function methods continued
sotropic medium, EM wave scatt., dyadic Green's fn. 72228
enna response in reverberation chamber, remarks 72589
irectional antenna, input impedance eval. using probe excited rect. ring 83553
olar hydrodynamic model, semiconds., init.-boundary value prob. 69467
ed Green's fns., eval. using Shanks transform. 78970
ied imperfectly cond. cylinder, image reconstr. freq. depend. 107225
ity-shielded infinitely thin meander line, stratified medium, mobile commun. ppl. 94109
c. cylindrical waveguide, uniaxial anisotropic medium 94084
c. disk microstrip antenna on uniaxial substr., Green's fns. determ. 94151
c. pol. conical beam spherical slot array antenna, charact. 72634
c. polarized conical beam spherical slot array antenna, polariz. charact. 83676
c. waveguide, tensor Green's fn. of lin. and point sources 83491
upled microstrip lines, anal. using integral method 94092
indrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 1209
indrical struct. with long.-inhomog. filling, Green's fns. 117749
nsely packed microstrip interconnects, anal. using sparse-matrix/canonical grid ethod 89852
ubly periodic fn. computation, combined method 72238
al-freq. monopole-helical antenna, mobile handset 72503
hamel's theorem and problems containing variable-scale mobile forces 79056
adic fns. for planar stratified bianisotropic media, unbounded/scatt. field repre-entations 105712
adic Green's fn. for biaxial medium 72277
adic Green's fns. for dielec. spheroid, spheroidal vector wave eigenfunction xpansion 72158
c. property enhanced tomography, simul. study 98206
ngated mag. source, fast spheroidal multipole imaging anal. 83140
M dyadic Green fns., class./symm. rels. 83077
M field, dyadic Green's fn. 72170
M field solns. using anal. continuation from real to complex spaces 72274
M fields of thin circ. loop antenna above (un)grounded multi-layered chiral abs 72535
M modeling of multilayer microstrip antennas/ccts. 72471
M scatt. by bodies of rev., fast algm. 72258
M scatt. from PEC target above or buried in lossy half space, fast multipole ethod 83237
M scatt. problems, appl. of finite element time domain method 83218
M simulators, CAE, PCB and EM design problems *(Italian)* 125871
M theory, auxiliary fns. 83076
bedded antenna in composite medium, EM anal. 83633
AC, space discretising time domain methods for num. modelling of EM coup-ng 83386
lt multipole scatt. models, half-space Green's fn. eval. 94000
tating electrode unidirectional SAW transducers, quasi-static anal. 116212
lly-depleted SOI MOSFETs, Halos or pockets, 2D anal. threshold voltage odel 115923
net-type ferrite films, VBL, dark-field microscopy geometries 116284
en-state P/M compacts, nondestructive electrostatic dens. assess. 114534
ided wave inspection accuracy increase, time-varying matched filter 101588
roelectric circ. conducting waveguides, theory 83495
elmholtz determinant operator for bianisotropic media, field ecomp./factorization 72159
teromophic waveguide, cutoff freqs. calc. by operator theory 69015
eromorphic waveguide, higher order modes, operator theory 72411
channeling, kinetic eqns., long-range fraction 103280
SC planar struct., microwave nonlin. response, EM simul. 71105
man head, mobile phone emissions, absorpt. calcs. 133069
brid normal-supercond. devices, nonlin. transport theory 116519
interconnects with thick conductors, capacitance/conductance calcs. 126510
s, substr. coupling, modeling methods *(Polish)* 70264
T anal., efficient Green's fn. method code 92719
perfectly conducting bodies, EM scatt., time-domain integral eqn. anal. 83240
plantable med. device, EM model, cylindrical DGFs 87889
inite nonlin. loaded antenna arrays, inexact Newton anal. 83670
omog. problems, magnetostatic field, BEM 83141
eract. QD in nonequilib. state, AC response 69672
erventional MRI, local RF heating, Green's fn. 122089
ersion formulas for tridiagonal matrices with appl. to BVP 101106
ered anisotropic media, electrodynamic problems, Green tensor fns. 117604
ered bianisotropic struct., complete spectral Green's dyadic 83192
ered biological media, electrode array excitation model 133078
ered dielec., rapid calc. of electrostatic Green's fns. 128657
ered dielec./ferrite microstrip line struct., dyadic Green's fn. calcs. 80163
. antenna array on multilayer dielec. ground, anal. *(Polish)* 105973
crostrip antennas in multilayered media, full-wave anal. 72566
crostrip atten. in transm. layered structs., dyadic Green's fn. modifs. 94113
crostrip cylindrical antennas anal., efficient Green's fns. calc. 83566
crostrip disk antennas with inhomog. artificial dielec. 83655
crostrip line, bound to leaky mode transit. 80169
crostrip lines, edge sing., spatial domain anal. 83479
crostrip lines on magnetized ferrites with arbitrarily oriented bias field, full-ave charactn. 69009
crostrip patch antennas, eval. of 2D react. integrals 72517
crostrip patch antennas, parametric study using spectral domain method 72565
crostrip struct. with complex media, loss inclusion via dyadic Green's fn. odifs. 102497
crostrip substr., 3D Green's fns. 102503
crostrip with multilayer dielec. struct., anal. by complex image method 72424
crowave toroidal cavity transducer, theory 120711
xed-sig. ICs, substr. coupling param. extraction, BEM *(Chinese)* 80123
M-wave semicond. two-port network, props. at 77 K 80293
bile commun. handset, interact. of EM energy with human arm 111220
oM fast calc. for printed grid array antenna anal. 83715
oM for compact large planar scatterers in homog. medium 83223
nopole antenna with conducting flat disk above earth, theoretical anal. 72437
PIE with general elec./mag. sources, multilayered media Green's fns., Hertz ot. approach 102505
ulticonductor interconnects, freq.-depend. losses, transm.-line models 126969
ultilayered media, dyadic EM Green's fns. calc. 117662
ultilayered media, Green's fns. in near-field region 72244
ultilayered medium, embedded vert. strip, integral eqn. 83463
ultilayered medium, overlying objs. EM scatt. 72213
ultilayered stratified gyroelectric chiral media, dyadic Green's fns. 72452
ultiple dielec. multicond. systs., field computation and capacit. extract. 128660
ultiple interface geom., supercond., quasiclassical theory 127504
ultipole mag. drum of mag. encoder, surface mag. field distrib. 86457

Green's function methods continued
nonintimate Schottky jns., effective dens. of bias voltage depend. interfacial states 80898
nonlin. penetrable objs., TM-case scatt., time-domain vol. integral eqn. 94017
nonuniform cold magnetized plasma column, penetrated and scatt. field distribs. 94019
one-particle Matsubara temp. Green's fn., stat. phys., QFT and inform. theory 83781
open-ended-waveguides located in infinite ground plane, mutual coupling 128831
organic crysts., exciton spectrum, high order nonlin. 128532
pass. microwave device, param. extraction, full-wave PEEC 69095
PCB DC power-bus struct., vert. discontinuities, cct. extraction, MPIE 80486
PCB layout, crosstalk prediction model 102805
PCB with multilayered geom., gaps and bypass capacitors effects on interconnect 102802
perfectly conducting slotted bicone, transient excitation 83545
periodic waveguide struct., radiation mode spectrum 127754
phase sing. meas., small struct. vicinity, Linnik interf. microscope *(German)* 75812
photodetector array spectrum anal. using influence fn. 109559
photonic cryst.-parallel plate waveguide struct., Green's fns. 94085
piezotransducers radiation in fluids, mixed formulation FEA/BEM Green's fn. anal. 111522
planar cct. simul., wave concept iter. procedure 114960
planar rect. phased dipole arrays, 3D Green's fn. 117836
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral host medium 117654
polyaromatic hydrocarbon stacks, conductance calcs., Landauer formula 115209
polynomial operators 72165
probe excited rect. cavity-backed slot antenna, input impedance 83554
PSAW guiding/diffr., full wave and simple models 92734
quantum wire transistor, RT simul. 70217
quasi-2D SAW ID-tags for wireless ident., Green's fn. and network anal. 92710
QW IR photodetectors, full bandstructure modeling 131933
radiating dipoles in layered media, complex image tech., accuracy improvement 72438
RF multilayer PCB layout, EM coupling, full-wave anal. 102806
rough dielec. surfaces, out of plane bistatic scatt. 105708
rough surface with Dirichlet/Neumann/impedance boundary conditions 72270
SAW and BAW devices, modeling of third-order effects 92721
SAW periodic struct., FEM and Green's fn. anal. 116210
scalar Hertz pot., field anal., nonhomogeneous uniaxial dielec.-mag. mediums 83093
semi-Markov diffusion proc., first exit point, distrib. dens. 124510
shape from shading, Green's fn. approac 129881
shielded homog. multiconductor transm. lines, PEC and PMC walls, TEM props. 94097
short slot in impedance surface, lossy-ground plane effects on radiation 128850
sing. two-point BVP *(Chinese)* 101087
skin effect, open-boundary problem, FEM/DBCI hybrid method 128686
slot antenna radiation charact., influence of metallization width 128855
slot antenna with varying Gaussian curve slot width 105847
sq. QW, electroabsorption, Coulombic coupling 103136
Square Kilometer Array project, finite array effects computation 86280
static Green's fn., sing. removal 83098
static mag. fields, props. calc., biological appl. 133083
stratified 3D photonic struct., light scatt. and propag., fully vectorial tech. 104750
supercond. microstrip lines, full-wave characterisation 80160
surface waves in piezoelec. media, left eigenvectors of Stroh matrices 72296
theory/appl. 67711
thick microstrip antenna finite arrays, anal. 83750
thin circ. plate with elastically supported edge 114067
time domain free-space dyadic Green's fn., spherical wave expansion 72285
time-domain discrete Green's fn. method, FDTD grid boundary characterisation 93996
transient EM wave beam scatt. modelling 83206
unbounded anisotropic medium, dyadic Green's fn. in cylindrical coord. 83204
uniaxial bianisotropic media, cylind. vector wave fn. represent. of Green's dyadics 72156
uniaxial bianisotropic media, Green's dyadics eigenfunction expansion 117609
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
VCSEL transverse mode static charact., anal. calc. 71836
vector Green's fns., multipole expansion, error anal., EM scatt. 94013
vert. antennas in dielec. half-spaces, complex image prediction model 94145
wave scatt. amplit. by reson. bodies in free space/waveguides, investig. 83210
wavelet transforms, Green's fn. methods 90196
wavelet transforms, Green's fns. 89963
C nanotube, Al electrode, quantum transport props., ab initio modeling 91509
C nanotube devices with current flow, pot. drop 115216
$CoSi_2$/Si(111), BEEM, band struct. effects 69713
GaAs OPFET, microwave charact., threshold voltage model 71551
GaAs-based HBTs, thermal mgt. and modeling 126667
GaMnAs-based double barrier RTD, ferromag. material emitter, spin-depend. transport 81184
GaN/AlN self-organised QD, strain distrib., built-in elec. fields, carrier states 91836
InAs, Shockley-Read-Hall recomb. rates, full-band-struct. calc. 91635
InP/InGaAsP planar waveguide struct. with 3D rect. defect, mode propag. inter-act. 93109
$LiNbO_3$ spherical waveguide AO devices, light beam guid-ing/collimating/focusing 116852
$LiTaO_3$, IDT admittance, BAW radiation 116219
$LiTaO_3$, IDT admittance, bulk wave radiation 92746
$ZnO\text{-}Al_2O_3$ SAW devices, MOCVD, piezoelec. coupling coeff. 116217
$ZnSe/Zn_{1-x}Mn_xSe$ multilayers, spin-polarized transport 91749
ZnTe/CdSe(100) interfaces, electronic struct. anal. 91740

grey systems
AC speed-adjustable syst., grey sliding mode controller design *(Chinese)* 134085
difference inform. entropy 72713
EDM charact. anal., GM(0,N) grey model and fuzzy logic appl. 78361
FMEA, grey theory appl. 67675
GM(1,1 | τ,r), grey DE soln., matrix train 67717
hazy grey set results based on kenning map 113909
hydroelectric generating set axis orbit, automatic ident. *(Chinese)* 112447
motion vector estim., grey search algm. 106957
nonequigap GM(1,1) modeling 113908

grey systems continued
oil pipe erosion assess., grey target theory software 113750
power filter, act., grey prediction control 122981
power transformer oil, dissolved gas prediction, grey model *(Chinese)* 88785
prediction modeling via grey relational weighting 122815
seasonal power load forecasting, combined gray neural network model *(Chinese)* 77285
target tracking by hierarchical grey-fuzzy motion decision-making 84645
undulating series, grey model 113907
GRIN lenses *see gradient index optics; lenses*
GRIN optics *see gradient index optics*
grinding
ball race mill coal/coke grinding, operational features 78605
cast Fe, porous, bonded diamond grinding wheels for flat-surface nanomachining 103714
CMP planarisation using pre-thin-surface grinding, ULSI mfg. 115660
combined ELID-grinding/EDM method expts. *(Japanese)* 100347
electrolytic in-proc. dressing grinding, wheel state estim. 134680
engng. surfaces eval., combined fractal modelling & wavelet anal. 121201
ferroelec. ceramic powder, fine grinding, crystallinity 125086
ground/polished surfaces, quantitat. roughness meas., total internal refl. microscopy 109999
microspherical lens fab. by ELID grinding 82186
microspherical lens mould fab., cup-type grinding wheels & ELID 116790
nanosurfacing proc. simul., MDM guidelines 115809
petroleum coke grinding with vert. airswept pendulum mill 89495
Portland cement plant project overview, Florida, USA 89485
quartz blank, ELID grinding 81596
sens. fusion rule acquisition based on environ. condition in sens. fusion syst. 131901
ultraprecision microform generating machine, microfabrication grinding 81595
wheel surface automatic image proc. syst. develop. *(Japanese)* 129819
Gd_2SiO_5:Ce single cryst., ELID grinding 82256
Mn-Zn ferrite, recycled, mag. props. and their appls. to mag. parts *(Japanese)* 104499
Si diaphragms, form. by precision grinding, buckling suppress. 92548
Si wafer fine grinding proc., proc. params. 92006
ZnO-SnO_2 spinel form., mech. activation effects 114473
groove guides *see waveguides*
ground electrodes *see earth electrodes*
ground services, aerospace *see ground support systems*
ground states
see also excited states
artificial retina, optoelectronic cct., stochastic algm. 106775
azo-dyes, multivariable anisotropic random-walk mol. devices, quantum chem. design 69336
cascaded free-induction decay FWM sigs. obs. 82827
diamond, polycryst. materials struct./props., simul., interfacial perspective 102964
high-gain QD IR photodetector 86559
low-noise opt. amps., polariton transit., fiber transm. systs. 85992
multilevel atoms, cavity dark states for quantum computing 104851
QD, Kondo effect, mag. field-induced 91823
QD artificial mols., N-electron ground states, mag. field-induced transits. 91828
QD opt. amps., ultrafast nonlin. procs. 117256
QD-QW systs., shallow impurities and δ-doping, defect states anal. 115390
quantum cellular automaton based logic gates/ccts. simul. 102008
self-assembled QD, carrier relax., excited states 91817
stilbene, multivariable anisotropic random-walk mol. devices, quantum chem. design 69336
AlGaAs/GaAs, QD, energy relax., DC/pulse-excited current meas. 80857
AlGaAs/GaAs multiperiod quantum-cascade struct., THz electroluminesc. 126145
AlGaAs/GaAs quantum wire, exciton-LO-phonon scatt. suppression 126193
C_{60} and metal derivatives, opt. limiting, picosecond reverse saturable absorpt. 71958
C_{70} and metal derivatives, opt. limiting, picosecond reverse saturable absorpt. 71958
CdTe/CdMgTe buried quantum wires, interdiffusion using patterned SiO_2 masks 80826
Cr^{2+}:$Cd^{0.55}Mn^{0.45}Te$ saturable absorber for Ho,Tm,Cr:YAG laser pass. Q-switching 82753
^{133}Cs thermal cell, saturated absorpt. spectrum, high-precision freq. meas. 117429
Er:glass Q-switched lasers with Co-doped transparent glass ceramic saturable absorber 117165
GaN epilayers, ground/excited excitonic reson., magneto-opt. study 80721
GaN:Mg/Al_2O_3, wurtzite sample, electronic Raman scatt., MBE/MOCVD growth 124862
HgCdTe MIS struct., subbands, reson. tunneling, 2DEG, tunneling current 69744
InAs QD amps., elec. pumped, ultrafast carrier dyn./dephasing 128261
InAs self-assembled QD amps., ultrafast gain recovery, modulation limitations 71812
InAs self-assembled QDs on InAlGaAs/InP(311)B, 1.6 μm ground-state lasing 117216
InAs/GaAs QD, time-resolved photoluminesc. 69661
InAs-InGaAs ultralow-threshold QD lasers, ground-state emission/gain 128221
In(Ga)As QDs, carrier dyn. rel. to lasers/microcavity light emitters 115398
Li III microcapillary plasma, lasing to ground state 128081
Nd:YAG laser, high-power CW diode pumped, output charact. 105250
Nd:YAG laser materials, ground/excited state direct pumping 82563
SiO_2:F for ILD appls., low dielec. const. anal. 91921
SiO_2/Si-QD/SiO_2/Si tunnel capacitor, charging dyn. *(Chinese)* 126129
Yb^{3+}-doped quasi-three-level laser crysts., selection criteria 117146
ground support equipment
see also aircraft communication; navigation
GB208 control unit for airport radio traffic handling 88089
ground support systems
see also aircraft communication; instrument landing systems; microwave landing systems; navigation
air traffic mgt. and weather info. dissemination, commun. syst. archit. 133264
ARCEMIS for ATC and air defense radio systs. central control 88088
Aura project TES instrum., ground data systs./flight operations 133320
COGENT, cognitive agent for Spacecraft telemetry monitoring 76823
deep space network ranging syst., use of DSP technol. 133267
distributed satellite C^2 testbed develop. 122504
John Hopkins APL Satellite Communications Facility 133268
JPEG 2000 technol. develop. for advanced ground station archit. 95232
ground support systems continued
NASA spaceflight ground network, commercial and Internet trends 122544
NOVA 9000, surface movement radar display and proc. syst. for ATC 989
RAPIDS rem. sens. receiving station,agric. monitoring 122720
regional aeronautical telecom network, simulated perform. charact. 120033
rem. sens. ground stations, DAQ & archiving syst., real-time proc. 122554
SMEX program, ground data syst. risk mitigation tech. 122543
tracking, aerial manoeuvring obj., adaptive Kalman filter 88080
tropos. emission spectrometer ground syst. 133319
Tropospheric Emission Spectrometer, ground data syst. develop. 133321
Tropospheric Emission Spectrometer ground data syst., sci. data visualiza 133323
grounding *see earthing*
group codes
automorphism groups of one-point codes 117943
binary lin. code, automorphism group computation 129041
complex cryptic code systs., operations in finite GF GF(2^n) 118022
differential space-code modulation for interf. suppression 106064
FT, factor graphs 129173
packing, group codes, Radon transforms and integral geom. 94279
space-time group codes design 106137
struct. theorems for group ring codes, self-dual codes appl. 117964
tail-biting codes, suboptimum MAP-decoding using dual trellis *(English)* 72
unitary sig. constellations for differential space-time modulation 106063
unitary space-time codes design from SU(2) Lie group representation 1291
group decision support systems
asynchronous learning networks, collaborative learning support, knowledge 113352
ICONS project, interactive learning for global education 67423
group method of data handling *see forecasting theory; identification*
group technology (production) *see manufacture; production control*
group theory
see also group codes; Lie groups
bijections between group rings preserving character sums 124566
block ciphers, group theoretic property, encryption fns. 72971
braid group cryptography, key agreement protocols 129285
$(C_k \oplus G, k, \lambda)$ difference families 124568
Cayley perfect designs as generalizations of perfect Mendelsohn designs 78
Chevalley alg. enumeration 124451
Chinese monoid 113902
Clifford groups invariants 117871
codes for differential signaling with many antennas 83851
congruence subgroups of the Hecke groups G_4 and G_6, normalizers 100744
cover-free families/superimposed codes, constr./bounds/appls. to crypto phy/group testing 129109
data struct. for geometric/topol. aspects of finite element algms. 68066
difference set in $(Z/4Z)^3 \times \mathbb{Z}/5Z$ 90011
double differential space-time block coding for time-selective fading chan 83850
fast Fourier-Weyl transform 118855
finite element-based algms., mag. scalar pot. cuts, topol. c straints/computational complexity 72160
free product, profinite topol. and finitely generated subgroups 67843
fuzzy sets, operation of fuzzy groups 67794
fuzzy subgroups equivalence classes 100893
fuzzy topol. groups, props. 100886
generalized Steiner systs. GS(2,4,v,2) with v, prime power≡7 (mod 12) 117
geometric struct. with indeterminacy, gauges/gauge transforms. for uncerta description 84262
infinite trees and iter., coalgebraic view 100743
intersecting free subgroups in free products of groups 113825
isomorph-free search in group theoretic framework 100824
Jantzen region geom. in Lusztig's conjecture 78756
Kantor's unitary ovoids, hyperplane sects. 78874
Kennaugh null theory extension 75172
length and area fns. on groups and quasi-isometric Higman embeddings 67
multiple aircraft conflict resoln., optimal maneuver, pure braid group appro 88087
multiqudit systs., quant. entanglement swapping, Bell-type meas. 83945
multirate multicast sessions, optim. based rate control 119114
Naor-Reingold pseudo-random fn. from ellipt. curves, lin. complexity 1245
no. theory applied to cryptography *(German)* 94338
non-interactive public key cryptosystems using non-max. imaginary quadr orders 129323
normal fuzzy R-subgroups in near-rings 67835
omega- and chiroferrites, constitutive tensors calc. 70496
public key cryptosystems using modular group, loopholes 106268
rank, root and eqns. in free groups 113828
rational trinomials with alternating group as Galois group 100880
realization over Q of groups $\hat{A}_5/A_5$ 100999
recursive MDS-codes 94257
Schur rings of dimens. 4, anal. 78875
sig. space tomographic transforms, gp. theory, review 129981
string replacement exponentiation 83965
symmetric block ciphers based on group bases 129310
T-generalized transform. semigroups, decomp. 100733
ternary codes, min. wt./wt. distribs. 94280
torsion-free groups, simultaneously solving set of eqns. 113826
torsion-free quotients of braid groups 113827
translation generalized quadrangles, charactn. 78877
Z^2 subshifts, strong cocycle triviality 78767
GaAs/AlAs shell QD, phonon modes 80820
Groupe Speciale Mobile *see cellular radio; radiotelephony*
groupware
see also group decision support systems
3D streaming transm. via Internet *(Chinese)* 108275
BuddyCache, cache coherence for transactional peer group appls. 108326
busbar layout, CSCW syst. using VRML *(Chinese)* 100501
coalition public-key cryptosystems 129262
collaborative design, constraint-based heuristics, act. approach to proc. 124299
collaborative music comp. syst. over Web 130886
collaborative technols., asynchronous and distributed proc. improvement 85
commercial Java implement. of group commun. using reliable multicast 130
commun. media and group cohesion, relative influences on social presence, participation and group consensus 119771
component based video commun. tool for collaborative virtual environ. 108
concurrent exception handling 108355

ware continued
nfig. of commun. networks by anal. co-operation graphs 119478
ORBA lightweight components, design and implement. requirements 130407
gital whiteboard, security, JAVA cards 85355
ducation, collaborative learning support in Internet learning space 119609
ducation, commun. patterns, computer mediated and face-to-face 85359
ectronic meeting systs. constr., secure interlink archit. 130803
ectronic white board, commun. aspects 96283
yperlink anchor generation in video streams using OvalTine 108381
-home computer networks, collaborative media streaming 74232
habited TV, broadcasting interact. inside collaborative virtual environs. 86301
ternet call center, collaborative multimedia middleware archit. 96228
ternet imaging conf., San Jose, CA, USA (2001) 94755
P-based sync. collaboration commun., sender delay comparison 96236
ey mgt. for dyn. multicast groups 129254
rge screen display human factors in mil. appls. 97698
arning, online, collaborative, constructivist, peer-to-peer, obj.-based systs. 113354
arning experiences, sharing through correspondence on WWW 113353
ng-dist. education via multimedia-board, CSCW appl. 108439
ed. image anal. and modelling, CORBA-based telemedicine syst. 111298
obile agents, transparent migration 74251
obile technol., use negotiation 119936
ultimedia collaboration and caching, reliable multicast Webcast protocol 130346
ultimedia presentation syst., distributed environ., floor control mechanism 74439
ultipoint multimedia synchronisation in videoconferencing appl. 85368
rs. presence cues for telephone users 108072
mart radio, community based music radio 85381
ereoscopic virtual environ., networked syst. 108375
rveillance and monitoring using low-cost microsensors 109443
nc. collaborative design based on message commun. *(Chinese)* 85316
eamSpace, team articulation work and virtual meetings environ. 130906
elebuddy, collective telepresence and tele-conversation through phys. avatars 108385
lemedical work and cooperation 111284
lemedicine multimedia commun. and CSCW 111303
elFam telemedicine syst. for family doctor practices 111274
anscollaborative mfg. software for OEM/contract manufacturer inform. access 89835
ideo based teleconferencing, distributed interact., audio/video delays 74417
irtual/real distributed environ., real time integrat. 94883
R based project meetings, collaborative 108380
eb-based cooperation with basic support for cooperative work 130970
ired and wireless platforms, collaborative multimedia appls. 108405
ireless inter-PANs for seamless interact. across mobile meetings/dispersed settings 120010
/LAN, expt. eval. of FEC on multicast audio streams 130692
see cellular radio; radiotelephony
IBE *see chemical beam epitaxial growth*
see geometrical theory of diffraction
devices *see thyristors*
see graphical user interfaces
ed electromagnetic wave propagation *see waveguide theory*
ed light propagation *see optical waveguide theory*
aev-Bleustein waves *see surface acoustic waves*
n devices
see also Gunn diodes; Gunn oscillators
anostructured devices, elec. params. meas. *(Chinese)* 81180
wo-terminal devices for mm-wave/THz appls., advances 91291
lGaAs/GaAs heterojunction bipolar TED design 102603
n diodes
6-40 GHz band Gunn diode generator, design and charact. 80268
icrostrip antennas, Gunn integrated, noise 105905
icrowave act. ccts., global modelling by iter. procedure 102637
esistive cct., domain dyn., pulse params. 80251
imul. of phys. procs. in Gunn diodes with island injectors of hot electrons 115819
W-band overmoded waveguide oscillator, Gunn diode 69040
aN TEDs, 200-300 GHz microwave power generation, Monte Carlo tech. 115820
aN-based Gunn-effect MM-wave sources, develop. 91292
n effect
see also Gunn devices
aAs HV HBTs, neg. RF-resist., Gunn effect study 91247
n oscillators
6-40 GHz band Gunn diode generator, design and charact. 80268
irect digital FM, phase locked Ka-band Gunn oscillator *(Chinese)* 68638
ECTED MM-wave oscillator 91234
urokawa-type oscillator reson. struct., equiv. cct. derivation 79613
M-wave Gunn diode oscillator, evanescent mode power combiner 80209
M-wave quasi-opt. oscillator with Gunn diode array, power combiner optim. 80287
emicond. synchronized microwave oscillators, power suppression mode 68643
ubmillimeter-wave receiver for portable submm-wave telescope, 492 GHz 80264
W-band overmoded waveguide oscillator with Gunn diodes, 94 GHz 102629
lGaAs/GaAs heterojunction bipolar TED design 102603
aAs MESFET-like oscillator perform., num. study 125741
aAs packaged Gunn oscillator, global simul. 125722
aN-based Gunn-effect MM-wave sources, develop. 91292
, plasma *see plasma guns*
ecology
see also mammography; obstetrics
xilla, digital phantom based on Visible Human Project data set 132956
rachytherapy implants, dosimetric verification 98804
reast, improved irrad. tech., 3D geom. inform./intens. modulation 76653
reast, intact, radiotherapy, virtual simul. appl. 76627
reast cancer, internal mammary lymph node chain radiotherapy 87863
reast cancer patients, virtual simul. 98667
reast cancer radiotherapy, contralateral breast dose meas., superflab appl. 98825
reast cancer radiotherapy, dosimetry meas., START trial 98625
reast radiotherapy, interfractional patient movement, dosimetric consequences 98668
reast radiotherapy, vol. changes/set-up error effects 76760
reast radiotherapy phantom design for START trial 87808
reast treatment, 3-D treatment planning syst. algm. verification 111203
gynaecology continued
breast tumour contrast-enhanced MRI, arterial input fn., T_2* change 87657
breasts, X-ray therapy, mixed energy beams/beam spoiler 111095
endometrium, estim. in US images using recursive model 132603
endometrium charactn. in connection with uterine contraction 132604
endometrium motion estim. in US image seq. 76363
ovarian follicle detect., meas. model syst. error suppression 132606
ovarian tumour in US images, 3D image reconstruction 110790
gyrators
see also network analysis
act.-R design using CFOA-poles, resonators/filters/oscillators 102336
CMOS act. inductor, L-band MMIC 69286
CMOS differential act. inductor, tunable inductance and Q-factor 91436
CMOS differential act. inductor, tunable L/Q for freqs. up to 5 GHz 91313
CMOS unity-gain cell gyrator techs., inverting CCII 68909
inductor, SC and current mode ccts. 102788
MMIC act. floating gyrator 80341
multiport current conveyor ccts., nodal anal. 125594
multiport gyrator, realization using current mirror ccts., filter appl. *(Japanese)* 80037
ultra miniature isolator with broadband isolation using ferrite gyrator 92870
gyroklystrons *see gyrotrons; klystrons*
gyromagnetic effect
see also magnetic resonance
depolarization dyadics of lossless gyrotropic media, improper integrals/Maxwell Garnett formalism 104504
ferrite filled waveguide resonator, gyromagnetic medium, FDTD anal. 92796
ferrite film, strip-slot waveguide, strip-down magnetostatic modes 104546
magnetostrictive amorph. wire micromotor, load charact. 134105
MM-wave semicond. phase shifters, charact. 80281
periodic circ. waveguide, azimuthally magnetized ferrite tube 69002
supercond. rotor, rot. in mag. field, dyn., elasticity effects 116515
Co alloy, amorph. ferromag. wire, gyromagnetic reson., HF losses 127300
gyromagnetrons *see gyrotrons; magnetrons*
gyromonotrons *see gyrotrons*
gyropeniotrons *see gyrotrons*
gyroscopes
see also fibre optic gyroscopes; navigation
accelerated rigid bodies, drift-free attitude estim. 97224
balancing machine, design & develop. challenges 122513
ceramic packaging, MEM sens. arrays 100582
comb-shape microresonators, act. freq. tuning by localized thermal stressing 104193
constr. mach. unstructured obj. attitude/stabil. control 134322
dual beam-mass struct., DRIE micromachining 86760
free/ang. speed gyroscopes, test bench 111333
GPS-augmented multisensor vehicle navig. syst., develop. and test 86261
HARPSS polysilicon vibr. ring gyroscope, MEMS technol., elec. isolated vert. electrodes 81575
hybrid optomechanical gyroscope, injection interferometer readout 86752
inertial sens., dual-axis SOI micromachined device, opt. sens. 121036
inertial sens., micromachined disc, electrostatic levitation 97575
inertial-mag. systs., attitude defn. using laser gyros 132136
jittery deflection freq. laser gyro, rate-valve value charact. *(Chinese)* 128633
knee angle/ang. vel. detect., rate gyroscope-accelerometer syst., FES 87335
LF flat-type piezoelec. vibratory gyroscope, constr. 127262
low profile inclination sens. *(Japanese)* 131925
MEMS, CAD tools, design rules for non-Manhattan shapes 92536
MEMS technol. for NASA space missions, JPL research & facilities 98883
MEMS vibratory rate gyroscope, syst. ident. 75766
miniaturized integrated opt. sens. design modelling, MQW microring laser use 131870
piezoelec. ring gyroscope, 1D eqns. 116194
PM sens./actuators, temp. compensation, FEA 120773
PM torquer 131885
polysilicon cantilever MEMS-struct., shock load, mech. reliab. 127102
quartz tuning-fork ang. rate microsensor, dyn. characts. compensation tech. 75758
ring laser gyro for track geom. params. meas. 128627
sens., low-cost, perform. augmentation 121049
simultaneous attitude control and energy storage using VSCMGs 133221
single gimbal control moment gyroscope systs., trajectory tracking, adaptive compensation control *(Chinese)* 76802
strapdown INS, navig. perform. anal. method *(Chinese)* 88057
vibr. microgyroscope, high perform., characts. 81584
vibr. microgyroscope, MEMS technol., design and fab. 70347
vibratory gyroscope fab. by mixed micro-machining 104208
visually impaired navig. syst. develop., sens., DGPS & digital maps 76714
$LiNbO_3$, opp. polarized plate, H-type single cryst. piezoelec. gyroscope 92684
$LiTaO_3$ piezoelec. gyroscope, temp. self-compensation 104428
$LiTaO_3$, piezoelec. vib. gyroscope, fig. of merit, charge sensitivity 92682
PZT film-based micromechanical/opt. devices 70333
PZT, thickness-shear-mode trapped-energy resonators, parallel field excited 92778
Si deep etching for micro-gyroscope fabr. 81626
gyrotrons
see also cyclotron masers
advanced CW technol. gyrotrons, PM syst., design, constr. and testing 69450
CARM-gyrotron, travelling and near-cutoff waves excitation 105054
coaxial cavity, structural eccentricity, eigenfrequency shift 80591
coaxial cavity gyrotron, electron beam eccentricity, gyrokinetic anal. 80590
coaxial gyrotron heterodyned microwave sigs., time freq. anal. 91556
complex cavity gyrotron with abrupt transit., SCF theory and simul. *(Chinese)* 102934
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
cyclotron-reson. maser, TW, quasi cutoff waves, cooperation 117047
DIII-D tokamak, ECR heating facility upgrade, 8.4 MW modulator/regulator power systs. 78021
DIII-D tokamak, regulated power supply for high power gyrotron filaments 68580
electron beam technol., conf., Varna, Bulgaria (Jun. 2000) 89516
forming systs. of intense gyrotron helical electron beams, num. simul. models 125971
freq.-doubling inverted gyrotwystron, phase deviation/pushing 125975
freq.-multiplying gyro TWT, phase stabil. 80614
gyro TWT, 2-stage, with distributed losses, lin. theory 91561
gyro-TWT, self-consistent nonlin. simul. model 69458
gyroklystron, freq. doubling, for advanced accelerator appls. 80603

gyrotrons continued
gyroklystron develop. for accelerator appls. 110144
gyroklystrons, shot noise, uniform plasma model 102936
gyroresonance devices, helical electron beam form. 72207
Gyrotron FU series, develop. and appls. 91551
HF gyrotrons, develop. and appls. *(Japanese)* 91553
high power microwave and MM-wave sources for fusion research, gyrotron develops. 69455
high-harmonic complex cavity gyrotron, gradual transit., beam-wave interact. *(Chinese)* 125969
high-power, high-efficiency oscill., depressed collector operation 114618
ITER, electron cyclotron heating and current drive syst. 102928
L-2M stellarator, gyrotron response to refl. microwaves 91545
large orbit gyrotron with PM syst., design 91552
magnetron injection guns, mech. tunable, design and gyrotron beam charact. 115258
MM-wave and subMM-wave devices, appls. 69454
MM-wave gyrotrons, develop. and appls. 91547
operation, electron emission azimuthal inhomog. effect 91546
photonic-band-gap resonator gyrotron 91550
relativistic gyrotron, efficiency enhancement 80604
relativistic gyrotron operating at high cyclotron harmonics 102930
relativistic SHF gyrotron, highly efficient, with microsecond pulse width 80606
single-mode operation, refl. effects 91548
synchrotron reson. maser, stimulated emission at high gyroharmonics 128034
tapered vane loaded broad-band gyro-TWT anal. 80611
$TE_{22,6}$-mode gyrotron with refls., time-domain modal anal. 69443
three-cavity freq. quadrupling coaxial gyroklystrons for linacs 110157
tunable subMM-wave gyrotrons with optimised reson. cavity, develop. 69444
vircator, microwave generation, inhomog. mag. field 115257

gyrotropy (optical) *see optical rotation*

gyrotwystrons *see gyrotrons*

H-centres
alkaline earth fluorides, rare earth doped, thermolum. spectra 82327

H^∞ control
see also H^∞ optimisation
CD player control design, perform.-robustness trade-off 86355
converters, sample-rate, sampled-data control based design 80141
decentralized load freq. control, robust H_∞ control 111920
digital PLL, loop filters design, mixed H_∞/H_2 method 68886
dual-stage HDD, fixed order H_∞ control design 81901
H_∞ fuzzy estim. for nonlin. discrete-time dyn. systs. 130118
high-speed network H^∞ flow control, μ-synthesis 130526
IM, current-fed, load vars. H_∞ control 99676
IM, reduced order flux observer *(Chinese)* 134005
IM drive H∞ field-oriented control scheme 78211
IM drives, FOC, H_∞ controller design *(English)* 123852
Italian rly., servo-actuated pantograph 100293
J-spectral factors parametrization 67703
LHD supercond. coils, H_∞ current control 71040
mag. bearing syst. with flexible rail, robust H_∞ control 127412
mag. disk drives, high-bandwidth servo control designs 92855
MAGLEV syst., H_∞ control and closed loop ident. 105691
MagLev syst. 2-block/3-block H∞ control problems *(Chinese)* 100283
miniature flywheel syst., hybrid mag. bearings H^∞ control scheme 78187
multi-machine syst., TCSC/excitation, robust coord. control *(Chinese)* 99262
noisy filter bank systs., H_2/H_∞ sig. reconstruction 73647
nonlin. chaotic Chua ccts., robust tracking control, fuzzy approach 90678
nonlin. H_∞, max-plus algm., convergence/error anal. 67899
planar manipulators, eye-in-hand syst., inverse optimal H_∞ disturbance atten. 86620
PM sync. motors, nonlin. H^∞ control 77839
power syst. oscill. damping, SVC and ASVC, robust H_∞-optimal control *(English)* 111924
power syst. stabilization, sync. condenser, fast excitation control 77253
PSS design, partial pole placement, numerator-denominator perturb. 133516
PSS design using robust gain scheduling control theory 77214
robust coord. SVC suppl. controller design 122863
robust H_∞ PSS design, normalised coprime factorisation 99287
robust static sync. series compensator design 111896
single-phase UPS inverters, H_∞ loop-shaping controller design 88958
SSSC, torsional damping improvement, robust H_∞ optimal control 112749
submarine cable laying proc. control scheme 125858
switched reluctance motor, H_∞ control, design, simul. 123900
turbogenerator governor H_∞ robust decentralized control scheme *(Chinese)* 123325
uncertain nonlin. systs., sampled meas., $\mathcal{H}_\infty$ filtering design 95676
unmanned vehicle, H∞ steering control syst., MR sens. 134518
vectored thrust aircraft advanced flight control Harrier, robust lin. param.-varying control 88233
winding systs. tension multivariable H_∞ control scheme 134520

H^∞ optimisation
see also H^∞ control
2D digital filters, H_∞ reduced-order approx., lin. matrix inequality 80087
CDMA, improved multistage parallel interf. cancellation for multipath fading channels 85529
DS-CDMA commun. syst. in time-varying multipath channels, adaptive H_∞-sub-weight equalizer 85521
dual-stage HDD, fixed order H_∞ control design 81901
dyn. systs., fault detectors design, $\mathcal{H}_\infty$ optim. 84751
envelope-constrained FIR filter design with uncertain input 107501
filter design for lin. time delay systs. 130129
filtering of delay systs., guaranteed cost/H_∞ 130143
filtering/deconvolution, LMI-based H_2, explicit formulas 107506
FIR H^∞ equalization 73695
fuzzy estim. for nonlin. discrete-time dyn. systs. 130118
H_2/H_∞ mixed filtering design in multirate transmultiplexer systs., LMI approach 131025
homotopy algms. for solving coupled Lyapunov eqns. 114090
IM vector control, flux observer, H∞ optim. 134473
nonlin. H_∞, max-plus algm., convergence/error anal. 67899
robust filtering for uncertain discrete-time state-delayed systs. 95697
robust multiuser detect. 107608
secure commun., Chua's cct., nonlin. H_∞ sync. 95747
US C-scan images, blind deconvolution, H_∞ ident. strategy 101589

Haar transforms
1D inverse Haar transform, online computing, prog. proc. 102207
3D wavelet-based multiresolution anal., microstrip low pass filter appl. 69087
adaptive Haar transforms with arbitrary time/scale splitting 118788

Haar transforms continued
arbitrary-shape printed antenna modelling, multiresolution method of mon 128840
asynchronous FIR filter banks for discrete wavelet transform 91105
buried targets, rough air-ground interface, time-domain sens. 77067
differential eqn. solving via rationalized Haar fns. 79063
fast classical and quantum fractional Haar wavelet transforms 130011
IIR filter lossy/lossless seq. transforms, image coding appl. *(Japanese)* 107
image proc., Mallat algm., restrained condition *(Chinese)* 95141
integer multiwavelet transform for lossless image coding 84496
LSI cct. video image proc., contour extraction algms. 101997
MPEG-7 std., color/texture descriptors 84387
multi-aspect scatt. data, wavelet coeffs., dual HMM charactn. 73436
multipath channel param. determ. using wavelet decomp. 84813
multiresolution time-domain FDTD/Haar num. stable interface, microw structs. appl. 94101
network traffic, independent wavelet models comparison 73758
nonlin. channel noise reduction/ident. using neural net 130269
optimal transform domain watermark embedding via LP 95048
Poisson noise, wavelet coeff. distrib. 118375
power-plane reson. anal. using Haar-wavelet-based MRTD 105819
shifted piecewise lin. transform 124459
subimage extraction by integer-type lifting wavelet transforms 94662
TLM, FDTD and Haar wavelet MRTD algms. for EM simul. 93956
watermarking method for embedding index data into colour images using wav transform 95353
waveguide discontinuities, modal multi-resoln. time-domain tech. 102509
wavelet transform for real-time image compression using FPGAs 84399

hacking (hobby computing) *see hobby computing*

hacking (illegal computer access) *see computer crime*

Hadamard codes
CATV quasi-sync. CDMA with high-order modulation 97077
CDMA multirate sigs. constr. with controlled peak-to-av. power ratio using incomplete block designs 83821
dyn. MRI, multiple resolns., phase-encode select dimens. 87632
indoor wireless appls., perform. of turbo-coded MC-CDMA 108754
low rate turbo-Hadamard codes with low decoding complexity 129162
MMSE equalizers for freq. selective multipath CDMA forward link, perfo eval. 107696
OFDM-CDMA syst. with low peak-to-av. power ratio 106058
OFDM-CDMA systs. with 4-QAM, dyn. spreading code selection method PAPR reduction 131168
space-time Hadamard codes, efficient decoding using Hadamard transf 129186
Walsh-Hadamard spreading/joint detect., excess signaling concept 73729

Hadamard matrices
bounds for determinant of Hadamard product of H-matrices 101039
Bush-type Hadamard matrix of order 324 existence/symmetric designs infi classes 114088
de brain seq. based codes, fast decoding 83872
dense coding/quantum teleportation schemes 117973
incidence matrices of SBIBDs, values of minors, growth problem appl. 89
inverse H-matrices *(Chinese)* 78751
length 40 binary self-dual cyclic codes 117976
multiuser k-ary code for noisy multiple-access adder channel 117947
orthogonal block transforms and filter banks, permutation based design 73
sig. proc., Williamson type fast Hadamard transforms 118877
unbounded error probabilistic commun. complexity 95735

Hadamard transforms
adaptive LMS block Volterra filters 118997
affine projection algm. using novel subband adaptive syst. 84757
BIST for seq. cores in SoC environ., spectral methods 101918
constrained VQ codebook design for noisy channels 72830
data hiding in compressed images, capacity estim. 95252
fast Hadamard transform, math. model and FPGA implement. 90846
generalized reverse jacket transform, even length vectors, appls. 124773
image retrieval, energy spreading transform approach 107256
image VQ with degrad. control mechanism 129720
imaging with nanoresolution, near-field optics 95231
low-complexity video coder based on discrete WHT 118582
low-correl. interframe differences, DCT-Hadamard-transform coding 11851
LSI cct. video image proc., contour extraction algms. 101997
multi-carrier CDM, amplit. distribs. for Hadamard/Fourier spreading 7470
orthogonal block transforms and filter banks, permutation based design 73
quasicyclic dyadic codes in Walsh-Hadamard domain 129052
recursive adaptive Fourier analyzer based on WHT 118830
robust oblivious digital watermarking using image transform PM 95161
sig. proc., Williamson type fast Hadamard transforms 118877
space-time Hadamard codes, efficient decoding using Hadamard transf 129186
sync. CDMA syst., perform. of UCHT seqs. 73848
unified complex transform seqs., periodic autocorrelation upper bound 128
video compression using integer DCT 95209
VQ for channels with memory 129182
WHT/OFDM, improved OFDM transm. method for selective fading chan 83819

haemoglobin *see proteins*

half-wave plates *see optical elements*

halide glasses
see also fluoride glasses
chalcohalide glasses, Nd doped, IR-to-vis. upconversion 128495
CdF_2-$CdCl_2$-NaF-BaF_2-$BaCl_2$-ZnF_2:Nd glass, upconversion procs. 104909
Sb_2O_3-CuI-NaCl(NaI)($PbCl_2$)(PbI_2) glasses, prep., struct., opt. props. 92939

Hall constant *see Hall effect*

Hall effect
see also Hall mobility; quantum Hall effect
abnormal shape meas., noncontact mag. meas. method 86948
aromatic polyimide films, partially carbonised, semicond. elec. props. 8077
ATON-thruster plasma accelerator, perform. charact. 76819
compensated semicond., impurity-assisted elec. breakdown 116135
diamond:B,N, CVD films, elec. props., acceptor/donor defects 80644
diamond:H films, surface region carrier generation 69493
diamond:N films, highly-conducting ultrananocryst., PECVD, elec. c charactn. 102980
diamond films, hot filament CVD, struct./elec./opt. props. *(English)* 12598
diamond p-type semicond. films, magnetoresist. *(English)* 125987
diamond thin film, form. of shallow acceptor states in surface region 6947
elec. anisotropic semiconds., van der Pauw meas., finite-element anal. 868

ffect continued
plastic packages, die stress drift meas. using piezo-Hall effect 67625
/V semiconds., damage caused by hard- and soft-etching plasma 69837
rmal conductor/perfect insulator/perfect conductor disordered composites, agnetotransport 91923
miconds., probing spin currents 86945
MNI films, multiple-steps implant., elec. props. improvements *(Chinese)* 26226
DI-SIMNI film, multiple-step implant., elec. props. *(English)* 91881
in valve multilayers, magnetoresist., planar Hall effect 81839
eak mag. fields 102952
lAs/GaAs superlattices, thermal budget for selectively doped heterostructs. 91782
lGaAs/InGaAs/GaAs SQW, modulation doped, electron dens., mobility 80852
lGaAs-GaAs HEMT, 2DEG transport props., quantitat. mobility spectrum anal. 92409
$l_{0.15}Ga_{0.85}N$:Mg/GaN superlattices, elec./opt. props., LED appl. 126134
lGaN/GaN HFET, electron transport props., electron dens., polaris. effect 81385
lGaN/GaN heterostruct., MBE layer limitations due to lateral inhomog., disloc. 03101
lGaN/GaN heterostruct., chem. treated/thermally oxidized surface prop. 80809
lGaN/GaN heterostruct., elec. cond., quantum corrections 80783
$l_{0.18}$GaN/GaN heterostruct., sub-bandgap absorpt., photocurrent spectra 91742
lGaN-GaN MODFET, 2DEG transport props., quantitat. mobility spectrum nal. 92409
lInAs/InGaAs HEMT, diffusing F atom suppression by PH_3 plasma treatment 15949
$l_{1-x}In_xN$ films, plasma source MBE grown, opt./elec. props. 90311
$l_{2-x}In_xSe_3$ single crysts., transport props. 126088
l_2Se_3:Fe, magnetoresist., SdH effect 80776
$ldAs_2$ crysts, transport props., hydrostatic press. effects 91720
$ld_xHg_{1-x}Te$:V crysts., Bridgman growth, transport props. 90206
$ld_xHg_{1-x}Te$/CdZnTe heterostruct., elec. props. 115363
ldO thin films, low-press.CVD and elec. props. 90407
ldTe, doping, elec./opt. investigs. 126009
$le_yFe_xCo_{4-x}Sb_{12}$ skutterudite, struct. and thermoelec. props., Fe content depend. *(Chinese)* 126090
$leRu_4(Os_4)P_{12}$, filled Skutterudite-type struct., thermoelec. props. 80769
lo-Cr-Ta/Pt film perp. recording layer, magnetis. proc. *(Japanese)* 92828
loO/Co/NiFe film with antidot array, MR, Hall resist., magnetis. 104508
$lrSi_2$ films on Si(111), transport, opt., thermoelec. props. 91723
$lu_{0.5}Ag_{0.5}InSe_2$ thin films, elec. resist., thermopower, Hall effect meas. 91728
luGaSe$_2$ films/single crysts., struct./elec./opt. props. 126103
luInS$_2$ single crysts., horiz. Bridgman growth, defect props. 114210
luInSe$_2$ solar cells using horiz. Bridgman growth method 100176
luInTe$_2$, cryst. growth, elec. and opt. props. 115358
lu_3O:N thin film, reactive RF magnetron sputtering 79200
lu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
l-CuInSe$_2$ elec. characts., impurity band cond. effects anal. 126093
lrAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
leSi$_2$ films on Si(111), transport, opt., thermoelec. props. 91723
laAs RT scanning Hall probe microscopy, mag. imaging appl. *(English)* 104515
laAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
laAs, cryst. struct./inhomogeneities, γ-ray irrad,. props. effects, detector appl. 91646
laAs epilayers, low temp. grown, defect props. 79235
laAs, monocrystalline films, MBE on AlN thick film 90287
laAs:Si, delta-doped MBE layers, elec./opt. props. 69511
laAs:Si,Be MBE growth, compensation 68196
laAs/AlGaAs:C epilayers, MOCVD, elec., opt. props., QW laser appls. *(Chinese)* 79311
laAs/GaAlAs hot electron light emitting device at low and high elec. and mag. fields, anal. 117269
GaAs/GaMnAs(InMnAs) ferromag./nonmagnetic heterostruct., spin-depend. phenom. 91766
GaAs/InGaAsN/GaAs QWs, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
GaInAs/GaNAs short-period superlattices gas-source MBE growth and charactn. 101256
GaMnAs, ferromag. epilayers on GaAs(411)A, magnetotransport props. 80762
GaN, MBE layer limitations due to lateral inhomog., disloc. 103101
GaN MBE layers, highly resistive, elec. transport 91676
GaN MOCVD epitaxial layers, influence of As doping on elec. props. 126016
GaN, controlled O doping using plasma assisted MBE 126317
GaN epilayers, ammonia MBE on (0001) sapphire, defect reduction, HFEt structs. 101225
GaN epitaxial wafers for HFETs, material/device characts. 103903
GaN films, Ga-polarity, XRD, PL, Hall effect, RF-MBE growth 91621
GaN, max. mobility predictions 102997
GaN undoped layers, PPC, RF-plasma assisted MBE 127908
GaN:Be (Mg),O, coimplantation, ohmic contact resist. appl. 126304
GaN:Be, elec./structural anal., Raman spectrosc., high resoln. XRD 81000
GaN:C films, plasma-MBE growth/doping, elec./opt. props. 126315
p-GaN:Mg, acceptor activation, microwave treatment, PL, Hall effect 81047
p-GaN:Mg, elec. activation, two step RTA 69785
GaN:Mg films, MOCVD, carrier concentratio, microstruct. effect 126051
GaN:Mg,Be films, MOCVD, Be implant., high hole conc. 69826
GaN:Si, carrier conc./mobility, IR refl. spectra *(Chinese)* 115319
GaN:Si single cryst. films on sapphire substrs., growth, luminesc. props. *(Chinese)* 68255
α-GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and IR ellipsometry meas. 69545
GaN-sapphire interface, thermally activated cond. 103184
Ge films grown on $(NH_4)_2S$-treated GaAs by MBE 101286
Ge oscillistor, electron-hole plasma, nonlin. chaos phenom. 69499
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
Ge:Sb, ICP-mass spectrometry/NAA/Hall effect anal. 80660
GeTe-Sb_2Te_3 layered cpds., Hall coeff./elec. cond./thermoelec. power 103078
GeTe-Sb_2Te_3 layered cpds., comp., elec. props. 91721
HgCdTe, MWIR, MBE growth and device proc. on large area Si substrs. 90348
HgCdTe passiv. by A^2B^6 layers, elec. props., heterostruct. charactn. 126030
p-$Hg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor band 115301
p-$Hg_{1-x}Cd_xTe$, MBE, light hole densities/mobilities, IR detector appl. *(Chinese)* 115299
HgCdTe:As, MBE, elec. props., high-operating-temp. photodetectors appl. 69503
$Hg_{1-x}Cd_xTe$:As epilayers, in situ doped, MBE growth, elec. props. 102999

Hall effect continued
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
HgCdTe/Si heterostruct., laser beam epitaxy 68365
n-$Hg_{0.80}Mg_{0.20}Te$/CdTe MBE films, interface accumulation layer, cond. *(Chinese)* 115323
ITO highly cond. thin films for display appls., deposition proc. 97622
InAlAs/InGaAs highly doped metamorphic HEMTs, subband electron props. 115960
n-InAs, high-current solid-state opening switches 80473
InAs/GaSb electron-hole syst., insulating state in mag. field, edge effects anal. 80792
InAsN film, plasma-assisted GSMBE 114276
In(As)P:Zn, MOVPE based Zn diffusion, diffusion depth, hole conc. 127952
InGaAs:Si PHEMT, single-/double-δ doped, MBE grown, charge dens. control 92388
InGaAs/InAlAs, metamorphic HEMT on GaAs, MBE, characts. 92386
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunctions, effective mass, quantum lifetime 103106
$In_{0.75}Ga_{0.25}As/In_{0.75}Al_{0.25}As$, gate-controlled 2DEG, large spontaneous spin splitting 69655
InGaAsN, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
InGaP/(In)GaAs modul.-doped heterostruct., GSMBE, HEMT/HHMT appl. 101242
In_xMoSe_2 intercalated single cryst., growth, elec./opt. props. 115348
In_2O_3/SeO_2 thin films, struct., elec. and gas sens. props. 97474
InP, MeV As and P ion implanted and annealed, elec. and opt. props. 126018
InP:Mn eval. and use for particle detectors 121493
InP:S cryst. growth, VGF tech. 114222
InP:Ti eval. and use for particle detectors 121493
p-InSb, Hall effect, magnetoresist. 103011
InSb films, MBE high-quality growth on Si(111), charactn. 68175
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
MoS_2:Re, elec./opt. anisotropic props. 91701
Ni-pillars, electroplated, ferromag. dots/arrays, Hall-magnetometry 116275
PbSe:Bi, doping, self-compensation 91965
$Pb_{1-x}Sn_xTe_{1-y}Se_y$ lattice-matched layers, LPE growth and props. 90479
PbTe thin films, thermoelec. props., percolation transit. 69563
Pt/Co/Pt ultra thin film devices, AFM fabricated defects, mag. domain wall propag. 127344
RuO_2 reactively sputtered films, resist./Hall effect 80752
Si MOSFET, dil. 2D electron syst., parallel mag. field, Hall coeff. 70084
Si detectors, radiation damage 121434
Si multilayer structs., MBE growth combining solid/molten Si evap. 103132
Si, transmutation doped semicond., Hall effect 125986
Si:B wafers, type conversion by 3-MeV proton irrad. 91609
Si:B,F implanted samples, TED reduction 115512
Si:Mn films, super-doped, gas source MBE growth, anom. Hall effect 90295
Si:P, transmutation-doped γ-irrad., defect states, elec. props. 91580
Si/Ge Si Qw MODFET, low energy PECVD, struct./elec. charactn., TEM 124890
Si-on-sapphire material/devices, RF appl. charactn. 91911
3C-SiC, donor densities/energy levels, Hall-effect meas., free carrier conc. spectrosc. 69600
n-SiC:N, 4H polytype, elec. transport props. 91726
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807
4H-SiC:P,C(Si), co-implant., n-type doping 103278
Sn-O epitaxial films on sapphire, oxid., phase transits. and elec. props. 80744
SrS, doping, elec./opt. investigs. 126009
Xe second-generation ATON-type plasma thruster, radiation and energy charact. 76820
$YBa_2Cu_3O_{7-\delta}$, high field scanning Hall probe imaging 70623
$YBa_2Cu_3O_{7-\delta}$ semicond. film, elec. characts., bolometer appl. *(Chinese)* 131903
$YBa_2Cu_3O_y/La_{0.7}Ca_{0.3}MnO_y$ HTSC multilayers, Hall effect 70639
ZnO, green emission band, fine struct. 80677
ZnO:B films, electrochem. growth, elec. props., dimethylamine-borane conc. effects 101442
ZnSe crysts., Br-doped, growth and charactn., vert. sublimation method 101164
ZnSe, doping, elec./opt. investigs. 126009
ZnTe, doping, elec./opt. investigs. 126009

Hall effect (plasma) *see plasma magnetohydrodynamics*

Hall effect devices
see also Hall effect transducers
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
BNL superconduct. solenoid, mag. field meas., rot. Hall probe 104586
built-in current sens. devices for micro-IDDQ test of VLSI chips 127008
CMOS Hall ang. posn. sens. 120748
garnet thin films, ferromag. domain structs., scanning Hall probe microscopy anal. 86465
HTSC Hall magnetometer, Stirling cryocooler, NDE 75442
hybrid ferromagnet/semicond. devices, GMR induced by mag. barriers 116497
mag. microsystems, Hall effect-based CMOS design 75507
split-current mag. field sensitive resistors, model anal. 131898
SQUID/Hall effect hybrid sens., NDE scanning syst. 70967
Si Hall devices and mag. ang. sens. 109810
Si MAGFET, low temp. operation 70107
Sr ferrites, ferromag. domain structs., scanning Hall probe microscopy anal. 86465

Hall effect transducers
2D Hall ang. detector, contactless angle meas. *(Chinese)* 120765
3D Hall struct., integrated vector sens./mag. compass 111380
5-DOF tracking syst., 2D-array of Hall sens. & PM, posn. sens. 109491
CMOS integrated Hall mag. sens., mag. flux concentrator 75475
DC power supply-ground insulating resist. meas. method *(Chinese)* 88949
diagnostic ultrasound power meter, force bal. 98311
elec. props., Hall effect imaging feasibility in humans 110762
HTSC Hall magnetometer, NDE appls. 71142
IM control syst., load profiling meas. & proc., clipping integrator 112517
large Helmholtz coil calib. at low AC mag. field levels 72204
mag. field sens. microsystems, num. offset optim. 121033
mag. flux dens. internat. comparison, field coil transfer stds. 109406
mag. sens., integrated interface electronics 97220
mag. sens., vibr. meas. 120722
magnetometric devices, charact. compensation in radiation 131884
plasma Hall effect mag. sens., macrosensors vs. microsensors 109806
single phase switched reluctance motor for vac. cleaner 134666
squirrel cage aluminium rotor, internal defects eval., Hall sens. 134052

Hall effect transducers continued
three-phase current sens., mag. sens. arrays, sig. proc. 109522
turbocompressor PM sync. motor sensorless vector control scheme 133973
Bi scanning Hall probe microscopy on AFM tip 109797
$(BiPb)_2Sr_2Ca_2Cu_3O_8$ HTSC Hall sens. AC loss meas. calib. 77406
GaAs Hall effect sens., high accuracy, MBE grown, design/fab. 75444
Hall generators *see Hall effect devices*
Hall mobility
diamond:B homoepitaxial film, growth, elec./opt. props. 115294
double-gate SOI MOSFETs, Hall effect meas. 126762
elec./opt. props. charactn., MOVPE 82425
polysilicon thermal sprayed coatings, elec. charact. 115287
AlGaAs:C, δ-doped layers, MOVPE, nipi superlattices for AM 90389
a-$Al_xGa_{1-x}As$:H films, Hall mobility/carrier conc. expts. 80757
AlGaAs/InGaAs double δ-doped pseudomorphic HEMT, MBE growth *(Chinese)* 92383
AlGaN:In,Si solar blind photodetectors, In-Si codoping 120806
AlGaN:Si/GaN:In heterostruct., In doping enhanced 2DEG, XRD 81048
AlGaN/GaN epitaxial films on Si(111), AlN buffer layer growth effect 68229
AlGaN/GaN films on Si(111), MOCVD, AlN buffer layer growth effects 124994
AlGaN/GaN single heterostruct., MOCVD growth, opt. props. 91665
AlGaN/GaN single/double HFETs, 2DEG transport props. 70198
AlGaN/GaN:Mg superlattices, p-type modulation Mg doping, resist., hole conc. 81046
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, elec. charactn. 103894
$BaCu_2S_2$, elec. props., phase transits. 91700
C(:B) diamond films, surface stucture, CL, plasma CVD, Schottky jn. appl. 68274
CdMnTe/(Cd,Mg)Te SQW 2DEG, magnetotransport meas. 80856
CdO MOCVD high mobility films and their depend. on struct. 90408
CdS films, electron beam, deposition, opt., elec. props. 69527
CdTe:Sb, impurity states, elec. studies 69802
CdTe-CdS solar cells, CdS:$CdCl_2$ vac.-evaporated window layer expts. 100130
GaAs, SI, effect of Ar^+ implant. on galvanomagnetic props. 80702
GaAs:Si,He layers, ion-beam-induced isolation 126310
GaN RF-MBE films, intermediate-temp. buffer layers, low-freq. excess noise 115324
GaN epilayer, GSMBE growth *(Chinese)* 90265
GaN films, H plasma cleaned sapphire substrs., plasma assisted MOCVD, single cryst. orient. 90458
GaN free-standing high quality templates, Hall mobility, carrier conc. 80713
GaN wurtzite films, RF plasma-assisted MBE, surface reconstruction 101300
GaN:Mg, blue LED, nitrogen plasma treatment, vacancies, reactivation 82419
p-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
GaN:Mg, novel methods, p-type/RF input activation, long-time air annealing, hole conc., PL 80983
GaN:Mg p-type films, temp.-depend. hole transport 126048
GaN:Mg/AlN epilayers, ion implant., annealing, PL 126328
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
p-$Hg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor band 115301
n-$Hg_{0.80}Mg_{0.20}Te$/CdTe MBE films, interface accumulation layer, cond. *(Chinese)* 115323
ITO films, PLD and props., laser irrad. effects 79358
ITO films, rf sputtering, struct./elec. props. 103050
InGaAs metamorphic HEMT epitaxial wafers, MOVPE grown 69144
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunction, magnetotransport 91732
$In_xGa_{1-x}N$:Mg epitaxial MOCVD films, elec./opt. characts. 69513
InN MBE growth and elec. props., AlN buffer layer effects 101299
InN films, low temp. growth, annealing, RF plasma excited MBE growth 91937
InN/Si heterojunctions, MBE, hole-barrier struct. 90301
In_2O_3:Mo transparent conductive film, prep., struct./elec./opt. props. 115328
α-In_2Se_3 single cryst. with In excess, elec./opt. props. 80766
$Pb_{1-x}Sn_xTe$ polycryst. pressed samples, galvanomagnetic props. 82356
Si, irrad. detectors, Lorentz angle anal., low temp. effects 132318
poly-Si layers, atmos. press. iodine vap. transport deposition 100067
p-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
Si:B(As)(P)(Sb) ultra-shallow abrupt jns., activation/deactivation, laser annealing 115481
Si/AlN/GaN layers, growth & elec./opt. charact., MOCVD 79298
SiC, 4H/6H polytypes, electron Hall mobility, Hall scatt. factor, dopant conc. depend. 80765
SiC, 6H, electron transport, Monte Carlo simul. *(Chinese)* 115349
4H-SiC MOSFET inversion layer, interface states 103869
SiC polytypes, semiempirical model of carrier mobility 69569
4H-SiC:N CVD films, cond. electrons, intrinsic mobility, valley-orbit splitting 69597
SiGeC:P epilayers, low-press. CVD, P doping 80989
$TlCu_3S_2$, elec. props., phase transits. 91700
ZnCdMgSe-based DBRs, high reflectivity symm. strained, MBE, charactn. 105384
ZnO:Al films, MOVPE, struct./elec./opt. props. 103044
ZnO:Al films, substr. temp. effect on struct., elec. & opt. prop. 90247
ZnO:Al transparent conductive films, DC magnetron reactive sputter prep. and charactn. 69504
ZnSe, sublimation method growth, elec. props. 68129
Hall-Petch relationship *see yield stress*
halogen lamp annealing *see incoherent light annealing*
halting problem *see computability*
Hamming codes
aliasing-free space compactor design, switching theory formulation 101965
all-opt. logic ccts., nondegenerate FWM, polariz. props. 71446
binary lin. Hamming codes, efficient algm. 106127
chaotic freq. hopping seqs., FPGA-based generator, SS commun. 73847
coding for informed decoders 129160
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
distributed sens. networks, sens. placement using coding theory 130160
ellipt. curve cryptography, compact encoding of non-adjacent forms 106280
enhanced fault model for high defect coverage 79719
fuzzy neural Hamming classifier design and training 84575
joint source/channel coding design 94303
lin. codes, computational model 106077
min. av. dist. of binary codes, LP approach 90023
min. dist. bounds for lin. codes over GF(7) 94318
near-optimal codes on two-state Markovian additive channel 129189
perfect binary codes, struct. of i-components 94287
Hamming codes continued
prog. Hamming neural network feature extractor *(Chinese)* 102449
self-dual codes, min. dist. and decoding capacity anal. 129043
subcodes of Hamming codes, near-optimality on two-state Markovian add channel 129021
subthreshold CMOS analog MAP decoder for (8, 4) Hamming code 6895
systematic binary alg. block codes, iter. decoding 72826
systematic m-ary single-sym. error correcting codes 83841
turbo product codes decoding, fast Chase algm. appl. 129016
hand tools
universal motor struct. using soft mag. composites 133926
handheld computers *see notebook computers*
handicapped aids
3-D arm movements recogn., fuzzy rule-based approach 87923
Arlyn Arm robotic workstation, classroom eval. 98733
assistive technol. projects for engng. students 87927
barrier-free passenger inform. terminal syst. research *(Japanese)* 122359
bladder controller nerve sig. analog proc. cct., implantable, low-power CM 76677
blind people, auditory guidance syst. with sig. transform. 133380
blind pers. intell. guide-stick 111167
blind person's US navig. aid, DSP-based, spatial hearing 133060
blinking commun./control channel for disabled people, image proc. 87930
brain-computer interface, five-classes, inform. transfer rate 122358
bulk micromachined electrostatic microvalve, curved-compliant struct. pneum tactile display 87922
Bump Around automated bumper car for children with disabilities 111176
Capstone engng. design projects to aid disabled pers. 98735
Child Mobility Car 111179
cognitive rehabilitation using telemedicinal VR 111278
disabled pers. movements, opt. fiber curvature sens. 98731
DSP-driven cochlear prostheses, eight-channel-stimulator design 122353
E-Racer, joystick controlled go-kart 111175
EEG-based brain-computer interfaces, motor imagery control 111185
elec. cart for disabled pers., develop. and use of 3D CAD syst. *(Japan* 100267
electrolarynx with, pitch control fn. and eval. *(Japanese)* 87921
ergonomic consequences of assistive technol. for disabled 98734
FES for paralysed extremity fn. restoration 133061
Flexibot, multi-functional general purpose service rehabilitation robotic 122
Get-Up and Go elec. wheelchair and seat-lift mechanism 111181
hand gesture contours, automated class. for gesture-based interact. and comm 73127
HandTalker, multimodal dialog syst., sign lang. and 3D virtual human 731
hemiplegic patients' adaptive FES switching syst. 122357
hidden picture transm., video syst., CCITT T.4 2D compression 84370
Hybrid II test dummy, kinematic comparison to wheelchair user 111183
Implas LSI microchip, nerve stimulation, body fn. control 122337
indoor pers. navig. syst., IR interactive commun. 111184
inform. presentation mode change for disabled, using AI 111168
integrated environment's control syst. for quadriplegic pers. 111187
Internet robot supporting telepresence, constrained image understanding 118
intraocular microsystems, retina implants, press. sens. and vision aids 1330
Japanese Sign Language, non-manual inform. recogn. 73554
knowledge-based multimedia telecare syst. for elderly and disabled 133177
lang. rehabilitation using cognitive approach, assistive technol. 98737
LED directed headswitch controlled motorized wheelchair 111173
LIPPS, telephone with animated face for hearing-impaired 111171
LipTelephone, videophone for deaf people 108482
Mandarin speech, tone enhancement for listeners with hearing impairment 736
MANUS, wheelchair-mounted rehabilitation robot 87932
Minimeter Maxi, disabled pers. computer interface 111169
mobile commun., networked society 74800
Morse code recogn. for users with phys. impairments, neural network a 87933
Morse code recogn. syst., backpropag. neural net, disabled pers. appl. 1111
Multi Remote appliance controller for pers. with disabilities 111174
multiband dyn. range compression (MDRC) algm., hearing aid 111182
multilingual speech synthesis software using keyboard input 111172
neuromorphic VLSI cct. & spinal cord real-time interact. 122329
Nokia(c), accessibility solns. 113435
non-invasive vision syst. for blinds 98729
occupational therapy, engng. students & assistive technol. interact. 87928
paralysed patients, EEG-based commun., self-initiation 76717
patient hand movement, assistant force compensation by exog nous/neurophysiological sigs. 129516
pointing device, EMG controlled, neural net appl. *(Japanese)* 87919
posn. sens.-controlled computer mouse for disabled 87925
powered wheelchair controller using master-slave control archit. 133058
psychosocial impact of electronic aids to daily living 98732
real-time news closed caption prod. syst. 76716
rem. sign lang. via wireless network *(Japanese)* 87929
retina implant for stimulation of ganglion cells, laser microperforation 1223
Rise and Shine automated Hoyer Lift for pers. with disabilities 111177
scanning telephone dialing aid, hand malfunction pers. *(Chinese)* 98730
senior design projects, dist. learning 78508
sign lang. recogn. and lip motion via parallel multistream model 73555
speech handicapped children, multimedia supported pronunciation traini 111188
speech rate conversion syst., high-quality real-time *(Japanese)* 83977
speech recogn. software interact., disabled and traditional users 106411
speech-based user interfaces and subtitling for deaf 111170
TV programs, automatic closed-caption prod. for hearing-impaired *(Japane* 86293
two-wheel drive wheelchairs, steering algm., vector control, microcontrol 133062
undergraduate & graduate design projects in bioengineering 87295
upper limb five-DOF powered orthosis, design 87917
VAHM robotic wheelchair, US localization method *(French)* 76713
vibrotactile sensation thresholds rel. to pulse burst stimulus param. 76715
videophone for hearing impaired using MPEG-4 tools 96247
virtual holographic recogn., digital methods, med. appls. 82967
visually impaired, humane multimedia interface design 87931
visually impaired navig. syst. develop., sens., DGPS & digital maps 76714
voice rem. control device, SICARE *(English)* 122356
walking guide tactile interface for visually impaired 84654
walking/carrying assistance for in-home elderlies, robot arm 87926
wearable master device for spinal injured pers. as control device for wheelcha 133059

capped aids continued
heelchair assist devices 111178
heelchair Tri-Module and Controller 111180
heelchair users, custom contour cushion fab., press. mapping method 87924
ing, materials *see materials handling*
sets (telephone) *see telephone sets*
writing recognition
2iA CheckReader, commercial bank check recogn. syst. 84517
t. digit classifiers, separability optim. approach 129533
pect ratio adaptive normalization for handwritten character recogn. 73553
hinese bank check amount recogn. and segmentation 84518
rsive handwriting recogn. via HMM based two-pass approach 73309
git class., Hamming neural network feature extractor *(Chinese)* 91130
screte HMM, discrim. power indicator 129935
ocument proc., image rot. 94678
ducation, Electronic Chalk, Java-multimedia-table for classroom and teleteaching *(German)* 130939
ature extraction and fuzzy set theory for handwriting recogn. 129679
rensic studies on handwritten documents, computer based syst. 84083
zzy curve-tracing algm. 129422
ndwritten Chinese character recogn. 73424
ndwritten signatures, real-time verification using hybrid optoelectronic method 129587
rs. key generation for secure commun. syst. 94359
gmentation of touching handwritten Japanese characters 94892
gnature class./recogn., writing on digitising tablet 106670
gnature verification online via model-guided segmentation 129678
gnatures, offline forgery detect., local correspondence method 107211
keleton extraction by shape decomp., handwritten Hangul characters *(Korean)* 94923
ructural freehand pattern ident. based on drawing manner ident. 84540
DNNs, time delay dyn. nonlin. neural networks, learning algm., appls. *(German)* 114910
nconstrained handwritten numeral string segmentation 95574
ord segmentation method for handwritten Korean text lines *(Korean)* 94925
riter ident. using text line based features 129928
written character recognition
ct. digit classifiers, separability optim. approach 129533
rabic handwritten text-line extraction 129669
spect ratio adaptive normalization for handwritten character recogn. 73553
ank cheques, handwritten dates, knowledge-based segmentation syst. 129671
ank cheques, handwritten legal amounts segmentation, feedback-based approach 129941
inary handwritten text images thinning, triangulation procedure 95461
razilian bank cheques, modular syst. for num. amount recogn. 129672
roken handwritten digits anal./reconstruction 94692
heque proc., images binarization, image depend. model 129600
hinese bank check amount recogn. and segmentation 84518
hinese character recogn. 73424
hinese handwritten character recogn. through video camera 94690
hinese OCR using Gabor feature extraction 84248
onditional independence assumption effects on handwritten character segmentation 129666
ursive handwriting recogn. via HMM based two-pass approach 73309
ursive handwriting segmentation method, character shape extraction appl. 94691
ursive word segmentation, morph. method 94693
ictionary learning by adding hyperspherical templates *(Japanese)* 73449
istributed computing for lexicon-driven handwritten word recogn. 129680
eature discovery, deterministic generative models 129737
orensic studies on handwritten documents, computer based syst. 84083
orm document proc., Chinese handwritten field data extraction, gravit.-based algm. 95435
and-drawn shape outline capture via recursive subdivision 84570
igh speed VLSI archit. 90945
HMM based syst. for handwritten numeral string recogn. 129673
mage recogn., hardware-friendly soft-computing algm. 118702
ndiv. validation 129929
ntell. character recogn., stat. approach 95565
Kannada handwritten characters, on-line recogn. using wavelet features/neural classifier 95468
ine drawing segmentation into lines of different orient., neural net-based method 118699
multi-ring/single-ring differential chain coding for telewriting appl., efficiency 118625
multiple handwritten word recogn. techs. fusion 84592
multiresolution recogn. of offline handwritten Chinese characters 129676
Mutual Information for handwritten isolated word recogn. 129681
Off-line recogn. of unconstrained handwritten numerals based on skeleton coding *(Chinese)* 106128
off-line script recogn. syst., comparison of character n-grams and dictionaries 129665
paper based user interface for editing documents 94885
prog. Hamming neural network feature extractor *(Chinese)* 102449
secondary digit class. using key features 94891
segmentation of touching handwritten Japanese characters 94892
segmentation-free recogn. of handwritten touching numeral pairs via modular neural net 129554
skeleton extraction by shape decomp., handwritten Hangul characters *(Korean)* 94923
stat. image obj. recogn. using mixture densities 84604
stroke extraction, XYTC transform 129926
stroke-based directional feature extraction for handwritten Chinese character recogn. 129677
structural feature extraction, skeletal graphs appl. 129927
touching numeral segmentation, water reservoir based approach 129942
unconstrained handwritten numeral string segmentation 95574
unconstrained handwritten text recogn., vocab. size and lang. models 129667
word recogn., slant correction, 2D warping *(Japanese)* 95465
word segmentation method for handwritten Korean text lines *(Korean)* 94925
nkel matrices
electrocardiographic p-wave morph. class. 76308
Shanks transform., condition nos. 114072
struct. total least sq. problem for Hankel/Toeplitz matrices 114079
subspace state-space syst. ident. via exploitation of displacement struct. 79035
nkel transforms
borehole induction meas., hybrid EBA/CG-FFHT method 88099
borehole induction meas., hybrid FFHT-EBA method, inverse algm. 88104
circ. disk microstrip antenna on uniaxial substr., Green's fns. determ. 94151
Hankel transforms continued
continuous Euler transform. for FT of slowly decaying fn. 68092
densely packed microstrip interconnects, anal. using sparse-matrix/canonical grid method 89852
image raw data preprocessing, Fourier-Hankel transform 118295
multilayered media, dyadic EM Green's fns. calc. 117662
Shanks transform., condition nos. 114072
shaped reflector antenna for 60-GHz radio access points 94124
thick conducting plane, magnetostatic pot. penetration into two circ. apertures 105678
haptic interfaces
see also data gloves; force feedback
digital surgery, human-robot symbiotic interact., haptic whole arm manipulator 122451
endoscope, virtual, haptic/visual feedback, for training 98164
EVA gloves, space environ., SkilMate finger develop. 97207
landmine detector operator training, motion tracking, virtual mine lane 77112
maxillofacial operation planning using VR techs. *(German)* 111076
med. robot haptic interface connection 111079
microsurgery, telerobotic, haptically augmented control 98594
microsurgery, tissue props. and pulse meas., force feedback-based microinstrument 98595
nano scale interact. and manipulation, bilateral scaled teleoperation syst. develop. 90595
SAW tactile display, VR 92698
vibrotactile sensation thresholds rel. to pulse burst stimulus param. 76715
walking guide tactile interface for visually impaired 84654
hard disc drives *see disc drives; hard discs*
hard discs
see also disc drives
100-kTPI HDD, Φ-shaped actuated suspen.-based piezoelec. microactuator 116461
biological sigs., long-term DAQ, storage and presentation, Microsoft Windows appl. 110527
BLDCM drive spindle vibr., eccentricity calcs. 134072
brushless DC spindle motors, robust torque optimisation 78220
CMOS G_m-C biquadratic stage for PRML read channel appl. 102337
CMOS OTA-C seventh-order lin. phase filter, HDD read channel systs. 91039
cyclically loaded mag. disks texture fatigue, repeated load test *(Japanese)* 81897
demodulation of servo tracking sigs. printed with litho. patterned master disk 116364
disks, rot., reson. and stationary waves 70520
drive actuators, prod. cost rel. to bandwidth, FEM anal. 92844
drive head-disk interface, act. control 81900
drive spindle motor, electromechanical-coupled field anal. *(Korean)* 77900
drive vibr. compensation, MEMS-based accelerometer 92858
drives, min. posn. error sigs., controller optim. 134427
dual actuator type HDD, dyn. anal., design params. 92845
dual-stage actuator disk drives, improved servo perform., track follow, track seek, and settle 116462
dual-stage HDD, fixed order H_∞ control design 81901
electrostatic microactuator optimally designed for HDD 99874
ferrite thin film, reactive sputtering and mag. props. 116285
flying slider in HDD, oil-repellent treatment 104529
Fujitsu next-generation data storage technol. *(Japanese)* 116327
GMR heads, mag./mech. spacing, thermal behavior 92815
GMR spin valves, growth, surface/interface effects, UH-dens. data-storage appl. 104522
HDD, BLDC spindle motor, unbalanced-mag.-pull optim. 123530
HDD, dyn. ramp load/unload friction testing 116452
HDD, hard disk assembly, self-servowrite clocking proc. 116459
HDD, head-disk interface tribology, accelerated testing 92843
HDD, high-speed mag. fluid bearing spindle motor 134096
HDD, mag. printing, proc. optim. 116360
HDD, servo track writing, Printed Media technol. 116458
HDD, thermal activation vol., computer simul. 116359
HDD, ultra-high-dens. perp. recording *(Japanese)* 92853
HDD head-disc spacing var. suppression, act. flying height control 116308
HDD slider & disc motion meas. using CD-ROM syst. 127369
HDD slider motion meas. using laser beam, 3-facet micromirror 127820
HDD suspen. vibr. meas., US pulse-echo tech. 116309
HDDs, ultra-high-dens. recording, mag. materials *(Japanese)* 92854
HDTV, HDD recording/playback, transport stream proc. LSI 120546
head disk spacing var. meas. under vibr. conditions, real-time method 121182
head readout sig. AM, micro-waviness effect *(Japanese)* 92852
head-disk interface, lubricant bonding fraction effect 70542
head-disk spacing meas., opt. interferometry, error anal. 92812
head/disk interface, lubricant moguls form. 70539
head/hard disk thermal asperities, test method 92814
high-bandwidth drive macro/microactuation 81748
high-dens. disk drives, dual-stage actuator control 92857
intell. storage of pers. video files *(German)* 70518
long. recording media, advanced, SNR improvements 116370
lubricant films, mag. hard disk, accelerated wear test 101635
mag. contact duplication, lithographically patterned master medium *(Japanese)* 92837
MR/GMR-based mag. heads, ultra-high dens., constr./technol. 127373
multi-zone in-home hard disk video recorders, min-max subsequence problems 120585
multilayer inplane bending piezoelec. actuator for dual-stage head-positioning control syst. 104431
multiple disk/spindle assembly, model/low-vibr. control 92856
NEC high speed/large capacity mag. head technol. *(Japanese)* 104525
next-generation digital TV using std. Internet technols. *(Japanese)* 120533
normal incidence pol. interferometry for flying height and head-disk spacing meas. 121220
num. eval. of heat and fluid flow within rot. disks 81904
perfluoropolyether lubricant films, hard-disk media 104532
perfluoropolyether lubricant for hard disk media, chem. props. 81902
perfluoropolyether lubricant thickness meas. on mag. disk surface 92806
perp. recording, disk drive integrat. issues 116329
pers. digital recorders 75326
PFPE lubricant films of hard disk media, cyclotriphosphazene additive microphase separation investig. 70540
PFPE lubricants on C-coated Al_2O_3-TiC sliders, head-disk interface appl. 92813
piezoelec. microactuator, high track dens. HDD appl. 134325
real-time video storage, hard disk based *(Chinese)* 95140
small acoustic chamber screening, meas. var. reduction 75914
SOI BiCMOS 800 Mbit/s write driver for HDD 114888

hard discs continued
superhigh dens. mag. recording, prospects *(Chinese)* 92840
surface, slider dyn., take-off height 116449
technol., superparamagnetic behaviour, patterned media 116306
textured slider/textured disk contact deform., stiction 92811
TMR jns., long. bias method using exchange coupling field 81920
track deviation, nanometer-scale accuracy, external posn. sens. 116460
TV linked content server systs. for video area networks *(German)* 75320
ultra-high dens. HDDs, head technol. to achieve more than 100 Gbits/inch^2 *(Japanese)* 116315
ultra-low mag. disk head fly height control, CMOS MEMS-based electrostatic microactuator 123708
ultrahigh dens. HDDs, 300 Gbits/inch^2 technol. roadmap *(Japanese)* 81903
Zygo Pegasus 2000 fly height testers, meas. uncertainty 127362
Au-to-Au interconnection flip-chip bonding, COS HDD assembly 113661
C coatings, charactn. of nano-wear mechanisms 68476
a-C tetrahedral films prepared on mag. hard disks, deposition and props. 104517
a-C:H DLC film on Al_2O_3-TiC sliders, tribo-chem. wear 92809
C:H DLC films, O_2 gas effect on deposition & film quality, Raman spectra 68155
a-C:H, Fomblin Z lubricant films, TDS 104531
C:H overcoats, perfluoropolyether ZDOL lubricant decomp., tribology of head/disk interface 70521
Co-Cr film, perp. recording, ultra-high dens. HDD *(Japanese)* 70519
Co-Cr perp. recording medium, ultra-high dens. HDD technol. *(Japanese)* 116475
CoCrTa films for hard disks, analytic soln. for mag. orient. between grains 116258
CoPt patterned media with perpend. mag. anisotropy, fab. and props. 116265
$CoPt_3$ irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
FePd irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
FePt irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264

hard magnetic materials *see permanent magnets*

hard metals *see cermets*

hard soldering *see brazing*

hardening
see also dispersion hardening; radiation hardening; softening (metallurgical); surface hardening; work hardening
epoxyacrylic oligomers, UV-curable, fibre protective coatings appls. 116557
nonlin. structural response, sensitivity anal. and optim. 79131
piezoceramic resonators, reson. freq. stabil./domain struct. *(Polish)* 70438
polyurethane-acrylates, protective coatings in opt. fiber technol. 116558
precip.-hardened copper alloy messenger wire, durability eval. 78295
$Al_xGa_{1-x}N$:Si,Mg/GaN, mech. props., impurity doping effect 81025
Sn-Pb eutectic solder joints in microelectronics packaging, constitutive model 113469

hardness
see also abrasion; hardness testing; Vickers hardness
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
diamond film on porous Si, PL, passiv. *(English)* 125988
diamond films, nanocryst., biased enhanced microwave plasma CVD 114326
diamond films, nanocryst., microwave plasma CVD synthesis, roughness anal. 114325
diamond-like C coating DC-RPECVD on OPC drum, DC power depend. anal., laser printer appls. 68225
DLC hard films, direct ion beam deposition from RF ICP source 79211
elastograms, simulated, class. based on texture features 110825
hard disk coatings, charactn. of nano-wear mechanisms 68476
mag. storage, layered materials, continuous stiffness meas. 92849
mag. tapes, dyn. mech. charactn., nanoindentation methods 114562
micro-reducer, design, perform. and reliab. study, 3D micro-mechanisms 70339
photoresist film, mech. props., He ion irrad./annealing 90579
photosensitive copolymer comps. for opt. inform. proc. and storage 71204
plastic encapsulant material props., effects of temp. exposure above glass transit. 67566
PSG, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
reverse tone etchback STI CMP, modeling 92078
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
steel, plastic deform., scanning SQUID microscopy 68486
SU8C resist, electron beam lithog., exposure, micro-optics appl. 69977
Ag-La_2O_3 contact material, prep. and props. *(Chinese)* 101505
Ag-W elec. contact materials, Ni addit. effects 79425
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
Al-Si casting mold materials, surface modif. by plasma-based ion implant. *(Japanese)* 79423
Au wire bonding for organic PCB, metallization characts. effects 115166
BN_x-SiN_y composite films, multisource plasma CVD synthesis 124900
$Ba_2Be_2B_2O_7$, UV-NLO material, prep., struct., SHG *(Chinese)* 72010
$BaSrTiO_3$ thin films by PLD, microstruct./props., O_2 partial press. 90466
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
C ion beam deposited overcoats, mag. disks, mech. strength, wear resist. 116435
C tetrahedral amorph. film by filtered cathodic arc deposition for disk overcoat 116434
a-C:H DLC films, deposition methods for GMR heads 79293
a-C:H,F films, PECVD, F incorporation 68261
a-CN_x films, N-rich, deposition, charactn. and appls. 90411
a-$C_{1-x}Si_x$:H alloys prep. by high plasma dens. source 68264
Cr_2O_3 plasma-splayed ceramic coatings, microstruct., high-temp. tribological props., additives effects 68409
H-silsesquioxane spin-on polymer low-k film, proc./props., CMP charact. 92149
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
Si-C-N films deposited by microwave plasma CVD on Si with buffer layers, characts. 114332
SiN_x dual ion beam deposited H-free films, mech. and etching props. 127098
SiO_2, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
SiO_2, silica self-assembled aerogel-like low dielec. const. films, prep. 79418
SiO_2:methyl films, CVD, struct./dielec. props. 124893
SiOC, PECVD layer, chem. mech. polishing 115645
SiOC very low-k ILD film with extendibility to k<2.7, material props. 92150

hardness testing
3D parts laser-assisted generation, blown powder proc. 105636
mag. storage technol., applied surface anal., review 104526
NPP cable ageing, nondestructive diagnosis 101568

hardness testing continued
partial melted joint using off eutectic lead-free reflow solders, microstruct. mech. props. 67643
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, overpressure proc., J_c 70716

hardware description languages
1D/2D order stat. filters, FPGA design 91099
64-point FFT design example using A|RT-Designer, OFDM radio 101138
8051-like microcontroller, transient fault tolerance, VHDL description 1255
AC machine, complex motor direct torque control, VLSI design approach 78
AHDL simulator, event-driven ITA, dyn. partitioning 101645
AIRE/CE intermediate format for IC CAD tool integrat. 68513
analog chip design automation using software tools 79540
appl.-specific reconfigurable RISC proc. core, embedded appls., FPGA prototyping 68849
army network protocols with conflicting timers, efficient test generation 1078
ASIC cell fault models, VITAL compliant VHDL simulation 102424
assertion methodologies for Verilog design 68698
asynchronous logic, Blowfish algm. implement. 101942
ATLAS Level-1 Calorimeter Trigger Pre-Processor syst., ASIC design pr 121727
automatic functional vector generation using interact. FSM model 79741
automatic generation of parallel CRC ccts. 101904
BCH min. wt. decoder for double error 129003
behavioral cct. modeling conf., Santa Rosa, CA, USA (2001) 124240
behavioral models for VLSI chips, verif. using seq. sampling tech. 101953
bus controller verification, imPROVE-HDL model checker appl. 79826
chip multiprocessor design 114779
coarse-grained dyn. reconfigurable hardware archit. for wireless commun. 965
compilation for software engineers, ATM example 68500
DECT ASIC, RF interface design, mixed mode methodology 102423
dependable proc. perform., pre-silicon perform. validation 102236
DES encryptor/decryptor core in FPGA 106230
digital cct. design, reusable intellectual property block verification, prog. sy 68705
digital high-speed CCD camera, interface design, VHDL *(Chinese)* 97355
digital timing recovery, software radio receiver, FPGA implement. 68788
discrete wavelet transform computation using RNS archit. 114700
distributed security schemes for networks 83947
DSP-RAM archit. for parallel DSP in memory, implement. 114809
EDA HDL 125170
education in µP design, Abel-HDL and prog. logic cct. 113286
electro-thermal simul. of MEMS microsystems with mixed abstraction modelli 81589
embedded proc., RTL fault simulator 79750
embedded syst. simul.-guided prop. checking, multivalued AR-automata 797
Ethernet interface soft IP, spec. and design 108193
Fairisle ATM switch fabric using FormalCheck, model checking 131027
ferroelec. thin film capacitors, cct. simul. model, AHDL implement. *(Korea* 81786
FIR filter, low power design, image proc. appls. 125612
floating point CORDIC proc., low power, behavioural synthesis 68822
formal verification effects on quality in IP design and implement. 79724
formal verification with protocol compiler, pipelined FIFO-like buffer 13040
FPGA automated hardware synthesis, MATLAB appl., precision & error an 79705
FPGA implement. of PWM pattern generators 114736
FPGA optim., VHDL, public-domain Matlab software 102063
FPGA real-time prog. *(German)* 125412
FPGA struct., fully functional and self-configurable multipliers, VHDL descri tion 79812
generic components, pure VHDL and VHDL abstractions, Open PROMOL exte nal scripting lang. 79714
Genevieve based semi-formal test generation 125368
hardwired distributed arith. compatible DCT/IDCT archit., image compressio 95124
high-level hardware transforms., complete spec. and implement. methodolo 68670
high-level specs., develop. cost and size estim. 79664
IEEE1394 syst. simul. environ. and design of link layer controller 101960
IM digital neural current controller scheme 112528
IM DTC-based speed control, ASIC design 134051
image compression, distributed algorithm based 2D inverse DCT *(Chines* 118512
indust. DSP block, semi-formal test generation, Genevieve methodology 1022
integer 1-D discrete wavelet transform archit. using FPGAs 114730
logic ccts., formal verification, recurrence eqns. & equivalence checking 687
low-bit motion detector archit., power scalability and VHDL model 95275
low-power mixed sync./asynchronous implement., automatic FSM synthes 114694
Merlot multiprocessor chip, logic design environ. *(Japanese)* 79762
microelectrofluidic systs. hierarchical modeling/simul., perform. anal. 104157
microprogrammed proc., self-repairing execution unit 125539
mixed hardware/software systs. generation from SDL specs. 79665
mixed-HDL simul. for reduced SoC design complexity 114684
mixed-sig. modeling with AleC++, HDL features 68499
MOEPE, merged odd-even PE archit., stereo matching hardware *(Korea* 84179
MPEG-2 video stream decomp., variable length decode, VHDL descriptio *(Chinese)* 96318
MPEG-2 VLSI video decoder, VHDL description and verification *(Chines* 119820
multi-lingual synthesis and verification environ. 125304
multiple EDA tools within ASIC design flow 101879
OTDM syst., behavior description and simul. using VHDL 96831
overcurrent relays, VHDL modeling 88479
pipelined archit. proc. verification by behavioral-level-only HDL code 79501
pipelined reprogrammable microcontrollers, high-level synthesis techs. 68832
portable high-speed clock generator, full pull-in range, HDL 91001
rapid develop. of audio proc. hardware, Handel-C 101656
reconfigurable computing archit., coherent compilation cycle 125369
reusable direct digital freq. synthesizers, VHDL-based design/design methodol ogy 125585
RF ident. syst., commun. protocol, modularized design *(Chinese)* 120115
RNS converters, automatic generation, archit. level exploration, CAD too 102218
RT level VHDL simul., cycle-based approach 68706
RTL VHDL simul., synthesizable, fast cycle-based approach 68514
S3C2400X indust. embedded SOC product, model checking 125367

vare description languages continued
heduling and placement methods for C to hardware/software compilation 90811
mantics handling with OO intermediate format 114587
q. logic synthesis syst., RTL form *(Chinese)* 125276
mulink based hardware/software codesign flow/IP library 125366
C design, gradual refinement of commun., mixed-level cosimul. 79709
C design methodology for 3rd millennium ICT products 101887
C device modelling for virtual test using VHDL 80115
C programme, digital hardware organization course, block-oriented design 125292
2V, post-layout spice simul. accel. using Verilog gate-level modeling 114583
PARC v.8 Integer Unit, proc. core design and synthesis 79945
T, PERL package for LSI simul. and test environ. 101975
at. shift registering sorting archit., fair queuing algms. in high speed routers *(Chinese)* 108224
opping criteria comparison, high quality behavioral verification 79723
mbolic RTL simul., RT-level Verilog constructs, 8051 micro-controller design 125338
ystemC, behavioral synthesis, compiler generation techs. 79674
erm Rewriting Systems, concurrent systs., nondeterministic and asynchronous behavior 101958
ming modelling in HDL, fund. principles 70234
i-state buffer inference in HDL synthesis 101972
rySense develop. platform for sens. systs. realization 109423
eriBox CBT syst. for chip design, logic synthesis, multimedia techs. 124257
HDL behavioral-level designs, verif. pattern gen. for coding error detect. *(Korean)* 114568
HDL described replicated archits., induction-oriented verif. 68687
HDL interconnections analog macromodels, timing behavior, event-driven simulators 101883
HDL lang., logic synthesis of digital systs. *(Spanish)* 79657
HDL lang., loop statement synthesis method for RTL synthesis *(Chinese)* 114579
HDL models of parallel n×n bit multiplication blocks, DSP appls. 102194
HDL procs., behavioral test generation 68679
HDL simulator accel. by embedding syst.-cell library *(Chinese)* 104025
HDL soft core based model of configurable microcomputer family 79934
HDL transparent fault injection and simul., shared variables and linked lists 79833
HDL-AMS based mixed-sig. simulator *(Chinese)* 114578
HDL-AMS library of RF blocks models 125191
HDL-AMS modeling/simul. of a-Si:H pass. pixel sens. for med. imaging 109719
HDL-AMS simul. for batt. chargers 90734
HDL-based implement. of area- and power-efficient filter archits. 114881
HDL-based seq. propagated concurrent fault simul. method 79752
HDL-SPICE mixed-sig. ccts., distributed event-driven simul. 125625
ideo decoder, multimedia sig. proc., VHDL syst.-level design 107049
ITAL, VHDL ASIC libraries, ASIC modeling spec. 127009
ITAL VHDL gate level std., cycle-based simul. 125405
LSI design IP protection, constraint-based watermarking techs. 116005
LSI functional test synthesis, design methodology 92459
wavelet coder/decoder, FPGA implement. 68754
WCDMA matched filter, FPGA implement. *(Chinese)* 95829
Web server, functionally minimized embedded, network connectivity for small appliances 130637
WLAN encryption algms., hardware implement. 130714

lware-software codesign
ppl.-specific multiprocessor SoC, generic archit. model 79676
ppl.-specific reconfigurable RISC proc. core, embedded appls., FPGA prototyping 68849
ASIP SoC multimedia codesign based on multicriteria optim. 119808
cache memory syst. energy behavior anal. using software/hardware optim. 114740
code placement in hardware software co-synthesis, perform./cost effects 79700
code-perturb. simul.-based hardware verification, black- and white-box approach 79725
commercial PCs, mil./commercial aircraft interface archits. 76809
computational phys., HW/SW co-design, formal methods, conf. Iechia (June 2000) 113261
conditional task graph allocation/scheduling, hardware/software co-synthesis 81441
conf., Copenhagen, Denmark (April 2001) 78419
cooperative voltage scaling between OS and appls. for low-power real-time systs. 114784
design methodology for high perform. ICs, wireless broadband radio baseband case study 125305
design verification, hardware tools 125380
digital high-speed CCD camera, interface design, VHDL *(Chinese)* 97355
digital mobile transceiver single chip implement., design planning 78574
DSP cores, hardware/software partitioning algm., register files 68852
DSP systs., parameterized dataflow modeling 118850
DSP systs. for DSL appls., design for low-power implement. 125527
electronic software engng. education, large-scale parallel-embedded appls. 124275
embeddable FPGA archit. for ASIC designs, hardware/software soln. 102116
embedded instruction memory decompressor, HW/SW partitioning 79660
embedded networking appls., syst.-level prototyping 95971
embedded proc. in codesigns, customizable partitioned caches 79722
embedded syst. simul.-guided prop. checking, multivalued AR-automata 79708
embedded systs., OO modeling and co-simul. 101665
embedded systs., systematic approach to software peripherals 79906
embedded systs. design and verif., reuse oriented prototyping methodologies 101954
flexible granularity automated hardware/software partitioning, high-level estim. techs. 68700
FPGA automated hardware synthesis, MATLAB appl., precision & error anal. 79705
FPGA hardware/software co-design in embedded syst., partition decision, graduate course 125294
GA driven hardware-software partitioning for dyn. reconfigurable embedded systs. 114673
generic wrapper archit. for multi-proc. SoC cosimulation and design 84959
high-level specs., develop. cost and size estim. 79664
HW/SW codesign framework based on distributed DSP VM 125321
IEEE1394 syst. simul. environ. and design of link layer controller 101960
IEEE 802.11 WLAN, enhanced MAC implement. 130378
indust. sens. networks, embedded networking, hardware/software design 109451

hardware-software codesign continued
instruction-level power anal. model with data dependency, generic RISC proc. 114788
integrated hardware-software co-synthesis and HLS, embedded systs., power/latency constraints 79699
IP-over-ATM frame reassembly, hardware/software tradeoffs in integrated archit. 74262
logic optim. and code generation for embedded control appls. 79667
MAGELLAN, multiway hardware-software partitioning/scheduling for latency minimization 79661
MetaCores, design and optim. techs. 125178
microcontroller-based pass. standby UPS design project 124249
mixed control and dataflow systs., modelling in MASCOT 125289
mixed hardware/software systs. generation from SDL specs. 79665
modelling and eval. of hardware/software designs 79658
multi-std. video and image codecs, HW-SW co-design and verification 85421
multiprocessor SoC, syst. design, validation and fast prototyping 102199
partitioning of embedded syst. in OCAPI-xl 79659
PIPER, co-synthesis, pipeline structs., instruct. reordering constraints, instruct. set proc. 114774
platform design approach for re-config. network appliances 101988
real-time LAN codesign, stat. model and realization of access unit 85193
S^3E^2S, CAD environ. for embedded electronic systs. 101902
scheduling and placement methods for C to hardware/software compilation 90811
senior capstone design project in computer engng. 125296
Simulink based hardware/software codesign flow/IP library 125366
SoC design, dyn. reconfig. overhead mgt., minim. config. size 79707
SoC design, fast hardware-software co-simul. framework 79710
SoC design, gradual refinement of commun., mixed-level cosimul. 79709
SoC design methodology for 3rd millennium ICT products 101887
SoC design skills, collaboration in design team, hardware-software implement., education 124263
SoC dyn. reconfig. archit., hardware-software partitioning algm. 79706
software radio, sym. sync., MMSE interpolation *(Chinese)* 96373
stack proc. virtual component, design and verification 68682
syst.-on-a-chip approach for indust. robotic controller design 103992
System Canvas, design environ. for embedded DSP and telecomm. systs. 79663
TACO protocol proc. simul. environ. 79666
tool box for syst. level commun. synthesis 79662
UCM, universal commun. model for automotive syst. integrat. platform 89416
VLSI archit.-level power estim. and design expts. 115990
wireless commun., IC soln. challenges 85497
WLESS-frame, 802.11 stations simul.-based devel. environ. 108239
XVPI, portable hardware/software interface for Virtex 90812

harmonic analysis
see also waveform analysis
2D fringe pattern demodulation, spiral phase quadrature transform 94742
3-phase 2-pole induction machine diagnosis, simplified spectral approach 134030
3D eddy current FE anal. of electromechanical devices 88722
AC/DC power converter input waveforms transient anal. 112676
AC/DC power systs., harmonic anal., power converters, indust. drives 123001
acoustic target models and phenomenology 77124
analogue ccts. soft fault diagnosis, sensitivity anal. 125209
BAW thin-film composite resonator, finite element simul. 116209
composed Pade-type approx. 114005
cyclotron freq., high-order harmonics excitation by relativistic oscillators 80597
Doppler radar expanded vel.-azimuth display tech., error anal. *(Chinese)* 76865
elec. machines, mag. field anal., Enokizono-Soda modeling *(Japanese)* 105660
elongated mag. source, fast spheroidal multipole imaging anal. 83140
FPAAs, configurable analogue block, SC ccts., harmonic anals. *(Italian)* 125627
free mixing layers, vortex dyn., rapid scanning two-component LDA *(Lithuanian)* 121268
freq. domain notch periodogram algm. 107574
heart, harmonic phase MRI, bandpass filters design 98408
helical slow-wave struct., space-harmonic effects, equiv. cct. anal. 69460
high-power indust. motor drive power convertors, harmonic anal. method 77989
homog. symm. dielec. bodies, EM diffr./scatt. 83231
HTS transm. lines, nonlin. simul./charactn., harmonic bal. algms. 71124
hybrid AC-DC supply generators no-load voltage waveform calc. *(Chinese)* 99736
ICA and computational harmonic anal. 113885
IGBT SPWM VSI harmonics restraint/anal. studies *(Chinese)* 88814
IM, rotor slot harmonics, rotor design effect 134044
IM, strong parasitic torques, rotor eccentricity 112533
IM drive, distorted voltage fed, torsional vibr., real-time tracking 89342
IM drive, real-time μP-based vector speed control 123920
IM speed meas., current harmonic anal., Chirp-Z transform 112516
inductosyn angle-measuring syst., error separation technol. *(Chinese)* 86962
indust. elec. components capability under harmonics, CIAO OO-program 112097
insertion devices, integral mag. field anal., stretch-wire syst. 121156
Krylov-subspace simul., autonomous RF/microwave ccts., digitally modulated carriers 91222
large nonlin. microwave ccts., sig. and noise anal., harmonic-bal. techs. 102581
LV distrib. network, harmonic distortion levels synthesis, ATP/EMTP 77308
metal oxide surge arrester diagnostics, voltage harmonics, representation model 133807
microwave and MM-wave device model, Boltzmann transport eqn. 102605
microwave bal. power amp., harmonic bal. anal. 125704
motion anal., uncertainty rels. 129568
multiconductor power transm. lines, phase domain harmonic anal. 133586
multidimensional harmonic retrieval, identifiability 107372
multilevel converter for aircraft power syst. appls. 76810
multiple AC/DC static power converters, harmonic current eval. 134154
multiple high-power AC/DC converter power systs., harmonic domain soln. 112060
opt. current sens. for harmonic anal. of current waveforms 123080
parameterization, generalizing Caratheodory's uniqueness to N dimens. 73568
parameterization in N dimens., identifiability 130001
periodic steady state calc., shooting methods, error minimization 125161
phase estim., digital algms. 129979
plane-wave sound field reprod. with loudspeaker array 107386
PM lin. brushless motor, air core, space harmonics field anal. 134063
polluted power networks, Steinmetz circuitry behavior symmetrization 133685
power syst. distorted sigs. freq. anal. using Prony method 77370
power syst. harmonics/interharmonics estim. methods 77357
probabilistic harmonic power flow for percentile eval. 133699

harmonic analysis continued
projection-invariant pattern recogn. with logarithmic harmonic fn./wavelet transform 129805
PWM converters, nonlin. DE 101755
quantum holography, mag. reson. tomography and gravit. wavelets 82965
salient-pole generator model for harmonic anal. 133935
session syst. with acoustic instrums., develop. 75331
shielded multiconductor lines, quasi-TEM eigenwaves params. anal. 85454
simultaneous multiple harmonics anal. using enhanced FFT-based parametric algm. 77367
slip energy recovery IM drives, harmonic anal. 78207
slotless PM lin. sync. motor, mag. field/thrust anal. *(Korean)* 123503
small-scale indust. power network lab. harmonic reson. simul. 77365
smooth air-gap induction machines, dyn. eccentricity modelling 123421
solid-state fault current limiter, harmonic anal./improvement 123064
speech sigs. spectral struct. for fund. freq. estim. 106341
speech voiced/turbulence-noise components, pitch-scaled estim. 118072
struct. damage, modal characteris., nonexponent. transient decay model 122743
surface profilometry, filtering features of measuring base 132152
thick film resistor I-V charact. nonlin., material struct. effects 125841
three-level rectifiers, PWM method for input-current harmonics control 134173
three-phase boost rectifiers, discontinuous cond. mode operated 123603
three-phase matrix converters, input current harmonics under unbalance *(Chinese)* 88886
three-phase power syst. harmonics, seq. ccts. study *(Chinese)* 88432
time-varying power syst. harmonics visualisation using Morlet wavelet transform 99367
total harmonic distortion anal. simul. 77364
voice quality, speech melody effects 72985
weakly guiding opt. fibers with exact boundary condition, simul. by FEM 128821
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416

harmonic distortion
see also power system harmonics
2.2 kW PWM rectifier/inverter CMV suppression 134210
2.4 MVA soft-switched modular MV drive, design considerations 134201
3-phase AC-DC converter, high PF, phase shifted control 123612
3-phase const. voltage transformer based on ferroresonance, anal., design 134115
6-pulse thyristor converters, pulse multiplication tech. 88902
10 kW PV power syst. modelling using equiv. elec. cct. method 112418
12-pulse converter harmonic anal., unbalanced voltage operation, voltage sags 112636
13.56 MHz current-source generator using HF CSI approach 123623
18-pulse capacitor input-type voltage source rectifier *(Korean)* 123633
20 kW GTO NPC inverters, PWM switching pattern control scheme 134187
120 kVA automated power quality test platform 133708
500 W series-reson. DC/AC inverter for impedance-load drives 77960
±500 kVA static VAr generator, GTO dead zone compensation study *(Chinese)* 111727
ABB technol. in power elec./electronic engng. 77132
AC motor ASDs, PWM operation adverse effects elimination 134475
AC/DC power converter input waveforms transient anal. 112676
act. filter, fuzzy controlled, optimum duty cycle design 122984
act. harmonic power filter current ref. synchronisation *(Slovenian)* 77369
act. power filter perform. without compensation current detect. filter 89037
act. power filtering using multi-current source power converter approach 112739
act. power filters, expanded current sync. detect. algm. 134333
act. power harmonic filter using predicted current control 78118
act. power harmonic filters, adaptive learning current control algm. 133704
act. power quality conditioner control, harmonic compensation 99360
act. three-phase PFC power converter, cct. topol. improvement 88936
act.-front-end voltage/current source rectifiers operating region 123620
ADC, dyn. testing, freq. domain design 102265
adjustable-speed sync. motors harmonic reduction 112472
analogue/digital converters, power consumption and conversion speed, resoln., S/N ratio *(German)* 125568
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
arc furnace cct. pass. higher harmonics filter perform. *(Polish)* 124104
arc furnace harmonics/interharmonics/unbalance, freq. domain anal. 134649
arc welding machine harmonic reduction using three-phase PWM boost converter 134679
ASD, harmonic distortion mitigation, filters 134432
batt. charger PFC preregulators, optimal control scheme 78012
bi-directional AC-DC thyristor converter unified control scheme 88822
biased electrostrictive ceramics, quasistatic coupling coeffs. 99080
BiCMOS high speed voltage follower, Gilbert's translinear loop 125604
bidirectional sinusoidal HF PWM inverter design 99820
binaural room impulse responses, transfer-fn. meas. with sweeps 118839
boost bridge audio amp. 131783
boost bridge music sig. amp., efficiency and total harmonic distortion 68602
boost DCM power converter, input current waveform anal./improvement *(Japanese)* 88812
brushless PM motor drives, SABER simul. 123899
calibrated harmonics tracking generator, internal DSP & DAC 101851
capacitor bank protection overview 99887
cascade double Γ-CL current source reson. inverter anal. 134161
chem. indust. power supply syst., harmonic filter concept 134684
Chinese power quality anal. and develop. *(Chinese)* 77355
Class D amp., low-power LV, feedback design, improved THD 79589
class D digital amp., sampling proc. and pulse generator 101808
CMOS 800 MHz continuous time biquadratic cell, gm-C fully differential config. 102348
CMOS audio power amp. driving 8 V_{pp} into 7 ohm resistive load 90770
CMOS CCII, symmetric two-gain-stage voltage follower 68924
CMOS high speed voltage-to-current converter, lin. tech. 91128
CMOS lin. OTA design using current addit./subtraction tech. 90767
CMOS line driver, DSL 79561
CMOS low noise transconductor, low distort. HF fully differential design 68930
CMOS LV front-end interface, switched-op amp ccts., SC designs 125603
CMOS LV rail-to-rail input/output opamp with. nested Miller compensation 68605
CMOS LV rail-to-rail switched buffer topologies for opamp input stages 114627
CMOS LV S/H cct., switched-op-amp tech. 91123
CMOS prog. gain amp., 100 MHz, high lin., current-mode tech. 79591
CMOS sinh/tanh shaped ultra low-volt. floating-gate transconduct. amps., harmonic distortion 101810
CMOS transconductance amp., harmonic distortion 114629
CMOS tunable transconductor for continuous-time filtering appls. 80081

harmonic distortion continued
commercial building power syst. harmonics, digital monitoring systs. 7734
compact fluoresc. lamp, electronic ballasts, perform. anal. 134616
const.-voltage const.-freq. PWM DC/AC converter, repetitive learning contr 88941
converter nonintegral harmonics from AC network resonating with DC netw 134217
current-source-type act. rectifier, current control, transfer fn. 78008
current-tunable phase shifter using MOS internal capacits., 700 MHz 6914
custom power interface for power QA *(English, French)* 133690
DC-DC converters, PFC, use of Sepic topol. *(Spanish)* 99830
differential switched-current bandpass ΣΔ modulators, nonlin. effect 79973
digital transducer array loudspeaker, distortion and directivity 97109
directly modulated DFB lasers, nonlin. distortion suppress. tech. 93719
discharge lamp HF electronic ballasts, SMPS harmonic reduction topol. *(Sp ish)* 89432
dispersed wind generation capacity, power syst. flicker level eval. 133881
distorted line voltage power syst. load symmetrization apporach 111929
distrib. network parallel act. power harmonic filter control strategy 133553
distrib. syst. dispersed generation interconnection, voltage charact. improvem *(Japanese)* 133673
distrib. syst. power quality improvement using PWM IGBT convertors 133
distrib. systs., harmonic flows, load models comparison 133686
distrib. transformers/primary feeder, optimal connection, harmonic distort 122973
distributed generation syst. act. power harmonic filtering optim. *(Japan* 133905
DPSK sig. stabil. in freq.-detuned station interf. 117904
DSL telephone pair gain systs., automatic testing 119815
dual channel reson. DC-DC power converter bifurcation 123626
dyn. hysteresis, neural network and actual freq. transplantation 128672
elec. energy meters, calib., SMPS appl. *(Slovenian)* 77656
electrodynamic loudspeakers, nonlin. params. estim. method 86352
EV charging, single-phase residential harmonic loads 113095
EV loads, power distrib. syst. harmonic effects 122990
FG-MOSFET digitally prog. attenuator, HSPICE simul. 68961
five-phase reluctance motor drive, harmonic injection field oriented con 134482
floating-gate MOS biquad, LV, second-order g_m-C filter 125601
fluoresc. lamp act. PFC/ballast control IC 134618
fluoresc. lamp modelling for voltage fluct. anal. 78334
force-controlled rectifier systs. common mode disturbances 77992
fractional freq. transm. line networks, steady-state perform. *(Chinese)* 111
fully differential switched-current memory cell with low charge-injection er 90897
fully functional integrator based continuous-time filters, VHF 80045
fuzzy-logic current-sensorless feedforward act. rectifier 134160
GIC-saturated transformers, curren harmonics/VAr consumption anal. 1125
grid-connected voltage source converter synchronisation methods 78005
halogen lamps, electronic transformer 89431
HF electronic ballast providing line freq. lamp current 124073
high-input voltage regulator module design using integrated mag. 88845
high-lin. digitally prog. components for continuous-time sig. proc. 91050
high-perform. AC power supplies, sync.-frame harmonic control 77984
high-power indust. motor drive power convertors, harmonic anal. method 77
HV CT, equiv. cct. modelling, voltage measuring topologies 88805
hybrid AC-DC supply generators no-load voltage waveform calc. *(Chine* 99736
hybrid act. power filter, harmonics detect. design *(Chinese)* 112741
hybrid act. power harmonic filter topol. develop. 89034
hybrid wind/diesel generating syst. with three-level invertor 133895
IGBT SPWM VSI harmonics restraint/anal. studies *(Chinese)* 88814
IM derating under unbalanced voltage supply operation 112509
IM drive, distorted voltage fed, torsional vibr., real-time tracking 89342
IM drive, real-time μP-based vector speed control 123920
IM operation, supply voltage distortion effects anal. 112497
IM three-phase voltage unbalance effects modelling 112501
indust. distrib. network high-speed VAr compensation systs. 88389
indust. distrib. syst. harmonic reson. problems 88439
indust. distrib. systs., fast harmonic load flow method 77314
indust. elec. components capability under harmonics, CIAO OO-progr 112097
indust. plants act. voltage correction technols. 134671
indust. power network lab. harmonics modelling/simul. 99366
indust. power quality problems 133680
inexpensive quasi-unity PF regulation syst. for resistive heaters 89450
injection-current-based 3-phase rectifier, hysteresis/PWM control techs. 1341
insulation systs., PD activity, ageing accel., voltage distortion 70431
integrated power quality in distrib. equipt. 133695
intell. switching for efficient power control 99244
inverter-fed AC motor drives, two-phase PWM techs. 123896
inverters, multilevel PWM methods perform. at low modulation indices 1341
invertor DC-link cct. fuses, harmonic power losses prediction 134230
large deployable space telescopes, microdynamic issues 82266
long arc in free air, dyn. model, lab. testing 102885
long distrib. feeder, shunt act. filter installation considerations 133663
LV distrib. network, harmonic distortion levels synthesis, ATP/EMTP 77308
LV/MV networks, harmonic distortion survey, results, corrective strategi 133603
Mach-Zehnder opt. modulator with variable bias, large sig. anal. 116817
microwave sub-harmonic injection-locked bal. oscillator-doubler 91281
microwave/MM-wave opt. links, dispersion effects reduction, SOA boost 86000
mixed chaotic elec. arc furnace model develop. *(English)* 124097
modular multilevel inverter for HV AC power supply appls. 134247
modulating fn. PWM inverters, polynomial sampling algm. 123630
MOSFET, freq.-domain anal., nonquasi-static effects 81293
multi-inform. control model of harmonic in wireless commun. based on D 74835
multi-inverter STATCOM transformer syst., equiv. short-cct. impedandan *(Chinese)* 122807
multi-level VSI optim. for MVDC transm. systs. 123625
multi-motor drives, act. front-end converter, seq. sampling SVM 134696
multi-string PV-converter topol./control strategy 123265
multiconductor power transm. lines, phase domain harmonic anal. 133586
multilevel converter for aircraft power syst. appls. 76810
multilevel inverters optimised space vector switching seqs. 88923
multiple AC/DC static power converters, harmonic current eval. 134154
multiple high-power AC/DC converter power systs., harmonic domain sol 112060

nic distortion continued
ltiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
V cable sizing, nonlin. loads, decision theory criteria 123015
V multilevel cascade inverters, vector control tech. 88833
nlin. electronic loads, power quality assess. and harmonic comparison 112080
anographic research vessel, low cost modular instrum. syst. 111441
amp input differential stage, EMI robustness 90771
eratively rebuilding convertor networks, PAM, tensor model 88938
. encoder higher-order sig. distortion reduction using modulated pitch grating
Japanese) 86461
timized hybrid power filter and VAr compensator 134334
timized PFC controller using CCM boost converter power IC 88882
nel loudspeaker syst. develop., design, eval. and enhancement 86357
rallel act. power filters under unbalanced load conditions *(Korean)* 123712
rtially reson. act. filter, digital PWM control cct. with DSP 112081
C capacitor burn out calc., distrib. systs., harmonics current *(Chinese)* 89312
C cct. with modified SEPIC converter 134158
P design using boost power convertor *(Chinese)* 133493
P using ZVS PWM power converter 88852
LC power converter topol., immittance conversion theory-based 123624
lluted power networks, Steinmetz circuitry behavior symmetrization 133685
seidon 2 Altimeter, Jason satellite, C/Ku-band pulsed transmitters 111336
wer distrib. adaptive reclosing scheme, fault patterns class. *(Korean)* 123045
wer quality anal. lab. for power engng. education 89642
wer quality conditioner, unified series-parallel deadbeat control 133703
wer quality engng. 112077
wer quality monitoring using staggered undersampling 112191
wer quality problems soln. using Inherent Structure Theory of Network
12067
wer supply quality, voltage fluct. 77348
wer syst. current symmetrisation, Steinmetz syst. design study 122899
wer syst. distorted sigs. freq. anal. using Prony method 77370
wer syst. dyn. harmonics estim., FFT truncation effects 77351
wer syst. harmonic voltage, transformer winding connection influence *(Chinese)* 112070
wer syst. harmonics, sources and filtering approaches 89038
wer syst. harmonics suppression, optimal filter allocation study *(Japanese)*
7361
wer syst. harmonics/interharmonics estim. methods 77357
wer syst. voltage distortion source detect. method 77339
wer transformer sheet winding eddy current loss, freq. effects 134117
obabilistic harmonic power flow for percentile eval. 133699
g. AC power source, switched current topol. 99754
g. single phase AC power source, switched current topol. 99757
ogrammed PWM VSI, three-layer neural networks 68567
V powered water pumping, current-fed parallel reson. push-pull inverter
13179
WM AC/DC power converter, high-speed source voltage sensorless control
23615
WM inverter switching three-phase harmonic systs. characterisation 123569
WM matrix converters, current modulation strategies comparison 123621
WM power convertor SHE switching patterns generation using GA 88924
WM VSI-fed IM drives, chopper cct. improvement 134499
WM-controlled freq. converters, transformer selection/design 112660
uasi 12-pulse rectifier for adjustable speed drive appls. 88903
ctifier systs. coupling with harmonic cancelling reactors 88980
cursive digital sinusoidal oscillator with uniform freq. spacing 90998
sist. welding machines, power quality and EM emissions 78363
iF fiber optic link, multi-electrode lin. EA modulator 82212
MS power/voltage meas. using wavelet packet transform 112200
st. elec. machines with skewed slots, multi-slice FE modeling 133913
ilient-pole generator model for harmonic anal. 133935
ampled AM enhanced analog transm. over opt. fiber 131452
C S/H cct. for LF appl., low power dissipation 114904
anning capacit. microscopy of MOS structs., dopant quantif. error study
121142
CM SOA sig., cross-phase wavelength conversion 86083
eries act. power filter control algm. *(Korean)* 123713
eries power quality compensator test studies *(Chinese)* 77368
eries voltage/harmonic compensator sync. frame-based control strategy 88435
hunt act. power harmonic filter neurocontrol scheme 78114
hunt capacitor appls., harmonic reson. pot. assess. 77354
hunt VAr compensator capacitor voltage equalisation, closed loop control
111828
igs. prod. by nonlin. dyn. systs., harmonic distort. anal. 90661
imultaneous multiple harmonics anal. using enhanced FFT-based parametric
algm. 77367
ine wave amplit. meas. error, laser interferometer *(Chinese)* 86986
ingle stage PFC converter, reduced voltage stress, high efficiency 88856
ingle-phase line-interactive UPS improvement 99824
ingle-phase modular act. power harmonic filter, rule-based controller 112755
ingle-phase PWM AC/DC power converter, fuzzy-neural controller studies
134242
ingle-phase PWM inverter act. filters, current-tracking method 77986
ingle-phase three-level PWM AC/DC power converter topol. 123573
ingle-phase two-level PWM inverters, regular-sampled harmonic elimination
99819
ingle-phase ZVS PWM rectifier using inductor energy recovery ccts. 134244
inusoidal oscillator design adjusting for opamp slew rate and bandwidth limita-
tions 68634
lip energy recovery IM drives, harmonic anal. 78207
mall elec. utility, external interconnection, network aspects 99235
mall-scale indust. power network lab. harmonic reson. simul. 77365
mart power conditioner develop. for value added PV appl. 112406
oft-switched act. clamped reson. link inverter eval. 77982
SQUID microstrip amp., harmonic distortion/intermodulation products 71120
squirrel cage motor loads, improved weighted total harmonic distortion index
113060
stds., meas. 77345
SVC using five-level PWM inverter 133514
switched mode rectifier/inverter, adjustable input PF 123653
switched-current S/H cct. for LF appl., 0.6 μm, simul. & perform. 80133
switched-MOSFET tech. for prog. filters operating at low-volt. supply 80070
sync. generators, AC/DC stator connections, steady-state charact. *(Chinese)*
133954
THD factor meas. uncertainty, power quality indices 109964
THD/harmonic act. power meas., virtual instrumentation 112073
three-phase act. power filters modelling/simul. 112743
three-phase autotransformer/rectifier PFC scheme 88904
three-phase boost rectifiers, discontinuous cond. mode operated 123603

harmonic distortion continued
three-phase current-source act. power filter, deadbeat current control 134339
three-phase CVCF PWM inverter, digital repetitive learning control 99826
three-phase diode rectifier with sinusoidal input current 134250
three-phase distrib. network voltage unbalance random var. modelling 112011
three-phase five-level double power converters, IM drive appls. 88979
three-phase four-wire distrib. syst. harmonic suppression scheme 88436
three-phase four-wire distrib. systs., neutral harmonic mitigator design 133702
three-phase fuzzy-controlled shunt act. power conditioners 122907
three-phase induction-type watthour meter accuracy, harmonic distortion effects 123091
three-phase indust. power syst. hybrid power harmonic filter 89468
three-phase inverter PWM waveform higher harmonics elimination method *(Japanese)* 112074
three-phase line-interactive UPS syst. implement. 134221
three-phase matrix converters, input current harmonics under unbalance *(Chinese)* 88886
three-phase power act. harmonic filter, vector control transient behavior 123716
three-phase power syst. harmonics, seq. ccts. study *(Chinese)* 88432
three-phase power syst. short-cct. current calcs. 112018
three-phase PWM rectifiers, current control stabil. issues 123619
three-phase shunt act. power filter control methods 78113
three-phase single-stage step-up/down current rectifier sliding mode control 134167
three-phase static PWM freq. converter struct. 123652
three-wire three-phase partly-decoupled CCM PFC power converter 88869
time-varying power syst. harmonics visualisation using Morlet wavelet transform 99367
total harmonic distortion anal. simul. 77364
trapezoidal-wave power distrib. syst., diode rectifier loads 133668
type-SS4 locomotive probabilistic harmonic currents modelling *(Chinese)* 78305
unbalanced distrib. syst. three-phase act. power line conditioners optim. 88365
undergraduate power supply design/anal. curriculum 100454
unidirectional three-level act. rectifier topol. for MV drive systs. 88868
unified power quality conditioner, theory, modelling, appl. 77353
unity gain opamp in 3.3 V CMOS technol. using tail current compensation 79577
unity PF 3-phase PWM SCR rectifier, induction heating, metal indust. 134647
unity PF act. clamping single-phase three-level rectifier 88851
unity PF buck type PWM rectifier, medium/high power DC motor drives 134166
UPFC prototype with energy snubber using SHE method *(Chinese)* 77203
UPS inverter second order deadbeat controller design *(Korean)* 123588
UPS VSI, output LC filter design considering syst. response *(Korean)* 134199
urban Maglev syst. invertors, soft-switching HV act. power filter 134529
Uruguayan cement plant power quality problems 134698
utility interactive PV syst., static inverter, anal. 112422
variable speed compressor drives, public power grid connection 133683
VIENNA Rectifier II, switching freq. harmonic distortion of mains currents 78039
voltage distortions reduction using s-Domain approach 112068
voltage doubler rectifier, two-input current mode PFC *(Japanese)* 77971
VSI output LC power harmonic filter design 78115
VSI PWM-specific harmonic elimination gating sig. generation optim. 112659
VSI space vector modulator with variable clock freq. 99812
VSI-fed IM drives, dual-stator windings design 134455
wideband capacitive voltage sens. design for HVDC transm. line appls. 88500
wind farm perform. improvement using VAr compensation 123256
wind turbine farms, weak elec. distrib. systs. dyn. anal. 99586
Xining power grid, harmonic survey 77352
GaAs HBT dual T/H, 1 GS/s, wideband pipelined ADC appl. 125633

harmonic generation
see also optical harmonic generation
adaptive imaging using 8×128 array 110768
CARM-gyrotron, travelling and near-cutoff waves excitation 105054
emboli detect./discrim. using harmonics 110735
fiber-opt. links, microwave harmonic generation, model 80391
fluxgate mag. sens., insulator core, harmonic generation 127375
freq.-doubling inverted gyrotwystron, phase deviation/pushing 125975
HTSC films and devices, comparative studies of microwave nonlin. 127534
L-band EPR spectrosc., tunable surface-coil-type resonator 76498
med. second harmonic imaging, US image quality, computer generated phantom model 76348
MM-wave harmonic space diversity act. integrated array, design 72678
nondestructive subharmonic imaging with US contrast agents 122012
nonlin. acoustic NDE, superheterodyne receivers, absol. calib. 122733
nonlin. acoustic techs. for NDE, freq. shifts & memory effects 114492
nonlin. transm. line params. effect on soliton propag., freq. tripler optim. appl. 83448
nonlin. transm. lines, heterostruct. barrier varactor loaded, solitons 105821
percolation theory, materials sci./microelectronics appls. 91570
piezoelec. resonator, nonlin. (in)direct THG, intermodulation method 70440
power amp., LV design, second harmonic manipulation 68609
pulse inversion Doppler harmonic imaging, generalisation 122008
spallation generated minute cracks, nonlin. US meas. 114494
SQUID microstrip amp., harmonic distortion/intermodulation products 71120
steel, Cr-Mo-V, high temp. exposure effect, nonlin. acoustic NDE 114493
strip-type resonators, second-harmonic thickness-extensional vib. 92681
subMM-wave Schottky diode harmonic multiplier, self-matching model 102617
tissue harmonic imaging, clinical benefits 110750
tissue harmonic imaging, spatial covariance anal. 110784
ultrasound nonlin./lin. imaging techs. at HF 110765
US contrast imaging, pulse inversion & second harmonic comparison 122007
US echography contrast agents, harmonic imaging 122004
US microbubble contrast agent imaging, act. enhancement 122006
wideband sub-forcing harmonic phase inversion US imaging 122005
FeCoNi/CuBe, sensitive nonlin. GMI effect 127352
Nb thin films, third-order local nonlin. microwave response 70582
PZT, disk-type PZT transducer, liq. viscosity meas., transversal effects 99077
PZT, double US transducer, acoustic wave nonlin. meas. 99076
YBaCuO film, optoelectronic RF harmonic generation and mixing 104589
YBaCuO thin films, nonlin. effects, on-wafer microwave probe station meas. 70666
$YBa_2Cu_3O_7$ thin films, third-order local nonlin. microwave response 70582
$YBa_2Cu_3O_{7-\delta}$ thin films, power depend. impedance, harmonic generation 92884

harmonic oscillators
helical-wiggler FEL, harmonic oscillator approach 71860
high-harmonic complex cavity gyrotron, gradual transit., beam-wave interact. *(Chinese)* 125969

harmonic oscillators continued
nonlin. Fabry-Perot resonator, direct num. integrat. 72047
open quant. systs., non-Markovian dyn., time-convolution projection 106285
sig. transm., thermal reson. 95619
stiff oscillatory systs., delta jumps and white noise 79066
GaAs PHEMT MM-wave push-push oscillator 102675
GaN layers, harmonic generation meas., MOCVD 124989
a-WO_3 films, electrocoloration curve anal. 104607

harmonic oscillators (circuits)
ferroelec. thin film capacitors, cct. simul. model, AHDL implement. *(Korean)* 81786
hyperchaotic cct. with damped harmonic oscillators, ANP3/PSpice simul. 90690
impedance meas. using harmonic oscillator, food sterility testing 121145
Josephson jn., persistent current qubit, inductance effects 70943
self-oscillating mixers, nonlin. design tools 101868
VCOs for GHz-range appls., varactor diodeless configs. for tuning 114995

harmonics
see also harmonic analysis; harmonics suppression; power system harmonics
4 kb/s hybrid harmonic/waveform speech coding 106366
5-phase hybrid stepping motors, oscill. anal. *(Chinese)* 112560
AC induction machine online shaft current monitoring/prediction 99666
adaptive RF Cartesian predistorter for high power class-AB amp. 91250
binary pseudo-random sig. gen., overview and MATLAB routine 118827
biomedical parallel MRI, SMASH image reconstruction 132777
blood, cardiology, diagnostic ultrasound, nonlin. native propag. 76347
C-band push-pull power amp. integrated with quasi-Yagi antenna 80259
CDMA power amp., anal. of subharmonic load pull 68590
class-F power amps., max. efficiency and output study 80260
class-F power amps., max. flat waveform operation 68623
CMOS circ.-geom. act.-transformer power amp., 2.4 GHz 102729
concatenative recogn./synthesis paradigm based VLBR speech coder 84006
cone-beam image reconstruction, CT/SPECT, spherical harmonics 87731
cone-beam image reconstruction using spherical harmonics, short-obj. problem 132792
coupled-line HTS low-pass filter, broad-band harmonic rejection 116539
current regulated PWM inverters, IM appls., voltage control strategies 77975
DAQ systs., sens. noise reduction method 131830
DC machine external mag. field calc. from housing mag. load 99679
DC motor, PM and static commutation, rot. induced voltages 99688
direct-conversion receiver RF-ICs, mixer develop., review *(Japanese)* 74586
echocontrast agents, blood flow assess. by US-induced destruction 76376
elec. bicycle BLDCM, act. EM torque harmonics compensation 123959
ELF mag. fields generated by elec. appliances, equiv. M1 moment estim. 75830
EM fields/complex mediums characterisation, orthonormal beams appl. 105670
fingerprint image ridge freq. estim. by higher order spectrum 94510
five-phase IM, rotor field oriented control, third harmonic currents 89324
IEC mains harmonic emissions meas., test method and instrumentation requirements 83404
IM, single layer 3-phase AC windings design optimisation 112522
IM drive field-oriented PI speed control, bifurcations 134434
IM losses calc. using nonlin. time-stepping FEM 123417
induction drive selection criteria for speed-sensorless appls. 134456
IPFM generated heartbeats, heart rate variability anal., interval spectrum distortion props. 132567
Ka-band preselected harmonic mixer with YIG tuning filter 80265
large orbit M-type microwave oscillator, theoretical anal. 80592
light field ang. momentum, Lie alg. symm. operators 117700
micro-channels for micro device cooling, evaporating two-phase flow mechanism 81552
microstrip patch antenna with annular ring PBG 72554
microwave Class-E/Class-C/Class-F power amps., finite no. of harmonics 102638
microwave power amp., harmonic tuning design 79574
microwave power amps., high-efficiency low-IM design 80318
microwave sub-harmonic injection-locked bal. oscillator-doubler 91281
mixed nonGaussian/Gaussian ARMA noises, harmonic retrieval, HOS 84803
MOSFET RF power amps., multi-harmonic tuning behaviour 102644
MRI, multiple sclerosis lesions, 3-D surface reconstruction using spherical harmonics 132772
myocardial contrast echocardiography, power Doppler, harmonic angio tech. 98338
myocardial sig. intens., respiration influence 87484
oblique slices, automatic shimming, degenerate spherical harmonics effect 87651
pass. lin. component third harmonic testing, review 113453
power amps., polyharmonic operation, theory 68617
PWM invertor-fed IM acoustic noise, fan cowl influence 123408
random hysteresis PWM inverter with robust spectrum shaping 99793
relativistic gyrotron operating at high cyclotron harmonics 102930
robust all-opt. harmonic clock sig. gen. via opt. inject. into mode-locked semicond. lasers 109045
S-band class AB push-pull power amp. with wideband harmonic suppression, high efficiency 91296
salient pole sync. machine permeance model develop. 123344
second harmonic class-F power amp. in std. CMOS technol. 80326
SEIG, current-controlled VSI, voltage control anal. 133993
semicond. fuse ratings, harmonic currents effects 125862
sensorless multi IM drive strategy using MRACS 134461
sigs. recovery, adaptive extrapolation algm. anal. 107351
space-harmonic MM-wave magnetrons with secondary emission cathode, anal. 69456
SRM torque ripple minimisation using harmonic current injection 99646
subharmonic MMIC mixer array for 2D imaging in ECE radiometry, 150 GHz 80339
subharmonically pumped MMIC mixer array with patch antennas, 150 GHz 80327
surface profilometry, filtering features of measuring base 132152
synchrotron reson. maser, stimulated emission at high gyroharmonics 128034
third-order intermodulation product, RF and microwave power amps., injection techs. 80258
three-phase induction machines, PWM power converter-fed, losses studies 112499
three-phase squirrel cage motor fault-related harmonics detect. 112500
tunable subMM-wave gyrotrons with optimised reson. cavity, develop. 69444
UHF Class-E/Class-C/Class-F power amps., finite no. of harmonics 102638
uniplanar bal. subharmon. pumped mixer for MM-wave syst. design 69201
VCOs and synthesizers, nonlin. effects, design guidelines for minimisation 91248

harmonics continued
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LDs, THz rep tion rates 82693
InP mm-wave HEMTs, look-up table based large-sig. model, impact ioniza 114977
Nb/Nb_2O_{5-y}-interfaces, Q-drop, supercond. Nb cavities 69023
Si substr. ringing in microfabricated US transducers 111498

harmonics suppression
see also power harmonic filters
2.2 kW PWM rectifier/inverter CMV suppression 134210
3-phase 4-wire syst., neutral current harmonics compensation by synchron machine 122978
3-phase STATCOM, current control, harmonic elmination *(Chinese)* 9988
5 kW boost converter, multiphase control, fuel cell energy *(French)* 1343
18-pulse capacitor input-type voltage source rectifier *(Korean)* 123633
20 kW GTO NPC inverters, PWM switching pattern control scheme 1341
36-pulse HVDC transm. for rem. sited generation 133591
AC motor ASDs, PWM operation adverse effects elimination 134475
act. three-phase PFC power converter, cct. topol. improvement 88936
adaptive cancellation of selected harmonics from sig. 119053
adjustable-speed sync. motors harmonic reduction 112472
brushless PM motor drives, SABER simul. 123899
class-E power amps., transm. line load network topol. and design 80263
CMOS transmitter, broadband wireless commun. 108522
converter nonintegral harmonics from AC network resonating with DC netw 134217
CPW, slit discontinuity, equiv. cct. model 69013
discharge lamp HF electronic ballasts, SMPS harmonic reduction topol. *(Sp ish)* 89432
distorted periodic sigs., phase meas., nonsynchronous multirate digital filte 123079
distrib. STATCOM, voltage flicker mitigation, direct power control 13367
distrib. syst. dispersed generation interconnection, voltage charact. improven *(Japanese)* 133673
electronic ballast, small size and low cost for HF fluoresc. lamps *(Japan* 100314
fluoresc. lamp, electronic ballast, self-oscillator, half-bridge inverter *(Japan* 125256
fluoresc. lamp act. PFC/ballast control IC 134618
fractional horsepower elec. drives, UPS 89351
high speed IM drive with harmonics, inverter 123882
high-perform. AC power supplies, sync.-frame harmonic control 77984
HT-7 Tokamak power supply, reactive power compensation, harmonic supp sion 134141
HT-7U supercond. Tokamak, PF power supply design 77950
HTS coupled-line low-pass filter for broadband harmonic rejection 69084
hybrid wind/diesel generating syst. with three-level invertor 133895
IGBT SPWM VSI harmonics restraint/anal. studies *(Chinese)* 88814
IIR comb filter, harmonic interf. removal, multirate method 107491
IM drives, sensorless posn. control, inverter clamping saliency anal. 13448
indust. distrib. syst. harmonic reson. problems 88439
indust. plants act. voltage correction technols. 134671
inverters, multilevel PWM methods perform. at low modulation indices 134
mag.-flux-control-type var. inductor, laminated core *(Japanese)* 112578
microstrip bandpass filters, harmonic suppression, parallel coupled lines *(nese)* 102510
microstrip multistage coupled ring bandpass filters with harmonic suppr 69016
microstrip ring bandpass filter, varactor tuning, harmonic suppression 6904
microwave oven, voltage clamped ZVS-PWM inverter fed DC-DC conve 124128
multi-motor drives, act. front-end converter, seq. sampling SVM 134696
multi-string PV-converter topol./control strategy 123265
optimized PFC controller using CCM boost converter power IC 88882
orthogonal-core-type var. inductor, wedge gaps shape effect *(Japanese)* 112
parallel-coupled-line microstrip bandpass filter with spurious passband suppr 102577
PFC, voltage doubler rectifier without switching device, harmonics reduc 122989
PFP using ZVS PWM power converter 88852
power electronics equipt., EM environ. impact, EMI, EMC 99357
power supply quality, voltage fluctts. 77348
power syst. symm. components fast estim., digital filters 111683
PWM AC/DC power converter, high-speed source voltage sensorless con 123615
PWM boost type rectifier, input output harmonic elimination, control met 123595
PWM power convertor SHE switching patterns generation using GA 8892
rectifier systs. coupling with harmonic cancelling reactors 88980
rectifier-inverter systs., DC-link harmonic reson. damping 134164
self-lin. ccts. involving PN jns. 101690
shunt capacitor appls., harmonic reson. pot. assess. 77354
shunt VAr compensator capacitor voltage equalisation, closed loop con 111828
single-phase 3-level PWM inverter, harmonics alleviation, control 134251
single-phase two-level PWM inverters, regular-sampled harmonic elimina 99819
six-phase IM, torque dens. improvement, third harmonic current inject 134471
smart power conditioner develop. for value added PV appl. 112406
SMES power conditioning syst., thyristor PWM converter *(Korean)* 12384
SR beamlines, high-order harmonic suppression by glass capillary array 132
SSRL, planar PM quadrupole, field aperture 110179
substation, HF switching DC power syst., multi-level monitoring *(Chin* 123682
switching converter harmonic spikes suppression, dithered sigma-DM 1342
three-phase autotransformer/rectifier PFC scheme 88904
three-phase diode rectifier with sinusoidal input current 134250
three-phase inverter PWM waveform higher harmonics elimination met *(Japanese)* 112074
trapezoidal-wave power distrib. syst., diode rectifier loads 133668
tunable microstrip-ring bandpass filter 102324
UHF band pass filter using miniaturized sq. stepped-impedance reson *(Korean)* 114864
unidirectional three-level act. rectifier topol. for MV drive systs. 88868
UPFC prototype with energy snubber using SHE method *(Chinese)* 7720
utility interactive PV syst., static inverter, anal. 112422
voltage distortions reduction using s-Domain approach 112068
voltage doubler rectifier, two-input current mode PFC *(Japanese)* 77971

ionics suppression continued
oltage source PWM drives, near unity input displacement factor 113049
ley transforms
see also discrete Hartley transforms
D vector radix algm. for 3D new Mersenne no. transform 73212
ata hiding in compressed images, capacity estim. 95252
ravity data filtering using Hartley transform 122598
o. theoretic transforms 130003
mann-Shack sensors *see wavefront sensors*
ing functions *see cryptography; file organisation*
guti relaxation *see anelastic relaxation*
rds and race conditions
omino logic ccts., coupling-aware min. delay optim. 102108
omino logic ccts., coupling-aware min. delay optimisation 79829
ntentional clock skew scheduling algm. for high perform. clock distrib. network 102307
ORA dyn. CMOS ccts., clock-race conditions investig. 114732
atic timing anal., false coupling interacts., ATPG-based approach 125374
see heterojunction bipolar transistors
see user interfaces
IOS *see CMOS integrated circuits*
MAC *see high definition television; television standards*
E insulation *see polyethylene insulation*
L *see digital subscriber lines*
V *see high definition television*
V codecs *see high definition television; video codecs*
-up displays
ppl.-specific integrated lenses and filters for microdisplays using elec. switchable Bragg grating technol. 109850
GH wavefront-transforming element, design and fab., binary opt. techs. *(Chinese)* 128575
olour filters for LCD miniature displays 97758
etinal scanning display DOE design/fab. 121118
ee-through head mounted HOE display 132110
ide-angle opt. systs. for HUD *(Russian)* 132094
phones
Bluetooth semicond. devices for short-range radio broadcasting *(German)* 85649
lead-related transfer fns., spatial sound synthesis 83991
ers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
th care
see also patient care
D US image reconstr. for home health care *(Japanese)* 87471
cute care hospitals, technol. transfer, survey design and data collection, Internet/intranet usage and impact meas. 98842
udio-video rem.-patient monitoring via Internet, privacy protection 74440
Black Sea Tele-Diab syst. develop., implement. and clinical eval. 98877
ardiac disease diagnosis and mgt. using telehealth 133150
Chinese hospital services quality meas. using SERVQUAL scale adaptation 89721
Chinese hospitals health care quality mgt. 89720
linical health inform. network using off-the-shelf software to safely transfer med. data 111290
T, MRI, regional factors affecting use in Sweden 87725
DEFINITY Wireless Business System, health care appl., Nurse Call System Integration 76590
diabetic patients with intensified insulin therapy, telecare, randomized clinical trial 98612
DICOM, security situation & activity in Japan *(Japanese)* 88022
Finnish telemedicine programs, three-yr. follow-up 85118
Fukuoka City physician group, diagnosis support *(Japanese)* 133202
GSM, uninterrupted data transm., health services appl. 108955
home automation, tele-Haus project with integrated microsystems 78349
home health care, low-cost telemedicine 133200
home nursing in Queensland, Australia, pot. of telemedicine 111282
home telecare, digital interactive TV use, tech. framework 111289
Implanted pacemaker patients, rem. follow-up, south of Italy experience 88014
Intell. tele-healthcare environ. offering pers.-centric/wellness-maint. services 122464
Internet-assisted Home Healthcare System on CATV network *(Japanese)* 133192
Internet-based med. teleconsultation syst. 133199
Intranet Health Clinic, Web-based med. support services employing XML 111270
MedStage platform for inform. and commun. in healthcare 111268
mental health professionals, cognitive-behavioural therapy training, videoconferencing pilot study 130898
mental health services, community-based, ICT soln. 111258
mobile healthcare providers, patient benefit authorization service 133203
neurosurgical health services, video consultation, comparative impact 111279
nursing, telephone advice, callers' experiences 133153
PACS, enterprise-wide, technol. assess. 98850
PACS in Toolo Hospital, filmless radiology/surgery 88012
PACS procurement proc., required steps 98855
PACS security model 98852
patient admin. master-syst./clinical subsystem data transfer realised using ProtoGen/HL7 98875
patient data cards in health networks, secure interoperability 111267
pers. inform., intell. inform. struct. for composing/pushing over Internet 111300
photonic technol. in 21st century, new industries creation 78373
proc.-oriented supply chain mgt., JIT appl. 89751
professional develop. service delivery for health, education and welfare professionals, telemedicine 67424
regional health care network supported by organisational change, electronic referral and booking confirmation 111259
RF staff ident. to open doors in homes for aged *(Japanese)* 131047
rheumatology telehealth consultations, cost-effectiveness and user satisfaction 133161
Swedish health care, telematics projects overview 98870
TEAC-Health project, research-based recommendations for European certification of health telematics services 98873
telematics, physician attitudes, empirical survey 111269
telemedicine, getting started 122456
telemedicine, med. sig. watermarking 111292
telemedicine, next step, introduction and review 122454
telemedicine, Technology Acceptance Model 122465
telemedicine's pot., barriers, incentives and possibilities in implement. phase 133162
telemedicine and health network 133197
telemedicine and telecare, conf., London, UK (Jan. 2001) 124173
telemedicine effects on workplace changes, emergency nurse practitioner opinions 133154
telemedicine implement. and eval. for rem. health-care, European Northern Periphery Programme Project 133183
telemedicine options appraisal for health district, strategic clinical and business case 133164
teleradiology/teledermatology in Finnish mil. med. 76784
USA, case study of telemedicine appls. 98862
Venezuelan health sector Y2K Nat. Evaluation Project 87294
videoconferencing in Queensland health service 133152
vital signs monitoring, telemedicine, patient and physician satisfaction 133185
vital signs monitoring from home with open systs. 111275
wireless Internet appl. 111299
health effects of radiation *see biological effects of radiation*
health hazards
see also biological effects of radiation; natural radioactivity hazards
blood-brain barrier, cell phone effects and tumor treatment 98739
brachytherapy misadministrations, lessons to be learned 98688
cardiac angiographic procedures, radiation doses 98770
cardiac pacemakers, MRI interf. 87907
cell phones, public health concerns and emissions testing 122366
cellular mobile telephones, health impact, precautionary principle, EC commun. 122436
cellular phone, RF radiation, health effects 122362
cellular telephones, human head temp. rise, peak SARs, safety guidelines 88008
Chernobyl, Latvian clean-up workers, retrospective ESR dosimetry 122417
Chernobyl nuc. reactor site, Object Shelter, aerosol distrib. 111223
cochlear implants, elec. stimulation, pH shift 122340
corona plume, HV overhead lines, aerosols charging 111249
cosmic-radiation dosemeter, mil. aircraft crew 87996
CT fluoroscopy-guided interventional procedures, techs./radiation dose to radiologists 110971
developing CNS, clinical concerns in ultrasound exposure 110792
dielec. voltage withstand high-pot. tester, safety-related features 86441
dual-band phones, human head, power absorpt. and temp. elevations 88009
elec. safety training from childhood to adulthood 124289
electromedical apparatus safety considerations *(Italian)* 87296
electronic device user protection from low-energy radiation 133145
ELF EM radiations and intrinsic EM phenom., human health issues 87947
EM fields, biological effects, health and safety, risk assess. 87941
EM phenom. and standardisation implications overview 72384
EM radiation hazards assess. in residential areas 83401
entrance surface doses, X ray procedures, Bangladesh 133119
environ. stds. integrat. in European semicond. indust. 67681
ethylene oxide monitoring in sterilization operations, miniature IR gas analyzer 75700
extrusion melt press. meas. for food/med. appls. 100572
ferromag. pillow, pot. MR hazard not detectable by hand-held magnet 132757
fire-retardant cable cpds., toxicity aspects 69292
fork lift overturns and head injury 98741
fractionated cranial irrad., ellipsoidal radiosurgery targets, radiobiologic modelling 87858
GSM mobile terminals, anal. of proposals to reduce SAR levels 108931
hand effect on cellular phone radiation 122410
hand-set mobile telephone with reduced EMW hazard, triple-freq. operation 105974
HI risk assess., nuc. detecting systs., hadrontherapy appl. 132325
homog. phantom exposed to cordless phones radiation, SAR 87937
human body, power freq. mag. field interact., eval. methods *(Polish)* 133071
human body elec. fields resulting from 60-Hz contact currents 111192
human head, mobile phone emissions, absorpt. calcs. 133069
human head temp. rise for cellular phones, peak SARs prescribed in safety guidelines 111193
human health depend. on geomag. activity 87946
human health hazards from EM energy emitted by ELF commun. systs. *(Polish)* 133070
ICRP, UNSCEAR, some distant memories 87998
implantable cardioverter defibrillators, EMI 87905
implanted cardiac pacemakers, elec. field interf. threshold 76667
interventional MRI, catheters/guidewires, problems/solns. 76487
interventional MRI, local RF heating, Green's fn. 122089
interventional radiology, dose-area prod., occupational dose assess. 122416
intraoperative probe, γ-ray detect., radiation safety *(French)* 76722
Ionising Radiations Regulations 1999, generic approach to risk assess. 76766
Japanese EM fields human exposure limitation regulations 78548
labour safety, near-field LF spectrum EM field meas. *(Polish)* 133072
laser pointers, power output, federal stds., safety hazard 122365
mammalian cells, RF exposure, CDMA, FDMA, DNA damage 122433
med. robot, hazard ident./safety insurance control 98606
MF and HF transmitting antennas, EM fields investig. 97055
mobile handset antenna, exposed human body, temp. distrib. calc. *(Chinese)* 111189
mobile phones peak SAR assess., head tissue complexity role 85613
mobile telephone three-element array antenna with triple-freq. operation 105975
multiple laser pulse max. permissible exposure determ., ANSI Z136.1-2000 100504
NFPA 70E elec. safety Standard changes for yr. 2000 89780
num. anthropomorphic model, radiological accidents, internal dosimetry *(English)* 98829
OOK CDMA indoor IR wireless systs. on diffuse channel, perform. anal. 86124
patient dose, radiographic tech. factors, Greek hospitals 111236
patient size, X-ray CT tech. factors, hazards 110939
pelvic malignancies, radiotherapy, inguinal node boost, collimator jaws 98637
pers. satellite commun. antennas, polaris. purity/SAR investigs. using hybrid method 83584
plasma doping, simul./safer gas usage 103289
Polish EM field human exposure limitation regulations 78549
polyethylene hip joints, wear-debris-induced osteolysis 76671
polysiloxane foil cct. carrier technol. *(German, English)* 67590
power freq. mag. fields meas. in different environ. 105672
power lines, EM field strength, radiated and near-fields *(German)* 88457
power overhead linemen generator backfeed protection 78547
pregnant staff, diagnostic radiology, foetus dose, occupational exposure 133135
prostate cancer, conformal radiotherapy, rectal sequelae, dose-vol. 98782

health hazards continued
prostate carcinoma radiotherapy, late-term rectal complications probab. 98641
pulsed RF EM fields, effects on selected markers of immune syst. 87935
radiation dosimeter consisting of leuco cryst. violet/halocarbons, develop. 110294
radiation hormesis, doses, beneficial health effects 87987
radiofrequency radiation exposure stds., global harmonization 111232
radiowave absorpt. by brain/eyes in human head eccentric spheres model, anal. 87950
residences, static mag. field meas., power-freq. mag. field/human interacts. 98742
retinal damage, red diode laser exposure 98816
retinal hazard eval., laser safety apparent source anal. 111190
RF EM fields, safety stds. 122363
RF mapping for exposure compliance 97800
safety mgt., reasonable precaution approaches 67495
SAR reduced pers. commun. handset, FDTD investigs. 83706
shield material design, astronaut space radiation protection 111215
solder fume extraction/filtration considerations 80511
spacecraft, LEO, LET distribs. 121611
temporal variability meas. in residential mag. field exposures 87934
urban environ., outdoor background ELF mag. fields 76747
VDTs, content-depend. health hazards, adaptive temporal filters appl. 98764
VOC-free PCB protective coating selection 125908
wafer epitaxial deposition procs., low press., exhaust mgt. challenges 79288
whip type low SAR mobile handset antenna 83603
^{241}Am lung meas., voxelised num. phantoms, MCNP code *(English)* 98830
CdTe module mfg., safety mgt. syst. experience 100126
^{137}Cs, mobile gamma spectrometry, on-line stat. methods 98761
CsCl/elec. induced arrhythmia, rapidly paced heart 87439
^{125}I, in-vivo, imaging plate thyroid monitoring syst. 87986
^{125}I prod. activities, defense in depth radiation protection 111231
^{131}I, mobile gamma spectrometry, on-line stat. methods 98761
^{131}I, therapeutic dose, patient release, another indiv. exposure 98817
Li batts. transportation, UN Recommendations amendments 89047
Pb-free soldered interconnections, board level reliab. 115152
Sn-Ag(-Cu) solder alloys, thermo-mech. props./creep deform. 68392
Sn(-Cu) surface finishes for Pb-free packaging 67617
Sn-Pb-Ag solder alloy, thermo-mech. props./creep deform. 68392
SnO_2 toxic gas sens.-based autonomous real time air pollution monitoring syst. 133360
^{99}Tc^{m}-labelled radiopharmaceuticals, Indian adult, radiation dose estim. 111235
^{99m}Tc-RP128, rheumatoid arthritis inflammation imaging, dosimetry 76723
cellular radio, health effects and precautionary principle 76719

health physics *see dosimetry; health hazards; radiation monitoring; radiation protection*

hearing
see also auditory evoked potentials; bioacoustics; ear; hearing aids; speech
AMR speech codec, noise suppression syst. *(English)* 74489
audio sig. octave anal. for sound perception 72993
auditory cortex, hierarchical organization, fMRI 76468
auditory scene anal. and auditory organization 129374
automobile noise corrupted speech, binaural diverse sub-band proc. 72991
aviation helmets, act. noise reduction, mil. jet trainer test flight 87936
BiCMOS attenuator for audiometric appls. with on-chip power amp. 92481
binaural 360° sound localization syst., model and appl. 111515
European Audiology, conf., Oulo, Finland (June 1999) 78381
fMRI, auditory stimulation, intermolecular double-quantum coherences 132660
functional MRI, human auditory cortex, block/event-related designs 122105
functional MRI, silent BOLD imaging, visual/auditory simul. 132656
handheld mine detector operator perform., audio icon design issues 77114
head-related transfer fns., spatial sound synthesis 83991
HF cochlear hearing loss patients, cortical reorganisation 121977
hybrid auditory masking models 83995
impairments, VR CD-ROM, HI-SIMv1.0 87290
interaural cross-correl. temporal change, sound image broadening by single refl. 86350
landmine detect., EM induction sens., human auditory discrim. 77113
lang. proc. in children, fMRI/PEPSI comparison 122101
long-duration tonebursts, periodic presentation, near-DC mag. fields 76332
MEG, dyn. current dipole params. inversion, human brain *(Chinese)* 121988
MEG, evoked response single trials anal., min. spanning tree 87463
MEG for studying brain activity in word recogn. *(German)* 76336
microscale auditory syst., hyperacute directional hearing 87881
multichannel cochlear implant., speech perception, fn. benefit 76697
natural environ., coloration, binaural decoloration 107301
newborn hearing screening, OAE-based, sig. proc. influence 87475
otosclerotic ears, elec. bone-cond. audiometry, Carhart notch effect 87359
own voice in auditory virtual environ. 106383
paediatric audiology, conf., Copenhagen, Denmark (May, 2000) 89504
parametric audio coding, overview 94405
phoneme perception, multichannel cochlear implant effect 76698
pontine auditory pathway, human, functional mag. reson. imaging 122073
schizophrenia, auditory evoked response suppression, single trial MEG anal. 121983
second-order difference cochlear model-based speech recogn. 84069
spatial sound reprod., subjective assess. 97110
spatially complex sound synthesis in virtual space, accurate offline algm. 88213
speech coding, low bit-rate, improved sinusoidal model based 94408
speech handicapped children, multimedia supported pronunciation training 111188
underwater hearing thresholds, noise exposure limits, acoustic estim. 122694
virtual acoustics, appls. and technol. trends 129962
visual/motor/auditory cortices, fMRI, optimum echo time 87630

hearing aids
acoustic feedback reduction, variable step-size of LMS algm. 73017
adaptive dyn. range optimisation for hearing aids 76678
audiometer-telephone interface, digital feedback suppression syst. 76703
bal. membrane micromachined loudspeaker, hearing instrum. 92543
bionic wavelet transform, time-freq. method based on auditory model 98718
bone cond. hearing aids, skull vibr. meas., PC-based in-situ test 76706
CLARION cochlear implants, speech proc. strategy preferences 76696
cochlea, 2D silicon model, analogue VLSI cct. 98715
cochlear implant, nerve monophasic/biphasic stimulation anal. 122345
cochlear implant., speech perception and functional benefit 76694
cochlear implant., speech perception in prelingually deaf children 98703
cochlear implant children, av. electrode voltage, intra-/post-operative obs. 87911

hearing aids continued
cochlear implant users, acoustic vowel space/CV coarticulation, hearing stat changes effects 98725
cochlear implant users, loudness perception/late auditory evoked pots. 76695
cochlear implants, elec. stimulation, pH shift 122340
cochlear implants, eval. & rehabilitation, adv. software tool 76669
cochlear implants & GSM phones, compatibility 76699
cochlear implants stimulation, auditory thresholds, sympathetic skin respor 76665
digital hearing aid fitting strategy, loudness & sound quality 76701
digital hearing aids, multimode compression archit., user tests 76705
digital hearing instrum. fitting strategies comparison 76704
directional acoustic receiving syst., microphone array 111136
DSP-driven cochlear prostheses, eight-channel-stimulator design 122353
Ephraim-Malah noise reduction algms. for digital hearing aids 111159
European Audiology, conf., Oulo, Finland (June 1999) 78381
fitting procedures eval., sig. proc. algms. 76700
fitting strategies, children's amplif. requirements 98701
freq. transposition hearing syst., appl. in children 87910
LV CMOS filter, dyn. gate biasing use 122354
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078
Mandarin speech, tone enhancement for listeners with hearing impairment 7301
MEMS acoustical sens. array, hearing instrum. appl. 87920
microscale auditory syst., hyperacute directional hearing 87881
middle ear implant, differential floating mass type vibr. transducer 98713
multi-microphone technol. for severe-to-profound hearing loss 76702
multiband dyn. range compression (MDRC) algm., hearing aid 111182
multichannel cochlear implant., speech perception, fn. benefit 76697
nonlin. sig. proc. using index calculus DBNS arith. 95640
otiatria, mag. devices appl., implantable prostheses 76666
paediatric audiology, conf., Copenhagen, Denmark (May, 2000) 89504
perceptual time-freq. subtraction algm. for noise reduction 111161
perform., multiple model least sq. tech. 122355
phoneme perception, multichannel cochlear implant effect 76698
piezoelec. transducer cochlear implant, bending piezoelec. mode, modelli 111164
sensorineural hearing impaired listeners, digital ITE-hearing aids eval. *(Germa* 111160
single reson. anal. hearing aid to deliver high quality speech sounds *(Japanes* 122319
speech anal. based on chirped wavelets 106357
speech in noise, intelligibility for hearing-aid users 133051
subthreshold log filters, LV CMOS basic building blocks 80131
switched-MOSFET prog. LV bandpass filter, hearing aid devices 80071
TDMA cellular telephone, EMI with hearing aid 94055
TICA implant. hearing syst., direct electromech. stimulation 122334
vert. IC packaging for portable appls. 100601
virtual hearing aid, digital/analogue aids comparison in children 133050
virtual sens. arrays, robust phase shift estim. in noise 122347
young children with hearing aids, auditory perform., Nijmegen experience 9870
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Si chip-size-packaged microphones, chip stack design 111505

heart *see cardiology*

heart valves *see cardiology; prosthetics*

heat capacity *see specific heat*

heat conduction
see also thermal conductivity; thermal resistance
3D flip-chip solder joint, heat flux and current dens. 113525
132 kV deep tunnel power cables, continuous/transient ratings 99377
ALS Superbend magnet syst., supercond. dipoles 76006
back-to-back tape BGA packages, thermal perform. 113628
bare-die stacked modules with Cu through-vias, thermal charactn. 113627
cryocooler-cooled HTS coils, stabil. criterion 71019
curved surface heating under laser drilling, geom. influences 128601
fluidic interstitial thermal interface materials, thermal contact resist. 124348
hot bar blade for PCB soldering, design, simul. and prototype 125893
HTS magnets, cond. cooled, limiting length 71020
hydrogenerator, stator strands heating anal., 3D isoparametric element metho *(Chinese)* 112467
induction heated furnace charges, temp. field distribs. anal. *(Polish)* 124102
integral props. of heat eqn. 101115
localised heating due to low power focussed laser, max. temp. rise calcs. 8305
LWR fuel rod behaviour under RIA conditions, DYN3D calc. 99507
math. cooling model for thin-wall shell under fast convective mixing of ga 124700
MCM time depend. temp. fields from heat cond. eqn. eigenfunctions/eigenvalue 113695
methacrylate piece, CO_2 laser marking, temp. distrib. 72141
opt. radiation intens. space distrib. meas., thermal method 86999
overhead transm. line ampacity anal. using FEM 99382
plexiglass, CO_2 laser pulse irrad., solitonic wave slow components, IR thermov sion method 105562
polysilicon thermal actuator array, macromodel *(Chinese)* 92496
power DMOSFETs, thermal networks for electro-thermal anal. 115932
QMIT, quasi-monolithic integrat. technol., thermal stress simul. and meas 113625
sand casting proc., thermal optimisation 79122
self-heating of elec. ccts., modelling via thermal networks 90627
semicond. thin films, photothermic action, high-speed inform. recording 8206
single-chamber SOFC, exothermic react. as heat source, cell perform. ana 112820
solar thermionic energy converter, electrode heating, efficiency 78179
sub-microscale temp. distrib. meas., scanning thermal microscopy *(Chinese* 87017
synthetic diamond heat sinks for high-power LD 78668
thermoacoustic tomography inverse problem, minimization 98262
transverse flux induction heating, galvanizing line, 3D eddy currents, temp. fiel 134644
wavelet-Galerkin method for solving parab. eqns. in finite domains 124732
Bi-2223 HTS minesweeping magnet, cond. cooled 77026
Bi-2223/Ag tape wound 3D HTSC coil, 2D quench propag. model 71016
Nb_3Sn cond. cooled screen for current limiter, thermal design 77599
Nb_3Sn pancake-shaped supercond. magnets, quench phenom. modelling 7100
Si opt. excited microresonators, models 116078
TiN/Al/TiN/SiO_2 metallization, void-containing interconnects, local Joule heat ing 69933

convection *see convection*
dissipation *see cooling*
engines
see also Stirling engines
mirror gas turbines, exhaust heat recovery method 123210
OTEC power plant environ. impact/design optim. 99600
exchange *see heat transfer*
exchangers
see also cooling towers
absorpt. refrigeration systs. perform., heat exchangers effect 100341
air conditioner inner unit develop., cross-flow fan air flow anal. *(Japanese)* 89457
air-conditioning chiller selection considerations 124121
aircraft environ. control syst. counterflow heat exchanger, thermodyn. optim. 76791
cooling-tower water, fouling mitigation, electronic anti-fouling 123183
fluid catalytic cracking plant, heat exchanger network retrofit anal. 124145
forced flow cooled current leads for fusion magnets 104584
generating unit predictive plant-wide control, phys. model 88567
GT-35 gas-turbine for CHP, testing 99561
HTGR, compact heat exchanger, heat transfer and flow props. *(Japanese)* 123168
HTGR gas turbine ultrafine off-set fin syst., design anal. *(Japanese)* 123151
integrated SOFC syst., heat exchangers, mass/energy bal. 99984
LHC inner triplet quadrupole heat exchanger, He II heat transfer 75967
micro heat exchanger design, optim. proc. 113607
microfluidic chem. microreaction systs., multiphysics simul. tools 116073
Mikroglas microstruct. glass components for microreaction technol. 114467
mirror gas turbines, exhaust heat recovery method 123210
multiple air conditioning syst., water heater, ice thermal storage *(Japanese)* 124119
onboard fuel proc. for fuel cell vehicles, microreaction technol. 123991
power cycle simul. using energy utilization diag. 77743
refrigerator, thermoelec., perform. 124122
semicond. mfg. facilities, multi-generation enhanced power quality design 113172
SOFC field unit, condition monitoring 99987
SOFC-GT systs., cost effective design 99988
Sulzer 8RND90 diesel power installation, heat exchangers, diagnostics 99575
telecomm. network shelters, low energy air conditioning 113152
transport phenom. studies, holographic interferometry 132224
two phase flow thermosiphon heat exchanger, thermal/mech. design *(Spanish)* 88601
urban centre district heating control/monitoring dispatching syst. 112285
very small scale CHP syst., heat recovery 99574
Ar^+ ion laser cavity stabil., thermoelastic stabil. 82712
CO preferential oxid. reactor, PEMFC, automotive appls. 99991
Si intrinsic-point heater, micropropulsion appl. 104191
flow *see heat transfer*
insulation *see thermal insulation*
losses
see also thermal insulation
air-cooled gas turbine power plants, thermodyn. anal. 112317
CHP stations, steam-turbine installations, economic efficiency enhancement 112311
DSP-100 steel-melting arc furnaces efficiency, transformer power upgrade 100326
HT-7U Tokamak, CICC, AC losses, plasma disruption effects 70995
HTSC power cables, calorimetric losses meas. 77391
HTSC power transm. cable systs., AC loss/thermal considerations 77394
intercooling/reheat gas turbine cycles insight 77762
multi-chip power modules, thermal mgt. and reliab. 125942
power transm. line conductor temp. assess. method *(English)* 112094
self-consistent simul., transient heating effects, elec. devices, finite integrat. 124684
solar glazings, ang. depend. opt. props., outdoor meas. 123836
Pb-acid valve-regulated stationary batts., high-rate recharge expts. 78143
measurement
see also calorimetry
bypass orifice inverter heat pump, thermal perform. study 100340
distributed intell. hierarchical syst., heat metering and control 122825
interstitial applicators meas., FEA computations of heating patterns 110787
natural convective heat transfer coeff. meas. at electronic component surface 121250
thin heat flux sens. for building appl., ASTM C 1130 calib. 97175
meters *see heat measurement*
of adsorption
InP/Pd MOS Schottky diode hydrogen sens., hydrogen sensitivity 109790
of crystallisation
Si(001) amorph./cryst. interface, SPE growth, MD simul., Reply to Comment 79398
of dissociation
oxalyl fluoride for dielec. etch appl. in ICP etch tool 92076
of fusion
vert. Bridgman config., anal. of factors affecting interface deflection 114226
of melting *see heat of fusion*
of mixing
CdS, electronic struct., defect phys., thin film solar cells 91654
CdSe, electronic struct., defect phys., thin film solar cells 91654
CdTe, electronic struct., defect phys., thin film solar cells 91654
of reaction
see also heat of dissociation
single-chamber SOFC, exothermic react. as heat source, cell perform. anal. 112820
Li_xCoO_2 high temp. electrode/electrolyte reacts. 112771
$Li_xMn_2O_4$ high temp. electrode/electrolyte reacts. 112771
$Sm_9Fe_{65}Co_{20}V_9$, H-assisted disproportionation/recomb. 116262
of transformation
see also heat of crystallisation; heat of fusion; heat of vaporisation
narrow thin interconnects, void growth dyn., capillary effects, simul. 92111
of vaporisation
IC chip cooling, micro heat pipe array, fab., charact. *(Korean)* 124324
Au nanoparticles, opt. recording media, laser-induced size reduction 104611
pipes
400 MW lignite-fired power station, FGD retrofitting experience *(English)* 123208
electronic equipt. cooling, heat pipe, heat flux 78629
heat pipes continued
IC chip cooling, micro heat pipe array, fab., charact. *(Korean)* 124324
notebook computer cooling, integrated plate heat pipe with heat spreader 113541
notebook PC CPU cooling, packaged miniature heat pipe 79931
power electronics heat pipe thermal behaviour from frozen startup 67647
power plant waste heat recovery using two-phase thermosyphon heat pipe 133832
sintered miniature heat pipes, thermal perform. 124345
space rem. sens., thermal engng. design *(Chinese)* 98906
spacecraft panel shaker random vibr. test for high-intens. acoustics simul. 98892
heat pumps
building night-time cooling technol., prototype testing 100338
bypass orifice inverter heat pump, thermal perform. study 100340
complex thermal cogen. plant operation optimisation 88562
direct coupled heat-pump wind turbine syst., heat/mech. energy comparison 133891
gas heat pump systs., environ. friendly engine *(Japanese)* 122715
geothermal energy utilization in Turkey 123113
Peltier effect solid state heater cooler, design, eval. 113034
residential PV-thermal binary utilization syst., optimum design 123258
MgO-water chem. heat pump for cogen., thermal anal. 77742
heat radiation
see also emissivity
4.4 GHz microwave thermometer with compensation of refl. coeff. 87558
biological tissues, estim. of temp. distrib. by multifrequency microwave thermography 87559
CZ melt, flow, ellipt. temp. contours under transverse mag. field, calcs. 90212
losses in opt. fibres prediction 93062
LWR fuel rod behaviour under RIA conditions, DYN3D calc. 99507
space rem. sens., thermal engng. design *(Chinese)* 98906
Nd:YAG CW laser keyhole dyn. characterisation 83054
heat sinks
anisotropic graphite heat spreaders for electronics thermal mgt. 67632
cascaded microchannel cooling of high power LD bars 117328
CHP stations, steam-turbine installations, economic efficiency enhancement 112311
Cool Shield EMI shielding with thermal mgt. 105815
desktop computer cooling, min. air flow design, CFD modeling 113542
diamond heat-spreading films for GaN-based high-power FET devices 81254
high av. power diode laser arrays with water cooler, thermal anal. *(Chinese)* 117253
fan-driven power electronics cooling assembly, num. optim. 78652
high-heat-flux thermal mgt. schemes, assess. 78619
IC substrs./heat sinks, thermal time consts. 124356
IGBT losses anal., SPICE behavioral models 70145
IGBT switching module systs., electrothermal anal., thermal component model 90745
immersion cooling, high-speed photography 78623
interstitial applicators meas., FEA computations of heating patterns 110787
large-area solder joints mech. behaviour modelling 67543
LTCC-multilayer module design with integrated liq. cooling syst. 124354
Micro-faze thermal grease, dry-to-touch 67582
microfin array, flow-induced vibr., enchanced heat transfer, computer cooling 67629
mirror gas turbines, exhaust heat recovery method 123210
moving magnet loudspeaker syst. with electronic compensation 120598
multi-chip power modules, thermal mgt. and reliab. 125942
multichip mechatronic power packages, mold delamination and die fracture anal. 113644
multichip/multisubstrate module, thermal simul., multilevel model *(Chinese)* 91518
μP, high-speed, heat sink, grounding method 114789
notebook computer cooling, integrated plate heat pipe with heat spreader 113541
Peltier effect solid state heater cooler, design, eval. 113034
pin fin microheat sink, thrust and frictional forces 78612
plate fin, strip fin, and pin fin heat sinks, modeling of thermal/hydraulic perform. 78620
plate fin heat sinks, entropy generation minimization 78622
plate-fin type heat sink, impinging air flow and heat transfer 113555
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
power MOSFET modules, void induced thermal impedance studies 126791
power semicond. mounting techs. comparison 92323
quasi-monolithic technol. for power microwave/mm-wave ICs, static thermal design 69234
RCGCT, gate drive unit 126697
rigid sphere and elastic layer bonded to rigid substr., contact modelling 78627
SISE parallel plate forced convection heat sinks, DFM 78621
space simulators heat sinks, quantitat. thermal design *(Chinese)* 111317
synthetic diamond heat sinks for high-power LD 78668
syst. level electronics thermal modeling, Therminic 2000 panel summary 113694
thermal-gasket materials selection, EMI considerations 105790
thermoelec. refrigeration syst. using PCM 100344
ZVT PWM boost converters, conducted EMI noise generation/propag. modeling 123613
AlSiC liq. cooled base plate, integral pin fins, thermal charactn. 78628
C/Cu/Cr composite syst., SIMS anal., heat sink appl. 101506
GaInAs strained QW 2 μm laser, improved perform. by increased carrier confine. 71780
InAlAs/InGaAs/InP 5.2 μm-type I quantum-cascade laser, CW operation at 210 K 117239
InGaAs MQW high-power VCSEL arrays, improved output perform. 128229
InGaAs/AlGaAs high-power QW lasers, high-temp. operation 105317
InGaAs-AlGaAs-GaAs SQW-GRINSCH LDs, dry-etched mirror facets, integrated photodiodes 128220
InP HBT refl. grid amp., heat sinking 101793
Si micromachining microchannels heat sink, theoretical/expt. anal. 100578
$Si_{0.94}Ge_{0.06}$/Si:B superlattice phonon-pumped semicond. laser 128247
heat storage *see thermal energy storage*
heat systems
see also boilers; heating
closed water heating syst., flowmeter readings, bubble effect 89454
rotary drying kiln, temp. meas., operating mode judgement, data fusion method, fuzzy proc. *(Chinese)* 75917
heat transfer
see also convection; cooling; heat conduction; heat radiation; thermal diffusivity
1D anal. of microwave batch sterilization of water with continuous impedance matching 78368
ATLAS supercond. toroids, quench modelling 75973

heat transfer continued
atmos. press. arc plasmas heat transfer anal. 113137
auxiliary mill duty laminated 4DN series DC motors 112540
building environ. simul. before desk top computers, USA, pers. memory 100331
cantilever probes for sub-100 nm scanning thermal microscopy, design and batch fab. 121030
coal/pet-coke firing pipe design customisation 78580
compact finite-difference scheme for 1D heat transport eqn. 90153
cortical sulci, automatic landmarking 87580
crucible-type induction furnaces, flow/temp. distrib. studies *(German)* 113138
cryst. growth, SoLFIDaP symposium, Belgium (Sept. 2001) 113242
elec. heat tracing, CFD modeling 124091
elec./hybrid EV secondary cells, thermal characterisation 89133
electronic packages, thermal/psychrometric response, num. model 113546
electronics, thermal design, overall cooling perform. assess. 124347
ferrite phase shifter in grooved waveguide, temp. charcts. anal. 102568
finite-element modeling of dry sliding wear in metals 79130
fuel cell power modules, gaseous reactant flow 89175
Greens fns. for boundary element anal. of anisotropic bimaterials 68088
high power laser windows, 3D temp. distrib., thermal lens effect *(Chinese)* 117327
high temp. HPFF cable operation, thermo-chem. phenom. 133734
high-temp. microwave proc., review 100327
hot-electron bolometer with normal metal-insulator-supercond. tunnel jn. 87011
HTGR, compact heat exchanger, heat transfer and flow props. *(Japanese)* 123168
HTSC tube, thermal stabil. 71183
IC, transient 3D heat flow anal., TLM quad tree mesh 115993
IC chip cooling, micro heat pipe array, fab., charact. *(Korean)* 124324
IM thermal modelling, lumped param./2-D FEA methods 123415
in-mold EM stirring in continuous casting 100345
integrated SOFC syst., heat exchangers, mass/energy bal. 99984
inverse problem for Laplace's eqn. in thin strip, stabil. of solns. 114126
ion nitriding devices, glow discharge energy exploitation *(Polish)* 124105
large diam. CZ-cryst. growth, Si melt flow, steady/dyn. mag. fields effects 90225
laser cutting proc., transient 3D computer simul., parallel comput. 105623
LHC inner triplet quadrupole heat exchanger, He II heat transfer 75967
local nonsimilarity solns. for mixed convection boundary layer flow of micropolar fluid 101091
MCFC, heat and mass transfer, num. simul. *(Chinese)* 112838
MCFC based combined cycle power plant, efficiency, pollution reduction 99566
metal casting, solidif./filling simul., ProCAST, MagmaSOFT 89844
micro heat exchanger design, optim. proc. 113607
mobile handset antenna, exposed human body, temp. distrib. calc. *(Chinese)* 111189
MSW incinerator combustion chamber, bed combustion, gas flow 134653
multilayer struct. semicon. devices, thermal layout optimis., anal. method 70004
Newton-Krylov methods preconditioning in solidifying flow appls. 101116
nonlin. thermal stress and flow modeling in various electronic packages 89859
num. emulation on simultaneous soil moisture and heat transfer under freezing/thawing conditions *(Chinese)* 76826
num. eval. of heat and fluid flow within rot. disks 81904
office occupants in Sydney, activity rates/thermal comfort 122364
open multideck refrigerated food display cabinets, defrost control params. 78347
opt. fiber drawing procs., Fresnel interfaces, radiative transfer modelling 82121
overhead power line conductor temp. modelling *(Serbian)* 88459
phosphotungstic acid electrolyte-based fuel cell, CFD study 100022
plate-fin type heat sink, impinging air flow and heat transfer 113555
plexiglass, CO_2 laser pulse irrad., solitonic wave slow components, IR thermovision method 105562
power plant waste heat recovery using two-phase thermosyphon heat pipe 133832
pulverised coal gasification proc., reactor thermal perform. modelling 133839
PVDF-trifluoroethylene copolymer, pyroelec. dyn. 127210
PWM inverters, diode rectifiers, electrolytic capacitors, life estim. *(Korean)* 134198
PWR, U-tube heat transfer/flooding during reflux condensation 99522
refrigerator, thermoelec., perform. 124122
resist. heated FZ furnace, radiative heat transfer, FIDAP num. study 114223
Russian fossil fuels CFBC, technol. substantiation 112312
salient pole sync. machine rotors, cooling/ventilation modelling 123362
sand casting proc., thermal optimisation 79122
seq. build-up PWB, CO_2 laser drilling, residual thin materials 69319
ship propulsion large PM sync. motors, thermal anal. 123972
sintered miniature heat pipes, thermal perform. 124345
SME normally-closed gas microvalve, flow meas. 123705
SMT assembly thermal absorpt. for multicriterial thermal design 125910
SOFC heat transfer/gas flow modelling develops. 99983
solar thermoelec. batt., struct., efficiency 112859
steam boiler furnace incident radiation fluxes determ. 123201
stratified liq./vap. medium electrohydrodynamic induction pumping 93967
substation busbar end contact heating computation 89004
substation busbar prolongation muff heating calcs. 89005
superheated drop detectors, electronic neutron pers. dosimetry 122422
thermal flow sens., calorimetric device 86763
thermal vac. sens., heat transfer compensation 125946
thermochemical responses of sandwich panels to fire, math. model 114181
thermolum. pers. dosimetry, abnormal glow curves, algm. 133112
thermophysical props., conf., Boulder, USA (Jun. 2000) 78385
transient buoyant flow, in room with displacement ventilation, chilled ceiling syst. 100337
transport phenom. studies, holographic interferometry 132224
tubular SOFC technol., computer modelling using ANSYS package 99981
unattended IR intrusion detect., human targets surface temp. modeling 77023
vert. Bridgman config., anal. of factors affecting interface deflection 114226
vert. Bridgman growth, modeling solute segreg., free-surface tech. 114225
VVER-1000 NPP steam generators, corros. build-up prediction 123167
$3Al_2O_3$-$2SiO_2$ ceramic material, microwave heating, FDTD modelling 113144
$Au/YBa_2Cu_3O_7$ fault current limiters, quench distrib., meander lines resist. 112176
CO preferential oxid. reactor, PEMFC, automotive appls. 99991
CdTe-CdS thin-film solar cells, time-resolved PL studies 100113
GaSb, vert. Bridgman growth, heat/momentum transfer, num. anal. 114228
LiBr mixtures based single-stage/advanced absorpt. heat transformers, solar ponds temp. increases 134413
$Li_xMn_2O_4$ spinel cell electrode, heat generation charcts. meas. 99920
NbN phonon-cooled hot electron bolometers, 2D hot-spot mixer model 71091
Nb_3Sn persistent current switch, MHD ship propulsion, switching reacts. 127543
Nd:phosphate glass Shenguang III laser prototype, residual thermo-opt. distortions *(Chinese)* 105237

heat transfer continued
Pt IR sources for nondispersive IR gas monitors 132030
SF_6 cct. breaker arc behaviour, nozzle ablation effects 112692
Si, CZ cryst. growth, 400 mm diam., global simul. 101159
Si, CZ cryst. growth, temp. gradient meas. 101156
Si, CZ growth rate, temp. gradient depend. 79173
Si FZ cryst. growth, Marangoni flow/interfaces, 3D simul. 90231
Si films, supercooled liq., solid nucleation/growth modelling 114397
Si, large diam. tube, EFG, modelling, expt. 90234
SiC, bulk growth, kinetics model, heat transfer 90235
SiC crysts., phys. vap. transport growth, proc. model 114230
SiC, sublimation growth, heat/mass transport calcs. 114229
SiC sublimation growth proc., global modeling, thermoelastic stress 9021
Ti-Ni-Cu SMA actuators, high-speed response 116060
Y-Ba-Cu-O HTSC, cylindrical melt-textured, magnetothermal instabi 70656
YAG:Nd miniature solid state lasers, thermal tuning, lin. *(German)* 9374
solder-drop printing proc. for flip chip, liq. metal droplet spreading/so 80534

heat treatment
see also annealing; quenching (thermal); rapid thermal processing; temp ing; thermomechanical treatment
300 mm wafers, mech. props., slip length simul. during thermal proc. 702
ABS copolymer film, bending piezoelec. 104380
aerial image photolithography, normalized image log-slope metric usage 11
BG dielec. charact. MIL PRF 55681 capacitors, insulation resist. degrad. 11
ceramic chip capacitors for automotive indust., qualification testing 89413
chem. amplified pos. resist profile change, re-adhering acid effects 103552
conductive adhesives for flip-chip appls., self-alignment capability 67604
conductive layers in LTCC ccts., assembly props. 78657
cracked steam turbine blades, ER410/ER316L steel repair welding 67498
die edge heat treatment, YAG laser source, on-the-machine tool *(Japan* 93916
doped trivalent rare-earth ion doped silica gel-glasses, sol-gel method 116554
elec. furnace params., energy consumption effects *(Polish)* 124135
elec. shaft furnaces for heat treatment appls. *(German)* 113140
electronic packages, 2D surface curvature meas. during thermal cycling 11
epoxy underfill materials, titanate/zirconate coupling agent effects 67599
epoxy/glass fiber composites, surface hydrophobicity, thermal treatm *(Korean)* 116186
epoxy/phenolic syst. underfill for FCOB appls., curing mechanism 67585
ferritin mol. nano-particle 2D array, AFM/SEM 102867
flash memory, 0.25 μm, data retention, plasma charging/mobile ion ef 102164
flip chip attach, fluxless solder nonconductive paste tech. 125938
garnet film, crack form., cpd. glass underlayer 127340
high-power IGBT inverter for induction heating appls. *(German)* 112618
IC package encapsulation, back-end proc. overview 78662
iron, austempered, ductile, laser surface hardening, math. modeling 72110
LTCC photolithographic feature fab. 124379
MCM-D packaging, wet etch stop resist eval. 69375
methyl silsesquioxane thin films, prep. and dielec. charactn. for IC appls. 116
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 115
MOV, oxygen role at grain boundary 91407
multiple anion nonvolatile acetal resists for e-beam lithog. 103641
nanoparticle liq. suspens., drop-on-demand dispensing for microelectronics m ufacture 100613
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill encapsulant develop. formulation, epoxy resin combinat 67580
nonlin. optic and conductive polymers, thermal heating effects 93304
nonporous activated carbon electrode elec. double layer capacitor, high ene dens. *(English)* 100224
opt. coatings surface, sol-gel method, particle size and distrib. study *(Chin* 71497
opt. coatings surface, sol-gel method, particle size and distrib. *(Chinese)* 82
Parmod functional electronic materials, laser proc. 115157
PCB conformal coating proc. optim. 115193
PEEK, electron beam irrad., dielec. and thermal props. 92668
phosphate PTFE, fast proton conducting composite materials, fab./props. 125
phthalocyanine zinc spin-coated film opt. writing/erasing props. 92964
plastic encapsulant material props., effects of temp. exposure above glass tra 67566
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 9214
poly(N-vinylcarbazole), mol. doped LED, ionic charge polariz. *(Japan* 116986
poly(norbornene/maleic anhydride/acrylic acid/tert-butyl acrylate) single-l 193 nm resist, base additives 103546
poly(p-hydroxystyrene) pos. photopolymer, vis.-sensitive, using vinyl e crosslinker 103518
poly(triphenyldiamine)/nanoporous TiO_2/dye-sensitized hybrid solar c 123816
polymer bonding proc., nanolithography appls. 126522
polynorbornene low-k dielec. material, photosensitive, for packaging ap 67601
polysilicon, metal-induced lateral crystn. technol., device appls. 80629
pyramid polygon mirror wide-band laser scanning heat treatment *(Chin* 93914
PZT thin films, depth profile, RF glow discharge at. emission spectrosc. 104
quartz, concave refr. microlens arrays fab. by ion beam etching *(Chinese)* 71
repairable CSP underfill materials for reliab. enhancement 113598
resist lithographic perform. enhancement, PAB effect and solvent removal, in ferometric meas. 115741
SAN copolymer film, bending piezoelec. 104380
SCM440/SNCM220 steels, CO_2 laser heat treatment by rot. pyramid poly mirror 83058
self-primed spin-on low-k materials testing for wafer cost of ownership opt 92124
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
steel, C, mag. Barkhausen noise and hysteresis loop 79487
steel bar heat treatment proc. automation *(Polish)* 124136
steel rods, surface residual stress, laser US charactn. 114509
steel rods, surface residual stresses, laser US & piezo-transducer 79491
toners, quaternary ammonium charge control additive, heat treatment eff 83167
TPP, 12Kh1MF steel steam line, regenerative heat treatment 112295
ULSI device isolation struct., metal impurities behaviour 81107
Ag-SnO_2-In_2O_3 elec. contacts, prod. optim. 90563

treatment continued
g-sheathed $(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ multifilamentary tapes, fab., props. *(Japanese)* 27469
gCu-sheathed Bi-2212 multifilamentary round wires, crit. curr. dens. 127438
gPd alloy powders, monodispersed/low-fire, for ultra-thin MLC capacitor electrodes 80427
gPd:$BaTiO_3$ electrode/Pb-based relaxor ferroceramic cofiring characts. 79440
l matrix-C fibre multilayer composites fabr. and charactn. 114452
l:Bi capacitor foils, simulated proc., Bi behaviour 80439
lGaAs/GaAs 2DEG, contactless heating by strip-line guided microwaves 03102
l_2O_3:Tb,Zn(Ca) films, long lasting luminesc. 104908
$_2O_3$-P_2O_5-MgO-Al_2O_3-SiO_2 low firing temp. glass-ceramics, HF multilayer chip nductors appl. 101509
a,Sr)TiO_3 single-phase epitaxial film fabr. and microstruct. charactn. 101459
a ferrites, investig. of mag. force 81828
a$Fe_{12}O_{19}$ ferrite powder, coprecipitation prep., mag. props. 104506
a$Fe_{12}O_{19}$ hexaferrite monodispersed nanoparticles, prep., mag. props. 104505
a$MgAl_{10}O_{17}$:Eu phosphors for plasma displays, phase rels., thermal degrad. 32342
$a_{1-x}Sr_xTiO_3$-Al_2O_3-MgO ferroelec. composite, dielec. prop., sol-gel synthesis 14448
aTiO_3 dielec. films, prep. & microstruct., sol-gel/powder coating proc. 81691
Bi,Pb)$_2Sr_2Ca_2Cu_3O_x$ tapes, Ag-clad, evol. of core dens. during proc. 70756
Bi,Pb)SrCaCuO 2223 HTSC tapes, two axial rolling under long. stress 125090
-2223/Ag tapes, sintering time reduction, J_c 127447
PbSrCaCuO 2223 HTSC large sized mag. shield prepared by jointing sintered bulks 83392
PbSrCaCuO 2223 sintered bulk HTSC, prep. factor to enhance J_c (15,000 A/cm^2) 81934
PbSrCaCuO 2223 tapes, two axial rolling under long. stress, deform., effect on microstruct. 68431
PbSrCaCuO HTSC 2223 tapes, I_c and phase characts. after heat treatment in emp. gradient 70707
$_{1.8}Pb_{0.4}Sr_2Ca_{2.1}Cu_3O_x$/Ag tapes with CeO_2 barriers, microstruct., elec. props. 27449
$Bi,Pb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC ribbons, sintering, AE testing 81970
SrCaCuO 2212 tapes, modified powder-in-tube method, high crit. current dens. 70709
$_2Sr_2CaCu_2O_y$ HTSC large capacity Rutherford cable, testing 71187
$_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC multifilamentary wires, current distrib. and loss reduction 127462
$_2Sr_2Ca_2Cu_3O_8$/Ag HTSC tapes, high temp. sintering prep. and charactn. 70705
$_2Sr_2Ca_2Cu_3O_8$/Ag HTSC tapes, twisted filaments, ceramic barriers and elec. props. 70700
$_2Sr_2Ca_2Cu_3O_x$/Ag tapes, transposed filaments, transport current losses 70695
$_2Sr_2CaCu_2O_{8+\delta}$/Ag HTSC tapes, electroplating prep, J_c under mag. field 70718
$_2Sr_2CaCu_2O_x$/Ag/Ni HTSC clad tape, fab., mech. props., J_c 70735
$_2Sr_2Ca_2Cu_3O_{10}$-SrVO-Ag HTSC multifilamentary tapes, prep. and charactn. 127465
$_4Ti_3O_{12}$, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
$_4Ti_3O_{12}$:La, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
fibers, PAN-based, electrochem. props., rechargeable Li ion batt. anodes appl. 99897
fibers, vap.-grown, basic props. and their batt. appls. 99896
films, controlled ion-plasma deposition and charactn. 114401
nanotubes, patterning technol. using photolithog. for FED appls. 69438
nanotubes, synthesis & struct., HREM 114483
periodic porous nanostructured, prep., struct. 114470
/Cu/Cr composite syst., SIMS anal., heat sink appl. 101506
C-Co composite films on glass, heat treated, field emission 69410
O_2 high-power multibeam lasers, surface hardening appls. 83050
$a_2Al_2SiO_7$ cryst. slab waveguides from surface crystallized glass 93113
$a_xPb_{1-x}TiO_3$:Li^+ film, prep., humidity sens. appl. 75439
dSe nanocrysts. in a-ITO films, struct./SHG, elec. field effects 82891
eO$_2$-ZrO$_2$ thin film, sol-gel prep., counter electrode appl. 68320
o-Ni alloy nanowire array, prep., mag. props. *(Chinese)* 127311
oPt/Cr long. media, nucleation site layer, sig./noise ratio *(Japanese)* 70525
u end termination develop. methodology for base metal electrode based MLC capacitors 115086
u line geom., interconnect microstruct., proc. params. 92123
u surface modif. by thermal/plasma treatments 92096
uO/Fe_2O_3:Li_2O, elec. props., precalcination temp. depend. 80747
e insulated powder, mag. props., AC mag. appl. 104498
e-Cr-Ni, age-hardenable austenite alloy, low temp. mag. sens. 75483
e-Si-Mn-S elec. steel sheet, mag. props., slab reheating 104495
eCoCrSiB, amorph., GMI strip/coil sens. 75482
aAs HIGFET, 0.35 μm, surface oxid. status effects on charact. 103843
aAs film bonding on piezoelec. substr., epitaxial lift-off 92737
aAs/XP (X=Ga,In), wafer bonding, at. H surface cleaning 126389
aAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
$a_xIn_{1-x}As_{1-y}N_y$/GaAs laser struct., In/N ratio effects 93588
e-Se-Te-Si_3N_4-CdS spin-coated chalconitride thin film, prep. 125061
eSbTe-based phase change opt. disks, amorphization/crystn. mechanisms *(English)* 71234
l-silsesquioxane low-k ILD films, nanoporous, thermal treatment effects 92157
l-silsesquioxane low-k ILD thin films, H_2-N_2 ambient curing study 92155
l-silsesquioxane spin-on polymer low-k film, proc./props., CMP charact. 92149
l-silsesquioxane ultra low-k ILD films with tunable elec./mech. props. 92159
TO coatings, chem. soln. deposition, proc. and elec. props. 101426
nAs/GaAs QD, post-growth thermal treatment, PL/TEM obs. 126168
nGaAsN QW, solid source MBE growth, charactn. and laser appls. 101258
$Ta_{1-y}Nb_yO_3$ disordered ferroelec. crysts., dielec. const. 127234
rF lithog. imaging syst., anti-refl. layer design considerations 103559
aCoO$_3$ thin films, ion-beam sputtering prep., elec. props. 68149
aFeO$_3$ perovskite thin films, RF magnetron sputtering, elec. cond. *(Japanese)* 90255
aGaO$_3$ powders, pure and doped, chem. synthesis by amorph. citrate/EG method, oxide fuel cells appl. 123780
aNiO$_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
a_2O_3-B_2O_3-GeO_2 transparent surface crystallized glasses with stillwellite-type LaBGeO$_5$, SHG 71989
aOF:Eu^{3+} thin films, sol-gel synthesis, PL props. 82341
$a_{1-x}Pb_xMnO_3$ CMR ceramics, co-precip. oxalate precursor prep. 68406
aSrCoO$_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
aSrMnO$_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$La_{0.8}Sr_{0.2})MnO_3$-ZrO_2-Y_2O_3 SOFC cathode-electrolyte interface reacts. 99970
$iAl_yCo_{1-y}O_2$ prepared via sol-gel proc., electrode perform. 123728
$iAl_xMn_{2-x}O_4$, emulsion drying method, enhanced structural stabil./cycleability 90559
$LiB_{1/9}Mn_{17/9}O_4$ cathode for Li ion batt., synthesis 99903
$Li_2B_4O_7$-$SrBi_2Ta_2O_9$ glass ceramic, NLO and ferroelec. behavior 82024
$LiNbO_3$/Si SAW-semicond. coupled device fab., film bonding 92736
Mg_2SnO_4 ceramics, synthesis-proc.-microstruct. correl. 68401
Mg_2SnO_4, synthesis from metallic precursors via powder metall. route, XRD/EDX 68408
Mn-Zn ferrite, recycled, mag. props. and their appls. to mag. parts *(Japanese)* 104499
$MnZnFe_2O_4$ ferrite cores, mag. props., mech. strength 127335
$NaNbO_3$ crystallite containing BSG glass-ceramic, opt. limiting behavior 93775
Nb-Ti supercond. tapes, prep., upper crit. field anisotropy 70777
Nb-Ti supercond. wires, prod. scheduling, quality improvement 67690
Nb-Ti-Ta multifilamentary supercond. tape, J_c, microstruct. 70778
Nb_3Al, transformed jelly-roll multifilamentary wires, supercond., rapid heating 70760
Nb_2O_5, lattice consts. and gas-sens. props., calcining temp. effect 97455
Nb_2O_5-TiO_2 thin films for electrochromic devices 71405
Nb_3Sn composites, bronze processed, microstruct., I-V charcts. 70767
Nb_3Sn, insulated cable stacks, accelerator magnet coils, thermomechanical props. 71048
Nb_3Sn internal tin strands, ITER Toroidal Field Model Coil, heat treatment effects 127413
Nb_3Sn, internal-Sn, supercond. props., starting Cu-Sn phase effects 70569
Nb_3Sn strand, tokamak device, perform. var., heat treatment 82001
Nb_3Sn strands, internal tin, heat treatment optim. 68398
Nb_3Sn supercond. by powder in tube proc., Ti and Ta addits. 70571
Nb_3Sn supercond. reinforced by Ta cores, mech. props. 68429
Nb_3Sn wires, internal Sn processed, influence of Ge addit. on phase form. and EM props. 70757
NbTi CICCs, 36-strand, control of contact resist. by strand surface coating 81947
NbTi, insulated cable stacks, accelerator magnet coils, thermomechanical props. 71048
$(NbW)_3Sn$ multifilamentary composite supercond. for AC use, hysteresis loss and J_c 81928
Ni/ZrO_2 anode catalyst prep., mist pyrolysis method, SOFC appl. 79441
Ni-Fe alloy of low coercivity and improved corros. resist. in cyclic damp heat test 81808
Ni-MLC capacitors, Y5V dielec., bakeout-property rels. 80426
PZT, ferroelec. films, polariz., pyroelec. props., orient. effects 116169
PZT fibers, effect of heating temp. on dielec. props. 70425
PZT fine powders prep., PVA evap. route, heat treatment and charactn. 90591
PZT thin films, sol-gel growth, excess Pb content on microstruct./elec. props., 101412
PZT:Mn,W,Sb,Ni ceramics, prep., microstruct./dielec. props. 101487
PZT-based 4Mbit FRAM devices, retention behavior rel. to capacitor procs. 70473
PbB'B"O_3 ferroelec. solid solns., dielec. nonlin. 70413
Pb($Fe_{1/2}Nb_{1/2}$)O_3-PMN, struct., dielec. props., proc. routes 68403
PbO-SiO_2 glass, photoinduced refr. index change, UV irrad. 127553
Pt layer residual stress, thin film micro-gas sens., thermal cycling 120986
Pt-Si based O_2 sens., reactivation, surface heating & temp. meas. 97453
$RuSr_2GdCu_2O_8$ supercond. cpd., impurity phases 81937
Si, concave refr. microlens arrays fab. by ion beam etching *(Chinese)* 71392
Si films, CVD epitaxy, low thermal budget surface cleaning/dry etching 92088
Si films/amorph., Ni induced lateral crystn., elec. field effects 125053
Si multicrystalline solar cells, screen printed contact form. mechanisms 100170
Si solar cells, NIR internal quantum efficiencies, thermal modifs. 100165
Si wafer disloc. dens. change during thermal proc., solar cells 91598
Si:Au, acceptor behavior rel. to long-term heat treatment 102970
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si:H,N,O,Ni CZ wafers, intrinsic gettering, minority carrier lifetime 91930
SiC/Si:O interface, hollow voids, elec. current heating 126105
$Si_{1-x}Ge_x$ single- and poly-crysts., material props., nuc. detectors appl. 115342
Si(Li) detectors, Cu staining method, X-ray anal. microscopy 121465
SiO_2 mesoporous film humidity sens., surfactant template self-assembly 97177
SiO_2, silica self-assembled aerogel-like low dielec. const. films, prep. 79418
SiO_2/Si struct., elec. props. 69771
$Sm_2Fe_{17}N_x$ powders, high-perform. epoxy-resin-bonded magnets, mag./thermal props. 70548
SnO_2 nano-gas sens., Pd/Pt/Au catalysts, perform. 132064
SnO_2:Sb xerogel electrodes prep. and charactn. for electrochem. capacitor appls. 102768
SnO_2-Ca(K)(Mg) methane gas sens., impregnated powder using wet chem. method 97524
SnO_2-carbon composites anodes for Li-ion secondary batts. 99941
Sr ferrites, investig. of mag. force 81828
Sr_2CeO_4 blue phosphor, Pechini's method synthesis and charactn. 104922
SrO-BaO-Nb_2O_5-GeO_2 tungsten-bronze glass-ceramics, crystn., dielec. props. 90562
Ta thin-film supercond. transit. edge thermometers 87020
TaO_x top layers, buried photoresist layers etching 126410
Tb-FeCo/FeCo multilayers, large magnetostrictive suscept. 70506
Ti-Si bilayers, init. reacts., in situ resist. meas. 80892
$TiAl_3$ interfacial growth, in-situ TEM obs./num. simul. 103462
TiNi SMA thin films charactn., MEMS appls. 125069
TiO_2 mesoporous thin films, prep. by surfactant templating 79395
TiO_2/CdSe films, PV conversion, thermal treatment effect 134404
TiO_2/organically modified silane composite, sol-gel, charactn. 71498
(TlPb)SrCaCuO-based HTSC biaxially aligned tapes, electrodeposition and charactn. 68340
U_3O_8 powder, alternative method to produce MTR fuel elements 101477
WO_3 semicond., elec. props., gas sens. appl. 86711
WO_3-$Na_2O(MnO_2)(Al_2O_3)(NiO)(Co_3O_4)$ ceramics, elec. props. 90552
YBaCuO Josephson jns., ramp edge modif. by ion beam irrad./heat treatment 70808
$Y_1Ba_2Cu_3O_7$ HTSC films, ex-situ post-deposition proc. for coated tape fabr. 68181
YIG:Ce films, prep. by RF magnetron sputter techs., struct./mag. charact. 81832
$YMnO_3$:Zr thin films, sol gel method, leakage current orig., heat treatment 104318
YVO_4:Nd^{3+} cryst., LHPG, opt. props. 124796
ZnO varistor, LV, microstruct. and elec. props. 81405
ZnO varistor fabr., powder coating with mixed dopant solns. 79372
ZnO:Ga films, sol-gel prep., struct./elec. props. 114388
ZnO:SnO_2 based varistor ceramics, microstruct. & elec. prop. 101496
ZnO-based ceramic films, prep. & props., sol-gel proc. 126915
ZrF_4-LaF_3-AlF_3-GaF_3-ErF_3 glasses, devitrification, nucleation/spinodal decomp. 90582

heat treatment continued
(ZrSn)TiO_4 microwave ceramics with low sintering temp., control of Zn 114449
$ZrTiO_4$ powders for microwave components, aq. synthesis and sintering 101492
poly(N-vinylcarbazole) LED, $LiClO_4$ doped, efficiency 116982

heated cathodes *see thermionic cathodes*

heating
see also electric heating; induction heating; ovens; plasma heating; process heating; refractories; solar heating; space heating
15 kV enclosed bus assembly, 5 kA, 60 Hz 3-phase continuous current test 133417
absorbing opt. fiber-based heater 82096
closed cycle vap. turbogenerators, rem. telecomms. power sources 112469
Faraday rotator design for high av. power lasers 127852
fiber Bragg grating with metal coating, tuning efficiency *(Chinese)* 71292
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
HT-7U Tokamak, magnet coil impregnation, hybrid heating method 127512
hyaline cartilage, NIR laser radiation effect on opt. props. 132640
IM winding heating, superposition/equiv. load methods 112523
intercooling/reheat gas turbine cycles insight 77762
localised heating due to low power focussed laser, max. temp. rise calcs. 83059
micro-lens-fibre fab., two-step proc. using continuous CO_2 laser source 104679
opt. material absorpt. coeffs., laser interferometer calorimetry 132191
overhead power line conductor temp. modelling *(Serbian)* 88459
oxide thin film PLD syst., high temp., halogen lamp heating 90473
Peltier effect solid state heater cooler, design, eval. 113034
rechargeable batt. charging proc., Joule heating dissipation minimisation 123726
simultaneous cooling/heating solar absorpt. syst. with NaOH:KOH:CsOH and H_2O-LiBr 134412
tunable external cavity semicond. laser with fiber Bragg grating feedback *(Chinese)* 71854
tunable phase-shifted long-period gratings by refr. index-shifting 120199
turbulent round jet, heated, temp. dissipation meas., cold-wire anemometry 132222
Ag nanoclusters in PMMA films, post-heating, NLO props. 71920
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
Nb_3Sn persistent current switch, MHD ship propulsion, switching reacts. 127543
Nd^{3+}:$Gd_2(MoO_4)_3$ nonlin. laser cryst. quantum efficiency 82586
Si opt. microsensor, direct near-field antenna testing 109603

heating, buildings *see space heating*

heating elements
see also electric heating
absorbing opt. fiber-based heater 82096
ceramic microcomponents, rapid prototyping fab. proc. 127125
elec. heating conductor service life, internal temp. distribs. effects *(Polish)* 124092
gas sens., embedded microheater element, thermally insulated dielec. membrane 132024
ink jet print head prod. simul., methods 124316
micro-gas sens. array, heating power control method 97495
micromachined hotplate, screen-printing of thick-film gas sens. 97489
planar lightwave cct., device package, AlN heater 113617
PM wind energy generator for power heating appls. *(Latvian)* 112367
polysilicon heater, CMOS microstruct., high temp. sens. 97573
PTF sens. 120721
vert. micromachined resistive heater for micro-gas separation column 113142
$LaCrO_3$:Ca thin film heaters, fab./eval. *(Japanese)* 78336
Pt IR sources for nondispersive IR gas monitors 132030
Si intrinsic-point heater, micropropulsion appl. 104191
TiO_2-based gas microsensors for high temp. appls. 132031

heavily doped semiconductors
see also degenerate semiconductors
300 mm wafers, mech. props., slip length simul. during thermal proc. 70239
bipolar transistor, base transit time, base doping profiles, iter. schemes 70049
diamond:Al(Cu), high energy ion implant., conducting layer form. 80999
diamond:B, heavily-doped, high cond., impurity states 115295
diamond:B highly-doped electrodes, PbO_2 electrocatalysis and deposition, US effects 90503
planar silicon diode temp. sens., low-temp. current transfer 75419
poly(ferrocenylsilane) semicond. thin films with vap.-phase I diffusion doping, electronic props. 69606
SOI MOSFET, highly doped, inversion-layer mobility, self-consistent calc. 92348
AlN:Si heavily doped electron field emitters, phosphor, AFM 80578
Au/Ti/p-diamond:B ohmic contact, specific contact resist. meas., transm. line model anal. *(Chinese)* 115427
B doped LPCVD polysilicon film, pre-annealing influ. on residual stresses 103245
p-GaAs base of HBT, nonthermal electrons, femtosecond energy relax. 81216
GaAs:Be films, MBE, defect engng., elec. props. 126032
GaAs:Be films, MBE, structural props. 126034
GaAs:Cr, SI, effect of Ar^+ implant. on galvanomagnetic props. 80702
GaAs:Cr(Fe)(Co) film, electronic & mag. props., MBE growth 79243
GaN:Mg, acceptor related recomb. centers, inhomog. spatial distrib., CL 81043
GaN:Mn, high dose ion implant., nanoscale mag. regions 127326
GaN:Mn(Fe) epilayers, prep., magnetis., MBE 79244
$Ge_{1-x}Si_x$:B (Ga) (P), heavily impurity doped, CZ growth 79186
p-$Hg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor band 115301
InAlAs/InGaAs/InP lattice-matched/metamorphic HBT, MBE growth 115860
InAsP:Zn/InP(InGaAs) heterostruct., doping, photodiode appl. 115553
InGaAs:C, heavily doped, CBE growth, surface morph. 101205
InGaAs/AlAsSb QW, MBE growth, Si doping 115397
InP:Fe, heavily compensated implanted samples, $Fe^{2+/3+}$ trap conc. 91967
InP-based HBTs, heavily doped, manufacturable MBE proc. and charact. 125730
SOI/Al, heavily doped, efficient electronic cooling 103168
Si highly doped nanowires, dual-gate config., single-electron tunneling obs. 70224
Si, highly doped polycryst., grain boundaries carrier transport 91590
Si p/p$^+$ substrs., spiral inductors with reson. freq. of 20 GHz 69227
Si planar resistors, temp. response curves, low-temp. hopping cond. nonohmic effects 75420
Si pn devices, PEEM, doping-induced contrast, photon energy depend. 69630
Si ultra-shallow diodes, epitaxially grown, Al/Si contact 115825
Si:B CZ substr., boron implant., CMOS technol. 103282
p/p$^+$-Si:B highly doped substr. wafers, edge treatments and misfit disloc. nucleation 102960

heavily doped semiconductors continued
Si:B p/p$^+$ epitaxial layers, ion implant., misfit disloc. nucleation/glide, F 126280
Si:B, vert. surface tunneling transistors, B surface phase effects 81191
p+Si:B wafers in aq. KOH, etch rate vars., proc. condition 103341
Si:B,F films, PECVD, struct., transport props. 114337
Si:Er, ion implant., IR PL emission, minority carrier lifetime 91585
p$^+$-Si:H,B,Fe, Fe detect., DLTS, Schottky diode meas. 80655
Si:Mn films, super-doped, gas source MBE growth, anom. Hall effect 9029
Si:N,C, high dose shallow plasma immersion ion implant. 91973
Si:P, heavily doped, chem. comp. changes during native oxide form. 12599
Si:P, heavily doped, oxid. rate, interfacial silicon emission model simul. 115
Si:Sb bulk cryst./δ-doped layer, magnetocond., weak localization 91579
Si/SiGe MODFETs, nearly body-effect free design 81389
Si/SiGe/Si DHBT, neg. resist. charact., high power appls. *(Chinese)* 1158
n-Si/p-PPV jns., elec. charactn. 115375
SiC:Al,B, 4H, deep acceptors, EPR, vacancies 69798
SiC:N Schottky jn. admittance, carrier freeze-out effects 69718
4H-SiC:N epilayers, thermopower, phonon drag effect modeling 69599
4H-SiC:P,C(Si), co-implant., n-type doping 103278
$Si_{0.95}Ge_{0.05}$, heavily GaP- and P-doped, thermoelec. props. 80764
TiN-Si planar jns., proximity effect 104576

heavy electron materials *see heavy fermion superconductors*

heavy fermion superconductors
Josephson effect study 104580

heavy ion excited X-ray emission *see ion microprobe analysis*

Hebbian learning
∞OH neuron model as principal component analyzer 129457
blind source separation by redundancy reduct. in recurrent neural net 9564
complex-valued sources blind separation, extended Hebbian learning 95625
MEMS, dyn. simul., model reduction, neural network 70345
neural net facial expression recogn. syst. using unsupervised local proc. 129
olfactory cortex design & implement. in analogue VLSI 102483
seq. proc. neural network, nonmonotonic transfer fn. 91135
visual cortex, spiking associative memories, patterns 114917

height measurement
see also radar altimetry
digitized image, height meas. for forensic scientists 118171
GLAS spaceflight instrum. fiber optic syst. components testing/reliab. 10466
gradienter, hydraulic press. method, resoln. and response time 75452
head disk spacing var. meas. under vibr. conditions, real-time method 1211
optic fiber sens. based telemetry for height meas. of telescopic gasometer 75
SAR, interferometric coherence, two-target height effects 75132
Zygo Pegasus 2000 fly height testers, meas. uncertainty 127362

helical antennas
150 MHz helical antenna close to human abdomen, radiation efficiency *(Japanese)* 83646
array synthesis from curvilinear radiators with account of mutual influe 117832
bal.-fed antenna syst. for handset 94154
bifilar and quadrifilar truncated spherical helical antennas, FDTD design 117
broadband antenna response anal. using hybrid freq. domain MoM/FDTD te 83625
broadband tapered printed quadrifilar helical antenna 94172
circ. antenna array with helical antennas, anal. 72697
CLASP software suite for antenna design/optim. 83526
contra-wound toroidal helix antenna, EM anal. 105900
contrawound toroidal helix antenna fields 105901
dual-band phones, human head, power absorpt. and temp. elevations 88009
dual-freq. monopole-helical antenna, mobile handset 72503
head exposure to cellular phone helical antennas, FDTD method 133074
Helix Design for cylindrical helix antennas with matching sects. 94121
INMARSAT-C and GPS L-band shaped beam quadrifilar helix antenna 725
low-cost sq. cross sect. helical antennas 94122
miniature dielec.-loaded bifilar antennas for mobile commun., num. simul. pa ages 83599
nonuniform helix diam. helical antennas 128846
normal mode spherical helical antenna for mobile commun. 72580
pers. satellite commun. antennas, polaris. purity/SAR investigs. using hyb method 83584
PIFA/helical antenna on different ground planes, simulated impeda bandwidths/gains/radiation patterns/SAR values 83520
printed quadrifilar helical antenna size reduction using simulated anneal 83617
quadrifilar helical antenna printed on dielec. prism, anal. 72569
quadrifilar helix antenna with parasitic helical strips 105879
reson. contrawound toroidal helix antenna 94129
retrodirective antenna array card-type transponder, dedicated short-range co mun. 96640
spherical helical antenna, input impedance and antenna gain 105903
TDMA cellular telephone, EMI with hearing aid 94055
Univ. of Bradford mobile telephone dosimetry studies 133075
VHF normal mode helical antenna anal. close to human abdomen 72614
VHF portable radio terminals, helical antenna suppressing body effect *(Japanese)* 83648

helical dislocations *see screw dislocations*

helical waveguides
dielec.-loaded ridged helical groove slow-wave struct. for MM-wave TV 80609

helicons
see also solid-state plasma
Si_3N_4 film, helicon plasma sputtering deposition, props., sputtering-gas pre effect 101183

helicopter antennas *see aircraft antennas; helicopters*

helicopter communication *see aircraft communication; helicopters*

helicopter control *see aircraft control; helicopters*

helicopter electronics *see avionics; helicopters*

helicopter testing *see aircraft testing; helicopters*

helicopters
airborne digital computers/display devices *(Russian)* 133217
autonomous aggressive maneuvers, avionics syst. 122521
autonomous helicopter hover, ANN appl. 98884
autonomous scale-model helicopter, visual servoing 94993
blade vortex interact., background oriented schlieren method 122509
detect. and class. demonstrator 77123
HBSC, heliborne battlefield surveillance radar DP 77082
HF helicopter antenna, reson. features anal. using model morphing 94143

opters continued
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
pen syst. COTS avionics network, MIL-STD-1553 replacement 122747
verhead power line aerial inspection, camera sightline pointing requirements 77437
pilotage, image intensified and IR data, image fusion 98880
propeller flow, blade-based theory, Zhukovsky's soln. 88031
econnaissance image data transm., airborne network syst. 77033
obot stereo vision for power cable inspection 88452
ROSA rotorcraft open systs. avionics 88063
otor blades, damage detect. tech. 111321
ound detect., neural networks, parametric spectral representation techs. 88249
STAP scheme for hovering helicopter detect. 75097
UAV covert datalink, MQW modulating retroreflector 99117
unmanned aerial vehicle distributed video appl., QuO QoS framework 129804
unmanned mini-helicopter control for visual power lines inspection 123020
vision syst. for landing of unmanned rotorcraft 94996
Tm,Ho:$LiYF_4$ imaging laser radar for heli-borne obstacle warning avoidance syst. *(Japanese)* 96998
bstats *see solar energy concentrators*
otrons *see stellarators*
orts *see airports*
lium-3 counters
cylind. proport. counter, Bonner sphere, Vandellos II NPP appl. 121600
cylindrical ^{3}He gas ionization chamber, digital waveform anal. 121637
fissile materials detect., meas. control complex 121520
multilayer ^{3}He detector for neutrons 121560
outputs anal. at liq. He temp. 87193
posn. sensitive ionization chamber for thermal neutrons 121527
^{3}He posn.-sensitive ionization chamber for thermal neutrons 110330
met mounted displays
augmented reality, fast calib. scheme 109845
digital LCDs and projectors, electronic distortion correction, warp technol. 97638
eye-sens. HMD for real-time eye gaze point tracking *(Japanese)* 131973
mobile HMD terminal for cyber commun. 97751
optoelectronic HMD and sight syst. 121121
scanning beam displays, eye safety anal., LEDs and laser appls. 97725
solid-state laser-based displays 97760
uncooled FPA camera/display for firefighting appls. 75648
SiO_2 PECVD microstruct., laterally emitting TFEL device fab. 82371
mholtz equations
2D wavelength-size lens simul., accurate num. method 128785
3D exterior Helmholtz problem, coupled natural boundary-FEM *(Chinese)* 124761
acoustic waveguides, local orthogonal transform., one-way anal. 83497
adaptive FEA for EM with vector tetrahedra 128645
circ. polarised rect. microstrip antenna anal. 83532
coupled microstrip lines, anal. using integral method 94092
DDM/FMM based fast algm. for scatt. by multi-cylinders 72279
determinant operator for bianisotropic media, field decomp./factorization 72159
dual-band antennas for wireless handsets, freq.-domain finite-difference anal. 83578
E-polarized field of point source, HF excitation of thin dielec. coated smooth metallic cylinder 83208
eddy current microscopy of graphite-epoxy composite, image proc. 68479
edge detect. by Helmholtz principle 84603
eigenfrequencies of membranes of arbitrary boundary and with varying surface mass dens. 124762
GPR imaging of land mines, inverse problem soln. 77088
Helmholtz-Thevenin theorem expansion to multiterminal networks 90624
incompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
laser beam multiple filamentation, self-focusing, vector/random effects 105489
layered anisotropic media, electrodynamic problems, Green tensor fns. 117604
mesoscopic struct., photons and electrons, opt. commun. appl. 131352
moist tropos. radio occultation sigs. modeling/inversion 76889
MUSIC lin. sampling algm., weakly scatt. targets, self-adjoint matrix 107363
nearly H^1-optimal FEM 101127
num. soln. of first kind integral eqn. for Helmholtz eqn. on smooth open arcs 114153
perfectly cond. circ. cylinder, spectral-domain formulation of EM scatt. 117651
periodic surface, computer reconstr., scatt./transm. acoustic fields 109990
polygonal region, EM field 117735
preconditioners, iter. soln. of boundary element eqns. for 3D Helmholtz eqn. 68014
QW, scatt., neg. phase time, microwave analogy expt. 94039
reson. cavity chain, dispersion rel. and field distrib. *(Chinese)* 117728
rot. symmetric cavities, multipole theory anal. of axisymmetric modes 94086
scalar wave diffr. by perfectly soft infinitely thin circ. ring 128732
shape sensitivity calcs. for exterior acoustics problems 79121
SOI waveguide, 2D grating coupler modelling, BPM 116666
split cavity oscillator, three cavities, HF charact. *(Chinese)* 83493
TM/TE/TEM beam mode solns. 128375
vector/scalar pot., general expressions 117622
wavelet transforms, Green's fn. methods 90196
weakly guiding opt. fiber propag. const., eigenvalue condition 127625
p desks *see technical support services*
p services *see technical support services*
moglobin *see proteins*
MT *see high electron mobility transistors*
MT circuits
see also HEMT integrated circuits
amp. design for 12 GHz MMDS appl. using neural net transistor noise model 69129
bal. act. mixer 90798
bandwidth-compensated transimpedance amp. for multigigabit opt. receivers 101787
dielec. resonator PHEMT oscillator, low noise 90797
multioctave amp., cascaded reactively terminated single-stage distributed, EW syst. 91238
PHEMT 77 GHz mixer modules with finline transits. for automotive appls. 69119
PHEMT U-NII LNA, EM simul. 68599
X-band single-stage hybrid amp. design 70197
AlGaAs/GaAs PHEMT, bal. self-oscillating mixer 80302
AlGaN/GaN HEMT-based VCOs, varactor-tuned with low phase noise 80276
GaAs HEMT cryogenic LNA 68604

HEMT circuits continued
GaAs MESFET and PHEMT, power amp., IMT-2000 appl. 68595
GaN HEMT, broadband push-pull microwave power amp. 114987
InP HEMT cryogenic LNA 68604

HEMT integrated circuits
20 GHz compact 90° hybrid MMIC design and layout 91303
28 GHz LMDS highly integrated MMIC chipset 131109
77 GHz FMCW automotive radar, fully MMIC-based front end 131670
adaptive radar receivers, tunable recursive act. MMIC filters, intermodulation props. 125802
AGC transimpedance amp., low noise, wide input, 10-Gb/s opt. commun. systs. 125239
antenna switch diplexer front-end module for GSM/DCS/PCS appls., PHEMT switches 91348
bal. amp. using 6-port power divider, S param. & power perform. 104089
broad band refl. type 180° phase shifter with series and parallel LC ccts. 80374
broadband MMIC power amps. with compact flat gain PHEMT cells, 20-30 GHz 91385
C-band highly efficient hybrid-PHEMT MMIC amp., 10 W design 125753
CMP, prototyping and low vol. prod., engng. education 126920
cold FET I-Q lin. vector modulator topol., monolithic X-band implement. 125750
decade wide bandwidth integrated LNA, 0.4-8 GHz, act. antenna appl. 125784
dual-gate p-HEMT MMIC X-band down-converter 91382
enhancement mode PHEMT power amp. MMICs, single supply, GSM/DCS appls. 91370
ETC, electronic toll collection syst., RF transceiver MMIC, surface via-hole isolation 91345
GaAs HEMT MMICs based variable gain Ka-band solid-state power amp. 69183
integrated HEMT-based charge amp. design and expt. 110398
J-band transceiver MMIC with image rejection, PHEMT implement. 125795
Ka band power pHEMT technol. for space power flip-chip assembly 102693
Ka-band 3-stage power amp., power PHEMT proc., 6W peak output 91309
Ka-band even-harmonic quadrature resistive MMIC mixer for direct conversion receivers 91340
Ka-band low noise down converter for space appls., PHEMT MMIC implement. 125798
Ka-band MM-wave three-port transistor drain mixer, optimizing design *(Chinese)* 68653
Ka-band temp. compensated ring resonator VCO, adjust. using laser trimming 102719
lin. FETs, full-wave modeling, MM wave appls. 102709
mixed GaAs opt. modulator and PHEMT MMIC proc. line on 150 mm wafers 125832
mm-wave MMIC mixer modules, optimized antipodal finline transits., 77 GHz 125803
MM-wave radio relay front end, 58 GHz, single chip PHEMT implement. 125797
MMIC amp. CAD, PHEMT transistor models 68625
MMIC broadband 90° power divider using all-pass act. filter 125788
MMIC mm-wave phase shifter using complementary bias techs. 114989
MMIC RF yield forecasting methods 69233
MMIC vector modulator for W-band software radar techs. 109285
multitransistor MMIC ccts., MM-wave amps., stabil. anal. 125807
narrow-band photoreceivers, lightwave-microwave systs., photodiode intrinsic conductance 131381
PHEMT analog MMICs, MM-wave appls. 69185
PHEMT high gain freq. doubler for 76 GHz automotive radar 80366
PHEMT IC, dual-band tri-mode receiver, N(W)-CDMA systs. 96482
PHEMT IC chip set for interactive TV, Local Multipoint distrib. *(German)* 69170
PHEMT LF noise model, appl. to MM-wave automotive radar chip set design 80311
PHEMT LNA, integrated bypass switch, portable wireless appl. 90757
PHEMT LNA with integrated bypass switch, 0.05-6 GHz portable wireless appls. 80382
PHEMT MMIC act. inductor 102677
PHEMT MMIC amp. design, 1-3 GHz, for transmit/receive appls. 102663
PHEMT MMIC chipset, MVDS transceiver 125763
PHEMT MMIC coplanar feedback VCO, fab. technol. 102671
PHEMT MMIC dual-freq. push-push VCO for wideband wireless appls. 125761
PHEMT MMIC high-Q act. inductor for MM wave appls. 125758
PHEMT MMIC nonuniform distributed power amps., design methodology 91384
PHEMT MMIC power amps., EW appls. 125762
PHEMT MMIC power module, Ka-band wireless commun. 125770
PHEMT MMIC technol., MM-wave space appls. 69188
PHEMT MMIC VCO, broadband oscillator design 102668
PHEMT monolithic double-bal. upconverter for MM-wave point-to-multipoint distrib. systs. 125755
pHEMT technol. wideband act. downconverter MMIC, HDI 91350
PHEMT VCO MMIC with very high tuning bandwidth, design 125752
PHEMTs, wafer mfg., MMIC appls. 69238
quasi-monolithic hybrid technol. based on micromachining and low-temp. thin-film proc. 115020
resistive MMIC Q-Band HEMT mixer for MVDS appls. 125757
Stentor satellite transmit act. antenna, Ku-band Quadri-SSPA 96617
V-band SPDT switch HEMT MMIC for high power use, high isolation 80376
W-band MMICs, design techs. for chip area reduct., amp. and automotive radar appls. 102718
wideband MMIC Kowari mixer/phase shifters, diode- and HEMT-based designs 91300
X-band MMIC direct 8 PSK modulator for high data rate Earth obs. appls. 125748
X-band MMIC up-converter, CAD-simul. 91381
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 70320
AlGaAs/GaAs deep submicron PHEMT MMIC amps., high-reliab. Q-band perform. 125773
AlGaAs/InGaAs PHEMT, Ka-band MMIC amp. 69184
AlGaAs/InGaAs mm-wave Q band power pHEMT proc. technol. 115021
AlGaAs-GaAs 8.5/25.5 GHz act. freq. tripler MMIC 96412
AlGaN/GaN HEMT MMIC attenuator, dyn. range 125769
AlGaN/GaN HEMT MMICs on SiC substrs., high-power broadband amps. 91383
AlGaN/GaN HEMT high power wideband feedback amp. module 114625
GaAs 3D on-chip inductors, fab., perform. and PHEMT LNA appl. 80370
GaAs HEMT MMIC MEMS switched dual-path power amp. 91359
GaAs HEMT MMIC UWB amp. 69187
GaAs HEMT regenerative MMIC freq. dividers for 28 and 14 GHz 125754

HEMT integrated circuits continued
GaAs MBE, high-vol. cost-effective multi-wafer reactor 90286
GaAs P-HEMT MMIC for K- to Ka-band wireless commun. 74610
GaAs P-HEMT gate improvement/control, proc. modelling/simul. 116042
GaAs PHEMT Ka-band monolithic ccts. for transceiver appls. 69208
GaAs PHEMT MM-wave push-push oscillator 102675
GaAs PHEMT MMIC amp. 69176
GaAs PHEMT MMIC diode mixer 69207
GaAs PHEMT MMIC power amp., CAD 69202
GaAs PHEMT MMIC power amps., reliab. study 115004
GaAs PHEMT MMIC requirements for satellite based commun. 115012
GaAs PHEMT MMIC, serial-to-parallel converter, spaceborne SAR 125765
GaAs PHEMT SP3T T/R switch for DCS 80375
GaAs PHEMT distrib. amp. ICs for 40 Gbit/s high output voltage driver modules 125774
GaAs PHEMT laser/modulator driver IC with dual-mode act. matched output buffer, 10-Gb/s 131410
GaAs PHEMT mixer, single bal. topol. and design methodology 125749
GaAs PHEMT power amp. MMIC, single supply design for GSM handsets 91369
GaAs PHEMT wideband true-time delay MMIC with on-chip digital drivers 125799
GaAs PHEMT/MMIC mfg., 6″ wafer fab. facilities establishment 70212
GaAs V-Band MMIC SPDT pass. HEMT switch using impedance transform. networks 80378
GaAs direct digital mm-wave receiver MMICs, six-port 96404
GaAs frameless membrane monolithic cct. 1.2 THz freq. tripler 102680
GaAs metamorphic HEMT-based MMIC amps., high gain/perform. 69243
GaAs mfg. technol., conf., Washington, DC, USA (May 2000) 78444
GaAs microwave FET LNAs, portable radio commun. equipt., dyn. range estim. 102699
GaAs monolithic/hybrid integrated photoreceivers, 40 Gbit/s commun. 96708
GaAs pHEMT K-band amp. for on-satellite commun. systs. 80330
GaAs power metamorphic HEMT MMIC technol., very high efficiency/low cost 69232
GaAs super self-aligned RF switch IC for mobile comms. appl. 102657
InAlAs/InGaAs HEMT IC, opt. commun. cct. 120166
InAlAs/InGaAs/InP HEMTs and InAs/AlSb/GaSb RITD, monolithic integrat. 70321
InAlAs/InGaAs/InP-InAs/AlSb/GaSb HEMT RITD D-flip-flops, monostable/bistable logic element 79771
InAlAs-InGaAs metamorphic HEMT MMIC technol. on GaAs substrs. 69244
InGaAs metamorphic HEMT technol. for mm-wave low noise/power appls., high perform. 69168
InGaAs/AlGaAs PHEMT proc. for X-band power amp. and LNA MMICs 125804
InGaAs/InAlAs/InP HEMT MMIC amp., reliab. 115007
InGaAs-AlGaAs-GaAs HEMT MMIC prod. proc., 0.1 μm, for commercial Ka-band LNAs 69245
InGaP/InGaAs HEMT TW amp. with CPW technol., 70 GHz bandwidth 125786
InGaP-InGaAs HEMT monolithic resistive mixers, Q-, V- and W-band designs 80368
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
InP HEMT D-type flip-flop and MUX ccts., 40 Gbit/s, design tech. 90854
InP HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
InP HEMT, MM-wave on-wafer testing, room & cryogenic temp. 80328
InP HEMT MMIC LNA, radioastronomy 69190
InP HEMT MMIC UWB amp. 69187
InP HEMT MMIC amps., 85-115 GHz, ultra-low-noise design 69178
InP HEMT MMIC freq. doubler, 164 GHz, design and perform. 80332
InP HEMT MMIC oscillators 69191
InP HEMT MMIC requirements for satellite based commun. 115012
InP HEMT X-band/Ka-band amp. for Deep Space Network 115013
InP HEMT high-speed IC, opt. fiber commun. 120165
InP HEMT preamplifier, flat transimpedance gain, high-speed fiber optic commun. syst. 125240
InP HEMT ultra broadband low power MMIC amp., 1-50 GHz, design 125787
InP MMIC HEMT medium power amps., 65-145 GHz, designs 102686
InP act. device/varactor MMIC HEMT VCO, 80 GHz 102724
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
InP-based RTD/HEMT microwave freq. divider IC, high-speed operation 115006
InP-based monolithic HEMT diode bal. mixer for 100-140 GHz 80364
InP-based photoreceiver OEICs for 40 Gb/s TDM systs. 117045

HEMT switches *see field effect transistor switches*

hereditary systems *see distributed parameter systems*

hermetic motors *see induction motors*

Hermitian matrices
alg. ICA algm. for three sources and two sens. 118810
bandlimited images, fast extrapolation/superresolution algms. 95185
bicubic element for eigenvalue problem of biharmonic eqn., convergence/superconvergence 79016
Birkhoff quadrature formulas, extremal approach 114043
CMOS Hermitian decoder IC, Koetter's decoding algm. 106194
complex matrices, matrix products, sing. values/eigenvalues , upper and lower bounds 78750
d-fold Hermite-Gauss quadrature 124617
Galerkin trigonometric wavelet methods for natural boundary integral eqns. 68056
generalized wts. of class of trace codes 83867
generic direct sparse lin. syst. solver in C++ for power syst. anal. 133426
homog. test based on empirical charact. fns. 114049
lossy bianisotropic media, conditions for param. dyadics 72167
M-channel paraunitary filterbanks factorization 84724
polynomial time interior-point algms., symmetric cones, associative and Jordan alg. 113975
self-dual codes over GF(4) with highest known min. wts. 72785
sq. factorization and Hermite integrat., fast modular algms. 67937
two-stage methods for Hermitian pos. definite matrices 101026

Hessian matrices
binary signalling, adaptive min.-BER DFE 107677
combined extra-up dating/self-scaling BFGS method 114060
convex quadratic programs, continuous/integer solns. rels. 124577
multi-step unconstrained optim., metric-based parameterizations 114016
nonlin. model for fn.-value multistep methods 101013
pulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 98515
vol. decimation using eigenvalues of Hessian matrix 95562

HET *see hot electron transistors*

heterodyne detection
2,5-dioctyloxy PPV, two-color opt. heterodyned opt. Kerr effect 117435
2D smart detector array opt. coherence topography 73146
all-opt. microwave downconverter, sig. channelization 125828
automatic focusing common-path heterodyne surface profiling interferome 86969
birefr. fibers, laser heterodyne sig. detect. 116638
Brillouin-based distributed fiber temp. sens., microwave coherent detect. 75
cellular handset, GPS receiver 96486
CMOS RF receiver front-end for Bluetooth appl., 1-V 2.4-GHz 102702
coherent lidar high-resoln. Doppler vel. profiles retrieval 122661
coherent lidar LDA for wind turbines, opt. mixing schemes 99591
coherent opt. PSK systs., perform. degrad., nonnegligible loop delay time in ence 131407
coherent opt. RF channelizer, diffr. grating 125829
CPFSK coherent opt. syst., self PM effect, eval. 106030
distributed fibre optic temp. sens. utilising spontaneous Brillouin scatt. 865
femtowatt detect. with lasers, heterodyne tech. 95723
FPGA, adaptive heterodyne filter 102399
HF device, near-field MM-wave injection, opt. probing 102749
high-resoln. gas-dens. meas. by laser heterodyne method 110011
immunosens., opt. heterodyne SPR phase detect. 97418
laser radar imaging/refl. tomography 109301
microwave heterodyne detect. calibrated distributed fiber temp. sens. 75556
microwave phase shifter, opt. control, CFG and OFS 69253
MM-wave radio-on-fiber sig., opt. heterodyne detect. 131350
multichannel coherent CPFSK syst. using opt. amp., sensitivity penalty 109
multimodal waveguide struct., opt. field phase mapping 104697
multiple-wavelength interferometry, 3D absol. dist. meas. *(German)* 75884
multiply scatt. photons, low-coherence interferometric path-length-resolved D pler meas. 132646
on-axis digital heterodyne holography, synthetic-aperture expt. in vis. 1285
opt. heterodyne high-power mm-wave generation using 1.55-μm T photodetectors 125826
opt. mode, adaptive phase meas., time delays effects 86997
opt. receiver perform., freq. response meas. techs. 96701
opt. tandem SSB receiver, WDM syst., microwave filtering 131524
scatt. medium homodyne/heterodyne imaging by 2D holographic phase-sensit detector 131915
self-compensation heterodyne vibrometer using AO modulator vibr. detec 116858
simultaneous distributed fibre temp.-strain sens., spontaneous Brillouin backsc 97290
single mode master/slave laser detectors. amplif. regimes 93620
SIS receiver, space FIRST/HIFI Band 1 appls. 71143
solid-state heterodyne receiver for THz operation, challenges 91293
spatial quadrature, heterodyning demodulation tech. 110733
surface pot. detect. using scanning force microscope *(Japanese)* 97766
CO_2 EO Q-switched RF-excited waveguide laser 82497
CO_2 RF excited waveguide laser, heterodyne Q-switched pulsed output *(C nese)* 71909
Nb SIS mixer, NbTiN/SiO_2/Al tuning cct. 70863
Nb quasi opt. hot-electron bolometer mixers, 2.5 THz radiation detect., hete dyne response 71118
Nb supercond. hot electron bolometer mixer, microstrip line coupling 7113
Nb/Al-AlO_x/Nb SIS receiver, MM and subMM wave detect. 71162
Nb/Al-oxide/Nb tunnel jn. SIS mixer-preamplifier, 200-300 GHz 102621
NbN hot electron bolometer mixer, THz freq. waveguide receiver 71174
NbN supercond. HEB, THz low-noise receiver 104592

heterogeneous databases *see distributed databases*

heterojunction bipolar transistors
band engng. and doping design *(Chinese)* 103779
capacitance, multi-bias S-param. meas. 81229
cct. design optimisation, opt. demodulator 82357
common-emitter offset voltage, Gummel-Poon model 92312
conf., Molecular beam epitaxy, Beijing, China (Sept. 2000) 89511
cpd. semicond. mfg. technol., conf., Las Vegas, NV, USA (May 2001) 113
device research, conf., Denver CO, USA (June 2000) 67376
dry etch proc. monitoring, CCD-controlled in situ interferometry 81086
electroabsorption waveguide modulator/HBT monolithic integrat. for 1.55 116731
GaAs HBT, high-power thermal resist. values, quick derivation 115852
III-N-V low-bandgap nitrides and their device appls. 103794
III-V dry etching, depth/reflectivity meas. by CCD-controlled in situ interferon try 69888
III-V heterostruct. device simul., indust. appl. 126623
implant isolation, MeV mask, cost effective 70046
intrinsic cct. params., direct extraction, extrinsic-inductance independe approach 102626
MMIC VCO, phase noise 102667
MOBILE-based RTDs, 3-terminal, for high-speed logic appl. 90892
nonlin. III-V HBT compact models, param. extraction strategies 92303
on-wafer 1/f noise meas./charactn. syst., robust 109464
perform./reliab., predictive simul. 115853
power amp. arrays, defective cells ident. by IR emission microscopy 11587
power devices, effects of base-collector capacit. on lin. 69123
power HBT, emitter current crowding effect reduction 92324
power HBTs, dyn. self-consistent electro-thermal model 115848
power MMIC, base feed design using high power HBTs 91387
reliab. determ., eval. of beta degrad. 126681
reliab. eval., thermal resist. and current accel. exponent 126662
RFIC, lead-frame plastic CSP, low-pass filtering 100610
self-consistent simul., transient heating effects, elec. devices, finite integ 124684
SiGe HBT ccts., fully coupled electrothermal mixed-mode device simul. 812
thermal model, pulsed I-V meas. 81208
AlGaAs HBT, MOCVD 81237
AlGaAs HBT, ionizing radiation detector 87223
AlGaAs/GaAs HBT model, SPICE simul. 81230
AlGaAs/GaAs HBT model, generalized pencil-of-fn. method 92302
AlGaAs/GaAs HBT, plasma hydrogenation effects on dc charact. 126665
AlGaAs/GaAs HBTs, emitter struct. var. effect on RF charact. 80292
AlGaAs/GaAs HBTs, reliab. anal., device simul. 81225
AlGaAs/GaAs S-band HBT, fab., charact., power appl. *(Chinese)* 102602
AlGaAs/GaAs four-terminal HBT, RF AGC and mixer 92305
AlGaAs/GaAs heterojunction bipolar TED design 102603
AlGaAs/GaAs high-speed HBTs with reduced base-collector capacit. 12570
AlGaAs/GaAs power HBT, lin., C_{bc} effects 92301

ojunction bipolar transistors continued
GaAs/GaAs vert. HBT with 106 V breakdown 81224
$_x$Ga$_{1-x}$As/GaAs HBT, finite element model 81228
GaAs-GaAs DHBTs with composite collector for power amps. 103772
GaAs-GaAs HBT variable gain power amp. for mobile WCDMA appls. 1368
GaAs-GaAs HBTs, barrel type MOVPE reactor for 6″ epitaxial wafers 68259
GaAs-GaAs HBTs for power appls., thermal effects/reliab. 81223
GaAs-GaAs HBTs, long-term reliab., base current study 70044
GaAs-GaInP/G HBTs, emitter transit time, CBE, microwave perform. 80274
$_{0.3}$Ga$_{0.22}$I$_{0.48}$P/GaAs HBT, high temp. current gain anal. *(Chinese)* 81233
GaInAs/GaAs metamorphic HBT/P-I-N photodiodes, MBE growth 103765
GaInP/GaAs HBT, proton implant isolation *(Chinese)* 103785
GaN/AlN/GaN heterobipolar phototransistor, photoresponse, defect levels 2347
GaN/GaN hetero bipolar phototransistor, luminesc., photodetectors, photocurent 82363
GaN-GaN HBTs for high-temp. electronics appls., modelling 92318
InAs/InGaAs HBT CML ring oscillator, sub-5 ps gate delay demo. 79845
InAs/InGaAs HBT IC, low-power static freq. divider 127015
InAs-GaInAs-InP HBTs, low temp./high current lifetests 81241
r,O-doped Si layered struct. 1.54 μm light emitting devices, MBE grown 93393
aAlAs-based symm. emitter-collector planar DHBT, LPE fabr. and DC charactn. 70030
aAs HBT, RF power amp., microwave meas. 103776
aAs HBT dual T/H, 1 GS/s, wideband pipelined ADC appl. 125633
aAs HBT power amps., feedback bias cct. design 80317
aAs HBT, small-sig. model 70036
aAs HBTs, small-sig. equiv. cct. model params., direct extraction 102642
aAs HV HBTs, neg. RF-resist., Gunn effect study 91247
aAs HV power HBTs for base-station amps. 91240
-GaAs base of HBT, nonthermal electrons, femtosecond energy relax. 81216
aAs based HBT power amps., ident. of humidity related failure mechanisms 127017
aAs device mfg., 150 mm wafer line for wireless handheld commun. appls. 74851
aAs discrete HBT devices, DC and microwave reliab. eval. 69133
aAs mfg. technol., conf., Washington, DC, USA (May 2000) 78444
aAs one-finger power HBT, 2D hydrodynamic simul. 70050
aAs:Be/In$_{0.49}$Ga$_{0.51}$P HBT, growth, GSMBE 103774
aAs:Si(Be)(C), doping during MBE, single-port compact dopant source 103252
aAs/AlGaAs HBT 5.8 GHz OFDM transmitter MMIC chip set, design/perform. 91312
aAs/AlGaAs HBT MMIC chip set, OFDM transmitter 91353
aAs/AlGaAs charge-imaging FET, charge noise 103763
aAs/AlGaAs low shot noise heterojunction phototransistors 93361
aAs/InGaP heterostruct. bipolar transistor, Raman charactn. 126685
aAs-AlGaAs DEHBT, optoelectronic switch 116941
aAs-AlGaAs HBT prod. proc. technol., perform./reliab. 70043
aAs-InGaP HBTs, reliab. studies 70048
aAs-based HBTs, thermal mgt. and modeling 126667
aAs-based HBTs, turn-on voltage reduction 125724
aAs-based metamorphic technol., appl. to device struct. 126263
aInNP, electronic/optoelectronic material 115318
aInP etching in Cl_2/Ar ECR proc., low damage and low surface roughness 126368
aInP/GaAs HBT MMIC oscillator, phase noise 102670
aInP/GaAs HBT struct., SPV spectr., contactless electroreflectance 126684
aInP/GaAs HBTs, MOVPE-grown, reliab. tests 115850
aInP/GaAs HBTs for HV operation, develop. and charactn. 125723
aInP/GaAs hetero-bipolar transistors, LF noise modelling, 1/f-noise model 102631
aInP-GaAs HBT technol. for high power X-band/broadband amps. 125745
aInP-GaAs HBTs for X-band power appls., reliab. 91290
aInP-GaAs collector-up tunneling-collector HBTs, zero-offset/low knee voltage, power amps. 70052
aInP-GaAs:C HBTs, MOVPE-grown, material quality/uniformity issues 70040
aN based HBT, band offsets, current transport, 1/f noise 81239
aN based transistors, overview 103926
aN, electronic devices, microwave power generation, LNA 81388
aN/AlGaN high power/high temp. devices, review 70068
aN/AlGaN small-area HBT, proc. develop. 103766
aN-based electronic/optoelectronic devices, business opportunities 70002
aN(Mg)/AlGaN(Mg) superlattice base contact layer BJT 92311
e/Si HBT power amp. 68592
nAlAs/InGaAs HBT ECL static freq. divider, 75 GHz 68769
nAlAs/InGaAs HBT IC, adder carry-and-sum logic cct. 114710
nAlAs/InGaAs HBT carry-and-sum logic cct., adder archit. 114705
nAlAs/InGaAs/InP DHBTs, dc current gain rel. to extrinsic base design vars. 115856
nAlAs/InGaAs/InP lattice-matched/metamorphic HBT, MBE growth 115860
nGaAlAs/InP, multiple NDR switching 92300
nGaAs:C, heavily doped, CBE growth, surface morph. 101205
nGaAs/GaAs multi-finger HBT, modelling incl. self-heating effects 81212
nGaAs/InAlAs transferred-substr. HBT monolithic amp., 185 GHz, design 102681
nGaAs/InP DHBT, cryogenic charact. 70035
nGaAs/InP DHBT technol. and design methodology for >40 Gb/s opt. commun. ccts. 131411
nGaAs-InP photo-HBT, MM-wave generation and digital modulation 116944
nGaN/GaN DHBT fab., MOVPE, ECR plasma etching 81238
nGaN/GaN DHBT, p-InGaN base, high current gain, MOCVD/plasma etching fab. 92306
nGaP HBT, reliab., pulsed elec. stress 126661
nGaP emitter HBT variable-gain LNA, 2 GHz mobile phone appl. 80381
nGaP emitter HBT, variable-gain LNA, mobile phone 90756
nGaP emitter HBTs, fab. and long-term reliab. 126680
nGaP/GaAs DHBT, base-collector design optimisation 81240
nGaP/GaAs DHBTs with composite collectors for power amps. 115855
nGaP/GaAs HBT current gain charactn., heavily doped base effects anal. 115868
nGaP/GaAs HBT, extended ledge ballasted, thermal characts. 126664
nGaP/GaAs HBT, improved large-sig. model, param. extraction 92304
nGaP/GaAs HBT power amp. MCM for 1.95 GHz W-CDMA handsets 96485
nGaP/GaAs HBT/PIN photoreceiver, OEIC technol. 105035
nGaP/GaAs HBTs, implant isolation and base contact abnormalities influ. on perform. and reliab. 126682
nGaP/GaAs fully self-aligned HBT proc., incorp. of alloy-through passivating-ledge proc. 126679

heterojunction bipolar transistors continued
InGaP/GaAs heterojunction phototransistors, opt. characts. 82360
InGaP/GaAs high power HBTs for 2.4 GHz transmitter appl., design and qualification 125727
InGaP/GaAs power heterostruct. emitter bipolar transistor, microwave perform. 125701
InGaP/GaAs reson. tunneling bipolar transistors, multiple NDR 70038
InGaP/GaAs reson.-tunneling HBT with superlattice struct. 70032
InGaP-GaAs HBT Doherty amp. with high efficiency over wide power range 91264
InGaP-GaAs HBTs, InGaP ledge effects on reliab. 92315
InGaP-GaAs HBTs under temp./current stress, charactn. 70042
InGaP-GaAs HBTs, waveform charactn./modeling of dyn. charge behavior 91245
InGaP-GaAs-AlGaAs DHBTs, transient charact. 70045
InGaP-HBT emitter-mesa proc., optimized surface morph. 70039
InGaP-HBTs, barrel type MOVPE reactor for 6″ epitaxial wafers 68259
InGaP-emitter HBTs, reliab. 70041
InGaPSb/GaAs-based HEMT and HBT, MOVPE, elec. characts. 115956
InP DHBT, X-band/Ka-band power amps. 114981
InP DHBT, lin. X-band operation 115865
InP DHBT technol. 115862
InP HBT IC technol./appls. 70291
InP HBT ICs, proc. integrat. 116020
InP HBT OEIC, photonic ADC 128030
InP HBT VCO, freq. tuning range 101843
InP HBT fab. for 40 Gb/s commun. systs. appls. 70047
InP HBT prod. proc. based on MBE 127016
InP HBT refl. grid amp., heat sinking 101793
InP HBT, unilateral power gain, dyn. base widening 92309
InP HBTs, appl. of HBTCAD software incl. HBTSIM simulator and HBTANA model 81214
InP HBTs, end-of-life reliab., RF modelling 115851
InP HBTs in next-generation telecom devices *(Japanese)* 114971
InP HBTs, telecom devices *(Japanese)* 115872
InP high-speed electronics, opt. fiber transm. syst. 131373
InP, related materials, conf., Nara, Japan (May 2001) 113237
InP/GaAsSb/InP NpN DHBTs, ultrahigh perform. staggered lineup 114975
InP/GaAsSb/InP double HBT, current capability and breakdown voltage 92308
InP/GaInAs submicron HBT with buried W wires, base-collector capacitance reduction 103773
InP/InGaAs DHBT master-slave D-type flip-flop, ETDM syst. 79856
InP/InGaAs DHBT, microwave noise and small-sig. params. scaling 103777
InP/InGaAs DHBTs with polyimide passiv., DC and microwave noise transient behavior 114988
InP/InGaAs HBT, ammonia plasma surface passiv. 115861
InP/InGaAs HBT, common-emitter offset voltage, Gummel-Poon model 92312
InP/InGaAs HBT degrad. induced by SiN passiv. 115859
InP/InGaAs HBT, gain limitations, surface level pinning 81209
InP/InGaAs HBTs, elec. props./transport mechanisms, 4.2-300 K 103768
InP/InGaAs HBTs, vel.-modulation and transit-time effects 103781
InP/InGaAs HPT/HBT MMIC photoreceiver, fibre radio distrib. syst. 80402
InP/InGaAs PNP HBT, MOCVD growth, HF operation 115858
InP/InGaAs abrupt HBTs, Monte Carlo and extended drift-diffusion simul., comparison 81213
InP/InGaAs abrupt HBTs, comparison between Monte Carlo and extended drift-diffusion models 70037
InP/InGaAs mm-wave self-oscillating heterojunction bipolar phototransistor oscillators 125827
InP/InGaAs self-aligned HBT, crystallographically defined emitter contact technol. 115857
InP/InGaAs superlattice-emitter reson. tunneling bipolar transistors 92299
InP/InGaAs:C HBT, RF-noise params., modelling/cryogenic temp. depend. 114980
InP/InGaAs:C HBTs, consistent small-sig. and RF-noise param. modelling 102627
InP/InGaAs/InP DHBTs, high breakdown voltage, 300 GHz F_{max} 114976
InP/InGaAs/InP transferred-substr. DHBTs with f_{max}=425 GHz 102651
InP/InGaAs/InP metamorphic DHBT, DC charactn./transport props., 300-400 K 115854
InP-GaAs metamorphic HBTs, microwave noise and power perform. 102630
InP-HBT differential VCO with wide tuning range, SONET/SDH fiber optic appls. 91338
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
InP-InGaAs-InGaAsP DHBT proc. develop. for power appls. 92317
InP-InGaAs(P) DHBTs, noise charact., emitter orient. effects 92316
InP-based HBTs, heavily doped, manufacturable MBE proc. and characts. 125730
InP-based monolithically integrated RTD/HBT MOBILE for logic ccts. 114709
Si HBT, hot carrier reliab., extrapolation model 126677
$Si/Ge_xC_ySi_{1-x-y}$, group IV heterostruct. form. by Ge and C ion implant., appl. to HBTs 81227
Si/Ge_xSi_{1-x}, group IV heterostruct. form. by Ge and C ion implant., appl. to HBTs 81227
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
Si/SiGe HBT ICs with low cost in 15 to 20 GHz range 80357
Si/SiGe HBT low-cost Ku to Ka band MMICs using commercial HBT proc. 69197
Si/SiGe HBT, microwave transformers, inductors and transm. lines 102639
Si/SiGe HBTs, hot carrier effects on correl. resist. 80298
Si/SiGe HBTs, trench-isolated , thermal resist. 81222
Si/SiGe/Si DHBT, neg. resist. characts., high power appls. *(Chinese)* 115867
Si/SiGe/Si HBT, GSMBE growth *(Chinese)* 81235
Si/SiGe/Si HBT struct., GSMBE growth and charactn. *(Chinese)* 126674
Si/SiGe/Si n-p-n HBT, carrier depth profile, electrochem. C-V method *(English)* 81215
Si/SiGe/Si:Er,O HBT light emitting devices, 1.54 μm light emission 71567
Si-SiGe mm-wave MMIC near-range radar sens., coplanar transm. lines, MEMS switches 115019
SiGe BiCMOS HBT, LF noise behaviour and phase noise perform. study 69196
SiGe BiCMOS technol. at IBM, progress/evol. 92479
SiGe HBT, 13.5 GHz, fabricated by planar technol. *(Chinese)* 81231
SiGe HBT 40 Gb/s 4:1 MUX and 1:4 DEMUX IC modules, SONET/SDH 109178
SiGe HBT LNA, dual bias feed cct. 90755
SiGe HBT MMIC 16 GHz oscillator design with act. elements 125810
SiGe HBT, RF lin. 103793
SiGe HBT RF technol., transistor noise 103789
SiGe HBT RF technol., transistor noise 126671
SiGe HBT UHF power amps. in flip-chip and packaged technol. 91325

heterojunction bipolar transistors continued
SiGe HBT amp., 900 MHz, variable gain with low noise fig. 80356
SiGe HBT, base transit time, model, exponential base doping, current dens. *(Chinese)* 126675
SiGe HBT, electron transit time, device simul. 126663
SiGe HBT for analogue BiCMOS technol. appl., review 92477
SiGe HBT, hot carrier reliab., extrapolation model 126677
SiGe HBT lin. LNA with dual bias feed cct., 2 GHz band design 80380
SiGe HBT monolithic wideband amp., 15 GHz, 2.8 dB noise fig. 91356
SiGe HBT, self-aligned SEG 103790
SiGe HBT, situ GSMBE growth *(Chinese)* 81232
SiGe HBT small-sig. cct. models, multibias operation, param. extract. 69162
SiGe HBT struct., epitaxy by HV/RTP/CVD syst. *(English)* 101307
SiGe HBT technol. LNA, 23-GHz 91342
SiGe HBT technol. implement., low-temp. UHV/CVD tech. 103778
SiGe HBT, ultrathin base, transport model *(Chinese)* 81234
SiGe HBTs, LF noise and phase noise behavior, Ge profile shape 102624
SiGe HBTs, Ni/Ag metallization using NiSi contact 115866
SiGe HBTs, RF distortion anal. 91255
SiGe HBTs, TED suppression by buried carbon layer 92313
SiGe HBTs, differentially grown structs., optimized low-freq. noise, lateral base design 81219
SiGe HBTs for 40 Gb/s SONET fibre-optic data-rate, mixed-sig. BiCMOS 104146
SiGe HBTs for BiCMOS technol., stabil., reliab., material params. 81210
SiGe HBTs, high injection effects on noise charact. 81218
SiGe HBTs, low RF noise optimized, cryogenic operation 70033
SiGe HBTs, profile design considerations for base transit time minimiz. 103769
SiGe HBTs, vert. scaled, low-temp. collector profile design 70034
SiGe HFET/HBT technol. for microwave/mm-wave appls., advances 91289
SiGe SIMMWIC HBT technol., coplanar and microstrip oscillators 102673
SiGe graded HBTs, inverse base width modulation effect, anal. model 103775
SiGe high-speed LV HBT proc., implanted collector profile optimiz. 70031
SiGe, low noise microwave HBT *(Chinese)* 92295
SiGe microwave HBT *(English)* 92297
SiGe microwave power HBTs fabricated by fully self-aligned double mesa technol. 102625
SiGe self-aligned SEG HBT static freq. divider and MUX/DEMUX, fibre links 79835
SiGe self-aligned base heterojunction bipolar technol., UHS2 proc. 81499
SiGe structs. on 8 inch Si wafers, inline charact. using Bede QC200 x-ray diffractometer 69776
SiGe technol., role in microwave/MM-wave appls., HBT modeling, amp. design 80277
$Si_{1-x}Ge_x$, RIE, HBT appl. 103368
SiGe:C HBT module for integrat. in deep submicron CMOS proc. 69194
SiGe/Si HBT, high power X-band operation 81206
SiGe/Si heterojunction multilayer struct., growth & charactn., MBE 101282
SiGe/Si large-area multifinger HBT for high-power Ku-band operation 114968
SiGe/Si microwave HBT, reliab. 126678
SiGe-HBT for RF wireless commun., advantages 81217
SiGeC HBT, UHV-CVD, bandgap, strain engng. 81207
$Si_{1-x-y}Ge_xC_y$ crysts., phys. props., device appl., C doping effects 69827
Si(SiGe), growth rate & nonselective growth, modified GSMBE 101281

heuristic programming
see also artificial intelligence
asynchronous real-time distributed systs., adaptive commun., heuristic algms. 74283
ATC, rerouting in bad weather, dyn. network flow 98931
BDD variable ordering approaches comparison 100679
branch-and-bound algm. with mini-bucket heuristics 100841
concurrent engng. activities, product develop., heuristic prog. method *(Chinese)* 89801
cruise missile mission planning, heuristic algm. for automatic path generation 133390
DCLC-DSF, distributed delay-constrained least-cost unicast routing heuristic *(Chinese)* 74046
diagnostic inform. fusion syst., archit. and design 131800
distrib. feeder load restoration using robust heuristic method 122910
distrib. syst. planning, optimal feeder routing using heuristic strategy *(Korean)* 77281
document image decoding using iterated complete path search 129801
document image decoding using iterated complete path search 95337
eEMU, client-server syst. for syst. monitoring and event mgt. 108024
electronics mfg. AOI, optimal allocation of AOI resources 100648
fuzzy interpolation with Cartesian representation and extensibility fns. 124649
immunity-based simulated annealing, quadratic assignment problems appl. *(Japanese)* 113994
improved motion stereo matching based on modified dyn. prog. 129646
k-cardinality assignment problems, algms. and codes 74899
load forecasting, intell. hybrid syst. 99318
local search heuristics for two-stage flow shop problems with secondary criterion 124587
min. init. marking problem of Petri nets, heuristic algm. FMDB 67803
moving obj. complex hypothesis tracking 118941
moving obj. tracking using Hausdorff dist. 73272
multimachine power syst. turbogenerators, optimal DHP neurocontrol design 133542
multimachine PSS param. optim. using genetic local search 122890
multipurpose MV distrib. systs. reconfig., fuzzy reasoning approach 133559
n-job, m-machine flow-shop problem heuristic 124440
network control via hindsight optim., using simul. 74083
optim. algms., expt. eval. 100909
parthenogenetic algm. for binary quadratic prog. problem 90057
PCB assembly, tabu search heuristic for component assignment 125892
radio link freq. assignment, guided GA 122752
robot visual servo control, depth estim. perform. criterion 129518
robust power syst. stabilizer design using heuristic optim. tech. 99301
satellite link capacity planning, heuristic approach 96628
shared-per-link struct. in WDM networks, placement of wavelength converters 131508
short-term generation scheduling using hybrid AI/heuristic method 122927
short-term unit commitment, advanced GA approach *(Chinese)* 88391
sig. anal./ident., robust, model-based 118792
TCP/IP network design, stochastic approx./transaction-level 73981
telecomm. network optimisation, heuristic algms. 130475
Tornasol, Spanish speech recogn., integrated syst. 73112
two-level wireless ATM network, heuristic algm. for optimal design 108646
VLSI power/perform. optim., fuzzy simulated evol. 104009

heuristic programming continued
VLSI std. cell placement, iter. heuristics 104057
wind micropower induction generators, sensorless power maximization 123252

Hewlett Packard Interface Bus *see peripheral interfaces*

HEXFET *see insulated gate field effect transistors*

HF amplifiers
see also radiofrequency amplifiers; VHF amplifiers
79 dB-SNR 70 mW 18 MHz CCD front-end with fully-digital amplif. 1

HF antennas
direction finding, stationary and mobile HF to UHF antennas 86270
direction finding and array proc., colocated antennas design 83713
ESD transient EM fields, ultra wide band test syst. 87375
four wire dual-mode spiral antenna, CAD 72599
ground-wave radars, scatt. matrices freq. depend. 120450
helicopter antenna, radiation, rotor-blade modulation 83634
helicopter antenna, reson. features anal. using model morphing 94143
high lat. path commun., directional diversity and spatial filtering 85576
MF and HF transmitting antennas, EM fields investig. 97055
SW broadband antenna design 83544

HF propagation *see HF radio propagation*

HF radio propagation
21st. century mil. commun., archit./technols., conf., Los Angeles, CA, (2000) 100394
AEHF syst., mission utility eval. 111609
aircraft interf. due to VSAT/SNG and SIT terminals 88058
ALE third-generation technols., anal. 108827
artificially disturbed ionos. plasma, aftereffects 88138
Australia's Antarctic commun. syst. 120097
BLOS commun. technols. for deep battle, UK perspective 111566
commun., ionos. trough effects, neural networks appl. 131088
D-region, middle lat., electron dens. var. due to earthquakes 128769
Damson HF channel characterisation, review 105744
digital commun., source separation with collocated antennas 84729
Digital Radio Mondiale, key tech. features 75283
Europe mid-lat. trough models, refinement/develop., expt. based investig.
ground-wave propag. over irregular terrain and sky-wave propag. 83289
high lat. path commun., directional diversity and spatial filtering 85576
imaging riometer, high-lat. ionos. studies 88126
ionos., Doppler freq. shift meas. 83340
ionos. HF channel computer simul. 85496
ionos. inhomog. struct., refl. sig. distortion anal. 105729
ionos. irreg. diagnostics from MF/HF radio echoes 122655
ionos. macroscale inhomogeneities and radio sounding 105730
ionos. param. diagnostics, vert. sounding method errors 133305
ionos. propag. channels, wideband scatt. fns. 128767
littoral environ., groundwave propag. predictions (GRAPPLE) 83314
long dist. links for multimedia transm. 108407
Mars, atmos. meteoric layer, HF radio atten. 105760
McConnell NiS deposit, Sudbury, radio tomography, borehole radar delin 122587
message network, dyn. resource assignment 111568
message network, perform. improvement 111567
mil. requirements for increased data rates 111607
multimode wideband channels, scatt. fns. 83290
nonconstant immittance plane, overlying radio wave propag. 72329
noncontiguous channels, propag. charact. 83288
ocean large-scale gravity waves due to ship motion, radar detect. 122698
off-great-circle high lat. propag. and oblique ionogram features 83291
OTH HF radar, ionos. distortion mitigation techs. 99130
radar sig. proc., range resoln. and coherent integrat. time 96914
rocks mech. stress monitoring, underground waveguide propag. 133273
short paths, sporadic E layer effects 105727
short-/medium range ionos. radiopaths eval. 83281
sloping coastal land, HF radiowave propag. 72308
spatial diversity/high data rate waveforms 108583
SuperDARN OTH HF radar systs., range accuracy 122657
topside ionos. sounder, electron dens. distribs. 133308
transauroral ionos. radiopath and electron dens. 105728
transmitter location procedure by single station location method, accuracy 86272
Xi'an-Dalian link, 10 MHz propag. and ionos. Doppler shift 85570

HF range *see HF amplifiers; HF antennas; HF radio propagation*

HF transformers *see high-frequency transformers*

HF transmission lines *see high-frequency transmission lines*

HFC networks *see hybrid fibre coax networks*

HGMS *see magnetic separation*

Hi-Fi equipment
CD player control design, perform.-robustness trade-off 86355
digital home entertainment syst., elevated speaker projection 118080
digital music performers, Japanese, laptop performers, CD designers and t artists 75334
drop-impact behavior of mini Hi-Fi audio products, finite element mod 100563
DVD player, tracking servo perform., defect. detect. 116585
echo canceler with correct echo-path ident., input-sliding tech. 131785
FM sig. reception, theoretical/expt. study of noise/distortion 120521
laser act. tracking, basics & appls. 93937
MPEG/audio low power encoders using simplified psychoacoustic model/fa allocation 118104
SV-SD70 and SV-SD01 audio players *(Japanese)* 86354

Hi-Vision *see high definition television*

hidden feature removal
3D image presentation, hidden-surface removal in SIRDS algm. 106700
3D modeling of archaeological vessels using shape from silhouette 84208
body parts tracking of multiple people, new approach 95598
camera motion recovery from occlusions 84597
focus based feature extraction for pallets recogn. 129840
hierarchical mesh-based global motion estim., occlusion areas detect. 949
image template matching using correl.-based block areas selection *(Japa* 129550
image-based rendering using parameterized image varieties 118307
moving pictures, automatic extraction method of facial regions for occl faces 118780
multi-camera syst. for tracking multiple people 95006
multiple camera fusion for multi-obj. tracking 95010
occlusion models for natural images, stat. study of scale-invariant dead l model 118304

n feature removal continued
se estim., shape extraction, Hough transform invariance 129847
obabilistic framework for segmenting people under occlusion 107178
iable real-time multiview tracking 95008
ust ICP registration algm. extension using M-estim. *(Japanese)* 129877
RDS generalized algm., still and moving 3D scenes 106768
ban map, road network extraction using center line *(Japanese)* 106817
deo objs. generation by multiple-view extensive partition lattice operators
4826

n line removal *see hidden feature removal*

n Markov models
t. human-mobile manipulator cooperation, intention recogn. 97858
laptive model-based speech enhancement 94391
rborne target class., HMM and matching pursuit 96923
rabic speech recogn., VQ/HMM 94422
RMA context depend. modeling 118951
ynchronous CDMA sigs., channel estim. and demodulation in freq.-selective
ading 119217
TM networks with bursts of errors, perform. params. 84820
to speech recogn. syst., combined CEP vector/wavelet transform based method
73053
utomatic robust speech recogn., multiple timescale feature combination
English) 73099
utomatic sound detect. and recogn. for noisy environ. 118071
utomatic speech recognizers, error sources investig. *(English)* 73082
utomatic topic segmentation, prosodic and lexical cues integrat. 94434
ayesian blind/semi-blind equalisation of channels with Markov inputs 119199
ayesian tree-struct. image modeling using wavelet-domain HMMs 84276
ayesian tree-struct. online transform. of HMMs, optimal model selection for
speaker adaptation 106404
lind channel estim., time depend. inclusion 96508
oolean vector seq. pattern learning HMM, IC BIST appl. 116008
rain MR images, white matter areas extraction 98389
rain-computer interface, five-classes, inform. transfer rate 122358
hart anal. and recogn. in document images 129605
hinese speech recogn., phonetic/prosodic probab., 3D Viterbi search *(Chinese)*
84057
lassical HMM, homog. assumption compensation by probab. penalty *(Chinese)*
106389
ontinuous speech recogn., HMM/NN hybrid approach 129394
ursive handwriting recogn. via HMM based two-pass approach 73309
iscrete HMM, discrim. power indicator 129935
DQRUMA with scheduling algms. for multimedia traffic in indoor environ. for
W-ATM networks 85026
CG segmentation using wavelet and HMM assoc. 121952
EG-based brain-computer interfaces, motor imagery control 111185
MAP-based speaker adaptation, robust correl. estim. 73056
mbedded HMM for face detect./recogn., max. likelihood training 84610
ntropy-coded sources, joint source-channel turbo decoding 106153
phraim-Malah noise reduction algms. for digital hearing aids 111159
ace detect. by learning from pos. examples 95420
ar-talking speech recogn., microphone array sig. proc. 84050
ault detect., local asymptotic approach 84753
innish lang., phonetic vocoder 119827
IR channels excited by convolutionally encoded inputs, MLE 95807
raming through peripheral perception 94786
ilbert channel, interleaving effects 117986
andwriting recogn. via feature extraction and fuzzy set theory 129679
andwritten Chinese character recogn. 73424
andwritten numeral string recogn. via two-stage HMM based syst. 129673
enry fingerprint classifier with HMM/decision tree approach 129875
ierarchical image probab. models 94814
uman motion tracking/anal., unified framework 95013
yperspectral image anal., Hidden Markov Model 73188
yperspectral imagery spectral anal., HMM approach 133278
mage commun., hidden Markov sources transm. over Gaussian channels 84468
mage segmentation, multisensor, Dempster-Shafer fusion 111386
nteractive dialogue telephone service 106416
isolated word recogn., high-perform. robust, sig. modeling 106402
isolated word recogn., inform. and HMM decision fusing using Bayesian causal
tree 118154
isolated word speech recogn., finite-state VQ, dyn. spectral features *(Chinese)*
73057
Japanese connected digit speech, whole word HMM-based speech recogn. 73051
Japanese news commentary cognition 118158
land mine detect., HMM/morph. neural networks 77083
landmine detect., ground radar, HMM 88261
large-vocab. continuous speaker adaptation study 129410
laser radar range profiling, expectation-max. algms. 118315
low-dens. parity check codes over finite-state binary Markov channels, decoding
129084
machine speech recogn. systs. usability *(German)* 73076
mandarin digit string speaker-independent speech recogn. syst. *(Chinese)* 94424
Mandarin speech recogn., smoothed-unit HMM algm. *(Chinese)* 84039
MAP approach to speaker adaptation using trended HMM 84047
MAP sym. decoding in channels with error bursts 83914
max. likelihood estimator, almost sure convergence rate 78816
max. likelihood texture anal./class. using wavelet-domain HMMs 106756
missing feature theory implement., acoustic backing-off 73062
MPEG-4 facial animation syst., audio-to-visual conversion 118590
MUGSHOT database, profile views, hybrid face recogn. systs. 107200
multi-aspect scatt., wavelet coeff. charactn. by dual HMM 95608
multi-aspect scatt. data, wavelet coeffs., dual HMM charactn. 73436
multi-modal dialog scene detect. using HMM 85363
multiple freq. line tracker 131689
multiresolution trees for ATR algms. anal. 96911
multiscale image segmentation, wavelet-domain HMM 107213
multiscale texture segmentation using hybrid contextual labeling tree 94835
network commun. channels using HMM 119644
noisy speech recogn., nonstationary AR HMM method 118144
nonlin. filters, stabil. and approx., Hilbert projective metric, particle filters appl.
73682
off-line script recogn. syst., comparison of character n-grams and dictionaries
129665
online estim. of HMM params. 84061
PC-independent speech recogn. syst. using DSP 129409
people tracking with single video camera, hierarchical model of dyn. 129633
phonetic rules for pronunciation errors diagnosis *(English)* 73010
radar target ident., HMM framework neural network classifier *(Chinese)* 73479

hidden Markov models continued
reduced-complexity smoothing 84682
robust automatic speech recog. with missing/unreliable acoustic data 73063
robust connected digit recogn. in car noise environ. 118151
robust speech recogn., adaptive model-based tech. 106422
robust speech recogn., missing data approach, reliab. measure 118131
SAR imagery, multi-aspect target detect. using HMMs/2D matching pursuits
75144
SAR multiscale image segmentation using wavelet-domain hidden Markov tree
models 75133
second-order HMM, face recogn. appl. 84634
semi-blind block channel estim./sig. detect. 73731
sentence recogn. through hybrid neuro-Markovian modeling 129403
short-time stationary sigs. in additive noise/channel distortion, spectrum estim.
84670
Sindhi lang., speech to text syst., automatic speech recogn. 106380
single trial EEG data, online class., HMM appl. 110596
skeleton-based walking motion anal. using HMM and act. shape models 106822
smoothed functionals, recursive computation 67766
Spanish speech recogn., context-depend. sublexical units 73072
speaker normalisation using mixture of recurrent neural nets 73066
speaker recogn. feature using correl. dimens. 129408
speaker verification, competition-based meas. 118129
speech, partial temporal corruption, union model 118141
speech, pitch tracking based on stat. anticipation 106391
speech audio/visual features fusion 94390
speech enhancement, soft decision 118066
speech recogn., articulatory prod. model 118140
speech recogn., MLP/HMM syst., dyn. context 118142
speech recogn. systs. based on lin. transforms *(German)* 73093
state alignment in speaker verification, search-space reduction, detect. approach
84049
subband-HMM speaker recogn., inform. fusion 106394
superimposed HMM transient detect. via target tracking ideas 119094
target perceivability, appls. 130030
time-series pattern matching using deformable Markov model templates 67765
time-sync. speech recogn. using higher-order n-gramme speech models *(German)* 73087
Tokyo Inst. of Technology progress in speech recogn. 118162
tone lang., syllables recogn. 73043
topol. free HMM, background modeling 106546
turbo code over impulsive noise channel, perform. eval. 129025
unconstrained handwritten text recogn., vocab. size and lang. models 129667
unexploded ordnance, UWB SAR method 88262
utterance verification based on dyn. garbage eval. approach *(Chinese)* 84025
video class. based on HMM using text and faces 118732
video struct. discovery using pseudosemantic trace 94913
Vietnamese document image recogn. based on HMM and linguistics 129938
Virtual Mouse, inputting device by hand gesture tracking and recogn. 73538
visual speech recogn., normalized training 94435
vocab.-independent speech recogn., multilingual phone models 94426
voice recogn., rate anal. principles, HMM, neural networks *(Italian)* 84043
wavelet-based image denoising 94800
WDM opt. network scheduling, traffic prediction using HMC 109140
wireless-ATM syst., multimedia traffic, DQRUMA MAC protocol 85063

hidden surface removal *see hidden feature removal*

hierarchical databases *see database management systems*

hierarchical systems
see also multivariable systems
300 mm wafer fab controllers design, CPN-based approach 89948
ATM networks, connection admission control using modular neural networks
84824
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 119468
complex control ccts., dyn. reconfigurable implement. 101940
differential game under uncertainty, Nash-Slater soln. 67746
distributed intell. hierarchical syst., heat metering and control 122825
FPGA-based reconfigurable computers, hierarchical memory mapping 79701
HV overhead elec. lines, fully-automatic live-line maint. robot 88463
IP-over-ATM networking, CAC and routing of QoS-aware and best-effort flows
107898
Middle Egypt Electricity Company microscada syst. implement. 133524
mobile computing location data mgt. via hybrid scheme 85638
MRI, multispectral image segmentation using hierarchical self-organizing map
110908
multilevel nested Petri nets anal. algms. 113936
Nomad robot, meteorite search, Science Autonomy System 97400
power syst., optimum emergency control, dyn. stabil., hierarchical systs. *(Russian)* 122895
power syst. flexible network integrated supervisory control 122844
SMT dual-robot syst., coord. planning and control, hierarchical model 89875
solar-TPP, gain-scheduled fuzzy PI control scheme 133902
stressed power syst. global control, stabil. 88352
three-phase inverter control software design archit. 88898
top-level PCB schematics, systs. design strategy, hierarchical approach 69306
underwater unmanned vehicles, sonar-based guidance 131685
Web caching archits., hierarchical/distributed caching anal. 119546

high bit rate digital subscriber lines *see digital subscriber lines*

high coercivity materials *see permanent magnets*

high definition television
1080/24P, global prod. format 109367
advanced multimedia proc. LSI 120548
ATSC 8-VSB modulator using digital methods *(Chinese)* 109366
ATSC-HDTV trellis decoder, recursive metric for NTSC interf. rejection 120541
blind/semiblind channel equalization for wireless broadcast channels 73845
broadcast technol., NIST advanced technol. program project 97064
BS digital tuner unit for CATV syst. *(Japanese)* 131753
CMOS single chip video proc. 120544
COMETS 21 GHz advanced satellite broadcasting expts. 74890
compact 3D HDTV camera with zoom lens 109365
decoder sync. syst., video buffer mgt. 86324
digital, multi-tap high speed equalizer design *(Chinese)* 107716
digital and computational video, conf., Tampa Florida (2001) 100380
digital micro-mirror array based, second generation advanced multimedia display
proc. appl. 120551
digital receiver with HDD, digital stream proc. technol. 120552
digital TV and video compression 95139
digital video storage using opt. storage device, data allocation/simultaneous
record/playback 116588
endoscopic visualization systs., telesurgical perform. comparison 87798

high definition television continued
enhanced pers. video recorder design/implement. 120553
FD Trinitron, digital TV sig. proc. & display technol. 86326
film-to-video high quality cost-effective converter 120549
genlock and timing regeneration for multiple formats of high-defn. video and digital cinema 75302
HDD recording/playback, transport stream proc. LSI 120546
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 113211
images and formats 131741
ISO/IEC 13818-1 decoders, design 120547
Japanese BS digital broadcast receiver 120545
LCoS liq.-cryst.-on-Si microdisplays, develop. & appls. 121100
moving image, future 97063
MPEG-2 decoded video restoration, deinterlacing and superresolution 95103
MPEG-2 HDTV encoder, multiple enhanced SDTV encoding LSIs based develop. 118538
MPEG-7 HDTV program search engine, multimedia inform. auto-retrieval 86323
multiformat HDTV camera head 120542
multimedia syst. LSI, concurrent design environ. *(Japanese)* 84386
network infrastructure *(German)* 75303
NX-2700, prog. single-chip HDTV proc. 75304
PDP HDTV, color temp. improvement, driving scheme 120543
plasma display, high-resoln. interlaced addressing 86841
post-proc. using computationally efficient adaptive nonlin. filters 118332
projection CRT, 16 cm large neck, HDTV display appl. 109903
projection display for ATSC std., 61 in., large neck CRT 86327
rear-projection TV, sig. proc. using digital micro-mirror array 120550
set-top boxes, digital TV, protocols, decryption systs. *(German)* 120519
super high defn. image transm. syst. *(Japanese)* 86322
terrestrial digital TV broadcasting, US outlook 86307
thermal imager, high resoln., HDIR syst. 109638
TV linked content server systs. for video area networks *(German)* 75320
universal DTV mastering in high resoln., multiframe rate compression-free video recorder 86346
UWB technol. for wireless video networking 119868
video decoder, syst. control, reconfigurable features 86325
video sig. post-proc., erasable PLD appl. 97062
EG-2 422PML video, audio, and syst. encoder, 64-Mbit embedded DRAM, portable HDTV encoder 107111

high electron mobility transistors
see also HEMT circuits; hot electron transistors; power HEMT
2DEG, triangular pot., quantized energy level *(Chinese)* 92404
amp. design for 12 GHz MMDS appl. using neural net transistor noise model 69129
bias dependant LF FET noise model for CAD, large and small sig. models 80308
conf., Molecular beam epitaxy, Beijing, China (Sept. 2000) 89511
conf., Radiation imaging detectors, Freiburg, Germany (Jul. 2000) 89569
cpd. semicond. mfg. technol., conf., Las Vegas, NV, USA (May 2001) 113279
cpd.-semicond. transistor technols., quantum-mech.-Poisson solver 115811
delta-doped pseudomorphic HEMT struct., Franz-Keldysh oscill., FFT anal. *(Korean)* 70184
fast noise meas. procedures, uncertainty 75852
fully integrated HEMT based charge amp., design/expt. 121710
HEMTs, breakdown quenching using body contact 115964
HF device, near-field MM-wave injection, opt. probing 102749
HF PHEMT state fns., full extraction using time domain meas. 91259
high-speed ICs, RTDs/Schottky barrier diodes/0.1-μm-gate HEMT, monolithic integrat. 70229
III-V heterostruct. device simul., indust. appl. 126623
large-sig. dyn. behaviour, meas. and charactn. 70180
MESFET and HEMT microwave devices and MMICs, electrothermal model 80289
metamorphic HEMT struct., AlGaAsSb/InAlGaAs/InAlP-based buffers, comparison 70204
microwave HEMT parasitics charactn., S/noise param. meas., calib. 102635
microwave PHEMT device, nonlin. noise modeling, residual phase noise, LF noise meas. 91261
microwave transistors, noise modeling, wave approach, correl. effect 70174
MODFETs, two-channel, two-stream ballistic instabil. 92413
modulator driver IC, device model params. *(Chinese)* 103914
multi-wafer prod. MBE syst., integrated real-time multisensors 90290
multilayer struct. semicon. devices, thermal layout optimis., anal. method 70004
noise charactn., extraction techs. and CAD procedure 86943
nonlin. lumped-element model for large-sig. cct. design 70197
opt. illum., freq.-depend. behavior 103911
param. extraction, optim. and parasitic extraction 70193
PHEMT, enhancement-mode, lin. and saturated power amps. 70179
PHEMT, impact ionization, device scaling 81372
PHEMT, microwave, charactn. techs. for temp. depend. expt. anal. 114982
PHEMT, microwave receiver, cryogenic temp. operation 80303
pHEMT, small-sig. model up to 110 GHz based on GA 92389
PHEMT LF noise model, appl. to MM-wave automotive radar chip set design 80311
PHEMT MMIC VCO, phase noise, LMDS appls. 102672
PHEMT model and verif. by load-pull and waveform meas. 70182
PHEMTs, bias-depend. large sig. modeling by pulsed meas. 91257
quasi-2D phys. PHEMT model for two-tone time-domain IMD simuls. 80314
spintronic devices, transport props., quantum computation appls., review 92403
stat. model, Monte Carlo method and PCA 103927
thermal transients in microwave devices and their influ. on IMD 80313
ultrafast device testing by near-field opt. heterodyning 97792
(Al,Ga)As high mobility electron heterostruct. wafer fused on $LiNbO_3$ 103148
(Al,In)GaAs/GaAs pseudomorphic HEMTs, 1/f noise study, 4.2 K cryoelectronics 70188
n-$Al_{0.24}Ga_{0.76}As$, surface states, DLTS, HEMT study 69533
AlGaAs/GaAs HEMT, $H_2(D_2)$ plasma exposure 126876
AlGaAs/GaAs HEMT, anal. model 126879
AlGaAs/GaAs HEMT dc output characts., interface states effect *(Chinese)* 81374
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 70320
AlGaAs/GaAs depletion-mode HEMT, dyn. behavior under opt. illum., model anal. *(Chinese)* 115945
AlGaAs/InGaAs HEMT, simul. of electron tunneling 126898
AlGaAs/InGaAs double δ-doped pseudomorphic HEMT, MBE growth *(Chinese)* 92383
AlGaAs/InGaAs pHEMTs, MBE, inline sheet charge control, AlAs etch stopper for GaAs cap removal 126427
AlGaAs/InGaAs pseudomorphic MODFET, DC and microwave charact. 70178

high electron mobility transistors continued
AlGaAs/InGaAs pseudomorphic high electron transistors, effects of hot-elec stress 103919
AlGaAs/InGaAs/GaAs PHEMT, submicron T-gate fab. using RTA reflo resist 103912
AlGaAs/InGaAs/GaAs PHEMT, ultra-broadband nonlin. TOPAS model 81
AlGaAs/InGaAs/GaAs cryoelectronic MODFET, deep levels 115940
AlGaAs/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on characts. 115950
AlGaAs/InGaAs/GaAs pseudomorphic HEMT, photolum., spacer layer thickn effects 126874
AlGaAs/InGaAs/GaAs pseudomorphic HEMT, transconductance 81369
N-AlGaAs/InGaAs/GaAs pseudomorphic QW based sub-0.25 μm gate HE 81370
$Al_{0.25}Ga_{0.75}As/In_{0.20}Ga_{0.80}As/GaAs$:Si pHEMTs, DLTS obs. 115968
AlGaAs-GaAs HEMT, 2DEG transport props., quantitat. mobility spectrum a 92409
AlGaAs-GaAs-AlGaAs MODFET channel cond. with high doping levels 92
AlGaAs-InGaAs pseudomorphic HEMT fab. by ICP dry etching, device char 70210
AlGaAs-InGaAs-AlGaAs HEMTs, barrel type MOVPE reactor for 6″ epita wafers 68259
AlGaAs-InGaAs-GaAs pHEMT, microwave props., selective gate recess etch technol. 115961
AlGaAs-InGaAs-GaAs pHEMT perform., SiN_x passiv. thickness effect 701
AlGaN/GaN HEMT, GaN mass transport regrowth for ohmic contacts 7927
AlGaN/GaN HEMT, ammonia MBE on 4H-SiC 68199
AlGaN/GaN HEMT, chem. sens., fluid monitoring 81379
AlGaN/GaN HEMT fab., buried p-layers 81380
AlGaN/GaN HEMT, prep. on 2-inch proc. line, DC/microwave characts. 1268
AlGaN/GaN HEMT, proton-irrad., dc/rf perform. 125706
AlGaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 696
AlGaN/GaN HEMT, technol./perform./fab., 2-inch epitaxy, microwave pow appls. 81383
AlGaN/GaN HEMTs, MBE growth, high current/f_T 81364
AlGaN/GaN HEMTs, MOCVD on SiC, high-transconductance 126890
AlGaN/GaN HEMTs, fab., characts., short-channel effects 70199
AlGaN/GaN HFET, fab., GSMBE, ECR plasma 81386
AlGaN/GaN MODFET, electron trapping, dc drain current, DLTS 81362
AlGaN/GaN RF HEMT, IMD and lin. 92393
AlGaN/GaN short channel HEMT, gate recess, breakdown volt. 81387
AlGaN/GaN:He,P HFETs fab., ion implant., classical/gate metal approach 813
$Al_{0.15}Ga_{0.85}N$/GaN HFET, high-temp. electron transport 115959
AlGaN-GaN HEMTs, degrad. charact. 81394
AlGaN-GaN HEMTs, perform. limits 92415
AlGaN-GaN HEMTs, simul. 92416
AlGaN-GaN MODFET, 2DEG transport props., quantitat. mobility spectru anal. 92409
AlGaN-GaN MODFET, I-V characts. and output conductance, 2D anal. mod 70186
$Al_xGa_{1-x}Sb_ySb_{1-y}$, lattice-matched, MBE, InP based HEMT appl. 103094
AlInAs/GaInAs/InP MOCVD grown HEMTs with InP etch-stop layer 70207
AlInAs/InGaAs HEMT, diffusing F atom suppression by PH_3 plasma treatme 115949
$Al_{0.48}In_{0.52}As/In_{0.53}Ga_{0.47}As$ high-perf. planar HEMT 103910
AlInAs-GaInAs enhancement-mode metamorphic HEMTs on GaAs subst DC/RF perform. 92411
AlSb/InAs HEMT, TiW/Au gate metallization, fab., characts. 115955
C_{60}/C_{70} incorp. nanocomposite resist syst., nanolithography 92238
GaAs FET Schottky gate metallization, electron-beam irrad. damage 70211
GaAs MBE, high-vol. cost-effective multi-wafer reactor 90286
GaAs MESFET and HEMT, low temp. microwave charact. 70190
GaAs MESFETs and HEMTs, equiv. cct. model, parasitic capacit. deter 70181
GaAs P-HEMT gate improvement/control, proc. modelling/simul. 116042
GaAs PHEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
GaAs PHEMT, MBE growth in GEN III single wafer reactor, substr. temp. un formity 101213
GaAs PHEMT, T-gate recessing, $SiCl_4/SiF_4/O_2$ RIE 126883
GaAs PHEMT/MMIC mfg., 6″ wafer fab. facilities establishment 70212
GaAs device mfg., 150 mm wafer line for wireless handheld commun. appl 74851
GaAs metamorphic HEMT, K-band subharmonic down-converter 102609
GaAs metamorphic HEMT, strain relax. and disloc. filtering 103895
GaAs metamorphic HEMT-based MMIC amps., high gain/perform. 69243
GaAs monolithic X-ray imaging sens., med./synchrotron appls. 98010
GaAs:Si(Be)(C), doping during MBE, single-port compact dopant sourc 103252
$GaAs/Al_{0.3}Ga_{0.7}As$, 2DEG, acoustic phonon absorpt./emission 92405
GaAs/InGaAs/AlGaAs MODFETs, thin buffer layer, high transconductanc 92387
GaAs-AlGaAs MBE, As-free high-temp. surface cleaning, two-step-heating se 92003
GaAs-AlGaAs PHEMTs, contactless RT charactn. by SPV spectrosc. 70205
GaAs-based metamorphic technol., appl. to device struct. 126263
$GaInP/In_xGa_{1-x}As/GaAs$ inverted delta-doped V-shaped pseudomorphic HEMT temp. depend. 80273
GaN HEMTs, min. noise fig., Fukui eqn. calc. 81368
GaN based transistors, overview 103926
GaN epilayers, ammonia MBE on (0001) sapphire, defect reduction, HFE structs. 101225
GaN/AlGaN HEMT, nonlin. anal., Volterra series 103925
GaN/AlGaN/Pt HEMTs, H_2/CO/NO/hydrocarbon gas sens. 86748
GaN-based electronic/optoelectronic devices, business opportunities 70002
Ge thin-film metamorphic HEMTs, hybrid integrat. and substr. removal 12591
InAlAs/InGaAs HEMT, PECVD passiv. film, isolation degrad. 115951
InAlAs/InGaAs HEMT, δ-doped metamorphic, long. optic phonon-plasmo coupling 103907
InAlAs/InGaAs HEMT fab., bilayer UVIII/PMMA resist 81371
InAlAs/InGaAs HEMT, ultra-short gate, lattice matched growth 92401
InAlAs/InGaAs HEMTs, drain conductance, freq. dispersion, impact ionizatio bias conditions 81358
InAlAs/InGaAs highly doped metamorphic HEMTs, subband electron prop 115960
InAlAs/InGaAs metamorphic HEMT, GaAs substr., InP buffer layer 81393
InAlAs/InGaAs/AlGaInAs/InGaAs/InP/InAlAs HFET, low temp. impact ioniz EL 70187
N-InAlAs/InGaAs/InAlAs metamorphic heterostruct. based sub-0.25 μm gat HEMT 81370
InAlAs/InGaAs/InP HEMT, design optim. 115958

electron mobility transistors continued
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ metamorphic HEMTs, 0.06 μm gate length 115948
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ E/D-mode metamorphic HEMT 92400
AlAs-InGaAs HEMTs, pot. profile meas. using Kelvin probe force microscopy 2268
AlAs-InGaAs MODFETs, comparison of conventional and asymmet. coupled QW transport channels 81365
AlAs-InGaAs-InP HEMTs from various proc. options, charactn./reliab. 92417
AlAs-InGaAs-InP microwave HEMT, carrier-conc.-depend. low-field-mobility model 70196
As, self-assembled QD, high field transport, MODFET appls. 91781
GaAs channel metamorphic HEMTs on 100 mm GaAs substrs., high perform. 99167
GaAs, lattice-matched HEMT, high-field region, effective length 126899
GaAs metamorphic HEMT epitaxial wafers, MOVPE grown 69144
GaAs metamorphic HEMT technol. for mm-wave low noise/power appls., high perform. 69168
GaAs:Si PHEMT, single-/double-δ doped, MBE grown, charge dens. control 92388
GaAs/AlGaAs HEMT struct., PL 92385
GaAs/AlGaAs recessed-gate PHEMTs, orient. depend. charact. 126892
GaAs/AlInAs HEMT, MBE on oxide-bonded InGaAs, characts. 126897
GaAs/AlInAs/GaAs metamorphic HEMTs, long term stabil., hot electron stress test 126872
GaAs/InAlAs HEMT, ion irrad. effects, radiation tolerance 126881
GaAs/InAlAs insulated gate PHEMT with Si interface control layer 80294
GaAs/InAlAs, metamorphic HEMT on GaAs, MBE, characts. 92386
GaAs/InAlAs/InP enhancement-mode pseudomorphic HEMT 115947
GaAs/InGaP HEMTs, technol. optim., anal. modelling 70200
$In_{0.7}Ga_{0.3}As/In_{0.52}Al_{0.48}As$ pseudomorphic QW-HEMT struct., MBE growth 103898
$In_{0.74}Ga_{0.26}As/In_{0.52}Al_{0.48}As$ QW HEMT, MBE, optimized channel thickness 103909
InGaAs-InAlAs HEMT, MBE growth, electron dens. and surface pot. 103896
InGaP/(In)GaAs modul.-doped heterostruct., GSMBE, HEMT/HHMT appl. 101242
InGaP/$In_{0.33}Ga_{0.67}As$ p-HEMT grown on patterned GaAs, microwave and noise perform. 91282
InGaP/InGaAs, pseudomorphic HEMT, highly strained, growth on GaAs, charact. 126900
InGaP/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC charact. 115950
InGaP/InGaAs/GaAs pHEMTs, 150 nm gate length, DC charactn. 70201
$In_{0.5}Ga_{0.5}P/In_{0.2}Ga_{0.8}As$ dual-gate PHEMTs, characts. 126885
$In_{0.5}Ga_{0.5}P/In_{0.33}Ga_{0.6}As$ PHEMT, LF noise 126875
InGaPSb/GaAs-based HEMT and HBT, MOVPE, elec. characts. 115956
InN/GaN heterostruct., flow modulation epitaxy, MOCVD, HEMT 90454
InP HEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
InP HEMT asymmetric T-gate recess fab., single-step patterning using GA 92410
InP HEMT technol. for HF analog appls. 114974
InP MOVPE based material for MM and subMM wave generation and amplif. 68298
InP high-speed electronics, opt. fiber transm. syst. 131373
InP mm-wave HEMTs, large-sig. LUT model, non-quasi-static and impact ionisation effects 91260
InP mm-wave HEMTs, look-up table based large-sig. model, impact ionization 114977
InP, related materials, conf., Nara, Japan (May 2001) 113237
InP/$In_{0.5}Al_{0.5}As/In_{0.5}Ga_{0.5}As/InAsP$ M-HEMT, GSMBE growth 115946
InP/InAlAs/InGaAs HEMT, fab. technol. 115952
InP/InAlAs/InGaAs HEMTs, hole accumulation, source resist. 115954
InP/InGaAs/InAlAs MSM/HEMT OEIC struct., GSMBE growth 101238
InP-based submillimeter-wave HEMTs, asymmetric gate-recess engng. 102647
Si/Ge Si Qw MODFET, low energy PECVD, struct./elec. charactn., TEM 124890
Si/$Si_{0.58}Ge_{0.42}$ n-MODFETs, RF and microwave noise perform. 102650
Si-$Si_{1-x}Ge_x$ HEMT struct., design, 2DEG dens. *(Chinese)* 92399
Si/SiGe HFETs, n- and p-type devices, technol. and characts., review 80297
Si/SiGe MODFETs, nearly body-effect free design 81389
Si/SiGe strained QW MODFET, cryogenic cct. 115943
SiGe/Si vert. p-type high-mobility heterojunction MOSFET 70075

energy physics electronics *see nuclear electronics*

energy physics instrumentation computing
dvanced detectors, conf., La Biodola, Elba, Italy, May 2000 67400
ALICE DAQ syst., status/prospects 131831
ATLAS calorimeter, high-speed digital opt. data link, SEU 98061
ATLAS detector liq. argon calorimeters, implement. of serial protocol 121639
ATLAS high level triggers, read-out buffer prototype 121745
ATLAS high-level triggers, ATM studies 132463
ATLAS pixel detector, second level trigger, fast track finding algm. 98059
Belle DAQ syst. switchless event building farm design anal. 120673
Blue database, high-fold γ-ray coincidence data 87269
CDF expt., Event Builder, Level 3 trigger systs. 132466
harged beam in conducting pipe, parallel 3D Poisson solver 110108
CHIMERA 4π multidetector array, data class. 121578
CHORUS emulsion expt., CERN, data handling 87251
CLIC lin. collider central tracking detector, design anal. 110367
CMS calorimeter, Global Calorimeter Trigger proc. using reconfigurable logic 76147
CMS event builder demonstrator, Myrinet results 131832
DAQ, high-speed archit. 120680
Data Organizer high traffic node for tracking detector data 132462
detect. systs., geom. params. sim. using OMEGA code 76014
dielec. track detectors, automatic image anal. syst. 121673
Dubna gas filled recoil separator, DAQ syst. 120678
EPICS role in DAQ and beamline control 109456
EUROMET Ge γ-ray spectrometry efficiency transfer software compar. 121764
FPIX1, pixel-readout-chip for BTeV expt., software 87259
gamma-ray tracking algms., DSP 121861
gas ionizing radiation detectors, leak microstruct., timing inform. 76043
hadronic collider trigger fast tracker proc. design anal. 121738
HERA event indexing systs., software design, anal. 97159
HERA H1 fast track trigger electronics 76140
HERA-B database services, detector config., calib. 132432
HERA-B high-p_T trigger design anal. 121737
HERA-B RICH detector, design criteria, detector components and event anal. tools 121642
HERA-B vertexing experience 87178

high energy physics instrumentation computing continued
high field supercond. wigglers, mag. field stabilis. with DAQ controllers 121368
high speed DAQ syst. design/operation anal. for HyperCP expt. 120674
hybrid MSGC thermal neutron detector DAQ/histogram design anal. 132345
ISAC, fast Faraday cups, oscilloscope, bunch shape meas. 87128
KLOE, DAQ syst. archit., mega-vol. data handling 87238
KLOE DAQ/trigger syst. design anal. 132449
KLOE distrib. event building syst., proc./data flow control 131833
LEDA, beam phase meas. syst. 87126
LEPS expt., DAQ syst. 120675
LHC data transm., G-link, gigabit Ethernet compliant serializer 121704
LHC supercond. coils, persistent current calc., modified Bean model, FEM 87064
LHCb DAQ syst., event building in IN interface card 132464
lin. opt. link using radiation hard VCSELs for analogue front-end chip 76153
longit. instabil. control syst., program. DSP-based multibunch fdbk. 87094
low emittance flat-beam electron source for lin. colliders 97935
low-cost intell. portable MCA design anal. 121742
MAC-1 universal setup, β-spectrograms meas., image-reading syst. 98079
multidetector arrays, DAQ, review 109454
multiphase flow monitoring by computerised radioact. particle tracking 121274
muon beam transverse ionization-cooling channel design and simul. 121334
NA48 expt. online PC farm, DAQ syst., switched fast ethernet network 76143
NIST undulator resorting using simulated annealing 110174
NSRL klystron corridor, leaked EM noise *(Chinese)* 110111
nuc. track membranes, unconventional etch methods *(Chinese)* 87246
particle detector gas-cylinder inversion syst. based on embedded computer 76137
pixel 8×8 array IC for X-ray spectrosc. 121714
PK-AΓ-02 α-γ-radiometer-spectrometer, ^{241}Am proximate monitoring 98080
PreFPIX2 chip, core archit. 121713
proportional counters, digital pulse proc. tech. 121636
PSI Injector 2 cyclotron, proton beam dump, surveillance protect. 87129
radionuclide activity & neutron flux stds., unified counting channels 87262
recycling accelerator, hard bremsstrahlung, high-efficiency source 110246
ring Compton camera DAQ syst. design anal. 121743
ROTOR VLSI proc. optim. 121708
RPC sim., neutron sensitivity, GEANT-MICAP code, review 76131
scintillation photomultiplier detectors, flexible DAQ board 120679
shift-scale invariance-based wiggler radiation simul. code 121795
SNS linac, beam posn./phase monitors, EM modeling 87101
software/hardware technol. spin offs 87811
SR microtomography, high energy & resoln., HASYLAB beamline 101565
SRRC, long. feedback syst. 87050
SSRF DeviceNet control syst. design anal. 121313
STACEE γ-ray detector prog. digital delay/trigger syst. 121739
TESLA lin. collider detector, obs. track reconstruction perform. 110366
TRF++ simulator package, track pattern recogn., central trackers 110365
twisted waveguide accelerating struct. 110133
UNICAT control syst. at APS 109457
VXIbus based four-channel gated integrator syst. *(Chinese)* 120657
WASA detector fast prog. trigger syst. design anal. 121740
X-ray/neutron modelling & digital imaging for NDT 101564
γ-spectra nuclide quantification GUI, librarian-driven anal. 132485
CdZnTe detectors, digital sig. proc., clustering method 121635
CdZnTe pixel detectors, charge transport simul. 121483
CdZnTe portable detectors, automated radioisotope ident., fuzzy logic 121628
CsI(Tl) cryst., intrinsic radioact. background, (α,γ) discrim. *(Chinese)* 110297
^3He cylind. proport. counter, Bonner sphere, Vandellos II NPP appl. 121600
^3He ionization chamber, digital waveform anal. 110344
Rn SSNT detectors, Monte Carlo simul. 121672
Si, vertex tracking detector design for top quark discovery expts. 132326

high fidelity amplifiers *see audio-frequency amplifiers*

high fidelity equipment *see Hi-Fi equipment*

high field effects
see also Gunn effect; hot carriers; impact ionisation; Poole-Frenkel effect; Schottky effect; Zener effect
1D insulation, charge carrier transport/trapping, thermal stimulation 81723
ballistic ellipt. shaped quantum wire, conductance 91776
ballistic SNS quantum point contacts, coherent multiple Andreev refls. and current reson. 127482
ballistic transport devices, quantum interf. devices *(Chinese)* 126902
biaxially oriented polypropylene film in AC high field region near breakdown, charging current *(Japanese)* 104409
buried struct. in semicond., BEEM, review 115452
diamond, carriers impact excitation under extremely high elec. fields 102971
high mobility organic semiconds., 2D electron/hole systs., charge transport props. 115341
MODFETs, two-channel, two-stream ballistic instabil. 92413
MOSFET, ultrathin gate, oxide traps, PDO method *(English)* 92335
nanoscale MOSFET, mobility vs. drain current rel. 70131
organic single-layer LEDs, recomb. efficiency at high fields 127970
polymeric insulators, freq.-based charactn., virtual space charge model 116183
quantum switch based on coupled waveguides 92419
Schottky barrier TFT, off-state leakage current, cond. mechanisms 92346
semiconds., hot electrons, high-field transport 91574
shallow n^+-p-well diodes, generation lifetime from reverse generation current 126106
vert. integrated transistor-laser struct., modified design 93665
AlN, electron runaway in strong elec. fields 126029
C nanotube, Al electrode, quantum transport props., ab initio modeling 91509
C nanotube electron waveguides, quantum interf. and ballistic transm. anal. 125934
GaAs, SI, traveling high-elec. field domains, current oscills. 80710
GaAs asymmetrically excited photoconductive switch, fs carrier dyn. 71544
$GaAs/Al_{0.33}Ga_{0.67}As$ QD device, Coulomb charging 126182
$GaAs/Al_{0.3}Ga_{0.7}As$ 2D struct., hot-hole lateral transport 69636
$GaAs/Al_xGa_{1-x}As$ 1D channel, AFM fab., ballistic transport 69665
GaAs/AlGaAs superlattices, miniband transport, ARC 103141
GaAs-based superlattices, magneto-miniband transport, intense THz irrad. effects 103139
GaInAs/InP-based three-terminal ballistic jns., nonlin. operation 103100
GaN, bulk, polar opt. phonon scatt. and neg. Kromer-Esaki-Tsu differential cond. 103020
GaN, electron runaway in strong elec. fields 126029
n-Ge, electron-hole plasma, high-field autosolitons, emission from hot charge carriers 69477
HfO_2 gate dielec., struct. and electronic props. anal., theoretical methodology 127140

high field effects continued
InAs, self-assembled QD, high field transport, MODFET appls. 91781
InAs/Permalloy 2DEG, spin injection & spin detect. expt. 80903
InGaAs/InP-based ballistic rectifiers, sensitivity 126687
InN, electron runaway in strong elec. fields 126029
InP bulk high field carrier transport, Monte Carlo modeling 103022
InP, elec.-field-induced electron-transit-time reson., MM radiation generation 80676
NiFe/InGaAs/InAlAs four-terminal struct., ballistic spin transport 126214
PZT sol-gel derived films, ohmic cond./activation energy, temp. depend. 92645
Si wafer-air gap-mirror struct., photocond. relax. time, nonuniform microwave field 126004
Si:P(As)(Sb)(B)(Ga), high-field hopping cond., hopping domains 115286
$Si/Si_{0.8}Ge_{0.2}$ heterostruct., 2D hole gas, energy loss rates 80801
Si/SiO_2/Al MOS capacitors, ultrathin gate oxide, anom. LV tunneling current 69749
$Si-SiO_2$-Si MOS struct., gate dielec., struct. and electronic props. anal., theoretical methodology 127140
$Si-SiON-SiO_2$-Si MOS struct., gate dielec., struct. and electronic props. anal., theoretical methodology 127140
SiC, 4H, band to band tunneling, high field transport 69598
SiC, 6H, electron transport, Monte Carlo simul. *(Chinese)* 115349
SiC MOS capacitors, interface props. rel. to N_2O annealing 69754
$Si_{1-x}Ge_x$:B-gated MOS capacitors, elec. stress 80938
$SrTiO_3$-Si interface, gate dielec., struct. and electronic props. anal., theoretical methodology 127140

high-frequency amplifiers *see HF amplifiers*

high-frequency discharges
air plasma, microwave generation using qtr.-wave coaxial resonator 102889
bifocal microwave plasma device, lin. extended, materials proc. appls. 128865
low-press. microwave plasma UV lamp, water purif./ozone appls. 134607
S band HPM pulse compression, spontaneous gas breakdown switch *(Chinese)* 102882
single-surface multipactor on dielec. surface 92606
XUV-optics at BESSY II, contaminated, plasma cleaning methpd 121307
Al sputtered atoms ionization in microwave ECR plasma source 114245
CF_4 plasma discharge, 2D PIC-MCC model, diagnostics 92024
CO RT microwave-excited cw laser 105106
CO supersonic flow laser, RF-discharge, math. model 117070
CO_2 RF excited slab laser, optogalvanic effect 105120
CO_2 lasers, RF α-discharges 82465
CO_2 sealed-off slab lasers, all-solid-state generator excitation, output charact. 105109
He microwave-induced plasma based particle analyzer, use for mfg. environ. assess. 122705
Hg CW at. laser, microwave discharge pumped, output charact. *(Chinese)* 71645
N_2-Ne(Ar) mixtures, capacitively coupled RF discharges, breakdown 92612
O_2-I chem. laser, RF discharge dissoc. 105073
O_2-I chem. laser, RF discharge pumped, singlet O_2 generator *(Japanese)* 128117
S lamp, plasma-quartz interact., glow spectra 124076
μc-Si:H films, RF glow discharge deposition, Ar-dil. SiH_4 plasma 102988
SiH_4, plasma CVD, VHF-excited plasma characts., ladder-shaped electrode 114361

high-frequency effects
see also helicons; hot carriers; skin effect; solid-state plasma
decacyclene LB film light-emitting devices, AC/DC response 93387
diamond:B films, heavily doped, microwave cond., photocond. 125997
EM field coupling to long terminated lines 72373
high T_c supercond. films, microwave surface impedance, phenomenological model 70659
high T_c superconds., surface resist. meas., dielec. resonators 75820
low dens. carrier ferromag. semiconds., mag. interacts. 81811
metal films, local microwave charactn., IC appl. 109950
microporous systs., water inclusions, charge transport/polariz. 90584
on-chip interconnect, inductance modeling and extraction 126498
Permalloy stripe, nano-size rect., HF dyn. 81802
PWM invertor-fed AC motor drives, HF model for EMC anal. 134453
RTD, displacement currents and real part of high-freq. cond. 70006
semicond. superlattices, DC-/THz-ac-driven, coherent phenom. *(English)* 115379
AlGaAs/GaAs 2DEG, contactless heating by strip-line guided microwaves 103102
AlGaAs/GaAs HBTs, emitter struct. var. effect on RF charact. 80292
$(As_2Se_3)_{20}(SbSI)_{80}$, elec. cond., temp./freq. effect 103064
$(Ba,Sr)Sm_2Ti_4O_{12}$ ceramics, microwave dielec. props., comp. 104396
$a\text{-}Co_{68.25}Fe_{4.5}Si_{12.25}B_{15}$ wires/ribbons, GMI 81813
$κ\text{-}(ET)_2Cu(NCS)_2$, vortex struct., Josephson plasma reson. 102493
p-GaAs base of HBT, nonthermal electrons, femtosecond energy relax. 81216
GaAs chip, quantised current driven by SAWs 126043
GaAs pure high-resist. wafers, microwave photocond. diagnostics 82313
GaAs/AlGaAs heterostruct. nanoelectronic Y-branch, microwave props. 115359
$a\text{-}Ge_{10-x}In_xSe_{90}$ thin films, dielec. props. 92592
$HgBa_2CaCu_2O_{6+δ}$ HTSC thin films, microwave charactn. 70579
InP surface damage, methane-H_2 RIE-induced 92094
$KTa_{1-y}Nb_yO_3$ disordered ferroelec. crysts., dielec. const. 127234
$La_{0.7}(Pb_{1-x}Sr_x)_{0.3}MnO_3$ films, CMR, bolometer/mag. sens. appls. 81800
$La_{2/3}TiO_3$-$TiNiO_3$ ceramics, prep., microwave props., microstruct. 114923
$LiNbTaTiO_3$ low sintering temp. microwave resonator ceramics, prep., props. 114924
$Mn_xFe_{3-x}O_4$ ferrites, ferrimag. reson., cond. 116283
$MnZnFe_2O_4$ ferrite core losses, time-domain MSPM based algm. 127334
$Nd_{0.67}Sr_{0.33}MnO_3$ epitaxial films, microwave losses, dc transport, mag. prop. 68992
Si, microcrystalline films, catalytic CVD, struct., electronic props. 124958
Si on sapphire, radiation-damaged, ultrafast carrier relax. 69471
Si wafer surfaces, wet chem. treatment, microwave refl. photocond. decay meas. 82305
Si:B Coulomb glass, microwave ac cond. spectrum 102491
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
Si/SiO_2 disordered nanostructures, reson. tunneling 115451
SiC MESFETs, 4H/6H, transport model simul. 81367
SiC, surfaces, cluster ion beam smoothing 69866
SiO_2 thin-film, defect-induced dielec. loss, Coulomb glass 81631
SiO_2-B_2O_3-P_2O_5-TeO_2-Fe_2O_3-BaO-CaO glass, elec. relax. 92581
Ta_2O_5 thin-film, defect-induced dielec. loss, Coulomb glass 81631
$Tl_2Ba_2Ca_1Cu_2O_8$ HTSC films on 3″ sapphire wafers, high freq. filter appls. 70613
$Tl_2Ba_2CaCu_2O_8$ HTSC films, surface impedance, THz-freq. 70657
$Tl_2Ba_2CaCu_2O_8$ HTSC large area films, prep., microwave appl. 124823

high-frequency effects continued
$Tl_2Ba_2CaCu_2O_8$ double sided films, dual mode cross slotted filter, growth props., MOCVD 82010
YBaCuO film, surfaces, cluster ion beam smoothing 69866
$YBa_2Cu_3O_{6.9}$ thin films, fab., pass. microwave devices appl. 90475
$YBa_2Cu_3O_7$ HTSC large area films, prep., microwave appl. 124823
$YBa_2Cu_3O_7$ HTSC thin films, MW props. improvement, artificial defects eff 70602
$YBa_2Cu_3O_{7-δ}$ HTSC coplanar thin-film resonators, power handling 92913
$YBa_2Cu_3O_{7-δ}$ films, complex resist. meas., microwave broadband tech. 7581
$YBa_2Cu_3O_x$ epitaxial film, single-domain $YBa_2Cu_3O_x$ substr., surface re 80156
$YBa_2Cu_3O_y$ HTSC films, surface impedance, RF/DC fields 70649
$YBa_2Cu_3O_y$ HTSC, surface impedance, power dependencies, rf field 70658
$YBa_2Cu_3O_{7-δ}$/Au HTSC double-sided films, microstrip band-pass filters 929
$YBa_2Cu_3O_y/Y_2O_3$-ZrO_2/YIG films, IBAD-YSZ template growth 68380
$Zn_{1-x}Mn_xSe_{1-x}Te_y$ epilayers, dielec. props. 80767
ZnO thin-film, defect-induced dielec. loss, Coulomb glass 81631
$(Zr,Sn)TiO_4$-La_2O_3-NiO ceramics, sintering, microwave props., anneal 114438
$ZrTiO_4$ films, microstruct., microwave-freq. dielec. props. 104242

high-frequency heating *see radiofrequency heating*

high-frequency radio propagation *see HF radio propagation*

high-frequency transformers
arc welding machine, control power stages based on IGBT switching fer transformers 77977
class E isolated DC/DC power converter anal. and design 88963
CMOS circ.-geom. act.-transformer power amp., 2.4 GHz 102729
coaxial winding transformer, Faraday shielding, HF range 102792
contactless power conversion for motors, HF transformer model 123498
contactless power/inform. transm. scheme 133581
fast MV power syst. transients, internal transformer insulation effects 1341
half-bridge series-parallel reson. converter, EM considerations 99741
induction heating, HF transformer, design, testing 113146
induction heating HF transformer, current dens., num. models 113147
Litz wire winding, stray losses, computer anal. *(Polish)* 115097
modelling, refl. coeff. tech. & S matrix theory 91438
monolithic lumped planar transformers, modelling up to 20 GHz 114996
nonlin. mag. cores, modeling/simul. using PSpice 104535
phase-shifted ZVS-PWM DC-DC power converter topol. 112673
power supply HF HV DC isolation transformer-rectifying module 99731
single-stage AC-to-DC converter, DC bus voltage control 123658
SMPS cost-effective EMC-conforming design 88815
spiral inductors and transformers for RFICs, modelling 91355
SRM drives, unipolar converter, PF improvement 89340
three-transformer CATV divider using bead-type ferrite core, freq.-range wid ing 131757
VSI HF transformer act. auxiliary reson. soft commutation snubber *(Japane* 99803
Si/SiGe HBT, microwave transformers, inductors and transm. lines 102639

high-frequency transmission line measurement
lossy transm. lines, freq. depend. param. extraction, TDR/TDT 121167
microwave transm. line, group vel. meas., FM reflectometry 109952

high-frequency transmission lines
act. phased array antenna using transm.-line coupling network and VCO 726
antenna arrays, transm. line band stop filters 72653
micro-dispensing/ink jetting direct write technols., material systs. 100564
MM-wave ICs, structural problem of PC transm. lines 69209
mm-wave six-port reflectometer based on sampled-transm. line archit. 1099
short-length lin. impedance transformer, matching characts. 83447
Au-polyimide ILD multi-level interconnect proc. using dual 4.5 μm-thick me layers 69961
Si/SiGe HBT, microwave transformers, inductors and transm. lines 102639

high level languages
see also Ada; authoring languages; C language; FORTH; FORTRAN; know edge representation languages; logic programming languages; object-ori ented languages; parallel languages; Pascal; PROLOG; simulation lan guages; specification languages; virtual reality languages; visual languages
data commun. test automation using scripting langs. 120642
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germa (March 2001) 78400
eEMU, client-server syst. for syst. monitoring and event mgt. 108024
hardware synthesis from high-level prog. lang. descript. 101673
modular software for IC mfg. appls., benefits 126922
RISC-based DSP synthesis, compiler-friendly, perform. eval. 68839

high level synthesis
see also hardware-software codesign
activity-driven clock design, CMOS sync. digital syst. 68683
affine iter. algms., design flow, commun. synthesis 114689
aggregration/disaggregation in HLA multi-resoln. distributed simul. 125390
algorithmic level DSP synthesis, symbolic alg., multimedia appls. 125551
area/time optimizing algm. in high-level synthesis of control-based hardwar 68688
ASIC design methodology achieving 550 MHz operation 125358
assignment-space exploration, testable data-path synthesis, minimizing parti scan registers 68785
automated design of SOCs using cores 114685
backward propagated capacitance model for VLSI RTL power estim. 114676
behavioral and gate level designs, power estim. improvement 90823
behavioral verif., high quality using stat. stopping criteria 79499
bipartition-codec archit., entropy-based algm. for area overhead reduct. 1019
BIST data path synthesis, high-level data path allocation 90822
BIST RTL data paths, testability trade-offs, 3D design space 79715
bus controller verification, imPROVE-HDL model checker appl. 79826
clustering based fast clock scheduling for light clock-tree 79684
CMOS cct. av./peak temps., modified high-level synthesis effects 116037
CMOS digital ccts., gate level power optim. using dual-supply voltages 1252
Colif, design representation for appl.-specific multiprocessor SOCs 114577
control flow synthesis, feasibility of omitting state reduction step *(Chines* 101663
control intensive designs, high level synthesis, speculation techs. 125354
DAB chipset develop., real-time rapid prototyping approach, behavioral synthes 79743
data distrib. mgt. migration from DoD 1.3 to IEEE 1516 125388
data distrib. mgt. strategies, perform. comparison 125389
data path synthesis, clique partition. algms. based on improved merging rul *(Chinese)* 114580
datapath tile placement and routing, automatic layout 79698

evel synthesis continued
ep submicrometer designs, interconnect-driven design planning/synthesis, lay-ut optim. 68684
ES encryptor/decryptor core in FPGA 106230
sign automation, conf., Las Vegas, NV, USA (June 2001) 124209
ital cct. design, reusable intellectual property block verification, prog. syst. 8705
ital VLSI design, architectural synthesis with interconnection cost control 01957
SP algms. implement., automatic word length determ. method 102248
SP systs., combined word-length optim. and high-level synthesis 90956
LITE design methodology of foundation IP for improving logic synthesis qual-y 79744
bbeddable FPGA archit. for ASIC designs, hardware/software soln. 102116
ilt simul., high-level std. 68508
xible granularity automated hardware/software partitioning, high-level estim. echs. 68700
ating-point behavioral synthesis, optim. tech. 79823
PGA based designs, area time power estim., behavioral level 68724
PGA optim., VHDL, public-domain Matlab software 102063
nctional test generation for behaviorally seq. models 79691
rdware transforms., complete spec. and implement. methodology 68670
terog. FPGA under delay constraint, low power driven re-synthesis algm. 02112
terog. multiprocessor SoC, appl.-specific archit. generation 125553
uristic datapath allocation for multiple wordlength systs. 79711
erarchical algorithmic descriptions, architectural transforms. in recursive HLS 01955
erarchical design for SOCs 68848
erarchical phys. design 104003
erarchical timing pair model for high-level synthesis 101980
gh perform. VLSI design, CAD infrastructure 125166
cremental rerouting, Boolean satisfiability-based, FPGA appl. 79799
put space adaptive design, high-level methodology, energy/perform. optim. 25375
va machine, microcontroller appls. 114798
rge digital ccts., multiple supply domains, substr. noise generation, high-level imul. 79687
n. analog syst. synthesis, hierarchical perform. optim. 101749
gic fns., evol. synthesis using MUX 114679
gic schematics, high-speed display/graphics mgt. *(Chinese)* 79755
w-power mixed sync./asynchronous implement., automatic FSM synthesis 14694
IAMon, hardware/software monitor for high-level SoC verification 79727
letaRTL, RTL design abstraction level, ASIC design 79677
ulticlock selection/synthesis for control data flow graph 125286
ultidimensional periodic scheduling, high-throughput DSP systs., two-stage soln. 114794
P, high perform., semi-custom design flow 125552
FDM transceiver for WLAN, 72 Mbit/s, C++ based syst. design 119580
O hardware spec., verification, and synthesis framework 125175
rtially simultaneously alive sigs., storage requirement estim., data intensive ppls. 126981
ass transistor logic macrocells, automatic layout generator 79798
ipeline scheduling, normalized scheduled data flow graph appl. *(Chinese)* 68686
ipelined archit. proc. verification by behavioral-level-only HDL code 79501
ipelined ccts., loosely-coupled modular design 101959
ipelined reprogrammable microcontrollers, high-level synthesis techs. 68832
LAs, optimal folding using 0-1 lin. prog. 90847
ower consumption, data flow graph 68503
apid develop. of audio proc. hardware, Handel-C 101656
econfigurable computing archit., coherent compilation cycle 125369
esource constrained async. scheduling method via DFG transform. 101971
eusable components based synthesis, arith. spec., POLYSYS tool 101888
T level test insertion using functional test metrics 68677
T level VHDL simul., cycle-based approach 68706
T-level fault simul. based on symbolic propag., VLSI ccts. 101922
TL morphing, making IP-reuse work in syst.-on-a-chip designs 114674
cheduling, allocation, and binding problems, enhanced GA 114581
cheduling and placement methods for C to hardware/software compilation 90811
elf-federating aviation simul. using HLA 125391
ig. strength based switching activity modeling and estim. for DSP appls. 114787
ingle pulser design, formal methods 80021
oC design challenges 125526
oC design with IP blocks, coherent functional, elec. and phys. modeling 114572
oC syst. level archit. exploration using SpecC methodology 101961
T, PERL package for LSI simul. and test environ. 101975
TARC, Semiconductor Technology Academic Research Center, high-level LSI design stages 114691
tat. design space exploration, appl.-specific unit synthesis 125179
topping criteria comparison, high quality behavioral verification 79723
trong testability of operational modules, high level synthesis *(Japanese)* 68502
tructural IC design comp. for C++ hardware models, layout struct. 90821
witching noise constraints effect on high-level synthesis 125624
ymbolic RTL simul., RT-level Verilog constructs, 8051 micro-controller design 125338
ync. data-path ccts., sig. represent. guided synthesis using carry-save adders 125442
SystemC, behavioral synthesis, compiler generation techs. 79674
SystemC design lang. for develop. of ASICs and systs. *(German)* 90813
Term Rewriting Systems, concurrent systs., nondeterministic and asynchronous behavior 101958
testable data path synthesis, GA 125404
testable data path synthesis, GA 114731
top-down interactive behavioral synthesis environ., grammar based 68669
tri-state buffer inference in HDL synthesis 101972
verification and debugging of synthesized designs using RTL transforms. 79712
VHDL behavioral-level designs, verif. pattern gen. for coding error detect. *(Korean)* 114568
VHDL lang., loop statement synthesis method for RTL synthesis *(Chinese)* 114579
VHDL procs., behavioral test generation 68679
VHDL transparent fault injection and simul., shared variables and linked lists 79833
VHDL-AMS library of RF blocks models 125191
video decoder, multimedia sig. proc., VHDL syst.-level design 107049

high level synthesis continued
virtual CMOS library approach for fast layout synthesis 104121
VLSI CAD algms., teaching, web-based visualization tools, Java applets 125301
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
wireless SoC design infrastructure and automated chip design flow 114894

high-pass filters
analog filters, introduction 107528
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
current-mode biquadratic filters using multiple-output FTFNs 68929
current-version neg. feedback biquad filter, opamp cct. 68932
discrete wavelet transform computation using RNS archit. 114700
dual channel noise cancelling syst. 84068
ECG feature extraction using optimal mother wavelet 121974
Fabry-Perot laser mode partition noise reduction, SOA as high-pass filter 128241
FIR digital filters, low/high-pass and mid-pass/stop designs 114878
FPGA, adaptive heterodyne filter 102399
HDD head-disc spacing var. suppression, act. flying height control 116308
hearing aid LV CMOS filter, dyn. gate biasing use 122354
high output impedance current-mode multifn. filter with dual output CCIIs 91045
image denoising using scale-adaptive lifting schemes 94806
image noise elimination using nonlin. filtering strategies with edge preservation 106529
inductive sens., alternative cct. configs. comparison 75487
infants, 2-month-old, TEOAE, high-pass filtering effect 87506
integrated gain flattening waveguide filter design by Abeles computation method 127899
JPEG compressed images, deblocking approach 106884
lin. combination of weighted medians, design 107522
low-noise act.-RC low, high and band-pass allpole filters using impedance tapering 102369
multimedia sig. proc., tunable/variable pass. digital filters 84758
nonlin. high-pass filtering for image noise removal 95673
nonseparable VLSI archit. for 2D discrete periodized wavelet transform 125611
perfect-reconstruction filter banks, low-delay design using LP 107499
pos. kurtosis histograms on high-pass filter natural image filtering 118208
predistorted refl.-mode hybrid prototype networks, symm. and asymmetrical characts. 68900
Raman fibre amp. gain enhancement by opt. filtering techs., num. simul. 128147
robust high-pass and notch Gm-(grounded) C biquads, filter topologies 80066
satellite Ku-band E-plane output diplexer, CAD 85922
shadowed video scene clarification by multiframe averaging 118168
single filter freq. masking FIR filters, narrow- and wide-band designs 80104
stack filters optim. based on mirrored threshold decomp. 73656
suspen. stripline band pass filter 69032
UIE flickermeter, digital implement., params. sensitivity anal. 109444
universal current-mode filter using CCII and current followers 68923
universal voltage-mode filter, three input/single output, operational floating current conveyors 68921

High Performance FORTRAN *see FORTRAN; parallel languages*

High Performance Parallel Interface *see local area networks; network interfaces; protocols*

high-pressure techniques
diamond:B temp./press. sens., high-press. high-temp. appl. 86505
electronic, mag. props. megabar press. studies in diamond cells 97786
hydrostatic press. anvil cell, electron transport meas., high pulsed mag. field 109922
Kovar-Pyrex microfluidic connection, local anodic bonding 92545
liq. column displacement based press. metrol., inherent errors 75921
multichannel IR pyrometer, pulsed power expt. appl. 97237
press. sens., on-chip prog. monolithic integrated device 121044
resist. foil strain gauges appl. in high press. research 75498
solids under high press., nuc. probes, conf., Cologne, Germany (Sept. 1999) 89508
supercond. mixer ccts., whole wafer dicing/thinning techs. 71090
thick wall pipeline, dyn. press., condition monitoring 87024
GaN single cryst., press.-controlled soln. growth method 101161
Si high-press. sens., fusion bonding, low-cost packaging 109804

high-purity Ge detectors *see germanium radiation detectors*

high-speed integrated circuits
see also very high speed integrated circuits
ADCs, speed-power-accuracy trade-off, nanoelectronics 102304
ADCs for low power appls. 68875
ASIC design methodology achieving 550 MHz operation 125358
asynchronous ccts., design proc. 79786
bandpass delta-sigma modulator using SC resonator struct., 80 MHz 90966
BGA packaging, mixed-sig. and digital ICs, radiative coupling 113519
BiCMOS design and perform., act. WDM components appls. 127071
BiCMOS high speed voltage follower, Gilbert's translinear loop 125604
BiCMOS very high-speed replicating current comparator for Viterbi decoders 114898
bit-parallel systolic multipliers for class of GF(2^m) 125409
Booth-algm. FIR archit., A low-complexity 102402
clock buffers design, min. jitter 91000
clock generator using factorial DLL for video appls. 114853
clock tree topol. extraction algm., clock distrib. network tolerance to delay uncertainty 102316
CMOS, eight-level metal low-k intermetal dielec., ESD protection, grounded-up bond pads 81522
CMOS ADC, IF sampling 102287
CMOS C^3L high-speed logic ccts. in capacitor coupling tech. 102068
CMOS continuous-time current comparator, current-mode analog ICs 102447
CMOS continuous-time current comparator, high speed/power ratio design 68968
CMOS cpd. mode logic based high perform. 32×32 bit multiplier design *(Korean)* 114698
CMOS current comparator cct., high-perform. *(Chinese)* 104086
CMOS current comparator cct., robust high-speed and low-power design 68970
CMOS DAC, 14 bit, low power, current steering archit. 90971
CMOS DAC, 8 bit, high-speed current switching, design 102278
CMOS DAC, high-speed current domain design *(Chinese)* 80015
CMOS differential logic for low-power and high-speed appls. 102026
CMOS domino logic ccts., mixed-swing methodology for MAC implement. 102118
CMOS fast-lock mixed-mode DLL using 2 bit SAR algm. 114889
CMOS flash ADC, ultrafast design for SoC appls., 1 GS/s 90992
CMOS flash ADCs, capacitive cct. archit. for compact realization 90995

high-speed integrated circuits continued
CMOS folding/interpolation A/D converter for analog interface module of TFT-LCD driver 79997
CMOS folding/interpolation ADC design, 3.3 V, 8 bit, 200 MS/s *(Korean)* 114815
CMOS HF I/O interface ccts., design-for-ESD-reliab. 104113
CMOS high speed µP, on-die clock jitter detector 125532
CMOS high speed voltage-to-current converter, lin. tech. 91128
CMOS high-speed bandpass sigma-delta modulator, SC resonator 68879
CMOS high-speed current-mode wave-pipelined ADC, 8 bit archit. 68866
CMOS high-speed dual-modulus prescaler with new flip-flop *(Chinese)* 101862
CMOS high-speed low-power fully parallel CAM macros, design for ASIC appls. 68798
CMOS high-speed µP, register renaming units, ASIC multi-port RAM cell cct. 102247
CMOS high-speed opamps, gain and bandwidth boosting techs., filter appls. 79581
CMOS high-speed pipeline ADC for W-CDMA appls., design/power optim. 102270
CMOS high-speed track/hold cct. design 114901
CMOS I/O interface ccts., 1.2 Gb/s, 100K pos. ECL syst. compat. 68884
CMOS inner product proc., 3D vol. rendering 102216
CMOS low power 10 bit, 80 MS/s pipelined ADC at 1.8 V power supply 80002
CMOS low-jitter PLL with pseudo-differential delay elements based VCO 68657
CMOS low-power pipelined map overlaying archit. for hand held appls. 90948
CMOS low-power rendering engine for portable multimedia syst. 68841
CMOS LV high-speed fourth-order sigma-delta modulator implement. 79958
CMOS LV high-speed pipelined ADC, 10 bit, 2.5 V, 40 MS/s 80001
CMOS mixed PTL/static logic for low-power and high-speed ccts. 125427
CMOS mixed-sig. equalizer for Gigabit Ethernet on copper wire 108369
CMOS multiplier, 32×32-bit design with sign select Booth encoder 90850
CMOS MUX/DEMUX ICs using CML, 10 Gb/s, opt. link appl. 75038
CMOS parallel pipeline ADC, 10-bit 200-MS/s, front-end S/H cct. 90969
CMOS pipelined ADC, 14 bit, 20 Msamples/s, design and perform. 68870
CMOS PLA, high-speed low-power design, pseudofootless dyn. cct. 102000
CMOS PLL, low-power voltage control oscillator 101837
CMOS prog. freq. divider for DRRS std., 1.4 GHz/2.7 V 68883
CMOS race logic high-speed carry look-ahead adder, 64-bit 125457
CMOS regenerative comparators, symbolic anal. 91125
CMOS S/H amp., high-speed ADC *(English)* 90747
CMOS SC bandpass filter, freq. up-translation, DDFS syst. 80048
CMOS SC segmented DAC, clock jitter induced distortion 79993
CMOS skew-tolerant high-speed domino logic, noise and timing var. reduction 102030
CMOS transimpedance amp., 2 Gbit/s, for opt. comms. 114624
CMOS transimpedance MMIC amp. design, BSIM large-sig. model, opt. commun. appl. 91339
CMOS voltage down converters for high-speed SRAMs 90902
CMOS/SIMOX ASIC, current-sensed double-dens. SRAM 114762
coupled interconnections, multiconductor transm. lines, reduced-order models 81420
cpd. semicond. IC technols., appls. in high data rate opt. fiber commun. 131389
crosstalk-induced logical/delay faults, on-chip buses, embedded-software-based approach 101921
current-mode CMOS S/H IC, 1 V, 20 MS/s and 57 dB SNR 125632
data converters for commun. systs., syst. specs. 79965
digital double relax. oscill. SQUID design 68887
digital ICs, sig. integrity, MOSFET modeling, LE-FDTD method 90835
digitally controlled oscillator using adjustable resistors, HF µP appl. 68882
DRAM, analogue sync. mirror delay with duty cycle-correction scheme 102145
DRAMs, yield improvement, column redundancy scheme, multiple bit pre-fetch struct. 125511
dual-phase-controlled dyn. latched amp. for high-speed/low-power DRAMs 90899
dyn. latch comparator with reduced offset using init. switch *(Korean)* 79837
electronic systs., high-speed/low-power design, cct. optim./models 126952
elevated-CPW struct. for high-speed digital interconnects 91324
FIR filter VLSI implement., bit-level optimized carry-save addits. 114874
FLEETzéro chip, async. switching fabric expt. 79785
flip-chip structs. design tech. with optimised CPW patterns 69223
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808
fully depleted CMOS/SOI 2000 gate SOG array *(Chinese)* 114723
GSI, interconnect and substr. struct. 81419
handwriting recogn., high speed VLSI archit. 90945
HF/high speed package interconnects, meta-evol. prog. based robust model param. extraction 126467
high-dens. LSIs, internal waveform obs., EO sampling prober 116000
high-resoln. high-speed A/D converters, sub-ps aperture uncertainty meas. 114830
high-sensitivity photodiodes & OEIC props., review 117020
incrementer/decrementer cct., high-speed CMOS, multiple look-ahead struct. 102023
interconnect proc. var. and timing anal., pico-second differences 126992
interconnection, scale reduction, DCM macromodel *(Chinese)* 92449
interconnects, anal. using multipoint Pade approx. 90642
interleaved CMOS flash ADC, 6 bit, 900 MS/s 102300
IOE modulation cct. 71626
large interconnect network simul., nonlin. cct. reduct. 90639
Lempel-Ziv data compress. algm., unified VLSI systolic array design 90924
level shifters for high-speed 1-3.3 V interfaces in 0.13 µm Cu-interconnect/low-k CMOS technol. 125583
low power ADC design, current-mode approach 90996
low power CMOS 10 bit DAC for high speed appls. 102302
low power high speed charge recycling CMOS threshold logic gate 102093
low-power and high-speed equalizer for mag. storage read channels 80125
low-power high-speed max. a priori decoder archits., design 79917
low-power SOI CMOS cct., high speed, variable threshold voltages 116033
low-power SRAM compiler for portable consumer electronics 102150
MMIC, high-speed HF analog RF cct. 102664
MMU, fully associative TLB, CAM match cct. 125535
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS implement. 79949
multi-level pass. order reduction of interconnect networks 92460
multi-point clock distrib. networks, VLSI ccts., top-level high-speed distrib. 70268
multilevel flash memories, high-speed low-power sense comparator 68793
multiple segmented coupled RC interconnects of VLSI ccts., noise model 81455
multiplier-accumulator archit. 90880

high-speed integrated circuits continued
multiprocessor digital syst., low-power RF clock distrib. 114852
multirate-cascade sigma-delta modulators, high speed low power config. 799
µP, digitally adjustable resistor for path delay charactn. 68823
µP, high-speed, heat sink, grounding method 114789
on-chip inductance in high-speed VLSI ccts., high-perform. design issu 116017
op amp, high-speed IC *(German)* 79606
opto-electronic transient waveform digitiser, mil. appls. 90972
pattern decoder in MPEG-4 padding block hardware accelerator 79950
perform. improvement using E-tests and SPICE model 79936
pipeline A/D converter, high-speed low-power area-efficient, CMOS techn 68862
PLA using dyn. array logic ccts. with latch sense amps. 114707
PLDs, high-speed/flexible controllers design 114735
PMOS-boosted source follower, robust energy-efficient bus driver tech. 1255
polymer asymmetric Fabry-Perot film, external EO sampling 82215
portable high-speed clock generator, full pull-in range, HDL 91001
power-conscious cct. design techs. for high-perform. computing 125280
proc.-induced clock skew minimisation using delay tuning 102317
quantum MOS logic, cct. appls. 102006
reconfigurable pipeline ADC, high speed ICs, cell design 68859
reduced latency DRAM memories for cache, 3D graphics and mobile apps *(German)* 114739
RNS converters, automatic generation, archit. level exploration, CAD to 102218
ROM, low-power and high-speed modules, ASIC appls. 114761
ROM-less direct digital freq. synthesizer using segmented nonlin. DAC 1018
RS decoders, high-speed VLSI archits., Berlekamp-Massey algm. 125530
serial transceivers for data commun. systs. 96711
shared BISR anal. for multiple embedded memories in SOC 102182
simultaneous switching noise in high-speed chip package, IBIS model *(Chines* 92450
simultaneous switching noise modelling, high speed systs., digital design 796
small-geom. CMOS, 1.5-nm gate oxide, cutoff freq., propag. delay time 703
SoC designs, thermal mgt. syst. and prototyping 70262
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
SOS CMOS low-power opt. receiver for inter-chip commun. 117023
split-level precharge differential logic, high-speed charge-recycling 102003
SSB upconversion of quadrature DDS sigs. to 800to-2500-MHz band 68976
submicron interconnect delay reduction techs. for bi-directional/uni-direction buses 125274
supercond. MCM, high-speed interchip data transm. 70878
two metal layer tape package for improving high speed DRAM perform. 1136
ULSI high-speed serial commun. with error correction using 0.25 µm CMO technol. 104112
ultra-low-power ultra-high clock rate SFQ logic ccts. 68713
variable threshold voltage CMOS, optimum device param., scalability 81501
video sens. sig., high-speed great-capacity storage/proc. 86444
VLSI, automatic clock tree design with IPs in syst. 104066
VLSI, high-speed interconnect, transient simul. *(Chinese)* 92448
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
VLSI design, high-speed interconnects, num. simul. 81482
VLSI distributed interconnects simul., freq. depend. params., Krylov-space tech 92452
VLSI systolic cct., GF(2^m) iter. division algm. 102019
voltage overshoots in high-speed digital SoCs, built-in-chip testing 101916
AlInAs/InGaAs HBT CML ring oscillator, sub-5 ps gate delay demo. 79845
AlInAs/InGaAs HBT IC, low-power static freq. divider 127015
Cu interconnects, NH_3-plasma treat. and CMP modif. effect on TDDB improv 81116
Cu-SiO_2 interconnects for high speed ccts., sig. propag. and crosstalk charact 126460
GaAs HBT dual T/H, 1 GS/s, wideband pipelined ADC appl. 125633
GaAs ICs, direct fault detect./anal. using EO sampling syst. 79668
GaAs PHEMT distrib. amp. ICs for 40 Gbit/s high output voltage driver modul 125774
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech 102025
InAlAs/InGaAs HBT ECL static freq. divider, 75 GHz 68769
InAlAs/InGaAs/InP HEMTs and InAs/AlSb/GaSb RITD, monolithic integra 70321
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
InP HEMT D-type flip-flop and MUX ccts., 40 Gbit/s, design tech. 90854
InP HEMT high-speed IC, opt. fiber commun. 120165
InP HEMT preamplifier, flat transimpedance gain, high-speed fiber optic com mun. syst. 125240
InP high-speed electronics, opt. fiber transm. syst. 131373
InP transferred substr. HBT technol. continuous-time Σ-Δ A/D converter 12557
InP-based RTD/HEMT microwave freq. divider IC, high-speed operatio 115006
Si PLL freq. synthesiser in 0.8 µm bipolar prod. technol., 7.35 GHz 91006
Si bipolar technol., dual-modulus prescalers 125635
Si bipolar technol., dual-modulus prescalers 102448
Si technol./devices, develop. 103948
SiOCH low-k copper barrier films, PE-CVD deposition using HMDSO, N_2O an NH_3 126446
SiOCNH low-k copper barrier films, PE-CVD deposition using HMDSO, N$_2$O and NH_3 126446

high-speed optical techniques
see also optical pulse compression; optical pulse generation
1.28 Tbit/s-70km opt. TDM fs-pulse transm., dispersion compensation *(Japa nese)* 120366
1.52 Tbit/s OCDM/WDM transm. expt. 75032
1.55 µm opt. sampling syst., pulse waveform sonogram charactn. 71892
2,5-dioctyloxy PPV, two-color opt. heterodyned opt. Kerr effect 117435
3D photonic cryst. fab., fs laser interf. tech. with diffr. beam splitter 93152
3D photonic lattice crysts., femtosecond laser microfabrication, multiphoto proc. 105632
60 Gbit/s WDM-OTDM transmultiplexing using electro-absorpt. modulato 131572
act. mode-locked laser, time-resolved autocorrelation meas. 128400
adaptive controlled opt. fiber fs pulse propag. 82771
all-opt. DEMUX by fiber cross-PM 96852
all-opt. DEMUX module, switching charact. 75028
all-opt. logic AND operation of electroabsorption modulator 71447
all-opt. sampling, ultrafast SOA, opt. commun. sig. 109219
all-opt. serial-to-parallel T-bits/s sigs. conversion using FWM proc. 117421
all-opt. switch based on ultrafast nonlin. interferometer 93844

speed optical techniques continued
-opt. switch using different wavelength controlling pulse 105561
ayed-waveguide grating, high-speed transm. and dispersion charact. 104695
ylene-vinylene polymer neat films, TW lasing 93568
TLAS EM calorimeter, high speed digital opt. data link, SEU 121623
to-aligned fs lasers, SESAM mirrors 82756
r-code 2D detect. syst. using multi LD with time-sharing light emission opera-
on 86510
at-detect OTDM DEMUX 120146
ue femtosec. opt. pulse generation, SHG and phase mismatch compensation
nal. *(Chinese)* 128391
rbon nanotube suspens., opt. limiting behaviour, wavelength effects, pulse
uration 71963
scaded TW electroabsorption modulator, distributed effects model 93237
alcohalogenide glasses, all-opt. poling, second order SHG nonlin. 82865
$^{2)}\cdot\chi^{(2)}$ cascaded nonlin. meas. by spectrally resolved two-beam coupling *(Chi-
ese)* 71940
irped picosecond opt. pulse propag. in higher order dispersion managed fiber
inks *(Chinese)* 127628
irped-pulse amplif. laser syst., stretching factor calc. and meas. *(Chinese)*
05418
ne camera, image intensifier dyn. prop. problems *(Chinese)* 131997
LC, self-lasing by stimulated emission/fluoresc./DFB 82560
MOS act. pixel sens. imager design, high speed laser detect. 120892
herent opt. PSK systs., perform. degrad., nonnegligible loop delay time influ-
nce 131407
mb-like dispersion profiled fiber compressor, design method, perform. study
Chinese) 104620
mb-like dispersion profiled fiber compressor for ultrahigh speed OTDM syst.
16649
mmun. systs., dispersion mgt. schemes *(English)* 109199
ndensed media, femtosecond laser pulse induced mass-transfer procs., Doppler
omography 87030
njug. oligomers, opt. power limiting based on two-photon absorpt. 93780
njug. silicon-ethynylene polymers/metallocomplexes, fast third-order NLO
esponse 71937
pper phthalocyanine films, femtosecond NLO response 82831
unter-propag. Mach-Zehnder switched SOA opt. impulse response 120346
PS, opp. polarised pulse shapes, scanning force optoelectronic microscope
neas. 128410
w dye tunable narrow-band UV laser syst., Cu vapour laser pumped 93491
w terahertz radiation, coherent EO detect. 97791
W-mode photoinjector, freq.-converted driving laser *(Chinese)* 82750
-cyclooctylamino-5-nitropyridine:C_{70}, opt. limiting effect, absorpt. saturation
28470
-cyclooctylamino-5-nitropyridine-C_{70} syst., laser radiation opt. limitation
105482
ata conversion, photonic type for ultrafast ADCs and DACs 68856
endrimer mols., large two-photon absorpt. cross sect. 117403
elec., ultrafast laser materials proc., opt. breakdown modelling 83057
elec. nm film targets, thickness estim., picosecond X-ray pulse generation appl.
21858
iffr. tomography with ultrashort pulse incident wave, time-varied incident wave
effect *(Chinese)* 73245
ispersion-managed act. fiber, chirped solitary waves optimal compression
127618
ispersion-managed fiber ring laser, act. mode-locked, jitter, stabil. anal. 82538
ispersive fibre medium, coherent laser pulse temporal interf. 82111
ithiolene metal complex, asymm., opt. limiting response, reverse saturable
absorpt. 105483
ual core NLDC, switching study 93034
M driven cylindrical implosions, high speed laser shadowgraphy 97386
O ADC principle, tunable laser & DOEs 86448
O modulators, compact model for microwave CAD environ. 93228
abry-Perot filter time delay, short opt. pulses 96668
emtosecond Gaussian beam focusing by lenses *(Chinese)* 105413
emtosecond high energy laser pulse, temporal filtering, self-PM *(Chinese)*
128392
emtosecond laser micro-machining near air-ionization threshold 93922
emtosecond polariz. laser pulse shaping, dual-channel spectral interferometry
71895
emtosecond soliton anal., method of unidirectional waves 128547
emtosecond soliton params., reson. Raman perturb. 128550
FH modulation, AO-modulator based laser pulse shaping 105446
ber Bragg gratings, cross-PM, nonlin. pulse switching 104661
ber spatial-temporal charact., ultrashort-pulse interferometry 104682
bre commun. line with periodically inserted SOA, picosecond pulse propag.
116655
bre optics develop. for greater bandwidths *(German)* 131493
bre ring laser, regenerative mode-locking, pulse freq. doubling 71897
irst-order polaris. mode dispersion vector monitoring in ps pulse transm. systs.
109111
lashlamp-pumped dye laser radiation SHG 117459
s laser pulse opt. data storage 93010
s laser radiation safety aspects in laser material proc. 72119
s OPO phase control 105499
s pulse train all-opt. wavelength conversion 71991
s-laser-prod. plasma, soft X-ray generation, time resolved spectrosc. 117052
ullerene-containing PDLC, thin phase holograms recording 83021
und. opt. fiber soliton, dispersive phase components 93853
ain-switched diode laser, nonresonant self-injection seeding, step-tunable sin-
gle-mode operation 128237
ain-transparent ultrafast nonlin. interferometer, Gb/s polariz. insensitive all-opt.
DEMUX 131591
arnet waveguide-type amps., ultrashort opt. pulses, partial coherent props.
74961
as high-order harmonic generation, sub-10-fs laser driven 82844
as-filled hollow fibre, ultrashort laser pulse THG 93799
Gaussian wavelet pulse propag., ultrashort pulse time evol. 105422
Gb/s all-opt. DEMUX, gain-transparent ultrafast-nonlin. interferometer 75017
Gb/s flash all-opt. ADC design 93239
new generation devices for all-opt. commun. network 74924
geophys. prospecting by fiber-coupled THz receiver antennas 132147
glass, fs laser induced recording, electron/hole trapping 92976
grooved channel, heat transfer enhancement strategies comparative eval. 132225
group-vel.-matched birefr. cryst. three-wave mixing 71948
high gain opt. fibre amps., self-similar pulse propag. 82540
high power picosecond UV laser using BaB_2O_4 SHG tunable feature *(Chinese)*
105517
high speed/high resoln. angle meas. syst. *(Chinese)* 109997

high-speed optical techniques continued
high-aperture beam generalizations 82731
high-av.-power FEL for materials proc. 128594
high-gain transient X-ray laser, optim. of drive pulse config. at 19.6 nm 128098
high-intens. SHG by fs pulses 105520
high-num.-aperture holey fiber, enhanced short laser pulse spectral broadening
117355
high-resoln. femtosecond pulse shaper using LCD 71419
highly dispersed pulse symmetric fibre links, timin/amplit. jitter cancellation
74911
highly dispersed pulse transm. at 40 Gb/s 96834
highly NLO fibre loop mirror, fs pulse reshaping 117520
holey fibres, short laser pulses, controlled light localisation 116629
hollow fibers, gas filled, picosecond pulses FWM 71270
hollow fibers short-pulse FWM for highly sensitive gas-phase anal. 82072
image intensifier high-speed photography syst. for surveying *(Chinese)* 131996
imaging plate, real-time readout, wavelength-shifting fibers, streak camera
76067
in-building opt. LAN, high speed integrated opt. wireless transceivers 85957
inert gas beam delivery for ultrafast laser micromachining, ambient press. 72136
inert gas kHz repetition rate high harmonic generation, piezoelec. pulsed valve
117460
interferometric ultrafast SOA-based opt. switches for high-speed networks
120240
isolated QD ensemble, inelastic ultrashort pulse interacts. 72063
Kerr nonlin. charactn. using dispersed femtosecond pulse spectral evol. 82836
laser drilling with short pulses, high accuracy, model 105626
laser SR femtosecond X-ray source, inverse Compton scatt. 98102
laser-induced dielec. breakdown, femtosecond time-resolved study 127146
LD radiation freq. synchronisation with fs Ti:sapphire laser mode freq. 117369
LHC data transm., G-link, gigabit Ethernet compliant serializer 121704
long-haul opt. transm., ultra high-speed, using dispersion managed solitons
74923
Mach-Zehnder interferometer switches, ultrafast switching dyn. 74949
Mach-Zehnder-type opt. modulators, chirp params. direct meas. 104815
magnesium phthalocyanine films, femtosecond NLO response 82831
Manhattan Street Network, ultrafast opt. packet switching over arbitrary phys.
topologies 131617
massive WDM systs., group vel. dispersion, SRS crosstalk 109216
MCP opt. sig. coupling using VCSEL, mass spectrometry appl. 97384
metal clusters, intense laser pulse interacts. 82741
metals, laser ablation thresholds with short laser pulses 93921
metals, micromachining with femtosecond 250-nm laser pulses 93925
micro particle manipulator fab., neg. dielectrophoretic force *(English)* 116100
microstruct. fibers, dispersion meas. using femtosecond laser pulses 82110
microstruct. fibre, microchip laser pumped, compact broadband continuum
source generation 71253
mid-IR intersubband SOA ps opt. pulse response 93746
mode-locked fiber laser, OTDM sig. injection, clock recovery *(Chinese)* 96778
monolithic Mach-Zehnder interferometer with integrated SOA, ultrafast all-opt.
DEMUX 120318
monolithic mode-locked LD, ultrafast opt. pulse train generation/stabilization
117372
monolithic mode-locked LD for high-speed opt. commun., freq. control 117373
MQW electroabsorption modulator, neg. chirp operation 116808
multi-beam high power four pass solid laser amp., flat-in time pulses *(Chinese)*
105439
multi-terawatt sub-ps. laser pulses, freq. doubling for plasma interacts. 71883
NLO mirror using transparent SOAs, enhanced transm. 93847
nonresonant self-injection seeded gain-switched diode laser, tunable operation
128414
nonstationary semicond. plasmas, laser ultrashort pulses cascaded upshifting,
multiple refls. 71985
obj. reconstruction, time reversal using single-cycle terahertz pulses 94927
OC-192 commun. high-speed syst., fiber testing 96719
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov.
2000) 113262
opto-electronic QW semicond. devices for opt. sig. proc. *(English)* 109075
OTDM and WDM systs., functionalities and expts. at COM Research Center
(English) 109198
parametric diffuser, wavelength conversion, 200 Gbit/s opt. sampling 85978
pentaazadentate metal complexes in tetrahydrofuran, opt.-limiting performs.
71949
phase-shifted Bragg gratings, ultrashort light pulses transm. 127620
photoelec. automatic focusing syst., laser wave interf. patterns, CCD lin. array
127939
photonic cryst. fiber, ps pump pulses, white-light supercontinuum generation
117475
photonic device fab., fs laser oscillator materials proc. 128620
photonic technol. in 21st century, new industries creation 78373
photorefr. MQW SLM, operating speed enhancement 93229
phthalocyanines, rare earth substituted, opt. limiting, nonlin. absorpt. 93782
pico-femtosecond image-tube photography, quantum electronics 131989
picosecond pulse transm. syst., third-order dispersion compensation *(Chinese)*
96659
planar metal target heating by ultrashort laser pulses, 1D two-temp. diffusion
model 128599
polymer lasers, dispersion cavities with vol. holographic gratings, single-mode
operation 93686
polymer multimode waveguide backplane, 2.5 Gbit/s transm. 104731
pulsed laser ablation, microengineering appls. 128595
pulsed VCSEL, ultrafast polariz. dyn. and noise meas. 128411
QD embedded photonic cryst. struct., ultrafast semicond. all-opt. switch 105552
QD opt. amps., ultrafast nonlin. procs. 117256
quantum cascade lasers, high-freq. modulation without relax. oscill. reson.
128390
quantum router, all-opt. switching method 120312
rare-earth-ion-doped cryst. photon echo procs., all-opt. data rate conversion
82824
real-time spectrally decomposed wave proc. by nonlin. wave mixing procs.
105476
refr. thin-film micro-optics, femtosecond interf. effects 82206
reson. two-level medium, ultrashort light pulses, FDTD anal. 93718
retinal fs laser pulses spot size, vis. lesion threshold depend. 67501
rhodamine-B dye doped polymer DFB microchip-laser-pumped laser 117091
seeded opt. SHG, vortex-induced beam shaping 105506
semicond. microcavities, ultrafast light-polariz. dyn., review 93639
semicond. quantum struct., quantum-mech. effects *(Chinese)* 91831
SHG, coherent control using spectrally phase coded fs. waveforms 82883
short probe pulse SBS, transient response, distributed strain sens. appl. 97325

high-speed optical techniques continued
short pulse x-ray laser expts., ASE computational modelling 128035
silica, thermally poled fused, charge distrib., second-order nonlin. 72040
siloxane polymer lightwave cct. on ceramic substr., ultrafast optoelectronic multi-chip-modules 117034
single mol. level biological probes, two-photon excitation fluoresc. correl. microscopy 75678
single ridge waveguide electroabsorption modulated DFB laser for 2.5-Gb/s transm. 120183
single-mode fibers, polariz. mode dispersion/loss 82075
single-mode opt. fibers with nonshifted dispersion, soliton evol. 93849
SOA, nonlin. propag./FWM of picosecond opt. pulses 128289
SOA based all-opt. switch, transparent CW assist light, pattern effect reduction 117496
SOA-based Mach-Zehnder interferometers, all-opt. high-speed sig. proc. 118359
SOA-based symmetric Mach-Zehnder-type all-opt. switch, fs switching 82930
SOA/DFB laser device, ultrafast all-opt. regeneration 120134
solid-state laser cryst. ps SRS 82793
squarylium dye film, all-opt. 2D serial-to-parallel pulse converter 82820
squarylium dye J aggregates, absorpt. bleaching, two-photon excitation proc. 93778
squarylium dye J aggregates, third-order nonlin. opt. coeffs., Z-scan tech. 127550
squarylium dye J-aggregate film, femtosecond 2D serial-to-parallel pulse converter 116874
std. telecomm. fiber refr.-index changes on tightly focused fs NIR pulse irrad. 104641
straight/tapered opt. waveguides, femtosecond pulse propag. 82161
sub-picosecond OPO, spectral phase meas. 105513
sub-picosecond UV laser pulse filamentation, nonlin. propag. 82785
sub-ps opt. switches in hyper-THz repetition rates using dark reson. 72043
subharmonic pulse fs OPO, carrier-phase control 117350
submicrosecond speed acoustooptic variable opt. attenuator 85979
subpicosecond THz pulses, undistorted guided-wave propag. in parallel-plate Cu waveguide 82141
surface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
swept beam ultrashort-laser-pulse meas., FROG device 128396
Tb/s data transm. array-waveguide grating short-pulse transm. charact. 86055
TDM network all-opt. clock extraction at 160 Gbit/s with monolithic mode-locked LD 96686
TDM systs., high speed, modelling/expts. 120367
temporal/spatial opt. solitons nonlin. tunneling through organic thin films/polymeric waveguides 82955
thermal plasma flows, visualization and diagnostics 87031
third-/fourth-order act. dispersion compensation in OTDM transm. 75043
third-order opt. nonlin. based ultrahigh dens. opt. recording 92975
THz opt. asymmetric DEMUX switching charact., control pulse shape *(Chinese)* 105546
THz reflectometry, reflectance meas., inverse problem model syst. 97798
tight focusing condition short pulse propag. 105646
time window width opt. fiber pulse propag. num. simul. 127610
time-division DEMUX, ASLALOM, cross-talk anal. 120297
time-freq. 2D femtosecond FWM, mol. and electronic response 128430
tin phthalocyanine, broadband opt. limiting using tandem filters 71959
tissue fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
ultra-fast photonic ring network using opt. packet compression-TDM scheme 109116
ultra-high speed high repetition shutter camera, image converter tube 75625
ultra-high-speed opt. gate, photodiode/electroabsorpt. modulator integrat. 117022
ultra-short high-power laser pulse propag. in air, lidar eqn. modifs. 120462
ultra-short laser pulses, machining, indust. appls. *(English)* 128616
ultra-short self-focusing intense laser pulse propag. *(Chinese)* 93785
ultrafast all-opt. integrated optic switch, selective area MQW disordering 117504
ultrafast device testing by near-field opt. heterodyning 97792
ultrafast nonlin. interferometer gate, GHz all-opt. XOR logic 131568
ultrafast opt. routing, temporal freq.-to-space conversion 131351
ultrafast opt. waveform synthesis/proc./transm. 117351
ultrafast polariz. bistable VCSEL, all-opt. RZ to NRZ format conversion 109066
ultrafast polariz. bistable VCSEL all-opt. DEMUX 117498
ultrafast-laser ablation, MBE & isotopic enriched film deposition 68319
ultrahigh scanning speed OCT, comb generators 118188
ultrahigh-speed opt. TDM transm. 75013
ultraintense laser accel., conf., Pisa, Italy (Sept.-Oct. 2000) 117550
ultraintense laser interacts. and appls., conf., Elounda, Crete, Greece (May 1999) 71882
ultraintense p-polaris. laser interact., harmonic generation 105531
ultrashort laser pulse ablation, on-the-fly depth profiling 93924
ultrashort laser pulse detect., time stds., calib. methods 93729
ultrashort laser pulse Page fn. meas. 128404
ultrashort laser pulses meas., GRENOUILLE SHG FROG tech. 93717
ultrashort X-UV pulses, dispersionless autocorrelator, sub-femtosecond pump-probe expts. 128384
ultrashort-pulse amplit./phase meas., two-photon absorpt. sonogram trace 105447
ultrashort-pulse laser appls. review 93721
ultrashort-pulsed laser micromachining, acoustooptic device ang. dispersion compensation 117570
underdense plasma, high intens. TW fs Ti:sapphire laser pulse propag. 128790
unidirectional beam deflection using electrooptic traveling phase grating 93234
unitravelling-carrier photodiode, milliwatt-level multi-octave MM-wave sigs. 80398
UV laser ablation, plasma/plume effects, CCD photography 105654
VCSEL beam waists, transverse mode splitting, opt. output spectra 71900
VCSELs, coupled, ultrafast directional beam switching 82765
waveguide-integrated p-i-n diodes based high-speed high-power 1.55 μm photodetectors 120811
wavelength shift keying, wavelength discrim. cct. in WDM networks 96790
WDM to OTDM MUX using ultrafast all-opt. wavelength converter 109202
WLAN, detector/preamplifier noise effects 86117
X-ray FEL optics conf., San Diego, CA, USA, (July 2000) 78430
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
X-ray lasers pumped by ultra-short light pulses 128083
Ag^{+} Ni-like ion transient collisional excited X-ray laser 128064
Ag^{+} Ni-like transient collisional X-ray laser, temporal resoln. 128059
Ag-containing porous vol. medium transmissive holograms, periodic fs pulse recording 93892
$AgGaS_2$, mid-IR femtosec. noncollinear opt. parametric amplif. 82853
Al, femtosecond laser pulse interact., damage and ablation thresholds 93926
AlGaAs optoelectronic dual diode struct. for opt. controlled opt. gate 116953

high-speed optical techniques continued
AlGaAs-GaAs-based Schottky photodiodes, reson.-cavity-enhanced, I Schottky contact material 82354
AlGaN/GaN QW, intersubband absorpt., ultrashort pulse wavelength conversi FDTD simul. 116700
AlInAs/GaInAs quantum cascade lasers, far-IR and ultra-high-speed operati 82656
AlN ceramic, material proc., fs/ns/μs laser ablation 125082
Ar gaseous medium, high-order harmonics generation, double-peak splitti 117487
Ar, high-order harmonic generation spatial quality, conversion efficiency 1174
Ar^{8+} Ne-like soft X-ray ion laser, short-pulse laser-irrad. gas puff target 1281
ArF/KrF excimer laser microlithography, resist react. mechanisms by laser fla photolysis 103519
BaB_2O_4 cryst. noncollinear phase-matched fs parametric interact. proc. 8289
β-BaB_2O_4 thin cryst. second harmonic $\chi^{(2)}$ cascading phenom. 117483
C, ultrafast inner shell photo-ionization pumped X-ray laser 128091
C^{+} soft X-ray ion laser amps., capillary discharge 128070
C_{60} and metal derivatives, opt. limiting, picosecond reverse saturable absor 71958
C_{70} and metal derivatives, opt. limiting, picosecond reverse saturable absor 71958
C_{70}-doped polyimide films, ps radiation freq. conversion 93793
CO_2 laser CW radiation for sheet steel surface treatment 83051
CO_2 slab-type laser, short pulse prod. *(Japanese)* 82743
CdMnTe/ZnTe MQW, ultrafast mag. polaron dyn., opt. pump-probe spect 80832
CdTe FIR broadband autocorrelator, sub-picosecond time resoln. 128525
Ce^{3+}:$LiCaAlF_6$ solid-state broad-band gain medium, UV fs pulse amplif. 7170
Co, innershell transits. inversion, photopumping by relativistic plasmas 1280
Cr:$LiSrAlF_6$ diode pumped laser, white-light freq. comb generation 117161
Cu, micromachining using nanosecond Q-switched Nd:YAG laser radiatio 72142
Cu wafer metrology for electroplating/CMP control 115689
Cu^{+} pulse long. discharged ion lasers 105100
CuPc thin film, third order NLO suscept. *(Chinese)* 117432
Er-doped fiber laser, effect of pass. Q-switching at low pumping power 8278
Er-doped subpicosecond freq.-shifted feedback fibre lasers, stable pulse operatio 93503
Ga film deposition on fused silica substrs., rapid reflectivity rise, transient matt state evidence 93298
GaAs MSM photodetector, impulse response 97234
GaAs bulk microcavities, instantaneous opt. modulation 72051
GaAs, ion-implanted, for ultrafast saturable absorber appls. 128458
GaAs lift-off thin film, time-domain pulse meas. tech. 97793
GaAs low-temp.-grown MSM switch, ultrafast differential S/H 82441
GaAs micro-CPS-lines gap, ultrafast photoconductive charact. *(Chinese)* 9336
GaAs opt. probe, coupled microstrip lines, pulse coupling meas. 125655
GaAs photocond. antenna, ultrabroadband THz radiation detect., fs laser pulse 97797
GaAs/AlGaAs MQW ultrafast all-opt. DEMUX switch 96867
GaAs/AlGaAs QW, intersubband transit., ultrafast all opt. modulation 11669
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LDs, THz repet tion rates 82693
GaAs-AlGaAs QW VCSEL, shallow implant-apertured, high-speed modulatio 105449
GaInAs/AlInAs mid-IR quantum cascade lasers, high-speed digital data transm 128317
GaInAs-AlGaInAs-AlInAs step QW high-speed Stark shift mid-IR modulato 116815
GaN, free standing, fs laser machining 105648
GaN/AlGaN QW, intersubband transit., ultrafast all opt. modulation 116699
GaP, proton bombard., external EO sampling *(Chinese)* 93225
Ge nanocrystals, third-order opt. nonlin., pump-probe tech. 105460
GeS_2/In(Sn-Bi), reflectivity dyn. response, WORM opt. disk appl. *(Japanese* 71232
GeS_2–based glasses, ultrafast all-opt. switching, Z-scan investig. method 8293
H_2 femtosecond-laser-pumped X-ray laser, below light speed TW excitatio 71646
H_2-F_2 IR-initiated thermal-chain explosion laser 93471
He, high-order harmonics generation, beam divergence in few-opt. cycle regim 117485
$HgGa_2S_4$, mid-IR femtosec. noncollinear opt. parametric amplif. 82853
InAs QD amps., elec. pumped, ultrafast carrier dyn./dephasing 128261
InAs THz radiation emitter, femtosecond laser pulse irrad. 71889
InAs self-organized nanostructures on InAlAs/InP(001), IR spectra IRphotodetection appls. 80881
InAs strained p-type QW, THz nonlin. optics 69677
InAs/GaAs QD microdisk lasers, ultrafast dyn., fs opt. pumping 71764
InGaAlAs strained QW lasers, high-speed microwave modulation 117376
InGaAs QW/InP/InGaAsP nonlin. Bragg reflector, ultrafast opt. pulse compres sion 116733
InGaAs:Fe/InP high-speed MQW saturable absorber, FTIR/pump-probe meas 82822
InGaAs/AlAsSb QW, intersubband transit., nonlin./response speed eval. 11539
InGaAs/InAlAs:Be MQW ultrafast saturable absorber for all-opt. switch 12032
InGaAs/InP integrated asymm. twin-waveguide ultrafast all-opt. switch 10475
In(Ga)As-GaAs QD EL devices, intersubband gain/stimulated emission 9184
InGaAs-InP photon-counting diode detectors, ps time-resolved PL 71561
InGaAsP MQW, carrier transport, ultrafast spin dyn., polaris. switching 11750
InGaAsP QW mode locked LD, pulse charactn, two-photon absorpt. opt. gatin 117374
InGaAsP, solid state thermionic cooler monolithic integrat. with semicond. laser 104744
InGaAsP strained QW lasers, high-speed microwave modulation 117376
InGaAsP:Be asymmetric Fabry-Perot device, ultrafast all-opt. switching 12032
InGaAsP/InGaAsP MQW electro-absorpt. modulator, extinction ratio, structura depend. *(Korean)* 71404
InGaAsP/InP 1.53-1.55 μm LD, on-wafer surface implanted ps pulse 117255
InGaAsP-based SOA, pulse distortion 74949
InP, femtosecond-pulse laser machining, surface damage thresholds 93920
$KTiOPO_4$, quasi-phase-matched SHG, vis. duration-bandwidth tuneable sourc 93795
KrF av.-power excimer laser 82480
LiF with F_2^{+} centres, broadband opt. amp. of IR pulses 117153
$LiNbO_3$ nonlin. cryst., transform-limited narrow-linewidth injection-seeded n THz wave parametric generator 82850
$LiNbO_3$ periodically poled nonlin. periodic cryst. 2nd harmonic generatio 93809
$LiNbO_3$ photorefr. grating form., bulk PV effect 93318

speed optical techniques continued
iNbO$_3$ quasiphase-matched wavelength converters, all-opt. DEMUX 117438
iNbO$_3$ waveguide QPM-SHG/DFG device, picosecond all-opt. switching 117469
iNbO$_3$ waveguided modulators for 40 Gbit/s and beyond 116823
iNbO$_3$:Zn damage-resistant waveguide, parametric wavelength conversion and amplif. 93127
lo preplasma, picosecond Nd:glass laser pulse propag. 128791
loOS$_3$ICu$_3$(2-Mepy)$_3$ cubane-like shaped metal cluster, excited-state nonlin. refr. 82839
l solid films, ps laser photolysis at cryogenic temp. 72128
lbN ps supercond. single-photon opt. detector 92919
ld:YAG Q-switched ultrashort pulse laser syst., two-pass quadrature freq. conversion scheme 82552
ld:YAG diode-pumped high-power rod laser, high-efficiency operation 128187
ld:YAG ns nonselective-cavity laser radiation stats. on saturable absorber passage 82767
ld:glass Vulcan laser Petawatt beamline 71714
ld-doped silica double clad fiber as powerful white light laser sources, freq. converted OPO 71667
$_2$-I pulsed chem. lasers, SF$_6$ buffer gas 93470
/bS-polymer nanocomposite, third-order opt. nonlin., femtosecond Z-scan investig. 71928
r$_{0.7}$Ca$_{0.3}$MnO$_3$ MR thin films, THz radiation obs. 82936
t-Cu colloidal solns., ps Nd:YAG laser THG 93800
$^+$ Ne-like hybridly pumped collisional soft x-ray laser 128067
F$_6$, breakdown under fast oscillating impulse voltage, photoelec. detect., GIS *(Chinese)* 99838
b thin film nanometer scale opt. switch form., data storage appls. 93836
i array prism coupled THz-wave parametric oscillator 71973
i, femtosecond-pulse laser machining, surface damage thresholds 93920
i/SiO$_2$, photonic band gap cryst. fab., femtosecond laser micromachining 83041
iO$_2$, fused silica, US monitoring of laser damage 71199
r$_2$CuO$_3$, nonlin. opt. material, ultrafast all-opt. switching 82935
i:sapphire fs laser oscillator, EO cavity dumped 128192
i:sapphire high-power fs laser, solid state phys. appls. *(Japanese)* 82545
i:sapphire laser femtosecond pulses, fiber delivery 117362
i:sapphire laser-syncroscan streak camera, time-resolved opt. tomography syst. *(Chinese)* 132641
i:sapphire oscillators, sub-10-fs act. synchronisation 105230
i:sapphire regenerative amplified femtosecond pulsed laser, sub-micron-machining, Rowland ghost effect 72116
i^{3+}:Al$_2$O$_3$ cryst. laser, Nd:YAG laser pumped 93546
Ba$_2$Cu$_3$O$_{7-\delta}$ HTSC thin film antennas, THz beam generation from 1.55 μm fs laser 70620
VO$_4$:Nd, fs reson. nonlin. refr., degenerate pump-probe spectra 71926
Zn-coated C steel plate, ultra-short pulsed Nd:YAG laser-ablation surface cleaning 72143
ZnTe EO sampling by fs Ti:sapphire laser, ang. depend. 87001
ZrO$_2$ plated film spallation by short pulsed laser irrad., max. shear stress theory *(Chinese)* 128612

h-speed techniques
see also high-speed integrated circuits; high-speed optical techniques; streak photography
gate-level transistor perform. charactn. by ps imaging cct. anal. 104021
heterodyne meas., extremely lin. analog freq. ramps, PLLs 132149
supersonic inlet flow in air-breathing propulsion systs. for high-speed space travel appls. 111363
ultrasound high speed beamformer using TMS320C6201 DSP 110803
Ag^{19+} X-ray laser, short multi pulse pumped, saturated lasing emission 128076
GaAs asymmetrically excited photoconductive switch, fs carrier dyn. 71544
GaAs coplanar transm. line, ps elec. pulse detect., Franz-Keldysh effect 86946
PZT actuator, fab., high speed AFM 81625

h-temperature electronics
acrylate/polyphenylene sulfide film capacitors for high temp. appls. 115085
auto-bulk-biased multithreshold SOI CMOS cct., high temp. operation *(Chinese)* 92467
automotive appls., high temp. electronic microsystems 134568
bipolar IC for automotive appls., behaviour and reliab. *(Japanese)* 100301
BOPP AC capacitor film dielec. for metallization, high temp. perform. 80449
car transm. syst., integrated mechatronic syst. 124047
FET high-temp. high-power technol. 103908
fully depleted SOI CMOS technol., heterog. micropower, high-temp., RF microsystems 92473
IGBT, trench device, soft-switching turn-off charact. 126847
microsystem packaging for high temp./harsh environ. 132075
non-volatile memories for microsystems in automotive appls, reliab. 114765
PEN capacitor dielec. films for surface mounting/high temp. appls. 80448
semicond. power device develop. trends using SiC/diamond materials 81251
SMD solder joints for automotive devices, degrad. behavior at high temp., life predict. *(Japanese)* 89851
TFSOI modular proc. for CMOS power devices/ICs 104098
VCSEL, high-speed high-temp. operation 82659
VDMOS transistor, ionic contamination, wafer-level testing 126812
WWW educational course 113314
AlGaAs/InGaAs heterostruct. doped-channel FET, high temp. operation 115965
AlGaN/GaN HEMTs, HF meas. at high temps. 91276
AlGaN/GaN HFET, fab., GSMBE, ECR plasma 81386
AlGaN/GaN RF HEMT, IMD and lin. 92393
AlGaN-GaN HBTs for high-temp. electronics appls., modelling 92318
AlGaN-GaN HEMT, study of temp. depend. of IMD and lin. 91239
a-C/n-Si sputtered heterojunctions, charge carrier response time 126113
GaN/AlGaN high power/high temp. devices, review 70068
InGaP/GaAs/InGaAs camel-like FET for high-breakdown/low-leakage/high-temp. appls. 103902
InGaP-GaAs HBTs under temp./current stress, charactn. 70042
InP/InGaAs/InP metamorphic DHBT, DC charactn./transport props., 300-400 K 115854
SOI technol., review, IC appls. *(Chinese)* 69756
Si nanoparticle colloids, thin film form., high temp. single electronics 103930
SiC MOSFET gas sens., indust. appls. 86745
4H-SiC PiN rectifier, high temp. charact. 126707
4H-SiC merged PIN/Schottky diodes, inductively-loaded half-bridge inverter charactn. 126625
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls. 100594

high-temperature electronics continued
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594

high-temperature superconductors
1.5 kVA HTSC induction generator, develop. and testing 77862
1 GJ class HTS-SMES, toroidal magnet syst., conceptual design 134421
2 kWh flywheel motor-generator, PM/HTSC bearing expts. 78186
2-D Maglev transporter, HTSC bulk lift/restoring force charact. 78236
3.6 MJ HTS-SMES, compact magnet design 134422
10 kWh flywheel energy storage syst. HTSC mag. bearing 78181
12.4 kV HTSC power cable installation/operation 77431
12 kVA sync. generator three-phase inductive HTSC fault current limiter 77620
15 kWh cryocooler cooled HTS-SMES, feasibility for power syst. stabilisation 134419
21-pole microstrip filter for IMT-2000 base stations with steep atten. 69085
36 kV HTSC tape cables, full-scale test results 77432
36 kV/2 kA$_{rms}$ HTS cable models for utility demons. 133743
60 kA HTS current lead for fusion magnet appls. 77407
66 kV/100 MVA high-T$_c$ supercond. power cable develop. 133742
600 A HTSC current lead develop. for LHC correction magnets 75992
AC HTSC cables, tech. and economical assess. 77433
AC loss problem in bulk HTSCs 81939
aircraft struct., NDE, multiplexed SQUID array 70965
ALS Superbend magnet syst., supercond. dipoles 76006
anisotropic superconds., finite element calcs. of local current distrib. 70640
at.-layer engng. of supercond. oxides, yesterday/today/tomorrow 70588
bicrystal Josephson mixers, noise props. at 345 GHz and 20 K 69158
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag-Mn 6.6 kV HTSC fault current limiter, design, testing 77619
BiSrCaCuO-Ag HTSC tapes, AC losses expts. 70727
BPSCCO cylinder, mag. field, multi-layered soft-iron cylinders, HTS DC-SQUID 70638
bridge-type superconducting fault current limiter, tech. problems *(Chinese)* 123057
BSCCO-shielded-core reactor, resistive behaviour, fault current limiter 77591
bulk resistive supercond. fault current limiter materials 77586
bulk secondary lin. actuator studies 78098
cables and terminations develop. and testing 77419
coated conductors, PLD on steel substrs., transport/anisotropic props. 70594
coil mag. shield type fault current limiter 88493
coils, AC loss meas. with cryocooled sample 116530
coils, cryocooler-cooled, stabil. criterion *(Korean)* 127514
coils, quench develop. anal., universal scaling theory 71017
commun. satellite subsystems 71100
conf., HTSC in HF fields, Naples, Italy (May 2000) 89549
conf., Models and phenom. for convent. and high temp. supercond., Varenna, Italy (Jun./Jul. 1997) 100446
conf., Tokyo, Japan (Oct. 2000) 113190
coupled-line HTS low-pass filter, broad-band harmonic rejection 116539
coupled-line low-pass filter for broadband harmonic rejection 69084
CPW bandpass filter, meander line half-wavelength resonator 71112
crit. currents in superconds., conf., Gottingen, Germany (Jun. 2001) 113251
cross-coupled microstrip bandpass filter, design 127532
cryocooled supercond. coil syst., AC loss meas. 71061
cryocooler-cooled HTS coils, stabil. criterion 71019
cryogenic materials, conf., Rio de Janeiro, Brazil (Jun. 2000) 78412
current comparator, charged particle beam meas. 70856
current feeders for large-scale supercond. coil appls. 71058
current injection into HTSC 127478
DC reactor type supercond. fault current limiter, 6.6 kV power syst. 77593
DC SQUID, asymmetric config. 70925
DC SQUID, external mag. field 70980
DC SQUID magnetometer, resistively shunted inductance 70927
DC SQUID magnetometers, geophys. prospection 70923
DC SQUIDs and integrated SQUID electronics in liq. nitrogen, small mag. field meas. 70864
DC-SQUID flip-chip magnetometers/gradiometers 70990
direct-coupled SQUID magnetometer, design optim. 70979
disk resonators, nonlin. anal., materials charactn., filter design 69021
disk trapped field HTSC magnet, stress distrib., shape factor 71030
electroceramics, conf., Portoroz, Slovenia (Sept. 2000) 100422
epitaxial layer appls. in MIC, interface props. role 91299
fault current limiter, nonlin. I-V charact. 77582
fault current limiters, tech./economic impacts on power syst. 77589
fault current limiters appls. in Danish utility network 133802
film planar filters, dual-mode cross-slotted sq. resonators 92911
films, intermodulation meas., one-port dielec. resonator 92917
films, microwave surface impedance, phenomenological model 70659
films, nonlin. microwave response 71117
films, planar filters, wireless systs. 71099
films/devices, high resoln. magneto-opt. obs. 70780
filter, ESM channeliser 71107
filter subsystem for mobile telecomm. base stations 68904
filter subsystems, wireless telecomms. 71083
filters, mobile commun. base stations 82008
flat supercond. cables, large edge currents, coupling losses 92921
flat supercond. composites, time consts., AC loss, relax. meas. 81959
flat superconds., vortex vel. laws to I-V data 81935
fluorite type oxide films for biaxially textured HTSC coated conductors, prep. 68150
flux-lock high-T$_c$ supercond. fault current limiter design guidelines 88491
flux-lock type HTSC fault current limiter design guideline 77585
flywheel energy storage syst. using HTSC mag. bearings 78183
flywheel energy storage syst. with horiz. axle mounted on YBa$_2$Cu$_3$O$_7$ bearings 134415
flywheel high-T$_c$ supercond. mag. bearings, drag torque expts. 78184
flywheel HTSC mag. bearings, mag. forces/rot. losses anal. 78185
four-jn. bicryst. switch for HTSC SQUID magnetometer pickup coil 116516
hairpin-comb filter, cascaded struct. *(Korean)* 114865
Hall magnetometer, NDE appls. 71142
Hall magnetometer, Stirling cryocooler, NDE 75442
high current dens. requirements for practical appl., HTSC role 70587
High Temperature Superconductivity Space Experiment, on-orbit charact. 76813
high-perform. mag. shield-type device supercond. fault current limiter 112175
high-temp. supercond., electrodynamics, elec. engng. appls. *(Russian)* 116509
high-temp. supercond. power cable develop. *(Chinese)* 99378
hist., environ. factors 70580
HTS fault current limiter, power syst. stabil. anal. 77595

high-temperature superconductors continued
HTS ramp edge technol. sigma-delta A/D converter 71181
HTSC silver-doped YBCO thin film, mag. penetration depth meas. by microstrip resonator 70611
HTSC SQUID, develop., commercialisation 116521
HTSC SQUID magnetometer/planar gradiometer, eddy current NDE appl. 70790
human skin microimaging, high-temp. supercond. surface coil 132662
hybrid double-D sheet-inducer for SQUID-based eddy current NDT 68480
inductive type HTS fault current limiter, sync. generator unit protection 133803
indust. high temp. supercond. power cable, develop., testing 112104
intense muon beam lines, hybrid LTS-HTS solenoid magnet 76004
interface-engineered Josephson jns., capacitance anal. based on equiv. cct. model 127486
interface-engineered Josephson jns. with high I_cR_N products 127485
Japan's national project on supercond. cables 77389
Josephson effect study 104580
Josephson jn. arrays, remanent magnetis. 70793
Josephson-jn. arrays coupled by distributed ccts. 70974
Ka-band HTS/III-V semicond. hybrid bal. mixer 69157
Ka-band planar HTSC filters for commun. satellite appls. 82013
large-area HTS-coated stainless steel tapes with high crit. currents 70751
laser beam deflection polygon scanner using HTSC bearings 71869
levitation coil for fusion plasmas mag. confine. 71032
local field above supercond., magneto-opt. imaging polarimetry 71443
low and high temp. supercond. transformers develop. *(Chinese)* 88798
low noise high-T_c bicrystal jn. rf SQUID fab. 70784
mag. bearings, stiffness improvement/eval. 71007
mag. flux guide for high-resoln. SQUID microscope 70816
mag. flux penetration mode, AC loss charact. 127418
mag.-levitated stepping motor improvement 77899
MAGLEV syst., mag. stress studies 78241
magnet, advanced design approach 81991
magnet, racetrack type, shape optim. using response surface methodology 81992
magnetis. charact. meas. syst., compens. method, SQUID noise 70993
magnetometer with double modulation 75436
magnets, cond. cooled, limiting length 71020
materials sci. with high energy ion beams 115800
MCG, SQUID gradiometry, noise cancellation 76334
melt texture growth HTSC ball, MAGLEV hysteresis *(Chinese)* 116503
microstrip antennas, perfect impedance matching point 83577
microstrip filter, quasi-lumped element design 102562
microstrip filter using multiple coupled line resonators *(Korean)* 114866
microstrip lines, full-wave characterisation 80160
microstruct. aspects of supercond. for magnets & motors 92883
microwave appls., cryogenic packaging 71114
microwave ccts., harmonic bal. algms. for nonlin. simul. 92912
microwave charactn., surface resist. meas. accuracy using sapphire resonator 75839
microwave filters 71092
microwave nonlin. in HTSC films and devices, comparative studies 127534
microwave resonators, vortex pairs and nonlin. inductance 71123
microwave surface resist., phenomenological model 70610
miniaturized cooling syst. for HTS antennas, develop. and vac. seal-off prop. 127533
modified double-layered HTSC tube for charged particle beams 121382
multi-layer HTSC transm. cable AC loss calc. 77427
multi-stage dual-mode cross-slotted HTSC filters for telecom appls. 82014
multifilamentary high T_c superconds., long. mag. field AC loss 77416
multilayer conductor, effect of interlayer insulation on transport AC loss 70665
multipole microwave filter, mobile commun. base station 82009
multistrand conductors, multiphase AC loss mechanisms 77403
planar HTS lumped element bandpass filter with spiral inductors 80210
planar HTSC lumped element bandpass filter with spiral inductors 82015
planar microstrip ccts. on high-permitt. substrs., FDTD anal. 69086
planar struct., microwave nonlin. response, EM simul. 71105
plate shielding current dens. spatial distrib. calcs. 71185
power appls. 112103
power cable appl. effects study 77423
power cable syst. prototype at Detroit Edison 88455
power cables, calorimetric losses meas. 77391
power link design perform. 77396
power machine round HTSC wires, coupling loss calcs. 77804
power transformers, design rules 88795
power transformers develop. 112598
power transformers optimisation 77915
power transm. cable, design, prod. 77422
power transm. cable, magnetis. loss calc. 112102
power transm. cable energy losses calcs. 77425
power transm. cable systs., AC loss/thermal considerations 77394
projected SO(5) Hamiltonian for cuprates, underdoped SNS jns. appl. 116528
ramp-type jns., fab., ion beam etching role 70800
receiver equipt., mobile commun. 131222
RF high-T_c SQUID syst., nonlin. 70783
RF SQUIDs 70950
RF SQUIDs, HTSC, yield/perform. improvements 70787
ring, quantum roulette noise thermometer 70886
ring/magnet mag. interact. force expts. 71006
rly. traction supercond. transformer 89398
rod-type HTS supercond. fault current limiter 77596
RSFQ logic cct., switching probab. 70823
sampler, current meas. syst. 71121
sampler, HF elec. waveform meas. syst. 127490
sampler syst., digital sig. waveform meas. 70821
sapphire image-type DR design for HTSC film surface resist. meas. 86910
satellite commun. subsystems 71116
scanning SQUID microscope, closed-cycle refrigerator-cooled 92900
SFQ ccts., interface engineered Josephson jns. 70883
shield shapes, mag. field conc. calc. 71047
sine-Gordon vortex states, quantum antiferromagnets 127483
single-layer second-order HTSC SQUID gradiometer, step-down balancing 75494
slotted high-Tc SQUID magnetometer, vortices entry in double-pickup-coil config. 70788
slotted HTSC SQUID magnetometer without flux dam, static mag. field effect 75493
SMES device, DC-DC converter, liq. nitrogen temp. 71080
SMES syst. for study on utility/customer power appls. 78189
SMES syst. R&D efforts 134417
spinner magnetometer, rock remanent magnetisation meas. 70818
spiral coils, MRI 71049
high-temperature superconductors continued
SQUID, first-order single-layer gradiometer 70986
SQUID, mag. gradiometry, geophys. exploration 70988
SQUID, pulse tube cooler, low noise cooling 70884
SQUID amp., PD meas. 75813
SQUID gradiometer, biological immunoassay appl. 132006
SQUID gradiometer, feedback electronics 70918
SQUID gradiometer, mobile mag. anom. detect. 70917
SQUID magnetocardiography, status, perspectives 76328
SQUID magnetometer, biological immunoassay 76330
SQUID magnetometer, chemomagnetic field detect. 70887
SQUID magnetometer, sentinel-lymph node biopsy 76331
SQUID magnetometers, low-freq. noise, flux dam effects 75492
SQUID microscope, high μ-metal needle 70899
SQUID microscope head, sharp permalloy rod, high spatial resoln. 75410
SQUID picovoltmeter, flip-chip flux transformer 70922
SQUIDs, flip-chip and integrated input coils 70959
step-edge Josephson jns., HTSC, excess current effect on SQUID perfor 70789
Stirling cryocooler for HTSC RF filters 92916
supercond. current limiters, quench conditions 77598
SuperGenerator, high T_c supercond. generator 123314
surface growth, proc., low energy beam-modified, conf., Boston, USA (N 1999) 67359
surface resist. meas., dielec. resonators 75820
surface resist. meas., probe coupling microstrip line resonator tech. 75818
tape AC transport current loss meas. set-up *(Japanese)* 104565
tape testing, $La_{1-x}MnO_3$ GMR mag. field sens. 75470
tape/cable power conductors, overcurrent expts. 77392
tapes, AC transport current loss meas., errors suppression 70685
thick-film Josephson transit. on alumina substr., prod. 81982
thin film, dielec. resonator, Q-factor meas. 104590
thin film, surface impedance charactn., CAD algm. 127419
thin films and devices, mag. imaging by scanning SQUID microscope 7057
thin films in pass. microwave devices, appls. *(Chinese)* 116540
three-phase HTSC power transm. cable, fault current tests 77393
transformer, AC losses meas., flux diverters effect 77917
transm. lines, nonlin. simul./charactn., harmonic bal. algms. 71124
trimmingless narrowband planar HTS filters, design 92915
tube, thermal stabil. 71183
two-hole HTSC RF SQUID gradiometer for NDE *(Korean)* 70835
waveguide, microwave propag. 127539
wire technol. for supercond. motor develop. 112458
YBaCuO resistively shunted double jn. SQUID, Josephson linewidth, tem depend. 70972
Zimmerman SQUIDs, assoc. electronics and some anoms. 127472
Au/PZT/$YBa_2Cu_3O_7$/ZrO_2-Y_2O_3 heterostruct. film, KrF excimer laser ablatio XRD 101395
Ag ribbons, {110} textured, prep. for biaxially aligned supercond. tapes 683
Ag/Bi-2223 tapes, crit. current densities, mech. deform. techs. effects 81964
Ag/Bi-2223 tapes, self-field loss, freq./temp. depend. 127461
Ag/Bi,Pb(2223) tapes, material developments, texture 81963
Ag/Pb($Zr_{0.53}Ti_{0.47}$)O_3/$YBa_2Cu_3O_{7-\delta}$ fabrication, field effect/polaris. charac 104389
Ag/RE(123) tapes, material developments, texture 81963
Ag/Tl(1223) tapes, material developments, texture 81963
Ag/$YBa_2Cu_3O_{7-\delta}$ thin film contact, contact resist., Ag morph. 102495
Ag-clad Yb-123 tapes, isothermal melt texturing using temp. gradient 11651
Ag-sheathed $(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ multifilamentary tapes, fab., props. *(Japane* 127469
Ag-sheathed BSCCO tapes, eddy current loss in AC transport regime 70691
AgCu-sheathed Bi-2212 multifilamentary round wires, crit. curr. dens. 1274
Al plate, deform., high-T_c rf SQUID planar gradiometer obs. 125157
Au/$Bi_2Sr_2CaCu_2O_{8+x}$ jns., c-axis transport, Andreev reflect. 127480
Au/$YBa_2Cu_3O_{6+x}$ heterojunctions, electron transp., temp. behavior 70902
Au/$YBa_2Cu_3O_7$ fault current limiters, quench distrib., meander lines resi 112176
BSCCO tapes, phase transform. charact., cryogenic/room temp. proc. effe 104562
BSCCO-2223 high perform. tape long length mfg. for underground power cab appl. 77418
BSCCO(2223) tapes, phase form., O_2 exchange, macro-thermogravimetrical ol 70643
(BaK)BiO_3, surface resist., diamag. shielding suscept. 70644
$(Ba_{0.9}Nd_{0.1})CuO_{2+x}$/$CaCuO_2$ artificial structs., supercond. 92882
$(Bi,Pb)_{2.2}Sr_2Ca_{2.2-x}Pr_xCu_3O_y$/Ag sheathed tapes, enhanced flux pinning 127448
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_{10+\delta}$/Ag HTSC tapes, grain boundaries/defects, direct at. sca imaging 68418
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_{10+\delta}$/Ag multifilamentary tape proc., texture develop. 6841
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_{10+\delta}$/Ag tapes, crit. params., laser scanning tech. meas. 707
$(Bi,Pb)_2Sr_2Ca_2Cu_3O10$/Ag multifilamentary tape, crit. current dens. *(Chines* 70739
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ Ag-sheathed tapes, crit. current dens. 104563
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ HTSC wires, develop. 127442
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ tapes, Ag-clad, evol. of core dens. during proc. 70756
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$:U/Ag supercond. tapes, phase form., thermal treatme optimisation 81958
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$/Ag, twisted supercond. tape, prep., microstruct. evol. 706
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$/Ag-Mg-Sb HTSC tapes, I_c, strain effects 70722
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$ HTSC bulk composite with Ag wires, crit. current den 81933
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$/Ag textured tapes, higher harmonic responses, scali behavior 92890
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$/Ag-sheathed tape, vortex dyn., ac suscept. meas. 92887
(Bi,Pb)2223/Ag tapes, powder-in-tube, I_c anisotropy, starting precursor effe 104564
Bi,Pb(2223) tapes, phase form., high crit. current dens. 70753
(Bi,Pb)SrCaCuO 2223 HTSC tapes, two axial rolling under long. stress 1250
Bi:2223/Ag commercial tape, quasi-reversibility, vortex shaking in orthogon mag. fields 127430
Bi-2212 6-on-1 cable-in-conduit, strain tolerant, fab., testing 77401
Bi-2212 HTS materials for AC current transport and fault current limitati 77617
Bi-2212 coils, reinforced winding for 30 T class supercond. magnets 127524
Bi-2212 ribbon-like thin films, growth mechanism, AES obs. 70589
Bi-2212 tube, internal/external mag. fields, shielding, transient response 776
Bi-2212/Ag Rutherford cable, HTS SMES appl. 134420
Bi-2212/Ag prototype magnets, fabr./transport props. for 1 GHz-NMR magn syst. 127525
Bi-2223 1.29T magnet, design, fab., perform. 92905

emperature superconductors continued
2223 50 m, 115 kV warm dielec. cable syst., test results 77420
2223 Ag-sheathed multifilamentry tapes, scaling, anisotropic current transport rops. 81951
2223 Ag-sheathed tape, anisotropic transport, percolation model 127457
2223 HTS 10 kVA power transformer, double pancake windings *(Korean)* 23544
2223 HTS conductor struct., AC loss meas., calorimetry 70684
2223 HTS minesweeping magnet, cond. cooled 77026
2223 based composite conductors, resistive fault current limiting appl. 70632
2223 coil, overcurrent pulses, transient elec./thermal responses 71021
2223 low loss supercond. wires/tapes, AC loss meas. 70683
2223 stabilized tapes 20 kA current lead develop. 127468
2223 stacked tapes, crit. current, self mag. field effects 81931
2223 supercond. tapes, AgPdMg sheath alloy materials, thermal cond., mech. rops. 70635
2223 tape based 66 kV HTS power cable, prod., AC losses reduction 133745
2223 tape coil, levitation expt. for plasma confine. device 127526
2223 tapes, Ag/Ag-alloyed, fab. for power engng. appl. 70736
2223 tapes, internally oxidized Ag/1.2 at.% Mg sheaths, supercond. props. ffects 70634
2223 tapes, reinforced Ag sheath, oxide core additives, pinning mechanisms 27456
2223 tapes stacks, magnetisation loss in perp. mag. field 127467
2223 tapes, twisted filaments, HTS power transm. cables, AC losses 77404
2223 transposed segment conductors, HTS cable develop. 133744
2223/Ag HTS pancake coil, solid nitrogen impregnation, thermal behaviour 1022
2223/Ag composite tapes, power dissipation with (un)twisted filaments 70690
2223/Ag multifilamentary tapes, microstruct., phase form., high temp. neutron iffr. obs. 70754
2223/Ag sheathed tape, extended E-J charact., ang. depend. 127458
2223/Ag supercond. tapes, strain/fatigue tests 127459
2223/Ag tape based HTS magnet for Si single cryst. growth 71068
2223/Ag tape based resonator coil, V-I curves, loss meas. 71043
2223/Ag tape wound 3D HTSC coil, 2D quench propag. model 71016
2223/Ag tapes, sintering time reduction, J_c 127447
Pb-Sr-Ca-Cu-O tape, props. of resistive- and supercond.-joints 70712
(-Pb)-Sr-Ca-Cu-O/Ag(AgMg) HTSC tapes, I_c hysteresis 70732
-based HTS wires for high field insert coils at HOMER II facility 71070
2212/Ag melt processed monocore tapes, porosity/phase purity competitive-ess 81962
2212/Ag tapes, melt proc., 2201 intergrowths 127436
2223 supercond. FCL, transient resist. increase, applied mag. field 77594
2223) tapes, Ag-sheathed, low thermal cond. 70738
2223/Ag tapes, high T_c supercond. DC cable develop. *(Chinese)* 123019
2223/Ag tapes in supercond. magnets, optimal design method 71071
PbSrCaCuO 2212 crysts., MgO doped, Pb substitution effects on J_c 81932
PbSrCaCuO 2212 crysts., var. of flux pinning with Pb doping 70662
PbSrCaCuO 2223 HTSC large sized mag. shield prepared by jointing sintered ulks 83392
PbSrCaCuO 2223 HTSC multifilamentary tapes, important factors affecting C losses 127444
PbSrCaCuO 2223 multifilamentary tapes, init. stages of proc., anal. TEM 8420
PbSrCaCuO 2223 phase, texture/form. after partial-melting/solidif. in high ag. fields 68412
PbSrCaCuO 2223 sintered bulk HTSC, prep. factor to enhance J_c (15,000 /cm^2) 81934
PbSrCaCuO 2223 tapes, two axial rolling under long. stress, deform., effect on icrostruct. 68431
PbSrCaCuO 2223/Ag supercond. tape, crit. current ang. depend., model 27454
PbSrCaCuO, Ag-sheathed 2223 monocore tapes, current distrib. and flow in ag. fields 70763
PbSrCaCuO HTSC 2223 tapes, I_c and phase charcts. after heat treatment in mp. gradient 70707
PbSrCaCuO HTSC, effects of Ag_2O doping on EM props. 82018
PbSrCaCuO HTSC tapes, Ag clad, mag./elec. transport props., precursor pow-er props. effect 70706
PbSrCaCuO HTSC thick film based sensitive mag. field sens. 121155
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ 24 kV warm dielec. HTSC power cable 77430
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTS tape AC losses, geom. effects calcs. 70724
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC axial flux-type PM sync. motor 77837
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC coil quench detect. approach 71050
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC current lead props., sinter-forging rate effect 77409
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC current leads, quench propag. 77415
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC losses modelling 70726
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC round-shaped strand power cable 133747
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC supercond. fault current limiter charcts. 77606
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC tape AC losses, FEM simul. 70725
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC tape mag. losses in parallel mag. fields *(Korean)* 16512
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC tape transport loss charact. *(Korean)* 116510
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ multifilamentary Ag-sheathed wires, appl. 70737
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$, oriented cryst. growth by mag. melt proc. 68111
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$ HTSC Hall sens. AC loss meas. calib. 77406
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$ HTSC common coil dipoles, persistent current effects 1042
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$ HTSC tapes, AC losses num. simul. 70688
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$ HTSC tapes, neighbouring tape AC current effects 70687
(Pb)SrCaCuO$_x$ HTSC SNS jns., whole-head SQUID syst., mag. shield 76327
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$:Ca$_2$CuO$_3$/Ag HTSC multifilamentary tapes, transport AC sses 127463
PbSrCaCuO/Ag 2223 HTSC tape, crit. persistent current for loop 70711
PbSrCaCuO/Ag 2223 HTSC tape proc., continuous cooling sintering 81967
PbSrCaCuO/Ag 2223 HTSC wires, sausaging and crit. current dens., drawing arams. effects 70776
PbSrCaCuO/Ag 2223 multifilamentary tapes, supercond. outgrowths, micros-tructural study 68427
PbSrCaCuO/Ag 2223 reacted multifilamentary tapes, supercond. joint 68421
PbSrCaCuO/Ag HTSC 2223 tape, I-V charcts. in range of very low elec. field 1952
PbSrCaCuO/Ag tapes, 2212 phase, microstruct., crit. curr. dens. 127437
$_{1.8}$Pb$_{0.4}$Sr$_2$Ca$_{2.1}$Cu$_3$O$_x$/Ag tapes with CeO$_2$ barriers, microstruct., elec. props. 27449
$_{2-x}$Pb$_x$Sr$_3$Ca$_2$Cu$_3$O$_y$/Ag tape prep., precursor powder control 81968
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC multifilamentary tapes, transverse mech. props. 0733
iPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC ribbons, sintering, AE testing 81970

high-temperature superconductors continued
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC tapes, I_c, precompression effects 70714
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC tapes, deform.-induced damage, fast healing 70774
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC tapes, eccentric rolling, J_c 92888
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC tapes, jointed area J_c degrad. 70713
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC tapes, mech./transport props. 70715
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag HTSC tapes, overpressure proc., J_c 70716
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag alloy HTSC tapes, multifilamentary, J_c distrib. 70772
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$/Ag-Au 20 kA HTSC magnet current lead testing 71057
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$/Ag sheathed, HTSC wire 127429
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_y$/Ag HTSC tapes, I_c and I_c-H behaviours, CaCuO$_2$ precursors addit. 81966
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag 1.5 kA HTSC current leads for SMES magnets 78198
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag HTSC DC transm. power cable develop. 77424
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag HTSC cables, AC losses studies 77429
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag HTSC coils, winding geom. optimisation 71074
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag HTSC conductor AC transport current losses studies 70741
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag HTSC power transm. cable mfg. progress 77421
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag HTSC tape AC loss tests 77428
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag multifilamentary tapes, current distribs., AC transport losses 70742
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Ag-Au HTSC tapes, AC loss freq. depend. 70729
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$-Au-Ag twisted multifilamentary HTSC tape AC losses 70728
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$-Ag HTSC coil hysteretic losses, num. anal. 71045
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$-Ag stand-alone permanent HTSC magnet syst. 71046
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$-Ag HTS wires and cables for power transm. 112105
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_y$0 HTSC tapes, J_c, magneto-optic imaging 70734
(BiPb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_y$0/Ag-Au 1 kA HTSC leads, supercond. magnet appls. 77408
(BiPb)$_2$Sr$_2$Ca$_c$u$_3$O$_{10}$ HTSC three-phase fault current limiter 77605
Bi$_{1.7}$Pb$_{0.3}$Sr$_{1.9}$Cu$_1$ based HTSC power cables 77388
BiSrCaCuO 2212 ROSATwire, effect of filament size on supercond. props. 127440
BiSrCaCuO 2212 tapes, modified powder-in-tube method, high crit. current dens. 70709
BiSrCaCuO 2223 HTSC multifilament tapes, Ag alloy sheathed, engng. crit. current dens. 70708
BiSrCaCuO 2223 HTSC tape, transport E-J charcts. under bending strain, percolation model 127443
BiSrCaCuO 2223 HTSC tapes, powder-in-tube processed, mech. props. 125091
BiSrCaCuO 2223 cryocooler cooled pancake coil, quench develop., anisotropic E-J charcts. 127520
BiSrCaCuO 2223 ring bundle barrier multifilamentary tapes, AC losses 81973
BiSrCaCuO 2223 supercond. tapes, field depend. at 77 K 70748
BiSrCaCuO 2223 tapes, OPIT fab., current paths and current carrying capability 70775
BiSrCaCuO 2223 tapes, prep., grain growth and J_c, Pb content/particle size effects 70755
BiSrCaCuO 2223/Ag-AgMg tapes, J_c distrib. 127453
BiSrCaCuO HTSC 2212 ROSATwires, two kilometer long 127441
BiSrCaCuO HTSC internally stranded RBB low AC loss tape, PITAR prep. and props. chractn. 70699
BiSrCaCuO HTSC tapes, homog. current distrib. studies 77434
BiSrCaCuO axial type HTSC motor 82022
BiSrCaCuO based supercond. rings, powder-pressed, pulsed mag. fields shielding 71196
BiSrCaCuO bifilar winding solenoid type HTS coil expts. 71044
BiSrCaCuO conductors and magnets at high stress-strain levels 127519
BiSrCaCuO long 2223 tapes, perform., effects of local vars. in crit. current dens. 70745
BiSrCaCuO sintered supercond., normal/anom. skin effect regions 70624
BiSrCaCuO tapes, props. & flux pinning, power appl. problems 81957
BiSrCaCuO twisted supercond. filaments in tapes, effective resist. 81961
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ HTSC tapes, J_c and crit. stress, temp. effects anal. 81949
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$ precursor powders, phase transform., XRD/SQUID suscept. meas. 70622
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$ HTSC multifilamentary tapes, coupling current loss and decay in mag. field 70701
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$ HTSC multifilamentary tapes for transformer appls. 70604
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ monocore tape, high crit. current dens., current limiting mechanisms 70633
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ supercond., multifilamentary tape, AC losses *(Korean)* 70612
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ tape conductors, temp. and mag. field depend. of crit. current 70747
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ tapes, compressive stress-strain-I_c props. 70606
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ tapes, crit. current, long. compressive strain 70607
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ tapes stack, time const. meas., effective permeab. 70692
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ tapes/wires, magnet appl. 127450
Bi$_2$Sr$_2$CaCu$_2$O$_8$ HTSC SMES cables, AC loss props. 133746
Bi$_2$Sr$_2$CaCu$_2$O$_8$ HTSC current leads, transport perform. expts. 77410
Bi$_2$Sr$_2$CaCu$_2$O$_8$ HTSC textured ceramics for improved current leads 77411
Bi$_2$Sr$_2$CaCu$_2$O$_8$ Rutherford cables, crit. current var. as fn. of transverse stress 70660
Bi$_2$Sr$_2$CaCu$_2$O$_8$ composites, high crit. current dens., proc. issues 70631
Bi$_2$Sr$_2$CaCu$_2$O$_8$, fault current limiter 88492
Bi$_2$Sr$_2$CaCu$_2$O$_8$ films, anisotropic props. on tilted substrs. 70590
Bi$_2$Sr$_2$CaCu$_2$O$_8$ mesa structs., self-heating effects 70573
Bi$_2$Sr$_2$CaCu$_2$O$_8$ power link, transm./fault current limitation 88454
Bi$_2$Sr$_2$CaCu$_2$O$_8$ semi-supercond. magnet concept 71073
Bi$_2$Sr$_2$CaCu$_2$O$_8$ supercond. fault current limiter expts. 77584
Bi$_2$Sr$_2$CaCu$_2$O$_8$ underdoped/overdoped planar tunneling jn., energy gap 70915
Bi$_2$Sr$_2$CaCu$_2$O$_{8+\delta}$ films, pulsed laser ablation, intrinsic Josephson jns. form. 70591
Bi$_2$Sr$_2$CaCu$_2$O$_{8+\delta}$, irreversibility line, press. depend. 81936
Bi$_2$Sr$_2$CaCu$_2$O$_{8+\delta}$ whiskers, synthesis tech., charactn. 68112
Bi$_2$Sr$_2$CaCu$_2$O$_{8+x}$ HTSC, BaO$_2$-added, microstruct., I_c 70605
Bi$_2$Sr$_2$CaCu$_2$O$_{8+x}$, SOFC contact layers, chem. compatibility 89174
Bi$_2$Sr$_2$CaCu$_2$O$_{8+x}$ single crysts., stacks of intrinsic Josephson jns. 81975
Bi$_2$Sr$_2$CaCu$_2$O$_{8+x}$ single crysts., submicron tunneling jns., prep., props. 81978
Bi$_2$Sr$_2$CaCu$_2$O$_{8+x}$ single-cryst. films, LPE growth 125033
Bi$_2$Sr$_2$Ca$_2$CuO$_x$ HTSC tapes, J_c and n-values, temp. effects study 81946
Bi$_2$Sr$_2$CaCu$_2$O$_x$ single cryst. whisker, intrinsic Josephson jns. 70935
Bi$_2$Sr$_2$CaCu$_2$O$_y$ HTSC film bolometer response to variable duty ratio IR laser pulses 127541
Bi$_2$Sr$_2$CaCu$_2$O$_y$ HTSC large capacity Rutherford cable, testing 71187
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_8$ HTSC 15 kWh SMES R&D study 134418
Bi$_2$Sr$_2$Ca$_2$Cu$_3$O$_{10}$:U tapes, in-field behaviour, enhanced flux pinning 81930
Bi$_2$Sr$_2$CaCu$_2$O$_8$:Pb/Ag(Ni) HTSC tapes, fab., J_c 70719

high-temperature superconductors continued
BiSrCaCuO/Ag 2223 HTSC tapes, joint resist. meas. using one-turn shorted coil 70710
BiSrCaCuO/Ag 2223 multifilamentary tapes, current carrying capability and texture, magnetis. 70749
BiSrCaCuO/Ag 2223 multifilamentary tapes, quench characts., mag. field/mag. anisotropy effects 70746
BiSrCaCuO/Ag 2223 tapes, flat rolling, sandwich rolling and pressing, magneto-opt. images 68435
BiSrCaCuO/Ag 2223 tapes, sandwich rolling and flat rolling in proc. 68432
BiSrCaCuO/Ag 2223 untwisted HTSC tapes, transverse resistivities 127445
BiSrCaCuO/Ag HTSC 2223 tapes, ^{235}U doped, vortex pinning by fission tracks 81956
BiSrCaCuO/Ag HTSC tape, num. modelling of rolling 68433
BiSrCaCuO/Ag HTSC tape processed by PIT method, interface irreg. and texture evol. 68434
BiSrCaCuO/Ag, elec. motors with bulk HTS elements, characts., future prospects 123387
BiSrCaCuO/Ag sheathed tapes/wires, chem. anal. 70636
BiSrCaCuO/Ag tapes, calorimetric AC loss meas. in applied mag. fields 81938
BiSrCaCuO/Ag-based elec. HTS motors, recent results, future prospects 82021
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC multifilamentary wires, current distrib. and loss reduction 127462
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, sandwich rolling deform. prep. and charactn. 81972
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag multifilamentary HTSC sheathed tapes, pickup coil meas. 70730
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag multifilamentary tapes, conductor archit., current distrib. 70694
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag tapes, current dens. distrib. in overload conditions 70689
$Bi_2Sr_2Ca_2Cu_3O_{10}$/Ag tapes, stacked, ac losses ang. depend. 127455
$Bi_2Sr_2Ca_2Cu_3O_8$/Ag HTSC multifilamentary tape, transport AC loss partitioning anal. 70704
$Bi_2Sr_2Ca_2Cu_3O_8$/Ag HTSC tapes, high temp. sintering prep. and charactn. 70705
$Bi_2Sr_2Ca_2Cu_3O_8$/Ag HTSC tapes, twisted filaments, ceramic barriers and elec. props. 70700
$Bi_2Sr_2Ca_2Cu_3O_8$/Ag HTSC untwisted multifilamentary tapes, eddy current AC loss anal. 70703
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag multifilament tapes, alternating mag. field losses 81974
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag, multifilamentary tapes, shielding, losses in perp. AC mag. fields 70693
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag tapes, tape-in-rect. tube proc. 70740
$Bi_2Sr_2Ca_2Cu_3O_x$/Ag tapes, transposed filaments, transport current losses 70695
$Bi_2Sr_2CaCu_2O_8$/Ag HTSC composite tapes, form./growth, J_c 70720
$Bi_2Sr_2CaCu_2O_8$/Ag HTSC tapes, Pb/La/Ti-substitution, J_c, T_c 70721
$Bi_2Sr_2CaCu_2O_{8+\delta}$/$(Sr,Ca)_3Al_2O_6$ HTSC/dielec. syst., T_c 70374
$Bi_2Sr_2CaCu_2O_{8+\delta}$/Ag HTSC tapes, electroplating prep, J_c under mag. field 70718
$Bi_2Sr_2CaCu_2O_x$/Ag ROSATwire fab. with reduced Ag content 127439
$Bi_2Sr_2CaCu_2O_x$/Ag/Ni HTSC clad tape, fab., mech. props., J_c 70735
$Bi_2Sr_2CaCu_2O_y$/Ag HTSC tapes, microstruct., supercond. T_c/J_c 70717
BiSrCaCuO-Ag HTSC tapes, thermal cond., calorimetric study, exptal. method and simul. 87012
$Bi_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC multifilamentary tapes, AC magnetis. loss meas. 127464
$Bi_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC multifilamentary tape, I-V curves and local crit. current anal. 81960
$Bi_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC tape split coil magnet for Si single cryst. growth appls. 127523
$Bi_2Sr_2Ca_2Cu_3O_{10}$-SrVO-Ag HTSC multifilamentary tapes, prep. and charactn. 127465
$Bi_2Sr_2Ca_2Cu_3O_8$-Ag HTSC multifilamentary tape props., resistive barrier config. effects 70702
$Bi_2Sr_2CaCu_2O_8$-Ag cond.-cooled HTSC solenoid magnet syst. 71078
$Bi_{2.1}Sr_{2.1}Ca_{0.81}((CuO)_{1-x}(NiS)_x)_2O_{8+\delta}$ HTSC, struct./mag. props. 81942
$Bi_2Sr_2CuO_{6+x}$, SOFC contact layers, chem. compatibility 89174
$(Bi_2Sr_{2-x}La_xCaCu_2O_y)$/Ag tapes, microstruct., supercond. props., La substitution effect 81971
C fiber composite, impact damage, HTS-SQUID magnetometry 70966
CeO_2, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
CeO_2/MgO buffer layers YBaCuO films on metallic substrs. 68154
Cu metallic coating on HTS surfaces using electrochem. deposition 68327
$CuBa_2Ca_3Cu_4O_y$ superlattice thin film, prep. by self-assembling epitaxy method 124822
$DyBa_2Cu_3O_7/La_{2/3}Ba_{1/3}MnO_3$ heterostruct., spin injection & transport 92901
Er_2O_3 buffer layers for YBCO/Ni coated conductors, prep. 68343
$EuBa_2Cu_3O_x$ films, recovery, sputtering induced oxygen plasma effect 70625
Eu_2CuO_4, magnetron rf sputtering on YSZ(100) substrs., buffer layer for YBCO growth 68145
GdBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. props. 127434
GdBaCuO bolometer, SiN membrane, act. electrothermal feedback 71140
$GdBa_2Cu_3O_{7-\delta}$ thin films, surface resist., intermodulation meas. 97799
Gd_2O_3 buffer layers for YBCO/Ni coated conductors, prep. 68343
$Hf_{0.74}Yb_{0.26}O_{1.87}$, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
$(Hg,Re)Ba_2Ca_2Cu_3O_y$ HTSC single phase fiber fabr. for current lead appls. 70614
Hg-based HTS loop antenna, pass. radiative cooler for spacecraft 72483
$HgBa_2CaCu_2O_{6+\delta}$ HTS microstrip lines, microwave-power handling capability 125649
$HgBa_2CaCu_2O_{6+\delta}$ HTSC thin films, microwave charactn. 70579
$HgBa_2CaCu_2O_x$ HTSC thin films, prep. 79411
$Hg_{0.8}Pb_{0.2}Ba_2Ca_2Cu_3O_{8+\delta}$ HTSC thick film growth and charactn. 70616
$(HgPb)Ba_2Ca_2Cu_3O_y$ HTSC, mag. suscept. and AC loss meas. 70615
$Hg_{0.75}Re_{0.25}Ba_2Ca_2Cu_3O_{8+\delta}$ bi-axially textured HTSC film, synthesis, J_c 68337
$(Hg_{0.8}Re_{0.2})Ba_2CaCu_2O_{6+\delta}$ HTSC thick films, fab., T_c, J_c 125038
$Hg_{0.9}Re_{0.1}Ba_2CaCu_2O_y$ SQUID, grain boundary jns. flux noise 127489
$(La,Ca)(Ba,La,Ca)_2Cu_3O_z$, film, PLD, struct./supercond. props. 127426
$La_2CuO_{4+\delta}$ syst., metastable phase, 32K T_c 70642
$La_{2-x}Sr_xCuO_{4+\delta}$ HTSC PLD films, T_c, Sr doping depend. 70628
$La_{1.85}Sr_{0.15}CuO_4$(100) HTSC thin films, orig. of resist. peak effect 70664
$La_{2/3}Sr_{1/3}MnO_3/SrTiO_3/YBa_2Cu_3O_{7-\delta}$ HTSC multilayers, growth, struct. 68303
$La_2Zr_2O_7$ buffer layers for YBCO/Ni coated conductors, prep. 68343
$LiNbO_3$ opt. modulator with HTSC transm. line 71109
MgB_2 based digital cct., BER 102094
MgB_2 film, T_c, high crit. current densities 127421
MgB_2 nanobridges based SQUID 127422
MgB_2 supercond. tapes, unsintered, large transport crit. current dens. 92889
MgB_2 supercond. wires, Fe-clad, high crit. currents 81950
MgB_2 tape, Fe-clad, high-transport crit. current dens. above 30 K 127466

high-temperature superconductors continued
MgB_2 tapes/wires, powder-in-tube-processed, high transport crit. current de 127451
MgB_2 wires, transport behavior/crit. current densities 116513
MgB_2/Fe supercond. wires with high J_c, very fast form. 127446
MgO buffer layers, texture, $YBa_2Cu_3O_{7-x}$ deposition 68195
MgO films, biaxial texture, electron beam evap., $YBa_2Cu_3O_7$ HTSC appl. 68
N_2 liq./solid composite insulation syst., PD inception, thermal bubble condit *(Japanese)* 81724
Nb_3Sn HEP accelerator high-field supercond. magnet cable develop. 75982
Nb_3Sn common coil HTSC magnet program at BNL 75985
NbTi cryogen-free supercond. magnet develop. 71060
(Nd,Eu,Gd)-Ba-Cu-O HTSCs, single-domain bulk, prep. for high mag. fi appls. 114433
Nd-Ba-Cu-O HTSC, large grain, self-seeded melt growth fab. 68133
Nd-Ba-Cu-O, large grain HTSC, top-seeded melt growth proc. growth 6811
Nd-Ba-Cu-O, screen-printed thick films, supercond. props. *(Japanese)* 127-
Nd-Ba-Cu-O single crysts., effect of O content on flux pinning 70661
Nd-Ba-Cu-O:CeO_2,Pt HTSC, Nd-422 particle refinement, J_c 70655
Nd-Ba-Cu-O/Ag HTSC, melt-processed, quasi-PM 70669
(Nd-Eu-Gd)$Ba_2Cu_{3?-x}$:Ag HTSC, melt-processed, flux pinning 70668
NdBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. pro 127434
NdBaCuO ramp-edge jns. with interface-modified barrier 70810
$NdBa_2Cu_3O_7$ HTSC biaxially oriented films, sputter deposition and grain str 70617
$NdBa_2Cu_3O_7$ bicrystal Josephson jns./SQUIDs operating at 77 K 70983
$NdBa_2Cu_3O_y$ HTSC film patterns, mag. flux trapping, scanning SQUID micr copy 70583
$NdBa_2Cu_3O_y$ multi-seeded HTSC, morph., T_c, J_c 70653
$NdBa_2Cu_3O_7$:Ag large-grain c-axis oriented bulk HTSC fabr. and mag. pro 114237
$NdBa_2Cu_3O_7$-Ag HTSC, melt growth rate and solid soln. range, undercool effects 114236
$(Nd_{0.333}Eu_{0.333}Gd_{0.333})_{1.18}Ba_{2.1}{}_2Cu_{3.09}O_x$ filamentary superconds., J_c 70771
$Nd_{0.33}Eu_{0.33}Gd_{0.33})Ba_2Cu_3O_y$:$CeO_2$-Pt, microstruct., mag. props. 116505
(NdSm)$Ba_2Cu_3O_x$ bulk HTSC fabr., melt texturing and charactn. 116507
Ni biaxially-textured substrs., electrodeposition, $YBa_2Cu_3O_7$ HTSC tape a 68342
Ni tapes, thermal oxid. of NiO, annealing temps. 68395
Ni-Cr tapes, thermal oxid. of NiO, annealing temps. 68395
Ni-Cr(V) biaxially textured tape substr. for $YBa_2Cu_3O_{7-\delta}$ HTSC films 68397
Ni-V tapes, thermal oxid. of NiO, annealing temps. 68395
NiO(200) buffer layer YBaCuO films on metallic substrs. 68154
$(Pb,Bi)_2Sr_2Ca_2Cu_3O_{10+x}$/Ag HTSC multifilamentary tapes, I_c 81969
$(Pb,Bi)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC/Cu hybrid current leads, design optim. for L appl. 71193
$(Pb_2Cu)Sr_2(Dy_{1-x}Ca_x)Cu_2O_{8\pm\delta}$, epitaxial films, chem. bond nature, XPS c 70592
$Pr_{0.85}Ca_{0.15}MnO_3/YBa_2Cu_3O_{7-\delta}$ MSW device, fab., characts. 127537
$Pr_{1-x}Ca_xMnO_{3-y}/YBa_2Cu_3O_7$ HTSC jns., field effect 70485
R-Ba-Cu-O HTSC (R=rare earth), resin impregnation, mech. props. 81941
R-Ba-Cu-O thick film on metal tape, coated conductor fabricated by LPE 68
R-Ba-Cu-O/Ag (R=Sm, Nd), melt proc., PM perform. 116532
RBaCuO (R=rare earth), QMG grown, current limiting elements 123067
$RBa_2Cu_3O_7$ HTSC films (R=rare earth), LPE growth from NiO saturated s 68350
$RBa_2Cu_3O_{7-\delta}$, mixed, solubility and LPE growth 68330
$RuSr_2GdCu_2O_8$ supercond. cpd., impurity phases 81937
(Sm,Gd)-Ba-Cu-O:Ag HTSC, melt-proc. fab., T_c 68410
Sm-Ba-Cu-O/Ag HTSC, melt-processed, quasi-PM 70669
SmBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. pro 127434
$SmBa_2Cu_3O_{6+\delta}$ film, PLD, supercond. props., surface morph. 125007
SmBaCuO/YBaCuO, hybrid-type bulk magnet, characts. 116536
Sm_2O_3, IBAD, growth struct., biaxially textured HTSC coated conduct 125048
$SrTiO_3$ tunable dielec. thin films for HTSC microwave filter appls. 82012
$(TbBi)(SrBa)_2Ca_2Cu_3O_x$ HTSC film, two-layer electrodeposition proc. charactn. 68339
$Tl_2Ba_2Ca_1Cu_2O_8$ HTSC films on 3″ sapphire wafers, high freq. filter appls. 70
$Tl_2Ba_2Ca_1Cu_2O_8$ thin films, MOCVD, microwave device appls. 70574
$Tl_2Ba_2CaCu_2O_8$ HTSC films, surface impedance, THz-freq. 70657
$Tl_2Ba_2CaCu_2O_8$ HTSC large area films, prep., microwave appl. 124823
$Tl_2Ba_2CaCu_2O_8$ double sided films, dual mode cross slotted filter, growth props., MOCVD 82010
$Tl_2Ba_2CaCu_2O_8$, misaligned films, intrinsic Josephson jns. 70593
$Tl_2Ba_2CaCu_2O_8$ supercond. thin films, c-axis Josephson plasma reson. 11650
$Tl_2BaCa_2Cu_2O_{8+\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893
$Tl_2Ba_2CaCu_2O_x$ HTSC epitaxial films, bicryst. grain boundary Josephson j 70794
(TlPb)SrCaCuO-based HTSC biaxially aligned tapes, electrodeposition charactn. 68340
$(Y,Ca)Ba_2Cu_3O_y$ HTSC, melt growth fab., J_c, flux pinning 68411
Y-123 HTS materials for AC current transport and fault current limitation 770
Y-Ba-Cu-O HTSC coated conductors, Ni alloy substr. treatments 70744
Y-Ba-Cu-O HTSC, cylindrical melt-textured, magnetothermal instabilit 70656
Y-Ba-Cu-O HTSC films, long./transverse magnetis. 70647
Y-Ba-Cu-O SQUID, LF noise, artificial defects 70930
Y-Ba-Cu-O bandpass filter, quasi-ellipt. freq. response 71111
Y-Ba-Cu-O bicrystal Josephson jn., SFQ shift register 70855
Y-Ba-Cu-O bicrystals, low angle, crit. current hysteresis 70675
Y-Ba-Cu-O films, Cu deficiencies, struct./elec. props. effects 70627
Y-Ba-Cu-O films, nanosize texture and transport props. 70663
Y-Ba-Cu-O filter and resonator, sapphire substr. 71095
Y-Ba-Cu-O high-current coated conductor using MOCVD and IBAD 68257
Y-Ba-Cu-O, large grain HTSC, top-seeded melt growth proc. growth 68113
Y-Ba-Cu-O melt-textured bulk material, Tm-Ba-Cu-O soldered, phase fo 81940
Y-Ba-Cu-O single grained supercond. rings, current limiting perform. 77588
Y-Ba-Cu-O thin films, sapphire substrs., microwave devices 71094
Y-Ba-Cu-O, unidirectional solidif., supercond. rod current leads 116506
Y-Ba-Cu-O/Ag($SrTiO_3$) HTSC, biaxially aligned, spray pyrolysis epita growth 68348
YBCO SQUIDs, eddy current probe, MM fatigue cracks obs. 68481
YBa_2Cu3O_x plate, mag. shielding, crit. current dens. influence 70637
YBaCuO 123 HTSC CVD films form. on textured Ag tapes, supercond. pro 127434

emperature superconductors continued
3aCuO 123 HTSC coated conductors, long length IBAD template films 25045
3aCuO HTS bulk/multiple electromagnets, act.-maglev syst. 116542
3aCuO HTS conductor struct., AC loss meas., calorimetry 70684
3aCuO HTS films, opt.-microwave interact. modeling, optoelectronic devices 25825
3aCuO, HTS microstrip resonators with ferrite component, transm. characts. 9059
3aCuO HTSC antenna, satellite commun. and security syst. 71103
3aCuO HTSC bandpass filter, microstrip circ. patch resonator 71102
3aCuO HTSC bulk meanders, fault current limitation perform. 127544
3aCuO HTSC detector cct. using Schottky barrier diode for bandwidth modul. 2016
3aCuO HTSC ferrite phase shifter, latching struct. 71108
3aCuO HTSC film, high-Q mech. adjustable HF cct. 127515
3aCuO HTSC films, soln. deposition, coated conductor fabr. and charactn. 8334
3aCuO HTSC magnets, flux trapping charact. expts. 71028
3aCuO HTSC rings and ring pairs, transient response to pulsed mag. fields 8487
3aCuO HTSC tape on Ag-Cu/Ni/Ag-Cu clad tapes, textured props. 127433
3aCuO HTSC wire, fab. of buffer layers and seed layers on biaxially textured i tapes 124880
3aCuO IR bolometer array, cryogenic CMOS readout cct. 71169
3aCuO Josephson jns., ramp edge modif. by ion beam irrad./heat treatment 0808
3aCuO, PLD on $SrTiO_3$, plume/growth kinetics anal. 92886
3aCuO, Y_2O_3-ZrO_2 biaxially aligned layers deposition on metal tape 68146
3aCuO ac mag. induction susceptometer design 82023
3aCuO bicrystal grain boundaries, IMD and Josephson vortices 70601
3aCuO bulk HTSC Maglev vehicles, levitation force meas. 78237
3aCuO bulk HTSC magnets, trapped field charact. expts. 71029
3aCuO bulk HTSC, repeated pulsed-field magnetis., temp. control 70585
3aCuO, bulk supercond. in rot. machine, EM phenom. during transient state 23388
3aCuO bulk supercond., mag. field, FEM 70586
3aCuO coated IBAD tapes, transverse stress, fatigue effects 70752
3aCuO coated conductor on cube textured Ag substr., fab. of CeO_2 buffer layer 25000
3aCuO coated conductor prep. by surface-oxid. epitaxy, long length oxide tem-date 124998
3aCuO coated conductor stabiliz. using $La_{0.7}Sr_{0.3}MnO_3$ single buffer layer 27420
3aCuO coated conductors by continuous sol-gel proc., textured buffer layers 8329
3aCuO coated conductors, low cost, prep. by soln.-based techs., buffer layers 8332
3aCuO coated conductors, seed/buffer layers fabr. on metallic substrs. for PLD 27417
3aCuO dc SQUID multilayer magnetometers, low-freq. noise in ambient mag. elds 131866
3aCuO dc-SQUID magnetometers, noise increase in mag. fields 131874
3aCuO deposition by MOCVD on metallic substrs., comparative study on uffer layers 68227
3aCuO, elec. motors with bulk HTS elements, characts., future prospects 23387
3aCuO elec. resist. meas., four-probe method, error sources 97779
3aCuO, fab. of high-J_c tapes by epitaxial deposition on RABiTS 127432
3aCuO film act. high power switches 78048
3aCuO film growth on Y_2O_3 buffered/nonbuffered $SrTiO_3$ using precursor films ncl. fluorides 68180
3aCuO film, large transport currents, magnetooptical studies 70621
3aCuO film, optoelectronic RF harmonic generation and mixing 104589
3aCuO film strips, supercurrent distrib., temp. depend., terahertz radiation naging 127428
3aCuO film, supercond. opt. modulator 104569
3aCuO film, surface resist. meas., two dielec. resonator method 75844
3aCuO film, surfaces, cluster ion beam smoothing 69866
3aCuO films, double-sided coating on 5-inch wafers, 3-chamber deposition ys. 68160
3aCuO films, fab. of ZrO_2 ion-beam deposited cubic template films 68371
3aCuO films, high current densities, fault current limiter implications 77590
3aCuO films, microstrip resonators, quality factor 69019
3aCuO grain boundary Josephson jn., RF SQUID 70958
3aCuO in-plane aligned tapes fabricated by inclined substr. deposition 124999
3aCuO integrated multilayer SQUID magnetometers with slotted washers 5491
3aCuO interface-controlled Josephson jn. fab. using Sr_2AlTaO_6 insulating lay-rs 70809
3aCuO low loss supercond. wires/tapes, AC loss meas. 70683
3aCuO mag. bearing, radial type, rot. speed degrad. 116535
3aCuO meander pattern conductors, fault current limiters 77587
3aCuO, meander-shaped QMG current limiting device, AC current loss 16543
3aCuO microstrip hairpin-type filter 71106
3aCuO mid-IR bolometer array, inter-pixel crosstalk 71160
3aCuO, mm-wave Josephson mixer, noise decrease in small DC mag. fields 8649
3aCuO multi-block bulk HTSC Maglev syst., levitation force studies 78239
3aCuO multifilamentary coated supercond., decreasing transport ac losses ethod 127424
3aCuO planar DC-SQUID gradiometer, high resoln. *(Chinese)* 86482
3aCuO ramp-edge jns. with interface-modified barrier 70810
3aCuO resonators and filters, act. tuning, piezoelec. actuator 71093
3aCuO rot. disk, mag. bearing, drag torque 127423
3aCuO single-grained HTSC magnets, levitation/suspen. force calc. 71013
3aCuO step edge jn. rf-SQUID magnetometers, noise characts. 70985
3aCuO step-edge Josephson jns. in rf-washer SQUIDs, mag. field behavior 0982
3aCuO step-edge SQUIDs, temp. depend. charact. 70785
3aCuO, supercond. bearing, mag. grad. levitation, rot. losses 116502
3aCuO supercond. lumped-element filter with planar spiral inductors 71082
3aCuO superconds., MAGLEV appls. 92885
3aCuO superconductive opt. flux trap memory cell 127497
3aCuO thin film, fault current limiter, perform. verification 77616
3aCuO thin films, microstrip resonators, nonlin. microwave effects 69022
3aCuO thin films, nonlin. effects, on-wafer microwave probe station meas. 0666

high-temperature superconductors continued
YBaCuO thin films on multilayers prepared by all-chem. soln. deposition proc. 125014
YBaCuO wafers and patterned microstrip resonators, power handling capabilities 69024
YBaCuO wide microstrips, effective propag. params. 68995
$Y_1Ba_2Cu_3O_7$ HTSC films, ex-situ post-deposition proc. for coated tape fabr. 68181
$Y_1Ba_2Cu_3O_{7-x}$ HTSC thin films, microwave props. *(English)* 81945
$Y_1Ba_2Cu_3O_{7-\delta}$ thin film, growth, sputtering deposition 102494
$Y_{1.8}Ba_{2.4}Cu_{3.4}O_x$ HTSC-PM bearing syst., 3D vibr. 71182
$YBa_2Cu_3O_{6+x}$ laser MBE layer, T_c, AFM meas. 116526
$YBa_2Cu_3O_{6.9}$ thin films, fab., pass. microwave devices appl. 90475
$YBa_2Cu_3O_7$ DC SQUID, resistively shunted inductance 70928
$YBa_2Cu_3O_7$ HTSC, IBAD-PLD reel-to-reel continuous form. and charactn. 68304
$YBa_2Cu_3O_7$ HTSC RSFQ cct., small-scale integrated technol. 70849
$YBa_2Cu_3O_7$ HTSC deposition on metal tape substrs. and charactn. 68179
$YBa_2Cu_3O_7$ HTSC film bicrystal Josephson jns., transport 70677
$YBa_2Cu_3O_7$ HTSC films, vortices, terahertz radiation imaging 70630
$YBa_2Cu_3O_7$ HTSC large area films, prep., microwave appl. 124823
$YBa_2Cu_3O_7$ HTSC, low angle grain boundaries, high J_c capabilities 70678
$YBa_2Cu_3O_7$ HTSC melt-textured growth proc., mag. field effects, DTA obs. 79188
$YBa_2Cu_3O_7$ HTSC, pulsed magnetis. procs., flux flow 70672
$YBa_2Cu_3O_7$ HTSC thin films, MW props. improvement, artificial defects effects 70602
$YBa_2Cu_3O_7$ Josephson jn., $LaAlO_3$ bicrystal, THz spectrosc. 70851
$YBa_2Cu_3O_7$ Josephson jn. array, surface wave resonator 70934
$YBa_2Cu_3O_7$ based SQUID magnetometer, transient EM method, geomag. pros-pecting 81980
$YBa_2Cu_3O_7$, c-axis microbridges, characts., interface role 69116
$YBa_2Cu_3O_7$ coated tapes, Ag/Ni composite ribbons 127470
$YBa_2Cu_3O_7$ double-sided film, PLD on MgO, X-band filter charactn. 71088
$YBa_2Cu_3O_7$ dual-mode supercond. planar filter, slotted sq. resonator 71110
$YBa_2Cu_3O_7$ film, MgO buffer layers prep. by inclined substr. deposition 68369
$YBa_2Cu_3O_7$, film, PLD/sputtered, on MgO buffered Si(100), microstruct. charactn. 70597
$YBa_2Cu_3O_7$ film based Josephson jn. rf-SQUID magnetometers, step struct. effects 81979
$YBa_2Cu_3O_7$ film, microwave surface resist. meas., dielec. resonator 70609
$YBa_2Cu_3O_7$ film, thermal cycling behavior on Y-stabilized ZrO_2 buffered (100) Si 70599
$YBa_2Cu_3O_7$ films, 2-inch-diam. double-sided, coating-pyrolysis proc. 124914
$YBa_2Cu_3O_7$ films, PLD, alignments, thickness effects 127416
$YBa_2Cu_3O_7$ films on Ag by MOCVD in mag. fields, growth and supercond. props 114313
$YBa_2Cu_3O_7$ high-quality HTSC tiles, prep., mag. bearing appl. 68134
$YBa_2Cu_3O_7$ microwave filters, tuning by $SrTiO_3$ ferroelec. film 69138
$YBa_2Cu_3O_7$ multichannel DC-SQUID, biomag. meas. 76329
$YBa_2Cu_3O_7$ single-layer first-order SQUID gradiometer for unshielded environ. 75496
$YBa_2Cu_3O_7$ step edge Josephson jns., single-layer SQUID gradiometers 70984
$YBa_2Cu_3O_7$ step-edge Josephson jn. dc SQUID magnetometers on sapphire sub-strs. 70799
$YBa_2Cu_3O_7$ supercond. half-wave microwave resonator 71098
$YBa_2Cu_3O_7$ supercond. tapes growth on MgO ISD buffer layers 70697
$YBa_2Cu_3O_7$ supercond.-semicond. interface, quasi-particle injection device 70933
$YBa_2Cu_3O_7$ thin film, T-resonator, microwave charact. 71096
$YBa_2Cu_3O_7$ thin films, ferroelec. polariz. charging, PZT thin films growth/charact. 101182
$YBa_2Cu_3O_7$ thin films on substrs./bicrystals with vicinal offcut, high I_cR_n jns. 70673
$YBa_2Cu_3O_7$ thin films, supercond. fault current limiters 112161
$YBa_2Cu_3O_7$ thin films, third-order local nonlin. microwave response 70582
$YBa_2Cu_3O_{7-d}$ films, field deployable microwave filters 91022
$YBa_2Cu_3O_{7-\delta}$ DC SQUID magnetometer, modulation efficiency 70894
$YBa_2Cu_3O_{7-\delta}$ HTS, grain microstruct. & growth, melt-texturing 104559
$YBa_2Cu_3O_{7-\delta}$ HTSC conductor AC transport current losses studies 70741
$YBa_2Cu_3O_{7-\delta}$ HTSC coplanar thin-film resonators, power handling 92913
$YBa_2Cu_3O_{7-\delta}$ HTSC film, strain relax. obs. 70646
$YBa_2Cu_3O_{7-\delta}$ HTSC film, surface resist., microstruct. 70648
$YBa_2Cu_3O_{7-\delta}$ HTSC films, dc sputtering, T_c, J_c 68159
$YBa_2Cu_3O_{7-\delta}$ HTSC films, masked ion beam irrad. damage profiles 81943
$YBa_2Cu_3O_{7-\delta}$ HTSC long-length coated conductor prep. by surface-oxid. epitaxy 70618
$YBa_2Cu_3O_{7-\delta}$ HTSC step-edge jn. DC-SQUID planar gradiometer *(Chinese)* 127471
$YBa_2Cu_3O_{7-\delta}$ HTSC strip lines, supercurrent distrib., THz imaging 82011
$YBa_2Cu_3O_{7-\delta}$ HTSC thick films, LPE growth on textured metal substrs. 68333
$YBa_2Cu_3O_{7-\delta}$ HTSC thin film antennas, THz beam generation from 1.55 μm fs laser 70620
$YBa_2Cu_3O_{7-\delta}$ HTSC-based tapes, conductive buffer layer/overlayers 70743
$YBa_2Cu_3O_{7-\delta}$ Josephson jn., masked ion damage barrier 70880
$YBa_2Cu_3O_{7-\delta}$, MAGLEV force 82019
$YBa_2Cu_3O_{7-\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893
$YBa_2Cu_3O_{7-\delta}$ SQUID, grain boundary jn., vortex motion 70929
$YBa_2Cu_3O_{7-\delta}$ SQUID magnetometer, mag. shielded room 70981
$YBa_2Cu_3O_{7-\delta}$ adjustable multilayer HTS bandpass taped comb-line filters 116538
$YBa_2Cu_3O_{7-\delta}$ asymmetric DC SQUID, voltage-flux charact. 70926
$YBa_2Cu_3O_{7-\delta}$ bulk array for lin. supercond. actuator 82020
$YBa_2Cu_3O_{7-\delta}$ epitaxial film, microwave loss, vortex propag., surface impedance 70576
$YBa_2Cu_3O_{7-\delta}$ film, PLD, buffer layer lattice matching effects 70598
$YBa_2Cu_3O_{7-\delta}$, film, enhanced quality on Eu_2CuO_4 buffer layer on $SrTiO_3$ substrs. 70596
$YBa_2Cu_3O_{7-\delta}$ film, grain boundary jns., direct flux noise meas. 127488
$YBa_2Cu_3O_{7-\delta}$ films, complex resist. meas., microwave broadband tech. 75819
$YBa_2Cu_3O_{7-\delta}$ films, local microwave surface resist. vars. 70581
$YBa_2Cu_3O_{7-\delta}$ films, microwave props., thickness depend. 70575
$YBa_2Cu_3O_{7-\delta}$ films, struct./microwave props., post-annealed CeO_2 buffer layer effect 70645
$YBa_2Cu_3O_{7-\delta}$, high field scanning Hall probe imaging 70623
$YBa_2Cu_3O_{7-\delta}$ hybrid HTSC fault current limiter, quench behaviour 77607
$YBa_2Cu_3O_{7-\delta}$ interface-engineered Josephson jns. optimized for high J_c 116522
$YBa_2Cu_3O_{7-\delta}$ mag. bearings, centrifuge appls. 81995
$YBa_2Cu_3O_{7-\delta}$ microstrip resonator, cross-coupled band-pass filter 71113
$YBa_2Cu_3O_{7-\delta}$ microstrip ring resonators, penetration depth, dielec. const. 92914
$YBa_2Cu_3O_{7-\delta}$, mini-bulk magnet, trapped mag. field 116533

high-temperature superconductors continued
$YBa_2Cu_3O_{7-\delta}$, polycryst., bearings/elec. power devices 116508
$YBa_2Cu_3O_{7-\delta}$ power link, transm./fault current limitation 88454
$YBa_2Cu_3O_{7-\delta}$ sealed bottom HTSC cylinder, RF mag. shielding effect 71192
$YBa_2Cu_3O_{7-\delta}$ slot antenna coupled hot-electron bolometers, mm-wave radiation detector 127535
$YBa_2Cu_3O_{7-\delta}$ supercond. fault current limiters, quench behavior 77610
$YBa_2Cu_3O_{7-\delta}$ supercond. tapes, situ high rate growth 68193
$YBa_2Cu_3O_{7-\delta}$ thin film log-periodic antennas, highly efficient THz radiation 127536
$YBa_2Cu_3O_{7-\delta}$ thin films, microwave intermodulation study, external mag. field 70577
$YBa_2Cu_3O_{7-\delta}$ thin films, power depend. impedance, harmonic generation 92884
$YBa_2Cu_3O_{7-\delta}$ thin-film supercond. fault current limiters, init. quench develop. 77609
$YBa_2Cu_3O_{7-x}$ HTSC film on Ce_2O/NiO/Ni-V, J_c, thickness 70619
$YBa_2Cu_3O_{7-x}$ HTSC films, buffer layer prep. on Si 114242
$YBa_2Cu_3O_{7-x}$ HTSC films, situ electron beam evap. prep. 79251
$YBa_2Cu_3O_{7-x}$ HTSC, melt-textured, mag. field/current distrib. 70651
$YBa_2Cu_3O_{7-x}$ HTSC, sputter deposition from rotatable targets 68147
$YBa_2Cu_3O_{7-x}$ Josephson MM-wave detector, dyn. range 71175
$YBa_2Cu_3O_{7-x}$, SOFC contact layers, chem. compatibility 89174
$YBa_2Cu_3O_{7-x}$ SQUID magnetometers, field-induced low-freq. noise suppression by slotted flux dams 127487
$YBa_2Cu_3O_{7-x}$ bicrystal Josephson jn., THz spectral anal. 70850
$YBa_2Cu_3O_{7-x}$ broadband HTS microstrip antennas, satellite commun. appl. 71086
$YBa_2Cu_3O_{7-x}$, double-sided superconduct. thin film microstrip resonator, loss model 71119
$YBa_2Cu_3O_{7-x}$, film, PLD on CeO_2/$BaTiO_3$ double buffer layers, supercond. props. 70595
$YBa_2Cu_3O_{7-x}$, film, US spray pyrolysed, post annealing props. 70600
$YBa_2Cu_3O_{7-x}$ film, cryoelectronics appl. 127529
$YBa_2Cu_3O_{7-x}$ film, screening effects in supercond. FET 127509
$YBa_2Cu_3O_{7-x}$ films, IBAD of Y_2O_3-ZrO_2 biaxially textured buffer layers 68370
$YBa_2Cu_3O_{7-x}$ grain boundary jns., comp. anal. 70865
$YBa_2Cu_3O_{7-x}$ hot-electron bolometer mixers, microwave radiation response dyn. 116541
$YBa_2Cu_3O_{7-x}$ microstrip filter, H-type resonator 71097
$YBa_2Cu_3O_{7-x}$ on RABiTS, magneto-opt. imaging of transport currents 70674
$YBa_2Cu_3O_{7-x}$ ramp-edge Josephson jns. with surface-modified barriers 70812
$YBa_2Cu_3O_{7-x}$ ramp-edge jn., RS flip-flop 70931
$YBa_2Cu_3O_{7-x}$ ramp-edge jn., latching-type driver cct. 70932
$YBa_2Cu_3O_{7-x}$ spiral lines, propag. time, elec./thermal modulation 68997
$YBa_2Cu_3O_{7-x}$ step-edge jn. dc SQUID magnetometers, noise props. 75495
$YBa_2Cu_3O_{7-x}$ tapes, ISD method fabr., elec. props. 127435
$YBa_2Cu_3O_{7-x}$ thin film, hot electron bolometer 71159
$YBa_2Cu_3O_{7-x}$ ultrafast photodetector, kinetic-inductive proc. 71132
$YBa_2Cu_3O_{7-x}$ uniform large area deposition, laser plume scanning tech. 125006
$YBa_2Cu_3O_{7-y}$, SIS tunnel jns., a-axis oriented, Josephson effects 70798
$YBa_2Cu_3O_{7-y}$ films, laser-deposited on CeO_2-buffered Al_2O_3, microstruct. obs. 127425
$YBa_2Cu_3O_{7-y}$ thin films, submicron tunneling jns., prep., props. 81978
$YBa_2Cu_3O_x$ HTSC films, continuous CVD tech., J_c 68240
$YBa_2Cu_3O_x$ HTSC films, pulsed laser ablation, hot filament effects anal. 125010
$YBa_2Cu_3O_x$ HTSC plates, J_c, texture depend. 70652
$YBa_2Cu_3O_x$ HTSC surface coil, MRI, small animals 76488
$YBa_2Cu_3O_x$ HTSC thin fiber, directional solidif., growth rate effects anal. 114235
$YBa_2Cu_3O_x$ Josephson jn., fab. proc., carbon mask 70826
$YBa_2Cu_8O_x$ bridges and Josephson jns., C masks for fab. 116517
$YBa_2Cu_3O_x$ ceramic superconds. AE testing, PZT transducer studies *(Polish)* 68488
$YBa_2Cu_3O_x$ epitaxial film on single domain YBCO substr., prep., charactn. 68328
$YBa_2Cu_3O_x$ epitaxial film, single-domain $YBa_2Cu_3O_x$ substr., surface resist. 80156
$YBa_2Cu_3O_y$ HTSC films, elec. inhomogeneities, laser scanning microscopy 70629
$YBa_2Cu_3O_y$ HTSC films, surface impedance, RF/DC fields 70649
$YBa_2Cu_3O_y$ HTSC films, surface resist. meas. with dielec. resonator method 132130
$YBa_2Cu_3O_y$ HTSC, melt textured, ion irrad., surface columnar defects 70654
$YBa_2Cu_3O_y$ HTSC, melt-textured, mag. bearing/reluctance motor appl. 70650
$YBa_2Cu_3O_y$ HTSC, surface impedance, power dependencies, rf field 70658
$YBa_2Cu_3O_y$ bulk HTSC, melt-texture joining 81944
$YBa_2Cu_3O_y$ continuously processed coated conductors, buffer layers based on IBAD YSZ 70641
$YBa_2Cu_3O_y$, microstrip-line filters, 2 GHz, tuning props. 68896
$YBa_2Cu_3O_y$ step-edge jns. DC SQUID, voltage modulation effects 70786
$YBa_2Cu_3O_y$ tape, develop. by using inclined substr. method 70750
$YBa_2Cu_3O_y$ thin film, surface image, mm-wave scanning near-field microscope 132143
$YBa_2Cu_3O_y$ thin film, two-SQUID directly coupled magnetometer 70893
$YBa_2Cu_3O_y$ thin films, surface resist. meas., dielec. resonator method 70608
$YBa_2Cu_3O_{7-\delta}$:Ag HTSC films, large-area PLD, device appl. 68307
$YBa_2Cu_3O_{7-\delta}$:Ca HTSC films, grain boundaries, J_c/T_c 70676
$YBa_2Cu_3O_{7-\delta}$:Ca, film, grain boundary crit. currents doping-induced enhancement 70603
$YBa_2Cu_3O_{7-\delta}$:Zn HTSC, T_c, flux pinning, CuO_2 site doping 70667
$YBa_2Cu_3O_{7-\delta}$:Zn(Ag) HTSC, trapped fields 70670
$YBa_2Cu_3O_{7-\gamma}$:Er HTSC, flux pinning, cryst. growth 70671
YBaCuO/Ag HTSC tapes prod. by oxid. of metallic precursors 70698
YBaCuO/Ag tape, transport current props. above crit. current region 70681
YBaCuO/PrBaCuO/YBaCuO ramp jns., graded barrier layer, stationary props. 81989
YBaCuO/SrTiO/LaAlO multilayers, freq. agile microwave devices 68897
$YBa_2Cu_3O_7$/Ag SNS Josephson jn., dc supercond. fault current limiter 81984
$YBa_2Cu_3O_7$/MgO films, high temp. supercond., inclined substr. deposition, evap. 124833
$YBa_2Cu_3O_7$/$NdBa_2Cu_3O_7$ single cryst. contacts, LPE growth 70584
$YBa_2Cu_3O_7$/$PrBa_2Cu_3O_7$ superlattices, ultrathin films, block-by-block growth 70992
$YBa_2Cu_3O_7$/$SrTiO_3$/$YBa_2Cu_3O_7$ multilayer SQUIDs, low-freq. flux noise 70898
$YBa_2Cu_3O_{7-\delta}$/Au HTSC double-sided films, microstrip band-pass filters 92910
$YBa_2Cu_3O_{7-\delta}$/Au L-band microstrip bandstop filters 71104
$YBa_2Cu_3O_{7-\delta}$/Eu_2O_3(Gd_2O_3) buffer layer HTSC, dip-coating 68341
$YBa_2Cu_3O_{7-\delta}$/$La_{0.67}$ jns., size depend., mesoscopic effect 127498
$YBa_2Cu_3O_{7-\delta}$/$NdGaO_3$ buffer layer/textured Ni tape, fab. 68313
$YBa_2Cu_3O_{7-\delta}$/$SrTiO_3$ heterostruct., tunable microwave filter 71122
$YBa_2Cu_3O_{7-x}$/$Bi_2Sr_2CaCu_2O_{8-y}$ HTSC bilayer films, prep. 68312

high-temperature superconductors continued
$YBa_2Cu_3O_{7-y}$/$PrBa_2Cu_3O_y$ HTSC trilayer Josephson jns., CMP 127415
$YBa_2Cu_3O_{7-y}$/$PrBa_2Cu_3O_{7-y}$($SrTiO_3$) HTSC Josephson jns. 70795
$YBa_2Cu_3O_x$/CMR multilayers, mag./supercond. props., spin injection devi
appl. 70791
$YBa_2Cu_3O_y$/CuNiAl(NiCr) low cost coated HTSC, nonmagnetic substrs., p
68349
$YBa_2Cu_3O_y$/$La_{0.7}Ca_{0.3}MnO_y$ HTSC multilayers, Hall effect 70639
$YBa_2Cu_3O_y$/$TmBa_2Cu_3O_y$ HTSC solder joints, quality estim. 127431
$YBa_2Cu_3O_y$/Y_2O_3-ZrO_2/YIG films, IBAD-YSZ template growth 68380
YBaCuO-NdFeB HTSC-PM Maglev syst., levitation force expts. 78238
YBaCuO-based elec. HTS motors, recent results, future prospects 82021
YBaCuO-based mag. thrust bearing for 25 kWh flywheel, characts. 116501
$YBa_2Cu_3O_7$(-$SrTiO_3$-$YBa_2Cu_3O_7$) PLD thin films on sapphire, microwave ap
92909
$YBa_2Cu_3O_{7-\delta}$-Au(Ag) film contacts, metallization/interconnection 127508
$YBa_2Cu_3O_{7-\delta}$-$SrRuO_3$-$LaNiO_3$-Ni conductive multilayers growth/charact., po
appl. 127452
$YBa_2Cu_3O_{7-\delta}$-$SrTiO_3$ epitaxial films, bolometer appls., low 1/f noise 71145
YBa_2Cu_3Ox supercond. transm. line, BER meas. 70890
YBaLaCuO ramp-edge interface modified jns. for HTS SFQ ccts. 70811
(Y)NdBaCuO films, DC sputtered, supercond. props. 70626
Y_2O_3, IBAD, growth struct., biaxially textured HTSC coated conductors 125
Y_2O_3-ZrO_2 films, IBAD prep. for highly textured Y-Ba-Cu-O HTSC 68379
$YbBa_2Cu_4O_8$, double-sided epitaxial films, coating-pyrolysis proc. 124915
$Zr_2Sm_2O_7$, IBAD, growth struct., biaxially textured HTSC coated conduc
125048
$Zr_{0.85}Y_{0.15}O_{1.93}$, IBAD, growth struct., biaxially textured HTSC coated conduc
125048

high-temperature techniques
see also high-temperature electronics; pyrometers; refractories
BCB diffractive struct., fab. for high-power laser appls. 104602
bichromatic pyrometry, high-temp. proc. rem. diagnostics via integra
photodetectors 132204
diamond:B temp./press. sens., high-press. high-temp. appl. 86505
elastic prop. & internal temp. distrib. meas., laser US 68489
electroconsolidation proc. monitoring/control, nonintrusive US sens. 124139
FBG proc., high temp. miniature oven, low thermal gradient 93074
fiber optic sens., high temp. meas. 75585
fiber optic sens. for high temp. meas. of molten steel in ladle 75588
helmet-mounted uncooled FPA camera/display for firefighting appls. 75648
high-temp. fixed points in 1150°C to 2500°C range 120619
high-temp. microwave proc., review 100327
MEMS interconnect technols., thermo-mech. reliab., testing/FEA 127088
on-line temp. meas. instrum. for high-temp. obj., specific radiance *(Chine*
110035
opt. fiber sens. for high-temp. meas., fluoresc. techs. 97326
oxide thin film PLD syst., high temp., halogen lamp heating 90473
phosphosilicate FBG, thermal/UV presensitis., high temp. sens. appl. 97288
phys. prop. meas. with CCD camera, image segmentation algm. 107226
polysilicon heater, CMOS microstruct., high temp. sens. 97573
pulverised coal flames, concurrent temp. & soot conc. meas. 124096
sapphire-ruby single-cryst. fibre, high temp. thermometers 97304
scale interpolation & transfer, 800-1600°C, meas. std. 75356
SMT laser soldering for high-temp. environ. 125914
GaN thin film growth, reactive close space method, high temp. tech. 90459
$La_3Ga_5SiO_{14}$ based high temp. nanobalance sens. 97439
Pt-C, eutectic points, metrology institute meas. 121251
Rh-C, eutectic points, metrology institute meas. 121251
Ru-C, eutectic points, metrology institute meas. 121251
Si gas sens., low-power micromachined struct. 86704
SiC micromachined diaphragm/sapphire fibre optic press. sens. for high-te
aerospace appls. 120827
SiC-Pd(Pt) Schottky diode, high temp. H_2 and CH_4 detect. 97540

high-voltage engineering
see also high-voltage techniques; HVDC power transmission
cct. breakers, fault diagnosis, RBF networks appl. *(Chinese)* 134272
condition assess. using model-aided diagnosis 112702
food sterilization technol. develop. using pulsed HV appl. *(Japanese)* 124
relay unit for hybrid EV *(Japanese)* 100266
spark gap, product decontamination technol. 88992
undergraduate EM course, role of computers, expts. 113391
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
XLPE cable for Shin-Toyosu long-dist. line, 500 kV, develop. and instal. 123
C nanotube, field emission, HV triode FPD 109894
GaAs HV diodes with subnanosecond gate voltage recovery 126643
$SrTiO_3$ ceramics, sintering, HV capacitor appls. 102770
$SrZrO_3$ ceramics, sintering, HV capacitor appls. 102770

high-voltage integrated circuits *see power integrated circuits*

high-voltage techniques
500-kV combined opt. I-V meas. syst. 75447
AC/pulse film capacitor technol. for future market requirements 123714
air gaps, lightning impulse testing, humidity correction factor 99418
arc resist. calc. 102884
contact discharge, sub-nanosecond HV pulse source 127151
dielec. voltage withstand high-pot. tester, safety-related features 86441
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
embedded decoupling capacitors, HV charact. 115067
ESP, spherical metallic particles dyn. 83177
feedthroughs, for high-power ICRF antenna, HV test 72700
fibre optic sens., electrification meas. in power transformers 77936
freq.-output fiber-optic voltage sens. for HV lines 109612
high-impulse voltage measuring systs., num. EM field anal. 86900
HT-7U Tokamak, LHCD syst., pulsed HV DC power supply 77951
HVDC thyristor modules, operational tests, synthetic test cct. 88932
hybrid fiber optic current sens., HV power line 120859
IEEE Standard Techniques for High-Voltage Testing amendment 88498
IGBT inverter source, intrinsic fail-safe capability 125231
impulse waveforms, digital proc. based on time-freq. anal. 107459
inductive divider comparator for HV thermal converters 120691
long arc in free air, dyn. model, lab. testing 102885
long arc in still air, testing, modeling and simul. 102883
meas. techs., corona assess. method, neural nets 97769
miniature inductive adder modulator for LLNL small recirculator expt. 979
overhead elec. lines, fully-automatic live-line maint. robot 88463
plasma flash X-ray generator, Ce target, quasimonochromatic X-rays 11043
power supply operating, mag. field 110406
pulse-packet shaper 68661
series-reson. convertor, phase shifted control, quasi-soft switching 88940

ltage techniques continued
nanosecond repetitive-pulse generators, compact high-power, review 99828
er treatment in recirculating systs. 100356
er-window flash X-ray prod. from lin. plasma source 110434
ccelerator HV switches, triggering using solid-state laser 123659
long pulse laser, simplified power supply, zero cross switching tech. 71873
HV cct. breakers, react. kinetics model 99852

order statistics
ptive blind multiuser decorrelation detector, higher order cumulant *(Chinese)* 827
ptive blind separation of sources using dens. estim. and simulated annealing 0150
ptive filtering, white input and convergence speed 119025
ptive syst. training using HOS, entropy and MSE criteria 107431
ptive Volterra param. estim. using zero tolerance optimisation 119010
C testing, cumulative histogram variance, freq. errors 114841
medical sig. anal., ICA techs. 132555
medical sigs., ICA for automatic noise and interf. cancellation 121929
nd channel ident. using evol. prog. 107703
nd complex-valued sig. separation by real-valued rot. 118859
nd equalization algms., stat./structural approaches 107702
nd focusing wideband array proc. 118861
nd ident. of 2nd order Hammerstein series 129973
nd MIMO syst. ident. based on cross-polyspectra 118809
nd multi-channel deconvolution 107401
nd nonlin. channel ident., constrained hybrid GA 119176
nd sig. separation of MIMO-FIR convolutive mixtures using syst. theory 07442
nd source separation, deriving sub/super Gaussianity of source sigs. 118862
nd source separation and sig. class. 107400
nd source separation in complex instantaneous lin. mixtures, unified closed-orm estimators 118808
nd source separation of lin. instantaneous mixtures using closed-form estima-ors 107327
ssgang-zero crossing equalization, integrated HOS-SOS approach 130267
rrier freq. offset blind estim. in unknown multipath 83803
DMA asynchronous multipath channels, blind space-time detect. 73728
FAR modified trimmed mean algm., two subwindows tech. *(Chinese)* 109234
mplex higher-order systs. synthesis using chain fractions 101639
nst. amplit. phase modulated sigs. detect. in additive noise 84774
nvolutive mixture separation using contrast fn. approach 73601
nvolutive mixtures separation using HOS 84707
mulant-based independence measures for lin. mixtures 83788
fferential source separation, num. and anal. solns. 118866
gital commun., blind equalization based on fourth-order cumulants 130251
gitally modulated sigs. with timing offsets, kurtosis 83811
S-CDMA asynchronous sigs. in multipath channels, blind detect. using code-onstrained inverse filter criterion 84776
S-CDMA asynchronous systs., sigs. blind detect. 107771
S-CDMA in multipath channels, blind asynchronous sig. detect. 84896
S-SS commun. systs., HOS and GA-based interf. rejection filter 74541
S/CDMA systs., MIMO inverse filter criteria and blind max. ratio combining sing HOS 84905
CG beat recogn. using fuzzy hybrid neural network 132568
CG data compression using wavelets and HOS 87363
CG late pot. detect. using higher order time-freq. 76272
DGE systs., blind equalization feasibility 84871
EGs, multi-sources, multi-dimens. delay-correl. MUSIC *(Chinese)* 87436
pileptiform EEG, seizure activity isolation, ICA & dyn. embedding 76265
qualizer perform., on-line eval. based on HOS 119189
USIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
IR multichannel ident. using weighted cumulant matrix 107726
ourth-order stats., trispectrum, bandwidth and deconvolution 118789
ybrid selection/max.-ratio combining, HOS of output SNR 74553
CA/simultaneous third-order tensor diagonalization 118846
R blind equalizer class, pole placement techs. 130067
R Volterra filtering for multisource discrim. 73670
mage class. by local inform., independent component anal. 118772
mage enhancement, edge preserving filtering by combining CBAE/median filter 129444
nput output quadratic systs., cumulant-based algm. for ident. 118905
ndmine detect., GPR, high-dimens. ANOVA & seq. probab. ratio test 77075
n. prediction coding filters, source separation techs. 107558
nachined parts shape recogn. using higher order neural network *(Chinese)* 129878
naterial class. by US sig. HOS anal. 118863
MIMO blind deconvolution, cumulant-based inverse filter criteria, (props./algms./appl. to DS/CDMA systs. 84853
MIMO channels, blind estim./equalization, multidelay whitening 107689
MIMO FIR filters, blind ident., alg. approach 84766
MIMO freq. domain blind syst. ident. based on second-/HOS 95651
nixed nonGaussian/Gaussian ARMA noises, harmonic retrieval, HOS 84803
nobile commun. systs., location param. estim. 96559
nobile radio multipath time delay estim., HOS method 108904
nonochrome video seqs., spatiotemporal filter for noise reduction 106765
nultitime-freq. classifiers for noisy modulations 118868
nonlin. cumulant based adaptive filter for image Gaussian/impulsive noise removal 129443
nonlin. image operators, HOS, freq. component AND-like combinations 130096
normalized blind speech separation algms. 106343
phase randomisation, higher cumulants behaviour num. study 124509
pulmonary diagnostic syst. for combat casualty care, obstructive/restrictive flow charact. extraction 76337
radar clutter recogn. based on HOS combination 75099
radio-pulse sig. detect. against nonGaussian noise background 84786
register sig. detect. approaches in telephone networks 73734
RF environ., automatic sig. anal. 107610
robust speech/nonspeech detect. using high order stats. 118130
rot. mach. vibr. sigs., Wigner-Ville spectral moments *(French)* 107303
sens. array sigs., scale-cumulant domain deconvolution 95635
SHF/EHF satellite commun., propag. data stat. proc. 83284
side-scan sonar imagery, robust real-time mine class. 77049
sig. proc. education, multidisciplinary approaches 130006
sig. separation exploiting nonGaussianity 107311
space plasma data, time series anal. using HOS *(English)* 122678
speech coding, higher order spectrum anal. appl. *(Chinese)* 129377
surface EMG, bispectral anal. 110654
time-varying channel tracking, robust adaptive predictive algms. 119018
topographic ICA, depend. struct. visualization 118825

higher order statistics continued
transient detect., wavelet packets and de-noising based on HOS 119096
transm. channel sigs., discrete source separation, MCMC anal. 107589
underwater sig. detect., biol. noise, pass. detect. perform. 75243
vibroacoustic machine diagnostics, etalonless method 78588
video seqs., vehicle detect./tracking 84330
VLSI cct., peak power dissipation, extreme order stats. 92441
WAN, jitter-based delay-boundary prediction 130816
wavelet-polyspectra, principles and props. 118865
wideband sig. param. estim. based on HOS 118916

Hilbert spaces
2D-emission tomography prob., approx. inverse algm., regularization 76528
abstr. optimal lin. filtering 84750
approx. of lower semicontinuous differential inclusions 100995
at. qubits, generalised meas. 94356
augmented Lagrangian algms. in Banach spaces, inexact versions of proximal point 113959
biorthogonal wavelet charactn., multiresolution anal. 118929
cloning, symmetric and asymmetric, quantum network 94218
completely pos. maps, max.-likelihood reconstruction 95733
convergence of interpolation procs. in Hilbert space 67939
dense coding/quantum teleportation schemes 117973
dithering pattern, partitioning strategy, space-filling curve *(Chinese)* 73128
Elliot-MacMahon algm. for computing Hilbert bases 101046
FEM for differential eigenvalue problems with mixed classical and (semi-)periodic boundary conditions 68082
filter dens. existence for Hilbert-space valued systs. 84749
filtering, risk sensitive, in infinite dimens. spaces 84748
FIR fractional delay filter, optimal synthesis in reproducing kernel Hilbert space 73650
fractional Brownian motion, stochastic calculus 67710
frame pseudo-duals with appls. 118930
Gegenbauer approx., DE, rough asymptotic behaviors 124645
generalized nonlin. implicit quasi-variational inclusions with fuzzy mappings 67971
generalized quasi-variational-like inclusions with nonconvex functionals 100973
Hermitian operators in discrete Hilbert space, expectation value expansion 94337
higher dimens. systs., quantum key distrib. using multilevel encoding 94371
infinite dim. Banach manifold , quant. info., exponential connection 83783
inform. manifolds, Chentsov metric, dual affine connections 83786
iter., Fejer-monotone in Hilbert spaces, convergence 78988
Jacobi interpolation approxs., sing. DE appls. 124639
kernel partial least sq. regression in RKHS 78822
max.-likelihood decoding, quantum factor graphs 117994
mesoscopic elec. ccts., commutation rels., Coulomb blockade 70222
mixed state entanglement, optimal dense coding 118023
modular forms modulo p^m , unramified case 124536
multiqudit systs., quant. entanglement swapping, Bell-type meas. 83945
N-dimens. pseudo-Hilbert scan in hyper-rect. parallelepiped region, address generator 94534
nonparametric exponential model, class. stat. manifolds 83785
parab. distributed systs., sens. structs., regional detectability 75437
parab. stochastic PDE, time-discretization 78771
perturb. of least sq. problem in Hilbert spaces 78977
pseudomonotone variational inequalities, proximal methods convergence 67841
quant. cryptography, class. inform., reversible extraction 106213
quant. inform., cloning procs., (in)exact procs. 105984
qubit encoding in oscillator, infinite-dimens. Hilbert space 94222
real Hilbertian info-manifolds, probab., stats. 83784
real vector space, quant. state entanglement, rebits 94211
semilinear integrodifferential eqns., approxs. of solns. 114125
sonoelastography images, modal artifacts reduction 121999
spin direction, optimal encoding/decoding 94297
subspace method in Hilbert space 84541
uniform distrib., discrepancy, reproducing kernel Hilbert spaces 124685

Hilbert transforms
2D cardiovascular vel. maps, visualisation with Hilbert transform 87659
2D fringe pattern demodulation, spiral phase quadrature transform 94742
adaptive chirplet-based real sig. decomp., fast algm. 84711
computing Hilbert transform of generalized Laguerre and Hermite wt. fns. 114197
ECG sig. anal., Hilbert transform appl. 110595
fractional operations and time-freq. distribs. 95539
heart rate variability anal., empirical mode decomp. appl. 110557
hypercomplex sigs., analytic sig. extension to multidimensional case 129648
inverse band-limited sig. prob., regularisation, Malvar-Wilson wavelets 129980
liq.-cryst. light valve, spatial filtering phase knife, image differentiation 129639
mixed nonGaussian/Gaussian ARMA noises, harmonic retrieval, HOS 84803
phonocardiograms, automatic denoising methods comparison 121991
SC image rejection filter for complex IF receivers 68917
sig. proc., Hilbert transform pairs of wavelet bases 73652
single-image fringe projection profiling method for dyn. appl. 113749
software radio receivers, simplified sig. proc. 107529
spiral cone-beam CT, long obj. problem, 1-D Hilbert transforms 132797
spiral scan cone beam CT, second-intersection contribs. elimination 132798
squirrel cage motor, rotor bar breaking, on-line detect. *(Chinese)* 77868
T-invariant causal lin. syst., anal. continuation, Kramers-Kronig anal. 130075
US cross-correl. flow meas., modulated sig. vel. depend. charact. 110054
US cross-correl. flowmeter, demodulation, undersampling 110053
weighted Hilbert transform on real line, boundedness and uniform num. approx. 101137
NbN RSFQ logic cct., Hilbert transform spectrosc. 70824
$YBa_2Cu_3O_7$ Josephson jn., $LaAlO_3$ bicrystal, THz spectrosc. 70851
$YBa_2Cu_3O_{7-x}$ bicrystal Josephson jn., THz spectral anal. 70850

hip joint replacements *see prosthetics*

HIPPI *see local area networks; network interfaces; protocols*

history
Alexander Graham Bell and invention of telephone, 125th anniversary 89953
All-Russia Electrical Engineering Inst. anniversary, hist. *(Russian)* 113267
ASD in next decade 123887
audio files hist. 75335
automotive current meas., historical overview 78320
aviation thermal radiometry, hist. and develop. 111312
biosensors, principles, develop. hist., future trends 132001
broadcasting technol., historical aspects 75277
calib. automation and AI 86414
CCD invention, historical review 126884
Central Radio Propagation Laboratory and EK Smith in 1950s-1960s 117690

history continued
computer vision, future and past 106456
David C. Prince, switchgear design engineer, researcher, inventor 112699
Deakin Univ., engng., online teaching/learning 78534
digital document image networking 129802
Dutch power systs. reliab., outage data collection hist. 133682
EEG, historical develop., equipt., tech. & pitfalls 76267
electron beam lithog., direct write, hist., state of art 92235
electrotherapy for patient treatment 76595
engineers, hist. of technol. teaching 78497
Ferraris, Galileo, work in field of elec. power distrib. 78742
Fort Wayne Electric Company, historical overview 88292
fuzzy multimedia IT based on fuzzy control 130978
game theory, Zermelo theory and early hist. 67754
goal prog. model, hist., future trend 100904
Hyman's pacemaker invented in early 1930s, mysterious fate 122321
ICPADM, hist. 124203
ICRP, UNSCEAR, some distant memories 87998
indust. electrostatic appls., past, present, future 83162
interconnected power syst. transm. transfer capability survey *(Chinese)* 88308
internat. temp. scales & ITS-90, hist. develop. 75353
Internet hist. and operating principles, general and Polish aspects *(Polish)* 85318
Internet pricing and commun. hist. 108235
ion implant. equipt. for semicond. appls., historical review 113206
ionos. sounding, 70th anniversary 111422
John Logie Baird, mech. image scanning, hist. 120502
lift theory in works of N. E. Zhukovsky 88030
Lincoln Laboratory, radar develop. overview 99135
Lorentz, L., EM fields, Coulomb gauge and H.A. Lorentz 93953
Mayo Clinic, biomedical imaging resource, historical review 132501
med., phys./engng. appls. 98114
med. & proc. impedance tomography, hist. & current develop. 110615
Moscow State Univ. Department of Physics of Oscillations research 116798
MPEG open-source software proc. 73350
nephrourology, abdominal ultrasound diagnosis, hist. 87482
NTT Communication Science Laboratories, ten-yr. hist./future vision 89952
opt. halide sens., fluoresc. quenching kinetics 121005
packet switching, historical study 84840
PACS-CT interfacing at Baltimore Veterans Affairs Medical Center, historical perspective 98847
Poland, radioastronomy hist. and direction 86283
pumped storage power plant generator step-up transformer transients 112362
rare books, digital archiving, image proc. technol. appl. 106706
Soviet three-coord. L-band pulsed radar and magnetrons (in 1920s/1930s) 96968
sparse aperture imaging, origs. and hist., opt. synthesis imaging 120937
supercond., hist., environ. factors 70580
Swerling radar target models, early Chinese experience 120425
telephone syst. develop. from Bell to present day 108075
tungsten halogen energy-efficient lamps, technol. hist. 134634
unmanned/manned spacecraft electronics develop. 76811
wing theory of N.E. Zhukovsky and S.A. Chaplygin 88029
Si PV module mfg., US PV indust. R&D advances 112981
Si power MOSFETs for microwave appl., R&D hist. review *(Japanese)* 91283
Si:H, amorph. and microcryst., hot wire CVD, review in USA 124940
HIXE *see ion microprobe analysis; X-ray chemical analysis*
HJBT *see heterojunction bipolar transistors*
HMD *see helmet mounted displays*
HMM *see hidden Markov models*
HMOS integrated circuits *see MOS integrated circuits*
hobby computing
digital music legislation, neutral judicial advice 131782
hodoscopes *see cosmic ray apparatus; particle detectors*
HOE *see holographic optical elements*
hoists
see also materials handling
IM drive syst., cycloconverter based, control 100359
mine hoist DC motor drive, intell. monitoring/control syst. 124168
overhead material handling operation, emergency back-up syst. design 113091
hole burning (optical) *see optical hole burning*
hole capture *see hole traps*
hole density
diamond:B,N, CVD films, elec. props., acceptor/donor defects 80644
diamond, surface-channel MESFET, 2D device simul. 81363
double layer semicond. nanostruct., excitons, model simul. 80859
elec./opt. props. charactn., MOVPE 82425
tetracene bicrystal, hole transport through single grain boundary 69605
wide-gap semiconds., doping limits, amphoteric defect model 91949
AlGaAs:C, δ-doped layers, MOVPE, nipi superlattices for AM 90389
(Al)GaN:Si(Be)(Mg)(C) films, MBE, layer morph., doping efficiency 68207
$Al_{0.15}Ga_{0.85}N$:Mg/GaN superlattices, elec./opt. props., LED appl. 126134
p-AlGaN/GaN strained cladding layer superlattice, InGaN MQW LD fab., Mg doping 81044
AlGaN/GaN:Mg superlattices, p-type modulation Mg doping, resist., hole conc. 81046
$Al_{0.14}Ga_{0.86}N/Al_{0.18}Ga_{0.82}N$ LED, transparent conductive layer, short period alloy superlattice, UV 82428
$Bi_{2.1}Sr_{2.1}Ca_{0.81}((CuO)_{1-x}(NiS)_x)_2O_{8+\delta}$ HTSC, struct./mag. props. 81942
$Cd_xHg_{1-x}Te$/CdZnTe heterostruct., elec. props. 115363
CdTe, excimer laser doping techs. 91978
$Ce_xFe_xCo_{4-x}Sb_{12}$ skutterudite, struct. and thermoelec. props., Fe content depend. *(Chinese)* 126090
Co/p-GaN:H interface, contact resist., RTA effects 103158
$CuInTe_2$, cryst. growth, elec. and opt. props. 115358
Cu_2O:N thin film, reactive RF magnetron sputtering 79200
GaAs:Be films, MBE, defect engng., elec. props. 126032
$GaAs/Al_xGa_{1-x}As$, dil. 2D hole syst., in-plane magnetoresist. 115370
GaAs/AlGaAs:C epilayers, MOCVD, elec., opt. props., QW laser appls. *(Chinese)* 79311
p-GaMnAs dil. mag. semicond., defects, first-principles study 116244
GaMnAs:Sn layers, electronic/mag/ props., carrier conc. depend. 80674
GaN, cubic, p-type Mg/N-type Si doping 69830
GaN:C films, plasma-MBE growth/doping, elec./opt. props. 126315
GaN:Mg, blue LED, nitrogen plasma treatment, vacancies, reactivation 82419
p-GaN:Mg, elec. activation, two step RTA 69785
p-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
p-GaN:Mg film, CO_2 laser annealed, optical, elec. props. 80984
p-GaN:Mg film, MOCVD growth, Mg doping *(Chinese)* 79315
GaN:Mg films, MOCVD, carrier concentratio, microstruct. effect 126051
hole density continued
GaN:Mg films, low temp. activation, N_2 annealing with thin Ni film 8097
GaN:Mg, novel methods, p-type/RF input activation, long-time air annea
hole conc., PL 80983
GaN:Mg p-type films, temp.-depend. hole transport 126048
GaN:Mg,Be films, MOCVD, Be implant., high hole conc. 69826
p-GaN:Mg,O, activation, sheet resist., PL 80694
GaN/AlGaN:Mg heterostruct., polariz. induced 2D hole gas 103097
GaSb:Gd ingots, elec. & compositional props., Bridgman growth method 6
$GaSb/Al_xGa_{1-x}Sb$, MOCVD, elec./opt. props. 126119
$GeTe\text{-}Sb_2Te_3$ layered cpds., comp., elec. props. 91721
$p\text{-}Hg_{1-x}Cd_xTe$, MBE, light hole densities/mobilities, IR detector appl. *(Chi*
115299
In(As)P:Zn, MOVPE based Zn diffusion, diffusion depth, hole conc. 1279
InAsP:Zn/InP(InGaAs) heterostruct., doping, photodiode appl. 115553
InGaAs:C, heavily doped, CBE growth, surface morph. 101205
InGaN:Mg/Au/Pd(Ni), low p-type contact resist., Ni-Au/Pd-Au metallisa
80916
$In_xGa_{1-x}N$:Mg epitaxial MOCVD films, elec./opt. charact. 69513
InGaN/GaN DHBT fab., MOVPE, ECR plasma etching 81238
InGaN/GaN DHBT, p-InGaN base, high current gain, MOCVD/plasma etc
fab. 92306
InGaN/GaN:Mg/Au/Pd(Ni), low p-type contact resist., Ni-Au/Pd-Au metal
tion 80916
InP/InGaAs interface, Zn segreg. use for as-deposited ohmic contact f
103167
PZT films, RF magnetron sputtering, leakage current, fatigue props. 70393
Pb/Sn/Te, thermoelec. material joining, liq. phase diffusion bonding, tough
103163
$(Pb_2Cu)Sr_2(Dy_{1-x}Ca_x)Cu_2O_{8\pm\delta}$, epitaxial films, chem. bond nature, XPS
70592
Si, 3D integrated wafers block, bumpless, wiring by through-hole intercon
tions 115670
Si detectors, irrad. p^+-n-n^+ diodes, electron/hole sigs., temp. depend. 12146
Si mesoporous nanocrysts., free charge carriers, IR absorpt. and DC elec. c
meas. 115296
a-Si:H TFTs, leakage charact., front hole channel effect 70135
$Si/Si_{0.8}Ge_{0.2}$ heterostruct., 2D hole gas, energy loss rates 80801
4H-SiC thyristors, turn-on procs., temp. depend. 70054
SiC:B,C, 4H polytype, B acceptors, seq. implant. effects 80995
SiGe/Si heterojunction multilayer struct., growth & charactn., MBE 101282
$YBa_2Cu_3O_{7\text{-}\delta}$:Ca HTSC films, grain boundaries. J_c/T_c 70676
ZnO, excimer laser doping techs. 91978
ZnSe, excimer laser doping techs. 91978
ZnSe, sublimation method growth, elec. props. 68129
hole mobility
ambipolar organic devices for complementary logic 70292
α-(BEDT-TTF)$_2I_3$, transport prop. under high press., ultra narrow gap semicc
103081
bilayer organic LEDs, EL analytic model 93430
conjug. polymers, light emitting, prep., PL props. 82321
diamond:B,N, CVD films, elec. props., acceptor/donor defects 80644
diamond:B thin film, buffer layer effects on CL, CVD 79318
elec./opt. props. charactn., MOVPE 82425
MOS diodes/capacitors, electron/hole tunneling current discrim. 81423
MOSFET, diffusion-drift transport, channel length depend. at cryogenic tem
70101
OLED, transient EL 104986
organic EL devices, amorph. mol. material 104980
organic LED carrier behavior anal. on hopping cond. basis, computer sim
(Japanese) 82404
organic semiconds., high carrier mobility, electronic device appls. 69621
pentacene single crysts., hole transport 91717
pMOSFET, hole quantization effects, threshold voltage shift, six-band effect
mass approx. 70159
poly(3-alkylthiophene)-based quasi-solid state PV cells charactn. 116961
poly(p-phenylene vinylene) LED, enhanced carrier mobility, perform. 71613
polyimides, triphenylamine-containing, photocond. 91709
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole transp
layers 105000
PPV-based LED, charge transport props. 117016
PPV-oligomer based Schottky diodes, I-V charact. 71562
PPV-type pentamers, vac.-deposited/spin-cast films, field-effect mobilities 696
PVK-matrix photorefr. polymer dye hole transport by EO chromophore 9293
tetracene bicrystal, hole transport through single grain boundary 69605
AlGaAs-GaAs HEMT, 2DEG transport props., quantitat. mobility spectrum an
92409
AlGaN/GaN:Mg superlattices, p-type modulation Mg doping, resist., hole con
81046
AlGaN-GaN MODFET, 2DEG transport props., quantitat. mobility spectru
anal. 92409
$Cd_xHg_{1-x}Te$/CdZnTe heterostruct., elec. props. 115363
CdZnTe pixel detectors, num. modelling of charge-sharing 121484
$Cu(In,Ga)Se_2$ (220)-oriented solar cells, device perform. studies 100100
$CuInTe_2$, cryst. growth, elec. and opt. props. 115358
GaN epilayers on GaAs(110), elec./opt. props., radical beam epitaxy, TEM,
90333
GaN:C films, plasma-MBE growth/doping, elec./opt. props. 126315
p-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
GaN:Mg p-type films, temp.-depend. hole transport 126048
GaSb:Gd ingots, elec. & compositional props., Bridgman growth method 6952
$GaSb/Al_xGa_{1-x}Sb$, MOCVD, elec./opt. props. 126119
$GeTe\text{-}Sb_2Te_3$ layered cpds., Hall coeff./elec. cond./thermoelec. power 10307
HfO_2 ultra thin CVD MOSFET gate dielec., dual polysilicon gate electrode
reliab. 126779
$p\text{-}Hg_{1-x}Cd_xTe$, MBE, light hole densities/mobilities, IR detector appl. *(Chinese*
115299
ITO/P3BT/Al sandwich cell, conjug. polymer with high TOF mobil. 115442
InGaP/(In)GaAs modul.-doped heterostruct., GSMBE, HEMT/HHMT app
101242
InP HBT, unilateral power gain, dyn. base widening 92309
InP bulk high field carrier transport, Monte Carlo modeling 103022
InSb surface magnetoplasma waves, mag. field effect on excitation efficienc
80675
poly-Si layers, atmos. press. iodine vap. transport deposition 100067
Si mesoporous nanocrysts., free charge carriers, IR absorpt. and DC elec. cond
meas. 115296
a-Si:H TFTs, leakage charact., front hole channel effect 70135
$Si\text{-}Si_{1-x}Ge_x$ heterostruct., spectral & voltage charact., LPE 80786

obility continued
SiGe SOI p-MOSFETs with strained-Si channel on SiGe-on-insulator substr., MOX technol. 103819
based polymers, photocond., electrophotography appl. 116904
on-SiGe-on-insulator, strained Si, by wafer bonding, MOSFET carrier mobil- enhancement 126236
Schottky diode, radiation hardness under relativistic protons, precision alpha ectra 70014
-SiC power MOSFET, large-area device 126837
Ge HBTs for BiCMOS technol., stabil., reliab., material params. 81210
Ge pMOSFET perform. rel. to hole mobility in fully-strained layers 92377
Ge strained vert. MOSFET, hole and electron mobility 103874
$_xGe_x$ buried channel heterostruct. PMOSFET, hole mobility 81314
Ge/Si vert. p-type high-mobility heterojunction MOSFET 70075
O_2 ultrathin films, leakage curr. under prebreakdown, MOSFET appl. 70162
O_2 nanoporous layer dye sensitized solar cells 123822
lysilane catenated polymer, end grafted, mol. wire, AFM 101513

raps
ee also electron traps
NaphDATA hole transport layers, aging-induced traps, TSC meas., LED appls. 9616
insulation, charge carrier transport/trapping, thermal stimulation 81723
C thin-film electroluminesc. devices perf., carrier trapping time 104978
NPD hole transport layers, aging-induced traps, TSC meas., LED appls. 69616
mond:B,N, CVD films, elec. props., acceptor/donor defects 80644
crete energy states, TSC curves, auto-separation/reconstruction 92583
PVBi/AlO$_x$/Al-based OLEDs, nanosec. electrolum. spikes at voltage turn-off 27996
RAM, 512 Mb/0.12 µm design rule, long data retention time strategy 125490
sh memory, tunnel oxide nitridation, gate disturbance degrad. 79872
ass, fs laser induced recording, electron/hole trapping 92976
OD NMOSFET hot carrier degrad. phenom., W or S shape evol. 81354
OS device degrad., role of holes in D isotope effect and mechanisms 91889
MOSFET, GIDL degrad., hot carrier stress *(Chinese)* 81327
OSFET, interface states generation after hole injection 81305
OSFETs, submicron, random telegraph sigs., oxide trap props. extraction 20082
MOSFETS fabricated in BiCMOS proc., radiation damage 115798
ulti-level flash memory, detrapping-induced threshold voltage shift, anal. ethod 125472
tithiophene polycryst. thin film FET, grain size depend. mobility 70164
ganic hole transport materials, trap engng. 69567
ganic LEDs, C-V curves, deep hole traps, simul., modelling 71617
ganic LEDs, luminous efficiency improvements by carrier trapping dopants 05003
otorefr. harmonic gratings, electron-hole transport model 93907
MOS dosimeter, irrad. bias field *(Chinese)* 87990
oly(p-phenylene vinylene)/poly(2-carboxyphenylene-1,4-diyl) bilayer film, uminesc. props. 93332
olysilicon thermal sprayed coatings, elec. charact. 115287
PV LEDs, electron/hole traps, charge based DLTS anal. 127975
exithiophene polycryst. thin film FET, grain size depend. mobility 70164
OI nMOSFETs, mesa-isolated, Bi-MOS mode operation, hot carrier degrad. 03817
OI struct., interface states and deep-level centers 115445
OI wafers, interface traps charactn., back-channel-type scanning charge pump- ing method 115455
in gate MOS devices, hole current time depend., breakdown model 126761
-ray storage phosphor materials, recent develop. 127929
-Al$_{0.24}$Ga$_{0.76}$As, surface states, DLTS, HEMT study 69533
lGaAs/GaAs microwave power HFETs, turn-off charact., surface effects 70191
lGaAs-GaAs HBTs, long-term reliab., base current study 70044
lGaN MOCVD films, DOS distrib., transient photocurrent anal. 71515
$_2O_3$:Tb,Zn(Ca) films, long lasting luminesc. 104908
u/BaTiO$_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
$_4$Ti$_3$O$_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
-C:H films and assoc. heterostruct., artificial pot. relief 103121
aS:Eu^{2+},(Tm^{3+}), persistent/thermoluminescent phosphors, trapping centres 104936
dS/CuIn$_{1-x}$Ga$_x$Se$_2$-based solar cells, DLTS 112854
dTe films, band gap shallow levels on metallic substrs. 126060
dTe-CdS polycryst. solar cells, deep levels investig. 100185
dZnTe detectors, capacitive Frisch grid struct. 121475
dZnTe pixel detectors, num. modelling of charge-sharing 121484
aAs FET Schottky gate metallization, electron-beam irrad. damage 70211
aAs HIGFETs, WSi gate, degrad. phenom. caused by hot carriers 92379
aAs MESFET transient model predicting trap-induced memory effects under complex digital modul. 92392
aAs MESFETs, SPICE model for digitally modulated RF perform. charact. 80262
aAs MESFETs, trap-related kink dyn. 126889
aAs, SI LEC, radiation detectors appl., materials sci. issues 90207
aAs epilayers, RTA, defect engng. using SiO$_2$/Si$_3$N$_4$ stacking layers 126024
-GaAs:C,Mg wafer, elec. isolation, proton ion bombard./annealing 126038
aAs:Fe, ps photoresponsivity, Fe hole capturing states effects 71508
aAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dis- persion 69543
-GaAs/Ga(As,N)/GaAs heterostructs., deep-level defects, orig./annealing 80688
aAsN/GaAs QW, effective mass and carrier recomb., opt. detect. of cyclotron reson. 69688
aN MESFET, SiN$_x$ passiv. effects 91288
-GaN Schottky diodes, deep levels, DLTS 126646
aN epilayers, nonradiative recomb. proc., transient grating method 80718
-GaN films, deep levels/PPC studies, MOCVD 127909
$^+$-nGaN homojunction diodes, deep levels, DLTS 126646
aN:P films, electronic struct., PL 80727
aN/AlN self-organised QD, strain distrib., built-in elec. fields, carrier states 91836
gCdTe, passivated, interface traps from transient photoconductive decay meas. 71509
gCdTe-based n$^+$-p photodiodes, charge transport 116940
TO/conjug. polymer-fullerene/Al PV cells, admittance and ESR spectra 127944
nGaAsN, deep levels, high-efficiency multi-jn. solar cells 89283
nGaP solar cells, radiation hard, DLTS obs. 134408
nP, n-type/p-type, proton bombard., elec. isolation 69508
iNbO$_3$ near-stoichiometric crysts., photorefr. props. 93768

hole traps continued
N-MOSFET dominant interface trap generation proc. during hot-carrier stressing 81355
Pt porphyrin-based conjug. dendrimer LED, electrophosphorescence control 128010
Si NP colour detector, transient behaviour/charge anal. 75547
Si detectors, irrad. p$^+$-n-n$^+$ diodes, electron/hole sigs., temp. depend. 121463
Si nanocrystal based MOS struct., prep., charge retention effect 80947
Si:B(Ga)(O)(C) solar cells, radiation-induced defects, impurity effects 100033
p-Si:Fe,B, Fe-B pairs, acceptor level, capture cross sects. 69498
a-Si:H, occupation of dangling-bond states and photocond., band tails effect 93323
a-Si:H,Er/c-Si PECVD struct., effect of Er on electronic traps 91743
n-SiC, 4H, epilayers, proton irrad. induced defects, DLTS 69590
6H-SiC Schottky diodes, elec. charactn. of deep levels 115824
6H-SiC buried-gate n-channel JFETs, deep trap charactn. 103918
p$^+$/n$^-$/n$^+$ SiC:B struct., EL, opt. emission microscopy 69639
SiC:H, 4H, H_2 conc., theoretical approach, vacancy-hydrogen complex 69588
4H-SiC(1120), CVD and deep level anal. 79275
Si$_{1-x}$Ge$_x$/Si p-channel MOSFET, low-freq. noise charact. 115918
a-SiN/SiO$_2$ thin stacked dielec. syst., trap-controlled SCLC mechanism 92674
SiO$_2$ gate oxide, hole trapping and trap generation 69762
SiO$_2$ ultra-thin films, X-ray irrad. damage, microscopic obs. 81732
SiO$_2$, ultrathin, defect generation and breakdown induced by substr. hot-hole injection 103213
SiO$_2$:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254
SiO$_2$:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiO$_2$-Si interface, trapped charge imaging, noncontact AFM 80925
SrAl$_2$O$_4$:Eu^{2+},Dy^{3+}, persistent/thermoluminescent phosphors, trapping centres 104936
SrS-based ACTFEL devices, electrolum. thermal quenching study 104977
TaN(-polysilicon) SAG n-MOSFETs with ultra thin CVD ZrO$_2$ gate dielec. 126780
VDMOSFET HI sensitivity, pre-neutron irrad. effects 81295
W/TiN/SiO$_2$/Si MOS capacitor struct., TiN deposition method effect 103199
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
ZnS:Mn-based ACTFEL devices, electrolum. thermal quenching study 104977
ZrO$_2$/Si plasma deposited thin films, electron/hole trapping 127135

holiday industry *see leisure industry*

hollow cathode discharges *see glow discharges*

hollow cathodes *see cathodes*

holograms *see holography*

holographic gratings
2D free-space opt. interconnection networks, multi-order diffr. grating *(English)* 127868
3D real-time HOE display syst., animated perspective views 121116
5CB NLC, methyl red azo dye doped, director reorientation by short pulsed irrad. 83005
Acid blue 7 dye soaked gelatin films, self-diffr. gratings 83006
airborne A-band spectrometer, aerosol & cloud opt. prop. rem. sens. 122629
anthracene, reversible photodimerization in polymer layer, dyn. phase hologram recording 105588
aspheric holographic opt. element, non-spherical wave recorded, ray tracing 128583
azo dye mol. doped thick polymer films, holographic grating generation 105594
azo-modified polymer film on liq.-cryst. cells, trans-cis photoisomerisation, opt. data recording 93020
azobenzene liq. cryst. polyester, high diffr. efficiency polariz. gratings 82224
azobenzene polymers, holographic refl. gratings 72091
azobenzene side-chain polyester thin films, rewritable polariz. holographic data storage 82976
azobenzene side-chain polymer liq.-crysts., opt. data storage 93887
azopolymer thin films, opt. induced surface relief gratings fab. 93899
BB-640 holographic plates, fixation-free rehalogenating bleach optim. 82027
binary-phase diffr. gratings for periodic struct. fab. *(Korean)* 72074
Bragg grating fringe stabilizers for telecomm. device mfg. 82977
bromophenol blue(R) dye-rosin film, holographic appls. 72085
carbazol-containing photopolymer photoresist layers, charactn. 93884
carbazole-contained polymers, spiropyran dyes doped, photochromism, holographic recording and erasing 93896
chromophore polymer composites, dual-use erasable photorefr./irreversible holographic gratings 83018
circulating solid state laser beam control by holographic gratings 83013
commercial aspects and appls. *(English)* 104859
concave grating mfg., CAD and eval. 93893
concave holographic diffr. grating fab. 105600
cyanoazobenzene side-chain polymethacrylate, liq. cryst., biphotonic holographic recording 72076
2-cyclooctylamino-5-nitropyridine:C$_{70}$, opt. limiting effect, absorpt. saturation 128470
DCG film, fast-form. absorpt. grating 117528
Disperse Red 1 azo-dye doped cellulose acetate polymer film, holographic refl. gratings 93898
DOEs design and fab. for imaging spectrometer 104861
dual-order spectrograph holographic grating, UV groove efficiency 83001
dye-doped polymer films, photochromic holographic recording 93883
electroholographic switches, Bragg grating, DWDM switching appls. 82210
fab. using two step recording proc. 105595
Far Ultraviolet Spectroscopic Explorer high-dispersion spherical holographic gratings 72071
fiber-end grating, holographic interferometry temp. sens. 121255
Floquet's theorem applied to holographic antenna design 94155
hybrid semicond. polymer reson. grating waveguide struct., fab. and props. 93134
injection moulding of fine structurized opt. surfaces 116792
kinoform gratings, phase-step errors from diffr. efficiencies 72079
large modulation depth photorefr. higher-order grating, image rot. 83019
large optics real-time holographic compensation in space-based opt. systs. 105605
methacrylate photopolymer films, dual holographic grating form. 93894
microstruct. for large-area appls., fab. 117532
mixed amplit.-phase holographic gratings, shifted Borrmann effect 83011
NanoWave scanning probe posn. encoder, nanoscale mfg. posn. meas./control 92258
NLC, dye doped, dyn. holographic grating form. 105603
NLC thin layer, dye-doped, under DC elec. field, holographic grating form. mechanism 105602

holographic gratings continued
nonuniform refl. vol. holographic grating, num. simul. *(English)* 72094
opt. elements for VCD, DVD, diffr. efficiency *(Chinese)* 105597
PDLC, evol. of anisotropic refl. gratings 105596
PDLC transm. gratings, phys. props. 128569
PDLCs, holographically-form., voltage response 82998
phase multiple holographic transm. grating reconstruction props., wave inclination influences 72099
photochromic side chain liq. cryst. polymer, reversible UV image recording 72072
photocond. polymer-NLC hybrid structs., opt. inform. proc. appl. 104832
photonic switching systs. based on EO vol. holographic diffr. gratings, perform. 85442
photopolymer films for vol. phase refl. hologram recording 82990
red sensitive photopolymer holographic Bragg grating, Lloyd's interferometer 117544
photopolymer holographic memory, grating detuning effect 128591
photopolymer holographic vol. gratings, laser cavity appl. 93885
photopolymer thick films, holographic gratings recording 93897
photorefr. harmonic gratings, electron-hole transport model 93907
photorefr. holograms, nonlin. grating combinations, crosstalk, band-transport eqns. 93905
photosensitive copolymer comps. for opt. inform. proc. and storage 71204
poly(acrylic acid) film IR holography 90611
polyimide-C_{70} syst., refr. index light-induced var., holographic data storage 105587
polymer lasers, dispersion cavities with vol. holographic gratings, single-mode operation 93686
polymer vol. phase holographic grating, photo-induced diffusion self-amplif. 83036
polymer-dispersed liq. crysts., periodic structs., EO appls. 82229
recorded ion-etched varied line spacing grating for monochromator 117540
refl. vol. holographic grating, polariz. props. 117530
reson. media with phase memory, opt. echo holography, inform. procs. 105589
sampled grating DBR multiwavelength laser arrays for WDM appls. 105342
self-proc. photopolymer comps. for holographic recording 82991
silica glass, crossed holographic gratings, periodic nanostruct. array 105581
smart free-space opt. interconnects, commun. links 131550
solid-state laser beam mode control using holographic mirrors 93709
stereograms, light valve application 82996
Talbot holographic interferometer 82970
uniaxial centered systs., field improvement 82966
vol. holographic data storage, grating detuning, retrieval image 93022
waveguide grating mirror for large-area semicond. lasers 93662
xanthene dye sensitised DCG holographic sensitivity 83017
Ag halide emulsions, hologram development 82988
Ag halide transm.-type holograms recording in Agfa-Gevaert 8E75HD emulsions 83010
a-As_2S_3 lin. holographic recording 83014
$Ba_{0.77}Ca_{0.23}TiO_3$ photorefr. cryst., FWM procs. 83034
$Bi_{12}TiO_{20}$, self-pumped phase-conjug. mirror recording, spatial subharmonics generation 128446
C_{70} fullerene-doped organic thin films, holographic grating recording 128571
C_{60}-doped NLC films, holographic image storage 105598
CdF_2:Ga real-time holographic media, metastable nature 83030
CdTe:V(Fe) photorefr. cryst. holographic gratings, FWM 128572
InO_x thin films, chem. and optoelectronic appls. 82054
$K_{1-y}Li_yTa_{1-x}Nb_xO_3$, paraelectric phase, wavelength-selective photonic switching 128533
$LiNbO_3$, holograms photorefr. thermal fixing, spatial freqs. nonlin. mixing 128588
$LiNbO_3$ near-stoichiometric crysts., fast photorefr. response 93909
$LiNbO_3$ photorefr. H^+-exchanged waveguides, holographic recording 127773
$LiNbO_3$ photorefr. crysts., thermally fixed holograms develop. 128585
$LiNbO_3$ photorefr. waveguides, ion exchange/implant. fab., holographic recording 127772
$LiNbO_3$ vol. hologram Bragg condition, PV field effects 83031
$LiNbO_3$:Fe cryst., vol. holographic gratings for photorefr. wavelength DEMUX scheme 128590
$LiNbO_3$:Fe photorefr. cryst., thermally fixed hologram develop. 93888
$LiNbO_3$:Fe(Fe,Ce) photorefr. crysts., holograms, thermal fixing efficiency *(Chinese)* 72095
$LiNbO_3$:Fe,Mn opt. fixed local photorefr. holograms, integrated WDM devices 105611
$LiNbO_3$:Fe,Mn photochromic crysts., nonvolatile holographic recording, scatt. suppression 105609
$LiNbO_3$:Fe,Mn photorefr. holographic interferometer sens. 105604
$LiNbO_3$:Tb,Fe, nonvolatile/quasi-nonvolatile holographic recording 128587
$LiNbO_3$:Ti,Cu channel waveguides, permanent narrow-band refl. holograms 83032
Nd:YAG high av. power lasers, self-adaptive cavity, nonlin. mirror 117149
Nd:YAG laser, self-starting, self-induced refr. index gratings 71738
Nd:YAG nonreciprocal self-pumped laser phase conjugator, reson. refr.-index grating 128439
Nd:YAG self-starting phase-conjug. laser, dyn. NLC holographic mirror 71946
a-Si:H/NLC interf. gratings, reversible recording 117545
$Sr_{0.61}Ba_{0.39}Nb_2O_6$:Cr single cryst. photorefr. props. 82046
$YAlO_3$:Mn, two-color holographic recording, nonvolatile readout 105613

holographic interferometry
see also electronic speckle pattern interferometry
3C stereo & holographic PIV in turbulence meas., conf., Mont-Saint-Aignan, France (May 2000) 113273
3D asymmetric temp. field meas. by real time laser interferometric tomography 121254
3D holographic devices, two-beam wavefront reconstruction 83020
3D obj. recogn., shift-invariant, digital holography 107264
3D obj. recogn. digital holographic neural network 129923
aircraft materials testing, photonics techs. appl. 88043
artwork conservation, laser surface cleaning, structural changes 72106
bending strain meas. by digital holography 125141
blood erythrocyte shapes, holographic interf. microscope exam. 122061
CGH based interferometric setup for aspheric lens testing, sensitivity anal. 105617
color holographic interferometry recording, research activities at ISL 82994
compact highly automated pulsed holographic camera systs., white-light-viewable hologram prod. 82980
compact portable photorefr. cryst. holographic camera 83033
cryst. US photorefr. sens. 131896

holographic interferometry continued
depolarised speckle radiation wave front polaris. capture by holographic la mode 117535
compact digital zoom photo-cameras for holographic interferometry 105614
dyn. out-of-plane deform. meas. by pulsed digital holographic interferome 132186
electroplating baths, current dens. meas. methods 89477
fiber-end grating, holographic interferometry temp. sens. 121255
grooved channel, heat transfer enhancement strategies comparative eval. 132
heart valve bio-prostheses, lensless Fourier holographic interferometry 1220
high-quality aspherical optics testing by CGH 83003
image decomp., CGH interf. 84401
incoherent triangular holography, resoln. anal. 128564
lateral-shear holographic interferograms, wave-front control 93903
low-coherence off-axis photorefr. holography, beam walk-off elimination 720
MEMS microstruct. testing by in-line digital microscopic holography sy 128570
microcomponent material mech. params. determn. by digital holography 1212
microcomponents, inspection, digital holography, meas. sensitivity *(Germe* 81630
microcomponents mech. props. meas. by digital holography *(German)* 830
microelement testing by opt. meas. station 117534
microstruct. for large-area appls., fab. 117532
mid-IR holographic correction by opt. addressed liq. cryst. SLM 105606
multicore flexible fiber endoscopes, pulsed digital holographic interferome 87523
paintings, microdetachment studies, hologram interferometry 83023
panoramic holographic interferometers, metrological charact. 128568
red sensitive photopolymer holographic Bragg grating, Lloyd's interferome 117544
photorefr. cryst. based holographic camera, interferometry appl. 93900
polymer photonic crysts. fab. by holographic lithog. 127567
portable photorefr. cryst. holographic interferometer 128586
pulsed TV holography, digital speckle photography, lost interf. phase restorati 83015
rainbow holographic camera, single laser beam recording 117531
real-time analog holography, pattern recogn. 105579
reconstruction using DMD 83037
sandwich holography, simultaneous temp. visualization/heat-transfer coeff. mea 117539
Talbot holographic interferometer 82970
transparent objs., real-time holographic testing method, interf. pattern *(Chines* 105577
transport phenom. studies, holographic interferometry 132224
vibr. fringe pattern extraction, digital camera appl. 117533
violet semicond. lasers for ESPI 72098
whole opt. wavefield reconstruction by digital holography 128582
AsSeTe/AsSe chalcogenide glasses, 3D photonic struct., waveguides an MOEMS fab. 127546
$LiNbO_3$:Fe,Mn photorefr. holographic interferometer sens. 105604
Si MEMS elements testing, grating & holographic interferometry 70335

holographic lenses *see holographic optical elements; lenses*

holographic optical elements
see also holographic gratings
1.5 μm liq. cryst. polariz. independent beam steering switches 96688
3D real-time HOE display syst., animated perspective views 121116
achromatic holographic opt. lens Fourier proc. 84160
Al reflective layer on SiO_2 substr., complex-AM DOE 105610
appl.-specific integrated lenses and filters for microdisplays using elec. switch able Bragg grating technol. 109850
aspheric holographic opt. element, non-spherical wave recorded, ray tracin 128583
atmos. opt. rem. sens., fly-eye design advances 122676
BB-640 holographic plates, fixation-free rehalogenating bleach optim. 82027
beam-shaping CGHs for coherent/partially coherent light 105586
blazed holographic opt. element fab. by ultrahigh-precision cutting 82962
broadband indoor wireless multimedia access, holographic opt. receiver front en 86121
bromophenol blue(R) dye-rosin film, holographic appls. 72085
CDMA for IR wireless commun. systs. appls. 82968
CGH wavefront-transforming element, design and fab., binary opt. techs. *(Chi nese)* 128575
color holographic interferometry recording, research activities at ISL 82994
color reflector, refl. profile 93904
commercial aspects and appls. *(English)* 104859
cryst. US photorefr. sens. 131896
display screen enhancement films, opt. behaviour 92940
long period fiber grating fab. using computer-generated holographic gratin 127692
float glass thickness meas., on-line DOE sens. meas. 124402
integrated optoelectronic systs. opt. field modelling, FFT-based full diffr. metho 105041
IR LD beam spatial filtering by holographic tech. 93710
IR wireless indoor commun., combating multi-path distortion 85178
IR-transparent opt. materials, kinoform elements fab., technol. principles 10560
LC projector using holographic polymer-dispersed LC films 109906
liq. cryst. SLM correction element, laser energy transport adaptive syst. 10482
micro-optics beam shaping elements for holographic recording appls. 72088
opt. design and fab., conf., Tokyo, Japan (Nov. 2000) 124215
optimum HOE lens, CAD design 128581
perfect shuffle opt. interconnection holographic element, red sensitive photo polymer, fab. *(Chinese)* 71625
photonic packet address proc. using holographic correlator 74957
photopolymer film narrow-bandwidth holographic refl. filters 71494
photorefr. cryst. based holographic camera, interferometry appl. 93900
photorefr. FWM, opt. image restoration 129538
scanning disk, straight-line scanning anal., aberration correction *(Chinese* 93886
scatt. medium homodyne/heterodyne imaging by 2D holographic phase-sensitive detector 131915
see-through head mounted HOE display 132110
self-proc. photopolymer comps. for holographic recording 82991
spherical mirror as front end receiver for wireless in-house IR commun. 96677
stereography diffusers, LCD laser light projection 93882
transparent objs., real-time holographic testing method, interf. pattern *(Chinese)* 105577
uniaxial centered systs., field improvement 82966
violet semicond. lasers for ESPI 72098

raphic optical elements continued
dely tunable DBR semicond. laser, dyn. holographically-written grating mirror
05435
halide film, holographic stereograms for 3D computer models visualisation
2995
-S-Se thin films, holographic recording, opt. props. 82989
$_2S_3$ thin film, holographic recording, opt. props. 82989
TiO_3 photorefr. phase-conjugating mirror, intracavity beam shaping, reference-
ss holography 128376
-doped polymers, primary photochem. proc., hologram recording 93895
F excimer laser, beam shaping and homogenization using multifacet Fresnel-
inoforms 105401
NbO_3 elec. controlled vol. holograms for wavelength DEMUX systs. 128589
NbO_3, vol. hologram, elec. controlled spectral filter 71491

raphic storage
) multirate channel coding for opt. page memories 94267
)-area/3D-vol. holographic opt. storage nanotechnology 93877
) opt. data storage, vol. holographic device 127586
B NLC, methyl red azo dye doped, director reorientation by short pulsed irrad.
3005
50 nm WDM vol. holographic read-out memory 116581
D devices, inform. characts. 82067
o-containing liq.-cryst. polymer films, controlled holographic recording 82062
o-modified polymer film on liq.-cryst. cells, trans-cis photoisomerisation, opt.
ata recording 93020
obenzene side-chain polyester thin films, rewritable polariz. holographic data
torage 82976
obenzene side-chain polymer liq.-crysts., opt. data storage 93887
pacity improvement using double-random phase encryption 128565
romophore polymer composites, dual-use erasable photorefr./irreversible
olographic gratings 83018
mpact disc, filter banks, Lie groups 109389
ntent-addressable holographic databases 92948
gital holographic opt. memory syst., hybrid error correction coding 93021
sk memories, defocused Fourier plane holograms storage *(Korean)* 72075
uble random phase encryption digital holographic data security syst. 116580
e-doped polymer films, photochromic holographic recording 93883
urier hologram matrix write/read opt. syst. 128567
urier hologram storage, opt. representation of binary data *(Korean)* 116574
laser pulse opt. data storage 93010
round glass, holographic encryption and MUX, phase conjug. readout algm.
2089
nage decomp., CGH interf. 84401
nage folding, holographic data storage 92950
EMPLEX photopolymer develop. for holographic storage 93006
ultilayered waveguide holographic storage, Fresnel diffr. patterns, FFT 104615
rganic storage media for holographic opt. memory, state-of-the-art, future pros-
pects 82969
EPK films, photothermoplastic storage media, holography 117547
notoanisotropic polymers with photochromic fragments, super-high holographic
memory inform. capacity 93009
notochromic side chain liq. cryst. polymer, reversible UV image recording
72072
notonic packet address proc. using holographic correlator 74957
notopolymer holographic memory, grating detuning effect 128591
notorefr. polymer composite, digital holographic data storage 93017
notorefr. polymeric composite for holographic appls. 116562
lixel misregistration compensated vol. holographic data storage 71222
olariz. encrypted secure holographic memory syst. 82064
olariz. holograms, phase coded recording for data MUX and encryption 82978
olyimide-C_{70} syst., refr. index light-induced var., holographic data storage
105587
eson. media with phase memory, opt. echo holography, inform. procs. 105589
hift-multiplexed holographic memory, photorefr. material storage dens. 93016
oft decision Viterbi decoding, burst error correction 104616
peckle holographic storage, speckle size optim. *(Chinese)* 128580
tereography diffusers, LCD laser light projection 93882
hin film polymer media holographic memory card, data storage 82974
hin hologram superposed image registration, correl. responses 127581
hin polymer storage layer dens. optim. for polariz. holograms 82975
ol. data storage, field distrib. uniformisation along opt. axis 83009
ol. hologram MUX, complex phase encoding method 127583
ol. holographic data storage, grating detuning, retrieval image 93022
ol. holographic memory 116566
ol. holographic storage device inform. quality 82066
ol. holographic storage using dyn. speckle, MUX selectivity *(Chinese)* 128579
wavelength multiplexed microhologram opt. disk, photopolymer layer 116568
Au nanoparticles, opt. recording media, laser-induced size reduction 104611
$Ba_{0.77}Ca_{0.23}TiO_3$ photorefr. cryst., FWM procs. 83034
$BaSrKNaNb_5O_{15}$:Ce,Co, CZ growth, photorefr. effect, holographic storage
104604
C_{60}-doped NLC films, holographic image storage 105598
Ce:KNSBN cryst., holographic recording with orthogonally polarized beams
128563
$LiNbO_3$ cryst. holographic recording, carrier mobility 83029
$LiNbO_3$ cryst., near-stoichiometric, growth, fast photorefr. response 104605
$LiNbO_3$ doped stoichiometric cryst., holographic props. 93878
$LiNbO_3$, doubly/triply-doped, nonvolatile holographic storage *(Chinese)* 72096
$LiNbO_3$ holographic memory, localized recording 105612
$LiNbO_3$:Er, nonvolatile two-colour holographic recording 128574
$LiNbO_3$:Fe, multiplexed holograms selective erasure 105608
$LiNbO_3$:Fe photorefr. cryst., compact holographic memory syst., one-beam
geom. 128566
$LiNbO_3$:Fe photorefr. cryst., compact holographic memory syst. 93872
$LiNbO_3$:Fe photorefr. cryst., holographic triple random PE opt. data encryption
93008
$LiNbO_3$:Fe(Fe,Ce) photorefr. crysts., holograms, thermal fixing efficiency *(Chi-
nese)* 72095
$LiNbO_3$:Fe(Fe,Mg), dual-wavelength holographic storage, fanning noise suppres-
sion *(English)* 72086
$LiNbO_3$:Fe,Mn crysts., two-center holographic recording, persistent hologram
storage 72073
$LiNbO_3$:Fe,Mn, holographic storage dyn. *(Chinese)* 116565
$LiNbO_3$:Fe,Mn photochromic crysts., nonvolatile holographic storage 93906
$LiNbO_3$:Fe,Mn photochromic crysts., nonvolatile holographic recording, scatt.
suppression 105609
$LiNbO_3$:In,Fe cryst., opt. props., holographic storage props. 104618
$LiNbO_3$:Mn,Ce cryst., growth & opt. props., holographic data storage 117537
$LiNbO_3$:Tb,Fe, near-stoichiometric, holographic storage appl., EPR obs. 72077

holographic storage continued
$LiNbO_3$:Zn,Fe, CZ growth, holographic storage 104619
$LiTaO_3$:Fe congruent cryst. nonvolatile holographic storage 93890
$SrBaNbO_3$, digital holographic memory, modulation coding 71220
$(SrBa)Nb_2O_6$:Ce, photorefr. crysts., cached holographic 3D display syst. appl.
105616
$SrBaNb_2O_6$:Ce,Cu, CZ growth, phase conjug. effect 101154
$YAlO_3$:Mn, two-color holographic recording, nonvolatile readout 105613

holography
see also acoustic holography; computer-generated holography; electron holography; holographic gratings; holographic interferometry; holographic optical elements; holographic storage; microwave holography
2D hologram commun., image compression, wavelet anal. *(English)* 93879
3D meas. of microstruct. using holography *(German)* 83026
3D obj. recogn., distortion tolerant, digital holography 107265
3D optoelectronic image proc. and recogn. 107288
advanced holography teaching in high school 78481
anthracene, reversible photodimerization in polymer layer, dyn. phase hologram
recording 105588
at. resoln. X-ray holography 93873
autostereoscopic displays, big size holographic screen 109897
azobenzene side-chain polymer liq.-crysts., opt. data storage 93887
azobenzene-doped polymer film, polarized-light-controlled holographic recording
83035
bank notes, holographic high level security features 82985
BB-640 holographic plates, fixation-free rehalogenating bleach optim. 82027
brain MRI slices, holographic two-step storage method *(Chinese)* 98395
Brillouin enhanced dyn. holography, dyn. aberrations 128573
carbazole-contained polymers, spiropyran dyes doped, photochromism,
holographic recording and erasing 93896
CDMA for IR wireless commun. systs. appls. 82968
coherent hard X-rays FT holography 72081
color holograms, specially designed fast exposure syst. 82993
color holographic interferometry recording, research activities at ISL 82994
compact 3D profilometer with grazing incidence diffr. optics 83027
compact highly automated pulsed holographic camera systs., white-light-view-
able hologram prod. 82980
composite input scene correl. 129635
conical multiplex holography, distortion correction using direct obj.-image rels.
128578
cubic (111)-cut photorefr. piezocrystals, two-wave mixing, diffr. efficiency
optimisation 127570
current holographic materials available from Slavich, recent advances 82026
2-cyclooctylamino-5-nitropyridine:C_{70}, opt. limiting effect, absorpt. saturation
128470
2-cyclooctylamino-5-nitropyridine-C_{70} syst., laser radiation opt. limitation
105482
DCG hologram, reprocessing, expt. research 117543
Denisyuk's hologram recording, brightness distrib. features 82972
diatomic small nanostructure objs., opt. holography, near-field effect 72083
diffuse obj. tilt meas. by double-exposure speckle photography, speckle fanning
132151
digital holography, correct-image reconstruction in presence of severe anamorph-
ism 93908
digital master holograms, coherent masks, comparative shape control 117536
disk memories, defocused Fourier plane holograms storage *(Korean)* 72075
display screen enhancement films, opt. behaviour 92940
DWDM all-opt. network wavelength discipline/power bal. 86068
electroholographic switches, Bragg grating, DWDM switching appls. 82210
eukaryotic cell imaging by X-ray FELs 87727
EUV lensless FT holography 83002
fixation-free rehalogenating bleached holograms, overmodulation effects 93891
Fourier hologram matrix write/read opt. syst. 128567
Fourier holography, alg. foundation 72093
fractal digital holograms, security appls. 82971
full color Lippmann type holograms replication *(Japanese)* 83000
fullerene-containing PDLC, thin phase holograms recording 83021
glass plate, holographic marking by internal periodic struct. using Nd:$LiYF_4$ laser
(Japanese) 105584
hard X-ray fluoresc. holography 72084
high av. power solid-state pulse-repetitive ps lasers, distortions dyn. correction
128382
high resoln. wavefront control conf., San Diego, CA, USA (Aug. 2000) 100415
high-index opt. coating security holograms 82986
high-speed 3-D imaging using photorefr. holography 118285
hologram binarization, iter. stepwise quantization method 129785
holographic portraiture, display techs. 82984
holography conf., St. Polton, Austria (July 2000) 78374
image reconstruction, simul. of other phenom. 93881
incoherent holography, hand drawn images 82964
IR light holographic recording proc. in photorefr. crysts., two-step procs. 93889
laser beam control conf., St. Petersburg, Russia (June 2000) 124197
Leith-Upatnieks transm. hologram, public display appls. 82983
liq. cryst.-porous glass syst., polariz. holograms 82997
liq. crysts., opt. props., conf., Humacao, Puerto Rico (Sept. 1999) 78380
living human face meas. using pulsed holography 82973
marine plankton underwater particles, in-line/off-axis holorammetry, replay
facility 88173
mech. vibrs. meas. by time av. holography project 82982
microcomponents mech. props. meas. by digital holography *(German)* 83025
microscopic objs., digital holographic reconstruction, aberration compensation
83008
microscopic particles, hologram recording and reconstruction 105590
MM-wave antenna, semicond. plasma, electronic beam steering 105875
multi-layer hologram diffr. props. 117541
multi-posn. space-coherent radar, antenna posns. sync., syst.-level anal. 120432
multiple plane velocimetry, in-line digital holography 117546
multiple-exposure rainbow holography, vert.-area partition recording, 3D mono-
chromatic image synthesis 105585
Odin telescope, 119 GHz meas. with hologram-type CATR 120496
on-axis digital heterodyne holography, synthetic-aperture expt. in vis. 128577
opt. images, multi-channel correl. recogn. method 118746
optoelectronics, photorefr. materials, conf., Strasbourg, France (May/June 2000)
124219
particle tracks, high-resoln. recording by in-line holography 82981
phase-contrast SR CT, math. foundations 132492
photoanisotropic materials, holographic recording 72087
photopolymer films for vol. phase refl. hologram recording 82990
photopolymer materials for refl. phase hologram recording 105593

holography continued
polariz. holograms, phase coded recording for data MUX and encryption 82978
polymer based tracking novelty filter, two-beam coupling geom. 71929
polymer photonic crysts. fab. by holographic lithog. 127567
postage stamps with embossed holograms 82963
power combining cct., broadband anal. 102523
pseudo color coding fractional FT rainbow hologram, anti-counterfeiting appls. *(Chinese)* 105592
pulsed holography wavelengths overview 82979
push-pull dithiole, fluorene acceptors as electron transport materials for holography 116908
quantum holography, mag. reson. tomography and gravit. wavelets 82965
real-time recording, LCD, aberration compensation 72092
rebroadcasting sig. method in opt. backplane bus syst. 93269
recycling of undiffracted laser light for hologram reconstruction 105582
refl. laser radiation polariz. charact. meas. by coord.-free holographic method 117340
reflective type opt. addressed liq. cryst. SLM, holographic correction 105607
reson. media with phase memory, opt. echo holography, inform. procs. 105589
Rose Bengal-Methylene Blue panchromatic ion pair for holographic recording material 82036
self-proc. photopolymer comps. for holographic recording 82991
Slavich PFG-01 red sensitive plates, fixation-free bleached silver halide transm. hologram recording 117538
soft X-ray holography at NSRL 72080
Spiropyran doped polymer matrix films, photochromic react., reversible holographic recording 93781
stereograms, light valve application 82996
subsea holographic recording of plankton/marine particles 111462
surface shape meas. by phase-shifting digital holography 82999
surface-plasmon-coupled waveguide modes, holography 117529
telecomm. networks, opt. neuro-fuzzy systs. 120120
thin polymer storage layer dens. optim. for polariz. holograms 82975
transparent objs., real-time holographic testing method, interf. pattern *(Chinese)* 105577
UV lithog., off-axis TIR holography 115747
virtual holographic recogn., digital methods, med. appls. 82967
vol. hologram, diffr. efficiency, polariz. props. 117542
vol.-holographic confocal microscope, turbulence imaging 93901
white light expt. holography for high school teaching 78480
whole opt. wavefield reconstruction by digital holography 128582
X-ray FEL, appls. 105378
X-ray image holography, nanometer resoln., micro-zone-plates *(Chinese)* 105578
Ag halide emulsions, hologram development 82988
Ag halide film, holographic stereograms for 3D computer models visualisation 82995
Ag halide lab.-made emulsion 82987
Ag halide sensitized gelatin, diffuse-obj. holograms, refr.-index modulation 83007
Ag halide transm.-type holograms recording in Agfa-Gevaert 8E75HD emulsions 83010
Ag-containing porous vol. medium transmissive holograms, periodic fs pulse recording 93892
Ag-halide materials for multicolor holography, comparative study 82992
As-S-Se thin films, holographic recording, opt. props. 82989
a-As_2S_3 lin. holographic recording 83014
As_2S_3 thin film, holographic recording, opt. props. 82989
$Bi_{12}SO_{20}$ photorefr. JTC, rot. invariant pattern recogn. 107251
$Bi_{12}TiO_{20}$ photorefr. cryst. charactn. by feedback-controlled running holograms 82051
Cr-doped polymers, primary photochem. proc., hologram recording 93895
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
InP 2D nanostructures, two-time laser holography fab. 115794
$K_{1-y}Li_yTa_{1-x}Nb_xO_3$, paraelectric phase, wavelength-selective photonic switching 128533
$LiNbO_3$ cryst. holographic recording, carrier mobility 83029
$LiNbO_3$ elec. controlled vol. holograms for wavelength DEMUX systs. 128589
$LiNbO_3$ photorefr. H^+-exchanged waveguides, holographic recording 127773
$LiNbO_3$ photorefr. crysts., thermally fixed holograms develop. 128585
$LiNbO_3$:Fe cryst., holograms, ionic/electronic dark decay 83004
$LiNbO_3$:Fe, multiplexed holograms selective erasure 105608
$LiNbO_3$:Fe photorefr. cryst. vol. holographic proc., 3D obj. recogn. 118660
$LiNbO_3$:Fe photorefr. material, parasitic hologram reconstruction 83028
$LiNbO_3$:Fe(Fe,Ce) photorefr. crysts., holograms, thermal fixing efficiency *(Chinese)* 72095
$LiNbO_3$:Fe,Mn opt. fixed local photorefr. holograms, integrated WDM devices 105611
$LiNbO_3$:Mg photorefr. cryst. beam deflection 116800
$LiNbO_3$:Tb,Fe, nonvolatile/quasi-nonvolatile holographic recording 128587
$LiNbO_3$:Ti,Cu channel waveguides, permanent narrow-band refl. holograms 83032
$LiTaO_3$ stoichiometric photorefractvie cryst. multichannel correlator 82053
$LiTaO_3$:Fe congruent cryst. nonvolatile holographic storage 93890
Nd:YVO_4 holographic laser oscillator, CW, diode-pumped, constr., props. 93572
Si macroporous photonic cryst. substrs. at 1.55 μm 82184
SiC, 4H, free carrier diffusion, transient grating techs. 69579
$SrBaNb_2O_6$ ferroelec. crysts., neg. applied field index change, interferometric meas. method 82050

home automation
see also building management systems
2.4 GHz ISM radio soln. for Bluetooth and wireless home networking 96143
adaptive resource mgt. syst. for home-area networks 74233
cellular telephone-based home appliance control syst., prototyping 108776
CMOS analog front-end chip, HomePNA appls. 108472
collaborative media streaming in in-home network 74232
ECHONET device adapter *(Japanese)* 85452
Energy Management System *(Japanese)* 88295
gateway technols. for home network and their implement. 74231
HAVi/ECHONET gateway *(Japanese)* 85119
Home Safety Station Beruhi *(Japanese)* 85145
Honeywell Global Home Server, home automation commun. security syst. 119711
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 113211
Internet access to home area network, AutoHan project 74175
Living network Control Protocol for domestic appliances 134665
networked house of the future, guide 74352
open service gateways for home, software archit. 74176
power line and Bluetooth for domestic appliance control *(German)* 89465

home automation continued
power line commun. interface based on SS technol. *(Chinese)* 107793
smart buildings, multifunctional transponder-based appls./services 75770
tele-Haus project with integrated microsystems 78349
user interfaces design *(German)* 86876
wireless home link syst. in Japan at microwave/MM-wave freqs. 130756
wireless video home-link using 60 GHz band, broadcast TV sigs., MMIC-b setup 131339
wireless video home-link using 60 GHz band, nonlin. IMD 131341
wireless video home-link using 60 GHz band, transmitter/receiver de 131340

home computing
see also hobby computing; home shopping; home working
audio-video content abstraction program interface for home network ap 120540
CableLabs CableHome project, home networking 74360
commodity software for audio/visual home appliances 120539
consumer commun./mass market inform. networking 96182
data broadcasting software *(German)* 97053
ECHONET commun. middleware program, support tool for developing comm software *(Japanese)* 85120
Ethernet home networking 74371
HAVi appls. on Internet-enabled devices, rem. execution 119691
IEEE1394/Ethernet technols. based home networking syst. 119692
IEEE 1394 wireless home networks, ASK transceivers, 60GHz-band 13075
inform. wiring syst. using bal. cable for high-speed network 119693
Internet access to home area network, AutoHan project 74175
IPv6 & IEEE1394 for home networking *(Japanese)* 84944
MGCS HomeRouter SJ6, develop. *(Japanese)* 85068
multimedia friendly home WLAN 85186
μVNC embedded module for low-cost Internet connectivity/home appliar interconnectivity 119695
open service gateways for home, software archit. 74176
PHS for wireless home commun. syst. *(Japanese)* 85596
polymer opt. fibre appls. 119729
private and public digital domestic spaces 96248
protocol for wide area secure networked appliance commun. 130340
residential gateway as service platform 119761
secure rem. access from office to home 130636
unified digital platform, develop. 119807
wireless cardiorespiratory telemonitoring syst. use by elderly patients 13318
wireless commun. appl. 96432
XML-based household profiling for home networks 119607

home shopping
e-commerce deployment, project planning, time-based mgt. 89810
WWW shopping, coloured goods ordering, display problems 109876

home working
integrated environment's control syst. for quadriplegic pers. 111187
VPN, new revenue opportunities for MSO 97073
wireless home link syst. in Japan at microwave/MM-wave freqs. 130756

homodyne detection
2D video sig. spectrum in FMCW homodyne radar, phase noise 86151
coherent homodyne opt. network crosstalk modelling 85999
coherent opt. PSK systs., perform. degrad., nonnegligible loop delay time int ence 131407
coherent state superposition, detect. schemes, opt. commun. syst. 131355
radio receiver planning, noise/intercept point calc. 119869
scatt. medium homodyne/heterodyne imaging by 2D holographic phase-sensit detector 131915
spectral phase interferometry for direct elec.-field reconstruction, homody detect. 128419
weak opt. sig. detect. *(Polish)* 73177

homogenising *see heat treatment*

homopolar generators
self-exciting Faraday disk homopolar dynamo, behav. in external mag. fi 112548

homopolar motors
high/low T_c supercond. for magnets & motors, microstruct. aspects 92883
variable reluctance motor using axial field coil 133982

homopolymers *see polymers*

Hopf bifurcation *see bifurcation*

Hopfield neural nets
adaptive image restoration by neural networks 106841
affine invariant obj. recogn., Hopfield network appl. 107154
articulated shape, recogn. and visual model learning, accumulative Hopfie matching 107261
asynchronous multicarrier CDMA commun. syst., Hopfield neural net/Viter decoding 73868
Banyan network with variable-length packets, neural network based schedul *(Chinese)* 95853
Bushehr PWR, fuel mgt. optim., ANN appl. 133852
cellular call capacity optimisation, HNN DCA algm. 85707
computer-generated forces modelling, data fusion technol. appl. *(Chines* 122765
constrained nonlin. optim., barrier method, modified Hopfield network ap 100963
contextual-constraint-based Hopfield neural cube, med. image segmentati 110517
crossbar switching, Hopfield neural net appl., theoretical limitations 73804
cryptosystem, symmetric encryption algm., neural network *(Chinese)* 12924
degradable VLSI/WSI arrays, reconfiguration algm. based on Hopfield netwo *(Chinese)* 104024
DNA analog vector alg. and phys. constraints on large-scale DNA-based neu network computation 69348
economic dispatch problems, Hopfield neural network soln. approaches 1122
edge detect., Hopfield neural network 95524
encryption syst. based on Hopfield neural network 118028
image color quantization, competitive Hopfield neural net 73353
image color quantization by Hopfield neural net 106667
image recogn., Hopfield neural networks algms. effectiveness 118715
image registration and obj. recogn., affine invariant matching 84637
image restoration method using, Hopfield neural net model 94726
infinite no. of cells in Hopfield networks, VLSI 91148
interactive image retrieval, integrated segmentation tech. 94941
LFMCW car sens., OO algm. for range super-resoln. estim. 75080
lung adenocarcinoma, tissue colour images anal. 87350
microwave tomographic reconstruction, inverse scatt. problem 129650
neuro-vision syst., 3D image reconstruction 118745

l neural nets continued
in. optim., constrained, using neurofuzzy systs. 100956
nal act. power flow solns., modified Hopfield neural network 122945
et-switched networks, min. delay routing neural net method 85264
rem. image sens. by Hopfield neural net, syst. fusion 84132
er dispatch with prohibited zones, Hopfield neural net 111801
omized Hopfield networks, recogn. ability 93270
rsive cellular networks for inverse problems 94445
le-phase power transformer windings, inrush current forces 134119
l satellite mission scheduling using Hopfield neural networks *(Chinese)* 9031
o images, segment matching, neural net 94725
olic Hopfield-type associative memory, specs. and FPGA implement. 102467
I systolic implement. 68977

g conduction
rph. organic semiconds., interface-limited injection meas. and modelling 5436
ge carriers/excitons relax. in polymers 92577
ug. dendrimer films, charge transport, electrolum. appls. 127993
ug. polymer diode, voltage-modulated MM-wave spectrosc., mesoscopic arge transport 115834
nond:B, heavily-doped, high cond., impurity states 115295
nond, ion-implanted, graphitization, variable range hopping cond. 91987
nond films, plasma CVD, struct., elec. props., Schottky devices 126209
rdered organic LEDs, charge carrier transport/recomb. 105014
S device, oxide defects, freq.-resolved capacitance 115463
ED, hopping cond., computer simul. *(Japanese)* 116987
ED, mol. materials, elec. transport 117006
iothiophene single crysts., charge transport, conjug. length depend. 91710
anic LED, charge transport/light-emission, intermolecular interacts. effect 7419
anic LED carrier behavior anal. on hopping cond. basis, computer simul. *apanese)* 82404
tacene single crysts., hole transport 91717
y(2,5-thienylene vinylene) films, disordered semiconds., isokinetic temp. 5346
y(methyl(phenyl)silanediyl), charge carrier transport 90567
y(silylene)s, charge carrier photogeneration/transport, polar acceptor side oups effect 71507
ol. disordered systs., generalized effective-medium approx. for hopping trans-rt 115330
$Ga_{1-x}As$ parab. well, QHE 80839
N_x films, opt. absorpt., elec. cond. 69554
$KBiO_3$, surface resist., diamag. shielding suscept. 70644
nagnetron sputtered thin films, microstruct. and effect on cond. 69560
$(Mn_{1-x}Nb_x)O_4$ tetragonal K_2NiF_4-type cpd., elec. props. anal. 80773
Te, doped samples, variable-range hopping, electron correl. effects 115300
$ulnSe_2$ elec. characts., impurity band cond. effects anal. 126093
As, SI, effect of Ar^+ implant. on galvanomagnetic props. 80702
As, doped samples, variable-range hopping, electron correl. effects 115300
aAs:Be/AlGaAs QW multilayered structs., low-temp. hopping cond. over pper Hubbard band 126133
aAs:C,Mg wafer, elec. isolation, proton ion bombard./annealing 126038
As:Cr(Fe)(Co) film, electronic & mag. props., MBE growth 79243
As:N, implanted, annealing temp. depend. of elec. cond. and capacitance dis-rsion 69543
As/AlAs superlattice QW, photoexcited carriers, perp. transport 126166
As/AlGaAs, 2D variable-range hopping cond., electron-electron interact. influ-ice 115360
N MBE layers, highly resistive, elec. transport 91676
N, low temp. transport, carrier densities, impurity sites effects 126069
, doped samples, variable-range hopping, electron correl. effects 115300
$ie_{10-x}In_xSe_{90}$ thin films, dielec. props. 92592
$lg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor nd 115301
$_4Ga_{0.6}As/GaAs(311)B$ QD superlattice, metal-insulator transit. 80888
$Ga_{1-x}As/GaAs(311)B$ self-assembled QD arrays, in-plane photocurr. 115416
Se_3 amorph. films, AC cond., dielec. props. 91693
FeO_3 perovskite thin films, RF magnetron sputtering, elec. cond. *(Japanese)* 0255
Mn ferrites, elec. cond. 91686
$_1Fe_{1.8}Cr_{0.2}O_4$-$BaTiO_3$ composites, AC cond., magnetoelec. effect 127155
$_{0.67}Sr_{0.33}MnO_3$ epitaxial films, microwave losses, dc transport, mag. prop. 8992
ZT film capacitors, dielec. relax., leakage currents 70416
ZT/$(LaSr)_2CuO_4$ perovskite ferroelec. FET, strongly modulated cond. obs. 1338
$-O_2$-based resist. thermometers, magnetoresist. below 0.3 K 109483
doped samples, variable-range hopping, electron correl. effects 115300
n-MOSFET, Ta_2O_5 gate dielec., n^+-p jn. leakage characts. 69629
planar resistors, temp. response curves, low-temp. hopping cond. nonohmic ffects 75420
As-based photodetectors, photoelec. charact., blocked hopping cond. 75520
P nanocryst. films, low temp. transport mechanisms *(Chinese)* 115297
P(As)(Sb)(B)(Ga), high-field hopping cond., hopping domains 115286
C-N(:B) ceramics, struct. and transport props. 126102
BCN ceramics, high-temp., dopable electronic materials 69562
C, 4H, band to band tunneling, high field transport 69598
CN ceramics, high-temp., dopable electronic materials 69562
SiGe films, low temp. cond., ESR, opt. absorpt. 115331
O_2-B_2O_3-P_2O_5-TeO_2-Fe_2O_3-BaO-CaO glass, elec. relax. 92581
O_5-P_2O_5-TeO_2 glasses, switching, DC cond. 115334
O_3-B_2O_3 glass, elec. cond., O_2 sens. props. 97457
O_3-Sb_2O_3-TeO_2 glass, elec. cond., O_2 sens. props. 97457
$_{1-x}Mn_xSe_{1-x}Te_y$ epilayers, dielec. props. 80767
O:Fe, excitonic procs., PL/elec. DC behaviour 126040

antennas
dielec. & perfect thin cond. surface modelling, FDTD method *(Chinese)* 05695
GHz indoor wireless commun., fan-beam antenna 72526
.4 GHz LOS indoor channels, delay spread effects 85575
erture antennas at 42 GHz for LMDS commun. syst. 72615
ray fab. using SU-8 lithographic technol., bolometer appl. 94200
-band corrugated horn for satellite Earth station antennas 72702
-band microwave relay antenna syst., feed design 72611
rc.-symmetric feed horn design, profile options 72572
mpact forward-looking SAR with digital beamforming on receive only *English)* 75210
nical horn antenna excited by quasi-Yagi array, 60 GHz design 94157

horn antennas continued
conical horn antennas loaded with metallic discs, near-field meas. 94142
corrugated horns perform., surface waves high-Q resons. effects 72512
dielec. lens antenna curvature design 105892
directivity diag. synthesis 72603
dual profile corrugated circ. waveguide horns for radioastronomy appls. 83534
feed for MM wave reduced-sidelobe broadband antenna design 72594
Gaussian profiled horn antennas, design aspects 72616
GBS/Milstar airborne RX/TX antenna 105874
generating line break antennas, polariz. characts. 83632
H-plane strip-loaded hollow dielec. sectoral horn antennas for sq. radiation pattern 72539
hard corrugated conical horn anal. by method of generalised scatt. matrices 83567
high-directivity planar antenna using controllable photonic bandgap material 83571
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
impulse radiating antennas with arrays, prompt aperture efficiency 105861
Internet wireless access, highly sectorized syst. 83701
Ka-band radar front-end, appl. to avalanche detect. 133346
Ka-band spacecraft beacon antenna for propag. study 72466
Ku-band act. transmit-array module with horn or patch array sig. launching/receiving device 72648
landmine detect., UWB ground penetrating radar, time-domain modelling 77098
large adaptive reflector antenna, feed-reflector design 105902
liqs., complex permitt., wideband/noncontact charactn. 109932
metal-flanged rect.-aperture arrays anal., parallel framework 128896
microstrip antennas in subsurface sens., moisture meas. & NDT 88194
MM-wave band ship-borne navig. radar 120444
MM-wave Gaussian radiation pattern antennas 117820
MM-wave indoor radio transmitter/receiver with antenna 131089
modal scatt. at radiating apertures, near field anal. 128756
multi-beam dual-reflector submm-wave telescope on ESA PLANCK surveyor, fast PO simul. 75257
multi-mode conical corrugated horn design 83557
multi-moded corrugated horns for far-IR space appls., radiation patterns 117815
multireflector offset antennas, cross-polariz. component elimination, beam mode anal. 105980
octagonal micromachined horn antenna for submillimeter-wave appls., anal. 83643
optimum gain pyramidal horns design 72586
pass. act. L- and S-band microwave sens., marine/hydrol. 76905
pyramidal horn gain proximity corrections, anechoic chamber, two/three-antenna method 72477
radio-on-fibre syst., photodetect., photonic feeding antenna & transm. 85567
spaceborne microwave radiometer, multifrequency corrugated feed 117861
spatial power combiner, act. reflect array and horn antenna 69039
TEM face-to-face horn fed pulse radiation antenna 83547
TEM horn antennas optimized for transient radiation 105909
TEM-wave transit. devices synthesis, geom. opt. Maxwell eqns. 83539
ultra-wide band ground penetrating radar antennas, perform. 83618
ultrawide band TEM antennas, radiation procs., num. simul. *(Chinese)* 105883
UWB microstrip quasi-horn antenna, develop. 83537
waveguide/horn radiators, matching/directional charact. anal. 117816
wideband TE_{21} mode tracking corrugated horn with feed syst. 72576
window on medium cover, spec. determ. 72605
wire frame TEM horn feedback paraboloid, high power pulse radiation antenna *(Chinese)* 117799
X-, Ku- and Ka-band feed horns for global-Earth coverage from geostat. orbit 72570

horology *see time measurement*
hospital administration *see health care; medical administrative data processing*
hospital engineering *see biomedical engineering*
hospital information systems *see medical information systems*
hot carriers
0.18-μm 3.5/6.8 nm dual gate oxide CMOS technol., effects of F on parametrics and reliab. 81506
1.55 μm SOA Auger recomb. heating/hot phonon effects 71798
2D semiconds., terahertz spectral emission from hot carriers 125644
ballistic electron normal energy distrib. meas., three-terminal HET 75854
bolometer, hot-electron, with normal metal-insulator-supercond. tunnel jn. 87011
buried struct. in semicond., BEEM, review 115452
CMOS 0.18 μm technol., RF cct. perform. degrad. due to soft breakdown and hot carrier stress 91337
CMOS cct., strained silicon channel 81500
CMOS device, hot carrier reliab., deuterium annealing 126808
CMOS devices, ultrathin oxide reliab., phys. and predictive models 116023
CMOS hot-carrier-induced cct. degrad., long run reliab. problems 81510
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS product screening strategy for low failure rate 81524
CMOS RF cct., soft breakdown and hot carrier effect 104136
CMOS technol., hot carrier emission, timing probe 127059
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
cpd. semicond. devices and ICs, conf., Aegean Sea, Greece (May/June 2000) 78443
deep sub-micron MOSFETs, hot carrier effects *(Chinese)* 103850
deep submicron grooved-gate PMOSEET charact., substr. doping dens. influ. *(Chinese)* 70112
deep submicron MOSFETs, hot carrier degrad. at room/liq. N_2 temp. 70102
deep-sub-micron grooved-gate p-channel MOSFET, hot-carrier degrad., donor interface state 70078
degraded short channel LDD-nMOSFETs, 2D electrostatic model, hot carriers 70081
DQW, nonequilibrium electrons, Boltzmann eqn. approach 126151
dual floating gate flash memory cell, multilevel operation 79869
Eldo implemented hot-carrier reliab. simul. 103744
flash EEPROM, p-channel/n-channel, reliab. comparison 79895
flash memory, multilevel storage, channel hot electron prog. 102166
gate oxides, 6.8/3.5 nm, plasma damage, param. shifts/hot-carrier response/dielec. integrity 69879
grooved-gate n-channel MOSFET, hot-carrier effect, MEDICI simul. *(Chinese)* 115898
grooved-gate PMOSFET, hot-carrier-degrad. mechanism and hot-carrier-effect immunity *(Chinese)* 115911
Gunn diodes, simul. of phys. procs. with island injectors of hot electrons 115819
Hitachi divided bit-line microcontrollers with flash memory *(German)* 125559
hot-electron bolometer mixer, IF bandwidth, hotspot model 71180

hot carriers continued
hot-electron micro-bolometer, thermal charactn. 70909
IC reliab., short-time tests, opt. interconnect/transistor failures, stat. models 78723
III-V semicond. hot-hole lasers 93650
lateral asymm. channel MOSFETs, hot-carrier induced interface-trap profiles 126759
layout-driven hot-carrier degrad. minimization using logic restructuring techs. 125343
LDD NMOSFET hot carrier degrad. phenom., W or S shape evol. 81354
LDD NMOSFETs, 0.18 μm, freq. perform., elec. stress effects 103888
LDMOS power transistor, cellular base station appl. 126825
LDMOS transistors, SOA optim. using 2 peaks of body current 126844
logic design, appl. of hot-carrier reliab. simul. 101996
MOS device, through-the-gate implant., elec. reliab. 103196
MOS device degrad., role of holes in D isotope effect and mechanisms 91889
N-MOSFET, CHISEL injection, lifetime prediction 126810
MOSFET, drain jn. space charge region, interface trap passiv. 126819
n-MOSFET, GIDL degrad., hot carrier stress *(Chinese)* 81327
MOSFET, hot electron degrad. and substr. current 126734
p-MOSFET, off-state stress, device degrad. 92380
MOSFET, oxide soft breakdown, device degrad. 126731
MOSFET, short-channel fluorinated device, hot carrier effects *(Chinese)* 103846
MOSFET 2D analytic distrib. models, drain/substr./gate current distribs. 115922
MOSFET flash EPROM devices, lateral profiling of interface traps and oxide charge, charge pumping 114763
MOSFETs, deuterium passivated, hot carrier lifetime/dielec. breakdown 103863
MOST, hot electron stressed, D_2 passiv. of interface traps 103854
n-MOSFET low-standby-power design effects on hot carrier reliab. 126745
n-MOSFET reliab., hot-carrier degrad., gate dielec. electron trapping 103833
n-MOSFETs, expt. verif. of high energy tail in electron energy distrib. 126754
n-MOSFETs, sub-0.25 μm, hot-carrier-induced photoemission peak, location from gate center 103890
NIS jn., electronic refrigerator, heat sources 70885
NIS submicron tunnel jn., micro-bolometer 71171
nMOSFET, 1/f noise behavior rel. to NO nitridation 70088
nMOSFET, hot-carrier degrad., interface trap generation effect 70089
nMOSFET, hot-carrier reliab., H-transport interface-trap-generation model 70130
nMOSFET, small-sized, hot carrier reliab., doping conc. effect *(Chinese)* 81335
NMOSFET enhanced channel hot carrier degrad., high V_{GS}, electron-electron scatt. role 81353
NMOSFET protection devices in 0.13 μm CMOS technol., hot electron/ESD stress interact. 81526
NMOSFETs, CMOS proc. steps impact on drain current kink at liq. He temp. 70312
nMOSFETs, hot-carrier degrad., interface trap generation crit. energy 70086
NMOSFETs, worst-case hot-carrier stress condition, LDD resist. effects 70116
partially depleted SOI MOSFETs, generation/recomb. effects 103736
PDSOI NMOSFETs, channel hot-carrier-induced gate oxide breakdown anal. *(English)* 126804
phonon-cooled hot electron bolometer gain/noise, hot spot mixer model 71135
PMOSFET, deep submicron, neg. jn. depth *(Chinese)* 103847
PMOSFETs, high reliab., hot-carrier instabil. considerations for ⩽100 nm technol. 126744
polysilicon surface channel CMOS devices, plasma charging enhanced hot carrier effect 115939
polysilicon TFT, hot carrier degrad./kink effect 97652
polysilicon TFT, low-temp., hot carrier effects 81272
polysilicon TFT, reliab., CMOS inverter cct. 115929
polysilicon TFTs, enhanced degrad. under dyn. hot-carrier stress 126753
polysilicon TFTs, low temp., hot carrier effects anal. using device simulator 103891
polysilicon TFTs with D plasma treatment, DC reliab. improve. 92344
power UMOSFETs, LV, trench geom./proc. impact on perform./reliab. 81349
QD IR photodetectors, neg. differential photocond. 75513
quantum cascade laser hot phonons, interface phonon lifetimes 71830
quantum-cascade lasers, carrier thermalization vs. phonon-assisted relax. 82618
reliab. phys., conf., Orlando, FL, USA (April/May 2001) 78456
scanning hot electron microscopy, hot electron/thermal electron current ratio 70010
self-convergent MOS flash-memory prog. scheme for MV and analog data storage 102438
semicond. field microemitter, hot electron transport, 2D quasi-hydrodynamic approach 69441
semicond. quantum wire, hot-electron power losses, Q1D electron gas model 115381
semiconds., hot electrons, high-field transport 91574
six moments of Boltzmann's transport eqn. for device simul. 103743
SOI MOSFET, deep submicron device archit., reliab. *(English)* 92337
SOI MOSFET's transfer charact., drain current deep-saturation effects *(Chinese)* 126749
SOI N-MOSFETs, hot carrier degrad. 126818
SOI NMOSFET, interface traps, forward gated-diode monitoring *(English)* 126803
SOI nMOSFETs, mesa-isolated, Bi-MOS mode operation, hot carrier degrad. 103817
spin-valve transistor, fab., charactn., and phys. 81922
spin-valve transistor, magnetocurrent temp. depend., phenomenological model 104549
STI CMOS devices, phys./quantitat. width depend. hot carrier model 81356
submicrometer CMOS technols., hot carrier degrad. and ESD interact. 116022
submicron P- and N-MOSFETs, expt. study and modeling of white noise sources 126799
terahertz detector and mixer, 2DEG hot electron bolometer 102615
thin gate oxide MOSFETs, interface states, thermal annealing 126814
ultra-thin oxides in p-channel MOSFET, wear-out accel., body effect induced 103841
VDSM IC, full-chip reliab. simul. 126999
voltage overshoots in high-speed digital SoCs, built-in-chip testing 101916
Al hot electron bolometer, subMM-wave mixer 71134
Al supercond. hot electron bolometer mixer, conversion efficiency 71176
AlGaAs/GaAs 2DEG, contactless heating by strip-line guided microwaves 103102
AlGaAs/GaAs microwave power HFETs, turn-off characts., surface effects 70191
AlGaAs/GaAs power HFET, elec.-field-related reliab. 103923
AlGaAs/GaAs power HFETs, hot-carrier-stressed devices, gate-lag effects 126873
AlGaAs/InGaAs HEMT, simul. of electron tunneling 126898

hot carriers continued
AlGaAs/InGaAs pseudomorphic high electron transistors, effects of hot-elec stress 103919
AlGaAs-GaAs hot electron injection laser, vert. integrated transistor-laser st 105310
AlGaN-GaN HEMTs, degrad. charact. 81394
AlN, luminesc. spectrum, high elec. fields 91667
Au/(AlGa)As heterostruct., second derivative BEEM spectra 91876
$CoSi_2$/Si(111), BEEM, band struct. effects 69713
Er_2O-doped Si layered struct. 1.54 μm light emitting devices, MBE grown 9
p-GaAs electrodes, time-resolved photolum., drift-diffusion model 91928
GaAs, electron-plasmon scatt., plasmon freq. Doppler shift 69522
GaAs hot electron injection FETs 92414
GaAs microcavity, reson. excited polaritons, energy relax. 80825
$GaAs/Al_{0.3}Ga_{0.7}As$ 2D struct., hot-hole lateral transport 69636
$GaAs/Al_xGa_{1-x}As$ superlattices, mag.-field-induced miniband transits. 6966
n-GaAs/AlAs:Si MQW, hot electrons inelastic scatt. 80814
GaAs/AlGaAs periodic superlattice struct., quantum cascade devices, hot e tron distrib. 93637
GaAs/GaAlAs hot electron light emitting device at low and high elec. and r fields, anal. 117269
GaAs-AlGaAs heterojunctions, 2D hot-electron transport 91739
GaAs-AlGaAs heterostruct. wide bandwidth MM wave mixer. diffusion co 2DEG 80270
GaN MBE layer, hot electron/hole dyn. 69549
GaN, luminesc. spectrum, high elec. fields 91667
n-Ge, electron-hole plasma, high-field autosolitons, emission from hot ch carriers 69477
$n\text{-}Hg_{0.8}Cd_{0.2}Te$, 2D hot electrons, microwave/MM response, magneto-quan effects 103039
InAs, self-assembled QD, high field transport, MODFET appls. 91781
InGaAs/AlInAs/GaAs metamorphic HEMTs, long term stabil., hot electron st test 126872
$In_xGa_{1-x}N$/GaN DH, carrier dyn., femtosecond pump-probe spectra/TRPL 69
InN, luminesc. spectrum, high elec. fields 91667
InP/InGaAs abrupt HBTs, comparison between Monte Carlo and extended d diffusion models 70037
N-MOSFET dominant interface trap generation proc. during hot-carrier stress 81355
Nb THz hot-electron bolometer mixer, microstrip-line-coupled, direct respon 127540
Nb hot electron bolometer, terahertz radiation 71129
Nb quasi opt. hot-electron bolometer mixers, 2.5 THz radiation detect., hete dyne response 71118
Nb supercond. hot electron bolometer mixer, microstrip line coupling 7113
Nb/NbTiN hot electron mixer, hybrid terahertz detector 70859
NbN hot electron bolometer mixer. THz freq. waveguide receiver 71174
NbN hot electron bolometer, terahertz radiation 71129
NbN hot electron bolometric mixer, terahertz receiver 71177
NbN hot electron bolometric mixers, IF bandwidth/noise temp. meas. 7112
NbN phonon-cooled hot electron bolometers, 2D hot-spot mixer model 710
NbN ultrafast hot electron single photon detector 71131
$Ni_{80}Fe_{20}$, hot-electron transport, spin-valve transistor study 81921
Pt/NiFe/Au/Co/Au spin-valve transistor fab., miniaturisation, SOI wafer 705
Pt/NiFe/Au/Co/Au spin-valve transistor, noise props. 70563
Si HBT, hot carrier reliab., extrapolation model 126677
Si MOS tunnel diode, hot electron luminesc. 103207
Si MOSFET, short channel, local iter. Monte Carlo anal. 115926
Si, n±p jns., hot-carrier impact ionization PV effect 80788
Si:B MOS capacitor, elec. props., a-Si gate electrode, two-step nitridation effe 69767
Si:B n-channel trench UMOSFETs, channel B-doping 81312
$Si/Si_{0.8}Ge_{0.2}$ heterostruct., 2D hole gas, energy loss rates 80801
Si/SiGe BJT and HBT, Monte Carlo anal. 92310
Si/SiGe HBTs, hot carrier effects on correl. resist. 80298
$(Si/SiO_2)_n$ multilayers and microcavities, LED appls. 93431
SiC, natural superlattices, hot-electron transport, Wannier-Stark quantizati 80822
SiGe HBT, hot carrier reliab., extrapolation model 126677
Si_3N_4 ultra-thin gate dielec. p-MOSFET, hot-carrier reliab. 81357
$a\text{-}SiN_xH_y$ thin-film diodes, hot-electron degrad., LCD appl. 70011
SiO_2, ultrathin, defect generation and breakdown induced by substr. hot-h injection 103213
SiO_2:RE in MOS diodes, efficient EL 71599
SiO_2/Si:N deep submicron CMOS transistors, ultrathin gate oxide grow 115924
Ta_2O_5 gate dielec. CMOS devices, low freq. noise, reliab. 127058
$YBa_2Cu_3O_{7-x}$ hot-electron bolometer mixers, microwave radiation response d 116541
$YBa_2Cu_3O_{7-x}$ thin film, hot electron bolometer 71159
$YBa_2Cu_3O_{7-x}$ ultrafast photodetector, kinetic-inductive proc. 71132

hot cathodes *see thermionic cathodes*

hot electron transistors
see also resonant tunnelling devices
ballistic electron normal energy distrib. meas., three-terminal HET 75854
ballistic transport devices, quantum interf. devices *(Chinese)* 126902
high detectivity QW IR HET photodetector, optim. at low temp. 86525
AlGaAs-GaAs hot electron injection laser, vert. integrated transistor-laser stru 105310
Pt/NiFe/Au/Co/Au spin-valve transistor fab., miniaturisation, SOI wafer 705
Pt/NiFe/Au/Co/Au spin-valve transistor, noise props. 70563

hot electrons *see hot carriers*

hot pressing
HDI PWB fab., imprint patterning technol. compatibility 125907
LIGA technols./appls. for MEMS fab. 81609
notebook PC CPU cooling, packaged miniature heat pipe 79931
Ag/Bi-2223 tapes, crit. current densities, mech. deform. techs. effects 81964
$BaBi_4Ti_4O_{15}$:Nb(Fe), ferroelec./elec. props., doping depend. 104347
$(Bi_2Te_3)(Sb_2Te_3)(Bi_2Se_3)(Bi_2Te_3)$, thermoelec. pn jn. 91757
C/Cu/Cr composite syst., SIMS anal., heat sink appl. 101506
NdFeB sintered magnet, die upset, electrochem. corros. 127386
$Nd_{13.9}(Fe_{92}Co_8)_{80.3}B_{5.5}Ga_{0.5}$, multiscale mag. domains 81809
PLZT ceramics, organometallic prep., microstruct. 101486
PZT ceramics, nanocrystalline ferroelec., props. 104356
PZT piezoelec. actuators, microwave/hot-press hybrid sintering 101483
SiC-SiC composites for fusion reactors, mech. props., interfacial strength 6842
β-SiC-TiB_2 composites, manufacture, densification, pressureless annealin *(Korean)* 114436
ZnSe:Cu ceramics, opt. and elec. props. 91616

rolling
mill proc. ride-through investigs. 78357
PM sens. syst. for hot strip mill, param. 3D FEA modelling 131899
web proc., scanning gauge data proc., 2D var. reconstr. 113810
FeSi, high Si content, thermomech. proc., magnetostriction and hysteresis losses 127296
Nb-Ti supercond. tapes, prep., upper crit. field anisotropy 70777
Pr-Fe-Co-Nb-B syst. exchange spring magnets, mag. props. *(Japanese)* 127329
wall epitaxial growth *see vapour phase epitaxial growth*
working
see also hot rolling
PDP photopatternable cond. tapes, Fodel Tape-on-Substr. 109858
(Pr,Nd)FeB magnet, hot workability, ball milling and melt spinning 127387
Y-Ba-Cu-O HTSC coated conductors, Ni alloy substr. treatments 70744
ugh transforms
3D image reconstr., random sampling/voting method 84339
affine transforms., Hough transform gathering strategy 84590
affine-invariant detector of arbitrary shapes, generalized Hough transform *(Japanese)* 73445
algm. for FPGA implement. 94508
arbitrary-shape extraction, ambiguities resoln., Hough transform appl. 129838
artificial retina camera, real-time pattern recogn., Hough transform algm. 73439
automatic gradient threshold for line extraction 106445
bar chart recogn. in document images via Hough-based model 95572
bidimensional shape detect. under global deform. 129827
binary image, digital line component detect., computer vision appl. 73501
bronchial abnormalities, lung CT, automated detect., ERS transform 132780
circ. geological forms in satellite imagery, ident. 122557
circle size detect. by pyramidal transform data fusion 84552
deformable shapes detect. by stochastic optim. 95442
detect. ellipses, geometric symm. 129428
document image bar charts detect./recogn. 95517
Earth obs., onboard image selection/compression 111377
error propag. investig. 94479
facial feature detect., color segmentation/KL transform *(Chinese)* 95431
facial features detect. on images with multiple faces 73550
global fig. extraction, Hough transform, voting proc., variable-sized directional image filter *(Japanese)* 106746
gradient based progressive probabilistic Hough transform 95567
gray-scale images, straight lines detect. through regularized Hough transform 94955
high precision line detect., Hough transform with reverse mapping *(Japanese)* 73448
high-speed line detect. method using Hough transform in local area 118434
Horus, shape-based robot orient. detect. and ident. 84624
human face, eye detect., Hough transform and separability filter *(Japanese)* 129434
image proc., line fitting using Hough-like procedure 73304
lin. band detect., Euclidean dist. transform and line segment extraction method 95436
line and plane detect. based on conjug. formulation 118684
LSI cct. video image proc., contour extraction algms. 101997
med. X-ray imaging, digital self-adaptive acquisition 122137
moving obj. tracking, inform. extraction 94466
MTI data clustering and mil. form. recogn. 99133
obj. tracking problem, pose estim. algm. 84332
opt. feature extraction by Hough transform filter array *(Korean)* 73441
opt. flow detect., subpixel, by Hough transform 84338
opt.-electronic shape recogn. syst. based on synergetic associative memory 118690
parallel image proc. for line detect. in shared-memory and distributed environ. 94584
planar obj. detect. under scaled orthographic projection 94988
portal imaging methodologies, automated edge detect. 87326
pose estim., shape extraction, Hough transform invariance 129847
real-time robust detect. of moving objs. in cluttered scenes 118349
recogn. of objs. normalized in log-polar space using Kohonen networks 129904
rect. pillar posn. detect. by image, Hough transform. *(Japanese)* 84607
SAR images, wavelet filtering algm. in automated lineament detect. by Hough transform 95583
separability filter for detect. of eyes from human faces 84614
single vision-based mobile robot self-localisation approach 129453
skew detect. and block class. of printed documents 94489
sonar ranging, boundary location using Hough transform 109307
straight patterns, high resoln. positioning, Hough transform multiscale matched filtering 94474
time-freq. distrib., Hough transform, curve extraction *(Chinese)* 84693
two-step circle detect. algm. from intersecting chords 94478
X-rays of thorax, rib suppression, Hough transform 98484
usehold appliances *see domestic appliances*
usings *see packaging*
vercraft
small hovering robot, basic research and develop. *(Japanese)* 78310
VF *see FORTRAN; parallel languages*
VGe detectors *see germanium radiation detectors*
VIB *see peripheral interfaces*
VML *see hypermedia markup languages*
VTP *see hypermedia; transport protocols*
Wbard model
quantum cellular automaton based logic gates/ccts. simul. 102008
p-$Hg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor band 115301
Wbble model *see cosmology*
Wckel theory, extended *see EHT calculations*
WD *see head-up displays*
see colour
Wffman codes
audio sigs., low delay perceptually lossless coding 106377
binary Huffman codes redundancy, Gallager's upper bound improvement 129168
binary image compression, Huffman coding 95329
bitwise Huffman coding, source mapping 94291
combined Huffman code, row and column array code and phase/FM 83892
DCT coeff. compression 107051
DCT conditional event coding without side inform. in video compression 95087
efficient Huffman decoding 94269
embedded RAM built-in self-diagnosis, use of syndrome compression 125479

Huffman codes continued
entropy-coded sources, joint source-channel turbo decoding 106153
FORTE-VLC, forward tracing self-error correction VLC for wireless image coding 118567
H.263+ std., trellis-based R-D optimal quantization 95210
image transm., error resilient sync. codeword for VLC 95299
limited-order blocksort based image compression 107089
min.-redundancy prefix codes, space-economical algms. 117923
minimisation of roundoff errors of prefix sums via dyn. constr. of Huffman trees 78974
MPEG-2 AAC decoder, design optim. 118103
multiple access networks, optimal code design for lossless/near lossless source coding 106171
nonlin. predictive model evol. for lossless image compression 84416
optimal multiple preset dictionaries, NP-hard problem 106179
redundant transform. on binary data, appl. to image coding and transm. 84373
reversible VLC constr. 118513
stereo image wavelet-based mixed-resoln. coding 118491
symm. reversible VLC, theoretical bounds 117936
text compression for speeding up string pattern matching *(English)* 72909
texts, pattern matching 106182
transform coding, theoretical foundations 117951
unbounded-length codes, low-memory fixed-latency encoder 106142
VQ/entropy coding of med. images, progressive reconstruction 110497

human engineering *see ergonomics*

human factors
see also behavioural sciences; biocybernetics; ergonomics; man-machine systems; office environment; speech intelligibility; user interfaces
ATC, human controllers, physiological meas. 98940
ATC, psychophysiological measures on personnel 98939
ATC, trust of people and systs. 98934
ATC commun., shift work and workload effects 98935
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
ATC user interface design, combining human factors methods 98933
augmented reality, fast calib. scheme 109845
automotive night vision technol., safety improvement appls. 134577
B757 pilots, descent scenarios, ATC clearances, mgt. by consent problems 133265
Bavarian NPPs, notifiable events, regulatory safety criteria *(German)* 77690
behavioral ROC curves/multidimensional matched filter comparison 130076
broadband networks for dist. education and training 108012
cellular telephone antennas affected by human body interact., current distrib. estim. 117796
chest images, digital radiology, gradation proc. algm. 98517
chest radiograph interp., JPEG compressed images vs. uncompressed images 98486
commun. media and group cohesion, relative influences on social presence, task participation and group consensus 119771
company profit sharing, employer vs. owner issues 100482
computed tomography interp., zoom-and-pan vs. browse-and-paste display method, effect on inter-observer agreement 76518
computer conferencing syst., on- and off-campus usage by engng. students 67416
control room colour coded displays with visual layers 97593
CRT display image quality under ambient glare, ISO 9241-7 ergonomic std. 97687
design engineers, knowledge teaching, skill develop., attitude cultivation 113441
digital imaging, human perceptive based robust watermarking method 84105
digital radiography, impact on clinical workflow and patient satisfaction 98495
disabled and traditional users, speech recogn. software interact. 106411
display viewability & measurable characts. correl. 97656
dist. learning, student receptivity, effect of technol., reputation, constraints and learning preferences 67415
dyn. inspection aptitude test for US NDT 114499
education, commun. patterns, computer mediated and face-to-face 85359
elec. distributor in Hungary, customer loyalty meas. *(English)* 133438
electronic indust. work-induced stress anal. in ergonomics, fuzzy decision approach 89833
electronics mfg., human error/mistake proofing 113450
electronics trouble-shooting, expert error 67527
emotion class. based on MPEG-4 facial defn. param. set 129829
endoscopic visualization systs., telesurgical perform. comparison 87798
engng. design, humane concerns 113440
fighter jet cockpits large screen display 99109
handheld mine detector operator perform., audio icon design issues 77114
HCI approach to usable/effective security 119542
health telematics, physician attitudes, empirical survey 111269
hidden targets detect., mine-detect.-like task 77111
human-oriented prod. proc. simul., human factors *(Japanese)* 113430
IEC 61508 std., human factor issues 89779
in-vehicle cell phones use, driver distraction and rel. to car accidents 108870
inhabited TV, broadcasting interact. inside collaborative virtual environs. 86301
inhabited TV event, network and user activity patterns 75295
inspection, limits to human perform. optim. 89891
integrated command environ., large screen displays implement. guidelines 99115
integrated command environ. develop., lessons learned 99113
Japanese complexion color preference under illum. *(Japanese)* 124057
landmine detect., EM induction sens., human auditory discrim. 77113
landmine detector operator training, motion tracking, virtual mine lane 77112
lang. learning project using OO multi user domains 119588
large screen display human factors in mil. appls. 97698
large screen displays' cognitive benefits, C^2 syst. expt. 97742
learning through video on WWW, genres, user attitudes and prospects 113383
letter legibility and pixel resoln. of TFTLCDs/CRTs compared 97646
lighting controls, office workers' reacts. 89425
meaningful meas., basic principles 120604
melody input user interface, Tuneserver 106346
mil. cockpit displays, luminance level effects on visual perform. 98909
mil. command environs., conf., San Diego, CA, USA (2000) 89528
mine detect. & remediation technol., conf., Orlando, USA (Apr. 2000) 67351
mobile commun., driver distraction and vehicle accidents 78555
mobile handsets, mobile assistants and AI techs. 74706
mobile Internet, WAP usability study 74355
mobile phones and driving, UK perspective on government policy 78557
multibeam & multipanel displays, scan archit. perceptual effects 109879
multimodal surrogates for video browsing 118242
multiple driver systs. HMI integrat. design proc. 134586
multiple regions-of-interest query for accessing image databases 84245

human factors continued
musical cyberinstrument design, SensOrg, cognitive ergonomics 86359
NDT operator perform. in blind test piece trial 114500
network inform. mgt. in heterog. decentralized enterprise environ. 108021
network security and QoS, components and perspectives 130585
NPP, accident support via human-machine interface design 133845
NPP automated control and safety systs. 133846
NPP PSA, MMI eval., HEROS ES 88542
NPP safety, human error probab., human model simul. 112226
nuc. safety coaching culture, 360-deg assess. proc. 99496
nursing, telephone advice, callers' experiences 133153
Olkiluoto BWR NPP, maint. failures anal. 99492
open exam approach to student assess. in engng. education 113377
organizational change, double-loop learning control model for reengng. 89709
orthostereoscopic images, cyclopean vision, size estim. and presence 106809
PACS implement., user acceptability as crit. success factor 98844
paper based user interface for editing documents 94885
Peep, network auralizer for network monitoring with sound 108022
pervasive speech and natural lang. technol. 106384
phone-use related driver distraction detect. feasibility 78556
pilot visual inform. flow syst., ergonomic factors *(Chinese)* 88062
power plant control, validation of control syst. specs. 77680
private and public digital domestic spaces 96248
radiology workflow and patient vol., effect of PACS on technologists/radiologists 98849
retinal image digitization, optim. for improved digital proc. and visualization 110850
rheumatology telehealth consultations, cost-effectiveness and user satisfaction 133161
road traffic accident risk of car drivers during mobile telephone use 78554
search/detect. model testing, image dataset 129526
sig. proc. education, multidisciplinary approaches 130006
speech user interfaces, multimodal error correction 73075
student interact. anal. in computer-mediated commun. environ. 119518
SymGeons, visual complexity model, implications for visual control tasks 129817
talking call waiting, text-speech synthesis, customer acceptance 85161
talking head interface, realism, believability and acceptability 106412
teleconsultations, perceived artificiality avoidance 133172
teledermatology store-and-forward service, patient satisfaction 133173
telemedical consultations, depth perception 111255
telemedical work and cooperation 111284
telemedicine for hypertensive patient pop., patient and physician satisfaction, clinical study 111283
telephone interact. in UK households, patterns of use 96060
telepsychiatry as routine service, patient perspectives 76781
telepsychology service provision to Shetland Islands, UK, client and therapist satisfaction and therapeutic alliance develop. 133170
total prod. life cycle, human factor *(Japanese)* 113429
traffic accidents caused by driver use of car phones, react. time meas. 78553
user interface design for engng. drawing vectorization software, VHVector *(Chinese)* 129868
virtual conf. eval., CybErg 1999 96245
vital signs monitoring, telemedicine, patient and physician satisfaction 133185
wafer plant preventive maint. activities, cognitive demands extracted using applied cognitive task anal. 89834
whole-motivated covenant, mode of governance suitable for knowledge business *(Chinese)* 89662
work environ. ergonomic factors effect on human body impedance *(Polish)* 67489
workplace training program, organisational context, ATC appl. 124282
SmartLibrary infrastructure for ubiquitous technols./appls. 74235

human-machine systems *see man-machine systems*

human relations *see behavioural sciences; social sciences*

human resource management
aerospace indust. R&D, inform. carriers selection investig. 67487
Bangladeshi nongovernment universities, TQM overview 89603
brand mgt., living brand 67460
company profit sharing, employer vs. owner issues 100482
creative work mgt., intrinsic motivation role 89671
customer rels. mgt., future 100480
distrib. utility human resources mgt. fn. outsourcing 133632
excellence achievement using ideology concept 89713
HR systs. integrat., e-recruiting 89757
innovation/technol. mgt., conf., Singapore (Nov. 2000) 89555
IT projects implement., organisational change mgt. 89806
Italian telecomms. indust. employment dyn. 130538
labor-intensive textile indust., global technol. change impact 89706
leadership develop. in mfg. environ. 89672
Mobile Technology, electronics manufacturer, IS department mgt. 78581
organizational change, double-loop learning control model for reengng. 89709
proc. based change implement. case studies 67493
product-mix VLSI assembly facility, operator allocation planning 89775
project scope decisions empowerment using R&D content graphs 113398
telecomms. company, country-wide, continuous education 113380
TQM implement., Spanish experiences 67649
trans-European company downsizing, restructuring, change procs. 67464
weekly tour scheduling problem using integer prog. model 113417
whole-motivated covenant, mode of governance suitable for knowledge business *(Chinese)* 89662

human services *see public administration; social sciences*

humanities
see also archaeology; art; history; language translation; linguistics; literature; music
digital museum, on-demand exhibition 85374
digital video mgt. for heterog. and distributed resources 108398
inform. sci. research, past/present/future 96075
intermedia in electronic images 84119

humidity
see also atmospheric humidity; hygrometers
accelerated lifetime test methods for package technols. 124355
air gaps, lightning impulse testing, humidity correction factor 99418
arc fusion spliced telecomm. opt. fibers in extreme climatic circs. 116635
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334
CSP/area array package board level reliab. 113602
dielec. strength lightning impulse testing, humidity correction factor 92593
electrostatic powder coating proc. back corona, relative humidity effects 125064

humidity continued
epoxy-silica composites, dielec. props., effects of humidity and thermal st 81642
ESD protective materials perform. at low relative humidity 83121
FCOB assemblies with/without encapsulation, reliab. 78654
flip chip underfill to passiv. material adhesion, environ. influence 67598
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhan ment 124332
glob top encapsulants, surface insulation resist. perform., temp./humidity 67
HDI flip chip-on-flex, base materials eval. 124359
IC hermeticity assess. by electrolysis 67630
IC stress tests, moisture-based failure modelling 126953
isotropic conductive adhesives as SMT solder alternative 124349
multiple anion nonvolatile acetal resists for e-beam lithog. 103641
Nafion based electrochem. cells, voltage-conc. rels. with enhanced slopes 99
non-hermetic press. contact IGBT modules, reliab. eval. 124321
organic-inorganic hybrid protonic polymeric electrolytes, PEMFC 123786
OSP accelerated aging, solderability assays via three test methods 115200
PCB electrochem. migration mechanism/accel., SO_2 gas environ. *(Japane* 69296
PEMFC, portable power source for commun. 89159
poly(ethylene oxide-co-epichlorohydrin)/NaI polymer electrolyte, cell ap 79444
polyetherimide adhesion to Si wafer, Al-chelate treatment, MCM fab. 8054
polymer gate FET sens. array for organic vapour detect. 97497
polymer housed metal oxide surge arresters durability, impulse current stres 133801
polysilicon surface-micromachined MEMS test structs., elec./environ. reli charact. 104165
PoPD/PVA composite film humidity sens., AC impedance spectrosc. stu 97215
SOFC, hydrogen fed, proton conductor, thermodyn. anal. 134377
solar cell modules/encapsulations, indoor study/ageing tests 134388
static charge reduction on personnel in electronic indust. 93965
VOC-free PCB protective coating selection 125908
voltage sags, power/service quality, humid/hot dry environ. comparison 122
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Ag-porous Si interfaces, H-stimulated changes of props. 115439
AgO watch batts., electrolyte sealing, anode can/gasket clearance *(Japane* 89049
Al/por-Si/Si struct., adsorpt.-based porosimetry using capacitance meas. 115
Au bumped flip chip assembly using anisotropic conductive/nonconductive ad sives 124357
$BaMO_3$ (M=Ti, Zr, Hf, Sn), humidity sens. materials 121298
GaAs based HBT power amps., ident. of humidity related failure mechanis 127017
Ga_2O_3 gas sens., long-term stabil., power consumption 132036
(In)GaN LEDs, indust. prod. on SiC 104996
InP-monolithic resistive sens., air quality eval. 86720
NO_x prod. in spark and corona discharges 83097
Si, passivated luminesc. porous, props. 103362
Sn(-Cu) surface finishes for Pb-free packaging 67617
SnO_2 gas sens., long-term stabil., power consumption 132036

humidity control
building humidity control using condenser/CHP heat reclamation 134659
single-bodied humidity & temp. sens., adv. lin., design, fab. 97562

humidity measurement
see also humidity sensors; hygrometers
air humidity meas. inside electronic devices 87041
capacitive humidity sens. design/fab., interdigit electrodes *(Korean)* 120740
CMOS humidity sens. with on-chip calib. 109493
comfort sens., fuzzy symbolic approach 132084
embedded third order LC low pass Butterworth filters in MCM-L technol. 800
environ. data loggers 132092
environ. monitoring sens., wireless, pass., reson.-cct., design/appl. 131897
lower limb prosthesis, portable meas. of press., temps. and humidity 13304
moisture meas. in low parts in 10^9 range, tunable diode laser absorpt. spe 110069
multifunctional DMM, nonelectrical quantities meas. *(Polish)* 121066
oil-immersed power transformer condition monitoring syst. 77935
QCM sens. array with on-chip heating, meas. mode 121022
quaternized 4-vinylpyding-butyl methacrylate copolymers, humidity switchi ionisation 86500
reson. cavity microwave differential tech., optim. 87042
wet surface resist. distrib., automated meas. syst. 120651

humidity sensors
see also hygrometers
acoustic humidity and gas sens. 120716
air dens. and humidity sens., opt. fibre and α-ray detector 97293
air humidity meas. inside electronic devices 87041
atmos. turbulence meas. syst., meteorological param. *(Chinese)* 76882
capacitive/resistive/thermal cond.-based humidity sens. technols., selecti 109520
CMOS humidity sens. with on-chip calib. 109493
conf., Birmingham, UK (Feb. 2000) 113194
ethynylated polymers, synthesis & humidity sens. appl. 97179
fibre optic humidity sens., food proc. indust. 120838
foot monitoring, in-shoe multisensory DAQ syst. 87344
indust. appls. 120717
mass metrology, air moisture monitoring, opt. sens. 121236
microwave moisture sens., universal calib. tech., permitt. fn. 120741
multilayered microstrip anal. for microstrip moisture sens. design appl. 1095
NTCDA organic TFT, humidity sens. 97219
oil-immersed power transformer condition monitoring syst. 77935
osmium(IV) chloro complexes, humidity sens., thick-film technol. 75441
PI/CAB bilayer film humidity sens., sensitive character, temp. coeff. *(Chines* 120767
polyimide capacitive relative humidity sens. for anodically bonded hermet micropackages 86755
polymer solid electrolyte, humidity sens. 120982
polymer waveguide humidity sens., symm. multilayer config. 75440
polymer-coated fused silica opt. fiber humidity sens. 97310
PoPD/PVA composite film humidity sens., AC impedance spectrosc. stu 97215
PPV thin films, vapour phase fuming sulfuric acid-doped, humidity sens. 10948
PTF sens. 120721
pulmonary fn. diagnostic microsyst., humidity sens. design 98128

idity sensors continued
quaternized 4-vinylpyding-butyl methacrylate copolymers, humidity switching, ionisation 86500
eson. cavity microwave differential tech., optim. 87042
ingle-bodied humidity & temp. sens., adv. lin., design, fab. 97562
kin humidity sens., bonding tech., laser micromachining 109814
ransformer oil, moisture solubility meas. 127248
vireless IDT microsens. for subsurface sens., design & appl. 86757
Al_2O_3 porous tape cast substr., humidity sens., electrode geom. 75497
$BaMO_3$ (M=Ti, Zr, Hf, Sn), humidity sens. materials 121298
C films, humidity detecting props., surface control 109761
$-CN_x$ films, N-rich, deposition, charactn. and appls. 90411
$Ca_xPb_{1-x}TiO_3:Li^+$ film, prep., humidity sens. appl. 75439
$CoCl_2$, hydroxyethylcellulose film, opt. fibre humidity sens. 120839
SiO_2 mesoporous film humidity sens., surfactant template self-assembly 97177
$SnMoO_4$-SnO_2 composites, elec. props., humidity sens. 87038
TiO_2 sputtered film humidity sens., neg. substr. bias, charactn. 97178
Zn_2SnO_4-$LiZnVO_4$ thick film humidity sens. *(Chinese)* 75928
engineering *see high-voltage engineering*
AC
ll-outdoor-air HVAC systs., energy saving economic anal. 99477
uilding energy simul., power flow modelling integrat. 100235
uilding environ. simul. before desk top computers, USA, pers. memory 100331
uilding simul. programs, multiple-domain approach 113150
ommercial building energy use, Hong Kong 124117
ecentralized Energy Bus technol. for building HVAC automation 78343
omain integrat. in building simul., ESP-r integrated package 100332
conomizer cycle energy perform. anal. 78341
nergy-efficient buildings, components effects anal. 133842
ault detect., model-based feedforward control 100333
oor mobility effect on isolation efficiency of vibr. isolators 134658
ntegrated predictive/adaptive building HVAC/lighting control 89453
ntell. buildings, EMS/control systs. design/testing, simul. tools 89452
ooftop air-handling unit, high-solidity low noise axial fans appl. 134657
chool buildings, energy consumption/conservation simul., Saudi Arabia 89451
emicond. mfg. technol., energy conservation measures *(Japanese)* 89476
ingle-phase IM ASD, reduced no. of switches, HVAC appl. 134464
DC *see HVDC power convertors; HVDC power transmission*
DC convertor stations *see HVDC power convertors; substations*
DC power convertors
6-pulse HVDC transm. for rem. sited generation 133591
ABB technol. in power elec./electronic engng. 77132
AC transm. conversion into HVDC, FACTS, rectifier, inverter 112005
lternative HVDC converter schemes comparison 123657
apacitor-commutated converter using act.-pass. capacitor 112007
orce-commutated converters, ABB technol. 112597
uzzy logic controller optimal design, GA 133593
cotland HVDC Light project, trial/commercial operation 133589
Xii Channel HVDC link, thyristor valves and GIS 77307
ight-triggered thyristor charact. eval. *(Japanese)* 134240
ong-cable HVDC-transm., capacitor commutated converter control 111866
Moyle Interconnector, Scotland-Northern Ireland HVDC link, infrastructure 99239
ultipulse power converters/controls for HVDC and FACTS systs. 88876
imultaneous inter-area decoupling/local area damping, voltage source HVDC converter 112009
tatic converters, indust. and utility appls. 99747
echnol. for power syst. appls. *(Japanese)* 88811
hyristor modules, operational tests, synthetic test cct. 88932
VSC based HVDC, steady-state model, controller design 112010
DC power transmission
see also HVDC power convertors
0 kVA offshore wind farm HVDC interconnection model 99589
6-pulse HVDC transm. for rem. sited generation 133591
000 MW cross-Channel submarine HVDC capacity auction 88309
001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Feb. 2001) 100393
ABB technol. in power elec./electronic engng. 77132
AC transm. conversion into HVDC, FACTS, rectifier, inverter 112005
AC-DC power syst., modified GA, optimal PID controller 77274
AC/DC parallel tie-line local control, variable param. equiv. model *(Chinese)* 99255
apacitor-commutated converter using act.-pass. capacitor 112007
onvertor light-triggered thyristor charact. eval. *(Japanese)* 134240
urrent regulator controlled, DC side short cct. 99331
lter, reactor winding, eddy current loss 134329
uzzy logic controller optimal design, GA 133593
iotland HVDC Light project, trial/commercial operation 133589
ybrid optic DC meas. syst. *(Chinese)* 99330
apanese HVDC std. develop. project overview *(Japanese)* 99329
Xii-channel HVDC link/Tachibana-bay unit, islanded syst. mode test 112008
orean elec. indust., new technol. impact 99194
ight technol., ABB technol. 112597
ong-cable HVDC-transm., capacitor commutated converter control 111866
onitoring using wavelet multi-resoln. anal. 133592
Moyle Interconnector, Scotland-Northern Ireland HVDC link, infrastructure 99239
ulti-infeed HVDC systs., co-ordinated recovery strategy 112006
ultiple high-power AC/DC converter power systs., harmonic domain soln. 112060
ultipulse power converters/controls for HVDC and FACTS systs. 88876
V power distrib. systs., novel switching technols. integrat. 133625
ower conversion technol. for power syst. appls. *(Japanese)* 88811
ower quality problems, solns., technol. 77342
ower syst. growth, new technols., Japan 99178
ower systs., real-time digital simul., FACTS, HVDC, control, protection *(Chinese)* 122883
ower systs., real-time digital simul., NETOMAC *(Chinese)* 122808
ower systs. tech. cooperation between China and developed countries 111827
ricing methods for transm. over HVDC lines *(Chinese)* 88324
multaneous inter-area decoupling/local area damping, voltage source HVDC converter 112009
mall elec. utility, external interconnection, network aspects 99235
ystem simul., NETOMAC software *(Chinese)* 133590
urkey-Israel elec. grids interconnection, HVDC sub sea cables 122839
SC based HVDC, steady-state model, controller design 112010
ideband capacitive voltage sens. design for HVDC transm. line appls. 88500
ind-farms, multi-terminal DC transm. syst., VSC 112372
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC DC transm. power cable develop. 77424
HVEM *see electron microscopy*
HVIC *see power integrated circuits*
hybrid computers
microsatellite reconfigurable semi-virtual computer archit. 133244
hybrid fibre coax networks
AM/OFDM syst., BER perform. *(Chinese)* 96301
broadband access networks, evol. and convergence implications for equipt. providers 96263
business market 96297
cable systs., next-generation broadband services 97074
cable telephony, packetized format 97065
CATV, MPEG-2 TS transm., HFC network *(Chinese)* 97075
CATV broadband network archits. 75312
CATV networks, upgrading for broadband interactive services 97066
deep fiber baseband access network design 130996
DVB version 2.0 *(German)* 97052
fiber optic transm. equipt. for renewal *(Japanese)* 131755
FTTH evol. from HFC 130990
integrated broadband cable networks emergence 75309
integrated voice/data services in hybrid fiber/coax networks, anal. 85404
MAC improved guaranteed access protocol 130400
MPLS for multiservice delivery 95875
multimedia driven HFC MAC protocol, hardware implement. 108481
NEC's coaxial transm. equipt. for renewal *(Japanese)* 131004
online ident. and control of distortion inform. flow in PCN based on fuzzy control technol. 119783
shared access networks supporting Internet DiffServ, access control 84963
software radio, adaptive access technol. 85545
South Tokyo Cable Television, Internet commun. service *(Japanese)* 131750
transparent hybrid fiber/copper approach, DSL service area enlargement 74474
up-stream channel, burst mode DQPSK demodulation *(Chinese)* 131002
VBR video stream transm. *(Chinese)* 119817
wavelet modulation 96296
hybrid integrated circuits
see also beam-lead devices; multichip modules
183-207 GHz wideband receiver based on metal dielec. waveguide 85470
automotive hybrid IC proc. error reduction, microcontroller implement. 125918
bipotentiostatic uric acid sens., conducting polymer based, charact. reproducibility 132007
broadband uniplanar building blocks for MMIC and hybrid mm-wave ICs 125812
C-band highly efficient hybrid-PHEMT MMIC amp., 10 W design 125753
conductive layers in LTCC ccts., assembly props. 78657
CPW magic-Te TX/RX integrated front-end, 3D topologies and global synthesis 91371
DC-DC converters, capacitor/resistor integrat. for improved efficiency/miniaturisation 79553
DC/DC power converter, thick film hybrid technol. *(Spanish)* 99829
DECT CMOS power amp. module with multilayer LTCC pass., 1.9 GHz 80333
diamond microwave filter, dielec. reson., coupled microstrip 102525
direct conversion six-port MM-wave receiver 108571
discharge lamps, hybrid electronic ignition ccts. 124085
DuPont 8039 thick film resistors, ZrO_2-based substr. compatibility 69269
eye press. monitoring syst., wireless, hybrid IC integrated into intra-ocular lens 122459
flip-chip for space appls., bonding reliab. study 125792
flip-chip structs. design tech. with optimised CPW patterns 69223
freq. triplers, stabil. ensuring design procedure 80367
gravure offset printing develop. for fine line thick film ccts. 125916
high-perform. opt. commun. devices, hybrid integrat. technols. *(Japanese)* 93448
implantable microdevices, electrode-substr.-package codesign 122336
low-k thick film dielec., simul. model 69335
LTCC multilayer technol. for thick film sens. appls. 131879
LTCC photolithographic feature fab. 124379
MESSENGER deep space mission, electronically scanned phased-array antenna 120109
microwave amps., hybrid and monolithic, cct. CAD 102717
microwave MCM-D CPW quadrature couplers/power dividers, X-/Ku-/Ka-band design 125801
multidielectric multiconductor hybrid ICs, closed form method of lines approx. anal. 80335
multilayer coupled-line struct., design and cct. appls. 80205
multiple bondwires for MM-wave packaging, wideband charactn. 69210
QPSK modulators, microwave and MM-wave types, error correct. scheme 91310
quasi-monolithic hybrid technol. based on micromachining and low-temp. thin-film proc. 115020
RF packaging for space appls., micropackage to SOP, syst. on a package 124320
RF Si technol., IC-compatible 2-level bulk micromachining proc. module 91376
smart power blocks for use in DC/DC converters, iPO-WIR module family *(German)* 90713
sol-gel-derived 0-3 composite ceramics for direct write electronics appls. 102841
telecomm. equipt. appls. *(Italian)* 102840
thermal spray techs. for meso-electronics/sens. direct write fab. 114399
thick-film multilayer MCM-C interconnection using diffusion patterning technol. 67645
thick-film/LTCC materials for wireless appls., eval., meas. techs. 80343
uniplanar bal. subharmon. pumped mixer for MM-wave syst. design 69201
X-band high efficiency hybrid power amp. design using HFETs 69203
Ag thick film RF antenna fab. using direct-write techs. 117784
Al CPWs on Si substr., 38 GHz, loss mechanisms and hybrid mixer implement. 125790
Au/Cr/sapphire interfacial fracture, hybrid microcircuits, annealing 102839
$BaSrTiO_3$ ferroelec. tunable pre-select filter/LNA hybrid cct., perform. 91362
Cu/Ag thick film conductors on Al_2O_3 substrs. for power appls. 78658
GaAs monolithic/hybrid integrated photoreceivers, 40 Gbit/s commun. 96708
Ge thin-film metamorphic HEMTs, hybrid integrat. and substr. removal 125919
InP/Si CMOS hybrid integrated photoreceiver, alignment tolerant 120161
Si micromachined pass. struct. for MMICs, hybrid integrat., packaging technols. 115018
Si-SiGe HBT push-push oscillator for 58 GHz in hybrid microstrip tech. 80338
TiCuAg-AlN fritless conductor syst. for power electronic appls. 68558
hybrid turbine cycle power stations *see combined cycle power stations*
hydraulic control equipment
see also electrohydraulic control equipment
automotive vehicle engine mounting systs., survey 78311
guardrails piling, automatic machine, PLC 113822
posn. control syst., optimal-tuning PID control schemes 133873
rolling mill nonlin. roll thickness control scheme 124134

hydraulic control equipment continued
rotary hydraulic speed control syst., optimal-tuning PID control schemes 133873
total body irrad., cells array compensator, state-space water-level control 133038
total liq. ventilation, press.-limited respirator/lung mech. syst. 122283
urban sewage networks, sens. fault diagnosis, rainfall-runoff multi-modelling 88178

hydraulic systems
aircraft hydraulic syst., generalized cross-sig. anom. detect. 122506
fluid power syst. computerised design support tool develop. 100521
thermal flow sens., calorimetric device 86763
urban sewage networks, sens. fault diagnosis, rainfall-runoff multi-modelling 88178

hydraulic turbine generators *see hydroelectric generators*

hydraulic turbines
120 MW hydropower plant Kaplan bulb turbines installation project 77775
cross-flow and reverse running pump turbines, internal flow perform. *(Japanese)* 123238
doubly-fed machine pumped storage power unit control optimisation 123245
hydropower plant rehabilitation, Francis turbine runners CAD 77779
hydropower plant turbine governors, surge tanks fuzzy control scheme *(Chinese)* 112343
intell. cavitation diagnostics/monitoring 99581
marine current turbines for hydroelectric power generation appls. 112361
Sharavathy valley project, hydroelectric power station, modernisation 112352
small-scale hydroelectric power generation using induction generators 112358
sync. power generator, robust lin. control 77227
wave energy conversion syst. Wells air turbine flows studies 123244
zero-head hydro-propulsion, random flow, kinetic energy harnessing 88635

hydroacoustics *see underwater sound*

hydroelasticity *see elasticity*

hydroelectric generators
3D dyn. simul. study *(Chinese)* 99579
500 MVA hydrogenerator reactance calc. using FEA 123237
525 kV XLPE EHV power cables installation project, China 88449
axis orbit, automatic ident. *(Chinese)* 112447
condition monitoring and diagnostic syst. model for hydroelec. generating set 77780
direct water cooling, temp. rise calc. 99626
doubly-fed machine pumped storage power unit control optimisation 123245
Ertan hydropower plant, generator-transformer unit, relay protection *(Chinese)* 123327
generator-transformer unit, WFBZ-01 microcomputer-based protection *(Chinese)* 99623
incomplete split-phase transverse differential protection, Three Gorge Power Station *(Chinese)* 133922
induction machines, steady-state phase-coord. model 88739
internal fault, main protective relay sensitivity anal. *(Chinese)* 88694
large hydrogenerator reactance determ. using FEA/domain decomp. 133874
North China power syst. black start using hydroelec. generating sets *(Chinese)* 77165
power plant generating units restoration project, India 77784
power station computerized SCADA syst. 99583
power syst. dyn. stabil. enhancement, doubly-fed adjustable speed machine 77220
pumped storage power plant generator step-up transformer transients 112362
refurbishment technol., mech. anal. techs. 99625
salient-pole hydro generator stator temp. field calc. *(Chinese)* 112346
Sharavathy valley project, hydroelectric power station, modernisation 112352
short-term hydro-thermal power syst. scheduling optim. 122919
small hydropower plant generator beaviour under distrib. network faults *(Slovenian)* 123235
small-scale hydroelectric power generation using induction generators 112358
state params., on-line ident., ANN *(Chinese)* 123326
stator strands heating anal., 3D isoparametric element method *(Chinese)* 112467
three-phase hydrogenerator multirate optimal control tech. 77774
transformer transfer voltage countermeasure study 99582
turbine intell. cavitation diagnostics/monitoring 99581
turbogenerator valve nonlin. robust control strategy *(Chinese)* 77769
wavelet data compression, real-time monitoring syst. for large hydraulic machines 77771

hydroelectric power
see also hydroelectric power stations
510 MW Teesta Stage V hydropower plant project, India 77776
alternative vehicle powertrains, primary energy efficiency 134538
China's big hydroelectric dams, social and environ. issues 112356
co-Scandinavian network elec. prices, water reservoirs influence 99217
dam building alternatives 77777
diurnal peaking regulation, reservoir environ. impacts 88624
elec. generation expansion, investment planning 122917
elec. power generation options, neuro-fuzzy program approach, Jordan 123111
environ. costs 88515
generation scheduling, ant colony syst. optim. approach 112340
green mktg. of hydroelectric power resources 77778
Hokkaido, elec. demand and supply struct. 88293
Indian hydroelectric power resources overview 77782
low-head hydroelectric power generation planning 88629
low-head hydropower exploitation using syphon plant approach 77785
Lower Mekong River hydroelectric power pot. 88634
marine current turbines for hydroelectric power generation appls. 112361
Nat. Hydroelectric Power Corporation Ltd. power projects, India 77783
Norwegian hydroelectric power plants, environ. class. 88623
Norwegian hydropower resources, role and benefits 88622
Norwegian wind power develop., water-wind resources synergy 88642
power syst. strategy, competing generation technols., Russia *(Russian)* 122781
pricing method in power market *(Chinese)* 111725
renewable energy policy in Lithuania 77682
run-of-river hydropower plant automatic generation control program *(Chinese)* 77770
short-term hydro scheduling, mixed integer LP 133877
Slovenian hydroelectric power plant water inflow forecasting *(Slovenian)* 123234
Southern Africa long-term hydropower capacity expansion planning 88404
spill elec. price of Central China Power Net *(Chinese)* 88325

hydroelectric power stations
see also dams; hydraulic turbines; hydrothermal power systems; pumped-storage power stations; tidal power stations; water supply; wave power generation
120 MW hydropower plant Kaplan bulb turbines installation project 77775
400 kV oil-filled power cables for hydroelectric power plant project 77386
510 MW Teesta Stage V hydropower plant project, India 77776
525 kV XLPE EHV power cables installation project, China 88449
550 MW hydropower plant computerised plant mgt. project, China 112353
Australian hydroelectric power installations, life extension overview 112355
automatic generation control *(Chinese)* 77781
backwash control valve damage studies *(Chinese)* 112344
capacity planning model for massive hydroelectric energy storage plan *(French)* 77156
cascade hydropower syst. water mgt. using reservoir flow forecasts 123241
cascaded hydroelectric plants, short-term scheduling, GA 123239
China's power syst., Three Gorges project, transm. lines, distrib. automatic 99578
Chinese Three Gorges Power Market, type and trading mode *(Chinese)* 1227
computerized SCADA syst. 99583
control systs. rehabilitation challenges 123240
control/maint. strategy, fault tolerant mode 88637
dam building alternatives 77777
dam safety assess. using ES technol. 88630
dam safety monitoring using vibr. wire sens. 88631
dams, Norwegian guidelines for risk assess. 88627
diurnal peaking regulation, reservoir environ. impacts 88624
electronic control module for small hydroelectric power plant 133875
Ertan hydropower plant, generator-transformer unit, relay protection *(Chines* 123327
flood control, stochastic approach 88636
gate movement protection 112357
generating units, 3D dyn. simul. study *(Chinese)* 99579
generating units restoration project, India 77784
generation scheduling, ant colony syst. optim. approach 112340
generator-transformer unit, WFBZ-01 microcomputer-based protection *(Chi nese)* 99623
green mktg. of hydroelectric power resources 77778
ground/obj. movement detect. using GPS in hydroplant environment *(Serbia* 88633
hourly power scheduling, competitive framework, lin. algm. 99218
HV station transformer differential protection *(Chinese)* 99718
hydrol. forecast/reservoir regulation automatization *(Chinese)* 112342
hydrothermal systs., short-term optim., evol. techs. 77148
incomplete split-phase transverse differential protection, Three Gorge Power St tion *(Chinese)* 133922
Indian hydroelectric power resources overview 77782
Jiangya project sluice gate automatic control syst., reservoir dispatch, Ethern Profibus network *(Chinese)* 77772
Kadra powerhouse, Kalinadi hydroelectric project stage II 112348
Kalinadi hydroelectric project, Kadra/Kodasalli powerhouses control strate 112351
Kalinadi hydroelectric project stage-II, environ. aspects 112350
Kodasalli dam, Kalinadi hydroelectric project stage II 112349
Kodasalli powerhouse, Kalinadi hydroelectric project stage II 112347
Krasovskii's works on hydroelec. power station control 112354
long-term hydro scheduling problem, simulated annealing 112359
low-head hydroelectric power generation planning 88629
low-head hydropower exploitation using syphon plant approach 77785
Lower Mekong River hydroelectric power pot. 88634
maint./upgrading decisions tool 88625
Nat. Hydroelectric Power Corporation Ltd. power projects, India 77783
North China power syst. black start using hydroelec. generating sets *(Chine* 77165
Norwegian hydroelectric power plants, environ. class. 88623
Norwegian hydropower resources, role and benefits 88622
Norwegian wind power develop., water-wind resources synergy 88642
operation during floods, RIFA CBT simulator 88626
operator training competence network 88632
plants constr., ecological aspects, building work *(English)* 112341
pricing method in power market *(Chinese)* 111725
protection syst. retrofit project 77786
PV plants integrat. in hydro-thermal syst., economic eval. 111806
real time neuro-fuzzy prod. syst. for hydroelectric power company 123242
rehabilitation, Francis turbine runners CAD 77779
restoration scenarios simul. model 112345
run-of-river hydropower plant automatic generation control program *(Chine* 77770
run-of-river plant refurbishment, new low-head hydro plant constr. 88628
salient pole sync. generators, hydroelectric plant, automatic optim. 123338
scalar product restrained incomplete-differential protection, inter-branch sh cct. *(Chinese)* 77474
Sharavathy valley project, hydroelectric power station, modernisation 1123
short-term hydro-thermal power syst. scheduling optim. 122919
Slovenian hydroelectric power plant water inflow forecasting *(Slovenia* 123234
small hydroelectric power plants, engng./environ. mgt. projects *(Spanish)* 77
small hydropower plant generator beaviour under distrib. network faults *(Slo nian)* 123235
small-scale hydroelectric power generation using induction generators 1123
small-scale hydroelectricity, variable-speed cascaded induction generat 133876
Snowy Mountains Hydro Scheme earthing syst. safety assess. 77787
Snowy Mountains Hydro-Electric scheme, economic justification 123236
South China power syst. dyn. stabil. improvement 77212
Southern Africa long-term hydropower capacity expansion planning 88404
streamflow forecasting, multi-step-ahead, monthly, by neurofuzzy network mo 122937
Taipower hydropower project quality inspection syst. improvement *(Chine* 77773
transformer transfer voltage countermeasure study 99582
turbine governors, surge tanks fuzzy control scheme *(Chinese)* 112343
turbine intell. cavitation diagnostics/monitoring 99581
turbogenerator valve nonlin. robust control strategy *(Chinese)* 77769

hydrogen bonds
polybithiophene, films, electrochem. polymerization, solvent effects 125027
polythiophene, films, electrochem. polymerization, solvent effects 125027
self-assembling polymers, H-bonded, complex dyn. 90566

ogen bonds continued
TF based organic semiconds., sens. for recogn. of nucleic acid components 75667
aN epilayers, MBE, at. H_2 impact 90299
-GaN:Mg, acceptor activation, microwave treatment, PL, Hall effect 81047
i thin films, hot wire CVD, solar cells/TFT appls. 79320
-Si:H and μc-Si:H hot wire thin films, SiH_4 flow, H_2 dilution 103073
-Si:H films, UV/white/sub-gap light soaking effects 104902
-Si:H films, catalytic CVD, solar-cell materials appl. 124954
-Si:H thin film nip solar cells, VHF-PECVD, photo-induced degrad. 112890
iC:H,B, 4H, H_2 presence, SIMS, low temp. PL spectra 69583
-Si_xN_y:H, rem. PECVD film, H dissoc. reacts. 126272
-SiO_2 surf., hydrophilic wafer bonding modeling 81056
i:sapphire laser crysts., direct bonding tech., feasibility study 92936

ogen economy
nergy storage technols. comparison 89104
igh catalytic activity disordered hydrogen-storage alloys, Ni-metal hydride batts. appl. 89045
arge fusion power plant design, economics, theory 99482
EM fuel cells, parametric study of cathode catalyst layer using pseudo-homog. model 134365
EMFC hydrogen storage, compressibility factor/fugacity coeff. determ. 89182
lasmatron fuel converters for hydrogen rich gas prod., emissions reduction 133835
ublic liq. hydrogen filling station for automobiles, Munich Airport 99457
V powered water electrolysis plant, hydrogen/oxygen prod. 88654
enewable energy syst. for rem. commun. stations powering 88662
olar-hydrogen energy utilisation in UAE to maintain energy market share 88519
team reforming of methanol over Cu-based catalysts, H_2 generation, fuel cell appls. 134364
ansportation fuel prod., municipal solid waste gasification 134540
ehicle engine, hydrogen fuel, charact., ignition props. 134559
ehicle engine, hydrogen fueled, optimisation 134558
ehicle hydrogen fuel prod., water electrolysis, elec. power requirement 134539
ero-emissions gas-fired cogen. of power and hydrogen 133859
$l_{0.15}Ga_{0.85}As$/Si solar cell, water splitting, H_2 prod. 100028
, activated, H_2 adsorpt., modelling, transportation appl. 113090
storage capacity in (single)multi-walled carbon nanotubes 68459
aGaP/GaAs, selectively-grown on Si, PV-photoelectrolysis cells appl. 79393
aGaP/GaAs/Si PV/PEC cells, selective heteroepitaxy, H_2 generation from sunlight 112956
$a_{0.9}Sm_{0.1}Ni_{2.0}Co_{3.0}$ electrode alloy, electrochem. prop., magnetis. treatment 123742
$lg_{35}Ti_{10}M_5Ni_{50}$ (M=Y,Al,Zr) H storage electrodes, electrochem. 101463
i hydride electrodes, sintering, elec. vehicle appl. 89128
li-MH alkaline high power batts. in bipolar stack design 89080
li-MH batt., $MmNi_5$ based hydrogen storage alloy paste type neg. electrode 99902
li-MH batts., high-power, H-storage alloys develop. 112796
li-MH batts., intermetallic-based metal hydride electrodes, behaviour 99901
li-MH secondary cell H_2 storage intermetallic particles, surface modif. 99905
li-MH secondary cell hydrogen storage electrode alloys develop. 89081
li-MH secondary cells, electrode electrocatalytic charact. 89082
li-MH secondary cells, hydrogen storage electrode alloys studies *(Chinese)* 89071
ni-Zr, amorph., catalyst, global CO_2 recycling 76925
$lNi_{3.65}Co_{0.75}Mn_{0.4}Al_{0.2}$ hydrogen storage alloy, Ni-MH batt., electrochem. perform. 99900
Si:H/c-Si solar cells, sputter deposited, PV water electrolysis, H_2 prod. 100029
$l_{0.7+y+z}Zr_yCr_{1.2}V_{0.8}Ni_x$ hydrogen storage alloy dyn., Ni-MH batt. *(Chinese)* 89062
$l_{0.8}Zr_{0.2}Mn_{2-x}Cr_x$ PEMFC hydrogen resource storage props. 89181
-Ti alloy surface-modified by ballmilling proc., electrode charact. 112770
$l_3TiNi_{0.56}Hf_{0.24}$ alloy electrode, electrochem. behaviors during charge-discharge cycling 112764
r based alloys, comp. effect on struct., Ni-MH batts. 123769
r-Ti-V-Mn-Ni AB_2-type H storage alloys, Cr and La doped, electrode charact. 134353
$r_{1-x}Ti_xCrNi$ alloy electrodes, Ni-MH batt., H_2 absorpt., electrochem. props. 99899
$r_{0.5}Ti_{0.5}Mn_{0.4}V_{0.6}Ni_{0.85}M_{0.15}$ (M=Fe,Co,Cu,Mo,Al) electrodes, cell appl. 112792

ogen energy *see hydrogen economy*

ogen ion concentration *see pH*

ogen production *see hydrogen economy*

ogen storage *see hydrogen economy*

ogenation
MOS device, hot carrier reliab., deuterium annealing 126808
amond:B, ion-induced electron emission, effect of surface hydrogenation and sample temp. 80557
amond:H, surface cond., adsorbate coverage, FTIR obs. 69494
amond thin film, form. of shallow acceptor states in surface region 69470
ethyl radical form. in hot filament CVD 68279
OST, hot electron stressed, D_2 passiv. of interface traps 103854
olysilicon TFT, RF plasma & SiN_x hydrogenation comparison 81264
ring ribbon Si solar cells, PECVD SiN_x induced hydrogen passiv. 100056
lGaAs/GaAs HBT, plasma hydrogenation effects on dc charact. 126665
C:H films, current-induced conditioning, field emission 80567
C:H,N films, low-temp. annealing effect, field emission 80569
u surface cleaning, hydrogen plasma treatment 103297
CuInSe$_2$:H, hydrogenation, cond. type conversion 103409
dFeB-type powders, intermediate mag. phases in H disproportionated state 00550
l/GaAs:H,S Schottky contact, sulfidation/thermal hydrogenation 103159
$_2Fe_{14}B$ magnet, metastable phases and texture, HDDR proc. 127384
EFG multicrystalline solar cells, lifetime enhancement 100054
high-valued polysilicon resistors control by hydrogenation techs. 76047
lattice defect passiv. by ECR hydrogenation tech. 69895
n-web screen-printed front-surface-field solar cells, gettering, passiv. 134389
solar cells, high quality screen-printed contacts, rapid photo-assisted forming gas anneal 100139
c-Si solar cells, simultaneous bulk H_2 passiv./selective emitter form. 100055
:H surface, hydrogenation, impurity metal atoms removal 69897
-Si:H,B,Fe, Fe detect., DLTS, Schottky diode meas. 80655
C:Al epitaxial layers, acceptor-H interact., low-temp. PL spectrosc. 91713
C:H 6H surface passiv., hydrogenation, struct., fermi level 92020
O_2/GaAs, penetration of at. H from gas phase 103316
O_2-P_2O_5 fibers, H loading/UV irrad. effects on opt. props. 127646
$n_6Fe_{65}Co_{20}V_9$, H-assisted disproportionation/recomb. 116262
N, APCVD, H_2 addit. effect 79326

hydrogenation continued
W/SiO_2/Si MOS capacitors, interface passiv. using at. H 69740
polysilicon/SiO_2/Si structs., thermally induced (100)Si/SiO_2 interface degrad. 91915

hydrological equipment
4D self-pot. tomography in near-surface geophys. exploration 88167
fiber optic soil moisture sens. design, lab. and field meas. 97328
glacial ice, dust logging, rapid opt. method 76914
in-situ comp. sens., inductive & capacitive sens. arrays 120987
Ka-band radar front-end, appl. to avalanche detect. 133346
multi-point snow temp. recording syst. 111464
pass. act. L- and S-band microwave sens., marine/hydrol. 76905
sandstone, water content meas., fast neutrons transm. 88161
SMOS MIRAS demonstrator, receiver specs. 122684
soil moisture, SMOS satellite microwave radiometer 111454
transm. meas. of porosity, neutron generator, geophys. appl. 88160
VHF ground elec. cond. anoms. meas. eqpt 88096

hydrological techniques
4D self-pot. tomography in near-surface geophys. exploration 88167
flooding, springtime, forecasting, rem. sens. methods 99008
forest rain storage detect., ERS tandem mission SAR 76917
glacial ice, dust logging, rapid opt. method 76914
GPS appls., conf., Tsukuba, Japan (Oct. 1999) 113270
hydrogeology, airborne SAR-GPR methods, L-/P-bands 88112
hydropower station, hydrol. forecast/reservoir regulation automatization *(Chinese)* 112342
ice sheet, edge detect. tech. 133337
ice surface types, SAR imaging 111437
pollution monitoring, conf., Boston, USA (Nov. 2000) 89541
radar, multifreq. SAR, hydrol. params. 88170
radar mapping of Antarctic ice surfaces 111438
sand dunes, water content, radar refls. model 122685
sandstone, water content meas., fast neutrons transm. 88161
self-pot. anoms., CW transform 88107
skin soil moisture, SSM/I quantitat. estim. 98980
snow/ice interferometric SAR sigs. penetration depth 133338
snowcover, microwave emission model, layered struct. 99014
snowcover, microwave radiometry, hydrol. simul. 111456
soil, crop-covered, radar scatt. 122686
soil moisture, 6.6 GHz radiometry, thermodyn. temp. 111449
soil moisture, AMSR-E SHF radiometry, land heterog. 111465
soil moisture, L-band radiometry, ESTAR SGP99 expt. 111450
soil moisture, L-band radiometry emission model 111452
soil moisture, microwave brightness temps., neural nets 111448
soil moisture, microwave polarimetry method 111467
soil moisture, microwave radiobrightness, data assimilation 111453
soil moisture, microwave radiometry, multifreq. algm. 111447
soil moisture, microwave radiometry, USA Great Plains 111451
soil moisture, radiometry, S-/L-bands, accuracy 122691
soil moisture, SMOS satellite microwave radiometer 111454
soil moisture, TRRM TMI microwave rem. sens., SGP99 expt. 111466
soil moisture, USA 1993 Midwest flood, satellite obs. 111455
soil moisture inversion, neural network based 88163
soil moisture meas. using meter-wave noise sig. 88166
Svalbard, glaciers, valleys, fjords, ERS Tandem SAR rem. sens. 122693
temp., lidar meas., freq.-shifted Raman scatt. 99022
underwater hearing thresholds, noise exposure limits, acoustic estim. 122694

hydromagnetics *see magnetohydrodynamics*

hydrometers
see also density measurement
dens. std. in single nontoxic liq., hydrometer calib. 75357

hydrophones
see also sonar
Comprehensive Nuclear-Test-Ban-Treaty, hydroacoustic monitoring syst. 88162
diffusive hydrophone for US meas. 111434
ferroelec. sens. advances & emerging technol., review 131881
fiber optic dielec. multilayer hydrophone, freq. response 111526
fiber-optic interferometric hydrophone array using FDM *(Chinese)* 86249
HF acoustic field, computer-controlled exposimetry syst. 110029
intrinsic DFB fibre laser hydrophone 131943
large-scale multiplexed fiber optic sens. arrays for geophys. appls. 122548
Mach-Zehnder interferometric fiber-optic hydrophone, demodulation *(Chinese)* 120882
mandrel fiber-optic hydrophones, press.-to-accel. responsivity ratio 97311
mine detect., acoustic array syst., liq.-filled roller array 77000
nonlin./lin. imaging techs. at HF 110765
seismic fiber optic multiplexed sens. for oil exploration and reservoir mgt. 122547
shallow sea, charact. of receiving antenna arrays 133342
shallow-water oceanic waveguides, medium-scale diffr. tomography 111435
shear-moonie piezoelec. composite transducer 81736
TDM/DWDM large-scale multiplexed interferometric fiber-optic sens. 75567
tubular, 1-3 piezocomposites, free-field voltage receiving sensitivity *(Chinese)* 99083
underwater acoustic commun., expt. testing of pass. phase conjug. 109229
US hydrophone spatial averaging corrections from 1 to 40 MHz 110773
vector hydrophone, near-field/far-field azimuth and elevation angle estim. 130025
vector-sens. correls. in ambient noise, array proc. 111445
PZT hydrophones for high-energy react. det. in water 122739
ZrW_2O_8, temp. compensation, radial Bragg grating package, interferometric hydrophone arrays 104665

hydropower *see hydroelectric power*

hydrostatics
CO_2 pulsed laser radiation/liqs. time-depend. interact. 72101

hydrothermal crystal growth *see crystal growth from solution*

hydrothermal power systems
augmented Lagrangian, transm. constraints, pumped-storage 133880
bid-based hydrothermal scheduling, market power assess./mitigation 88326
daily energy market, ordinal optim. based bidding strategy 133503
daily optimal economic load dispatch in elec. market, improved priority method *(Chinese)* 77169
generation scheduling, stochastic prog. 99580
Lagrangian relax.-based auction implement. improvement 111757
PV plants integrat. in hydro-thermal syst., economic eval. 111806
short-term hydro-thermal power syst. scheduling optim. 122919
short-term optim., evol. techs. 77148

hygiene
see also medicine
warm water bidet energy-saving pers. hygiene syst. *(Japanese)* 89444

hygrometers
see also humidity measurement; humidity sensors
Si dew point hygrometer mirrors, surface temp. homog. optim. 109803
Si dew point hygrometer model 121297

hyperbolic equations
conducting cylinder embedded in complex medium above ground plane, anal. 72398
digital cellular networks, hyperb. radiolocation 96603
discrete models of coupled dyn. thermoelasticity for stress-temp. formulations 90103
discrete scheme for diffusive-dispersive conservation laws 114143
evol. problems, method of lines appl., a posteriori error estim. 124718
finite vol. approxs. and strict stabil. for hyperb. problems 114157
Galerkin method for nonlin. hyperb. eqn. *(Chinese)* 79061
least sq. moving finite elements 90184
mixed finite element for nonlin. hyperb. eqns., error estim. 101125
nonlin. hyperb. eqns., num. existence and uniqueness proof for solns. 114170
normally hyperb. compact invariant manifolds discretization of ODE 114109
reacting Euler eqns., relax. schemes, hyperb. conservation laws 90158
semidiscrete central-upwind schemes for hyperb. conservation laws 114103

hypercube networks
ATM PNNI networks, link state aggregation using shufflenet 74033
broadcasting protocol in line digraphs 107942
Butterfly network exposed layouts 104026
connected rings, scalable fault-tolerant topol. for opt. networks 96816
cube-connected cycle layout without long wires 125517
faulty hypercubes, multicast routing algm. based on parallel branching 130521
interconnection networks, dual of hypercubes 85082
multicomputers, cube alg. based fault-tolerant multicast routing algm. 119383
multilayer-wiring VLSI area model, compact, multilayer layout for butterfly fat-tree 104028
parallel matrix factorisation on hypermesh, perform. eval. 114080
pipelined cct. switching in hypercubes, perform. model 119123
seq. Viterbi decoder macro, ACS-feedback method 106121
VLSI layout and packaging of butterfly networks 104027

hyperfine field interactions (condensed matter) *see hyperfine interactions*

hyperfine interactions
see also hyperfine structure
p-/n-(6H-)SiC:Al(N), intrinsic defects, electron irrad., Si displacement threshold, Frenkel pairs 69797
C:P, type IIa diamond crysts., cold implant., rapid annealing effects 80998
CoNiFe electroplated film, saturation induction 116267
$Dy_{20}Fe_{80-y}$-Co_y amorph. thin films, mag. and conversion electron Mossbauer spectra 127294
$Pr_2Fe_{14}B$ melt-spun ribbons, hard magnet characts., Mossbauer obs. 92784
$Ti_xCo_{1+x}Fe_{2-2x}O_4$ ferrite powders, struct., mag. props 92785
$ZnFe_2O_4$, nanocryst., influence of Fe^{3+} ions at tetrahedral sites on mag. props. 81830
ZnSe:Mn QD colloidal nanocrysts., EPR/opt. props. 91810

hyperfine structure
acetylene saturated lines, 1.54 μm, opt. freq. std. develop. 109413
Cs at. clock, freq. pulling by hyperfine σ-transit. 109402
^{133}Cs thermal cell, saturated absorpt. spectrum, high-precision freq. meas. 117429
I_2 high-stabil. diode-laser-based freq. ref. 75349
I_2 hyperfine transit., mini-Nd:YVO_4 laser stabilization, FM spectra 82557
^{39}K transit., 770 nm, opt. freq. std. develop. 109413
MnO_2 powders, EPR anal. for power sources 90586
Nd:YAG lasers, I_2-stabilized, absol. freq. meas. 86385
SiC, 4H, D_1 bound exciton, Zeeman effect, PL 69581

hypermedia
see also hypermedia markup languages
adaptive hypermedia systs., user models role 113311
agent based education syst., cellular phone based 131298
aggregate hypertext transfer protocol model for marginal distrib. 107926
Bluetooth wireless ad-hoc network form./scheduling algms. perform. 131224
cluster-based Web servers with load balancing, perform. meas. *(Polish)* 130644
cooperative proxy caching, viability anal. 130693
DHTTP, efficient/cache-friendly transfer protocol for Web traffic 119376
dist. learning technols., hypermedia classroom *(Slovenian)* 130742
documentation design for safety crit. training appls. 78503
EDA appls., collaboration framework for hypermedia-aided design 125174
GSM teaching to GSM teaching, hypermedia approach 67453
HTTP Web transfers across satellite links, latency reduction by smart proxy 85016
hyperlink-proposals and request-prediction 74405
hyperlinking to decryption software, legality, USA 100489
image matching for automatically linking multimedia meeting documents 106515
image segmentation by movement estim./contour extraction 106482
Internet multimedia services, OO appl. develop. platforms 108363
Internet server switching, yesterday and tomorrow 108502
Markov proc. model cache algm. for network file servers 119556
multimodal systs., interactive advice tool on speech use 118138
Net-BTRON, distributed hypermedia OS 96238
TCP/IP protocol headers for Web traffic 119339
unified digital platform, develop. 119807
video streams, hyperlink anchor generation using OvalTine 108381
VoD, human-like avatars/hypermedia 86336
Web servers, feedback control for guaranteeing relative delays 85348
Web servers, simul. based perform. anal. 130442
Web servers, traffic model and perform. eval. 119312
Web wireless mobile service, distributed proxy server syst. develop. 108157

hypermedia markup languages
appl. service dependencies mgt. 130690
B2B transactions, Simple Object Access Protocol 85266
Broadcast Satellite digital data broadcast service, BML authoring syst. 120082
CC/PP, effects and perform. of content negotiation *(Japanese)* 119269
Centaurus, framework for intell. services in mobile environ. 74234
clinical trials, rem. data entry using WAP phones 98874
component selection and matching for IP-based design, SoCs 81430
Context Aware Messaging Service *(Japanese)* 119521
DICOM struct. reporting, diagnostic reports, stds., langs. *(Japanese)* 88021
digital teletext service, XML-based content format 96064
filmless radiology teaching 89610

hypermedia markup languages continued
home area network, Internet access, AutoHan project 74175
home telecomm. equipt., middleware emergence 75311
hyper audio Web browsing syst. via telephone 119721
I/O heterog. devices, markup lang./syst. 108145
Internet portal environ., contents gathering/delivering, messaging/XML 1308
Internet-based med. teleconsultation syst. 133199
Java-based smartcard, data storage extension 125496
Markov proc. model cache algm. for network file servers 119556
MedStage platform for inform. and commun. in healthcare 111268
metadata integrat. from prod. to consumer 75276
middleware platform mgt. based on portable interceptors 96045
MPEG-7 video self-describing scheme, interoperable image/video conte descriptions 73380
Multimedia Description Framework, content description of audio/video doc ments 119777
networked phys. world, automated ident. archit. 108327
news video browsing, visual/audio/text anal. integrat. 94829
online service adaptation for mobile and fixed terminal devices 108138
Paks VVER-440 units, PLASMA on-line safety monitoring, EOP visualiz. mo ule 112230
patient immediate discharge letters, use of XML in Scotland 111266
power market data exchange using XML 111750
radiology and pathology conf., Web browser-based image presentation, eval. traditional film-based environ. 98835
real world video stream description lang., appl. 94796
secure digital archiving of high-value data 118010
service authoring for third-party prog., service-mediation-enabled feature serve 108057
Simple Object Access Protocol for interoperability problems on Web 74182
SMIL-based scenarios, protocol synthesis, distributed environ. impleme 95925
TMN evol. role 130566
TV-Anytime metadata, preliminary spec. 75275
WAP over Bluetooth, technol./appls. 119283
wired and wireless platforms, collaborative multimedia appls. 108405
wireless Internet for mobile devices 85177
WWW Consortium standardization activities 119733
WWW contents adaptation to terminal equipt. limitations *(German)* 74303
XML and security 119537
XML based policy-driven mgt. inform. service 130673
XML compression with multiplexed hierarchical PPM models 106842
XML security mechanisms 119538
XML-based household profiling for home networks 119607
YK data compression algms., complexity/implement./expt. results 129998

hyperon detection
HERMES silicon strip detector, cooling, read-out electronics, SNR 76076

hypersound *see ultrasonics*

hypertext *see hypermedia*

Hypertext Markup Language *see hypermedia markup languages*

hyperthermia
3D water-coated antenna applicator for deep-body hyperthermia 87847
B-scan US imaging, liver thermal coagulation, freq. shift atten. mapping 982
blood vessels, photothermal coagulation, OCT, modelling 87830
brain tumours, clinical thermometry, 27 MHz interstitial hyperthermia 1110
conformal ultrasound phased arrays for thermal therapy, fab. 76623
deep-body hyperthermia, num./expt. methods for further develop. 87813
digestive tract tumours, thermal coagulation necrosis, US applicator 87854
dual concentric conductor microwave applicators, hyperthermia at 433 M 76615
EM induced hyperthermia, optim. and control, model order reduction 13302
hepatic bipolar RF ablation, separated multiprong electrodes 122309
inductive hyperthermia, excitation apparatus 133024
inductive hyperthermia, handy excitation coil, simul. *(Japanese)* 111063
interstitial applicators meas., FEA computations of heating patterns 110787
interstitial laser photocoagulation, relative light fluence changes, opt. monitor 122302
interstitial RF therapy effectiveness, shear modulus reconstr. 122289
interstitial US therapy, heating pattern control, wideband transducers 11111
liver cancer coagulation, microwave-induced thermal distrib., computer-aid dyn. simul. 87870
malignant tumour growth, low-energy ns microwave pulses effect 76657
microwave antenna, thermal therapy appls. 87836
multiantenna applicators, regional hyperthermia, optimal controls, fast alg 122305
multielement catheter-cooled interstitial ultrasound applicators for thermal th apy 98639
neck hyperthermia, circ. phased aperture antenna EM emissions 133018
neovascular maculopathy, PDT/transpupillary thermotherapy *(Japane* 111108
prostate cancer, interstitial microwave thermal therapy, helical antenna ar 98623
prostate disease thermal treatment, MRI compatible intracavitary ultraso array 76426
prostate therapy, focused US phased arrays design 111115
prostate treatment, microwave transurethral applicator with helix-loaded-dip antenna 87872
quasistatic zooming of FDTD $\vec{E}$-field computations 76639
radiometry controlled conformal microwave array hyperthermia applica 76622
rectal cancer, neoadjuvant treatment response predicting by laser-induced end enous fluoresc. 87554
regional hyperthermia, EM phased arrays, optimal freq./antenna arrangem 87873
regional hyperthermia applicator design using FDTD modelling 98624
regional hyperthermia treatment, absorbing struct. use 76614
regional hyperthermia treatment planning syst. 76613
retinal photocoagulation, changes and present state *(Japanese)* 111109
RF catheter ablation, heating efficiency prediction, bioimpedance meas. 111
RF thermal ablation with NaCl soln. injection, elec. cond. effect 87878
SIGMA-eye applicator, antenna arrays, interacts./transforming networks 111
soft tissue sarcomas, preoperative thermoradiotherapy, thermal dose para 87871
temp. distrib. in sarcomas, DE-MRI meas. tissue perfusion 76425
transurethral high intens. focused US, catheter based prototype 111120
tumour hyperthermia, EM tech., technol. aspects 76656
tumour microwave thermotherapy, US temp. monitoring 87834
tumour thermal therapy, MR monitoring appl. 110894
urologic tube, complex US & microwave irradiator interf. 87850

erthermia continued
urologic tube, US & microwave irradiator design, model 87849
US coagulation therapy, multisector split-focus transducer 111119
ochromism *see light absorption*
othesis formation *see heuristic programming*
teresis
see also coercive force; control nonlinearities; dielectric hysteresis; elastic hysteresis; magnetic hysteresis; remanence
3D hysteresis piecewise-const. cct., bifurcation 90693
ADC dyn. testing, IEEE 1057-94 std., nonlin. 120701
ADC histogram testing, IEEE Std. 1241, benefits & risks 102285
ATM network, hierarchical QoS routing, dyn. inform. update methods 130482
bifurcation anal. of hysteresis oscillator 114651
cellular systs., QoS degrad. due to H/O hysteresis 74620
chaotic electromech. oscill. for mag. levitation, switching mode control 125206
Chua's cct., freq. switched, freq. hysteresis 90684
CMOS regenerative comparators, symbolic anal. 91125
comparator instabil. removal with hysteresis, pos. feedback 68972
external-cavity semicond. laser stabil., strong-feedback regime 93629
HTSC power cables, calorimetric losses meas. 77391
IM direct stator flux and torque vector control 123913
IM direct torque control, inverter switching freq. prediction 77879
interface-engineered Josephson jns., capacitance anal. based on equiv. cct. model 127486
large deployable space telescopes, microdynamic issues 82266
low background QW IR photodetectors 86550
magnetostrictive actuators, hysteresis modelling and compensation 92878
magnetostrictive-type torque sens. for low-C steel steering shaft, basic charact. *(Japanese)* 110002
melt texture growth HTSC ball, MAGLEV hysteresis *(Chinese)* 116503
microstructural press. sens., reson. mode hysteresis effect 132070
MQW bistable laser carrier dyn. 117259
NLC cell with optoelectronic feedback, self-oscills., opt. bistability 82245
organic mol. aggregates ultrathin film, hysteresis, transm. switching 93841
overhead conductors, thermal hysteresis eval., meteorological station data *(Japanese)* 112114
partially depleted SOI CMOS technol., device design/modeling and cct. perspective 70309
partially-depleted SOI CMOS Schmitt trigger ccts. with controllable hysteresis 125273
penicillin detect., EnFET, capacitive EIS sens. & LAPS comparison 120950
piecewise-lin. chaotic cct., bifurcation, hysteresis and 1D map 125200
piezoceramic actuator hysteresis model, voltage excitations 92695
piezoelec. actuators, hysteresis and creep effects, real-time inverse feedforward controller 92679
PMMA-based polymer fiber Bragg gratings, thermal tuning 93093
polymer stabilized cholesteric texture materials for projection display 97614
press. transducer MEMS struct., degrad. proc., temp. hysteresis 86756
PWL hysteresis based oscillator, 2D bifurcation diag. 90788
QW IR photodetectors, low background conditions, time-depend. effects 86549
QW VCSEL polariz. behavior 82629
random hysteresis PWM inverter with robust spectrum shaping 99793
reflective electromechanically actuated film display for direct viewing 109844
relax. oscillator with relay-hysteresis, robustness 68632
Samsung supercond. test facility, AC losses/heat removal in 3D winding pack 104588
scalar hysteretic systs. with wipe-out memory, model 81791
series-connected NDR devices, hysteresis phenom. anal. 68908
single-bodied humidity & temp. sens., adv. lin., design, fab. 97562
SNS jn., sig. amplif., hysteresis 79572
SOA, all-opt. hysteresis control by cross-PM 93839
superconvergent method for approximating bending moment of elastic beams with hysteresis damping 79073
V/BR voice using hysteresis thresholds 84002
V/CSELs, opt. bistable injection locked, hysteresis, power and freq. depend. 71768
(BaSr)TiO_3 thin films, hysteresis effect, alternative gate dielec. appl. 115465
Bi(-Pb)-Sr-Ca-Cu-O/Ag(AgMg) HTSC tapes, I_c hysteresis 70732
BiPbSrCaCuO HTSC thick film based sensitive mag. field sens. 121155
BiSrCaCuO 2223 ring bundle barrier multifilamentary tapes, AC losses 81973
BiSrCaCuO axial type HTSC motor 82022
C nanotubes, ferromag. contacted, magnetoresist. 80529
InGaAs ring cavity SOA, self-mode-locked, ps pulse generation 93730
Nb_3Sn multifilamentary wire for accelerator magnet appls., develop. 81965
Nb_3Sn supercond. strand with enhanced charact. for ITER 70572
$(NbW)_3Sn$ multifilamentary composite supercond. for AC use, hysteresis loss and J_c 81928
Ni hydroxide act. material, hysteresis during cycling 112785
POI piezoresistive high-press. sens. for harsh environ. 132074
Si high-force piezoresistive force sens., max. hysteresis error 86758
SiN_x, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiO_2, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
$Sn_2P_2S_6$ photorefr. recording, elec.-field enhanced beam coupling 82813
$Sr_xBa_{1-x}Nb_2O_6$, rare-earth impurity doping, ferroelec. and photorefr. props. 128455
TiO_2 sputtered film humidity sens., neg. substr. bias, charactn. 97178
VO_2 bolometer based IR radiation detect., double correl. sampling tech. 120695
VO_2 transit.-edge microbolometer, hysteresis model 120812
teresis motors
BiSrCaCuO/Ag, elec. motors with bulk HTS elements, charcts., future prospects 123387
YBaCuO, bulk supercond. in rot. machine, EM phenom. during transient state 123388
YBaCuO, elec. motors with bulk HTS elements, charcts., future prospects 123387
tres *see colour centres*
VI_2 semiconductors *see ternary semiconductors*
-VI_2 semiconductors *see ternary semiconductors*
lithography *see ultraviolet lithography*
rograms *see input-output programs*
O *see ion beam assisted deposition*
computers
elec. track detectors, automatic image anal. syst. 121673
roduct takeback programmes overview 100700
IC *see integrated circuits*
IC cards *see smart cards*
IC engines *see internal combustion engines*
ICAD *see intelligent design assistants*
ICAI *see intelligent tutoring systems*
ICF *see fusion reactors; plasma inertial confinement*
icon-based interfaces *see graphical user interfaces*
iconoscopes *see television camera tubes*
idea processors
student interact. anal. in computer-mediated commun. environ. 119518
identification
see also control theory; correlation methods; frequency response; parameter estimation; power system identification; state estimation
2D random variable, dens. fn. logarithm nonparam. approx. 113897
3-phase AC locomotive, rail-wheel adhesion ident. 89399
3G W-CDMA semi-blind channel ident., orthogonal transmit diversity 85804
act. mag. bearing sync. disturbance compensation 92880
adaptive filtering algms., syst. ident. 130082
adaptive filters with LMS algms., DC bias effects 107488
adaptive optimal nonlin. filtering design, duality 119061
adaptive receivers, interf. distrib. ident. by moment method 118888
AGV steering control/ident. using vision syst. 129448
aircraft engines dyn. ident. with neural networks *(Chinese)* 133214
aircraft sens. failure detect., ident., and accommodation, min. resource allocating networks appl. 111305
binary pseudo-random sig. gen., overview and MATLAB routine 118827
black-box models from input-output meas. 109399
blind asynchronous CDMA receivers using code-constrained CMA 84865
blind channel ident., subspace tracking method 119184
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind channel ident. using evol. prog. 107703
blind ident. of 2nd order Hammerstein series 129973
blind ident. of nonminimum phase systs., mean differential cepstrum 129974
blind MIMO ident., alg. approach 107559
blind MIMO syst. ident. based on cross-polyspectra 118809
blind multichannel ident., lin. channel-based noise subspace parameterizations 84870
blind nonlin. channel ident., constrained hybrid GA 119176
blind source separation, 2nd order stats. algm. optim. 118798
camera calib., obj. relative posn./orient. ident. 86642
cartridge ident. syst. for firearm authentication 73168
cascade time-series syst., nonparametric estim. of nonlin. by multiscale approx. 73599
CDMA high capacity array-receiver requiring reduced pilot power 74750
channel estim. and equalization with block interleavers 84868
Chinese road maps, automating data extraction/ident. 73144
circ. geological forms in satellite imagery, ident. 122557
coherent OFDM syst., perform. of channel estim. using pilot syms. 106043
collocation mining using corpora for ident./representation *(English)* 73009
comb-shaped antenna for radiofrequency ident., anal. of near field 105933
computational tomography, nonlin. filtering, photon diffusion 87714
computer vision, perspective dyn. syst. observability 84201
conc. multivariate outliers ident. using ang. props. 113831
controlled syst. lang. ident., modelling, control and anom. detect. 112731
Cramer-Rao bounds for blind multichannel estim. 73832
D_{st} geomag. index forecasting, adaptive nonlin. systs. ident. 122640
damage detect. meas. point selection, mutual inform. concept 86989
DECIDE subcircuit extraction algm. by recursive graph ident. scheme 101682
degraded broadcast channel, ident. capacity region inner/outer bounds 128948
deterministic blind beamforming, identifiability in incoherent multipath with small delay spread 118915
deterministic sig., blind zero-forcing ident. 73826
digital commun., blind equalization based on fourth-order cumulants 130251
drum boiler syst. identifier, fuzzy rules extraction, GA 112291
DS-CDMA asynchronous systs., sigs. blind detect. 107771
DS-CDMA systs., semi-blind spatio-temporal equalization and multiuser detect. 85815
E-type vert. spindle coal mill syst. ident., GA 99543
EEG as biometric, class. 132556
electrocardiographic p-wave morph. class. 76308
EM, effects of dyn. info. in ident. problems 128639
EMI sig. proc./source ident., wavelet packet-based tech. 72374
faces extraction from natural background for pers. ident. 118779
fault detect., fuzzy relational model ident. 67650
feedback syst., fading memory, radial basis model 114592
finite dimens. MIMO lin. syst., input-output sigs., finite length DFT 84683
FIR MIMO channels, colored sigs. driven, blind identifiability conditions 107727
FNS muscle model ident. using Matlab Simulink 122328
fuzzy relational eqn. with defuzzification, largest soln. 100838
general unreplicated fractional factorial designs, dispersion effects testing 113752
ground penetration radar sigs. for AP mine detect., instant. params. anal. 131666
growlers on sea surface, coherent radar detect., spectral method 122697
guide star catalog constr., star map ident. *(Chinese)* 98904
hearing aid perform., multiple model least sq. tech. 122355
heart, ventricular recovery index, min. invasive ident. 76226
hydro-power plant restoration scenarios simul. model 112345
IIR channel, blind equalization 130254
image degrad., blind ident., ascendant hierarchical class. 118228
indiv. ident. using lip shape as password *(Japanese)* 106819
inductive cond. meas., model selection, parametric inversion 114497
Internet traffic ident. using feedforward multilayer layer perceptron 119754
inverse filtering in a priori indeterminacy, optim. algms. 84730
iris recogn. through feature vector/classifier improvement 84588
Kautz filters adaptation in identifying dyn. systs., separable nonlin. least-sq. methods 107537
large scale differential alg. systs., automatic struct. anal. 114117
large sens. data networks, pattern anal., inform. fusion techs. 107365
lightning return stroke ident., field-based inverse algm. 83092
lightning return strokes inverse ident. procedure 83096
lin. multiuser systs., second-order stats. based equalization/interf. cancellation 107691
loudspeakers, Volterra filter, 2nd order nonlin. distortion elimination 131780
low antenna height base station in urban area, propag. path ident. 105755
mag. disk drive dual-stage servo systs., electrostatic microactuators, mechatronics 89022
mag. field ident. by charged projectiles data 117624

identification continued
MAGLEV syst., H_∞ control and closed loop ident. 105691
magnetostrictive actuators, hysteresis modelling and compensation 92878
Markov jump systs., min. MSE estim. 73680
matching-relevant transistor pairs ident., fast method for analog design 104078
MEMS vibratory rate gyroscope, syst. ident. 75766
metal tag recogn., smart eddy current sens., blind source separation 118800
microalternator ident./control, local model networks 88715
MIMO channels, blind ident. based on correlative coding and perform. anal. 84869
MIMO channels, polynomial ambiguity resistant precoders, blind identifiability 106162
MIMO FIR channels, lin. prediction-based semi-blind estim. 84866
MIMO FIR filters, blind ident., alg. approach 84766
MIMO freq. domain blind syst. ident. based on second-/HOS 95651
mixed time scale recursive algms. 95702
multi-inform. control model of harmonic in wireless commun. based on DSP 74835
multidimensional harmonic retrieval, identifiability 107372
multiple-antenna OFDM systs., channel estim. and adaptive power allocation 85520
multivariable freq. response meas., nonlin. distortions effect 109919
multivariable generalized predictive control, Takagi-Sugeno fuzzy model 111832
N-dimens. adaptive DP syst., quadratic goal fn., second derivative estim. 73669
NMR spin syst. ident. by nonlin. adaptive filtering 73661
non-orthogonal spectral data separation 107454
nonlin. channel noise reduction/ident. using neural net 130269
nonlin. systs. ident., bispectrum, second order Volterra model 118953
nonparametric ident. of lin. systs., resonator based 101686
OFDM offset QAM pulse shaping systs., blind channel ident. 83800
OFDM syst., alias-free subband adaptive equalizer 107710
OFDM transms., blind sync. using null sub-carriers with distinct spacings 83812
pass. component charactn. in non-sinusoidal conditions, virtual instrum. tech. 120656
pers. ident. syst. using isodensity maps based fast template matching algm. 118778
pole behaviour in ident. using fractional filter 73685
polymeric powder coating proc., adaptive computer-aided control syst. *(Russian)* 67685
power transformer inrush ident. using improved correl. algm. *(Chinese)* 99713
power transformer winding deform. diagnosis methodologies *(Chinese)* 134138
precoder-assisted channel estim. in complex projective space 84867
prediction of gaseous emissions using neural networks 99032
radio transmitter ident., adaptive array algms. based on transient response *(Japanese)* 107368
radiosignal refl. by moving pers. 119091
rapidly fading commun. channels, ident. 119185
reson. link inverters, optimal on-line control, pulse pattern ident. 88971
reson. piezoelec. transducers, broadband test sig. generation 86503
robot high perform. IM drives, speed neuro-controller 113080
robust automatic speech recogn. in presence of impulsive noise 84026
room acoustic transfer fns. estim. 85360
rotary US motor, TW type, robust neurocontrol 88781
satellite mobile nonlin. channel ident. using Volterra filters 119951
SAW sens., ident., design rules 81760
second order syst. nonlin. meas., 2D adaptive algm. 107561
seismic and acoustic sig. ident. algms. 73735
semi-blind OFDM channel estim. using coded pilot sig. 107680
semicond. exposure apparatus, anti-vibr. units, subspace multivariable syst. ident. *(Japanese)* 103657
separable nonlin. least-sq. methods, systs. modelling, Kautz and Laguerre filters 107526
seqs., strong mixing, nonparam. dens. derivative estim. 118945
shape-based ident. of large aircraft 94772
sheet metal deep drawing, intell. control, real-time meas. and ident. 113816
sig. anal./ident., robust, model-based 118792
sig. time seq. shape ident. with limited receiving bandwidth 107316
SOFC single cells, syst. ident. modelling approach 99980
space plasma data, time series anal. using HOS *(English)* 122678
space-time channel tracking for multipath fast-fading channels 130275
space-time decorrelating receivers in multipath fading channels *(Chinese)* 73861
speech texts, qualitat. comparison by collocation ident. *(German)* 73005
stereo echo canceler with correct echo-path ident., input-sliding tech. 131785
structural syst. ident., strain and translational displacements meas. outputs 97854
subsurface sens. & imaging syst., unified discipline develop. 84167
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multiuser detector 85527
syst. ident. & struct. health monitoring, conf., Madrid, Spain (June 2000) 78468
table drive syst., nonlin. friction, GMDH-based modeling/compensation 113082
temporal morph. systs. modeling via lattice dyn. systs. 118183
terrestrial broadcasting, channel estim. in OFDM systs. 97048
time series tools, generalization 113879
time-varying channel tracking, robust adaptive predictive algms. 119018
time-varying sig. detect. and ident., adaptive transform. 119086
time-varying Volterra model, best wavelet basis selection 107399
tomographic distributed ground sens. arrays 75634
turbine-generator subsynchronous torsional modes, eigensystem realization algm. 112459
turbogenerator AVR loops ident., RBF and MLP NN comparison 88695
turbogenerator vibr. shape ident. using modal anal. theory *(Chinese)* 88682
two-support rotator, fault-chaos rel. test ident. 86443
unknown data channels, nonlin. blind-deconvolution 85656
unknown FIR channels, universal redundant precoders for guaranteed recovery of block transms. 85531
unvoiced speech component, ident./reconstruction 106372
urban sewage networks, sens. fault diagnosis, rainfall-runoff multi-modelling 88178
US wave propag. through sediments, parametric modeling 99023
VALYDYNE diff. press. sens. dyn. prop., human airducts model ident. 110524
VAV air-conditioning syst. fault-tolerant supervisory control 100334
ventricular repolarisation duration variability, spectral decomp. tech. *(Chinese)* 110548
VHF radio transmitter fingerprints, characts. 119885
video surveillance systs., semantic ident. of moving targets 106481
VIS-SWIR hyperspectral data anal., atmos. correction algms. 98974
W-CDMA, near-far-resistant single-user channel ident. by interf. subspace rejection 84904
watermarking and ident. in presence of side inform. 72778
WB-CDMA terminal, low-complexity channel estim. scheme 85814

identification technology
not used for identification of persons (via biometrics) or systems
see also mark scanning equipment
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
CMOS low-power digital signature transponder IC for high perform. RFI authentication 96638
CMOS RFID transponder IC design using damping cct. *(Korean)* 114886
contactless ident. systs., RF-ID systs., LabVIEW prog. lang. appl. *(Germa* 131337
extended-range RF ident. systs., inductively coupled contactless design *(Ge man)* 85940
inductive pass. RFID technol., product lifecycle mgt. 109034
ITS, Intelligent Transport Systems, combined RF ident., vehicle detect./tra posn. 100280
microstrip-fed slot antenna for MM-wave RFID syst. 72563
microsystems, prod. trends in product design 116112
paper reel supply chain RF ident. syst., antenna demands 119886
pass. ident.-tags based SAW sens., overview *(Chinese)* 70450
pass. RFID appls., asynchronous vs. sync. cct. designs 96637
pass. SAW sens. and transponders, low cost radio interrogation syst. 74907
quasi-2D SAW ID-tags for wireless ident., Green's fn. and network anal. 927
RF staff ident. to open doors in homes for aged *(Japanese)* 131047
RFID systs., inductively coupled, dyn. perform. 96636
RFID-technol., recent develop. and future requirements 96635
SAW pass. device, multi-resoln. wireless force sens. syst. 116220
TIRIS digital receiver module for LF RFID syst., analog front end design 963
VLSI wafer ident., microcharacter recogn., V-shaped notch 100545
wireless ident. tags syst. based on SAW sens. *(Chinese)* 86501
wireless SAW ident. and sens. systs. 70447

IDT *see interdigital transducers*

IEC standards
act. opto-electronic devices/components, standardization *(Japanese)* 93316
Australian power syst. meas. traceability 77667
BGA/CSP standardization, 2000 status 113599
cable shielded screening atten. test method down to 5 MHz 83360
conformal/stereotactic radiotherapy treatment planning, graphical treatme simul. 98645
CPET scanner, perform. eval. using IEC & NEMA protocols 122231
DALI digital addressable fluorescent lighting control interface 134624
DRAM cache for high quality distributed video 85366
electronic equipt. immunity, indirect ESD, transient anal. 78582
electronic pers. dosemeters, photon radiation perform. 122419
fast Ethernet commun. protocol for office appls., ISO/IEC 11801 std. *(Germa* 119628
fiber optic connector pistoning failure mode, acceptance testing 127679
fieldbus transm. line EMC testing, simul. models 86417
flickermeter testing, calib. syst., digital logic & software control 109836
flickerometer, voltage wave quality, incandescent lamp lumin. *(Spanish)* 994
GTEM cell, TEM-mode E-field uniformity 117720
hazardous locations zone equipt. installation, US experiences 124287
HDTV ISO/IEC 13818-1 decoders, design 120547
HiFi audio sigs., source encoding *(German)* 84013
high-power EM transient phenom. protection, IEC standardisation 83437
human factor issues in IEC 61508 std. 89779
IEC/EN 61000-4-6 EMC tests, injection clamps appl. guidelines 83377
IEC/IEEE train commun. network 74076
IEEE 802.1D std. for LAN/MAN MAC bridges, amendment 96081
IEEE Std.802.1w-2001, MAC bridges operation changes 119552
increased safety induction machine design, develop. and testing 99665
indiv. radiation monitoring services, QA programmes 133107
ISO/IEC 15288 std., Standards Working Group report 67510
ISO/IEC 9796-1 signature scheme, chosen messages attack 106298
LAN/MAN stds., token ring access method/phys. layer specs. 96082
laser charact. standardization *(Japanese)* 93698
mains harmonic emissions meas., test method and instrumentation requireme 83404
mammography, radiation metrology network, calib. systs. 122153
MPEG-4 shape coding, fast motion estim. algm. 95084
MPEG-4 video encapsulation/marking over IP differentiated services 12974
MPEG-7 appls., P-frame motion vectors, low-complexity global motion esti 95180
MPEG-7 std., overview 85382
MPEG-7 Systems, overview 85383
MPEG-audio layer III algm. for 16-bit DSP 79951
multilevel converters, PFC based on diode clamped rectifier 68559
oil-cooled transformers, loss-of-life assess. guidelines, IEEE/IEC stds. 1235
power electronic equipt., touch/protective conductor current meas. *(Polis* 99831
power transformer bushings/winding insulation, PD location/anal. 134126
refinery power plant, fault current limiters, benefits assess. 78366
rem. substation operation protocol requirements 78062
SBus, chip and module interconnect bus 96083
steam turbine-generator IEEE/ANSI C50 Standards series revision 123190
substation telecontrol protocol perform. improvement 123688
substations, EMC assurance, EM disturbances mitigation 78083
substations, standardised commun., IEC 61850 std. 78061
telecomm. services, common criteria, aviation 119445
telecontrol inform., network access *(Chinese)* 119524
thermocouple calib., simultaneous, error sources, ISO/IEC 17025 std. 10941
turbogenerator elec. params. spec., stds., grid codes 123282
UIE flickermeter, digital implement., params. sensitivity anal. 109444
universal protocol converter, telecontrol/testing equipt., IEC 870-5-101 *(G man)* 97131
wafer level transient voltage suppression CSP for ESD protection, low cost/l I/O 113592
AgO watch batts., electrolyte sealing, anode can/gasket clearance *(Japane* 89049
$Li_2B_4O_7$, TLD, indiv. monitoring, Greek AEC 122384
LiF, TLD, indiv. monitoring, Greek AEC 122384

IEEE-488 *see peripheral interfaces*

IEEE-896 *see system buses*

IEEE-960 *see system buses*

IEEE-1596 *see system buses*

IEEE standards
see also ANSI standards
1-38 kV indoor AC MV switches, IEEE Standard 123667
10 Gbit Ethernet appls. & opportunity, IEEE 802.3ae std. 108109
10 Gbit Ethernet technols. 119732
10 Gbit/s Ethernet, IEEE 802.3ae and pre-std. products 130735

standards continued
2.11, differentiation mechanisms 119303
2.11 ad hoc WLAN, bandwidth allocation/sharing/extension protocol for multimedia 130369
2.11 ad hoc WLAN, distributed bandwidth allocation/sharing/extension protocol for multimedia 119375
2.11 adaptive multirate WLAN 108143
2.11 MAC protocol working in multihop wireless ad hoc networks 73985
2.11 mobile ad hoc networks, hidden terminal jamming problems 131229
2.11 network perform., threshold param. influence anal. 96086
2.11 networks, CBR packetized voice transm. 130778
2.11 wireless LAN, packet telephony support 120114
2.11 wireless networks, MAC layer broadcast support 108550
2.11 WLAN, service differentiation extensions for elastic/real-time traffic 119575
2.11 WLAN, voice services support 119667
2.11 WLANs perform. in Bluetooth environ. 85271
2.11/ETSI HIPERLAN type 1 under burst noise channel, perform. comparison 96089
2.11a phys. layer high-speed WLAN, OFDM receiver 109033
2.11a-compliant high-speed WLAN module, develop. 130847
2.15.4 std. for low-power low-cost wireless pers. area networks 120007
2.1D std. for LAN/MAN MAC bridges, amendment 96081
00BASE-T, Gigabit Ethernet networks in twisted pair copper conductors *(Italian)* 85256
94 computer connectivity std. for automatic test appl. 75366
94 data bus syst. for automobile appls. *(German)* 89424
94 wireless home network using MM-wave technols. 108411
94 wireless home networks, ASK transceivers, 60GHz-band 130757
94/Ethernet technols. based home networking syst. 119692
C machines, VPI stator coils, unimpregnated ground insulation, surge testing 133941
hoc networking, wireless network interface energy consumption 119374
-hoc network emulation 85223
DC effective resoln., metrological charactn., IEEE std. 90978
DC histogram test, small-amplit. triangular waves 114829
DC histogram testing, IEEE Std. 1241, benefits & risks 102285
DC terminology and test methods, IEEE Std 1241-2000 appraisal 90962
DC testing, std. framework for IEEE-STD-1241 in MATLAB 114832
DC testing with IEEE Std 1241-2000 114838
isembled PCBs, IEEE std. test access port, boundary-scan register 102816
oadband wireless channels, soft decoding techs. 94276
usNet protocol for backplane bus-based interprocessor commun., perform. anal. 119324
EA-851 versatile home network, inter-cluster connectivity backbone 119608
ement indust. elec. maint./safety improvement, IEEE Standard 134701
heckpoint-recovery for mobile computing systs. 74246
MOS wireless LAN to IEEE std. 802.11a, prog. chipset, 2.4 GHz *(German)* 74167
ommon mezzanine card family 119551
oncentrator PV receiver sects./modules, qualification tests, IEEE Standard 100027
ata distrib. mgt. migration from DoD 1.3 to IEEE 1516 125388
esign methodology for high perform. ICs, wireless broadband radio baseband case study 125305
IS, high-level real-time extension 130874
istributed contention-free traffic scheduling in IEEE 802.11 multimedia networks 108316
lec. insulating material/systs. rating, temp. limits, IEEE Standard 92664
lec. power distrib. reliab. indices, IEEE Guide 112026
thernet data transm. at gigabit/sec rate, IEEE stds., hybrid transceivers *(German)* 96068
xtruded laminated dielec. shielded power cable joints, IEEE Standard 112119
ixed broadband wireless access systs. coexistence, IEEE recommended practice 119929
loating point MAF 101941
ragment adaptive reduction for coping with radio unlicensed bands interferers 128806
enerator excitation systs., perform. spec., interconnection requirements 123348
AVi appls. on Internet-enabled devices, rem. execution 119691
ierarchical IC test approach using boundary scan test 100556
IPERLAN/2 and IEEE 802.11a, phys. and MAC layer comparison 85535
iperlan/2 and IEEE 802.11a stds. for 5 GHz band high speed wireless multimedia networking *(English)* 85562
ome inform. wiring syst. using bal. cable for high-speed network 119693
HomeRouter SJ6, develop. *(Japanese)* 85068
HSLAN, optoelectronics appls. & opportunities 96769
uman 2450 MHz CW energy exposure, outside IEEE C95.1 std., no core temp. increase 133067
HV cct. breakers, monitoring/diagnostic params. selection, IEEE Standard 99836
ysteretic ADC dyn. testing, IEEE 1057-94 std., nonlin. 120701
CEA MV power cable specs. overview 133738
EC/IEEE train commun. network 74076
EEE 1394b receiver chip testing, jitter meas. 131826
EEE 205-2001, TV video sig. luminance level meas. 120537
EEE 802.11 MAC protocol, capacity anal. 73924
EEE 802.11 networks, IP QoS support, service discipline 108371
EEE 802.11 networks, priority-based transm. 107950
EEE 802.11 WLAN, cell planning 108207
EEE Standard Techniques for High-Voltage Testing amendment 88498
EEE Std.802.1w-2001, MAC bridges operation changes 119552
EEE Std 1596-1992 for LV differential sigs. for SCI 85302
EEE Std 802.11d-2001, WLAN MAC and PHYS layer specs. 119553
ndust. automation, IEEE 802.11 WLAN appl. *(German)* 130745
ndust./commercial power systs., zone-branch reliab. methodology 133424
nsulated power cable installation, termination, testing, IEEE Standard 99371
P optimized broadband wireless access 131105
Pv6 & IEEE1394 for home networking *(Japanese)* 84944
JTAG pipeline prog. via VME-6U interface, embedded test bus controllers *(Italian)* 86401
LAN/MAN, port-based network access control 108108
LAN/MAN stds., token ring access method/phys. layer specs. 96082
LMDS stds., architectural issues 96416
local and MAN IEEE Std 802.1Q, virtual bridged LAN 119549
MACA, large propag. delay situation, simple modif. for drastic improvement 95857
mech. checked proof of IEEE compliance of floating point arith. of AMD-K7 proc. 90932
metal-enclosed interrupter switchgear, IEEE Standard 123668
mixed-sig. modeling with AleC++, HDL features 68499

IEEE standards continued
mobile packet radio, service differentiation, distributed control algms. 120020
OFDM mobile radio syst., effect of weather radar on perform. 108214
oil-cooled transformers, loss-of-life assess. guidelines, IEEE/IEC stds. 123563
OP i.LINK opt. transceiver, IEEE1394a-2000 compatible, develop. *(Japanese)* 120173
opt. amp. noise fig. defn., IEEE defn. 128144
overvoltage protection devices, avalanche protection diodes and MOV *(German)* 88495
petrochemical indust., elec. safety, PCIC impact 134687
phys. and environ. layers for PCI mezzanine cards 119550
phys. layer interface, IEEE std. for med. device commun. 119548
pipelines/vessels, impedance/induction/skin effect heating, IEEE Standard 134650
power electronics, spec. lang. standardisation, IEEE Std. 1515-2000 79551
power syst. synchrophasors, IEEE Standard 123069
power syst. wire-line commun. ccts. protection, IEEE Recommended Practice 119855
private virtual reconfigurable network, authentication 74356
Profibus-DP/IEEE 802.11 WLAN network integrat. 130709
pulp/paper indust., IEEE Standard 841 IM, comparison testing 124152
pulse waveform anal. std., low/high state level, algms. comparison 109411
refinery power plant, fault current limiters, benefits assess. 78366
RF EM fields, safety stds. 122363
robust SuperPoll with chaining protocol for IEEE 802.11 WLAN for multimedia 73921
Rohde & Schwarz's I/Q modulation generator AMIQ and sig. generator SMIQ 86790
SBus, chip and module interconnect bus 96083
semicond. power rectifier transformers, design, appl., IEEE std. 134236
sens. networking and interface standardization 109438
severe duty totally enclosed fan-cooled squirrel cage motors, IEEE 841-2001 134688
smart WLAN syst., improved algm. for dyn. slot assignment 108309
SoC design, testability stds. 115992
squirrel cage motors, IEEE 841, perform., operating temp. considerations 112507
stationary batt. selection/maint. guidelines 112793
steam turbine-generator IEEE/ANSI C50 Standards series revision 123190
three-phase group-operated AC power syst. switchgear, IEEE Standard 112684
three-phase utility power systs. neutral grounding, IEEE Guide 88474
thyristor surge protective devices appl., IEEE Guide 123062
totally enclosed fan-cooled squirrel cage severe duty motors, IEEE Standard 100350
TV linked content server systs. for video area networks *(German)* 75320
unified DFT archit., IEEE 1149.1 and VSIA/IEEE P1500 compliant test access controllers 125339
URD network faulted cct. indicators, IEEE Guide 123070
USB/IEEE 1394 stds. enhancements, design issues 109449
virtual bridged LANs, IEEE 802.1Q 1998 Edition amendment 85303
VITAL, VHDL ASIC libraries, ASIC modeling spec. 127009
Wi-Fi (802.11b) and Bluetooth systs. coexistence 120008
wireless gateway for wireless home AV network, implement. 119902
wireless home link syst. in Japan at microwave/MM-wave freqs. 130756
wireless Internet, IEEE 802 stds. 119860
wireless packet networks, power controlled multiple access protocol 119304
wireless packet switching networks, computer tool for anal. and prediction 108726
WLAN, distributed fair scheduling 73994
WLAN, distributed mechanism for power saving 107938
WLAN, IEEE 802.11 96122
WLAN, IEEE 802.11 syst. design 85306
WLAN, throughput eval., high load and noise conditions 108297
WLAN high-rate systs., trellis-coded complementary code keying 74172
WLANs, RF power/MAC combined tuning 130736
WLESS-frame, 802.11 stations simul.-based devel. environ. 108239

IETS *see tunnelling spectra; tunnelling spectroscopy*
IEXE *see ion microprobe analysis; X-ray chemical analysis*
IF amplifiers *see intermediate-frequency amplifiers*
IGBT *see insulated gate bipolar transistors*
IGBT switches *see power semiconductor switches*
IGFET *see insulated gate field effect transistors*
ignition
see also electric ignition
elec. insulation internal defaults ignition, PD model, meas. 104404
gas-fired power-plant ignition proc., LD-based in-situ methane detect. 112338
overhead lines workers, 100% cotton clothing, ignition hazard estim. 67497
solar thermionic energy converter, electrode heating, efficiency 78179
thin metal sheets, noncontact US generation, plasma igniter 122731
S lamp, plasma-quartz interact., glow spectra 124076
ignitrons *see mercury arc rectifiers*
IGT *see insulated gate bipolar transistors*
II-III$_2$-VI$_4$ semiconductors *see ternary semiconductors*
II-IV-V$_2$ semiconductors *see ternary semiconductors*
II-VI semiconductors
3d-transit. metal ion doped II-VI chalcogenide crysts. for laser systs. 71218
ALE growth, sublimation modelling, competing surface reconstr. 101301
chalcogenides crysts., low dimens., synthesis *(Chinese)* 90208
conf., Albuquerque, NM, USA (Oct.-Nov. 2000) 89593
diamond/CdTe inverted heterojunction thin film solar cell 134385
dil. mag. semiconds., elec. spin injection 82398
IEEE PV specialists conf., Anchorage, AK, USA (Sept. 2000) 89575
IIB-VI cpds., doping-limiting mechanisms, common orig. 69822
LD, universal discriminant for CW operation 82637
semicond. & insulating materials, conf., Canberra, Australia (July 2000) 124181
semimagnetic double-barrier tunneling struct., spin-polarized currents, shot-noise suppression 126148
Ag-CdTe Schottky barrier diodes, I-V charact. 115832
p-$AgGa_{0.25}In_{0.75}Se_2$/n-$Zn_{0.35}Cd_{0.65}S$ polycryst. thin film heterojns., charact. 112879
Al-CdTe Schottky barrier diodes, I-V charact. 115832
AlAsSb/InAs/Cd(Mg)Se heterostruct., MBE, elec./struct./opt. props. 69634
Al(Ga)Sb/InAs/Cd(Mg)Se hybrid heterostruct., mBE growth, luminesc. props. 103019
BeMnZnSe/GaAs, spin injection/manipulation 91845
BeZnCdSe layers, MBE growth on InP substrs. 101277
CaS:Er,Cu phosphors, phosphoresc., Cu doping effects 104916
(Cd,Hg)Te LW photoresistors, noise spectrum, num. model 92272
(Cd,Hg)Te epitaxial layers, laser-induced struct. defects, props. modif. 103023

II-VI semiconductors continued
(Cd,Zn)S, chem.-bath-deposited buffer layer for Cu(In,Ga)Se_2-based solar cells 100190
$Cd_{0.25}Hg_{0.75}Se$ layers growth by laser evap. in static vac. 79352
CdHgTe films, nonaqueous electrodeposited, solar cell appl. 101439
CdHgTe near-contact variband layers, weak opt. emission photoelec. amplif., saturation suppression 103026
$Cd_{0.19}Hg_{0.81}Te$ photoresistors, sensitivity & detectivity, pulsed laser annealing effect 71546
$Cd_xHg_{1-x}Te$ alloys, irrad., Fermi level pinning and elec. props. 115302
$Cd_xHg_{1-x}Te$:V crysts., Bridgman growth, transport props. 90206
$Cd_xHg_{1-x}Te$/CdZnTe heterostruct., elec. props. 115363
CdMgTe-CdTe-CdMnTe asymm. QW, mag. polaron bifurcation, photolum. spectra anal. 80833
(CdMnHg)(TeSe) 45° Faraday rotator for compact in-line opt. isolators, growth and charactn. *(Japanese)* 93258
$Cd_{1-x}Mn_xSe$ QD, MBE growth, XRD, photoluminesc. *(Japanese)* 101227
$Cd_{1-x}Mn_xSe/Zn_{1-y}Cd_ySe$ QW, MBE growth, XRD, photoluminesc. *(Japanese)* 101227
CdMnTe QW, dil. mag. semiconds. for magnetoelectronics 92872
CdMnTe:Cr(Co) for tunable mid-IR lasing 93651
CdMnTe/(Cd,Mg)Te SQW 2DEG, magnetotransport meas. 80856
CdMnTe/CdMgTe QW quantum Hall syst., photolum. spectra, Mn conc. depend. in high mag. fields 80834
CdMnTe/ZnTe MQW, ultrafast mag. polaron dyn., opt. pump-probe spectra 80832
$Cd_{1-x}Mn_xTe/Cd_{1-y}Mg_yTe$ QW, MBE growth, XRD, photoluminesc. *(Japanese)* 101227
$Cd_{1-x}Mn_xTe$/CdMgTe(CdTe) MQW, MBE growth, excitons, PL obs. 103150
CdO MOCVD high mobility films and their depend. on struct. 90408
CdO single-cryst. rocksalt layers, MOMBE growth on GaAs (001) substrs. 90315
CdO thin films, low-press.CVD and elec. props. 90407
CdO:F films, spray pyrolysis, chem. comp., elec. cond. mechanism 125047
CdO/CdS thin films, cond. oxide layer form. during air heating 103369
CdS N^+ ion implanted thin films, irrad.-induced PPC 93324
CdS PLD films on glass, green single-/two-photon gap emission 116916
CdS QD, self assembled ordered arrays, C-V characts. 126194
CdS buffer layer, Cu(InGa)$(SSe)_2$ solar cells, absorber transient behaviour 100136
CdS chem. deposited thin films under mag. field, props. modif. 68326
CdS, chem.-bath-deposited buffer layer for Cu(In,Ga)Se_2-based solar cells 100190
CdS clusters in mordenite/MCM-41 matrices, opt. props. 126044
CdS clusters in thiophenolates, synthesis, charactn. *(Chinese)* 91614
CdS, electronic struct., defect phys., thin film solar cells 91654
CdS film, Ag ion exchange modif., XPS profile anal. 126011
CdS film, trylene thread, PV effect 104901
CdS films, CBD/CSS growth, band gap energy form. 90481
CdS films, chem. bath deposition 125034
CdS films, electrochem. ALE on Ag(111) 90519
CdS films, electron beam, deposition, opt., elec. props. 69527
CdS films, photochem. deposition from aq. solns., elec., opt. props. 79370
CdS films, spray pyrolysis from thiourea complexes, elec./opt./struct. props. 91642
CdS large area thin films deposited by sputtering tech., solar cells appl. 90262
CdS nanoclusters growth mechanism in zeolite Y, positron annihilation obs. 69510
CdS nanocryst. particulate films, $TiCl_4$ treatment, photoelectrochemical props. 103364
CdS nanocrystallites in SiO_2 matrix, surface modif. 91634
CdS nanocrystals, CuS-coated/$Cd(OH)_2$-activated, fluoresc. props. *(English)* 80730
CdS nanocrystals form. in SiO_2 substrs. by ion implant. 126240
CdS nanocrystals in Nafion perfluorinated ionomer, synthesis, struct. 80712
CdS nanoparticles, hydrothermal growth in MOR-type zeolites 125097
CdS nanoparticles on Ag(Au) substrs., SAM linking, surface plasmon reson. 91666
CdS nanosized particles in hyperbranched conjug. polymers, fluoresc. spectr. 126046
CdS photocond. element, optoelectronic logic gate 104848
CdS platelet particles synthesis/charactn. in octylamine-water syst. 115325
CdS single nanocrystal on SAM, room temp. electron transport 103038
CdS, sq. thin flake, hydrothermal synthesis by using surfactants and thiocarbohydrate 79433
CdS thin films, chem. deposition, growth kinetics, mag. field effects 90492
CdS thin films form. by PLD, absorpt. dichroism 127573
CdS thin-film polycryst. solar cells, environ.-friendly mfg. 134391
CdS window/buffer layer material, CdTe thin film PV modules 112993
p-CdS:Cu thin films, chem. states, depth profiles, XPS anal. 103263
CdS:N films, ion implant., Raman scatt./XRD 115556
CdS:Si, cathodolum. 91640
CdS/CdTe large-area thin-film solar cell sub-module develop. 100098
CdS/CdTe solar cell, spectral response improvement using fluoresc. plate 134398
CdS/CdTe solar cell struct., doping and intermixing, spatially resolved cathodolum. obs. 112878
CdS/CdTe solar cells, ZnTe:N back contacts 100107
CdS/CdTe solar cells, incident light wavelength transform. 89281
CdS/CdTe thin film solar cell, electromodulated photolum. 112853
CdS/CdTe thin film solar cells, 2-μm thick, approaching high efficiencies over 13% 100191
CdS/CuIn$_{1-x}$Ga$_x$Se$_2$-based solar cells, DLTS 112854
CdS/HgS/CdS QD-well systs., shallow impurities and δ-doping, defect states anal. 115390
CdS/ZnSe type-II superlattices, localized excitons, PL obs. 80823
n-CdS/p-InP heterojunctions, transport mechanisms & PV charactn. 91734
CdS-CdTe solar cell perform./stabil., precontact surface chem. effects 100128
CdS-CdTe solar cells, 1-D device nonideal behavior modeling 100117
CdS-CdTe solar cells, Ni_2P back contact material expts. 100129
CdS-CdTe solar cells, ZnTe:Cu back contacts expts. 100179
CdS-CdTe solar cells, stress-induced degrad. anal. 100116
CdS-doped glasses, photodarkened, thermolum. glow curves 69506
CdS-intercalated $K_2(TiNb)_4O_9$, synthesis, photocatalysis 91652
CdS-nanoparticles-porous-Si heterojunction, photolum., I-V charact. 126107
CdS(Se) thin film, high yield synthesis, chem. bath deposition 125025
$CdS_{1-x}Se_x$ QD in borosilicate matrix, X-ray irrad. 91848
$CdS_{0.036}Te_{0.964}$, grain boundaries, elec. activity, R-EBIC method, solar cell operation 91655
CdSe QD, elec. pumped lasing 117175
II-VI semiconductors continued
CdSe QD on ZnBeSe/GaAs epilayers, MBE, struct./PL props. 103118
CdSe colloidal semicond. QD, time-gated biological imaging 87525
CdSe, electronic struct., defect phys., thin film solar cells 91654
CdSe fast electron irrad. thin films, cond. regimes 91651
CdSe jn. capacitance under reverse bias, interlayer insulation effect 1266
CdSe nanocryst./organic dye bilayer opt. microcavities, enhanced Forster e transfer 82187
CdSe nanocrystal films, electrodeposition, pH effects 90480
CdSe nanocrysts. in a-ITO films, struct./SHG, elec. field effects 82891
CdSe nanoparticles, γ-irrad. prep. in ethylenediamine solvent syst. 92261
CdSe, nanowire arrays, highly ordered, polycryst., electrodeposition syn 115791
CdSe self-assembled QD form., diffusion effect 79325
CdSe self-assembled QD, form. mechanism 124936
CdSe stacked QD, MBE growth, PL 103120
CdSe:Mn QD, organometallic synthesis, spectrosc. characterisation, etc EPR, MnSe precursor 103128
CdSe:Si, cathodolum. 91640
CdSe/CdS PEC, charact. streamlining using Cd metal substr. 134402
CdSe/TiO_2, screen printed/spray painted coatings, sensitization by CdSe 7
CdSe/ZnO composite coatings, sintering, photosensitivity 101501
CdSe/ZnS nanocryst. films, layer-by-layer growth, LED appl. 125029
CdSe/ZnSe QW/islands, MBE using CdS, Se exchange react. 101271
CdSe/ZnSe surfaces, nanostructure growth, MBE, AFM anal. 101274
CdSe-based QWs, suppression of lateral fluct. 101199
CdSeS QD in glass, structural and opt. props. *(Chinese)* 126179
$CdSe_xS_{1-x}$ QD in glass spherical microcavities, PL 91779
$Cd_2SnO_4/Zn_2SnO_4/Zn_xCd_{1-x}S$/CdS/CdTe polycryst. thin film solar cells 100
CdTe APCVD thin-film solar cells 100131
CdTe Apollo solar module perform. and reliab. 100043
CdTe FIR broadband autocorrelator, sub-picosecond time resoln. 128525
CdTe, VPE growth in temp. gradient thermal field 68185
p-CdTe crysts., pulsed laser-stimulated SAWs 115303
p-CdTe crysts., shallow jn. form. by In diffusion, excimer laser annealing, detector appl. 115309
CdTe detector, coincidence DAQ, detect. efficiency 121618
CdTe detectors for hard X-ray/γ-ray detect. 132371
CdTe detectors, proton radiation damage 115806
CdTe, doped samples, variable-range hopping, electron correl. effects 115
CdTe, doping, elec./opt. investigs. 126009
CdTe elec. props., $CdCl_2$ effects, grain-boundary cond. theory 91656
CdTe electrodeposited film struct. and comp., deposition pot. depend. 125043
CdTe electrodeposition from basic aq. solns. containing ethylenediamine 9
CdTe, electronic struct., defect phys., thin film solar cells 91654
CdTe electrooptic modulator for CO_2 Q-switched laser pulsed beam hetero sig. *(English)* 117067
CdTe epitaxial films, close-spaced sublimation growth and struct., substr. eff 80685
CdTe, etching in ferricyanide soln, surface film form. 103355
CdTe, excimer laser doping techs. 91978
CdTe, film growth, kinetic model, DEFT calcs. 90441
CdTe films, MBE growth in (100) orient., GaAs(100) substrs. 101279
CdTe films, band gap shallow levels on metallic substrs. 126060
CdTe, gamma detector, semicond. cryst. optim. 87277
CdTe gamma detectors, coincidence timing resoln., PET appl. 110291
CdTe, grain boundaries, elec. activity, R-EBIC method, solar cell opera 91655
CdTe highly fluoresc. nanoparticles, elec. field directed layer-by-layer assem 125037
CdTe, intraoperative probe, γ-ray detect., radiation safety *(French)* 76722
CdTe modulation-doped QWs, exciton/trion excitations, PL 80841
CdTe module mfg., safety mgt. syst. experience 100126
CdTe nanocrystals, PL Stokes shift 126028
CdTe, nuc. detector materials, real defect conc. meas. by PICTS and SCLC m ods 82311
CdTe, photodetector material, powder metall. 103024
CdTe polycryst. film, flat panel X-ray image sens. *(Japanese)* 122146
CdTe, self-organized islands on ZnTe(001), hot wall epitaxy 101452
CdTe solar cells, electron beam induced effects 100182
CdTe superstrate thin film solar cells, window/absorber layers influence 100
CdTe surfaces, antireflective struct. by ECR plasma etching 93313
CdTe thin back-to-back detectors charactn. 132382
CdTe thin film PV modules, CdS and ZnSe window/buffer layers compari 112993
CdTe thin film solar cells, CSS-based stoichiometry control 100127
CdTe thin film solar cells, I-V charact. cross-over modeling 100120
CdTe thin film solar cells commercialisatins, efficiencies 100094
CdTe thin film solar cells, native defect control by close-spaced sublimat 89275
CdTe thin film solar cells, perform. meas., sweep rate effects 100133
CdTe thin film, vac. sublimation growth, struct./elec. props. *(Chinese)* 792
CdTe thin-film solar cells, ZnTe:N_2 back contact insertion 100178
CdTe thin-film solar cells, freq.-depend. complex admittance meas. 100186
CdTe:Ge double phase conjug. mirror geom. EO switch 128453
CdTe:In(Cl), mag. suscept., paramag. props. 91644
n-CdTe:In,I MBE films, donors, photocond. spectra 91620
CdTe:Mn nanocrystals synthesis using reverse micelles as nanoreactors 101
CdTe:O thin films, sputter deposition, characts., O content effect 79201
CdTe:Sb, impurity states, elec. studies 69802
CdTe:Si, cathodolum. 91640
CdTe:V photorefr. material, deep levels, opt./thermal spectrosc. studies 820
CdTe:V(Fe) photorefr. cryst. holographic gratings, FWM 128572
CdTe/$Cd_{1-x}Mn_xTe$ QWs, excitons spin transport dyn. 80682
CdTe/$Cd_{1-x}Zn_xTe$ QW, exciton bound ionized donor impurity 115415
CdTe/CdMgTe buried quantum wires, interdiffusion using patterned SiO_2 mas 80826
CdTe/CdMgTe buried single QDs using selective thermal interdiffusion 917
CdTe/CdS PV, jn. transport props., light/voltage props. 127949
CdTe/CdS flexible solar cells on polymer films 89286
CdTe/CdS heterojunctions, interface morph., annealing effects 126116
CdTe/CdS polycryst. thin film solar cells, nonuniform power generation 1001
CdTe/CdS solar cells, Cu distrib. before/after accelerated stress testing 1001
CdTe/CdS solar cells, electrodeposited, heterojunction props. 134387
CdTe/HgCdTe interface, thermal evap., elec. props. 103095
CdTe/ZnTe, ultrathin QW, lateral exciton migration, anom. phonon wind effe 91787
CdTe-CdS polycryst. solar cells, deep levels investig. 100185
CdTe-CdS solar cells, CdO:Sn MOCVD front contact appl. 100181

semiconductors continued
Te-CdS solar cells, CdS:$CdCl_2$ vac.-evaporated window layer expts. 100130
Te-CdS solar cells, Cu back contact PL studies 100180
Te-CdS solar cells, temp./illum. depend. jn. transport 100121
Te-CdS thin film solar cells, low-temp. deposition proc. 100177
Te-CdS thin-film solar cells, time-resolved PL studies 100113
Te-CdS-Zn_2SnO_4-Cd_2SnO_4 solar cells layer thickness/interdiffusion charactn. 00114
Te-absorber PV cells/modules, mfg. equipt., R&D 100096
Te-based solar cells, local photocurrent and resist. meas. 100118
$Te_{1-x}S_x$ absorber films/PV devices optimisation, combinat. method 100110
Zn(Mn)Te, second-order nonlin. efficiency, NIR spectral region 128529
$_{0.8}Zn_{0.2}S$ nanopillars in layered cpds., intercalation and photochem. props. 2253
ZnSSe QW LDs on GaAs, 560-nm CW laser emission 128262
ZnSSe-based QD nanocrystals, nucleation/growth in BSG 91801
ZnTe 3D posn.-sensitive spectrometers 98096
ZnTe, Zn fraction, microphotoluminescence mapping 80709
ZnTe detector implement. for dual-energy X-ray absorptiometry 110925
ZnTe detectors for coincident α-γ spectrosc. 87187
ZnTe detectors hard X-ray/γ-ray detect. 132371
ZnTe, gamma detector, semicond. cryst. optim. 87277
ZnTe, high resist. wafers, annealing, cryst. quality *(Chinese)* 103244
ZnTe, high-press. Bridgman grown, for EO appls. 93236
ZnTe, intraoperative probe, γ-ray detect., radiation safety *(French)* 76722
ZnTe pixel detectors, num. modelling of charge-sharing 121484
ZnTe segmented detectors, edge and corner effects on spectra 132383
ZnTe semicond. detector for X-ray/γ-ray monitoring 132417
ZnTe single crysts., growth conditions, defects 79158
ZnTe substrs., IR absorpt. behavior, annealing 91671
ZnTe surfaces, antireflective struct. by ECR plasma etching 93313
ZnTe wafer, effective temp., micro-PL map *(Chinese)* 93450
$_{0.80}Zn_{0.20}Te$ high resist. cryst. growth, modified Bridgman method 124806
$_{1-x}Zn_xTe$, cryst. quality, PL/XRD anal. 126045
$_{1-x}Zn_xTe$ crysts., DC photocond., gamma-ray detector appl. 93329
$_{1-x}Zn_xTe$, horiz./ vert. Bridgman/phys. vap. deposition, comp. 101151
$_{1-x}Zn_xTe$ melt-grown crysts., complex dielec. permitt. 91641
$_xZn_{1-x}Te$ VPE on GaAs substr., LRO 124857
ZnTe:In, Te antisite defects, deep donor levels 126050
ZnTe:N,H_2 QW, N acceptors, H_2 passiv., PL obs. 103146
ZnTe:V holographic cryst. US photorefr. sens. 131896
ZnTe/Si growth, morph./cryst. quality improvement, MBE 90341
$_xZn_{1-x}Te$/GaAs heterostruct., struct., SAD/TEM obs. 115369
$^{2+}$:ZnSe broadly tunable laser, cw/pulsed/act. mode-locked regimes 82616
$_{1.8}$S-CdS jns. surface-barrier UV sens. 86515
e/ZnSe/Fe planar jns., low temp. tunneling magnetoresist. meas. 126252
aAs/ZnSe jn., spin-coherent transport 103112
gCdTe 1024×1024 tactical IR staring sens. syst., MWIR perform. 111555
gCdTe 2D array technol. in UK 97257
gCdTe, CVD on Te adsorbed Si substr., surface morphologies, annealing effect 126059
gCdTe FPA, IR detect. modules, DSP technols. 111552
gCdTe FPA, laser beam induced current tech. *(Chinese)* 120910
gCdTe IR FPA, nonlin. response *(Chinese)* 120909
gCdTe IR detectors & FPA, simultaneous unipolar multispectral integrated technol. 97254
gCdTe IR detectors, in-situ vac. proc., dry plasma technol. 131916
gCdTe LPE layers, undoped annealed, carrier conc., substr. quality effect 91673
gCdTe, LW neg. luminesc. devices 104966
gCdTe LWIR detectors, p-n jn. depth, lateral photocurrent and transverse photovoltage 97258
gCdTe LWIR emitters on conductive substrs., growth 90430
gCdTe LWIR n^+-p photodiode array, zero-bias resist.-area product/quantum efficiency 93362
gCdTe, MBE growth, In doping, IR FPAs appls. *(Chinese)* 91966
gCdTe, MBE growth for LWIR detectors, ellipsometry comp. control 101201
gCdTe, MBE-grown, comp. control, surface defects 101280
gCdTe MIS struct., subbands, reson. tunneling, 2DEG, tunneling current 69744
gCdTe, MWIR, MBE growth and device proc. on large area Si substrs. 90348
gCdTe PV device, I-V charact., MS interface transport *(Chinese)* 91867
gCdTe PV devices, SW IR detectors appl. *(Korean)* 120790
gCdTe SWIR detector, Earth resources rem. sens. 109539
gCdTe detector in PISCES, wide-field, 1-2.5 μm camera 75663
-HgCdTe, diffusion length meas. using laser beam induced current 91672
gCdTe double-layer heterojunction photodiodes, 2D anal. 82350
gCdTe dual-band PV detectors, computer modeling 97241
gCdTe dual-band PV detectors, triple layer heterojunction design 109545
gCdTe, elec. props. and determ. of CdTe mole fraction *(Korean)* 80695
gCdTe epilayer, surface oxid., X-ray PES *(English)* 81089
gCdTe epilayers, MBE grown, comp. control, spectrosc. ellipsometry 90346
gCdTe epilayers, MBE growth, reduced defect dens. 90343
gCdTe epitaxial film, LPE growth *(Chinese)* 101431
gCdTe, etching in ferricyanide soln, surface film form. 103355
gCdTe, excess carrier bipolar mobility *(Chinese)* 80731
gCdTe exposed to H_2/CH_4 plasma RIE, p-to-n type-conversion mechanisms 91674
gCdTe growth on (552) oriented CdZnTe by MOVPE, MIR photodiode detector arrays appl. 90431
gCdTe heterojunction photodiodes, low 1/f noise 127947
gCdTe high perform. VLWIR detectors, fab. issues 75531
gCdTe layers, MBE grown, comp., temp. depend., spectrosc. ellipsometry 90345
gCdTe layers, micromachined opt. concentrators fab. for IR LEDs 71368
gCdTe multi-band IR detector, spaceborne rem. sens. 109538
gCdTe multichannel MCT/PIR-fiber detectors for fast pyrometry and multispectral sens. 109555
gCdTe n^+-on p diffusion-limited diodes, IR detector perform. in area array 75523
gCdTe n-on-p-type structs., RIE induced p-to-n conversion, contactless jn. contrast 93370
gCdTe on sapphire, LPE, status & advancements 90522
gCdTe opt. sens. for IC fault isolation 103984
gCdTe p-on-n heterostruct. IR photodiodes, planar proc. charactn. 97259
gCdTe passiv. by A^2B^6 layers, elec. props., heterostruct. charactn. 126030
gCdTe, passivated, interface traps from transient photoconductive decay meas. 71509
gCdTe, photocond. detectors, fab., RIE-induced blocking contacts 86516
gCdTe photodetectors with neg. luminesc. efficiencies >80% 75511
gCdTe second generation IR detectors, mass prod. challenges 97253

II-VI semiconductors continued
HgCdTe single/two-colour IR FPA, MBE, run-to-run reproducibility 109644
p-$Hg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor band 115301
n-$Hg_{0.8}Cd_{0.2}Te$, 2D hot electrons, microwave/MM response, magneto-quantum effects 103039
$Hg_{1-x}Cd_xTe$, MBE grown, FTIR spectr. 103001
p-$Hg_{1-x}Cd_xTe$, MBE, light hole densities/mobilities, IR detector appl. *(Chinese)* 115299
$Hg_{1-x}Cd_xTe$ films, MBE on $Cd_{0.96}Zn_{0.04}Te(211)B$, defects 90350
$Hg_{1-x}Cd_xTe$ uncooled PV LWIR detector 109541
$Hg_{1-x}Cd_xTe$ very LW IR photodiodes, current mechanisms 93369
HgCdTe:As, MBE, elec. props., high-operating-temp. photodetectors appl. 69503
HgCdTe:As layers, MBE grown, defects, TEM anal. 91988
$Hg_{0.8}Cd_{0.2}Te$:In epilayers on p-$Cd_{0.96}Zn_{0.04}Te$, surface stabil., passiv. 115647
$Hg_{1-x}Cd_xTe$:Ar, ion implant., struct. damage, RBS/TEM obs. 81041
$Hg_{1-x}Cd_xTe$:As epilayers, in situ doped, MBE growth, elec. props. 102999
$Hg_{1-x}Cd_xTe$:As, p-type dopant activation kinetics 91989
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
HgCdTe/Si MWIR FPA, fab. & perform., MBE 97395
HgCdTe/Si heterostruct., laser beam epitaxy 68365
$Hg_{0.6}Cd_{0.4}Te$/CdZnTe(211)B epilayers, MBE growth *(Korean)* 68183
HgCdTe-CdTe-ZnS double insulator MIS device, fab., surface passiv. *(Chinese)* 115460
HgCdTe-based n^+-p photodiodes, charge transport 116940
HgCdTe(211) epilayers, MBE grown, cross-hatch morph. charactn. 90344
HgCdZnTe photodetectors, laser irrad., energy gap modif. 109566
n-$Hg_{0.80}Mg_{0.20}Te$/CdTe MBE films, interface accumulation layer, cond. *(Chinese)* 115323
β-HgS/CdS, spherical dot, electron spectrum renormalisation, confined/interface phonons 103030
HgSe polycryst. thin film, growth method 101399
HgSe:V crysts., growth, transport props. 91643
InAs/ZnSe core/shell nanocryst. QDs, artificial-atom states, STM 91804
MgS/ZnSe QW, zinc blende, MBE growth using ZnS source 101272
MgSe thin films, MBE growth on ZnSe/GaAs(001), core levels 68176
MgSe, zinc blende, MBE growth using ZnS source 101272
MgSe/BeZnCdSe superlattices, QW, MBE growth on InP substrs. 101277
Mo/CIS/CdS thin film interfaces, electrodeposition, PV appl. 123807
Ni-CdTe Schottky barrier diodes, I-V charact. 115832
PbSe-BaF_2-CaF_2 film photoelec. props., Al-PbSe Schottky diode fab. *(Chinese)* 71485
PbTe/HgTe self-aligned nano-cryst. syst., controlled precip. prep. 115380
Pr_6O_{11}-based ZnO ceramic varistors stabil., microstruct., elec. props., Er_2O_3 addit. effect 79427
Sb-based type II QW for mid-IR lasers 93660
a-Si p-i-n solar cells efficiency enhancement using LP-CVD ZnO 100200
a-Si pin thin film solar cells, texture-etched ZnO substrs. upscaling 112861
a-Si solar cells on PECVD natively textured ZnO 112860
a-Si:H large-area thin-film solar cells, textured ZnO:Ga film props. 100202
α-Si:H/ZnO solar cells on metallized polymer substrs., struct. 78166
Si/HgCdTe, MBE growth for large format MWIR FPA 90342
p-Si/n^+-ZnO/n-ZnO/Pd diode struct., forward current suppression by light 70013
SiO_2-coated CdS nanoparticles, photodegradation in silica gels 126398
SnO_2/ZnO nano-porous composite electrodes, dye-sensitized solar cell appl. 78168
p-$SrCu_2O_2$/n-ZnO UV-emitting diodes, fab./charactn. 71588
SrS, doping, elec./opt. investigs. 126009
SrS-based ACTFEL devices, electrolum. thermal quenching study 104977
Te based II-VI cpds., opt. second-order nonlin., NIR comparative charactn. 93831
Ti/Au ohmic contacts to n-ZnO, elec./structural props. 91874
TiO_2/CdSe films, PV conversion, thermal treatment effect 134404
Zn/ZnSe(001), Schottky barrier, XPS, I-V/C-V meas. 80896
ZnAgSe mixed cryst. NLO susceptibilities 71995
ZnBeMnSe dil. mag. semiconds. in spin-polarized electronics 80684
ZnBeSe mixed crysts., photoacoustic studies, two-layer approach 115326
$Zn_{1-x}Be_xSe$ crysts., AES, ellipsometry, photolum. studies 90213
ZnBeSe:N(Te), high p-type doping, modified delta-doping tech. 91981
ZnCdMgSe/InP QW, vis. LED, DBR 103135
ZnCdMgSe-based DBRs, high reflectivity symm. strained, MBE, charactn. 105384
(ZnCdMn)Se/ZnSe/(ZnCd)Se semimag. double QW struct., LO-phonon assisted tunneling 80815
ZnCdS, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdSe QW, low temp. migration enhanced epitaxy 101275
ZnCdSe, ferroelec. props. in nonoxide semiconds., memory devices 104317
$Zn_{0.70}Cd_{0.30}Se$ QWs, asymmetric coupled, reflective SHG meas. tech. *(Chinese)* 105492
ZnCdSe/ZnMgSe, homoepitaxial distrib. Bragg structs., MBE on ZnSe substrs. 105297
$Zn_{0.45}Cd_{0.55}Se$/InP MOCVD growth, surface defects, substr. deoxidization temp. effects 68223
$Zn_{1-x}Cd_xSe$/ZnSe QCSE photomodulator *(Chinese)* 82217
$Zn_{1-x}Cd_xSe$-ZnSe asymmetric coupled QWs, reflective SHG meas. tech. *(Chinese)* 128520
ZnCdTe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdTe-ZnTe QW, LPMOCVD, growth/charact. 124937
ZnMgBeSe Schottky barrier diode based vis.-blind UV photodetectors 86518
ZnMgBeSe, UV photodetectors, MBE growth, characts. 97255
ZnMgS UV photodetectors, MBE, charactn. 97256
ZnMgS-based solar-blind UV photodetectors, growth & response, MBE 109567
ZnMgSSe, selective UHV dry etching 69903
ZnMgSSe/GaAs(100) photoassisted MOVPE growth, XRD and photolum. obs. 68222
ZnMgSSe/ZnSe MQW laser, thermal stabil., opt. pumped lasing 128330
ZnMgSSe/ZnSe MQW lasers, opt. pumped lasing, PL 93619
ZnMgSe, MBE growth, effect of high energy electrons during growth 90349
ZnMnTe epilayers, dil. mag. semiconds. for magnetoelectronics 92872
$Zn_{0.97}Mn_{0.03}Te$-GaAs based QW heterostruct., opt. injection of spin-polarized carriers 91767
ZnO MOVPE using MBE grown ZnO layer as substr. 90403
ZnO QD in silica nanoparticles matrix, stable PL 80683
ZnO Schottky UV photodetectors 86531
ZnO and InSnO/ZnO contacted with n-type GaN layer, ohmic perform. 69646
ZnO, anodic thin film, rectification, L-C-R characts. 80962
ZnO based varistor, grain boundary elec. charact., EBIC/SEM 115976
ZnO ceramic varistors, degrad., EPMA, ambient sintering 80411

II-VI semiconductors continued
ZnO ceramics, $BaBiO_{2.77}$ varistor property promoter 69262
ZnO, defect conc. regulation using separation layer 91638
ZnO, depletion layer depth, energy barrier height under H_2 103013
ZnO, dry etching in ICP 92063
ZnO electrodeposition on ITO electrode by pot. modulation method 90495
ZnO electrodes, struct. and photoelectrochem. props. 91668
ZnO electronic ceramic powder, combustion proc. synthesis 100566
ZnO epilayers, fund. valence band, strain-field effects 126055
ZnO epitaxial films, PLD and charactn. *(Japanese)* 68306
ZnO, excimer laser doping techs. 91978
ZnO film, piezoelec., MOCVD on SiO_2/Si substr., SAW device appl. 101317
ZnO films, ALE growth, charactn., substrs. for GaN, InGaN MBE growth *(Polish)* 79264
ZnO films, CVD, elec./opt. props. 103012
ZnO films, ECR-MBE on (0001) sapphire, struct. props. 79253
ZnO films, ECR-MBE on sapphire, interface props. 79252
ZnO films, Zn^{2+} aq. mist atmos. press. glow plasma CVD 68273
ZnO films, electrodeposition in perchlorate medium, H_2O_2 as O precursor 90516
ZnO films, low temp. plasma CVD 68235
ZnO films, thermally evaporated, opt. props., annealing effects 90328
ZnO films, undoping, reactive sputtering, defect PL 91669
ZnO, green emission band, fine struct. 80677
ZnO layer on ZnS, prolonged electron bombard., degrad. effect, AES/cathodolum. obs. 103049
ZnO layers, MOVPE using N_2O, opt. props. 90429
ZnO layers, plasma-enhanced MBE on (0001) sapphire, defect charactn. 90308
ZnO luminesc. thin films, PLD growth and charactn. 68315
ZnO nanoparticles in highly transparent MgF_2 films, green photolum. 80714
ZnO nanostructured based varistor materials, impedance spectrosc. studies 115304
ZnO, native defect energetics, first-principles plane-wave pseudopot. calcs. 91636
ZnO particles, 3D STEM 103465
ZnO piezoelec. multilayers, BAW response, transm. line method 104300
ZnO, plasma treated, low-resist./nonalloyed ohmic contacts 69729
ZnO, plasma-assisted MBE on Al_2O_3(0001) with ultrathin MgO buffer 68165
ZnO polycryst. films by ZnSe(S) oxid., electron-emission/CL props. 104905
ZnO, polycryst., self-assembled laser cavities, opt. props. 93631
ZnO, polycryst., valence band splitting, PL 69528
ZnO polycrysts., near-field UV PL spectra 126023
ZnO powders, decomp. from hydroxycarbonate precursor, crystallite size, morph. 114218
ZnO powders, high electrochem. discharge capacity, prep., struct. and perform. 68442
ZnO selective-area ALE growth on soft lithog.-patterned substrs. 114278
ZnO single cryst. growth under hydrothermal conditions 79166
ZnO single cryst. substrs., epitaxial ZnO film growth 79213
ZnO single crysts., hydrothermal/flux grown, cathodolum. microscopy 126027
ZnO smooth nanoporous films, electrochem. deposition and charactn. 101406
ZnO spray pyrolysis thin films, struct./DC elec. charact. 69521
ZnO, sputter deposition on Cu metallised Si substrs. 124814
ZnO sputtered films, struct. and UV photolum. obs. *(Chinese)* 126053
ZnO substrs. for homoepitaxy, eval. 101291
ZnO surface micromachined piezoelec. accelerometers, design, sensitivity anals. 86754
ZnO surface textured films, expanding thermal plasma CVD, solar cell appls. 101346
ZnO texture-etched substrs. for a-Si thin film solar cells 100203
ZnO, textured, expanding thermal plasma CVD, solar cell appls. 90439
ZnO, thin film GHz BAW resonator, electrode effects 81754
ZnO thin films, US spray pyrolysis deposition 68360
ZnO thin films, electrodeposition on n-Si(100), struct./opt. props. 125041
ZnO thin films for UV laser, synthesis and charactn. 68317
ZnO thin films on InP, laser-MBE, solar cells appl. 79269
ZnO thin films on Si and amorph. substrs., PLD 90476
ZnO thin films, post-annealing treatment effect on light emission props. 93342
ZnO ultrafine particles, prep., surface props., photocatalysis 115320
ZnO ultrafine particles, quantum size effect, photocatalytic props. *(Chinese)* 103008
ZnO, valence states control, codoping method 91952
ZnO varistor, LV, microstruct. and elec. props. 81405
ZnO varistor fabr., powder coating with mixed dopant solns. 79372
ZnO varistors, elec. degrad., additive effects *(Japanese)* 103940
ZnO varistors, grain boundaries, photoacoustic spectrosc. 103939
ZnO:Al film, sputtered, opt./IR/elec. props. 103036
ZnO:Al film, struct., conductive mechanism *(Chinese)* 80732
ZnO:Al films, MOVPE, struct./elec./opt. props. 103044
ZnO:Al films, substr. temp. effect on struct., elec. & opt. prop. 90247
ZnO:Al films, transparent conductive, sol-gel proc. prep., elec./struct./opt. props. 103003
ZnO:Al transparent conductive films, DC magnetron reactive sputter prep. and charactn. 69504
ZnO:Al/a-pin Si_xC_{1-x}:H/Al optimized laser scanned photodiode imaging transducer 86666
ZnO:Al(Ga) epitaxial layers, opt. props., doping effects 91979
ZnO:B films, electrochem. growth, elec. props., dimethylamine-borane conc. effects 101442
ZnO:Bi_2O_3, electronic ceramics, microwave sintering, varistor appl. 114446
ZnO:Bi,Sb varistor, EBIC contrast at grain boundaries, voltage bias effect 92429
ZnO:Cr films, chem. spray deposition, chem. stabil., etching rate, surface morph. 126025
ZnO:F thin films, spray pyrolysis prep., struct./elec./opt. props. 114404
ZnO:Fe, excitonic procs., PL/elec. DC behaviour 126040
ZnO:Ga, film, sputtered, elec. props., PL 126042
ZnO:Ga films, sol-gel prep., struct./elec. props. 114388
p-ZnO:Ga,N films, PLD, codoping fab. 91950
ZnO:Li films, sol-gel method, crystn., c-axis orient. 114389
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557
ZnO:M,Al (M=Cr,Mn,Fe,Co,Ni,Cu) thin films, magnetoresist. 80697
ZnO:N film, PE-MOCVD, impurity states, emission spectra 80739
ZnO:Ni films, fab., Ni content/carrier dens. effect on transport & mag. prop. 80698
ZnO:Pr varistors, electronic interface states at grain boundaries 102764
ZnO:SnO_2 based varistor ceramics, microstruct. & elec. prop. 101496
ZnO:Zn phosphor thin films, filtered arc deposited, PL props. 71542
ZnO:Zn thin film, UV/blue luminesc., emission spectra 116932
ZnO/Al_2O_3(00·1), MOVPE high-quality film growth 68238
ZnO/Au contacts, rectification, ohmic charcts. 103182

II-VI semiconductors continued
ZnO/GaN heterojunction, polarity control and valence-band offset, UPS and 101200
ZnO/GaN:Mg heterostruct., edge UV luminesc., N_2 plasma annealing eff 91744
ZnO/GaN/α-Al_2O_3, high quality heteroepitaxial structs. CVD growth 7932
ZnO/ITO multilayer ohmic contacts to n-type GaN isotype conjunction 69
ZnO/Si heterostruct., elec. props. 103108
ZnO/Si photodiodes, fab., detector photoresponse 97266
ZnO/a-Si:H based solar cells, conductive oxide/p+/i jn. improvement 1238
ZnO/sapphire epilayers, MBE growth, substr. config. effect 124834
ZnO-Au Schottky diodes, elec. and defect props., high energy proton bomb effects 126212
ZnO-based ceramic films, prep. & props., sol-gel proc. 126915
ZnO-based dil. mag. semicond., magneto-opt. props. 80678
ZnO-based materials, plasma-assisted MBE, charactn. 90347
ZnO-based quasi-bicryst., CVD epitaxy, struct. 68224
ZnO-based varistor powders, modified citrate gel techs. 68404
ZnO-based varistors, elec. charact., modified citrate gel tech. 70226
ZnO-based varistors, inversion boundaries, study using electron microsc methods 69267
ZnO(0001) surface, lattice relax., DV-Xα calcs. 103042
ZnOBi_2O_3:Y_2O_3 varistor ceramics, microstructural & elec. charact. 101495
ZnS, CVD, microstruct./comp./opt. transparency correl. 126012
ZnS EL element, optoelectronic logic gate 104848
ZnS barrier, TMR in mag. tunnel jns. 81855
ZnS, defect conc. regulation using separation layer 91638
ZnS dome, antireflective/protective film prep. *(Chinese)* 93303
ZnS, film growth, kinetic model, DEFT calcs. 90441
ZnS film growth, successive at. layer deposition using mol. beams 91615
ZnS films, chem. bath deposition with sodium citrate as complementary compl ing agent 101400
ZnS films, electrochem. ALE on Ag(111) 90519
ZnS nanoparticle-doped PVCz electrolum. devices, electrolum. props. 1098
ZnS nanoparticles, doped, synthesis, PL 126056
ZnS nanoparticles, hydrothermal growth in MOR-type zeolites 125097
ZnS patterned thin-film growth, laser/excimer lamp deposition 68232
ZnS phosphor, white luminesc. on InGaN UV LED illum. 127938
ZnS, thin film electrolum. devices, transport props., simul. *(Chinese)* 1169
ZnS, thin-film electroluminesc. devices, charcts., space charge effects 116
ZnS, transport props., temp. depend. 126058
ZnS:Ag,Al phosphors in FED, dead layer, TEM anal. 104915
ZnS:Ag,Cl phosphors, ZnO nanoparticle coated, degrad. reduction 82338
ZnS:Cu(Ag) phosphors synthesis using hydrazine monohydrate soln. 97629
ZnS:Cu(Ag)(Mn) phosphor materials, microwave synthesis & charactn. 823
ZnS:Cu,Al,Au phosphor, cathodolum. brightness, surface chem. changes, ten effects 104943
ZnS:Cu,Cl electrolum. phosphor, $TiO_x(SiO_x)$ film light emission life-sp charact. 104939
ZnS:Cu,Cl(Al) phosphors, luminesc. mechanisms 93349
ZnS:Cu,Mn, EL display panel in aircraft cabin meters *(Chinese)* 88061
ZnS:Er EL displays, electron energy spatial distrib. 93381
ZnS:Eu(Tb) nanocryst. phosphors, prep. & charactn. 104924
ZnS:Mn EL device, RF magnetron sputtering 127958
ZnS:Mn based EL device, growth & luminance, quasi-rheotaxy 104923
ZnS:Mn, doped/undoped, dc EL, elec. cond. 93336
ZnS:Mn laterally emitting TFEL displays, fast modelling 75806
ZnS:Mn-based ACTFEL devices, electrolum. thermal quenching study 1049
ZnS:TbF_3 phosphor films, electron-beam evap. method, crystn., thickne depend. *(Korean)* 79223
ZnS:TbOF thin films, sputter deposition, electrolum. phosphor 124816
ZnS:TbOF,Ag,Cu,Ce EL phosphor films, co-doping studies 127932
ZnS/HgCdTe interface, thermal evap., elec. props. 103095
ZnS/Si(100) thin films, PLD and cathodolum. studies 79357
ZnS-Cu(In,Ga)Se_2 thin film solar cells, annealing proc. expts. 100115
ZnS-based EL phosphors/devices, structural eval. 93348
ZnS-based QW, excitonic opt. props., UV photolum. spectra *(Japanese)* 918
ZnS-based phosphors, InGaN-based UV LED excited, white luminesc. 8237
ZnS-based thin-film EL display, impact excitation cross sect., activator cor 86811
ZnSCdS:Au,Cu phosphor, X-ray luminesc., med. imaging 93350
ZnSSe photodetector, femtosecond autocorrelation meas., two-photon absor 109568
ZnS_xSe_{1-x}:Mn TFEL devices, band gap engng. for improved efficiency/brightne 75796
$ZnS_{1-x}Te_x$, Auger param. shift, extra-at.-relax. 103018
ZnSe, CH_4/H_2/Ar high dens. plasma etching proc., charactn. 69918
ZnSe CVD, av. grain size, reagent conc. depend. anal. 90356
ZnSe, MBE growth, effect of high energy electrons during growth 90349
ZnSe MBE growth on GaAs(111)B surfaces, RHEED obs. 124827
ZnSe Shottky photodiode based UV dosimeters 133121
ZnSe blue-violet and UV light detectors 109577
ZnSe cryst. growth by CVT, finite element code computational study 68104
ZnSe crysts., Br-doped, growth and charactn., vert. sublimation method 1011
ZnSe, doping, elec./opt. investigs. 126009
ZnSe epilayers on GaAs, Se-related luminesc. centers 102996
ZnSe epilayers, quality improv. by low temp. growth of ZnSe buffer layer 7932
ZnSe, excimer laser doping techs. 91978
ZnSe, film growth, kinetic model, DEFT calcs. 90441
ZnSe films, cathodolum., disloc. bundles anal. 103028
ZnSe films, electrodeposition, struct./opt. props. 125042
ZnSe green-emitting LD, implant.-induced disordering 128246
ZnSe growth from zinc chloride solvent by successive LPE 101443
ZnSe layers on GaAs(004), threading disloc. removal 92089
ZnSe, polycryst. nanoparticles, MOVPE in counterflow jet reactor 125068
ZnSe, second-harmonic and sum-freq. generation, dot patterns obs. 105527
ZnSe, selective UHV dry etching 69903
ZnSe single crysts. conductive type control in vert. Bridgman method 101162
ZnSe single crysts., deep center luminesc., surface prep. effects 69517
ZnSe single crysts., twin-free, Bridgman growth 79176
ZnSe, sublimation method growth, elec. props. 68129
ZnSe thin film buffer layers, solar cells, opt., structural, morph. props. 10013
ZnSe thin films on GaAs, PLD, cryst. quality 68305
ZnSe window/buffer layer material, CdTe thin film PV modules 112993
ZnSe:(Te,N), δ-doped MBE growth, PL 103032
ZnSe:Al single cryst., phys. vap. transport growth/doping 101165
ZnSe:Al,Cl,In, shallow levels, selective photoluminesc. spectra 91619
ZnSe:Cl MBE epilayers, PL, phys. mechanisms 103033
ZnSe:Cl,Li films, MBE on GaAs, codoping effects 91954

semiconductors continued
Se:Co^{2+} saturable absorber for Er-doped all-fiber pass. Q-switched low-threshold laser 71685
Se:Cr^{2+} broadly tunable CW laser 93586
Se:Cr^{2+} crysts., prep. conditions and IR photolum. lifetime meas. 81018
Se:Cr^{2+} polycrystal mid-IR laser 82615
Se:Cu ceramics, opt. and elec. props. 91616
Se:Ga, δ-doped superlattices, persistent photocond. *(Chinese)* 80879
ZnSe:Mg, film, elec. props., edge luminesc. 80736
Se:Mn QD colloidal nanocrysts., EPR/opt. props. 91810
Se:Mn films, MOVPE growth and charactn. 114358
Se:N, implanted defect props., β-NMR obs. 91650
Se(:Sb) film, photoacoustic spectra, MOVPE 126041
Se:Te (O) semicond. scintillators, integrated radiation detectors 110333
Se/BeTe superlattices, MBE, struct./opt. props. 103149
Se/GaAs heteroepitaxy, defect form., Monte Carlo simul. 101278
Se/GaAs heterovalent interfaces in MBE, surf./interf. struct. 79256
Se/GaAs interface, thermal element diffusion, SIMS anal. 69632
Se/XGaAs/GaAs (X=Al,In) epilayers, MBE, cryst. quality, surface segreg. 101273
$Se/Zn_{1-x}Cd_xSe$ strained superlattices, MBE on GaAs, lattice IR refl. spectra 103029
$Se/Zn_{1-x}Mn_xSe$ heterostruct., spin reson. suppression/enhancement 69645
$Se/Zn_{1-x}Mn_xSe$ multilayers, spin-polarized transport 91749
Se/ZnCdSe MQW, MBE grown, refr. indices 101216
Se/ZnMgBeSe, homoepitaxial distrib. Bragg structs., MBE on ZnSe substrs. 105297
Se/ZnMnSe heterostruct., spin-polarized transport, cond. band offset effects 91753
Se/ZnS QD, highly photoluminescent 101422
Se-ZnS QW, acoustically driven opt. phenom. 115378
Se-based cpds., device-quality, mixed-colour LEDs 117013
SeTe, MBE, deep emission electron-phonon coupling 103017
Se(Te,O) semicond. scintillators and integrated scintielectronic radiation detectors 121551
Te (110) THz-wave EO transceivers 74958
Te, DFG, opt. switching/amplif. 117482
Te EO sampling by fs Ti:sapphire laser, ang. depend. 87001
Te, RIE using methane, H_2 gases 126375
Te, doping, elec./opt. investigs. 126009
Te epilayers, PL charact. on GaAs(100) substrs. 91633
Te homoepitaxial layer, MOVPE growth 114348
Te large-diam. single crysts. growth by vert. gradient freezing method 101163
+ZnTe:Al layers, MBE growth, struct./elec./opt. props. 90317
ZnTe:Cr^{2+} layers, MBE growth on GaAs(100), opt. charactn. 101212
ZnTe:Cu thin films, struct. and opt. props., Cu soln. immersion immersion time depend. anal. 103283
ZnTe:Yb films, MBE on (100) GaAs, photolum. 101209
ZnTe/CdSe(100) interfaces, electronic struct. anal. 91740
ZnXS (X=Cd,Mg) epilayers, MBE growth on GaP 101276
organic films/CdSSe interfaces, photoelectrical props. 69631

semiconductors
0 GHz GaAs monolithic twin-dipole antenna FET mixer 115010
50 mm through substr. interconnect fab conversion for III-V wafer mfg. 126513
AlN, combustion temps., gravity behaviors effects *(Chinese)* 124783
bulk nitride growth, related techs., conf., Brazil (Nov. 2000) 113249
chirped fiber Bragg gratings, group delay anal. 71284
computational band-struct. engng. of III-V semicond. alloys 91625
conf., Molecular beam epitaxy, Beijing, China (Sept. 2000) 89511
conf., Nitrides, Strasbourg, France (May/June 2000) 67403
cpd. semicond. mfg. technol., conf., Las Vegas, NV, USA (May 2001) 113279
damage caused by hard- and soft-etching plasma 69837
delta-doped pseudomorphic HEMT struct., Franz-Keldysh oscill., FFT anal. *(Korean)* 70184
devices, electro-fluidic assembly tech. on Si 125941
diamond films, PECVD on hexagonal GaN substr. 90372
double barrier RTD for logic ccts. 81197
dry etching, depth/reflectivity meas. by CCD-controlled in situ interferometry 69888
ferromag., spin electronics, review *(Japanese)* 91571
fiber optic telecomms., III-V semicond. technol. requirements 74952
films, pulsed CBE, real-time opt. charactn. 124830
GaAs-STAR space solar array design, multijunction concentrator cells 111349
GaAs HBT, high-power thermal resist. values, quick derivation 115852
GaAs HEMT MMICs based variable gain Ka-band solid-state power amp. 69183
GaAs MSM-TW photodetectors 75537
GaAs-based devices, selective low-damage etching, prod. soln. 69887
GaN film, charactn., ELO, MOCVD 79340
GaN p-n jn., forward biased, minority carrier transport enhance. 91741
heterostruct. device simul., indust. appl. 126623
hot-hole lasers 93650
IEEE PV specialists conf., Anchorage, AK, USA (Sept. 2000) 89575
III nitrides and UV detect. 109584
III-N-V low-bandgap nitrides and their device appls. 103794
III-nitrides, MBE growth and device appls. 90272
implanted B(Se) ion distrib., modeling 115523
InAsP cells for solar TPV appls. 113027
InP planar waveguide DWDM technol. 120377
InP-based arrayed waveguide grating DEMUX 120378
interfaces, MOVPE growth, ordering phenom. control, device appl. effects 126049
Ka-band HTS/III-V semicond. hybrid bal. mixer 69157
lattice-mismatched thin films, conf., Castelvecchio-Pascoli, Italy (Sept. 1998) 78441
liq. phase electroepitaxial growth, conc. profiles simul. 101445
mag. semicond., magnetotransport props. & appls., review 69608
MBE platform growth technol., environ. safety 90201
MEH-PPV/GaAs, photoinduced charge carriers at surfaces/interfaces 91711
metal-n-GaAs-n^+-GaAs Schottky-barrier struct., ballistic electron transport 115423
metal/GaAs heterostruct. fab., vac. wafer bonding 103231
metal/InAlAs/InGaAs heterostruct., cond. props., quantum calcs. 80893
monolithic multi-jn. solar cells, perform. meas. methods 112942
MOVPE, low temp. kinetic effects 90427
multi-wafer prod. MBE syst., integrated real-time multisensors 90290
nanoelectronics using III-V semicond. nanoelectronics, prospects/key issues 92262
nitride III-V semicond. growth, parasitic react., regional DEFT 90445
nitride III-V semicond. QW lasers, threshold current, opt. gain spectra 105271

III-V semiconductors continued
nitride lasers, diagonal-current injection VCSEL design 93594
nitride MQW lasers, mode transform., buffer layer effect 71774
nitrides, electronic materials conf., Denver, CO, USA (June 2000) 67369
nitrides, Monte Carlo simul. of terahertz generation 103048
nitrides, opt. microsensors, RF MBE growth 101214
nonlin. III-V HBT compact models, param. extraction strategies 92303
perylene-3,4,9,10-tetracarboxylic-dianhydride films on Si:H and GaAs:S 92061
phase struct./props., high-press. effects 80653
PHEMT, MBE growth in GEN III single wafer reactor, substr. temp. uniformity 101213
photonic crysts., coherent lasing action, ultrasmall integrated devices 127805
photonic crysts. and devices at opt. wavelengths 104599
poly(p-phenylene vinylene)/porous GaP composite materials, LED appl. 93437
pulsed electron source, at. collisions, expt. design 110266
quantum cascade laser for LWIR emission 93635
QW, conversion of spin into directed elec. current 69678
QW, inhomog. spin distrib. diffusion 91820
QW IR photodetector FPA, readout-IC 109642
QW IR photodetectors, conf., Dana Point, CA, USA (July 2000) 89506
QW IR photodetectors, device charactn. 86540
RF cpd. semicond. technol. for mobile wireless commun. systs. 74801
semicond. & insulating materials, conf., Canberra, Australia (July 2000) 124181
spin polarized electron source and polarimeter, review 110249
strain-bal. materials for high-efficiency solar cells 112950
tandem III-V solar cells, strain relax. 89292
ternary nitride layers, nucleation kinetics on GaN from vapour phase 90544
UV sens. develop. using semicond. materials 110017
VCSEL, material issues, fab. & props. 128297
zinc blende/wurtzite III-V semiconds., band params., review 80686
AlGaInP LED wafers, bonding to Au/AuBe mirrors 116992
AlN, CVD, monomeric chelated amides as miscible liq. precursors 124920
Ag/3,4,9,10-perylene-tetracarboxylic-dianhydride/GaAs heterostruct., Raman scatt. charactn. 103109
Ag/GaAs(110) Schottky barrier height, press. depend. meas. 91871
(Al,Ga)As high mobility electron heterostruct. wafer fused on $LiNbO_3$ 103148
(Al,Ga)N/GaN, high duality heterostruct., MBE growth on SiC(0001) 90338
(Al,In)GaAs/GaAs pseudomorphic HEMTs, 1/f noise study, 4.2 K cryoelectronics 70188
Al/AlN/Au film bulk acoustic resonator, W/SiO_2 multilayer reflector, filter appl. 104450
Al/AlN/SiO_2/Al piezoelec. acoustic thin film resonators, temp. compensation 104454
Al/GaAs interface, low press. CVD, microstruct., elec. props. 115429
Al/GaN ohmic contacts, elec. characts. 91862
Al/Si/GaAs(001) Schottky diodes, interface reacts./local interface dipoles 103753
Al/SiN_x:H/$In_{0.53}Ga_{0.47}As$, elec. charactn., DLTS, cond. transient techs. 103188
AlAs cylindrically symmetric mesa struct., steam oxid., temp./thickness depend. 81082
AlAs mirror microcavity, ultra-thin laterally injected LEDs 82201
AlAs:Na,Xe, ion implant., amorph. rate, RBS anal. 81028
AlAs/AlP superlattices, gas-source migration-enhanced epitaxy, struct. 101233
AlAs/GaAs DBR, doping-induced loss, laser appl. 93616
AlAs/GaAs heterostruct., tunnel diodes, precision growth 101174
AlAs/GaAs superlattices, thermal budget for selectively doped heterostructs. 91782
AlAs/GaAs:N,Ar,Xe interfaces, ion implant., amorph., RBS obs. 81029
AlAs/GaP short-period superlattices, gas-source migration-enhanced epitaxy, PL 101234
AlAs-InGaAs-AlAs double barrier reson. tunneling diode waveguide modulator/detector 97273
$AlAs_xSb_{1-y}$, MBE, comp., response surface modeling 79267
AlAsSb/InAs/Cd(Mg)Se heterostruct., MBE, elec./struct./opt. props. 69634
AlGaAs, AFM-defined semicond. nanostructures, electronic props. 126603
AlGaAs HBT, MOCVD 81237
AlGaAs HBT, ionizing radiation detector 87223
AlGaAs, MBE growth in GEN III single wafer reactor, substr. temp. uniformity 101213
AlGaAs, MOVPE growth, Al distrib. coeff. *(Chinese)* 79313
AlGaAs QW heterostruct., TA phonon amplif. 126147
AlGaAs VCSEL photonic quantum ring laser, evanescent/propag. wave characts. 117319
AlGaAs X-ray detector with opt. response 98049
AlGaAs broad area laser emission, struct. delayed opt. feedback 82647
AlGaAs, direct phase matching, opt. M-waveguide vars. 82890
AlGaAs heterostruct., oxid., pass. opt. waveguide 104726
AlGaAs ideal QW solar cells, theoretical model, conversion efficiencies 112858
AlGaAs index-guided VCSEL, transverse mode props. 71839
AlGaAs opt. pumped unipolar QW lasers, gain optim. 117262
AlGaAs optoelectronic dual diode struct. for opt. controlled opt. gate 116953
AlGaAs quasi-phase matched waveguides fab. by GaAs/Ge/GaAs (100) sublattice reversal epitaxy 93119
AlGaAs single-lateral mode LD with window-mirror struct., high-power operation 128226
AlGaAs thin APDs, low avalanche excess noise 104949
AlGaAs waveguide, fab., SHG, epitaxial orient.-patterning 127777
AlGaAs waveguide microcavity-enhanced surface-emitted SHG 71979
n-$Al_{0.24}Ga_{0.76}As$, surface states, DLTS, HEMT study 69533
$Al_{0.25}Ga_{0.75}As$, Si implant. weak damage, RBS/C, Raman spectrosc. 103279
$Al_{0.3}Ga_{0.7}As$, MBE-grown (001) surfaces, conductance gap anom. 91617
$Al_{0.6}Ga_{0.4}As$ thin APDs, low multiplication noise, modelling/expt. study 82349
$Al_{0.8}Ga_{0.2}As$, low avalanche noise behaviour 126074
$Al_{0.8}Ga_{0.2}As$ p-i-n/n-i-p photodiodes, avalanche multiplication charact. 116956
$Al_xGa_{1-x}As$ based tritium-powered betacells 113032
$Al_xGa_{1-x}As$, compositional depend. of defect mobility and damage buildup 81034
$Al_xGa_{1-x}As$ films, MBE, nonstoichiometry, reflectance obs. 126033
$Al_xGa_{1-x}As$ graded-gap X-ray detector, opt. response 91647
$Al_xGa_{1-x}As$ homojn. APD, multiplication noise 71559
$Al_xGa_{1-x}As$ layer for oxide confined laser with integrated spot size converter 117288
$Al_xGa_{1-x}As$ parab. well, QHE 80839
AlGaAs:C, δ-doped layers, MOVPE, nipi superlattices for AM 90389
$Al_{0.3}Ga_{0.7}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
$Al_{0.5}Ga_{0.5}As$:Be MBE layers, He^{++}-irrad., DLTS obs. 80706
AlGaAs/GaAs 2DEG, contactless heating by strip-line guided microwaves 103102
AlGaAs/GaAs DBR laser mirror, RIE 128356
AlGaAs/GaAs HBT model, SPICE simul. 81230
AlGaAs/GaAs HBT model, generalized pencil-of-fn. method 92302

III-V semiconductors continued
AlGaAs/GaAs HBT, plasma hydrogenation effects on dc charact. 126665
AlGaAs/GaAs HBTs, emitter struct. var. effect on RF charact. 80292
AlGaAs/GaAs HBTs, reliab. anal., device simul. 81225
AlGaAs/GaAs HEMT, $H_2(D_2)$ plasma exposure 126876
AlGaAs/GaAs HEMT, anal. model 126879
AlGaAs/GaAs HEMT dc output charact., interface states effect *(Chinese)* 81374
AlGaAs/GaAs HEMT, opt. illum., freq.-depend. behavior 103911
AlGaAs/GaAs, ICP plasma etching, end-point detect., opt. emission spectra 103363
AlGaAs/GaAs MQW slab, photorefr. grating filter 127797
AlGaAs/GaAs PHEMT, bal. self-oscillating mixer 80302
AlGaAs/GaAs, QD, energy relax., DC/pulse-excited current meas. 80857
AlGaAs/GaAs QW IR photodetectors, barrier width effect on perform. 86538
AlGaAs/GaAs S-band HBT, fab., charact., power appl. *(Chinese)* 102602
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 70320
AlGaAs/GaAs deep submicron PHEMT MMIC amps., high-reliab. Q-band perform. 125773
AlGaAs/GaAs depletion-mode HEMT, dyn. behavior under opt. illum., model anal. *(Chinese)* 115945
AlGaAs/GaAs dielec. mirror, InGaAs strained layer self-positioning 81614
AlGaAs/GaAs, double barrier RTD, ballistic electron emission, enhanced filtering 70216
AlGaAs/GaAs double layer 2D hole syst., SAW vel. shift 80796
AlGaAs/GaAs four-terminal HBT, RF AGC and mixer 92305
AlGaAs/GaAs heterojunction bipolar TED design 102603
AlGaAs/GaAs heterojunction phototransistors, emitter shoulder struct., opt. gain 82351
AlGaAs/GaAs heterojunction, quantum Hall regime, charge screening 80794
AlGaAs/GaAs heterostruct., layer-compensated selectively doped, nanolithography appl. 91733
AlGaAs/GaAs high-power 980 nm laser arrays, nonabsorbing facets 117246
AlGaAs/GaAs high-power QW rem. jn. laser, elec. noise charact. 82662
AlGaAs/GaAs, high-power broad-area lasers, MBE, charact. 93593
AlGaAs/GaAs high-speed HBTs with reduced base-collector capacit. 125700
AlGaAs/GaAs lin. LD arrays, 157 W quasi-CW output *(Chinese)* 82680
AlGaAs/GaAs multiperiod quantum-cascade struct., THz electroluminesc. 126145
AlGaAs/GaAs p-i-n LD heterostruct., fine struct., electrostatic force microscopy 93615
AlGaAs/GaAs power HBT, lin., C_{bc} effects 92301
AlGaAs/GaAs power HFET, elec.-field-related reliab. 103923
AlGaAs/GaAs power HFETs, hot-carrier-stressed devices, gate-lag effects 126873
AlGaAs/GaAs quantum wire, exciton-LO-phonon scatt. suppression 126193
AlGaAs/GaAs radiation resistant concentrator solar cells with internal Bragg reflector 89304
AlGaAs/GaAs single jn. solar cells, Si substr., graded GeSi buffers 112918
AlGaAs/GaAs vert. HBT with 106 V breakdown 81224
AlGaAs/GaAs/InGaAs composite MQW structs., PV appls. 89302
AlGaAs/GaAsP broad-area LD with large opt. cavity waveguide struct., beam quality 82645
AlGaAs/InGaAs HEMT, simul. of electron tunneling 126898
AlGaAs/InGaAs PHEMT, Ka-band MMIC amp. 69184
AlGaAs/InGaAs delta-doped pseudomorphic HEMT, current instabil. 92397
AlGaAs/InGaAs doped-channel FETs for high power microwave appls. 69113
AlGaAs/InGaAs double δ-doped pseudomorphic HEMT, MBE growth *(Chinese)* 92383
AlGaAs/InGaAs heterostruct. doped-channel FET, high temp. operation 115965
AlGaAs/InGaAs mm-wave Q band power pHEMT proc. technol. 115021
AlGaAs/InGaAs pHEMTs, MBE, inline sheet charge control, AlAs etch stopper for GaAs cap removal 126427
AlGaAs/InGaAs power doped-channel FETs, IMD reduct. by air-bridge gate proc. 91254
AlGaAs/InGaAs pseudomorphic MODFET, DC and microwave charact. 70178
AlGaAs/InGaAs pseudomorphic high electron transistors, effects of hot-electron stress 103919
AlGaAs/InGaAs/AlGaAs PHEMT submitted to RF and DC step stresses, LF noise 126871
AlGaAs/InGaAs/AlGaAs enhancement-mode double-doped HJFET, celluar phone appl. 103900
AlGaAs/InGaAs/GaAs PHEMT, submicron T-gate fab. using RTA reflowed resist 103912
AlGaAs/InGaAs/GaAs PHEMT, ultra-broadband nonlin. TOPAS model 81392
AlGaAs/InGaAs/GaAs SQW, modulation doped, electron dens., mobility 80852
AlGaAs/InGaAs/GaAs cryoelectronic MODFET, deep levels 115940
AlGaAs/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on DC charact. 115950
AlGaAs/InGaAs/GaAs pseudomorphic HEMT, photolum., spacer layer thickness effects 126874
AlGaAs/InGaAs/GaAs pseudomorphic HEMT, transconductance 81369
N-AlGaAs/InGaAs/GaAs pseudomorphic QW based sub-0.25 μm gate HEMT 81370
$Al_{0.15}Ga_{0.85}As$/Si solar cell, water splitting, H_2 prod. 100028
$Al_{0.2}Ga_{0.8}As$/GaAs/$Al_{0.2}Ga_{0.8}As$ single QW laser, pop. inversion 128298
$Al_{0.24}Ga_{0.76}As$/GaAs MQWs, photocurrent study *(Korean)* 80831
$Al_{0.25}Ga_{0.75}As$/$In_{0.20}Ga_{0.80}As$/GaAs:Si pHEMTs, DLTS obs. 115968
$Al_{0.3}Ga_{0.7}As$/GaAs MQW on Si substrs., H plasma passiv. 103414
$Al_xGa_{1-x}As$/GaAs HBT, finite element model 81228
$Al_xGa_{1-x}As$/GaAs solar cells, highly efficient, growth, charact. 89303
$Al_xGa_{1-x}As$/GaAs/$Al_xGa_{1-x}As$ QWs, quantum confine. effect on mobility degrad. 91800
AlGaAs-(In)GaAs VCSELs for opt. data link appls., high perform. 82612
AlGaAs-GaAs DHBTs with composite collector for power amps. 103772
AlGaAs-GaAs HBT variable gain power amp. for mobile WCDMA appls. 91368
AlGaAs-GaAs HBTs, barrel type MOVPE reactor for 6″ epitaxial wafers 68259
AlGaAs-GaAs HBTs for power appls., thermal effects/reliab. 81223
AlGaAs-GaAs HBTs, long-term reliab., base current study 70044
AlGaAs-GaAs HEMT, 2DEG transport props., quantitat. mobility spectrum anal. 92409
AlGaAs-GaAs QW 2DEG channels, dissipation, fluctS./ultrafast procs. 91849
AlGaAs-GaAs QW-SCH lasers, constituent layer comp. 93608
AlGaAs-GaAs all-glass terrestrial concentrator modules, develop. progress 112935
AlGaAs-GaAs heterostruct.-barrier varactor diodes for 255 GHz tripling operation 91294
AlGaAs-GaAs hot electron injection laser, vert. integrated transistor-laser struct. 105310

III-V semiconductors continued
AlGaAs-GaAs micromachined sens. for microwave/mm-wave power m 75845
AlGaAs-GaAs polariz. converter, electrooptic phase mismatch control 932
AlGaAs-GaAs quantum-wire gain-coupled DFB laser, MOCVD growth 71
AlGaAs-GaAs self-assembled QD microcylinder lasers, cw RT opera 117241
AlGaAs-GaAs-AlGaAs MODFET channel cond. with high doping levels 9
AlGaAs-GaAs-based Schottky photodiodes, reson.-cavity-enhanced, Schottky contact material 82354
AlGaAs-GaAsP high power broad area LD, large opt. cavity struct. 82670
AlGaAs-GaInP/G HBTs, emitter transit time, CBE, microwave perform. 8
AlGaAs-InGaAs PHEMT struct. on GaAs substrs. for mm-wave power am 91279
AlGaAs-InGaAs lasers, 2D-photonic cryst. mirrors based on Al_2O_3-mask 7
AlGaAs-InGaAs pseudomorphic HEMT fab. by ICP dry etching, device cha 70210
AlGaAs-InGaAs-AlGaAs HEMTs, barrel type MOVPE reactor for 6″ epit wafers 68259
AlGaAs-InGaAs-GaAs pHEMT, microwave props., selective gate recess etc technol. 115961
AlGaAs-InGaAs-GaAs pHEMT perform., SiN_x passiv. thickness effect 70
AlGaAs-InGaAs-GaAs power PHEMT, 1.2 V operation for PHS handset 69118
AlGaAs-based VCSEL, single-mode, long-term spectral stabil. 82652
AlGaAs-based microcavity, electronic excitations, selectively enhanced inel light scatt. 71863
$Al_xGa_{1-x}As$-GaAs based nanofabricated reson. tunneling LEDs, fab., cha 93413
AlGaAsSb, MOVPE in multiwafer planetary reactor 79324
AlGaAsSb, virtual substrs., LPE growth 79380
$Al_xGa_{1-x}As_ySb_{1-y}$, MBE, As mole fraction calib. 101261
AlGaAsSb/GaSb tandem TPV cells, photocurrent dens., efficiency 113033
AlGaAsSb/InAlGaAs/InAlP-based buffers, metamorphic HEMT struct., comp son 70204
$Al_{0.3}Ga_{0.22}I_{0.48}P$/GaAs HBT, high temp. current gain anal. *(Chinese)* 81233
AlGaInAs high speed 1.3 μm DFB-LD, λ/4-shift grating 117220
AlGaInAs laser high speed uncooled commun. systs. 74938
AlGaInAs strained MQW lasers, high-power, recomb. mechanisms 71845
AlGaInAs/GaAs metamorphic HBT/P-I-N photodiodes, MBE growth 1037
AlGaInAs/InP Bragg mirror VCSEL, design/perform. 128332
AlGaInAs/InP VCSEL, MBE growth 101240
AlGaInAs/InP heterostruct., in-situ etching with CBr_4 in MOCVD rea 115638
AlGaInAs/InP strained layer SCH-MQW laser, LP-MOCVD growth *(Chin* 82675
AlGaInAs-InP 1.3 μm strained MQW lasers, temp. depend. of gain char 82664
AlGaInAs-InP 1.3-μm uncooled MQW laser design 128243
AlGaInAs-InP high power tapered 1.55 μm DBR lasers 82669
AlGaInAs-InP strained MQW lasers, gain charact. temp. depend. 82613
AlGaInAsP QWs, gas source MBE, laser appl. 101237
AlGaInAsP:Zn-based self-aligned stepped substr. laser, high-power opera 128334
AlGaInN VCSEL, fab., ICP etching, dielec. mirrors 81099
AlGaInN high-power flip-chip LEDs 71581
AlGaInN ridge geom. LD, lateral transverse modes anal. 93599
AlGaInP LED, mirror substr. wafer bonding 116993
AlGaInP LED samples, modulated doping effect on work voltage *(Chin* 104994
AlGaInP VCSEL, solid-source MBE growth 101241
AlGaInP based vis. red VCSEL, develop. & perform. 71837
AlGaInP high-power 660-nm LD, small aspect ratio beam divergence 117
AlGaInP large opt. cavity LD, opt. loss 128276
AlGaInP lasers emitting at 670 nm, cladding material blocklayers 93667
AlGaInP, microcavity LED, external quantum efficiency 128021
AlGaInP microcavity LED, intrinsic emission spectrum, deconvolution 128
AlGaInP vis. LEDs 82379
AlGaInP vis. LEDs, reliab. 93440
AlGaInP/AlGaAs reson. cavity LEDs, growth & perform., solid source M 105293
AlGaInP/AlGaAs, ultralow threshold red VCSEL, MOVPE, charact. *(Engl* 82678
AlGaInP/AlInP LED, fab. & perform. 117277
AlGaInP/AlInP superlattices, transient photocurrent/PL, simultaneous m 115401
$AlGaInP/Ga_{0.4}In_{0.6}P$ MQW LD, tapping-mode tuning-fork NSOM 82658
AlGaInP/GaAs HBT, proton implant isolation *(Chinese)* 103785
AlGaInP/GaAs/GaInNAs/Ge 4-jn. solar cells, high efficiency 112916
AlGaInP/GaInP multi-mode self-pulsating MQW LD with epitaxially integr saturable absorber 71824
$(Al_{0.4}Ga_{0.6})_{0.5}In_{0.5}P$/GaInP MQW-LD, opt. beam qualities meas. 105367
AlGaInP-based VCSEL, 650 nm, high efficiency design 128255
AlGaN HEMTs, correl. of materials charact. with microwave perform. 125
AlGaN MOCVD films, DOS distrib., transient photocurrent anal. 71515
AlGaN MOCVD selective growth, LD struct. appl. 79328
AlGaN UV photodetectors on sapphire/Si substrs. 97270
AlGaN UV photodetectors, photodiode struct. 86563
(Al)GaN based heterostruct., near/DUV LD, opt. prop. 80805
AlGaN based reson. cavity enhanced UV photodetectors, DBR 86570
AlGaN, electronic devices, microwave power generation, LNA 81388
AlGaN epilayers, undoped, nanopipes obs. 103041
AlGaN films, hot wall epitaxy, XRD 91680
Al(Ga)N, hexagonal/cubic heterostruct., strain relax., plasma assisted M 79257
AlGaN high-perform. back-illum. solar-blind MSM photodetectors 126256
AlGaN layers, spatially resolved spectra, CL, micro cracks, stress distrib. 79
AlGaN photodetectors, MBE on Si(111), charact. 109561
AlGaN solar blind PIN heterojunction photodiode, luminesc. 82362
$Al_{0.09}Ga_{0.91}N$, MOCVD, recomb. mechanisms, UV detectors response 10302
$Al_{0.4}Ga_{0.6}N$ absorpt. layer back illum. solar-blind photodetectors 97245
$Al_{1-x}Ga_xN$ refl. spectra, Kramers-Kronig anal. 91681
$Al_xGa_{1-x}N$, MOCVD for solar-blind UV detectors 120813
$Al_xGa_{1-x}N$ films, MBE, struct. quality, ordering 68208
$Al_xGa_{1-x}N$ films, MOVPE on 6H-SiC (0001) substrs. 79303
$Al_xGa_{1-x}N$ films, opt. phonon energies, comp. depend. 69541
$Al_xGa_{1-x}N$ hexagonal nanocryst. solids, synthesis, Raman scatt. spectra 791
$Al_xGa_{1-x}N$, pendeo epitaxial growth/characterisation, SEM, TEM, XRD 792
$Al_xGa_{1-x}N$ thin film, GSMBE growth, Si(111) substr. 101207
$Al_xGa_{1-x}N$ thin films, pendeo-epitaxial growth and charact. 79296

semiconductors continued
GaN:In heterostruct., UV optoelectronics appls. 103138
GaN:In,Si solar blind photodetectors, In-Si codoping 120806
GaN:Mg films, acceptor levels, LED obs. 69534
GaN:Si/GaN:In heterostruct., In doping enhanced 2DEG, XRD 81048
)GaN:Si(Be)(Mg)(C) films, MBE, layer morph., doping efficiency 68207
$_{.13}Ga_{0.87}N$:Si(Mg), MOCVD, structural props. 126057
$_{.15}Ga_{0.85}N$:Mg/GaN superlattices, elec./opt. props., LED appl. 126134
$Ga_{1-x}N$:Si,Mg/GaN, mech. props., impurity doping effect 81025
GaN/AlGaN DH UV LEDs, MOCVD growth 116989
GaN/AlN/GaN heterobipolar phototransistor, photoresponse, defect levels 2347
GaN/AlN/GaN high-power microwave HEMTs, high mobility at high sheet harge densities 125708
AlGaN/Au Schottky contacts, environ. aging 69736
GaN/GaN DBRs, stress engng. during MOCVD 68214
GaN/GaN FET VCO, high-power RF source 101834
GaN/GaN HEMT, GaN mass transport regrowth for ohmic contacts 79278
GaN/GaN HEMT MMIC attenuator, dyn. range 125769
GaN/GaN HEMT MMICs on SiC substrs., high-power broadband amps. 1383
GaN/GaN HEMT, RESURF device, HV power switching 92402
GaN/GaN HEMT, SiN_x passiv., device perform. 126901
GaN/GaN HEMT, ammonia MBE on 4H-SiC 68199
GaN/GaN HEMT, chem. sens., fluid monitoring 81379
GaN/GaN HEMT fab., buried p-layers 81380
GaN/GaN HEMT high power wideband feedback amp. module 114625
GaN/GaN HEMT perform. rel. to MOCVD growth termination conditions 0173
GaN/GaN HEMT, prep. on 2-inch proc. line, DC/microwave characts. 126869
GaN/GaN HEMT, proton-irrad., dc/rf perform. 125706
GaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 69642
GaN/GaN HEMT, technol./perform./fab., 2-inch epitaxy, microwave power ppls. 81383
GaN/GaN HEMT-based VCOs, varactor-tuned with low phase noise 80276
GaN/GaN HEMTs, HF meas. at high temps. 91276
GaN/GaN HEMTs, MBE growth, high current/f_T 81364
GaN/GaN HEMTs, MOCVD on SiC, high-transconductance 126890
GaN/GaN HEMTs, fab., characts., short-channel effects 70199
GaN/GaN HEMTs, study of current collapse producing traps 69137
GaN/GaN HF and high power HEMTs, material and device issues 80299
GaN/GaN HFET, Si_3N_4 passiv. 81391
GaN/GaN HFET, electron transport props., electron dens., polaris. effect 81385
GaN/GaN HFET, fab., GSMBE, ECR plasma 81386
GaN/GaN HFET, fab./charactn., KOH based UV photoassisted wet etching 81106
GaN/GaN HFET, high power microwave/MM-wave device develop. *(Japanese)* 81256
GaN/GaN HFET, large periphery, multigate design 81345
GaN/GaN HFET, material optimisation 103904
GaN/GaN HFET struct., impedance spectrosc. anal. 103905
GaN/GaN HFET/MOSHFET, current collapse, induced strain mechanism 26882
GaN/GaN HFETs, gate leakage current effect on noise 81382
GaN/GaN HJFETs, full band Monte Carlo simul., theoretical comparison 81384
GaN/GaN MODFET, electron trapping, dc drain current, DLTS 81362
GaN/GaN MOS HFET, large periphery, multigate design 81345
GaN/GaN MOS heterostruct. FET, photoanodic oxide, DC characts. 70113
GaN/GaN MQW waveguides, fab. and opt. study 93103
GaN/GaN, MQWs, localised states, PL obs. 80869
GaN/GaN QW, intersubband absorpt., ultrashort pulse wavelength conversion, FDTD simul. 116700
GaN/GaN QW, magneto-PL, valence band 103124
GaN/GaN RF HEMT, IMD and lin. 92393
GaN/GaN UV photodetectors, recent advances 97240
GaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
GaN/GaN emitters, field emission study, UPS, MOVPE 80577
GaN/GaN epitaxial films on Si(111), AlN buffer layer growth effect 68229
GaN/GaN films on Si(111), MOCVD, AlN buffer layer growth effects 124994
GaN/GaN hetero bipolar phototransistor, luminesc., photodetectors, photocurrent 82363
GaN/GaN heterojn. band offsets, photolum. and modulation spectra obs. 91764
GaN/GaN heterostruct. FET, 2DEG distrib., doping effects anal. 126880
GaN/GaN heterostruct., MBE layer limitations due to lateral inhomog., disloc. 103101
GaN/GaN heterostruct., chem. treated/thermally oxidized surface prop. 80809
GaN/GaN heterostruct., elec. cond., quantum corrections 80783
GaN/GaN heterostruct., electronic struct., localized vars. 126122
GaN/GaN heterostruct., epitaxial FET struct., carrier props., surface treatment effects 92032
AlGaN/GaN heterostruct. growth, NH_3 flow effect, reactor press., 2DEG transport props. 90449
AlGaN/GaN heterostruct., localized charge trapping behavior 126127
AlGaN/GaN heterostruct., low temp. phonon emission 80789
AlGaN/GaN heterostruct., plasma-assisted MBE, growth/electron transport props., Ga flux effect 124855
AlGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. model, PL 126126
AlGaN/GaN heterostruct., surface pot., scanning Kelvin probe microscopy 80791
AlGaN/GaN heterostruct. wafers for high-power HFETs, elec. charactn. 103798
AlGaN/GaN heterostructs., surface morph. and disloc. electronic props. 69641
AlGaN/GaN high power-dens. HEMTs on SiC, scalable large-sig. model 91246
AlGaN/GaN high volt. HEMT, field plate on Si_3N_4 stepped insulator 126878
AlGaN/GaN microwave HFETs, AlGaN props., in situ opt. monitoring, MOVPE 101324
p-AlGaN/GaN modulation doped superlattices, improved mobil./resist. 126178
AlGaN/GaN multilayer based DBRs, plasma assisted MBE 127883
AlGaN/GaN on sapphire, inhomog. contact pot. image, Kelvin probe force microscopy 91751
AlGaN/GaN power HEMTs, breakdown voltage enhance. using field plate 103901
AlGaN/GaN short channel HEMT, gate recess, breakdown volt. 81387
AlGaN/GaN single heterostruct. FET, electronic energy spectrum modelling 92396
AlGaN/GaN single heterostruct., MOCVD growth, opt. props. 91665
AlGaN/GaN single/double HFETs, 2DEG transport props. 70198

III-V semiconductors continued
p-AlGaN/GaN strained cladding layer superlattice, InGaN MQW LD fab., Mg doping 81044
AlGaN/GaN structs., RF plasma-assisted MBE growth, struct. and surface morph. 68186
AlGaN/GaN superlattices, hot wall epitaxy, XRD 91680
AlGaN/GaN:He,P HFETs fab., ion implant., classical/gate metal approach 81381
AlGaN/GaN:In,Si MQW, In-Si-codoping, MOCVD, PL 91990
AlGaN/GaN:Mg superlattices, p-type modulation Mg doping, resist., hole conc. 81046
AlGaN/GaN/6H-SiC, surface/buried MQW, MBE, opt. emission, band bending 91778
AlGaN/GaN/SiC, nonuniform contact pot. profile 80808
AlGaN/metal Schottky contacts, XPS depth profiles, elec. meas. 103160
$Al_{0.13}Ga_{0.87}N/Al_{0.10}Ga_{0.9}N$ LED, LD, 339 nm DUV emission 82420
$Al_{0.14}Ga_{0.86}N/Al_{0.18}Ga_{0.82}N$ LED, transparent conductive layer, short period alloy superlattice, UV 82428
$Al_{0.15}Ga_{0.85}N$/GaN HFET, high-temp. electron transport 115959
$Al_{0.15}Ga_{0.85}N$/GaN:Mg superlattices, elec./opt. props. charactn., MOVPE 82425
$Al_{0.18}GaN$/GaN heterostruct., sub-bandgap absorpt., photocurrent spectra 91742
$Al_{0.18}Ga_{0.82}N/AlN(Al_{0.8}Ga_{0.2}N)$ QWs, MOVPE, opt. props. 126186
$Al_{0.2}Ga_{0.8}N$/GaN heterojunction, effective mass of 2DEG 91729
n-i-$Al_{0.33}Ga_{0.67}N$/p-GaN UV photodiode structs., solar-blind perform. anal. 131923
$Al_{0.65}Ga_{0.35}N$/GaN MQWs, intermediated layers effect, TEM, XRD 91852
$Al_xGa_{1-x}N$/GaN HFET, nanoscale electronic props. 103897
$Al_xGa_{1-x}N$/GaN epilayers, effects on UV LED chips 82413
$Al_xGa_{1-x}N$/GaN heterostruct., thermodyn. and nucleation kinetics 79198
$Al_xGa_{1-x}N$/GaN modulation-doped heterostruct., subband electron props. 91735
$Al_xGa_{1-x}N$/GaN cubic heterostruct., MBE, struct., vib., opt. props. 101223
AlGaN-GaN HEMT, study of temp. depend. of IMD and lin. 91239
AlGaN-GaN HEMTs, degrad. charact. 81394
AlGaN-GaN HEMTs for microwave power appls. 69166
AlGaN-GaN HEMTs, perform. limits 92415
AlGaN-GaN HEMTs, simul. 92416
AlGaN-GaN MODFET, 2DEG transport props., quantitat. mobility spectrum anal. 92409
AlGaN-GaN MODFET, I-V characts. and output conductance, 2D anal. model 70186
AlGaN-GaN RF power HFETs, wide bandgap, commercialization prospects 69165
AlGaN-GaN epitaxial layers, pot. profile meas. using Kelvin probe force microscopy 92268
AlGaN-GaN heterojunctions, low-noise photodetectors 75512
AlGaN-GaN photodetectors, ultra-low-noise 97271
AlGaN-GaN power HEMTs for wireless commun., device scaling and perform. 125710
AlGaN-based SQW LED, mW operation in UV region 82374
AlGaN-based UV photodetectors, recent develop. 109560
AlGaN-based UV-LED on bulk GaN, perform. 93421
$Al_{0.4}Ga_{0.6}N$-based Schottky barrier photodetectors, low-freq. noise 97239
$Al_xGa_{1-x}N$-based QW, DUV LED and LD, growth and opt. props. 82601
$Al_xGa_{1-x}N$-based metal-semicond.-metal UV photodetectors, fab. 109579
$Al_yGa_{1-y}N_xAs_{1-x}$, thin films, nitride form. by N ion implant. 103275
$Al_xGa_{1-x}P$/GaP multilayers, MOVPE, struct., Raman spectra 101386
AlGaSb, MOVPE in multiwafer planetary reactor 79324
$Al_xGa_{1-x}Sb$, CZ growth, Al segreg. phenom. 124804
$Al_xGa_{1-x}Sb$ films, MOCVD, elec./opt. props. 114334
$Al_xGa_{1-x}Sb$, melt growth, AlSb compositional nonuniformity 101153
Al(Ga)Sb/InAs/Cd(Mg)Se hybrid heterostruct., mBE growth, luminesc. props. 103019
$Al_xGa_{1-x}Sb_yAs_{1-y}$, lattice-matched, MBE, InP based HEMT appl. 103094
AlInAs/GaInAs quantum cascade lasers, far-IR and ultra-high-speed operation 82656
AlInAs/GaInAs/InP MOCVD grown HEMTs with InP etch-stop layer 70207
AlInAs/GaInAs/InP:Be MQW structs., low-temp. MBE growth 101236
AlInAs/InGaAs HBT CML ring oscillator, sub-5 ps gate delay demo. 79845
AlInAs/InGaAs HBT IC, low-power static freq. divider 127015
AlInAs/InGaAs HEMT, diffusing F atom suppression by PH_3 plasma treatment 115949
$Al_{0.48}In_{0.52}As/In_{0.53}Ga_{0.47}As$ high-perf. planar HEMT 103910
$Al_{0.66}In_{0.34}As/Ga_{0.67}In_{0.33}As$ enhancement-mode metamorphic HEMT, modeling and meas. 69140
AlInAs-GaInAs HEMT struct. on InP substrs. for mm-wave power amplif. 91279
AlInAs-GaInAs enhancement-mode metamorphic HEMTs on GaAs substr., DC/RF perform. 92411
AlInAs-GaInAs-InP HBTs, low temp./high current lifetests 81241
AlInGaAs-InP three-QW polariz.-insensitive opt. amps. 93657
AlInGaN QW, light emission optimisation 126189
AlInGaN self-assembled quaternary superlattice struct. 114346
$Al_xIn_yGa_{(1-x-y)}N$ UV LD 105288
AlInGaN/AlInGaN MQW, pulsed ALE, LED appl. 124871
AlInGaN/InGaN MQW vert. conducting LEDs on SiC, quantum efficiency 82423
AlInGaN/InGaN, MQWs, localised states, PL obs. 80869
AlInGaP high-power LEDs, MOVPE-grown, surface texturing 71608
$Al_{1-x}In_xN$ films, MOCVD, opt. props., IR spectrosc. ellipsometry 126073
$Al_{1-x}In_xN$ films, plasma source MBE grown, opt./elec. props. 90311
AlInN/AlGaN multiple layers, MOVPE growth on GaN, struct. 68269
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, elec. charactn. 103894
$Al_{0.5}In_{0.5}P$/InGaAs doped-channel HFETs, high power dens./PAE 114978
Al(In)Sb/InAs/Ga(In)Sb interband cascade laser, CW perform. rel. to fab. 128219
AlN, CBE on compliant Si/SiC substrs. 103035
AlN RF reactive sputtering depos., consumer wireless commun. appl. 101179
AlN, barriers in spin-depend. tunnel jns., HREM obs. 80681
AlN buffer layer effects on InN MBE growth and elec. props. 101299
AlN bulk single-cryst., high-temp. hardness 69535
AlN, combustion synthesis, gravity behaviors, microstruct. effect *(Chinese)* 124784
AlN, electron runaway in strong elec. fields 126029
AlN epilayers, MBE growth, annealing, reactive N_2 kinetic energy 124835
AlN epitaxial film, vibr./opt. props. 126067
AlN epitaxial films, RF-MBE/-MEE on SiC, charactn. 101221
AlN epitaxial growth, ECR plasma assisted MOCVD struct. 90456
AlN, epitaxial growth on $SrTiO_3$ substrs. 101304
AlN epitaxial growth on off-angle R-plane sapphire substrs. by MOCVD 101383
AlN epitaxial layers, Al_2O_3, SiC, Si substrs., MBE growth, cathodolum. 93333

III-V semiconductors continued
AlN, epitaxy on Si or sapphire, HF SAW devices appl. 81755
AlN film, SAW filter, MOCVD on off-angle R-plane sapphire 81761
AlN film, low temp. deposition *(Chinese)* 90464
AlN film, prep., DOS distrib., CPM/DLTS anal. 91631
AlN film, sputtered on Al_2O_3(0001), crit. thickness 101194
AlN films, ECR plasma-aided reactive PLD 90472
AlN films, PLD, pulse duration/gas press. effects 79354
AlN films, RF-MBE, RF-MEE on SiC, structural anal. 90302
AlN films, c-axis-oriented, reactive RF magnetron sputtering, SAWs 114248
AlN films, ion-beam-enhanced deposition, surface struct./resist. 125063
AlN films, piezoelec. coeffs. 127220
AlN films, pulsed DC reactive sputtering, piezoelec. props. 80679
AlN films, pulsed sub-band-gap photoexcitation, MIM struct. obs. 93321
AlN films, reactive DC magnetron sputtering, SAW, transducer appl. 114256
AlN films, reactive DC magnetron sputtering prep., struct. 68153
AlN films, reactive PLD assisted by RF discharge plasma 124996
AlN hexagonal films, plasma-assisted MBE on Si(001) 101224
AlN, low-resist. wide band-gap, codoping method 126314
AlN, luminesc. spectrum, high elec. fields 91667
AlN nanofibers, combustion synthesis and charactn. 68103
AlN piezoelec. polycryst. films, rf magnetron sputter deposition, SAW appl. 124818
AlN piezoelec. thin films, morph. props., DC reactive magnetron sputtering 68148
AlN polycryst. plate from nitriding electrolytically etched Al plate 81096
AlN reflectance spectra, temp. depend. 91682
AlN, resist., band-gap shift, metal-nonmetal transit. 115321
AlN thin films, N radical-assisted PLD, surface morph. 68300
AlN thin films, PLD 68316
AlN thin films, growth, character. microwave filter/microsystem appls. 101196
AlN thin films, reactive ion beam coating 68152
a-AlN thin-film phosphors with Cu, Mn, or Cr, vis. emission 104914
AlN:C reactive DC magnetron sputtered thin films, depth element distrib. 101188
AlN:C,O, valence/spin control by codoping 115563
AlN:Er film, sputter deposited, photo-/cathodo-/electrolum. 91664
AlN:Eu(Tb)(Er) films, vis. cathodolum. 126071
AlN:H films, chem. stabil., nitrogen plasma treatment 92045
AlN:O ceramics, radiation induced recomb. procs. 127921
AlN:O,C, conductive film fab., two beam PLD, XRD 90467
AlN:O,C films, two-beam PLD, ohmic character 91630
AlN:Si, MOVPE, $Al_{1-x}Si_xN$ solid soln. form. 124925
AlN:Si, generation-recomb. noise of DX centers 126020
AlN:Si heavily doped electron field emitters, phosphor, AFM 80578
AlN/Al/Al_2O_3 IDT, nitrogen-ECR plasma deposition, SAW filter 92697
AlN/GaN MISFET, wet chem. etching prep. using hot phosphoric acid 115900
AlN/GaN MQW, MOCVD, DUV ps time-resolved photolum. 68266
AlN/Si heterointerface, laser MBE, RHEED, XPS 90332
AlN/SiC film syst., sublimation sandwich growth, buffer layers 114305
AlN/SiC heterojns., band-offset trends, first principles calcs. 91754
AlN/sapphire films, oxid., synchrotron X-ray scatt. 69894
AlN/sapphire thin films, SPE recrystn., GaN epitaxy substr. 125050
AlN/sapphire(0001) films, RF sputter growth mode evol., X-ray scatt. obs. 90257
AlN-BSG composite, material synthesis, gravity behaviors *(Chinese)* 125093
AlN-GaN MISFETs, growth/charactn. 92382
AlN(0001) blocking layer, self-limited wurtzite-struct., form at Al/TiN(111) diffusion barriers 69539
AlON, barriers in spin-depend. tunnel jns., HREM obs. 80681
AlSb/InAs HEMT, TiW/Au gate metallization, fab., charactn. 115955
Au/(AlGa)As heterostruct., second derivative BEEM spectra 91876
Au/$BaTiO_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
Au/GaInP:Te MOCVD Schottky contact, γ-ray induced deep electron traps, DLTS anal. 115441
Au/GaSb (110) interface, low temp. work fn., acceptor states 126203
Au/Ge/Pd/n-GaSb ohmic contacts, microstruct. anal., sub-μm contacts 103165
Au/InP interface, forward I-V charact., Sb effects 126196
Au/Pd/p-GaN, interfacial react., surface treatment effect, ohmic contact 81105
Au/Si_xN_y/n-GaAs struct., N-rich PECVD dielec. fab. 124909
Au/TiB_2/GaAs Schottky contacts, transit. layer, transverse bulk photovoltage 69712
Au/n-GaN metal-semicond. diode, intrinsic Schottky barrier height 70024
Au/n,p-GaN Schottky diodes, I/V/T charact., inhomog. barrier influence 81205
Au-plated T-gate GaAs MESFETs, fab. proc., charactn. *(Korean)* 70185
BAlGaN/AlN MQWs, UV/PL spectra, MOVPE 91854
BN, cubic, crysts., growth, homog. degrad. 90203
BN, cubic, electronic transport, Monte Carlo simul. *(Chinese)* 115308
BN, cubic films, PECVD, TACVD, nucleation 90373
BN, cubic films, laser ablation deposition 90469
BN, cubic films, pulsed PECVD 124903
BN, cubic films, reactive sputtering, pulsed RF substr. bias 90242
BN cubic films, rf magnetron sputtering, ion bombard. effects 90241
BN, cubic, growth from hexagonal graphitic BN powders 90202
BN, cubic thin films, ion-beam assisted pulsed Nd:YAG laser deposition 125002
BN films, IBAD, stress form. 68373
c-BN films, RF bias sputtering, struct. anal. 68144
BN films, low dielec. const., plasma CVD, charactn. 90375
BN films, plasma CVD, elec. charcts., metal contact props. 91632
BN films, sputter deposition, phase ident., multichannel ellipsometry 91629
BN thin films, cubic, microwave PECVD, charactn. 90374
BN, vapour deposition, substr. effect 79277
BN/Si, IBAD, thin film growth, real-time ellipsometry 101447
BN/Si(001) films, microwave plasma CVD and charactn. 79289
n-CdS/p-InP heterojunctions, transport mechanisms & PV charactn. 91734
CdSe QD on ZnBeSe/GaAs epilayers, MBE, struct./PL props. 103118
$Cd_xZn_{1-x}Te$/GaAs heterostruct., struct., SAD/TEM obs. 115369
Co/GaAs, ferromag./semicond. spin FET 81398
Co/S/GaAs(001), modified epitaxy, comp. with Co/GaAs(001) 91869
Co/p-GaN:H interface, contact resist., RTA effects 103158
Cr/n-GaAs Schottky barriers, nonuniform plasma breakdown, surface microrelief effect 126632
Cs/p-GaAs(110), photoemiss., STM, STS, spin-polarized photoelectron source 110232
CsO-GaAs interf., layer thickness, NEA surface form. 110234
Cu phthalocyanine/InSb(111) thin films, mol. beam deposition growth, in-situ monitoring 90337
Cu/GaAs(110) Schottky barrier height, press. depend. meas. 91871
Cu(Al,Ga)(S_2,Se_2)/GaAs(001) heterointerfaces, valence band discontinuities 69651

III-V semiconductors continued
CuInSe$_2$-GaAs epitaxial solar cells, sodium additive effects 100099
ErAs/InGaAs particle/matrix superlattices, metal-semicond. transit. 103119
Fe/Ag/GaAs waveguide structs., microwave bandstop filter appl. 104538
Fe/GaAs, metal film epitaxial growth, ion beam sputtering 114250
Fe/GaAs(100) Schottky barrier height, press. depend. meas. 91871
Fe/Ni bilayers on GaAs(001), perp. magnetisation 127346
Fe-GaN-Fe epitaxial tunnel jns. on GaAs, transport props. 127359
(Ga,Mn)As/AlAs/(Ga,Mn)As dil. mag. semicond. jns., tunneling magnetore 91745
GaAlAs LED, radiation degrad. effects 105026
GaAlAs diode laser, violet output based on CdZn(SCN)$_4$ freq. doubling *(nese)* 71770
GaAlAs/AlAs 1D photonic band gap struct., SHG enhancement 71976
GaAlAs/GaAs temp. insensitive micromachined vert. cavity wavelength 82293
$Ga_{1-x}Al_xAs$/GaAs QW, double-barrier, photoionization spectrum 126152
GaAlAs-GaAlAs photonic band gap semicond. struct. SHG 82926
GaAlAs-GaAs 4×4 multiple wavelength micromachined filter array 93191
GaAlAs-GaAs micromachined DBR vert. cavity wavelength filter, temp. inse tive 85970
GaAlAs-GaInAs-GaAs complementary N-HIGFETs, 0.3 μm, 10 GHz load- meas. 92369
GaAlAs-based symm. emitter-collector planar DHBT, LPE fabr. and charactn. 70030
$Ga_xAl_yIn_{1-x-y}N$ films, MOVPE growth, quasi-thermodyn. model *(Engl* 101364
GaAlN/GaN heterostruct., US waves amplif. 91750
GaAs 128×128 element concave microlens array, fab. *(Chinese)* 104778
GaAs, 2D/3D photonic-cryst. struct. fab. 127566
GaAs 2DEG QD, paramag.-diamag. interplay 69701
GaAs 3D on-chip inductors, fab., perform. and PHEMT LNA appl. 80370
GaAs 6 inch wafer mfg., cost effective yield enhance. using August NSX s 126924
GaAs (001), Mg adsorpt., surface/bulk props. 126039
GaAs (001)-(111)B facet struct. transform. by surface diffusion during MBE patterned substrs. 90278
GaAs (n11)A substrs. grown using MBE, As press. depend. of hillock mor 90279
GaAs, CMOS inverter, charcts. 127062
GaAs CPW MMIC, Si MEMS package 69189
GaAs, CZ growth, cryst.-meniscus syst. behaviour, model anal. 90218
GaAs CZ growth model, convective interact./instabilities 90221
GaAs Cat-CVD, wafer temp. control, apparatus eval. 124948
GaAs E/D mode MESFETs, 0.12 μm gate, f_T/f_{max}> 100 GHz, ion implant., power IC appls. 69145
GaAs FET 1.8-GHz push-pull power amp. using impedance-transforming bal 125733
GaAs FET DC bias current adjustment, on-wafer digital laser trimming te 70206
GaAs FET Schottky gate metallization, electron-beam irrad. damage 70211
GaAs FET act. balun and bal. mixer, C-band down-converter 69131
GaAs FET analog, RF and microwave ICs, CAD tool 80347
GaAs FET, nonlin. model 92408
GaAs HBT, RF power amp., microwave meas. 103776
GaAs HBT dual T/H, 1 GS/s, wideband pipelined ADC appl. 125633
GaAs HBT power amps., feedback bias cct. design 80317
GaAs HBT, small-sig. model 70036
GaAs HBTs, small-sig. equiv. cct. model params., direct extraction 102642
GaAs HEMT MMIC MEMS switched dual-path power amp. 91359
GaAs HEMT MMIC UWB amp. 69187
GaAs HEMT cryogenic LNA 68604
GaAs HEMT regenerative MMIC freq. dividers for 28 and 14 GHz 125754
GaAs HFET modeling and charactn. for lin. 2.4 GHz high power amp. des 69128
GaAs HIGFET, 0.35 μm, surface oxid. status effects on charact. 103843
GaAs HIGFETs, WSi gate, degrad. phenom. caused by hot carriers 92379
GaAs HV HBTs, neg. RF-resist., Gunn effect study 91247
GaAs HV diodes with subnanosecond gate voltage recovery 126643
GaAs HV power HBTs for base-station amps. 91240
GaAs Hall effect sens., high accuracy, MBE grown, design/fab. 75444
GaAs IC reliab. prediction from life test data, regression tech. 70242
GaAs ICs, direct fault detect./anal. using EO sampling syst. 79668
GaAs LD, opt. absorpt., thermoreflectance meas. 82607
GaAs, MBE for AlGaAs/CaF_2 saturable absorber mirror 93690
GaAs, MBE growth, orient., microstructural differences 90284
GaAs MBE, high-vol. cost-effective multi-wafer reactor 90286
GaAs, MBE, nanoscale selective growth 124843
GaAs, MBE on nearly lattice-matched SiGe substrs. 101293
GaAs, MBE-grown (001) surfaces, conductance gap anom. 91617
GaAs MEMS and MOEMS, develop., fab. and perform. 127821
GaAs MESFET 2D 8×8 photoreceiver array and VCSEL drivers, hig throughput opt. data links 131409
GaAs MESFET, $H_2(D_2)$ plasma exposure 126877
GaAs MESFET IC mfg., 6 inch wafers, N-minus resist. control 127068
GaAs MESFET LTCC Ku-band transmitter module, integrated filter, satell commun. appls. 96620
GaAs MESFET MMIC adaptive transversal preamplifier for high spe lightwave systs. 91361
GaAs MESFET MMIC, low-power direct conversion receiver 96367
GaAs MESFET MMIC phase shifter, analogue and digital control 69205
GaAs MESFET MMIC power amp. for PCS and W-CDMA base station, 4 125759
GaAs MESFET, OEIC receiver array 105034
GaAs MESFET, TLM struct., radiation induced resist. 115942
GaAs MESFET amp., large-sig. behavior 102726
GaAs MESFET and HEMT, low temp. microwave charact. 70190
GaAs MESFET and PHEMT, power amp., IMT-2000 appl. 68595
GaAs MESFET, back-gate, threshold voltage uniformity *(Chinese)* 81376
GaAs MESFET, channel current higher order components, extraction meth 70176
GaAs MESFET charact. modeling *(French)* 81373
GaAs MESFET common-source/drain/gate amps., RF large sig. perform. co parison 91287
GaAs MESFET, cryogenic charge sensitive preamplifier 68614
GaAs MESFET current mode class-D power amps. for high efficiency RF appl 91266
GaAs MESFET, freq. dispersion and thermal effects 92384
GaAs MESFET model, dyn. behavior under opt. illum. 71556
GaAs MESFET, nonlin. model for DC I-V charact. 70209

semiconductors continued
-GaAs MESFET ohmic contact, TiN diffusion barrier, reliab. *(Chinese)* 81378
GaAs MESFET, ohmic contact, TiN diffusion barrier layer 115426
GaAs MESFET phase shifter MMIC for C-band smart antenna combining 69200
GaAs MESFET transient model predicting trap-induced memory effects under complex digital modul. 92392
GaAs MESFET-like oscillator perform., num. study 125741
GaAs MESFETs, SPICE model for digitally modulated RF perform. characts. 80262
GaAs MESFETs and HEMTs, equiv. cct. model, parasitic capacit. determ. 70181
GaAs MESFETs, substr.-trapping effects suppression, buried p-layers 126886
GaAs MESFETs, trap-related kink dyn. 126889
GaAs MLE, self-limiting growth, surface react. mechanism anal. 101384
GaAs MM-wave HV PIN diode switch, develop. 125805
GaAs MM-wave integrated freq. convertor design 80250
GaAs, MM-wave parametric instabil., freq. multiplication 69143
GaAs MMIC, EO probing, CW calib. 102665
GaAs MMIC LO, LMDS radio link 125764
GaAs MMIC chip-set for Ku-band radio-link transmitter 125747
GaAs MMIC downconverter for PCS front-end appls., fab. and perform. 114991
GaAs MMIC multiplier devices, metal beamleads, fab. techs., 200-2700 GHz 102678
GaAs MMIC oscillator, act. patch antenna array 105951
GaAs MMIC phase shifter 69206
GaAs MMIC technol. integrat. in mm-wave satellite commun./LMDS transceivers 74576
GaAs MMIC through-substr. via inductance, multiple on-wafer test approaches 102741
GaAs MMIC yield mgt., data-driven strategy using data warehouse 115011
GaAs MMIC-design and mm-wave module prod. yield 125808
GaAs MMICs, vol. prod. 125767
GaAs MMICs, vol. prod. 80359
GaAs MOSFET, $Ga_2O_3(As_2O_3)$ gate dielec., liq.-phase selective oxid. 81311
GaAs MQW modulators, flip-chip bonded kinematic package, design/testing 128027
GaAs MSM photodetector and electron detector, freq. response mechanisms 132145
GaAs MSM photodetector, impulse response 97234
GaAs OPFET, microwave charact., threshold voltage model 71551
GaAs P-HEMT gate improvement/control, proc. modelling/simul. 116042
GaAs PHEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
GaAs PHEMT Ka-band monolithic ccts. for transceiver appls. 69208
GaAs PHEMT MM-wave push-push oscillator 102675
GaAs PHEMT MMIC amp. 69176
GaAs PHEMT MMIC diode mixer 69207
GaAs PHEMT MMIC power amp., CAD 69202
GaAs PHEMT MMIC power amps., reliab. study 115004
GaAs PHEMT MMIC requirements for satellite based commun. 115012
GaAs PHEMT MMIC, serial-to-parallel converter, spaceborne SAR 125765
GaAs PHEMT SP3T T/R switch for DCS 80375
GaAs PHEMT, T-gate recessing, $SiCl_4/SiF_4/O_2$ RIE 126883
GaAs PHEMT distrib. amp. ICs for 40 Gbit/s high output voltage driver modules 125774
GaAs PHEMT laser/modulator driver IC with dual-mode act. matched output buffer, 10-Gb/s 131410
GaAs PHEMT mixer, single bal. topol. and design methodology 125749
GaAs PHEMT power amp. MMIC, single supply design for GSM handsets 91369
GaAs PHEMT wideband true-time delay MMIC with on-chip digital drivers 125799
GaAs QD, RF sputtering, photoluminesc. 90243
GaAs QW, DC biased, enhanced opt./THz freq. mixing 128498
GaAs, QW GRINSCH lasers, regrowth, annealing 101292
GaAs QW IR imaging photodetectors wafers, MBE-grown, commercial prod. 86662
GaAs, QW VCSEL, TE/TM mode spontaneous emission 117245
GaAs QW, exciton-polariton propag./scatt., spectra 126184
GaAs QW, terahertz spectral emission from hot carriers 125644
GaAs RF high power technols. for wireless infrastructure markets 125709
GaAs RFICs in SOT-23 packages, failure anal. techs. for small plastic packages 125806
GaAs RT scanning Hall probe microscopy, mag. imaging appl. *(English)* 104515
GaAs S-band photogun driven by solid state GaAs pulse laser 110237
GaAs, SI, HPLEC grown, elec. props. compensation *(Chinese)* 80729
GaAs, SI LEC, radiation detectors appl., materials sci. issues 90207
GaAs, SI, effect of Ar^+ implant. on galvanomagnetic props. 80702
GaAs, SI, internal friction, annealing effects 91653
GaAs, SI, traveling high-elec. field domains, current oscills. 80710
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
GaAs SPDT FET switches with capacitor cancelled parasitic inductance 80377
GaAs Schottky gate quantum wire transistors, metal nano-dot single electron memory device 81395
GaAs Schottky-barrier FET, ^{60}Co γ-radiation influence on electro-phys. props. 103921
GaAs TUNNETT diodes as efficient MM-wave sources 80267
GaAs V-Band MMIC SPDT pass. HEMT switch using impedance transform. networks 80378
GaAs VCSELs, use in 3 Gb/s data transm. over PCB integrated polymer waveguides 104724
GaAs VLSI ccts., self-timed techs. for low-power digital arith. 102079
GaAs X-band MMIC power amp., on-chip temp. compensation cct. 91386
GaAs, aged porous, IR opt. props. 69516
GaAs, anisotropic island phase on flat GaP, Stranski-Krastanow corrugated surface 68172
GaAs, anodic oxide films, radioactivation anal. 103394
GaAs anti-dot structs., solid source MBE, area selective epitaxy 114298
GaAs anti-reflecting films design and deposition for opt. fiber commun. appls. 116894
GaAs asymmetrically excited photoconductive switch, fs carrier dyn. 71544
GaAs at. layer doped FET, differential capacitance profile, simple model 92390
GaAs backside via RIE proc., high throughput, DOE 69892
GaAs band edge absorpt. sens. element for fiber-optic temp. sens. *(Chinese)* 109617
GaAs barrier diode, MBE grown, DC/RF characts. 92278
p-GaAs base of HBT, nonthermal electrons, femtosecond energy relax. 81216
GaAs based HBT power amps., ident. of humidity related failure mechanisms 127017
GaAs based LD struct. with InAs QD, electroluminesc. 128323

III-V semiconductors continued
GaAs based nonstoichiometric heterostruct., optoelectronic props. 127549
GaAs based self-organized QDs, carrier-dyn., appl. to LW sources and detectors 91774
GaAs bevelled multilayer struct., doping conc. profile, micro-Raman spectra obs. 80854
GaAs bifurcation optic act. device, extinction ration, half-wave voltage 116704
GaAs bulk SI samples, radiation detector appls., review 132487
GaAs bulk microcavities, instantaneous opt. modulation 72051
GaAs bulk resistors for MMIC appls., highly accelerated stress failures 69266
GaAs buried gate MESFET, opt. FET 103924
GaAs, carrier profiling, scanning spreading resist. microscopy 103002
GaAs chip fab. facility, data-driven yield mgt. syst. 103969
GaAs chip, quantised current driven by SAWs 126043
GaAs clean/NEA surf./superlattice, SPV effect 104898
GaAs cleaved surface, defects, STM photoabsorption spectra 69502
GaAs, cluster tool sputtering metallization procs. 90249
GaAs concentrator solar cells, LPE grown, 1000 suns operation, 26.2 % efficiency 112927
GaAs conformal VPE, reversible transport, selective etching reacts. 79266
GaAs conformal layers grown on Si, self-doping near seed/layer interface 103262
GaAs coplanar transm. line, ps elec. pulse detect., Franz-Keldysh effect 86946
GaAs corros./surface behavior in acidic solns. 69890
GaAs coupled-resonator VCSEL QW DBR laser, mW single-mode power 117187
GaAs cryst. annealing proc. using VB method, disloc. dens. anal. 115486
GaAs, cryst. struct./inhomogeneities, γ-ray irrad,. props. effects, detector appl. 91646
GaAs cryst.-based fiber-optic temp. sens. 86593
GaAs crysts. VGF method growth, deform. twins form. study 114208
GaAs current filament lasers, short pulse energy, perform. & model 117205
GaAs, damage evol., track form., during swift Kr/Xe ion irrad. 115311
GaAs, deep defect centers, pin diode meas. 126031
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025
GaAs depletion-mode MESFET high-speed clock recovery/decision cct. *(Chinese)* 70319
GaAs depletion-mode MOSFET with low temp. selective grown oxide gate 126868
GaAs detectors, charge division/collection, trapping effects, continuity eqns., proc. modelling 97990
GaAs device manufacture, capacity issues in material supply chain 126919
GaAs device mfg., 150 mm wafer line for wireless handheld commun. appls. 74851
GaAs device technology, opt. lithog. appl., phase-shifting of discrete patterns 115736
GaAs device technols. in Japan, current/future appls. 74082
GaAs devices, channel temp., scanning thermal microscopy 126065
GaAs devices, reliab. testing, vol. impacts 113777
GaAs digital circuitry, Schottky Barrier diode and MESFET ICs, appls. *(Italian)* 79647
p-GaAs, dil. 2D hole syst., metallic behavior 126014
GaAs diodes, energetic HI, single-event transient current 103758
GaAs direct digital mm-wave receiver MMICs, six-port 96404
GaAs discrete HBT devices, DC and microwave reliab. eval. 69133
GaAs, doped samples, variable-range hopping, electron correl. effects 115300
GaAs dot-wire coupled structs. grown by selective area MOVPE, single electron devices appl. 101370
GaAs double Schottky barrier particle detector charactn. *(Chinese)* 97937
GaAs dry etching, electrostatic chuck adaptation 69893
GaAs dual gate MESFET DC model for PSPICE *(Chinese)* 81375
GaAs dual-gate MESFET, anal. small-sig. model, three-port S-params. 102608
GaAs electrochem. etching, impact on proc./mask design/device perform. 69889
p-GaAs electrodes, time-resolved photolum., drift-diffusion model 91928
GaAs, electron-plasmon scatt., plasmon freq. Doppler shift 69522
GaAs enhancement HJFET dual-mode power amp. for TDMA/CDMA handsets 114993
GaAs epilayer on Si, $(NH_4)_2S$ treatment, annealing, deep levels reduction 92007
GaAs epilayers, MOCVD on Ge, antiphase boundaries self-annihilation 79274
GaAs epilayers, RTA, defect engng. using SiO_2/Si_3N_4 stacking layers 126024
GaAs epilayers, effect of disloc. form. during growth on struct. & PL 68177
GaAs epilayers, low temp. grown, defect props. 79235
GaAs epilayers on Si, bulk/surface defect passivation, RF PH_3/H_2 plasma exposure 115626
GaAs, epitaxial growth on $SrTiO_3$ substrs. 101304
GaAs epitaxial liftoff proc. for SAW-semicond. coupled device fab. 92708
GaAs external EO measuring syst., high spatial resoln./voltage sensitivity 132120
GaAs, fiber-coupled photorefr. US demodulator 93767
GaAs film, MBE growth, Si(110) substr. tilting angle 101210
GaAs film bonding on piezoelec. substr., epitaxial lift-off 92737
GaAs film on Si substrs., H plasma passiv. 103414
GaAs films, Franz-Keldysh effect, photoreflectance, SPV 80737
GaAs films, LT-MBE grown/As implanted, As precip. Ostwald ripening 126035
GaAs, flat profile DDR, microwave neg./pos. resist., cryst. orient. effects 80275
GaAs frameless membrane monolithic cct. 1.2 THz freq. tripler 102680
GaAs general purpose LNA/PA, RF Micro Devices RF2910, RF2911 114636
GaAs, generation IV image intensifiers, with unfilmed MCP 86634
GaAs grown on Si, passiv. of disloc. by phosphine plasma exposure 69833
GaAs, high-dens. N_2 plasma nitridation, surface layer charactn. 103356
GaAs high-power MMIC chipsets for 18 to 32 GHz freq. band appls. 125760
GaAs high-power ultra-fast photoconductive semicond. switch *(English)* 82358
GaAs high-speed MSM photodetectors with AlAs/GaAs DBR struct., meas. 86517
GaAs, hole-hole scatt. of photoexcited heavy-holes *(Chinese)* 116902
GaAs homojunction far-IR detectors, interfacial work-fn. internal photoemission 80849
GaAs hot electron injection FETs 92414
a-GaAs, implant.-induced struct., EXAFS 80760
GaAs integrated electro-thermal probe 104810
GaAs integrated polariz. converter at 1.3 μm 127783
GaAs internal photoemission reson. cavity enhanced photodetector 97274
GaAs, ion implant., computer simul., visual obs. of implant. profiles 115521
GaAs ion-implanted E/D MESFETs, proc. optim. for RF perform. 125726
GaAs, ion-implanted, for ultrafast saturable absorber appls. 128458
GaAs ion-implanted planar-gate MESFET, single-voltage-supply 102604
GaAs isolation struct., backgate impedance dispersion 103437
GaAs isolation struct., backgate impedance dispersion 103436

III-V semiconductors continued
GaAs large diam. wafers, RTA tech., dopant diffusion/slip form. minimisation 115487
GaAs large-size wafers, 150 mm, mass prod. at Freiberger 126926
GaAs, laser heating, thermal melting threshold, ultrafast XRD 72118
GaAs lift-off technol. for finer resoln./topography 115653
GaAs low-dimens. systs., energy levels, elec./mag. field effects 115391
GaAs low-dimens. systs., shallow-donor transits., mag. field effects 91843
GaAs, low-temp. MBE grown, carrier dyn., terahertz emission spectrosc. 91648
GaAs, low-temp. grown, enhanced intermixing in anion and cation sublattices 126293
GaAs low-temp.-grown MSM switch, ultrafast differential S/H 82441
GaAs low-temp.-grown layer inserted into n-and p-type matrices, majority carrier accumulation 126112
GaAs, melt growth techs., computer simul. 124800
GaAs metamorphic HEMT, K-band subharmonic down-converter 102609
GaAs metamorphic HEMT, strain relax. and disloc. filtering 103895
GaAs metamorphic HEMT-based MMIC amps., high gain/perform. 69243
GaAs mfg., fab design and constr. proc. 70243
GaAs mfg. technol., conf., Washington, DC, USA (May 2000) 78444
GaAs micro-CPS-lines gap, ultrafast photoconductive charact. *(Chinese)* 93365
GaAs microcavity, reson. excited polaritons, energy relax. 80825
GaAs micromachined power sens. with integrated receiving antenna, 60 GHz 109820
GaAs microresonators, cavity solitons study 127812
GaAs microwave FET LNAs, portable radio commun. equipt., dyn. range estim. 102699
GaAs microwave FET parasitic inductances and drain resist. under act. bias conditions 91233
GaAs mm- wave IMPATT diode ccts., series connection, push-pull oscillators 125734
GaAs, monocrystalline films, MBE on AlN thick film 90287
GaAs monolithic integrated LD driver, on-wafer testing *(Chinese)* 93578
GaAs monolithic/hybrid integrated photoreceivers, 40 Gbit/s commun. 96708
GaAs multimode interf. opt. power splitter *(Chinese)* 104690
GaAs multiple ion-implanted FETs, nonlin. Volterra-series anal. of IMD characts. 114973
GaAs nanocryst. form. by pulsed laser ablation, photolum. charactn. 81154
GaAs nanocrystalline thin film, vac. evap. 79248
GaAs nanopillars fab., colloidal gold natural lithog. 126601
GaAs nanowires, oxide-assisted growth, opt. characts. 69662
n-GaAs nm-sized Schottky contacts, current transport and C-V characts. 91860
GaAs, nonradiative recomb., EL2 defect, elec. studies 80689
GaAs on Si(100), OMVPE init. nanoheteroepitaxial growth 101372
GaAs one-finger power HBT, 2D hydrodynamic simul. 70050
GaAs opt. biased MESFET, anal. model, unilateral power gain 115963
GaAs, opt. consts., dielec. film thickness metrology for comp. semicond. mfg. 126064
GaAs opt. probe, coupled microstrip lines, pulse coupling meas. 125655
GaAs orient. patterned film NLO freq. conversion 105500
p-GaAs oxide, aspect ratio improvement, AFM-based nanolithography 92216
n-GaAs, oxide growth/stabil., coupled transient photocurrent/surface anal. 103359
GaAs p/n structs., etching, galvanic effects anal. 92064
GaAs p-i-n photodetectors, bandwidth-efficiency product, design criteria 71557
GaAs p-n jn. solar cell, gamma irrad., elec. characts. 134409
GaAs p-type IMPATT diode, large-sig. anal. 69147
GaAs, p-type metal contact etching 126393
GaAs packaged Gunn oscillator, global simul. 125722
GaAs, pass. Q switching of Nd:YVO_4 laser 117360
GaAs photocathode, at. H cleaning, JLC appl. 110240
GaAs photocathodes, charge limit phenom. 110235
GaAs photocathodes, objs. reflective radiation, spectral matching factors 75612
GaAs photocond. antenna, ultrabroadband THz radiation detect., fs laser pulses 97797
GaAs photoconductive switch, elec. pulse generation 104951
GaAs photomixer, terahertz radiation generation 104952
GaAs phys. FET model for power amp. IMD simul. 91252
GaAs pixel detectors, bump bonding interconnect technol. 132303
GaAs plate, complex permitt., MM-wave meas., circ. waveguide 109934
GaAs polycryst. layer growth for large area imaging detectors 90385
GaAs, polyenergetic ion implant., device isolation 115560
GaAs, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
GaAs, porous, luminesc. spark processed, Raman spectra 69532
GaAs power FET, ultrabroadband, W-CDMA base station appl. 91244
GaAs power HFET, high efficiency, W-CDMA base station appl. 91243
GaAs power MESFET, optimized electrothermal design, nonlin. 3D heat flow eqn. soln. 115969
GaAs power MESFET, small-sig. equiv. cct., param. extraction, microwave CAD tools *(Chinese)* 125714
GaAs power amp., WLAN appl. 68597
GaAs power metamorphic HEMT MMIC technol., very high efficiency/low cost 69232
GaAs power microwave transistors, MOCVD δ-doped struct. 91286
GaAs power switches, ultrahigh freq. DC-to-DC converters 123594
GaAs proc., reversible and permanent wafer bonding 126262
GaAs processed and scrapped wafers, recycling for prod. runs 126392
n-GaAs, proton irrad. defects, fast relax. 103037
GaAs pure high-resist. wafers, microwave photocond. diagnostics 82313
GaAs push-pull FET, W-CDMA base station 126895
GaAs push-pull power FET optimized for 12 V class A-B operation, 6 GHz, 50 W, low distortion 91295
GaAs pyramid microstruct. form. by MBE regrowth, opt. charact. 82199
GaAs pyramidal microstruct. on pre-patterned GaAs(001), growth optimisation 90277
GaAs quantum wire superlattice, δ-doped, QHE, SdH oscills. 91772
n-GaAs quantum wires, Fermi-edge sing., PL obs. 80860
GaAs reson. tunnelling struct., monolithic electroacoustic device 81753
GaAs semicond. residual stress, lifetime prediction model 125154
GaAs, shallow donor states, central-cell corrections, strong mag. fields effects 80680
GaAs single QW, opt. pumped NMR as local spin probe 91829
GaAs single cryst., vapour press. controlled CZ growth 90230
GaAs single crysts., Cz growth, layered homog., low freq. vibs. effects 90200
GaAs solar cells, MOCVD grown on Si substr. 112946
GaAs solar cells, proton irrad. and thermal annealing *(English)* 112876
GaAs solid/gas-source MBE, optimized growth conditions 90285
GaAs space solar cells grown on Si substrs. 88067
GaAs, spatially resolved spin-injection probab. 80690

III-V semiconductors continued
n-GaAs spin-valve transistor with, Fe/Au/Fe(001) base 104543
GaAs substr., DOEs transfer, direct-write electron-beam lithog., VCSEL integra 105400
GaAs substr. QC, ion implant. test, TCAD simul. 69998
GaAs substr. based six-finger Lange coupler, design and testing 125681
GaAs substr., multilayer inductor, RF/microwave ccts. 69288
GaAs substr. removed waveguides for tunable filters 116663
GaAs substrs., MBE of quantum wires and QD 90271
GaAs substrs., homoepitaxial overgrowth, diffusion, shape evol. 90276
GaAs super self-aligned RF switch IC for mobile comms. appl. 102657
GaAs surface, SR treated, photoreflectance obs. *(Korean)* 69515
GaAs, surface passiv., ion bombard. 115635
GaAs surface, pure water treatment and charactn., water droplet contact ang meas. 103444
GaAs surface reconstructions, influence of growth rate on MBE surface phas diags. 124837
GaAs surface, sputter-etching, surface flattening 69905
GaAs surface, sulfur passiv., Franz-Keldysh effect *(Chinese)* 81088
GaAs, surface-wave plasma source, O-plasma damage, ashing proc. 115642
GaAs surfaces, (100), morph./microrelief 81069
GaAs thick SI wafers, SPV spectrosc. 116906
GaAs thin films, 1/f noise anal. 80703
p-GaAs thin layers, photoemission, photovoltage effects 71513
GaAs thin-film epitaxial p-n jn. solar cell charactn. 112952
GaAs through-substr. via hole proc., 1000 wafers/week throughput barrier 6994
GaAs, vapour-press.-controlled Cz growth, melt temp./ flow field, simul. 11422
GaAs, vis. phase-locked lin. chirped pulses, coherent broadband pulse shapin 72035
GaAs vol. prod., systematics and key perform. indicators 126928
GaAs wafer fab, operation of dual use foundry for mil./commercial users 12691
GaAs wafer mfg., dicing improvements for yield enhance. and throughpu increase 126925
GaAs wafer mfg., scaling up back-side proc. 126424
GaAs:^{73}As, implant., diffusion study 126278
GaAs:As, ion-implanted, opt. transm. spectra 80687
GaAs:As$^+$ arsenic-ion-implanted photoconductors, ultrafast switching/THz gene ation 91401
GaAs:B MESFET back-gating effect on undoped SI-GaAs *(Chinese)* 81377
GaAs:Be, doping, ultrafast optoelectronic device appl. 126312
GaAs:Be, electron-hole recomb., two-color pump-probe obs. 126036
GaAs:Be films, MBE, defect engng., elec. props. 126032
GaAs:Be films, MBE, structural props. 126034
p-GaAs:Be/AlGaAs QW multilayered structs., low-temp. hopping cond. ove upper Hubbard band 126133
GaAs:Be/$In_{0.49}Ga_{0.51}P$ HBT, growth, GSMBE 103774
GaAs:Br, ion-implanted, damage prod., ion energy depend. 81038
GaAs:C_{60}, MBE growth, migration enhanced epitaxy 90283
p-GaAs:C,Mg wafer, elec. isolation, proton ion bombard./annealing 126038
GaAs:Cr epilayer structs. for X-ray imaging detectors 91645
GaAs:Cr, epitaxial detector p-i-n-struct., γ-ray/ξ-ray detector appl. 90489
GaAs:Cr(Fe)(Co) film, electronic & mag. props., MBE growth 79243
GaAs:Dy, OMVPE growth and props. 79287
GaAs:Er, electron emission channeling 126279
GaAs:Fe, ps photoresponsivity, Fe hole capturing states effects 71508
GaAs:H, H-ion implant., depth distrib., damage profiles 115561
GaAs:Mg MBE layer, opt./elec. props. 80738
GaAs:Mn, with nanoscale mag. clusters, photo-enhanced magnetoresist. effe 80696
GaAs:MnAs nanocluster/GaAs/AlAs DBRs multilayers, magneto-opt. effect *(Japanese)* 93259
GaAs:N CBE incorporation using 1,1-dimethylhydrazine 101295
GaAs:N, N-related complexes, first-principles pseudopotential method 91623
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dis persion 69543
GaAs:O MESFET, surface O implant., DC/RF perform. 126891
GaAs:Sb films, low temp. grown, struct. transforms. 68190
GaAs:Se, ion implant., strain profile, Bragg-case sect. topography 69820
GaAs:Se(Te) MLE, doping characts., impurity precursor adsorpt. control 10328
n-GaAs:Si, α-particle irrad., annealing, electronic/struct. props. 126008
GaAs:Si cryst. nanorods, MBE growth, SEM/TEM/EDX charactn. 68162
GaAs:Si, delta-doped MBE layers, elec./opt. props. 69511
GaAs:Si, δ-doped, electronic struct., applied elec. field effects 80997
GaAs:Si epitaxial layers, combined FIB/MBE synthesis, carrier activation 9166
GaAs:Si, ion-implanted, damage profile meas. using an opt. method 126294
GaAs:Si planar p-n jns., MBE, elec./opt. props. 69633
GaAs:Si substr., epitaxial growth and amphoteric doping 114271
GaAs:Si/InGaAs/AlGaAs forward-biased Schottky diode, EL obs. 128001
GaAs:Si(Be)(C), doping during MBE, single-port compact dopant source 103252
GaAs:Si,Be MBE growth, compensation 68196
GaAs:Si,Be δ-codoped material characts., MBE 90282
GaAs:Si,He layers, ion-beam-induced isolation 126310
GaAs:Si,Mg, buried p-layer in GaAs MESFET channel, RTA, activation anal 80707
GaAs:Xe, isolated amorph. zones, implant. induced, electron-induced regrowt 81166
GaAs:Zn, OMVPE growth, surfactant effects on doping 69786
n-GaAs/Al jns., Schottky barrier, tunneling spectrosc. 103171
GaAs/$Al_{0.33}Ga_{0.67}As$ 2DEG, spin-depend. transport 103107
GaAs/$Al_{0.33}Ga_{0.67}As$ QD device, Coulomb charging 126182
GaAs/$Al_{0.35}Ga_{0.65}As$ MQW, alpha particle irrad., annealing, PL obs. 80816
GaAs/$Al_{0.35}Ga_{0.65}As$ MQW, dry etch damage minimisation 126341
GaAs/$Al_{0.3}Ga_{0.7}As$ 2D struct., hot-hole lateral transport 69636
GaAs/$Al_{0.3}Ga_{0.7}As$, 2DEG, acoustic phonon absorpt./emission 92405
GaAs/$Al_{0.3}Ga_{0.7}As$ QW microcavity, exciton-photon coupling 93681
GaAs/$Al_{0.3}Ga_{0.7}As$ reson. double-barrier struct., reson./discrete energies 69679
GaAs/$Al_{0.45}Ga_{0.55}As$ quantum cascade laser, 300 K operation at 9 μm 71762
GaAs/$Al_xGa_{1-x}As$ 1D channel, AFM fab., ballistic transport 69665
GaAs/$Al_xGa_{1-x}As$ asymmetric one-/two-sided QW, electron mobility 69702
GaAs/$Al_xGa_{1-x}As$, dil. 2D hole syst., in-plane magnetoresist. 115370
GaAs/$Al_xGa_{1-x}As$ double QD, SET, high sensitive submillimeter-wave detecto 109943
GaAs/$Al_xGa_{1-x}As$ double quantum wires in mag. fields, THG 82854
GaAs/$Al_xGa_{1-x}As$ superlattices, mag.-field-induced miniband transits. 69669
GaAs/$Al_xGa_{k-1}As$ MQW, excitonic transits., opt. selection rules 91795
GaAs/AlAs Landau-quantized superlattices, Monte Carlo simul. of miniban cond. 80842
GaAs/AlAs QW, electron mobility anisotropy, electron gas 126169

V semiconductors continued
GaAs/AlAs double barrier RTDs, SHF injection locking and power combining 125702
GaAs/AlAs, multilayers, cavity-enhanced/quasiphase-matched multi-order refl.-SHG 91626
GaAs/AlAs piezoelec. (111) superlattice, acoustic phonons, dispersion, transm. and refl. 91837
GaAs/AlAs power MESFET, wet selective etch procs. 92067
GaAs/AlAs shell QD, phonon modes 80820
GaAs/AlAs single mode quantum cascade lasers, CW operation *(German)* 128322
GaAs/AlAs superlattice QW, photoexcited carriers, perp. transport 126166
GaAs/AlAs superlattice, seq.-tunnelling, current self-oscills. 126154
GaAs/AlAs superlattice, ultrashort-period nonsymmetric, stimulated emission 80830
GaAs/AlAs superlattice waveguide, QPM grating, QW intermixing 104727
GaAs/AlAs superlattices, segreg., Raman study 124858
GaAs/AlAs type-II superlattice, excitons-biexcitons, quantum stats. 69670
GaAs/AlAs vert. reson. tunneling transistor for appl. in digital logic ccts. 68762
GaAs/AlAs, weakly coupled superlattices, current self-oscill. freqs. 126181
GaAs/AlAs:Be MQW, opt. nonlin., fs response time 93779
n-GaAs/AlAs:Si MQW, hot electrons inelastic scatt. 80814
GaAs/AlGaAs, 2D variable-range hopping cond., electron-electron interact. influence 115360
GaAs/AlGaAs 2DEG, quantum Hall regime, inter-edge-state scatt. centers 91756
GaAs/AlGaAs GRIN-SCH-SQW LD structs., deep levels 128300
GaAs/AlGaAs HBT 5.8 GHz OFDM transmitter MMIC chip set, design/perform. 91312
GaAs/AlGaAs HBT MMIC chip set, OFDM transmitter 91353
GaAs/AlGaAs, ICP etching, etch mechanism/etch depth distrib. 126350
GaAs/AlGaAs MQW, 2D electrons spin polariz., ^{69,71}Ga NMR meas. 115419
GaAs/AlGaAs MQW APD, param. optim., GA 93371
GaAs/AlGaAs MQW IR photodetectors with 2D random-grating opt. couplers 86547
GaAs/AlGaAs MQW SEED array, flip-chip bonding OE smart pixels *(English)* 93224
GaAs/AlGaAs, MQW, coherent all-opt. nonlin. polariz. switch 93843
GaAs/AlGaAs MQW detectors and modulators, optoelectronic smart pixels *(English)* 82448
GaAs/AlGaAs MQW solar cells under one sun and conc. sunlight 112930
GaAs/AlGaAs MQW struct., electron interf., non-localized states *(Chinese)* 91809
GaAs/AlGaAs QD array, wet chem. etching *(English)* 80878
GaAs/AlGaAs QD, droplet epitaxy, photolum. study 114297
GaAs/AlGaAs QD, modified droplet epitaxy, PL obs. 68347
GaAs/AlGaAs QW, D-cond. band, transport/opt. props. 103144
GaAs/AlGaAs QW IR photodetector *(English)* 97227
GaAs/AlGaAs QW IR photodetector, responsivity, I-V charact. 75524
GaAs/AlGaAs QW IR photodetectors *(English)* 109575
GaAs/AlGaAs QW IR photodetectors, MOCVD, MBE, perform. comparisons *(Chinese)* 97226
GaAs/AlGaAs QW IR photodetectors, PL charactn. *(Chinese)* 75527
GaAs/AlGaAs QW IR photodetectors, microstrip antenna coupling 86546
GaAs/AlGaAs QW IR photodetectors, response wavelength modif. by RTA *(Chinese)* 97225
GaAs/AlGaAs QW, SiO_x capping layers, impurity-free interdiffusion 91838
GaAs/AlGaAs QW dual-band photodetectors, interband/intersubband transits. 86542
GaAs/AlGaAs QW, energy levels, QWIP appl. *(Chinese)* 115376
GaAs/AlGaAs QW, exciton localization dyn., PL obs. 126165
GaAs/AlGaAs QW, intersubband transit., ultrafast all opt. modulation 116699
GaAs/AlGaAs QW, proton implant. 93590
GaAs/AlGaAs QW, quantum Hall regime photolum., finite current effect anal. 80844
GaAs/AlGaAs QWIP, IR radiation transm. 131919
GaAs/AlGaAs TW opt. modulator, progress/future prospects 117383
GaAs/AlGaAs V-groove quantum wire LED, narrow linewidth excitonic emission 93394
GaAs/AlGaAs VCSEL, laser pattern & carrier distrib., microprobe EL 71841
GaAs/AlGaAs antidots, sq. lattice, geom. reson. shift in mag. field 80836
GaAs/AlGaAs asymm. coupled QWs, carrier transfer by interband photoexcitation 80829
GaAs/AlGaAs asymmetrical coupling double QW intermixing, combinat. proton implant. *(Chinese)* 126140
GaAs/AlGaAs asymmetrical coupling double QW, intermixing via combinat. ion implant. *(Chinese)* 103143
GaAs/AlGaAs ballistic quantum wire, four-terminal resist. 80824
GaAs/AlGaAs charge-imaging FET, charge noise 103763
GaAs/AlGaAs, disordered superlattices, tunnelling in elec. field 69675
GaAs/AlGaAs double-QW superlattice, pop. props./carrier dyn. 91784
GaAs/AlGaAs electron Y-branch switch, switching effects between drains 70214
GaAs/AlGaAs epilayers for integrated optoelectronics, MBE, GaAs-Si wafer bonding 90289
GaAs/AlGaAs, fiber asymmetric waveguide coupler, narrow-band light emission 127719
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LD 71847
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LDs, THz repetition rates 82693
GaAs/AlGaAs heterojunction, terahertz spectral emission from hot carriers 125644
GaAs/AlGaAs heterostruct., Fermi-liq. behavior of low-dens. 2D hole gas 69656
GaAs/AlGaAs heterostruct. QD, 2DEG, single electron transport 80812
GaAs/AlGaAs heterostruct., back-gated undoped, electron transport charact. 91736
GaAs/AlGaAs heterostruct., capacitance theory 115364
GaAs/AlGaAs heterostruct., electron quantum wire fab. by trench etching 70220
GaAs/AlGaAs heterostruct. nanoelectronic Y-branch, microwave props. 115359
GaAs/AlGaAs high power semicond. laser stack arrays, output charact. *(Chinese)* 105323
GaAs/AlGaAs, high-mobility 2D heterostruct., anisotropic disorder, DC transport 126108
GaAs/AlGaAs laser mesas, HVPE, SI GaInP:Fe and GaAs:Fe 117198
GaAs/AlGaAs low shot noise heterojunction phototransistors 93361
GaAs/AlGaAs, mol. controlled semicond. resistor, exciton photoluminesc., microwave modulation 102758
GaAs/AlGaAs, multilayers, cavity-enhanced/quasiphase-matched multi-order refl.-SHG 91626
GaAs/AlGaAs, narrow quantum Hall bars, absence of activation-type cond. 91758
GaAs/AlGaAs, open QD arrays, electron-electron interacts. 91814

III-V semiconductors continued
GaAs/AlGaAs, open QD arrays, multiple-single dot interf. transit. 115418
GaAs/AlGaAs opt. modulators on p-i-n rib waveguide, switching voltage reduction 127838
GaAs/AlGaAs periodic superlattice struct., quantum cascade devices, hot electron distrib. 93637
GaAs/AlGaAs photonic bandgap microcavity SEL, operation, PL 105279
GaAs/AlGaAs photonic quantum ring laser, CAIBE fab. 105267
GaAs/AlGaAs photonics IC for opt. beamforming in phased array antennas 82439
GaAs/AlGaAs quantum cascade laser spectrosc. by tunnelling magnetotransport 80843
GaAs/AlGaAs, quantum cascade lasers, MBE growth, strain effects 93591
GaAs/AlGaAs quantum cascade lasers, facet temp. mapping, PL microprobe 93636
GaAs/AlGaAs shallow 2DEG, conducting tip AFM lithog. 126121
GaAs/AlGaAs single V-groove quantum wire, micro-photoluminesc. *(Chinese)* 115420
GaAs/AlGaAs single heterostruct., FQHE, long. resist. anom. around 2/3 filling factor 80798
GaAs/AlGaAs single-mode VCSEL growth, real-time opt. control 71840
GaAs/AlGaAs superlattices, miniband transport, ARC 103141
n-GaAs/AlGaAs superlattices, phonon-pumped terahertz gain 71763
GaAs/AlGaAs superlattices, wide QWs, transverse-transport current self-sustained oscills. 115393
GaAs/AlGaAs surface textured LED, texture-enhanced transm. 127968
GaAs/AlGaAs syst., wafer fusion, LD fab. 103226
GaAs/AlGaAs three-level QW struct. intersubband Raman laser 71849
GaAs/AlGaAs triple barrier RTD, energy filter for ballistic electron spectrosc. 75854
GaAs/AlGaAs undoped asymmetric double QW, intersubband absorpt. dyn. 126052
GaAs/AlGaAs vert. cavity MQW modulators/photodetectors for opt. interconnects 116803
GaAs/AlGaAs vert. superlattice FET, miniband transport 103913
GaAs/AlGaAs:C epilayers, MOCVD, elec., opt. props., QW laser appls. *(Chinese)* 79311
GaAs/AlGaAs/GaAs quantum barrier varactor, CPW freq. tripler 114944
GaAs/AlGaAs-based LED, dil. mag. semiconds. for spin-polarized current injection 80684
n-GaAs/Au Schottky diode, I-V charact., swift HI irrad. 126637
n-GaAs/Au jns., Schottky barrier, tunneling spectrosc. 103171
GaAs/Fe granular structs., photoinduced magnetism 91765
GaAs/Fe($Ni_{80}Fe_{20}$) structs., spin-polarized electron transport 80894
GaAs/$Ga_{1-x}Al_xAs$ QW, exciton bound ionized donor impurity 115415
GaAs/$Ga_{1-x}Al_xAs$ parab. superlattices, opt. transits. 103025
GaAs/$Ga_xAl_{1-x}As$ high-mobility heterostruct., Aharonov-Bohm oscills. 91755
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
p-GaAs/Ga(As,N)/GaAs heterostructs., deep-level defects, orig./annealing 80688
GaAs/GaAlAs MMI opt. power splitter, opt. commun. *(English)* 93104
GaAs/GaAlAs hot electron light emitting device at low and high elec. and mag. fields, anal. 117269
GaAs/GaAlAs opt. switch, design & fab., discrete spectral index method 117503
GaAs/GaAlAs single quantum wire, Auger mechanism carrier scatt., time-resolved microphotolum. 103004
GaAs/GaAsP superlattice photocathode, MOCVD growth 101361
GaAs/GaInP, etching in Cl_2/Ar ECR plasma 115634
GaAs/GaMnAs(InMnAs) ferromag./nonmagnetic heterostruct., spin-depend. phenom. 91766
GaAs/GaSb tandem stack concentrator solar cell 112933
GaAs/Ge interfaces, device-quality III-V epitaxy 89293
GaAs/Ge solar cell, AC params. meas. by impedance spectrosc. 113016
GaAs/Ge/GaAs, sublattice reversal epitaxy, nonlin. opt. devices appls. 90288
GaAs/InAs, QD self form. in short-period superlattices on InP 90318
GaAs/InAs superlattices, 1.3-1.5 μm wavelength QD self-form. on InP (411) 115404
GaAs/InAs/AlAs quantum cascade lasers, pulsed mode operation 128318
GaAs/InGaAs MQW struct., spontaneous oscills. and triggered pulsing 115383
GaAs/InGaAs far-IR QW photodetectors, cutoff wavelength 86541
GaAs/InGaAs high power laser struct., LP-MOCVD growth and charactn. *(Chinese)* 128263
GaAs/InGaAs multi-QW solar cells, dark currents characts. improvement 112951
GaAs/InGaAs, strained/strain-bal. QW, tandem solar cells 89301
GaAs/InGaAs/AlGaAs MODFETs, thin buffer layer, high transconductance 92387
GaAs/InGaAs/AlGaAs δ-doped heterostruct., EL from forward-biased Schottky diode 82316
GaAs/InGaAs/AlGaAs heterostruct., electron quantum wire fab. by trench etching 70220
GaAs/InGaAsN/GaAs QWs, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 115316
GaAs/InGaP heterostruct. bipolar transistor, Raman charactn. 126685
GaAs/InP, heterostruct., coherent/incoherent relax., HREM 126111
GaAs/MnSb MBE granular thin film structs., MR switch effect *(Japanese)* 91748
GaAs/P radiation detector, perform., role of geom./electrode technol. 132308
GaAs/Si solar cell, phosphine-added hydrogen plasma passiv. 112958
GaAs/Si space power solar cells, flight degrad. data 111343
GaAs/TaN/Cu MESFETs, backside metallization using TaN as diffusion barrier 70194
GaAs/XP (X=Ga,In), wafer bonding, at. H surface cleaning 126389
GaAs/ZnSe jn., spin-coherent transport 103112
GaAs-(Cs,O) vac. interf., electron emiss., longit./transv. energy distrib. 110233
p-GaAs-(Cs,O)-vac. interface, laser-driven electron sources 110231
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approach 91794
GaAs-$Al_{0.46}Ga_{0.54}As$ superlattice struct. carrier dyn., time-integrated/time-resolved PL 91827
n-GaAs-AlAs DBR laser mirrors, elec. noise characterisation 71799
GaAs-AlAs LW VCSELs 117296
GaAs-AlAs QD and quantum wire structs. on corrugated surfaces, interface struct., growth 68206
GaAs-AlGaAs DEHBT, optoelectronic switch 116941
GaAs-AlGaAs HBT prod. proc. technol., perform./reliab. 70043
GaAs-AlGaAs MBE, As-free high-temp. surface cleaning, two-step-heating seq. 92003
GaAs-AlGaAs MQW electro-absorpt. modulator devices, parallel opt. interconnects 117038

III-V semiconductors continued
GaAs-AlGaAs MQW low background IR detectors 86551
GaAs-AlGaAs PHEMTs, contactless RT charactn. by SPV spectrosc. 70205
GaAs-AlGaAs QHE, edge states electron-hole-pair recomb. suppression, time-resolved FIR photocond. 80793
GaAs-AlGaAs QW IR photodetectors, skimmed archit., FPA appls. 86556
GaAs-AlGaAs QW IR photodetectors, transient photocurrent overshoot 86552
GaAs-AlGaAs QW VCSEL, shallow implant-apertured, high-speed modulation 105449
GaAs-AlGaAs QW all-SOA NLO loop device self-switching 105555
GaAs-AlGaAs QW laser struct., atom migration, SIMS study 93609
GaAs-AlGaAs cond.-band QW struct., intersubband transits. 69693
GaAs-AlGaAs double QW ridge-waveguide LD, near-THz pass. harmonic modelocking 105428
GaAs-AlGaAs epitaxial heterostruct. photonic cryst. waveguides 82164
GaAs-AlGaAs heterojunction punch-through phototransistor noise charact. 82355
GaAs-AlGaAs heterojunctions, 2D hot-electron transport 91739
GaAs-AlGaAs heterostruct. wide bandwidth MM wave mixer, diffusion cooled 2DEG 80270
GaAs-AlGaAs high-perform. VCSEL systs., opt. data links 82663
GaAs-AlGaAs n-N heterojunctions, band-gap offset estim. using J-V-T charact. 69647
GaAs-AlGaAs n-i-p-i layer tunable photonic band gap switches 117499
GaAs-AlGaAs p-i-n diode photonic IC inverting gates 71448
GaAs-AlGaAs ridge waveguide quantum cascade lasers, monolithic photonic bandgap mirrors 71800
GaAs-AlGaAs superlattice, spin polarized electron photocathodes 110241
GaAs-AlGaAs superlattice waveguide charactn. by three-wave mixing 93763
GaAs-AlGaAs superlattices, suppression of electron injection in applied mag. field 69671
GaAs-AlGaAs transversely pumped nonlin. conversion struct. 82855
GaAs-AlGaAs/Si(100) lasers, ELO MOCVD and charactn. 114315
GaAs-AlGaAs-GaAs quantum barrier varactor integrated with CPW, design 69122
GaAs-GaAlAs 1D photonic band-gap struct., pulsed opt. logic gate simul. 82253
GaAs-GaAlAs microaperture SEL, near-field opt. data storage appl. 128245
GaAs-GaAlAs photonic band gap struct., opt. switching 127833
GaAs-GaAlAs-GaAs quasiball. single-barrier heterostruct., N-type neg. diff. cond. 126117
GaAs-GaAs solar cells for NASA RAINBOW concentrator 112929
GaAs-GaAsP superlattice, spin polarized electron photocathodes 110241
GaAs-Ge Terra spacecraft flexible blanket solar array 112872
GaAs-Ge three-terminal tandem solar cells, charact. calcs. 112941
GaAs-InGaP HBTs, reliab. studies 70048
GaAs-Si heterog. wafer direct surface activated bonding, RT method 69777
GaAs-TiAl(TiPtAu) microwave power MESFETs, gate current dens. and temp. stress effects 69169
GaAs-based HBTs, thermal mgt. and modeling 126667
GaAs-based HBTs, turn-on voltage reduction 125724
GaAs-based HIGFETs on LT-GaAs buffer, optim. 70165
GaAs-based QD laser progress 117290
GaAs-based QW and QD lasers, 1.3 μm, comparative anal. 71857
GaAs-based doped superlattice laser wavelength tuning 82769
GaAs-based metamorphic technol., appl. to device struct. 126263
GaAs-based microcavity LED with InAs/GaInAs QD 117011
GaAs-based quantum cascade laser with Peltier cooled element, output charact. 71815
GaAs-based superlattices, magneto-miniband transport, intense THz irrad. effects 103139
GaAs-based waveguiding heterostruct. with InAs QD, miniband transm. 93137
GaAs-on-Si space solar cells, testing 112919
n-GaAs-p-$(Ge_2)_{0.02}(ZnSe)_{0.03}(GaAs)_{0.95}$ struct., photosensitivity 104897
GaAs(001) barriers for mag. tunnel jns., fab. 79232
GaAs(001) homoepitaxy at low substr. temps., mound form. 124836
GaAs(001) layers, low-temp. MBE, excess As incorp. model 79230
GaAs(001) surface, Be and Se ion implant. at grazing ion-surface interacts., computer simul. 115522
GaAs(001), thin film growth/surface treatment, glancing-angle ions 68151
GaAs(001)/(110)/(111), SAW ang. dispersion/propag. 69540
GaAs(100), fs UV laser treatment, surface modifs., surface states 69865
GaAs(100) orient. sheets, elemental topol. arrangement, device appl. 126026
GaAs(100) surface, β-GaS passiv., surface band bending, PES obs. *(Chinese)* 81067
GaAs(100) surface, ion-induced nitridation 69915
GaAs(100), thioacetamide passiv., struct., thermal stabil. 69836
GaAs(110), homoepitaxy, kinetic surface structuring, model study 90236
GaAs(Cs,O) photocathode, transm. mode stabil. *(Chinese)* 69389
$GaAs_{0.983}N_{0.017}$, dil. syst. N distrib., STM obs. 103000
$GaAs_{1-x}N_x$ semicond. high-efficiency solar cells 112940
GaAsN/GaAs QW, effective mass and carrier recomb., opt. detect. of cyclotron reson. 69688
GaAsN/GaN QWs, envelope fn. calcs., excitons 91806
GaAsN/InAs/GaAs superlattices, opt. consts., crit. points, free carrier effects, phonon modes 126063
$GaAs_{1-x}N_x$/GaAs MQW, opt. transits., band anticrossing 115417
$GaAs_{1-x}N_x$/GaAs epilayers, MOVPE, N incorporation mechanisms 90362
GaAsP, MBE growth, As atoms, surf. migration, substr. temp. depend. 90294
GaAsP:Zn(Sn) MOMBE growth, impurity doping and elec. props. charactn. 69789
GaAsP/AlGaAs LD bars, polaris.-resolved EL, mounting stress 71846
GaAsP/GaAs material, buried-channel opt. waveguide fab. by CBE 93124
GaAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
GaAsP/InGaAsN SLS for solar cells, lattice matching 112949
GaAsP-AlGaAs 810-nm large opt. cavity diode lasers, narrow beam divergence 128242
$GaAs_yP_{1-x-y}N_x/GaP_{0.98}N_{0.02}$, disloc.-free QW lattice matched to Si 103130
p-GaAsSb, OMVPE, anisotropic resist., TEM obs. 126021
GaAsSb QW LW lasers, MOVPE/MBE growth 117203
GaAsSb QW VCSEL, growth and opt. props. 128264
GaAsSb superlattice layers, MOCVD on InP 79319
GaAsSb type-II QW laser gain, charge-separation effects 82623
$GaAs_{0.5}Sb_{0.5}$ layers, MBE growth on (111)B InP, elec./opt. charactn. 114273
GaAsSb/GaAs QW VCSELs, CW operation 71766
GaAsSb/InGaAs heterostruct. on GaAs, type-II band alignments 101215
GaAsSb-GaAs 1.3-μm QW VCSELs, Ethernet appls. 119762
GaAsSb-GaAs QW VCSEL, CW room temp. operation at 1.3 μm 105339
GaAsSb-based type-II QW laser, blue emission shift 105334
GaAsSbN/GaAs QWs, MBE growth, 1.3-1.55 μm emission appl. 101259
GaFeAs, highly-resistive epilayers, MBE growth, magneto-opt. effects 79227

III-V semiconductors continued
GaInAs quantum wire, self-assembly, SILO proc. 115396
GaInAs single QD edge-emitting microlasers 128239
GaInAs strained QW 2 μm laser, improved perform. by increased carrier con 71780
GaInAs/(Al)GaAs low threshold high efficiency MBE grown QD lasers 117
GaInAs/AlGaAs QD edge-emitting laser, highly reflecting Bragg mirrors, ou charact. 71806
GaInAs/AlGaAs ultrashort QD microlasers, fab., CW operation 105281
GaInAs/AlInAs mid-IR quantum cascade lasers, high-speed digital data tra 128317
GaInAs/GaAs QW, multi-wavelength vert. cavities MOCVD, laser char 93584
GaInAs/GaAs VCSEL array, single-mode and stable-polariz. operation 105
GaInAs/GaAs VCSEL, polariz. controlled highly strained, MOCVD 71851
GaInAs/GaAs single mode VCSEL array, GaAs(311)B substr. 71794
GaInAs/GaAsP VCSEL, photorefl. line shape symm., QW ground-state exc energy 71760
GaInAs/GaInAsP laser struct., pulsed-laser-induced QW intermixing 71843
GaInAs/GaInAsP(InP) heterostruct./MQW, MOVPE, struct. quality 90365
GaInAs/GaNAs short-period superlattices gas-source MBE growth and chara 101256
GaInAs/InAlAs RTD, nonlin. THz gain, multiple photon-assisted tunne 115835
GaInAs/InP composite channel struct. HEMT, 60 GHz power perform. 114
GaInAs/InP high-power composite channel HEMT, low gate current, dc/rf form. 70195
GaInAs/InP-based three-terminal ballistic jns., nonlin. operation 103100
$Ga_{0.47}In_{0.53}As$/Ti(Pt) Schottky barrier heights, Franz Keldysh oscills./di characts. 69715
GaInAs-AlGaInAs-AlInAs step QW high-speed Stark shift mid-IR modul 116815
GaInAs-GaAs highly strained QW VCSEL laser, stable polariz. operat 128233
GaInAs-InAlAs QW triple-barrier RTD, nonlin. THz gain from multiphot assisted tunneling 115838
GaInAsN films, MBE growth, thermodyn. anal. 124847
GaInAsN solar cells, electron diffusion length modelling 112945
GaInAsN/GaAs QW lasers for 1.3 and 1.5 μm wavelength range 117218
GaInAsN-GaAs double QW lasers, 1.5-μm range, room-temp. operation 128
GaInAsP CW lasing microdisk injection lasers, large spontaneous emission fac 105280
GaInAsP VCSEL, design and fab. 117279
GaInAsP distrib.-reflector lasers with vert. aligned grating, RIE 117214
GaInAsP materials for LW optoelectronics, MOCVD growth 114342
GaInAsP microdisk injection laser, large spontaneous emission factor 71777
GaInAsP photonic crysts., CH_4-plasma-irrad., strongly enhanced light extract 103137
GaInAsP photopumped microdisk lasers, low-threshold CW lasing 117174
GaInAsP planar photonic cryst. waveguides, low propag. loss meas. 116669
GaInAsP/AlInAs microcylinder injection laser, cladding oxid. 117323
GaInAsP/BCB DBR laser, fab., single-mode operation 93583
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photo integrat. 105311
GaInAsP/InP act./pass. microring resonator filter appl. 116732
GaInAsP/InP heterostruct., in-situ etching with CBr_4 in MOCVD reactor 1156
GaInAsP/InP lasers, high-reflectivity semicond./BCB Bragg reflector mirr 71771
GaInAsP/InP opt. pumped stripe laser, design, fabr. and high-power operat 117195
GaInAsP/InP superluminescent LED, tapered act. region, high-power CW ope tion 93427
GaInAsP/InP wirelike laser, strain-compensated MQW struct., etched/regro interfaces 117215
GaInAsP-InP complex coupled DFB lasers, FIB technol. based 128240
GaInAsP-InP monolithic transceiver photonic IC opt. crosstalk 120195
GaInAsP-InP multimode interf. coupled ring resonators 93132
GaInAsP-InP strongly index-coupled MQW DFB lasers, wirelike act. regi 128234
GaInAsP-InP vert. coupled microring resonator channel-dropping filters 714
GaInAsSb mid-IR photodetector MBE growth 101267
$Ga_{1-x}In_xAs_ySb_{1-y}$ solid solns. by LPE, role of Pb 114383
$GaIn_{0.16}As_{0.22}Sb$/InAs heterostruct., quantum magnetotransport 115372
GaInN, MQW, LED, MOCVD, PL 82427
GaInN MQWs, structural charact., PL, raised press. MOCVD, TEM 79309
GaInN vis. lasers, materials/MOVPE technol. 93666
$(Ga_{0.5}In_{0.5})N$ ordered alloys, piezoelec., first-principles calcs. 126019
GaInN/GaN MQWs, varying In comp., temp. depend. carrier dyn., PL 8086
GaInN/GaN QW, polaris. control, epitaxially lateral overgrowth orie cathodolum. 91853
GaInN/GaN epilayers, MOVPE, pit form., TEM, threading disloc. 79308
GaInN/GaN mesa-struct. LEDs, current crowding, opt. saturation effects 715
GaInN/GaN/AlGaN single QW, piezoelec. field sign, PL 127236
$Ga_{1-x}In_xN$/GaN polarised QW, PL excitation spectrosc., level assignment 807
GaInNAs LW MQW DBR VCSELs 117299
GaInNAs QW, VCSEL, elemental solid source MBE 103134
GaInNAs and Ga(In)NP, optoelectronic materials, LEDs 105031
Ga(In)NAs films, rf plasma MBE, VCSEL appl. 124848
GaIn(N)As highly strained MQW structs./lasers, MOCVD, well no. depe 115402
GaInNAs low-threshold lasers, MOCVD growth 101340
Ga(In)NAs materials, MBE growth, annealing improved luminesc. efficie 102998
GaInNAs, solid source As MBE 101453
$Ga_{1-3x}In_{3-x}N_xAs_{1-x}$:Si,Be films, GSMBE, doping, elec. props. 126308
GaInNAs/GaAs LDs, 1.3 μm, low threshold current operation 93670
GaInNAs/GaAs MQW reson.-cavity-enhanced IR photodetectors 131920
GaInNAs/GaAs MQWs, GS-MBE growth, opt./struct. props. 103116
GaInNAs/GaAs QW, cryst. quality, MOVPE growth rate optim., PL 126192
GaInNAs/GaAs QW laser, low-temp. MOVPE growth 117230
(GaIn)(NAs)/GaAs QW lasers, opt. gain spectra for 1.3-μm-wavelength regi 71757
GaInNAs/GaAs QW lasers, plasma-assisted MBE, kinetic model 71832
GaInNAs/GaAs QW, plasma-assisted MBE growth, quality improvement a charactn. 101254
GaInNAs/GaAs QW, plasma-assisted MBE growth/charactn. 101253
GaInNAs/GaAs SQW lasers, plasma-assisted solid-source MBE growth a high-temp. characts. 82609
GaInNAs/GaAs compressive strained QW, electronic band struct. 91789

semiconductors continued
aInNAs/GaAs densely packed QDs, CBE growth, dot size/dens. control 114272
aInNAs/GaAs heterostruct., photodiode, MBE growth 104944
aInNAs/GaAs(001) RF-MBE growth, Raman scatt. charactn. 101255
aInNAs/GaAsP QW, strain-compensated, GS-MBE, PL obs. 105272
aInNAs/GaAsP/GaAs/GaInP strain-compensated QW laser structs., GSMBE growth and charactn. 101257
aInNAs/GaNAs QWs, MBE, struct./PL props. 124866
$a_xIn_{1-x}N_{0.04}As_{0.96}$/GaAs SQW lasers, subbands, interdiffusion effects 82643
aInNAsSb 1.26-μm SQW lasers, gas-source MBE growth 117222
aInNAsSb SQW CW ridge lasers, gas source MBE grown 128244
aInNAsSb SQW laser, GSMBE growth 117233
aInNP, electronic/optoelectronic material 115318
aInNP/GaAs heterostructs., GSMBE growth, band lineup, PL study 101211
aInP QW/AlGaAs-AlAs Bragg mirrors, high-efficiency reson.-cavity LED 71589
aInP Stranski-Krastanov islands, OMVPE on GaP/Si substrs. 114338
aInP epilayers, compositional modulation by surfactants in OMVPE 124913
aInP etching in Cl_2/Ar ECR proc., low damage and low surface roughness 126368
aInP growth on misoriented substrs., solid source MBE 90291
aInP strained layers grown on GaP(001) by GSMBE, surface reconstruction and morph. 79239
aInP surfactant-enhanced OMVPE growth, photolum. spectra studies 90378
$a_{0.5}In_{0.5}P$, normal-incidence SHG 93812
$a_{1-x}In_xP$ growth, surface react. kinetics during pulsed CBE 90270
$a_{1-x}In_xP$ strained layers growth, gas source MBE 90292
$a_xIn_{1-x}P$, band struct., order param. 69512
aInP$_2$ solar cells, MOCVD grown on Si substr. 112946
aInP:Fe regrowth GaAs-AlGaAs BH VCSEL, perform. charact. 82641
aInP/AlGaInP QW LDs, S-shaped NDR, cladding layer thickness depend. 71786
aInP/AlGaInP, strained MQW laser, perp. opt. beam quality study *(Chinese)* 128266
aInP/AlGaInP strained MQW laser, vert. beam quality 128324
aInP/AlGaInP/AlGaAs/AlAs distrib. Bragg reflector VCSELs, props. 128331
aInP/GaAs HBT MMIC oscillator, phase noise 102670
aInP/GaAs HBT struct., SPV spectr., contactless electroreflectance 126684
aInP/GaAs HBTs, MOVPE-grown, reliab. tests 115850
aInP/GaAs HBTs for HV operation, develop. and charactn. 125723
aInP/GaAs MBE-grown cascade solar cells, prod. advances 112937
aInP/GaAs hetero-bipolar transistors, LF noise modelling, 1/f-noise model 102631
aInP/GaAs ordered interface, internal elec. field effects, PR/Raman scatt. 115367
aInP/GaAs/Ge three-jn. concentrator solar cells 112909
aInP/GaAs/Ge triple jn. space power solar cells 112938
aInP/GaAs/InGaAs V-gate MESFET, micromachined V-grooves, selective etching 103917
aInP/GaInAs/GaAs-based QW laser, design, self-consistent num. simul. 128278
aInP/GaInAs/Ge 3-jn. concentrator solar cells, high efficiency 112916
aInP/$In_xGa_{1-x}As$/GaAs inverted delta-doped V-shaped pseudomorphic HEMT, temp. depend. 80273
$a_{0.5}In_{0.5}P$/GaAs/Ge triple jn. solar cells, PV concentrator systs. 112907
$a_{0.5}In_{0.5}P$/GaAs/Ge triple-jn. solar cells, electron irrad. effects 112960
$a_{0.52}In_{0.48}P$/GaAs, carrier lifetime, PL, ordering depend. 126128
$a_xIn_{1-x}P/Al_{0.5}In_{0.5}P$ (110)-oriented strained QWs, opt. anisotropy, barrier height effect 115313
$a_yIn_{1-y}P/Ga_{1-x}In_xAs$ dual-jn. solar cells, proton response 112924
aInP$_2$/GaAs multijunction space solar cells, electron/proton radiation testing 112922
aInP$_2$/GaAs space solar cells, electron/proton radiation effects anal. 112921
aInP$_2$/GaAs/Ge Hughes 702 satellite solar cells charactn. 111348
aInP$_2$/GaAs/Ge multijunction space solar cells, electron/proton radiation testing 112922
aInP$_2$/GaAs/Ge tandem space solar cells, iso-jn. dark current 112926
aInP-AlGaInP thin-film 650 nm LEDs 82402
aInP-GaAs HBT technol. for high power X-band/broadband amps. 125745
aInP-GaAs HBTs for X-band power appls., reliab. 91290
aInP-GaAs collector-up tunneling-collector HBTs, zero-offset/low knee voltage, power amps. 70052
aInP-GaAs:C HBTs, MOVPE-grown, material quality/uniformity issues 70040
aInP-GaAs-Ge three-jn. solar cells studies 89285
aInP-GaInAs all-glass terrestrial concentrator modules, develop. progress 112935
aInP$_2$-GaAs-InGaAsN-Ge four-jn. solar cells develop. 112913
aInPa/GaAs/Ge triple solar cells, MOCVD grown, high efficiency 112917
aInSb W QW LD & opt.-pumped mid-IR lasers, high-temp. oper. 105361
aInSb/InAs IR detectors, characts., struct. params. influence 97261
aInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814
aInSbAs/GaAlSbAs tunable QW laser, gas anal. 71819
aInTlAs alloys on InP, solid source MBE growth 90323
aInTlAs layers on InP, growth by MBE 68166
aMnAs layers, migration-enhanced epitaxy, struct. and mag. props. 68163
aMnAs, low temp. MBE growth, Mn effects 79226
aMnAs:Sn layers, electronic/mag/ props., carrier conc. depend. 80674
aMnAs/(In)GaAs heterostructs., spin-depend. props. 91746
aMnAs/AlAs/GaMnAs single-barrier ferromag. semicond. tunnel jn., magnetoresist. 80790
aMnAs/AlAs/GaMnAs tunnel jns., anisotropic tunneling magnetoresist. obs. 80787
aMn)As/GaAs based ferromag./nonmagnetic semicond. LEDs, elec. spin injection 82399
aMnAs/GaAs/InGaAs, p-n jn. LEDs, electrolum., I-V characts. 82384
aMnAs-based double barrier RTD, ferromag. material emitter, spin-depend. transport 81184
aN (0001) oriented MOCVD epilayer grown on (11$\bar{2}$0) sapphire 101353
aN, CBE on compliant Si/SiC substrs. 103035
aN, CVD, monomeric chelated amides as miscible liq. precursors 124920
aN, EL device, powder prep., AC operation 82370
aN, ELO on MBE GaN buffer layer on Si, hydride VPE 90531
aN, ELO on Si(111), hydride VPE growth 68377
aN, Er-implanted, opt. memory devices 104609
aN HEMT, broadband push-pull microwave power amp. 114987
aN HEMTs, min. noise fig., Fukui eqn. calc. 81368
aN HV mesa/planar Schottky/pin rectifiers, elec. characts. simul. 103746
aN, Hi-Prexx facility, prep./charactn. 68415
aN, ICP etched surface, plasma-induced damage, photolum. 126380

III-V semiconductors continued
GaN LEDs, Ni/Au ohmic contacts form., annealing in O_2 ambient, oxid. 80918
GaN MBE films, screw disloc. elec. activity rel. to growth stoichiometry 80671
GaN, MBE growth, antimony surfactant 101206
c-GaN MBE growth, hexagonal GaN phase-domain inclusion, expt. investig. 103014
GaN MBE growth, init. stage, defect form. in films 90313
GaN MBE growth on 6H-SiC(0001), low energy electron microscopy obs. 101294
GaN, MBE growth on ZnO films, charactn., substr. ALE growth *(Polish)* 79264
GaN MBE growth, thin SiC layer coated (100)/(111) Si substrs. 101250
GaN MBE growth using ECR N_2 plasma 124839
GaN MBE, interfaces, structural stabil. 101243
GaN MBE layer, hot electron/hole dyn. 69549
GaN, MBE layer limitations due to lateral inhomog., disloc. 103101
GaN MBE layers, highly resistive, elec. transport 91676
GaN, MBE, surface adatoms, current-induced migration 101245
GaN MESFET, SiN_x passiv. effects 91288
GaN MESFETs and MOSFETs, LF noise 81288
GaN MESFETs and bulk materials, RF breakdown 103922
GaN MESFETs on (111) Si substrs., static meas. 103920
GaN MOCVD epitaxial films, growth, effect of dil. ammonia flow rate 79297
GaN MOCVD epitaxial layers, influence of As doping on elec. props. 126016
GaN, MOCVD films, defects, monoenergetic positron beams anal. 80700
GaN MOCVD films on sapphire, opt. props. improvement in situ SiN treatment 127911
GaN MOCVD films, surf. morphol., opt. props., dry etching infl. 103306
p-GaN, MOCVD grown, ohmic contacts by controlled activation of Mg 69724
GaN MOCVD growth, materials/devices, PL, EL, reviews 79304
GaN MOCVD growth on 3C-SiC/Si(111) substr., buffer layer effects 69509
GaN MOCVD on Si(111), stress control and appl. to HFET 68288
GaN MOCVD, situ normal incidence reflect. 124912
GaN MOVPE, a-face/c-face sapphire substrs. FET appl. 90450
GaN, MOVPE on (0001) sapphire, SAW vel., electromechanical coupling coeff. 126010
GaN MOVPE reactor, complex flow, gas phase chem. reacts. 90446
GaN MQWs, strain control by combination of H_2 and N_2 carrier gases 68287
GaN MSM photodetectors, Schottky contact metals 86511
n-GaN, N_2O plasma surface treatment, elec./ohmic contact props. effects 126385
GaN QD form. by self-assembling droplet epitaxy, appl. to SET 126136
GaN QW, $Al_{0.8}Ga_{0.2}N$ barriers, MOCVD grown, PL 124992
GaN, RF plasma MBE growth, post growth thermal annealing 103239
GaN RF-MBE films, intermediate-temp. buffer layers, low-freq. excess noise 115324
GaN, RF-MBE, growth dyn., atomic H effects 90304
GaN SQW LD, UV emission 105287
GaN Schottky barrier UV detectors, gain mechanism 109574
n-GaN Schottky contacts, disloc. effect on I-V characts. 69727
n-GaN Schottky diode charact. in Ni, Ta and Ni/Ta metal contact schemes 92291
n-GaN Schottky diodes, deep levels, DLTS 126646
GaN Schottky diodes, dry-etch damaged, elec. props. recovery by N_2 plasma exposure 126633
n-GaN Schottky diodes, high dens. plasma damage, Cl_2/Ar discharges 126645
GaN Schottky rectifiers on free-standing substrs. 70015
GaN TEDs, 200-300 GHz microwave power generation, Monte Carlo tech. 115820
n-GaN, Ti/Al ohmic contacts, microstruct. evol. with increasing anneal temp. 69721
GaN, air bridged lateral epitaxial growth, recomb. dyn. 80872
n-GaN alloyed at low temp., surface treated, low resistive ohmic contact form. 69737
GaN and GaAs-based HFETs, LF and microwave noise charact. 125728
GaN, back-illum. MSM UV photodetector, high internal gain 86520
GaN based HBT, band offsets, current transport, 1/f noise 81239
GaN based MQW LD, RT-CW operation, GaN/GaInN opt. guiding layers 93598
GaN based transistors, overview 103926
GaN, below gap states excitation, two wavelength excited PL 80867
GaN bonding with Si, SeS_2 bonding assisted layer, laser lift-off 80971
GaN, bulk, US waves amplif. 91750
GaN, bulk, polar opt. phonon scatt. and neg. Kromer-Esaki-Tsu differential cond. 103020
GaN, conf., Nottingham, UK (July 2000) 100368
GaN, controlled O doping using plasma assisted MBE 126317
GaN crack-free films, selective area MOVPE on trenched SiC substrs. 101338
GaN cryst., ion implanted, wet etching, photoresist 126420
GaN crysts., opt. props., picosecond Z-scan meas. 80693
GaN, cubic, RF-plasma assisted MBE using AlGaAs buffer layer on GaAs(100) 101248
GaN cubic nanoparticles, synthesis, dielec. props. 127136
GaN, cubic, p-type Mg/N-type Si doping 69830
GaN, degenerate QW, polar-opt. phonon-limited transport 91816
n-GaN, develop. of Al-free ohmic contact 103175
GaN device, vert. mirrorlike facet, RIE 81051
GaN, dry etch damage recovery by N_2 plasma treatment 69860
GaN edge-terminated Schottky rectifiers on quasibulk GaN substrs. 103754
GaN, effect of N/Ge coimplantation on Ge activation 103270
GaN, electron runaway in strong elec. fields 126029
GaN, electronic devices, microwave power generation, LNA 81388
GaN epilayer, GSMBE growth *(Chinese)* 90265
GaN epilayers, LEO, without crystallographic tilting/voids, SEM, XRD 79341
GaN epilayers, MBE, at. H_2 impact 90299
GaN epilayers, MBE grown, annealing, PL 126276
GaN epilayers, N_2 helicon wave plasma assisted evap. deposition, nitridation 114411
GaN epilayers, RF MBE growth, threading disloc. reduction, AlN multiple layers 90297
GaN epilayers, ammonia MBE on (0001) sapphire, defect reduction, HFEt structs. 101225
n-GaN epilayers, disloc. dens. eval., photoassisted anodic etching 81100
GaN epilayers, disloc. props. comparison, MOCVD, MBE grown films comparisons 91622
n-GaN epilayers, elec. props., plasma etching, ICP plasma damage 80742
GaN epilayers, ground/excited excitonic reson., magneto-opt. study 80721
GaN epilayers, hydride VPE regrowth, GaN quasi substrs., XRD, PL, Raman spectra 68245
GaN epilayers, low press. MOCVD on ALE AlN 91679
GaN epilayers, low press. MOVPE, PL, photoreflectance, growth temp./press. 90448
GaN epilayers, low temp. MBE, struct. transits. 101222
GaN epilayers, nonradiative recomb. proc., transient grating method 80718

III-V semiconductors continued
GaN epilayers on GaAs(110), elec./opt. props., radical beam epitaxy, TEM, PL 90333
GaN epilayers on GaAs(111)A, metal organic HCl VPE, growth temp. influence, surface morph., PL, XRD 68248
GaN epilayers on sapphire, RTO in dry oxygen, XRD, SEM 126421
GaN epilayers, photoenhanced wet etching in KOH-based solns. 126365
GaN epilayers, surface pot., scanning Kelvin probe microscopy 80791
GaN epilayers, wurtzitic films, low energy IBAD, ion irrad. influenc 90527
GaN epitaxial growth on GaAs(111), XRD 90252
GaN, epitaxial growth on $SrTiO_3$ substrs. 101304
GaN, epitaxial lateral overgrowth, growth domains, CL, micro-Raman spectra 79332
n-GaN epitaxial layer, high/low-energy proton bombard., elec. charact. 91628
GaN epitaxial layers, high resoln. polariton spectra, band gap temp. depend. 80722
GaN epitaxial layers, lateral overgrowth, MOCVD, crystallographic tilt, mask material depend. 79333
GaN epitaxial layers, plasma assisted MBE, electron mobility optimisation 90298
GaN epitaxial layers, single-mol. precursor efficient chem. soln. deposition method 101418
GaN epitaxial layers, struct./elec./opt. props. 69519
GaN epitaxial wafers for HFETs, material/device charcts. 103903
GaN, epitaxially laterally overgrown, DFWM spectr. 126022
GaN, epitaxy on Si or sapphire, HF SAW devices appl. 81755
GaN epitaxy, selective area growth techs., review 103046
GaN, excitonic polaritons, photoreflectance/PL spectra 80719
GaN, facet controlled ELO, disloc. dens. reduction, low press. MOVPE 79342
GaN, femtosecond laser machining 70357
GaN film, MOVPE, H_2/N_2 carrier gas effects 90452
GaN film, MOVPE growth on porous Si substr., struct./elec. charactn. 69547
GaN film, amorphization by ion implant. 81009
GaN film, controlling heteroepitaxial growth on an at. scale, STM study 90312
GaN film growth, elec./optical/struct. props., AlN interlayers, TEM 124889
GaN film, hydride VPE grown, carrier dyn., PL 124988
GaN film, lateral epitaxy overgrowth/growth mechanism *(Chinese)* 90386
GaN film, two step HVPE growth, nucleation effects, XRD 114368
GaN films, Ga-polarity, XRD, PL, Hall effect, RF-MBE growth 91621
GaN films, H plasma cleaned sapphire substrs., plasma assisted MOCVD, single cryst. orient. 90458
GaN films, MBE on GaAs(001), XRD/PL obs. *(Chinese)* 114264
GaN films, MBE on GaN/AlN buffer layers, polarity anal. 79241
GaN films, MOCVD, 3D-2D transit. 90457
GaN films, MOCVD, synchrotron X-ray anal. techs. 90425
GaN films, MOCVD/MBE, high N_2 press. growth, defects 68294
GaN films, MOVPE ELO on sapphire, synchrotron X-ray topography 90380
GaN films, MOVPE on BP thin buffer layer on Si(100) 68293
GaN films, MOVPE on c-Al_2O_3, substr. orient. effects anal. *(Chinese)* 126054
GaN films, MOVPE, thermal annealing, Ga droplet form. 68292
GaN films, RF plasma MBE on GaAs, cryst. struct. 68210
GaN films, RF reactive sputtering, laser annealing 91940
GaN films, RF-plasma assisted MBE, multiple AlN intermediate layer 68209
GaN films, ammonia react. epitaxy, struct. 90387
GaN films, crack-free hexagonal, growth on AlN/Si buffer/substr. 101360
GaN films, crystallographic struct., facet-initiated ELO 79331
n-GaN films, deep levels/PPC studies, MOCVD 127909
GaN films, epitaxial growth, RF-PLD 90478
GaN films, epitaxially laterally overgrown, cryst. tilts determ. by four-circle XRD 79294
GaN films, etching with pulsed KrF excimer laser 69919
GaN films grown by plasma assisted laser-induced CVD, props., influence of HI irrad. 126017
GaN films, high press./temp. annealing, micro Raman spectra 126061
GaN films, hydride VPE, time modulated growth, disloc. suppression 68246
GaN films, ion implant., structural and opt. charact. 126292
GaN films, low-energy ion assisted epitaxy and struct. 69514
GaN films, near-surface traps, DLTS 91613
GaN films on (001)β-$LiGaO_2$, MOVPE, polarity, coaxial impact collision ISS, PL 69524
GaN films on SIC, PL, photocond., RIE effects 81102
GaN films, piezoelec. coeffs. 127220
GaN films, selective photoenhanced electrochem. etching 103290
GaN films, substr. induced biaxial stress, SEM, XRD, PL 90453
GaN, free standing, fs laser machining 105648
GaN free-standing high quality templates, Hall mobility, carrier conc. 80713
GaN freestanding epitaxial template, luminesc. obs. 69501
GaN, geom. magnetoresist., vert./lateral cond. 80704
GaN grown on Si(111) using UHV CVD, props., step-graded AlGaN interlayer effects 124930
GaN, growth techs. and device appls., review *(Chinese)* 115307
GaN heteroepitaxial lateral overgrowth/charactn., low disloc. dens., MOVPE growth, nucleation 79335
GaN heteroepitaxial layers, ECR-MBE growth, Si(001)/(111) substrs., substr. nitridation influence 101251
GaN, heteroepitaxy, SiC substr. eval. 68137
GaN hexagonal struct., selective area growth, MOCVD, self limited facet control 79336
GaN high current gain BJT, regrown emitters 126686
GaN, high-dose ion implant. 81033
GaN high-mobility epilayer, RF plasma-assisted MBE on GaN buffer layer 124846
GaN high-purity hexagonal MBE films, blue photoluminesc. fine struct. 93341
GaN, high-qual., gas-source MBE, room-temp. electron mobil. 101246
GaN high-quality UHV-CVD growth on Si(111) substr. 79279
GaN homo-jn. LEDs, MOCVD, multiple-pair buffer layer 71601
GaN homoepitaxy by MBE *(English)* 79263
p^+-nGaN homojunction diodes, deep levels, DLTS 126646
GaN, hydride VPE, $GaCl_3$ partial press. effect 68138
GaN, hydride VPE layers, mass transport growth, opt. emission 79401
GaN interfaces, Fermi level pinning, elec. admittance/DLTS correl. 124864
GaN, ion implant., current status 103251
GaN, ion-induced damage propag., enhanced diffusion, PL 69531
n-GaN isotype conjunction, ZnO/ITO multilayer ohmic contacts 69666
GaN, lateral epitaxial overgrown, crystallographic tilting reduction by oxide mask removal 114347
GaN, lateral epitaxially overgrown films, elec. props., spatial var. 91658
n-GaN layer, ohmic perform. of ZnO/ITO/ZnO contacts 69646
GaN layers, ELO, WN_x mask, MOVPE, elec. props., WN_x/GaN contacts 79334
GaN layers, LEO, picosecond photoinduced reflectivity 124990
III-V semiconductors continued
p-GaN layers, Ni/Al/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
p-GaN layers, Ni/Ti/Au ohmic contacts form., thermodyn. approach, contact resist. 126217
GaN layers, ammonia MBE on 4H-SiC 68199
GaN layers, harmonic generation meas., MOCVD 124989
GaN layers, laterally overgrown, microstruct., TEM obs. 69538
GaN layers, low temp. growth on sapphire wi dimethylhydrazine/triethylgallium, crystallinity evol. 101357
GaN layers, six-wafer MOCVD growth, morph., struct., carrier gas effec 124934
GaN layers, struct., cathodolum. 103031
GaN, low temp. transport, carrier densities, impurity sites effects 126069
n-GaN, low-resist. Ti/Al/Ti/Au multilayer ohmic contact 81114
p-GaN, low-resist. nonalloyed ohmic contact, strained InGaN contact lay 126200
p-GaN, low-resist. thermally stable ohmic contacts, Pd/Ni metallization 1154
GaN, low-resist. wide band-gap, codoping method 126314
GaN, luminesc. spectrum, high elec. fields 91667
GaN materials/devices, quantum 1/f noise anal. 91677
GaN, max. mobility predictions 102997
GaN microwave power MESFETs, pulse charactn. of trapping/thermal effec 80312
GaN nanoheteroepitaxy on Si substrs. 90237
GaN nanostructure, self-organized, MBE, CL, PL, SEM 91657
GaN, nanowires, oxide-assisted synthesis, microstructs., transm. electr microsc. charactn. 126604
p-GaN ohmic contact, H_2 storage materials effect 80920
GaN on Si(111) grown by pulsed laser deposit., RHEED, XPS 125009
GaN one-step MOCVD growth on $ZnAl_2O_4/\alpha$-Al_2O_3 substrs., XRD charact *(Chinese)* 124932
GaN optoelectronic devices, defect dens. reduction 91675
GaN p-i-n rectifier struct., elec. props. and deep level spectra 69643
GaN, pendeo epitaxial growth/characterisation, SEM, TEM, XRD 79330
n-GaN, photoanodic oxid., oxide elec. props. 103335
n-GaN photoelectrochemically etched surfaces, tree-like features, threading d loc., revelation 81103
n-GaN, photoenhanced electrochem. etching 126409
n-GaN, photoenhanced electrochem. etching using CH_3COOH soln. *(Korea* 115617
GaN, plasma etching, surface/bulk damage 126340
GaN plasma-assisted MBE growth, vicinal (001) GaAs substrs., structural/op props. correl. 101249
GaN polar surface, selective etching in KOH soln. studied by XPS 126388
GaN polycryst. GSMBE layers, strong PL emission 80692
GaN, polycryst. films, RF magnetron sputtering, struct. anal. 91637
GaN polycryst. films, metal substrs., gas source MBE, PL, XRD 79261
GaN powders, catalytic growth, struct. charactn. 68446
GaN power HEMTs, self-heating effects study 102645
GaN quasi-free standing epitaxial layer, RF-plasma assisted MBE on nan columnar GaN 124870
GaN, related materials, minority carrier transport, review 126015
GaN rf-plasma-assisted MBE thin films, structural props., RTA 69784
GaN selective area growth, MOVPE, PL spectra, impurity incorporation 793
GaN selective area growth on Si(III), AlGaN intermediate layer, , MOVP TEM, 79337
GaN, selective growth on 4H-SiC patterned with AlN seed layer, NH_3 MB 124854
GaN self organised nanostructures, RF MBE growth, XRD, TEM 90335
GaN self-assembled QD, plasma-assisted MBE growth and charactn. 69687
GaN semicond. laser, opt., elec. and thermal anal. 117179
GaN, shallow levels, selective photoluminesc. spectra 91619
GaN single cryst., press.-controlled soln. growth method 101161
GaN single crysts. high-N_2-press. growth, doping, props. charactn. 124798
GaN, single phase hexagonal films, MOCVD on GaAs(100) *(Chinese)* 1013
GaN, solid-source RF MBE, charact. 101247
GaN strain-free homoepitaxial layers, donor-bound excitons, magneto-spe trosc./luminesc. 80720
GaN, subband gap yellow luminesc., opt. metastability 91624
n-GaN substr., ohmic contacts 126198
GaN substrs., bowing, hydride VPE 68251
GaN superlattices, terahertz radiation sources 102614
GaN surface, RIE damage 126382
GaN surface ablation by fs. pulses, accumulation effects, AFM obs. 126334
p-GaN surface band bending, aqua regia soln. surface treatment effects, SR PI obs. 69870
GaN, surface chem., elec. props. 103292
p-GaN, surface-treated, elec. charcts. of thermally stable Ru and Ru/Au ohm contacts 69709
GaN surfaces roughened by H plasma treatment, field emission 69385
GaN surfaces/interfaces, low energy electron-excited nano-luminesc. spec 91662
GaN suspen. microstruct., photoelectrochemical etching 70349
p-GaN, thermally stable Nb and Nb/Au ohmic contacts 69720
GaN thick films, VPE growth, Ga/NH_3 direct reacts., structural/opt. charac 68247
GaN thick films, hydride VPE, CL charactn. 68250
GaN thin film gas sens., MOCVD, response/recovery 86750
GaN thin film growth, reactive close space method, high temp. tech. 90459
GaN thin film material, selective chem. etching 103375
GaN thin films, epitaxial growth on sapphire(0001) 68318
GaN thin films, pendeo-epitaxial growth and charact. 79296
GaN thin films, reactive evap. on metal foils, crystallinity 101449
GaN, thin homoepitaxial film, MBE grown, confined exciton-polariton mod 68191
GaN, transient PL, deep level defects 82323
GaN, transient electron vel. overshoot, time-resolved electroabsorption 1030
GaN tri-halide vap.-phase epitaxy using $GaCl_3/InCl_3$, thermodyn. 101355
GaN undoped epilayer, three-photon fluoresc., SHG obs. 82904
GaN, undoped epilayers 80715
GaN undoped epilayers, long term photocapacitance logarithmic decay behavi 81195
GaN, undoped, evidence of free carrier conc. gradient along c-axis 103005
GaN undoped layers, PPC, RF-plasma assisted MBE 127908
GaN vert. mesas, RIE in $BCl_3/H_2/Ar/CH_4$ ICP 81061
GaN wide band gap semicond., precise ablation etching 101393
GaN with buried WN_x, ELO 69831
GaN wurtzite film on 6H-SiC, surface superstruct., PL props. 103040
GaN wurtzite films, RF plasma-assisted MBE, surface reconstruction 101300

V semiconductors continued
-GaN, yellow luminesc., persistent photocond. 69507
-GaN:(Mg,)Be, ion implant., surface morph. and photolum. meas. 69832
GaN:Ar(Si), patterning, ion implant.-depend. etching 69920
GaN:As, MOCVD growth, bulk electronic transport, point defect chem. 126070
GaN:As films, MBE, strong blue emission 104904
GaN:As(Ge)(Se) epilayers, radioact. isotope ident., PL 126330
GaN:Au, ion implant., thermal annealing 81010
GaN:Be (Mg),O, coimplantation, ohmic contact resist. appl. 126304
GaN:Be, elec./structural anal., Raman spectrosc., high resoln. XRD 81000
GaN:Be,H, Be doping, first-principles studies 91970
GaN:C films, plasma assisted/ammonia MBE, elec. charact. 80741
GaN:C films, plasma-MBE growth/doping, elec./opt. props. 126315
GaN:C(Au) films, ion implant. disorder, dyn. annealing 81011
GaN:Er, C films, GSMBE grown, surface morph., PL, SEM, AFM 126062
-GaN:Er epilayers, ion implanted, Er^{3+} photolum. 81023
GaN:Er films, PL/EL vis./IR obs., precip. 93340
GaN:Er, implant.-induced damage suppression 80733
GaN:Er(,O) epilayers, implant. and high temp. RTA 69780
GaN:Eu epilayers, ion implant., PL 81022
GaN:Fe, ion implant., damage, annealing, lattice site location 81016
GaN:Fe^+ films, implanted, struct., ion channeling/Mossbauer spectra 81037
GaN:Fe(Mn) epilayers, MBE, mag. props. 103009
GaN:H, NH_3-MBE, nuc. react. anal. 101244
GaN:H, ion implanted, Raman scatt. anal. 91963
GaN:H, wurtzite, Ga vacancies-H interact. 91649
GaN:H,Mg/Au/ITO UV solar cells, UV detectors 89305
GaN:H,Mg(Be), RF-plasma MBE growth, on sapphire, doping 81001
GaN:In films, MOVPE, indium doping effect 115555
GaN:In films, carrier dyn., MOVPE, time resolved PL 80726
GaN:In films layers, RF-MBE growth, In surfactant effect 90300
GaN:Mg (si) films, pure and doped, near band edge recomb., PL 80723
-GaN:Mg MOVPE layers, deep trap anal., elec. cond., TSC and thermal admittance spectra meas. 69546
GaN:Mg Schottky diodes, thermal admittance spectrosc. 92284
-GaN:Mg, acceptor activation, microwave treatment, PL, Hall effect 81047
GaN:Mg, acceptor related recomb. centers, inhomog. spatial distrib., CL 81043
-GaN:Mg activation, thermal annealing, oxidizing atmos. 81045
GaN:Mg, blue LED, nitrogen plasma treatment, vacancies, reactivation 82419
GaN:Mg bulk single crysts., elec. props., temp. depend. 69537
-GaN:Mg, elec. activation, two step RTA 69785
-GaN:Mg epilayer, PL, MOVPE, SIMS 79346
-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
-GaN:Mg epilayers, micro-Raman PL, MOCVD 79345
-GaN:Mg film, CO_2 laser annealed, optical, elec. props. 80984
-GaN:Mg film, MOCVD grown 126216
-GaN:Mg film, MOCVD growth, Mg doping *(Chinese)* 79315
GaN:Mg films, MOCVD, carrier concentratio, microstruct. effect 126051
GaN:Mg films, PL spectrosc. 115306
GaN:Mg films, cathodolum., time evol. 69542
-GaN:Mg films, local vibr. modes, acceptor activation/deactivation 79344
GaN:Mg films, low temp. activation, N_2 annealing with thin Ni film 80975
GaN(:Mg) layers, elec. props., expt./theoretical investigs. 103006
GaN:Mg, multiple step RTA, enhanced p-type cond. 103236
GaN:Mg, novel methods, p-type/RF input activation, long-time air annealing, hole conc., PL 80983
GaN:Mg p-type films, temp.-depend. hole transport 126048
GaN:Mg thin film SAW filter with high vel./low insertion loss, MOCVD 81762
-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaN:Mg/Al_2O_3, wurtzite sample, electronic Raman scatt., MBE/MOCVD growth 124862
GaN:Mg/AlN epilayers, ion implant., annealing, PL 126328
-GaN:Mg/Ni contacts, Schottky barriers, memory capability 80922
-GaN:Mg/Pd ohmic contact, Au diffusion barrier, elec. props. 80919
GaN:Mg(In), bulk and MOCVD grown, influence of Mg and In on defect form. 124894
GaN:Mg(Si), elec./opt. props. gas source MBE 80728
GaN:Mg(Si)/Pd contacts, interface states, positron annihilation spectrosc. 80900
GaN:Mg(Si)(C)(O) films, ion implanted, SIMS/RBS-channelling obs. 115507
GaN:Mg,Be films, MOCVD, Be implant., high hole conc. 69826
GaN:Mg,C,He,O epilayers, ion implant. induced defect states, elec. charactn. 81024
GaN:Mg,H films, H lattice location, ion channeling obs. 80708
-GaN:Mg,O, activation, sheet resist., PL 80694
GaN:Mg,Si(O), valence/spin control by codoping 115563
GaN:Mn, high dose ion implant., nanoscale mag. regions 127326
GaN:Mn(Fe) epilayers, prep., magnetis., MBE 79244
GaN:O, defect depth profiling, photolum./cathodolum. following RIE in O_2/Ar plasmas 91663
GaN:P films, electronic struct., PL 80727
GaN:Pr epilayer, Pr doped, PL/CL 126329
GaN:RE full color thin film electrolum. phosphor syst., multiple color capability 69530
-GaN:Si MBE growth on (001) GaAs substrs., PL study 103015
GaN:Si, carrier conc./mobility, IR refl. spectra *(Chinese)* 115319
GaN:Si epilayers, HVPE, polarized micro-PL spectrosc., disloc. struct. 80724
GaN:Si epilayers, MOCVD, threading disloc., nonradiative nature, PL 80717
GaN:Si epitaxial films, electron backscattered diffr. obs. 69544
GaN:Si films, VPE on MOCVD-GaN templates, strain, doping distrib. 68295
GaN:Si films on GaAs, MOVPE, photolum., Si doping effect 79305
GaN:Si layers, TiN direct deposition, ohmic contacts 124826
-GaN:Si layers on sapphire, reactive MBE, deep centers charact., DLTS 124865
GaN:Si, opt. props., doping depend. 126047
GaN:Si, resist., band-gap shift, metal-nonmetal transit. 115321
GaN:Si single cryst. films on sapphire substrs., growth, luminesc. props. *(Chinese)* 68255
-GaN:Si thin films/MESFET structs., low level of 1/f noise 69526
GaN:Si/InGaN:Mg QW LED, tunnel jn., hole injection 116976
-GaN:Si/Ti/Al/Pt/Au ohmic contact, Pt barrier thermal stabil. 103176
GaN:Si(In)(Mg)(C), basal plane stacking fault energy, doping effects 103260
-GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and IR ellipsometry meas. 69545
GaN:Tb films, GSMBE, PL, RHEED, EXAFS 79260
GaN:Ti^+, O^+, Fe^+, Cr^+, FET struct., implant isolation, sheet resist. 126822
GaN:Zn blue powder phosphor for VFD/FED, synthesis, cathodolum. 109862
GaN/3C-SiC/Si(001), epilayers, single source VPE, MOCVD, RHEED, XRD, PL 90444

III-V semiconductors continued
GaN/(Al,Ga)N MQW, carrier dyn., internal elec. field effects, orient./strain state 80864
GaN/(Al,Ga)N heterostruct., reactive MBE on SiC(0001) 124869
GaN/(In,Ga)N, high duality heterostruct., MBE growth on SiC(0001) 90338
GaN/Al epilayers, polarity conversion, coaxial impact collision ISS anal., MOVPE 92095
GaN/$Al_{0.08}Ga_{0.92}N$:Si MQW grown on $Al_{0.22}Ga_{0.78}N$, low disloc. dens. 79347
GaN/$Al_{0.2}Ga_{0.8}N$ superlattices, opt. phonon zone-folding effect 69500
GaN/$Al_{0.56}Ga_{0.44}N$ superlattices, MOVPE growth, opt. props. 90451
GaN/Al_2O_3 epilayers, gas source MBE growth, Al_2O_3 surface nitridation, RHEED 90303
GaN/Al_2O_3(0001), atmos. two flow MOVPE, large lateral/vert. growth rate 90447
GaN/Al_2O_3(0001), hydride VPE growth, high temp. GaN buffer effects, PL 68249
GaN/Al_xGa_{1-x} reson.-cavity-enhanced p-i-n photodetector, design 75518
GaN/$Al_xGa_{1-x}N$ QW laser, tuning charact., MBE 93589
GaN/$Al_xGa_{1-x}N$ buried layer QW high-power LD 71811
GaN/$Al_xGa_{1-x}N$ multilayered struct., Raman spectra, MOCVD, MBE, opt. phonons 79343
p-GaN/$Al_xGa_{1-x}N$/Ti superlattices, Ti based ohmic contact resist. 80914
GaN/Al(In)GaN heterostruct. 69523
GaN/AlAs/GaAs(001), epitaxial layers, cryst. orient., MOVPE, computer simul. 90394
GaN/AlGaN HEMT, nonlin. anal., Volterra series 103925
GaN/AlGaN HFET, SiC substr., microwave power charact. 81390
GaN/AlGaN HFET struct., pillars, FIB etching, micro PL/Raman mapping 126422
GaN/AlGaN, LED, in situ dry etch monitoring, electronic transits. 81104
GaN/AlGaN MQW, MOVPE, H_2/N_2 carrier gas effects 90452
GaN/AlGaN MQW, below gap states excitation, two wavelength excited PL 80867
GaN/AlGaN MQW, excitons/polaritons, reson. Rayleigh scatt., vert. motional narrowing 80868
GaN/AlGaN MQW, persistent photocurrent, PL comparison 69668
GaN/AlGaN MQWs, ground level emission energy, internal elec. fields 126187
GaN/AlGaN QW, MOCVD, in-situ thermal etching 80821
GaN/AlGaN QW, built-in elec. field effects, TEM and photolum. studies 69681
GaN/AlGaN QW, charge storage, internal field screening 103125
GaN/AlGaN QW, intersubband transit., ultrafast all opt. modulation 116699
GaN/AlGaN QW lasers, electronic/opt. props., spontaneous polariz. 82610
GaN/AlGaN SQ wells, intersubband transits., strain relax., screening 91851
GaN/AlGaN asymmetric double QW, piezoelec. field sign, PL 127236
GaN/AlGaN heterostruct. FETs, traps, low-freq. noise spectra 126870
GaN/AlGaN heterostruct., surface chem., elec. props. 103292
GaN/AlGaN high power/high temp. devices, review 70068
GaN/AlGaN semicond. QW, mesoscopic capacitor effect, piezoelec. field screening 80874
GaN/AlGaN separate confine. heterostruct., spontaneous/stimulated emission 69695
GaN/AlGaN single QW, PL enhancement, piezoelec. field screening effect 126185
GaN/AlGaN small-area HBT, proc. develop. 103766
GaN/AlGaN strained MQW, piezoelec. field, PL press. behavior 103140
GaN/AlGaN, strained hexagonal superlattices, phonons, free carriers, opt. study 69686
GaN/AlGaN:Mg heterostruct., polariz. induced 2D hole gas 103097
GaN/AlGaN/AlN, NH_3-MBE growth, HFET, 2DEG, sputter deposition 90307
GaN/AlGaN/GaN, enhancement mode MISFET, prep., charact. *(English)* 81330
GaN/AlGaN/Pt HEMTs, H_2/CO/NO/hydrocarbon gas sens. 86748
GaN/AlN, QDs, QWs, MBE, UV to red light emission 90334
GaN/AlN epilayers, ammonia gas source MBE growth/charactn., sapphire substr., excitons 90305
GaN/AlN heterojns., band-offset trends, first principles calcs. 91754
GaN/AlN self-organised QD, strain distrib., built-in elec. fields, carrier states 91836
GaN/AlN superlattice, MOVPE growth, phonon modes/free carrier, IR/Raman spectra 124987
GaN/AlN superlattice, polar phonons, ang. dispersion, Raman spectra 69700
GaN/AlN/SiC/Si, epilayers, MOCVD, growth rate effect, surface morph., PL 90400
GaN/AlN/SiO_2, epilayers, hydride VPE/MOMBE hybrid growth, PL 68243
GaN/AlN/sapphire, high-temp. AlN interlayers, crit. thickness 69770
p-GaN/Au/Pd contacts, elec./struct. props., surface treatment 69717
GaN/Ga_2O_3:Gd capacitor, low interface state dens., C-V/G-V charactn. 69743
GaN/GaAlN QW, excitons, opt. pumping, temp. effect 80870
GaN/GaAs(001), plasma-assisted NH_3 gas nitridation, struct., opt. props. 91661
GaN/GaAs(100), epilayers, substr. protection, strain relax., intermediate layer effect 79306
GaN/GaInN based high power blue violet LD, epitaxial overgrowth, disloc. dens. 93596
GaN/GaN/Al_2O_3, bulk cryst. growth, sublimation, MOCVD, PL 68114
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
GaN/GaP(001) epilayers, growth evol., MOVPE, XRD, AFM 90395
n-GaN/Hf ohmic contact, surface treatment, KOH soln. 126202
GaN/InGaN LED, device perform., uniform current spreading 71595
GaN/InGaN LED on HVPE GaN, substrate props. 68244
GaN/InGaN LED, sapphire substrs., current crowding 127974
GaN(/InGaN) LEDs, temp. depend. EL 71600
n-GaN/InGaN MQW/p-AlGaN/p-GaN hexagonal microprism, selective area MOVPE, EL 82207
GaN/InGaN MQWs, dry etching using inductively coupled $Cl_2/CH_4/H_2/Ar$ plasma 92086
GaN/InGaN, MQWs, localised states, PL obs. 80869
GaN/InGaN, blue LD, high resoln. printing appl. 93601
GaN/InGaN multilayer EL, GaN buffer growth conditions 80890
GaN/InGaN/AlGaN, LD, in situ dry etch monitoring, electronic transits. 81104
GaN/InGaN/GaN cubic double heterostruct., QD photolum. 103131
GaN/InGaN-on-sapphire blue LEDs, ESD-stressed, resistive current paths 127964
GaN/$LiGaO_2$ metal/semicond./metal UV photodetectors, MBE 109564
GaN/M (M=Au, Cu), Schottky contacts, XPS, AES 126218
GaN/Ni/Au Schottky diodes on sapphire and SiC substrs. 126630
p-GaN/Pd contacts, elec./microstruct. changes, surface treatment 69716
n-GaN/Pt Schottky contacts, proc.-induced electron traps, DLTS 69548
GaN/Si(001/111) heteroepilayers, inert N_2 mols./radical atoms/mol. ions influence, cryst. struct., ECR-MBE 90399

III-V semiconductors continued
GaN/Si(111), MBE growth, cracking obs. 103034
GaN/Si(111) films, RF sputter deposition, struct. and charactn. 69536
GaN/SiC, epilayers, lateral overgrowth, pulsed MOCVD, InGaN LED appl. 90455
GaN/SiC heterojns., band-offset trends, first principles calcs. 91754
GaN/SiC lasers, L-I charcts., mirror reflectivity depend. 105269
α-/β-GaN/SiC/Si, heteroepitaxial growth, PL, cryst. microstruct., residual stress 90331
GaN/metal Schottky contacts, I-V-T charcts., barrier height effect *(Japanese)* 80891
GaN/metal Schottky contacts, XPS depth profiles, elec. meas. 103160
GaN/sapphire HVPE films, interfacial region impurity band, SFM obs. 69518
GaN/sapphire, N_2^+-ion implantation and α-irrad. effects, Raman and photolum. spectra anal. 126007
GaN/sapphire(0001), hydride VPE, thermal cond., disloc./grain boundary effects 126068
p-GaN/transition metal ohmic contacts, contact resist., reliab. 80921
p-GaN/transitionmetal, transparent low resist. ohmic contact, Charactn., blue LED appls. 80915
GaN-AlGaN HEMTs grown by RF-assisted MBE for robust low noise/high power amps. 91280
GaN-AlGaN-GaN UV photodiodes, highly selective 97272
GaN-Au Schottky jn., I-V charact. *(Chinese)* 80910
GaN-based Gunn-effect MM-wave sources, develop. 91292
GaN-based IMPATTs, D-band noise charact. 80286
GaN-based ITO Schottky photodiodes, high-speed vis.-blind 127946
GaN-based LD, opt. gain, opt. internal loss 128314
GaN-based LED, minority-carrier diffusion length 105011
GaN-based LEDs, spectrally resolved electrolum. microscopy and μ-electrolum. investig. 104995
GaN-based MQW heterostruct. LEDs, luminesc. spectra and efficiency 116978
GaN-based MSM photodetectors, transparent ITO Schottky contacts 97262
GaN-based blue LD 105366
GaN-based devices, etch end-point detect. using opt. emission spectrosc. 69881
GaN-based electronic/optoelectronic devices, business opportunities 70002
GaN-based high power blue-violet LD, ELO and charactn. 82634
GaN-based high-power FET devices, Heat-spreading diamond films 81254
GaN-based lasers, etched facets, charactn. 103334
GaN-based materials OMVPE growth, single step nucleation proc. 90440
GaN-on-sapphire, guided elastic waves, SAW resonators 104329
GaN-sapphire interface, thermally activated cond. 103184
GaN(0001), Ga-polar, morphology depend. growth kinetics 90352
GaN(0001), catalytic role of Au in Ni/Au contact 69730
GaN(0001) clean/In-terminated surface, Be incorporation 81066
GaN(000$\bar{1}$) film, N-plasma assisted MBE on 6H-SiC(000$\bar{1}$) 90319
GaN(1100) M-plane plasma-assisted MBE on γ-$LiAlO_2$(100), nitride semiconds. free of internal electrostatic fields 101252
GaN(111) epilayers, microstruct., selective growth, MOVPE on Si(001) 79338
GaNAs epilayers on GaAs, lattice params., Vegard's law 80691
GaNAs surfaces, wire struct. form., MOMBE, In role 90314
GaN_xAs_{1-x} alloy, MBE growth on GaAs (100) *(English)* 90263
GaN_xAs_{1-x} thin films, nitride form. by N ion implant. 103275
GaN_yAs_{1-y} MOVPE growth, thermodyn. 101354
GaNAs/GaAs single QW, opt. transits., band bowing coeff. 80889
GaN(Mg)/AlGaN(Mg) superlattice base contact layer BJT 92311
GaNP, electronic struct., pseudopotential methods 91639
$GaN_{1-x}P_x$ hexagonal films, laser-assisted MOCVD growth, PL obs. 101381
$GaN_{1-x}P_x$, laser assisted MOCVD, PL, LED, SIMS 90381
$GaN_{0.011}P_{0.989}$/GaP double-heterostruct., gas-source MBE growth, red LED appl. 101260
GaNSi substrs., hydride VPE, carrier/disloc. conc., GaN/InGaN LED fab. 68244
GaP AT cut resonators, piezoelec. props. 81680
GaP aspheric off-axis microlenses, distortionless opt. interconnect syst. 116772
GaP cryst. fast adaptive interferometer, small out-of-plane vibr. meas. 83067
GaP, doping charact. of Mg *(Chinese)* 103271
GaP films, solid-source MBE/ALE growth, struct. 101235
GaP high-av.-power Raman laser, freq. conversion/beam cleanup 128250
GaP intermediate layers in GaInP/GaAs double barrier reson. tunnelling structs. 126660
GaP phase-modulated light beam wo-wave mixing under dc elec. field 71936
GaP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
GaP, proton bombard., external EO sampling *(Chinese)* 93225
GaP, shallow donor states, central-cell corrections, strong mag. fields effects 80680
GaP, surface passiv. with CH_3CSNH_2 soln. *(Chinese)* 69880
GaP waveguides, [100], [110], [11-2] directional, spontaneous Raman scatt. 93130
GaP:^{73}As, implant., diffusion study 126278
GaP:N LED, P^+–n^-–n jn. barrier distrib. *(Chinese)* 117004
GaP:N_2^+, α-GaN phase, ion-implant. synthesis 126296
n-GaP:S, PPC at low temps. 82308
GaP/AlAs heterostruct. for DBR appls., very low temp. MBE growth 101203
GaP/AlP type-II short-period superlattices, carrier localization, PL obs. 80840
GaP/GaP mol.-force wafer bonding, nanometer air gaps meas. 68471
GaP/TmP/GaAs heterostruct., transistor action, MBE growth of TmP/GaAs 115871
GaP/TmP/GaAs heterostruct., transistor action 115844
$Ga_{0.35}P/Ga_{0.83}In_{0.17}As$ monolithic tandem concentrator solar cells 112908
GaSb, Bridgman grown, transport procs., modelling 114224
GaSb, MOVPE in multiwafer planetary reactor 79324
GaSb nanoparticles embedded in SiO_2 composite films, prep., opt. props. 114249
GaSb single-jn. TPV cells, photocurrent dens., efficiency 113033
GaSb solar TPV cells, $Al_2O_3/Er_3Al_5O_{12}$ eutectic composite selective emitter 113024
GaSb solar cells, simultaneous Zn and P diffusion 113028
GaSb substr., oxide desorpt., reflectance monitoring 81095
GaSb surfaces, ordered QD form. during ion sputtering 80851
GaSb, vert. Bridgman growth, heat/momentum transfer, num. anal. 114228
GaSb:Gd ingots, elec. & compositional props., Bridgman growth method 69520
GaSb:Mn, vert. Bridgman tech. growth, segreg., growth rate effects 91986
GaSb:Te, single cryst. growth in space 90211
$GaSb/Al_xGa_{1-x}Sb$, MOCVD, elec./opt. props. 126119
GaSb/AlGaAsSb device fab., hydrofluoric acid/peroxide/tartaric acid etchant mixture *(Chinese)* 69869
GaSb/GaAs, III-V semicond. nanostructures, surface stress effects during MBE growth 114286
GaSb/GaAs QD, MOCVD, struct. props. 126164
GaSb/GaAs, heterostruct., coherent/incoherent relax., HREM 126111

III-V semiconductors continued
GaSb/InAs/AlSb mid-IR angled-grating DFB lasers, beam quality limitatio 128359
GaSb/InGaAsSb based photodiodes, band energy diag. engng. & photorespon 71547
GaSb/InGaAsSb tandem TPV cells, photocurrent dens., efficiency 113033
GaSb-AlGaSb heterostruct., MBE growth, SIMS and HRXRD 69650
GaInNAs/GaAs superlattice, thermal treatment, structural effects 115410
ITO/GaP UV-vis. photodiodes, characterisation/modelling 82361
(In,Ga)N based LEDs, multichip LEDs, phosphor converted LED, revie 104999
(In,Ga)N/GaN/(Al,Ga)N laser struct., opt. gain and saturation 117240
InAlAs/(110)InP MBE growth, Al-segregated region form. mechanism, TE obs. 103043
InAlAs/AlGaAs, self-assembled QD, luminesc., struct., growth temp. 90339
InAlAs/InAs epitaxial bilayer film, misfit disloc. introduction 126110
InAlAs/InGaAs HBT ECL static freq. divider, 75 GHz 68769
InAlAs/InGaAs HBT IC, adder carry-and-sum logic cct. 114710
InAlAs/InGaAs HBT carry-and-sum logic cct., adder archit. 114705
InAlAs/InGaAs HEMT IC, opt. commun. cct. 120166
InAlAs/InGaAs HEMT, PECVD passiv. film, isolation degrad. 115951
InAlAs/InGaAs HEMT, δ-doped metamorphic, long. optic phonon-plasm coupling 103907
InAlAs/InGaAs HEMT fab., bilayer UVIII/PMMA resist 81371
InAlAs/InGaAs HEMT, ultra-short gate, lattice matched growth 92401
InAlAs/InGaAs HEMTs, drain conductance, freq. dispersion, impact ionizati bias conditions 81358
InAlAs/InGaAs complementary NPN and PNP HBTs, monolithic integ 115863
InAlAs/InGaAs highly doped metamorphic HEMTs, subband electron pro 115960
InAlAs/InGaAs metamorphic HEMT, GaAs substr., InP buffer layer 81393
InAlAs/InGaAs superlattice APD, dark current reduction 116939
InAlAs/InGaAs/AlGaInAs/InGaAs/InP/InAlAs HFET, low temp. impact ion EL 70187
N-InAlAs/InGaAs/InAlAs metamorphic heterostruct. based sub-0.25 μm g HEMT 81370
InAlAs/InGaAs/InP 5.2 μm-type I quantum-cascade laser, CW operation at 2 K 117239
InAlAs/InGaAs/InP DHBTs, dc current gain rel. to extrinsic base design va 115856
InAlAs/InGaAs/InP HEMT, design optim. 115958
InAlAs/InGaAs/InP HEMTs and InAs/AlSb/GaSb RITD, monolithic integ 70321
InAlAs/InGaAs/InP lattice-matched/metamorphic HBT, MBE growth 11586
InAlAs/InGaAs/InP mid-IR quantum cascade lasers, refr. index dispersion eff on perform. 105294
InAlAs/InGaAs/InP-InAs/AlSb/GaSb HEMT RITD D-flip-flops, monc able/bistable logic element 79771
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ metamorphic HEMTs, 0.06 μm gate length 1159
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ E/D-mode metamorphic HEMT 92400
InAlAs-InGaAs HEMTs, pot. profile meas. using Kelvin probe force microsco 92268
InAlAs-InGaAs MODFETs, comparison of conventional and asymmet. coup QW transport channels 81365
InAlAs-InGaAs metamorphic HEMT MMIC technol. on GaAs substrs. 692
InAlAs-InGaAs reson.-cavity APDs, ultra-low-noise 97271
InAlAs-InGaAs-InAlAs-InP QW 2DEG channels, dissipation, flucts./ultra procs. 91849
InAlAs-InGaAs-InP HEMTs from various proc. options, charactn./reliab. 92
InAlAs-InGaAs-InP microwave HEMT, carrier-conc.-depend. low-field-mobi model 70196
$In_{0.52}Al_{0.48}As$-$In_{0.53}Ga_{0.47}As$ waveguide APD gain-bandwidth product 93372
InAlGaAs QW laser, low threshold current dens. design, k.p method 11727
InAlGaAs/GaAs high-power diode lasers, strain-induced defects, photocur spectrosc. 105314
InAlGaAs/InAlAs all-monolithic VCSEL, 1.55 μm, pulsed operation 82689
InAlGaAs/InGaAsP unitraveling-carrier photodiode based TW photodetec 75540
InAlGaAs-AlGaAs strained MBE MQW, reson. absorpt., THz radiation gene tion in mag. field 93343
In(Al)GaAsSb/GaSb QW ridge-waveguide lasers, wide opt. gain spectr 128274
InAlGaN-based QW, DUV LED and LD, growth and opt. props. 82601
$In_xAl_{1-x}N$ alloy, MOVPE growth, quasi-thermodyn. model *(English)* 79317
InAs 1.3-μm QD high temp. ridge waveguide lasers 93652
InAs, 2DEG containing self-assembled QD, transport props. 69696
InAs (110), electron accumulation layers, near-surface region 115322
InAs QD HFET, memory operation 81359
InAs QD MQW MBE growth and charactn., laser appls. 80885
InAs QD amps., elec. pumped, ultrafast carrier dyn./dephasing 128261
InAs QD laser on InP substr., 2.5 GHz direct modulation, low chirp operat 128319
InAs QD laser, oscillatory charact. temp. 105338
InAs QD lasers, two-sect., pass. mode-locking 82619
InAs QD memory, opt. storing and deletion of charge 92946
InAs QD, microdisk struct., cavity-QED 80810
InAs QD on (001) GaAs, MBE growth conditions optimisation 114304
InAs QD on (100) InAlAs/InP, MBE, struct./opt. props. 103151
InAs QD on GaAs, MBE, deep level defects 114295
InAs QD, selective area epitaxy using InGaAs thin films 124993
InAs QD, single opt. photon sources 113133
InAs QD with strain reducing layer, improved electrolum. 117010
InAs QD-SOAs, nonlin. gain dyn., opt. commun. device appl. 93646
InAs QDs, epitaxy on self-organized 2D InAs islands by AP-MOCVD 903
InAs QDs in modulation doped AlGaAs/GaAs heterostructs., IR photodete 120817
InAs QDs on InP, self-assembled, electron beam pre-patterning for site-con 68291
InAs, Shockley-Read-Hall recomb. rates, full-band-struct. calc. 91635
InAs, Stranski-Krastanow growth, island shape, vol., dens., reversibility 79
InAs THz radiation emitter, femtosecond laser pulse irrad. 71889
InAs TPV cells, enhanced photogeneration, photodiodes 123835
InAs dots, MBE on anodised GaAs, honeycomb hollows effects 114293
InAs, epitaxial growth on $SrTiO_3$ substrs. 101304
n-InAs, high-current solid-state opening switches 80473
InAs islanding on GaAs(001), STM study 114292
InAs islands on InAlAs templates, effects of mismatch strain/alloy comp. form. 68205

emiconductors continued
s islands self-assembled on pseudomorphic/metamorphic InAlAs buffer lay-
s grown on GaAs 114290
s nanocrystal QDs, reson. tunneling charging control 91769
s nanocrystals in Si, form. by seq. ion implant., charactn. 81031
s nanodots, $Al_{0.5}Ga_{0.5}As$ matrix, charge storage effect 115395
s nanostructure device, fab., AFM oxid. proc. 115793
s photodetector, MBE, current leakage 93360
s self-assembled QD, DLTS charactn. 126066
s self-assembled QD IR photodetector, fab./photocond. 120791
s self-assembled QD amps., ultrafast gain recovery, modulation limitations
812
s self-assembled QD, charging effect in metal-semicond.-metal diode devices
03221
s, self-assembled QD, electronic transport, hysteresis 80887
s, self-assembled QD, high field transport, MODFET appls. 91781
s self-assembled QD on GaAs/InP, LP-MOCVD growth 101343
s self-assembled QDs, SSMBE growth on InP (100) substr., PL props.
03117
s self-assembled QDs grown by MBE, structural charactn. 114291
s self-assembled QDs on InAlGaAs/InP(311)B, 1.6 μm ground-state lasing
17216
s self-assembled QDs, struct./electrooptical charact., laser/LED appl. 91839
s self-assembled quantum-dash lasers, RT operation 93653
s self-assembling QDs, selective form. on GaAs(001), single electron mem-
ry 115405
s self-organized QD emitter based 2D photonic cryst. nanocavities 93166
s self-organized nanostructures on InAlAs/InP(001), IR spectra,
photodetection apps. 80881
s strained p-type QW, THz nonlin. optics 69677
s vert. stacked nanodots in HFET, threshold voltage shift charactn. 115967
s wire-like QD, misaligned GaAs(100) substr. 69660
s/(Al,Ga)As self-organized islands, size/dens. control 80699
$As/Al_{0.6}Ga_{0.4}Sb$ IR intersubband quantum cascade lasers, shortwave limit *(Chi-
ese)* 71796
s/AlGaSb QW, back-gate control 69699
s/AlGaSb/GaSb/AlSb/InAs reson. interband tunneling diodes 70012
s/AlInAs nanowire superlattices on InP(001), lateral correl. 101217
s/AlSb IR intersubband quantum cascade lasers, shortwave limit *(Chinese)*
1796
s/AlSb double barrier RTD, electron/hole transm. fn., interface effect 126142
s/AlSb strained MQW, unintentionally-doped, MBE growth,
haractn./optimisation 101262
s/AlSb/GaAlSb heterostruct. mm-wave zero-bias diodes, characts. 125736
s/Ga(Al)Sb gated QWs, quantum magnetoresist., beat patterns obs. 69674
s/GaAs, III-V semicond. nanostructures, surface stress effects during MBE
rowth 114286
s/GaAs QD, GaAs proximity cap, postgrowth RTA, TEM/photolum. obs.
26270
s/GaAs QD, InAs wetting layer ellipsometry at QD form. threshold 103147
s/GaAs QD, PL emission 91773
s/GaAs QD, capping layer growth interruption, island dissolution 103010
s/GaAs QD laser, dark pulse form. after nonreson. opt. pulse injection 93716
s/GaAs QD lasers and VCSELs grown by MBE 117282
s/GaAs QD lasers with InGaP cladding layer, solid-source MBE growth
17217
s/GaAs QD microdisk lasers, ultrafast dyn., fs opt. pumping 71764
s/GaAs QD, opt. anisotropy, PL intens. 69667
s/GaAs QD, post-growth thermal treatment, PL/TEM obs. 126168
s/GaAs QD, time-resolved photoluminesc. 69661
s/GaAs QDs grown by MBE, growth rate effects on size, comp. and opt.
rops. 114287
s/GaAs QDs, strain, cond. band, mol. dyn. simul. 115414
s/GaAs bimodal QD, thermal photocarriers redistrib. 93327
s/GaAs mesas, surface at. stresses, press. distrib., multimillion atom simul.
03099
s/GaAs, mid IR QD detector, normal-incidence 97232
s/GaAs multi-stacked QD, defect generation, MBE 80886
s/GaAs nanomesa syst., million-atom mol. dyn. simul. 69648
s/GaAs quantum boxes in GaAs microdisks, time resolved Purcell effect
80828
s/GaAs self-assembled QD, exciton energy 91785
s/GaAs self-assembled QD laser, max. modal gain 93632
s/GaAs self-assembled coherent QDs, size and shape evol. influenced by seed
ayer 114288
s/GaAs self-assembled dots, 2DEG, magneto-PL 80837
s/GaAs self-assembled vert. stacked QD, interband transits. 91768
s/GaAs self-organized QD, excited-state lasing *(Chinese)* 105265
s/GaAs self-organized QD laser, intens. noise 71848
s/GaAs self-organized QD, selective growth, shadow mask tech. 114294
s/GaAs self-organized QDs on (411)A GaAs by MBE 114289
s/GaAs ultrathin layers, carrier capture, degenerate pump-probe tech. anal.
69676
s/GaAs/AlAs QDs/quantum wires, interface roughness, tunnelling 91850
s/GaAs/InGaAs QD, interdiffusion, luminesc. *(English)* 103142
s/GaAs(InP) buried QD, TEM obs. 91841
s/GaInAs QD DFB lasers, 1.3 μm, HF charact. 128256
s/GaInAs QD DFB lasers, singlemode operation 71790
s/GaInAs-QD lasers, 1.3μm operation, MBE growth 117228
s/GaInP self-assembled QD, MBE, opt. props. 114300
s/GaInSb mid-IR interband cascade lasers, high power 105362
s/GaInSb superlattice diodes, Wannier-Stark localization 93367
s/GaSb QW, 2D electron-hole syst., hybridization 126180
s/GaSb cascade laser, interband tunneling 82608
s/GaSb double QW, coupled electron-hole magnetotransport 115386
s/GaSb electron-hole syst., insulating state in mag. field, edge effects anal.
80792
s/GaSb/AlSb heterostruct., zero-bias MM-wave diode, direct detect. 102616
s/GaSb/AlSb intersubband light-emitting struct., emission wavelength control
82365
s/InAlAs heterostructs., MBE growth, props. 103104
s/InAlAs/InP self-assembled QD/wires, QD lasers 117280
$s/InAs_xSb_{1-x}$, mid-IR LEDs, MBE growth 101266
s/InAsSb/InAlAsSb QW LD, MBE growth, 3μm emission 101265
s/InAsSbP LED grown by gas-phase epitaxy 128007
s/InGaAs QD, opt. microcavities/act. layers 116979
s/InGaAs high-power type-II QW lasers, fab., characts. 128333
s/InGaAs self-assembled composite QD for PV appls. 100213
s/InGaAs/GaAs, LW VCSEL 117176
s/InGaAsSb QW, opt. pumped integrated absorber laser 93603

III-V semiconductors continued
InAs/InGaSb photodetectors, MBE on GaAs bonded substrs. 109578
InAs/InP QD, MOVPE, V/III ratio/annealing effects 80982
InAs/InP QD superlattice, solid source MBE, emission tuning 114299
InAs/InP QDs, wetting layer carrier dyn., CW/time resolved PL 69658
InAs/InP quantum wire, vert. self-organization 115408
InAs/InP reson. tunneling QD stacks, high peak-to-valley ratios 69664
InAs/InP, self-assembled QD, CBE growth 101202
InAs/InP self-assembled quantum wires, MBE, struct. 126159
InAs/InP self-assembled quantum wires, opt. transits., excitons 80811
InAs/Permalloy 2DEG, spin injection & spin detect. expt. 80903
InAs/Permalloy interface, spin injection & detect. 80904
InAs/ZnSe core/shell nanocryst. QDs, artificial-atom states, STM 91804
InAs-GaAs QD, LP-MOVPE grown, PL efficiency 91825
InAs-GaAs, graded solute conc. method growth, microgravity 114234
InAs-GaAs low dark current QD IR photodetector, AlGaAs current blocking layer 86560
InAs-GaAs n-type QD IR photodetectors 86561
InAs-GaAs normal-incidence high-temp. mid-IR vert. QD photodetector 131914
InAs-GaAs self-organized QD, VCSELs 117286
InAs-GaInSb type-II high power high efficiency interband cascade QW lasers 93674
InAs-GaSb uncooled superlattice photodiodes 71548
InAs-InGaAs QD VCSEL fab. proc. 117297
InAs-InGaAs RT CW QD VCSELs 105274
InAs-InGaAs ultralow-threshold QD lasers, ground-state emission/gain 128221
InAs-InGaAs-GaAs QD VCSEL lasers 82628
InAs-on-GaSb interface, As-soak control 80884
InAsN film, plasma-assisted GSMBE 114276
InAsN/InGaAs/InP single QW, PL mechanism, photocond., gas source MBE growth 91805
InAsP compliant substrs., lattice-mismatched InP-based device fab. 114340
$InAs_{0.4}P_{0.6}$ nanocrystals embedded in SiO_2 films, prep., opt. props. 79203
$InAs_xP_{1-x}$ 2D ordering array islands, exchange react. form. 126414
$InAs_yP_{1-y}$ MBE growth, As_2 and As_4 incorporation, thermodyn. model anal. 68174
In(As)P:Zn, MOVPE based Zn diffusion, diffusion depth, hole conc. 127952
InAsP:Zn/InP(InGaAs) heterostruct., doping, photodiode appl. 115553
InAsP/In(GaAs)P MQW laser structs., band-struct. and opt. gain 117283
InAsP/InGaAsP ridge waveguide LD, strain compensated, GSMBE growth 105289
InAsP/InP strained MQW ridge-waveguide laser, RTA effects 128335
InAs(P)(Sb) surface, nitridation, XPS anal. 103408
InAsSb, MBE grown, miscibility gap, substr. lattice const. effect 103016
InAsSb room-temp. mid-IR detectors, MBE growth 101268
InAsSb, virtual substrs., LPE growth 79380
$InAs_{1-y}Sb_y$, melt epitaxial growth, 7-12 μm cutoff wavelength 68376
InAsSb/InAsSbP double heterostruct., LED, electrolum. 82392
InAsSb-AlAsSb DH QW opt.-pumped mid-IR lasers 93677
InAsSbP solid soln. films, LPE on InAs, LED appl. 114382
InAsSbP, virtual substrs., LPE growth 79380
InAsSbP/InGaAsSb/GaInAsSb type II heterostruct., high power mid-IR lasers 82672
$In_{0.53}Ca_{0.47}As$, MBE-grown (001) surfaces, conductance gap anom. 91617
$In_{1-x}Cd_xSb$ films, prep., struct. & elec. props. 91627
In_xGa_{1-x}, traveling liq. zone growth, micro-Raman scatt. 114220
InGaAlAs MQW DFB laser, MOVPE growth, InGaAsP/InP grating 115368
InGaAlAs quantum-confine. heterostruct., 100-watt laser bars based on PLA 82686
InGaAlAs reson.-tunneling opt. modulators, microwave props. 71416
InGaAlAs strained MQW lasers, act. struct. design 82638
InGaAlAs strained QW lasers, high-speed microwave modulation 117376
InGaAlAs/InP HBT, multiple NDR switching 92300
InGaAlAs/InP VCSEL diodes, operation charact. 128320
InGaAlP, doping charact. of Mg *(Chinese)* 103271
InGaAlP epitaxial layer, LP-MOCVD growth, In comp. control, dyn. anal. *(Chinese)* 68271
InGaAlP gain switched FP LD at 650 nm, opt. pulse param. anal. *(Korean)* 93726
InGaAlP red VCSELs 105354
$In_{0.5}(Ga_{0.73}Al_{0.27})_{0.5}P/GaAs$, double heterostruct., photoreflectance spectr. *(Korean)* 80673
InGaAlP-based low-threshold high-temp. proton-implanted red-emitting VCSELs 128248
InGaAs 2D act. pixel FPA, switching and amplif. charact. 131965
InGaAs APD, Peltier cooling and pass. quenching, single photon counting 71558
InGaAs LV MQW pin Fabry-Perot modulator, microcavity regime impact 71410
InGaAs, MBE, surface roughness, growth params. effects 101204
InGaAs MOVPE init. stage growth on multiatomic-stepped GaAs struct. 101356
InGaAs MQW high-power VCSEL arrays, improved output perform. 128229
InGaAs MQW lasers, widely tunable, selective-area-growth 93628
InGaAs MSM photodetector, finger electrodes, responsivity 97276
InGaAs Mesa diodes, SiN_x films, ICPECVD 124927
In(Ga)As QD IR photodetectors, neg. differential photocond. 75513
InGaAs QD, MBE growth, charactn. 79233
InGaAs QD act. layer semicond. lasers, EL2 defects 82660
(InGa)As QD, at. equilib. conc. 68161
InGaAs QD on InAlAs wetting layer, struct., photolum. 126132
InGaAs QD ring and cylindrical cavity lasers, elec. pumped configs. 128254
In(Ga)As QDIPs, phys. model, dark current/photocurrent 120802
In(Ga)As QDs, carrier dyn. rel. to lasers/microcavity light emitters 115398
InGaAs QW, PL emission 91773
InGaAs QW VCSELs, substr. removal fab. 128253
InGaAs QW based 1.5-1.6 μm VCSEL for metro WDM appls. 117213
InGaAs QW lasers, gain, refr. index change, linewidth enhancement factor 128273
InGaAs QW opt. pumped blue emitting semicond. laser chip 128259
InGaAs QW vert. cavity lasers, low-threshold high-temp. operation 93642
InGaAs SQW 940-nm diode lasers, high reliab. 128222
InGaAs SQW high-power diode laser bars 82667
InGaAs SQW, ion implanted, saturable absorber mirrors for pass. mode-locking 105485
InGaAs SQW strain-modulated nanostructs., grazing-incidence XRD, photolum. 69684
InGaAs VCSELs, singlemode output power enhancement, reduced spatial hole burning 71769
InGaAs advanced detectors on GaAs substrs. 109556
InGaAs broad area lasers, high power/reliab. operation 105315
InGaAs channel metamorphic HEMTs on 100 mm GaAs substrs., high perform. 69167

III-V semiconductors continued
InGaAs concave disks, heterog. droplet epitaxy, In segreg. 114296
InGaAs detectors, extended-wavelength, grown by MOVPE 120797
InGaAs edge-coupled p-i-n photodiode, etching proc. defined pseudowindow 127941
InGaAs films, MOCVD on InP non-planar substrs. 114359
InGaAs gain-switched LD with fiber Bragg gratings, near-transform-limited ps pulses 93720
InGaAs, high-radiation-resistant solar cells for multijunction solar cells 134386
InGaAs inverted MSM photodetector, Si CMOS differential receiver 105050
InGaAs, lattice-matched HEMT, high-field region, effective length 126899
InGaAs, low-divergence 980 nm lasers, nonabsorbing facets 93592
InGaAs metamorphic HEMT epitaxial wafers, MOVPE grown 69144
InGaAs metamorphic HEMT technol. for mm-wave low noise/power appls., high perform. 69168
InGaAs miniature IR camera for unattended imaging 75631
InGaAs p-i-n photodiode array monolithic four-channel DWDM opt. receiver array 109153
InGaAs photodiode, NIR absorpt. tomography appl. 121257
InGaAs photodiode array spectral analysers, WDM syst. monitoring 104948
InGaAs power PHEMT device technol. for broadband wireless access 91241
InGaAs quantum wire FET, NDR 115957
InGaAs quantum wire honeycomb network, BDD quantum LSI, MBE growth 115972
InGaAs ridge quantum wire, selective MBE growth 79224
InGaAs ridge quantum wires, sub-μm pitch lin. arrays, selective MBE 115406
InGaAs ring cavity SOA, self-mode-locked, ps pulse generation 93730
InGaAs self-organized QD on GaAs (311)B studied by conductive AFM tip 80855
InGaAs self-organized QDs for advanced optoelectronics appls. 115394
InGaAs single self-assembled QD, photocurrent, PL 80827
InGaAs strained QW lasers, freq. response 105309
InGaAs strained QWs, RTA selective QW disordering, monolithic integrat. 126130
InGaAs ternary bulk cryst. growth, zone growth method 114219
InGaAs tetrahedral shaped recess QD *(Japanese)* 115413
InGaAs vert. QD arrays, mismatch/chem. comp. anal. by TEM 68198
$In_{0.15}Ga_{0.85}As$ QW based microcavity EL device charact. 104976
$In_{0.16}Ga_{0.84}As$ QW, strain-induced lateral carrier confine., PL 115409
$In_{0.2}Ga_{0.8}As$ on GaAs(001), growth method, monitoring of surface topography/stress evol. 90274
$In_{0.22}Ga_{0.78}As$, QW GRINSCH lasers, regrowth, annealing 101292
$In_{0.53}Ga_{0.47}As$ TPV cells, simultaneous Zn and P diffusion 113028
$In_{0.54}Ga_{0.46}As$, LP-MOVPE, diethylzinc doping efficiency 115613
$In_xGa_{1-x}As$ bulk mixed cryst., rot. Bridgman growth 101167
InGaAs:C, heavily doped, CBE growth, surface morph. 101205
InGaAs:Fe/InP high-speed MQW saturable absorber, FTIR/pump-probe meas. 82822
InGaAs:Si PHEMT, single-/double-δ doped, MBE grown, charge dens. control 92388
InGaAs:Si/GaAs epitaxial films, crit. thickness, misfit disloc., XRD 69529
InGaAs:Si/GaAs single QW, PL, delta-doped sheet posn. 126167
$In_{0.15}Ga_{0.85}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
InGaAs/(Al)GaAs, MBE on GaAs, strain relax., disloc. TEM obs. 68188
InGaAs/AlAs, double-barrier RTD, scanning hot electron microscopy 70010
InGaAs/AlAsSb MQW, temp.-insensitive intersubband transits. at 1.55 μm 80848
InGaAs/AlAsSb QW, MBE growth, Si doping 115397
InGaAs/AlAsSb QW, intersubband saturation intens. improve. 126131
InGaAs/AlAsSb QW, intersubband transit., nonlin./response speed eval. 115399
InGaAs/AlAsSb:Si heterostruct., dopant-induced interface disorder, MBE lattice matched to InP 101263
InGaAs/AlGaAs HEMT struct., PL 92385
InGaAs/AlGaAs MQW modulator, proton irrad. effect, free-space commun. 116828
InGaAs/AlGaAs PHEMT proc. for X-band power amp. and LNA MMICs 125804
InGaAs/AlGaAs QD intermediate band solar cell 112903
InGaAs/AlGaAs bound-to-bound QW IR detector, excited-state posn. meas. 91842
InGaAs/AlGaAs high-power QW lasers, high-temp. operation 105317
InGaAs/AlGaAs multi-color broadband QW photodetectors for LWIR appls. 86539
InGaAs/AlGaAs pseudomorphic QW, MBE growth 101219
InGaAs/AlGaAs pulsed LD, DIAL lidar rem. sens. & spectrosc. 122663
InGaAs/AlGaAs recessed-gate PHEMTs, orient. depend. charact. 126892
InGaAs/AlGaAs/GaAs, quantum cascade lasers, MBE growth, strain effects 93591
InGaAs/AlInAs HEMT, MBE on oxide-bonded InGaAs, charact. 126897
InGaAs/AlInAs/GaAs metamorphic HEMTs, long term stabil., hot electron stress test 126872
InGaAs/GaAs 980 nm oxide confined laser with integrated spot size converter 117288
InGaAs/GaAs LD, blue light by freq. doubling using aperiodically poled $LiNbO_3$ 71977
InGaAs/GaAs MQW excitonic reson. photorefr. devices, vibr. meas. appls. 128456
InGaAs/GaAs MQW, photorefractivity, Franz-Keldysh geom. 82803
InGaAs/GaAs, QD IR photodetector, lateral carrier transport 131910
InGaAs/GaAs QD, low-press. MOVPE, In comp. distrib. 124895
InGaAs/GaAs QD, microstruct., TEM 126161
InGaAs/GaAs QD reson.-cavity light-emitting devices 128277
InGaAs/GaAs QD, self-organized, PL, elec. field effects 126163
InGaAs/GaAs QW lasers, fab. & perform. 117277
InGaAs/GaAs QW, time-resolved PL in mag. fields 69698
InGaAs/GaAs QWs grown by MBE on GaAs(001) vicinal surfaces, step bunching 90275
InGaAs/GaAs heterostruct., interfacial coherence, lateral In segreg. 126120
In(Ga)As/GaAs high power QD laser *(Chinese)* 93576
InGaAs/GaAs multi-finger HBT, modelling incl. self-heating effects 81212
InGaAs/GaAs multilayer structs., MBE grown, photolum. charact. 90327
InGaAs/GaAs partially relax. heterostruct., misfit disloc. 80802
InGaAs/GaAs phototransceiver OEIC, low power, photodiode & QD microcavity LED 96709
InGaAs/GaAs piezoelec. MQW on (111)B GaAs, pyroelec. coeff. 91790
InGaAs/GaAs relax. graded buffer layers, threading disloc. dens. 80803
InGaAs/GaAs self-assembled QD lasers, 1.3 μm, perform. & phys. props. 93669
In(Ga)As/GaAs self-assembled QD/wires, QD lasers 117280
InGaAs/GaAs self-assembled QDs, opt. gain, effect on SOA operation 117223

III-V semiconductors continued
InGaAs/GaAs self-organized QD lasers, temp.-depend. Auger recomb. c 91807
InGaAs/GaAs single-mode ridge waveguide lasers with aperiodic Bragg-gr fibre, near-transform-limited picosecond pulses 71822
InGaAs/GaAs single-mode ridge waveguide laser, external cavity, spectral rowing 71823
InGaAs/GaAs strained SQW LD, electron emission, DX centers, RTA ef 128299
InGaAs/GaAs strained layer SCH SQW laser, output charact. 71805
InGaAs/GaAs/AlGaAs SC-QWIP, LWIR detect. 131905
InGaAs/GaAs/AlGaAs triple-QW GRINSCH laser, sol-gel fab., output ch 93614
InGaAs/InAlAs HEMT, ion irrad. effects, radiation tolerance 126881
InGaAs/InAlAs MQW electroabsorption modulators, loss eval. *(Japa* 93235
InGaAs/InAlAs MQW-EA modulator, wavelength converter 116826
InGaAs/InAlAs insulated gate PHEMT with Si interface control layer 802
InGaAs/InAlAs, metamorphic HEMT on GaAs, MBE, charact. 92386
InGaAs/InAlAs modulation doped heterostruct., strain relax. layer 115365
InGaAs/InAlAs quantum cascade lasers, MBE growth and charactn. 12828
InGaAs/InAlAs quantum cascade reinforced ridge waveguide laser, ou charact. *(Chinese)* 71797
InGaAs/InAlAs quantum wire FET, NDR 115941
InGaAs/InAlAs ridge-type quantum-wire FET, quasi-1D transport char 92394
InGaAs/InAlAs strain-compensated quantum cascade laser *(Chinese)* 935
InGaAs/InAlAs strained MQW electro-absorpt. modulator 116809
InGaAs/InAlAs transferred-substr. HBT monolithic amp., 185 GHz, de 102681
InGaAs/InAlAs:Be MQW ultrafast saturable absorber for all-opt. switch 120
InGaAs/InAlAs/InGaAs heterojunction interband tunnel diode, microw instabil. 102606
InGaAs/InAlAs/InP HEMT MMIC amp., reliab. 115007
InGaAs/InAlAs/InP enhancement-mode pseudomorphic HEMT 115947
InGaAs/InGaAlAs/InP strained QW lasers, LW, MBE growth 105290
InGaAs/InGaAsP MQW microdisk laser, ultralow threshold lasing *(Eng* 82677
InGaAs/InGaAsP MQW microdisk lasers, opt. pumped, MOCVD, char *(Chinese)* 128313
InGaAs/InGaAsP MQW scaled microdisk lasers, dyn. behavior 128279
InGaAs/InGaAsP MQWs with dielec. and InGaAs capping layers, intermi behavior 115377
InGaAs/InGaAsP microdisk lasers, GSMBE growth 105292
InGaAs/InGaAsP microlasers, equilateral triangle resonator, rate eqn. a 117260
InGaAs/InGaAsP second-order DFB/DBR laser, surface-emitting single-l operation 82627
InGaAs/InGaAsP/InGaP strained QW lasers *(English)* 82682
InGaAs/InGaP HEMTs, technol. optim., anal. modelling 70200
InGaAs/InP 2D photonic cryst. microlasers on Si wafer, RT operation at 1.55 82603
InGaAs/InP, ACQW, opt. gain switching 82633
InGaAs/InP APD, low-noise single-photon detect., quantum cryptography ap 104962
InGaAs/InP DHBT, cryogenic charact. 70035
InGaAs/InP DHBT technol. and design methodology for >40 Gb/s opt. comm ccts. 131411
InGaAs/InP QW dual-band photodetectors, interband/intersubband trans 86542
InGaAs/InP QW, photocarrier transport/recomb. 126135
InGaAs/InP electroabsorption modulator, NAND/NOR/EXOR all-opt. logic g 82944
InGaAs/InP injection semicond. QW laser, act. region particles/quasi-partic energy states 117258
InGaAs/InP integrated asymm. twin-waveguide ultrafast all-opt. switch 104
InGaAs/InP p-i-n detector/single-mode fiber pass. coupling, micromachin 75542
InGaAs/InP p-i-n photodiodes, tandem struct., bandwidth 71545
InGaAs/InP quantum wires/dots, MBE growth using nanopore templates 115
InGaAs/InP strained quantum wire lasers, linewidth enhancement factor, ma body effects 93664
InGaAs/InP tunable external cavity LD, MEMS rotary actuator 117300
InGaAs/InP-based ballistic rectifiers, sensitivity 126687
InGaAs/InP-based saturable absorber mirrors, proton-bombard., recovery d 71951
InGaAs/SiN_x/GaAs(111)B bridge layers LPE growth, circ. trench geom. optim ation 101444
$In_{0.06}Ga_{0.94}As$/GaAs MQWs, photocurrent spectrosc. *(Korean)* 116903
$In_{0.15}Ga_{0.85}As$/GaAs self-organized quantum wire channel FET charact. 103
$In_{0.15}Ga_{0.85}As$/GaAs(553)B quantum wires, MBE growth and charactn. 9181
$In_{0.2}Ga_{0.8}As$/GaAs MQW IR photodetector, p-n-p camel diode struct., IR absor 97238
$In_{0.2}Ga_{0.8}As$/GaAs multilayer, elastically relax., LPOMVPE grown, island nucl tion 68254
$In_{0.27}Ga_{0.78}As$/GaAs quantum wires grown on (221)A GaAs substr. by MBE, o quality 126141
$In_{0.4}Ga_{0.6}As$/GaAs(311)B QD superlattice, metal-insulator transit. 80888
$In_{0.5}Ga_{0.5}As$/GaAs QD laser structs., emission wavelength, internal elec. fi depend. 105327
$In_{0.53}Ga_{0.47}As$/AlAs/InAs, pseudomorphic RTD, MBE, elec. props. 81190
$In_{0.53}Ga_{0.47}As/GaAs_{0.5}Sb_{0.5}$ type II MQW diodes, electrolum. 105005
$In_{0.53}Ga_{0.47}As/In_{0.4}Ga_{0.6}As$, QW opt. amps. 82666
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, dielec.-induced interdiffus., two-step R 80973
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunctions, effective mass, quantum lifeti 103106
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, photocurrent/transm. spectra anal. 126191
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ metamorphic tunnel diodes on GaAs 126658
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, dry etch damage minimisation 126341
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ IR intersubband quantum cascade lasers, shortwa limit *(Chinese)* 71796
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, confined states, QCSE 91771
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ heterojunction, magnetotransport 91732
$In_{0.53}Ga_{0.47}As/InAlGaAs/In_{0.52}Al_{0.48}As$ metamorphic double heterojunct photodiodes 71554
$In_{0.54}Ga_{0.46}As/InP$, LP-MOVPE, SiH_4 doping efficiency, carrier gas/group-V p cursor effect 115612
$In_{0.62}Ga_{0.38}As/In_{0.47}Ga_{0.53}As$(InP) strain bal. QW cell, TPV 113029

emiconductors continued
$_7$Ga$_{0.3}$As/In$_{0.52}$Al$_{0.48}$As pseudomorphic QW-HEMT struct., MBE growth 3898
$_{74}$Ga$_{0.26}$As/In$_{0.52}$Al$_{0.48}$As QW HEMT, MBE, optimized channel thickness 3909
$_7$Ga$_{0.25}$As/In$_{0.5}$Al$_{0.5}$-As reson. tunneling diode struct., crit. layer thickness 277
$_5$Ga$_{0.25}$As/In$_{0.75}$Al$_{0.25}$As, gate-controlled 2DEG, large spontaneous spin split-g 69655
$_5$Ga$_{0.25}$As/In$_{0.75}$Al$_{0.25}$As heterojunction, spontaneous spin-splitting 80795
$_x$Ga$_x$As/In$_{1-y}$Ga$_y$P MQW modulator, smart-pixel appl. 116840
Ga$_{1-x}$As/GaAs self-organized QD, MBE growth *(Chinese)* 90264
Ga$_{1-x}$As/GaAs strained QW lasers, degrad. mechanism 71758
Ga$_{1-x}$As/GaAs strained QW, step-bunching, PL obs. 126177
Ga$_{1-x}$As/GaAs(311)B self-assembled QD arrays, in-plane photocurr. 115416
Ga$_{1-x}$As/In$_x$Al$_{1-x}$As lattice-matched QW, MBE, photoluminesc. 90280
Ga$_{1-x}$As/In$_y$Al$_{1-y}$As electroabsorption modulators, strain-compensated 82209
iaAs-AlAs reson. tunneling diode, semicond. waveguide optoelectronic witching 117037
iaAs-AlGaAs SQW GRINSCH ridge waveguide laser, high-power pump peration 105316
iaAs-AlGaAs high-perform. VCSEL systs., opt. data links 82663
iaAs-AlGaAs reson.-cavity separate absorpt. charge and multiplication APD eq. response, model 93364
iaAs-AlGaAs spin pol. electron source, superlattice photocathode photolumin. 0261
iaAs-AlGaAs-GaAs HEMT MMIC prod. proc., 0.1 μm, for commercial Ka-nd LNAs 69245
iaAs-AlGaAs-GaAs SQW-GRINSCH LDs, dry-etched mirror facets, inte-rated photodiodes 128220
iaAs-AlInGaAs MQW integrated 2x2 cross point opt. switch 117202
iaAs-GaAs LW strained-layer QW lasers grown by MBE 71776
iaAs-GaAs MQW photorefr. p-i-n diode, MBE fab. 116942
(Ga)As-GaAs QD EL devices, intersubband gain/stimulated emission 91840
iaAs-GaAs QD laser, quasi-Fermi level separation 105276
iaAs-GaAs photorefr. MQW device in quantum confined Stark geom. 80880
iaAs-GaAs solar cells for NASA RAINBOW concentrator 112929
iaAs-GaAs unipolar self-organized QD FIR laser PL spectrum 105277
iaAs-GaAs(111)B single QW, In segreg., TEM and photolum. obs. 91792
iaAs-InAlAs HEMT, MBE growth, electron dens. and surface pot. 103896
iaAs-InGaAsP MQW microdisk lasers, threshold pump power *(Chinese)* 28321
iaAs-InGaAsP MQW struct., multiple-wavelength laser fab. by direct laser riting 128326
iaAs-InGaAsP QW waveguide-type wavelength DEMUX photodetectors 5525
iaAs-InGaAsP diffused QW modulators/lasers 127778
iaAs-InGaAsP laser, QW intermixing using Ar plasma exposure 71842
iaAs-InGaAsP multiple wavelength selective channel electro-absorpt. intens. odulators, P^{2+} ion implant. induced intermixing 93232
iaAs-InP 0.55 eV n/p/n MIM TPV cell develop. 113022
iaAs-InP QW-based artificial electronic nanomaterial, RT and 50 GHz opera-on 103705
iaAs-InP bipolar heterojunction photo transistor noise props. 102744
iaAs-InP photo-HBT, MM-wave generation and digital modulation 116944
iaAs-InP photon-counting diode detectors, ps time-resolved PL 71561
iaAs-InP quantum wire opt. modulators, 1.55 μm, simul. and optim. 116799
iaAs-InP solar cells for NASA RAINBOW concentrator 112929
iaAs-Si fused PIN photodiode avalanche gain, fusion proc. 116946
iaAs-Si hybrid chip Terabit/s parallel opt. connections 71624
iaAs(GaAs) III-V photodiode /CMOS hybrid receivers, wafer-bonding, sensi-vity 85960
iaAsN, GSMBE grown, defect charactn., XRD/SIMS/PL/Hall effect meas. 15316
iaAsN QW VCSEL on GaAs substr., 1.3 μm, perform. characts. 93671
iaAsN QW, solid source MBE growth, charactn. and laser appls. 101258
iaAsN VCSEL device, intracavity QW monitor diode 117191
iaAsN VCSELs, singlemode operation, high bit rate data transm. 71789
iaAsN, deep levels, high-efficiency multi-jn. solar cells 89283
$_{0.04}$Ga$_{0.96}$As$_{0.99}$N$_{0.01}$, dil. syst. N distrib., STM obs. 103000
iaAsN/GaAs, LW VCSEL 117176
iaAsN/GaAs QW lasers, localized N states effect on material gain 105264
iaAsN/GaAs VCSEL, laser threshold temp. depend. 71761
iaAsN/InP QW struct., CBE growth, NH_3 precursor 91942
iaAsN-GaAs LW edge emitting lasers, low threshold current dens. 117298
iaAsNSb/GaAs QWs for 1.55 μm lasers, solid-source MBE growth 79240
iaAsP BH LD, AlInAs-oxide current blocking layer, low threshold current 3672
iaAsP LD, 1.55 μm, gain suppress. effect on nonlin. dyn. 82694
iaAsP LD, electron radiation effects, output charact. *(Chinese)* 105324
iaAsP LD, rapid temp. tuning, high-press. H_2O absorpt. spectrosc. appl. 28407
iaAsP MQW LD, SI InP:Fe, buried layer *(Chinese)* 82681
iaAsP MQW LD with InP:Fe lateral current blocking layers, heterobarrier eakage 93668
iaAsP MQW asymmetric Fabry-Perot modulators for microwave photonic ppls. 131379
iaAsP MQW, carrier transport, ultrafast spin dyn., polaris. switching 117500
iaAsP MQW lasers, 1.5 μm, heterobarrier leakage effect 117204
iaAsP MQW lasers, elec./opt. LF noise meas. 71803
iaAsP MQW lasers, opt. and elec. LF noise correl. 71858
iaAsP MQW microarray waveguide, selective MOVPE for integrated photon-cs 116730
iaAsP MQW ridge waveguide EAM, selective area growth *(Chinese)* 101363
iaAsP QW mode locked LD, pulse charactn, two-photon absorpt. opt. gating 17374
iaAsP QW narrow stripe 1450 nm LD, half watt fiber-coupled power 128284
iaAsP QW photonic cryst. laser, prep. & props., PL 105278
iaAsP QW waveguide photodiodes arrays for WDM and fiber sens. appls. 31904
iaAsP SOA with injection, long. spatial hole burning 82624
iaAsP act. layer VCSEL, compressive strain 105355
iaAsP discretely tunable mode-locked SOA laser, arrayed waveguide grating 28416
iaAsP, high-radiation-resistant solar cells for multijunction solar cells 134386
iaAsP modulation doped MQW laser emitting at 1.55 μm 82644
iaAsP, monolithic integrat. DFB laser array, act. stripe angling, thin-film tripe heater *(English)* 93575
iaAsP nonidentical QW SOA-superluminescent diodes 117185
iaAsP optoelectronic devices, monolithic integrat. with Si electronics 117035

III-V semiconductors continued
InGaAsP radiation resistant low bandgap multi-jn. solar cell 112855
InGaAsP, solid state thermionic cooler monolithic integrat. with semicond. lasers 104744
InGaAsP strained QW lasers, high-speed microwave modulation 117376
InGaAsP tensile-strained bulk strained opt. amps., polariz. sensitivity 117229
InGaAsP uncooled directly modulated RWG GC-DFB lasers, 85°C investig. 93655
$In_{0.7}Ga_{0.3}As_xP_{1-x}$ thin film surface, ellipsometry 115310
$In_{1-x}Ga_xAs_yP_{1-y}$ MQW heterostruct. lasers, opt. and structural props. 93624
InGaAsP:Be asymmetric Fabry-Perot device, ultrafast all-opt. switching 120321
InGaAsP/AlGaAs LW fused air-gap VCSEL, characts. 82713
InGaAsP/AlGaAs multi-wavelength elec. pumped VCSEL, 1.5 μm, fab. 82688
InGaAsP/InAlAs asymm. superlattice struct. APD, dark current reduction 116948
InGaAsP/InAsP mass-transport-grating DFB lasers for externally modulated systs. 128224
InGaAsP/InGaAsP MQW TW electroabsorption modulator 104807
InGaAsP/InGaAsP MQW electro-absorpt. modulator, extinction ratio, structural depend. *(Korean)* 71404
InGaAsP/InGaAsP MQW electroabsorption waveguide, facet reflectivity, photo-current 104809
InGaAsP/InGaP/AlGaAs SQW diode lasers with tensile-strained barriers, 2 W reliable operation 128316
InGaAsP/InP 1.53-1.55 μm LD, on-wafer surface implanted ps pulse 117255
InGaAsP/InP BH LD, HBr etching 117225
InGaAsP/InP LD, NIR absorpt. tomography appl. 121257
InGaAsP/InP LD, modulation response, amplified luminesc. 117180
InGaAsP/InP MQW PV struct., PL, carrier screening effects 93363
InGaAsP/InP MQW laser structs., enhanced band-gap blueshift, group V inter-mixing 71759
InGaAsP/InP Mach-Zehnder interferometer SOA switch, MOVPE growth 117497
InGaAsP/InP QW lasers, threshold charact. 117177
InGaAsP/InP TW electroabsorption modulator, MM-wave sig. 82222
InGaAsP/InP cascaded microdisk resonators, opt. filter responses 71354
InGaAsP/InP high power 1.5μm integrated superluminescent light source 105013
InGaAsP/InP high power strained QWs, integrated superluminescent light source 93398
InGaAsP/InP integrated superluminescent light source with tilted struct. *(Chinese)* 105008
InGaAsP/InP lasers for CMS tracker, radiation damage & annealing 97988
InGaAsP/InP, laterally complex-coupled DFB lasers, gas source MBE grown 128337
InGaAsP/InP laterally coupled ridge waveguide DFB lasers, chem. sens. appls. 71767
InGaAsP/InP monolithic HBT 40 Gbit/s opt. receivers 96710
InGaAsP/InP multi-QW lasers, neutron radiation damage, carrier lifetime 93623
InGaAsP/InP ultrashort lasers with deeply etched Bragg mirrors 82622
InGaAsP/InP waveguide modulators, efficient fibre-chip coupling 93449
InGaAsP/InP wavelength selective filter with Fabry-Perot etalon resonator 116729
InGaAsP/InP-based act. grating waveguide struct. 93161
InGaAsP/InP(001), MOMBE growth rate effect on lateral comp. modulation 115315
InGaAsP/InGaAs/InP multiquantum well high power broadband singlelobe superluminescent diode 82405
InGaAsP/InP-GaAs/AlAs DBRs with BH VCSELs, output charact. 105336
InGaAsP-InP MQW SLA, FWHM width 128286
InGaAsP-InP all-opt. Mach-Zehnder DEMUX, monolithic integrat. 74948
InGaAsP-InP broadened waveguide semicond. lasers, record-high CW opt. out-put power 82668
InGaAsP-InP bulk LDs, saturable absorber fab. by HI implant. 128457
InGaAsP-InP high power lin. QW diode laser arrays 93676
InGaAsP-InP integrated Bragg grating struct. opt. add/drop filters 131398
InGaAsP-InP robust ridge waveguide TIR switch design, opt. cross-connect appls. 120327
InGaAsP-InP slab-type coupled waveguide struct. opt. pulse compression 116697
InGaAsP-InP wide-range-tunable laterally coupled DFB lasers 128311
InGaAsP-based SOA, pulse distortion 74949
InGaAsP-based fused waveguide couplers/switches, fused photonic IC 120351
InGaAsPN detectors, gas source MBE grown 97246
InGaAsSb RWG QW diode laser, pulsed anodization etching 105353
InGaAsSb mid-IR QW laser material, ridge-waveguide struct., pulsed anodiza-tion etching 115644
InGaAsSb, virtual substrs., LPE growth 79380
InGaAsSb/AlGaAsSb 2 μm MQW ridge-waveguide lasers, temp./injection cur-rent depend. 105295
InGaAsSb/AlGaAsSb MQW ridge waveguide 2.0μm LD, MBE growth 101264
InGaAsSb(Gd)/InAsSbP DH lasers, 3-3.3 μm, LD spectrosc. 71833
InGaN, $(NH_4)_2S_x$-treated, XPS surface anal. 126367
InGaN CW MQW LD on Cu substrs., perform. charact. 128227
InGaN, In inhomog. & emission charact., excitons 105028
InGaN LDs on SiC substr., MOVPE, laser characts. 105346
(In)GaN LEDs, indust. prod. on SiC 104996
InGaN LEDs/AlGaN quantum cascade struct., mid-IR emission/absorpt. 93441
InGaN, MBE growth on ZnO films, charactn., substr. ALE growth *(Polish)* 79264
InGaN, MOCVD, In incorporation, growth press. effect 68226
InGaN, MOVPE growth, quasi-thermodyn. model *(English)* 79312
InGaN, MOVPE, supersaturation-depend. step-behavior 101382
InGaN MQW LD charact., wavelength depend. 82632
InGaN MQW, RF MBE, H flux modulation 79242
InGaN MQW hexagonal microfacet lasers, room-temp. lasing by current injec-tion 105326
InGaN MQW laser, deeply etched air/nitride DBR, single mode oper. 105348
InGaN MQW laser, differential gain charact. optim., tuning 117266
InGaN MQW, reson. cavity, blue/near UV LED, lasers 82424
InGaN MQWs, chem. mapping 101325
InGaN MSM photodetectors, Schottky contact metals 86511
InGaN QD, high dens., MOCVD, PL 90402
InGaN QW, MBE, PL study 124861
InGaN QW, light emission optimisation 126189
InGaN QW struct., high-perform. laser operation, band-states model 117265
InGaN SQ wells, amber LED, EL/PV spectra, PL 82407
InGaN SQW blue/green LED, current-modulated electrolum. spectr. 104991
InGaN, UV LED, high power, MOVPE on patterned sapphire substr. 93424
InGaN act. layers, radiative recomb. proc. in GaN-based LEDs 82389

III-V semiconductors continued
InGaN based LED, nanostructures, radiative recomb. 82426
InGaN epilayer, high quality cubic-phase, MOCVD growth *(Chinese)* 79316
InGaN epilayer, structural anal. & PL, XRD/EXAFS 103047
InGaN epilayers, time resolved PL spectra, low In comp. regime 126327
InGaN films, MOCVD grown, RBS/channeling, photolum. studies *(Chinese)* 101362
InGaN films, MOCVD/MBE grown, photocond., photolum., Stokes shift 71514
InGaN films, high In content, PL/structural props. comparison 127926
InGaN films, plasma-assisted MBE, photoluminesc., LEDs 104997
InGaN films, strain-relax., MOCVD grown, opt./struct. props. 126072
InGaN green LEDs, MOVPE growth on Si(111), charactn. 105002
InGaN growth at low temp., In incorporation kinetics 114277
InGaN laser struct., opt. loss, spatially/spectrally resolved meas. 105270
InGaN lasers, unstable resonator, fundamental mode operation 93600
InGaN layers, indium content, LEDs, PL peaks, RBS, EXAFS, EDX 128018
InGaN micro-size light emitters, emission wavelengths 105024
InGaN, multi QW LD, pump-probe spectrosc. 71809
InGaN nanoscale dots, MOCVD, PL, AFM, TEM 124991
InGaN narrow stripe self-pulsating LDs, optim. for DVD 71844
InGaN ridge-type MQW LD, selective area re-growth 128251
InGaN, tailorable band-tail, band-state model, QW laser appl. 80705
InGaN thin films, MOVPE, In rich region form. at hexagonal pits, CL, SEM 124986
InGaN, time-resolved electroluminesc., exciton recomb., LED meas. 82318
InGaN, white light source based LEDs 82421
$In_{0.06}Ga_{0.94}N$ MQW LD lased at 400 nm, localized excitons 93602
$In_xGa_{1-x}N$ SQWs, opt. emission/In disordering, coaxial impact collision ISS 80871
$In_xGa_{1-x}N$, structural/elastic props. modeling, DEFT 91678
$In_xGa_{1-x}N$ tri-halide vap.-phase epitaxy using $GaCl_3/InCl_3$, thermodyn. 101355
InGaN:Mg/Au/Pd(Ni), low p-type contact resist., Ni-Au/Pd-Au metallisation 80916
InGaN:Zn microcrystals, Pure and doped, PL excitation spectrum, nitridation 80725
$In_xGa_{1-x}N$:Mg epitaxial MOCVD films, elec./opt. charact. 69513
InGaN/AlGaN:Zn,Si DH green LED, LP-MOVPE growth *(Chinese)* 82410
InGaN/AlGaN(GaN), blue/green LED, MOVPE *(Chinese)* 117002
InGaN/Cu, MQW/LD, laser lift-off, MOCVD 93597
InGaN/GaN DH, localized states, photoreflectance, PL, CL 91761
InGaN/GaN DHBT fab., MOVPE, ECR plasma etching 81238
InGaN/GaN DHBT, p-InGaN base, high current gain, MOCVD/plasma etching fab. 92306
InGaN/GaN, LD growth on sapphire, morph. evol., MOCVD, disloc. 82692
InGaN/GaN LDs, self-consistent simul. & anal. 105347
InGaN/GaN LED, elec./opt. props. charactn., MOVPE 82425
InGaN/GaN LEDs, Si-doped $In_{0.3}Ga_{0.7}N$/GaN short-period superlattice tunneling contact layer 127973
InGaN/GaN, MOCVD growth, materials/devices, PL, EL, reviews 79304
InGaN/GaN MQW, In aggregation, phase separation, HRTEM 91835
InGaN/GaN MQW LED with tunnel contact jns., lateral current spreading 71579
InGaN/GaN MQW LEDs, failure mechanisms rel. to fab. 93429
InGaN/GaN MQW LEDs, temp. depend. of radiative recomb. zone 82390
InGaN/GaN MQW LEDs transm. expt. in plastic opt. fiber LAN *(Japanese)* 93085
InGaN/GaN MQW, air bridged lateral epitaxial growth, recomb. dyn. 80872
InGaN/GaN MQW, below gap states excitation, two wavelength excited PL 80867
InGaN/GaN MQW, different In comp., struct./opt. props. comparision 126188
InGaN/GaN MQW, growth interruption, opt./struct. props. 91813
InGaN/GaN MQW heterostructs., MBE, struct./PL props. 124868
InGaN/GaN MQW, interrupt growth method, PL props. 91833
InGaN/GaN MQW monolithic white LEDs, wavelength emission tuning 127962
InGaN/GaN MQW, photoluminesc., exciton localization 103122
InGaN/GaN MQW props., barrier growth temp. effects, XRD and photolum. meas. 115421
InGaN/GaN MQW struct., PL, sapphire substrs. 91834
InGaN/GaN MQW struct., time resolved PL, MOCVD 80876
InGaN/GaN MQW, structural props., In distrib., PL 91832
InGaN/GaN MQWs, PL, MOCVD, excitation dens. 80873
InGaN/GaN MQWs grown on Ga-polarity GaN by plasma-assisted MBE 68173
InGaN/GaN, NH_3-MBE, polarity control 90306
InGaN/GaN, QDs, QWs, MBE, UV to red light emission 90334
InGaN/GaN QW, MBE, PL obs. 68192
InGaN/GaN QW, MOCVD, in-situ thermal etching 80821
InGaN/GaN QW SEL, SiO_2/ZrO_2 multilayer mirrors 71810
InGaN/GaN QW, indium segreg., PL, stimulated emission, phase separation 80875
InGaN/GaN QW microdisk LED, size depend. 71582
InGaN/GaN QW struct., RTA effects, MOCVD, phase separation, PL, disloc., strain relax. 91944
InGaN/GaN QW struct. emission mechanism, PL, LD, LED 80865
InGaN/GaN SQ wells, RF-MBE growth, charactn. 79258
InGaN/GaN SQW struct., green LED *(Chinese)* 93395
InGaN/GaN, VCSEL design, opt. elec. model, diagonal current injection 93683
InGaN/GaN based LEDs/MQW LD, disloc., external quantum efficiency 93404
InGaN/GaN based-QDs, growth/phys., optoelectronic appls., PL, QD lasers 90401
InGaN/GaN, blue LED, MOCVD on Si substr., AlAs seed layer 82422
InGaN/GaN blue LEDs, MOVPE, EL & PL spectra 82378
InGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
InGaN/GaN dual-wavelength blue/green MQW LED 127969
InGaN/GaN heterostruct., spectrosc. ellipsometry, parametric dielec. fn. model, PL 126126
InGaN/GaN multilayer,MOCVD growth interruptions, opt./struct. props. 91855
InGaN/GaN strongly biased QW, piezoelec. field, tunneling times meas. 103115
InGaN/GaN violet LD, low-press. MOVPE, CW operation 105349
InGaN/GaN:Mg blue LEDs, MBE, charactS. 71602
InGaN/GaN:Mg/Au/Pd(Ni), low p-type contact resist., Ni-Au/Pd-Au metallisation 80916
InGaN/GaN/Al_2O_3 heterostruct., MBE/MOVPE growth, structural/opt. props. correl. 126125
InGaN/GaN/sapphire, MOCVD-grown, interface props., cathodolum. anal. 80853
InGaN/SiC MQWs, carrier lifetime, PL energy shift, QCSE, free carrier screening 80863
InGaN/SiC QW LEDs, high-brightness, growth mode, strain depend. 104998
$In_{0.3}Ga_{0.7}N$/GaN QW growth and their opt. and structural props. 114353
$In_xGa_{1-x}N$/GaN DH, carrier dyn., femtosecond pump-probe spectra/TRPL 69637
$In_xGa_{1-x}N$/GaN LEDs, time-resolved PL 128019

III-V semiconductors continued
$In_xGa_{1-x}N$/GaN QW, InGaN comp./growth rate, MOCVD 126137
$In_xGa_{1-x}N$/GaN heterostruct., thermodyn. and nucleation kinetics 79198
InGaN-GaN MQW LEDs, InGaN current-spreading layer, enhanced ou power 128015
InGaN-GaN-AlGaN VCSEL laser design, 3D elec.-thermal-opt. simul. 128
InGaN-GaN(AlInGaN) multiquantum-well LEDs, opt. charact. 71603
InGaN-based LED, temp. depend. of elec.-field induced photolum. 71586
InGaN-based LEDs, review 105029
InGaN-based LEDs/lasers, wafer bonding/laser lift-off integrat. 128033
InGaN-based UV LED excited ZnS-based phosphors, white luminesc. 823
InGaN-based light emitting devices, emission mechanism *(Japanese)* 8236
InGaN-based white LED lighting, high-efficiency, illum. charactS 89441
(InGa)(NAs)/GaAs struct. emitting in 1-1.6 μm wavelength range 93661
InGaP HBT, reliab., pulsed elec. stress 126661
InGaP PHEMTs for wireless power appls. 102646
InGaP emitter HBT variable-gain LNA, 2 GHz mobile phone appl. 80381
InGaP emitter HBT, variable-gain LNA, mobile phone 90756
InGaP emitter HBTs, fab. and long-term reliab. 126680
InGaP field-modulating plate MESFET, high breakdown volt., RF power form. 91256
InGaP films, OMVPE, superlattice ordering, PL obs. 103045
InGaP, high-radiation-resistant solar cells for multijunction solar cells 1343
InGaP solar cells, radiation hard, DLTS obs. 134408
InGaP vis. lasers, materials/MOVPE technol. 93666
InGaP:C photoconductive gate, picosecond response 127910
InGaP/(In)GaAs modul.-doped heterostruct., GSMBE, HEMT/HHMT ap 101242
InGaP/GaAs DHBT, base-collector design optimisation 81240
InGaP/GaAs DHBTs with composite collectors for power amps. 115855
InGaP/GaAs HBT current gain charactn., heavily doped base effects an 115868
InGaP/GaAs HBT, extended ledge ballasted, thermal charactS. 126664
InGaP/GaAs HBT, improved large-sig. model, param. extraction 92304
InGaP/GaAs HBT power amp. MCM for 1.95 GHz W-CDMA handsets 964
InGaP/GaAs HBT transimpedance amp., capacitive peaking tech. 114631
InGaP/GaAs HBT/PIN photoreceiver, OEIC technol. 105035
InGaP/GaAs HBTs, implant isolation and base contact abnormalities influ. perform. and reliab. 126682
InGaP/GaAs, ICP plasma etching, end-point detect., opt. emission spec 103363
InGaP/GaAs bipolar transistor, multiple NDR switching 92300
InGaP/GaAs cpd. solar cell, AM0 conc. operation 112910
InGaP/GaAs dual-jn. solar cell mfg. experience 112936
InGaP/GaAs epitaxial layers, super-ordered domains, diffr. anom. fine str 69525
InGaP/GaAs fully self-aligned HBT proc., incorp. of alloy-through passivati ledge proc. 126679
InGaP/GaAs heterojunction phototransistors, opt. charactS. 82360
InGaP/GaAs high power HBTs for 2.4 GHz transmitter appl., design and qual cation 125727
InGaP/GaAs power heterostruct. emitter bipolar transistor, microwave perfo 125701
InGaP/GaAs reson. tunneling bipolar transistors, multiple NDR 70038
InGaP/GaAs reson.-tunneling HBT with superlattice struct. 70032
InGaP/GaAs, selectively-grown on Si, PV-photoelectrolysis cells appl. 7939
InGaP/GaAs single jn. solar cells, Si substr., graded GeSi buffers 112918
InGaP/GaAs/GaSb cell-interconnected-ccts., line-focus concentrator arra 112931
InGaP/GaAs/Ge multi-jn. solar cell efficiency improvements, epitaxial 112915
InGaP/GaAs/Ge radiation-hard triple-jn. space power solar cells 111362
InGaP/GaAs/InGaAs camel-like FET for high-breakdown/low-leakage/hig temp. appls. 103902
InGaP/GaAs/InGaAs lasers, elec., opt. props., He^+ ion irrad. 93643
InGaP/GaAs/Si PV/PEC cells, selective heteroepitaxy, H_2 generation from su light 112956
InGaP/GaN heterostruct., wafer fused, interface struct./PL 115473
InGaP/$In_{0.33}Ga_{0.67}As$ p-HEMT grown on patterned GaAs, microwave and noi perform. 91282
InGaP/InGaAs HEMT TW amp. with CPW technol., 70 GHz bandwidth 1257
InGaP/InGaAs, pseudomorphic HEMT, highly strained, growth on GaA charactS. 126900
InGaP/InGaAs/GaAs pHEMT, SSMBE grown, deep level effects on D charactS. 115950
InGaP/InGaAs/GaAs pHEMTs, 150 nm gate length, DC charactn. 70201
$In_{0.5}Ga_{0.5}P/In_{0.2}Ga_{0.8}As$ dual-gate PHEMTs, charactS. 126885
$In_{0.5}Ga_{0.5}P/In_{0.33}Ga_{0.6}As$ PHEMT, LF noise 126875
$InGaP_2/GaAs/Ge$ space solar cells, radiation response anal./modeling 112920
InGaP-Au/Cu Schottky contact, thermal reliab. and MSM photodetector app 69708
InGaP-GaAs HBT Doherty amp. with high efficiency over wide power ran 91264
InGaP-GaAs HBTs, InGaP ledge effects on reliab. 92315
InGaP-GaAs HBTs under temp./current stress, charactn. 70042
InGaP-GaAs HBTs, waveform charactn./modeling of dyn. charge behavi 91245
InGaP-GaAs solar cells for NASA RAINBOW concentrator 112929
InGaP-HBT emitter-mesa proc., optimized surface morph. 70039
InGaP-HBTs, barrel type MOVPE reactor for 6″ epitaxial wafers 68259
InGaP-InGaAs HEMT monolithic resistive mixers, Q-, V- and W-band desig 80368
InGaP-InGaAs dual-jn. solar cell develop. 112953
InGaP-emitter HBTs, reliab. 70041
InGaP(As) layers/MQW-structs., solid source MBE growth, laser appls. 1248
InGaPSb/GaAs-based HEMT and HBT, MOVPE, elec. charactS. 115956
InGaSb, virtual substrs., LPE growth 79380
$In_xGa_{1-x}Sb$, melt epitaxial growth, 7-12 μm cutoff wavelength 68376
InMnAs/GaAlSb heterostruct., photoinduced magnetism 91765
InMnAsSb, MOMBE growth, LW region sens.-memory device appl. 101269
InN MBE growth and elec. props., AlN buffer layer effects 101299
InN, electron runaway in strong elec. fields 126029
InN epilayers, In content inclusion, substr.-surface depend., surface polari MOVPE 90398
InN epilayers, MOVPE, growth rate, limiting proc., NH_3 decomp. 90396
InN film, low-temp. epitaxial growth 114255
InN films, MBE on InN buffer layers, disloc. densities, XRD 79229
n-InN films, ethylene glycol in water electrolyte, photoassisted anodic etchi 81101
InN films, low temp. growth, annealing, RF plasma excited MBE growth 9193

semiconductors continued
N, luminesc. spectrum, high elec. fields 91667
N, resist., band-gap shift, metal-nonmetal transit. 115321
N whiskers, CVD investigs. 101149
N/AlN multiple wurtzite QD, 3D strain field calcs. 91791
N/Ga(In)P, MOCVD, substr. surface nitridation suppression 90397
N/GaN heterostruct., flow modulation epitaxy, MOCVD, HEMT 90454
N/Si heterojunctions, MBE, hole-barrier struct. 90301
NAs, electronic struct., pseudopotential methods 91639
P 2D nanostructures, two-time laser holography fab. 115794
P 4x4 monolithic opt. cross connect, insertion loss 120329
P BH laser, MOVPE growth, in situ etching 117224
P CVD optoelectronic struct., scanning spreading resist. microscopy 103257
P DFB laser, wavelength stabil., non-hermetic package 117209
P DHBT, X-band/Ka-band power amps. 114981
P DHBT, lin. X-band operation 115865
P DHBT technol. 115862
P HBT IC technol./appls. 70291
P HBT ICs, proc. integrat. 116020
P HBT OEIC, photonic ADC 128030
P HBT VCO, freq. tuning range 101843
P HBT VHSICs, opt. commun., prediction extraction modelling scheme 04084
P HBT fab. for 40 Gb/s commun. systs. appls. 70047
P HBT prod. proc. based on MBE 127016
P HBT refl. grid amp., heat sinking 101793
P HBT, unilateral power gain, dyn. base widening 92309
P HBTs, appl. of HBTCAD software incl. HBTSIM simulator and HBTANA hodel 81214
P HBTs, end-of-life reliab., RF modelling 115851
P HBTs in next-generation telecom devices *(Japanese)* 114971
P HBTs, telecom devices *(Japanese)* 115872
P HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
P HEMT D-type flip-flop and MUX ccts., 40 Gbit/s, design tech. 90854
P HEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
P HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
P HEMT, MM-wave on-wafer testing, room & cryogenic temp. 80328
P HEMT MMIC LNA, radioastronomy 69190
P HEMT MMIC UWB amp. 69187
P HEMT MMIC amps., 85-115 GHz, ultra-low-noise design 69178
P HEMT MMIC freq. doubler, 164 GHz, design and perform. 80332
P HEMT MMIC oscillators 69191
P HEMT MMIC requirements for satellite based commun. 115012
P HEMT X-band/Ka-band amp. for Deep Space Network 115013
P HEMT asymmetric T-gate recess fab., single-step patterning using GA 02410
P HEMT cryogenic LNA 68604
P HEMT high-speed IC, opt. fiber commun. 120165
P HEMT preamplifier, flat transimpedance gain, high-speed fiber optic com-hun. syst. 125240
P HEMT technol. for HF analog appls. 114974
P HEMT ultra broadband low power MMIC amp., 1-50 GHz, design 125787
P HFET, OEIC receiver array 105034
P HJFET, superlattice-inserted, V-band MMIC LNA 115008
P ICP etching using N_2/H_2 69854
P LNA and phase switch MMICs, pseudo correlating mm-wave radiometer 02698
P, LP-MOVPE, SiH_4 doping efficiency, carrier gas/group-V precursor effect 15612
P, LP-MOVPE, diethylzinc doping efficiency 115613
P MISFET, oxide-free insulated gate struct. 115904
P MMIC HEMT medium power amps., 65-145 GHz, designs 102686
P MMIC radiometer 69173
P MMIC technol. LNA module, 183-GHz conical-scanning microwave imager ounder 102697
P, MOMBE growth 114275
P MOVPE based material for MM and subMM wave generation and amplif. 58298
P, MeV As and P ion implanted and annealed, elec. and opt. props. 126018
P QD by GSMBE on GaP, radiative recomb. 69692
P RTD/HFET MOBILE depth-2 full-adder cct. 114708
P, SI substrs. 115312
P SOA-based 4 × 4 switch matrix, spectral gain/noise fig. 93640
P act. device/varactor MMIC HEMT VCO, 80 GHz 102724
P and InGaAs etching using, HBr high dens. ICP plasma 126423
P based QW laser, low energy ion implant. fab. 93626
P based electroabsorption-modulated tunable DBR laser transmitter, long-haul commun. appls. 131371
P based materials, all-solid-source MBE growth for fiber telecomms. 116737
P based strained MQW laser structs., heterointerface optimiz., MOVPE/MOMBE 115400
P bulk SI samples, radiation detector appls., review 132487
P bulk high field carrier transport, Monte Carlo modeling 103022
P, carrier profiling, scanning spreading resist. microscopy 103002
P cryst., LEC growth, etch pit dens. 114221
P, damage evol., track form., during swift Kr/Xe ion irrad. 115311
P devices, 2D carrier profiling, SSRM 115317
P double intracavity contacted VCSEL, lattice matched growth 105356
P doubly stacked layer self-assembled QD, magnetophotolum. studies 91770
P, dry etching using N_2 containing chem., damage charactn. 126372
P, effect of VO_2^+ cation on HNO_3 oxid. 103399
InP, elec. isolation by ion bombard., dose depend., thermal stabil. 80734
P, elec.-field-induced electron-transit-time reson., MM radiation generation 30676
P, electroabsorption transceiver concepts and syst. appls. 96678
P epitaxial films, chloride VPE growth on GaAs substr. 114341
P etched waveguides, monolithically integrated planar waveguide etched grating devices 82442
P etching with H_2-BCl_3-Ar plasma 69891
P, femtosecond-pulse laser machining, surface damage thresholds 93920
P, film, gas sens., atmos. pollution meas. 109768
P films, MOCVD on InP non-planar substrs. 114359
P guiding layer, photonic cryst. ultrashort bend waveguide 116684
P heterostruct. laser, rapid thermal MOCVD growth 114344
P, high-press. mag. LEC cryst. growth, P injection 79174
P high-speed electronics, opt. fiber transm. syst. 131373
P, implant. induced selective chem. etching 92048
P, implant.-induced carriers/depth profiles correl., annealing 91958
InP, implant.-induced struct., EXAFS 80760
P islands, seeding on InAs QD templates 80818

III-V semiconductors continued
InP laser, EAM tuning, WDM telecomm. syst. 117231
InP lasers, nanoscale patterning, FIB enhanced etching 128305
InP, lattice param. deviation, horiz. Bridgman method under controlled P vap. press. 69505
InP layers, MBE growth, surface reconstruction 90293
InP, low damage sidewall form. by ECR-RIE using CH_4/H_2 115639
InP low-high-low IMPATT diodes, n-type/p-type device comparison 92281
InP, melt growth techs., computer simul. 124800
InP membrane microlasers, microdisk and photonic cryst. cavity lasers 117234
InP mm-wave HEMTs, large-sig. LUT model, non-quasi-static and impact ion-isation effects 91260
InP mm-wave HEMTs, look-up table based large-sig. model, impact ionization 114977
InP monolithic VCSEL with air-gap Bragg reflectors, room-temp. operation 82599
InP, n-type/p-type, proton bombard., elec. isolation 69508
InP nanoparticles in SiO_2 thin films, prep., struct./opt. props. 80701
n-InP nm-sized Schottky contacts, current transport and C-V characts. 91860
InP opt. networking components for 40 Gbit/s and beyond, opt. subsystem 96669
n-InP, oxide growth/stabil., coupled transient photocurrent/surface anal. 103359
InP, ozone-treated, surface oxide layer 69835
InP, phonons, acceptors, THz absorpt. spectra 126037
InP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
InP, porous, microstruct., PL spectra 126013
p-InP pseudo Schottky barrier diode, NO_2 gas sens. 97558
InP, related materials, conf., Nara, Japan (May 2001) 113237
InP selective growth on FIB-modified GaAs surface by hydride VPE 114407
InP self-assembled QD embedded in $In_{0.5}Al_{0.5}P$, MOCVD 68216
InP self-assembled QDs embedded in InAlGaP, MOCVD growth on GaAs 115403
InP self-assembled QDs embedded in InAlP grown on GaAs, growth and charact. 68290
n-InP, self-induced voltage oscills. during anodic etching, 3D microstruct. appl. 92052
InP semicond. residual stress, lifetime prediction model 125154
InP single cryst., bulk growth, micromech. based constitutive rels. 124803
InP single cryst., horiz. Bridgman growth, controlled P vapour press. 101166
InP substr., V-groove micromachining for p-i-n photodetector appls. 92084
InP surface damage, methane-H_2 RIE-induced 92094
InP surface, deep dry etching, methane-H_2-Ar gas mixture 126364
InP, surface passiv., organic thiols/polyimide 126391
InP transferred substr. HBT technol. continuous-time Σ-Δ A/D converter 125577
InP tunable Fabry-Perot filter, involuntary underetching 82272
InP wafers, ultrashort-pulse laser ablation in air 81074
InP:Dy, OMVPE growth and props. 79287
InP:Er, implanted, lattice location, emission channeling obs. 81039
InP:Fe, VGF growth, nuc. radiation detector appl. charactn. 97991
InP:Fe cryst., thermally tunable double-peak phase-conjug. reflectivity 82818
InP:Fe epitaxial layers, dopant distrib., time-resolved photolum. 91670
InP:Fe, heavily compensated implanted samples, $Fe^{2+/3+}$ trap conc. 91967
InP:Fe, high temp. ion implant., high Fe solubility 81013
InP:Fe holographic cryst. US photorefr. sens. 131896
InP:Fe,Ru,Zn films, dopant diffusion, current-volt. studies 115554
n-InP:H, hydrogen neutralization effect, defect states 80711
InP:Mg^+, implanted, RTA, lattice recovery, Raman obs. 80981
InP:Mn eval. and use for particle detectors 121493
InP:Ru LP-HVPE layers, elec. charact. 91659
InP:Ru growth by low-press. hydride VPE 101322
InP:S cryst. growth, VGF tech. 114222
InP:Si^+, implanted, free-carrier conc., PL method 80735
InP:Ti eval. and use for particle detectors 121493
p-InP:Zn, plasma-induced defects, elec. props., migration mechanism 115314
n-InP/Al_xMo_{1-x} alloy electrode syst. for thermally stable ohmic contacts 115430
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
InP/GaAs vert./lateral heterog. integrat. on wafer surface 115411
InP/GaAsSb/InP NpN DHBTs, ultrahigh perform. staggered lineup 114975
InP/GaAsSb/InP double HBT, current capability and breakdown voltage 92308
InP/GaInAs submicron HBT with buried W wires, base-collector capacitance reduction 103773
InP/GaInP red light emitting self-assembling QD lasers 82665
InP/$In_{0.5}Al_{0.3}Ga_{0.2}P$ photopumped red-emitting QD heterostruct. lasers 82626
InP/$In_{0.5}Al_{0.5}As/In_{0.5}Ga_{0.5}As$/InAsP M-HEMT, GSMBE growth 115946
InP/InAlAs/InGaAs HEMT, fab. technol. 115952
InP/InAlAs/InGaAs HEMTs, hole accumulation, source resist. 115954
InP/InGaAs DHBT master-slave D-type flip-flop, ETDM syst. 79856
InP/InGaAs DHBT, microwave noise and small-sig. params. scaling 103777
InP/InGaAs DHBTs with polyimide passiv., DC and microwave noise transient behavior 114988
InP/InGaAs HBT, ammonia plasma surface passiv. 115861
InP/InGaAs HBT, common-emitter offset voltage, Gummel-Poon model 92312
InP/InGaAs HBT degrad. induced by SiN passiv. 115859
InP/InGaAs HBT, gain limitations, surface level pinning 81209
InP/InGaAs HBTs, elec. props./transport mechanisms, 4.2-300 K 103768
InP/InGaAs HBTs, vel.-modulation and transit-time effects 103781
InP/InGaAs HPT/HBT MMIC photoreceiver, fibre radio distrib. syst. 80402
InP/InGaAs PNP HBT, MOCVD growth, HF operation 115858
InP/InGaAs QW IR photodetectors, strain effect on operating wavelength 131911
InP/InGaAs TW electroabsorption modulators, electrode width effects 116811
InP/InGaAs abrupt HBTs, Monte Carlo and extended drift-diffusion simul., comparison 81213
InP/InGaAs abrupt HBTs, comparison between Monte Carlo and extended drift-diffusion models 70037
InP/InGaAs interface, Zn segreg. use for as-deposited ohmic contact form. 103167
InP/InGaAs mm-wave self-oscillating heterojunction bipolar phototransistor oscillators 125827
InP/InGaAs p-n jn. form., SOG, diffusion proc. 69828
InP/InGaAs self-aligned HBT, crystallographically defined emitter contact technol. 115857
InP/InGaAs short-period modulation-doped superlattices, electronic scatt. meas. and calcs. 91819
InP/InGaAs superlattice-emitter reson. tunneling bipolar transistors 92299
InP/InGaAs ultrahigh-speed DH DHPTs for optoelectronic mm-wave MMICs 131383
InP/InGaAs:C HBT, RF-noise params., modelling/cryogenic temp. depend. 114980

III-V semiconductors continued
InP/InGaAs:C HBTs, consistent small-sig. and RF-noise param. modelling 102627
InP/InGaAs/InAlAs MSM/HEMT OEIC struct., GSMBE growth 101238
InP/InGaAs/InGaAsP integrated laser heterostruct., ion implant. mask fab. 93625
InP/InGaAs/InGaAsP integrated laser-modulator device fab., post-growth proc. 117289
InP/InGaAs/InGaAsP strained QW lasers, fab. & perform., GSMBE growth 105291
InP/InGaAs/InP DHBTs, high breakdown voltage, 300 GHz F_{max} 114976
InP/InGaAs/InP photonic waveguide structs., Br_2-N_2 reactive beam etching 116728
InP/InGaAs/InP transferred-substr. DHBTs with f_{max}=425 GHz 102651
InP/InGaAsP LD, low internal loss, ICP etching fabr. 117219
InP/InGaAsP double fused vert. coupler beam splitter 116747
InP/InGaAsP multimode interf. coupler, 1×8 channel power splitter 71339
InP/InGaAsP multimode interf. couplers, access guide first-order mode effect 116681
InP/InGaAsP planar waveguide struct. with 3D rect. defect, mode propag. interact. 93109
InP/InGaAsP vert. coupled crossed waveguide opt. ADM 120302
InP/InGaP/InGaAs RTD relax. oscillator, opt.-injection locking 125260
InP/InPGaAsP slab-waveguide based 2D photonic-crysts. 127795
InP/Pd MOS Schottky diode hydrogen sens., hydrogen sensitivity 109790
InP/InGaAs/InP metamorphic DHBT, DC charactn./transport props., 300-400 K 115854
InP/InGaAsP high-power lasers, output charact., opt. commun. appls. 105313
p-InP/poly(pyrrole) interface, current transport 91865
InP-GaAs metamorphic HBTs, microwave noise and power perform. 102630
InP-HBT differential VCO with wide tuning range, SONET/SDH fiber optic appls. 91338
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
InP-InGaAs photovaractor for opt. controlled microwave ccts. 71563
InP-InGaAs reson.-cavity enhanced photodetectors, high BWE product 97236
InP-InGaAs-InGaAsP DHBT proc. develop. for power appls. 92317
InP-InGaAs-InP QW 2DEG channels, dissipation, flucts./ultrafast procs. 91849
InP-InGaAs(P) DHBTs, noise charact., emitter orient. effects 92316
InP-InGaAsP MQW DBR vert. cavity SOAs 105319
InP-InGaAsP SOA, wideband steady-state model 71787
InP-InGaAsP VCSEL arrays with DBR, fab., WDM appls. 128225
InP-InGaAsP pass. waveguides, WDM crosstalk obsv. 75014
InP-InGaAsP vert. coupled opt. ADM 74946
InP-Si direct wafer bonding, cryst. defects charactn. 115475
InP-based BH VCSELs, 1.55 μm, low threshold current 105344
InP-based HBTs, heavily doped, manufacturable MBE proc. and charact. 125730
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 114992
InP-based MOEMS opt. microcavities fab./design 93215
InP-based RTD/HEMT microwave freq. divider IC, high-speed operation 115006
InP-based VCSELs for 1.55 μm wavelength range 117212
InP-based arrayed waveguide gratings, crosstalk 93070
InP-based high-speed devices, passiv. of epitaxial multilayer structs. by Si layer *(Japanese)* 115631
InP-based monolithic HEMT diode bal. mixer for 100-140 GHz 80364
InP-based monolithically integrated RTD/HBT MOBILE for logic ccts. 114709
InP-based multi-QW solar cells, proton irrad., EBIC, cathodolum. 112959
InP-based optoelectronic device mfg., high dens. plasma etch procs. 128032
InP-based photoreceiver OEICs for 40 Gb/s TDM systs. 117045
InP-based submillimeter-wave HEMTs, asymmetric gate-recess engng. 102647
InP-based ultra-fast electroabsorption modulator integrated DFB lasers 117226
InP-lattice-matched 1.55 μm VCSEL, AlGaAsSb-AlAsSb DBR mirrors 128231
InP-monolithic resistive sens., air quality eval. 86720
InP(001), As/P exchange quantum wires/dots form. 68202
InP(001), two-step As-desorpt. during MOCVD, surface photoabsorption study 124872
InP(100) surface, nitridation studied by AES and EELS 92012
InSb, Auger recomb. coeff., IR-FIR dyn. plasma reflectivity 115305
InSb Compact staring imager 109655
InSb FPA based mil. miniature modular integrated sight 77102
InSb FPA midwave-IR snapshot imaging spectrometer 131963
p-InSb, Hall effect, magnetoresist. 103011
InSb IR detector, substr. film stress *(Chinese)* 109570
InSb buffer layer effects in InP based MIS struct. 80942
n-InSb doped piezoelec. semiconds., electrostriction effect on parametric dispersion/amplif. 93792
InSb films, MBE high-quality growth on Si(111), charactn. 68175
InSb films, MBE on GaAs, magneto-resist. effect 101270
InSb jn., Ka-band circulator 80182
InSb layers, micromachined opt. concentrators fab. for IR LEDs 71368
InSb multielement IR sources with alternating contrast 117005
InSb radiation hardness, preliminary irrad. infl., detector appl. 126325
InSb surface magnetoplasma waves, mag. field effect on excitation efficiency 80675
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
p-InSb:Te, elec. charact. 91618
K/GaAs(001), nonmetal-metal transit., modulated photovoltage changes 103179
Mg/PTCDA/Se-GaAs Schottky contacts, soft X-ray photoemission spectr. 91861
MgO films on p-GaAs(100), microstruct./elec. props. 68187
MgO:NiO matched emitter, TPV energy conversion, GaSb cells 89307
MnSb/GaAs MBE, Ga surface segreg., core-level photoemission spectra obs. 114283
MnSb/GaAs granular MBE films, room temp. photoinduced magnetoresist. *(Japanese)* 80672
Na/GaAs(001), nonmetal-metal transit., modulated photovoltage changes 103179
Nb/InAs based supercond.-semicond.-supercond. struct., ballistic refl. at side gate 70914
Nb/InGaAs/InP/Nb Josephson jns., carrier transport 70908
Ni/Au low-resist. ohmic contact to Mg doped $Al_{0.15}Ga_{0.85}N$/GaN superlattices 80909
Ni/Au/p-GaN contacts, annealing effects 103161
Ni/Au/p-GaN ohmic contact, microstruct., elec. props. 69711
Ni/GaN, defect-induced lateral chem. heterog., interface electronic props. 126213
Ni/Ti/GaAs(001) films, RF magnetron sputtering, struct. anal. 124815
Ni/n-GaAs jns., Schottky barrier height, adsorbed O effect 115431
NiAu-GaN, Schottky barrier height & surface state dens., C-V/PL meas. 126201
NiFe/Cu(InAs), elec. spin injection in semicond. and metal 80905

III-V semiconductors continued
NiFe/InAs-2DEG/NiFe multiple jns., spin injection expt. 69628
NiFe/InGaAs/InAlAs four-terminal struct., ballistic spin transport 126214
$Ni_{80}Fe_{20}$/GaAs Schottky barrier interface, spin-polarized electron trans 126211
O_2/GaAs(100) interface, electron-beam-induced reacts. 103419
Pd/$Al_{0.11}Ga_{0.89}N$ Schottky diodes, thermal stabil., annealing, XRD, AFM, 81204
Pd/Au/p-GaN, ohmic contact form., cryst. ordering 126207
Pd/GaAs:H,S Schottky contact, sulfidation/thermal hydrogenation 103159
Pd/p-GaN:Mg ohmic contacts, elec. props. 69733
Pt/GaN Schottky diodes, C-V charact., tunnelling 103756
Pt/GaN Schottky diodes, H_2/CO/NO/hydrocarbon gas sens. 86748
Pt/Ru/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal st 80917
Pt/p-GaN:Mg, ohmic contacts, surface treatment, low resist./thermal st 80917
Pt-GaN Schottky diodes, high temp. I-V charact., ambient gas effects 922
ScN thin films, plasma assisted PVD, reactive sputtering, struct., opt. pr 90540
ScN/GaN heterojunctions, fab., elec props. 91763
ScN/metal contacts, growth, elec. charact. 91872
Si/AlN/GaN layers, growth & elec./opt. charact., MOCVD 79298
Si/GaAs hybrid pixel detectors, med. X-ray imaging appl. 97993
SiN_x:H/InP interface, N_2 rem. plasma cleaning of InP, elec. charactn. 1154
Si_3N_4/AlGaN/GaN MISHFETs 126802
Si_3N_4/Si/GaAs MIS capacitors, phys., elec. props. 126231
Si_3N_4/c-GaN/GaAs passiv. struct., prep., struct./opt. props. 103300
SiO_2/GaAs, penetration of at. H from gas phase 103316
SiO_2/Gd_2O_3/GaN, MOSFET, perform. anal. 103825
Ta/AlGaN/GaN, ohmic contacts for HFET, contact resist. 69706
Ta/Ti/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
Ti/Al/GaN:Si contacts, struct., AES/TEM obs. 103173
Ti/Al/Pd/Au/n-GaN multilayer contacts, elec. charactn., metall. anal. 91870
Ti/Al/Pt/Au/GaN ohmic contacts, elec. charact. 91862
Ti/Ta/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
TiB_x-GaAs contact struct., solid-state reacts., RTA 115422
TlInGaAs layers, GSMBE growth on GaAs, temp. stable LD appls. 11427
TlInGaAs/InP DH LEDs, gas source MBE growth, temp. stable wavele 116995
TlInGaAs/InP DH struct., GSMBE growth, WDM syst. appls. 101239
$Zn_{0.45}Cd_{0.55}Se$/InP MOCVD growth, surface defects, substr. deoxidization te effects 68223
$Zn_{0.97}Mn_{0.03}Te$-GaAs based QW heterostruct., opt. injection of spin-polarized riers 91767
ZnO/GaN heterojunction, polarity control and valence-band offset, UPS and 101200
ZnO/GaN:Mg heterostruct., edge UV luminesc., N_2 plasma annealing eff 91744
ZnO/GaN/α-Al_2O_3, high quality heteroepitaxial structs. CVD growth 79321
ZnSe MBE growth on GaAs(111)B surfaces, RHEED obs. 124827
ZnSe/GaAs heteroepitaxy, defect form., Monte Carlo simul. 101278
ZnSe/GaAs heterovalent interfaces in MBE, surf./interf. struct. 79256
ZnSe/GaAs interface, thermal element diffusion, SIMS anal. 69632
ZnSe/XGaAs/GaAs (X=Al,In) epilayers, MBE, cryst. quality, surface segr 101273
para-hexaphenyl on GaAs, nanostructures, fab., structs., review, appls. 6998
quasibinary $A_x{}^{III}B_{1-x}{}^{III}C^V$ cpds., crystn. from supercooled liq. 124780
GaN, cubic films, MOVPE, selective area growth, hexagonal phase generat detect./anal., 79307

III-VI semiconductors
space power solar cell arrays, Si/multijn. technols. comparison 111344
GaAs/AlGaAs MQW ultrafast all-opt. DEMUX switch 96867
GaSb TPV generator AR-coated refractory metal matched emitters 113021
p-GaSe single cryst., defect centers, annealing 91941
GaSe, vert. Bridgman growth, radial dopant segreg. simul. 103267
Ga_xSe_y thin film buffer layers, solar cells, opt., structural, morph. props. 100
InGaAsP 1.3 μm MQW lasers, large-sig. modulation response 117267
In_2O_3-GaSe heterostruct., photocurr. amplif. effect 126124
InSe films, thermal/flash evap. growth techs., charactn. 79246
InSe layered monocrystals/films, noises *(Ukrainian)* 115338
In_xSe_y thin film buffer layers, solar cells, opt., structural, morph. props. 100
p-InSe/oxide heterojunctions on (110)-oriented InSe, photoelec. props. 8080
n-$SnS_{1.9}Se_{0.1}$/p-GaSe:Cd heterojunctions, photoelec. props., energy bands 917

IIR filters
2D IIR filter design, variable magnitude & contour charact. 91096
2D recursive infinite-area impulse response digital filters synthesis 73690
2D separable-denominator state-space digital filters, matrix projection des tech. 68945
2D systolic-array digital filter using local broadcast scheme, cascade form 689
act. noise control, adaptive IIR filters, classical algms. 107476
adaptive and blind adaptive DFE, design realization *(Chinese)* 95818
adaptive IIR filter, freq. detect. in noisy environ., VLSI design 102405
adaptive IIR notch filter, memoryless nonlin. gradient algm. 95684
adaptive photonic RF filters realized with adaptive Bragg gratings 80395
all pass IIR filters, optimal energy compaction, design procedure 125614
AR equalization with const. modulus criterion 119191
arbitrary dispersive media freq.-depend. FDTD method, ABC 105696
arbitrary-band multi-path polyphase IIR filters, design 91089
auditory filter bank inversion using least sq. optim. tech. 95667
bias-free adaptive IIR filtering algms. 73679
blind equalizer class, pole placement techs. 130067
blind source recovery in static/dyn. environ., state space model 107577
causal stable IIR filter banks with powers-of-two coeffs., design 119065
causal stable perfect reconstruction two-channel IIR filter banks, design 1301
comb filter, harmonic interf. removal, multirate method 107491
compaction filters, optim. with fixed-angle poles 130103
computer-aided test for characterizing parasitic oscills. 130100
cosine-modulated biorthogonal IIR filter banks, speech coding 102391
data transm. over noisy channels, optimal orthogonal finite order transm ter/receiver filters design 107538
design in complex domain 107540
digital filter and filter bank design by num. optim., review 118982
digital filters satisfying magnitude and phase specs., comparison 91112
digital IIR filter design using adaptive simulated annealing 107552
digital multichannel polyphase filters with IIR, synthesis *(Russian)* 114873
digital recursive filters, multiplierless implement. based on coeff. translati methods 91081
digital timing recovery, software radio receiver, FPGA implement. 68788

ers continued
tal tunable bandpass filter, synthesis/appls. 95686
ct-form delta operator-based IIR filter with min. noise gain and sensitivity 085
ct-form IIR filter, modified delta operator, roundoff noise perform. 91093
ersive medium, FDTD method *(Chinese)* 105694
CDMA radio channels, overlapping window decorrelating multiuser detector 7570
SS perform. improvement using adaptive FIR notch filter 95822
error IIR ADF, unbiased online algm. 91097
Rayleigh fading mobile radio channel modelling 108953
GA, adaptive heterodyne filter 102399
GA implement. of pulse-shaping IIR filter 114882
tional delay filters, design 91083
eralized polynomial predictive filters 130064
dient-based adaptive notch filter with constrained poles and zeros 130066
-band filter, multiplier-free struct., synthesis scheme 80098
n-speed multiplier-free realization, ROMs, elevated sig. rate 80089
ge seq. stabilisation, motion vector integrat. vs. frame posn. smoothing 9579
dmine thermal detect., resoln. requirements, 2D AR models 76982
FARgram anal. in pass. sonar, sensitivity props. of IIR decimation filters 0471
git. coupl.-bunch instabil. control, IIR feedback algms. 87093
y/lossless seq. transforms, image coding appl. *(Japanese)* 107030
-power and high-speed equalizer for mag. storage read channels 80125
-sensitivity IIR WDF with hypercomplex coeffs. 91104
D IIR filters, fixed separable denominator, least-sq. design, multivariate divi-on 102386
taCores, design and optim. techs. 125178
ed time scale recursive algms. 95702
ISE spectral domain estimators for nonuniform syst. modeling subband adap-ve filters 107566
ltiple IR background generation for warning/search-and-track systs., model-g/simul. 88246
ltiplier design, graphical methods, digital filter appls. 101881
ltiplier-less IIR filter synthesis algms. to trade-off delay and no. of adders 080
ltiplierless ellipt. filters, cascade and parallel realizations 130073
ltiplierless low-delay FIR and IIR wavelet filter banks with SOPOT coeffs. 9066
r-perfect-reconstruction IIR QMF banks, design using FIR phase-compensa-on filters 130104
sy filter bank systs., H_2/H_∞ sig. reconstruction 73647
ave-band all-pass based IIR filter banks, image enhancement appls. 106479
imal digital IIR filter design 102393
imal IIR filters with variable delay 118983
elining of recursive filters, GA based approach 91074
cked string instrums., automatic IIR anal./synthesis 120603
yphase N-path IIR struct., quantization effects 114877
rtable audio appls., act. noise controller syst., CMOS analogue implement. 7107
se shaping and jitter-free freq. error detect. and timing recovery, digital filters 8660
l-time 3D acoustic image localization algm. by embedded DSP 84141
eiver phase equalization, min. phase SAW filters anal. 107541
onfigurable sig. proc. channels, transients reduction 119042
ursive digital filter model, inverse filtering tech. 130137
filter, digitally prog. for CMOS technol. 80069
mine detect. & class. proc. strings fusion for sonar imagery 77050
ond-order adaptive IIR notch filter, constrained poles/zeros, plain gradient gm. 130090
ond-order adaptive IIR notch filter for freq. detect., variable step-size LMS-ke algm. 84792
ure chaotic commun. schemes, low-power realizations 74073
rt wordlength selective IIR filters, design procedure, implement. complexity 02380
ftware-implemented digital filters, power anal. 102413
ce-time array data simul. 107534
ech noise reduction using modified DFT pair 83994
ble IIR 2D digital filters, design using seq. semidefinite prog. 91063
ble notch filter design with optimal pole placement 130122
mmetric impulse response filters, effect of zeros 130046
e-struct. IIR/FIR octave-band filter banks with very low-complexity anal. fil-rs 91060
hable fractional-delay allpass filter struct., closed-form design 102403
o channel QMF pseudo-perfect reconstruction IIR filter banks, smooth wavelet is. 102389
o-channel biorthogonal IIR filter banks, low syst. delay, multiplierless imple-ent. 91052
o-channel IIR/FIR filter banks 130044
o-path polyphase IIR filter design using downhill simplex algm. 91091
equal order denominator/numerator IIR filters design 95695
iform DFT filter banks, stable, causal, perfect reconstruction, design 102382
lterra filtering for multisource discrim. 73670
wel synthesis, online EM algm./IIR filter, neural 118120
avelet-based VLBR video coding using image warping/overlapped block otion compensation 73384
ISE method based design 84723
DN waveguide technol. compact tunable opt. devices 116746
see knowledge based systems
nation *see lighting*
nation control *see lighting control*
see instrument landing systems
classification
wavelet packet based feature selection method for image recogn. 95570
obj. class., continuous surface shadow moire tech., multilayer feedforward eural network use 129864
surface texture rot. invariant class. by photom. stereo 129834
t. digit classifiers, separability optim. approach 129533
aptive model for texture anal. 84315
M-FM model for fingerprint class. 73263
imal fibers, fuzzy pattern recogn. and class. 118487
NN for rem. sensed images class. 94599
tipersonnel land mine detect., operational sens.-fusion syst. 77008
tipersonnel landmine detect., GPR, wavelet shape feature extraction 77074
sembly actions detect. by scene obs. 84302
IR, model-based, anisotropic scatt. attribution 75138
IR MSC HRR perform., range resoln. effects anal. 86127

image classification continued
ATR systs., HRR data, interfering scatterers mastering 75157
attribute cluster network and fractal image compression 73354
automated enhancement, segmentation and class. of digital brain images using networks of networks 110878
automated target detect. using IR multispectral anal. 88247
automatic anal. of FISH images 132517
automatic class. of cells using morph. shape in peripheral blood images 98119
automatic counting of chlorella using image proc. and neural network 73451
automatic moving obj. extraction for content-based video indexing 118775
automatic target detect. algms. for logically combining decision spaces 129501
bank cheques, handwritten legal amounts segmentation, feedback-based approach 129941
battlefield, digital, appls. of scalable sing. 3D modelling 77122
Bayer pattern images, saturation-based adaptive inverse gradient interpolation 94864
Bayes networks appl. to semantic understanding of consumer photographs 94827
Bayesian self-organising map for Gaussian mixtures 118739
belief networks constr. 94787
biomedical optics/photonics trends, conf., Miami Beach, FL, USA (Apr. 2000) 100430
BIRD satellite on-board thematic data proc., neural chip class. 99044
block-coded images, blocking artifacts reduction using self-similarity 129702
blood cell image anal. for abnormalities 132509
Bohai Sea, ice detect. and classif., SAR and SSM/I obs. 76919
bone tumor segmentation from MR perfusion images with neural networks 110890
BP scheme appl. 94595
brain amyloidosis diseases, microscope image class. by filtering of amyloid plaque 121892
brain disorder class. based on apparent diffusion coeff. values in diffusion MRI 76472
brain parcellation, adaptable fuzzy C-means for improved image class. as pre-proc. procedure 98423
brain tissue class. from MRI using decision-tree learning tech. 122084
brain tissue segmentation in MRI, RF inhomog. correction method 110881
BrainSuite, automated cortical surface ident. tool 87578
breast dens. estim. on mammograms, computerized image anal. 87760
breast MRI, contrast enhancement curve eval. using neural net 98394
Breast Perfusion Analysis System for MRI 110907
breast tumor images, feature extraction and class., artificial organisms 76201
bright targets segmentation using wavelets/adaptive thresholding 84273
camera motion recovery from occlusions 84597
cell image texture-based segmentation, neural net/morph. 110536
cell images, anal./classif., directional fractal dimens. features 87551
cellular images, morphometric anal. and class. 87323
chest radiographs/mammograms, computer-aided diagnosis systs. 132819
chest radiography, tuberculosis screening, computer-aided diagnosis 87757
chromosome feature extraction via topographic anal. *(Chinese)* 110498
chromosome images, homologue class., iter. centromere segmentation algm. 87519
chromosome images multi-feature anal. and class. 87550
cigarette paper marking quality eval. 107142
cluster no. and influence zones estim. 118755
CNN, general class. problem 102450
colonic cancer images, classif., orient. coherence metrics 132632
color coord. systs. comparison *(Japanese)* 94612
color documents, class. strategy using Cart trees 94756
color edge detect., automatic isotropic tech. 118749
color image class. based on color and texture anal. 94964
color images, invariant face detect., orthogonal Fourier-Mellin moments and SVM appl. 95445
color transits. phys. nature, class. 95441
colour image retrieval, multi-component cross entropy segmentation 129576
colour photom. stereo, simultaneous reconstruction of local gradient and colour of rough textured surfaces 106649
colour texture images class. 94591
company logos class., adaptive graphical pattern recogn. 107222
composite two-layered rem. sens. image unsupervised classif. 111385
computer graphics simul. of bot. bark images *(Japanese)* 106820
content-based image retrieval with relevance feedback 95586
continuous human activity segmentation/recogn. 95600
continuous-valued images, continuous dist. transform. 73505
contour anal. using time-varying AR model 94715
contour based class. of video objs. 94915
contour-based obj. recogn. using wavelet-transform 129830
correl. image class., PCA 84572
CT brain images, stroke lesion anal., rule-based approach 132838
curvature-based range image class. for obj. recogn. 95419
degrad., blind ident., ascendant hierarchical class. 118228
Dempster-Shafer framework of automatic map updating by multispectral image fusion 106672
dental caries lesions detect. using deformable templates 87768
digital image proc. appls., conf., San Diego, CA, USA (Aug. 2000) 100401
digital mammograms, multiresolution detect. of spiculated lesions 76530
digital mammographic images, computer assisted library, CALMA project 76556
digital video frame, text detect., SVM 84193
digital video seqs., long transit. anal. 94769
distributed collaborative surveillance advancements 77104
document image class. by modified X-Y tree encoding 129754
document image regions, picture, graphics, and text class. 94875
document images, fast class. using weighted distortion 94719
document images, font clustering and class. 118338
document page class. via struct. based features 84084
dual modality tomography for material class. 109472
dubious image blocking using colour features 118390
dyn. face recogn. across multiple views 129915
dyn. multi-scale image class. 94759
Earth Mover's dist. is Mallows dist., insights from stats. 106621
eddy current testing, automated quantitat. defect charactn., ANN use 101596
edge pixel class. with max. entropy for image segmentation 84242
edge representation/recogn., multilayer feedforward NN 129890
effective neural network ensembles for image class. 106731
eigenpaxels and neural net approach 73496
elastograms, simulated, class. based on texture features 110825
emotion class. based on MPEG-4 facial defn. param. set 129829
endmembers determ. in high spatial and spectral resoln. data 73191
engine condition estimating fiber-optic sens. 120866
entropy coders for image compression based on binary forward class. 106953

image classification continued
entropy minimization for semi-supervised terrain class. 94812
error-resilient video coding with channel-optimized trellis-coded quantization 84396
face detect., general framework 73541
face detect. in colour images using skin probab. map 84579
face detect. in compressed domain 129822
face recogn., orthoface method, eigenvalues 73480
face recogn. and class., self-organising map, RBF networks 107257
face recogn. using moving window classifier 129916
fast retrieval methods for images with significant vars. 94666
feature extraction based on boundary chain code for defect of CCL 118422
fingerprint class. based on fractal Brownian motion 73462
fingerprint image class. by core anal. 73465
flooding, springtime, forecasting, rem. sens. methods 99008
food safety inspection, obj. class. from X-ray images 124409
football goal detect., SVM appl. 106523
force field transform for ear/face recogn. 84608
forest fire smoke, AVHRR imagery, neural nets 122607
form class. method, partial matching 95573
fractal image coding, feature difference class. 107073
FT holograms, gray level/quasi-colors 105615
fuzzy cluster anal. of classified data 129590
fuzzy clustering based on cooccurrence matrix, data retrieval appl. 118439
gamut-mapping expt., ranked data anal. 73154
gender class. using SVMs 95509
generalized neural trees for outdoor scene understanding 94816
georeferenced airborne video, independently moving objs./interacts. detect. 95012
granulometric moments, asymptotic joint normality 118754
grasps class. by robot hands 84259
gray-level image reconstruction, Fourier-Mellin transform approx. 129541
gray-scale images, multifractal anal. 106828
hand gesture contours, automated class. for gesture-based interact. and commun. 73127
handwritten Chinese characters, offline multiresolution recogn. 129676
handwritten signatures, real-time verification using hybrid optoelectronic method 129587
hierarchical discriminant regression for incremental and real-time image class. 106454
hierarchical unsupervised learning of facial expression categories 95018
high-bandwidth sens. syst., advanced proc. hardware & algms. 95414
high-speed high DOF spatial normalization for human brain imaging 76206
higher-order spectra invariants for shape recogn. 118666
histogram-based classifier, coding appl. 106876
HK and SC curvature description methods 84227
HMM multiresolution trees for ATR algms. anal. 96911
housekeeping service robot, laundry isolating/unfolding task 86674
HRR ATR using eigen-templates with noisy obs. in unknown target scenario 86125
HRR signatures, syntactic pattern recogn. 75161
human activity real-time monitoring, multiple vision sens. 86413
human behaviors, gender recogn., neural ensembles 107153
human face, paralinguistic features extraction method *(English)* 84281
human faces recogn. based on fast computation of circ. harmonic components 73546
human image class., sig. detect. theory misrepresentations/model-free approach 73153
human motion tracking/anal., unified framework 95013
human skin color model using neural networks 118674
hyperspectral anal. toolset, spectral similarity scale algm. 122556
hyperspectral data class., feature extraction 99057
hyperspectral image, fusion class. based on adaptive subspace decomp. 94821
hyperspectral image anal. tech., anom. detect. algm., Quad-AR filter 95412
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
hyperspectral imagery, adaptive hierarchical segmentation algm. based on quad-tree decomp. 94539
hyperspectral imagery, matrix factorization algms. for band selection 76953
hyperspectral imagery scenes, target spectra stats. 99048
hyperspectral images, projection pursuit target detect. 98956
hyperspectral images, reduced dimens. quadratic detect. algms. 95416
hyperspectral mixture proc., Gibbs-based partitioning 98958
hyperspectral sens. develop., data proc. viewpoint 133281
ideal observer approx., Bayesian class. neural nets 132502
ident. using color inform. 107295
impact damaged delaminated composite, shearography, neural fuzzy anal. 125156
incremental hierarchical discriminant regression method 129675
indexing/machine vision, color representation 95533
indust. furnaces, fuel combustion status eval., image class. based method *(Chinese)* 84118
indust. image proc., real-time behaviour, multivariate approach 113745
indust. image texture anal., multivariate anal. using PCA 118678
insect-infested forest class., video proc. algms. 99042
invariant gender ident. 107284
IR and SAR image exploitation, expt. syst. 111626
IR dual-band pass. imagery for automatic clutter rejection 95507
iris fast detect. using neural nets 129826
iris recogn. through feature vector/classifier improvement 84588
ISAR low-resoln. radar, cross-range scaling, new method 75125
ITS, video based traffic param. extraction, integrative method, background subtraction 73483
Japanese address reading, lexicon-driven handwritten character string recogn. 129940
Kannada handwritten characters, on-line recogn. using wavelet features/neural classifier 95468
land cover class., nonparametric machine learning 122612
land cover mapping, supervised, ART neural net class. 122613
land mine detect., sens. fusion archit., limited training data sets 77009
landmine detect., data fusion & Dempster-Shafer evidential reasoning 77062
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
landmine detect. & class., EMI sens., non-Gaussian noise environ. 77012
Laplace integral for watershed segmentation, radiographs appl. 98551
larva class., learning VQ neural net training 110537
laser range-imaging vehicle sens. devel., electronic toll collection appls *(Japanese)* 97396
liver X-ray diagnosis, simulated annealing with logarithmic cooling schedule 110921
local inform. based class., independent component anal. 118772
local thresholding classified VQ with memory reduction 95395
image classification continued
lossless image coding using optimum prediction generated by local image tures 106868
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 101
mammographic mass charactn., spiculation measures/morph. features 9852
mammographic mass detect., adaptive thresholding, region growing 12215
mammographic masses class., automated method develop. *(Japanese)* 132
mammography, computerised, nonlin. pixel signature transform. 129849
mass detect., decision support by featured database visualization/modular ne networks 76503
max. likelihood texture anal./class. using wavelet-domain HMMs 106756
med. image anal., neural net appls. 118247
med. images, shape recovery using level set regularizers 110543
meteorite ident. by robot vision, Antarctica 107134
meteorite search by robot vision in Antarctic, outcomes 95596
microcalcification detect. by multi-scale methods and stat. techs. 98496
microcalcifications, clustered, computer class. as malignant/benign 132818
microcalcifications, digital mammograms, SVM classifier 87730
min. consistent subset, tabu search approach to condensed nearest neighbor r 84256
min. struct. and motion problems with missing data 106579
moment patterns in radon space, invariance to intens. scaling 118694
motion estim., global motion model based on B-spline wavelets 129582
motion monitoring/class. with center-biased motion estim. 94556
motion-based video segmentation using fuzzy clustering/mixture model 843
MPEG compressed domain, B-spline curve representation of segmented 106530
MPEG-4 body animation param. estim. from depth images 94847
MPEG-4 video, still texture, spatial content indexing 118733
MPEG-compressed videos, automatic shot change detect. 118461
MRI, automatic intens.-based tissue class. 122095
MRI, cortical sulci detect. and tracking 122081
MRI cerebral images, rule-based ES for automatic segmentation 76429
multi-aspect scatt. data, wavelet coeffs., dual HMM charactn. 73436
multi-ping mine hunting data, classifiers comparison & optim. metric 7704
multi-spectral image spectral mixture anal., unmixing methods 118210
multi-view face detect. and pose estim., kernel machine based learning 107
multimedia data compression for recogn. and content-based retrieval 11870
multiple binary-class decision trees for obj. based image retrieval 94760
multiple classifiers for color flag/trademark image retrieval 73262
multiple hierarchical overlapped self-organising map appl. 118669
multiple nonseparated battlefield ordnance events class., ELMO algm. 1334
multiple objs. detect. in partial occlusion, class./tracking approach 118771
multiple sclerosis detect., magnetisation transfer ratio images 98261
multiple sclerosis lesions, automated segmentation, model outlier detect. 1108
multiple-sclerosis brain tissue class., stat. 3D image segmentation algm. 1109
multiresolution gray scale/rot. invariant texture class. 95454
multiresolution segmentation for images with low depth of field 95473
multiscale anal. of pixel connectivity props. 94545
multiscale class. using complex wavelets/hidden Markov tree models 94658
multiscale image segmentation, wavelet-domain HMM 107213
multiscale texture segmentation using hybrid contextual labeling tree 94835
multispectral image fusion/merging with multiscale fund. forms 129509
multispectral imagery, parallel hybrid evol. algm. 95413
multitemporal SAR images, detect. of step pattern of change 96950
multiview extensive partition operators for semantic video obj. extraction 94
nailfold capillaries, taxonomy based on morph. 76382
natural scene anal., nearest-neighbour classifiers 84094
natural/enhanced IR images, embedded targets, image metrics/human detect. p form. 84155
NDT image fusion using eddy current and US meas. data 114503
NDT of materials, DCT/DWT feature extraction/ANN class. 125146
near lossless image compression by relax. labeled prediction 84461
neural class. of Lamb wave US weld testing sigs. 79486
neural nets comparison for image class. 73466
neural networks for local recogn. of images with mixed noise 118688
neural responses, functional MRI estim. and classif. 98404
neural-net/ActiveX integrated environ. 106704
news video browsing, visual/audio/text anal. integrat. 94829
NOAA AVHRR images, class. algms. comparison 111384
noisy image seqs., impulse detectors 84142
Nomad robot, meteorite search, Science Autonomy System 97400
non-texture/textured images classification, region segmentation 95587
nonlin. filtering in wavelet transform domain 94802
nonstationary point obj. detect. in recording of scene from two viewpoi 129818
obj. recogn., color-invariant shape moments 118654
ocean colour rem. sens., fuzzy logic class. 111458
on-board satellite image compression, bit rate and local QC using rate/distorti criterion 118558
OO feature-based model for land class. *(Chinese)* 94920
open source agenda for research linking text and image content features 1294
open-ended texture class. for terrain mapping 94836
opt. vehicle classifiable sens. devel. for ITS *(Japanese)* 97397
optimal design of transform coders/quantizers 95384
outdoor image seqs., tracking/recognizing two-pers. interacts. 95599
page segmentation and content class., document image proc. 84241
pairwise face recogn., Bayes classifier 107181
panoramic/adaptive/reconfigurable interface for similarity search 94797
Pap smear test automated class. using neural nets 121887
pass. polarimetric IR target class. 94773
PCB inspection using SVM 80513
perceptually uniform color spaces for texture anal., eval. 73500
pixel class., stat. models 73172
plan-view trajectory estim. with dense stereo background models 106653
polarimetric device for image anal. *(French)* 107120
pollen grain images, nonlin. features extraction 121864
pose-invariant face recogn. by face synthesis 129914
prostate segmentation from 2D ultrasound images 110683
prostate tissue malignancy, tissue class. & elastographic imaging 121998
prostate US imaging for guiding biopsies & planning/monitoring therapy 1107
pseudo power signatures appl. 94543
pulmonary nodule surrounding struct., charactn. using differential geom.-bas vector fields 87707
pulmonary nodules, 3D curvatures, feature extraction algms. *(Japanese)* 981
pulmonary nodules, internal struct. image anal. 87765
pulmonary nodules, malignant and benign, hybrid class. approach based on top and histogram features 87706
pulmonary nodules class., contrast enhancement patterns 87767
pulmonary organs, extraction and class. based on thoracic 3D CT images 1109

e classification continued
yramid image coder using histogram based classifier 84421
C cloth prod., real-time defect detect. 120886
adar ATR from SAR images, perform.-complexity tradeoffs 86185
adar image stats. modeling, terrain feature ident. 96900
adar target ident., HMM framework neural network classifier *(Chinese)* 73479
APIDS rem. sens. receiving station,agric. monitoring 122720
egion merging/class. segmentation algms., extensive partition/gray-level connected operators 106690
em. sampling, cost effective ref. data sampling algm. 122603
em. sens., digital image, class. coding, software simul. *(Chinese)* 95142
em. sens., robust pixel unmixing 122614
em. sens., satellite data retrievals by neural net 111484
em. sens. data, multi-source, boosting, bagging and consensus-based class. 122724
em. sens. image classifiers, supervised, combination based on indiv. class performs. 122723
em. sensed imagery, class., lossy compression effects 111379
em. sensed images, integrated pipelined and distributed syst. for real-time class. 133276
etinopathy, diabetic, abnormality detect. in automated mass screening syst. 110851
oad images, real-time proc., optimal moving windows method 95554
obust face recogn. using automatic age normalization 107291
obust head pose estim. by machine learning 94795
ock sole fish recogn., act. contour algm. 95518
pt. invariant texture features using dual-tree complex wavelet transform 106444
otated textures class. using overcomplete wavelet frames 94598
otodynamic mach., wavelet transform and neural net for condition monitoring 123276
-way parallel finite time Gibbs class. 106526
AR, class. perform. prediction using parametric scatt. feature models 86132
AR, interferometric coherence, two-target height effects 75132
AR ATR, aspect diversity benefits, fund./expt. results 86134
AR ATR, use of SVM 96925
AR ATR improvement, virtual neg. examples incorporation 75152
AR ATR using digitally spotlighted phase hist. data 75151
AR image super-resoln. using Bayesian/convex set-theoretic approaches 75139
AR imagery, target discrim. 109277
AR imagery algms., conf., Orlando, FL, USA (April 2000) 67397
AR interferometric images, adaptive complex-amplit. texture classifier, local phase unwrapping/feature extraction 75175
AR multiscale image segmentation using wavelet-domain hidden Markov tree models 75133
AR polarimetric imaging, Gaussian Markov random field model 86161
atellite imagery, improved neural network tech. for data dimens. reduction *(French)* 111375
cale invariant face detect./class. from log-polar image 95483
creening mammogram, artificial intell. algm. for tumour detect. 98512
ea mine class., adaptive subspace-based background normaliser 77051
ea mine detect. & class. proc. strings fusion for sonar imagery 77050
econdary digit class. using key features 94891
egmentation by curve evol. with fuzzy c-means clustering 106752
egmented images class. combining neural networks and wavelet matching 118298
eqs., motion anal. and class. with directional Gaussian derivatives 94748
ex class. of adults' and children's faces via computational/neural net models 129552
hadow carving 106537
hallow water mine class., CAD/CAC algms., sonar data fusion 77052
hallow water mine detect./class., side-scan sonar, algm. fusion 77046
hallow water mine hunting, synthetic aperture sonar, adaptive focusing 77053
hallow-water mine countermeasure, Web-centric virtual prototyping environ. 77048
hape recogn. based on wavelet-transform modulus max. 73467
HARP ATR syst., Bayesian multiple-look updating appl. 75158
hort-term load forecasting/class. using neural nets 122930
hot class. for hard transit. and noise reduction tech. 84348
ide-scan sonar imagery, robust real-time mine class. 77049
kew detect. and block class. of printed documents 94489
occer image segmentation, unsupervised color texture feature extraction/selection 94708
PECT collimation/syst. geom., class. tasks related to Parkinson's disease 111022
pectral imagery, invariant display strategy 94447
pectral signature separability meas., unsupervised training algms. 84144
upervised fuzzy/Bayesian class. of high dimens. data, comparative study 94538
urface curvature class. for multiple reflectance obj. using neural network *(Japanese)* 84279
urface orient. class. from polariz. images 94665
urveillance syst., moving obj. detect. and indexing *(Chinese)* 106491
VM for image class. problems 84247
echnol. alert based on patent search 94918
eleteaching syst., image preprocessing for content-based image coding 95258
errain mapping, polarimetric SAR, simulated annealing 122617
est feature classifiers, high-generalization ability *(English)* 118463
est feature classifiers, perform. and appls. 106433
ext anal. using local energy 129885
ext string detect. from mixed text/graphics images 94887
exture based class. and segmentation, Laguerre-Gauss transform 129897
exture class., multiclass test feature classifier 106805
exture image class. via inform. geom. method *(Japanese)* 73135
exture images, class. using multi-scale stat. estimators of fractal params. 129622
exture modeling/class. in wavelet feature space 84314
exture segmentation, multiscale Bayesian model averaging framework 94518
exture segmentation using fractal signature 94596
extured materials, surface defects ident., wavelet packets 124401
ouching numeral segmentation, water reservoir based approach 129942
ransform domain feature detect. and concealment algm. 106932
RWIS III hyperspectral sens., agricultural imagery anal. 106519
wo-param. Fisher criterion for feature extraction methods 106432
wo-stage texture segmentation using complementary features 94832
nconstrained scene model-based human face detect. 95498
nderstanding archit. based image proc. 107238
nderwater target class. in changing environ., adaptive feature mapping 77044
nderwater target discrim., neural network class. paradigms 77045
nsupervised texture segmentation using dominant image modulations 106754
rban environ. charactn. by SAR data, comparison between co-occurrence and wavelet features 73454
rban regions automatic extraction, SPOT satellite imagery 99052

image classification continued
urban scenes, vegetated areas, hyperspectral imagery 98961
US B-scan breast images, malignant vs. benign tumour class. 110717
US images, auto-segmentation by GA 122024
US liver tissues class., M-band wavelet transform appl. 87512
US sig. class., neural net based multidimens. sig. proc. 101591
US weld inspection sigs., LEARN++ incremental learning algm. 100634
vector probab. diffusion 94558
vehicle detect., PCA classifier 107155
vehicle no.-plate recogn. using neural nets 84593
versatile learning by sample, stat. pattern class. in biomedical images 121889
video class. based on HMM using text and faces 118732
video coding, adaptive postprocessors with DCT-based block class. 107018
video coding, block-DCT based, low-complexity post-proc. for artifact reduction 95203
video coding, fast block matching via 3D hybrid search algm. 84427
video obj. extraction and shape coding using B-splines 118504
video objs. generation by multiple-view extensive partition lattice operators 94826
video partitioning by temporal slice coherency 94922
video seq. illum. effect descriptor 118460
video seqs., motion vector estim. using edge oriented block matching algm. 95083
video seqs., vehicle detect./tracking 84330
video surveillance syst., adaptive background subtraction 84626
view-based clustering of obj. appearances, independent subspace anal. 107183
Virtual Female data set, ensemble class. with limited merging 110541
visual inform. retrieval, image representation method 118734
VQ for image indexing *(Chinese)* 107025
watermark for digital image authentication, wavelet packet/adaptive spatial transform. 95061
wavelet image coding using blockwise binary class. and trellis coded quantization 106989
wideband target signatures, spatial/temporal covariance props. 86129
window-based nonlin. filters and pattern recogn. 118973
wooded region/agricultural region discrim. by SAR 111485
wooden surface defect detect., Gabor filters, evol. algm. design 106525
writer ident. using text line based features 129928
zerotree wavelet image coding/adaptive packetization for low-bit-rate transport 106969

image coding
see also video coding
1D grammar-based codes for lossless image coding 95256
1D inverse Haar transform, online computing, prog. proc. 102207
2-color images, secure/invisible data hiding 118602
2D DCT, shifted FT-based tensor algms. 106973
2D DFT, self-similar ring-shaped watermark embedding 129716
2D digital image normal vector/winding no., hole detect. appl. 118670
2D discrete wavelet transform core design for image compression 73326
2D discrete wavelet transform with integer lifting scheme, parallel archit. 95247
2D generalized cyclic patterns for secret watermark generation 95159
2D hologram commun., image compression, wavelet anal. *(English)* 93879
2D hypercomplex FT decomp. into complex FT pairs 118561
2D multirate filter from 1D filter 95328
2D separable filters for optimal reconstruction of JPEG-coded images 95039
2D wavelet coding implement., scheduling strategies 119825
2D-multiple notch filter, blocking artifact reduction, DCT coded image 95156
3-D stereo endoscopic PACS viewer develop. 132546
3D binary images representation, math. morph. 95233
3D contrast-enhanced MR angiography, nonrepetitive phase-encoding orders, quantitat. eval. 132694
3D digital imaging, opt. inform. proc. models 95356
3D generalized shape sampling method/file format for storage or indexing 95204
3D geom. compression, DPCM and var. appl. 95220
3D graphic models, error-resilient coding via adaptive mesh segmentation 95043
3D images, parallel compression implementation using PVM 118642
3D med. data, multirate coding 98161
3D models, joint geom./texture progressive coding 95359
3D models with subdivision surfaces, hierarchical coding 95221
3D obj. database, multi-viewpoint image coding and view synthesis 118570
3D objs. coding using surface point signatures 95358
3D oceanographic images around land masses, wavelet-based coding 99019
3D realistic objs., CGH 83016
3D RGB image compression for interactive appls. 129736
3D surfaces, hierarchical coding using box splines 129718
3D-vision syst., image-coding based, calib. *(Chinese)* 95248
3G mobile radio, image transm. DC error correction 85888
adaptive encoder for bi-level images 107062
adaptive intercolor error prediction codes, lossless color picture compression 129740
adaptive lin. prediction for lossless coding of greyscale images 84456
adaptive transforms with overlapping basis fns. 106887
adaptive VQ, overlapping 107068
adaptive/proadaptive image compression 107083
alg.-integer encoding, error free computation of DCT/IDCT 107098
algm. for FT on compressed image in restricted quadtree and shading format 73394
ALOS/PRISM stereographic images, terrain elevation meas., JPEG 122552
anti-interf. algm. for wavelet image coding *(Chinese)* 73417
appearance-based recogn. using perceptual components 107260
approx. image message authentication codes 73392
approx. optimal assignment for unequal loss protection 83934
arbitrarily shaped image objs., transform coding, wavelet transform, lifting scheme *(Chinese)* 118599
arbitrarily shaped image segment representation by wavelet basis 84493
arith. coding archits. 129721
artificial retina camera, real-time pattern recogn., Hough transform algm. 73439
ASIC, space-qualified downlink image compression for commercial rem. sens. appls. 106913
asymmetric watermarking tech., robustness 95266
ATR content-based image compression 84514
attribute cluster network and fractal image compression 73354
audio-video rem.-patient monitoring via Internet, privacy protection 74440
authentication and tamper-proofing using math. morph. 129711
authentication with distortion constraints 129747
authentication/integrity verification via content-based watermarks/public key cryptosystem 95372
authentication/ownership verification, watermaking schemes 118598
authentication/protection, multipurpose watermarking 118597

image coding continued
automatic model-based semantic obj. extraction algm. 129690
AWGN channels, error-resilient compressed images transm. using soft-input source decoding 106982
axial symmetric scans, prediction gain optimisation 95086
B-mode images, coded excitation, clinical use 110774
bandlimited images, fast extrapolation/superresolution algms. 95185
best-neighbourhood-matching error concealment algm., evol. strategy *(Chinese)* 73366
bi-level image coding for digital printing using GA 73418
bi-level images, near exact expansion 95184
binary arith. coding and rapid probab. estim. 73325
binary comic image, digital watermarking scheme *(Japanese)* 73406
binary image compression, Huffman coding 95329
binary image compression FPGA-based systolic array archit. 73321
binary image optimized coding based on rect. partitioning *(Chinese)* 106958
binary images, adaptive VQ 106872
biomedical image compression using variable order wavelets transforms/HVS charact., progressive scheme 132786
biomedical MRI, sensitivity encoding, arbitrary k-space trajectories 132759
biorthogonal nearly coiflet wavelets for image compression 95148
biorthogonal wavelet constr. based on human visual syst., GA *(Chinese)* 106851
biorthogonal wavelet filters for image compression 95190
bit-map generation for block truncation coding by neural network 84422
bitstream scaling by ref. frame altering 106962
blind image watermarking, robustness 95265
blind watermarking algm. in complex wavelet domain 95268
blind watermarking tech. using wavelet transform 129796
block color quantization, new color halftoning method 95309
block truncation coding using edginess inform. 95171
block-based adaptive lossless image coder 84454
block-based coded images, efficient similarity-based error concealment method 95305
blocking artifact suppression, successive structural anal. using wavelet transform 106889
blocking artifacts blind meas. 106861
blocking artifacts reduction, transform coeffs. adaptive postfiltering 73336
blocking artifacts reduction algm. in block boundary area using neural network 129795
blockwise zero mapping image coding method 95286
blood flow meas., fast vel. encoded cine MRI, breath holding effect 122115
boundary filter optim. for segmentation-based subband coding 95700
boundary-labeling automaton, vertex chain code generation, geometric quantities calc. 118632
cardiac longitud. strain, short-axis images, strain-encoded MRI 132742
cardiac MRI, mixed echo train acquisition displacement encoding with stimulated echoes 132692
cardiac MRI, six-element array, SNSE coil design 132673
cascaded MAP-based lin. predict. error conceal. tech. for consecutive block losses 84485
CDF biorthogonal wavelet filters, image compression 73427
CDM, opt. implement. for super resoln., spectrosc. method 106881
CDM, opt. implement. for super resoln., temporal method 106882
CDMA commun., image source coding, channel coding and spreading 108739
CDMA techs. for embedding data in digital images 95066
celestial sphere, unique point images 95402
CGH fab. by electron-beam direct-writing, image quality *(Chinese)* 105591
CGH image compression/transm./reconstruction *(Japanese)* 118641
chaotic image watermarking, region-based tech. 118622
chest radiograph interp., JPEG compressed images vs. uncompressed images 98486
chromatic adaptation perform. of different RGB sens. 97392
class., eigenpaxels/neural net approach 73496
class. by local inform., independent component anal. 118772
classified VQ for image indexing *(Chinese)* 107025
classified zerotree wavelet image coding/adaptive packetization for low-bit-rate transport 106969
CMOS adder, 2D IDCT, image compression 107010
CNN for image coding 118510
codec, fast efficient computation of cubic-spline interpolation 73370
color document compression, fast, scalable DSP archit. 95335
color image compression, locally adaptive resoln. method 129769
color image watermarking in HSI space 95373
color images, blind/readable watermarking 95059
color still pictures encoding by wavelet transform/VQ 129703
color-coded grating profilometry, lumin., RGB and HIS models *(Chinese)* 73388
color-coded projection grating, 3D surface profilometry *(Chinese)* 95343
color-portrait image compression tech. 95129
color-texture regions, images and video, unsupervised segmentation 106880
colored image compression using neural networks 84398
colored pattern appearance model for image indexing 95237
colour image databases using BTC for storage and retrieval 84433
colour image skeletonisation, morph. tech. 129481
colour image wavelet compression using vector morph. 118498
colour images, 2D run-length encoding techs. modifs. 107009
colour images, index data embedding method using wavelet transform 129745
colour re-indexing algm. for lossless compression of digital images 118648
combined spatial and subband block coding of images 95389
commercial watermarking, engng. considerations 106924
commun., hidden Markov sources transm. over Gaussian channels 84468
competitive/re-init. learning, adaptive VQ 106910
complex image/color matching/coding, spatio-chromatic filtering 95451
complexity-regularized image denoising 73403
compression, directional wavelets appl. 107082
compression, fast nearest neighbor searching algms. for VQ 129746
compression, low-complexity/-memory entropy coder 129696
compression, wavelet transform, zerotree encoding *(Chinese)* 129759
compression, wavelet transform archit. 106977
compression algm. based on dyn. stratification of submatrices and vector space 106975
compression and decompression, fuzzy rel. eqns. 118650
compression and visualization software environ., hierarchical grid interpolation 95019
compression and watermark embedding techs., interplay 129767
compression by fuzzy-ART VQ and 2D runlength encoding 73352
compression by Gabor expansion 84392
compression encoders, tree approx. and optimal encoding 118926
compression improvement by coupling coding techs./redundant transform 95388
compression parallel archit., DCT/IDCT 84397

image coding continued
compression syst., neural net based Karhunen-Loeve based transform coding, s
isometries appl. 107020
compression to computer graphics 95109
compression tolerant watermarking for image verification 95056
compression using auto-associative neural network and embedded zero-tree co
ing 84423
compression using derivative inform. with dist. transforms 118556
compression using implicit polynomials 118604
compression using orthonormal finite ridgelet transform 95187
compression with non-uniform block segmentation and luminance approx. usi
bilinear curved patches *(Japanese)* 95145
compression/VQ by ART2 neural net, hierarchical clustering 118596
computational image sens. with pixel-based integrat. time control 97353
const. rate wavelet-based image compressor 108484
constrained VQ codebook design for noisy channels 72830
content-adaptive watermarking based on stochastic multiresolution image mode
ing 129710
context-based adaptive arith. coding, least sq. algm. 84479
continuous tone image lossless coding, error diffusion method *(Japanese)* 7334
contour coding, modified binary tree and perform. anal. 106902
contour data coding using DCT transform 107045
copyright labeling of printed images 95374
cpd. image compression using adaptive wavelet transform *(English)* 84450
cryptosystems, encryption algm. based on VQ 118634
data compression, inform. entropy preserved coder, integer Haar wavelet trans
form, sub-block DPCM *(Chinese)* 73364
data compression software on space-qualified DSP board 118576
data compression with essentially nonoscillatory schemes 118624
data decorrelation by wavelet transform 129730
data embedding method for disclosing betrayers in collusion attack *(Japanese*
73346
data filling algms. for mixed raster content layers 95197
data hiding by optimal moderately-significant-bit replacement 106919
data hiding in compressed images, capacity estim. 95252
data hiding in ordered dithered halftone images 95240
data hiding using wavelet transform and error-control coding 95070
databases, scale/fractal transforms 95515
DCT, model-based discontinuity eval. 73373
DCT approx. with lifting scheme, systematic design/appls. 106896
DCT coding, adaptive block sizes 84419
DCT coding, universal VLC 94270
DCT coeff. compression 107051
DCT coeffs. organization for embedded image coding 106874
DCT data, morph. representation 107096
DCT image coding, decimation/interpolation 95259
DCT implement. with distributed arith. 118594
DCT low-complexity scalable image compression 95383
DCT PM, robust digital watermark procedure for still images 118620
DCT watermarks, effective channel coding 95366
DCT with lifting scheme, fast multiplierless approx. 106916
DCT-based image coding method using random neural network 95029
DCT-based pyramid struct., significance tree image seq. coding 95212
DCT-coded picture transm. over noisy channels, transformed domain error con
cealment 84381
DCT-domain blind watermarking syst. using optimum detect. on Laplacia
model 95062
DCT/VQ image steganography 106879
DCTlab educational image compression software for digital TV course 89640
decoded fractal images, hierarchical fixed-point-seeking method 84447
decomp., CGH interf. 84401
decomp. of fuzzy rels. 106850
dense range images, geometric/topol. lossy compression 95192
depth first search bit stream SPIHT algm. 106928
depth-encoding Anger detector using scintillating fibres 132936
DFT, basis fn. truncation effects 94511
diagnostic image compression of biomedical vols. 121878
DICOM extensions for narrow-band networks 106930
DICOM std., electronic storage, display/print fn. *(Japanese)* 88020
digital camera for taking evidential photographic images 118526
digital camera images, flexible storage 107092
digital cinema develop., large screen projection displays 86892
digital document image networking 129802
digital image compression using directional sub-block DCT 95260
digital image compression using wavelet transform with transit. matrix 10690
digital image hiding technol. based on tangram and Conways' game 95069
digital image proc. appls., conf., San Diego, CA, USA (Aug. 2000) 100401
digital image watermarking 95021
digital image watermarking *(Chinese)* 95346
digital image watermarking, geometric transforms. robustness 95371
digital image watermarking scheme applying wavelet transform locally 12974
digital images, improved tamper-detect. method 129764
Digital Link, high-functional digital monitor interface 86886
digital mammograms, fixed block-based lossless compression 132785
digital video frame-based watermarking 130981
digital watermark, class./estim. based attacks/benchmarks 106923
digital watermark embedding with local distortion attacks tolerance, hierarchica
method *(Japanese)* 107035
digital watermarking, algms./appls. 95352
digital watermarking, image authenticity by spectral components modif. 10704
digital watermarking, inform. retrieval 106922
digital watermarking, variational approach 95367
digital watermarking of still images in wavelet transform domain 84391
disparity data and picture quality in stereoscopic image 107029
distortion-invariant target recogn. syst. simul., learning VQ neural network
107234
distortion-rate theory for indiv. images *(Chinese)* 107026
distributed algorithm based 2D inverse DCT *(Chinese)* 118512
distributed fractal image compression on PVM for million-pixel images 10686
distributed memory archit., image compression, parallel algms. 106978
document compression using rate-distortion optimized segmentation 73341
document image class. by modified X-Y tree encoding 129754
document image decoding using iterated complete path search 129801
document image decoding using iterated complete path search 95337
document image decoding using linguistic constraints 95338
document recogn./retrieval conf., San Jose, CA, USA (2001) 89587
DS-CDMA Rayleigh channel variable block 2D-CELP image transm. 108946
DSP chip, zerotree image coding algm., wavelet filter *(Chinese)* 129739
dyn. memory model based optim. of scalar/vector quantizer 95273
dyn. MRI, multiple resolns., phase-encode select dimens. 87632

ge coding continued
arth obs., onboard image selection/compression 111377
EBWIC, efficient bit allocation wavelet image coder with low complexity 95074
echocardiac images, robust quantization table design 98316
dge-directed prediction for natural imagelossless compression 73401
dge-preserved neural network model for image restoration 106886
dge-preserving neural network model 95392
dge-preserving regularization, coding artifact removal, post-proc. 84497
dge-preserving subband image coding scheme based on separate coding of region and residue sources 129743
ducational tool, Image Analyser 100470
ffective inform. preservation method for binary image reduction 118493
lectrophoretic gels, image digitalization, automated anal. 110832
mbedded foveation image coding 118519
mbedded image coding and implement. *(Chinese)* 129687
mbedded image coding using zeroblocks of wavelet coeffs. and context modeling 107056
mbedded image sources in noisy channels, dyn. UEP schemes optim. 84472
mbedded quadtree-based image coding, quincunx wavelet filter design 95291
mbedded wavelet-based quadtree interframe coding algm. 107110
ncryption, double phase encoding, fractional FT *(Chinese)* 107028
ntropy coders for image compression based on binary forward class. 106953
rror resilient image coding, lapped orthogonal transform design 95301
rror resilient image transm. using joint source-channel coding 84473
rror resilient sync. codeword for VLC 95299
rror-resilient zero-tree wavelet image coding over noisy channels 73333
uclidean Lab color spaces quantization by Fibonacci lattices 129765
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
ye-state action unit detect. by Gabor wavelets 73544
EZW coding, selective coeff. scan algm. *(Chinese)* 129688
EZW image codec based on intraband partitioning 95284
EZW image compression, multi-channel channel-optimized scheme 84474
ace encoding and recogn., topological PCA 95429
ace encoding and recogn. based on human visual model and DCT 129761
ace focus coding, H.263+ video coding std. 73426
ace tracking from video seq., act. appearance algm. 107196
ace/facial features detect. automation 129924
aces extraction from natural background for pers. ident. 118779
acial expression, intell. coding using neural network and morphing 84432
acial expression recogn. based on 2D struct. of emotion 73456
acial expression transform. based on sketch image/multiscale edges 73419
acial modeling from uncalibrated image 129684
acial models, compensation for ensemble-specific effects 129913
actory automation, multimedia appls., image/video coding 130936
ast fractal image coding in freq. domain 95132
ast fractal image compression coding method 84364
ast fractal image encoding based on adaptive search 106883
ast motion estim., block-based motion estim. algm. 84446
eature discovery, deterministic generative models 129737
ilm image resoln. meas., electronic methods *(German)* 95345
ingerprint, gray-level image, lossless compression algm. *(Chinese)* 84438
orward-adaptive wavelet image coder design and anal. 95073
ourier descriptors watermarking of vector graphics images 95263
ourier domain watermarking generalization to space/spatial-freq. domain 95393
ractal coding of shapes, projected IFS model based 95177
ractal coding scheme using ref. images 118514
ractal compression accel. using real-time decoder 107037
ractal encoding of distorted images, textures, atmos. effects 106867
ractal geom. and appls. 124525
ractal image coding, convergence 95174
ractal image coding, DCT transform *(Chinese)* 106847
ractal image coding, feature difference class. 107073
ractal image coding, non-iter. scheme 107038
ractal image coding, trigonometric approx. method 73422
ractal image coding based on adaptive matching *(Chinese)* 129686
ractal image coding comparison 84368
ractal image coding in wavelet transform domain, list-directed approach 118573
ractal image coding scheme 84495
ractal image coding schemes using nonlin. grey scale fns. 73423
ractal image coding with multi-scaling for brightness *(Japanese)* 73396
ractal image compression, adaptive post-proc. 95173
ractal image compression, efficient decoding scheme 95169
ractal image compression, fast code enhancement with local search 95167
ractal image compression coding based on generalized convergence *(Chinese)* 106848
ractal image compression proc. for moving pictures *(Japanese)* 79947
ractal image encoder, real-time implement. 107044
ractal image encoding, wavelet transform domain searching 95133
ractal pattern coding, nondeterministic kinetics based feature clustering 129732
ractional FT, image representation/compression 129789
ractional GF(q^n) composite domain for image scrambling 73413
ragile authentication watermark for images 95060
ree-form 3D obj. compression using surface signature 95024
req. domain chaotic watermarking of digital images 95128
resnel transform of images for watermarking appl. 95151
ringe-based images, 3-D gauging image data compression 84403
uzzy relational eqns. in image compression/reconstr. *(Japanese)* 106976
gamma-compression gamut mapping method based on concept of image-to-device 84415
gastroenterology patient record consultation, MPEG-4 scene comp. 88015
generalized array codes for wireless image commun. in fading presence 129797
generalized lapped biorthogonal transforms using lifting steps 106897
generalized reverse jacket transform, even length vectors, appls. 124773
geom. wavelets for image compression 95076
geometric compression with predictable compression ratio 95235
geometric-invariant robust watermarking through freq. domain constellation matching 95119
Glicbawls, grey level image compression algm. 107080
global motion estim. for global motion compensation coding 84482
global motion estim. using fast and robust algm. *(Chinese)* 118631
gray level image embedding, DCT-based image hiding algm. 107017
gray scale document images, lossless compression methods eval. 84458
gray-scale document image lossy compression, quantization 95334
gray-scale images, pattern detect. with polariz. coding, matched filtering techs. 84515
ground glass, holographic encryption and MUX, phase conjug. readout algm. 72089
group testing for wavelet packet image compression 107055
Hadamard transform imaging with nanoresolution, near-field optics 95231
halftone image, data hiding with intens.-/connection-selection 107031

image coding continued
halftone pictures, hidden images, unique spatial filter fns. 95226
handwritten Chinese character recogn. 73424
hardwired distributed arith. compatible DCT/IDCT archit., image compression 95124
head pose estim. with Gabor wavelet networks 129611
hexagonal watermark embedding in wavelet domain 84492
hiding inform. in color images using small color palettes 106901
hierarchical CNN archit. for image intens. conversion 106870
hierarchical fractal coding based on VQ *(Chinese)* 95245
hierarchical wavelet image coding, iter. backward segmentation 95071
high dimens. clustered data model-based interpolation 107021
high-speed pattern decoder in MPEG-4 padding block hardware accelerator 79950
hologram binarization, iter. stepwise quantization method 129785
holographic storage capacity improvement using double-random phase encryption 128565
holographic transform compression of images, multiple descriptors 118638
Huffman decoding 94269
human faces recogn. based on fast computation of circ. harmonic components 73546
hybrid syst. for real-time lossless image compression 73393
hybrid VLC, wireless image transm. 108486
hybrid wavelet compression scheme for material textures 95321
HYDICE data, JPEG-2000 compression, 3D wavelets and KLT 95022
hyperspectral anal. toolset, spectral similarity scale algm. 122556
hyperspectral data, obj. detect., compression effect 107149
hyperspectral data compression, lossy VQ *(English)* 98960
hyperspectral data compression using VQ and DCT 98950
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
hyperspectral images, reduced dimens. quadratic detect. algms. 95416
hyperspectral imaging, JPEG-2000 compression, 3D wavelets and KLT 95023
hyperspectral rem. sens., spatial-spectral compression 99061
ICA for compressed vector representations 106909
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (May 2001) 113283
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE data compression, conf., Snowbird, UT, USA (March 2001) 100449
IEEE image and sig. proc. and anal., conf., Pula, Croatia (June 2000) 89596
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IIR filter lossy/lossless seq. transforms, image coding appl. *(Japanese)* 107030
image-feature based second generation wavelet based watermarking scheme *(Chinese)* 107275
image-intensive commun. syst. supporting pers. user requirements 118503
incoherent opt. systs., depth of focus, image encoding/decoding *(Chinese)* 84376
indexing techs., DCT domain 95045
inform. hiding using permutations 129713
informed embedding, watermark insertion exploiting image/detector inform. 95261
integer multiwavelet transform for lossless image coding 84496
integrated lossy/lossless image coding based on LWT and multichannel predict. 73404
inter-frame 3D DCT subband hierarchical coding *(Chinese)* 73367
interframe scalable coding using wavelet 95257
interleaved (2,1,7) convolutional codes perform. in mobile image commun. syst. 83894
Internet distributed image IS 119801
interscale/intrascale dependencies between image wavelet coeffs. 95078
IR dual-band pass. imagery for automatic clutter rejection 95507
ISAR image compression, geometric phase appls. 86147
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 2001) 124234
iterated transform. theory, Kohonen neural networks and DCT 73331
iterated transform. theory-based image coding 73411
JasPer, software-based JPEG-2000 codec implement. 96315
JBIG2 bi-level image coding std. 84459
JBIG2 std., dictionary design for text image compression 73402
JIT image browsing over Internet 107079
joint halftoning/watermarking 95157
joint source-channel coding for image transm. over noisy channels 95155
joint source-channel coding using arith. codes and TCM 106175
JPEG2000, embedded block coding 95112
JPEG2000, error resilient coding 95300
JPEG2000, new compression paradigms 106936
JPEG2000 and turbo-codes for robust image transm. 84470
JPEG2000 codec, implement. on fixed-point DSP 119822
JPEG2000 coding pipeline, quantisation watermarking 118583
JPEG2000 images, scalable detect. of perceptual watermarks 118584
JPEG2000 implement. on different computer platforms 106949
JPEG2000 still image coding std., efficient region of interest coding 95114
JPEG2000 still image compression std. 106955
JPEG2000-based scalable reconstruction of image local regions 84503
JPEG 2000, internat. std. for binary still image coding 84489
JPEG 2000, multiple component compression 106947
JPEG 2000, overview/archit./aplications 95111
JPEG 2000, regions of interest encoding and reconstruction 118562
JPEG 2000, TCQ 106948
JPEG 2000, visual optim. tools 95113
JPEG 2000 decompression tuning perform. via rounding, theory/practice 106944
JPEG 2000 file format, flexible color encoding archit. 106941
JPEG 2000 file format, imaging archit. 106939
JPEG 2000 for detected SAR imagery compression 109254
JPEG 2000 foundations, modern lossy wavelet image compression tutorial 118495
JPEG 2000 functionalities, anal. study 95116
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
JPEG 2000 next generation image compression syst. features and syntax 95115
JPEG 2000 std., DWT lossless compression, VLSI design 118527
JPEG 2000 still image coding, eval. vs. JPEG-LS, MPEG-4 VTC, JPEG 118550
JPEG 2000 still image coding vs. other stds. 106938
JPEG 2000 still image compression std. 118496
JPEG 2000 technol. develop. for advanced ground station archit. 95232
JPEG and wavelet comparative study for image compression 110968
JPEG coded domain, watermarking using inter-block correl. 73372
JPEG coded images, image restoration, mean removed classified VQ 95127
JPEG coder for partially reliable transport service 84366
JPEG compressed domain, image indexing and retrieval 118646
JPEG compressed images, deblocking approach 106884

image coding continued
JPEG compression factor control, new algm. 118545
JPEG encoder IP core, embedded, memory efficient preprocessing archit. for scanner 73428
JPEG image denoising using fuzzy wavelets 118490
JPEG images, unsupervised image obj. segmentation 95378
JPEG images, watermarking and selective encryption algms. 84418
JPEG modified image compression tech. 95137
JPEG quantization table, bitmap compression hist. ident., MLE 95088
JPEG stat. model redesign, DCT coeffs. lossy mode fitting distrib. 95380
JPEG std. uniform quantization error modeling, appls. to seq./progressive operation modes 73342
JPEG still image compression, blocking artifact free inverse DCT 95391
JPEG-2000, EBCOT, embedded block coding for optimized truncation 95225
JPEG-2000 based scan-based proc. 111383
JPEG-2000 error resilience technol. 106942
JPEG-2000 image compression, point-wise extended visual masking 95075
JPEG-2000 std., computational complexity eval. 106945
JPEG-2000 technol. and testbed, summary 106937
JPEG-DCT compressed color images, quality prediction based on SCIELAB metric 106986
JPEG-LS, rate control algm. design 106885
JPEG-LS diagonal edge detect., low cost algms. 118528
JPEG-LS modified image coder with increased channel error robustness 118643
JPEG/JPEG2000, memory complexity comparison 106946
JPEG/JPEG2000, multiple compression cycle perform. comparison 106943
JPEG/JPEG 2000 image coder comparison 107004
JTC, ref. PE, multiple target detect. 106933
Kohonen-GLA algms. for efficient VQ 73378
large-size images, transm. via Internet, Macintosh-based software syst. 95020
lattice struct. for regular paraunitary lin.-phase filterbanks/M-band orthogonal symmetric wavelets 129792
layered depth image compression algm. 107064
legal court cases, digital camera image ident. 118489
lifting based discrete wavelet transform archit. for JPEG2000 84488
light stripe triangulation config. color-coded opt. profilometry 86958
limited-order blocksort based image compression 107089
lin. constrained generalized Lloyd algm. for reduced codebook VQ 84388
listless wavelet zerotree image coding algm. for hardware implement. *(Chinese)* 73412
Lloyd lin. constrained generalized algm. for virtual codebook VQ 95170
local thresholding classified VQ with memory reduction 95395
lossless image coding, adaptive predictor combination 118564
lossless image coding, design of min.-rate predictor 118579
lossless image coding, integer-to-integer wavelet transforms 84486
lossless image coding using optimum prediction generated by local image features 106868
lossless image compression, arith. coding 95326
lossless image compression, filter banks with nonlin. lifting steps 73347
lossless image compression, lin. colour transform. coeffs. 118610
lossless image compression using adaptive integer wavelet coding 95327
lossless image data seq. compression using optimal context quantization 107053
lossless multiresolution transform for image authenticating watermarking 129715
lossless natural image compression using regressive anal. 118574
lossless picture compression, soft median adaptive predictor 118600
lossless still image coding using min.-rate predictors 84457
lossy and lossless compression perform., finite precision wavelets 95295
lossy context-based adaptive entropy coding, lookahead search 95385
lossy image compression, adaptive quantization and noise detect. 107090
lossy image compression, adaptive scanning methods for wavelet difference reduction 95289
lossy image compression, quincunx wavelet transform lifting scheme 95077
lossy image compression using adaptive wavelet filters 129709
lossy packet network compressed image quality measures 129790
low-bit motion estim. with edge enhanced images for lowpower MPEG encoder 95126
low-pass split wavelet pyramids, appl. to efficient zerotree coding of med. images 107113
low-resoln. content-based image watermarking in wavelet domain 129776
low-resoln. region discriminator for wavelet image coding 84360
LV motion, fast estim. using subspace approx. techs. 87664
LZ1 compression of binary images using rectangle greedy matching tech. 107074
LZ-based image compression 95037
LZW compression optim., lossy generalizations 107086
M-channel lin.-phase paraunitary filter banks with unequal length 95681
MAGELLAN, multiway hardware-software partitioning/scheduling for latency minimization 79661
Mallat algm., restrained condition *(Chinese)* 95141
mammography, digital, limited-error compression algms. 76547
masked wavelet coder for image compression 107057
masked wavelets appls. to image compression 107087
mean quantization blind watermarking for image authentication 95375
mean-match correl. VQ image encoding algm. 118633
mean-quantization-based fragile watermarking for image authentication 118515
med. image compression by cosine and wavelet transforms 110788
med. image compression by DCT spectral similarity strategy 110525
med. images, lossless compression by hierarchical segmentation 110534
med. radiology, image compression methods 122143
med. ultrasound and X-ray image compression methods, clinical assess. 132837
mesh objs. generation/tracking, coarse-to-fine approach 95216
missing block reconstruction in block coded image transm. 84510
mixed raster content compression, block-threshold segmentation optim. 95198
mobile commun., image error concealment *(Chinese)* 108795
model-based interpolation of high-dimens. clustered data 95234
modulated lapped transform computation, fast algm. 84716
motion estim. algm. using adaptive search tech. *(Chinese)* 106490
motion-compensated frame differences, space-depend. characts. anal. 95283
Motion-JPEG2000 standardization, target market 95117
moving image, future 97063
moving obj. segmentation, spatial-temporal Markov random field *(Chinese)* 73197
MPEG transcoding, requantization param. optimisation *(Japanese)* 95144
MPEG-2 image seq. coding, rate-distortion optimal fast thresholding 84380
MPEG-2 software-based high-quality encoder using scene change detect./adaptive quantization 118534
MPEG-4 coding perform. improvement, compression optim./blocking effect elimination 95332
MPEG-4 coding perform. optim., post-proc. role 106858

image coding continued
MPEG-4 FBA decoder for Web appls. using Java applet 107001
MPEG-4 imagery, ring convolutional trellis codes design for MAP decodi 129800
MPEG-4 noisy still texture image, adaptive thresholding 95382
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS imp ment. 79949
MPEG-4 visual texture coding using double transform coding 107014
MPEG-7, image/video self-description scheme 74427
MPEG-7 std., color/texture descriptors 84387
MPEG-7 std., supported colour spaces, image retrieval efficiency 118611
MPEG-integrated still imagery and live video, soft-computing based 73320
MRI, adaptive sensitivity encoding incorporating temporal filtering 87619
MRI, ghost artifact cancellation using phased array proc. 132743
MRI, sensitivity-encoded spectrosc. imaging 132768
MRI, SMASH/SENSE, expt./num. comparisons 87648
multi-bit binary arith. coding 94268
multi-bit image watermarking, geometric distortions robustness 95376
multi-rate hybrid codec and perform. eval. for image compression 85426
multi-ring/single-ring differential chain coding for telewriting appl., efficien 118625
multi-spectral image compression on Internet 95030
multi-std. video and image codecs, HW-SW co-design and verification 8542
multi-view image coding incorporating approx. geom. 95108
multi-viewpoint image data, model-aided coding 95223
multibase transform coding for multispectral image compression 73360
multichannel image compression by bijection mappings onto zero-trees 953
multicore-fiber CDMA networks, double-wt. signature pattern codes 74966
multimedia data compression for recogn. and content-based retrieval 11870
multimedia data recovery using inform. hiding 73408
Multimedia Description Framework, content description of audio/video do ments 119777
multiple description coding 118497
multiple description coding using exact discrete Radon transform 107085
multiple description coding using trellis coded quantization 83935
multiple description image transm. using block-based DC separation 10710
multiple region-of-interest image coding with embedded watermark 107012
multiple same-sized block mapping 107097
multiplicative watermarks, optimal detect. 118618
multirate sig. proc. on finite fields 118626
multiresolution adaptive image pyramid based compression algm. 106984
multiresolution-histogram indexing/relevance feedback learning 95194
multiscale image segmentation, wavelet-domain HMM 107213
multispectral and hyperspectral imagery, data reduction based on catastrophe t ory appl. 73385
multispectral image compression using reversible WT and KLT *(Japane* 73395
multispectral images, lossy compression, blockwise distortion measure 1297
multispectral rem. sens. images, lossless compress. based on SPIHT *(Chine* 95230
multistage multichannel fractional Fourier-domain filtering, opt. image encry tion 118494
multiview image compress. using quadtree disparity estim. 107109
myocardial strains determ. from tagged MRI, fast techs. 98470
natural images, wavelet-based decomp. in independent resoln. levels 10703
near lossless image compression by relax. labeled prediction 84461
nearest VQ codeword search scheme, tighter kick-out condition 129742
nearly optimum generalized multilevel block truncation coding algm. with f nonexhaustive search 106925
network model coding gain for smoothed descriptions coding 129798
neural network approaches to fractal image compression/decompression 1186
neural network face recogn. using stat. feature/skin texture params. 129823
neurological CT and MRI, JPEG and JPEG 2000 irreversible compressi algms., eval. 98493
noisy image compression, wavelets/multiwavelets/wavelet packets/multiwave packets comparison 107069
noisy images, coding based on fuzzy VQ 84444
non-iter. fractal image compression, variance-based domain blocks 73389
noncausal predictive lattice model for image compression 84502
nonlin. multi-resoln. decomp. with appls. to image compression 95125
nonlin. predictive model evol. for lossless image compression 84416
nonlin. transform. periodicity *(Chinese)* 129689
nonseparable nonlin. decomp., image compression appls. 95188
oblivious cocktail watermarking by sparse code shrinkage, regional-/global-bas scheme 95264
oblivious digital watermarking scheme with blob-oriented spatial-domain mech nism 107033
octree isosurface codification based on discrete planes 118649
on-board satellite image compression, bit rate and local QC using rate/distorti criterion 118558
online image compression using SVD and adaptive VQ 118563
open-loop/closed-loop wavelet to DCT progressive image transcoder 95093
opt. image encryption, generalized fractional convolution operation 106964
opt. morph. correl., visual area coding tech. 107236
opt. neuron network, photon echo with time data coding 104852
optimal adaptive DCT watermarks 118619
optimal design of transform coders/quantizers 95384
optimal L-filter for blocking artifact reduction using GA 106890
optimal subband wavelet thresholding using noisy/non-noisy data of imag 129773
optimal transform 107067
optimal transform domain watermark embedding via LP 95048
optimisation for decoded images using 3D smoothing method 73319
orient. adaptive lapped orthogonal transform appl. 95381
orthogonal length-3 approx. order preserving prefilters 119043
oSPIHT, embedded obj.-based SPIHT image coding 129774
osteoporotic bone, encoded FTIR microspectroscopic data visualizationy 1108
pace code for arbitrarily shaped objs. 95394
packet networks image transm., multi-stage vector quantizer design 84471
page segmentation and content class., document image proc. 84241
palette-based compression, efficient color re-indexing scheme 95310
parallel MRI, generalised approach 110869
parametric lossless image compressors 84455
partitioned iter. fn. syst., digital imaging tool 95136
partitioning for fractal coding under rate/complexity constraints 118603
partitions encoded with transit. points method, constrained/unconstrained simp fication 95219
pattern recogn. and image anal., coord. logic filters 129575
PD sigs. noise removal, wavelet based 84383
PDP, motion picture disturbance, dyn. gray-scale control 86843

e coding continued
erceptually important colors extraction/similarity meas. 84453
erceptually-based robust image transm. over wireless channels 95163
erfect image watermarking possibility 107046
ers. ident. documents, image based authentication, DCT appl. 95034
ET images, adaptive lossless compression method 111002
anar coded aperture imaging, near-field artifact reduction 132845
anetary mission image compression archit. 108485
OCS-based image reconstruction from irregularly-spaced samples 95183
oisson-corrupted data, complexity-regularized denoising 95296
olariz. encrypted secure holographic memory syst. 82064
olariz. holograms, phase coded recording for data MUX and encryption 82978
olygon-based shape coding, vertex adjustment, geometric constraint 84361
olygonal shape descriptors, image retrieval and obj. localization 106894
ortable digital video cameras, image proc., VLSI switched-current implement. 95354
osteriori quantized matching pursuit 107076
PM approach to watermark detect. and decoding 95049
rincipal component neural networks, still image compression 106956
rinted images, copyright labeling 118605
rinted images, watermarking/copyright labeling 106888
rogressive and exact image reconstruction using nonlin. bank filters 118555
rogressive compression for triangular meshes with QC 106877
rogressive image coding using SPIHT algm. and trellis coded quantiser 73323
rogressive image transm., joint source-channel coding *(English)* 73390
rogressive image transm., lossless algm. *(Polish)* 129697
rogressive image transm., quadtree and shading approach 118629
rogressive image transm. in memory channels, perform. anal./optim. 106980
rogressive lossless image coding, adapted nonlin. multiresolution decomp. 129777
rogressive quadtree wavelet encoder for lossy image compression 106985
rogressive source coding for power constrained Gaussian channel 106852
seudo color coding fractional FT rainbow hologram, anti-counterfeiting appls. *(Chinese)* 105592
ramid image coder using histogram based classifier 84421
ramid texture compression/decompression using interpolative VQ 95175
M/MQ-coded data, worst av. code word length, single context coding model *(Japanese)* 73397
MF two-channel approx. lin. phase filter bank design, image compression appl. 73383
oS filter module to transmit MPEG video on heterog. environ. 84400
adratic phase systs., opt. encryption 95038
uadtree-based fractal image coding using VLSI archit. 129734
uality measures, stat. anal. of sensitivity and consistency 129725
dar, geometric obj./image rels. 86131
diographic images, Web-based retrieval using multi-scale tree VQ in wavelet domain 110977
dioisotope image quality, impact of wavelet compression 98568
nge imagery, variational segmentation by piecewise facet models 96902
nge images correl., shape conformity eval. 106965
ayleigh fading channel, compressed image commun., trellis decoding of block codes 106093
al-time multi-spectral image fusion 129949
compression, Q-factor reduction, quantisation error reduction 129779
configurable on-board payload data proc. syst., ESA develop. 98920
constructed test images, subjective quality, classical/advanced wavelet coders 129791
coverable tamper proofing by secure DCT 129741
dundant transform. on binary data, appl. to image coding and transm. 84373
gion and data hiding based error concealment 129787
gion-based image coding, image partition simplification 118571
gion-based scanning for image compression 95217
gion-based subband/wavelet image coding 95294
gion-based watermarking by distrib. adjustment 106900
gion-selective image compression, nonuniform sampling theorem 106988
liable digital watermarking, successive subband quantization and human visual syst. 129763
m. sens., digital image, class. coding, software simul. *(Chinese)* 95142
m. sens., on-board opt. image compression 111382
m. sensed imagery, class., lossy compression effects 111379
ndering scene compression 95110
presentation using histogram-based classifier, coding appl. 106876
search in image compression 118547
sidual VQ, Gaussian codebooks 95172
soln. progressive coding using sorting algm. 95293
soln. scalable lossless progressive image coding via conditional quadrisection 95095
trieval on uncompressed/compressed domains 95195
GB image color quantization, dyn. archit. self-organizing map appl. 107022
nging artifact removal, max. likelihood param. estim. 95085
nging-artifact removal, max.-likelihood param. estim. 95350
obust data hiding for images 95255
obust data hiding using psychovisual thresholding 95067
obust digital watermarking tech. for images 73375
obust high capacity data embedding 95065
obust image hashing 95364
obust image transm. using source adaptive modulation with diversity 73358
obust image watermark with wavelet transform/SS techs. 106999
obust oblivious digital watermarking using image transform PM 95161
obust oblivious watermarking scheme 95118
obust watermarking, diversity and attack charactn. 118518
tate-tiling image comp. method for parallel vol. rendering on distributed memory multicomputers 84369
AR data compression, range focusing/variable-rate trellis-coded VQ 109236
AR imagery, lossless compression using multiple-pass gradient adaptive lattice filter 109251
AR images, joint denoising and lossless/lossy compression 129731
AR polarimetry-interferometry, theory, technol. and appl. 86207
AR wavelet compressed imagery, ATR perform. 86187
tellite images coding, real BCH codes as joint source/channel codes 73357
tellite on-board front-end proc., systematic-DSP 133246
alable image coding with projection-based context modeling 95292
ene adaptive multiple coding for robust image transm. 84475
cure image coding scheme using RNS 129701
gmentation-based image coding, morph. local monotonicity 106895
gmentation-based lossless compression of burn wound images 110504
quence compression coding scheme, 3D wavelet transform *(Chinese)* 73359
SN model for image compression, neural net simul. .84374
ape approx. through recursive scalable layer generation 95222
ape-adaptive DCT, perform. factors 129729

image coding continued
sig. compression using slantlet transform, efficient approach 95615
sigs., systs. and computers, conf., Pacific Grove, CA (2000) 100407
skeleton struct., image compression algm. with perfect reconstruction 95134
skew-coord. DCT method for images, entropy coding based on Gaussian mixture distrib. model 73327
skin, human, high-resoln. spectrosc. imaging 87600
SLM, FT opt. proc. appls. 104888
small animal SPECT, coded aperture imaging investig. 111035
small animal SPECT, coded aperture imaging investig. 132979
Space Solar Telescope, imaging syst. and DP 109699
sparse image coding with clustering, face recogn. appl. 95046
sparse vector lin. prediction with near-optimal matrix struct. 106864
spatial noise shaping for image coder enhancement 107063
spatial-domain image watermarking 106899
spectral image compression for data commun. 95333
spectral satellite image compression based on wavelet transform *(Chinese)* 95344
SPIHT, SPIHT, lossy image coding 73414
SPIHT algm., improvement for high-speed pipeline archit. implement. *(Chinese)* 73387
SPIHT algm. based on variable sorting thresholds 107015
SPIHT error-tolerant image compression 95330
SPIHT image compression algm., rate-distortion optim. 107060
SPIHT stripe-based lossy compression of vol. med. images 98160
SPIHT-based embedded colour image coding techs. 95341
SPIHT-based image compression, optimal refinement/significance map tradeoffs 106981
SS watermarking combining visual/detect. models 95370
SS watermarking with self-sync. capabilities 95053
stack X-tree image coding algm. 73430
steganography for low bit-rate wavelet based image coder 95068
stereo image compression approach via pixel value var. trend adaptive subspace projection 106917
stereo image wavelet-based mixed-resoln. coding 118491
stereo images, edge-preserving disparity estim./disparity-compensated intermediate view reconstruction 95239
stereo images, embedded coding 95361
still color pictures, quality-oriented JPEG coding 118578
still digital camera, H.26L intra mode encoder archit. 120904
still image coding, hybrid method 129719
still image compression, JPEG 2000, lifting based DWT, embedded block coding, optimized truncation 129708
still image compression syst. using wavelets, perform. anal. 73409
still image wavelet transform coding, intra and inter-band relns. eval. 95288
still images copyright protection, self-similar chaotic watermarks 95052
still images transm., combined source-channel coding 106994
streaming thin client compression 107061
stroke MRI, diffusion-weighted EPI, sensitivity encoding 132695
subband coded image quality, fuzzy control, std./fuzzy quality measure 118517
subband DCT approach to image watermarking 129712
subband image coding systs., filterbanks for less ringing artifacts *(Japanese)* 73398
subband sampling, multimedia commun. 108433
subband-coded images, edge enhancement 73335
suboptimal fractal coding using iter. transform. 73334
substation rem. watching, 2D image proc., wavelet transform *(Chinese)* 73371
surface shape meas. by phase-shifting digital holography 82999
surfaces hierarchical representation and coding, 3D polygon meshes 95250
surveillance, importance assignment for compressed image interp. 84434
SVD/VQ-based image hiding scheme 84441
sym. matching based document image compression and merging syst. 95336
symmetric-antisymmetric multiwavelet filter bank, image compression *(Chinese)* 107474
target detect., wavelet transform and GA *(Chinese)* 84436
target recogn., intell. compression, feature detect./fusion 84551
telemedicine, accident and emergency, accuracy, effect of image resoln., compression, colour depth and display modality 133159
teleteaching syst., image preprocessing for content-based image coding 95258
thin film polymer media holographic memory card, data storage 82974
thin polymer storage layer dens. optim. for polariz. holograms 82975
time-varying natural images, sparse coding 118505
TMW^{Lego} for OO image modelling 107081
total var. improved wavelet thresholding in image compression 95189
totally incoherent light opt. security/encryption 73420
transform compression, subspaces of quantization artifacts 95390
transform domain feature detect. and concealment algm. 106932
transm. over mobile fast-fading channels, wavelet noise cancellation/interleaving techs. 95123
transm. over Rayleigh channels, wavelet domain diversity method 84417
twisted NLC SLM, Fresnel lens amplit. apodizer encoding 82285
two layer VQ of images 84393
two-channel coding of images using spline surfaces 84385
UAV-HALE surveillance syst., SAR images, autom. obj. detect. 96977
UHF secondary imagery dissemination systs., evol. 111604
ultrahigh-speed VQ, scalable lin. array archit. with data-driven control 96320
ultrasound images, irreversible compression using JPEG algm., clinical eval. 98263
unified lossless, near-lossless, lossy coding of images based on lossless DCT *(Japanese)* 118635
universal multi-scale matching pursuits algm. with reduced blocking effect 95387
unwrapping of sigs. in transform domain 84478
unwrapping of sigs. in transform domain, sig. reconstruct./lossy image compress. appls. 95711
US images compression, space-freq. segmentation with entropy coding 98315
VI, computational allegory 129778
variable focus FZP, phase-only SLM 93295
variable-size-block motion estim., rate distortion optim. *(Chinese)* 118511
varying channels, progressive source coding with regressive channel coding *(English)* 72892
vector bit-plane encoding, uniform distrib. of points on hyper-sphere 95331
vector transform algm. for image coding *(Chinese)* 95227
video proc. and multimedia commun., conf., Zadar, Croatia (June 2001) 113202
vision model based perceptual coding of digital images 84494
visual binary DP in compressed domain by finite transducers 84491
visual commun. over noisy channels, error resilience tools 129784
visual cryptography, improved schemes 129793
visual cryptography, known-energy neural net approach 107112
visual data, digital watermarking trends 118617

image coding continued
visual embedding of wavelet transform coeffs. 95290
visual feature discrim. vs. compression ratio for polygonal shape descriptors 95025
visual inform., isotropic vs. anisotropic encoding 106853
visual learning by integrat. descriptive/generative methods 106907
visually lossless data compression for real-time frame/pushbroom space imagers 106914
VLBR feature-preserving image coding 107058
VLSI implement. of fractal image compression proc. for moving pictures 129753
vol. med. data compression based on cube splitting 110496
VQ, embedded optim. constraints 118507
VQ, evol. simulated annealing algm. *(Chinese)* 95229
VQ, fast clustering algm. for codebook prod. 73343
VQ based Bayesian image filtering, MRI appl. 95193
VQ image coding using sub-vector techs. 95168
VQ image proc. based on projection onto hypercubes 95040
VQ with degrad. control mechanism 129720
VQ with edge reconstruction 95495
VR using concentric mosaic, constr./rendering/data compression 95362
watermark embedding, sig. hiding within cover image 106921
watermark extraction and modified robust embedding scheme 95054
watermark for digital image authentication, wavelet packet/adaptive spatial transform. 95061
watermark robustness against affine transform *(Japanese)* 95143
watermark-removal software, geometric distortion compensation using triangular meshes 129717
watermarking, coding techs. for data hiding and capacity limit 95047
watermarking, Legendre array *(Chinese)* 95244
watermarking, resilience against attack 95051
watermarking algm., matched filtering *(Chinese)* 84437
watermarking algm., VQ 84405
watermarking by moment invariants 95158
watermarking by variable dimens. VQ 73374
watermarking in presence of compression, energy allocation 95055
watermarking method for embedding index data into colour images using wavelet transform 95353
watermarking scheme based on charact. of addit. among DCT coeffs. 106898
watermarking scheme using digital images 73361
watermarking schemes, geometric props. 95377
watermarking using complex wavelets with resist. to geometric distortion 118621
watermarking/data hiding, inform.-theoretic model 95365
wavelet adapted and visually tuned compression 107007
wavelet based compression for image retrieval systs. 106979
wavelet based image watermarking schemes, comparison 95369
wavelet block quantization tables for images, optim. algm. *(Chinese)* 95228
wavelet coding with fractals for image seqs. 84507
wavelet compression improvement with neural networks 107070
wavelet image and video coding on parallel archits. 129766
wavelet image coding, fast accurate rate prediction and picture QC 106983
wavelet image coding method using small block DCT 73362
wavelet image coding using blockwise binary class. and trellis coded quantization 106989
wavelet image coding with zero-tree of wavelet coeffs. 129762
wavelet image compression, optimal decomp. 95396
wavelet image compression, optimum quantization error feedback filter 95285
wavelet image compression, simple and efficient algm. 95287
wavelet image compression/coding scheme 106990
wavelet image/sig. compression 95130
wavelet lifting scheme for image compress. and reconstruct., SFG approach 95355
wavelet transform 73410
wavelet transform, image compression based *(Chinese)* 73386
wavelet transform coding, edge-based artifact mitigation 107078
wavelet transform footprints, catching sing. for compression/denoising 95186
wavelet transform for real-time image compression using FPGAs 84399
wavelet transforms, scalable DSP realisation 118499
wavelet upper bounds on 2D Lipschitz class and zerotrees 118560
wavelet-based digital watermarking with halftoning tech. 107016
wavelet-based image codec in memory-constrained environ., design 74484
wavelet-based image coder using joint source-channel coding 107106
wavelet-based image coding, lambda iterate bit allocation algm. *(English)* 84362
wavelet-based image coding, perceptual quantization, psychovisual eval. 95072
wavelet-based image compression using fixed residual value 106950
wavelet-based image compression using shuffling and bit plane correl. 106952
wavelet-based image-coding scheme, variable-coeff. fixed-length coding method *(Chinese)* 95154
wavelet-based watermarking for digital images/video 95368
wavelet-based watermarking for still images tamper proofing 95162
wavelet-compressed image restoration using adaptively masking smoothness constraints 106862
wavelet-subband image coder, design 107052
Web pages, delta encoding 107084
weld joint inspection, thermographic images compression 78693
Wiener filter hybrid digital-opt. correlator, compact image recogn. syst. 71474
wireless image transm., product coding/decoding 96381
wireless packet networks 95164
zero redundancy error protection of images using self-organizing-maps 73379
zero-tree quantization algm., block-adaptive *(Chinese)* 73415
zerotree coding algm., low memory, set partitioning in hierarchical tree *(Chinese)* 129738
zerotree of wavelet coeffs., image compression algm. *(Chinese)* 118636
$LiNbO_3$:Fe photorefr. cryst., holographic triple random PE opt. data encryption 93008

image colour analysis
1D color temp. conversion in perceived illum. 114791
2D complex FFT, efficient implement. of quaternion FT/convolution/correl. 129647
2D hypercomplex FT decomp. into complex FT pairs 118561
2D mesh-based video obj. segmentation and tracking, occlusion resoln. 107282
2D robust shape estim. of moving objs., MAP detect. rule for spatial/temporal coherency 84327
2D run-length encoding techs. modifs. 107009
3D head/hands tracking in real time by EM algm. 107197
3D light source geom. calib. from images 118365
3D lookup table method, interpolation errors on gray gradations 73155

image colour analysis continued
3D model and obj. color estim. using multiple color images 129551
3D rigid obj. automatic shape reconstruction from calibrated images 129472
3D scalable wavelet video compression, improved color coding 118615
3D struct. tensor/curve evol. for image seq. segmentation 73148
3D TV full parallax colour integral image data compression, chrominance components sub-sampling 107095
4-sens. camera calib. for image representation 106636
520-TV line high-resoln. surveillance camera, devel. 120587
acrylic sculpture proc., laser segmented pixel drawing 105637
adaptive filters for colour image proc., survey 118216
adaptive vector median filters for color image restoration 118423
adaptive-neighborhood histogram equalization 73161
additive non-Gaussian noise corrupted image restoration 94616
ADS40 airborne digital sens., data proc., test flight results 122718
aerial images, region-based segmentation, Karhunen-Loeve transform 118316
algorithmic mapping of color to texture 95568
AMPAC database, boot program for printing machine, intell. printing 94879
ang. distrib. of refl. spectral intens., image reprod. 94865
anisotropic diffusion, scale-space techs. 73266
approximating CIECPLM97s color appearance model by means of neural networks 106730
artificial life for image segmentation 129555
assembly actions detect. by scene obs. 84302
automatic color preference correction for color reprod. 94874
automatic model-based semantic obj. extraction algm. 129690
automatic moving obj. extraction for content-based video indexing 118775
automatic skin-color distrib. extraction for face detect./tracking 73458
automatic speechreading syst., lip feature extraction 94798
automatic white bal. of digital colour images using fuzzy logic 73318
Bayer pattern images, saturation-based adaptive inverse gradient interpolation 94864
Beltrami framework for vision, affine invariance 118252
biological image/interf. colors thickness extraction 73517
biological model for still/video images 118468
blind/readable watermarking 95059
blinking commun./control channel for disabled people, image proc. 87930
block color quantization, new color halftoning method 95309
blood vel. estim., recursive ultrasound imaging/spatially encoded sigs. 110732
body parts tracking of multiple people, new approach 95598
brain amyloidosis diseases, microscope image class. by filtering of amyloid plaque 121892
CAMIA, Computer-Aided Medical Images Analyzer 110532
car license plate recogn. syst., neural network based 84566
carpet flooring material, invariant pattern location, unsupervised color-based perceptual organization and graph-based matching 106522
categorical color mapping, color-categorical weighting method, gamut mapping 84185
CCD color filter array using sig. correl., color interpolation 94823
change detect. based on colour edges 84631
chroma transform based face locating/tracking method 73167
chromatic adaptation perform. of different RGB sens. 97392
chromaticity diffusion 94704
chrominance data, high-compression by segmentation of luminance 118581
class. based on color and texture anal. 94964
class. strategy for color documents, using Cart trees 94756
CLIMS, image retrieval using colour and wavelet features 73307
CMOS APS image sens., very high resoln., pixel size limitations 131974
color calib. targets for digital input devices 73282
color conspicuity model for visualization 129592
color coord. systs. comparison *(Japanese)* 94612
color display for dichromats 94872
color halftone descreening based on color sigma filters 95706
color image, content based color signature *(Chinese)* 84173
color imaging, device independent color, color hardcopy, and graphic arts, conf. San Jose, CA, USA (Jan 2001) 89586
color mgt. systs. and meas. devices for monitors 94763
color stds., Internet color imaging 73280
color-coded grating profilometry, lumin., RGB and HIS models *(Chinese)* 73388
color-coded projection grating, 3D surface profilometry *(Chinese)* 95343
colored pattern appearance model for image indexing 95237
colour image segmentation for scenes containing vegetation and soil 94486
colour map interp. via automatic/interactive techs. 107250
colour-coded grating 3-D profile meas./appl. 121215
colour-difference eval. using CRT display, parametric effects *(Chinese)* 73
comparison of PCA and ICA in color recogn. 95421
complex image/color matching/coding, spatio-chromatic filtering 95451
compression tech. using locally adaptive resoln. method 129769
computer vision for color recogn./noncontact meas. *(Italian)* 118676
computer vision syst. for tracking players in sports games 94968
constancy unification, general correl. framework 84184
constrained dichromatic refl. model, colour constancy 118445
contact lens trauma assess., corneal images anal. 87552
content-based image retrieval using fuzzy multiple attribute relational gra 129446
content-based image retrieval using fuzzy visual representation 118735
content-based image retrieval using sketch based queries 118737
correl., hypercomplex Wiener-Khintchine theorem 94706
cpd. Gauss-Markov random fields for color image restoration 118387
deformable shape detect. and description, model-based region grouping approa 84533
Dempster-Shafer theory based color edge detector 95519
dense 3D surface acquisition, struct. light appl. 89908
DICOM use in integrat. of imaging into electronic patient record at Departm of Veterans Affairs 98121
digital color AOI syst., high-resoln., for 0201 component inspection 100655
digital halftoning algms., error diffusion, error bounds 94576
digital low-end camera for on-screen texture visualisation, colorimetric characterisation 97737
digital still cameras, color segmentation as aid to white balancing 94869
digital video-MPEG-2 intracoding conversion 118521
document compression, fast, scalable DSP archit. 95335
document compression using rate-distortion optimized segmentation 73341
dubious image blocking using colour features 118390
edge detect., local nonuniformity perceptual assess. 107230
edge detect. tech. based on gradient operators 118758
edge detect. using hypercomplex filters 118218
edge detector based on stat. rupture tests 95521
edge detectors in multiple color spaces, comparison 94707

ge colour analysis continued
dge-region cooperative segmentation 106483
lectrophotographic color prints, predicting transmittance spectra 94867
ndoscopic ultrasound, echo-enhancing agents use 122022
nhancement in poor visibility conditions 94705
nhancement using shunting inhibitory CNN 118384
uclidean Lab color spaces quantization by Fibonacci lattices 129765
USIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
ye 3D US images, high-resoln., morph. assay 110722
ace, lip region anal. for emotion detect., evol. 107262
ace and hands tracking in complex background using colour and motion 129902
ace detect., general framework 73541
ace detect. for multimedia appls. 94641
ace detect. from complex scenes in color images 118705
ace detect. in color images and video seqs. 107292
ace detect. in colour images using skin probab. map 84579
ace detect. in compressed domain 129822
ace recogn. based on skin/lip chrominance from color images 84526
ace-assisted low-complexity video coding 95178
ace-color modeling and segmentation, mixture model 118753
aces extraction from natural background for pers. ident. 118779
acial feature detect., color segmentation/KL transform *(Chinese)* 95431
acial feature points, robust detect. under nonlin. illum. 107231
acial image retrieval 118738
ANN-based subsampling of color video seqs. 118222
eature selection using decision trees, outdoor scenes obj. recogn. appl. 95549
iltering, fuzzy color credibility approach 94710
iltering in xyY color space 94824
iltering of color images distorted by impulse noise 129438
inding colored objs. under different illum. conditions, robotic appls. 95422
oreground segmentation using adaptive mixture models in color/depth 95011
orward-looking airborne camera image degrad., phys.-based color image enhancement approach 129508
PGA archit. for videowall image proc. 118173
T holograms, gray level/quasi-colors 105615
uzzy algms. for combined quantization/dithering 73261
uzzy-assignment-based color interpolation algm. 94877
amma-compression gamut mapping method based on concept of image-to-device 84415
amut clipping 94711
amut mapping algm., lightness mapping/multiple anchor points 84186
amut mapping fund., survey 84188
amut-mapping expt., ranked data anal. 73154
iuteal aneurysm embolization, giant, colour Doppler sonography in follow-up 76364
ray and colour med. images, impulse noise reduction, random walk approach 132532
roup-of-frames/pictures color histogram descriptors for multimedia appls. 84288
iding inform. in color images using small color palettes 106901
ierarchical histograms, image-based data retrieval representation 84289
ierarchical model based human motion tracking 95543
igh-resoln. color image reconstruction from compressed video seqs. 129473
igh-speed chip-matrix 1200-dpi LED printhead for digital color printer 94878
istogram based multichannel filter 118219
istogram constr. from color invariants 107165
istogram modif. for enhancement of multi-channel sigs. *(Japanese)* 84136
istograms anal. based image retrieval method 84096
opfield neural net for image color quantization 106667
uman face detect., prediction-and-verification 94965
uman face recogn., facial color/motion inform. extraction *(Japanese)* 95488
uman skin color model using neural networks 118674
uman skin colour phys.-based modelling under mixed illuminants 84596
YDICE data, JPEG-2000 compression, 3D wavelets and KLT 95022
yper-spectral data, color constancy 129630
ypercomplex color-sensitive smoothing filters 94524
CA features of colour and stereo images 118244
llent. using color inform. 107295
EE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
llum. charact. estim. 84274
luminant chromaticity estim. from single color image 84187
luminant color estim. using polarizing filter, color correction appl. *(Japanese)* 73136
npulse noise reduction filter 130095
npulse noise removal for color image, noise detect. based 73314
ndexing techs., DCT domain 95045
ndexing/machine vision, color representation 95533
ndiv. ident. using lip shape as password *(Japanese)* 106819
ndust. furnaces, fuel combustion status eval., image class. based method *(Chinese)* 84118
ntegrated segmentation and depth ordering of motion layers in image seqs. 129631
ntens.-hue-saturation-based image fusion with saturation compensation 73143
nteractive image retrieval, integrated segmentation tech. 94941
nterpolation with edge-enhancement 106753
ntracardiac press. grad. mapping, Euler eqn., colour echocardiograms 98264
nvariant face detect., orthogonal Fourier-Mellin moments and SVM appl. 95445
nverse halftoning, look-up table method 118371
shihara pseudoisochromatic plates, digital color dot picture 94761
PEG 2000 file format, flexible color encoding archit. 106941
PEG 2000 file format, imaging archit. 106939
PEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
PEG coded images, image restoration, mean removed classified VQ 95127
PEG compressed domain image retrieval by colour/texture 107088
PEG compression factor control, new algm. 118545
PEG-DCT compressed color images, quality prediction based on SCIELAB metric 106986
n. color grading, color space conversion 94464
p contour extraction using deformable model 95502
ssless image compression, lin. colour transform. coeffs. 118610
SB steganography detect. in color and gray-scale images 129537
ng adenocarcinoma, tissue colour images anal. 87350
ng cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
achine vision, conf., Bristol, UK (Sept. 2000) 124239
icrovasculature blood flow imaging, real-time HF US syst. optim. 110723
obile robot localization, image fingerprint seqs. derivation and matching 97389
odified fast vector median filter 129461

image colour analysis continued
modular neural network-type CANFIS neuro-fuzzy modeling for multi-illum. color device charactn. 129660
moire-free color halftoning using 2×2 printer modeling 94880
morph. operations 73160
moving pictures, automatic extraction method of facial regions for occlusion faces 118780
moving vehicles, automatic license plates ident., Sova-2 software syst. 95410
MPEG-4 video, still texture, spatial content indexing 118733
MPEG-7 std., color/texture descriptors 84387
MPEG-7 std., supported colour spaces, image retrieval efficiency 118611
MRI data, multi-channel, colouring 110877
multi-bit image watermarking, geometric distortions robustness 95376
multi-component cross entropy segmentation for colour image retrieval 129576
multi-slit rangefinder develop. *(Japanese)* 84090
multichannel 2D delta-domain lattice filter, noise removal 84140
multichannel image enhancement and registration, vector order filter 118391
multichannel image proc., impulsive noise 84266
multichannel images, optimal target location 95590
multichannel M-filtering for color image restoration 94521
multichannel sig. enhancement by histogram modif. 118217
multiple classifiers for color flag/trademark image retrieval 73262
multiple image descriptions for browsing and retrieval 94762
multiple objs., real-time color-based tracking, Cocoa archit. 94851
multiple-exposure rainbow holography, vert.-area partition recording, 3D monochromatic image synthesis 105585
multiresolution anal., color morphological pyramid *(Chinese)* 118420
multispectral and hyperspectral imagery, data reduction based on catastrophe theory appl. 73385
natural backgrounds and artificial objs., spectropolarization contrasts 73534
natural color reprod. of image, highlights, vector transform., nonlin. mapping 84183
natural images, color segmentation and fig.-ground segreg. 95494
natural images, edge-directed interpolation 118367
neural network face recogn. using stat. feature/skin texture params. 129823
neural network-based text location 118751
noise atten. filtering tech. 129573
noise removal from colour pictures *(Chinese)* 73133
nonlin. vector multiresolution anal. 107398
normalized color difference edge detector, quaternion representation based 95520
obj. based video, mesh based segmentation and update 84464
obj. localization, histogram dist. measures comparison 94839
obj. recogn., color-invariant shape moments 118654
obj. recogn., massive color quantization 84616
obj. recogn. under different illum. 107281
obj. recogn. using multimodal neighbourhood signature method 129831
obj. segmentation, fast geodesic act. contours 118724
obj. tracking, mean shift/optimal prediction 94789
obj. tracking with attributes, probabilistic techs. 106663
obj. tracking with shape representation network using color 94793
obj.-based intra-frame wavelet video coding 129775
objectionable images detect. and filtering, Internet appl. 118730
objective metric for colour image comparison 118220
obstacle detect., color segmentation/stereo homography 94729
outdoor autonomous mobile robot 109672
palette-based compression, efficient color re-indexing scheme 95310
paletted images, data hiding 118221
panoramic photography image alignment/color matching 95577
pattern-selective color image fusion 84092
PCB AOI, color/black-and-white systs. comparison 113769
people tracking syst. using color histogram based recogn. tech. 84630
perceptual color difference metric for complex images based on Mahalanobis dist. 73158
perceptually important colors extraction/similarity meas. 84453
perceptually uniform color spaces for texture anal., eval. 73500
periodontium, tension-deformative condition investig., bone tissue atrophy 87317
phase correl. algm. for multicomponent images 94908
photomosaic creation software, digital image proc. 129506
photorealistic image synthesis, color appearance 94873
pixel colour invariance 129609
portrait color image compression tech. 95129
pos. tensor factorization 106726
pose-invariant face recogn. by face synthesis 129914
pre-filtering with Retinex in color image retrieval 94758
premixed flames, combustion anal. by image proc. 94694
progressive content-based retrieval using tree-struct. graphs 106831
prostate cancer discrim., 3D US Doppler imaging, zonal anal. 110713
pseudo color coding fractional FT rainbow hologram, anti-counterfeiting appls. *(Chinese)* 105592
quantitat. error anal. of color in IEEE publications 94522
quantization by color space dimens. reduction 73292
quantization of colour, competitive Hopfield neural net 73353
real-time automated video and audio capture 118716
real-time multi-spectral image fusion 129949
real-time obj. recogn., optimal color quantization 129852
recurrent visual semantics discovery in consumer photographs 94831
region-based color image segmentation scheme, unsupervised seed determ. 94523
region-based watermarking by distrib. adjustment 106900
region-of-interest video coding, multiple-face tracking syst. 84465
regions-of-interest based image retrieval with local/spatial queries 94668
reliable real-time multiview tracking 95008
representation and retrieval of color and shape based images *(Chinese)* 129855
retinopathy, diabetic, abnormality detect. in automated mass screening syst. 110851
retrieval through shape matching of partially occluded objs. using hierarchical content description 84617
retrieval using color plane moment 118783
rewritable broad-band color filters for spectral image anal. 84075
RGB image color quantization, dyn. archit. self-organizing map appl. 107022
road signs detect. and tracking 95401
saturation enhancement, luminance adjustment method 106720
search/detect. model testing, image dataset 129526
secure/invisible data hiding 118602
segmentation, advances and prospects 129557
segmentation, anisotropic diffusion method 94862
segmentation, color-edge extraction/seeded region growing 118723
segmentation, mean field annealing EM algm. 94833

image colour analysis continued
segmentation based on fuzzy math. morph. 94818
segmentation scheme for continuous color images 84349
segmentation simplification using fuzzy attributed graph 94520
segmentation using hierarchical fuzzy region merging tech. 118341
segmentation-based lossless compression of burn wound images 110504
semantic video obj. extraction using four-band watershed/partition lattice operators 73147
shading correction/segmentation of color images 129583
shading-and highlight-invariant color image segmentation using MPC algm. 94876
shot class. for hard transit. and noise reduction tech. 84348
sig. proc. and colour mgt. 106840
similarity measure for color image indexing 94765
single-CCD camera captured color images, multi-image resoln. enhancement 94822
single-chip CCD still cameras, color filter arrays interpolation 131995
skeletonisation of colour images, morph. tech. 129481
skin color 118289
skin detect., novel adaptive colour segmentation algm. 129610
soccer image segmentation, unsupervised color texture feature extraction/selection 94708
social robot, context-depend. attention syst. 109695
spatial luminance interacts. influence on perceived brightness 94870
spatial segmentation, min. description length formalism 94632
spatio-temporal joint probab. images for video segmentation 94646
spectral distrib. and shape, simultaneous meas. syst. *(Japanese)* 84521
spectral estim. and color appearance prediction of fluoresc. materials 73281
spectral imagery, invariant display strategy 94447
spectral model for halftone color prediction 94819
spectral reprod. from scene to hardcopy, image proc. 94866
SPIHT-based embedded colour image coding techs. 95341
sports video annotation, visual tracking syst. 95546
stack filter design using models of human visual syst., color image enhancement 118241
steganographic framework for ref. colour based encoding and cover image selection 106520
still color pictures, quality-oriented JPEG coding 118578
still pictures encoding by wavelet transform/VQ 129703
teleconferencing face detect. by audio/video cues 108382
telemedicine, accident and emergency, accuracy, effect of image resoln., compression, colour depth and display modality 133159
text extraction under complex background via color edge detector *(Chinese)* 118756
texture image subjective retrieval based on orient./color interacts. 95003
texture images class. 94591
texture-color regions, images and video, unsupervised segmentation 106880
tongue diagnosis, image proc., texture, colour *(Chinese)* 110489
transits. phys. nature, class. 95441
trends and future research 94519
triplet-valued wavelets and splines 129907
TV high quality consumer video proc. chip 120524
unsupervised niche clustering algm. for multivariate clusters and color image segmentation 129598
US colour flow diagnostic syst., gen. purpose, digital beamforming *(Japanese)* 76368
US NDE, data anal. using SVD of Hankel data matrix 125160
vector color error diffusion halftoning systs., design/anal. 118370
vector median filter for colour image proc. 94473
video, fast act. obj. tracking 118378
video archive retrieval syst. by video fingerprint method *(Japanese)* 73345
video coding, color set partitioning in hierarchical tree scheme perform. 95242
video images. model-based varying pose face detect. and facial feature registration 129439
video network, multiple vehicles identity maint. 95007
video obj. extraction and shape coding using B-splines 118504
video obj. localization/tracking, semi-automatic seeded region growing algm. 107032
video partitioning by temporal slice coherency 94922
video representation, key frame selection 94644
video segmentation by integrat. of color, textual and temporal inform. 106838
video segmentation using level sets 95311
video seqs., automatic moving obj. extraction *(Chinese)* 95430
video seqs., synthetic summaries using multiresolution based key frame selection in perceptually uniform color space 94647
video sig. denoising/sharpening 118334
video sig. temporal events in all dimens./scales 95016
video surveillance environ., illum. vars. compensation 118174
video temporal segmentation, gradual transits. detect. 107127
Visible Man lower extremity visualization, segmentation by evol. 98143
visual cryptography, improved schemes 129793
visual eval. of colour-based image retrieval procs. 129474
VQ based image indexing 94468
watermarking, Gaussian pixel weighting marks in AM 118397
watermarking in HSI space 95373
wavelet compression using vector morph. 118498
wavelet-based color image denoising 94709
Wiener generalized image reconstruction from colour sens. data using scale invariant prior 94951
WWW shopping, coloured goods ordering, display problems 109876

image compression *see data compression; image coding*

image convertors
see also fluorescent screens; image intensifiers
flat-panel X-ray detector for digital radiography & fluoroscopy *(Japanese)* 76532
NLC polariz. converter 82246
pico-femtosecond image-tube photography, quantum electronics 131989
portal imaging detector for advanced radiation therapy 133035
radiotherapy dosimetry, portal imaging detector spectral response 133130
semicond. gas discharge image converter, high-speed switch-on, optimal control 109661
ultra-high speed high repetition shutter camera, image converter tube 75625
Si:S IR image converter 120890

image databases *see visual databases*

image deblurring *see image restoration*

image enhancement
3D angiographies, variational image restoration 122085
3D contrast-enhanced MR angiography, nonrepetitive phase-encoding orders, quantitat. eval. 132694
abdominal CT cine viewing 87722
adaptive image proc. using rank-order filters with spatial elements connectivity 106715
adaptive model-based digital halftoning incorporating image enhancement 94501
adaptive neighborhood contrast enhancement using histogram-based image partitioning, parallel implement. 110943
adaptive noise canceling and edge detect. filter 107294
AM-FM model for fingerprint class. 73263
anal. of images using first absol. central moment 129482
animal nervous syst. microscope images, enhancement techs. 121865
arbitrary scale image enlargement method with HF components predict. *(Japanese)* 118437
artery-vein separation via MRA, image proc. approach 110856
atmos. correction of spectral imagery data 73183
automatic white bal. of digital colour images using fuzzy logic 73318
automotive intell. image sens. for inner space monitoring 124038
blind removal of image non-lin. 106468
block truncation coding using edginess inform. 95171
blood vessel permeab. map to blood pool contrast agent calc. from dyn. MRI lesion charactn. 98391
brain gliomas MRI, FLAIR seq., CSF/blood flow artifacts reduction 98388
breast, dyn. contrast enhanced imaging, multiple resoln. images acquisition 132689
breast cancer, dyn. contrast-enhanced Gd-DTPA MRI, arterial input fn. 87641
breast images, contrast-enhancing MRI, non-rigid registration, vol. and shape preservation of enhancing lesions 87586
breast MRI, computer-based anal. of enhancement curves 98422
breast MRI, contrast enhancement curve eval. using neural net 98394
breast pathology assess. by MRI-mammography 2D/3D data fusion 87585
Breast Perfusion Analysis System for MRI 110907
breath-hold MR angiography, magnetisation-prepared contrast-enhanced method 87682
burst noise reduction, decimation and adaptive weighted median filter 106486
cascaded MAP-based lin. predict. error conceal. tech. for consecutive block losses 84485
chest images, digital radiology, gradation proc. algm. 98517
chromaticity diffusion 94704
CMOS imager, shunting inhib. image proc. 97364
color constancy unification, general correl. framework 84184
color image enhancement, stack filter design using models of human visual syst 118241
color image enhancement in poor visibility conditions 94705
color image interpolation with edge-enhancement 106753
color image saturation enhancement, luminance adjustment method 106720
color image watermarking in HSI space 95373
color images, adaptive-neighborhood histogram equalization 73161
color images, morph. operations 73160
color images, noise atten. filtering tech. 129573
colour images, multichannel sig. enhancement by histogram modif. 118217
colour pictures, noise removal method *(Chinese)* 73133
complex geophys. images, contrast enhancement/segmentation 98951
compressed low resoln. video, motion estim./resoln. enhancement 95201
compressed video enhancement, pre-/post-proc. algms. 106992
compressed video enhancement using visual quality meas. 95199
compression using derivative inform. with dist. transforms 118556
contrast enhanced MR angiography 76485
contrast enhancement by wavelet based homomorphic filtering *(Chinese)* 8425
cortical sulci, automatic landmarking 87580
data fusion using multiple models 106762
data hiding by optimal moderately-significant-bit replacement 106919
DC motor commutation spark image-monitoring method *(Chinese)* 112542
denoising algm., wavelet-based method, adaptive algm. 73293
denoising via local-inform.-based fuzzy filters 118181
digital image enlargement, Laplacian pyramid representation method 106502
digital images restoration/resoln. enhancement 106485
duplex scanning, show-through cancellation 94680
echocardiographic image seq. filtering in freq. domain 132609
edge directed interpolation 94649
edge pot. images, eigen-space method *(Japanese)* 118311
edge preserving filtering by combining CBAE/median filter 129444
edge-localized image sharpening via reassignment, appl. to computed tomography 76523
elec. impedance computerized tomography, differential imaging 109921
emerging TV displays, image quality improvement 120522
endoscope, electronic, FPGA-based real-time image proc. syst. 76415
endoscopic image enhancement based on illum.-reflectance model *(Chinese)* 98373
endoscopic images, automatic boundary enhancement and detect., iris filter 76202
endoscopic video images, nonlin. distortion correction 98361
enlargement/reduction, lin.-phase FIR digital filter responses, visual eval. 73200
ESRF ID 22 beamline high-resoln. X-ray imaging & tomography 76168
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
face-assisted low-complexity video coding 95178
fingerprint enhancement,directional filter bank based 94949
fingerprint images, enhancement algm. using dyn. filter masks *(Chinese)* 11869
fingerprint recogn. using wavelet features 84344
fingerprint verification syst., ADSP21060 proc. 118658
FLIR imagery, region based PCA modular clutter rejection 95510
FOPEN data, image enhancement techs. 99161
forward-looking airborne camera image degrad., phys.-based color image enhancement approach 129508
FPD image interpolator with image improvement 132105
FPGA archit. for videowall image proc. 118173
fractal image compression, adaptive post-proc. 95173
gamma-compression gamut mapping method based on concept of image-to-device 84415
gamut mapping fund., survey 84188
gel electrophoresis image enhancement 118226
geophys. mapping, lin. features, directional filters 122586
gray and colour med. images, impulse noise reduction, random walk approach 132532
gray level images, alg. model, image enhancement 106703
gray-level images, geometric proc., filtering/enhancement operations accel 84294
halftone image, data hiding with intens.-/connection-selection 107031
halftone image data hiding improvement with intens. selection 106771
heterog.-driven hybrid denoising 118180
high-resoln. color image reconstruction from compressed video seqs. 129473

ge enhancement continued
histogram modif. for enhancement of multi-channel sigs. *(Japanese)* 84136
hybrid perceptual image proc. using interpolating wavelets 98162
hyperechoes, spin-echo-based refocusing MRI strategy 98427
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
iliac arteries, contrast-enhanced MR angiography optimisation 132746
index reconstruction, resoln. improvement, total var. min. 106694
intramyocardial M-mode Doppler tissue imaging anal. 98341
JPEG compressed images, deblocking approach 106884
landmine detect., autom., multiple features, GPR & acoustic data 77064
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
landmine detect., stepped-freq. GPR, antenna characts. & de-embedding 77097
LF vibrated image seq., enhanced-resoln. restoration using convex projections 129414
liver parenchyma, dyn. contrast-enhanced 3D MR imaging 87677
logarithmic image proc. model 94594
LOS stabilization for image quality enhancement 109698
low-bit motion estim. with edge enhanced images for lowpower MPEG encoder 95126
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
LV vol. quantification, spatiotemporal anal., real-time 3-D echocardiography 87502
mass detect., lesion site selection by morph. enhancement/contextual segmentation 76502
med. image enhancement using complex-valued CNN filters 132539
med. images enhancement, neural network basis model 122056
med. X-ray imaging, transform-based denoising and enhancement 122138
modified anisotropic diffusion for image smoothing and enhancement 118187
modified MPEG-2 predictive video coding, spatio-temporal scalability 118557
motion compensated de-interlacing for both real time video/still images 94688
moving target radar detect., spectral approach 99153
MPEG video encoding rate control, local image area defn. enhancement 95254
MPEG-2 software-based high-quality encoder using scene change detect./adaptive quantization 118534
MPEG-coded video seqs., real-time visual postprocessor 84413
MR projection angiography, contrast-enhanced, background suppression, magnetisation prep. 98432
MRI, image intens. inhomogeneities, retrospective correction by inform. minimization 87587
multi-angle spatial compounding, imaging strategies 110761
multi-scale based Bayesian denoising algm., wavelet shrinkage 129459
multi-window impulse detector for restoration filters of noise-corrupted images *(Japanese)* 118436
multichannel 2D delta-domain lattice filter, noise removal 84140
multichannel image enhancement and registration, vector order filter 118391
multifocus images, fusion, wavelet decomp. *(Chinese)* 107116
multiscale contrast enhancement 84077
multiscale sharpening/smoothing in Besov spaces with appls. to image enhancement 106776
multispectral image sharpening using wavelet transform and spatial correl. of edges 73192
nasal papilloma diagnosis, Gd-enhanced MRI, spatiotemporal neural net 98479
natural color reprod. of image, highlights, vector transform., nonlin. mapping 84183
natural images, edge-directed interpolation 118367
Newtonian operator for contrast enhancement *(French)* 106439
night vision images, real-time proc. 94441
noisy image edge detect., Java algm. *(Chinese)* 129809
nonlin. combined spatial-freq. domain filtering 118657
nonlin. enhancement in space scale domain 118234
nonlin. image interpolation through extended permutation filters 94563
nonlin. image simplification via levelings/reconstruction filters, PDE approach 94718
nonlin. transform of gray level for image enhancement *(Chinese)* 129505
NP-3 UHF image quality, enhancements using digital spotlighting tech. 99147
octave-band all-pass based IIR filter banks, image enhancement appls. 106479
old film pictures, blotches correction/contrast enhancement 94685
PACS radiographic images, digital proc. for publishing 76527
parametric image restoration/resoln. enhancement 106688
pattern-selective color image fusion 84092
PFC emulsion blood pool contrast agent, harmonic imaging 122011
photosensitive nonlin. liq.-cryst. film, edge enhancement, image addit.-subtraction 118205
pixel-level image fusion scheme, enhanced visualization, Laplacian pyramid decomp. 95534
portal imaging in radiation oncology, computed radiography appl. 98545
portal vein, Gd-enhanced 3D MR portography with subtraction 76497
proc. with rational operators, noise smoothing and anisotropic diffusion 129574
progressive fine granular scalable coding, new rate allocation scheme 84487
projection X-ray microscopy, modified SEM, enhanced contrast & 3D CT 76173
pulmonary nodule images segmentation using 1-norm minimization 118214
pulmonary nodules class., contrast enhancement patterns 87767
pulse interf., nonlin. filtering 106679
radioisotope image quality, impact of wavelet compression 98568
radiological image contrast enhancement, discrete wavelet transform 76543
rear-projection TV, sig. proc. using digital micro-mirror array 120550
rem. sens. imagery, noise reduction, data masking and PCA 111378
renal arteries, high-spatial-resoln. contrast-enhanced MR angiography 87678
renography, time-series contrast-enhanced MRI, image registration 110910
resistive cct. simul. based edge enhancement for image segmentation 106446
resoln. enhancement, adaptive algm. 106759
ringing artifact removal, max. likelihood param. estim. 95085
rock sole fish recogn., act. contour algm. 95518
SAR image speckle reduction using iterated struct. filters *(Chinese)* 131650
SAR image super-resoln. using Bayesian/convex set-theoretic approaches 75139
SAR images, open-loop adaptive filtering for speckle reduction 109242
SAR multi-freq. polarimetric imagery, PCA-ICA neural network model for enhancement/feature extraction 96929
satellite image restoration success criteria 98954
scanner-model-based document image improvement 94676
sea mine detect., side-scan sonar, gray-scale morph. filters 77047
segmentation using PDEs and morph. 94502
selective sharpness enhancement of heavily-corrupted old film seqs. 94687
self-avoiding random walk approach 118236
shadowed video scene clarification by multiframe averaging 118168
sharpening & noise reduction, fuzzy neural net 118728
sharpening/smoothing in Besov spaces, wavelet-based approach, deblurring appls. 94950
shunting inhib. CNN, digitally prog., current mode cct. 68954
shunting inhibitory CNN appl. 118384
sig. and image enhancement by generalized adaptive diffusion proc. 118802
sig. depicted on image, acquisition/refinement method 118476
single-CCD camera captured color images, multi-image resoln. enhancement 94822
SIREV, Sector Imaging Radar for Enhanced Vision 131667
skin lesions segmentation, partial differential eqns.-based image proc. algms. 98149
small-feature-preserving noise-rejecting RM-KNN filters 84172
small-feature-preserving nonlin. image filtering in noise 84171
smoothing and edge detect. by time-varying coupled nonlin. diffusion eqns. 73514
spatially connected neighborhood nonlin. filters, image restoration/enhancement 82298
SPECT reconstructions enhancement by coregistered MR data 132869
spectral satellite image compression based on wavelet transform *(Chinese)* 95344
spinal cord injury, vivo dyn. contrast-enhanced MRI 76446
sync. enlargement algm., nuc. med. image segmentation *(Chinese)* 98570
terrain mapping, MERIS-Landsat TM sens. fusion 98962
transform domain image restoration methods, review/comparison/interp. 118177
two layer VQ of images 84393
two-stage radar image despeckling, local stat. Lee and sigma filtering 120396
ultrasound imaging, sidelobe reduction filters 110781
US adaptive speckle reduction and coherence enhancement 87510
US C-scan images, blind deconvolution, H_∞ ident. strategy 101589
US contrast imaging, pulse inversion & second harmonic comparison 122007
US images, morph. operations, locally variable structuring elements 98276
US images, texture edge detect., Gabor fns.-based approach 87488
US imaging, spatial deform., dual transducer approach 98274
US med. images, freq. decomp./compounding with wavelet packets 110677
US microbubble contrast agent imaging, act. enhancement 122006
variable-resoln. displays for visual commun. and simul. 97648
vertebral bone marrow perfusion, dyn. contrast-enhanced MRI 110904
video coding, block-DCT based, low-complexity post-proc. for artifact reduction 95203
video images, contrast enhancement by multi-scale nonlin. smoothing *(Japanese)* 118312
vol. vascular images, skeletonization 98477
watermarking, resilience against attack 95051
wavelet aided contrast enhancement 94861
wavelet video-proc. technol., compression ratios, enlargements 84384
wavelet-based image estim., empirical Bayes approach 106689
wavelet-based tech. for image refinement 118484
wavelet-compressed image restoration using adaptively masking smoothness constraints 106862
Wiener enhanced image restoration, Haar wavelet transform based 129440
X-ray angiography images, algms. for combining, comparison 110913
X-ray imaging methodology advances & capabilities, review 110431
X-ray mammography, morph. templates for texture inform. extraction 110978
γ-ray imaging, apparent image form. by Compton-scatt. photons 122163
ArF lithog. for 100 nm technol. node, progress overview 103541
HgCdTe 1024×1024 tactical IR staring sens. syst., MWIR perform. 111555
TeO_2 AO cell image proc./edge enhancement 118199

image intensifiers
see also microchannel plates
2D X-ray detector, matrix addressing, micro gas-filled phototubes *(Chinese)* 132494
airborne UV photon-counting radiometer with metal anode 86646
automotive night vision technol., safety improvement appls. 134577
cameras eval. 86639
clandestine night time surveillance, long-range laser-illum. imaging 109700
conf. on image intensifiers, San Diego, CA, USA (Aug. 2000) 78461
eval. of image intensified video cameras 86638
eval. of image intensifiers for scientific research 86637
fluoroscopy unit under automatic brightness control, computer model 111204
gamma ray imaging, image intensifier/cooled CCD camera 120889
high-speed photography syst. for surveying *(Chinese)* 131996
image-intensified CCD wavefront sens., sig. transferring charact., meas. error *(Chinese)* 109687
impactron, solid-state image intensifier 120923
IR syst. design proc., four-step iter. 75605
ISPA-tubes with scintillating YAP:Ce windows, X & γ ray imaging 121812
JMDT Navy/Marine Corps program, future enhanced mine detect. capability 77095
LHCb-RICH project, pixel hybrid photon detectors 97965
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
MCP and anode gap, spatial resoln. 75644
mil. cockpit displays, luminance level effects on visual perform. 98909
modulation/sig. transfer fns. meas./comparison 120916
monolithic LWIR/NIR multispectral QWIP night vision 86660
multialkali photocathodes, objs. reflective radiation, spectral matching factors 75612
ocean bottom LIF imaging 122687
perform. eval. 86636
perform. eval., white phosphor vs. green phosphor displays 86633
photoelectronics develop. overview 86647
photomultiplier tubes, detector technol. advances 115272
PIV syst., online adjustable digital pulse synchroniser 120919
portable neutron generator based fast neutron radiography 101563
quality enhancement with LOS stabilization 109698
small obj. & soft material X-ray CT imaging, image intensifier 110438
super size image intensifiers develop. 80625
SWUIS-A UV/vis/IR imaging syst. for airborne astron. & aeronomy 98897
tissue fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
X-ray image intensifier-TV fluoroscopy, sig. detect. theory 87729
X-ray image sens., spectral efficiency eval., lin. conversion 76164
X-ray streak camera, on-line temporal charactn. 121771
GaAs photocathodes, objs. reflective radiation, spectral matching factors 75612
GaAs(Cs,O) photocathode, transm. mode stabil. *(Chinese)* 69389
I act. quantum filter for image intensification 116886
Nd:YAG laser precise microstructuring, metallic surface wear props. improvement 72121

image management systems *see document image processing; visual databases*

image matching
2D image frame matching degrad., elevational motion influence 110778
2D image space, efficient moving obj. tracking 106506

image matching continued
2D motion estim. archit., complementary embedded memory banks 84264
2D pattern matching based on generalized FT 94750
3-camera capturing syst. for disparity panorama generation 94702
3D cardiac motion estim. by point-constrained opt. flow algm. 132537
3D endoscopic images, ref.-based fast stereo matching syst. 76403
3D face direction meas. by template interpolated matching *(Japanese)* 73447
3D image capture and appls., conf., San Jose, CA, USA, Jan. 2001 113220
3D image reconstr., vision-based, dual representation 129836
3D med. images, global 3D rigid registration 98459
3D multi-resoln. reconstruction through texture matching 129471
3D obj. reconstruction from multi-resoln. texture matching 94527
3D rigid motion estim., stereo matching disparity images 106540
3D transform coding of partitioned video seqs. with matching pursuits 118572
3D vols. matching using self organising maps for computer vision 118297
act. contour topologic transform., discrete-time CNN approach 107140
act. stereo vision syst., lines/points matching using GA 94815
action events recogn. from multiple viewpoints 95602
adaptive parallel syst. dedicated to projective image matching 95513
affine invariant obj. recogn., Hopfield network appl. 107154
area-based image matching, precise sub-pixel estim. *(Japanese)* 94613
area-based stereo matching, boundary overreach *(Japanese)* 73139
ASTER init. image eval. 111397
attitude tracking of aircraft with single imaging sens. using num. optim.-based methods 73119
automatic 3D modeling using range images obtained from unknown viewpoints 84215
automatic face cloning/animation using real-time facial feature tracking/speech acquisition 73199
automatic moving obj. extraction for content-based video indexing 118775
autonomous robot, biologically inspired homing, visual landmark matching 120920
best-neighbourhood-matching error concealment algm., evol. strategy *(Chinese)* 73366
bidimensional shape detect. under global deform. 129827
bit-plane matching algm., adaptive, full-search *(Chinese)* 129685
block motion estim., complexity-distortion optimal search algm. 107091
block motion estim. using efficient search strategy 94783
block-based coded images, efficient similarity-based error concealment method 95305
block-matching motion estim., multiresolution telescopic search 118492
block-matching motion estim. algm. based on successive elimination 94930
blotches corruption, image seqs., restoration method *(Japanese)* 73250
brain imaging, fast multimodal surface matching, Powell's and Downhill Simplex algms., comparative study 76207
brain MRI, 3-D robust registration, dense deform. field, hierarchical estim. 76479
brain tumour SPECT & MRI images, surface fitting based registration 87775
breast X-rays, correspondence, curved epipolar lines 132832
camera motion recovery from occlusions 84597
camera posns. computing from multi-camera head 84213
camera self-calib. from ellipse correspondences 97403
capturing natural hand articulation 106629
cardiac MRI, multistage hybrid act. appearance model matching, ventricles segmentation 76481
categorical color mapping, color-categorical weighting method, gamut mapping 84185
chest radiographs, patient recogn. method in PACS environ. 87751
chest X-ray helical CT images, computer-aided diagnosis syst. 98532
coastal water quality, multiparam. inversion, hyperspectral anal. 99010
color and shape based image representation and retrieval *(Chinese)* 129855
color obj. recogn. under different illum. 107281
complex image/color matching/coding, spatio-chromatic filtering 95451
constrained act. appearance models 106588
content adaptive motion estim. for mobile video encoders 84483
content based retrieval, area morph. segmentation 94940
contour-based obj. recogn. using wavelet-transform 129830
correspondence based on ordinal measures of assoc. 118736
coupled-view act. appearance models 129912
covariance matrices for image features 106622
cranes, container relative posn. meas. by image proc. *(Japanese)* 94627
databases, fast multiresolution feature matching algm. for exhaustive search 73149
deformable image matching, topol. preservation 84606
deformable template model based on fuzzy alignment algm. 84319
Dempster-Shafer theory mass fn. determ. by fuzzy clustering 73461
dense depth estim. from dense multiperspective panoramas 106473
Dervish mine-clearance vehicle, image-seq. motion estim. 100309
dictionary approx. for matching pursuit video coding 95205
dictionary learning by adding hyperspherical templates *(Japanese)* 73449
digital aerial imagery, automated spatiotemporal change detect. 73432
digital camcorder image stabilizer, Gray-coded bit-plane block matching 73279
digital camcorder image stabilizer, gray-coded bit-plane block matching 131777
digital image stabilizer, matching algm., Gray-coded bit-plane, video seq. 73205
digital low-end camera for on-screen texture visualisation, colorimetric characterisation 97737
direct and mirror images, feature points matching by GA *(Japanese)* 84283
document image decoding using iterated complete path search 129801
document image matching based on component blocks 94679
document images, font clustering and class. 118338
document images, font clustering/cluster ident. 73446
dolphin photo-ident., invariant models, eval. 107298
dyn. face recogn. across multiple views 129915
edge based stereo matching, disparity gradient based search space reduction 129899
edge representation/recogn., multilayer feedforward NN 129890
edge-oriented block matching, fast search algm. 84504
EEG/MEG and MRI data sets, automatic alignment 84199
endovascular interventions, X-ray fluoroscopy, guide-wire tracking 87710
face detect., general framework 73541
face detect., template matching, neural network verification *(Chinese)* 107114
face detect. in color images and video seqs. 107292
face localization in complex scenes, orient. template matching 95501
face tracking from video seq., act. appearance algm. 107196
face verification from 3D and grey level clues 107242
facial expression recogn. approach for perform. animation 95552
facial feature extraction in frontal view images 107207
FANN-based subsampling of color video seqs. 118222
fast block matching algm. based on winner-update strategy 95251
fast block-based motion estim. via DC matching 107255
image matching continued
fast fractal image coding in freq. domain 95132
fast motion estim., adaptive matching scan algm. 73163
fast retrieval methods for images with significant vars. 94666
fast template matching based on num. GA *(Chinese)* 118765
fingerprint image matching, plastic distortion model 95453
fingerprint image postprocessing algm. 106760
fingerprint recogn., new ref. point 95511
fingerprint verification syst., ADSP21060 proc. 118658
fitness fn. for shape detect. using GA 106737
fMRI scans, elastic registration using fast DCT 98466
foreground segmentation using adaptive mixture models in color/depth 9501
forensic sci., image database of cartridge cases, image matching 118653
form class. method, partial matching 95573
fractal image coding, feature difference class. 107073
fractal image coding based on adaptive matching *(Chinese)* 129686
fractal image coding with multi-scaling for brightness *(Japanese)* 73396
frame-based tracing of multiple objs. 95005
fuzzy-assignment-based color interpolation algm. 94877
geo-location of overhead rem. sens. FOV using synthetic maps 133280
geometric-invariant robust watermarking through freq. domain constellatic matching 95119
global matching framework for stereo computation 106571
gray-scale images, pattern detect. with polariz. coding, matched filtering tec 84515
group actions, homeomorphisms, and matching, general framework 118305
Hausdorff dist. algms. for pyramidal struct. 107221
hierarchical disparity estim. algm. for stereoscopic video coding 84371
hierarchical histograms, image-based data retrieval representation 84289
hierarchical motion hist. images for recognizing human motion 95601
hierarchical video motion estim. using neural network 95323
high-speed high DOF spatial normalization for human brain imaging 76206
high-speed image matching using GA-based block/pixel extraction *(Japanes* 94774
high-speed image matching using GA-based partial template extraction *(Jape nese)* 100656
human action, view-invariant representation/learning 95014
hyperspectral imagery, adaptive hierarchical segmentation algm. based on qua tree decomp. 94539
IEEE image and sig. proc. and anal., conf., Pula, Croatia (June 2000) 89596
immersive teleconference, hybrid block/pixel recursive disparity anal. 96246
improved motion stereo matching based on modified dyn. prog. 129646
impulse restoration template matching under geometric uncertainties 94720
indexing techs., DCT domain 95045
inter-block/inter-frame search algm. for block motion estim. 73207
iter. multigrid regularization tech. 129867
iterated transform. theory coding, Kohonen neural networks and DCT 73331
Joint Feature Distributions for image correspondence 106609
JPEG compressed domain image retrieval by colour/texture 107088
Kullback-Leibler dist. on wavelet subbands, texture similarity meas. 94938
Landsat 5/Landsat 7 underfly cross-calib. expt. 76829
Landsat sens. cross-calib. using nearly coincidental matching scenes 73182
LDA-based face verification, matching scores 129911
local stereovision matching, ADALINE neural network use 118750
low-power VLSI archit. for telescopic search block-matching motion estim *(Chinese)* 102219
lumbar vertebral ident., automatic, using surface-based registration 110953
lung cancer diagnosis, helical CT image anal. 87766
LZ1 compression of binary images using rectangle greedy matching tec 107074
mammography, computer-aided, best-partial-match dist. as improved metri space for pixel signatures 84110
map-to-image registration with line segments 129431
med. data, 3D scalar, vector and tensor, non-rigid registration 87661
med. image registration, rigid, block matching to improve robustness 87314
memory efficient motion estimator for three step search block-matching algm 118540
microcalcification clusters, 3D reconstruction from 2 mammographic view 87741
mobile robot localization, image fingerprint seqs. derivation and matching 97385
model-based video-coding, real-time 2(1/2)-D head pose recovery 118593
modeling of objs. and human faces 94895
MOEPE, merged odd-even PE archit., stereo matching hardware *(Korean* 84179
mosaicing, seq. bundle adjustment method 129496
motion compensation, mesh-based scheme, temporal concealment approach 118227
motion estim., advanced center biased search algm. 95079
motion estim., block matching algm., pixel sub-sampling 84345
motion estim., cellular search algm. 94849
motion estim., fast block-matching algm. 84357
motion estim., multilevel multistep algm. 84100
motion estim. lossless fast full search algm. 106843
motion estim. using adaptive blocksize obs. model/efficient multiscale regulariza tion 94672
motion recogn. of lower limb without marks, research 107237
moving obj. tracking using Hausdorff dist. 73272
moving objs., multiple, tracking with laser range finder 97000
MPEG-2 motion estim., parallel block matching tech. 107008
MPEG-4 coding syst., efficient algm. for matching pursuits 95213
MPEG-4 motion estim., BMA, scalable archit. 84346
MPEG-7 edge histogram descriptor, relevance feedback 118782
MPEG-7 homog. texture descriptor 85393
MPEG-7 visual shape descriptors 84543
multi-camera detect./tracking using region-matching 95004
multi-camera syst. for tracking multiple people 95006
multi-modal image matching, variational approach 118250
multimedia meeting documents, automatic linking by image matching 106515
multimodal image matching, local similarity measures, Shannon entropy 94963
multiple objs. detect. in partial occlusion, class./tracking approach 118771
multipolyhedron reconstruction using GA via 3-view matching algm. 129507
multiresolution motion estim., hierarchical block matching algm. 95080
multiresolution shape recovery by surface deform. 95576
multiresolution-histogram indexing/relevance feedback learning 95194
multitemplate image detect., antiface algm. 95475
multiview image synthesis, hierarchical genetic disparity estim. algm. 94701
myocardial gated SPECT, nonparametic nonrigid registration 122243
myocardial tracking algm., ejection fraction calc., gated SPECT 110992
nasal papilloma diagnosis, Gd-enhanced MRI, spatiotemporal neural net 98479
nested-multilevel redundancy exploitation for fast block matching 95082

ge matching continued
neuro-vision syst., 3D image reconstruction 118745
neurosurgery/brain stereotaxic irrad. optimisation, multimodal matching appl. 122285
NOAA-AVHRR accurate image navig., contour matching approach 122689
noise-free similarity model for image retrieval systs. 94764
nonzero order JTC with optimized real-valued ref. fn. 95538
objectionable images detect. and filtering, Internet appl. 118730
objs., learning-based detect., segmentation, matching 95456
occlusion robust adaptive template tracking 106584
OCR readability study, algms. for testing partially damaged characters 84583
optimal pixel selection, GA *(Japanese)* 73137
outlier rejection by rot., ROR algm. 95474
palmprint ident. via texture based dyn. selection scheme 84567
panoramic photography image alignment/color matching 95577
particle image & opt. flow velocimetry for turbulent flows/flames 110066
pattern recogn., matched filtering generality, MED projection 95531
PDP prod. line inspection, morph. skeleton algm. 129458
perceptually based image comparison 94513
perceptually important colors extraction/similarity meas. 84453
pers. ident. syst. using isodensity maps based fast template matching algm. 118778
PET atten. correction, 3D template & consistency conditions 122185
photoelec. collimation simul. syst. using image dyn. recogn. *(Chinese)* 84594
piecing-error for sub-images, relax. algm. 73475
point feature matching under small nonrigid motion 129558
polygonal approxs. of 3D shapes through multiple-view matching 118276
pose-invariant face recogn. by face synthesis 129914
pre-filtering with Retinex in color image retrieval 94758
precise sub-pixel estim. on area-based matching 106470
projection-based block-matching motion estim. 106915
prostate implant seed, automated localisation, fluoroscopic images, simulated annealing 98663
pulmonary nodules detect., helical CT images, template-matching 98513
QC, epipolar line bunch constraint *(Chinese)* 95469
quantitat. 3D ultrasound imaging using automated image tracking 110756
quasi-feature based mosaic constr., block matching *(English)* 94628
range recovering from omnidirectional image pair 95553
rank-order similarity eval. 94512
real-time AOI syst. for PCBs, image matching 124412
real-time face tracking under partial occlusion and illum. change 73543
real-time vehicle tracking in image seq., digital rear-view mirror 124040
real-time video compression, motion estim., FPGA chip implement. 129771
region-based obj. recogn., multiple representations prunning 129843
regions-of-interest based image retrieval with local/spatial queries 94668
registration, min. spanning tree algm. 95440
registration by selective correl. coeffs. *(Japanese)* 84529
relational graph matching for human detect. and posture recogn. 95423
retrieval based on similarity learning 94936
retrieval through shape matching of partially occluded objs. using hierarchical content description 84617
robust and accurate image alignment, hybrid search algm. 113748
robust error concealment algm. using iter. weighted boundary matching criterion 95304
robust image matching for occlusion using vote by block matching *(Japanese)* 129435
robust interest points matching algm. 107185
robust lin. algm. for determining epipolar geom. 73235
sampling approach to ultra-fast obj. location 118355
SAR feature representation/matching, probablistic dist. transform 86135
SAR imagery, multi-aspect target detect. using HMMs/2D matching pursuits 75144
scale distortion-invariant pattern recogn., fractional correl. perform. *(Chinese)* 107209
scene reconstruction from multiple cameras 84286
sea surface temp. estim., AVHRR MWIR band, MODTRAN values 133345
separated-kernel image proc. using FSM, implement. for template matching 106780
seq. image segmentation based on blob matching *(Chinese)* 118352
shape from shading, Green's fn. approac 129881
shape indexing by dyn. prog. 118464
shape matching 107162
shape matching using curvature based polygonal approx. in scale-space 95516
shoeprint impressions, detect. and class. 95438
similarity measure based on ordinal correl. 94935
spatio-temporal concealment tech. using boundary matching algm. and mesh-based warping 106961
spatio-temporal images, transit. effects charactn. 94469
stable monotonic matching for stereoscopic vision 84627
stereo correspondence, edge-based, robust, hybrid symbiotic genetic optimisation 129884
stereo image matching using GA with adaptive chromosomes 94498
stereo image reconstr. from polycentric panoramas 84340
stereo image seqs., incremental shape reconstruction 94697
stereo images, segment matching, neural net 94725
stereo matching algm., wavelet transform 118405
stereo matching algm. based on gray-level segments *(Chinese)* 106732
stereo matching by compact windows via min. ratio cycle 106572
stereo matching decision, Dempster-Shafer evidential reasoning *(Chinese)* 94600
stereo matching method using modified GA 107239
stereo subpixel robust matching by match candidates relax. 94970
stereo vision, matching methods and validity measures, quantitat. eval. 129515
stereo vision image matching by self-organizing neural net 107279
stereoscopic image self-matching without camera calib. 129900
structural descriptions learning of graphic syms. using deformable template matching 129602
subpixel interpolation and matching, empirical filter estim. 106643
surface matching by 3D point's fingerprint 106615
surface shape signatures, obj. matching 118682
sym. matching based document image compression and merging syst. 95336
template matching algm. 106642
template matching approach to content based image indexing by low dimens. Euclidean embedding 106644
template matching hardware develop., high-speed proc. strategy 94775
template matching strategies for fast face detect. 118784
template matching using correl.-based block areas selection *(Japanese)* 129550
temporal error concealment using two-step block matching principle 118331
temporally seq. chest images, digital subtraction, rib elim. 76542
texture-based image retrieval, DFT and Zernike moments use 95584

image matching continued
topol. and geom. cooperation based method for stereo matching 118282
topol. preserving deformable image matching 94517
trabecular struct. in human bone, time-lapse deform. tracking method, image anal. 110841
uncalibrated image pairs, planar homography detect. 129901
uncalibrated image seq. matching, 8-point algm. 107278
uncalibrated images of same scene, corresponding point matching 84547
unconstrained scene model-based human face detect. 95498
understanding archit. based image proc. 107238
underwater environ. reconstruction environ. by robust pre-aligned ICP 88203
unified systolic array design for wavelet-based video codec 74485
universal multi-scale matching pursuits algm. with reduced blocking effect 95387
US imaging, spatial deform., dual transducer approach 98274
V1, computational allegory 129778
vectoral imaging-based AOI for PCB assembly 113761
vehicle license image segmentation using wavelet transform 84239
video, face detect./tracking using dyn. prog. 84615
video, model-based temporal obj. verification 73499
video blending with synthetic images created from matched viewing environ. 129563
video coding, block-matching motion estim., low power archit. 95400
video coding, content-based and perceptual bit-allocation, matching pursuits 73329
video coding, fast matching pursuit method with dist. comparison 95096
video compression, block-based motion compensation, adaptive matching criterion 106951
video encoder with matching pursuit 84506
video movie annotation syst., script-video assoc. 73166
video seqs., motion vector estim. using edge oriented block matching algm. 95083
viewpoint invariant texture matching and wide baseline stereo 106654
virtual holographic recogn., digital methods, med. appls. 82967
Visible Human Project datasets, automatic registration methods *(Chinese)* 110919
visual motion estim. via second order cone prog. 94929
Viterbi algm. as, alternative to energy minimization for stereo image matching 118288
VLBR variable frame rate video coding 107043
vol. image registration by template matching 129811
wavelet-based video coder via bit allocation 95041
X-ray/portal image matching, automatic syst., eval. 87708
XIMIT, X-ray migration meas. of hip socket implants using implant models and image templates 76711

image morphing
brain tumours, corticospinal tract displacement simul. 87575
cellular images, morphometric anal. and class. 87323
facial expression, intell. coding using neural network and morphing 84432
facial image morphing, Kohonen self-organizing feature map appl. 95536
forward-moving images, mosaicking/warping 94853
functional MRI, image distortion correction by multimodal non-rigid warping 87589
HF helicopter antenna, reson. features anal. using model morphing 94143
hippocampus of patients with mesial temporal sclerosis and temporal lobe epilepsy, MRI, deform.-based segmentation 98392
liver tumor detect., automatic, from CT images 87697
neurosurgery, US/MRI overlay with image warping 87477
text to audiovisual speech synthesizer 106408

image motion analysis
see also motion compensation; motion estimation
2D image motion OTF *(Chinese)* 94483
2D mesh-based video obj. segmentation and tracking, occlusion resoln. 107282
3D echocardiographic endocardial border delineation, contrast agent FS069, transesophageal studies 132613
3D head tracking/head pose estim., stabilized adaptive appearance changes model 106705
3D invariants of moving targets 86130
3D manipulation of motion imagery 84287
3D multimodal tracking/event detect. via particle filter 95716
3D rigid struct. recovery from 2D motion, weighted factorization method 94526
3D scene, motion anal. and segmentation *(Chinese)* 118194
act. camera control/motion recovery, foveate wavelets 106499
action events recogn. from multiple viewpoints 95602
adaptive algms. for real-time target extraction from surface movement radar 75181
architectural scenes, combining single view recogn. and multiple view stereo 106544
arteries, elastic modulus/motion estim. using intravascular US *(Chinese)* 122033
assembly actions detect. by scene obs. 84302
atherosclerotic blood vessel tracking/lumen segmentation, MRI 98411
attentive foveal sens. for target tracking 109677
audio-visual segmentation and cocktail party effect 73107
automatic meas. of intens. of motion activity of video segments 94910
automatic moving obj. extraction for content-based video indexing 118775
automatic skin-color distrib. extraction for face detect./tracking 73458
Bayesian spatio-temporal motion detect. under varying illum. 129469
biological objs. movement/motility, act. contours 87300
body parts tracking of multiple people, new approach 95598
camera motion, error propag. to epipolar constraint 131978
camera motion recovery from occlusions 84597
cardiac MR image quality, flow and motion 87689
cardiac MRI, left ventricular motion/shape anal. syst. *(Chinese)* 98401
color constancy, biological model for still/video images 118468
compressed video, motion activity region-based descriptor 95505
computer vision, visual tracking in appl. domains 73267
content-based scalable H.263 video coding for road traffic monitoring 84431
content-based video coding, automatic obj. segmentation 118535
coronary mag. reson. angiography, motion compensation strategies 76450
coronary MRA motion effect suppression, real-time navigator approach 87688
DCT coding, universal VLC 94270
DCT-prediction based progressive fine granularity scalable coding 95313
densely moving points, motion correspondence problem 94607
diaphragm motion quantification in fluoroscopy, computer program 76541
digital moving picture defn., test pattern seq. *(Chinese)* 129760
dist. seqs., motion recogn. of lower limb without marks, research 107237
echocardiographic colour kinetic wall motion, broad complex tachycardia differentiation 110800
ego-motion estimation; 3D motion fields, multiple cameras 84093

image motion analysis continued
face anal./synthesis 73200
face and hands tracking in complex background using colour and motion 129902
faces and gestures, reconition, anal., and tracking, real time systs., conf., Vancouver, BC, Canada (Jul. 2001) 100409
faces extraction from natural background for pers. ident. 118779
facial expressions recogn. from video frames 118777
facial video compression, local features reconstruction 95179
feature-based visual servoing, stable region enlargement 86618
filtering/smoothing of trajectory, state space model 84099
FLIR seqs., stabilization, obj. detect. and tracking 94791
foreground extraction in moving images 129580
forward-moving images, mosaicking/warping 94853
FPGA archit. for videowall image proc. 118173
frame-based tracing of multiple objs. 95005
free-form surface registration using rigid motion constraints 94586
freq.-time mixed domain optimal filter for moving obj. extraction 106674
generalized neural trees for outdoor scene understanding 94816
georeferenced airborne video, independently moving objs./interacts. detect. 95012
hand modeling/anal./recogn. 73477
heart disease, phase contrast MRI, left ventricular wall motion 122091
hierarchical motion hist. images for recognizing human motion 95601
highly-parallel stereo vision VLSI proc., optimal parallel memory access scheme 68829
homography estim., total LSA/equilibration 118189
human early vision syst., CNN-based retina model 132582
human face detect., prediction-and-verification 94965
human motion, higher-order spectral anal. 95544
human motion tracking/anal., unified framework 95013
human movement reconstruction, silhouette based tech. 129542
human movement study using multimedia syst. 132521
human posture estim. based on stat. motion models *(Japanese)* 107146
hybrid PET/SPECT imaging, motion detect., partial sinograms correl. 132890
IEEE video events detect. and recogn. workshop, Vancouver, BC, Canada (July 2001) 89599
improved motion stereo matching based on modified dyn. prog. 129646
IR target detect. and recogn., modified method for small targets *(Chinese)* 73521
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 2001) 124234
joint likelihood methods for mitigating visual tracking disturbances 95715
liq. opt. flow in images, validity revisited 94554
lung cancer radiotherapy, video-based respiratory gating syst. 87837
lung high-resoln. CT images, cardiac motion artifacts reduction *(Japanese)* 87745
lung tumour motion, detect./prediction with fluoroscopy 87703
lying pers. motion tracking syst., press. distrib. image based 111049
machine vision, conf., Bristol, UK (Sept. 2000) 124239
mag. reson. coronary angiography, motion correction 87690
marine search & rescue, motion images in bad conditions, obj. detect. 106699
median nerve movement meas., HF US images, cross-correl. anal. 132616
MEMS motion meas., computer microvision, opt. microscope, CCD camera, stroboscopic illum. 109663
monocular video seqs., homography matrices 129495
motion pictures, dramatic story sects. and tempo determ. 95504
motion-based class. of cartoons 84500
moving obj. detect. in image seqs. by perceptual edge tracking 94845
moving obj. segmentation, review 95238
moving pictures, automatic extraction method of facial regions for occlusion faces 118780
MPEG-2 compressed video, wipe prod. 95182
MPEG-7 video content description, parametric motion models 118176
MPEG-7 visual motion descriptors 84139
MPEG-7 visual std. for content description, overview 84138
MPEG-compressed videos, automatic shot change detect. 118461
MR elastography, 3D subzone-based reconstruction algm. 87617
multi-camera syst. for tracking multiple people 95006
multi-image struct. recovery from motion, projective 84537
multiframe orient. determ., lin. epipolar algm. 94528
multiple camera fusion for multi-obj. tracking 95010
multiple description coding of motion fields for robust video transm. 106967
multiple faces tracking/zooming syst. 73547
multipoint video conferencing, region-based obj. tracking using wavelet transform 118607
multiview scene capture by surfel sampling, video streams to non-rigid 3D motion, shape and reflectance 106596
myocardial ischaemia MRI, serial motion assess. by ref. tracking 122092
myocardial perfusion ^{201}Tl SPECT, static & dyn. imaging 122242
myocardial rapid vel. distrib., tissue Doppler imaging 87485
myocardial strains determ. from tagged MRI, fast techs. 98470
myocardial tracking algm., ejection fraction calc., gated SPECT 110992
myocardial wall motion, quantitat. regional anal. 98283
myocardium high vel. distrib. meas., US beam direction control 110701
neonatal seizures, video recordings, motion strength/motor activity sigs. extraction 132628
neurological disorders diagnosis, human gait/posture anal. 98360
news and sport videos, semantic inform. extraction 129569
nonlin. motion-distorted composite frame restoration 106488
nonrigid motion anal., piecewise affine model for image registration 94529
nonrigid objs. discrim., motion/segmentation 118752
nonstationary point obj. detect. in recording of scene from two viewpoints 129818
nonuniform motion detect. using reduced order likelihood ratio test 84309
obj. detect. 129454
obj. localisation, multi-label fast marching algm. 107283
obj. real-time tracking with movels and affine transform. 84323
obj. segmentation, fast geodesic act. contours 118724
obj. tracking, gazing based on image moments *(Chinese)* 73297
obj. tracking, mean shift/optimal prediction 94789
obj. tracking using Hausdorff dist. 73272
obj. tracking with shape representation network using color 94793
obj.-based motion description, low-level features to semantics 94911
occluded scenes, multiple people tracking, multiple cameras appl. 129493
outdoor image seqs., tracking/recognizing two-pers. interacts. 95599
parameterized image varieties for image-based rendering 118307
particle filter for tracking multiple objs. 95714
PDP, motion picture disturbance, dyn. gray-scale control 86843
point feature matching under small nonrigid motion 129558
posn. estim. in perspective syst., robust 84202
prostate cancer radiotherapy, organ motion var. models, affine transform. 87839

image motion analysis continued
radar rem. sens., moving targets, SAR imaging 122615
randomly moving cluttered targets, multiframe Bayesian tracking 94792
real-time automated video and audio capture 118716
reliable real-time multiview tracking 95008
road traffic surveillance syst., low bit-rate video codec 129722
road vehicle speed detect., computer vision and image proc. appl. *(Chinese)* 97339
segmentation and tracking using 3D Markov random field 106764
segmentation by movement estim./contour extraction 106482
segments detect. across images, synchronizable pulse-coupled neural network 106665
seqs., motion anal. and class. with directional Gaussian derivatives 94748
shape and camera estim., single camera based, EKF 106682
snowfall noise elimination using time median filter *(Japanese)* 106818
social robot, context-depend. attention syst. 109695
spatio-temporal image segmentation using opt. flow and clustering algm. 94966
sports video annotation, visual tracking syst. 95546
stepped freq. radar, moving targets imaging 75187
stereo camera model, multi-image matching 94496
struct. from motion problem, ambiguities reduction using inertial data 84300
struct. from motion using seq. Monte Carlo methods 106651
super-resoln. fast reconstruction algm. for pure translational motion/common space-invariant blur 118379
super-resoln. reconstruction algm. for translational motion/space-invariant blur 94780
target tracking in scenery, change detect., ICA 106524
text to audiovisual speech synthesizer 106408
topol.-independent region tracking with level sets 95270
traffic monitoring, visual feature tracking methods 73130
traffic video surveillance, vehicle extraction and tracking 129475
trilinearity to reduce misregistration in image mosaicing 118279
tumour motion from breathing, fluoroscopic study, precise radiotherapy, lung cancer 132820
TV high quality consumer video proc. chip 120524
underwater vehicle posn. meas. by image mosaicking 97839
video, model-based temporal obj. verification 73499
video coding, perceptual PSNR for improved objective quality eval. 129726
video coding, semi-automatic semantic obj. extraction 84463
video content-based retrieval, obj. motion trajectory indexing 118481
video messaging over wireless networks, OO source/channel coding 73407
video network, multiple vehicles identity maint. 95007
video objs. partitioning into temporal segments using local motion inform 106855
video representation, key frame selection 94644
video retrieval, temporal texture modeling *(Korean)* 106742
video seq. illum. effect descriptor 118460
video seq. obj. tracking, local search N-interact. particle syst. 129581
video seq. segmentation, rule-based framework for post-proc. merging 84326
video seqs., vehicle detect./tracking 84330
video surveillance, image anal., stat. model-based change detect., spatial regularization 129510
video surveillance camera moving obj. tracking algm. 106839
video surveillance systs., semantic ident. of moving targets 106481
view-based visual tracking with occlusions detect. 97388
visual inform. modeling/mgt., logical framework 94770
visual proc. of depth and motion in synthetic visual displays 106677
visual tracking using Snake based on target contour inform. 129891
vocal folds regional vibratory pattern assess., videostrobokymography 87542
VR using concentric mosaic, constr./rendering/data compression 95362
wireless video quality perceptual metric 84509
XML Web based motion capture data warehousing and translation syst. for collaborative animation projects 94854
Si CZ growth, online diam. calib., shape estim. 114209

image processing
see also computer vision; computerised tomography; document image processing; Hough transforms; image coding; image colour analysis; image enhancement; image morphing; image motion analysis; image recognition; image reconstruction; image registration; image representation; image resolution; image sampling; image segmentation; image sequences; image thinning; maximum entropy methods; medical image processing; minimum entropy methods; radar imaging; sonar imaging; stereo image processing; video signal processing
1D recursive median sieve, simplified implement. 106514
2-D fractional Brownian motion interpolation, image proc. 129418
2D and 3D images, detect. of second-degree vars. 118459
2D convolution algms., dedicated VLSI devices/general-purpose proc./DSPs implement. *(Polish)* 73178
2D DHT computation algms. 90194
2D fringe pattern demodulation, spiral phase quadrature transform 94742
2D localized filter-based lin. coherent noise atten. 107510
2D nonredundant directionally selective complex wavelets 94659
2D proc. array struct. for convolution 130033
3-D profile meas. using virtual slit Moire method by line laser *(Japanese)* 75877
3D and 4D images morph. operations, shape primitive detect. to skeletonization 94983
3D digital imaging and modeling, conf., Quebec City, Quebec, Canada, May-June 2001 78459
3D image proc. algms., topol. preserving transform. *(Japanese)* 98138
3D images, centres detect. of max. geodesic discs on dist. transform of surfaces 94987
3D modeling syst. of human face and full 3D facial caricaturing 84235
3D optoelectronic image proc. and recogn. 107288
3D shape inform., opt. methods, hybrid methodology, overview 132168
3D surface digitizing/modeling develop. 73213
3D vector radix algm. for 3D new Mersenne no. transform 73212
aberration-corrected STEM, autotuning software 102950
accuracy assess. and verifications in digital photogrammetry 106792
achromatic holographic opt. lens Fourier proc. 84160
adaptive directional morph. operators 118230
adaptive filtering for image denoising 118335
adaptive image database using wavelets 106763
adaptive image interpolation algm. for image/video proc. 129559
adaptive regularized noise smoothing of dense range image using directional Laplacian operators 118280
advanced sig. proc., conf., San Diego, CA, USA (Aug. 2000) 89565
aerospace images proc., distributed archit. software syst. 94442
air, spark paths, 3D image capturing and proc. 84169

age processing continued
airborne inventory/inspection technol. for elec. power line condition assess. 88502
aircraft maint., phase stepping shearography, improved software 122496
algm. for reconstructing special lattice sets from their approx. X-rays 94974
analog adaptive median filters for image proc. 114870
anisotropic diffusion eqn., init. conditions, sing. solns. 67718
annular jet, flow anal., particle image velocimetry 121290
arbitrary filter SLMs, optimal region of support 71472
area moment calc. method for wavelet/spline curves 78860
artifacts subjective appearance, image preprocessing 84404
artificial neural nets in image proc., conf., San Jose, CA, USA, Jan 2001 113222
Asia Pacific Conf. on ccts. and systs., Tianjin, China (Dec. 2000) 67378
ASTER target obs. scenario 109475
ATR, distributed image proc. 111630
authentication, digital watermarking algm. *(Chinese)* 129641
auto-focusing algm. for digital cameras *(Korean)* 129556
automated program generation syst., CBR appl. *(Japanese)* 84101
automatic generation of multipath algms. in cellular nonlin. network 118299
automatic image generation by GA for testing halftoning methods 94461
axo-somatic boutons, motoneuron cell membrane, computer-assisted quantification 76400
background removal algm. for Navy IRST systs. 122755
band proc. imaging library for TriCore-based digital still camera 118354
Bayesian sens. image fusion, local lin. generative models 118314
Bayesian tree-struct. image modeling using wavelet-domain HMMs 84276
BGIS 2000 Ball global imaging syst. for Earth rem. sens. 122553
binary representation of complex nos., efficient division 79646
binary/gray-scale/fuzzy math. morphologies rels. 124543
blackberry, NMR imaging, multivariate stat. methods 118204
blast furnace, pulverized coal injection, video monitoring, image anal. 134676
blind inverse gamma correction 118321
blind sig. separation, alg. ICA 106827
BRDF inform., interp. of reflectance meas. over vegetation 76959
calibrated digital images, colour difference acceptability 106493
camera tracking syst. using self tuning regulator/visual feedback 129450
car accident meas., scene images from digital camera 109975
cartridge ident. syst. for firearm authentication 73168
CCD DP speed accel. method *(Chinese)* 106804
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
ceramic tiles, visual QC, image comparison method, matrix SVD 118470
cerebral blood flow/mRNA sigs., simultaneous meas., correl. anal. 122166
CGH, fixed-point format *(Japanese)* 72078
checkerboard distortion avoidance in continuous-time domain 95678
chem. indust., proc. imaging & image proc., DuPont appls. 113808
chirp pulse microwave computed tomography by num. computation, human head model *(Japanese)* 98533
chromatic-dispersion compensated hybrid refr.-diffractive lens, totally incoherent opt. proc. operations 118326
CMOS image sens., SoC, prog. analog image preprocessing 109690
CNN VLSI implement. approaches, hybrid struct. 102460
collimated laser beam, diffr. pattern, multi-layer feedforward neural network image proc. *(Chinese)* 129544
commun. systs., networks and DSP, conf., Bournemouth, UK (July 2000) 78391
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
concurrent determ. of connected components, image proc. appl. 118400
conf., Taipei, Taiwan (July 2000) 67395
conf. on EO and microelectronics, Tel Aviv, Israel (Nov. 1999) 78457
confidence and curvature estim. of curvilinear struct. in 3-D 106617
confine. tree implement. algm. 94984
conical multiplex holography, distortion correction using direct obj.-image rels. 128578
convolution operation on general purpose proc. 129532
coord. ref. syst. of nonstationary sigs. 106791
copy protection of digital images, DCT-based 106707
cork stopper class. using FPGAs and digital image proc. techs. 125325
correl. computation method for binary images based on matrix factorisation 129934
cortex, opt. imaging, neuronal activity-driven sigs. extraction *(Japanese)* 132629
cosine-fourth and vignetting effects in real lenses 106565
cost modeling for early image proc. appls. 94840
cracks automatic meas. using fibre-optic reflectometry 90600
crease enhancement diffusion in image filtering 73269
data fusion using median filters and self-organizing feature maps 94509
daylighting, bi-directional transm. distrib. fns., digital imaging 110022
DCT proc. algm., low power order based 79948
DDGIPS, general image proc. syst. in robot vision 90921
deformable models, formal framework, convergence 118261
denoising using hybrid wavelet/DCT method 129484
denoising using scale-adaptive lifting schemes 94806
dense range image smoothing using adaptive regularization 96910
dielec. track detectors, automatic image anal. syst. 121673
differential scale invariants, invariance anal. 94536
diffractive 3D phase gratings for opt. sens. and image proc. for perform. of human vision 94581
digital cinema and microdisplays, conf., Boston, MA, USA (Nov. 2000) 109846
digital halftoning, row-oriented error diffusion 106452
digital image proc., 2D new Mersenne no. transform fast algm. 106823
digital image proc., Lagrange wavelets 118366
digital image proc. appls., conf., San Diego, CA, USA (Aug. 2000) 100401
digital image scrambling, Arnold transform. *(Chinese)* 73129
digital photography and photographic printing 94868
digital still-picture cameras, OECF, ISO speed, and SFR 73278
digital still-picture cameras, spatial freq. response 73277
digital visual inform. proc., vision/graphics addit. 94957
digital watermarked images, noise corruption influence 84078
digital watermarks hiding using multiresolution wavelet transform 129416
diode laser arrays, spatial instabilities, wavelet sig. proc. 128364
discrete combinat. surfaces, naive planes 98567
discrete geom. for computer imagery, conf., Uppsala, Sweden (Dec. 2000) 89597
discrete time SISO lin. (L,M) shift invariant syst. 84237
discrete-time CNN image proc. *(Japanese)* 91136
displacement of images, computation methods comparison 94480
display projection imaging syst., geometric rectification method *(Chinese)* 84123
distributed image proc., Web enabled client-server model for develop. environ. 106443

image processing continued
distributed neural networks, archit., AOI appl. 124410
dithering pattern, partitioning strategy, space-filling curve *(Chinese)* 73128
dot diffusion improvement, image halftoning 84189
DP, cpd. eye model, direction quantization 84076
dyadic wavelet-based nonlin. cond. eqn., theory/appls. 94557
dyn. range compression based on illum. compensation 118383
Earth imagery archives, smart tools appl. 120697
Earth Mover's dist. is Mallows dist., insights from stats. 106621
eddy current microscopy of graphite-epoxy composite, image proc. 68479
edge-preserving filters using layered fuzzy controllers with learning 118333
education and text resources, survey 113385
ejector co-axial flow mixing zone visualisation method 87037
electroactive polymers, compliant actuators, appls. 125102
electronic toll collection syst. develop. using radiocommunication *(Japanese)* 123999
electronics DFT, concepts/methods/implement. techs. 125887
embedding multiple watermarks *(Chinese)* 84249
EO archit., opt. interconnected reconfigurable mesh 82255
estimating fund. matrix by transforming image points in projective space 73242
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
expt. solid mech., digital image/speckle correl. 118318
EYESCAN, high-resoln. digital panoramic camera 86670
face detect. by facets, combined bottom-up/top-down search using cpd. templates 94639
facial caricature drawing based on subjective impressions 118433
facial sketch generation with non-parametric sampling 106630
fast algm. for computing $q^{[1]} \times q^{[2]}$ 2D-DCT *(Chinese)* 118350
feature extraction based on boundary chain code for defect of CCL 118422
fibre optic strain sens. arrays, large-scale/low-cost 75578
fine-detail preserving filter for noise suppression in image proc. 106722
fingerprint image ridge freq. estim. by higher order spectrum 94510
Finnish audio-visual text-to-speech synthesizer, eval. 118136
fire detect., smoke turbulent charact. *(Chinese)* 113424
flexible workobject localization for CAD-based robotics 94450
flowmeter for loading road tankers using proc. tomography 121276
Fourier-wavelet vol. rendering by view interpolation 94495
FPGA automated hardware synthesis, MATLAB appl., precision & error anal. 79705
FPGA based image proc. board *(Chinese)* 94606
FPGA ccts., multi-scale contours detect., algm. establishment *(French)* 118475
FPGA logic cct. design, video proc. algms. 118453
fractal image dimens. calc., box-counting method 94472
fuel aerosol stream, drop size determ., diffractive method 109979
fuzzy tunable filter based on differences between pixels 118233
gamma ray imaging, image intensifier/cooled CCD camera 120889
gauge block center length, automatic laser interf. meas. *(Chinese)* 109984
Gaussian blur-space for deblurring/edge-preserving noise smoothing 73257
genetic spot array images, robust spot fitting 98151
geo-spatial image anal. appls. 76825
geometric objs., pattern recogn. and image proc., layered segment trees insertion 95448
geophys. mapping, lin. features, directional filters 122586
geophys. prospecting by fiber-coupled THz receiver antennas 132147
GFRP PWB, small diam. drilling damage estim., picture proc. *(Japanese)* 102829
glass surface wave profile meas. using shadow image proc. *(Japanese)* 132154
global fig. extraction, Hough transform, voting proc., variable-sized directional image filter *(Japanese)* 106746
gray level obj. transform. using adaptive morph. 118229
gray-scale images, multifractal anal. 106828
gray-tone digital images, graph-like sets, regularization criteria 106683
HAADF-STEM, focusing/astigmatism correction auto-tuning method 110109
halftone image generation, multiobjective genetic algm. 94574
halftoning, look up table method 106451
Hausdorff discretization for cellular dists., cover/supercover discretizations 106813
height meas. from digitized image for forensic scientists 118171
helicopter pilotage, image intensified and IR data, image fusion 98880
heterodyne noncontact surface profiling interferometer with automatic focusing 97825
high data rate opt. parallel proc., error anal. 84159
high dyn. range panoramic imaging 106460
high power dens. solid-state laser, opt. components wavefront PSD meas. *(Chinese)* 71868
high-speed 3-D imaging using photorefr. holography 118285
HMMs for wavelet-based image denoising 94800
hot strip steel, transform. imaging using mag. techs. 106508
Hough transform algm. for FPGA implement. 94508
Hough transform error propag. 94479
human perceptive based robust watermarking method, digital imaging 84105
hybrid ESPI-FEM methods, mapping correl. algm., displacements meas. appls. 118319
hyperspectral data, anom. detect. using spectral unmixing 106518
hyperspectral data characterisation using GA 106517
hyperspectral image anal., Hidden Markov Model 73188
hyperspectral imagery, blind separation of spectral signatures 118933
hyperspectral imagery spectral anal., HMM approach 133278
hyperspectral images, material discrim., viewing geom. 99055
hyperspectral images, projection pursuit target detect. 98956
hyperspectral target detect., subpixel, lin. mixing 98957
IC yield mgt., automated image retrieval syst., field test 100627
ICA and blind sig. separation, conf., Helsinki, Finland (June 2000) 113195
ice images proc. interface for automatic features extraction 106783
iD PHOTO format for digital still cameras *(Japanese)* 118430
iD PHOTO magneto-opt. disk syst. develop. *(Japanese)* 116394
IDC-1000Z digital camera iD PHOTO magneto-opt. disk drive *(Japanese)* 116593
IDC-1000Z digital disk camera SF-MO2 opt. head develop *(Japanese)* 116849
IDC-1000Z digital disk camera using iD PHOTO magneto-opt. recording syst. *(Japanese)* 116848
IDC-1000Z digital still camera fns. *(Japanese)* 118431
identity-plus-row matrix decomp., parallel projection algms. design 106511
IEEE Canadian elec. and computer engng., conf., Toronto, Ont., Canada (May 2001) 113283
IEEE elec. and electronic engineers conf., Tel-Aviv, Israel (2000) 113257
IEEE image and sig. proc. and anal., conf., Pula, Croatia (June 2000) 89596
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IEEE MELECON conf., Lemesos, Cyprus (May 2000) 113196

image processing continued
IFS models, inverse fractal problem, hybrid evolutive-genetic strategy 94571
ILS glide slope perform. sensitivity to sideband-only phase variances 98908
imaging spectrometry, conf., San Diego, USA (July-Aug. 2000) 89500
impulse noise removal based on directional difference *(Japanese)* 84135
impulse noise suppression using adaptive L-Filters 106477
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
inform. mining, appls. in image proc. 84152
integral-geom. morph. image anal., review 118324
intell. multimedia, video and speech proc., conf., Hong Kong (May 2001) 78475
intell. US phased array syst. for steel NDT, optimised design 114532
intens., struct.-adaptive filtering based on polynomial regression modeling 73156
interacts. between no. theory and image anal. 73230
intermediate image interpolation using polyphase weighted median filters 118186
interval and fuzzy methods in rem. sens. and satellite image proc. 129659
IR and SAR image exploitation, expt. syst. 111626
IR image, noise removal based on H.263 video recommendation with adaptive filter *(Chinese)* 106678
IR image proc. tech. for vehicle sens. appls. *(Japanese)* 118362
IR recogn. of objs., high-capacity hardware 111625
IR thermal image proc., time domain/space domain tech. 109623
IRFPA nonuniformity correction, diffractive lenslet array anal. 86621
isodiametric neighborhoods in finite topol. spaces, image problems *(Japanese)* 73249
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 2001) 124234
iter. closest point algm. 84214
Japanese yukata, intell. design support syst. 118473
Java vision toolkit, teaching 118450
Ka band MM wave mixer image recovery *(Chinese)* 118373
Landsat 7 Science Data Processing 76954
large-scale 3D obj. meas., image data-patching method 97823
law enforcement, enabling technols. conf., Boston, MA, USA (2000) 113185
least stat. depend. bases based image approx. and modelling 94499
least-sq. image resizing using finite differences 106693
leave-one-out covariance estimator, effect of no. of samples 73187
level set methods and image proc. 94492
license plate recogn. using SKIPSM 107269
lin. blurred images, iter. deconvolution using nonparametric stabilizing fns. 94943
lin. CCD camera, interf. fringes, fast accurate algm. anal. *(Chinese)* 109703
line fitting using Hough-like procedure 73304
linguistic description of relative posns. in images 107117
liq.-cryst. light valve, spatial filtering phase knife, image differentiation 129639
LMS adaptive sig.-depend. L-filters using impulse detector as switch 73302
LMS-based adaptive order-stat. filters 73303
local activity indicators, hard-switching adaptive image filtering 118317
local large-strain meas., noncontact opt. methods 114504
local smoothing, adaptive Gaussian filter 129504
local transform domain filters with varying params. 130057
LOFAR radio-telescope using cluster computers and grid proc. 75263
log-polar coord. mapping based automatic target tracking syst. *(Chinese)* 130014
logarithmic asphere electronic imaging 86641
long range oblique photography syst. 118466
long-range laser illum. imaging, clandestine nighttime surveillance 83068
low cost scaleable parallel image proc. syst. 118200
low-level cortical perception model 94811
low-noise image acquisition via piecewise-lin. bounded-SNR imaging 86616
LSB steganography detect. in color and gray-scale images 129537
machine vision, imaging anal., tutorial 129545
machine vision syst. light source requirements 120907
machine vision-based inspection systs., fund. 89900
magnification using decimated orthogonal wavelet transform 94657
MAJC 5200 multimedia proc. µP 90950
Mandelbrot set algm., parallel proc. 84198
map data watermarking using generalized sq. mask 129655
margin extraction of inform. for container's series no. 118424
marine rescue target detect., image proc. techs. 118471
Markov binary random fields, morph. estimator for clique pot. 84313
Markov obj. procs. 73240
massively parallel proc., efficient primitive binary morph. algms. 73151
meas. of multiple points using, TV camera with circ. shifting apparatus 118269
microfabrication device develop. for scanning electron microscope *(Japanese)* 124317
microoptical element plane wave diffr., effective hybrid approach 94440
microstruct. meas. syst., image proc. tech. *(Chinese)* 121189
microvascular permeab., rat cerebral pia mater, image computer anal. *(Chinese)* 110827
mobile robot target tracking, visual-servoing/navig. 84690
model based halftoning, impact of human visual syst. models 94881
model-based inspection of shot-peened surfaces using fusion techs. 106781
model-based inverse halftoning with wavelet-vaguelette deconvolution 106449
mol. images, three-way data pre-proc. by pulse-coupled neural nets 106810
monocular vision method for camera focusing posn. *(Chinese)* 75608
morph. image filter, 3D, using spatial partitioning representations 118440
morph. image proc. of bubble in laser-induced shock-wave lithotripsy 95417
morph. opening and closing in noise, approx. 118377
morph. operators with discrete line segments 94973
motion estim. algm. using adaptive search tech. *(Chinese)* 106490
motion picture films, opt. variable dens. sound tracks restoration 106702
moving optic syst., imaging features, lin. coord. transform. *(Chinese)* 106802
moving V-belt strain meas., opt. correl. & spatial filter sens. 109505
moving vehicles, real-time laser-based detect. syst. 83064
MPEG compressed newsfeeds anal. and presentation, Internet supported 84082
MPEG-7 visual std. for content description, overview 84138
MSI imagery simul. from HSI data 73181
multi-obj. multi-dimens. homotopic deform., cellular model 94500
multi-scale corner detect., nonlin. filtering *(Chinese)* 84081
multi-view 3D images, crossed lenticular screen displays 97716
multi-wavelet transforms, 2D constrained, real-time struct. 107512
multiagent systs. and neural networks of distributed archit. for target ident. of air images 73120
multichannel image proc., impulsive noise 84266
multichannel image proc. using fuzzy vector median-rational hybrid filters 118388
multidimensional sig. proc., 3D DHT, 3D vector radix algm. 129960
multimedia proc. for building immersive environ. 119806
multiple mobile robots, laser-based guidance 93913

image processing continued
multiple plane velocimetry, in-line digital holography 117546
multispectral, hyperspectral, and ultraspectral image proc. algms., conf., Orla FL, USA, April 2000 67365
multispectral imagery, GA combining new and existing image proc. tools 73
multispectral images, PCA, neural net 94724
multispectral smart pixel imaging arrays, modulator design 97399
N× image interpolator based on rational fns. 129483
N-dimens. pseudo-Hilbert scan in hyper-rect. parallelepiped region, address g erator 94534
nanoparticle size distribs. estim., image anal. 97804
near-bottem sediment, multifreq. acoustic data color-encoding 122683
nearest neighbor method for efficient iter. closest point algm. 84216
nearness in digital images and proximity spaces 94972
neuro-fuzzy filters based on recursive proc. and genetic learning 130094
twisted NLC display grating for Ronchi test config. 71424
noise reduction using midpoint-type nonlin. filters 106528
nonlin. cumulant based adaptive filter for image Gaussian/impulsive no removal 129443
nonlin. evol. eqns. simul. via cellular networks 107490
nonlin. filter design, methodologies and challenges 130093
nonlin. filtering impulse noise removal from corrupted images 94805
nonlin. filtering in wavelet transform domain 94802
nonlin. filtering of images with pulse interf. 106733
nonlin. filters for image proc., robustness 106509
nonlin. high-pass filtering for image noise removal 95673
nonlin. image operators, HOS, freq. component AND-like combinations 1300
nonlin. image proc. and pattern anal., conf., San Jose, CA, USA (Jan. 200 113186
nonlin. order stat. filter design 118239
NSRL 200 MeV linac beam energy stabilization syst. *(Chinese)* 87066
num. anal. of oscills. in nonconvex problem related to image selective smooth 129426
obj. image capture by TMS320C50 high speed digital proc. chip *(Chine* 73285
objs. with periodic surface texture, projected fringes images, recording, opt. pr 129640
occlusion models for natural images, stat. study of scale-invariant dead leav model 118304
OCT image form., quantization methods 106494
oil-spill detect., automatic interferometric syst. 76924
online image security, protection mechanism 94934
opt. films convex/concave defects detect. using patterned illum. *(Japane* 82271
opt. films convex/concave defects detect. using patterned illum. *(Japane* 127880
opt. plane glass, surface inspection, quantizing image tech. *(Chinese)* 841
opt. wavelet transform *(Chinese)* 94602
optimal algms. for multiple query problem on reconfigurable meshes 1187
optoelectronic proc., parallel archit., local image proc. 129536
orient. estim., conventional techs. and non-differential approach 118344
orthographic error diffusion tone scale generation method 106806
ortophotomosaic of high objs., adjustment of image contrast and brightne 129585
Oseen-vortex flow, direct meas., digital particle images 97880
P systs. with picture objs. 106738
paired-comparison-based scaling methods, error simul. 94871
panoramic annular lens, image lin. *(Chinese)* 84121
parallel and distributed computing conf., Las Vegas, NV, USA (2000) 7841
parallel and distributed methods for image proc., conf., San Diego, CA, US (July 2000) 67350
parallel image proc. on TMS320C80 single-chip multiprocessor 79940
parallel line grouping based on interval graphs 94991
parallel OO image proc. toolkit 73116
parallelizing, image proc. library on distributed-memory syst. 73117
parameterized wavelet archits. 73173
parametric/geometric act. contours rels. 106750
particle tracking velocimetry, super resoln., monophasic flow appl. 121289
partition-based median type filters for image noise suppression 73256
pass. microwave radiometer mine detector, field tests 76984
pattern class., k-nearest neighbours rule, k-dist. transform. 118731
PCB, inspection, image proc. tech., eddy-current testing probe *(English)* 1006
PCB inspection, ECT image proc., wavelet transform 125865
PDP discharge, 3-D light emission images anal. *(Korean)* 121089
PDP fluoresc. patterns, automated rapid defect inspection algm. 121130
pellet component quality eval. using image proc. with neural networks 9481
peripheral vision simul. testing, image discrim. 97649
phase-sensitive parametric image amplif. 128501
phase-shift interferometry, interf. pattern with step, proc. tech. 94752
photomosaic creation software, digital image proc. 129506
photorefr. ccts., two-beam coupling modules 94738
piecewise approx. of curves using nonlin. diffusion in scale-space 94470
piecewise polynomial interpolators, degree/support/regularity/order parametriz tion 94653
piezoelec. resonators, mode shape meas., image proc. tech. 104426
PIV syst., online adjustable digital pulse synchroniser 120919
pixel purity index algm. comput., blocks of skewers, FPGA proc. 94446
planar line rels. by projective invariant of vanishing points *(Chinese)* 12963
planar pattern, single view, vanishing self-polar triangle recovery 94698
point convergence index filter charact. anal. *(Japanese)* 94610
Poisson noise, wavelet coeff. distrib. 118375
Poisson-corrupted data, complexity-regularized denoising 95296
pollution plumes, hyperspectral imagery, matched filters 99035
polyhedra moments, explicit formulae 94589
polynomial filters for image/video proc. 94958
pos. kurtosis histograms on high-pass filter natural image filtering 118208
pose estim., stat. anal. 118190
preprocessing methods for computer images of particle saltation *(Chinese* 107273
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219
program loop parallelization, register allocation, run-time support 106747
PSF/global frame shifts, simultaneous estim. at lower S/N ratios 94959
pulverised coal flames, concurrent temp. & soot conc. meas. 124096
pulverized coal particle meas., image anal. by microscope *(Japanese)* 86977
quality, noise deviation, EM algm. *(Chinese)* 94618
radio image denoising, astron., Daubechies wavelet *(Chinese)* 97038
random image fields filtering on arbitrary 2D grids, algms. 118357
random model params. estim. via lin. systs. with granulometric inputs 73218
rank-order filters for digital images, geometric distortions generalized mode 82288

ge processing continued
raw data preprocessing, Fourier-Hankel transform 118295
real-time 3D acoustic image localization algm. by embedded DSP 84141
real-time facial expression animation 84236
real-time image proc., convolution operation implemented in FPGA 129586
real-time vision, intens. profile efficient computation 84337
real-world scenes capturing/proc./rendering syst. 97164
reconnaissance image data transm., airborne network 99118
rectification, anisotropic spatial model method 98967
recurrent probabilistic dyn., face recogn. appl. 84562
recursive weighted median filters with real-valued wts., optim. algm. 94559
reduced polygon model, interactive quality eval. 94713
reduced temporal phase unwrapping robustness shape meas., neg. exponential seq. 86965
refr./diffractive micro-optics opt. interconnects 116770
regional geoinformational syst., aerospace image proc., intranet network 99043
reverse engng., neural net based image proc. 89802
reverse engng., phys. model shape autonomous meas. 100528
rly. overhead contact lines, automatic optic inspection *(German)* 78288
rot. averaging, Riemannian metric method 118209
rot. using parallel VM, implement. 118477
rot. zooming camera, self-calib. using two views 94863
row-oriented multiscale error diffusion tech. for digital halftoning 73196
RPV, real-time parallel image proc. environ. on PC-cluster *(Japanese)* 84087
SAIM mobile multisensor image exploitation syst. 99119
SAR raw data, compression using method of BABC *(English)* 73295
satellite imagery, panchromatic, small obj. detect. 122622
scene constraints during calib. 106603
second-generation watermarking benchmark, attack modelling 94507
seismic 2.5-D true-amplit. migration 122571
selective attention, modeled on prefrontal cortex net 84343
self-dual morph., first steps 94717
semi-implicit finite vol. scheme for nonlin. diffusion eqns. in image proc. 118454
separated-kernel image proc. using FSM, implement. for template matching 106780
Shack-Hartmann positioner, image proc. techs. 75891
shadow carving 106537
shape boundary smoothing via symm. transforms 84268
shape moments on arrays with reconfigurable opt. buses, parallel algm. 129565
ship wake detect., SAR images, Radon transforms 106492
sig.-depend. image noise, wavelet and pyramid filtering 130056
silicon retina chip for precision image spatial/temporal derivatives 109678
site security, wireless integrated sens./proc./display networks 106799
skeletal muscle, sarcomere length meas., epi-illum.-type polaris. microscope 122049
small target, real-time IR pre-detect. *(Chinese)* 94481
small-feature-preserving nonlin. image filtering in noise 84171
smart pixels, appl. to opt. interconnects and image proc. 117041
smart vision sens., theoretic design 121061
smoothing of images with exponential fns. 106685
snowfall noise elimination using time median filter *(Japanese)* 106818
soft computing, advanced video/image proc. and commun. 73216
space junk, organization of opt. obs./DP 133208
space of circles, image proc. appls. 73232
Space Solar Telescope, imaging syst. and DP 109699
space-based hyperspectral imaging and commercial appls. 122545
spatial carrier fringe pattern, phase indeterminacy in phase anal. methods *(Chinese)* 94484
spectral reprod. from scene to hardcopy, image proc. 94866
spectrally modulated interferogram anal. by recurrence nonlin. filtering method 129539
specular tilted surface meas. by fiber-optic sens. 89910
stack filter design, tree representation evol. 84742
stat. methods, conf., Uppsala, Sweden (1999) 113188
stat. optimal morph. operators 118987
steganographic framework for ref. colour based encoding and cover image selection 106520
steganography effects in various image formats 106331
storage and batt. resources mgt., image capture device using dyn. transcoding 73165
stripe boundary codes, real-time struct.-light range scanning of moving objs. 106626
subsetting/formatting Landsat 7 L0R ETM+ data products 73186
super-Gaussian laser beam, CCD based charactn. 117345
surface biophys. params. estim. from satellite imagery 76949
switching median filters based on counter propag. networks 118235
target detect. on perspective plane, morph. approach 118376
target tracking DP tech. under image dithering condition *(Chinese)* 129637
templet matching successive elimination/multilevel successive elimination algms. *(Chinese)* 73513
temporal morph. systs. modeling via lattice dyn. systs. 118183
terrain mapping, image coherence, smoothness membership 122608
terrain mapping, lin. feature changes, edge-finding 99064
thermal control with image proc. and fuzzy controllers 129591
third-order suscept. meas. by Mach-Zehnder interferometry tech. 71918
THz pulse imaging 94537
time-correl. single photon counting, 3D imaging 106743
topographic ICA, depend. struct. visualization 118825
topol.-adaptive obj. modeling based on 3D math. morph. *(Japanese)* 73141
torsional vibr. meas. syst., Doppler technol., sig. proc. *(Chinese)* 110007
total var. minimization by fast level sets transform 118258
TPP, optimal coal firing, flame image proc./anal. syst. 133867
translation-invariant windowed nonlin. discrete filters archit. 118172
transparent lenses surface defects detect., concentric frame difference method *(Japanese)* 82257
triangular grids, finding shortest path with neighbourhood seqs. 129572
trifocal tensors with Grassmann-Cayley alg. 84341
twin-grating fiber optic sens., demodulation algm. 75573
two-phase turbulent flow, PIV treatment, direct num. simul. 121288
two-soln. interface meas. using image proc. *(Japanese)* 132213
two-state sig.-depend. rank order mean filter, stat. threshold design 94561
two-valued digital images, interchangeable pixel pairs 94504
TWT spherical grid curvature rad. meas. 132176
undergraduate core algms. course, image related appl. 113390
undergraduate digital image proc. courses, algm. design 113387
unsteady turbulent swirling flow, PIV/POD/vortex ident. 121292
upper atm. wind vel. meas., stellar scintillation patterns anal. 133283

image processing continued
US images, Kirchhoff migration 101545
US images, speckle noise modelling, neural approach 118246
US NDT expertise, CAD-based simul. & imaging tools 101609
vector directional filters, wt. concept introduction 84079
vector median filtering, parallel algms. 129566
vehicle motion variables meas. based on image anal. 129445
video artifact estim. and meas., image anal. 118508
view interpolation, perspective homotopy transform *(Chinese)* 106423
viewing geom., impact on vision through atmos. 106633
VIOS-III, distributed and parallel image proc. environ. *(Japanese)* 84086
visual cryptography, neural nets 83960
visual obj. tracking, probabilistic data assoc. 84128
VLSI prog. parallel archit. for 2D discrete wavelet transform 94771
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
voice/text proc., integrated tech. for multi-data appls. *(Japanese)* 118264
vol. holographic memory 116566
vortex spatial filter opt. sig. detect. 71475
VQ based shear-warped vol. rendering *(Chinese)* 83873
VQ for nonlin. factorial models of opt. imaging data low-dimens. independent manifolds 84318
watermark verification syst., zero knowledge proof *(Japanese)* 106442
watermarking, role of inform. theory 94506
watermarking of vol. data, robust, invisible, using 3D DCT 94852
wave-front meas. errors from restricted concentric subdomains 118402
wavelet domain adaptive vis. watermarking of images 129424
wavelet thresholding, image denoising *(Chinese)* 94482
wavelet-based imaging informatics, literature review 106714
weak random screens image speckles, autocorrelation fn. properties *(Chinese)* 94919
weighted dist. transforms in four dimens. 94980
wide-field imaging interferometry testbed for space mission support, develop. 120661
Wiener generalized image reconstruction from colour sens. data using scale invariant prior 94951
windowed discrete cosine/sine transforms for data shifting 107326
wireless pers. multimedia commun., conf., Bangkok, Thailand (Nov. 2000) 89557
$BaTiO_3$ cryst., two-way 2D pattern transfer upon requesting 128449
LiB_3O_5 cryst. image upconversion, dyn. UV microstereolithography 129535
Pb scintillating fiber calorimeter, opt. survey by digital imaging techs. 76101

image processing equipment
see also image scanners; pattern recognition equipment
act. vision, analogue VLSI model of selective attention 103988
aerial photograph draping & perspective correction, hardware soln. 94754
Antarctic ice borehole probe 122601
Aries compact modular macro-block for digital filtering 91113
artificial retina camera, real-time pattern recogn., Hough transform algm. 73439
catadioptric stereo using planar mirrors 129645
CMOS current-mode prog. CNN, low-power consumption 68986
CMOS image sens. based visual pattern recogn. and sig. proc. syst. 75399
CMOS prog. spatial proc. imager chip, focal plane steerable spatial filtering 75657
CNN cell for computing disparity map using stereo vision algm. 68990
container ident. mark recogn. syst., image capture device *(Japanese)* 84524
data compression software on space-qualified DSP board 118576
deep sub-micron ICs, contact elec. probing, SPM tech. 115999
digital cct. design, reusable intellectual property block verification, prog. syst. 68705
digital still-picture cameras, OECF, ISO speed, and SFR 73278
digital vision chip, appls. *(Japanese)* 94493
fast Hadamard transform, math. model and FPGA implement. 90846
fingerprint ident., real-time, opt.-electronic syst. develop. 84157
FIR filter, low power design, image proc. appls. 125612
fractal image compression proc. for moving pictures *(Japanese)* 79947
frame rate meas. approach for real-time computer vision appls. 121176
gamma ray imaging, image intensifier/cooled CCD camera 120889
high speed visual decision maker, focal plane analog proc. array 79955
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
internal combustion engine develop., opt. access/diagnostic techs. 120687
LCD monitor controller IC, integrated ADCs, high perform. 86895
legal court cases, digital camera image ident. 118489
low-noise image acquisition via piecewise-lin. bounded-SNR imaging 86616
low-power motion-estim. archit. based on early-jump-out tech. 102229
Modular Miniature Imaging Sensor, law enforcement appls. 111632
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS implement. 79949
multi-step improved breaking-off-search CMOS motion estim. ccts., low power 94575
orthonormal inverse DWT, design and FPGA implement. 86455
quadtree-based fractal image coding using VLSI archit. 129734
radiology, digital equipt. acquisition and installation procedures, team approach at Mayo Clinic 98499
reconfigurable on-board payload data proc. syst., ESA develop. 98920
satellite on-board front-end proc., systematic-DSP 133246
scene-adaptive algm., motion estim. and compensation archit. 73348
segmentation, fast watershed algm. and FPGA-based archit. 90934
sig. proc. dedicated systs., optimised archit. design *(French)* 116015
soft computing, advanced video/image proc. and commun. 73216
SPIHT algm., improvement for high-speed pipeline archit. implement. *(Chinese)* 73387
struct. light, shaped depth-image capturing syst. 73283
subpixel accuracy analogue fast edge location meas. using CCD image 118729
survey of electronic products charact. *(German)* 131983
systolic array design for kernel fns. of video compression 101880
TMS320C80 single-chip multiprocessor, parallel image proc. appl. 79940
tools develop. and appls. *(German)* 131967
unbounded delay CNN, convergence anal., VLSI 80144
universal CNN cell cct. using simplicial neuro-fuzzy inferences for fast image proc. 91149
video windowing controller design for electronic endoscope and multimedia 75292
vision chip syst. for real time visual proc. *(Japanese)* 84088
VLSI advanced research, conf., Salt Lake City, UT, USA (March 2001) 67360
VLSI analogue spiking neural net, address domain probab. synapses 91141
VLSI discrete-time CNN proc. 75395
Xetal, CMOS low-power high-perform. smart camera proc. chip 102230

image quantisation *see data compression; image coding*

image recognition
see also edge detection; face recognition; fingerprint identification; gesture recognition; image classification; image matching; image texture; object detection; object recognition
1D ATR, parametric HRR signature modeling 75154
1D HRR profiles, ground target range extent anal. 75155
1D HRR target features, stat. anal. 86137
2D correlative extremal navig. syst., target-localizing algms. 73526
2D correlative extremal navig. systs., target-localizing algms. 73527
2D shape model automatic constr., brain appl. 87607
2D shape recogn., shape touching simul. with matrix sens. 109693
2D wavelet packet based feature selection method for image recogn. 95570
3D invariants of moving targets 86130
3D landmark detect. and ident. in CAESAR project 84574
3D modeling method for man-made obj. recogn. in rem. sens. images *(Chinese)* 107204
3D obj. motion and struct. recogn., contours 95459
3D obj. recogn. using appearance based neural image proc. algm. 95548
3D optoelectronic image proc. and recogn. 107288
3D real range data, principle curvatures/Darboux frame estim. 118726
3D real-time obj. recogn., multiple perspectives imaging 95528
abdominal organ recogn. in CT images, contextual neural net, fuzzy rules 76540
action categorization from video seqs. 73533
action events recogn. from multiple viewpoints 95602
aerial images, automatic aircraft detect. 129828
age estim. from dyn. features of gait *(Japanese)* 95482
airborne hyperspectral detect. systs. 75194
airborne spectral images, phys.-based model acquisition and ident. 106614
airborne targets in IR image seqs., detect. 95566
ANN embedded automated inspection quality mgt. syst. for mfg. industries 113739
area-granulometry, estimator of size distrib. of image objs. 94916
artificial retina camera, real-time pattern recogn., Hough transform algm. 73439
ATR, anal./expt. perform.-complexity tradeoffs 109273
ATR, intra-class variability and class models 75208
ATR algm. on scalable Myrinet/field prog. array nodes 109297
ATR content-based image compression 84514
ATR MSC HRR perform., range resoln. effects anal. 86127
ATR systs., camouflage patterns, human observer perception 133397
ATR systs., HRR data, interfering scatterers mastering 75157
ATR systs., receiver operating characts. curve points 86188
ATR/feature-aided tracking using complex spatial filters 86128
automatic counting of chlorella using image proc. and neural network 73451
automatic no.-plate recogn., road user charging 118762
automation, OO approaches 95408
bar chart recogn. in document images via Hough-based model 95572
bar code recogn., polynomial recursive optim. algm. 95405
BGA packaging, coplanarity study 113557
bin-picking robot syst. using 3D obj. recogn. *(Japanese)* 107249
binary image, digital line component detect., computer vision appl. 73501
biologically inspired visual syst. for autonomous robot 84564
biometrics, automated, review of methods 95457
blind texture detect. by genetic prog. 107136
brain tumors automatic detect., MRI unsupervised segmentation 98405
calcification detect. in mammograms, parallel region-growing algm. 76501
CAMEO-SIM phys.-based broadband scene simul. tool, camouflage/concealment/deception methodologies 133398
car detect. in low resoln. aerial image 107172
car disassembly, stereo-vision-based robot syst. 84598
car image recogn. using fuzzy inference method 129925
car license plates detect. from complex scene 73457
celestial sphere, unique point images 95402
chest radiographs, lung regions ident., segmentation approach 98537
chest radiographs, patient recogn. method in PACS environ. 87751
Chinese bank check amount recogn. and segmentation 84518
chip shape, image recogn. 113766
circ. geological forms in satellite imagery, ident. 122557
client-server archit. for document image recogn. 95491
clutter charactn. metrics 95508
clutter-rejection tech. for FLIR imagery using dyn. ROI extraction 118685
CMOS image sens. based visual pattern recogn. and sig. proc. 75399
color eigenflows, stat. modeling of joint color changes 107164
color segmentation for localization in embedded systs. 84623
colour image segmentation, advances and prospects 129557
colour image skeletonisation, morph. tech. 129481
colour map interp. via automatic/interactive techs. 107250
colour triplet-valued wavelets and splines 129907
complex circ. charts, inform. extraction, tachograph disks 129939
component placement, 3D vision technol. appls. 115140
concealed weapon ident., mm wave sens. 107272
concentric shapes filter for image recogn. and implement. in modified DT-CNN 129866
container ident. mark recogn. syst., image capture device *(Japanese)* 84524
content-based image retrieval, region-of-interest and spatial layout 95585
continuous human activity segmentation/recogn. 95600
contour recogn. in images by feature extraction using neural network 129832
contrast-to-clutter modeling of detect., image-based metrics 129863
cooling water intake, jellyfish detect., video syst. *(Japanese)* 95486
cortical sulci, automatic recogn. using cluster of neural networks 87577
cortical sulci detect. MRI 3D curves tracking 98461
CT image reconstr./recogn., image moment method 118667
databases, scale/fractal transforms 95515
dental cast shape, complete 3-D reconstruction using perceptual grouping 132634
description generation, mixture distrib. param. estim. *(Japanese)* 107248
detect. of ridges and ravines on range images and triangular meshes 73489
digital naive planes recogn. and polyhedrization 95592
discrete HMM, discrim. power indicator 129935
document anal. results eval., graph probing method 129930
document anal. task, table ground-truthing problem 129932
document image decoding using linguistic constraints 95338
document images, font clustering/cluster ident. 73446
dolphin photo-ident., invariant models, eval. 107298
dyn. tracking/recogn. of curves, road detect. appl. 84618
emotion retrieval, derived from cartoon expressions 95537
energy spreading transform for image retrieval 107256
Euclidian dist. transform values optim. by no. theory 118656
extended objs. recogn., human operators ability 118714

image recognition continued
face model calib., 3-D facial feature points automatic extraction 95497
facial expression recogn. by computer vision 73535
fast video interp., automatic interp., semiautomatic interp. *(Chinese)* 9460
feature anal. using DCT 84633
feature associative proc. for image recogn. based on A-D merged archit. 107
feature-based syntactic and metric shape recogn. 73491
FLIR imagery, region based PCA modular clutter rejection 95510
flooding, springtime, forecasting, rem. sens. methods 99008
forensic sci., striation pattern anal. on firearm bullets 118652
Fourier plane nonlin. filters, noise robustness for image recogn. 118741
FPGA-based hardware, ns-range recogn. speed *(Japanese)* 129821
fractional operations and time-freq. distribs. 95539
fuzziness in image recogn. 118700
fuzzy logic based image recogn., computing with words 118786
fuzzy-rule-based image proc. on CNN universal machine 107139
genetic clustering algm. guided by descent algm. 107135
georeferenced road extraction 73433
global/local GA visual servoing, fish-catching appl. 95597
goldfish species discrim. by image recogn. 84599
gray-scale image based character recogn. algm. 95571
gray-scale images, pattern detect. with polariz. coding, matched filtering tec 84515
handwriting recogn., high speed VLSI archit. 90945
handwritten character recogn. via aspect ratio adaptive normalization 73553
hardware-friendly soft-computing algm. 118702
herd male GA 107235
hierarchical charactn. scheme for image retrieval 95540
hierarchical model based human motion tracking 95543
hierarchical motion hist. images for recognizing human motion 95601
high resoln. 3D snapshot ISAR imaging and feature extraction 96924
high temp. obj. image anal. syst. *(Chinese)* 84558
HMM and act. shape models for skeleton-based walking motion anal. 1068
HMM multiresolution trees for ATR algms. anal. 96911
Hopfield neural networks algms. effectiveness 118715
Horus, shape-based robot orient. detect. and ident. 84624
Hotelling transform, computerised biological objs. recogn., corneal cells ap 98159
Hough tech. for document image bar charts detect./recogn. 95517
Hough transform filter array for opt. feature extraction *(Korean)* 73441
Hough transform for line and plane detect. based on conjug. formulation 1186
HRR ATR using eigen-templates with noisy obs. in unknown target scenar 86125
HRR moving signatures ident. with ATR belief data assoc. filter 86126
HRR phys.-based moving target model, param. estim. algms. 75156
HRR synthetic moving target profile generation using meas./modeled target da 86138
human action, view-invariant representation/learning 95014
human behavior monitoring from video taken in office environ. 129812
human face orient. estim. using symm. and feature points anal. 73459
human motion, higher-order spectral anal. 95544
human motion recogn., view-based aspect model based on motion change *(Jap nese)* 129860
human motion tracking/anal., unified framework 95013
hyperspectral data, obj. detect., compression effect 107149
IC defect image, math. morph. filtering *(Chinese)* 73515
IC image proc., neocognitron neural net 102836
IEEE video events detect. and recogn. workshop, Vancouver, BC, Canada (Ju 2001) 89599
illum. 3D bodies, morph. slice-based counting 118655
image-feature based second generation wavelet based watermarking schem *(Chinese)* 107275
immune network with interacts. between B cells for pattern recogn. 118763
indust. proc. monitoring & SPC, multivariate image anal. 113809
inform. protection systs., Poisson-sig. param. estim. 118712
intell. agent support for automated radiology exam 76200
Internet robot supporting telepresence, constrained image understanding 1187
invariant mixture recogn. in hyperspectral images 107159
IR dual-band pass. imagery for automatic clutter rejection 95507
IR images, human false target detect. decision behavior 118727
IR images, human target detect., atmos. blur/noise distortion/Wiener filter rest ration 84156
IR imaging, target acquisition perform. modeling 75636
IR target acquisition modeling, atmos. turbulence MTF 133399
iris recogn. through feature vector/classifier improvement 84588
JSIES Joint Services Interoperable Exploitation System 99126
JTC with significant output images, opt. security syst. appls. 118697
K-nearest neighbor algm. for data mining, stat. approach 95564
knowledge base constr., image recogn. and understanding systs. 95409
land targets stat. pose estim. in SAR 75207
Landsat 7 automatic cloud cover assess. 76957
library loan recording using book and face images *(Japanese)* 95487
license plate recogn. using SKIPSM 107269
license plate serial no. segmentation/recogn. *(Japanese)* 118776
line drawing segmentation into lines of different orient., neural net-based metho 118699
liver tumor detect., automatic, from CT images 87697
local recogn. methods for better image recogn. 129842
lock opening/closing with image base by cellular phone via Internet 74863
loop detect. in 2D engng. drawings based on node pretreatment *(Chinese)* 129816
lymphocytes, cancer detect., fractal dimens. anal., electron microscope image 132522
mammogram microcalcifications, unsupervised detect. 87349
manipulator, intell. stereo vision syst. 73507
med. image recogn. using structural graph grammar-based techs. 98144
med. image segmentation algms., efficiency 121872
micro device prod. automation, flat image recogn. tech. 92575
mil. target acquisition, thermal imagery, perception studies 129861
mobile robots and AGVs, precise dead-reckoning, optimal landmark pattern 109667
modeling the shape of the scene, holistic representation of spatial envelope 118768
moment patterns in radon space, invariance to intens. scaling 118694
motion blurred target recogn. using method of moments 84550
motion estim., affine invariant feature set appl. 94931
motion recogn. of lower limb without marks, research 107237
moving head tracking in cluttered stereo vision scenes 84625
moving target detect. syst. from IR image using GA *(Japanese)* 129820
moving vehicles, automatic license plates ident., Sova-2 software syst. 95410

image recognition continued
MPEG-2 compressed video, variance extraction 107126
MSTAR occluded targets recogn. 75153
multi-obj. detect. and segment., context-free marker-controlled watershed transform 84544
multi-obj. image ident. algm., high-level Hu's moments *(Chinese)* 129918
multi-valued neurons based neural net, appl. to image and blur recogn. 118686
multimodal speech recogn., visual features use 84035
multiple target recogn. using laser radar range data, jump-diffusion algm. 118696
multiple-target recogn. using discrete rot. FT 118695
multiregion obj. detect. embedded in nonoverlapping noise 129865
multispectral, hyperspectral, and ultraspectral image proc. algms., conf., Orlando, FL, USA, April 2000 67365
natural backgrounds and artificial objs., spectropolarization contrasts 73534
natural image human detect. perform. 133396
neural activity detect., block-design functional MRI 98407
neural networks for local recogn. of images with mixed noise 118688
neurological disorders diagnosis, human gait/posture anal. 98360
news and sport videos, semantic inform. extraction 129569
nonlin. combined spatial-freq. domain filtering 118657
nonlin. joint fractional transform correlator, opt. pattern recogn. 84553
nonrigid objs. discrim., motion/segmentation 118752
nonzero order JTC with optimized real-valued ref. fn. 95538
nonzero-order JTC in noise, peak variance minimization 73494
normalization of images via covariance matrix and eigenvectors 84581
obj. ident./pose estim. for robotic manipulation 84622
obj. recogn. under affine transforms. 129921
objs., learning-based detect., segmentation, matching 95456
objs. detect. under varying illum. and pose 107186
objs. image ident. using wavelet and moment *(Chinese)* 107274
opt. images, multi-channel correl. recogn. method 118746
opt.-electronic shape recogn. syst. based on synergetic associative memory 118690
opt.-pattern recogn., matched filtering generality, MED projection 95531
optimal design of transform coders/quantizers 95384
optimal syst. struct. for image anal./proc. 73440
optoelectronic complex inner product image segmentation, ATR/machine vision appls. 107233
outdoor image seqs., tracking/recognizing two-pers. interacts. 95599
output sigs., orthogonal polynomials expansion, multidimensional probab. dens. charact. 73528
parallel thinning algms. for 2D grayscale images 73488
param. estim. of image, min. method 73524
pattern recogn. optimum receivers, Gaussian noise with unknown stats. 95529
pedestrians, multiple, tracking in crowd *(Japanese)* 107247
people tracking syst. using color histogram based recogn. tech. 84630
perceptual textural features, computational measures 107124
perceptually uniform color spaces for texture anal., eval. 73500
periapical lesion anal. using stat. textural features 110949
pers. recogn. syst. using fibre grating vision sens. *(Japanese)* 107145
photoelec. collimation simul. syst. using image dyn. recogn. *(Chinese)* 84594
piecing-error for sub-images, relax. algm. 73475
pillar-like objs., posn. meas., US sens. array/neural networks *(Japanese)* 95480
pixel clustering on custom computing machine, data truncation effect 95426
pixel-level image fusion scheme, enhanced visualization, Laplacian pyramid decomp. 95534
plane image contour, vector representation, Fourier descriptor 73495
polariz. diversity images, target detect., stat. techs. 73255
polygonal snake adapted to opt. noise models, min.-complexity segmentation 95580
preprocessing methods for computer images of particle saltation *(Chinese)* 107273
probabilistic framework for segmenting people under occlusion 107178
pulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 98515
quantum computer for image data recogn. 73431
racehorse ident. syst. using iris recogn. *(Japanese)* 84523
radar, geometric obj./image rels. 86131
radar imaging and recogn., parametric model with freq. depend. 75108
radar target model generation from multiple SAR images 86140
randomized Hopfield networks, recogn. ability 93270
range images correl., shape conformity eval. 106965
real and virtual edge intersection determ. in pairs of uncalibrated images 107132
real-time multilevel vector proc. 95404
real-time reconfigurable image recogn. syst., model-based develop. 107227
reduced-rank automatic target detect./recogn. 109275
region detect. in image recogn., Active Net model 73450
region extraction using competition of multiple act. contour models 84175
relational graph matching for human detect. and posture recogn. 95423
reliable video segmentation, fade/dissolve detect. 107130
rem. sens. data, radiometric equalization by laser scan data utilization 129825
retrieval using color plane moment 118783
road sign detect., JTC, Fourier-plane nonlin. filter 107287
road sign recogn., composite filter bank 107290
road vehicle night time detect. algm., light pattern use 107240
rot. invariant texture anal., comparative study 118342
SAR, class. perform. prediction using parametric scatt. feature models 86132
SAR artificial clutter scenes modeling using spatial autocorrelation/group stats. 86136
SAR ATR, aspect diversity benefits, fund./expt. results 86134
SAR ATR perform. prediction, validation using learned distortion models 86133
SAR imagery, target discrim. 109277
SAR images, autotruthing 77040
SAR images, wavelet filtering algm. in automated lineament detect. by Hough transform 95583
SAR unsupervised image segmentation using recursive partitioning 75134
SAR wavelet compressed imagery, ATR perform. 86187
scale distortion-invariant pattern recogn., fractional correl. perform. *(Chinese)* 107209
scene boundary detect. method 107128
scene change detect. using, cross entropy 107129
scenes with translationally repeated quadrics, recogn. 84538
segmented SOA opt. pattern recogn. 118661
separating appearance from deform. 107182
seq. accumulation of evidence 129858
shape pattern recogn. by neural net 107210
shapes recogn. by editing shock graphs 107174
SHARP ATR syst., Bayesian multiple-look updating appl. 75158
SLM, FT opt. proc. appls. 104888

image recognition continued
slow-moving point target seq. detect., low-SNR IR image seqs. *(Chinese)* 107115
small-size image detect. and recogn., opt.-digital methods 95411
soccer player motion recogn. based on stat. wts. 107276
sports video annotation, visual tracking syst. 95546
SS watermarking with self-sync. capabilities 95053
stereo obj. tracking syst., opt. binary phase extraction JTC 73497
still images copyright protection, self-similar chaotic watermarks 95052
stochastic target detect. for hyperspectral data 107148
striation marks visual comparison with struct. light 107271
subspace methods for face/clutter discrim. 95496
SVM appl. 94548
sym. and shape recogn. 95492
Tactical Endurance Synthetic Aperture Radar ATR perform. 88240
target thermal imaging modelling, correctness verification 109675
templet matching successive elimination/multilevel successive elimination algms. *(Chinese)* 73513
threat sens., textural feature assessed camouflage methods, low false alarm rate 133386
tolerable direction difference based 107131
TV commercials, automatic recogn. on digital TV 73506
typeface ident. by obs. character image modeling 73452
UML diags., online recogn. 129936
unconstrained handwritten numeral string segmentation 95574
user interface design for engng. drawing vectorization software, VHVector *(Chinese)* 129868
vascular struct./deform., B-mode ultrasound imaging 87509
vehicle no.-plate recogn. using neural nets 84593
vehicle parking detect. method using image segmentation 84601
video data rep./compression, texture recogn. 95407
video PLL in gait recogn. 107170
video proc. and multimedia commun., conf., Zadar, Croatia (June 2001) 113202
video seqs., scene cut detect. for indexing 118747
video seqs., visual perception, severe vibr. effects 84602
Vietnamese document image recogn. based on HMM and linguistics 129938
virtual holographic recogn., digital methods, med. appls. 82967
visual pattern proc., CMOS technol., artificial retina neural net 73276
visual servoing invariant to changes in camera intrinsic params. 107171
visual target distinctness prediction, min. error gain 129862
Visual-FSSEM, unsupervised data visualization and interactive feature selection 73455
waste clean-up automation, telerobotics elements 95527
watermark extraction and modified robust embedding scheme 95054
watermarking, resilience against attack 95051
wavelet domain recogn., survey 107147
wavelet kernel fn. network *(Chinese)* 95485
weak-image target detect. under strong beam disturbance *(Chinese)* 73523
wideband target signatures, spatial/temporal covariance props. 86129
Wiener filter hybrid digital-opt. correlator, compact image recogn. syst. 71474
window-based nonlin. filters and pattern recogn. 118973
$Bi_{12}SO_{20}$ photorefr. JTC, rot. invariant pattern recogn. 107251

image reconstruction
see also image restoration
1D time domain inverse scatt., optim. approach with edge-preserving regularization 128754
2D conducting targets, EM imaging, GA-BEM hybrid 72281
2D discrete Fourier irregular samples, closed-form image reconstruction using Good-Thomas FFT 84299
2D image anal. by Tchebichef moments 106692
2D image moments, fast computation, biaxial transform 94505
2D image sigs. with missing obs., real-time reconstruction 129467
2D imaging, continuously tunable high spectral resoln. opt. filter 71502
2D inverse filtering of opt. images, noise suppression 118363
2D nonredundant directionally selective complex wavelets 94659
2D PET images reconstruction 76576
2D PET reconstr., point spread fn., math. model 98573
2D scatterers, microwave imaging by inverting scatt. near-field meas. 73306
2D separable filters for optimal reconstruction of JPEG-coded images 95039
2D SPECT with 180° DAQ, image reconstruction, line-integral model 132897
2D-multiple notch filter, blocking artifact reduction, DCT coded image 95156
3-D asymmetric temp. field meas., opt. tomography tech. 118408
3-D Compton scatt. camera images, list mode EM reconstruction 132886
3-D PET, direct Fourier reconstruction with Fourier reprojection 132933
3-D PET data, cluster reconstruction in Windows NT network, BeeHive 132874
3D actual obj. opt. hologram manufacture *(Chinese)* 72097
3D asymmetric temp. field meas. by real time laser interferometric tomography 121254
3D backprojected PET images, adaptive scatt. & randoms correction 122177
3D blind image reconstruction, combined nonlin. and stat. techs. 129485
3D box method for 3D reconstruction of obj. from multi-images 73225
3D breast topol. vars. during repeat MRI, quantification 98468
3D CGH image reconstruction by 2D FT method 105580
3D coronary arterial segment reconstr. from projection boundaries 98125
3D coronary reconstruction from routine single-plane coronary angiograms 132782
3D depth inform. reconstruction using stereo images 129651
3D dielec. body reconstruction using unrelated illum. method 94003
3D dielec. obj. image reconstruction using gradient-based optim. 83259
3D echocardiography, ventricular vol. quantification, normal/aneurysmal LV 132594
3D face model creation from video 118277
3D face model reconstruction from video seq. 106662
3D graphic models, error-resilient coding via adaptive mesh segmentation 95043
3D hand pose reconstruction using specialized mappings 106556
3D HF US images of skin and eye 98303
3D image capture and appls., conf., San Jose, CA, USA, Jan. 2001 113220
3D image reconstr., lin. parameterized models 95476
3D image reconstr., random sampling/voting method 84339
3D image reconstr., vision-based, dual representation 129836
3D image reconstruction, translational alignment method 73268
3D image reconstruction from exponential parallel-beam projections 111024
3D interferometric ISAR imaging, target scatt. 86237
3D interpolation method for 3D reconstruction 118287
3D med. data, multirate coding 98161
3D med. image reconstr., vol. rendering, shear-warp transform. 94579
3D microwave imaging using UWB radar techs. 129564
3D modeling of archaeological vessels using shape from silhouette 84208
3D motion inform. estim. from opt. flow by subspace theory *(English)* 107286

image reconstruction continued
3D motion/struct. recovery from motion/shading flows 118725
3D multi-resoln. reconstruction through texture matching 129471
3D obj. face recogn./reconstr., single 2D line drawing 129871
3D obj. model building from multiple views using calib. plate 84191
3D obj. reconstruction from multi-resoln. texture matching 94527
3D obj.-based description techs. for virtual prod. 94898
3D optoelectronic image proc. and recogn. 107288
3D PET, Monte Carlo simul. & scatt. correction, perform. anal. 122181
3D PET hybrid scatter correction, unscattered coincidences distrib. 122198
3D PET imaging, list-mode EM-ML 132854
3D PET iter. reconstruction using stochastic sampling 132881
3D posn. meas., gait anal. & surgical navig., calib. method *(English)* 87332
3D profile reconstruction using opt. fibre Fizeau interferometer 118409
3D real-time reconstruction on high resoln. FPA 94532
3D realistic objs., CGH 83016
3D reconstruction approach, geom. fund. of polycentric panoramas 106574
3D reconstruction for high-speed vol. meas. 106794
3D reconstruction from multiple 2D views, trilinear tensor technol. 118271
3D reconstruction from stereo pair without knowledge of intrinsic or extrinsic params. 94848
3D reconstruction from two orthogonal views using simulated annealing approach 84230
3D reconstruction of aorta from tomographic image seq., anal. and optimisation 122135
3D reconstruction systs., image distortion/resoln. effects 94969
3D reconstruction technol. *(Chinese)* 106745
3D reconstruction using light stripe projections on cube frame, calib.-free approach 84206
3D rigid obj. automatic shape reconstruction from calibrated images 129472
3D rigid struct. recovery from 2D motion, weighted factorization method 94526
3D scene reconstr., polyhedral projection correction 95595
3D shape meas. in neurovision syst. 106789
3D shape modeling syst. using PC/digital cameras *(Japanese)* 106740
3D shape reconstr. from silhouette, interactive algm. 94856
3D shape reconstr. of hybrid reflectance by LMS algm. 106684
3D shape recovery using, video camera with, gyro sens. and error anal. 118270
3D shape recovery using neural-based hybrid reflectance model 129525
3D SPECT, optimal non-iter. reconstr., uniform atten. 132858
3D surface reconstruction from apparent contours 129470
3D terrain reconstr. by binocular stereo images 84628
3D tomographic image reconstr., X-ray source helical path 94439
3D ultrasound compounding, rapid image registration 110754
3D ultrasound image reconstruction from freehand scanned frames 121888
3D ultrasound imaging systs., diagnostic appls. review 76367
3D US image reconstr. for home health care *(Japanese)* 87471
3D US imaging syst. using mag. posn. sens., calib. *(Chinese)* 132601
3D vector-based image representation, data fusion 129837
3D wavelet transform video coding, optimal bit allocation strategy 73429
3D X-ray microtomographic syst., CMOS image sens., bone imaging 132827
3D X-ray microtomographic syst. with CMOS image sens. 132834
4D PET image reconstruction from list mode data 132855
accelerated coord. descent methods for Bayesian reconstruction using ordered subsets of projection data 76575
accurate obj. reconstruction from partial shapes for virtual worlds 84104
acoustical diffr. tomography in finite form and computer simuls. 99103
act. stereo 3D reconstruction, automatic neural net training 95000
act. stereo vision syst., lines/points matching using GA 94815
adaptive contour sampling/coding using skeleton/curvature 95218
affine 3-D reconstruction from two projective images of independently translating planes 106612
affine calib. from moving objs. 106567
ambiguous config. for 1D struct. and motion problem 107156
ambiguous reconstructions 106607
ang. weighted hybrid cone-beam CT reconstruction 87728
animal positron tomograph, image generation, Monte Carlo coincident aperture fns. 111033
animal positron tomograph, image generation, Monte Carlo coincident fns. 132971
animals, ARO-PET 76585
aortic dissection-simulating artifact, charactn. in computed tomography 98519
array-based image form., optimal sampling 94533
arteriovenous malformations, 3D reconstruction, radiosurgery, DSA 98558
atten./scatter-corrected ^{99m}Tc cardiac SPECT studies 111030
auditory ossicular chain, CT virtual endoscopy *(Chinese)* 98524
automated photogrammetric syst. for photorealistic skull 3D reconstruction 94909
automatic alignment of electron tomography images using markers 94460
automatic color preference correction for color reprod. 94874
automatic reconstruction of top of head from Cyberware PS head scan data 118286
AVENUE, automated site modeling in urban environ. 84234
B-scan 3D ultrasound imaging, speckle suppression method *(Chinese)* 122027
backprojection filtering algms., vector/second order tensor fields reconstruction 129486
bandlimited images, fast extrapolation/superresolution algms. 95185
Bayesian opt. diffusion tomography, nonlin. multigrid algms. 73260
beam-deflection opt. tomography, Radon transform iter., temp. fields 118407
beam-shaping CGHs for coherent/partially coherent light 105586
BGA solder joint X-ray slicing using transm. X-ray systs./standalone software 113584
binary holograms, fab. method using laser punch tech. 128584
biological image/interf. colors thickness extraction 73517
biomedical MRI, sensitivity encoding, arbitrary k-space trajectories 132759
biomedical parallel MRI, SMASH image reconstruction 132777
bistable gradient neural net appl. 118263
blind image deconvolution/small-extent point-spread fns. using resultant matrices 94947
block truncation coding using edginess inform. 95171
block-based coded images, efficient similarity-based error concealment method 95305
block-iter. parallel algm., sparse systs., pixel-related weighting 132520
blocking artifact suppression, successive structural anal. using wavelet transform 106889
bomb detect. using backscattered X-ray radiography 110436
bone dens., tetrahedral mesh modelling of data for anatomical atlases and intens.-based image registration 87739
bone fracture callus dens. eval., X-ray radiography & quantitat. CT 76515
bone mineral content assess., 3-D SR microtomography images 110961
bone mineral content assess., 3D SR microtomography images 132823

image reconstruction continued
brachytherapy treatment planning, CT based, automatic catheter reconstruction 98543
brain elec. tomography, alg. reconstruction techs., Tikhonov regularisation 98207
brain model, temp.-/constr.-change distrib., reconstructed permitt./cond. images 87380
brain PET, reconstruction strategies for HRRT 132873
brain slices, macroscopic opt. images, 3D reconstruction 87520
brain SPECT, absol. activity quantitat., anal. vs. iter. methods 122239
brain SPECT, dopamine receptor imaging, scatt., atten., collimator response 122173
breast, dyn. contrast enhanced imaging, multiple resoln. images acquisition 132689
breast cancer diagnosis, imaging techs. *(German)* 110930
breast cancer investigs., MRI scans, automatic finite element mesh generation 110872
breast/brain MRI, preprocessed image reconstruction appl. 122076
broken handwritten digits anal./reconstruction 94692
bronchial tree modeling and 3D reconstruction 76474
bubble column gas hold-up meas., elec. resist. tomography, ANN use 110057
bubbly gas/liq. pipe flow cross-correl. meas., dual-plane ERT syst. 110056
building struct. recovery from high resoln. aerial imagery 73241
bulk $\chi^{(2)}$ cryst., blurred image reconstruction by blurred image reconstruction 129529
buried imperfect conductor, image reconstruction, EM scatt. 86193
buried imperfectly cond. cylinder, image reconstr. freq. depend. 107225
camera calib. and 3D reconstruction from single images using parallelepipeds 106476
camera network design by natural selection 84284
capacitance tomography sens., internal-external electrodes, reconstr. algm. 120739
cardiac CT imaging, multisector image reconstr. 132800
cardiac diffusion tensor MRI, solenoidal tensor fields, 3D reconstruction 87597
cardiac MRI, iter. approach to tensor tomography 132708
cardiac SPECT, atten. smear, 'paradoxical' counts increase 132847
cardiac SPECT, atten./scatt. corrected, regularisation optimisation 122187
cardiac SPECT, uniformity, contrast, SNR eval. 122252
catheter 3D orient. & posn. determ., single-plane X-ray images 87698
CDM, opt. implement. for super resoln., temporal method 106882
CGH fab. by electron-beam direct-writing, image quality *(Chinese)* 105591
CGH image compression/transm./reconstruction *(Japanese)* 118641
Chebyshev moments for image reconstruction 118262
chrominance data, high-compression by segmentation of luminance 118581
circ.-scanning US diffr. tomography, LF scatt. component 98302
codec, fast efficient computation of cubic-spline interpolation 73370
coded-excitation pulse-echo imaging, optimal transmit/receive beam synthesis 110692
coherent scatter X-ray CT med. imaging, Monte-Carlo simul. 110928
color eigenflows, stat. modeling of joint color changes 107164
color holographic interferometry recording, research activities at ISL 82994
color-coded projection grating, 3D surface profilometry *(Chinese)* 95343
colour photom. stereo, simultaneous reconstruction of local gradient and colour of rough textured surfaces 106649
compression using derivative inform. with dist. transforms 118556
Compton scatter SPECT tomograph. image reconstr., MLE 111043
computed tomography images, beam-hardening correction using post-reconstruction method and equiv. tissue concept 98498
computerized tomography, 2D, reconstruction filters scaling 87771
COMVIS, commun. framework for computer vision 118309
concentric mosaic(s), planar motion and 1D cameras 106608
cone beam filtered backprojection reconstruction algm. for circle-plus-two-arc orbit 87759
cone-beam CT for MV LINAC, electronic portal imaging 98544
cone-beam helical CT reconstruction algm. using tree-struct. filter bank *(Japanese)* 132784
cone-beam image reconstruction, CT/SPECT, spherical harmonics 87731
cone-beam image reconstruction using spherical harmonics, short-obj. problem 132792
cone-beam iter. reconstruction of long obj. segment 132857
conf. on nuc. med. imaging, Lyon, France (Oct. 2000) 100419
conformal imaging with non-contacting microwave antenna array 98384
contex-based predictive coder for lossless/near-lossless video compression 84460
contour-based obj. recogn. using wavelet-transform 129830
contrast enhanced opt. tomography, gradient-based nonlin. optim. methods 106495
coronary artery MRI, off-reson. distortion reduction, echo-time interpolation 122107
coronary vasculature, 4D quantif., angiography & US data fusion 98535
cpd. image compression using adaptive wavelet transform *(English)* 84450
CPET scanner, perform. eval. using IEC & NEMA protocols 122231
CT, cone beam filtered back-projection reconstruction algm. 132799
CT, iter. max.-likelihood polychromatic algm. 132804
CT, reconstruction, tree-struct. filter bank *(Japanese)* 73138
CT, weighted hybrid cone beam reconstruction, circ. trajectories 122157
CT image reconstr./recogn., image moment method 118667
CT-based bracytherapy treatment planning, automatic reconstruction of catheters 133007
data fusion, wavelet transform *(Chinese)* 94605
DCT-based scalable video coding, drift mgt. 107066
DCT-coded picture transm. over noisy channels, transformed domain error concealment 84381
deblurring subj. to nonnegativity constraints, obj.-constrained CT appl. 132805
deep venous thrombosis, ultrasound elasticity imaging 110812
deformable organ model, sphere-filled method, virtual surgery 98588
degenerate self-imaging Fourier filters 129634
Denisyuk's hologram recording, brightness distrib. features 82972
denoising via wavelet coeff. magnitude correl. adjustment 94804
dense estim. of surface reflectance params. from registered range and color images 118281
dense range image smoothing using adaptive regularization 96910
dental cast shape, complete 3-D reconstruction using perceptual grouping 132634
depth first search bit stream SPIHT algm. 106928
depth from defocus estim. in spatial domain 84556
DFT, basis fn. truncation effects 94511
diagnostic image compression of biomedical vols. 121878
differential constraints in 3D reconstruction proc. appl. to stereo 106576
differential TR eddy current test probe, crack shape reconstr. 101612

image reconstruction continued
diffuse opt. tomography, highly heterog. media, breast appl. 87539
diffuse opt. tomography inverse problem, admissible soln. approach 110844
digital holography, correct-image reconstruction in presence of severe anamorphism 93908
digital hyperbola segment reconstruction from code 94976
digital image compression using directional sub-block DCT 95260
digital image compression using wavelet transform with transit. matrix 106903
digital image seqs., rot. motion estim. and anal. 118392
digital reconstr. radiography, vol. rendering, splatting shear-warp 132824
digital video seqs., long transit. anal. 94769
compact digital zoom photo-cameras for holographic interferometry 105614
discrete sets with absorpt. 94975
distorted image correction, Tikhonov regularisation method *(Russian)* 129814
double random phase encryption digital holographic data security syst. 116580
driver assistant syst., lateral and long. dists. detect. 73315
DRRs calc. algms. for different accelerator voltages, tools 98546
dual head coincidence imaging, scatter response, Monte Carlo simul. 122197
dual head gamma camera PET, ^{153}Gd line source, atten. correction 122183
dual isotope SPECT imaging, crosstalk & scatter correction 122201
dyn. emission tomographic reconstruction problems, exponential spectral anal. 132863
dyn. $H_2{}^{15}O$ myocardial PET, components blind separation, ICA 110995
dyn. image reconstr. for proc. CT, pseudo Kalman filter algm. 106710
dyn. PET, OS-EM 110991
dyn. SPECT, 4D max. a posteriori reconstruction, compartmental model-based prior 76580
dyn. SPECT, fig. of merit fns. comparison 132862
dyn. SPECT method, perform. assess. 132905
ECG imaging, noninvasive reconstruction, torso inhomogeneities effect 76318
echocardiographics images, 3D modeling and visualization of ventricles 132610
echocardiography and Doppler tissue imaging, myocardial vel. meas. 132608
edge detect. by multiscale wavelet method *(Chinese)* 73522
edge-adaptive clustering for unsupervised image segmentation 94547
edge-preserving interpolation, fuzzy tech. 118175
eight-row CT scanner, helical reconstruction algms. 132794
EIT, elec. impedance tomography, applied- and induced-current, multiprocessor systs. 110622
EIT algms. modif. using pipeline multiprocessor algm. 110973
elastic modulus distrib. reconstruction, 3-D displacement vector 110817
elec. capacitance tomography, image reconstruction 109929
elec. capacitance tomography, image reconstruction algm. 97780
elec. impedance imaging of two-phase flows, sens. strategies sensitivity anal. 106507
elec. impedance proc. tomography, internal struct./electrodes model 109924
elec. impedance tomography, bipolar DC pulse tech., core anal. 111389
elec. impedance tomography, Matlab based data proc. & anal. syst. 98204
elec. impedance tomography, reconstr. regularis. method optim. 109927
elec. impedance tomography image reconstr., FEM, error propag. simul 109926
elec. impedance tomography reconstruction algm. using EKF 129456
elec. resist. tomography, electrode array, image reconstr. *(Chinese)* 86909
elec. resist. tomography using bidirectional current pulse tech. 109923
elec. tomography in indust. appls., status 110503
elec. tomography in indust. appls., status 120688
electronic portal imaging, incident beam distribs., iter. algm. for reconstruction 111127
EM inductance tomography, image reconstruction method 118267
emission computed tomography, stat. regulated/adaptive EM reconstruction 111031
emission CT, stat. regulated/adaptive EM reconstruction 132885
emission tomography, MAP estim., fast EM-like methods 76563
endoscope syst. for high-speed 3D meas. 110528
error resilient image coding, lapped orthogonal transform design 95301
Euclidean reconstruction and auto-calib. from continuous motion 106645
exponential ray transform, sampling conditions, nuc. imaging appl. 132866
exponential spectral anal., large dyn. emission tomographic reconstruction problems 132944
EZW coding, selective coeff. scan algm. *(Chinese)* 129688
facial expression transform. based on sketch image/multiscale edges 73419
facial model estim. algms. using stereo/mono image seq. 73484
facial modeling from uncalibrated image 129684
facial video compression, local features reconstruction 95179
fan-beam diffr. tomography, full/min.-scan reconstruction algms. 94737
fan-beam diffr. tomography, min.-scan reconstruction algms. 122158
fan-beam tomography, multiresolution reconstruction 132795
fast hierarchical backprojection algms., error anal./perform. 84278
fast PET image reconstruction, SVD decomp. of syst. matrix 111027
FDG, fast parametric image reconstruction, dyn. PET data 132904
FDG PET, iter. reconstruction, atten. correction, image fusion 122161
feature point tracking algm., 3D image reconstruction 129553
feature-based image seq. compression coding 95342
feedforward ANN for efficient high-order image subsampling 94813
fetoplacental vasculature, 3D power Doppler US imaging 132611
filtered backprojection algm., range conditions, pseudoinverse soln. 87744
filtering using scale-space continuity, wavelet-based method 73157
fingerprint enhancement,directional filter bank based 94949
fish-eye lens camera nonlin. calib. for stereo vision syst. 73236
flattened image mosaicing from straight uniform generalized cylinders, projection distortion anal. 84097
fluidized bed, bottom zone imaging, elec. capacitance tomography 121144
fluoresc. freq.-domain photon migration, 3D unconstrained/constrained image-reconstruction 76406
FPA in pass. MM-wave imaging, optimal dithering 131999
fractal coding of shapes, projected IFS model based 95177
fractal image coding, trigonometric approx. method 73422
fractal image coding with multi-scaling for brightness *(Japanese)* 73396
fractal image compression, adaptive post-proc. 95173
fractal image compression coding based on generalized convergence *(Chinese)* 106848
fractional derivatives, splines and tomography 132787
free-space imaging with act. microwave tomographic syst. 79485
Fresnel transform of images for watermarking appl. 95151
fuzzy relational eqns. in image compression/reconstr. *(Japanese)* 106976
gamma camera detector, virtual PMTs, centroid positioning perform. improvement 122268
general curves reconstruction using factorization and bundle adjustment 118308
generalised K_N-convolution/fast Vandermonde transform, modulo arbitrary polynomial reduction, algms./multiplicative complexity 118995
genetic relax. iter. FT algm. for image reconstruction 84178
image reconstruction continued
geometric struct. with indeterminacy, gauges/gauge transforms. for uncertainty description 84262
globally convergent Newton-SOR method for stat. image reconstruction 132513
gradient-based iter. reconstruction schemes for opt. tomography 76386
gray-level image reconstruction, Fourier-Mellin transform approx. 129541
grayscale hit-or-miss transform based on level sets 95522
ground glass, holographic encryption and MUX, phase conjug. readout algm. 72089
ground state 84174
ground surface image reconstruction using radio ground waves 111381
ground surface tomographic imaging, ground wave use 88097
H.324 videotelephony std., H.263 picture header recovery 119504
HADES-CCG tomographic reconstr. tool, X-ray & neutron radiography 101610
half-quadratic regularization, preconditioning and appls. 84353
half-scan cone-beam CT fluoroscopy, multiple X-ray sources 98528
hand-held γ-cameras, reconstruction implement., surgery appl. 132983
HDTV, post-proc. using computationally efficient adaptive nonlin. filters 118332
head, human, hemodynamics, 3D vol. tomographic localization 132644
head and neck cancer, 3D spiral computed tomography imaging for staging and surgical planning 98485
head motion correction in emission tomography, hybrid 3D reconstruction/registration algm. 132851
height-from-gradient recovery, wavelet-based algm. 84335
heterodyne laser radar imaging/refl. tomography 109301
HI CT reconstruction, range shift distrib., 2D detect. syst. 98158
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
high ang. resoln. diffusion-weighted MRI 87631
high precision line detect., Hough transform with reverse mapping *(Japanese)* 73448
high-resoln. color image reconstruction from compressed video seqs. 129473
high-resoln. image reconstruction using hybrid evol. algm. *(English)* 84252
high-resoln. image reconstruction with displacement errors 84352
high-resoln. wavefront control syst., opt. addressed NLC SLM 109686
high-speed phase-shifting profilometry 106784
hologram binarization, iter. stepwise quantization method 129785
holographic image reconstruction, simul. of other phenom. 93881
holographic interferometry reconstruction using DMD 83037
holographic storage capacity improvement using double-random phase encryption 128565
holographic transform compression of images, multiple descriptors 118638
Hough tech. for document image bar charts detect./recogn. 95517
human body kinetics, vision-based feature meas. 87557
human face image reconstruction for virtual space teleconferencing *(Japanese)* 84280
human motion spatial reconstruction using images of single camera 122038
human movement reconstruction, silhouette based tech. 129542
hv-convex 4- and 8-connected discrete sets, reconstruction algms. 129571
hybrid PET/SPECT coincidence imaging, patient motion effects 122217
hyperspectral anal. toolset, spectral similarity scale algm. 122556
hyperspectral imagery, detect. and segmentation 73189
hyperspectral imaging, JPEG-2000 compression, 3D wavelets and KLT 95023
I/Q sigs. compression for US diagnostic equipt. 98289
idiopathic scoliosis, optimal 3D correction, radiograph 122120
improved motion stereo matching based on modified dyn. prog. 129646
incoherent holography, hand drawn images 82964
incoherent triangular holography, resoln. anal. 128564
incomplete circ. array, sig. reception, spatial source distrib. projection reconstruction, algm./simul. 118195
indust. objs., nondestructive inspection, cone-beam X-ray computer tomography *(Russian)* 67655
integral 3D imaging syst., digital image proc. 107289
intens. modulated radiotherapy, inverse planning, ridge fns. 133131
intermediate view synthesis from binocular images for stereoscopic appls. 107019
internal combustion engine develop., opt. access/diagnostic techs. 120687
interpolational alg. polynomial expansion, iter. approach, at. fns. 114026
interstitial RF therapy effectiveness, shear modulus reconstr. 122289
inverse filters for arbitrarily focused image reconstruction from two differently focused images 84295
inverse scatt. image reconstruction, refl./transm. data ob. 98299
ISAR imaging of maneuvering targets, param. estim. of multicomponent polynomial sigs. 75084
ISAR imaging of targets at low elevation angles 96917
iter. reconstruction, efficient forward projection using tri-lin. interpolation 132512
JBIG2 std., dictionary design for text image compression 73402
JPEG2000-based scalable reconstruction of image local regions 84503
JPEG 2000, regions of interest encoding and reconstruction 118562
JPEG 2000 decompression tuning perform. via rounding, theory/practice 106944
JPEG modified image compression tech. 95137
JPEG still image compression, blocking artifact free inverse DCT 95391
JTC with significant output images, opt. security syst. appls. 118697
knee MRI, musculo-skeletal radiology, progression to 3-D imaging 110854
lactate discrim. in echo-planar spectrosc. imaging, J-coupling 76441
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
landmine detect., automated, multispectral imaging, iter. morph. algms. 77065
landuse class., SAR/INSAR data and opt. imagery fusion *(English)* 76964
large screw threads, shape recovery and anal. 84229
lattice struct. for regular paraunitary lin.-phase filterbanks/M-band orthogonal symmetric wavelets 129792
legged robots, guidance in unstructured environ., qualitat. vision 86604
lin. and nonlin. tomography, inverse scatt., review 129468
lin. dual-space approach to 3D surface reconstruction 106538
lin. multi view reconstruction and camera recovery 106465
linogram algm. for computerized tomography 98511
liq./vap. two-phase flow visualization, elec. impedance tomography 132230
list-mode emission tomographic image reconstruction, likelihood maximisation 132891
liver parenchyma, dyn. contrast-enhanced 3D MR imaging 87677
living human face meas. using pulsed holography 82973
local vector tomography using wavelets 98317
LUT inverse halftoning improvement, tree-struct. method 118345
LV, 3D geometric model reconstruction, almost automatic method 122025
LV segmentation/VRML visualization in echocardiographic images 76370
LW sound wave CT, prior distribs. subspace projection algm. 98279
lymphoma treatment, high-resoln. absol. SPECT appl. 122238
manifold reconstruction from unorganized points 106761
manipulator, intell. stereo vision syst. 73507
MAP algm. for image reconstruction *(Chinese)* 129427

image reconstruction continued
MAP high-resoln. image reconstruction with multisensors, fast algm. 84263
marching cubes algm., novel and efficient implement. 73209
math. modelling, estim. and imaging, conf., San Diego, CA, USA, July-Aug. 2000 67380
Maul Space Surveillance Site nonimaging laser radar data, reflective tomography reconstruction 86240
maxillofacial region, coronal reconstruction from axial helical CT data 87715
MDAPET camera, missing projection data compensation 122230
med. computerised radiography images, wavelet random noise removal *(Chinese)* 98523
med. image compression by DCT spectral similarity strategy 110525
med. image registration and model constr. using GA 87353
med. image vol. rendering method 98135
med. image vol. rendering using dist. transform 98136
med. images, lossless compression by hierarchical segmentation 110534
med. optoacoustic press. transients, temporal backward projection, FT methods 98350
media and DSP proc., CBP and ART image reconstruction algms. 114777
median root prior images, PET/SPECT reconstruction, visual quality improvement 132875
metabolite maps reconstr. in ^{1}H-MRS imaging, time-domain tech. 87570
microcalcification clusters, 3D reconstruction from 2 mammographic views 87741
micromanipulation med. robot, visual servo control syst. *(Chinese)* 106686
microPET P4, syst. dedicated to small animal imaging 132972
microscopic particles, hologram recording and reconstruction 105590
microwave holographic 3D rendering using microstrip array antenna 93880
microwave imaging, inversion of scatt. near-field meas. 129432
microwave imaging applied to rem. sens. using multilevel fast multipole algm. 75127
microwave radiometric systs., Volosyuk-FT for optimal radio brightness image reconstruction 73284
microwave tomographic imaging techs. for indust. procs. 121165
microwave tomographic reconstruction, inverse scatt. problem 129650
microwave tomography, Born approx. 86927
min. struct. and motion problems with missing data 106579
missing block reconstruction in block coded image transm. 84510
mitral regurgitation, 3D color Doppler reconstruction 76345
ML-EM images, noise/resoln. props., incorrect modelling effects 132887
mobile robots, struct. light based uncalibrated vision 109666
model-based obj. tracking using stereo vision 95555
molten steel flow distrib., EM imaging 121277
molten steel flow profiles imaging 110061
moment-coded grey-scale images, max. entropy reconstruction 73174
monocular vision syst. for autonomous vehicle guidance 84307
mosaic constr. from image stream with parallax 94846
mosaicing, seq. bundle adjustment method 129496
motion compensation, mesh-based scheme, temporal concealment approach 118227
motion compensation using representation of regions 118575
motion estim., circ. motion, epipolar geom. from profiles 84130
motion stereo camera model, multi-image matching 94496
moving target tracking in scenery, change detect., ICA 106524
MPEG video, MAP estimator for high resoln. video reconstruction 95200
MPEG-2, num. modeling of transm. errors and video quality 84414
MPEG-2 video sig., transm. errors, reconstructed image quality 73206
MPEG-4 video streams, efficient error concealment implement. 118609
MR elastography, 3D gradient echo meas., steady-state motion 110870
MR elastography, 3D subzone-based reconstruction algm. 87617
MR elastography, complex-valued stiffness reconstruction, differential eqn. alg. inversion 122110
MRF modeling in median pyramidal transform domain for denoising appls. 118974
MRI, ANN reconstruction from noisy sparse images 76428
MRI, coil-by-coil image reconstruction with SMASH 132702
MRI, dyn. k-space sampling, temporal freq. anal. 76438
MRI, ghost artifact cancellation using phased array proc. 132743
MRI, multiple sclerosis lesions, 3-D surface reconstruction using spherical harmonics 132772
MRI, planar rigid body motion estim. 98460
MRI reconstruction, VD-AUTO-SMASH imaging 87644
MRI spiral imaging, efficient off-reson. correction 132677
multi-camera 3D modeling syst. to digitize human head and body 118272
multi-image struct. recovery from motion, projective 84537
multi-inform. array inversion using variational Born iter. method 76845
multi-seeded fuzzy segmentation on face centered cubic grids 98510
multi-slice CT, nonlin. helical reconstruction algm. 132789
multi-slice helical computed tomography, long. sampling & aliasing 132790
multi-view image coding incorporating approx. geom. 95108
multi-view range image fusion, Main-Stitched-Line/Sub-Stitched-Line concept 116870
multi-viewpoint image data, model-aided coding 95223
multibaseline stereo correction for silhouette-based 3D model reconstruction from multiple images 118283
multidimens. fast Pade transforms for med. MRI/CT appls. 132712
multienergy X rays, quant. in-line phase-contrast imaging 98110
multiframe infinitesimal motion model for reconstruction of scenes with multiple lin. moving objs. 106648
multiframe orient. determ., lin. epipolar algm. 94528
multiframe stereo reconstruction, global region segmentation 106467
multifreq. elec. impedance tomography syst., frontend archit. 87423
multifrequency elec. impedance tomography for patient monitoring 121918
multilayer struct. NDT, US tomography, iter. reconstr. 101601
multimodality image fusion toolkit, high-speed interactive fusion 76433
multiphase flow meas., elec. capacitance tomography 110058
multiple conductors, EM wave scatt., image reconstruction 94025
multiple description coding of motion fields for robust video transm. 106967
multiple description image transm. using block-based DC separation 107103
multiple motion scene reconstruction from uncalibrated views 106534
multiple-exposure rainbow holography, vert.-area partition recording, 3D monochromatic image synthesis 105585
multipolyhedron reconstruction using GA via 3-view matching algm. 129507
multirate sig. proc. on finite fields 118626
multiresolution shape recovery by surface deform. 95576
multiscale models for DP, sensitivity anal. 118364
multislice CT/cardiac CT sector reconstruction, partial scan weighting algms. 132793
multispectral images, lossy compression, blockwise distortion measure 129727

image reconstruction continued
Mumford-Shah functional for image segmentation/denoising/interpolation/magnification 94779
Mumford-Shah problem, curve evol., boundary-value stochastic procs. 94837
MVC, Nokia proprietary low bit rate video codec for mobile multimedia 118549
myocardial perfusion param. imaging, ^{13}N-ammonia PET, nonlin. method 110994
myocardial perfusion SPECT, camera perform. eval., channelised Hotelling observer 132921
myocardial perfusion SPECT, reconstr.-based compens., Hotelling observer 122179
myocardial SPECT perfusion imaging, var. wall thickness effect 132859
myocardial strains determ. from tagged MRI, fast techs. 98470
myocardial wall tagging with undersampled projection reconstr. 76440
myocardium PET, FDG uptake, blood glucose effect 122247
natural images, edge-directed interpolation 118367
network model coding gain for smoothed descriptions coding 129798
neural tissue water compartments visualis., diffusion tensor MRI 76442
neuro-vision syst., 3D image reconstruction 118745
neurocomputing method for image reconstruction of three-phase flows in elec capacitance tomography *(Chinese)* 122144
neutron tomography syst. for quantitat. NDT, preproc. corrections 101562
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
NIR diffusive tomography, image reconstruction algm. 110837
NIR tissue imaging syst. with diffuse photons, 2D image constr. 76392
nonCartesian k-space data, direct reconstruction, nonuniform FFT 87626
nonlin. diffusion and multiscale anals. 106749
nonlin. image simplification via levelings/reconstruction filters, PDE approach 94718
nonlin. sinogram filter design for backprojection reconstruction 132867
nonnegativity enforcing in image reconstruction algms. 73223
nonseparable nonlin. decomp., image compression appls. 95188
obj. image reconstruction from speckle pattern, astron. instrums. appls. 129870
obj. in translation inspection, limited X-ray viewpoints 100632
obj. modeling and anal. based on morphable model *(Chinese)* 107202
obj. modeling using space carving 94699
obj. reconstruction, time reversal using single-cycle terahertz pulses 94927
obj. surface reconstruction, shadows use 94741
obj.-based reconstruction using coupled tomographic flows 94681
octree isosurface codification based on discrete planes 118649
on-axis digital heterodyne holography, synthetic-aperture expt. in vis. 128577
one-step crust and skeleton extraction algm. 73243
opt. computed tomographic imaging by photon counting method *(Japanese)* 122066
opt. computed tomography imaging of absorbers, US phase-shift detect. 110845
opt. wavelet transform *(Chinese)* 94602
optoacoustic tomography, time-gated press. distrib. meas./image reconstruction 121989
ordered-subsets EM algm., image segmentation, brain MRI appl. 132715
osteoporosis mouse model, bone archit., 3D SR microtomography 132826
ovarian tumour in US images, 3D image reconstruction 110790
packet video commun., low bit rate, rate-distortion optimal source/channel coding 84466
PACS, image registration and dyn. imaging 111297
panoramic depth imaging with single std. camera 129577
parallel MRI, generalised approach 110869
parameterized image varieties for image-based rendering 118307
parametric scene reduction algm. from geometric rels. 73227
parametric shape estimators perform. for 2-/3-D imaging systs. 122219
partial surface reconstruction from range pictures 84148
partitioning for fractal coding under rate/complexity constraints 118603
perfect sampling, exact MAP states 106711
peripheral vein grafts, cross-sect. area changes, 3D US imaging 122003
PET, 3-D reconstruction with 3D-OSEM vs. FORE+OSEM 110983
PET, 3D, direct Fourier reconstruction with Fourier reprojection 122271
PET, 3D OSEM and median root prior reconstruction algm. 132872
PET, atten. correction, axial transm. resoln. effects 111040
PET, COSEN, iter. algm. for fully 3-D listmode data 98577
PET, cross-ref. max. likelihood estim. reconstruction 110981
PET, dyn. image seqs., simultaneous reconstruction, frame-to-frame coupling 132876
PET, dyn. series, ML-EM reconstruction, cross-validation stopping rule 111044
PET, fast fully 3D image reconstruction using planograms 132880
PET, fast image reconstruction, syst. matrix, SVD decomp. 132879
PET, high resoln. scanner, SSRB, MSRB, and FORE methods comparison 132871
PET, lesion detectability, MAP reconstruction, computer observers 110984
PET, max.-likelihood EM reconstruction, arbitrary noise distrib. 76577
PET, randoms-precorrected scans, max. likelihood emission image reconstruction 132878
PET, transm. reconstruction, ordered-subset algm. appl. 122191
PET 3D image reconstruction using max. entropy on mean *(French)* 122255
PET cameras, irregular sampling/interact. depth, 3-D reconstruction 132953
PET cameras with irregular sampling/interact. depth, 3D reconstruction 132877
PET dedicated instrum., small planar detectors, improved perform. 122232
PET image reconstruction by vector norm optim. 87780
PET iter. reconstr. algms., random-coincidence corrections 110999
PET reconstruction, Bayesian multiresolution algm. 98581
PET reconstruction, noise propag. from atten. correction 122192
PET transm. reconstruction, 3D nonlocal edge-preserving regularization 132854
PET transm. scan time reduction, std./segmented atten. correction 122184
PET whole body images, nonattenuation corrected, dedicated ML-algm. 122177
PET whole body imaging, vol. resoln., coincidence plane defns. 122234
PET/CT image registration of rat brain/skull using AIR algm. 122212
PETRRA positron camera, backprojection-space 3D scatter correction 122196
phase obj. imaging, diffr. tomography reconstruction algms. 84165
phase-contrast SR CT, math. foundations 132492
phase-contrast X-ray microtomography, polychromatic sealed source 76172
phase-shifting digital holography, surface contouring, image reconstruction 93902
pinhole SPECT of mice using LumaGEM gamma camera 111037
planar coded aperture imaging, near-field artifact reduction 132845
planar contour reconstruction, fractal algm. *(Chinese)* 94739
planar shape representation based on multiwavelets 118785
plane-based projective reconstruction 106561
plastic landmine detect., GPR imaging, permitt. contrast, curve evol. 77099
POCS-based image reconstruction from irregularly-spaced samples 95183
polariz. holograms, phase coded recording for data MUX and encryption 82977
polygonal approxs. of 3D shapes through multiple-view matching 118276
pos. tensor factorization 106726

nage reconstruction continued
posn. sensitive photomultiplier tube, high resoln. 3D SPECT 115275
posteriori quantized matching pursuit 107076
practical cone beam artifact correction algm. 132788
prefiltering/reconstruction filters for vol. rendering 106833
primitive detect., 2D isotopic wavelet filter 73558
probabilistic framework for space carving 106557
proc. tomography, fluid dyn. models/state estim., flow fields inaccuracies effect 106505
progressive and exact image reconstruction using nonlin. bank filters 118555
progressive image transm., quadtree and shading approach 118629
progressive lossless image coding, adapted nonlin. multiresolution decomp. 129777
projection X-ray microscopy, modified SEM, enhanced contrast & 3D CT 76173
projective reconstruction upgrading 106602
projective struct. and motion from two views of piecewise planar scene 106578
prostate brachytherapy, high dose rate, CT planning, catheter reconstruction 98653
prostate implant seed, automated localisation, fluoroscopic images, simulated annealing 98663
pseudo color coding fractional FT rainbow hologram, anti-counterfeiting appls. *(Chinese)* 105592
pulse-echo imaging results with 1D capacitive micromachined US transducer arrays 111502
pyramidal algm. for area morph. 94721
QMF two-channel approx. lin. phase filter bank design, image compression appl. 73383
quantum holographic teleportation, 2D opt. image reconstuction 94212
quasi-opt. diffr. tomography 86938
radiotherapy, rem. verification, digitally reconstructed radiography, portal images 98619
radiotherapy verification, few-view tomographic reconstruction, MV photon beams 110935
rainbow holographic camera, single laser beam recording 117531
range images, reconstruction of surfaces behind occlusions 84221
range recovering from omnidirectional image pair 95553
rangefinder/digital camera syst., real-world scene reconstruction 120900
rat lung MRI using low-temp. prepolarized helium-3 87668
real-time analog holography, pattern recogn. 105579
real-time obj. tracking based on opt. flow/act. rays 106829
real-valued discrete Gabor transform for image representation 94578
real-world objs., 3-D reconstruction using extended voxels 94531
reconstruction of degraded image seqs., appl. to film restoration 94485
reconstructive surgery/med. modelling, design methods appl. 98590
rect. positron emission mammograph, list mode likelihood reconstruction 132853
rect. positron emission mammograph, list-mode likelihood reconstruction, image props. 132928
refining triangle meshes by non-lin. subdivision 84226
region and data hiding based error concealment 129787
region-based image coding, image partition simplification 118571
region-selective image compression, nonuniform sampling theorem 106988
regularizing L-curve Lanczos method for underdetermined lin. systs. 73274
reliable real-time multiview tracking 95008
rendering, geom.-image representation tradeoff 94568
rib artifacts, electron beam tomography, cone beam reconstruction algm. 110515
rigid obj. 3-D shape/motion estim. from 2D video 118369
rot. digital angiography syst., acute pulmonary thromboembolism 87723
rough surface underground imaging, stat. approach 96896
SAR complex-valued images, superresolution/edge-preserving reconstruction 96895
SAR digitally spotlighted subaperture image form. using high-perform. computing 75145
SAR generalized inversion/ω-k algm. for runway imaging, comparison 96893
SAR wavefront reconstruction using motion-compensated phase hist. data/DPCA-based GMTI 75128
scalable video, error-resilient compression/transm. 106934
scalable video coding, optimal estim. for error concealment 106993
scalable video coding, switched error concealment/robust coding decisions 95303
scene adaptive multiple coding for robust image transm. 84475
scene model reconstruction, stat. geometric framework 129625
scene reconstruction from multiple cameras 84286
scenes with translationally repeated quadrics, reconstr. 84538
scoliosis, digital radiography with scanning method, init. eval. 87762
sea mine detect., side-scan sonar, gray-scale morph. filters 77047
self-referencing level-set method for image reconstruction from sparse Fourier samples 118257
seq. cone-beam tomography, fast/efficient method 132796
shape from texture and integrability 106632
shape recogn. based on wavelet-transform modulus max. 73467
shape reconstruction from moments, theory/algms./appls. 94747
shape recovery of unknown topol., novel modeling algm. 106559
simultaneous water/fat MRI with chem.-shift correction 110861
single camera rot. dyn. SPECT, dyn. EM algm. 122275
single-chip CCD still cameras, color filter arrays interpolation 131995
skeleton struct., image compression algm. with perfect reconstruction 95134
skeleton-based tracking, opt. motion capture reliab. increase 110849
skew-coord. DCT method for images, entropy coding based on Gaussian mixture distrib. model 73327
skull/brain, rat, PET, CT, and MR image registration 132942
small animal PET, iter. image reconstruction fast algm. 87779
small animal PET, prototype develop. 132991
small animal SPECT, coded aperture imaging investig. 132979
small animal SPECT, coded aperture imaging investig. 111035
small obj. & soft material X-ray CT imaging, image intensifier 110438
small-animal compact DOI-PET systs., fast image reconstruction method 132976
smooth distribs. reconstruction within unsmooth circumferences from limited views 132888
sparse aperture imaging, reconstruction and SNR considerations 118474
spatial video noise reduction using wavelet based freq. decomp. 90195
SPECT, AB-EMML algm., low-stats. reconstruction 132882
SPECT, cerebral blood flow quantification, atten./scatt. correction impact 122189
SPECT, compact Compton camera design, params./imaging algms. 132924
SPECT, fan-beam collimators, geom. response modelling 132926
SPECT, interior point iter. max.-likelihood reconstruction algm. 76564
SPECT, list mode iter. reconstruction algm., LMIRA 122274
SPECT, list-mode iter. reconstruction algm. 132931

image reconstruction continued
SPECT, projector/backprojector pair for iter. reconstruction 132864
SPECT, resoln. recovery for list-mode reconstruction 111042
SPECT, transm. image reconstruction, redundant inform., asymmetric fanbeam collimation 132930
SPECT, transm. image reconstruction, redundant inform., asymmetric fanbeam collimation 132870
SPECT cardiac images, truncated projection data, body contour, atten. compensated images 76574
SPECT data iter. reconstruction using JavaSpaces 132883
SPECT filtered backprojection images, partial vol. effects correction 122248
SPECT nonuniform photon atten. correction, Natterer's method var. 122182
SPECT reconstruction, 3D filtered back-projection algm. 122272
SPECT reconstruction, Mu-Tau-Sigma model 132865
SPECT reconstructions enhancement by coregistered MR data 132869
SPECT reconstructions enhancement by coregistered MR data 111025
SPECT scatter correction, collimator depend., transm. depend. convolution 122200
SPECT/PET, segmented atten. map reconstruction, incomplete transm. data 122170
spectral anal. for light field rendering 94570
spectral reconstruction of piecewise smooth fns. 84133
spectral satellite image compression based on wavelet transform *(Chinese)* 95344
spectrosc. MR imaging using SS prod. by oscill. gradient fields 76427
SPIHT stripe-based lossy compression of vol. med. images 98160
spiral cone-beam CT, exact ROI reconstruction, algm. perform. eval. 122159
spiral cone-beam CT reconstruction, local ROI algms. eval. 110956
spiral scan cone beam CT, second-intersection contribs. elimination 132798
split-and-merge method for 3D model reconstruction 118275
sq. fluidized beds using capacitance tomography 110060
SR microtomography, high energy & resoln., HASYLAB beamline 101565
SR X-ray transm. microtomography facility for biomed. imaging 132825
stat. image reconstruction and projections no. modif. 94664
stereo image matching using GA with adaptive chromosomes 94498
stereo image reconstr. from polycentric panoramas 84340
stereo image seqs., incremental shape reconstruction 94697
stereo images, edge-preserving disparity estim./disparity-compensated intermediate view reconstruction 95239
stereo images, embedded coding 95361
stereo imaging, wavelet-based reconstruction of irregularly-sampled images 94650
stereo vision, calib./3D reconstr. using neural nets 118432
stereoscopic MRI, fast real-time techs. 132741
still image coding, hybrid method 129719
striata, ^{123}I SPECT imaging, simultaneous reconstruction/segmentation method 132868
struct. and motion from silhouettes 106610
struct. and motion from two uncalibrated views using points on planes 84210
subband image coding systs., filterbanks for less ringing artifacts *(Japanese)* 73398
subjective QC based integrated error resilience technol. for video commun. *(Chinese)* 107024
subjective video quality over error-prone channels, control strategy 96587
super-resoln. fast reconstruction algm. for pure translational motion/common space-invariant blur 118379
super-resoln. image reconstruction with multisensors, preconditioned iter. methods 94746
super-resoln. reconstruction algm. for translational motion/space-invariant blur 94780
superresolution using L-curve, lin. shift-invariant and nonlin. blurs 84351
surface reconstruction tech. based on 3D triangulation enhancement 73214
surface reconstruction using level set method 118260
surface reconstruction with arbitrary BRDFs 106627
surface shape meas. by phase-shifting digital holography 82999
surfaces reconstruction using anisotropic basis fns. 106650
synthesized aperture, Doppler sig., obj. internal struct. scanning 84124
synthetic dyn. transmit focus, clinical US imaging 110690
temporal bone, helical CT, image reconstruction algm. *(Japanese)* 98514
test images, subjective quality, classical/advanced wavelet coders 129791
texture description using complex wavelet transform 94667
thoracic SPECT, Ga-67 tumour detect., block-iter. accel. effect 122273
tibia, human, stress anal. under pathological conditions 76460
Tikhonov generalized regularized lin. inverse problems, regularization param. selection 84293
tilted spiral cone-beam CT, advanced single-slice rebinning 87752
time-varying elec. impedance tomography image reconstr., EKF 109925
tomographic data, direct proc. estim. using artificial neural systs. 106504
tomographic image reconstruction, stat., Newton-SOR method *(Japanese)* 132850
tomographic images, multilevel domain decomp. algm. for fast reprojection 94682
tomographic images, region of interest reconstruction using filter banks 98522
tomographic reconstruction of homog. objs. using multi-step ART 98318
tomography, discrete, med. appls. 76546
tomography of gravel-air-seawater mixture, neural network reconstruction 109471
topography reconstruction of specular surfaces from series of grey-scale images 106786
total var. improved wavelet thresholding in image compression 95189
trabecular bone, short-TE projection reconstruction NMR microscopy 98476
transform domain feature detect. and concealment algm. 106932
transm.-type US inverse scatt. CT, circ. arc points ob. data 98294
transparent objs., real-time holographic testing method, interf. pattern *(Chinese)* 105577
triple-head gamma-camera PET syst., software geom. calib. method 122216
TTR algm., exponential X-ray transform inversion, SPECT appl. 132801
tumour detect. in PET oncology, atten. correction effects 122190
tumour SPECT, collimator-detector response compensation eval. 122237
turbulent atmos., adaptive phase compensation, synthetic image methods 133299
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479
two-phase flow elec. impedance imaging, sens. strategies anal. 121275
two-phase flow void fraction meas., capacitance tomography 110052
ultrasound diffr. tomography, use of harmonics 88217
ultrasound transm. tomography, image reconstruction algm. adaptation 88215
uncalibrated motion capture exploiting articulated struct. constraints 106611
underwater environ. reconstruction environ. by robust pre-aligned ICP 88203
unwrapping of sigs. in transform domain 84478
urban 3D model reconstruction using vehicle-borne laser range scanners 84233

image reconstruction continued
urban map, road network extraction using center line *(Japanese)* 106817
US FT camera for quasi-real-time imaging 88219
US NDT data proc., 3D graphics role, adv. software environ. 114539
vascular imaging syst., Integris Allura, rot. angiography, 3D reconstruction 76529
vehicle vision syst. for adaptive cruise control *(French)* 73132
ventricle mech., MRI, finite-element reconstruction method 98474
video coding, VLBR, motion-compensated 3D wavelet transform 95399
video compression, multiresolution motion estim., interpolation filter 73425
video compression using integer DCT 95209
video editing using fig. tracking/image-based rendering 94569
video joint source-channel coding, distortion-rate charact. modeling 84467
video-based body modeling, articulated soft objs. 106558
view planning with registration constraint 84212
viewing 3D MRI data in perspective 76477
visual cryptography, improved schemes 129793
VLSI-oriented algm. for wavelets part image reconstruction from few projections *(Japanese)* 106816
vol. computed tomography syst., misalignment, image reconstruction 98529
vol. holographic data storage, field distrib. uniformisation along opt. axis 83009
Voxel Stuffing, vol. interpolation from cross-sectional images 98415
VQ, fast clustering algm. for codebook prod. 73343
VQ with degrad. control mechanism 129720
VQ with edge reconstruction 95495
VQ/entropy coding of med. images, progressive reconstruction 110497
VR using concentric mosaic, constr./rendering/data compression 95362
wafer profile electron microscopy, neural network reconstruction 115280
wavelet adapted and visually tuned compression 107007
wavelet image compression, optimal decomp. 95396
wavelet image compression, optimum quantization error feedback filter 95285
wavelet lifting scheme for image compress. and reconstruct., SFG approach 95355
wavelet transform coding, edge-based artifact mitigation 107078
wavelet upper bounds on 2D Lipschitz class and zerotrees 118560
wavelet-based VLBR video coding using image warping/overlapped block motion compensation 73384
wavelets/VQ based low bit-rate video compression, replenishment tech. 73338
weighted centroid neural net for edge preserving image compression 118595
weld inspection, US data reconstr., visualis. & anal., AutoCAD(R)2000 100644
well logging, 2D EM cond. imaging 88101
whole opt. wavefield reconstruction by digital holography 128582
wide-angle ISAR pass. imaging using smoothed pseudo Wigner-Ville distrib. 96958
Wiener generalized image reconstruction from colour sens. data using scale invariant prior 94951
wireless video, error resilient codec 96325
X-ray CT, cone beam reconstr., inversion formula 118268
X-ray CT, fast ordered subset reconstruction 132791
X-ray CT, ordered subset reconstruction 98503
X-ray fluoresc. microtomography at ESRF ID22 beamline, 2D imaging 76175
X-ray image slices, vol. reconstr., multiplex inclusions *(Japanese)* 110430
X-ray imaging methodology advances & capabilities, review 110431
X-ray microtomograph, desktop instrum., 3D microscopy 76171
X-ray tomography, discontinuous 2D dens. reconstruction algm. 121237
zonal wavefront reconstruction, wavelet transform 94751
^{241}Am lung meas., voxelised num. phantoms, MCNP code *(English)* 98830
C_{60}-doped NLC films, holographic image storage 105598
CdZnTe detectors, posn. sensitive, prototype Compton scatt. camera 121474
^{3}He, hyperpolarized, pulmonary gas flow, dyn. spiral MRI 132762
^{131}I lymphoma treatment, high-resoln. absol. SPECT quantitation 111018
KrF excimer laser, beam shaping and homogenization using multifacet Fresnel-kinoforms 105401
$LiNbO_3$:Fe photorefr. cryst., compact holographic memory syst. 93872
$SrBaNbO_3$, digital holographic memory, modulation coding 71220
Ti:sapphire laser-syncroscan streak camera, time-resolved opt. tomography syst. *(Chinese)* 132641
breast cancer assess., constrained modulus reconstruction tech. 132653

image registration
2D gray-scale image fusion by multiscale morph. 107216
3-D med. image registration results, objective assess., stat. confidence intervals 132527
3-D tracking of US images using spatial localiser, fast calib. method 132617
3-D ultrasound, rigid registration with MR images 132598
3D deform. field estim., robust, by template propag. 84149
3D digital imaging and modeling, conf., Quebec City, Quebec, Canada, May-June 2001 78459
3D facial model adaptation 94638
3D med. gray images, line fig. extraction algms. *(Japanese)* 98141
3D med. image registration, parallel algms. *(French)* 121871
3D med. images, global 3D rigid registration 98459
3D multiple view surface registration with error modeling and anal. 94525
3D ultrasound, rigid registration with MRI, generalized correl. ratio 87479
3D ultrasound compounding, rapid image registration 110754
3D vol. registration, expts. on tissue phantom & liver 110753
3D-VIEWER, atlas-based syst. for indiv. and stat. investigs. of human brain 111064
acetabular cup posn., post-operative meas. X-ray/CT registration 76561
ADS40 airborne digital sens., data proc., test flight results 122718
aerial photograph draping & perspective correction, hardware soln. 94754
affine invariant matching 84637
airborne hyperspectral imagery, unknown materials invariant tracking, model acquisition 98953
airborne video precision enhanced by model based registration 94841
APS-94F SLAR syst., image capture, proc. & recording syst. upgrade 99124
attributed range images, registration 84217
auditory cortex echo-planar fMRI, decay-sampling design 87572
automated image registration perform. prediction 73114
automated registration of rem. sensed images with adaptive generation of corresponding point pairs *(Japanese)* 118438
automatic alignment of electron tomography images using markers 94460
automatic registration of 2D with 3D imagery in urban environ. 106660
AVENUE, automated site modeling in urban environ. 84234
biomedical image interpolation, generalized regression neural networks appl. 110899
bone dens., tetrahedral mesh modelling of data for anatomical atlases and intens.-based image registration 87739
brachytherapy prostate implants, vol./dosimetric study, US/CT image fusion 98661

image registration continued
brain deform. tracking during neuro-surgical intervention 87692
brain imaging, fast multimodal surface matching, Powell's and Downhill Simplex algms., comparative study 76207
brain MRI, 3-D robust registration, dense deform. field, hierarchical estim. 76479
brain MRI, long. change, normalised accurate meas. 110888
brain shift, 3D intraoperative MRI, image registration using finite-element biomechanical model 87576
brain slices, macroscopic opt. images, 3D reconstruction 87520
brain SPECT, lin. registration algms., errors from hypoperfusion lesions 111000
brain SPECT and MRI, image co-registration using anatomical features 98569
brain SPECT receptor data, automated stereotactic standardization 76573
brain tumour SPECT & MRI images, surface fitting based registration 87775
brain tumours, corticospinal tract displacement simul. 87575
breast images, contrast-enhancing MRI, non-rigid registration, vol. and shape preservation of enhancing lesions 87586
breast lesions, mammography, automated registration tech. 87753
breast pathology assess. by MRI-mammography 2D/3D data fusion 87585
breast tissue, biomech. 3D FEM modelling, MRI data 76421
carotid arteries, 3-D power Doppler US/MR angiographic images registration 110795
carotid artery contrast-enhanced MRI angiography, array coil 98469
cartographic road network deform. on SPOT satellite image 99053
catheter 3D orient. & posn. determ., single-plane X-ray images 87698
combined invariants to convolution and image rot. 95589
combined rot./convolution invariants 95452
combined ultrasound/NIR diffusive light imaging 110764
composite two-layered rem. sens. image unsupervised classif. 111385
computer-assisted geo-spatial registration and truthing 73115
coronarographic densitometric meas., X-ray scatt. & veiling glare 76516
cross-sens. registration optim. study 75623
CRT display prod. line convergence meas., low cost CCD sens. 97700
CT-SPECT, combined syst. with single CdZnTe detector 122149
deformable image matching, topol. preservation 84606
digital vision syst. for 3D model acquisition 73224
dist. constraint based iter. struct./pose estim. 94516
document image matching based on component blocks 94679
dual isotope SPECT imaging, crosstalk & scatter correction 122201
EEG/MEG and MRI data sets, automatic alignment 84199
endoscopic images and 3D surfaces, mixed-reality merging 87713
endoscopic robot surgery, laser-pointing image registration 98603
face recogn., robust, cooperative distributed image registration *(Japanese)* 73444
facial soft tissue change anal., 3D measuring techs. 87522
feature-based video mosaic 94714
fiducial registration from single X-ray image for fluoroscopic guidance and radiotherapy 87738
fingerprint image matching, plastic distortion model 95453
fMRI scans, elastic registration using fast DCT 98466
free form surfaces projective registration, iter. algm. 94515
free-form complex surfaces, non-contact 3D sens. 89909
free-form surface, adaptive DAQ and modelling, struct.-light vision sens. appl. 86651
free-form surface registration using rigid motion constraints 94586
functional MRI, image distortion correction by multimodal non-rigid warping 87589
functional MRI image realignment tools comparison using computer-generated phantom 132690
geo-location of overhead rem. sens. FOV using synthetic maps 133280
geo-spatial image and data exploitation, automated, conf., Orlando, FL, USA (April 2000) 76942
geometric model generation by registration and integrat. of multiple range images 84224
glass drops vol./mass meas., eqpt. and image proc. 106718
head motion correction in emission tomography, hybrid 3D reconstruction/registration algm. 132851
HELINET unmanned aerial vehicles for opt. Earth surveillance 99050
hybrid image registration for digital camera image fusion 118197
hybrid PET/SPECT coincidence imaging, patient motion effects 122217
hyperspectral imaging, airborne, georegistration 98955
iliosacral screw placement, percutaneous, computer-assisted, clinical validation 87792
image-enhanced moving target radar detect., spectral approach 99153
image-guided surgery, computer vision 132540
Insight, common validation methodology for med. image segmentation/registration algms. 84109
interactive multimodal visualization syst., archit. 87339
IR/MMW automatic two-stage image registration algm. for concealed weapons detect. 118398
iter. closest point algm., parallel implement. 84218
JMDT Navy/Marine Corps program, future enhanced mine detect. capability 77095
knowledge-based neural network for fusing edge maps of multi-sens. images 118196
land-based IR search and tracker syst., background images registration 84204
landmark-based elastic registration using approximating thin-plate splines 87337
landmine/UXO detect., GPR/EMI/magnetometer sens. fusion 77020
Landsat 7 on-orbit geometric calib. and perform. 76951
local deform., transform mapping of correl. images 73313
lumbar spine, 3D MRI seq. for computer assisted surgery 110897
lumbar vertebral ident., automatic, using surface-based registration 110953
mammograms, X-ray and 3D MRI data, elastic registration 98501
manmade obj. detect., multispectral sens., water vap. features 99045
map-to-image registration with line segments 129431
math. modelling, estim. and imaging, conf., San Diego, CA, USA, July-Aug 2000 67380
med. data, 3D scalar, vector and tensor, non-rigid registration 87661
med. image registration, genetic optimisation methods *(Chinese)* 121900
med. image registration, rigid, block matching to improve robustness 87314
med. image registration and model constr. using GA 87353
min. spanning tree algm. 95440
mine-free trackway maint., forward-looking GPR, change detect. 77096
model acquisition using rot. stereo and image focus anal. 106790
motion estim., multi-image gradient-based algms. 129527
MPEG-2 video compression, illum.-invariant algm. for subpixel-accuracy stabilization 95147
MRI breast dyn. images, thin-plate spline based autom. alignment 98465
MRI intra-operative surgeries, vol. registration by surface point signature/mutual inform. maximization 87683

image registration continued
MRI-SPECT vol. images, multimodal 3D image registration 76430
MRI/CT appl., consistent image registration, forward/reverse transforms 98419
multi-modal image matching, variational approach 118250
multichannel image enhancement and registration, vector order filter 118391
multidimensional elastic image registration, spline appl. 94663
multimodal 3D cardiac inform. registration using iter. closest-point approach 76213
multimodal brain image anal., phys.-based stat. deformable model 132710
multimodal med. vol. registration, spherical markers appl. 98554
multimodality med. image registration, mutual inform. based 76431
multimodality registration, EEG/MEG and MRI data sets, automatic alignment 121980
multiresolution proc. for robust mesh watermarking 73508
multispectral image fusion/merging with multiscale fund. forms 129509
multiview registration in frame space 106457
mutual inform. and gradient inform., combined, maximization 84111
mutual inform. bound for image registration 110487
myocardial perfusion assess., adaptive/self-evaluating registration method 110893
myocardial perfusion SPECT, coronary artery disease detect. 132902
natural backgrounds and artificial objs., spectropolarization contrasts 73534
neurosurgery, augmented-reality endoscope navig. syst. 87789
neurosurgery, image-guided, model-updated, anal. using intra-operative MRI 87784
neurosurgery/brain stereotaxic irrad. optimisation, multimodal matching appl. 122285
neurosurgical guidance, intra-op. 3D US & pre-op. MRI integrat. 76600
NOAA-AVHRR accurate image navig., contour matching approach 122689
non-rigid image registration, inter-subj., mixed variable optim. approach 76496
nonrigid image registration, symmetrization using inversion-invariant energies, appl. to multiple sclerosis 84112
nonrigid motion anal., piecewise affine model for image registration 94529
ocean surface sens., LWIR hyperspectral polarimetric imager 76915
omni directional, real time, stereo image acquisition syst. 84146
ophthalmic digital images, registration, vector mapping 98362
opt. 3D profilometry, subdivided shapes data registration *(Chinese)* 109983
opt. flow estim., image registration, local rigidity 95433
optimal mass transport and image registration 122276
oral implantology, computer-aided, navig. syst. accuracy 87893
organ motion model, prostate radiotherapy serial imaging meas. 122432
orthopaedic surgery, computer assisted, augmented reality navig. syst. 76602
PACS, image registration and dyn. imaging 111297
panoramic mosaicing, global and local registration 118300
parallel-perspective stereo mosaics 106553
PCB photolithography technols. for large-area boards 102833
perspective view registration, new method 94703
PET, atten. correction using consistency conditions/3D template 132932
PET atten. correction, 3D template & consistency conditions 122185
PET/CT image registration of rat brain/skull using AIR algm. 122212
phase correl. algm. for multicomponent images 94908
photosensitive copolymer comps. for opt. inform. proc. and storage 71204
portal imaging, dosimetric verification, review 133040
portal imaging methodologies, automated edge detect. 87326
preoperative CT/intraoperative fluoroscopy images alignment, registration algm. 87750
prostate cancer discrim., 3D US Doppler imaging, zonal anal. 110713
prostate cancer radiotherapy, organ motion var. models, affine transform. 87839
pulmonary nodules class., contrast enhancement patterns 87767
quasi-feature based mosaic constr., block matching *(English)* 94628
racehorse ident. syst. using iris recogn. *(Japanese)* 84523
radionuclide therapy, SPECT marker-based image registration 111001
range image, progressive registration based on surface triangulation 106489
range image registration, software platform and empirical eval. 84223
real-time multi-modality 3-D med. image registration 110508
real-world scenes capturing/proc./rendering syst. 97164
renography, time-series contrast-enhanced MRI, image registration 110910
respiratory-gated PET, 4D affine registration models 111026
respiratory-gated PET, 4D affine registration models 132852
rigid body visual servoing, navig. fns. 86617
rigid-body point-based registration, target registration error distrib. 132503
robust image registration using log-polar transform 94514
rot.-invariant image registration, ring Zernike moments *(Japanese)* 94623
SAR imagery interp. algms. for complex building scenes 86139
scalp electrode posn. & MRI data sets alignment, digitisation compens. 98464
selective correl. coeff. approach *(Japanese)* 84529
seq. chest radiographs, temporal subtraction, computer-aided diagnosis 110940
skull/brain, rat, PET, CT, and MR image registration 132942
SPECT, dual isotope, photon crosstalk calc., downscatter correction 122176
SPECT, lesion detect., human-observer perform., noisy atten. maps, patient motion 122172
SPECT brain imaging, simult. Tc-99m/I-123, spectral factor anal. 122241
SPECT reconstructions enhancement by coregistered MR data 132869
SPECT reconstructions enhancement by coregistered MR data 111025
splines for sig. proc. 129462
stochastic rigidity, image registration for nowhere-static scenes 106582
successive estim. of registration params., error stabilization 84305
surgery, 3D slice image overlay syst. with accurate depth perception 87313
surgical interventions under video-augmented X-ray guidance, appl. to needle placement 87799
surgical navig., 3D, fluoroscopic X-ray image registration proc. 87740
tactical image exploitation, automated model-based image registration 77041
temporal lobe epilepsy, ictal hyperperfusion, SPECT & MRI coregistration 110993
temporally seq. chest images, digital subtraction, rib elim. 76542
terrain scanning robot, map building, image registration method 109668
therapy, image-guided, intra-operative image segmentation and non-rigid image registration 87785
tolerance control with high resoln. 3D meas. 84232
trilinearity to reduce misregistration in image mosaicing 118279
ultrasound, free-hand 3D, automated calib., image registration approach 88214
ultrasound/MRI 3D registration & fusion, major vessels as fiducial markers 76339
underwater environ. reconstruction environ. by robust pre-aligned ICP 88203
US echoes refl. from surface under two layers, modelling and anal. 87478
variational and level set methods in computer vision, conf., Vancouver, BC, Canada (July 2001) 113213
vascular tree extraction from MRA/power Doppler US image vols. 76491
ventilation/perfusion lung scan anal., image registration perform. eval. 110493
image registration continued
vertebral trabecular bone, CT/projection radiography images, texture comparison 110966
video images, model-based varying pose face detect. and facial feature registration 129439
video-rate range sens., depth from defocus, real-time range estim. 75661
Visible Human Project datasets, automatic registration methods *(Chinese)* 110919
visual inspection by binocular rivalry, stereo viewing 78700
vol. image registration by template matching 129811
watermarking using complex wavelets with resist. to geometric distortion 118621
weapon systs., robust correl. tracker 118761
whole-body scintillation camera image registration, conjug. view 122244
X-ray/portal image matching, automatic syst., eval. 87708
image representation
2D AR model using lattice representation and inform. criteria for texture anal. 118486
2D correlative extremal navig. syst., target-localizing algms. 73526
2D correlative extremal navig. systs., target-localizing algms. 73527
2D digital objs. representation 94981
2D image anal. by Tchebichef moments 106692
3D binary images representation, math. morph. 95233
3D capture, representation/manipulation of cuneiform tablets 118278
3D hand pose reconstruction using specialized mappings 106556
3D image capture and appls., conf., San Jose, CA, USA, Jan. 2001 113220
3D image presentation, hidden-surface removal in SIRDS algm. 106700
3D image reconstr., vision-based, dual representation 129836
3D images, centres detect. of max. geodesic discs on dist. transform of surfaces 94987
3D images, parallel compression implementation using PVM 118642
3D LAMP, layered panoramic representation 106659
3D med. data, multirate coding 98161
3D medial axis computing for chamfer dists. 94986
3D modeling of archaeological vessels using shape from silhouette 84208
3D obj. database, multi-viewpoint image coding and view synthesis 118570
3D obj. recogn. using appearance based neural image proc. algm. 95548
3D obj.-based description techs. for virtual prod. 94898
3D objs. coding using surface point signatures 95358
3D polygon meshes for hierarchical representation/coding of surfaces 84452
3D shape modeling with extended hyperquadrics 84225
3D source models for content-based video coding 95269
3D surfaces, hierarchical coding using box splines 129718
3D vector-based image representation, data fusion 129837
3D wavelet obj.-based video coding using layered obj. representation 95101
3D wavelet-based multiresolution obj. representation 129561
4-sens. camera calib. for image representation 106636
act. camera control/motion recovery, foveate wavelets 106499
act. contours and surfaces, smoothness measures 118251
action events recogn. from multiple viewpoints 95602
adaptive model for texture anal. 84315
affine transforms. of 3D objs. represented with neural networks 84220
airborne spectral images, phys.-based model acquisition and ident. 106614
AM-FM model for fingerprint class. 73263
arbitrarily shaped image segment representation by wavelet basis 84493
area morph. algms. 106815
ATR, model-based, anisotropic scatt. attribution 75138
attractor basin transient stats. as pop. code for obj. representation 84542
blind target detect. from LADAR data 122762
BrainSuite, automated cortical surface ident. tool 87578
breadth-first search appl. 94781
CAD model acquisition, range image segmentation 94695
chrominance data, high-compression by segmentation of luminance 118581
circle size detect. by pyramidal transform data fusion 84552
color and shape based image representation and retrieval *(Chinese)* 129855
color constancy unification, general correl. framework 84184
color image filtering in xyY color space 94824
color image proc., color morph. pyramid *(Chinese)* 118420
color images, spatial segmentation, min. description length formalism 94632
color paletted images, data hiding 118221
commun., hidden Markov sources transm. over Gaussian channels 84468
compression using implicit polynomials 118604
compression using orthonormal finite ridgelet transform 95187
compression with geom. wavelets 95076
content adaptive mesh generation, new approach 84311
content characterisation for semantic similarity calc. 84559
content-based image retrieval using fuzzy visual representation 118735
content-based video representation and indexing 73316
contour coding, modified binary tree and perform. anal. 106902
corner detect. fast algm. using morphologic skeleton 73520
coronary vasculature, 4D quantif., angiography & US data fusion 98535
coupled-view act. appearance models 129912
data filling algms. for mixed raster content layers 95197
DCT/triangular mesh based scalable image coder 95386
denoising via wavelet coeff. magnitude correl. adjustment 94804
dense range images, geometric/topol. lossy compression 95192
DFT, basis fn. truncation effects 94511
digital image enlargement, Laplacian pyramid representation method 106502
digital image proc. appls., conf., San Diego, CA, USA (Aug. 2000) 100401
digital images, pattern extraction/synthesis using hierarchical wavelet framework 94660
digital mammograms, multiresolution detect. of spiculated lesions 76530
distributional clustering for content-based retrieval of images/video 84291
dyn. mosaicking, new methods 94784
dyn. MRI, region of interest acquisition method 87676
edge representation based 94939
edge representation/recogn., multilayer feedforward NN 129890
edge tracking thinning method of image representation 118668
edge-based method for text detect. from complex document images 129670
energy spreading transform for image retrieval 107256
face recogn., generalized spectroface 84640
face recogn., view-subspace anal. of multi-view patterns 107198
face recogn., wavelet domain associative memory 84639
face-color modeling and segmentation, mixture model 118753
fingerprint recogn. using principal Gabor basis fn. 84582
flattened image mosaicing from straight uniform generalized cylinders, projection distortion anal. 84097
formats and images 131741
fractal coding of shapes, projected IFS model based 95177

image representation continued
fractional FT, image representation/compression 129789
free-form obj. representation and recogn. techs., survey 84557
fuzzy representation and edge tracking thinning 129593
Gaussian scale mixtures random cascades, natural images modeling/denoising 84312
generic quad-tree, storage and mgt. of similar images 106496
gray scale images, dissimilarity meas., Baddeley's dist. 118414
gray-level image reconstruction, Fourier-Mellin transform approx. 129541
gray-level images, geometric proc., filtering/enhancement operations accel. 84294
gray-scale images, straight lines detect. through regularized Hough transform 94955
group-of-frames/pictures color histogram descriptors for multimedia appls. 84288
haemodynamics, Doppler US time freq. images anal., deformable models 87508
hand gesture contours, automated class. for gesture-based interact. and commun. 73127
head pose estim. with Gabor wavelet networks 129611
heat-vision images, criterion for quality assess. 106680
hierarchical histograms, image-based data retrieval representation 84289
histogram-based classifier, coding appl. 106876
histogram-based method for face/cars detect. 94825
holographic transform compression of images, multiple descriptors 118638
holographic vibr. fringe pattern extraction, digital camera appl. 117533
human action, view-invariant representation/learning 95014
human image class., sig. detect. theory misrepresentations/model-free approach 73153
indexing/machine vision, color representation 95533
interactive multimodal visualization syst., archit. 87339
interframe scalable coding using wavelet 95257
intermediate-level vision, complexity, confusion, and perceptual grouping, curve-like representation 118766
Internet distributed image IS 119801
intra-pulse modulated sigs., feature extraction using time-freq. anal. 109233
invariant face recogn. 118720
layered depth image compression algm. 107064
lin. model for use with Kalman filter restoration 118238
liver X-ray diagnosis, simulated annealing with logarithmic cooling schedule 110921
long image seqs., motion segmentation 129619
low dimens. invariant signature of 3-D obj. under varying view and illum. 107167
low-resoln. content-based image watermarking in wavelet domain 129776
magnification using decimated orthogonal wavelet transform 94657
mesh objs. generation/tracking, coarse-to-fine approach 95216
mobile e-service mage utilization 131299
modeling the shape of the scene, holistic representation of spatial envelope 118768
morph. image filter, 3D, using spatial partitioning representations 118440
morph. shape representation with overlapping disk components 106691
motion compensation using representation of regions 118575
motion-based video segmentation using fuzzy clustering/mixture model 84320
MPEG compressed domain, B-spline curve representation of segmented obj. 106530
MPEG-2 image seq. coding, rate-distortion optimal fast thresholding 84380
MPEG-4 facial animation, audiovisual integrat. in multimedia commun. 129781
MPEG-4 video, obj.-adaptive vertex-based shape coding 118637
MPEG-7 edge histogram descriptor, relevance feedback 118782
MPEG-7 std., color/texture descriptors 84387
MPEG-7 video content description, parametric motion models 118176
MPEG-7 visual motion descriptors 84139
MPEG-7 visual shape descriptors 84543
multidimensional elastic image registration, spline appl. 94663
multiple description coding 118497
multiple view geom. of non-planar alg. curves 106619
multiresolution target discrim. during image form. 75143
multiscale contrast enhancement 84077
multiscale discretization of shape contours 73229
multiscale image representation using B-spline approaches 129466
multispectral images, nonlin. scale-space isomorphic rep. 118211
network-based imaging, optimal halftoning 94882
nice viewpoints of objs. in space, computational complexity 73238
noisy images, spline-based resampling 129588
nonlin. enhancement in space scale domain 118234
nonsymmetric half-plane AR image model 118192
normalized color difference edge detector, quaternion representation based 95520
obj. modeling and anal. based on morphable model *(Chinese)* 107202
obj. modeling using space carving 94699
obj. recogn., color-invariant shape moments 118654
obj. tracking by adaptive modeling 94790
obj. tracking by Gabor wavelet transform/golden sect. algm. 95558
obj. tracking with shape representation network using color 94793
obj.-based motion estim./higher scalability, mesh/crack lines appl. 95196
obj.-based video abstraction, integrated scheme 129700
overhead compression by hierarchical enumerative coding 118565
parametric description of obj. motion using EMUs 94673
parametric scene reduction algm. from geometric rels. 73227
partial surface reconstruction from range pictures 84148
partitioned iter. fn. syst., digital imaging tool 95136
partitions encoded with transit. points method, constrained/unconstrained simplification 95219
PDE and variational problems on implicit surfaces 118259
PDP prod. line inspection, morph. skeleton algm. 129458
perceptible level lines and isoperimetric ratio 94636
planar shape representation based on multiwavelets 118785
plane image contour, vector representation, Fourier descriptor 73495
point distrib. model shape fitting using Kalman filter 94541
polygonal shape descriptors, image retrieval and obj. localization 106894
pose-invariant face recogn. by face synthesis 129914
precise camera operation params., robust depth-map estim. 94700
probabilistic framework for space carving 106557
progressive compression for triangular meshes with QC 106877
progressive content-based retrieval using tree-struct. graphs 106831
pseudo power signatures appl. 94543
quantum computer for image data recogn. 73431
rare books, digital archiving, image proc. technol. appl. 106706
real-valued discrete Gabor transform for image representation 94578

image representation continued
recogn. syst. output sigs., orthogonal polynomials expansion, multidimension probab. dens. charact. 73528
region merging/class. segmentation algms., extensive partition/gray-level co nected operators 106690
region segmentation, conc.-based adaptive approach 129846
region-based image retrieval 84290
region-based obj. recogn., multiple representations prunning 129843
rendering, geom.-image representation tradeoff 94568
rendering overview, software/hardware issues 94567
resoln. and frame-rate scalable subband/wavelet video coder 106970
robust image hashing 95364
rotated textures class. using overcomplete wavelet frames 94598
SAR ATR using digitally spotlighted phase hist. data 75151
SAR feature representation/matching, probablistic dist. transform 86135
scene reconstruction from multiple cameras 84286
segmentation, nonoverlapping block binary representation 129608
segmentation maps coding for layered obj. representations 95208
segmentation using probabilistic PCA and ICA subspace mixture models 1296
seismic imaging, sing. charactn. by monoscale anal. 111391
semantics-based retrieval by content 94828
shape approx. through recursive scalable layer generation 95222
shape profile modelling with mixture of Gaussians 84619
shape skeletonisation by identifying discrete local symms. 107214
sig. depicted on image, acquisition/refinement method 118476
simplification of 3D skeletons using dist. inform. 73237
skeleton struct., image compression algm. with perfect reconstruction 95134
skin detect., novel adaptive colour segmentation algm. 129610
smoothing scale space, translation-invariant wavelet shrinkage 84271
space carving algm., stat. consistency check 129629
space of all stereo images 106463
Sparse PCA, multi-scale struct. extraction from data 106580
spectral imagery, invariant display strategy 94447
stereo image seqs., incremental shape reconstruction 94697
stereo images, embedded coding 95361
stereo imaging, wavelet-based reconstruction of irregularly-sampled image 94650
stereo matching algm., wavelet transform 118405
straight lines and circles in log-polar image 129488
struct. video browsing/editing, image/audio seq. visualization/interact. mech nisms 94642
subspace methods for face/clutter discrim. 95496
superquadrics-based obj. representation of complex scenes from range image 118274
surface matching by 3D point's fingerprint 106615
surfaces hierarchical representation and coding, 3D polygon meshes 95250
SVD, approx. image representation 106438
template matching algm. 106642
text block segmentation using pyramid struct. 94893
texture based class. and segmentation, Laguerre-Gauss transform 129897
texture modeling/class. in wavelet feature space 84314
textured image segmentation using Markov random field in wavelet doma 94834
TV high quality consumer video proc. chip 120524
undergraduate algms. course, image-proc. projects 118451
US images compression, space-freq. segmentation with entropy coding 9831
user-assisted segmentation, partition-based image representation 84322
video coding, very low bitrate, mesh based 95215
video coding, VLBR, motion estim. algm. 95138
video data rep./compression, texture recogn. 95407
video representation, key frame selection 94644
video seq. encoding/decoding using streamed 3D representation 95360
view-based obj. representations using RBF networks 107245
visual data representation, recent achievements and future develop. 118548
visual inform. retrieval, image representation method 118734
wavelet domain recogn., survey 107147
wavelet lifting scheme for image compress. and reconstruct., SFG approa 95355
wavelet transform footprints, catching sing. for compression/denoising 9518
wavelet-based color image denoising 94709
wavelet-based salient points for image retrieval 95514
a/μcSi:H laser-scanned p-i-n photodiode for image detect. 109658

image resolution
see also radar resolution
1.75D ultrasound array, preliminary expt. results 110704
1D HRR profiles, ground target range extent anal. 75155
1D HRR target features, stat. anal. 86137
1D resoln. improvement of images in time series by GA 118202
2D image motion OTF *(Chinese)* 94483
2D mesh-based video obj. segmentation and tracking, occlusion resoln. 10728
3-D PET data, cluster reconstruction in Windows NT network, BeeHive 1328
3-D ultrasound, rigid registration with MR images 132598
3-headed γ-camera PET, resoln., detector thickness influence 122211
3D confocal surface profilometry, annular pupil filter, super-resoln. *(Chines* 109967
3D digital imaging, opt. inform. proc. models 95356
3D display syst. based on computer-generated integral photography 109896
3D echocardiographic endocardial border delineation, contrast agent FS069, tra sesophageal studies 132613
3D HF US images of skin and eye 98303
3D high-resoln. fast spin-echo coronary mag. reson. angiography 122099
3D image anal. of fibrous materials 106673
3D inform. acquisition using stereo vision by subpixel resoln. relative disparit 129455
3D models, joint geom./texture progressive coding 95359
3D models with subdivision surfaces, hierarchical coding 95221
3D motion multiresolution/luminance anal. based rigid obj. segmentation meth 84325
3D obj. reconstruction from multi-resoln. texture matching 94527
3D PET imaging, partial vol. correction, image/sinogram based algms. 1222
3D precise meas. with high resoln. stereo head 94967
3D real-time reconstruction on high resoln. FPA 94532
3D reconstruction systs., image distortion/resoln. effects 94969
3D SPECT, optimal non-iter. reconstr., uniform atten. 132858
3D surfaces, hierarchical coding using box splines 129718
3D synthetic aperture imaging using virtual source element in elevation pla 110785
520-TV line high-resoln. surveillance camera, devel. 120587

ge resolution continued
abdominal image quality, real-time correction of wavefront arrival time errors 110766
accelerator-based fast neutron radiography, image form. phys. 101566
adaptive multiresolution imager based on FPGA 120914
adaptive US imaging using SONOLINE Elegra 110767
airborne camcorder rem. sens. syst., usage-charact. 133368
airborne/spaceborne photography, EO syst. perform. anal. 94585
algorithmic 3D simul. of breast calcifications, digital mammography 87724
all-polymer TFT ccts., high-resoln. ink-jet printing 103882
ALS hard X-ray imaging microscopy & tomography 76174
animal positron tomograph, image generation, Monte Carlo coincident aperture fns. 111033
animal positron tomograph, image generation, Monte Carlo coincident fns. 132971
ANIPET, versatile PET scanner for lab. animals 132975
anisotropic XRD image mottling effects, energy dispersive meas. 101586
APS-94F SLAR syst., image capture, proc. & recording syst. upgrade 99124
area morph. algms. 106815
area-based image matching, precise sub-pixel estim. *(Japanese)* 94613
ASV-LCD, high-perform., continuous pinwheel alignment mode *(Japanese)* 121090
ATR, model-based, anisotropic scatt. attribution 75138
ATR MSC HRR perform., range resoln. effects anal. 86127
ATR systs., HRR data, interfering scatterers mastering 75157
automated syst. for low-resoln. document/text images restoration 73159
automatic image thresholding using hit-or-miss morph. operator 106527
B-mode blood flow imaging 110729
B-mode images, coded excitation, clinical use 110774
bandlimited images, fast extrapolation/superresolution algms. 95185
Bayesian iter. binary filter design 118179
BESSY II scanning transm. X-ray microscope, spectral resoln. 76169
BGA substr. conducting path defects, AOI 100611
bi-level image coding for digital printing using GA 73418
bi-level images, near exact expansion 95184
bias-resoln.-variance tradeoffs for single pixel estim. tasks 132515
binary handwritten text images thinning, triangulation procedure 95461
biomedical image rot. and scaling using polynomial-based interpolators 121894
black blood MRI quality and vessel wall segmentation 132738
block-based coded images, efficient similarity-based error concealment method 95305
block-matching motion estim. algm., low-power VLSI archit. 68831
blood flow simul., US resoln. test obj., thin film phantom 110744
blood vel. estim., recursive ultrasound imaging/spatially encoded sigs. 110730
BOLD fMRI human brain imaging, ultrahigh mag. field 76443
bone mineral content assess., 3-D SR microtomography images 110961
brain haemodyn. response, BOLD & perfusion based event-related fMRI 87571
brain MRI, human, fast 3D sodium imaging 132655
brain PET, reconstruction strategies for HRRT 132873
brain SPECT, dopamine receptor imaging, scatt., atten., collimator response 122173
brain SPECT and MRI, image co-registration using anatomical features 98569
brainstem, high resoln. MRI at 8 T 98387
breast, dyn. contrast enhanced imaging, multiple resoln. images acquisition 132689
breast calcification segmentation from high-resoln. mammographic specimen radiographs, multi-scale algm. 98491
breast images, dense, microcalcification clustering, computer-aided detect. syst., contrast resoln. effects 98518
breast imaging, high resoln. PET appl. 122227
breast imaging by diffuse opt. tomography 76411
breast/brain MRI, preprocessed image reconstruction appl. 122076
bright targets segmentation using wavelets/adaptive thresholding 84273
bromophenol blue(R) dye-rosin film, holographic appls. 72085
camera network design by natural selection 84284
cardiac MRI, left ventricular dimens. meas., real-time acquisition 132657
cardiac PET, quantitat. imaging, reproducibility in integrated anal. environ. 122254
carotid artery contrast-enhanced MRI angiography, array coil 98469
CBERS, China-Brazil Earth Resources Satellite, Infrared Multispectral Scanner, CCD camera 111482
CCD camera, honeycomb struct., image quality, computer simul. *(Japanese)* 86613
CDM, opt. implement. for super resoln., spectrosc. method 106881
CDM, opt. implement. for super resoln., temporal method 106882
CDTs, ultra fine aperture grille, opt. transmittance 97720
circ.-scanning US diffr. tomography, LF scatt. component 98302
clandestine night time surveillance, long-range laser-illum. imaging 109700
clinical image review using act.-matrix LCD, comparison with CRT displays 97631
CMOS APS image sens., very high resoln., pixel size limitations 131974
CMOS prog. spatially variant multiresolution readout, sens. focal plane 97366
coherent opt. systs., superresolution improvement 129413
color image compression, locally adaptive resoln. method 129769
color image correl., hypercomplex Wiener-Khintchine theorem 94706
color image proc., color morph. pyramid *(Chinese)* 118420
color paletted images, data hiding 118221
colour-based facial image retrieval 118738
compressed low resoln. video, motion estim./resoln. enhancement 95201
compressed video, spatial scalability, motion vector comp. algm. 118522
compression, resoln. progressive coding using sorting algm. 95293
Compton camera for multi-tracer imaging, segmented Ge detectors 122207
Compton camera for multitracer imaging, Monte Carlo simul. 111012
computationally scalable partial dist. based fast search motion estim. 94549
concave holographic diffr. grating fab. 105600
cone beam vol. CT image artifacts, wavelet-anal. 122134
content-adaptive watermarking based on stochastic multiresolution image modeling 129710
continuity props. of appearance manifold for mobile robot posn. estim. 118416
correl., real-time high-resoln. multiprocessor syst. 84282
CPET scanner, perform. eval. using IEC & NEMA protocols 122231
CRT display image quality under ambient glare, ISO 9241-7 ergonomic std. 97687
CRT display perform., factors affecting 97634
CRT displays, monochrome, medium-resoln., calib. for purpose of board exams. 97635
CRT phosphor screens granularity, CCD-based charactn. 97701
CT-SPECT, combined syst. with single CdZnTe detector 122149
data filling algms. for mixed raster content layers 95197
DCT, model-based discontinuity eval. 73373

image resolution continued
deep X-ray lithog. with SU-8 resist, considerations 103655
dermatoscopic images, multiresolution colour image segmentation tech. appl. 98150
diagnostic monitors, high-resoln., QC issues 98123
diffr.-limited images, prior scene inform. modeling/extrapolation for set theoretic restoration/super-resoln. 94655
digital beamforming in handheld ultrasound systs., low power delay calc. 110805
digital camera imaging polarimeters, calib. requirements, bit depth 75654
digital camera syst., resoln./image quality, MTF *(Japanese)* 86612
digital color AOI syst., high-resoln., for 0201 component inspection 100655
digital halftoning algms., error diffusion, error bounds 94576
digital halftoning with optimized dither array, press printing appl. 94577
digital image anal., tracking algms., sig. filtering *(German)* 84260
digital image enlargement, Laplacian pyramid representation method 106502
digital image seqs., rot. motion estim. and anal. 118392
digital images enlargement with multi-neural networks 94777
digital images restoration/resoln. enhancement 106485
digital mammograms, multiresolution detect. of spiculated lesions 76530
digital radiography, scatt. correction, aperture sigs., interpolated local sampling 98555
digital radiology CRT display syst. params. 110927
digital still camera CCD, high resoln. *(Japanese)* 86611
digital X-ray radiographic nondestructive control systs., resoln. estim. 132486
document proc., image rot. 94678
DPIV, wavelet-based image denoising 106513
dry etch proc. monitoring, CCD-controlled in situ interferometry 81086
dry thin film photoresists, wet lamination for improved PWB yields/etch lat. 125900
dual head coincidence clinical camera, image correction techs. 122240
dyn. mosaicking, new methods 94784
dyn. SPECT, fig. of merit fns. comparison 132862
ECAT HRRT, high resoln. research tomograph, perform./first clinical appl. 122221
edge directed interpolation 94649
EEG, high-resoln. imaging, equiv. source techs. 110618
efficient wavelet-based algm. 94656
eight-row CT scanner, helical reconstruction algms. 132794
elec. impedance computerized tomography, differential imaging 109921
electronic components, microfocal X-ray imaging develop. 78702
ELNOS X-ray diagnostic table syst. with flat panel detector *(Japanese)* 76533
embedded foveation image coding 118519
endoscopic visualization systs., telesurgical perform. comparison 87798
enhancement, adaptive algm. 106759
ESRF ID 22 beamline high-resoln. X-ray imaging & tomography 76168
eval. of image intensified video cameras 86638
eval. of image intensifiers for scientific research 86637
eye 3D US images, high-resoln., morph. assay 110722
fan-beam tomography, multiresolution reconstruction 132795
fiber-optic image guides, spatial resoln. meas. 104621
field-seq. color projectors, color breakup mechanism 97647
film image resoln. meas., electronic methods *(German)* 95345
filtering using scale-space continuity, wavelet-based method 73157
fine pattern replication by EUV lithog. 103646
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
fluorinated polymer-based 157 nm resist for VUV lithog. 126558
fMRI, high-resoln., multislice partial k-space GR-EPI, cubic voxels 98436
fMRI data anal. using spline wavelets 132706
fMRI sig. in motor area, early decrease detect. 122096
focused beam US transducers, microelectronic materials props. effects 133374
forward-moving images, mosaicking/warping 94853
foveated wide FOV imaging syst., liq. cryst. SLM 86640
FPGA archit. for videowall image proc. 118173
fractal coding of shapes, projected IFS model based 95177
fractional Talbot effect based wavefront sens., opt. wavefront meas. 109529
frame-rate scalable subband/wavelet video coder 106970
FT profilometry review, deformed grating images 86970
gamma camera detector, virtual PMTs, centroid positioning perform. improvement 122268
γ-camera collimators, quality perform., investig. comparison *(Chinese)* 111044
Gaussian scale mixtures random cascades, natural images modeling/denoising 84312
gaze determ. via images of irises 129617
gender class. using SVMs 95509
generalized radar/radiometry imaging problems 86152
generalized scale-selection 94565
generation IV image intensifiers, with unfilmed MCP 86634
georeferenced airborne video, independently moving objs./interacts. detect. 95012
gradient-echo coronary MR angiography, 3D spiral vs. Cartesian 132774
gray-scale nonlin. filter design via multiresolution apertures 129464
green OLED pass. matrix display, long-life, charcts. 109887
ground-penetrating radar vel. estim. and imaging method 86195
Hadamard transform imaging with nanoresolution, near-field optics 95231
haemodialysis access grafts & fistulae, MRI angiography 76439
HDTV high quality cost-effective film-to-video converter 120549
HDTV projection display for ATSC std., 61 in., large neck CRT 86327
HELINET unmanned aerial vehicles for opt. Earth surveillance 99050
HF composite lin. US arrays design for med. imaging 110697
HI CT reconstruction, range shift distrib., 2D detect. syst. 98158
hierarchical image probab. models 94814
hierarchical mesh-based global motion estim., occlusion areas detect. 94933
hierarchical wavelet image coding, iter. backward segmentation 95071
high-energy film radiography, proc. param. optim., MCNP model 101584
high-energy X-ray/neutron modelling & digital imaging for NDT 101564
high-resoln. color image reconstruction from compressed video seqs. 129473
high-resoln. phantom for MRI 132730
high-resoln. phase-contrast wavefront sens., opt. addressed phase SLM based 109683
high-resoln. projection microdisplays, lens image quality 109884
high-resoln. satellite imagery for commercial appls., comparison 118381
HMM multiresolution trees for ATR algms. anal. 96911
holographic stereograms, light valve application 82996
Hough transform/automatic gradient threshold for line extraction 106445
HRR ATR using eigen-templates with noisy obs. in unknown target scenario 86125
HRR moving signatures ident. with ATR belief data assoc. filter 86126
hybrid PET/SPECT resoln., LSO/NaI scintillators, online rebinning 122218

image resolution continued
hyperspectral fundus imager, syst. concept & data proc. 98346
hyperspectral sens. develop., data proc. viewpoint 133281
i-line resist, aq. base developable, for micromachining appls. 104220
IFSAR, spotlight-mode, scatterer location direction cosine method extension 109240
IFSAR for rapid terrain visualization demons. 111628
III-V dry etching, depth/reflectivity meas. by CCD-controlled in situ interferometry 69888
ILA projector technol. based electronic cinema 86893
incoherent opt. systs., depth of focus, image encoding/decoding *(Chinese)* 84376
incoherent triangular holography, resoln. anal. 128564
index finger moment arms/tendon action lines, high resoln. MRI 87568
index reconstruction, resoln. improvement, total var. min. 106694
integrated CT-SPECT syst. for small-animal imaging 110929
intens.-hue-saturation-based image fusion with saturation compensation 73143
intensified cameras eval. 86639
intensifier tube perform. eval. 86636
interframe scalable coding using wavelet 95257
intermediate view synthesis from binocular images for stereoscopic appls. 107019
Internet, multiresolution-multicast video distrib. 95122
intracerebral radiosensitive probe, neuropharmacology investigs., small lab. animals 132962
intravascular ultrasound elastography, high resoln. 110806
ISAR imagery focusing, inform. theoretic measure 96913
ISAR low-resoln. radar, cross-range scaling, new method 75125
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
JERS radar data in environ. pollution monitoring, Zagreb example 109272
JPEG2000, multimedia digital data compression std. *(German)* 84442
JPEG2000, new compression paradigms 106936
JPEG2000 codec, implement. on fixed-point DSP 119822
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
JPEG 2000 next generation image compression syst. features and syntax 95115
JPEG compressed domain image retrieval by colour/texture 107088
JPEG image denoising using fuzzy wavelets 118490
k-nearest neighbor learning, fast binary image resoln. increment 94652
knee articular cartilage, high resoln. MRI, watershed segmentation 110863
landmine detect., temporal IR contrast var. 76983
landmine thermal detect., resoln. requirements, 2D AR models 76982
laser optoacoustic imaging syst. for med. tomography 87499
laser scanning THG microscopy in biol. 87331
laser-based electro-opt. sens., imaging modalities develop. 120938
laser-SQUID microscopy for nondestructive nonelectrical-contact IC failure anal. 81497
LCD, advanced technol., mater. develop. & future trends 121083
LCD image quality improvement using photopolymers 97711
LCoS liq.-cryst.-on-Si microdisplays, develop. & appls. 121100
letter legibility and pixel resoln. of TFTLCDs/CRTs compared 97646
LF vibrated image seq., enhanced-resoln. restoration using convex projections 129414
light stripe triangulation config. color-coded opt. profilometry 86958
limited-extent images aliased because of spectral undersampling, recovery 118404
lin. constrained generalized Lloyd algm. for reduced codebook VQ 84388
logarithmic asphere electronic imaging 86641
long-range laser illum. imaging, clandestine nighttime surveillance 83068
lossless multiresolution transform for image authenticating watermarking 129715
lossy image compression, quincunx wavelet transform lifting scheme 95077
lossy packet network compressed image quality measures 129790
low-level image anal. algms., contextual perform. prediction 84605
low-power CMOS, optimisation of real-time sig. proc. algms. 73164
low-resoln. content-based image watermarking in wavelet domain 129776
low-resoln. region discriminator for wavelet image coding 84360
lung cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
lung high-resoln. CT images, cardiac motion artifacts reduction *(Japanese)* 87745
lymphoma treatment, high-resoln. absol. SPECT appl. 122238
lymphoscintigraphy handheld scintillation camera, high-resoln. 110998
M-band wavelet transform, adaptive approach to unsupervised texture segmentation 106512
machine vision optics 86614
mag. recording syst., situ ultra-high resoln. mag. imaging 116333
mammographic imaging systs., X-ray polycapillary optics 98556
mammography, lesion detectability, digital spot vs. conventional spot methods 132831
mammography, photon-counting X-ray imaging syst. eval. 132835
MAP high-resoln. image reconstruction with multisensors, fast algm. 84263
max. entropy image restoration revisited 84292
max. intens. projection, fast hierarchical algm. 98131
max. intens. projection, fast progressive method 106712
MaxPET, dedicated mammary/axillary region syst. for breast cancer 122220
med. 3D ultrasound images, blind homomorphic deconvolution 98307
med. harmonic imaging, optimised high bandwidth transducer 110686
med. imaging, CRT-FPD transitional challenge 97710
MEMS microstruct. testing by in-line digital microscopic holography syst. 128570
mesh objs. generation/tracking, coarse-to-fine approach 95216
metastatic rodent tumours, pure absorpt. mode high-resoln. MRS imaging 87574
methanofullerene neg. type e-beam resists, sensitivity improvement 103642
microcirculation HF flow imaging, syst. param. & tissue prop. effect 110747
microcylindrical axilens, rigorous EM anal. 82195
micromechanical device vibr. mode shapes, microscopic interferometry meas. 121230
microPET detectors, coincidence meas., small animal imaging scanner 132959
microPET P4, syst. dedicated to small animal imaging 132972
microwave tomography, Born approx. 86927
ML-EM images, noise/resoln. props., incorrect modelling effects 132887
MM-wave multi-ray pass. radio imaging syst. 86933
MM-wave radioastronomy, image super-resoln. 86279
mobile robotics visual sens., resoln. enhancement by mech. vibrs. 75616
modified MPEG-2 predictive video coding, spatio-temporal scalability 118557
monochrome monitor, high-resoln., based on triple-gun principle 97721
motion compensated de-interlacing for both real time video/still images 94688
motion-based video segmentation using fuzzy clustering/mixture model 84320
image resolution continued
motion-compensated layered video coding for playback scalability 73337
moving image, future 97063
MPEG video, MAP estimator for high resoln. video reconstruction 95200
MPEG video transcoding by spatial resoln. reduction 95094
MPEG-2 decoded video restoration, deinterlacing and superresolution 951
MPEG-encoded video sigs., scene detect. methods 107047
MRI, fast T_1 mapping with vol. coverage 98438
MRI, highly nonlin. RF mag. fields, high resoln. mapping 98457
MRI, off-reson. & on-reson. seq. optim., magnetis. transfer contrast *(Ger* 87672
MRI, sensitivity-encoded spectrosc. imaging 132768
MRI angiography & brain attack diagnosis software, SLINKY & iPass *(J nese)* 76490
MRI spiral imaging, efficient off-reson. correction 132677
multi-aperture SAR, proc. for fine-resoln. images of arbitrarily large ex 96965
multi-band image segmentation, scalar approach 94820
multi-inform. array inversion using variational Born iter. method 76845
multi-resoln. corner detect. 107121
multi-resoln. mechanism for image segmentation method 84629
multi-resoln. mesh based 3D obj. recogn. *(Chinese)* 107267
multi-resoln. mesh-based motion estim. using backward-in-forward trac 118396
multi-resoln. skeletonization, shape and topol. preserving multi-valued im pyramids 94476
multibeam & multipanel displays, scan archit. perceptual effects 109879
multidimensional elastic image registration, spline appl. 94663
multiple targets resoln. using time range Doppler image 75192
multiple-exposure rainbow holography, vert.-area partition recording, 3D mo chromatic image synthesis 105585
multirate sig. proc. on finite fields 118626
multiresolution adaptive image pyramid based compression algm. 106984
multiresolution motion estim., hierarchical block matching algm. 95080
multiresolution nonlin. filters appl. 118182
multiresolution permutation filters based on decision trees 94566
multiresolution target discrim. during image form. 75143
multiresolution-based adaptive image watermarking scheme 129465
multiresolution-histogram indexing/relevance feedback learning 95194
multiscale class. using complex wavelets/hidden Markov tree models 94658
multiscale image representation using B-spline approaches 129466
multiscale sharpening/smoothing in Besov spaces with appls. to image enhan ment 106776
multispectral image fusion/merging with multiscale fund. forms 129509
myocardial wall tagging with undersampled projection reconstr. 76440
myocardium PET, FDG uptake, blood glucose effect 122247
n-MOSFETs, sub-0.25 μm, hot-carrier-induced photoemission peak, locat from gate center 103890
natural image anal. and modeling using random cascades on wavelet tr 106778
natural images, edge-directed interpolation 118367
natural images, wavelet-based decomp. in independent resoln. levels 10703
near-field opt. data storage, improved perform. 127587
near-surface buried struct. imaging with high-resoln. surface-wave group-v tomography 94683
neutron radiography, imaging tech., neuron sources & appls. 101561
neutron tomography syst. for quantitat. NDT, preproc. corrections 101562
noisy images, spline-based resampling 129588
nondiffracting bandlimited wave solns. for US pulsed waves in imaging ap 99108
nonlin. cellular neural filters for image proc. problem appls. 84154
nonlin. enhancement in space scale domain 118234
nonlin. multi-resoln. decomp. with appls. to image compression 95125
nonlin. vector multiresolution anal. 107398
obj. reconstruction, time reversal using single-cycle terahertz pulses 94927
obj.-based motion estim./higher scalability, mesh/crack lines appl. 95196
occipital lobe MRI, gray/white matter, inverse T_2 contrast 132751
octree isosurface codification based on discrete planes 118649
offset printing of liq. microstruct. for high resoln. lithog. 103697
old film pictures, blotches correction/contrast enhancement 94685
OLED displays, perform. status & future prospects 121099
omnidirectional image seq., resoln. improvement *(Japanese)* 106503
on-axis digital heterodyne holography, synthetic-aperture expt. in vis. 12857
OPC impact on IC layout and DRC, lithog. proc. simul. 126583
optoacoustic tomography, time-gated press. distrib. meas./image reconstructi 121989
paediatric brain vols. comparability, image orient. effects, 3D MR data 1108
panoramic radiography, image charact. and convenience using CCD, stora phosphor and film receptors 98500
pass. radio imaging, super-resoln. 86926
PC based low cost video digitizer 73296
PCB AOI, color/black-and-white systs. comparison 113769
PET, ADAC MCD camera, NEMA NU 2-2000 perform. meas. 122214
PET, APD array, monolithic Si wafers, 32-channel LSO matrix 132935
PET, atten. correction, axial transm. resoln. effects 111040
PET, cross-ref. max. likelihood estim. reconstruction 110981
PET, high resoln., 32-channel LSO matrix coupled to monolithic 4×8 APD arr 122205
PET, high resoln., granulated dual layer detectors, Monte Carlo study 13291
PET, high resoln. scanner, SSRB, MSRB, and FORE methods comparis 132871
PET, high-resoln., granulated dual-layer detectors, Monte Carlo study 13294
PET, micro cryst. element detectors, perform. characts. 132937
PET, true continuous 2D/3D whole body scanning implement. 122224
PET, vol. resoln. uniformity improvement, coincidence plane defns. eva 111015
PET cameras with irregular sampling/interact. depth, 3D reconstruction 13287
PET dedicated instrum., small planar detectors, improved perform. 122232
PET detector module with LSO scintillation crysts./APD array 132961
PET iter. reconstr. algms., random-coincidence corrections 110999
PET micro cryst. element detectors, multichannel PMT coupled 122202
PET reconstruction, Bayesian multiresolution algm. 98581
PET whole body imaging, vol. resoln., coincidence plane defns. 122234
PET/CT image registration of rat brain/skull using AIR algm. 122212
phantom/animal imaging studies using PLS synchrotron X-rays 110958
phase fluct. imaging OCT 76397
phase only liq. cryst. SLM optoelectronic Zernike filter, high-resoln. wavefro anal. 109684
phase-coded pulse seq. for nonlin. imaging 110749
phase-contrast X-ray microtomography, interferometer design 76177

ge resolution continued
phoswich/APD detectors, low-noise CMOS preamplifiers, high-resoln. PET systs. 111011
photobleaching photoacid generator for chem. amplified resist at 193 nm 103542
photomasks, resoln. enhancement techs., eval. method 126577
photopolymer materials for refl. phase hologram recording 105593
photopolymers/imaging systs. for LD imaging 105651
pinhole SPECT of mice using LumaGEM gamma camera 111037
planar shape representation based on multiwavelets 118785
plaque MR imaging, inform. theoretic anal. 98410
polygonal snake adapted to opt. noise models, min.-complexity segmentation 95580
polymer gel dosimetry, param. selective MR-microimaging, radiotherapy appl. 122390
polysilicon TFT light emitting polymer high-resoln. monochrome display 97602
polysilicon TFT-LCD for mobile PC XGA display 79645
pos. tone photosensitive polyimide photoresist for broadband stepper use 81144
progressive compression for triangular meshes with QC 106877
progressive image transm., quadtree and shading approach 118629
progressive lossless image coding, adapted nonlin. multiresolution decomp. 129777
projection X-ray microscopy, modified SEM, enhanced contrast & 3D CT 76173
prostate, nonmetastatic/metastatic tumours differentiation, high resoln. MRI 87643
prostate cancer discrim., 3D US Doppler imaging, zonal anal. 110713
pulmonary nodules, high resoln. spiral CT diagnosis *(Chinese)* 76509
pulmonary regional perfusion eval., ultrafast MRI 98442
pulse inversion Doppler harmonic imaging, generalisation 122008
pulsed thermographic images, enhanced spatial & depth resoln. 101583
QSXGA superhigh defn. TFT-LCD, digital interface *(Japanese)* 121094
radar imaging, fast multilevel domain decomp. algm. 75105
radar imaging, high resoln., 2D data extrapolation using AR lattice modelling 131640
radiographic images, Web-based retrieval using multi-scale tree VQ in wavelet domain 110977
radioisotope image quality, impact of wavelet compression 98568
radiological image contrast enhancement, discrete wavelet transform 76543
random noise radar, low coherence fiber optics appl. 109299
rangefinder/digital camera syst., real-world scene reconstruction 120900
real-time analog holography, pattern recogn. 105579
rect. positron emission mammograph, list mode likelihood reconstruction 132853
reflective colour LCD panels, RGB directive reflectors *(Japanese)* 121091
reflective storage FLC display, ultralow power consumption, high-defn. *(English)* 121092
reflective TN-LCD, wide VA, single polariser, compensation films 86839
regional hyperthermia treatment planning syst. 76613
rem. sens., on-board opt. image compression 111382
rem. sens. data, mixed pixel, image resoln. algm. *(Japanese)* 94629
renal arteries, high-spatial-resoln. contrast-enhanced MR angiography 87678
resolved depth step color-coded opt. profilometry 75856
retinal diseases imaging, scanning laser ophthalmoscope appl. *(Japanese)* 110835
retinal image digitization, optim. for improved digital proc. and visualization 110850
road traffic surveillance syst., low bit-rate video codec 129722
robust motion estim. using spatial Gabor filters 118393
Rose Bengal-Methylene Blue panchromatic ion pair for holographic recording material 82036
SAR, airborne, motion compensation 75090
SAR, class. perform. prediction using parametric scatt. feature models 86132
SAR ATR, aspect diversity benefits, fund./expt. results 86134
SAR complex-valued images, superresolution/edge-preserving reconstruction 96895
SAR data compression techs., review 131628
SAR digitally spotlighted subaperture image form. using high-perform. computing 75145
SAR generalized inversion/ω-k algm. for runway imaging, comparison 96893
SAR high resoln. near-field images, reduced bandwidth algm. 131638
SAR image super-resoln. using Bayesian/convex set-theoretic approaches 75139
SAR imagery, target discrim. 109277
SAR images, open-loop adaptive filtering for speckle reduction 109242
SAR images, road detect. using GA with region growing concept 96909
SAR imaging based on fractional lower-order stats., high-resoln. autofocus techs. 131639
SAR polarimetric target feature extraction/image form. via semi-parametric method 75137
SAR raw data, compression using method of BABC *(English)* 73295
SAR regularized imaging based on recogn.-oriented features, eval. 75126
SAR sidelobe apodization using Kaiser window 96897
SAR spaceborne images, road detect. using GA 75135
satellite image joint denoising/deblurring, spatio-freq. noise distrib., priori 94946
satellite image restoration success criteria 98954
satellite image striping noise elimination, wavelet anal. 118313
scalable lossless progressive image coding via conditional quadrisection 95095
scan SAR, sig.-to-ambiguity ratio increment, design method 109257
scanned lin. grating light valve projection syst. 86894
scanner-model-based document image improvement 94676
scanning beam displays, eye safety anal., LEDs and laser appls. 97725
scanning thermoacoustic tomography, microwave-induced, tissue imaging 87498
scanning X-ray microscope, lab. scale, noise limited resoln. 76167
scintillation camera, bias free positioning estimators 132917
scintillation cameras, bias-free positioning estimators investig. 111019
scintillation detectors, spatial resoln. improvement, retro-reflective tape appl. 122265
scintimammography, dedicated scintillation cameras perform. 110997
scintimammography/stereotactic core biopsy digital X-ray combined syst. 122209
sea surface temp. estim., AVHRR MWIR band, MODTRAN values 133345
search/detect. model testing, image dataset 129526
seismic imaging, sing. charactn. by monoscale anal. 111391
semicond. proc., opt. microscopy 89888
SET-080 Alpha, high resoln. multiple slice brain SPECT *(Japanese)* 76582
shallow water mine/obstacle survey, radar acoustic hybrid 77054
SHARP ATR syst., Bayesian multiple-look updating appl. 75158
SILYAL top surface imaging proc. for 157-nm lithog. 103654
SimRAD Viewer/P med. imaging station develop. *(Japanese)* 76787
single-grid moire interferometer for line imaging appls. 132174
single-shot EPI, suscept.-induced losses, sig. recovery 132752

image resolution continued
skeletal muscle perfusion, arterial spin labelling MRI, venous occlusion plethysmography 132739
skin, human, high-resoln. spectrosc. imaging 87600
skin US param., global & local estim., high resoln. images 110716
small animal emission tomography, TOHR, charactn./first eval. 132965
small animal PET, iter. image reconstruction fast algm. 87779
small animal PET devices with mm resoln., design considerations 132970
small animal SPECT, coded aperture imaging investig. 132979
small animal SPECT, coded aperture imaging investig. 111035
small animal SPECT imaging, high resoln. detectors develop. 132978
small γ-camera using PSPMT, NaI(Tl), CsI(Tl) and CsI(Na), perform. eval. 132981
small obj. & soft material X-ray CT imaging, image intensifier 110438
small vessel blood flow imaging, HF US, time & freq. domain anal. 110741
small-animal PET scanner, DOI capability, design optimisation 132985
small-animal tomographic imaging, high-resoln. semicond. camera 132967
soft tissue, high-precision motion estim., speckle echo wavelet transform 98301
SOI bonded wafers, eval. by automated acoustic micro imaging 126220
solid-state image sens., opt. charactn. methods 120896
sonoelastography, strain imaging, multi-resoln. algm. 122000
sparse aperture imaging, origs. and hist., opt. synthesis imaging 120937
spatial resoln. increase, binary operator design, k-NN learning 118456
SPECT, fan-beam collimators, geom. response modelling 132926
SPECT, resoln. recovery for list-mode reconstruction 111042
SPECT, transm. image reconstruction, redundant inform., asymmetric fanbeam collimation 132870
SPECT absol. activity quantitation from projections, anal. approach 111028
SPECT filtered backprojection images, partial vol. effects correction 122248
SPECT reconstruction, Mu-Tau-Sigma model 132865
SPECT reconstructions enhancement by coregistered MR data 132869
SPECT reconstructions enhancement by coregistered MR data 111025
spectral model for halftone color prediction 94819
spiral cone-beam CT, exact ROI reconstruction, algm. perform. eval. 122159
spiral cone-beam CT reconstruction, local ROI algms. eval. 110956
splines for sig. proc. 129462
SR X-ray transm. microtomography facility for biomed. imaging 132825
stereo images, embedded coding 95361
stereo matching algm., wavelet transform 118405
stereoscopic video seqs., act. contour-based video obj. segmentation 106832
strain rate imaging of beating heart using 2D speckle tracking 98327
stroke, acute, rapid 3D diffusion MRI, mice expts. 98444
stroke, white matter tract disruption, MR diffusion tensor imaging 132718
stroke MRI, diffusion-weighted EPI, sensitivity encoding 132695
STS-99 Shuttle Radar Topography Mission, delay-stabilized microwave fiber optic link 111483
subminiature image intensifier sens. perform. improvements, 18-mm/16-mm 86635
subpixel edge detect. syst., dimens. meas., obj. localization, digital-based approaches 107277
super high defn. image transm. syst. *(Japanese)* 86322
super-resoln. fast reconstruction algm. for pure translational motion/common space-invariant blur 118379
super-resoln. image reconstruction with multisensors, preconditioned iter. methods 94746
super-resoln. reconstruction algm. for translational motion/space-invariant blur 94780
Super-TFT IPS-LCD, 18 in., fast response speed 86837
superresolution using L-curve, lin. shift-invariant and nonlin. blurs 84351
surgical navig. 3D display syst. 87804
SXGA liq.-cryst.-on-Si light valve, high-defn. video projector 86850
synthetic aperture radiometer, effect of mutual coupling between antenna elements on imaging and calib. *(Chinese)* 131892
synthetic transmit focusing for US imaging 110691
syst.-on-a-package, high-dens. PWB substr., ultra-fine photoresist image form. 124382
telemedicine, accident and emergency, accuracy, effect of image resoln., compression, colour depth and display modality 133159
terrain mapping, MERIS-Landsat TM sens. fusion 98962
texture images, class. using multi-scale stat. estimators of fractal params. 129622
texture modeling/class. in wavelet feature space 84314
thyroid, I-131 studies, high-resoln. detector syst., perform. meas. 111006
tissue elasticity, US imaging, spatial resoln. limits 121997
tissue harmonic imaging, clinical benefits 110750
tissue microcirculation imaging, phase resolved OCT/ODT syst. 98379
TOF-PET tech., educational tool for demonstrating 132895
tomographic images, region of interest reconstruction using filter banks 98522
trabecular bone vol. fraction mapping by low-resoln. MRI 98435
trilinear color image sens., very high resoln. 120887
triple-head gamma-camera PET syst., software geom. calib. method 122216
twisted nematic LCD viewing angle, in-plane-compensation foils 86838
ultra-high resoln. CRTs, reduced aperture grille pitch 97719
ultrahigh-resoln. OCT, continuum generation in air-silica microstruct. opt. fiber 73254
ultrasound array design, 1.75 D, beamforming scheme/param. tradeoff 110706
ultrasound diffr. tomography, use of harmonics 88217
ultrasound image synthetic aperture techs., motion compensation 110804
ultrasound imaging, sidelobe reduction filters 110781
ultrasound nonlin./lin. imaging techs. at HF 110765
ultrasound speckle reduction, compounding approach 110776
underwater video mosaicing for seabed mapping 84304
US 3D imaging from small cylindrical aperture 110755
UV polymeric materials/resists for 193/157 nm appls. 103653
UXGA TFT-LCD for legible document viewers 86844
variable-resoln. displays for visual commun. and simul. 97648
video proc., wavelet transform appls. 94661
video seq., adaptive resoln. image acquisition using mosaicing 84303
video seqs., synthetic summaries using multiresolution based key frame selection in perceptually uniform color space 94647
video transcoding, resoln. reduction model *(Chinese)* 106931
virtual PMTs, centroid positioning perform. improvement near γ-camera detector edges 111010
visual perception of video seqs., severe vibrs. 106425
VR using concentric mosaic, constr./rendering/data compression 95362
watermark for digital image authentication, wavelet packet/adaptive spatial transform. 95061
wavelet filters in multi-resoln. motion estim. 129707
wavelet image compression, optimal decomp. 95396
wavelet-based image codec in memory-constrained environ., design 74484
wavelet-based tech. for image refinement 118484

image resolution continued
wavelet-subband image coder, design 107052
WWW shopping, coloured goods ordering, display problems 109876
X-ray CT, fast ordered subset reconstruction 132791
X-ray CT, ordered subset reconstruction 98503
X-ray microtomograph, desktop instrum., 3D microscopy 76171
XM-1 high-resoln. soft X-ray microscope at ALS, computer proc. 98093
zNose virtual chem. sens. array technol., high-resoln. olfactory images 97458
zooming at fractional scaling ratio, adaptive low complexity algm. 118469
Ag halide film, holographic stereograms for 3D computer models visualisation 82995
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
AlGaAs X-ray detector with opt. response 98049
ArF lithog., 193 nm, vinyl ether-maleic anhydride alternating polymer resist syst. 103545
ArF lithog., cyclo-olefin/maleic anhydride type resists for sub-100 nm patterning 103551
ArF neg. resist, androsterone derivative with δ-hydroxy acid, comonomer struct., dissolution 103548
ArF/KrF excimer laser microlithography, resist react. mechanisms by laser flash photolysis 103519
CsI(Tl) scintillating arrays for scintimammography, imaging eval. 132984
CsI(Tl)/Si PIN photodiode imaging module, compact 64-pixel, IC readout, perform. 122263
HgCdTe, long lin. MWIR/LWIR arrays for high-resoln. imaging 109645
HgI_2 based high-resoln. X-ray act. matrix image sens. 109669
I act. quantum filter for image intensification 116886
^{131}I lymphoma treatment, high-resoln. absol. SPECT quantitation 111018
Mo FEA, frit sealing, emission characts., ambient gas influence 97666
a-Se based diagnostic imagers, sig. form. quantitat. anal. 76512
a-Si TFT LCD of SXGA class, universal controller, interpolation algm. 97730
a-Si X-ray imager, large-area, perform., NDE appl. 120895
a-Si:H p-i-n imager, spatial resoln. 109674
Ti:sapphire mode-locked laser sub-5.2 fs pulse generation, techs./dyn./appls. 82760

image restoration
2D sigs. restoration using autoregressive models 106453
3D angiographies, variational image restoration 122085
3D blind image reconstruction, combined nonlin. and stat. techs. 129485
3D gated cardiac SPECT, spatiotemporal noise reduction filter 132860
3D sagittal brain MR images, automated segmentation by masking/restoration operations 110867
3D stance recovery, shadows use, parallel/perspective projection 118455
act. sounding systs. 120403
adaptive blind image regularization, recursive soft-decision PSF/neural network approach 94954
adaptive image restoration, neural learning approach, fuzzy model-based network archit. 73251
adaptive image restoration by neural networks 106841
adaptive vector median filters for color image restoration 118423
adaptive/proadaptive image compression 107083
additive non-Gaussian noise corrupted image restoration 94616
aerial image by circ. scanning, flight params. effect 98943
anisotropic diffusion driven by diffusion tensors 73222
aperiodic model improvement using extended size deconvolution method 73202
artificial retina, optoelectronic cct., stochastic algm. 106775
atmos. correction using, MODTRAN4-based algm. 76832
autocorrelation fns. based, regularization methods 94745
automated syst. for low-resoln. document/text images restoration 73159
best-neighbourhood-matching error concealment algm., evol. strategy *(Chinese)* 73366
blind blur ident. using discrete periodic Radon transform 84356
blind deconvolution of blurred images from multiple obs., GCD algm. use 129441
blind image deconvolution, wavelet transform-based noise reduction schemes 118223
blind image deconvolution/small-extent point-spread fns. using resultant matrices 94947
blind restoration of multichannel imagery, double-regularization approach 118323
blind restoration syst. of blurred/noisy num. images 84296
blotches corruption, image seqs., restoration method *(Japanese)* 73250
blurred images, blind deconvolution by ICA 94615
blurred noisy images, edge detect. problems modeling 118722
brachytherapy source localization, 3D tomosynthetic image restoration 110941
burst noise reduction, decimation and adaptive weighted median filter 106486
cellular nonlin. networks for minimization of functionals, appl. examples 91166
coding perform. of shape-adaptive DCT 129729
color image restoration, multichannel M-filtering 94521
color image restoration using cpd. Gauss-Markov random fields 118387
commun., hidden Markov sources transm. over Gaussian channels 84468
compression using implicit polynomials 118604
convex half-quadratic criteria and min. algms. 84272
corrupted images, impulse noise removal using posn./directional inform. 118178
cosine-fourth and vignetting effects in real lenses 106565
curvature-based diffusion with time-delay regularization 95434
curved textured surface anal. by local spectral distortion 95455
de-mixing, ICA vs principal component anal. 106484
de-noising using stochastic reson. 106516
deblurring, projection pursuit learning network, gating network fns. 106772
deblurring combining total var. and wavelet packet approaches 118253
deblurring of circ. motion blurred images 94960
deconvolution in freq. domain 106734
degrad., blind ident., ascendant hierarchical class. 118228
degraded images restoration by combined homomorphic/adaptive fuzzy multilevel median filtering *(Chinese)* 129514
denoising, autocorrelation modeling of wavelet coeffs. 94810
denoising using directional filter banks 94807
depth from defocus in presence of partial self occlusion 106566
deterministic algm., image and contours restoration 118353
diffr.-limited images, prior scene inform. modeling/extrapolation for set theoretic restoration/super-resoln. 94655
digital image proc. appls., conf., San Diego, CA, USA (Aug. 2000) 100401
digital images restoration/resoln. enhancement 106485
document images of bound vols., distortion recovery 129674
dyn. & gated image seqs., spatially-adaptive temporal smoothing 132861
echocardiac images, robust quantization table design 98316
edge-preserved neural network model for image restoration 106886
edge-preserving neural network model 95392

image restoration continued
edge-preserving smoothing, region-based alternative 94945
eigenstructure-based direct multichannel blind image restoration 118322
EUSIPCO sig. proc., conf., Tampere, Finland (Sept. 2000) 113193
feature-preserving flows, stochastic DE view 94560
filling-in gray level and color images, variational model 106461
filters, subspace inform. criterion 119004
freq. domain filters for image sharpening/softening 106435
fund. matrix threading by trifocal tensor 94608
fuzzy convex ordinary kriging appl. 84298
fuzzy method & GAs, relative gray scale grade *(Chinese)* 84170
gamma camera dead-time correction for ^{131}I, scatt. independ. 122249
gammagraphic images, cpd. regularizer for Bayesian restoration 110443
GMRES method for restoration of images with spatially variant blur 94744
gray and colour med. images, impulse noise reduction, random walk approa 132532
HELINET unmanned aerial vehicles for opt. Earth surveillance 99050
Hopfield neural net model 94726
hyperspectral rem. sensed images, systematic disturbances anal. 73113
IEEE image and sig. proc. and anal., conf., Pula, Croatia (June 2000) 89596
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
IFS appl. 94944
IFS-based image restoration 118224
impulse detector and median filter 118225
impulse noise corrupted images restoration using image gradients 106721
impulse restoration template matching under geometric uncertainties 94720
index reconstruction, resoln. improvement, total var. min. 106694
inverse filters for arbitrarily focused image reconstruction from two differen focused images 84295
IR images, human target detect., atmos. blur/noise distortion/Wiener filter rest ration 84156
iter. restoration methods, point spread fn. vars., robustness anal. 94948
JPEG coded images, image restoration, mean removed classified VQ 95127
JPEG compressed images, deblocking approach 106884
landmine detect., EM induction imaging, modelling 77018
LF vibrated image seq., enhanced-resoln. restoration using convex projection 129414
light microscopy, adaptive shape-from-focus with error estim. 129578
lin. filters under PSD stabilization, optim. 118320
lin. representation model for use with Kalman filter restoration 118238
low-bit-rate moving picture coding using loop filtering/post-filtering 95149
lung nodule screening, scanning-beam digital X-ray syst. 76513
lungs, dyn., med. image restoration using lung motion OTF 76385
max. entropy image restoration revisited 84292
med. images, shape recovery using level set regularizers 110543
median based impulse rejecting filters, new class 94564
ML sig. restoration multiplicative algms. with non-negativity constraints 7362
monochrome video seqs., spatiotemporal filter for noise reduction 106765
Monte Carlo dose distrib. in radiotherapy planning, denoising 76726
morph. filter design using GA 118240
MPEG-2 decoded video restoration, deinterlacing and superresolution 95103
MPEG-4 coding, joint optim. of compression/restoration 118502
MRF modeling in median pyramidal transform domain for denoising appl 118974
multi-window impulse detector for restoration filters of noise-corrupted image *(Japanese)* 118436
multichannel images, least sq. restoration, matrix formulation 129649
multiple filters for lin. alg. systs. 118374
multiple image filters fusion 129560
multiresolution nonlin. filters appl. 118182
night vision images, real-time proc. 94441
nonlin. image noise filtering algm. based on SVD block proc. 106480
nonlin. image noise removal and deform. elimination 118185
nonlin. motion-distorted composite frame restoration 106488
nonnegativity enforcing in image reconstruction algms. 73223
obj. surface shape from shading meas. by neural net, indust. appl. 120644
obj. tracking by adaptive modeling 94790
objective fn. minimization with non-smooth data-fidelity terms 118249
old film pictures, blotches correction/contrast enhancement 94685
old films, low complexity cut detect. in flicker presence 106857
old manuscripts restoration using image proc. techs. 94597
old motion pictures, defect removal 129570
optimal regularized image restoration using generalized-cross-validation criterio 94926
orthonormal vector sets, regularization using coupled PDE 118248
parametric image restoration/resoln. enhancement 106688
parametric modeling of blurred images 106758
partitioned separable paraboloidal surrogate coord. ascent algm. 84297
pass. rem. image sens. by Hopfield neural net, syst. fusion 84132
permutation weighted median algms. for image sharpening 118232
photorefr. FWM, opt. image restoration 129538
pipes in service 2D/3D X-ray image restoration, wall thickness meas. 100643
pixel-level image fusion scheme, enhanced visualization, Laplacian pyramid decomp. 95534
pixon-based image denoising with Markov random fields 106695
pre-conditioned edge-preserving image deblurring/denoising 95462
pulsed thermographic images, enhanced spatial & depth resoln. 101583
radioisotope image quality, impact of wavelet compression 98568
Raman microscopic images, modelling/restoration 98368
reconstr. using bistable gradient neural nets 118263
recoverable tamper proofing by secure DCT 129741
rect. tight crack reconstr., eddy current impedance change 101613
recursive cellular networks for inverse problems 94445
recursive implement. of constrained LMS L-filters for image restoration 73305
regularized objective fn. minimization for image restoration stabil. 118254
rem. sens., on-board opt. image compression 111382
representation of image, nonsymmetric half-plane AR model 118192
SAR image super-resoln. using Bayesian/convex set-theoretic approaches 75139
satellite image deconvolution using complex wavelet packets 94953
satellite image joint denoising/deblurring, spatio-freq. noise distrib., priori 94946
satellite image restoration success criteria 98954
satellite image striping noise elimination, wavelet anal. 118313
segmentation using PDEs and morph. 94502
selective sharpness enhancement of heavily-corrupted old film seqs. 94687
seq. restoration, impulse noise, adaptive 3D median filtering 73142
shift invariant image restoration, overcomplete max.-entropy MAP framework 94803
space-variant point spread fn. model for undercorrected opt. systs. 84265
spatially connected neighborhood nonlin. filters, image restoration/enhancement 82298

ge restoration continued
stereo matching algm. based on gray-level segments *(Chinese)* 106732
superresolution, efficient wavelet-based algm. 94656
superresolution using L-curve, lin. shift-invariant and nonlin. blurs 84351
tech. document images, optimum binarization 106450
terrain mapping, polarimetric SAR, simulated annealing 122617
Toeplitz block banded block systs., regularized soln. 94743
transform domain image restoration methods, review/comparison/interp. 118177
translation invariant operations design via neural network training 94562
Two-Mu image-restoration algm., point-spread fn. convolution 94740
unified Lyapunov convergence of both unsupervised ICA and supervised PCA learning, image de-mixing 107138
urban map, road network extraction using center line *(Japanese)* 106817
US brain images restoration method, speckle noise removal 98330
US C-scan images, blind deconvolution, H_∞ ident. strategy 101589
variational and level set methods in computer vision, conf., Vancouver, BC, Canada (July 2001) 113213
vector fields/gray levels filling-in by joint interpolation 94782
vector median filter for colour image proc. 94473
video seqs., visual perception, severe vibr. effects 84602
visual perception of video seqs., severe vibrs. 106425
wavelet-based image denoising tech. using spatial priors 94808
wavelet-based image denoising under overcomplete expansion 94809
wavelet-compressed image restoration using adaptively masking smoothness constraints 106862
Wiener enhanced image restoration, Haar wavelet transform based 129440
Wiener modified filter for multi-frame restoration of blurred/noisy images 129442
$Bi_{12}TiO_{20}$, image restoration and pre-proc., two-wave mixing 105479

ge retrieval
see also content-based retrieval
adaptive image database using wavelets 106763
area morph. segmentation 94940
artificial neural nets in image proc., conf., San Jose, CA, USA, Jan 2001 113222
automated image segmentation by level set anal. 106755
automatic model-based semantic obj. extraction algm. 129690
BIRDS-I, benchmark for image retrieval using distributed systs. over internet 96140
CAMEL, Concept Annotated iMagE Libraries 94767
class. by local inform., independent component anal. 118772
CLIMS, image retrieval using colour and wavelet features 73307
clinical PACS, research and teaching access 89608
coarse-to-fine texture image retrieval method 94914
color image watermarking, Gaussian pixel weighting marks in AM 118397
color plane moment method 118783
colored pattern appearance model for image indexing 95237
colour image databases using BTC for storage and retrieval 84433
colour image retrieval, multi-component cross entropy segmentation 129576
colour-based facial image retrieval 118738
colour-based image retrieval procs., visual eval. 129474
content based image retrieval in image databases, clustering based 106661
content characterisation for semantic similarity calc. 84559
content-based image retrieval, region-of-interest and spatial layout 95585
content-based image retrieval using fuzzy multiple attribute relational graph 129446
content-based image retrieval using fuzzy visual representation 118735
content-based image retrieval using sketch based queries 118737
content-based image retrieval with relevance feedback 95586
contour-based obj. recogn. using wavelet-transform 129830
databases, fast multiresolution feature matching algm. for exhaustive search 73149
databases, scale/fractal transforms 95515
digital video seqs., long transit. anal. 94769
digital video servers, segmented inform. dispersal 109379
dimens. reduction 94937
distributed multimedia syst. 106846
distributional clustering for content-based retrieval of images/video 84291
document image matching based on component blocks 94679
document image regions, picture, graphics, and text class. 94875
edge representation based 94939
Electronic Roads in the Information Soc., content-based image retrieval/IP Diff-Serv 108362
energy spreading transform approach 107256
face detect. algm. for video database appls. 94640
face detect. for multimedia appls. 94641
fast retrieval methods for images with significant vars. 94666
gradual shot transit. detect., unified approach 106448
gray-level image reconstruction, Fourier-Mellin transform approx. 129541
hierarchical charactn. scheme for image retrieval 95540
hierarchical histograms, image-based data retrieval representation 84289
hierarchical storage mgt. systs. for video retrieval syst., perform. anal. 120586
higher-order spectra invariants for shape recogn. 118666
histograms anal. method 84096
IC yield mgt., automated image retrieval syst., field test 100627
indexing techs., DCT domain 95045
indexing/machine vision, color representation 95533
interactive image retrieval, integrated segmentation tech. 94941
Internet imaging conf., San Jose, CA, USA (2001) 94755
JIT image browsing over Internet 107079
JPEG compressed domain image retrieval by colour/texture 107088
kansei-keyword extraction from japanese film scenario using sensitivity inform. 129662
knowledge base constr., image recogn. and understanding systs. 95409
Kullback-Leibler dist. on wavelet subbands, texture similarity meas. 94938
math. modelling, estim. and imaging, conf., San Diego, CA, USA, July-Aug. 2000 67380
med. image databases, efficient retrieval 76212
media database storage and retrieval conf., San Jose, CA, USA (2001) 89590
meteorological image archives, query-by-shape 122668
mobile multi-agent syst. for med. image retrieval 121903
MPEG compressed video, macroblock inform. based efficient wipe detect. 106856
MPEG-7 appls., P-frame motion vectors, low-complexity global motion estim. 95180
MPEG-7 based TV news programs indexing/retrieval 118483
MPEG-7 edge histogram descriptor, relevance feedback 118782
MPEG-7 homog. texture descriptor 85393
MPEG-7 std., supported colour spaces, image retrieval efficiency 118611
MPEG-7 visual motion descriptors 84139

image retrieval continued
multimodal surrogates for video browsing 118242
multiple binary-class decision trees for obj. based image retrieval 94760
multiple classifiers for color flag/trademark image retrieval 73262
multiple image descriptions for browsing and retrieval 94762
multiresolution segmentation for images with low depth of field 95473
multiresolution-histogram indexing/relevance feedback learning 95194
natural images retrieval, new approach 106437
noise-free similarity model for image retrieval systs. 94764
non-texture/textured images classification, region segmentation 95587
obj. recogn., color-invariant shape moments 118654
obj. recogn. using multimodal neighbourhood signature method 129831
obj.-based motion description, low-level features to semantics 94911
obj.-based video abstraction, integrated scheme 129700
open source agenda for research linking text and image content features 129433
panoramic/adaptive/reconfigurable interface for similarity search 94797
parametric description of obj. motion using EMUs 94673
perceptually important colors extraction/similarity meas. 84453
piecewise approx. of curves using nonlin. diffusion in scale-space 94470
polygon-based bounding vol. as, spatiotemporal data model for video content access 94465
polygonal shape descriptors, image retrieval and obj. localization 106894
pre-filtering with Retinex in color image retrieval 94758
progressive content-based retrieval using tree-struct. graphs 106831
radiographic images, Web-based retrieval using multi-scale tree VQ in wavelet domain 110977
real-time obj. recogn., optimal color quantization 129852
real-world video seqs., shot detect., lighting change problem 75315
real-world video seqs., shot detect. with multi-measures 75314
recorded sound tracks transliteration for speech recogn./searching *(German)* 73094
region shape similarity for image retrieval 94766
region-based image retrieval 84290
regions-of-interest based image retrieval with local/spatial queries 94668
rem. sens., satellite data retrievals by neural net 111484
robust interest points matching algm. 107185
segmentation by movement estim./contour extraction 106482
semantics-based retrieval by content 94828
shape matching of partially occluded objs. using hierarchical content description 84617
similarity learning based 94936
spine X-ray images, computer-assisted retrieval of biomedical features 110975
subimage extraction by integer-type lifting wavelet transforms 94662
texture description using complex wavelet transform 94667
texture image retrieval based on evol. prog. *(Chinese)* 106724
texture image subjective retrieval based on orient./color interacts. 95003
texture-based image retrieval, DFT and Zernike moments use 95584
tolerable direction difference based 107131
Trace transform appl. 106497
traffic surveillance, content-based event retrieval 129815
uncompressed/compressed domains 95195
video archive retrieval syst. by video fingerprint method *(Japanese)* 73345
video class. based on HMM using text and faces 118732
video indexing/retrieval, semantic concepts inference 94942
video movie annotation syst., script-video assoc. 73166
video obj. retrieval, MPEG-4 compressed domain shape features 73377
video objs. partitioning into temporal segments using local motion inform. 106855
video objs. segmentation/tracking, content-based video indexing/interactive TV/prod. systs. 94645
video representation, key frame selection 94644
video retrieval, temporal texture modeling *(Korean)* 106742
video seqs., synthetic summaries using multiresolution based key frame selection in perceptually uniform color space 94647
video surveillance environ., illum. vars. compensation 118174
visual feature discrim. vs. compression ratio for polygonal shape descriptors 95025
visual inform. modeling/mgt., logical framework 94770
visual inform. retrieval, image representation method 118734
vol. holographic data storage, grating detuning, retrieval image 93022
wavelet based compression for image retrieval systs. 106979
wavelet-based salient points appl. 95514
Web-based rem. security camera server syst. using index search algm. 131758
Webscope-CBVR, content-based video retrieval syst. for WWW 118325

image sampling
2D adaptive sampling for obj. detect. 106835
2D discrete Fourier irregular samples, closed-form image reconstruction using Good-Thomas FFT 84299
3D generalized shape sampling method/file format for storage or indexing 95204
3D image presentation, hidden-surface removal in SIRDS algm. 106700
3D polygon meshes for hierarchical representation/coding of surfaces 84452
3D range image resampling using B-spline surface fitting for opt. range sens. 75650
3D surfaces, hierarchical coding using box splines 129718
3D TV full parallax colour integral image data compression, chrominance components sub-sampling 107095
abdominal image quality, real-time correction of wavefront arrival time errors 110766
adaptive contour sampling/coding using skeleton/curvature 95218
adaptive imaging using 8×128 array 110768
algms. for efficient and accurate edge detect. and localization 107141
array-based image form., optimal sampling 94533
automated image segmentation by level set anal. 106755
Bayesian switching algm. for optimal increasing binary filter 129463
bidimensional nonseparable nonorthogonal wavelet packets appl. *(Chinese)* 129546
biomedical image interpolation, generalized regression neural networks appl. 110899
cluster no. and influence zones estim. 118755
CMOS image sens. camera with focal plane edge detect. 131975
color image proc., color morph. pyramid *(Chinese)* 118420
denoising using wavelet thresholding/model selection 94801
depend. component resampling, iter. nonlin. Gaussianization algm. 106825
detail prediction 94651
differential scale invariants, invariance anal. 94536
digital beamforming in handheld ultrasound systs., low power delay calc. 110805
digital image enlargement, Laplacian pyramid representation method 106502
discretized Radon transform and spectral props. 122136

image sampling continued
double random phase encoding encryption syst., SNR enhancement 118018
DST/DCT domains, interpolation props. 94654
duplicate video syst. using alternate temporal sub-sampling 106875
efficient paired comparison method 73152
ellipsometric imaging syst., image grabbing, image proc. *(Chinese)* 94603
EM driven cylindrical implosions, high speed laser shadowgraphy 97386
Euclidean Lab color spaces quantization by Fibonacci lattices 129765
facial feature extraction in frontal view images 107207
FANN-based subsampling of color video seqs. 118222
feedforward ANN for efficient high-order image subsampling 94813
film image resoln. meas., electronic methods *(German)* 95345
frame rate meas. approach for real-time computer vision appls. 121176
generalized scale-selection 94565
geophys. meas. syst., irregular and adaptive sampling 88103
GLRT and max. invariant hypothesis test comparison 109261
HDTV high quality cost-effective film-to-video converter 120549
hierarchical image segmentation algm. based on hepta-tree 118339
high-resoln. image reconstruction with displacement errors 84352
hybrid Radon-Fourier tech., stat. props. 129618
impulse restoration template matching under geometric uncertainties 94720
indirect-detect. flat-panel detector, diagnostic appl. *(Japanese)* 87718
intravascular echography, ultrasound contrast agent, parametric mapping 110811
IR imaging, target acquisition perform. modeling 75636
JPEG image denoising using fuzzy wavelets 118490
JPEG modified image compression tech. 95137
k-nearest neighbor learning, fast binary image resoln. increment 94652
landmine/UXO detect., GPR/EMI/magnetometer sens. fusion 77020
limited-extent images aliased because of spectral undersampling, recovery 118404
lossless image compression, lin. colour transform. coeffs. 118610
lossy image compression, quincunx wavelet transform lifting scheme 95077
low-pass split wavelet pyramids, appl. to efficient zerotree coding of med. images 107113
marine search & rescue, motion images in bad conditions, obj. detect. 106699
max. entropy image restoration revisited 84292
max. intens. projection, fast hierarchical algm. 98131
max.-order-min.-support fns. 84277
motion estim., block matching algm., pixel sub-sampling 84345
MPEG-4 enhanced digital TV set-top terminal, implement. 118532
MPEG-4 shape decoding, conformance test 118533
MRI, ANN reconstruction from noisy sparse images 76428
MRI, dyn. k-space sampling, temporal freq. anal. 76438
multi-slice helical computed tomography, long. sampling & aliasing 132790
multiresolution adaptive image pyramid based compression algm. 106984
multiresolution nonlin. filters appl. 118182
multiresolution permutation filters based on decision trees 94566
multiresolution proc. for robust mesh watermarking 73508
myocardial wall tagging with undersampled projection reconstr. 76440
nested-multilevel redundancy exploitation for fast block matching 95082
NOAA AVHRR images, class. algms. comparison 111384
noisy images, spline-based resampling 129588
nonlin. image interpolation through extended permutation filters 94563
nonuniform X-ray image sampling on electron probe *(Chinese)* 132496
NP-3 UHF image quality, enhancements using digital spotlighting tech. 99147
obj. detect. using 2D-adaptive sampling, viper algm. 118337
particle filter for tracking multiple objs. 95714
pattern recogn., meas. errors consideration 118713
POCS-based image reconstruction from irregularly-spaced samples 95183
prefiltering/reconstruction filters for vol. rendering 106833
progressive lossless image coding, adapted nonlin. multiresolution decomp. 129777
projective transforms., efficient param. estim. 84306
radiographic images, Web-based retrieval using multi-scale tree VQ in wavelet domain 110977
reconnaissance pushbroom electro-opt. sens., motion correction 99125
region-selective image compression, nonuniform sampling theorem 106988
rem. sampling, cost effective ref. data sampling algm. 122603
rem. sens., on-board opt. image compression 111382
rendering overview, software/hardware issues 94567
resoln. scalable lossless progressive image coding via conditional quadrisection 95095
sampling approach to ultra-fast obj. location 118355
SAR real-time proc., 1st order motion compensation, resample problem 75085
SAR wavefront reconstruction using motion-compensated phase hist. data/DPCA-based GMTI 75128
scene boundary detect. method 107128
self-referencing level-set method for image reconstruction from sparse Fourier samples 118257
sidelobe reduction, analytic nonlin. approach 96928
single-CCD camera captured color images, multi-image resoln. enhancement 94822
spectral anal. for light field rendering 94570
splines for sig. proc. 129462
stereo imaging, wavelet-based reconstruction of irregularly-sampled images 94650
still image coding, hybrid method 129719
subband sampling, multimedia commun. 108433
subpixel interpolation and matching, empirical filter estim. 106643
super-resoln. image reconstruction with multisensors, preconditioned iter. methods 94746
superresolution, efficient wavelet-based algm. 94656
surfaces hierarchical representation and coding, 3D polygon meshes 95250
VLSI-oriented algm. for wavelets part image reconstruction from few projections *(Japanese)* 106816
vol. images, complex boundary extraction via deformable surface 73509

image scanners
2D high-speed bar-code detect. syst., time-sharing laser light emission method 93943
3D surface digitizing/modeling develop. 73213
bar-code 2D detect. syst. using multi LD with time-sharing light emission operation 86510
bilevel image corners for scanning charact. estim. 95569
complex circ. charts, inform. extraction, tachograph disks 129939
Counter Sniper, small projectile and gunfire localization syst. 107412
environ.-friendly product develop. *(Japanese)* 78729
film image resoln. meas., electronic methods *(German)* 95345
FOCOIVA lens 2D image scanner 127872
gray-scale image based character recogn. algm. 95571

image scanners continued
hand-drawn shape outline capture via recursive subdivision 84570
LD rapid scanning M3 galvanometer imaging radar *(Chinese)* 131676
MM wave FMCW radar imaging for portable concealed weapon detect. 1092
model-based document image improvement 94676
multibeam & multipanel displays, scan archit. perceptual effects 109879
ocean scanning multi-spectral imager, on-orbit solar calib. meas. 99011
page skew detect. and correction based on line continuity *(Chinese)* 10673
planar refl. grating lenses, imaging syst. 121119
pneumoconiosis, optimal scanning, display and segmentation of ILO X-
image set 110980
radiographic image quality comparison from four digitization devices as view
on computer monitors 76214
spectral image capture device based on micromirror syst. 93223
stroboscopic stereo rangefinder 84209
wafer 3D micropattern meas., opt. probe & control design 120653

image segmentation
2D fast MRI brain segmentation, region-based level-set snakes 110889
2D generalized cyclic patterns for secret watermark generation 95159
2D human brain MRI white matter/gray matter boundary segmentation 9841
2D mesh-based video obj. segmentation and tracking, occlusion resoln. 1072
2D pseudo-Wigner distrib. for local spectra features extraction, texture an
106447
2D shape model automatic constr., brain appl. 87607
3-D skeletal kinematics, biplane radiograph seqs., knee appl. 87743
3-level thresholding, probab. partition/fuzzy c-partition 84143
3D and 4D images morph. operations, shape primitive detect. to skeletonizati
94983
3D automated segmentation and structural anal. of vascular trees using deform
ble models 121884
3D brain struct., adaptive-focus stat. shape model, segmentation 76420
3D cardiac motion estim. by point-constrained opt. flow algm. 132537
3D functional MR image segmentation using, GA 98416
3D graphic models, error-resilient coding via adaptive mesh segmentation 950
3D image anal. of fibrous materials 106673
3D med. image proc., math. morph. *(Japanese)* 98421
3D med. image segmentation, metaballs appl., struct. deformable models 1104
3D med. image segmentation algm., forecasting capability *(Chinese)* 94617
3D medical images, line and sheet struct. detect. and quantification 87308
3D model-based visual surveillance syst. 118559
3D motion multiresolution/luminance anal. based rigid obj. segmentation meth
84325
3D motion tracking by Kalman filtering 95424
3D MR image segmentation using mixture model and morph. filtering 1220
3D obj. recogn. using range images, morph. feature extraction and geometr
hashing 107285
3D PET, partial vol. effects correction algm., segmented MRI appl. 122251
3D PET imaging, partial vol. correction, image/sinogram based algms. 1222
3D phys.-based multi-obj. deformable model constr. 87684
3D range image, gradient based polyhedral segmentation 94696
3D sagittal brain MR images, automated segmentation by masking/restorati
operations 110867
3D scene, motion anal. and segmentation *(Chinese)* 118194
3D struct. tensor/curve evol. for image seq. segmentation 73148
3D transform coding of partitioned video seqs. with matching pursuits 1185
3D wavelet obj.-based video coding using layered obj. representation 95101
4D med. image segmentation, space and time shape constrained deformable su
faces 87309
abdominal aortic aneurysm segmentation, 3-D deformable model, CT imag
98565
abdominal aortic aneurysms, 3D image anal. 110947
abdominal organ recogn. in CT images, contextual neural net, fuzzy rules 765
abrupt change detect., multiplicative noise, power-law time-scale contra
129480
acrylic laser sculptures, segmented pixel drawing, thermal monitoring 10564
acrylic sculpture proc., laser segmented pixel drawing 105637
act. contour topologic transform., discrete-time CNN approach 107140
action categorization from video seqs. 73533
activated sludge, microscopic images based feature anal. 129460
adaptive segmentation/tracking of overlapping objs. with feedback 95009
Alzheimer's disease diagnosis, brain atrophy meas. by image segmentation an
fuzziness 129658
AM-FM image segmentation approach 94634
anatomical struct., robust 3D image segmentation with level sets 87310
anatomically accurate finite element grids from med. images 98156
arbitrarily shaped image segment representation by wavelet basis 84493
area morph. algms. 106815
area-granulometry, estimator of size distrib. of image objs. 94916
arterial/venous trees, highly automated segmentation from 3D MR angiograph
110901
artery-vein separation via MRA, image proc. approach 110856
artificial life for image segmentation 129555
artificial retina, optoelectronic cct., stochastic algm. 106775
artificial target segmentation method based on fractal features *(Chinese)* 11871
at. gesture component, unsupervised learning, auto clustering, min. descriptio
length 106664
atherosclerotic blood vessel tracking/lumen segmentation, MRI 98411
automated 3D PDM constr. using deformable models 106575
automated enhancement, segmentation and class. of digital brain images usin
networks of networks 110878
automated ovarian follicle segmentation using region growing 98342
automatic face cloning/animation using real-time facial feature tracking/speec
acquisition 73199
automatic meas. of intens. of motion activity of video segments 94910
automatic model-based semantic obj. extraction algm. 129690
automatic speechreading syst., lip feature extraction 94798
automation, OO approaches 95408
AUV obstacle avoidance & path planning, multibeam forward looking sona
78242
background-foreground segmentation, dominant motion estim. and static seg
mentation 94962
background-foreground segmentation via dominant motion estim. 73211
bank cheques, handwritten legal amounts segmentation, feedback-based approac
129941
bathymetric mapping, SPOT satellite data anal. 99024
Bayesian grouping for image segmentation and obj. recogn. 95550
BBLimage, portable open-source software toolkit for vol. image anal. 132714
beef meat, fat content determ. from NMR images 106719

ge segmentation continued
biological cell image segmentation with kernel-based dyn. clustering and ellipsoidal cell shape model 110516
biologically inspired autonomous robot, approach-avoidance behaviors learning 75628
biologically inspired visual syst. for autonomous robot 84564
biomedical image act. segmentation, saliency/dissimilarity 76229
biomedical image segmentation, expert delineation learning by neural net 121896
biomedical images/vols., interactive segmentation using connected operators 98152
black blood MRI quality and vessel wall segmentation 132738
blind target detect. from LADAR data 122762
blood cell image anal. for abnormalities 132509
blood vessels, deformable model with single point init. for segmentation, quantification and visualization in 3D MRA 87590
body parts tracking of multiple people, new approach 95598
body-seat interface, able-bodied/paraplegic subjs., press. distrib. anal. 132542
BOLD fMRI human brain imaging, ultrahigh mag. field 76443
BOLD MRI, functional neuroimaging, 1.5 & 3 T comparison 76444
bone MRI segmentation algm. assess. using SR micro-CT 132717
bone tumor segmentation from MR perfusion images with neural networks 110890
bone X-rays anal. syst. for prosthesis placement, segmentation module 76545
boundary filter optim. for segmentation-based subband coding 95700
brain, human, water T_2 relax. components, magnetisation transfer 132722
brain amyloidosis diseases, microscope image class. by filtering of amyloid plaque 121892
brain fMRI, stat. parametric maps, Bayesian approach to segmentation 122093
brain MR images, white matter areas extraction 98389
brain MRI, 3-D robust registration, dense deform. field, hierarchical estim. 76479
brain MRI, automated segmentation of cerebrospinal fluid and lateral ventricles 132778
brain MRI, automatic scan prescription 132672
brain MRI, fast fuzzy clustering segmentation algm. *(Chinese)* 110859
brain MRI, large lesions segmentation 98420
brain MRI, lateral ventricular vols., accurate meas. method 87599
brain MRI, long. change, normalised accurate meas. 110888
brain MRI, nonlin. diffusion for interactive multi-scale watershed segmentation 87584
brain MRI, perfusion-based segmentation using similarity mapping 122106
brain MRI, subcortical structs., automatic segmentation, inform. fusion 98418
brain parcellation, adaptable fuzzy C-means for improved image class. as preproc. procedure 98423
brain region auto-extraction from MRI, neural network controlled snake 110864
brain struct. segmentation, MRI, fuzzy modeling 98406
brain tissue class. from MRI using decision-tree learning tech. 122084
brain tissue segmentation in MRI, RF inhomog. correction method 110881
brain tissue vols. quantification using MRI fusion 76432
brain tumors automatic detect., MRI unsupervised segmentation 98405
brain tumours, corticospinal tract displacement simul. 87575
BrainSuite, automated cortical surface ident. tool 87578
Brazilian bank cheques, modular syst. for num. amount recogn. 129672
breast calcification segmentation from high-resoln. mammographic specimen radiographs, multi-scale algm. 98491
breast cancer, computerized thermography, image segmentation, temp. vars. 76387
breast dens. estim. on mammograms, computerized image anal. 87760
breast lesions, automatic segmentation on ultrasound 110685
Breast Perfusion Analysis System for MRI 110907
breast tissue, biomech. 3D FEM modelling, MRI data 76421
breast tissue dens. quantification via digitised mammograms 110915
breast US images, boundary detect. algms., eval. methodology 132605
bright targets segmentation using wavelets/adaptive thresholding 84273
broken handwritten digits anal./reconstruction 94692
CAD model acquisition, range image segmentation 94695
CAMIA, Computer-Aided Medical Images Analyzer 110532
car license plate recogn. syst., neural network based 84566
car license plates detect. from complex scene 73457
cardiac deform., regional, estim. of 3D strain from 4D cine-MRI and echocardiography, in-vivo validation 87662
cardiac elastography, local cardiac muscle motion imaging 110700
cardiac MR 2D vel. images, vortex segmentation 98413
cardiac MRI, multistage hybrid act. appearance model matching, ventricles segmentation 76481
carotid artery segmentation in US images, contour PDF 76371
carotid US images anal., EcoStudio computer tool 98275
CBIT, context-based image transm., med. appl. 84080
cell image texture-based segmentation, neural net/morph. 110536
cerebral blood flow MRI, arterial input fn., fuzzy clustering 87654
cerebral spinal fluid, white/grey matter, MRI segmentation 87566
chaotic image watermarking, region-based tech. 118622
character and video caption extraction method *(Korean)* 95581
chart anal. and recogn. in document images 129605
chest images, digital radiology, gradation proc. algm. 98517
chest radiographs, lung regions ident., segmentation approach 98537
chest radiographs/mammograms, computer-aided diagnosis syst. 132819
chest radiography, tuberculosis screening, computer-aided diagnosis 87757
Chinese bank check amount recogn. and segmentation 84518
Chinese road maps, automating data extraction/ident. 73144
chrominance data, high-compression by segmentation of luminance 118581
chromosome images, homologue class., iter. centromere segmentation algm. 87519
chromosome images multi-feature anal. and class. 87550
circumscribed contours/region growing/clustering fusion based 94544
class. combining neural networks and wavelet matching 118298
classified zerotree wavelet image coding/adaptive packetization for low-bit-rate transport 106969
cluster no. and influence zones estim. 118755
CNN visual µP, video compression algms. implement. 106869
CNS tumour malignancy eval., MRI, fractal dimens. use 76494
coding, morph. local monotonicity 106895
coding perform. of shape-adaptive DCT 129729
colon polyp detect., electronic cleansing, material tagging/image segmentation 132822
color aerial images, region-based segmentation, Karhunen-Loeve transform 118316
color based video segmentation using level sets 95311
color coord. systs. comparison *(Japanese)* 94612

image segmentation continued
color edge detect., local nonuniformity perceptual assess. 107230
color edge detector for text extraction under complex background *(Chinese)* 118756
color image segmentation, mean field annealing EM algm. 94833
color image segmentation based on fuzzy math. morph. 94818
color image segmentation based on HSL probab. dens. *(Chinese)* 84254
color image segmentation based on HSL probab. dens. *(Chinese)* 84120
color image segmentation simplification using fuzzy attributed graph 94520
color images, invariant face detect., orthogonal Fourier-Mellin moments and SVM appl. 95445
color images, noise atten. filtering tech. 129573
color images, shading correction/segmentation 129583
color images, spatial segmentation, min. description length formalism 94632
color preserving image segmentation 106483
color segmentation for localization in embedded systs. 84623
color video, fast act. obj. tracking 118378
color-edge extraction/seeded region growing 118723
color-texture regions, images and video, unsupervised segmentation 106880
colour image retrieval, multi-component cross entropy segmentation 129576
colour image segmentation, advances and prospects 129557
colour image segmentation, hierarchical fuzzy region merging tech. 118341
colour image segmentation for scenes containing vegetation and soil 94486
colour segmentation, anisotropic diffusion method 94862
colour-based facial image retrieval 118738
complex geophys. images, contrast enhancement/segmentation 98951
compression with non-uniform block segmentation and luminance approx. using bilinear curved patches *(Japanese)* 95145
computer vision, visual tracking in appl. domains 73267
concealed weapon ident., mm wave sens. 107272
concentric mosaic(s), planar motion and 1D cameras 106608
content based image retrieval in image databases, clustering based 106661
content based retrieval, area morph. segmentation 94940
content-based image retrieval, region-of-interest and spatial layout 95585
content-based image retrieval using fuzzy visual representation 118735
content-based image retrieval using sketch based queries 118737
content-based indexing in MPEG-[1,-2 & 4] domains 95028
content-based video coding, automatic obj. segmentation 118535
content-based video representation and indexing 73316
contextual constraints exploration for character preclassification 129601
contextual-constraint-based Hopfield neural cube, med. image segmentation 110517
continuous color images, real-time segmentation 84349
continuous human activity segmentation/recogn. 95600
contour-based grouping and obj. recogn. using Markov random fields 95493
contrast enhancement, self-avoiding random walk approach 118236
coronary artery imaging, ECG-triggered segmented 3D true-FISP tech. 132688
coronary vasculature, 4D quantif., angiography & US data fusion 98535
cortex inner/outer surfaces segmentation, PDE based approach 76493
cortex segmentation, variational geometric approach 121885
crater detect. for autonomous landing on asteroids 118418
CT brain images, stroke lesion anal., rule-based approach 132838
cursive handwriting recogn. via HMM based two-pass approach 73309
cursive handwriting segmentation method, character shape extraction appl. 94691
cursive word segmentation, morph. method 94693
curve evol. approach for image segmentation using adaptive flows 106638
curve evol. with fuzzy c-means clustering for image segmentation 106752
cylinder-bore surface defect detecting syst., computer vision tech. *(Chinese)* 89895
cytoskeletal organis. in chondrocytes, temporal var., image anal. 87541
data driven Markov chain Monte Carlo, image segmentation 106604
data-driven nonlin. diffusion for obj. segmentation 84324
DC motor commutation spark image-monitoring method *(Chinese)* 112542
deboned poultry phys. contaminant detect. by image segmentation 73145
deformable shape detect. and description, model-based region grouping approach 84533
Dempster-Shafer framework of automatic map updating by multispectral image fusion 106672
Dempster-Shafer theory based color edge detector 95519
Dempster-Shafer theory mass fn. determ. by fuzzy clustering 73461
denoising and segmentation approaches 84267
dermatoscopic images, multiresolution colour image segmentation tech. appl. 98150
DeskScan syst., face models scanning with desktop cameras 129417
detect. across images, synchronizable pulse-coupled neural networks 106665
detect. of ridges and ravines on range images and triangular meshes 73489
diaphragm motion quantification in fluoroscopy, computer program 76541
diesel spray image segmentation, likelihood ratio test 84161
diffusion snakes, stat. shape knowledge and image inform. in variational framework 118255
digital and computational video, conf., Tampa Florida (2001) 100380
digital mammography images, authenticity/integrity 110914
digital reconstr. radiography, vol. rendering, splatting shear-warp 132824
digital still cameras, color segmentation as aid to white balancing 94869
digital video proc., motion estim. and segmentation framework 94844
discrete convexity detect. of polyominoes 94989
distortion-invariant target recogn. syst. simul., learning VQ neural network 107234
document anal. results eval., graph probing method 129930
document anal. task, table ground-truthing problem 129932
document compression using rate-distortion optimized segmentation 73341
document image class. by modified X-Y tree encoding 129754
document images, font clustering/cluster ident. 73446
document page segmentation, automatic perform. eval. method 129933
document recogn./retrieval conf., San Jose, CA, USA (2001) 89587
document segmentation using polynomial spline wavelets 129562
document text segmentation using multi-band disc model 94888
double-sided handwritten archival documents anal., character extraction from interfering background 95446
dual head gamma camera PET, ^{153}Gd line source, atten. correction 122183
dyn. mosaicking, new methods 94784
dyn. prog. based algm. for optimal edge detect. in med. images 87355
dyn. scene, locally adaptive thresholding of seq. of image frames 106837
dyn. tracking/recogn. of curves, road detect. appl. 84618
echocardiographic 3D image anal., automatic 87501
echocardiographics images, 3D modeling and visualization of ventricles 132610
edge pixel class. with max. entropy for image segmentation 84242
edge-adaptive clustering for unsupervised image segmentation 94547
edge-preserving smoothing, region-based alternative 94945

image segmentation continued
edge-preserving subband image coding scheme based on separate coding of region and residue sources 129743
elderly health care, 3D stereo-vision-based robot 87805
EM/E-MRF strategy for underwater navig. 129503
endometrium, estim. in US images using recursive model 132603
endometrium charactn. in connection with uterine contraction 132604
endoscopic images, automatic boundary enhancement and detect., iris filter 76202
endoscopy, virtual, WWW-based, for CT anal. of bronchial airways 110946
endurance athletes, iliac arteries kinking detect., MR angiography 122075
evol.-based adaptation strategy for VQ image filtering 76484
extraocular muscle borders detect. using math. morph. 76544
extraocular muscle vol. meas. using dyn. contours 87598
eye 3D US images, high-resoln., morph. assay 110722
eye detect., fuzzy template matching, feature-param.-based judgement 95463
face, recogn./charact. feature extraction 73512
face detect., color images with complex background, neural 107219
face detect., general framework 73541
face detect. algm. for video database appls. 94640
face detect. for multimedia appls. 94641
face localization in complex scenes, orient. template matching 95501
face segmentation and feature tracking for videophone appl. 84642
face-color modeling and segmentation, mixture model 118753
facial feature detect., color segmentation/KL transform *(Chinese)* 95431
facial features detect. on images with multiple faces 73550
fast range image segmentation, edge detect. strategy 84228
fast segmentation using level set curves of complex wavelet surfaces 94838
fast video interp., automatic interp., semiautomatic interp. *(Chinese)* 94604
feature indexing in database of digitized x-rays 94912
feature-based syntactic and metric shape recogn. 73491
feature-based video mosaic 94714
fetoplacental vasculature, 3D power Doppler US imaging 132611
Fibonacci thresholding, sig. representation and morph. filters 130058
fiducial marks automatic segmentation method 73150
filtering using scale-space continuity, wavelet-based method 73157
fingerprint image class. by core anal. 73465
fixating act. agent, visual cues 86668
flattened image mosaicing from straight uniform generalized cylinders, projection distortion anal. 84097
flux maximizing geometric flows, geometric act. contour models 110866
football match image seqs., automatic camera calib. 95449
foreground segmentation using adaptive mixture models in color/depth 95011
forward-moving images, mosaicking/warping 94853
freq.-sensitive ellipt. competitive learning, texture segmentation 106729
functional MRI, tissue segmentation-assisted anal. for human motor response combining neural net and fuzzy C-means 76483
fuzziness in image recogn. 118700
fuzzy aggregated connectedness for image segmentation 129888
fuzzy images, line segment extraction 118748
fuzzy-region-segmentation 106669
GA, geostatistics, and fuzzy c-means clustering 106458
gamma camera dead-time correction for ^{131}I, scatt. independ. 122249
Gaussian mixture param. estim., iter. method 107246
generalized mosaicing 106462
geodesic act. contours, adaptive for image segmentation 84108
geometric morph. of granular materials 73228
globular material, feature extraction and edge detect., hybrid neural network appl. *(Chinese)* 129869
gradient magnitude based region growing algm. for accurate segmentation 98552
gradient-based approach, segmentation of human face 118680
gradient-echo coronary MR angiography, 3D spiral vs. Cartesian 132774
gradual shot transit. detect., unified approach 106448
gray image segmentation and assoc., primary view perception 95477
gray level edge thinning method 84568
gray level thresholding using Havrda and Charvat entropy 106836
gray-scale image proc., lin. CNN 94723
gray-scale images, multifractal anal. 106828
gray-scale nonlin. filter design via multiresolution apertures 129464
grey-scale images, adaptive threshold-gradient segmentation 94444
haemodynamic eval. with TURBO BRISK, phase contrast angiography 76473
hand gesture contours, automated class. for gesture-based interact. and commun. 73127
handwriting stroke extraction, XYTC transform 129926
handwritten character segmentation, conditional independence assumption 129666
handwritten dates on bank cheques, knowledge-based segmentation syst. 129671
handwritten Korean text lines, word segmentation method *(Korean)* 94925
handwritten numeral string recogn. via two-stage HMM based syst. 129673
handwritten word recogn., lexicon-driven, distributed computing 129680
handwritten word recogn., slant correction, 2D warping *(Japanese)* 95465
head boundary location with 2D CW transform 84578
head detect. method based on region shield segmentation 84576
head model, EEG/MEG appls. *(Chinese)* 110608
hierarchical histograms, image-based data retrieval representation 84289
hierarchical image segmentation algm. based on hepta-tree 118339
hierarchical pre-segmentation without prior knowledge 110875
hierarchical wavelet image coding, iter. backward segmentation 95071
high dimens. clustered data model-based interpolation 107021
high temp. phys. prop. meas. with CCD camera, image segmentation algm. 107226
high-speed high DOF spatial normalization for human brain imaging 76206
hip joint, newborn, 3D visualization using ultrasound and automatic image segmentation 110724
hippocampal surface struct. in patients with unilateral mesial temporal sclerosis, shape anal. 98390
hippocampus of patients with mesial temporal sclerosis and temporal lobe epilepsy, MRI, deform.-based segmentation 98392
histogram image unimodal thresholding 118665
HK and SC curvature description methods 84227
housekeeping service robot, laundry isolating/unfolding task 86674
human face, paralinguistic features extraction method *(English)* 84281
human face computer animation, phys. based model obtained from MRI 118336
human face detect., prediction-and-verification 94965
human head MRI images segmentation, anisotropy reduction of topol. operators 76478
human segmented natural images database, segmentation algms. evaluation 106628
human skin colour phys.-based modelling under mixed illuminants 84596
human visual behavior, top-down guided eye movements 106428

image segmentation continued
hybrid 2D phase unwrapping by fuzzy clustering for SAR images 86229
hybrid morph. proc. units archit. for real-time video segmentation systs. 1022
hypercomplex sigs., analytic sig. extension to multidimensional case 129648
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
hyperspectral imagery, adaptive hierarchical segmentation algm. based on qua tree decomp. 94539
hyperspectral imagery, detect. and segmentation 73189
ice images proc. interface for automatic features extraction 106783
IEEE image and sig. proc. and anal., conf., Pula, Croatia (June 2000) 89596
IEEE image proc., conf., Vancouver, BC, Canada (Sept. 2000) 78470
iliosacral screw placement, percutaneous, computer-assisted, clinical validati 87792
indust. image proc., real-time behaviour, multivariate approach 113745
Insight, common validation methodology for med. image segment tion/registration algms. 84109
integrated segmentation and depth ordering of motion layers in image seq 129631
intell. transportation systs., vision-based moving vehicles detect. *(Englis* 73478
interactive graph cuts for optimal boundary & region segmentation of objs. in D images 106471
interactive image retrieval, integrated segmentation tech. 94941
interactive image segmentation using multiple color spaces *(Chinese)* 10720
intermediate-level vision, complexity, confusion, and perceptual grouping, ma ping complexity 118767
intermediate-level vision, complexity, confusion, and perceptual grouping, curv like representation 118766
intermediate-level vision, perceptual grouping, curve-like rep. 118662
intermediate-level vision, perceptual grouping, mapping complexity 118663
intracranial white matter lesions, MRI, multispectral 3D segmentation 87595
intravascular devices localisation with paramag. markers in MRI 132711
intravascular ultrasound images, modeling and segmentation *(French)* 1106
IR images, fuzzy c-means clustering with brFCM algm. 118488
IR target detect. and recogn., modified method for small targets *(Chinese)* 735
iris segmentation based on refl. and eyelash detect. model 84238
ISPA 2001, image and sig. proc. and anal., conf., Pula, Croatia (June 200 124234
iterated transform. theory-based image coding 73411
Japanese address reading, lexicon-driven handwritten character string recog 129940
joint source-channel coding for image transm. over noisy channels 95155
JPEG 2000, regions of interest encoding and reconstruction 118562
JPEG images, unsupervised image obj. segmentation 95378
JPEG-2000 error resilience technol. 106942
knee arthroplasty, planning by use of 3D US image vols. 110725
knee articular cartilage, high resoln. MRI, watershed segmentation 110863
landmine detect., autom., multiple features, GPR & acoustic data 77064
landmine detect., automated, multispectral imaging, iter. morph. algms. 7706
Laplace integral for watershed segmentation, radiographs appl. 98551
large-size arclength meas., noncontact ultra-accurate syst. *(Chinese)* 100623
laser radar range profiling, expectation-max. algms. 118315
layered obj. representations, segmentation maps coding 95208
left ventricular ejection fraction determ., gated blood-pool tomography 98579
level set algm. for minimization of Mumford-Shah functional in image pro 118256
level set anal. 106755
license plate serial no. segmentation/recogn. *(Japanese)* 118776
light point, real-time detect. and tracking *(Chinese)* 118372
line drawing segmentation into lines of different orient., neural net-based meth 118699
liver, automated segmentation, multislice CT images *(Japanese)* 122152
local stereovision matching, ADALINE neural network use 118750
localization and meas. of miniature SMC objs. 113746
long image seqs., motion segmentation 129619
lossless compression of burn wound images 110504
low quality camera images, binarisation method 129664
low-contrast images segmentation, Fourier spectrum approx. 84153
LSI cct. video image proc., contour extraction algms. 101997
lumbar spine, 3D MRI seq. for computer assisted surgery 110897
lung adenocarcinoma, tissue colour images anal. 87350
lung nodules in CT scans, automated detect., preliminary results 110934
lung vascular sizes, spatial distrib., 3D greyscale morph. 87702
LV, 3D geometric model reconstruction, almost automatic method 122025
LV segmentation in cardiac MR images 110874
LV segmentation/VRML visualization in echocardiographic images 76370
LV shape/motion, 3D dyn. model, deformable superquadrics 76361
M-band wavelet transform, adaptive approach to unsupervised texture segmenta tion 106512
machine vision image proc. techs., review *(Italian)* 118675
mag. reson. angiography image anal. using skeletonization and dist. transform 76495
mag. reson. image anal. by inform. theoretic criteria 87567
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 10159
mammogram microcalcifications, unsupervised detect. 87349
mammographic acquisition param. effects on semi-automated quantitat. measur of breast cancer risk 98494
mammographic image segmentation, tissue-mixture model, Markov random fields 98548
mammographic mass charactn., spiculation measures/morph. features 98527
mammographic mass detect., adaptive thresholding, region growing 122154
MAP-based probabilistic diffusion algm. for correspondence/line field estim 94552
Markov random fields and deformable models integrat. for image segmentatio 84107
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
mass detect., lesion site selection by morph. enhancement/contextual segmenta tion 76502
math. expression recogn., robust method, perform. eval. 129931
math. modelling, estim. and imaging, conf., San Diego, CA, USA, July-Aug 2000 67380
math. morph. *(Chinese)* 118707
meat sci., fat quantification, MRI/image anal. techs. testing 132716
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
med. image magnification, curve evol. approach via Mumford-Shah functiona 87311
med. image segmentation algms., efficiency 121872
med. images, lossless compression by hierarchical segmentation 110534
med. images, semi-automatic segmentation of 3D objs. 87705
med. images, shape recovery using level set regularizers 110543

mage segmentation continued
med. imaging, geometric deformable model in confidence field 73221
med. imaging modality interfacing, relay station impact 98120
med. X-ray imaging, digital self-adaptive acquisition 122137
medial-guided fuzzy image segmentation 84106
microangiopathy, capillary image segmentation exploiting weak shape constraints 87315
microcalcification detect. by multi-scale methods and stat. techs. 98496
microcalcifications, extraction from digital mammograms using regional watershed 98490
min. invasive robotic coronary artery bypass, 3-D visualization 76599
min. mean cut 106569
mine detect. systs., perform. assess. 73193
mixed raster content compression, block-threshold segmentation optim. 95198
mobile robot moving obj. tracking, US sens., virtual US image 111541
model-based EEG/MEG, MRI brain segmentation algm. appl. 132713
model-based obj. tracking using stereo vision 95555
modeling method for video stream based on seq. struct. graph *(Chinese)* 129735
modified gray level morph. gradient with accurate orient. estim./reduced noise sensitivity 107253
modified gray level morph. gradient with low threshold values/noise sensitivity, perform. 107254
modular algm. for automatic slice positioning in tubular organs 87770
mosaic constr. from image stream with parallax 94846
mosaicing, seq. bundle adjustment method 129496
motion compensated prediction, moving obj. segmentation *(Japanese)* 73162
motion compensation using representation of regions 118575
motion estim., affine invariant feature set appl. 94931
motion estim. and segmentation using GA 84192
motion segmentation, orthogonal projection matrix of shape space *(Japanese)* 94611
motion segmentation and tracking using 3D Markov random field 106764
motion segmentation by subspace separation and model selection 106647
motion-based video segmentation using fuzzy clustering/mixture model 84320
movement estim./contour extraction 106482
moving image foreground extraction 129580
moving obj. high-speed tracking algm. 129447
moving obj. segmentation, review 95238
moving obj. segmentation, spatial-temporal Markov random field *(Chinese)* 73197
moving pictures, automatic extraction method of facial regions for occlusion faces 118780
MPEG4 obj.-based compressed video, digital watermarking algm. 84477
MPEG compressed domain, B-spline curve representation of segmented obj. 106530
MPEG video seqs., scene detect. 95236
MPEG-2 coded video, blockiness, freq. domain meas. 106860
MPEG-4, semiautomatic segmentation using spatio-temporal gradual region merging 118530
MPEG-4 body animation param. estim. from depth images 94847
MPEG-4 camera systs., real-time practical video segmentation algm. 118531
MPEG-4 coding, joint optim. of compression/restoration 118502
MPEG-4 video, obj.-adaptive vertex-based shape coding 118637
MR cardiac images, variational approach for segmentation of LV 122087
MRI, fast T_1 mapping with vol. coverage 98438
MRI, interleaved EPI, oblique flow artifacts, centric reordering 76447
MRI, multiple sclerosis lesions, 3-D surface reconstruction using spherical harmonics 132772
MRI, multispectral image segmentation using hierarchical self-organizing map 110908
MRI, robust fuzzy image segmentation 106845
MRI 3D struct., image segmentation, adaptive-focus stat. shape model 87583
MRI angiography, cerebral blood vessel extraction, region growing 76492
MRI brain image segmentation using AM-FM model 110898
MRI brain images, connectivity-restrained multi-scale segment., fuzzy C-means 76471
MRI cardiac images, left ventricular segmentation 132755
MRI cerebral images, rule-based ES for automatic segmentation 76429
MRI images, 3D heart segmentation and tracking, FEM-based deformable model 132756
MRI intra-operative surgeries, vol. registration by surface point signature/mutual inform. maximization 87683
MRI vertebral cross-sects. 122117
MTI data clustering and mil. form. recogn. 99133
multi-band image segmentation, scalar approach 94820
multi-camera detect./tracking using region-matching 95004
multi-layer CNN based texture segmentation 84147
multi-obj. detect. and segment., context-free marker-controlled watershed transform 84544
multi-obj. image ident. algm., high-level Hu's moments *(Chinese)* 129918
multi-purpose vision systs. for mobile robotics 94459
multi-resoln. mechanism for image segmentation method 84629
multi-seeded fuzzy segmentation on face centered cubic grids 98510
multiframe infinitesimal motion model for reconstruction of scenes with multiple lin. moving objs. 106648
multiframe stereo reconstruction, global region segmentation 106467
multimodal med. vol. registration, spherical markers appl. 98554
multimodality image fusion toolkit, high-speed interactive fusion 76433
multiple handwritten word recogn. techs. fusion 84592
multiple image descriptions for browsing and retrieval 94762
multiple motion obj. segmentation, homogenous region merging 107297
multiple motion segmentation by edge tracking between two frames 129632
multiple objs., real-time color-based tracking, Cocoa archit. 94851
multiple regions-of-interest query for accessing image databases 84245
multiple sclerosis lesions, automated segmentation, model outlier detect. 110855
multiple-sclerosis brain tissue class., stat. 3D image segmentation algm. 110909
multiresolution segmentation for images with low depth of field 95473
multiscale anal. of pixel connectivity props. 94545
multiscale class. using complex wavelets/hidden Markov tree models 94658
multiscale image segmentation, wavelet-domain HMM 107213
multiscale skeleton generation, optimized approach 129528
multiscale texture segmentation using hybrid contextual labeling tree 94835
multiseeded segmentation using fuzzy connectedness 84532
multisensor aerial images, class-scale space segmentation 94503
multisensor image segmentation, Dempster-Shafer fusion 111386
Mumford-Shah functional, num. minimization 124680
Mumford-Shah functional for image segmentation/denoising/interpolation/magnification 94779
Mumford-Shah problem, curve evol., boundary-value stochastic procs. 94837
myocardial gated SPECT, nonparametic nonrigid registration 122243

image segmentation continued
myocardial gated SPECT, space-time segmentation, level set act. contours 98578
myocardial perfusion SPECT, reconstr.-based compens., Hotelling observer 122179
myocardial SPECT perfusion imaging, var. wall thickness effect 132859
MyoTrack, 3D deform. field method to measure cardiac motion from gated SPECT 87774
n-D med. images, computationally efficient nonlin. edge preserving smoothing 132514
natural images, color segmentation and fig.-ground segreg. 95494
natural scene anal., nearest-neighbour classifiers 84094
news and sport videos, semantic inform. extraction 129569
Newtonian operator for contrast enhancement *(French)* 106439
non-texture/textured images classification, region segmentation 95587
nonlin. image simplification via levelings/reconstruction filters, PDE approach 94718
nonlin. variational image smoothing/segmentation on multiprocessor machine, globally convergent iter. schemes 73258
nonoverlapping block binary image representation, segmentation 129608
nonrigid objs. discrim., motion/segmentation 118752
obj. based video, mesh based segmentation and update 84464
obj. boundary extraction, snake algm., watershed transform 129876
obj. boundary segmentation, fast and accurate act. contours 73317
obj. in translation inspection, limited X-ray viewpoints 100632
obj. recogn., projective alignment with regions 84535
obj. region detect., sens. array proc. approach 132525
obj. segmentation, fast geodesic act. contours 118724
obj.-based image segmentation, perceptual importance charactn. 94788
obj.-based intra-frame wavelet video coding 129775
obj.-based video abstraction, integrated scheme 129700
obj.-based video segmentation, perform. eval. metrics 118552
objs., learning-based detect., segmentation, matching 95456
objs. image ident. using wavelet and moment *(Chinese)* 107274
objs. selection with freehand sketches 106552
oblivious cocktail watermarking by sparse code shrinkage, regional-/global-based scheme 95264
obstacle detect., color segmentation/stereo homography 94729
oesophagus outer wall detect., US images, data fusion, stochastic optim. 76350
omni directional, real time, stereo image acquisition syst. 84146
on-board satellite image compression, bit rate and local QC using rate/distortion criterion 118558
opt. wavelet transform *(Chinese)* 94602
optim.-based image segmentation algms. 73531
optimum thresholding via class uncertainty and region homog. 94609
optoelectronic complex inner product image segmentation, ATR/machine vision appls. 107233
ordered-subsets EM algm., image segmentation, brain MRI appl. 132715
organ class. from cross-sect. images, fuzzy c-means med. image clustering 98417
organ segmentation, interactive, using graph cuts 87312
oSPIHT, embedded obj.-based SPIHT image coding 129774
osteoporosis mouse model, bone archit., 3D SR microtomography 132826
outdoor image seqs., tracking/recognizing two-pers. interacts. 95599
paediatric brain vols. comparability, image orient. effects, 3D MR data 110887
paediatric kidney CT, knowledge-based segmentation, parenchymal vol. meas. 122141
page segmentation and text extraction from gray-scale images, microfilm 95575
pairwise attraction and repulsion, image segmentation 106466
panoramic mosaicing with image interpolation 84355
particle images, thresholding algms., comparative perform. 73171
partitions encoded with transit. points method, constrained/unconstrained simplification 95219
PDE approach to image smoothing/magnification using Mumford-Shah functional 106748
PDEs and morph. appl. 94502
perceptible level lines and isoperimetric ratio 94636
perfusion quantif., Levovist infusion & power Doppler image pairs 98265
pers. detect. in complex scenes, real-time surveillance syst. 129512
perspective textured plane segmentation through ridges of CW transform 106814
PET, dyn. images, segmentation using cluster anal. 132907
PET, segmented atten. correction, fuzzy inference systs. 122188
PET, whole body, segmented atten. correction, neighbourhood EM clustering 122186
PET transm. scan time reduction, std./segmented atten. correction 122184
PET/CT image registration of rat brain/skull using AIR algm. 122212
pixel clustering on custom computing machine, data truncation effect 95426
planar patch extraction with noisy depth data 84222
pneumoconiosis, optimal scanning, display and segmentation of ILO X-ray image set 110980
point-cloud segmentation, self-organizing feature map networks *(Chinese)* 118448
polarimetric SAR image segmentation using robust competitive clustering 120460
pollen grain images, nonlin. features extraction 121864
polygonal snake adapted to opt. noise models, min.-complexity segmentation 95580
polyps, computerised detect., CT colonography, automated colonic walls segmentation 122140
precise camera operation params., robust depth-map estim. 94700
preprocessing methods for computer images of particle saltation *(Chinese)* 107273
probabilistic framework for segmenting people under occlusion 107178
probabilistic PCA and ICA subspace mixture models for image segmentation 129615
procedures optimisation, GA *(Japanese)* 84085
progressive content-based retrieval using tree-struct. graphs 106831
projective transforms., efficient param. estim. 84306
prostate cancer, treatment planning, CT image segmentation 87809
prostate segmentation from 2D ultrasound images 110683
prostate tissue malignancy, tissue class. & elastographic imaging 121998
pseudo power signatures appl. 94543
pulmonary nodule images segmentation using 1-norm minimization 118214
pulmonary nodule surrounding struct., charactn. using differential geom.-based vector fields 87707
pulmonary nodules, surrounding structs. anal., differential geom. based vector fields 98549
pulmonary ventilation kinetics, dyn. ^{19}F-MRI using inhaled SF_6 76445
radar multi-segment detect. proc., GA-based optimum design 75093
range image segmentation, morph. watershed 84513
range imagery, variational segmentation by piecewise facet models 96902

image segmentation continued
range sens. using moving-aperture lens 106908
range/intens. image fusion, segmentation, robust trimmed method 107217
real-world eval. of generic document recogn. method for mil. form 129604
real-world video seqs., shot detect., lighting change problem 75315
real-world video seqs., shot detect. with multi-measures 75314
reconfigurable hardware for real time image proc. 94794
rectilinear buildings, detect. and modelling from multiple aerial images 84127
region extraction based on elastic-plastic deform. model 84177
region extraction using multiple act. contour models 94842
region merging/class. segmentation algms., extensive partition/gray-level connected operators 106690
region restriction and noncausal algm. for line proc. of image seq. 106723
region segmentation, conc.-based adaptive approach 129846
region segmentation via deformable model-guided split and merge 106532
region shape similarity for image retrieval 94766
region-based color image segmentation scheme, unsupervised seed determ. 94523
region-based high quality video coding 95107
region-based image coding, image partition simplification 118571
region-based image retrieval 84290
region-based scanning for image compression 95217
region-based subband/wavelet image coding 95294
region-based video coding by shape adaptive DCT, prediction error regions determ. 95100
region-based watermarking by distrib. adjustment 106900
regional hyperthermia treatment planning syst. 76613
regional watermarking based on histogram spec. 129476
regularized EM algm. 73265
relational graph matching for human detect. and posture recogn. 95423
relative fuzzy connectedness among multiple objs., image segmentation algms. 73288
relative segmentation quality, objective eval. 84321
reliable video segmentation, fade/dissolve detect. 107130
rem. device control on Internet 106676
representation of image, nonsymmetric half-plane AR model 118192
resistive cct. simul. based edge enhancement for image segmentation 106446
retinopathy, diabetic, abnormality detect. in automated mass screening syst. 110851
road and pipe detect. within LADAR intens. images via fuzzy techs. 120468
rotorcraft, unmanned, vision syst. for landing 94996
SAR image segmentation-based tech. for ship detect. 96975
SAR imagery, high resoln. sens. and anisotropic segmentation 84200
SAR imagery algms., conf., Orlando, FL, USA (April 2000) 67397
SAR images, road detect. using GA with region growing concept 96909
SAR images, ship detect. using segmentation-based approach 96986
SAR multiscale image segmentation using wavelet-domain hidden Markov tree models 75133
SAR polarimetric image segmentation using texture partitioning and stat. anal. 96889
SAR polarimetric imaging, Gaussian Markov random field model 86161
SAR spaceborne images, road detect. using GA 75135
SAR unsupervised image segmentation using recursive partitioning 75134
satellite imagery, panchromatic, small obj. detect. 122622
satellite weather imagery, texture-based segmentation 98984
scalar images, topol. point-sets segmentation 84126
scene boundary detect. method 107128
scene change detect. in video seqs. 106905
scintimammography energy resoln., ROI deconvolution, truncated SVD 122195
screening mammogram, artificial intell. algm. for tumour detect. 98512
scribble recognizer, online, eval. 106727
sectored snakes, CT image learned-energy segmentations 118718
segmentation of image seq., multiple feature clustering 118191
seismic acoustic image segmentation, fuzzy fusion of attributes 122605
self windowing for high-speed vision 118435
self-organizing vision, stochastic clustering 129547
semantic video obj. extraction using four-band watershed/partition lattice operators 73147
semi-supervised induction of fuzzy rules for image segmentation 129589
semi-supervised segmentation refinement, stat. act. grid method 94590
seq. image segmentation based on blob matching *(Chinese)* 118352
seq. segmentation, act. appearance motion model 94843
seqs. taken from video camera, changing weather 84197
shading-and highlight-invariant color image segmentation using MPC algm. 94876
shallow water mine class., CAD/CAC algms., sonar data fusion 77052
shape and topol. constraints on parametric act. contours 129419
shape deform., SVM regression and appl. to med. image segmentation 110509
shape matching of partially occluded objs. using hierarchical content description 84617
shape recogn. based on wavelet-transform modulus max. 73467
shape-resolving local thresholding for obj. detect. 73519
sharpness preserving image enlargement based on ramp edge model 107215
signature verification online via model-guided segmentation 129678
skin detect., novel adaptive colour segmentation algm. 129610
skin lesions segmentation, partial differential eqns.-based image proc. algms. 98149
skin US param., global & local estim., high resoln. images 110716
skull stripping problem in MRI solved by single 3D watershed transform 87581
Snake act. contour model for visual obj. tracking 95559
snake contours for multiple objs. segmentation 84350
snakes-based cardiac contour extraction, automatic init. 76470
soccer image segmentation, unsupervised color texture feature extraction/selection 94708
sorted region merging to maximize test reliab. 94546
spatio-temporal image segmentation using opt. flow and clustering algm. 94961
spatio-temporal images, transit. effects charactn. 94469
spatio-temporal joint probab. images for video segmentation 94646
SPECT, ^{67}Ga imaging, scatt. compensation method, ANN use 122180
SPECT filtered backprojection images, partial vol. effects correction 122248
SPECT nonuniform photon atten. correction, Natterer's method var. 122182
SPECT/PET, segmented atten. map reconstruction, incomplete transm. data 122170
spinal cord injury, vivo dyn. contrast-enhanced MRI 76446
spiral CT angiography, pulmonary vascular tree, automated segmentation/visualisation 122142
sports video annotation, visual tracking syst. 95546
SPOT multispectral images, bathymetric segmentation *(French)* 122699
stat. models 73172
stat. multiregion snake-based segmentation 73217
stereo correspondence using GA-based segmentation 106455
stereo images, segment matching, neural net 94725
stereo matching algm. based on gray-level segments *(Chinese)* 106732
stereo visual servoing, proper stacking of Jacobians 94731
stereoscopic video seqs., act. contour-based video obj. segmentation 106832
stereotactic neurosurg., image guided, functional database 76601
striata, ^{123}I SPECT imaging, simultaneous reconstruction/segmentation method 132868
structural segmentation of LV, imaging strategy 87351
successive estim. of registration params., error stabilization 84305
superquadrics-based obj. representation of complex scenes from range images 118274
surface defect detect. with histogram-based texture features 94451
surgery, image-guided using 3D ultrasound, intra-operative soft tissue deform., Bayesian estim. 87480
surveillance, eval. of video segmentation methods 118348
SVM appl. 94548
symmetric region growing algms. 94633
sync. enlargement algm., nuc. med. image segmentation *(Chinese)* 98570
talk and game shows segmentation framework 106641
tele-education support syst., movement recogn. of lecturer 84531
template matching strategies for fast face detect. 118784
temporal video segmentation using frame/histogram-space 106854
temporally seq. chest images, digital subtraction, rib elim. 76542
tesselations by connection in orders 94971
text block segmentation using pyramid struct. 94893
text location in complex image using cluster based templates 84194
text region segmentation in natural scene images 129606
text segmentation of machine-printed Gurmukhi script 94889
text string detect. from mixed text/graphics images 94887
texture based class. and segmentation, Laguerre-Gauss transform 129897
texture boundary detect. using 2D Gabor elementary fns. 84098
texture feature anal. using assoc. rules 107143
texture image segmentation based on human vision perception *(Chinese)* 118351
texture image segmentation by combining multiple segmentation results *(English)* 106821
texture segmentation, multiscale Bayesian model averaging framework 94518
texture segmentation, self-supervised, by complementary feature type 118664
texture segmentation using fractal signature 94596
texture segmentation using moving av. modeling approach 94637
texture-adaptive act. contour models 98134
texture-based segmentation, multifractal charactn. 94542
textured image segmentation based on fractal/filtering 107218
textured image segmentation using Markov random field in wavelet domain 94834
therapy, image-guided, intra-operative image segmentation and non-rigid image registration 87785
time series symbolization, fuzzy neural network clustering algm. 73312
tolerance control with high resoln. 3D meas. 84232
topol. encoding of 3D segmented images 94979
touching handwritten Japanese character segmentation 94892
touching numeral segmentation, water reservoir based approach 129942
trabecular bone vol. fraction mapping by low-resoln. MRI 98435
trabucular bone MRI, automated 3D region growing algm. 98472
trachea segmentation in CT images using act. contours 110922
traffic surveillance, content-based event retrieval 129815
traffic video surveillance, vehicle extraction and tracking 129475
transit. region algm., 1D lin. regression proc. *(Chinese)* 94620
tree-struct. wavelet decomp. based multisensor image fusion algm. *(Chinese)* 94621
trilinearity to reduce misregistration in image mosaicing 118279
two-stage texture segmentation using complementary features 94832
ultrasound image segmentation, adaptive snake model 87474
ultrasound image segmentation, region growing method 110779
ultrasound images, gray level stats., lognormal approx. 98312
ultrasound images, ML contour estim. using beta-stats. 132607
unconstrained handwritten numeral string segmentation 95574
underwater robot, concurrent mapping and localisation 109305
underwater video mosaicing for seabed mapping 84304
unsupervised niche clustering algm. for multivariate clusters and color image segmentation 129598
unsupervised texture segmentation, one-step mean shift and boundary Markov random fields 94588
unsupervised texture segmentation using dominant image modulations 106754
US images, auto-segmentation by GA 122024
US images, morph. operations, locally variable structuring elements 98276
US images compression, space-freq. segmentation with entropy coding 98315
user-assisted segmentation, partition-based image representation 84322
variational and level set methods in computer vision, conf., Vancouver, BC, Canada (July 2001) 113213
variational multiphase motion for Mumford-Shah model 106751
vascular segmentation in phase-contrast MRA, fusing speed and phase inform. 87582
vector probab. diffusion 94558
vehicle GPS/map matching integrated navig. syst., D-S reasoning *(Chinese)* 86265
vehicle license image segmentation using wavelet transform 84239
vehicle license plate ident., digital image proc., neural nets 106701
vehicle parking detect. method using image segmentation 84601
vel. estim. using orient. tensors, parametric motion, and simultaneous segmentation 106535
ventricular fn., MRI eval., true FISP vs. FLASH obs. 87681
ventricular shape visualization using selective vol. rendering of cardiac data sets 132518
versatile learning by sample, stat. pattern class. in biomedical images 121889
vessel-like patterns detect. in noisy environ. 87549
video and image coding, shape-adaptive transforms, overview 107000
video coding, automatic face detect. and tracking 106892
video coding, VLBR, motion estim. algm. 95138
video compression, robust region-based motion estim. 95081
video data, real-time recursive motion segmentation 118608
video denoising using fuzzy-connectedness principles 84358
video editing using fig. tracking/image-based rendering 94569
video obj. extraction via surface optim. and Voronoi order 118588
video obj. localization/tracking, semi-automatic seeded region growing algm. 107032
video obj. relevance estim. 118553
video obj. segmentation based on global motion estim./compensation 118330

image segmentation continued
video obj. segmentation using Eulerian region-based act. contours 106554
video obj. tracking algm. based on motion re-estim. 84329
video objs. partitioning into temporal segments using local motion inform. 106855
video objs. segmentation/tracking, content-based video indexing/interactive TV/prod. systs. 94645
video segmentation, fuzzy theoretic approach, syntactic features appl. 118411
video segmentation by integrat. of color, textual and temporal inform. 106838
video segmentation using spatiotemporal Markov random field 84195
video seq., adaptive resoln. image acquisition using mosaicing 84303
video seq. segmentation, rule-based framework for post-proc. merging 84326
video seq. segmentation mask quality, objective eval. 129478
video seqs., automatic moving obj. extraction *(Chinese)* 95430
video sig. temporal events in all dimens./scales 95016
video surveillance, image anal., stat. model-based change detect., spatial regularization 129510
video surveillance camera moving obj. tracking algm. 106839
video temporal segmentation, gradual transits. detect. 107127
video text recogn. by segmentation, character selection 129607
video watermark embedding, ROI ident. with PCA 129698
video-rate pipeline straight line extraction algm. 107125
videos, digital, textual insert extraction 129910
virtual and real obj. separation, ICA 118698
Visible Man lower extremity visualization, segmentation by evol. 98143
VLBR variable frame rate video coding 107043
VLBR video seq., obj. based segmentation 84425
vocal folds regional vibratory pattern assess., videostrobokymography 87542
vol. vascular images, skeletonization 98477
vol. X-ray CT images, automatic lung segmentation, accurate quantitation 87742
VR using concentric mosaic, constr./rendering/data compression 95362
watershed transform based segmentation, fast algm. and FPGA-based archit. 90934
watershed-based image segmentation, joint region merging criterion 94635
weld QC, radioscopic testing, automatic image proc. 100642
whole-body scintillation camera image registration, conjug. view 122244
wooded region/agricultural region discrim. by SAR 111485

image sensors
see also CCD image sensors; CMOS image sensors; focal planes; television camera tubes
3D digital imaging and modeling, conf., Quebec City, Quebec, Canada, May-June 2001 78459
3D displacement measuring moire interferometer 75864
3D imaging of transparent objs. 129490
3D range image resampling using B-spline surface fitting for opt. range sens. 75650
180° FOV LW IR lens design 82265
act. matrix flat panel imagers, radiotherapy, phys. charact. 109673
act. pixel sens., intell. opt. sens. ccts., opt.-syst.-on-a chip *(German)* 75607
adaptive GMRF anom. detector for hyperspectral imagery, perform. anal. 75617
airborne scanning laser ranging-imager sens. 111372
analog front-end, image sens. sig. conditioning 68963
AOTF hyperspectral imagers 75606
articulated HBM, hierarchical 3D pose estim. 84333
articulated human models, real-time tracking, 3D shape-from-silhouette method 86669
ASTER cryocooler, in-flight perform. 111399
ASTER early sci. outcome and operation status 111393
atmos. correction using, MODTRAN4-based algm. 76832
attentive foveal sens. for target tracking 109677
automatic lane keeping, Perception Net based sens. fusion 86650
automotive intell. image sens. for inner space monitoring 124038
automotive night vision technol., safety improvement appls. 134577
automotive parts, CAD-guided dimens. inspection, graph-based surface merging 100622
autonomous aircraft landing, navig. syst. design, nonlin. pass. sens., nonlin. filtering appl. 88059
behavioural meas. syst. for children with develop. disorders using omni-directional camera *(Japanese)* 132631
binary distorted diffr. grating for multiplane imaging and wavefront sens. 104862
biochem. image sens., light-addressable potentiometric *(Chinese)* 97427
blasted surfaces roughness meas., light scatt. method 75873
camera intrinsic param. calib. *(Chinese)* 109688
CAMEVA camouflage effectiveness, target detectability estim. 133393
chromatic adaptation perform. of different RGB sens. 97392
clandestine night time surveillance, long-range laser-illum. imaging 109700
clutter charactn. metrics 95508
coastal ocean imaging spectrometer, on-orbit calib. 99009
complex spatio-temporal interact., sens. computing 97583
computed tomographic imaging spectrometer 97343
concealed weapon ident., mm wave sens. 107272
cone beam vol. CT image artifacts, wavelet-anal. 122134
conf., sens./syst./next-generation satellites, Barcelona, Spain (Sept. 2000) 113183
conf. on sens. and control techs., Wuhan, China (June 2000) 78371
contraband/explosives detect., scintillation & semicond. sens. appl. 110437
data fusion using median filters and self-organizing feature maps 94509
diffractive 3D-grating opt. sens. with trichromatic color constancy 97349
digital camera syst., resoln./image quality, MTF *(Japanese)* 86612
DOE fab. for opto-electronic hybrid IS 104779
dual-energy hybrid imaging sens., single exposure radiography 110945
electronics packaging struct., microDAC strain meas. 115994
ELNOS X-ray diagnostic table syst. with flat panel detector *(Japanese)* 76533
eval. of image intensifiers for scientific research 86637
field spectroradiometric data covering 0.4-2.5-µm wavelength region, post-proc. 76833
flat panel X-ray image sens., amorph. Se & polycryst. CdTe *(Japanese)* 122146
flat-panel X-ray detector for digital radiography & fluoroscopy *(Japanese)* 76532
flexible assembly, flexible parts feeding 89837
flexible parts assembly algm., visual sens. syst. 86673
forward-looking airborne camera image degrad., phys.-based color image enhancement approach 129508
foveated wide FOV imaging syst., liq. cryst. SLM 86640
free-form surface, adaptive DAQ and modelling, struct.-light vision sens. appl. 86651
Gamma Knife treatment spec. verif. using stereo-opt. camera 76619
geo-spatial image anal. appls. 76825

image sensors continued
geostationary atmos. sounding instrum. 133326
GLIMPS projectile, sens. and taggant delivery systs. 111314
high dyn. range panoramic imaging 106460
high gain n-well/gate tied PMOSFET image sens., fab. in CMOS proc. 75638
high precision QW IR photodetector camera systs., med. imaging appls. 87544
high-energy X-ray/neutron modelling & digital imaging for NDT 101564
high-precision laser beam center meas. 71874
HV overhead elec. lines, fully-automatic live-line maint. robot 88463
Hyperion robotics project, sun-sync. navig. 131970
hyperspectral adaptive matched filter detectors, comparative anal. 75193
hyperspectral data anal., mitigation of atmos. effects 76863
hyperspectral image sens., mil. value 97342
hyperspectral imagery, matrix factorization algms. for band selection 76953
hyperspectral imagery spectral anal., HMM approach 133278
hyperspectral images, charactn. and delineation of plumes, clouds, and fires 75622
hyperspectral rem. sensed images, systematic disturbances anal. 73113
hyperspectral syst. simul., hyperspectral sens. simul. and VNIR testing results 75621
hyperspectral syst. simul., integrated sens. scene modeling and simul. archit. 75620
indoor robot, 2D relative motion estim., monocular images 75609
inductive array imaging of buried objs. 77109
Infrared Space Observatory, CAM LW detector, cosmic rays 120927
Infrared Space Observatory, ISOCAM detectors, review 120924
Infrared Space Observatory, ISOCAM detectors response 120925
Infrared Space Observatory, ISOCAM LW glitch effects 120929
Infrared Space Observatory, ISOCAM LW transients 120933
Infrared Space Observatory, ISOCAM SW transient effects 120932
Infrared Space Observatory, ISOCAM-LW dark current 120926
Infrared Space Observatory, ISOPHOT, space weather effects 120934
Infrared Space Observatory, ISOPHOT transient effects 120931
intens.-hue-saturation-based image fusion with saturation compensation 73143
IR converters based on ferroelec.-semicond. thin-layer systs. 86526
IR image proc. tech. for vehicle sens. appls. *(Japanese)* 118362
IR images, defocus/vibr. distortions modeling 118380
IR imaging, target acquisition perform. modeling 75636
IR syst. design proc., four-step iter. 75605
IR target acquisition modeling, atmos. turbulence MTF 133399
landmine localization, vehicle-mounted IR imager calib. 75347
Landsat 7 ETM+, early ground-ref. calib. results for using small test sites 74878
Landsat 7 satellite syst. program, present and future 74877
Landsat sens. cross-calib. using nearly coincidental matching scenes 73182
large-area image capture device with organic sens. 86609
laser range-imaging vehicle sens. devel., electronic toll collection appls *(Japanese)* 97396
log-polar images, disparity estim. and vergence control 131966
low quality camera images, binarisation method 129664
low-cost vision sens. 75614
machine vision for robot control/in-line proc. monitoring, advances 97358
machine vision image sens., IPOT 2001 exhibition, reviews 120884
machine vision technol., emerging trends 118213
material ident. over var. of scene conditions and viewing geom. 73180
MCP photon counting imagers, electronic readout systs. 86645
meta motion planner, navig. packages comparison problem 97369
micro optics conf., Quebec City, Que. Canada, (June 2000) 100406
micro-obj. manipulation, robust vision syst., MINIMAN micro-robot project 86648
microbolometer uncooled thermal imaging sens., law enforcement appls. 109711
microrobot posn. and speed control sens., photoetching tech. 81600
Microscopic Visual Feedback syst., High Speed Vision *(Japanese)* 84089
mil. target acquisition, thermal imagery, perception studies 129861
Mine Hunter/Killer program, close-in detect. syst. 77091
MMW imaging systs., wideband proc., photonic correl. 80396
mobile robot posn., omnidirectional visual sens. SYCLOP *(French)* 73131
mobile robot vision-based localization sens., sens. uncertainty field computation 97398
mobile robotics visual sens., resoln. enhancement by mech. vibrs. 75616
mobile robots, biologically-inspired visual landmark learning 75643
MODIS and ASTER airborne simulators, imaging spectrometers 98885
monolithic LWIR/NIR multispectral QWIP night vision 86660
MSG SEVIRI imager, in-flight verification & calib. 122628
MSI imagery simul. from HSI data 73181
MTI dense-cloud mask algm. comparisons 99046
MTI init. on-orbit calib. perform. 97346
multialkali photocathodes, objs. reflective radiation, spectral matching factors 75612
multiple-wavelength interferometry, 3D absol. dist. meas. *(German)* 75884
neuron-BJT, silicon retina and CNN 91132
night vision imaging spectrometer (NVIS) perform. params. 73185
NIR absorpt. tomography, ICE meas. appl. 121257
occupant detect. using SVM, intell. airbags 100310
ocean scanning multi-spectral imager, on-orbit solar calib. meas. 99011
omni directional, real time, stereo image acquisition syst. 84146
opt. vehicle classifiable sens. devel. for ITS *(Japanese)* 97397
Palomar 5-m telescope, QW IR photodetector astron. imaging 86658
paper curl shape meas. by stereoscopic camera syst. 86966
pers. recogn. syst. using fibre grating vision sens. *(Japanese)* 107145
phase only liq. cryst. SLM optoelectronic Zernike filter, high-resoln. wavefront anal. 109684
photoelectronics develop. overview 86647
point-robot posn. control, single-camera visual servoing 86607
portable digital video cameras, image proc., VLSI switched-current implement. 95354
proc. tools develop. and appls. *(German)* 131967
refl. laser intens. from IR syst., diffr. theory *(Chinese)* 86610
rem. surveillance of building interiors by maneuverable sens. 106797
rigid body visual servoing, navig. fns. 86617
robot artificial cpd. eye, optimal sens. morph. 86649
robot navig., combined config. space/occupancy grid approach 75639
robot state space constr. by attention control 109694
robotic part assembly, neural/fuzzy optimal proc. model 100570
SAIM mobile multisensor image exploitation syst. 99119
scanning thermal viewer opt. systs. size calc. 86626
scatterable landmines detect., high contrast 77117
Seagle-1, portable thermal imager 75652
self-referenced hand-held range sens. 86643
Shack-Hartmann sens. for aspherical surfaces nonnull testing 109718
silicon retina chip for precision image spatial/temporal derivatives 109678

image sensors continued
single-photon energy resolving detectors, supercond. electronics requirements 75662
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
smart vision sens., theoretic design 121061
soccer robots, omni-directional catadioptric vision 131985
sparse aperture imaging, origs. and hist., opt. synthesis imaging 120937
spatially discrete coherent imaging systs., optimal pixel profiles 97352
spectral variability modelling of ground irradiance fns. 75619
spectroradiometers ground-ref. calib. 98947
survey of electronic products charact. *(German)* 131983
sustained neurons in fly, analogue IC design 91134
systs.-in-a-package technol. research at Interuniversity Microelectronics Center 67595
T-ray imaging, package inspection & portable 3D scanners 120908
telerobotic systs., virtual environ., sens. feedback assimilation 109704
thermal cameras, temp. meas., internat. metrological organizations 86665
thermal viewer image quality, photodetector array fill factor 109697
threat sens., textural feature assessed camouflage methods, low false alarm rate 133386
time-correl. single photon counting, 3D imaging 106743
tomographic distributed ground sens. arrays 75634
unattended imaging sens. advances and appls. 75630
unattended surveillance and monitoring syst. 111634
video-rate range sens., depth from defocus, real-time range estim. 75661
visual syst. of insects, modeling via autonomous mobile robots 84150
visually cluttered scene search time, fuzzy logic approach 133394
VLSI image sens. project chip, undergraduate course, design cycle 126954
wavelength calib. and instrum. line shape estim. of LWIR hyperspectral sens. from in-scene data 76859
wide-field sparse-aperture imaging, space-borne surveillance appls. 122750
Wiener generalized image reconstruction from colour sens. data using scale invariant prior 94951
Xetal, CMOS low-power high-perform. smart camera proc. chip 102230
$Ba_{1-x}Sr_xTiO_3$, film, MOCVD, uncooled IR image sens., dielec. bolometer mode 86530
CsI:Tl scintillator-Si-well X-ray microdetector based on deep RIE techs. 110942
GaAs QW IR imaging photodetectors wafers, MBE-grown, commercial prod. 86662
GaAs hybridized QW IR photoconductors arrays at Goddard Space Flight Center 86657
GaAs photocathodes, objs. reflective radiation, spectral matching factors 75612
HgI_2 based high-resoln. X-ray act. matrix image sens. 109669
HgI_2 thick film radiological X-ray detectors, charactn. 110926
InAs-GaSb uncooled superlattice photodiodes 71548
NbN DSP module, IR FPA sens. 70827
SF_6-N_2 gas mixture, creeping discharge under neg. µs pulse voltage, barrier shape effects *(Japanese)* 127153
a-Si X-ray imager, large-area, perform., NDE appl. 120895
a-Si, large area X-ray image sens. arrays, MEMS fab. technol. 110426
a-Si large-area MEMS fab., thick SU-8 photoresist, X-ray image sens. array 97375
a-Si microbolometer based IR camera for unattended ground sens. 75632
a-Si p-i-n diode/organic LED image sens. and display device 97733
a-Si:H, image sens. array, large-area, two-color 97382
a/µcSi:H laser-scanned p-i-n photodiode for image detect. 109658
a-Si:H p-i-n imager, spatial resoln. 109674
a-Si:H pass. pixel sens. for med. imaging, VHDL-AMS modeling/simul. 109719
a-Si:H thin film imaging technol. on glass/plastic substrs. 75629
ZnO:Al/a-pin Si_xC_{1-x}:H/Al optimized laser scanned photodiode imaging transducer 86666
a-Si technol., digital cct. stabil. 114859

image sequences
2D directional filters, new struct. for opt. flow estim. 94674
2D face warping using single image 73548
2D image frame matching degrad., elevational motion influence 110778
2D mesh-based video obj. segmentation and tracking, occlusion resoln. 107282
2D obj. displacement/strain distrib. estim. by relative opt. flow *(Japanese)* 95489
2D robust shape estim. of moving objs., MAP detect. rule for spatial/temporal coherency 84327
3-D skeletal kinematics, biplane radiograph seqs., knee appl. 87743
3D adaptive wavelet transform/context modeling for scalable lossy to lossless video coding 95211
3D cardiac motion estim. by point-constrained opt. flow algm. 132537
3D coded video seqs., spatio-temporal post-filtering 107040
3D face model creation from video 118277
3D face model reconstruction from video seq. 106662
3D fractal compression for real-time video 129772
3D head pose recovery for interactive VR avatars 107258
3D head tracking/head pose estim., stabilized adaptive appearance changes model 106705
3D image reconstr., random sampling/voting method 84339
3D interlaced video compression, image ghosting removal 95131
3D intra- and interframe target detect. in IR/mmW image seqs. 111622
3D LAMP, layered panoramic representation 106659
3D manipulation of motion imagery 84287
3D matched filter for detect. of land mines 73125
3D med. data, multirate coding 98161
3D motion estim., projective spatio-temporal differential stereo *(Japanese)* 129524
3D motion inform. estim. from opt. flow by subspace theory *(English)* 107286
3D motion multiresolution/luminance anal. based rigid obj. segmentation method 84325
3D motion/struct. recovery from motion/shading flows 118725
3D obj. database, multi-viewpoint image coding and view synthesis 118570
3D obj.-based description techs. for virtual prod. 94898
3D plane params., iter. computation 129491
3D polygon meshes for hierarchical representation/coding of surfaces 84452
3D reconstruction of aorta from tomographic image seq., anal. and optimisation 122135
3D rigid struct. recovery from 2D motion, weighted factorization method 94526
3D scalable wavelet video compression, improved color coding 118615
3D scene, motion anal. and segmentation *(Chinese)* 118194
3D shape and motion recovery, error charactn. of factorization method 73291
3D shape recovery using, video camera with, gyro sens. and error anal. 118270
3D source models for content-based video coding 95269
3D struct. tensor/curve evol. for image seq. segmentation 73148
3D transform coding of partitioned video seqs. with matching pursuits 118572

image sequences continued
3D wavelet obj.-based video coding using layered obj. representation 95101
3D wavelet transform decomp. for video compression 95317
3D wavelet transform video coding, optimal bit allocation strategy 73429
3D wavelet video coding, boundary effects 106935
4D med. image segmentation, space and time shape constrained deformable sur faces 87309
abdominal aortic aneurysm, US image boundary recogn. validation 110676
absol. frame displacement based image seq. stabilisation, Kalman filterin 129423
accurate opt. flow in noisy image seqs. 106590
act. appearance motion model segmentation 94843
act. contours, motion estim. based tracking 118413
act. vision, robust control and tracking 84117
action categorization from video seqs. 73533
action events recogn. from multiple viewpoints 95602
adaptive post-proc. error concealment based on video-surveillance syst. feedbac 95306
adaptive segmentation/tracking of overlapping objs. with feedback 95009
aerial image seqs., change detect. 94966
aerial photography, image seq. overlap monitoring 98944
air/water two-phase flow, bubble rise vel., image proc. 106716
airborne targets in IR image seqs., detect. 95566
alignment of non-overlapping seqs. 106598
ambiguous reconstructions 106607
anatomy/fn. MR imaging based on intermolecular double-quantum coherence 110862
ang. distrib. of refl. spectral intens., image reprod. 94865
angiographic image seqs., simulated, layer decomp., accuracy assess. 132803
aortic wave vel., rapid meas., in vivo eval. 98434
apparent motion reversal, joint spatio-temporal/spatio-temporal-freq. representa tions 106709
arteries, elastic modulus/motion estim. using intravascular US *(Chinese)* 12203
articulated and occluded video obj. motion tracking 129511
articulated motion, modelling/tracking from multiple camera views 129620
assembly actions detect. by scene obs. 84302
atherosclerotic blood vessel tracking/lumen segmentation, MRI 98411
ATM network, flow control for encoded video appls. 129751
attitude tracking of aircraft with single imaging sens. using num. optim.-base methods 73119
automated anal. of echocardiographic apical four-chamber images 76365
automated registration of rem. sensed images with adaptive generation of corre sponding point pairs *(Japanese)* 118438
automatic speechreading syst., lip feature extraction 94798
automatic target recogn., temporal data/decision level fusion 129835
automatic tumour extraction from 2D CT images by neural computation 12212
automatic white bal. for digital image containing human face 73481
autonomous vehicles, obj. recogn. 107244
B-pictures bidirectional motion backward tracking for anchor pictures interfram concealment 95307
background model init. algm. for video surveillance 106586
background-foreground segmentation, dominant motion estim. and static seg mentation 94962
Bayes detect. and target tracking in real clutter image seqs. 96941
Bayesian spatio-temporal motion detect. under varying illum. 129469
Bayesian tracking for learning image stats. 106657
BGA solder joint X-ray slicing using transm. X-ray systs./standalone softwar 113584
biological objs. movement/motility, act. contours 87300
bit-plane matching algm., adaptive, full-search *(Chinese)* 129685
block-based adaptive lossless image coder 84454
block-based video coding, blocking artifacts reduction 106859
blotches corruption, image seqs., restoration method *(Japanese)* 73250
brain gliomas MRI, FLAIR seq., CSF/blood flow artifacts reduction 98388
brain region auto-extraction from MRI, neural network controlled snake 11086
brain shift, 3D intraoperative MRI, image registration using finite-eleme biomechanical model 87576
breast MRI, contrast enhancement curve eval. using neural net 98394
camera motion, error propag. to epipolar constraint 131978
camera self-calib., varying focal length, 2 images 120921
car license plate recogn. syst., neural network based 84566
cardiac deform., regional, estim. of 3D strain from 4D cine-MRI and echocard ography, in-vivo validation 87662
cardiac wall motion detect., spatiotemporal-freq. anal. 76584
cardiovascular syst. blood vel. estim., pre- & post-proc. filters 110743
chrominance data, high-compression by segmentation of luminance 118581
CMOS visual sens., focal-plane computation, low-complexity algms. 73468
CNN visual µP, video compression algms. implement. 106869
color based video segmentation using level sets 95311
color constancy, biological model for still/video images 118468
color video, fast act. obj tracking 118378
color-texture regions, images and video, unsupervised segmentation 106880
compressed image transm. on fixed-rate digital channels 107050
compressed low resoln. video, motion estim./resoln. enhancement 95201
compressed video, motion activity region-based descriptor 95505
compressed video enhancement, pre-/post-proc. algms. 106992
compressed video enhancement using visual quality meas. 95199
compressed video seq. decoding for wireless networks, unified image/bitstrea anal. 118577
compression coding scheme, 3D wavelet transform *(Chinese)* 73359
computer animation, image-based visual servoing appl. 94727
computer vision, visual tracking in appl. domains 73267
content-based error-resilient video coding, worst-case criterion 95298
content-based video coding, automatic obj. segmentation 118535
contex-based predictive coder for lossless/near-lossless video compressio 84460
continuous human activity segmentation/recogn. 95600
contour based class. of video objs. 94915
coord. ref. syst. of nonstationary sigs. 106791
cross ratio, PDF 129628
data-driven model for monocular face tracking 107191
DCT-based pyramid struct., significance tree image seq. coding 95212
DCT-coded video seqs., picture quality meas., block visibility 73340
deconvolution and noise control 118184
deformable modeling for characterizing biomedical shape changes 94977
deformable shape recovery by factorization based on spatiotemporal meas. matr 73290
Dervish mine-clearance vehicle, image-seq. motion estim. 100309
DeskScan syst., face models scanning with desktop cameras 129417
diamond zonal-based algms. for fast/efficient motion estim. 95241

image sequences continued
digital image seqs., rot. motion estim. and anal. 118392
digital image stabilizer, matching algm., Gray-coded bit-plane, video seq. 73205
digital subtraction peripheral angiography using image stacking, init. clinical results 98525
digital video, content authentication/tamper detect. 95063
digital video, objective quality eval., MPEG-2 syst. 84372
digital video proc., motion estim. and segmentation framework 94844
digital video seq. stabilization 118356
digital video seqs., long transit. anal. 94769
dimens. anal. of image motion 106533
disc based video recorders, MPEG-2 streams virtual editing 118328
discontinuities in opt. flow fields 106536
dyn. & gated image seqs., spatially-adaptive temporal smoothing 132861
dyn. complex scene anal. with fractal embedding method *(French)* 106440
dyn. face recogn. across multiple views 129915
dyn. hand gesture recogn., randomized self-organizing map algm. 73204
dyn. image seq. anal. using fuzzy measures 106430
dyn. mosaicking, new methods 94784
dyn. nuc. med. seqs., factor anal., ambiguous solns. correction 122246
dyn. scene, locally adaptive thresholding of seq. of image frames 106837
dyn. textures 106631
echocardiographic 3D image anal., automatic 87501
echocardiographic image seq. filtering in freq. domain 132609
echocardiographics images, 3D modeling and visualization of ventricles 132610
edge detect. algms. using struct. from motion task 107118
efficient low bit-rate video-coding algm. focusing on moving regions 129694
ego-motion estimation; 3D motion fields, multiple cameras 84093
egomotion, moving objs., expectation driven detect., neural archit. 109708
EM/E-MRF strategy for underwater navig. 129503
emission tomography, MAP estim., fast EM-like methods 76563
endometrium, estim. in US images using recursive model 132603
endometrium charactn. in connection with uterine contraction 132604
endometrium motion estim. in US image seq. 76363
entropy-based gaze planning 118417
estim. of opt. flow in 3D voting space for brightness change 94462
Euclidean reconstruction and auto-calib. from continuous motion 106645
eye-state action unit detect. by Gabor wavelets 73544
face anal./synthesis 73200
face and hands tracking in complex background using colour and motion 129902
face detect. algm. for video database appls. 94640
face detect. in color images and video seqs. 107292
face focus coding, H.263+ video coding std. 73426
face recogn. from multi-pose image seq. 129906
face tracking from video seq., act. appearance algm. 107196
facial expression recogn. approach for perform. animation 95552
facial expressions in realistic communicating clones, view-based approach 118589
facial expressions recogn. from video frames 118777
facial landmarks location and tracking, Gabor wavelet networks appl. 95450
facial model estim. algms. using stereo/mono image seq. 73484
facial motion estim. via 3D facial synthesis and animation *(Korean)* 94924
FANN-based subsampling of color video seqs. 118222
fast block-based motion estim. via DC matching 107255
fast motion estim. based on spatio-temporal Gabor filters, parallel multi-DSP archit. 94749
fast rot. phased array real-time 3D acquisition unit, DP 110757
FDG, fast parametric image reconstruction, dyn. PET data 132904
feature-based image seq. compression coding 95342
feature-based video mosaic 94714
film flicker removal, enhanced approach 106487
firing particle detect., adaptive fuzzy threshold 73169
fixating act. agent, visual cues 86668
flicker correction for heavily-corrupted old film seqs., robust method 94686
flicker reduction in old films 94684
FLIR seqs., stabilization, obj. detect. and tracking 94791
fMRI data anal. using spline wavelets 132706
fMRI neuroimages, ICA 122083
football match image seqs., automatic camera calib. 95449
frame-based tracing of multiple objs. 95005
frame-coherent vol. rendering 84145
frontal-pose image recovery from single profile image 95500
fund. matrix threading by trifocal tensor 94608
fusion of electrorotation freq. estim. 118198
fusion through consideration of image texture components 84516
Gabor attributes tracking for face verification 84613
gastroenterology patient record consultation, MPEG-4 scene comp. 88015
gel-phantom absorbed dose imaging, 3D data visualis. toolkit 133133
geometric struct. with indeterminacy, gauges/gauge transforms. for uncertainty description 84262
gesture recogn. for walking pers. by reduced range image seq. 73537
grey level intens. prediction using neural nets 118472
group-of-frames/pictures color histogram descriptors for multimedia appls. 84288
H.26L video coding std., adaptive motion vector accuracy 95104
H.26L video decoder optim. 107005
hand shape extraction and understanding by multiple cues fusion technol. 73540
heart deform., tagged MRI and elasticity-based region model 98409
hierarchical mesh-based global motion estim., occlusion areas detect. 94933
hierarchical model based human motion tracking 95543
hierarchical unsupervised learning of facial expression categories 95018
hierarchical video motion estim. using neural network 95323
high-resoln. color image reconstruction from compressed video seqs. 129473
high-resoln. image generation from video image seqs. by light field 94907
hip operations simul. and design of custom-made endoprostheses using VR 87726
histogram image unimodal thresholding 118665
HMM and act. shape models for skeleton-based walking motion anal. 106822
HMM-based visual speech recogn., normalized training 94435
human action, view-invariant representation/learning 95014
human face detect., prediction-and-verification 94965
human face orient. estim. using symm. and feature points anal. 73459
human head movement from image seq. 84176
human motion, higher-order spectral anal. 95544
human motion tracking/anal., unified framework 95013
human tracking with mixtures of trees 107169
hybrid image registration for digital camera image fusion 118197
ICA for compressed vector representations 106909
IEEE image proc. conf., Vancouver, BC, Canada (Sept. 2000) 78470
imaging model 106469

image sequences continued
indiv. ident. using lip shape as password *(Japanese)* 106819
indoor robot, 2D relative motion estim., monocular images 75609
integrated segmentation and depth ordering of motion layers in image seqs. 129631
inter-frame 3D DCT subband hierarchical coding *(Chinese)* 73367
interactive visual dialog, act. vision based obj. recogn. 129844
Internet, face detect. for security syst. 118385
Internet packet-loss resilient video using MPEG-4 fine granular scalability 95302
interpolation, opt. flow based models 73275
intra-frame video coding using biorthogonal symmetric wavelet filters 95397
intracranial arteriovenous malformation visualisation with physiological inform. 110960
intravascular US palpation, automated approach 110809
intrinsic images derivation from image seqs. 106597
IR image seq., target detect. probab. 106426
IR target detect. and recogn., modified method for small targets *(Chinese)* 73521
IRFPA, adaptive nonuniformity correction *(Chinese)* 75626
joint likelihood methods for mitigating visual tracking disturbances 95715
joint watermarking and video compression 95160
kidney perfusion, ultrasound contrast agents, radiofrequency proc. 76344
land cover mapping, supervised, ART neural net class. 122613
legged robots, guidance in unstructured environ., qualitat. vision 86604
LF vibrated image seq., enhanced-resoln. restoration using convex projections 129414
liq. opt. flow in images, validity revisited 94554
locally adaptive deblocking filter for low bit rate video 95202
long image seqs., motion segmentation 129619
low bit-rate video coding using space-freq. adaptive coding 129723
low-bit motion detector archit., power scalability and VHDL model 95275
lumbar spine, 3D MRI seq. for computer assisted surgery 110897
lung CT, efficient sliding thin-slab vol. visualisation 110916
LV segmentation/VRML visualization in echocardiographic images 76370
LV shape/motion, 3D dyn. model, deformable superquadrics 76361
machine vision, conf., Bristol, UK (Sept. 2000) 124239
manipulator with vision, self-calib. by factor method 109407
match moving tech. for merging CG cloth and human movie seqs. 73400
Matching Pursuits tech. for weighted atom searching in video coding *(Chinese)* 73416
med. B-scan ultrasound images, 2D noise-robust blind deconvolution 98306
med. image vol. rendering method 98135
media database storage and retrieval conf., San Jose, CA, USA (2001) 89590
mesh objs. generation/tracking, coarse-to-fine approach 95216
micromechanical flying insect, virtual insect flight simulator, software testbed 98894
mitral annular line seq. from 2D+1D precordial echocardiogram 76369
mobile multimedia commun., robust video watermarking 96261
mobile robot 3D struct. estim. and planning, vision and range fusion 86605
mobile robot localization, image fingerprint seqs. derivation and matching 97389
model-based bundle adjustment for face modeling 106655
model-based obj. tracking using stereo vision 95555
modified MPEG-2 predictive video coding, spatio-temporal scalability 118557
monochrome video seqs., spatiotemporal filter for noise reduction 106765
monocular video seqs., homography matrices 129495
monocular vision syst. for autonomous vehicle guidance 84307
morph. filter design using GA 118240
mosaic constr. from image stream with parallax 94846
motion anal. and class. with directional Gaussian derivatives 94748
motion compensation algm. based on second-order prediction 94712
motion compensation using representation of regions 118575
motion estim., affine invariant feature set appl. 94931
motion estim., circ. motion, epipolar geom. from profiles 84130
motion estim., data fusion soln. to accuracy-efficiency trade-off problem 94551
motion estim., fast block-matching algm. 84357
motion estim., global motion model based on B-spline wavelets 129582
motion estim., multi-image gradient-based algms. 129527
motion estim. using spatio-temporal CW transform, new results/implement. 94669
motion estim. with opt. flow-based adaptive search region 84390
motion recogn. of lower limb without marks, research 107237
motion vector integrat. vs. frame posn. smoothing for image seq. stabilisation 129579
motion-based class. of cartoons 84500
motion-based video segmentation using fuzzy clustering/mixture model 84320
motion-compensated frame differences, space-depend. characts. anal. 95283
motion-compensated video coding using 3D scene models 95278
motion-compensated video compression with reduced complexity encoding 73330
motorsensory activation prototype device, fMRI 110873
moving image, future 97063
moving obj. detect. in image seqs. by perceptual edge tracking 94845
moving obj. segmentation, review 95238
moving obj. time-to-contact estim., point tracking *(Chinese)* 118401
moving obj. tracking, inform. extraction 94466
moving objs., multiple, tracking with laser range finder 97000
moving objs. based extraction on morph. motion filter 84363
MPEG coded video, Markov-modulated self-similar procs. modeling 118591
MPEG compressed video, macroblock inform. based efficient wipe detect. 106856
MPEG spatial scalability improvement 96317
MPEG VBR video stream, stat. charact. *(Chinese)* 129756
MPEG video, MAP estimator for high resoln. video reconstruction 95200
MPEG video seqs., scene detect. 95236
MPEG-2 coded video seqs., space/freq. masking, digital watermarking appl. 95058
MPEG-2 compressed video, variance extraction 107126
MPEG-2 image seq. coding, rate-distortion optimal fast thresholding 84380
MPEG-2 seqs., hierarchical transm. in noisy environ. 84378
MPEG-2 video compression, illum.-invariant algm. for subpixel-accuracy stabilization 95147
MPEG-2 video decoder, error concealment tech. 118537
MPEG-4, semiautomatic segmentation using spatio-temporal gradual region merging 118530
MPEG-4 facial animation, audiovisual integrat. in multimedia commun. 129781
MPEG-4 real-time appls., multiple video objs. rate control algm. *(English)* 73369
MPEG-4 shape coding, fast motion estim. algm. 95084
MPEG-4 video streams, DWT-based obj. watermarking syst. 95262
MPEG-7 appls., P-frame motion vectors, low-complexity global motion estim. 95180

image sequences continued
MPEG-7 video content description, parametric motion models 118176
MPEG-7 visual motion descriptors 84139
MPEG-coded video seqs., real-time visual postprocessor 84413
MPEG-compressed videos, automatic shot change detect. 118461
MPEG-encoded video sigs., scene detect. methods 107047
MRI, fast T_1 mapping with vol. coverage 98438
MRI breast dyn. images, thin-plate spline based autom. alignment 98465
MRI cardiac images, left ventricular segmentation 132755
MRI images, 3D heart segmentation and tracking, FEM-based deformable model 132756
MRI seq., modeling/tracking of cardiac left ventricular motion by lin. harmonic model *(French)* 110860
multi-camera syst. for tracking multiple people 95006
multi-image struct. recovery from motion, projective 84537
multi-resoln. mesh-based motion estim. using backward-in-forward tracking 118396
multi-view dyn. face model, modelling faces dyn. across views and over time 107163
multibeam & multipanel displays, scan archit. perceptual effects 109879
multichannel regularized recovery of compressed video seqs. 95152
multiobject behavior recogn. by selective attention 73529
multiple camera fusion for multi-obj. tracking 95010
multiple description video coding, efficient estim. theoretic prediction 95106
multiple motion scene reconstruction from uncalibrated views 106534
multiple motion segmentation by edge tracking between two frames 129632
multiple objs. detect. in partial occlusion, class./tracking approach 118771
multiresolution motion estim., hierarchical block matching algm. 95080
multiresolution shape recovery by surface deform. 95576
multitemporal SAR images, detect. of step pattern of change 96950
multiview extensive partition operators for semantic video obj. extraction 94494
myocardial perfusion assess., adaptive/self-evaluating registration method 110893
MyoTrack, 3D deform. field method to measure cardiac motion from gated SPECT 87774
nasal papilloma diagnosis, Gd-enhanced MRI, spatiotemporal neural net 98479
nested-multilevel redundancy exploitation for fast block matching 95082
neurological disorders diagnosis, human gait/posture anal. 98360
NFS over Myrinet-based clusters for parallel multimedia appls., perform. 130711
noisy image seq. filtering by adaptive lower-upper-middle smoother 106767
noisy image seqs., impulse detectors 84142
non-parametric image subtraction by grey level scattergrams 129848
nonlin. correl. for multiple objs. motion estim. 129412
nonlin. image interpol. method for frame rate increase in multimedia and VR appls. 106844
nonlin. motion-distorted composite frame restoration 106488
nonrigid motion anal., piecewise affine model for image registration 94529
nonrigid objs. discrim., motion/segmentation 118752
nonstationary point obj. detect. in recording of scene from two viewpoints 129818
nonuniform motion detect. using reduced order likelihood ratio test 84309
obj. based video, mesh based segmentation and update 84464
obj. modeling using space carving 94699
obj. real-time tracking with movels and affine transform. 84323
obj. recogn. from curvilinear motion estim. 129845
obj. segmentation, fast geodesic act. contours 118724
obj. tracking, mean shift/optimal prediction 94789
obj. tracking by adaptive modeling 94790
obj. tracking by Gabor wavelet transform/golden sect. algm. 95558
obj. tracking with shape representation network using color 94793
obj.-based intra-frame wavelet video coding 129775
obj.-based motion estim./higher scalability, mesh/crack lines appl. 95196
obj.-based video abstraction, integrated scheme 129700
occlusion robust adaptive template tracking 106584
oesophagus outer wall detect., US images, data fusion, stochastic optim. 76350
old films, low complexity cut detect. in flicker presence 106857
old motion pictures, defect removal 129570
omnidirectional image seq., resoln. improvement *(Japanese)* 106503
opt. flow, computation of boundary-preserving estim. 129624
opt. flow computation 129616
opt. flow computation in log-mapped image plane 84342
opt. flow detect., subpixel, by Hough transform 84338
opt. flow estim., errors-in-variables modeling 118368
opt. flow estim., image registration, local rigidity 95433
opt. flow estim., neighbourhood size, shape, wts. and model order selection 94928
opt. flow estim. for occlusion using extrapolation 94550
opt. flow estim. over extended image seq. 106830
opt. flow estim. using feature of varying brightness 84205
opt. flow estim. using forward-backward constraint eqn. 94675
opt. flow independent components have brain-like receptive fields 118245
opt. flow motion estim., variable brightness phys. model 84131
opt. flow stats. 73286
opt. flow with adaptive gradients, motion estim. 94553
opt. images, multi-channel correl. recogn. method 118746
optic flow computation using discrete wavelet anal. 106777
optic flow variational method, spatio-temporal smoothness constraint 84270
outdoor image seqs., tracking/recognizing two-pers. interacts. 95599
ovarian follicle detect., meas. model syst. error suppression 132606
panoramic mosaicing, global and local registration 118300
panoramic mosaicing with image interpolation 84355
parameterised moving shape extraction 129623
parametric image restoration/resoln. enhancement 106688
particle filter for tracking multiple objs. 95714
particle image & opt. flow velocimetry for turbulent flows/flames 110066
pattern-selective color image fusion 84092
PDE and variational problems on implicit surfaces 118259
pedestrians, multiple, tracking in crowd *(Japanese)* 107247
people tracking syst. using color histogram based recogn. tech. 84630
people tracking with single video camera, hierarchical model of dyn. 129633
perfusion quantif., Levovist infusion & power Doppler image pairs 98265
pers. detect. in complex scenes, real-time surveillance syst. 129512
PET, dyn. image seqs., simultaneous reconstruction, frame-to-frame coupling 132876
planar obj., microscopic defect eval. by specular refl. image seq. 129437
Point Distribution Model for determining motion components 73308
posture change/respiratory rate, subj. in bed, real-time image seq. anal. 122046
precise camera operation params., robust depth-map estim. 94700
precise sub-pixel estim. on area-based matching 106470

image sequences continued
probabilistic learning/modelling of obj. dyn. for tracking 107168
progressive compression for triangular meshes with QC 106877
prostate tissue malignancy, tissue class. & elastographic imaging 121998
pulsed arterial spin labelling MRI, tagging schemes, imperfect slice profile 98439
Q-warping, quadratic ref. surfaces direct computation 106501
QM/MQ-coded data, worst av. code word length, single context coding mode *(Japanese)* 73397
radar, geometric obj./image rels. 86131
rainfall patterns forecasting, regularized Gaussian mixture models *(English* 122637
randomly moving cluttered targets, multiframe Bayesian tracking 94792
real world video stream description lang., appl. 94796
real-time obj. recogn., optimal color quantization 129852
real-time obj. tracking based on opt. flow/act. rays 106829
real-time pedestrian tracking/counting using single camera 118302
real-time robust detect. of moving objs. in cluttered scenes 118349
real-time vehicle tracking in image seq., digital rear-view mirror 124040
real-world objs., 3-D reconstruction using extended voxels 94531
real-world video seqs., shot detect., lighting change problem 75315
real-world video seqs., shot detect. with multi-measures 75314
reconstruction of degraded image seqs., appl. to film restoration 94485
recorded sound tracks transliteration for speech recogn./searching *(German* 73094
recurrent visual semantics discovery in consumer photographs 94831
region and obj. based wavelet video coding, rate-distortion optim. 106991
region restriction and noncausal algm. for line proc. 106723
region-based color image segmentation scheme, unsupervised seed determ 94523
region-of-interest video coding, multiple-face tracking syst. 84465
relative segmentation quality, objective eval. 84321
reliable real-time multiview tracking 95008
resoln. scalable lossless progressive image coding via conditional quadrisection 95095
respiration rate/posture monitoring, image seq. anal. *(Japanese)* 110520
restoration from corruption by impulse noise, adaptive 3D median filterin 73142
retinal layers functional imaging, laser scatt., spreading depression 87533
rigid obj. 3-D shape/motion estim. from 2D video 118369
road signs detect. and tracking 95401
road vehicle night time detect. algm., light pattern use 107240
robust error concealment algm. using iter. weighted boundary matching criterio 95304
robust estim. of motion and struct. using discrete H_∞ filter 94932
robust facial feature tracking 129626
robust global motion estim. using simplified M-estimator 94555
robust layered coding of video for transm. over noisy channels 107105
robust motion estim. using spatial Gabor filters 118393
robust parametric estim. over optimal support of fluid flow struct. in multispectra image seqs. 73219
robust shape tracking in cluttered background 95542
robust vel. estim. method in image seq. using mixed domain phase sig. 84546
robust visual tracking, co-inference approach 106593
SAR imagery, multi-aspect target detect. using HMMs/2D matching pursuit 75144
scene change detect. in video seqs. 106905
scene model reconstruction, stat. geometric framework 129625
sea surface motion field determ. from IR imaging 133336
segmentation and range sens. using moving-aperture lens 106908
segmentation by movement estim./contour extraction 106482
segmentation maps coding for layered obj. representations 95208
segmentation of images, multiple feature clustering 118191
segments detect. across images, synchronizable pulse-coupled neural network 106665
selective sharpness enhancement of heavily-corrupted old film seqs. 94687
semantic video obj. extraction using four-band watershed/partition lattice opera tors 73147
separation of multiple objs. in motion images by clustering 106541
seq. image segmentation based on blob matching *(Chinese)* 118352
shape and camera estim., single camera based, EKF 106682
sign-changing filters, independent component anal. of temporally convolved na ural image seqs. 84180
simultaneous estim. of super-resolved intens. and depth maps from low resol defocused obs. of scene 106472
simultaneous water/fat MRI with chem.-shift correction 110861
single-CCD camera captured color images, multi-image resoln. enhancemen 94822
SIRDS generalized algm., still and moving 3D scenes 106768
slow-moving point target seq. detect., low-SNR IR image seqs. *(Chinese* 107115
small moving targets detect., clutter environ., real time hardware implemen 75218
Smartface, face recogn. syst., varying facial pose and expression *(Japanese* 84522
Snake act. contour model for visual obj. tracking 95559
snakes-based cardiac contour extraction, automatic init. 76470
SNR scalable transcoding for video over wireless channels 95120
space carving algm., stat. consistency check 129629
Sparse PCA, multi-scale struct. extraction from data 106580
spatially correl. motion seqs., estim./mode decision 129692
spatio-temporal image segmentation using opt. flow and clustering algm. 9490
SPECT brain imaging, simult. Tc-99m/I-123, spectral factor anal. 122241
SPIHT stripe-based lossy compression of vol. med. images 98160
split-and-merge method for 3D model reconstruction 118275
star tracker, star image simul. software *(Chinese)* 98899
steady-state MR imaging, transient response charactn./reduction 98440
stereo image seqs., 3D motion/scene depth estim. 94497
stereo image seqs., incremental shape reconstruction 94697
stereoscopic video imaging using low-cost PC-based syst. 94906
stereoscopic video seqs., act. contour-based video obj. segmentation 106832
stereovision, indiv. evol. strategy appl. 118201
stochastic rigidity, image registration for nowhere-static scenes 106582
struct. estim. of articulated obj. by motion image anal. 118764
struct. from motion problem, ambiguities reduction using inertial data 84300
struct. video browsing/editing, image/audio seq. visualization/interact. mech nisms 94642
structural learning from iconic representations 95444
subjective video quality over error-prone channels, control strategy 96587
successive estim. of registration params., error stabilization 84305

mage sequences continued
super-resoln. fast reconstruction algm. for pure translational motion/common space-invariant blur 118379
surveillance syst., moving obj. detect. and indexing *(Chinese)* 106491
surveillance video, content based software DEMUX 118169
target detect., wavelet transform and GA *(Chinese)* 84436
temporal video segmentation using frame/histogram-space 106854
temporally seq. chest images, digital subtraction, rib elim. 76542
terrain mapping, lin. feature changes, edge-finding 99064
text to audiovisual speech synthesizer 106408
texture images seq. and proc. control 94449
textured surfaces, struct. estim. using local affine flow 129613
thyroid gland radiotherapy, biomass anal. by X-ray images 98613
time-depend. video connections call admission control 109385
time-varying natural images, sparse coding 118505
topol.-independent region tracking with level sets 95270
tracking, pers. with 3D motion by integrat. opt. flow and depth 118203
traffic monitoring, visual feature tracking methods 73130
trajectory filtering/smoothing, state space model 84099
tumor boundary detect. in MR image seqs. 84636
turbulent atmos., adaptive phase compensation, synthetic image methods 133299
ultrasound image fast simul. 110780
uncalibrated image seq. matching, 8-point algm. 107278
unmanned aerial vehicle, vision based navig. 97401
US image 2D motion field parametric estim., spatially smoothed regression model 110777
user-assisted segmentation, partition-based image representation 84322
vascular struct./deform., B-mode ultrasound imaging 87509
VBR high perform. video coding algm. for fixed size storage appls. 95097
VBR MPEG sources over ATM networks, policing method for Markovian traffic descriptors 73382
VBR MPEG-2 video, traffic prediction/network resources estim. 107048
VBR MPEG-2 video sources, adaptive trained neural networks for traffic prediction 118616
VBR video source charactn. and practical hierarchical model 106954
vel. estim. and moving obj. detect. using wavelet transform and parallel Kalman filter 118394
vertebral column, functional anal. based on MRI and direct vol. rendering 87588
video, airborne images, event detect. and anal. 111369
video, face detect./tracking using dyn. prog. 84615
video, model-based temporal obj. verification 73499
video 3D wavelet coding, regions of support 106972
video blending with synthetic images created from matched viewing environ. 129563
video clip retrieval, global motion inform. model 94593
video coding, block-DCT based, low-complexity post-proc. for artifact reduction 95203
video coding, motion compensation on wavelet transform domain 95276
video coding, perceptual PSNR for improved objective quality eval. 129726
video coding, semi-automatic semantic obj. extraction 84463
video coding, space-freq. block motion field modeling 73339
video coding, very low bitrate, mesh based 95215
video coding with quadtrees and adaptive VQ 118580
video compression, displaced frame difference coding using dense motion fields 95280
video compression, error-resilient method using multiple states 95297
video compression, localized, VQ for robot vision 84476
video compression with wavelets and random neural network approxs. 118509
video data mgt., high level semantics modelling 84243
video image seqs., algms. for deformable lin. objs. shape change recogn. 84328
video image seqs., small-sized periodic binary sigs. 106717
video image seqs., tracking eval. 118166
video images, model-based varying pose face detect. and facial feature registration 129439
video images de-interlacing using shortest path tech. 129643
video joint source-channel coding, distortion-rate charact. modeling 84467
video obj. extraction and shape coding using B-splines 118504
video obj. extraction for OO appls. 118587
video obj. extraction via surface optim. and Voronoi order 118588
video obj. localization/tracking, semi-automatic seeded region growing algm. 107032
video obj. segmentation based on global motion estim./compensation 118330
video objs. generation by multiple-view extensive partition lattice operators 94826
video partitioning by temporal slice coherency 94922
video proc. and multimedia commun., conf., Zadar, Croatia (June 2001) 113202
video quality assess., recursive biorthogonal wavelet transform 129652
video representation, key frame selection 94644
video scratch rejection using filters with prediction error proc. 118237
video segmentation, fuzzy theoretic approach, syntactic features appl. 118411
video segmentation using spatiotemporal Markov random field 84195
video seq., adaptive resoln. image acquisition using mosaicing 84303
video seq., robust transm. using double-vector motion compensation 106968
video seq., spatiotemporal segmentation, distributed generic algms. 106697
video seq. encoding/decoding using streamed 3D representation 95360
video seq. illum. effect descriptor 118460
video seq. obj. tracking, local search N-interact. particle syst. 129581
video seq. segmentation, rule-based framework for post-proc. merging 84326
video seq. segmentation mask quality, objective eval. 129478
video seqs., automatic moving obj. extraction *(Chinese)* 95430
video seqs., motion vector estim. using edge oriented block matching algm. 95083
video seqs., scene cut detect. for indexing 118747
video seqs., synthetic summaries using multiresolution based key frame selection in perceptually uniform color space 94647
video seqs., vehicle detect./tracking 84330
video seqs., visual perception, severe vibr. effects 84602
video shot boundary detect. using edge obj. tracing/tracking 118458
video shot change detect., near shortest transversal path 84115
video shot detect. via adaptive cumulation algm. 84244
video summarization using reinforcement learning in eigenspace 94643
video surveillance, image anal., stat. model-based change detect., spatial regularization 129510
video surveillance camera moving obj. tracking algm. 106839
video surveillance environ., illum. vars. compensation 118174
video surveillance systs., automated obj. detect. and tracking 118165
video surveillance systs., semantic ident. of moving targets 106481
video transport over wireless channels, rate-control scheme 74636
video-rate range sens., depth from defocus, real-time range estim. 75661
video-surveillance systs. characterisation, perform. eval. criterion 129853

image sequences continued
video-telephony and conferencing, image prediction, face detect. and triangulation appl. 118628
videoconferencing, Kalman noise filtering and motion compensated video coding 95099
videoconferencing, video quality assess., audio impact 108387
videophone seqs., 3D motion estim. of head and shoulders 94992
videotelephony seq. coding using content-based hybrid DPCM/classified VQ 107034
virtual fashion simul. by merging CG and humans in video seqs. *(Japanese)* 106441
visual perception of video seqs., severe vibrs. 106425
visual tracking using Snake based on target contour inform. 129891
VLBR variable frame rate video coding 107043
VLBR video coding using matching pursuit and codebook adaptation 95098
VLBR video seq., obj. based segmentation 84425
VLBR wavelet video coding combined with H.263 and SLCCA 73355
Voxel Stuffing, vol. interpolation from cross-sectional images 98415
wavelet coding with fractals for image seqs. 84507
wavelet filters in multi-resoln. motion estim. 129707
wavelet-based video coder via bit allocation 95041
wavelet-based VLBR video coding using image warping/overlapped block motion compensation 73384
wavelets/VQ based low bit-rate video compression, replenishment tech. 73338
weapon systs., robust correl. tracker 118761
weather changing in image seqs. taken from video camera 84197
wide-angle ISAR pass. imaging using smoothed pseudo Wigner-Ville distrib. 96958
Wiener modified filter for multi-frame restoration of blurred/noisy images 129442
Wiener spatio-temporal filtering of image seqs. using parametric motion model 84301
wireless video, error resilient codec 96325
wooded region/agricultural region discrim. by SAR 111485
X-ray angiography images, algms. for combining, comparison 110913
zoom tracking act. vision tech. and appls. 129430
Si CZ growth, online diam. calib., shape estim. 114209

image skeletonisation *see image thinning*

image texture
2D adaptive sampling for obj. detect. 106835
2D AR model using lattice representation and inform. criteria for texture anal. 118486
2D Gabor elementary fns. for texture boundary detect. 84098
2D pseudo-Wigner distrib. for local spectra features extraction, texture anal. 106447
2D Volterra param. estim. using zero tolerance optimisation 84317
2D Wold decomp., evanescent field param. estim. 118343
2D Wold decomp. for texture modeling, nonlin. prediction 84310
3-D obj. recogn. from shadow shape curves 73556
3-D skeletal kinematics, biplane radiograph seqs., knee appl. 87743
3D face model reconstruction from video seq. 106662
3D face synthesis based on orthogonal photos/speech-driven facial animation 95545
3D graphics and video resizing, arbitrarily scalable edge-preserving interpol. 84347
3D head models generation from multiple images using ellipsoid approx. for rear part 84316
3D modeling syst. of human face and full 3D facial caricaturing 84235
3D models, joint geom./texture progressive coding 95359
3D multi-resoln. reconstruction through texture matching 129471
3D obj. reconstruction from multi-resoln. texture matching 94527
3D source models for content-based video coding 95269
3D surface texture rot. invariant class. by photom. stereo 129834
3D texture anal., invariant feature extraction, autocorrelation fn. 94477
act. texture-adaptive contour models 98134
activated sludge, microscopic images based feature anal. 129460
adaptive image restoration, neural learning approach, fuzzy model-based network archit. 73251
adaptive model for texture anal. 84315
aerial photograph draping & perspective correction, hardware soln. 94754
affine-based texture mapping, low power SIMD archit. 95525
AM-FM image segmentation approach 94634
AM-FM react.-diffusion for oriented texture completion 73259
appearance-based recogn. using perceptual components 107260
ATR systs., camouflage patterns, human observer perception 133397
audification/sonification 106510
auto-binomial model param. estim. methods 118193
automatic image thresholding using hit-or-miss morph. operator 106527
automatic metaphase finding, texture coarseness estim. 129898
automatic model-based semantic obj. extraction algm. 129690
automatic target recogn., temporal data/decision level fusion 129835
biorthogonal wavelet constr. based on human visual syst., GA *(Chinese)* 106851
block-matching motion estim., dual-bit-resoln. image, low-power VLSI architect. *(Chinese)* 106424
brain MRI datasets, 3D texture anal. 76482
breast tumor images, feature extraction and class., artificial organisms 76201
breast ultrasonograms, malignant and benign tumours, comparative anal. of texture charact. 98280
breast US images, boundary detect. algms., eval. methodology 132605
camera calib. using rect. textures 86671
cell image texture-based segmentation, neural net/morph. 110536
chest radiography, tuberculosis screening, computer-aided diagnosis 87757
circ./ellipt. correl. struct., long-correl. image models 84275
class. and segmentation using Laguerre-Gauss transform 129897
class. of texture images using multi-scale stat. estimators of fractal params. 129622
coarse-to-fine texture image retrieval method 94914
color aerial images, region-based segmentation, Karhunen-Loeve transform 118316
color image class. based on color and texture anal. 94964
color images, neural network-based text location 118751
color textures, learning and generating, recurrent multiple class random neural networks 118296
color-texture regions, images and video, unsupervised segmentation 106880
colour texture images class. 94591
comet assay image anal., DNA strand break detect. 132531
content based retrieval, area morph. segmentation 94940
content-based image retrieval using fuzzy multiple attribute relational graph 129446

image texture continued
content-based image retrieval using fuzzy visual representation 118735
contour coding, modified binary tree and perform. anal. 106902
crit. Markov random fields, characterisation and appls. 106769
CT-scan images, bone texture charactn. 98566
curved textured surface anal. by local spectral distortion 95455
databases, fast multiresolution feature matching algm. for exhaustive search 73149
denoising using directional filter banks 94807
dense 3D surface acquisition, struct. light appl. 89908
description using complex wavelet transform 94667
digital low-end camera for on-screen texture visualisation, colorimetric characterisation 97737
digital video frame, text detect., SVM 84193
digital vision syst. for 3D model acquisition 73224
dimens. reduction 94937
dyn. textures 106631
elastograms, simulated, class. based on texture features 110825
endoscopic images and 3D surfaces, mixed-reality merging 87713
face detect. in compressed domain 129822
face model calib., 3-D facial feature points automatic extraction 95497
faces extraction from natural background for pers. ident. 118779
facial texture, transform. and prototyping 106713
fault detect. algm. *(Chinese)* 94587
feature anal. using assoc. rules 107143
feature extraction using 2D GA 73170
fingerprint, gray-level image, lossless compression algm. *(Chinese)* 84438
fingerprint images, fractal method for sing. detect. 73442
fractal digital holograms, security appls. 82971
fractal encoding of distorted images, textures, atmos. effects 106867
fractal image compression, adaptive post-proc. 95173
freq.-sensitive ellipt. competitive learning, texture segmentation 106729
fusion through consideration of image texture components 84516
generalized scale-selection 94565
granulometric moments, asymptotic joint normality 118754
gray-scale image proc., lin. CNN 94723
gray-scale images, multifractal anal. 106828
harmonics extraction based on HOS spectrum decomp. 106613
head pose estim. with Gabor wavelet networks 129611
heterog. canopy surface, SAR images simul. 76965
histogram image unimodal thresholding 118665
human face image reconstruction for virtual space teleconferencing *(Japanese)* 84280
hybrid wavelet compression scheme for material textures 95321
hypercomplex sigs., analytic sig. extension to multidimensional case 129648
indexing techs., DCT domain 95045
indust. image proc., real-time behaviour, multivariate approach 113745
indust. image texture anal., multivariate anal. using PCA 118678
inform. geom. method for class. of texture images *(Japanese)* 73135
intermediate-level vision, perceptual grouping, curve-like rep. 118662
intermediate-level vision, perceptual grouping, mapping complexity 118663
intravascular ultrasound images, modeling and segmentation *(French)* 110681
IR images, computing textural features based on co-occurrence matrix 129584
IR images, human false target detect. decision behavior 118727
isotropic/anisotropic Gaussian textures, generalized circ. autoregressive models 95530
joint likelihood methods for mitigating visual tracking disturbances 95715
JPEG 2000 for detected SAR imagery compression 109254
JPEG compressed domain image retrieval by colour/texture 107088
Kullback-Leibler dist. on wavelet subbands, texture similarity meas. 94938
learning optimal texture edge detectors 94956
lin. constrained generalized Lloyd algm. for reduced codebook VQ 84388
Lloyd lin. constrained generalized algm. for virtual codebook VQ 95170
local affine flow for struct. estim. of textured surfaces 129613
low-level image anal. algms., contextual perform. prediction 84605
low-resoln. content-based image watermarking in wavelet domain 129776
M-band wavelet transform, adaptive approach to unsupervised texture segmentation 106512
machine vision, conf., Bristol, UK (Sept. 2000) 124239
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 101592
mammogram microcalcifications, unsupervised detect. 87349
mammographic mass charactn., spiculation measures/morph. features 98527
mammographic microcalcifications, optimal filter-based detect. 132814
mapping by successive refinement 94648
max. likelihood texture anal./class. using wavelet-domain HMMs 106756
mean orient. estim. methods, study of introduced bias 118340
Meastex/Vistex benchmark based comparison of methods 94573
metastatic rodent tumours, pure absorpt. mode high-resoln. MRS imaging 87574
microangiopathy, capillary image segmentation exploiting weak shape constraints 87315
model acquisition using rot. stereo and image focus anal. 106790
modeling/class. in wavelet feature space 84314
modified gray level morph. gradient with low threshold values/noise sensitivity, perform. 107254
moving obj. segmentation, review 95238
MPEG compressed video domain, camera motion estim. using feature points 95315
MPEG video contents, fast dissolve operations 95181
MPEG-4 arbitrarily shaped video objs., fast motion estim. method 95357
MPEG-4 noisy still texture image, adaptive thresholding 95382
MPEG-4 still texture coding, hardware-efficient archit. design, CMOS implement. 79949
MPEG-4 video, still texture, spatial content indexing 118733
MPEG-4 visual texture coding using double transform coding 107014
MPEG-7 homog. texture descriptor 85393
MPEG-7 std., color/texture descriptors 84387
MPEG-7 visual std. for content description, overview 84138
MRI brain image segmentation using AM-FM model 110898
multi-camera 3D modeling syst. to digitize human head and body 118272
multi-layer CNN based texture segmentation 84147
multi-resoln. mechanism for image segmentation method 84629
multi-view image coding incorporating approx. geom. 95108
multiclass test feature classifier for texture class. 106805
multiple texture planes, detect. using local spectral distortion 129614
multiresolution gray scale/rot. invariant texture class. 95454
multiresolution-based adaptive image watermarking scheme 129465
multiscale class. using complex wavelets/hidden Markov tree models 94658
multiscale image segmentation, wavelet-domain HMM 107213
multiscale texture segmentation using hybrid contextual labeling tree 94835
natural images retrieval, new approach 106437
image texture continued
natural scene anal., nearest-neighbour classifiers 84094
natural/enhanced IR images, embedded targets, image metrics/human detect. perform. 84155
neural network face recogn. using stat. feature/skin texture params. 129823
nonlin. diffusion and multiscale anals. 106749
obj. recogn. with multiple cues 107293
omni directional, real time, stereo image acquisition syst. 84146
open-ended texture class. for terrain mapping 94836
orient./color interacts. for texture image subjective retrieval 95003
palmprint ident. via texture based dyn. selection scheme 84567
PDE and variational problems on implicit surfaces 118259
perceptual textural features, computational measures 107124
perceptually uniform color spaces for texture anal., eval. 73500
periapical lesion anal., stat. textural features/neural nets 122130
periapical lesion anal. using stat. textural features 110949
perspective textured plane segmentation through ridges of CW transform 106814
polarimetric SAR image, multi-texture max. likelihood estim. *(Chinese)* 86159
pollen grain images, nonlin. features extraction 121864
pose-invariant face recogn. by face synthesis 129914
primitive detect., 2D isotopic wavelet filter 73558
prostate, nonmetastatic/metastatic tumours differentiation, high resoln. MRI 87643
pseudo power signatures appl. 94543
pulmonary nodules, high resoln. spiral CT diagnosis *(Chinese)* 76509
pyramid texture compression/decompression using interpolative VQ 95175
regions-of-interest based image retrieval with local/spatial queries 94668
rem. sensed images, integrated pipelined and distributed syst. for real-time class. 133276
rendering, geom.-image representation tradeoff 94568
rendering overview, software/hardware issues 94567
resoln. enhancement, adaptive algm. 106759
retrieval, DFT and Zernike moments use 95584
retrieval based on similarity learning 94936
road traffic surveillance syst., low bit-rate video codec 129722
rot. invariant texture anal., comparative study 118342
rot. invariant texture features using dual-tree complex wavelet transform 106444
rotated textures class. using overcomplete wavelet frames 94598
SAR artificial clutter scenes modeling using spatial autocorrelation/group stats. 86136
SAR interferometric images, adaptive complex-amplit. texture classifier, local phase unwrapping/feature extraction 75175
SAR multiscale image segmentation using wavelet-domain hidden Markov tree models 75133
SAR polarimetric image segmentation using texture partitioning and stat. anal. 96889
SAR polarimetric imaging, Gaussian Markov random field model 86161
satellite imagery cloud class./temporal updating by neural net 122730
satellite weather imagery, texture-based segmentation 98984
scalable affine core for mesh-based video obj. motion compensation 73376
segmentation, multifractal charactn. 94542
segmentation, multiscale Bayesian model averaging framework 94518
segmentation by combining multiple segmentation results *(English)* 106821
segmentation of textured images based on fractal/filtering 107218
segmentation using fractal signature 94596
segmentation using Markov random field in wavelet domain 94834
segmentation using moving av. modeling approach 94637
segmentation using probabilistic PCA and ICA subspace mixture models 129615
self-supervised texture segmentation by complementary feature type 118664
shape from texture, homog. 129612
shape from texture, scale adaptation from spectral defocusing min. 107123
shape from texture and integrability 106632
small IR target detect. approach based on multiscale relative dist. image 7351
soccer image segmentation, unsupervised color texture feature extraction/selection 94708
solid texture mapping, 3D RGB image compression 129736
spatial entropy defn. for texture discrim. 96901
target detect. in IR image, discrete wavelet frames applying feature wt. *(Chinese)* 77081
targets detect., nature texture background *(Chinese)* 95471
textile inspection, texture selective removal using wavelets *(Japanese)* 94625
textons and texture discrim., spectral histogram model 106668
texture image segmentation based on human vision perception *(Chinese)* 118351
tongue diagnosis, image proc., texture, colour *(Chinese)* 110489
two-stage texture segmentation using complementary features 94832
UAV-HALE surveillance syst., SAR images, autom. obj. detect. 96977
ultrasound image segmentation, region growing method 110779
unsupervised texture segmentation, one-step mean shift and boundary Markov random fields 94588
unsupervised texture segmentation using dominant image modulations 10675
urban environ. charactn. by SAR data, comparison between co-occurrence and wavelet features 73454
US B-scan breast images, malignant vs. benign tumour class. 110717
US images, auto-segmentation by GA 122024
US images, texture edge detect., Gabor fns.-based approach 87488
vertebral trabecular bone, CT/projection radiography images, texture comparison 110966
vertebral trabecular bone, texture, CT images, fractal anal. 132842
video data rep./compression, texture recogn. 95407
video images, model-based varying pose face detect. and facial feature registration 129439
video partitioning by temporal slice coherency 94922
video retrieval, temporal texture modeling *(Korean)* 106742
video-based online face recogn. using identity surfaces 107194
visual learning by integrat. descriptive/generative methods 106907
VLBR feature-preserving image coding 107058
VLSI layout rendering, texture mapping with mipmapping 126983
wavelet for arbitrarily shaped video-obj. coding 129695
wavelet-based color image denoising 94709
wavelet-based salient points for image retrieval 95514
wavelet-based VLBR video coding using image warping/overlapped block motion compensation 73384
weak-image target detect. under strong beam disturbance *(Chinese)* 73523
X-ray mammography, morph. templates for texture inform. extraction 110975

image thinning
3D 3-subiteration thinning algm. for medial surfaces 94985
3D and 4D images morph. operations, shape primitive detect. to skeletonization 94983

age thinning continued
3D obj. recogn. using range images, morph. feature extraction and geometric hashing 107285
adaptive contour sampling/coding using skeleton/curvature 95218
affine invariant erosion of 3D shapes 106606
automatic image thresholding using hit-or-miss morph. operator 106527
β-skeleton computation, fast algms. 118212
binary handwritten text images thinning, triangulation procedure 95461
blood vessels, deformable model with single point init. for segmentation, quantification and visualization in 3D MRA 87590
breadth-first search appl. 94781
broken handwritten digits anal./reconstruction 94692
bronchoscopy, virtual, 3D, automatic centre-line extraction 87712
corner detect. based on generalized morph. skeleton *(Chinese)* 129808
CT-scan images, bone texture charactn. 98566
cursive handwriting segmentation method, character shape extraction appl. 94691
dyn. load balancing of parallel cellular automata 73118
fingerprint image postprocessing algm. 106760
fingerprint verification syst. using direct minutiae extraction 84569
fringe skeletons extraction, Laplacian transform., robust algm. *(Chinese)* 106803
fuzzy representation and edge tracking thinning 129593
graph representation for objs. based on hierarchical decomp. of skeletons *(Chinese)* 107203
gray level edge thinning method 84568
gray-scale images, segmentation-free skeletonization via PDEs 94716
grey-scale images, fast skeletonization algm. based on erosion simul. *(Chinese)* 129638
handwritten Hangul characters, skeleton extraction by shape decomp. *(Korean)* 94923
HMM and act. shape models for skeleton-based walking motion anal. 106822
iter. closest point algm., parallel implement. 84218
mag. reson. angiography image anal. using skeletonization and dist. transforms 76495
medial-surface oriented 3D two-subfield thinning algm. 118412
modular algm. for automatic slice positioning in tubular organs 87770
MRI angiography, cerebral blood vessel extraction, region growing 76492
multi-resoln. skeletonization, shape and topol. preserving multi-valued image pyramids 94476
multiscale skeleton generation, optimized approach 129528
page segmentation and content class., document image proc. 84241
pattern recogn. and image anal., coord. logic filters 129575
PDP prod. line inspection, morph. skeleton algm. 129458
people tracking with single video camera, hierarchical model of dyn. 129633
pseudo-dist. map for segmentation-free skeletonization of gray-scale images 107175
real-time interactive obj. outlining using control points/smoothness param. manipulation 94540
real-time teleconferencing, fast hand gesture recogn., stereo act. vision interface 108383
reliable/fast fingerprint ident. for security appls. 95512
RF ablation treatment planning, blood vessel detect. 111134
shape skeletonisation by identifying discrete local symms. 107214
simplification of 3D skeletons using dist. inform. 73237
skeleton struct., image compression algm. with perfect reconstruction 95134
skeletonization of ribbon-like shapes based on regularity and sing. anals. 84586
vol. skeleton algm. using penalized dist. fn. 106671
vol. vascular images, skeletonization 98477

nage transmission *see visual communication*

nagers *see image sensors*

MMA *see ion microprobe analysis*

nmittance, electric *see electric immittance*

nmittance measurement, electric *see electric immittance measurement*

npact avalanche transit-time diodes *see IMPATT diodes*

npact ionisation
see also avalanche breakdown
BJT, selectively implanted collector, impact ionization 81226
deep submicron MOSFETs, hot carrier degrad. at room/liq. N_2 temp. 70102
diamond, carriers impact excitation under extremely high elec. fields 102971
drift step recovery diodes, impact ionization wave breakdown 81185
HEMTs, breakdown quenching using body contact 115964
IGBT power pack, reverse bias safety operating area 126826
impact-ionization-engineered multiplication region APD 93375
impactron, solid-state image intensifier 120923
LDMOS transistors, SOA optim. using 2 peaks of body current 126844
MIS struct., avalanche-multiplication coeff., probabilistic distrib. 115453
MOS power device, ultra-thick gate oxide, reliab. 103197
MOS quantum yield expt., stress-induced leakage current correl. with high-energy oxide traps 91904
MOSFET, anode hole injection model, impact ionization 126813
N-MOSFET, CHISEL injection, lifetime prediction 126810
MOSFET 2D analytic distrib. models, drain/substr./gate current distribs. 115922
MOSFETs, bulk Si and SOI, CMOS ULSI standby currents 103877
n-MOSFETs, sub-bandgap impact ionization 81271
n-MOSFETs, expt. verif. of high energy tail in electron energy distrib. 126754
NMOS devices, lateral bipolar snapback high current I-V charactS., model params. extract. 70160
NMOSFETs, CMOS proc. steps impact on drain current kink at liq. He temp. 70312
partially depleted SOI MOSFETs, generation/recomb. effects 103736
PHEMT, impact ionization, device scaling 81372
polysilicon TFT, hot carrier degrad./kink effect 97652
punch-through limited breakdown volt. of parallel-plane jn., calc. *(Chinese)* 92271
reach-through APD, drift-diffusion model 127942
RESURF, SOI and super-jn. power devices 126723
semiconds., nonlocal impact ionization, Fokker-Planck model, device appl. 91573
separate absorpt. multiplication region superlattice APD, excess noise 71555
thin APD freq. response, excess noise factor 93376
VGBNPN bipolar transistor, ESD protection, smart power technol. 126668
$Al_{0.6}Ga_{0.4}As$ thin APDs, low multiplication noise, modelling/expt. study 82349
AlGaAs/InGaAs delta-doped pseudomorphic HEMT, current instabil. 92397
$Al_{0.66}In_{0.34}As/Ga_{0.67}In_{0.33}As$ enhancement-mode metamorphic HEMT, modeling and meas. 69140
GaAs MESFETs, trap-related kink dyn. 126889
GaInAs/InP composite channel struct. HEMT, 60 GHz power perform. 114979

impact ionisation continued
GaInAs/InP high-power composite channel HEMT, low gate current, dc/rf perform. 70195
GaInP/AlGaInP QW LDs, S-shaped NDR, cladding layer thickness depend. 71786
GaN MESFETs and bulk materials, RF breakdown 103922
HgCdTe 2D array technol. in UK 97257
InAlAs/InGaAs HEMTs, drain conductance, freq. dispersion, impact ionization, bias conditions 81358
InAlAs/InGaAs/AlGaInAs/InGaAs/InP/InAlAs HFET, low temp. impact ioniz., EL 70187
InAlAs-InGaAs reson.-cavity APDs, ultra-low-noise 97271
InP mm-wave HEMTs, large-sig. LUT model, non-quasi-static and impact ionisation effects 91260
InP mm-wave HEMTs, look-up table based large-sig. model, impact ionization 114977
InP/InAlAs/InGaAs HEMTs, hole accumulation, source resist. 115954
PZT thin film, fatigue model based on thermionic field emission mechanism 127222
SOI FETs, ion beam induced charge collection, body-tie effects 126728
Si field emitters, carrier transport, num. simul. *(Chinese)* 80571
Si, n±p jns., hot-carrier impact ionization PV effect 80788
Si, submicron diodes, impact ionization, soft threshold 104960
Si:O,Er MBE-grown films, electron and hole impact excitation 71520
$Si_{1-y}C_y$:Er MBE-grown films, electron and hole impact excitation 71520
a-SiN_xH_y thin-film diodes, hot-electron degrad., LCD appl. 70011
$SrBi_2Ta_2O_9$ thin film, fatigue model based on thermionic field emission mechanism 127222
SrS:Ce ac thin-film EL devices, dyn. space charge mechanism 93390
SrS-based ACTFEL devices, electrolum. thermal quenching study 104977
ZnS:Mn-based ACTFEL devices, electrolum. thermal quenching study 104977

impact strength
see also fracture toughness; notch strength
CRT bulb, tempered panel glass, impact strength 80619

impact testing
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
drop test anal. of electronic products, intell. data mining syst. 124298
instrumented Charpy impact testing, direct displacement meas. 90596
polysilicon cantilever MEMS-struct., shock load, mech. reliab. 127102
spallation generated minute cracks, nonlin. US meas. 114494
surface mount conductive adhesives, contact resist. 113528

impact toughness *see fracture toughness*

IMPATT diodes
see also IMPATT oscillators
drift step recovery diodes, impact ionization wave breakdown 81185
freq. converter-multiplier based on controlled avalanche breakdown 125712
integrated act. microstrip antenna, large sig. anal. 72519
low-high-low silicon DDD, optimisation and wideband anal. 70017
microstrip antenna, act., IMPATT integrated, theory 72482
MM wave IMPATT diodes, large-sig. computer simul. 70018
planar antenna, MM-wave emitter, TLM anal. 105853
two-terminal devices for mm-wave/THz appls., advances 91291
GaAs, flat profile DDR, microwave neg./pos. resist., cryst. orient. effects 80275
GaAs p-type IMPATT diode, large-sig. anal. 69147
GaN-based IMPATTs, D-band noise charact. 80286
InP low-high-low IMPATT diodes, n-type/p-type device comparison 92281
NbN_x microwave diode contacts, interstitial phases 126644
TiB_x microwave diode contacts, interstitial phases 126644
TiN_x microwave diode contacts, interstitial phases 126644
ZrB_x microwave diode contacts, interstitial phases 126644

IMPATT oscillators
injection-locked MM-wave IMPATT oscillators, locking-band widening 80271
microstrip IMPATT oscillator, design, develop. and testing 68637
GaAs mm- wave IMPATT diode ccts., series connection, push-pull oscillators 125734
4H-SiC IMPATT oscillator, design/fab./microwave charactn. 69141

impedance, acoustic *see acoustic impedance*

impedance convertors
see also negative impedance convertors
capacitive sens., self-oscillatory convertor, thermistor bridge 75462
CMOS VLSI universal prog. sampled data filter 102365
dual-freq. unequal power divider, base station antenna array 114945
GIC-based third-order act. low-pass filters 125605
hybrid coupler, broadband lumped-element lattice cct. 80216
hybrid-ring impedance-transforming directional couplers and power dividers *(Polish)* 69025
immitance sens. params., computing instrumentation 109930
inductor, SC and current mode ccts. 102788
multisection qtr.-wavelength transformer, charact. impedance 69089
SAW filters, multimedia appls., impedance transform., double bal. operation 92762
short-length lin. impedance transformer, matching charactS. 83447
three-port power dividers and impedance transformers 91187
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
CoZrNb/polyimide multilayer mag./dielec. hybrid transm.-line, wavelength shortening 127398
GaAs FET 1.8-GHz push-pull power amp. using impedance-transforming baluns 125733
GaAs V-Band MMIC SPDT pass. HEMT switch using impedance transform. networks 80378

impedance, electric *see electric impedance*

impedance imaging, electric *see electric impedance imaging*

impedance matching
1D anal. of microwave batch sterilization of water with continuous impedance matching 78368
7.8 to 8.7 GHz X-band microstrip VCO 90780
8-way high power divider/combiner design in waveguide and planar types 69052
acoustic-opt. device, transduction efficiency, binding layers effect 116862
act. devices, wideband MM-wave matching, opt. control 102743
analogue LC filter tuning, multiobjective genetic algm. approach 91009
antenna response in reverberation chamber, remarks 72589
BiCMOS highly lin. down-conversion mixer with MCM pass. for GPS appls. 69215
binomial matching transformers, design methods comparison 83468
broadband microwave diode detectors, CAD using filter approxs. 125703
broadband microwave filters, diplexers and matching networks 68894
broadband probe-fed plate antenna with stub, design 117798
broadband rect. patch antenna with pair of wide slits 117783

impedance matching continued
C-band highly efficient hybrid-PHEMT MMIC amp., 10 W design 125753
cellular base station dual-band printed antenna optim. 85694
ceramic chip antenna using meander conductor lines 94173
circ. pol. conical beam spherical slot array antenna, charact. 72634
CMOS circ.-geom. act.-transformer power amp., 2.4 GHz 102729
CMOS fully-monolithic LNA 68594
CMOS inductorless LNAs, 2 V/1 GHz, with 2-3 dB NF 69235
CMOS LV act. inductor and appl. to RF bandpass amp. design 115025
CMOS two-stage class B power amp., 1.9 GHz, low resist. substr. 69212
compact pulse generator, pulse peak voltage, cascading ratio *(Korean)* 134147
const.-output dyn. amp. for variable amplit. target tracking 75400
coupled line feed single-layer rect. patch antenna, bandwidth enhancement 83631
dielec. resonator antenna with displaced conformal strip feed 72548
dielec.-loaded flanged parallel-plate waveguide with box-type termination, radiation props. 72584
dipole circ. array in interferometric direction-finding syst., anal. 73629
dual-freq. CPW-fed dual-slot loop antenna 105870
dual-freq. planar printed antenna, microstrip fed, design and anal. 94150
electrified rly. track cct., impulsive interf. suppression 78312
EM coupled microstrip slot antenna, design by FDTD equiv. cct. method 72498
exponential transm. line, high-speed detect. cct. 83458
fast transimpedance amp. for MCP detectors, low imped. input 97360
ferrite circ. waveguide variable polarizer loaded with dielec. ring 70556
ferrites for microwave absorber appls. 94028
flat-time-delay transversely coupled resonator SAW filter, parallel connected filter tracks 92716
Gb/s electroabsorption modulator, DFB laser integrat., long-haul opt. transm. systs. 74926
GPS dual freq. bi-orthogonally polarized antenna, design 105866
HF composite lin. US arrays design for med. imaging 110697
horiz. pol. slot-array antenna on coaxial cylinder 72674
HTS bicrystal Josephson mixers, noise props. at 345 GHz and 20 K 69158
infinite planar waveguide phased array antennas, scan range enhancement 94181
Ku-band high-power amps. in portable user earth terminals, transm. power control scheme 80323
L-band proximity-coupled patch antenna with dielec. loading 94147
LC filter tuning, GA and simulated annealing 114860
LC matching ccts. for class-E inverter with non-stationary load, anal. 90649
LCD microdisplay anal., 2D opt. simul., FDTD method 97672
mag. flux controlled Josephson array oscillators 69156
MI-DFB laser modules, modulator integrated DFB, RF impedance matching 93644
microstrip antennas, imped. bandwidth improve. using under coupling tech. 72562
microwave act. cct., interactive visual design 102599
microwave cct. modeling/simul., design principles 125689
microwave multistage act. freq. multiplier 91127
MIMP, Motorola's Impedance Matching Program 125169
MMIC lumped element directional coupler, single bal. mixer 125766
modified printed strip monopole antenna with pol. diversity for WLAN appls. 72582
monolithic grid oscillator 101835
MOS transistors, random channel param. vars. modeling, device matching 81324
multi-band mobile telephone antennas 83528
multilayer ferroelec./continuous transverse stub phase shifters and phased antenna arrays 80306
multiport broadband matching of complex n-port loads 90645
multisite IC testing for reduced test time/costs 116007
OE-COF,optoelectronic chip on film packaging technol., flip-chip bonded devices *(Japanese)* 113539
opt. tuned metallodielectric photonic band gap array/patch antenna, study 83729
PCS base station low-cost microstrip-line-fed shorted-patch antenna 72543
periodic transm. line struct., Bloch impedance, freq. depend. 94073
photonic MM-wave generation at 100 GHz using uni-travelling-carrier photodiodes 125824
planar antenna, MM-wave emitter, TLM anal. 105853
porous materials, reson. impedance matching layers for air-coupled US 111519
proc. control, plasma impedance matching, discrete wavelet monitoring 124441
pseudospark electron beam source for FEL, impedance match *(Chinese)* 71861
quadrature directional coupler, optimum compensating susceptance/posn. 102526
quadrifilar helix antenna with parasitic helical strips 105879
radio receiver planning, noise/intercept point calc. 119869
rect. waveguide endwall slot feed microstrip arrays, num. study 72683
resistive measuring cable for field-probe meas., unit step response anal. *(Japanese)* 132119
resistor matching charactn. for mixed-sig. proc. develop. using DAC 102430
RF integrated inductors for MMICs, mobile commun. handset appl. *(Japanese)* 80319
RF PDP, impedance matching, software-based anal. 86866
S-band ultra LNA, series drain resistor load/lower reson. matching stubs *(Japanese)* 91302
SAW convolver, semicond. coupled, multi-strip electrodes, simul. 92738
short-length lin. impedance transformer, matching charact. 83447
side-lobe transient response of large antennas 83691
single-ended and differential impedance eval. in PCBs 80484
single/dual band quadrifilar spiral antennas for satellite-mobile handsets, new designs 83621
SiP, syst.-in-a-package, RF blocks, WLAN appl. 89881
small dielec. loaded antennas, efficiency-fractional bandwidth product 117776
small-sig. microwave amps., specified stabil. safety margin, optimum design 69121
Smith chart appls. for microwave component charact. 102592
Smith charts program, PC assisted tutorial 83467
supercond. slot antenna, broadband impedance matching cct. 72488
U-slot stacked microstrip antenna, effect of shorting posts or vias 94148
ultra fine isolator for portable phone, implement. using LC imped. match. ccts. 80227
VHF ground elec. cond. anoms. meas. eqpt. 88096
W-CDMA 180 W 3G LDMOS power amp., internally matched LTCC 102610
waveguide phased array antennas, parametric studies on WAIM sheets 94190
waveguide/horn radiators, matching/directional charact. anal. 117816
wideband low loss SAW filters using slanted IDTs, optimal design 91012
wireless terminals, antenna design for selection diversity 120054
AlGaN/GaN HEMT MMICs on SiC substrs., high-power broadband amps. 91383
$Ba_xSr_{1-x}TiO_3$ epitaxial thin film, microwave phase shifter 69125

impedance matching continued
CoNbZr micro-patterned thin film inductor, fab. & inductance prop. *(Japane* 104540
GaAs FET 1.8-GHz push-pull power amp. using impedance-transforming bal 125733
GaAs PHEMT mixer, single bal. topol. and design methodology 125749
InGaP-GaAs HBT Doherty amp. with high efficiency over wide power ran 91264
$LiNbO_3$ waveguided modulators for 40 Gbit/s and beyond 116823
Si bipolar monolithic RF bal. down conversion mixers, noise anal. 69216
$YBa_2Cu_3O_{7-x}$ microstrip antennas, perfect impedance matching point 83577

impedance matrix
admittance matrices passivity enforcement, paper discussion/closure 124648
asymmetrical piezoelec. annular bimorph anal. using impedance/admittance m rices 99079
bend discontinuity, anal. asymptotic extraction tech. 114930
broadband antenna response anal. using hybrid freq. domain MoM/FDTD tec 83625
dipole antenna, wavelet simulator tech., moment method 94117
distrib. network cable impedance calcs., parallel ccts., multi-neutral retur 112033
double cct. lines on same tower, transform. method *(Chinese)* 123027
EM charact. of grounded slab/parallel-plate struct. using SDDI tech. 83253
HF transformer modelling, refl. coeff. tech. & S matrix 91438
layered biological media, electrode array excitation model 133078
MESFET amp., microwave device, electro-thermal simul. 80301
microstrip antennas, scatt. anal., charact. modes appl. 72660
microstrip array, infinite, plane wave refl. 105923
MoM, macro-element compression 128744
MoM fast calc. for printed grid array antenna anal. 83715
multilayer printed antennas and ccts., multiresolution anal. 83507
optimal grouping of basis fns. 72229
pass. PCB radiation suscept. modeling, complex images method 94056
PCB with multilayered geom., gaps and bypass capacitors effects on interconne 102802
power quality problems soln. using Inherent Structure Theory of Netwo 112067
power syst. voltage stabil. assess. using bus impedance matrix 111938
salient-pole generator model for harmonic anal. 133935
sing. wire antenna kernel, efficient integral transform tech. 72536
waveguide discontinuities, multimode anal. using generalised scatt. matrix ar power waves 83478

impedance measurement, electric *see electric impedance measurement*
impedance transformers *see impedance convertors*
imperfections, crystal *see crystal defects*
impermeability *see permeability*
implantation, ion *see ion implantation*
implants, surgical *see prosthetics*
implosions *see explosions*

importance sampling
asynchronous multisensor tracking in clutter, Bayesian seq. MC method 13341
AWGN random phase channel, importance sampling 73756
CFAR smallest-of and geometric-mean detectors, fast simul. 96906
digital phase detectors with carrier phase tracking, error floor assess., large devia tions approach 130159
event probab., seq. estim. 119097
finite-state Markov chain, small transit. probabilities, fast simul. 67770
GA with entropy-Boltzmann samplings 90059
Gabor attributes tracking for face verification 84613
hybrid Monte Carlo-recursive ident. for blind detect. over Rayleigh fading chan nel 119197
jump Markov lin. systs., seq. simul.-based estim. 73663
large deviation anal. for MUX independent regulated inputs 108248
multicast networks, efficient importance sampling, Monte Carlo simul. 11911
multiservice loss systs. Monte Carlo simul. 96220
OFDM/QAM sub-carrier synchronized syst., importance sampling anal. 72735
over keepered medium, thermal stabil., read/write simul. *(Japanese)* 92829
polaris. mode fibre dispersion compensators, BER modelling 131353
RBF-based multiuser detector for multicode DS/CDMA syst. 84778
risk significance and safety significance 100502
robust visual tracking, co-inference approach 106593
single differential-group delay element polariz.-mode dispersion compensators importance sampling 131615

impregnated insulation
compact muon solenoid conductor, effect of surface treatment on adhesion at 300 K and 4.2 K 82003
failure, regression anal. 116187
FRP laminate ITER coil insulation, neutron irrad., dielec. strength 81727
oil-impregnated pressboard, moisture diffusion, interdigital sens. 127246
oil-ommersed transformer over-load operation, insulation paper thermal deterio ration *(Japanese)* 99727
paper insulation, charge evol., pulsed electroacoustic method 112098
power cable on-line diagnosis, noninvasive UWB PD tech. 112101
supercond. magnets, ground/turn/layer insulation, phys. props. 82000

impulse generators *see pulse generators*

impulse noise
adaptive Bayesian DFE for alpha-stable noise environ. 107720
adaptive image proc. using rank-order filters with spatial elements connectivity 106715
adaptive min. robust M-beamforming for multiple moving sources and impulse noise 95655
adaptive regularized noise smoothing of dense range image using directiona Laplacian operators 118280
ADSL and VDSL systs., improved channel model 96303
ADSL DMT systs., turbo coding 129203
affine projection filter algm. based on M-estim. *(Chinese)* 95710
analog adaptive median filters for image proc. 114870
array sig. proc., min. robust M-beamforming for moving sources 118908
audio sigs., double-threshold-based approach to impulsive noise detect. 129367
automatic sound detect. and recogn. for noisy environ. 118071
binary symmetric channel, spectral interpolation coder, noise cancellation 129008
blind turbo equalization in Gaussian and impulsive noise 107683
blotches corruption, image seqs., restoration method *(Japanese)* 73250
bootstrap testing for impulsive behavior 73725
coherent M-ary signaling in impulsive noise, optimum detector 85512
color image, impulse noise removal 73314
color image filtering distorted by impulse noise 129438

pulse noise continued
color image impulse noise reduction filter 130095
color image restoration, multichannel M-filtering 94521
color images, noise atten. filtering tech. 129573
complex no. codes, iter. decoding 129045
corrupted images, impulse noise removal using posn./directional inform. 118178
corrupted images restoration using image gradients 106721
de-noising by modified soft-thresholding, wavelet transforms 84657
detect. algms. for multicarrier commun. systs., perform. anal. 131078
digital sig. reception with background impulse and white noise 107612
digital watermarked images, noise corruption influence 84078
DMT VDSL with impulse noise, crosstalk mitigation using multiuser detect. 130149
document image binarization by coplanar prefilter 129663
DS-CDMA systs., robust single-user detect. perform. 84918
edge-preserving filters using layered fuzzy controllers with learning 118333
freq.-selective filtering using weighted myriad filters with real-valued wts. 130125
gray and colour med. images, impulse noise reduction, random walk approach 132532
helicopter blade vortex interact., background oriented schlieren method 122509
hybrid AM/OFDM light ware syst., BER perform. *(Chinese)* 96301
IFS-based image restoration 118224
image burst noise reduction, decimation and adaptive weighted median filter 106486
image denoising via local-inform.-based fuzzy filters 118181
image enhancement, self-avoiding random walk approach 118236
image impulse noise suppression using adaptive L-Filters 106477
image intens., struct.-adaptive filtering based on polynomial regression modeling 73156
image noise elimination using nonlin. filtering strategies with edge preservation 106529
image noise reduction using midpoint-type nonlin. filters 106528
image proc., fine-detail preserving filter for noise suppression 106722
image proc., fuzzy-tunable filter based on differences between pixels 118233
image proc., line fitting using Hough-like procedure 73304
image proc., switching median filters based on counter propag. networks 118235
image restoration method using IFS 94944
image restoration using impulse detector and median filter 118225
image seq. filtering by adaptive lower-upper-middle smoother 106767
image seq. restoration, impulse noise, adaptive 3D median filtering 73142
image sig. proc., impulse noise removal *(Japanese)* 84135
images, edge detector, fuzzy iter. 73482
lifting wavelet transform for impulse noise reduction 132559
LMS-based adaptive order-stat. filters 73303
M-estim. robust adaptive filtering 119052
median based impulse rejecting filters, new class 94564
median filter based realizations of robust time-freq. distribs. 107553
mixture noise, nonlin. RLS, error-saturation nonlin. *(Chinese)* 107409
modified fast vector median filter 129461
multi-window impulse detector for restoration filters of noise-corrupted images *(Japanese)* 118436
multichannel image proc., impulsive noise 84266
noisy image seqs., impulse detectors 84142
non-Gaussian channels, robust decorrelating decision-feedback multiuser detect. 119187
nonlin. cumulant based adaptive filter for image Gaussian/impulsive noise removal 129443
nonlin. filter output, anal. of outlier influence 130062
nonlin. filtering impulse noise removal from corrupted images 94805
nonlin. group-blind multiuser detect. 119983
OFDM, phase noise effects 117894
partition-based median type filters for image noise suppression 73256
powerline commun. networks MAC layer model 108512
reson. piezoelec. transducers, broadband test sig. generation 86503
RLS nonlin. algm., correl. mixture noise 78989
robust adaptive filtering in impulse noise, least mean M-estim. algms. 119014
robust adaptive SS receiver, neural net preprocessing, non-Gaussian noise 74571
robust automatic speech recogn. in presence of impulsive noise 84026
robust quasi-Newton adaptive filtering algm. for impulse noise suppress. 95672
robust subspace tracking 130035
S-CDMA and TDMA, comparison for cable modem upstream channel 84883
satellite images coding, real BCH codes as joint source/channel codes 73357
SCM opt. transm. syst., clipping induced distortions *(Japanese)* 96825
small-feature-preserving noise-rejecting RM-KNN filters 84172
spatially connected neighborhood nonlin. filters, image restoration/enhancement 82298
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
turbo code over impulsive noise channel, perform. eval. 129025
two-state sig.-depend. rank order mean filter, stat. threshold design 94561
underwater sig. detect., biol. noise, pass. detect. perform. 75243
video denoising using fuzzy-connectedness principles 84358
wavelet packet modulation, transm. method in pulse-wise noise *(Japanese)* 106054
wide-band impulsive noise source, direction-finding tech. 75253
xDSL systs. corrupted by impulse noise, error-free seconds calc. 96300
Si forward-biased single-cryst. solar cells, impulse noise, nondestructive reliab. 112857

pulse response *see transient response*

pulse testing
air gaps, lightning impulse testing, humidity correction factor 99418
dielec. strength lightning impulse testing, humidity correction factor 92593
extra-turn power transformer gaseous insulation design studies *(Korean)* 123545
HV impulses, digital proc. based on time-freq. anal. 107459
IGBT PWM inverter-fed IM, insulation charact. anal. 134047
IGBTs and FETs in pulsed power appls., testing 92354
LDPE/polypropylene copolymer blend, elec. breakdown effects 77382
neg. pre-stressed conductor-plane gaps sparkover, pos. switching impulse voltages 91530
oriented extended chain cryst. polyethylene, treeing discharges 104411
polymer housed metal oxide surge arresters durability, impulse current stresses 133801
pos. direct voltage pre-stressing rod conductor gaps, sparkover 91531
power transformer impulse testing, soft-thresholding wavelet de-noising appl. *(Chinese)* 112606
rly. traction motors insulation weakness diagnosis *(German)* 113093
stun gun impulse voltage release, human body resist. *(Japanese)* 133388
N_2 high-press. insulation, lightning impulse breakdown charact. *(Japanese)* 92618

impurities
for impurity vibrations see "localised modes" or "phonon-impurity interactions"
see also chemical analysis; crystal purification; impurity absorption spectra; impurity distribution; impurity states; interstitials; magnetic impurities; semiconductor doping
chem. supplier quality mgt. for semicond. manufacture, changes/challenges 100625
diamond, ion implant. related defects, inhib. of light element diffusion 115557
DUV scatterometer for nanoparticle detect. in semicond. mfg. 109434
HTSCs, phenomenological model for microwave surface resist. 70610
insulating oil dielec. props., acetophenon effects *(Japanese)* 81729
ion implant. technol., metal contamination reduction 115608
low-quality silicon feedstock purification for solar cell fab. 100087
metall. grade Si upgrading for solar grade feedstock appls. 100046
metallic impurities, various substrs., removal by HF-based solns. 92087
poly/SIS/Si interface eval. by differential conductance *(Chinese)* 103223
polysilicon TFTs with SiN_x/SiO_2 dual under layer, back-channel effects 97653
Raman spectrosc., multifunctional anal. tool for microelectronics mfg. 103968
stainless-steel-particle-related burn-in failures, corrective actions 103233
supercond., conf., Tokyo, Japan (Oct. 2000) 113190
AlN, resist., band-gap shift, metal-nonmetal transit. 115321
CO_2 high-power multibeam lasers with heat regenerator, output charact. 82486
$Ce_{0.9}Gd_{0.09}Ca_{0.01}O_2$ electrolytes for low temp. SOFC 123792
$Ce_{0.9}Gd_{0.09}Fe_{0.01}O_2$ electrolytes for low temp. SOFC 123792
$Ce_{0.9}Gd_{0.1}O_2$ electrolytes for low temp. SOFC 123792
$Ce_{0.8}Gd_{0.18}Pr_{0.02}O_2$ electrolytes for low temp. SOFC 123792
Co silicidation, gaseous impurities, impact and solns. 103225
Cu, electroplated, on-chip metallis., gap fill, microstruct., comp. 115711
$CuInS_2$ single crysts., horiz. Bridgman growth, defect props. 114210
GaAs nanowires, oxide-assisted growth, opt. charcts. 69662
GaN, undoped, evidence of free carrier conc. gradient along c-axis 103005
GaN:Si, resist., band-gap shift, metal-nonmetal transit. 115321
He microwave-induced plasma based particle analyzer, use for mfg. environ. assess. 122705
HgCdTe LPE layers, undoped annealed, carrier conc., substr. quality effect 91673
InN, resist., band-gap shift, metal-nonmetal transit. 115321
$KMgF_3$:Er(Ce), impurity activation, TLD appls. 122373
PZT ferroelec. thin films, polariz./self-polariz. 127233
Pb-acid batts., life/capacity improvements, metal control additives 89109
Si LPE thin-film solar cell characterisation 100088
Si cryst. growth, engng. anal. of microdefect form. 79171
Si, lateral gettering of Fe and Pt by cavities induced by He implant. 81007
Si oxide films prepared by RF PECVD, C impurities reduction 90363
Si solar cells, heavily doped regions DOS 100059
μc-Si:B films, electron beam assisted plasma CVD, ion energy/hydrogen effects 102989
μc-Si:H,O films, O impurity effects, solar cell appls. 91611
Si:O, annealed under hydrostatic press., O aggregation and thermal donors 115478
Si_3N_4 film, helicon plasma sputtering deposition, props., sputtering-gas press. effect 101183
$SrBi_4Ti_4O_{15}$:Mn elec. cond., controlled oxygen partial press. 104379

impurity absorption spectra
see also defect absorption spectra
borate/silicate:Yb laser materials, CZ growth 124795
diamond:P films, low temp. excitation spectrum 69496
rare-earth doped chalcogenide glass fiber, mid-wave/LW IR laser pot. 105192
As-Ge-Ga-S:C(Pr)OH)(CS_2)(hydrocarbon) glasses, opt. props. 90583
$Ba_{0.77}Ca_{0.23}TiO_3$:Fe(Rh), photorefr. props., two-beam coupling 128445
Bi_2TeO_5:Au^+, nanoclusters form., strong absorpt. max. 91961
a-CN_x:H films, PECVD, effects of CF_4 addit. on growth 68262
CaS:Eu,Sm electron trapping material in light conversion agricultural film *(Chinese)* 71215
CdTe:V(Fe) photorefr. cryst. holographic gratings, FWM 128572
CdZnSSe-based QD nanocrystals, nucleation/growth in BSG 91801
CdZnTe:N,H_2 QW, N acceptors, H_2 passiv., PL obs. 103146
Cr-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
$CsCdBr_3$:Dy^{3+},Yb^{3+}, cryst. growth, spectrosc. props., mid-IR laser 93542
Cu^+:SiO_2 sol-gel glass, spectra, laser appls. 117170
Er-doped fiber amp. gain control, Sm-doped inner-cladding 117117
GaAs/AlGaAs QW, D-cond. band, transport/opt. props. 103144
GaN, undoped, evidence of free carrier conc. gradient along c-axis 103005
GaN:H, NH_3-MBE, nuc. react. anal. 101244
GaN:Mg,C,He,O epilayers, ion implant. induced defect states, elec. charactn. 81024
$GaPO_4$, hydrothermal soln. growth, struct., IR obs. 79162
Ga_2S_3-La_2S_3-La_2O_3:Dy^{3+} for 1.3-μm opt.-fiber amps. 128139
p-GaSe single cryst., defect centers, annealing 91941
$Gd_3Ga_5O_{12}$:Nd^{3+},Cr^{3+} laser single crysts., CZ growth, dopant conc. control 79189
InAs nanocrystals in Si, form. by seq. ion implant., charactn. 81031
InP, phonons, acceptors, THz absorpt. spectra 126037
KPb_2Cl_5:Dy^{3+},Yb^{3+}, cryst. growth, spectrosc. props., mid-IR laser 93542
$LiNbO_3$:In, photodamage resist., opt. props. 104392
$LiNbO_3$:Tb,Fe, near-stoichiometric, holographic storage appl., EPR obs. 72077
$LiTaO_3$:Ho^{3+}, up-conversion procs., CW excitation 105497
$MIn(MoO_4)_2$:Cr, (M=alkali metals), opt. props., laser appls. 82326
$NaBi(WO_4)_2$:Nd^{3+} single cryst., growth, polarised opt. absorpt. & PL 104597
Na_2O·$Cd_3Al_2Si_3O_{12}$:Er^{3+} glass, opt. charactn. 71217
Nd:$NaY(WO_4)_2$, CZ growth, thermal and laser props. 93536
Nd:YAG ceramics, hot band reson. pump, spectrosc. and laser emission 105231
Nd:YAG ceramics, laser emission under reson. pump in emitting level 93545
Nd^{3+}:$Gd_{0.2}Y_{0.8}Al(BO_3)_4$, laser cryst., growth and laser props. *(Chinese)* 71729
Nd-chelate/polymer opt. fibre amplif., NIR fluoresc. bands 128151
P_2O_5 glass:Er,Yb,Cr eye-safe laser syst., spectral & laser charact. 93549
$PbWO_4$:Fe^{3+} large single cryst. CZ growth, annealing and opt. charactn. 79187
Sb_2O_3-CuI-NaCl(NaI)$(PbCl_2)(PbI_2)$ glasses, prep., struct., opt. props. 92939
Si:H, H-plasma-etched and H-implanted single-cryst., annealing effect 69781
a-Si:H based pin solar cells, interfacial opt. spectra 100195
a-Si:H,(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
Si:O, FZ grown, O precip. in hydrogen ambience and its appl. 79175
Si:O, annealed under hydrostatic press., O aggregation and thermal donors 115478
p-/n-SiC, 6H, 15R, LF vibr. spectrosc., localised modes, Raman spectra 69578
SiC:Al,B, 4H/6H, absorpt. meas., doping level eval. 69809
SiC:B,V,N 6H crysts., PVT growth/doping, carrier conc. 124793
a-SiC:H ECR-PECVD films, microstruct. and opt. props. 68265

impurity absorption spectra continued
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807
a-$Si_{1-x}C_x$:H thin films, ECR-CVD deposited, blue emission 71528
SiO_2:Ag(Cu)(Au)(Er), opt. response, ion implanted nanoparticles, review 116552
SrS:Eu,Sm, IR stimulable phosphor, opt. storage 116572
SrS:Eu,Sm, electron traps, opt. storage *(Chinese)* 116929
Ti-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
Tm^{3+}:KY_3F_{10} laser, spectrosc. and CW operation 82587
YAG:Er^{3+}(Yb^{3+}) cryst., eye-safe laser syst., growth & opt. homogeneity 93547
YVO_4:Nd^{3+} cryst., LHPG, opt. props. 124796
ZnTe:Cr^{2+} layers, MBE growth on GaAs(100), opt. charactn. 101212
impurity and defect absorption spectra of inorganic solids *see defect absorption spectra; impurity absorption spectra*
impurity and defect absorption spectra of solids *see defect absorption spectra; impurity absorption spectra*
impurity clustering *see impurity distribution*
impurity distribution
see also doping profiles
diamond:B,N, CVD films, elec. props., acceptor/donor defects 80644
diamond:N, synthetic crysts., implanted N redistribution 126322
diamond:N nanocryst. films, PECVD, struct., electrochem. behavior 91605
diamond:S single crysts., ion implanted, struct. props. 126290
FIB micro machining, vert. Ga distrib., defects, lateral contamination 115610
flip chip underfill encapsulant reliab. perform., filler settling effects 67579
MOSFET impurity conc. profiles extraction by DCIV method 115938
nonuniform QW IR photodetectors, elec. field distrib., perform. study 86544
polysilicon thermal sprayed coatings, elec. charact. 115287
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
thin film anodic bonding, sodium distrib. 103227
ULSI device isolation struct., metal impurities behaviour 81107
ultrathin gate oxide CMOS with undoped selective epitaxial Si channel layer 70307
Ag-filled conductive adhesive joints, ionic impurities effects 125899
Ag^+-glass waveguides, GRIN profiles, thermodiffusional form. 127734
$Al_xGa_{1-x}N$:Si,Mg/GaN, mech. props., impurity doping effect 81025
AlN:C reactive DC magnetron sputtered thin films, depth element distrib. 101188
Bi:Te nanowire arrays fab., transport props., modelling 102966
CdS/CdTe solar cell struct., doping and intermixing, spatially resolved cathodolum. obs. 112878
n-CdTe:In,I MBE films, donors, photocond. spectra 91620
GaAs:^{73}As, implant., diffusion study 126278
GaAs:H, H-ion implant., depth distrib., damage profiles 115561
$Ga_{1-x}Fe_xAs$, mag. semicond., impurities, XAFS obs. 80768
GaN film, two step HVPE growth, nucleation effects, XRD 114368
GaN:Er, C films, GSMBE grown, surface morph., PL, SEM, AFM 126062
GaN:Fe^+ films, implanted, struct., ion channeling/Mossbauer spectra 81037
GaN:H,Mg(Be), RF-plasma MBE growth, on sapphire, doping 81001
GaN:In films, carrier dyn., MOVPE, time resolved PL 80726
GaN:Mg, novel methods, p-type/RF input activation, long-time air annealing, hole conc., PL 80983
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaN:Mg,H films, H lattice location, ion channeling obs. 80708
GaP:^{73}As, implant., diffusion study 126278
$Gd_3Ga_5O_{12}$:Nd^{3+},Cr^{3+} laser single crysts., CZ growth, dopant conc. control 79189
Ge:Sb, ICP-mass spectrometry/NAA/Hall effect anal. 80660
$Ge_{1-x}Si_x$:B (Ga) (P), heavily impurity doped, CZ growth 79186
InGaP-GaAs-AlGaAs DHBTs, transient charact. 70045
$In_{1-x}Mn_xAs$, mag. semicond., impurities, XAFS obs. 80768
InP, high-press. mag. LEC cryst. growth, P injection 79174
InP, implant.-induced carriers/depth profiles correl., annealing 91958
InP:Er, implanted, lattice location, emission channeling obs. 81039
Nd:YAG boule slices, laser perform., opt. props. 93540
PbSe:Bi, doping, self-compensation 91965
$RuSr_2GdCu_2O_8$ supercond. cpd., impurity phases 81937
Si, SIMS depth profiling, O_2^+(N_2^+) beam-induced profile broadening effects 69473
Si:Al polycryst., extended high temp. Al gettering, elec. props. 126261
Si:As, near-surface damage annealing and ultralow energy implants elec. activation 126275
Si:As(B)(P), ion implant. induced contamination, Monte Carlo simul./modeling 115609
Si:B, low energy B^+ implant., lattice damage, slow positron obs. 81027
Si:C, ion implant., $Si_{1-x}C_x$ form./stabil. 69803
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si:Ge cryst., lattice param., X-ray topography/chem. etching obs. 69480
Si:H crysts., H depth profiling, ERDA anal. 126324
Si:H, implant. induced surf. layer exfol. 80993
Si:H^+,He^+ single cryst., evol. during annealing 126273
μc-Si:H,O films, O impurity effects, solar cell appls. 91611
Si:He,N, porous Si form., MeV energy pre-implant. 80992
Si:O, BOX, SIMOX, positron annihilation 91969
Si:P(B)(100)/Cl etching react. and adsorpt. 103442
4H-SiC epilayers, hot-wall CVD, doping/trap conc. reduction 124931
SiC:B related defects, struct./kinetics, ab initio method 69592
SiC:H, 4H, H_2 conc., theoretical approach, vacancy-hydrogen complex 69588
SiC:H heteroepitaxial film growth, methane RF PIII method 90538
SiC:H,B, 4H, H_2 presence, SIMS, low temp. PL spectra 69583
SiC:O, 3C, 4H, isolated oxygen defects; elec. activity 69594
$Si_{1-x}Ge_x$ on Si(001) substr., band gap narrowing 81021
Si_3N_4/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
SiO_2/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
SiO_2/Si:Er syst., PL obs. *(Chinese)* 127912
SiO_xN_y ultrathin films, RTN, N depth profile obs. 91996
YVO_4:Nd, defects in large single crysts. 90217
ZnO varistor fabr., powder coating with mixed dopant solns. 79372
ZnSe:N, implanted defect props., β-NMR obs. 91650
impurity electron states *see impurity states*
impurity scattering
used for carrier scattering by impurities
2D lateral superlattices, magnetotransport, smooth disorder 91815
finite short-period modulation-doped superlattices, electronic scatt. meas. and calcs. 91819
semicond. microscopic pot./free carrier distrib. theory, Debye Huckel approach 80628
impurity scattering continued
semiconds., electron spin coherence, kinetic theory 91844
SOI MOSFET, highly doped, inversion-layer mobility, self-consistent ca 92348
AlGaN/GaN HFET, electron transport props., electron dens., polaris. effe 81385
p-AlGaN/GaN modulation doped superlattices, improved mobil./resist. 1261
$Bi_{2-x}In_xSe_3$ single crysts., transport props. 126088
n-$CuInSe_2$ elec. characts., impurity band cond. effects anal. 126093
$GaAs/Al_xGa_{1-x}As$ asymmetric one-/two-sided QW, electron mobility 69702
GaAs/AlGaAs 2DEG, quantum Hall regime, inter-edge-state scatt. centers 917
GaN materials/devices, quantum 1/f noise anal. 91677
p-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
n-$Hg_{0.80}Mg_{0.20}$Te/CdTe MBE films, interface accumulation layer, cond. *(Chine* 115323
ITO films, RF sputtering prep., struct./elec. props. 90239
$In_{0.7}Ga_{0.3}As/In_{0.52}Al_{0.48}As$ pseudomorphic QW-HEMT struct., MBE grow 103898
InSnO thin films for OLED, morph., elec. props. 109873
Si, non-parab. band hydrodynamical model, electron device simul. 91578
Si:B n-channel trench UMOSFETs, channel B-doping 81312
$Si/Si_{1-x}Ge_x$ deep submicron MOSFET, stepped doping profile 103870
ZnS, transport props., temp. depend. 126058
n-ZnTe:Al layers, MBE growth, struct./elec./opt. props. 90317
impurity segregation *see impurity distribution*
impurity states
see also deep levels; defect states; electron traps; hole traps; impurities; impurity absorption spectra
aromatic polyimide films, partially carbonised, semicond. elec. props. 80777
diamond:B, heavily-doped, high cond., impurity states 115295
diamond:B/Al Schottky contacts, DLTS space charge spectrosc. 80906
diamond:H, low-resistive n-type semicond., H-related complexes 91951
diamond:H CVD films, defect states, DLTS 80646
diamond:H films, surface region carrier generation 69493
diamond:Ni,N, W8/AB5 defect levels, EPR obs. 126001
diamond:P films, low temp. excitation spectrum 69496
diamond:P homoepitaxial films, cathodolum. obs. 116914
diamond:P homoepitaxial n-type CVD films, phonon-assisted electronic transiti 69495
diamond:S,N,B, deep donor states, doping efficiency 69497
diamond, low-resist. wide band-gap, codoping method 126314
diamond thin film, form. of shallow acceptor states in surface region 69470
doped diamond nanocrystallites, qubits, quantum computing appl. 125136
endo-fullerenes, qubits, solid-state quantum computing appl. 125136
organic hole transport materials, trap engng. 69567
polar QD, impurity binding energy, finite pot. barriers 115392
poly-Si:P gate/band gap narrowing, incomplete impurity ionization, direct tunne ing leakage current 91592
QD-QW systs., shallow impurities and δ-doping, defect states anal. 115390
semicond. microscopic pot./free carrier distrib. theory, Debye Huckel approac 80628
semiconds., shallow-level centers, conf. review 91569
surface-doped diamond, pH sens., surface termination effect 87023
topol. disordered systs., generalized effective-medium approx. for hopping trans port 115330
wide gap semiconds., doping behaviour, conf. 124204
wide-gap semiconds., doping limits, amphoteric defect model 91949
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
AlGaN:Mg films, acceptor levels, LED obs. 69534
(Al)GaN:Si(Be)(Mg)(C) films, MBE, layer morph., doping efficiency 68207
AlGaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 69642
AlGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 8080
AlGaN/GaN heterojn. band offsets, photolum. and modulation spectra obs 91764
AlGaN/GaN:Mg superlattices, p-type modulation Mg doping, resist., hole conc 81046
AlGaN-GaN HBTs for high-temp. electronics appls., modelling 92318
AlN, low-resist. wide band-gap, codoping method 126314
AlN:C,O, valence/spin control by codoping 115563
AlN:O ceramics, radiation induced recomb. procs. 127921
α-Al_2O_3:C, high sensitivity TLD, trap-one recomb. centre model, review 127920
Au/GaSb (110) interface, low temp. work fn., acceptor states 126203
Au/TiB_2/GaAs Schottky contacts, transit. layer, transverse bulk photovoltage 69712
$BaSrTiO_3$:Ni ceramics, O vacancies, dyn. behavior, TSC obs. 127224
CdS/CdTe solar cell struct., doping and intermixing, spatially resolved cathodolum. obs. 112878
CdTe, doping, elec./opt. investigs. 126009
n-CdTe:In,I MBE films, donors, photocond. spectra 91620
CdTe:Sb, impurity states, elec. studies 69802
CdTe/$Cd_{1-x}Zn_xTe$ QW, exciton bound ionized donor impurity 115415
CdTe/CdS solar cells, electrodeposited, heterojunction props. 134387
CdZnTe:N,H_2 QW, N acceptors, H_2 passiv., PL obs. 103146
$(Ce_{0.67}Tb_{0.33-x})Mn_xMgAl_{11}O_{19}$ phosphor, Mn^{2+} luminesc. 127934
p-$CuInSe_2$:H, hydrogenation, cond. type conversion 103409
Cu_2O:N thin film, reactive RF magnetron sputtering 79200
Cu_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
n-$CuInSe_2$ elec. characts., impurity band cond. effects anal. 126093
GaAs, SI, internal friction, annealing effects 91653
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
GaAs low-dimens. systs., shallow-donor transits., mag. field effects 91843
GaAs, shallow donor states, central-cell corrections, strong mag. fields effects 80680
GaAs:Be films, MBE, defect engng., elec. props. 126032
GaAs:Fe, ps photoresponsivity, Fe hole capturing states effects 71508
GaAs:N, N-related complexes, first-principles pseudopotential method 91623
GaAs:Si,Be MBE growth, compensation 68196
GaAs/AlGaAs QW, D$^-$-cond. band, transport/opt. props. 103144
$GaAs/Ga_{1-x}Al_xAs$ QW, exciton bound ionized donor impurity 115415
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approach 91794
$Ga_{1-x}In_xAs_ySb_{1-y}$ solid solns. by LPE, role of Pb 114383
GaInP/AlGaInP QW LDs, S-shaped NDR, cladding layer thickness depend. 71786
GaN MOCVD growth on 3C-SiC/Si(111) substr., buffer layer effects 69509
n-GaN Schottky diodes, deep levels, DLTS 126646
GaN epilayers, MBE grown, annealing, PL 126276
n-GaN epilayers, elec. props., plasma etching, ICP plasma damage 80742

urity states continued
GaN epilayers, low press. MOVPE, PL, photoreflectance, growth temp./press. 90448
GaN epitaxial layers, high resoln. polariton spectra 80722
GaN film growth, elec./optical/struct. props., AlN interlayers, TEM 124889
GaN films on SiC, PL, photocond., RIE effects 81102
p⁺-nGaN homojunction diodes, deep levels, DLTS 126646
GaN, hydride VPE layers, mass transport growth, opt. emission 79401
GaN, low-resist. wide band-gap, codoping method 126314
GaN optoelectronic devices, defect dens. reduction 91675
GaN, shallow levels, selective photoluminesc. spectra 91619
GaN strain-free homoepitaxial layers, donor-bound excitons, magneto-spectrosc./luminesc. 80720
p-GaN:(Mg,)Be, ion implant., surface morph. and photolum. meas. 69832
GaN:Be, elec./structural anal., Raman spectrosc., high resoln. XRD 81000
GaN:Be,H, Be doping, first-principles studies 91970
GaN:C films, plasma assisted/ammonia MBE, elec. characts. 80741
GaN:C films, plasma-MBE growth/doping, elec./opt. props. 126315
GaN:H, NH_3-MBE, nuc. react. anal. 101244
GaN:In films, carrier dyn., MOVPE, time resolved PL 80726
GaN:Mg (si) films, pure and doped, near band edge recomb., PL 80723
p-GaN:Mg MOVPE layers, deep trap anal., elec. cond., TSC and thermal admittance spectra meas. 69546
GaN:Mg Schottky diodes, thermal admittance spectrosc. 92284
p-GaN:Mg, acceptor activation, microwave treatment, PL, Hall effect 81047
GaN:Mg, acceptor related recomb. centers, inhomog. spatial distrib., CL 81043
p-GaN:Mg activation, thermal annealing, oxidizing atmos. 81045
GaN:Mg, blue LED, nitrogen plasma treatment, vacancies, reactivation 82419
GaN:Mg bulk single crysts., elec. props., temp. depend. 69537
p-GaN:Mg epilayer, PL, MOVPE, SIMS 79346
p-GaN:Mg epilayers, MOCVD grown, temp. depend. Hall meas. 80740
GaN:Mg p-type films, temp.-depend. hole transport 126048
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaN:Mg/Al_2O_3, wurtzite sample, electronic Raman scatt., MBE/MOCVD growth 124862
p-GaN:Mg/Ni contacts, Schottky barriers, memory capability 80922
p-GaN:Mg,O, activation, sheet resist., PL 80694
GaN:Mg,Si(O), valence/spin control by codoping 115563
GaN:P films, electronic struct., PL 80727
GaN:Si films on GaAs, MOVPE, photolum., Si doping effect 79305
α-GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and IR ellipsometry meas. 69545
GaN/sapphire HVPE films, interfacial region impurity band, SFM obs. 69518
GaN-sapphire interface, thermally activated cond. 103184
GaP, shallow donor states, central-cell corrections, strong mag. fields effects 80680
p-GaSe single cryst., defect centers, annealing 91941
$Gd_3Ga_5O_{12}$:Ag phosphor prep. and electrolum. characts. *(Chinese)* 116930
Gd_3PO_7:Eu^+ phosphor, UV/VUV luminesc. props. 82331
p-Ge lasers, influence of group II and III shallow acceptors on gain 93595
Ge:Au, deep-level impurity centres, hydrostatic press. effects 80635
p-$Hg_{0.78}Cd_{0.22}Te$, lightly compensated Cu-doped, metallic cond. over acceptor band 115301
$Hg_{1-x}Cd_xTe$:As epilayers, in situ doped, MBE growth, elec. props. 102999
$Hg_{1-x}Cd_xTe$:As, p-type dopant activation kinetics 91989
HgSe:V crysts., growth, transport props. 91643
InGaAsN/GaAs QW lasers, localized N states effect on material gain 105264
InGaN:Zn microcrystals, Pure and doped, PL excitation spectrum, nitridation 80725
$In_xGa_{1-x}N$:Mg epitaxial MOCVD films, elec./opt. characts. 69513
InGaN/GaN MQW struct., time resolved PL, MOCVD 80876
InGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
InP, phonons, acceptors, THz absorpt. spectra 126037
n-InP:H, hydrogen neutralization effect, defect states 80711
InP:Mg^+, implanted, RTA, lattice recovery, Raman obs. 80981
InP:Ru LP-HVPE layers, elec. charact. 91659
$K_3Na(SO_4)_2$:Eu TLD phosphor, correl. ESR/PL/TL studies 76725
LiF:Mg,Cu,P, high sensitivity TLD, trap-one recomb. centre model, review 127920
$LiTaO_3$:Ho^{3+}, up-conversion procs., CW excitation 105497
$MgSO_4$:Dy(Mn)(P)(Cu), thermoluminescent 3D spectra *(Chinese)* 127928
$NaBi(WO_4)_2$:Nd^{3+} single cryst., growth, polarised opt. absorpt. & PL 104597
PZT sol-gel derived films, ohmic cond./activation energy, temp. depend. 92645
$Pb_5Al_3F_{19}$:Nd^{3+} cryst., site-selective spectrosc., IR-to-vis. upconversion 105496
$Pb_{1-x}Ge_xTe$:Ga, impurity-induced photocond. 93319
PbSe:Bi, doping, self-compensation 91965
SIMOX wafer, Si top layer residual O behaviour, photolum. and SIMS obs. *(Chinese)* 126245
Si, high energy ion implant., annealing, elec. act. centres 115510
Si multilayer structs., MBE growth combining solid/molten Si evap. 103132
Si pn devices, PEEM, doping-induced contrast, photon energy depend. 69630
Si, shallow acceptor center, mag. moment relax. rate, muon probe 102961
Si, shallow donor states, central-cell corrections, strong mag. fields effects 80680
Si:Ag coupled quantum wire-dot, single-electron transport through Anderson center 69683
Si:Ag solar cells, thermal failure model, depth profile anal. 89282
Si:Al,H, interstitial-type defect aggregations, H-enhanced self-organization 126000
Si:As, near-surface damage annealing and ultralow energy implants elec. activation 126275
Si:Au, acceptor behavior rel. to long-term heat treatment 102970
n-Si:Au-based V-groove p-i-n photodetectors, static and transient characts. 120793
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:B(Ga)(O)(C) solar cells, radiation-induced defects, impurity effects 100033
Si:B,Fe, ultrapure float-zoned samples, Fe trace levels detect., photolum. method 69468
Si:B,Ge(P), metallic, codoping fab., first principles calcs. 91953
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si:Er, Er centers optimisation for reverse biased LEDs 69489
Si:Er, ion-implant., range distribs. 69488
Si:Er,O, O-coimplant., donor centers form. effect 69486
p-Si:Fe,B, Fe-B pairs, acceptor level, capture cross sects. 69498
a-Si:H hot-wire CVD films, electronic states, light-induced metastability 127907
p^+-Si:H,B,Fe, Fe detect., DLTS, Schottky diode meas. 80655
Si:Li,Er-based IR electrolum. devices, elec. field-induced fab. 71564
Si:Mn films, super-doped, gas source MBE growth, anom. Hall effect 90295
Si:O, annealed under hydrostatic press., O aggregation and thermal donors 115478

impurity states continued
Si:O, polycryst., EFG, deep level defects 91608
Si:O,Er MBE-grown films, electron and hole impact excitation 71520
Si:P nanocrysts., ball milling, grain size distrib. and band struct. modif. 126596
Si:P(Bi), pop. inversion, far-IR lasing 91581
Si:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
Si:Sb bulk cryst./δ-doped layer, magnetocond., weak localization 91579
Si:Yb, ion-implant., range distribs. 69488
p-/n-SiC, 4H, epilayers, Be implant., Be defect centers, DLTS 69595
SiC, 4H/6H, electron/ion irrad., intrinsic defect centers, annihilation 69810
SiC, 6H, MOS struct., shallow dopant/surface levels, TSC 69758
SiC Schottky jn. admittance, carrier freeze-out effects 69718
3C-SiC, donor densities/energy levels, Hall-effect meas., free carrier conc. spectrosc. 69600
SiC polytype depend., tantalum/tungsten band gap states 69596
4H-SiC thyristors, turn-on procs., temp. depend. 70054
SiC:Al epitaxial layers, acceptor-H interact., low-temp. PL spectrosc. 91713
SiC:Al,B, 4H, deep acceptors, EPR, vacancies 69798
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
4H-SiC:B crysts., B centres, DEFT 69593
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 69811
$p^+/n/n^+$ SiC:B struct., EL, opt. emission microscopy 69639
4H-SiC:B,Al, impurity-controlled dopant activation, H-determined site selection 126101
SiC:B,Al,H passiv. and defect props., ab initio DEFT calcs. 126404
SiC:B,C, 4H polytype, B acceptors, seq. implant. effects 80995
SiC:H, 4H, H_2 conc., theoretical approach, vacancy-hydrogen complex 69588
SiC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796
SiC:H,Al, 4H, passivating H-Al complex, dissoc. energy 69589
p-SiC:H,Al, acceptor passiv. and thermal reactivation 126403
SiC:H,B, 4H, H_2 presence, SIMS, low temp. PL spectra 69583
n-SiC:N, 4H polytype, elec. transport props. 91726
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V meas. 68237
SiC:O, 3C, 4H, isolated oxygen defects; elec. activity 69594
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807
4H-SiC:P,C(Si), co-implant., n-type doping 103278
$Si_{1-y}C_y$:Er MBE-grown films, electron and hole impact excitation 71520
SiGe/Si QW, THz lasing mechanism 93621
SiO_2:Er, ion-implant., range distribs. 69488
SiO_2:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254
SiO_2:Yb, ion-implant., range distribs. 69488
SiO_2/Si:Er nanocryst. syst., exciton-Er energy transfer, PL 69481
SnO_2 nanocryst. thin films grown on p-InSb(111), structural, elec., and opt. props. 80749
SrS, doping, elec./opt. investigs. 126009
SrS:Ce ac thin-film EL devices, dyn. space charge mechanism 93390
SrS:Eu,Sm, IR stimulable phosphor, opt. storage 116572
SrS-based ACTFEL devices, electrolum. thermal quenching study 104977
$Sr(Ti_{1-x}Mn_x)O_y$ polycryst. films, leakage currents 127164
$SrTiO_3$ grain boundaries, Z-contrast STEM imaging 104299
TiO_2:Eu^{3+} sol-gel thin films, PL props. 71518
Tm^{3+}-doped fluorozirconate glass, $^3H_4 \rightarrow {}^3F_4$ transit. quantum efficiency 92944
$Y(BO_3,PO_4)$:Ce,Tb,Gd, luminesc. charact. *(Chinese)* 71537
$Zn(Ga_{1-x}Al_x)_2O_4$:Mn spherical phosphors, LV cathodoluminesc. 104940
ZnO, green emission band, fine struct. 80677
ZnO, valence states control, codoping method 91952
ZnO:Fe, excitonic procs., PL/elec. DC behaviour 126040
ZnS:Mn-based ACTFEL devices, electrolum. thermal quenching study 104977
ZnSe, doping, elec./opt. investigs. 126009
ZnSe:Al,Cl,In, shallow levels, selective photoluminesc. spectra 91619
ZnSe:Cr^{2+} crysts., prep. conditions and IR photolum. lifetime meas. 81018
ZnSe:Cu ceramics, opt. and elec. props. 91616
ZnSe:N, implanted defect props., β-NMR obs. 91650
ZnSe(:Sb) film, photoacoustic spectra, MOVPE 126041
ZnTe, doping, elec./opt. investigs. 126009
n-ZnTe:Al layers, MBE growth, struct./elec./opt. props. 90317

IMS-2 interface *see peripheral interfaces*

in-circuit testing *see integrated circuit testing; printed circuit testing*

incandescent lamps *see filament lamps*

incoherent light annealing
see also rapid thermal annealing
Pt/$SrTiO_3$/Pt/Ti/SiO_2/Si capacitors, post-annealed $SrTiO_3$ thin films, prep. 68143
a-Si:H thin films, light-induced annealing effects, positron beam annihilation/FTIR spectra 80977
Si(100), at.-order thermal nitridation, subsequent Si layer growth 103314

incommensurate-commensurate transformations *see commensurate-incommensurate transformations*

incremental encoders *see analogue-digital conversion; angular measurement; encoding*

incremental learning *see learning (artificial intelligence)*

indentation
300 mm wafers, mech. props., slip length simul. during thermal proc. 70239
Au/Cr/sapphire interfacial fracture, hybrid microcircuits, annealing 102839
AZ 1350J photoresist, mech. props., ion irrad. induced crosslinking 69965
ceramics ceramics low temp. bonding, sol-gel proc., SEM, TEM 125080
a-diamond thin films, tensile prop., MEMS, sens. 127097
hard disk coatings, charactn. of nano-wear mechanisms 68476
low-k dielec., mater. charactn. for damascene integrat. 126463
mag. storage, layered materials, continuous stiffness meas. 92849
mag. tapes, dyn. mech. charactn., nanoindentation methods 114562
microsprings and microcantilevers, mech. props. 116095
polysilicon microcantilever beam bending, nanoindentation, Young's modulus *(Chinese)* 81569
polysilicon microcantilever beams, mech. props., nanoindentation *(Chinese)* 81565
portable soft tissue indentor, accuracy & reliab. testing 87320
supercond. magnet structural materials, Vickers hardness 125148
thin films, stresses and mech. props., conf., Boston MA, USA (Nov.-Dec. 1999) 113277
wiresaw mfg., brittle material slicing, free abrasive machining 113459
Ag metallization on co-fired MLC substr., strength of solder interface 67535
Ag, thin films, fatigue, dyn. microbeam deflection 127093
Al MEMS films, Young's modulus, yield strength, microcantilever beams *(Korean)* 114555

indentation continued
AlN bulk single-cryst., high-temp. hardness 69535
$BaTiO_3$ theoretical/expt./appls., piezoelec. ceramics, indentation, theory, expt. 104373
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
a-C:H/ZnSe/BaF_2/Y_2O_3 DLC IR antirefl. multilayered interf. coatings 116883
Cu electroplated films, adhesive strength & scratch resist. 126491
GeSbTe films, phase-change recording media, mech. props. 82033
H-silsesquioxane ultra low-k ILD films with tunable elec./mech. props. 92159
LaB_3O_6 single cryst., morphol., thin-layer radiation detectors 132354
$LiNbO_3$/Pt/Ti/Au/Au integrated opt. waveguide modulator, mech. testing 82177
$LiNbO_3$-Ti-Pt-Au-Au opt. waveguide modulator, depth-sens. nanoindentation 116806
PZT, piezoelec. ceramics, indentation, theory, expt. 104373
PZT thin films, mech. props., adhesion, SPM/SEM, MEMS 127095
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ cryst., indentation-induced domain switching 104395
Si cryst. surfaces micromorphology, wet chem. etching 126345
Si polycryst. microcantilever beams, mech. props., specimen size effect 81559
Si-C-N films deposited by microwave plasma CVD on Si with buffer layers, characts. 114332
$Zr_{55}Al_9Ni_5Cu_{31}$ glass, SME, microactuators 123706

index terms *see vocabulary*

indexing
see also database indexing; information dissemination; vocabulary
advanced digital video surveillance 118167
color documents, class. strategy using Cart trees 94756
color images, neural network-based text location 118751
colored pattern appearance model for image indexing 95237
colour image comparison, objective metric 118220
colour re-indexing algm. for lossless compression of digital images 118648
compressed video, motion activity region-based descriptor 95505
content-based video representation and indexing 73316
digital video, stylized text events, robust detect. 129803
dyn. complex scene anal. with fractal embedding method *(French)* 106440
face detect., complex backgrounds, neural net based method 95472
full-text index compression 94259
image indexing techs., DCT domain 95045
JPEG compressed domain, image indexing and retrieval 118646
med. image databases, efficient retrieval 76212
motion based video index syst. *(Chinese)* 73239
motion pictures, dramatic story sects. and tempo determ. 95504
MPEG compressed domain, B-spline curve representation of segmented obj. 106530
MPEG-2 streams, index model *(Chinese)* 118630
multi-attribute data broadcast, indexing techs. for power mgt. 86297
multi-modal dialog scene detect. using HMM 85363
piecewise approx. of curves using nonlin. diffusion in scale-space 94470
scene change detect. in video seqs. 106905
semantic video indexing and multimedia understanding 94785
spoken document retrieval for TREC-8, broadcast news audio 106387
ToCAI description scheme for multimedia document indexing and retrieval 85364
traffic surveillance, content-based event retrieval 129815
video archive retrieval syst. by video fingerprint method *(Japanese)* 73345
video content-based retrieval, obj. motion trajectory indexing 118481
video seqs., scene cut detect. for indexing 118747

indicators
see also alarm systems
dial indicators calib., uncertainty calc., machine vision syst. 109841
EL indicators, struct., sealing methods 109838
FED indicator using screen-printed C nanotube emitters 86826
illum. push button, mil. and indust. use *(Italian)* 86794
LED instrum. panel design in automotive indust. 89410
mag. storm indicators, natural mag. fields registration instrums. 83378
URD network faulted cct. indicators, IEEE Guide 123070
C nanotube FED, num. indicator 75799
Eu complex-based MQW electrolum. devices, voltage indicators 109840

indoor radio
1.9 GHz band indoor propag. channel charact. 72337
2.0 GHz indoor radiated-mode leaky feeder propag. 72309
2.4 GHz SS syst. meas. in modern office buildings 105763
3D indoor radiowave propag. modeling by multilevel fast multipole algm. 72320
5.3 GHz wideband indoor radio channel, empirical charactn. 105753
5.8 GHz wideband indoor radio channel perform., furniture effects 83339
11 GHz indoor picocellular syst., assess. using propag. meas. and simul. 108757
60 GHz fiber-radio commun. syst. for indoor ATM network 131086
60 GHz indoor wireless commun., fan-beam antenna 72526
60 GHz radio channel sounding, T/R module for high data rate comms. 74546
62.4 GHz indoor channels, K-factor meas. and correl. bandwidth 85573
62.4 GHz LOS indoor channels, delay spread effects 85575
900 MHz handset diversity antenna, head/hand/shoulder effects, correl. charact. 94161
1900 MHz indoor propag. channel, wideband meas. and ray-tracing simul. 94030
adaptively sampled near-field smart array antenna for indoor wireless commun. 108879
asymmetric DFE, full-duplex commun. for indoor wireless appls. 119172
asymmetric wireless commun., OFDMA/TDD packet transm. 119888
BLAST-like indoor radio systs., asymptotic anal. 131111
Bluetooth, adaptive link-level error recovery mechanisms 85488
Bluetooth commun., microwave oven dictated EMI mitigation 94063
Bluetooth embedded IP pers. area network, archit. and perform. 85273
Bluetooth future scenarios, effects on value networks and business models 108637
Bluetooth MAC, throughput and power consumption improvement policies 85489
Bluetooth phys. layer perform. anal. in indoor wireless network 85486
Bluetooth wireless technol., merits and limitations 85487
Bluetooth wireless technol., overview 108535
Bluetooth/proposed evol. technols., consumer electronics appl./coverage constraints 119965
broadband fixed wireless access in future integrated commun. 119916
building materials, in-situ characterisation 80157
CDMA systs. in Nakagami multipath fading channel, perform. 131123
cellular transceiver, low power repeater 85667
cellular/PCS syst. design, indoor propag. 74757
DEFINITY Wireless Business System, health care appl., Nurse Call System Integration 76590

indoor radio continued
downlink TD-CDMA, lin. reception and multi-sens. extension 108841
DQRUMA with scheduling algms. for multimedia traffic in indoor environ. W-ATM networks 85026
DS-CDMA PCS indoor systs. with distributed antennas, forward link perfor eval. 85744
dual-band in-building wireless networks 85600
fair wireless channel allocation, adaptive zone selection/modulation un nonuniform traffic 108212
frame size adaptation for indoor wireless networks 120111
freq. hopping picocellular networks, interf. avoidance 85514
GSM radio network, hierarchical cellular struct. with inter-layer reuse, capac increment 131175
heterog. fixed and mobile networks, mobility convergence 131104
Hiperlan/2 and IEEE 802.11a stds. for 5 GHz band high speed wireless m timedia networking *(English)* 85562
human tracking indoors using WLAN received sig. strength values 131136
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
IEEE 802.11a phys. layer high-speed WLAN, OFDM receiver 109033
IEEE vehicular technol. and commun., conf., Leuven, Belgium (Oct. 200 78454
local mean power and fading stats. 85485
micro-/pico-cellular mobile commun., polaris. consideration 83265
microwave propag., indoor environ., GO/UTD model 83275
microwave WLAN, EM field distrib. 96408
MIMO channels, temporal var. in indoor environ., meas. 85635
MIMO channels in indoor environ. 85848
MIMO indoor radio channel capacity at 5.8 GHz 108606
MIMO indoor wireless channels, capacity meas. 85810
MIMO vector channel sounder meas. for smart antenna syst. eval. 120062
MM-wave band wireless network, impact of shadow fading 108595
MM-wave broadband wireless indoor networks, combined spatial-temporal C equalization 85465
MM-wave indoor LAN, antenna-coupled detector arrays 85224
MM-wave indoor radio transmitter/receiver with antenna 131089
MM-wave wireless commun., const. flux illum. of sq. cells 74574
MMSEC-RAKE receivers with diversity branches resoln. reductio anal./simul./appls. 85721
mobile radio environ., perform. assess. of adaptive equalizers 108763
mobile systs., radio channel investigs. 74864
MT-CDMA noncoherent syst. with diversity combining 131050
MT-CDMA sigs. receiver, two-stage MLSE 119910
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multipath propag., stochastic model anal. 85766
OFDM bandwidth-efficient indoor wireless, channel equalization 131083
OFDM broadband systs., spatial transmit diversity 74823
office environ., 5.25 GHz OFDM expt. study 131084
perform. of turbo-coded MC-CDMA for indoor wireless appls. 108754
picocells, wideband propag. prediction, new fast approach 83271
picocellular wireless commun., multimode fiber feed. OFDM 108869
precoded packet wireless systs., fast code rate adaptation 96445
propag. effects, anal. 83269
propag. prediction from outdoor site to indoor site *(Chinese)* 117683
Q-CDMA and chaotic SS CDMA systs., perform. comparison over Saleh indoo channel 74584
residential environ., MM-wave radio propag. 128776
Rohde and Schwarz EB200 miniport receiver for coverage and field-streng meas. 86785
room impulse response simul., scalable C40 multi-DSP syst. 108588
short-range wireless, long-term view 85580
single-feed rect.-ring microstrip antenna for indoor commun. under Bluetoot protocol 117787
site-specific channel modelling accuracy 83334
space-time propag. modelling, ray launching 85574
spatio-temporal equalization based on estim. channel response 119182
terrestrial/satellite intersegment handover, anal./perform. eval. through simu 96506
two-layered patch and loop antenna with dual freq. for indoor microcellular sys 72579
UHF bi-dyn. channel sounder for indoor meas. 85474
UHF indoor propag., simul. using num. tech. 128763
UHF indoor propag., wall inner struct. effects 72319
UHF indoor radio channels, rms delay and coherence bandwidth 74617
UHF indoor/outdoor channels, multi-element arrays capacity growth 85543
UHF LOS/nLOS time dispersion meas. in indoor radio channel 83266
UHF propag., ray-tracing methods 74572
UMTS spatio-temporal propag. trial results 83302
UWB technol. for wireless video networking 119868
W-CDMA cellular systs., evol. of high-speed packet-data services 131249
wavelet packet based indoor wireless channel model 108598
wideband channel sounder for real-time meas. on time-variant indoor radio chan nels *(German)* 128764
wideband meas. of time-variant indoor radio channels, moving scatterers impac *(German)* 128765
wireless gateway for wireless home AV network, implement. 119902
WLAN, adaptive pre-selected sector antenna transmitter diversity using DS CDMA 108211
WLAN, SS syst., SAW filter, chirp $\pi/4$-DQPSK modulation 96384
WLAN, token ring based, mean packet delivery time, wireless channel impac 130821
WLAN environ., single room, analytic calc. of power delay profile 74526
WLAN systs., power control combined adaptive zone selection 108208
WLANs for home networking appls., power limitations impact 119694

indoor radon *see natural radioactivity hazards*

indoor wireless communication *see indoor radio*

induced anisotropy (magnetic)
AuFe mag. multilayer, GMR, induced anisotropy, ion beam mixing *(Chinese* 116296
$(Co.Fe)_{50}Pt_{50}$ thin films, mag./magneto-opt. props. rel. to struct. 116254
CoO/Co/NiFe film with antidot array, MR, Hall resist., magnetis. 104508
CoZrNb/CoSm exchange-coupled underlayer for perp. recording media 116250
$CrPt_3$ chem. ordered films, mag. patterning by ion-beam irrad. 104479
Fe-Co-Si-B metallic glass, induced anisotropy, magnetoelastic props. 104490
FeCoNi/CuBe, sensitive nonlin. GMI effect 127352
Ni-Fe toroid cores, annealing and mag. treatment params. control for high perme abilities 127374
Ta/Cu/$Ni_{79}Fe_{21}$/Cu/Ta film, induced uniaxial mag. anisotropy and film magneto striction 127345

ctance
D Josephson jn. arrays, Coulomb blockade 127505
2D Josephson jn. arrays, paramag. Meissner effect, full mutual-inductance effects anal. 127481
2D underdamped Josephson jn. arrays, Eck-like steps 70973
3-phase soft-switching inverters simplification, zero-current-transit. 134184
3D interconnect inductance, freq. depend. 126996
5-phase reluctance motor drive, DSP-based direct torque control 89336
AC voltage regulator modules, topologies, HF power distrib. systs. 88831
air plasma, microwave generation using qtr.-wave coaxial resonator 102889
axial-flux circumferential current PM AC machine studies 133938
bal. three-phase variable inductance, transient power charact. 111670
BLDCM, C-dump converter-fed, winding mutual inductance studies *(Chinese)* 88756
brushless PM motors, low inductance, multilevel DC link inverter 133931
busbar elec. modelling, interconnection inductance, CAD 77131
cct.-aware on-chip inductance extraction 104075
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
class E power amp., nonlin. output capacit., finite DC-feed induct., design 80351
CMOS differential act. inductor, tunable L/Q for freqs. up to 5 GHz 91313
CMOS low-noise logic cells, substr. noise, resistive substr. model 102070
CMOS on-chip inductance effect on sig. nets under influence of power grid noise 81503
CMOS proc., Al(Cu) interconnect technol., on-chip inductance 81119
coil loaded monopole antennas, meas./computed results comparison 94170
contactless power conversion for motors, HF transformer model 123498
contactless power transm. for undersea robot, fund. considerations *(Japanese)* 134528
CT saturation detect. algm. *(Korean)* 115093
Cu vap. laser, discharge cct., capacitance, inductance, GA study *(Chinese)* 117053
DC reactor type supercond. fault current limiter, 6.6 kV power syst. 77593
DC-link inverter, low-inductive fuses 78042
deep submicron design, state of art and trends in parasitic extraction 104069
differential via holes in PCBs, FASTCAP modelling 91459
distrib. line, on-line impedance meter 133713
distributed RLC interconnects, anal. of on-chip inductance effects 126963
elec. gun, reusable pulsed lin. mag. flux compressor, model *(Chinese)* 93986
electrified rly., covered conductors *(German)* 123980
electrodischarge excimer laser excitation syst. simul. by equiv. elec. cct. 117062
embedded third order LC low pass Butterworth filters in MCM-L technol. 80033
fast rise time HV pulse generator, modified Marx generator *(Korean)* 123591
flywheel, axial-field sync. motor, semi-anal. inductance calc. 123839
flywheel slotted/slotless ring-wound PM brushless machines comparison *(Korean)* 123841
fork lift truck, LV SRM drive, modified C-dump converter 134550
half-bridge series-parallel reson. converter, EM considerations 99741
HBT intrinsic cct. params., direct extraction, extrinsic-inductance independent approach 102626
helical slow-wave struct., space-harmonic effects, equiv. cct. anal. 69460
helicoidal single-layer cylindrical coil self-inductance eval. 80462
HF transformer modelling, refl. coeff. tech. & S matrix 91438
high power dens. microtransformers, fab. techs. 80458
high power IGBT inverter, wiring inductance minimisation 112635
high-loss dielec., LF permitt. meas. setup, loss resist. compens. 97782
HTSC DC SQUID magnetometer, resistively shunted inductance 70927
HTSC microwave resonators, vortex pairs and nonlin. inductance 71123
HTSC SQUIDs, flip-chip and integrated input coils 70959
hysteresis-mode boost-converter input stages, high PF AC-fed power supplies 114600
IC design, power connector technol., low loop inductance 81448
IGBT module, chip current imbalance meas. *(Japanese)* 81283
IM drive, PF control, DSP based six-switch converter 89329
IM flux observer, mutual inductance sensitivity, discrete time domain 112526
induction machines, flux angle estim., FEM, HF sig. injection 88742
inductive ccts. current phase fuzzy control scheme 101725
inductive load-current interruption, arcing duration estim. *(Japanese)* 102797
inductive sens., alternative cct. configs. comparison 75487
interconnect design, simultaneous shield insertion/net ordering, explicit RLC noise constraint 126975
interior PM sync. motor, rotor config. studies *(Japanese)* 112493
interior PMSM, saturation/cross-magnetis. effects 133986
interleaving voltage regulator modules, coupling inductors-based perform. improvement 88961
Josephson jn., persistent current qubit, inductance effects 70943
large-scale mag. coupling modelling for on-chip interconnect 126979
lin. switched reluctance motor, high precision control appls. 123511
lin. sync. reluctance motor, inductance, cross magnetis. 134077
line sects. as capacitances or inductances in microwave range 128815
long ferromag. rod with arbitrary length coil, quasistatic/dyn. mag. permeab. 86921
loop conductor, nonzero cross sect., self-inductance 115101
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
MIMIC backside via self-inductance, calc. method 125775
moving coil lin. motor, armature field anal., posn./stroke control 88767
moving coil lin. oscillatory actuator, dyn. charact. *(Korean)* 134080
moving coil lin. oscillatory actuator, inductance and armature react. 128724
multi-secondaries concentric windings transformers, short-cct. reactances 123540
multi-terminal capacitors, package distributed models, 2D lossy transm.-line approach 113504
multicomponent solenoidal converter, distributed sectional inductance coil 72199
multilayer supercond. IC, inductance calc., 3D-MLSI software package 70978
nonlin. transm. line params. effect on soliton propag., freq. tripler optim. appl. 83448
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
on-chip clock wire inductance, fast bounds estim. tech. 101992
on-chip global interconnect struct., min/max inductance approxs. 126980
on-chip inductance extraction via windowing for simul. efficiency 79692
on-chip inductance in high-speed VLSI ccts., high-perform. design issues 116017
on-chip interconnect, inductance modeling and extraction 126498
on-chip interconnections, model anal. of transients 103457
pass. filter design, nonlin. inductance perform. estim. 91019
PCBs, capacitances/inductances extraction using exponential expansion method 69297
perp. mag. recording head, UHF dyn. 116356

inductance continued
phys. freq. depend. lumped model for RF integrated inductors 91333
PIFA compact dual-freq. designs using LC resonators 94125
PIFA/small patch struct. for mobile phones, capacitive/inductive loading influence 83623
planar spiral-type microelectromagnetic dist. sens. develop. *(Japanese)* 97811
planar transformers, low leakage inductance 80457
PMSM, robust speed control 112490
PMSM drives, sensorless control, sliding mode observer 134462
polycryst. ferrimag. core in alternating opp. mag. fields, special features 127381
power plane SPICE models and simulated perform. for materials and geometries 91458
quadrature directional coupler, optimum compensating susceptance/posn. 102526
railgun perform., current dens. distrib., inductance gradient *(Korean)* 117642
ramification of component selection 124303
rect. loops in rect. coaxial cavities, mutual coupling factor 91190
repeater insertion in tree struct. inductive interconnect 103987
segmented-type sync. reluctance motor, rotor design improvement *(Korean)* 123337
sens., AM meas. cct., precision improvement *(Chinese)* 109486
shielded coil inductance 83152
shielded interconnect four-line syst., mutual capacitance, inductance 69944
single-layer second-order HTSC SQUID gradiometer, step-down balancing 75494
slot-coupled patch antenna, input charact. improvement with strip 72462
slotless sync. machine, supercond. field winding, reactance 88700
small explosive mag. flux compression generator, HV generation *(Chinese)* 88950
smooth air-gap induction machines, dyn. eccentricity modelling 123421
SMPS flyback transformers, capacitance model 77946
solenoids, self-inductance series paradox *(Chinese)* 117635
solid rotor pulsed asynchronous generator, FEM-based num. anal. 123437
spiral inductors, low cost MCM-D substrs., design options 115229
spiral magnetocumulative generator, solenoid wires insulation influence *(Russian)* 99827
SQUID charge qubits, self/mutual inductance 81987
SRM, optimal driving condition, torque/speed control, GA-ANN 134503
SRM drives, rotor posn. estim., robustness anal. 134508
SRM phase inductance charactn. using Fourier series approach 133966
SSTF, supercond. magnet syst., induced voltage, AC loss 71039
STATCOM, harmonic reson., pass. components params. selection 112745
supercond. microstrip lines, bias current and temp. controlled variable inductance meas. 71115
supercond. power cable, EM behaviour 77402
supercond. quantum interf. filters, LC-reson. voltage response 70977
surface-mount PMSM, saturation/armature react. effects 123356
switched reluctance machine, multilevel modeling/simul. 133978
three-level rectifiers, PWM method for input-current harmonics control 134173
three-phase IM, optimal phase-shifter cct. params. 123470
three-phase variable act.-pass. reactance transient response 88361
transcutaneous energy transm. syst. efficiency, capacitor use *(Japanese)* 111135
transformer, init. magnetizing current, num. anal. tech. *(Japanese)* 112611
transformer winding, very fast transients anal., MTL theory 134107
transient stabil. improvement, UPFC design, DC capacitor, line inductance 111895
transverse flux lin. switched-reluctance motor, 3D force calcs. 112557
two metal layer tape package for improving high speed DRAM perform. 113632
two-axis lin. SRM inductances determ., controlled VSI *(Slovenian)* 77896
two-axis lin. sync. reluctance motor, operating point depend. inductances 123521
VHF portable radio terminals, helical antenna suppressing body effect *(Japanese)* 83648
VIENNA Rectifier II, switching freq. harmonic distortion of mains currents 78039
VLSI design, interconnect inductance, param. extraction 81459
VLSI design, on-chip inductance, repeater insertion 81460
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optim. 125385
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
VLSI on-chip interconnect, inductance effects, PEEC approach to cct. model 126978
VLSI on-chip interconnect modelling, full-wave PEEC time-domain method 81475
Yagi-type hardware neuron model, CMOS IC implement. *(Japanese)* 91133
ZCZVT PWM full-bridge DC-AC converter, commutation cell 134179
Al electrolytic capacitors, low inductance, freq. converter design 69280
AlGaN/GaN HEMT high power wideband feedback amp. module 114625
GaAs MMIC through-substr. via inductance, multiple on-wafer test approaches 102741
GaAs SPDT FET switches with capacitor cancelled parasitic inductance 80377
GaAs backside via RIE proc., high throughput, DOE 69892
GaAs microwave FET parasitic inductances and drain resist. under act. bias conditions 91233
Mn-Zn ferrites, microstruct. depend. of AC mag. props. 127336
NO_x control, solid-state switched pulser, nonthermal plasma proc. 133361
Nb/Cu supercond.-normal-supercond. asymmetry modulated SQUIDs 70975
NbN multilayer supercond. RSFQ ccts., inductance 70861
$Pt/BaSrTiO_3/Pt$ MIM capacitors, dielec. const., coplanar struct. 102778
Si CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515
Si substr., IC interconnects, resist. and inductance 70279
Si substr., VLSI interconnects, distributed inductance/resist. per-unit-length formulas 126509
Si-SiN-Cu insulator-lined substr.-via technol. with high aspect ratio, MMIC appls. 102723
SiO_2 ultra-thin CMOS gate oxides, two-freq. capacitance meas. tech., limitations 104124
YBaCuO wide microstrips, effective propag. params. 68995
$YBa_2Cu_3O_7$ DC SQUID, resistively shunted inductance 70928
$YBa_2Cu_3O_7$ step edge Josephson jns., single-layer SQUID gradiometers 70984

inductance measurement
borehole induction logging, adaptive focusing 88100
borehole induction meas., hybrid EBA/CG-FFHT method 88099
EM inductance tomography, image reconstruction method 118267
flexible inductive transducer, mag. resist. influenced by variable overlap area 120759
HT-7U Tokamak, vac. vessel, elec. params. 132124
multilayer planar printed inductors in RF consumer appls. 115095
on-chip mag. bead separator, spiral electromagnets, semi-encapsulated permalloy 116107

inductance measurement continued
ramification of component selection 124303
steel indust., strip speed determ., mag. contact-less sens. 132179
sync. reluctance motor, param.-meas., vector control 133984
induction, electromagnetic *see electromagnetic induction*
induction generators *see asynchronous generators*
induction heating
see also electric furnaces; ovens
3D induction heating EM/thermal fields anal. *(English)* 124101
AC-AC pulse converter for induction heating appls. 123637
continuous casting rot. stirrers, mag. field calc. *(German)* 113160
converters, capacitive/leakage currents, hazard sources *(Polish)* 78340
crucible-type induction furnaces, flow/temp. distrib. studies *(German)* 113138
current-fed inverter AFC 124100
disk induction heating, pressing on shaft, optimum params. 134642
dual freq. output quasi-reson. inverter *(English)* 113143
edge-element FEM, adaptive mesh generation 83146
ferromag. plate, equiv. excitation length 89448
ferromag. plate load, induction heating, inverter-inductor-load syst. 89449
forging indust. induction heaters, rational energy use optim. *(German)* 113161
freq. converter, insulation voltage stresses anal. *(Polish)* 99807
freq. convertors, retrospective, develop. trends *(German)* 112617
furnace, current reson. inverter, switching surge *(English)* 124095
furnace charges, temp. field distribs. anal. *(Polish)* 124102
furnaces, EM force excitation, structural-dyn. behavior 134643
handy excitation coil for inductive hyperthermia, simul. *(Japanese)* 111063
HF transformer, current dens., num. models 113147
HF transformer, design, testing 113146
high-power IGBT inverter for induction heating appls. *(German)* 112618
metal discs induction heating, inductor optimisation, GA *(Polish)* 124109
MF thyristor converters, elec. shock protection *(Polish)* 100330
nonlin. surface impedance, thermal effect 134641
pipeline fluid heating using PWM invertor-eddy current dual pack heater 124099
pipelines/vessels, impedance/induction/skin effect heating, IEEE Standard 134650
power supply with PLL, surge anal. 124098
quasi-reson. single-ended invertor for induction surface hardening appls. 78033
quasiresonant soft-switching PWM VSI for induction heating appls. 123638
rot. cylinder simul. model *(Polish)* 124107
soft-switching high-power HF inverters, parallel connection topol. 134204
stationary induction heating of flat charges, temp. field 78339
surface impedance, 3D finite element model 134646
thermal calcs. accuracy, input material data influence 78338
transverse flux heating, optimal inductor design, combined evol.-simplex tech. 89445
transverse flux induction heating, galvanizing line, 3D eddy currents, temp. field 134644
transverse flux induction heating, thermal field, EM forces 113148
two-cycle autonomous inverter ccts. for HF heating appls. 78032
unity PF 3-phase PWM SCR rectifier, induction heating, metal indust. 134647
3C-SiC lamella prepared from Si solvent saturated by carbon and PL *(Chinese)* 127922
induction machines *see asynchronous machines*
induction motor drives
3-level voltage-fed inverter IM drive, NN space vector PWM controller 134467
3-phase asynchronous motor drive, expanded functional capabilities 123936
3-phase IM-inverter drives, power meas., Park transform. 100250
3-phase unipolar IM drive, MRACS current control 134465
3-phase VSI fed IM drive, PV array perform. 100247
4-phase IM drives, CMV elimination 134448
5-phase IM drives, DSP-based vector control and direct torque control 123862
act. power filters, expanded current sync. detect. algm. 134333
adaptive fuzzy neural power control 134430
adaptive observer-based sensorless IM drive stabilisation 134442
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
automatic controller reconfiguration, fault tolerant operation 123857
bearingless IM drives, radial force detect., feedback effects 134437
carrier-sig. injection-based sensorless IM drives, saturation-induced saliencies 123934
controlled syst. lang. ident., modelling, control and anom. detect. 112731
copper ore transport, 20 MW downhill conveyor syst., three-level converters 134707
crane mechatronic syst. dyn. behavior investig. 89493
current regulated PWM inverters, IM appls., voltage control strategies 77975
current ripple minimisation, SVM control 123917
digital control systs. 100255
digital vector control syst. math. models 89348
direct stator flux and torque vector control 123913
direct torque and vector control comparison 100251
direct torque control, inverter state selection 89364
direct torque control, stabil. anal. 123919
direct torque control, torque ripple reduction strategy 100252
direct torque control approach 113044
direct torque control strategy studies 123876
direct torque control using enhanced inverter switching 78205
direct torque controlled IM drive, neural observer synthesis 89363
distorted voltage fed, torsional vibr., real-time tracking 89342
double stator inverter fed IM ASD, current control perform. optimisation 123907
doubly-fed induction machine, rotor side control strategy 134468
doubly-fed twin stator IM drive, control perform. eval. 78213
DSP-controlled IM drives, smart sens. bearings 123884
DTC using fuzzy variable switching sector 134502
dual IM drive, reduced switch count, dual current-regulated PWM VSI 123933
educational use 123939
EV, IM drive design, vector control 124005
EV, IM drive inverter, degrad. regimes, num. simul. *(French)* 134519
EV, sensorless IM drive, freq.-hybrid vector control 89375
EV propulsion, IM drives, optimum speed ratio 89376
exhaust fan, subsynchronous cascade drive, torsional reson. damage 89365
field oriented control, H_∞ controller design *(English)* 123852
field oriented speed control scheme 123898
field oriented speed control scheme, rotor flux observer 89330
field-oriented PI speed control, bifurcations 134434
filtered back EMF based speed-sensorless IM drive 134460
five-phase IM, rotor field oriented control, third harmonic currents 89324
fixed-speed IM PWM invertor-based ASD retrofit 134496
fuzzy controlled, loss minimization 123867
fuzzy efficiency optim. control *(Korean)* 113079
fuzzy logic direct torque control 123918
induction motor drives continued
fuzzy Volts/Hertz control scheme 100241
$H\infty$ field-oriented control scheme 78211
HF asynchronous motor drive, transistor inverter 100256
HF modeling, conducted EMI, overvoltage 88747
high speed IM drive with harmonics, inverter 123882
high-dyn. indust. motor drives, torsional vibrs. damping/ident. 124150
high-perform. adaptive parallel distributed compensator 123866
hoisting IM drive syst., cycloconverter based, control 100359
HV multilevel inverters, PWM control method, IM ASD *(Japanese)* 99802
hybrid fuzzy/PI two-stage controller 123863
ident., indirect vector control, ANN 113071
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IGBT PWM VSI-fed IM drives, series line termination net 123926
IGBT-based freq. converters for IM drives 112663
IM drive, optimized excitation current control 134531
IM drive, sensorless control, on-line param. ident. 123912
IM drive design, freq. converter filter characts. optim. 113081
indirect field oriented control, PI controller design 134429
indirect field oriented control, robust tuning of speed loop 123928
indirect field oriented control, slip freq. detect. 134438
indirect field oriented IM drive, flux/speed observer 123856
indirect FOC, 1 DOF and 2 DOF controllers design 123947
indirect rotor-flux oriented IM drives, param. var. expts. 78225
indirect vector-controlled IM drive, PI/fuzzy estimators 123874
indust. electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
interior PM IM drive, sensorless posn. control, posn. estim. 134486
inverter fed IM, transient reactances, rotor fixed saliencies 123911
inverter topologies for IM drive vector control appls. 88988
LIM drive, intell. backstepping control 100237
LIM servo drive, robust control, neural network uncertainty observer 78210
LIM servo-drive, nonlin. decoupled control, sliding-mode tech. 100238
loss minimization control using GAs 123865
mining machines, power supply syst., elec. transient procs. 100357
multi-motor drives, act. front-end converter, seq. sampling SVM 134696
multilevel power conversion, worldwide develop. trends 88974
MV IM drive with integrated DC link choke 134474
nonlin. speed control strategy improvement 123946
on-line testing, predictive maint., monitoring 123463
open-end winding IM drive, dual inverter fed, space vector PWM control 89321
param. estim., output error, eqn. error 123406
PF control, DSP based six-switch converter 89329
power converter control techs. 99745
power converters, digital control strategy, IM drive 113064
PSpice simul. models for IM drives 113072
PWM drives, long feeder cables, overvoltages, modelling 134472
PWM freq. converter, windings, pulsed voltage surges 123937
PWM inverter fed, control techs. 89356
PWM inverter fed, variable struct. torque/stator flux control 89346
PWM inverter fed IM drive, diode rectifier front end, regenerative braking 123931
PWM inverter-fed, HF conducted EMI modelling 123925
PWM inverter-fed IM drives, decoupled direct control 123855
PWM invertor-fed IM drives, shaft voltage prediction model 134454
PWM rectifier, four-step commutation strategy 123872
PWM rectifier/inverter-fed, control strategies 123908
PWM VSI fed IM drives, steady-state power saving, RBF neural network 113063
PWM VSI IM drive, DSP based fault detect. 100254
PWM VSI-fed IM drives, chopper cct. improvement 134499
PWM-extended DTC strategy 123881
quasi-reson. DC link inverter-fed IM drives, voltage feeding algms. 123924
real-time µP-based vector speed control 123920
reduced parts-count multi-level rectifiers, naval ship propulsion 134521
robot high perform. IM drives, speed neuro-controller 113080
rotor IGBT chopper control 89319
rotor speed estim. using Kalman filter algms. 134439
selection criteria for speed-sensorless appls. 134456
sensorless control, perform. limitations 123910
sensorless DTC, adaptive stator resist. estim. 113083
sensorless hybrid direct torque control IM drive 134444
sensorless IFOC, current regulators 100258
sensorless induction spindle motor drive, fuzzy NN speed controller 123904
sensorless multi IM drive strategy using MRACS 134461
sensorless posn. control, inverter clamping saliency anal. 134488
sensorless speed adjustment control, allied GA 78103
sensorless vector-controlled elec. vehicle IM drive 89394
servo motor drive, DSP based, robust integral struct. control 123860
servomotor drive robust control scheme 78212
servomotor drives, optimal relay vector posn. control algms. 113057
servomotor drives, robust posn./speed neurocontrol scheme 134498
Shinkansen, single-inverter multiple-IMs traction drives, vector control 89377
single phase IM drive design and computer based fault detect. 100262
single-chip inverter-fed IM drive concepts 134470
single-phase IM ASD, reduced no. of switches, HVAC appl. 134464
single-phase IM drives, literature survey 123877
six-phase IM, torque dens. improvement, third harmonic current injection 134471
slip energy recovery IM drives, harmonic anal. 78207
slip ring IM ASD, voltage source DC-link converter, transient behaviour 123892
speed control, fuzzy-logic controller, DSP syst. 89347
speed controller design of IM drive with time delay 78214
speed drives, sliding mode current control 113048
speed meas., current harmonic anal., Chirp-Z transform 112516
speed sensorless vector control, nonlin. inverter model 134487
speed sensorless vector controlled IM drive, core loss 89321
speed-sensorless vector control, NN speed estim. 78218
SPEEDAM 2000, conf., Ischia, Italy (June 2000) 78442
squirrel cage motor, direct/indirect space vector control methods 123923
squirrel cage motor loads, improved weighted total harmonic distortion index 113060
stator flux oriented vector start-up scheme 134440
stator-flux-oriented vector control, space-vector PWM, neural nets 123932
steady-state phase-coord. model 88739
submersible pump IM drives, inverter upgrade energy saving estim. 89360
three-level inverter, DTC, ANN as switching vector selector 134450
three-phase five-level double power converters, IM drive appls. 88979
three-phase IM, thyristor voltage controller, speed measuring method *(Chinese)* 112513

induction motor drives continued
three-phase IM drive syst., fault tolerance improvement 78215
three-phase IM drive transient behaviour optim. software 123938
three-phase matrix converters, input current harmonics under unbalance *(Chinese)* 88886
three-phase PWM VSI IM drive, lumped param. model 123897
three-phase soft-transit. inverter, ZCS, near ZVS control strategy 123602
TMC320C243-based torque estimator 123870
torque optim., main path saturation, nonlin. model *(Chinese)* 134007
vector control, flux observer, H∞ optim. 134473
vector controlled IM drive modelling, VHDL 123940
vector-controlled IM drives using random invertor switching 78206
voltage convertor fed IM, dyn. props. 77878
voltage stabil., harmonics effect, ASD effect on harmonics 122847
VSI fed IM drives, variable freq. space vector modulator 123916
VSI IM drive, adaptive nonlin. controller based optimal control 134463
VSI-fed IM drives, dual-stator windings design 134455
VSI-IM drive, PWM less current control 123402

induction motor protection
drives for educational purposes 123939
microcontroller appl. 112536
on-line stator resist. estim., temp. monitoring 134031
short-cct. fault protection using HBC fuses 134026

induction motors
see also capacitor motors; induction motor drives; induction motor protection; linear induction motors; squirrel cage motors
1-phase resistor-start IM, 3-phase stator, starting optim. 88733
2-phase IM, time asymmetry, stator phase windings, inductive coupling 99657
2nd.-order sliding mode control 77876
3-phase asynchronous single-machine freq. converters based on RA motors 123467
3-phase covered corundum arc furnace, neural supervisory control 113141
3-phase double-feed IM simul. in stable sync. operation 123483
3-phase IM, broken bars detect., instantaneous power spectrum 88752
3-phase IM, regenerative/DC injection braking 123440
3-phase IM, stators switching-over, electromechanical power transform. *(Russian)* 99675
3-phase inverter-fed IM, neural network based direct self control 123456
3D time-stepping FEA, equiv. mag. cct. 133998
690 V indust. distrib. networks, economic savings pot. *(English, French)* 134668
act. mag. bearings, IM fed, rotors vibr. condition monitoring 92881
adaptive vector control scheme 88720
ADC, parallel sampling, electronic motor control *(German)* 114837
adjustable speed syst. for IM *(Chinese)* 133997
air gap/slot leakage, mag. slot wedges effects *(German)* 88730
ammonia compressor, IM, stray load losses, stator/rotor slot ripple 134021
ANN-based neurocontroller for IM 77877
asynchronous electromotor, energy saving *(Chinese)* 112530
axial airgap disc induction machines modelling 88737
bearing currents/EMI/DC-link voltage vars. mitigation, dual-bridge inverter 123458
bearing damage detect. via DWT anal. of starting current transient 123448
broken bars eval. using elec. signature anal. 123455
broken rotor bar detect. using pattern recogn. 123424
broken rotor bar diagnosis using sliding DFT 123411
broken rotor bar faults detect., on-line neurofuzzy approach 123422
cage motor starting, inner temp. meas., fluoresc. opt. fibre 123450
capacitance motor, math. model, symm. components *(Russian)* 112504
catenary cable tension control, fuzzy robust feedforward control 133760
charact. computer-aided multimedia education 78532
coal pulverization, IM, operating current, HV vars. *(Chinese)* 88732
condenser-run single-phase IM, finite element anal. *(Korean)* 77870
condition monitoring using PWM spectrum anal./optim. 134024
control, pole-PM, multi-leg multi-phase inverter 123407
control lab., Internet-based 77858
control of unknown torque motor, sensorless speed tracking 134028
control struct. model with erroneous field orient. 112529
control syst., load profiling meas. & proc., clipping integrator 112517
cross-saturation/deep bar effects modelling 134018
current-fed IM, load vars. H∞ control 99676
damaged IM perform. prediction, FEM appl. 133999
derating under unbalanced voltage supply operation 112509
design optimisation, FEM 134002
digital neural current controller scheme 112528
direct torque control, inverter switching freq. prediction 77879
direct torque control, stabil. anal. 112506
direct torque control, torque-ripple reduction strategy 99672
direct torque/flux sliding mode control approach 123444
direct torque/posn. control syst. 134049
disc-type IM, equiv. cct. params., electromech. charcts. 112503
doubly fed IM, current control, stabil., main mag. saturation effect 123871
DSP based speed sensorless perform. eval. tool 134029
DSP-based speed sensorless direct torque control *(Chinese)* 77860
DTC-based speed control, ASIC design 134051
efficiency determ. approaches 123469
elec. rly. vehicle brake force improvement using capacitance *(Japanese)* 78244
end-rings EM field anal. approach *(Japanese)* 77872
energy optimized control, dyn. model *(Chinese)* 134006
equiv. cct. params. determ. using GA 123478
EV IM design using niching GA 100284
fault detect./isolation, nonsinusoidal residual generation 123460
fault diagnosis, vibr. anal., DSP-based FFT-analyser 112515
flux observer, mutual inductance sensitivity, discrete time domain 112526
full-order flux observer sensitivity anal. 88746
fuzzy logic based multimodel field oriented control 88743
fuzzy optimal volts/Hertz control method 123412
fuzzy robust field oriented control 99662
global exponential output-feedback control 112514
heavy-duty IM design methods 123434
high-speed vector-controlled IM for engine test stands 88748
hybrid EV starter/generator fuzzy control expts. 134522
IGBT PWM inverter-fed IM, insulation charact. anal. 134047
IM, on-line condition monitoring 134025
impact on short-cct. current, calcs. and anal. 112534
indirect field-oriented control, global asymptotic stabil., robustness 77866
indust. plant, IM load, power quality improvement by static transfer switch 134669
indust. radial power systs., energy saving, life cycle cost design criteria 134670

induction motors continued
instantaneous torque control, secondary flux as param. 123401
interconnected offshore power syst., IM starting, ASVC 100358
inverter with low cost RC snubber for induction/BLDCM 134207
inverter-fed three-phase small IM design guidelines *(Japanese)* 88723
large IM, soft starting, torque pulsations minimisation 123457
load effect diagnosis, instantaneous power spectrum 88753
load effect diagnostic tool using instantaneous power spectrum 99656
loads, aggregate model 77875
long-dist. IM driving, overvoltages avoidance 88726
losses calc. using nonlin. time-stepping FEM 123417
LV AC motors, surge impedance meas., TW approach 99661
LV elec. motors, research, design, manufacture at NIPTIEM, Russia 123464
mag. field, Preisach hysteresis and finite element models 134011
magnetizing rotor flux determ., VSI 112535
mech. fault online diagnosis, ANN appl. 88735
mech. faults signature anal., wavelet packet decomp. 88736
model ref. adaptive fuzzy speed control approach 123479
models comparison, nonlin. field oriented control appl. 123427
modular advanced reactor main coolant pump canned three-phase IM 112241
motor-generator traction set develop. 134545
multiphase IM, pulsating torque, losses 134022
neg. seq. impedance, closed rotor slot effect 134019
neural network controlled IM, chaos detect. in vel. control 77863
neuro-fuzzy motor controller design on DSP 134053
non-invasive slip meas. tech. 123461
nonlin. control, parallel neural network estimator training 123459
nonlin. multivariable flux and speed PI control 134004
observability conditions for motors at low freqs. 88727
online inertia ident., auto-tuning *(Chinese)* 99660
parallel-connected dual IM speed sensorless vector control 134023
param. ident., least sq. and GA 88724
param. ident. from step response *(Korean)* 123442
params. weighting-mean synthesis modeling *(Chinese)* 123451
perform., nonideal voltage and winding condition effects 88729
PID accel. controller/pre-compensator design 134050
power bal. of electromechanical systs. 112473
power converter-fed IM, losses/efficiency determ. 123435
power station transients, math. modelling 123098
power station turbogenerators, excitation, transients modelling *(Russian)* 99606
power syst. voltage stabil. anal., combined power load model *(Chinese)* 77229
pulp/paper indust., IEEE Standard 841 IM, comparison testing 124152
pump IM fault detect. using fuzzy signature anal. 134015
PWM inverter fed, saturation, perform. anals. 123482
PWM inverter-fed IM, capacitive parasitism anal. 88721
PWM inverter-fed IM bearings, capacitively-coupled discharge currents 88740
PWM inverter-fed IM drives, conducted EMI prediction 134048
PWM invertor-fed IM, fuzzy posn./speed control 123433
PWM invertor-fed IM acoustic noise, fan cowl influence 123408
PWM VSI, CMV reduction, act. canceling/compensating ccts. 123566
recycling, design principles 123419
reduced order flux observer *(Chinese)* 134005
rotor fault detect., pattern recogn. 134032
rotor flux estim., nonlin. observer 134027
rotor flux vector magnitude reconstruction, ANN appl. *(Polish)* 123404
rotor IGBT chopper controlled, quasi-dyn. model *(Chinese)* 77859
rotor resist. estim., autotuning algm. *(Chinese)* 134008
rotor slot harmonics, rotor design effect 134044
rotor steady-state heating, instrumentation, testing 134042
saturated IM, passivity-based control scheme 99673
SEIG feeding IM, dyn. eigenvalue anal. 112510
selection, mean-loss method, motor torque, slip 99658
sensorless control, robust flux/speed/rotor time const. estim. 134041
sensorless control, VSI control, ANN 133995
sensorless control by adjustable freq. controller 77865
sensorless control systs. develop./anal. 123439
sensorless control using disturbance observer 123432
sensorless motor control, Kalman filter neural obs. 77869
sensorless rotor vel. tracking control 88741
sensorless torque control syst. 123410
servomotor HF mech. oscills., act. damping control 134039
servomotor robust adaptive nonlin. speed control 123480
servomotor syst., adaptive fuzzy sliding-mode controller design 123699
short-cct. current calc./meas. 88749
short-circuited asynchronous motor, freq.-control 123436
single layer 3-phase AC windings design optimisation 112522
single-phase IM, elec. params. estim., q-d model 134037
single-phase IM, hysteresis current controller 112532
single-phase IM inrush current controller design *(Korean)* 123454
single-phase IM vector speed control syst. *(Korean)* 123453
skewed rotor bar, flux linkage 134010
sleeve vs. anti-friction bearings, optimal choice 134043
sliding mode output feedback speed control *(Italian)* 123399
slip-power recovery syst., PWM boost rectifier *(Japanese)* 123403
slip-ring IM, distributed inertias, torsional oscill. problems 123438
slipring IM pulsating torques generation *(German)* 112505
space vector PWM VSI, IM appls., dead-time effects predictive compensation 77983
specialized asynchronous motor with compact stator windings 123468
speed control, 80C552 microcontroller 99668
speed estim., nonlin. ident. tech. 77874
speed estimators params. robustness 123426
speed sensorless control, rotor resist. ident. 134035
speed sensorless FOC, full adaptive backstepping design 134040
speed tracking control, max. power transfer 77867
speed-torque charcts. using speed sensorless tech. 123425
stand alone PV pumping plants, PV-DC/DC inverter-asynchronous motor model 112435
star connection, neutral point pot., 3D-2D FEM 134012
starting proc. sig., period domain anal. *(Chinese)* 99652
starting-generated voltage sags effects anal. 133709
static/dyn. forces, partial differential energy-bal. eqns. 99659
stator condition monitoring, fuzzy logic approach 123418
stator-flux-oriented control, iron loss 77880
stray load loss eval., I/O and calorimetric methods 134020
stray load loss meas., stat. anal. 123449
strong parasitic torques, rotor eccentricity 112533
supply voltage distortion effects anal. 112497
switched reluctance and IM, torque-wt. comparison 112488
symm. self-ventilated IM, cooling perform. 124115

induction motors continued
thermal modelling, lumped param./2-D FEA methods 123415
three-bus power syst., model, chaos, dyn. IM model *(Chinese)* 111839
three-level inverter-fed IM, direct torque control algm. 133994
three-phase IM, charact. anal. method 88734
three-phase IM, optimal phase-shifter cct. params. 123470
three-phase IM broken rotor bars detect. approach 99654
three-phase IM fault detect., stator current anal. program 123476
three-phase IM fault detect. using current signature anal. 88750
three-phase IM LV stator windings fault diagnosis 123423
three-phase IM reclosing transient modelling *(Chinese)* 99664
three-phase IM selection criteria for traction appls. 100285
three-phase IM single-phase operation anals. *(Chinese)* 99663
three-phase parametric IM, single-phase power supply 134009
three-phase synchronous/asynchronous motor stator winding fault diagnosis 123384
three-phase two-speed RA elevator IM, EM procs. modelling 124006
three-phase voltage unbalance effects modelling 112501
total losses, calorimetric meas. facility, calib. procedure 123447
total losses/temp. rise determ. using equiv. loading methods 112498
traction IM, rotor field oriented vector control syst. 123989
two-phase IM, shifted auxiliary stator winding, general model 112521
two-phase salient pole IM, mech. perform. estim., FEM 112519
two-pole IM vibr. in rot. mag. field, expt. 123473
valve-inductor motor, phase winding disconnection, switching cycle modelling *(Russian)* 88738
vector control, Simulink/RTW-based real time control syst. develop. *(Korean)* 112531
vector control, space-vector modulation tandem inverter 123428
vector controlled, params. var. effect compensation 123400
vector torque control strategy *(Chinese)* 134046
ventilation holes shape optimisation approach *(Japanese)* 77871
voltage collapse, power syst. control *(Chinese)* 133543
VSI fed, self-commissioning algm. 123443
washing machines, three-phase IM, electronic control ccts. *(German)* 89467
winding heating, superposition/equiv. load methods 112523
winding voltage distrib., PWM IGBT inverter effects 88728
Si diode, three-phase inverter, AC IM 88719
SiC diode, three-phase inverter, AC IM 88719

inductive energy storage
high-power Z-pinch, pulsed power source *(Chinese)* 99801
HV generation, inductive pulsed power Marx generator, exploding wire 88985
long-action very low resist. crowbar 99848
S-band vircator, premodulated electron beam, compact generator 80588
SIGNAL high-current pulse generator with μs plasma opening switch 78016
supercond. inductive store, act. power regulation *(Russian)* 123843
UV laser ablation plasma elec. current interruption, inductive energy storage appls. 134414
vircator, inductive storage syst. driven, PSpice simul. *(Chinese)* 115259
VMG-80 magnetocumulative generator-based HV pulsed power source 77955
VMG-80 magnetocumulative generator-based HV pulsed power source *(Russian)* 77952
XeCl long-pulse efficient laser, discharge pumped, output charact. 105129

inductive inference *see inference mechanisms*

inductive learning *see learning by example*

inductive storage *see inductive energy storage*

inductors
see also coils; current limiting reactors; power inductors; transformers
1.8 GHz wireless LNA with high quality factor L-C filter 102703
1 MHz converter, planar LCT components integrat. 88922
3D microstruct., plastic deform. mag. assembly 81612
3D mm-wave MMIC technol., BCB-based, low-loss pass. components 102692
50 kW soft-transit. inverter, ZCS, near-ZVS 88913
450 W single-stage PFC converter, universal-line input 88855
air-core inductors, RF resist. and Q-factor determ. 69285
arc suppression coil, controllable inductor, mag. bias *(Chinese)* 77468
BiCMOS VCO, 4.7 GHz, chip/MCM-D package co-design for HIPERLAN-2 transceiver appl. 131087
buck-forward DC-DC converter with smooth input current 78028
CMOS act. inductor, L-band MMIC 69286
CMOS Chebyshev bandpass filter, Q-enhanced spiral inductors appl. 125593
CMOS differential act. inductor, tunable inductance and Q-factor 91436
CMOS front-end for 900 MHz zero-IF wireless receiver, paging sigs. 125780
CMOS fully-integrated differential VCO for 10 GHz band operation 102701
CMOS high-Q act. inductor, IF/RF wireless appls., low power supply voltages 70316
CMOS IC, spiral inductor, RF MEMS technol. 69289
CMOS inductorless LNAs, 2 V/1 GHz, with 2-3 dB NF 69235
CMOS LC VCOs, low-power wireless systs., power consumption minimisation 102705
CMOS LC VCOs, noise props., inductance selection, graphical optim. method 69225
CMOS LV act. inductor and appl. to RF bandpass amp. design 115025
CMOS monolithic DC/DC switch-mode boost converter dyn. PWM, embedded power mgt. 134177
CMOS power amp., wireless SOP, LTCC pass. library 124374
CMOS power amp. with LTCC high-Q integrated pass. for 2.4 GHz ISM band 91367
CMOS power amp. with micromachined solenoid inductors, 2.4 GHz 91308
CMOS RF inductorless differential second-order bandpass filter 102634
CMOS simultaneous switching noise minimization using dual layer power line mutual inductors 127052
CMOS technol. scaling for wireless commun. arena 115001
CMOS VCO, Bluetooth wireless transceivers appls., accumulation mode varactors, spiral inductors 102731
CMOS VCO, inductive varactor tuning 101838
CMOS VCO with reduced phase noise, 1.8 GHz, on-chip filters, off-chip low freq. inductor 125823
coupled van der Pol oscillators, phase-inversion-waves, refl./transm. 90786
DECT VCO integrated pass. using thin film MCM-D technol. 131263
electrostatic printing-based mfg. procs. for electronics industries 101462
EM simulators, CAE, PCB and EM design problems *(Italian)* 125871
embedded high Q-inductors in MCM-L technol., design and modelling 102685
embedded pass. component integrat. for PWB 102827
embedded pass. component technol., cost/perform. considerations 100588
embedded pass. components for MCM technols. 125943
epoxy adhesives, stress effects, packaged LTCC, mag. appls. 67548
ferrite ceramic chips, Cu electrode glow discharge deposition 115098
ferro-/ferrimag. materials, losses, modified Steinmetz eqn. 92782

inductors continued
flyback rectifier, high PF operation, line current shaping controller 134224
foundry RF CMOS technol., 0.18 μm, 70 GHz F_t for single chip syst. solns. 102689
gapped HF inductors, conductive losses prediction 99724
half-bridge converters, current-doubler rectifier, unified anal. 88862
half-bridge series-parallel reson. converter, EM considerations 99741
harmonic source/compensation, act. power filters *(Chinese)* 77349
high PF 3-phase AC/DC Cuk struct., doubly discontinuous cond. mode 78000
high-Q inductor add-on module in thick Cu/SiLK single damascene for RFIC 125739
high-Q MMIC spiral inductor study using prod. silicon proc. 91434
HV generation, inductive pulsed power Marx generator, exploding wire 88985
induction heating, HF transformer, design, testing 113146
induction machine, liq.-metal rotor operation 124137
integrated mag. anal./design, PFC power supply appl. 80459
long-action very low resist. crowbar 99848
low-AC-resist. planar/foil wound inductors, quasidistributed gap tech. 80460
low-K CMOS, micromachined high-Q inductors in 0.18 μm Cu interconnect 115003
mag.-coupled tuneable inductor for wideband VFOs, 1.4-2 GHz 91363
MCM-D thin film techs., integrated spiral inductor/coupler appls. 69220
MCMs, integrated RF pass. proc., capacitance dens., inductor Q values 102878
meander inductor, 3D self-assembly, microwave charact. 80463
MEMS microwave inductor, solder surface tension self-assembly 80464
MEMS technol. for RF/microwave wireless appls. 80229
microcoils fab., electroplated Cu & Permalloy, micromoulding 75764
micromachined tunable CPW resonator, spiral inductor 80224
microwave multilayer cct., EM model, long. decomp. 102583
mixed-sig. IC substr. coupling parasitic extraction, RF/microwave spiral inductors 68957
MMIC multi-layer integrated inductors anal. with wave concept iter. procedure 102696
MMICs, coupling effects between lumped elements 115014
multi-stage LNAs, source inductor value determ., Ka-band MMIC design appl. *(Japanese)* 91301
multilayer planar printed inductors in RF consumer appls. 115095
multimode LIM, edge effect, inductor module params. *(Russian)* 112549
mutual inductors with ferromag. nonlin., topol. and dyn. 91439
MV IM drive with integrated DC link choke 134474
n-MOSFET single-stage amps. with high-Q spiral inductors on polymer dielec. 69195
on-chip inductors, substr. losses, charactn. 102793
Parmod functional electronic materials, laser proc. 115157
partially-depleted SOI CMOS technol., 0.13 μm, for low-power digital/RF appls. 127046
pass. component charactn. in non-sinusoidal conditions, virtual instrum. tech. 120656
pass. components, 0201 size, high-yield assembly proc. charactn. 80501
pass. components, market renaissance, overview 80409
pass. electronic components, reliable in-cct. eval. 80413
pass. electronic components, reliable in-cct. eval. 115041
pass. EM inductor, nonlin. hist.-depend. mag. behavior effects 128693
PCB design for embedded pass. 115125
phase-shifted ZVS-PWM DC-DC power converter topol. 112673
PHEMT MMIC act. inductor 102677
PHEMT MMIC high-Q act. inductor for MM wave appls. 125758
phys. freq. depend. lumped model for RF integrated inductors 91333
planar HTS lumped element bandpass filter with spiral inductors 80210
planar HTSC lumped element bandpass filter with spiral inductors 82015
printed inductors on alumina substrs., low-pass filter appls. 115091
PWM voltage source rectifier, reduced-size input filter, operation 134165
reconfigurable MEMS filters, tunable lumped components design 80223
RF components, pass. SMD, meas.-based extrinsic modeling 100583
RF inductor, MEMS self-assembly 69287
RF integrated inductors for MMICs, mobile commun. handset appl. *(Japanese)* 80319
RF pass. cct. modelling, coupled lines and scalable models 114962
RF Si technol., IC-compatible 2-level bulk micromachining proc. module 91376
RF-microwave multilayer integrated pass. using organic syst. on package technol. 102684
RFIC, tuned LNA, bootstrapped inductor 91435
RFIC 2 GHz VCO with post-processed Cu inductors 115002
RLC ccts., radiative noise, fluct.-dissipation theorem 68549
sandwich type ferromag. RF integrated inductor for 2 GHz range, charact. 80369
saturated ferromag. rect. prism/rect. coil, 3D mag. field 105680
SC and current mode ccts. 102788
single-phase 3-level PWM inverter, harmonics alleviation, control 134251
single-phase AC/DC integrated PWM converter, digital control 134213
SMPS cost-effective EMC-conforming design 88815
soft switching inverter, act. reson. DC link assisted, power loss anal. 88929
SOI LDMOS technol. for fully-integrated RF power amps. 115016
spiral inductor Q enhancement, n^+-diffusion patterned ground shield 102659
spiral inductors, high-Q, for integrated RF front-end subsystems, high perform. 85661
spiral inductors, low cost MCM-D substrs., design options 115229
spiral inductors, micromachined, UV-LIGA techs., mag. MEMS and RF devices 127409
spiral inductors and transformers for RFICs, modelling 91355
spiral inductors for Si-based RFICs, effects of polysilicon shield 115028
spiral on-chip inductors and transformers, modeling 92435
stationary induction heating of flat charges, temp. field 78339
strong coupled multi-harmonic FEM EM device simul. package 83150
symmetric dual-level spiral inductors for RF ICs, meas. 91373
symmetric dual-level spiral inductors for RFIC *(Korean)* 80345
symmetric inductors fab. in CMOS technol., T cct. topol. for broadband modelling 91354
symmetric inductors in CMOS technol., T cct. topol. for broadband modelling 91314
T8 fluoresc. lamp ballast using piezoelec. transformer, charact. 134638
TFSOI technol., isolation structs. for mixed sig. RF SOC appls. 104145
thermal spray techs. for meso-electronics/sens. direct write fab. 114399
thin film decoupling ccts., 3D integrat. of thin film pass. components 102837
thin-film spiral inductors, structural design, FEM EM field simul. *(Japanese)* 104551
three-level rectifiers, PWM method for input-current harmonics control 134173
three-phase buck power converter lossless current sens. scheme 112622
time-varying inductive electro-mech. multiports, thermodyn. theory 90702
transverse flux induction heating, thermal field, EM forces 113148

inductors continued
tunable high Q VHF/UHF devices, ferromag. film appls., materials issues 92867
vert. planar coil inductors, develop. using plastic deform. mag. assembly 80371
ZCS PWM DC/DC converters, operation principle *(Korean)* 123583
ZVS AC-DC boost converter, energy recovery ccts. 134228
ZVS asymmetrical half bridge PWM converter, planar integrated L-L-C-T module 134218
B_2O_3-P_2O_5-MgO-Al_2O_3-SiO_2 low firing temp. glass-ceramics, HF multilayer chip inductors appl. 101509
(CoFeB)-(SiO_2) film, mag. permeab., inductor core 127286
CoNbZr RF integrated inductor, stray capacitance, equiv. cct. anal. *(Japanese)* 104541
CoNbZr micro-patterned thin film inductor, fab. & inductance prop. *(Japanese)* 104540
CoPdAlO mag. film, RF integrated inductor 127285
a-CoZrTa mag. film HF and low resist. integrated inductors with 3D struct. 125738
Cu full damascene metallization, sub-0.18 µm RF CMOS SoC high Q inductor and MIM capacitor appl. 125740
Cu post-processed inductors with appl. to 2 GHz integrated VCO 69240
Cu/low-k interconnect CMOS platform, 0.13 µm, for SoC appls. 127019
Fe-Si-Al powder E-cores for inductor, high saturation flux dens. 123542
FeZrBAg double rect. spiral thin-film inductors, characts. 127405
GaAs 3D on-chip inductors, fab., perform. and PHEMT LNA appl. 80370
GaAs substr., multilayer inductor, RF/microwave ccts. 69288
MgCuZn ferrite, low temp. sintering and elec. and mag. props. 114429
Si MMIC LNA, substr. resist., EM simul. 91380
Si RFICs, deep trench guard technol. to suppress coupling between inductors 102690
Si integrated inductors in 0.18 µm CMOS technol. for MMIC/RFICs 125777
Si integrated spiral inductors, high-Q implement. in CMOS technol. 115027
Si on-chip spiral inductor, layout and ground shield effectiveness 69179
Si p/p^+ substrs., spiral inductors with reson. freq. of 20 GHz 69227
Si/SiGe HBT, microwave transformers, inductors and transm. lines 102639
SiGe/Si HBT and lumped pass. components for An X-band high-power amp. 91360
Sn-Ag-Cu Pb-free solders for pass. components, usage implications 80445
Ti/FeTaN planar-type film inductor HF DC-DC converter 127406
YBaCuO supercond. lumped-element filter with planar spiral inductors 71082

industrial atmospheres *see air pollution*

industrial control
see also numerical control; process control
archit. supporting loose/close cooperation of distributed autonomous systs. 74291
assembly, 2-robot, task seq. optim. by evol. algms. 125897
Bluetooth, indust. sens./control radio commun. std. 96076
CAN, PLC networks design using rem. I/O module 130712
CMP, optimal, neuro-fuzzy inference 92005
cpd. semicond. fab. facility, incremental levels of automation 103970
custom paperless shop floor control syst. for efficient mfg. in wafer prod. 124447
digital meas. systs. and distributed virtual instrumentation *(Italian)* 97162
dual full-bridge motor driver IC family for indust. motion control 114604
fieldbus networks, cyclic-service, bandwidth allocation 86419
Fieldbus-oriented MAC protocol model framework using time division and sync. *(Chinese)* 85032
Foundation Fieldbus network controller, commun. algm. *(Chinese)* 97151
geom. control, photoelec. sens. appl. *(Russian)* 131856
guardrails piling, automatic machine, PLC 113822
high resoln. posn. inform. extraction from sinusoidal encoders 123694
high-speed indust. Gigabit-Ethernet networks congestion control 130865
IEC/ISA fieldbus, data link layer, perform. anal. 75379
IEEE 802.11 WLAN appl. *(German)* 130745
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
indust. predictive control overview 77765
intell. sens. config./operation for microcontrollers 121052
interf. suppression in distributed intell. control syst. 78736
MCU syst. for indust. control, EMC design *(Chinese)* 124444
micropositioning device for automatic alignment of substrs. for indust.-scale thin films deposition 124438
mine hoist DC motor drive, intell. monitoring/control syst. 124168
Mitsubishi 16-bit M30624 microcontroller, develop./appls. *(Spanish)* 102201
network design/develop. alternatives 120662
networked-intell. motor control systs. 133944
offshore indust. fieldbus automation technol. 89936
online grid-gaps inspection syst. for electron-gun manufacture 80579
OO inform. model for manufacturability anal. of PCB fab. 91456
PID feedback control, output usefulness in fault detect. 124394
power syst. load shedding, ES prototype develop. 78355
pressbrake control, bend angle meas., sens. design 109969
quality diffusion optimal regulation 89890
self-organised mfg. scheduling, agent learning *(Japanese)* 113804
smart sens. design in indust. procs. appls. 121053
spatial coord. syst. using PZT-actuated laser tracking station *(Japanese)* 86953
speed modulation, alternation, freq. convertors, indust. appls. *(Chinese)* 99752
surface mount PCB mfg., design issues assoc. with neural net systs. 91474
SwitchNet open network for factory automation field-end components 130792
TCP/IP protocol in indust. visualisation systs. *(Polish)* 130656
vision syst. and 3D modelling for quantification of morph. of irregular particles 94452
VRML animation of inspection syst. 120639
wireless indust. networking using CAN MAC-sublayer 130793
wireless mobile computing, indust. appls. 96149
workpiece localization by meas. syst., error compensation 97147
GaAs vol. prod., systematics and key perform. indicators 126928

industrial economics *see economics*

industrial manipulators
3-DOF parallel-link CMM, theory and virtual prototype 113741
assembly, 2-robot, task seq. optim. by evol. algms. 125897
assembly planning, simul. with laser cell calib. 83070
bin-picking robot syst. using 3D obj. recogn. *(Japanese)* 107249
car disassembly, stereo-vision-based robot syst. 84598
denture mfg., robotic tooth insertion with interactive ES 98727
med. robot haptic interface connection 111079
micro-obj. manipulation, robust vision syst., MINIMAN micro-robot project 86648
microassembling, joining technol., robots and grippers 116117
MOEMS sens. integrat., positioning strategies 93222
obj., moving target, spatial coord. meas., laser tracking syst. 117585
part assembly, neural/fuzzy optimal proc. model 100570

industrial manipulators continued
patient hand movement, assistant force compensation by exogenous/neurophysiological sigs. 129516
PCB assembly, robot moves sequencing, extended dyn. point spec. approach 67687
SMT placement machines, slew motion timing model estim. 89868
two-finger variable reluctance gripper, modelling and charactn. 89014

industrial plants
act. voltage correction technols. 134671
combined-cycle power plant indust. energy supply project *(German)* 112331
facilities shutdown proc. due to network disturbances 134699
fault tolerance, fuzzy class. syst. based on reliab. 78561
maint. using reliab. programme 100509
networked-intell. motor control systs. 133944
safety model design in plant enterprise engng. environ. 78560
shielded power cable systs., preventive maint. testing 123017
wafer plant preventive maint. activities, cognitive demands extracted using applied cognitive task anal. 89834

industrial power systems
690 V indust. distrib. networks, economic savings pot. *(English, French)* 134668
act. plant voltage correction technols. 134671
ammonia prod. plant proc. sustainability solns. 124144
automobile plant power supply modernisation benefits *(German)* 78358
brown coal surface mining MV switchgear, life-cycle concepts 134261
cement indust., conf., Vancouver, BC, Canada (May 2001) 78478
cement plant power syst. µP-based protective relays 89479
ceramics plant cogen. facility optim. studies 134700
chem. indust. power supply syst., harmonic filter concept 134684
combined-cycle power plant indust. energy supply project *(German)* 112331
customers, power quality cost survey 113158
DC hybrid cct. breaker using integrated gate-commutated thyristors 78055
distrib. back-up protection, µP based multifunction relays 134689
distrib. network high-speed VAr compensation systs. 88389
distrib. networks automation 78365
distrib. syst. harmonic reson. problems 88439
distrib. syst. reliab. assess. using Six Sigma methodology 133661
distrib. syst. transfer switch/cct. breaker ratings, indust. stds. 77521
distrib. systs., fast harmonic load flow method 77314
distrib. systs., pass. filters, marginal bus costs, LP 77315
earth fault feeder detect. techs. for indust. networks 133820
elec. safety programs 113423
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
harmonic filters, reactive power compensation 133692
harmonic-polluted power networks, Steinmetz circuitry behavior symmetrization 133685
hot rolling mill proc. ride-through investigs. 78357
Hsin-Chu indust. park, distrib. syst. outage countermeasures *(Chinese)* 77330
IEEE petroleum and chem. indust. conf., Toronto, Ont., Canada (Sept. 2001) 124213
IM load, power quality improvement by static transfer switch 134669
Indonesian small/medium scale industries, energy use, CO_2 emissions 78353
indust. elec. drives for energy conserving appls. 113075
IPP generators, utility interconnection protection 77520
IPP perspectives on power syst. voltage stabil. 133544
lab. harmonics modelling/simul. 99366
large indust. distrib. networks automation solns. 133526
lighting project savings using photom. CAD calcs. 134605
load mgt. optim. using time of use tariffs 134672
load shedding, ES prototype develop. 78355
mfg. sectors energy intens. develop. anal. 78359
mining power systs., earth faults, on-site safety eval. 134708
MV indust. distrib. syst. power quality assess., wavelet/FFT 133637
oil refinery elec. power syst. upgrade 134685
oil refinery power facility, LAN-based load shedding controller 113175
peak and valley time price for indust. elec. consumers *(Chinese)* 99199
perform. studies, std. format develop. 78354
petrochemical indust., elec. safety, PCIC impact 134687
petroleum indust., power distrib. over long dists., design 134692
power distrib. syst. planning project, Germany 133565
power quality problems 133680
power syst. voltage stabil. studies, indust. loads modelling 133528
radial power systs., energy saving, life cycle cost design criteria 134670
reactive power optimal distrib. 99192
reactive power resources, optimal exploitation 99185
refinery power plant, fault current limiters, benefits assess. 78366
refining indust. AFD operation reliab. improvement 134690
semicond. mfg. facilities, multi-generation enhanced power quality design 113172
Shanghai commercial power syst., DSM benefits anal. *(Chinese)* 78356
shielded power cable systs., preventive maint. testing 123017
Singapore power quality initiatives 133678
single-phase loads balancing, hybrid scheme 122997
small build-own-operate onsite cogen. projects 123178
small-scale indust. power network lab. harmonic reson. simul. 77365
steam turbine cogen. syst. perform., spreadsheet model *(Spanish)* 133864
supply quality costs anal. survey 88437
three-phase indust. power syst. hybrid power harmonic filter 89468
three-phase indust. power syst. unbalance voltage level meas. 77363
ungrounded/high-resist. grounded indust. systs., fault location 99438
Uruguayan cement plant power quality problems 134698
US indust. CHP promotion, pot. energy policy impact 133857
US indust. energy efficiency improvement, policy scenarios 133844
world-class petrochemical facility expansion challenges 100351
zone-branch reliab. methodology 133424

industrial property
see also copyright; patents
2D generalized cyclic patterns for secret watermark generation 95159
ADSL modem, decision-making method for archit. selection 130999
ASIC design, MOS cct. appls. *(German)* 103982
ASIC implement. flow, estim. of speed, area, and power of parameterizable soft IP 125337
ASIC obsolescence and DSP appls., intellectual property, fab. procs. 114682
audio watermarking for copyright protection 129383
blind watermarking algm. with semantic meaningful watermarks 106998
bus-based prog. SoCs, IP cores, self-test methodology 101920
chip foundries and dawn of open intellectual property era 67518
clock distrib. strategy for IP-based develop. 101943
CMOS digital freq. synthesizer 101817

industrial property continued
component selection and matching for IP-based design, SoCs 81430
constraint-based watermarking for graph partitioning solns. 125362
core based IC design enabled by 3D wafer bonding, research-focused project course 126958
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
digital cct. design, reusable intellectual property block verification, prog. syst. 68705
digital ICs, latency-insensitive design 101968
digital video frame-based watermarking 130981
ELITE design methodology of foundation IP for improving logic synthesis quality 79744
EPGA Varicore embedded PGA, reconfigurable IP *(Italian)* 79832
Ethernet interface soft IP, spec. and design 108193
formal verification effects on quality in IP design and implement. 79724
FPGA intellectual property protection, fingerprinting techs. 114715
hardware metering scheme, low overhead proofs, manufactured parts 125444
high-speed VLSI, automatic clock tree design with IPs in syst. 104066
IBM-Research internal prototype platform, e-Seminar lect. recording and distrib. syst. 97095
IEEE1394 syst. simul. environ. and design of link layer controller 101960
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
IP supply chain, design reuse paradigm comes of age 68697
JPEG encoder IP core, embedded, memory efficient preprocessing archit. for scanner 73428
knowledge mgt. and transit. of traditional organization *(Chinese)* 89661
LSI design, education, IP database *(Japanese)* 89632
MetaCores, design and optim. techs. 125178
mgt., holistic audit 89746
MicroNetwork-based integrat. for SOCs, automated develop. environ. 125371
mixed sig. design, ANTRIM software *(Italian)* 80119
mixed sig. design watermarking for IP protection, priority decoder 68950
mixed-sig. IP blocks, DFM characts. and optimisation 104138
mode dependency timing charactn. method, cct. delays, timing models 125447
multicore systs. on silicon, exact fault simul., intellectual property protection 79716
multimedia digital IC reusable interface design 126948
µP IP cores testing, SOC develop. 79914
Non-Disclosure Agreements, types, when to use them 78541
ownership challenge, logic block design time 114683
parameterizable error-propag. space compactors for response obs. 101912
placement watermarking of std.-cell designs, spatial domain and spectral domain 68732
portable multimedia terminals, motion compensation block IP, embedded DRAM macro 129657
R&D competition vs. duopoly cooperation *(Chinese)* 89758
reconfigurability of FPGA, Intellectual Property design proc. 79825
reconfigurable systs., design space, reconfiguration hierarchy 125348
reusable baseband Bluetooth IP, SoC integrat., ASIC design house 125352
robust image hashing 95364
RTL morphing, making IP-reuse work in syst.-on-a-chip designs 114674
Samsung S3C4520X syst. manager for network SoC designs with various memory access types 131015
satisfiability-based functional delay fault testing, CNF formulas 101951
seq. cct. design, digital watermarks 102090
Simulink based hardware/software codesign flow/IP library 125366
SoC design for verification methodology, functional verification at blockto syst. level 79726
SoC design methodology for 3rd millennium ICT products 101887
SoC research infrastructure for Canadian universities 126956
soln.-based watermarking tech. of satisfiability, combinat. isolation lemmas 125361
STARC, Semiconductor Technology Academic Research Center, high-level LSI design stages 114691
syst.-on-a-chip design methodology/products using flexible interconnect archit. approach 70273
syst.-on-a-chip video encoder, proc. interfacing 106927
TCG, transitive closure graph-based representation for non-slicing floorplans, VLSI 127010
unified DFT archit., IEEE 1149.1 and VSIA/IEEE P1500 compliant test access controllers 125339
unified reconfigurable arith. proc. design, array size/bitwidth trade-off 79935
video watermarking tech., adaptive multiresolution *(Chinese)* 129757
virtual components, publicly detectable protection techs., watermarking method 125443
VLSI design IP protection, constraint-based watermarking techs. 116005
VSIA quality metrics for IP and SoC, Quality Evaluation Spreadsheet appl. 78695
wafer fab e-Diagnostics, intellectual property, equipt. maintainability and availability 89836
watermarking scheme using digital images 73361
Web server, functionally minimized embedded, network connectivity for small appliances 130637

industrial research management *see research and development management*

industrial robots
see also industrial manipulators; mobile robots
assembly line, soldering/solder inspection, automated syst. 113465
automobile body assembly line robot reliab. study *(Japanese)* 124425
cross-mktg. products ideal candidates for robotic packaging 89876
double spiral-space element electromechanical transducer, robot appls. *(Russian)* 89015
dual-armed cluster tools for wafer fab., real time scheduler 81476
electronics, conf., Cholula, Puebla, Mexico (Dec 2000) 113235
flexible assembly, flexible parts feeding 89837
geometric/non-geometric errors calib. 75859
heavy duty material proc., laser devices and machine/robot interfaces *(German)* 93915
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
live power lines teleoperated maint. robotic syst. 88460
machine vision for robot control/in-line proc. monitoring, advances 97358
minifactory, distributed automation syst., high-perform. network infrastructure and protocols 108175
mobile robots, teleoperations/rem. sens. DAQ *(German)* 120669
multiple robot path optim., virtual mfg. environ. *(Chinese)* 113462
nuc. steam generators eddy current inspection, robotic vision 88544
open-network-interface robot link, proposal for std. 96240
PCB assembly seq., feeder assignment, Tchebyshev robot arm motion, problem 89822

industrial robots continued
PCB assembly seq., feeder assignment, Tchebyshev robot arm motion, models 89823
polishing robot in-proc. surface roughness opt. sens. *(Japanese)* 132172
PWR press. vessel, fallen objs. retrieval, teleoperated robotized syst. 123127
reliab. assurance 100675
robotics and machine vision, future prospects 95002
SMT dual-robot syst., coord. planning and control, hierarchical model 89875
spatial coord. syst. using PZT-actuated laser tracking station *(Japanese)* 86953
syst.-on-a-chip approach for indust. robotic controller design 103992
track meas. syst. *(Chinese)* 132169
two-fingered grippers synthesis for positioning/identifying objs. 107119
user-friendly automatic polishing robot syst., rem. operation 131812
video image seqs., algms. for deformable lin. objs. shape change recogn. 84328
welding robots, high speed rot. arc sens., seam tracking controller 134683
welding techs., act. multibaseline stereo vision *(Chinese)* 109689

industrial standards *see standards*

industries
this heading is restricted to those industries which are not covered by other specific headings
see also aerospace industry; automobile industry; brewing industry; cement industry; ceramic industry; chemical industry; construction industry; DP industry; electricity supply industry; electronics industry; food processing industry; glass industry; information industry; manufacturing industries; metallurgical industries; mineral processing industry; paper industry; petroleum industry; pharmaceutical industry; plastics industry; printing industry; textile industry
3D digital traditional Japanese crafting syst., modernisation 108158
elec. tomography in indust. appls., status 110503
flat sprays induction charging for space charge generation 128710
Japanese manufacturers' R&D dyn. anal. 89727

inelastic electron tunnelling spectra *see tunnelling spectra*

inelastic electron tunnelling spectroscopy *see tunnelling spectroscopy*

inertial confinement fusion *see fusion reactors; plasma inertial confinement*

inertial navigation
accelerometer, LS-TLS seq. ident. algm. 97202
airborne IR imaging, rectification, GPS and INS *(Chinese)* 120912
airborne mapping, GPS/INS/CCD syst., hardware-software integrat. 122623
autonomous helicopter hover, ANN appl. 98884
AUV, small, integrated GPS/INS 131691
captive-carry HIL missile simulator, relative targeting archits. 122764
carrier-phase DGPS for off-road vehicles control attitude determ., comparison 97027
closed-loop basic gravit. inertial syst. 76807
errors estim. using GPS meas. 131699
fiber optic gyroscopes, INS alignment procs., angle random walk reduction 131961
FIDO rover, state estim. and vehicle localization, sens. fusion framework 86498
GPS/INS integrated navig. syst., fault detect. method *(Chinese)* 76804
inertial-mag. systs., attitude defn. using laser gyros 132136
integrated navig. systs., using accumulated errors to realize closed-loop rectification *(Chinese)* 131710
Mars Umbilical Technology Demonstrator, capability extension 122493
micro inertial meas. units, calib. techs. *(Chinese)* 121029
mobile robot outdoor navig. syst., GPS and inertial platform 108976
oil pipelines inspection automation, pig location, inertial navig. 113773
radioinertial navig. equipt. with adaptive antenna array, jamming resist. 120485
SAR, airborne, motion compensation 75090
strapdown INS, navig. perform. anal. method *(Chinese)* 88057
strapdown INS based GPS integrity monitoring, pseudorange estim. *(Chinese)* 86267
theodolite for measuring ship, measuring stars in daytime *(Chinese)* 97016
two-component INS, correction problem, stabil. anal. 76806
Si micro-g accelerometers, closed-loop, deposited rigid electrodes, perform. limits 75756

inertial systems
MEMS sens., modelling and simul. 121048
miniature inertial meas. syst. 86751
sens., micromachined disc. electrostatic levitation 97575

inference mechanisms
see also case-based reasoning; common-sense reasoning; diagnostic reasoning; model-based reasoning; spatial reasoning; temporal reasoning
3-D objs. recogn. through next view planning using uncalibrated camera 107186
3D multimodal tracking/event detect. via particle filter 95716
500 kV substation, automatic switching seqs. generation, ES *(Chinese)* 11271
accelerated life testing, simple step-stress models inference 89831
adaptive neuro-fuzzy inference systs., analog VLSI, stochastic perturbative techs 68980
air target fusion ident., kinematic state & foe-friend attribute *(Chinese)* 13340
aircraft range estim., angle target tracking IR sens. 133220
antenatal fetal risk assess. by US, neural nets 110823
antipersonnel land mine detect., operational sens.-fusion syst. 77008
asymptotic inference for spatial autoregression and orthogonality of Ornstein-Uhlenbeck sheets 67725
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 11946
autonomous chasing robot, fuzzy control algm. 99075
Bayes networks appl. to semantic understanding of consumer photographs 9482
BDD cct.-based Boolean reasoning, structural transforms., SAT procedure 125349
brain MRI, automated segmentation of cerebrospinal fluid and lateral ventricle 132778
BraMBLe, Bayesian multiple-blob tracker 106594
building detect., fuzzy representation/grouping 95547
car image recogn. using fuzzy inference method 129925
car-following collision prevention, adaptive network fuzzy inference sys 113119
CCI rejection using clustering techs. and fuzzy inference 119195
CDMA long-code multipath syst., blind multiuser detect. 107604
CMP, optimal, neuro-fuzzy inference 92005
combine harvester guidance, fuzzy inform. merging *(French)* 75245
computer vision, correspondence, island model parallel GA 106773
control via networks, QoS anal. and prediction 96239
controlled syst. lang. ident., modelling, control and anom. detect. 112731
DAQ sens. agents, human behavior emulation 120667
data fusion based on sens. mgt., class. methods 86486
Deep Space Station Controller, autonomous ground station control 131331
Dempster-Shafer framework of automatic map updating by multispectral imag fusion 106672

nference mechanisms continued
Dempster-Shafer theory based color edge detector 95519
diagnostic models, based on FMEA models and ontologies 131799
digital versatile disks, discrim. method using fuzzy inference syst. 116587
discourses role in multidisciplinarity 89621
distrib. substation fast fault sect. estim. approach 134313
distrib. substations, on-line fault estim., cause-effect networks 112722
distrib. syst. contingency, CPN, customer load patterns 133594
distributed state estim. for discrete event syst. diagnosis 86396
double cct. power lines fault ident. tech. 77377
DVD-ROM readout RF sig. equalization, ANFIS-based PRML syst. 116595
edge-preserving interpolation, fuzzy tech. 118175
EEG alpha activity detect. by fuzzy reasoning 121975
elec. impedance computerized tomography, differential imaging 109921
electronic mail mining using similarity-based agents 119523
emotion class. based on MPEG-4 facial defn. param. set 129829
externally excited transm. lines, anal./modeling using fuzzy inference for EMC problems 105802
facial expression anal. by integrat. feature-point posns./image gray levels 95437
failure mode screening, fuzzy scheme 78707
fault diagnosis, fuzzy, using knowledge expression/approx. reasoning 124428
fuzzy control of BLDCM by gray prediction 134073
fuzzy controllers, opt. implement. 71452
fuzzy inference method appl. to general transm. lines 72396
fuzzy interpolation with Cartesian representation and extensibility fns. 124649
fuzzy multimedia IT based on fuzzy control 130978
fuzzy spatial load forecasting, small area land-use anal. *(Chinese)* 88407
fuzzy spatial load forecasting, small area urban land-use anal. *(Chinese)* 88399
fuzzy-rule-based image proc. on CNN universal machine 107139
GPS carrier phase meas. for freq. sync., fuzzy & PD control 86378
hand-drawn sym. recogn. by primitive separation and fuzzy inference 84113
handwritten character segmentation, conditional independence assumption 129666
highly nonlin. syst. modeling/prediction, adaptive-neuro fuzzy inference 118956
HMM based speech audio/visual features fusion 94390
HMM for network commun. channels 119644
human tracking with mixtures of trees 107169
hydropower syst. flood control, stochastic approach 88636
IM, neuro-fuzzy controller design on DSP 134053
IM drive, hybrid fuzzy/PI two-stage controller 123863
image class. syst., belief networks constr. 94787
image resoln. increase, binary operator design, k-NN learning 118456
impact damaged delaminated composite, shearography, neural fuzzy anal. 125156
IN, service interacts., dyn. detect. approaches 74424
inference, quasilikelihood, for long-memory procs. filters 119060
integrated obj. recogn. methods, multiple-path archit. 95447
Internet-based self-aware services, anoms. detect. using Bayesian networks 130688
iter. multiuser detect. with graphical modeling 84897
landmine detect. sens. modelling, fusion & discounting, D-S theory 77019
laser proc., online quality detect. & beam control, multisens. class. 117564
matrix FMECA, fuzzy logic appl., extended risk prioritisation 113776
MEG/EEG inverse problem, spatial-temporal Bayesian inference 110667
microcontroller, CMOS fuzzy inference coprocessor chip *(English)* 102220
model-based graphics recogn. 95490
motors, fuzzy-neuro intell. fault diagnosis 78712
multicriterion ranking of competing alternatives, coord. meas. planning 75341
multirate sig. estim., stat. inference problem 119063
multiscale class. using complex wavelets/hidden Markov tree models 94658
neurofuzzy systs., num. info. process., hardware implement. 114907
order params. for detecting target curves in images 118303
PCS mobility databases restoration scheme 131158
peak load forecasting using fuzzy ES 111977
power syst. spatial offer-and-demand forecasting, neuro-fuzzy inference systs. 111955
power syst. voltage sags class./charactn. method 111647
predictive meas.-based fuzzy logic connection admission control 130190
preventive syst. maint., components partial monitoring, Bayesian inference 113425
probabilistic learning/modelling of obj. dyn. for tracking 107168
probabilistic logical inference using quantities of DNA strands 102858
prostate tissue malignancy, tissue class. & elastographic imaging 121998
PWM buck and boost DC-DC converter, simultaneous digital fuzzy control *(Korean)* 123584
rect. microstrip antenna, reson. freq., fuzzy inference syst. 72447
rectilinear buildings, detect. and modelling from multiple aerial images 84127
rem. sens. data, parallel fuzzy inference syst. 133370
robot localization using context in omnidirectional imaging 94999
rotary drying kiln, temp. meas., operating mode judgement, data fusion method, fuzzy proc. *(Chinese)* 75917
rough Petri net to model sens. fusion 131902
SAFARI, struct. approach for automatic rule 106434
seismic acoustic image segmentation, fuzzy fusion of attributes 122605
self-tuning dual input power syst. stabilizer, ANFIS-based 122876
sens. integrat./fusion model using fuzzy inference syst. 84665
sonar occupancy grid constr., uncertainty method comparison 86253
source routing in networks with uncertainty, inference, sensitivity and path caching 74021
source separation algms., logical induction, Bayesian inform. 105999
spatial elec. load forecasting, computational support tool 112055
speech, hybrid connectionist-structural acoustical modeling 73612
speech enhancement, Bayesian evidence approach 73013
speech understanding, intention based probabilistic phrase spotting 84064
speech-to-speech translation, contextual reasoning 106406
surface roughness fibre opt. sens., self-focusing fibre, fuzzy algm. 75589
switched reluctance motor drives, normal and fault conditions, fuzzy inference syst. 133958
sync. generator out-of-step protection with AI methods 77844
target tracking by hierarchical grey-fuzzy motion decision-making 84645
transm. channel sigs., discrete source separation, MCMC anal. 107589
underwater target discrim., neural network class. paradigms 77045
video, airborne images, event detect. and anal. 111369
visual uncertainty and occlusion, resoln. through probabilistic reasoning 129627
voice networks, fuzzy logic-based diagnosis of traffic anoms. 119467
Voice over IP, predictive playout delay adaptation 108083

infinite dimensional systems *see multidimensional systems*
infinite impulse response filters *see IIR filters*
infinite series *see series (mathematics)*
information brokers *see information industry*
information capacity *see channel capacity*
information dissemination
concurrent multicast in weighted networks 73966
data broadcasting, push-based scheduling for min. latency time 85333
healthcare inform., pers., intell. inform. struct. for composing and pushing over Internet 111300
mobile ad hoc networks, seven degrees of separation 74822
multimedia collaboration and caching, reliable multicast Webcast protocol 130346
self-organizing sens. networks, inform. dissemination, distributed services 129991
ubiquitous computing, scalable and self-organizing meta-data dissemination 108329
wireless data access archit. using push/pull technols. 96531
information highways *see information networks; internetworking; wide area networks*
information industry
content indust., convergence/diversity 108181
FCC organizational struct. and regulatory convergence 107998
information infrastructure *see information networks; internetworking; wide area networks*
information needs
teacher mailing lists, minority activity 89613
Information Network System *see ISDN*
information networks
see also information resources; Internet
act. network archit. *(Chinese)* 74259
BT inform. assurance programme 119541
C4I defensive infrastructure for survivability against multi-mode attacks 111587
CAINONET network perform. monitor syst., key technol. research 96039
CAINONET perform. real-time monitoring and eval. syst. 96040
CATV broadband network design and simul. 120555
clinical health inform. network using off-the-shelf software to safely transfer med. data 111290
component based video commun. tool for collaborative virtual environ. 108141
distributed IS, autonomous navig. archit. 130850
distributed location mgt. for wireless networks, perform. anal. 97031
distributed proc. environ., cost effective service logic deployment 119562
GBS IP multicast tunneling 107822
heterog. networks mgt. across security/coalition domains 108041
Hong Kong, IT and telecomm. infrastructure appls. for business and service 130964
IEEE inform. networking, conf., Beppu City, Japan (Jan.-Feb. 2001) 89576
inform. warfare, infrastructure protection policies 88238
Intelligent Hub Access System 111565
multicast real time relay using ATM networks 85214
Multimedia Super Corridor, Malaysia, software develop., business-university collaboration 130938
pers. mobility/service portability support strategies eval. 96487
PHS-based multihop wireless infrastructure for local communities 108902
PiNet, wireless connectivity for organizational inform. access using lightweight handheld devices 108271
robust info. network mgt. syst., graph theoretical study 74127
SATMIN satellite multipurpose inform. network, network mgt. *(Chinese)* 74118
sens. inform. networking archit./appls. 108274
tie-set graph theory and appl. to info. network mgt. 113910
TINA, enhancement of platform access using WAP 130374
TINA environ., service subscription inform. mgt. using OO middleware 130919
US Army installations, inform. assurance archit. 111589
US Army IT mgt., installation inform. infrastructure archit. 111643
video-based inform. networks for regional community creation 119776
information resources
adaptive ring access protocol for super high-speed networks, perform. eval. 95928
advanced collaboration services 108058
aggregate hypertext transfer protocol model for marginal distrib. 107926
AIMS, learning/teaching support for WWW-based education 67437
aircraft pers. commun., in-flight technols. develops. 111311
appl. server design for user service maint. in Web based environ. *(Polish)* 130645
ASP, appl. service providers 96006
B2B e-commerce trends, e-procurement/e-marketplaces *(German)* 85336
B2B transactions, Simple Object Access Protocol 85266
Bent seqs. based variable-length coding for wireless advertising 129056
bilateral anonymity/logged Web address abuse prevention 108201
broadcast delivery of digital products via scheduling algms. 120516
cached Web objs., mutual consistency maint. 74250
client-server Internet database connectivity and two-machine flowshop 85194
clinical trials, rem. data entry using WAP phones 98874
cluster-based Web servers with load balancing, perform. meas. *(Polish)* 130644
Colditz Castle/Town mktg. mgt., website appl. 100486
computational and inform. grids 85325
conductive adhesives for packaging, Internet course, expt. seq. 113372
congestion cost/OPF calc. using Internet Web program *(Korean)* 122816
connection caching under various models of commun. 107835
consumer commun./mass market inform. networking 96182
continuing mfg. learning using multi-user sync. simul. game 67444
Deakin Univ., engng., online teaching/learning 78534
denial-of-service attack prevention methods 119462
digital inform. age course for elec. engng. students 78531
digital library distributed multimedia syst. QoS mgt. *(Chinese)* 96257
digital video mgt. for heterog. and distributed resources 108398
dist. education, Web mining 89619
dist. education network courses, WWW technol. appls. *(Chinese)* 67414
dist. learning technols., hypermedia classroom *(Slovenian)* 130742
distributed environ., problem determ., dyn. dependencies characterisation, act. approach 130683
distributed image proc., Web enabled client-server model for develop. environ. 106443
domain caching for live-event Web services 108331
downloadable audio and dial-up voice browser appls. via Web 96277
DSP in software radio commun. 95657
dubious image blocking using colour features 118390
e-business, large scale sites, new technols. support *(Japanese)* 119626

information resources continued
e-commerce deployment, project planning, time-based mgt. 89810
e-mail-based inform. sharing syst. for intra-corporate coord. 119515
e-mktg., community manager/knowledge importance 108183
ECSAIWeb, adaptive learning environ. on WWW 100464
education, Electronic Chalk, Java-multimedia-table for classroom and teleteaching *(German)* 130939
educational technol. in biomedical research, education and training, Web-based appls., mgt. and delivery 100478
elec. companies, Internet services overview *(German)* 111687
electronic business site perform. scalability *(Polish)* 130312
electronic packaging educ. module develop., Sync-O-Matic software tool 113371
electronic packaging syst. cost anal., Internet-based educ. mater. 113370
endoscopic video database on WWW, linking with ISDN 98841
endoscopy, virtual, WWW-based, for CT anal. of bronchial airways 110946
geographically replicated Web servers, QoS 85326
gigabit Ethernet network, supporting multimedia commun. 85195
healthcare inform., pers., intell. inform. struct. for composing and pushing over Internet 111300
home telecomm. equipt., middleware emergence 75311
Host Integration Server 2000 for legacy mainframe systs. data usage 108351
hyper audio Web browsing syst. via telephone 119721
hypermedia interactive assisted learning 100468
I/O heterog. devices, markup lang./syst. 108145
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 124193
IEEE Societies Web-based elec. engng. education efforts 89601
iFrench, Paris-Content Distribution Service, Internet video delivery trial 130846
InfoTorg online service, migration to WAP 108927
Internet, content routing support archit. 119307
Internet filtering to stop cyber slacking/accessing offensive material *(German)* 74164
Internet imaging conf., San Jose, CA, USA (2001) 94755
Internet mktg. needs bal. with consumer concerns, property rights framework 85175
Internet multimedia services, OO appl. develop. platforms 108363
Internet search service on multi-search engine, GA-based dyn. pers. filtering 119749
Internet-based dist. learning using learning by doing paradigm 78525
Internet-based med. teleconsultation syst. 133199
Internet-based power syst. freq. monitoring network 112197
KALIMER NPP IS for rem. users 133849
Landsat-7 ETM+ internal calibrator, data models 122551
learning environ., integrated with campus IS 119610
learning experiences, sharing through correspondence on WWW 113353
learning on demand, hybrid sync./asynchronous approach 78520
learning through video on WWW, genres, user attitudes and prospects 113383
library ref. services enhanced through technol. 119514
location selection for act. services 119702
med. image rem. consultation via WWW technols. 106807
med. IS, WWW-based, for collaboration between rural clinics and central hospital *(Japanese)* 76785
media constr. patterns, abstraction and reuse in multimedia appl. specs. 96274
melody input user interface, Tuneserver 106346
microcontent for wireless and mobile appliances 74358
microelectronics education online courseware library using Java applets 78515
mobile community commun. syst. 107861
modern elec. markets, e-commerce appl. possibilities *(Chinese)* 122819
MPEG compressed newsfeeds anal. and presentation, Internet supported 84082
multimedia computing and networking conf., San Jose, CA, USA (2001) 89588
Multimedia Information Service Center, design 74434
multimedia presentation syst., distributed environ., floor control mechanism 74439
multimedia stds. for WWW 96272
NDT educ. improvements, North Central Collaboration efforts 113317
Net-BTRON, distributed hypermedia OS 96238
NetNews servers, effective caching 74197
network inform. mgt. in heterog. decentralized enterprise environ. 108021
networked tools in interactive learning, future approach 67443
Obsolescence Manager online database for electronic components *(German)* 91405
on-line instrum. drivers, Internet resource listings 109450
optimal scheduling in queueing network models of high-vol. commercial web sites 108335
parallel and distributed computing conf., Las Vegas, NV, USA (2000) 78417
pedestrian navig. using small wireless handheld display 109320
pers. digital TV listings service 75299
pervasive speech and natural lang. technol. 106384
power syst. course, Internet/WWW appl. *(Chinese)* 78494
R&D mgt. through network mapping, Internet-based approach 113397
radiographic images, Web-based retrieval using multi-scale tree VQ in wavelet domain 110977
radiologist continuing professional develop. using WWW as delivery vehicle 89600
relay protection Web-based MIS *(Chinese)* 77550
rem. BLDCM learning lab. 78513
replicated redirection service maint. in WWW-based IS 108332
RLC/MAC enhanced design for integrated services support over EGPRS 95861
robust front-end for speech recogn. on WWW, voice over IP recogn. 73069
RSVP Unibrowser for dist. learning using videostreaming and Web 119797
sci. museum exhibitions via Webcasting, live and rem. online audiences 108343
semicond. mfg., rapid prototyping of 300 mm fabs 81174
semicond. proc. steps, stat. inform., Web based mining 79509
service mgt., company-customer commun. via Internet 89738
SIMBA user alert service archit. for dependable alert delivery 108088
Simple Object Access Protocol for interoperability problems on Web 74182
simul. conf., Seattle, WA, USA (2001) 78452
SimulNet educational platform, stds.-driven E-learning 78529
Situated Computing Framework for mobile and ubiquitous multimedia access using small-screen devices 130954
skills eval. for resource-based study using electronic resources 124242
smart radio, community based music radio 85381
spambots and unsolicited advertising email prevention 108089
spine X-ray images, computer-assisted retrieval of biomedical features 110975
streaming-media knowledge discovery 119778
supported web-based learning systs. for higher education students 78502
surgeon training via video conferencing and Internet 119769
TANGOW, model for internet-based learning 67429
TCP transactions, CPA 85296
information resources continued
TCP/IP-based multimedia appls./services over satellite links, ASI/CNIT project experience 85376
teaching and learning practice in Web-based multimedia technol. course, experience report 113381
tele-training methodologies develop. using Internet technols. 78492
tourist inform. services provision using mobile computers *(Japanese)* 120006
TPOCAST pers. inform. delivery platform *(Japanese)* 120005
Ukrainian telematics-based education overview 113299
Virtual Classroom, Internet technol. based course delivery 108106
virtual conf. eval., CybErg 1999 96245
Virtual Inhabited Call Centre, pers. mobile agent syst. 74146
Web, mobile WAP-based mgt. 108034
Web based dist. learning/teaching using DVD and Internet 109364
Web based e-educational environ. using Java technol. 100469
Web based learning environ. for commun. module 113288
Web caching archits., hierarchical/distributed caching anal. 119546
Web client traffic, empirical distribs., synthetic traffic generation 74212
Web graph struct. compression 107463
Web graphs compression 107462
Web layout, optimal design, heavy tails/generalized coding 119742
Web pages, delta encoding 107084
Web satellite-based multicasting services, theoretical framework 130779
Web server, usage of older Apple Mac computers 85259
Web servers, simul. based perform. anal. 130442
Web services, zero-loss, constr. 119744
Web site traffic anal., interactive, multidimensional, using OLAWEB 108361
Web traffic, RED tuning 85297
Web wireless mobile service, distributed proxy server syst. develop. 108157
Web-appl. develop. using model/view/controller design pattern 130880
Web-based acquisition, storage & retrieval of biomed. sigs. 88024
Web-based appl. server *(Chinese)* 108101
Web-based collaborative syst. for supplier selection 89754
Web-based cooperation with basic support for cooperative work 130970
web-based dist. educational initiatives, metadata models 78504
Web-based dist. instruction eval. model 78516
Web-based interactive e-learning software tool for power engng. 124274
Web-based patient diagnosis data mgt. syst. 132547
Web-based secure LDAP mgt. syst., design/implement. 96230
Web-based telecomm. needs modeling tool, EOTIP methodology 108004
Web-like Internet/bulk-data traffic, tail drop/act. queue mgt. perform. comparison 130770
web/data servers power demand dens. requirements 130983
webVDM, web-enabled virtual disassembly manager for electronic products 100541
wireless Web access, end-end approach 74245
WWW Consortium standardization activities 119733
WWW contents adaptation to terminal equipt. limitations *(German)* 74303
WWW mining, low-complexity fuzzy relational clustering 108195
WWW over DTV, broadcasting and Internet 86306
WWW proxies, optimal hash routing 74024
WWW server perform., wide-area conditions effects 119649
WWW shopping, coloured goods ordering, display problems 109876
WWW systs., locally distributed, load balancing algms. *(Polish)* 130647
WWW technol. adoption/diffusion into mainstream teaching 113348
XML and security 119537
XML security mechanisms 119538
XtremWeb, expt. platform for global computing 108114
zero-copy protocol implement. 130409
SmartLibrary infrastructure for ubiquitous technols./appls. 74235

information retrieval
see also information storage; query formulation; query processing; relevance feedback
audio news broadcasts, spoken document retrieval, TREC-8 94436
client-server Internet database connectivity and two-machine flowshop 85194
commun. sci. for indiv./society, social systs. past/present/future 96074
data organization and retrieval on parallel air channels 85566
digital TV navigator 131721
digital watermarking, inform. retrieval 106922
document images, fast class. using weighted distortion 94719
document page class. via struct. based features 84084
document recogn./retrieval conf., San Jose, CA, USA (2001) 89587
e-mail-based inform. sharing syst. for intra-corporate coord. 119515
enterprise IS, Internet technols. for data access 85268
i-mode car navig. syst. with small GPS appliance, overview *(Japanese)* 131711
interactive commercial/multimedia inform. retrieval *(Japanese)* 119792
Internet portal environ., contents gathering/delivering, messaging/XML 130866
Internet VoD E-commerce syst. based on multilevel video metadata 97079
JPEG compressed domain, image indexing and retrieval 118646
Kansei retrieval syst. for distributed multimedia databases, design 96281
local decoding procedures for error-correcting codes 72812
mobile agents for pers. inform. retrieval 85731
mobile environ. archit., intell. genetic search and proxy caching 119713
MPEG-7 video content description, parametric motion models 118176
Net-BTRON, distributed hypermedia OS 96238
NewsEye, news video browsing and retrieval syst. 84501
newspaper archive, interactive vocal IRS 119498
one-way trapdoor permutations for non-trivial single-server private inform. retrieval 107944
parallel text searching on heterog. cluster of workstations 130725
PCB design archiving systs. 115123
PiNet, wireless connectivity for organizational inform. access using lightweight handheld devices 108271
Serbian spoken dialogue syst. for bus travel inform. retrieval 118153
SIMBA user alert service archit. for dependable alert delivery 108088
single database private inform. retrieval implies oblivious transfer 107945
Slovenian spoken dialog systs., acoustic and lang. modelling 129402
spoken document retrieval for langs. of Hong Kong 84053
SURF, Simple UI to Retrieve Favorites 131733
ToCAI description scheme for multimedia document indexing and retrieval 85364
Tokyo Inst. of Technology progress in speech recogn. 118162
video content-based retrieval, obj. motion trajectory indexing 118481
visual inform. retrieval, image representation method 118734
Web caching archits., hierarchical/distributed caching anal. 119546
wireless data access archit. using push/pull technols. 96531
word-meaning similarities determ. by stat. whole-text-anal. *(German)* 73006

nformation retrieval languages *see query languages*
nformation retrieval systems
see also online front-ends; search engines
audio-visual programs cataloguing, metadata use *(German)* 131736
i-Broadcast syst., cross-medial broadcast program contents mgt. *(German)* 131738
MPEG multimedia stds. (MPEG-1, MPEG-2, MPEG-4, MPEG-7, MPEG-21) *(German)* 83904
networked phys. world, automated ident. archit. 108327
privacy enhancing technols. conf., Berkeley, CA, USA (2000) 100408
RAI SlotFill syst. for connecting audio/video archives via idle SNG transponders 75301
rare books, digital archiving, image proc. technol. appl. 106706
rem. sens. ground stations, DAQ & archiving syst., real-time proc. 122554
scientific commun. develop., value chain considerations 119444
secure digital archiving of high-value data 118010
secure digital archiving of high-value data 129242
semantics-based retrieval by content 94828
urban community IS using simple IR broadcasting telecomm. protocol *(Japanese)* 107884
Web pages, delta encoding 107084
Web-based IS, clustering techs. to detect usage patterns 130639
Webscope-CBVR, content-based video retrieval syst. for WWW 118325
wireless database broadcasting, effective data placement 96221
nformation science
see also information dissemination; information industry; information needs; information retrieval; information retrieval systems; information services; information storage; publishing; vocabulary
human and inform. sci. research, past/present/future 96075
nformation services
see also information networks; information resources
act. server pages tech., accessing real-time data in Internet/Intranet, on-line monitoring *(Chinese)* 77727
bandwidth demand, second telephone lines and on-line services 130992
Global Broadcast Service end-to-end services, protocols/encapsulation 111562
i-mode car navig. syst. with small GPS appliance, overview *(Japanese)* 131712
location-depend. inform. service using data broadcasting *(Japanese)* 119737
mobile inform. society, appl. driven evol. 85703
Multimedia Information Service Center, design 74434
NTT's vision for inform. sharing services in the 21st century, R&D 96336
pers. news delivery service, agent-based implement. 74069
TV-Anytime metadata, preliminary spec. 75275
USA broadband cable market, consequences of AOL/Time Warner merger rules 74066
user situations and services 119458
WAP protocol over GSM-SMS, perform. anal. 130454
iformation storage
see also information retrieval
automotive test data mgt. 100272
Black Sea Tele-Diab syst. develop., implement. and clinical eval. 98877
conf. on info. storage technol., Hong Kong, China (Nov. 2000) 113234
DNA-based cryptography 69358
PCB design archiving systs. 115123
quantum phase, inform. storage or retrieval 94216
radiation worker records, Korean national dose registry 111248
store-and-forward VoD services, traffic control scheme 97087
iformation storage systems *see information retrieval systems*
iformation systems
see also database management systems; digital libraries; engineering information systems; geographic information systems; management information systems; medical information systems; personal information systems; public information systems; traffic information systems
BT inform. assurance programme 119541
cellular mobile IS, integrated isochronous/bursty media data, channel-state-depend. bandwidth allocation 107847
computer appls. in indust. and engng., conf. Honolulu (Nov. 2000) 78446
digital inform. age course for elec. engng. students 78531
digital library distributed multimedia syst. QoS mgt. *(Chinese)* 96257
distrib. constr. IS downsizing, GUI appl. *(Chinese)* 112023
distributed IS, autonomous navig. archit. 130850
elec. equipt. on-line insulation monitoring, IS, GIS *(Chinese)* 88666
enterprise IS, Internet technols. for data access 85268
home inform. wiring syst. using bal. cable for high-speed network 119693
hybrid checkpoint protocol for mobile-to-mobile commun. 107805
Internet security *(Japanese)* 119625
law enforcement, enabling technols. conf., Boston, MA, USA (2000) 113185
learning environ., integrated with campus IS 119610
mobile appls., IS *(Slovenian)* 130633
mobile e-commerce, intrusion tolerance schemes 85308
Mobile Technology, electronics manufacturer, IS department mgt. 78581
power generation energy resource/economics monitoring syst. *(Russian)* 77672
power market tech. support syst. framework *(Chinese)* 111726
project cost control syst. design, safety model anal., IT *(Chinese)* 100527
project investment decision making 89807
rem. area telecomm. network components, PV power supply 108455
SARA, Survivable Autonomic Response Architecture 96096
software defined radio strategies for inform. warfare/assurance 111613
strategic IS planning practices, Slovenia, Singapore, comparison 89773
supply chain mgt. systs., state of art and vision 89748
utility enterprise integrat. interfaces, MultiSpeak™ spec. experience 122804
WebFabIS web-based microelectronics lab. inform. syst. 113451
WorldCom, Telecom Management Network, strategic IS methodology 119487
formation systems, management *see management information systems*
formation theory
see also channel capacity; correlation theory; decoding; encoding; entropy; error statistics; estimation theory; filtering theory; modulation; prediction theory; quantum communication; rate distortion theory; signal detection; signal processing; speech intelligibility; switching theory
2D chaotic dyn. systs. sync. by transm. of state inform. 94226
3D digital imaging, opt. inform. proc. models 95356
adaptive minor component extraction with modular struct. 107383
ADSL systs. supporting downstream wireline/wireless trunks, subchannel allocation 85409
Akaike inform. theoretic criteria for model order selection, behavior 94224
asymptotic equivalence of inform.-theoretic divergences 128928
at. gesture component, unsupervised learning, auto clustering, min. description length 106664
ATM networks, FEC coding for real-time transport 119129
information theory continued
autoregressive models, adaptive, criterion 73602
axiomatization of generalized entropy of partitions 83782
Bayesian inform. geom., irreversible procs., max. entropy anal. 105995
Bayesian ordering, extended probab. distrib., refinability principle 105994
Bell inequality, max. entangled mixed states 95731
Bell states, hiding multiple bits, low-entanglement method 95752
binomial and Poisson distribs. as max. entropy distribs. 83789
bipartite quant. entanglement, two-qubit interact. 94206
blind separation of sigs., redundancy reduction criterion 73632
blind source separation by redundancy reduct. in recurrent neural net 95641
blind source separation using Renyi's mutual inform. 72709
CDMA space-time spreading multilayered syst. 74582
chaos based modulations, inform. theory perspective 94238
chaos sync., small noise effect, inform. sig. 117962
chaotic dyn. systs., sync., impulsive feedback anal. 128930
chaotic secure commun. using neural network 72714
chaotic systs. synchronisation, proportional plus derivative control design *(Chinese)* 117876
classical inform. transm. via quantum entanglement 128960
Clifford groups invariants 117871
cloning, symmetric and asymmetric, quantum network 94218
combinat. multi-level networks synthesis using inform. theory method 79822
conf., disordered and complex systs., London, Eng. (Jul.2000) 78460
cryptology, conf., Bruges, Belgium (May 2000) 113200
cumulant-based independence measures for lin. mixtures 83788
damage detect. meas. point selection, mutual inform. concept 86989
deterministic dyn. systs., algorithmic complexity, randomness 105991
digital watermarking, inform. retrieval 106922
discrete inform. sources, sig. proc. and modeling of dyn. objs. 106010
discrete time-warped FT, optimal warping fn. design 95722
dispersion-free NLO fiber multispan effects, Shannon channel capacity 109185
divergence minimization under prior inequality constraints 128926
DS-CDMA multi-cell randomly spread syst., multiuser detect. 119105
eddy current sens. response, ill-conditioned mixtures, Bayesian anal. 110037
ensemble learning, neg. logarithm likelihood fn. *(Japanese)* 94215
entangled atom interferometry, quant. cryptography, grav. effects 106251
entangled input states rel. to quantum channel capacity 128918
error-correcting output coding learning machines, codeword bit error interdependence 117956
feature selection, inform.-theoretic algm. 94205
finite-state channel messages, universal detect. 117883
Fisher inform., irreversible phenom., stat. mech. 105992
forward-adaptive wavelet image coder design and anal. 95073
Frank sig. and its generalizations, cyclic and n-adic shifts 117877
functional MRI data anal., inform. theoretic approach incorporating spatial priors 87579
generalised quant. search algm., phase inversions, expt. NMR 106252
Hamiltonian quantum feedback control algm. 83794
handwritten isolated word recogn. based on Mutual Information 129681
Hermitian operators in discrete Hilbert space, expectation value expansion 94337
hydroacoustic inform.-transm. channel model 109315
hypothesis testing from vector-quantized data, perform. limits 128932
IEEE elec. and electronic engineers conf., Tel-Aviv, Israel (2000) 113257
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
image compression, interscale/intrascale dependencies between wavelet coeffs. 95078
image registration by maximization of combined mutual inform. and gradient inform. 84111
image watermarking, role of inform. theory 94506
improved wavelet packet decomp. algm., weak fault detect. appls. *(Chinese)* 106801
infinite dim. Banach manifold , quant. info., exponential connection 83783
inform. diags., entropy, index of coincidence and error probab. 128935
inform. maximization and expt. design 105997
inform. proc., classical wave-optics analogy 83930
inform. uniqueness in differential games 113864
intuitionistic fuzzy sets, decomposable/inform. measures 100837
ISAR imagery focusing, inform. theoretic measure 96913
ISI-free pulse better than Nyquist pulse for same excess bandwidth 117869
land targets stat. pose estim. in SAR 75207
local thermofield theory, quant. entanglement, Bell inequalities 72967
low complexity (turbo) classifiers in high dimens. feature spaces 128933
mag. reson. image anal. by inform. theoretic criteria 87567
manifolds, Chentsov metric, dual affine connections 83786
Markov chains in continuous time, large deviation principle 117879
matrix CUSUM, recursive multihypothesis change detect. algm. 128924
MaxEnt queries, seq. sampling 107356
measuring inform. about inform. 128927
min. complexity seq. multihypothesis detect. 128923
min. complexity seq. multihypothesis detect., weak seq. tests 83779
min. rate adaptive estim. over continuous hyper-params. 83791
min.-entropy estimator for regression problems with unknown distrib. of obs. errors 105996
mobile commun., hard handoffs, alternative metrics 85671
mol. dimers/trimers, quantum-phase/inform.-entropy dyn. 117881
MRI, image intens. inhomogeneities, retrospective correction by inform. minimization 87587
multichannel blind deconvolution, freq. domain, adaptive spline fns. appl. 107315
multidimensional digital scatter media, dyn. nodal commun. 117884
multiparticle quant. superposition, stimulated entanglement, parity amplif. 128961
multiqudit systs., quant. entanglement swapping, Bell-type meas. 83945
multirate lin. systs., inform. theory 128952
narrow-band subliminal channel, inform.-theoretic model *(Chinese)* 128959
no-cloning and no-imprinting theorems, quantum cryptography 106246
non-Shannon-type inform. inequalities and appls. 128956
nonadditive inform. content, inform. theory 94214
nonparametric exponential model, class. stat. manifolds 83785
nonrobustness property of indiv. ergodic theorem 117878
novel inform. criterion, global convergence anal. 118851
optimal transform for discrete Hirschman uncertainty principle 83792
orient. estimators, divergence lower bounds 117864
Pinsker's inequality, Vajda's tight lower bound and refinements 128925
plaque MR imaging, inform. theoretic anal. 98410
Poisson's law and inform. theory 128938
Poisson channel, optimal sig. selection 106006
polariz.-entangled photons, quant. decoherence, cavity QED source 94207

information theory continued
pos. fns. factorization 128936
predictability, complexity, and learning 124521
probab. distribs. families characterized by entropy 83790
protection systs., design method 83775
quant. comms., three-particle entanglement states, transform. probab. 83795
quant. cryptography, class. inform., reversible extraction 106213
quant. inform., cloning procs., (in)exact procs. 105984
quant. inform. theory, multipartite pure states, local discrim. 128931
quant. meas., interact.-free which-path info. 94208
quantum cryptography unconditional security 129247
quantum entanglement, secrecy, review 106250
quantum holographic teleportation, 2D opt. image reconstuction 94212
quantum inform. theory, error exponents 128962
quantum phase, inform. storage or retrieval 94216
radar range profiles, relative phase inform. 75141
radio channel data transm. using masking oscills. 128915
radiocommunication networks interf. noise, Shannon's formula reworking 72383
random instantaneous message transm. using entanglement-based comms. 129253
randomness and inform. theoretic entropy 94220
real Hilbertian info-manifolds, probab., stats. 83784
real vector space, quant. state entanglement, rebits 94211
real-time obj. recogn., optimal color quantization 129852
secret key exchange, random card deals, hierarchical struct. 106202
secret-key agreement, secrecy capacity 106313
seismic sig. proc., inform. anal. 88092
sens. inform. capacity & energy cost, biol. vs. Si photoreceptors 106002
separating systs. theory, basic aspects 106005
set reconciliation with nearly optimal commun. complexity 128957
set-membership ident., stat. approach 128934
Shannon's commun. channels and word spaces 117880
Shannon channel capacity, dispersion-free NLO fiber transm. 109184
sig. quantization, inform. granulation 107307
single user fading channel, queueing anal. 117882
sophisticated product, reliab. synthesis assess., inform. theory *(Chinese)* 100677
source coding with side inform. and inform. embedding, duality 129228
source separation, constrained Cramer-Rao bounds 130002
source separation algms., logical induction, Bayesian inform. 105999
stat. phys., QFT and inform. theory 83781
structural redundancy in non-orthogonal transforms 128954
task complementarity, min. entropy, max. likelihood anal. 105993
transm. channel sigs., discrete source separation, MCMC anal. 107589
transm. pricing, elec. tracing, proportionality principle 99214
trellis codes design for source coding with side inform. at decoder 106176
two photon absorpt. crysts., complete Bell state meas., quant. interf. 70218
uniform ensemble, inform.-disturbance tradeoff in quantum meas. 128967
universal hypothesis testing, competitive Neyman-Pearson approach 128921
unknown binary vectors, two-stage disjunctive testing, asymptotic efficiency 128922
V-BLAST, perform. losses due to fading 85532
vector solitons, cascaded collisions, inform. transfer 128562
vol. holographic storage device inform. quality 82066
Weaire-Phelan partition for quantization 117866
wireless networks, achievable rate region 128951

infrared astronomy
see also submillimetre astronomy
Antarctic Plateau sites, astron. observing 105747
Infrared Space Observatory, CAM LW detector, cosmic rays 120927
Infrared Space Observatory, ISOCAM detectors, review 120924
Infrared Space Observatory, ISOCAM detectors response 120925
Infrared Space Observatory, ISOCAM faint obj. detect. 120928
Infrared Space Observatory, ISOCAM LW glitch effects 120929
Infrared Space Observatory, ISOCAM LW transients 120933
Infrared Space Observatory, ISOCAM SW transient effects 120932
Infrared Space Observatory, ISOCAM-LW dark current 120926
Infrared Space Observatory, ISOPHOT, deglitching methods 120930
Infrared Space Observatory, ISOPHOT, space weather effects 120934
Infrared Space Observatory, ISOPHOT transient effects 120931
Infrared Space Observatory, LWS doped Ge photo-detectors 120818
Infrared Space Observatory, SWS detectors, perform. 120819
Infrared Space Observatory, SWS spectrometer sensitivity 120820
interferometers, integrated optics appl. 127791
ISO detectors, conf., Madrid, Spain (Jan. 1998) 113272
multi-moded corrugated horns for far-IR space appls., radiation patterns 117815
photometer, InGaAs photocathode photomultiplier 69465
PISCES, wide-field, 1-2.5 μm camera for large-aperture telescopes 75663
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
solar spectrograph detectors research *(Chinese)* 97233
wide-field imaging interferometry testbed design, FIR/sub-MM missions 98887
Ge:Ga stressed detectors, compact 2D array for IR astron. 120821

infrared communication *see optical communication*

infrared detectors
see also bolometers; photodetectors; pyroelectric detectors; submillimetre wave detectors
2D pyroelec. array technol. 131912
3D moving target tracking with distributed pass. sens. using EKF 73635
400 kV overhead power conductors, rem. temp. meas. tech. 88501
ACREO QW IR photodetector FPA 86655
aircraft range estim., angle target tracking IR sens. 133220
AIRS hyper-spectral IR sounder for weather forecasting 133325
all-solid-state IR gas sens., LEDs and IR detectors 120963
anti-personnel mine detect. technol., review *(Japanese)* 111644
ASTER cryocooler, in-flight perform. 111399
ASTER early sci. outcome and operation status 111393
astron. photometer, InGaAs photocathode photomultiplier 69465
Auger-suppressed IR photodetector, photonic cryst. enhancement 86519
Bayesian sens. image fusion, local lin. generative models 118314
bearings-only target motion anal. using dual-waveband IR syst. 88243
bird alarms in full-stare IRST's 111623
camera, uncooled, law enforcement appls. 109710
carbon nanotube highly ordered arrays, IR detect., fab. procs., review 86562
CMOS compatible micromachined thermoelec. IR microsensor 120796
CMOS readout ccts. for monolithic IR thermoelec. sens., model./charactn. 120703
colour pyrometer IR photodetector spectral charact. optim. *(Russian)* 75517
conf. on sens. and control techs., Wuhan, China (June 2000) 78371
cooled IR imaging sens., Schottky barrier bolometer arrays appl. 109626
COVIR Compact Visible and IR Radiometer, Earth/climate monitoring 133279

infrared detectors continued
cryogenic transit.-edge microbolometer/calorimeter 71141
cw terahertz radiation, coherent EO detect. 97791
dist. sens., noise added theory based, lin. 109573
doped QW minigap-confined states, intersubband transits., IR detector appls. 80882
Earth Sensor Assembly, satellite attitude determ. 88074
environ. gas sens. & sens. mechanisms, overview 133357
expendable IR sens., uncooled technol., producibility improvements 111551
ferroelec. sens. advances & emerging technol., review 131881
FPA uncooled microbolometer based cameras, UL3 ALPHA and OMEGA 75635
FPAs, readout tech. for on-chip compensation of dark current 97363
Fraunhofer IAF QW IR photodetector research, 2D FPA 86652
French mil. systs. 109648
helmet-mounted uncooled FPA camera/display for firefighting appls. 75648
high detectivity QW IR HET photodetector, optim. at low temp. 86525
high energy ion implant. detect. wavelength tuned QWIP 97247
high-gain QD IR photodetector 86559
homojunction interfacial work-fn. internal photoemission FIR detectors 131932
hot filament IR radiator and pyroelec. detector 109557
hot-electron micro-bolometer, thermal charactn. 70909
human action pattern meas. using mag. IR sens. *(Japanese)* 110658
III-V material systs. QW IR photodetectors, device charactn. 86540
image IR converters based on ferroelec.-semicond. thin-layer systs. 86526
image proc. tech. for vehicle sens. appls. *(Japanese)* 118362
Infrared Space Observatory, CAM LW detector, cosmic rays 120927
Infrared Space Observatory, ISOCAM detectors, review 120924
Infrared Space Observatory, ISOCAM detectors response 120925
Infrared Space Observatory, ISOCAM faint obj. detect. 120928
Infrared Space Observatory, ISOCAM LW glitch effects 120929
Infrared Space Observatory, ISOCAM-LW dark current 120926
Infrared Space Observatory, ISOPHOT, deglitching methods 120930
Infrared Space Observatory, ISOPHOT, space weather effects 120934
Infrared Space Observatory, ISOPHOT transient effects 120931
Infrared Space Observatory, LWS doped Ge photo-detectors 120818
Infrared Space Observatory, SWS detectors, perform. 120819
Infrared Space Observatory, SWS spectrometer sensitivity 120820
integrated thermoelec. sens., CMOS compatible frontside micromachining 121037
IRFPA nonuniformity correction, diffractive lenslet array anal. 86621
ISO detectors, conf., Madrid, Spain (Jan. 1998) 113272
Jet Propulsion Laboratory QW IR photodetector research, FPA nonuniformity 86555
landmine localization, vehicle-mounted IR imager calib. 75347
landmine trip wires opt. detect. 77116
large format broadband QW IR photodetector arrays, spatially modulated prism interferometer appls. 86656
large format LW MQW IR detector arrayed FPA commercialization 86661
lin. Stirling cryocoolers, space platform 111326
low background QW IR photodetectors 86550
low-background extrinsic detector, gain and detectivity 109558
MEMS uncooled thermal detector, opt. readout, FZP 109542
microbolometer arrays, thin film ferroelec. materials use 109540
microbolometer fab., structural stabil. and IR detect. charcts. improve. 97248
microbolometer uncooled thermal imaging sens., law enforcement appls. 109717
microbolometers, stabil. conditions, nonlin. dyn., thermal runaway 97252
microlens array and IR detector array, hybrid integrat. 71399
micromachined lin. thermoelec. IR sens. array design 120823
micromachined uncooled IR bolometer lin. array using VO_2 thin films 75533
Mine Hunter/Killer program, close-in detect. syst. 77091
MIR/LWIR photodetectors, rem. technol., SNR alteration by noise manipulation 109654
mixed-refrigerant Joule-Thomson cryocoolers used for cooling IR devices, fast cool-down 109548
mosaic IR diode array, fig. of merit, quantum efficiency/crosstalk ratio 131930
MQW IR photodetectors, nonequilibrium HF noise, responsivity 86514
MQW IR photodetectors, periodic elec.-field/charge domains, ensemble Monte Carlo particle simul. 86553
Multi-Selcon autonomous luminaire connected via networks with wireless remote control *(Japanese)* 100320
multichannel IR pyrometer, pulsed power expt. appl. 97237
multiple IR background generation for warning/search-and-track systs., modeling/simul. 88246
NanoWalker three-legged miniature robot, high-resoln. opt. positioning system 86971
NIR absorpt. tomography, ICE meas. appl. 121257
NIR spectral responsivity scale, cryogenic radiometer, detector calib. 75350
NIS submicron tunnel jn., micro-bolometer 71171
nonuniform QW IR photodetectors, elec. field distrib., perform. study 86544
overhead conductors temp. meas., IR sens. 110041
Palomar 5-m telescope, QW IR photodetector astron. imaging 86658
panoramic IR viewing, multi-opt. systs. 86624
pass. IR detector DOE 116873
pass. polarimetric IR target class. 94773
plexiglass, CO_2 laser pulse irrad., solitonic wave slow components, IR thermovision method 105562
polariz. sensitive diffractive optics integrat. with IR photodetector arrays 104747
polyethylene sheets, crease detect. using opt. syst. *(Japanese)* 131922
polysilicon bolometer, IR FPA, membrane transfer bonding 120795
pulse tube cooler with lin. compressor, IR sens. appl. 109547
pulse tube cryocoolers for cooling IR sens., mil. tactical appls. 111553
pyroelec. IR sens., 3D simul., optimized peripheral cct. *(Korean)* 86533
PZT(:Mn) sol-gel thin films, pyroelec. detectors 104478
PZT etching in MORI high dens. plasma syst., pyroelec. detector array contact reliab. 103377
QD IR detector, high sensitivity due to barrier-limited photoelectron capture 97269
QD IR photodetectors, detectivity 75515
QD IR photodetectors, neg. differential photocond. 75513
QW IR detector, proton implant. assistant intermixing proc. 109546
QW IR detector imaging systs., standardized high perform. readout IC 86661
QW IR photodetector-LED integrat., space charge spectrosc. 86554
QW IR photodetectors, conf., Dana Point, CA, USA (July 2000) 89506
QW IR photodetectors, detect. wavelength tuning 86543
QW IR photodetectors, full bandstructure modeling 131933
QW IR photodetectors, low background conditions, time-depend. effects 86551
QW IR polariz. sensitive photodetecting thermal imager 86654
QW/QD IR detector photo-response/dark current, theoretical modeling 86558
QWIP, local responsivity 86513

rared detectors continued
QWIP current noise suppression at low bias voltages 97268
QWIP with blocking barrier, HF characts. 86521
radiation hardness, JFET sig. extraction cct. *(Russian)* 86529
reach-through APD, drift-diffusion model 127942
real-time act. target tracking mono-chip 117017
recogn. of objs., high-capacity hardware 111625
reconnaissance image data transm., airborne network syst. 77033
rem. objs. IR imaging in atm. turbulence 109712
robot navig., combined config. space/occupancy grid approach 75639
satellite IR surveillance, high operating temp. FPA develop. 133409
scanning thermal viewer opt. systs. size calc. 86626
scatterable landmines detect., high contrast 77117
scenes and systs. design, open-ended tools 109554
self-organized QDs, carrier-dyn., appl. to LW sources and detectors 91774
Shack-Hartmann wavefront sens. for conformal dome metrology 109717
shipborne pass. IRST sens. 109650
single-color dual-band QW IR detector FPA, lab./field imaging testing 86653
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
smoke particles discrim. using IR photoelec. detect. 75534
Sofradir IR detector products, past/future 109551
Sofradir IR detectors, product develop. 109549
soil, moisture/organic matter prediction, NIR sens. 122592
solar spectrograph detectors research *(Chinese)* 97233
sounder technol. trends 133324
space-borne IR detectors, miniature coaxial pulse tube refrigerator 111325
SPARCLE telescope, metrology of opt. beam expander 109302
SQW IR photodetectors, noise gain vs. capture probab. 86545
STRV-1d QW IR photodetectors, space flight technol. validation 86659
STRV-1d QWIP technol. validation in space flight 122531
supercond. tunnel jn. photon detector, local trap spectrosc. 71173
supercond. tunnel jns., X-ray and opt. photon counting detectors 71163
systs.-in-a-package technol. research at Interuniversity Microelectronics Center 67595
target detect. and recogn., modified method for small targets *(Chinese)* 73521
thermal imaging syst., 20:1 zoom, athermalization *(Korean)* 120899
thermal receiver opt. radiation pulses, math. modeling 120814
thermal viewer image quality, photodetector array fill factor 109697
three-stage He sorption refrigerator for IR detector cooling 89462
tomographic distributed ground sens. arrays 75634
trip wire detect. using polarimetric IR 75516
TRMM CERES thermistor bolometer sens., lunar radiance broadband meas. 122644
two-color QW IR photodetector FPA 86557
two-color spinning concentric-annular-ring reticle seeker, adaptive IR counter countermeasure 88252
two-electrode SOA, photodetected sig. response, sign reversal 105322
unattended IR intrusion detect., human targets surface temp. modeling 77023
uncooled, study of characts. of VO_x and $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ 120792
uncooled FPA based thermal imager, nonuniformity compensation methods 75649
uncooled IR microbolometer arrays for Earth rem. sens. 109552
uncooled IRFPA with SOI diode detectors, perform. 109630
uncooled micromachined CMOS compatible IR sens. microsystems 86622
uncooled sens. technol., Australian research 109544
waveguide-integrated p-i-n diodes based high-speed high-power 1.55 μm photodetectors 120811
AlGaAs/GaAs QW IR photodetectors, barrier width effect on perform. 86538
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 70320
Au-In-Ni bonding syst., fluxless microjoining, isothermal solidif. 102871
(Ba,Sr)TiO_3 ferroelec. bolometer on micromachined Si, uncooled IR sens. 109629
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$Ba_{0.8}Sr_{0.2}TiO_3$ sol-gel derived pyroelec. film, IR detector appl. 104387
$Ba_{1-x}Sr_xTiO_3$, film, MOCVD, uncooled IR image sens., dielec. bolometer mode 86530
$BaSrTiO_3$ uncooled pyroelec. thin-film IR detector thermally isolated by dielec. membrane *(Korean)* 120794
Bi-La-Sr-Mn-O film fabr., uncooled IR microbolometer appl. 120816
$Bi_2Sr_2CaCu_2O_y$ HTSC film bolometer response to variable duty ratio IR laser pulses 127541
CO lasers, continuous radiation, thermostable power sens. 82479
CO_2 atmos. conc., IR-ray analyzer appl. 120998
CO_2 lasers, continuous radiation, thermostable power sens. 82479
(Cd,Hg)Te LW photoresistors, noise spectrum, num. model 92272
GaAs QW IR imaging photodetectors wafers, MBE-grown, commercial prod. 86662
GaAs homojunction far-IR detectors, interfacial work-fn. internal photoemission 80849
GaAs hybridized QW IR photoconductors arrays at Goddard Space Flight Center 86657
GaAs low temp. grown photocond. antenna, near-field THz microscopic probe 97795
GaAs/AlGaAs MQW IR photodetectors with 2D random-grating opt. couplers 86547
GaAs/AlGaAs QW IR photodetector *(English)* 97227
GaAs/AlGaAs QW IR photodetector, responsivity, I-V charact. 75524
GaAs/AlGaAs QW IR photodetectors *(English)* 109575
GaAs/AlGaAs QW IR photodetectors, MOCVD, MBE, perform. comparisons *(Chinese)* 97226
GaAs/AlGaAs QW IR photodetectors, PL charactn. *(Chinese)* 75527
GaAs/AlGaAs QW IR photodetectors, microstrip antenna coupling 86546
GaAs/AlGaAs QW IR photodetectors, response wavelength modif. by RTA *(Chinese)* 97225
GaAs/AlGaAs QW dual-band photodetectors, interband/intersubband transits. 86542
GaAs/AlGaAs QW, energy levels, QWIP appl. *(Chinese)* 115376
GaAs/AlGaAs QWIP, IR radiation transm. 131919
GaAs/AlGaAs QWIP develop. in France 109550
GaAs/InGaAs far-IR QW photodetectors, cutoff wavelength 86541
GaAs-AlGaAs MQW low background IR detectors 86551
GaAs-AlGaAs QW IR photodetectors, skimmed archit., FPA appls. 86556
GaAs-AlGaAs QW IR photodetectors, transient photocurrent overshoot 86552
GaInAsSb mid-IR photodetector MBE growth 101267
GaInNAs/GaAs MQW reson.-cavity-enhanced IR photodetectors 131920
GaInSb/InAs IR detectors, characts., struct. params. influence 97261
GaNAs high-sensitivity reson.-cavity avalache photodiode 93377
GaSb/InGaAsSb based photodiodes, band energy diag. engng. & photoresponse 71547
Ge QD in Si, lateral geom. IR detectors 80883

infrared detectors continued
poly-Ge on SOI substrs., near-IR waveguide photodetectors design and fab. 97242
Ge on Si p-i-n photodetectors for NIR, integrated design 75532
Ge:Ga FIR photoconductor 2D array, THz imaging 109657
Ge:Ga stressed detectors, compact 2D array for IR astron. 120821
Ge/Si interlevel QD IR photodetector 75519
Ge/Si near-IR photodetector, growth & photoresponse spectrum 97231
Ge-Si heterojunction photodetectors, CVD grown 97264
HgCdTe 2D array technol. in UK 97257
HgCdTe FPA, laser beam induced current tech. *(Chinese)* 120910
HgCdTe IR FPA, nonlin. response *(Chinese)* 120909
HgCdTe IR detectors & FPA, simultaneous unipolar multispectral integrated technol. 97254
HgCdTe IR detectors, in-situ vac. proc., dry plasma technol. 131916
HgCdTe LWIR detectors, p-n jn. depth, lateral photocurrent and transverse photovoltage 97258
HgCdTe LWIR n^+-p photodiode array, zero-bias resist.-area product/quantum efficiency 93362
HgCdTe, MBE growth for LWIR detectors, ellipsometry comp. control 101201
HgCdTe, MWIR, MBE growth and device proc. on large area Si substrs. 90348
HgCdTe PV devices, SW IR detectors appl. *(Korean)* 120790
HgCdTe SWIR detector, Earth resources rem. sens. 109539
HgCdTe dual-band PV detectors, computer modeling 97241
HgCdTe dual-band PV detectors, triple layer heterojunction design 109545
HgCdTe growth on (552) oriented CdZnTe by MOVPE, MIR photodiode detector arrays appl. 90431
HgCdTe high perform. VLWIR detectors, fab. issues 75531
HgCdTe multi-band IR detector, spaceborne rem. sens. 109538
HgCdTe multichannel MCT/PIR-fiber detectors for fast pyrometry and multispectral sens. 109555
HgCdTe n^+-on p diffusion-limited diodes, IR detector perform. in area array 75523
HgCdTe opt. sens. for IC fault isolation 103984
HgCdTe p-on-n heterostruct. IR photodiodes, planar proc. charactn. 97259
HgCdTe, photocond. detectors, fab., RIE-induced blocking contacts 86516
HgCdTe photodetectors with neg. luminesc. efficiencies >80% 75511
HgCdTe second generation IR detectors, mass prod. challenges 97253
p-$Hg_{1-x}Cd_xTe$, MBE, light hole densities/mobilities, IR detector appl. *(Chinese)* 115299
$Hg_{1-x}Cd_xTe$ uncooled PV LWIR detector 109541
$Hg_{1-x}Cd_xTe$ very LW IR photodiodes, current mechanisms 93369
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
HgCdTe/Si MWIR FPA, fab. & perform., MBE 97395
HgCdZnTe photodetectors, laser irrad., energy gap modif. 109566
InAlAs-InGaAs reson.-cavity APDs, ultra-low-noise 97271
InAlGaAs/InGaAsP unitraveling-carrier photodiode based TW photodetector 75540
InAs QDs in modulation doped AlGaAs/GaAs heterostructs., IR photodetector 120817
InAs island insertion intersubband IR photodetector concept 86548
InAs photodetector, MBE, current leakage 93360
InAs self-assembled QD IR photodetector, fab./photocond. 120791
InAs self-organized nanostructures on InAlAs/InP(001), IR spectra, IRphotodetection apps. 80881
InAs/GaAs, mid IR QD detector, normal-incidence 97232
InAs-GaAs low dark current QD IR photodetector, AlGaAs current blocking layer 86560
InAs-GaAs n-type QD IR photodetectors 86561
InAs-GaAs normal-incidence high-temp. mid-IR vert. QD photodetector 131914
InAsSb PV structs., noncryogenic quantum detect. in mid-IR 109553
InAsSb room-temp. mid-IR detectors, MBE growth 101268
In(Ga)As QDIPs, phys. model, dark current/photocurrent 120802
InGaAs advanced detectors on GaAs substrs. 109556
InGaAs detectors, extended-wavelength, grown by MOVPE 120797
InGaAs/AlGaAs bound-to-bound QW IR detector, excited-state posn. meas. 91842
InGaAs/AlGaAs multi-color broadband QW photodetectors for LWIR appls. 86539
InGaAs/GaAs, QD IR photodetector, lateral carrier transport 131910
InGaAs/GaAs/AlGaAs SC-QWIP, LWIR detect. 131905
InGaAs/InP APD, low-noise single-photon detect., quantum cryptography appls. 104962
InGaAs/InP QW dual-band photodetectors, interband/intersubband transits. 86542
$In_{0.2}Ga_{0.8}As$/GaAs MQW IR photodetector, p-n-p camel diode struct., IR absorpt. 97238
InGaAsP QW waveguide photodiodes arrays for WDM and fiber sens. appls. 131904
InGaAsPN detectors, gas source MBE grown 97246
InP/InGaAs QW IR photodetectors, strain effect on operating wavelength 131911
InSb FPA based mil. miniature modular integrated sight 77102
InSb IR detector, substr. film stress *(Chinese)* 109570
$KTiOPO_4$ periodically-poled cryst. tunable mid-IR light generation, gas sens. appl. 88181
$La_{0.7}(Pb_{1-x}Sr_x)_{0.3}MnO_3$ films, CMR, bolometer/mag. sens. appls. 81800
Nb microbolometer-microstrip dipole antenna as IR detector, FDTD vs. expt. 97230
NbN ps supercond. single-photon opt. detector 92919
PZT and PZT/$PbTiO_3$ multilayered thin films, pyroelec. props. 81702
PZT film-based micromechanical/opt. devices 70333
PZT pyroelec. thin film IR detector props., substr. effects 131930
(PbLa)TiO_3 thin films, modified jet-vap. deposition, pyroelec. props, IR sens. appls. 70398
Pb_2ScTaO_6 sputtered thin films for dielec. bolometer mode thermal detector arrays 87014
$PbZrTiO_3/YBa_2Cu_3O_{7-x}$ heterostruct., uncooled wide-band IR detect. 75522
PtSi Schottky diode, barrier height reduction by ion injection doping *(Chinese)* 91856
PtSi-Si Schottky diode IR detectors, quantum efficiency increase 75539
Si Hamamatsu S1337-11 photodiodes for absol. spectral responsivity std. detectors *(Chinese)* 97250
Si integrated microspectrometers, low-cost syst. develop. 116754
a-Si microbolometer based IR camera for unattended ground sens. 75632
Si micromachined isolated diode, uncooled thermal IR detector 109543
Si:As-based photodetectors, photoelec. charact., blocked hopping cond. 75520
Si:S IR image converter 120890
Si/HgCdTe, MBE growth for large format MWIR FPA 90342

infrared detectors continued
SiGe/Si MQW devices for Si microelectronics 86534
SiGe/Si MQW reson.-cavity-enhanced photodetector, fab., responsivity study 120815
SiGe/Si MQW reson.-cavity-enhanced top-/bottom-illum. photodetector 120800
$Si_{0.7}Ge_{0.3}$/Si MQW normal-incident photodetectors *(Chinese)* 86536
Si_3N_4 micromesh bolometer array for 350 μm astrophys. 131924
SiN_x:H films, PECVD, opt. props., IR-sens. arrays 131921
VO_2 bolometer based IR radiation detect., double correl. sampling tech. 120695
VO_x film uncooled membrane-type lin. microbolometer array 86528
VO_x microbolometer, uncooled focal plane sens. 109632
VO_x uncooled FPA, low cost design and appl. 75633
VO_2-based uncooled microbolometer lin. array, design/fab. 75538
VO_2-based uncooled thin film bolometer *(Chinese)* 75528
YBaCuO IR bolometer array, cryogenic CMOS readout cct. 71169
YBaCuO mid-IR bolometer array, inter-pixel crosstalk 71160
$YBa_2Cu_3O_{7-\delta}$ semicond. film, elec. characts., bolometer appl. *(Chinese)* 131903

infrared imaging
see also focal planes; submillimetre wave imaging
2D pyroelec. array technol. appl. 131912
3D intra- and interframe target detect. in IR/mmW image seqs. 111622
180° FOV LW IR lens design 82265
acrylic laser sculptures, segmented pixel drawing, thermal monitoring 105642
ACUIM, atmos. correction using imbedded models 76861
advanced hand-held mine detector and mine detect. neutralization and route marking syst. 77092
advanced-warning syst. risk-reduction, MSMP & BAMM programs 111621
AHI airborne thermal IR hyperspectral imager 98896
airborne IR imaging, rectification, GPS and INS *(Chinese)* 120912
airborne scanning laser ranging-imager sens. 111372
airborne targets in IR image seqs., detect. 95566
aircraft materials testing, photonics techs. appl. 88043
AIRS hyper-spectral IR sounder for weather forecasting 133325
ALOS/PRISM stereographic images, terrain elevation meas., JPEG 122552
antipersonnel land mine detect., operational sens.-fusion syst. 77008
antipersonnel mines, pass. IR polarimetric rem. sens., GA 88254
ASTER ground data syst., first data generation 111398
ASTER init. image eval. 111397
atherosclerotic vulnerable plaques diagnosis, IR/NIR fibre optic imaging 110826
atmos. correction incl. BRDF influence of target 76958
automated target detect. using IR multispectral anal. 88247
automatic two-stage image registration algm. for concealed weapons detect. 118398
automotive night vision technol., safety improvement appls. 134577
background removal algm. for Navy IRST systs. 122755
Bayesian sens. image fusion, local lin. generative models 118314
behavioral ROC curves/multidimensional matched filter comparison 130076
biological tissues, estim. of temp. distrib. by multifrequency microwave thermography 87559
BIRD satellite on-board thematic data proc., neural chip class. 99044
breast cancer, computerized thermography, image segmentation, temp. vars. 76387
breast cancer, thermographic interp., num. computation as tool 87545
buried landmine discrim., joint spectral region 77115
buried landmines IR imaging, surface roughness effects 73126
CAMEO-SIM phys.-based broadband scene simul. tool, camouflage/concealment/deception methodologies 133398
camera, uncooled, law enforcement appls. 109710
canopy thermal IR hot spot vars., canopy geom. depend., 3D model 122727
CBERS, China-Brazil Earth Resources Satellite, Infrared Multispectral Scanner, CCD camera 111482
clandestine night time surveillance, long-range laser-illum. imaging 109700
cloud polaris. prop. effect on target discrim., composite image 133406
CLOUDS cloud-radiation monitoring satellite, instrum. & syst. 122634
clutter background, wide-sense stationary props. *(Chinese)* 120911
CMOS photodiodes for image sens., charactn. 86623
coastal water quality, multiparam. inversion, hyperspectral anal. 99010
COBRA ATD minefield detect., Joint Countermine ACTD Demons. 77094
combined ultrasound/NIR diffusive light imaging 110764
compositional inform. extraction for trafficability mapping from hyperspectral data 76834
conf., San Diego, CA, USA (July 2000) 100365
conf., sens./syst./next-generation satellites, Barcelona, Spain (Sept. 2000) 113183
coronary artery bypass surgery, graft patency eval., thermal-coronary-angiography 76405
Counter Sniper, small projectile and gunfire localization syst. 107412
cryogenic temp. opt. fibre perform. tests 127629
cryst. opt. materials, brief review 104600
defocus/vibr. distortions modeling 118380
dental freq.-domain IR photothermal radiometry & luminesc. 87532
diazo linkages, liq. cryst. mixtures, IR appls. 127844
distortion-invariant target recogn., biological model 107151
double-sided buried-contact solar cells, floating jn. shunts localization 100064
dual modality tomography for material class. 109472
dual-band pass. imagery for automatic clutter rejection 95507
dual-band thermal imaging with pyroelec. FPA detector 75646
dyn. IR scene projection, single-cryst. Si liq. cryst. light valve 116838
Earth-satellite links, spaceborne IR/microwave radiometry for near real-time rainfall atten. monitoring 117677
elec./hybrid EV secondary cells, thermal characterisation 89133
ensemble learning ICA, appl. to IR imaging 121879
female breast thermograms, edge detect. 84571
ferroelec.-semicond. thin films, pyroelec. thermal vision image converters 86526
fibroadenoma, NIR tomographic breast imaging scatt. heterog. 87524
FLIR imagery, region based PCA modular clutter rejection 95510
FLIR seqs., stabilization, obj. detect. and tracking 94791
FLIR tactical video, space-time compression 95191
flying target, dist. and attitude meas., opt. imager 109656
forestry advanced rem. sens. tech., standing timber vol. estim. 122721
fractal image coding based on adaptive matching *(Chinese)* 129686
fuzzy c-means clustering with brFCM algm. 118488
gaseous hydrocarbon distrib. meas. by NIR absorpt. tomography syst. 110043
geo-location of overhead rem. sens. FOV using synthetic maps 133280
green alloy compacts, thermographic inspection, ref. composite fab. 114513
green-state P/M compacts, electrothermographic crack detect. 114512
ground surface, IR radiation charact., heat bal. eqn. *(Chinese)* 122728
high precision QW IR photodetector camera systs., med. imaging appls. 87544
high-bandwidth sens. syst., advanced proc. hardware & algms. 95414

infrared imaging continued
high-resoln. EL displays, mil. appls. 86862
HMM multiresolution trees for ATR algms. anal. 96911
human false target detect. decision behavior 118727
human target detect., atmos. blur/noise distortion/Wiener filter restoration 841
hyperspectral anal. toolset, spectral similarity scale algm. 122556
hyperspectral image anal. tech., anom. detect. algm., Quad-AR filter 95412
hyperspectral image segmentation, algm. hardware implement., FPGA 9541
hyperspectral imagery, blind separation of spectral signatures 118933
hyperspectral imagery, matrix factorization algms. for band selection 76953
hyperspectral imagery scenes, target spectra stats. 99048
hyperspectral images, charactn. and delineation of plumes, clouds, and fi 75622
hyperspectral images, reduced dimens. quadratic detect. algms. 95416
hyperspectral imaging polarimeter, design changes, flight meas. 76878
hyperspectral imaging polarimeter, rem. sens., limitations, uncertainties 768
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
hyperspectral radiometry simul., SENSOR end-to-end simul. tool 122719
IC board fault detect. using histogram of thermography 124398
ICs, self-heating effects, hot spot/electrothermal coupling methods *(Chines* 92434
image metrics for clutter charactn. 95508
imaging spectrometry, conf., San Diego, USA (July-Aug. 2000) 89500
Infrared Space Observatory, CAM LW detector, cosmic rays 120927
Infrared Space Observatory, ISOCAM detectors, review 120924
Infrared Space Observatory, ISOCAM detectors response 120925
Infrared Space Observatory, ISOCAM faint obj. detect. 120928
Infrared Space Observatory, ISOCAM LW glitch effects 120929
Infrared Space Observatory, ISOCAM LW transients 120933
Infrared Space Observatory, ISOCAM SW transient effects 120932
Infrared Space Observatory, ISOPHOT, deglitching methods 120930
Infrared Space Observatory, ISOPHOT, space weather effects 120934
internal combustion engine develop., opt. access/diagnostic techs. 109676
IR imaging equip. for solar cell temp. distrib. studies 112987
IR Shack-Hartmann wavefront sens. for conformal dome metrology 109717
IR target acquisition modeling, atmos. turbulence MTF 133399
IRFPA, adaptive nonuniformity correction *(Chinese)* 75626
IRST syst., small-target detect., gray-scale morph. filter 109624
IRST systs., multitarget tracking *(Chinese)* 75229
ISO detectors, conf., Madrid, Spain (Jan. 1998) 113272
JMDT Navy/Marine Corps program, future enhanced mine detect. capabili 77095
land mine detect., sens. fusion archit., limited training data sets 77009
land-based IR search and tracker syst., background images registration 8420
landmine detect., automated, multispectral imaging, iter. morph. algms. 7706
landmine detect., data fusion & Dempster-Shafer evidential reasoning 77062
landmine detect., GPR/IR/metal detector, stat. sens. fusion 77061
landmine detect., hyperspectral reflectance signatures perform. 77011
landmine detect., MH/K vehicle-mounted syst., sens. fusion 77058
landmine detect., multimode subsurface sens. & imaging 88226
landmine detect., multisens. mine signature meas. 77063
landmine detect., soil temp. prediction model, IR thermography 77016
landmine detect., temporal IR contrast var. 76983
landmine detect. sens. modelling, fusion & discounting, D-S theory 77019
landmine detect./discrim., single-waterjet-induced thermal profile 77015
landmine localization, vehicle-mounted IR imager calib. 75347
landmine thermal detect., resoln. requirements, 2D AR models 76982
landmine under rough surface, IR signatures, diurnal cycle, simul. 76943
landmines polariz. features for improved automatic detect. 77118
large format broadband QW IR photodetector arrays, spatially modulated pris interferometer appls. 86656
layer thickness thermal wave determ., pulsed ring heat source 101580
liq. cooled LTCC substrs. for high power appls. 89857
long-range laser illum. imaging, clandestine nighttime surveillance 83068
machine vision image sens., IPOT 2001 exhibition, reviews 120884
Mars rover test site, IR hyperspectral anal., geol. mapping 98886
MEDUSA, airborne multispectral oil spill detect. and charactn. syst. 111468
microbolometer uncooled thermal imaging sens., law enforcement appls. 10971
micromachined mass flow sens. for common-rail injection systs. *(Germa* 109815
mil. target acquisition, thermal imagery, perception studies 129861
mine detect. & remediation technol., conf., Orlando, USA (Apr. 2000) 67351
mine detect. in IR imagery, wavelet-based third-order neural network 73435
Mine Hunter/Killer program, close-in detect. syst. 77091
MIR/LWIR photodetectors, rem. technol., SNR alteration by noise manipulatio 109654
monolithic LWIR/NIR multispectral QWIP night vision 86660
moving target detect. syst. from IR image using GA *(Japanese)* 129820
MSG SEVIRI imager, in-flight verification & calib. 122628
MTI dense-cloud mask algm. comparisons 99046
MTI init. on-orbit calib. perform. 97346
multi-slit rangefinder develop. *(Japanese)* 84090
multialkali photocathodes, objs. reflective radiation, spectral matching factor 75612
multiband opt. syst., DOE spectral filter 109641
multifunction radar-IRST integrat. in naval environ. 133410
multiple IR background generation for warning/search-and-track systs., model ing/simul. 88246
multiple nonseparated battlefield ordnance events class., ELMO algm. 133405
multisensor aerial images, class-scale space segmentation 94503
multisource limitation of reticle-based opt. trackers 111635
multispectral imagery, parallel hybrid evol. algm. 95413
natural image human detect. perform. 133396
natural/enhanced IR images, embedded targets, image metrics/human detect. per form. 84155
near-field IR microsc. transient photoinduced aperture 109622
night vision images, real-time proc. 94441
night-vision device-rangefinder based on biplanar direct-transfer image-converte tube 131980
NIR diffusive tomography, image reconstruction algm. 110837
NIR tissue imaging syst. with diffuse photons, 2D image constr. 76392
noise removal based on H.263 video recommendation with adaptive filter *(Chi nese)* 106678
Northeast Bioengineering Conference, 27th annual, Storrs, CT, USA (Mar-Ap 2001) 100396
obj. reconstruction, time reversal using single-cycle terahertz pulses 94927
overhead conductors temp. meas., IR sens. 110041
panoramic IR viewing, multi-opt. systs. 86624
pass. ranging IRST systs. *(Chinese)* 117583
PBGA package, thermal charact., IR thermography 113721

rared imaging continued
PCB test/inspection using IR technol. 69324
pixel-level image fusion scheme *(Chinese)* 94619
plexiglass, CO_2 laser pulse irrad., solitonic wave slow components, IR thermovision method 105562
point target detect., IR clutter rejection 86599
power apparatus fault diagnosis using IR imaging tech. *(Chinese)* 112438
power semicond. device elec. failure localization, backside emission microscopy 70071
PRISM hyperspectral imager, IR imaging chain design 111328
proc. tech. for vehicle sens. appls. *(Japanese)* 118362
pulsed thermographic images, enhanced spatial & depth resoln. 101583
radiance factor maps of natural scenes, CCD-array-based apparatus 86628
reconfigurable on-board payload data proc. syst., ESA develop. 98920
reconnaissance, IR and SAR image exploitation, expt. syst. 111626
refl. laser intens. from IR syst., diffr. theory *(Chinese)* 86610
rem. objs. IR imaging in atm. turbulence 109712
rubber-toughened thermoplastics, thermo-elastic IR stress anal. 79475
satellite weather imagery, texture-based segmentation 98984
scanner, opt. MTF meas., digital Fourier anal. method 120915
scanning thermal viewer opt. systs. size calc. 86626
scenes and systs. design, open-ended tools 109554
sea surface motion field determ. from IR imaging 133336
sea surface temp. estim., AVHRR MWIR band, MODTRAN values 133345
Seagle-1, portable thermal imager 75652
semiinfinite media with vol. defects, thermal contact scanning anal. 132650
seq., target detect. probab. 106426
SGLI sens. for GCOM, multiband medium spatial resoln. imager 122627
SIRTF FIR unstressed Ge:Ga detectors, obs. and calib. strategies 120822
Skymed/Cosmo syst. simul., rem. sens., VIRS imaging spectrometer 122550
slow-moving point target seq. detect., low-SNR IR image seqs. *(Chinese)* 107115
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90602
space-based hyperspectral imaging and commercial appls. 122545
spectral variability modelling of ground irradiance fns. 75619
spectropolarimetric imaging, field-portable imager, AOTF 97347
Stirling cryogenic coolers in France, IR cameras appl. 109647
Stokes imaging polarimetric target acquisition & mine detect. 77027
Stokes polarimeter, absol. radiometric calib. 75653
STRV-2 payload, Space Technology Research Vehicle, act. and pass. expts. 122487
surface temp., thermal images from day-night pair, diurnal animation 76844
surface temp. and emissivity separation, atmos. compensation 76860
surveillance camera visual-thermal image fusion 84158
SWUIS-A UV/vis/IR imaging syst. for airborne astron. & aeronomy 98897
synthetic thermal TOF depth imaging, thickness maps 101582
syst. design proc., four-step iter. 75605
T-ray imaging, package inspection & portable 3D scanners 120908
target acquisition perform. modeling 75636
target detect. in IR image, discrete wavelet frames applying feature wt. *(Chinese)* 77081
target simulator, field stop mechanism *(Chinese)* 88248
target thermal imaging modelling, correctness verification 109675
technol. maturation, technol. life cycles 109652
temp. field, 3-D visualisation, meas., liq. cryst. scanning thermography method 131795
textural features based on co-occurrence matrix 129584
thermal cameras, temp. meas., internat. metrological organizations 86665
thermal image proc., time domain/space domain tech. 109623
thermal imager, high resoln., HDIR syst. 109638
thermal imager, input wavefront distortion, opt. perform. *(Korean)* 97394
thermal imager, starring array 109649
thermal imager, TRM3 thermal range model 109637
thermal viewer image quality, photodetector array fill factor 109697
thermal viewer sig. const. component reconstruction, optomechanical scanning 86629
thermographic diagnosis standardisation, data proc. method 76391
thermosonic imaging for NDE, hybrid US/IR technol. 101581
third-generation FPA for night-fighting equipt. for soldiers 111550
THz pulse imaging 94537
TRWIS III hyperspectral sens., agricultural imagery anal. 106519
tumour angiogenesis detect./eval., IR imaging appl. 76404
uncooled micromachined CMOS compatible IR sens. microsystems 86622
underground distrib. cable joints overheating diagnostics *(English, French)* 133766
undersea obj., IR imaging, sea surface refl. 88169
vehicle-mounted mine/UXO detect., DGPS error, EKF, fixed interval smoothing 77066
view-based visual tracking with occlusions detect. 97388
viewing geom., impact on vision through atmos. 106633
VIS-SWIR hyperspectral data, perform. assess. of atmos. correction algms. 76862
VISIR vis. imaging spectrometer & IR radiometer, coastal & land appl. 122717
waste clean-up automation, telerobotics elements 95527
wavelength calib. and instrum. line shape estim. of LWIR hyperspectral sens. from in-scene data 76859
weak IR target detect., K-L transform *(Chinese)* 94622
weld joint inspection, thermographic images compression 78693
White Sands Missile Range IR imagery data, turbulence-induced edge image waviness 75604
ZnO varistors, energy handling capability meas. 125843
Al-Si-Cu metallization lines, local temp. distrib., scanning thermal microsc. 115671
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
GaAs photocathodes, objs. reflective radiation, spectral matching factors 75612
Ge solid-state modulator, thermal imaging syst. 109639
Ge:Ga FIR photoconductor 2D array, THz imaging 109657
HgCdTe, long lin. MWIR/LWIR arrays for high-resoln. imaging 109645
HgCdTe n^+-on p diffusion-limited diodes, IR detector perform. in area array 75523
HgCdTe n-on-p-type structs., RIE induced p-to-n conversion, contactless jn. contrast 93370
InAs-GaSb uncooled superlattice photodiodes 71548
InSb multielement IR sources with alternating contrast 117005
O plasma wafer bonding, low temp. epitaxial layer transferring 115637
Pb-acid valve-regulated stationary batts., high-rate recharge expts. 78143
Pb_2ScTaO_6 sputtered thin films for dielec. bolometer mode thermal detector arrays 87014
Si large area multicrystalline solar cells, LBIC and IR thermography mapping 100149

infrared imaging continued
Si solar cell wafers IR lifetime mapping tech. 100058
SiN_x membrane, IR thermal imaging 104167
YBaCuO IR bolometer array, cryogenic CMOS readout cct. 71169
$YBa_2Cu_3O_7$ HTSC films, vortices, terahertz radiation imaging 70630

infrared-infrared double resonance *see optical double resonance*

infrared LAN *see wireless LAN*

infrared-microwave double resonance *see microwave-optical double resonance*

infrared-radiofrequency double resonance *see optical double resonance*

infrared radiometry *see radiometry*

infrared sources
see also submillimetre wave generation
1.55 μm supercontinuum source high-resoln. opt. coherence-domain reflectometry 132194
1.5-μm three-sect. DBR lasers, transient current control, tuning time reduction 105437
1.5-μm tilted integrated superluminescent light source 127971
1.65 μm-band high differential gain broadband discrete fiber Raman amp. 128171
850 nm 2D selectively oxidized VCSEL arrays, flip-chip integrat. 115224
850-nm VCSEL arrays, Gps-class parallel-interconnection module appl. 117186
960/980 nm QW laser pumps for Er-doped fibre amps. 96702
980 nm LD module, fiber Bragg grating wavelength stabilized 128283
1550-nm spot-size converter integrated DFB lasers, low-cost single-mode opt. sources appl. 109067
all-solid-state IR gas sens., LEDs and IR detectors 120963
ALS, synchrotron IR beamlines, spectromicroscopy and fast timing 87139
ANKA SR facility, research opportunities 87140
asymmetrical funnel-shape QW lasers, intraband transits. 71831
α-DFB mid-IR angled-grating lasers 93675
diode lasers, lighting technol. and techs. 117254
heterodyne noncontact surface profiling interferometer with automatic focusing 97825
HF gyrotrons, develop. and appls. *(Japanese)* 91553
high reliab. high power LD modules, EDFA pumping 131385
hot filament IR radiator and pyroelec. detector 109557
low-dimens. semicond. heterostruct. lasers, quantum coherence, IR generation 93618
methanol-d_3 opt. pumped laser emission, SW far-IR laser cavity 82498
2-methyl-4-nitroaniline derivatives, terahertz radiation charact. 82917
microchip OPOs for IR operation 117457
mid-IR intersubband SOA ps opt. pulse response 93746
mid-IR pulse generation by $\chi^{(3)}$ DFG 117473
NSLS VUV ring, coherent FIR SR obs. 87076
quantum cascade DFB laser, mid-IR continuously tunable single-mode 105363
quantum cascade DFB laser based sens., trace gas detect. 109784
quasi-phase-matched seeded OPA, high-power fs light pulse generation 82911
rare earth doped silver halide strongly pumped fiber amp. design considerations 117106
self-organized QDs, carrier-dyn., appl. to LW sources and detectors 91774
supercontinuum CW opt. source for 10 Gbit/s DWDM systs. 131417
THz waves, coherent tunable, parametric generation 105532
TPV devices, photonics modeling 123837
transverse VCSEL laser mode turn-on dyn. 128325
wavelength tunable electroabsorption modulated DFB laser with thin film heater 105312
Cr^{2+} doped polycrystal ZnSe mid-IR laser 82615
Cr^{4+}:YAG microchip lasers, Q-switched mode locking 82772
Er-doped double-pass superfluorescent fiber source for fiber-optic gyroscope 75560
Er-doped fiber extended band ASE source for WDM 75061
Er-doped superfluorescent fiber source, high-stabil. and broad-band operation *(Chinese)* 71258
GaAs-AlAs LW VCSELs 117296
GaAs-based self-organized QD laser modulation response, wetting layer entropy effect 105275
GaInNAsSb SQW CW ridge lasers, gas source MBE grown 128244
H_2 tunable CW Raman laser, external cavity LD pumped 105154
Ho,Tm:$LiYF_4$ 2 μm cryst. laser transmitter, space appls. 105233
Ho:YAG high-power RT intracavity-pumped laser 71715
Ho^{3+}-doped silica CW 2 μm fibre laser 71669
InAs 1.3-μm QD high temp. ridge waveguide lasers 93652
InAs-GaInSb type-II high power high efficiency interband cascade QW lasers 93674
InAs-InGaAs RT CW QD VCSELs 105274
InAsSb-AlAsSb DH QW opt.-pumped mid-IR lasers 93677
InGaAs strained QW lasers, freq. response 105309
InGaAsP LD, rapid temp. tuning, high-press. H_2O absorpt. spectrosc. appl. 128407
InGaAsP QW narrow stripe 1450 nm LD, half watt fiber-coupled power 128284
InGaAsP/InP integrated superluminescent light source with tilted struct. *(Chinese)* 105008
InGaAsP/InGaAs/InP multiquantum well high power broadband singlelobe superluminescent diode 82405
InGaAsP-InP MQW SLA, FWHM width 128286
InGaAsP-InP high power lin. QW diode laser arrays 93676
InP-lattice-matched 1.55 μm VCSEL, AlGaAsSb-AlAsSb DBR mirrors 128231
InSb multielement IR sources with alternating contrast 117005
$LiInS_2$, mid-IR SHG 2.75 to 6.0-μm, FELIX pump source 72020
$LiNbO_3$, periodically poled, narrowband THz radiation generation, tuning charact. 71984
$LiNbO_3$ periodically poled noncollinear opt. parametric procs., broadband IR generation 128496
$LiNbO_3$, periodically poled, single-mode vis./IR OPOs 82921
$LiNbO_3$ periodically poled widely tunable quasi-phase-matched OPO *(Chinese)* 128505
$LiNbO_3$ quasi-phase-matched OPO source, IR chem. sens. 109783
$LiNbO_3$ sync. pumped periodically poled cryst. low-threshold mid-IR opt. parametric oscill. 82906
Nd:LaF_3 low phonon energy channel waveguide lasers, MBE grown 128201
Nd:YAG cryst. fiber laser gains, end pumped 128178
Nd:YAG rod laser amp., LD-pumped, CW TEM_{00} mode 1064 nm beam generation 128212
Pt IR sources for nondispersive IR gas monitors 132030
$RbTiOAsO_4$, periodically poled, CW DFG, mid-IR trace gas detect. 82908
Ti:sapphire diode-pumped aperiodically poled laser cavity 117151
Tm-doped ZBLAN fiber amp., 794 nm emission 128153

infrared sources continued
Yb:S-FAP gas-cooled diode laser source for photon collider, design anal. 105254
Yb-doped 1.45 µm double-clad Raman fiber laser 128149
$ZnGeP_2$, narrow-linewidth middle-IR OPO 72029

infrared spectra
acetylene saturated lines, 1.54 µm, opt. freq. std. develop. 109413
act. broadband polymer stabilized liq. crysts. 86821
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
BEDT-TTF salt, successive dry-wet proc. for fabricating conductive thin film 101306
binaphthyl-based luminesc. conjug. polymer, synthesis and charactn. 125101
BSG film, LPCVD, wafer bonding appl., AFM, FTIR 124887
N-(2-chlorophenyl)-(1-propanamide) nonlin. cryst., growth & charactn. 127558
conf., Models and phenom. for convent. and high temp. supercond., Varenna, Italy (Jun./Jul. 1997) 100446
crown ether based wide band gap light emitting electrochem. cells, ion dissoc. 134343
2-cyclooctylamino-5-nitropyridine-C_{70} syst., laser radiation opt. limitation 105482
diamond:H, surface cond., adsorbate coverage, FTIR obs. 69494
diamond:N films, HFCVD modulated growth tech., doping 68272
diamond:P films, low temp. excitation spectrum 69496
diamond:P homoepitaxial n-type CVD films, phonon-assisted electronic transits. 69495
diamond CVD film, thermolum., photon dosimetry 82328
diamond CVD films, IR opt. props. charactn. 116551
diamond for high-dens. opt. recording 82056
diamond heteroepitaxial growth on pre-deposited β-SiC oriented layer on Si(001) *(Chinese)* 101377
diamond polycryst. films, layered struct., ex situ spectrosc. ellipsometry 91594
diamond polycryst. plates, electron-assisted hot filament CVD, SAW dispersion 80648
diamond self-supported sheets, CVD, DC elec. cond. props. 91593
DLC films, 2.45 GHz microwave/13.56 MHz multi-jet RF plasma source synthesis, comp. 79407
DNA/C nanotube mol. films, electronic struct. self-form., charge transfer 125929
DNA/CNT chip on Si, electronic props. 102865
doped oxide films, anhydrous hydrofluoric etching, residues charactn. 103317
electron affinitive oxadiazole novel blue light-emitting polymers, synthesis, opt. props. 114463
epoxy resin, thermally degradable, electronic packaging 113719
ethylene oxide monitoring in sterilization operations, miniature IR gas analyzer 75700
ferritin mol. nano-particle 2D array, AFM/SEM 102867
ferrocene groups linked by oligothiophene, charge transfer 102853
HBT power amp. arrays, defective cells ident. by IR emission microscopy 115876
N-hexylcarbazole-co-3,4-ethylenedioxythiophene copolymers, opt./electrochem. props. 92926
trans-4-[p-(N-hydroxyethyl-N-ethylamino)styryl]-N-methylpyridinium p-toluene sulfonate, NLO props. 82909
iodoheptafluoropropane, dielec. etchant appl., effluent FTIR charactn. 103294
liq. crysts., opt. props., conf., Humacao, Puerto Rico (Sept. 1999) 78380
long-period fiber gratings, UV-preexposure method, transm. spectrum shift 104647
low bandgap conjug. polymers for bulk heterojunction PV cells 127948
low-k etch/ash for Cu dual damascene 103391
low-loss IR dielec. material syst., broadband dual-range omnidirectional reflectivity 116561
methano-[60]fullerene-Ag nanocomposite, opt. limiting effect 117427
methyl silsesquioxane thin films, prep. and dielec. charactn. for IC appls. 116184
moisture meas. in low parts in 10^9 range, tunable diode laser absorpt. spectr. 110069
NLO chromophores/crosslinked syst., host-guest 117408
NTCDA organic TFT, humidity sens. 97219
organic SOG, $Si(OH)_{4-x}F_x$ liq.-phase deposition, optics 90482
oxide films, TEOS/O plasma anal., influence of energy and particle flux on deposition params. 124918
PEO/$NaClO_3$ electrolyte, ionic cond., plasticizer effects 79453
PEO/$NaClO_3$ polymer electrolyte, ionic cond., batt. appl. 89102
planar photonic cryst., waveguide bends, NIR (non)resonant transm. spectra 127738
plasma polymerization in gas discharge, IR fibre evanescent wave spectrosc. 68363
poly(p-phenylene vinylene) derivative based electrodeposited film, fab./opt. charact. 68353
poly(p-phenylene vinylene)/poly(2-carboxyphenylene-1,4-diyl) bilayer film, luminesc. props. 93332
poly(p-phenylene vinylene)/porous GaP composite materials, LED appl. 93437
polyacrylonitrile microcellular foam film electrodes for supercapacitors 100230
polybenzidine semicond., thermal prep. and elec. charactn., doping effects anal. 103272
polyceram dye-doped sol-gel coatings for near-IR laser protection 104895
polyethylene film, polythiophene grafting, ATR-FTIR, XPS, SEM, AFM 125110
polymer low-loss waveguides, absorpt./scatt. 93110
polymer/C nanocomposite thin films, PLD, gas sens. appl. 68302
polymethylsilsesquioxane SOG films, micro-opt. struct. fab., X-ray irrad. 71365
polyperinaphthalene films, excimer laser ablation growth, elec. cond. 114380
pos. tone chem. amplified resists, plasma etching, deprotection/film thickness loss 103504
prostate tissues, human, FTIR microspectroscopy, SRIXE techs. 98356
PVDF-trifluoroethylene copolymers, ferroelec. phase transit., struct. 125103
PVDF-trifluoroethylene copolymers, structural/transitional props., high energy electron irrad. 125104
pyridinium periodate ferroelec., transits., NIR FT Raman study 104368
quartz crysts., wedge-like, cryst. growth conditions, structural-morph. charact. 79159
α-quartz films, ion beam doping, epitaxial regrowth 79406
rare-earth doped chalcogenide glass fiber, mid-wave/LW IR laser pot. 105192
self-assembling monolayer/Si(001) syst., electronic dens. modulation, gas sens. appls. 97467
short external opt. cavity DFB diode laser wavelength tuning 82779
SIMOX film, thickness meas., IR spectrosc. *(Chinese)* 91884
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
tetraethoxyorthosilicate-methacryloxypropyl trimethoxy silane hybrid network, microoptical elements fab. 71364
thermosetting polymer mr-I-9000 film, struct., nanoimprint lithog., XPS/FTIR 125119

infrared spectra continued
tribochemistry in contact recording 70541
triphenylamine polymers, ethynyl/aromatic moieties, synthesis & props. 90569
truncated-well DFB lasers, facet phases, sub-threshold spectra 71793
ultra-thin oxides growth on Si(100) by RTO for CMOS/advanced device 103358
venous blood, human, low-interis. He-Ne laser interact., transm. spectrum 93943
vibr. photon echo, classical mech., dyn.-static line broadening crossover 82827
wafer contaminant location/ident. by IR microscopy/fluoresc. illum. 70230
water vap., IR absorpt. spectrum meas. with THz-wave parametric generato *(Japanese)* 105508
Ag/InSnO sputtered multilayers with organic dyes, opt. filters for PDP 104867
$AgGaSe_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
AgO_x films, reactive sputtering, IR/Raman obs. *(Japanese)* 71214
$Al_xGa_{1-x}N$ films, opt. phonon energies, comp. depend. 69541
$Al_{0.65}Ga_{0.35}N$/GaN MQWs, intermediated layers effect, TEM, XRD 91852
$Al_{1-x}In_xN$ films, MOCVD, opt. props., IR spectrosc. ellipsometry 126073
$Al_{1-x}In_xN$ films, plasma source MBE grown, opt./elec. props. 90311
AlN epitaxial film, vibr./opt. props. 126067
AlN films, ECR plasma-aided reactive PLD 90472
Al_2O_3, noncrystalline dielec. films, PECVD, phys., elec. props. 101315
As-Ge-Ga-S:C(Pr)OH)(CS_2)(hydrocarbon) glasses, opt. props. 90583
As-S-Se glass opt. fibres, prep., opt. & strength params. 93086
a-AsSeGe films, elec./struct./opt. props. 80755
BN, cubic films, pulsed PECVD 124903
BN, cubic thin films, ion-beam assisted pulsed Nd:YAG laser deposition 125001
BN films, low dielec. const., plasma CVD, charactn. 90375
BN films, sputter deposition, phase ident., multichannel ellipsometry 91629
BN thin films, cubic, microwave PECVD, charactn. 90374
BN/Si(001) films, microwave plasma CVD and charactn. 79289
B_2O_3-SiO_2 thin film, dielec. props. 114921
β-BaB_2O_4 thin cryst. second harmonic $\chi^{(2)}$ cascading phenom. 117483
$Ba_{0.77}Ca_{0.23}TiO_3$:Fe(Rh), photorefr. props., two-beam coupling 128445
$BaSnO_3$, prep./props., liquefied petroleum gas sens. appl. 109741
(BaSr)TiO_3 films, MOCVD, oxid. react. anal. 124906
$BaTiO_3$ sol-gel derived thin film on ITO-glass, ferroelec. props. 70418
$BaTiO_3$ thin films and powders by an aq. sol-gel proc., prep., struct., dielec. props. 68336
Bi_2Se_3 thin films, electrodeposited, prep. from nonaqueous medium, charact. 114384
$Bi_{12}SiO_{20}$, polariz. self-modulation effect, opt. charactn. 128450
$Bi_2(Zn_{1/3}Nb_{2/3})_2O_7$ thin films, dielec. props., FTIR spectra 116131
C antireflective coating over photoresist, etch selectivity, O_2/CHF_3/Ar gas chem 103308
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
a-C:F films, ICPCVD, struct./dielec. props. 114333
a-C:F films, ion beam deposition, charactn. 124845
C:H DLC films, O_2 gas effect on deposition & film quality, Raman spectr 68155
a-C:H films, RT deposition from laser-assisted photolytic CVD at 248 nm 114336
a-C:H,F films. PECVD, F incorporation 68261
a-C:H,N films, RF PECVD, spectrosc. props. 68286
a-C:H,N films, low-temp. annealing effect, field emission 80569
C_xF synthesized at room temp., charact./electrochem., C starting material effect 99894
C_3N_4 films, sputtered, struct., dens., chem. states, XPS/FTIR/X-ray reflectivity 90258
a-CN_x:H films, PECVD, effects of CF_4 addit. on growth 68262
CO_2 in-situ combustion diagnostics using LD absorpt. sens. 109787
a-$C_{1-x}Si_x$:H alloys prep. by high plasma dens. source 68264
$Ca_{10}(PO_4)_6(OH)_2$, cryst. hydroxyapatite powders, mechanochemical-hydrothermal prep. 68444
CaS:Eu,Sm electron trapping material in light conversion agricultural film *(Chinese)* 71215
$CdHg(SCN)_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
CdS(Se) thin film, high yield synthesis, chem. bath deposition 125025
CdTe:V photorefr. material, deep levels, opt./thermal spectrosc. studies 82040
CdTe:V(Fe) photorefr. cryst. holographic gratings, FWM 128572
CdZn(Mn)Te, second-order nonlin. efficiency, NIR spectral region 128529
CdZnTe, high resist. wafers, annealing, cryst. quality *(Chinese)* 103244
CdZnTe substrs., IR absorpt. behavior, annealing 91671
$Cd_{0.80}Zn_{0.20}Te$ high resist. cryst. growth, modified Bridgman method 124806
Cr-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
Cs D_2 line shift, dens. depend., precise wavelength modulation refl. spectrosc. meas. 110020
Cs vap. cell, vel.-selective saturated absorpt. spectrum *(Korean)* 93713
^{133}Cs thermal cell, saturated absorpt. spectrum, high-precision freq. meas. 117429
$CsCdBr_3:Dy^{3+},Yb^{3+}$, cryst. growth, spectrosc. props., mid-IR laser 93542
$CsGeCl_3$ single cryst., soln. growth, nonlin. opt. props. 79170
$CsLiB_6O_{10}$ cryst., UV OHG, water-assoc. surface degrad. 93819
$CsTiOAsO_4$, top seeded soln. growth 68106
Cu film electroless deposition on Si:H(111), spectrosc. studies 101403
$CuCoMnO_x$ spinel coatings, sol-gel prep., solar absorber appl. 125040
$CuFe_2O_4$ thin film prep., $CuFe_2$ cathodic electrodeposition/oxid. 79366
$CuInTe_2$, cryst. growth, elec. and opt. props. 115358
n-CuO/$BaTiO_3$, nanosized powders, gas sens. props., FTIR spectrometry 97431
CuS thin film, high yield synthesis, chem. bath deposition 125025
Cu_2Se thin film, high yield synthesis, chem. bath deposition 125025
Er-doped fiber amp. gain control, Sm-doped inner-cladding 117117
GaAs, aged porous, IR opt. props. 69516
GaAs epilayers, low temp. grown, defect props. 79235
GaAs polycryst. layer growth for large area imaging detectors 90385
GaAs, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
GaAs:As, ion-implanted, opt. transm. spectra 80687
GaAs:Sb films, low temp. grown, struct. transforms. 68190
GaAs:Si,Be MBE grown, compensation 68196
GaAs/AlGaAs QW, D- cond. band, transport/opt. props. 103144
$GaAs_{0.5}Sb_{0.5}$ layers, MBE growth on (111)B InP, elec./opt. charactn. 114273
GaInAs/GaAsP VCSEL, photorefl. line shape symm., QW ground-state exciton energy 71760
(GaIn)(NAs)/GaAs QW lasers, opt. gain spectra for 1.3-µm-wavelength regime 71757
GaN layers, struct., cathodolum. 103031
GaN undoped epilayer, three-photon fluoresc., SHG obs. 82904
GaN, undoped, evidence of free carrier conc. gradient along c-axis 103005

frared spectra continued
GaN:H, NH_3-MBE, nuc. react. anal. 101244
GaN:Si, carrier conc./mobility, IR refl. spectra *(Chinese)* 115319
α-GaN:Si(Mg) films, carrier effective mass, mobility and conc., Hall and IR ellipsometry meas. 69545
GaN/AlGaN, strained hexagonal superlattices, phonons, free carriers, opt. study 69686
GaN/AlN superlattice, MOVPE growth, phonon modes/free carrier, IR/Raman spectra 124987
GaN-based ITO Schottky photodiodes, high-speed vis.-blind 127946
GaP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
$GaPO_4$, hydrothermal soln. growth, struct., IR obs. 79162
$GaPO_4$:OH, hydrothermal soln. cryst. growth, elastic consts. 79163
Ga_2S_3-La_2S_3-La_2O_3:Dy^{3+} for 1.3-μm opt.-fiber amps. 128139
GaSe nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
$Gd_{0.8}La_{0.2}VO_4$:Nd, spectrosc./laser props. 117147
Ge-Se-Te-Si_3N_4-CdS spin-coated chalconitride thin film, prep. 125061
Ge_xSe_{1-x} thin films, semi-closed space prep. tech., struct. anal. 124859
H_2O vap., absorpt. spectrosc. using rapid temp. tuned LD 128407
HgCdTe, MBE-grown, comp. control, surface defects 101280
HgCdTe, MWIR, MBE growth and device proc. on large area Si substrs. 90348
$Hg_{1-x}Cd_xTe$, MBE grown, FTIR spectr. 103001
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
$Hg_{1-x}Mn_xB$ (B=S,Se,Te), transport/phonon props., far-IR reflectivity spectra 103080
HgSe polycryst. thin film, growth method 101399
ITO thin film, deposition & charactn., transparent electrode appl. 116560
ITO thin films, reactive evap. prep. and charactn. 79228
InAs self-organized nanostructures on InAlAs/InP(001), IR spectra, IRphotodetection apps. 80881
InAs/AlSb strained MQW, unintentionally-doped, MBE growth, charactn./optimisation 101262
InAs/GaSb QW, 2D electron-hole syst., hybridization 126180
InAsN film, plasma-assisted GSMBE 114276
$InAs_{1-y}Sb_y$, melt epitaxial growth, 7-12 μm cutoff wavelength 68376
InF_3-YF_3-BaF_2-SrF_2-NaF-ZnF_2-GaF_3 glasses, opt. props. and thermal stabil. 127564
InGaAs:Fe/InP high-speed MQW saturable absorber, FTIR/pump-probe meas. 82822
InGaAs/AlAsSb QW, MBE growth, Si doping 115397
InGaAs/AlAsSb QW, intersubband transit., nonlin./response speed eval. 115399
InGaAs-GaAs unipolar self-organized QD FIR laser PL spectrum 105277
InGaAsP nonidentical QW SOA-superluminescent diodes 117185
InGaN layers, indium content, LEDs, PL peaks, RBS, EXAFS, EDX 128018
InGaN/GaN/Al_2O_3 heterostruct., MBE/MOVPE growth, structural/opt. props. correl. 126125
$In_xGa_{1-x}Sb$, melt epitaxial growth, 7-12 μm cutoff wavelength 68376
In_2O_3:Mo transparent conductive film, prep., struct./elec./opt. props. 115328
InP 2D nanostructures, two-time laser holography fab. 115794
InP, effect of VO_2^+ cation on HNO_3 oxid. 103399
InP, phonons, acceptors, THz absorpt. spectra 126037
InP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
n-InP:H, hydrogen neutralization effect, defect states 80711
InP-Si direct wafer bonding, cryst. defects charactn. 115475
InSb, Auger recomb. coeff., IR-FIR dyn. plasma reflectivity 115305
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
$K_3Li_2Nb_5O_{15}$, SHG, IR spectra *(Chinese)* 72012
$(K_xNa_{1-x})(Sr_yBa_{1-y})Nb_2O_6$:Ce(Cu), opt. props. *(Chinese)* 71938
KPb_2Cl_5:Dy^{3+},Yb^{3+}, cryst. growth, spectrosc. props., mid-IR laser 93542
$LaBSiO_5$:Ce(Tb) stillwellite, luminesc., cryst. chem. 116935
$LaGaO_3$ powders, pure and doped, chem. synthesis by amorph. citrate/EG method, oxide fuel cells appl. 123780
$LiNbO_3$:In, photodamage resist., opt. props. 104392
$LiNbO_3$:In,Fe cryst., opt. props., holographic storage props. 104618
$LiNbO_3$:ZnO, CZ method growth, defect struct., XRD/IR/Raman spectra 127201
$Li_{3.3}PO_{3.9}N_{0.17}$ solid electrolyte film, prep., batt. appl. *(Korean)* 114246
a-Li_xWO_3 films, polaron absorpt. obs. 93312
$MnHg(SCN)_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
$MnHg(SCN)_4(C_2H_6OS)_2$, organometallic NLO cryst., growth, charactn. 68108
$^{15}NH_3$, absorpt. line freqs. meas. using CO_2/OsO_4 stabilized laser 71636
N_2O, rovibr. reson., quantum-cascade laser freq. stabilis. 105455
$NaBi(WO_4)_2$:Nd^{3+} single cryst., growth, polarised opt. absorpt. & PL 104597
Na_2O·$Cd_3Al_2Si_3O_{12}$:Er^{3+} glass, opt. charactn. 71217
Nb ultrathin films, quantum size effects 82295
Nb_2O_5-TiO_2 thin films for electrochromic devices 71405
Nd:$NaY(WO_4)_2$, CZ growth, thermal and laser props. 93536
Nd:YAG ceramics, laser emission under reson. pump in emitting level 93545
Nd-chelate/polymer opt. fibre amplif., NIR fluoresc. bands 128151
$NdAl_3(BO_3)_4$ microchip laser cryst., opt. charactn. and laser gain modeling 93557
NiO films, spray pyrolysis prep., electrochromism 127881
$^{188}OsO_4$, absorpt. line freqs. meas. using CO_2/OsO_4 stabilized laser 71636
PLZT thin films, crystn. and roughness, annealing effects 101424
$Pb_{1-x}Mn_xB$ (B=S,Se,Te), transport/phonon props., far-IR reflectivity spectra 103080
PbO-Bi_2O_3-Ga_2O_3 glass fab., optoelectronics and opt. fiber appls. 116556
PbS QD embedded glass for mid-IR laser Q-switching 71916
PbSe QD embedded glass for mid-IR laser Q-switching 71916
PbTe/BaF_2(111) epilayers, hot wall epitaxy growth, opt. props. *(Korean)* 69574
Pb(Zr,Ti)O_3 films, alkoxide-based sol-gel proc., chem. struct. evol. 127198
Pd-octaisopentyloxy-phythalocyanine-doped ormosil, self-diffr., opt. limiting props. *(Chinese)* 128466
$Rb_xCs_{1-x}TiOAsO_4$, top seeded soln. growth 68106
$RbTiOAsO_4$, top seeded soln. growth 68106
SO_2 & SO_3 meas. in aircraft engine exhaust, tunable LD syst. 111478
Sb_2O_3-CuI-NaCl(NaI)($PbCl_2$)(PbI_2) glasses, prep., struct., opt. props. 92939
SbSI ferroelec. electroceramics, microwave/far IR studies 104349
ScN thin films, plasma assisted PVD, reactive sputtering, struct., opt. props. 90540
Si, doping profile, opt. meas. 91947
Si mesoporous nanocrysts., free charge carriers, IR absorpt. and DC elec. cond. meas. 115296
Si, microcrystalline films, catalytic CVD, struct., electronic props. 124958
Si, passivated luminesc. porous, props. 103362
Si polycryst. films, hot-wire-assisted PECVD, struct./opt. props. 124967
Si, porous, anodisation form. on Si surfaces, IR spectra anal. 91999

infrared spectra continued
Si, porous, implanted with N by PIII 81035
Si, porous, surface passiv. by SiO_x, Al_2O_3 films *(Chinese)* 81090
Si, spectral responsivity, temp. depend., anal. model 93359
Si thin films, low temp. epitaxial growth by hot wire cell method 125067
Si wafers, photoelasticity, scanning IR polariscope obs. 102994
Si wafers, surface passiv., plasma CVD SiN films 126401
Si:C(N), low-energy ion implant., buried insulating layer form. 103253
Si:H, H-plasma-etched and H-implanted single-cryst., annealing effect 69781
a-Si:H based pin solar cells, interfacial opt. spectra 100195
Si:H, implant. induced buried nano-cavities, microstruct., opt. effects 125993
a-Si:H, light-induced struct. changes, weak bonds, dangling bonds role 93325
a-Si:H,(O)(C), hot-wire CVD, photoelec. props., depth profiling 127906
μc-Si:H,P films, hot-wire CVD, struct./elec./opt. props. 124966
Si:N blue luminesc. nanoparticles, fab., opt. props. 69491
Si:N,C, high dose shallow plasma immersion ion implant. 91973
Si:O, FZ grown, O precip. in hydrogen ambience and its appl. 79175
Si:O, annealed under hydrostatic press., O aggregation and thermal donors 115478
Si:O,H,N, porous, passiv., PL intens. 71522
$Si/(Ta_2O_5)_x(Al_2O_3)_{1-x}$ interface, electron traps 103185
Si/SiO_2/photoresist syst., fluorocarbon plasma selective etching 92010
Si(100) surface, native oxide growth, grazing incidence X-ray refl. and FTIR spectra 115658
Si(111)/H-1×1 surface, init. oxid. stages, IR absorpt. obs. 103305
Si(111)-H surface in dil. NH_4F soln., electrochem. ATR-FTIR spectra 103443
p-/n-SiC, 6H, 15R, LF vibr. spectrosc., localised modes, Raman spectra 69578
SiC, ECR-CVD deposited nano-cryst., room temp. blue light emission 126100
4H/6H-SiC, excess carrier lifetime/surface recomb., opt. charactn. 91706
SiC films, ICP CVD, struct. 124924
SiC films, growth on Si, adsorbed propene laser melting 79379
β-SiC, low-temp. direct synthesis by metal vap. vac. arc ion source implant. 125085
SiC thin films, CVD using methylsilanes, C incorp., IR spectra 101342
$Si_{1-y}C_y$ thin films, low temp. epitaxial growth by hot wire cell method 125067
4H-SiC:Al, implant. damage/annealing, IR investig. 69808
SiC:H 6H surface passiv., hydrogenation, struct., fermi level 92020
a-SiC:H ECR-PECVD films, microstruct. and opt. props. 68265
a-SiC:H alloy photolumin. wide-bandgap films deposited by Cat-CVD using acetylene 124971
a-SiC:H film plasma CVD by dissociating source gases separately, opt. props. *(Japanese)* 90361
μc-SiC:H films, VHF-PECVD, optoelectronic & structural props. 90388
α-SiC:H low-k dielec., diffusion barrier, Cu dual damascene proc. 81111
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807
a-$Si_{1-x}C_x$:H film, ECR-CVD, struct./opt. props., RF bias voltage effect 80753
a-$Si_{1-x}C_x$:H films, PECVD, microstruct., thermal stabil. *(Chinese)* 103075
a-$Si_{1-x}C_x$:H films, prep. by hot-wire CVD and props. 124970
a-$Si_{1-x}C_x$:H thin films, quantitat. anal., vibr. spectra 69557
SiCOH films, ultralow-k dielec., PECVD, charactn. 90384
SiGe epitaxial layers on Si, anodic oxid., enhanced passiv. of oxide/SiGe interface 92049
a-SiGe:H films, PECVD, props. anal. 103067
$Si_{1-x-y}Ge_xC_y$ UHV/CVD, HRTEM, X-ray diffr. *(Chinese)* 79221
$Si_{1-x-y}Ge_xC_y$ epilayers, UHV CVD, strain relief *(Chinese)* 79314
$Si_{1-x-y}Ge_xC_y$ film, UHV-CVD, annealing effects *(Chinese)* 103249
$Si_{1-x-y}Ge_xC_y$ films, UHV/CVD, struct. anal. 101379
Si_3N_4 film, helicon plasma sputtering deposition, props., sputtering-gas press. effect 101183
SiN_x films, ion-assisted deposition, ECR plasma, props. anal. 101448
SiN_x films, low temp. thermal CVD, for microelectronics appls. 124922
a-SiN:H, Cat-CVD, deep submicron MOS device appls. 124974
SiN_x:F, gate dielec. films, rem. ECR-PECVD from NH_3/SiF_4 90414
SiN_x:H films, PECVD, opt. props., IR-sens. arrays 131921
SiN_x:H films for polysilicon gate patterning, charactn. 127134
a-Si_3N_4/SiON PECVD thin films, IR spectrosc. anal. 68296
a-SiO_2, film, PECVD, props. thickness depend. 101365
SiO_2 surface /buried interface layers in Si-Si bonded wafers 103357
SiO_2 ultra-thin films fabricated with plasma oxid. tech., struct. and elec. props. *(Chinese)* 126246
SiO_2, ultrathin combustion CVD layers on Zn coated steel, struct., morph. 101368
SiO_2 ultrathin oxide growth, ultra-slow multicharged ion beam 103396
SiO_2:C low k thin films, prep. by PECVD from tetramethylsilane 101323
SiO_2:H ISSG ultrathin gate oxide, NMOS capacitor, reliab. 103203
SiO_x/organic composite thin films, PECVD, dielec. props. 90364
SiOC films, PECVD, low dielec. const. 104247
SiON film, opt. waveguide 104738
SiO_xN_y PECVD films, correl. of phys. props./chem. struct., IR spectrosc. 68297
SiO_xN_y, low stress films, sputtering type ECR plasma deposition, charactn. 124812
SiO_xN_y:H films for polysilicon gate patterning, charactn. 127134
SiO_xN_y/Si Bragg reflector for reson. cavity photodetectors *(Chinese)* 86537
$Si_{20}Te_{80}$ glasses, phys. props., acoustooptic devices appl. 93260
SnO_2, CO adsorpt., in situ diffuse reflectance FTIR spectr. 109749
SnO_2 electroceramics with additives, elec. props. 103060
SnO_2 nanopowders, surface reactivity, gas sens. props., particle size influence 120959
SnO_2 nanosized powder & thick film gas sens., prep., charactn. 132048
n-SnO_2, nanosized powders, gas sens. props., FTIR spectrometry 97431
SnO_2:F thin films, sol-gel prep. from alkoxyfluorotin complex 68335
SnO_2:Pd thick film sens., CO consumption 109750
SnO-$SnCl_2$-P_2O_5 glass, prep. & props. 101521
SnO_2-based semicond. sol-gel sens. array, air pollutants detect. 109769
SnTe/BaF_2(111) epilayers, hot-wall epitaxy growth, opt. props. *(Korean)* 114309
$SrBPO_5$:Ce(Tb) stillwellite, luminesc., cryst. chem. 116935
$SrBa(Nb,Ta)_2O_6$ highly oriented film, synthesis, struct. & dielec. prop. 127175
SrS:Eu,Sm, IR stimulable phosphor, opt. storage 116572
Ta_2O_5 films, annealing, dielec./opt. props. 116126
Te based II-VI cpds., opt. second-order nonlin., NIR comparative charactn. 93831
Te nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
Ti-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
TiO_2 organic/inorganic hybrids with substituted phthalocyanine or polythiophene, nanofabrication 134396
TiO_x films, PECVD, multi jet hollow cathode plasma source 68236
TiO_2/organically modified silane composite, sol-gel, charactn. 71498
TiO_2-MnO films, sol-gel method, opt. props. 79389

infrared spectra continued
Tl_3AsSe_3 nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
Tm^{3+}:KY_3F_{10} laser, spectrosc. and CW operation 82587
V_2O_5-MoO_3 films, electron beam evaporated, elec./opt. props. 103059
WO_3 electrochromic films, rf-sputtering, residual charges, IR absorpt. 127900
WO_3 semicond., elec. props., gas sens. appl. 86711
WO_x-SnO_2 nanosized powder & thick film gas sens., prep., charactn. 132048
WO_3·H_2O/PANI electrochromic device, electrochem. & opt. props. 82219
Y silicate ultrathin insulators on Si, phys. and elec. charact. 91893
$ZnCd(SCN)_4$, UV nonlin. opt. cryst., growth, OHG 82859
$ZnCd(SCN)_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
$ZnGeP_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
$ZnHg(SCN)_4$, bimetallic thiocyanates, ABTC struct. type, NLO cryst. materials 104603
ZnO ultrafine particles, prep., surface props., photocatalysis 115320
ZnO:Al film, sputtered, opt./IR/elec. props. 103036
ZnO:Al transparent conductive films, DC magnetron reactive sputter prep. and charactn. 69504
ZnO:Li ceramics/films, PLD, ferroelec./dielec. props. 104386
ZnO:Pr varistors, electronic interface states at grain boundaries 102764
$ZnSe/Zn_{1-x}Cd_xSe$ strained superlattices, MBE on GaAs, lattice IR refl. spectra 103029
ZnTe:Cr^{2+} layers, MBE growth on GaAs(100), opt. charactn. 101212
upconversion phosphors, recent advances, new appls. 104932

infrared spectrometers
see also infrared spectroscopy
astron. photometer, InGaAs photocathode photomultiplier 69465
Atmospheric Infrared Sounder, prelaunch perform. charact. 122645
cirrus, FIRSC, airborne IR FT spectrometer 76875
compositional inform. extraction for trafficability mapping from hyperspectral data 76834
DIAL rapidly tunable AO spectrometer for space environ. 93941
DOEs design and fab. for imaging spectrometer 104861
French SWIR technol. used for astron. 111327
FTIR spectrometer, pass. rem. chem. vap. monitoring 99033
geostationary atmos. sounding instrum. 133326
hyperspectral imaging polarimeter, design changes, flight meas. 76878
hyperspectral imaging sens. for gas leak detect., DOE, image proc. 99027
hyperspectral sens. develop., data proc. viewpoint 133281
IASI interferometer, ref. freq. stabilised laser source 122631
Infrared Space Observatory, LWS doped Ge photo-detectors 120818
Infrared Space Observatory, SWS detectors, perform. 120819
Infrared Space Observatory, SWS spectrometer sensitivity 120820
LIGA-microspectrometer, low-cost design 116793
LWIR spectral polaris. signatures of mater., FTIR spectropolarimeter 75656
methane trace gas flux meas., fast chem. sens., LD spectrosc. 111474
micro opt. components fab. by high precision embossing 71366
mid-IR laser absorpt. spectrosc., portable multichem. sens. 109785
MIPAS onboard ENVISAT, flight model perform., calib. & charactn. 122630
NIR spectrometer based on AO tunable filter 71444
replicated micro-opt. sens. for indust. spectral anal. *(German)* 104767
Skymed/Cosmo syst. simul., rem. sens., VIRS imaging spectrometer 122550
solar spectrograph detectors research *(Chinese)* 97233
surface temp. and emissivity separation, atmos. compensation 76860
tropos., O_3, Aura IR satellite spectrometer 76876
tropos. chem. meas., Imaging Geostationary Fourier Transform Spectrometer 133327
tropos. emission spectrometer ground syst. 133319
Tropospheric Emission Spectrometer, ground data syst. develop. 133321
Tropospheric Emission Spectrometer ground data syst., sci. data visualization 133323
wide-field imaging interferometry testbed design, FIR/sub-MM missions 98887
widely tunable difference freq. spectrometer, trace gas detect. appls. 88182
InSb FPA midwave-IR snapshot imaging spectrometer 131963
KTP periodically-poled crysts., opt. nonlin. mixing, gas sens. 120994
$LiNbO_3$ DFG periodically poled laser spectrometer, ambient formaldehyde detect. 88188
Si IR micro-spectrometer based on diffr. grating 104765
Si integrated microspectrometers, low-cost syst. develop. 116754

infrared spectroscopy
see also infrared spectrometers; Raman spectroscopy; submillimetre wave spectroscopy
act. rem. gas sens. using LDs, pseudorandom tone burst modulation 111476
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
ALS, synchrotron IR beamlines, spectromicroscopy and fast timing 87139
ANKA SR facility, research opportunities 87140
astron. photometer, InGaAs photocathode photomultiplier 69465
atherosclerotic vulnerable plaques diagnosis, IR/NIR fibre optic imaging 110826
binary gas mixture conc. meas., high sensitivity NIR laser absorpt. 109786
biomedical diagnostics, opt. spectrometry 76414
coal fired power-plant in-situ monitoring, NIR LD spectrosc. 111475
combustion gases, temp./OH radicals meas., diode-laser absorpt. spectrosc. 128625
continuous piecewise direct standardization, meta-params. optim. 78912
elec. arc furnace pollution control, NIR opt. proc. sens. 110042
electron bunch, sub-ps, nonintercepting meas. using coherent diffr. radiation 87121
fibre opt. TDM gas sens. syst., forward-coupled ladder topol. 75729
flashlamp-pumped dye laser radiation SHG 117459
formaldehyde, atmos., conc. meas. by laser absorpt. spectrosc. 76936
freely propag. THz pulses, destructive interf., high-resoln. spectr./opt. computing appl. 94010
gas-fired power-plant ignition proc., LD-based in-situ methane detect. 112338
haemoglobin conc., oxy-/deoxy-/total-, opt. meas. precision 83073
human tissues, opt. charactn., time-resolved reflectance spectrosc. 110843
hydrocarbon contaminants imaging, laser-based syst., FPA 109716
in-situ combustion diagnostics using LD absorpt. sens. 109787
ion implant. proc., effluent species abatement, customized dry scrubber design 126287
IRMA tunable IR multicomponent DAQ syst. for plasma diagnostics 109455
isotropic materials, complex refr. index meas. by Mueller matrix polarimetry 121238
laser material proc., focal posn. monitoring syst. 121211
longwave IR opt. parametric conversion techs./materials/devices 82860
lung tissues, human, NIR Raman spectrosc., mol.-level cancer diagnosis 98364
mid-IR fiber-optic spectrosc., anal. appls. 97318
mid-IR laser absorpt. spectrosc., portable multichem. sens. 109785

infrared spectroscopy continued
multifunctional indust. combustion proc. monitoring by in-situ NIR tunable dio laser syst. 109738
narrow linewidth OPO photoacoustic spectrosc., LIDAR/sens. appls. 72037
NSRL IR beam handling equipt., appls. *(Chinese)* 110216
ocean surface sens., LWIR hyperspectral polarimetric imager 76915
ormosil photosensitive syst. integrated optics 104743
osteoporotic bone, encoded FTIR microspectroscopic data visualizationy 1108
pass. rem. chem. vap. monitoring, FTIR spectrometer 99033
poly(2,2'-diaminobenzyloxydisulfide) conducting polymer high-energy storag material 123772
pool fires, multiple species meas., tunable LD spectrosc., FDM use 111479
quantum cascade DFB laser, mid-IR continuously tunable single-mode 1053
quantum cascade DFB laser based sens., trace gas detect. 109784
quantum cascade laser spectrosc./chem. sens. 97560
quantum-cascade laser, Pound-Drever-Hall freq. stabilis., rovibr. reson. 1054
radiation-grafted PSI membranes, fuel cell testing 123787
skin cancer diagnosis, FTIR fiber optic evanescent wave spectrosc. 87529
skin tissue class., FEW-FTIR spectrosc., neural network 87537
spectral hole burning based RF spectrum analyzer 115029
spectropolarimetric imaging, field-portable imager, AOTF 97347
thermal IR spectral band detect. limits for unidentified surface materials 13336
THz time-domain spectrosc. syst. 121245
unburned methane detect. by portable diode laser gas analyzer 109739
vehicle exhaust emissions, multicomponent rem. sens., dispersive IR/UV spec trosc. 111469
vehicle exhaust VOC meas., extractive FTIR spectrosc. 122702
VIS-SWIR hyperspectral data anal., atmos. correction algms. 98974
VOC trace gas detect. by NIR seeded cavity ring-down spectrosc. 76940
widely tunable difference freq. spectrometer, trace gas detect. appls. 88182
XLPE cable, insulation/semicond. interface improvement, diffusion metho *(Japanese)* 99374
a-C:H, rf plasma deposition using methane, transmittance and reflectance spec trometry 103065
CO_2 atmos. conc., IR-ray analyzer appl. 120998
CO_2 conc. meas. in bioreactor vent gases with DFB diode lasers 121262
CO_2, trace gas detect. using CW DFG radiation source 82908
Cs D_2 line shift, dens. depend., precise wavelength modulation refl. spectros meas. 110020
H_2 tunable CW Raman laser, external cavity LD pumped 105154
HgCdTe multichannel MCT/PIR-fiber detectors for fast pyrometry and multi pectral sens. 109555
InGaAsSb(Gd)/InAsSbP DH lasers, 3-3.3 μm, LD spectrosc. 71833
$KTiOPO_4$ periodically-poled cryst. tunable mid-IR light generation, gas sen appl. 88181
Li-ion batt., anisole electrolyte additive, effect on cycle perform. *(Chinese* 89067
$LiNbO_3$ quasi-phase-matched OPO source, IR chem. sens. 109783
$LiNi_{1-y}Co_yO_2$ powders, sol-gel proc., Li-ion batt. cathode 123757
NH_3 conc. meas. in bioreactor vent gases with DFB diode lasers 121262
NH_3 trace gas sens. by near-IR diode-laser-based overtone spectrosc. 12126
NO spectrosc. detect. by quantum cascade laser 86713
O_2 high press. conc. meas. by VCSEL lasers 86714
Si, microcrystalline, hydrogen passiv. depth, carrier lifetime meas. 91610
Si, porous, sulfur passiv., PL/ stabil. improvement *(Chinese)* 91586
c-Si solar cells perform., oxygen precip. role 100093
Si thin films, wafer bonding, exfol. proc., IR spectrosc., X-ray imaging 1263
a-Si:H thin film nip solar cells, VHF-PECVD, photo-induced degrad. 11289
a-Si:H thin films, light-induced annealing effects, positron beam annihila tion/FTIR spectra 80977
$a\text{-}Si_{1-x}C_x$:H films, plasma CVD, deposition rate/film struct. *(Japanese)* 7927
TiO_2 incorp. zeolite thin films for solar cells 89294
Tm-doped fibre laser intracavity absorpt. spectrosc., water vapour detector app 76897

infrared telescopes *see telescopes*
infrared thermography *see infrared imaging*
infrared tracking *see optical tracking*
infrasonic waves *see acoustic waves*

initial value problems
4-point spline collocation methods for solving second-order IVP 79076
acoustic waveguides, local orthogonal transform., one-way anal. 83497
adaptive high-order finite-difference method for nonlin. wave problems 12471
attractors for discretization of Ginzburg-Landau-BBM eqns. 79099
comparison theorem for nonlin. eqns. 101057
continuous Runge-Kutta-Nystrom methods for IVP with periodic solns. 10110
convergence of Runge-Kutta methods for delay diff. eqns. 79095
degenerate sing. semilinear parab. eqns., steady state soln. 68034
discrete-delay systs., num. soln. 90141
ellipt. Fekete points sets, num. soln. approaches 68018
ESIRK methods implement. for stiff IVP 68042
exponentially-fitted Runge-Kutta methods, freq. determ. and step-length contro 79088
first-order evol. eqns. in Banach spaces, spline techs. 101012
first-order impulsive functional diff. eqns. in Banach spaces 124709
first-order quasi-lin. IVP differential problems, a priori error bounds, polynomia approx. solns. 113838
four-stage symplectic and P-stable SDIRKN methods with dispersion of high order 90157
generalized inverse via Maple for solving differential eqn. systs. 79050
high-dens. disk drives, dual-stage actuator control 92857
interpolatory approx. of matrix exponential based on Faber polynomials 9007
Kronecker product IVP involving method of least sq. 101097
locally conservative Eulerian-Lagrangian finite difference method for parab. eqn 114122
long time integrat. of IVPs of ODEs using power series arith. 124719
long-time num. computation of wave-type solns. driven by moving sources 79075
mag. recording, head-media interact., max. principle 70543
math. cooling model for thin-wall shell under fast convective mixing of gas 124700
MEBDF package for num. soln. of large sparse systs. of stiff IVP 68038
microwave pass. devices, optimal shape design method using FE time domain method 125658
neural nets, adaptive, nonlin., with delays, anal. 114911
neutral diff. eqns., lin. multistep methods, num. stabil. 79097
nonhomogeneous scalar conservation laws finite vol. schemes 79064
nonlin. cct. differential-alg. eqns., consistent init. conditions 68528
nth-order lin. diff. eqns., fuzzy IVP 68040
num. study of nonlin. init.-BVP or IVP 68032

ial value problems continued
oil well testing, parab. eqn., init. BVP *(Chinese)* 101088
one-leg and lin. multistep methods for multiply stiff sing. perturb. problems 114108
open trajectories, IVP of autonomous syst. 124705
optimized explicit Runge-Kutta pair of orders 9(8) 79071
oscills. of solns. of IVP for parab. eqns. 79081
parab. eqn. IVP, 1D/2D, parallel algm. 113835
parallel global integrat. method 124687
parallel ODE solver adapted to oscillatory problems 90159
quasilinear parab. eqns., DC type nonlin., generalized quasilinearization 67715
react.-diffusion eqn., global convergence 79055
scalar wave diffr. by perfectly soft infinitely thin circ. ring 128732
second order IVP, Numerov type methods 114113
semi-implicit finite vol. scheme for nonlin. diffusion eqns. in image proc. 118454
semidiscretization in time, least-sq. Galerkin methods for parab. problems 124629
slow TW on finite interval for Burgers'-type eqns. 79090
spectral corrections for Sturm-Liouville problems 90154
stabil. props. of nonnegative solns. of semilinear problems with convex or concave nonlin. 90148
structural anal. method for differential alg. syst. 79092
upwinding in method of lines 68011
zero-stabil. of variable stepsize multistep methods, spectral rad. approach 90161
ection lasers *see semiconductor lasers*
ection locked amplifiers
microwave oscillating amps., behavioural modeling 125264
ection locked oscillators
2D coupled oscillator array 117833
CMOS digital controlled oscillator 101836
CMOS injection-locked ring oscillator prescalers, 1-GHz and 2.8-GHz, modulo-8 design 125818
microwave sub-harmonic injection-locked bal. oscillator-doubler 91281
MM-wave harmonic space diversity act. integrated array, design 72678
MM-wave IMPATT oscillators, locking-band widening 80271
two-port Van der Pol model for simul. of steady-state/transient response 90793
GaAs/AlAs double barrier RTDs, SHF injection locking and power combining 125702
InP/InGaAs mm-wave self-oscillating heterojunction bipolar phototransistor oscillators 125827
InP/InGaAs ultrahigh-speed DH DHPTs for optoelectronic mm-wave MMICs 131383
Nd:YAG microchip solid-state laser array, synchronized chaotic oscill., Talbot mirror 128204
ection moulding *see moulding*
jet printers
all-polymer TFT ccts., high-resoln. ink-jet printing 103882
direct write technols., commercial appls./review 103977
display assembly and interconnect, low-cost 86797
head prod. simul., methods 124316
high-speed inkjet printing, drop modulation firing, focused acoustic wave *(Japanese)* 111547
micro-fluid device with piezo-microactuator on Si diaphragm 92528
micro-opt. interconnects, microjet printing 131433
micro-optics direct-writing fab. by ink-jet printing 93170
multicolor pixel patterning of light-emitting polymers by ink-jet printing 97603
patterned multifunctional nanostructures, rapid prototyping 103716
pioneers and competitors 89705
self-focusing acoustic-wave liq. ejector for ink-jet printing appl. 116222
UV laser appl. for ink-jet printing machines 93911
Al_2O_3 particle suspens., ink jet deposition, modelling/droplet form. 101500
rganic insulating materials *see insulating materials*
rganic polymers
ORMOCERs, hybrid inorganic-organic polymers for opt./elec. interconnection 71200
CN_x large-scale well aligned nanotube films, PECVD, electron field emission 79273
Si-based polymers, photocond., electrophotography appl. 116904
SiP-PMA/PWA hybrid gels, amorph. phosphate-Nafion hybrids, inorganic/organic composites, fast proton conductors 125095
ut-output media (computers) *see computer peripheral equipment*
ut-output programs
see also device drivers
multi-wavelet transforms, 2D constrained, real-time struct. 107512
MUROS-1 med. imaging pixel detector read-out syst. design anal. 122155
ut-output stability
Josephson jns., perturbed sine-Gordon eqn., BIBO stabil. 104572
piezoelec. actuators, hysteresis and creep effects, real-time inverse feedforward controller 92679
SPEC *see information services*
pection
see also automatic optical inspection; quality control; reliability; testing
2D image measuring machine, absol. code, autofocusing *(Chinese)* 124404
3-DOF parallel-link CMM, theory and virtual prototype 113741
3D computer vision, surface shape meas. and NDT 118410
3D machined surfaces topography, fractal geom. appl. 121200
3D stacked LSI struct., packaging technol. 113506
3D surface depression profiling, focused air coupled US pulses 114502
3D US ray tracing in AutoCAD 2000, add-on modules 101590
3D vision syst., explosives disposal & building inspection appl. 86630
11 kV oil filled switchgear, maint. optimisation condition based decision making 134263
900 MWe French NPPs, periodic safety review, plant life mgt. 112259
AC2K TFT-LCD panel inspection syst. *(Japanese)* 78688
ACSR conductor deterioration inspection using solenoid sens. 133752
adaptive QC strategy, inspection reduction, acceptance-sampling schemes 124436
airborne inventory/inspection technol. for elec. power line condition assess. 88502
aircraft inspection, computer-aided tap test syst., mag. cam 122498
aircraft inspection, NDE sens. integrat., scanning/positioning modules 122497
aircraft maint., phase stepping shearography, improved software 122496
aircraft materials testing, photonics techs. appl. 88043
AIT-II dark-field inspection tool with automatic defect class., method/cost effectiveness 100629
alloy surface layer charactn., magnetometric eddy current sens. 101634
alternating aperture phase shift mask, automated AFM metrology 103667
inspection continued
alternating phase shift mask, prod. proc. and assurance method 103692
alternating phase shift mask technol. 103662
area array components, X-ray/endoscopy-based inspection techs. 124417
area array devices, combined visual/X-ray inspection 113737
ASIC mfg. lines defect inspection method *(Japanese)* 69332
automatic defects class. using pulse-echo tech., pattern recogn. 79488
avionics LCD, photom. meas., intraplant & interplant correl. 98912
back side failure anal. flow for flip-chip/lead-on-chip/multi-metal-level dies 113778
BGA lead coplanarity, line-struct. laser scanning meas. syst. 67646
BGA solder joint voids, effects on thermal fatigue 113570
BGA solder joint X-ray slicing using transm. X-ray systs./standalone software 113584
BGA substr. inspection, noncontact probe for profilometric meas. 132177
binary OPC/SB mask, 0.13-μm design rule, reticle defects detectability, wafer printability 103589
biological product detect., conf., Boston, USA (Nov.2000) 78377
bitmap/TENCOR inspection data correl. for IC yield anal. 100624
black box proc. control syst. for electronics mfg. line failure anal. 113812
bonded wafer yield increase by acoustic micro imaging 89902
BWR power plant turbine blade inspection using phased array probes 123173
cable maint. robot, lin. dyn. response *(Chinese)* 113427
capability index assess. under skewness sensitivity 113751
cargo inspection syst., low-dose backscatt. imaging 113092
cast-resin power transformer onsite insulation diagnosis 134125
caverned large oil tanks, fibre opt. rem. inspection 123109
ceramic column grid array modules, mfg. proc. for high vol. prod. 78646
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334
ceramics, flaws and anoms. detect., acoustic microimaging 125145
chrome-on-quartz binary masks, dry etching, in-proc. defect inspection 103402
cigarette paper marking quality eval. 107142
CMM coord. errors meas., vol. distrib. feature *(Chinese)* 78698
color images, shading correction/segmentation 129583
compact and portable 3D camera for space appls. 83066
complex geom. component, US inspection, smart flexible contact phased array transducer 89913
composite mater. elastic moduli, Lamb wave vel., contactless method 114489
contraband/explosives detect., scintillation & semicond. sens. appl. 110437
crack meas. by eddy-currents, probe/inducer effects 114543
CRT prod. technol., portable mag. characts. tester 79482
CSP solder paste quality/vol., impact of print params./package pitch and I/O 115223
CSP/BGA packaging yield enhancement with solder flux/paste proc. control 124333
CSP/micro-BGA proc./damage assess. with acoustic micro imaging 113585
curved dielec. obj., automated spot-by-spot microwave inspection 78697
curved surface inspection, noncontact meas., opt. fiber sens. *(Chinese)* 97315
cylindrical eddy-current probes, spatial freq. spectra 114541
DC motors, maint. concerns for long operation 123497
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633
differential TR eddy current test probe, crack shape reconstr. 101612
digital terrain modelling & indust. surface metrol., commonalities 113755
dimpled BGA proc. develop. for space flight appls. 133229
discolored bondpads caused by $Al(OH)_3$ form., SEM inspection, EDX, FIB 102873
distributed machine vision syst. using Ethernet networking 113735
DMD, 3D micro-inspection 113744
dosimetric services, approval procedures, EU member states, Switzerland 133100
DUV laser appls. in wafer inspection & opt. disc mastering 113774
DUV scatterometer for nanoparticle detect. in semicond. mfg. 109434
dyn. inspection aptitude test for US NDT 114499
economic mfg. qty. model with imperfect product quality 89899
eddy current coil footprint assess., probab. of crack detect. 114537
eddy current freq. output sens. for precision engng. 75458
elec. generators servicing, rotor forging crack inspection, stator repairs 99615
electron gun charact. in TW electron LINAC, customs inspection systs. *(Chinese)* 80562
electronic assembly QC, NDT, inspection/X-ray eval. techs. *(German, English)* 115188
electronic assembly stress screening using broad spectrum acoustic excitation 102832
electronic component autom. defect detect., US SAM, DSP 100658
electronic components, microfocal X-ray imaging develop. 78702
electronics prod., inspection strategies optimisation, quality cost models 113772
embedded attenuated PSM contact layer, 248 nm, defect-sizing issues for UV inspection 103590
embedded phase shift mask, tritone inspection 103684
empirical optim. in reliab. problem 67672
engng. surface texture, proc. related assess. & supervision 113759
engng. surfaces eval., combined fractal modelling & wavelet anal. 121201
engng. surfaces metrol. & props., conf., Huddersfield, UK (Apr. 2000) 113232
engng. surfaces morph. charactn., ISO 12085 MOTIF method 113754
far-field meas. instrum. for opt. telecom light source charactn. 120175
fast 3D topography meas. accuracy, instrum. comparison 113757
Finnish indust., pattern recogn. appls. 94443
flexible workobject localization for CAD-based robotics 94450
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
flip chip procs., reflowable underfill appl., design rules 113638
floating struct. fatigue maint. planning, cost/reliab. based 113422
focused beam US transducers, microelectronic materials props. effects 133374
food safety inspection, obj. class. from X-ray images 124409
fusion-bonded SOI wafer yield enhancement by acoustic inspection 126259
generator rotor purchase, quality rotor spec. 123293
Gray Field UV technol. for defect inspection systs., design/appl. 100630
green alloy compacts, thermographic inspection, ref. composite fab. 114513
guided wave inspection accuracy increase, time-varying matched filter 101588
guided wave sig., dispersion effect removal, sig. proc. tech. 101587
hierarchical approach to pattern matching for indust. appls. 94580
high-energy film radiography, proc. param. optim., MCNP model 101584
high-power pulsed LD, damage induction & threshold level detect. 93704
high-spatial-resoln. subsurface microsc., appl. to IC inspection 78686
hot wire inspection using eddy current tester with computer syst. 113742
human perform. optim. limits 89891
HV transm. lines inspection, eddy current & mag. flux leakage tech. 77440
hydroelectric power plant, backwash control valve damage studies *(Chinese)* 112344

inspection continued
IC defect inspection/metrology, proc. integrat. 100638
IC killer-defect control using reliable high throughput SEM-automatic defect class. 104019
IC package delamination NDI, MM-wave inspection syst. 113764
IC package inspection enhancement using real-time X-ray systs. 100639
IC package inspection using X-ray systs. 124403
IC structural defect anal., trends 104020
IC yield learning, line SEM inspection 100628
IC yield mgt., automated image retrieval syst., field test 100627
Ignalina nuc. power plant components, NDT activity 88549
image proc. tools develop. and appls. *(German)* 131967
IMPACT ADC IC yield anal., multiple defect class. technols., test sample shaping 104018
in-line defect data for memory die, automated alignment scheme 104040
Inconel PWR SG tubes, maint., probabilistic fracture mech. 112234
indust. inspection using controller-driven VRML animation 120639
indust. robots reliab. assurance 100675
integral pass. in PCBs, appl.-specific economic anal. 125896
integral pass. in PCBs, appl.-specific economic anal. 67611
integrated economic design model for QC, replacement, and maint. 124392
intell. robots and computer vision, conf., Boston, MA, USA (Nov. 2000) 89501
involute profile deviations meas., generalised polar-coord. method *(Chinese)* 78739
IPC2547 std., electronics test/inspection equipt. proc. integrat. 78589
Krsko PWR, degraded SG tubes maint., probabil. approaches 112270
Lamb wave US tomography, double crosshole & fanbeam reconstr. 101611
laser cutter for LCD patterned plate inspection syst. *(Japanese)* 83042
laser scanning wafer inspection syst., focal sens. develop. 78696
laser US syst. appl. 131928
laser-based external corros. mapping of pipelines 105621
laser-SQUID microscopy for nondestructive nonelectrical-contact IC failure anal. 81497
laser-US, NDT, indust. appls. 90610
lattice height data, crit. points extraction algm. 113756
LCD prod. yield improvement, ITES opt. meas. syst. 121115
limited access pipe inspection, US guided wave flexural mode tuning 101549
locomotive wheel integrity US inspection using EMAT systs. 99107
low-temp. press.-assisted bonding technol., microchemical anal. appls. 92557
LV switch cct. poor contact detect. method *(Japanese)* 80470
machine tool meas./inspection syst. synthesis 97168
machine vision, imaging anal., tutorial 129545
machine vision for robot control/in-line proc. monitoring, advances 97358
machine vision optics 86614
machine vision syst. light source requirements 120907
machine vision technol., emerging trends 118213
machine vision technol. evol. 97359
machine-vision syst. prod. line calib. 73246
machined rough surface meas. by fringe pattern light interferometry 67662
med. image appl., differentiate MRI image by image comparison tech. 110900
mfg. procs., first-off inspection schedules 78699
microelectronic component SAM inspection, freq. domain anal. 124393
microsystem technol., FIB appls. 92539
MICROTOP.06.MFC triangulation-based sens. for noncontact micro/nanotopographic surface inspection 97381
mobile gamma-radiation inspection syst., cantilever vibr. 114522
μBGA solder joint, vibr. fatigue, intermetallic cpds. effects 78616
multi-axis nano-positioning platform for wafer inspection syst. 67659
multibeam high-resoln. UV wavelength reticle inspection 103588
multilayer aircraft struct., fatigue crack charactn., US imaging 101615
multilayer aircraft struct. inspection, rem.-field eddy-current syst. 122495
μShape, reverse engng. in microsystem technol. 116062
natural gas pipeline inspection gauge speed control using bypass flow 124418
NDT operator perform. in blind test piece trial 114500
near-field microwave NDT, NaCl in mortar determ. 114540
nondestructive inspection, cone-beam X-ray computer tomography *(Russian)* 67655
NPP service-related degrad., life prediction 77710
nuc. fuel rod inspection, OD rem. field eddy current probe 112249
nuc. steam generators eddy current inspection, robotic vision 88544
obj. in translation inspection, limited X-ray viewpoints 100632
off-line gage eval., online gage usage, decision support 113767
oil pipe erosion assess., grey target theory software 113750
oil pipelines inspection automation, pig location, inertial navig. 113773
online grid-gaps inspection syst. for electron-gun manufacture 80579
online inspection for hidden internal defects 78691
opt. films convex/concave defects detect. using patterned illum. *(Japanese)* 82271
opt. films convex/concave defects detect. using patterned illum. *(Japanese)* 127880
opt. lithog. lenses, wave-front aberrations meas., IC mfg. appl. 126585
opt. plane glass, surface inspection, quantizing image tech. *(Chinese)* 84122
optimal np control charts for conc. sampling inspection 89943
optimal X̄ chart for conc. sampling inspection 89941
optoelectronic receiver, rapid inspection method, second harmonic 117592
overhead power line aerial inspection, camera sightline pointing requirements 77437
P/M component quality, sintering proc. kinetics, US in-situ NDE 114511
parallel mechanism CMM *(Chinese)* 89898
PCB, inspection, image proc. tech., eddy-current testing probe *(English)* 100620
PCB in-cct. test for QA 69314
PCB in-cct./functional testing, cluster approach 115196
PCB inspection, ECT image proc., wavelet transform 125865
PCB inspection, ECT probe, solenoid pick-up coil 125866
PCB inspection, eddy current testing sens. 115192
PCB inspection tools, improper selection/misuse, impact on meas. data 113762
PCB manufacture, high complexity, quality/test modeling role 115175
PCB proc. quality cost models, SPC method integrat. 115171
PCB rework with 0201 components 125912
PCB solder joint assembly defect level/fault spectrum study 115155
PCB test/inspection using IR technol. 69324
PCB trace width meas., automated/manual methods 69325
PCB X-ray inspection, 2D with oblique view at highest magnification systs. 78690
PDP prod. line inspection, morph. skeleton algm. 129458
pipe inspection, US transducer holder mechanism 90605
pipes in service 2D/3D X-ray image restoration, wall thickness meas. 100643
Polux nondestructive inspection method for wood pole strength meas. 123034
polymer-matrix composites, opt. spectrosc./laser-ultrasound generation comparison 114554
inspection continued
polysilicon post-etch residue contamination in wafer fab., failu anal./elimination 103349
portable 3D US NDT exam., kinematic anal. 125147
portable neutron generator based fast neutron radiography 101563
power equipt. portable inspection tour installation *(Chinese)* 77803
power syst. asset mgt. using infrequent inspections 133448
power transformers insulating oil diagnosis using neural nets 134135
proc. chamber recovery using pattern monitor wafer on inspection tool 1005
proc. control and diagnostics in semicond. mfg., conf., Santa Clara, CA, US (Sept. 2000) 100413
proc. imaging for autom. control, conf., Boston, USA (Nov. 2000) 113219
proc. monitoring, surrogate variable based method 124396
procedural inspection task, forgetting models, empirical comparison 100660
product life-testing strategies for improved data with time/cost savings 1243
QC, stat., optimum rectifying inspection plans 67656
quantitat. NDE, conf., Ames, USA (July 2000) 100385
random defect-limited IC yield using deterministic model 103955
ref. plates absol. calib. for surface interferometric inspection 86392
reticle defects, detect./repair/printability for 193 nm exposure 126563
reticle inspection database pre-screening using mfg. rule check 100646
round bar US testing, angle beam immersion tech., echoes anal. 114519
satellite inspection robot, end-effector 100507
SEM sub-surface probing for indust. inspection appls. 100649
semicond. proc., opt. microscopy 89888
semicond. technol., particle inspection, in-line monitoring *(Japanese)* 89911
semicond. wafer, defect detect., particle scanner, calib. 89889
serial prod. lines, inspection/repair stations, perform. modelling 67657
silicone elastomer insulating surfaces, hydrophobic charact. *(German)* 10440
SILYAL top surface imaging proc. for 157-nm lithog. 103654
single-unit syst., completely unknown lifetime distrib., inspection schedul 67648
small metal particles detect. using RF SQUID planar gradiometer 114530
smart struct., self-diagnosis/-repair using hollow-centre opt. fibre 114559
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 9060
SMT assembly proc. enhancement using prod. defect data 115173
SMT component solder joint void meas., X-ray image anal. 115176
SMT electronics assembly, SPC/data collection, determ./implement. 115170
SMT inspection machine *(Japanese)* 89912
SMT proc. control strategies using automated X-ray inspection 115153
SMT test/inspection tools for improved proc. control 115154
SMT yield enhancement by X-ray inspection/rework integrat. 80498
sodium lamp tube crack detect. using laser illum. *(Japanese)* 89429
SOI bonded wafers, eval. by automated acoustic micro imaging 126220
source-sample react. forces meas., EM NDE tech. 101572
stainless-steel-particle-related burn-in failures, corrective actions 103233
steam generator tube inspection, rem. field eddy current tech. 112237
steam power plant feedwater heater tubes plugging selection 99554
steel pipe machined defects, mag. flux leakage sig., feature extraction 100635
strategy optim. in electronics prod. using quality cost models/SPC 124411
structural integrity expt. eval., US tech., acoustoelasticity 90598
sum of Xs control chart employing curtailed inspection 89940
T-ray imaging, package inspection & portable 3D scanners 120908
tailored blank laser welds, QC, US guided wave & EMAT use 124139
Taipower hydropower project quality inspection syst. improvement *(Chinese)* 77773
telepathology and rem. microscopy for intra-operative diagnoses on frozen sect 111273
trilinear color image sens., very high resoln. 120887
truncation proc., asperity profile changes, interferometric microscopy 113758
two-coord. automatic-tracing device for accessory size meas. *(Chinese)* 12440
two-coord. slope test with fibre opt. sens., math. model 120861
two-soln. interface meas. using image proc. *(Japanese)* 132213
Ukraine/Russia, in-service reactor inspection technol. improvements 112256
ultrathin wafer handling/probing 126260
unmanned mini-helicopter control for visual power lines inspection 123020
US NDT data proc., 3D graphics role, adv. software environ. 114539
US sig. class., neural net based multidimens. sig. proc. 101591
US weld inspection sigs., LEARN++ incremental learning algm. 100634
UV inspection of EUV and SCALPEL reticles 103595
UV resists, 193 nm, CD degrad. during SEM inspection, mechanistic studie 103550
view planning with registration constraint 84212
VUV lithog., attenuated phase shifting mask 103598
wafer bumping technol. for cost-effective packaging 67618
wafer contaminant location/ident. by IR microscopy/fluoresc. illum. 70230
wafer defect/excursion monitoring technol. 70235
wafer fab. technol., defect mgt. strategies, inspection technols. 124415
wafer inspection, nondestructive thickness meas. techs., productive availabilit 67654
wafer probing technol. in IC mfg. 70266
wafer sort yield, robust windowing method for Poisson yield model appl./validation 103954
weighing apparatus, optimal inspection freq., mfg. proc. *(Japanese)* 78689
weld inspection, US data reconstr., visualis. & anal., AutoCAD(R)2000 10064
weld inspection by laser-based sens. 124395
weld QC, radioscopic testing, automatic image proc. 100642
welded joints maint., fatigue, fracture, probabilistic optim. 89843
weldment intell. US flaw class., perform. enhancement 101614
wire rope local flaw quantitat. test, self-adaptive wavelet packet *(Chinese)* 124405
X-ray CT, cone beam reconstr., inversion formula 118268
X-ray digital microlaminography, BGA/flip-chip inspection 67652
X-ray imaging methodology advances & capabilities, review 110431
X-ray imaging metrology tool capability for SMT PCB assembly nondestructive inspection 113738
CdZnTe pad detector, readout ASIC, automatic baggage inspection 121480
Cu ULSI metallization barrier layers, review 69930
Cu dual damascene proc. defect tracing 126496
GaAs RFICs in SOT-23 packages, failure anal. techs. for small plastic package 125806
IC yield mgt., customized AutoSAT templates in foundry environ. for better rec ipe set-up 100626
KrF attenuated PSM defect printability, DRAM fab. 103600
$PbWO_4$ anisotropic scintillating crysts., quality inspection from interferometric fringes 121607
SF_6 GIS inspection/maint. services using voice recogn. syst. 134274
a-Si X-ray imager, large-area, perform., NDE appl. 120895
Si polished wafers, nanotopography anal. techs. 75868
Si wafer fab., nodules due to Si precip. 103950

pection continued
ZrSiO attenuated phase shift mask, ArF lithog. 103601

tability *see stability*

tallation
see also commissioning; computer installation
12.4 kV HTSC power cable installation/operation 77431
110 kV compact overhead power line testing and installation 99383
120 MW hydropower plant Kaplan bulb turbines installation project 77775
400 MW lignite-fired power station, FGD retrofitting experience *(English)* 123208
525 kV XLPE EHV power cables installation project, China 88449
1100 MW combined cycle power plant repowering project *(Chinese)* 77764
alternative local loop 85403
busbar layout, CSCW syst. using VRML *(Chinese)* 100501
commercial bridge capacitor bank installation project, USA 112740
Coriolis mass flowmeters, model based correction 120731
flexible power/inform. cables, breakage studies 77385
FTTD installation and maint. *(Spanish)* 96757
long distrib. feeder, shunt act. filter installation considerations 133663
optic fiber sens. based telemetry for height meas. of telescopic gasometer 75381
power equipt. portable inspection tour installation *(Chinese)* 77803
power indust., elec. installations, efficiency *(Spanish)* 100500
radial primary power distrib. network optimum VAr control 77332
redox-flow batt. syst. for installation inside office buildings, develop. 123727
roof-mount Silicon Film™ module grid-connected PV power syst. 112387
small build-own-operate onsite cogen. projects 123178
stationary batt. selection/maint. guidelines 112793
unbalanced distrib. syst. three-phase act. power line conditioners optim. 88365
wafer fab, high vol., retrofitting using SMIF technol. 67519
XLPE cable for Shin-Toyosu long-dist. line, 500 kV, develop. and instal. 123014

tallation, computer *see computer installation*

tallation management (computers) *see DP management*

tallation, power *see power installation*

truction sets
see also computer architecture; microprogramming
ASIP SoC multimedia codesign based on multicriteria optim. 119808
CADRE, low-power, low-EMI DSP archit. for digital mobile phones 125542
computer arith. for media sigs. proc. 90807
crosstalk-induced logical/delay faults, on-chip buses, embedded-software-based approach 101921
digital video, flexible software decoding 129724
DSP cores, hardware/software partitioning algm., register files 68852
fault tolerant approach to µP design 102233
FLUX chip, 20-GHz 16-bit ultrapipelined RSFQ proc. prototype 68828
FR-V archit., VLIW proc. core for SoC *(Japanese)* 114795
H.263 video encoding optim. using single proc. computer, perform. trade-offs/benchmarking 95347
handwriting recogn., high speed VLSI archit. 90945
heterog. multiprocessor DSP archit. for low-power audio sig. proc. appls. 90936
high-perform. CPU designs, step power reduction, instruction prediction 79933
indust. network proc., C compiler design 130342
Intel x86 archit., security vulnerabilities caused by errors 102234
Itanium's new basic operation of fused multiply-add 68851
mAgic-FPU and MADE, customizable VLIW core and modular VLIW proc. archit. description environ. 114801
MAJC 5200 multimedia proc. µP 90950
multimedia execution hardware accelerator 90944
PIPER, co-synthesis, pipeline structs., instruct. reordering constraints, instruct. set proc. 114774
prog. DSP design using VLIW archit. 102205
reconfigurable systs., design space, reconfiguration hierarchy 125348
SoC design, fast hardware-software co-simul. framework 79710
SoC proc., hardware/software instruction set configurability 125547
trace cache instruction fetch perform., anal. model 125516
VLIW CPU, appl.-specific, reconfigurable, optimum extended instruction-set archit. determ. 90939
VLIW proc., code compression 102242
VLIW scheduling for energy and perform. 90937

strument landing systems
see also microwave landing systems
AIRBUS, MLS all-weather landing syst. *(French)* 88086
glide slope perform. sensitivity to sideband-only phase variances 98908

strument transformers
150 kV distrib. network measuring transformers eval. 123557
differential busbar protection during measuring power transformers saturation *(Serbian)* 88483
flexible inductive transducer, mag. resist. influenced by variable overlap area 120759
HV instrum. transformer ceramic insulator, 3D elec. field. anal. 88803
impedance synthesis methods for instrum. transformer calib. 115094
low-power instrum. transformers, optimized switchgear operation 77923
opt. CT, sig. proc. schemes comparison 75814
power line current sens. using analogue opt. data transfer 77661
substations, opto-electronic sens. concept for analogue meas. 78073
three-phase current sens., mag. sens. arrays, sig. proc. 109522
transm. line protection, I-V transformer correction, ANN 77509
wideband voltage meas. using HV CT 123090
$Bi_4Ge_3O_{12}$ opt. voltage transformer, temp. compensation 123550

strumentation
see also aerospace instrumentation; computerised instrumentation; digital instrumentation; digital readout; display instrumentation; instruments; nuclear instrumentation; physical instrumentation control; signal generators; signal processing equipment; signal sources
conf., instrum. & meas. technol., Budapest, Hungary (May 2001) 100431
DoD stds.-based COTS products, modeling 111640
DVB, QoS monitoring/optimisation *(German)* 75267
FEL reflective optics, metrology instrumentation 82700
impedance synthesis methods for instrum. transformer calib. 115094
intell. components/instrums. for control, conf., Buenos Aires, Argentina (Sept. 2000) 113254
Ka-band resonator autooscillating instrumentation for Q-meas. 75394
solar home PV power systs., batt./charger testing procedures 133897
SR instrumentation, conf., Stanford, USA (Oct. 1999) 113182
subsea separators, level meas./control strategies 110049
symm./relative errors principles 97115
weld defects, Lamb wave signature, wavelet anal. 89846
Pb-acid batt., discrete freq. immittance spectrosc. 89112

instrumentation amplifiers
accuracy improve., phase and gain error meas., self-calib. 114623
bladder controller nerve sig. analog proc. cct., implantable, low-power CMOS 76677
CMOS based smart temp. sens. & voltage refs., sig. proc. 132085
DAQ systs., sens. noise reduction method 131830
delta-sigma ADC, ultra-low noise chopper-stabilized prog. gain instrum. amp. 90976
LAPS, light addressable potentiometric sens., CMOS analog lock-in amp. 109467
microcontroller-based portable multifunctional patient monitor 98205
multipurpose protection 79573

instrumentation buses *see field buses*

instruments
see also individual types of instruments, e.g. "astronomical instruments", "bridge instruments", "optical instruments"
bipolar charge aerosol classifier instrum. syst. 128663
blower efficiency meas. instrum. using µP technol. *(Chinese)* 109428
EL indicators, struct., sealing methods 109838
elec. instrum. standby power supplies, all-day-efficiency improvement *(Japanese)* 78022
electronic instrum. engng., conf., Novosibirsk, Russia (Sept. 2000) 78420
ground-DC power supply insulating resist. meas. apparatus *(Chinese)* 123082
hole/axle dimens. meas., extreme value orient., turn back pt. error 86949
laparoscopic instrums., redundancy to avoid stretching 132997
meas. instrum. design, accuracy calc., permissible errors 86368
monitoring/control over Internet, GPIB interface 75371
power syst. voltage distortion source detect. method 77339
small hole diam. meas., pattern projection method, theory *(Japanese)* 75878
XmaS beamline instrum. develop. for mag. and high-resoln. diffr. 121852

insulated gate bipolar transistors
1.6 MW/150 kHz IGBT inverter for welding appls. 78364
3-level invert voltage space vector control *(Chinese)* 68577
3-level invertor, IGBT based, for urban rail vehicles *(Chinese)* 68578
3-phase ZVS PWM inverter, digital control, reson. snubber, CT 134225
4.5 kV Fuji Electric high-power flat-packaged IGBTs 126797
5-phase reluctance motor drive, DSP-based direct torque control 89336
50 kV, 2 kA switch, series IGBTs driven by displacement current *(Japanese)* 81282
200 kV cable tests, HV AC-AC power converter 88448
600 V PT-/NPT-IGBTs under different short-cct. conditions 103844
600 V/6 kA bidirectional ZVS hybrid DC IGBT switch 134271
1200 V carrier stored trench bipolar transistor switch characts. 126788
1200 V robust trench IGBT 70171
1200 V soft punch through IGBT develop. 70172
1700 V IGBT module using punch through struct. 70080
AC-excited sync. machine control syst., field weakening, overload capability 123905
anal. model, applied terminal voltages 115849
arc welding machine, control power stages based on IGBT switching ferrite transformers 77977
asymmetrical IGBT, I-V characts. degeneracy rel. to n-buffer layer conc. 126765
automatic-lock-automatic-retrieve single-chip intell. power module for converter systs. 125222
auxiliary reson.-commutated snubber-linked three-level IGBT ZVS VSI 134202
auxiliary reson.-commutated soft-switching inverter topol. 134200
bi-directional double-side double-gate device, wafer bonding 126828
BLDCM drive syst. for EV appls. 123960
bondless press. contact IGBT, electromechanical design strategies 70064
brushless PM motors, low inductance, multilevel DC link inverter 133931
clean energy delivery, power electronic devices as enabling technol. 114610
clustered IGBT monolithic integrat. with LV components to form 3 kV intell. power chip 81537
clustered IGBT power semicond. device 70055
compact intell. IGBT power module develop. 70138
Cool MOS, low on-resist. MOS-gated power device, MOSFET/IGBT comparisons 115881
crit. loads ride-through, 3-phase inverter, DC-link voltage regulator 88911
CSTBT, on-state voltage 126866
D^2BGA chip-scale IGBT package 81290
DC metro traction drives, inverters, HV press-pack IGBTs 89390
DC-link inverter, low-inductive fuses 78042
device technol. future 90715
DIP intell. power module, 4th generation planar IGBT 70147
discrete IGBTs for motor control, elec. robust designs 115878
distrib. syst. power quality improvement using PWM IGBT convertors 133691
drive, high power, protection cct., overcurrent *(Chinese)* 125224
DSP-controlled PWM VSC-based STATCOM, develop. 123715
dual channel injection enhanced gate transistor, 2D simul. 103837
dual-gate lateral IGBT with gradual hole injection, anal. 103806
dual-voltage self-clamped IGBT for automotive ignition appls. 134602
EconoPACK+ modular IGBT inverter design platform 77993
EconoPACK+ six-pack IGBT module invertor package 88883
EconoPACK-Plus large-capacity 6-in-1 IGBT module 126795
elec. drives, low-power semicond. devices integrat. 100240
embedded power, hybrid MCM-based 3-D integrat. packaging technol. 80541
emitter ballasted IGBTs, short-cct. ruggedness, body effect 126846
epitaxial/nonepitaxial planar gate and trench gate IGBTs, turn-off behaviour 115912
field stop IGBT concept with, optimized diode 70136
fixed-speed IM PWM invertor-based ASD retrofit 134496
flux reversal machine, automotive alternator with 42/14 V DC dual output 113120
free wheeling diode, short on-pulse reverse recovery behavior 126650
freq. converters for IM drives 112663
gate drive cct., saturation voltage 126853
GTBT, gate drive cct., current source 126850
H-bridge switching converters, full-digital control board 88832
hard/soft switched PWM invertors, conducted EMI emissions modelling 123635
high power IGBT inverter, wiring inductance minimisation 112635
high power IGBT module freq. converter, transformer-type electron accelerators 99748
high power PWM inverter with series act. filter, control strategy 123605
high-perform. gate cct. driving multiple connections of insulated gate devices 90740
high-power, press pack module 124387
high-power HV power ICs for automotive appls. 78323
high-power IGBT converters, reson. turn-off snubber, design optimisation 77978
high-power IGBT CSI for AC motor drive appls. 134183

insulated gate bipolar transistors continued
high-power IGBT inverter for induction heating appls. *(German)* 112618
high-power semicond. devices state-of-the-art 92325
homog./nonhomogeneous IGBTs under short-cct. conditions 70169
HV, SCALE driver *(Chinese)* 70154
HV CMOS IGBT gate driver controlling four switches 116045
HV GTO and IGBT, PSPICE cct. simul. 81249
HV IGBT inverter source, intrinsic fail-safe capability 125231
hybrid act. power harmonic filter topol. develop. 89034
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
IGBT arc welding power supply using soft-switch inverting control *(Chinese)* 90718
IGBT gate driver, intell. power module, HV CMOS proc. 126824
IGBT modules, thermal fatigue effects, finite element modelling 70065
IGBT/diode chipset, power module, field stop technol. 126827
IM, rotor IGBT chopper controlled, quasi-dyn. model *(Chinese)* 77859
IM drive, rotor IGBT chopper control 89319
IM winding voltage distrib., PWM IGBT inverter effects 88728
induction heating freq. convertors, retrospective, develop. trends *(German)* 112617
indust./traction machine drives, power electronics technol. 100275
interconnected offshore power syst., IM starting, ASVC 100358
inverter, 3-level space vector PWM, voltage unbalance compensation 88925
jn. temp./losses anal. using behavioral models 70079
latch-up immunized lateral trench IGBT, p+ diverter struct., smart power IC 115870
lateral IGBT, current distrib., 2D anal. model 126760
lateral IGBT, npn controlled, segmented anode 115847
lateral trench IGBT employing effective p+ diverter for improving latch-up charact. 103836
LLC full bridge inverter topol., plastic indust. corona generation 89478
local lifetime control IGBT structs., turn-off perform. comparison 126702
losses anal., SPICE behavioral models 70145
micro channel water cooled power modules 67631
module, chip current imbalance meas. *(Japanese)* 81283
module technol. with high PD resist. 126790
modules, power cycling lifetime improvement, reliab. design 126798
modules, void free soldering proc., solder joint reliab. enhancement 67644
monolithic IGBT gate driver for smart power modules, CMOS 0.8 μm/50 V proc. implement. 81538
multi-syst. locomotives, traction drives, IGBT inverter, small snubber concept 89400
MV power converter topologies for high-power appls. 134205
MV PWM IGBT VSI power stack topologies 89345
non-hermetic press. contact IGBT modules, reliab. eval. 124321
nonpunchthrough trench IGBT high-power switching devices, TCAD syst. 70062
NPT IGBT rated overload charact. study 126789
NPT-IGBT, wide cell pitch carrier stored trench bipolar transistor struct. 126721
parallel connected IGBTs, act. voltage clamping, power loss distrib. 70144
pipeline fluid heating using PWM invertor-eddy current dual pack heater 124099
planar IGBT, sub-micron proc. technol. 126861
power conversion, power semiconds., conf., Nurnberg, Germany (June 2000) 67391
power converter technol., soft switching, GTO, IGBT, IGCT 99743
power device chip interconnection from wirebonding to area bonding 81255
power devices, electro-thermal model 126724
power electronics market anal./review 92330
power IGBT, thermal behaviour, 2D computer simul. 92327
power IGBT series assoc., act. clamping cct. optim./integrat. 126787
power IGBT switches, flexible dv/dt/di/dt control method 126786
power mgt. semicond. roadmap in new millennium 99740
power module, temp. distrib., simul. model *(English)* 103802
power module in automotive traction inverter, lifetime estim. 125219
power modules, wire bonding connections, lifetime improvement 81291
power pack, reverse bias safety operating area 126826
power semicond. device modelling for power convertor transient simul. 112634
power semicond. device packaging/chip interconnection, wire/area-bonding technols. 115880
power semicond. device technol., current status/trends 126704
power semicond. devices, phys. based compact models for cct. modelling appls. 81258
power semicond. modules, power cycling reliab. 126792
press. contact IGBT, reliab. testing 70140
PT and NPT-IGBTs, short-cct. operation, spontaneous destruction 126849
pulsed power appls., testing 92354
punch-through device, silicon wafer direct bonding technol. *(Chinese)* 92336
punch-through IGBT, forward voltage and turn-off loss 126865
PWM inverter, partially coupled electro-thermal anal. 123656
PWM inverter high-power IGBT module ratings for traction appls. 78046
PWM inverter-fed IM, insulation charact. anal. 134047
PWM invertor switching pattern generators, FPGA implement. 123654
PWM invertor-fed IM drives, shaft voltage prediction model 134454
PWM multicell inverter, safety/short-cct. tolerance improvement 77999
PWM VSI-fed IM drives, series line termination net 123926
R-IPM series, IGBT intell. power modules, Tj detecting fn. 70146
reson. DC link inverter, IGBT perform., device optim./modeling 123614
reverse blocking, AC-AC direct conversion cct. 126859
rolling stock propulsion systs., IGBT power semiconds. 126709
self-aligned p base trench IGBT, on-state perform. enhancement 126785
series reson. DC-DC converter, HV IGBT eval. 88931
series-connected IGBT modules, hierarchical controller archit. 90725
series-connected IGBT strings, switching transients control 70152
series-reson. convertor, phase shifted control, quasi-soft switching 88940
single-gated multiple-mode power semiconds., IGBT switching, thyristor on-state charcts. 70061
single-phase switch-mode voltage-doubler rectifier using pump ccts. *(Japanese)* 112655
small-sized lateral trench electrode IGBT, improved latch-up, breakdown charcts. 115869
smart IGBT for automotive ignition appls., chip on chip technol. 134603
SMES control algms. for customer power quality improvement 78190
SMES syst. for study on utility/customer power appls. 78189
soft switching inverter, act. reson. DC link assisted, power loss anal. 88929
soft-switched act. clamped reson. link inverter eval. 77982
soft-switching choppers, load adaptive ZVS scheme 134189
soft-switching high-power HF inverters, parallel connection topol. 134204
SOI HV LIGBT and LDMOS, unclamped inductive switching 126851
SOI power ICs with intell. CMOS control circuitry 81536
solderable metallization, device passiv. material effects 70067
insulated gate bipolar transistors continued
SPWM VSI harmonics restraint/anal. studies *(Chinese)* 88814
stacked IGBTs based fast HV, high-current switching 99844
STATCOM nonlin. control scheme *(English)* 77234
static converters, indust. and utility appls. 99747
switching module systs., electrothermal anal., thermal component model 90745
sync. generator excitation systs. using IGBT power convertor 133952
three-level IGBT inverters, space-vector PWM method 88965
three-phase boost rectifiers, discontinuous cond. mode operated 123603
three-phase inverter, IGBT output stage, driver module 112649
three-phase PWM VSI IM drive, lumped param. model 123897
three-phase soft-switched current-source PWM rectifier topol. *(Japanese)* 99804
three-phase thyristor bridge reson. switch *(Japanese)* 82431
three-wheel EV, slotless PM AC motor wheel direct drive 113097
traction, IGBT modules reliab. testing 89389
trench clustered device, UMOS controlled thyristor 126848
trench device, hybrid vehicle appl. 126867
trench device, soft-switching turn-off charact. 126847
trench electrode, power IC syst. 92350
trench gate PT/planar IGBT modules comparison 70139
trench gate technol. MOSFET/IGBT semicond. power modules for operation up to 270 K *(German)* 70059
trench high-cond. IGBT, short-cct. capability 126860
trench-gate IGBT switching charact., temp. effects 126793
trench-planar IGBT, injection-enhancement effect 70063
turn-on charcts. improvement with trench oxide pin Schottky diode 126722
UHV device termination, 3D RESURF super-jn. 126713
ultra fast hybrid cct. breakers with GTO and IGBT, comparison 99842
unity PF act. clamping single-phase three-level rectifier 88851
VSI control, parasitics effects modelling 88926
VSI IGBT perform., cct. parasitic impedance effect modelling 88921
washing machines, three-phase IM, electronic control ccts. *(German)* 89467
ZCS commutation, IGBT behavior anal., test ccts. 90742
ZCT soft-switching PWM convertor *(Chinese)* 99753
Al electrolytic capacitors, low inductance, freq. converter design 69280
Pb-Sn alloy, void free soldering proc., large-area high power IGBT modules 92322

insulated gate field effect transistors
see also insulated gate bipolar transistors; ion sensitive field effect transistors; MISFET; MOSFET
BSIM, Berkeley short-channel IGFET model for cct. design, CMOS appls. 127061
deep-submicrometer SOI gate controlled hybrid transistor, quasi-2D model *(Chinese)* 92333
FlipFET, wafer level packaged HexFET devices 70137
HIGFET device manufacturability enhancement using DOE/tech. knowledge 70166
HSGFET ozone sens., ppb range ozone detection *(Chinese)* 120999
hybrid organic-inorganic struct. based optoelectronic devices 93435
light responsive polymer FET 116951
metal-ferroelec.-MIS memory FET, fab. & charact. 127276
organic TFT, logic gates, bias stress 103807
polysilicon TFTs, low temp. excimer-laser crystallized Si, fab./charcts. 115935
$Bi_2Ti_2O_7$ thin film, chem. soln. deposition *(Chinese)* 90490
GaAlAs-GaInAs-GaAs complementary N-HIGFETs, 0.3 μm, 10 GHz load-pull meas. 92369
GaAs HIGFET, 0.35 μm, surface oxid. status effects on charact. 103843
GaAs HIGFETs, WSi gate, degrad. phenom. caused by hot carriers 92379
GaAs/GaMnAs(InMnAs) ferromag./nonmagnetic heterostruct., spin-depend. phenom. 91766
GaAs-based HIGFETs on LT-GaAs buffer, optim. 70165
PLZT/$(LaSr)_2CuO_4$ perovskite ferroelec. FET, strongly modulated cond. obs. 81338
Si MOS nanotransistor, gate technol., DC elec. results 103827
Y_2O_3/Si(001), direct heteroepitaxy, high-k gate dielec. appls. 124844

insulated wires
elec. conductor tensile props. 91440
helical magnetocumulative generator operation, wire insulation effects 123275
in-neck yokes, vac. props. of materials, inner yoke tubes appl. 91543
mica-bearing insulated wire for machine windings 99619
space grade wires & cables, radiation tolerance, fast eval. tech. 122469
space grade wires in electron environ., ESD study 133235
spiral magnetocumulative generator, solenoid wires insulation influence *(Russian)* 99827
SR beamline, residual gas anal. of instrumentation wire 132483
Al magnet wire continuous cleaning proc., MF atmos. plasma appl. 125857

insulating coatings
see also insulating thin films; varnish; waxes
electrostatic powder paints, TSC rel. to curing proc. 92667
infinite perfect conducting nonlin. loaded circ. cylinder excitation calcs. 83400
struct. acrylic latex based elec. insulation coatings 104412
supercond. magnets, ground/turn/layer insulation, phys. props. 82000

insulating materials
see also ceramic insulation; ceramics; composite insulating materials; dielectric materials; gaseous insulation; glass; insulating coatings; insulating thin films; mica; organic insulating materials; thermal insulating materials
1D insulation, charge carrier transport/trapping, thermal stimulation 81723
150°C glass transit. temp., PD stabil. 70433
ageing 104403
dielec. breakdown mechanisms diagnosis using neural net PD monitoring 92665
earthing syst. safety mitigation measures, series impedance insulation 77573
elec. insulating material/systs. rating, temp. limits, IEEE Standard 92664
electroinsulator resource, thermodyn. prognostication 92666
ICPADM, hist. 124203
liqs. flow electrification hazards 83123
surfaces ESD characterisation 83114
N_2, liq., nanosecond breakdown 81649

insulating materials, acoustic *see noise abatement*
insulating materials, thermal *see thermal insulating materials*

insulating oils
see also transformer oil
11 kV oil filled switchgear, maint. optimisation condition based decision making 134263
400 kV oil-filled power cables for hydroelectric power plant project 77386
AC dielec. strength testing 92608
AC voltages, prebreakdown currents anal. 104407
charged oil metal vessels, lightning protection systs. 128665
dielec. props., acetophenon effects *(Japanese)* 81729
high temp. HPFF cable operation, thermo-chem. phenom. 133734

ulating oils continued
PD sig. detect., opt. fiber Sagnac interferometer *(Korean)* 70384
polypropylene film-oil interacts., surface treatment 104419
transformers, oil-cooled, overloading/loss-of-life assess. guidelines 123541

ulating thin films
see also dielectric thin films; insulating coatings
acetophenone-soaked polyethylene, carrier mobility estim. by transient space charge *(Japanese)* 127250
Advanced DV-MULTI build-up packaging substr., proc./struct. 124343
all-printed inorganic logic elements fabricated by liq. embossing 114704
BPSG films, atmos.-press. CVD 124933
BSG film, LPCVD, wafer bonding appl., AFM, FTIR 124887
catalytic CVD, conf., Kanazawa, Japan (Nov. 2000) 124220
deep submicron NMOSFETs, ultrathin gate oxide, post-soft-breakdown charact. 81342
diamond heat-spreading films for GaN-based high-power FET devices 81254
dyn. neg.-ion mixing method using high-current HI/electron beam evap. 125054
fluorocarbon films, integrated MEMS proc., deep RIE 104205
intrinsic oxide breakdown, trap generation closed-form stat. model 69768
methylsilane/trimethylsilane-doped low k PECVD organosilicate glasses, elec. props. 104233
MOS devices, thermal oxide degrad. kinetics under elec. stress 91890
MOSFET gate oxide, H_2-anneal induced pos. charge generation and props. 92378
multilayers/films, deposition/struct., review 90325
oxide reliab. in MOS devices under high field stress 103730
polysilicon TFT, self-aligned thicker sub-gate oxide near drain/source regions 126752
silica low-k film, methylene group incorporation, CVD, elec. props. 101320
solid films/surfaces, conf., Princeton, NJ, USA (July 2000) 89510
thick gate oxides, >50nm, surface treatments, growth conditions, power MOSFET appl. 103365
thin oxides quality assess. using const./ramped stress meas. 103729
ultra-thin oxides in p-channel MOSFET, wear-out accel., body effect induced 103841
ultra-thin oxides MOS capacitors, elec. charactn., quantum modeling 103741
ultrathin oxide films on Si, effective thickness meas. methods 109966
Y_2O_3:Eu(Tb)(Ce) thin films, phosphor, pyrolysis, colored emissions 104935
Al/V_2O_5/Al struct., elec. transport mechanism 80961
AlF_3 thin films growth on GaAs(110), struct. and chem. stabil. 114403
AlN gate dielec. MIS capacitors, reactive magnetron sputtered, elec. props. 91905
Al_2O_3 films, prep. struct., HREM, mag. tunnel jn. appl. 116125
Al_2O_3 thin insulating barriers in mag. tunnel jns., elec. props. 80960
AlO_x, at. layer deposition, thin film head gap appl. 101232
Au/$BaTiO_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
a-BN_x films, opt. absorpt., elec. cond. 69554
BN_x-SiN_y composite films, multisource plasma CVD synthesis 124900
$BaTa_2O_6$ interface elec. props. in TFEL devices 97669
C films, low temp. PECVD, emission props. 90379
a-C:F films, ion beam deposition, charactn. 124845
CeO_2, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
CeO_2 thin films, spray pyrolysis, opt. props., electrochromism 82283
CeO_2/Si(100) sputtered film, elec. charact. anal. 92673
Cr_2O_3 layer in MIM jn., inelastic tunnelling *(Russian)* 103218
Eu_2CuO_4, magnetron rf sputtering on YSZ(100) substrs., buffer layer for YBCO growth 68145
GaN epilayers on GaAs(110), elec./opt. props., radical beam epitaxy, TEM, PL 90333
Ga_2O_3, high-k gate dielec. on SiGe 126230
Ga_2O_3:Gd/GaAs interface comp., core level photoelectron spectrosc. 69752
Ga_2O_3(Gd_2O_3), high-k gate dielec. on SiGe 126230
Gd_2O_3 films, electron-beam evap. on Si(100), charactn. 91906
Gd_2O_3, high-k gate dielec. on SiGe 126230
HfO_2 gate insulator, high permitt., chem. vap. deposition 114356
$Hf_{0.74}Yb_{0.26}O_{1.87}$, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
MgO buffer layers, SEM, modelling, inclined substr. deposition, evap. 124833
MgO films, IBAD, texture develop., deposition thickness/rate depend. 68366
MgO thin films, spin coatings, secondary electron emission 102891
(Nb,Ti)N films, reactive magnetron sputter-deposition, sputter source charactn. 101178
NbN films, reactive magnetron sputter-deposition, sputter source charactn. 101178
$NdNiO_3$ film, PLD 114374
poly-Si gate oxide reliab. post annealing degrad. and suppression *(Chinese)* 126244
a-Si oxide films, Al doped, RT vis. EL 82366
Si oxide films prepared by RF PECVD, C impurities reduction 90363
Si oxynitride films, plasma-nitrided, gate-quality, XPS study 103331
Si:Er/SiO_2 nanocrysts., PL, broad-band/flashlamp pumping 69484
Si/SiO_2Cl_x syst., rapid thermal chlorinated oxides 92062
Si-rich oxide layered MIS capacitor, elec./struct. charactn. 69748
SiC conducting/insulating tracks by laser direct writing 115337
SiC/SiN_x/Si struct., nitridation/rf sputtering growth, charactn. 91929
α-SiCOF film, low-dielec.-const., PECVD, ULSI interconnection appl. 81108
SiGe CMOSFET tunneling currents, ultrathin gate oxide, cond.- and valence-band components 81298
Si_3N_4, LPCVD from dichlorosilane/ammonia, single wafer RTP 90406
Si_3N_4 MEMS structural films on Si, wafer scale testing 127092
Si_3N_4 film, Cat-CVD, ULSI proc. appl. 124975
Si_3N_4, film, ECR assisted sputter deposition, elec. props. 127255
Si_3N_4 film, helicon plasma sputtering deposition, props., sputtering-gas press. effect 101183
Si_3N_4 films, smooth and dense, prep. and charactn. 114251
Si_3N_4 films, temp. depend. thermal expansion coeff., MEMS 104177
Si_3N_4 films, ultrathin on Si, SPM/lithog. 92030
Si_3N_4 nanoporous membrane, ion beam sculpting, DNA detector 103711
Si_3N_4 thin films, microbridge testing, deform., CVD 132183
SiN_x films, ICPECVD, spectrosc. ellipsometry, etch behavior 124927
SiN_x films, ion-assisted deposition, ECR plasma, props. anal. 101448
SiN_x, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiN_x:F, gate dielec. films, rem. ECR-PECVD from NH_3/SiF_4 90414
SiN_x:H films for polysilicon gate patterning, charactn. 127134
SiN_x:H/Si structs., RTA, elec. props., C-V/SPV charactn. 91887
Si_3N_4-SiO_2 dielec. film, photo-enhanced NDR/photo-accelerated TDDB 71506
SiO_2 CVD, low-press. silane oxid., modeling particle form. 68217
a-SiO_2, film, PECVD, props. thickness depend. 101365

insulating thin films continued
SiO_2 film, TEOS/ozone CVD modelling 90416
SiO_2 film, gate oxide degrad., stress polarity effect 104255
SiO_2 film thicknesses meas. by XPS, elastic-electron scatt. effect 132161
SiO_2 films, PECVD on Si, defect charactn. 124905
SiO_2 films, electron injection stressed, trapped charges nonuniform distrib. 92675
SiO_2 gate dielec. layers for Si microelectronics, review 103212
SiO_2 gate in power MOS devices, electron irrad. effects 103719
SiO_2 growth by TEOS-O_2 plasma mixture, 3D Monte Carlo model 68218
SiO_2, high quality ultra-thin gate dielec. by Cat-CVD and catalytic anneal 127137
SiO_2 insulating films, RF magnetron facing target sputtering 114247
SiO_2, interconnect test structs., electromigration failure, materials effect 69957
SiO_2 layers on Si, excimer-laser-induced micropatterning 81072
SiO_2 planar thin films oxid., stress effects 126351
SiO_2, porous silica thick films by base-catalyzed sol-gel route 79375
SiO_2 sol-gel films, pot. sens. appls., surface plasmon reson. study 101408
SiO_2 stressed ultrathin films, nm-scale elec. charactn., cond. AFM 80939
SiO_2 superthin films on GaAs, liq. phase deposition, metal-semicond. barrier height 80934
SiO_2 thin film, CO_2-laser-assisted PECVD 79282
a-SiO_2 thin films, increased dielec. permitt. 92599
SiO_2 thin films, nonabsorbing/weakly absorbing, thickness/refr. index meas. 75906
SiO_2 thin films, plasma CVD, surface roughness 101359
SiO_2 thin-film, defect-induced dielec. loss, Coulomb glass 81631
SiO_2 ultra-thin films, X-ray irrad. damage, microscopic obs. 81732
SiO_2 ultra-thin films, switching behaviour of post-breakdown cond. 115459
SiO_2 ultra-thin oxides, soft breakdown and hard breakdown, photoemission microscopy 69746
SiO_2, ultrathin combustion CVD layers on Zn coated steel, struct., morph. 101368
SiO_2, ultrathin, defect generation and breakdown induced by substr. hot-hole injection 103213
SiO_2 ultrathin films, leakage curr. under prebreakdown, MOSFET appl. 70162
SiO_2 ultrathin films, post-breakdown I-V charact., multiple snapbacks modeling 92610
SiO_2 ultrathin films, thermal growth, ion beam anal. 92058
SiO_2 ultrathin gate oxides, intrinsic dielec. breakdown, thermal damage 103209
SiO_2:C low k thin films, prep. by PECVD from tetramethylsilane 101323
SiO_2:Er films, Si nanoparticles, PL/EL enhancement 82319
SiO_2:F films, water absorpt., residual stress effects 90369
SiO_2:F,C with low dielec. const., deposition, high resist. to annealing 124917
SiO_2:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254
SiO_2/GaAs, penetration of at. H from gas phase 103316
SiO_2/Si:Er,Y nanocryst. films, luminesc. sensitization 71527
SiO_2/Si:N deep submicron CMOS transistors, ultrathin gate oxide growth 115924
SiO_xN_y, low stress films, sputtering type ECR plasma deposition, charactn. 124812
SiO_xN_y:H films for polysilicon gate patterning, charactn. 127134
SiON/Si film syst., liq. phase deposition, refr. index 90499
Sm_2O_3, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
Sr_2AlTaO_6 films, MOCVD, incorp. in HTS multilayer structs. 68241
Sr_2AlTaO_6 insulating layers for YBaCuO ramp-edge Josephson jns. 70809
$Sr(Ti_{1-x}Mn_x)O_y$ polycryst. films, leakage currents 127164
Ta_2O_5 CVD films based metal-oxide-metal structs., elec. props. 91925
Ta_2O_5 anodic thin films, defects, DLTS and conductance transient investig. 116134
Ta_2O_5 thin films, gate currents temp. depend. 126243
Ta_2O_5 thin-film, defect-induced dielec. loss, Coulomb glass 81631
TaO_xN_y ultrathin gate dielec., O_3 annealing, elec./reliab. charact. 69779
TiO_2 gate insulator, high permitt., chem. vap. deposition 114356
TiO_2 thin films, gate currents temp. depend. 126243
TiO_x IBAD films on Si, dielec. const., surface roughness, O ion dose depend. 115447
TiO_x MOCVD proc. for microelectronics appls. 90412
V_xO_y film, PLD 114374
Y silicate ultrathin insulators on Si, phys. and elec. charact. 91893
$YBa_2Cu_3O_7$/MgO films, high temp. supercond., inclined substr. deposition, evap. 124833
Y_2O_3, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
Y_2O_3 gate oxides, high-κ, on Si(100), interface reacts. 126224
Y_2O_3, high-k gate dielec. on SiGe 126230
Y_2O_3 sputtered films for electrochem. sens. 70375
ZnO thin-film, defect-induced dielec. loss, Coulomb glass 81631
ZrO_2 gate insulator, high permitt., chem. vap. deposition 114356
$Zr_2Sm_2O_7$, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
$Zr_{0.85}Y_{0.15}O_{1.93}$, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
a-iO_2 films, VUV-irrad., Si nanocrystals precip., Si-Si bonds form. 69997

insulation
see also cable insulation; electric breakdown; gaseous insulation; insulating materials; insulation co-ordination; insulation testing; insulators; machine insulation; substation insulation; switchgear insulation; thermal insulation; vacuum insulation
6-35 kV distrib. networks, insulation params. calc. *(Russian)* 88425
6-35 kV networks, insulation params., continuous monitoring 88430
All-Russian Scientific-Research Inst. of Electromechanics, elec. engng. materials develop. 101145
dielec. insulation void, PD sigs. modeling, EMTDC 70430
elec. equipt. on-line insulation monitoring, IS, GIS *(Chinese)* 88666
electrified rly., covered conductors *(German)* 123980
inductive heating freq. converter, insulation voltage stresses anal. *(Polish)* 99807
multi-chip power modules, thermal mgt. and reliab. 125942
solid insulation cavity PD, Pedersen's model 104251
SZITs digital ground connection indicator, lin. cct. insulation estim. *(Russian)* 90643
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517

insulation co-ordination
power electronic syst., insulation coord., Electrotechnical Standards *(Polish)* 90746
solid insulation, LV equipt., dielec. testing 70432

insulation testing
see also insulator testing; partial discharge measurement
3-electrode meas. set with metal ring *(Polish)* 120689
11 kV paper cables, condition assess., self-organising maps 99373
11 kV paper-insulated cable condition monitoring using SOFMs 123018
11 kV underground paper-insulated power cable failure detect. 133817
12.4 kV HTSC power cable installation/operation 77431
22 kV power distrib. cable condition monitoring approach 133720
150°C glass transit. temp., PD stabil. 70433
150 kV distrib. network measuring transformers eval. 123557
200 kV cable tests, HV AC-AC power converter 88448
500 kV DC extruded dielec. power cable *(Japanese)* 88442
500 kV XLPE insulated DC submarine power cable develop. *(Japanese)* 88446
AC machines, VPI stator coils, unimpregnated ground insulation, surge testing 133941
AC motors, ASD supplied, winding insulation degrad. 99609
acetophenone-soaked polyethylene, carrier mobility estim. by transient space charge *(Japanese)* 127250
acrylate/polyphenylene sulfide film capacitors for high temp. appls. 115085
ageing expts., PD meas. technol. *(Korean)* 70386
all-dielec. self-supporting opt. ground wires, aeolian vibr. tests 74925
BG dielec. charact. MIL PRF 55681 capacitors, insulation resist. degrad. 115078
biaxially oriented polypropylene film in AC high field region near breakdown, charging current *(Japanese)* 104409
cast-resin power transformer onsite insulation diagnosis 134125
defective MLC capacitors, elec. test data anal. effectiveness 115074
dielec. breakdown mechanisms diagnosis using neural net PD monitoring 92665
dielec. loss sens. for elec. equipt. insulation meas., equiv. cct., error compensation *(Chinese)* 75821
dielec. strength lightning impulse testing, humidity correction factor 92593
distrib. cable networks quality assess. tools 133723
distrib. transformer oil dielec. strength meas. 134124
EHV XLPE cable joints, semicond. interface dielec. strength, diffusion method *(Japanese)* 99389
elec. conductor tensile props. 91440
elec. insulation internal defaults ignition, PD model, meas. 104404
elec. machine insulation diagnosis, anom. $\Delta\tan\delta$ phenom. *(Japanese)* 88689
electroinsulator resource, thermodyn. prognostication 92666
epoxy/glass fiber composites, surface hydrophobicity, thermal treatment *(Korean)* 116186
EVA copolymer film space charge meas. in cryogenic-RT region *(Japanese)* 127249
extra-turn power transformer gaseous insulation design studies *(Korean)* 123545
extruded laminated dielec. shielded power cable joints, IEEE Standard 112119
fast MV power syst. transients, internal transformer insulation effects 134112
gas cct. breaker inhomog. high-temp. SF_6 gas behaviour 112685
generator-transformer short-cct. protection, switch-based insulation monitoring 99618
GIS, PD sig. propag./location, freq. components comparison 134278
GIS acoustic wave propag. props./PD location ident. *(Japanese)* 112704
GIS PD meas. using nonconventional UHF sens. 78058
glob top encapsulants, surface insulation resist. perform., temp./humidity 67567
HF solid insulation testing, HV HF switching power supply 77968
high-temp. fiber reinforced cellulose transformer insulation endurance 134114
HTV silicone rubbers, sample thickness var., tracking and erosion behavior 104415
HV cable insulation, internal mech. stresses, elec. strength 123012
HV insulated wire deterioration research *(Japanese)* 133740
HV insulation, PD diagnosis strategies for measuring systs. 109430
HV insulation, PD meas./eval., ES, ANN 109917
HV machine insulation, PD anal., wavelet transforms 92609
IGBT PWM inverter-fed IM, insulation charact. anal. 134047
impregnated paper insulation, charge evol., pulsed electroacoustic method 112098
interturn fault, HV winding of power transformer, detect./localization using wavelets 112601
IT earthing syst., elec. network insulation, selective control *(Serbian)* 122782
LDPE, electrode-insulator interface, accumulated space charges, EL meas. 127245
LDPE, transient surface pot., scanning electron microscope meas. of mobility 127244
LDPE film, transit space charge distrib. and external cct. current up to breakdown *(Japanese)* 81731
LDPE power cable insulation, metallocene catalyst expts. *(Japanese)* 88445
LDPE/polypropylene copolymer blend, elec. breakdown effects 77382
liqs., AC dielec. strength testing, stat. approach 92608
locomotive traction motors, mica-bearing polyamide insulation, life testing 100278
LV power capacitors, dielec. failure anal., harmonic reson. effects 112744
MLC chip capacitor insulation resist. degrad. mechanism, engng. anal. 115076
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 115077
MV distrib. cable lines, PD diagnostic systs. 133730
MV power cables, insulation condition assess., on-site PD detect. 133729
MV underground power cable ccts., condition based maint. 133721
MV XLPE cables, ageing, condition based maint., PD diagnostics 133722
noise-mixed PD recogn. using feedforward triple-layer neural net 116182
oil, PD sig. detect., opt. fiber Sagnac interferometer *(Korean)* 70384
oil dielec. props., acetophenon effects *(Japanese)* 81729
oil-filled transformer insulating papers, thermal degrad. tests *(Japanese)* 80455
oils, AC voltages, prebreakdown currents anal. 104407
oriented extended chain cryst. polyethylene, treeing discharges 104411
paper insulation testing in corona environ. 70434
PD activity, ageing accel., voltage distortion 70431
PD DAQ, prog. digital oscilloscope based syst. 120668
PD pulse occurrence fluct. anal. using integral eqn. 70377
PD type ident. from AE freq. spectra 104402
PE/XLPE insulated cables water trees diagnosis, return voltage meas. *(English, French)* 133728
power apparatus, insulation perform. diagnosis, PD meas. *(Japanese)* 112443
power apparatus PD meas. eval. strategies 112442
power cable on-line diagnosis, noninvasive UWB PD tech. 112101
power cable syst. mgt., standardisation, prequalification, diagnostics 133719
power transformer diagnosis/repair in power stations 112610
power transformer insulation, moisture content meas. 88800
power transformer insulation monitoring, condition assess. 77939
power transformer oil static electrification expts./modelling 99723
power transformer static electrification, pressboard comp. effects 134139
power transformers insulating oil diagnosis using neural nets 134135

insulation testing continued
pressboard/XLPE insulation failure, regression anal. 116187
relative permitt. detector for cable insulation 77381
rly. traction motors insulation weakness diagnosis *(German)* 113093
shielded power cable systs., preventive maint. testing 123017
silicone elastomer insulating surfaces, hydrophobic charact. *(German)* 1044(
silicone rubber outdoor insulation, material screening/eval. methods 81730
solar cell modules/encapsulations, indoor study/ageing tests 134388
soldering pastes/fluxes, surface insulation resist. testing 115201
solid insulation, LV equipt., dielec. testing 70432
space grade wires & cables, radiation tolerance, fast eval. tech. 122469
stator winding insulation, thermal ageing, SQUID mag. field mapping 11244
substation HV apparatus RS485 bus-model online insulation monitoring sys *(Chinese)* 89007
substation transformer life estim. approach 123561
three-phase dry-type power transformer failure anal. 77929
transformer oil elec. breakdown initiation, stochastic regularities 134140
transm. transformers, oil samples, furfural content meas. 88799
tree propag. initiation, fatigue failure type, simulated tree channel *(Japanese* 127238
underground XLPE power cable, HF PD meas., capacitive sens. 77387
water treed MV XLPE cables, NDT, on-site dielec. response methods 13372
XLPE, ethylene-acrylic acid copolymer modified, space charge accumulation water treeing *(Chinese)* 104418
XLPE cable, insulation/semicond. interface improvement, diffusion metho *(Japanese)* 99374
XLPE cable insulation degrad. monitoring, PD chaotic anal. 133741
XLPE insulation, space charge meas., LIPP method 104420
XLPE insulation hetero-space charge generation, moisture effects *(Japanese* 104410
XLPE power cable in-service insulation diagnosis approach *(Japanese)* 11210
Au PCB finger contacts, flux spatter minimization/elimination, systematic ana 115202
N_2 high-press. insulation, lightning impulse breakdown charact. *(Japanese* 92618
N_2 liq./solid composite insulation syst., PD inception, thermal bubble conditio *(Japanese)* 81724
N_2/SF_6 gas mixtures impulse creepage discharge propag. mechanisms *(Japanese* 92616
Pb-free solder paste residues, post-solder cleaning 115135
SF_6 GIS, PD, EM wave detect. 134275
SF_6 particle-contaminated GIS/GITL systs. with dielec. coated electrode 112681
SF_6/paper insulation, PD phenom. *(Korean)* 116188

insulation, thermal *see thermal insulation*

insulator contamination
275 kV AC glass insulator strings, light nonuniform pollution, flashover 12304
AC pollution flashover voltage, acid wet precip. *(Chinese)* 88467
coastal substation insulator washing timing DSS *(Japanese)* 112126
composite distrib. insulator develop. and testing investig. 133762
composite insulator artificial contamination method 112121
composite insulator rods brittle fracture mechanisms assess. 133763
composite insulators, unidentified power freq. flashover expts. *(Chinese* 112122
distrib. porcelain suspen. insulators, nonsoluble indust. dust effects *(Korean* 123039
HV glass/porcelain outdoor insulators contamination, breakdown strength *(Ger man)* 133767
HV insulators. salt contamination prediction, east coast Peninsular Malaysi 99387
HV insulators contamination on Peninsular Malaysia east coast 77445
leakage current envelope. level crossing anal. 112116
MEEC distrib. syst., weak points, early detect., US emissions 133669
outdoor distrib. polymeric suspen. insulators, contamination effects *(Korean* 133761
PCB contamination, transformer oil, immunochemical meas. 127247
polluted porcelain insulators, dielec. behaviour studies 112115
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. perform 88470
RTV silicone rubber coatings modelling on glass/porcelain insulators 88464
salt contaminants, dist. from sea, stat. method, Korea *(Korean)* 123038
salt contaminants distrib. with dist. from sea, west coast, South Korea *(Korean* 99388
semicond. glazed insulator perform. tests under natural pollution 77446
suspen. insulator, artificially polluted, leakage current waveforms, freq. charact 112125
XLPE cable, composite insulator termination develop. *(Japanese)* 112127

insulator-metal boundaries *see metal-insulator boundaries*

insulator-semiconductor boundaries *see semiconductor-insulator boundaries*

insulator testing
aluminous porcelain insulators, high-strength, microstructural reinforcemen 77449
composite distrib. insulator develop. and testing investig. 133762
composite insulator artificial contamination method 112121
composite insulator rods brittle fracture mechanisms assess. 133763
composite insulators, unidentified power freq. flashover expts. *(Chinese* 112122
distrib. porcelain suspen. insulators, nonsoluble indust. dust effects *(Korean* 123039
HV glass/porcelain outdoor insulators contamination, breakdown strength *(Ger man)* 133767
liq. insulator elec. field vector distrib., three-direction opt. meas. syst. *(Japanese* 77447
outdoor HV porcelain insulators, RTV coatings, leakage current tests 77448
PD VHF-wideband EM noise studies 112120
polluted porcelain insulators, dielec. behaviour studies 112115
polymer insulators, use in HV apparatus *(Russian)* 123040
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. perform 88470
semicond. glazed insulator perform. tests under natural pollution 77446
silicone rubber insulators, hydrophobicity transfer *(Chinese)* 99386
silicone rubber outdoor insulators, degrad., leakage current monitoring *(Korean* 123037
solid insulator AC surface spark-over voltage in liq. N_2/He 77443
suspen. insulator, artificially polluted, leakage current waveforms, freq. charact 112125
vintage ceramic suspen. insulator integrity assess. 88471

ılators
i.e. insulating devices. For materials see "insulating materials" or NTs as appropriate
see also bushings; ceramic insulators; composite insulators; insulation; insulator contamination; insulator testing; polymer insulators; silicone rubber insulators
15 kV enclosed bus assembly, 5 kA, 60 Hz 3-phase continuous current test 133417
base insulating constr., discharge charact., rain influence estim. *(Russian)* 123041
distrib. lines, lightning performs., computational methods sensitivity 112029
E Minor pulsed power facility upgrade 99787
electrostatic tube lens, electron transport, insulator charging effect 93973
HV towers, mobile phone base station, safety aspects 133772
LV distrib. networks, lightning surge protective devices 133599
overhead lines, concrete poles, grounding lead conductor, surge impedance 99350
surfaces triboelectric charging review 88469

ırance
see also insurance data processing
med. robotics, safety issues 111254
oncology home care vs. hospital care, cost-minimization anal. 111286
power generation indust. emerging trends, insurer's perspective 122801
power syst. reliab. mgt., investment, economic mechanism 88298
telemedical innovations, general conditions/success factors *(German)* 98864

ırance data processing
patient benefit authorization service for mobile healthcare providers 133203

ger programming
0-1 integer programs, tight approx. via lin. relax. 101038
2-dimens. vector packing problem, lower bounds and algms. 90022
air traffic flow mgt., rate control index 88081
ammonia prod. plant proc. sustainability solns. 124144
ATC, rerouting in bad weather, dyn. network flow 98931
ATM LAN, optimal switch and interconnection location 119122
ATM network design, traffic models and optim.-based heuristics 84832
branch-and-bound for general-integer lin. programs 113980
cellular radio, distributed power control algms. 74736
CMM, optimum path planning, comparison of integer prog. model with GA model 120654
CMOS logic ccts., path balancing algm. for glitch power reduction 90856
CMOS wave steered ccts., latch count minimization and latency, integer LP 125440
column generation models for channel assignment in cellular networks 119859
computer networks, VC, pre-selection routing 85081
convex quadratic programs, continuous/integer solns. rels. 124577
cutting planes and elementary closure in fixed dimens. 78909
degree-constrained min. spanning tree problem, branch and cut method 67799
discrete relax. of combinat. programs 113949
discrete VAr optim., nonlin. primal-dual interior point algm. *(Chinese)* 111649
distrib. network restoration after supply transformer fault 99353
distrib. network service restoration reconfiguration optim. algm. *(Chinese)* 99332
distrib. systs. service restoration, math. prog. approach 88423
DRAM wafer fab, multichamber work cell mgt., optim. 100547
DSP systs., combined word-length optim. and high-level synthesis 90956
DWDM fibre networks, optimisation and cost savings 120243
energy efficient storage bandwidth optim. and memory assignment 102178
energy-aware embedded systs., real-time task scheduling 127053
epileptic seizure transit., optim. 76309
FIR digital filter design with discrete coeffs., semidefinite prog. relax. 80108
FIR filter with discrete coeffs., optimal design 91073
flexible unit maint. scheduling, uncertainties, integer prog. 88511
floating bias voltage sources minimisation, integer LP 79496
FPGA automated hardware synthesis, MATLAB appl., precision & error anal. 79705
FPGA partitioning, dyn. reconfig., integer LP 125395
FPGA-based reconfigurable computers, hierarchical memory mapping 79701
fuzzy nonlin. integer program by parametric prog. 90042
generalized min. spanning trees 100885
generic ILP-based approaches for time-multiplexed FPGA partitioning 114717
goal prog. solns., genetic and conventional methods comparison 78900
graph chromatic no. computation 67815
h-Chase decoding, testing conditions eval. method 129209
hybrid dyn. prog./depth-first search, reliab. optim. 124594
hydroelectric energy storage plants, capacity planning model *(French)* 77156
hydroelectric resources, elec. generation expansion, investment planning 122917
hydrothermal power generation scheduling, stochastic prog. 99580
hypothetical opt. network, virtual topol. design 120225
IC layout, wire packing, integer prog. 70257
ILP-based board-level routing of multi-terminal nets for prototyping reconfig. interconnect 104049
IMT-2000, partially decentralized resource-mgt. 74821
indust. load mgt. optim. using time of use tariffs 134672
integral basis iter. substitution method 100924
Internet, reliab.-based optimal allocation of mirror servers 74400
IP over WDM archit., joint operation under dyn. data traffic 95953
joint module selection and retiming with carry-save representation 114737
λ-ring syst. in survivable WDM networks of interconnected self-healing ring systs. 96818
large FPGAs, cost minimization of partition. with complex resource constraints 68787
low power multiport memories exploration/design 114767
LP-based algms. for traffic engng. in flat differentiated services network, scalability props. 119387
LPSAT, unified approach to RTL satisfiability 79690
mixed integer LP, multiparametric, iter. soln. algm. 78898
mixed integer nonlin. prog., integrat. SQP and branch-and-bound techs. 67886
mixed integer rounding inequalities, aggregations 78940
mixed-integer prog., branch-and-cut 78901
mobile computing, channel adaptive multiple burst admission control 130729
multi-agent integer prog. 100911
multicriteria/multi-constraint integer LP 113955
multiobjective lin. integer prog. problems scalarization 90021
multitechnology networks, design problem 119528
nonlin. integer bilevel prog., optimal soln. *(Chinese)* 67890
opt. networks, traffic grooming algm. for transceiver minimization 120220
optimal multicast server selection based on receivers' preference 86334
optimal partitioning algm., technol.-mapped designs on single-chip emulation systs. 68781

integer programming continued
optimal vol. subintervals; with k points and star discrepancy via integer prog. 124590
packing-covering type integer programs, optima approx. 90037
particle swarm optim. for reactive power and voltage control 99297
PCB assembly, tabu search heuristic for component assignment 125892
perfect, ideal and bal. matrices 89961
permutations sorting by reversals through branch-and-price 113951
power syst. VAr/voltage control using particle swarm optim. 111885
pth power Lagrangian method 78889
quadratic assignment problem polytope and star transform. 90024
radial distrib. network power capacitor placement optimisation 133667
ring loading problem, integer demand splitting 130499
robust spanning tree problem with interval data 107985
rural area telecomm. networks, multicriteria hub decision making 95985
satellite link, dyn. bandwidth allocation, DAMA algm. 131307
short-term hydro scheduling, mixed integer LP 133877
small satellite mission scheduling using Hopfield neural networks *(Chinese)* 109031
SMT prod. line scheduling, mixed integer prog. 115133
sparse representation of quantized frame coeffs. using 0-1 integer prog. 130009
SS-TDMA satellite syst. with intersatellite links, time slot assign. problem 120085
static CMOS ccts., stand-by leakage power minimisation 79792
successive survivable routing, optimal spare capacity allocation approx. 119420
syst.-on-a-chip optimal test access archits. 115989
testing point selection *(Chinese)* 75339
transm. network expansion, mixed integer disjunctive model 88410
transm. network expansion planning, specialised branch-and-bound algm. 133558
transm. network expansion planning using GA 111945
TSP, cutting planes location 67779
TSP, motorized, cooperative, mixed-integer optimal control 78917
two-level wireless ATM network, heuristic algm. for optimal design 108646
unit commitment, tabu search, embedded priority list 111656
view planning with registration constraint 84212
VLSI packet switching fabrics, low-power syst.-level design, perform. specs. 74496
voltage stabil. constrained VAr planning, New Zealand 111980
wavelength routed opt. network, routing and wavelength assignment 131450
wavelength routed opt. networks 120219
wavelength-routed ring network, logical topol. design, mixed integer LP *(Chinese)* 74978
WCDMA multimedia systs., optimal resource mgt. 74820
WDM mesh-survivable transport networks 96744
WDM networks, survivable routing of logical topologies 120247
WDM non-hierarchical interconnected ring networks, dimensioning 86019
WDM opt. mesh network protection strategies 109108
WDM survivable networks, capacity and revenue optim. 130470
weekly tour scheduling problem using integer prog. model 113417
wire packing, crosstalk-aware chip-level track/layer assignment with integer LP 101652
wireless ATM network, design optim., GA 131225
wireless ATM network cell assignment, genetic algm. approach 95762

integral equations
see also boundary integral equations; electric field integral equations; Fredholm integral equations; integro-differential equations; magnetic field integral equations; method of moments; Volterra equations
2D generalized exponential integral, num. eval. 72446
2D magnetostatics, hybrid finite element/integral methods, discretization schemes 128669
2D microstrip-dipoles reconfigurable aperture antenna array gain 128892
2D PEC scatterers, duality of integral eqn.-meas. eqn. of invariance method 72283
2D SPECT with 180° DAQ, image reconstruction, line-integral model 132897
2D TE incident EM wave scatt., diagonal moment-matrix soln. 72267
2D wavelength-size lens simul., accurate num. method 128785
3D airborne radome of superspheroidal shapes, discrete anal. 72703
3D conducting struct., stationary phase method for radiation anal. 83506
3D dielec. body reconstruction using unrelated illum. method 94003
3D dielec. targets near lossy half space, multilevel fast multipole algm. 72216
3D eddy current integral formulation, matrix-by-vector products 83147
3D eddy current problems with integral formulations, fast algm. 128678
3D EM field diffr. problem, integral eqn. method 72247
3D EM scatt., integral eqn.-asymptotic phase method appl. 105715
3D inhomog. dielec. objs., transient EM scatt. 72269
3D interconnect inductance, freq. depend. 126996
3D plane-wave scatt., dual-surface CFIE 83250
3D struct., adaptive integral method based capacitance computation 72164
abruptly ended fiber waveguide, radiation characts. 93069
additive Schwarz preconditioners for h-p version of Galerkin BEM for 2-d problems 114151
antenna array synthesis from curvilinear radiators with account of mutual influence 117832
antenna response in reverberation chamber, remarks 72589
arbitrarily shaped cathode electron gun, iter. solns. 72180
asymmetrical double ridge waveguide, propag. charact. 72414
axisymmetric antennas, scatterers and resonators, AKBOR computer code 83502
axisymmetrical periodic electrodynamic structs., reson. effects during excit. by electron current 128696
biharmonic integral eqn. solns., non-uniqueness detect. by SVD 114098
binary modulated sigs. with depend. Rician fading, coherent multichannel reception 74776
biological tissues, impedance computer tomographic diagnostics using elec. current 122148
boundary-element based formulations for crack shape sensitivity anal. 79112
broadband printed antenna, current distrib. and input impedance 72601
broadside antenna arrays, directivity approx. 120430
buried imperfect conductor, image reconstruction, EM scatt. 86193
C-band monopulse shaped ring-focus antenna, near field 72612
capacitance matrix of unequal diam. dielec. coated cylinders above ground plane 72405
CGFFT method with discontinuous FFT algm. 72166
circ. antenna array with helical antennas, anal. 72697
circ. ideally conducting cylinder with dielec. layer coating and nonlin. loads 117757
circ. pol. conical beam spherical slot array antenna, charcts. 72634
circ. polarized conical beam spherical slot array antenna, polariz. charact. 83676
circ. resonator with nonlin. load in gap of axial rod, pulse excitation 105839

integral equations continued
coaxial aperture elec. sens., variational principle, full-wave anal. 97195
comonotonically additive functionals, extension/representation 67716
compact CPW-fed printed antennas, small ground planes, anal. and modelling 128875
cond. modes basis fns. for efficient EM anal. of on-chip/off-chip interconnect 126961
conducting bodies of rev., use of wavelets for soln. of EM scatt. 128734
conducting wedge, Weber-Schafheitlin integral 72217
conical slot antenna excitation 117772
contrawound toroidal helix antenna fields 105901
convex circ. cylinder apertures, mutual coupling calc. using hybrid UTD-MoM method 72650
coupled microstrip lines, anal. using integral method 94092
CPW on semicond. substr. 94095
cylinders and flat plates, RCS 120430
cylindrical cavity-backed slot applicator, power distrib. 69257
cylindrical dielec. resonators in antenna appls., integral eqns. anal. *(Polish)* 91209
cylindrical shell, EM shielding, boundary elements method *(Chinese)* 105778
damped oscill., logarithmic decrement eval., integral sig. proc. 101594
dense shielded IC, EM anal., adaptive integral method 102695
densely packed microstrip interconnects, anal. using sparse-matrix/canonical grid method 89852
depolarization dyadics of lossless gyrotropic media, improper integrals/Maxwell Garnett formalism 104504
dielec. prolate spheroid, electrostatic image theory 117615
dielec. rod, EM pulse diffr. 128747
dielec. tapered rod antennas anal. 105906
diffr. over uniform array of absorbing half-screens, generalized soln. 83243
diffusion tensor MRI, fiber tract mapping 122086
diplexer design using pre-synthesized waveguide filters 102548
dipole antenna, wavelet simulator tech., moment method 94117
dispersion-managed transm. link, master integral eqn. anal. 96647
distorted laser beam wavefront correction simul. 128367
DS-CDMA asynchronous syst. in Nakagami fading, precise BER calc. 74559
dyadic Green's fn. for biaxial medium 72277
dyadic Green's fns. for dielec. spheroid, spheroidal vector wave eigenfunction expansion 72158
E-plane waveguide to microstrip transit. for MM-wave appls., anal./design 69001
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
eddy current testing, num. anal. by integral eqn. method 128684
EDFA spectral props. modelling 128165
EM charact. of grounded slab/parallel-plate struct. using SDDI tech. 83253
EM dyadic Green fns., class./symm. rels. 83077
EM far-region radiation with vert. M1 in sea 83327
EM field anal., reflective and rot. symm. model, simplification method 128649
EM field formulation, math. models/num. methods 128653
EM fields Poisson integrals, Laplacian 3D FEA solns. 128640
EM modeling of multilayer microstrip antennas/ccts. 72471
EM response of line elec. current source excited multiple cylindrically curved thin screens 72261
EM scatt., Galerkin operators in adaptive integral method implement. 83187
EM scatt., integral eqns. soln., multilevel fast multipole algm. 72282
EM scatt., MoM using high-order non-uniform grids 83224
EM scatt. by penetrable bodies, pot. integral eqn. method 83225
EM scatt. by penetrable bodies, pot. integral eqns. method 93993
EM scatt. by transversely anisotropic inhomog. cylinders, FEM-FMA hybrid method 72276
EM wave coherent scatt. from random medium layer with rough boundaries 94023
EM wave diffr., impedance wedge, Wiener-Hopf anal. 94027
EM wave scatt. by complex objs., recursive algm. 94002
EM wave scatt. by complex struct., recursive reduction techs. 72273
EM wave scatt. from anisotropic and composite screens, dual-series tech. 83215
EM wave scatt./losses by thin dielec. screens, fast soln. 128749
embedded antenna in composite medium, EM anal. 83633
EMC, space discretising time domain methods for num. modelling of EM coupling 83386
error estim. and adaptive mesh refinement in BEM 101118
Euler trapezoid formulae 101114
extremization of lin. integral, stat. decision problem 78921
extremization of lin. integrals 78920
fast-multipole accelerated Poisson solver in two dimens. 114145
Fermi-Dirac integrals, anal. expansion and num. approx. 90171
fibre zoned with metal-dielec. ring, light propag. 127657
finite phased arrays, element charact. anal. using matrix manipulations 83751
finite-slot phased arrays fed by rect. waveguides, MoM anal. 72651
fixed-point theorems for countably condensing maps on Frechet spaces 101111
flange-mounted ellipt. waveguide arrays, mutual coupling 83745
flip-chip assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
fractional Brownian motion, stochastic calculus 67710
fringe integral eqn. for truncated grounded dielec. slab 105711
FT profilometry, phase-unwrapping proc., differentiation *(English)* 75875
Gaussian noise perturbed vectors, phase angle distrib. 72745
generalized fuzzy integral seq., convergence 124547
generalized invariant cubature formulae 68055
geophys., EM 3D modelling, nonlin. inversion 122566
georadar, slot and dipole antennas 86170
Green's doubly periodic fn. computation, combined method 72238
Green's fn. for rough surface with Dirichlet/Neumann/impedance boundary conditions 72270
gridded sq. FSSs, anal. 72440
head phantom, induced EM field reconstruction, microwave imaging 132649
heat eqn., integral props. 101115
HF EM field coupling to long terminated lines 72373
HF four wire dual-mode spiral antenna, CAD 72599
HF radiowave propag. over sloping coastal land 72308
homog. symm. dielec. bodies, EM diffr./scatt. 83231
honeycomb sandwich structs., EM wave simul. by 3D vol. integral eqns. 128757
horiz./vert. Hertz dipoles, near-field vector pot. 128849
human head, mobile phone emissions, absorpt. calcs. 133069
hypergeometric fns. transform. 78976
IC high-speed interconnects, order-reduction algm. 94071
IC thin-film interconnects, electromigration modeling, void nucleation 92103
IEM/IEMM surface scatt. model extension 98971
IIR filters design, WISE method 84723
imperfectly conducting bodies, EM scatt., time-domain integral eqn. anal. 83240

integral equations continued
infinite perfect conducting nonlin. loaded circ. cylinder excitation calcs. 8340
infinite periodic struct. with localized impurity, EM scatt. 83236
integrated optoelectronic systs. opt. field modelling, FFT-based full diffr. metho 105041
intens. modulated radiotherapy, inverse planning, ridge fns. 133131
inverse problem for acoustic wave eqn., probabilistic approach to approxs. an uniqueness 101113
inverse scatt. for plane screen 90168
isotropic point source, evanescence asymptotics 117699
land mine imaging & detect., inversion method, 3D grid 77006
lin. differential games, simple matrices and integral constraints 67758
lin. integral eqns., weakly stable method 101109
liq.-cryst. diffr. gratings, asymmetric transmissive behavior, beam-steering eff ciency 116830
loaded perforated shields, perform. anal. 83363
loop antenna in cold magnetoplasma, current distrib./input impedance 72514
loop-coupled shielded enclosures with apertures, EM field modelling 124383
lossy single lines, nonlin. resistors, bifurcations and chaos 101699
(M)MIC-struct., fast spectral domain integral eqn. techs. 91306
marine boundary layer wind, inverse method soln. 76895
math. models for problem of diffr. of H-polarized wave on irregular media inter face 128737
matrix thinning, preconditioning tech., MEI method 67990
metal cylinder, EMP 2D diffr. 83230
metal-flanged rect.-aperture arrays anal., parallel framework 128896
metallic implants, MRI artifacts, num. simul. integral method 76459
microstrip antenna array, plane spiraphase focusing lens 105940
microstrip antennas, scatt. anal., charact. modes appl. 72660
microstrip antennas, subsectional edge expansion fns. calc. 83620
microstrip antennas in multilayered media, full-wave anal. 72566
microstrip cylindrical antennas anal., efficient Green's fns. calc. 83566
microstrip disk antennas with inhomog. artificial dielec. 83655
microstrip lines on magnetized ferrites with arbitrarily oriented bias field, full wave charactn. 69009
microstrip patch antennas, eval. of 2D react. integrals 72517
microstrip patch antennas, parametric study using spectral domain method 7256
microwave backscatt. model for bare soil field 76843
microwave imaging applied to rem. sens. using multilevel fast multipole algm 75127
mixed pot. integral eqn. soln., fast algm., microstrip antenna appl. 72441
MoM, macro-element compression 128744
MoM fast calc. for printed grid array antenna anal. 83715
MoM for compact large planar scatterers in homog. medium 83223
MPIE with general elec./mag. sources, multilayered media Green's fns., Herr pot. approach 102505
multi-inform. array inversion using variational Born iter. method 76845
multiconductor transm. line, MoM, Galerkin/razor blade testing 72399
multidimensional filter stat. anal. with non-Gaussian non-white noise 119048
multilayer composite laminates, init. strain effects 114163
multilayer dielec. struct. diffr. grating, EM wave propag. 117704
multilayer dielec. struct. with diffr. grating, EM diffr./propag. 127755
multilayered medium, embedded vert. strip, integral eqn. 83463
multilayered resistive strip gratings, microwave/MM-wave scatt./absorp 125691
multiple conductors, EM wave scatt., image reconstruction 94025
near-field diagnostic tech. based on equiv. mag. currents 83510
Newton method convergence, Holder continuous first derivative 78996
nonlin. penetrable objs., TM-case scatt., time-domain vol. integral eqn. 94017
nonuniform cold magnetized plasma column, penetrated and scatt. field distrib 94019
num. soln. of first kind integral eqn. for Helmholtz eqn. on smooth open arc 114153
num. soln. of integral-alg. eqns. of index 1 by polynomial spline collocatio methods 114040
num. stabil. in calc. of eigenfrequencies using integral eqns. 67994
opt. microresonator design/simul. 127808
optimal fractional controllers for commensurate order systs. 73646
packing, group codes, Radon transforms and integral geom. 94279
particle accelerator, coupling impedance bench meas., validity 75947
pass. microwave device, param. extraction, full-wave PEEC 69095
pass. PCB radiation suscept. modeling, complex images method 94056
PCB, transient anal., 3D freq. domain integral eqn. 125867
PCB DC power-bus struct., vert. discontinuities, cct. extraction, MPIE 80486
PCB layout, crosstalk prediction model 102805
PCB with multilayered geom., gaps and bypass capacitors effects on interconne 102802
PCBs, capacitances/inductances extraction using exponential expansion meth 69297
PD pulse occurrence fluct. anal. using integral eqn. 70377
PDEs, rel. to integral eqns., use of CW transform *(Chinese)* 67714
PEC large scatt. problems using asymptotic phasefront extraction, efficient Mo 72231
periodic composites containing complex shaped dielec. particles, quasi-stati effective permitt. 104245
periodic Riemann BVP, approx. soln. 114146
periodic waveguide struct., radiation mode spectrum 127754
periodic waveguide systs., axisymmetric elec. waves 83480
permitt. profile retrieval 127138
plane wave scatt. by achiral multilayered sphere in infinitely extended chiral hos medium 117654
PO approx., line integral representation for diffracted fields 117674
polyhedra moments, explicit formulae 94589
polypyrrylarylenemethine/polyvinyl film, Gaussian beam diffr. behavior *(Chi nese)* 128480
possibility measures/integrals defined on complete lattice 67786
probe excited rect. cavity-backed slot antenna, input impedance 83554
probe excited rect. cavity-backed slot antenna, radiation pattern anal. 72600
quasi-Monte Carlo method for ellipt. BVP 79059
Rayleigh-fading quasi-static space-time channel, cutoff rate/sig. design 11793
RCS, PO integral, num. methods *(Chinese)* 131655
recogn. syst. output sigs., orthogonal polynomials expansion, multidimensiona probab. dens. charact. 73528
regularization for surface representations of discontinuous solns. of lin. ill-pose problems 101112
relax. modulus reconstruction for viscoelastic medium with complete data 9016
RF multilayer PCB layout, EM coupling, full-wave anal. 102806
rot. invariant cubature formulas over n-dimens. unit cube 79109
rough perfect conducting surface scatt., Kirchoff and integral eqn. models com parison 83194

egral equations continued
scalar pulses diffr. at plane apertures 105717
scalar wave diffr. by perfectly soft infinitely thin circ. ring 128732
second kind integral eqns. soln. by Galerkin methods with continuous orthogonal wavelets 124734
self-term wire antenna kernel, integral transform tech. 83498
semi-Markov diffusion proc., first exit point, distrib. dens. 124510
shadow-corrected bistatic scatt. from random very rough surfaces 105709
shielding effectiveness of bent slots, wave penetration 105797
simul. of propag. along irregular terrain, efficient soln. of integral eqn. 94029
sing. wire antenna kernel, efficient integral transform tech. 72536
slot antenna radiation under semi-infinite dielec. layer 83576
soil moisture inversion, neural network based 88163
Sommerfeld integrals eval., complex image method 105827
spline Petrov-Galerkin methods for periodic pseudo-diff. eqns. 124635
stable num. differentiation 79044
stochastic diff. eqns., mean sq. approx. 68051
strip- and slot-line guided forward, backward, and complex MSWs, anal. 104542
superconvergence of residual as error estimator in BEM, collocation, num. integrat. and error indicators 101119
surface field scatt. by impedance polygonal cylinder, PO currents 94020
tapered transm. lines, charactn. using contour integral approach 72395
tech. materials, impedance computer tomographic diagnostics using elec. current 122148
thick microstrip antenna finite arrays, anal. 83750
thin conductors with long. current direction, mag. field calc. 91406
thin shell syst. submitted to HF source field, modelling 128644
three-param. integral 114147
time domain free-space dyadic Green's fn., spherical wave expansion 72285
transient EM scatt., MoM soln., spatio-temporal multiresoln. anal. 105710
transm. line, layered medium, complex image anal. 83457
TW electrooptic modulator response, quantitat. anal. *(Chinese)* 127834
UA-FWLIS full-wave layered-interconnect simulator for react. anal. in stripline ccts. 91375
unified approach in semi-infinite atmos. 72297
vector/scalar pot., general expressions 117622
Volterra-Stieltjes operator-integral eqns. solvability 68053
wave scatt. amplit. by reson. bodies in free space/waveguides, investig. 83210
waveguide bends, modelling of propag. and scatt. 128830
waveguides, explicit SW asymptotics for diffr. by finite-length discontinuities 117734
weakly guiding opt. fiber propag. const., eigenvalue condition 127625
C semi-infinite nanotube, EM wave scatt. anal. 105726
Si, doping profile, opt. meas. 91947
YIG in-plane magnetized film, anal. of excitation of MSSW/MSBVW modes 70560

egral transforms *see transforms*

egrated circuit bonding
see also wafer bonding
3D stacked LSI struct., packaging technol. 113506
ATLAS pixel detector, indium bump technol., theory 97959
BiCMOS VCO, 4.7 GHz, chip/MCM-D package co-design for HIPERLAN-2 transceiver appl. 131087
bump-less interconnect, next generation syst. packaging 113657
camera module, flip-chip interconnection 120902
compact fluoresc. lamp, electronic ballasts, perform. anal. 134616
diamond triode FEA, anisotropic conductive film bonding 69432
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633
flip chip-in-package stud bump bonding proc., reduced proc. steps 80536
flip-chip for space appls., bonding reliab. study 125792
HDI flip chip-on-flex, base materials eval. 124359
high dens. lead-free soldering, appl. to 0603 chip component *(Japanese)* 91517
high-perform. opt. commun. devices, hybrid integrat. technols. *(Japanese)* 93448
high-productivity stud bump bonding mounting technol. *(Japanese)* 91516
laser micro welding in electronics, limitations and miniaturization pot. 91514
LeadFrameOnChip, power bus and bond-over-act.-cct. 124388
micro stud bump, low-impact high-speed bonding technol. *(Japanese)* 91515
microbump bonding, internal stress and connection resist. 113536
microsystem technol., IC bare chip bonding, Ar atom bombard. 116088
solder bumps thermal fatigue in IC joints 78670
wire bond integrity, probe scrubbing damage effects 113682
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al-Si plasma-treated IC bond pads, chem. and morph. studies 67591
Au electroplated microbump, surface activated bonding 113511
Au ribbon bonding for IC interconnection, designed expt. for proc. eval. 80535
Au-Sn(Ag) micro-metal bonding technol., LSI package 113532
Au-to-Au interconnection flip-chip bonding, COS HDD assembly 113661

egrated circuit design
see also circuit CAD; circuit layout CAD; integrated circuit layout
0.18 μm ASIC MOSFETs, robust design using Taguchi method with TCAD 126991
0.18-μm salicide CMOS technol., ESD protection design, substr.-triggered tech. 104114
2.4F^2 memory cell technol. with stacked-surrounding gate transistor DRAM 102122
2D FPGAs, optimum switch box designs, global routing dens. constraints 125434
3D IC, deep-submicron interconnect and syst.-on-a-chip 81480
3D mm-wave MMIC technol., BCB-based, low-loss pass. components 102692
3D MMIC technol. for low-cost MM-wave ccts. 125781
3D SoC, global interconnect design window 126942
20-bit DAC, design options, stds.-lab perform. 114823
A^2BC, adaptive address bus coding for low power deep sub-micron designs 126988
ABC-MT-CMOS DSP core, charge pump cct., standby current 125533
act. vision, analogue VLSI model of selective attention 103988
activity-driven clock design, CMOS sync. digital syst. 68683
activity-sensitive flip-flop and latch selection for reduced energy 68726
adiabatic ccts., power estim. using model 127032
air-gap stacked Marchand balun for MMIC, graphical design method 80373
AIRE/CE intermediate format for IC CAD tool integrat. 68513
Alpha μP, α-particle induced soft error rates, historical trends 79953
analog adaptive median filters for image proc. 114870
analog CAM implement. with floating gate transistors *(Korean)* 102435
analog IC optim., fuzzy perform. model of mismatch 101731
analog LSI design, data clustering/labeling in speech recogn. 79954
analog/mixed-sig. IP modeling for design reuse, SoC appl. 80114

integrated circuit design continued
analogue IC small-sig. modeling, elementary transistor stages, behavioral sig. path 125213
APLAC Design Suite for RFIC mixer design simul. 91372
appl.-specific heterog. multiprocessor systs., power minimisation, voltage reduction 125529
appl.-specific multiprocessor SoC, generic archit. model 79676
area-efficient binary adder, novel design 102015
area-power optimal state assignment, complete weighted graph 114677
ASIC cell fault models, VITAL compliant VHDL simulation 102424
ASIC design, MOS cct. appls. *(German)* 103982
ASIC design methodology achieving 550 MHz operation 125358
ASIC design of color seq. driver for LCOS microdisplay devices 114750
ASIC design using EDA tools, IP service providers *(German)* 115995
ASIC implement. flow, estim. of speed, area, and power of parameterizable soft IP 125337
ASIC obsolescence and DSP appls., intellectual property, fab. procs. 114682
ASSP design, multimedia syst. 79946
async. cross-pipelined multiplier design, handshake cct. 102002
asynchronous design styles, bundled-delay and dual-rail ccts. 79778
asynchronous events, electronics readout based on multi-correl. double sampling 76145
asynchronous RISC proc., FPGA-based rapid prototyping 102206
ATM ring MAC protocol, hardware modeling/verification 74493
autonomous decentralized low-power syst. LSI using self-instructing predictive shutdown method 125386
back to back conductor backed CPW to microstrip transit. design 91317
backward propagated capacitance model for VLSI RTL power estim. 114676
bandgap ref. for BiCMOS VLSI appls., stat. anal. and optim. 125216
behavioral and gate level designs, power estim. improvement 90823
behavioral models for VLSI chips, verif. using seq. sampling tech. 101953
behavioral partitioning in synthesis of mixed analog-digital systs. 125623
BiCMOS current conveyor, wideband, prog. filter appl. 68920
BiCMOS design and perform., act. WDM components appls. 127071
BiCMOS highly lin. down-conversion mixer with MCM pass. for GPS appls. 69215
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
BiCMOS VCO, 4.7 GHz, chip/MCM-D package co-design for HIPERLAN-2 transceiver appl. 131087
BiCMOS waveguide-based OEIC design 105048
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
bipolar LNA, 5.8 GHz, 1 V, overall noise fig., robust integrat. 102728
bipolar power MMIC, base feed design using high power HBTs 91387
BISRAMGEN phys. design tool for BISR RAMs 68809
broadband MMIC power amps. with compact flat gain PHEMT cells, 20-30 GHz 91385
BSIM3v3 MOSFET model key param. extraction for efficient CMOS design 104093
BSIM, Berkeley short-channel IGFET model for cct. design, CMOS appls. 127061
buffered interconnect tree optim., Lagrangian relax./dyn. prog. 126995
C-band highly efficient hybrid-PHEMT MMIC amp., 10 W design 125753
cache memory archits., fast syst.-level exploration driven by energy-delay metrics 102151
CADRE, Configurable Asynchronous DSP for Reduced Energy, low power multiported register bank 79908
CAM, low-power design, power models, binary static cells 102174
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0.1 μm rule *(Japanese)* 68773
carry-save-adder based arith. ccts., timing and area trade-offs for optim. 79846
CATS design data transcription streamlining for memory products, mask manufacture 102157
CDMA receiver, steepest descent algm., systolic implement. 119205
chain FRAM archit., overview/trends 90908
chaotic commun. syst., transceiver chip design and CMOS implement. 96383
charge-transfer amp. for ADC appl., dyn. behavior anal. 90763
chip multiprocessor design 114779
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
CHIPDESIGN, project-oriented microelectronics course, ASIC std. cell design flow 125298
class E power amp., nonlin. output capacit., finite DC-feed induct., design 80351
clock distrib. strategy for IP-based develop. 101943
clock tree synthesis for semi-sync. ccts. 101894
clock tree topol. extraction algm., clock distrib. network tolerance to delay uncertainty 102316
CMOS 2.5 GHz complementary -G_M VCO using PMOS varactors, design 91327
CMOS 6T-SRAM, 130 nm technol., high dens./perform., for SoC appls. 125469
CMOS ADC, 8 bit design, efficient archit. 102277
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS analog 2nd generation current conveyors, VLSI design and implement. 102370
CMOS analog IC, AMGIE synthesis environ. 104132
CMOS analogue ICs, low-power design 116021
CMOS analogue reinforcement neural chip, design & implement. 91140
CMOS APS image sens., radiation-induced dark sig. 97377
CMOS ASICs, shifter design 90861
CMOS cct. av./peak temps., modified high-level synthesis effects 116037
CMOS ccts., mutual compensation of mobility/threshold voltage temp. effects 92465
CMOS charge pump cct., high efficiency, body effect 104109
CMOS charge pump ccts., area efficient design 80140
CMOS chip output buffers, switching noise reduction, design tech. 104088
CMOS compatible MEMS, charactn., design optim. 81585
CMOS continuous-time current comparator, high speed/power ratio design 68968
CMOS current comparator cct., robust high-speed and low-power design 68970
CMOS current comparator design, fully differential, LV/power, high speed 70304
CMOS current conveyor design 114869
CMOS current steering DAC design, stat. methodology 102290
CMOS current-mirror amp. with compact slew rate enhancement cct. 79578
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
CMOS current-steering D/A converters, stat. yield model 125581
CMOS DAC, 8 bit, high-speed current switching, design 102278
CMOS device design, deep sub-micron, for low power analog appls. 127047
CMOS device design, sub-50 nm, expt./simul. study 126769
CMOS device downsizing below 0.1 μm, problems/solns. 104090
CMOS differential act. inductor, tunable L/Q for freqs. up to 5 GHz 91313

integrated circuit design continued
CMOS digital ccts., gate level power optim. using dual-supply voltages 125287
CMOS digital VLSI design in SOI, cct.-level CAD tools 79728
CMOS dyn. single phase logic, self-timed stages, power reduction, pipeline cct. designs 102027
CMOS energy-efficient skewed static logic design, topol.-depend. dual voltage 102103
CMOS equiripple continuous-time filter, 200 MHz, design for nonlin. suppress. 125599
CMOS front-end for 900 MHz zero-IF wireless receiver, paging sigs. 125780
CMOS front/back end plasma etch procs., fund. design limitations 104126
CMOS fully-integrated differential VCO for 10 GHz band operation 102701
CMOS gate dielec. scaling limits 116034
CMOS gate oxide plasma proc. induced damage, transistor gate area depend. 104131
CMOS GHz RFICs, on-chip ESD protection design using polysilicon diodes 125743
CMOS HF I/O interface ccts., design-for-ESD-reliab. 104113
CMOS high-speed low-power fully parallel CAM macros, design for ASIC appls. 68798
CMOS high-speed pipeline ADC for W-CDMA appls., design/power optim. 102270
CMOS high-speed track/hold cct. design 114901
CMOS ICs, nanoscale technol., low temp. operation 116038
CMOS IF bandpass amp. design, low sensitivity to temp. and proc. vars. 79604
CMOS inductorless LNAs, 2 V/1 GHz, with 2-3 dB NF 69235
CMOS interconnect model, DOE and multiobjective optim. 104061
CMOS interpol. FIR filter, power/area efficient design for W-CDMA appl. *(Korean)* 80091
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS LV continuous-time analog cct. design 90704
CMOS LV logic ccts., design considerations, simulated behavior 68727
CMOS LV rail-to-rail input/output opamp with. nested Miller compensation 68605
CMOS microwave oscillators on SOI substrs., design and fab. 125746
CMOS MPU appls., TCAD stat. design methodology 125555
CMOS multiplier, 32×32-bit design with sign select Booth encoder 90850
CMOS NOR-flash memory, low power techs. 102149
CMOS on-chip opt. clock distrib., baseline receiver cct. 127056
CMOS op amp design for mixed sig. LSIs *(Japanese)* 70314
CMOS OTAs, reversed nested Miller compensation with current follower 79584
CMOS pipelined-burst SRAM, low-power, design 102143
CMOS power-conscious proc. scheduling for real-time embedded systs. design 114775
CMOS proc. ported register file, leakage-tolerant, DC noise robustness 125565
CMOS prog. BP on-chip learning neural net with learning rate adaptation *(Chinese)* 91161
CMOS rail-to-rail op amp design, 0.9 V, 0.51 µA 114622
CMOS regulator, low dropout, 60 µA quiesc. current/250 mA max. 81502
CMOS reliab. margins, scaling-induced reductions, design-in reliab. efforts 81508
CMOS SC segmented DAC, clock jitter induced distortion 79993
CMOS seq. ccts., power estim. using graph-based methods 114695
CMOS shallow jn. technol., International Technology Roadmap for Semiconductors perspective 104141
CMOS simultaneous switching noise minimization using dual layer power line mutual inductors 127052
CMOS single-rail variable encoded completion detect. scheme, self-timed design, ternary MVL 90864
CMOS sizing rule for high perform. long interconnects 81471
CMOS skew-tolerant high-speed domino logic, noise and timing var. reduction 102030
CMOS technol. develop., 0.35-µm, blanket/pocket anti punchthrough device designs 104091
CMOS technol. scaling challenges for sub-0.1 µm generations 70303
CMOS technol. scaling for wireless commun. arena 115001
CMOS technol. with act. well bias, scalability/biasing strategy 127021
CMOS transconductor design, 3.3 V, 80 dB SFDR up to 10 MHz 114902
CMOS transimpedance amp., 2 Gbit/s, for opt. comms. 114624
CMOS VHF prog. read-channel continuous-time filter with on-chip tuning 80042
CMOS VLSI, LV design, temp. instabilities 116035
CMOS VLSI cct., leakage power minimization 104010
CMOS VLSI digital cct. low-power design 70302
CMOS VLSI digital ccts., substr. noise generation, power-supply parasitic components 125302
CMOS VLSI low power/low swing bus design archits. 127051
CMOS VLSI systs., low-power ccts., design flows 81505
CMOS voltage buffer with resistive freq. compensation 92475
CMOS voltage multiplier using MOS transistors in saturation region 68964
CMOS/BiCMOS static latch ccts., design/meta-stable operation considerations 102046
CMOSFET gate length scaling to 35 nm 126738
CMS tracker, APV25 0.25 µm CMOS readout chip 121715
co-ordinated design mgt. procs., project mgt. organisation for CAD *(German)* 114681
code placement in hardware software co-synthesis, perform./cost effects 79700
combinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
component selection and matching for IP-based design, SoCs 81430
concurrent IC/package/syst. design strategy 100585
conditional keeper tech. for sub-0.13µ wide dyn. gates 125456
conditional task graph allocation/scheduling, hardware/software co-synthesis 81441
connection design, Maxwell eqns. *(Italian)* 81478
constraint-based watermarking for graph partitioning solns. 125362
continuous time filters, wide dyn. range, divide and conquer design tech. 80046
cooled CMOS systs., act. threshold compensation cct. 104110
coplanar mm-wave MMIC design, technol. problems 125813
coupling-driven bus design for low-power appl.-specific systs. 126989
CPLD technol. mapping algm. under time constraint 68681
CPUs, 32 bit design for handheld consumer electronic product appls. 90942
CRRDL, charge recovery-recycling differential logic, dyn. CMOS 102029
cryogenic spaceborne CMOS testing and optim. 76812
current division network, 10-bit, stat. design, MOSIS 2-µm proc. 125582
current peaking CMOS IC driver designs/reson. cavity LEDs, parallel opt. interconnects appls. 93456
current-mode chaotic ccts., IC design for secure commun. 101713
custom and ASIC designs, methodologies for freq. gap reduct. 126982
custom ICs, conf., San Diego, CA, USA (May 2001) 100451

integrated circuit design continued
DAB chipset develop., real-time rapid prototyping approach, behavioral synthesi 79743
DAC current-steering macrocell, VLSI integrated syst. design 68873
data path synthesis, clique partition. algms. based on improved merging rule *(Chinese)* 114580
data-driven dyn. logic/NP-CMOS logic, design comparison 68750
deep sub-micron technols., timing anal. with crosstalk as fixpoints on complet lattice 126986
deep submicrometer technols., crosstalk estim., coupling capacitances 81474
deep submicron designs, power supply noise estim., vector generation 70287
deep submicron IC design, cct. theory and interconnect anal. 70271
deep submicron IC design, parasitic extraction 81483
deep submicron IC interconnects, crosstalk and delay estim., switching cond tions 70270
deep submicron procs., crosstalk noise eval. model 81454
deep submicron semicond. IC design *(German)* 81444
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
design/test, DFT tool/ATE platform cooperation 126997
digital cct. design, reusable intellectual property block verification, prog. sys 68705
digital cct. design teaching, prototyping hardware/software environ. 124276
digital CMOS robust transit. dens. estim., input/output transit. behavior 10198
digital design, PLD, elec. engng. degree course 125299
digital filter design, intra-disciplinary capstone project, design teams 124264
digital ICs, latency-insensitive design 101968
digital logic design and computer fund. courses, microcontrollers and FPGA 124260
digital mobile transceiver single chip implement., design planning 78574
digital multimedia wireless telecomm., very-high dens. VLSI chips, low-powe design 130971
digital VLSI design, architectural synthesis with interconnection cost contr 101957
direct-conversion receiver RF-ICs, mixer develop., review *(Japanese)* 74586
distributed clock systs., substr. noise anal. 68888
DLX RISC pipelined µP, forwarding and interlock logic design automatio 125562
domain distributed intell. proc. for inform. fuselets 97584
DRAM, 0.1 µm, bitline spacerless storage node SAC/Ru-Ta_2O_5-Ru capacit with TiN contact plug 125475
DRAM, 512 Mb/0.12 µm design rule, long data retention time strategy 12549
DSM CMOS technol., energy efficient signaling, on-chip interconnect 10198
DSP appls., floating point low power adder design 68757
DSP appls., low-power design tech. 102241
DSP core FPGA implement. for full rate/half rate GSM vocoders 74768
DSP systs., combined word-length optim. and high-level synthesis 90956
DSP systs. for DSL appls., design for low-power implement. 125527
dual band TDMA power amps., analog power control IC 91346
dual-gate p-HEMT MMIC X-band down-converter 91382
dual-threshold voltage assignment with transistor sizing for low power CMO ccts. 68779
dyn. power mgt. tools, integrat. in IC design flow 101946
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
dyn. threshold voltage MOSFET technol., derivatives/vars., pot. appls. 70110
EDRAMs, design archits. 90903
electronic systs., high-speed/low-power design, cct. optim./models 126952
electronics DFT, concepts/methods/implement. techs. 125887
EM emission modelling, syst. anal. 81436
EM interconnect modeling, CAD approach, HF effects 70274
embeddable FPGA archit. for ASIC designs, hardware/software soln. 102116
embedded DRAM develop., technol., phys. design, and appl. issues 102129
embedded DRAM macros, interface socket design methodology 114749
embedded DRAM technol., 0.15 µm logic based, with 0.425 µm² stacked ce using MIM capacitor 125491
embedded RF capacitors in low temp. cofired ceramic, modelling/testing 11364
embedded systs., memory hierarchy, energy dissipation anal., DCT 102169
embedded systs., OO modeling and co-simul. 101665
embedded systs. design and verif., reuse oriented prototyping methodologie 101954
embedded systs.-on-chip, partitioned memory synthesis, multi-bank SRA archit. 125383
EPGAT, embedded PGA core ASIC for board-based designs 68756
ESD protection ccts. for HF/RF appls., anal. and design 80340
ESD protection design, test models, failure mechanisms 104008
ESD protection device issues for IC designs, modeling methods 104073
FASTEST, CMOS analog ccts., stat. eval., DC anal. 125215
field-prog. mixed sig. systs., analog-digital partitioning 68947
finite difference formulation, IC interconnect simul. and modelling 92453
finline in MM-wave IC design, knowledge-based ANN models 80161
flash ADC, 6 bit digital design in 0.25 µm CMOS 102299
flash EEPROM, p-channel/n-channel, reliab. comparison 79895
flexible granularity automated hardware/software partitioning, high-level estim techs. 68700
flip chip design rule develop. for multiple sig. and ground bump configs. 6917
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
formal verification effects on quality in IP design and implement. 79724
formal verification in EDA tools, equivalence and property checking 81449
foundry era IC design methodology, heads-up design considerations 81450
foundry perspective of syst. integrat. in IC indust., quality design and time-to-vo 81453
FPGA design reuse strategy for syst.-level integrat. 114727
FPX, field prog. port extender, hardware modules, Internet routers/firewalls, CA platform 124266
freq. triplers, stabil. ensuring design procedure 80367
full chip ESD design rule checking 104072
GAME, mismatch modeling and simul. in analogue IC design 125214
GasP async. ccts., design method and CMOS sq. FIFO implement. 79787
gate-level transistor perform. charactn. by ps imaging cct. anal. 104021
Gekko PowerPC µP, timing convergence, synthesis tools and phys. desig 79932
Gilbert downconversion mixer, 2.4 GHz for W-CDMA appl., noise perform optim. 102712
global driver sizing tool, crosstalk noise 81457
GSI, interconnect scaling limits 104055
Hall effect-based CMOS mag. microsystem design 75507
Hanan grid problems, catalog 113923
hardware metering scheme, low overhead proofs, manufactured parts 125444
hardware/software codesign senior capstone design project in computer engng 125296
Harvard archit. RISC-µC core design, dedicated busses 114797

egrated circuit design continued
HDTV ISO/IEC 13818-1 decoders, design 120547
heterog. FPGA under delay constraint, low power driven re-synthesis algm. 102112
heterog. multiprocessor SoC, appl.-specific archit. generation 125553
hierarchical algorithmic descriptions, architectural transforms. in recursive HLS 101955
hierarchical capacitance extraction algm. without multipole expansion 126993
hierarchical stat. optim. method, constraint generation, Mahalanobis' dist. 68550
high perform. VLSI design, CAD infrastructure 125166
high quality analog CMOS and mixed sig. LSI design 81507
high speed multiplier-accumulator archit. 90880
high speed serial transceivers for data commun. systs. 96711
high-accuracy digital 5 bit 0.8-2 GHz MMIC RF attenuator for cellular phones 102721
high-cost nanometer-technols. era IC design, design-mfg. interface 126972
high-level prog. lang. descript., global variable localization for hardware synthesis 101673
high-order cascaded continuous-time ΣΔ modulators, synthesis 102427
high-perform. CPU designs, step power reduction, instruction prediction 79933
high-security cryptographic fast finite field multiplier archit. 114712
high-speed ADCs, speed-power-accuracy trade-off, nanoelectronics 102304
high-speed digital ICs, sig. integrity, MOSFET modeling, LE-FDTD method 90835
high-speed power-conscious cct. design techs. for high-perform. computing 125280
high-speed VLSI cct. capacitive coupling noise reduction 126994
HiperLAN 5.4 GHz low power CMOS sync. oscillator, design 91328
Hodgkin-Huxley neuron model cct. implementation, PWL approach 91159
homog. multiprocessing and future of silicon design paradigms 125521
Hopper, automation engine, phys. design of large IC 104004
hot-carrier reliab. simul. appl. to logic design 101996
IEEE1394 syst. simul. environ. and design of link layer controller 101960
IGBT gate driver, monolithic, for smart power modules, CMOS 0.8 µm/50 V proc. implement. 81538
in-place delay constrained power optim. using functional symms. 79689
input space adaptive design, high-level methodology, energy/perform. optim. 125375
integer multipliers, 32-bit, perform. measures, FPGA synthesis comparison 68753
intell. power electronics modules, embedded power packaging technol. 81534
inter- and intra-chip MOSFET perform. vars., test cct. based extract. for analog-design reliab. 104139
interconnect, RC delay metric, perform. optim. 70249
interconnect param. var., technol. scaling impact on clock skew & delay 126939
interconnect proc. var. and timing anal., pico-second differences 126992
interconnect technol. for ≤100 nm scaling, impact on key chip metrics 69941
interconnect tree optim., hybrid DQP algm. 70258
interconnection syst. *(Italian)* 92436
intra-task voltage scheduling algm. for low-energy real-time appls. 125359
ion implant. techs. for device scaling solns., perform. benefits 69806
IP, property ownership challenge, logic block design time 114683
IP-core based IC design enabled by 3D wafer bonding, research-focused project course 126958
IR real-time act. target tracking mono-chip 117017
irregular shaped power distrib. planes, transm. matrix modelling method 89880
ISDN systs., USB implement. in integrated access chip 119766
JouleTrack Web-based tool for software energy profiling, µP appls. 125548
JPEG 2000 std., DWT lossless compression, VLSI design 118527
Ka-band MM-wave three-port transistor drain mixer, optimizing design *(Chinese)* 68653
Ka-band MMIC sub-harmonically pumped image reject. diode mixer, 37-40 GHz 125796
Ku-band freq.-tunable LNA using variable-capacitance elements/neg. feedback ccts. *(Japanese)* 69241
large on-chip VLSI interconnect grids, power simul., model reduction 92454
large seq. ccts., power estim. approach, consecutive vector blocks 68780
latch-up device simul. tool, 2D, for pre-Si develop. phase 81496
latency-driven design of multi-purpose systs.-on-chip, deep submicron technol. 125336
lateral flux integrated capacitors, capacity limits and matching props. 104079
lateral power device integrat. in mixed sig. BiCMOS technol. 81533
Lempel-Ziv data compress. algm., unified VLSI systolic array design 90924
lin. FETs, full-wave modeling, MM wave appls. 102709
LNAs, monolithic type up to 10 GHz in Si and SiGe bipolar technols. 125785
LOTTERYBUS, high-perform. commun. archit. for SoC designs 125334
low power ADCs, design techs. 102298
low power and noise radiation hard BiCMOS front-end readout syst. for capacit. detectors 110416
low power arith. ccts., design method *(Japanese)* 79763
low power CMOS ccts. with clocked power 68784
low power CMOS VLSI design methods 104094
low power consumption arith. units, Plastic Hard Macro Technology *(Japanese)* 79764
low power design, surplus timing utilisation for power reduction 101989
low power digital CMOS cct. design, power estim. tech. 101985
low power DSP core, semicustom ASIC design, batt. powered appls. 125541
low-cost pluggable chip scale package for high pin-count appls. 113471
low-power 10 bit ADC, 0.25 µm CMOS, design/test results 121706
low-power and high-speed equalizer for mag. storage read channels 80125
low-power ASIC systs. design 115205
low-power CMOS digital ccts. with subvolt supply voltages 68702
low-power continuous-time integrators, dyn. range limits 91032
low-power design, use of residue and logarithmic no. systs. 114690
low-power mixed sync./asynchronous implement., automatic FSM synthesis 114694
low-power optim.-based volt. scaling tech. using multiple supply voltages 101987
low-power SRAM compiler for portable consumer electronics 102150
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
LSI design, education, IP database *(Japanese)* 89632
lumped-element CPW-to-CPS transits., MMIC design 91318
Luna 340, emulation on Axis Xtreme syst. 101657
LUT-based FPGA synthesis, functional decomp. 79793
LV continuous time tunable HF filters based on floating gates 68911
LV low-power continuous-time ΣΔ ADCs, design strategy 79963
LV SOS CMOS VCO, 930 MHz, design and perform. 80337
MAMon, hardware/software monitor for high-level SoC verification 79727
matching-relevant transistor pairs ident., fast method for analog design 104078
matrix on-chip interconnect, Amba bus spec. 126950

integrated circuit design continued
MCM for video graphic accel., sig. integrity and design consideration 91521
MegASIC, analogue, mixed-sig. and digital ICs, IC design, foundry facilities *(German)* 126929
merged DRAM logic for video sig. proc., design metrics 102231
MetaCores, design and optim. techs. 125178
metal interconnection, ESD/EOS protection cct. and I/O buffer 126505
MetaRTL, RTL design abstraction level, ASIC design 79677
METRICS, syst. for automatic recording and predict. of design quality metrics 81452
mfg. from 300 mm wafer pilot stage to prod. 81410
microelectronic systs. education, conf., Las Vegas, NV, USA (June 2001) 124190
microelectronics 3D design/packaging, EMC-oriented 126934
microelectronics classes, design contests as class projects, worth 124271
microelectronics dist. education course, web-based learning approach 126959
MicroNetwork-based integrat. for SOCs, automated develop. environ. 125371
microwave act. bandpass filters, lin. and noise perform. optim. 69182
microwave MCM-D CPW quadrature couplers/power dividers, X-/Ku-/Ka-band design 125801
mil. phased-array radar IC package surface temp. gradients, convective film coeffs. 124380
MIMIC backside via self-inductance, calc. method 125775
mixed analog-digital systs., LV/current-mode gates 91120
mixed sig. design, ANTRIM software *(Italian)* 80119
mixed sig. design watermarking for IP protection, priority decoder 68950
mixed sig. IC design via dist. learning, CAD and lab. dilemma 125619
mixed-HDL simul. for reduced SoC design complexity 114684
mixed-sig. ccts., pulsed activation power saving tech., pulse stream neuron chip 102426
mixed-sig. ICs, substr. noise minimisation, substr. contacts placement 102425
mixed-sig. SoC design, joint university/indust. Internet-based course 124256
mixed-technol. VLSI systs. incl. MEMS and MOEMS, CAD issues 70322
MM wave multi-fns., MMIC design approaches, elec. optim. 125809
mm-wave telecomm. modules, MMIC spread compensation, automatic output power control 91341
MMIC, 3D design, FDTD model 102666
MMIC, high-speed HF analog RF cct. 102664
MMIC interconnect, differential via, CAD model 101667
MMIC LNA, low-power LV FET cct. design 80336
MMIC multi-layer integrated inductors anal. with wave concept iter. procedure 102696
MMIC param. ident. using hybrid neural net archit. 91364
MNOS NVM technol., current status/future prospects 90904
mobile DSP, reconfigurable syst.-on-a-chip archit. 131137
modular proc. technol. for VLSI syst.-on-a-chip appls. 104080
MOEMS device design flow 81592
MOS analog design, reuse procedure, scalable model rules 125211
MOS digital ccts. with perform. limited yield, proc. variability 125376
MOS IC amp. design teaching to undergraduates 104006
MOS ICs, parametric yield optim. rel. to device mismatch 127066
MOS multiple-valued logic voltage-mode adders, cct. design 102032
MOS silicide form. effects on resist. of common source/drain region 126483
MOS switching ccts., delay estim. algm. 80019
MOSFET model with small set of params. for electronic engng. education 126767
multi-level flash memory, detrapping-induced threshold voltage shift, anal. method 125472
multi-level metal winding on-chip transformer/balun for RFICs 91332
multi-modulus divider, low-power, in 0.6 µm digital CMOS technol. 68690
multi-PLL clock distrib. archit. for GSI 91002
multi-point clock distrib. networks, VLSI ccts., top-level high-speed distrib. 70268
multi-stage LNAs, source inductor value determ., Ka-band MMIC design appl. *(Japanese)* 91301
multichannel optoelectronic data links, realistic end-to-end simul. 128026
multiclock selection/synthesis for control data flow graph 125286
multilayer thin film MCM-D, CPW feedthroughs, design/charactn. 80540
multilevel DRAM with adjustable cell capacity, design 114766
multimedia digital IC reusable interface design 126948
multimedia stream proc. and commun., syst.-on-a-chip 130957
multiple narrow-band bandpass sigma-delta modulators, transfer fn. design 90973
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismatch charactn. 104125
multistage feedforward compensated opamps, low power and distortion 68600
multithreshold voltage technol. for low power bus archit. 101770
multitransistor MMIC ccts., MM-wave amps., stabil. anal. 125807
µP, high perform., semi-custom design flow 125552
µP, on-board cache subsystem, design and packaging 113480
µP cache energy reduction by dual voltage supply 102246
µP LV swing clock distrib. schemes 102315
MUX, low-power decomp., sig. transit. propag. 102323
nanometer design, dyn. power scaling trends, packaging problems 126971
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
nonlin. memory power modelling 79879
nonuniform chip-temp. depend. sig. integrity 126964
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write scheme 90910
nonvolatile memories, fully qualified analog design flow, CAD tools 79541
OEICs, yields, packaging aspects, CAD tools 93446
OFDM transceiver for WLAN, 72 Mbit/s, C++ based syst. design 119580
on-chip global interconnect struct., min/max inductance approxs. 126980
on-chip inductance in high-speed VLSI ccts., high-perform. design issues 116017
on-chip interconnect, inductance modeling and extraction 126498
optimum on-chip power distrib. networks for GSI 126940
orthogonal 1D DWT, canonical and retimed RNS archits., field-PLD 102055
OTA CMOS design tech. for SC appls., low-power low-noise design 101786
OTA design for sigma-delta modulators using 0.35 µm CMOS proc. 101800
over-designed ccts., analog cct. synthesis, library creation 68556
package perform. design for 10 Gb/s systs. 67616
packaging design optimisation using 2D/3D EDA environ. 124344
packaging planning at design stage, benefits 100579
packaging thermal design, modelling approach 124371
parallel and distributed VLSI synthesis on workstation network 79721
parallel CRC computations, systematic approach 106160
parallel-prefix modulo 2^n+1 adders for diminished-one operands 79863

integrated circuit design continued
parametric timing yield estim. from static timing anal., robust design for-quality 81469
partial bus-invert coding for power optim. of appl.-specific systs. 68701
partial implement. in VLSI CAD, equivalence checking 125350
partially simultaneously alive sigs., storage requirement estim., data intensive appls. 126981
partially-depleted SOI CMOS design, high perform., for 0.18 µm technol. generation 70308
partially-depleted SOI CMOS SRAM, gate-to-body tunneling current effects 127042
partition-codec archit. synthesis for low power and small area cct. design 102113
pass-transistor adiabatic logic adder, low-noise/low-power design 68751
phase shift mask/opt. proximity correction, optimal insertion points in IC design flows 126578
PHEMT LF noise model, appl. to MM-wave automotive radar chip set design 80311
PHEMT MMIC nonuniform distributed power amps., design methodology 91384
PHEMT VCO MMIC with very high tuning bandwidth, design 125752
phys. design, conf., San Diego, CA, USA (April 2000) 100382
PIN diode monolithic dual channel 0.5 to 20 GHz limiter 125751
pipeline A/D converter, high-speed low-power area-efficient, CMOS technol. 68862
pipeline ADC with radix<2 archit. 68867
pipelined reprogrammable microcontrollers, high-level synthesis techs. 68832
placement watermarking of std.-cell designs, spatial domain and spectral domain 68732
planar shielded microstrip ccts., rigorous charactn. of shielding effect 80352
PLD-based DSP systs., debugging and design, staged approach 79904
polysilicon nonlin. resistor modeling for analog cct. design 102761
polysilicon resistors, analog CMOS appls., LF noise current 68555
porous low-k dielec. design, pore generation methods 115684
portable high-speed clock generator, full pull-in range, HDL 91001
power BiCMOS proc., HV device implement., 20 V mixed sig. cct. appl. 127072
power connector technol., low loop inductance 81448
power module integrated cooling design using CFD simul. 127075
power-managed syst., stochastic modeling, dyn. mgt. policy 116004
power/ground network optim. based on equiv. cct. modeling 126984
PreFPIX2 chip, core archit. 121713
proc. develop. continuity, materials-based approach 103943
proc.-induced clock skew minimisation using delay tuning 102317
professional CAD environ. for IC design teaching 124269
prog. DSP design using VLIW archit. 102205
prog./expandable Hamming neural network *(Chinese)* 80147
pseudomorphic HFET MM-wave monolithic power amp. for mobile broadband systs. 80325
PWM inverter, three-phase, FPGA based-IC design with optimized space vector modulation schemes 68573
quasi-monolithic integrat. technol., static thermal design 80360
rail-to-rail I/O CMOS op amp, 1 V, design strategy 79590
RC power bus max. voltage drop in digital VLSI ccts. 79730
re-engng. power-aware systs., operational diversity 104050
reconfigurability of FPGA, Intellectual Property design proc. 79825
reconfigurable ANN with GA training, cct. design *(Chinese)* 102481
reconfigurable computing for wireless base station design 125546
reconfigurable systs., design space, reconfiguration hierarchy 125348
regular time-efficient VLSI archit. for multiplication modulo 2^n+1 *(Chinese)* 92433
resistor matching charactn. for mixed-sig. proc. develop. using DAC 102430
reticle defects, detect./repair/printability for 193 nm exposure 126563
reusable baseband Bluetooth IP, SoC integrat., ASIC design house 125352
reusable direct digital freq. synthesizers, VHDL-based design/design methodology 125585
RF transceivers for wireless commun. 85617
RF-CMOS, scaling impact on analog perform. 91377
RFIC multidisciplinary design, first-yr. graduate course for RF engineer training 124265
RFICs, conf., Phoenix, AZ, USA (2001) 89526
RFICs, ESD-induced cct. perform. degrad. 127000
RISC µP with DSP functionality, 32 bit, rapid prototyping 68845
RISC-based DSP synthesis, compiler-friendly, perform. eval. 68839
RNS converters, automatic generation, archit. level exploration, CAD tool 102218
RS codec, finite field multiplier, custom VLSI design 108487
RSFQ µP, cell-based top-down design methodology 127491
RTL coding style effect on testability, use of RTL code analyzer 101993
RTL morphing, making IP-reuse work in syst.-on-a-chip designs 114674
RTL VHDL simul., synthesizable, fast cycle-based approach 68514
S3C2400X indust. embedded SOC product, model checking 125367
S-band ultra LNA, series drain resistor load/lower reson. matching stubs *(Japanese)* 91302
s-expanded symbolic network fns. for computer-aided analog IC design 79545
SC filter, LV/low-power, using cascode transistor config. 68922
SC-type Δ-Σ modulators, single-bit, power consumption optim. 68878
scratch-pad memory space, compiler-controlled dyn. on-chip mgt. 125373
SDH, multiplex sect. adaptation fn., ASIC design *(Chinese)* 96821
seq. ccts., peak-power estim. algm., low-power ccts. 102010
sig. proc. dedicated systs., optimised archit. design *(French)* 116015
sigma-delta modulator, very LV, design methodology 79962
Simple RISC Computer archit. µP design, undergraduate course 125297
simultaneous switching noise in high-speed chip package, IBIS model *(Chinese)* 92450
single level integrat. packaging, ultra high dens., HF 89870
single-finger NMOSFETs, nonuniform bipolar cond., deep sub-µm ESD protection design 81348
SIP vs. SOC, partitioning instead of integrat. 70286
smart-power ICs, parasitic minority carrier injection, substr. pot. shift, simul. 81535
SOC, syst. on a chip, cost, power dissipation, technol. and design 116019
SoC, systs. on a chip, multidisciplinary and collaborative design, interactive video course 126957
SoC challenges in deep submicron technol. evol. 102195
SoC design, dyn. reconfig. overhead mgt., minim. config. size 79707
SoC design, fast hardware-software co-simul. framework 79710
SoC design, gradual refinement of commun., mixed-level cosimul. 79709
SoC design, mixed sig. ICs, design quality 80118
SoC design, retargeting of mixed-sig. blocks 80116
SoC design, testability stds. 115992
SoC design flow quality, std. design langs., APIs 81463

integrated circuit design continued
SoC design for verification methodology, functional verification at blockto sys level 79726
SoC design skills, collaboration in design team, hardware-software implemen education 124263
SOC design verification, port order fault model 104054
SoC design with IP blocks, coherent functional, elec. and phys. modelir 114572
SoC designs, thermal mgt. syst. and prototyping 70262
SoC Masters, internat. MSc program in SoC design at KTH 124267
SoC programme, digital hardware organization course, block-oriented desig 125292
SoC research infrastructure for Canadian universities 126956
SoC syst. level archit. exploration using SpecC methodology 101961
SoC techs., reusable design flow *(Spanish)* 102223
SoC test challenges and DFT methodologies 126949
SoCs, multi-million gate designs, hierarchical power network anal., power gri modeling 79735
Socware design cluster for SoC, research & education programme 126955
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
SOI MOSFET model, analog cct. design *(Chinese)* 103981
soln.-based watermarking tech. of satisfiability, combinat. isolation lemma 125361
SPARC v.8 Integer Unit, proc. core design and synthesis 79945
STARC, Semiconductor Technology Academic Research Center, high-level LS design stages 114691
stat. design space exploration, appl.-specific unit synthesis 125179
stat. methodology, conf., Kyoto, Japan (June 2001) 124210
static CMOS and pass transistor logic designs, technol. mapping, delay reductio 125417
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistc sizing 102035
static timing anal., false coupling interacts., ATPG-based approach 125374
substr. noise in ICs, anal., models and optim. 104047
supercond. digital logic cct., yield optim. 70957
superscalar µP archits., genetic approach to design space exploration 102249
surface-pot.-based MOS model for RF CMOS design, param. extraction techs 102740
sustained neurons in fly, analogue IC design 91134
SwampFinder product develop. tool, IC DFM 104014
switching CMOS mixer design for 2 GHz direct conversion receivers 80350
switching noise constraints effect on high-level synthesis 125624
symm. dual cascode voltage switch level converter for low-power appls. 7956
symmetric dual-level spiral inductors for RFIC *(Korean)* 80345
sync. data-path ccts., sig. represent. guided synthesis using carry-save adder 125442
sync. DIC, clock distrib. network 80020
sync. handshake ccts., FPGAs, Tangram behavioral-level spec. 79783
syst.-level perform. anal. for designing on-chip commun. archits. 70275
syst.-on-a-chip, cache and bus archits., power consumption 90814
syst.-on-a-chip, gigascale, integrated global interconnect archit. 69947
syst.-on-a-chip, prog. cct. design *(Italian)* 102221
syst.-on-a-chip, reconfigurable design, dual supply voltage scaling 90723
syst.-on-a-chip approach for indust. robotic controller design 103992
syst.-on-a-chip design methodology/products using flexible interconnect archit approach 70273
syst.-on-a-chip design technol. 126945
syst.-on-a-chip designs, sub-wavelength tools integrat., opt. proximity correctio 81477
syst.-on-a-chip DFT strategies 126968
SystemC design lang. for develop. of ASICs and systs. *(German)* 90813
systolic array design for kernel fns. of video compression 101880
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67622
testable data path synthesis, GA 125404
testable data path synthesis, GA 114731
TestChipB, prog. logic core advanced technol. demonstrator 102252
timing sign-off re-engng., IC design 92444
top-down analog design methodology using Matlab and Simulink 101747
top-down interactive behavioral synthesis environ., grammar based 68669
TV high quality consumer video proc. chip 120524
UHF OTA-C filters, design issues and CMOS implement. 69217
ULSI ccts., distributed LRC power grid, core switching noise modelling 9244
ultra deep submicron ICs, power supply noise reduction, optimized distributed capacitors 70263
ultra-low threshold voltage CMOS high perform. µP, design methodology 102255
undergraduate microelectronic systs. education, CAD tools, contemporary engng practices 124262
VeriBox CBT syst. for chip design, logic synthesis, multimedia techs. 124257
verification tool for complex IC design 101928
very LV CMOS companding filters, design based on MOS translinear principle 68912
VHDL simulator accel. by embedding syst.-cell library *(Chinese)* 104025
VHDL soft core based model of configurable microcomputer family 79934
VITAL VHDL gate level std., cycle-based simul. 125405
VLSI, conf., Orlando, FL, USA (April 2001) 89562
VLSI, reconfigurable archit., evolvable hardware 68505
VLSI, static estim. tech. of power sensitivity in logic ccts. 125436
VLSI, symm. buffer design 92438
VLSI archit.-level power estim. and design expts. 115990
VLSI CAD, hist.-based dyn. minimization during BDD constr. 101949
VLSI CAD algms., teaching, web-based visualization tools, Java applets 12530
VLSI cct. gate sizing problem, parallel genetic approach 70284
VLSI cct. substr. coupling modeling, semi-anal. quasi-static approach 70283
VLSI ccts., input vector gen. for max. intrinsic decoupling capacit. 104051
VLSI design, cct. delay uncertainty increase by perform. optim. 101982
VLSI design, deep-submicron interconnects 81481
VLSI design, DUNE multilayer gridless routing syst. 70254
VLSI design, gate duplication complexity 104060
VLSI design, high-speed interconnects, num. simul. 81482
VLSI design, indust.-sponsored graduate programme, IIT Delhi 124270
VLSI design, interconnect capacitance, param. extraction 81458
VLSI design, interconnect inductance, param. extraction 81459
VLSI design, interconnect sizing and spacing, coupling capacitance 104059
VLSI design, min. delay routing tree 103990
VLSI design, on-chip inductance, repeater insertion 81460
VLSI design, power consumption optim., control loop 102214
VLSI design education, synchronized streaming media appl., Internet in rem learning 124268
VLSI design IP protection, constraint-based watermarking techs. 116005

egrated circuit design continued
VLSI distributed interconnects simul., freq. depend. params., Krylov-space techs. 92452
VLSI image sens. project chip, undergraduate course, design cycle 126954
VLSI inductive crosstalk, differential signaling modelling, phys. synthesis tools 127011
VLSI large-scale power grid anal. based on preconditioned Krylov-subspace iter. methods 126960
VLSI low-complexity combinat. RNS multiplier, full adder-based cct. 125429
VLSI low-power µP design, zero-skew gated clock routing tech. 68836
VLSI mixed-timing systs., robust interfaces, latency-insensitive protocols 125335
VLSI on-chip interconnect, inductance effects, PEEC approach to cct. model 126978
VLSI packet switching fabrics, low-power syst.-level design, perform. specs. 74496
VLSI power/ground network solver, incomplete Cholesky decomp. conjug. gradient *(Chinese)* 92432
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
VLSI yield optim. design based on sub-proc.-element level redundancy *(Chinese)* 104023
vMOS-based compressor design for parallel multipliers 68749
W-band MMICs, design techs. for chip area reduct., amp. and automotive radar appls. 102718
wafer cleaning capability for increasing technol. demands 103433
wafer level/parametric IC test systs. for design/life cycle enhancement 104042
wafer probe yields and IC design sensitivities, yield loss Pareto 81467
watermarking of std.-cell feedthroughs in mixed-sig. design 68951
wavelet coder/decoder, FPGA implement. 68754
WCDMA channel decoder, VLSI design/implement. 120072
WDM CAD design tools 86091
Weaver receiver topol., image-rejection ratio 114990
wideband MMIC Kowari mixer/phase shifters, diode- and HEMT-based designs 91300
width-adaptive data word archits., asynchronous VLSI techs. 68728
wirebond triangle- and T-profiles, design, linkage-spring model 113534
wireless commun., IC soln. challenges 85497
wireless SoC design infrastructure and automated chip design flow 114894
WWW based analog cct. CAD tool, design space interactive exploration 79547
X-band high efficiency hybrid power amp. design using HFETs 69203
X-band MMIC up-converter, CAD-simul. 91381
xDSL sigma-delta modulator, digital CMOS technol., top-down design 79961
Yagi-type hardware neuron model, CMOS IC implement. *(Japanese)* 91133
yield modeling method for design rule trade-off in interconnection substrs. 81479
Cu IC interconnect proc. characterisation using ps sonar noncontact opt. technol. 126494
Cu post-processed inductors with appl. to 2 GHz integrated VCO 69240
GaAs FET analog, RF and microwave ICs, CAD tool 80347
GaAs HEMT regenerative MMIC freq. dividers for 28 and 14 GHz 125754
GaAs MMIC-design and mm-wave module prod. yield 125808
GaAs PHEMT mixer, single bal. topol. and design methodology 125749
GaAs metamorphic HEMT-based MMIC amps., high gain/perform. 69243
InGaAs/InAlAs transferred-substr. HBT monolithic amp., 185 GHz, design 102681
InGaAs/InP DHBT technol. and design methodology for >40 Gb/s opt. commun. ccts. 131411
InGaP/GaAs HBT transimpedance amp., capacitive peaking tech. 114631
InGaP/InGaAs quadruple power combined monolithic HBT oscillator, 100-GHz-band *(Japanese)* 102658
InGaP-InGaAs HEMT monolithic resistive mixers, Q-, V- and W-band designs 80368
InP HBT VHSICs, opt. commun., prediction extraction modelling scheme 104084
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
InP HEMT D-type flip-flop and MUX ccts., 40 Gbit/s, design tech. 90854
InP HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
InP HEMT MMIC amps., 85-115 GHz, ultra-low-noise design 69178
InP HEMT ultra broadband low power MMIC amp., 1-50 GHz, design 125787
InP LNA and phase switch MMICs, pseudo correlating mm-wave radiometer 102698
InP MMIC HEMT medium power amps., 65-145 GHz, designs 102686
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 114992
SOI based design of analogue/memory ccts. 90703
Si CMOS fully-integrated LC VCOs at RF, neg. conductance ccts. 69214
Si bipolar LNA for WLAN appls., 5.8 GHz, design and perform. 114994
Si bipolar monolithic RF bal. down conversion mixers, noise anal. 69216
Si integrated inductors in 0.18 µm CMOS technol. for MMIC/RFICs 125777
Si substr. coupling noise modeling and expt. verif. for mixed-sig. IC design 102419
Si/SiGe n-MOSFET single stage amps. on CMOS grade Si substr., design 69195
Si-SiGe HBT push-push oscillator for 58 GHz in hybrid microstrip tech. 80338
SiGe BiCMOS switched-LNA, 800-900 MHz, wide dyn. range design 80379
SiGe BiCMOS technol. and CAD environ. for 2-40 GHz VLSI mixed-sig. ICs 114999
SiGe HBT MMIC 16 GHz oscillator design with act. elements 125810
SiGe HBT for analogue BiCMOS technol. appl., review 92477
SiGe RF BiCMOS SC pipelined ADC design, clock jitter 79986
SiGe bipolar wideband amp., 15 GHz, 2.8 dB noise fig., design 91315

ntegrated circuit economics
backend lithog., 300 mm wafer proc. 92221
BIST, economic anal. 114687
catalytic technol. PFC emissions control in semicond. mfg. 89932
code placement in hardware software co-synthesis, perform./cost effects 79700
DRAM wafer probe testing strategies, impact of market changes 102146
high-cost nanometer-technols. era IC design, design-mfg. interface 126972
lithog. equipt. in semicond. fab, financial considerations 92194
MCM yield/cost trade-offs with KGD probab./repair 69376
nondestructive elastic probe technol., advanced elec. testing 92439
photomask/lithog. cost balancing in IC fab. 103522
quality of design from IC mfg. perspective 81462
self-primed spin-on low-k materials testing for wafer cost of ownership optim. 92124
sustainability considerations in microelectronics indust. 81414
wafer carrier replacement for improved IC yield/tool availability 115986
wafer environ. control, contamination metrology equipt., cost anal. 103525
wafer fab. technol., defect mgt. strategies, inspection technols. 124415
GaAs MMIC-design and mm-wave module prod. yield 125808
GaAs, cluster tool sputtering metallization procs. 90249

integrated circuit economics continued
GaAs device technology, opt. lithog. appl., phase-shifting of discrete patterns 115736
GaAs lift-off technol. for finer resoln./topography 115653
Si, 300 mm wafer develop., cost/technol. challenges 67520

integrated circuit interconnections
see also integrated circuit metallisation; integrated circuit packaging
1D continuum electromigration modeling for IC interconnect reliab. 115991
3D chip stacking technol., ultra-fine-pitch interconnection 113523
3D IC, deep-submicron interconnect and syst.-on-a-chip 81480
3D IC technol. 104029
3D ICs, thermal anal., num. modeling 126943
3D integrat., stochastic 3D interconnect model, perform. charactn. 81461
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
3D interconnect inductance, freq. depend. 126996
3D multilayer CPW struct. with wideband vert. interconnection, modelling 125793
3D SoC, global interconnect design window 126942
3D SOI integrat., interconnect archits., double-gate transistors 127067
3D stacked LSI struct., packaging technol. 113506
3D tech. visualizations in VLSI design, full-wave interconnect anal., clock distrib. 125363
15-GHz wireless interconnect, 0.18-µm CMOS, integrated transmitters, receivers, and antennas 125776
150 mm through substr. interconnect fab conversion for III-V wafer mfg. 126513
A²BC, adaptive address bus coding for low power deep sub-micron designs 126988
accurate pattern registration for IC tomography 92106
adjacent interconnect lines, deep submicron technols., crosstalk eval., inductive effects 126935
adv. interconnect & low-k dielec., conf., San Francisco, USA (Apr. 2000) 89563
aggressor alignment for worst-case coupling noise 103997
ALIVH any layer interstitial via hole substr., interconnection tech. 67562
ALIVH any-layer interstitial via hole interconnect substr., insulator material 67574
all-printed inorganic logic elements fabricated by liq. embossing 114704
archit. driven cct. partitioning, multiterminal nets, multifield-PGA 68778
area array components, X-ray/endoscopy-based inspection techs. 124417
area array devices, combined visual/X-ray inspection 113737
area array packaging, high dens., high speed separable interconnect appl. study 124336
at. layer CVD for metal nitride growth, dual damascene barrier requirements 90460
at. layer deposition 124891
automatic ribbon wire bonding technol. 102874
barrier-metal systs., metal ion reservoirs, IC low current dens. lines 81120
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effects 92140
BEOL post-ash residue removal, recirculated batch spray proc., low cost 81084
BGA assembly failures, Ta capacitor induced 113571
BGA package repair using MWIR systs., proc./rework cost control 89853
BGA packaging, solder sphere quality considerations 124340
BGA packaging, ultravia substr. for high perform. 67593
BGA solder joint reliab., FEA assess. methodology, prediction accuracy 113580
BGA solder joint voiding, PCB surface pad finish/contamination impact 113712
BGA solder joint voids, effects on thermal fatigue 113570
BGA/CSP connection durability during thermal shock, finite element modeling 100598
BGA/CSP semicond. packaging rework/repair, outsourcing aspects 67592
bisphenol A epoxy/phenoxy resin encapsulant, thermosetting/thermoplastic combination 67581
bordered/borderless contacts, electromigration lifetime, misalignment 69932
BPSG pre-metal dielec. film CMP, removal rate/uniformity/defectivity 103346
broadband 3D FDTD charactn. of multiple flip-chip interconnects 100589
broadband RF amps., CPW interconnects, on-board probing, calib. tech. 91335
buffered interconnect tree optim., Lagrangian relax./dyn. prog. 126995
buildup struct. CTE mismatch, reliab., thermal cycling, FEA 113679
bump-less interconnect, next generation syst. packaging 113657
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
Capacitive Micromachined Ultrasonic Transducers, low parasitic capacitance elec. interconnects 104222
cavity down BGA/flip-chip-in-package encapsulation procs. 113467
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
cct.-aware on-chip inductance extraction 104075
cct.-level layout-specific interconnect reliab. assess. 92144
centrifugal semi-aq. cleaning proc. for high-dens. package substrs. 115183
ceramic BGA, 1 mm pitch, reliab., design/proc. effects 113569
ceramic column grid array modules, mfg. proc. for high vol. prod. 78646
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334
channel routing, 3-layer HVH, min. crosstalk layer assignment, pseudo-Boolean optim. 70272
chip scale BGA traces, self/mutual-inductance modeling, conductive die attach influence 124377
chip size BGA packaging for high perform. memory appls. 68790
CMOS, full opens in interconnection paths, detectability conditions 125330
CMOS analogue cct. routing, contact and via placement algm. *(Chinese)* 101738
CMOS buffer, adiabatic charging of long interconnects 68743
CMOS CDM ESD phenom., mixed-mode transient anal. *(Korean)* 116026
CMOS device downsizing below 0.1 µm, problems/solns. 104090
CMOS devices, 0.12 µm, high perform., with manufacturable 0.18 µm technol. 127020
CMOS DRAM interconnect line charact., underlayer geom. effect, S-param. 114756
CMOS dyn. prog. arith. array proc., DSP appls. 68819
CMOS FRAM with chain cell struct., fully planarized, 8 Mbit 125471
CMOS front/back end plasma etch procs., fund. design limitations 104126
CMOS gate dielec. scaling limits 116034
CMOS gate high-k dielec. by liq. source misted chem. deposition 104100
CMOS gate oxide plasma proc. induced damage, transistor gate area depend. 104131
CMOS gates, RC interconnect loads, π-model, propag. delay 90820
CMOS interconnect model, DOE and multiobjective optim. 104061
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS on-chip inductance effect on sig. nets under influence of power grid noise 81503

integrated circuit interconnections continued
CMOS proc., Al(Cu) interconnect technol., on-chip inductance 81119
CMOS proc. flow for combined three layer/self-aligned contacts 104099
CMOS reliab. margins, scaling-induced reductions, design-in reliab. efforts 81508
CMOS reverse interconnect scaling in multi-GHz amp. and oscillator design 115015
CMOS scaled memory-adder systs., time delay, interconnection and dielec. materials 68842
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
CMOS sizing rule for high perform. long interconnects 81471
CMOS systs., ground interconnection networks, max. simultaneous switching noise 70298
CMOS technol. interconnect perform. metric, stochastic wiring distrib. model 125279
CMOS technol. scaling challenges for sub-0.1 μm generations 70303
CMOS ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
CMOS VLSI systs., phantom mode signaling, sig. to interconnect usage 70296
CMOS-IV SoC technol., 100 nm, for high dens. embedded memory/mixed sig. LSIs 127018
CMP removal rate uniformity control, empirical-based modeling 81085
COB glob top encapsulant curing, variable freq. microwave proc. 78641
combinat. logic blocks, coupling and noise aware delay anal. 68748
combustion CVD-based low-k dielec. thin-film technol. for HDI PCB appls. 125904
compliant cantilevered spring interconnects for flip-chip packaging 113631
concurrent IC/package/syst. design strategy 100585
cond. modes basis fns. for efficient EM anal. of on-chip/off-chip interconnect 126961
conducting polymers, microelectronics appls., review 81409
conductive adhesives for flip-chip appls., self-alignment capability 67604
conf., Burlingame, CA, USA (June 2001) 124180
coupled RC tree networks, moment matching based model for crosstalk estim. 81456
coupled transm. lines, transient simul., time-domain scatt. params. 90652
coupling, crosstalk noise, aggressor alignment 70252
coupling, peak noise and delay meas. 116016
coupling-driven bus design for low-power appl.-specific systs. 126989
crosstalk-induced logical/delay faults, on-chip buses, embedded-software-based approach 101921
CSP flexure-induced tensile stress effects charactn./minimization, empirical strategy 78644
CSP interconnects, cyclic bending, fatigue 113550
CSP laser rework technol., energy source perform./proc. specific package reliab. 113605
CSP proc. with reworkable underfills for mobile phone appls. 113708
CSP rework, proc./cost control 89854
CSP solder attach reliab. optim. 113603
CSP technol. for electronic hardware miniaturization, trends 100602
CSP/BGA packaging yield enhancement with solder flux/paste proc. control 124333
CSP/BGA solder joint fatigue life, thermal cycling ramp rate effects 113579
CSP/BGA yield enhancement with solder flux/paste proc. control 125940
CSP/flip chip underfill, multi-pass dispensing on dual parallel lanes 100584
CSP/MCM-L impact on portable wireless product substr. requirements 124381
Cu damascene interconnects, localized strain meas. by CBED 92172
current dens. 116018
current-mode sense amps. for high dens. DRAM and PIM archits. 102175
D2BLP double dens. bottom leaded SDRAM stack package, develop. 113593
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
deep sub-micron ICs, contact elec. probing, SPM tech. 115999
deep sub-micron technols., timing anal. with crosstalk as fixpoints on complete lattice 126986
deep submicrometer designs, interconnect-driven design planning/synthesis, layout optim. 68684
deep submicron CMOS, energy efficient signaling, on-chip interconnect repeater insertion 81511
deep submicron crosstalk simul., freq.-depend. charact. 92456
deep submicron design, state of art and trends in parasitic extraction 104069
deep submicron IC design, cct. theory and interconnect anal. 70271
deep submicron IC design, parasitic extraction 81483
deep submicron IC interconnects, crosstalk and delay estim., switching conditions 70270
deep submicron semicond. IC design *(German)* 81444
deep submicron SoC interconnects, high-level crosstalk defect simul. 104013
deep submicron technol., coupled RC trees, moment matching method 81438
delay insensitive SoC interconnect using 1-of-4 data encoding 79671
design, interconnection syst. *(Italian)* 92436
design, Maxwell eqns. *(Italian)* 81478
design, nonuniform chip-temp. depend. sig. integrity 126964
design, simultaneous shield insertion/net ordering, explicit RLC noise constraint 126975
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
die attach technol. in back-end proc. 69362
dielec. porous thin films, low-k, struct. and property charact. 70369
dielec. thin films, low-k, thermal mech. props., advanced metrology for rapid charact. 75895
digital CMOS IC interconnect, RLC macromodels 101948
digital VLSI design, architectural synthesis with interconnection cost control 101957
dimpled BGA proc. develop. for space flight appls. 133229
dispersive multiconductor transm. line-based discrete interconnect model 81421
distributed interconnect networks, transm. line model based anal./simul. 90651
distributed mutual inductance/resist. expressions for semicond. interconnects 103463
distributed RLC interconnects, anal. of on-chip inductance effects 126963
double ion-implant Ti-salicide technol., high-perform. CMOS appl. 92126
DRAM, 0.1 μm, bitline spacerless storage node SAC/Ru-Ta_2O_5-Ru capacitor with TiN contact plug 125475
DRAM cell capacitor with multiple-level interconnects, modeling and simul. 114743
DRAM storage node pad proc., line type self-aligned contact/oxide spacer/direct metal plug 125476
dry de-veil photoresist/etch residue removal for solvent-free cleaning 115651
DSM CMOS technol., energy efficient signaling, on-chip interconnect 101984
dual damascene struct., hybrid DUV-e-beam lithog. 115769
dual gate CMOS DRAM self-aligned contact proc., tetrachlorosilane-based SiN mask films 125473

integrated circuit interconnections continued
dual GOI, STI proc. param. effects 81416
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
elec. conductive adhesives, low m.p. alloy incorporation, depletion/wettin 67600
electromigration, early failures, stat. anal. 92105
electromigration reliab. estim., IC interconnect trees 92174
electron projection/e-beam direct write lithog. resists, image form. 103643
electronic interconnects/packaging, material factors 69934
electronically conductive filled adhesive joints, behaviour under cyclic loadin 67559
elevated-CPW struct. for high-speed digital interconnects 91324
EM anal., FDTD method 92457
EM interconnect modeling, CAD approach, HF effects 70274
embedded pass. components for MCM technols. 125943
energy model considering coupling effects 126985
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut par titioning 102105
epoxy underfill materials, titanate/zirconate coupling agent effects 67599
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
fast wafer-level detect. and control of interconnect reliab. 103481
FCOB, FCOB, no-flow underfill materials, yield anal., proc. modeling 78667
FCOB assemblies with/without encapsulation, reliab. 78654
FCOB SMT assembly proc. trade-off cost anal. 115221
FCOF, flip chip on flex, standoff height meas., SAM nondestructive methodology 78608
film thickness/dens. meas. using combined X-ray tech. for IC metrology appls 103952
fine-pitch BGA board-level solder joint reliab. enhancement by package modifs 124335
finite difference formulation, IC interconnect simul. and modelling 92453
flex-based two metal layer electronic packaging 67547
flexible CSP interposer substrs., laser via form. for high dens. assembly 124353
flexible nanospring interconnects, high-perform. probing, coupled thermal-elec. model 113626
flip chip array packages, transfer molding encapsulation 78643
flip chip assembly subcontracting, integrated turn-key capability 69369
flip chip assembly with reflow encapsulants 113564
flip chip attach, fluxless solder nonconductive paste tech. 125938
flip chip BGA underfill charactn. using rigid substr. 113562
flip chip bumped interconnects, emerging technols. 100609
flip chip package with reflowable underfills, reliab. studies 113706
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
flip chip packaging, surface tension/adhesion 67597
flip chip packaging defect diagnosis using acoustic microimaging 78615
flip chip PBGA packaging, OSP surface finish charactn. 113711
flip chip technol. utilization in automotive electronics, perspective 124021
flip chip under bump metailization systs. on Cu pads 113635
flip chip under-bump metall. conversion to intermetallics, reliab. impact 67624
flip chip underfill encapsulant reliab. perform., filler settling effects 67579
flip chip underfill procs., rapid, for large to small flip chips 113704
flip chip underfill to passiv. material adhesion, environ. influence 67598
flip chip-in-package, molded underfill material/proc. 113563
flip chip-in-package stud bump bonding proc., reduced proc. steps 80536
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip chip/wafer-level CSP, emerging packaging technols. 113698
flip-chip assembly syst. for prototyping/proc. investigs. 125939
flip-chip assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
flip-chip mfg., solder flux/underfill compatibility 69364
flip-chip mounting proc. develop., metallic joint using US wave energy 125936
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
flip-chip populated PCB rework by laser desoldering 124351
flip-chip underfill delamination mechanism/growth rate *(German, English)* 89865
flip-chip/CSP components on ceramic substrs., rapid power cycling 67621
flip-chip/underfill reliab., no-clean assembly proc. conditions effects 67564
floating MIM capacitors, charging damage 102781
FPGA channel segmentation design, multi-level matching-based algm. 68755
FPGA global interconnects, parity-based BIST, design/implement. 114586
FRAM, high dens., scalable sub-10F^2 1T1C capacitor-on-bitline cell technol. 125470
gate oxide, ultra-thin, ESD protection device trigger transient effects on reliab. 70118
gate oxide damage in plasma proc., historical overview/future prospects 103423
generic RC trees, crosstalk noise estim. 125186
global fault localization using induced voltage alteration 115996
GSI, interconnect and substr. struct. 81419
GSI, interconnect scaling limits 104055
harsh environ. microelectronics/microsystems, research/develop. 132073
HDI, nano-spring array 78655
HDI BGA substrs., ultra-high dens., develop. 113587
HDI build-up PWB design tools, requirements 69300
HDI chip package substrs., dielec. materials 124370
HDI fab., laser proc. 124331
HDI flex ccts. with nonpermanent interconnect/termination technols. 124337
HDI flip chip-on-flex, base materials eval. 124359
HDI microelectronics packaging roadmap for space appls. 133228
HDI modular packaging for space electronics appls. 133234
HDI multilayers, low cost, using power mesh archit. 100599
HDI PCB, microvias reliab. assess., syst.-on-a-package 113680
HDI PCB foil lamination technol. 124369
HDI PCB mfg. technol. selection, board thickness prediction 113589
HDI PCB organic laminate substrs., microstructural anal. 113590
HDI PCB technol., influence on sig. integrity 124368
HDI PWB fab., imprint patterning technol. compatibility 125907
HF/high speed package interconnects, meta-evol. prog. based robust model param. extraction 126467
hierarchical IC test approach using boundary scan test 100556
high resoln. TFT-LCDs, low resistive material bus-line proc. 92114
high-dens. electronic packaging, SPICE models, coupled interconnections 89885
high-k dielec. gate materials for ULSI devices, advances/materials compatibility 104108
high-k gate dielec., materials eval./selection 104105
high-k gate dielec. for CMOS devices, future challenges 104130

egrated circuit interconnections continued
high-power appls., integrated power electronic building blocks 116046
high-speed coupled interconnections, multiconductor transm. lines, reduced-order models 81420
high-speed digital ICs, sig. integrity, MOSFET modeling, LE-FDTD method 90835
high-speed high-dens. LSIs, internal waveform obs., EO sampling prober 116000
high-speed interconnection, scale reduction, DCM macromodel *(Chinese)* 92449
high-speed interconnects, anal. using multipoint Pade approx. 90642
high-speed interconnects, order-reduction algm. 94071
high-speed IOE modulation cct. 71626
high-speed large interconnect network simul., nonlin. cct. reduct. 90639
Hiperprint interconnect technol. for printed subassemblies, high perform./low cost 67636
hole plugging technol. for HDI circuitry/through-hole multilayer PWBs 125903
hybrid elec.-opt. interconnection technol. for multilayer pc boards 91460
hydrogen silsesquioxane charact., appl. of charge-based capacitance meas. tech. 92131
IBM S/390 MCM, off-chip buses, operating freq. trends 89884
ICP resist stripping, proc. modif. to avoid low-k dielec. film damage 69867
ILD PECVD induced charging damage, IC yield/reliab. effects 101375
ILP-based board-level routing of multi-terminal nets for prototyping reconfig. interconnect 104049
inductance extraction via windowing for simul. efficiency 79692
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
intell. power electronics modules, embedded power packaging technol. 81534
interchip via technol., vert. syst. integrat. 126465
interconnect-driven short-cct. power modeling 126965
IR FPAs, systs.-on-a-chip, CMOS technol., design tools 109635
isothermal electromigration test as proc. control methodology, case study 81129
isothermal wafer-level electromigration test for metal syst. reliab. monitoring 126473
large on-chip VLSI interconnect grids, power simul., model reduction 92454
large-scale mag. coupling modelling for on-chip interconnect 126979
laser direct-write of materials for microelectronics appls. 103979
laser micro welding in electronics, limitations and miniaturization pot. 91514
laser microchemical direct write deposition/etch methods, real-world appls. 103978
latency-driven design of multi-purpose systs.-on-chip, deep submicron technol. 125336
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
lead forming methods for IC packaging 100586
level shifters for high-speed 1-3.3 V interfaces in 0.13 µm Cu-interconnect/low-k CMOS technol. 125583
LGA/BGA packages, second level reliab. comparison 113581
line params. 70285
liq. solder joint technol. for electronic assembly bonding *(German, English)* 89864
local interconnect gap-fill optim., integrated multiscale 3D simul. 126477
localizable HDI-PCB technol. develop. 113588
lossy multiconductor transm. lines, pass. macromodels, multiport distributed interconnects 124365
LOTTERYBUS, high-perform. commun. archit. for SoC designs 125334
low dielec. const. materials, IC appls. 69927
low dielec. const. materials for ICs 104244
low-energy adaptive bus coding, Mediabench benchmark set run-time memory access traces 92108
low-K CMOS, micromachined high-Q inductors in 0.18 µm Cu interconnect 115003
low-k dielec., dual damascene patterning, trench etch procs. 103456
low-k dielec., mater. charactn. for damascene integrat. 126463
low-k dielec. films, characterisation by ellipsometric porosimetry 92600
low-k dielec. thin film pore charact., positronium annihilation lifetime spectrosc. 92601
low-k porous dielec., dual hard mask, Cu dual damascene fab. 115718
LTCC materials for high dens. multilayer interconnect 124378
LTCC MCM substr., design of strip-line struct. and flip-chip interconnects 100591
LTCC tape systs., chem./structural/mech. props. 79434
lumped-element CPW-to-CPS transits., MMIC design 91318
matrix on-chip interconnect, Amba bus spec. 126950
MCM, chip mounting and interconnection, space appls. 91520
MCM elements, time domain charactn. with TLM method 91519
MCM-D packaging, wet etch stop resist eval. 69375
MCM-D thin film techs., integrated spiral inductor/coupler appls. 69220
MCM-D/L/BGA integrated package with embedded pass., satellite TV demonstrator 124364
MCM-SL/D HDI substrs. using multilayer thin film technol. on laminate substrs. 124360
MEMS/electronics integrated technols., co-fab. proc. seqs. 81543
metal interconnection, ESD/EOS protection cct. and I/O buffer 126505
metal/polysilicon CMOS gates, work fns., effects of high-k dielec. 127039
metallic interconnect thin films, elec. failure procs. 126433
metallic lines, percolative approach to electromigration 69925
metallic thin film, electromechanical failure 92102
metrology, rapid X-ray reflectometry appls. 115720
micro-BGA/chip/wafer test/burn-in, high-dens. sockets 124338
microelectronic struct. under uniform thermal loading, finite element modeling 115688
miniaturised consumer electronics, assembly proc. trends 67637
miniaturized interconnects, creep/contact opening electromigration failures 92104
miniaturized reliable space electronics, prod. commercialization 133232
MIS interconnects, device level equiv. cct. modelling 92447
mixed-sig. ICs, on-chip interconnects, orthogonal gridded shield, transm. characts. 91118
MMIC, high-speed HF analog RF cct. 102664
MMIC interconnect, differential via, CAD model 101667
MOSFET HF noise param. de-embedding procedure, metal interconnect capacitive effects 103887
µBGA packaging for high-perform. RDRAM/SDRAM appls. 125497
multi-conductor interconnect line systs., capacitance extraction, test struct./method 103496
multi-level pass. order reduction of interconnect networks 92460
multi-point clock distrib. networks, VLSI ccts., top-level high-speed distrib. 70268

integrated circuit interconnections continued
multichip ultra-thin 3D stacking technol. 91522
multiconductor interconnects, freq.-depend. losses, transm.-line models 126969
multiconductor transm. line simul. using order-reduction techs. 94072
multidielectric multiconductor hybrid ICs, closed form method of lines approx. anal. 80335
multilayer thin film MCM-D, CPW feedthroughs, design/charactn. 80540
multilevel interconnect, proc. integrat., pattern misalignment 103471
multilevel interconnect struct., interlevel coupling noise model, Markov chain 126938
multilevel interconnection with intermetal dielec. air gaps, reliab. studies 126430
multilevel ULSI interconnects, thermal model incorp. via effect 126937
multimedia digital IC reusable interface design 126948
multimedia stream proc. and commun., syst.-on-a-chip 130957
multiple bondwires for MM-wave packaging, wideband charactn. 69210
multiple dielec. multicond. systs., field computation and capacit. extract. 128660
multiple segmented coupled RC interconnects of VLSI ccts., noise model 81455
µP, on-board cache subsystem, design and packaging 113480
Nanoglass E polymer/Cu damascene proc., etch/clean/CMP 126451
nanometer technol., interconnect energy dissipation, minimization tech. 126990
nanoparticle liq. suspens., drop-on-demand dispensing for microelectronics manufacture 100613
nanospring interconnects for high-dens. appls. 67609
narrow thin interconnects, void growth dyn., capillary effects, simul. 92111
neo-Manhattan bump interconnection for B²IT build-up PWBs/area array IC package substrs. 113703
netlists, archit. driven partitioning, logic emulation 79795
new materials for act./pass. integrated devices, wireless appls. 69221
NMOSFET protection devices in 0.13 µm CMOS technol., hot electron/ESD stress interact. 81526
no-clean stencil printing proc. develop. for SMT/through-hole interconnect technols. 124339
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill develop. for flip chip assembly *(English)* 89866
no-flow underfill encapsulant develop. formulation, epoxy resin combinations 67580
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
non-uniform substr. temp. effect on clock sig. integrity in high perform. IC designs 101991
nonuniform temp.-depend. interconnect perform. anal. in high perform. ICs 126962
on-chip clock wire inductance, fast bounds estim. tech. 101992
on-chip copper interconnects, freq.-depend. current distrib. for inductance modeling 103998
on-chip global interconnect struct., min/max inductance approxs. 126980
on-chip inductance in high-speed VLSI ccts., high-perform. design issues 116017
on-chip interconnect, inductance modeling and extraction 126498
on-chip interconnections, model anal. of transients 103457
on-chip interconnections in integrated Josephson jn. logic schemes 114722
on-chip interconnects, large sig. anal. 69960
opt. interconnects 103472
optimal buffer insertion under accurate delay models, graph based algm. 79697
optimum on-chip power distrib. networks for GSI 126940
optimum voltage swing on on-chip/off-chip interconnect 92437
organic ion-implanted low-k organic SOG films, IC appls. 126466
organic low-k dielec., plasma etching, damascene archit. 103387
package encapsulation, back-end proc. overview 78662
package inspection using X-ray systs. 124403
package solder joint reliab. testing, computer simul. 78661
package/board level interconnect design, empirical constraints 113692
packaging design optimisation using 2D/3D EDA environ. 124344
packaging for high perform. memory 124328
packaging/board warpage charactn., location/type/magnitude importance 124330
param. var., technol. scaling impact on clock skew & delay 126939
partially-depleted SOI CMOS technol., 0.13 µm, for low-power digital/RF appls. 127046
passivated metal interconnects, thermal stresses, anal. model 115681
PBGA on flex substr., board level reliab. 67622
PCB lossy interconnects, time domain modeling, dielec. loss 80488
PCB solder joint reliab., thermal expansion mismatch impact 115116
pHEMT technol. wideband act. downconverter MMIC, HDI 91350
pixel detector modules, MCM-D technol. 97961
plasma etch damage, charging pot./current densities, substr. connection effects 103432
plasma etching, wafer temp. meas./control 92044
plasma related damage and proc.-induced phenom., conf., Monterey, CA, USA (Nov. 2001) 100381
plasma/proc.-induced damage control, symposium overview 103976
plastic IC encapsulation, 3D wire sweep meas. using X-ray CT instrum. *(Japanese)* 67639
plastic packages, die stress drift meas. using piezo-Hall effect 67625
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 92145
polycryst. solids, stress-driven mass transport, lattice-based micromechanical continuum formulation 69940
polymer stencils, UV laser-cut, for fine pitch wafer bumping 100587
polymer stud grid array CSP, flip chip assembly proc. develop., reliab. assess. 113634
polyoxymethylene films, hot filament CVD, air gap sacrificial layer 125100
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, contact resist. 102185
porous low-k dielec. design, pore generation methods 115684
porous low-k ILD thin films, struct./props., X-ray reflectivity/SANS 91922
porous low-k ILD thin films, X-ray reflectivity/SANS, 3-phase model 92160
post-ash polymer residue removal from BEOL struct. using inorganic chem. 92043
post-metal CMP cleaning with electrolyzed DI water, surface control tech. 103344
power connector technol., low loop inductance 81448
pre-bond IC plasma cleaning, wire bond pull strength enhancement 81077
preimidized polyimides, high-dens. packaging, electron beam enhanced multilayer, planarization 78609
proc. technol. requirements for 300 mm wafer transit. 115984
proc. var. and timing anal., pico-second differences 126992
PROPHET, placement-depend. full chip thermal simul., functional blocks 126947
PTFE/siloxane nanocomposite ultra low-k ILDs, high-temp. mech. behavior/phase morph. 92153
PTMSTD-III DAQ/analyser, DSP syst. design 68821

integrated circuit interconnections continued
PVD IC metallization, particle contamination control in sputter deposition modules 101193
quartz tuning fork resonators fabr., selective etching, photolithography and characterization 115735
raised cosine signaling crosstalk reduction for interconnect-limited bus 126936
Rambus memory module, wafer level package, microwave model 113481
RC delay metric, perform. optim. 70249
reliab., short-time tests, opt. interconnect/transistor failures, stat. models 78723
reliab. phys., conf., Orlando, FL, USA (April/May 2001) 78456
repeater block planning under simultan. delay/transit. time constraints 81440
repeater insertion in tree struct. inductive interconnect 103987
reworkable underfills for area array packaging encapsulation 67563
RF chip-to-substr. interconnect, wire bond parameterized model 113639
RF-microwave multilayer integrated pass. using organic syst. on package technol. 102684
RLCG interconnects, pass. model order reduction, moment components method 92458
RT-level route-and-place design methodology for interconnect optim. in DSM regime 104045
self-aligned contact etch stop window, enhanced, using C_4F_6 chem. 103379
self-primed spin-on low-k materials testing for wafer cost of ownership optim. 92124
semicond. proc. research, ionised plasma appls., review 115636
shielded interconnect four-line syst., mutual capacitance, inductance 69944
shielded vert. interconnection for microwave CSP, design for reliab. 125794
SiLK porous semicond. dielec. film, damascene interconnect 115706
siloxane-based low k materials, heat/moisture resist., IC appl. 104238
SILYAL top surface imaging proc. for 157-nm lithog. 103654
SIPPs, std. interconnect proc. params., deep sub-micron ICs 104048
SISPAD '00, semicond. procs. and devices simul. conf., Seattle, WA, USA (Sept. 2000) 67374
Sn-Ag-Cu Pb-free solders for BGA appls., reliab./Au embrittlement 67571
SoC clock freq., on-chip & on-board interconnects partition 126941
SoC interconnect crosstalk defects testing using on-chip embedded proc. cores 126977
SoCs, multi-million gate designs, hierarchical power network anal., power grid modeling 79735
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
SoL interconnection, compliant wafer level package, embedded air-gap 126464
solder bumps thermal fatigue in IC joints 78670
solder droplet printing technol., high precision, principles/appls. 69366
spin-on porous ultralow-k dielec., single/dual damascene integrat. 115717
SPMCM, symmetric prog. multi-chip module for low-power prototyping syst. 115226
stack DRAM cell with low parasitic resist. device/poly metal gate technol. for Gbit DRAM 125489
stacked chip-to-chip interconnection, wafer bonding, dielec. glue 115700
stacked hotplate low-temp. annealing syst. for 300 mm wafer thermal proc. 80978
static timing anal., false coupling interacts., ATPG-based approach 125374
struct. on-chip interconnection networks, top level wires, modular design 125372
sub-50 nm gate length transistors and interconnects *(Japanese)* 115905
submicron interconnect delay reduction techs. for bi-directional/uni-directional buses 125274
submicron layout, interconnect delay, stat. anal. 92442
super BGA, wideband model for high speed digital ccts. 89860
super high speed polysilicon emitter IC technol. *(Chinese)* 104085
super-BGA package reliab., underfill effects 67606
sync. DRAM perform. improve. by lowering interconnect capacit. 125467
syst.-on-a-chip, gigascale, integrated global interconnect archit. 69947
syst.-on-a-chip design methodology/products using flexible interconnect archit. approach 70273
syst.-on-a-package, high-dens. PWB substr., ultra-fine photoresist image form. 124382
systs.-in-a-package technol. research at Interuniversity Microelectronics Center 67595
T-G^2BGA, tape gold-gold gang bond BGA, highly reliable CSP develop. 113470
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
TaO_xN_y high-k dielec. materials 102144
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
technol. for ≤100 nm scaling, impact on key chip metrics 69941
testing, switching activity, automated BIST synthesis 104058
thermal proc. technol., gate dielec. thickness limits/materials 70232
thermal spray techs. for meso-electronics/sens. direct write fab. 114399
thick conductors, capacitance/conductance calcs. 126510
thick-film multilayer MCM-C interconnection using diffusion patterning technol. 67645
thin-film interconnects, electromigration modeling, void nucleation 92103
thin-film interconnects, grain boundary crack growth 103491
through-wafer via holes, conductive membrane 92113
tree optim., hybrid DQP algm. 70258
trench filling by ionized metal phys. vap. deposition 126480
TSOP epoxy molding cpd. pellet wt. determ. rule 124341
two metal layer tape package for improving high speed DRAM perform. 113632
UA-FWLIS full-wave layered-interconnect simulator for react. anal. in stripline ccts. 91375
ULSI high-speed serial commun. with error correction using 0.25 μm CMOS technol. 104112
ULSI interconnect form. using dispersed nanoparticles 92100
ULSI interconnect scaling and parasitics, crosstalk noise, opt./RF interconnects 81123
ULSI interconnect syst., thermal perform., simul. *(Chinese)* 126499
ULSI plastic packaging, die cracking eval./improvement 100619
ultra clean proc., conf., Ostend, Belgium (Sept. 2000) 78425
ultra deep submicron ICs, power supply noise reduction, optimized distributed capacitors 70263
ultra-dense stacking technol. for interconnect of ultra thin chips for space appls. 115228
ultra-fine line HDI for syst.-on-a-package using photoimageable polymers, low cost 67573
ultra-low k ILD materials for use in ULSI BEOL struct., mech. integrity 92431
ultra-low-k dielec. materials for advanced interconnects, eval. 69926
ultra-thin FCOB assembly 115222
ultrahigh-speed 1.55-μm photodiodes on Si with low-loss MM-wave CPW 93458
ultralow-k ILD materials develop., IC proc. challenges 126492
under-bump metall. etching for wafer level packaging 100580

integrated circuit interconnections continued
underfill encapsulant affected by flip chip assembly variables, adhesion 6757
underfill resin develop., flow microcalorimetry appl. 67610
UV polymeric materials/resists for 193/157 nm appls. 103653
VCSEL high-perform. syst. for different scale opt. interconnections 82663
vert. CMOS gates, feasibility study 104102
very deep submicron CMOS, global interconnects, current sens. techs. 9246
VHDL interconnections analog macromodels, timing behavior, event-driven simulators 101883
via-first dual damascene integrat. scheme, evol. of trench profiles 103454
via/line package level/wafer level tests, comparison 81131
Viterbi decoders, path metric memory mgt. for minimising interconnection 90926
VLSI, high-speed interconnect, transient simul. *(Chinese)* 92448
VLSI, on-chip crosstalk eval. between adjacent interconnections 70269
VLSI buffer and wire resource allocation, design methodology 126973
VLSI delay and crosstalk estim., lumped and distributed coupled RC tree moment computation 81485
VLSI design, deep-submicron interconnects 81481
VLSI design, high-speed interconnects, num. simul. 81482
VLSI design, interconnect capacitance, param. extraction 81458
VLSI design, interconnect complexity modeling, Rent's rule 81465
VLSI design, interconnect inductance, param. extraction 81459
VLSI design, interconnect sizing and spacing, coupling capacitance 104059
VLSI design, interconnect-centric floorplanning, repeater block planning 7025
VLSI design, on-chip inductance, repeater insertion 81460
VLSI design, routing model 70255
VLSI distributed interconnects simul., freq. depend. params., Krylov-space techs 92452
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optim 125385
VLSI inductive crosstalk, differential signaling modelling, phys. synthesis too 127011
VLSI interconnect, Cu/low-k dielec., cleaning chem. 126481
VLSI interconnect model order reduction, bal. truncation realization algn 104065
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
VLSI interconnects and electronic packages, elec. modeling and simul. 8148-
VLSI multilayer interconnect, quasi-3D capacitance 81492
VLSI on-chip interconnect, inductance effects, PEEC approach to cct. mod 126978
VLSI on-chip interconnect modelling, full-wave PEEC time-domain metho 81475
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
VLSI time-domain interconnect models, MIMO type selective orthogonal leas sq. method 124367
VLSI transm. line pass. modeling, differential quadrature method 81437
VLSI true worst case cct. timing perform., interconnect param. vars. 81468
wafer bumping by solder paste printing, stencil design improvement 113560
wafer bumping technol. for cost-effective packaging 67618
wafer cleaning capability for increasing technol. demands 103433
wafer fab., sidewall polymer contamination during metal etching 103350
wafer level area array solder bump interconnects with Pb-free/low-α solder 113594
wafer level CSP using liq. bismaleimide polymers 124327
wafer level packaging, WAVE wide area vert. expansion proc. implement 113604
wafer level packaging for 300 mm, photolithography requirements 100608
wafer level packaging for 300 mm, progress overview 100607
wafer level reliab./packaged electromigration tests, expt. comparison 81130
wafer level stress data use as early burn-in/reliab. predictor 104017
wafer level transient voltage suppression CSP for ESD protection, low cost/lo I/O 113592
wafer solder bumping technols., overview 102875
wafer stepper, 300 mm, for bump/wafer level scale packaging appls. 126520
wafer-level batch packaging technol., elec. testing 113659
wafer-level packaging, technol./implement., education 124361
wideband scalable elec. model for microwave/MM wave flip chip interconnect 91374
wire bonding, robust bond model, proc. implement. 69372
wire bonding in back-end assembly proc., overview 69373
wirebonding proc. control, ASTM method F.459 revision 69370
worst-case IC interconnect delay noise, driver modeling and alignment 12698
yield modeling method for design rule trade-off in interconnection substr 81479
Ag electroless deposition in Si struct. 90500
Ag/Al bilayer self-encapsulation proc. kinetics model 92180
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second leve reliab., comparison 113586
Ag-W films, electroless prep., mech./elec./opt. props. 68388
Ag-W films, electroless-deposited, microelectronics appl. 79385
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al contact hole filling & metallis., improved step coverage *(Chinese)* 81126
Al dual-damascene interconnect via electromigration lifetime, soft low-k organi SOG ILDs 92117
Al film mass transfer during local anodic oxid. 69938
Al interconnect texture, Ti underlayer effect, electromigration resist. 69953
Al interconnects, electromigration-induced stress interact. 92138
Al interconnects, stress-induced voiding in proc. qualification, quantitat. assess 81133
Al lines, via/polygranular cluster electromigration-induced stress interact. 9217
Al multigrain thin film lines, electromigration props., grain boundary struc 92110
Al passivated interconnects, grain orient. meas., X-ray microdiffr. 69951
Al passivated line single grain strain meas. by X-ray microdiffraction during electromigration 92173
Al passivated line test struct., sub-μm wide, grain orient./strain meas. 92175
Al plug CVD-PVD proc. for sub-0.25 μm devices, via filling/Al microstruct. underlayer effects 92171
Al, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435
Al via-void generation mechanism for Gbit-scale DRAM, anal. 79900
Al/TiN bilayers, 111-textured, interfacial react. pathways/kinetics, XRD an TEM study 126479
Al/TiN(001) epitaxial diffusion barrier, annealing, interfacial react. 91933
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
Al-Cu interconnects, electromigration reliab., Ti(TiN) underlayers effect 126432
Al-Cu lines, electromigration immunity, pre-annealing effect 115672
Al-Cu(Si) interconnects, electromigration damage, comp. effect 126434

igrated circuit interconnections continued
Al-Cu(Si) metallic interconnects, electromigration modelling, percolative approach 92119
Al-based interconnect reliab., width transit. effects 92120
AlCu ULSI multilevel-metallizations, stress migration behavior 92118
AlCu interconnects, electromigration behaviour, stress-induced voiding effects 92176
AlCu line wafer level electromigration testing, isothermal/const. current/SWEAT methods 81128
AlCu passivated conductor line electromigration, Cu conc./stress evol. 92143
AlGaAs-(In)GaAs VCSELs for opt. data link appls., high perform. 82612
AlON diffusion barrier form. for Ag interconnect metallization 92179
AlSi-based metallisation in microelectronic devices, corros. inhib. 103488
ArF lithog., cyclo-olefin/maleic anhydride type resists for sub-100 nm patterning 103551
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
Au electroplated microbump, surface activated bonding 113511
Au interconnection, electromigration meas. tech. 126507
Au interconnections, electromigration/electrochem. react. failure mechanism 115673
Au ribbon bonding for IC interconnection, designed expt. for proc. eval. 80535
Au wire bonding to Ni/Pd plated leadframes 102877
Au-polyimide ILD multi-level interconnect proc. using dual 4.5 μm-thick metal layers 69961
Au-to-Au interconnection flip-chip bonding, COS HDD assembly 113661
C multiwalled nanotubes, reliab. and current carrying capacity 102869
a-C:F PECVD film characts., damascene interconnection 69954
a-C:F low-k ILD thin films, thermally stable, by ICP-CVD 92152
$CoSi_2$ selective growth on patterned substr., dual ion beam tech. *(Chinese)* 81124
$CoSi_2$/Si interface, struct./electronic props., first-principles calc. 103153
Cu BEOL technol., advanced ULSI interconnects, defect reduction 126441
Cu CMP film, RT direct bonding, bumpless interconnection 113630
Cu CMP, low cost residue-free abrasive-free proc. 126358
Cu CMP proc. modules, defect class. 126502
Cu CMP technol. for ULSI multilevel metallization *(Chinese)* 103302
Cu CMP, two-step proc., 0.13 μm node multilevel metallis. 126461
Cu CMP, two-step proc., chem. induced defects reduction 126462
Cu CVD, Cu(TMVS)(hfac) sourced, on TaN substrs., surface morph., water vap. effects 90463
Cu CVD for gigascale interconnects, 2,2,6,6-tetramethyl-2-sila-3,5-heptanedione precursor 92167
Cu DC/pulse plating for trench/via filling, optimum conditions 126490
Cu IC interconnect proc. characterisation using ps sonar noncontact opt. technol. 126494
Cu ULSI metallization barrier layers, review 69930
Cu, additive-free electroplating in high aspect ratio trenches 126443
Cu alloy interconnect, modeling and simul. 92107
Cu backside contamination issues in CMOS proc. integrat., case study 92476
Cu damascene interconnect, SiO_2 dielec., electromigration 115709
Cu damascene interconnect, polymeric dielec., nanoscale deform. 115694
Cu damascene interconnect sheet resist./line width meas., test struct. issues 103497
Cu damascene interconnection, SiO_2 dielec. barrier 115704
Cu damascene interconnection technol., self aligned metal capping 126440
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92116
Cu damascene interconnects, recrystn. anneal, reliab./post-CMP defects 81135
Cu damascene proc. control using in-line meas. syst. 92125
Cu damascene struct., AURORA inorganic low-k dielec., charactn./integrat. 92156
Cu damascene struct., methylsilane-doped low-k CVD oxide intermetal dielec. 69942
Cu damascene struct., slurry employing silica abrasive for CMP 103458
Cu dual damascene interconnect, SiO_2 IMD, electromigration reliab. 115708
Cu, dual damascene interconnect, electromigration props. 115692
Cu dual damascene interconnect, ultrathin CVD barrier/seed 115698
Cu dual damascene interconnect/low-k organic polymer, fine CD control 126450
Cu dual damascene interconnects, spin-etch planarization 103348
Cu dual damascene microstruct./via chain yields, annealing conditions optim. 126487
Cu dual damascene proc. defect tracing 126496
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Cu dual-damascene interconnects, sub-0.1 μm, barrier/seed technols. 115686
Cu electrodeposition in presence of additive, simul. of shape evol. 90502
Cu electrodeposition, review, IC appls. 79364
Cu electrodeposits in fine line damascene structs., recrystn. 69955
Cu, electroless seed layers for sub-0.1 μm interconnects, charactn. 126444
Cu electroplated film, Cu/Cu/TaN/SiO_2/Si multilayer interfacial react. 81113
Cu electroplated films, adhesive strength & scratch resist. 126491
Cu electroplated films, swirl defects orig. & elimination 115714
Cu electroplated interconnects, microtexture/strain 103460
Cu electroplated thin films, RT recrystn., methods/mechanisms 101416
Cu electroplating, two-step tech., seed enhancement 115713
Cu films, acid-based electroless deposition, kinetics & microstruct. 90518
Cu films, acid-based electroless deposition, react. mechanisms 90517
Cu films, damascene electroplated, morph., filling capability 68352
Cu films on Si wafer, ULSI ccts. interconnection material oxid. behaviour 126407
Cu inlaid interconnect lines, microstruct., annealing conditions 69929
Cu interconnect CMP optim., proc. flow tuning 126497
Cu interconnect, effective resist. 115703
Cu interconnect electroplating, seed layer surface RTA effects anal. 115489
Cu interconnect features, elec. linewidth, test chip 103495
Cu interconnect oxid. and reduction anal. using spectrosc. ellipsometry 104036
Cu interconnect technol., high-vol. mfg. transit. 115685
Cu interconnect, wafer level reliab. monitor, isothermal testing 103474
Cu interconnection in ULSI, electroplating technol. *(Chinese)* 126500
Cu interconnections, microstructural anal. using ps US 92170
Cu interconnections reliab. improve., use of binary Cu-alloy films 126457
Cu interconnects, NH_3-plasma treat. and CMP modif. effect on TDDB improve. 81116
Cu interconnects, SR X-ray microdiffraction 69946
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu interconnects, air-gap fab. for low intralevel dielec. const. 92148
Cu interconnects, electromigration, confine. materials mech. props. effects 103459
Cu interconnects, electromigration threshold 69950
Cu interconnects, electromigration-induced failure rate rel. to grain struct. 69922

integrated circuit interconnections continued
Cu interconnects, sub-0.1 μm, fab./perform. limits 92168
Cu interconnects, sub-0.10 μm, jet electrochem. deposition plating/seed layers 81118
Cu interconnects, thermal stabil., self-aligned MgO layer effects 69924
Cu interconnects, thermal stress and reliab. charactn. of barriers 126456
Cu line geom., interconnect microstruct., proc. params. 92123
Cu line patterning, high resoln., by direct imprinting 115668
Cu lines, 0.10 μm wide, failure obs. by OBIRCH method 126459
Cu metallisation, electroplating, electrolyte resist. control 115715
Cu metallization, sub-0.25 μm, seed-layer sputter deposition, line cusp magnetron plasma source 92164
Cu migration, H promoted in high press. anneal proc. 69923
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu, nucleation on polyimide surface, photochem. react. 69937
Cu periodic reverse electroplating, waveform shape/freq. optim. 68351
Cu planarization proc., lin. polisher, pattern depend. 126357
Cu polycryst. films, kinetic Monte Carlo simul. of growth 90532
Cu seed layer for Cu metallisation, stresses 103484
Cu seed layer for interconnection, agglomeration control 126482
Cu seed layers, organic soln. deposition on barrier metals 92185
Cu single/dual damascene oxide/low-k ILD interconnects, plasma charging damage issues 103486
Cu single-inlaid interconnects, electromigration failure, Blech effect 115679
Cu smooth thin film deposition in deep-sub-μm trench using H atom source plasma CVD reactor 90461
Cu spontaneous nonaqueous electrochem. deposition on Al and AlCu 68325
Cu, sputtered, patterned using ion milling or CMP, surface electromigration 115664
Cu stressed damascene interconnection, dielec. breakdown, EL obs. 81110
Cu, superfilling CVD using catalytic surfactant, interconnect appls. 124892
Cu surface modif. by thermal/plasma treatments 92096
Cu thin film CVD using Cypron volatile liq. precursor 114314
Cu, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435
Cu thin films, sputter deposition, resist. meas. 126442
Cu thin films, thermal mech. props., advanced metrology for rapid charact. 75895
Cu thin films, void form. by thermal stress conc. at twin interfaces 103464
Cu trench/via filling by electroplating, current dens./pulse waveform effects 92178
Cu two-level interconnect, defects and electromigration 115691
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
Cu wafer metrology for electroplating/CMP control 115689
Cu wetting of 2D silicates, robust barriers for interconnect appls. 126438
Cu/$(HSiO_{3/2})_x$/Si, sputtered Cu films, thermal reacts. 92134
Cu/Ag thick film conductors on Al_2O_3 substrs. for power appls. 78658
Cu/CVD SiOC dual-damascene interconnect, electromigration reliab. 115710
Cu/Cu/TaN/SiO_2/Si multilayer, interfacial reacts., electroplated Cu props. 81122
Cu/SiLK interconnect, flip-chip package, interfacial adhesion 115678
Cu/SiLK resin dual damascene, low permitt. spin-on hardmask 126452
Cu/SiO_2/Si, sputtered Cu films, thermal reacts. 92134
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu/Sn-Bi solder interconnect, Bi interfacial segreg. 79420
Cu/Ta/SiO_2/Si films, Ta diffusion barrier layer oxid., thermal annealing 69935
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu/TaN/SiO_2/Si multilayers, struct. integrity, IMP-deposited nitride thickness effect 92099
Cu/W/SiN_x multi-level damascene interconnects, electromigration 126506
Cu/a-C:F low-k dielec. damascence interconnection, electroplating 103475
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu/low-k ILD and Cu/ultralow-k ILD layers, CMP module integrat./proc. 126493
Cu/low-k ILD dual-damascene interconnects, surface prep. 103470
Cu/low-k ILD interconnect technol. for semicond. devices 103478
Cu/low-k ILD interconnects, 0.13 μm technol. node, dielec. materials selection 115683
Cu/low-k ILD proc. integrat. enhancement techs. 126495
Cu/low-k ILD proc. metrology, complexity/capabilities 126489
Cu/low-k cyclohexane-based plasma polymer films interface, chem. interact., adhesion charact. 103453
Cu/low-k dielec. interconnect schemes, thermomechanical stress anal. 126431
Cu/low-k dielec. interconnects, interfacial adhesion 115707
Cu/low-k interconnect CMOS platform, 0.13 μm, for SoC appls. 127019
Cu/low-k interconnects, deep-sub-μm, impact of vias on thermal charact. 126488
Cu/low-k submicron interconnect structs., thermal stresses charactn. 126458
Cu/low-k wiring, interconnect module technol. 69928
Cu-CMP for dual damascene technol., (non)Prestonian removal regimes 69858
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-SiO_2 air gap interconnect, CMOS technol. 115719
Cu-SiO_2 dual-damascene interconnects, electromigration reliab. 92115
Cu-SiO_2 dual-damascene interconnects, electromigration early failure stats. 81134
Cu-SiO_2 interconnects for high speed ccts., sig. propag. and crosstalk charactn. 126460
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
Cu-Ta-based multilevel interconnects, CMP 103479
Cu-TiWN multilayer interconnections, electromigration 81117
CuAl-SiO_2 barrier/adhesion promoter-ILD interface microstruct., charactn. 103461
CuNi substr. surface/Pb-free solder interacts. 113582
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packaging 125945
GaAs MMIC through-substr. via inductance, multiple on-wafer test approaches 102741
GaAs backside via RIE proc., high throughput, DOE 69892
GaAs, pixel detectors, bump bonding interconnect technol. 132302
GaAs through-substr. via hole proc., 1000 wafers/week throughput barrier 69945
H-silsesquioxane low-k ILD films, dry photoresist stripping proc. chem. effects 92154
H-silsesquioxane low-k ILD films, nanoporous, thermal treatment effects 92157
H-silsesquioxane low-k ILD thin films, H_2-N_2 ambient curing study 92155
H-silsesquioxane low-k dielec. material integrat. with TiN/TaN/W_2N thin film barriers 92181
H-silsesquioxane spin-on polymer low-k film, proc./props., CMP charact. 92149
H-silsesquioxane ultra low-k ILD films with tunable elec./mech. props. 92159
KrF lithog. for DRAM using tri-level resist proc., material/proc. develop. 103556

integrated circuit interconnections continued
$LaNiO_3$ epitaxial metallic films, O-ion elec. field-induced migration, 1/f noise 115666
Mo gate electrode work fn. adjustment for CMOS technol. 127037
$MoSi_2$/Al interconnect lines, electromigration, stress-induced escape 126485
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
Ni, nucleation on polyimide surface, photochem. react. 69937
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
$NiSi_2$/Si interface, struct./electronic props., first-principles calc. 103153
Pb/halide-free green IC packaging 124363
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pb-free materials options for environ. friendly IC packaging 67682
Pb-free packages, board level reliab. assess. 113573
Pb-free solder alloys for flip chip/area array package bumping 67569
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
Pb-free solder spheres for BGA appls., pad finishes, shear strength 113701
Pb-free soldered interconnections, board level reliab. 115152
Pd spontaneous nonaqueous electrochem. deposition on Al and AlCu 68325
Si, 3D integrated wafers block, bumpless, wiring by through-hole interconnections 115670
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buried diffusions 91391
Si high-dens. micromachined interconnects, single-mode microstrip propag. 102694
Si low resist. substr. microwave filters, polyimide interface layer, wireless ccts. 91334
Si photo-emitters for opt. interconnects, accelerated stressing/degrad. mechanisms 82450
Si substr., IC interconnects, resist. and inductance 70279
Si substr., VLSI interconnects, distributed inductance/resist. per-unit-length formulas 126509
Si substr., microstrip on-chip interconnects 126508
Si wafer fab., nodules due to Si precip. 103950
Si-SiN-Cu insulator-lined substr.-via technol. with high aspect ratio, MMIC appls. 102723
Si-based opt. interconnect for sig. transm., VLSI technol. 126453
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
a-SiC:H dielec. diffusion barrier, Cu interconnect 115721
a-SiC:H low-k diffusion barrier, Cu interconnect 115705
α-SiCOF film, low-dielec.-const., PECVD, ULSI interconnection appl. 81108
SiCOH films, ultralow-k dielec., PECVD, charactn. 90384
SiCOH-based low-k dual-phase ILD materials by PECVD 91902
SiN film, catalytic CVD 124976
SiO_2 CVD film, Al interconnection, laser ablation *(Japanese)* 83062
SiO_2 dielec. CMP in ULSI multilevel metallization *(Chinese)* 103301
SiO_2 gate dielec. scaling, long term reliab. estim., error calc. 81417
SiO_2, interconnect test structs., electromigration failure, materials effect 69957
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2 porous low-k ILD film by photo-assisted sol-gel proc. 90523
SiO_2 sol-gel derived porous layers for low-k dielec. appls. 92163
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
SiO_2:C low k thin films, prep. by PECVD from tetramethylsilane 101323
SiO_2:F dielec. thin films, structural anals. by micro-Raman spectrosc. 92602
SiO_2:F fluorinated-silicate-glass film stacks, IC interconnect interlayer dielec., cap oxides 126469
SiO_2:F for ILD appls., low dielec. const. anal. 91921
SiO_2:F glass films, prep., struct., IC appl. 114345
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
SiO_2-xerogel nanoporous low-k ILD films, grazing incidence SAXS 92161
SiOC PECVD low-k ILD films using SiH_4 based gas precursors for Cu damascene interconnects 92121
SiOC very low-k ILD film with extendibility to k<2.7, material props. 92150
SiOC-H dielec. on Cu wiring, dual damascene, wet/plasma clean 115716
SiOCH low k ILD films for <0.18 μm dual damascene appl., integrat./charactn. 92122
SiOCH low-k copper barrier films, PE-CVD deposition using HMDSO, N_2O and NH_3 126446
SiOCNH low-k copper barrier films, PE-CVD deposition using HMDSO, N_2O and NH_3 126446
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-based Pb-free solder paste reflow for flip chip wafer bumping, proc. window 69367
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702
Sn-Cu Pb-free microelectronic solder joints, Sn pest 100597
Sn-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Cu liq.-solid react. couples, η phase scallops/whiskers, growth 101467
Sn-Pb eutectic solder joints in microelectronics packaging, constitutive model 113469
Ta/TaC diffusion barriers for Cu metallization on Si, reliab. 91877
Ta/low-k cyclohexane-based plasma polymer films interface, chem. interact., adhesion characts. 103453
TaN CVD diffusion barrier for Cu interconnects 92166
TaN diffusion barrier against Cu diffusion, perform. eval. using SIMS/AFM 69939
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
TaN, zero thickness copper barrier, at. layer deposition 115697
TaN/Ta bilayer, high perform. liner for Cu-Damascene ULSI interconnects 126439
Ta_2N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
$TaSi_xN_y$ gate electrodes for dual gate CMOS devices, elec. charact. 127038
Ti/low-k H-silsesquioxane and Ti/TEOS struct. at elevated temps., comparison study 92182
Ti-Al diffusion barrier layers, thin film growth and oxid. procs. 92109
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvement reservoir modeling 81132
Ti-TiN long throw/ionized PVD liners for W-plug contact/via appls. 103469
TiN/Al/TiN/SiO_2 metallization, void-containing interconnects, local Joule heating 69933
$TiSi_2$, C54 phase form. enhance. by multi-thermal-shock proc. 103450
$TiSi_2$, low temp. C54 form., refractory-metal-free C40, CMOS interconnect 80972
$TiWN_x$, selective etching, electroplated Pb-Sn solder 113533
W, blanket films for microelectronic contacts, temp. gradient effects 103468
W plug CMP using different consumables, optim. 69956
W post-CMP defect inspection, recipe optim. 100637
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101
W/W_2N/WO-based thin film CVD using volatile liq. precursors 90462
W-TiN damascene metal gate CMOS technols., perform. improvement 127040
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm technol 125492
W-ZrN-polysilicon gate electrode config., ZrN barrier thermal stabil. 81115
W-damascene SRAM cell interconnect ILD, CMP scratch induced defects, failure mechanism 79891
WN_x reactive sputter deposited barrier thin films, stress/microstruct./thermal stabil. 91878
WSi_2 film form., ion beam synthesis, charactn. 69959
WSi_x metal resistor, MIM capacitor, CMOS technol. 115040
WSi_x sidewall in W-polycide gate, deform., contact resist, annealing effects 103234
YSi & YSi_2 layer synthesis, ion implant. & RTA, VLSI interconnect *(English)* 81125
multilevel interconnect technol. with intra-metal air-gap for ≤0.25 μm procs 92147
no-flow underfill materials for eutectic/Pb-free solders, high melting temp 67586
solder-drop printing proc. for flip chip, liq. metal droplet spreading/solidif 80534

integrated circuit layout
2D hierarchical compaction algm. for VLSI layout reuse *(Chinese)* 81488
3D tech. visualizations in VLSI design, full-wave interconnect anal., clock distrib. 125363
3D VLSI, placement benchmarks 104046
20 GHz compact 90° hybrid MMIC design and layout 91303
28 GHz LMDS highly integrated MMIC chipset 131109
AC machine, complex motor direct torque control, VLSI design approach 78102
acyclic graphs, min. congestion embedding into ladders, VLSI layout 70280
analog CMOS ADC building blocks, anal. of manufacturability factors 102271
AnalogRouter, automatic current-driven routing tool for analog ccts. 81473
analogue automated layout tools, design rule description 68553
ASIC data prep. mgt. for opt. proximity correction 101938
auto-bulk-biased multithreshold SOI CMOS cct., high temp. operation *(Chinese)* 92467
BGA packaging, ultravia substr. for high perform. 67593
bipolar CML testability, inductive fault anal., library cell layouts 102074
buffer location planning by network flows 101897
cct.-level layout-specific interconnect reliab. assess. 92144
cell-based VLSI ccts., table-lookup delay model-based timing-driven placement algm. *(English)* 79718
channel routing, 3-layer HVH, min. crosstalk layer assignment, pseudo-Boolean optim. 70272
clustering based fast clock scheduling for light clock-tree 79684
CMOS compact central arbiters for memories with multiple read/write ports 79828
CMOS fully integrated very low phase noise quadrature VCO, 1.57 GHz 125820
CMOS PLA, high-speed low-power design, pseudofootless dyn. cct. 102000
CMOS reverse interconnect scaling in multi-GHz amp. and oscillator design 115015
CMOS voltage limiter/regulator design 68585
CMOS wave steered ccts., latch count minimization and latency, integer LP 125440
CMOS-based power distrib. networks, transient voltage fluct. estim. 102109
coarse-grained dyn. reconfigurable hardware archit. for wireless commun. 96529
congestion-driven placement algm. based on cell inflation *(English)* 103980
convex-polygons, optimum packing by seq. table data struct., VLSI layout appl. 81426
corner block list, floorplanning with abutment constraints and L-shaped/T-shaped logic blocks 125381
coupled RC tree networks, moment matching based model for crosstalk estim. 81456
coupled transm. lines, transient simul., time-domain scatt. params. 90652
crosstalk-driven interconnect CAD, optim. 103999
current mode ccts. for prog. WTA neural network 114908
custom ASIC design methodology with on-demand library generation 125387
datapath layout, placement refinement *(English)* 81486
datapath tile placement and routing, automatic layout 79698
dedicated sig. proc. systs., hierarchical automated design flow, layout generation 114783
deep submicrometer designs, interconnect-driven design planning/synthesis, layout optim. 68684
deep submicron LSI design, parasitic wire capacitance *(Japanese)* 81493
deep submicron verification tools, crosstalk noise modeling 81439
digital CMOS ccts., transistor sizing for switching activity reduct. 90826
domino logic ccts., coupling-aware min. delay optimisation 79829
dry etch proc. monitoring, CCD-controlled in situ interferometry 81086
energy efficiency of μP memory struct., architectural/cct.-level 101944
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut partitioning 102105
ESD protection cct., input capacitance 81464
ESD protection circuitry design rule checker for IC I/O cells 104071
fast asynchronous ccts., design proc. 79786
fast digital double relax. oscill. SQUID design 68887
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
floorplan area optim. problem for VLSI ccts., AWO algm. 70267
floorplan models and backend chip design 101900
floorplanning algm., yield enhancement 81466
floorplanning classical formulations 101901
FR-V archit., VLIW proc. core for SoC *(Japanese)* 114795
full custom layout design 90833
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808

grated circuit layout continued
full-feature alternating phase-shifting technol., phase-aware std.-cell design flow 125342
H263+ low-power full-search block-matching motion-estim. design 96314
handwriting recogn., high speed VLSI archit. 90945
HDTV CMOS single chip video proc. 120544
heuristic planar routing algm. for high perform. layouts 70277
high speed multilevel staged clock routing *(Chinese)* 90810
high-dens. DRAMs, bipolar-voltage prog. antifuse cct., post-package bit-repair scheme 125510
high-speed VLSI, automatic clock tree design with IPs in syst. 104066
hot-carrier degrad. minimization using logic restructuring techs. 125343
hybrid wave-pipelined bit-pattern associative VLSI router 90824
ILP-based board-level routing of multi-terminal nets for prototyping reconfig. interconnect 104049
incremental rerouting, Boolean satisfiability-based, FPGA appl. 79799
indust. GHz CPU, VLSI clock distrib. cct. design 102250
interconnect, current dens. 116018
interconnect design, simultaneous shield insertion/net ordering, explicit RLC noise constraint 126975
interconnect trees for electromigration reliab. estim. 92174
latency-driven design of multi-purpose systs.-on-chip, deep submicron technol. 125336
leaf cell synthesis, 1D, transistor chaining with integrated dyn. folding 126966
low power consumption arith. units, Plastic Hard Macro Technology *(Japanese)* 79764
low-power VLSI archit. for telescopic search block-matching motion estim. *(Chinese)* 102219
LSI cct. video image proc., contour extraction algms. 101997
LSI layout with diagonal edges, resizing algm. 81490
macrocells, constructive procedure for optimising placement 101674
mask generation, automated tapeout syst. for prod. environ. 103585
mask prog. matrix design for seq. ccts. using universal logic gates 102081
MESFET and HEMT microwave devices and MMICs, electrothermal model 80289
mixed sig. design, ANTRIM software *(Italian)* 80119
MMIC for wireless commun., design and technol. tradeoffs 80354
MMICs, coupling effects between lumped elements 115014
module placement with pre-placed modules using B*-tree representation 104064
MOSGRAD, CAD tool for simulating effects of systematic/random channel param. vars. 81518
multi-center congestion estim./minimization during placement 104002
multi-commodity flow global routing by approx. algm. 103994
multi-level logic optim., graph-based alternative wiring scheme 68740
multi-way cct. partitioning using GBAW logic perturb. techs. 79683
multilevel cooperative search, cct./hypergraph partitioning problem 101899
non-Manhattan shapes, MEMS design rules for IC CAD tools 92536
non-slicing floorplanning algm. using corner block list topol. represent. 81429
OPC impact on IC layout and DRC, lithog. proc. simul. 126583
optimal buffer insertion under accurate delay models, graph based algm. 79697
pad-oriented multiple-mode ESD protect. struct. and layout optim. in BiCMOS 127069
partially-depleted SOI salicide CMOS technol., ESD robustness of devices 116040
pass transistor logic macrocells, automatic layout generator 79798
PD-SOI CMOS technol., perform. anal. of tapered gate device sizing methodology 127028
perform.-driven global routing technol. *(Chinese)* 79655
peripheral I/O high quality ASICs, I/O cell placement, elec. checking methodology 81451
PHEMT MMIC amp. design, 1-3 GHz, for transmit/receive appls. 102663
PLAs, optimal folding using 0-1 lin. prog. 90847
plasma etch damage, charging pot./current densities, substr. connection effects 103432
qtr.-state seq. for floorplan represent., layout optim. appl. 81428
recursive bi-sect. timing driven placement using phys. net constraints 125382
recursive partitioning based placement, cut seqs., dyn. prog. approach 125454
repeater block planning for interconnect-centric floorplanning 101898
repeater block planning under simultan. delay/transit. time constraints 81440
repeater insertion in tree struct. inductive interconnect 103987
RF CMOS IC, pad de-embedding 92464
routing, pseudopin assignment, crosstalk noise control 70251
RT-level route-and-place design methodology for interconnect optim. in DSM regime 104045
self-heating effects, hot spot/electrothermal coupling methods *(Chinese)* 92434
single ended pass-transistor logic, comparison with CMOS/CPL 101945
SKILL-based library for retargetable embedded analog and mixed-sig. cores 81442
SLASH deterministic block placement algm. based on seq.-pair 81427
slicing floorplan, extension to handle L/T-shaped modules and abutment constraints 70276
slicing tree floorplan representation for VLSI layout design 81435
snap-on cell placement tool 101893
SoC clock freq., on-chip & on-board interconnects partition 126941
SOI complementary BiCMOS devices, perform. eval. using test struct. 104147
std. cell layout, FAME detailed placement algm. *(English)* 79761
std. cell placement optimisation by candidate sieving 125414
Steiner tree optim. for buffers, blockages and bays, VLSI 104068
Steiner trees, flexibility, global router, chip size 126974
STI silicided bulk CMOS, compact layout rule extract., latchup prevention 81509
struct. on-chip interconnection networks, top level wires, modular design 125372
structural IC design comp. for C++ hardware models, layout struct. 90821
submicron IC layout, clock skew and time delay 101885
submicron layout, interconnect delay, stat. anal. 92442
substr. coupling, modeling methods *(Polish)* 70264
TCG, transitive closure graph-based representation for non-slicing floorplans, VLSI 127010
timing-driven VLSI layout, objective fn. modif. for efficient optimisation 103986
trapezoid-to-simple polygon recomposition for resist. extraction 104070
ULSI ICs, design and reliab. aspects of multilevel metal large-scale power line layouts 104039
UXGA compatible TFT LCD panel low noise triple channel graphic digitizer 114834
vert. CMOS gates, feasibility study 104102
virtual CMOS library approach for fast layout synthesis 104121
VLSI, optimum design of power and ground topol. subj. to reliab. and noise constraints *(Chinese)* 81487
VLSI buffer and wire resource allocation, design methodology 126973

integrated circuit layout continued
VLSI CAD, timing-driven macro-cell placement algm. 127012
VLSI cct. interconnect trees optim. 104000
VLSI cct. layout, missing material defects, crit. area 70250
VLSI cct. layout CAD, crit. area for missing material defects 104001
VLSI ccts., timing-driven placement algm. *(Chinese)* 116012
VLSI design, floorplanning algm., Lagrangian relax. 70259
VLSI design, global routing, multicommodity flow, approx. algm. 70253
VLSI design, interconnect complexity modeling, Rent's rule 81465
VLSI design, interconnect-centric floorplanning, repeater block planning 70256
VLSI design, routing model 70255
VLSI floorplan, area(number)-bal. hierarchy of staircase channels with min. crossing nets 104067
VLSI floorplans using seq.-pair, simulated annealing search *(Japanese)* 104062
VLSI global routing, efficient rectilinear Steiner tree algm. 126944
VLSI layout, area optim. of packing represented by seq.-pair 81424
VLSI layout, optimal sub-cct. extract. by min-cut graph 70281
VLSI layout anal., geom. proximate nets 81472
VLSI layout rendering, texture mapping with mipmapping 126983
VLSI layout spacing, simplex algm., graph theory 92443
VLSI layout topol. reuse by parametric BSG 81425
VLSI LV/low-power/appls., std. cell library design 68837
VLSI multi-layer routing, constrained via minimization *(Chinese)* 116013
VLSI on-chip interconnect modelling, full-wave PEEC time-domain method 81475
VLSI oxide CMP manufacturability, model-based dummy feature placement 81167
VLSI phys. design, floorplanning, top-down partitioning-based method modif. 70288
VLSI phys. design automation, distributed and OO framework 104063
VLSI placement, simulated evol. algorithm adaptive bias scheme 101963
VLSI power/perform. optim., fuzzy simulated evol. 104009
VLSI std. cell placement, iter. heuristics 104057
wave-steered design methodology, global routing tech. 126967
wire packing, integer prog. 70257
$CoSi_2$ CMOS test struct., 0.18-μm, latchup charactn. 104095
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025
GaAs direct digital mm-wave receiver MMICs, six-port 96404
InP RTD/HFET MOBILE depth-2 full-adder cct. 114708
Si CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515
Si on-chip spiral inductor, layout and ground shield effectiveness 69179
Si/SiGe HBT low-cost Ku to Ka band MMICs using commercial HBT proc. 69197

integrated circuit manufacture
used for commercial manufacture only
see also integrated circuit economics; integrated circuit yield; masks; photolithography
150 mm through substr. interconnect fab conversion for III-V wafer mfg. 126513
300 mm CZ wafers, intrinsic gettering 69775
300 mm foundry IC mfg., overview 124307
300 mm wafer fab controllers design, CPN-based approach 89948
300-mm equipt. semicond. mfg. tools, eval. techs. 103726
advanced proc. control implement. for wafer fabs, equipt. interface 100722
advanced proc. control software for 300 mm wafer fabs 100729
advanced semicond. mfg., conf., Munich, Germany (April 2001) 100397
analog CMOS ADC building blocks, anal. of manufacturability factors 102271
ASIC mfg. lines defect inspection method *(Japanese)* 69332
ASIC obsolescence and DSP appls., intellectual property, fab. procs. 114682
automation software for 300 mm wafers 70237
backend lithog., 300 mm wafer proc. 92221
backside mounting procedures for semicond. wafer proc. 126425
capacity anal. tool for IC manufacture 100554
catalytic technol. PFC emissions control in semicond. mfg. 89932
ceramic column grid array modules, mfg. proc. for high vol. prod. 78646
chem. supplier quality mgt. for semicond. manufacture, changes/challenges 100625
chip foundries and dawn of open intellectual property era 67518
CMOS device downsizing below 0.1 μm, problems/solns. 104090
CMOS mfg., fault detect. using model-based PCA 104119
CMOS microsensors, parasitic behaviors charactn. 127122
CMOS proc. flow for combined three layer/self-aligned contacts 104099
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
CMP, optimal, neuro-fuzzy inference 92005
CMP, prototyping and low vol. prod., engng. education 126920
CMP operations, optimised, extended X-factor theory, unit hours concept 100546
CMP removal rate uniformity control, empirical-based modeling 81085
cpd. semicond. fab. facility, incremental levels of automation 103970
cpd. semicond. mfg. technol., conf., Las Vegas, NV, USA (May 2001) 113279
custom paperless shop floor control syst. for efficient mfg. in wafer prod. 124447
cycle time reduction and capacity improvements in mfg. 124313
direct write technols., commercial appls./review 103977
DRAM to ASIC prod. transit., lithog. challenges 115983
DRAM wafer fab, multichamber work cell mgt., optim. 100547
dual ion implant. syst. for wide appls. envelope 69814
DUV scatterometer for nanoparticle detect. in semicond. mfg. 109434
dyn. temp. technol. for IC proc. control 100717
e-diagnostics for semicond. wafer e-factory capability 70236
e-diagnostics links, SEMI GEM/SECS stds./equipt. front-end modules, rels. 103962
e-mfg. domino effect for IC proc. efficiency/yield/productivity enhancement 103961
e-mfg. for enhanced IC equipt. productivity 103960
e-mfg. opportunities in semicond. proc. 103959
electronics materials, technol. innovation transit., market perspective 70247
electrostatic chucks for litho. appls., design apsects 115764
environ. stds. integrat. in European semicond. indust. 67681
EPROM IC product life cycle assess. 100703
ESD-EMI induced IC proc. interruptions 103966
etch proc. improvement as part of overall plan to increase fab productivity 81075
fab. facility automation for 300 mm wafers 103965
FIB mask repair technol. for ArF lithog. 103587
FIB micro machining, vert. Ga distrib., defects, lateral contamination 115610
FLOTOX EEPROM tunnel window form. proc. var. effects on reliab. 102142
foundry era IC design methodology, heads-up design considerations 81450
foundry IC mfg., scaling variance, invariance and prediction of design rule, from 0.25-μm-0.10-μm 124443

integrated circuit manufacture continued
foundry perspective of syst. integrat. in IC indust., quality design and time-to-vol. 81453
FPGA develop. and manufacture 90859
front-end, single-wafer diffusion proc. for advanced 300-mm fab. lines 67523
gas conc. ratio precise control in proc. chamber 113813
gravure offset printing develop. for fine line thick film ccts. 125916
hard mask STI etch proc. for ≤0.13 μm logic technol. 103378
high-k dielec. gate materials for ULSI devices, advances/materials compatibility 104108
high-press. gas cylinders, safety in semicond. mfg. 89781
indust. visual inspection, fast alignment search algm. 100640
ion implant. techs. for device scaling solns., perform. benefits 69806
ion implanters, next generation perform., Varian Control System realisation 115548
large diam. epitaxial wafer develop., tech. issues 70240
laser scanning wafer inspection syst., focal sens. develop. 78696
laser-microjet wafer dicing, water jet cooled 103946
lateral power device integrat. in mixed sig. BiCMOS technol. 81533
level set based surface profile evol., extension velocities 103941
lithog. proc. control, advanced, basic functionality requirements 103524
LSI fab. proc., Taguchi methods 126617
LSI nMOS/pMOS gate length correl. effects on accuracy of stat. modeling 126618
Mahalanobis-Taguchi syst. for wafer yield prediction 124414
MEMS/electronics integrated technols., co-fab. proc. seqs. 81543
metrology platform for 300 mm wafers, develop. 67521
microelectronic systs. education, conf., Las Vegas, NV, USA (June 2001) 124190
microelectronics indust. in Malaysia, policies/R&D, review 103956
microelectronics technol., interactive course on website, animations 124258
miniaturized reliable space electronics, prod. commercialization 133232
mixed GaAs opt. modulator and PHEMT MMIC proc. line on 150 mm wafers 125832
mixed-sig. IC proc. transfer from Motorola MOS10 fab to Tower Semiconductor fab 103975
modular software for IC mfg. appls., benefits 126922
MOSIS, IC prototyping and low vol. prod. service, educational programme 127034
multi-axis nano-positioning platform for wafer inspection syst. 67659
multi-chamber wafer proc. tools, class., capacity components 100553
multifunction minifab tools for syst. chip fab., design by Japanese companies 81412
multiple product procs., adaptive control, microelectronics mfg. facilities 100724
multiple quality response optim. in IC mfg. 115981
Nissin 300 mm medium current ion implanter EXCEED2300 115547
NMOS device optim. using response surface methodology with orthogonal arrays 124413
NMOS transistor prodn., parallel beam and batch implanters, elec. comparison 115542
noncontact wafer handling using high-intens. US levitation 103953
opt. digital profilometry for sub-70 nm IC metrology 121209
opt. lithog. lenses, wave-front aberrations meas., IC mfg. appl. 126585
packaging, PLC-based automated book casing syst. 89862
packaging planning at design stage, benefits 100579
Petri net based scheduling for IC mfg. *(Chinese)* 113454
PHEMTs, wafer mfg., MMIC appls. 69238
photolithography, imaging metrology requirements for low k_1 proc. param. 69967
photolithography, thermostabilisation by carrier gas layer *(Russian)* 92212
photolithography CD control automation in complex mixed technol. mfg. fab 103523
photolithography proc., CD control in semicond. mfg. 115729
photolithography proc., overlay error, reticle interf. effect, IC foundry fab 103569
photolithography proc. intell. CD control 100718
photomask fab., micro-EDM feasibility study 92430
photomasks, resoln. enhancement techs., eval. method 126577
photoresist coating recipe, low-vol., solvent prewet step, defect mechanisms 69968
pilot stage to prod., 300 mm wafer IC mfg. 81410
plasma ashing/residue/polymer removal proc. integrat., joint improvement project 69875
plasma etch procs. modelling using lin. output neuron neural net 125915
plasma etching proc., shape-based optimal control 81065
polysilicon post-etch residue contamination in wafer fab., failure anal./elimination 103349
post-ash polymer residue removal from BEOL struct. using inorganic chem. 92043
post-etch dry polymer residue cleaning, stat. methods 126411
proc. control and diagnostics in semicond. mfg., conf., Santa Clara, CA, USA (Sept. 2000) 100413
proc. control/fault detect./event recogn. via univariate pattern recogn. 113814
proc. cycle time reduction, operational time variability quantification 100549
proc. develop. continuity, materials-based approach 103943
proc. gas distrib. systs., moisture dry-down charact. modeling 78594
proc. integrat. for 300 mm wafer fab automation 115985
proc. perform. metrics, utilization of effective availability/effective capacity 100552
proc.-induced vars., modeling and anal. 104074
product develop. time reduction by virtual test 78593
product-mix VLSI assembly facility, operator allocation planning 89775
PVD IC metallization, particle contamination control in sputter deposition modules 101193
quality of design from IC mfg. perspective 81462
Raman spectrosc., multifunctional anal. tool for microelectronics mfg. 103968
RCA cleaning syst. adaptive predictive temp. control, thermal model *(Japanese)* 124304
reconfigurable semicond. mfg. systs. design, maint. and failure considerations 89825
reentrant mfg. lines, model predictive control, real time optim. 78738
ref. fab methodology for proc. cost reduction using systematic target setting 100551
ref. plate mfg. proc. for ion project. litho. pattern lock syst. 115763
reticle delivery automation for 300 mm fab 115737
reticle inspection database pre-screening using mfg. rule check 100646
RIE syst., neural net-based adaptive proc. control 115622
SECS/GEM IC proc. tool commun. protocols, evol. for e-mfg./300 mm wafers 103963
semicond. foundry fab, priority-based tool capacity allocation 89951
integrated circuit manufacture continued
semicond. mfg., data mining tool, rough set theory 67526
semicond. mfg., fab prod. schedules 89832
semicond. mfg. systs., degraded behavior, Petri nets based modelling and ana 89824
semicond. mfg. systs. optim., systs. approach, three-phase framework 126615
semicond. track systs., pot. deadlock set ident. 89949
semicond. wafer mfg., resource portfolio planning methodology 89934
single wafer proc. IC fab., cluster tool, modelling and control 89950
SRAM early failure rate reduction, dyn. voltage stressing appl. 81495
stacked hotplate low-temp. annealing syst. for 300 mm wafer thermal proc 80978
stainless-steel-particle-related burn-in failures, corrective actions 103233
submicron IC gate-sizing for crosstalk-induced delay elimination 126923
SwampFinder product develop. tool, IC DFM 104014
Tegal 90X etchers, Triant Model Ware integrated proc. control module 10072
TFSOI modular proc. for CMOS power devices/ICs 104098
thermal spray techs. for meso-electronics/sens. direct write fab. 114399
thin chip mfg., pre-assembly 113452
TWINSCAN photolithography platform for dual 300 mm wafer proc. 69983
UK semicond. indust. learning network constr. 124248
ULSI, high purity water, contamination, dissolved oxygen and total organic carbon, control *(Chinese)* 113815
ultrashallow jn. form., ion implanter/RTA syst. issues 126316
ultrashallow jn. monitoring, nondestructive in-line carrier illum. syst. 103266
uniform march tests, optimal, memory ICs, fault coverages 102137
vac. systs., power supply considerations 89819
vac. systs., total digital control 89818
vert. wafer stage develop. for high-vac. appls. in ion-beam litho. syst. 115762
VIA/BGA(R)low-cost high-perform. packaging technol. for broadband telecomms 78613
VirMIC syst. for virtual mfg. of ICs, open framework, modeling technol. *(Chinese)* 124446
virtual test for semicond. product develop. time reduction 70260
VLSI fab. proc. optim., feedforward neural networks appl. 113817
VLSI oxide CMP manufacturability, model-based dummy feature placement 81167
VLSI proc., robust design, DOE techs. 124442
VLSI wafer ident., microcharacter recogn., V-shaped notch 100545
VSIA quality metrics for IP and SoC, Quality Evaluation Spreadsheet appl 78695
wafer batch furnace proc., develop./appls. 70244
wafer defect/excursion monitoring technol. 70235
wafer exposure pattern optim., 2D cutting algm. 115982
wafer fab, high vol., retrofitting using SMIF technol. 67519
wafer fab cycle time mgt., stat. approach 100550
wafer fab e-Diagnostics, intellectual property, equipt. maintainability and availability 89836
wafer fab. facility, av. cycle time reduction 126927
wafer fab. scheduling, uncertain proc. requirements, search strategy 89944
wafer fab. systs., modelling, scheduling, and prediction, queueing Petri net and GA appl. 100719
wafer pattern overlay metrology, fund. 126561
wafer plant preventive maint. activities, cognitive demands extracted using applied cognitive task anal. 89834
wafer pot. and charging damage, influence of scribe lanes 116009
wafer probing technol. in IC mfg. 70266
wafer proc. for 300 mm, mfg. equipt. sector challenges 103945
wafer proc. liq.-handling syst. component testing to ensure purity/reliab. 81076
wafer prod. fab, 300 mm, exact proc. copy mgt. 78587
wafer test automation in 300 mm environ. 116011
wafer thinning technol. based on CMP techs. 69876
wafer tools/fabs, 300 mm automation optim. requirements 81413
wafer vol. prod. fab develop. for 300 mm 124308
wafer-handling systs. mgt. for 300 mm using BXi integrated controller 124445
WebFabIS web-based microelectronics lab. inform. syst. 113451
wiresaw mfg., brittle material slicing, free abrasive machining 113459
ArF/KrF excimer laser microlithography, resist react. mechanisms by laser flash photolysis 103519
Co silicidation, gaseous impurities, impact and solns. 103225
Cu dual-damascene interconnects, sub-0.1 μm, barrier/seed technols. 115686
Cu interconnect CMP optim., proc. flow tuning 126497
Cu interconnect technol., high-vol. mfg. transit. 115685
Cu/low-k ILD interconnect technol. for semicond. devices 103478
Cu/low-k ILD proc. integrat. enhancement techs. 126495
GaAs MBE, high-vol. cost-effective multi-wafer reactor 90286
GaAs MESFET IC mfg., 6 inch wafers, N-minus resist. control 127068
GaAs MMICs, vol. prod. 125767
GaAs MMICs, vol. prod. 80359
GaAs PHEMT/MMIC mfg., 6″ wafer fab. facilities establishment 70212
GaAs device manufacture, capacity issues in material supply chain 126919
GaAs large-size wafers, 150 mm, mass prod. at Freiberger 126926
GaAs mfg., fab design and constr. proc. 70243
GaAs mfg. technol., conf., Washington, DC, USA (May 2000) 78444
GaAs proc., reversible and permanent wafer bonding 126262
GaAs processed and scrapped wafers, recycling for prod. runs 126392
GaAs through-substr. via hole proc., 1000 wafers/week throughput barrier 69945
GaAs vol. prod., systematics and key perform. indicators 126928
GaAs wafer fab, operation of dual use foundry for mil./commercial users 126916
GaAs wafer mfg., scaling up back-side proc. 126424
InGaAs-AlGaAs-GaAs HEMT MMIC prod. proc., 0.1 μm, for commercial Ka-band LNAs 69245
InP HBT prod. proc. based on MBE 127016
InP-based optoelectronic device mfg., high dens. plasma etch procs. 128032
KrF lithog. for DRAM using tri-level resist proc., material/proc. develop. 103556
O_2 electrochem. sens. for proc. gas monitoring, charactn. 86706
Si, 300 mm wafer perform. for giga ULSI device procs. 70238
Si, 300 mm wafers, batch furnace/RTP proc. prod. maturity 67522
Si micromachining microchannels heat sink, theoretical/expt. anal. 100578
Si ultra-thin ICs, dicing by thinning for improved mech. reliab. 70231
Si:O single-cryst., O recoil implant 80994
SiO_2 direct-write ion beam induced CVD for IC post-proc. modif./repair 115978
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm technol. 125492

integrated circuit measurement
see also integrated circuit testing
150 nm partially-depleted SOI and bulk technols., comparative perform. 126921
AB class low noise I-V integrated charge amp. *(Polish)* 90766

egrated circuit measurement continued
accurate pattern registration for IC tomography 92106
ADC effective resoln., metrological charactn., IEEE std. 90978
advanced proc. control implement. for wafer fabs, equipt. interface 100722
aerial image photolithography, normalized image log-slope metric usage 115732
BCD, BCDMOS technol., gate oxide lifetime indicator, wafer level reliab. 104144
BiCMOS collector insert layers, highly doped, proc. develop./simul. 92478
BIST on-chip short-time interval meas. tech. for testing high-speed commun. links 101936
cantilever probes for sub-100 nm scanning thermal microscopy, design and batch fab. 121030
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0.1 μm rule *(Japanese)* 68773
cct.-level layout-specific interconnect reliab. assess. 92144
CD metrology meas., postetch layer, elec. beam treatment 104035
chain FRAM archit., overview/trends 90908
clustered IGBT monolithic integrat. with LV components to form 3 kV intell. power chip 81537
CMOS device/cct. ultra-thin oxide reliab., phys./predictive models 81525
CMOS digital/analog technol., 0.18 μm, SPICE stat. anal. during proc. develop. 104123
CMOS EAROM submicrometer polysilicon surface defects, form. mechanism 102155
CMOS gate level phase shift lithog. eval., test chips 103700
CMOS microsensors, parasitic behaviors charactn. 127122
CMOS parametric matching meas., high precision, transistor noise impact 104142
CMOS regulator, low dropout, 60 μA quiesc. current/250 mA max. 81502
CMOS technol. scaling challenges for sub-0.1 μm generations 70303
CMOS two-stage class B power amp., 1.9 GHz, low resist. substr. 69212
CMOS ultrathin oxide reliab., stat. breakdown meas., data interp. 116025
CMOS VLSI digital ccts., substr. noise generation, power-supply parasitic components 125302
CMOS voltage limiter/regulator design 68585
CMP slurry anal., particle meas. 103384
CMP slurry flow rate/point-of-use filter life using press. transducer/flowmeter 103395
Cu damascene interconnects, localized strain meas. by CBED 92172
cycle-to-cycle period jitter meas. of HF clock sigs. 102312
deep submicron cct., DC current generation and meas. 79813
deep submicron CMOS device charact. prediction using inverse modeling techs. 127054
deep submicron digital ccts., functional correl. anal., crosstalk induced crit. paths 125446
defect inspection/metrology, proc. integrat. 100638
digital CMOS ccts., crosstalk noise, simul. results 79688
digital IC port behavioral models, meas. transient waveforms 114675
dual-gate p-HEMT MMIC X-band down-converter 91382
dual-slope method time interval meas. core, CMOS technol. 101907
DUV lithog. alignment optim. 126562
DUV stepper lens contamination control, purged gas purification 126579
elec. alignment meas., resistor ladder struct. 109982
electrostatic force microscopy, PPM 105684
film thickness/dens. meas. using combined X-ray tech. for IC metrology appls. 103952
fine pattern replication by EUV lithog. 103646
flip-chip assembly syst. for prototyping/proc. investigs. 125939
foundry IC mfg., scaling variance, invariance and prediction of design rule, from 0.25-μm-0.10-μm 124443
FRAM retention anal. method based on memory cell read sig. voltage meas. 102162
g-line pos. photoresists, opt. characterisation 115739
gate oxides, 6.8/3.5 nm, plasma damage, param. shifts/hot-carrier response/dielec. integrity 69879
gate-level transistor perform. charactn. by ps imaging cct. anal. 104021
HDI multilayers, low cost, using power mesh archit. 100599
high-resoln. high-speed A/D converters, sub-ps aperture uncertainty meas. 114830
in-situ plasma etch proc. endpoint control in IC mfg. 103376
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
interconnect coupling, peak noise and delay meas. 116016
interconnect metrology, rapid X-ray reflectometry appls. 115720
interconnect technol. for ≤100 nm scaling, impact on key chip metrics 69941
Ka-band 3-stage power amp., power PHEMT proc., 6W peak output 91309
lithog., CD-SEMs, unified spec. 103531
lithog. overlay meas., model-based lot disposition algms. 81143
low-k dielec. films, characterisation by ellipsometric porosimetry 92600
low-k dielec. thin film pore charact., positronium annihilation lifetime spectrosc. 92601
low-k thick film dielec., simul. model 69335
metal films, local microwave charactn., IC appl. 109950
metrology platform for 300 mm wafers, develop. 67521
microelectronic device thermal/thermomechanical characterisation by laser probing 115987
microelectronics materials charactn. by AES-sputter depth profiling 70248
microstruct. meas. syst., image proc. tech. *(Chinese)* 121189
microwave IC interrogation by photonics 102747
MM-wave cryogenic IC, on-wafer testing 69230
modulated large-sig. operating conditions, component behaviour, NWA 131843
MOS capacitor sensitive soft breakdown triggering, meas. syst. noise 104143
MOS IC oxide leakage currents, Si dangling bond defect link, direct evidence 81529
MOS ULSI technol., ultra-thin gate dielec., thickness meas. under inversion condition 127064
MOSFET flash EPROM devices, lateral profiling of interface traps and oxide charge, charge pumping 114763
MOSFET LF noise meas. for mixed-sig. LSI & SoC, noise model *(Japanese)* 81512
multi-axis nano-positioning platform for wafer inspection syst. 67659
multi-conductor interconnect line systs., capacitance extraction, test struct./method 103496
multilayer thin film MCM-D, CPW feedthroughs, design/charactn. 80540
multiport differential microwave amps., noise matrix parameterization 125715
multivariate methods for IC proc. control/fault detect. 100723
on-chip sub-ns sig. capture and charactn. ccts. 104076
on-wafer CPW meas. de-embedding, nonuniform transm. line model appl. 103967
on-wafer open-short-load-thru calib. stds., ANN modeling 75842

integrated circuit measurement continued
opt. digital profilometry for sub-70 nm IC metrology 121209
organic bottom ARCs for photolithography, recent progress 103558
overlay pattern design for real-time focus and tilt monitor 103570
packaging whole field displacement meas. tech. using speckle interferometry 113473
partially-depleted SOI CMOS design, high perform., for 0.18 μm technol. generation 70308
partially-depleted SOI CMOS SRAM, gate-to-body tunneling current effects 127042
partially-depleted SOI CMOS technol., 0.13 μm, for low-power digital/RF appls. 127046
pattern writing by large-scale plasma source ion implant. syst., planar ICP source 115497
pellicle-induced distortions in advanced opt. reticles, 157 nm 103591
Pentium III Xeon proc. with L2 cache, cartridge thermal design/metrol. 114799
photolithographic image quality metrics using normalized image log-slope 81145
photolithography, imaging metrology requirements for low k_1 proc. param. 69967
photolithography CD control automation in complex mixed technol. mfg. fab 103523
photolithography proc., overlay error, reticle interf. effect, IC foundry fab 103569
photomask blank layer params., X-ray refl. method, photomask property distrib. 103621
photomasks, 3D scanning probe metrology 115733
photomasks, resoln. enhancement techs., eval. method 126577
plasma etching, wafer temp. meas./control 92044
plastic IC encapsulation, 3D wire sweep meas. using X-ray CT instrum. *(Japanese)* 67639
plastic packages, die stress drift meas. using piezo-Hall effect 67625
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. props. 104092
polysilicon gate etching, 0.15 μm, in-line plasma induced charging monitor 103427
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, contact resist. 102185
polysilicon/ZrO_2 gate dielec. MOSFETs for sub-qtr. micron CMOS, low temp. proc. 127024
pos. tone photosensitive polyimide photoresist for broadband stepper use 81144
proc. control strategy based upon device perform. metrics 100721
proc. control/fault detect./event recogn. via univariate pattern recogn. 113814
proc. develop. continuity, materials-based approach 103943
proc. technol. requirements for 300 mm wafer transit. 115984
profilometers, ultrahigh accurate flatness and 3D meas. for LSI wafers and aspheric lenses *(Japanese)* 93945
PTFE/siloxane nanocomposite ultra low-k ILDs, high-temp. mech. behavior/phase morph. 92153
reticle defects, detect./repair/printability for 193 nm exposure 126563
RF CMOS IC, pad de-embedding 92464
RFI suscept., test procedures crit. assess. 72385
RFICs, ESD-induced cct. perform. degrad. 127000
self-heating effects, hot spot/electrothermal coupling methods *(Chinese)* 92434
SEM sub-surface probing for indust. inspection appls. 100649
semicond. thermal meas. and mgt., conf., San Jose, CA, USA (March 2001) 78402
small sig. ac-SPV noncontact monitoring, near surface doping for IC-proc. 104034
SOI CMOS proc. scaling effects on logic proc. soft error rates 127041
SOI power ICs with intell. CMOS control circuitry 81536
split-gate flash EEPROM coupling coeff. meas. method without extra test struct. 102163
submicron external EO meas. syst. based on GaAs immersion lens 86899
super-fast fully depleted CMOS/SOI ring oscillator with delay time of 45 ps *(Chinese)* 79649
symmetric dual-level spiral inductors for RF ICs, meas. 91373
Teflon AF polymer pellicle optim. for 157 nm lithog., increased lifetime/transm. 92227
TFSOI modular proc. for CMOS power devices/ICs 104098
TWINSCAN photolithography platform for dual 300 mm wafer proc. 69983
ULSI STI, local mech. stress, UV micro-Raman spectrosc. 69850
ultrashallow jn. form., ion implanter/RTA syst. issues 126316
ultrashallow jn. monitoring, nondestructive in-line carrier illum. syst. 103266
ultrathin gate dielec., proc. metrology 109994
UV resists, 193 nm, CD degrad. during SEM inspection, mechanistic studies 103550
UV resists, 193 nm, shrinkage anal./charactn. 81141
VLSI design, deep-submicron interconnects 81481
wafer 3D micropattern meas., opt. probe & control design 120653
wafer charge monitoring by disk current 116010
wafer contaminant location/ident. by IR microscopy/fluoresc. illum. 70230
wafer environ. control, contamination metrology equipt., cost anal. 103525
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
wafer pattern overlay metrology, fund. 126561
wafer scale pattern meas. for CMP anal. 103347
wafer tools/fabs, 300 mm automation optim. requirements 81413
water, ultrapure, for microelectronic proc., total organic C monitoring instrumentation 132210
X-ray resist pattern edge roughness suppression using low ion strength developer 103639
X-ray scatt. methods for meas. of roughness of surfaces/interfaces 97167
Yagi-type hardware neuron model, CMOS IC implement. *(Japanese)* 91133
Al passivated line single grain strain meas. by X-ray microdiffraction during electromigration 92173
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
Al-Cu(Si) metallic interconnects, electromigration modelling, percolative approach 92119
AlCu passivated conductor line electromigration, Cu conc./stress evol. 92143
ArF lithog., cyclo-olefin/maleic anhydride type resists for sub-100 nm patterning 103551
Au interconnection, electromigration meas. tech. 126507
Cl_2 plasma-induced wafer charging reduction through ion-ion sync. bias 103429
$CoSi_2$ CMOS test struct., 0.18-μm, latchup charactn. 104095
Cr-on-glass photomasks, dry etch proc. optim. 103526
Cu ULSI metallization barrier layers, review 69930
Cu damascene interconnect sheet resist./line width meas., test struct. issues 103497
Cu damascene proc. control using in-line meas. syst. 92125

integrated circuit measurement continued
Cu damascene struct., AURORA inorganic low-k dielec., charactn./integrat. 92156
Cu electroplated interconnects, microtexture/strain 103460
Cu interconnect features, elec. linewidth, test chip 103495
Cu interconnect oxid. and reduction anal. using spectrosc. ellipsometry 104036
Cu interconnects, sub-0.1 μm, fab./perform. limits 92168
Cu line patterning, high resoln., by direct imprinting 115668
Cu surface modif. by thermal/plasma treatments 92096
Cu wafer metrology for electroplating/CMP control 115689
Cu/low-k ILD proc. metrology, complexity/capabilities 126489
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-SiO_2 interconnects for high speed ccts., sig. propag. and crosstalk charactn. 126460
Cu-TiWN multilayer interconnections, electromigration 81117
GaAs MMIC, EO probing, CW calib. 102665
GaAs MMIC yield mgt., data-driven strategy using data warehouse 115011
GaAs metamorphic HEMT-based MMIC amps., high gain/perform. 69243
GaAs power metamorphic HEMT MMIC technol., very high efficiency/low cost 69232
InAlAs-InGaAs metamorphic HEMT MMIC technol. on GaAs substrs. 69244
KrF resist develop., alkaline conc. var. effects on CD 103553
Si polished wafers, nanotopography anal. techs. 75868
Si wafer, contaminants surface densities, TXRF 81407
Si wafer thermal oxide trace metal contaminants, characterisation 103385
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 102955
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
SiGe layer cluster tool, spectrosc. ellipsometry, integrated metrology 104038
SiO_2 sol-gel derived porous layers for low-k dielec. appls. 92163
SiO_2 ultra-thin CMOS gate oxides, two-freq. capacitance meas. tech., limitations 104124
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795
TiN PVD gate thermal stabil. under RTA, impact on CMOSFET charact. 104128
multilevel interconnect technol. with intra-metal air-gap for ≤0.25 μm procs. 92147

integrated circuit metallisation
see also integrated circuit interconnections
3D voids simul. in chip metallization structs., reliab. eval. 126429
adv. interconnect & low-k dielec., conf., San Francisco, USA (Apr. 2000) 89563
ASIC-embedded CAM with power-saving and design for test features 102181
at. layer CVD for metal nitride growth, dual damascene barrier requirements 90460
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effects 92140
BEOL post-ash residue removal, recirculated batch spray proc., low cost 81084
bondpad peeling failure in wafer fab., AES/EDX studies 103949
BPSG pre-metal dielec. film CMP, removal rate/uniformity/defectivity 103346
cct.-level layout-specific interconnect reliab. assess. 92144
CMOS, eight-level metal low-k intermetal dielec., ESD protection, grounded-up bond pads 81522
CMOS device downsizing below 0.1 μm, problems/solns. 104090
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol. 127020
CMOS FRAM with chain cell struct., fully planarized, 8 Mbit 125471
CMOS front/back end plasma etch procs., fund. design limitations 104126
CMOS gate dielec. scaling limits 116034
CMOS gate high-k dielec. by liq. source misted chem. deposition 104100
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS proc., 0.18 μm, $CoSi_2$ spike form. in act. contact salicidation 70293
CMOS proc. flow for combined three layer/self-aligned contacts 104099
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
CMOS technol., low-k inter-metal dielec., act. ccts. under wire bonding I/O pads 127031
CMOS technol. scaling challenges for sub-0.1 μm generations 70303
CMOS-IV SoC technol., 100 nm, for high dens. embedded memory/mixed sig. LSIs 127018
CMP removal rate uniformity control, empirical-based modeling 81085
CMP slurries, extensive pump handling effects 103380
conducting polymers, microelectronics appls., review 81409
Cu damascene interconnects, localized strain meas. by CBED 92172
Cu/TiN/6H-SiC(0001) heterostruct., epitaxial growth, PLD, XRD, TEM 114381
Damascene feature fill, electroless and electrolytic seed repair effects 126445
DRAM, 0.1 μm, bitline spacerless storage node SAC/Ru-Ta_2O_5-Ru capacitor with TiN contact plug 125475
DRAM storage node pad proc., line type self-aligned contact/oxide spacer/direct metal plug 125476
dry de-veil photoresist/etch residue removal for solvent-free cleaning 115651
dual gate CMOS DRAM self-aligned contact proc., tetrachlorosilane-based SiN mask films 125473
dual work fn. metal gate CMOS technol. using metal interdiffusion 104120
e-beam evap. syst., adaptive controller design/implement. 68197
electromigration, early failures, stat. anal. 92105
electromigration in metallic lines, percolative approach 69925
electronic interconnects/packaging, material factors 69934
film thickness/dens. meas. using combined X-ray tech. for IC metrology appls. 103952
flip chip solder bumps, electromigration failure, voids effects 92137
flip chip under-bump metall. conversion to intermetallics, reliab. impact 67624
flip-chip mounting proc. develop., metallic joint using US wave energy 125936
floating MIM capacitors, charging damage 102781
FRAM, high dens., scalable sub-$10F^2$ 1T1C capacitor-on-bitline cell technol. 125470
gate oxide, ultra-thin, ESD protection device trigger transient effects on reliab. 70118
gate oxide damage in plasma proc., historical overview/future prospects 103423
gate oxides, 6.8/3.5 nm, plasma damage, param. shifts/hot-carrier response/dielec. integrity 69879
high resoln. TFT-LCDs, low resistive material bus-line proc. 92114
high-k dielec. gate materials for ULSI devices, advances/materials compatibility 104108
high-k gate dielec., materials eval./selection 104105
high-k gate dielec. for CMOS devices, future challenges 104130
high-Q inductor add-on module in thick Cu/SiLK single damascene for RFIC 125739
high-resoln. AMLCD made with a-Si:H TFTs having Al-gate 97746
ICP resist stripping, proc. modif. to avoid low-k dielec. film damage 69867

integrated circuit metallisation continued
ILD PECVD induced charging damage, IC yield/reliab. effects 101375
intell. power electronics modules, embedded power packaging technol. 81534
interchip via technol., vert. syst. integrat. 126465
interconnect metrology, rapid X-ray reflectometry appls. 115720
interconnect technol. for ≤100 nm scaling, impact on key chip metrics 6994
interconnect trees for electromigration reliab. estim. 92174
interconnects, conf., Burlingame, CA, USA (June 2001) 124180
ionized plasma phys. vap. deposition, integrated multi-scale model 79402
IPVD feature scale evol., effects of transient diffusion 68367
isothermal electromigration test as proc. control methodology, case study 8112
isothermal wafer-level electromigration test for metal syst. reliab. monitorin 126473
LeadFrameOnChip, power bus and bond-over-act.-cct. 124388
low dielec. const. materials for ICs 104244
low-k dielec. films, characterisation by ellipsometric porosimetry 92600
low-k dielec. thin film pore charact., positronium annihilation lifetime spectrosc 92601
low-k etch/ash for Cu dual damascene 103391
MCM-D packaging, wet etch stop resist eval. 69375
MCM-D thin film techs., integrated spiral inductor/coupler appls. 69220
metal contacts, rf precleaning, aspect ratio depend. plasma-induced chargin damage 103315
metal/polysilicon CMOS gates, work fns., effects of high-k dielec. 127039
MIMIC backside via self-inductance, calc. method 125775
MOS silicide form. effects on resist. of common source/drain region 126483
μBGA packaging for high-perform. RDRAM/SDRAM appls. 125497
multi-conductor interconnect line systs., capacitance extraction, tes struct./method 103496
multichip ultra-thin 3D stacking technol. 91522
multilayered syst.-on-package. design against interfacial delamination 113614
Nanoglass E polymer/Cu damascene proc., etch/clean/CMP 126451
nanoparticle liq. suspens., drop-on-demand dispensing for microelectronics man ufacture 100613
NMOSFET protection devices in 0.13 μm CMOS technol., hot electron/ESD stress interact. 81526
noble metallization proc. using preferential metal deposition Al with methylpyr roridine alane 126454
organic ion-implanted low-k organic SOG films, IC appls. 126466
partially depleted CMOS/SOI technol. *(Chinese)* 104118
partially-depleted SOI CMOS technol., 0.13 μm, for low-power digital/RF appls 127046
plasma etch damage, charging pot./current densities, substr. connection effect 103432
plasma etching, wafer temp. meas./control 92044
plasma related damage and proc.-induced phenom., conf., Monterey, CA, US/ (Nov. 2001) 100381
plasma/proc.-induced damage control, symposium overview 103976
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 92145
polyimide, thin photosensitive films for metallisation schemes, charactn. 10345
polyimides, LSI ILD 90573
polysilicon plug, 130 nm, on Gbit DRAM lightly doped diffusion region, contac resist. 102185
porous low-k dielec. design, pore generation methods 115684
porous low-k ILD thin films, struct./props., X-ray reflectivity/SANS 91922
porous low-k ILD thin films, X-ray reflectivity/SANS, 3-phase model 92160
post-ash polymer residue removal from BEOL struct. using inorganic chem 92043
post-metal CMP cleaning with electrolyzed DI water, surface control tech 103344
proc. technol. requirements for 300 mm wafer transit. 115984
PTFE/siloxane nanocomposite ultra low-k ILDs, high-temp. mech. behav ior/phase morph. 92153
PVD IC metallization, particle contamination control in sputter deposition mod ules 101193
quasi-monolithic technol. for power microwave/mm-wave ICs, static therma design 69234
RF Si technol., IC-compatible 2-level bulk micromachining proc. module 9137
RFIC 2 GHz VCO with post-processed Cu inductors 115002
scanning SQUID microscopy for current imaging of ICs 116001
self-aligned contact etch stop window, enhanced, using C_4F_6 chem. 103379
self-primed spin-on low-k materials testing for wafer cost of ownership optim 92124
silicide thin film form. on Si under high-temp. annealing, diffusion model 115690
SILYAL top surface imaging proc. for 157-nm lithog. 103654
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
stack capacitor integrat. with buried O barrier using CMP of noble metal 127027
stack DRAM cell with low parasitic resist. device/poly metal gate technol. fo Gbit DRAM 125489
stacked hotplate low-temp. annealing syst. for 300 mm wafer thermal proc 80978
submicron via-hole filling, Al low-press. seed proc. 115687
super high speed polysilicon emitter IC technol. *(Chinese)* 104085
syst.-on-a-chip, gigascale, integrated global interconnect archit. 69947
TAB/device packaging thin film failure mechanisms, Auger depth profil ing/surface anal. 124329
TaO_xN_y high-k dielec. materials 102144
TFVL dual-inlaid metal proc., proximity dummy feature placement 126449
thermal proc. technol., gate dielec. thickness limits/materials 70232
trench filling by ionized metal phys. vap. deposition 126480
ULSI ICs, design and reliab. aspects of multilevel metal large-scale power lin layouts 104039
ULSI interconnect syst., thermal perform., simul. *(Chinese)* 126499
ULSI plastic packaging, die cracking eval./improvement 100619
ultra-low k ILD materials for use in ULSI BEOL struct., mech. integrity 9243
ultralow-k ILD materials develop., IC proc. challenges 126492
under-bump metall. etching for wafer level packaging 100580
UV polymeric materials/resists for 193/157 nm appls. 103653
vert. CMOS gates, feasibility study 104102
vert. mesh RF capacitors in std. CMOS, design and charactn. 125778
via line structs., electromigration tests, fast wafer level/std. package leve 115680
via-first dual damascene integrat. scheme, evol. of trench profiles 103454
via/line package level/wafer level tests, comparison 81131
VLSI metallization, electromigration proc. *(Chinese)* 92098
wafer bumping by solder paste printing, stencil design improvement 113560
wafer cleaning capability for increasing technol. demands 103433
wafer fab., sidewall polymer contamination during metal etching 103350

grated circuit metallisation continued
wafer level reliab./packaged electromigration tests, expt. comparison 81130
wafer level stress data use as early burn-in/reliab. predictor 104017
Ag direct write metallizations, contact form. 103492
Ag/Al bilayer self-encapsulation proc. kinetics model 92180
Al 1 μm line, fault localisation, thermal laser stimulation, 3D finite element ANSYS model anal. 127004
Al CVD films prep. from dimethylethylamine alane, morph. and hole filling props. 90415
Al CVD-PVD proc. for DRAM appls. 126455
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al contact hole filling & metallis., improved step coverage *(Chinese)* 81126
Al direct write metallizations, contact form. 103492
Al dual-damascene interconnect via electromigration lifetime, soft low-k organic SOG ILDs 92117
Al film mass transfer during local anodic oxid. 69938
Al interconnect texture, Ti underlayer effect, electromigration resist. 69953
Al interconnects, stress-induced voiding in proc. qualification, quantitat. assess. 81133
Al lines, via/polygranular cluster electromigration-induced stress interact. 92177
Al passivated line single grain strain meas. by X-ray microdiffraction during electromigration 92173
Al passivated line test struct., sub-μm wide, grain orient./strain meas. 92175
Al plug CVD-PVD proc. for sub-0.25 μm devices, via filling/Al microstruct., underlayer effects 92171
Al sputtered atoms ionization in microwave ECR plasma source 114245
Al via-void generation mechanism for Gbit-scale DRAM, anal. 79900
Al/TiN bilayers, 111-textured, interfacial react. pathways/kinetics, XRD and TEM study 126479
Al/ZrN/Zr trilayered film on Si, seq. single-oriented growth, contact syst. prep. 81127
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
Al-05 Cu alloys, chem. mech. planarization, 1 Gb DRAM chips appl. 103360
Al-Cu thin-film metallizations, thermal aging, reliab. tests 115669
Al-Cu(Si) metallic interconnects, electromigration modelling, percolative approach 92119
Al-based interconnect reliab., width transit. effects 92120
AlCu ULSI multilevel-metallizations, stress migration behavior 92118
AlCu interconnects, electromigration behaviour, stress-induced voiding effects 92176
AlCu line wafer level electromigration testing, isothermal/const. current/SWEAT methods 81128
AlCu passivated conductor line electromigration, Cu conc./stress evol. 92143
AlON diffusion barrier form. for Ag interconnect metallization 92179
AlSi-based metallisation in microelectronic devices, corros. inhib. 103488
Au interconnections, electromigration/electrochem. react. failure mechanism 115673
Au-Ni-Sn intermetallic phase form in eutectic Pb-Sn solder form. on Ni/Au metallization 67531
Au-polyimide ILD multi-level interconnect proc. using dual 4.5 μm-thick metal layers 69961
a-C:F low-k ILD thin films, thermally stable, by ICP-CVD 92152
Co-W-P thin films, electroless deposition for ULSI, MEMS appls. 90509
$CoSi_2$ CMOS test struct., 0.18-μm, latchup charactn. 104095
$CoSi_2$ epitaxial nanowire fab. using opt. lithog. and silicon proc. 92256
$CoSi_2$ selective growth on patterned substr., dual ion beam tech. *(Chinese)* 81124
Cu CMP proc. modules, defect class. 126502
Cu CMP technol. for ULSI multilevel metallization *(Chinese)* 103302
Cu CMP, two-step proc., 0.13 μm node multilevel metallis. 126461
Cu CMP, two-step proc., chem. induced defects reduction 126462
Cu CVD, Cu(TMVS)(hfac) sourced, on TaN substrs., surface morph., water vap. effects 90463
Cu CVD for gigascale interconnects, 2,2,6,6-tetramethyl-2-sila-3,5-heptanedione precursor 92167
Cu IC interconnect proc. characterisation using ps sonar noncontact opt. technol. 126494
Cu MOCVD on TiN diffusion barrier, plasma pretreatments effect 92112
Cu ULSI metallization barrier layers, review 69930
Cu alloy interconnect, modeling and simul. 92107
Cu backside contamination issues in CMOS proc. integrat., case study 92476
Cu damascene interconnect sheet resist./line width meas., test struct. issues 103497
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92116
Cu damascene interconnects, recrystn. anneal, reliab./post-CMP defects 81135
Cu damascene proc. control using in-line meas. syst. 92125
Cu damascene struct., AURORA inorganic low-k dielec., charactn./integrat. 92156
Cu damascene struct., methylsilane-doped low-k CVD oxide intermetal dielec. 69942
Cu damascene struct., slurry employing silica abrasive for CMP 103458
Cu dual damascene interconnect/low-k organic polymer, fine CD control 126450
Cu dual damascene interconnects, spin-etch planarization 103348
Cu dual damascene microstruct./via chain yields, annealing conditions optim. 126487
Cu dual damascene proc. defect tracing 126496
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Cu dual-damascene interconnects, sub-0.1 μm, barrier/seed technols. 115686
Cu dual-damascene proc. resoln. improvement, top surface imaging 92090
Cu, effect of NH_3-plasma treatment and CMP modif. on TDDB improve. 81116
Cu electrodeposition, review, IC appls. 79364
Cu electroless deposition for ULSI 90501
Cu, electroless deposition, quartz cryst. microbalance study 68345
Cu electroplated films, swirl defects orig. & elimination 115714
Cu electroplated interconnects, microtexture/strain 103460
Cu, electroplated, on-chip metallis., gap fill, microstruct., comp. 115711
Cu electroplated profiles, pattern depend. modelling, CMP 115712
Cu electroplated thin films, RT recrystn., methods/mechanisms 101416
Cu electroplating, two-step tech., seed enhancement 115713
Cu films, acid-based electroless deposition, kinetics & microstruct. 90518
Cu films, acid-based electroless deposition, react. mechanisms 90517
Cu films, electrodeposition, buffering agent, mass transfer model 90514
Cu films, high press. laser pulse heating, microstructural evol. 125070
Cu films/damascene fine lines, resist., ULSI appl. 126501
Cu full damascene metallization, sub-0.18 μm RF CMOS SoC high Q inductor and MIM capacitor appl. 125740
Cu interconnect CMP optim., proc. flow tuning 126497
Cu interconnect features, elec. linewidth, test chip 103495
Cu interconnect technol., high-vol. mfg. transit. 115685

integrated circuit metallisation continued
Cu interconnections, microstructural anal. using ps US 92170
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu interconnects, air-gap fab. for low intralevel dielec. const. 92148
Cu interconnects, electromigration, confine. materials mech. props. effects 103459
Cu interconnects, sub-0.1 μm, fab./perform. limits 92168
Cu interconnects, sub-0.10 μm, jet electrochem. deposition plating/seed layers 81118
Cu line patterning, high resoln., by direct imprinting 115668
Cu metallisation, electroplating, electrolyte resist. control 115715
Cu metallisation, wafer probing, testing techs. 92451
Cu metallization, 0.10 μm wide lines, failure obs. by OBIRCH method 126459
Cu metallization, improved diffusion barrier by stuffing TiN grain boundaries with Al interlayer 126475
Cu metallization, investig. of sputtered TaC_x/WC_x films as diffusion barriers 126471
Cu metallization, ion implanted SiO_2:N PECVD diffusion barrier *(English)* 103451
Cu metallization, sub-0.25 μm, seed-layer sputter deposition, line cusp magnetron plasma source 92164
Cu migration, H promoted in high press. anneal proc. 69923
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu particles, surface cleaning/etching in aq. ammonia vap., hillock form. obs. 126405
Cu periodic reverse electroplating, waveform shape/freq. optim. 68351
Cu planarization proc., lin. polisher, pattern depend. 126357
Cu post-processed inductors with appl. to 2 GHz integrated VCO 69240
Cu seed layers, organic soln. deposition on barrier metals 92185
Cu single/dual damascene oxide/low-k ILD interconnects, plasma charging damage issues 103486
Cu smooth thin film deposition in deep-sub-μm trench using H atom source plasma CVD reactor 90461
Cu straight wires arrays form., electrodeposition 101433
Cu surface modif. by thermal/plasma treatments 92096
Cu thin films, thermal mech. props., advanced metrology for rapid charact. 75895
Cu trench/via filling by electroplating, current dens./pulse waveform effects 92178
Cu via electromigration, study of bimodal distribs. of time-to-failure 126472
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
Cu wafer bonding, microstruct., oxide distrib. 68387
Cu wafer metrology for electroplating/CMP control 115689
Cu/Ag thick film conductors on Al_2O_3 substrs. for power appls. 78658
Cu/Er/Si(100), Cu metallization interact., solid-phase reacts. 81121
$Cu/ErSi_{2-x}/Si$, Cu metallization interact., solid-phase reacts. 81121
Cu/Gd/Si(100), Cu metallization interact., solid-phase reacts. 81121
Cu/SiLK resin dual damascene, low permitt. spin-on hardmask 126452
$Cu/Ta/SiO_2/Si$ films, Ta diffusion barrier layer oxid., thermal annealing 69935
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
$Cu/TaC_x(WC_x)/Si$ metallization/diffusion barrier syst., anal. 115676
$Cu/W/SiN_x$ multi-level damascene interconnects, electromigration 126506
Cu/a-SiCOF interface, ULSI interconnect metallization, annealing, XPS/AES/SEM 103477
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu/low-k ILD and Cu/ultralow-k ILD layers, CMP module integrat./proc. 126493
Cu/low-k ILD dual-damascene interconnects, surface prep. 103470
Cu/low-k ILD interconnect technol. for semicond. devices 103478
Cu/low-k ILD interconnects, 0.13 μm technol. node, dielec. materials selection 115683
Cu/low-k ILD proc. integrat. enhancement techs. 126495
Cu/low-k ILD proc. metrology, complexity/capabilities 126489
Cu/low-k damascene proc. develop., rapid X-ray reflectometry metrology 104037
Cu/low-k interconnect CMOS platform, 0.13 μm, for SoC appls. 127019
Cu/low-k interconnects, deep-sub-μm, impact of vias on thermal charact. 126488
Cu/low-k wiring, interconnect module technol. 69928
Cu/methylsilane-doped low-k CVD deposited oxides, damascene process,leakage current mechanisms 126448
Cu-CMP for dual damascene technol., (non)Prestonian removal regimes 69858
$Cu-Cr(V)(Ta)-SiO_2$ multilayers on Si, Cu self aligned passiv. 69949
Cu-Mo-based multilayer films for advanced metallisation, microstruct., Mo addit. effects 115675
$Cu-SiO_2$ dual-damascene interconnects, electromigration reliab. 92115
$Cu-SiO_2$ dual-damascene interconnects, electromigration early failure stats. 81134
$Cu-Ta-SiO_2$ metalisation struct., Ta diffusion barrier study 92184
Cu-Ta-based multilevel interconnects, CMP 103479
Cu-TiWN multilayer interconnections, electromigration 81117
Cu-W-Si , selective MOCVD on AZ 5214-patterned substrs., IC metallisation 69952
$CuAl-SiO_2$ barrier/adhesion promoter-ILD interface microstruct., charactn. 103461
GaAs MMIC through-substr. via inductance, multiple on-wafer test approaches 102741
GaAs, cluster tool sputtering metallization procs. 90249
GaAs wafer mfg., scaling up back-side proc. 126424
H-silsesquioxane low-k ILD films, dry photoresist stripping proc. chem. effects 92154
H-silsesquioxane low-k ILD films, nanoporous, thermal treatment effects 92157
H-silsesquioxane low-k ILD thin films, H_2-N_2 ambient curing study 92155
H-silsesquioxane low-k dielec. material integrat. with $TiN/TaN/W_2N$ thin film barriers 92181
H-silsesquioxane spin-on polymer low-k film, proc./props., CMP charact. 92149
H-silsesquioxane ultra low-k ILD films with tunable elec./mech. props. 92159
Mo gate electrode work fn. adjustment for CMOS technol. 127037
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
Pb-free leadframe packages, plating chem. eval./reliab. 113700
Si integrated inductors in 0.18 μm CMOS technol. for MMIC/RFICs 125777
Si integrated spiral inductors, high-Q implement. in CMOS technol. 115027
Si wafer fab., nodules due to Si precip. 103950
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
SiCOH-based low-k dual-phase ILD materials by PECVD 91902
SiGe HBTs, Ni/Ag metallization using NiSi contact 115866
SiO_2 ILD, CMP, ULSI mfg. *(Chinese)* 103407
SiO_2 dielec. CMP in ULSI multilevel metallization *(Chinese)* 103301

integrated circuit metallisation continued
SiO_2 gate dielec. scaling, long term reliab. estim., error calc. 81417
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2 porous low-k ILD film by photo-assisted sol-gel proc. 90523
SiO_2 sol-gel derived porous layers for low-k dielec. appls. 92163
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
SiO_2:F FSG proc. develop., Cu/damascene technol., PECVD reactors 126447
SiO_2:F dielec. thin films, structural anals. by micro-Raman spectrosc. 92602
SiO_2:F for ILD appls., low dielec. const. anal. 91921
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
SiO_2-xerogel nanoporous low-k ILD films, grazing incidence SAXS 92161
SiOC PECVD low-k ILD films using SiH_4 based gas precursors for Cu damascene interconnects 92121
SiOC very low-k ILD film with extendibility to k<2.7, material props. 92150
SiOCH low k ILD films for <0.18 μm dual damascene appl., integrat./charactn. 92122
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702
Ta/TaC diffusion barriers for Cu metallization on Si, reliab. 91877
TaN CVD diffusion barrier for Cu interconnects 92166
TaN diffusion barrier against Cu diffusion, perform. eval. using SIMS/AFM 69939
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
Ta_2N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
Ta_2O_5 MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
TaSiN ultra-thin diffusion barriers for Cu metallization, high-resoln. EDS anal. 115693
Ti/Si films, solid-state react., vol. anal. of C49-C54 transform. 126474
Ti/low-k H-silsesquioxane and Ti/TEOS struct. at elevated temps., comparison study 92182
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvement, reservoir modeling 81132
Ti-TiN long throw/ionized PVD liners for W-plug contact/via appls. 103469
$TiAl_3$ interfacial growth, in-situ TEM obs./num. simul. 103462
TiC sputtered diffusion barrier for Cu metallization, thermal stabil. 103490
TiCuAg-AlN fritless conductor syst. for power electronic appls. 68558
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
TiN/Al/TiN/SiO_2 metallization, void-containing interconnects, local Joule heating 69933
$TiSi_x$/poly-Si/oxide/Si transistor gate struct., memory device appl. 92135
W CMP, appl. of CMP model 103330
W CMP procs., modeling and charactn. 92070
W CVD films, rarefied particle clouds, in situ monitoring 101314
W CVD on MOCVD TiN diffusion barrier, step coverage 126470
W LPCVD, selective deposition on Si 114310
W bit-line, PECVD-Ti proc., enhanced nitridation 115722
W film, deposition & layer props., CVD 115665
W films, chem. treatment, IC appl. 103439
W plug CMP using different consumables, optim. 69956
W post-CMP defect inspection, recipe optim. 100637
W selective CVD using SiH_4 reduction of WF_6, Si consumption 90422
W/TiN damascene metal gate, full CMP proc. integrat. for ULSI 92127
W/W_2N/WO-based thin film CVD using volatile liq. precursors 90462
W-TiN damascene metal gate CMOS technols., perform. improvement 127040
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 70306
W-WN-polysilicon gate vert. cell DRAM implement. in sub-130 nm technol. 125492
W-ZrN-polysilicon gate electrode config., ZrN barrier thermal stabil. 81115
W-damascene SRAM cell interconnect ILD, CMP scratch induced defects, failure mechanism 79891
WC_x diffusion barrier for Cu metallization, thermal stabil. 103467
WC_x diffusion barrier/Cu metallization syst., phys./elec. props. 81109
WN_x reactive sputter deposited barrier thin films, stress/microstruct./thermal stabil. 91878
WSi_2 film form., ion beam synthesis, charactn. 69959
WSi_x integrity, plasma ashing proc., VLSI, F base strip proc. effect on polycide film 126359
multilevel interconnect technol. with intra-metal air-gap for ≤0.25 μm procs. 92147

integrated circuit modelling
see also semiconductor device models; semiconductor process modelling
0.24 μm CMOS technol. eval. and BSIM RF modeling for Bluetooth power appls. 69171
1D continuum electromigration modeling for IC interconnect reliab. 115991
3D IC, deep-submicron interconnect and syst.-on-a-chip 81480
3D IC technol. 104029
3D ICs, thermal anal., num. modeling 126943
3D integrat., stochastic 3D interconnect model, perform. charactn. 81461
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
3D multilayer CPW struct. with wideband vert. interconnection, modelling 125793
3D voids simul. in chip metallization structs., reliab. eval. 126429
A²BC, adaptive address bus coding for low power deep sub-micron designs 126988
ADC modelling & testing, state-of-the-art review 114839
adiabatic CMOS switching ccts., two-phase power-clock supply *(Chinese)* 104087
adjacent interconnect lines, deep submicron technols., crosstalk eval., inductive effects 126935
analog IC optim., fuzzy perform. model of mismatch 101731
Analog Insydes, symbolic modeling and anal. of analog ICs 90707
analog/mixed-sig. IP modeling for design reuse, SoC appl. 80114
analogue IC small-sig. modeling, behavioral sig. path modeling 125212
analogue IC small-sig. modeling, elementary transistor stages, behavioral sig. path 125213
analogue IC SPICE anal., novel MOSFET model implement. 103845
APLAC Design Suite for RFIC mixer design simul. 91372
asynchronous RISC proc., FPGA-based rapid prototyping 102206
ATM ring MAC protocol, hardware modeling/verification 74493
backward propagated capacitance model for VLSI RTL power estim. 114676
barrier-metal systs., metal ion reservoirs, IC low current dens. lines 81120
behavioral models for VLSI chips, verif. using seq. sampling tech. 101953
behavioural modeling for timing, noise, and sig. integrity anal. 104077
behavioural modeling of analogue and mixed-sig. ICs 114571

integrated circuit modelling continued
BGA IC packages, elec. anal., equiv. cct. models 113733
BGA/CSP connection durability during thermal shock, finite element modelin 100598
bipolar log domain filters in std. CMOS proc., SPICE compatible model 8007
BJT RF LNA/mixer ICs, spurious free dyn. range perform. anal. 69236
bus-based prog. SoCs, IP cores, self-test methodology 101920
cct.-aware on-chip inductance extraction 104075
cct.-level layout-specific interconnect reliab. assess. 92144
CFD, PBGA, compact model topologies 113548
charact. params. of normal distrib., determ. method *(English)* 81443
chip scale BGA traces, self/mutual-inductance modeling, conductive die attac influence 124377
chip-level thermal anal. algm., BEM *(English)* 104033
CMOS, 0.18 μm with deep n-well implant., RF perform. improve. 125744
CMOS, eight-level metal low-k intermetal dielec., ESD protection, grounded-u bond pads 81522
CMOS analogue functional elements, large-sig. anal., Fourier-series approxs 90706
CMOS analogue ICs, low-power design 116021
CMOS cct., simultaneous switching noise, IBIS model *(Chinese)* 92471
CMOS CDM ESD phenom., mixed-mode transient anal. *(Korean)* 116026
CMOS current comparator cct., high-perform. *(Chinese)* 104086
CMOS current comparator design, fully differential, LV/power, high spee 70304
CMOS current steering DAC design, stat. methodology 102290
CMOS current-mode multiport SRAM, read and write operations, energy reduc tion 125482
CMOS current-steering D/A converters, stat. yield model 125581
CMOS device/cct. ultra-thin oxide reliab., phys./predictive models 81525
CMOS devices, ultrathin oxide reliab., phys. and predictive models 116023
CMOS devices and ccts., vel. overshoot, phys. compact model 104135
CMOS differential cascade voltage switch logic ccts., delay optim./energy estim 68752
CMOS digital ICs for spacecraft appls., radiation effects, case study 133236
CMOS digital VLSI cct. fault detect., gate orient. effects 70305
CMOS digital/analog technol., 0.18 μm, SPICE stat. anal. during proc. develop 104123
CMOS dual V_T domino logic, noise constrained power optim. 102031
CMOS gates, cycle-true leakage current modeling, leakage power estim. 10211
CMOS gates, RC interconnect loads, π-model, propag. delay 90820
CMOS hot-carrier-induced cct. degrad., long run reliab. problems 81510
CMOS interconnect model, DOE and multiobjective optim. 104061
CMOS inverter, perform., ionising radiation effects, model 92472
CMOS inverter, vel. saturation, delay model *(Chinese)* 92463
CMOS latches, simulator to study metastability 101937
CMOS logic ccts., path balancing algm. for glitch power reduction 90856
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS low-noise logic cells, substr. noise, resistive substr. model 102070
CMOS microsensors, parasitic behaviors charactn. 127122
CMOS microwave oscillators on SOI substrs., design and fab. 125746
CMOS on-chip inductance effect on sig. nets under influence of power grid nois 81503
CMOS PLL jitter-induced power/ground noise design perspective 125268
CMOS readout ccts. for monolithic IR thermoelec. sens., model./charactr 120703
CMOS RF ccts., effects of gate resist. on perform. 69177
CMOS scaling, optimum gate oxide thickness, cct.-level perspective 92470
CMOS systs., ground interconnection networks, max. simultaneous switchin noise 70298
CMOS technol. interconnect perform. metric, stochastic wiring distrib. mode 125279
CMOS transimpedance MMIC amp. design, BSIM large-sig. model, opt. con mun. appl. 91339
CMOS ultrathin oxide reliab., stat. breakdown meas., data interp. 116025
CMOS VLSI cct., leakage power minimization 104010
complementary pass-transistor logic ccts., fault characterisation 102005
cond. modes basis fns. for efficient EM anal. of on-chip/off-chip interconne 126961
conf., SOI devices, modelling/charactn., Grenada, Spain, (Oct. 2000) 100372
connection design, Maxwell eqns. *(Italian)* 81478
contact-substr. coupling, fast parametric model 104043
coplanar mm-wave MMIC design, technol. problems 125813
coupled RC tree networks, moment matching based model for crosstalk estim 81456
CSP proc. with reworkable underfills for mobile phone appls. 113708
current division network, 10-bit, stat. design, MOSIS 2-μm proc. 125582
datapath layout, placement refinement *(English)* 81486
DC integrat. level anal. of low-Vdd CMOS cct. using worst-case noise margi map 127055
DC/RF tunnel diode model, appl. to simulate HITFETs and quantum-MMIC 125735
DECT ASIC, RF interface design, mixed mode methodology 102423
deep submicron CMOS device charact. prediction using inverse modeling techs 127054
deep submicron CMOS structs., gate output transit. time modeling 102107
deep submicron crosstalk simul., freq.-depend. charact. 92456
deep submicron design, state of art and trends in parasitic extraction 104069
deep submicron IC design, parasitic extraction 81483
deep submicron IC interconnects, crosstalk and delay estim., switching cond tions 70270
deep submicron procs., crosstalk noise eval. model 81454
deep submicron technol., coupled RC trees, moment matching method 81438
deep submicron verification tools, crosstalk noise modeling 81439
deep-submicron CMOSFETs mismatch, phys. based model for Monte Carl SPICE simul. 104137
defect level estim. and model accounting for fault clustering effect 104044
design, EM emission modelling, syst. anal. 81436
design, nonuniform chip-temp. depend. sig. integrity 126964
digital CMOS ccts., gate-level simul. using IDDM model 101986
digital CMOS IC interconnect, RLC macromodels 101948
digital IC port behavioral models, meas. transient waveforms 114675
digital PD-SOI ccts., body-voltage estim., transistor-level static timing ana engine 79753
dispersive multiconductor transm. line-based discrete interconnect model 8142
distributed clock systs., substr. noise anal. 68888
distributed interconnect networks, transm. line model based anal./simul. 9065
DRAM cell capacitor with multiple-level interconnects, modeling and simu 114743

grated circuit modelling continued
DRAM struct., stacked, parasitic capacitance from multilevel conductors, num. method 114742
dyn. thermal modelling of semicond. packages, variable angle model basis 78665
EEPROM floating gate cell, charge sheet model 102171
EEPROM prog., time and degrad. aspects, tunnel oxide 102173
EEPROM technol. charge pump ccts., power consumption modelling 102148
EM interconnect modeling, CAD approach, HF effects 70274
embedded DRAMs, memory cell array opens and shorts, static/dyn. behavior 79876
embedded high Q-inductors in MCM-L technol., design and modelling 102685
embedded systs., memory hierarchy, energy dissipation anal., DCT 102169
ESD protection design, test models, failure mechanisms 104008
ESD protection device issues for IC designs, modeling methods 104073
fast coupling aware delay estim. scheme based on interconnect cct. model 79729
ferroelec. capacitors, HF C-V charact. model 90912
ferroelec. memory cell, single transistor/two capacitor-type, fab./charactn. 90911
field penetration through planes in multilayered packages, modelling 89879
finite difference formulation, IC interconnect simul. and modelling 92453
flash EEPROMs, thin oxide, anom. cell cond. mechanism 79894
flash memory disturbances, modeling and test 102135
flash memory read disturb reliab., appl.-specific usage model 79898
flexible nanospring interconnects, high-perform. probing, coupled thermal-elec. model 113626
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip-chip assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
floating gate neuron MOS cct. perform. improvement by low temp. operation 70299
floating gate NVMs, low temp. data retention, reliab. methodology 79897
floating-gate MOSFET voltage comparator, hysteresis tunable 104103
floorplanning algm., yield enhancement 81466
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
formal verification effects on quality in IP design and implement. 79724
GAME, mismatch modeling and simul. in analogue IC design 125214
gate oxides, very thin, trap generation/breakdown procs. 69761
Gekko PowerPC µP, timing convergence, synthesis tools and phys. design 79932
global driver sizing tool, crosstalk noise 81457
HDI multilayers, low cost, using power mesh archit. 100599
HEMT broad band refl. type 180° phase shifter with series and parallel LC ccts. 80374
HEMT MMIC RF yield forecasting methods 69233
HEMT modulator driver IC, device model params. *(Chinese)* 103914
HF IC, 3D planar conducting struct., lossy Si substr. 103991
high speed IC device perform. improvement using E-tests and SPICE model 79936
high-dens. electronic packaging, SPICE models, coupled interconnections 89885
high-speed coupled interconnections, multiconductor transm. lines, reduced-order models 81420
high-speed digital ICs, sig. integrity, MOSFET modeling, LE-FDTD method 90835
high-speed interconnection, scale reduction, DCM macromodel *(Chinese)* 92449
HRM, hierarchical simulator for full-chip power network reliab. anal. 79734
HV and power ICs, mixed-mode simul. *(Chinese)* 92480
IC packaging, wafer surface profile impact 67612
ICs, HBM ESD testing, contact reliab. 127001
inductance extraction via windowing for simul. efficiency 79692
InPack wire sweep anal. software, PBGA/stacked CSP accuracy verification 124342
instruction-level power anal. model with data dependency, generic RISC proc. 114788
inter- and intra-chip MOSFET perform. vars., test cct. based extract. for analog-design reliab. 104139
interconnect energy model considering coupling effects 126985
interconnect param. var., technol. scaling impact on clock skew & delay 126939
interconnect technol. for ≤100 nm scaling, impact on key chip metrics 69941
interconnect trees for electromigration reliab. estim. 92174
interconnect-driven short-cct. power modeling 126965
interconnects, EM anal., FDTD method 92457
interconnects, line params. 70285
inverter, RLC load, short-cct. power anal. 102102
JouleTrack Web-based tool for software energy profiling, µP appls. 125548
Ka-band 3-stage power amp., power PHEMT proc., 6W peak output 91309
large digital ccts., multiple supply domains, substr. noise generation, high-level simul. 79687
large on-chip VLSI interconnect grids, power simul., model reduction 92454
large-scale analog networks, regularity-based hierarchical symbolic anal. method 79542
large-scale mag. coupling modelling for on-chip interconnect 126979
layout, wire packing, integer prog. 70257
LC based on-chip VCO, power supply induced jitter modelling 68635
lead-frame plastic CSPs, modeling for predict. of low-pass filter effects on RFICs 91336
leadframe plastic CSPs for RFICs in wireless appls., elec. models 113505
lin. FETs, full-wave modeling, MM wave appls. 102709
logarithmic adder optimal struct. with fanout of two for minimizing area-delay product 90849
logarithmic CMOS sens., nonlin. illum. depend., model, calib. 120893
lossy multiconductor transm. lines, pass. macromodels, multiport distributed interconnects 124365
low power CMOS VLSI design methods 104094
low-k thick film dielec., simul. model 69335
LSI cct., multi-conductor transm. line, steady-state anal. 92455
LSI yield anal. based on crit. area model *(Japanese)* 116003
(M)MIC-struct., fast spectral domain integral eqn. techs. 91306
MCM component placement, optimal, fuzzy thermal modeling 115233
MCM yield/cost trade-offs with KGD probab./repair 69376
MESFET and HEMT microwave devices and MMICs, electrothermal model 80289
mesoscopic elec. ccts., commutation rels., Coulomb blockade 70222
metal contacts, rf precleaning, aspect ratio depend. plasma-induced charging damage 103315
metal interconnection, ESD/EOS protection cct. and I/O buffer 126505
metallic interconnect thin films, elec. failure procs. 126433
mfg. vars., modeling and anal. 104074
microelectronic solders, diffusional coarsening modelling 113713

integrated circuit modelling continued
miniaturized interconnects, creep/contact opening electromigration failures 92104
MIS interconnects, device level equiv. cct. modelling 92447
mixed sig. DFT/BIST automation using behavioral modeling 68952
mixed-sig. IC substr. coupling parasitic extraction, RF/microwave spiral inductors 68957
mixed-sig. ICs, on-chip interconnects, orthogonal gridded shield, transm. charcts. 91118
mixed-sig. IP blocks, DFM charcts. and optimisation 104138
MLC IC-BGA device reliab. 78642
MMIC, 3D design, FDTD model 102666
MMIC, high-speed HF analog RF cct. 102664
MMIC, large-sig. charact., nonlin. stat. model 102716
MMIC interconnect, differential via, CAD model 101667
monolithic lumped planar transformers, modelling up to 20 GHz 114996
MOS analog design, reuse procedure, scalable model rules 125211
MOS floating gate neuron cct., low temp. DC charact. 68984
MOS high-dens. DRAM cell with built-in gain stage 68807
MOS silicide form. effects on resist. of common source/drain region 126483
MOSFET LF noise meas. for mixed-sig. LSI & SoC, noise model *(Japanese)* 81512
multi-level pass. order reduction of interconnect networks 92460
multicarrier complex lowpass models of RF transceiver ICs, nonlin. behavior 80385
multichip/multisubstrate module, thermal simul., multilevel model *(Chinese)* 91518
multiconductor interconnects, freq.-depend. losses, transm.-line models 126969
multilevel interconnect struct., interlevel coupling noise model, Markov chain 126938
multilevel ULSI interconnects, thermal model incorp. via effect 126937
multiple segmented coupled RC interconnects of VLSI ccts., noise model 81455
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismatch charactn. 104125
µP package, core and I/O power delivery, integrated model 114790
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
nanometer technol., interconnect energy dissipation, minimization tech. 126990
non-quasistatic CMOS RF-models 102738
non-uniform substr. temp. effect on clock sig. integrity in high perform. IC designs 101991
nonlin. dyn. analog ccts., symbolic behavioral model generation, term ordering 90708
nonuniform temp.-depend. interconnect perform. anal. in high perform. ICs 126962
on-chip clock wire inductance, fast bounds estim. tech. 101992
on-chip global interconnect struct., min/max inductance approxs. 126980
on-chip inductance in high-speed VLSI ccts., high-perform. design issues 116017
on-chip interconnections, model anal. of transients 103457
on-chip interconnections in integrated Josephson jn. logic schemes 114722
on-wafer open-short-load-thru calib. stds., ANN modeling 75842
optimum on-chip power distrib. networks for GSI 126940
optimum voltage swing on on-chip/off-chip interconnect 92437
optoelectronic systs. opt. field modelling, FFT-based full diffr. method 105041
packaging thermal design, modelling approach 124371
partially depleted SOI CMOS technol., device design/modeling and cct. perspective 70309
partially-depleted SOI CMOS SRAM, gate-to-body tunneling current effects 127042
pass. MMICs and MIMICs, anal. using 3D method of moments 91393
passivated metal interconnects, thermal stresses, anal. model 115681
PHEMT LF noise model, appl. to MM-wave automotive radar chip set design 80311
phys. freq. depend. lumped model for RF integrated inductors 91333
pipeline ADC, behavioral model, MATLAB and SIMULINK appl. 68858
plasma/proc.-induced damage control, symposium overview 103976
PLL jitter caused by digital switching noise in mixed-mode cct., anal. 91117
polymer stud grid array, 72-pins, parametric compact thermal models 113697
polysilicon resistors, analog CMOS appls., LF noise current 68555
porous low-k ILD thin films, X-ray reflectivity/SANS, 3-phase model 92160
power-managed syst., stochastic modeling, dyn. mgt. policy 116004
power/ground network optim. based on equiv. cct. modeling 126984
prefix adders, deep-submicron technol., anal. wire delay model 102086
PROPHET, placement-depend. full chip thermal simul., functional blocks 126947
quasi-monolithic technol. for power microwave/mm-wave ICs, static thermal design 69234
raised cosine signaling crosstalk reduction for interconnect-limited bus 126936
resistor matching charactn. for mixed-sig. proc. develop. using DAC 102430
RF chip-to-substr. interconnect, wire bond parameterized model 113639
RF-CMOS, scaling impact on analog perform. 91377
RFIC, nonlin. high-speed cct., steady-state anal. 101696
RLCG interconnects, pass. model order reduction, moment components method 92458
S/390 µP chip, RLC coupled noise eval. 102254
semicond. packages, thermal modelling 113696
semicond. thermal meas. and mgt., conf., San Jose, CA, USA (March 2001) 78402
short-channel MOS transistor ccts., DC solns., nth power law model 70317
sig. strength based switching activity modeling and estim. for DSP appls. 114787
sigma-delta modulator, very LV, design methodology 79962
simultaneous switching noise in high-speed chip package, IBIS model *(Chinese)* 92450
simultaneous switching noise modelling, high speed systs., digital design 79656
SIPPs, std. interconnect proc. params., deep sub-micron ICs 104048
SISPAD '00, semicond. procs. and devices simul. conf., Seattle, WA, USA (Sept. 2000) 67374
smart-power ICs, parasitic minority carrier injection, substr. pot. shift, simul. 81535
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
SoC, substr. RC network model, substr. coupling noise, triple well CMOS 70297
SoC clock freq., on-chip & on-board interconnects partition 126941
SoC design with IP blocks, coherent functional, elec. and phys. modeling 114572
SoC device modelling for virtual test using VHDL 80115
SoCs, multi-million gate designs, hierarchical power network anal., power grid modeling 79735
SOI CMOS, self-heating free param. extract./cct. simul. 104140

integrated circuit modelling continued
SOI partially depleted MOSFETs, ULSI CMOS appl., LETISOI model anal. 103989
SOI substrs. with buried ground plane for substr. noise suppress., modeling 102691
solder bumps thermal fatigue in IC joints 78670
SPARC v.8 Integer Unit, proc. core design and synthesis 79945
SPICE simul., freq. warping/chaotic behaviour generation 90630
spiral inductors and transformers for RFICs, modelling 91355
spiral on-chip inductors and transformers, modeling 92435
SRAM parametric yield enhancement, cct. level device optim., stat. cct. simul. 125486
stopping criteria comparison, high quality behavioral verification 79723
stress tests, moisture-based failure modelling 126953
structural IC design comp. for C++ hardware models, layout struct. 90821
sub-qtr.-micron CMOS, ESD protection strategy, gate-driven vs. substr.-triggered design 127026
submicron IC layout, clock skew and time delay 101885
submicron layout, interconnect delay, stat. anal. 92442
substr. coupling, modeling methods *(Polish)* 70264
substr. noise, chip-level anal. with network reduct. by matrix comput. 81470
substr. noise, modelling and digital library creation 79746
substr. noise in ICs, anal., models and optim. 104047
substrs./heat sinks, thermal time consts. 124356
super BGA, wideband model for high speed digital ccts. 89860
super-BGA package reliab., underfill effects 67606
symmetric inductors fab. in CMOS technol., T cct. topol. for broadband modelling 91354
symmetric inductors in CMOS technol., T cct. topol. for broadband modelling 91314
syst.-on-a-chip, gigascale, integrated global interconnect archit. 69947
syst.-on-a-chip design methodology/products using flexible interconnect archit. approach 70273
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
thin-film interconnects, electromigration modeling, void nucleation 92103
thin-film interconnects, grain boundary crack growth 103491
timing sign-off re-engng., IC design 92444
transient 3D heat flow anal., TLM quad tree mesh 115993
transistor emitter current edge-crowding-effect, precise and approx. solns., SPICE simul. *(Chinese)* 81177
transm. line delay model, wire/buffer sizing, perform. optim. 128816
ultra-low k ILD materials for use in ULSI BEOL struct., mech. integrity 92431
variable threshold voltage CMOS, optimum device param., scalability 81501
VDSM IC, full-chip reliab. simul. 126999
VeriBox CBT syst. for chip design, logic synthesis, multimedia techs. 124257
very deep submicron IC designs, current source cell model for delay calc. 79733
VHDL interconnections analog macromodels, timing behavior, event-driven simulators 101883
VHDL models of parallel nxn bit multiplication blocks, DSP appls. 102194
VHDL soft core based model of configurable microcomputer family 79934
VITAL, VHDL ASIC libraries, ASIC modeling spec. 127009
VLSI, high-speed interconnect, transient simul. *(Chinese)* 92448
VLSI, on-chip crosstalk eval. between adjacent interconnections 70269
VLSI cct., peak power dissipation, extreme order stats. 92441
VLSI cct. substr. coupling modeling, semi-anal. quasi-static approach 70283
VLSI delay and crosstalk estim., lumped and distributed coupled RC trees, moment computation 81485
VLSI design, deep-submicron interconnects 81481
VLSI design, gate duplication complexity 104060
VLSI design, high-speed interconnects, num. simul. 81482
VLSI design, interconnect capacitance, param. extraction 81458
VLSI design, interconnect complexity modeling, Rent's rule 81465
VLSI design, interconnect inductance, param. extraction 81459
VLSI design, interconnect sizing and spacing, coupling capacitance 104059
VLSI design, interconnect-centric floorplanning, repeater block planning 70256
VLSI design, on-chip inductance, repeater insertion 81460
VLSI design, routing model 70255
VLSI distributed interconnects simul., freq. depend. params., Krylov-space techs. 92452
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optim. 125385
VLSI inductive crosstalk, differential signaling modelling, phys. synthesis tools 127011
VLSI interconnect model order reduction, bal. truncation realization algm. 104065
VLSI interconnects, nonuniform/coupled, characterisation using GA 69948
VLSI interconnects and electronic packages, elec. modeling and simul. 81484
VLSI layout spacing, simplex algm., graph theory 92443
VLSI on-chip interconnect, inductance effects, PEEC approach to cct. model 126978
VLSI on-chip interconnect modelling, full-wave PEEC time-domain method 81475
VLSI packet switching fabrics, low-power syst.-level design, perform. specs. 74496
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
VLSI technol., stat. many-dimens. simul., response surface methodology 67667
VLSI time-domain interconnect models, MIMO type selective orthogonal least-sq. method 124367
VLSI transm. line pass. modeling, differential quadrature method 81437
VLSI true worst case cct. timing perform., interconnect param. vars. 81468
wafer burn-in failures and local region yield, integrated field-reliab. model 104030
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
wideband scalable elec. model for microwave/MM wave flip chip interconnects 91374
wirebond triangle- and T-profiles, design, linkage-spring model 113534
worst-case IC interconnect delay noise, driver modeling and alignment 126987
yield modeling method for design rule trade-off in interconnection substrs. 81479
Al 1 μm line, fault localisation, thermal laser stimulation, 3D finite element ANSYS model anal. 127004
Al interconnects, stress-induced voiding in proc. qualification, quantitat. assess. 81133
Al via-void generation mechanism for Gbit-scale DRAM, anal. 79900
Al-Cu(Si) interconnects, electromigration damage, comp. effect 126434
Al-Cu(Si) metallic interconnects, electromigration modelling, percolative approach 92119
Al-based interconnect reliab., width transit. effects 92120

integrated circuit modelling continued
Cu interconnects, electromigration, confine. materials mech. props. effec 103459
Cu interconnects, sub-0.1 μm, fab./perform. limits 92168
Cu/low-k interconnects, deep-sub-μm, impact of vias on thermal charact. 12648
GaAs FET analog, RF and microwave ICs, CAD tool 80347
GaAs MESFET-like oscillator perform., num. study 125741
InP HBT VHSICs, opt. commun., prediction extraction modelling schem 104084
InP HEMT X-band/Ka-band amp. for Deep Space Network 115013
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 11499
Si CMOS spiral inductor, RF IC design, SPICE model *(Korean)* 81515
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buri diffusions 91391
Si integrated inductors in 0.18 μm CMOS technol. for MMIC/RFICs 125777
Si substr., IC interconnects, resist. and inductance 70279
Si substr. coupling noise modeling and expt. verif. for mixed-sig. IC desig 102419
a-Si:H pass. pixel sens. for med. imaging, VHDL-AMS modeling/simul. 10971
SiGe BiCMOS HBT, LF noise behaviour and phase noise perform. study 6919
SiO_2 ultra-thin gate films, leakage current through multiple breakdown path modeling 81530
SiO_2:F for ILD appls., low dielec. const. anal. 91921
Sn-Pb eutectic solder joints in microelectronics packaging, constitutive mod 113469
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvemen reservoir modeling 81132
TiN/Al/TiN/SiO_2 metallization, void-containing interconnects, local Joule hea ing 69933
solder-drop printing proc. for flip chip, liq. metal droplet spreading/solidi 80534

integrated circuit noise
0.18 μm ASIC MOSFETs, robust design using Taguchi method with TCA 126991
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 9244
3D tech. visualizations in VLSI design, full-wave interconnect anal., clock di trib. 125363
AB class low noise I-V integrated charge amp. *(Polish)* 90766
act. guard band cct., substr. noise suppression 80052
adaptive radar receivers, tunable recursive act. MMIC filters, intermodulatio props. 125802
adjacent interconnect lines, deep submicron technols., crosstalk eval., inductiv effects 126935
ADV719x family video encoders, oversampling, digital noise reduction 7338
APD output currents, transimpedance op amp *(German)* 101774
auto-zero amps., offset, drift and 1/f noise, design ideas 68607
behavioural modeling for timing, noise, and sig. integrity anal. 104077
BiCMOS double-bal. subharmonic mixer for direct conversion receivers, 1. GHz 91352
BiCMOS highly lin. down-conversion mixer with MCM pass. for GPS appl 69215
BiCMOS quadrature multi-phase LC oscillators, phase noise perform., quali factor 125821
BiCMOS VCO, 4.7 GHz, chip/MCM-D package co-design for HIPERLAN transceiver appl. 131087
bipolar LNA, 5.8 GHz, 1 V, overall noise fig., robust integrat. 102728
BJT RF LNA/mixer ICs. spurious free dyn. range perform. anal. 69236
cardiac pacemaker, sens. chain, CMOS micro-power low noise log-domain am 87894
CCD & CMOS low-light-level imagers, perform. comparison 75659
clock tree topol. extraction algm., clock distrib. network tolerance to delay unce tainty 102316
CMOS 0.18 μm technol., RF cct. perform. degrad. due to soft breakdown and h carrier stress 91337
CMOS 2.4 GHz four port mixer for direct conversion used in telemeteri 108094
CMOS act. pixel sens. imager design, high speed laser detect. 120892
CMOS and SiGe LNAs and mixers for WLAN appl., comparison 114998
CMOS based smart temp. sens. & voltage refs., sig. proc. 132085
CMOS cct., simultaneous switching noise, IBIS model *(Chinese)* 92471
CMOS chip, organic/ceramic packages, simultaneous switching noise 11366
CMOS chip output buffers, switching noise reduction, design tech. 104088
CMOS controlled slew-rate output driver, design and noise reduction 91003
CMOS deep submicron technol., noise props. 70310
CMOS digital VLSI design in SOI, cct.-level CAD tools 79728
CMOS double-bal. quadrature mixer 101865
CMOS dual V_T domino logic, noise constrained power optim. 102031
CMOS dyn. logic cct. testing based on charge sharing 102075
CMOS freq. synthesizer, charge pump, dual-path loop filter, PCS- and cellula CDMA 125817
CMOS fully-integrated differential VCO for 10 GHz band operation 102701
CMOS fully-monolithic LNA 68594
CMOS ground distrib. networks, max. simultan. switching noise expressi 114678
CMOS integrated Hall mag. sens., mag. flux concentrator 75475
CMOS inverter, series-voltage noise margin 102097
CMOS latches, simulator to study metastability 101937
CMOS LC VCOs, noise props., inductance selection, graphical optim. meth 69225
CMOS LNA, 2.4-GHz ISM band, noise fig., power dissipation 102704
CMOS LNA, differential amp., noise fig. 114638
CMOS LNA, source degeneration, image-rejection notch filter 101811
CMOS logic, tailoring for RF appls. 115026
CMOS low noise transconductor, low distort. HF fully differential design 689
CMOS low-jitter PLL with pseudo-differential delay elements based VC 68657
CMOS low-noise logic cells, substr. noise, resistive substr. model 102070
CMOS merged LNA/mixer for WCDMA, 2 GHz, phase noise 125815
CMOS MR head preamplifier design, disk drive read elements 68610
CMOS on-chip inductance effect on sig. nets under influence of power grid noi 81503
CMOS PLL, voltage regulator, DC-DC capacitive converter 114668
CMOS PLL-based freq. synthesizer, wireless commun. systs., 0.9, 1.8, 1.9 a 2.4 GHz 102706
CMOS proc. ported register file, leakage-tolerant, DC noise robustness 1255
CMOS readout ccts. for monolithic IR thermoelec. sens., model./charact 120703
CMOS RF cct., soft breakdown and hot carrier effect 104136
CMOS RF receiver front-end for Bluetooth appl., 1-V 2.4-GHz 102702

grated circuit noise continued
CMOS SC segmented DAC, clock jitter induced distortion 79993
CMOS simultaneous switching noise minimization using dual layer power line mutual inductors 127052
CMOS single-amp. pipeline ADC, 6 bit, W-CDMA receiver appl. 80003
CMOS skew-tolerant high-speed domino logic, noise and timing var. reduction 102030
CMOS switched-current 2nd-order bandpass ΣΔ modulator 102282
CMOS systs., ground interconnection networks, max. simultaneous switching noise *(Korean)* 116032
CMOS systs., ground interconnection networks, max. simultaneous switching noise 70298
CMOS technol. scaling for wireless commun. arena 115001
CMOS test vehicle, CBGA package, core switching noise 113669
CMOS transconductance cell, down-conversion mixer 101864
CMOS VCO, Bluetooth wireless transceivers appls., accumulation mode varactors, spiral inductors 102731
CMOS VCO, inductive varactor tuning 101838
CMOS VCO with inductive degeneration noise suppression, 2.2 GHz 102730
CMOS VLSI digital ccts., substr. noise generation, power-supply parasitic components 125302
CMOS VLSI low power/low swing bus design archits. 127051
CMOS voltage limiter/regulator design 68585
combinat. logic blocks, coupling and noise aware delay anal. 68748
concurrent IC/package/syst. design strategy 100585
continuous-time oversampling sigma-delta converters, clock jitter effect 79970
coupled RC tree networks, moment matching based model for crosstalk estim. 81456
cryogenic spaceborne CMOS testing and optim. 76812
current-feedback amps. vs. voltage op amp 68603
current-mode CMOS S/H IC, 1 V, 20 MS/s and 57 dB SNR 125632
data bus, differential signaling, sig. path no. 68885
DC integrat. level anal. of low-Vdd CMOS cct. using worst-case noise margin map 127055
decade wide bandwidth integrated LNA, 0.4-8 GHz, act. antenna appl. 125784
deep submicrometer technols., crosstalk estim., coupling capacitances 81474
deep submicron designs, power supply noise estim., vector generation 70287
deep submicron procs., crosstalk noise eval. model 81454
deep submicron verification tools, crosstalk noise modeling 81439
delta-sigma ADC, ultra-low noise chopper-stabilized prog. gain instrum. amp. 90976
digital CMOS ccts., crosstalk noise, simul. results 79688
digital VLSI ccts., static timing anal. incl. power supply noise effect on propag. delay 125356
distributed clock systs., substr. noise anal. 68888
domino logic design, crosstalk noise minimization 102089
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
fast digital double relax. oscill. SQUID design 68887
filter bank ADC, quantization noise 90964
flip-chip multi-mode, multi-band VCO IC using low cost BiCMOS proc. 91329
floating-gate CMOS differential analog inverter for ultra LV appls. 81516
FM-CW autonomous cruise control radar MMICs, simul. of noise spectra distortion 86239
foundry RF CMOS technol., 0.18 μm, 70 GHz F_t for single chip syst. solns. 102689
Gilbert downconversion mixer, 2.4 GHz for W-CDMA appl., noise perform. optim. 102712
global driver sizing tool, crosstalk noise 81457
Hall effect-based CMOS mag. microsystem design 75507
HBT MMIC VCO, phase noise 102667
HEMT AGC transimpedance amp., low noise, wide input, 10-Gb/s opt. commun. systs. 125239
high quality analog CMOS and mixed sig. LSI design 81507
high-perform. CPU designs, step power reduction, instruction prediction 79933
interconnect coupling, crosstalk noise, aggressor alignment 70252
interconnect design, simultaneous shield insertion/net ordering, explicit RLC noise constraint 126975
IR FPAs, readout tech. for on-chip compensation of dark current 97363
J-CDMA/AMPS appl. IF-baseband CMOS receiver, 110-MHz 108833
Ka band power pHEMT technol. for space power flip-chip assembly 102693
Ka-band low noise down converter for space appls., PHEMT MMIC implement. 125798
Ka-band temp. compensated ring resonator VCO, adjust. using laser trimming 102719
Ku-band freq.-tunable LNA using variable-capacitance elements/neg. feedback ccts. *(Japanese)* 69241
large digital ccts., multiple supply domains, substr. noise generation, high-level simul. 79687
layout, wire packing, integer prog. 70257
LC all-pass network based quadrature generation in RFICs 80348
LC based on-chip VCO, power supply induced jitter modelling 68635
LF noise anal. of bipolar transistors and MOSFETs using complementary BiCMOS technol. 116043
lin. opt. link using radiation hard VCSELs for analogue front-end chip 76153
LNA in mixed-sig. cct. environ., effects of IC packaging on perform. 68948
LNAs, monolithic type up to 10 GHz in Si and SiGe bipolar technols. 125785
logarithmic CMOS sens., nonlin. illum. depend., model, calib. 120893
low power and noise radiation hard BiCMOS front-end readout syst. for capacit. detectors 110416
mag. RAM technol., GMR/tunneling magnetoresist.-based, status/future prospects 90907
mag.-coupled tuneable inductor for wideband VFOs, 1.4-2 GHz 91363
microwave act. bandpass filters, lin. and noise perform. optim. 69182
microwave background radiat. anisotropy, low noise cryogenic preamp. 75262
mismatch-shaped pipeline ADC, 12 bit, CMOS implement. 125575
mixed analog-digital systs., LV/current-mode gates 91120
mixed-sig. IC substr. coupling parasitic extraction, RF/microwave spiral inductors 68957
mixed-sig. ICs, substr. noise minimisation, substr. contacts placement 102425
MM-wave cryogenic IC, on-wafer testing 69230
MMIC off-the-shelf parts for next generation of space exploration 122529
MOS analogue neural networks, fault-tolerant training in presence of transistor mismatches 68988
MOS capacitor sensitive soft breakdown triggering, meas. syst. noise 104143
MOS resistive cct., MOSFET-C implement., bandwidth, noise, offset and nonlin. 102367
MOSFET LF noise meas. for mixed-sig. LSI & SoC, noise model *(Japanese)* 81512
multi-bit Σ-Δ modulator, noise-reducing loop *(Chinese)* 114845
multi-bit sigma-delta modulators, noise-reducing loop 79969

integrated circuit noise continued
multi-stage LNAs, source inductor value determ., Ka-band MMIC design appl. *(Japanese)* 91301
multilevel interconnect struct., interlevel coupling noise model, Markov chain 126938
multiple segmented coupled RC interconnects of VLSI ccts., noise model 81455
multiport differential microwave amps., noise matrix parameterization 125715
multiprocessor digital syst., low-power RF clock distrib. 114852
narrow-band photoreceivers, lightwave-microwave systs., photodiode intrinsic conductance 131381
NMOS capacitors, large area, soft breakdown triggers under const. voltage stress 81527
OTA CMOS design tech. for SC appls., low-power low-noise design 101786
output driver current slew rate, novel test cct. *(Chinese)* 127057
package, split power planes 113671
package power distrib. networks, modeling of field penetration through planes 89879
partially depleted SOI CMOS technol., device design/modeling and cct. perspective 70309
partially-depleted SOI CMOS Schmitt trigger ccts. with controllable hysteresis 125273
pass-transistor adiabatic logic adder, low-noise/low-power design 68751
peripheral I/O high quality ASICs, I/O cell placement, elec. checking methodology 81451
PHEMT LNA with integrated bypass switch, 0.05-6 GHz portable wireless appls. 80382
PHEMT MMIC amp. design, 1-3 GHz, for transmit/receive appls. 102663
PHEMT MMIC VCO, phase noise, LMDS appls. 102672
PLL freq. synthesizer in 0.8 μm Si bipolar prod. technol., 6.7 GHz 91320
PLL jitter caused by digital switching noise in mixed-mode cct., anal. 91117
polysilicon resistors, analog CMOS appls., LF noise current 68555
quadrature LC-VCO, low power/phase noise differential tuned 96498
raised cosine signaling crosstalk reduction for interconnect-limited bus 126936
RF-CMOS, scaling impact on analog perform. 91377
RFIC 2 GHz VCO with post-processed Cu inductors 115002
RFICs, ESD-induced cct. perform. degrad. 127000
routing, pseudopin assignment, crosstalk noise control 70251
S-band DC SQUID based amp., low noise 69242
S-band ultra LNA, series drain resistor load/lower reson. matching stubs *(Japanese)* 91302
S/390 μP chip, RLC coupled noise eval. 102254
SC S/H cct. for LF appl., low power dissipation 114904
sigma-delta modulators, CAA techs. 102292
simultaneous switching noise, computer simul. 113670
simultaneous switching noise in high-speed chip package, IBIS model *(Chinese)* 92450
simultaneous switching noise modelling, high speed systs., digital design 79656
sixth-order cascaded ΣΔ modulator, archit. comparison, CMOS implement. 102272
SoC, substr. RC network model, substr. coupling noise, triple well CMOS 70297
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
SOI substrs. with buried ground plane for substr. noise suppress., modeling 102691
static CMOS master-slave flip-flop expt. 68745
static nonlin. testing of D/A converters, bit intermodulations 114828
sub-70 nm dyn. domino MOS ccts., anal. techs. and scaling trends 125455
substr. noise, chip-level anal. with network reduct. by matrix comput. 81470
substr. noise, modelling and digital library creation 79746
substr. noise in ICs, anal., models and optim. 104047
successive approx. ADC, metastability errors influ. on SNR 102267
switched-current S/H cct. for LF appl., 0.6 μm, simul. & perform. 80133
switched-MOSFET tech. for prog. filters operating at low-volt. supply 80070
time-interleaved ADC systs., channel lin. mismatch effects 79984
ULSI ccts., distributed LRC power grid, core switching noise modelling 92445
ULSI interconnect scaling and parasitics, crosstalk noise, opt./RF interconnects 81123
ultra deep submicron ICs, power supply noise reduction, optimized distributed capacitors 70263
ultra thin oxides, soft breakdown detect., noise-based trigger algm., accurate/robust 81531
ultra-thin gate oxide soft breakdown, plasma proc. induced damage correl. 103426
ultrahigh bandwidth photonic A/D converters, highly lin. photoreceiver design 80011
uncooled microbolometer FPA, on-chip low-noise ROIC archit. 109631
VLSI, on-chip crosstalk eval. between adjacent interconnections 70269
VLSI, optimum design of power and ground topol. subj. to reliab. and noise constraints *(Chinese)* 81487
VLSI cct. substr. coupling modeling, semi-anal. quasi-static approach 70283
VLSI design, deep-submicron interconnects 81481
VLSI inductive crosstalk, differential signaling modelling, phys. synthesis tools 127011
worst-case IC interconnect delay noise, driver modeling and alignment 126987
$BaSrTiO_3$ ferroelec. tunable pre-select filter/LNA hybrid cct., perform. 91362
Fe-Al-O mag. granular film, HF noise suppression 127396
GaAs 3D on-chip inductors, fab., perform. and PHEMT LNA appl. 80370
GaAs MESFET amp., large-sig. behavior 102726
GaAs MMIC LO, LMDS radio link 125764
GaAs PHEMT Ka-band monolithic ccts. for transceiver appls. 69208
GaAs PHEMT MMIC requirements for satellite based commun. 115012
GaAs microwave FET LNAs, portable radio commun. equipt., dyn. range estim. 102699
GaInP/GaAs HBT MMIC oscillator, phase noise 102670
InGaAs metamorphic HEMT technol. for mm-wave low noise/power appls., high perform. 69168
InGaAs/AlGaAs PHEMT proc. for X-band power amp. and LNA MMICs 125804
InGaAs-AlGaAs-GaAs HEMT MMIC prod. proc., 0.1 μm, for commercial Ka-band LNAs 69245
InGaP emitter HBT variable-gain LNA, 2 GHz mobile phone appl. 80381
InGaP emitter HBT, variable-gain LNA, mobile phone 90756
InP HEMT LNA MMICs, Ka- and V-band designs in CPW technol. 80329
InP HEMT MMIC amps., 85-115 GHz, ultra-low-noise design 69178
InP HEMT MMIC requirements for satellite based commun. 115012
InP MMIC technol. LNA module, 183-GHz conical-scanning microwave imager sounder 102697
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 114992
Si MMIC BiCMOS LNA chip sets, high-lin. for base station appls. 69180

integrated circuit noise continued
Si RFICs, deep trench guard technol. to suppress coupling between inductors 102690
Si bipolar LNA for WLAN appls., 5.8 GHz, design and perform. 114994
Si bipolar monolithic RF bal. down conversion mixers, noise anal. 69216
Si bipolar technol., monolithic LNA 91378
Si bipolar transimpedance preamplifier, opt. receiver front-end 101809
Si integrated inductors in 0.18 µm CMOS technol. for MMIC/RFICs 125777
Si microelectrodes with on-chip electronics, preamp. noise perform. 87379
Si radiation detectors, leakage current, low-power CMOS SOI readout front-end 110390
Si substr. coupling noise modeling and expt. verif. for mixed-sig. IC design 102419
Si/SiGe HBT ICs with low cost in 15 to 20 GHz range 80357
Si/SiGe HBT low-cost Ku to Ka band MMICs using commercial HBT proc. 69197
Si/SiGe bipolar technol. based act. mixer, 30 GHz, fab. and perform. 69198
Si-SiGe HBT push-push oscillator for 58 GHz in hybrid microstrip tech. 80338
SiGe BiCMOS HBT, LF noise behaviour and phase noise perform. study 69196
SiGe BiCMOS proc. 12-GHz quadrature LC-VCO, fully-differential oscillator 125822
SiGe BiCMOS switched-LNA, 800-900 MHz, wide dyn. range design 80379
SiGe HBT amp., 900 MHz, variable gain with low noise fig. 80356
SiGe HBT lin. LNA with dual bias feed cct., 2 GHz band design 80380
SiGe HBT monolithic wideband amp., 15 GHz, 2.8 dB noise fig. 91356
SiGe bipolar technol., monolithic LNA 91378
SiGe bipolar universal dual band LNA implement. for wireless appls. 91357
SiGe bipolar wideband amp., 15 GHz, 2.8 dB noise fig., design 91315
SiGe freq.-scalable bipolar RF front-end design, LNAs and act. mixers 69224
SiON-based CMOS, heavily NO nitrided, analog charact. for mixed analog/digital LSIs 127048
Ta_2O_5 gate dielec. CMOS devices, low freq. noise, reliab. 127058

integrated circuit packaging
see also chip scale packaging
2D inter-chip opt. interconnect, opt. I/O 93453
3D chip stack technol. 81408
3D chip stacking technol., ultra-fine-pitch interconnection 113523
3D EM anal. of package influence on IC perform. 69248
3D ICs, thermal anal., num. modeling 126943
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
3D MM-wave IC, MEMS packaging technol. 67557
3D mm-wave MMIC technol., BCB-based, low-loss pass. components 102692
3D module package, System Block Module 113524
3D stacked LSI struct., packaging technol. 113506
5.8 GHz OFDM commun., integrated transceiver module, multilayer packaging 108787
5IDT long. coupled wide-band bal. SAW filter, long. multi-mode resonator 92760
50 GHz broadband SMT package for microwave appls. 113629
850 nm 2D selectively oxidized VCSEL arrays, flip-chip integrat. 115224
advanced packages, failure anal. and reliab. testing using ultrasound 78722
advanced semicond. devices, soft errors, radiation sources 115799
air humidity meas. inside electronic devices 87041
air-channel structs. for microfluidic, MEMS and microelectronic appls., fab. 113559
ALIVH any layer interstitial via hole substr., interconnection tech. 67562
ALIVH any-layer interstitial via hole interconnect substr., insulator material 67574
Alpha µP, α-particle induced soft error rates, historical trends 79953
area array devices, combined visual/X-ray inspection 113737
area array packages, solder bump shape prediction algms. 78607
area array packaging, high dens., high speed separable interconnect appl. study 124336
ASIC, flip-chip and wire bonded packages 113672
ATLAS pixel detector, indium bump technol., theory 97959
automated PLC-based book casing syst. 89862
automatic ribbon wire bonding technol. 102874
automotive PBGA assembly, board-level reliab. with SnAg Pb-free/SnPbAg solder interconnects 113572
back to back conductor backed CPW to microstrip transit. design 91317
back-to-back tape BGA packages, thermal perform. 113628
bare-die stacked modules with Cu through-vias, thermal charactn. 113627
BGA assembly failures, Ta capacitor induced 113571
BGA IC packages, elec. anal., equiv. cct. models 113733
BGA lead coplanarity, line-struct. laser scanning meas. syst. 67646
BGA package repair using MWIR systs., proc./rework cost control 89853
BGA packaging, mixed-sig. and digital ICs, radiative coupling 113519
BGA packaging, solder sphere quality considerations 124340
BGA packaging, ultravia substr. for high perform. 67593
BGA solder joint reliab., FEA assess. methodology, prediction accuracy 113580
BGA solder joint voiding, PCB surface pad finish/contamination impact 113712
BGA solder joint X-ray slicing using transm. X-ray systs./standalone software 113584
BGA substr. conducting path defects, AOI 100611
BGA wire bond integrity/package interfacial adhesion, plasma cleaning gas chem. effects 113568
BIAC liq. cryst. polymer film, high heat resist./dimens. stabil. 113710
BiCMOS capacitive press. sens., surface micromachined, for automotive appls. 78324
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
BiCMOS VCO, 4.7 GHz, chip/MCM-D package co-design for HIPERLAN-2 transceiver appl. 131087
biodegradable LSI packing materials *(Japanese)* 78725
bisphenol A epoxy/phenoxy resin encapsulant, thermosetting/thermoplastic combination 67581
Bluetooth module/single-chip device testing 74744
broadband 3D FDTD charactn. of multiple flip-chip interconnects 100589
bump-less interconnect, next generation syst. packaging 113657
C4 IC ultra-thinning, backside anal., first silicon debug 126931
camera module, flip-chip interconnection 120902
cavity down BGA/flip-chip-in-package encapsulation procs. 113467
cell phone, LSI packaging, 3D lamination layer *(Japanese)* 113693
centrifugal semi-aq. cleaning proc. for high-dens. package substrs. 115183
ceramic BGA, 1 mm pitch, reliab., design/proc. effects 113569
ceramic BGA package, Pb-free solder alloy 113655
ceramic column grid array modules, mfg. proc. for high vol. prod. 78646
ceramic column grid array package rework proc., challenges/solns. 113575
ceramic column grid array packages, assembled/reworked, reliab./failure anal. 124334

integrated circuit packaging continued
chip cooling, micro heat pipe array, fab., charact. *(Korean)* 124324
CMOS cct. av./peak temps., modified high-level synthesis effects 116037
CMOS chip, organic/ceramic packages, simultaneous switching noise 113668
CMOS device mismatch, mech. stress impact 104122
CMOS digital ICs for spacecraft appls., radiation effects, case study 133236
CMOS DRAM interconnect line charact., underlayer geom. effect, S-parar 114756
CMOS IC pressed-ceramic package antenna for single-chip wireless transceiv 128868
CMOS integrated Hall mag. sens., mag. flux concentrator 75475
CMOS power amp., wireless SOP, LTCC pass. library 124374
CMOS test vehicle, CBGA package, core switching noise 113669
CMOS VLSI digital cct. low-power design 70302
CMOS-based microsens. fab. technol., packaging approaches 109802
COB glob top encapsulant curing, variable freq. microwave proc. 78641
COG bonding proc., Al/PI composite bumps appl., LCD driver chip packagin 78636
combustion CVD-based low-k dielec. thin-film technol. for HDI PCB appl 125904
compliant cantilevered spring interconnects for flip-chip packaging 113631
concurrent IC/package/syst. design strategy 100585
conducting polymers, microelectronics appls., review 81409
conductive adhesives for flip-chip appls., self-alignment capability 67604
conductive layers in LTCC ccts., assembly props. 78657
cooled CMOS systs., act. threshold compensation cct. 104110
D2BLP double dens. bottom leaded SDRAM stack package, develop. 113593
deformable membrane mirrors, microfab., packaging & testing 71380
delamination NDI, MM-wave inspection syst. 113764
design optimisation using 2D/3D EDA environ. 124344
die attach technol. in back-end proc. 69362
die bond inspection, SAM sig. deconvolution using wavelet transforms 10063
digital IC package, RF meas. of current and voltage distribs. 75840
dimpled BGA proc. develop. for space flight appls. 133229
dual stripline params. for multilayer PCB design 125650
dyn. thermal modelling of semicond. packages, variable angle model basi 78665
elec. conductive adhesives, low m.p. alloy incorporation, depletion/wettin 67600
electronic interconnects/packaging, material factors 69934
electronic packaging, graduate educational course 113315
electronically conductive filled adhesive joints, behaviour under cyclic loadin 67559
electronics DFT, concepts/methods/implement. techs. 125887
embedded pass. components for MCM technols. 125943
encapsulation, back-end proc. overview 78662
epoxy resins, molding cpds., CABGA packages 113724
epoxy underfill adhesion, flip-chip packaging 113483
epoxy underfill materials, titanate/zirconate coupling agent effects 67599
ESD damage risk minimization, polymer technol. options 100581
FCOB, FCOB, no-flow underfill materials, yield anal., proc. modeling 78667
FCOB assemblies with/without encapsulation, reliab. 78654
FCOB SMT assembly proc. trade-off cost anal. 115221
fine pitch gold ball bonding develop., response surface methodology optimisatio 91512
fine-pitch BGA board-level solder joint reliab. enhancement by package modifs 124335
flexible nanospring interconnects, high-perform. probing, coupled thermal-elec model 113626
flip chip array packages, transfer molding encapsulation 78643
flip chip assembly subcontracting, integrated turn-key capability 69369
flip chip assembly with reflow encapsulants 113564
flip chip attach, fluxless solder nonconductive paste tech. 125938
flip chip BGA underfill charactn. using rigid substr. 113562
flip chip bumped interconnects, emerging technols. 100609
flip chip design rule develop. for multiple sig. and ground bump configs. 69174
flip chip package with reflowable underfills, reliab. studies 113706
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
flip chip packaging, surface tension/adhesion 67597
flip chip packaging defect diagnosis using acoustic microimaging 78615
flip chip procs., reflowable underfill appl., design rules 113638
flip chip solder joints, fracture, isothermal cyclic shear, FEA 113689
flip chip technol. utilization in automotive electronics, perspective 124021
flip chip underfill encapsulant reliab. perform., filler settling effects 67579
flip chip underfill procs., rapid, for large to small flip chips 113704
flip chip underfill to passiv. material adhesion, environ. influence 67598
flip chip-in-package stud bump bonding proc., reduced proc. steps 80536
flip chip-on-flex OnePass proc. improvement for clean products 113561
flip chip-on-flex packaging, 80 µm pitch, attachment reliab. 67620
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip, thermal grease pump-out, accelerated reliab. testing 113475
flip-chip assembly syst. for prototyping/proc. investigs. 125939
flip-chip assembly with underfill, micromechanics-based interfacial stress anal./fracture 67583
flip-chip BGA package, solder bump, thermo-electromigration 113654
flip-chip BGA package, thermal interface material 113526
flip-chip BGA packages, reliab. studies, power cycling test 67550
flip-chip CPW W-band amp. MMICs, parasitic substr. modes suppress. 91311
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
flip-chip electronic packages, quantitat. strain anal. by phase-shifting moire interferometry 121232
flip-chip for space appls., bonding reliab. study 125792
flip-chip in leaded molded package 113658
flip-chip interconnect struct., pillar bump 113651
flip-chip interconnection, micro-ball wafer bumping 113653
flip-chip mfg., solder flux/underfill compatibility 69364
flip-chip mounting proc. develop., metallic joint using US wave energy 125936
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
flip-chip package, lead-free solder and under-bump metall. 113513
flip-chip packages, interfacial delamination near solder bumps/UBM 113547
flip-chip packaging, epoxy resin reworkable underfill, thermally degradable 67587
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
flip-chip underfill delamination mechanism/growth rate *(German, English)* 89865
flip-chip-on-ceramic substr., packaging proc. 67633
flip-chip/underfill reliab., no-clean assembly proc. conditions effects 67564

grated circuit packaging continued
floating MIM capacitors, charging damage 102781
FluxFill self-fluxing underfill product develop./pager product implement. 113705
fluxless wafer solder bump reflow proc. using carboxylic acids 69368
focused beam US transducers, microelectronic materials props. effects 133374
free-space micro-opt. intra-MCM interconnection module, fab./packaging tolerances 116771
Gb/s electroabsorption modulator, DFB laser integrat., long-haul opt. transm. systs. 74926
harsh environ. microelectronics/microsystems, research/develop. 132073
HDI, nano-spring array 78655
HDI BGA substrs., ultra-high dens., develop. 113587
HDI build-up PWB design tools, requirements 69300
HDI chip package substrs., dielec. materials 124370
HDI fab., laser proc. 124331
HDI flex ccts. with nonpermanent interconnect/termination technols. 124337
HDI flip chip-on-flex, base materials eval. 124359
HDI microelectronics packaging roadmap for space appls. 133228
HDI modular packaging for space electronics appls. 133234
HDI multilayers, low cost, using power mesh archit. 100599
HDI PCB, microvias reliab. assess., syst.-on-a-package 113680
HDI PCB foil lamination technol. 124369
HDI PCB mfg. technol. selection, board thickness prediction 113589
HDI PCB organic laminate substrs., microstructural anal. 113590
HDI PCB technol., influence on sig. integrity 124368
HDI PWB fab., imprint patterning technol. compatibility 125907
hermetic wafer bonding based on RTP, wafer-level MEMS packaging 103972
hermeticity assess. by electrolysis 67630
HF/high speed package interconnects, meta-evol. prog. based robust model param. extraction 126467
hierarchical IC test approach using boundary scan test 100556
high dens. stripline packages, via fence struct. for crosstalk reduct. 102682
high temp. bipolar IC for automotive appls., behaviour and reliab. *(Japanese)* 100301
high-dens. electronic packaging, SPICE models, coupled interconnections 89885
high-power appls., integrated power electronic building blocks 116046
Hiperprint interconnect technol. for printed subassemblies, high perform./low cost 67636
Hitachi divided bit-line microcontrollers with flash memory *(German)* 125559
hole plugging technol. for HDI circuitry/through-hole multilayer PWBs 125903
IC/MEMS packaging reliab. reliab. test methodologies, comparison 116054
intell. power electronics modules, embedded power packaging technol. 81534
interconnect technol. for ≤100 nm scaling, impact on key chip metrics 69941
interconnects, conf., Burlingame, CA, USA (June 2001) 124180
irregular shaped power distrib. planes, transm. matrix modelling method 89880
Irvine Sensors advanced vis./IR microcameras for dual-use appls. 109653
isotropically conductive adhesives as interconnect materials, flip-chip test vehicle 113688
Ka band transmitter modules for LMDS equipt. mass prod., BGA/LM packages 96387
Ka-band low noise down converter for space appls., PHEMT MMIC implement. 125798
laser direct-write of materials for microelectronics appls. 103979
laser micro welding in electronics, limitations and miniaturization pot. 91514
laser microchemical direct write deposition/etch methods, real-world appls. 103978
laser microchemical etching, MEMS inverse stereolithography/flip-chip de-bug appls. 81628
laser proc. for microelectronics packaging appls. 67551
LCC voltage-output reson. converters, state-variable modelling 101772
LCD driver LSI, COF technol., reel to reel method *(Japanese)* 121125
lead forming methods for IC packaging 100586
lead-free electronic joints, ternary intermetallic alloy kinetics and form. 113623
LeadFrameOnChip, power bus and bond-over-act.-cct. 124388
LGA/BGA packages, second level reliab. comparison 113581
liq. cooled LTCC substrs. for high power appls. 89857
liq. solder joint technol. for electronic assembly bonding *(German, English)* 89864
LNA in mixed-sig. cct. environ., effects of IC packaging on perform. 68948
low-power ASIC systs. design 115205
LTCC materials for high dens. multilayer interconnect 124378
LTCC microwave packages, vert. transits., LMDS appls. 100592
LTCC tape systs., chem./structural/mech. props. 79434
Mars rover microelectronics, die attachment for -120°C to +20°C thermal cycling 88075
MCM component placement, optimal, fuzzy thermal modeling 115233
MCM substr., embedded pass. filter, test method 113720
MCM-D packaging, wet etch stop resist eval. 69375
MCM-D thin film techs., integrated spiral inductor/coupler appls. 69220
MCM-D/L/BGA integrated package with embedded pass., satellite TV demonstrator 124364
MCM-L prototyping syst. tracking tool 125944
MCM-SL/D HDI substrs. using multilayer thin film technol. on laminate substrs. 124360
MEMS/electronics integrated technols., co-fab. proc. seqs. 81543
metal layer/ceramic substr. buckling driven interface delamination 113616
metallic interconnect films, cyclic temps., crawling 103971
mgt. talent eval. model using fuzzy AHP 124284
micro-BGA/chip/wafer test/burn-in, high-dens. sockets 124338
microelectronic component SAM inspection, freq. domain anal. 124393
microelectronic packaging thermal mgt., composites/materials develop. 67607
microelectronic solders, diffusional coarsening modelling 113713
microelectronics 3D design/packaging, EMC-oriented 126934
micromachined W-band pass. components for commun. appls. 69237
mil. phased-array radar IC package surface temp. gradients, convective film coeffs. 124380
miniaturized reliable space electronics, prod. commercialization 133232
mirror-imaged area array assemblies on SMT PCBs, rework proc. develop. 115168
MLC IC-BGA device reliab. 78642
mm-wave ICs, wave leakage, crosstalk and package effects 125811
MM-wave syst.-on-a-package, MCM integrat. 124375
MMICs for space programmes, status and packaging trends 69181
MOEMS device design flow 81592
µBGA packaging for high-perform. RDRAM/SDRAM appls. 125497
multi-chip syst. on silicon using thin-film technol., SoC assemblies *(German)* 67544
multichip ultra-thin 3D stacking technol. 91522
multilayer cylindrical electronic module, thermal anal. *(Chinese)* 113691
multilayer thin film MCM-D, CPW feedthroughs, design/charactn. 80540

integrated circuit packaging continued
multilayered electronic packaging, FEA, mesh sensitivity 113551
multilayered packages, modeling of field penetration through planes 89879
multilayered syst.-on-package, design against interfacial delamination 113614
multiple bondwires for MM-wave packaging, wideband charactn. 69210
µP, package capacitor, max. operating freq. 113479
µP chip-level packaging, syst. level view 68815
µP package, core and I/O power delivery, integrated model 114790
µP packages, thermal implications of increased device functionality 90958
nanometer design, dyn. power scaling trends, packaging problems 126971
nanoparticle liq. suspens., drop-on-demand dispensing for microelectronics manufacture 100613
nanospring interconnects for high-dens. appls. 67609
neo-Manhattan bump interconnection for B²IT build-up PWBs/area array IC package substrs. 113703
no-flow flip chip assembly, high throughput/low cost, underfill voiding, substr. design effects 69365
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill develop. for flip chip assembly *(English)* 89866
no-flow underfill encapsulant develop. formulation, epoxy resin combinations 67580
no-flow underfill material, eutectic and lead-free solders 113499
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
notebook computer cooling, integrated plate heat pipe with heat spreader 113541
notebook PC CPU cooling, packaged miniature heat pipe 79931
OEICs, yields, packaging aspects, CAD tools 93446
on-chip inductors, substr. losses, charactn. 102793
optoelectronic chip on film packaging, technol. and perform. 117028
PA-RISC µP package, design optim., elec. model 113478
package/board level interconnect design, empirical constraints 113692
packaging whole field displacement meas. tech. using speckle interferometry 113473
packaging/board warpage charactn., location/type/magnitude importance 124330
PBGA and QFN package bandwidths, high-speed broadband products 113728
PBGA on flex substr., board level reliab. 67622
PBGAs, lead-free assembly capability, moisture blocking planes and reflow perform. 113472
PCB, via filling, conductive adhesive materials 115162
PCB design level, EMI vs. IC package technol. 125873
PCB solder joint reliab., thermal expansion mismatch impact 115116
Pentium III Xeon proc. with L2 cache, cartridge thermal design/metrol. 114799
perform. design for 10 Gb/s systs. 67616
peripheral array package, delamination growth prediction, interfacial fracture toughness test 78635
peripheral array package, interfacial delamination propag., 2D/3D num. models 78634
PHEMT MMIC power module, Ka-band wireless commun. 125770
phosphor screen, cathodolum., field effect diode panel sealing proc. effects 75791
planar optics for proc./network appls. 128029
planar shielded microstrip ccts., rigorous charactn. of shielding effect 80352
planning at design stage, benefits 100579
plastic encapsulant, moisture induced delamination, coupling agent bonded interface degrad. 113716
plastic encapsulant material props., effects of temp. exposure above glass transit. 67566
plastic encapsulated microcircuit reliab., molded part props., stat. monitoring 67576
plastic IC encapsulation, 3D wire sweep meas. using X-ray CT instrum. *(Japanese)* 67639
plastic IC package warpage rel. to proc. conditions 113549
plastic packages, die stress drift meas. using piezo-Hall effect 67625
plastic SMT package moisture sensitivity perform., Pb-free reflow temp. effects 113574
plate-type heat sink effects on adjacent PCB interf., capacitive coupling 67555
polyimide passiv./epoxy underfill interface, water-assisted crack growth 89867
polymer stud grid array, 72-pins, parametric compact thermal models 113697
polymer-ceramic nanocomposites for MCM-L integral capacitors, colloidal proc. 69277
polynorbornene low-k dielec. material, photosensitive, for packaging appls. 67601
power semicond. package using combined module/discrete assembly 70324
PowerPC systs., prog. thermal mgt. interface cct. 114807
pre-bond IC plasma cleaning, wire bond pull strength enhancement 81077
probe pad structs. for MM-wave IC multi-module scheme at 76 GHz band 125791
probe/probe card design for chip/wafer/package/PCB level testing 124305
PROPHET, placement-depend. full chip thermal simul., functional blocks 126947
PWB, HDI and package substrs., halogen-free materials 91471
QMIT, quasi-monolithic integrat. technol., thermal stress simul. and meas. 113625
quasi-monolithic technol. for power microwave/mm-wave ICs, static thermal design 69234
radiation hardened SRAM for space appls. 133249
Rambus memory module, wafer level package, microwave model 113481
rect. IC package delamination, geom. effect, fracture mech. anal. 113615
reflowable underfill proc. modif. for flip-chip assembly develop. 113486
RF chip-to-substr. interconnect, wire bond parameterized model 113639
RF packaging for space appls., micropackage to SOP, syst. on a package 124320
RF-microwave multilayer integrated pass. using organic syst. on package technol. 102684
RFIC packaging technol. integrat., wireless telecomms. appls. 74577
RFICs, conf., Phoenix, AZ, USA (2001) 89526
ROBOCOTS program for robust COTS IC packaging 78645
scanning SQUID microscopy for current imaging of ICs 116001
semicond. mfg. lead frame, integrated CAD/CAM syst. 126918
semicond. packages, thermal modelling 113696
semicond. packaging assembly, case-based decision support model 113709
semicond. thermal meas. and mgt., conf., San Jose, CA, USA (March 2001) 78402
short-dist. opt. interconnections, hardware packaging issues 105036
sig. integrity, sig. return path and power delivery 113726
simultaneous switching noise, computer simul. 113670
simultaneous switching noise in high-speed chip package, IBIS model *(Chinese)* 92450
SimWitch software tool for materials stream cost distrib. assess., FLIPAC Esprit Project 67494
single level integrat. packaging, ultra high dens., HF 89870

integrated circuit packaging continued
single-insertion multiple-temp. IC testing 103983
SiP, syst.-in-a-package, RF blocks, WLAN appl. 89881
smart power IC, automotive electronics *(German)* 81539
smart PWM driver in SO-8 package for automotive solenoid controls 134601
Sn-Ag-Cu Pb-free solders for BGA appls., reliab./Au embrittlement 67571
SoC designs, thermal mgt. syst. and prototyping 70262
solder bumps thermal fatigue in IC joints 78670
solder column interposer ceramic grid array technol. for ACPI appls. 113578
solder droplet printing technol., high precision, principles/appls. 69366
solder joint reliab. testing, computer simul. 78661
SONET opt. receivers, opt. module assembly principle 113610
split power planes 113671
stacked thin dice packaging, small vol. 3D package, FEM 113507
stress tests, moisture-based failure modelling 126953
substrs./heat sinks, thermal time consts. 124356
super BGA, wideband model for high speed digital ccts. 89860
super-BGA package reliab., underfill effects 67606
surface mount LSI package, viscoelastic warpage anal. 78674
syst.-on-a-chip and syst.-on-a-package technols. 113521
syst.-on-a-package, high-dens. PWB substr., ultra-fine photoresist image form. 124382
syst.-on-a-package substr., proc. integrat. 113522
systs.-in-a-package technol. research at Interuniversity Microelectronics Center 67595
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
tape-and-reel packaging technol., improved perform./reliab./cost-efficiency 124362
TFSOI modular proc. for CMOS power devices/ICs 104098
thermal design, modelling approach 124371
thermal transients meas., hardware & software solns. 100605
thick-film multilayer MCM-C interconnection using diffusion patterning technol. 67645
timing anal. tool, intrinsic photon emission 127007
TSOP epoxy molding cpd. pellet wt. determ. rule 124341
UA-FWLIS full-wave layered-interconnect simulator for react. anal. in stripline ccts. 91375
ULSI ccts., distributed LRC power grid, core switching noise modelling 92445
ULSI plastic packaging, die cracking eval./improvement 100619
ultra-fine line HDI for syst.-on-a-package using photoimageable polymers, low cost 67573
ultra-thin FCOB assembly 115222
ultrathin IC packaging 113660
ultrathin wafer handling/probing 126260
under-bump metall. etching for wafer level packaging 100580
underfill encapsulant affected by flip chip assembly variables, adhesion 67578
underfill material, adhesion/reliab./reworkability study, free radical polymerization syst. 113636
underfill resin develop., flow microcalorimetry appl. 67610
vert. IC packaging for portable appls. 100601
VLSI interconnects and electronic packages, elec. modeling and simul. 81484
VLSI on-chip interconnect, inductance effects, PEEC approach to cct. model 126978
wafer bumping by solder paste printing, stencil design improvement 113560
wafer bumping technol. for cost-effective packaging 67618
wafer level packaging for 300 mm, photolithography requirements 100608
wafer level packaging for 300 mm, progress overview 100607
wafer level reliab./packaged electromigration tests, expt. comparison 81130
wafer proc. for 300 mm, mfg. equipt. sector challenges 103945
wafer solder bumping technols., overview 102875
wafer surface profile impact on IC packaging 67612
wafer-level batch packaging technol., elec. testing 113659
wafer-level packaging, technol./implement., education 124361
WASPP Program, passiv. develop. for packages in harsh environ. 77013
WAVE, wide area vert. expansion packaging proc. develop. 113508
wideband scalable elec. model for microwave/MM wave flip chip interconnects 91374
wire bond integrity, probe scrubbing damage effects 113682
wire bonding, robust bond model, proc. implement. 69372
wire bonding in back-end assembly proc., overview 69373
wirebond triangle- and T-profiles, design, linkage-spring model 113534
wirebonding proc. control, ASTM method F.459 revision 69370
Ag-W films, electroless prep., mech./elec./opt. props. 68388
AlN-filled underfill, high thermal cond., for flip-chip appls. 67565
AlSi-based metallisation in microelectronic devices, corros. inhib. 103488
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
Au ribbon bonding for IC interconnection, designed expt. for proc. eval. 80535
Au wire bonding to Ni/Pd plated leadframes 102877
Au-Sn pulse electrodeposited thin films, growth charactn. 125044
Au-Sn(Ag) micro-metal bonding technol., LSI package 113532
Cu BGA substr. etch treatment, solder mask adhesion 67575
Cu CMP film, RT direct bonding, bumpless interconnection 113630
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92116
Cu electroless deposition, Pt-Ag/Al_2O_3 substr., IC packaging 124325
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu/Ag thick film conductors on Al_2O_3 substrs. for power appls. 78658
Cu/SiLK interconnect, flip-chip package, interfacial adhesion 115678
CuNi substr. surface/Pb-free solder interacts. 113582
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packaging 125945
GaAs CPW MMIC, Si MEMS package 69189
GaAs RFICs in SOT-23 packages, failure anal. techs. for small plastic packages 125806
InP/Si CMOS hybrid integrated photoreceiver, alignment tolerant 120161
InP-based photoreceiver OEICs for 40 Gb/s TDM systs. 117045
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
Ni/Au electroless plating, flip-chip BGA, solder joint reliab. 113723
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567
Pb/halide-free green IC packaging 124363
Pb-free leadframe packages, plating chem. eval./reliab. 113700
Pb-free materials options for environ. friendly IC packaging 67682
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
Pb-free solder spheres for BGA appls., pad finishes, shear strength 113701
Si, 3D integrated wafers block, bumpless, wiring by through-hole interconnections 115670
Si high-dens. micromachined interconnects, single-mode microstrip propag 102694
Si micromachined pass. struct. for MMICs, hybrid integrat., packaging technol 115018
Si piezoresistive stress sens., packaging appls. 75427
Si wafer strength/surface morph. correl. 100593
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
SiGe HBT UHF power amps. in flip-chip and packaged technol. 91325
SiO_2-filled epoxy molding cpds., thermal stress anal. 114453
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag Pb-free solders for flip-chip interconnects 100596
Sn-Ag lead-free solders for flip-chip joints, thermal fatigue behavior 69374
Sn-Ag solder ball on effect on microstruct. of BGA joints with Au/Ni coated C pads 69330
Sn-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu lead-free solders for flip-chip joints, thermal fatigue behavior 6937
Sn-Ag-Cu solders in BGA packages, microstruct., joint strength and failure mechanism 113516
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls 100594
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls 100594
Sn-Ag-Cu-based Pb-free solder paste reflow for flip chip wafer bumping, proc window 69367
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Cu Pb-free microelectronic solder joints, Sn pest 100597
Sn-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Cu liq.-solid react. couples, η phase scallops/whiskers, growth 101467
Sn-Pb eutectic solder joints in microelectronics packaging, constitutive model 113469
Sn-Pb-Ag solders in BGA packages, microstruct., joint strength and failure mechanism 113516
TaN thin film resistors, on-chip wireless appls., mismatch/flicker noise charact 102765
$TiWN_x$, selective etching, electroplated Pb-Sn solder 113533
YBa_2Cu_3Ox supercond. transm. line, BER meas. 70890
no-flow underfill materials for eutectic/Pb-free solders, high melting temp 67586
solder-drop printing proc. for flip chip, liq. metal droplet spreading/solidif 80534

integrated circuit process simulation *see semiconductor process modelling*

integrated circuit reliability
see also integrated circuit yield
0.18-μm 3.5/6.8 nm dual gate oxide CMOS technol., effects of F on parametrics and reliab. 81506
0.18-μm salicide CMOS technol., ESD protection design, substr.-triggered tech 104114
1D continuum electromigration modeling for IC interconnect reliab. 115991
3D SOI integrat., interconnect archits., double-gate transistors 127067
3D voids simul. in chip metallization structs., reliab. eval. 126429
ABC-MT-CMOS DSP core, charge pump cct., standby current 125533
ADCs, transient fault sensitivity anal. 90993
adv. interconnect & low-k dielec., conf., San Francisco, USA (Apr. 2000) 89563
advanced semicond. devices, soft errors, radiation sources 115799
Alpha 21364 μP error handling syst., pre-silicon verification 125564
Alpha μP, α-particle induced soft error rates, historical trends 79953
analog CMOS ICs, HV stress test paradigms, gate-oxide reliab. enhancement 101737
area array packages, solder bump shape prediction algms. 78607
ASIC implant charging, photoresist bake, electron flood gun effect 115582
automotive hybrid IC proc. error reduction, microcontroller implement. 125918
barrier-metal systs., metal ion reservoirs, IC low current dens. lines 81120
BCB-SiO_2 low-k ILD interfaces, adhesion/subcritical debonding, fatigue effects 92140
BCD5 smart power technols., ESD protection struct. 127074
BCD, BCDMOS technol., gate oxide lifetime indicator, wafer level reliab. 104144
BGA packaging, solder sphere quality considerations 124340
BGA/CSP connection durability during thermal shock, finite element modeling 100598
BiCMOS prog. lin. mag. Hall sens. for automotive appls. 78325
bidirectional tunneling program/erase NOR-type 3D flash memory cell 79881
BISRAMGEN phys. design tool for BISR RAMs 68809
bitmap/TENCOR inspection data correl. for IC yield anal. 100624
bondpad peeling failure in wafer fab., AES/EDX studies 103949
bordered/borderless contacts, electromigration lifetime, misalignment 69932
buildup struct. CTE mismatch, reliab., thermal cycling, FEA 113679
cct.-level layout-specific interconnect reliab. assess. 92144
CD metrology meas., postetch layer, elec. beam treatment 104035
charact. params. of normal distrib., determ. method *(English)* 81443
chip cards and smart cards, ISO security std. *(German)* 80022
CMOS, eight-level metal low-k intermetal dielec., ESD protection, grounded-up bond pads 81522
CMOS antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
CMOS cct. av./peak temps., modified high-level synthesis effects 116037
CMOS CDM ESD phenom., mixed-mode transient anal. *(Korean)* 116026
CMOS device/cct. ultra-thin oxide reliab., phys./predictive models 81525
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol. 127020
CMOS devices, ultrathin oxide reliab., phys. and predictive models 116023
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
CMOS FPGA perform., surface channel PMOSFET degrad., plasma-induced damage effects 79857
CMOS FRAM with chain cell struct., fully planarized, 8 Mbit 125471
CMOS gate dielec. scaling limits 116034
CMOS gate oxide plasma proc. induced damage, transistor gate area depend. 104131
CMOS HF I/O interface ccts., design-for-ESD-reliab. 104113
CMOS high-k dielec. layers, gate insulator layer thickness, leakage currents, reliab. 127022
CMOS hot-carrier-induced cct. degrad., long run reliab. problems 81510
CMOS ICs, nanoscale technol., low temp. operation 116038
CMOS ICs, weak chips, MINVDD testing, min. supply voltage value 104116
CMOS image sens./IC products, prod. line cross-contamination study 104101

grated circuit reliability continued
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS parametric matching meas., high precision, transistor noise impact 104142
CMOS proc., 0.18 µm, $CoSi_2$ spike form. in act. contact salicidation 70293
CMOS product screening strategy for low failure rate 81524
CMOS reliab. margins, scaling-induced reductions, design-in reliab. efforts 81508
CMOS SDR/DDR DRAM, 4 Gb, high manufacturability/perform. 125468
CMOS SoC, 100 nm, multi-gate dielec. technol. using H pre-treatment 127044
CMOS technol., overvoltage/reverse voltage protection 70315
CMOS technol. scaling challenges for sub-0.1 µm generations 70303
CMOS ultrathin oxide reliab., stat. breakdown meas., data interp. 116025
CMOS VLSI digital cct. low-power design 70302
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
CMP slurry anal., particle meas. 103384
COB glob top encapsulant curing, variable freq. microwave proc. 78641
COG bonding proc., Al/PI composite bumps appl., LCD driver chip packaging 78636
complementary pass-transistor logic ccts., fault characterisation 102005
compliant cantilevered spring interconnects for flip-chip packaging 113631
concurrent IC/package/syst. design strategy 100585
cpd. semicond. devices and ICs, conf., Aegean Sea, Greece (May/June 2000) 78443
CSP assembly reliab., thermal cycling ramp rate effect 113681
CSP flexure-induced tensile stress effects charactn./minimization, empirical strategy 78644
CSP laser rework technol., energy source perform./proc. specific package reliab. 113605
CSP proc. with reworkable underfills for mobile phone appls. 113708
CSP reliab., elastomer thermo-mech. behavior effects 124384
Cu damascene interconnects, localized strain meas. by CBED 92172
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
D2BLP double dens. bottom leaded SDRAM stack package, develop. 113593
design, interconnection syst. *(Italian)* 92436
design/test, DFT tool/ATE platform cooperation 126997
deterministic scan-BIST archit. with appl. to field testing of high-availability systs. 101994
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633
dielec., microelectronics reliab., conf., Munich, Germany (Nov. 2000) 100403
digital CMOS robust transit. dens. estim., input/output transit. behavior 101983
direct-tunneling gate CMOS perform./reliab., wafer orient. depend. 127043
DRAM cell transistor jn. leakage, band to defect tunneling, off-state bias-temp. stress 79887
DRAM retention time distrib. prediction method 79888
dual GOI, STI proc. param. effects 81416
dual op amp, flip-chip fine package, 8-pin counts 114633
EEPROM prog., time and degrad. aspects, tunnel oxide 102173
electromigration, early failures, stat. anal. 92105
electronic interconnects/packaging, material factors 69934
embedded DRAM, low temp. capacitor technol., dielec. stack film 114772
EPLD, self-repairable, advanced self-repairing methodology 90886
epoxy/phenolic syst. underfill for FCOB appls., curing mechanism 67585
EPROM cell plasma damage, RIE chem. effects 102165
ESD damage risk minimization, polymer technol. options 100581
ESD protection device issues for IC designs, modeling methods 104073
ethylene glycol ether free solder paste for flip-chip appls. 113457
FCOB assemblies with/without encapsulation, reliab. 78654
FIB techs. for IC failure anal. appls. 70289
field-evolvable hardware based on flash memory-incorp. µP 90954
flash cell arrays, SILC charactn. tech. 79896
flash EEPROM, p-channel/n-channel, reliab. comparison 79895
flash memories, erratic bit anal. 79889
flash memory, 0.25 µm, data retention, plasma charging/mobile ion effects 102164
flash memory, body-effect-assisted NOR-type multilevel cct. 79870
flash memory device technols., review 90905
flash memory read disturb reliab., appl.-specific usage model 79898
flexible nanospring interconnects, high-perform. probing, coupled thermal-elec. model 113626
flip chip assembly and reliab. assess. via reflowable underfill 113637
flip chip assembly subcontracting, integrated turn-key capability 69369
flip chip BGA underfill charactn. using rigid substr. 113562
flip chip package with reflowable underfills, reliab. studies 113706
flip chip packaging, passiv. and solder mask, surface props. 113718
flip chip packaging, surface tension/adhesion 67597
flip chip procs., reflowable underfill appl., design rules 113638
flip chip solder bumps, electromigration failure, voids effects 92137
flip chip technol. utilization in automotive electronics, perspective 124021
flip chip under-bump metall. conversion to intermetallics, reliab. impact 67624
flip chip underfill encapsulant reliab. perform., filler settling effects 67579
flip chip-in-package, molded underfill material/proc. 113563
flip chip-on-flex packaging, 80 µm pitch, attachment reliab. 67620
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip BGA packages, reliab. studies, power cycling test 67550
flip-chip device no-flow underfill toughening, effect on fillet cracking 67603
flip-chip for space appls., bonding reliab. study 125792
flip-chip mfg., solder flux/underfill compatibility 69364
flip-chip mounting proc. develop., metallic joint using US wave energy 125936
flip-chip on organic BGA substr. carrier, assembly, eval. 125937
flip-chip packages, interfacial delamination near solder bumps/UBM 113547
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
flip-chip underfill delamination mechanism/growth rate *(German, English)* 89865
flip-chip-on-ceramic substr., packaging proc. 67633
flip-chip/CSP components on ceramic substrs., rapid power cycling 67621
flip-chip/underfill reliab., no-clean assembly proc. conditions effects 67564
floating gate NVMs, low temp. data retention, reliab. methodology 79897
FLOTOX EEPROM tunnel window form. proc. var. effects on reliab. 102142
fpBGA packages, fine pitch BGA, ball-shear strength 78676
FR-4 flip chip reliab., eutectic solder bumps, reduced proc. steps 89849
FRAM cct., nonvolatile memories, true and complement bitline, reliab. *(Italian)* 79880
FRAM retention anal. method based on memory cell read sig. voltage meas. 102162
FRAM retention testing, indiv. cell measuring method 79890

integrated circuit reliability continued
fuzzy nos. appl. 115817
gate oxide, ultra-thin, ESD protection device trigger transient effects on reliab. 70118
gate oxide damage in plasma proc., historical overview/future prospects 103423
gate oxide reliab., transistor-limited const. voltage stress test 126946
gate oxide TDDB lifetime prediction under direct tunneling regime, gate voltage depend. model 126223
gate oxides, 6.8/3.5 nm, plasma damage, param. shifts/hot-carrier response/dielec. integrity 69879
gate oxides, very thin, trap generation/breakdown procs. 69761
gate-level transistor perform. charactn. by ps imaging cct. anal. 104021
global fault localization using induced voltage alteration 115996
HBM ESD test equipt., contact reliab. 127001
HDI BGA substrs., ultra-high dens., develop. 113587
HDI microelectronics packaging roadmap for space appls. 133228
HDI PCB, microvias reliab. assess., syst.-on-a-package 113680
high dens. DRAM, bit line coupling scheme and elec. fuse cct. 125507
high dens. plasma fluorinated silicate glass deposition, plasma-induced charging damage 103232
high speed DRAMs, yield improvement, column redundancy scheme, multiple bit pre-fetch struct. 125511
high temp. bipolar IC for automotive appls., behaviour and reliab. *(Japanese)* 100301
high-k gate dielec. for CMOS devices, bond ionicity 100665
high-k gate dielec. for CMOS devices, future challenges 104130
high-κ gate dielec., CMOS appl. 70294
high-perform. CPU designs, step power reduction, instruction prediction 79933
high-speed aerospace PWM control chips under cryogenic temps. 133226
Hitachi divided bit-line microcontrollers with flash memory *(German)* 125559
hot-carrier reliab. simul. appl. to logic design 101996
HRM, hierarchical simulator for full-chip power network reliab. anal. 79734
IC/MEMS packaging reliab. reliab. test methodologies, comparison 116054
IC/semicond. device ESD testing, transm. line pulsing set-up 104083
ILD PECVD induced charging damage, IC yield/reliab. effects 101375
implantable stimulators, semi-custom CMOS vs. low-power microcontroller 76690
inter- and intra-chip MOSFET perform. vars., test cct. based extract. for analog-design reliab. 104139
interconnect proc. var. and timing anal., pico-second differences 126992
interconnect reliab., fast wafer-level defect detect. and control 103481
interconnect trees for electromigration reliab. estim. 92174
interconnects, conf., Burlingame, CA, USA (June 2001) 124180
inverse gate electrode flash technol., CMOS proc. compatible, for syst.-on-a chip 90906
inverse gate electrode flash technol., CMOS proc. compatible for SoC appl. 102180
isothermal electromigration test as proc. control methodology, case study 81129
isothermal wafer-level electromigration test for metal syst. reliab. monitoring 126473
isotropic conductive adhesive joints in flip-chip test vehicle, HF meas. 67584
joints, solder bumps thermal fatigue 78670
killer-defect control using reliable high throughput SEM-automatic defect class. 104019
layout-driven hot-carrier degrad. minimization using logic restructuring techs. 125343
lead free interfacial struct., accelerated thermal cycle testing, BGAs and CSPs 113621
lead-free electronic joints, ternary intermetallic alloy kinetics and form. 113623
liq. solder joint technol. for electronic assembly bonding *(German, English)* 89864
low-cost pluggable chip scale package for high pin-count appls. 113471
LSI silica-based thermo-optic switches *(Japanese)* 93447
LV CMOS ccts., I_{DDQ} testing, leakage control techs. 127033
m-out-of-n hardware bit voter, CMOS VLSI technol., fault tolerant designs 79809
Markov model for copy-back cache reliab. prediction 114746
Mars rover microelectronics, die attachment for -120°C to +20°C thermal cycling 88075
MCM, chip mounting and interconnection, space appls. 91520
MCM component placement, optimal, fuzzy thermal modeling 115233
MCM yield/cost trade-offs with KGD probab./repair 69376
metal layer/ceramic substr. buckling driven interface delamination 113616
metallic interconnect thin films, elec. failure procs. 126433
micro via-in-pad substrs., solder bumped flip chip appls., design and manufacture 89871
microelectronic device thermal/thermomechanical characterisation by laser probing 115987
microelectronic packaging thermal mgt., composites/materials develop. 67607
microelectronics devices, failure anal., spectrosc. photon emission microscopy appl. 115997
microelectronics microdosimetry theory, ionizing radiation effects 126609
miniaturized interconnects, creep/contact opening electromigration failures 92104
miniaturized reliable space electronics, prod. commercialization 133232
mixed-technol. VLSI systs. incl. MEMS and MOEMS, CAD issues 70322
MLC IC-BGA device reliab. 78642
MMIC off-the-shelf parts for next generation of space exploration 122529
MNOS NVM technol., current status/future prospects 90904
MOS capacitor sensitive soft breakdown triggering, meas. syst. noise 104143
MOS capacitors, gate oxide breakdown posn. discrim., test struct. 104082
MOS IC oxide leakage currents, Si dangling bond defect link, direct evidence 81529
MOSFET flash EPROM devices, lateral profiling of interface traps and oxide charge, charge pumping 114763
moulded PBGA socket, solder joint reliab., assembly quality 113686
multilayered syst.-on-package, design against interfacial delamination 113614
multilevel interconnection with intermetal dielec. air gaps, reliab. studies 126430
µP packages, thermal implications of increased device functionality 90958
nanometer design, dyn. power scaling trends, packaging problems 126971
nanospring interconnects for high-dens. appls. 67609
NMOS capacitors, large area, soft breakdown triggers under const. voltage stress 81527
NMOSFET protection devices in 0.13 µm CMOS technol., hot electron/ESD stress interact. 81526
no-clean stencil printing proc. develop. for SMT/through-hole interconnect technols. 124339
no-flow flip chip assembly, high throughput/low cost, underfill voiding, substr. design effects 69365
no-flow underfill, toughening agents, effect on fillet cracking 113485

integrated circuit reliability continued
no-flow underfill based on nonanhydride curing syst., develop. 67588
no-flow underfill develop. for flip chip assembly *(English)* 89866
no-flow underfill encapsulant develop. formulation, epoxy resin combinations 67580
no-flow underfill moisture absorpt., solder mask coated FR4 PWB interfacial adhesion effects 67602
no-flow underfills, flip chip assemblies, adhesion charactn. 67626
non-volatile memories for microsystems in automotive appls, reliab. 114765
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write scheme 90910
NOR-type flash memory cells, data retention failure 79893
package solder joint reliab. testing, computer simul. 78661
parasitic bipolar transistor model in protection MOSFET, generated-hole-depend. base resist. 81418
partially-depleted SOI CMOS SRAM, gate-to-body tunneling current effects 127042
partially-depleted SOI salicide CMOS technol., ESD robustness of devices 116040
passivated metal interconnects, thermal stresses, anal. model 115681
Pb-free reflow soldering impact on electronics packages 124358
PBGA solder joints, fatigue lifetime rel. to reflow conveyor speed 113545
Pentium III Xeon proc. with L2 cache, cartridge thermal design/metrol. 114799
peripheral I/O high quality ASICs, I/O cell placement, elec. checking methodology 81451
plasma etch damage, charging pot./current densities, substr. connection effects 103432
plasma proc.-induced damage testing methodology for 0.13 µm CMOS technol. 104129
plasma related damage and proc.-induced phenom., conf., Monterey, CA, USA (Nov. 2001) 100381
plasma/proc.-induced damage control, symposium overview 103976
plastic encapsulant, moisture induced delamination, coupling agent bonded interface degrad. 113716
plastic encapsulated microcircuit reliab., molded part props., stat. monitoring 67576
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 92145
polyimide-Cu MCM-D, copper capping alternatives eval. 115231
polymer stud grid array CSP, flip chip assembly proc. develop., reliab. assess. 113634
polysilicon oxide quality optim. at wafer level, BCDMOS technol. 124432
polysilicon-ONO-Si NVM device retention reliab., two-step high temp. deuterium anneals 79892
polyvalent error control codes for multilevel memories 68792
power transistor, integrated, size optim. regarding reliab. constraints 127073
power VDMOS FETs in BCDMOS technol., reliab. study 126727
power/ground network optim. based on equiv. cct. modeling 126984
PreFPIX2 chip, core archit. 121713
proc. control and diagnostics in semicond. mfg., conf., Santa Clara, CA, USA (Sept. 2000) 100413
PVD IC metallization, particle contamination control in sputter deposition modules 101193
PWM inverter, three-phase, FPGA based-IC design with optimized space vector modulation schemes 68573
QMIT, quasi-monolithic integrat. technol., thermal stress simul. and meas. 113625
random defect-limited IC yield using deterministic model 103955
rated EMC params. determ. using EMCpar software 83382
reworkable no-flow underfills for flip chip appls. 78666
RF packaging for space appls., micropackage to SOP, syst. on a package 124320
ROBOCOTS program for robust COTS IC packaging 78645
semicond. electronics, conf., Guoman Port Dickson Resort, Malaysia (Nov. 2000) 89564
shielded vert. interconnection for microwave CSP, design for reliab. 125794
short-time tests, opt. interconnect/transistor failures, stat. models 78723
siloxane-based low k materials, heat/moisture resist., IC appl. 104238
SIMOX wafer surface defects, effects on device charact. *(Japanese)* 91888
single-finger NMOSFETs, nonuniform bipolar cond., deep sub-µm ESD protection design 81348
single-pass reflow encapsulant for flip chip appl., develop. 67568
smart PWM driver in SO-8 package for automotive solenoid controls 134601
smart-power ICs, parasitic minority carrier injection, substr. pot. shift, simul. 81535
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSP, develop. 113595
SoC design flow quality, std. design langs., APIs 81463
SoCs, multi-million gate designs, hierarchical power network anal., power grid modeling 79735
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
SOI-BiCDMOS single-chip automotive LSI, air bag controller, RISC CPU 89411
split-level precharge differential logic, high-speed charge-recycling 102003
SQUIDs for IC defect location/failure anal. appls. 126998
SRAM chips, high standby current due to spurious gate reticle image printing 79901
SRAM early failure rate reduction, dyn. voltage stressing appl. 81495
stacked thin dice packaging, small vol. 3D package, FEM 113507
stainless-steel-particle-related burn-in failures, corrective actions 103233
static latches, cosmic ray induced soft errors, scaling trends 125458
STI for CMOS logic technol., mfg. optim. 104097
STI silicided bulk CMOS, compact layout rule extract., latchup prevention 81509
stud bump bonding flip-chip technol., chip-on-flex develop. 69363
sub-100 nm devices failure anals., concept anal. instrums. develop. 115998
sub-qtr.-micron CMOS, ESD protection strategy, gate-driven vs. substr.-triggered design 127026
sub-qtr.-micron CMOS devices, ultrathin ox/nitride gate stack, RTCVD 127025
submicrometer CMOS technols., hot carrier degrad. and ESD interact. 116022
substr. noise in ICs, anal., models and optim. 104047
super high speed polysilicon emitter IC technol. *(Chinese)* 104085
super-BGA package reliab., underfill effects 67606
TAB/device packaging thin film failure mechanisms, Auger depth profiling/surface anal. 124329
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
tape-and-reel packaging technol., improved perform./reliab./cost-efficiency 124362
technol.-tolerant I_{DDQ} method for CMOS digital IC diagnosis 101917
thin films, stresses and mech. props., conf., Boston MA, USA (Nov.-Dec. 1999) 113277
thin-film interconnects, electromigration modeling, void nucleation 92103
thin-film interconnects, grain boundary crack growth 103491
TSOP epoxy molding cpd. pellet wt. determ. rule 124341
UHF components selection, acceptance checking, stat. method 69228
ULSI device isolation struct., metal impurities behaviour 81107
ULSI ICs, design and reliab. aspects of multilevel metal large-scale power lin layouts 104039
ULSI plastic packaging, die cracking eval./improvement 100619
ultra thin oxides, soft breakdown detect., noise-based trigger algm., acc rate/robust 81531
ultra-low k ILD materials for use in ULSI BEOL struct., mech. integrity 924
ultra-thin FCOB assembly 115222
ultra-thin gate oxide soft breakdown, plasma proc. induced damage corre 103426
ultrahigh thermal cond. module, direct solder-attach, C4 reliab. 113678
ultralow-k ILD materials develop., IC proc. challenges 126492
ultrathin gate oxide breakdown stats., phys.-based analytic approach 70385
ultrathin gate oxides, soft breakdown, stat. anal. 126221
underfill encapsulant affected by flip chip assembly variables, adhesion 6757
underfill material, adhesion/reliab./reworkability study, free radical polymeriz tion syst. 113636
UV resists, 193 nm, CD degrad. during SEM inspection, mechanistic studi 103550
VDSM IC, full-chip reliab. simul. 126999
very deep sub micron memories, soft error rate, syst. reliab. 68804
via line structs., electromigration tests, fast wafer level/std. package leve 115680
via-first dual damascene integrat. scheme, evol. of trench profiles 103454
via/line package level/wafer level tests, comparison 81131
VLSI, optimum design of power and ground topol. subj. to reliab. and noise co straints *(Chinese)* 81487
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optir 125385
VLSI metallization, electromigration proc. *(Chinese)* 92098
VLSI technol., stat. many-dimens. simul., response surface methodology 6766
VLSI technol., systs. and appls., conf., Hsinchu, Japan (April 2001) 113284
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
VLSI test generation for maximizing ground bounce for internal circuitry wi reconvergent fan-outs 101935
voltage overshoots in high-speed digital SoCs, built-in-chip testing 101916
wafer burn-in failures and local region yield, integrated field-reliab. mod 104030
wafer high-temp. PECVD charging damage prediction, current-bal. mod 101376
wafer level area array solder bump interconnects with Pb-free/low-α solde 113594
wafer level CSP using liq. bismaleimide polymers 124327
wafer level packaging, WAVE wide area vert. expansion proc. implemen 113604
wafer level packaging for 300 mm, progress overview 100607
wafer level reliab./packaged electromigration tests, expt. comparison 81130
wafer level stress data use as early burn-in/reliab. predictor 104017
wafer level transient voltage suppression CSP for ESD protection, low cost/lo I/O 113592
wafer level/parametric IC test systs. for design/life cycle enhancement 10404
wafer proc. liq.-handling syst. component testing to ensure purity/reliab. 8107
wafer solder bumping technols., overview 102875
wafer-handling systs. mgt. for 300 mm using BXi integrated controller 1244
WASPP Program, passiv. develop. for packages in harsh environ. 77013
WAVE, wide area vert. expansion packaging proc. develop. 113508
wire bond integrity, probe scrubbing damage effects 113682
Al 1 µm line, fault localisation, thermal laser stimulation, 3D finite elemen ANSYS model anal. 127004
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al dual-damascene interconnect via electromigration lifetime, soft low-k organ SOG ILDs 92117
Al interconnects, stress-induced voiding in proc. qualification, quantitat. asses 81133
Al lines, via/polygranular cluster electromigration-induced stress interact. 9217
Al multigrain thin film lines, electromigration props., grain boundary struc 92110
Al passivated line single grain strain meas. by X-ray microdiffraction duri electromigration 92173
Al via-void generation mechanism for Gbit-scale DRAM, anal. 79900
Al/low-k dielec. interconnect struct., nanoscale elastic imaging 92142
Al-Cu interconnects, electromigration reliab., Ti(TiN) underlayers effec 126432
Al-Cu lines, electromigration immunity, pre-annealing effect 115672
Al-Cu thin-film metallizations, thermal aging, reliab. tests 115669
Al-Cu(Si) interconnects, electromigration damage, comp. effect 126434
Al-Cu(Si) metallic interconnects, electromigration modelling. percolativ approach 92119
Al-based interconnect reliab., width transit. effects 92120
AlCu ULSI multilevel-metallizations, stress migration behavior 92118
AlCu interconnects, electromigration behaviour, stress-induced voiding effec 92176
AlCu line wafer level electromigration testing, isothermal/const. current/SWEA methods 81128
AlCu passivated conductor line electromigration, Cu conc./stress evol. 92143
AlGaAs/GaAs deep submicron PHEMT MMIC amps., high-reliab. Q-band pe form. 125773
Al_2O_3 plasma-induced surface charging modif. by VUV radiation 101197
AlON diffusion barrier form. for Ag interconnect metallization 92179
Au bumped flip chip assembly using anisotropic conductive/nonconductive adh sives 124357
Au interconnections, electromigration/electrochem. react. failure mechanis 115673
Au-polyimide ILD multi-level interconnect proc. using dual 4.5 µm-thick met layers 69961
Cl_2 plasma-induced wafer charging reduction through ion-ion sync. bias 10342
Cu BGA substr. etch treatment, solder mask adhesion 67575
Cu damascene interconnection technol., self aligned metal capping 126440
Cu damascene interconnects, electromigration charactn. vs. texture anal. 9211
Cu damascene interconnects, recrystn. anneal, reliab./post-CMP defects 8113
Cu damascene struct., methylsilane-doped low-k CVD oxide intermetal diele 69942
Cu dual damascene interconnect/low-k organic polymer, fine CD control 1264
Cu dual damascene proc. defect tracing 126496
Cu electroplated interconnects, microtexture/strain 103460
Cu interconnect technol., high-vol. mfg. transit. 115685

grated circuit reliability continued
Cu interconnect, wafer level reliab. monitor, isothermal testing 103474
Cu interconnections reliab. improve., use of binary Cu-alloy films 126457
Cu interconnects, NH_3-plasma treat. and CMP modif. effect on TDDB improve. 81116
Cu interconnects, SR X-ray microdiffraction 69946
Cu interconnects, TDDB lifetime, barrier metals/low-k dielec. impact 81136
Cu interconnects, electromigration, confine. materials mech. props. effects 103459
Cu interconnects, electromigration-induced failure rate rel. to grain struct. 69922
Cu interconnects, thermal stress and reliab. charactn. of barriers 126456
Cu metallization, 0.10 µm wide lines, failure obs. by OBIRCH method 126459
Cu metallization, sub-0.25 µm, seed-layer sputter deposition, line cusp magnetron plasma source 92164
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu single-inlaid interconnects, electromigration failure, Blech effect 115679
Cu trench/via filling by electroplating, current dens./pulse waveform effects 92178
Cu via electromigration, study of bimodal distribs. of time-to-failure 126472
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu/$TaC_x(WC_x)$/Si metallization/diffusion barrier syst., anal. 115676
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu/low-k ILD and Cu/ultralow-k ILD layers, CMP module integrat./proc. 126493
Cu/low-k ILD interconnect technol. for semicond. devices 103478
Cu/low-k interconnect CMOS platform, 0.13 µm, for SoC appls. 127019
Cu/methylsilane-doped low-k CVD deposited oxides, damascene process,leakage current mechanisms 126448
Cu-Mo-based multilayer films for advanced metallisation, microstruct., Mo addit. effects 115675
Cu-SiO_2 dual-damascene interconnects, electromigration reliab. 92115
Cu-SiO_2 dual-damascene interconnects, electromigration early failure stats. 81134
Cu-TiWN multilayer interconnections, electromigration 81117
CuAl-SiO_2 barrier/adhesion promoter-ILD interface microstruct., charactn. 103461
GaAs IC reliab. prediction from life test data, regression tech. 70242
GaAs MM-wave HV PIN diode switch, develop. 125805
GaAs PHEMT MMIC power amps., reliab. study 115004
GaAs RFICs in SOT-23 packages, failure anal. techs. for small plastic packages 125806
GaAs based HBT power amps., ident. of humidity related failure mechanisms 127017
GaAs mm-wave MMICs, BCB thin film layers, automotive radar and wireless commun. appl. 91304
H-silsesquioxane low-k dielec. material integrat. with TiN/TaN/W_2N thin film barriers 92181
InAlAs-InGaAs metamorphic HEMT MMIC technol. on GaAs substrs. 69244
InGaAs/InAlAs/InP HEMT MMIC amp., reliab. 115007
InGaAs-AlGaAs-GaAs HEMT MMIC prod. proc., 0.1 µm, for commercial Ka-band LNAs 69245
InP HBT IC technol./appls. 70291
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
InP-based HFET coplanar MMIC LNA, 60 GHz, design and perform. 114992
Ni-P electroless UBM-solder interface, Ni-Sn intermetallics,joint reliab. 113715
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Pb-free leadframe packages, plating chem. eval./reliab. 113700
Pb-free solder alloys for flip chip/area array package bumping 67569
Pb-free solder bumps, shear/microstruct., RT and multiple reflow/high temp. aging 67605
Pb-free solder spheres for BGA appls., pad finishes, shear strength 113701
Pt-$SrBi_2Ta_2O_9$-Pt capacitor-based FRAM, imprint failure lifetime estim. 90909
Si, 300 mm wafers, batch furnace/RTP proc. prod. maturity 67522
Si IC foundry yield enhancement/mgt. using Iddq stress current signature 81415
Si IC technol., materials introduction, contamination risk 103974
Si controlled rectifiers, ESD protection ccts., variable holding voltage 83135
Si ultra-thin ICs, dicing by thinning for improved mech. reliab. 70231
Si wafer fab., nodules due to Si precip. 103950
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
SiGe RF-ICs, power consumption, reliab., device phys. 80320
SiGe self-aligned SEG HBT static freq. divider and MUX/DEMUX, fibre links 79835
SiO_2 damage test wafer plasma etch, electron temp., trace rare gas opt. emission spectra 103428
SiO_2 gate dielec. scaling, long term reliab. estim., error calc. 81417
SiO_2 gate oxide growth on plasma damaged Si surfaces, quality degrad. 103430
SiO_2 ultra-thin gate films, leakage current through multiple breakdown paths, modeling 81530
SiO_2 ultra-thin gate oxide degrad./breakdown, quantitat. H-based model 126222
SiO_2-filled epoxy molding cpds., thermal stress anal. 114453
SiO_2-xerogel films for ILD appls., proc./charactn./reliab. 92162
SiOF-Ta low k dielec./barrier metal interface strength, four-point bending tech. 92139
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu Pb-free solders for flip-chip interconnects 100596
Sn-Ag-Cu lead-free solder vol. effect on intermetallic layer form., interface microstruct. 113515
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-In(-Cu) Pb-free/polymer-core solder balls, CSP board level reliab. testing 113702
Sn-Cu Pb-free microelectronic solder joints, Sn pest 100597
Sn-Cu Pb-free solders for flip-chip interconnects 100596
SnAgCu solder joints on WLP in thermal cycle testing, deform. and crack growth 113622
$SrBi_2(Ta_x,Nb_{1-x})_2O_9$-$Bi_2$ $(Ta_x,Nb_{1-x})O_6$ ferroelec. memory, metal covering cell 68808
Ta/TaC diffusion barriers for Cu metallization on Si, reliab. 91877
TaN diffusion barrier against Cu diffusion, perform. eval. using SIMS/AFM 69939
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169

integrated circuit reliability continued
Ta_2O_5 gate dielec. CMOS devices, low freq. noise, reliab. 127058
Ti/low-k H-silsesquioxane and Ti/TEOS struct. at elevated temps., comparison study 92182
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvement, reservoir modeling 81132
$TiAl_3$ interfacial growth, in-situ TEM obs./num. simul. 103462
TiN PVD gate thermal stabil. under RTA, impact on CMOSFET charact. 104128
TiN barrier thin films by ALCVD for Cu metallization, props. 92165
W CVD on MOCVD TiN diffusion barrier, step coverage 126470
W/Al plug vias, post via-etch clean impact on mech. reliab. 92101
W/TiN damascene metal gate, full CMP proc. integrat. for ULSI 92127
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 70306
W-damascene SRAM cell interconnect ILD, CMP scratch induced defects, failure mechanism 79891
ZrO_2/$ZrSi_xO_y$ ultra-thin films for CMOS gate appls., high thermal stabil. 127049
short-channel nMOSFETs, breakdown mode/location, impact on reliab. specs. 81351

integrated circuit technology
see also under specific integrated circuit headings
see also clean rooms; integrated circuit bonding; integrated circuit interconnections; integrated circuit measurement; integrated circuit metallisation; integrated circuit packaging; integrated circuit yield; integrated optoelectronics; isolation technology; nanotechnology; rapid thermal processing; resists; semiconductor process modelling; semiconductor technology; SIMOX
0.18-µm 3.5/6.8 nm dual gate oxide CMOS technol., effects of F on parametrics and reliab. 81506
3D chip stack technol. 81408
3D CMOS SOI IC using high-temp. metal-induced lateral crystn. 81513
150 nm partially-depleted SOI and bulk technols., comparative perform. 126921
157 nm lithog. for 100 nm generation and beyond, progress and status 103597
300 mm wafers, mech. props., slip length simul. during thermal proc. 70239
300 mm wafers, RTP flash anneal ramp rate effect on lithog. overlay perform. 115482
acid-breakable resins for chem.-amplified pos. electron resist matrices 103640
advanced proc. control software for 300 mm wafer fabs 100729
advanced semicond. mfg., conf., Munich, Germany (April 2001) 100397
alternating phase shift mask quality impact on 100 nm gate lithog. 103613
amorph. nonvolatile semicondoctor memory technol. and appls. 68796
automotive electronics, future requirements, semicond. technol. develop. 124052
automotive microelectronic sens., EMC/EMI limitations 124055
backside mounting procedures for semicond. wafer proc. 126425
BCD5 smart power technols., ESD protection struct. 127074
catalytic CVD, conf., Kanazawa, Japan (Nov. 2000) 124220
ccts. and systs., conf., Karuizawa, Japan (April 2000) 67370
chem. amplified e-beam resists, react. mechanisms by pulse radiolysis 103520
chem. amplified pos. resist profile change, re-adhering acid effects 103552
chem. amplified resists, post-exposure delay effects 103549
chem. supplier quality mgt. for semicond. manufacture, changes/challenges 100625
cleaning proc. economic/perform./environ. constraints, reconciliation 126356
CMOS compatible frontside micromachining of integrated thermoelec. sens. 121037
CMOS deep-sub-0.25 µm technol., TCAD optim. 116036
CMOS device, S/D extension, shallow jn., ion implant. *(English)* 92462
CMOS devices, sub-0.1 µm, ring oscillator ccts., fab. 81514
CMOS flash memory technol., quasi-virtual ground array, embedded appls. 68799
CMOS gate oxide, He plus rem. plasma nitridation 81049
CMOS humidity sens. with on-chip calib. 109493
CMOS IC, ultra-shallow jn. doping technol. 116039
CMOS ICs, nanoscale technol., low temp. operation 116038
CMOS image sens./IC products, prod. line cross-contamination study 104101
CMOS LSI jn. technol., conf., Makuhari, Japan (Dec. 2000) 113209
CMOS proc., proximity correction, dual mask model 103695
CMOS proc. technol. trends for SoC era 116027
CMP proc., model for mech. wear and abrasive particle adhesion 92072
CMP slurry-induced metallic contaminations elimination, post-CMP cleaning proc. 103435
CMP wastewater treatment for reuse/recycling/reclamation 115650
coplanar mm-wave MMIC design, technol. problems 125813
cpd. semicond. devices and ICs, conf., Aegean Sea, Greece (May/June 2000) 78443
cpd. semicond. IC technols., appls. in high data rate opt. fiber commun. 131389
cpd. semicond. indust., high-vol. mfg. 103973
cpd. semicond. mfg. technol., conf., Las Vegas, NV, USA (May 2001) 113279
crit. IC proc. failure prevention by in-situ particle monitoring 103944
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
cyclic olefin polymer resists for 193 nm lithog. 103547
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
direct write technols., commercial appls./review 103977
DOE, excimer laser fab., low cost 71459
DRAM to ASIC prod. transit., lithog. challenges 115983
DSPs, new generation, concept/archit. 114808
dual ion implant. syst. for wide appls. envelope 69814
dyn. temp. technol. for IC proc. control 100717
e-diagnostics links, SEMI GEM/SECS stds./equipt. front-end modules, rels. 103962
electronics materials, technol. innovation transit., market perspective 70247
embedded DRAM develop., technol., phys. design, and appl. issues 102129
environ. stds. integrat. in European semicond. indust. 67681
etch proc. improvement as part of overall plan to increase fab productivity 81075
ethylene glycol ether free solder paste for flip-chip appls. 113457
EUV masks, multilayer defects, scalar simul. 69962
extrusion coating modeling, electronics mfg. appl. 79400
FIB techs. for IC failure anal. appls. 70289
fiber optic telecomms., III-V semicond. technol. requirements 74952
five-wafer batch annealing syst. using resistively heated stacked hot plates 69782
flash memory device technols., review 90905
fluoropolymer resist materials for 157 nm microlithography 103656
fluoropolymer resist props. for 157 nm UV lithog. 103649
fluoropolymers for 157 nm lithog. resist appls. 103648
foundry RF CMOS technol., 0.18 µm, 70 GHz F_t for single chip syst. solns. 102689
gravure offset printing develop. for fine line thick film ccts. 125916
high-power HV power ICs for automotive appls. 78323
high-Q inductor add-on module in thick Cu/SiLK single damascene for RFIC 125739

integrated circuit technology continued
inverse gate electrode flash technol., CMOS proc. compatible for SoC appl. 102180
ion implant., wafer charging monitor, MOS capacitor 103273
ion implant. techs. for device scaling solns., perform. benefits 69806
ionized plasma phys. vap. deposition, integrated multi-scale model 79402
large diam. epitaxial wafer develop., tech. issues 70240
lateral power device integrat. in mixed sig. BiCMOS technol. 81533
lithog. proc. control, advanced, basic functionality requirements 103524
logic ccts., high-perform. and low-power technol. roadmaps 103964
MegASIC, analogue, mixed-sig. and digital ICs, IC design, foundry facilities *(German)* 126929
MEMS devices for integrated wireless commun. transceivers, IST MELODICT project 74831
methanofullerene neg. type e-beam resists, sensitivity improvement 103642
α-methylstyrene polymer-based 157 nm single-layer/bilayer resists 103652
mfg. automation software for 300 mm wafers 70237
mfg. from 300 mm wafer pilot stage to prod. 81410
microcontact printed plastic ccts. for electronic paper 69337
microelectronics, conf., Kauai, HI, USA (Feb. 2001) 124225
microelectronics indust. in Malaysia, policies/R&D, review 103956
microelectronics innovation, specialty materials supplier collaboration requirements 115988
micromachine intracardiac ultrasound scanner, IC technol. 111495
MICRO.tec 2000, conf., Hannover, Germany (Sept. 2000) 113199
mix-and-match nanoimprint/UV lithog. 92224
mixed-sig. IC proc. transfer from Motorola MOS10 fab to Tower Semiconductor fab 103975
MMIC design using glass technol. 69246
modular proc. technol. for VLSI syst.-on-a-chip appls. 104080
modular software for IC mfg. appls., benefits 126922
multi-chamber wafer proc. tools, class., capacity components 100553
multifunction minifab tools for syst. chip fab., design by Japanese companies 81412
multiple anion nonvolatile acetal resists for e-beam lithog. 103641
nanoscale printheads for pattern transfer, direct FIB writing using microcontact printing 115789
nanotechnology trends, self-assembly/defect tolerance 92257
nanotechnology-based mol. test equipt. 81158
NanoWave scanning probe posn. encoder, nanoscale mfg. posn. meas./control 92258
noncontact wafer handling using high-intens. US levitation 103953
optoelectronics, technol. develops. for opt. commun. 128028
organic semicond. TFTs, IC mfg. 103942
partially depleted CMOS/SOI technol., 0.5 μm channel length *(Chinese)* 104117
partially-depleted SOI salicide CMOS technol., ESD robustness of devices 116040
PD-SOI CMOS technol., perform. anal. of tapered gate device sizing methodology 127028
photobleaching photoacid generator for chem. amplified resist at 193 nm 103542
photomask/lithog. cost balancing in IC fab. 103522
photopolyimide pos.-type resist based on vinyl ether crosslinking/de-crosslinking 103517
photoresist coating recipe, low-vol., solvent prewet step, defect mechanisms 69968
photosensitive glass wafer microchip fabr. and thermal lens microscopy appl. 121260
PIII, deep trench buried-plate doping technol. appl. 115568
plasma ashing/residue/polymer removal proc. integrat., joint improvement project 69875
plasma doping, simul./safer gas usage 103289
plasma etching of nonvolatile materials, contamination, by-product deposition mgt. 103431
plasma ion doping as ultra-shallow jn. fab. tool 103288
PLC high-dens. integrated technols., AWGs appl. *(Japanese)* 93141
poly(norbornene/maleic anhydride/acrylic acid/tert-butyl acrylate) single-layer 193 nm resist, base additives 103546
polysilicon 300-mm etch equipt., maturity assess. 103401
polysilicon post-etch residue contamination in wafer fab., failure anal./elimination 103349
polysilicon resistors in sub-0.25 μm CMOS ULSI appls., charactn. 81519
polysilicon TFT technol. for notebook displays 86804
probe/probe card design for chip/wafer/package/PCB level testing 124305
proc. integrat. for 300 mm wafer fab automation 115985
proc. perform. metrics, utilization of effective availability/effective capacity 100552
pyrocarbonate functionalized monomer synthesis, radical polymerisation, pos.-tone photoresists 115730
QW intermixing as fab. platform for OEICs 128023
resist outgassing at EUV wavelengths 103645
resist outgassing under EUV irrad. 103644
resist pattern adhesion on SiH_4-coupling treated surface, direct AFM meas. 103638
resist surface silylation, chem./proc. issues 103560
reticle delivery automation for 300 mm fab 115737
reticle ESD damage mechanisms using Canary diagnostic reticle 81142
reverse tone etchback STI CMP, modeling 92078
RTP, step forward in microelectronics technols. 103224
RTP reactor constr./optim. for large diam. ULSI wafers 126258
SECS/GEM IC proc. tool commun. protocols, evol. for e-mfg./300 mm wafers 103963
semicond. electronics, conf., Guoman Port Dickson Resort, Malaysia (Nov. 2000) 89564
sensitive endpoint detect. for dielec. etch 92080
silica films, mol. templated nanoporous, plasma treatments 115643
single wafer high current ion implanter, advanced device fab. 121412
SOC, syst. on a chip, cost, power dissipation, technol. and design 116019
SoC challenges in deep submicron technol. evol. 102195
SoC design, mixed sig. ICs, design quality 80118
SoC techs., reusable design flow *(Spanish)* 102223
SOI bonded wafers, eval. by automated acoustic micro imaging 126220
SONOS nonvolatile semicond. memories for space/mil. appls. 125505
stack capacitor integrat. with buried O barrier using CMP of noble metals 127027
STI planarization proc. using direct CMP 115654
sub-5 nm multiple-thickness gate oxide form. by O implant., optim. 70313
supercond. mixer ccts., whole wafer dicing/thinning techs. 71090
surface react. doping using gas source for ultra-shallow jn. form. 103287
sustainability considerations in microelectronics indust. 81414
Swissair 111 crash EEPROM data recovery, failure anal. techs. 79899

integrated circuit technology continued
syst.-on-a-chip, N_2 ion implant. and VHP O_2 re-oxid. 103390
syst.-on-a-chip design technol. 126945
tapered contact etch, proc. charactn. 126370
tetrafluoromethane plasma induced damage during dry ashing/photoresist resid removal 103424
TFT-LCD fab., high selectivity photoresist ashing proc. 92041
thick film technol. for wireless appls. 125917
ultra-pure proc. gas filter membranes, contamination contrib. eval. 103381
ultra-shallow jn. form., ion implant./RTA technol. trends 103261
ultra-shallow jn. form. by RTA, current capability/problems 103250
UV lithog. technol. develop. for 157 nm, status 103647
UV resist backbones, 248 nm, rejuvenation for 157 nm lithog. 103651
UV resist resin syst. for 157 nm lithog. 103650
vac. systs., power supply considerations 89819
vac. systs., total digital control 89818
vert. merged MOS ULSI, optoelectronic/nanoelectronic, single-wafer singl lithog. proc. 70318
vert. planar coil inductors, develop. using plastic deform. mag. assembly 8037
VLSI technol., conf., Kyoto, Japan (June 2001) 124232
VLSI technol., systs. and appls., conf., Hsinchu, Japan (April 2001) 113284
void-free pre-metal CVD dielec. for ULSI 90433
wafer batch furnace proc., develop./appls. 70244
wafer defect/excursion monitoring technol. 70235
wafer dicing proc., fully automatic syst., collaborative study 103947
wafer epitaxial deposition procs., low press., exhaust mgt. challenges 79288
wafer fab, high vol., retrofitting using SMIF technol. 67519
wafer proc. for 300 mm, mfg. equipt. sector challenges 103945
wafer prod. fab, 300 mm, exact proc. copy mgt. 78587
wafer thinning technol. based on CMP techs. 69876
wafer vol. prod. fab develop. for 300 mm 124308
wafer-handling systs. mgt. for 300 mm using BXi integrated controller 12444
WDM opt. networks, high speed, planar waveguide devices using Si IC techno 74980
AlGaAs/InGaAs mm-wave Q band power pHEMT proc. technol. 115021
ArF lithog., 193 nm, vinyl ether-maleic anhydride alternating polymer resist sys 103545
ArF lithog. for 100 nm technol. node, progress overview 103541
ArF lithog. photoacid generator design, perform. trade-offs 103543
ArF neg. resist, androsterone derivative with δ-hydroxy acid, comonomer struct dissolution 103548
$B_{10}H_x^+$ beamline ion implant. for shallow jn. form. 81020
C spun-on bottom ARC film for KrF/ArF lithog., pattern transfer proc. 10355
GaAs mfg. technol., conf., Washington, DC, USA (May 2000) 78444
GaInP-GaAs HBT technol. for high power X-band/broadband amps. 125745
Ge thin-film metamorphic HEMTs, hybrid integrat. and substr. removal 12591
InGaAs/AlGaAs PHEMT proc. for X-band power amp. and LNA MMIC 125804
InP HBT ICs, proc. integrat. 116020
KrF laser lithog., ARC materials containing isoflavone derivative chromophor 103557
KrF lithog., DRAM fab. 103528
KrF lithog. imaging syst., anti-refl. layer design considerations 103559
Nb supercond. IC proc. technol. 70954
NbN Single Flux Quantum Circuit, fab./operating props. 126970
O_2 electrochem. sens. for proc. gas monitoring, charactn. 86706
SOI based design of analogue/memory ccts. 90703
Si IC technol., materials introduction, contamination risk 103974
Si IR micro-spectrometer based on diffr. grating 104765
Si RIE in tetrafluoromethane plasma, etch depth saturation effect at high RI power 103383
Si large diam. crysts., upper yield point, temp./shear strain rate depend. 6947
Si spherical device, 1 mm, clustering/enabling proc. technols. 69774
Si submicron IC technol., microwave high-dens. plasma source 69906
Si surface cleaning, wet etching, IC prod. 69907
Si technol./devices, develop. 103948
Si:B CZ substr., boron implant., CMOS technol. 103282
a-Si:H films on SiO_2 passivated steel substrs., crystn., polysilicon TFT 10323
Si/SiGe HBT low-cost Ku to Ka band MMICs using commercial HBT proc 69197
Si(113) wafers, oxid., alternative IC material to Si(001) 69908
SiGe BiCMOS technol. at IBM, progress/evol. 92479
SiGe HBT for analogue BiCMOS technol. appl., review 92477
SiGe self-aligned base heterojunction bipolar technol., UHS2 proc. 81499
SiGe technols. for future multimedia appls. 69193
SiGe:C HBT module for integrat. in deep submicron CMOS proc. 69194
Si_3N_4 technols. for post-SiO_2 p-MOSFET gate dielec. in CMOS proc. 81520
SiO_2 etching, high-perform., environ. harmonized gas chem. *(Japanese)* 81063
SiO_2 gate dielec. layers for Si microelectronics, review 103212
SiO_2 passiv. layer PECVD using IPL 2000 E/D, uniformity study 101349
TiN films deposited on Pa-n, crack form. due to large thermal mismatch 114252
TiO_x MOCVD proc. for microelectronics appls. 90412
Y_2O_3/SiO_2 bilayer gate dielec. based MIS devices on Si, interfacial charge trapping 103201

integrated circuit testing
see also integrated circuit measurement
1.55-μm photonic systs. for microwave/MM-wave meas. 132144
3D TEM anal., FIB lift-out tech. 126932
accumulator-based bit-serial test response compaction schemes, ISCAS'85 benchmark ccts. 79738
adaptive ramp generator, low cost for analog BIST appls. 101849
ADC differential nonlin. testing, exponential shaped voltage 102284
ADC dyn. test setup, timing jitter contribs. meas. 80013
ADC dyn. testing, dual-tone sig. based 2D histogram 114840
ADC histogram test, small-amplit. triangular waves 114829
ADC histogram testing, IEEE Std. 1241, benefits & risks 102285
ADC hysteretic distortion detect., phase-spectrum anal. 114827
ADC integral nonlin. determ., FFT test, Chebyshev polynomials 102286
ADC modelling & testing, state-of-the-art review 114839
ADC testing, cumulative histogram variance, freq. errors 114841
ADC testing, transportable A/D box for comparative meas. 109425
ADC testing using joint time-freq. anal. 90977
ADC testing with IEEE Std 1241-2000 114838
ADC transit. level meas., dyn. input, servo-loop extension 114843
ADCs, lin. histogram testing, low-cost BIST archit. 125578
advanced packages, failure anal. and reliab. testing using ultrasound 78722
AIT-II dark-field inspection tool with automatic defect class., method/cost effectiveness 100629
Alpha 21364 μP error handling syst., pre-silicon verification 125564

grated circuit testing continued
Alpha μP, α-particle induced soft error rates, historical trends 79953
analog cct., fault detect. probab. fn. 101733
analog CMOS ICs, HV stress test paradigms, gate-oxide reliab. enhancement 101737
analog IC testing, DC fault dictionary 101729
analog ICs, device params., test generation based diagnosis 79538
analogue ccts., multiple fault diagnosis method 79548
ASIC cell fault models, VITAL compliant VHDL simulation 102424
ASIC design of color seq. driver for LCOS microdisplay devices 114750
ASIC implant charging, photoresist bake, electron flood gun effect 115582
asynchronous cct. testing, techs. and ATE archits. 79788
back side failure anal. flow for flip-chip/lead-on-chip/multi-metal-level dies 113778
BGA packaging, ultravia substr. for high perform. 67593
BGA SMD components, board level testing *(German)* 80485
BGA substr. conducting path defects, AOI 100611
BIST, distributed and embedded, test pattern generator 79731
BIST, oscill. based method for functional testing of smart sens. devices 80124
BIST, set covering model appl. to reseeding 81434
BIST data path synthesis, high-level data path allocation 90822
BIST for seq. cores in SoC environ., spectral methods 101918
BIST scheduling for min. energy consumption under power constraints 101933
BIST strategies at register-transfer and algorithmic levels 125341
BIST-based design-for-test method, breaking correl. to improve testability 101914
BIT for intell. syst. design & condition monitoring, overview 131805
bitmap results from embedded memory, yield enhancement 102131
bitmap/TENCOR inspection data correl. for IC yield anal. 100624
block-test scheduling under power constraints, combined tree growing 104053
Bluetooth module/single-chip device testing 74744
Bluetooth wireless technol., test challenges 131252
Boolean vector seq. pattern learning HMM, IC BIST appl. 116008
bordered/borderless contacts, electromigration lifetime, misalignment 69932
built-in current sens. devices for micro-IDDQ test of VLSI chips 127008
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
bus-based prog. SoCs, IP cores, self-test methodology 101920
C4 IC ultra-thinning, backside anal., first silicon debug 126931
CAS-BUS testing of TAPed and wrapped cores 81433
CCD camera FOV generation, neural net 100664
chem. amplified pos. resist profile change, re-adhering acid effects 103552
CMOS, full opens in interconnection paths, detectability conditions 125330
CMOS all-digital shunt-capacitor DLL, nonlin. reduction tech. 102318
CMOS analogue BIST, current sens., proc. var. independent 101736
CMOS and BiCMOS logic ccts., fault charactn. and DFT tech. for I_{DDQ} fault detect. 125438
CMOS antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
CMOS chip, sig. capture and timing meas. 102440
CMOS data commun. transceivers, at-speed testing, BIST methodology 101906
CMOS deep submicron technol., noise props. 70310
CMOS device mismatch, mech. stress impact 104122
CMOS digital ccts., defect-oriented fault simul. and test generation 79740
CMOS digital ICs for spacecraft appls., radiation effects, case study 133236
CMOS digital VLSI cct. fault detect., gate orient. effects 70305
CMOS dyn. I_{dd} test, current meas., energy consumption ratio 104096
CMOS embedded memory diagnosis via test response compression 102139
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
CMOS gate level phase shift lithog. eval., test chips 103700
CMOS gate oxide plasma proc. induced damage, transistor gate area depend. 104131
CMOS ICs, weak chips, MINVDD testing, min. supply voltage value 104116
CMOS latches, resistive opens, delay testing, DFT 102044
CMOS op-amps, radiation effects rel. to gate oxide growth method *(Chinese)* 101796
CMOS product screening strategy for low failure rate 81524
CMOS SRAM macro, quasi-worst-condition BIST 125487
CMOS SRAMs, dyn. power supply current testing for open defects 79883
CMOS technol., hot carrier emission, timing probe 127059
CMOS technol., low-k inter-metal dielec., act. ccts. under wire bonding I/O pads 127031
CMOS technol. develop., 0.35-μm, blanket/pocket anti punchthrough device designs 104091
CMOS/BiCMOS ccts., fault charactn./DFT for I_{DDQ} faults detect. 125406
CMP removal rate uniformity control, empirical-based modeling 81085
CMP slurries, extensive pump handling effects 103380
CMS tracker, APV25 0.25 μm CMOS readout chip 121715
colour counting tech. and appl. to path delay fault coverage in ICs 79742
combinat. ATPG algms., test pattern compaction, independent/compatible faults *(Korean)* 102095
combinat. cct. path delay faults, ATPG methodology 79810
combinat. cct. testing, power consumption optimisation 79805
combinat. ccts., resynthesis for path delay fault testability 125418
combinat. MVL ccts., genetic algm. for ATPG tool 90891
compact IDDQ test set generation method *(Japanese)* 79765
complementary pass-transistor logic ccts., testing, single-stuck faults 102018
crit. IC proc. failure prevention by in-situ particle monitoring 103944
cross-chip delay meas. and charcts. of delay modeling flow, boundary scan delay chain 79736
crosstalk originated error detect., error detecting codes optim. 79686
cryogenic spaceborne CMOS testing and optim. 76812
CSP flexure-induced tensile stress effects charactn./minimization, empirical strategy 78644
CSP proc. with reworkable underfills for mobile phone appls. 113708
current-based testing for deep-submicron VLSIs 70278
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
custom logic blocks, efficient path delay test generation 114718
data path synthesis, GA 114731
data path synthesis, GA 125404
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
DC-DC converters, capacitor/resistor integrat. for improved efficiency/miniaturisation 79553
deep sub-micron ICs, contact elec. probing, SPM tech. 115999
deep submicron SoC interconnects, high-level crosstalk defect simul. 104013
defect image, math. morph. filtering *(Chinese)* 73515
defect oriented fault diagnosis for semicond. memories, charge anal., theory and expts. 102138

integrated circuit testing continued
defect-oriented test scheduling, polynomial-time heuristic, globally optimal solns. 81491
design/test, DFT tool/ATE platform cooperation 126997
deterministic scan-BIST archit. with appl. to field testing of high-availability systs. 101994
deterministic software-based self-testing of embedded proc. cores 79911
DFT based methodology reduces fault-coverage anal. 101929
diagnostic March tests for memories, ATG algm. 102140
digital cct. design, reusable intellectual property block verification, prog. syst. 68705
digital lin. systs., concurrent testing 101969
digital VLSI, crosstalk faults, BIST *(Japanese)* 68666
DRAM, 512 Mb/0.12 μm design rule, long data retention time strategy 125490
DRAM cell transistor jn. leakage, band to defect tunneling, off-state bias-temp. stress 79887
DRAM retention time distrib. prediction method 79888
DRAM wafer probe testing strategies, impact of market changes 102146
dual-gate PMOSFET, B dopant penetration/gate depletion anal. for Gbit DRAM design 102184
dual-slope method time interval meas. core, CMOS technol. 101907
e-diagnostics for semicond. wafer e-factory capability 70236
eDRAM, embedded DRAM technol., leakage and retention test struct. 114771
electronics DFT, concepts/methods/implement. techs. 125887
electronics packaging struct., microDAC strain meas. 115994
embedded DRAM technol., 0.15 μm logic based, with 0.425 μm^2 stacked cell using MIM capacitor 125491
embedded memories, design and test 102130
embedded memory access time meas. using BIST circuitry 79745
embedded memory core testing, on-chip march pattern generator, low hardware overhead 125291
embedded PLLs, lock/jitter/stabil. verification/characterisation 114664
embedded PLLs, verification tests 79626
embedded RAM built-in self-diagnosis, use of syndrome compression 125479
embedded RAM fault diagnosis by syndrome compression, built-in self-diagnosis 79875
embedded SRAM of μPs, μCs and DSPs, efficient BIST method 102176
embedded test in semicond. chip and concept of embedded quality 78694
epoxy underfill materials, titanate/zirconate coupling agent effects 67599
EPROM cell plasma damage, RIE chem. effects 102165
ESD protection design, test models, failure mechanisms 104008
evaluating/forecasting syst. for test generation algms. 116014
failure anal., testing interface 127006
fault simul., high-level std. 68508
FCOB assemblies with/without encapsulation, reliab. 78654
FFM, functional fault modeling, opamp ccts., test generation 125241
FIB micro machining, vert. Ga distrib., defects, lateral contamination 115610
FIB techs. for IC failure anal. appls. 70289
flash cell arrays, SILC charactn. tech. 79896
flash EEPROMs, thin oxide, anom. cell cond. mechanism 79894
flash memories, erratic bit anal. 79889
flash memory, 0.25 μm, data retention, plasma charging/mobile ion effects 102164
flash memory proc. flow develop., circ. resist residue defects 102141
flip chip BGA underfill charactn. using rigid substr. 113562
flip chip packaging, acoustic micro imaging, overview/current status/future roadmap 113565
flip chip under-bump metall. conversion to intermetallics, reliab. impact 67624
flip chip-on-flex OnePass proc. improvement for clean products 113561
flip chip-on-flex packaging, 80 μm pitch, attachment reliab. 67620
flip chip-on-laminate assemblies, solder fatigue based reliab. modeling 78648
flip chip-on-organic packages, anisotropic conductive adhesives, reliab. enhancement 124332
flip-chip BGA packages, reliab. studies, power cycling test 67550
flip-chip electronic packages, quantitat. strain anal. by phase-shifting moire interferometry 121232
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
flip-chip underfill delamination mechanism/growth rate *(German, English)* 89865
flip-chip/CSP components on ceramic substrs., rapid power cycling 67621
FLOTOX EEPROM tunnel window form. proc. var. effects on reliab. 102142
focused beam US transducers, microelectronic materials props. effects 133374
force control based testing, flexible IC inserter 81498
FRAM retention testing, indiv. cell measuring method 79890
freq.-directed run-length codes, appl. to syst.-on-a-chip test data compression 101911
full-scan ccts., test appl. by input control tech., power consumption 79754
functional test coverage maximization in ASICs using evol. algms. 92440
gate oxide, ultra-thin, ESD protection device trigger transient effects on reliab. 70118
gate oxide reliab., transistor-limited const. voltage stress test 126946
gate oxide TDDB lifetime prediction under direct tunneling regime, gate voltage depend. model 126223
gate oxides, very thin, trap generation/breakdown procs. 69761
geometric-primitives-based compression scheme for testing systs.-on-a-chip 101913
Gray Field UV technol. for defect inspection systs., design/appl. 100630
handwriting recogn., high speed VLSI archit. 90945
HBM ESD test equipt., contact reliab. 127001
HDI flip chip-on-flex, base materials eval. 124359
HDI multilayers, low cost, using power mesh archit. 100599
hermeticity assess. by electrolysis 67630
HF μP, digitally adjustable resistor for path delay charactn. 68823
hierarchical fault diagnosis of analog and mixed sig. ccts. 103985
hierarchical IC test approach using boundary scan test 100556
hierarchical test of VLSI, transparency extract. and utilization 101923
high speed IC device perform. improvement using E-tests and SPICE model 79936
high-spatial-resoln. subsurface microsc., appl. to IC inspection 78686
high-speed high-dens. LSIs, internal waveform obs., EO sampling prober 116000
hysteretic ADC dyn. testing, IEEE 1057-94 std., nonlin. 120701
IC/MEMS packaging reliab. reliab. test methodologies, comparison 116054
IC/semicond. device ESD testing, transm. line pulsing set-up 104083
IEEE 1394b receiver chip testing, jitter meas. 131826
IEEE Std 1241-2000 for ADC terminology and test methods 90962
ILD PECVD induced charging damage, IC yield/reliab. effects 101375
IMPACT ADC IC yield anal., multiple defect class. technols., test sample shaping 104018

integrated circuit testing continued
in-line defect data for memory die, automated alignment scheme 104040
in-line SEM automatic defect class. for vol. IC fab defect reduction/yield enhancement 100636
indust. DSP block, semi-formal test generation, Genevieve methodology 102202
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
Intel Pentium 4 µP, validation 125550
interactive BIST appl., compression tech., test data vol. reduction 101909
interconnect reliab., fast wafer-level defect detect. and control 103481
interconnect testing, switching activity, automated BIST synthesis 104058
interconnect trees for electromigration reliab. estim. 92174
inverse gate electrode flash technol., CMOS proc. compatible, for syst.-on-a chip 90906
ion beam anal. for material studies at Ljubljana tandetron ion accelerator 70290
IP-based designs, delay fault testing via symbolic path modeling 125288
isothermal electromigration test as proc. control methodology, case study 81129
isothermal wafer-level electromigration test for metal syst. reliab. monitoring 126473
isotropic conductive adhesive joints in flip-chip test vehicle, HF meas. 67584
isotropically conductive adhesives as interconnect materials, flip-chip test vehicle 113688
JTAG based AC leakage self-test for digital VLSI ccts. 125303
killer-defect control using reliable high throughput SEM-automatic defect class. 104019
laser scanning wafer inspection syst., focal sens. develop. 78696
laser-SQUID microscopy for nondestructive nonelectrical-contact IC failure anal. 81497
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
leakage faults backside localization, thermal laser stimulation 126930
lin. cct. fault diagnosis, bilinear transform. in 3D & 4D space 101743
lin. histogram BIST for ADCs, time decomp. tech. 79964
lin. time-invariant ccts., algm.-based fault detect. 101742
liq. solder joint technol. for electronic assembly bonding *(German, English)* 89864
low power BIST test pattern generator, modified clock scheme 101924
low testability analog ccts., software program for ambiguity group determ. 90640
low-power 10 bit ADC, 0.25 µm CMOS, design/test results 121706
low-power systs. on chips, asynchronous and locally sync., software design 79696
LSI silica-based thermo-optic switches *(Japanese)* 93447
LTCC materials for high dens. multilayer interconnect 124378
LV CMOS ccts., I_{DDQ} testing, leakage control techs. 127033
mag. RAM technol., GMR/tunneling magnetoresist.-based, status/future prospects 90907
mask generation, automated tapeout syst. for prod. environ. 103585
MCM yield/cost trade-offs with KGD probab./repair 69376
metal contacts, rf precleaning, aspect ratio depend. plasma-induced charging damage 103315
micro-BGA/chip/wafer test/burn-in, high-dens. sockets 124338
microelectronic component SAM inspection, freq. domain anal. 124393
microelectronic indust. Raman spectrosc. anal. tech. 80519
microelectronic test struct., Kobe, Japan (Mar. 2001) 113210
microelectronics, conf., Tehran, Iran (Nov. 1999) 78403
microelectronics, devices and materials, conf., Postojna, Slovenia (Oct. 2000) 78447
microwave IC interrogation by photonics 102747
miniature mag.-field probe for HF currents meas., LSI and PCB testing 86920
minienvironment particle monitoring procedures 89815
mining IC test data to optimize VLSI testing 70261
mission logic for embedded testing, syst.-on-a-chip logic cores 79747
mixed digital and lin. analog ccts., fault diagnosis 125617
mixed sig. ccts., online fault diagnosis, simplified fuzzy ARTMAP appl. 80122
mixed sig. test bus, test waveform shaping by pre-equalization 102418
mixed-sig. cct., syst. level testing of analog fns. 68955
mixed-sig. designs, syst.-level test synthesis, hierarchical test approaches 102421
mixed-sig. IC testing, lin. model 102417
MLC IC-BGA device reliab. 78642
MM-wave cryogenic IC, on-wafer testing 69230
MM-wave on-wafer testing facilities, room & cryogenic temp. 80328
MNOS NVM technol., current status/future prospects 90904
MOS capacitor sensitive soft breakdown triggering, meas. syst. noise 104143
MOS capacitors, gate oxide breakdown posn. discrim., test struct. 104082
MOS diodes/capacitors, electron/hole tunneling current discrim. 81423
multi-port memories, simul.-based test algm. gen. and port scheduling 125498
multilevel DRAM with adjustable cell capacity, design 114766
multilevel interconnection with intermetal dielec. air gaps, reliab. studies 126430
multiple fault diagnosis of analog ccts. by locating ambiguity groups of test eqn. 101741
multiple logic defect diagnosis, full-scan design, curable vectors 101910
multiple scan chain design for two-pattern testing, seq. cct. appl. 102042
multiple-threshold mixed sig. CMOS technol., 1.8 V/3.3 V devices, mismatch charactn. 104125
multisite IC testing for reduced test time/costs 116007
µP EMC testing, capacitive and mutual resist. coupling *(German)* 79943
µP internal-SRAM testing using zero-overhead BIST 68834
µP IP cores testing, SOC develop. 79914
MVpGen test program generation tool for complex pipeline behavior verification 125563
n-detect. test generation, fault dominance appl. 101934
nanoparticle liq. suspens., drop-on-demand dispensing for microelectronics manufacture 100613
nanospring interconnects for high-dens. appls. 67609
neighborhood pattern-sensitive fault test algms. for semicond. memories 102136
NMOS capacitors, large area, soft breakdown triggers under const. voltage stress 81527
NMOSFET protection devices in 0.13 µm CMOS technol., hot electron/ESD stress interact. 81526
no-flow flip chip assembly, high throughput/low cost, underfill voiding, substr. design effects 69365
no-flow underfills, flip chip assemblies, adhesion charactn. 67626
nondestructive elastic probe technol., advanced elec. testing 92439
nonlin. analog ICs, optimum test stimuli, nonlin. prog., time-domain sensitivities 79539
on-chip subnanosecond sig. meas. ccts. 104076
online inspection for hidden internal defects 78691
opt. lithog. lenses, wave-front aberrations meas., IC mfg. appl. 126585
opt. positioning IC, on-wafer functionality test procedure 75506
order based diagnostic systs., rule evol. 102801

integrated circuit testing continued
over rejection detect. 104007
package delamination NDI, MM-wave inspection syst. 113764
package inspection enhancement using real-time X-ray systs. 100639
package thermal transients meas., hardware & software solns. 100605
parallel-serial scan cct., test pattern generation 125379
parameterizable error-propag. space compactors for response obs. 101912
path delay faults, diagnosis in at-speed environ., functionally sensitized path 102038
Pb-free reflow soldering impact on electronics packages 124358
photothermal deflection microscope, lin.-motor-driven pulse stages, IC appl 110033
pipelined ADC, struct. testing, BIST schemes 79987
pipelined ADCs, self-testable with low hardware overhead, BIST scheme 102276
plasma etch damage, charging pot./current densities, substr. connection effect 103432
plasma proc.-induced damage testing methodology for 0.13 µm CMOS technol 104129
plasma-assisted wafer de-chucking power-lift proc. induced charging damage 104056
poly(methylsilsesquioxane) ILDs, processible, synthetic control/props. 92145
polysilicon gate etching, 0.15 µm, in-line plasma induced charging monito 103427
post-etch dry polymer residue cleaning, stat. methods 126411
power constrained test scheduling, power profile manipulation 104052
PowerPC µP, anal. of testing methodologies for custom designs 102203
PowerPC µP, false timing path ident. 79920
probe pad structs. for MM-wave IC multi-module scheme at 76 GHz band 125791
proc. chamber recovery using pattern monitor wafer on inspection tool 10055
proc. control and diagnostics in semicond. mfg., conf., Santa Clara, CA, USA (Sept. 2000) 100413
proc. control subsystems, software-based self-test methodologies for perform faults 101995
product develop. time reduction by virtual test methodology 81445
prog. BIST for embedded SDRAM, Verilog BIST modules 125478
pseudo random BIST for detecting real defects, min. test length 104032
ramification of component selection 124303
random defect-limited IC yield using deterministic model 103955
real time yield checks at wafer test 104041
reliab., short-time tests, opt. interconnect/transistor failures, stat. models 78722
resistor matching charactn. for mixed-sig. proc. develop. using DAC 102430
RFI suscept., test procedures crit. assess. 72385
RT level test insertion using functional test metrics 68677
RTL coding style effect on testability, use of RTL code analyzer 101993
RTL partial scan design syst. *(Japanese)* 79767
safety crit. microelectronic ccts. perform., EMC 81422
SC filters based on allpass sects., testability 80068
scanning Kelvin probe microsc., electrostatic pot. meas., cantilever effects 97770
scanning SQUID microscopy, noise, spatial resoln., IC appl. 70817
scanning SQUID microscopy for current imaging of ICs 116001
self-primed spin-on low-k materials testing for wafer cost of ownership optim 92124
semicond. failure anal., SPM 127002
semicond. failure anal., SPM appls. 113779
sensitivity based analog fault dictionary 90711
seq. cct. test generation using state transit. diag., combinat. cct. part 114728
seq. logic ccts., design diversity for concurrent error detect. 102045
shifter/accumulator pairs in datapaths, deterministic BIST scheme 125331
sigma-delta techs. for integrated test and meas. 126951
siloxane-based low k materials, heat/moisture resist., IC appl. 104238
single-insertion multiple-temp. IC testing 103983
single-photon avalanche diodes, defect charactn., CMOS proc. monitoring 104965
SoC, early error detect. for fault tol. and at-speed debugging 101919
SoC and core verification at Motorola 125351
SoC design, testability stds. 115992
SOC design verification, port order fault model 104054
SoC device modelling for virtual test using VHDL 80115
SoC embedded cores testing, twisted-ring counters use 101966
SoC interconnect crosstalk defects testing using on-chip embedded proc. cores 126977
SoC test framework 81431
SOC test resource partitioning, Object Oriented Paradigm and UML 79675
SoC testability using LSSD scan struct. 104005
socillator test, delay test scheme for embedded ICs in boundary-scan environ. 104012
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
SOI complementary BiCMOS devices, perform. eval. using test struct. 104147
solder droplet printing technol., high precision, principles/appls. 69366
source-measure units, automated testing role 131808
speed-independent async. ccts., test pattern generation 79807
SPIRIT, highly robust combinat. test generation algm. 102072
spreading resist., lapping bevel angle, meas. accuracy effect *(Chinese)* 70265
SQUIDs for IC defect location/failure anal. appls. 126998
SRAM chips, high standby current due to spurious gate reticle image printing 79901
SRAM early failure rate reduction, dyn. voltage stressing appl. 81495
SRAM parametric yield enhancement, cct. level device optim., stat. cct. simul. 125486
SRAM transparent testing methodology using dyn. power supply current 114738
stat. methodology, conf., Kyoto, Japan (June 2001) 124210
static CMOS PLA, testable design method, IDDQ testing 79806
static latches, cosmic ray induced soft errors, scaling trends 125458
static nonlin. testing of D/A converters, bit intermodulations 114828
step response based mixed-sig. BIST approach 68953
stress tests, moisture-based failure modelling 126953
stripe-like test jns., ion beam induced charge collection 115804
structural defect anal., trends 104020
stud bump bonding flip-chip technol., chip-on-flex develop. 69363
sync. DRAM for space appls., 64 Mbit, testing 90919
syst.-on-a-chip, combining low-power scan testing and test data compression 125347
syst.-on-a-chip, test techs. *(Italian)* 90817
syst.-on-a-chip DFT strategies 126968
syst.-on-a-chip optimal test access archits. 115989
syst.-on-a-chip precedence-based, preemptive, and power-constrained test scheduling 104031
syst.-on-a-chip test data compression/decompression 81432

grated circuit testing continued
syst.-on-a-package, high-dens. PWB substr., ultra-fine photoresist image form. 124382
technol.-tolerant I_{DDQ} method for CMOS digital IC diagnosis 101917
test seq. compaction method for seq. ccts. with reset states *(Japanese)* 79766
TFT-array testing for high resoln./high content AMLCDs 81494
timing anal. tool, intrinsic photon emission 127007
token scan cell for low power testing of scan-based ccts. 68691
tristate syst. environ., fault detect. 125173
tunneling opens diagnosis, screening and localization issues 104011
two-amp. partially act.-R sinusoidal oscillator 68640
ULSI, local cross-sect. EBIC, local jn./defect delineation 116002
ULSI device isolation struct., metal impurities behaviour 81107
ULSI plastic packaging, die cracking eval./improvement 100619
ULSI TDDB charact., nitridation effects, oxide thickness depend. 104081
ultra thin oxides, soft breakdown detect., noise-based trigger algm., accurate/robust 81531
ultra-pure proc. gas filter membranes, contamination contrib. eval. 103381
ultra-thin FCOB assembly 115222
ultra-thin gate oxide soft breakdown, plasma proc. induced damage correl. 103426
ultrathin gate oxides, soft breakdown, stat. anal. 126221
ultrathin wafer handling/probing 126260
unified DFT archit., IEEE 1149.1 and VSIA/IEEE P1500 compliant test access controllers 125339
uniform march tests, optimal, memory ICs, fault coverages 102137
very low cost testers 114686
via line structs., electromigration tests, fast wafer level/std. package level 115680
VIA/BGA(R)low-cost high-perform. packaging technol. for broadband telecomms. 78613
via/line package level/wafer level tests, comparison 81131
video ADC, differential gain & phase testing, time-freq. anal. 114842
virtual test for semicond. product develop. time reduction 70260
VLSI, single event transient testing, OBIC imaging 127003
VLSI chip, EB/FIB integrated test syst. 127005
VLSI layout anal., geom. proximate nets 81472
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
VLSI test generation for maximizing ground bounce for internal circuitry with reconvergent fan-outs 101935
voltage overshoots in high-speed digital SoCs, built-in-chip testing 101916
wafer bumping by solder paste printing, stencil design improvement 113560
wafer bumping technol. for cost-effective packaging 67618
wafer burn-in failures and local region yield, integrated field-reliab. model 104030
wafer defect/excursion monitoring technol. 70235
wafer fab., sidewall polymer contamination during metal etching 103350
wafer level reliab./packaged electromigration tests, expt. comparison 81130
wafer level stress data use as early burn-in/reliab. predictor 104017
wafer level/parametric IC test systs. for design/life cycle enhancement 104042
wafer probe test stat. bin anal. 104015
wafer probing technol. in IC mfg. 70266
wafer proc. liq.-handling syst. component testing to ensure purity/reliab. 81076
wafer test automation in 300 mm environ. 116011
wafer-level batch packaging technol., elec. testing 113659
wafer-level packaging, technol./implement., education 124361
weighted pseudo-random testing hybrid BIST, test resource partitioning scheme 101908
wire bond integrity, probe scrubbing damage effects 113682
yield learning, line SEM inspection 100628
yield mgt., automated image retrieval syst., field test 100627
yield mgt., customized AutoSAT templates in foundry environ. for better recipe set-up 100626
yield optim. for mature semicond. fabricators 104016
Al 1 µm line, fault localisation, thermal laser stimulation, 3D finite element ANSYS model anal. 127004
Al interconnects, stress-induced voiding in proc. qualification, quantitat. assess. 81133
Al passivated line test struct., sub-µm wide, grain orient./strain meas. 92175
Al via-void generation mechanism for Gbit-scale DRAM, anal. 79900
Al-Cu thin-film metallizations, thermal aging, reliab. tests 115669
Al-based interconnect reliab., width transit. effects 92120
AlCu interconnects, electromigration behaviour, stress-induced voiding effects 92176
AlCu line wafer level electromigration testing, isothermal/const. current/SWEAT methods 81128
AlGaAs/GaAs deep submicron PHEMT MMIC amps., high-reliab. Q-band perform. 125773
AlN-filled underfill, high thermal cond., for flip-chip appls. 67565
Al_2O_3 plasma-induced surface charging modif. by VUV radiation 101197
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
Au interconnections, electromigration/electrochem. react. failure mechanism 115673
Au-polyimide ILD multi-level interconnect proc. using dual 4.5 µm-thick metal layers 69961
CdZnTe wafer, effective temp., micro-PL map *(Chinese)* 93450
$CoSi_2$ CMOS test struct., 0.18-µm, latchup charactn. 104095
Cu backside contamination issues in CMOS proc. integrat., case study 92476
Cu damascene interconnects, electromigration charactn. vs. texture anal. 92116
Cu dual damascene microstruct./via chain yields, annealing conditions optim. 126487
Cu interconnect features, elec. linewidth, test chip 103495
Cu interconnect, wafer level reliab. monitor, isothermal testing 103474
Cu interconnections, microstructural anal. using ps US 92170
Cu metallisation, wafer probing, testing techs. 92451
Cu metallization, 0.10 µm wide lines, failure obs. by OBIRCH method 126459
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu single/dual damascene oxide/low-k ILD interconnects, plasma charging damage issues 103486
Cu single-inlaid interconnects, electromigration failure, Blech effect 115679
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu/Ta/TaN barrier interconnects, electromigration tests, AES anal. 103485
Cu/barrier metal/low-k materials integrat., interface adhesion, quantitat. study 92141
Cu-SiO_2 dual-damascene interconnects, electromigration reliab. 92115
Cu-SiO_2 dual-damascene interconnects, electromigration early failure stats. 81134

integrated circuit testing continued
GaAs IC reliab. prediction from life test data, regression tech. 70242
GaAs ICs, direct fault detect./anal. using EO sampling syst. 79668
GaAs MMIC through-substr. via inductance, multiple on-wafer test approaches 102741
GaAs PHEMT MMIC power amps., reliab. study 115004
GaAs chip fab. facility, data-driven yield mgt. syst. 103969
GaAs direct digital mm-wave receiver MMICs, six-port 96404
GaAs monolithic integrated LD driver, on-wafer testing *(Chinese)* 93578
HgCdTe opt. sens. for IC fault isolation 103984
InP transferred substr. HBT technol. continuous-time Σ-Δ A/D converter 125577
Ni electroless deposit-Cu/Al/Si bump pad adhesion strength, flip chip bonding 124376
O plasma wafer bonding, low temp. epitaxial layer transferring 115637
Pb-free leadframe packages, plating chem. eval./reliab. 113700
Pt-$SrBi_2Ta_2O_9$-Pt capacitor-based FRAM, imprint failure lifetime estim. 90909
Si IC foundry yield enhancement/mgt. using Iddq stress current signature 81415
Si polished wafers, total thickness variance and site flatness, comparative study 115657
Si wafer fab., nodules due to Si precip. 103950
Si wafer strength/surface morph. correl. 100593
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
SiO_2 damage test wafer plasma etch, electron temp., trace rare gas opt. emission spectra 103428
SiO_2 direct-write ion beam induced CVD for IC post-proc. modif./repair 115978
SiO_2 gate oxide growth on plasma damaged Si surfaces, quality degrad. 103430
SiO_2 nanoporous thin film microstruct./electronic props., proc./annealing effects 92158
SiO_2 thermal growth in home-made furnace, structural charact. 103382
SiO_2 ultra-thin gate films, leakage current through multiple breakdown paths, modeling 81530
SiO_2 ultra-thin gate oxide degrad./breakdown, quantitat. H-based model 126222
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damascene eval. 92146
SiO_2:F glass films, prep., struct., IC appl. 114345
Sn-Ag Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb-Bi Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-Cu-Sb(Bi) Pb-free solder alloy for high-temp. microelectronics appls. 100594
Sn-Ag-In Pb-free solder alloy for high-temp. microelectronics appls. 100594
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
$TaSi_xN_y$ gate electrodes for dual gate CMOS devices, elec. charact. 127038
Ti-AlCu-TiN metal lines with refractory barriers, electromigration improvement, reservoir modeling 81132
W post-CMP defect inspection, recipe optim. 100637
W-WN_x(TiN) metal gate electrode sputter deposition, gate dielec. charact. 70306
W-ZrN-polysilicon gate electrode config., ZrN barrier thermal stabil. 81115

integrated circuit yield
0.18 µm ASIC MOSFETs, robust design using Taguchi method with TCAD 126991
AIT-II dark-field inspection tool with automatic defect class., method/cost effectiveness 100629
analogue IC mismatch, yield, spec-wise lin., feasibility-guided search 125217
ASIC implant charging, photoresist bake, electron flood gun effect 115582
automotive hybrid IC proc. error reduction, microcontroller implement. 125918
Axcelis GSD-HE series implanters, continuous variable aperture, throughput 115543
BGA/CSP semicond. packaging rework/repair, outsourcing aspects 67592
BISRAMGEN phys. design tool for BISR RAMs 68809
bitmap/TENCOR inspection data correl. for IC yield anal. 100624
bonded wafer yield increase by acoustic micro imaging 89902
bondpad peeling failure in wafer fab., AES/EDX studies 103949
C4 IC ultra-thinning, backside anal., first silicon debug 126931
chem. amplified resist contamination, imperfect wafer environ. control cost 115738
CMOS antenna testers, plasma proc.-induced oxide failure fraction/antenna ratio rel. 104127
CMOS current-steering D/A converters, stat. yield model 125581
CMOS gate oxide plasma proc. induced damage, transistor gate area depend. 104131
CMOS image sens./IC products, prod. line cross-contamination study 104101
CMOS SoC, 100 nm, multi-gate dielec. technol. using H pre-treatment 127044
CMOS SRAM, yield-limiting NMOSFET gate depletion 104106
CMP slurry anal., particle meas. 103384
CMP slurry flow rate/point-of-use filter life using press. transducer/flowmeter 103395
cpd. semicond. indust., high-vol. mfg. 103973
crit. IC proc. failure prevention by in-situ particle monitoring 103944
CSP/BGA packaging yield enhancement with solder flux/paste proc. control 124333
current division network, 10-bit, stat. design, MOSIS 2-µm proc. 125582
data mining solves tough semicond. mfg. problems 67517
deep submicron semicond. IC design *(German)* 81444
defect inspection/metrology, proc. integrat. 100638
defect level estim. and model accounting for fault clustering effect 104044
divided word line memory, block-repair fault-tolerant archit., BISR 102134
DRAM wafer probe testing strategies, impact of market changes 102146
DUV stepper lens contamination control, purged gas purification 126579
e-mfg. domino effect for IC proc. efficiency/yield/productivity enhancement 103961
electronic indust. work-induced stress anal. in ergonomics, fuzzy decision approach 89833
embedded DRAM technol., 0.15 µm logic based, with 0.425 µm² stacked cell using MIM capacitor 125491
FCOB, FCOB, no-flow underfill materials, yield anal., proc. modeling 78667
flash memory proc. flow develop., circ. resist residue defects 102141
floorplanning algm., yield enhancement 81466
FluxFill self-fluxing underfill product develop./pager product implement. 113705
fusion-bonded SOI wafer yield enhancement by acoustic inspection 126259
general clock distrib. networks, stat. skew modeling 125290
Gray Field UV technol. for defect inspection systs., design/appl. 100630
HEMT MMIC RF yield forecasting methods 69233
high dens. DRAM, bit line coupling scheme and elec. fuse cct. 125507
high speed DRAMs, yield improvement, column redundancy scheme, multiple bit pre-fetch struct. 125511
high-dens. DRAMs, bipolar-voltage prog. antifuse cct., post-package bit-repair scheme 125510

integrated circuit yield continued
ILD PECVD induced charging damage, IC yield/reliab. effects 101375
IMPACT ADC IC yield anal., multiple defect class. technols., test sample shaping 104018
in-line defect data for memory die, automated alignment scheme 104040
in-line SEM automatic defect class. for vol. IC fab defect reduction/yield enhancement 100636
in-situ plasma etch proc. endpoint control in IC mfg. 103376
interconnect proc. var. and timing anal., pico-second differences 126992
killer-defect control using reliable high throughput SEM-automatic defect class. 104019
laser microchemical direct write deposition/etch methods, real-world appls. 103978
line SEM inspection for IC yield learning 100628
lithog. overlay meas., model-based lot disposition algms. 81143
LSI yield anal. based on crit. area model *(Japanese)* 116003
Lucent Technologies, yield components, knowledge-based automatic software tools 103725
Mahalanobis-Taguchi syst. for wafer yield prediction 124414
MCM yield/cost trade-offs with KGD probab./repair 69376
mgt., automated image retrieval syst., field test 100627
mgt., customized AutoSAT templates in foundry environ. for better recipe set-up 100626
mixed-sig. IP blocks, DFM characts. and optimisation 104138
mm-wave telecomm. modules, MMIC spread compensation, automatic output power control 91341
MMIC, large-sig. charact., nonlin. stat. model 102716
MNOS NVM technol., current status/future prospects 90904
modeling method for design rule trade-off in interconnection substrs. 81479
MOS digital ccts. with perform. limited yield, proc. variability 125376
MOS ICs, parametric yield optim. rel. to device mismatch 127066
multiple logic defect diagnosis, full-scan design, curable vectors 101910
nonvolatile memories, fully qualified analog design flow, CAD tools 79541
OEICs, yields, packaging aspects, CAD tools 93446
optim. for mature semicond. fabricators 104016
package encapsulation, back-end proc. overview 78662
packet-based DRAM with daisy-chained redundancy scheme, 2 GB/s, 256 Mb 125508
parametric timing yield estim. from static timing anal., robust design for-quality 81469
plasma etch damage, charging pot./current densities, substr. connection effects 103432
plasma etching, wafer temp. meas./control 92044
plasma etching of nonvolatile materials, contamination, by-product deposition mgt. 103431
plasma/proc.-induced damage control, symposium overview 103976
polysilicon DRAM capacitor storage electrode, Raman spectra/PH_3 anneal/elec. props. 103243
polysilicon wafer edge die yield loss elimination for accelerometers 97579
pos. tone photosensitive polyimide photoresist for broadband stepper use 81144
proc. chamber recovery using pattern monitor wafer on inspection tool 100555
proc. control strategy based upon device perform. metrics 100721
quality of design from IC mfg. perspective 81462
random defect-limited IC yield using deterministic model 103955
real time yield checks at wafer test 104041
reconfigurable MCM syst., enhanced quality, redundant utilisation 102879
reticle defects, detect./repair/printability for 193 nm exposure 126563
shared fuse macro for multiple embedded memory ASIC devices with redundancy 102183
SimWitch software tool for materials stream cost distrib. assess., FLIPAC Esprit Project 67494
split-gate flash device, registration and proximity effect 102156
SRAM parametric yield enhancement, cct. level device optim., stat. cct. simul. 125486
stat. methodology, conf., Kyoto, Japan (June 2001) 124210
STI for CMOS logic technol., mfg. optim. 104097
structural defect anal., trends 104020
supercond. digital logic cct., yield optim. 70957
tape-and-reel packaging technol., improved perform./reliab./cost-efficiency 124362
tunneling opens diagnosis, screening and localization issues 104011
ultra clean proc., conf., Ostend, Belgium (Sept. 2000) 78425
UV resists, 193 nm, CD degrad. during SEM inspection, mechanistic studies 103550
VLSI cct. layout, missing material defects, crit. area 70250
VLSI sub-resoln. proc. windows, yield estim., detailed full-chip CD simul. 103572
VLSI technol., stat. many-dimens. simul., response surface methodology 67667
VLSI wafer fab., optim., neural network *(Chinese)* 81171
VLSI yield optim. design based on sub-proc.-element level redundancy *(Chinese)* 104023
wafer burn-in failures and local region yield, integrated field-reliab. model 104030
wafer carrier replacement for improved IC yield/tool availability 115986
wafer contaminant location/ident. by IR microscopy/fluoresc. illum. 70230
wafer dicing proc., fully automatic syst., collaborative study 103947
wafer fab. technol., defect mgt. strategies, inspection technols. 124415
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
wafer level stress data use as early burn-in/reliab. predictor 104017
wafer probe test stat. bin anal. 104015
wafer probe yields and IC design sensitivities, yield loss Pareto 81467
wafer sort yield, robust windowing method for Poisson yield model, appl./validation 103954
wafer stepper, 300 mm, for bump/wafer level scale packaging appls. 126520
wire bonding, robust bond model, proc. implement. 69372
AlGaAs/InGaAs mm-wave Q band power pHEMT proc. technol. 115021
Au bumped flip chip assembly using anisotropic conductive/nonconductive adhesives 124357
Au-polyimide ILD multi-level interconnect proc. using dual 4.5 μm-thick metal layers 69961
Cu CMP proc. modules, defect class. 126502
Cu IC interconnect proc. characterisation using ps sonar noncontact opt. technol. 126494
Cu dual damascene microstruct./via chain yields, annealing conditions optim. 126487
Cu dual damascene proc. defect tracing 126496
Cu/SiLK resin dual damascene, low permitt. spin-on hardmask 126452

integrated circuit yield continued
Cu/low-k interconnect CMOS platform, 0.13 μm, for SoC appls. 127019
GaAs 6 inch wafer mfg., cost effective yield enhance. using August NSX sys 126924
GaAs MMIC yield mgt., data-driven strategy using data warehouse 115011
GaAs MMIC-design and mm-wave module prod. yield 125808
GaAs chip fab. facility, data-driven yield mgt. syst. 103969
GaAs wafer mfg., dicing improvements for yield enhance. and throughp increase 126925
HgCdTe opt. sens. for IC fault isolation 103984
Si IC foundry yield enhancement/mgt. using Iddq stress current signature 8141
Si IC technol., materials introduction, contamination risk 103974
Si polished wafers, nanotopography anal. techs. 75868
SiGe HBT technol. implement., low-temp. UHV/CVD tech. 103778
SiO_2:F FSG proc. develop., Cu/damascene technol., PECVD reactors 126447
Ti-TiN long throw/ionized PVD liners for W-plug contact/via appls. 103469
W post-CMP defect inspection, recipe optim. 100637

integrated circuits
see also analogue integrated circuits; digital integrated circuits; high-speed integrated circuits; hybrid integrated circuits; integrated optoelectronics; large scale integration; masks; microwave integrated circuits; millimetre wave integrated circuits; monolithic integrated circuits; power integrated circuits; submillimetre wave integrated circuits; substrates; superconducting integrated circuits; thick film circuits; thin film circuits; UHF integrated circuits
board fault detect. using histogram of thermography 124398
commun. networks convergence to multiservice systs. *(German)* 85128
conf., advanced radiation dosimetry, Athens, Greece (July 2001) 124201
DIP intell. power module, 4th generation planar IGBT 70147
elec. bicycle, DC motor speed control, load induction unit 123988
elec. drives, low-power semicond. devices integrat. 100240
image proc., neocognitron neural net 102836
intell. switching for efficient power control 99244
laser microfabricated detector design review 132349
liq. metal alloy ion sources for microelectronics indust., review 103229
microelectronic devices unipolar charge induction modelling 128662
microelectronic indust. Raman spectrosc. anal. tech. 80519
microelectronics, conf., Kuwait (Nov. 1999) 67387
microelectronics, devices and materials, conf., Postojna, Slovenia (Oct. 2000 78447
microelectronics devices, failure anal., spectrosc. photon emission microscop appl. 115997
microelectronics education online courseware library using Java applets 7851
polyimide film ILD form. for VLSI/ULSI devices 104413
portable equipt., ZXSC100 integrated DC-DC converter chips 123580
security alarm syst. batt., charge/discharge, peripheral interface controller 1 113419
telecomm. distributed DC-DC converter, PWM controller IC 96288
thin film decoupling ccts., 3D integrat. of thin film pass. components 102837
Si, vertex tracking detector design for top quark discovery expts. 132326

integrated control systems *see centralised control*

integrated horn antennas *see horn antennas*

integrated logic circuits
see also application specific integrated circuits; BiCMOS logic circuits; bipolar logic circuits; field effect logic circuits; logic arrays
2D inter-chip opt. interconnect, opt. I/O 93453
3D silicon and recogn. based logic, enabling road to HAL 91131
300 mm foundry IC mfg., overview 124307
asynchronous cct. testing, techs. and ATE archits. 79788
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0. μm rule *(Japanese)* 68773
capacity anal. tool for IC manufacture 100554
carry-save representation based arith. implement. 90878
carry-save-adder based arith. ccts., timing and area trade-offs for optim. 7984
combinat. cct. path delay faults, ATPG methodology 79810
combinat. ccts. design error diagnosis without error model 101947
combinat. logic blocks, coupling and noise aware delay anal. 68748
combinat. MVL ccts., genetic algm. for ATPG tool 90891
conditional keeper tech. for sub-0.13μ wide dyn. gates 125456
cube rooting, digit-recurrence algm. and logic cct. implement. 68767
custom logic blocks, efficient path delay test generation 114718
digital logic ccts., compiler driven simul. tech. 79839
domino logic ccts., coupling-aware min. delay optim. 102108
double-step mask-making, mask gate CD vars., logic appl. 92223
dyn. power mgt. tools, integrat. in IC design flow 101946
electronic logic devices, review 114693
fast asynchronous ccts., design proc. 79786
field-evolvable hardware based on flash memory-incorp. μP 90954
formal verification, recurrence eqns. & equivalence checking 68709
hard mask STI etch proc. for ≤0.13 μm logic technol. 103378
hidden double data transfer scheme for merged DRAM logic design 68806
high-perform. and low-power technol. roadmaps 103964
high-security cryptographic fast finite field multiplier archit. 114712
high-speed bit-parallel systolic multipliers for class of GF(2^m) 125409
IGBT gate driver, monolithic, for smart power modules, CMOS 0.8 μm/50 proc. implement. 81538
logic/syst. LSI, front end of line technol., review 115506
low power-delay-product multiplier with dyn. operand exchange 68782
merged DRAM-logic computing 90894
modified Booth 1's complement and modulo 2^n-1 multipliers 68739
new materials for act./pass. integrated devices, wireless appls. 69221
on-chip interconnections in integrated Josephson jn. logic schemes 114722
pass transistor logic macrocells, automatic layout generator 79798
pipelined logarithmic no. syst. ALU, low power design 90872
seq. logic ccts., design diversity for concurrent error detect. 102045
single clocked adiabatic static logic for digital low power appls. 68759
smart photonics, optoelectronics integrated with Si CMOS VLSI ccts. 93445
speed-independent async. ccts., test pattern generation 79807
structural anal., hierarchical class. algm. 79748
sync. data-path ccts., sig. represent. guided synthesis using carry-save adder 125442
testable data path synthesis, GA 125404
testable data path synthesis, GA 114731
VCR digital FM demodulator 131776
VITAL VHDL gate level std., cycle-based simul. 125405
InAlAs/InGaAs/InP HEMTs and InAs/AlSb/GaSb RITD, monolithic integra 70321

egrated manufacturing systems *see computer integrated manufacturing*

egrated memory circuits
see also bipolar memory circuits; CMOS memory circuits; DRAM chips; field effect memory circuits; flash memories; SRAM chips
amorph. nonvolatile semicondoctor memory technol. and appls. 68796
AMULET3i async. dual-ported copy-back cache archit. 79874
bitmap results from embedded memory, yield enhancement 102131
CATS design data transcription streamlining for memory products, mask manufacture 102157
clocked FIFO in asynchronous syst. appls., metastability perform. 102170
CSP/MCM-L impact on portable wireless product substr. requirements 124381
defect oriented fault diagnosis for semicond. memories, charge anal., theory and expts. 102138
diagnostic March tests for memories, ATG algm. 102140
EEPROM technol. charge pump ccts., power consumption modelling 102148
electron spin-based semicond. device technol. 126912
embedded memories, design and test 102130
embedded memory access time meas. using BIST circuitry 79745
embedded RAM built-in self-diagnosis, use of syndrome compression 125479
embedded SRAM of µPs, µCs and DSPs, efficient BIST method 102176
energy efficiency of µP memory struct., architectural/cct.-level 101944
FeRAM, 1T1C, fatigue-free ref. scheme and proc.-induced damage 114741
FeRAM device and cct. technols. fully compatible with advanced CMOS 102179
ferroelec. capacitor for FeRAM design, macro model *(Chinese)* 114757
flash cell arrays, SILC charactn. tech. 79896
flash EEPROMs, thin oxide, anom. cell cond. mechanism 79894
flash for portable appls., energy consumption considerations 102126
flash memory, 0.25 µm, data retention, plasma charging/mobile ion effects 102164
flash memory device technols., review 90905
flash memory proc. flow develop., circ. resist residue defects 102141
flash memory read disturb reliab., appl.-specific usage model 79898
floating gate NVMs, low temp. data retention, reliab. methodology 79897
FRAM retention anal. method based on memory cell read sig. voltage meas. 102162
hybrid wave-pipelined bit-pattern associative VLSI router 90824
in-line defect data for memory die, automated alignment scheme 104040
JPEG video rate compression on parallel single-chip digital CMOS imager, transpose memory 95272
low power multiport memories exploration/design 114767
LV operation FeRAM, bit-line ground sense tech. 125484
mag. RAM technol., GMR/tunneling magnetoresist.-based, status/future prospects 90907
MMU, fully associative TLB, CAM match cct. 125535
motion estimator for three step search block-matching algm. 118540
multi-level flash memory, detrapping-induced threshold voltage shift, anal. method 125472
multi-port memories, simul.-based test algm. gen. and port scheduling 125498
µP and PLD, on-chip debugging tool and embedded memory *(Italian)* 90929
neighborhood pattern-sensitive fault test algms. for semicond. memories 102136
non-volatile memories for microsystems in automotive appls, reliab. 114765
nonlin. memory power modelling 79879
nonvolatile memories, fully qualified analog design flow, CAD tools 79541
plasma related damage and proc.-induced phenom., conf., Monterey, CA, USA (Nov. 2001) 100381
polyvalent error control codes for multilevel memories 68792
program word-line voltage generator for multilevel flash memories 68794
solid-state mass memory, fault tolerant, dyn. routing syst. 102172
split-gate flash EEPROM coupling coeff. meas. method without extra test struct. 102163
SyncFlash memory, high perform. sync. flash device 68803
systs. on a chip, embedded memory 102128
TaO_xN_y high-k dielec. materials 102144
ternary CAM, Ultra2M and Ultra9M devices *(Italian)* 125465
uniform march tests, optimal, memory ICs, fault coverages 102137
very deep sub micron memories, soft error rate, syst. reliab. 68804
Xilinx Virtex II self-addressing FIFO using FPGA features 68797
C_{60} mol. transistor, memory/adder model 125932
SiN tunnel dielec. flash memory cell, 55 Å EOT, demo. 114773

egrated optics
see also integrated optoelectronics; optical films; optical modulation; optical planar waveguides; optical waveguides
1.52 Tbit/s OCDM/WDM transm. expt. 75032
1.5-µm tilted integrated superluminescent light source 127971
1-to-4 opt. TDM DEMUX, photonic ADC 86082
1D & 2D laser line scan generation, fibre opt. reson. scanner 71381
2×2 cross-point switch fab. on pass. act. reson. coupler platform 116745
2D mode solver integrated optics design methods 127720
2D photonic crysts., candidate for wave plates in microwave photonics 69249
2D photonic crysts., wavelength DEMUX and opt. filters, freq. anal. 82183
2D waveguide-based photonic crysts., 3D control of light 82182
3D photonic cryst. fab., fs laser interf. tech. with diffr. beam splitter 93152
3D shape inform., opt. methods, hybrid methodology, overview 132168
3D wide-angle wave eqn., opt. wave propag. 71312
3R regenerator in SOA delayed-interf. config. 96696
4×4 parab. tapered MMI coupler fab. in SOI technol. 71348
770 nm source based on seeded fibre amp. and PPKTP, power scalability 117099
ADM with UV-written Bragg gratings and directional coupler 120143
all-opt. logic AND in SOA-based Mach-Zehnder wavelength convertor 93277
all-opt. serial-parallel & parallel-serial data convertors, MZI based 93276
all-opt. tunable interferometric bandpass filter, DARR loaded coupler 93146
anisotropic/magnetooptic waveguides, FEM full vectorial beam propag. method 116712
antenna array Fourier opt. proc. beamforming network 120704
ARC dielec. resonators for integrated optics 116751
arrayed waveguide grating based OADM, loss-imbalance equalization 120358
arrayed waveguide grating multi/DEMUX, design optim. *(English)* 86100
arrayed waveguide grating wavelength tuned beam steerers 82746
astron. interferometers, integrated optics appl. 127791
asymmetrical opt. rib waveguide propag. charact. 116691
athermal all-polymer arrayed-waveguide grating MUX 75007
AWG-based thermo-optic wavelength tunable filter using polymer waveguides 116722
axial line scanning device, display/printing appls. 86863
bicorn single-mode waveguide filters, strong broad rejection 127890
BPM, parallel algm. for 3D nonlin. problems 117413
Bragg grating assisted MMIMI-coupler for tunable add-drop MUX 109203

integrated optics continued
branched output arrayed-waveguide gratings, simultaneous multichannel monitoring purposes 127769
cascaded TW electroabsorption modulator, distributed effects model 93237
χ^2-waveguide arrays, beam steering/switching 131393
CMOS photodetectors/receivers for smart-pixel based photonic systs. 97341
colloidal photonic crysts., chem. assembly strategy, review 127568
compact mode-size lensing converters, integrated opt. waveguide/fibre coupling, FDTD simul. 131554
compact opt. encoder with micromachined photodetector 86973
conducting interfaced dielec. slab waveguide guided light propag. 127767
conf., integrated photonics research, Quebec, Canada, July (2000) 113278
conf., San Jose, CA, USA (Jan. 2001) 124185
cross-connects, requirements, archits. and technols. 96870
cross-over opt. waveguide using polystyrene micro-sphere arrays/thin film bank 104746
DAC, pulse pattern recogn. 127781
device modelling by time-domain BPM 71324
DFB laser array, wavelength selection, MMI coupler and SOA 117232
diffractive optics-act. semicond. components integrat. 104747
digital opt. cct. switches and switching matrices in polymers 131590
diode lasers, real refr. index guided self-aligned struct., monolithically integrated 71813
divided thin-film heater tunable dispersion equalizer, Gb/s RZ transm. appls. 96694
DOE, design, microfabrication and testing, fiber coupling appls. 104857
DOE fab. for opto-electronic hybrid IS 104779
DOE wide FOV array, integrat. with photodetectors 104855
DOEs transfer into GaAs, direct-write electron-beam lithog., VCSEL integrat. 105400
DWDM-systs., pass. opt. components 131505
eight-channel bent waveguide SOA array for hybrid PICs 71782
electroabsorption laser modulators, integrated with DFB-LD, for DWDM 127831
electroabsorption modulated-integrated DFB laser modules, output charact. 105343
electroabsorption modulator integrated DFB laser for WDM fiber telecomms. 116737
electroabsorption modulator integrated DFB lasers, optimal wavelength detuning 116824
electroabsorption waveguide modulator/HBT monolithic integrat. for 1.55µm 116731
electron-opt. modulators based on free electrons 104814
EO modulator coupling loss improve. by waveguide and fiber tapering 116827
EO polymer based grating-assisted codirectional coupler filter 116900
EO polymer integrated optic devices, space appls. 93451
femtosecond modelocked fiber laser, WDM pulse generation, pulse shapers, arrayed waveguide gratings 120315
fiber mgt. for opt. board integrat. *(Japanese)* 120292
fiber optic gyroscope closed-loop syst., modified digital serrodyne proc. *(Korean)* 75554
fibre optic sens., automotive meas. appls. 120825
free-space micro-opt. components & appls., overview 104788
free-space micro-opt. intra-MCM interconnection modules, design and realisation 93444
gain flattening waveguide filter design by Abeles computation method 127899
glass ceramic laser radiation controlling elements, EO sensitivity 128479
glass slide ion exchanged opt. slab waveguides, integrated optics technol. fab. 82137
grating assisted opt. waveguide couplers 82147
guided wave opt. sens. devices, modeling and charactn. 127727
guided-wave opt. devices design, BPM 127771
H-ROD, versatile microoptical component 116763
high-power EO lens/scanner for space-based platforms 93153
high-speed EO modulators, compact model for microwave CAD environ. 93228
high-speed nonreciprocal switching, MSSW induced opt. phase shift 93149
hollow opt. waveguide for temp.-insensitive photonic IC 93160
hollow waveguide integrated optic systs. for 10.6 micron laser radar 71347
hybrid diffractive/graded-index splitter prototype for fiber optics 116622
hybrid EO/inductive current sens. for HV power syst. appls. 99436
hybrid MOEMS approaches for fiber optic switches/switch matrices 93080
hybrid multilayer heterostruct. optoelectronic transistors, fiber coupled E-field sens. element appls. 104742
hybrid polymer-on-glass integrated DOE for wavelength discrim. 93162
hybrid SLC Solc/Fabry-Perot filter for wavelength DEMUX 75048
hybrid-opt. isolators, progress 127853
hyperb. unstable-resonator laser, spot-array grating-outcoupler 117317
hyperb. unstable-resonator semicond. laser, design optim. 93648
III-V material systs. QW IR photodetectors, device charactn. 86540
III-V semicond.-based photonic crysts., coherent lasing action, ultrasmall integrated devices 127805
immunosens., opt. heterodyne SPR phase detect. 97418
innovative integrated grating-assisted ADM, design and simul. 96798
inorganic-organic hybrid polymers, sol-gel, opt. interconnection 71216
inter-chip opt. interconnection, planar photonic cct. *(Japanese)* 117025
interferometer, opt. control using photochromic polymer 93151
interferometric fibre gyroscopes, error compensation 75581
interferometric ultrafast SOA-based opt. switches for high-speed networks 120240
ion-exchanged integrated waveguide devices, appl. fields 127779
ion-exchanged waveguide add/drop filter with Bragg grating 127721
laser-fiber coupling, spot-size conversion 104685
lateral taper coupled asymmetric twin-waveguide high-bandwidth photodiode 93373
LD sub-harmonic mode locking, spectral domain anal. 117393
LIGA-microspectrometer, low-cost design 116793
lightwave network anal., recent develop. 74930
lossy anisotropic opt. waveguides, perfectly matched layer boundary conditions, complex FEM modal solver 104704
low-cost multimode waveguide couplers for multimode fiber-based LAN 109062
low-loss mode conversion waveguide adapter 82179
low-loss Y-branch waveguides, design method 116677
Mach-Zehnder generalized opt. switches 119849
Mach-Zehnder interferometer gate, monolithically integrated, all-opt. sampling 72049
Mach-Zehnder isolator using transverse magneto-opt. phase-shift 127850
Mach-Zehnder modulator design, TW electrodes elec. field, FEA *(Chinese)* 71353
magic T on glass substr., integrated opt. fab./testing 82180
massively parallel fiber-free-space opt. interconnects 82438

integrated optics continued
micro optics conf., Quebec City, Que. Canada, (June 2000) 100406
micro-opt. sens. syst. develop., laser microinterferometer 116794
microcavities, enhanced opt. spectrosc. 127780
microdiffractive lens/VCSEL integrat., FIB direct milling 71783
micromachined tunable laser using polysilicon 3-D mirror 71357
micromechanical phase-shifting gate technol. for opt. logic components desiugn 104845
micromechanical photonic IC 93192
micromirror array test syst., high resoln. SLM 93220
microoptical correlators, security appls. 116774
microphone, micromachined device, opt. interferometric readout 97108
microprism-type bent waveguides, perform. tolerance 82158
microprism-type wide-angle bent waveguides, design, fab. 93145
microwave design syst. based photonic CAD tool 82172
miniaturised opt. sens. systs., technol. and prod. techs. *(Danish)* 75408
miniaturized fiber coupled RF elec.-field sens., resoln. and sensitivity 109602
MOEMS syst. opt. switching technols. 131504
monolithic integrated single ridge stripe electroabsorption modulated DFB lasers, selective area LP-MOVPE *(Chinese)* 82654
monolithic LWIR/NIR multispectral QWIP night vision 86660
monolithic Mach-Zehnder interferometer with integrated SOA, ultrafast all-opt. DEMUX 120318
monolithically integrated EA-modulated tunable DBR lasers, HF elec. crosstalk 127832
monomode channel guides, ion-exchanged, effective index method 82140
multicolor illum. compact RGB planar DOE beam expander 116727
multilayer waveguides, mode control, efficient SHG 116715
multimode interf. couplers, tunable power splitting ratios 71351
multimode interf. Mach-Zehnder interferometer opt. switches *(Chinese)* 71306
multimode interf. struct. integrated optic systs. 127800
multimode-interf. Michelson interferometer temp. sens., integrated optics technol. 109500
multiwavelength laterally complex coupled DFB laser arrays, FIB lithog. fab. 128260
N×N tapered/straight multimode interf. couplers, sig. bandwidth 71323
nonlin. chromophore doped EO polymer modulators 104806
nonperiodic grating-assisted directional coupler design, iter. method 82148
OLED integrated with polymer waveguide 127965
opt. components/microsystems, fab., packaging 71384
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov. 2000) 113262
opt. microresonator design/simul. 127808
opt. waveguide theory and num. modelling, conf., Prague, Czech Republic (May 2000) 100417
oriented electrooptic polymer devices, opt. nonlin. 71411
ormosil photosensitive syst. integrated optics 104743
OTDM systs., sync., opt. all-pass filters 120194
OXC/OADM in WDM opt. transport networks, low crosstalk struct. 109166
parallel amps. struct., filter-free wavelength conversion 117458
pass. act. reson. coupler platform, taper length var. 116749
pass. polariz. converter using slanted semicond. rib waveguides 116743
PCR chip, micromachined, integrated optics 92542
periodic dielec. multilayer cladding TM-pass waveguide polarizers 127722
photonic ccts. integrated with CMOS compatible photodetectors 93452
photonic crysts., 2D, waveguide-based, 3D light control 82171
photonic IC, 3D wide-angle parab. eqn. algm. 93165
photonic IC, design and simul. tools 104757
photonic switching integrated AO devices, multiwavelength separation 96814
photonic systs. for space systs., conf., San Diego, CA, USA (July/Aug. 2000) 89566
photonic true-time-delay networks design for radar appl. 91395
photonic-bandgap waveguide devices, FDTD anal. using eigenfields 116750
planar lightwave cct., device package, AlN heater 113617
planar lightwave cct., dispersion-compensation techs. *(Japanese)* 93143
planar microlens array parallel opt. interconnects 82188
planar microlens opt. interconnects, design param. 104769
planar opt. systs., microoptical integrat., ray-tracing anal. 104754
planar photonic crysts. for integrated optics, design rule 82173
planar waveguides, direct UV writing fab. *(English)* 104722
plasma wave modulator/switch based integrated opt. memory 127576
PLC large-scale/highly-functional technols., recent progress *(Japanese)* 93140
polariz. insensitive planar integrated opt. switch 117495
polariz. sensitive diffractive optics integrat. with IR photodetector arrays 104748
polariz.-insensitive Bragg gratings design in zero-birefr. ridge waveguides 104717
polarized polymer film, order param. and polarized lifetime *(Chinese)* 71329
polyimide low-power opt. attenuator, micromachined membrane type waveguide 116748
polymer based opt. add/drop multiplex/cross-connect appls. 116564
polymer digital opt. switch with integrated attenuator 104752
polymer multimode waveguide backplane, 2.5 Gbit/s transm. 104731
polymer pass. slab waveguide integrat. with FLC EO modulator 127806
polymer-based single-mode integrated opt. beam splitter, design and realisation 93126
polymeric DFB-structs., erasable/permanent, multicolour tunable laser emission 116741
polymeric grating-assisted codirectional coupler filter, photobleaching, post-fab. tuning 104733
polymeric photonic devices for RF and phased array appls. 115033
polymeric push-pull EO Mach-Zehnder modulators, 1310/1550 nm 71402
prog. integrated opt. diffractive element 127790
push-pull polymer digital opt. switch using truncated-structural X-branches 109076
QW IR photodetector-LED integrat., space charge spectrosc. 86554
reciprocal photonic lattice filter, all-opt. config., perform. characts. 71504
RF photonic devices and systs., conf., San Diego, CA, USA (July/Aug. 2000) 78427
rib waveguide, modal anal., finite element and mode matching methods 104705
rib waveguide curved bends, wave propag., evanescent field, radiation loss, sens. appls. 104709
ridge waveguide SOA monolithically integrated with gain-coupled DFB laser, fibre-coupled power 71350
sampled grating DBR multiwavelength laser arrays for WDM appls. 105342
semicond. amp. tapered mode-locked integrated grating cpd. cavity laser design 71820
semicond. lasers and opt. amps., hybrid integrat. technol. 105352
semicond. microring resonator integrated photonics 116797
semicond. waveguides, opt. pulse nonlin. interacts., time-domain large-sig. model 117377

integrated optics continued
shot-shifted electron-beam lithog. gratings, stitching-error reduction 126529
silica refr. microlenses for Shack-Hartmann wavefront sens., fab. and testing 104799
silica waveguides, thermally poled, large SHG 127761
silicon-based integrated opt. press. sens., intermodal interf. 131868
single-line photonic-cryst. waveguide, group vel., propag. losses 127785
sinusoidal elec. drives for opt. time DEMUX 131522
slab-type asymm. 2D photonic cryst. waveguides, finite thickness effect 11671
smart photonics, optoelectronics integrated with Si CMOS VLSI ccts. 93445
smectic A* liq. cryst. waveguide optoelectronic router 127787
smectic C* integrated Bragg grating continuously tunable filter 127885
SOA based integrated Mach-Zehnder interferometer, wavelength conversion, opt logic *(English)* 104849
SOA delayed-interf. config. for all-opt. wavelength conversion 120319
SOA-based Mach-Zehnder interferometers, all-opt. high-speed sig. proc. 11835
soda-lime glass, Cu^{+}-Na^{+} ion exchange channel waveguides, light propag. 9313
SOI compact 3-dB tapered multimode interf. coupler 82181
SOI rib opt. waveguides, geometric struct., single mode conditions *(Chinese)* 93106
SOI waveguide, 2D grating coupler modelling, BPM 116666
sol-gel based waveguides, fab., opt. amplif. and photosensitivity 104716
SPR biosensor, integrated opt. waveguide 97410
sq.-lattice photonic cryst. laser, polariz. mode control 105414
step tapered waveguides, propag., asymptotic anal. 104707
stratified 3D photonic struct., light scatt. and propag., fully vectorial tech 104750
surface plasmons reson. excitation for light radiation modulation 93114
symmetric Mach-Zehnder type all-opt. switches for for ultrafast all-opt. sig. proc 120317
symmetric-Mach-Zehnder-type all-opt. polariz.-insensitive semicond. regenerato 75016
Teflon AF, waveguiding layer fab. by ion irrad. 116550
telecom/datacom opt. components, key technols. 120159
terraced LD and garnet crysts. integrat. by wafer direct bonding 82635
thin-film opt. directional coupler fab. by two-step ion-exchange tech. *(Japanese)* 82134
time-domain wave propag. scheme 116742
tomography, integrated opt. fibre-lens syst. 120840
transceiver, straight waveguide and double-filter photodiode *(Japanese)* 12015
TW electrooptic modulator response, quantitat. anal. *(Chinese)* 127834
ultrafast all-opt. integrated optic switch, selective area MQW disordering 11750
uniform spot-size waveguide converter, laser-fiber coupling 71322
variable opt. attenuator based on guided wave reson. 127798
VCSEL appls., high-throughput multimode fiber links/2D interchip interconnections 117201
VCSEL array, single-mode low-impedance, integrated mode filters 117302
VCSEL interconnects, Ethernet and opt. integrated PCBs 105049
VCSEL-based MOEMS archit., nanofab., SNOM sens. 93178
VCSEL/REPD, interferometric sens., displacement meas. 75443
VCSELs, guided-mode reson. filters, single-mode operation control 105325
very low crosstalk polymer waveguide based digital thermo-optic switch 7500
voltage transducer for HV appls. 99437
waveguide input grating coupler for WDM/wavelength encoding 93133
waveguides, effective-index method, variational method 71315
waveguides, shape optim., inverse problem techs. 104718
wavelength-dilated multiple wavelength filters for WDM/TDM PON 120260
WDM DEMUX/opt. filters using finite 2D photonic crysts., freq. domain anal 86052
WDM opt. filter review 86056
WDM opt. transport networks, integrative OADM/OXC, homodyne crosstal anal. 120251
WDM tunable filters, coupled polymer waveguides and substr. removed GaA waveguides 116663
WG-mode DR based microwave and opt. network components, num. anal 80186
whispering gallery mode cylindrical dielec. resonators 116752
wide-angle crossed opt. waveguides, calc. models *(Chinese)* 71341
X-cube, 8-port beamsplitting device 104749
X-cube integrated balk optic filtering device 116726
X-jn. compact opt. switches, WDM perform. 74929
Y-branch rib waveguide power splitter power loss reduction 93111
Al direct laser writing on Si_3N_4 waveguides, SNOM studies, opt. mode converte fab. appls. 93934
AlAs cylindrically symmetric mesa struct., steam oxid., temp./thickness depend 81082
AlAs-InGaAs-AlAs double barrier reson. tunneling diode waveguide modula tor/detector 97273
AlGaAs, direct phase matching, opt. M-waveguide vars. 82890
AlGaAs heterostruct., oxid., pass. opt. waveguide 104726
AlGaAs/GaAs DBR laser mirror, RIE 128356
AlGaAs-GaAs polariz. converter, electrooptic phase mismatch control 93238
AlGaInP/GaInP multi-mode self-pulsating MQW LD with epitaxially integrate saturable absorber 71824
Al_2O_3:Er(Ti)(Cr) for act. integrated opt. appls. 127802
Er-doped waveguide amps. integrated with 980nm/1550nm WDM 120193
Er^{3+}-doped tunable fiber laser, integrated optics Mach-Zehnder interferomete 82542
GaAs bifurcation optic act. device, extinction ration, half-wave voltage 11670
GaAs integrated polariz. converter at 1.3 μm 127783
GaAs multimode interf. opt. power splitter *(Chinese)* 104690
GaAs:MnAs nanocluster/GaAs/AlAs DBRs multilayers, magneto-opt. effect *(Japanese)* 93259
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LDs, THz repet tion rates 82693
GaAs-AlGaAs p-i-n diode photonic IC inverting gates 71448
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photoni integrat. 105311
GaInAsP/InP act./pass. microring resonator filter appl. 116732
GaInAsP-InP multimode interf. coupled ring resonators 93132
GaN thin film material, selective chem. etching 103375
Ga_2S_3-La_2S_3-La_2O_3 chalcogenide glass based opt. channel waveguides 116676
GeSe/Si rib opt. waveguides, geometric struct., single mode conditions *(Chinese)* 93106
InGaAs QW/InP/InGaAsP nonlin. Bragg reflector, ultrafast opt. pulse compres sion 116733
InGaAs strained QWs, RTA selective QW disordering, monolithic integra 126130
InGaAs/GaAs 980 nm oxide confined laser with integrated spot size converte 117288

tegrated optics continued
InGaAs/InP 2D photonic cryst. microlasers on Si wafer, RT operation at 1.55 µm 82603
InGaAs-AlAs reson. tunneling diode, semicond. waveguide optoelectronic switching 117037
InGaAs-InGaAsP QW waveguide-type wavelength DEMUX photodetectors 75525
InGaAs-InGaAsP diffused QW modulators/lasers 127778
InGaAsN VCSEL device, intracavity QW monitor diode 117191
InGaAsP MQW microarray waveguide, selective MOVPE for integrated photonics 116730
InGaAsP, solid state thermionic cooler monolithic integrat. with semicond. lasers 104744
InGaAsP/InP Mach-Zehnder interferometer SOA switch, MOVPE growth 117497
InGaAsP/InP integrated superluminescent light source with tilted struct. *(Chinese)* 105008
InGaAsP/InP wavelength selective filter with Fabry-Perot etalon resonator 116729
InGaAsP/InP-based act. grating waveguide struct. 93161
InGaAsP-InP all-opt. Mach-Zehnder DEMUX, monolithic integrat. 74948
InGaAsP-InP integrated Bragg grating struct. opt. add/drop filters 131398
InGaAsP-InP robust ridge waveguide TIR switch design, opt. cross-connect appls. 120327
InP 4x4 monolithic opt. cross connect, insertion loss 120329
InP based QW laser, low energy ion implant. fab. 93626
InP based electroabsorption-modulated tunable DBR laser transmitter, long-haul commun. appls. 131371
InP, related materials, conf., Nara, Japan (May 2001) 113237
InP:Fe substr. highly reliable Gb/s electroabsorption modulator 127836
InP/InGaAs/InGaAsP integrated laser heterostruct., ion implant. mask fab. 93625
InP/InGaAs/InGaAsP integrated laser-modulator device fab., post-growth proc. 117289
InP/InGaAs/InP photonic waveguide structs., Br_2-N_2 reactive beam etching 116728
InP/InGaAsP double fused vert. coupler beam splitter 116747
InP/InGaAsP multimode interf. couplers, access guide first-order mode effect 116681
InP/InGaAsP vert. coupled crossed waveguide opt. ADM 120302
InP-InGaAsP VCSEL arrays with DBR, fab., WDM appls. 128225
K^+/Na^+ ion exchanged GRIN opt. waveguide beam splitters 127801
$KTiOPO_4$ integrated-opt. high power amplit. modulator for vis. wavelength range 82145
$LiNbO_3$ EO intens. modulators using strain-optic effects 116805
$LiNbO_3$ EO modulator, time domain opt. response, FDTD 93164
$LiNbO_3$ channel waveguide, periodically poled, all-opt. diode 93144
$LiNbO_3$ epitaxial film on c-sapphire substrs., opt. waveguide appls. 71313
$LiNbO_3$ integrated opt. devices 127796
$LiNbO_3$ opt. intens. modulator package, monitoring photodiode 71407
$LiNbO_3$ periodically poled waveguides, propag. modes, cascaded second-order nonlin. 104713
$LiNbO_3$ periodically poled waveguides, wavelength conversion 104756
$LiNbO_3$, piezoelec./ferroelec., microstructuring for MEMS devices 70364
$LiNbO_3$ short-path-length high-speed opt. modulators 116724
$LiNbO_3$ waveguide electrooptic switches, multiwavelength opt. networks 120350
$LiNbO_3$ waveguided modulators for 40 Gbit/s and beyond 116823
$LiNbO_3$ waveguides, all-opt. amplif. 105208
$LiNbO_3$ x-cut optoelectronic device passivated by Si_3N_4 film 82221
$LiNbO_3$ zero-order half-wave plates for integrated optics appls. 127784
$LiNbO_3$:Fe cryst. photorefr. phase zone plates 127789
$LiNbO_3$:Fe photorefr. phase zone plates, diffr. efficiency *(Chinese)* 104863
$LiNbO_3$:Fe,Mn opt. fixed local photorefr. holograms, integrated WDM devices 105611
$LiNbO_3$:Fe,Mn photorefr. holographic interferometer sens. 105604
$LiNbO_3$:Ti directional coupler, coupling length adjustment using groove struct. 82178
$LiNbO_3$:Ti integrated opt. waveguides for opt. BFN, birefr. 127782
$LiNbO_3$:Ti,Er periodically poled waveguides, nonlin. integrated opt. freq. converters 128486
$LiTaO_3$ quasi-vel.-matched guided-wave electrooptic phase modulator opt. pulse generation 116698
$LiTaO_3$, vap.-phase proton-exchange for high-quality waveguides fab. 127723
Nd-doped double-clad fiber amps. for coherent space commun. systs. 71679
Si EO device, LED antifuse/photodetector integrat., sens. appls. 104745
Si IR micro-spectrometer based on diffr. grating 104765
Si V-groove fab. using Ta_2O_5 etch mask prepared by magnetron sputtering 103291
Si guided-wave MOEMS, fab., from technol. to appls. 127814
all-Si low loss single mode opt. waveguide 82168
Si optoelectronic modulator based on Bragg mirror 82220
a-Si, photonic-grade, hot-wire deposition 124955
Si platform high speed evanescently coupled PIN photodiodes 104946
Si, porous, buried waveguides, laser local oxid. fab. 71305
Si, porous, patterning for integrated opt., H ion implant., RTA 92008
Si substr., 3D MM-wave photonic IC 80403
Si wafer 400-channel arrayed-waveguide grating, DEMUX props. 75005
Si/SiO_2 waveguides, CMOS-compatible, scatt. losses 116714
Si-based race track resonators, design using FDTD method 71349
Si-based waveguiding struct., energy transfer at opt. freqs. 128025
Si-on-Si waveguide struct. mode-mixing router 127803
Si-on-insulator struct., opt. freq. energy transfer 127792
SiO_2-based waveguide T-splitter, micron-size bending rads. 127759
SiON integrated opt. waveguide DEMUX, stress effect 93148
SiON technol. pass. polariz. converter 82170
SiON waveguide integrated optics devices, WDM networks 109217
SiON waveguide technol. compact tunable opt. devices 116746
Ta_2O_5/SiO_2/128°YX-$LiNbO_3$ photoelasticity enhancement, SAW, opt. modulator appl. 116725
Ti:$LiNbO_3$ digital opt. switches, low crosstalk, drive voltage reduction 120372
ZnO:Li(,Mg) thin films, ferroelec., opt. switching appl. 127557

tegrated optoelectronics
see also optical interconnections
2D fiber-based opt. interconnect 82433
2D inter-chip opt. interconnect, opt. I/O 93453
3D photonic cryst. fab., laser appls. 117291
4x4 parab. tapered MMI coupler fab. in SOI technol. 71348
850 nm 2D selectively oxidized VCSEL arrays, flip-chip integrat. 115224

integrated optoelectronics continued
act. pixel sens., intell. opt. sens. ccts., opt.-syst.-on-a chip *(German)* 75607
act.-matrix FEA for next-generation FEDs 97757
all-opt. digital proc. ccts., switching/regenerative memory appls. 116868
Army microwave beamforming, opt. controlled phased-array antenna use, monolithic opt. element integrat. 99173
arrayed waveguide grating filter, WDM syst. indiv. channel polariz. control 131552
arrayed-waveguide grating devices, photomask resoln. effect 96799
artificial retina, optoelectronic cct., stochastic algm. 106775
ATLAS calorimeter, high-speed digital opt. data link, SEU 98061
ATLAS SCT readout, VCSELs & PIN photodiodes, radiation hardness 98062
ATLAS tracking detector radiation hard opt. readout syst. 132447
backplane and board intra-computer commun. problems, embedded polymer opt. data highways 91492
BiCMOS design and perform., act. WDM components appls. 127071
BiCMOS multi-channel opt. interface transmitter/receiver chip set, LCD appl. 117033
BiCMOS waveguide-based OEIC design 105048
bidirectional opt. interconnect, VCSELs, photodiodes, CMOS IC 105044
birefr. photonic IC BFN 91400
board-level intra-chip guided-wave opt. clock distrib. network 128024
broadband access opt. transceivers, MEM integrated waveguides 109056
broadband high-power photodetector arrays for photonically implemented phased array antenna archits. 83738
build-up cct. carriers for electronic assemblies in aviation/spacecraft technol. *(German, English)* 76803
CDF Silicon Vertex Detector upgrade, port card design 121719
chip on film packaging, technol. and perform. 117028
CMOS laser driver, 1 Gbit/s, packaging, on-chip decoupling capacitor 117030
CMOS OEIC, DVD and high-speed fiber receiver 82447
CMOS opt. head for high-resoln. posn. encoders 92474
CMOS transimpedance amp., 2 Gbit/s, for opt. comms. 114624
CMOS transimpedance MMIC amp. design, BSIM large-sig. model, opt. commun. appl. 91339
CMS digital opt. link, radiation-tolerant opt. receiver 98060
commun. appls. of integrated opto-electronics 120171
conf., integrated photonics research, Quebec, Canada, July (2000) 113278
cpd. semicond. devices and ICs, conf., Aegean Sea, Greece (May/June 2000) 78443
cpd. semicond. IC technols., appls. in high data rate opt. fiber commun. 131389
cross-connect switches based on SOA arrays 120370
DARPA program for develop. of chip-scale microsystems 127086
diffractive/refr. microoptics components develop., design, fab. and appls. 71362
DIL modules with reusable fiber-chip-coupling mechanism 117018
direct-light-triggered thyristors, high power, self-protection fns. 81246
discrete correl. proc., pipelined digital correlator 71623
DWDM syst. wavelength splitters, FT-based Mach Zehnder interferometers 131551
electroabsorption modulator integrated DFB laser modules 131434
electroabsorption modulator integrated DFB lasers, wavelength detuning effect 82444
electroabsorption modulator integrated DFB lasers, identical epilayer method, wavelength detuning 85969
EO polymer integrated optic devices, space appls. 93451
Fabry-Perot LDs integrated with spot size converter for 2.5 Gbit/s appls. 120164
FAST-Net global interconnection syst., beam-steering, aberration anal. 93457
ferroelec. thin films for opt. appls. 81697
fiber optic telecomms., III-V semicond. technol. requirements 74952
fibre-chip coupling using low-loss tapered fibers 93449
flip-chip structs. design tech. with optimised CPW patterns 69223
free-space opt. interconnection modules for 2D photonic-VLSI circuitry, microlenses and GRINs 109225
Gb/s electroabsorption modulator, DFB laser integrat., long-haul opt. transm. systs. 74926
Gbit/s OTDM sig. generation, all-opt. regularization 120314
HEMT modulator driver IC, device model params. *(Chinese)* 103914
heterojunction phototransistor/QW-LD integrated optoelectronic device, static/dyn. responses 71627
high-dens. data commun., opt. interconnects role 117042
high-perform. opt. commun. devices, hybrid integrat. technols. *(Japanese)* 93448
high-speed, high-responsivity 1.55 µm photodetector on InP 120124
high-speed DFB light source/RCE photodetector for WDM fiber commun. network appl. 120169
high-speed fibre-optic link, opto-electronic interface inside connector 74942
high-speed high-sensitivity photodiodes & OEIC props., review 117020
high-speed IOE modulation cct. 71626
high-speed opto-electronic transient waveform digitiser, mil. appls. 90972
hybrid elec.-opt. interconnection technol. for PCB appls. 69299
hybrid integrated VCSEL/MESFET driver arrays for opt. interconnects 105038
in-building opt. LAN, high speed integrated opt. wireless transceivers 85957
inorganic-organic hybrid polymers, sol-gel, opt. interconnection 71216
inter-chip opt. interconnection, planar photonic cct. *(Japanese)* 117025
IP scalable switching based on opt. interconnects 119847
IR real-time act. target tracking mono-chip 117017
JOS Uniphase clip design, fibre attachment for 980 nm pump lasers 117029
large-scale arrayed waveguide grating module, super-high-contrast planar lightwave cct. technols. 120275
lateral taper coupled asymmetric twin-waveguide high-bandwidth photodiode 93373
LHC expts., lin. laser-driver array for opt. transm. 121718
low-crosstalk hybrid-integrated opt. transceiver module, polymer PLC chip 96697
LSI silica-based thermo-optic switches *(Japanese)* 93447
Mach-Zehnder interferometric arrayed-waveguide grating MUX/DEMUX 120376
massively parallel fiber-free-space opt. interconnects 82438
MCM, optimal partitioning algm. *(Chinese)* 93443
MEMS/VCSEL hybrid syst. for laser beam steering/collimation 105047
micro-opt. interconnects, microjet printing 131433
micro-photonic ccts., photonic microstruct./microdisk lasers 104768
microelectronic very large-scale integrated systs., adaptive optics, advanced imaging 105042
micromechanical opt. cross connects 116795
micromechanical photonic IC 93192
micromirror array test syst., high resoln. SLM 93220
microscale adaptive optics, wave-front control with µ-mirror array and VLSI stochastic gradient descent controller 116784
microwave/lightwave interacts., research and appls., review 82451

integrated optoelectronics continued
mixed GaAs opt. modulator and PHEMT MMIC proc. line on 150 mm wafers 125832
MM-wave generation at 100 GHz using uni-travelling-carrier photodiodes 125824
module, SMT technol. 100603
MOEMS device design flow 81592
MOEMS technol., packaging and opt. interconnection technol. *(German, English)* 116788
monolithically integrated smart pixel, non-reson. cavity LED/photoconductive receiver 75529
monolithically integrated wavelength selective cross connects 117036
MSM photodetector, photonic RF mixer 115032
multicarrier QAM sig. electroabsorption modulator integrated DFB laser transmitters 131376
multichannel optoelectronic data links, realistic end-to-end simul. 128026
multilayer PCB, opt. interconnection technol. 91494
multilevel photonic modules for MM-wave phased array antennas 83739
multimode-interf. Michelson interferometer temp. sens., integrated optics technol. 109500
multiple fn. planar lightwave ccts., wafer-scale proc., high-channel-count DWDM systs. appl. 82436
multisection electro-absorpt. DBR laser, accelerated aging modelling 128269
multispectral smart pixel imaging arrays, modulator design 97399
narrow-band photoreceivers, lightwave-microwave systs., photodiode intrinsic conductance 131381
neg. resist. opt./microwave ccts. 102746
OE-COF,optoelectronic chip on film packaging technol., flip-chip bonded devices *(Japanese)* 113539
OEICs, yields, packaging aspects, CAD tools 93446
OELD as light source for polymeric waveguides 104736
OLED integrated with polymer waveguide 127965
opt. amp.-switch integrated device, static/dyn. charactn. 82443
opt. BPSK modulation of 10 GHz using integrated hybrid device 82430
opt. fibre-fed millimetre-wave radio systs. for broadband services 74564
opt. field modelling, FFT-based full diffr. method 105041
opt. interconnection technol. in switches, routers and opt. cross connects 131510
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov. 2000) 113262
opt. networks, opt. components 120223
opt. positioning IC, on-wafer functionality test procedure 75506
opt. transceiver for FTTH appls., optimised 96762
organolanthanide-based IR LEDs, optoelectronic integrat. 93423
ORMOCERs, hybrid inorganic-organic polymers for opt./elec. interconnection 71200
packaging technols./materials/procs., overview 67558
packaging/phys. design for high sig. bandwidth era 67635
phased-array antenna, polymeric waveguide ccts. for true time delay 117844
phosphor screen, cathodolum., field effect diode panel sealing proc. effects 75791
photonic ccts. integrated with CMOS compatible photodetectors 93452
photonic crysts., 2D, waveguide-based, 3D light control 82171
photonic packet switching, planar lightwave cct. platform technol. 120334
PIN-AMP module using pass. alignment struct., 10 Gbit/s, develop. 120151
planar lightwave cct. based functional devices, point-to-point WDM appls. 131399
planar lightwave cct. platform eliminating Si terraces, hybrid integrated modules apl. 82445
planar lightwave ccts., dyn. fns. integrat. 117021
planar optics for proc./network appls. 128029
PMMA free-space micro-opt. modules, design, fab. and characterisation for photonic interconnects 127813
polymer films, UV-moulding for micro-opt. systs. and O/E-integrat. 71371
polymer opt. waveguides, integrat. into PCBs 116671
polymer-based opt. waveguide devices, OEIC appls. 116740
posn. encoder syst., integrated opt., with phase calib. 75505
pulsed TOF laser radar, wide dyn. range receiver channel 109298
QW intermixing as fab. platform for OEICs 128023
QW optoelectronic integrated device, opt. gain 82446
receiver, monolithic integrat., MSM photodiode 131372
RF photonic devices and systs., conf., San Diego, CA, USA (July/Aug. 2000) 78427
RZ polaris. multiplex transm. expt., 84 fs PMD detect. sensitivity 120287
semicond. arrayed waveguide grating monolithically integrated multiwavelength photodetector 104947
short-dist. free-space opt. interconnections, real-time act. alignment demons. 128031
side-illum. mirror photodiodes for surface hybrid integrat. modules, coupling tolerance 75521
siloxane polymer lightwave cct. on ceramic substr., ultrafast optoelectronic multi-chip-modules 117034
single floating QD gate FET memory cell, stored charges, opt. modulation 127589
small-form-factor opt. transceiver develop. and appl. 120187
smart photonics, optoelectronics integrated with Si CMOS VLSI ccts. 93445
smart pixels, appl. to opt. interconnects and image proc. 117041
SMT-compatible opt.-I/O chip packaging for chip-level opt. interconnects 113642
SOA-based Tb/s opto-electronic packet switch, WD/SD archit. 120371
SOA-planar lightwave cct. hybrid Michelson interferometric wavelength converter, DWDM networks 82843
SOI-based 3dB MMI splitter *(English)* 82435
SOLNET, self-organizing lightwave network, film opt. cct. substr. 117024
SONET opt. receivers, opt. module assembly principle 113610
SOS CMOS low-power opt. receiver for inter-chip commun. 117023
spot-size-converted DFB laser, uncooled, 2.5 Gbit/s, pass. align. 120201
surface mounting of planar lightwave cct. on opt. fibre cct. board 71622
surface-mountable transfer mold photodiode/PIN-AMP module, develop. 120152
systs.-in-a-package technol. research at Interuniversity Microelectronics Center 67595
technol. develop. in integrated optoelectronics for opt. commun. 128028
terraced LD and garnet crysts. integrat. by wafer direct bonding 82635
three-phase thyristor bridge reson. switch *(Japanese)* 82431
TW SLA, cct. model, OEIC appl. *(Chinese)* 105266
ultra-high-speed opt. gate, photodiode/electroabsorpt. modulator integrat. 117022
Ultrafast Photonics Collaboration, research program in photonics and data commun. 82449

integrated optoelectronics continued
ultrahigh bandwidth photonic A/D converters, highly lin. photoreceiver design 80011
ultrahigh-speed 1.55-μm photodiodes on Si with low-loss MM-wave CPW 93458
UV-induced planar lightwave cct. index changes, birefr. control 128611
VCSEL based optoelectronic multiple chip modules 117039
VCSEL high-perform. syst. for different scale opt. interconnections 82663
VCSEL modulation, 20 Gbit/s, 3.3 V SiGe laser driver IC 120202
VCSEL-SLM integrated optoelectronic devices for parallel computing systs 105046
VCSEL/CMOS optoelectronic chip-2D opt. fiber data link parallel interconnec syst., crosstalk anal. 117040
vert. integrated reson.-cavity LEDs, low-power phototransceiver arrays 12801
vert. merged MOS ULSI, optoelectronic/nanoelectronic, single-wafer single lithog. proc. 70318
VLSI, archits. & technols. 117027
WDM CAD design tools 86091
WDM opt. networks, high speed, planar waveguide devices using Si IC technol 74980
wideband photonic ADC, monolithic integrat. 114851
X-ray indust. CT, optoelectronic integrated sens. 87268
AlGaAs high-dens. integrated VCSEL/PD QW laser arrays, uniform power dis tribs. 117189
AlGaAs/GaAs HBTs, emitter struct. var. effect on RF charact. 80292
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 7032
AlGaAs-(In)GaAs VCSELs for opt. data link appls., high perform. 82612
Au/Pt/Ti opt. module thin-film electrodes, adhesion force meas. *(Japanese)* 82432
Au-In-Ni bonding syst., fluxless microjoining, isothermal solidif. 102871
CdZnTe wafer, effective temp., micro-PL map *(Chinese)* 93450
Er,Yb co-doped phosphate glass waveguide DFB laser amp. fab. 93539
GaAs MESFET 2D 8×8 photoreceiver array and VCSEL drivers, high throughput opt. data links 131409
GaAs MESFET, OEIC receiver array 105034
GaAs low-temp.-grown MSM switch, ultrafast differential S/H 82441
GaAs monolithic optoelectronic integrated EO switch devices, carrier injectio effects 82945
GaAs monolithic/hybrid integrated photoreceivers, 40 Gbit/s commun. 96708
GaAs/AlGaAs MQW SEED array, flip-chip bonding OE smart pixels *(English)* 93224
GaAs/AlGaAs MQW detectors and modulators, optoelectronic smart pixel *(English)* 82448
GaAs/AlGaAs epilayers for integrated optoelectronics, MBE, GaAs-Si wafe bonding 90289
GaAs/AlGaAs photonics IC for opt. beamforming in phased array antenna 82439
GaAs-AlGaAs MQW electro-absorpt. modulator devices, parallel opt. interco nects 117038
GaAs-AlGaAs p-i-n diode photonic IC inverting gates 71448
GaInAs/AlGaAs ultrashort QD microlasers, fab., CW operation 105281
GaInAsP-InP monolithic transceiver photonic IC opt. crosstalk 120195
Ge on Si p-i-n photodetectors for NIR, integrated design 75532
InGaAs 2D act. pixel FPA, switching and amplif. charact. 131965
InGaAs inverted MSM photodetector, Si CMOS differential receiver 105050
InGaAs p-i-n photodiode array monolithic four-channel DWDM opt. receive array 109153
InGaAs strained QWs, RTA selective QW disordering, monolithic integra 126130
InGaAs/GaAs phototransceiver OEIC, low power, photodiode & QD microcavit LED 96709
InGaAs/InP p-i-n detector/single-mode fiber pass. coupling, micromachinin 75542
InGaAs-AlAs reson. tunneling diode, semicond. waveguide optoelectroni switching 117037
InGaAs-AlGaAs-GaAs SQW-GRINSCH LDs, dry-etched mirror facets, inte grated photodiodes 128220
InGaAs-InGaAsP diffused QW modulators/lasers 127778
InGaAs(GaAs) III-V photodiode /CMOS hybrid receivers, wafer-bonding, sens tivity 85960
InGaAsP discretely tunable mode-locked SOA laser, arrayed waveguide gratin 128416
InGaAsP optoelectronic devices, monolithic integrat. with Si electronics 11703
InGaAsP/InP high power 1.5μm integrated superluminescent light sourc 105013
InGaAsP/InP monolithic HBT 40 Gbit/s opt. receivers 96710
InGaAsP-based fused waveguide couplers/switches, fused photonic IC 12035
InGaN-based LEDs/lasers, wafer bonding/laser lift-off integrat. 128033
InGaP/GaAs HBT transimpedance amp., capacitive peaking tech. 114631
InGaP/GaAs HBT/PIN photoreceiver, OEIC technol. 105035
InGaP/GaAs heterojunction phototransistors, opt. charact. 82360
InP 4x4 monolithic opt. cross connect, insertion loss 120329
InP HBT OEIC. photonic ADC 128030
InP HEMT high-speed IC, opt. fiber commun. 120165
InP HFET, OEIC receiver array 105034
InP etched waveguides, monolithically integrated planar waveguide etche grating devices 82442
InP opt. networking components for 40 Gbit/s and beyond, opt. subsystem 9666
InP/InGaAs ultrahigh-speed DH DHPTs for optoelectronic mm-wave MMI 131383
InP/InGaAs/InAlAs MSM/HEMT OEIC struct., GSMBE growth 101238
InP/InGaP/InGaAs RTD relax. oscillator, opt.-injection locking 125260
InP/Si CMOS hybrid integrated photoreceiver, alignment tolerant 120161
InP-HBT differential VCO with wide tuning range, SONET/SDH fiber opt appls. 91338
InP-InGaAsP vert. coupled opt. ADM 74946
InP-based optoelectronic device mfg., high dens. plasma etch procs. 128032
InP-based photoreceiver OEICs for 40 Gb/s TDM systs. 117045
NbN/MgO/SiO_2/NbN multilayers on R-plane sapphire, on-chip fast RSFQ cct 70801
Si Gb/s p-i-n photodiode 1-μm CMOS technol. monolithically integrated op receiver 82440
Si OEICs in CMOS/BiCMOS technols. for DVD systs. 82437
Si SOI, integrated multimode interf. couplers 116738
Si elec. controlled optoelectronic Y-switch, bipolar mode FET 75049
Si optoelectronic modulator based on Bragg mirror 82220
Si photo-emitters for opt. interconnects, accelerated stressing/degrad. mech nisms 82450
Si, porous, buried waveguides, laser local oxid. fab. 71305
Si, porous, integrated LEDs, fab. proc. using graded doping profiles 82396

egrated optoelectronics continued
Si smart pixel OE arrays, heterog. integrat. with micro-optics 117032
Si technol. opt. NOR gate 127871
a-Si:H, image sens. array, large-area, two-color 97382
Si-based waveguiding struct., energy transfer at opt. freqs. 128025
Si-bipolar monolithic IC design for opt. receivers, emitter-coupled pair ccts. 74964
Si-on-Si waveguide struct. mode-mixing router 127803
Si-on-reflector substrs., high-reflectivity, optoelectronic device appl. *(English)* 105032
Si-on-sapphire CMOS, improved VCSEL/CMOS optoelectronic interconnects 93455
SiGe/Si MQW reson.-cavity-enhanced top-/bottom-illum. photodetector 120800
SiN films, selective photoresist ashing, trifluoromethane addit. 115740
SiO_2 8 PLC tap dyn. gain flattening filter 131556
SiO_2:Ge/Si integrated Si-based optocoupler, efficient blue light emission 93389
SiO_2-on-Si thermo-optic integrated lightwave cct. switching 96783
SiON UV transparent multimode buried-channel waveguide biochem. sens. 75740
ZnO-B_2O_4:Eu fibre/Si photodiode selective UV detector 86568

egrated plant control *see centralised control*

egrated project support environments *see project support environments*

egrated services digital network *see ISDN*

egrated software
see also database management systems; software packages; spreadsheet programs; word processing
DICOM use in integrat. of imaging into electronic patient record at Department of Veterans Affairs 98121
digital radiography, impact on clinical workflow 98488
digital radiography, impact on clinical workflow and patient satisfaction 98495
equipt. maint. admin. using integrated software systs. 100508
field intell. instrum. software syst., integrat. technol. *(Chinese)* 109427
integrat. methodology of agent-oriented simul. *(Chinese)* 85037
NetworkDesigner-Artifex-OptSim, integrated software tools for high speed networks synthesis/anal. 131483
PACS/voice recogn. integrated syst. develop. and early experience 98867
script wrapper for software integrat. systs. 108307
soft mol. computing 69350
wafer sort yield, robust windowing method for Poisson yield model, appl./validation 103954
warfighter C^{4}ISR syst., integrat. technols. 77032

tegrated vacuum devices *see vacuum microelectronics*

tegrated voice/data communication
see also ISDN
3G mobile commun. systs., DECT technol. 85786
3G mobile radio, TD-SCDMA benefits and implement. 96609
3G mobile radio access stds. 96610
3G UMTS syst., Erlang capacity of base station transceiver 85683
7R/E switch,, OneLink Manager element mgt. syst. 74092
access aspects of voice/data convergence 108468
ad hoc network, modified MAC protocol, QoS *(Chinese)* 119364
advanced collaboration services 108058
Alcatel SoftCall, multimedia softswitch framework 130240
all-digital loop, integrated voice-data access network 96302
ATM in wireless networks, service and network mgt. strategies 74096
atm. laser commun., computer network linking 120387
ATM networks, real-time VBR connections, QoS control 130214
ATM-based DSL access network, voice call quality 108065
Bluetooth wireless ad-hoc network, asynchronous data traffic perform. 119899
CDMA broadband WLL systs., capacity anal. 85558
CDMA cellular system,inforstation implementation *(Chinese)* 96545
CDMA/ATM-based mobile systs., QoS simul. of AAL2 95910
cellular CDMA, min. duration outage anal. for integrated services with correl. interf. 85759
cellular CDMA, outage for integrated voice data services with correl. sig. and interf. 85758
cellular mobile IS, integrated isochronous/bursty media data, channel-state-depend. bandwidth allocation 107847
cellular radio, multiple access protocol with explicit/implicit reservation 73925
cellular syst. handoff, perform. anal. 96578
cellular voice/data services, integrated multiple access control/adaptive channel coding 84976
cellular wireless systs., utility-based power control 120017
CHARISMA, channel-adaptive TDMA-based MAC protocol for integrated voice/data services 85018
collision-free voice/data integrated PRMA protocol *(Chinese)* 73929
converged voice and data services in new network 108081
convergence of networks, voice over IP *(Slovenian)* 130741
corporate networks, radio relay *(German)* 130802
CS-PRMA/AP, carrier sense PRMA with adaptive permission 95912
dedicated access line, value added integrated telecomm. services 96011
digital simultaneous voice and data appls., fast alg. codebook search method 94301
DRMA with multiple slot reservation/retransmission using exponential backoff *(Japanese)* 107883
DS-CDMA, wireless packet transm., variable proc. gain control 84914
DS-CDMA voice/data systs. with limited channel elements, Erlang capacity anal. 74646
DSL CPE for business users 74463
Ethernet telephone ccts., connection to data networks *(Italian)* 130601
Extended GPRS voice/data stat. MUX, MAC layer 96448
GSM, GPRS and UMTS, integrat. of mobile computing 108215
GSM to GPRS, cellular wireless data transm. evol. 131205
GSM/EDGE speech capacity booster, qtr. rate AMR channels 108786
H.323 for multimedia 84950
HFC, deep fiber baseband access network design 130996
hierarchical hybrid network archit. for integrated services 85090
HIPERLAN/2, capacity request and allocation mechanisms, perform. eval. 119325
hybrid fiber/coax networks, perform. anal. 85404
hybrid networks 108900
ICEBERG, service portability achievement 96102
IEEE802.11 networks, CBR packetized voice transm. 130778
IEEE 802.11 networks, IP QoS support, service discipline 108371
Internet telephony, tech. and economic aspects 130616
IP based integrated wireless network, archit./mobility mgt. 96449
IP billing *(Polish)* 130651
IP networks, appl.-level control 108287

integrated voice/data communication continued
ITU-T BICC protocol, integrated voice-data multiservice platform develop. 73886
LF fixed broadband wireless access radio systs. 119918
M-DCF, MAC protocol with QoS support in ad hoc network 107828
MAC collision resoln./dyn. allocation protocol for wireless networks data/voice integrat. 84941
MAC protocol for voice/data integrated wireless CDMA systs. 85034
MAC protocols for wireless multimedia services, perform. eval. 73961
medium and high capacity wireless TDMA channels, highly efficient voice-data integrat. 73919
migration of voice networks towards next-generation networks 130605
mobile data services, converging IN and Internet AAA systs. 131190
mobile multimedia service, sub-multiplex fn. 108668
mobile packet data commun. network, requirements and implement. *(Japanese)* 96556
mobile wireless networks, dual-threshold reservation, perform. anal. 85734
multimedia networks, CDMA ALOHA protocols, QoS and capacity comparisons 95880
multiple carrier CDMA syst. for integrated voice and data services, Erlang capacity 108756
next generation networks, Alcatel Integrated Management Solution 108040
next generation networks, service archit. 131191
next-generation cable network 131742
next-generation mobile commun. systs. 96608
next-generation networks, press. on operators for new design principles 130530
next-generation networks for new business models 108039
noncollision PRMA for data/voice traffic, perform. anal. 107919
opt. IP over WDM networks, traffic mgt./network planning 131466
optimal migration towards voice/data convergence 108031
packet networks, MAC protocol 131067
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
PHS for wireless home commun. syst. *(Japanese)* 85596
PRMA, anal. of voice loss ratio and data delay 95909
PRMA protocol, stabil. and optim. anal. for voice data integrat. in PCN 84940
PRMA protocol for collision free integrated voice/data commun. 85014
QoS in digital TV networking 97047
reliable all-informed voice networking syst., perform. 111584
RLC/MAC enhanced design for integrated services support over EGPRS 95861
SEAMA protocol, diffusion approx. for voice/data integrat. in wireless network 85061
self-organizing self-healing wireless networks 85774
service control layer signaling based on session initiation protocol 130377
SIP-based VoIP service prototyping in Java 96237
SoftSwitch for distributed service and converged networks 130915
SONET/SDH, optimal cost stacked uni-directional path switched ring design 86042
SONET/SDH for packet-centric networks, new MUX scheme 120228
T/CDMA archits., integrat. voice and data appls. 119212
TCP/IP in commun. systs. 108399
TDMA hybrid switched integrated voice/data mobile commun., traffic policy 85711
TETRA QoS mgt. with dyn. bearer selection schemes 120002
UMTS mobile intranets 108373
UTRAN, AAL2 protocol timer-CU, effect on traffic perform. 107947
VoDSL, voice over DSL 74151
voice network migration to next-generation archit. 108038
voice over DSL 74471
voice over DSL, revolutionary transm. syst. for small businesses 85158
voice over IP, conversion or replacement considerations *(German)* 85144
VoIP, dimensioning next generation transport networks 107972
VoIP converged voice and data networks 85182
VOIP migration, exam. of different solns. 85162
VoIP on integrated voice/data networks, QoS perform. eval. 130824
VoIP private intranets for crit. commun. 119505
VoIP using session initiation and media gateway control protocols 107952
W-CDMA cellular systs., evol. of high-speed packet-data services 131249
WCDMA voice/data integrated syst., stabilised random access protocol 119289
WIN with WAP for enhanced voice/data services 130376
wireless ATM networks and mobile IP 131192
wireless networks, integrated services with space-time block-coded transms. 108612
wireless pers. commun., call admission control, syst. modeling 74670
WLAN, CSMA/CA protocol 74326

integrating circuits
biquad second order building block with minimised parasitic transfer zero influence 102346
Borexino read out electronics, trigger syst., detector photomultipliers 76142
cascaded delta delta-sigma modulator, noise shaping, random noise proc. 90974
cascaded sigma-delta modulators, adaptive integrator bounding/adaptive interstage coupling 102274
cascaded Σ-Δ modulators, integrator pole error compensation 86450
CMOS 800 MHz continuous time biquadratic cell, gm-C fully differential config. 102348
CMOS SC ladder filter, embedded anti-aliasing 102373
CMOS second order sigma-delta modulator with S^2I integrator 114821
CMOS tunable transconductor for continuous-time filtering appls. 80081
common-mode feedback ccts. for SC stages with large common-mode input 91124
continuous-time sigma-delta modulators, LV current-mode integrators 79967
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
delta operator based low sensitivity ladder realization for sampled data filters 102353
depth of interact. PET, detector module, analog ASICs 122256
differential log-domain filters, high-gain common-mode feedback ccts. 80054
differential stroboscopic integrator, small sig. recording 86792
double gated-integrator, nuc. radiation detector sigs. shaping 87257
electret microphone sigma-delta modulator interface, on-chip ref. 102296
FM digital double errors 72744
fourth-order SC sigma-delta A/D converter, high-ripple Chebyshev loop filter 80006
fully functional integrator based continuous-time filters, VHF 80045
LF differentiators/integrators for biomedical and seismic sigs. 109468
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl. 125602
low-power continuous-time integrators, dyn. range limits 91032
LV sigma-delta modulators, integrator output swing optimisation 80004
MOSFET-R-C filtering tech. with improved lin. 91038

integrating circuits continued
multirate Σ-Δ modulator, integrator sampling rate increment 79991
multirate Σ-Δ modulators, lin. anal., polyphase decomp. 79988
non-integer order integrat. by using neural networks, chaotic syst. 91157
portable audio appls., act. noise controller syst., CMOS analogue implement. 97107
pulse-train stimulation integrate-and-fire cct., quantized dyn. 125640
robust high-pass and notch Gm-(grounded) C biquads, filter topologies 80066
SC integrators, gain/offset compensated/very large time const., comparison 68971
SC resonators, LV implement., LDI and two-delay-loop stages 91040
SC-type Δ-Σ modulators, single-bit, power consumption optim. 68878
SCF, PSRR charact., leapfrog filter, equal level diag. design 125598
strong-inversion CMOS current-mode companding integrator implement. 80137
switched-current bilinear integrator realised using single current-mirror 125626
switched-current bilinear ladder group-delay equalisers 68915
switched-voltage delay cell with differential inputs, config. and appls. 114903
SYSCUF, automated synthesis package for switched current filters 68916
third-order PWL dyn. systs., decomposed canonical state models 90694
thresholds detect. by electronic cct. using jump phenom. 68531
VHF CMOS bandpass filter for IF appl. 102356
VXIbus based four-channel gated integrator syst. *(Chinese)* 120657
wire rope, NDT, integrator cct. *(Chinese)* 102443

integrating spheres *see photometry*

integration
see also method of moments
1D large apertures, narrow-waisted Gaussian beam discretization for short-pulse radiation 117648
airborne radome, elec. design, vector aperture-integrat./surface-integrat. method *(Chinese)* 105981
asymptotic expansions of Laplace-type integrals 90100
Bell polynomials in integrat. 90066
biharmonic integral eqn. solns., non-uniqueness detect. by SVD 114098
BPSK/QPSK Rayleigh fading channel, symmetric capacity 107624
Burgers' eqn. lin. implicit time integrat. scheme 114102
CDMA systs., optimal space-time block codes 106089
Chinese speech recogn., phonetic/prosodic probab., 3D Viterbi search *(Chinese)* 84057
coded systs. over AWGN/fading channels, error probabilities upper bounds 72934
composite dielec., elec. field by curved surface charge method, elec. flux continuity *(Japanese)* 72162
contrawound toroidal helix antenna fields 105901
damped oscill., logarithmic decrement eval., integral sig. proc. 101594
DDS, phase interpolation, delay generator, two-step integrat. 114642
dyadic Green's fn. for biaxial medium 72277
ellipt. flattened Gaussian beam propag. charact. *(Chinese)* 82725
EM fields, modified kernel, a priori error bounds 117620
EM scatt. by bodies of rev., fast algm. 72258
EM wave scatt. from imperfectly conducting circ. disc, full wave anal. 105716
Euler method in num. integrat. of react.-diffusion problems with blow-up 114099
explicit-implicit method for flexible-rigid multibody systs. 114179
FEL, hybrid undulator design 128339
finite integrat. tech., discrete energy conservation/related laws 83089
four-stage symplectic and P-stable SDIRKN methods with dispersion of high order 90157
fractional Brownian motion, stochastic calculus 67710
fractional diff. eqn. time response, num. algm. *(Japanese)* 124701
fully discrete hp-finite elements, fast quadrature 68072
generalisation of Telles' method for weakly sing. boundary element integrals evaluation 90173
gyromagnetic materials for microwave appls., time domain modeling using finite integrat. tech. 125643
H-polarized plane wave incidence, reson. scatt. from slit coupled cylindrically eccentric impedance cavity 72239
Henstock integral of fuzzy-no.-valued fns. 67708
high-speed large interconnect network simul., nonlin. cct. reduct. 90639
incremental length diffr. coeffs. for arbitrary cylindrical scatterers 93992
insertion devices, integral mag. field anal., stretch-wire syst. 121156
integral detect. of low observable target by stepped freq. sigs. 75086
intractability results for integrat. and discrepancy 114100
IVP parallel global integrat. method 124687
IVPs of ODEs using power series arith., long time integrat. 124719
locally regular CNN 68978
mag. field, transient anal., adaptive step time integrat. 128687
meshless regular hybrid boundary node method 124735
multi-obj. tracking, engng. stats. 95713
multidetector arrays, DAQ, electronics, review 110308
multilayered media, Green's fns. in near-field region 72244
nanosurfacing proc. simul., MDM guidelines 115809
noncompact fuzzy no. space, embedding problem 113946
nonlin. dyn. ccts., time-domain simul., num. errors, energy content 68526
nonlin. EM field comput., hybrid tech., triangle search method 83143
nonlin. Fabry-Perot resonator, direct num. integrat. 72047
oscillatory integrat. rules 90099
pass. integrat. methods, fund. theory 68903
pass. Runge-Kutta methods, num. stabil. props. 90101
plates, thin piezoelec., buckling anal., FEM/DKQ element *(Chinese)* 127162
punch-through limited breakdown volt. of parallel-plane jn., calc. *(Chinese)* 92271
quadrature formulas on the unit circle and the interval, -1, 1 79045
quotient gradient methods for solving CSP 90036
radar ATR, nuisance params. mgt. 86184
rail launcher devices with sliding contacts, EM anal. 83185
rect. piezoceramic transducers, flexural waves transm., NDE 116201
resonators, freq. domain anal. with finite integrat. tech. 83492
self-consistent simul., transient heating effects, elec. devices, finite integrat. 124684
self-term wire antenna kernel, integral transform tech. 83498
series related to the Euler series, Feynman diag. calc. 124683
sharp edge particle EM wave scatt. anal., extended boundary condition method 83348
small PM motors, perform./brush commutation modelling 123524
spherical Marcinkiewicz-Zygmund inequalities and pos. quadrature 79043
spherical product algms., integrat. of smooth fns. with one sing. point 124686

integration continued
stroked overhead line lightning channel incoming/refl. waves modelling 8847
symplectic FDTD method for solving Maxwell eqns. 128643
symplectic integrators for discrete nonlin. Schrodinger systs. 68010
three-phase double-winding power transformer EM transients simul. 88790
time integrat. algms., freq. domain anal. 101061
time marching multilevel techs. for evol. dissipative problems 90165
time-varying sig. detect. and ident., adaptive transform. 119086
unbounded anisotropic medium, dyadic Green's fn. in cylindrical coord. 8326
uniform distrib., discrepancy, reproducing kernel Hilbert spaces 124685
upwinding in method of lines 68011
urban area quasi-MM band fixed wireless access, delay profile 85551
variable fractional-delay FIR digital filters, discretization-free design 102408
VHDL-SPICE mixed-sig. ccts., distributed event-driven simul. 125625
waveguides, freq. domain anal. with finite integrat. tech. 83492
worst case complexity of surface integrat. 114101
X-ray beams, central axis, field factors, sector-integrat. 98643
X-ray CT, cone beam reconstr., inversion formula 118268
Ge detector, source peak efficiency, disk/vol. integrat. *(Japanese)* 121612

integrators *see integrating circuits*

integrity, data *see data integrity*

integro-differential equations
see also Boltzmann equation; Fokker-Planck equation; Liouville equation; master equation; Vlasov equation
computational EM appl. of meshless method 128641
conducting cylinder embedded in complex medium above ground plane, ana 72398
convolution type discrete nonlin. integro-DE, num. stabil. 68050
electrostatic field interact. with fractal surfaced dielec. body 72177
EM charact. of grounded slab/parallel-plate struct. using SDDI tech. 83253
HTSC plate shielding current dens. spatial distrib. calcs. 71185
min. residual method applied to transport eqn. 68044
multisplitting waveform relax. for lin. integral-diff.-alg. eqns. in cct. simu 67966
nonlin. impulsive integrodifferential eqns., uniform soln. boundednes Razumikhin tech. 113837
nonlin. Volterra discrete eqn., priori soln. bounds 68058
opt. fibers, nonlin. wavefields, amplif. effects 104684
orthogonal basis fns. Legendre polynomials, integro-DE with Cauchy kern 114112
Petrov-Galerkin methods, nonlin. Volterra integro-DE 101078
plate de-icing in cold cross flow by hot fluid injection through slot, aircraft appl 88026
quasi-interpolatory modified splines for sing. integral models 67924
relax.-based algms., lin. integral-differential-alg. eqns. 101089
relax.-based transient anal., matrix splitting, cct. simul. 79504
second order lin. ellipt. eqns., transms. problems, min. estim. 67722
seismic imaging, sing. charactn. by monoscale anal. 111391
semilinear integrodifferential eqns., approxs. of solns. 114125
shells, nonlin. piezoelec. circ., free vibr. anal. 104427
Sobolev-Volterra projection for FEA of integro-diff. eqns. *(Chinese)* 124764
superconvergent method for approximating bending moment of elastic beam with hysteresis damping 79073
Volterra integral-differential syst., practical stabil. and Lyapunov's stabil. *(Chinese)* 100747

intellectual property *see industrial property*

intelligence, artificial *see artificial intelligence*

intelligent actuators
act. piezoelec. layers, sound refl./transm. control, modelling 114476
act.-pass. hybrid piezoelec. network, vibr. control, neg. capacitance 116203
adaptive struct., current & future research activities 114474
adaptronics technol. for intell. lightweight struct. 68452
artificial urethral valve, transcutaneous energy transformer, shape memory actuators 122344
beam, smart composite, self-adapting vibr. control syst. 127264
cardiovascular sci., nanotechnol. needs, overview 132993
components/instrums. for control, conf., Buenos Aires, Argentina (Sept. 2000) 113254
composite plates, nonlin. actuation, coupled piezoelec.-mech. model 114478
comput. methods for smart struct. & mater., conf., Madrid, Spain (June 2000) 124206
EM coupled microstrip antenna smart mech. actuated two-layer microstrip antenna 72649
faults, self-diagnosis 123697
ferroelec./polymer composites, embedded sens., actuators, composite struct. health monitoring 101528
flight servos, intell., high-perform., neural net-based control, advanced mechatronic systs. design 122538
ionic polymer-metal composites, fund. props., review 114481
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
magnetorheologic fluid smart actuators, flow behaviour in narrow channels 104553
magnetostrictive actuator, approx. inversion of hysteresis 81924
magnetostrictive actuators, hysteresis modelling and compensation 92878
magnetostrictive transducer, actuators/sens. appls. 109827
monolithic SMA micro actuators, designing methods 104197
piezo-actuated vibroacoustic absorbers, interior noise control 123696
piezoceramic torsional actuator, design & perform. 116202
piezoelec. beams, BernouHi-Euler beam theory correction 114475
polymer/Pt nanocluster composite film actuators, self-assembly 114479
smart antenna design, variable geom. truss struct. 117829
smart beams, piezoelec. actuator/sens., debonding effect 114477
stacked actuator displacement-amplif. mechanism, topol. optim. 112727
Terfenol-D high-power LF magnetostrictive actuation, vibr. control 78105
FePd, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
NiAl, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
NiTi/Si diaphragm micropump, design, microfab. & charact. 127131
PMN-$PbTiO_3$ patches charactn., plate struct. act. vibr. control 116230
RuTa, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
Ti-Ni-Cu SMA actuators, high-speed response 116060
TiNi, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530

elligent agent interaction *see cooperative systems*
elligent buildings *see building management systems; factory automation; home automation; office automation*
elligent control
see also neurocontrollers
act. networks, appl. of computational intell. techs. 74045
act. vision systs., agent-based control archit. 73271
agent-based bidirectional intell. rem. controller 114793
APD, intell. control, laser radar syst. 75231
artifical artificial legs, reviews *(Chinese)* 98710
ATM networks, intell. leaky bucket algms. for sustainable-cell-rate usage param. control 107775
ATM wireless broadband networks, intell. control of QoS adaptation 131223
audiostimulator *(Chinese)* 97143
automotive collision warning radar, sig. proc. 75101
batt. charging proc. control, neuro-fuzzy-genetic approach 134143
building EMS using LAN technol. 89316
CAN Bus based intell. PLC controller *(Chinese)* 114805
Chinese distrib. automation schemes *(Chinese)* 77261
conf. on intell. mfg., Boston, MA, USA (Nov. 2000) 113184
cutting tools, direct control by microtechniques 113820
DaimlerChrysler vision systs. for intell. vehicles 89422
direct elec. concrete curing, intell. virtual control method 100323
dispersed generation power systs., intell. control methods 111864
distributed intell. hierarchical syst., heat metering and control 122825
elec. engng., neural networks/fuzzy logic appl. 124245
elec./electronic equip. optim., conf., Brasov, Romania (May 2000) 100426
electroheat procs. fuzzy knowledge appl. *(Polish)* 124093
EMR fluid with nanoscale composite, vibr. control 79464
EMS for optimum short-term scheduling 133830
EV sharing syst. *(Japanese)* 124001
feeder automation intell. telecontrol scheme *(Chinese)* 111834
flight servos, intell., high-perform., neural net-based control, advanced mechatronic systs. design 122538
fluoresc. lamp ballasts self configuring dimming interface 134625
four-legged animal robot, multilevel multisensor based decision fusion 97223
fully networked energy infrastructure, stupid network, distributed intell. 133492
fuzzy switching regulators 101761
high-speed networks, fuzzy admission control scheme 130193
HV overhead elec. lines, fully-automatic live-line maint. robot 88463
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
integrated predictive/adaptive building HVAC/lighting control 89453
intell. control-maint.-tech. mgt. syst. anal./design *(Chinese)* 78550
intell. transport systs., downloadable multi-mode and multi-service software radio 113114
interf. suppression in distributed intell. control syst. 78736
LIM drive, intell. backstepping control 100237
manipulator, intell. stereo vision syst. 73507
matrix converter PMSM drive, neural-network switching strategy 123929
mfg. procs. control using distributed intell. 113805
microgravity environ. on-board monitoring using nerual nets 120659
mine hoist DC motor drive, intell. monitoring/control syst. 124168
mobile commun. systs., power control methods 120004
mobile wireless ad hoc networks, adaptive control protocol 74763
motor control systs., intell. devices/networks integrat. 133942
networked-intell. motor control systs. 133944
New Millennium Deep Space One spacecraft, Remote Agent autonomous control syst. 76822
open archit. microcontroller based distributed meas. syst. and control syst., automatic program generation 75375
photolithography proc. intell. CD control 100718
posn. controller-based adaptive self-tuning drive syst. 134449
power converter control techs. 99745
power distrib. syst. protective relays, appl. scope expansion 133775
power electronics, control using AI, review 90716
power syst. control and mgt., intell. syst. appls. 77206
power syst. intell. parallel controller, fuzzy linguistic rules assess. 88368
rly. power syst. substation protection/control integrat. 78247
RoboCup, AI research perspective 75664
sensorless PM sync. drives, direct axis current utilization 134443
sheet metal deep drawing, intell. control, real-time meas. and ident. 113816
single wafer proc. IC fab., cluster tool, modelling and control 89950
smart airbag systs., foil resistors as electro-pyrotechnic initiators, low energy 89418
smart domestic appliances control using microcontroller-based triacs 78352
sound speaker mfg., automated QC by neuro-fuzzy approach 120599
SRM drive intell. adaptive online direct EM torque estimator 123875
stand-alone intell. digital dist. relay, paper discussion/closure 133795
substation control/protection/monitoring integrat. strategies 134304
substations, voltage/reactive power control, intell. automatic equipt. *(Chinese)* 99858
train network simulator design based on train commun. network 134543
unit power plant, fuzzy-neuron intell. coord. control 112208
vision based intell. robots 73215
VRML animation of inspection syst. 120639
wind-diesel power syst. distributed intell. load control scheme 99590
ntelligent databases *see deductive databases*
ntelligent design assistants
concrete product life cycle anal./CAD, intell. syst. 125089
electronic device simul. via character inform. technols. *(Russian)* 101671
EMC problems, 3D simul. tools, ES 72371
environ.-conscious products, requirement-centered design support syst. *(Japanese)* 100520
FILTEX, microband filter intell. design syst. 68518
fluid power syst. computerised design support tool develop. 100521
Hopper, automation engine, phys. design of large IC 104004
iter. design, meta-level eval. fn. reformulation strategies 100522
semicond. mfg. lead frame, integrated CAD/CAM syst. 126918
ntelligent knowledge based systems *see knowledge based systems*
ntelligent materials
see also intelligent structures
act. composites, microfab. by coextrusion hollow fibres 101526
act. piezoelec. layers, sound refl./transm. control, modelling 114476
adaptive struct., current & future research activities 114474
adaptronics technol. for intell. lightweight struct. 68452
beam, smart composite, self-adapting vibr. control syst. 127264
comput. methods for smart struct. & mater., conf., Madrid, Spain (June 2000) 124206
intelligent materials continued
design for environ., act. disassembly using smart materials, costs 100537
electroconjugate fluids based micro motor 134104
EM band-gap struct., class./charactn./appls. 83222
ferroelec. smart materials, nonlin. props. 116150
ferroelec./polymer composites, embedded sens., actuators, composite struct. health monitoring 101528
fiber optic sens. syst. for material/struct. condition 90564
GMI, smart materials, mag. field sens., reviews 101531
high nonlin. ellipt. fiber sens. 109588
ionic polymer-metal composites, fund. props., review 114481
lin. strain matrix material embedded fibre strain sens. 86583
magnetostrictive actuators, hysteresis modelling and compensation 92878
magnetostrictive transducer, actuators/sens. appls. 109827
MEMS material crack diagnosis, electrostatic comb test device 125158
monolithic SMA micro actuators, designing methods 104197
multi-link smart materials robots, model-free regulation 92694
P(VDF-TrFE) electrostrictive copolymer, electromech. coupling factor 104325
piezoelec. actuation archit. design, state of art 116190
piezoelec. coated fibre composites, effective props. 104363
piezoelec. material-embedded struct., crack ident. *(Chinese)* 90604
plate, laminated, shear-deformable, piezoelec. actuators, thermal postbuckling 127266
polymer/Pt nanocluster composite film actuators, self-assembly 114479
SMA contrib. to aerospace related smart struct. 101529
SMART coatings synthesis and functioning for compact instrums. and sens. appls. *(Danish)* 71467
smart polymer composite thermistor, fault/short cct. current heating 125127
smart syst. materials, conf., Boston, MA, USA (Nov.-Dec. 1999) 100375
steel crack growth monitoring using piezotransducer array 101527
syntactic foam embedded fibre sens., mech. strength 131951
twisted opt. fiber strain sens., compressive/tensile stresses and strains study *(Chinese)* 75550
C fibre reinforced plastic, damage detect., impedance spectrosc. 114482
FePd, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
NiAl, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
PZT piezoelec. fibre/polymer matrix composites, dielec. props. 104364
RuTa, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
SiC conducting/insulating tracks by laser direct writing 115337
TiNi, rapid solidified metallic actuators, EM nozzleless melt spinning prep. 101530
intelligent networks
3G environ., gaining/collecting revenues 131189
act. commun. networks, Internet ticket ordering service model 96185
act. fault tolerant networks, on-line network simul. 130577
act. flow manipulation, IN services 130914
act. networking, distrib. denial of service attacks repulsion 130576
act. telecom networks, service creation and mgt. 74117
advanced IN, components of mgt. logic programs *(Japanese)* 74426
agent based distributed UPT syst., archit. *(Chinese)* 96252
AIN, decentralised databases, SCP archit. using multicasting access 130934
approved location stamps 131188
archit. based on act. network technol. 96255
archit. based on act. networks *(Chinese)* 108393
ATM technol. and develop. *(Chinese)* 107665
bandwidth on demand 74104
CAMEL, evol. and PPS eval. 131185
China, commun. technol. research develop. plan 95978
computer network nodes, perform. measures 96253
concept, structure, services *(Chinese)* 74421
consciousness, beyond ant-hill model 119774
converged IN services and API 130907
converged network, value added services 119772
convergent network trends, perform. and capacity planning 130918
customer constructing syst. 130927
Device Management Service 130926
digital container mechanism for all-opt. network heterog. traffic transport 120323
e-commerce, IN core competencies for payment systs. 130928
end-to-end commun. network intell. 108394
enhanced service design exploiting syst.-independent reusable feature modules 130924
formal spec. of services, feature interaction detection *(Chinese)* 119775
general mesh opt. networks, scalable distributed restoration 109118
global inform. infrastructure, networks integrat. 119935
GPRS, network intell. 131184
hierarchically dyn. NMS using mobile agents 130582
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE IN, conf., Boston, MA, USA (May 2001) 124226
IEEE MELECON conf., Lemesos, Cyprus (May 2000) 113196
IN Forum, service delivery mechanisms in next generation networks 130933
IN with cross-network open provisioning, Internet bandwidth transactions 130932
IN/Internet interworking model 108170
IN/Internet interworking model, C/BGF 107825
IN/Internet interworking model, service control gateway design *(Chinese)* 108395
IN/IP integrat. archit., service-independent MGF framework 130921
integrat. of IN and Internet, bal. between idealism and current products realism 74425
inter-vehicle commun. network with autonomous relay access scheme 74649
Internet, face detect. for security syst. 118385
Internet integrat. with next generation networks *(Polish)* 85319
Internet/IN interworking by SCP *(Chinese)* 108246
internetworking solns. to ACC customer roaming 74422
IP environ., signalling model for real-time services 96159
ISA, intell. services agent supporting IN/IP integrat. 130916
Latin America, advanced telecomm. services deployment 130477
mesh based opt. network routing and restoration 96738
mobile data services, converging IN and Internet AAA systs. 131190
mobile Internet, intell. SIP syst. 130758
mobile network, IN technol. 96581
mobile telecomm. systs., intell. mobility mgt. archit. 74813
neurofuzzy networks 102474
next generation intell. reconfigurable mobile networks, OO organic archit. 130935

intelligent networks continued
next generation networks, service archit. 131191
next-generation network evol. for revenue-generating services 108055
next-generation networks, prototype for service archit. 131186
next-generation networks, semaphores with feature interacts. 130910
open integrated IN, universal service platform 74423
open prog. and act. networks 130913
open SCE 130917
opt. network mgt. 108056
opt. networks, lightpath routing 109112
opt. networks and technols., trends and evol. 131361
opt. services 120206
OSA-enabled global appl. roaming 131187
Parlay API, validation through prototyping 130912
Parlay enhancement with mobile code technols. 130930
PILOTE, SCE in next-generation networks 130909
PrePaid Service, evol. towards real-time payment syst. 130925
protocol modifs., flexible SCE 130375
SCE 96256
SCP and SSP, multi-vendor integrat. 130908
SCP services platform, migration to IP-based appls. platform 130929
self-served mobile location query service 130920
sens. networking and interface standardization 109438
server farm 96254
service control, efficient resources utilization algm. 119773
service control layer signaling based on session initiation protocol 130377
service interacts., dyn. detect. approaches 74424
services managment in IN, conf., Austin, TX, USA, Dec. 2000 100376
services opt. network archit. 120207
SLA monitoring and service mgt. through distributed intell. agents, generic archit. 130911
smarter Internet, act. networks for service providing 130931
SoftSwitch for distributed service and converged networks 130915
TINA, enhancement of platform access using WAP 130374
TINA accounting mgt. archit. based prototype 130666
TINA environ., service subscription inform. mgt. using OO middleware 130919
transaction capabilities/CORBA gateway using obj. pool mechanism 130555
UPT syst. based on IN CS-2 *(Chinese)* 108070
virtual home environ., unified messaging and I-centric services 130922
VoIP networks, third-party call control for call center appls. 130610
VoIP suppl. services, advanced IN control archit. 130923
WIN with WAP for enhanced voice/data services 130376

intelligent sensors
2D pyroelec. array technol. 131912
3D vision, smart VLSI opto-sens., laser spot posn. meas. 109707
act. fibre waveguide sens., embedded structural condition monitoring 121054
act. pixel sens., intell. opt. sens. ccts., opt.-syst.-on-a chip *(German)* 75607
act. struct. health monitoring, FRC & steel-reinforced concrete 79467
adaptive struct., current & future research activities 114474
air conditioned atmos., Forane 134a/CO_2 concs. discrim., electronic nose 132062
aircraft skin panels, embedded FBG sens., buckling anal. 88046
automotive dist. from ground meas., US sens., smart car 113110
automotive intell. image sens. for inner space monitoring 124038
BIST, oscill. based method for functional testing of smart sens. devices 80124
bridge & highway static/dyn. testing, long-gauge FBG strain sens. 120843
bridge struct. health monitoring with FBG sens. 86781
Brillouin opt. time-domain reflectometer distributed opt. fiber strain sens. 86777
closed-loop meas. channel, noise detect. algms. 109825
CMOS analogue SIMD focal-plane proc. array, smart-sens. VLSI cct. 109691
CMOS based smart temp. sens. & voltage refs., sig. proc. 132085
CMOS integrated three-axis accelerometer, bulk micromachining 109822
CMOS temp. sens., curvature correction, digital bus interface 86776
coffee QC using electronic nose, PCA & MLP 109828
comfort sens., fuzzy symbolic approach 132084
compensation circuitry, EEPROM arrangements, neural networks *(Italian)* 132081
complex spatio-temporal interact., sens. computing 97583
components/instrums. for control, conf., Buenos Aires, Argentina (Sept. 2000) 113254
composite plates, nonlin. actuation, coupled piezoelec.-mech. model 114478
comput. methods for smart struct. & mater., conf., Madrid, Spain (June 2000) 124206
concrete moisture content meas. using Mach-Zehnder interferometer 90599
conf., Birmingham, UK (2000) 89523
conf. on intell. mfg., Boston, MA, USA (Nov. 2000) 113184
conf. on sens. and control techs., Wuhan, China (June 2000) 78371
config./operation of sens. for microcontrollers 121052
DAQ sens. agents, human behavior emulation 120667
DC meas., intell. instrum. 86903
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
distributed fibre opt. strain sens. for long struct. 109608
distributed fibre opt. temp. sens., spatial resoln. wavelet ANN 120860
domain distributed intell. proc. for inform. fuselets 97584
DSP-controlled IM drives, smart sens. bearings 123884
elec. impedance tomography, smart sens., harsh environ. 121055
electronic nose, Forane 134a discrim., time reduced modelling param. 97550
electronic nose, gas anal. gradient microarray 132026
embedded fiber optic sens., single-fiber fragmentation test 131952
embedded sens. arrays, sensitive skin 75769
Eurofighter Typhoon struct. health & usage monitoring syst., validation 88047
eye, artificial, control using EOG following real eye 98722
fault detect., intell. for monitoring/diagnostics 132082
FBG array for distributed strain sens. 97299
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
FBG strain sens. ship hull struct. monitoring, sig. proc. 89388
ferroelec./polymer composites, embedded sens., actuators, composite struct. health monitoring 101528
fiber optic BOTDA sens., distributed strain meas. *(Korean)* 120848
fiber optic sens., anchor monitoring 75587
fiber-optic extrinsic Fabry-Perot interferometer strain sens., three-wavelength digital phase demodulation 86586
fibre opt. microbend sens. for smart struct., distributed detect. 75771
fibre opt. pre-embedded concrete bar sens., temp. charact. 131938
fibre optic sens., interf. pattern recogn., CGH-ANN syst. 86584
filament wound press. vessel monitoring, embedded FBG sens. 97309
flow sens. for liq. injection detect., data commun. *(Chinese)* 75768
gas trunk pipelines, opt. fiber bidirectional strain gauge 120841
GMI, smart materials, mag. field sens., reviews 101531
hierarchical distrib. intell. sens. instrum. syst., error compens. 120648
high nonlin. ellipt. fiber sens. 109588
indust. procs. appls. 121053
indust. sens. syst., conf., Boston, USA (Nov. 2000) 113218
instrums. teaching, dist. learning via Internet 113368
integrated ang. speed sens. syst. design, automotive appl. 109824
Intelli-FIELD electrostatic field disturbance sens. 89777
ionic polymer-metal composites, fund. props., review 114481
ITS, Intelligent Transport Systems, combined RF ident., vehicle detect./train posn. 100280
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
large struct. monitoring opt. fiber sens. syst., vibr./temp. meas. 109598
laser-US smart mould for composite parts mfg., fibre opt. US sens. 114451
lin. strain matrix material embedded fibre strain sens. 86583
mag. sens. design, sensitivity based covariance anal. 121057
magnetostrictive transducer, actuators/sens. appls. 109827
metal tag recogn., smart eddy current sens., blind source separation 118800
metallic struct. embedded FBG sens., prep., thermal perform. 120849
micro-mag. sens., magneto-impedance/stress-impedance, review 75765
micro-unattended mobility syst., grenade launcher deployed sens. 77025
microcontroller based instrums., calib. method 120625
micromechanical press. sens. in CMOS technol. 121043
microresonator, mag. sens. 86762
mixed-sig. smart sens. IC for NASA's new millennium spacecraft 114887
MR current sens. microsystem with full digital calib. 75757
networking and interface standardization 109438
neural network based sens., redundant technol., sens. fault diagnosis *(Chinese)* 121060
neural network-based sens. sig. accelerator 121050
neural-network based modelling, nonlin., monitor appl. 86773
piezoceramic inertial actuator, mech. impedance of struct. detect. 127259
piezoresistive press. sens., correction using microcontroller 75772
piezoresistive sens. smart compensation syst., MCA7707 proc. 121056
QC cloth prod., real-time defect detect. 120886
real time intell. sens. validation, Bayesian network 133872
real-time vibr. modal coords. sens. using piezoelec. array 132087
reconfigurable multimedia surveillance networks, intell. sens./software radio technols. for optimal design 108578
reconfigurable smart sens., networking 109829
rem. sens. with self test, new opportunities for phys. transducers perform. improvement 132086
rocket engine test facility, DAQ & health monitoring syst. 111319
Rollinsford bridge distributed strain monitoring by Brillouin-scatt. based fiber optic sens. 97323
self-mixing interferometry, FT method, displacement meas. 97833
self-organizing sens. networks, inform. dissemination, distributed services 129991
self-validating sens. probab. estim. algms. 132083
sens. node cluster, distributed, collaborative sig. proc. 95611
SensEdu, Internet course for teaching sensorics 113369
shell finite element for smart piezoelec. composite plate/shell struct., act. vibr. control 121051
sig. conditioning appl. to sens. 86779
sig. detect. appls. 75449
Signal-I, smart press./rarefaction/press. difference sens. *(Russian)* 75767
smart appliances design 109826
smart beams, piezoelec. actuator/sens., debonding effect 114477
smart buildings, multifunctional transponder-based appls./services 75770
smart fiber reinforced polymer rod, ductility and health monitoring 86778
smart on-board adaptive sens., MECA electrometer 133250
Smart Sensor Web, Web-based sens. fusion, visualization of tactical battlefield 77038
smart struct. monitoring using PZT actuators & PVDF sens. 109823
smart transducers interface design, time triggered archit. 131824
soil, intell. dielec. sens. 121059
spacecraft avionics, networking intell. I/O components 133243
spectral chem. sens., systematic profile/feature-based intell. 109737
steel crack growth monitoring using piezotransducer array 101527
struct. health monitoring, damage detect., modal damping meas. 79465
structural syst. ident., strain and translational displacements meas. outputs 97854
syntactic foam embedded fibre sens., mech. strength 131951
syst. ident. & struct. health monitoring, conf., Madrid, Spain (June 2000) 78468
technol. advances & future develop., miniaturisation, overview 109816
thermal spray techs. for meso-electronics/sens. direct write fab. 114399
unattended surveillance and monitoring syst. 111634
US flowmeter, improved meas. & calib. facility 121058
virtual water quality tests with electronic tongue 122704
vision, dyn. reconfigurable, for intell. sens. 106796
vision sens., theoretic design 121061
VRML animation of inspection syst. 120639
wind sens. with integrated interface electronics 86775
wireless sens. for indust. mfg. 86774
Si technol./devices, develop. 103948
SnO_2 gas sens. array, impedance characts., ANN pattern recogn. 97504
SnO_2 sens. array, VOC detect., ANN pattern recogn. 97506
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033

intelligent structures
see also flexible structures; intelligent materials
act. composites, microfab. by coextrusion hollow fibres 101526
act. fibre waveguide sens., embedded structural condition monitoring 121054
act. struct. health monitoring, FRC & steel-reinforced concrete 79467
act.-pass. hybrid piezoelec. network, vibr. control, neg. capacitance 116203
adaptive laminated struct., higher-order B-spline strip models 125129
adaptive struct., current & future research activities 114474
adaptronics technol. for intell. lightweight struct. 68452
air-coupled US NDT, improved transducers 114517
aircraft skin panels, embedded FBG sens., buckling anal. 88046
aircraft structural health mgt. 88045
beam, flexible smart, act. posn. control using internal model control 68453
beams, smart, vibr. control, generalized location fn. method *(Chinese)* 68451
bridge & highway static/dyn. testing, long-gauge FBG strain sens. 120843
bridge struct. health monitoring with FBG sens. 86781
Brillouin opt. time-domain reflectometer distributed opt. fiber strain sens. 86777
composite beams, dyn. anal., approx. soln., MATLAB 125128
composite plates, nonlin. actuation, coupled piezoelec.-mech. model 114478
comput. methods for smart struct. & mater., conf., Madrid, Spain (June 2000) 124206
computational design/optim. advances, MEMS appl. 116071

elligent structures continued
damage detect. meas. point selection, mutual inform. concept 86989
diffr. Lamb wave struct. health monitoring syst., multiresoln. proc. 79466
distributed fibre opt. strain sens. for long struct. 109608
embedded sens. arrays, sensitive skin 75769
FBG array for distributed strain sens. 97299
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
FBG strain sens., shaft torsion deform. meas. 75591
FBG-based meas. syst. in struct. health monitoring 86780
fiber optic sens. syst. for material/struct. condition 90564
fiber-optic extrinsic Fabry-Perot interferometer strain sens., three-wavelength digital phase demodulation 86586
fibre opt. microbend sens. for smart struct., distributed detect. 75771
fibre opt. pre-embedded concrete bar sens., temp. charact. 131938
fibre optic strain sens., temp./strain meas. 75583
filament wound press. vessel monitoring, embedded FBG sens. 97309
gas trunk pipelines, opt. fiber bidirectional strain gauge 120841
health monitoring, damage detect., modal damping meas. 79465
laminated plates with distrib. piezoelec. sens./actuators, FEM model 114480
large infrastruct. health monitoring, wireless transm. syst. instrum. 100513
large struct. monitoring opt. fiber sens. syst., vibr./temp. meas. 109598
lin. strain matrix material embedded fibre strain sens. 86583
magnetostrictive transducer, actuators/sens. appls. 109827
metallic struct. embedded FBG sens., prep., thermal perform. 120849
NDT, imped. spectrosc., dyn. thermography, interferometry 90602
piezoelec. beams, Bernoulli-Euler beam theory correction 114475
piezoelec. intell. beam state-depend. LQ vibr. control *(Chinese)* 104433
piezoelec. material-embedded struct., crack ident. *(Chinese)* 90604
piezoelec. plates & shells, semi-anal. charactn., piecewise discretis. 125130
plates, thin piezoelec., buckling anal., FEM/DKQ element *(Chinese)* 127162
real-time vibr. modal coords. sens. using piezoelec. array 132087
Rollinsford bridge distributed strain monitoring by Brillouin-scatt. based fiber optic sens. 97323
ship hull struct. monitoring using FBG strain sens., sig. proc. 89388
SMA contrib. to aerospace related smart struct. 101529
smart beams, piezoelec. actuator/sens., debonding effect 114477
SMART coatings synthesis and functioning for compact instrums. and sens. appls. *(Danish)* 71467
smart plates, vibr. control using discretely distributed piezoelec. quasi-modal actuators/sens. 127257
smart struct., self-diagnosis/-repair using hollow-centre opt. fibre 114559
smart struct. monitoring using PZT actuators & PVDF sens. 109823
steel crack growth monitoring using piezotransducer array 101527
syst. ident. & struct. health monitoring, conf., Madrid, Spain (June 2000) 78468
temp./strain meas., act. fibre/fibre grating combination 120832
twisted opt. fiber strain sens., compressive/tensile stresses and strains study *(Chinese)* 75550
vert. fin buffeting alleviation, strain actuation, closed-loop control tests 111306
vis. semicond. lasers with external light input, chaotic oscill. modes, commun. appls. 105328
C fibre reinforced plastic, damage detect., impedance spectrosc. 114482

telligent tutoring systems
adaptive hypermedia systs., user models role 113311
asynchronous dist. education appl. 113310
computer-based intell. learning material for CSCL, use/reuse *(English)* 78533
DC cct. theory, problem solving, ES 101648
ECG interp., teaching guided by CARDIOLOG tutorial ES 100477
ECSAIWeb, adaptive learning environ. on WWW 100464
LECOBA learning companion syst., expertise, motivation and teaching 67441

telligent vehicle highway systems *see automated highways*

telligibility, speech *see speech intelligibility*

ntensity measurement
see also acoustic intensity measurement
LEDs, standardization, radiometric intens. meas. 82381
liq. insulator elec. field vector distrib., three-direction opt. meas. syst. *(Japanese)* 77447
luminous intens. & flux stds. develop., cryogenic radiometer *(Japanese)* 86389
opt. radiation intens. space distrib. meas., thermal method 86999
self-referenced intens. based opt. fiber sens., Michelson sens. head config. 109597
video projectors, opt./illum. params. meas. *(German)* 86320

ntensity modulation
adaptive laser US receiver, polaris. self-modulation effect 101554
arc therapy, Monte Carlo dose verification 122429
ASE noise reduced opt. receiver, Mach-Zender interferometric diversity scheme 109061
bladder carcinoma, intens. modulated radiotherapy, dyn. multileaf collimation 98635
capacity of intens. modulated systs. using opt. amps. 109046
chirped FBG strain sens., subcarrier phase detect. scheme 97287
chirped fibre gratings for MM-wave generation & proc. appl. 91403
coherent-chaotic light conversion based delay line opt. recogniser 119852
correl. turbulent free-space opt. channels, max.-likelihood spatial-diversity reception 75066
Corvus IMRT treatment plans, target/crit. struct. doses 76732
DIAL, pseudo-random code-based, LWIR, QC laser, intens. modulation 111426
digital opt. fibre photoplethysmograph design, DDS, DSP 110847
direct detect. systs. with opt. amps., spectral efficiency 131366
electron beam radiotherapy, modulated, beam charactn., MC model 76620
external-cavity semicond. laser, transm. perform. assess. 96685
fiber grating semicond. laser, act. mode locking, time domain anal. 117392
fiber grating semicond. laser operation, act. mode-locking regime, time-domain anal. 128236
fiber optic sens., anchor monitoring 75587
fibre opt. TDM gas sens. syst., forward-coupled ladder topol. 75729
fibre ring laser, regenerative mode-locking, pulse freq. doubling 71897
fibre ring lasers, rational harmonically modelocked, higher-order opt. pulse generation 93523
Fourier hologram storage, opt. representation of binary data *(Korean)* 116574
gain-saturated SOA intens. modulation/noise suppression 128285
gas conc. monitor using solid state IR modulator 75722
Gb/s dispersion-managed soliton transm., sync. intens. modulation control stabil. 74919
high-speed Mach-Zehnder-type opt. modulators, chirp params. direct meas. 104815
histogram-based probab. multihypothesis tracking, intens.-modulated sens. data 130134
hybrid EO oscillator, injected OTDM sig. 8×2.5 Gbit/s frame clock recovery 120357

intensity modulation continued
IR dist. sens., noise added theory based, lin. 109573
IR wireless commun., PM 75063
LINAC MLC-based intens.-modulated radiation therapy, QA 111083
micromultileaf collimator, intens.-modulated radiosurgery/radiotherapy 111084
MLC intens.-modulated radiotherapy, Monte Carlo simul. 111086
MLC-based IMRT dose verification, Clarkson summation algm. 76728
multileaf collimator intens.-modulated radiation therapy, dose calc. 111195
multileaf collimator intens.-modulated radiation therapy program 111090
multileaf collimator-based intens.-modulated radiotherapy, dosimetry 111196
multileaf collimator-based intens.-modulated radiotherapy delivery 111087
multileaf collimator-based intens.-modulation radiation therapy 111089
multiple intens.-modulated opt. fiber sens., network compensation tech. 75592
ocean surface sens., LWIR hyperspectral polarimetric imager 76915
opt. intens. modulated channels, sig. constellation design 128988
opt. wireless commun., outdoor appls., modulation methods 96883
phase-locked phase-shifting LD interferometer, photothermal modulating techs. 75872
photon/proton intens.-modulated radiation therapy, inverse planning 111082
prostate cancer, fast-neutron therapy RBE 111128
prostate patient with prosthetic hip, intens. modulated radiotherapy 76731
radiation therapy, multileaf collimator params. 111085
radiation therapy, patient dose verification 111197
radiation therapy planning, beam space control 98649
radio-over-fibre, simul. on distributed point Fabry-perot LD 108782
radiotherapy, intens.-modulated, accel. of dose calcs. 87999
radiotherapy, treatment planning optimisation criteria 133020
radiotherapy compensators, dose distrib., QA *(English)* 87827
reflective intens.-modulated fibre opt. sens., obliquity effect *(Chinese)* 120845
return-to-zero coding polariz. division multiplex transm., PMD tolerance 120289
robot, analog data transm., plastic opt. fiber, bending loss compensation 131344
scanned pencil beam apparatus, dosimetric modelling, ^{60}Co tomotherapy 76764
self-calib. interferometric/intens.-based fibre opt. sens. 75577
semicond. lasers, pseudorandom wavelength hopping, sync. 93613
step chirped fibre grating, phase mask principle & design *(Chinese)* 127683
stereotactic/IMRT plans, accurate comparison 76730
surface roughness fibre opt. sens., self-focusing fibre, fuzzy algm. 75589
surface roughness meas., fibre probe, computer proc. *(Chinese)* 75599
thyroid malignancies, intens. modulated radiation therapy 76729
twisted opt. fiber strain sens., compressive/tensile stresses and strains study *(Chinese)* 75550
underwater acoustic sens., WDM, fiber Bragg grating 131956
VCSEL, polaris. switching, expt. obs., appls. 128301
Er^{3+}-doped fibre quasi-ring & FBGs, dual-wavelength lasers 93514
InGaAs/InGaAsP MQW scaled microdisk lasers, dyn. behavior 128279
$LiNbO_3$ EO intens. modulators using strain-optic effects 116805
$LiNbO_3$ opt. intens. modulator package, monitoring photodiode 71407
$LiNbO_3$ polariz. independent EO intens. modulator 116825

inter-computer links
distributed multimedia computer systs., resource mgt. key issues 108402
mobile agent based workflow systs., perform. and scalability issues 130849
peer-to-peer computing for live Internet events coverage 130743
peer-to-peer networking, technol. and business perspectives 74163

interacting binary stars *see binary stars*

interacting control systems *see multivariable control systems*

interactive devices
see also haptic interfaces; keyboards; mouse controllers (computers); touch sensitive screens
E-Racer, joystick controlled go-kart 111175
landmine detector operator training, motion tracking, virtual mine lane 77112
microfabrication device develop. for scanning electron microscope *(Japanese)* 124317
partial matching method for directory assistance, telephones as input devices *(Japanese)* 74478
walking guide tactile interface for visually impaired 84654

interactive programming
see also interactive systems
prod. planning problems, double objective mixed integral prog. model *(Chinese)* 113818
trigger prog. of logic analyser instrums., instrum.-specific lang. *(German)* 109460

interactive systems
see also interactive programming; interactive television; interactive terminals; interactive video; online operation; virtual reality
acoustic focusing by microphone array for human-robot interact. 120591
acoustics, synthesis, sig. proc. education, interactive multimedia 78501
assistive technol. for the disabled, ergonomic consequences 98734
ATM cell/IP packet transm. in multimedia interactive satellite commun. syst. 74880
ATM videoconferencing, interactivity and stabil. 108388
brain MRI, nonlin. diffusion for interactive multi-scale watershed segmentation 87584
broadband satellite access for interactive multimedia services 109003
broadcast and new telecomms. networks, convergence 85701
camera calib. and 3D reconstruction from single images using parallelepipeds 106476
caregivers of people with Alzheimer's disease, factors affecting use of telephone-based intervention 76779
CIP, interactive vision syst. written in Java 106779
colour map interp. via automatic/interactive techs. 107250
commercial/multimedia inform. retrieval *(Japanese)* 119792
Czech Republic, interactive broadband systs. and market pot. 96013
DayMedia, multimedia teaching package on daylighting 78329
denture mfg., robotic tooth insertion with interactive ES 98727
dialogue telephone service 106416
DIS, high-level real-time extension 130874
disabled and traditional users, speech recogn. software interact. 106411
dist. education, student assess., coursework assignment using interactive indiv. questions 67420
distributed multimedia performs., detect., anal. and rendering of audience reacts. 130952
DV transm. systs. using ATM networks, delay/quality anal. 107964
education, commun. patterns, computer mediated and face-to-face 85359
education, Electronic Chalk, Java-multimedia-table for classroom and teleteaching *(German)* 130939
education with audiovisual and multimedia images *(French)* 89614
electronic media, digital interactive services 108434
electronics for mechatronics students, studio teaching 89655
ESA's ARTES Element 2, on-board proc. develop. 109010

interactive systems continued
fault-tolerant speech recogn. *(German)* 73077
file commun., computationally feasible protocol 130826
GBS IP multicast tunneling 107822
graph cuts for optimal boundary & region segmentation of objs. in N-D images 106471
GUIDE project, develop. and deployment of context-aware tourist guide 74374
hand gesture contours, automated class. for gesture-based interact. and commun. 73127
hand gesture recogn., vision-based, self-reliance smoothness 73539
hand shape extraction and understanding by multiple cues fusion technol. 73540
HFC CATV networks, upgrading for broadband interactive services 97066
hierarchical teleconferencing on Internet 85361
HIKARI Community and Collaboration Service using broadband network 119459
Home Energy Management System *(Japanese)* 88295
HPA nonlin. effects on freq. multiplexed OFDM sigs. 119922
human dialogue strategies, misrecognition problems 84060
hypermedia interactive assisted learning 100468
ICONS project, interactive learning for global education 67423
image retrieval, integrated segmentation tech. 94941
in-car spoken dialogue recording syst. *(Japanese)* 84030
Internet interactive music station, develop. 96231
Internet multimedia services, OO appl. develop. platforms 108363
Internet speech, impact of degrad. 130900
Ishihara pseudoisochromatic plates, digital color dot picture 94761
Japanese Sign Language, non-manual inform. recogn. 73554
long-dist. education via multimedia-board, CSCW appl. 108439
loss-resilient H.263+ video over Internet 95150
maxillofacial operation planning using VR techs. *(German)* 111076
med. images, semi-automatic segmentation of 3D objs. 87705
melody input user interface, Tuneserver 106346
microwave oven sound, emotional element of interacts. 89466
multi-objective optim. problems, interactive fuzzy satisficing approach using GA 113995
multimedia presentation syst., distributed environ., floor control mechanism 74439
multimedia servers, stochastic resource prediction/admission for interactive sessions 131765
multimedia syst. QoS user perception decision making by neural net 108438
multimodal systs., interactive advice tool on speech use 118138
multimodality image fusion toolkit, high-speed interactive fusion 76433
music, interactive, aesthetics 120601
musical cyberinstrument design, SensOrg, cognitive ergonomics 86359
natural speech proc., conf., Ilmenau, Germany (Oct. 2000) *(German)* 78383
NEC IVR product with automatic speech recogn. *(Japanese)* 84059
neurosurgery, US/MRI overlay with image warping 87477
newspaper archive, interactive vocal IRS 119498
NPP, accident support via human-machine interface design 133845
obj. recogn., interactive visual dialog, act. vision approach 129844
on-board scheduling for multimedia appls. 108418
organ segmentation, interactive, using graph cuts 87312
panoramic video, compression issues 84490
paper based user interface for editing documents 94885
pervasive speech and natural lang. technol. 106384
radiation oncology interactive case mgt. exam., patient treatment portal design skills assess. 89607
real-time interactive obj. outlining using control points/smoothness param. manipulation 94540
real-time interactive tele-exercise classroom for computer exercises over Gigabit Network 100453
recurrent visual semantics discovery in consumer photographs 94831
reduced polygon model, interactive quality eval. 94713
rem. instruction syst. for heterog. network environ., software archit. 124272
rly. spoken dialogue systs., ellipt. and anaphoric statements *(German)* 73078
RSVP Unibrowser for dist. learning using videostreaming and Web 119797
scalable multimedia syst. for interactive surveillance and video commun. appls. 119788
Serbian spoken dialogue syst. for bus travel inform. retrieval 118153
Shisanling pumped storage plant, rem. controlled operation *(Chinese)* 88639
speech reconstruction from Mel-freq. cepstral coeffs. 118134
speech user interfaces, multimodal error correction 73075
surgical robots, telemanipulators for face/spine work 98610
telemedicine, getting started 122456
telemedicine, interactive, sig. delay 122455
Tokyo Inst. of Technology progress in speech recogn. 118162
top-down interactive behavioral synthesis environ., grammar based 68669
Traceroute, network route-tracing utility program 119434
TV-Anytime metadata, preliminary spec. 75275
ubiquitous computing and rem. user interfaces 108328
user interface design for engng. drawing vectorization software, VHVector *(Chinese)* 129868
verifiable partial escrow of integer factors 130449
video based teleconferencing, distributed interact., audio/video delays 74417
Vigenere cipher, interactive cryptanalysis algm. 72984
virtual Internet based on CATV using prefetch agent 120589
Visual-FSSEM, unsupervised data visualization and interactive feature selection 73455
VQ based shear-warped vol. rendering *(Chinese)* 83873
waste clean-up automation, telerobotics elements 95527
watermark verification syst., zero knowledge proof *(Japanese)* 106442
Web based learning environ. for commun. module 113288
Web site traffic anal., interactive, multidimensional, using OLAWEB 108361
wireless Internet over LMDS, archit./expt. implement. 74595
WLAN, expt. eval. of FEC on multicast audio streams 130692

interactive television
see also video on demand
broadband wireless access based on cable modem 85548
CATV broadband network design and simul. 120555
digital terrestrial broadcasting, mobility/interactivity saviour 75281
digital terrestrial TV, wireless return channel/WITNESS project 120509
digital TV Java environ. 86302
digital video server, automatic recording agent 131761
educational opportunities of Internet services and TV integrat. 120583
edutainment, interactive TV and education integrat. 120535
electronic media, interactivity and broadband convergence highway 108435
enhanced DTV programs, data insertion 86300
fully interactive digital TV appls. *(German)* 131778
home telecare, digital interactive TV use, tech. framework 111289

interactive television continued
home telecomm. equipt., middleware emergence 75311
iMEDIA business model of pers. interactive TV advertising 75327
Internet TV economics, new niches or mass audiences 97057
Ka-band satellite terminals standardisation 85930
MPEG-2 compressed VoD, interactive operation implement. 97091
MPEG-2 digital TV broadcast systs., synchronized data services 86296
news speech, topic segmentation using word similarity 131722
PHEMT IC chip set for interactive TV, Local Multipoint distrib. *(Germa* 69170
SURF, Simple UI to Retrieve Favorites 131733
telepsychiatry appl. in brief counselling of non-psychotic patients from gene practice 133160
transm. of DVB service inform. via Internet 75279
video objs. segmentation/tracking, content-based video indexing/interacti TV/prod. systs. 94645

interactive terminals
see also interactive systems; remote consoles; workstations
diagnostic monitors, high-resoln., QC issues 98123

interactive video
see also video on demand
3D video, future 86345
ADSL access systs. for broadcast TV and interactive video services *(Polis* 85413
animal behavioral anal. by water maze tests, computerized syst. 129519
asthma telepharmacy counseling, metered-dose inhaler tech. 121869
DVD, convergence zone 97101
DVD business/indust. appls. 97103
DVD mastering 93013
DVD-Video std. expansion, MPEG-4 encoded content inclusion 97104
Fugue, time scales of adaptation in mobile video 96249
keyframe-based user interfaces for digital video 120576
mobile video syst., channel quality estim. error 84430
moving image foreground extraction 129580
MPEG-4 data video prioritisation over mobile networks 84377
NTT HIKARI Content Service, video on Internet 119730
phys. education using interactive digital video clips 75325
scalable support, proxy servers 120565
semantic video obj. extraction using four-band watershed/partition lattice opera tors 73147
SoC, systs. on a chip, multidisciplinary and collaborative design, interacti video course 126957
video clip usage for interactive media content via image reuse 108406
video codec adaptation for streaming multimedia, MPEG4 std. 85416
video objs. segmentation/tracking, content-based video indexing/interacti TV/prod. systs. 94645
W-band LEO satellite, Antarctic region data collection 120081

interchannel interference *see adjacent channel interference*

interconnected power systems *see power system interconnection*

interconnected systems
see also cascade systems; interconnections; power system interconnection
network consciousness, beyond ant-hill model 119774

interconnection networks, multiprocessor *see multiprocessor interconnection networks*

interconnections
see also integrated circuit interconnections; interconnected systems; optical interconnections; superconducting interconnections
air-channel structs. for microfluidic, MEMS and microelectronic appls., fab 113559
ATM LAN, optimal switch and interconnection location 119122
build-up PWBs, low-CTE base materials 69317
candidate Pb-free solder alloys, phase equilibria calc. 89847
CAT-5E modular jack for high-speed differential sig. interconnection, crosstal noise reduct. 91445
chip scale DCA MEMS package, modular, archit./proc. 81550
conductive lithographic film ccts., fab. proc. and appls. 91463
conformal dielec. interconnect capacitance, BEM-based simul. *(Chinese)* 104243
D^{2}BGA chip-scale IGBT package 81290
DAI, Dimple-Array Interconnect tech. for power semicond. devices thermomech. anal. 113510
densely packed microstrip interconnects, anal. using sparse-matrix/canonical gri method 89852
differential interconnects, charactn. from TDR meas. 125868
electronics packaging technol., phys. procs., visual modelling 124352
embedded power, hybrid MCM-based 3-D integrat. packaging technol. 80541
film chip capacitors, proc. technol. and mass prod. *(Japanese)* 91426
flexible polymer LED mfg., cond. lithog. film technol. 121067
flip chip/chip scale interconnects, durability anal., nested FEM methodol. 7872
glass solder micro-appl. for micro-systs. technol. prod. techs. *(German, English* 116108
high-speed interconnect simul. using MIMO type adaptive LS method 101677
human skin moisture sens., flat surface attachment, interconnection tech. 13200
HV/high temp. power electronics packaging, materials characterisation 78651
IGBT power modules, wire bonding connections, lifetime improvement 81291
integrated automotive components wiring/interconnecting for intell. vehicles 134594
layered dielec., rapid calc. of electrostatic Green's fns. 128657
LCD module interconnection, chip-on-film technol. 86859
MEMS interconnect technols., thermo-mech. reliab., testing/FEA 127088
microstrip line on-chip interconnects on lossy Si, freq.-depend. param. 10249
multilayer syst., progressive cracking on thermal cycling 89874
multiple vias in stripline struct., lumped-element models 91189
particle-in-elastomer interconnection syst., reliab. 115110
PCB, digital electronic, EMC *(Russian)* 72365
PCB, via filling, conductive adhesive materials 115162
PCB HDI, epoxy dielec., metal thin film adhesion 115161
PCB through-hole technol., conductive ink 115163
PCB with multilayered geom., gaps and bypass capacitors effects on interconnect 102802
PCBs carrying high pin-count SMDs, layout design *(German)* 125883
phase pole macromodel 113518
pins and vias, SPICE-compatible broadband elec. model 113520
planar interconnect struct., FDTD-SPICE full-wave anal. 114570
planar multi-cell struct. integrated reactive module 124373
polydiacetylene nanowires by STM-induced chain polymerization on graphite 125923
polyimide/Cu PCB materials, laser-assisted via hole metallization 69327

rconnections continued
power semicond. device packaging/chip interconnection, wire/area-bonding technols. 115880
re-routing estim. of shielding for RLC sig. integrity 125185
selective soldering implement. for through-hole components 80502
steel, Cr-Al, SOFC interconnect, HTSC contacts compatibility 89174
T-branch hidden discontinuity in PCB/microwave planar struct. 125690
tristate syst. environ., fault detect. 125173
Univ. level educ., Romanian experience 113374
UPS push-pull DC-DC converter, PCB parasitic influences, anal. 125227
ViaLUX 81, epoxy photo-dielec. dry film, microvia technol. 115165
write channel front end for above 1 Gb/s recording, anal. and optim. 116471
Al interconnect extrusions, interlevel dielec. film props. 126518
Al interconnect lines, damascene fabricated, mech. stress meas. 126519
Al thin interconnects, local strain meas., CBED, TEM 126437
Cu damascene lines, grain struct., electromigration resist. 126511
Cu interconnection technol., semicond. appls. 92128
InGaAs n/p/n monolithic interconnected modules for TPV appls. 113030
Sn-Ag(-Cu) solder alloys, thermo-mech. props./creep deform. 68392
Sn-Pb-Ag solder alloy, thermo-mech. props./creep deform. 68392

rdiffusion *see chemical interdiffusion*

rdigital transducers
5IDT long. coupled wide-band bal. SAW filter, long. multi-mode resonator 92760
capacitance sens. for micro imaging in elec. tomography systs., particle detect. appl. 120738
diamond films, MPACVD for surface acoustic wave filters 81757
double-mode SAW filters, selectivity improvement approach 91014
elastic strip response to stresses, calc. using fast var. method 92723
Green's fn. method code for IDT anal. 92719
HF SAW devices, develop. *(Chinese)* 125589
high efficiency SAW convolver with suppressed parasitic refl. sigs. 92706
high sidelobe reject. miniature SAW filters, unidirect. and cascaded IDTs 91015
IDT, Lamb waves generation, elec. field anal. *(Polish)* 121038
IDT, Lamb waves generation in Si membrane, modified Mason's model *(Polish)* 121039
large struct. integrity monitoring, embedded US sens., rem. DAQ 114527
leaky Lamb wave device, moving speed meas. 132180
lin. FM SAW filter, finger cut effects on perform. 127270
long. coupled resonator filter using edge refl. 91021
low-loss quasi-slanted SPUDT filters, develop. 91010
multi-IDT input tunable SAW filter, wireless telecomm. systs. 116216
multi-track SAW devices, inter-channel interact. eval. 92727
multiresoln. SAW chem. sens., pass. wireless interrogation 97441
oil-impregnated pressboard, moisture diffusion, interdigital sens. 127246
polymer coated SAW sens., inductively coupled, organic vap. detect. 97435
SAW hybrid sens., wireless press. and temp. meas. 92767
SAW IDT, reduced-order model 133379
SAW immunosens. for liq. environ., SiO_2 protective layer 97412
SAWs in periodic electrode arrays, harmonic admitt. and dispersion eqns., theorem 92724
slanted finger IDT SAW filters, diffr. effects anal. 91018
slanted finger IDTs, diffr. anal. 92726
small-sized resonator filter, shear horiz. wave on quartz 91020
SPUDT design for SAW filters with different-width split-finger IDTs 91016
tapered IDTs, elec. charge distrib. eval. 92713
thin membrane US microsensor, IDT, fab. 86464
wide-range tunable/switchable low-loss SAW filter, design and perform. 91013
wideband low loss SAW filters using slanted IDTs, optimal design 91012
wireless IDT microsens. for subsurface sens., design & appl. 86757
wireless temp. & press. sens. unit, SAW transponder technol. 86772
AlN films, reactive DC magnetron sputtering, SAW, transducer appl. 114256
AlN/Al/Al_2O_3 IDT, nitrogen-ECR plasma deposition, SAW filter 92697
GaN:Mg thin film SAW filter with high vel./low insertion loss, MOCVD 81762
$La_3Ga_{5.5}Nb_{0.5}O_{14}$ electrode-width-diff.-reversal-of-directivity transducer 92739
$La_3Ga_5SiO_{14}$ reversal of directivity transducer, coupled-mode eqns. 92740
$LiNbO_3$, fast leaky SAW 92641
$LiTaO_3$, IDT admittance, BAW radiation 116219
$LiTaO_3$, IDT admittance, bulk wave radiation 92746
$LiTaO_3$, fast leaky SAW 92641
PZT/TiO_x/SiO_2/SiN_x/SiO_2/Si struct., AO device appls. 81758

erface magnetism
see also magnetic multilayers; surface magnetism
conf. on magnetism, Recife, Brazil (Aug. 2000) 113250
domain wall displacement detect., wall simul., MO recording *(English)* 70537
ferromag. sandwiches, domain duplication, overview 70492
GMR spin valves, growth, surface/interface effects, UH-dens. data-storage appl. 104522
gyromagnets interface, nonlin. TM waves *(Chinese)* 105721
magneto-opt. recording, control of mag. exchange in coupled bilayer films *(English)* 71440
metal particle tape packing homog., depth-probing 104533
novel mag. structs. and appls., symp., San Sebastian, Spain (Sep. 2000) 78435
AlO_x barrier based spin-depend. tunnel jns., resist., oxid. control 126249
BeMnZnSe/GaAs, spin injection/manipulation 91845
Co nanowires, electrodeposition, mag. props. *(Chinese)* 125016
Co/Cu/Co sandwiches, Fe(Ti)(Cu) capping layers, GMR obs. *(Chinese)* 70503
Co-Ni alloy nanowire array, prep., mag. props. *(Chinese)* 127311
Co-Pt/Ru thin film high-coercivity long. recording medium, mag. props. 116373
CoPt/Cr long. media, nucleation site layer, sig./noise ratio *(Japanese)* 70525
CoPtCrB trilayer recording struct., magnetis., thermal stabil. 116371
$DyBa_2Cu_3O_7/La_{2/3}Ba_{1/3}MnO_3$ heterostruct., spin injection & transport 92901
FeCoNi/CuBe, sensitive nonlin. GMI effect 127352
FeNi/Fe(Ru) mag. tunnel jns., switching behaviour, mag. seed line effect 92875
(Ga,Mn)As/AlAs/(Ga,Mn)As dil. mag. semicond. jns., tunneling magnetoresist. 91745
GaAs 2DEG QD, paramag.-diamag. interplay 69701
GaAs/GaMnAs(InMnAs) ferromag./nonmagnetic heterostruct., spin-depend. phenom. 91766
GaMnAs ferromag.-semicond. jn., spin injection 91747
GaMnAs/AlAs/GaMnAs single-barrier ferromag. semicond. tunnel jn., magnetoresist. 80790
In-Sn/Ag soldered joint, $AgIn_2/Ag_2In$ transforms., thermal aging 114417
$Mn_{0.2}Cr_{0.8}Pt_3$-based epitaxial films, struct./mag. props. *(Japanese)* 70488
NiFe/NiMn bilayer/pinned spin valve, exchange coupling *(Japanese)* 70509
$Pr_{1-x}Ca_xMnO_{3-y}/YBa_2Cu_3O_7$ HTSC jns., field effect 70485
TaO_x barrier mag. tunnel jns., MR ratio rel. to oxid. time 70558

interface phenomena
see also accumulation layers; buried layers; chemical interdiffusion; composite material interfaces; diffusion barriers; interface magnetism; interface phonons; interface states; inversion layers; metal-insulator boundaries; metal-semiconductor-metal structures; MIM structures; MIS structures; Schottky barriers; semiconductor-electrolyte boundaries; semiconductor-insulator boundaries; semiconductor-insulator-semiconductor structures; semiconductor junctions; semiconductor-metal boundaries; superconductor-semiconductor boundaries; surface phenomena
advancing fronts, level set and fast marching methods 92266
elec. impedance tomography, inverse immersed interface anal. 132127
head-disk interface, lubricant bonding fraction effect 70542
layered PTFE interfacial charges meas. using step electroacoustic tech. 83128
organic LEDs, Joule heating effect, organic decomp. and gas evol. anal. *(Chinese)* 128008
poly/SIS/Si interface eval. by differential conductance *(Chinese)* 103223
Ag metallization on co-fired MLC substr., strength of solder interface 67535
C/polymer electrolyte interface in elec. double layer capacitor, props. *(English)* 99884
Cu/Sn-Bi solder interconnect, Bi interfacial segreg. 79420
Cu/W/SiN_x multi-level damascene interconnects, electromigration 126506
Si, CZ growth rate rel. to growth interface temp. gradient 68118
SiN_xO_y/Si(111) interfaces, photoinduced NLO diagnostic 82882

interface phonons
see also surface phonons
QD opt. amps., ultrafast nonlin. procs. 117256
quantum cascade laser hot phonons, interface phonon lifetimes 71830
reson. tunneling devices in asymmetric struct., perform. 81396
AlAs/AlP superlattices, gas-source migration-enhanced epitaxy, struct. 101233
AlGaAs QW heterostruct., TA phonon amplif. 126147
AlGaAs/GaAs quantum wire, exciton-LO-phonon scatt. suppression 126193
GaAs/AlAs shell QD, phonon modes 80820
n-GaAs/AlGaAs superlattices, phonon-pumped terahertz gain 71763
GaInP/GaAs ordered interface, internal elec. field effects, PR/Raman scatt. 115367
GaN/$Al_{0.2}Ga_{0.8}N$ superlattices, opt. phonon zone-folding effect 69500
GaN/AlN superlattice, MOVPE growth, phonon modes/free carrier, IR/Raman spectra 124987
GaN/AlN superlattice, polar phonons, ang. dispersion, Raman spectra 69700
Ge QD superlattices growth, thermoelec. appls. 114303
β-HgS/CdS, spherical dot, electron spectrum renormalisation, confined/interface phonons 103030
$In_{0.4}Ga_{0.6}As$/GaAs(311)B QD superlattice, metal-insulator transit. 80888
$In_xGa_{1-x}As$/GaAs(311)B self-assembled QD arrays, in-plane photocurr. 115416

interface roughness
3D quantum transport by supercell method, num. accel. and appls. 126914
double layer semicond. nanostruct., excitons, model simul. 80859
III-V semicond. interfaces, MOVPE growth, ordering phenom. control, device appl. effects 126049
metal particle tape packing homog., depth-probing 104533
metal particle tape syst., head-medium interface mag. charactn. 127365
MOSFET, ultrathin gate oxide, F-N tunneling, interface roughness 115888
perfluoropolyether lubricant film roughness, disk drive technol. 116443
quantum wires, elec. cond., correl. roughness effects 69697
SOI wafer, interface roughness, film thickness meas. 103204
ultrathin MOSFET, direct tunneling current, SiO_2/Si interface roughness effect 70092
AlAs/AlP superlattices, gas-source migration-enhanced epitaxy, struct. 101233
AlAs/GaP short-period superlattices, gas-source migration-enhanced epitaxy, PL 101234
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, elec. charactn. 103894
AlN, barriers in spin-depend. tunnel jns., HREM obs. 80681
AlON, barriers in spin-depend. tunnel jns., HREM obs. 80681
CdTe/CdS heterojunctions, interface morph., annealing effects 126116
Co/C, soft X-ray opt. multilayers, grazing specular reflectivity *(Chinese)* 71465
Co/Cr/Pd multilayers, prep., struct./mag. props. *(Chinese)* 127349
Co/Cu multilayers, roughness, high-angle X-ray diffr./reflectivity 116289
Cr/n-GaAs Schottky barriers, nonuniform plasma breakdown, surface microrelief effect 126632
Cu interconnects, sub-0.1 μm, fab./perform. limits 92168
Fe/Au epitaxial multilayers, roughness,mosaic defects, high-resoln. XRD 70504
GaAs/$Al_xGa_{1-x}As$ asymmetric one-/two-sided QW, electron mobility 69702
GaN/Al_xGa_{1-x} reson.-cavity-enhanced p-i-n photodetector, design 75518
InAs, 2DEG containing self-assembled QD, transport props. 69696
InAs/AlSb strained MQW, unintentionally-doped, MBE growth, charactn./optimisation 101262
InAs/GaAs/AlAs QDs/quantum wires, interface roughness, tunnelling 91850
InGaAs/GaAs QWs grown by MBE on GaAs(001) vicinal surfaces, step bunching 90275
$In_{0.74}Ga_{0.26}As/In_{0.52}Al_{0.48}As$ QW HEMT, MBE, optimized channel thickness 103909
$La_{2/3}Sr_{1/3}MnO_3/SrTiO_3/YBa_2Cu_3O_{7-\delta}$ HTSC multilayers, growth, struct. 68303
Mo/Si multilayer coating technol. for EUV lithog., uniformity 92201
Nb/Si multilayers, partially cryst., thermal stabil. 69723
Ni/Cu multilayers, electrodeposited, mag./FMR props. 81884
Ni/SiC, interface reaction, Ar^+ irrad. effects, thermal annealing 69704
PbSn solder reflow on Cu and Ni, phase evol. 114418
Pd/Cr/Co multilayers, mag./magneto-opt. props. 81850
Si SPE, mol. dyn. simul., growth mechanism, defect form. 90547
Si, disloc., cryst.-melt interface and melting, X-ray topography 68120
Si polycryst. layers, epitaxial realignment, BiCMOS technol. 124888
Si/SiGe MQW, MBE/CVD growth, struct., PL props. 80861
Si/SiO_2 interface roughness, MOSFET, quantum oscills. 81319
Si-CoSi shallow n^+-p jn. diodes, elec. characts., silicide layer thickness effects 115361
SiGe/Ge, Ge channel modulation-doped structs., mobility, channel width depend. 80784
SiO_2 film, AFM anodic oxid., nanofabrication 81083
SiO_2, gate oxide reliab., interface roughness 104258
SiO_2/Si, thermal oxid., surface/interface topography changes 115625
$SiO_2/SiO_xN_y/SiO_2$ dielec. film for flash memory by thermal oxid. of nitride 91914
SiO_2N_y/Si(100) interface, roughness, N atom incorporation 80943
Ta/Ti/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
Ti/Ta/Al/n-AlGaN/GaN ohmic contacts, microstruct., elec. props. 69728
$TiSi_2$ form. and sheet resist., Al interlayer effects 91857
W/TiN/Ta_2O_5 gate struct., diffusion barrier, thermal stabil. and elec. props. 115428

interface roughness continued
$W/WN_x/Ta_2O_5$ gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
W/n-$Si_{0.83}Ge_{0.17}$(001) Schottky contacts, low press. CVD, struct., elec. and chem. props. 103155
$W_{1-x}Si_x$/Si multilayers, excimer laser proc., thermal stabil. 126210
WSi_x/n-$Si_{0.83}Ge_{0.17}$(001) Schottky contacts, low press. CVD, struct., elec. and chem. props. 103155

interface states
see also core levels; surface states
0.18-μm 3.5/6.8 nm dual gate oxide CMOS technol., effects of F on parametrics and reliab. 81506
amorph. organic semiconds., interface-limited injection meas. and modelling 115436
antidot lattice, QHE, 2DEG nonlocal resist. 80846
BCD, BCDMOS technol., gate oxide lifetime indicator, wafer level reliab. 104144
CMOS device characts., γ radiation dose influence *(Chinese)* 103851
CMOS op-amps, radiation effects rel. to gate oxide growth method *(Chinese)* 101796
contact charge accumulation, two-step model develop. 83138
deep-sub-micron grooved-gate p-channel MOSFET, hot-carrier degrad., donor interface state 70078
deep-sub-micron grooved-gate PMOSFET, donor interface state induced degrad. *(Chinese)* 103848
degraded short channel LDD-nMOSFETs, 2D electrostatic model, hot carriers 70081
diamond films, (001) textured, deposition method 124810
diamond Schottky diodes, elec. AC behaviour 81192
diamond/n^+-Si heterojunction, elec. charactn., enhanced tunnelling 80799
4,4′-bis(2,2′-diphenyl vinyl)-1,1′-biphenyl multilayer blue OLEDs, ns EL spikes 105022
disordered organic LEDs, charge carrier transport/recomb. 105014
disordered semicond. QWs, reson. Rayleigh scatt., radiative coupling 91824
DNA/CNT chip on Si, electronic props. 102865
double layer semicond. nanostruct., excitons, model simul. 80859
double-gate SOI inversion layers, Monte Carlo simul., vol. inversion 69747
double-semicond. QW, mesoscopic correl., magnetotunneling spectra 91818
DPVBi/AlO_x/Al-based OLEDs, nanosec. electrolum. spikes at voltage turn-off 127996
drain-engineered submicron MOSFET, hot carrier induced drain current degrad. anal. 115917
electromechanical which-path interferometer, Aharonov-Bohm ring, QD 92503
ferromag. tunnel jns., spin polariz. at interface and TMR 127358
gate dielec. electron wave fn. penetration/interface scatt., simul. 126235
grooved-gate PMOSFET, hot-carrier-degrad. mechanism and hot-carrier-effect immunity *(Chinese)* 115911
HBT perform./reliab., predictive simul. 115853
HEMT, 2DEG, triangular pot., quantized energy level *(Chinese)* 92404
high-k dielec. gate materials for ULSI devices, advances/materials compatibility 104108
III-V semicond. interfaces, MOVPE growth, ordering phenom. control, device appl. effects 126049
ITO/diazopheny diamino glyoxime/In Schottky device, elec./impedance charactn. 126215
lateral asymm. channel MOSFETs, hot-carrier induced interface-trap profiles 126759
metal-$(PbZr_xTi_{1-x}O_3)$-(Ta_2O_5)-Si struct., NVM appl. 127279
metal-nitride-oxide-semicond. struct., percolation metal-insulator transit. 69750
metal/ferroelec./insulator/semicond. struct., polariz. stabil. 126237
metal/polysilicon CMOS gates, work fns., effects of high-k dielec. 127039
metal/$Si_{1-y}Ge_xC_y$ interfaces, Fermi level posn. 69707
MOS device degrad., role of holes in D isotope effect and mechanisms 91889
MOS IC oxide leakage currents, Si dangling bond defect link, direct evidence 81529
MOS struct., direct tunneling current, modified Airy fn. model 115456
MOS struct., interface trap params., high-temp. cond. spectra 126232
MOS transistor, surface recomb. current, temp. depend. 103879
MOS tunneling diode, carrier lifetime meas. from EL temporal response 126627
MOS tunneling diode, inversion current 103760
n-MOSFET, backsurface Ar^+ bombard. effects *(Chinese)* 103721
MOSFET, charge pumping based freq.-controlled low-level current source 101763
MOSFET, drain jn. space charge region, interface trap passiv. 126819
n-MOSFET, GIDL degrad., hot carrier stress *(Chinese)* 81327
MOSFET, interface states generation after hole injection 81305
p-MOSFET, off-state stress, device degrad. 92380
MOSFET, oxide soft breakdown, device degrad. 126731
MOSFET, short-channel fluorinated device, hot carrier effects *(Chinese)* 103846
MOSFET degrad. rel. to interface-states generation, SPICE3F4 charge-pumping model 70108
n-MOSFETS fabricated in BiCMOS proc., radiation damage 115798
MOST, hot electron stressed, D_2 passiv. of interface traps 103854
n-MOSFET low-standby-power design effects on hot carrier reliab. 126745
n-MOSFET reliab., hot-carrier degrad., gate dielec. electron trapping 103833
narrow-gap semicond. QW, dielec. response in mag. field 80819
NMOS device, ultrathin oxide, stress induced leakage current 126248
nMOSFET, 1/f noise behavior rel. to NO nitridation 70088
nMOSFET, hot-carrier degrad., interface trap generation effect 70089
nMOSFET, hot-carrier reliab., H-transport interface-trap-generation model 70130
nMOSFET, interface trap generation under stress, H/D isotope effect 92355
nMOSFETs, hot-carrier degrad., interface trap generation crit. energy 70086
NMOSFETs, worst-case hot-carrier stress condition, LDD resist. effects 70116
nonintimate Schottky jns., effective dens. of bias voltage depend. interfacial states 80898
oligothiophene/oligophenyl based devices, photoemission studies of band alignment 115440
organic semicond./Mg interface, orb. lineup, XPS/UPS charactn. 91873
organic/metal interface electronic struct., UV photoemission spectra, Kelvin probe method 103164
PMOS dosimeter, irrad. bias field *(Chinese)* 87990
polar QD, impurity binding energy, finite pot. barriers 115392
poly-Si:P gate/band gap narrowing, incomplete impurity ionization, direct tunneling leakage current 91592
polymer anode/small mol. interfaces, hole injection barriers 91737
polypyrrole free-grown layer, interface effects in PPV OLEDs 127997
polysilicon TFT, interface trap states, grain boundaries 115915

interface states continued
polysilicon TFT-LCD, low temp. gate insulator, photo oxid. & PECVD *(Japanese)* 121124
polysilicon TFTs, enhanced degrad. under dyn. hot-carrier stress 126753
polysilicon TFTs, LF noise model 92360
polysilicon thermal sprayed coatings, elec. charact. 115287
n^+-polysilicon/oxide interface traps in ultrathin oxides, charact. method 91903
power VDMOSFETs, pos. gate bias stress induced instabilities 126815
quantum struct., semicond. heterostruct. *(Chinese)* 80807
QW, excitons, C-V charact. 126155
QW, quasi-2DEG, exciton states, screening 126146
reson. tunneling diodes, direct bandgap, indirect bandgap-like current flow 92423
Schottky contact series resist., deep level impurities effects 126195
self-assembled QD, carrier relax., excited states 91817
semicond. interface with cryst. oxide, phys. struct. and inversion charge 103217
semicond. microcavities, parametric polariton amplif. 128489
semicond. microcavity, polaritons, exciton localization 91847
semicond. QD, single-particle tunneling calcs. 126153
semicond. quantum struct., quantum-mech. effects *(Chinese)* 91831
semicond. quantum wire, hot-electron power losses, Q1D electron gas model 115381
semicond. superlattices, DC-/THz-ac-driven, coherent phenom. *(English)* 115379
semicond.-metal interact., electron-hole/exciton diags. 103170
single/coupled double quantum wires, multisublevel magnetoquantum cond 126149
SOI NMOSFET, interface trap distrib., gated-diode method 115889
SOI NMOSFET, interface traps, forward gated-diode monitoring *(English)* 126803
SOI nMOSFETs, mesa-isolated, Bi-MOS mode operation, hot carrier degrad 103817
SOI struct., interface states and deep-level centers 115445
SOI-MOSFET, deep submicron, multi-freq. transconductance 103842
SOI-MOSFETs, low-freq. noise degrad. rel. to STI interface effects 103856
SQW struct., surface pot., admittance spectra *(Chinese)* 115384
STI CMOS devices, phys./quantitat. width depend. hot carrier model 81356
stripe-shaped 2DEG, large pos. magnetoresist. 80797
superlattices, quasi-localized states, opt. transits. 80835
thin gate oxide MOSFETs, interface states, thermal annealing 126814
TPD/metal interfaces, energy level alignment, band bending, Kelvin probe method 126208
tunnelling/trap dens. rel. at insulator/semicond. interfaces 103202
wide parab. well, commensurability oscills., in-plane mag. field 80838
zinc blende/wurtzite III-V semiconds., band params., review 80686
Ag/n-Si Schottky barriers, ICB deposited, Fermi level pinning, microscopic model 69725
Ag/n-Si Schottky jns., ICB deposited, induced interface states 69726
Ag-Si Schottky jns., ICB deposited, interface electronic struct. 80899
(Al,Ga)As high mobility electron heterostruct. wafer fused on $LiNbO_3$ 103148
Al/Al_2O_3/metal capacitors, anodised interface, interface states 69772
Al/AlO_x/Al Josephson jn., Cooper pair boxes, quantum computing appl. 70910
Al/MgF_2/tris-(8-hydroxyquinoline) aluminum interfaces, electronic struct., photoelectron spectr. 91880
Al/Si/GaAs(001) Schottky diodes, interface reacts./local interface dipoles 103753
Al/SiN_x:H/$In_{0.53}Ga_{0.47}As$, elec. charactn., DLTS, cond. transient techs. 103188
Al/SiN_x:H/Si devices, interfacial/bulk defects, struct./elec. props., temp. effects 91901
Al/intrinsic diamond/p^+-Si Schottky diodes, Q-DLTS/C-V meas. 92279
AlAs/GaP short-period superlattices, gas-source migration-enhanced epitaxy, PL 101234
AlAsSb/InAs/Cd(Mg)Se heterostruct., MBE, elec./struct./opt. props. 69634
n-$Al_{0.24}Ga_{0.76}As$, surface states, DLTS, HEMT study 69533
$Al_xGa_{1-x}As$ parab. well, QHE 80839
AlGaAs/GaAs HEMT dc output characts., interface states effect *(Chinese)* 81374
AlGaAs/GaAs double layer 2D hole syst., SAW vel. shift 80796
AlGaAs/GaAs heterojunction, quantum Hall regime, charge screening 80794
AlGaAs/GaAs multiperiod quantum-cascade struct., THz electroluminesc 126145
AlGaAs/GaAs quantum wire, exciton-LO-phonon scatt. suppression 126193
$Al_{0.2}Ga_{0.8}As$/GaAs/$Al_{0.2}Ga_{0.8}As$ single QW laser, pop. inversion 128298
$Al_{0.25}Ga_{0.75}As$/$In_{0.20}Ga_{0.80}As$/GaAs:Si pHEMTs, DLTS obs. 115968
AlGaN/AlN/GaN heterobipolar phototransistor, photoresponse, defect levels 82347
AlGaN/GaN HEMT structs., defect states effects, AES and LEEN obs. 69642
AlGaN/GaN HEMTs, study of current collapse producing traps 69137
AlGaN/GaN MODFET, electron trapping, dc drain current, DLTS 81362
AlGaN/GaN, MQWs, localised states, PL obs. 80869
AlGaN/GaN QW, magneto-PL, valence band 103124
AlGaN/GaN heterojn. band offsets, photolum. and modulation spectra obs 91764
AlGaN/GaN heterostruct., elec. cond., quantum corrections 80783
AlGaN/GaN heterostruct., electronic struct., localized vars. 126122
AlGaN/GaN heterostruct., epitaxial FET struct., carrier props., surface treatment effects 92032
AlGaN/GaN single heterostruct. FET, electronic energy spectrum modelling 92396
AlGaN/GaN/6H-SiC, surface/buried MQW, MBE, opt. emission, band bending 91778
$Al_{0.18}GaN$/GaN heterostruct., sub-bandgap absorpt., photocurrent spectra 91742
n-i-$Al_{0.33}Ga_{0.67}N$/p-GaN UV photodiode structs., solar-blind perform. anal. 131923
$Al_xGa_{1-x}N$/GaN modulation-doped heterostruct., subband electron props. 91735
Al(Ga)Sb/InAs/Cd(Mg)Se hybrid heterostruct., mBE growth, luminesc. props. 103019
AlInGaN/InGaN, MQWs, localised states, PL obs. 80869
AlInP/InP/AlInP metamorphic-pseudomorphic HEMT, MBE growth, elec. charactn. 103894
AlN/SiC heterojns., band-offset trends, first principles calcs. 91754
Al_2O_3 dielec. films on Si, UHV reactive at.-beam deposition 79245
Au/(AlGa)As heterostruct., second derivative BEEM spectra 91876
Au/Al_2O_3/Al MIM tunnel jns., light emission spectra *(Chinese)* 82317
Au/$BaTiO_3$/InP MIS structs., insulating layer sol-gel prep. and charactn. 127256
Au/GaInP:Te MOCVD Schottky contact, γ-ray induced deep electron traps, DLTS anal. 115441
Au/GaSb (110) interface, low temp. work fn., acceptor states 126203
Au/Si_xN_y/n-GaAs struct., N-rich PECVD dielec. fab. 124909
Au/SiO_2/Si MIS tunnel jns., light emission spectra *(Chinese)* 82317

erface states continued
Au/TiB_2/GaAs Schottky contacts, transit. layer, transverse bulk photovoltage 69712
Au/n-Si Schottky diodes, interface state dens. distrib. rel. to series resist. 92288
$Bi_4Ti_3O_{12}$ ferroelec. films on Si(100) with Si oxynitride ultrathin buffer layer 127171
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
$Cd_{1-x}Mn_xTe$/CdMgTe(CdTe) MQW, MBE growth, excitons, PL obs. 103150
CdS/$CuIn_{1-x}Ga_xSe_2$-based solar cells, DLTS 112854
CdS/ZnSe type-II superlattices, localized excitons, PL obs. 80823
n-CdS/p-InP heterojunctions, transport mechanisms & PV charactn. 91734
CdTe modulation-doped QWs, exciton/trion excitations, PL 80841
CdTe/$Cd_{1-x}Mn_xTe$ QWs, excitons spin transport dyn. 80682
CdTe/$Cd_{1-x}Zn_xTe$ QW, exciton bound ionized donor impurity 115415
CdZnTe:N,H_2 QW, N acceptors, H_2 passiv., PL obs. 103146
CeO_2/Si struct., localised charge storage, electrostatic force microscopy 103191
Co/Pb ferromagnet/supercond. nanojunctions, spin-depend. transport 127506
Co/S/GaAs(001), modified epitaxy, comp. with Co/GaAs(001) 91869
$CoSi_2$/Si interface, struct./electronic props., first-principles calc. 103153
Cu phthalocyanine/InSb(111) thin films, mol. beam deposition growth, in-situ monitoring 90337
Cu/Pb ferromagnet/supercond. nanojunctions, spin-depend. transport 127506
Cu-Ta-SiO_2 metalisation struct., Ta diffusion barrier study 92184
$Cu(Al,Ga)(S,Se)_2$/GaAs(001) heterointerfaces, valence band discontinuities 69651
$Cu(In,Ga)(S,Se)_2$-based solar cells, electronic struct., surface oxid., buried interfaces 134393
$Ga_{1-x}Al_xAs$/GaAs QW, double-barrier, photoionization spectrum 126152
GaAs QW, exciton-polariton propag./scatt., spectra 126184
GaAs, deep defect centers, pin diode meas. 126031
GaAs homojunction far-IR detectors, interfacial work-fn. internal photoemission 80849
GaAs low-dimens. systs., energy levels, elec./mag. field effects 115391
GaAs low-dimens. systs., shallow-donor transits., mag. field effects 91843
GaAs microcavity, reson. excited polaritons, energy relax. 80825
n-GaAs nm-sized Schottky contacts, current transport and C-V charact. 91860
n-GaAs quantum wires, Fermi-edge sing., PL obs. 80860
n-GaAs/Al jns., Schottky barrier, tunneling spectrosc. 103171
$GaAs/Al_xGa_{1-x}As$ superlattices, mag.-field-induced miniband transits. 69669
$GaAs/Al_xGa_{x-1}As$ MQW, excitonic transits., opt. selection rules 91795
GaAs/AlAs QW, electron mobility anisotropy, electron gas 126169
GaAs/AlAs superlattice QW, photoexcited carriers, perp. transport 126166
GaAs/AlAs type-II superlattice, excitons-biexcitons, quantum stats. 69670
n-GaAs/AlAs:Si MQW, hot electrons inelastic scatt. 80814
GaAs/AlGaAs GRIN-SCH-SQW LD structs., deep levels 128300
GaAs/AlGaAs MQW struct., electron interf., non-localized states *(Chinese)* 91809
GaAs/AlGaAs QW, D$^-$-cond. band, transport/opt. props. 103144
GaAs/AlGaAs QW, energy levels, QWIP appl. *(Chinese)* 115376
GaAs/AlGaAs QW, exciton localization dyn., PL obs. 126165
GaAs/AlGaAs heterostruct. QD, 2DEG, single electron transport 80812
GaAs/AlGaAs heterostruct., capacitance theory 115364
GaAs/AlGaAs shallow 2DEG, conducting tip AFM lithog. 126121
GaAs/AlGaAs single V-groove quantum wire, micro-photoluminesc. *(Chinese)* 115420
GaAs/AlGaAs superlattices, miniband transport, ARC 103141
GaAs/AlGaAs undoped asymmetric double QW, intersubband absorpt. dyn. 126052
n-GaAs/Au jns., Schottky barrier, tunneling spectrosc. 103171
$GaAs/Ga_{1-x}Al_xAs$ QW, exciton bound ionized donor impurity 115415
$GaAs/Ga_{1-x}Al_xAs$ parab. superlattices, opt. transits. 103025
n-GaAs/Ga(As,N)/GaAs heterostruct., rectifying contacts, admittance dispersion 103110
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approach 91794
GaAs-AlGaAs PHEMTs, contactless RT charactn. by SPV spectrosc. 70205
GaAs-AlGaAs QHE, edge states electron-hole-pair recomb. suppression, time-resolved FIR photocond. 80793
GaAs-based superlattices, magneto-miniband transport, intense THz irrad. effects 103139
GaAsN/GaN QWs, envelope fn. calcs., excitons 91806
GaAsN/InAs/GaAs superlattices, opt. consts., crit. points, free carrier effects, phonon modes 126063
$GaAs_{1-x}N_x$/GaAs MQW, opt. transits., band anticrossing 115417
GaInN/GaIn MQWs, varying In comp. 80866
$Ga_{1-x}In_xN$/GaN polarised QW, PL excitation spectrosc. 80716
$Ga_xIn_{1-x}N_{0.04}As_{0.96}$/GaAs SQW lasers, subbands, interdiffusion effects 82643
GaInP/GaAs ordered interface, internal elec. field effects, PR/Raman scatt. 115367
GaN Schottky barrier UV detectors, gain mechanism 109574
GaN based HBT, band offsets, current transport, 1/f noise 81239
n-GaN, photoanodic oxid., oxide elec. props. 103335
GaN surfaces/interfaces, low energy electron-excited nano-luminesc. spectr. 91662
GaN thick films, hydride VPE, CL charactn. 68250
GaN:Mg Schottky diodes, thermal admittance spectrosc. 92284
p-GaN:Mg/Al_2O_3, MBE growth, deep level related yellow luminesc., TEM 127927
GaN:Mg(Si)/Pd contacts, interface states, positron annihilation spectrosc. 80900
GaN/AlGaN MQW, below gap states excitation, two wavelength excited PL 80867
GaN/AlGaN MQW, excitons/poAlaritons 80868
GaN/AlGaN MQW, persistent photocurrent, PL comparison 69668
GaN/AlGaN QW, charge storage, internal field screening 103125
GaN/AlGaN semicond. QW, mesoscopic capacitor effect 80874
GaN/AlN, QDs, QWs, MBE, UV to red light emission 90334
GaN/AlN heterojns., band-offset trends, first principles calcs. 91754
GaN/AlN self-organised QD, strain distrib., built-in elec. fields, carrier states 91836
GaN/GaAlN QW, excitons, opt. pumping 80870
GaN/InGaN, MQWs, localised states, PL obs. 80869
GaN/InGaN/GaN cubic double heterostruct., QD photolum. 103131
GaN/M (M=Au, Cu), Schottky contacts, XPS, AES 126218
n-GaN/Pt Schottky contacts, proc.-induced electron traps, DLTS 69548
GaN/SiC heterojns., band-offset trends, first principles calcs. 91754
GaN/sapphire HVPE films, interfacial region impurity band, SFM obs. 69518
GaN-sapphire interface, thermally activated cond. 103184
Ga_2O_3:Gd/GaN capacitor, low interface state dens., C-V/G-V charactn. 69743

interface states continued
GaP intermediate layers in GaInP/GaAs double barrier reson. tunnelling structs. 126660
GaP/AlP type-II short-period superlattices, carrier localization, PL obs. 80840
Ge QD self-assembled on Si(001), elec. struct., comp. interdiffusion 69659
Ge/Si(001) QD heterostruct., electron spatial separation 103145
Ge-redistributed polysilicon-SiGe stack gate for CMOSFETs, high-perform. 126773
HfO_2 gate dielec., struct. and electronic props. anal., theoretical methodology 127140
HgCdTe MIS struct., subbands, reson. tunneling, 2DEG, tunneling current 69744
HgCdTe, passivated, interface traps from transient photoconductive decay meas. 71509
$Hg_{0.8}Cd_{0.2}Te$:In epilayers on p-$Cd_{0.96}Zn_{0.04}Te$, surface stabil., passiv. 115647
n-$Hg_{0.80}Mg_{0.20}Te$/CdTe MBE films, interface accumulation layer, cond. *(Chinese)* 115323
β-HgS/CdS, spherical dot, electron spectrum renormalisation, confined/interface phonons 103030
ITO/copper phthalocyanine, transparent organic LED, interface photoemission spectr. 128002
InAlAs/InGaAs HEMT, δ-doped metamorphic, long. optic phonon-plasmon coupling 103907
InAlAs/InGaAs highly doped metamorphic HEMTs, subband electron props. 115960
InAlGaAs/GaAs high-power diode lasers, strain-induced defects, photocurrent spectrosc. 105314
In(Al)GaAsSb/GaSb QW ridge-waveguide lasers, wide opt. gain spectrum 128274
InAs QD, microdisk struct., cavity-QED 80810
InAs self-assembled QD, DLTS charactn. 126066
InAs/AlSb double barrier RTD, electron/hole transm. fn., interface effect 126142
InAs/GaAs QD, InAs wetting layer ellipsometry at QD form. threshold 103147
InAs/GaAs QD, time-resolved photoluminesc. 69661
InAs/GaAs QDs, strain, cond. band, mol. dyn. simul. 115414
InAs/GaAs quantum boxes in GaAs microdisks, time resolved Purcell effect 80828
InAs/GaAs self-assembled QD, exciton energy 91785
InAs/GaAs self-assembled dots, 2DEG, magneto-PL 80837
InAs/GaAs self-assembled vert. stacked QD, interband transits. 91768
InAs/GaAs/AlAs QDs/quantum wires, interface roughness, tunnelling 91850
InAs/GaSb cascade laser, interband tunneling 82608
InAs/GaSb double QW, coupled electron-hole magnetotransport 115386
InAs/InAlAs heterostructs., MBE growth, props. 103104
InAs/InP self-assembled quantum wires, opt. transits., excitons 80811
InAs/ZnSe core/shell nanocryst. QDs, artificial-atom states, STM 91804
InAsN/InGaAs/InP single QW, PL mechanism, photocond., gas source MBE growth 91805
$In_{0.5}(Ga_{0.73}Al_{0.27})_{0.5}P$/GaAs, double heterostruct., photoreflectance spectr. *(Korean)* 80673
InGaAs SQW strain-modulated nanostructs., grazing-incidence XRD, photolum. 69684
$In_{0.16}Ga_{0.84}As$ QW, strain-induced lateral carrier confine., PL 115409
InGaAs/AlGaAs bound-to-bound QW IR detector, excited-state posn. meas. 91842
InGaAs/GaAs QW, time-resolved PL in mag. fields 69698
InGaAs/GaAs strained SQW LD, electron emission, DX centers, RTA effects 128299
InGaAs/InAlAs insulated gate PHEMT with Si interface control layer 80294
$In_{0.4}Ga_{0.6}As$/GaAs(311)B QD superlattice, metal-insulator transit. 80888
$In_{0.75}Ga_{0.25}As/In_{0.75}Al_{0.25}As$ heterojunction, spontaneous spin-splitting 80795
$In_{0.75}Ga_{0.25}As/In_{0.75}Al_{0.25}As$, gate-controlled 2DEG, large spontaneous spin splitting 69655
$In_xGa_{1-x}As/In_xAl_{1-x}As$ lattice-matched QW, MBE, photoluminesc. 90280
InGaAs-Si fused PIN photodiode avalanche gain, fusion proc. 116946
InGaN SQ wells, amber LED 82407
InGaN act. layers, radiative recomb. proc. in GaN-based LEDs 82389
InGaN/GaN DH, localized states, photoreflectance, PL, CL 91761
InGaN/GaN MQW, below gap states excitation, two wavelength excited PL 80867
InGaN/GaN MQW, different In comp., struct./opt. props. comparision 126188
InGaN/GaN MQW, photoluminesc., exciton localization 103122
InGaN/GaN MQW struct. 80876
InGaN/GaN MQW struct., PL, sapphire substrs. 91834
InGaN/GaN, QDs, QWs, MBE, UV to red light emission 90334
InGaN/GaN QW, indium segreg. 80875
InGaN/GaN QW struct., RTA effects, MOCVD, phase separation, PL, disloc., strain relax. 91944
InGaN/GaN QW struct. emission mechanism 80865
InGaN/GaN/sapphire, MOCVD-grown, interface props., cathodolum. anal. 80853
$In_{0.3}Ga_{0.7}N$/GaN QW growth and their opt. and structural props. 114353
$In_{0.5}Ga_{0.5}P/In_{0.2}Ga_{0.8}As$ dual-gate PHEMTs, characts. 126885
InP MISFET, oxide-free insulated gate struct. 115904
n-InP nm-sized Schottky contacts, current transport and C-V charact. 91860
InP/InGaAs HBT, gain limitations, surface level pinning 81209
InP/InGaAs HBTs, elec. props./transport mechanisms, 4.2-300 K 103768
InSb buffer layer effects in InP based MIS struct. 80942
$LiNbO_3$ MFS memory capacitor, low temp. growth 116227
$MgAl_2O_4$/Al(Ag) heterophase boundary, local bonding, ab initio study 103217
MgO film grown on p-InP, microstructural & elec. props. 104397
MgO films on p-GaAs(100), microstruct./elec. props. 68187
N-MOSFET dominant interface trap generation proc. during hot-carrier stressing 81355
Ni/GaN, defect-induced lateral chem. heterog., interface electronic props. 126213
$NiSi_2$/Si interface, struct./electronic props., first-principles calc. 103153
PbS QD embedded glass for mid-IR laser Q-switching 71916
PbSe QD embedded glass for mid-IR laser Q-switching 71916
Pt/GaN Schottky diodes, C-V charact., tunnelling 103756
$Pt/SrBi_2Ta_2O_9/CeO_2$/Si capacitors for ferroelec. FET, gate stacks, XRD, EDX, TEM 104472
SOI, deep levels, charge/capacitance DLTS 115446
Si QD arrays, electronic state localization, wormholes 91811
Si SPE, mol. dyn. simul., growth mechanism, defect form. 90547
p-Si, dielec. passiv., surface recomb. vel. 126349
Si n-MOSFET, Ta_2O_5 gate dielec., n^+-p jn. leakage characts. 69629
Si nanocrystal based MOS struct., prep., charge retention effect 80947
a-Si pn jns., tunnelling generation-recomb. currents 91759
Si, strained, ultrathin oxide/oxynitride films by O_2/NO plasma proc., trap dens. 69751

interface states continued
Si:B MOS capacitor, elec. props., a-Si gate electrode, two-step nitridation effects 69767
Si:B MOS-struct., through-gate implant., induced damage 115508
p-Si:B, microcryst., recomb. at interface states, current-illuminance charact. 93322
Si:B n-channel trench UMOSFETs, channel B-doping 81312
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:Co_2Cu, ion implanted, contamination, elec. props. 102959
a-Si:H pin diodes, ideality factor spatial effects 92285
a-Si:H solar cells, conductive oxide/p+/i jn. improvement 123805
Si:H(D) surfaces/CMOS interfaces, electron stimulated H(D) desorpt. 102955
Si/$(Ta_2O_5)_x(Al_2O_3)_{1-x}$ interface, electron traps 103185
Si/Al_2O_3/n+-polySi MOS capacitors, at. layer CVD, charactn. 80936
Si/CaF_2 nanocryst. MQW, vert. transport, trapping levels 126144
Si/SiGe modulation-doped QW, magnetoresistivity 115388
Si/SiO_2, GOI degrad., Cu contamination effect 91912
p-Si/SiO_2, RF hydrogen-plasma-related defects, DLTS 69764
Si/SiO_2 interface, dangling bond centers, elec. detect. EPR obs. 69765
Si/SiO_2 interface, improvement of reliab. for N_2O-nitrided LPCVD oxide *(Chinese)* 103210
Si/SiO_2, interface nitridation, struct., MOSFET appls. 92082
Si/SiO_2 n-channel MOSFET low-temp. operation, interf. traps effect 126820
Si/SiO_2 systs., conf., Boston, MA, USA (Nov.-Dec. 1999) 100429
Si/SiO_2/Al MOS capacitors, ultrathin gate oxide, anom. LV tunneling current 69749
Si/SiO_2/Si_3N_4 quantum wires/dots, charged insulator defects 126160
Si/SiO_2Cl_x syst., rapid thermal chlorinated oxides 92062
Si/$ZrSiO_2$, interface band offsets, scaling trends 91900
Si-SiO_2-Si MOS struct., gate dielec., struct. and electronic props. anal., theoretical methodology 127140
Si-SiON-SiO_2-Si MOS struct., gate dielec., struct. and electronic props. anal., theoretical methodology 127140
Si(111)/In(4×1) nanowire, at. geom., electronic struct. 91868
Si(113) wafers, oxid., alternative IC material to Si(001) 69908
SiC, 6H, MOS struct., shallow dopant/surface levels, TSC 69758
6H-SiC MOS capacitor, X-ray radiation response 80932
SiC MOS capacitors, interface props. rel. to N_2O annealing 69754
6H-SiC MOS structs., shallow traps at cryogenic temp., TSC study 69759
6H-SiC MOSFET, SiO_2-SiC interface deep traps, nonequilibrium field effect 70083
4H-SiC MOSFET inversion layer, interface states 103869
SiC MOSFETs, 4H/6H, interface traps, light emission obs. 70097
4H-SiC MOSFETs, inversion layer mobility and interface state dens. 70098
SiC:Al,B power DIMOSFET with double implanted P-well 81309
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
$p^+/n/n^+$ SiC:B struct., EL, opt. emission microscopy 69639
SiC/SiO_2 MIS struct., interface-state dens., H_2 annealing, reply to comment 80924
SiC/SiO_2 MOS structs., interface-state dens., H_2 annealing, comment 80923
SiGe and Si nMOSFETs with gate oxide grown by low temp. plasma anodisation, noise study 81346
$Si_{0.91}Ge_{0.09}$ strained layers, gate dielec. growth, RTP/split-N_2O tech. 92031
$Si_{1-x}Ge_x$/Si p-channel MOSFET, low-freq. noise charact. 115918
SiN ultrathin gate dielec., spin-depend. trap-assisted tunnelling current 80928
Si_3N_4 ultra-thin gate dielec. p-MOSFET, hot-carrier reliab. 81357
SiN_x PECVD films, ammonia plasma pretreatment effect 92025
SiN_x:H/InP interface, N_2 rem. plasma cleaning of InP, elec. charactn. 115444
SiN_x:H/Si structs., RTA, elec. props., C-V/SPV charactn. 91887
Si_3N_4/c-GaN/GaAs passiv. struct., prep., struct./opt. props. 103300
SiO_2 MOS capacitors, F-N tunnelling coeffs., nitridation 115046
SiO_2 films, PECVD on Si, defect charactn. 124905
SiO_2 gate oxide, hole trapping and trap generation 69762
SiO_2, nitrided thermal oxide, self-aligned SOI MOSFET 70151
SiO_x ultrathin film, low temp. form. from O radicals in Kr/O_2 plasma 103323
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiO_2/Si device-quality interfaces, ECR-PECVD low-temp. form. 80957
SiO_2/Si struct., elec. props. 69771
SiO_2/Si-QD/SiO_2/Si tunnel capacitor, charging dyn. *(Chinese)* 126129
SiO_2/SiC interface states, excess carrier lifetime/surface recomb. 91706
SiO_2/SiO_xN_y/SiO_2 dielec. film for flash memory by thermal oxid. of nitride 91914
SiO_x/ZrO_2(TiO_2) gate dielec. stacks, charge trapping in MOS capacitors 80927
SiO_2-Si interface, trapped charge imaging, noncontact AFM 80925
SiON oxynitrided thin films for flash memory appls., N_2 plasma conditions effects 68795
$Si_xO_yN_z$, RTO, nitrogen implant. 103354
Sm/para-sexiphenyl interface, electronic props. 115434
Sn/Ge(111), 3×3/√3×√3 reconstructions, surface bands electron correl. effects 103166
Sn/Si(111), 3×3/√3×√3 reconstructions, surface bands electron correl. effects 103166
n-SnO_2:Ni/p-Si heterostruct., NO_2/ethanol adsorpt., C-V charact. 69635
$SrBi_2Ta_2O_9$/SiON/Si ferroelec. MISFET, elec. props. 81275
SrS blue ACTFEL display, luminance-time charact., model 97670
SrS:Ce ac thin-film EL devices, dyn. space charge mechanism 93390
$SrTiO_3$/Si, RF magnetron sputtering, elec. props. 104259
$SrTiO_3$-Si interface, gate dielec., struct. and electronic props. anal., theoretical methodology 127140
Ta-Ta_2O_5-MnO_2 capacitor as MIS struct. in reverse mode 115082
Ta_2O_5 gate oxide MOSFET, electron mobility, interface trapped charge dens. 126784
TiO_2 thin film, synthesis, metalorganic decomp./annealing 116133
W/SiO_2/Si MOS capacitors, interface passiv. using at. H 69740
W/TiN/SiO_2/Si MOS capacitor struct., TiN deposition method effect 103199
W/WN/TaO_xN_y/SiO_2/p-Si nMOS capacitors, gate dielec. thermal stabil. 81648
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
$YBa_2Cu_3O_{7-\delta}$/$La_{0.67}$ jns., size depend., mesoscopic effect 127498
Y_2O_3/SiO_2 bilayer gate dielec. based MIS devices on Si, interfacial charge trapping 103201
Zn/ZnSe(001), Schottky barrier, XPS, I-V/C-V meas. 80896
ZnO, anodic thin film, rectification, L-C-R charact. 80962
ZnO varistors, elec. degrad., additive effects *(Japanese)* 103940
ZnO varistors, grain boundaries, photoacoustic spectrosc. 103939
ZnO:Pr varistors, electronic interface states at grain boundaries 102764
ZnO:SnO_2 based varistor ceramics, microstruct. & elec. prop. 101496
ZnO-Au Schottky diodes, elec. and defect props., high energy proton bombard. effects 126212
ZnOBi_2O_3:Y_2O_3 varistor ceramics, microstructural & elec. charact. 101495

interface states continued
ZnS TFEL device, $BaTa_2O_6$ interface elec. prop., turn-on charact. 97669
ZnTe/CdSe(100) interfaces, electronic struct. anal. 91740
$(ZrO_2)_x(SiO_2)_{1-x}$ high-k gate dielec., chem./phys. limits 104422
polysilicon/SiO_2/Si structs., thermally induced (100)Si/SiO_2 interface degrad. 91915

interface vibrations *see interface phonons*
interfaces, computer *see computer interfaces*
interfacial chemistry *see surface chemistry*
interfacial energy *see surface energy*
interfacial tension *see surface tension*
interfacial waves *see surface waves (fluid)*

interference
see also interference (signal)
electron bunch, inter-bunch interf., coherent SR intens. *(Chinese)* 87145

interference (signal)
see also adjacent channel interference; cochannel interference; crosstalk; electromagnetic interference; intersymbol interference
anti-interf. algm. for wavelet image coding *(Chinese)* 73417
asynchronous multicarrier CDMA commun. syst., Hopfield neural net/Viterbi decoding 73868
biomedical sigs., ICA for automatic noise and interf. cancellation 121929
bird alarms in full-stare IRST's 111623
bistable meas. devices, noise tuning, neuro-fuzzy approach 120649
CDMA cellular syst., adaptive antenna arrays *(Chinese)* 96497
CDMA multiwavelength opt. orthogonal syst., perform. and noise 120226
CDMA subspace-based multiuser detect., perform. 130290
CDMA sync. opt. systs. with APD and thermal noise, mark-detect. algm. 96667
CFAR approx. sig. detect., low rank non-Gaussian interf. 130168
channels capacity, genie-aided outer bounds 130294
chaos-based asynchronous DS-CDMA systs., perform. estim. and optimisation 95824
chaos-based DS-CDMA syst., optimal MAI reduction 95823
chaotic modulation schemes, noise perform. 94237
CIMA, carrier interf. in SSMA 74755
CMOS systs., ground interconnection networks, max. simultaneous switching noise *(Korean)* 116032
DFE hybrid struct. for CAP-based DSL systs., perform. 95814
digital FIR differentiator design based on max. SNR criterion 80099
distributed coloring and commun. in rings with local knowledge 85220
DMT receivers with selective windowing, per tone adaptive equalization 131008
DS-CDMA flat fading channel blind adaptive MMSE receiver 107753
DS-CDMA systs., optimal channel estim. algm. 107738
DS-SS perform. improvement using adaptive FIR notch filter 95822
ECG, power line interf. elimination, constrained eigenfilter 87455
ECG amp., combined driven right leg/guarding ccts., stabil. conditions 110591
fiber optic CDMA networks using series coupler access encoder/decoder, higher order sig. anal. 131498
freq. assignment in mobile phone systs. 108733
freq.-hopping interfered channel, adaptive pass. predetect. algm. *(Chinese)* 119209
gamma-distributed sigs., classes resoln. 107345
hybrid DS/SFH MSK syst., Rayleigh fading channel, partial-band noise interf. 105806
inform. conflict at search/detect. stage, anal. model 119093
inter-mesurand compensation, optimized look-up table 109398
intervehicle commun., oncoming vehicle interf. charact. 78233
LPI radar sig. detect. using SCF algms. *(Chinese)* 131649
matched and adaptive subspace detectors, interf. dominates noise 107602
MCM systs., adaptive channel estim. algm. using cyclic prefix, convergence anal. 72730
metallic fuselage struct., AE sigs. propag. 122499
MLE of weak cyclostationary digital commun. sigs. time/freq. differences of arrival 107329
modified freq. domain pitch detect. algm. *(Chinese)* 94409
monopulse antenna arrays, power optim. 117846
multifrequency sig., adaptive interperiod proc. 86172
multipath and underwater sound sigs., appl. of robust DWT 119087
multiple service class networks, cumulative switch delay effect 85430
Nakagami fading channel, error flow charact. modeling/eval. 117984
noisy distorted sigs., period determ. 107355
nonstationary data, optimal proc. 109309
online commun. in cellular networks 108693
PCA for STAP, Kronecker product improvement 107599
PCC-OFDM with overlapping sym. periods in multipath channel, perform. 73772
PD sigs. noise removal, wavelet based 84383
protected telecomms. M systs. sensitivity , state and param. estim. 119034
pulse interval modulation-CDMA opt. wireless commun. scheme, BER 86119
rank-adaptive sig. proc., subspace based biological sig. anal. 110621
SAR image proc., wavelet transform based edge detector 118691
Shalvi-Weinstein estimators, existence/perform. 107378
sig. detect. using approx. Karhunen-Loeve expansions 73712
smart antenna technol. for wireless commun. 117843
sonar, overlapping underwater sound streams, separation and fusion 119088
space-time adaptive estim. data, large stationary discretes 118902
space-time decorrelating receivers in multipath fading channels *(Chinese)* 73861
speech sig. intelligibility estim. against correl. interf. background 83982
subspace-invariant detector and flat-fading channels capacity 107628
transabdominal foetal EEG, noninvasive extraction, interf. cancellation algm. 98254
vocal sig. proc., interf. isolation 106340
voice/data integrated packet networks, MAC protocol 131067

interference filters
all-opt. tunable interferometric bandpass filter, DARR loaded coupler 93146
IR imaging, multiband opt. syst., DOE spectral filter 109641
LCD using birefr. filters, generating full color 86799
methane, absorptive detect., LED/opt. fiber coupled syst. 120991
microphone membrane deform. study, multiple-wavelength interferometry 127091
multiple cavities Fabry-Perot narrow-bandpass interf. filters, auto-design *(Chinese)* 116889
multiple-cavity NBI filter design for WDM opt. fiber commun. syst. 116652
opt. preamplified receivers, perform. eval., Gaussian approach 96691
reciprocal photonic lattice filter, all-opt. config., perform. charact. 71504
spectral props., residual ray method 127896
tandem AWG filter, 1010-channel, one primary/ten secondary AWGs 71488
wide stop-band/flat-pass-band opt. filters based on multi-resonators 71503

erference filters continued
wideband photonic ADC, monolithic integrat. 114851
XYZ prism colour splitting syst. for TV cameras 131732
Nb_2O_5-SiO_2 multilayer interf. filters, artificial nose fluoresc. sens. 86504
Si, porous, tunable opt. filter, microspectrometer 104764
ZnS/MgF_2 interf. filter, laser induced damage *(Chinese)* 104869

erference nulling *see interference suppression*

erference spectrometers
see also Fourier transform spectrometers
Fabry-Perot based spectrometer, MEMS sens., sig. conditioning, A/D conversion 86770
FTIR spectrometer, pass. rem. chem. vap. monitoring 99033
hyperspectral fundus imager, syst. concept & data proc. 98346
IASI interferometer, ref. freq. stabilised laser source 122631
static polaris. interf. imaging spectrometer, airborne rem. sens. 98949
wide-field imaging interferometry testbed design, FIR/sub-MM missions 98887
Si integrated microspectrometers, low-cost syst. develop. 116754

erference spectroscopy
see also Fourier transform spectroscopy
in-situ CVD film thickness meas. by thin film interf. 97828
pass. rem. chem. vap. monitoring, FTIR spectrometer 99033

erference suppression
see also echo suppression
2D inverse filtering of opt. images, noise suppression 118363
3D audio syst., improving perform. 75328
3D poststack data, random noise reduction, noncausal spatial prediction filtering 122583
3G CDMA cellular stds., forward link open-loop transmit diversity 85625
3G CDMA commun., interf. mgt. methods 96549
3G downlink supporting variable rate services, interf. cancellation 119988
AC regulator input PF improvement by multiplexed asymmetrical phase-control 101752
act. guard band cct., substr. noise suppression 80052
act. power filters for power quality improvement, EMI filtering 112084
adaptive antenna array, spatial/temporal receiver, broadband wireless syst. 74534
adaptive antenna arrays, power reduction with null depth trade-off 105965
adaptive antennas, pot. for mobile radio appls. 117857
adaptive array antenna with sidelobe canceller-type preprocessor *(Japanese)* 72687
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive blind multiuser decorrelation detector, higher order cumulant *(Chinese)* 95827
adaptive clutter suppression scheme, freq. domain proc. 75082
adaptive detect. in dense target environ. 96937
adaptive low complexity beamforming using split RLS algm. 73637
adaptive mixed-sig. narrowband interf. canceller for wireline transm. systs. 108514
adaptive noise canceller, normalized LMS algm. *(Chinese)* 130018
adaptive noise canceller with master-slave filter struct. 73644
adaptive noise reduction filter using cascaded sandglass-type neural nets 73686
adaptive nulling antenna, fast follower jammer suppression *(Chinese)* 85932
adaptive receivers, interf. distrib. ident. by moment method 118888
adaptive reduced-rank interf. suppression algms., convergence/tracking 105813
adaptive reduced-rank interf. suppression with rank selection 105783
adaptive space-time sig. proc./coding 107310
adaptive spatial/temporal optimal receiver using adaptive array antenna 85869
adaptive-transm. protocol for freq.-hop wireless commun. networks 130420
AGC Applebaum array for rejection of eigenvalue spread interfs. 94193
airborne radar, adaptive MTI scheme in freq. domain 86178
airborne radar, clutter suppression, STAP, elevation interferometry 86141
all-digital impulse radio for MUI/ISI-resilient multiuser commun. over freq.-selective multipath channels 108673
all-opt. asynchronous CDMA commun. syst. with double opt. harder-limiters *(Chinese)* 120121
analog codes for peak-to-av. ratio reduction *(English)* 72756
AO tunable filters, beat noise reduction method 116863
array antenna meas. with rough surface reflector, anal. 105967
array receiver with Kalman channel predictor for fast Rayleigh flat fading environ., perform. 83664
array sig. proc., struct. spatial interf. rejection combining 118909
asymmetric wireless commun., OFDMA/TDD packet transm. 119888
asynchronous CDMA, blind adaptive multiuser detect. algm. *(Chinese)* 130283
asynchronous DS-CDMA syst., hard-decision multistage interf. cancellation 108533
asynchronous DS-CDMA syst., optimal lin. space-time multiuser detector 84920
asynchronous QPSK/DS-CDMA, multipath Rayleigh fading channels, multistage interf. cancellation, perform. 72367
asynchronous TDD systs., adaptive array for high-power CCI reduction 108877
ATM-PON access systs., opt. transceiver design 120182
atmos. radars, ground clutter ident. and suppression 76874
ATSC-HDTV trellis decoder, recursive metric for NTSC interf. rejection 120541
audio sigs., wavelet shrinkage denoising, perceptual eval. 129369
bandwidth-efficient modulation schemes, interf. suscept. 131335
base-station antennas perform. enhancement using resistive plates 74844
beamforming for coherent sig. reception 84652
BER anal. of TCM schemes for CCI reduction in cellular mobile commun. 85681
BFDM/OQAM systs. based on biorthogonal modulated filter banks, design 73776
binary symmetric channel, spectral interpolation coder, noise cancellation 129008
binaural room impulse responses, transfer-fn. meas. with sweeps 118839
biomedical sigs., ICA for automatic noise and interf. cancellation 121929
BLAST algm., fast sq.-root implement. 108613
BLAST perform. improvement using space-time block codes/turbo decoding 72867
blind adaptive optimum lin. cancellation for long code CDMA 73743
blind image deconvolution, wavelet transform-based noise reduction schemes 118223
blind ISI/MAI cancellation based on periodically time-varying transm. power 95817
blind MAI suppression, inform.-theoretic approach 119221
blind multiuser interf. cancellation, max. likelihood approach 72364
blind source extraction in Gaussian noise 107430
block-based video coding, blocking artifacts reduction 106859
blocking artifacts reduction, transform coeffs. adaptive postfiltering 73336
Bluetooth commun., microwave oven dictated EMI mitigation 94063
Bluetooth radio data chip, VCO and quadrature demodulator *(German)* 74166

interference suppression continued
Boolean lower-upper-middle smoother design, permutation coloring concept 73693
broadband const. envelope interf. suppression algm. 105782
broadband mobile commun., beam and null simultaneous steering S/T-equalizer 108880
broadband mobile commun., wavelet-based multicarrier DS-CDMA syst. 108753
broadband mobile radio, joint spatial/temporal equalizer 85829
broadband wireless network, dense deployment techs. 85472
broadcast-freq. relay stations, coupling loop interf. canceller 97056
cascaded adaptive canceller using loaded SMI 94064
CAT-5E modular jack for high-speed differential sig. interconnection, crosstalk noise reduct. 91445
CCD output sig., noise reduction *(Chinese)* 97354
CCI rejection using clustering techs. and fuzzy inference 119195
cct. noise reduction by analogue lowpass filtering and data averaging 120699
CDMA, capacity doubling by in-cell seq. reuse and soft interf. cancellation 85850
CDMA, coded, lin. front end for iter. soft interf. cancellation/decoding 131070
CDMA, combined nonlin. MMSE beamforming and interf. cancellation 84898
CDMA, improved multistage parallel interf. cancellation for multipath fading channels 85529
CDMA, low-complexity interf. mitigation on vector channels, design/anal. 105803
CDMA asymptotically optimal receiver, perfect MAI cancellation 96357
CDMA asynchronous multicarrier syst., partial sampling MMSE interf. suppression 105805
CDMA blind asynchronous channel estim./equalization, multistep lin. prediction 84851
CDMA cellular radio, lin. successive interf. cancellation 96550
CDMA cellular syst., data traffic, truncated channel inversion based uplink power control 96507
CDMA cellular systs., adaptive interf. suppression filtering 130054
CDMA cellular systs. with augmented antenna arrays, perform. 85587
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA coded systs., iter. parallel interf. cancellation 130293
CDMA codeword optim., interf. avoidance/convergence 119204
CDMA direct-detect. opt. sync. systs. with interf. canceller using group inform. codes 74920
CDMA downlink multicarrier with space diversity, perform. 74747
CDMA long code systs., multiuser channel estim. 85516
CDMA mobile commun., grouped parallel multiuser detector 108677
CDMA mobile commun. systs., space-time iter./multistage receiver struct. 108858
CDMA mobile radio, digital correl. proc. use 85714
CDMA mobile radio capacity, BLAST based multiuser detect. 131288
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA multi-rate commun. systs., double chip waveforms anal. 84681
CDMA multifrequency technols., perfect freq.-time codes 85715
CDMA multipath systs., power control/transmit diversity 85799
CDMA multirate systs. with interf. cancellation, power control 74749
CDMA multistage multicarrier receiver, enhanced interf. suppression 85525
CDMA perform. improvement, bias reduction using optimized partial parallel interf. cancellation factor 131122
CDMA receiver, steepest descent algm., systolic implement. 119205
CDMA satellite systs., adaptive orthogonal code assignment 108991
CDMA sigs., multi-user detect. via iter. proc. 84800
CDMA smart antenna receiver with space-time proc. 119891
CDMA space-time spreading multilayered syst. 74582
CDMA spatio-temporal receiver struct. for multi-rate appls. 119991
CDMA sync. channels, turbo multiuser detect. with unknown interferers 130292
CDMA syst., adaptive array research 83675
CDMA syst., interf. suppression, constrained optim. model *(Chinese)* 83444
CDMA syst., novel cost fn. of adaptive antenna 73627
CDMA systs., adaptive interf. suppression, power control 107749
CDMA systs., combined rate/power/cell control for delay insensitive appls. 74681
CDMA systs., composite interf. cancellation 72357
CDMA systs., multi-rate interf. canceller for software defined radio 131262
CDMA systs., multiuser interf. cancellation using simplex algm. 84889
CDMA systs., soft interf. cancellation improvement 128813
CDMA systs., space-time-code blind receiver and neural net implement. 96391
CDMA systs., successive interf. cancellation receiver with neural network compensation 105817
CDMA systs., wt. init. for adaptive multistage parallel interf. cancellation 84908
CDMA technol., conf., Seoul, South Korea (1999) 67372
CDMA variable spreading-factor systs., multipath multiuser detect. 119978
CDMA wideband interf. cancellation base station, field test perform./anal. 72354
CDMA wideband networks, interf. subspace rejection, mixed-power operation modes 128812
CDMA wireless systs., robust constrained lin. receivers 85477
CDPD, cellular digital packet data, perform. with timed hop and forced hop 74710
cellular network, coord. training/transm. for interf. cancellation 105809
cellular radio, narrow-beam antennas and fractional loading factor 74732
circ. antenna arrays, pattern synthesis, null form. with excitation constraints 72686
clutter suppression in radar by quasi-continuous complex sig. and proc. optim. 96962
CMA adaptive array antenna syst. with single receiver using TDM 96515
color images, noise atten. filtering tech. 129573
common mode effective power on metallic lines, reduction using thin metal plate *(Japanese)* 105801
commun., discrete pseudorandom seqs. generator struct. 72930
commun. systs., time-varying interf. suppression using time-freq. sig. transforms 105808
commutator motors, minimizing influ. of current commutation on EM environ. *(Slovenian)* 123278
complex modulation schemes, iter. multiuser detect. 128976
constrained adaptive antenna arrays, uncorrelated interf. patterns space fitting using neural networks 128886
constrained detect. for noncoherent nonlin. multiuser commun. 107606
correl. interf. conditions, spatial/polariz. filtering 83406
CPM waveform, post-distortion ang. equalizer appl. 107685
Cricket location-support syst. 74375
CRT deflection yokes ringing meas. 97702
CRT display spot size meas. syst., DSP *(Chinese)* 109465
DAQ systs., sens. noise reduction method 131830

interference suppression continued
dedicated short range commun. syst., phys. layer 119994
degraded images restoration by combined homomorphic/adaptive fuzzy multilevel median filtering *(Chinese)* 129514
depth-assisted edge detect. via layered scale-based smoothing 129896
differential chaos shift keying commun. syst. 128996
differential space-code modulation 94244
differential space-code modulation for interf. suppression 106064
digital baseband predistorter using calib. memory, perform. 108576
digital equalization using neural seq. detector 119198
digital hearing aids, multimode compression archit., user tests 76705
digital watermarked images, noise corruption influence 84078
direct-digital six-port receivers, adjacent channel suppression 119882
distributed conductor-backed CPW phase/freq. shifter and appl. 102442
distributed intell. control 78736
DMT VDSL with impulse noise, crosstalk mitigation using multiuser detect. 130149
DMT with insufficient cyclic prefix, channel equalization 107697
DMT-DS-CDMA syst., per-tone blind sig. separation 119220
DOA tracking of coherent cyclostationary sigs. without eigendecomposition 84688
double-directional channel meas. 84655
downlink CDMA systs. with space-time codes and interf. cancellation 85826
DS-CDMA, adaptive beamforming using conjug. gradient algm. in multipath fading channel 74753
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA, decision feedback partial parallel interf. cancellation 105781
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
DS-CDMA, limits of coded transm. over fading channels *(English)* 73857
DS-CDMA, noncoherent MMSE interf. suppression 130304
DS-CDMA, successive interf. cancellation with optimum geometric power disparity 108722
DS-CDMA asynchronous robust space-time multi-user receiver 74581
DS-CDMA asynchronous syst. with concatenated convolutional coding, iter. multiuser detect. 107613
DS-CDMA asynchronous systs., code acquisition/interf. cancellation 107758
DS-CDMA asynchronous systs., Kalman filter based space-time receiver 108599
DS-CDMA beamspace-time interf. cancelling receiver 85862
DS-CDMA cellular syst., dyn. allocation optim. of transmitter power 131183
DS-CDMA cellular systs., adaptive array antenna beam pattern selection *(Japanese)* 131255
DS-CDMA coded asynchronous systs., long vs. short spreading seqs. comparison 108859
DS-CDMA coded systs., multicell uplink spectral efficiency 108856
DS-CDMA coherent syst., MMSE interf. suppression/turbo coding 106157
DS-CDMA commun., adaptive narrowband interf. cancellation 85820
DS-CDMA commun., space-time multiuser detect. in Rician fading channels 108723
DS-CDMA commun. syst. in time-varying multipath channels, adaptive H_∞-subweight equalizer 85521
DS-CDMA commun. systs., perform. study of decision-directed ML phase estimators 119227
DS-CDMA convolutionally coded multi-carrier systs. 107739
DS-CDMA detect. with combination of smart antennas and parallel interf. canceller 96518
DS-CDMA downlink transm., spatio-temporal array proc. 107390
DS-CDMA in fading channels, code timing acquisition by differential correl. 74792
DS-CDMA iter. multi-user turbo-code receiver 128814
DS-CDMA mobile radio, adaptive parallel interf. canceller *(Korean)* 120011
DS-CDMA mobile radio channel, blind space-time channel estim. 108698
DS-CDMA mobile radio with multimedia services, downlink beamforming and data rate allocation 108713
DS-CDMA mobile radio with multimedia services, downlink beamforming 96552
DS-CDMA mobile satellite noncoherent systs. with orthogonal sigs., perform. anal. 74651
DS-CDMA mobile syst., orthogonal successive interf. canceller for downlink commun. 74700
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS-CDMA multicarrier wavelet based syst., multistage interf. cancellation, perform. enhancement 105818
DS-CDMA multidimensional multicode syst., code diversity/error detect., perform. 74790
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA nonreal time data, power control/intracell scheduling 131149
DS-CDMA partial parallel interf. cancellation, tracking error effect 83411
DS-CDMA syst., blind adaptive decorrelating decision-feedback multiuser detect. 108553
DS-CDMA syst., data-independent beamformer 73866
DS-CDMA syst., multicarrier signaling and RAKE receiver integrat. 131057
DS-CDMA syst., power inversion adaptive array antenna for high power interf. suppression 72370
DS-CDMA syst. with timing errors, anal. of partial parallel interf. cancellation 108532
DS-CDMA syst. with timing errors, perform. of hard-decision parallel interf. cancellation 108534
DS-CDMA syst. with timing errors, perform. of parallel interf. cancel. *(Chinese)* 96389
DS-CDMA systs., adaptive multistage interf. cancellation 108724
DS-CDMA systs., adaptive narrowband interf. rejection, parallel interf. cancellers scheme 83356
DS-CDMA systs., asynchronous multi-stage SIC detector for multipath fading channels 85819
DS-CDMA systs., blind array sig. proc., temporal diversity 107421
DS-CDMA systs., combined adaptive interf. cancellation with antenna array 72358
DS-CDMA systs., dyn. groupwise successive interf. cancellation array receiver 85741
DS-CDMA systs., interf. reduction for reliable sync. 130282
DS-CDMA systs., multistage semi-blind adaptive multiuser detector for reverse link 131227
DS-CDMA systs., narrowband interf. suppression, FT-domain tech. 73852
DS-CDMA systs., semi-blind spatio-temporal equalization/multiuser detect. 131132
DS-CDMA systs., two-stage CMA blind multiuser detect. in multipath fading 131235
DS-CDMA systs. with multistage HD-PIC, perform. anal. 85680
DS-CDMA systs. with one-stage HD-PIC, perform. anal. 84886
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 10862
DS-CDMA with lin. interf. suppression, pilot-to-data power ratio optim. 8580
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
DS-CDMA with multipath, spreading code adaptation 108828
DS-SS CDMA, narrowband interf. suppression 128809
DS-SS commun., AM-FM jammers excision, instantaneous bandwidth us 96390
DS-SS commun. systs., HOS and GA-based interf. rejection filter 74541
DS-SS commun. systs., narrowband interf. rejection algm. 96392
DS-SS perform. improvement using adaptive FIR notch filter 95822
DS-SS systs., data-aided nonlin. filter for narrowband interf. rejection, closed form results 105816
DS-SS systs., interf. rejection using nonlin. interpolation lattice filters 85528
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
DS/CDMA long-code systs., channel estim./multiuser detect. 108854
DS/CDMA multirate commun., multiuser detect. 107571
DS/CDMA pilot channel assisted syst., channel power assignment 108797
DS/CDMA systs., effective multiuser receiver 85584
DS/CDMA systs., multiuser detect. with cell diversity 84790
DS/CDMA systs., two-stage decorrelating detector 74549
DS/FH SSMA hybrid systs., partial successive interf. cancellation 131054
DS/SS sigs., noncoherent anti-interf. receivers 85517
DS/SSMA commun. with generalized random spreading, blind adaptive multi user detect. 84788
DSL discrete multitone modulation receivers, RFI cancellation 108476
DSL systs., multi-user precoding for crosstalk cancellation 106144
DSP-based ionos. radio-link using DS-CDMA and on-line channel estim 108630
DSSS systs., modified lapped transform domain median filter for narrowban interf. suppression 131066
ECG, adaptive canceller of 50 Hz interf., FPGA appl. 110623
ECG feature extraction using optimal mother wavelet 121974
ECG interf. suppression. interbeat/intra-beat decorrelating transforms 87454
ECG sig. denoising using wavelet domain Wiener filtering 121923
EDGE 2-stage soft-output equalizer 84861
electrified rly. track cct., impulsive interf. suppression 78312
electronic systs. design for EM terrorism protection 83384
EM vector sens., source separation and tracking 107397
EMC, conf., Wroclaw, Poland (June 2000) 67408
EMC, current waveform, detect. through perturbing instants meas. 105779
EMI emissions rules, regulations, and options 83445
EMI mitigation, dual-bridge inverter, IM 123458
enhanced Godard blind equalizer based on transient phase anal. 73843
European DVB-T equalizer in time-variant channel for digital mobile commun 97050
face focus coding, H.263+ video coding std. 73426
fast data transm. ISI removal, adaptive digital filter 130257
fast freq.-hopped multiple access sigs. detect. 130164
fast-converging robust adaptive arrays 94197
fast-scan GMTI/STAP archits., perform. comparison 96991
FDD DS-CDMA systs., downlink inter-cell interf. cancellation 108957
FDD systs., downlink space-time proc. 119046
ferrite core, load effect, parallel 2-wire lines, equiv. cct. model *(Japanese)* 70546
FFH CDMA multirate opt. syst. using power control 74986
FH CDMA generalized multi-carrier transceivers 107740
FH CDMA mobile cellular networks, adaptive array appl. 107308
FHMA turbo-coded commun., iter. multiuser detect. 107614
FHMA turbo-coded commun., iter. multiuser detect. 84781
fibre ring lasers, rational harmonically modelocked, higher-order opt. pulse generation 93523
FIR filter bank transceivers with effective band separation 130055
fixed broadband wireless access systs. coexistence, IEEE recommended practice 119929
fixed wireless access syst., simulated tolerance for uplink sync. 85560
flip-chip multi-mode, multi-band VCO IC using low cost BiCMOS proc. 91329
FLIR imagery, region based PCA modular clutter rejection 95510
FM waveform mgt. by missile-borne pulsed Doppler radar during target tracking in clutter 99166
FM-CW radar atmos. profiler, dedicated computer syst. 76902
format conversion and display, removal of spatial and temporal alias artifacts 86298
FPGA, adaptive heterodyne filter 102399
fragment adaptive reduction for coping with radio unlicensed bands interfere 128806
freq.-invariant adaptive receiving/transmitting null beamforming 108871
freq.-selective fading channels, space-time block-coded multiple access 85719
FSR-LPTV filtering for blind equalization and interf. rejection 130263
gel electrophoresis image enhancement 118226
generalized FH OFDMA through unknown freq.-selective multipath channel 85479
generators *(Chinese)* 99627
Genetic Algorithm for Mobiles Equilibrium applied to video traffic 107906
global motion estim. using fast and robust algm. *(Chinese)* 118631
GPS receiver, interf. nulling, SS sig., adaptive antenna 74903
GPS receivers, FM jamming suppression, subspace array proc. 109327
gradient-based algm., gradient noise reduct. by variable step-size tech. 73704
GSM mobile telephone handset, low complexity pre-detect. antenna syst 105946
gyromagnetic media/devices design/research, EMC/ecology problems 83396
HBSC, heliborne battlefield surveillance radar DP 77082
HDTV, multi-tap high speed equalizer design *(Chinese)* 107716
hearing aids, variable step-size of LMS algm. for acoustic feedback reduct 73017
HF digital commun., source separation with collocated antennas 84729
HF ground wave polarimetric radar, radio disturbance suppression 75073
HF ground wave radar, multidisturbance suppress. using pol. filter *(Chinese)* 131645
HF surface wave radar, shipborne, expt. anal. of sea clutter 75070
hierarchical cell struct., uniform GoS 108717
high speed link, 2 GB/s differential simult. bi-directional I/O cell 119856
high-capacity wireless systs., perform. comparison of space-time archit. 10877
high-order QAM systs., phase noise and IMD reduction 72773
high-rate differential space-code modulation for interf. suppression 83816
high-rate pers. area networks, channel estim. with interf. cancel. 74513
HRR airborne phased-array radars, clutter suppression/moving target detect./feature extraction 75160
hybrid DS-FH-SS syst., transform domain interf. suppression *(Chinese)* 13029

erference suppression continued
hyper RBF neural networks for interf. cancellation with nonlin. proc. 107419
I/Q imbalance compensation methods 119883
ICA-based speech features for speech coding and noise reduction 118088
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE sig. proc. in wireless commun., conf., Taiwan, China (March 2001) 78451
IEEE vehicular technol. and commun., conf., Leuven, Belgium (Oct. 2000) 78454
IEEE wireless commun. and networking, conf., Chicago, IL, USA (2000) 78416
IIR comb filter, harmonic interf. removal, multirate method 107491
image adaptive noise canceling and edge detect. filter 107294
image anal. and pattern recogn., coord. logic filters 129575
image compression, total var. improved wavelet thresholding 95189
image denoising, autocorrelation modeling of wavelet coeffs. 94810
image denoising using hybrid wavelet/DCT method 129484
image edge feature extraction algm. *(Chinese)* 95470
image enhancement, self-avoiding random walk approach 118236
image impulse noise suppression using adaptive L-Filters 106477
image proc., fine-detail preserving filter for noise suppression 106722
image proc., rational operators, noise smoothing and anisotropic diffusion 129574
image representation lin. model for use with Kalman filter restoration 118238
image restoration using impulse detector and median filter 118225
image sharpening using permutation weighted median algms. 118232
image shot class. for hard transit. and noise reduction tech. 84348
image smoothing scale space, translation-invariant wavelet shrinkage 84271
image VQ with degrad. control mechanism 129720
images with pulse interf., nonlin. filtering 106679
images with pulse interf., nonlin. filtering 106733
impulse noise corrupted images restoration using image gradients 106721
impulse noise reduction based on lifting wavelet transform 132559
impulse noise removal for color image, noise detect. based 73314
in-house IR wireless commun., very high bit rates 86122
indoor freq. hopping picocellular networks, interf. avoidance 85514
indoor WLAN, adaptive pre-selected sector antenna transmitter diversity using DS-CDMA 108211
inhomog. broadened systs. pulse saturation, noise suppression 84738
instrumentation amps. protection 79573
intentional EMI mitigation requirements 83383
interf.-resistant LPTV-MMSE equalisation 119196
interleaved (2,1,7) convolutional codes perform. in mobile image commun. syst. 83894
internally grounded feedthrough capacitor, reliab./appls. 115068
IR image, noise removal based on H.263 video recommendation with adaptive filter *(Chinese)* 106678
IS-95 downlink SIC receiver, ML rate determ. perform. 105811
ISI adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sigs. 107690
ISI noisy channels, max. throughput loss due to narrowband interf. 84811
ISI-impaired narrow-band multiuser systs., min.-error-probab. single-user detect. 83407
iter. multiuser detect./decoding of asynchronous users, reduced complexity algm. 130173
iter. soft interf. cancellation for multiple antenna systs. 83408
Japan, advances in adaptive antenna technols. 105956
joint predistortion/transmit diversity 74679
laser rang finding and tracking syst., low noise electronic cct. design *(Chinese)* 96996
LCMP beamforming under quadratic constraint, RLS implement. 73655
LCMV broadband beamforming, single interf. presence, optimal temporal wt. spacing 72986
leadless format devices for EMI suppression 94062
LEO satellite networks, simulcast-based DCA for unicast/multicast commun. 96616
lin. interf. cancellation multiuser receivers, convergence 131058
lin. multiuser systs., second-order stats. based equalization/interf. cancellation 107691
lin. parallel interf. cancellation, large syst. anal. 128805
lin. parallel interf. cancellation, perform. 84797
Lincoln Laboratory's develop. of radar sig. proc. 99143
LMR, CCI reduction and path-diversity reception 74739
low PRF surveillance radar, anti-clutter and anti-interf. algms. 75219
LV ground-fault indicators operation, ASD effect 124147
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078
LV power line, high-speed data commun. using OFDM *(Chinese)* 119857
M-estim. robust adaptive filtering 119052
M-PSK sigs., successive cancellation based multiuser detector perform. 130157
MAC protocol for mobile ad hoc networks using directional antennas 85051
mag. shield, line spectrum noise cancellation, beat phenom. *(Japanese)* 105787
MAI suppression by reduced-rank lin. filtering 84762
MC DS-CDMA perform. in presence of partial band interf. 95836
MC-CDMA hybrid uplink interf. cancellation receiver 73860
MC-CDMA turbo coded uplink, iter. multiuser detect. and decoding 119235
MC-CDMA uplink, blind carrier freq. offset estim. 108829
microcellular syst., SCM-CDMA opt. fibre base station links 96877
microphone arrays, dereverberation and noise reduction 118055
microstrip ring struct. using air-gap control, reson. behavior, superstrate effects compensation 69078
MIMO blind deconvolution, cumulant-based inverse filter criteria, props./algms./appl. to DS/CDMA systs. 84853
MIMO commun. systs., advanced wireless access soln. 84656
MIMO interf.-limited cellular syst., simul. results 74752
MIMO multiuser smart antenna systs., spectral efficiency optim. 83753
Mixed Power Control with Directed Assignment for interf. reduction in channelized wireless systs. 85644
mixed-sig. PCB partitioning/layout 115126
MLSE sub-optimum detector with folded state-transit. trellis preselection stage 95717
MM wave pulse Doppler radar, suppression of interf. from hydrometeors 109249
MMSE reduced-rank multiuser receiver for sync. CDMA 108526
mobile commun. systs., research challenges for 3G and 4G 85705
mobile network capacity gain, beamforming/interf. cancellation 85647
mobile radio, adaptive cochannel interf. canceling with turbo codes 108894
mobile radio interf. cancellation, adaptive array algm. with spatial interpolation 131295
mobile satellite service handset transmitters, emissions control techs. 83416
mobile systs., radio channel investigs. 74864
modified Lee algm. with soft decision-feedback and backward recursion using M-algm. 107681
modulated complex lapped transform proc., design and CPLD implement. 68844

interference suppression continued
MOSFET HF matching meas. for CMOS mixer port crosstalk determ. 102715
MPEG-2 decoded video restoration, deinterlacing and superresolution 95103
MRF modeling in median pyramidal transform domain for denoising appls. 118974
MTI with multiple receive apertures, general sig. proc. algm. 96954
multiband frontend for software radios using high IF and act. interf. cancellation 96611
multiband software radio frontend design, interf. cancellation tech. 131264
multibeam interf. canceller based on order extended fast algms. 83393
multicarrier DS/SSMA syst. with reduced MAI and higher data rate in Rician fading channels 119896
multicarrier transm. systs., narrow freq. band suppression 117715
multichannel 2D delta-domain lattice filter, noise removal 84140
multipath fading DS-CDMA channels, blind single-user array receiver for MAI cancellation 119222
multipath non-Gaussian channels, multiuser detect. 119225
multiple access fading channels with multiple antennas, optimal power control 130305
multiple jammer suppression using adaptive lin. constrained inverse QRD-RLS beamformer 84755
multirate CDMA cellular systs., partial interf. cancellation receiver 85821
multiuser detect., overview and new interf. cancellation tech. 107616
multiuser detect. based on sym.-level cancellation 108531
multiuser DFE of block-spread multirate transms. for QoS wireless networking 84862
multiuser interf. suppression using optimal seqs. combined with antenna arrays 94059
multiuser sig. design/detect. using interf.-resistant modulation 130156
narrowband mobile radio, iter. CCI cancellation 85624
neuro-fuzzy filters based on recursive proc. and genetic learning 130094
noisy image edge detect., Java algm. *(Chinese)* 129809
noisy image seqs., impulse detectors 84142
noncontacting cover cable conduits, Schwarz-Christoffel anal. 80468
nonlin. channel noise reduction/ident. using neural net 130269
nonlin. group-blind multiuser detect. 119983
nonlin. image noise removal and deform. elimination 118185
nonlin. multiwavelet transform based soft thresholding 84658
nonparametric ident. of lin. systs., resonator based 101686
nonrecursive digital filter synthesis with sig.-interf. spectrum overlap 119040
OFDM, FEC code, intercarrier interf. 106124
OFDM, freq. offset errors, perform. degrad. reduction 72726
OFDM cellular systs. utilizing direct-spread slots, airframe extension 131279
OFDM commun. systs., in-band/out-band spectrum anal. using ICI cancellation methods 94248
OFDM mobile commun. systs., intercarrier interf. self-cancellation 96546
OFDM mobile systs., receive diversity 96434
OFDM multi-user satellite syst., code selection for interchannel interf. elimination 106034
OFDM systs., carrier freq. offset effect 106039
OFDM systs., freq. offset blind estim. filter 106032
OFDM-CDMA syst., anal. of parallel interf. cancellation scheme 96579
OFDM-CDMA systs., adaptive antenna array appl. 108872
OFDM-OQAM conjug. syst., filter design 106019
open area repeater with interf. cancellation syst., channel simulator 131071
opt. commun. networks, interf. suppression 120179
optimal adaptive proc. for domain factorised element-digitised array radar 75072
optimal sig. filtering in auxiliary channel of interf. var. 107515
orchestral music, unwanted sound blind removal 95692
OTH HF radar, ionos. distortion mitigation techs. 99130
package power distrib. networks, modeling of field penetration through planes 89879
PAM all-digital impulse radio for multiple-access through freq.-selective multipath 74662
partial parallel interf. cancellation using non-const. weighting factors 108552
pass. rem. image sens. by Hopfield neural net, syst. fusion 84132
PCB inductive crosstalk reduction by layout techs. 69303
PD meas., periodic interf. rejection, direct trap wave filter *(Chinese)* 86901
PD sigs. noise removal, wavelet based 84383
PD wideband meas. syst., periodic interf., direct trap wave filter *(Chinese)* 132123
pers. CDMA commun., selective partial parallel interf. cancellation 119953
perturb. methods for cancelling multi-user interf. 128800
phonocardiograms, automatic denoising methods comparison 121991
photonic interf. mitigation filter 69251
photonics-based interf. mitigation fibre filters for microwave sigs., parallel topol. 131380
PHS network, massive scale air interface reciprocity (motion) survey 108908
piezoelec. accelerometers, noise immune charge amp. 75461
polymer-ceramic nanocomposite embedded decoupling capacitor, SSN suppression 113503
power quality improvement, EMI filters 112085
power quality monitoring, wavelet transform, noise suppression algm. 77633
power system protection *(Chinese)* 77476
PPM-CDMA commun. syst. with opt. hard-limiter 74910
PPM-CDMA sync. fiber-optic systs., interf. reduction 109042
prestack migration, shot records phase encoding 122558
PSK freq. recovery, high-perform. estim. algm. 117909
pulse compression radar, ambiguity anal. using Gold code seqs. 96931
pulse-compression radar, neural network sidelobe suppression filter 109271
PWM buck converter, RF conducted emission reduction 134148
PWM VSI, CMV reduction, act. canceling/compensating ccts. 123566
QWIP current noise suppression at low bias voltages 97268
radar clutter texture retrieval, time-av. subspace methods 109260
radar detect., adaptive cosine estimator, max. invariance 109262
radar images modified alpha-trimmed filtering 86173
radio interf. autocompensator, multipath effects 85502
radio noise and interf. above 30 MHz 83441
radio-over-fibre, simul. on distributed point Fabry-perot LD 108782
rank-order filters for digital images, geometric distortions generalized model 82288
Rayleigh correl. multipath fading channels, iter. multi-user detect. *(English)* 74781
Rayleigh fading time-multiplexed pilot channel, adaptive parallel interf. cancellation 95815
receiver with few operation quantities, algms. 72361
reciprocal multipoint networks, LEGO approach for max-min capacity 108907
reduced-complexity detect. algms. for systs. using multi-element arrays 73732
rejection filter anal. during repetition period wobbling 107516
retransmission, refl. sig. and lateral spectrum components 108574

interference suppression continued
RF ferrite isolator 85475
robust adaptive filtering in impulse noise, least mean M-estim. algms. 119014
robust adaptive SS receiver, neural net preprocessing, non-Gaussian noise 74571
robust automatic speech recogn. in presence of impulsive noise 84026
robust quasi-Newton adaptive filtering algm. for impulse noise suppress. 95672
robust speech recogn., adapted wavelet packets domain denoising 129407
SAR imagery, matched subspace detectors for target discrim. 109267
SAR images, joint denoising and lossless/lossy compression 129731
SAR interferometric phase noise reduction using discrete wavelet transforms 75196
satellite commun., array sig. proc. for improvement of rural area coverage 131318
satellite images coding, real BCH codes as joint source/channel codes 73357
SC/MMSE ISI iter. equalizers, matched filter approx. 95810
SCDMA systs. over multipath fading channels, blind fractal sig. estim. 96566
SD/TD/CDMA systs., joint detect./pre-distortion techs. *(English)* 130147
SDMA, space domain multistage interf. 72353
SDSL upstream transm. with vector equalization, crosstalk mitigation 131007
secondary substations, power-freq. mag. fields mitigation 134297
self ICI cancellation-based OFDM systs. with carrier freq. offset estim., perform. 106038
semi-blind detect., burst unsynchronized CCI robustness 105810
Sensor Craft multi-mission radar, STAP proc., severe clutter 122761
SFH high capacity high data rate networks 83856
SFN for digital terrestrial broadcasting, loop interf. canceller for relay stations 72359
sidelobe canceller for reflector antenna using sig. subspace eigenvectors 117718
sig. and image enhancement by generalized adaptive diffusion proc. 118802
sig. denoising using line-adaptive lifting wavelet transform 118993
sig. reception against band-limited nonGaussian noise background 119872
sig.-depend. image noise, wavelet and pyramid filtering 130056
single-channel noise reduction with pitch-adaptive post-filtering 118052
small-feature-preserving noise-rejecting RM-KNN filters 84172
small-feature-preserving nonlin. image filtering in noise 84171
smart antenna systs., impact of W-CDMA sigs. 83705
SMI and CMA adaptive algms., combination 108881
Soft-Bar network-assisted resource allocation algm. 85874
software radio receivers, simplified sig. proc. 107529
SOI substrs. with buried ground plane for substr. noise suppress., modeling 102691
space-time codes, demodulation in presence of interf. 72926
spatial domain interf. canceller using multistage adaptive array with precise timing estim. 108878
speech coding, higher order spectrum anal. appl. *(Chinese)* 129377
speech enhancement, nonstationarity and beamforming use 94388
speech enhancement, spectral subtraction generated musical noise reduction 118069
speech enhancement method in wavelet domain 83997
speech enhancement using adaptive wavelet shrinkage 129376
speech noise reduction using modified DFT pair 83994
speech-interfering noise modeling, applied chaos theory 84036
spreading seqs., bounds on aperiodic and odd correl. 117958
SS comms., NBI cancellation using chaos 95821
SS commun., broadband interf. suppression, TF mask 108537
SS commun. systs., interf. rejection using RBF network *(Chinese)* 94067
SS commun. systs. using lapped transform, NBI excision *(Chinese)* 94066
SS sigs. in non-Gaussian noise, adaptive antenna array receivers 73726
SS wireless mobile commun. networks, congestion 85769
stacked A-to-D converter for increased radar sig. proc. dyn. range 96989
STAP, interf. suppression algm. 83385
STAP bistatic radar, adaptive clutter cancellation 109266
STAP for airborne high range resoln. phased array radar 96945
STAP scheme for hovering helicopter detect. 75097
star tracker, star image simul. software *(Chinese)* 98899
stepped-FM radar with MUSIC algm., clutter suppression charact. *(Japanese)* 131668
stochastic matched field array proc. for detect./nulling in uncertain ocean environ. 109310
stratos. commun. syst., narrowband interf. rejection 108679
subband and transform coder optim., theory and appls., review 84736
subband arrays, perform. anal. 117854
subspace leakage environ., rapid adaptation 107388
successive interf. cancellation with SISO decoding/EM channel estim. 105804
superposition coded modulation for unequal error protection, design 128991
SW radio commun., noise suppress. based on SVD 74583
sync. DS-CDMA systs., time-freq. decorrelating decision-feedback multiuser detector 85527
syst. archit. for broadband fixed wireless capacity maximisation 85572
target-to-clutter contrast enhancement using radar Doppler polarimetry 96955
TCC interf. canceller, FPGA implement. *(Japanese)* 108875
TCM, iter. space-time detect. for broadband wireless channels 85522
TD-CDMA based mobile radio systs., joint-detect. techs. comparison 107594
TD-CDMA uplink, multiuser detect. perform. 119946
TD-SCDMA syst., perform. of smart antenna 96517
TDD packet-switched cellular systs., interf. reduction 108848
TDD-CDMA receivers, Bayesian multistage interf. canceller for multiuser detect. 105799
TDD-CDMA receivers, soft Bayesian recursive interf. cancellation/turbo decoding 108938
TDMA cellular syst., channel ident. and interf. cancellation 131138
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decoding 108857
TDMA multiuser channel estim. for cochannel sigs. detect. 130284
TDMA narrowband systs., successive CCI cancellation 94060
TDMA-based hierarchical cellular systs., mobile speed estim. 108806
TDMA/CDMA 3G systs., multirate transm. receivers 74660
TDMA/W-CDMA/N-CDMA/W-CDMA spectrum overlaid systs. 72356
TechSat21 distrib. space-based radar syst., pattern synthesis 120456
ternary spreading seqs. with zero correl. duration 72710
text location in complex image using cluster based templates 84194
thick film integrated LC filters, design, fab. & test 114862
third generation mobile radio systs., use of smart antennas 120064
time-varying channels with DPSK inputs, blind DFE 84857
tracking radars, time domain synthesized binary phase code sidelobe suppression filter 75094
train power busbar supply by diesel locomotives *(German)* 134511
transform domain commun. syst., init. acquisition perform. 107625
trellis code multiple access, iter. multi-user detect. using, posteriori probabilities 130155
interference suppression continued
turbo equalization, jointly optimized adaptive equalization/channel decodin 107717
turbo proc. in joint multi-user detect./decoding *(Chinese)* 94333
TURBO-BLAST for high-speed wireless commun. 83409
turbo-equalization, bit interleaved modulations appl. 107708
TV interf. from VHV overhead transm. lines, minimisation *(Chinese)* 83391
twins, fetal ECG separation, blind source separation 121973
two-stage MMSE partial PIC receiver for multiuser detect. 84907
two-stage periodically time-varying equalizer and interf. suppression 107698
two-stage radar image despeckling, local stat. Lee and sigma filtering 120396
UHF indoor radio channels, rms delay and coherence bandwidth 74617
underwater acoustic commun. using phase conjug. 120395
unequal SNR denoised commun. sigs., time difference of arrival estim. 10891
uplink CDMA systs., multistage multiuser detector with parallel interf. cancella tion 84895
US adaptive speckle reduction and coherence enhancement 87510
UTRA downlink with W-CDMA, space diversity schemes 120065
UTRA TDD, MMSE adaptive receiver 119947
UTRA TDD adaptive MMSE RAKE receiver 108916
vascular struct./deform., B-mode ultrasound imaging 87509
vectored-DMT, FEXT canceling modulation scheme for coordinating user 128981
Vertical Bell Labs Layered Space-Time (V-BLAST) archit. and generalized DF 119181
vessel-like patterns detect. in noisy environ. 87549
vibrator and microstrip antennas, side radiation reduction level, UGTD 83524
video scratch rejection using filters with prediction error proc. 118237
videoconferencing, Kalman noise filtering and motion compensated video codin 95099
VLF polarised antenna array, null steering algm. 107312
voice activity detect. and speech enhancement based on coherence using pitc inform. 118054
W-CDMA, high-speed packet wireless access, radio link perform. *(Japanese)* 131254
W-CDMA, near-far-resistant single-user channel ident. by interf. subspace rejec tion 84904
W-CDMA, optimal power distrib. for successive interf. cancellation 85812
W-CDMA blind adaptive antenna array beamforming scheme 108924
W-CDMA downlink, interf. cancellation schemes 85754
W-CDMA improvements, principles and expt. results 108839
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller wit iter. channel estim. 72355
W-CDMA power controlled schemes with interf. cancellation, capacity 85877
W-CDMA reverse link, coherent adaptive antenna array diversity/SINR-base fast transmit power control 74639
W-CDMA reverse link, receivers for packet transm., comparison 108884
wavelet domain commun. syst. archit. for interf. avoidance 96399
wavelet packet based indoor wireless channel model 108598
wavelet-based image denoising tech. using spatial priors 94808
wavelet-based image denoising under overcomplete expansion 94809
WCDMA, look-direction downlink-beamforming *(English)* 107413
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short term channel props. 74666
WCDMA, uplink spatio-temporal interf. rejection combining 85831
WCDMA single-user interf. cancellation for fading channels and diversity anten nas 108777
WCDMA UTRA uplink, joint demodulation with smart antennas *(English* 106069
WCDMA UTRA uplink with unknown channel model order, smart antenn schemes 74688
wideband arrays, sidelobe reduction through subarray overlapping 94198
wideband DS/CDMA commun., combined space-time multiuser receivers 9651
wideband lin. FM waveforms, interf. cancellation 109241
wideband receivers, compensation of freq.-selective I/Q imbalances 85518
wideband sig. param. estim. based on HOS 118916
wideband smart antenna systs., freq. compensation, perform. anal. 128902
wireless ad-hoc network, adaptive antenna techs. 105978
wireless airborne commun. systs., overloaded array proc. 108694
wireless mobile systs. with ISI and CCI, spatial-temporal proc. 96520
wireless networks, cooperative diversity protocol 131093
wireless networks, integrated services with space-time block-coded transms 108612
WPAN appls., adaptive freq. hopping scheme 96639
X2 series EMI suppression capacitors, miniaturisation 115083
Fe-Al-O mag. granular film, HF noise suppression 127396
Fe-Si alloy flake-polymer composite based EMI filter, atten. 83395

interferometers
see also acoustic wave interferometers; electromagnetic wave interferometers; interferometry
direction finding, accuracy increase by three-antenna interferometer 120483
electromechanical which-path interferometer, Aharonov-Bohm ring, QD 92501
Si_3N_4 MEMS structural films on Si, wafer scale testing 127092

interferometry
see also acoustic wave interferometry; electromagnetic wave interferometry; holographic interferometry; interferometers; particle interferometry
adaptive image proc. using rank-order filters with spatial elements connectivit 106715
high-speed 3-D imaging using photorefr. holography 118285
multibaseline InSAR, appl. of array proc. techs. for layover soln. 98968

intergalactic matter
see also clusters of galaxies
Coma cluster, Sunyaev-Zeldovich effect, MITO expt. obs. 109332
quasar refr. scintillation, baryonic mass fraction test 120501

intergranular fracture *see brittle fracture*

interleaved codes
1-to-4 opt. TDM DEMUX, photonic ADC 86082
(2,1,7) convol. codes in mobile image commun. syst., perform. 72918
accumulated woven convolutional codes, turbo-like coding schemes compariso 129197
adaptable binary entropy coder 106178
ADSL DMT systs., turbo coding 129203
ATM wireless networks, punctured turbo codes with unequal error protectio appl. 83886
AWGN channels, non-uniform QAM sig. shaping; turbo coding appl. *(English* 72752
BICM-ID with sq. QAM constellations, Rayleigh fading channels design/anal./perform. eval. 72887
bit and coord. interleaved coded modulation over fading channels 72768

terleaved codes continued
bit-interleaved turbo-coded modulations, BER perform. 106111
block turbo codes for space-time systs. 72864
CDMA systs., interleaver design/anal. 129015
CDMA systs., interleavers design and anal. 130297
CDMA wideband cellular networks, power control results 85745
channel estim. and equalization with block interleavers 84868
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
concatenated codes with interleavers, design of fixed-point iter. decoders 72821
concatenated turbo-TCM for mobile satellite channels 129004
convolutional codes concatenation with ISI channels, precoder design 83937
convolutional codes perform. in mobile image commun. syst. 83894
convolutional double accumulate codes or double turbo DPSK 72820
correl. Rayleigh fading channel, coded modulations compared 83817
CPM, serial concatenated, ACI suscept. 129064
CPM sigs. over space-time correl. Rayleigh fading channels, soft output diversity combining 131290
DAB, FEC block, low-complexity design 109347
DS-CDMA coherent syst., MMSE interf. suppression/turbo coding 106157
entropy-coded sources, joint source-channel turbo decoding 106153
fading channels, coded modulation for differential encoding and non-coherent reception *(English)* 72754
FEC, convolutional and RS coding, interleaving syst., appls. *(Italian)* 83869
FEC-based video streaming, novel approach 118644
FEC-based wireless video streaming with pre-interleaving 107071
FH-SS systs., side inform. reception 108541
fixed-point iter. decoders for concatenated codes with interleavers, design 72880
Gilbert channel, interleaving effects 117986
Gilbert-Elliott channel with interleaving/retransmission, delay anal. of block coded transm. 94271
image transm. over mobile fast-fading channels, wavelet noise cancellation/interleaving techs. 95123
irregular turbo codes and unequal error protection 129123
IS-95 CDMA uplink, perform. improvement using decision feedback and sub-optimal Viterbi decoding 108936
IS-95A uplink code, decoding 74628
ISI channel, precoder effect on serially concatenated coding systs. 94295
iter. source-channel decoding, generalized framework 117991
lin.-complexity soft-decodable high-rate "good" codes, constr./props./perform. 129114
LMS channel, fig. of merit for interleaver depth eval. 108658
low rate turbo-Hadamard codes with low decoding complexity 129162
mag. recording storage channels, error correcting codes, applicability *(Japanese)* 70544
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulation 94243
ML decoding, approx. upper bounds on error probab. of lin. codes *(English)* 72834
modified turbo codes for perform. improvement 106099
MPEG-2 coded video seqs., space/freq. masking, digital watermarking appl. 95058
multifold turbo codes, BER perform. 129126
multiple parallel concatenated single parity check codes 129199
OFDM, coded modulation for noncoherent reception 106046
OFDM sig., peak-to-av. power ratio reduction by interleaving 106040
OFDM systs., interleaving techs. to combat highly freq.-selective channels 72723
OFDM systs., space-time code design 72860
OFDM TDD systs., adaptive interleaving 72750
OFDM-based LMDS, perform. eval., meas. channel models 96414
packet networks image transm., multi-stage vector quantizer design 84471
parallel concatenated block codes, iter. decoding, F24 coset MSP algm. 106079
parallel concatenated turbo codes for CPM 83859
parallel concatenated turbo codes with non-uniform constellations 129201
partial response channel, woven convolutional codes and MTR codes 129226
partial response channels, precoder design for concatenating convolutional codes 72912
partially concatenated convolutional codes constr. 129223
phase control seq. fast generation, array interleaving *(Chinese)* 83839
pipelined data converters, LV/energy efficient design 90985
punctured convolutional codes for unequal error protection, image transm., mobile channels *(Chinese)* 106150
Rayleigh fading channel, multilevel generalized array coding 83890
Rayleigh fading channels, improved multilevel coding schemes research 94272
RS decoders, high-speed VLSI archits., Berlekamp-Massey algm. 125530
self-dual codes, min. dist. and decoding capacity anal. 129043
serial concatenated convolutional code, improved design and SOVA algm. 94322
serially concatenated convolutional codes, interleaver design 129163
serially concatenated space-time code design in flat Rayleigh fading channels 85825
sliding window algm., interleaver design 129193
space-time bit-interleaved coded modulation over freq. selective fading channels with iter. decoding 72936
SPCP codes 106073
stream-oriented turbo codes 83913
syst.-on-a-chip test data compression/decompression 81432
TCM anal. and design with transmit diversity for wireless commun. 83826
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
third generation mobile commun., turbo codes, decoding implement. *(Chinese)* 106080
trellis termination methods theory/perform. 72877
turbo codes, cyclic shift interleaver design 117988
turbo codes, decoding implement. in third generation mobile commun. *(Chinese)* 106114
turbo codes, dist. profile *(English)* 72847
turbo codes, error floor and free dist. 129196
turbo codes, interleaver design 72876
turbo codes, trellis complexity anal., interleaver props./appls. 72898
turbo codes based on recursive systematic convolutional code decomp. 129225
turbo codes perform. improvement by concatenation with rect. parity check codes 129125
turbo codes using different trellis terminations, comparison 117987
turbo codes/serially concatenated codes with interleavers, free dist. calc., algms./appls. 72873
turbo coding, decoder complexity 94334

interleaved codes continued
turbo decoder, threshold LogMAP SISO block for FPGA implement. 106098
turbo decoding, complexity reduction 120061
turbo demodulation of zero-padded OFDM transms. 106067
turbo proc. in joint multi-user detect./decoding *(Chinese)* 94333
TURBO-BLAST for high-speed wireless commun. 83409
Turbo-codes multilevel modulation and their perform. *(Chinese)* 72929
turbo-equalization, bit interleaved modulations appl. 107708
turbo-single parity check codes 72895
type-I hybrid bandwidth-efficient turbo-ARQ scheme, diversity combining techs. 129164
UTRA TDD, throughput of hybrid ARQ types 95911
wireless commun., TCM and generalized selection combining 108602
woven codes with outer warp, vars./design/dist. props. 72874
woven convolutional codes with outer warp and unequal error protection 129227

intermediate-frequency amplifiers
CMOS chipset for multi-mode wireless appls., 1-10 GHz, design/perform. 102688
CMOS IF bandpass amp. design, low sensitivity to temp. and proc. vars. 79604
CMOS IF variable gain amp., lin. controlled gain range, temp. stabil. 125245
CMOS mixers and polyphase filters for large image rejection 68656
CMOS variable gain IF amp. with -67 dBc IM_3-distortion, AM/FM radio receiver 125246
microwave receiver, detector, pre- and IF amp. 68588
wideband CMOS wireless receiver, adaptive analogue IF sig. proc. 108655

intermediate valence compounds *see mixed valence compounds*

intermodulation
see also intermodulation distortion
adaptive radar receivers, tunable recursive act. MMIC filters, intermodulation props. 125802
CDMA driver amp., bias control tech. for current reduction 102649
cellular radio, third order intermodulation interf. probab. 85689
class G power amp., LV design 79599
CMOS low power RF mixer for GHz wireless appls. 102713
direct conversion receiver anal. for multistandard wireless appls. 108627
direct-conversion receiver RF-ICs, mixer develop., review *(Japanese)* 74586
dispersion compensation fiber gratings for CATV systs. *(Chinese)* 74922
double-bal. resistive mixer, integrated bal. oscillator 102660
electrodynamic loudspeakers, nonlin. params. estim. method 86352
FET microwave amp., nonlin. transfer charact. anal. 125713
freq. assignment with complex co-site constraints 75265
GSM duplexer, 1RU rack mounting, extracted pole resonator 74686
HTSC films, intermodulation meas., one-port dielec. resonator 92917
HTSC films and devices, comparative studies of microwave nonlin. 127534
HTSC microwave resonators, vortex pairs and nonlin. inductance 71123
HTSC planar struct., microwave nonlin. response, EM simul. 71105
MEMS filters, mitigation of cosite interf. in nonlin. receivers 107482
MEMS switch beam oscills., expressions for nonlin. effects 69107
MESFET, bilateral model, nonlin. and power appls. 70192
microwave power amps., high-efficiency low-IM design 80318
mixer IM perform. eval. using IP3 efficiency fig. of merit 114665
mm-wave sig. props., electrooptical upconversion, dispersive fiber transm. 131457
multilayer RF cct., vert. contactless transit. 102521
pass. intermodulation scatt., time-domain PO heuristic approach 72264
piezoelec. resonator, nonlin. (in)direct THG, intermodulation method 70440
satellite commun., intermodulation products reduction, generalized freq. assignment algm. 74871
satellite loading tools using spreadsheets 109022
self-lin. ccts. involving PN jns. 101690
short channel CMOS cct. for RFIC appls., nonlin. anal. 102714
solid-state high power amps., LF memory effects anal., influ. on IM charact. 91270
X-band class-F power amps. in high-efficiency transmitters, lin. 80261
AlGaAs/GaAs PHEMT, bal. self-oscillating mixer 80302
AlGaAs/GaAs power HBT, lin., C_{bc} effects 92301
$Al_{0.5}In_{0.5}P$/InGaAs doped-channel HFETs, high power dens./PAE 114978
GaAs FET act. balun and bal. mixer, C-band down-converter 69131
GaAs FET, nonlin. model 92408
GaAs MESFET amp., large-sig. behavior 102726
GaAs MESFET, channel current higher order components, extraction method 70176
GaAs MESFET model, dyn. behavior under opt. illum. 71556
GaScYIG film based MSW UHF freq. selective limiters 92869
InP DHBT, lin. X-band operation 115865
SiGe HBT, RF lin. 103793

intermodulation distortion
act. bal. mixer, lin. method 114663
adaptive digital predistortion, EDGE std. 102585
adaptive predistortion lin. using DSP 114856
adaptive RF Cartesian predistorter for high power class-AB amp. 91250
auto-zero amps., offset, drift and 1/f noise, design ideas 68607
bal. electroabsorption modulated microwave photonic link, expt. 131454
bipolar UHF power transistor, IMD, collector doping profile 126670
bipolar UHF power transistor, nonlin. distortion, doping profile 103788
CATV networks, automatic meas. of IMD 75313
CDMA RF sig. transms., SCM fiber-optic links, nonlin. effects 75040
class-E power amp., electronic tuning 101788
CMOS variable gain IF amp. with -67 dBc IM_3-distortion, AM/FM radio receiver 125246
differential switched-current bandpass $\Sigma\Delta$ modulators, nonlin. effect 79973
digital array nonlin., mitigation 96990
direct conversion receivers for mobile radio appls. *(German)* 85865
directly modulated DFB lasers, nonlin. distortion suppress. tech. 93719
distributed base station amp., lin. optim. 101791
dual parallel electroabsorption modulator, simultaneous IMD2/IMD3 suppression 93227
electroabsorption modulator, nonlin. suppression 71412
feedforward lin. power amp., error feedback tech. 68598
FM opt. direct radio-on-fiber syst., nonlin. distortion suppression 85952
fully functional integrator based continuous-time filters, VHF 80045
HBT lin., effects of base-collector capacit. 69123
high-order QAM systs., phase noise and IMD reduction 72773
HTSC disk resonators, nonlin. anal., materials charactn., filter design 69021
IM/DD dispersive analog opt. links, opt. modulation, Mach-Zehnder electrooptical modulator 131456
LDMOS distributed RF power amp., base station 101779
lin. using feedforward loop, 1.85 GHz, PCS base-station appls. 69127
LMDS multicarrier radio transmitters, design and test considerations 119926

intermodulation distortion continued
Mach-Zehnder analog optic modulator, RF/microwave bandwidth 82214
Mach-Zehnder opt. modulator with variable bias, large sig. anal. 116817
MESFETs, charactn. of IMD behavior in lin. region 80266
microwave act. bandpass filters, lin. and noise perform. optim. 69182
microwave act. devices, thermal transients and influ. on IMD 80313
microwave act. notch filter, varactor tuning 102364
microwave amp., lin., harmonic and baseband injection 125243
microwave component grading using vector NWA 69094
microwave freq. converter, multi-tone IMD meas. 102587
microwave/MM-wave opt. links, dispersion effects reduction, SOA booster 86000
mixer operation modes, nonlin. distortions anal. 105789
multi-carrier microwave power amp., design method 79575
multi-channel power amp., ultra-lin., IMD meas. 101792
multi-tone generator testing tech. supporting IMD and ACPR meas. 86944
nonlin. power amp., error vector magnitude estim. using two-tone IMD meas. 79607
nonlin. RF devices in radiocommun. systs., carrier-to-interf. ratio predict. 69114
OFDM sig. anal. over fiber-radio syst. *(Korean)* 117908
opt. direct FM radio-on-fiber syst., nonlin. distortion suppression scheme 75002
peak power distortionless reduction without explicit side inform. 72765
quasi-2D phys. PHEMT model for two-tone time-domain IMD simuls. 80314
radio-on-fibre-based multimode road-vehicle commun. syst., IMD 108781
resistive MMIC Q-Band HEMT mixer for MVDS appls. 125757
RF amps. with memory effects, IMD simul. 114632
RF power amp., memory effects, IMD meas. 101797
SCM SOA sig., cross-phase wavelength conversion 86083
sputtered metallic thin films, nonlin. meas. 124821
SQUID microstrip amp., harmonic distortion/intermodulation products 71120
static nonlin. testing of D/A converters, bit intermodulations 114828
third-order intermodulation product, RF and microwave power amps., injection techs. 80258
two-channel power amp. with diplexer output, TV transmitter 75287
W-CDMA 180 W 3G LDMOS power amp., internally matched LTCC 102610
wireless video home-link using 60 GHz band, nonlin. IMD 131341
AlGaAs/InGaAs power doped-channel FETs, IMD reduct. by air-bridge gate proc. 91254
AlGaN/GaN RF HEMT, IMD and lin. 92393
AlGaN-GaN HEMT, study of temp. depend. of IMD and lin. 91239
$(Ba_xSr_{1-x})TiO_3$ capacitor tunable RF filters, bandpass and lowpass, IMD 102332
GaAs microwave FET LNAs, portable radio commun. equipt., dyn. range estim. 102699
GaAs multiple ion-implanted FETs, nonlin. Volterra-series anal. of IMD characts. 114973
GaAs phys. FET model for power amp. IMD simul. 91252
GaAs push-pull power FET optimized for 12 V class A-B operation, 6 GHz, 50 W, low distortion 91295
GaN/AlGaN HEMT, nonlin. anal., Volterra series 103925
InGaAsP MQW asymmetric Fabry-Perot modulators for microwave photonic appls. 131379
InGaP field-modulating plate MESFET, high breakdown volt., low IMD 91256
SiGe HBTs, RF distortion anal. 91255
YBaCuO bicrystal grain boundaries, IMD and Josephson vortices 70601
$YBa_2Cu_3O_{7-d}$ films, field deployable microwave filters 91022
$YBa_2Cu_3O_{7-\delta}$ HTSC coplanar thin-film resonators, power handling 92913

intermodulation measurement
microwave freq. converter, multi-tone IMD meas. 102587
multi-channel power amp., ultra-lin., IMD meas. 101792
multi-tone generator testing tech. supporting IMD and ACPR meas. 86944
RF power amp., memory effects, IMD meas. 101797
$GdBa_2Cu_3O_{7-\delta}$ thin films, surface resist., intermodulation meas. 97799
$YBa_2Cu_3O_{7-\delta}$ thin films, microwave intermodulation study, external mag. field 70577

internal combustion engines
acoustic target models and phenomenology 77124
alternative vehicle powertrains, primary energy efficiency 134538
automobile rapid catalyst light-off using strategic engine control 100305
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF techs. 110048
automotive microsens. & sens. syst., current trends 124048
batt.-dominant hybrid EV, syst. design requirements 89405
cage rotor induction machine perform. in automotive starter-alternator appls. 77873
cylinder press. peak posn. in internal combust. engine, indirect meas. 121180
diesel engine emissions, control strategies 88183
diesel engine exhaust treatment, pulsed streamer corona reactor, RVC electrodes 76929
diesel oil injectors, jet charging, internal electrification 83125
diesel spray image segmentation, likelihood ratio test 84161
failure diagnosis using wavelet transform-based sound sig. anal. *(Japanese)* 95604
fiber-optic sens., engine condition estim. 120866
gaseous hydrocarbon distrib. meas. by NIR absorpt. tomography syst. 110043
gasoline engine transient air-fuel ratio control using US flowmeter 100303
gasoline/EV, inter-indust. proc. model 123992
grid-connected hybrid EV commercialisation 89403
Guernsey Island power syst., operating philosophy 111789
HEV auxiliary power unit lin. alternator/engine syst. design 123963
HEVs, powertrain sizing, emissions influence eval. 89391
hybrid EV commercialization, batt. cost/life issues 89404
hybrid EV novel drive strategy 123956
hydrogen fuel vehicle engine, characts., ignition props. 134559
hydrogen fueled vehicle engine, optimisation 134558
hydrogen rich gas from plasmatron fuel converters, emissions reduction 133835
intermittent fuel spray flows, PDA, time dividing anal. 87027
large goods vehicles' electronic systs. overview 134589
laser-induced exciplex fluoresc., quantitat. vapour-liq. visualization 132215
low noise engines develop., key steps and methods 100276
micromachined mass flow sens. for common-rail injection systs. *(German)* 109815
misfire detect., crankshaft ang. vel. meas., fuzzy pattern recogn. 89408
model engine lip seals, tribocharging effects expts. 83113
mounting systs. for vehicle engines, survey 78311
moving V-belt strain meas., opt. correl. & spatial filter sens. 109505
multifunctional sens. for oil condition eval. *(German)* 109770
NIR absorpt. tomography, ICE meas. appl. 121257
opt. access/diagnostic techs. 120687
opt. access/diagnostic techs. 109676

internal combustion engines continued
piezoresistive thick film engine cylinder press. sens. 134596
rem. radio equipt., hybrid PV/batt./LPG genset power supply 119813
rotary internal combustion turbine engine 99531
time domain acoustical holography and appls. 83012
toroidal ferromag. core hysteresis at transient excitation 102791
torque output equalisation, AC starter generator 123316
transient sprays, time-resolved diffr. granulometer 87026
turbocharger motor-generator design 100302
unknown input estim. techs. for automotive appls. 134604
NO_x removal, oxid., nonthermal plasma reactors 133356

internal conversion in atoms *see Auger effect*

internal conversion in molecules *see nonradiative transitions*

internal friction of liquids *see viscosity*

internal modes *see vibrational modes*

internal strains *see internal stresses*

internal stresses
accelerated testing, methodology/stress selection/appl. 78584
advanced US techs. for eval. of materials 99100
AMLCD glass substr. cutting, scribe-wheel dimens. effect 109857
BGA reliab., underfill material 113474
bimaterial microcantilever, adsorpt.- and absorpt.-induced stress studies 81559
box type SMD film capacitors, reliable solder quality under mech./thermal stres 80447
BPDA/PPD polyimide films, variable freq. microwave curing 91404
BPSG, interlevel dielec. films, mech. props., Al interconnect extrusions 12651
build-up PWBs, low-CTE base materials 69317
BWRs, weld-induced residual stresses, num. modelling 77704
capacitive micromachined switch, mech. design and optimisation 127103
CMOS device mismatch, mech. stress impact 104122
condenser microphone, deep cavity-shaped diaphragm 86349
conf., Phys. props. of mag. materials, Poznan, Poland (June 2000) 89545
CRT, lightweight bulb design 80618
CSP flexure-induced tensile stress effects charactn./minimization, empirical strat egy 78644
CSP/area array package board level reliab. 113602
diamond:B CVD films, piezoresist., grain boundaries, device appl. 115291
diamond, ion implant. related defects, inhib. of light element diffusion 11555
diamond film, CVD, residual stress effect, micromech. anal. 124886
diamond films, CVD, intrinsic stress meas., curvature meas. 124885
diamond nucleation, biased HFCVD, Raman spectra, SEM 68282
diamond tip wear mechanism, Si AFM-based micro/nano-machining 127118
directional grating rosette and moire interf. tech., residual stress meas. *(Chinese)* 132187
dual GOI, STI proc. param. effects 81416
elastomeric polymer dielec., strain response, electroactive polymer actuato 127215
electronic package, dissimilar material jn., sensitivity derivatives 113646
electronic packaging solder joint reliab., relative damage stress concept 78675
electronically conductive filled adhesive joints, behaviour under cyclic loadin 67559
epitaxial growth stress/strain, conf., Ile de Porquerolles, France (Oct. 200 78465
extreme UV lithog. mask, placement error, absorber pattern 92189
FBG strain sens., tunable narrow bandpass filter demodulator *(Korean)* 9731
film capacitors for automotive electronics, reliab. 113115
flip-chip assembly, anisotropic conductive film, reliab. 91513
flip-chip assembly with underfill, micromechanics-based interfacial stres anal./fracture 67583
GaN film, charactn., ELO, MOCVD 79340
HDI microelectronics packaging roadmap for space appls. 133228
HV cable insulation, internal mech. stresses, elec. strength 123012
IC plastic packages, die stress drift meas. using piezo-Hall effect 67625
interface controlled materials, conf., St. Petersburg, Russia (Jun. 2000) 78464
LCD TAB-on-glass connection with anisotropic cond. film, mismatch 86858
liq. solder joint technol. for electronic assembly bonding *(German, English)* 89864
magnetostrictive transducer, actuators/sens. appls. 109827
MEMS chem. sens., adsorpt.-induced/photoinduced stresses 109729
MEMS packaging, issues/challenges 116056
MEMS surface micromachined press. sens., CMOS proc. 97574
MEMS torsional ratcheting actuator, reliab. 89024
metallic struct. embedded FBG sens., prep., thermal perform. 120849
metals, surface prestressing by laser shot peening 72107
micro-opto-electro-mech. systs., batch fab. procs., residual material stress influ ences 93195
microbump bonding, internal stress and connection resist. 113536
microelectronic device thermal/thermomechanical characterisation by laser prob ing 115987
microelectronic solders, diffusional coarsening modelling 113713
MOS IC oxide leakage currents, Si dangling bond defect link, direct evidenc 81529
multilayer syst., progressive cracking on thermal cycling 89874
online inspection for hidden internal defects 78691
peripheral array package, delamination growth prediction, interfacial fractu toughness test 78635
piezoceramic/pass. polymer phase 3-3 composites, modelling 104365
planar SOFC model calc., internal stresses studies 99982
plastic encapsulated microcircuit reliab., molded part props., stat. monitorin 67576
poly(vinylidene fluoride-trifluoroethylene) highly electrostrictive network 127161
poly(vinylidene-fluoride hexafluoropropylene) copolymer, electrostricti response 127207
polyimides, amorph. piezoelec., polariz. stabil., piezoelec. effect, curing/polir conditions 127218
polynorbornene low-k dielec. material, photosensitive, for packaging appl 67601
polysilicon, notch form. by stress enhanced spontaneous etching 126369
polysilicon films for MEMS integrat. with submicrometer CMOS proc. 92569
polysilicon multilayered thick films, low-stress, microsystems fab. 92553
polysilicon wafer edge die yield loss elimination for accelerometers 97579
PSG, interlevel dielec. films, mech. props., Al interconnect extrusions 12651
PZT films, magnetron sputtering, residual stresses/stress relax., MEMS app 127096
PZT-based piezoelec. composite laminates, bending, elec. field effects 10437
QW lasers, highly strained, disloc. generation, X-ray topography 71808
Rambus memory module, wafer level package, microwave model 113481
semicond. devices, disloc.-free fab., sing. params. *(Japanese)* 70132

rnal stresses continued
SOG low-k ILD films, mech. reliab., curing temp. effects 92151
steel, mild, Barkhausen noise stress meas., prestraining effect 79490
steel, residual stress & carburisation, Barkhausen noise anal. 114526
steel, stress eval., Barkhausen noise meas., CRT prod. appl. 79482
steel, structural, residual stress, acoustoelastic LDV 79483
steel rods, surface residual stress, laser US charactn. 114509
steel rods, surface residual stresses, laser US & piezo-transducer 79491
steel sandwich panels, laser welded, residual stress meas., hole drilling 105638
steel surface, laser-US hardening 117557
structural integrity expt. eval., US tech., acoustoelasticity 90598
super-BGA package reliab., underfill effects 67606
Terfenol-D tagged GFRP, NDE, SQUID magnetis. meas. 114529
thick-film resistors, gauge factor enhancement driven by heterog. 80418
thin films, stresses and mech. props., conf., Boston MA, USA (Nov.-Dec. 1999) 113277
ULSI plastic packaging, die cracking eval./improvement 100619
ULSI STI, local mech. stress, UV micro-Raman spectrosc. 69850
US stress meas. using rot. EM-acoustic transducer 90614
US transducers, micromachined, using SiN membrane, fabricated in PECVD technol. 111503
ViaLUX 81, epoxy photo-dielec. dry film, microvia technol. 115165
wafer-level CSP, encapsulated double-bump technol. 100615
Ag, thin films, fatigue, dyn. microbeam deflection 127093
Al dual-damascene interconnect via electromigration lifetime, soft low-k organic SOG ILDs 92117
Al film mass transfer during local anodic oxid. 69938
Al interconnect lines, damascene fabricated, mech. stress meas. 126519
Al interconnects, electromigration-induced stress interact. 92138
Al interconnects, stress-induced voiding in proc. qualification, quantitat. assess. 81133
Al lines, via/polygranular cluster electromigration-induced stress interact. 92177
Al passivated line test struct., sub-μm wide, grain orient./strain meas. 92175
Al, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435
Al-Fe, bulk metastable nanostructured alloys, effects of heating/aging 114428
Al-Mg, residual stress, acoustoelastic LDV 79483
Al-Zn-Mg-Cu-Zr, bulk metastable nanostructured alloys, effects of heating/aging 114428
Al-based interconnect reliab., width transit. effects 92120
AlCu ULSI multilevel-metallizations, stress migration behavior 92118
AlCu interconnects, electromigration behaviour, stress-induced voiding effects 92176
AlCu passivated conductor line electromigration, Cu conc./stress evol. 92143
$Al_xGa_{1-x}N$:Si,Mg/GaN, mech. props., impurity doping effect 81025
AlGaN/GaN DBRs, stress engng. during MOCVD 68214
AlGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
AlGaN/GaN films on Si(111), MOCVD, AlN buffer layer growth effects 124994
p-AlGaN/GaN strained cladding layer superlattice, InGaN MQW LD fab., Mg doping 81044
$Al_xGa_{1-x}P$/GaP multilayers, MOVPE, struct., Raman spectra 101386
AlN FBAR duplexers, power handling, temp. coeff., PCS handsets 104457
AlN/Si heterointerface, laser MBE, RHEED, XPS 90332
AlN/SiC film syst., sublimation sandwich growth, buffer layers 114305
AlN/sapphire(0001) films, RF sputter growth mode evol., X-ray scatt. obs. 90257
ArF excimer laser resist, pattern collapse, DPAT method 126557
Au electroplated microstruct., mech. property 104206
Au/Ti bilayer film stress, RF MEMS switches 127117
B doped LPCVD polysilicon film, pre-annealing influ. on residual stresses 103245
BAlGaN/AlN MQWs, UV/PL spectra, MOVPE 91854
BN, cubic films, reactive sputtering, pulsed RF substr. bias 90242
BN films, IBAD, stress form. 68373
B_2O_3-P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
(Ba,Sr)TiO_3 thin films, epitaxial growth, ferroelec. props. 79206
(Ba,Sr)TiO_3/Y_2O_3-ZrO_2 films, metal-ferroelec.-insulator-semicond. memory 81779
$BaTiO_3$/$SrTiO_3$ PLD multilayers, structural and dielec. props. 81659
$Bi_{4-x}La_xTi_3O_{12}$ thin film, phys. and elec. props., effects of bottom electrodes 127172
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$/Ag HTSC tapes, I_c, precompression effects 70714
$Bi_2Sr_2Ca_2Cu_3O_{10}$ HTSC tapes, J_c and crit. stress, temp. effects anal. 81949
$Bi_2Sr_2Ca_2Cu_3O_x$ tapes, crit. current, long. compressive strain 70607
ta-C films, FCVA deposition, ESR and Raman spectra charactn. 68382
a-C:H,F films, PECVD, F incorporation 68261
a-C/diamond MEMS technol. 81563
$a\text{-}C_{1-x}Si_x$:H alloys prep. by high plasma dens. source 68264
CdS nanocrystallites in SiO_2 matrix, surface modif. 91634
CdTe:O thin films, sputter deposition, characts., O content effect 79201
CeO_2 buffer layers, ion-plasma sputter deposition on Si 114242
Co thin films thickness, stress effect, martensitic transform. 127094
Co/SiO_x/Si, SPE growth, stress effects, TEM 125049
Co/Ti/Si, SPE growth, stress effects, TEM 125049
$CoFe_2O_4$ epitaxial thin films, strain tuned mag. props. 92795
CoNiFe, electroplating, mag. microsystems 101423
$Co_{77}Pt_{23}$ alloy films with perp. mag. anisotropy, grain growth 70491
$CoSi_2$ coherent silicide islands on Si(111), strain 103181
$CoSi_2$ film, induced mech. stress, Si substr., appl. to MOS technol. 126219
Cu dual damascene interconnect, SiO_2 IMD, electromigration reliab. 115708
Cu electroplated interconnects, microtexture/strain 103460
Cu film, filtered cathodic vac. arc deposition, microstruct., internal stress, substr. bias effect 125056
Cu inlaid interconnect lines, microstruct., annealing conditions 69929
Cu interconnects, SR X-ray microdiffraction 69946
Cu interconnects, electromigration, confine. materials mech. props. effects 103459
Cu seed layer for Cu metallisation, stresses 103484
Cu thin film growth, ion-beam modif., MD simul. 68372
Cu, thin films, SiO_2 passiv., thermomech. anal. and curvature meas. 126435
Cu thin films, void form. by thermal stress conc. at twin interfaces 103464
Cu/W interface, electromigration modeling 126436
Cu(Al,Ga)(S,Se)$_2$ epitaxial films, MOVPE grown, structural studies 68221
Cu_6Sn_5 particle reinforced Sn-Ag solder joints, creep props. 100595
Fe/CoNbZr multilayers prep. by Ar/H_2 mixed gas sputtering/heat treatment, permeab. 104512
Fe-Si steel, grain-oriented, core loss reduction, laser scribing 127379
$FeSn_2$ particle reinforced Sn-Ag solder joints, creep props. 100595
GaAs PHEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
GaAs epilayers, RTA, defect engng. using SiO_2/Si_3N_4 stacking layers 126024

internal stresses continued
GaAs nanowires, oxide-assisted growth, opt. characts. 69662
GaAs:Se, ion implant., strain profile, Bragg-case sect. topography 69820
GaAs/AlGaAs, quantum cascade lasers, MBE growth, strain effects 93591
GaAs/InP, heterostruct., coherent/incoherent relax., HREM 126111
GaAsP/AlGaAs LD bars, polaris.-resolved EL, mounting stress 71846
GaInN MQWs, structural charact., PL, raised press. MOCVD, TEM 79309
$Ga_{1-x}In_xN$/GaN polarised QW, PL excitation spectrosc., level assignment 80716
GaIn(N)As highly strained MQW structs./lasers, MOCVD, well no. depend. 115402
$Ga_xIn_{1-x}N_{0.04}As_{0.96}$/GaAs SQW lasers, subbands, interdiffusion effects 82643
GaN MOCVD growth, materials/devices, PL, EL, reviews 79304
GaN MQWs, strain control by combination of H_2 and N_2 carrier gases 68287
GaN epilayers, N_2 helicon wave plasma assisted evap. deposition, nitridation 114411
GaN epilayers, ground/excited excitonic reson., magneto-opt. study 80721
GaN epilayers, hydride VPE regrowth, GaN quasi substrs., XRD, PL, Raman spectra 68245
GaN film, MOVPE, H_2/N_2 carrier gas effects 90452
GaN films, high press./temp. annealing, micro Raman spectra 126061
GaN films, substr. induced biaxial stress, SEM, XRD, PL 90453
GaN, shallow levels, selective photoluminesc. spectra 91619
GaN:Mg(In), bulk and MOCVD grown, influence of Mg and In on defect form. 124894
GaN:Si films, VPE on MOCVD-GaN templates, strain, doping distrib. 68295
GaN/(Al,Ga)N MQW, carrier dyn., internal elec. field effects, orient./strain state 80864
GaN/AlGaN MQW, MOVPE, H_2/N_2 carrier gas effects 90452
GaN/AlGaN MQWs, ground level emission energy, internal elec. fields 126187
GaN/AlGaN, strained hexagonal superlattices, phonons, free carriers, opt. study 69686
GaN/AlN self-organised QD, strain distrib., built-in elec. fields, carrier states 91836
GaN/AlN superlattice, MOVPE growth, phonon modes/free carrier, IR/Raman spectra 124987
α-/β-GaN/SiC/Si, heteroepitaxial growth, PL, cryst. microstruct., residual stress 90331
GaSb/GaAs, III-V semicond. nanostructures, surface stress effects during MBE growth 114286
GaSb/GaAs, heterostruct., coherent/incoherent relax., HREM 126111
Ge:Sb pulse magnetron sputtered film, struct., thermoelec. props. 91582
Ge/Au/Si, SPE growth, stress effects, TEM 125049
Ge/GaAs, SPE growth, stress effects, TEM 125049
GeSbTe films, phase-change recording media, mech. props. 82033
InAlGaAs QW laser, low threshold current dens. design, k.p method 117278
InAs/GaAs, III-V semicond. nanostructures, surface stress effects during MBE growth 114286
InAs/GaAs QDs, strain, cond. band, mol. dyn. simul. 115414
InAs/GaAs mesas, surface at. stresses, press. distrib., multimillion atom simul. 103099
InAs/GaAs nanomesa syst., million-atom mol. dyn. simul. 69648
InAsP/In(GaAs)P MQW laser structs., band-struct. and opt. gain 117283
InAsP/InGaAsP ridge waveguide LD, strain compensated, GSMBE growth 105289
$In_{0.16}Ga_{0.84}As$ QW, strain-induced lateral carrier confine., PL 115409
$In_{0.2}Ga_{0.8}As$ on GaAs(001), growth method, monitoring of surface topography/stress evol. 90274
InGaAs/AlGaAs/GaAs, quantum cascade lasers, MBE growth, strain effects 93591
InGaAs/GaAs heterostruct., interfacial coherence, lateral In segreg. 126120
$In_{0.75}Ga_{0.25}As/In_{0.5}Al_{0.5}$-As reson. tunneling diode struct., crit. layer thickness 92277
$In_xGa_{1-x}As$/GaAs strained QW lasers, degrad. mechanism 71758
InGaAsN/InP QW struct., CBE growth, NH_3 precursor 91942
InGaN/GaN MQW props., barrier growth temp. effects, XRD and photolum. meas. 115421
InGaN/GaN, blue LED, MOCVD on Si substr., AlAs seed layer 82422
InGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
InGaN/SiC QW LEDs, high-brightness, growth mode, strain depend. 104998
InGaP/GaN heterostruct., wafer fused, interface struct./PL 115473
InGaP(As) layers/MQW structs., solid source MBE growth, laser appls. 124867
InP HEMT, H-induced piezoelec. effect, 2D finite element simul. 115953
InP based strained MQW laser structs., heterointerface optimiz., MOVPE/MOMBE 115400
InP/InGaAs QW IR photodetectors, strain effect on operating wavelength 131911
Ir films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
IrO_2 films, dc sputtering, O barrier appls. in DRAM/FeRAM technol. 124813
$LaCrO_3$, doped, SOFC interconnect, lattice expansion, internal stress 89260
$La_{2-x}Sr_xCuO_{4+\delta}$ HTSC PLD films, T_c, Sr doping depend. 70628
$(La_{0.7}Sr_{0.3}MnO_3/SrTiO_3)_{15}$ superlattices, pulsed liq.-injection MOCVD 101339
$MgAl_2O_4$/Al(Ag) heterophase boundary, local bonding, ab initio study 103217
Mo thin film growth, ion-beam modif., MD simul. 68372
Mo/Si multilayers, stress reduction, EUV lithog. appls. 127879
$MoSi_2$/Al interconnect lines, electromigration, stress-induced escape 126485
$NdGaO_3$ buffer layers, ion-plasma sputter deposition on Si 114242
$Nd_{0.67}Sr_{0.33}MnO_3$ epitaxial films, microwave losses, dc transport, mag. prop. 68992
a- Ni-P microsized specimen, fatigue cracks propag., fatigue testing 101465
Ni-Ti shape memory thin film, growth & charactn. 116065
NiFe, electroplating, mag. microsystems 101423
NiMn, spin valve multilayers, stress, antiferromag. phase transform. 127347
Ni_3Sn_4 particle reinforced Sn-Ag solder joints, creep props. 100595
$NiZnFe_2O_4$:MnO_2 ferrites, high mag. perform. 127332
PLZT ceramics, precursor route prep., microstruct., elec. props. 104366
P_2O_5-SiO_2, silicate glasses, adsorpt./desorpt., sub-micron BiCMOS technol. modeling/appl. 126080
PZT, compression stress induced domain switching 116206
PZT films, piezoelec. coeffs. determ. using conventional 'd_{33}' meter 81673
PZT thin films, mech. props., adhesion, SPM/SEM, MEMS 127095
PZT/PZT(ZnO-Sb_2O_3) ceramic d_{31}-gradient flextensional actuator 81740
$Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics, sol-coated, struct.-property rels. 116181
$Pb(Mg_{1/3}Nb_{2/3})O_3$/$PbTiO_3$/$BaTiO_3$ ceramics, high field charact., chem. additive effects 104376
$PbMg_{1/3}Nb_{2/3}O_3$-$PbTiO_3$ epitaxial relaxor thin films, film thickness, dielec./piezoelec. props. 101391
$PbMgNbO_3$-$PbTiO_3$ ceramics, phase conversion, morphotropic phase boundary 104269
$PbWO_4$ anisotropic scintillating crysts., quality inspection from interferometric fringes 121607

internal stresses continued
$PbZr_{0.53}Ti_{0.47}O_3$ thin films, densification/evol. of stress effects 101427
Pd/Ge/GaAs, SPE growth, stress effects, TEM 125049
$Pr_{20}Fe_{73.5}B_1Cu_{1.5}$, bulk metastable nanostructured alloys, effects of heating/aging 114428
Pt layer residual stress, thin film micro-gas sens., thermal cycling 120986
PtMn, spin valve multilayers, stress, antiferromag. phase transform. 127347
SOI piezoresistive high-press. sens. for harsh environ. 132074
p-Si, elec. property, grain boundary impact, EBIC contrast 102963
Si films, rapid crystn. using elec.-current-induced joule heating 68362
poly-Si gate oxide reliab. post annealing degrad. and suppression *(Chinese)* 126244
Si membrane, stencil mask and mini-reticle, stress meas. 126533
Si microsystems, 1D/2D mech. stress. charactn., micro-Raman spectra 81567
Si piezoresistive stress sens., packaging appls. 75427
Si polycrystalline film, residual stress control, multilayer deposition, LPCVD, 101336
Si sputtered microstructs. integrat. with pre-fabricated CMOS circuitry 104182
Si, strained, ultrathin oxide/oxynitride films by O_2/NO plasma proc., trap dens. 69751
Si surface, 7×7 reconstruction, step/domain boundaries self organisation 91612
Si, tri-cryst., characterisation, solar cell appls. 91597
Si wafer strength/surface morph. correl. 100593
Si wafers, photoelasticity, scanning IR polariscope obs. 102994
Si:B MOS capacitor, elec. props., a-Si gate electrode, two-step nitridation effects 69767
Si:B polycryst. films, CVD, stress, MEMS appls. 104169
Si:B(P) polycryst. resistors, mech. stress of elec. perform. 125837
a-Si:H films, Cat-CVD prep., struct. and photo-induced vol. changes 126086
a/μc-Si:H hot-wire CVD, thin-film MEMS appl. 124949
Si:H, nanocrystalline films, hot-wire CVD, charactn. 124959
a-Si:H, photo-induced structural change, photocond. degrad. *(Japanese)* 82307
Si:He(H)(O), uniform stress effect 115558
Si/Au polycryst. beam MEMS struct., residual stresses 127082
Si/SMA bimorph microactuators, internal stress control, sputter-deposition proc. 99876
Si/Si_3N_4/Pt/PZT/Pt, residual stress, furnace annealing, RTA 104180
Si/SiGe quantum wires, inhomog. in-plane strain relax., XRD 69690
Si/SiGe strain-bal. MQWs on SiGe virtual substrs., opt. props. 91783
Si/SiO_2 electron waveguides, electronic props., oxid.-induced strain 115975
Si/SiO_2/Pt/PZT/Pt, residual stress, furnace annealing, RTA 104180
$(Si_m/Ge_n)_N$ step-graded short-period superlattices, solid source MBE 79250
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnects 92183
SiC substr., eval. for GaN heteroepitaxy 68137
SiC thin films, 3C, 6H-SiC(0001) substr. crysts., lattice param. meas., XRD 68171
$Si_{1-x}C_x$, C ion implant./annealing form. *(Chinese)* 126318
$SiC:N^+,Al^+$ buried layer implant., interstitial diffusion, internal stress effects 69816
SiC:N,Al, ion implant., defect evol., internal stress fields effects 81012
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
$Si_{1-y}C_y$:H films, photo-/plasma CVD, struct. 101318
SiGe growth on vicinal Si(111) surfaces, stress induced step bunching 90351
SiGe layer, strain relax., X-ray reciprocal space mapping studies, MBE 101284
SiGe pMOSFET perform. rel. to hole mobility in fully-strained layers 92377
SiGe uncapped islands on Si(001), MBE, strain/comp. distrib. 101298
$Si_{1-x}Ge_x$ films, MBE growth instabilities on vicinal Si(001) 90322
SiGe/Si QW, THz lasing mechanism 93621
SiGe/Si opt. channel waveguide, mapping of local stress distribs. 82157
SiGe/Si(001) QD, init. growth stages, kinetic 3D island mode 126183
$Si_{0.75}Ge_{0.25}$/Si(001) step-by-step MBE growth, short-period superlattice buffer effects 90267
$Si_{1-x}Ge_x$/Si triple barrier diodes, electron reson. tunneling 126628
$Si_{1-x}Ge_x$/Si(100) heterostruct., struct. & stabil., MBE 101283
SiGe-on-insulator virtual substr. fab., Si layer strain eval. 115457
SiGeC HBT, UHV-CVD, bandgap, strain engng. 81207
SiN MEMS membrane profile appl. to condenser microphone 92554
SiN PECVD membrane, ZnS sacrificial layer, tunable Fabry-Perot cavity 116756
SiN micromachined sens. appls., low tensile stress, wet etch procs. 97578
SiN spacer technol., elec. detect. & stress simul. 115845
Si_3N_4 MEMS structural films on Si, wafer scale testing 127092
Si_3N_4 film, helicon plasma sputtering deposition, props., sputtering-gas press. effect 101183
Si_3N_4 thin films, microbridge testing, deform., CVD 132183
SiN_x dual ion beam deposited H-free films, mech. and etching props. 127098
SiN_x films, ICPECVD, spectrosc. ellipsometry, etch behavior 124927
SiO_2 PECVD films, residual stress/fracture rel. to MEMS fab. 101373
SiO_2, interlevel dielec. films, mech. props., Al interconnect extrusions 126518
SiO_2 planar thin films oxid., stress effects 126351
SiO_2, porous silica thick films by base-catalyzed sol-gel route 79375
SiO_2 ultrathin gate oxides, intrinsic dielec. breakdown, thermal damage 103209
SiO_2:F films, water absorpt., residual stress effects 90369
SiO_2:F,C with low dielec. const., deposition, high resist. to annealing 124917
SiO_2-Au buckled composite microbridges 104185
SiO_xN_y PECVD films, correl. of phys. props./chem. struct., IR spectrosc. 68297
SiO_xN_y, low stress films, sputtering type ECR plasma deposition, charactn. 124812
SiO_xN_y thin films, low residual stress, sacrificial layer, MEMS 104171
SiO_xN_y ultrathin films, RTN, N depth profile obs. 91996
Sn-Ag solder joints, creep props. 100595
Sn-Cu Pb-free microelectronic solder joints, Sn pest 100597
$SrBi_2Ta_2O_9$, film, epitaxial, MOCVD, residual strain anal. 70411
$SrRuO_3$ epitaxial thin films on (001) $LaAlO_3$, microstruct. and growth mechanism 79202
$SrRuO_3/BaTiO_3$ epilayers, strain modif., substr. structural transit. 127306
$SrTiO_3$ buffer layers, ion-plasma sputter deposition on Si 114242
Ta films on Si and SiO_2/Si substrs., struct., annealing 80976
Ta_2N/TaN diffusion barriers for Cu metallization, intrinsic props. 103489
Ti-Al-V, bulk metastable nanostructured alloys, effects of heating/aging 114428
TiN films, ECR plasma sputter deposition and charactn., diffusion barrier appls. 79219
TiN films deposited on Pa-n, crack form. due to large thermal mismatch 114252
TiO_2/SiO_2, multilayer thin-film narrow bandpass filters, transm. characts. 93293
$TiSi_2$ film, induced mech. stress, Si substr., appl. to MOS technol. 126219
W film absorber, deep X-ray lithog. mask 69981
W film, deposition & layer props., CVD 115665
WN_x reactive sputter deposited barrier thin films, stress/microstruct./thermal stabil. 91878
Xe flashlamp tube, residual stress distrib. meas. 97851

internal stresses continued
$YBa_2Cu_3O_{7-\delta}$ HTSC films, dc sputtering, T_c, J_c 68159
$YBa_2Cu_3O_7$(-$SrTiO_3$-$YBa_2Cu_3O_7$) PLD thin films on sapphire, microwave appl 92909
Y_2O_3 sputtered films for electrochem. sens. 70375
ZnO powders, decomp. from hydroxycarbonate precursor, crystallite size, morph 114218
ZnO sputtered films, struct. and UV photolum. obs. *(Chinese)* 126053
ZnO:Al transparent conductive films, DC magnetron reactive sputter prep. an charactn. 69504
ZnSe:Al,Cl,In, shallow levels, selective photoluminesc. spectra 91619
$ZrTiO_4$ films, microstruct., microwave-freq. dielec. props. 104242
no-flow underfill materials for eutectic/Pb-free solders, high melting temp 67586

international trade
Asia, internat. telecomm. service companies and legislation 74059
Euro-Asian elec. trade, Kazakhstan transm. corridor feasibility 111702
globalization challenges for American telecomms. companies 85109
GMCR II services indust. strategic DSS 100498
Indian DBS TV, influence of US foreign DBS policy 131726

Internet
see also information resources; Internet telephony; intranets
2.56-Terabit/s opto-electronic switching fabric based photonic core node 8544
3D digital traditional Japanese crafting syst., modernisation 108158
3D streaming transm. via Internet *(Chinese)* 108275
3G IP WCDMA, simul. of access to fixed packet-switched networks usin OPNET 74448
3G mobile commun. systs., streaming technol. 119968
3G systs., multimedia standardization 96267
3G wireless and Internet users multimedia sessions 130453
3G wireless network, GSM and mobile IP integrat. 85893
3R opt. regeneration, all-opt. clock recovery 131419
4G mobile network archit. 108970
10 Gigabit Ethernet for LAN/MAN/WAN 119589
A/V telecomm. syst. with dyn. path selection mechanism 85215
ABR service for Internet appls. 74347
academe, long-term impact of internet 67431
academic libraries, rem. users, ref. assistance 130543
access network independent service control syst. for stream services, implement 96294
access technols., overview of wired and wireless systs. *(Polish)* 85320
ACM SIGCOMM computer commun., conf., Stockholm, Sweden (Aug.-Sept 2000) 67363
act. anycast, network-supported server load balancing 107975
act. commun. networks, Internet ticket ordering service model 96185
act. concealment for Internet speech transm. 85375
act. edge-tagging, network intruder ident./isolation 130769
act. internetworking, QoS routing-based congestion mgt. 108194
act. Meta-MIB for policy-based mgt. 96030
act. network archit. *(Chinese)* 74259
act. networks, appl. of computational intell. techs. 74045
act. networks, ingress monitoring, intrusion isolation scheme 130820
act. server pages tech., accessing real-time data in Internet/Intranet, on-line moni toring *(Chinese)* 77727
acute care hospitals, technol. transfer, survey design and data collection Internet/intranet usage and impact meas. 98842
ad-hoc networks, efficient multiple paths routing protocol 107807
adaptive early congestion notification marking, time scale decomp. 130702
Adaptive Gateway Location Protocol for prog. media gateways 130347
adaptive IP QoS mgt. framework 107953
adaptive media access protocol for ring topol. terabit networks *(Japanese* 119270
adaptive protocol for real-time fax commun. over Internet 107874
adaptive redundancy control, erasure-code-based real-time data transm. over Internet 108291
adaptive ring access protocol for super high-speed networks, perform. eval. 95928
additional telephone lines, demand 130991
additive encryption of redundant plaintext, attacks and implications on Internet security 129305
admission control scheme for Internet appls. 96162
ADSL, access VPN syst. config. *(Japanese)* 107885
ADSL modem, decision-making method for archit. selection 130999
ADTP, protocol for DP over Internet 130463
advanced IN, components of mgt. logic programs *(Japanese)* 74426
advanced IP services on community network 74348
agent-based pers. dist. learning syst. 108163
agent-based selection of DiffServ SLAs over MPLS networks 108337
aggregate hypertext transfer protocol model for marginal distrib. 107926
aggregate QoS enhancement through alternate routing 74039
aggregated traffic marking, fairness eval., Internet 74214
airline indust., telemedicine services 85117
Alcatel VIPeR, value-added IP routing, flexible software archit. 130509
all-IP syst. beyond 3G, QoS support 108816
all-opt. IP packet transport/switching nodes, granularity anal. 120335
all-opt. label swapping Internet protocol packet switching 120344
all-opt. networks impact on IP & computer archit. 119663
all-opt. next-generation, wavelength-convertible opt. switch design 120278
all-opt. time-domain IP router 96168
all-weather ground sens. syst., law enforcement appls. 109524
Alpine, user-level infrastructure for network protocol develop. 119309
alternative best effort, low-delay service provision 74268
AMIDEN peer-to-peer archit., networked appliances connnection 130638
ANA, Internet calib. direct to national meas. stds. 109415
ANN inter-subjective model for audio quality assess. in packet networks 106359
anom. behavior detect., network traffic params. optim. via evol. strategy 85228
anonymity network archit. 129328
anonymity service using free MIX routes for Internet users 106242
anonymous message sending over Internet 108325
anonymous packet tracing to approx. source 108124
Antibody Layer for Internet security 74215
AntNet algm., improved routing 130495
Apache, Jigsaw and Tomcat, open-source Web servers on Linux cluster platform. 130814
Apache Web server monitoring 74201
API for e-charging, outsource charging for content and appl. usage 130759
appl. and ISP, obstacles to merger 119599
appl. level act. networking infrastructure 74305
appl. partitioning using agents 74221

ernet continued
appl. service dependencies mgt. 130690
appl. service mgt., agent syst. design and implement. *(Japanese)* 130642
appls., conf., San José, CA, USA (July 2001) 100434
ARIMA model vs. f-ARIMA model 95750
Asia-Pacific innovations in mobile commun. 96430
ATM access networks, QoS interworking for Diffserv 74997
ATM network-Internet convergence in terms of QoS *(Polish)* 85321
ATM switch core for scalable perform., parallel packet forwarding archit. 119385
ATM switches, differentiated services, priority scheduling perform. 95775
ATM switching systs., packet discard schemes for differentiated services networks 107903
ATM video streaming services on IP multicast *(Japanese)* 86340
ATM-ABR, virtual channel onto VP MUX 73808
ATM-based Internet backbone, traffic meas. and anal. 119839
ATM/IP networks, fuzzy buffer mgt. 119166
attack detect. in large networks 96016
audio dyn. buffer, control and algm. 108378
audio-video rem.-patient monitoring via Internet, privacy protection 74440
authentication protocols on Web 119291
autonomous syst. rels. inference 74210
aviation, Internet protocols 122492
B2B e-commerce trends, e-procurement/e-marketplaces *(German)* 85336
B2B transactions, Simple Object Access Protocol 85266
bandwidth monitoring for network-aware appls. 119703
BCE's ComboBox for DTH satellite TV, DSL and pers. video recorder 75307
Beacon, hierarchical network topol. monitoring syst. based on IP multicast 95919
best effort network, misbehaving flow control, MXQ 74200
best-effort network, bandwidth guarantees provision, call-admission/pricing 119666
best-effort routers, distributed control/resource marking 74031
BGP opt. switches and lightpath route arbiter 96716
bidding syst., anonymous auction scheme 129358
bilateral anonymity/logged Web address abuse prevention 108201
binary comic image, digital watermarking scheme *(Japanese)* 73406
BIRDS-I, benchmark for image retrieval using distributed systs. over internet 96140
bitstream scaling by ref. frame altering 106962
BLAST capacities, thermal noise, spectral efficiencies 74625
Bluetooth, pers. area networking enabler 120009
Bluetooth camera to Internet link, connectivity soln. 119582
Bluetooth embedded IP pers. area network, archit. and perform. 85273
Bluetooth wireless data links, office systs., mobile telephone and mobile Internet systs. *(German)* 119627
Bluetooth-based public Internet access point, perform. eval. 108640
bone reaming, Internet force-feedback control syst. 98596
border gateway protocol, inherently safe backup routing 119419
border pricing protocol for inform. exchange between autonomous systs. 119275
BRAIN develop. for broadband mobile access network beyond third generation 85546
broadband data delivery over TV networks 97105
broadband Internet for Web computing *(Japanese)* 130839
broadband satellite networking 109001
broadband wireless access based on cable modem 85548
broadcast audio sigs., real-time occurrence monitoring 109356
broadcast TV to Internet audio/video 108196
broadcasting, future prospects overview 75285
buffer control and packet scheduling, IP and ATM networks 96204
bufferless stat. MUX, efficient bounds 73797
burst packet losses meas. in Internet end-to-end commun. *(Japanese)* 96126
bursty access pattern, dyn. lookup scheme 130707
bursty traffic, differentiated services networks pricing 119670
bus passenger IS using PC/portable telephone *(Japanese)* 119639
busbar layout, CSCW syst. using VRML *(Chinese)* 100501
business, commun. innovation 74161
business-to-business environ. service charging/billing 130665
cable modem broadband access, problems and solns. 85417
cable modem NMS *(Japanese)* 131748
cable modem technol./market perspectives, overview 74482
cable modem termination systs., switches and routers 97071
cable operators and streaming media 97068
cable systs., next-generation broadband services 97074
cache perform. and age penalty 119613
cached Web objs., mutual consistency maint. 74250
caching-proxy in LAN for educational computer room *(Polish)* 130648
call center, collaborative multimedia middleware archit. 96228
campus fibre network, AM-VSB CATV/Internet access sigs. 120559
capacity engng. of IP-based networks with multiprotocol label switching 107934
capacity scheduling for data services over digital networks 119483
cardiac telemonitoring, therapy surveillance mgt. for myocardial failure 122457
Carnivore, network surveillance syst. of FBI 119513
case based internetwork IS 85309
CATV, transm. syst. for renewal *(Japanese)* 131754
CATV home networking components, lightning discharges 131743
CATV Internet, content and backbone *(Japanese)* 131749
CATV Internet, network operation center *(Japanese)* 131747
cct.-switching opt. cross-connects in WDM transm. systs. 120328
CDAA, content distrib. archit. using network-layer anycast 108330
CDMA SMPT-based systs., spreading seqs. design 107922
cellular mobile internet *(Chinese)* 108794
cellular mobile Internet, mobile host location 95903
cement plant productivity mgt. with web server technol. 85351
centralized dyn. access probab. protocol for next generation wireless networks 119351
characts. inference from moment-based estimators 119687
China, commun. technol. research develop. plan 95978
ChinaGBN integrated NMS, design and implement. 96038
client-server Internet database connectivity and two-machine flowshop 85194
client-server rem. Windows-based sig. generator, design, implement. 109833
client-server systs., man-in-the-middle attack defence 130767
clinical trials, rem. data entry using WAP phones 98874
cluster-based network servers, demand-driven service differentiation 119673
cluster-based network servers, efficiency vs. portability 108354
cluster-based Web servers with load balancing, perform. meas. *(Polish)* 130644
collaborative learning tools develop. on Internet 67432
collaborative music comp. syst. over Web 130886
collective behavior with short-range correl. between routers 96151
color mgt. systs. and meas. devices for monitors 94763

Internet continued
color stds., Internet color imaging 73280
combined opt.-wireless broadband Internet access, transm. aspects 96135
commun. and multimedia security, conf., Garmstadt, Germany (May 2001) 124238
commun. effects server, distributed simul. 108199
commun. sci. for indiv./society, social systs. past/present/future 96074
component selection and matching for IP-based design, SoCs 81430
computational and inform. grids 85325
computer conferencing syst., on- and off-campus usage by engng. students 67416
computer equipt. power supplies planning 88397
computer music, post-digital tendencies 75336
computer networks, conf. Kyrnica, Poland (Jun. 2001) *(Polish)* 113274
computer-based educational activities, Internet support 67438
Concert IP Secure, managed firewall/VPN service 119540
concurrent bilateral teleoperation over Internet, time-varying commun. delay 130867
conductive adhesives for packaging, Internet course, expt. seq. 113372
config. method of multiple clusters for computational grid 108117
configurable adapter using FPGA chip 96072
congestion control mechanisms/best effort service model 74267
congestion pricing and user adaptation 119684
connection and access services *(Japanese)* 130807
connection caching under various models of commun. 107835
constrained mirror placement 119603
consumer commun./mass market inform. networking 96182
consumer electronics, computing/commun./e-commerce convergence 85650
consumer-oriented appliances, innovation threat 130634
content distrib. networks, business models 74260
content indust., convergence/diversity 108181
content routing support archit. 119307
Context Aware Messaging Service *(Japanese)* 119521
context-aware mobile portal 96103
continuing mfg. learning using multi-user sync. simul. game 67444
continuous media email, comprehensive archit. 74156
control via networks, QoS anal. and prediction 96239
convergence algm. for enhancing perform. of distributed appls. running on sizeable networks 119532
cooperative proxy caching, viability anal. 130693
coord. infrastructures for mobile agents 74313
copyrighted content protection against unauthorized copying, legal develop. 100481
CORBA based element mgt. prototype syst. 96037
core stateless networks, fair queuing with in/out bit 96130
core-network provisioning in interconnect WDM systs., Internet protocol centric signaling 131581
core-stateless guaranteed rate scheduling algms. 130708
covert channels, commun. using phantoms 130828
cracking, secure access control mechanism 74116
crit. technols. for future of computing, conf., San Diego, CA, USA (July-August 2000) 89499
CryptoManiac, fast flexible archit. for secure commun. 95930
CSP, syst. archit. for scalable Internet and commun. services 119612
customer rels. mgt., advanced technols. *(Japanese)* 119623
customer service mgt. archit. for Internet 96173
CyberCarrier service and network mgt. 74091
Czech Republic, interactive broadband systs. and market pot. 96013
data broadcasting, push-based scheduling for min. latency time 85333
data networks, M/G/1 state-depend. type queueing anal. for congestion control 130315
data storage mgt. via Internet backplane protocol 119715
data traffic charactn., collaborative videoconference appl. 108431
data transfer on multiple routes through Internet, perform. eval. *(Japanese)* 74368
data transfer stats. in Internet dial-up sessions 130799
data-driven label switching networks, cache replacement schemes 119133
data/IP telecomm., new generation of networks *(Dutch)* 130744
DCT/VQ image steganography 106879
Deakin Univ., engng., online teaching/learning 78534
delayed routing convergence 85300
denial-of-service attack prevention methods 119462
department VPN, multicast commun. method 74185
dependable Internet based online auctions, hierarchically struct. 74289
design and implement. of Internet call center 96056
developing Internet, effect of entrepreneurship and public policy 85270
DHTTP, efficient/cache-friendly transfer protocol for Web traffic 119376
dialup service congestion-depend. pricing 85226
DiasNet, Internet tool for commun. and education in diabetes 98876
differentiated caching services, control-theoretical approach 74279
differentiated fairness, service model/implement. 119578
differentiated IP services 74261
Differentiated Reliability, optimal design of opt. ring networks 109194
differentiated service, assured service, TCP algm. *(Chinese)* 119292
differentiated service network, fairness for assured service TCP users 130760
differentiated service networks, server selection support 119671
differentiated service-based inter-domain multicasting 96071
differentiated services, Quality of Web Services 119657
differentiated services, ultra high-speed multi-layer table lookup using TCAM 119574
differentiated services archits., packet loss guarantees provision 119755
differentiated services model for adaptive traffic, absol./relative bal. 119576
differentiated services network, aggregate flow control 130703
differentiated services network, multicast provision 96183
differentiated services network, QoS mapping mechanism for packet video 73391
differentiated services network, real-time traffic meas. 130856
differentiated services PHBs matching to ATM service categories, AF to VBR case 107927
differentiated services support using ATM GFR service 85243
differentiated services usage mgt. using pricing/charging 130664
differentiated-services, congestion control using nonlin. control theory 130782
DiffServ, adaptive appls. network resources pricing 119682
DiffServ, proportional differentiation service model 96155
DiffServ domain, dyn. congestion control framework 96160
DiffServ framework, multiple QoS guarantees with scalable support 130853
DiffServ network, per-hop behavior reservation mechanism 95894
DiffServ network, video transm., QoS aspects 96177
DiffServ network mgt. using end-to-end traffic flows 96044
Diffserv networks, computer aided tool for perform. eval. 119757

Internet continued
DiffServ networks, dual level leaky bucket traffic shaper archit. 119565
Diffserv networks, end-to-end QoS guarantees 130774
DiffServ networks, multicast transport service with bandwidth guarantees 107900
DiffServ networks, policy mgt. framework using traffic engng. 108263
DiffServ networks, TD²FQ integrated traffic scheduling/shaping scheme 119566
Diffserv networks, upper bound to loss probab. in MUX of jittered flows 108259
digital camera images transfer to Internet viaGSM phone 119835
digital certificate databases, distributed storage and revocation 94381
digital container mechanism for all-opt. network heterog. traffic transport 120323
digital generator-transformer protection, Internet-based mgt. syst. *(Chinese)* 99720
digital photography and photographic printing 94868
digital rights mgt. on open/semi-open networks 108333
directed reverse path join protocol, multicast routing protocol 107873
Director's Console, dc, live webcast control syst. 96212
DIS, high-level real-time extension 130874
dist. education, Web mining 89619
dist. education and impact of technol. in Europe and Japan 124243
dist. education network courses, WWW technol. appls. *(Chinese)* 67414
dist. education using video prod. 109386
dist. learning technols., hypermedia classroom *(Slovenian)* 130742
dist. learning via Internet and satellite downlink for ecosystem anal. 130631
dist. learning via pragmatic semantic reliable multicast archit. 74406
dist.-vector routing protocols 130362
distrib. control centre syst., constr. models *(Chinese)* 99200
distrib. protocols under loaded conditions 73894
distributed denial of service attacks, coord. defense scheme, on-off feedback control approach 95760
distributed denial of service tools, Shaft 108125
distributed environ., problem determ., dyn. dependencies characterisation, act. approach 130683
distributed image IS 119801
distributed image proc., Web enabled client-server model for develop. environ. 106443
distributed learning environ., QoS, holistic view 67422
distributed meas. syst. design, Java-based software environ. 109431
distributed media server mgt. 120563
distributed mgt. platform, Web interfaces use 130679
distributed multimedia systs., conf., Enschede, Netherlands (Oct. 2000) 78394
distributed security schemes for networks 83947
distributed systs. security/survivability, overview 108202
distributed TV prod. for dist. education , Uni-TV project 130982
distributed virtual environ., best-effort multimedia networking 96273
distributed virtual environ., QoS spec. 119561
distributing trust on Internet 108313
district power network, integrated automation syst. *(Chinese)* 77245
DNS-based server selection effectiveness 119746
domain caching for live-event Web services 108331
Domain Name System security extensions, public key validation 94343
driver IS network speech interface *(Japanese)* 124036
driver IS using DSRC *(Japanese)* 124027
DSP & SOC analog integrat. in Internet era 79924
DSP in software radio commun. 95657
dual-platform wireless AirPort network creation and files transfer 130843
DVD, broadband entertainment bridge 93012
DVD, multimedia redefinition 93014
DWDM based broadband integrated services network archit. 120266
DWDM systs. for Internet, opt. device develops. 120163
dyn. bandwidth allocation for low delay low jitter real-time commun. 95845
dyn. CBT and ChIPS, router support for improved multimedia perform. on Internet 130953
dyn. congestion control mechanisms for multiprotocol label switching networks 107935
dyn. multi-scale image class. 94759
dyn. multi-threshold metering schemes 129313
dyn. single freq. networks 131153
dyn. Web content, class-based cache mgt. 130694
e-business, large scale sites, new technols. support *(Japanese)* 119626
e-commerce, tech. and market approach 130873
e-commerce and Internet, mgt. issues 89737
e-commerce and traditional business, hybrid strategies 96069
e-commerce charact.-clustering model based on ART algm., design/implement. *(Chinese)* 108099
e-commerce deployment, project planning, time-based mgt. 89810
e-diagnostics for semicond. wafer e-factory capability 70236
e-mfg. domino effect for IC proc. efficiency/yield/productivity enhancement 103961
e-mfg. opportunities in semicond. proc. 103959
e-mktg., community manager/knowledge importance 108183
e-product develop. for mass customization 89797
EBU listening tests on Internet audio codecs 74488
ECA + SQL, practical event correl. approach 96152
ECG data transm., real-time, via Internet for non-clinical appls. 111294
eClips, new pers. multimedia delivery service 108396
ECN decentralized adaptive marking algm. 74325
economics of Internet TV, new niches or mass audiences 97057
ECVBA (Efficient Changes and Variability Bandwidth Allocation) algm. for VBR media streams 74436
edge router for supporting Diff-Serv *(Chinese)* 74295
education, collaborative learning support in Internet learning space 119609
education, Electronic Chalk, Java-multimedia-table for classroom and teleteaching *(German)* 130939
education via Internet *(Polish)* 85323
educational opportunities of Internet services and TV integrat. 120583
educational syst., Internet integrat. 89612
educational technol. in biomedical research, education and training, Web-based appls., mgt. and delivery 100478
effective bandwidth for traffic engng. 119569
elastic traffic routing algms. eval. 119579
elec. companies, Internet services overview *(German)* 111687
elec. supply syst. as data network, modems, Internet *(Spanish)* 74483
elec. utility electronic security technol. roadmap 111716
electric distributed object management, power market mgt. software, DCOM technol. *(Chinese)* 77171
electronic authentication syst. using secure device *(Japanese)* 85188
electronic business site perform. scalability *(Polish)* 130312
electronic commerce exchange syst. trustworthiness 119586

Internet continued
electronic commun., ties that bind, connections, comet cursors, and consen 85174
electronic mail mining using similarity-based agents 119523
electronic packaging educ. module develop., Sync-O-Matic software too 113371
electronic packaging syst. cost anal., Internet-based educ. mater. 113370
Electronic Roads in the Information Soc., content-based image retrieval/IP Diff Serv 108362
electronic voting in large-scale distributed syst. 106292
ELK, efficient large-group key distrib. protocol 85240
Eloquent Communication 6.0 server for identifying threats or assets 108107
Email Alert System, Petri net based modelling/simul. 119517
embedded systs., dyn. reconfigurable archit. 96532
end-to-end differentiated service QoS, network mgt. 74403
end-to-end flow control service design *(Chinese)* 96217
end-to-end host mobility 73993
end-to-end network path props. estim. *(English, Spanish)* 130415
end-to-end perform. meas./anal. syst. 108154
ENDE, multimedia protocol develop. network delay emulator 130961
endoscopic video database on WWW, linking with ISDN 98841
engng., self-training through Internet 78505
enterprise engng., zero-time framework based on T-strategy 78538
enterprise network traffic monitoring, anal., reporting 108179
ePON, Ethernet PON, opt. access network design and anal. 109143
eqpt. power supply syst. technols. *(Japanese)* 85399
EQUILOAD, load balancing policy for clustered web servers 119617
error control/media sync. effect on appl.-level perform. 74433
Ethernet in the first mile. Internet access 108292
Ethernet Wrapper, host access control 96199
Eurescom project HINE, heterog. in-house networking environ., cooperation between telecom operators for advanced home networking 74327
European R&D programme for inform. society technols. 130534
EVCS electronic virtual conf. syst. 96250
event services in high perform. systs. 119724
evolvable Internet hardware platforms 108222
Exedra media server, disk-striping scalability 97096
Exedra media server, modular and efficient resource mgt. 119611
explicit congestion notification and backward ECN, perform. comparison 130327
explicit rate congestion control with binary notifications 107925
extended fault-tolerant link state routing protocol on Internet 95935
EYESCAN, high-resoln. digital panoramic camera 86670
face detect. for security syst. 118385
facility provision using mobile agents 130892
facsimile as office appliance 130635
factory automation, multimedia appls., image/video coding 130936
fair bandwidth allocation, back press. based multicast scheduling 119688
fair queuing algm. based on CSFQ archit., perform. eval. 108319
fairness criterion realization by new scheduling algm. 130829
fairness enforcing with explicit network feedback in Internet 108315
fairness impact on Internet perform. 119643
fault and perform. mgt. of QoS and MPLS-enabled IP network 108062
FEC code-based multiple description coding for Internet video streaming and multicast 84409
FEC-based video streaming, novel approach 118644
feedback based/fair queuing mechanisms for unresponsive traffic, comparison 130320
fiber optic rem. temp. meas., Internet syst. 120864
fibre commun. conf., Anaheim, CA, USA (March 2001) 124207
filtering to stop cyber slacking/accessing offensive material *(German)* 74164
firewall operations *(French)* 108268
firewalls evol. 119539
fixed mobile Internet convergence 85184
fixed wireless services for fast Internet access, promises and failures 74594
flat-rate or usage-based network services pricing 108236
Flexent Element Management System using Web and obj. technols. for wireless network mgt. 74095
flow aggregation algm. for advance reservations 95734
flow gate-based Internet for wholesale power exchange 111736
FlowScan, network traffic flow reporting and visualization tool 108123
forwarding/expedited forwarding services interact. 108147
FPGA Windows-based design program, Innoveda packages *(German)* 68738
fractal α-stable broadband traffic shaping/policing 119756
fractal props. of Internet network 119399
fragmented tactical network, optimum speed of NAD scheduler 111574
free-space links soln. to last-mile problem 120385
future devel. and society 96184
game member impartiality in heterog. network environ. *(Japanese)* 119735
gateway technols. for home network and their implement. 74231
Gauge & Gate Realistic IP for migration path 107908
generic congestion control for IP networks and implement. in Linux kernel *(Chinese)* 108225
genetic adaptive routing algm. for Internet 108176
geographic location of Internet hosts 119652
geographically replicated Web servers, QoS 85326
German open elec. market, Java-based WWW-transm. schedule syst. 122836
GIA, scalable global IP-anycast framework *(English, Spanish)* 130416
gigabit Ethernet network, supporting multimedia commun. 85195
GLI syst., global mgt. for geographical location inform. of mobile entities 108219
global area multicast, protocol independent multicast group aggregation 74208
Global Broadcast Service, asymmetric TCP/IP networking 108165
global congestion avoidance using decentralized adaptive agents 130848
global GIS, case study 86426
global hierarchically addressed non-broadcast Ethernet 108344
global telecomm. systs., complex fault ident. and mgt. 74284
Global Wireless Internet, third-generation networks, pers. digital assistants 108368
GlobalGuard, IETF-IDWG intrusion alert protocol 96092
GPRS mobile users, Internet services, QoS-sensitive delivery problems 85843
GPRS network, Snoop TCP protocol anal. 73926
GPRS networks, retransmission mechanisms perform. 85883
GPRS radio interface for Internet appls., perform. eval. 85592
GPRS with IP QoS support 107905
grid computing for indust. users 74407
group commun. syst. based on MAC-over-IP 108318
group key mgt. for IP multicast, model & archit. 129331
GSM to GPRS, cellular wireless data transm. evol. 131205
H.263+ video, robust transm. over Internet 96179

ernet continued
HALO stratos. aircraft for high-speed Internet access 85632
HAVi appls. on Internet-enabled devices, rem. execution 119691
HAVi home networking std., Internet protocol functionality 119760
header compression in Handel-C, Internet appl. and design lang. 125420
healthcare, wireless Internet appl. 111299
healthcare inform., pers., intell. inform. struct. for composing and pushing over Internet 111300
heavy traffic modeling using α-stable self-similar procs. 95848
heterog. fixed and mobile networks, mobility convergence 131104
heterog. users, window-based congestion control 130701
hierarchical opt. path cross-connect syst., matrix WDM scheme 120339
hierarchical teleconferencing on Internet 85361
high perform. router, fast route lookup algms., anal. and design 130507
high perform. routers, packet scheduling algm. 130483
high perform. versatile residential gateway, develop. 85313
high speed wireless data access using antenna arrays 119920
high throughput IP, WDM packet switched technol. 119664
high-perform. IP forwarding, fast table update scheme 96200
high-perform. IP service node with layer 4 to 7 packet proc. features 108281
high-speed packet class. using segment tree 74035
high-speed packet switched networks, traffic mgt. 119479
high-speed router featuring min. delay var. 119389
HIPERLAN/2, providing IP QoS 119326
hist. and operating principles, general and Polish aspects *(Polish)* 85318
HMM for network commun. channels 119644
HMRSVP, hierarchical mobile RSVP protocol 74244
home area network, Internet access, AutoHan project 74175
home health care, low-cost telemedicine 133200
home telecomm. equipt., middleware emergence 75311
HomeRouter SJ6, develop. *(Japanese)* 85068
Honeywell Global Home Server, home automation commun. security syst. 119711
HORNET, packet-over-WDM multiple-access MAN 74320
HR systs. integrat., e-recruiting 89757
HTTP traffic modeling 85283
HTTP Web transfers across satellite links, latency reduction by smart proxy 85016
hybrid error control for video transm. in wireless IP networks 107023
hyper audio Web browsing syst. via telephone 119721
hyperlink-proposals and request-prediction 74405
hypermedia-aided design, collaboration framework for EDA appls. 125174
I2-DSI project, Internet2 distributed storage infrastructure 119555
I/O heterog. devices, markup lang./syst. 108145
IBMAS (Internet-Based Medical Archive System) 111302
IC designs with embedded Internet systs. *(German)* 114786
iCE, cool operation support syst. and interactive customer empowerment engine 130586
ICEBERG, service portability achievement 96102
ICONS project, interactive learning for global education 67423
IDMaps, global Internet host dist. estim. service 130815
IEEE 1451 smart transducer interface archit., sens. networking 74288
IEEE 802.11 networks, priority-based transm. 107950
IEEE ATM and high speed intell. Internet, conf., Seoul, South Korea (April 2001) 124230
IEEE broadband wireless Internet access, conf., Richardson, TX, USA (April 2000) 78405
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 124193
IEEE consumer electronics, conf., Los Angeles, CA, USA (June 2001) 113211
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
IEEE INFOCOM conf., Anchorage, AK, USA (April 2001) 113236
IEEE inform. networking, conf., Beppu City, Japan (Jan.-Feb. 2001) 89576
IEEE MELECON conf., Lemesos, Cyprus (May 2000) 113196
IEEE service portability and virtual customer environ., conf., San Francisco, USA (Dec. 2000) 89527
IEEE vehicular technol. and commun., conf., Leuven, Belgium (Oct. 2000) 78454
IETF activities in operations/mgt. area 74102
iFrench, Paris-Content Distribution Service, Internet video delivery trial 130846
IIP, Internet Imaging Protocol, telepathology 111291
i.Lon™ 1000 Internet server appl. to to linking LonWorks control network and IP based networks *(Polish)* 130657
IM control lab., Internet-based 77858
image retrieval in distributed multimedia syst. 106846
image segmentation for rem. device control on Internet 106676
imaging diagnostic departments, QA programmes, real-time mgt. syst. 98132
imagingvia Internet conf., San Jose, CA, USA (2001) 94755
impact of degrad. on Internet speech 130900
improved UDP protocol for video transm. over Internet-to-wireless networks 107917
IN SCP services platform, migration to IP-based appls. platform 130929
IN services through act. flow manipulation 130914
IN with cross-network open provisioning, Internet bandwidth transactions 130932
IN/Internet interworking by SCP *(Chinese)* 108246
IN/Internet interworking model 108170
IN/Internet interworking model, service control gateway design *(Chinese)* 108395
indiv. monitoring systs., direct ion storage/thermoluminesc. dosimetry, Internet reporting 122415
indust. automation, commun. networks, develop. trends *(Polish)* 74299
indust. Ethernet protocols, automation data systs., appls. layer *(German)* 74165
inform. security, threats and protection mechanisms 108187
inform. security conf., Wollongong, NSW, Australia (2000) 100378
infrastructure mapping techs. 119765
instrums. monitoring/control over Internet, GPIB interface 75371
integrat. ion imager, DNA samples, HI doses 122441
integrat. of IN and Internet, bal. between idealism and current products realism 74425
integrat. with next generation networks *(Polish)* 85319
integrated model for latency and steady-state throughput of TCP connections 119313
integrated modems and Internet commun. for electronic apparatus *(Italian)* 85419
integrated networks, perform. eval. framework 96415
integrated services, real-time traffic scheduling under controlled load service 108366

Internet continued
integrated services packet networks, per-flow based node archit. 85179
Intel x86 archit., security vulnerabilities caused by errors 102234
intell. commun. systs. model, past/present/future 96073
intell. customer constructing syst. 130927
intell. door monitoring syst. on Internet 74061
intell. instrums. teaching, dist. learning via Internet 113368
intell. multimedia, video and speech proc., conf., Hong Kong (May 2001) 78475
intell. opt. network, opt. services 120206
intell. tele-healthcare environ. offering pers.-centric/wellness-maint. services 122464
intell. transport syst. studies *(Japanese)* 124030
intell. tutoring systs. for asynchronous dist. education 113310
interact. control in chairperson-controlled university confs. 85354
interactive digital TV Java environ. 86302
interactive music station, develop. 96231
InterDAQ data logging Internet appliance, power meas. tech. 112198
Internet2 QoS 108336
Internet, efficiency of computing resource mgt. *(Chinese)* 108244
Internet, shared memory switching and virtual output queuing, robust and scalable switch 108265
Internet-assisted Home Healthcare System on CATV network *(Japanese)* 133192
InternetCAR appl. software, testing environ. design and implement. *(Japanese)* 124045
internetwork, addressing schemes interworking 74036
internetworking, conf., Bergen, Norway (October 2000) 67390
Interplanetary Internet 130622
Intranet Health Clinic, Web-based med. support services employing XML 111270
intrusion detect. systs., attack tolerant enhancement 108200
intrusion detect. systs., graphical techs. 96229
IntServ operation over DiffServ networks, Internet, QoS mechanisms 74213
IP, global wireless systs. integrat. 85666
IP advanced networks/services, service creation/mgt. 130569
IP and MPLS networks, perform. comparison and anal. 107831
IP based differentiated services domain, end-to-end QoS delivery 119751
IP based integrated wireless network, archit./mobility mgt. 96449
IP collaborative network environ., end-to-end security mgt. 130689
IP content and services billing 96117
IP core transport network 108278
IP dedicated networks, multimedia services *(Spanish)* 96278
IP differentiated services in MPLS-based networks, mgt./control archit. 74099
IP differentiated services networks, QoS architectural framework 130659
IP DiffServ archit., premium service provisioning 130763
IP DiffServ fairness, traffic conditioning and buffer mgt. scheme 130762
IP end-to-end services quality, defects per million service transactions measure 108182
IP fair queueing networks, video multicast 96178
IP forwarding perform., routing table constr. time 74173
IP gateways, using delay random early detect. 130737
IP global networks, appl. services mgt. 119686
IP integrated networks, bandwidth design methods for traffic engng./QoS 119731
IP lookup problem, trie-based algm. 73947
IP lookups improvement using multiple hash fns. 130352
IP mobility archit. 84961
IP multicast for mobile hosts 84995
IP multicast implement. based on open shortest path first protocol 85010
IP multicast service behaviour over next-generation satellite-terrestrial hybrid networks 130394
IP multimedia, mobile evol. *(Polish)* 119999
IP network, video transfer, packet loss, wavelet anal. 85345
IP network config. for intradomain traffic engng. 119640
IP network with guaranteed QoS, routing advertisement scalability 74038
IP networking archits. security 108188
IP networking autoconfiguration enabling local commun. 74301
IP networks, appl.-level control 108287
IP networks, bandwidth/latency monitoring 119681
IP networks, efficient reactive monitoring 119685
IP networks, intruder location, Markov decision model 74349
IP networks, mobile multicast protocol with error control 74402
IP networks, seamless mobility 85208
IP networks, traffic demands derivation, methodology/experience 85298
IP networks, two-bit service differentiation 119563
IP networks, Web-based distributed topol. discovery 108161
IP NMS 108284
IP opt. networks using MPLS/MPLambdaS, QoS guarantees 130764
IP opt. transm. *(Polish)* 120239
IP optimized broadband wireless access 131105
IP over all-opt. networks, next generation, opt. transparency 130766
IP over opt. networks, protection/restoration 96717
IP over WDM links, Internet traffic shaping 96728
IP over WDM networks, integrated dyn. IP/wavelength routing 120248
IP over WDM networks, switching archit. 131562
IP over WDM networks survivability mechanisms 130468
IP parallel packet forwarding for routers 119391
IP radio networks, QoS provisioning, flexible fair queuing 74591
IP scalable interdomain multicast archit., design 108159
IP scalable switching based on opt. interconnects 119847
IP scalable traffic control for weighted bandwidth allocation per flow 130852
IP security design and implement. *(Chinese)* 108185
IP service high availability archit. 130669
IP service provision over heterog. wireless networks, 4G develop. 108241
IP service switches 96119
IP switching, perform. study 95776
IP terabit switch router, archit. design 119392
IP traceback, advanced/authenticated marking schemes 119678
IP traceback, denial of service attack, probabilistic packet marking effectiveness 119345
IP traceback, network support 85295
IP traffic engng. using Optimized MultiPath tech. 85241
IP traffic with QoS provisioning, opt. packet switch 109195
IP VoD over dyn. STM, QoS *(English, Spanish)* 131771
IP wireless networks, QoS scheme for handoffs 85312
IP wireless networks, traffic mgt./QoS provisioning 130411
IP wireless networks with multiple classes, QoS provisioning through flexible fair queuing 74859
IP with QoS guarantees via GEO satellite channels, perform. issues 84964

Internet continued
IP-based services based convergence of fixed and cellular networks and services 73978
IP-based signaling, opt. cross connect control 130858
IP-based sync. collaboration commun., sender delay comparison 96236
IP-based VPNs, QoS params. embedded monitoring 130675
IP-centric data networks, opt. interconnection 120253
IP-centric lambda switched opt. networks, perform. modelling 96865
IP-centric opt. control plane 120208
IP-HORNET, CSMA/CA MAC protocols, WDM metropolitan area ring network 74321
IP-multicast environ., anonymity framework 74207
IP-over-ATM frame reassembly, hardware/software tradeoffs in integrated archit. 74262
IP-over-ATM networking, CAC and routing of QoS-aware and best-effort flows 107898
IP-over-ATM networks, real-time cell arrival seq. estim./simul. 74195
IP-over-WDM access networks, av. packet delay simul. 130863
IP-over-WDM network archits. 86003
IP-over-WDM networks, multi-protocol label switching recovery mechanisms 86002
IP/ATM and wireless environ., QoS/GOS mgt. meas. 108372
IP/ATM label-switched routing over random networks, flow generation 84956
IP/MPLS WDM networks, opt. packet switching 120308
IP/UDP/RTP headers for wireless commun., multi-ref. compression 107854
IP/WDM networks, overlay-/integrated-traffic engng. 74319
IPMoA, Integrated Personal Mobility Architecture 130831
IPSec key exchange std. anal. 130893
IPSec/VPN security policy, correctness, conflict detect., and resoln. 107865
IPv6, future approval networking 107829
IPv6 & IEEE1394 for home networking *(Japanese)* 84944
IPv6 address hierarchy linked label switching 73941
IPv6 commun. redirection using act. networks 73908
IPv6 deployment 73881
IPv6 for future wireless networks 84992
IPv6 Internet protocol adoption 107791
IPv6 next generation Internet protocol, conformance test 130429
IPv6 protocol in context of mobile appls. *(English)* 130649
IPv6 router announcement, possible problems and their solns. 130460
IPv6 to ATM flow mapping techs., simul. study 84991
IPv6 traffic with multiple QoS classes, modelling and perform. anal. 119632
Ishihara pseudoisochromatic plates, digital color dot picture 94761
IST Project FAIN, flexible IP act. networks archit. 73999
IT, global, satellite roles, trends/implications 85919
IVFCP flow control protocol for Internet video 73880
Japanese trunk transm. opt. fiber cable, high data traffic demand 96225
Java 2 distributed obj. middleware, perform. eval. and optim. 84987
Java applet program MOS memory simul. for act. learning environ. on WWW 125483
Java server objs. on rem. hosts, mobile rem. method invocation 130894
JIT image browsing over Internet 107079
jitter regulation in Internet router with delay consideration 74203
joint IP/opt. layer restoration on link failure 130864
JouleTrack Web-based tool for software energy profiling, µP appls. 125548
JPEG 2000, internat. std. for binary still image coding 84489
JPEG 2000 .jpm file format, layered imaging archit. for document imaging/Web animation 106940
JPEG coder for partially reliable transport service 84366
JQOS, QoS-based Internet videoconferencing syst. using Java media framework 119753
Ka band satellite syst. archit. for local loop Internet access 96630
kernel-based control of persistent Web server connections 119658
Kidlink online project, classroom online activities 113294
KOM RSVP engine implement./eval. 130351
KomNet, opt. transport/networking technols. for broadband Internet 131469
Korea e-commerce, now/future 96214
label switching router security 96139
large commun. network message chains, multi-disjunct paths 95983
large-scale free-space photonic packet switch modelling 96842
large-size images, transm. via Internet, Macintosh-based software syst. 95020
LARMP, large-scale act. reliable multicast protocol, Internet *(Chinese)* 119710
LAWN, anal. 74373
layered encoded video distrib. through caches 119745
layered multicast scheme for video over Internet, sender-adaptive and receiver-driven scheme 108437
layered multicast videoconferencing, fair link sharing 74418
layered multicasting, network-supported rate control *(Japanese)* 74364
layered protocol wrappers for Internet packet proc. in reconfigurable hardware 130718
layered video multicast, inter-session fairness 130871
layered video over IP network, perform. 84411
learning environ., internet-based, discount usability engng. 67430
learning experiences, sharing through correspondence on WWW 113353
learning on demand, hybrid sync./asynchronous approach 78520
learning through video on WWW, genres, user attitudes and prospects 113383
LEO satellite network, node mobility using Mobile IPv6 130371
LER, self-adaptive X/Y flow class. method 107833
libraries' and museums' role on providing access to commun. tools 74170
library ref. services enhanced through technol. 119514
lightweight scalable tool sharing for Internet 130385
lightweight virtual networks, control archit. 96170
LIN6, mobility support in IPv6 107864
link and routing issues for Internet protocols in space 120092
link bandwidth estim. improvement by stat. methods 96132
link state routing protocols, fast link state update flooding 73903
link-level loss rates, striped unicast probes use 119680
Linkway™ for 21st century mil. commun. 111559
Linux implement. of differentiated services router 74343
Linux VPN security gateway based on IPSec protocol *(Chinese)* 107792
load bal. multiple home agents for mobile IP networks 85340
load balancing, benefits for e-commerce 85286
load forecasting service, Internet access 133564
local and MAN, conf., Sydney, NSW, Australia, Nov. 1999 100433
location depend. query proc. archit. 130887
location selection for act. services 119702
lock opening/closing with image base by cellular phone via Internet 74863
logic-based reasoning of PKI trust model 129265
long-dist. education via multimedia-board, CSCW appl. 108439
longest match table look-up method using pointer cache 95882
LOS bandlimited channel, efficient error free data transm. 111583

Internet continued
loss-resilient H.263+ video over Internet 95150
lost packet repair based on real-time transport protocol *(Chinese)* 108290
lower-than-best-effort services, design and implement. *(English, Spanish)* 130798
LP-based algms. for traffic engng. in flat differentiated services networ scalability props. 119387
Lucent Technologies SpringTide, service-intell. IP archit. *(Polish)* 85095
M3C framework for multiple cluster mgt. and monitoring 74410
M²RT algm., tool for Internet commun. channels mean message response tim prediction 108237
M&M framework, mobile agents integrat. into off-the-shelf Web servers 1308
m-commerce customers, mobile Internet *(German)* 74846
M-Commerce security platform based on WTLS and J2ME 131266
MACE, multi-agent based distributed meas. systs. in CORBA environ. 1206
managed IP multicast platform, business appls. 74198
managed security monitoring, Internet for businesses 119593
mapping, dist. estim., alg. approach 119743
Market-Managed Multi-Service Internet 74253
Masters Degree programs, dist. learning via Internet 78527
MBA, multicast billing/accounting tool 130771
MBone session recording, light-wt. repair protocol 74435
Mcast multicast multimedia commun. software develop. platform 85367
mechatronics student expts., DCS monitoring via Internet 97150
med. dosimetrists, dist. learning by world wide web 98820
med. net instrums. for telemedicine 75679
media constr. patterns, abstraction and reuse in multimedia appl. specs. 9627
media streams, network scheduling 108408
media sync. quality, reactive control schemes comparison 118327
mediacaptain interface for streaming media browsing 130950
MedStage platform for inform. and commun. in healthcare 111268
megasamples/sec region computer-aided data collection, plug-in cards, built-i web servers *(German)* 131835
MEMS, microsystem technols. and design, Web-based training 127106
mgt. by delegation, open source components 130670
mgt. concepts of distributed inform. proc. systs. *(Polish)* 130549
MIBs, reverse engng. 130559
microcontent for wireless and mobile appliances 74358
microelectronics dist. education course, web-based learning approach 126959
microelectronics technol., interactive course on website, animations 124258
microwave CAD education tool 67454
middleware technol. *(Japanese)* 119624
mil. commun., ATM and Internet via satellite 108164
mil. IP networks, dyn. precedence 111593
MIPAV (Medical Image Processing, Analysis and Visualization) program app in clinical research 110544
mixed-sig. SoC design, joint university/indust. Internet-based course 124256
mktg. needs bal. with consumer concerns, property rights framework 85175
MM wave broadband wireless access technol. demonstrator for next generatio Internet 119919
MMUP Multimedia and Multiservice Universal Platform 108432
mobile act. overlay 74399
mobile ad hoc networks, seven degrees of separation 74822
mobile agent prog. 74316
mobile agents, eval. of security schemes *(English, Spanish)* 129266
mobile commerce, one-to-one mktg., consumer protection *(German)* 74372
mobile commerce, technols./appls. 96147
mobile commun., future generations using broadband access methods 85696
mobile commun., future platform, Internet, semicond. indust. aspects 85691
mobile commun. protocols, standardisation trends *(Japanese)* 130448
mobile commun. systs., develop. beyond 3G 85697
mobile computing environ., reduced cell switching 74377
mobile computing/ubiquitous networking, concepts/technols./challenges 85183
mobile CORBA develops. 130895
mobile data services, converging IN and Internet AAA systs. 131190
mobile environ., predictive end-to-end QoS 130395
mobile environ. archit., intell. genetic search and proxy caching 119713
mobile hosts, efficient multicast routing protocol 96192
mobile Internet, end-to-end service assurance 130595
mobile Internet, intell. SIP syst. 130758
Mobile IP, route optim. for next-generation mobile networks *(Japanese)* 7399
Mobile IP, security considerations 95898
mobile IP, virtual home agent based route optim. 85315
Mobile IP AAA infrastructure, authenticated key exchange 107851
Mobile IP for 3G wireless networks 85004
Mobile IP for flexible network support 85260
Mobile IP for large-scale network syst., reduction of signaling traffic 73891
Mobile IP for TCP appls., perform. eval. 107850
mobile IP foreign agents cooperating hierarchies, local-area mobility suppor 130438
mobile IP hand-offs, movement detect. methods 119636
mobile IP networks, power control by Kalman filter with error margin 85879
Mobile IP protocol 119294
mobile IP support in act. networking environ. 96085
Mobile IPv6 and cellular telephony 95890
mobile IPv6 based mobility mgt. archit. 108283
mobile location-based appls. 130832
mobile multimedia commun., IP-based multi-tier network 131141
mobile networks, prog. handoff design/implement./eval. 131173
mobile nodes in mobile IP based systs., low cost fault tolerance 74248
mobile OO-appls., generic archit. 96106
mobile packet radio, service differentiation, distributed control algms. 120020
mobile radio networks 85894
mobile RSVP, resource reservation with pointer forwarding schemes 95888
Mobile RSVP with dyn. resource sharing 95860
mobile services and devices, role playing in concept design 85272
mobile software agents appl. 108180
mobile wireless environ., act. network services 74618
mobile wireless Internet, intell. handoff 84996
mobile-IP with hierarchical local registration approach, multicast support 7390
mobile/wireless Internet services 73986
mobile/wireless IP networks using differentiated services/fast handoff method QoS support 85735
mobility portal services and next generation network technols. 108823
Moon-to-Earth high-bandwidth opt. data link 86116
MP3 music delivery, security methods 106367
MPEG compressed newsfeeds anal. and presentation, Internet supported 84082
MPEG traffic, buffer/bandwidth allocation 130968
MPEG video over Internet/wireless networks, packet coding schemes 84983

rnet continued
MPEG video sources, Markov model for feedback matching of traffic spec. params. 108421
MPEG-2 QoS adaptive streaming based on scalable media obj. 108400
MPEG-4 and H.263+ for streaming video appls., perform. comparison 129780
MPEG-4 FBA decoder for Web appls. using Java applet 107001
MPEG-TFRCP, video transfer with TCP-friendly rate control protocol 130451
MPLS, service provider networking infrastructures 130775
MPLS, traffic engng. *(Polish)* 119320
MPLS for multiservice delivery 95875
MPLS network simulator supporting QoS, design/implement. 107808
MPLS networks, congestion control mechanism for traffic engng. 74339
MPLS technol., flexible soln. to IP constraints *(German)* 130445
MPLS technols. for IP networking soln. 84948
MPLS VPNs with QoS routing capability 74342
MPLS-ATM switch for differentiated services 85244
MPLS-based protection label switching path recovery mechanism 130480
MRED, random early detect. approach 95854
MRMA, multicast resource mgt. archit. for IP platforms 96171
MRSVP, resource reservation protocol for integrated services network with mobile hosts 73917
MTBF, multicast group aggregation scheme for global area multicast 107929
multi-carrier 16QAM over lin. TWTA for Internet services 96633
multi-class networks, service meas. 130698
multi-constrained real-time multicast routing control algm. *(Chinese)* 85092
multi-layer bandwidth broker archit. 74344
multi-protocol label switching mgt. using policies 130686
multi-protocol label switching recovery porting to multi-protocol λ switching 120231
multi-protocol lambda switching for IP over opt. networks 107933
multi-ref. motion compensated prediction for error resilience 84428
multi-service networks, pricing policies 119567
multi-tier archit. for service creation, deployment and mgt. 74393
multicast deployment efforts support, monitoring tools survey 108249
multicast for small confs. 130902
multicast key distrib., lower bound 118026
multicast micro-mobility mgt. 108139
multicast multimedia transm. control *(Polish)* 130942
multicast routing by multiple tree routes 107984
multicast stats., scalable archit. for monitoring and visualization 96169
multicast with cache, adaptive zero-delay VoD service 120569
Multicast-based Distributed LVS, IP clusters 96207
multicasting policies, Internet usage, perform. comparison 85275
multifractal study of Internet traffic 119572
multimedia, caching/streaming framework 130345
multimedia appl. support via Internet QoS 85389
multimedia appls. roadmap for mobile customers 108686
multimedia audio/video services using streaming techs. *(German)* 96215
multimedia collaboration and caching, reliable multicast Webcast protocol 130346
multimedia commun., QoS control using ANN 119787
multimedia commun. over fixed wireless systs. via DOCSIS 1.1 108397
multimedia content delivery, inter-packet spacing effects 74445
multimedia dist. learning on demand syst., IP network *(Chinese)* 119780
multimedia inform., mobile adaptation, content model 119793
Multimedia Information Service Center, design 74434
multimedia Internet delivery, telecomms./computer/broadcast technols. convergence 108105
multimedia IP networks, service creation 108403
multimedia mobile radio handoff, localized predictive resource reservation 131273
multimedia networking support for distributed, immersive virtual environ. 130790
multimedia pre-fetching in Internet, prediction syst. 130944
multimedia radio IP networks, handoff resource reservation 131155
multimedia satellite networks and TCP/IP traffic transport 84943
multimedia services, global mobility/QoS provision, SUITED soln. 96100
multimedia services, OO appl. develop. platforms 108363
multimedia session, signalling protocols gateway syst. design 96233
multimedia streaming services, TMO structuring scheme 74446
multimedia traffic, burstiness reduction 96269
multimedia tutorial authoring, adaptation for dist. learning 100475
multipath framework archit. for integrated services 73945
multiple cooperative agent commun., tracking agent 74266
multiple description coding 118497
multiple design projects auditing, Internet-based approach 89689
multiprotocol label switching, pot. for use in broadcasting *(German)* 119295
multiprotocol label switching adaptive traffic engng. 130699
multiprotocol label switching networks, label switched paths reroute seq. planning 130776
MultiProtocol Label Switching networks, scheme for fast restoration 85246
multiprotocol label switching WDM-based broad-band wavelength switched IP network 75034
multiprotocol label switching-based wireless mobile network 85885
multiprotocol label-switching or single IP networks, traffic mgt. 108191
multiresolution-multicast video distrib. 95122
multiservice multipriority networks, traffic engng. 108289
multispan DWDM opt. fiber telecomm. systs. 120305
multiterabit networks, packet scheduling 74293
μVNC embedded module for low-cost Internet connectivity/home appliances interconnectivity 119695
NASA space and aeronautical networks, appl. of mobile-IP 119358
NASA spaceflight ground network, commercial and Internet trends 122544
native IP multicast routing services, Italian Academic and Research Network 108346
NDT educ. improvements, North Central Collaboration efforts 113317
NEAXΣ^{C}X media gateway and CX3100 Internet access node 85432
NEC's CX4200 IP Switch Edge Router *(Japanese)* 131023
NEC's CX5220 IP Switch Core Router *(Japanese)* 131035
NEC's CX6600-NM NMS *(Japanese)* 130587
NEC's CX6800-RD, IP infrastructure server *(Japanese)* 130810
NEC's IP networking soln. for Internet society *(Japanese)* 130809
NEC ATOMIS 16 multiservice switching syst. 85435
NEC CX3200 media gateway for Internet access 85433
NEC CX6100-SG signaling gateway 85434
NEC IP networking solns., overview 85199
NEC IP switch router CX5210 85200
NEC IX5010/5020 carrier class edge router, new service feature 85070
Net-BTRON, distributed hypermedia OS 96238
NetNews servers, effective caching 74197

Internet continued
NeTraMet for prod. traffic meas. 130672
nettimer tool for bottleneck link bandwidth meas. 119615
network behavior forecast based on sing.-spectrum anal. 96164
network exam. syst. design based on BWD *(Chinese)* 119485
network resource mgt. using mobile network domain agency 73906
network services and user utilities *(Japanese)* 74367
network services quality eval. by client obs. 108150
network systs., perform. eval. using client obs. *(Japanese)* 74133
networked phys. world, automated ident. archit. 108327
networking 2015 effects on human society 130624
NewsEye, news video browsing and retrieval syst. 84501
next generation Internet backbone router 130506
next generation network billing service based on TINA concepts 130583
next generation networks, required security features 108189
next-generation digital TV using std. Internet technols. *(Japanese)* 120533
next-generation Internet 130625
next-generation Internet, overview and tech. challenges *(Japanese)* 119534
next-generation mobile Internet, end-to-end QoS 85028
next-generation networks for new business models 108039
next-generation PBX, rem. mgt. via Internet, security issues 131021
next-generation residential gateway 130795
NIx-Vector routing for Internet packets 119396
nomadic computing 130623
nonguaranteed network services, video frame rate control 74205
nonstationarity of Internet traffic 119645
NTP topol., total cost, expt. eval. 95950
NTT Communication Science Laboratories, ten-yr. hist./future vision 89952
NTT HIKARI Content Service, video on Internet 119730
NTT HIKARI-Soft services vision 120263
NTT large-scale PLC technols. with advanced fns. 131426
nuc. data libraries, online services, med. appls., overview 98583
NUMASS, nuc. safety project WWW-based monitoring syst. 109441
NwsAlarm tool for resource perform. degrad. detect. 74411
objectionable images detect. and filtering, Internet appl. 118730
Obsolescence Manager online database for electronic components *(German)* 91405
off-line customizable Web browsing with mobile software agents 96107
off-the-record email syst. 119520
OLAP proxy-server archits. 85249
on-demand viewing, video presentation design 109382
on-line instrum. drivers, Internet resource listings 109450
Onion Routing security for anonymous Internet connections 108257
online constr. project collaboration 130855
online customer contact 96062
online rate control for video streams 129782
online service adaptation for mobile and fixed terminal devices 108138
open archit. based networked multimedia syst. 119809
open PC station, mgt. mode using IC card, Internet *(Chinese)* 85265
open protocol for secure online presence notification 119265
open service provisioning in telecomms. networks 96018
opt. burst switching 109177
opt. cross-connect mesh networks, deployment aspects 109113
opt. interconnects for telecomm. and data commun., conf., Beijing, China (Nov. 2000) 113262
opt. Internet, archits./protocols for global infrastructure 96070
opt. Internet, multicast technols. 120254
opt. Internet, next-generation network archit. options 86001
opt. Internet, restoration services 96210
opt. Internet protocol networks, flow-routing approach 130861
opt. internets, latest devel. 109104
opt. IP networks, flow routing 86004
opt. IP over WDM networks, traffic mgt./network planning 131466
opt. network edge radiating topol. 96712
opt. network innovation toward next generation Internet 131462
opt. networking, traffic demand growth, extended reach length 96764
opt. networking/real-time provisioning for next-generation 108242
opt. packet switch, perform. with self-similar traffic 96840
opt. packet-switching routers with self-similar bursty traffic, resource allocation 86062
opt. transport networks for Internet, develop. perspectives *(Polish)* 86038
optim.-oriented view of random early detect. 107875
optimal scheduling in queueing network models of high-vol. commercial web sites 108335
optimal service ordering for WWW server 119656
OSPF routing, monitoring service 130472
OST X.25/FR gateway, formal model based on high level Petri net 130804
OZ, dist. learning environ. for computer sci. education 108341
pacemaker/ICD pulse generator/lead registry, Internet-based 76709
packet delay stat. anal., streaming playout control 96131
packet destinations, pseudo-address generation algm. 130706
packet dispersion techs. and asymptotic dispersion rate 119679
packet networks, enhanced weighted round robin schedulers for bandwidth guarantees 108262
packet pair method for estim. noise filtering 96208
packet switching networks, multilayer chaotic encryption for secure commun. 107824
packet-based networks, fine-grained scalable video streaming 74432
packet-loss resilient video using MPEG-4 fine granular scalability 95302
packet-routing and wavelength-routing network, virtual topol. dyn. config. 120257
packetized audio, adaptive playout delay control 74441
PACS images, cable modem access using Web browser over Internet 98848
PACS Mobile and multicast IP services, syst. archit., prototype, and perform. 84997
panoramic video, compression issues 84490
parallel distributed test syst. design 86399
path vector routing protocols, convergence 119279
patient immediate discharge letters, use of XML in Scotland 111266
pay-per-view protocols, web-based video service, public-key digital signature *(Chinese)* 131772
payment scheme for broadcast multimedia streams 130967
PBX wireless network, mobility mgt., implement./perform. eval. 85589
PCP, end-to-end meas.-based CAC for real-time services over IP networks 107907
peace education project in Israeli high school, Internet-based group rels. 89617
peer-to-peer computing for live Internet events coverage 130743
peer-to-peer networking, technol. and business perspectives 74163
perform. estim., experience based approach 108153
periodic broadcast of dyn. data, time division is better than freq. division 130827

Internet continued
permutation capacity of WDM switching networks with limited-range wavelength conversion 131028
pers. digital TV listings service 75299
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
pervasive computing, context-based media adaptation 130956
pervasive speech and natural lang. technol. 106384
phasar-based packet WDM network archits., Internet/ATM protocols 96111
photonic core node based on 2.56 Tbit/s optoelectronic switching fabric 74501
photonic multiprotocol label switching 109114
photonic network trends, highly functional integrated standardized low-cost opt. components 131397
photonic networking technols. 130765
PHS for wireless home commun. syst. *(Japanese)* 85596
PIM-SM based IP-multicast, QoS-aware routing framework 74209
platform archit. for Internet service delivery and mgt. 96174
platform-independent API for QoS mgt. 119577
policy based SLA mgt. in enterprise networks 108221
policy division and fusion, multiple classifiers use 130687
policy/topol. impact on delayed routing convergence 119668
PON, opt. fibre access networks 96295
portal environ., contents gathering/delivering, messaging/XML 130869
portal mgt., cognitive engng. approach 85230
post-PC Internet 130621
power auction protocol without revealing winning bids 95922
power equipt. diagnosis/maint., Internet based virtual hospital archit. 112440
Power Internet power flow control/transactions monitoring archit. 122901
power laws and network topol. generators 74019
power plant perform. improvement using Internet 88508
power syst. course, Internet/WWW appl. *(Chinese)* 78494
power syst. freq. monitoring network, Internet-based 112197
power syst. state estim., Internet based wide area inform. sharing 111666
practical prog. packets 119604
pricing and commun. hist. 108235
prioritized resource allocation at differentiated services ingress routers 85247
Prism, Portal infrastructure for Streaming Media via Internet 108190
privacy enhancing technols. conf., Berkeley, CA, USA (2000) 100408
PRO-COW, protocol compliance on WWW 119308
Probe Car System driver inform. proc. overview *(Japanese)* 124031
proc. based high-speed longest prefix match search engine 119573
professional develop. service delivery for health, education and welfare professionals, telemedicine 67424
prog. network infrastructures, security 74394
protocol for wide area secure networked appliance commun. 130340
protocol routers, opt. technol. 130860
protocols, WDM perform. requirements overview 119662
provider-based accounting archit. 74184
proxy caching scheme for continuous media streams 108155
proxy-based security archit. for Internet appls. in extranet environ. 119727
PSTN/ISDN network, Internet-bound traffic impact minimisation 119559
public and private networks, dyn. host config. for mobility mgt. 119616
publisher-centric Web caching infrastructure, security 130696
push/pull among WAP appls., integrat. mechanism *(Chinese)* 130364
QoS, economic models 96165
QoS anals. of multimedia traffic in heterog. wireless IP networks 85387
QoS denial-of-service attack prevention 96098
QoS DiffServ networks, resource allocation/admission control styles 107901
QoS dyn. mapping control for streaming video in relative service differentiation networks 85253
QoS enabled VPNs mgt. 74100
QoS filter module to transmit MPEG video on heterog. environ. 84400
QoS for IP networks 74109
QoS for multimedia over IP, integrated solns. 108186
QoS guarantees for multicast traffic in heterog. multi-service networks 107899
QoS in mobile wireless networks, proactive/adaptive appls. 120044
QoS in multiservice IP networks, conf., Rome, Italy (Jan. 2001) 113281
QoS in next-generation Internet 95889
QoS issues in multi-service wireless Internet links 108264
QoS mgt. in multimedia networks and services, conf., Fortaleza, Brazil (Sept. 2000) 67373
QoS model for ATM networks *(Chinese)* 108230
QoS networks, rerouting algms. 95970
QoS path computation/hop-by-hop routing alg./algms. 119674
QoS Policy Framework and implement. 95907
QoS pricing, simul. and anal. 85236
QoS routing algms. for anycast services 130857
QoS routing with adaptive updating of link states 74011
QoS routing with network dependant delay cost, perform. anal. 107963
QoS using delay-synchronized dyn. priority scheduling 130227
QoS-aware routing in ATM/IP-over-ATM 74265
QoS-supporting networks, end systs. traffic shaping 130773
QoS/service interworking using constraint route label distrib. protocol 73885
QoSME, QoS mgt. and guarantees 95908
QoStat, tool for eval. of QoS capable routers 107937
quality, perform. and control of networks, conf., Boston, MA, USA, Nov. 2000 100441
queue forming, differentiated services *(Dutch)* 85196
R&D for next-generation IP network 108277
R&D mgt. through network mapping, Internet-based approach 113397
radiation therapy, centralized dose calc. syst. 98614
radiographic images, Web-based retrieval using multi-scale tree VQ in wavelet domain 110977
radiological databases for telemedicine and teaching, European projects IAEVA II and HERMES 111277
radiological image incorporation in electronic patient records 98492
radiologist continuing professional develop. using WWW as delivery vehicle 89600
radiology result receipt confirmation using digital certificates 98865
Raincore API for clusters of networking elements 119716
rate adaptive TCP, congestion control with explicit rate feedback, perform. 73946
reactive network mgt. archits./routing 130573
real time audio over best effort Internet, adaptive audio tool realisation 83978
real-time anom. detect. using soft-computing techs. 85232
real-time Internet appls., efficient bandwidth mgt. scheme 85346
real-time Internet traffic, variable rate model with QoS guarantees 108339
real-time multimedia obj. commun., distributed Web-based framework 85380
real-time multimedia sync. mechanism 85221
real-time streaming, retransmission schemes 130700
real-time water quality monitoring across Internet, virtual instrum. 99029

Internet continued
RED queue params., scalable config. 119239
RED/ECN params., adaptive model 95902
regional geoinformational syst., aerospace image proc., intranet network 99043
regulated traffic streams MUX, design/perform. 119150
relative prioritized packet video, loss propag. model 108404
relay protection Web-based MIS *(Chinese)* 77550
reliab.-based optimal allocation of mirror servers 74400
reliable Ethernet connectivity, broadband access network 108282
reliable mobile multicast protocol 74861
reliable multicast commun. protocol, perform. eval. 73972
reliable multicast congestion control 107821
reliable multicast protocols over Ethernet-connected networks 130724
reliable TCP-aware link layer retransmission for wireless networks 95913
rem. patient monitoring, secure home appliance access 122466
rem. socket archit. for Internet access using WLAN 84993
replicated redirection service maint. in WWW-based IS 108332
research trends, Internet servers 119655
residential gateway as service platform 119761
resource reservation protocol for multicast commun. 130387
response initiated multiple access, MAC protocol for satellite channels 73967
Rether protocol, QoS guarantee on 802.11 networks 130719
robot supporting telepresence, constrained image understanding 118781
robust front-end for speech recogn. on WWW, voice over IP recogn. 73069
Rohde and Schwarz broadcast transmitter rem. control and monitoring via Internet 86311
router, fast update of forwarding tables using AS nos. 96234
router archit. develop. *(Chinese)* 108276
router-based tech. for monitoring next-generation of Internet multicast protocols 130360
routers, rate and queue controlled random drop buffer mgt. 74206
routing archit. and border gateway protocol, scaling problems 85284
routing interval concept, IP routing table lookup scheme 130505
routing metrics computation *(French)* 85066
routing policy impact 119675
RQDMA, MAC protocol supporting QoS in IP-based broadband WLL 95859
RSVP networks, guaranteed vs. controlled load, implications 108146
RSVP refresh timer, adaptive dyn. message delivery 96209
RTP protocol, scalability enhancement algm. *(Chinese)* 107913
SafetyNet, lang.-based approach to prog. networks 74310
satellite systs. for multimedia and Internet traffic, antenna technol. issues 96629
satellite-terrestrial hybrid networks for multicast appls., efficient planning 130503
SATTL, self-adaptive WWW cache coherence protocol 108358
Saudi Arabian Internet progress 130817
scalable admission control, design and implement. 107897
scalable anonymous connections in context of MIP and AAA 129330
scalable embedded zero tree wavelet packet audio coding 84012
scalable mgt., navig. pattern 130558
scalable modular opt. interconnection network, terabit packet switch 96110
scalable multicast protocols using dyn. overlap tree path 73983
scalable obj.-based video multicasting 96181
scalable QoS supports for multimedia appls. in next-generation Internet 85347
scalable video, network transm., priority dropping 95308
scalable video over Internet, network adaptive rate control with unequal loss protect. 108436
schools, use of computers, Czech Republic 113302
sci. museum exhibitions via Webcasting, live and rem. online audiences 108343
seamless and uninterrupted interworking of wireless and wireline networks 74345
search service on multi-search engine, GA-based dyn. pers. filtering 119749
Secure Border Gateway Protocol public-key infrastructure 94344
secure Java appls. using smart cards 118014
secure rem. access from office to home 130636
secure Web server, perform. anal. based on SSL 108168
security technols. *(Japanese)* 119625
security-enhanced packet video with dyn. multicast throughput adjustment 85291
self-aware services, anoms. detect. using Bayesian networks 130688
Semsomm, scalable multiple encryption scheme for one-to-many multicast 129332
sendmail/qmail e-mail relaying 130618
SensEdu. Internet course for teaching sensorics 113369
server proximity, network latency metrics 74211
server switching, yesterday and tomorrow 108502
server-centred appls., scalability cost and reliab. meas. 119739
servers, modeling and perform. control 85225
service mgt., company-customer commun. via Internet 89738
service portability of networked appliances 96101
service providers, optimal yield mgt. 119533
service providers/users, flexible pricing plan 119683
service selection center, new model for increasing revenues *(German)* 96118
services managment in IN, conf., Austin, TX, USA, Dec. 2000 100376
services opt. network archit. 120207
servo perform., internet-based ES 123693
session initiation protocol for call control in 3G IP-based UMTS core network 73977
shallow-water mine countermeasure, Web-centric virtual prototyping environ. 77048
SHAMAN, distributed mgt. appls. environ. 130680
shortest-path data networks, optimal routing 108288
simple wavelength assignment protocol 95940
simul., difficulties 119545
simulated protocol method of WAP over TCP/IP network *(Chinese)* 85031
simulated small satellite environ., Internet-type protocol testing 119357
SimulNet dist. teaching syst., Java based 78519
single wafer proc. IC fab., cluster tool, modelling and control 89950
single-constrained routing, link-state/ant-like algm. behaviour 119280
SIP/H.323, distributed gateway interworking 73883
SMART, scalable multipath archit. for intra-domain QoS provisioning 108260
smart buildings, multifunctional transponder-based appls./services 75770
smart card based rem. authentication protocol for Internet-based syst. 130444
smart layer two protocol IP over WDM WAN 130862
Smart PlantWorks power plant O&M DSS 99446
Smart Sensor Web, Web-based sens. fusion, visualization of tactical battlefield 77038
smarter Internet, act. networks for service providing 130931
SMTP server and client for e-mails via Internet 130754
SNMP implement. on TLS/TCP base, perform. anal. 130343
SOAP (Simple Object Access Protocol), simplifying distributed develop. 119261

ternet continued
SOCRATES on IP router fault detect. 74005
soft QoS service 130761
software defined radio strategies for inform. warfare/assurance 111613
software-based router, scheduling computations 119642
SONET transcoder design for ATM over SONET or directly over fiber 85344
source-based control algms. for Internet traffic flows 119634
South Tokyo Cable Television, Internet commun. service *(Japanese)* 131750
Space Internet archits. and technols. for NASA enterprises 120107
space use of Internet, transport protocols and appls. 120091
SpaceMux, on-board mesh proc. 109013
SSL based secure transm. syst., design and implement. *(Chinese)* 108229
SSL handshake perform., improvement via batching 130440
SSL integrat. into JaCoWeb security framework, project/implement. 130344
stat. perform. guarantees for streaming flows using expedited forwarding 119254
stat. shift registering sorting archit., fair queuing algms. in high speed routers *(Chinese)* 108224
static routing algm. for Internet traffic engng. 74054
static-priority scheduling networks, differentiated services for real-time appls. 119672
stereoscopic video transm. over Internet 108430
storage, WWW-based mgt., rem. control 74130
Stream Code based act. network, internetwork syst. implement./eval. 95949
streaming media enhancement with cueing protocols 119297
streaming-media knowledge discovery 119778
streaming-media workload, meas. and anal. 119789
student interact. anal. in computer-mediated commun. environ. 119518
SubDomain for parsimonious Internet server security 108127
substation automation, digital inform. commun. methods *(Chinese)* 99853
substation automation, Web-embedded PLC appls. 112718
substation automation syst., Internet based commun. *(Chinese)* 99856
successive loss proc., charact. 107637
SURF, Simple UI to Retrieve Favorites 131733
surface texture IS 121199
surgeon training via video conferencing and Internet 119769
survivable opt. service using short leap shared protection 108367
switch router, hierarchical scheduling algm. *(Chinese)* 119719
Switzerland, xDSL gateway to data highway *(German)* 131001
SyncML initiative, std. for pers. data synchronisation 130841
systs. admin. conf., New Orleans, LA, USA (2000) 100377
TANGOW, model for internet-based learning 67429
targeted advertising and consumer privacy 129302
TCP asymmetric service provision using broadband satellite, perform. 73962
TCP behavior over wireless links 85027
TCP congestion control mechanisms, fairness issues 95877
TCP enhancement, token-based fast-TCP delay algm. 95895
TCP implement. in QoS provisioning networks, perform. comparison 95878
TCP interact. flows, detailed/accurate closed queueing network model 119379
TCP network traffic charactn. 108203
TCP networks, stochastic modeling of random early detect. gateways 73974
TCP NewReno, start-up transit. dyn. anal. 84945
TCP over ATM network, tightening of cell discarding method 95937
TCP over heterog. networks, FDA base station flow control scheme 119300
TCP over packet radio 84962
TCP perform. improvement over wireless links 73898
TCP perform. on asymmetric networks using satellite and terrestrial links 95879
TCP rate control, network perform. enhancement 73971
TCP rate implicit control 130406
TCP switching, exposing ccts. to IP 130356
TCP traffic in satellite networks with differentiated services, QoS 107889
TCP transactions, CPA *(English, Spanish)* 130413
TCP transactions, CPA 85296
TCP transport protocol for mobile wireless environ. 74177
TCP Vegas in heterog. environ., perform. 95936
TCP-friendly congestion control, survey 73937
TCP-friendly congestion control protocols, transient behavior 119380
TCP-friendly congestion/rate control, multimedia data transm. *(Chinese)* 119620
TCP-friendly video transfer 107931
TCP-IP based mobile radio links, perform. eval. 74751
TCP-like congestion control multicast sessions, network delay var. 119689
TCP-socket, C and Java, perform. comparison, JavaNws appl. 96124
TCP/Internet traffic via LEO satellites, eval. 85250
TCP/IP Diff-Serv, congestion control using fuzzy RED 119272
TCP/IP in commun. systs. 108399
TCP/IP modeling/validation 73938
TCP/IP network, attack methods/security strategies *(Chinese)* 108100
TCP/IP network security *(Polish)* 85322
TCP/IP protocol headers for Web traffic 119339
TCP/IP technol., hierarchy model, status, develop. prospects *(Chinese)* 85033
TCP/real time sources bandwidth feedback control 74271
TCP/UDP fairness for assured forwarding per hop behavior in differentiated services networks 119276
TDMA smart antenna wireless base stations, Internet controlled calib. syst. 85568
teaching and learning practice in Web-based multimedia technol. course, experience report 113381
tech., economic, legal and social trends 85206
tele-training methodologies develop. using Internet technols. 78492
Telebuddy, collective telepresence and tele-conversation through phys. avatars 108385
Telecom Italia's broadband services 131000
telecomms., liberalization, and Internet growth in Turkey 100363
telecomms. indust. 74254
telecomms. traffic stats. 130532
telemanipulation/telemetry in microenviron., via Internet 97158
telemedicine, patient care, mobile commun. technols., TELTRA 122452
telemedicine in Croatia 111276
telemedicine multimedia database for cyber doctor 111296
TIBD Phase III, V-NAD scheduler perform./param. optim. using Taguchi robust design 111575
time sync. meas. using GPS receiver, Internet 113289
tourist inform. services provision using mobile computers *(Japanese)* 120006
TPOCAST pers. inform. delivery platform *(Japanese)* 120005
Traceroute, network route-tracing utility program 119434
traffic, capacity mgt. 74341
traffic, nonlin. time series prediction methods 95763
traffic anal., protocols, attacks, design issues, Internet privacy 108256
traffic data, self-similar/fractal nature 96227
traffic engng. without full mesh overlaying 119669

Internet continued
traffic ident. using feedforward multilayer layer perceptron 119754
traffic mgt./network control using collaborative on-line simul. 130590
traffic pricing, incentive-compatible, consumers' private inform. extraction 96028
traffic shaping and link scheduling on high-perform. server 85350
traffic types/service classes 74270
trajectory sampling for direct traffic obs. 85299
transactional multimedia banner as Web access point 85332
transcoding charact. of Web images 96275
transit. mechanisms for IPv6/IPv4 within scope of GPRS with, Internet commun. 73979
transm. of DVB service inform. via Internet 75279
TransWeb, framework for transparent Web-server load balancing 130896
tree topol. for multicast congestion control 130787
tree-based multicast key agreement 118031
TV-Internet integrat. for instructional delivery, design implications and issues 120588
ubiquitous computing 130801
ubiquitous computing, scalable and self-organizing meta-data dissemination 108329
ubiquitous services and appls. for wireless society 130541
UDP and TCP commun. perform. on PC 108359
UDP transfers, simul. and anal. of packet loss 119335
UK substation inform. project, field experience with Internet technols. 78071
ultra long dist. submarine DWDM systs. 131395
ultrahigh-speed opt. TDM transm. 75013
UMTS, end-to-end QoS considerations 85628
uncheatable distributed computations 130834
unicast/multicast traffic, bandwidth-allocation policies 119547
unified IP service control archit. based on mobile commun. scheme 108285
Unisphere Solutions IP platform for broadband services *(Polish)* 85439
universal pers. computing over Internet, agent-based approach 74276
universal service in ubiquitous digital network 130339
universal service obligations, text services 119594
university/indust. linkage, Internet dist. education syst. 113382
UNSWo, universal network of small wireless operators 74616
UPMA, user-depend. perfect-scheduling multiple access for wireless ad hoc Internet access 107827
US Army installations, inform. assurance archit. 111589
USA rural Internet connectivity 85269
USAIA's bandwidth partitioning for wireless cell level, Petri net based perform. eval. 130441
USENIX conf. on Internet technols. and systs., San Francisco, CA, USA (March 2001) 113215
User Gateway, realization scheme 74226
user profiles for data recharging 108273
user-aware obj.-based video transm. over next-generation Internet 84410
utility-based inter-stream adaptation in multiple-flow IP session 85369
value-added wireless services 108097
VCSEL opt. interconnects, telecomm. appls. 96226
VDSL for broadband access syst. *(Japanese)* 131003
vector-like RSA cryptosystem 94340
very low rate video proc., Internet 94884
video, broadband delivery via DSL networks 119803
video, MPEG-4 based hybrid temporal-SNR scalability 96180
video coding for streaming media delivery 107075
video lects., Web-based courses, Internet transm. 84505
video on Internet, multilevel adaptive streaming, control 86338
video representation, key frame selection 94644
video retrieval over ATM access network under IPv6/RSVP protocols 130972
video streaming, adaptive congestion control techs. *(Chinese)* 118585
video streaming, education appls. 100459
video streaming, scalable differential JPEG 2000 wavelet video codec 106873
video streaming on Internet 74456
video transfer protocol over Internet with congestion control based on two-level rate control *(English)* 119271
video transm. over networks with no QoS guarantees, encoder buffer constraints 129750
video-scaling algm. based on human perception for spatiotemporal stimuli 95339
VideoTalks multimedia conferencing syst. 85378
virtual broadcasting 74362
Virtual Classroom, Internet technol. based course delivery 108106
virtual conf. eval., CybErg 1999 96245
virtual home environ. trial over Mobile IP 96104
Virtual Inhabited Call Centre, pers. mobile agent syst. 74146
virtual Internet based on CATV using prefetch agent 120589
Virtual Learning Space for online elec. engng. teaching 67434
virtual network based service provisioning, perform. modeling 130667
virtual overlay networks, mission crit. appls. 96142
virtual router topologies, QoS and act. networking 74392
virtual router/server concepts for IP backbone networks *(Japanese)* 119410
virtual SME, PRODNET Communication Infrastructure 74304
virtual/real distributed environ., real time integrat. 94883
VLSI CAD algms., teaching, web-based visualization tools, Java applets 125301
VLSI design education, synchronized streaming media appl., Internet in rem. learning 124268
Vmedia, virtual media access protocol for interactive image browsing 96211
VoD, full length movies 97089
VoD E-commerce syst. based on multilevel video metadata 97079
VoD syst. design for high-quality video/audio with D1 over IP 109377
voice/data convergence, access aspects 108468
VPN, assuring enterprise customers of secure data exchange 119601
VPN, confidentiality on public networks 74183
VPN, dyn. bandwidth mgt. 130797
VPN, new revenue opportunities for MSO 97073
VPN, provision of QoS 108338
VPN, tunneling techs. 95901
VPN, unified archit. 96163
VPN, Web-based customer mgt. 108035
VPN constr. using multi protocol label/lambda switching 96715
VRML animation of inspection syst. 120639
VRML in microwave propag. studies, WWW and computer aided education 67451
W^2F^2Q, packet fair queuing in wireless packet networks 74216
wafer fab e-Diagnostics, intellectual property, equipt. maintainability and availability 89836
WAP, overview 107797
WAP clients and SET protocol for secure commerce 74162
WAP integrated transport layer security 96590

Internet continued
WAP log mining as monitoring tool for m-commerce *(German)* 74136
WAP network 107796
WAP over Bluetooth, technol./appls. 119283
WAP over TCP/IP network, simulated protocol *(Chinese)* 84968
WAP protocol, voice browsing for handheld mobile devices 85008
WAP protocol over GSM-SMS, perform. anal. 130454
WAP roaming with star*home and Exalink 96489
WaryWolf, software package for Internet security assess. 130838
wavelength-convertible opt. switches for all-opt. next-generation Internet, optimal design 120383
WCDMA single-user interf. cancellation for fading channels and diversity antennas 108777
WDM burst switching mesh networks, deflection routing protocol 95942
WDM burst-switched opt. networks, fault mgt. 96747
WDM IP end-to-end transport services, integrated mgt. 130660
WDM MAN, MAC protocol for IP differentiated services 86005
WDM mesh-survivable transport networks 96744
WDM networks, novel opt. IP router archit. 96876
WDM opt. burst switched networks, contention resoln. policies 96745
WDM opt. burst-switched networks, reliable multicast protocol 96713
WDM packet routing protocol 75033
WDM ring distributed on-demand bandwidth reservation mechanisms 131582
Web, mobile WAP-based mgt. 108034
Web appls., content-aware request proc., STREAMS-based TCP/IP implement., customized module library 96136
Web based dist. learning/teaching using DVD and Internet 109364
Web caching archits., hierarchical/distributed caching anal. 119546
Web client traffic, empirical distribs., synthetic traffic generation 74212
Web clients, service time estim. using server logs *(English, Spanish)* 130414
Web computing, overhead reduction in network commun. 119641
Web content caches, refreshment policies 130705
Web content negotiation, CC/PP 108129
Web latency reduction using ref. point caching 119741
Web layout, optimal design, heavy tails/generalized coding 119742
Web MIXes, syst. for anonymous and unobservable Internet access 108258
Web proxy cache perform., sensitivity to workload charact. 130695
Web satellite-based multicasting services, theoretical framework 130779
Web server, functionally minimized embedded, network connectivity for small appliances 130637
Web server, perform. modeling 85254
Web server, usage of older Apple Mac computers 85259
Web server replica placement 119740
Web servers, feedback control for guaranteeing relative delays 85348
Web servers, simul. based perform. anal. 130442
Web servers, traffic model and perform. eval. 119312
Web services, zero-loss, constr. 119744
Web site traffic anal., interactive, multidimensional, using OLAWEB 108361
Web syst. technol. *(Japanese)* 130840
Web technol. appl. in factory environ. 85324
Web traffic, RED tuning 85297
Web wireless mobile service, distributed proxy server syst. develop. 108157
Web-appl. develop. using model/view/controller design pattern 130880
Web-based acquisition, storage & retrieval of biomed. sigs. 88024
Web-based appl. server *(Chinese)* 108101
Web-based cooperation with basic support for cooperative work 130970
Web-based courseware, speech input syst. *(Japanese)* 72996
Web-based IS, clustering techs. to detect usage patterns 130639
Web-based metacomputing problem-solving environ. for complex appls. 108116
web-based microelectronics lab. within EDIT Distance Learning Network, pilot implement. 124255
Web-based network config. mgt. syst. 96157
Web-based network element mgt. 108177
Web-based patient diagnosis data mgt. syst. 132547
Web-based radiotherapy treatment planning syst., client-server appl. 87845
Web-based rem. security camera server syst. using index search algm. 131758
Web-based secure LDAP mgt. syst., design/implement. 96230
Web-based training, desktop videoconferencing 113355
Web-like Internet/bulk-data traffic, tail drop/act. queue mgt. perform. comparison 130770
Web-PICASSO, Internet implement. of facial caricature syst. PICASSO 73545
web/data servers power demand dens. requirements 130983
Webcasting, broadcaster's perspective 74317
WebFabIS web-based microelectronics lab. inform. syst. 113451
WebMUX protocol state anal. with CPN modelling 95956
Webscope-CBVR, content-based video retrieval syst. for WWW 118325
wide area collaboration of public ATM networks and CATV local networks 85213
wideband Internet access using cable modem systs. 109368
Windows2000 QoS technol., video conf. appl., Internet integrated services *(Chinese)* 74419
wired and wireless phys. layer security issues 74351
wireless access, highly sectorized syst. 83701
wireless access network, congestion control for best-effort services 131193
Wireless Access Protocol, mobile Internet *(Spanish)* 96596
wireless appl. protocol, mobile e-commerce appls. 84953
wireless appl. protocol for mobile appl. *(Chinese)* 130425
wireless home link syst. in Japan at microwave/MM-wave freqs. 130756
wireless Internet, IEEE 802 stds. 119860
wireless Internet, mobile commun., location-based services 96592
wireless Internet, universal mobility challenge 96090
wireless Internet for mobile devices 85177
wireless Internet over LMDS, archit./expt. implement. 74595
wireless IP networks of future, QoS archit. 85242
wireless IP-based networks, eval. of macro/micro mobility extensions 107852
wireless messaging services 108294
wireless messaging services for mobile users 74157
wireless mobile networks, resource reservation protocol 130728
wireless networks, broadcast scheduling 74202
wireless security 119942
wireless user behavior capture, unique identifier tracking anal. 108156
wireless Web develop. 96145
WLAN and regional networking 108374
WWW based analog cct. CAD tool, design space interactive exploration 79547
WWW Consortium standardization activities 119733
WWW contents adaptation to terminal equipt. limitations *(German)* 74303
WWW large-scale distributed caches, perform. tuning 119560
WWW mining, low-complexity fuzzy relational clustering 108195
WWW over DTV, broadcasting and Internet 86306
WWW proxies, optimal hash routing 74024

Internet continued
WWW server, differentiated QoS mgt. 130677
WWW server perform., wide-area conditions effects 119649
WWW servers, hierarchical cache archit. 108162
WWW shopping, coloured goods ordering, display problems 109876
WWW systs., locally distributed, load balancing algms. *(Polish)* 130647
WWW technol. adoption/diffusion into mainstream teaching 113348
X-Bone, dyn. Internet overlay deployment and mgt. syst. 85189
Xilinx Univ. Program, university-based support environ. 124261
XML and security 119537
XML based policy-driven mgt. inform. service 130673
XML security mechanisms 119538
XtremWeb, expt. platform for global computing 108114
Youngster project, focusing on mobile world future users 85609
zero-copy protocol implement. 130409
GaAs device technols. in Japan, current/future appls. 74082

Internet information resources *see information resources*

Internet telephony
ABR service for Internet appls. 74347
act. networks archit. using declarative lang. 74384
adaptive IP telephony using intrastandard hybrid speech coding 108073
adaptive network modeling scheme 85233
adaptive voice commun. on IP networks, simul. study 74148
adaptive VoIP VBR speech coding, perform. comparison 130607
advanced collaboration services 108058
agent-based service brokering archit. for multiservice next-generation networks 108425
All IP UMTS networks migration, transport/mobility issues 96084
appl.-layer mobility using SIP 95868
asthma rem. control, telemedicine and Internet appl. 133191
bandwidth-limited real-time multimedia commun., header compression 96260
BICC, bearer-independent call control 85153
cable Internet syst. *(Japanese)* 131746
cable operators and telephony 74150
cable telephony, packetized format 97065
carrier-class, voice quality eval. 85205
cellular links, efficient transport 74401
cellular-IP convergence strategies, impact on mobile terminals 85782
centralized call admission control and load balancing for voice over IP 108075
conferencing, automatic addit./deletion of clients 130777
converged voice and data services in new network 108081
convergence of networks, voice over IP *(Slovenian)* 130741
core network traffic, capacity planning 119568
CX6800-CA call control server 85201
DC powering of Internet and IP telephony 108447
Delivery Multimedia Integration Framework, IP-telephony signaling 85370
distributed voice conf. syst. over IP networks *(Japanese)* 85358
dyn. voice-over-IP firewall with IP telephony appls. 85317
enterprise VOIP 108066
error control, audio redundancy codec combination 96059
GPRS/EGPRS enhanced voice over IP support 96442
H.323 for multimedia 84950
H.323 stacks for VoIP designs 96213
H.323/SIP service develop./deployment 130393
IEEE 802.11 networks, IP QoS support, service discipline 108371
IEEE INFOCOM conf., Anchorage, AK, USA (April 2001) 113236
IN/Internet interworking model, C/BGF 107825
instant messaging 85159
interoperability testing 74324
IP billing *(Polish)* 130651
IP domain small packets aggregation 130322
IP environ., signalling model for real-time services 96159
IP flow control engine for broadband access network edge *(Japanese)* 130615
IP over Ethernet via fiber 108293
IP phone gateway, adaptive network-attached storage syst. *(Chinese)* 119501
IP real-time traffic, scheduling mechanism for relative differentiation 74272
IP telephony, implement. of test-bed and perform. eval. 108074
IP telephony, recursive algm. for trend MLE in exponential noise 119506
IP telephony from user perspective 108082
IP telephony solns. for customer premises 85151
IP telephony systs., vulnerabilities and security limitations 119310
IP-based networks, handling service interact. incompatibilities 130611
IP-QoS server syst. 85203
ISA, intell. services agent supporting IN/IP integrat. 130916
LAN-based IP telephone syst. 96055
LCDs futuristic refinements, mobile phones appl. 121113
load charactn. and anom. detect. for voice over IP traffic 119653
media gateway control protocol description/validation using SDL/MSC 130710
Mitel Semiconductor develops. for VOIP *(Spanish)* 108076
mobile Internet, WAP usability study 74355
mobile Internet commun. services, secure authentication infrastructure 119508
mobile IP AAA archit. extension for differentiated services 130830
mobile telephony, adaptive resource allocation during handoff 85311
multimedia, service level agreements mgt. using utility model 74101
multimedia commun. over fixed wireless systs. via DOCSIS 1.1 108397
NEC's CX6600-NM NMS *(Japanese)* 130587
NEC CX3200 media gateway for Internet access 85433
NEC Gatekeeper CX6800-GK 85202
NEC NEAX2000IVS²/2400IPX, ToIP WAN soln. 85436
NEC NEAX2000IVS²/NEAX240OIPX, ToIP LAN soln. 85437
network delay/delay jitter charact. effect 130819
open packet telephony networks, mgt. solns. 130604
PacketCable 1.x archit. 74152
PacketCable archit. 74454
PacketCable security, cable IP telephony networks 130606
PC multimedia net-to-net commun., speech coder 129384
pers. wireless commun., conf., Lappeenranta, Finland (Aug. 2001) 113214
predictive playout delay adaptation for Voice over IP 108083
pricing strategies for IP telephony, comparative study 74144
QoS/new archits. for future telecomms. networks 108166
queueing anal. of simple FEC schemes for IP telephony 119249
real-time signaling transport protocol for VoIP 84960
RIDE replacement, hybrid PSTN/VoIP appl. soln. 85155
robust front-end for speech recogn. on WWW, voice over IP recogn. 73069
RSTP, reliable signalling transport protocol for VoIP 95900
secure Internet telephone, design and implement. 119507
server side round-trip delay meas. in WAP environ. 107909
service-creation obj. based framework 96108
shortest-path data networks, optimal routing 108288

nternet telephony continued
signaling protocols 85185
SIP and conversational Internet appls. 84951
SIP and H.323 interworking, VoIP networks 84952
SIP-based VoIP service prototyping in Java 96237
speech proc. issues in IP telephony 94406
stds. develop. 130635
stressed networks, prioritized resource allocation 130973
subscription handling using mobile agent swapping 74220
TCOLLABO, Team Collaboration Support System 85204
TCP/IP protocol stack, requirements for real-time commun. in wireless environ. 107904
tech. and economic aspects of Internet telephony 130616
technol.-regulation convergence, IP telephony case 96025
telemedicine, Internet telephony's opportunities 133158
UMTS air interface params., voice packet size/dejittering delay for VoIP call 119676
UMTS VoIP, first-order end-to-end delay anal. 96473
vGPRS mechanism for voice over general packet radio service network 74241
virtual home environ. trial over Mobile IP 96104
virtual LANs, admission control and bandwidth mgt. 119570
VoDSL, voice over DSL 74151
voice conferencing over EuroSkyWay satellite syst., anal. 119584
voice over Internet, delivery tool 96158
voice over IP, conversion or replacement considerations *(German)* 85144
voice over IP, engng. for quality 85149
voice over IP, network convergence 74143
voice over IP, review of technols., benefits and drawbacks 85148
voice over MPLS and Diffserv domains 85245
voice traffic, delay/jitter anal. 119677
voice transm. over IP network *(Polish)* 130603
voice-over-Internet protocol, packet commun., digitised voice sigs. *(Italian)* 130602
voice-over-IP networks, service level agreement dimensioning 130613
voice-over-IP telephony, packet switching *(German)* 108103
VOIP 108067
VoIP, access dimens. 85150
VoIP, dimensioning next generation transport networks 107972
VoIP, internat. stds. 85152
VoIP, multimedia services 85154
VoIP, session description protocol stack *(Korean)* 119336
VoIP access router, voice traffic MUX, Diffserv QoS 84841
VoIP and enterprise telecomm. network mgt. 74147
VoIP converged voice and data networks 85182
VoIP gateways, perform. monitoring syst. 74145
VoIP gateways and Megaco archit. 84949
VoIP in appls. for wireless access 108323
VOIP migration, exam. of different solns. 85162
VoIP networks, third-party call control for call center appls. 130610
VoIP on integrated voice/data networks, QoS perform. eval. 130824
VoIP private intranets for crit. commun. 119505
VOIP services, call accounting/billing 119502
VoIP suppl. services, advanced IN control archit. 130923
VoIP technol. eval. 85156
VoIP transm. in convergence network *(Polish)* 130341
VoIP using session initiation and media gateway control protocols 107952
VORAL syst., Voice over IP Routing in Application Layer 85168
wireless appls. using Internet protocol and voice over IP 119359

nternetworking
see also information networks; Internet; LAN interconnection
3G mobile commun. systs., DECT technol. 85786
3G wireless and Internet users multimedia sessions 130453
ABR service for Internet appls. 74347
act. internetworking, QoS routing-based congestion mgt. 108194
act. networking, distrib. denial of service attacks repulsion 130576
act. networks archit. using declarative lang. 74384
addressing schemes interworking 74036
advanced IP services on community network 74348
all-opt. networks impact on IP & computer archit. 119663
ATM flexible switching syst. supporting QoS 131030
ATM interworking unit with ISDN/Ethernet interfaces 108356
ATM network, hierarchical QoS routing, dyn. inform. update methods 130482
ATM wireless CPN, efficient location mgt. protocol 84974
ATM/frame relay interworking, traffic param. mapping and control *(Chinese)* 107652
Bluetooth, pers. area networking enabler 120009
border gateway protocol, inherently safe backup routing 119419
broadband access network implement. models, techno-economic study 108478
BT tech. archit. 107994
CANopen 119266
case based internetwork IS 85309
cellular mobile internet *(Chinese)* 108794
Concert IP Secure, managed firewall/VPN service 119540
conf., Bergen, Norway (October 2000) 67390
consumer electronics, computing/commun./e-commerce convergence 85650
differentiated services boundaries, QoS ad hoc internetworking 74336
DiffServ driven HFC syst., perform. eval. 74332
divergence-free protocol converters using supervisory control techs. 74275
e-commerce, electronics mfg./supply chain mgt., business models 113449
e-commerce heterog. systs., maximizing transactions by gateway filtering 130851
e-diagnostics for semicond. wafer e-factory capability 70236
e-mfg. domino effect for IC proc. efficiency/yield/productivity enhancement 103961
e-mfg. opportunities in semicond. proc. 103959
eDFM Web-based DFM in electronics assembly 115134
Eurescom project HINE, heterog. in-house networking environ., cooperation between telecom operators for advanced home networking 74327
gateway syst. as LAN/WAN link, domestic and small office appl. *(Italian)* 85280
gateway technols. for home network and their implement. 74231
generic network model, ITU approach for interoperability 74328
H.323/SIP service develop./deployment 130393
HAVi/ECHONET gateway *(Japanese)* 85119
high perform. versatile residential gateway, develop. 85313
IN internetworking solns. to ACC customer roaming 74422
IN with cross-network open provisioning, Internet bandwidth transactions 130932
IN/Internet interworking by SCP *(Chinese)* 108246

internetworking continued
IN/Internet interworking model 108170
IN/Internet interworking model, C/BGF 107825
IN/Internet interworking model, service control gateway design *(Chinese)* 108395
IN/IP integrat. archit., service-independent MGF framework 130921
inform. security, threats and protection mechanisms 108187
integrat. of IN and Internet, bal. between idealism and current products realism 74425
integrated terrestrial-satellite wireless networks, multimedia appls., adaptive error control 85024
Internet, next-generation, opt. networking/real-time provisioning 108242
Internet integrat. with next generation networks *(Polish)* 85319
Internet multimedia session, signalling protocols gateway syst. design 96233
IP, global wireless systs. integrat. 85666
IP environ., signalling model for real-time services 96159
IP packet/WDM networks, joint operation 96739
IP packets over ATM environ. via multiprotocol-over-ATM (MPOA) 74330
IP phone gateway, adaptive network-attached storage syst. *(Chinese)* 119501
IP router archits., overview 95973
IP-based services based convergence of fixed and cellular networks and services 73978
IT, global, satellite roles, trends/implications 85919
legacy IP appls. in an ATM-over-HFC access network, QoS 74338
media gateway control protocol description/validation using SDL/MSC 130710
mobile commun., future generations using broadband access methods 85696
mobile commun. systs., develop. beyond 3G 85697
Mobile IP, route optim. for next-generation mobile networks *(Japanese)* 73990
mobile wireless commun. beyond 3G 120003
MRED, random early detect. approach 95854
multimedia conferencing, interconnected networks, modelling and simul. 96282
multimedia QoS adaptation for inter-tech roaming 130966
national scale switchless based network, modelling and perform. eval. 74346
NEAXΣ^{C}X media gateway and CX3100 Internet access node 85432
NEC CX3200 media gateway for Internet access 85433
NEC CX6100-SG signaling gateway 85434
NetCamo, internetwork traffic anal. prevention camouflage 96114
network mgt. for multi-layered network survivability, overview 130553
network mgt. prototype for inform. delivery/planning with QoS guarantees 108043
open service gateways for home, software archit. 74176
open shortest path first interior gateway protocol vulnerabilities 107895
OST X.25/FR gateway, formal model based on high level Petri net 130804
PCB assembly proc., real-time factory data collection/Web reporting 115172
perform. anal. of TCP behavior in geo satellite environ. 73936
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
photonic core node based on 2.56 Tbit/s optoelectronic switching fabric 74501
PNNI, PNNI perform. eval. 130823
PNNI protocol, SDL-based hierarchical model for multicasting 95958
public key infrastructures, next generation 118009
QoS dyn. mapping control for streaming video in relative service differentiation networks 85253
QoS enabled VPNs mgt. 74100
QoS/service interworking using constraint route label distrib. protocol 73885
RED gateways with multiple competing TCP flows, anal. 73944
RENE, Rice Everywhere NEtwork project, multitier wireless commun. 85499
residential gateway as service platform 119761
SDH/OTN-based transport networks interworking 120211
seamless and uninterrupted interworking of wireless and wireline networks 74345
sens. inform. networking archit./appls. 108274
session initiation protocol for call control in 3G IP-based UMTS core network 73977
shortest-path data networks, optimal routing 108288
SIP/H.323, distributed gateway interworking 73883
Stream Code based act. network, internetwork syst. implement./eval. 95949
Symphony infrastructure for virtual server mgt. 119723
TCP networks, stochastic modeling of random early detect. gateways 73974
TCP/IP protocol in indust. visualisation systs. *(Polish)* 130656
terrestrial/satellite intersegment handover, anal./perform. eval. through simul. 96506
transm. coord. protocol for mobile satellite messaging syst. 73949
UMTS mobile intranets 108373
universal pers. computing over Internet, agent-based approach 74276
User Gateway, realization scheme 74226
Verizon's home networking 96080
voice/data convergence, access aspects 108468
VoIP gateways, perform. monitoring syst. 74145
VoIP gateways and Megaco archit. 84949
VoIP using session initiation and media gateway control protocols 107952
WAP, overview 107797
web-based microelectronics lab. within EDIT Distance Learning Network, pilot implement. 124255
wireless gateway for wireless home AV network, implement. 119902
wireless mobile router design 108171
wireless world visions *(English)* 108475
WLAN/WAN integrat. archit. 85343

interoperability *see open systems*

interpenetrating networks *see polymer blends*

interpolation
see also function approximation
2-D fractional Brownian motion interpolation, image proc. 129418
2D discrete Fourier irregular samples, closed-form image reconstruction using Good-Thomas FFT 84299
2D discrete lin. systs., stabil. testing, immittance-type tabular test 95679
2D DOA estim. using lin. interpolation tech. for circ. array 118948
2D Lagrange-Yen type interpolation in Paley-Wiener fns. space 107405
2D r-adaptive FEM using error indicators 68067
2D zero-phase FIR filter, nonuniform freq. sampling 80094
3-camera capturing syst. for disparity panorama generation 94702
3D face direction meas. by template interpolated matching *(Japanese)* 73447
3D face model reconstruction from video seq. 106662
3D graphics and video resizing, arbitrarily scalable edge-preserving interpol. 84347
3D interpolation method for 3D reconstruction 118287
3D lookup table method, interpolation errors on gray gradations 73155
3D med. image modeling of scatt. data based on data-depend. criteria 76524
3D med. image proc., math. morph. *(Japanese)* 98421
3D MR coronary angiography, navigator echo-based respiratory gating 110885

interpolation continued
3D nonlin. transient eddy current problems, multistep algm. 128683
3D polygon meshes for hierarchical representation/coding of surfaces 84452
3D range image resampling using B-spline surface fitting for opt. range sens. 75650
3D reconstruction from stereo pair without knowledge of intrinsic or extrinsic params. 94848
3D scatt., higher order parallelized multilevel fast multipole algm. 93995
3D ultrasound compounding, rapid image registration 110754
adaptive image interpolation algm. for image/video proc. 129559
adaptive image interpolation using, multilayer neural network 118294
adaptive interpolated FIR echo canceller, low complexity 102404
adaptive interpolation/smoothing algms., state-space approach 130130
adaptive laminated struct., higher-order B-spline strip models 125129
affine-invariant edge completion with affine geodesics 118673
airborne IR imaging, rectification, GPS and INS *(Chinese)* 120912
alg. multilevel preconditioners 101064
alg. polynomial expansion, iter. approach, at. fns. 114026
antenna far field reconstruction from near field data 94168
antenna near field-far field transform., nonuniform helicoidal scanning 94144
anti-alias FFT error anal., interpolation *(English)* 107322
approx. of matrix exponential based on Faber polynomials 90071
arbitrary scale image enlargement method with HF components predict. *(Japanese)* 118437
asymptotic formula for error in cardinal interpolation 114054
asynchronous sampling rate converter, two-stage design, interpolation method *(Japanese)* 114849
at. fns. appl. to interpolation problems 114025
atrial fibrillation organisation mapping with basket catheters 121906
automated syst. for low-resoln. document/text images restoration 73159
axisymm. drop shape anal. meas., CCD video camera, fast algms. 75883
B-spline closed curve interpolation to point data, node and knot placement 124632
B-spline interpolation in med. image proc. 98137
band pass wave digital ladder filters, direct design 130072
band-limited digital sigs., precise interpolation scheme *(Japanese)* 118943
bandlimited interpolation and extrapolation, synthetic view 129956
base-station-antenna radiation patterns, 3D interpolation method 72665
Bayer pattern images, saturation-based adaptive inverse gradient interpolation 94864
behavioral interpolation, coding, and control 78980
Bernstein quasi-interpolants 100997
bi-level images, near exact expansion 95184
bidimensional interproximation problem and mixed splines 67943
binary symmetric channel, spectral interpolation coder, noise cancellation 129008
biomedical image interpolation, generalized regression neural networks appl. 110899
biomedical image rot. and scaling using polynomial-based interpolators 121894
Birkhoff quadrature formulas, extremal approach 114043
block ciphers of low alg. degree 118045
blocking artifacts reduction algm. in block boundary area using neural network 129795
boost switching regulator, piecewise PWM/sliding-mode control, fuzzy controller design 99772
breast tissue, biomech. 3D FEM modelling, MRI data 76421
broadband antenna response anal. using hybrid freq. domain MoM/FDTD tech. 83625
building integrated PV power generation, assess. method 112405
Burgers eqn., connection coeffs. on interval and wavelet solns. 114119
buried objs., mines, EM scatt., complex natural reson. 88259
Butterworth biorthogonal wavelets derived from discrete interpolatory splines 130123
BVPs, interpolating wavelet scaling fn. with lifting appl. 114053
C^3 shape preserving interpolating space curves constr. 124636
canonical waveguide filters, full-wave design by optim. 102535
cascaded MAP-based lin. predict. error conceal. tech. for consecutive block losses 84485
categorical color mapping, color-categorical weighting method, gamut mapping 84185
CCD camera, honeycomb struct., image quality, computer simul. *(Japanese)* 86613
CCD color filter array using sig. correl., color interpolation 94823
CGFFT method with discontinuous FFT algm. 72166
checkerboard distortion avoidance in continuous-time domain 95678
Chinese characters proc., brain response, event-related fMRI 87573
circ. interval arith., simultaneous method of fourth order for finding complex zeros 67948
circ. raster, angle posn., photoelec. phase-comparing method *(Chinese)* 97821
CMOS DAC, low-glitch interpolation cct. 102275
CMOS DDS, low-power, self-adjusting phase interpolation 101813
CMOS DDS synthesizer with digital time domain interpolator 114662
CMOS folding/interpolation A/D converter for analog interface module of TFT-LCD driver 79997
CMOS folding/interpolation ADC design, 3.3 V, 8 bit, 200 MS/s *(Korean)* 114815
CMOS HF low-power multirate SC realizations for NTSC/PAL digital video filtering 80041
CMOS interpol. FIR filter, power/area efficient design for W-CDMA appl. *(Korean)* 80091
CMOS pipeline ADC, 8 bit, 30 MS/s, 1.8 V single power supply 125574
coherent OFDM syst., perform. of channel estim. using pilot syms. 106043
color image interpolation with edge-enhancement 106753
complex geophys. images, contrast enhancement/segmentation 98951
complex quadratic tridiagonal syst. for C^2 PH quintic splines 114033
computational EM appl. of meshless method 128641
computational modelling of viscoplastic fluids based on stabilised FEM 79129
conformal approx. of variational problems subj. to convexity constraint, non-convergence result 114173
conic approx. of planar curves 114050
constrained rational cubic spline 79017
content-based video indexing/retrieval, scene change detect. 84445
controlled syst. lang. ident., modelling, control and anom. detect. 112731
convergence of (0,1,2,3) interpolation on arbitrary syst. of nodes 79018
convergence of interpolation procs. in Hilbert space 67939
convergence of Runge-Kutta methods for delay diff. eqns. 79095
converters, sample-rate, sampled-data control based design 80141
coronary artery calcifications, vol. quantification, dual-slice spiral CT 98483
coronary artery MRI, off-reson. distortion reduction, echo-time interpolation 122107

interpolation continued
Crouzeix-Raviart type finite elements on anisotropic meshes 124751
cryptographic key assignment for overcoming CHW scheme incorrectne 118015
CT, reconstruction, tree-struct. filter bank *(Japanese)* 73138
cubic splines, max. entropy interpolation with possibly noisy data 100998
cubic-spline interpolation 78994
Czech utterances, homomorphic decomp. of fund. freq. contours *(Englis* 73035
DC electromagnet switch transient proc., parameters calc. *(Russian)* 93983
DCT image coding, decimation/interpolation 95259
DCT-coded picture transm. over noisy channels, transformed domain error co cealment 84381
DDS, phase interpolation, delay generator, two-step integrat. 114642
DDS clock generator, sub-ns time domain interpolator, 30-MHz 102320
defect inspection syst. with subpixel resoln., morph. operation 107280
delay diff. eqns. soln. using intervalwise partitioning by Runge-Kutta metho 68035
Dervish mine-clearance vehicle, image-seq. motion estim. 100309
dielec. resonator, FDTD method and Pade interpolation tech. 91213
digital image anal., tracking algms., sig. filtering *(German)* 84260
digital image proc., Lagrange wavelets 118366
digital radiography, scatt. correction, aperture sigs., interpolated local samplin 98555
digital receivers, multirate digital filters for timing recovery 107513
digitizing continuous-time filters improvements, comments 119001
disabled pers., voluntary upper-limb movements, computer simul. 111139
discrete box splines reducing computational cost and eval. 73598
display projection imaging syst., geometric rectification method *(Chinese* 84123
dosimetry, interpolation/extrapolation methods and multiresolution wavelet transf form 111233
DS-SS systs., interf. rejection using nonlin. interpolation lattice filters 85528
DSO coherent sampling syst. with triggered time interpolation 75775
DSP concept, structural subband decomp. 130092
DST/DCT domains, interpolation props. 94654
ectopic beats, heart rate variability anal., editing methods 76238
eddy current rail brake syst., lin. Halbach array 134525
edge directed interpolation 94649
edge elements on anisotropic meshes and approx. of Maxwell eqns. 114168
edge-preserving interpolation, fuzzy tech. 118175
eight-row CT scanner, helical reconstruction algms. 132794
electrostatic MEMS, lin., nonlin. and mixed-regime anal. 104192
element-free AMGe, general algms. for computing interpolation wts. in AM 101035
ellipt. filter params., num. interpolation 119055
EM charact. of grounded slab/parallel-plate struct. using SDDI tech. 83253
EM field, dispersive medium, time domain finite element model 72154
EM field recovery over sphere from data over spiral 93954
EM response, optimal interpolation/extrapolation algm. 128654
EM scatt., hybrid coord. FDTD scheme 105703
EM scatt., MoM using high-order non-uniform grids 83224
EM syst., reduced order finite element model 72153
embedded video coding engine, archit. and design 106959
emerging TV displays, image quality improvement 120522
engng. investment, dyn. payout period, interpolation estim. *(Chinese)* 89659
error estim. and adaptive mesh refinement in BEM 101118
evanescent-mode bandpass filter, ridged waveguide, inductive strip 102519
exponential ray transform, sampling conditions, nuc. imaging appl. 132866
facial features tracking in video seqs. using deformable-model-based approach 73220
Farrow struct. based 1D and 2D FIR filters, variable cutoff freqs., design 9106
fast template matching based on num. GA *(Chinese)* 118765
FDM software radio, multichannel digital up converter 74542
FDTD schemes for Maxwell eqn. 79005
FEA of coupling eigenvalue problem on overlapping domains 79151
field strength in elec. large building, pseudo-spectral time-domain algm. *(Chi nese)* 72307
film flicker removal, enhanced approach 106487
FIR adaptive interpolated filtering, simplified RLS algm. 119020
FIR filter for time delay estim. 107554
FIR fractional delay filter, optimal synthesis in reproducing kernel Hilbert space 73650
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
Fourier-wavelet vol. rendering by view interpolation 94495
FPD image interpolator with image improvement 132105
FPGA archit. for videowall image proc. 118173
fractional derivatives, splines and tomography 132787
freq. domain notch periodogram algm. 107574
freq.-domain Volterra kernels. ident. using interpol. scheme 114018
fuzzy interpolation with Cartesian representation and extensibility fns. 124649
fuzzy-assignment-based color interpolation algm. 94877
Galerkin trigonometric wavelet methods for natural boundary integral eqns. 68056
generalised K_N-convolution/fast Vandermonde transform, modulo arbitrary poly nomial reduction, algms./multiplicative complexity 118995
GoP MPEG video filtering and transm., frame selection algm. *(Chinese)* 118627
haemodynamic eval. with TURBO BRISK, phase contrast angiography 76473
HDTV ATSC 8-VSB modulator using digital methods *(Chinese)* 109366
head SAR due to mobile phones, interpolation/extrapolation 111221
Hermite bicubic element for eigenvalue problem of biharmonic eqn., conver gence/superconvergence 79016
Hermite interpolation by Pythagorean hodograph curves of degree seven 78998
high dimens. clustered data model-based interpolation 107021
high speed beamformer using TMS320C6201 DSP 110803
high-order scheme design, MPDE-aided method 114111
high-resoln. image reconstruction using hybrid evol. algm. *(English)* 84252
high-resoln. phantom for MRI 132730
higher order Whitney forms 67953
histogram-based probab. multihypothesis tracking, intens.-modulated sens. data 130134
homog. test based on empirical charact. fns. 114049
hybrid moment method-PO method improvement, PO operator eval. 128655
hybrid perceptual image proc. using interpolating wavelets 98162
hybrid time filter design in flexible systs., vibr. damping *(Chinese)* 125587
hyperspectral radiometry simul., SENSOR end-to-end simul. tool 122719
IF precision refl. coeff. meas., imped. calib. stds., interpolation 120627
IF precision refl. coeff. meas., imped. stds., calib., interpolation 120626
IIR comb filter, harmonic interf. removal, multirate method 107491
image codec, fast efficient computation of cubic-spline interpolation 73370

erpolation continued
image compression and visualization software environ., hierarchical grid interpolation 95019
image detail prediction 94651
image enlargement/reduction, lin.-phase FIR digital filter responses, visual eval. 73208
image interpolation, opt. flow based models 73275
image magnification using decimated orthogonal wavelet transform 94657
image proc., rational operators, noise smoothing and anisotropic diffusion 129574
image resoln. enhancement, adaptive algm. 106759
image superresolution, efficient wavelet-based algm. 94656
image VQ with degrad. control mechanism 129720
image zooming at fractional scaling ratio, adaptive low complexity algm. 118469
incomplete sig. reconstr. by nonlin. interpolation/genetic algm. 84706
incompressible NS eqns., first order press. stabilized FEM 124767
inductive cond. meas., model selection, parametric inversion 114497
init.-value discrete-delay systs., num. soln. 90141
integrated opt. posn. encoder syst. with phase calib. 75505
inter-mesurand compensation, optimized look-up table 109398
intermediate image interpolation using polyphase weighted median filters 118186
interrupted SAR 96932
ionos. limited area instantaneous maps generation 133302
IR/MMW automatic two-stage image registration algm. for concealed weapons detect. 118398
ISI-free FIR filterbank transceivers for freq.-selective channels 130121
iter. image reconstruction, efficient forward projection using tri-lin. interpolation 132512
Jacobi interpolation approxs., sing. DE appls. 124639
JPEG image denoising using fuzzy wavelets 118490
key generation method based on Lagrange polynomial interpolation formula *(Chinese)* 74297
Lagrange and av. interpolation over 3D anisotropic elements 114021
Laguerre models, optimal pole conditions satisfying interpolation constraints 129972
landmine under rough surface, IR signatures, diurnal cycle, simul. 76943
landmine/UXO detect., GPR/EMI/magnetometer sens. fusion 77020
large-scale/complex EMC problems soln. using method of moments 83362
lattice height data, crit. points extraction algm. 113756
LDD MOSFET, small geom. effects, semi-empirical model 126807
light point, real-time detect. and tracking *(Chinese)* 118372
lin. rational collocation method 114007
low quality camera images, binarisation method 129664
low-bit-rate video, nonlin. motion-compensated interpolation 106878
lung high-resoln. CT images, cardiac motion artifacts reduction *(Japanese)* 87745
LV motion, fast estim. using subspace approx. techs. 87664
M-band compactly supported orthogonal symmetric interpolating scaling fns. 95698
matrix-vector product for confluent Cauchy-like matrices for confluent rational interpolation 67989
max.-order-min.-support fns. 84277
MDAPET camera, missing projection data compensation 122230
med. data, 3D scalar, vector and tensor, non-rigid registration 87661
med. images, semi-automatic segmentation of 3D objs. 87705
med. imaging, spline interpolation and other convolution-based approaches 132511
meshless hypersingular boundary node method for 3D pot. theory and lin. elasticity problems 114149
meshless regular hybrid boundary node method 124735
microstrip lines on magnetized ferrites with arbitrarily oriented bias field, full-wave charactn. 69009
microwave cct., multivariate rational interpolation model 102593
missing block reconstruction in block coded image transm. 84510
mixed finite element modeling for dyn. of beam assemblages undergoing large overall motions in space 124740
mixed parab.-gradient systs. 79091
mobile radio, variant fading channel estimator with speed estim. 85677
mobile radio interf. cancellation, adaptive array algm. with spatial interpolation 131295
model-based interpolation of high-dimens. clustered data 95234
modes of convergence, interpolation methods 124625
MoM, grid-robust higher order vector basis fn. 83085
motion compensated de-interlacing for both real time video/still images 94688
MPEG spatial scalability improvement 96317
MPEG-2 error concealment, motion field estim. by vector rational and bilinear interpolation 118614
MPEG-4 FAP interpolation for facial animation at 70 bits/frame 129691
MRI, ANN reconstruction from noisy sparse images 76428
MRI, dyn. k-space sampling, temporal freq. anal. 76438
multi-slice CT, nonlin. helical reconstruction algm. 132789
multi-slit rangefinder develop. *(Japanese)* 84090
multi-stage power amp. module, large-sig. simul. 90772
multidimensional elastic image registration, spline appl. 94663
multidimensional interpolation and num. integrat. by BEM 114165
multilayered medium, overlying objs. EM scatt. 72213
multilevel fast multipole algm., translation matrix interpolation 105702
multimedia data recovery using inform. hiding 73408
multimodal image matching, local similarity measures, Shannon entropy 94963
multimodality med. image registration, mutual inform. based 76431
multipath fading channel, multifractal model *(Chinese)* 94219
multipath-fading channels, bandwidth-efficient pilot-sym.-aided tech. 108813
multiple-ref. temporal error concealment 106192
multirate systs., lin. phase FIR filter design based on fast convolution 130045
multiresolution approx. inverse preconditioner 100979
multiscreen FSS, reduced-order modeling using Krylov-based rational interpolation 83239
multistage secret sharing scheme based on factorization problem 106293
multistage sync. sampling rate converter, cascaded interpolators *(Japanese)* 114848
multivariate adaptive sampling, comput. EM anal. minimis., interpolation 102552
Mumford-Shah functional for image segmentation/denoising/interpolation/magnification 94779
MVDR beamformer for circ. arrays 107331
myocardial gated SPECT, nonparametic nonrigid registration 122243
N× image interpolator based on rational fns. 129483
natural images, edge-directed interpolation 118367

interpolation continued
natural neighbor coord. of points on surface 101004
NC machine tools multi-axis contouring error on transient state *(Japanese)* 67689
near-field sampling represent. of antenna radiated EM field over sphere 72451
neonatal heart rate time series, freq. domain methods 121897
noisy polynomial interpolation and noisy Chinese remaindering 106297
noncooperative demodulation, robust baud rate estimator 108558
nonlin. ccts. anal., Volterra series/piecewise const. interpolation 90668
nonlin. current-mode ccts., stat. anal. 114593
nonlin. image interpol. method for frame rate increase in multimedia and VR appls. 106844
nonlin. image interpolation through extended permutation filters 94563
nonlin. model for fn.-value multistep methods 101013
nonoverlapping domain decomp. method for stabilized finite element approxs. of Oseen eqns. 90176
nonuniform-to-uniform grid conversion using least-sq. splines 129955
opt. waveguide jns., full-vector anal., wavelet formulation finite-difference method 93129
optimal far-field interpolation, ellipsoidal source modeling 72449
optimal systs. of nodes for Lagrange interpolation on bounded intervals 114009
packet-switched commun. networks, speech sig. recovery 107670
panoramic annular lens, image lin. *(Chinese)* 84121
panoramic mosaicing with image interpolation 84355
parallel-perspective stereo mosaics 106553
partial shape preserving approx. by bivariate Hermite-Fejer polynomials 67969
partial shape preserving approxs. by bivariate Shepard operators 67968
picture error concealment interpolation algm. based on MMSE *(Chinese)* 73365
piecewise bicubic surface with shape params. 67967
piecewise polynomial interpolators, degree/support/regularity/order parametrization 94653
pipelined logarithmic no. syst. ALU, low power design 90872
pitch smoothing, pre-proc. method 129387
planar contour reconstruction, fractal algm. *(Chinese)* 94739
polynomial interpolation for implicitizing alg. curves 67960
polynomial interpolation on sphere 124638
polyphase interpolator for combined time-to-code convertors 76136
polyphase realisation of fractional sample rate converters 95712
power syst. freq. estim. in shortened meas. time, DFT interpolation 123071
prostate segmentation from 2D ultrasound images 110683
pseudo QMF banks, design 102381
pyramid texture compression/decompression using interpolative VQ 95175
quadratic B-spline surfaces, interpolation of vertices and normal vectors *(Chinese)* 78978
quadrature rule based on generalized mixed interpolation formula of exponential type 79008
quasi-interpolatory modified splines for sing. integral models 67924
radar imaging, fast multilevel domain decomp. algm. 75105
random procs., prediction and interpolation, guaranteed estim. algms. 84667
range restricted scatt. data interpolation using convex combination of cubic Bezier triangles 124578
rational interpolation examples in perform. anal. 114036
rational interpolation state space realization with prescribed poles 100985
ray shadowing by rough surface, probab. approx. through interpolation 83233
RCG ST-segment enhancement, wavelet interpolation filter 87421
rect. G^m-continuous filling surface patch and some improvements at corners 67956
refining triangle meshes by non-lin. subdivision 84226
region-based control points determ. for multivector motion description 95349
regular alg. curve segments, interactive design and data fitting 67955
reusable direct digital freq. synthesizers, VHDL-based design/design methodology 125585
rhythmogram spectral anal., cardiac rhythm pacemaker control model 98700
robot manipulators, motion control, visual servoing, path interpolation by homography decomp. 94732
root finding interpolation attack 129325
rotary encoder, digitally enhanced resoln. tech. 90997
sampling theorems, Nyquist and other methods 118853
SAR generalized inversion/ω-k algm. for runway imaging, comparison 96893
satellite images coding, real BCH codes as joint source/channel codes 73357
SAW periodic struct., FEM and Green's fn. anal. 116210
scintillation camera, bias free positioning estimators 132917
second order ellipt. problems, high accuracy sparse FEM 79119
second order IVP, Numerov type methods 114113
segmented sine wave DACs for freq. synthesizers 79995
separately-excited DC motor global speed control 112543
shape-preserving, multiscale interpolation by bi- and multivariate cubic L_1 splines 67961
sharpness preserving image enlargement based on ramp edge model 107215
sig. proc., nonparametric spectrum peak discrim. 129969
sig. reconstruction from multiscale edges, spline fn. interpolation 118840
single-CCD camera captured color images, multi-image resoln. enhancement 94822
single-chip CCD still cameras, color filter arrays interpolation 131995
Smolyak algm., fast calc. of coeffs. 67964
smooth distribs. reconstruction within unsmooth circumferences from limited views 132888
smooth integers for short intervals using CRT decoding 72811
smooth problem, finite element soln., superconvergence anal. 79155
software radio, sym. sync., MMSE interpolation *(Chinese)* 96373
sparse, regular, and planar graphs, complexity of counting 114017
speaker-independ. word recogn., piecewise lin. freq. warping *(Japanese)* 94416
spectral reprod. from scene to hardcopy, image proc. 94866
speech coding, low bit-rate, improved sinusoidal model based 94408
speech coding, VLBR, lin. inter-frame dependencies 94407
splines for sig. proc. 129462
stepped freq. radar, moving targets imaging 75187
stereo images, edge-preserving disparity estim./disparity-compensated intermediate view reconstruction 95239
stereo imaging, wavelet-based reconstruction of irregularly-sampled images 94650
stochastic proc. obs. with memory under anom. noise 73689
streamline-diffusion method for conforming/nonconforming finite elements 114155
structural dyn., advanced time-discontinuous Galerkin FEA method 79117
stylus profilometry, spiral sampling for fast DAQ 121193
subpixel accuracy analogue fast edge location meas. using CCD image 118729
subpixel edge detect. syst., dimens. meas., obj. localization, digital-based approaches 107277
subpixel interpolation and matching, empirical filter estim. 106643

interpolation continued
surfaces hierarchical representation and coding, 3D polygon meshes 95250
sym. timing recovery, optimal Farrow filter coeffs. 119109
sym. timing recovery scheme using two samples per sym., digital receiver 84805
synchronised motion using fieldbus-linked elec. drives 123890
temp. scale interpolation & transfer, 800-1600°C, meas. std. 75356
temporal bone, helical CT, image reconstruction algm. *(Japanese)* 98514
terrain mapping, slope-aspect, interpolated data 122606
tetrahedral C^m interpolation by rational fns. 79015
texture mapping by successive refinement 94648
thermographic diagnosis standardisation, data proc. method 76391
Thiele's interpolating continued fraction expansion, limiting case 100993
time depend. inhomog. elec. large opt. waveguide, interpolating wavelet Galerkin model 93139
time-varying recursive filters for decimation/interpolation 119008
tomographic images, multilevel domain decomp. algm. for fast reprojection 94682
transfinite interpolation over implicitly defined sets 67957
transform domain feature detect. and concealment algm. 106932
tree groups extraction from high-resoln. digital surface models 99051
trimming for subdivision surfaces 78992
twin laser sens. thickness meas. instrum. calib., isoline bilinear LUT 113743
two-field mixed variational principle for partially connected composite beams 114182
ultrasound transm. tomography, image reconstruction algm. adaptation 88215
uncertainty propag. with non-Lagrangian interpolation, ITS-90 appl. 75345
unit commitment determ., improved dyn. prog. method *(Chinese)* 111731
up/down conversion by sampling *(English)* 73585
US imaging, spatial deform., dual transducer approach 98274
Vandermonde determinants factoring, polynomial coeffs. 78745
variable fractional-delay FIR digital filters, discretization-free design 102408
VCSEL cct.-level models, mode overlap, compact representations 93715
vector fields/gray levels filling-in by joint interpolation 94782
VHDL-based implement. of area- and power-efficient filter archits. 114881
video coding, space-freq. block motion field modeling 73339
video coding, very low bitrate, mesh based 95215
video commun., multidimensional bit-rate control 106871
video data, real-time recursive motion segmentation 118608
video de-interlacing, nonlin. techs. 94689
view interpolation, perspective homotopy transform *(Chinese)* 106423
VLIW DSP vs. superscalar implement. of baseline 11.263 video encoder 106996
vol. computed tomography syst., misalignment, image reconstruction 98529
vortex patch problem, cubic spline approxs. 67935
Voxel Stuffing, vol. interpolation from cross-sectional images 98415
VQ with edge reconstruction 95495
VR using concentric mosaic, constr./rendering/data compression 95362
waveform interpolation speech coders, bit rate reduction 94399
wavelet based video frame interpolation 94860
wavelet filter bank with adaptive filter params. 119064
wavelet-based VLBR video coding using image warping/overlapped block motion compensation 73384
weighted Hilbert transform on real line, boundedness and uniform num. approx. 101137
weighted mean convergence of Lagrange interpolation for exponential wts. 90075
wideband smart antenna systs., freq. compensation, perform. anal. 128902
WOWA operator constr., fuzzy, shape preserving splines 78854
WOWA operator constr., fuzzy, using shape preserving splines 78853
X-ray mask, electron beam writing, image placement correction 126532
yarns tensile sigs. smoothing 73641
YGO3 for design of long Yagi arrays 128891
$Ga_xIn_{1-x}P$, band struct., order param. 69512
a-Si TFT LCD of SXGA class, universal controller, interpolation algm. 97730
Si high-force piezoresistive force sens., max. hysteresis error 86758

interpreters (program) *see program interpreters*

interpretive programs *see program interpreters*

interrupters
see also vacuum interrupters
chem. indust., cord-connected elec. equipt., safety initiatives 134693
dielec. voltage withstand high-pot. tester, safety-related features 86441
GBCB interrupting duty, DC component time const. effects 112687
metal-enclosed interrupter switchgear, IEEE Standard 123668
SOS diode nanosecond superdense-current interrupters 99419
three-phase group-operated AC power syst. switchgear, IEEE Standard 112684
three-phase power syst. supercond. fault current limiting interrupter 77602
$(BiPb)_2Sr_2Ca_{Cu_3}O_{10}$ HTSC three-phase fault current limiter 77605

interrupters, circuit *see circuit breakers*

interrupts
DCAP, async. superscalar archit. for exploiting instruction-level parallelism 79909
hardware design of net MUX, secure commun. *(Chinese)* 108495
HIP, hybrid interrupt-polling for network interface 130753

intersatellite links *see satellite links*

interstitials
300 mm wafers, RTP flash anneal ramp rate effect on lithog. overlay perform. 115482
CMOSFET, optimum halo struct. 115927
conf., Solid cpds. of transit. elements, Stresa, Italy (Apr. 2000) 89514
diamond:B/Al Schottky contacts, DLTS space charge spectrosc. 80906
insulator crysts., radiation-induced vacancy aggregation and opt. and scintillation props. 132394
PMOSFETs, 0.15-μm, B-interstitial clustering 115885
p-/n-(6H-)SiC:Al(N), intrinsic defects, electron irrad., Si displacement threshold, Frenkel pairs 69797
Bi_2Se_3:Fe, magnetoresist., SdH effect 80776
CdZnTe single crysts., growth conditions, defects 79158
Co/Si thin films, annealing, init. stage, dens. functional study 80974
$CuGaSe_2$ films/single crysts., struct./elec./opt. props. 126103
p-$CuInSe_2$:H, hydrogenation, cond. type conversion 103409
GaAs films, LT-MBE grown/As implanted, As precip. Ostwald ripening 126035
GaAs, low-temp. grown, enhanced intermixing in anion and cation sublattices 126293
GaAs:Se, ion implant., strain profile, Bragg-case sect. topography 69820
GaAs(001) layers, low-temp. MBE, excess As incorp. model 79230
Ga(In)NAs materials, MBE growth, annealing improved luminesc. efficiency 102998
GaInNAs/GaNAs QWs, MBE, struct./PL props. 124866
p-GaMnAs dil. mag. semicond., defects, first-principles study 116244
GaN:Be,H, Be doping, first-principles studies 91970

interstitials continued
GaN:H, NH_3-MBE, nuc. react. anal. 101244
p-GaN/Pd contacts, elec./microstruct. changes, surface treatment 69716
GaN(0001) clean/In-terminated surface, Be incorporation 81066
HgCdTe exposed to H_2/CH_4 plasma RIE, p-to-n type-conversion mechanisms 91674
InAs(P)(Sb) surface, nitridation, XPS anal. 103408
$In_{1-x}Cd_xSb$ films, prep., struct. & elec. props. 91627
NbN_x microwave diode contacts, interstitial phases 126644
SIMOX wafers, interstitial-type {311} planar defects, photolum. anal. 80656
Si, (311) defect dissolution, depth depend. 103269
Si, FZ growth, in situ electron irrad., extended defects, HREM 101155
p-Si, annealed 1.5 MeV B implanted, defects 103248
Si bipolar transistor, emitter diffusion depth, $TiSi_2$ form. 103792
Si, cryst. defect stabil., amorphization, mol.-dyn. simul. 91595
Si, interstitial kinetics during surface oxid., disloc. loop layer effect 81079
a-Si, ion beam induced epitaxial crystn., point defects role 80759
Si, ion implant., dopant diffusion, amorphization, atomistic modelling 91964
c-Si, ion implant., point defect diffusion and clustering 81003
Si, melt growth, defect form. procs., solid-liq. interface struct. *(Japanese)* 79178
Si surface oxid., interstitial injection rate and boundary condition anal. 115649
Si, thin film doping, point defects, react.-drift-diffusion eqn. 115614
Si, ultra low energy implants, interstitial defects, TED 115509
Si:Al,H, interstitial-type defect aggregations, H-enhanced self-organization 126000
Si:As(Ge), anom. P diffusion during postarsenic-implant. annealing 69823
Si:B, B-interstitial Si clusters, interstitial supersaturation, postimplantation annealing 102953
Si:B, laser thermal processed, annealing, B diffusion 115480
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91977
Si:B, ultra-low energy implant., damage, MEIS obs. 115511
Si:B(Sb), diffusion of B and Sb under influence of injected point defects 115492
Si:B,F implanted samples, TED reduction 115512
Si:B,Fe, ultrapure float-zoned samples, Fe trace levels detect., photolum. method 69468
Si:B,O,C, ion implanted, vacancy/interstitial depth profiles 69787
p-Si:Fe,B, Fe-B pairs, acceptor level, capture cross sects. 69498
Si:H, ion implant., nanocavity form. and defect interacts. 80657
Si:N, defect aggregation, N impact 81042
Si:O, CZ grown, interstitial O concs., point defect pop. 102974
Si:O, CZ growth, defects, simul. 124779
Si:O, O precip., RTA effects 80638
Si:P,Pt, n-type/p-type conversion, applied cooling rate depend. 91576
Si(100) stepped surface, implant-induced erosion, mol. dyn. study 69805
SiC:B epitaxial layer, diffusion 69795
SiC:B related defects, struct./kinetics, ab initio method 69592
SiC:H, 4H, H_2 conc., theoretical approach, vacancy-hydrogen complex 69588
SiC:N^+,Al^+ buried layer implant., interstitial diffusion, internal stress effects 69816
SiC:Si (Au), recoils, primary damage states, MDM, expt. study 69821
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
SiGe:B(Sb), diffusion of B and Sb under influence of injected point defects 115492
$Si_{1-x-y}Ge_xC_y$, B TED 91980
TiB_x microwave diode contacts, interstitial phases 126644
TiN_x microwave diode contacts, interstitial phases 126644
TiO_x films, vac. arc deposition/implant. growth, ion energy effects 79403
ZnO, native defect energetics, first-principles plane-wave pseudopot. calcs. 91636
ZnO sputtered films, struct. and UV photolum. obs. *(Chinese)* 126053
ZnSe:N, implanted defect props., β-NMR obs. 91650
ZnSe:Te,O semicond. scintillators behavior under high doses of ionizing radiation 132415
ZrB_x microwave diode contacts, interstitial phases 126644

intersymbol interference
adaptive array proc. for multipath fading mitigation via filter banks 73653
adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sigs. 107690
adaptive spatial/temporal optimal receiver using adaptive array antenna 85869
all-digital impulse radio for MUI/ISI-resilient multiuser commun. over freq.-selective multipath channels 108673
automatic channel equalization, digital data transm., embedded fuzzy control 96342
AWGN channels, joint turbo and modulated code encoding decoding 129215
baseband transm. systs., BER estim. formulae 96010
BCJR-type reduced-state algms. 72878
BFDM/OQAM systs. based on biorthogonal modulated filter banks, design 73776
blind adaptive phase offset correction 73833
blind equalization by parallel Bayesian DFE 84852
blind ISI/MAI cancellation based on periodically time-varying transm. power 95817
blind MAI suppression, inform.-theoretic approach 119221
blind multiuser interf. cancellation, max. likelihood approach 72364
blind nonlin. channel ident., constrained hybrid GA 119176
blind sig. proc. algm. for decorrelation and channel equalization 108928
blind source separation and sig. class. 107400
blind turbo equalization in Gaussian and impulsive noise 107683
broadband mobile commun., beam and null simultaneous steering S/T-equalizer 108880
broadband mobile radio, joint spatial/temporal equalizer 85829
broadband wireless commun., transmit/receive spatial MUX 131199
CA-CDMA, channel adapted CDMA for MAI/ISI free burst transm. 84912
CDMA, improved multistage parallel interf. cancellation for multipath fading channels 85529
CDMA asynchronous multicarrier syst., partial sampling MMSE interf. suppression 105805
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA multi-carrier syst. with virtual carriers over dispersive channels, subspace based blind detector 107600
CDMA variable spreading-factor systs., multipath multiuser detect. 119978
channel, precoder effect on serially concatenated coding systs. 94295
channels, reduced-complexity receiver capacity 118003
channels, time-recursive max. likelihood based seq. estim. 105812
convolutional codes concatenation with ISI channels, precoder design 83937
CPM waveform, post-distortion ang. equalizer appl. 107685
digital cellular radio, optimum combining diversity finite-length DFE 119967
digital holographic opt. memory syst., hybrid error correction coding 93021
digital radio transm., multipath propag., perform. eval. 83337

tersymbol interference continued
dispersion-managed soliton commun. with chirped fiber gratings, group-delay ripples 93866
dispersion-managed WDM syst., strong patterning effects, BER, num. eval. 120117
diversity detect. receiver, polaris. mode dispersion mitigation 131401
DMT optimal ISI-free transceivers for distorted channels with colored noise 128985
DMT transceivers, near-optimum channel shortening, matrix multiplication methods 107678
DMT with insufficient cyclic prefix, channel equalization 107697
DMT/OFDM modulation on twisted pair cables, guard interval reduction by impulse compression 72771
DS-CDMA, ESPAR antenna-based sig. proc. for sig. waveforms in ad hoc network systs. 85523
DS-CDMA blind asynchronous multiuser receivers, ISI channels 107752
DS-CDMA commun., space-time multiuser detect. in Rician fading channels 108723
DS-CDMA downlink transm., spatio-temporal array proc. 107390
DS-CDMA systs., two-stage CMA blind multiuser detect. in multipath fading 131235
DS-CDMA systs. uplink, multiple user max. likelihood code-timing acquisition 85805
DSL systs., multi-user precoding for crosstalk cancellation 106144
EDGE mobile radio syst., space-time coding 85670
enhanced Godard blind equalizer based on transient phase anal. 73843
equalization, digital channel, by alg. perceptron 119179
equalizers for sparse channels, perform. 107704
event error control codes, appls. 117946
fading dispersive channels, low-complexity commun. bandwidth expansion 131055
fast data transm. ISI removal, adaptive digital filter 130257
FDMA-based multiuser transmit optim. for broadcast channels 84901
FDTL-spatial/MLSE temporal equalizers in CCI, link-level simul. results 108891
FIR DFE for wireless data commun., fast optim. 73841
FIR filter bank transceivers with effective band separation 130055
FIR filterbank transceivers for freq.-selective channels 130121
freq.-selective fading channels, space-time block-coded multiple access 85719
fully digital timing recovery scheme using two samples per sym. 84805
FWM wavelength converting SOAs 93759
high speed link, 2 GB/s differential simult. bi-directional I/O cell 119856
high-dens. mag. recordings, neural net based bit-detect. 104530
high-speed data transm. syst. with modulo-type preequalization, perform. eval. 108648
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
in-house IR wireless commun., very high bit rates 86122
IR wireless commun., PM 75063
ISI-free pulse better than Nyquist pulse for same excess bandwidth 117869
iter. DFE for coded ISI channels *(Chinese)* 130264
iter. equalization and decoding, hybrid equalization strategies 129216
land mobile to mobile channel, differential detect. 131125
LEO satellite networks, simulcast-based DCA for unicast/multicast commun. 96616
low-complexity turbo-equalization for diversity channels 72932
M-ary ISI-corrupted PAM sig. detect., DFE using multiple-hyperplane partitioning 73839
M-PSK sigs., cost fn. for blind estim. 95804
mag. recording, decision feedback and partial response detectors, timing sensitivity 70523
MC-CDMA over dispersive channel, subspace based detect. 84782
MIMO blind deconvolution, cumulant-based inverse filter criteria, props./algms./appl. to DS/CDMA systs. 84853
MIMO blind equalization, blind source separation and fractional sampling 84872
MIMO finite-length DFE for space-time block-coded sigs. over multipath-fading channels 107684
MPSK, coherent, multichannel reception over freq. selective fading channels, perform. eval. 106045
multi-carrier DS CDMA, multi-rate traffic, BER anal. 95838
multi-mode fiber transm. syst., multi-path effects, adaptive equalization approach 96723
multibeam interf. canceller based on order extended fast algms. 83393
multichannel blind source separation and blind equalization using fractional sampling 107724
multipath channel param. determ. using wavelet decomp. 84813
multipath fading channel, turbo coded modulation, error perform. bound 106060
narrow-band multiuser systs., min.-error-probab. single-user detect. 83407
noisy channels, max. throughput loss due to narrowband interf. 84811
non-zero dispersion-shifted fiber commun. using phase-sensitive amps., perform. 109100
noncoherent LMS algm. for noncoherent seq. estim. 73830
noncoherent seq. estim. combined with noncoherent adaptive channel estim. *(English)* 107719
nonuniform filterbank struct. for channel precoding 95668
Nyquist DMSK for min. BER 106027
OFDM channel independent precoded systs. robust to spectral null channels 83825
OFDM layered space-time coded wideband archit. for dispersive wireless links 128977
OFDM mobile systs., receive diversity 96434
OFDM-OQAM conjug. syst., filter design 106019
OOK CDMA indoor IR wireless systs. on diffuse channel, perform. anal. 86124
opt. preamplified NRZ receivers, optimum filter bandwidths 120141
opt. preamplified receivers, perform. eval., Gaussian approach 96691
PCC-OFDM with overlapping sym. periods in multipath channel, perform. 73772
perfect-reconstruction cosine-modulated filter banks, coeff. quantization 119067
precoded VBR multiuser systs., blind channel estim. 108614
precoded/vector OFDM, channel spectral nulls robustness, reduced cyclic prefix length 106013
rigorous WDM receiver model, noise correl. 96813
room impulse response simul., scalable C40 multi-DSP syst. 108588
RZ opt. receiver amplit./phase margins, normal dispersion fiber Kerr nonlin. 131424
satellite nonlin. digital link, PSK modulation, blind equalization 96619
SC/MMSE ISI iter. equalizers, matched filter approx. 95810
SCDMA systs. over multipath fading channels, blind fractal sig. estim. 96566
self-timed Viterbi decoder, low power, convolutional FEC codes, ISI 83837
serially concatenated convolutional codes, iter. decoding in multipath Rayleigh fading environ. 72818

intersymbol interference continued
SFH SS commun., equalization/decoding 108674
sig.-depend. media noise mag. recording channels, decision feedback equalization 116465
single-chip Q-VLMS MLSE equaliser LSI, 100 Mbit/s, TDMA mobile radio 108653
slowest descent method and appl. to seq. estim. 119183
SOA, perform. depend. on pump and sig. power of wavelength converter based on FWM 105282
subband arrays, perform. anal. 117854
sym. error probab. bounds for ISI-like channels 128916
TCM, iter. space-time detect. for broadband wireless channels 85522
TCM for wireless ISI channels, soft detect. of modified phase precoding 108551
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
TCM with receiver diversity, turbo space-time equalization, max.-likelihood detect. 107694
TDD-CDMA receivers, Bayesian multistage interf. canceller for multiuser detect. 105799
TDMA systs., lin./nonlin. space diversity combining algms. 119993
TDMA/CDMA 3G systs., multirate transm. receivers 74660
time-varying channels with DPSK inputs, blind DFE 84857
transparent multiwavelength opt. network error probab., opt. MUX/DEMUX 131596
trellis coded M-ary 1RC CPM with lin. receiver/pre-coding, perform. 106028
turbo equalization, jointly optimized adaptive equalization/channel decoding 107717
underwater acoustic commun. using phase conjug. 120395
uniformly loaded PCB transm. lines, time jitter eqn. of NRZ sigs. 117725
unknown data channels, nonlin. blind-deconvolution 85656
W-CDMA mobile radio systs., sectorized space-time multiuser detect. 84794
W-CDMA uplink, blind channel estim. and multiuser detect. 73850
wavelet based multichannel commun. systs., satellite and fading commun. channels 106024
wideband DS/CDMA commun., combined space-time multiuser receivers 96519
wireless mobile systs. with ISI and CCI, spatial-temporal proc. 96520
wireless networks, integrated services with space-time block-coded transms. 108612
WLAN, SS syst., SAW filter, chirp $\pi/4$-DQPSK modulation 96384

intersystem crossing *see nonradiative transitions*

intramolecular vibrations *see vibrational modes; vibrational states*

intranets
ACLA framework for access control list anal. and optim. 119707
act. server pages tech., accessing real-time data in Internet/Intranet, on-line monitoring *(Chinese)* 77727
acute care hospitals, technol. transfer, survey design and data collection, Internet/intranet usage and impact meas. 98842
anonymous packet tracing to approx. source 108124
buffered networks, tight bounds for tail of packet waiting time distrib. 130317
busbar layout, CSCW syst. using VRML *(Chinese)* 100501
CEA-851 versatile home network, inter-cluster connectivity backbone 119608
closed commun. group for intranet, dyn. proc. resoln. protocol *(Japanese)* 74193
department VPN, multicast commun. method 74185
DIS, high-level real-time extension 130874
distributed security schemes for networks 83947
eClips, new pers. multimedia delivery service 108396
electric distributed object management, power market mgt. software, DCOM technol. *(Chinese)* 77171
enterprise IS, Internet technols. for data access 85268
event data, scalable visualization 96172
features and implementation of intranet services 130854
IEEE 1451 smart transducer interface archit., sens. networking 74288
Internet multimedia audio/video services using streaming techs. *(German)* 96215
Intranet Health Clinic, Web-based med. support services employing XML 111270
law firms, intranet develop. 74192
law schools and legal practice, intranets supporting organisational work 74191
learning environ., integrated with campus IS 119610
M²RT algm., tool for Internet commun. channels mean message response time prediction 108237
med. IS, WWW-based, for collaboration between rural clinics and central hospital *(Japanese)* 76785
Microsoft Personal Web Server in LAN *(Polish)* 130652
mobile IP support in act. networking environ. 96085
multimedia content distrib. to bal. QoS and cost 96265
multimedia satellite networks and TCP/IP traffic transport 84943
multimedia streaming services, TMO structuring scheme 74446
off-the-record email syst. 119520
PACS images, cable modem access using Web browser over Internet 98848
power network, electricity dispatch automation syst. based on Intranet *(Chinese)* 77168
private virtual reconfigurable network, authentication 74356
QoS routing in intranet, link state updating influence on perform. and cost 119393
regional geoinformational syst., aerospace image proc., intranet network 99043
SCADA/PAS/DTS integrat. graphic support syst. *(Chinese)* 77262
secure rem. access from office to home 130636
smart radio, community based music radio 85381
substation engng. and maint. intranet syst., PC based appls. 78093
substation protection/control, intranet-based meas./monitoring 78069
survivable intranet IS based on opt. fiber WAN *(Japanese)* 74370
TCP/IP in commun. systs. 108399
UK substation inform. project, field experience with Internet technols. 78071
UMTS mobile intranets 108373
VoIP private intranets for crit. commun. 119505
VPN, confidentiality on public networks 74183
VPN, planning framework 96123

intrinsic magnetisation *see spontaneous magnetisation*

intrusion detectors *see safety systems*

intuitionistic logic *see formal logic*

invariance
2D gray-level obj. recogn. using shape-specific points 95478
3D texture anal., invariant feature extraction, autocorrelation fn. 94477
arbitrary-shape extraction, ambiguities resoln., Hough transform appl. 129838
canonical fuzzy measure on (0, 1) 100856
confidence and curvature estim. of curvilinear struct. in 3-D 106617
dolphin photo-ident., invariant models, eval. 107298

invariance continued
Fourier holography, alg. foundation 72093
incoherent opt. systs., depth of focus, image encoding/decoding *(Chinese)* 84376
interact. Brownian motions, tagged particles, skew symmetric drifts 78814
multi-atom microlaser, stable photon source, subPoissonian stats. 127809
nonrigid image registration, symmetrization using inversion-invariant energies, appl. to multiple sclerosis 84112
obj. recogn., modular neural network 118671
planar manipulator, globally convergent vision-based posn. controller, adaptive visual servoing problem 97373
pose estim., shape extraction, Hough transform invariance 129847
queueing network with string transits., invariant measure 124473
robot self-localization, image-based, zero phase representation in panoramic images 94572
rot. scale-invariant EM fields 105658
sig. filtering and shift invariant anal. using complex wavelets 84735
single-mode gas laser, asymmetric limit cycle bistability 82941
$LiTaO_3$ stoichiometric photorefractvie cryst. multichannel correlator 82053

inventory control *see stock control*

inverse Nyquist diagrams *see Nyquist diagrams*

inverse photoemission spectra
SiC(111) growth by C_{60} decomp. on Si(111), electron spectroscopies 114269

inverse problems
1D cond. reconstruction from dual-loop EM data 122561
1D large apertures, narrow-waisted Gaussian beam discretization for short-pulse radiation 117648
1D time domain inverse scatt., optim. approach with edge-preserving regularization 128754
2D gravity interp., ANN appl. 122597
2D inverse filtering of opt. images, noise suppression 118363
2D inverse problems with appls. to supercond. mag. energy storage and microgravity 117618
2D scatterers, microwave imaging by inverting scatt. near-field meas. 73306
2D target shape estim. in nonlin. inverse scatt., pass. radar appl. 86174
2D time-harmonic scatt. by moderately rough interfaces, quasi-ray Gaussian beam algm. 117647
2D-emission tomography prob., approx. inverse algm., regularization 76528
3D dielec. body reconstruction using unrelated illum. method 94003
3D dielec. obj. image reconstruction using gradient-based optim. 83259
4D self-pot. tomography in near-surface geophys. exploration 88167
additive inverse eigenvalue problem, solvability *(Chinese)* 124672
alloy surface layer charactn., magnetometric eddy current sens. 101634
analog image transm. enhancement using digital side inform., wavelet-based image coding paradigm 107054
Arcangeli's discrepancy principle, modified projection scheme for ill-posed problems 100972
azimuthally anisotropic layered Earth, MT data inversion 122559
band-limited sig. prob., regularisation, Malvar-Wilson wavelets 129980
Bayer pattern images, saturation-based adaptive inverse gradient interpolation 94864
beam-plasma systs., wave spectrum dyn. 83351
bias-resoln.-variance tradeoffs for single pixel estim. tasks 132515
biomag. inverse field problem, extended sources reconstruction techs. 87457
biomag. inverse field problem, min. norm estims. multi-channel-SQUID sens. 121981
biomedical optics/photonics trends, conf., Miami Beach, FL, USA (Apr. 2000) 100430
blind inverse gamma correction 118321
bone, cancellous and cortical, imaging by US refl. tomography 122031
borehole induction meas., hybrid FFHT-EBA method, inverse algm. 88104
brachytherapy source localization, 3D tomosynthetic image restoration 110941
brain elec. tomography, alg. reconstruction techs., Tikhonov regularisation 98207
branched tube systs., param. estim. *(English)* 73003
building materials, in-situ characterisation 80157
buried imperfectly cond. cylinder, image reconstr. freq. depend. 107225
Burrows-Wheeler transform, space-time tradeoffs 106181
cardiac activation site orig. localisation, model-based ECG imaging 76294
cardiac activation time imaging, nonlin. ill-posed problem, iter. lin. optim. 121917
cardiac elec. activity imaging and 3D visualization 110635
cardiac elec. field simul., noninvasive diagnosis aid 98236
cardiac electrophysiology, noninvasive imaging 98239
CDMA cellular syst., data traffic, truncated channel inversion based uplink power control 96507
chaotic commun., inverse syst. approach 94246
closed planar curves, regularized autoregressive spectral estim. 107358
coastal water quality, multiparam. inversion, hyperspectral anal. 99010
coda-envelope-inversion tech. devel. 98941
complex refr.-index profile of fiber optics 71301
composite mater. elastic moduli, Lamb wave vel., contactless method 114489
composite plate NDT, Lamb & SH waves, air-coupled US transducers 90601
computational tomography, nonlin. filtering, photon diffusion 87714
conducting material defect profile ident., HTS-SQUID gradiometer use 101573
conducting plates, hole localization, fuzzy neural approach, noninvasive eddy current meas. 125143
cone with long. slots, plane EM waves scatt. 83229
conf., Bayesian inference/max. entropy methods, Gif-sur-Yvette, France (Jul. 2000) 100410
conf., computational acoustics, Rome, Italy (1999) 100384
contrast enhanced opt. tomography, gradient-based nonlin. optim. methods 106495
control theory, interactor matrix simple derivation/appls. *(Japanese)* 78746
cortical imaging, finite-element-based cortex pot. estim. 76237
cortical rhythms related to voluntary movements, EEG/fMR integrat. 76271
cortical source imaging from EEG, spatial filters, simul. study 98208
DC-DC converters, reson., fuzzy control 134324
DCT quadtree-based coding, rate-complexity-distortion optim. 95379
DFT, basis fn. truncation effects 94511
DFT, decomp., spectral anal. 107416
dielec. cylinders inverse scatt., RBF NNs 128759
dielec. permitt. at microwave freqs. using eigenvalue problem 72432
dielec. plate, complex permitt. meas., finite element anal., inverse problem 117738
differential TR eddy current test probe, crack shape reconstr. 101612
diffuse opt. tomography inverse problem, admissible soln. approach 110844
diffusion-wave laser photothermal radiometric diagnostics for NDE/NDT 90603
diversity systs. over generalized fading channels, av. outage duration 85483

inverse problems continued
DS-CDMA asynchronous sigs. in multipath channels, blind detect. using code constrained inverse filter criterion 84776
DS-CDMA asynchronous systs., sigs. blind detect. 107771
DWDM fibre gratings, new generation device design 96796
dyn. 3D shape meas. by FT profilometry 121187
dyn. prog., envelope theorems 100945
ECG/MCG spatiotemporal anal., current dens. estim., forward model 110619
eddy current NDT, sig. restoration, neural network model 125152
eddy current testing, crack recogn., inverse neural model 125150
eddy current testing, multi-freq. excitation spectrogram method, BEM 101593
EEG & MEG problem soln. using elec. impedance tomography 87431
EEG beta event-related sync. after tactile finger stimulation *(English)* 87433
EEG imaging, equiv. dipole layer, parametric projection filter 76236
EEG source estim., dipole distrib. model 76260
EEG-/MEG-data, spatio-temporal current dens. reconstruction 76324
EEGs, multi-sources, multi-dimens. delay-correl. MUSIC *(Chinese)* 87436
EIT, elec. impedance tomography, applied- and induced-current, multiprocesso systs. 110622
EIT algms. modif. using pipeline multiprocessor algm. 110973
elec. capacitance tomography, image reconstruction algm. 97780
elec. cond. meas., param. distrib. reconstruction 97781
elec. impedance proc. tomography, internal struct./electrodes model 109924
elec. impedance tomography, inverse immersed interface anal. 132127
elec. impedance tomography inverse problem, dual reciprocity BEM 132125
electromagnetism, inverse problems and optim., conf., Torino, Italy (2000) 113191
EM device design, use of ANN inverse mapping tech. 128703
EM devices, Tabu search for global optim. 128700
EM induction exploration, very early time, 3D imaging 88113
epileptic focus/mirror, param. estim. with MEG by computer simul. *(Chinese)* 110670
ESD, radiated mag. fields meas. using field sens. 75829
filters for arbitrarily focused image reconstruction from two differently focused images 84295
first-order bandpass sampling theory, spectral arrangement/other topics 73596
fn. MRI sigs., source separation, Bayesian stats. 107590
free-space imaging with act. microwave tomographic syst. 79485
Gaussian RBF expansions, scaled simplicial approx. for inversion 90098
geoacoustic param. estim., cross-rel. matched field inversion 122700
geoelectric exploration, dc resist., dual-grid inversion 122584
geophys., EM 3D modelling, nonlin. inversion 122566
geophys., EM induction, nonlin. inverse methods 88115
geophys., EM induction inverse scatt., 2D profiling 88114
geophys., MT automatic 1D inversion 122565
geophys. EM exploration, inversion methods 122589
geophys. prospecting by fiber-coupled THz receiver antennas 132147
GPR imaging of land mines, inverse problem soln. 77088
GPS/MET bending angle obs., optimal estim. inverse method appl. 122679
gradient-based iter. reconstruction schemes for opt. tomography 76386
gravity inversion using convexity constraint 88093
gray-scale images, straight lines detect. through regularized Hough transform 94955
ground surface image reconstruction using radio ground waves 111381
ground-penetrating radars, inversion procedure 86142
groundwater flow, elec. self-pot. anoms., analytic solns. 88106
HADES-CCG tomographic reconstr. tool, X-ray & neutron radiography 101616
head models with homog./inhomog. cond., pseudo-cond. values 87384
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
hidden ferrous 3D objs., ident., finite elements, eddy currents and magnetisation 117639
high-resoln. EEG, realistic geom. spline Laplacian estim. tech. 98189
ident. problems in EM, effects of dyn. info. 128639
IFS models, inverse fractal problem, hybrid evolutive-genetic strategy 94571
image inverse halftoning, look-up table method 118371
image matching, iter. multigrid regularization tech. 129867
image restoration based on autocorrelation fns., regularization methods 94745
incompressible shear vibr. elastography for tissue charactn., Helmholtz inversion 110813
index reconstruction, resoln. improvement, total var. min. 106694
inductive cond. meas., model selection, parametric inversion 114497
infinitely long conducting circ. cylinder, Gaussian beam far field scatt. 82722
inhomog. planar boundary beyond layered media, surface impedance 117661
intens. modulated radiotherapy, inverse planning, ridge fns. 133131
intens. modulated radiotherapy optimisation, recursive algm. 98696
intens. modulation radiotherapy, treatment planning optimisation 133020
intens.-modulated radiation therapy, inverse planning algms. 111088
interaural time/intens. disparities responses, differences between N1 wave 76286
interdigital dielectrometry sens., inverse param. estim. algms. 109514
inversion approxs. for fns. via s-power series 114012
ionos., electron dens. profiles determ. from oblique ionograms 133312
ionos. 3D struct., ionogram inversion, modular NN approach 133300
ionos. tomography generalization on diverse data sources 133306
ITER tokamak, magnetostatic reconstr., optimal probe placement 86919
JPEG 2000 decompression tuning perform. via rounding, theory/practice 106944
JPEG bitstreams, embedded binary data extraction using std. JPEG decoder 95064
JPEG quantization table, bitmap compression hist. ident., MLE 95088
land-mines, plastic, PDFT algm. for data eval. 128758
landmine detect., EM induction imaging, modelling 77018
landmine detect., multimode subsurface sens. & imaging 88226
layered biological media, electrode array excitation model 133078
LF act. sonar syst., non-Rayleigh reverberation, McDaniel model 109308
lightning return stroke ident., field-based inverse algm. 83092
lightning return strokes, differing height, ident., field-based inverse algm 117603
lightning return strokes inverse ident. procedure 83096
limb sounder radiometry, atm. obs. inversion using NNs 133316
lin. composite materials, inverse homogenization problem, EM constitutive props. 72155
lin. filters under PSD stabilization, optim. 118320
lin. integral eqns., weakly stable method 101109
lin. syst. noise effect reduction, coherence fn. in deconvolution 119009
line source antenna, generalized Gaussian quadrature appl. to inverse problem 105851
liq. complex permitt. meas., wide bandwidth, CPW cells 121166
liq./vap. two-phase flow visualization, elec. impedance tomography 132230
low dose area, nonlin. cell resp., radiation-ind. effects form. stats. 122404
LW sound wave CT, prior distribs. subspace projection algm. 98279

erse problems continued
mag. field ident. by charged projectiles data 117624
magnetostrictive actuator, approx. inversion of hysteresis 81924
many-valued fn. approx. by neural network 79022
marine boundary layer wind, inverse method soln. 76895
MEG, 3D meas., multiple sources estim. 132590
MEG, min. var. beamformers, synthetic aperture magnetometry, MUSIC 110668
MEG multipolar modelling of distributed sources, RAP-MUSIC 110669
MEG vector beamformer tech., neural sources activities reconstruction 87465
MEG/EEG inverse problem, spatial-temporal Bayesian inference 110667
MEG/EEG source imaging, ill-posed problem, multiresoln. approach 121960
membrane mask distortion/correction 103501
mesoscopic elec. ccts., commutation rels., Coulomb blockade 70222
mesoscopic struct., photons and electrons, opt. commun. appl. 131352
micromultileaf collimator, intens.-modulated radiosurgery/radiotherapy 111084
microwave imaging, inversion of scatt. near-field meas. 129432
microwave imaging applied to rem. sens. using multilevel fast multipole algm. 75127
microwave imaging inverse scatt., neural net approach 72295
microwave near-field subsurface radiothermometry 97873
microwave nondestructive eval., global optim. tech. 121169
microwave structs., reconstruct. procedure using 2D inverse TLM method 91223
microwave tomographic reconstruction, inverse scatt. problem 129650
MIMO blind deconvolution, cumulant-based inverse filter criteria, props./algms./appl. to DS/CDMA systs. 84853
MIMO channels, polynomial ambiguity resistant precoders, blind identifiability 106162
mine detect., 2D and 1D approaches comparison 77119
mixed spectra, regularized estim. using circ. Gibbs-Markov model 118844
ML sig. restoration multiplicative algms. with non-negativity constraints 73623
moist tropos. radio occultation sigs. modeling/inversion 76889
MPEG video streams, spatial SS watermark detect. 95057
MPEG-4 facial animation syst., audio-to-visual conversion 118590
multi-DOF meas. syst. for milli-struct., diffr. grating, kinematic anal. 121222
multi-freq. eddy current test, flaw reconstr., dyn. neural net models 101597
multi-inform. array inversion using variational Born iter. method 76845
multicast networks, efficient importance sampling, Monte Carlo simul. 119116
multichannel sound reprod. syst. using min.-norm-soln. in freq. domain *(Japanese)* 86351
multiple conductors, EM wave scatt., image reconstruction 94025
multiple vector min. search, inverse logical convolution 100917
multiplicative inverses, cryptographic appls. 83967
MUSIC lin. sampling algm., weakly scatt. targets, self-adjoint matrix 107363
neural net-based crack param., wavelet preproc. MFL sig. 101595
neural networks, Bayesian techs., review and case studies 118860
non-cooperative target recogn. using radar scatt. subspace fitting anal. 131632
noniterative lin. least-sq. error method for inverse problems 114019
nonlin. and lin. ill-posed problems, inverse problems and their regularization 78772
nonlin. distorted sig. reconstr., regularised inverse characts. 129986
nonuniformly coupled transm. line filters, design method 80025
num. reconstruction of internal states by boundary meas. for Laplace eqn. 101107
obj.-based reconstruction using coupled tomographic flows 94681
ocean waves, directional spectra, SAR inversion 88172
OFDM syst., alias-free subband adaptive equalizer 107710
oil reservoir charactn. & monitoring using EM geophys. tech. 88098
opt. coating design, integral refr. coeff. method 116898
opt. diagnosis, pre-computed Monte Carlo results, real time transform. 87540
opt. radiation intens. space distrib. meas., thermal method 86999
opt. waveguides, shape optim., inverse problem techs. 104718
optimal US focusing, spatio-temporal inverse-filter, med. appls. 99101
Orchard-Elliott pattern synthesis algm. 105924
parallel perfectly conducting cylinders microwave imaging 94042
particle size determ., multiple-light-scatt. conditions, light-transmittance predictions, inverse problem 75855
particle size meas., laser scatt. tech., projection iter. algm. 121206
pass. rem. image sens. by Hopfield neural net, syst. fusion 84132
pattern recogn. algms. based on space-filling curves/orthogonal expansions 84595
PCB, multi-layered current eval., least sq. method *(Japanese)* 101603
perfectly conducting cylinder, UHF/SHF inverse scatt. 128778
perfectly conducting cylindrical struct., EM scatt. 94001
permitt. and loss factor eval. of material in cavity, inverse tech. 81636
permitt. profile retrieval 127138
photon/proton intens.-modulated radiation therapy, inverse planning 111082
pipes in service 2D/3D X-ray image restoration, wall thickness meas. 100643
planar opt. waveguide, nanometer surface roughness determ. 82126
plastic landmine detect., GPR imaging, permitt. contrast, curve evol. 77099
PO multifrequency scatt. fields, shape reconstruction via SVD 117649
power syst. neural network inverse control scheme *(Chinese)* 77231
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
punctured recursive convolutional encoders and appl. in turbo codes 117930
radar imaging, high resoln., 2D data extrapolation using AR lattice modelling 131640
radar meas., model-based inversion of rough soil surface params. 76836
radar target ident. using 1D scatt. centres 131641
radiotherapy, inverse planning, min. norm approach 98697
radiotherapy inverse problem, hybrid optimisation approach 98695
rect. tight crack reconstr., eddy current impedance change 101613
ref. plates absol. calib. for surface interferometric inspection 86392
resist. spot welding of metals, elastic props., US NDE 114510
return stroke current ident., inverse procedure 72169
right atrium, noncontact/contact probe electrograms 87383
robust location problems with pos/neg wts. on tree 113926
rough surface underground imaging, stat. approach 96896
roundness/radial motion meas. using inverse matrix three-point method *(Japanese)* 97810
sample normalization 67771
SAR generalized inversion/ω-k algm. for runway imaging, comparison 96893
SAR imaging using stat. orthogonality 75123
satellite image deconvolution using complex wavelet packets 94953
satellite image joint denoising/deblurring, spatio-freq. noise distrib., priori 94946
scalar 2D inverse scatt. problems, degree of nonlin. 94015
scalp pot. fast comput., EEG forward problem, BP ANN 87398
scatterometry, optimal meas. config. 84103
seabed geoacoustic param. inversion, adaptive hybrid algm. 111444
seismic sig./coherent noise separation, migration filtering 122564
self-pot. anoms., CW transform 88107
SFCW radar, stratified dielec. medium, microwave imaging 86916

inverse problems continued
short period/long period fiber grating synthesis, Gel'fand-Levitan-Marchenko inverse scatt. method 104632
soil moisture inversion, neural network based 88163
soliton radiation in anom. dispersive opt. fiber 93851
steam generator tube flaws, eddy current sig., ANN inversion 101598
stochastic microwave imaging in NDT, GA-based iter. procedure 101577
subsurface radar, EM inversion, distorted Born approx. 111388
supercond. cables, current distrib., mag. field probes location 77426
surface electrophysical params., sync. fluct. of waves, optimum-estim. algms. 72245
surface/three-component borehole mag. data, joint inversion 122563
T-invariant causal lin. syst., anal. continuation, Kramers-Kronig anal. 130075
task complementarity, min. entropy, max. likelihood anal. 105993
thermoacoustic tomography inverse problem, minimization 98262
three-layer earth model, Wenner four-probe test data 133779
three-level rectifiers, PWM method for input-current harmonics control 134173
THz reflectometry, reflectance meas., inverse problem model syst. 97798
Tikhonov generalized regularized lin. inverse problems, regularization param. selection 84293
time delay estim. using sig. subspace model 107395
time-domain equiv. edge currents for transient scatt. 72232
time-resolved acoustic microscopy, elastic prop. meas., inverse algm. 114496
time-varying elec. impedance tomography image reconstr., EKF 109925
tomographic reconstruction of homog. objs. using multi-step ART 98318
transionospheric sounding, 2D spatial reconstruction, inverse problem 99001
transverse flux heating, optimal inductor design, combined evol.-simplex tech. 89445
turbid media with opt. soft large spherical particles, chiroptical spectrosc. 105770
two-phase flow elec. impedance imaging, sens. strategies anal. 121275
two-phase flow void fraction meas., capacitance tomography 110052
underwater bottom 2D topography inversion, SAR imagery 76920
US contact SH-wave transducers, num. modelling, BEM simul. 101616
US surface profile determ. by spatial voting, map building 107228
US transducer radiated field, spatial freq. spectra, ball reflector 101625
V-BLAST syst., low complexity archit. 85505
video compression using integer DCT 95209
weld QC, radioscopic testing, automatic image proc. 100642
weldment intell. US flaw class., perform. enhancement 101614
well logging, 2D EM cond. imaging 88101
wideband mobile radio channels charactn. using SVD-Prony algm. at 2.4 GHz 83303
X-ray CT, cone beam reconstr., inversion formula 118268
zero-tree based coders, parent-child coding gain 106183
Si, doping profile, opt. meas. 91947
ZrO_2-Y_2O_3 TBC degrad., quantitat. NDE, impedance spectrosc. 114491

inverse Radon transforms *see Radon transforms*

inverse synthetic aperture radar *see synthetic aperture radar*

inversion layers
charge pumping device with pot. barrier using inversion charge transfer 70228
CMOS logic technol., inverter delay, gate length reduction 125408
double-gate SOI inversion layers, Monte Carlo simul., vol. inversion 69747
dyn. threshold MOS/SOI transistors, LF noise, model 81296
gate dielec. electron wave fn. penetration/interface scatt., simul. 126235
inhomog. MIS struct., local photoelec. props. 91897
metal-nitride-oxide-semicond. struct., percolation metal-insulator transit. 69750
MOS field-induced pn jns., space charge region, recomb. current meas. 80945
MOS inversion layer, space charge capacitance, anal. model *(English)* 91883
MOS struct., direct tunneling current, modified Airy fn. model 115456
MOS struct., inversion layer, C-V charact. *(English)* 80953
MOS struct., Schrodinger eqn., non-uniform grid *(English)* 91882
MOS struct., surface layer DOS, charge control model *(Chinese)* 80955
n-MOSFET, backsurface Ar^+ bombard. effects *(Chinese)* 103721
MOSFET, deep submicron, quantized inversion layer states 81317
MOSFET, direct tunneling hole current through ultrathin gate oxide 81263
n-MOSFETs, sub-bandgap impact ionization 81271
MOST, inversion charge dens. modeling 103816
nanoscale MOSFET, mobility vs. drain current rel. 70131
NMOS inversion layers, direct tunneling, phys. compact model 126233
NMOSFETs, CMOS proc. steps impact on drain current kink at liq. He temp. 70312
nMOSFETs, ultra-thin gate oxide, breakdown softening at low inversion layer dens. 81347
non-quasistatic CMOS RF-models 102738
PMOS device, dielec. breakdown, p-polysilicon gate doping 103194
polysilicon doping extraction from C-V charact., improved formula 69819
SOI MOSFET, highly doped, inversion-layer mobility, self-consistent calc. 92348
submicron MOS transistors, static charact. and elec. noise, num. simul. 70109
ultrathin gate oxide MOSFET, tunneling current, quantum-mech. modeling 103814
GaAs/InGaAs/AlGaAs δ-doped heterostruct., EL from forward-biased Schottky diode 82316
HfO_2 gate insulator, high permitt., chem. vap. deposition 114356
InP surface damage, methane-H_2 RIE-induced 92094
Si, porous, unoxidized and oxidized, metal/PS/c-Si photodetector 131907
$Si/Si_{1-x}Ge_x$ deep submicron MOSFET, stepped doping profile 103870
$Si/SiO_2/Si_3N_4$ quantum wires/dots, charged insulator defects 126160
Si-on-SiGe MOSFET, strained, inversion layer centroid modeling 126729
SiC, 6H, inversion layers, Coulomb scatt. *(Chinese)* 69760
4H-SiC MOSFET inversion layer, interface states 103869
SiC MOSFETs, 4H/6H, interface traps, light emission obs. 70097
4H-SiC MOSFETs, inversion layer mobility and interface state dens. 70098
$Si_{1-x}Ge_x$ buried channel heterostruct. PMOSFET, hole mobility 81314
TiO_2 gate insulator, high permitt., chem. vap. deposition 114356
ZnO:Al/a-pin Si_xC_{1-x}:H/Al optimized laser scanned photodiode imaging transducer 86666
ZnO-based varistors, inversion boundaries, study using electron microscopy methods 69267
ZrO_2 gate insulator, high permitt., chem. vap. deposition 114356

inverted pendulums *see nonlinear systems*

invertors
see also PWM invertors
1.6 MW/150 kHz IGBT inverter for welding appls. 78364
1 MW VSI with emitter turn-off thyristor, HF operation 88912
2.4 MVA soft-switched modular MV drive, design considerations 134201
3-level invertor, IGBT based, for urban rail vehicles *(Chinese)* 68578
3-phase 3-wire VSI shunt act. filter, sliding mode control in dq frame 134149

invertors continued
3-phase 3-wire VSI shunt act. harmonic filter, input-state feedback control 134150
3-phase 4-wire inverters, decoupled control, 4×4 transform. matrix 123601
3-phase act. power filter, multiple single-phase VSI modules 122987
3-phase act. power filter, vector based control 122985
3-phase IM-inverter drives, power meas., Park transform. 100250
3-phase inverter, ZCT schemes comparison 88928
3-phase inverter-fed IM, neural network based direct self control 123456
3-phase PWM boost-buck rectifiers, power regenerating capability 134163
3-phase soft-switching inverters simplification, zero-current-transit. 134184
3-phase VCCS inverter for AC drives 99834
3-phase VSI fed IM drive, PV array perform. 100247
5-phase IM drives, DSP-based vector control and direct torque control 123862
5-phase reluctance motor drive, DSP-based direct torque control 89336
10 kVA offshore wind farm HVDC interconnection model 99589
10 kW PV power syst. modelling using equiv. elec. cct. method 112418
13.56 MHz current-source generator using HF CSI approach 123623
48 V telecom. power supply systs., dimensioning aspects 108450
50 kW grid-connected PV power syst., design, develop., perform. 112409
50 kW soft-transit. inverter, ZCS, near-ZVS 88913
125 W high-press.-mercury lamp full-bridge reson. inverter ballast 89439
250 W high-press. mercury vap. lamps using buck-boost inverter topol. 89437
250 W metal halide lamp electronic ballast develop. 134633
500 W series-reson. DC/AC inverter for impedance-load drives 77960
±500 kVA static VAr generator, GTO dead zone compensation study *(Chinese)* 111727
AC and DC power transm., power converters operation *(Russian)* 122896
AC motor drive power converter, earth fault current/overcurrent protection *(Polish)* 99805
AC transm. conversion into HVDC, FACTS, rectifier, inverter 112005
AC-AC inverter, build-in PFC soft-switching, unified controller 88830
AC-excited sync. machine control syst., field weakening, overload capability 123905
AC-UPS with PFC and fast dyn. response 88908
AC/AC single phase voltage regulators, comparative anal. 88907
act. filter under harmonic power vars., transient perform. 122988
act. power filter, adaptive neural network based harmonic current compensation 112076
act. power filter robust current tracking control design 123711
act. power filters, expanded current sync. detect. algm. 134333
act. UPS using HF ZVS cycloconverters 123607
adjustable-speed sync. motors harmonic reduction 112472
advanced SVC using three-level NPC inverter, robust control scheme 88367
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
arc welding machine, invertor-fed, mixed I-V control scheme 89472
ASD line-side current, discrete wavelet transform anal. 122994
auxiliary reson.-commutated snubber-linked three-level IGBT ZVS VSI 134202
batt. storage PV power plants, real-time monitoring/eval. 88649
BAUM type std. converter for DB Energie *(German)* 78269
BLDCM drive syst. for EV appls. 123960
brushless DC traction motors, perform. anal. studies 123974
brushless doubly-fed reluctance machines, PF control 123366
brushless doubly-fed reluctance machines, pump/wind turbine appls. 133985
brushless doubly-fed reluctance machines control strategies *(English)* 77843
brushless PM motor drives, SABER simul. 123899
brushless PM motors, low inductance, multilevel DC link inverter 133931
buck-based sinusoidal generator, sliding-mode control 78010
buffer minimization in pass transistor logic 101891
bypass orifice inverter heat pump, thermal perform. study 100340
cage IM, inverter-fed, rotor bar loss distrib., torque anal. *(Korean)* 77883
cascade double Γ-CL current source reson. inverter anal. 134161
cascaded two-switch buck-boost PFC cct., current programmed control 88854
cct., HF sect., line switching 123576
Class D voltage switching reson. inverter electronic ballast 124075
class E isolated DC/DC power converter anal. and design 88963
CMOS current comparator cct., high-perform. *(Chinese)* 104086
CMOS inverter, perform., ionising radiation effects, model 92472
compact DC/AC inverter for large electroluminesc. lamp 99766
compact fluoresc. lamps, high-PF single-switch electronic ballast 89430
copper ore transport, 20 MW downhill conveyor syst., three-level converters 134707
crit. loads ride-through, 3-phase inverter, DC-link voltage regulator 88911
CRONE speed controller for sync. motor drives 89353
CSI, voltage regulation schemes 99799
DC metro traction drives, inverters, HV press-pack IGBTs 89390
DC-AC voltage converter cct., HF, network switching *(Russian)* 88952
DC-fed elec. rly. vehicle, PMSM, stabil., regenerative braking *(Japanese)* 123952
DC-link cct. fuses, harmonic power losses prediction 134230
DC-link inverter, low-inductive fuses 78042
diesel-elec. locomotive double-feed induction generator, state feedback control 113103
distrib. line, on-line impedance meter 133713
distrib. networks power quality improvement, voltage/harmonics compensation 133698
distributed generation syst. act. power harmonic filtering optim. *(Japanese)* 133905
distributed PV power supply systs. implement. 123261
dominant harmonic act. filter operation under realistic utility conditions 99365
double stator inverter fed IM ASD, current control perform. optimisation 123907
double-winding LIM control syst. for pers. rapid transit syst. 123512
doubly-salient PM motor flywheel for building-integrated PV power systs. 89311
DVR™ PM platform-mounted dyn. voltage restorer, field experience 77225
dyn. voltage restorer prototype, design *(Korean)* 123582
EconoPACK+ modular IGBT inverter design platform 77993
EconoPACK+ six-pack IGBT module invertor package 88883
EconoPACK-Plus large-capacity 6-in-1 IGBT module 126795
elec. drives, automatic nonlin. auto-tuning method, Hammerstein modeling 78219
elec. drives, low-power semicond. devices integrat. 100240
elec. rly. vehicle brake force improvement using capacitance *(Japanese)* 78244
electronic ballast, small size and low cost for HF fluoresc. lamps *(Japanese)* 100314
elevators, supercapacitor energy storage syst., soft commutated interface 134523
EMO-SR10 full flat cabin combination microwave oven *(Japanese)* 124130
EV, axial airgap PM AC motor control 89384
EV, IM drive inverter, degrad. regimes, num. simul. *(French)* 134519
EV AC motor drive soft-switching inverters comparison 134203
invertors continued
EV air conditioning inverter/compressor develop. *(Japanese)* 89417
EV power batt. perform. testing syst. *(Chinese)* 78125
FACTS UPFC simul. techs. 111861
ferromag. plate load, induction heating, inverter-inductor-load syst. 89449
fluoresc. lamp, electronic ballast, self-oscillator, half-bridge inverter *(Japanes* 125256
fluoresc. lamp, high PF ballast, forward half-bridge reson. inverter 134619
fluoresc. lamp ballast, inverter, inductively coupled preheating ccts. 134620
fluoresc. lamp electronic ballast using half-bridge reson. invertor 89440
fluoresc. lamp electronic ballasts topologies comparison 89433
gas discharge lamp self-oscillating PFC electronic ballast 89438
grid-connected AC module inverters islanding prevention 112414
grid-connected PV, single phase inverter, fuzzy predictive current contr 112421
grid-connected PV power syst. inverters, PIC microcontroller 123262
grid-connected PV power systs., power generation mechanism 112411
grid-connected PV syst., PF control, act. islanding detect. 77798
grid-connected wound rotor induction machine, sensorless direct power contr 77861
hard-switched inverters using CoolMOS switches, reverse recovery minir 134176
HEV, integrated starter generator, LV/HV systs. comparison 123969
HF asynchronous motor drive, transistor inverter 100256
HF inverters, EMC perform. prediction 88838
HID headlamp systs. for automobiles, electronic ballasts *(Japanese)* 100300
HID lamp ballast, single-ended reson.-type inverter 78333
high power IGBT inverter, wiring inductance minimisation 112635
high press. sodium lamps, class d LC_sC_p series-parallel reson. inverter 12407
high speed IM drive with harmonics, inverter 123882
high-efficiency modulator for dyn. envelope tracking CDMA RF power amp 101858
high-perform. AC power supplies, sync.-frame harmonic control 77984
high-power IGBT inverter for induction heating appls. *(German)* 112618
high-power variable-voltage DC power sources, VSI 134142
HV IGBT inverter source, intrinsic fail-safe capability 125231
hybrid act. power harmonic filter topol. develop. 89034
hybrid EV novel drive strategy 123956
hybrid wind/diesel generating syst. with three-level invertor 133895
IGBT 3-level invert voltage space vector control *(Chinese)* 68577
IGBT arc welding power supply using soft-switch inverting control *(Chinese* 90718
IGBT power module in automotive traction inverter, lifetime estim. 125219
IGBT-based freq. converters for IM drives 112663
IM, instantaneous torque control, secondary flux as param. 123401
IM, magnetizing rotor flux determ., VSI 112535
IM, sensorless control, VSI control, ANN 133995
IM, transient reactances, rotor fixed saliencies 123911
IM, VSI fed, self-commissioning algm. 123443
IM direct stator flux and torque vector control 123913
IM direct torque control, inverter switching freq. prediction 77879
IM drive, adaptive nonlin. controller based optimal control 134463
IM drive, three-level inverter, DTC, ANN as switching vector selector 13445
IM drive design, freq. converter filter characts. optim. 113081
IM drive direct torque control, inverter state selection 89364
IM drive direct torque control approach 113044
IM drive direct torque control using enhanced inverter switching 78205
IM drive DTC using fuzzy variable switching sector 134502
IM drives, sensorless posn. control, inverter clamping saliency anal. 134488
IM drives, speed sensorless vector control, nonlin. inverter model 134487
IM sensorless control systs. develop./anal. 123439
IM vector control, flux observer, H∞ optim. 134473
IM vector control, space-vector modulation tandem inverter 123428
inaccessible neutral induction machines air-gap flux posn. estim. 88744
induction furnace, current reson. inverter, switching surge *(English)* 124095
induction heating, dual freq. output quasi-reson. inverter *(English)* 113143
induction heating current-fed inverter AFC 124100
induction heating power supply with PLL, surge anal. 124098
induction machines, instantaneous real/imaginary power control 134034
indust./traction machine drives, power electronics technol. 100275
integrated gate commutated thyristor, CSI 126701
intell. power unit, elec. and hybrid-EV 134552
interconnected offshore power syst., IM starting, ASVC 100358
interior PM sync. motor params. determ. approach 123385
interior PMSM, saturation/cross-magnetis. effects 133986
IPM sync. motor drive response to single-phase open cct. faults 89326
LC matching ccts. for class-E inverter with non-stationary load, anal. 90649
LCD backlight inverter syst. control, mixed dimming method 86864
LCD backlight inverter topologies anal. 134249
LCI fed sync. motor drives, current harmonic losses 134492
lin. fluoresc. lamp inductorless piezoelec. transformer electronic ballast 89435
LLC full bridge inverter topol., plastic indust. corona generation 89478
long-dist. IM driving, overvoltages avoidance 88726
low cost RC snubber for induction/BLDCM 134207
manipulator two-layers feedforward posn. control syst. 123698
metal halide lamp electronic ballasts, acoustic reson. prevention 89434
micro-turbine generators, dispersed generation perform. charact. 112478
microwave oven, voltage clamped ZVS-PWM inverter fed DC-DC converter 124128
mobile mil. diesel generator set, PM alternator, power conversion syst. 133910
multi-disc axial flux stratospheric aircraft propeller drive 133261
multi-inverter STATCOM transformer syst., equiv. short-cct. impedandance *(Chinese)* 122807
multi-level VSI optim. for MVDC transm. systs. 123625
multi-syst. locomotives, traction drives, IGBT inverter, small snubber concept 89400
multi-type inverter air conditioner, perform. anal. 89455
multilevel inverters optimised space vector switching seqs. 88923
multiple grid-connected single-phase inverters, combined switching harmonics 133676
multiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
multipulse power converters/controls for HVDC and FACTS systs. 88876
MV IM drive with integrated DC link choke 134474
MV multilevel cascade inverters, vector control tech. 88833
MV power converter topologies for high-power appls. 134205
nine-phase reluctance motor drive, perform. eval. expts. 134476
noncontact energy transfer syst. using immittance converter 123002
nonlin. switched ccts., inconsistent init. conditions, discrete-time tech. 90662
parallel-connected dual IM speed sensorless vector control 134023
phase-controlled class E inverter design 90730

rtors continued
π-LC power converter topol., immittance conversion theory-based 123624
PM lin. sync. motor, dyn. charact., moving mesh tech. *(Korean)* 123516
PMSM drives, adaptive fuzzy logic-based nonlin. robust control 134493
power converters, conducted EMI minimisation, stray inductance minimisation 88839
power electronics syst. modeling, use of Haar state eqns. 90732
power QC using redox rechargeable batt. syst. 112063
pulse supercond. magnets, inverter-converter bridge energy transfer cct. *(Japanese)* 92906
PV modules generation control cct. 77797
PV powered water pumping, current-fed parallel reson. push-pull inverter 113179
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
quasi-reson. DC link inverter-fed IM drives, voltage feeding algms. 123924
quasi-reson. single-ended invertor for induction surface hardening appls. 78033
random noise generator using MOSFET channel kT/C noise 101812
rectifier-inverter systs., DC-link harmonic reson. damping 134164
reduced parts-count multi-level rectifiers, naval ship propulsion 134521
refrigerated showcases, inverter scroll condenser *(Japanese)* 124124
residential PV systs. commercialisation, Massachusetts Electric Solar Project 112397
reson. DC link inverter, divided DC sources, clamping topol. 77998
reson. DC link inverter, IGBT perform., device optim./modeling 123614
reson. link inverters, optimal on-line control, pulse pattern ident. 88971
reverse blocking IGCTs for CSI appls. 77995
RSFQ pseudo random generator 70874
series act. clamped reson. DC-link inverter current control 134188
series injection VSI, integrated protection approach 134182
shunt VAr compensator capacitor voltage equalisation, closed loop control 111828
single DC reactor type supercond. FCL as power source 77597
single phase shunt act. power filter, simul./anal. *(Chinese)* 122993
single phase switched reluctance motor for vac. cleaner 134666
single phase UPS syst., AC-DC/DC-DC boost converter, half-bridge inverter 88909
single-/3-phase unbalanced loads, PFC, multilevel diode clamped VSI 111813
single-chip inverter-fed IM drive concepts 134470
single-phase modular act. power harmonic filter, rule-based controller 112755
single-phase PM motors, param. determ., math. model 123306
single-phase UPS inverters, H_∞ loop-shaping controller design 88958
single-stage push-pull electronic ballast with high input PF 100318
six-phase IM, torque dens. improvement, third harmonic current injection 134471
six-switch single-phase AC/AC converter 88835
small doubly-salient PM motor, design and anal. 112462
SMES, inverter-converter bridge energy transfer cct. 78191
soft switching inverter, act. reson. DC link assisted, power loss anal. 88929
soft-switching high-power HF inverters, parallel connection topol. 134204
SRM drives, half bridge inverter topol. 134504
SRM traction drive, optimal excitation, five-level inverter 134548
stand alone PV pumping plants, PV-DC/DC inverter-asynchronous motor model 112435
STATCOM nonlin. control scheme *(English)* 77234
static sync. compensator with SMES, dyn. perform. 111856
submersible pump IM drives, inverter upgrade energy saving estim. 89360
subsonic diagonal-type MHD generator, AC power syst. interconnection 78177
substation grounding impedance meas. syst. 77670
SVC, control/dyn. anal. using three level inverter topol. 78116
switch-mode power converters, large-sig. time-domain simul. 134157
switch-mode power supply design methods for computer facilities 112677
switched controller for fast voltage fed parallel act. filter 99363
switched mode rectifier/inverter, adjustable input PF 123653
switching losses, quasiresonant DC link cct. 99814
sync. series SVC 48-step inverter, modelling and control design *(Chinese)* 99202
T8 fluoresc. lamp ballast using piezoelec. transformer, charact. 134638
telecom. inverter module with digital control for parallel operation 112671
three-level inverter-fed IM, direct torque control algm. 133994
three-level VSI, DC side, capacitors' voltage vars. *(Chinese)* 88983
three-level VSI capacitor voltage balancing control methods *(Chinese)* 99733
three-phase four-wire distrib. systs., neutral harmonic mitigator design 133702
three-phase IM drive syst., fault tolerance improvement 78215
three-phase IM selection criteria for traction appls. 100285
three-phase indust. power syst. hybrid power harmonic filter 89468
three-phase inverter, IGBT output stage, driver module 112649
three-phase inverter control software design archit. 88898
three-phase power act. harmonic filter, vector control transient behavior 123716
three-phase small IM, invertor-fed, design guidelines *(Japanese)* 88723
three-phase soft-switching VSI for energy storage appls. 112672
three-phase soft-transit. inverter, ZCS, near ZVS control strategy 123602
transformers, inverter-fed, magnetis. control, turn-off devices 77947
transm. syst. optimum power flow control, UPFC 99280
two-axis lin. SRM inductances determ., controlled VSI *(Slovenian)* 77896
two-axis lin. sync. reluctance motor, operating point depend. inductances 123521
two-cycle autonomous inverter ccts. for HF heating appls. 78032
ultra light rail bus, flywheel powered, integrated elec. drive train 100281
UPFC control algm., stationary ref. frame simul. 133556
UPS, partial double conversion, non-reson. sinusoidal voltage inverter 99817
UPS inverter second order deadbeat controller design *(Korean)* 123588
UPS multi-loop control, digital predictive voltage/current regulators 88910
UPS series reson. power converter topologies 112669
urban Maglev syst. invertors, soft-switching HV act. power filter 134529
utility distributed reactive power control using correl. techs. 88362
utility interactive PV syst., static inverter, anal. 112422
utility-interactive PV power network power convertor syst. *(Japanese)* 77973
utility-interactive PV power systs., simul. scheme study 133901
utility-interconnected PV inverters, barriers removal 112416
variable speed wind energy syst., PM sync. generator control 123250
variable speed wind turbine, voltage source AC/DC/AC converter interface 112377
variable speed wind turbine back-to-back VSI efficiencies comparison 88873
vector-controlled IM drives using random invertor switching 78206
voltage sag correction, dyn. voltage restorer with min. power injection 77337
voltage sag mitigation using dyn. voltage restorer 99358
voltage sourced inverter, transfer fn., FACTS, STATCOM, UPFC, SSSC 99732
voltage-sourced inverter reactive power/imbalance compensation 112656
VSI, current regulation, zero crossings of compensated current errors 134186

invertors continued
VSI based series power quality compensator, interact. with power syst. *(Chinese)* 88433
VSI control, parasitics effects modelling 88926
VSI fed IM drives, variable freq. space vector modulator 123916
VSI HF transformer act. auxiliary reson. soft commutation snubber *(Japanese)* 99803
VSI IGBT perform., cct. parasitic impedance effect modelling 88921
VSI output LC power harmonic filter design 78115
VSI-based power oscill. damping scheme 133545
VSI-based voltage sag correcting device with additional VAr compensation *(English)* 111925
VSI-fed IM drives, dual-stator windings design 134455
VSI-IM drive, PWM less current control 123402
VSI/CSI modulation, variable band universal flux/charge modulator 134185
ZVS HF reson. inverter, charact. estim. 134248
ZVT inverter with simplified auxiliary cct. 88927
ZVT inverters, load adaptive fixed timing control 88834
FeMoCuSiB nanocrystalline soft mag. alloy, inverter core, mag. field annealing 88887
GaAs, CMOS inverter, charcts. 127062
Si diode, three-phase inverter, AC IM 88719
a-Si-alloy/c-Si stacked solar cells, design, technol., perform. eval. 112992
SiC diode, three-phase inverter, AC IM 88719
4H-SiC merged PIN/Schottky diodes, inductively-loaded half-bridge inverter charactn. 126625

invertors (logic) *see logic gates*

investment
110 MW combined cycle cogen. plant concept, Germany *(English)* 112330
AC HTSC cables, tech. and economical assess. 77433
advanced mfg. technols. justification tool develop. 67488
broadband capacity upgrade strategies in residential areas, investment cost anal. 74461
central cogen. units in Athens, economical approach 112298
coaxial vs. opt. fiber investments 75305
corporate investment behaviour under incomplete inform. 89759
cost-efficient power distrib. network develop. overview 133650
decisions under economic/implement. uncertainty 89760
distrib. automation planning solns., achievable benefits 133646
distrib. businesses risk mgt., emerging aspects 133628
distrib. ccts. design, losses effect anal. 112013
distrib. network, protection asset replacement, business value 77312
distrib. planning optim., capacity/efficiency/reliab. improvement 133568
distrib. reliab. indices, goal planning, risk anal. 133600
distrib. syst. planning, optimal feeder routing using heuristic strategy *(Korean)* 77281
economic feeder cable selection optim., risk anal. considerations 133731
economic PF, VAr compensation unit effects *(Serbian)* 88313
elec. indust. deregulation and IT investment 88310
elec. market investment, cost-effectiveness calc. model *(German)* 111686
elec. market liberalisation, power syst. economic effects *(German)* 88302
elec. market liberalisation, risk mgt. decision-making 133482
elec. supply, resources, pollution, dyn., Pakistan 122812
engng. investment, dyn. payout period, interpolation estim. *(Chinese)* 89659
European elec. market renewable energy systs. promotion survey 99206
feeder capacitor allocation optim. using interactive trade-off method 112016
feeder-specific expansion investment plan, demand-side resources prioritization 77283
foreign direct investment and spillovers of technol. 113406
gas turbine fuel diversification for combined cycle plant appls. *(German)* 123223
gas-fired cogen. develop. in Brazil 123180
Greek wind energy investments, economical assess. approach 112378
growth enterprise market anal. and prediction 89698
hi-tech start-ups innovation risks, key success factors 89681
hydroelectric resources, elec. generation expansion, investment planning 122917
IBM's power supply procurement proc. overview 88820
IGCC power plant economics, improved gas turbine power output project 99570
Indonesia's indust. technol. develop., foreign direct investment 113413
internat. R&D project eval. by multinational corporations 113401
Internet develop., effect of entrepreneurship and public policy 85270
Iranian power distrib. sector planning overview 133631
IS/IT project investment decision making 89807
Japanese manufacturers' R&D dyn. anal. 89727
LAPER rural elec. planning software *(English, French)* 133567
local loop unbundling, shaping BT for broadband competition 96289
long-range composite power syst. expansion planning using network topol. 88402
long-run marginal cost-based transm. use-of-syst. pricing, methods comparison 133436
long-term power generation fuel prices modelling/anal. *(Chinese)* 123095
maint. engng., delay mgt. 100512
mfg. agility develop. in SMEs 67492
mfg. technol. capital investment justification, integrated approach 89677
multi-state syst. redundancy optim., fixed resource-requirements, unreliable sources 89924
MV/LV transformer substation technol. advances *(English, French)* 134291
national/corporate technol. strategies, total factor productivity, Korea 113410
Norwegian power syst. losses, cost calc. method 133483
organizational objectives adjustment optim. using matrix struct. 67491
PACS, multi-imaging centre, planning 98122
Polish energy sector develop. in new economic conditions 77183
power delivery improvement using SMES 113035
power generation indust. emerging trends, insurer's perspective 122801
power network planning, investment and reliab. coord., fuzzy satisfaction, genetic-annealing algm. *(Chinese)* 99317
power plants air emissions control in competitive power market 133831
power station efficiency/capacity pot. overview *(German)* 123104
power syst. reliab. mgt., investment, economic mechanism 88298
project investment decision anal. for benefit pursuing/exposure preference 89700
PVMaT, mfg. R&D, tech. accomplishments, return on investment 112990
R&D investment decision and optimal subsidy 89761
R&D investment decisions anal., power series expansions approach 89762
R&D investment strategy in presence of network externalities *(Chinese)* 89665
rem. diagnosis of elec. distrib. networks *(English, French)* 133643
Romanian power distrib. network develop. strategies 133649
Romanian power project financing, consultancy role in investment attraction 111691
Romanian power sector restructuring, distrib. privatization requirements 133462

investment continued
semicond. firms R&D investment/perform. 89726
stable spectral measure estim., portfolio appls. 118944
state/privatized elec. companies, investment differences *(English, French)* 133465
transm. expansion planning, investment, macroeconomic params., case study 111975
transm. expansion planning, investment programs, macroeconomic params. 111974
transm. network expansion planning incorporating transient stabil. *(Chinese)* 88400
UK distrib. companies investment planning, benchmarking appl. *(English, French)* 133645
UK rly. regulatory framework 113098
UK rly. regulatory framework 113099
undergraduate & graduate design projects in bioengineering 87295
US competitive wholesale elec. markets overview 111707
US mfg. industries, lessons for UK industries 78540
venture capital indust. cross-country comparison 89701
venture capital investments, binomial valuation model 89766
virtual thermo-mech. prototyping of electronic packaging, material charact. and modeling 113731
wind energy investments in Argentina 133836
wireless-related investments, stock options 113392

invoicing
3G environ., gaining/collecting revenues 131189
advanced collaboration services 108058
API for e-charging, outsource charging for content and appl. usage 130759
BT's INCA, interconnect billing service 74108
business class services in broadband networks *(Polish)* 119457
business-to-business environ. service charging/billing 130665
dedicated access line, value added integrated telecomm. services 96011
DICOM protocol, image std., hospital wide service *(Japanese)* 88019
digital whiteboard, security, JAVA cards 85355
DOCSIS, enhanced services provision 75306
e-commerce, IN core competencies for payment systs. 130928
GPRS services, billing 74622
iCE, cool operation support syst. and interactive customer empowerment engine 130586
Internet pricing and commun. hist. 108235
intraLATA long dist. competition, carrier choice models from residential telephone bills 130608
IP billing *(Polish)* 130651
IP billing 96005
IP content and services billing 96117
Lucent Technologies' vision for network and service mgt. 74089
MBA, multicast billing/accounting tool 130771
mobile prepaid service, hot billing perform. 85131
multi-service networks, pricing policies 119567
next generation network billing service based on TINA concepts 130583
open archit. based networked multimedia syst. 119809
pan-European wireless micro-payment syst. framework 108972
PrePaid Service, evol. towards real-time payment syst. 130925
residential calling patterns, parametric, semi-parametric and nonparametric demand models 130609
VOIP services, call accounting/billing 119502
xDSL broadband access services, mktg. and managing 130989

iodide glasses *see halide glasses*

ion accelerators
3UDH Pelletron, ion-opt. calc. for new injector 97924
AIC-144 isochronous cyclotron, new extraction syst. 97923
BNL EBIS high current electron/ion beam dyn. simul. 110198
BRIC charge state breeder EBIS, RIBs 110272
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
cyclotrons, appls. and technol. *(Chinese)* 110073
EBIS primary ion sources, beam transport/prod. 110278
eRHIC, accelerator phys. issues 87075
EXCYT project, RIB prod., physics perspectives 110221
fast cycling intermediate energy ion synchrotron supercond. magnet syst. 75934
fast ion extraction from intense electron beams, EBIS single-turn inject. 110199
folded tandem ion accelerator facility at Trombay 132240
future hadron collider accelerator design anal. 132262
GSI high current linac commissioning and HIF related RF linac aspects 97888
GSI nuc. structure physics, colliders and set-ups 110070
GSI UNILAC high current linac, beam diagnostics develop., review 87136
HI fusion final focus magnet shielding designs 76010
HI inertial fusion in Europe 97896
HICAT, beam diagnostics 87124
HIF 500 kV ion source test stand, design 97933
high brightness X-ray sources, ultrashort pulse high power lasers *(Japanese)* 87271
high energy spin polaris., expt. review 110185
high intens. drift tube linac, HIDIF, beam stabil. 97901
high intens. linac beams, halo form., ICF appl. 97902
high-energy accelerators/colliders, polarized ion source 110247
high-energy storage ring, cryst. ion beams 110172
HIRFL Separated Sector Cyclotron, RF amplit. stabilization device *(Chinese)* 87142
HIRFL-CSR cooler storage ring, mode matching, beam efficiency *(Chinese)* 110169
indirect fusion targets for HI driver, VNIIEF studies 97885
induction accelerator, recirculator project results at LLNL 97903
induction accelerator efficiency at 5 Hz 97887
inductive ion accelerator, voltage modulation and repetitive operation 97886
Integrated Research Experiments facility and driver, beam simul. 97890
integrated research expt., design, planning, review 97909
intense highly-charged ion beam prod., review 110279
intense RIB facilities, post accelerator design anal. 110203
ITEP accelerator, HI fusion energy program in Russia 97884
JINR U-400/400M accelerators, HI phys. 110071
KSTAR, circ. aperture grid accelerator for NBI *(Korean)* 87058
labyrinth radiation streaming, proton accelerator facility, dosimetry 133128
Lanzhou HI research facility status and prospects *(Chinese)* 110225
LHC ALICE detector design for HI phys. expts. 132357
light ion beams for radiation treatment, facility design anal. 111130
light-ion driver develop. for inertial fusion energy 97895
multipurpose neutron generators, RF quadrupole linac based syst. 110222
NUCLOTRON POLARIS cryogenic polarized D source design anal. 132284

ion accelerators continued
NV-GSD-HE, high energy ion implanter, energy accuracy and control metho 115565
particle accelerator, source-to-target simul. studies 97904
PHELIX, PW high-energy laser for HI expts. 105162
radioact. beams and accelerators in France 75936
rel. ion accel., ultraintense laser interact., PIC simul. 110117
REX-ISOLDE project for post accel. of RIB 132277
REXEBIS post ion beam accelerator, design/commissioning 110092
RF linac total driver energy for HI plasma ignition, review 97910
RHIC beam loss monitor syst. commissioning in RHIC yr. 0 run 87103
RHIC beam profile meas. using ionization profile monitors 87105
RHIC collider, ARTUS tune meas. syst. 87107
RHIC commissioning/operation/design, review 110201
RHIC EBIS-based preinjector design, review 110202
RHIC p-carbon CNI polarimeter commissioning 110193
sextupole magnets, third order Lie map *(Chinese)* 75991
SNS linac beam diagnostic suite, review 87114
SPES exotic nuclei prod. project, accelerator challenges 132281
storage rings, intense ion beam accumul., charge exchange injection 97908
supercond. ion linac and assoc. accelerator develop. at NSC 132242
supercond. LINAC booster for Mumbai pelletron 132241
Warsaw K-160 cyclotron, design of central region 110219
ẽp high energy colliders, nucleon spin struct. fn. 110184
^{10}B neutron capture therapy, accelerator-based, dosimetry 122394
NbTi cable based supercond. dipoles for LHC, test results 75954

ion beam applications
see also focused ion beam technology; ion beam assisted deposition; ion beam lithography; sputtering
anal. for material studies at Ljubljana tandetron ion accelerator 70290
conf., Canela, Brazil (Sept. 2000) 78463
diamond for high-dens. opt. recording 82056
fatigue testing machine of microsized specimens, MEMS appls. 101546
HI beams, cancer therapy *(Chinese)* 133017
HI CT reconstruction, range shift distrib., 2D detect. syst. 98158
HV diode anal. using proton beam induced charge microscopy 115842
intense ion beams accelerated by Petawatt-class lasers 110100
mag. tunnel jns. on mag. shield smoothed by gas cluster ion beam 81893
materials sci. with high energy ion beams 115800
PtSi IR detector array device, microlens arrays with long focus for improving responsivity 109636
RIKEN slow highly charged ion facility 110245
single wafer medium current ion implanter, perform. charact. 121384
wafer-level GMR head proc., EOS indicators, floating gate EEPROM appl. 81907
a-C:F films, ion beam deposition, charactn. 124845
C_{60}/a-C superlattice struct. solar cell, nitrogen doping effects 112889
^{11}C beams, cancer radiotherapy, spot scanning, dose distrib. 76609
Cu, sputtered, patterned using ion milling or CMP, surface electromigration 115664
β-$FeSi_2$ ion beam synthesised light emitting devices, EL 93380
GaAs 128×128 element concave microlens array, fab. *(Chinese)* 104778
GaAs(100) surface, ion-induced nitridation 69915
Ge embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
Ge nanowires in oxidized Si V-grooves, ion beam synthesis 92250
HgCdTe p-on-n heterostruct. IR photodiodes, planar proc. charactn. 97259
Ni mandrels, ion beam figuring for X-ray replication optics 110448
Si embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
Si(110) grid, ion beam proc. syst., opt. fab. 115620
β-SiC, epitaxial growth on Si(100) by low energy ion beam deposition 114267
Si_3N_4 nanoporous membrane, ion beam sculpting, DNA detector 103711
SiO_2 PECVD microstruct., laterally emitting TFEL device fab. 82371
TaN CVD diffusion barrier for Cu interconnects 92166
YBaCuO interface-controlled Josephson jn. fab. using Sr_2AlTaO_6 insulating layers 70809

ion beam assisted deposition
conf., Coatings on glass, Maastricht, Netherlands (Oct./Nov. 2000) 100392
dyn. neg.-ion mixing method using high-current HI/electron beam evap. 125054
fluorite type oxide films for biaxially textured HTSC coated conductors, prep. 68150
large-area HTS-coated stainless steel tapes with high crit. currents 70751
organic LED optim., IBAD procs. and optoelectronic props. 128006
oxide film form., O ion sputtering, ion-beam apparatus 90253
rate model of FIB induced deposition *(Chinese)* 79413
surface growth, proc., low energy beam-modified, conf., Boston, USA (Nov. 1999) 67359
Ag-ZrO_2, Y_2O_3 stabilised, composite film electrode, O_2 sens. *(Japanese)* 132035
Al multigrain thin film lines, electromigration props., grain boundary struct. 92110
AlN epilayers, MBE growth, annealing, reactive N_2 kinetic energy 124835
AlN films, ion-beam-enhanced deposition, surface struct./resist. 125063
Au nanoclusters in SiO_2 films, nanocluster sizes control, ion-beam assist. depos. 90529
BN cubic films, rf magnetron sputtering, ion bombard. effects 90241
BN, cubic thin films, ion-beam assisted pulsed Nd:YAG laser deposition 125002
c-BN films, IBAD, depth resolved stress anal. 115629
BN films, IBAD, stress form. 68373
BN/Si, IBAD, thin film growth, real-time ellipsometry 101447
$BaTiO_3$ film form., O ion sputtering, ion-beam apparatus 90253
ta-C films, ion-assisted pulsed magnetron sputtering deposition 79214
C ion beam deposited overcoats, mag. disks, mech. strength, wear resist. 116435
ta-C:F ion beam deposited films growth/props. 68383
a-C:H DLC films, deposition methods for GMR heads 79293
a-C/a-C:H multilayers on Si, photodiode effects, EL obs. 82352
a-C/diamond MEMS technol. 81563
CeO_2, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
Cr/Ti/diamond, IBAD, RBS charactn. 114402
Cu thin film growth, ion-beam modif., MD simul. 68372
Er:YAG planar and ridge waveguides, deposition and material characterisation 93123
Fe/Al_2O_3/Fe tunneling jn., ion beam sputtering, microstruct. 81925
GaAs-GaAlAs microaperture SEL, near-field opt. data storage appl. 128245
GaAs(001), thin film growth/surface treatment, glancing-angle ions 68151
GaInAsP-InP complex coupled DFB lasers, FIB technol. based 128240
GaN epilayers, wurtzitic films, low energy IBAD, ion irrad. influenc 90527
GaN films, low-energy ion assisted epitaxy and struct. 69514
GaN:In films layers, RF-MBE growth, In surfactant effect 90300
$Hf_{0.74}Yb_{0.26}O_{1.87}$, IBAD, growth struct., biaxially textured HTSC coated conductors 125048

beam assisted deposition continued
HgCdTe-CdTe-ZnS double insulator MIS device, fab., surface passiv. *(Chinese)* 115460
InSnO thin films, dual ion beam assisted e-beam evap., phys. props. 79249
MgO films, IBAD, texture develop., deposition thickness/rate depend. 68366
Mo thin film growth, ion-beam modif., MD simul. 68372
Ni/Ti/diamond, IBAD, RBS charactn. 114402
Si epitaxial film solar cells, low temp. ion-assisted growth 134390
poly-Si films, epitaxial thickening by Al-induced crystallisation 90546
Si films, large-grained polycryst., ion-assisted deposition 79417
Si high-quality low-temp. epitaxial films, high deposition rate and props. charactn. 79416
Si nanocrystal based MOS struct., prep., charge retention effect 80947
Si(001), nitridation, isotope-beam material modif. 92057
Si(100), carbonization proc., ion-beam bombard. 125060
SiC cubic films, mol. ion beam deposition, struct. 68374
3C-SiC heteroepitaxial growth, on Si(100), ion-beam induced carbonization 101446
Si_3N_4 film, ECR assisted sputter deposition, elec. props. 127255
SiN_x dual ion beam deposited H-free films, mech. and etching props. 127098
SiN_x films, ion-assisted deposition, ECR plasma, props. anal. 101448
SiN/TiN attenuating phase shift photoblank, ion beam sputter deposition 103683
SiO_2 film form., O ion sputtering, ion-beam apparatus 90253
Sm_2O_3, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
TaN_x, diffusion barrier on polymer dielec., growth. low energy N ions effects 68375
Ta_2O_5 film form., O ion sputtering, ion-beam apparatus 90253
TiN films on GaAs, IBAD tech., surface morph. 114400
TiN_x, diffusion barrier on polymer dielec., growth. low energy N ions effects 68375
TiO_2 films, O-radical beam assisted evap., ion beam assisted 125057
TiO_x IBAD films on Si, dielec. const., surface roughness, O ion dose depend. 115447
TiO_2-SiO_2 ion-beam-sputtered mixed film low-loss dielec. mirror 71492
W/Ti/diamond, IBAD, RBS charactn. 114402
Y-Ba-Cu-O high-current coated conductor using MOCVD and IBAD 68257
YBaCuO 123 HTSC coated conductors, long length IBAD template films 125045
YBaCuO coated IBAD tapes, transverse stress, fatigue effects 70752
$YBa_2Cu_3O_7$ HTSC, IBAD-PLD reel-to-reel continuous form. and charactn. 68304
$YBa_2Cu_3O_{7-\delta}$ supercond. tapes, situ high rate growth 68193
$YBa_2Cu_3O_y$ continuously processed coated conductors, buffer layers based on IBAD YSZ 70641
YBaCuO/Ag tape, transport current props. above crit. current region 70681
$YBa_2Cu_3O_7/Y_2O_3$-ZrO_2/YIG films, IBAD-YSZ template growth 68380
Y_2O_3, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
Y_2O_3-ZrO_2 biaxially aligned layers on metal tape by modified magnetron sputtering, HTSC appl. 68146
Y_2O_3-ZrO_2 biaxially textured buffer layers on large-area polycryst. substrs. for YBaCuO films 68370
Y_2O_3-ZrO_2 films, IBAD prep. for highly textured Y-Ba-Cu-O HTSC 68379
ZrO_2 ion-beam deposited cubic template films for YBaCuO, fab. 68371
$Zr_2Sm_2O_7$, IBAD, growth struct., biaxially textured HTSC coated conductors 125048
$Zr_{0.85}Y_{0.15}O_{1.93}$, IBAD, growth struct., biaxially textured HTSC coated conductors 125048

n beam effects
see also ion beam mixing; ion-surface impact; ionoluminescence; plasma-beam interactions; proton effects
anal. for material studies at Ljubljana tandetron ion accelerator 70290
applied electron optics conf., Moscow, Russia, Oct. 1999 67396
AZ 1350J photoresist, mech. props., ion irrad. induced crosslinking 69965
bipolar transistors, neutron/ion effects 103780
BNL accelerator-based radiobiology facilities 122367
CMOS SRAM, ion irrad., SEU *(Chinese)* 79882
collimated swift ion microbeam, profiling using 16 M bit DRAM 103722
conf., Canela, Brazil (Sept. 2000) 78463
controlled ion-beam transform. of elec./mag./opt. materials props. 81152
CR-39, 50 MeV Li irrad., opt., chem. and structural response 121659
diamond:B, ion-induced electron emission, effect of surface hydrogenation and sample temp. 80557
diamond:N homoepitaxial (001) surface, ion beam nitridation, AFM/XPS 115628
diamond, doping by ion implant. 115551
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
diamond, ion implant. related defects, inhib. of light element diffusion 115557
diamond films, (001) polycryst., vacancy defects eliminated by H and B ions bombard. *(English)* 124873
diamond for high-dens. opt. recording 82056
diamond radiation detectors, charge transport props. 132305
film, track etched membranes radiation resist. 121685
gas electron multiplier detector anal. in high intens. particle beams 132300
giant MR sens., track width defn., ion irrad. effects 116489
HI channeling, kinetic eqns., long-range fraction 103280
HI radiotherapy, inverse treatment planning, dose optimisation 98671
HI therapy, ion-kill dosimetry 133115
high current ribbon beam, situ charging pot. monitoring 115585
high-energy HI nuc. microprobe, probe-forming lens syst. 132257
HV diode, ion-induced charge generation 126651
integrat. ion imager, DNA samples, HI doses 122441
Josephson trilayer jn., interface treatment 70882
light ion lithog., range/quadratic deviation, computer simul. 92191
long-period fiber grating fab. by FIB irrad. 82090
materials sci. with high energy ion beams 115800
materials sci. with ion beams, conf., Strasbourg, France (May-June 2000) 78432
metal phthalocyanine films, ion irrad., AFM study, gas sens. appls. 91708
MOS capacitor, HI irrad., radiation soft breakdown, 98-300 K 103192
MOS capacitors, high-energy ion irrad., thin oxide degrad. 126242
n-MOSFET, backsurface Ar^+ bombard. effects *(Chinese)* 103721
particle and laser beam machining, energy sink charact. *(German)* 100568
PET/polycarbonate films, fab. of nanoporous nuc. track membranes *(Chinese)* 76129
photoresist film, mech. props., He ion irrad./annealing 90579
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. props. 104092
power diodes, non-destructive tester for single event burnout 131803

ion beam effects continued
power P-i-N diode local lifetime control by light ion irrad., blocking capability 81199
α-quartz films, ion beam doping, epitaxial regrowth 79406
radiation dosimetry using 3D opt. RAM based on bistable photochromism 132368
ring, rot., self-trapping 110164
SEU phenom., transient IBIC & LBIC, data collection syst. & chamber 126606
single event burnout failure in semicond. power devices, thermal modeling 70056
single event charge collection from angled ion strikes 114758
SIRAD SEE facility, ion electron emission microscopy 126607
space radiation health, conf., Arona, Italy (May 2000) 124172
stacked CMOS act. pixel charged particle sens. noise charact. 132297
stripe-like test jns., ion beam induced charge collection 115804
surface growth, proc., low energy beam-modified, conf., Boston, USA (Nov. 1999) 67359
sync. DRAM for space appls., 64 Mbit, testing 90919
Teflon AF, waveguiding layer fab. by ion irrad. 116550
thin dielec., eval. of different wafer charging metrology protocols 115803
USQ diode, local lifetime control, He ion irrad. 126654
virtual mesa/spoiler mid-IR angled-grating DFB laser fabricated by ion bombard. 71765
wafer pot. and charging damage, influence of scribe lanes 116009
AlAs:Na,Xe, ion implant., amorph. rate, RBS anal. 81028
$Al_{0.25}Ga_{0.75}As$, Si implant. weak damage, RBS/C, Raman spectrosc. 103279
$Al_xGa_{1-x}As$, compositional depend. of defect mobility and damage buildup 81034
$Al_{0.5}Ga_{0.5}As$:Be MBE layers, He^{++}-irrad., DLTS obs. 80706
Au, SPE growth, ion beam induced epitaxial crystalliz. 90530
BaF_2, scintillation response to energetic ions 110380
$BaFe_{9.1}Co_{1.4}Ti_{1.5}O_{19}$, ferrites, swift HI irrad., mag. props. 81827
$BaFe_{12}O_{19}$, ferrites, swift HI irrad., mag. props. 81827
Co/Pt multilayers, ion-irrad. patterned, mag. imaging 127348
$CoPt_3$ irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
$CoSi_2$/Si Schottky contact, BEEM *(Chinese)* 80912
$CrPt_3$ chem. ordered films, mag. patterning by ion-beam irrad. 104479
Cu thin film growth, ion-beam modif., MD simul. 68372
p-CuSCN semicond. in polymer channels, electrodeposition 125023
Fe microstruct., FIB-fabricated nano-constrictions, mag. props. 116276
FePd irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
FePt irrad. highly anisotropic films, ion irrad. tech. for mag. props. tuning 116264
GaAs, damage evol., track form., during swift Kr/Xe ion irrad. 115311
GaAs diodes, energetic HI, single-event transient current 103758
GaAs, surface passiv., ion bombard. 115635
GaAs:Br, ion-implanted, damage prod., ion energy depend. 81038
GaAs:Si, ion-implanted, damage profile meas. using an opt. method 126294
GaAs:Si,He layers, ion-beam-induced isolation 126310
n-GaAs/Au Schottky diode, I-V charact., swift HI irrad. 126637
n-GaN Schottky diodes, high dens. plasma damage, Cl_2/Ar discharges 126645
GaN cryst., ion implanted, wet etching, photoresist 126420
GaN epilayers, wurtzitic films, low energy IBAD, ion irrad. influenc 90527
GaN film, amorphization by ion implant. 81009
GaN films grown by plasma assisted laser-induced CVD, props., influence of HI irrad. 126017
GaN films, ion implant., structural and opt. charact. 126292
GaN, geom. magnetoresist., vert./lateral cond. 80704
GaN, ion-induced damage propag., enhanced diffusion, PL 69531
GaN:Au, ion implant., thermal annealing 81010
GaN:C(Au) films, ion implant. disorder, dyn. annealing 81011
GaN:Er, implant.-induced damage suppression 80733
GaN:Eu epilayers, ion implant., PL 81022
GaN:Fe^+ films, implanted, struct., ion channeling/Mossbauer spectra 81037
GaN:Mg,H films, H lattice location, ion channeling obs. 80708
GaN:Pr epilayer, Pr doped, PL/CL 126329
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
GaSb/InAs/AlSb mid-IR angled-grating DFB lasers, beam quality limitations 128359
Ge embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
a-Ge, ion implant.-induced disorder, EXAFS/Raman spectr. obs. 80758
Ge/Si multilayers, coherent amorphization by ion beam irrad. 80658
$Ge_{0.2}Si_{0.8}$/Si epitaxial struct., ion beam channeling, strain relax. 69996
InAs (110), electron accumulation layers, near-surface region 115322
InAs(P)(Sb) surface, nitridation, XPS anal. 103408
InGaAs/InAlAs HEMT, ion irrad. effects, radiation tolerance 126881
InP, damage evol., track form., during swift Kr/Xe ion irrad. 115311
n-InP, elec. isolation by ion bombard., dose depend., thermal stabil. 80734
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
^{6}LiF:Mg,Ti TLD, Fe-ion irrad., glow-peak stabil. 98815
^{7}Li stopping power/random energy loss/straggling into Si 80663
Mo thin film growth, ion-beam modif., MD simul. 68372
Ni/SiC, interface reaction, Ar^+ irrad. effects, thermal annealing 69704
Ni-Fe/Al-O/Co-Fe films with tunneling magnetoresist. effect, deposition 81871
PtSi/Si Schottky contact, BEEM *(Chinese)* 80912
SOI FETs, ion beam induced charge collection, body-tie effects 126728
Si, ECR plasma oxid., Ar ion irrad. effects 69864
Si PIN diodes, switching time tailoring by induced defects, ion irrad. 115830
Si PIN photodiode, single ion hits, radiation damage 126608
Si, SIMS depth profiling, O_2^+(N_2^+) beam-induced profile broadening effects 69473
Si, SPE growth, ion beam induced epitaxial crystalliz. 90530
Si diodes, energetic HI, single-event transient current 103758
Si, dwell-time depend. of irrad. damage 81005
Si embedded nanoparticles in SiO_2, ion beam synthesis and charactn. 81160
a-Si, ion beam induced epitaxial crystn., point defects role 80759
Si, ion-beam-induced nitridation, elec. transients 69834
Si on sapphire, radiation-damaged, ultrafast carrier relax. 69471
Si, void dyn., radiation damage/impurities effects, TEM obs. 80664
Si:B, B diffusion, HI irrad. effects 115559
Si:B, Bi ion irrad. effects on impurity redistribution 126605
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91977
Si:Ge, ion-beam-induced defect evol., channeling implant. study 103720
Si:H(He) power PIN diodes, defect effects on charact., ion implant. 115829
Si:O, polycryst., defects, DLTS/IBICC characterisation 125985
Si:Sb, dopant behavior following 8 MeV C^+ ions irrad. 102985
Si/$TiSi_2$/Ti syst., sputtering prep., preamorphization, salicide form. 103154
Si(001), oxidized V-grooves shape evol., high-dose Ge^+ ion irrad. 81078

ion beam effects continued
SiC, 4H, proc. induced intrinsic deep level PL 69582
SiC, 4H/6H, electron/ion irrad., intrinsic defect centers, annihilation 69810
n-SiC, bulk/implanted layers, Raman spectra 69575
6H-SiC, ion-beam-induced disorder, accumulation, dyn. annealing, thermal recovery 80979
SiC, ion-implanted 6H, residual damage, RBS anal. 126094
SiC:Al, 4H, single crysts., Al^+ bombard. induced damage, ion beam anal. 69793
4H-SiC:Al, implant. damage/annealing, IR investig. 69808
SiC:Au, ion implant., thermal annealing 81010
SiO_2 implanted layer on Si, AFM investig. of radiation damage distrib. 91892
SiO_2 on 6H-SiC, ion beam induced charge gate rupture 115805
SiO_2 ultrathin oxide growth, ultra-slow multicharged ion beam 103396
SiO_2:F fluorinated-silicate-glass film stacks, IC interconnect interlayer dielec., cap oxides 126469
W point field electron emitters, surface erosion, He ion bombard.-induced 125961
YAP:Ce, scintillation response to energetic ions 110380
YBaCuO Josephson jns., ramp edge modif. by ion beam irrad./heat treatment 70808
$YBa_2Cu_3O_7$ HTSC thin films, MW props. improvement, artificial defects effects 70602
$YBa_2Cu_3O_7$ film based Josephson jn. rf-SQUID magnetometers, step struct. effects 81979
$YBa_2Cu_3O_{7-\delta}$ HTSC films, masked ion beam irrad. damage profiles 81943
$YBa_2Cu_3O_{7-x}$ grain boundary jns., comp. anal. 70865
$YBa_2Cu_3O_{7-x}$ ramp-edge Josephson jns. with surface-modified barriers 70812
$YBa_2Cu_3O_y$ HTSC, melt textured, ion irrad., surface columnar defects 70654
YIG:Si, ferrites, swift HI irrad., mag. props. 81827

ion beam lithography
DOE, FIB direct micromachining, combined FIB/X-ray lithog. 71387
free-space micro-opt. intra-MCM interconnection modules, design and realisation 93444
graphite microdisks, mesoscopic devices, FIB lithog. proc. 126904
light ion lithog., range/quadratic deviation, computer simul. 92191
multicharged ions, refl. lithog. 115766
multiwavelength laterally complex coupled DFB laser arrays, FIB lithog. fab. 128260
new materials/procs., MEMS appls., reviews 104204
oxide dual damascene trench etch profile control, Langmuir site bal. model anal. 103333
plastic micro-opt. module, inter-chip opt. interconnection 104783
PMMA free-space micro-opt. modules, design, fab. and characterisation for photonic interconnects 127813
project lithog., nanopatterning, resistless direct surface modif. 92232
projection litho., proc. develop. tool design and integrat. 103596
projection lithog., latent image form. 115782
projection lithog., resist proc. develop. 126545
projection lithog., stencil mask 115760
projection lithog., tool and mask develop. 115755
projection lithog., wafer stage assembly 115759
proton beam micromachining & electroplating, precision 3D microstruct. 104215
ref. plate mfg. proc. for ion project. litho. pattern lock syst. 115763
resist develop. proc. 115777
thermosetting polymer mr-I-9000 film, struct., nanoimprint lithog., XPS/FTIR 125119
vert. wafer stage develop. for high-vac. appls. in ion-beam litho. syst. 115762
InP lasers, nanoscale patterning, FIB enhanced etching 128305

ion beam mixing
double ion-implant Ti-salicide technol., high-perform. CMOS appl. 92126
dyn. neg.-ion mixing method using high-current HI/electron beam evap. 125054
materials sci. with high energy ion beams 115800
AuFe mag. multilayer, GMR, induced anisotropy, ion beam mixing *(Chinese)* 116296
ta-C films, ion-assisted pulsed magnetron sputtering deposition 79214
CN_x films, N implant. synth. into diamond, bonding struct. 126302
$CoSi_2$ selective growth on patterned substr., dual ion beam tech. *(Chinese)* 81124
Fe/Si bilayers, β-$FeSi_2$ form., combined ion irrad./annealing 91959
β-$FeSi_2$, single-phase, ion beam direct synthesis in Fe/Si bilayers 79405
a-$FeSi_x$, prep., struct. opt. props. 103068
GaAs/AlGaAs asymmetrical coupling double QW, intermixing via combinat. ion implant. *(Chinese)* 103143
GaAs/AlGaAs asymmetrical coupling double QW intermixing, combinat. proton implant. *(Chinese)* 126140
GaP:N_2^+, α-GaN phase, ion-implant. synthesis 126296
InGaAs-InGaAsP laser, QW intermixing using Ar plasma exposure 71842
InP/InGaAs/InGaAsP integrated laser-modulator device fab., post-growth proc. 117289
Si/3C-SiC/Si ion beam synthesized layer, metallization 91960
Si/C layer syst., SiC ion beam induced solid state react. 79404
Si_3N_4/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
SiO_2/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
WSi_2 film form., ion beam synthesis, charactn. 69959

ion beams
see also ion beam effects; ion optics; ion-surface impact; mass spectrometers; particle accelerators; radioactive ion beams
BNL EBIS high current electron/ion beam dyn. simul. 110198
buffer gas cooling of ion beams 121317
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
dual 6T persistent-mode SC solenoid ion-opt. syst. 75960
EBIS beam form./collection, beam handling equipt. design 110197
EBIS electron string mode operation, expt. design 110275
EBIS highly charged ions, at. mass, TOF anal. 110277
EBIS primary ion sources, beam transport/prod. 110278
EBTS plasma mode diagnostics, freq. scaling, EBIS expt. anal. 110276
energetic ion beams, transport, plasma boundary shape effect 121322
evaporative cooling, selective RF heating, EBIS/T 110196
fast ion extraction from intense electron beams, EBIS single-turn inject. 110199
high-energy accelerators/colliders, polarized ion source 110247
high-energy storage ring, cryst. ion beams 110172
integrated research expt., design, planning, review 97909
intense highly-charged ion beam prod., review 110279
intense ion beams accelerated by Petawatt-class lasers 110100
low energy ion beams, beam noise, tuning aid 121386
MeV ion beams for implant., electrostatic scanning 121383
MIS-1 electron-optic syst. design anal. 110200
RF-driven ion source in electrostatic accelerator, props. extraction *(Chines* 110113
RHIC EBIS-based preinjector design, review 110202
sextupole magnets, third order Lie map *(Chinese)* 75991
shielded HI environ. lin. detector, RTD mission 122440
SNS linac beam diagnostic suite, review 87114
Varian's high-energy ion implanters, dosimetry enhancements 115604
XEBIST ion beam focusing, rel. electron beam pinch effects 110274
$^{40}Ar^{1+}$ beam, high current, emittance meas. using single shot pepperpot sy 87117
$B_{10}H_{14}$, ion implant., beam spectra/surface resist./SIMS 115533
N^+/N^{++} beams, pulsed, source divergence angle meas. 98074
Xe liq.-scintillation chamber, ^{20}Ne ion beam response 87200

ion chambers *see ionisation chambers*

ion channel lasers *see free electron lasers*

ion channels (biomembrane) *see bioelectric phenomena; biomembrane transport*

ion channels (biomembranes) *see biomembrane transport*

ion counters *see counters*

ion cyclotron resonance spectra *see mass spectra*

ion cyclotron resonance spectroscopy *see mass spectroscopy*

ion density
$(PbBa)(ZrTi)O_3$:Bi_2O_3 cathode electron injection for ion source improvemer 104340
SiO_2 plasma etching chem. modeling 126379

ion etching *see sputter etching*

ion excited X-ray emission *see ion microprobe analysis*

ion implantation
see also semiconductor doping; SIMOX
0.18-μm 3.5/6.8 nm dual gate oxide CMOS technol., effects of F on parametric and reliab. 81506
1.48-μm flared resonators, CW power coupling into single-mode fiber 12834
3D Monte Carlo ion implant. model, ultra-low energy, fab. of gigabit device *(Korean)* 81019
ASIC implant charging, photoresist bake, electron flood gun effect 115582
asymmetric source/drain extension MOSFET struct. for sub-50 nm gate lengt CMOS devices 126740
Axcelis GSD-HE series implanters, continuous variable aperture, throughpu 115543
Axcelis GSD/HE class high energy implanters, LINAC dataset efficienc 121323
Axcelis MC3 300 mm implanter, proc. perform. review 115539
beam dropout related defects reduction, hybrid scan implanter 115549
BiCMOS collector insert layers, highly doped, proc. develop./simul. 92478
BiCMOS power IC, lateral MOSFET, dual cond. paths 126856
BJT, selectively implanted collector, impact ionization 81226
bottom emitting proton implanted medium area VCSELs, flower mode emissio 117207
charging damage in ion implant./plasma procs., controlled stress, tests 11558
CMOS, 0.18 μm with deep n-well implant., RF perform. improve. 125744
CMOS device, S/D extension, shallow jn., ion implant. *(English)* 92462
CMOS device design, sub-50 nm, expt./simul. study 126769
CMOS devices, sub-0.1 μm, ring oscillator ccts., fab. 81514
CMOS perform. improvement by laser annealed source/drain extension profiles simul. 116030
CMOS proc. technol. trends for SoC era 116027
CMOS technol. develop., 0.35-μm, blanket/pocket anti punchthrough devic designs 104091
CMOSFET, optimum halo struct. 115927
CMOSFET, sub-100 nm, ultrashallow jn. form., TED 80990
CMOSFET shallow n^+/p^+ jn. form. using PIII 126742
compact opt. encoder with micromachined photodetector 86973
computer simul. of ion implant. with visual obs. of implant. profiles 115521
conf., Canela, Brazil (Sept. 2000) 78463
conf., ion implant. technol., Alpbach, Austria, (Sept. 2000) 113205
controlled ion-beam transform. of elec./mag./opt. materials props. 81152
DC PIII for planar samples 115579
deceleration beam line, energy contamination control syst. 115611
deep submicron CMOS, dielec. pockets, short-channel effects/DIBL suppressio 92469
diamond:Al(Cu), high energy ion implant., conducting layer form. 80999
diamond:B semicond. films, MR effect 91601
diamond:B temp./press. sens., high-press. high-temp. appl. 86505
diamond:Si film, elec./opt. props. 91602
diamond, built-in bolometric detector 121248
diamond, doping by ion implant. 115551
diamond, homoepitaxial CVD, recovery treatments for ion-induced defects 69829
diamond, ion implant. related defects, inhib. of light element diffusion 11555
diamond, ion-implanted, graphitization, variable range hopping cond. 91987
diamond, search for donors 115550
diamond films, (001) polycryst., vacancy defects eliminated by H and B ion bombard. *(English)* 124873
DLC films, plasma based ion implant. syst. 101366
dose control accuracy in press. compensation 115607
double ion-implant Ti-salicide technol., high-perform. CMOS appl. 92126
DRAM, 512 Mb/0.12 μm design rule, long data retention time strategy 12549
DRAM, embedded, dual thickness gate oxid., ion implant. 79867
DRAM buried-channel pFET device, threshold voltage 115937
DRAM devices, charge-to-breakdown/oxide thickness, N implant. effects 115895
dual ion implant. syst. for wide appls. envelope 69814
ECR plasma source, DC PIII 91955
EEPROM technol., As implant dose 102127
effluent species abatement, customized dry scrubber design 126287
energetic ion beams, transport, plasma boundary shape effect 121322
equipt., overall effectiveness, mfg. sci. anal. 115537
fast-pulsing PIII, target temp. simul. 81169
FIB micro machining, vert. Ga distrib., defects, lateral contamination 115610
fluoride materials, growing of bulk crysts. and structuring waveguides, laser appls. 68178
GSD/VHE implanter, high energy/high current perform. 115546
HBT implant isolation, MeV mask, cost effective 70046
HI channeling, kinetic eqns., long-range fraction 103280
high current decaborane ion source, concept, feasibility 121415
high current implanter, long term proc. perform. improvements 115592
high current ribbon beam, situ charging pot. monitoring 115585

implantation continued
high energy ion implant. detect. wavelength tuned QWIP 97247
high energy low dose ion implant. monitoring and charact. using C(V) tech. 115584
historical review of equipt. for semicond. appls. 113206
II-V semiconds., modeling of implanted B(Se) ion distrib. 115523
implant proc. monitoring using Boxer Cross BX-10 metrology tool 115598
implanters, Varian VIISta series, improved cooling 121385
IW-630 ion implanter for 300-mm wafers, perform. 115545
kestrel implanter, increased ion source life 121418
KTP, planar opt. waveguides, proton double implant. form. 127786
logic/syst. LSI, front end of line technol., review 115506
low energy ion beams, beam noise, tuning aid 121386
low energy plasma flood gun using RF plasma form. 115588
low-energy ion implant., decel lens syst., high dose uniformity 121321
materials sci. with ion beams, conf., Strasbourg, France (May-June 2000) 78432
medium current ion implanter Exceed2000A, perform. of plasma flood gun 115587
metal contamination reduction in evol. of ion implant. technol. 115608
MeV ion beams for implant., electrostatic scanning 121383
microelectronics materials charactn. by AES-sputter depth profiling 70248
microsystem technol., FIB appls. 92539
MOS device, through-the-gate implant., elec. reliab. 103196
MOSFET, dual-gate CMOS technol., self-aligned pocket implant. 81270
MOSFETs with pocket implants, effective channel length extraction by C-V method 103858
multifunction minifab tools for syst. chip fab., design by Japanese companies 81412
multilayer dielec. Fabry-Perot cavity, ion-implanted gratings 71463
next generation perform., Varian Control System realisation 115548
Nissin 300 mm medium current ion implanter EXCEED2300 115547
NMOS transistor prodn., parallel beam and batch implanters, elec. comparison 115542
NMOSFET, self-aligned pocket implant., jn. capacitance 103873
NMOSFET, sub-0.1-μm, with 12-nm n^+-p jn. using 5-keV As_2^+ ion implant. 115884
NMOSFET fab., 70 nm, ultra-shallow n^+-p jns. using low energy As_2^+ implants. *(Korean)* 103883
NMOSFET fab., n^+-p jn., As_2^+ low energy implant. 81269
NMOSFETs, CMOS proc. steps impact on drain current kink at liq. He temp. 70312
nondestructive monitoring, positron annihilation spectrosc. 115601
NV-GSD-HE, high energy ion implanter, energy accuracy and control method 115565
NV-GSD-HE ion implanter, energy enhancement 121325
organic ion-implanted low-k organic SOG films, IC appls. 126466
p^+/n and n^+/p shallow jns. form. by PIII, dopant deposition effects 115569
parallel Monte Carlo simul. 115518
pattern writing by large-scale plasma source ion implant. syst., planar ICP source 115497
photoresist integrity, UV photostabilization for high dose/energy ion implants 126291
photoresist outgassing press. distrib. modeling using FEM 115731
photoresist props. during high current implant., I-line vs. DUV resist comparison 126521
PIII, deep trench buried-plate doping technol. appl. 115568
PIII, ion energy distribs., theory and expt. 115573
PIII pulse modulator, elec. charact., target area/posn. effects *(Japanese)* 103268
plasma ashing/residue/polymer removal proc. integrat., joint improvement project 69875
plasma doping syst. for 200 and 300 mm wafers 115570
plasma immersion implant. for semicond. modif./doping, historical perspective 103286
plasma ion doping as ultra-shallow jn. fab. tool 103288
PMOS device, N implant., gate oxide, B penetration 103208
PMOS transistors, F effects from BF_2 source/drain extension implants 70129
PMOSFET, short channel effect optim. by As P-halo implant 115892
PMOSFETs, 0.15-μm, B-interstitial clustering 115885
pMOSFETs, plasma doping/low energy ion implant., elec. props. 115909
pocket implanted MOSFET current gain factor length scaling, charactn. method 103893
polyamide-6 films, elec. props., multistage ion implant. effects 116185
polysilicon:P gate electrode in 0.5 μm CMOS devices, elec./microstruct. props. 104092
polysilicon field-emission cathodes, singly addressable arrays 102925
polysilicon TFT low-temp. proc., ion implant. technol. 115894
power MOSFET, super-jn. struct., shallow angle implant. 126862
proton implanted VCSEL, ESD pulse sensitivity 128232
pulsed plasma doping, contamination control, SIMS meas. 115577
pulsed plasma doping implant dose meas. syst. 115575
quasi-single-drain MOSFETs, short channel charcts. 81343
QW IR detector, proton implant. assistant intermixing proc. 109546
QW IR photodetectors, detect. wavelength tuning 86543
retrograde well and channel implants, tech./economic considerations 115504
Salford ultra low energy ion implanter, charge exchange cross sects. meas. 115595
Schottky barrier rectifier, high current dens., using V as barrier metal 92287
SDS source gas utilisation, sub-atmos. ion implant source gases control/delivery 132279
selectively-oxidized VCSELs, hybrid ion-implanted, high-power single mode operation 117188
self-aligned p base trench IGBT, on-state perform. enhancement 126785
semicond. device, implant profile, AFM/SCM imaging 103255
SEMICONDUCTOR300 ion implant systs., pilot prod. 115538
shallow n^+-p-well diodes, generation lifetime from reverse generation current 126106
short-channel vert. sidewall MOSFETs, proc. flow 92374
Si:N, low energy N implant., chem. anal. 91976
SIMNI films, multiple-steps implant., elec. props. improvements *(Chinese)* 126226
SIMOX, BOX synthesis, C enhance. of SiO_2 nucleation, simul./SIMS profiling 91985
SIMOX technol., BOX microstruct. 115526
SIMOX wafer prod., Hitachi UI-6000 implanter for low-dose fab. proc. 115541
SIMOX wafer surface defects, effects on device charact. *(Japanese)* 91888
SIMOX wafers, low dose O implant.-induced bulk and surface defects anal. 69791
single ridge waveguide electroabsorption modulated DFB laser for 2.5-Gb/s transm. 120183
single wafer high current ion implanter, advanced device fab. 121412
single wafer medium current ion implanter, perform. charcts. 121384
single-transverse-mode VCSEL under continuous and pulsed operation 105340
small sig. ac-SPV noncontact monitoring, near surface doping for IC-proc. 104034
Smart-Cut proc. for thin film transfer, generic nature 103276
SOI CMOSFETs, 50 nm, ultra shallow jn., by laser annealing/pre-amorphization implant. 126775
SOI CMOSFETs, fully depleted, low-temp. selective tungsten CVD technol. 81299
SOI struct., interface states and deep-level centers 115445
SOI wafer, Smart-Cut technol., surface defect anal. *(Chinese)* 80952
SOI wafers, thermally oxidized bonded, cryst. surface defect, oxygen gettering 91907
SOI-SIMNI film, multiple-step implant., elec. props. *(English)* 91881
solid state pulsed power systs. for PIII 115576
SOS film growth, CVD & SPE, charactn., device appl. *(English)* 79414
sources, design, operat, emittance effects 121416
SPIDER MOSFET wafers, high power implant charging damage 115583
spin valve, N-ion implanted, temp. depend. of GMR profiles 127354
SRAMs soft error improvement by ion implanted shallow well struct. 115979
static shielding diode and induction rectifier, channel implant. 126718
sub-5 nm multiple-thickness gate oxide form. by O implant., optim. 70313
submicron DRAM cell, Shallow Trench Isolation, ion beam shadowing n-jn. optimisation 116041
super-self-aligned bipolar transistor, deep selectively ion-implanted collector, high f_T/J_c *(Japanese)* 70051
surface capping during annealing, effects on ultrathin SIMOX materials microstruct. 91908
syst.-on-a-chip, N_2 ion implant. and VHP O_2 re-oxid. 103390
techs. for device scaling solns., perform. benefits 69806
tetrafluoromethane plasma induced damage during dry ashing/photoresist residue removal 103424
TFT LCD fab., ion doping syst., large area line beam form. 115535
trimethylphosphine as $^{31}P^+$ implant. source for Si device fab. 91984
ultra shallow jn. form., low energy B implants, pre-amorphization implants limits 115500
ultra-low-energy ion implant., Monte Carlo simul. 115493
ultra-shallow jn. form., ion implant./RTA 115531
ultra-shallow jn. form., ion implant./RTA technol. trends 103261
ultra-shallow jns., PLAD, comparison with beamline implant. 115574
ultra-shallow jns. in advanced CMOS technol., proc. integrat. challenges/solns. 116029
ultrashallow jn. form., ion implanter/RTA syst. issues 126316
ultrashallow jn. monitoring, nondestructive in-line carrier illum. syst. 103266
ultrashallow jns., plasma source ion implant. at low energy/high dose rate 69792
vac. actuated gas delivery, metal fluoride dopant appl. 126286
Varian's high-energy ion implanters, dosimetry enhancements 115604
Varian E220/E500 series implanters, cooling 115567
Varian VIISion Implanter certification for SDS, design considerations 126288
Varian VIISta 3000 single wafer high-energy ion implanter, design and perform. 115540
Varian VIISta 810 medium current implanter, dosimetry syst. 115593
VIISta 3000 ion implanter, beam optics 121324
VIISta 810 ion implanter, beam autotuning 115566
wafer charge monitoring by disk current 116010
wafer charging monitor, MOS capacitor 103273
wafer implant, two implant meas. of press. compensation factors 115586
wafer pot. and charging damage, influence of scribe lanes 116009
YIG films, narrow-linewidth, for heterog. integrat. 92790
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
Al-Si casting mold materials, surface modif. by plasma-based ion implant. *(Japanese)* 79423
AlAs:Na,Xe, ion implant., amorph. rate, RBS anal. 81028
AlAs/GaAs:N,Ar,Xe interfaces, ion implant., amorph., RBS obs. 81029
$Al_{0.25}Ga_{0.75}As$, Si implant. weak damage, RBS/C, Raman spectrosc. 103279
$Al_xGa_{1-x}As$, compositional depend. of defect mobility and damage buildup 81034
AlGaInP/GaAs HBT, proton implant isolation *(Chinese)* 103785
AlGaN/GaN:He,P HFETs fab., ion implant., classical/gate metal approach 81381
$Al_yGa_{1-y}N_xAs_{1-x}$, thin films, nitride form. by N ion implant. 103275
As ions, implanted into Si at 850°C, anom. behaviour 80985
AsF_5 dopant gas for RF ion source, device charcts. 121417
B and P ion implant., C_{60} thin film solar cells 112905
$B_{10}H_{14}$, ion implant., beam spectra/surface resist./SIMS 115533
$B_{10}H_x^+$ beamline ion implant. for shallow jn. form. 81020
β-BaB_2O_4, planar waveguides, He^+ implant., losses, freq. conversion 128524
$BaTiO_3$:Rh planar waveguide, He^+ ion-beam implant. fab., two-wave mixing 128448
$BaTiO_3$:Rh planar waveguide, photorefr. wave mixing 93764
Bi_2Se_3:Fe, magnetoresist., SdH effect 80776
$Bi_2Sr_2Ca_2Cu_3O_{10}$:U tapes, in-field behaviour, enhanced flux pinning 81930
Bi_2TeO_5:Au^+, nanoclusters form., strong absorpt. max. 91961
C, diamond-like, film deposition by plasma source ion implant. with superposed pulse 114409
ta-C films, electron field emission, surface morph. effect 102898
C, ion implant. into single-element/composite cathodes, freq.-pulsed regime 125955
a-C tetrahedral films, as-deposited and N implanted, electron field emission 125959
C:P, type IIa diamond crysts., cold implant., rapid annealing effects 80998
C_{60}:P, ion implant., for PV appls. 78174
CN_x films, N implant. synth. into diamond, bonding struct. 126302
$Ca_4GdO(BO_3)_3$ waveguides, CW blue-light SHG 82928
CdS N^+ ion implanted thin films, irrad.-induced PPC 93324
CdS nanocrystals form. in SiO_2 substrs. by ion implant. 126240
CdS:N films, ion implant., Raman scatt./XRD 115556
CdS-Cu(InGa)Se_2 heterostruct. solar cells, D^+ implant. effects 100125
Co-Cr fermoral heads, N ion implant., hard coatings 133054
$CoSi_2$ form. on porous Si by high dose ion implant. 81014
$CrSi_2$ layers on Si(111), growth upon high current pulsed Cr ion implant. 101450
Cu-Cr(V)(Ta)-SiO_2 multilayers on Si, Cu self aligned passiv. 69949
Cu-silica nanocomposites, ion implant. prep., third-order opt. suscept. 93762
Cu(001) surface, Ar ion implant. at grazing ion-surface interacts., computer simul. 115522
p-$CuInSe_2$:H, hydrogenation, cond. type conversion 103409
Er-implanted GaN opt. memory devices 104609
Fe/Si bilayers, β-$FeSi_2$ form., combined ion irrad./annealing 91959
β-$FeSi_2$ ion beam synthesised light emitting devices, EL 93380
β-$FeSi_2$/Si LED, ion beam synthesis, elec., electronic, opt. charcts. 82412
GaAs, CMOS inverter, charcts. 127062

ion implantation continued
GaAs E/D mode MESFETs, 0.12 μm gate, f_T/f_{max}> 100 GHz, ion implant., low power IC appls. 69145
GaAs MESFET, $H_2(D_2)$ plasma exposure 126877
GaAs MESFET IC mfg., 6 inch wafers, N-minus resist. control 127068
GaAs MESFET, OEIC receiver array 105034
GaAs MESFET, back-gate, threshold voltage uniformity *(Chinese)* 81376
GaAs, SI, effect of Ar^+ implant. on galvanomagnetic props. 80702
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
GaAs films, LT-MBE grown/As implanted, As precip. Ostwald ripening 126035
a-GaAs, implant.-induced struct., EXAFS 80760
GaAs ion-implanted E/D MESFETs, proc. optim. for RF perform. 125726
GaAs, ion-implanted, for ultrafast saturable absorber appls. 128458
GaAs isolation struct., backgate impedance dispersion 103436
GaAs multiple ion-implanted FETs, nonlin. Volterra-series anal. of IMD characts. 114973
GaAs, polyenergetic ion implant., device isolation 115560
GaAs, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
GaAs substr. QC, ion implant. test, TCAD simul. 69998
GaAs:^{73}As, implant., diffusion study 126278
GaAs:As, ion-implanted, opt. transm. spectra 80687
GaAs:As^+ arsenic-ion-implanted photoconductors, ultrafast switching/THz generation 91401
GaAs:Br, ion-implanted, damage prod., ion energy depend. 81038
GaAs:Er, electron emission channeling 126279
GaAs:H, H-ion implant., depth distrib., damage profiles 115561
GaAs:Mn, with nanoscale mag. clusters, photo-enhanced magnetoresist. effect 80696
GaAs:N, implanted, annealing temp. depend. of elec. cond. and capacitance dispersion 69543
GaAs:O MESFET, surface O implant., DC/RF perform. 126891
GaAs:Se, ion implant., strain profile, Bragg-case sect. topography 69820
GaAs:Si, ion-implanted, damage profile meas. using an opt. method 126294
GaAs:Si,He layers, ion-beam-induced isolation 126310
GaAs:Xe, isolated amorph. zones, implant. induced, electron-induced regrowth 81166
GaAs/AlGaAs QW, proton implant. 93590
GaAs/AlGaAs asymmetrical coupling double QW intermixing, combinat. proton implant. *(Chinese)* 126140
GaAs/AlGaAs asymmetrical coupling double QW, intermixing via combinat. ion implant. *(Chinese)* 103143
GaAs-AlGaAs QW VCSEL, shallow implant-apertured, high-speed modulation 105449
GaAs(001) surface, Be and Se ion implant. at grazing ion-surface interacts., computer simul. 115522
GaN cryst., ion implanted, wet etching, photoresist 126420
GaN, effect of N/Ge coimplantation on Ge activation 103270
GaN epilayers, wurtzitic films, low energy IBAD, ion irrad. influenc 90527
GaN film, amorphization by ion implant. 81009
GaN films, high press./temp. annealing, micro Raman spectra 126061
GaN films, ion implant., structural and opt. charact. 126292
GaN, geom. magnetoresist., vert./lateral cond. 80704
GaN, high-dose ion implant. 81033
GaN, ion implant., current status 103251
p-GaN:(Mg,)Be, ion implant., surface morph. and photolum. meas. 69832
GaN:Ar(Si), patterning, ion implant.-depend. etching 69920
GaN:As(Ge)(Se) epilayers, radioact. isotope ident., PL 126330
GaN:Au, ion implant., thermal annealing 81010
GaN:Be (Mg),O, coimplantation, ohmic contact resist. appl. 126304
GaN:Be, elec./structural anal., Raman spectrosc., high resoln. XRD 81000
GaN:C(Au) films, ion implant. disorder, dyn. annealing 81011
n–GaN:Er epilayers, ion implanted, Er^{3+} photolum. 81023
GaN:Er, implant.-induced damage suppression 80733
GaN:Er(,O) epilayers, implant. and high temp. RTA 69780
GaN:Eu epilayers, ion implant., PL 81022
GaN:Fe, ion implant., damage, annealing, lattice site location 81016
GaN:Fe^+ films, implanted, struct., ion channeling/Mossbauer spectra 81037
GaN:H, ion implanted, Raman scatt. anal. 91963
GaN:Mg/AlN epilayers, ion implant., annealing, PL 126328
GaN:Mg(Si)(C)(O) films, ion implanted, SIMS/RBS-channelling obs. 115507
GaN:Mg,Be films, MOCVD, Be implant., high hole conc. 69826
GaN:Mg,C,He,O epilayers, ion implant. induced defect states, elec. charactn. 81024
GaN:Mg,H films, H lattice location, ion channeling obs. 80708
GaN:Mn, high dose ion implant., nanoscale mag. regions 127326
GaN:P films, electronic struct., PL 80727
GaN:Pr epilayer, Pr doped, PL/CL 126329
GaN:Ti^+, O^+, Fe^+, Cr^+, FET struct., implant isolation, sheet resist. 126822
GaN/sapphire, N_2^+-ion implantation and α-irrad. effects, Raman and photolum. spectra anal. 126007
GaN_xAs_{1-x}, thin films, nitride form. by N ion implant. 103275
GaP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich modes 103027
GaP:^{73}As, implant., diffusion study 126278
GaP:N_2^+, α-GaN phase, ion-implant. synthesis 126296
GdOBr:Tb^{3+},Ce^{3+} phosphors, green emission enhancement by co-doping 82334
a-Ge, ion implant.-induced disorder, EXAFS/Raman spectr. obs. 80758
Ge nanowires in oxidized Si V-grooves, ion beam synthesis 92250
Ge wafers, ion-implanted B diffusion 126305
Ge:H, surface blistering, H-implant. dose effects 91968
Ge-redistributed polysilicon-SiGe stack gate for CMOSFETs, high-perform. 126773
Ge(100) substrs., self-ion-induced swelling 81032
GeF_4 isotopically enriched SDS ion implant. source, anal. 132261
$Hg_{1-x}Cd_xTe$:Ar, ion implant., struct. damage, RBS/TEM obs. 81041
In beam implant. for VLSI appl. 115501
In implanted wafers, pulsed C-V meas. 115502
In/B double pocket archit. for sub-100 nm MOSFETs 81340
InAs nanocrystals in Si, form. by seq. ion implant., charactn. 81031
InGaAlP-based low-threshold high-temp. proton-implanted red-emitting VCSELs 128248
InGaAs SQW, ion implanted, saturable absorber mirrors for pass. mode-locking 105485
InGaAs-GaAs photorefr. MQW device in quantum confined Stark geom. 80880
InGaAs-InGaAsP diffused QW modulators/lasers 127778
InGaAs-InGaAsP multiple wavelength selective channel electro-absorpt. intens. modulators, P^{2+} ion implant. induced intermixing 93232
InGaAsP/InP 1.53-1.55 μm LD, on-wafer surface implanted ps pulse 117255
InGaAsP-InP bulk LDs, saturable absorber fab. by HI implant. 128457

ion implantation continued
InGaP/GaAs HBTs, implant isolation and base contact abnormalities influ. perform. and reliab. 126682
InGaP/GaAs/InGaAs lasers, elec., opt. props., He^+ ion irrad. 93643
InP, MeV As and P ion implanted and annealed, elec. and opt. props. 12601
InP based QW laser, low energy ion implant. fab. 93626
InP, implant. induced selective chem. etching 92048
InP, implant.-induced carriers/depth profiles correl., annealing 91958
a-InP, implant.-induced struct., EXAFS 80760
InP, porous, MeV ion-implant.-assisted electrochem. etching, Frohlich mod 103027
InP selective growth on FIB-modified GaAs surface by hydride VPE 114407
InP:Er, implanted, lattice location, emission channeling obs. 81039
InP:Fe, heavily compensated implanted samples, $Fe^{2+/3+}$ trap conc. 91967
InP:Fe, high temp. ion implant., high Fe solubility 81013
InP:Mg^+, implanted, RTA, lattice recovery, Raman obs. 80981
InP:Si^+, implanted, free-carrier conc., PL method 80735
InP/InGaAs/InGaAsP integrated laser heterostruct., ion implant. mask fa 93625
InP/InGaAs/InGaAsP integrated laser-modulator device fab., post-growth pro 117289
n-InSb:Li^{3+} single crysts., transport and opt. props., ion irrad. effects 91983
p-InSb:Te, elec. charact. 91618
$Li_2B_4O_7$ cryst., low-loss opt. planar waveguides, He^+ implant. form. 71345
$Li_2B_4O_7$, planar waveguides, He^+ implant., losses, freq. conversion 128524
LiB_3O_5, planar waveguides, He^+ implant., losses, freq. conversion 128524
LiB_3O_5, waveguide form. by keV H^+ ion implant. 116668
$LiNbO_3$ crysts., multienergy Cu^+ ion implant., extraordinary refr.-index increas 116544
$LiNbO_3$ photorefr. waveguides, ion exchange/implant. fab., holographic recor ing 127772
$LiNbO_3$ waveguides, ion implanted. SHG depth depend. 82872
$LiTaO_3$, waveguide form. by keV H^+ ion implant. 116668
Mg-Cs alloy photocathode from Cs^+ ion-implant., sputtering proc., photoemissio *(Chinese)* 115239
Mo gate electrode work fn. adjustment for CMOS technol. 127037
Mo, ion implant. into single-element/composite cathodes, freq.-pulsed regim 125955
Mo/SiO_2/Si gate electrodes, work fn. engng., CMOSFET appl. 126750
N ultra-low energy ion implant. from rem. plasma source, Monte Carlo simu 115520
$NaY(WO_4)_2$:Nd, He^+ ion implant., planar opt. waveguide form., props. 12773
Ni ohmic contacts to p- and n-type 4H-SiC 103180
Ni/SiC, interface reaction, Ar^+ irrad. effects, thermal annealing 69704
P ion shower implant. for special power IC appls. 115571
PZT thin films, loss factor, O^+ implant. effects 92635
PtSi Schottky diode, barrier height reduction by ion injection doping *(Chinese* 91856
SIMOX low dose wafers, energy depend., struct. props. 115528
SOI, ion implant. SMART-CUT technol. 115527
SOI, low energy water ion implant. synthesis 115525
SOI wafer fab., PIII syst. 115530
SbF_3, vaporizer feed material for Bernas dual vaporizer 115580
Si, (311) defect dissolution, depth depend. 103269
Si MOS capacitors, gate oxide reliab., beamline implant./plasma doping 11553
Si MOS nanotransistor, gate technol., DC elec. results 103827
Si, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115536
Si PIN detector, fab., planar technol. *(Chinese)* 110282
p-Si, annealed 1.5 MeV B implanted, defects 103248
Si coating thickness on rot. wafer disk, batch ion implanters, charge sens 115603
Si, deep amorph. wells, crystn. by ion implant. 79415
Si, dwell-time depend. of irrad. damage 81005
Si, high energy ion implant., annealing, elec. act. centres 115510
Si, high-energy ion implant./annealing generated vacancy clusters 102967
Si implanted with N by PIII, reciprocal space mapping 81036
Si, ion implant., dopant diffusion, SIMS 126298
Si, ion implant., dopant diffusion, amorphization, atomistic modelling 91964
c-Si, ion implant., point defect diffusion and clustering 81003
Si, lateral gettering of Fe and Pt by cavities induced by He implant. 81007
Si lattice defect passiv. by ECR hydrogenation tech. 69895
Si layer transfer using wafer bonding/debonding 103277
Si, low energy Cs^+ and Cl^- ion implant., SIMS investigs. 115562
Si nanocrystal MTJ device, ion beam synthesis 126911
Si nanocrystal arrays based MOS memory devices 127065
Si nuc. radiation detectors, ion implant. 121430
Si p-n jns., ion implant. fab., PV devices appl. 123806
Si photoelement, blue-purple light detect. 86508
Si porous LED by std. BCD technol., yellow-orange EL 93432
Si, porous, implanted with N by PIII 81035
Si, porous, patterning for integrated opt., H ion implant., RTA 92008
Si, porous, thick layer form., implanted mask, gas sens. fab. 92009
Si proc., PIII 81002
Si surface layer cleavage, H-induced, thermodyn. model 80996
Si textured surface prep., etching, field emission, C implant. 69433
Si thick porous sacrificial layer form. using implanted mask technol., gas mic rosensors 92534
Si thin films, wafer bonding, exfol. proc., IR spectrosc., X-ray imaging 126353
Si, trapping of Al by disloc. loops 81008
Si, ultra low energy implants, interstitial defects, TED 115509
Si, void dyn., radiation damage/impurities effects, TEM obs. 80664
Si:As, cross-contamination reduction by beam cleaning, TXRF 126281
Si:As, implanted As redistrib., substr. temp., annealing ambient effects 115513
Si:As, ion implanted shallow jn., MEIS/RBS profiling 115373
Si:As, ion-implanted, clustering/precip. anal., SIMS/EXAFS 115590
Si:As/SiO_2 PMOSFET, short channel effect, halo implant effect 115916
Si:As^+(B^+)(P^+) off-axis oriented wafer control during high angle implants 115599
Si:As(B)(P), ion implant. induced contamination, Monte Carlo simul./modeling 115609
Si:As(Ge), anom. P diffusion during postarsenic-implant. annealing 69823
Si:As(Ge), ion implant., amorphization 115332
Si:Au, high-energy ion-implanted, vacancy evol., Au labeling 81030
Si:Au substrs., selective etching, micropatterned ion-implant., micromachining 92570
Si:B, B-interstitial Si clusters, interstitial supersaturation, postimplantation annealing 102953
Si:B, Bi ion irrad. effects on impurity redistribution 126605
Si:B CZ substr., boron implant., CMOS technol. 103282

implantation continued
Si:B Cz wafer based diode, high dose high energy implant., CMOS technol. 115831
Si:B MOS-struct., through-gate implant., induced damage 115508
Si:B, PIII, annealing, low-leakage p^+n jn. form. 80991
Si:B RT LED, ULSI compatability 71611
Si:B, RTP, shallow jn. form., sheet resist. studies 115485
Si:B implanted n^--gated tip arrays, C-doped BN coating 69405
Si:B, init. anom. diffusion in superlattice wafers at low-temp. annealing 126313
Si:B low dose low energy ion implant., noncontact in-line monitoring 115591
Si:B, low energy B implant., jn. characts., damage, pre-amorph. effects 115516
Si:B, low energy B^+ implant., lattice damage, slow positron obs. 81027
Si:B p/p^+ epitaxial layers, ion implant., misfit disloc. nucleation/glide, RTA 126280
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:B pulsed plasma doping syst., plasma charactn. 115578
Si:B, segreg. at ang. config. of Si/SiO_2 oxid. boundary 103258
Si:B, ultra low energy implant., decelerator module 115544
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91977
Si:B ultra shallow jns., sub keV ion implant. 115505
Si:B, ultra-low energy implant., damage, MEIS obs. 115511
Si:B, ultra-low energy implanted, elec. activation 115289
Si:B, ultra-shallow jn. implants, RTA, monitoring 115594
Si:B, ultralow energy implanted B, TED 69800
Si:B wafer, high-current single wafer implanters, beam incidence angle control 115600
Si:B wafers, supersaturated, deactivation kinetics 103247
Si:$B_{10}H_{14}$ jns., ultra low energy ion implant. 115532
Si:B/SiO_2, through-oxide implant., SIMS anal. 103254
Si:B(Ar) vicinal surface, low-energy implants, mol. dyn. anal. 126321
Si:B(As) wafers, dose uniformity of sub-keV implants 115602
Si:B(As)(BF_2), low-energy ion implant., high-conc. diffusion profiles 126311
Si:B(As)(P) (100) wafers, low-energy implant., RTA, jn. depth, cryst. orient. effects 115515
Si:B(As)(P)(Sb) ultra-shallow abrupt jns., activation/deactivation, laser annealing 115481
Si:B(BF_2) PMOS transistor, source/drain extension implants comparison 115891
Si:B(P) polycryst. resistors, mech. stress of elec. perform. 125837
Si:B(P), polysilicon thin film resistors, reliab. 125846
Si:B(P)(As) bulk-doped ref. wafers, dopant conc. meas., SIMS round-robin study 115596
Si:B(P)(As) wafer, ion implant., therma-wave dose sensitivity 115606
Si:B,F implanted samples, TED reduction 115512
Si:BF_2^+ doping charact., implant-induced defect sites, sheet resist. 103259
Si:BF_2^+, ultra-shallow jn. form. by implant., spike annealing 115517
Si:B,He, B-cavity gettering, He implant.-induced 126323
Si:B,O,C, ion implanted, vacancy/interstitial depth profiles 69787
Si:B,P,As, single-wafer implant., cross-contamination control 126284
Si:B,P,Mo, ion implant., Mo contamination studies 126283
Si:Bi (Bi_2), HI bombard., damage buildup 126307
Si:C, ion implant., $Si_{1-x}C_x$ form./stabil. 69803
Si:C ion-implanted epitaxial wafers, heavy metals gettering efficiency, TXRF obs. 69788
Si:C(N), low-energy ion implant., buried insulating layer form. 103253
Si:Co,Cu, ion implanted, contamination, elec. props. 102959
Si:Cu, electron emission channeling 126279
Si:Cu(Ag)(Au), MeV ion implant., damage prod., RBS-channelling anal. 91948
Si:Cu,He, metal gettering, He implant.-induced 80980
Si:Er, electron emission channeling 126279
Si:Er, high dose channelled implant., temp./ang. effects 91971
Si:Er, ion implant., IR PL emission, minority carrier lifetime 91585
Si:Er, ion-implant., range distribs. 69488
Si:Er nanocrystals, ion beam synthesis 80665
Si:Er/SiO_2 nanocrystals, nonradiative de-excitation procs. 69482
Si:Er/SiO_2 nanocrysts., PL, broad-band/flashlamp pumping 69484
Si:Er,O, O-coimplant., donor centers form. effect 69486
Si:Fe, ablation plasma ion implant. 69824
Si:Ge, dose rate and temp. depend. of Ge range profiles, channeling implant. 81006
Si:Ge, ion-beam-induced defect evol., channeling implant. study 103720
Si:Ge layers, preamorphous implants in-line charactn. 115597
Si:Ge, reducing As to Ge cross contamination, ion implant. 126282
Si:Ge,B(As)(P), ultra-shallow abrupt jns., Ge pre-amorphised, species depend. 115514
Si:Ge,B(P)(As) implanted wafers, laser thermal annealing, Boxer cross meas. 115488
Si:H, H-ion implant.-induced layer splitting, layer thickness effects 69804
Si:H, H-plasma-etched and H-implanted single-cryst., annealing effect 69781
Si:H, PIII, damage, defect form. 91982
Si:H RF MOSFETs, proton-implanted struct., transm. line noise 91249
Si:H films, Smart-Cut proc., proton implant., wafer bonding 115524
Si:H, implant. induced buried nano-cavities, microstruct., opt. effects 125993
Si:H, implant. induced surf. layer exfol. 80993
a-Si:H, ion beam synthesis of low resist. contacts 69710
Si:H, ion implant., nanocavity form. and defect interacts. 80657
Si:H nanocrystals in silica, PL, H passiv. 93337
Si:H pattern-implanted wafers, thermal/mech. separation 115292
Si:H, plasma immersion ion implant., H-induced surface blistering 126299
Si:H, plasma immersion ion implant., metallic contam. 126306
Si:H, surface blistering, H-implant. dose effects 91968
Si:H^+,He^+ single cryst., evol. during annealing 126273
Si:H(He) power PIN diodes, defect effects on charact., ion implant. 115829
Si:H(He)/SiO_2 SOI buried layer, O precip. form. 126408
Si:H,He, layer splitting, low energy channeling effect limitation 91972
Si:H,Ni/SiO_2 SIMOX, H-implant.-induced nanocavities, Ni gettering 115529
Si:He cond. modulation power device, localized lifetime control, transport model *(Chinese)* 115882
n-Si:He epitaxial wafer, high energy He implant., bubble form., disloc. 69799
Si:He^+, bubble form., implant. temp. effects 91962
n-Si:He^+(111) epitaxial wafer, bubble form., high energy ion implant. dose rate depend. 91604
Si:He(H)(O), uniform stress effect 115558
Si:He,N, porous Si form., MeV energy pre-implant. 80992
Si:In, halo doping by In ion implant., advanced CMOS devices 115499
Si:In, ion implant., 8250_{HT} implanter perform. 115564
Si:In, qtr. micron device implants, In cross contamination 126285
Si:Mo, plasma based ion implant., XPS studies *(Chinese)* 80986
Si:N, ion implanted, N-vacancy complexes, positron annihilation spectrosc. 91584
Si:N^+,O^+ irrad. crysts., depth selective XANES anal. 80987

ion implantation continued
Si:N,C, high dose shallow plasma immersion ion implant. 91973
Si:Ni polycryst. films on glass, Ni induced selective nucleation, SPE 125051
Si:O, ^{18}O implant., range params. 81026
Si:O single-cryst., O recoil implant 80994
Si:P high-dens. buried nanopyramid FEA, ion implant. & wet etching 80583
Si:P, ion implant. role in quantum computing 91974
Si:P, non-mass resolved ion implanter, P dose uniformity, oxide uniformity/dimer ratio effects 115572
Si:P wafer, ion implant., channeling uniformity control 115605
Si:P(Ge)(As)(Si), impurity proximity gettering, trans-projected-range effect 91957
Si:Sb, dopant behavior following 8 MeV C^+ ions irrad. 102985
Si:Sb, thin layer ref. material for surface anal., charactn. 91975
Si:Si^+/B^+ dual implanted wafers, RTA 126115
Si:Yb, ion-implant., range distribs. 69488
Si/3C-SiC/Si ion beam synthesized layer, metallization 91960
Si/$Ge_xC_ySi_{1-x-y}$, group IV heterostruct. form. by Ge and C ion implant., appl. to HBTs 81227
Si/Ge_xSi_{1-x}, group IV heterostruct. form. by Ge and C ion implant., appl. to HBTs 81227
Si/Si:Er interface, Er^{3+} low-temp. excitation, p-n jn. form. influence 126309
Si/SiO_2/steel foil TFT, direct thermal oxid. 70149
Si/$TiSi_2$/Ti syst., sputtering prep., preamorphization, salicide form. 103154
Si-on-SiGe-on-insulator, strained Si, by wafer bonding, MOSFET carrier mobility enhancement 126236
Si(001) anom. surface amorphization under Ar^+ ion bombard., RBS/channelling obs. 69842
Si(001), nitridation, isotope-beam material modif. 92057
Si(001), oxidized V-grooves shape evol., high-dose Ge^+ ion irrad. 81078
p-Si(100), selective Au electrodeposition on surface defects 90510
Si(100) stepped surface, implant-induced erosion, mol. dyn. study 69805
SiC, 4H, 6H, proton implant. induced intrinsic defects, EPR 69995
p-/n-SiC, 4H, epilayers, Be implant., Be defect centers, DLTS 69595
SiC, 4H, proc. induced intrinsic deep level PL 69582
SiC, 4H/6H, electron/ion irrad., intrinsic defect centers, annihilation 69810
SiC, 6H, ion implant., persistent D_{II} defect 69584
SiC, 6H, self-ion implanted, opt./struct. props. 81040
SiC, atomistic simul. of ion implant. into different polytypes 115519
n-SiC, bulk/implanted layers, Raman spectra 69575
4H-SiC buried channel normally-off MOSFETs, high channel mobility 70127
4H/6H-SiC, excess carrier lifetime/surface recomb., opt. charactn. 91706
β-SiC film, porous, electrolum. *(Chinese)* 81091
SiC, ion-implanted 6H, residual damage, RBS anal. 126094
β-SiC, low-temp. direct synthesis by metal vap. vac. arc ion source implant. 125085
4H-SiC merged pn-Schottky diodes, fab. *(English)* 103745
4H-SiC power MOSFET, large-area device 126837
SiC power devices, device proc. technol., thermal stabil. 70066
SiC power devices, single/multiple zone JTE structs. 126703
SiC, pulsed excimer laser proc. 72124
$Si_{1-x}C_x$, C ion implant./annealing form. *(Chinese)* 126318
SiC:Al, 4H, single crysts., Al^+ bombard. induced damage, ion beam anal. 69793
SiC:Al SIT, HV charact. 126896
4H-SiC:Al, implant. damage/annealing, IR investig. 69808
6H-SiC:Al^+,(N^+) wafer implant., photothermal meas. and modelling 69815
SiC:Al,B power DIMOSFET with double implanted P-well 81309
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
SiC:Al,N 6H LDMOS transistors, silane-ambient implant anneal 126735
SiC:Au, ion implant., thermal annealing 81010
4H-SiC:B epilayers, temp. depend. deep level defects, ion implant., DLTS 69811
SiC:B epitaxial layer, diffusion 69795
SiC:B,C, 4H polytype, B acceptors, seq. implant. effects 80995
SiC:Ga, ion implantated, local struct., XAFS 69818
SiC:Ge, ion implantaion form., elec. characts. 91724
SiC:H, 6H, vibr. props., H_2 ion implant., annealing effects 69794
SiC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796
SiC:H heteroepitaxial film growth, methane RF PIII method 90538
a-SiC:H, ion beam synthesis of low resist. contacts 69710
SiC:H, surface blistering, H-implant. dose effects 91968
SiC:He,N,Ti, ^{13}C enriched, 6H, 15R, low temp. PL 71524
6H-SiC:N^+, ion-implanted, quantitat. carrier profiling 103077
SiC:N^+,Al^+ buried layer implant., interstitial diffusion, internal stress effects 69816
SiC:N,Al, ion implant., defect evol., internal stress fields effects 81012
4H-/6H-SiC:N,O epitaxial layers, defect centers, CO_2 ambient, DLTS, C-V meas. 68237
4H-SiC:P,C(Si), co-implant., n-type doping 103278
SiC:Pd H_2 sens., ion beam induced surface modif. 75693
SiC:Si (Au), recoils, primary damage states, MDM, expt. study 69821
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
SiC:Ta crysts., deep levels, Ta incorp. during growth 126295
3C-SiC/Si buried layers, ion beam synthesis and charactn. 81004
SiGe HBTs, TED suppression by buried carbon layer 92313
SiGe device archits., local area Ge^+ implant. synthesis 115498
SiGe high-speed LV HBT proc., implanted collector profile optimiz. 70031
SiGe pseudomorphous epitaxial layers, ion beam induced strain relax. 115503
SiGe strained vert. MOSFET, hole and electron mobility 103874
$Si_{1-x}Ge_x$/Si MQW struct., photocurrent spectrosc. *(Chinese)* 80877
$Si_{1-x-y}Ge_xC_y$, B TED 91980
$Si_{1-x-y}Ge_xC_y$ alloy layer, SPE recrystn. *(Chinese)* 90524
nano-Si_3N_4 ion implanted QD, blue-light enhancement effect anal. *(Chinese)* 116911
Si_3N_4/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
SiO_2, ^{18}O implant., range params. 81026
SiO_2 implanted layer on Si, AFM investig. of radiation damage distrib. 91892
SiO_2:Ag(Cu)(Au)(Er), opt. response, ion implanted nanoparticles, review 116552
SiO_2:B/P_2O_5-SiO_2 glass films, defectiveness, B implant. effects 92587
SiO_2:D SIMOX BOX, incorp. D behaviour 80946
SiO_2:Er, ion-implant., range distribs. 69488
SiO_2:Ge/Si integrated Si-based optocoupler, efficient blue light emission 93389
SiO_2:Ge(Si) gate oxide for MOS devices, Ge(Si) nanoclusters, phys. props. 115790
SiO_2:N PECVD layer, ion implanted, barrier to Cu metallization *(English)* 103451
SiO_2:Si films, ion implanted nanocrysts., localized charge injection, AFM obs. 92254

ion implantation continued
SiO_2:Si gate n-MOSFETs, interface trap dens., capacitance/subthreshold/charge pumping methods 103860
SiO_2:Yb, ion-implant., range distribs. 69488
SiO_2/Si, MEVVA implant., foreign atom incorp. Co-silicides, annealing 91945
SiO_2/Si, N on implant. in 1-1000 eV energy range for gate dielec. fab. 115536
SiO_2/Si, low energy N implant., chem. anal. 91976
SiO_2/Si:Er nanocryst. syst., exciton-Er energy transfer, PL 69481
SiO_2/Si:Er syst., PL obs. *(Chinese)* 127912
SiO_2/Si:Er,Y nanocryst. films, luminesc. sensitization 71527
SiO_2/Si:N deep submicron CMOS transistors, ultrathin gate oxide growth 115924
SiO_2-Fe nanostructures, selective etching, AFM study 115661
$Si_xO_yN_z$, RTO, nitrogen implant. 103354
$SrBaNb_{O6}$ photorefractive crysts., waveguide channel elec. fixing 82052
$SrBaNb_2O_6$ crysts., He^+ ion implanted, nonlin. response, all-opt. telecomm. systs. appl. 93765
Ti:sapphire regions, Ti/O ions localised high-energy implant., struct. charactn. 117171
Ti/6H-SiC:Ne Schottky barrier diodes, fab., breakdown, reverse current *(English)* 126639
TiN films on GaAs, IBAD tech., surface morph. 114400
TiN_x film, dual-metal gate CMOS technol. 115928
TiN/Si textured layer form. by metal PIII/deposition 114408
TiO_x films, vac. arc deposition/implant. growth, ion energy effects 79403
$TiSi_2/p^+$ interface, optimal B distrib. for 0.18 μm DRAM technol. 115980
W bit-line, PECVD-Ti proc., enhanced nitridation 115722
W, ion implant. into single-element/composite cathodes, freq.-pulsed regime 125955
WSi_2 film form., ion beam synthesis, charactn. 69959
WSi_2 thin film, SiH_4/WF_6 CVD, oxide quality 103466
Xe plasma electron flood gun for GSD-200E^2 high current implanter 115581
$YBa_2Cu_3O_{7-\delta}$ Josephson jn., masked ion damage barrier 70880
YSi & YSi_2 layer synthesis, ion implant. & RTA, VLSI interconnect *(English)* 81125
YSi_{2-x} layers form. on Si by high-current Y ion implant. 103285
ZBLAN planar waveguides fabricated by He ion implant. 127737
ZnBeSe:N(Te), high p-type doping, modified delta-doping tech. 91981
ZnO-CdS-Cu(InGa)Se_2 heterostruct. solar cells, D^+ implant. effects 100125
ZnSe green-emitting LD, implant.-induced disordering 128246
ZnSe:N, implanted defect props., β-NMR obs. 91650

ion lasers
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
cylindrical cathode Cu ion lasers, geometric stabil., usability, operating charactn. *(Korean)* 117055
high current pulse capillary discharges, driver design 134146
high-current, ion-acoustic instabil., lowest freq. mode, dispersion rel. 82455
high-gain transient X-ray laser, optim. of drive pulse config. at 19.6 nm 128098
plasma focusing channels, electron beam betatron radiation 110137
saturated soft X-ray lasers, TW pumping, transient collisional excitation regime 117082
soft X-ray table-top laser plasma, interferometric plasma diagnosis 128100
transient collisional excitation x-ray laser generation 128058
X-ray laser lines, Gauss broadening by at. nuclei elec. pot. fluct. 117085
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
X-ray lasers pumped by ultra-short light pulses 128083
Ag X-ray laser amplif., 3D ray-tracing simul. 117083
Ag^+ Ne-like transient collisional excitation x-ray laser 128061
Ag^+ Ni-like ion transient collisional excited X-ray laser 128064
Ag^+ Ni-like transient collisional X-ray laser, temporal resoln. 128059
Ag^+ Ni-like transient short pulse X-ray laser, TW sub-ps pump pulse 128054
Ag^+ transient Ni-like x-ray laser, two-color irrad. 128057
Ag^{19+} X-ray laser, short multi pulse pumped, saturated lasing emission 128076
Ag^{19+} laser, wave-front shape eval. 128079
Al^{10+} Li-like ion tabletop X-ray laser, recombining plasma 117078
Ar capillary discharge Z-pinch plasmas, soft X-ray laser amplif. 128071
Ar capillary discharge plasmas, X-ray laser intense pulse guiding 128072
Ar high av. power table-top soft X-ray laser, spatial coherence meas. 128073
Ar high-av. power polarized soft-X-ray laser beam 93468
Ar ion laser, power enhancement using PM field 93472
Ar^+, Ne-like, capillary discharge-pumped soft X-ray laser 128093
Ar^+ antiStokes Raman laser, output spectral profile 82503
Ar^+ cw ion laser modal content/noise charact., phase-conjug. feedback 93469
Ar^+ ion fast capillary discharge soft X-ray laser plasma columns 128068
Ar^+ ion laser cavity stabil., thermoelastic stabil. 82712
Ar^{8+} Ne-like collisional excitation soft X-ray laser 128096
Ar^{8+} Ne-like soft X-ray ion laser, short-pulse laser-irrad. gas puff target 128109
Ar^{8+} collisionally pumped X-ray laser, computational modelling 128088
Ar^+-pumped CW wave ring dye laser, efficient stable operation 71867
ArIX capillary discharge laser, XUV reflectometry/ellipsometry 128092
Au^+ long. nanosecond discharge ion lasers 105101
C inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
C, ultrafast inner shell photo-ionization pumped X-ray laser 128091
C^+ soft X-ray ion laser amps., capillary discharge 128070
C^{5+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
C^{5+} ion X-ray laser, capillary discharge, induced MHD instabil. 128069
C^{5+} ion recombining plasma X-ray laser, charge exchange recomb. 117077
Ca, innershell photo-ionization-pumped $L_{23}M_1$ transit., femtosecond X-ray laser 128090
Ca vaps., high-repetition rate pulse laser *(Chinese)* 117063
Cd^+ Ni-like discharge-pumped laser 128095
Co, innershell transits. inversion, photopumping by relativistic plasmas 128089
Cr^{14+} soft X-ray laser, picosecond pumped, output charact. 128080
Cu^+ pulse long. discharged ion lasers 105100
Cu^+:SiO_2 sol-gel glass, spectra, laser appls. 117170
Fe^{16+} X-ray lasers, multiple irrad., seq. pumping 128077
Ge expanding laser prod. plasma X-ray laser medium, opacity calcs. 117086
Ge^+ Ne-like ion laser, hot electron beam pumped 117080
Ge^+ Ne-like short pulse pumped x-ray lasers 128062
Ge^+ Ne-like x-ray laser, pump condition modelling 128060
Ge^{22+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
He-Ag hollow-cathode ion laser, Ag II transit. efficient oscill. 93473
He-Cd^+ hollow cathode lasers, single-mode operation, linewidth studies 105096
He-Cu ion laser, sputtered hollow cathode discharge, ^{3}He role 93474
Kr^{8+} X-ray lasers, gain calcs. time hist., radiative-collisional model 128078
Kr^{8+} soft X-ray laser, opt.-field-induced ionization initiated transient excitation scheme 128085
Li III microcapillary plasma, lasing to ground state 128081
Li^{2+} preformed plasma, Lyman-α transit., soft X-ray lasing 128087

ion lasers continued
Mo X-ray laser, coherent SW radiation generation 105416
Mo preplasma, picosecond Nd:glass laser pulse propag. 128791
Mo^+ Ni-like ion transient collisional excitation x-ray lasers 128056
Mo^+ saturated Ni-like X-ray laser 128063
Mo^{14+} soft X-ray laser, picosecond pumped, output charact. 128080
N gas puff target, laser irrad., recomb. and collisional soft X-ray lasers 128086
N inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
N plasma recomb. X-ray laser, dens. meas., emission study 128084
N^+ ion x-ray recomb. laser, exploding-type-pumping using thin membrane target 117076
Nb^{13+} soft X-ray laser, picosecond pumped, output charact. 128080
Ne-Ca ion reson.-metastable transit. laser, charact. *(Chinese)* 117054
Ni^{18+} X-ray lasers, four-wave sum DFG scheme 128094
Ni-like high intens. X-ray lasers, laser plasma diagnostic appls. 128074
Ni-like transient X-ray ion lasers, hydrodynamic charact. 128065
O gas puff target, laser irrad., recomb. and collisional soft X-ray lasers 128086
O^{+5} ion charge-transfer pumped X-ray laser 117079
PLZT ceramics Fabry-Perot interferometers for vis. and mid-IR lasers 105458
Pd^+ Ni-like 4d→4p laser transit., saturated output tabletop x-ray lasers 128055
S^+ Ne-like hybridly pumped collisional soft x-ray laser 128067
Sn^+ Ni-like ion X-ray lasers 128053
Sn^{22+} X-ray lasers, 4d-4p transit., gain saturation 128075
Sr vaps., high-repetition rate pulse laser *(Chinese)* 117063
W^+ Ni-like soft-x-ray ion laser opacity effects, pulse duration depend. 128066
Xe gas puff target, laser irrad., recomb. and collisional soft X-ray lasers 128086
Xe^{8+} femtosecond driven collisional X-ray laser, $4d^95p$-$4d^95d$ line amplif. 128082
Zn^+ Ne-like amplified soft-X-ray laser radiation 128097
Zn^{20+} X-ray laser, half-cavity geom. effect on output and spatial coherence 117081

ion lenses *see lenses*

ion lithography *see ion beam lithography*

ion microprobe analysis
CSIRO-GEMOC nuc. microprobe, PIXE detect. limits for geological samples appls. 133269
diamond:S single crysts., ion implanted, struct. props. 126290
diamond radiation detectors, charge transport props. 132305
e-beam evap. syst., adaptive controller design/implement. 68197
high-energy HI nuc. microprobe, probe-forming lens syst. 132257
lateral straggling using microbeam at CENBG 132258
nuc. microprobe systs., new generation, RF ion sources, lens aberrations 125983
SOI-MOSFET, floating body effect suppression, nuc. microprobes 115919
stripe-like test jns., ion beam induced charge collection 115804
a-C:H,F films, PECVD, F incorporation 68261
GaN:Fe, ion implant., damage, annealing, lattice site location 81016
SOI FETs, ion beam induced charge collection, body-tie effects 126728
SOI-MOSFET, partially depleted, floating body effect, instabil. 115893
Si:As, ion implanted shallow jn., MEIS/RBS profiling 115373
Ti:sapphire regions, Ti/O ions localised high-energy implant., struct. charactn. 117171

ion microscopy
high-power thyristors, ion beam induced charge microscopy 115875
HV diode anal. using proton beam induced charge microscopy 115842
nuc. microprobe systs., new generation, RF ion sources, lens aberrations 125983
SIRAD SEE facility, ion electron emission microscopy 126607
Co thin films thickness, stress effect, martensitic transform. 127094
Cu electroplated thin films, RT recrystn., methods/mechanisms 101416
Cu films, high press. laser pulse heating, microstructural evol. 125070
Ni-P/Pd/Au electroless plating for PBGA package substr. 113567

ion mobility
see also ionic conductivity
aluminosilicate/polysiloxane network polyelectrolytes, enhanced ion mobility 123722
aspiration integrat. small ion counter, shielded collector, freq. response 87240
MEMS RF ion mobility spectrometer for chem. vap. detect. 109779
self-calib. prog. mobility spectrometer, atmos. ion meas. 98995
thiophene based conducting polymers, electronic QCM/quartz cryst. impedance meas. 125109
unipolar corona, Warburg law deficiencies explanation, graphical method 80552
GeO_2-SiO_2 fiber, thermally poled, electrooptic evol. modeling 116645
GeO_2-SiO_2 opt. waveguide, thermal poling, core-cladding interface effect 116667

ion optics
see also ion beams; mass spectrometers
3UDH Pelletron, ion-opt. calc. for new injector 97924
Axcelis GSD/HE class high energy implanters, LINAC dataset efficiency 121323
CSIRO-GEMOC nuc. microprobe, PIXE detect. limits for geological samples appls. 133269
dual 6T persistent-mode SC solenoid ion-opt. syst. 75960
energetic ion beams, transport, plasma boundary shape effect 121322
HI ICF power plant designs, final focus shielding 99479
high-energy HI nuc. microprobe, probe-forming lens syst. 132257
lin. beam optics in solenoidal channels 110166
low-energy ion implant., decel lens syst., high dose uniformity 121321
low-energy ion/electron vel. map imaging, magnifying lens 93976
mass spectrometer, portable, mag. double focusing, ion-opt. scheme 87263
MCP posn.-sensitive detectors in fast mol. beam expts. 132343
nuc. microprobe systs., new generation, RF ion sources, lens aberrations 125983
NUCLOTRON POLARIS cryogenic polarized D source design anal. 132284
NV-GSD-HE ion implanter, energy enhancement 121325
photofragment spectrometer, ion gating/bunching/pot. re-ref. unit 98075
projection litho., proc. develop. tool design and integrat. 103596
radiation therapy, proton beam delivery syst., design anal. *(Chinese)* 121320
sextupole magnets, third order Lie map *(Chinese)* 75991
VIISta 3000 ion implanter, beam optics 121324
^{11}C beams, cancer radiotherapy, spot scanning, dose distrib. 76609

ion plating
MEMS component transient liq. phase bonding, solder magnetron sputter deposition *(German, English)* 92526
MEMS components, solder, magnetron sputter ion plating 127129
PZT films, arc-discharge reactive ion-plating, ferroelec. props. 125058

ion probe microanalysis *see ion microprobe analysis*

ion pumps
Bayard-Alpert ionization gauge, practical guide to use and data interp. 110045
UMER electron beam injector, design, appl. 97907

n recombination
ionis. chamber loss of sig. charges, exposure standardisation *(Japanese)* 87992
streamer dyn. in dense media, num. simul. 116124
Al^{10+} Li-like ion tabletop X-ray laser, recombining plasma 117078
BaF_2 scintillations, track effects, crossluminescence quenching 121548
C^{5+} ion recombining plasma X-ray laser, charge exchange recomb. 117077
GaN:As(Ge)(Se) epilayers, radioact. isotope ident., PL 126330
H_2O recomb. IR lasing in supersonic plasma expansion 82474
He-Ar laser, hard ioniser pumped, act. medium kinetic model 93480
InGaAs-GaAs QD laser, quasi-Fermi level separation 105276
N^+ ion x-ray recomb. laser, exploding-type-pumping using thin membrane target 117076
SiC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796

n scattering *see ion mobility; ion-surface impact*

n scattering spectroscopy *see ion-surface impact*

n sensitive field effect transistors
antenna/chip biosensor using insect species, organic odour mols. 132011
cellular respiration & acidification meas. with CMOS ISFET 86685
CHEMFET and solid-state electrode, multi-ion anal. 121018
CMOS pH sensitive ISFET, chip temp. sens. 86735
diamond electrolyte-soln.-gate FET, biocompatible ion sens. 86749
floating gate electrolyte-insulator-semicond. capacitor, C-V charact. 115055
glucose-sensitive enzyme FET, MnO_2 catalyst powder doped 97416
hydrogel coated pH-FET SO_2 sens., surface/potentiometric prop. 86744
ISFET/MEMFET, const. current driver 81344
low power gas detect., work fn. principle 132038
multi ISFET/FIA soil anal. syst. with automatic sample extraction 73608
NAD^+-depend. enzyme sens. for lactate, PQQ biocatalyst 97419
penicillin detect., capacitive EIS & enzyme FET sens. 120942
penicillin detect., EnFET, capacitive EIS sens. & LAPS comparison 120950
penicillin sens., pH ISFET-based, immobilised enzyme 86690
rain droplet, pH meas., ISFET sens. 86742
triglycerides, pH detect., ISFET sens. 120954
Cu ion sens. thiacalix[4]arene films, semicond. substrs. 120975
Pr complex, bis[phthalocyaninato], charge-flow transistor NO_2 gas sens. 109776
Si multi-sens. needles, temp. sens. and ISFETs, appls. in surgery 121971
a-Si:H/SiO_2 gate pH-ISFET, surface pot. temp. depend. anal. 92338
SiO_2/Si_3N_4 ISFECs, ion sensitive field effect capacitors, sensitivity, MOSFET amp. structs. 121013
SnO_2/Al discrete gate ISFET pH sens., ASIC CMOS std. proc. 75710
a-WO_3 pH-ISFET, temp. effect, hysteresis and drift 86741

n sources
see also deuteron sources; liquid metal ion sources; mass spectrometer accessories; Penning ion sources
arc-discharge ion sources for HI fusion 97930
at.-size metal ion source, nanofabrication appls. 87159
BNL EBIS high current electron/ion beam dyn. simul. 110198
BRIC charge state breeder EBIS, RIBs 110272
conf., EBIS and traps appls., New York, USA (Nov. 2000) 100436
DC PIII for planar samples 115579
design, operation, emittance effects 121416
Dresden EBIT, materials research ion source, low-energy highly charged ions appl. 87158
dry-etching procs., perfluoro cpd. on-line monitoring 100684
EBIS at RHIC, design issues 110270
EBIS beam form./collection, beam handling equipt. design 110197
EBIS electron string mode operation, expt. design 110275
EBIS HI source for LHC pre-injector 110271
EBIS highly charged ions, at. mass, TOF anal. 110277
EBIS primary ion sources, beam transport/prod. 110278
EBTS plasma mode diagnostics, freq. scaling, EBIS expt. anal. 110276
ECR ion source, multiply charged ions prod. from solid material 121419
ECR ion source, RIKEN, 18 GHz, Ar^{8+} current enhancement 121410
ECR ion source with PM, 2.45 GHz, single charge state-type *(Chinese)* 87151
Electron Beam Test Stand, design/expt. study 110267
energetic ion beams, transport, plasma boundary shape effect 121322
EXCYT project, RIB prod., physics perspectives 110221
extended life ion source, lifetime improvements 121414
fast cycling intermediate energy ion synchrotron supercond. magnet syst. 75934
fast ion extraction from intense electron beams, EBIS single-turn inject. 110199
FEBIAD ion source for on-line isotope separator *(Chinese)* 87153
HI fusion induction linacs, ion sources and injectors 97928
HI fusion program in USA 97927
HIF 500 kV ion source test stand, design 97933
high current decaborane ion source, concept, feasibility 121415
high energy spin polaris., expt. review 110185
high intens. drift tube linac, HIDIF, beam stabil. 97901
high-energy accelerators/colliders, polarized ion source 110247
high-energy HI nuc. microprobe, probe-forming lens syst. 132257
highly charged ions generated in pinched electron beam 110244
IMI-2 electron beam multicharge ion source 72184
intense highly-charged ion beam prod., review 110279
ISOLDE on-line isotope separator facility 132276
ISOLDE on-line isotope separator operation 132275
kestrel implanter, increased ion source life 121418
KSTAR, circ. aperture grid accelerator for NBI *(Korean)* 87058
Lanzhou HI research facility status and prospects *(Chinese)* 110225
laser ion source, time-resolved emittance meas. with digital camera 97932
light ion beams for radiation treatment, facility design anal. 111130
low-energy gas discharge open-end ion source 87157
metal ion source, RF-sputter type, nonmass-separated ion beam deposition 121420
microwave ion source, B^+ ion current, MgO chamber material coating effects 121413
MIS-1 electron-optic syst. design anal. 110200
MIS-I multicharge ion source, electron-optic syst. design 72185
multi-element metal and gas pulse ion source *(Chinese)* 87150
oxide film form., O ion sputtering, ion-beam apparatus 90253
polarized sources/targets, spin expt., review 110250
radioact. beams and accelerators in France 75936
REX-ISOLDE project for post accel. of RIB 132277
RF-driven ion source in electrostatic accelerator, props. extraction *(Chinese)* 110113
RHIC commissioning/operation/design, review 110201
RHIC EBIS-based preinjector design, review 110202
RIKEN slow highly charged ion facility 110245
Romanian ECR ion source for at. phys./material researches 132273
SDS gas source ion implanter adsorbent technol., charactn. 126289

ion sources continued
SDS source gas utilisation, sub-atmos. ion implant source gases control/delivery 132279
single wafer high current ion implanter, advanced device fab. 121412
SIRAD, irrad. facility at LNL tandem accel. for rad. damage studies on semicond. det. and electronic devices/systs. 87152
SPES exotic nuclei prod. project, accelerator challenges 132281
spin phys., conf., Osaka, Japan, Oct. 2000 100435
SPIRAL facility, target-ion source syst., accelerated ISOL tech. 132278
Stern-Gerlach polarized H source, ECR ionization and charge exchange in Cs vapour 110252
Stockholm EBIS, status, scientific program 110268
TFT LCD fab., ion doping syst., large area line beam form. 115535
Tokyo-EBIT, highly charged ion beams, expt. anal. 110273
trimethylphosphine as $^{31}P^+$ implant. source for Si device fab. 91984
vac. arc ion sources for HI fusion, high current, recent advances 97931
Varian VIISion Implanter certification for SDS, design considerations 126288
VENUS, supercond. ECR ion source, constr., appls. 110243
VIISta 3000 ion implanter, beam optics 121324
warm EBIS, storage ring injection program 110269
XEBIST ion beam focusing, rel. electron beam pinch effects 110274
AsF_5 dopant gas for RF ion source, device charact. 121417
GeF_4 isotopically enriched SDS ion implant. source, anal. 132261
H^- source, polarized, develop. with reson. charge-exchange plasma ionizer 110253
^3He, polarized ion source, opt. pumping polarized ion source and spin-exchange 110254
(Nb,Ti)N films, reactive magnetron sputter-deposition, sputter source charactn. 101178
NbN films, reactive magnetron sputter-deposition, sputter source charactn. 101178
$(PbBa)(ZrTi)O_3$:Bi_2O_3 cathode electron injection for ion source improvement 104340
SbF_3, vaporizer feed material for Bernas dual vaporizer 115580
U^{4+} source, Mevva-type, HI fusion source appl. 97929
Xe highly charged ions prod. from liq. He free supercond. ECR ion source 87154

ion-surface impact
see also particle backscattering; sputtering
biopolymer mass spectrometry, supercond. microcalorimeter energy meas. 76155
carbon fibers, field emission cathode materials, prep., appls. 102890
controlled ion-beam transform. of elec./mag./opt. materials props. 81152
diamond:B, ion-induced electron emission, effect of surface hydrogenation and sample temp. 80557
diamond films, RIE, neg. bias depend. of S and F incorporation 92069
dielec. porous thin films, low-k, struct. and property charact. 70369
graphite, field emission cathode materials, prep., appls. 102890
high-resoln. LCD, at. beam alignment 82235
ionized plasma phys. vap. deposition, integrated multi-scale model 79402
materials sci. with high energy ion beams 115800
MEMS device plasma etch proc. optim. 81627
microelectronics materials charactn. by AES-sputter depth profiling 70248
multicharged ions, refl. lithog. 115766
RIKEN slow highly charged ion facility 110245
Si:N, low energy N implant., chem. anal. 91976
substr. smoothing using gas cluster ion beam proc. 103413
ultrathin oxide films on Si, effective thickness meas. methods 109966
AlF_3 thin films growth on GaAs(110), struct. and chem. stabil. 114403
As_2S_3, chalcogenide glasses surface modif. by N_2 plasma treatment 103412
β-C_3N_4, superhard phase, deposition from ta-C chem. sputtering 68140
Cu thin film growth, ion-beam modif., MD simul. 68372
Cu-Al cpd. cathodes, sputtering resist. under long-term ion-electron bombard. 115241
Cu(001) surface, Ar ion implant. at grazing ion-surface interacts., computer simul. 115522
GaAs(001) surface, Be and Se ion implant. at grazing ion-surface interacts., computer simul. 115522
GaN films on (001)β-$LiGaO_2$, MOVPE, polarity, coaxial impact collision ISS, PL 69524
GaN/Al epilayers, polarity conversion, coaxial impact collision ISS anal., MOVPE 92095
Ge, monolayer growth on Si(100), CAICISS anal. 90266
$Ge_{30}As_{10}Se_{60}$, chalcogenide glasses surface modif. by N_2 plasma treatment 103412
$In_xGa_{1-x}N$ SQWs, opt. emission/In disordering, coaxial impact collision ISS 80871
Mo thin film growth, ion-beam modif., MD simul. 68372
Ni mandrels, ion beam figuring for X-ray replication optics 110448
Si, monocrystalline, large-area surface treatment by low temp. ECR plasmas *(Chinese)* 91993
Si, monolayer growth on Ge(100), CAICISS anal. 90266
Si:As, cross-contamination reduction by beam cleaning, TXRF 126281
Si:As, ion implanted shallow jn., MEIS/RBS profiling 115373
Si:As, near-surface damage annealing and ultralow energy implants elec. activation 126275
Si:B, ultra shallow B implants, damage profiles, medium energy ion scatt. 91977
Si:B, ultra-low energy implant., damage, MEIS obs. 115511
a-Si:H plasma-assisted microcrystallization, PV appls., low temp. nanoscopic kinetics 82309
Si/glass anodic bonding, O plasma treatment effect 69856
Si(001) anom. surface amorphization under Ar^+ ion bombard., RBS/channelling obs. 69842
Si(001), ion-beam oxid., O^+ reactive scatt. 103406
Si(001), oxidized V-grooves shape evol., high-dose Ge^+ ion irrad. 81078
Si(100), carbonization proc., ion-beam bombard. 125060
SiC oxid. init. stages, ISS/angle-resolved XPS study 69896
SiC, surfaces, cluster ion beam smoothing 69866
SiC:Si (Au), recoils, primary damage states, MDM, expt. study 69821
SiN_x:H films for polysilicon gate patterning, charactn. 127134
SiO_2/Si, low energy N implant., chem. anal. 91976
SiO_xN_y:H films for polysilicon gate patterning, charactn. 127134
SnO_2:Pd films, Pd-Sn interacts., XPS, ISS, TPD studies 109752
TiN films, ECR plasma sputter deposition and charactn., diffusion barrier appls. 79219
W single-cryst. substrs., cleaning procedure, thermionic cathode appl. 102895
YBaCuO film, surfaces, cluster ion beam smoothing 69866
Y_2O_3 dielec. in Al-gated MOSFET, effective electron mobility 81285

ion-surface impact continued
ZnO/GaN heterojunction, polarity control and valence-band offset, UPS and XPS 101200
ion traps *see particle traps*
ionic conductivity
see also superionic conductivity
aluminosilicate/polysiloxane network polyelectrolytes, enhanced ion mobility 123722
elec. double layer capacitors, polymer gel electrolytes 123848
electroactive polymers, compliant actuators, appls. 125102
graphite-electrolyte interfaces, MDM, Li ion batt. appl. 112768
liqs., dielec. response in LF region 92580
modified hydrogel electrolyte material for secondary cell appls. 99907
organic-inorganic hybrid protonic polymeric electrolytes, PEMFC 123786
PAN-DMSO-TBAP solid-electrolyte microamperometric CO_2 gas sens. 86737
PEO/$NaClO_3$ electrolyte, ionic cond., plasticizer effects 79453
PEO/$NaClO_3$ polymer electrolyte, ionic cond., batt. appl. 89102
PMMA-POEM melt-formable block copolymer electrolytes for rechargeable Li batts. 101511
poly(ethylene oxide-co-epichlorohydrin)/NaI polymer electrolyte, cell appl. 79444
poly(vinyl alcohol)-poly(acrylic acid) gels, constitutive response, elastic deform., acidic/basic environ. 125114
polyethyleneoxide ion-conducting polymer film chem. sens. 97473
quaternized 4-vinylpyding-butyl methacrylate copolymers, humidity switching, ionisation 86500
solid state potentiometric sens., oxidable gaseous species detect. 75718
thermoplastic polyurethane and poly(ethylene oxide) composite electrolytes 112765
wide freq. band dielec. spectrosc., chem. reacts. under class./microwave heating 132134
$(Ba,Sr)TiO_3$ PLD dielec. thin films, AC and DC cond. studies 81634
$(Ba,Sr)TiO_3$ PLD dielec. thin films, dielec. response and complex impedance spectra anal. 81632
$Ba_2(In_{1-x}Ga_x)_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$Ba_2In_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$(Ba_{1-x}La_x)In_2O_5$ SOFC electrolytes, cryst. struct., ion cond. 89221
$(Ba_{1-x}La_x)In_2O_{5+x}$ solid soln., ion cond. 89222
$(Ba_{0.5}Sr_{0.5})TiO_3$:Al thin films, PLD, transient anal. 92655
CaH_2NaF-BaF_2-Al_2O_3 composite electrolytes, intermediate temp. SOFC 89213
$Ce_{0.8}Gd_{0.2}O_{2-x}$ solid electrolyte, intermediate temp. SOFC 89211
CeO_2:SrO, fuel cell electrolyte, electrochem. stabil. 112831
CeO_2-ZrO_2 interfacial procs., SOFC, charge transfer control, nano-scale effects 99964
$(CeO_2)_{1-n}(LaO_{1.5})_n$ SOFC electrolyte, elec. cond., grain boundaries effect 89212
$Cs_2Nb_4O_{11}$ cryst., growth, elec./dielec. props. 90205
$Gd_{0.1}Ce_{0.9O1.95}$ based composite electrolytes, intermediate temp. SOFC 89213
$(La,Sr)MnO_3$ SOFC cathode, equilib. condition 89226
$LaGaO_3$ perovskite fast oxide ion conductor, Co doping, SOFC 123789
$La_{0.5}Li_{0.5}TiO_3$ perovskite, Li^+-cond./cryst. struct. rels. 123771
$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_3$ -$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
$La_{1-y}Sr_yFe_{1-x}Al_xO_{3-\delta}$ cathodes/YSZ electrolyte for SOFC, chem. stabil. 112846
$La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.2}O_{2.8}$, gelcasting, proc./elec. props. 114431
$La_{0.8}Sr_{0.2}MnO_3$-$Ce_{0.8}Gd_{0.2}O_{2-x}$ SOFC cathodes, perform. 89227
Li secondary batts., salts for solid polymer eletroyte 123761
Li-ion batt., PVdF-based polymer electrolytes 89075
$Li_{3.3}PO_{3.9}N_{0.17}$ solid electrolyte film, prep., batt. appl. *(Korean)* 114246
Mg/V_2O_5 polymeric solid electrolyte, rechargeable batts. 134350
MnO_2 powders, EPR anal. for power sources 90586
$R_{0.8}Sr_{0.2}Fe_{0.8}Co_{0.2}O_{3-x}$ (R=La,Pr,Nd,Sm,Eu,Gd), prep./charactn. 101493
RuO_2/C composite supercapacitors, synthesis, props. 100232
SiO_2 ultrathin layers, stress-induced leakage current, H^+ dispersive transport model 69741
$Sm_{0.5}Sr_{0.5}CoO_3$ porous cathodes used in SOFC, mechanism 112830
$SrBi_4Ti_4O_{15}$:Mn elec. cond., controlled oxygen partial press. 104379
$SrTiO_3$:Mg(Ca), prep., struct./elec. props., SOFC appl. 79430
Ta_2O_5 sputtered thin films, dielec. study 104241
Y_2O_3-ZrO_2 thin film electrolyte for SOFCs, prep./characterisation 89171
YSZ/NiO-YSZ thin film syst., elec. & microstructural investigs. 112849
ZrO_2 sputtered thin films, dielec. study 104241
ZrO_2-Y_2O_3-TiO_2 SOFC anodes, screen printed, I-V polaris. 89245
ionic thermocurrents *see thermally stimulated currents*
ionisation
see also autoionisation; electron avalanches; field ionisation; impact ionisation; ion recombination; ionisation potential; photoionisation; Townsend discharge
air insulation strength for DC voltages, air gap bridged by flames 99421
earthing systs. ionisation proc. characterisation 99414
ESD-control techs., ionization-based for electronics assembly, safety 125902
ESP fine particles transport, electroaerodynamically induced secondary flow 83175
flame visualizations using elec. capacitance tomography 120652
gas mixture, high press., elec.-discharge plasma-dens. props. 86817
high-current vac. arc, three-liq. hydrodynamics approx. *(Russian)* 115234
high-intens. pulse compression in gas-filled hollow fibers with plasma nonlin. 128386
high-press. lamps, nonequilibrium mercury plasma state 134629
indoor air cleaning, corona ionisers effectiveness 88191
ionizer air-cleaners, dust removal, ozone emission 83163
muon beam transverse ionization-cooling channel design and simul. 121334
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
PDP cell, electron swarm behavior, init. electron energy distrib. 91528
static elec. field in waveguide, ionization fronts, high power radiation 91181
static surface charges neutralisation using DC corona discharge ionizer 83107
very small vac. cct. breakers, internal press. meas. *(German)* 134285
wind turbine grounding modeling, soil ionization effects 112376
Al sputtered atoms ionization in microwave ECR plasma source 114245
AlGaAs thin APDs, low avalanche excess noise 104949
AlGaN-GaN HBTs for high-temp. electronics appls., modelling 92318
InP bulk high field carrier transport, Monte Carlo modeling 103022
SF_6-N_2 gas mixtures, electron ionization, attachment, detachment 127149
SF_6-N_2 mixtures, nonuniform fields predischarge phenom., lightning impulse voltages *(Korean)* 92615
SO_2 removal, dielec. barrier discharge, ammonium salts collection 133353
p-/n-SiC, 4H, epilayers, Be implant., Be defect centers, DLTS 69595
SiC:Al,B,N, 4H, pn jns., implant., deep levels 69640
SiC:P epilayers, prep./characterisation, nuc. transmutations, neutron effects, FTIR 69807
ionisation chambers
see also liquid ionisation chambers; multiwire ionisation chambers; shower counters; streamer chambers
air kerma calib. factors and ionisation chamber correction values 111216
air kerma primary stds., low-energy X-rays, NIST & NPL comparison 75351
arc-shaped Xe gas ionization chamber, Monte Carlo charactn., med. appl. 9853
ATLAS liq. Ar EM calorimeter, preliminary results 132429
BABAR muon syst. 110371
beta-ray ophthalmic applicators dosimetry, different meas. methods comparison 98784
BTeV main spectrometer motivation and design 87264
CDF Run II upgrade syst. status 87175
clinical electron beams, energy constancy meas. 76636
CMS/LHC high radiation environ., large forward RPC perform. 121606
conf., Radiation and its effects on components and systs., Louvain-la-Neuve Belgium (Sep. 2000) 124202
conf. on particle detectors, Lyon, France (Oct. 2000) 100418
COSY cooler synchrotron, beam instrumentation for fast kicker extraction 8710
cylindrical ^{3}He gas ionization chamber, digital waveform anal. 121637
DØ calorimeter upgrade 121630
dark matter detect., recent develop. 121435
diamond CVD microdosimeters 122443
diamond detectors, 45/100 kVp therapy beams dosimetry appl. 122399
direct ion storage dosimeters with MOSFET devices, review 133142
discrim. based monitor for radioact. gases and vaps. 132288
dosimetric ionis. chambers, effective pt. of meas., Monte Carlo simul. 76739
electronic solid state dosimetry, review 133141
fissile materials detect., meas. control complex 121520
Gamma Knife beam output factor meas., detector size effect deconvolution 76741
gas electron multiplier detector anal. in high intens. particle beams 132300
gas ionizing radiation detector, leak microstruct., timing anal. 110307
gas ionizing radiation detectors, leak microstruct., timing inform. 76043
gas-filled ionization chamber, neutron flux meas. 87201
high press. Xe detector, robust fitting anal., SNM detect. sensitivity 121522
intens.-modulated radiation therapy, patient dose verification 111197
ion chamber for high-range gamma meas. in space crit. appls. 87288
JLC central tracker R&D 110362
LEDA ionisation chamber beam loss monitors, review 87133
LHC lumin., detector for bunch by bunch meas. and optim. 76008
LHC lumin. monitor, ionization chamber shower detector 121523
LHC lumin. monitor using secondary emission/ionisation techs. 121326
LHCb muon detector design 87186
linac radiation output constancy check, ionis. chamber/diode comparison *(German)* 87972
loss of sig. charges, exposure standardisation *(Japanese)* 87992
low energy photon beams, ion chamber response, Monte Carlo calc., expt. verification 111202
low-energy protons dosimetry, vert.-beam facility, Munich 122442
low-level dosimetry, ionisation chamber and meas. syst. 111211
MCP, acquisition/proc. of multiparametric inform. from pixel matrix 121698
MEGHNAD multi-element HI detector array, design review 110310
Micromegas as. large microstrip detector for COMPASS expt. 121421
MICROMEGAS detector in low-background astron./particle search appls 132346
MONOLITH, test prototype for atmos. neutrino oscills. studies 76134
multi-gap RPC, front-end electronics, timing compensation comparis. 121697
MUSIC multiple sampling ionization chamber for halo nuclei fusion investig 132286
organ doses, at. bomb survivors, radiation therapy 87961
output ratio modeling in air for megavoltage photon beams 88004
pencil chambers calib. in air kerma length 122398
pers. neutron dosemeter prototype, ion chamber/direct ion storage 122424
pixel segmented ionization chamber for therapeutical beams of photons/hadrons 76651
portal dosimetry, imaging plate appl., clinical X-ray beams 98821
portal imaging, EC film, direct opt. meas., X-ray scatt. effects 110918
portal scatter/primary dose ratio, Monte Carlo calc. 87976
posn.-sensitive ionization chamber, synchrotron sources, XAFS 76182
primary std. dosimetric equipt., current & charge meas., unified channels 8637
prostate intens.-modulated radiotherapy, interrupted dyn. seqs. 98616
pulsed clinical proton beams, small ionization chamber dosimetry 98790
radioactivity primary std. estab., traceability syst. *(Japanese)* 86391
relative dosimetry, detector line spread fns., Compton scatt. 122392
resistive plate chamber, high energy expts. 132366
resistive plate chambers timing, front-end electronics chain 121614
RHIC beam loss monitor syst. commissioning in RHIC yr. 0 run 87103
RHIC beam profile meas. using ionization profile monitors 87105
slot-scan digital radiographic imaging, dual-energy detector 121770
small photon beam Bragg-Gray cavity meas., parallel plate microchamber 7676
SNS beam loss monitor syst., design 87112
soft X-ray meas., multielectrode ion chamber, SR & TOFMS *(Japanese)* 8728
stereotactic linac radiotherapy-radiosurgery unit, TLD dosimetry 122299
virtual wedge syst., dosimetric charact., ion chamber, X-/radiochromic films obs. 98775
X-ray dosimetry, calib., correction factors, AAPM TG-61 report 87983
^{10}B neutron capture therapy, accelerator-based, dosimetry 122394
^{60}Co γ-ray sources, dose calib., ionization chamber syst. *(Japanese)* 122434
^{3}He ionization chamber, digital waveform anal. 110344
^{3}He posn. sensitive ionization chamber for thermal neutrons 121527
^{3}He posn.-sensitive ionization chamber for thermal neutrons 110330
^{192}Ir brachytherapy source, direct calib. of ref. chamber 98674
N-filled ion chamber, wide-range gamma monitoring 132423
^{90}Sr, radioact. check device, ionization chambers redundancy checks 76024
Xe chambers, high-press., med. radiography appl. 76557
Xe detector, high-press., robust fitting anal., SNM det. sensitivity 110328
ionisation gauges
Bayard-Alpert ionization gauge, practical guide to use and data interp. 11004
dense nonstationary hydrogen flows, ionization gauge operation 87036
electron motion 3D confine. anal., microelectronic vac. gauge appl. 69422
ionisation potential
see also work function
N-ethylcarbazole, plasma-polymerized, organic thin film EL device 127956
metal phthalocyanine single layer device, rectification ratio 103759
organic LED with O_2 plasma treated ITO, hole transport layer ionization pot effects 105012
organic multilayer EL device, bright pure blue emission 105001
poly(fluorene)-based alternating copolymers, opt. props., synthesis 69612
substr. smoothing using gas cluster ion beam proc. 103413

isation potential continued
C nanotube tip, adsorbed water mols., field-emission, DFT 125960
GaN:Mg (si) films, pure and doped, near band edge recomb., PL 80723
ised cluster beam deposition
surface growth, proc., low energy beam-modified, conf., Boston, USA (Nov. 1999) 67359
Ag/n-Si Schottky barriers, ICB deposited, Fermi level pinning, microscopic model 69725
Ag/n-Si Schottky jns., ICB deposited, induced interface states 69726
Ag-Si Schottky jns., ICB deposited, interface electronic struct. 80899
$Ge_{1-x}Mn_xTe$ films, ICB deposition, charact. 79397
oluminescence
diamond CVD microdosimeters 122443
diamond radiation detectors, charge transport props. 132305
BaF_2, scintillation response to energetic ions 110380
CsI(Tl) cryst., scintillation charact. depend. on Tl^+ concs. under e/α excitations 132401
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
$LiBaF_3$ scintillator, fast neutron and alpha detect. 121570
YAP:Ce, scintillation response to energetic ions 110380
osondes *see ionospheric measuring apparatus*
ospheric disturbances
3D irregular ionos. waveguide channel, EM scatt. 128824
anom. atten. during intense HF heating 105731
artificially disturbed ionos. plasma, aftereffects 88138
broad upshifted max. of stimulated EM emission, num. simul. 105741
D-region, middle lat., electron dens. var. due to earthquakes 128769
daytime spread-F-like irregularities over Jicamarca, radar obs. 133298
Europe ionos., total electron content spec. and GPS 88143
f_0F_2 quiet/disturbed ionos. values determ. 133301
F_2 layer infra-sonic wave disturbance due to typhoons 76893
Fukui/Ishikawa prefecture, 1997 Dec. 19 earthquake precursors 83394
geoelectromagnetic disturbances, effects on technol. systs. 83440
GPS receivers, operation, equatorial ionos. scintillations effects 120481
HF commun., ionos. trough effects, neural networks appl. 131088
HF noncontiguous channels, propag. charact. 83288
imaging riometer, high-lat. ionos. studies 88126
macroscale inhomogeneities and radio sounding 105730
meteors, Leonids, Nov 1998, VHF radio signature 94033
movements, bitemporal response fn. method 88128
near-space environ., radio-sig. characts., solar activity 88133
OTH HF radar, ionos. distortion mitigation techs. 99130
Space Shuttle exhaust, ionos. modif., plasma dens. depression 133310
sprite min. plasma dens. determined by VLF scatt. 76872
stimulated EM emission in 4.3-9.5 MHz pump wave freq. range 117710
tomography generalization on diverse data sources 133306
Turkey, 1999 earthquakes and ionos. EM propag. disturbances 83292
VLF sigs. propag., total solar eclipse effects 117688
VLF subionospheric propag. anoms. and Japanese earthquakes 83295
ospheric electromagnetic wave propagation
see also Earth-ionosphere waveguide
anom. atten. during intense HF heating 105731
Australia's Antarctic commun. syst. 120097
Bangkok, L band equatorial scintillation meas. 108994
broad upshifted max. of stimulated EM emission, num. simul. 105741
Central Radio Propagation Laboratory and EK Smith in 1950s-1960s 117690
D-region, middle lat., electron dens. var. due to earthquakes 128769
Damson HF channel characterisation, review 105744
decametre-wave obs. of cosmic radio sources, flux dens. fluctS. 94045
Digital Radio Mondiale, key tech. features 75283
Doppler freq. shift meas. 83340
doubly refl. ionos. radio transm. paths, charact. waves selective excitation 72300
dusty plasma, intrinsic electron dens. fluct., EM scatt. 83350
dyn., bitemporal response fn. method 88128
E-layer crit. freq., daily meas. 1957-94 over 4 stations, semiannual vars. 83272
electron conc. determ. methods 88127
Europe ionos., total electron content spec. and GPS 88143
Europe mid-lat. trough models, refinement/develop., expt. based investig. 83280
F2-layer max. height var., neutral wind component separation method 98999
f_0F2 neural network prediction models, degrad. with time 83313
f_0F_2 quiet/disturbed ionos. values determ. 133301
GPS radiosignals, direct, land surface refl. 83321
GPS real-time national networks, atmos. sens. 111429
GPS receivers, operation, equatorial ionos. scintillations effects 120481
GPS-Wide Area Augmentation System receivers, scintillation modeling 131321
GPS/MET radio occultation data anal. and validation 122680
HF channel computer simul. 85496
HF commun., ionos. trough effects, neural networks appl. 131088
HF digital commun., source separation with collocated antennas 84729
HF ground-wave propag. over irregular terrain and sky-wave propag. 83289
HF high lat. path commun., directional diversity and spatial filtering 85576
HF multimode wideband channels, scatt. fns. 83290
HF noncontiguous channels, propag. charact. 83288
HF off-great-circle high lat. propag. and oblique ionogram features 83291
HF propag. channels, wideband scatt. fns. 128767
HF short paths, sporadic E layer effects 105727
HF transmitter location procedure by single station location method, accuracy anal. 86272
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
imaging riometer, high-lat. ionos. studies 88126
Indian air navig. WAAS, ionos. grid point value estim. 75248
inhomog. struct., refl. sig. distortion anal. 105729
irreg. diagnostics from MF/HF radio echoes 122655
limited area instantaneous maps generation 133302
loop antenna in cold magnetoplasma, current distrib./input impedance 72514
macroscale inhomogeneities and radio sounding 105730
meteors, Leonids, Nov 1998, VHF radio signature 94033
microwave power transm. in space plasma, three-wave coupling 123005
midlatitude E_s layer, screening/limiting freq. 88139
nighttime ionos. 2D struct., GPS occultation/dens. gradient method 133307
oblique ionos. sounding, chirp sig. struct. 88136
OTH HF radar, ionos. distortion mitigation techs. 99130
plasma plane layer with irregularities, radio sounding 133304
polaris. coeffs. at cutoff point, mag. declination effects 83353
profile reconstruction using Faraday rot. data 122656
propag. modes of low- and very-low-lat. whistlers 105735
radio propag. research 83311
ionospheric electromagnetic wave propagation continued
radio waves in oblique ionos. sounding, limiting polariz., quasi-isotropic approx. 83274
radio-sig. characts. of near-space environ., solar activity 88133
real-time charactn. using diverse data 133309
regional ionos. spec., PRISM appl. 133311
S-band scintillation and max. solar cycle 108993
short-/medium range ionos. radiopaths eval. 83281
spread-E_s obs. over Dushanbe 1985-90, solar activity depend. 83273
sprite min. plasma dens. determined by VLF scatt. 76872
stimulated EM emission in 4.3-9.5 MHz pump wave freq. range 117710
SuperDARN OTH HF radar systs., range accuracy 122657
SW propag., solar activity ionos. indexes 99000
tomographic reconstruction 122654
total electron content prediction and meas. 117685
transauroral ionos. radiopath and electron dens. 105728
transionospheric propag., spaced paths sig. coherency 83315
transionospheric sounding, 2D spatial reconstruction, inverse problem 99001
Turkey, 1999 earthquakes and ionos. EM propag. disturbances 83292
UHF radar track acquisition, polar region ionos. effects 131665
UHF satellite commun., ionos. scintillation effects 105733
very low lat. whistlers, 3D ray tracing 83294
VHF impulsive terrestrial sigs., sources location determ. 122651
VHF ionos. propag. channels 83323
VHF scintillations, equatorial electrojet strength over India 117684
VLF amplit. obs., solar flare induced D-region enhancements 128777
VLF polarised antenna array, null steering algm. 107312
VLF subionospheric propag. anoms. and Japanese earthquakes 83295
Xi'an-Dalian link, 10 MHz propag. and ionos. Doppler shift 85570
ionospheric measuring apparatus
amat. radio service, scientific radio emissions as EMI source 85493
Chinese ionos. sounding network 88131
current dens. coil instrum. 111414
HF Doppler radar, Trivandrum mag. equator site 98976
imaging riometer, high-lat. ionos. studies 88126
Langmuir probes, antenna-plasma coupling effects 133303
Langmuir probes, surface contamination effects 122674
plasma wave analyzer with digital control, polar region rocket expt. *(Japanese)* 133313
radar antenna, Yagi interlaced phased array 98977
SuperDARN OTH HF radar systs., range accuracy 122657
topside ionos. sounder, electron dens. distribs. 133308
ionospheric propagation *see ionospheric electromagnetic wave propagation*
ionospheric techniques
3D struct., ionogram inversion, modular NN approach 133300
bitemporal response fn. method, ionos. movements 88128
electron conc. determ. methods 88127
electron dens. height profiles determ., regularisation 122641
electron dens. profiles determ. from oblique ionograms 133312
Europe mid-lat. trough models, refinement/develop., expt. based investig. 83280
F2-layer max. height, long. var., neutral wind component separation 98999
f_0F_2 quiet/disturbed ionos. values determ. 133301
GPS appls., conf., Tsukuba, Japan (Oct. 1999) 113270
GPS real-time national networks, atmos. sens. 111429
irreg. diagnostics from MF/HF radio echoes 122655
Langmuir probes, rocket sounding, DEOS flight F06 122675
Langmuir probes, surface contamination effects 122674
limited area instantaneous maps generation 133302
nighttime ionos. 2D struct., GPS occultation/dens. gradient method 133307
oblique ionos. sounding, chirp sig. struct. 88136
param. diagnostics, vert. sounding method errors 133305
profile reconstruction using Faraday rot. data 122656
radar detect. and tracking of ballistic missiles, satellites, and planets 99139
real-time charactn. using diverse data 133309
rem. sens., conf., Warsaw, Poland (July 2000) 113260
sounding techs., 70th anniversary 111422
space weather monitoring method using radio-sig. characts. 88133
SW propag., satellite sigs., solar activity indexes 99000
SWUIS-A UV/vis/IR imaging syst. for airborne astron. & aeronomy 98897
tomographic reconstruction 122654
tomography generalization on diverse data sources 133306
transionospheric sounding, 2D spatial reconstruction, inverse problem 99001
ionotophoresis *see electrophoresis*
IPSE *see project support environments*
IR astronomy *see infrared astronomy*
IR detectors *see infrared detectors*
IR focal plane arrays *see focal planes*
IR imaging *see infrared imaging*
IR sources *see infrared sources*
IR spectra *see infrared spectra*
IR spectroscopy *see infrared spectroscopy*
IR thermography *see infrared imaging*
IR tracking *see optical tracking*
irasers *see lasers*
irradiation effects *see radiation effects*
irradiation induced creep
OECD Halden reactor project fuels testing, safety, burnup, perform. 77716
ISAR *see synthetic aperture radar*
ISDN
see also B-ISDN
ATM interworking unit with ISDN/Ethernet interfaces 108356
ATM PON FTTx syst., broadband services delivery 108480
ATM-PON, opt. network unit controller, archit. design 131390
China, commun. technol. research develop. plan 95978
combined converter, telecom. network termination and terminal equipt. supply 108462
configurable adapter using FPGA chip 96072
congenital heart disease, rem. diagnosis, mgt. and education 111288
endoscopic video database on WWW, linking with ISDN 98841
global service control for multi-media networks 74452
group commun. syst. based on MAC-over-IP 108318
GSM cellular systs., high service grade DECT micro/pico cell clusters deployment 96436
HALO stratos. aircraft for high-speed Internet access 85632
HFC network upstream transm., all digital packet DS-CDMA transceiver 74498
implement. costs, eval. based on survey and case studies 74416
Internet integrat. with next generation networks *(Polish)* 85319

ISDN continued
knowledge-based multimedia telecare syst. for elderly and disabled 133177
med. IS, WWW-based, for collaboration between rural clinics and central hospital *(Japanese)* 76785
Mitsubishi M32C/83 microcontroller, ISDN and automotive CAN appls. *(German)* 79925
multi-purpose precision instrum., ISDN BRI-Simulator QS4017 *(German)* 86395
multimedia teaching presentation for ISDN telecomms. protocols 100474
neurological teleconsultation for general practitioners 76780
outpatient teleneurology cost implications 133181
PHS for wireless home commun. syst. *(Japanese)* 85596
priority leaky-bucket regulator for VP traffic in ATM networks 108231
PSTN/ISDN network, Internet-bound traffic impact minimisation 119559
resource mgt. policy orienting IETF integrated services network *(Chinese)* 131036
Samsung S3C4520X syst. manager for network SoC designs with various memory access types 131015
TCP/IP-based multimedia appls./services over satellite links, ASI/CNIT project experience 85376
teledermatology, real-time, societal costs compared with conventional care, cost-minimization anal. 111287
telemedicine in US, virtual patient, software-based 3D syst. 133201
telepathology and rem. microscopy for intra-operative diagnoses on frozen sects. 111273
telephone terminal, struct. and connection modes 74480
telepsychology service provision to Shetland Islands, UK, client and therapist satisfaction and therapeutic alliance develop. 133170
transm. module of ISDN-2B+D interface *(Chinese)* 74479
underground commun. based on ISDN and wireless access technols. 74599
USB implement. in integrated access chip 119766
VDSL, service splitter filter 85405
video streams, resource allocation for deterministic services 129749
video-based inform. networks for regional community creation 119776
warfighter C⁴ISR syst., integrat. technols. 77032

ISDN exchanges *see ISDN; telecommunication exchanges*

ISDN terminals *see ISDN; telecommunication terminals*

ISFET *see ion sensitive field effect transistors*

Ising lattices *see Ising model*

Ising model
conf., disordered and complex systs., London, Eng. (Jul.2000) 78460
functional MRI data anal., inform. theoretic approach incorporating spatial priors 87579
low dens. carrier ferromag. semiconds., mag. interacts. 81811
QD cellular automata, correl., majority gate 70223
NiFe submicrometer patterned mag. elements, magnetostatic interacts. 116268

island-like metallic thin films *see discontinuous metallic thin films*

ISO standards
3D models with subdivision surfaces, hierarchical coding 95221
act. opto-electronic devices/components, standardization *(Japanese)* 93316
chip cards and smart cards, ISO security std. *(German)* 80022
clinical engng. education, ISO guide 25 certified testing lab. 87291
CRT display image quality under ambient glare, ISO 9241-7 ergonomic std. 97687
cryptanalysis of countermeasures proposed for repairing ISO 9796-1 106299
Cyprus Telecommunications Authority and ISO 9000 quality mgt. syst. 113394
domestic tariff elec. customers, billing/accounting software develop. *(Serbian)* 122829
DRAM cache for high quality distributed video 85366
electronic pers. dosemeters, photon radiation perform. 122419
engng. surface form meas. & assess., ISO 1101, sampling strategy 78679
engng. surfaces morph. charactn., ISO 12085 MOTIF method 113754
error-detecting codes, ring of congruence classes, probab., ISO std. *(Chinese)* 72870
fast Ethernet commun. protocol for office appls., ISO/IEC 11801 std. *(German)* 119628
functional test in high-dens. PCB environ. 115195
group-of-frames/pictures color histogram descriptors for multimedia appls. 84288
H.263+ std., trellis-based R-D optimal quantization 95210
HDTV ISO/IEC 13818-1 decoders, design 120547
HiFi audio sigs., source encoding *(German)* 84013
household refrigerator-freezer energy test specs., Malaysian applicability 113153
IBM methodology for emerging environ. requirements evaluation 100693
IEEE 802.1D std. for LAN/MAN MAC bridges, amendment 96081
IEEE Std.802.1w-2001, MAC bridges operation changes 119552
indiv. radiation monitoring services, QA programmes 133107
instrumented Charpy impact testing, direct displacement meas. 90596
ISO 14001 environ. mgt. syst. certification in PV indust. 100685
ISO/IEC 15288 std., Standards Working Group report 67510
ISO/IEC 9796-1 signature scheme, chosen messages attack 106298
IT indust., eco-labelling 100686
JBIG2 bi-level image coding std. 84459
JPEG 2000, internat. std. for binary still image coding 84489
JPEG 2000 functionalities, anal. study 95116
JPEG 2000 still image coding, eval. vs. JPEG-LS, MPEG-4 VTC, JPEG 118550
JPEG 2000 still image compression std. 118496
LAN/MAN stds., token ring access method/phys. layer specs. 96082
laser charact. standardization *(Japanese)* 93698
laser materials proc., stds. and specs. *(Japanese)* 93917
laser opt. components, test methods, standardization trend *(Japanese)* 93691
mach. noise source sound power meas. under hemi-anechoic conditions 132201
mammography, radiation metrology network, calib. systs. 122153
mass meas., uncertainty eval., ISO guidelines 75901
MPEG video, picture quality investig. 73405
MPEG-4 audio and its appls. in mobile commun., overview 94404
MPEG-4 shape coding, fast motion estim. algm. 95084
MPEG-4 transport over IP/RTP 84971
MPEG-4 video encapsulation/marking over IP differentiated services 129748
MPEG-7 appls., P-frame motion vectors, low-complexity global motion estim. 95180
MPEG-7 homog. texture descriptor 85393
MPEG-7 std., overview 85382
MPEG-7 Systems, overview 85383
MPEG-audio layer III algm. for 16-bit DSP 79951
MPEG/audio low power encoders using simplified psychoacoustic model/fast bit allocation 118104
power syst. unconventional meas., uncertainty eval., virtual instrum. 112199
precision meas. uncertainties estim., ISO Guide alternative 109390

ISO standards continued
product environ. care, ISO 14001, ISO 14062, IPP, EEE, ecolabel elements 100691
pumps, steam turbines, vibr. eval., stds., codes *(Chinese)* 77757
SBus, chip and module interconnect bus 96083
security mgt. std. 119543
small ring gauges diam. meas., EUROMET comparison 120623
solder paste printers, machine/proc. capability coeffs. 125898
telecomm. services, common criteria, aviation 119445
Thai automotive indust. supply chain, new mfg. technols., QM 89901
thermocouple calib., simultaneous, error sources, ISO/IEC 17025 std. 109418
uncertainty & coverage probab., Bayesian eval. 109397
vibr./accel. pickups, phase shift charact. *(Japanese)* 75896
Welch-Satterthwaite formula validity in uncertainty estim. 75344
Pb-free reflow soldering, proc. requirements 91485

isobaric analogue states
^{14}Be, IAS, drip line nuclei studies 132431

isolated word recognition *see speech recognition*

isolation technology
1200 V robust trench IGBT 70171
bulk-dyn. threshold-voltage MOSFET, 65 GHz normal-mode f_t/220 GHz over-drive mode f_t 125711
CMOS device, STI, low temp. corner leakage charact. 70300
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol 127020
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
CMOS-IV SoC technol., 100 nm, for high dens. embedded memory/mixed sig LSIs 127018
compact intell. IGBT power module develop. 70138
DRAM, STI, retention time tail distrib. 125501
DRAM cells, 0.18 μm, enhanced retention time by fast-pull/fast-cool ingot growth, thermal budget 125474
DRAM trench capacitor, self-aligned buried strap, NFSTI technol. 114769
dual channel injection enhanced gate transistor, 2D simul. 103837
dual GOI, STI proc. param. effects 81416
embedded trench DRAMs, sub-0.10-μm, hemispherical-grain tech., LOCOS collar 102124
epitaxial/nonepitaxial planar gate and trench gate IGBTs, turn-off behaviour 115912
EXTIGATE, extended trench isolation gate technol., device optim. 69849
field stop IGBT concept with, optimized diode 70136
fluorocarbon films, integrated MEMS proc., deep RIE 104205
gigabit dens. DRAM cell transistor using retracted Si_3N_4-liner STI 68800
hard mask STI etch proc. for ≤0.13 μm logic technol. 103378
HBT implant isolation, MeV mask, cost effective 70046
high dens. plasma fluorinated silicate glass deposition, plasma-induced charging damage 103232
high-power appls., integrated power electronic building blocks 116046
HV drain extended MOST for 0.18-μm logic CMOS proc. 92468
isolated nanoparticle circuitry fab., lensless opt. tweezing 103703
lateral merged double Schottky rectifier, proposal and design 92282
lateral trench IGBT employing effective p+ diverter for improving latch-up charact. 103836
LF noise anal. of bipolar transistors and MOSFETs using complementary BiCMOS technol. 116043
memory cell landing pad, new integrat. technol. for 0.13-μm DRAM generation 114744
nonpunchthrough trench IGBT high-power switching devices, TCAD syst 70062
pattern transfer, IC-compatible proc., RF-MEMS component integrat. 92558
plasma immersion implant. for semicond. modif./doping, historical perspective 103286
pMOSFET reliab., trench edge effects 70117
polysilicon CMP proc. with small erosion for trench isolation proc. 103345
post-metal CMP cleaning with electrolyzed DI water, surface control tech 103344
power UMOSFETs, LV, trench geom./proc. impact on perform./reliab. 81349
recessed trench MOSFET proc. without crit. alignments 126843
RESURF LDMOS transistor, smart power technol. 126857
reverse tone etchback STI CMP, modeling 92078
RF mixed-sig. cct., Faraday cage isolation struct. 126415
scan and data driver LSIs for high-resoln. and large-size AC PDPs 97736
shallow n^+-p-well diodes, generation lifetime from reverse generation current 126106
SOI CMOS technol., hybrid trench isolation 104134
SOI complementary BiCMOS devices, perform. eval. using test struct. 104147
SOI HV power IC technol., PDP drivers 68662
SOI-MOSFETs, low-freq. noise degrad. rel. to STI interface effects 103856
spin-barrier galvanic isolations, spin transistors *(Russian)* 81532
STI, narrow device, stress and dopant redistribution effects 103389
STI, T-shaped technol. 81050
STI CMOS devices, phys./quantitat. width depend. hot carrier model 81356
STI for CMOS logic technol., mfg. optim. 104097
STI planarization proc. using direct CMP 115654
STI silicided bulk CMOS, compact layout rule extract., latchup prevention 81509
super high speed polysilicon emitter IC technol. *(Chinese)* 104085
TFSOI technol., isolation structs. for mixed sig. RF SOC appls. 104145
trench gate PT/planar IGBT modules comparison 70139
trench gate technol. MOSFET/IGBT semicond. power modules for operation up to 270 K *(German)* 70059
ULSI device isolation struct., metal impurities behaviour 81107
ULSI STI, local mech. stress, UV micro-Raman spectrosc. 69850
wafer scale pattern meas. for CMP anal. 103347
AlGaAs/InGaAs power doped-channel FETs, IMD reduct. by air-bridge gate proc. 91254
AlGaInP/GaAs HBT, proton implant isolation *(Chinese)* 103785
AlGaN/GaN:He,P HFETs fab., ion implant., classical/gate metal approach 81381
$CoSi_2$ CMOS test struct., 0.18-μm, latchup charactn. 104095
Cu dual-damascene proc. resoln. improvement, top surface imaging 92090
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packaging 125945
GaAs isolation struct., backgate impedance dispersion 103437
GaAs isolation struct., backgate impedance dispersion 103436
GaAs, polyenergetic ion implant., device isolation 115560
GaAs:Si,He layers, ion-beam-induced isolation 126310
GaN heteroepitaxial lateral overgrowth/charactn., low disloc. dens., MOVPE growth, nucleation 79335

olation technology continued
InAlAs/InGaAs HEMT, PECVD passiv. film, isolation degrad. 115951
InP, n-type/p-type, proton bombard., elec. isolation 69508
Si RFICs, deep trench guard technol. to suppress coupling between inductors 102690
Si RFICs, full-wave anal. of transverse and longit. couplings, effect of buried diffusions 91391
Si p/p+ substrs., spiral inductors with reson. freq. of 20 GHz 69227
Si surface micromachining, deep vac. cavity struct. appl. to microflow sens. 97568
Si surface plasma charging damage, reverse-act. area etching in poly-buffered STI proc. 103425
Si trench space solar cells fab., improved radiation hardness 112955
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si/SiGe HBTs, trench-isolated , thermal resist. 81222
SiC accumulation-mode power MOSFET, fully depleted N-channel epilayer 92372
SiGe HBT, self-aligned SEG 103790
SiGe double QD, hole transport, cond. peak splitting 69694
TiN PVD gate thermal stabil. under RTA, impact on CMOSFET charact. 104128
$TiSi_2$ contact hole etching, LOCOS isolation, Si SEG 126504
olators, microwave *see microwave isolators*
omer shift
$Pr_2Fe_{14}B$ melt-spun ribbons, hard magnet charact., Mossbauer obs. 92784
omorphism
homomorphisms of poset-valued alg. 67834
multispectral images, nonlin. scale-space isomorphic rep. 118211
otope detection
see also mass spectra
capillary electrophoresis microchip, radionuclide/metal detect. 86718
GaN:As(Ge)(Se) epilayers, radioact. isotope ident., PL 126330
otope effects
conf., Models and phenom. for convent. and high temp. supercond., Varenna, Italy (Jun./Jul. 1997) 100446
MOS device degrad., role of holes in D isotope effect and mechanisms 91889
nMOSFET, interface trap generation under stress, H/D isotope effect 92355
p-(4H-)SiC:Cr,V, band gap states, radiotracer-DLTS 69812
Si(001), oxid. obs. by high-resoln. RBS 92059
SiC, isotopically disordered, Raman spectra, phonon line broadening 69576
SiC polytype depend., tantalum/tungsten band gap states 69596
SiC:H, Al epilayers, H-passivated Al acceptors reactivation, hydrogen diffusion, quantitat. modeling 69796
SiC:He,N,Ti, ^{13}C enriched, 6H, 15R, low temp. PL 71524
otope separation
see also laser isotope separation; radiochemistry
accelerated ISOL tech. and SPIRAL project 132278
BRIC charge state breeder EBIS, RIBs 110272
FEBIAD ion source for on-line isotope separator *(Chinese)* 87153
turbomolecular pump, integrated electronic control module 134094
GeF_4 isotopically enriched SDS ion implant. source, anal. 132261
otopic generators *see radioactive sources*
otopomers *see isotope effects*
rated switching networks
area-efficient iter. modified-Booth multiplier based on self-timed clocking 125463
ration methods *see iterative methods*
rative decoding
3G mobile commun., short frame turbo decoding and ML decoding 106133
adaptive reduced-complexity iter. decoding 72816
algm. for calculating posterior probab./model representation 129180
ARQ syst., turbo iter. decoding convergence and errors 129046
band-limited wireless channel, coherent QAM decoder appl. *(Korean)* 120051
BCJR-type reduced-state algms. 72878
BICM-ID with sq. QAM constellations, Rayleigh fading channels, design/anal./perform. eval. 72887
BLAST archits., random space-time codes and iter. decoders 131073
BLAST syst. perform., iter. detect./decoding effects 72866
blind turbo equalization in Gaussian and impulsive noise 107683
blind/robust space-time receiver for turbo coded syst. 106135
block turbo code, reduced search trellis decoding, perform. eval. 94278
CDMA, coded, lin. front end for iter. soft interf. cancellation/decoding 131070
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA multicode downlink in shadowed multipath fading 131282
CDMA serially concatenated ECC syst., joint iter. decoding 108861
COFDM systs., near optimal joint channel estim. and data detect. 74698
complex no. codes, iter. decoding 129045
complex-valued cyclic code using FFT 83898
concatenated codes with interleavers, design of fixed-point iter. decoders 72821
content-adaptive watermarking based on stochastic multiresolution image modeling 129710
convolutionally encoded sigs. over multipath Rayleigh fading channels 106156
correl. binary source compression using turbo codes 129014
correl. sources over noisy channels, joint source-channel decoding 106173
cpd. error correcting iterated codes, decoding algm. *(Japanese)* 72905
CPM, power/bandwidth efficient serially concatenated, anal./simul. 72819
CPM, serial concatenated, ACI suscept. 129064
decoded fractal images, hierarchical fixed-point-seeking method 84447
DFE for coded ISI channels *(Chinese)* 130264
digital commun., turbo techs. overview 72908
digital commun. systs. appl. 72881
DS-CDMA, joint despreading and iter. decoding with serially concatenated turbo code and Walsh code 83891
DS-CDMA asynchronous syst. with concatenated convolutional coding, iter. multiuser detect. 107613
DS-CDMA coded systs., turbo multiuser detect., Gibbs sampling 107770
DS-CDMA coherent syst., MMSE interf. suppression/turbo coding 106157
DS-CDMA iter. multi-user turbo-code receiver 128814
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
dual code, iter. decoding, additive version of SISO algm. 129047
enhanced block coded modulation using iter. decoding based on parity check codes 129067
equalization and decoding, hybrid equalization strategies 129216
error correcting RLL codes using high rate RSC or turbo code 106159
expander codes, error probab. exponents 129070
fading channels, iter. decoding scheme for pilot-assisted modulation 74699
fast correl. attacks using parity-check eqns. 106328
FH-SS systs., side inform. reception 108541

iterative decoding continued
FH-SSMA networks, multiuser demodulation/iter. decoding 107732
FHMA turbo-coded commun., iter. multiuser detect. 84781
finite generalized quadrangles based code constr. 129172
fixed-point iter. decoders for concatenated codes with interleavers, design 72880
fractal image coding, non-iter. scheme 107038
fractal image compression, efficient decoding scheme 95169
freq. selective fading channel, turbo codes with multilevel modulation 106059
Gallager bounding tech. for turbo-like codes over fading channels 117982
GMSK signaling over multipath channels, turbo equalization based on Gibbs sampler 107718
high-dens. mag. recording channel, turbo decoding of generator matrix code 72915
high-rate turbo codes, iter. decoding using syndrome trellis 129202
hybrid ARQ schemes using turbo TCM for wireless channels, perform. 83939
hybrid factor graphs and adaptive equalization 130271
IEEE GLOBECOM'00 conf., San Francisco, CA, USA (Nov.-Dec. 2000) 67357
IEEE ICC 2001 commun. conf., Helsinki, Finland (June 2001) 124222
IEEE inform. theory symposium, Washington, DC, USA (June 2001) 124191
images, multiple same-sized block mapping 107097
IS-95A uplink code, decoding 74628
ISI channel, precoder effect on serially concatenated coding systs. 94295
joint source-channel decoding with iter. algms. 117953
LDPC and turbo codes, universal belief propag. based decoding 129152
lin.-complexity soft-decodable high-rate "good" codes, constr./props./perform. 129114
low dens. parity check code decoder, parallel archit. 106193
low dens. parity check codes *(Chinese)* 106109
low dens. parity check codes, constr. 72823
low rate turbo-Hadamard codes with low decoding complexity 129162
low-complexity turbo-equalization for diversity channels 72932
low-dens. parity check codes, iter. reliab. based decoding 129177
low-dens. parity-check codes decoding with probabilistic scheduling 129013
low-dens. parity-check convolutional codes, iter. decoding perform. anal. 129154
mag. recording channels, low-dens. parity-check codes appl. 72884
MC-CDMA turbo coded uplink, iter. multiuser detect. and decoding 119235
MDPSK, bit-interleaved coded, flat Rayleigh fading channels, decision-feedback differential demodulation 72747
MDPSK, bit-interleaved coded, iter. decision-feedback differential demodulation 94243
ML decoding, approx. upper bounds on error probab. of lin. codes *(English)* 72834
mobile radio, adaptive cochannel interf. canceling with turbo codes 108894
mobile radio transmit antenna diversity systs., turbo proc. 117993
modified turbo codes for perform. improvement 106099
multi-dimens. parity-check codes for bursty channels 129115
multicarrier DS-CDMA, freq. spread coding and turbo coding 106100
multifold turbo codes, BER perform. 129126
multilevel coded modulation, combined equalization/decoding 83876
multilevel codes 72886
multilevel codes/iter. multistage decoding, rate design rules/practical considerations 83853
multilevel coding, mapping strategies in fading presence, soft decision decoding 94273
multiple turbo codes, non-parallel decoding struct. 129098
multiuser detect. using iter. decoding 85828
multiuser detect./decoding of asynchronous users, reduced complexity algm. 130173
noncoherent iter. decoding of spectrally efficient coded modulations 129200
nonpunctured turbo codes, reduced-complexity iter. decoding 72813
OFDM systs., 2D iter. APP channel estim./decoding 72815
one-step majority logic decodable codes based on belief propag., iter. decoding *(English)* 72841
optimal joint source-channel decoding, iter. approx. 106151
parallel and serial turbo codes, iter. decoder anal. 129100
parallel concatenated block codes, iter. decoding, F24 coset MSP algm. 106079
parallel concatenated codes, convergence behavior 129018
parallel concatenated codes, iter. decoding trajectories *(English)* 72838
parallel concatenated turbo codes for CPM 83859
partial response channels, turbo equalization, precoding effect on convergence 72913
pilot sym. assisted turbo codes over flat-fading channels, iter. channel estim./decoding 106154
product block codes, LMSE criterion 129113
rate compatible product codes 106094
Rayleigh fading channels, improved multilevel coding schemes research 94272
Rayleigh flat correl. fading, joint iter. channel estim./decoding 106155
Rayleigh flat fast fading channels, soft decision directed MAP estim. 106087
rect. codes in iter. decoding *(English)* 72846
recursive systematic convolutional codes, twin-stack decoding 94294
reliab.-based decoding of low-dens. parity check codes 72883
RS codes, turbo decoding through binary decomp. and self concatenation 129044
RS decoders, high-speed VLSI archits., Berlekamp-Massey algm. 125530
RS product codes, iter. appl. of Chase algm. 129068
SCCPM, multi-user syst., iter. decoding 117957
secure mobile commun. using chaotic turbo codes 129231
separate coded PPM, iter. decoding of convolutional codes *(Japanese)* 117914
serial concatenated convolutional code, improved design and SOVA algm. 94322
serial concatenated TCM with rate-1 inner code 72817
serially concatenated code charact. matching for iter. decoding 117989
serially concatenated codes, code doping for iter. decoding convergence 129179
serially concatenated convolutional codes, iter. decoding in multipath Rayleigh fading environ. 72818
serially concatenated partial response mag. recording channels, iter. detect. 116464
serially concatenated space-time code design in flat Rayleigh fading channels 85825
serially concatenated space-time coding 106138
SFH high capacity high data rate networks 83856
SISO low latency module, broadband turbo decoding appl. 72879
soft output Viterbi algm. and max-log-MAP decoding, equivalence 108681
soft output Viterbi algm. turbo decoding, third generation mobile commun. syst. *(Chinese)* 106148
soft-decision decoding algms., search centers selection 129023
source-channel decoding, generalized framework 117991
space-time bit-interleaved coded modulation over freq. selective fading channels 72936

iterative decoding continued
SPCP codes 106073
spectrally efficient coded modulations, noncoherent iter. decoding 117990
stream-oriented turbo codes 83913
systematic binary alg. block codes 72826
TCM, iter. space-time detect. for broadband wireless channels 85522
TCM with receiver diversity, turbo space-time equalization, max.-likelihood detect. 107694
TDD-CDMA receivers, soft Bayesian recursive interf. cancellation/turbo decoding 108938
turbo block codes using modified Kaneko's algm. 106084
turbo code decoder, adaptive iter., power consumption 72807
turbo code over impulsive noise channel, perform. eval. 129025
turbo code perform. and design trade-offs 106083
turbo codes, convergence based design 129099
turbo codes, interleaver design 72876
turbo codes, iter. decoding perform., asymptotic anal. 129153
turbo codes, joint decoding and carrier phase recovery algm. 117959
turbo codes, parallel decoding using soft output T-algms. 106113
turbo codes, throughput improvement of iter. decoders 83830
turbo codes, tight bound on bit error probab. 83888
turbo codes in radiocommunication, memory power reduction implement. 83899
turbo codes on flat fading channels, adaptive iter. detect. 83857
turbo codes perform. improvement by concatenation with rect. parity check codes 129125
turbo codes transm. over fading channels, iter. channel estim. 83938
turbo coding, decoder complexity 94334
turbo decoder, threshold LogMAP SISO block for FPGA implement. 106098
turbo decoder anal., dens. evol. based 72882
turbo decoder anal. based on Gaussian dens. evol. 106086
turbo decoding, complexity reduction 120061
turbo decoding, distrib. of loop lengths in graphical models 117937
turbo decoding, error detect. improvement by short CRC with mean-sign-change criterion 129124
turbo decoding, extrinsic inform. form. 129155
turbo decoding, stop criterion *(English)* 94302
turbo demodulation of zero-padded OFDM transms. 106067
turbo equalization, jointly optimized adaptive equalization/channel decoding 107717
turbo greedy multiuser detect. 107754
turbo proc. in joint multi-user detect./decoding *(Chinese)* 94333
turbo product codes, perform. over partial response channels 117999
turbo product codes decoding, fast Chase algm. appl. 129016
turbo-coded AWGN and Rayleigh fading channels, soft-decision channel-optimized VQ 83871
turbo-coded modulation for transmit/receive antenna diversity systs. over block fading channels 72888
turbo-codes as error control codes 106116
turbo-equalization, convergence anal. 130258
Verdu soft demodulator, iter. coded multiuser detect. 107609
VLC, sym.-by-sym. MAP decoding *(English)* 72891
VLC for iter. source/channel decoding 106172
VLSI archit. for turbo codes, implement. in FPGA 94327
wireless ad hoc network, space-time block coding 108962
wireless fading channels, space-time trellis codes iter. decoding 108600
woven convolutional codes, pipeline decoding *(English)* 72854

iterative methods
see also gradient methods; iterative decoding; Newton method; Newton-Raphson method; predictor-corrector methods
1-norm quasi-min. residual variant of Bi-CGSTAB algm. for nonsymmetric lin. systs. 124660
1D iter. map with infinite collapses, chaotic characts. 90679
1D recursive median sieve, simplified implement. 106514
2-channel sig.-adapted biorthogonal filter banks, optimal design 118986
2D large scatt. problems, localized iter. generalized multipole tech. 83245
2D random rough surfaces, EM wave backscatt., forward-backward/spectral accel. method 128739
2D separable-denominator state-space digital filters, matrix projection design tech. 68945
2D sigs. restoration using autoregressive models 106453
3D asymmetric temp. field meas. by real time laser interferometric tomography 121254
3D backprojected PET images, adaptive scatt. & randoms correction 122177
3D BEM systs. of eqns., iter. techs. 79137
3D blind image reconstruction, combined nonlin. and stat. techs. 129485
3D cavity-backed aperture, EM wave scatt., FEM iter. method 72221
3D coating conductor with arbitrary shape, RCS computation using FMM/IBC 72286
3D ground penetrating radar simulator, FDTD method 86194
3D head tracking/head pose estim., stabilized adaptive appearance changes model 106705
3D med. images, global 3D rigid registration 98459
3D objs., fast-domain decomp. method for EM scatt. anal. 72220
3D PET, model-based scatt. correction accuracy, MC calc. input 122178
3D PET hybrid scatter correction, unscattered coincidences distrib. 122198
3D PET imaging, list-mode EM-ML 132854
3D PET iter. reconstruction using stochastic sampling 132881
3D quantum transport by supercell method, num. accel. and appls. 126914
3D range image, gradient based polyhedral segmentation 94696
3D target localization from seismic and acoustic signatures 73736
3G CDMA commun., interf. mgt. methods 96549
2000 Copper Mountain conf. on iter. methods, Boulder, CO, USA (April 2000) 100361
abruptly ended fiber waveguide, radiation characts. 93069
act. contour topologic transform., discrete-time CNN approach 107140
adaptive modulation for multiple antenna systs. 106062
adaptive neg. cycle detect. in dyn. graphs 100902
additive Schwarz methods, matrix anal. on leading term of condition no. 79019
aerial multi-conductor transm. lines with branch, switching transient EM field 134289
affine iter. algms., design flow, commun. synthesis 114689
AHDL simulator, event-driven ITA, dyn. partitioning 101645
air quality emissions, discrete Kalman filter use 133348
analogue syst. design problem formulation by control theory 101740
anatomical struct., robust 3D image segmentation with level sets 87310
animal positron tomograph, image generation, Monte Carlo coincident aperture fns. 111033
anisotropic MR ang. sens., integrated online diagnosis, CORDIC algm. 75468
antenna array radiation pattern sidelobe suppression 128911

iterative methods continued
AOR iter. method for new preconditioned lin. systs. 90076
aperiodic model improvement using extended size deconvolution method 732
approx. value iter. with randomized policies 78981
arbitrarily shaped cathode electron gun, iter. solns. 72180
ARMA modelling of PSD fns. 118884
ARPACK and eigs for large-scale computation of pseudospectra 101033
array antenna amplit. pattern, phase-only synthesis 83667
artery-vein separation via MRA, image proc. approach 110856
asymmetrical opt. rib waveguide propag. charact. 116691
asynchronous CDMA sigs., channel estim. and demodulation in freq.-select fading 119217
ATM multiple input-queued switches, perform. eval. 107635
ATR systs., receiver operating characts. curve points 86188
atten./scatter-corrected ^{99m}Tc cardiac SPECT studies 111030
AWGN channels, VQ codebooks/QAM sig. constellations optim. 72900
Balkan power interconnection, steady-state security assess. 133531
bar code recogn., polynomial recursive optim. algm. 95405
Bayesian iter. binary filter design 118179
Bayesian source separation, matrix element distribn., max. likelihood fn. 1075
BE iter.-solver-based substructuring algm. for 3D time-harmonic problems elastodynamics 114166
beam transverse-phase-space dens., CT meas. appls. *(Chinese)* 121331
beam-deflection opt. tomography, Radon transform iter., temp. fields 118407
beyond quenching for degenerate sing. semilinear parab. eqns. 79048
Bi-CGSTAB(L), dyn. selection of L *(Japanese)* 124667
biorthogonal wavelets with certain regularities 118927
bipolar transistor, base transit time, base doping profiles, iter. schemes 7004
bipolar transistor, base transit time, doping profile 103791
BLDCM, optim. techs. derived from expt. design method 134058
blind image deconvolution/small-extent point-spread fns. using resultant matric 94947
blind MAI suppression, inform.-theoretic approach 119221
blind multiuser interf. cancellation, max. likelihood approach 72364
blind source separation, approx. joint diagonalization using non-orthogonal ma rices 107427
block-iter. parallel algm., sparse systs., pixel-related weighting 132520
body-seat interface, able-bodied/paraplegic subjs., press. distrib. anal. 13254
Boolean fn. transform. to fn. of degree 3, iters. upper bound 124456
boundary element and FEM in elastostatics 114164
bounding solns. of underdetermined systs. 67929
bounds on differences of adjacent zeros of Bessel fns. and iter. rels. between co secutive zeros 79000
brachytherapy source localization, 3D tomosynthetic image restoration 1109
brain, human, water T_2 relax. components, magnetisation transfer 132722
brain, metabolite sigs., ^{1}H mag. reson. spectra anal. 87635
brain fMRI, stat. parametric maps, Bayesian approach to segmentation 1220
brain MRI, fast fuzzy clustering segmentation algm. *(Chinese)* 110859
brain PET, reconstruction strategies for HRRT 132873
brain SPECT, absol. activity quantitat., anal. vs. iter. methods 122239
brainstem auditory responses, quality improvement, single-sweep-based metho 121908
broadband mobile radio, joint spatial/temporal equalizer 85829
broadband turbo decoding, $O(\log_2 N)$-latency SISO 106085
Burgers' eqn. lin. implicit time integrat. scheme 114102
CALF adaptive filtering algm. improvement 107487
camera calib. using rect. textures 86671
capacitance tomography sens., internal-external electrodes, reconstr. algm 120739
cardiac activation time imaging, nonlin. ill-posed problem, iter. lin. optim 121917
cardiac MRI, iter. approach to tensor tomography 132708
cardiac SPECT, atten./scatt. corrected, regularisation optimisation 122187
cardiac SPECT, uniformity, contrast, SNR eval. 122252
carotid arteries, 3-D power Doppler US/MR angiographic images registratio 110795
causal stable IIR filter banks with powers-of-two coeffs., design 119065
cct. interconnect CAD, cross-talk driven, optim. 103999
CDMA, capacity doubling by in-cell seq. reuse and soft interf. cancellatio 85850
CDMA asynchronous systs., signature seq. optim. 131287
CDMA coded systs., iter. parallel interf. cancellation 130293
CDMA data users under delay/error constraints, forward link hierarchic SIR/rate control 131150
CDMA long code systs., multiuser channel estim. 85516
CDMA mobile commun. systs., space-time iter./multistage receiver struc 108858
CDMA multicell network design 96503
CDMA multipath systs., power control/transmit diversity 85799
CDMA receivers in interchip interf., nonlin. iter. multiuser detect. and equaliz tion 73723
CDMA sigs., multi-user detect. via iter. proc. 84800
CDMA sync. systs., iter. constr. of optimum signature seq. sets 85867
CDMA variable spreading-factor systs., multipath multiuser detect. 119978
cellular network, user mobility patterns, iter. optim. scheme for resource adapt tion 96458
cellular networks, loss formulas, optim. 96500
cellular radio, distributed power control algms. 74736
CGH reconstruction by iter. Fourier method 83024
chaotic sig. param. estim. 118903
circ. interval arith., simultaneous method of fourth order for finding comple zeros 67948
CLUCGS and CLUCR, matrix soln. methods for general cct. simul. 79508
CMA-based nonlin. blind equaliser, two-layer neural network model 119180
CMOS VLSI archit. of dyn. reconfigurable hardware-based cipher 102322
coastal water quality, multiparam. inversion, hyperspectral anal. 99010
collaborative design, constraint-based heuristics, act. approach to proc. mg 124299
color image interpolation with edge-enhancement 106753
color image restoration using cpd. Gauss-Markov random fields 118387
commun. network, probab. connectivity *(Chinese)* 95743
complex distrib. load flow, augmented matrix-based control scheme *(Chinese* 111908
complex matrices, sq. roots/sign fn., iter. 78760
complex modulation schemes, iter. multiuser detect. 128976
complex refr.-index profile of fiber optics 71301
complex-valued lin. systs. via equiv. real formulations 100980
compressed low resoln. video, motion estim./resoln. enhancement 95201
computer vision, correspondence, island model parallel GA 106773
cone-beam CT for MV LINAC, electronic portal imaging 98544

itive methods continued
one-beam iter. reconstruction of long obj. segment 132857
conformal imaging with non-contacting microwave antenna array 98384
onical breast phantom, 3D time-resolved opt. tomography 98370
onvergence on family of iters. with cubic order 114044
orrel. distributed sources, DOA estim., iter. approach *(Chinese)* 73740
orrel. waveform multiple-access channel multiuser detect. 130291
CPM sigs. over space-time correl. Rayleigh fading channels, soft output diversity combining 131290
CPW on semicond. substr. 94095
ross-cumulant zero-forcing blind source separation *(Chinese)* 129993
CT, iter. max.-likelihood polychromatic algm. 132804
D'Yakonov fully explicit variant of iter. decomp. method 124623
damped oscill., logarithmic decrement eval., integral sig. proc. 101594
data filling algms. for mixed raster content layers 95197
DC nonlin. ccts. soln., ellipsoid-based approach 79523
decision anal., equivalence judgments vs. ratio judgments 124482
deep sub-micron technols., timing anal. with crosstalk as fixpoints on complete lattice 126986
deformable template model based on fuzzy alignment algm. 84319
dense shielded IC, EM anal., adaptive integral method 102695
depend. component resampling, iter. nonlin. Gaussianization algm. 106825
design, meta-level eval. fn. reformulation strategies 100522
dielec. cylinder, EM scatt., domain decomp. method *(Chinese)* 105707
differential games, zero-sum, Nash soln. quadratic methods 124500
diffr.-limited images, prior scene inform. modeling/extrapolation for set theoretic restoration/super-resoln. 94655
diffuse/specular radar targets stat. imaging 75124
digital beamforming in handheld ultrasound systs., low power delay calc. 110805
digital beamforming systs., adaptive pattern synthesis 72681
digital cellular networks, hyperb. radiolocation 96603
digital commun. systs., blind max. ratio combining methods 96368
digital images restoration/resoln. enhancement 106485
digital watermarks subjected to optimum lin. filtering and additive noise, anal. 95666
direction finding method, sens. gain and phase are unknown 118796
discrete time-warped FT, optimal warping fn. design 95722
discrete wavelet domain, natural scale selection using eigenvalues 129961
distorted bandlimited almost-periodic sig. recovery, PQ theorem 95623
divergence-free finite elements, multilevel bases 124766
DMT receivers, RLS-based init. for per tone equalizers 130249
DOA estim. of coherent narrowband sigs. using lin. prediction, MSE-based regularization 130024
DOA MLE, modified EM algm. 107393
document image decoding using iterated complete path search 95337
document image decoding using linguistic constraints 95338
DOE, rapid prototyping, packaging appls. 128576
domain decomp. for sing. perturbed parab. problem with convection-dominated term 114008
DPIV, wavelet-based image denoising 106513
DS-CDMA, decision feedback partial parallel interf. cancellation 105781
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA turbo-coded systs., low-complexity iter. multiuser receiver 108620
DSLs, spectrally-shaped crosstalk-impaired, peak-energy-limited multicarrier systs. loading 131009
DSP systs., parameterized dataflow modeling 118850
dual head gamma camera PET, ^{153}Gd line source, atten. correction 122183
Duralumin plate, defect detect./imaging using Lamb waves, DORT 101629
dyn. iter. method for fast network partitioning 101666
dyn. PET, OS-EM 110991
dyn. rate control algms. for HDR throughput optim. 119900
dyn. SPECT, 4D max. a posteriori reconstruction, compartmental model-based prior 76580
echocardiac images, robust quantization table design 98316
eddy current testing, FFT integral formulation using edge-elements 79493
edge-adaptive clustering for unsupervised image segmentation 94547
elec. capacitance tomography, image reconstruction 109929
elec. impedance tomography, inverse immersed interface anal. 132127
elec. property enhanced tomography, simul. study 98206
electron holography, multiple and single scatt. 93874
electronic portal imaging, incident beam distribs., iter. algm. for reconstruction 111127
electrostatic parallel-plate actuator, opt. moving-fibre switch 92541
ELF sources enclosed by nonlin. ferromag. pipe, EM fields 72171
ellipt. BVP, Lagrange multipliers 124726
ellipt. PDEs, iter. methods, stopping criteria 124706
EM device design, use of ANN inverse mapping tech. 128703
EM devices, Pareto evol. optim., diversity enhancement tech. 83159
EM optim. problems, combined evol. strategies & approx. techs. 128642
EM scatt. from 2D large-scale impedance random rough surfaces 72266
EM scatt. problems soln. by improved spectral iter. tech. 93999
emission computed tomography, stat. regulated/adaptive EM reconstruction 111031
emission tomography, MAP estim., fast EM-like methods 76563
endoscopic images, automatic boundary enhancement and detect., iris filter 76202
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut partitioning 102105
equalization of partial response channels using dens. evol., thresholds 130259
Euler method in num. integrat. of react.-diffusion problems with blow-up 114099
event-related EEG (de)sync., time-freq. microstruct. 87417
explicit-implicit method for flexible-rigid multibody systs. 114179
exponential fitting multistep algms. for first-order ODEs 79087
expt. solid mech., digital image/speckle correl. 118318
extremization of lin. integral, stat. decision problem 78921
Fabry-Perot fibre opt. sens., transm.-type, sig. proc. algm. 120851
far-field meas. for mobile phones with small no. of meas. locations 132141
fast conformal mapping of multiply connected regions 67945
fast field comput. with fast multipole method, reduced comput. cost 83102
fault arc optimum time domain simul. using combined iter. method 99325
FDG PET, iter. reconstruction, atten. correction, image fusion 122161
FEA, fast explicit preconditioned, for symmetric lin. systs. 114194
Fejer-monotone methods in Hilbert spaces, convergence 78988
film flicker removal, enhanced approach 106487
finite difference solns. of react. diffusion eqns. with continuous time delays 90114
finite element techs. for free-vibr. and seismic anal. of liq.-storage tanks 68076

iterative methods continued
FIR filters, optimum discrete coeff. realization 80107
flatness meas., correlative stitching tech., iter. least-sq. method 121216
fluidized bed, bottom zone imaging, elec. capacitance tomography 121144
fluoresc. lamp modelling for voltage fluctuations. anal. 78334
force-minimized compact magnets for high-field clinical MRI imaging appls., stochastic design 116529
FPGA place and route problems, simulated annealing, iter. procs. *(Italian)* 79831
FQMR, flexible quasi-min. residual method with inexact preconditioning 101023
fractal coding of shapes, projected IFS model based 95177
fractal image coding, convergence 95174
fractal image coding scheme 84495
fractal image compression, adaptive post-proc. 95173
fractional delay filters, design 91083
free form surfaces projective registration, iter. algm. 94515
free-form surface registration using rigid motion constraints 94586
freq. domain notch periodogram algm. 107574
fuzzified iter. algms. for perform. driven low power VLSI placement 127014
Galerkin BEM, computational lin. alg. issues 124663
gamma-distributed sigs., classes resoln. 107345
general nonlin. prog., robust trust region algm. 78939
generalized hill climbing algms., convergence anal. 100916
generalized nonlin. implicit quasi-variational inclusions with fuzzy mappings 67971
generalized proc. sharing networks, end-to-end delay bound calc. 130182
generalized quasi-variational-like inclusions with nonconvex functionals 100973
generalized shuffle network, traffic-distrib. characts. of parallel switching archits. 84843
generalized simplex algm., phase-1 approach 124588
genetic relax. iter. FT algm. for image reconstruction 84178
globally convergent Newton-SOR method for stat. image reconstruction 132513
GMRES method for restoration of images with spatially variant blur 94744
GMT/PO approach to num. diffr. coeffs. of irregular edge on semi-infinite conductive circ.-cylinder 83199
GMT/PO approach to num. diffr. coeffs. of irregular top on conductive cone 83198
GPS static positioning soln. 75251
gradient-based iter. reconstruction schemes for opt. tomography 76386
graph coloring, iter. extension of max. clique 100894
graph decomp., heuristic procedures, hybrid GA 67812
grid refinement and nonlin. SOR 101133
ground surface tomographic imaging, ground wave use 88097
GSM fast fading channels, blind/nonblind turbo estim. 108937
GSM microcellular/macrocellular systs., hyperb. posn. location 131126
GSM systs., freq. sync. acquisition 85784
guided evol. simulated annealing, heritage factors 100969
hand pose recovery from single monochrome image 94850
hand-held γ-cameras, reconstruction implement., surgery appl. 132983
head, human, hemodynamics, 3D vol. tomographic localization 132644
heat-vision images, criterion for quality assess. 106680
hierarchical microcellular networks, random early blocking 85783
hierarchical wavelet image coding, iter. backward segmentation 95071
high-capacity wireless systs., perform. comparison of space-time archit. 108771
high-resoln. image reconstruction with displacement errors 84352
HMM-based visual speech recogn., normalized training 94435
hologram binarization, iter. stepwise quantization method 129785
homog. convex cones, Caratheodory no., duality 78908
homog. dielec. material in cavity, permitt. and loss factor estim. using FEM 70370
HOS based blind multi-channel deconvolution 107401
hyperspectral image segmentation, algm. hardware implement., FPGA 95415
hysteretic cores, supply ccts., rot. flux excitations 81909
IC design, interconnection syst. *(Italian)* 92436
IIR digital filters design in complex domain 107540
IIR stable notch filter design with optimal pole placement 130122
ill-posed 2D Fredholm integral eqn. solvability 90170
IM, mag. field, Preisach hysteresis and finite element models 134011
IM design optimisation, FEM 134002
image encryption, virtual image and iter. phase retrieval 129341
image enhancement, self-avoiding random walk approach 118236
image fusion by steerable pyramid 84589
image matching, iter. multigrid regularization tech. 129867
image panoramic mosaicing, global and local registration 118300
image proc./synthesis, multiple illuminant direction detect. 106500
image reconstruction, efficient forward projection using tri-lin. interpolation 132512
image restoration, partitioned separable paraboloidal surrogate coord. ascent algm. 84297
image restoration, recursive implement. of constrained LMS L-filters 73305
image restoration based on autocorrelation fns., regularization methods 94745
image restoration method using IFS 94944
image restoration with IFS 118224
image segmentation, Gaussian mixture param. estim., iter. method 107246
image segmentation based on integrat. of Markov random fields and deformable models 84107
image segmentation using level set curves of complex wavelet surfaces 94838
image transm., error resilient sync. codeword for VLC 95299
implicit iter. proc. for nonexpansive mappings 114029
implicit updates in multistep quasi-Newton methods 101011
improved conjug. gradient sq. method on parallel distributed memory archits. 124661
IMRT, forward treatment planning, "sequential"" optimisation tech. 76643
incomplete-LU preconditioners for nonsymmetric matrix systs. 67696
infinite periodic struct. with localized impurity, EM scatt. 83236
input and output buffered switch, simple iter. matching 130219
input output quadratic systs., cumulant-based algm. for ident. 118905
insulated-neutral LV power syst. fire safety, steady-state regimes calc. *(Russian)* 99180
integer prog. by integral basis iter. substitution 100924
integral quadratic constraints, lin. matrix inequalities, efficient solns. 78763
interactive visual dialog, act. vision based obj. recogn. 129844
interpolational alg. polynomial expansion, iter. approach, at. fns. 114026
interstitial RF therapy effectiveness, shear modulus reconstr. 122289
interval Gauss-Seidel method for generalized soln. sets to interval lin. systs. 67926
intra-pulse modulated sigs., feature extraction using time-freq. anal. 109233
invariant subspaces computation, Grassmann-Rayleigh quotient iter. 78759
IPO approach, subdomains splicing tech. 72275
irregular edge of semi-infinite cone, 3D num. diffr. coeffs. calc. 128752

iterative methods continued
ISAR imaging of moving targets, robust autofocus algm. 120424
Ishikawa iter., stabil., strong pseudo-contractions 78979
Ishikawa iter. procedures for nonlin. eqns., convergence and stabil. 114052
iterated conditional mode, ground state in image recovery 84174
IVP parallel global integrat. method 124687
Jacobi-Davidson type SVD method 101034
Japanese phoneme, stat. feature extraction, universal constraint *(Japanese)* 84044
jump Markov lin. systs., iter. algms. for state estim. 73595
Kalman sawtooth iterated extended smoother derivation via AECM algm. 107520
L-curve for MINRES method 90091
landmine detect., automated, multispectral imaging, iter. morph. algms. 77065
large analog/RF ccts., steady-state stabil. anal. algm. 79516
large lin. Toeplitz systs., augmented iter. method 118960
large sparse lin. complementarity, parallel chaotic multisplitting iter. methods 79039
large-scale normal coord. anal. for mol. struct. 101031
large-scale/complex EMC problems soln. using method of moments 83362
latex spheres in Intralipid suspens., turbid media opt. props., CW meas.-based methods 76394
left ventricular ejection fraction determ., gated blood-pool tomography 98579
LF vibrated image seq., enhanced-resoln. restoration using convex projections 129414
lifting scheme design from general wavelet 95699
lightning-interact. problems, FDTD anal., ABC 105796
lin. alg. eqns., convergence accel. 67962
lin. arrays with equal side lobes, alternative design 105976
lin. blurred images, iter. deconvolution using nonparametric stabilizing fns. 94943
lin. depend. during iters. of restarted block Lanczos methods 67984
lin. differential-alg. eqns., waveform relax. for periodic responses determ. 101022
lin. interf. cancellation multiuser receivers, convergence 131058
lin. matrix inequality fast randomized algms. 78764
lin. second-degree stationary iter. methods, convergence regions and optimal params. *(Chinese)* 78983
lin. syst. noise effect reduction, coherence fn. in deconvolution 119009
lin.-phase FIR filters, optim. using freq. response masking approach 80103
line drawing segmentation into lines of different orient., neural net-based method 118699
line spectrum estim., data-adaptive regularization method 118886
list-mode emission tomographic image reconstruction, likelihood maximisation 132891
Lloyd lin. constrained generalized algm. for virtual codebook VQ 95170
local smoothing, adaptive Gaussian filter 129504
low-power shared division and sq.-root archit. using GST algm. 125425
low-threshold telemetry, improved carrier tracking, smoothing filter 131330
LP/convex prog., long-step cutting plane algm. 78897
lymphoma treatment, high-resoln. absol. SPECT appl. 122238
(M)MIC-struct., fast spectral domain integral eqn. techs. 91306
machine tool coolant fault diagnosis by neural net 109436
mag. suspen. device, design optim., surface current method 128726
mag. systs., design tech. of using space mapping algm. 128706
mag. thin film head, mag. transducer, Kerr imaging 127367
MAGELLAN, multiway hardware-software partitioning/scheduling for latency minimization 79661
Mann and Ishikawa iter. procs., stabil. 114095
manoeuvring target ISAR imaging, time-freq. approaches 120426
matrix-free num. continuation/bifurcation 101020
max. entropy image restoration revisited 84292
MC-CDMA hybrid uplink interf. cancellation receiver 73860
median filter based realizations of robust time-freq. distribs. 107553
median root prior images, PET/SPECT reconstruction, visual quality improvement 132875
MEG/EEG source imaging, ill-posed problem, multiresoln. approach 121960
metabolite maps reconstr. in ^{1}H-MRS imaging, time-domain tech. 87570
microstrip cct. design , expanded space mapping design framework, preassigned params. 91231
microstrip patch antenna, MoM multilevel divide and conquer method 72455
microwave act. ccts., global modelling by iter. procedure 102637
microwave combline filters, FEM anal., multiport S-param. data, cct. simulator 91214
microwave devices, iter. solvers for hierarchical vector FEA 125688
microwave imaging applied to rem. sens. using multilevel fast multipole algm. 75127
MIMO multiuser smart antenna systs., spectral efficiency optim. 83753
MIMO wireless syst., layered space-time coding/sig. proc. 119862
MIMO-FIR channels, white fourth-order colored sigs. driven, blind deconvolution algms. 107402
min. output energy detector and estimator, sq.-root array forms 130174
minimisation, line search algm. avoiding small local min. 100964
mixed A/D networks, PWL simul., waveform relax. approach 90965
mixed complementarity problems, strictly feasible eqn.-based methods 114086
mixed integer LP, multiparametric, iter. soln. algm. 78898
ML deterministic algm. for blind joint channel/data estim. with multiple antennas 130004
MM-wave radiometer calib. load, brightness temp. 86925
MMIC multi-layer integrated inductors anal. with wave concept iter. procedure 102696
mobile cellular networks, approx. anal. of handoff traffic 85788
modal intervals for generation of error-bounded envelopes 67928
model based halftoning, impact of human visual syst. models 94881
modified chaotic cryptographic method 118029
modified line-SOR algms. 79033
monotone iter. method for second-order BVP in presence of lower and upper solns. 101095
monotone method for extremal solns. to second-order periodic BVP construction 124691
monotone variational inequality problems, class of iter. methods *(Chinese)* 78982
morph. filter design using GA 118240
MOS struct., inversion layer, C-V charact. *(English)* 80953
MOS struct., surface layer DOS, charge control model *(Chinese)* 80955
motion compensated de-interlacing for both real time video/still images 94688
MOV iter. calc. method in protection syst. simul. 77514
MPEG-4 coding syst., efficient algm. for matching pursuits 95213
multi-freq. eddy current test, flaw reconstr., dyn. neural net models 101597
multi-inform. array inversion using variational Born iter. method 76845

iterative methods continued
multi-radix approach to asynchronous division, data-depend. computation ti 79777
multi-step methods, 2nd-derivative, contractivity props. *(Chinese)* 124722
multi-step unconstrained optim., metric-based parameterizations 114016
multicarrier systs., optimum equalization, unified geometric approach 13025
multichannel regularized recovery of compressed video seqs. 95152
multichannel time delay and sig. params., global estim. via GA 73624
multiexponential transient spectrosc., iter. deconvolution 84739
multigrid-preconditioned Newton-Krylov method for incompressible NS eq 101062
multilayer printed antennas and ccts., multiresolution anal. 83507
multilayer struct. NDT, US tomography, iter. reconstr. 101601
multilayered boards, via capacitances, finite difference and FEM/DBCI proc dures 125872
multimodal 3D cardiac inform. registration using iter. closest-point approa 76213
multiobjective prog., tutorial 78954
multiple AC/DC static power converters, harmonic current eval. 134154
multiple input-queued switches with parallel iter. matching scheduling algr 95846
multiple motion obj. segmentation, homogenous region merging 107297
multiplicative Schwarz algm. with time stepping along charact. for convecti diffusion eqns. 114045
multirate partitioned Runge-Kutta methods 114123
multiscale models for DP, sensitivity anal. 118364
multisection qtr.-wavelength transformer, charact. impedance 69089
multisplitting waveform relax. for lin. integral-diff.-alg. eqns. in cct. simu 67966
multistage depressed TWT collectors, 3D FE modeling 125976
multistage multichannel fractional Fourier-domain filtering, opt. image encry tion 118494
multiuser detect. with graphical modeling 84897
MUSIC lin. sampling algm., weakly scatt. targets, self-adjoint matrix 10736
myocardial gated SPECT, nonparametic nonrigid registration 122243
myocardial perfusion SPECT, camera perform. eval., channelised Hotellin observer 132921
myocardial perfusion SPECT, reconstr.-based compens., Hotelling observe 122179
myoelectric surface sigs. recorded during dyn. protocols, adaptive amplit. estim 76270
narrowband mobile radio, iter. CCI cancellation 85624
near lossless image compression by relax. labeled prediction 84461
nearest neighbor method for efficient iter. closest point algm. 84216
Neumann-Neumann methods for vector field problems 67978
neural responses, functional MRI estim. and classif. 98404
neutral diff. eqns., lin. multistep methods, num. stabil. 79097
noisy images, edge detector, fuzzy iter. 73482
non-rigid image registration, inter-subj., mixed variable optim. approach 7649
noncontinuous generalization of arith.-geometric mean 124615
nonconvex sets, successive convex relax. methods, complexity anal. 113920
nonlin. ccts. simul., waveform relax., convergence theorem 68536
nonlin. distorted sig. reconstr., regularised inverse charact. 129986
nonlin. eddy current problems, 3D transient anal., FEM/BEM coupling 83151
nonlin. eqns. involving set-valued uniformly accretive operators, iter. soln 68008
nonlin. filtering impulse noise removal from corrupted images 94805
nonlin. interface problem in unbounded domains, soln. method 124748
nonlin. model for fn.-value multistep methods 101013
nonlin. ordinary differential eigenvalue problems, iter. algms. 114115
nonlin. orthomin(k) methods 124681
nonlin. prog., inexact-restoration method, Lagrangian tangent decrease 113971
nonlin. steady-state solns., freq. domain computations 95649
nonlin. two-point BVP, develop. of Numerov's method 90127
nonlin. variational image smoothing/segmentation on multiprocessor machine globally convergent iter. schemes 73258
nonnegativity enforcing in image reconstruction algms. 73223
nonorthogonal sig. compression iter. algm. 129988
nonperiodic grating-assisted directional coupler design, iter. method 82148
nonuniform transm. lines, arbitrary loads, space-time wavelet expansion 83455
num. algms., conf., Kent, OH, USA (March 1999) 67354
num. condition of polynomials in different forms 100981
num. solns. of react.-diffusion eqns. with nonlocal boundary conditions 124692
obj. in translation inspection, limited X-ray viewpoints 100632
ODE BVP, iter. shooting method, feedback control appl. 100749
OFDM, joint time freq. sync. and channel estim. using one training sym. 106042
OFDM systs., joint carrier phase and freq. offset tracking 117911
OFDM systs., nonlin. distortion compensation 94247
on-line dielec. loss meas., higher-order sine fitting algm. *(Chinese)* 132133
one-leg and lin. multistep methods for multiply stiff sing. perturb. problems 114108
one-point alg.-geom. codes, parity-check fns. 117942
one-variable polynomial Lyapunov eqn. soln., two-variable approach 78748
OPF, complementarity condition, fuzzy second correction scheme 88414
ophthalmic digital images, registration, vector mapping 98362
opt. flow estim., image registration, local rigidity 95433
opt. flow estim. over extended image seq. 106830
optic flow variational method, spatio-temporal smoothness constraint 84270
optimal distrib. load flow using fuzzy multi-objective decisions 111819
optimal subband wavelet thresholding using noisy/non-noisy data of images 129773
Orchard-Elliott pattern synthesis algm. 105924
Orchard-Elliott pattern synthesis algm. by pseudo-inverse and LMS 117838
overloaded array proc. with spatially reduced search joint detect. 107595
parallel algms. for solving Lyapunov and Stein eqns. 124668
parallel dyn. load balancing for adaptive computing in VLSI device simul. 81175
parallel iter. closest point algm. 84218
parallel iter. solver based on Schur complement syst. 124745
parallel ODE solver adapted to oscillatory problems 90159
parallelized higher-order generalized depletion perturb. theory 99509
ParIC, family of parallel incomplete Cholesky preconditioners 101005
particle size meas., laser scatt. tech., projection iter. algm. 121206
partitioned iter. fn. syst., digital imaging tool 95136
pass. planar microstrip cct. anal., iter. tech. 125659
pattern recogn. optimum receivers, Gaussian noise with unknown stats. 95529
permitt. and loss factor eval. of material in cavity, inverse tech. 81636
perspective view registration, new method 94703
PET, 3-D reconstruction with 3D-OSEM vs. FORE+OSEM 110983
PET, COSEN, iter. algm. for fully 3-D listmode data 98577
PET, dyn. series, ML-EM reconstruction, cross-validation stopping rule 111041

ative methods continued
PET based on penalized cross-entropy minimization 76589
PET iter. reconstr. algms., random-coincidence corrections 110999
PET transm. scan time reduction, std./segmented atten. correction 122184
Petri nets, stochastic, large, perform. eval., divide-and-conquer approach 124557
phase-only pulse shaping, iter. FT algm. 118421
phase-unwrapping algm., interferograms, circle field tv. *(Chinese)* 97820
piezoelec. stack resonator, complex mater. consts., imped. reson. 104435
pinhole SPECT of mice using LumaGEM gamma camera 111037
pipes in service 2D/3D X-ray image restoration, wall thickness meas. 100643
planar cct. simul., wave concept iter. procedure 114960
plasma etch reactor, vol. av. models, sensitivity 126616
plastic landmine detect., GPR imaging, permitt. contrast, curve evol. 77099
point estim. of simultaneous methods for solving polynomial eqns. 124677
polygon fitting, iter. best point algm. 90080
polygonal contour approx. based on relax. 129937
power flow soln. by complex admittance matrix method 122940
power syst. fault sect. estim., graph partition method 111669
power syst. load flow algm. using optimal prog. *(Korean)* 77202
power syst. stabil./voltage control, decentralised excitation/STATCOM control 77275
power syst. steady state anal. lin. models 88287
power syst. transient stabil. assess., crit. methods comparison *(Chinese)* 122855
power syst. transient stabil. assess. methods comparison *(Chinese)* 122882
power transformer protection using swarm-intell. trained neural network 123565
preconditioning iter. method to computation of fluid flow 101021
predictive multi-stage VQ, asymptotic closed-loop design 95176
predictor-corrector interior point methods for LP, adaptive use of iter. methods 67932
probabilistic multihypothesis tracker using turbo coding concept 130133
proc. voltage scaling for energy minimization with QoS constraints 125399
pseudo-chaotic seqs. generated using integer-no. iters. 128919
PSK freq. recovery, high-perform. estim. algm. 117909
PWR steam-line break, two fluid hydrodyn., preconditioned Krylov soln. 88547
QAM optimum receiver based on EM algm. over fading channel 131049
QMF bank low delay design using init. filter approach 119005
QMF banks design, modified Chen-Lee algm. 102394
QMF banks with low delay, efficient design considerations 107564
QMR-based projection, non-Hermitian systs. with multiple right-hand sides 114058
quadratic invariants and symplectic struct. of general lin. methods 79102
quadratically convergent multiple roots finding method without derivatives 67972
quasicomplementarity problem, monotonic iter. algms. 79021
quasilinear parab. eqns., DC type nonlin., generalized quasilinearization 67715
quotient-selected modified signed-digit division algm., optoelectronic implement. 104844
radar target model generation from multiple SAR images 86140
Rademacher penalties, structural risk minimization 84701
radial distrib. network load flow calc. using symm. components 99338
radiating slot in broad wall of rect. waveguide, charactn. using iter. FEM 83470
radionuclide therapy, SPECT marker-based image registration 111001
radiotherapy, inverse planning, importance factors, computer-assisted selection 98691
radiotherapy verification, few-view tomographic reconstruction, MV photon beams 110935
range image, progressive registration based on surface triangulation 106489
range image registration, software platform and empirical eval. 84223
Rayleigh correl. multipath fading channels, iter. multi-user detect. *(English)* 74781
RBF equalizer using fast clustering algm. 107699
receiver algm. for space-time encoded sigs. 106134
rect. tight crack reconstr., eddy current impedance change 101613
reduced complexity in-phase/quadrature-phase turbo equalisation using iter. channel estim. 130276
reduced param. nonlin. adaptive filter for chaotic time series prediction *(Chinese)* 125201
regularizing L-curve Lanczos method for underdetermined lin. systs. 73274
restoration methods, point spread fn. vars., robustness anal. 94948
RF/microwave neural models, iter. multi-stage algm. for robust training 69106
Riemann-Hilbert problems on multiply connected circ. regions 67946
rigid obj. 3-D shape/motion estim. from 2D video 118369
ring laser generation, quasi-stationary regime 105386
RNS Montgomery modular multiplication, improvements 90809
robot navig., mapping, spatial representation acquisition 106708
robust error concealment algm. using iter. weighted boundary matching criterion 95304
robust ICP registration algm. extension using M-estim. *(Japanese)* 129877
robust image registration using log-polar transform 94514
ROCKET, reduced order correl. kernel estim. tech. 107389
RS codes, decoding method, weakly-dual-basis *(Chinese)* 94290
saddle-point problems, iter. method with variable relax. params. 114063
SAR image speckle reduction using iterated struct. filters *(Chinese)* 131650
SAR image super-resoln. using Bayesian/convex set-theoretic approaches 75139
SAW coupled resonator filters, design automation, rapid design develop. 92715
SC/MMSE ISI iter. equalizers, matched filter approx. 95810
scatt. from obj. above half space, four-path model 105705
search direction for LP problems 124573
second-order blind source separation by recursive splitting of sig. subspaces 118815
semicond. laser, relative intens. noise reduction, modulation response using fiber grating 128388
sens. modelling, neural-network based, nonlin., monitor appl. 86773
seq. missing sample reconstr., spatiotemporal VQ 118834
shape preserving spline approx., lin. approach 124634
shape sensitivity calcs. for exterior acoustics problems 79121
shift for accurate sing. values in differential qd algm. 124662
short-term thermal generation scheduling using ant colony search algms. 111946
sigs. multidimensional multiresolution Fourier estim. 95633
sing. perturbed Nash games, Riccati eqns., LQ control 78804
sing. symmetric pos. semidefinite matrix splitting props. 78753
single-server queue with homog. jobs, near-optimal service policy 113849
single/multichannel fiber links, split-step solitons 127615
SISO equalization, prior inform. evol. 130260
skin effect, open-boundary problem, FEM/DBCI hybrid method 128686
slowest descent method and appl. to seq. estim. 119183
small animal PET, iter. image reconstruction fast algm. 87779
small animal SPECT, coded aperture imaging investig. 132979
small animal SPECT, coded aperture imaging investig. 111035

iterative methods continued
small salient pole generator finite element/time stepping modelling approach 99697
smart antenna, tracking capability, RLS algm., 3G mobile commun. 94194
smoothing of Crank-Nicolson scheme for nonhomogeneous parab. problems 124727
SMPS mag., core/winding losses calc. 112674
soccer image segmentation, unsupervised color texture feature extraction/selection 94708
soft interf. cancellation for multiple antenna systs. 83408
solenoid actuator, coupled syst., interlaced nonlin. iter. 128719
source coding with min. and rate-independent search and memory complexity 106190
sparse deconvolution by means of GA 73603
sparse matrix bipartite weighted matching algm. 90092
sparse vector subset selection, backward seq. elimination 118895
special struct. LQ programs, parallel interior-point method 101002
SPECT, AB-EMML algm., low-stats. reconstruction 132882
SPECT, fan-beam collimators, geom. response modelling 132926
SPECT, interior point iter. max.-likelihood reconstruction algm. 76564
SPECT, list mode iter. reconstruction algm., LMIRA 122274
SPECT, list-mode iter. reconstruction algm. 132931
SPECT, projector/backprojector pair for iter. reconstruction 132864
SPECT, resoln. recovery for list-mode reconstruction 111042
SPECT absol. activity quantitation from projections, anal. approach 111028
SPECT cardiac images, truncated projection data, body contour, atten. compensated images 76574
SPECT nonuniform photon atten. correction, Natterer's method var. 122182
SPECT reconstructions enhancement by coregistered MR data 132869
speech coding, low bit-rate, joint segmentation-quantization, codebook design 118097
speech enhancement, constrained iter. sinusoidal model 118074
speech LPC coeffs. based on predictive neuron model, new soln. method *(Chinese)* 84014
speech recogn. by fractals/iterated fn. systs. 118112
speech separation, difference phase-correl.-based criterion fn. *(Chinese)* 106334
speech spectrum modeling applied to spectrum coding and prediction 106375
spigot algm. and root computing 67930
stat. image reconstruction and projections no. modif. 94664
stationary/nonstationary/hybrid iter. MoM soln. schemes 128651
stents in angiographic images, deformable boundary detect. 110950
step criteria of num. methods for delay diff. eqns. *(Chinese)* 79057
stereo imaging, wavelet-based reconstruction of irregularly-sampled images 94650
stiff problems in eddy-current theory and regularization of Maxwell's eqns. 128690
stochastic microwave imaging in NDT, GA-based iter. procedure 101577
Stokes solvers in harmonic Velte subspace 114030
strong coupled multi-harmonic FEM EM device simul. package 83150
struct. total least sq., GA based 67941
sub-Riemannian geom., sub-analyticity of dist./spheres 67876
suboptimal fractal coding using iter. transform. 73334
subspace tracking, fast normalized Oja algms. 84662
substation busbar end contact heating computation 89004
substructuring method for div-stable finite element approxs. of Oseen problem 124747
substructuring method for Maxwell's eqns. in two dimens. 83249
supercond. bulk magnet, 3-D mag. field anal. 71031
surface reconstruction from planar sectional contours 84539
surface-mounted PM sync. motors, iron losses modelling 133987
sync. CDMA, multiuser detect. using probabilistic data assoc. 119210
systolic array, parallel algm., low-power design 102210
systs. of lin. eqns., iter. approach 101040
tapped-winding capacitor motor, extended cross-field theory, iron loss 134036
target and noise decorrelation, num. waveform design approach 96964
target-directed dyn. syst. model with switching states, param. estim. 73697
TCM with receiver diversity, turbo space-time equalization, sym.-by-sym. detect. 107693
TD-CDMA uplink, space-time sig. proc. using multistep joint detect. 96604
TDMA burst transms., support vector classifier based equalizer 107722
TDMA cellular syst., channel ident. and interf. cancellation 131138
TDMA cellular uplink, iter. multiuser detect./macrodiversity combining/decoding 108857
teletraffic, Erlang fixed-point iter. scheme 73762
textured image segmentation based on fractal/filtering 107218
thoracic SPECT, Ga-67 tumour detect., block-iter. accel. effect 122273
three-grid Fourier anal. for multigrid 101066
three-layer earth model, Wenner four-probe test data 133779
Tikhonov generalized regularized lin. inverse problems, regularization param. selection 84293
time-base for waveform param. estim. 121063
time-variant permutation generator, probabilistic cryptanalytic method 129272
TPP superheater syst. temp. control, bilinear syst. controller design 133861
transient eddy current problems, FDTD scheme 128679
transient eddy current problems, motional induction effects, FI²TD algms. 83148
transient EM scatt., MoM soln., spatio-temporal multiresoln. anal. 105710
tri-level alternating optim., local convergence 114051
triplet halfband filter banks, kernels, least sq. design 91056
trust-region methods for real-time tracking 106658
TSP, motorized, cooperative, mixed-integer optimal control 78917
tumour SPECT, collimator-detector response compensation eval. 122237
twin arith., limitation for underestimation 67927
two-phase flow capacitance tomography, sq. sens., image reconstr. *(Chinese)* 86479
two-phase mutually-coupled reluctance machines, dyn. simul. model 133965
two-phase turbulent flow, PIV treatment, direct num. simul. 121288
two-stage methods for Hermitian pos. definite matrices 101026
underwater robot, concurrent mapping and localisation 109305
US imaging, spatial deform., dual transducer approach 98274
UTR-10 2D freq. dep. detector adjoint funct., nodal method 77701
variational-like inequalities, mixed, iter. soln. 67858
video, face detect./tracking using dyn. prog. 84615
video, reduced-complexity iter. post-filtering 129693
video compression, robust region-based motion estim. 95081
video surveillance environ., illum. vars. compensation 118174
Viterbi 4-state soft decision decoding, bit error probab., exact anal. 129118
VLSI CAD, timing-driven macro-cell placement algm. 127012
VLSI global routing, efficient rectilinear Steiner tree algm. 126944
VLSI large-scale power grid anal. based on preconditioned Krylov-subspace iter. methods 126960

iterative methods continued
VLSI power/perform. optim., fuzzy simulated evol. 104009
VLSI std. cell placement, iter. heuristics 104057
VLSI systolic cct., GF(2^m) iter. division algm. 102019
VLSI true worst case cct. timing perform., interconnect param. vars. 81468
voice/data integrated mobile wireless networks, dual-threshold reservation, perform. anal. 85734
VQ image proc. based on projection onto hypercubes 95040
VQ/RCPC channel codes for Rayleigh fading channels, joint design 72935
W-CDMA mobile radio, parallel-type coherent multi-stage interf. canceller with iter. channel estim. 72355
waveguide problems, iter. domain decomp. method 117739
wavelength assignment heuristic to minimize SONET ADMs in WDM rings 131478
wavelength-routed networks, multicast nodes allocation 131502
wavelet-based image denoising tech. using spatial priors 94808
wavelet-compressed image restoration using adaptively masking smoothness constraints 106862
WB-CDMA terminal, low-complexity channel estim. scheme 85814
weighted max-norm estim. of additive Schwarz iter. scheme for lin. complementarity problems 79006
wireless commun. receiver, pipelined multiuser detector 108566
wireless image transm., product coding/decoding 96381
X-ray CT, fast ordered subset reconstruction 132791
X-ray CT, ordered subset reconstruction 98503
X-ray image slices, vol. reconstr., multiplex inclusions *(Japanese)* 110430
Er-doped broadband fibre amp., gain flattening filters, transm. fn. design *(Chinese)* 71658
Er-doped fiber ring laser, broad-band tunability 71672
GeSi alloys growth, comp. tracking, seq. Bayesian estim. 68135
NH_3 superradiant far-IR laser, opt. pumping 82458
Si MOSFET, short channel, local iter. Monte Carlo anal. 115926
Si, doped, nonlin. Boltzmann eqn. reduction 80670
Si, doping profile, opt. meas. 91947
SiGe HBTs, profile design considerations for base transit time minimiz. 103769
Ti:sapphire lasers, Kerr lens mode-locked, bistability study 82579
Ti:sapphire self-mode-locked laser, femtosecond opt. pulses, time-resolved opt. gating 105459
ZrO_2-Y_2O_3/Al_2O_3 composites, SOFC, modelling study 123796
breast cancer assess., constrained modulus reconstruction tech. 132653

iterative software design *see software prototyping*

iterative switching networks *see iterated switching networks*

itinerant model of magnetism *see band model of magnetism*

ITS *see intelligent tutoring systems*

IV-VI semiconductors
chalcogenides crysts., low dimens., synthesis *(Chinese)* 90208
mag./nonmagnetic superlattices, interlayer exchange coupling 91821
CO_2 dilated block copolymer templates, nanostructured materials, organometallic cpds. 90581
$Ge_{1-x}Mn_xTe$ films, ICB deposition, characts. 79397
GeSnTe, cleaved surfaces, oxid., XPS anal. 81097
GeTe, cleaved surfaces, oxid., XPS anal. 81097
ITO/PbS nanoparticle self-assembled heterojunction, elec. props. 126123
$Pb_{1-x}Ge_xTe$:Ga, impurity-induced photocond. 93319
PbS QD embedded glass for mid-IR laser Q-switching 71916
PbS semicond. nanoparticles, third NLO props. *(Chinese)* 105484
PbS, single nanocrystal on 11-mercaptoundecanoic acid monolayer, single-electron tunneling 91725
PbS uniform cubic-shaped nanocrystals, hydrothermal prep. and charactn. 101152
PbS-polymer nanocomposite, third-order opt. nonlin., femtosecond Z-scan investig. 71928
PbSe QD embedded glass for mid-IR laser Q-switching 71916
PbSe nanoparticles, photochem. synthesis, sizes 81159
PbSe:Bi, doping, self-compensation 91965
PbSe/PbEuTe midinfrared surface-emitting QD lasers 105284
PbSe/PbSrSe MBE MQW, band struct. and opt. props., mid-IR laser appls. 126139
PbSe/PbSrSe low-threshold opt. pumped VCSEL with QW act. region 71850
(PbSnGe)Te based IV-VI cpd. solid solns., thin film growth method 101458
PbSnTe:In epilayers, low-temp. diffusion annealing 91939
$Pb_{1-x}Sn_xTe_{1-y}Se_y$ lattice-matched layers, LPE growth and props. 90479
PbTe IR FPAs for low-cost thermal imaging, monolithic integrat. with Si 131968
PbTe QD, Volmer-Weber mode MBE growth, AFM obs. 101296
PbTe thin films, thermoelec. props., percolation transit. 69563
PbTe/BaF_2(111) epilayers, hot wall epitaxy growth, opt. props. *(Korean)* 69574
PbTe/HgTe self-aligned nano-cryst. syst., controlled precip. prep. 115380
PbTe/$Pb_{1-x}Eu_xTe$ QW VCSEL, growth & charactn., MBE 105298
Pt/W/Cr/SiC Schottky-barrier diodes, thermal stabil., radiation hardness 92275
3C-SiC films, oxid. depend. on defect dens. 103327
SnO_2 nanopowders, surface reactivity, gas sens. props., particle size influence 120959
SnS films for PEC, cathodic electrodeposition 101398
p-SnS-based PV cells, chem. deposition, characts. 89278
n-$SnS_{1.9}Se_{0.1}$/p-GaSe:Cd heterojunctions, photoelec. props., energy bands 91762
SnTe/BaF_2(111) epilayers, hot-wall epitaxy growth, opt. props. *(Korean)* 114309

IVHS *see automated highways*

izod testing *see dynamic testing*

Jacobian matrices
adaptive smoothing, computable Jacobians/Newton method 73672
arc furnace harmonics/interharmonics/unbalance, freq. domain anal. 134649
autonomous and non-autonomous ccts., harmonic bal. anal. 101705
B-differential for vector-valued max. fn. 114076
bal. distrib. network general-purpose load flow tech. 122974
biquadratic residues, extension of Jacobi sym. due to Gauss 79026
Birch and Swinnerton-Dyer conjectures for modular Jacobians of genus 2 curves 114082
blind sig. separation of convolutive mixtures, Jacobi-like algm. 106399
brain dyn. imaging using ICA, blind source separation, review 110617
classical q-orthogonal polynomials, struct. formula 124652
curves of genus 2 with (N, N) decomposable Jacobians 67996
DC nonlin. ccts. soln., ellipsoid-based approach 79523
depth estim., robot visual control syst., perform. criterion 97387
distrib. power flow anal., voltage control devices models 133665
double sq. root, Jacobi polynomials and Ramanujan's Master theorem 67949
dual-arm robot image-based visual feedback control 129451
electromagnet, shell elements for computation of mag. forces 128718

Jacobian matrices continued
FACTS UPFC scheme, power flow computation *(Chinese)* 99254
feature-based visual servoing, stable region enlargement 86618
genus one curves Jacobians 124673
hyperchaotic cct. with damped harmonic oscillators, ANP3/PSpice simul. 9069
ICA/simultaneous third-order tensor diagonalization 118846
ill-conditioned power-flow problems anal., voltage stabil. methodology 13357
indust. distrib. systs., fast harmonic load flow method 77314
Jacobi sums and families of irreducible polynomials of Gaussian periods 11404
Lagrangian systs. of conservation laws 114085
lin. alg. eqns., convergence accel. 67962
load flow anal., node ordering method, parallel computing 133580
local inverse for nonlin. mappings 67985
mag.-saturated electromech. devices, steady-state FEM anal. 123292
manipulator, kinematic uncertainty, setpoint control, approx. Jacobian feedback controller 97390
multi-DOF meas. syst. for milli-struct., diffr. grating, kinematic anal. 121222
multiple type-one equilib. points on stabil. boundary, generalized fixed-poin homotopy method 90663
nonlin. EM field comput., hybrid tech., triangle search method 83143
nonlin. microwave device modeling procedure for piecewise harmonic-bal. anal 80234
obj. tracking, gazing based on image moments *(Chinese)* 73297
optimal systs. of nodes for Lagrange interpolation on bounded intervals 114009
partitioning ODE systs. with, appl. to air pollution models 101069
piezoceramic material tensors ident. from elec. imped., iter. reconstr. 104328
power electronic device switching, steady-state algm., PWiseSS program 70060
power flow calc. using OOP *(Korean)* 122942
power flow soln. space boundary, predictor-corrector tech. 88416
power syst. differential-alg. eqns., sensitivity anal., GMRES method 99285
power syst. electromech. transients simul. using parallel proceesing approach 88288
power syst. load flow algm. using optimal prog. *(Korean)* 77202
power syst. steady state anal. lin. models 88287
preconditioning strategies for fully implicit radiation diffusion with material-energy transfer 101029
quasi-Newton power flow using partial Jacobian updates 88413
rigid body visual servoing, navig. fns. 86617
robot manipulators, motion control, visual servoing, path interpolation by homography decomp. 94732
spectral calcs. in MHD using Jacobi-Davidson method 79027
stereo visual servoing, proper stacking of Jacobians 94731
stochastic minelike obj. detect., nonlin. model, delay diff. eqns. 73194
TCSC devices location determ. using fuzzy decision making 134328
telerobotic systs., virtual environ., sens. feedback assimilation 109704
teletraffic, Erlang fixed-point iter. scheme 73762
transm. pricing using improved sensitivity indices 111785
twin-frame mobile robot, 6 DOF mechanism design and control 97199
two-wire thermocouples, temp. reconstr., nonlin. state estim. approach 97874
vehicle-mounted mine/UXO detect., DGPS error, EKF, fixed interval smoothing 77066

jamming
see also clutter
adaptive digital beamforming for angle estim. in jamming 96920
adaptive nulling antenna, fast follower jammer suppression *(Chinese)* 85932
advanced fighter radar electronic protection measures 99123
array antenna meas. with rough surface reflector, anal. 105967
bistatic radar denial/embedded commun. via waveform diversity 99155
cable TV theft, interdiction as means of prevention 120561
cascaded adaptive canceller using loaded SMI 94064
CDMA robust commun. systs. using quasi-Walsh PN seqs. 84885
chaos education in microwaves, microwave circuitry and appls. 67452
complex location syst., act. jamming compensation 83442
differential space-code modulation for interf. suppression 94244
differentially coherent code acquisition in wideband jamming 108582
DOCSIS protocols for mil. point-to-multipoint wireless links 107837
DS-SS commun., AM-FM jammers excision, instantaneous bandwidth use 96390
FFH syst. diversity combining, worst-case partial-band noise jamming 96396
FFH/BFSK with product combining, partial-band jammed Rayleigh fading channels, BER eval. 108530
FFH/BFSK with product combining over partial-band jammed Rayleigh-fading channels, BER perform. 119873
foil cloud, EM bistatic scatt., Monte Carlo simul. 75171
freq.-hopping interfered channel, adaptive pass. predetect. algm. *(Chinese)* 119209
GPS receivers, FM jamming suppression, subspace array proc. 109327
GSM terminals real-time detector 85713
HBSC, heliborne battlefield surveillance radar DP 77082
high-rate differential space-code modulation for interf. suppression 83816
IEEE 802.11 mobile ad hoc networks, hidden terminal jamming problems 131229
inform. conflict conditions, strategy selection by opposing sides 85503
Lincoln Laboratory's develop. of radar sig. proc. 99143
LMS shadowed Rician fading channels, multitone jamming effect 131127
long-range UHF radars for ground control of airborne interceptors 99138
multichannel adaptive energy detector and jamming 85501
multiple jammer suppression using adaptive lin. constrained inverse QRD-RLS beamformer 84755
noncorrelated radar obj. portraits proc. under different jamming conditions 75168
radar MTI in noise FM jamming environ., perform. anal. 75102
radar sigs. STAP, orthogonal wavelet decomp. 109263
radioinertial navig. equipt. with adaptive antenna array, jamming resist. 120485
RS coded FFH/BFSK lin.-combining receiver, multitone jamming/AWGN channels, perform. anal. 108542
satellite loading tools using spreadsheets 109022
SS commun., broadband interf. suppression, TF mask 108537
SS commun., software radio technol. 99122
SS multicarrier transm. chain for robust/discrete tactical commun. 111597
tactical battlefield networks, adaptive config. mgt. archit. design 111572

JANET *see information networks*

Java
3D rem. brain mapping invocation, distributed appl., Java & VRML 88016
act. proc. interact. with, environ. 74122
act. service mgt., novel archit. 130572
adaptive distributed network monitoring/control, syst. designs 130663
adaptive DSP education, Java applet 78526
advanced collaboration services 108058

a continued
advanced IN, components of mgt. logic programs *(Japanese)* 74426
airport mgt. database in simul. environ. 111367
Apache, Jigsaw and Tomcat, open-source Web servers on Linux cluster platform. 130814
appl. server design for user service maint. in Web based environ. *(Polish)* 130645
applet program MOS memory simul. for act. learning environ. on WWW 125483
archit.-independent run-time reconfigurable appls. framework 90843
asynchronous dist. learning, presentation semantic model 130948
ATM cell-relay networks, distributed simulator using Java 95773
centralised access over TCP/IP based on real-time Java VM 130868
Classification Canvas, biomedical data anal. 132510
client server syst. advanced faults mgt., Java API 130684
clinical PACS, research and teaching access 89608
commodity software for audio/visual home appliances 120539
commun. network simul., JVM distributed proc. *(Chinese)* 107954
commun. protocols, formal descriptions, Java 84954
config. method of multiple clusters for computational grid 108117
CYBERCYCLER simulator for simulating biological reacts., modular approach 69352
digital signature technol., realization in Java *(Chinese)* 83962
digital TV navigator 131721
digital whiteboard, security, JAVA cards 85355
distributed computations by act. network calls 74000
distributed image proc., Web enabled client-server model for develop. environ. 106443
distributed meas. syst. design, Java-based software environ. 109431
ECA + SQL, practical event correl. approach 96152
education, Electronic Chalk, Java-multimedia-table for classroom and teleteaching *(German)* 130939
elec. cct. design and anal., Java simul. 125163
embedded µP core with support for executing byte compiled Java code 125537
engng. drawings, vectorisation algm., Object Boundary Encoding 118677
gateway technols. for home network and their implement. 74231
German open elec. market, Java-based WWW-transm. schedule syst. 122836
group commun., commercial Java implement. using reliable multicast 130752
heterog. network devices provisioning, meta-data-driven approach 130674
high dens. packaging systs., virtual prototyping, JavaCAD tool 89882
HJA, Java prog. for CE devices 120538
home telecomm. equipt., middleware emergence 75311
home-area networks, adaptive resource mgt. syst. 74233
image proc. teaching, Java vision toolkit 118450
IN/IP integrat. archit., service-independent MGF framework 130921
interactive digital TV Java environ. 86302
interactive rem. instruction syst. for heterog. network environ., software archit. 124272
interactive vision syst. written in Java 106779
interactive visual protocol simulator 119264
InterDAQ data logging Internet appliance, power meas. tech. 112198
Internet, mobile location-based appls. 130832
internet based surface texture IS 121199
Internet mgt. by delegation, open source components 130670
Internet multimedia services, OO appl. develop. platforms 108363
Internet-based dist. learning using learning by doing paradigm 78525
IP networks, Web-based distributed topol. discovery 108161
IP VPN, config. errors diagnosis 130588
Jpure, purified Java execution environ. for controller networks 102198
JQOS, QoS-based Internet videoconferencing syst. using Java media framework 119753
LEAP, FIPA-compliant systs. on handheld devices 108687
live network clouds, automated unit testing 130563
M&M framework, mobile agents integrat. into off-the-shelf Web servers 130890
MAJC 5200 multimedia proc. µP 90950
med. image anal. and modelling, CORBA-based telemedicine syst. 111298
MEMS proc. design simulators based on VRML and Java 127105
microcontroller appls., Java 114798
microelectronics education online courseware library using Java applets 78515
mobile agent prog. 74316
mobile asset location 85261
mobile environ. archit., intell. genetic search and proxy caching 119713
mobile wireless environ., act. network services 74618
modelling with queues, empirical study 119258
MPEG-4 FBA decoder for Web appls. using Java applet 107001
MRI, contrast agent research develop., conf., Attard, Malta (May 2000) 89509
MRUI quantitation package, Java-based GUI 98398
myocardium, laser-tissue interact., 3D interactive visualization, Java 98666
Neko environ. for simulating/prototyping distributed algms. 107804
network mgt., software dyn. evol., hot-swapping 130662
noisy image edge detect., Java algm. *(Chinese)* 129809
NwsAlarm tool for resource perform. degrad. detect. 74411
OO imaging, interface implemented in Java 132884
optimal wholesale cross-border elec. trade planning, multi-agent technol. 133507
perform. eval. and optim. of Java 2 distributed obj. middleware 84987
PLAN, packet lang. for act. networks 74385
power exchange scheduling, tie-line costs allocation, multi-agent approach 111781
radiological image and report distrib. syst., Java-based, implement. in non-PACS environ. 98851
residential gateway as service platform 119761
resource selection mechanism for complex network services 119701
road EV, advanced diagnostic syst. 89392
scalable/adaptive agent-based mgt. framework implement. 74125
secure Java appls. using smart cards 118014
secure subscription mgt. on agent based platforms 96017
server objs. on rem. hosts, mobile rem. method invocation 130894
service authoring for third-party prog., service-mediation-enabled feature servers 108057
SimulNet dist. teaching syst., Java based 78519
SIP-based VoIP service prototyping in Java 96237
smartcard, data storage extension 125496
SPECT data iter. reconstruction using JavaSpaces 132883
speech sig. data banks, interrogation/maint. tools *(German)* 73089
SPIDER, design and provisioning tool for protected lightpaths in opt. networks 109119
storytelling, digital video, interact. approach 97094
TCP-socket, C and Java, perform. comparison, JavaNws appl. 96124
teleradiology, heterog. network, Java syst. 122461
TransWeb, framework for transparent Web-server load balancing 130896

Java continued
universal lossless data compression algms., greedy context-depend. seq. grammar transform based 129999
VLSI CAD algms., teaching, web-based visualization tools, Java applets 125301
VRML animation of inspection syst. 120639
Web based e-educational environ. using Java technol. 100469
Web-appl. develop. using model/view/controller design pattern 130880
Web-based metacomputing problem-solving environ. for complex appls. 108116
Web-PICASSO, Internet implement. of facial caricature syst. PICASSO 73545
wireless batt. powered device, very high bandwidth, SOC solns., compiler techs. 96478

Jaynes-Cummings model *see quantum optics*

jellies *see gels*

jet stream *see atmospheric movements*

jets
see also plasma jets; sprays
abrasive jet machining device, precision etching 116109
AirJet paper mover, mesoscale MEMS device 81619
annular jet, flow anal., particle image velocimetry 121290
coaxial liq. O_2/inert gas jets, liq. core charactn. 88077
dense nonstationary hydrogen flows, ionization gauge operation 87036
diesel oil injectors, jet charging, internal electrification 83125
dual-plane stereoscopic particle image velocimetry for lobed jet mixing flow meas. 132219
electroconjugate fluids based micro motor 134104
electrostatic sprayer, aerosol space charge generation, drops, EHD instabil. 83168
gas flow vel. meas. using laser-induced electrostrictive grating 121265
gas-dyn. window, stationary electron beam output 69421
high-heat-flux thermal mgt. schemes, assess. 78619
highly-conductive viscous liq. electrohydrodynamic spraying 83088
impulsively started jet, vortex ring evol., DPIV 121291
intermittent fuel spray flows, PDA, time dividing anal. 87027
landmine detect. using high-press. water jets, vibr. anal. 77014
landmine detect./discrim., single-waterjet-induced thermal profile 77015
laser cutting, auxiliary gas outflow dyn. 83045
laser fusion cutting proc., cut kerf, supersonic gas flow modelling 93932
laser-microjet wafer dicing, water jet cooled 103946
metal proc. using US cavitation jet, small burrs removal 99099
micro-dispensing/ink jetting direct write technols., material systs. 100564
mitral regurgitation, 3D color Doppler reconstruction 76345
non-clogging microreactor for chem. proc. and nano materials 116077
rigid simulated collapsed tube, steady turbulent flow meas. 110830
spherical/nonspherical particles, co-axial jet and swirling flow, laser-based particle meas. 97878
sq. pipe-array jet-type O_2 generator for chem. O_2-I laser *(Chinese)* 82477
supersonic rect. jet, nozzle trailing edges effect on acoustic field 97869
transient sprays, time-resolved diffr. granulometer 87026
turbulent jet aircraft perturbed laser beam CCD image sens. 86627
turbulent round jet, heated, temp. dissipation meas., cold-wire anemometry 132222
water jet supported laser cutting, high momentum transfer nozzle concept 72130
Cu interconnects, sub-0.10 µm, jet electrochem. deposition plating/seed layers 81118
HF CW chem. laser with three-jet nozzle array, secondary-fuel supply effect on charact. 128114
HF CW chem. laser with three-jet nozzle array, spatial-energy and spectral charact. 128113
O_2-I chem. laser, act. medium high total press. 82475
O_2-I chem. laser, basic hydrogen peroxide jet stabilization 105076
O_2-I chem. laser, multi-guideplate singlet oxygen generator 105071
O_2-I chem. laser research in Dalian, multi-kilowatt output 105058
O_2-I chem. laser with pipe-array jet-type singlet O_2 generator 105080
SF_6 blast cct. breakers, jet flow conditions *(German)* 134284
SiC suspens., ultra fine spray, thin film preparation, electrostatics 79410
Si_3N_4 ultra-thin gate dielec. p-MOSFET, hot-carrier reliab. 81357
ZrO_2 suspens., ultra fine spray, thin film preparation, electrostatics 79410
$ZrO_2/ZrSi_xO_y$ ultra-thin films for CMOS gate appls., high thermal stabil. 127049

JFET *see junction gate field effect transistors*

JFET circuits
see also JFET integrated circuits
IR detectors, radiation hardness, JFET sig. extraction cct. *(Russian)* 86529
photodiode, readout cct., dielec. polariz. noise 104945
GaAs power HFET, high efficiency, W-CDMA base station appl. 91243

JFET integrated circuits
DOM AMPL-8.3 amp. for gaseous wire detectors 87256
microwave background radiat. anisotropy, low noise cryogenic preamp. 75262
CsI(Tl) scintill. with Si drift detector array, high resol. γ-imaging 121780
InP HJFET, superlattice-inserted, V-band MMIC LNA 115008

JFET switches *see field effect transistor switches*

JIT *see production control; stock control*

jitter
see also timing jitter
2D video sig. spectrum in FMCW homodyne radar, phase noise 86151
absol. frame displacement based image seq. stabilisation, Kalman filtering 129423
ASE noise-induced soliton phase jitter, PSK feasibility 96653
ASIC devices for distributed packet switches with QoS support for IP and ATM 131020
ATM for broadcasting appls., experience of Institut fur Rundfunktechnik *(German)* 119143
ATM networks, time-crit. multimedia components and cell delay jitter 95798
audio dyn. buffer, control and algm. 108378
augmented reliable multicast CORBA Event Service 85211
BiCMOS digitally controlled oscillator for clock recovery and freq. synthesis PLLs, 600 MHz 68630
CBR ATM MUX, jitter anal. and simul. 84827
CCD images, line jitter nonuniformity, expt. study 129415
charge pump PLL with reduced jitter 90801
CMOS charge-pump PLL, sample-reset loop filter 101861
CMOS fast-locking low-jitter PLL, F/V converters 79629
CMOS low-jitter PLL with pseudo-differential delay elements based VCO 68657
CMOS PLL, 2 GHz, gain compensation VCO, peak-to-peak jitter 102734
CMOS PLL, voltage regulator, DC-DC capacitive converter 114668
configurable/extensible transport protocol 119343
credit-based fair queueing, service-scheduling algm. for packet-switched networks 130323

jitter continued
differentiated services archits., packet loss guarantees provision 119755
differentiated services network, deterministic allocation, worst-case anal. 73970
DiffServ framework, multiple QoS guarantees with scalable support 130853
Diffserv networks, upper bound to loss probab. in MUX of jittered flows 108259
digital MUX syst., clock sync. coding/decoding 95801
dispersion-managed lines, interchannel interact. collision induced power jitter 131576
dispersion-managed opt. soliton transm. systs., interchannel interact., power jitter 109200
dispersion-managed solitons for 160-Gb/s data transm. 82952
domain wall displacement detect., wall simul., MO recording *(English)* 70537
double-layer perp. media, media noise, writing field depend. *(Japanese)* 92820
DPLL, phase jitter, low-denominator rational reson. 101854
DPSK soliton transm. syst., perform. assess. 75027
DS-CDMA syst. with imperfect power control, PN code tracking loop 74833
DS/SS sigs., noncoherent anti-interf. receivers 85517
DSO coherent sampling syst. with triggered time interpolation 75775
DV transm. systs. using ATM networks, delay/quality anal. 107964
DVD-ROM readout RF sig. equalization, ANFIS-based PRML syst. 116595
dyn. bandwidth allocation for low delay low jitter real-time commun. 95845
dyn. CBT and ChIPS, router support for improved multimedia perform. on Internet 130953
ECG-gated dyn. 3D echocardiography, temporal jitter artifacts 76343
embedded PLLs, lock/jitter/stabil. verification/characterisation 114664
embedded PLLs, verification tests 79626
Engineering Test Satellite VI, laser commun. equipt., in-orbit meas. 75062
error control/media sync. effect on appl.-level perform. 74433
Ethernet, real-time traffic, distributed backoff algm. 96128
Fabry-Perot filter based all-opt. clock extraction cct. perform. anal. 75035
fibre-channel design, jitter, digital repeaters and retimer ICs 86032
fieldbuses, real-time MAC protocols, characts. anal. 119659
forwarding/expedited forwarding services interact. 108147
gas detectors, high flux operation in hostile environ., review 76130
high order giga-bit rate PLL, discrete z-domain anal. 79628
high-resoln. high-speed A/D converters, sub-ps aperture uncertainty meas. 114830
high-speed transceiver ccts. for opt. commun. systs. 109090
highly dispersed pulse symmetric fibre links, timin/amplit. jitter cancellation 74911
IEEE 1394b receiver chip testing, jitter meas. 131826
IEEE 802.11a WLAN, MAC scheme for prioritized services 130379
image seq. stabilisation, motion vector integrat. vs. frame posn. smoothing 129579
interactive VoD over high speed networks 109381
Internet router, jitter regulation with delay consideration 74203
Internet voice traffic, delay/jitter anal. 119677
IP DiffServ archit., premium service provisioning 130763
IP satellite environ., QoS guarantee, CNIT-ASI project expt. experience 74881
IP telephony, recursive algm. for trend MLE in exponential noise 119506
IP voice conferencing over EuroSkyWay satellite syst., anal. 119584
IP/ATM router, traffic-based scheduling mechanism and perform. anal. 95979
jittery deflection freq. laser gyro, rate-valve value charact. *(Chinese)* 128633
LC based on-chip VCO, power supply induced jitter modelling 68635
long. mag. recording medium, transit. posn. jitter 116457
mag. disk, high-dens. recording, skew angle effects 116323
mag. recording, decision feedback and partial response detectors, timing sensitivity 70523
meas. precision, opt. disc storage 92985
mgt. algms., perform. eval. 130200
mobile network, multicast protocol for multimedia streaming 130380
multi-channel split-step syst., solitary pulse collisions, crosstalk suppression 127711
multicast sync. protocol for multiple distributed multimedia streams 85048
multiple service class networks, cumulative switch delay effect 85430
MXLO21E1-3 SDH syst. chip, integrated design and appls. 96331
natural-sounding vowel synthesis using nonlin. dyn. model 106414
near-line inspection of CD/DVD opt. discs, automatic test method 93004
network model, QoS routing mechanism 119416
next generation wireless networks, heterog. traffic scheduling 74532
Nyquist/near-Nyquist pulse shaping with spectral constraints 84728
OC-192 CMOS transceivers 96692
on-chip sub-ns sig. capture and charactn. ccts. 104076
opt. packet switching networks, interfacing & sync. issues 120331
oscillator time- and freq.-domain measures, cct.-level params. 68633
oscillators, behavioural simul. of phase noise and jitter 101847
OTDM and WDM systs., functionalities and expts. at COM Research Center *(English)* 109198
perp. double-layered media noise, head field gradient effect on transit. jitter 116469
perp. granular recording media, ion beam patterning effects on write-read perform. 116410
phase change opt. recording at high vel., overwrite jitter 82060
phthalocyanine dye layer, CD-R disc proc. window 93001
PLL, jitter and phase noise, parallel anal. treatment 68651
PLL jitter, input sig. shape effects 68659
PLL jitter, nonwhite spectrum effects on sampled sig. SNR 68857
PLL jitter caused by digital switching noise in mixed-mode cct., anal. 91117
PLLs, phase noise, SSCR vs. cycle-to-cycle jitter rels. 68652
polariz.-maintaining dispersion-flattened dispersion-decreasing fiber pulse compressor 82950
QAM systs., suppressed carrier synchronizer with phase jitter 120031
QoS for multimedia over IP, integrated solns. 108186
QoS-supporting networks, end systs. traffic shaping 130773
RZ opt. receiver amplit./phase margins, normal dispersion fiber Kerr nonlin. 131424
scalable video, network transm., priority dropping 95308
serial commun. cct. with optimized skew charact. 85457
sig.-depend. media noise mag. recording channels, decision feedback equalization 116465
sigma-delta modulators, CAA techs. 102292
simultaneous 3R regeneration by fiber-parametric limiting amp. 131579
single-channel dispersion-managed soliton syst., phase/timing jitter, eye diags., error rates 127690
stat. perform. guarantees for streaming flows using expedited forwarding 119254
stat. shift registering sorting archit., fair queuing algms. in high speed routers *(Chinese)* 108224
sync. pumped OPO, pulse jitter suppression 82873
UMTS air interface params., voice packet size/dejittering delay for VoIP call 119676

jitter continued
VCOs and synthesizers, nonlin. effects, design guidelines for minimisatio 91248
video traffic in cellular wireless ATM network, delay jitter perform. 74693
voice over Internet, delivery tool 96158
voice over MPLS and Diffserv domains 85245
VoIP, network delay/delay jitter charact. effect 130819
WAN, jitter-based delay-boundary prediction 130816
wireless ATM, QoS oriented data-link control protocol for CBR traffic 13042
Nd:YLF/Nd:glass PROGRESS-P CPA laser facility, laser pulses 128189
Si bipolar VCO, high-speed opt. commun. syst. 102674

Johnson noise *see thermal noise*

joining processes
see also brazing; cable jointing; soldering; ultrasonic bonding; welding
cable insulation fusion using quadridirectional electron bombard. 102795
ceramic multilayer devices, green tape lamination 115206
composite insulator end-fitting plastic deform. law *(Chinese)* 88468
flexible disassembly tools 100689
microassembling, joining technol., robots and grippers 116117
struct. health monitoring by elec. resist. meas., review 114549
BiPbSrCaCuO 2223 HTSC large sized mag. shield prepared by jointing sintere bulks 83392
C crossing multiwalled nanotubes, form. of connection in electron beam 10153
$YBa_2Cu_3O_7$ HTSC, low angle grain boundaries, high J_c capabilities 70678

joint source-channel coding *see combined source-channel coding*

jointing, cable *see cable jointing*

Josephson effect
1D Josephson jn. arrays, Coulomb blockade 127505
1D Josephson-jn. array, penetration depth, screening field profiles 70796
2D Josephson jn. array, reson. cavity coupling 70969
2D Josephson jn. arrays, paramag. Meissner effect, full mutual-inductance effect anal. 127481
2D Josephson-jn. arrays, second-order phase transit. 70901
act. antenna array, phase shifting 72652
at.-layer engng. of supercond. oxides, yesterday/today/tomorrow 70588
ballistic three terminal devices, controlled Josephson current, noise props. anal 70903
Bloch oscillating transistor 70819
broadband Josephson volt. stds. using supercond. jn. arrays 97126
conf., Models and phenom. for convent. and high temp. supercond., Varenna Italy (Jun./Jul. 1997) 100446
flux-flow oscillators, phase locking in non-uniform microwave fields 92904
heavy-fermion systs., Josephson effect study 104580
high-T_c supercond. Josephson jn. arrays, remanent magnetis. 70793
HTSC, Josephson effect study 104580
HTSC, sine-Gordon vortex states, quantum antiferromagnets 127483
HTSC ring, quantum roulette noise thermometer 70886
HTSC SFQ ccts., interface engineered Josephson jns. 70883
HTSC thick-film Josephson transit. on alumina substr., prod. 81982
inductive cubic network of Josephson jns., electrodynamics 104578
interface engineered jn., crit. current 70881
interface-engineered Josephson jns., capacitance anal. based on equiv. cct. model 127486
interface-engineered Josephson jns. with high I_cR_N products 127485
isolated Abrikosov-Josephson vortex, nonlin. dyn. 92899
isolated long Josephson jns., fluxon dyn. 70913
jn., driven, chaos suppression 127474
long Josephson jn., fluxon, AC induced damping 104570
long Josephson jn., soliton oscillator clock, jitter meas. 70889
long Josephson jns., stacked arrays, microwave emission 70971
macroscopic quantum effects 70942
mag. props. of Josephson jn. arrays 127473
mesoscopic Josephson arrays, EM field-vortices interact. 127502
mesoscopic Josephson jn. with dissipation, quantum coherence 92895
mesoscopic Josephson jns., dyn. localization 104579
mesoscopic Josephson-jn. arrays, topol. quantization and degeneracy 70868
mesoscopic SFIFS/SFIS jns., crit. current 81988
mesoscopic supercond., conf., Atsugi, Japan (March 2000) 67402
multi-barrier supercond. jn. SQUIDs charact. 81976
multiterminal S/N mesoscopic struct., phase-coherent effects 70871
persistent current qubit, inductance effects 70943
polythiophene thin film based Josephson jns. 127475
prog. Josephson voltage std., nonuniformity tolerance 70822
quantum nano-stripe, opt. coherent control 104573
qubit state readout, quantum meas. proc. 75811
qubits for geometric quantum computation 70905
ramp-type jns., fab., ion beam etching role 70800
RSFQ pseudo random generator 70874
single Josephson jns., coherent single-Cooper-pair tunneling, Coulomb blockade 70991
SINIS Josephson jn. chain, digital-analog converter 81985
small Josephson jns., triangular array, microwave power 70836
small supercond. quantum states, Cooper-pair box, noise effect 127503
SNS ramp-type Josephson jns. 70963
SQUID, quantum fluct., unitary evol. operator 70900
step-edge Josephson jns., HTSC, excess current effect on SQUID perform. 70789
strip-like Josephson-jn. arrays, crit. state, demagnetizing effects 70797
trilayer jn., interface treatment 70882
tuning Josephson jn. through quantum crit. point 92897
underdamped Josephson jn. array, MM-wave radiation generation 70970
waveform synthesis, AC coupling tech. 70852
YBaCuO resistively shunted double jn. SQUID, Josephson linewidth, temp. depend. 70972
Zimmerman SQUIDs, assoc. electronics and some anoms. 127472
Al/AlO_x/Al Josephson jn., Cooper pair boxes, quantum computing appl. 70910
$Bi_2Sr_2CaCu_2O_8$ films, anisotropic props. on tilted substrs. 70590
$Bi_2Sr_2CaCu_2O_{8+\delta}$ films, pulsed laser ablation, intrinsic Josephson jns. form. 70591
$Bi_2Sr_2CaCu_2O_{8+x}$ single crysts., stacks of intrinsic Josephson jns. 81975
$Bi_2Sr_2CaCu_2O_x$ single cryst. whisker, intrinsic Josephson jns. 70935
MgB_2 nanobridges based SQUID 127422
Nb Josephson jn., i-line lithog., opt. proximity correction 70833
Nb SQUID ccts., small supercurrents, meas. 70907
Nb/Al double-barrier SINIS Josephson jns., phenomenological model 70916
Nb/Al/AlO_x/Nb, long inline Josephson jns., reson., flux flow 70568
Nb/Al/Nb trilayer, SNS Josephson jn. fab. 70962
Nb/AlO_x/Nb Josephson jn., photon detector, sidelobe suppression 71168
Nb/AlO_x/Nb Josephson jns., RSFQ ccts. 70953

phson effect continued
b/AlO$_x$/Nb-Al/AlO$_x$/Nb stacked Josephson jns., macroscopic quantum expts. 104566
lb/InAs based supercond.-semicond.-supercond. struct., ballistic refl. at side gate 70914
Jb/InGaAs/InP/Nb Josephson jns., carrier transport 70908
Jb-Al/Al$_x$O$_y$/Al/Al$_x$O$_y$/Al-Nb SINIS supercond. ICs 70956
Jb-Ti-Nb SNS jn., microwave cct., voltage std. 70955
Jb-based Josephson stacked double tunnel syst., pulse-activated transits. anal. 127500
JbN/MgO/NbN low-loss epitaxial trilayers, fab., THz appls. 71085
JbN/TaN$_x$/NbN SNS Josephson jns., PLD 70804
JdBaCuO ramp-edge jns. with interface-modified barrier 70810
JdBa$_2$Cu$_3$O$_7$ bicrystal Josephson jns./SQUIDs operating at 77 K 70983
rTiO$_3$ ferroelec. film, permitt. meas., Josephson jn. 70428
l$_2$Ba$_2$CaCu$_2$O$_8$, misaligned films, intrinsic Josephson jns. 70593
l$_2$Ba$_2$CaCu$_2$O$_8$ supercond. thin films, c-axis Josephson plasma reson. 116504
l$_2$Ba$_2$CaCu$_2$O$_{8+\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893
l$_2$Ba$_2$CaCu$_2$O$_x$ HTSC epitaxial films, bicryst. grain boundary Josephson jns. 70794
Y-Ba-Cu-O bicrystal Josephson jn., SFQ shift register 70855
Y-Ba-Cu-O films, nanosize texture and transport props. 70663
YBaCuO Josephson jns., ramp edge modif. by ion beam irrad./heat treatment 70808
YBaCuO bicrystal grain boundaries, IMD and Josephson vortices 70601
YBaCuO grain boundary Josephson jn., RF SQUID 70958
YBaCuO interface-controlled Josephson jn. fab. using Sr_2AlTaO_6 insulating layers 70809
YBaCuO, mm-wave Josephson mixer, noise decrease in small DC mag. fields 68649
YBaCuO ramp-edge jns. with interface-modified barrier 70810
YBaCuO step-edge Josephson jns. in rf-washer SQUIDs, mag. field behavior 70982
YBa$_2$Cu$_3$O$_7$ HTSC RSFQ cct., small-scale integrated technol. 70849
YBa$_2$Cu$_3$O$_7$ HTSC film bicrystal Josephson jns., transport 70677
YBa$_2$Cu$_3$O$_7$ Josephson jn., LaAlO$_3$ bicrystal, THz spectrosc. 70851
YBa$_2$Cu$_3$O$_7$ Josephson jn. array, surface wave resonator 70934
YBa$_2$Cu$_3$O$_7$ step edge Josephson jns., single-layer SQUID gradiometers 70984
YBa$_2$Cu$_3$O$_7$ step-edge Josephson jn. dc SQUID magnetometers on sapphire substrs. 70799
YBa$_2$Cu$_3$O$_7$ thin films on substrs./bicrystals with vicinal offcut, high I_cR_n jns. 70673
YBa$_2$Cu$_3$O$_{7-\delta}$ HTSC step-edge jn. DC-SQUID planar gradiometer *(Chinese)* 127471
YBa$_2$Cu$_3$O$_{7-\delta}$ Josephson jn., masked ion damage barrier 70880
YBa$_2$Cu$_3$O$_{7-\delta}$ SIS/SNS jns., low-field microwave absorpt. 92893
YBa$_2$Cu$_3$O$_{7-\delta}$ film, grain boundary jns., direct flux noise meas. 127488
YBa$_2$Cu$_3$O$_{7-x}$ Josephson MM-wave detector, dyn. range 71175
YBa$_2$Cu$_3$O$_{7-x}$ bicrystal Josephson jn., THz spectral anal. 70850
YBa$_2$Cu$_3$O$_{7-x}$ grain boundary jns., comp. anal. 70865
YBa$_2$Cu$_3$O$_{7-x}$ ramp-edge Josephson jns. with surface-modified barriers 70812
YBa$_2$Cu$_3$O$_{7-y}$, SIS tunnel jns., a-axis oriented, Josephson effects 70798
YBa$_2$Cu$_3$O$_x$ Josephson jn., fab. proc., carbon mask 70826
YBa$_2$Cu$_3$O$_x$ bridges and Josephson jns., C masks for fab. 116517
YBa$_2$Cu$_3$O$_y$ HTSC, surface impedance, power dependencies, rf field 70658
YBaCuO/PrBaCuO/YBaCuO ramp jns., graded barrier layer, stationary props. 81989
YBa$_2$Cu$_3$O$_{7-\delta}$/La$_{0.67}$ jns., size depend., mesoscopic effect 127498
YBa$_2$Cu$_3$O$_{7-y}$/PrBa$_2$Cu$_3$O$_y$ HTSC trilayer Josephson jns., CMP 127415
YBa$_2$Cu$_3$O$_{7-y}$/PrBa$_2$Cu$_3$O$_{7-y}$(SrTiO$_3$) HTSC Josephson jns. 70795
YBaLaCuO ramp-edge interface modified jns. for HTS SFQ ccts. 70811
phson junction devices *see superconducting junction devices*
phson logic circuits *see superconducting logic circuits*
phson memory circuits *see superconducting memory circuits*
phson radiation detectors *see superconducting particle detectors*
ni effect *see glow discharges*
ticks *see interactive devices*
ction gate field effect transistors
see also JFET circuits
bipolar JFET structs., neg. resist. behaviour, input I-V curves 70177
charge preamplifiers, P- and N-channel JFETs selection criteria as input elements 132465
charge-sensitive preamplifier, integrated, low noise/power, fast, for APD in JFET CMOS 114640
conf., Semicond. pixel detect. for particles/X-rays, Genova, Italy (Jun. 2000) 89507
DEPFET pixel sens., spectrosc./imaging perform. 97966
floating neg. resist. voltage-controlled resistor design 102760
high-temp. high-power technol. 103908
input capacitance and input current meas. 121141
p-channel JFETs, low noise, X-ray spectrosc. with Si drift detectors 115962
self-aligned JFET proportional-to-absol. temp. sens., nonlin. response 75508
SJFET, PTAT temp. sens. 109533
SJFET device noise meas./anal. for SPICE modeling 81361
AlGaAs/GaAs power HFET, elec.-field-related reliab. 103923
AlGaAs/InGaAs heterostruct. doped-channel FET, high temp. operation 115965
AlGaAs/InGaAs/AlGaAs enhancement-mode double-doped HJFET, celluar phone appl. 103900
AlGaN/GaN HFET, Si$_3$N$_4$ passiv. 81391
AlGaN/GaN HFET, electron transport props., electron dens., polaris. effect 81385
AlGaN/GaN HFET, fab., GSMBE, ECR plasma 81386
AlGaN/GaN HFET, fab./charactn., KOH based UV photoassisted wet etching 81106
AlGaN/GaN HFET, large periphery, multigate design 81345
AlGaN/GaN HFET, material optimisation 103904
AlGaN/GaN HFETs, gate leakage current effect on noise 81382
AlGaN/GaN HJFETs, full band Monte Carlo simul., theoretical comparison 81384
AlGaN/GaN heterostruct., electronic struct., localized vars. 126122
AlGaN/GaN single heterostruct. FET, electronic energy spectrum modelling 92396
AlGaN/GaN single/double HFETs, 2DEG transport props. 70198
AlGaN/GaN:He,P HFETs fab., ion implant., classical/gate metal approach 81381
Al$_x$Ga$_{1-x}$N/GaN HFET, nanoscale electronic props. 103897
CsI(Tl) single scintillator coupled to Si drift detectors array, gamma-ray imaging 110331
GaAs power HFET, high efficiency, W-CDMA base station appl. 91243
GaN epitaxial wafers for HFETs, material/device characts. 103903

junction gate field effect transistors continued
GaN/AlGaN HFET, SiC substr., microwave power charact. 81390
Ge JFETs for deep-cryogenic appls., design/fab./charactn. 70189
InAs QD HFET, memory operation 81359
InAs vert. stacked nanodots in HFET, threshold voltage shift charactn. 115967
InGaAs 2D act. pixel FPA, switching and amplif. charact. 131965
InP HFET, OEIC receiver array 105034
Si JFET, low temp. readout electronics, bolometric detector 70203
Si/polyimide bilayer HFET, T-shaped gate fab. 70202
SiC JFETs, turn-off/short-cct. behaviour studies 126888
4H-SiC SEJFET, normally-off type device 126893
6H-SiC buried-gate n-channel JFETs, deep trap charactn. 103918
junction lasers *see semiconductor lasers*
junctions, waveguide *see waveguide couplers*
just-in-time *see production control; stock control*
k-out-of-n system reliability *see consecutive system reliability*
k.p calculations
narrow-gap semicond. QW, dielec. response in mag. field 80819
AlGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
AlInGaAs-InP three-QW polariz.-insensitive opt. amps. 93657
GaInNAs/GaAs compressive strained QW, electronic band struct. 91789
GaN/AlGaN strained MQW, piezoelec. field, PL press. behavior 103140
GaN/AlGaN:Mg heterostruct., polariz. induced 2D hole gas 103097
InAlGaAs QW laser, low threshold current dens. design, k.p method 117278
InAs/GaAs QDs, strain, cond. band, mol. dyn. simul. 115414
InGaAs QW lasers, gain, refr. index change, linewidth enhancement factor 128273
InGaAs/InP, ACQW, opt. gain switching 82633
InGaAsP tensile-strained bulk strained opt. amps., polariz. sensitivity 117229
InGaN/GaN, cubic heterostruct., p-type doping effects, band struct. calcs. 80804
PbS QD embedded glass for mid-IR laser Q-switching 71916
PbSe QD embedded glass for mid-IR laser Q-switching 71916
SiC, 4H, band to band tunneling, high field transport 69598
Kalman filters
see also adaptive Kalman filters
3D head pose recovery for interactive VR avatars 107258
3D motion tracking by Kalman filtering 95424
3D motion/struct. recovery from motion/shading flows 118725
3D moving target tracking with distributed pass. sens. using EKF 73635
3D obj. motion and struct. recogn., contours 95459
3D radar tracking, Kalman filter design 96926
3D target tracking 86148
3G W-CDMA systs., channel estim. using Kalman filter algm. 85676
absol. frame displacement based image seq. stabilisation, Kalman filtering 129423
accelerated rigid bodies, drift-free attitude estim. 97224
act. shape-from-shadows with controlled illuminant trajectories 129521
airborne mapping, GPS/INS/CCD syst., hardware-software integrat. 122623
airborne video precision enhanced by model based registration 94841
α-β filters from Kalman filters *(Japanese)* 119058
antenna array receivers in autoregressive flat fading channels 108611
ARCAP time-freq. representations for decision 119029
array receiver with Kalman channel predictor for fast Rayleigh flat fading environ., perform. 83664
articulated and occluded video obj. motion tracking 129511
assembly actions detect. by scene obs. 84302
asynchronous CDMA sigs., channel estim. and demodulation in freq.-selective fading 119217
atm. water vap. estim. from GPS data 111430
attitude tracking of aircraft with single imaging sens. using num. optim.-based methods 73119
AUV, small, integrated GPS/INS 131691
AUV obstacle avoidance & path planning, multibeam forward looking sonar 78242
binocular profile recovery using, nonparametric Kalman filter *(Japanese)* 95479
blinks, Kalman filter detect. in video-oculography, locomotion appl. 98365
brushless refrigerator compressor motors, sensorless sinusoidal control 124123
captive-carry HIL missile simulator, relative targeting archits. 122764
car noise environ., speech quality and recogn. rate improve. 84027
car-like vehicles, enhanced localization, ABS sens. and GPS data fusion 97836
cellular mobile commun., OFDM syst., freq. offset estim. 85817
civ. engng. machine localization, laser theodolite/odometer 97841
computational tomography, nonlin. filtering, photon diffusion 87714
computer-generated forces modelling, data fusion technol. appl. *(Chinese)* 122765
data flow Petri net scheduling, branch-and-bound 78862
data fusion, robot internal meas. unit, laser range finder *(Chinese)* 73638
data fusion using multiple models 106762
DGPS, accuracy improvement, Kalman filtering 120101
discrete-time syst. robust filtering, noise, uncertainty 95675
distributed recursive state estimators, distributed Kalman filtering fusion with feedback 107508
distributed state estim. struct. for Kalman filtering *(English)* 118977
DS-CDMA asynchronous systs., Kalman filter based space-time receiver 108599
DS-CDMA systs., optimal channel estim. algm. 107738
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS-CDMA systs. under multipath fading channels, robust adaptive DFE receiver 84856
DS-CDMA tracking mode receiver with joint channel/delay estim./MMSE detect. 131056
dyn. image reconstr. for proc. CT, pseudo Kalman filter algm. 106710
EDGE syst., power control for wireless packet voice 74674
efficient satellite orbit determ. algm. 131300
EIT algms. modif. using pipeline multiprocessor algm. 110973
EKF-based chaotic sync., perform. eval. 119003
elec. impedance tomography reconstruction algm. using EKF 129456
exact likelihood for state space model with stochastic inputs 67724
face and hands tracking in complex background using colour and motion 129902
FIDO rover, state estim. and vehicle localization, sens. fusion framework 86498
finite-horizon robust filter design 107525
frame size adaptation for indoor wireless networks 120111
generalized random walks, fund. stochastic procs. 84740
genetically determined variable struct. multiple model estim. 118999
GPS carrier phase meas. method based on data transit. detect. 97035
GPS receiver tracking loops, optim. and sensitivity anal. 109321
GPS-augmented multisensor vehicle navig. syst., develop. and test 86261
grid-connected voltage source converter synchronisation methods 78005
gun/turret syst., DC motor drive, fault diagnosis, fault tolerant control 133416

Kalman filters continued
Hera-B triggering perform., design and experience 87252
HERA-B vertexing experience 87178
Hokkaido, elec. demand and supply struct. 88293
human tracking indoors using WLAN received sig. strength values 131136
hybrid Kalman-Bucy filter struct. synthesis 119041
hybrid systs., norm-bounded unknown nonlin., robust Kalman filter design 73683
IM, adjustable speed syst. *(Chinese)* 133997
IM, speed estimators params. robustness 123426
IM drive rotor speed estim. using Kalman filter algms. 134439
IM sensorless control, Kalman filter neuro obs. 77869
image representation lin. model for use with Kalman filter restoration 118238
inform. fusion based filtering algm. and integrated navig. syst. appl. *(Chinese)* 130107
integrated navig. systs., interval and fuzzy tech. appl. 130084
integrated navig. systs., using accumulated errors to realize closed-loop rectification *(Chinese)* 131710
intens. modulated radiotherapy optimisation, recursive algm. 98696
interconnected power network state estim. using randomly delayed meas. 133511
interior PM sync. machine sensorless speed control scheme 123369
interior PM sync. machine sensorless speed control scheme 113069
interior PM sync. motor sensorless control using Kalman filter 123377
interior PMSM drive, Kalman filter based vector control 89354
lead-acid batt., state-of-charge determ. methods 89086
machine vision, canonical forms and orbit ident. problems 84203
map-based mobile robot dyn. localization, optimal pose estimator, EKF comparison 97834
MIMO blind equalization, blind source separation and fractional sampling 84872
mobile IP networks, power control by Kalman filter with error margin 85879
mobile robot 3D struct. estim. and planning, vision and range fusion 86605
mobile robot dead-reckoning, precision-calibrated fiber optic gyroscope, sens. fusion 109593
mobile robot outdoor navig. syst., GPS and inertial platform 108976
mobile robot positioning, small-sized solid-state accelerometer 75893
model-based video-coding, real-time 2(1/2)-D head pose recovery 118593
model-set adaptation, fuzzy Kalman filter appl. 119059
motion estim. with incomplete inform. using omni-directional vision 94671
moving obj. time-to-contact estim., point tracking *(Chinese)* 118401
moving objs., slowly rot. aerials, tracking, radar models *(German)* 86190
MRI seq., modeling/tracking of cardiac left ventricular motion by lin. harmonic model *(French)* 110860
multi mobile robot systs., large environ., simultaneous localization and map building 86497
multi-platform GMTI tracking, surveillance & reconnaissance coalition 133404
multiple IR target tracking in clutter environ. 111624
multiple objs. detect. in partial occlusion, class./tracking approach 118771
multisensor syst. target tracking filter for proc. time-delayed data *(Japanese)* 130111
Neue Bahntechnik Paderborn, lin. motor, pitch anal./control 134537
noisy narrowband sigs., estim. and smoothing of instantaneous freq. 119074
noisy speech recogn., nonstationary AR HMM method 118144
non-LOS multipath conditions, mobile location calc., scatterer inform. 119971
nonlin. filtering with semi-parametric Biscay distribs. 130115
nonlin. Kalman filter theory and wing rock motion control appl. 107496
obj. location and rad. of curvature estim. using US sonar 75239
obj. posn. estim., multi-robot systs., distributed sens. fusion 95704
obj. tracking, mean shift/optimal prediction 94789
occluded scenes, multiple people tracking, multiple cameras appl. 129493
occlusion robust adaptive template tracking 106584
ocean acoustic tomography data anal. using Kalman filter 99016
OFDM systs., joint carrier phase and freq. offset tracking 117911
optimal estim. and tracking of general rot. using geometric alg. for computer vision 73234
pedestrian navig. syst., dead reckoning param. correction 131876
pipe length/temp. meas. using 2 acoustic sens. *(Japanese)* 133373
PMSM sensorless speed control, sliding mode observer, EKF 133971
point distrib. model shape fitting using Kalman filter 94541
possibilistic Kalman filtering/updating 73701
power syst. protective algm. for decaying aperiodic component elimination *(Chinese)* 77455
probabilistic multihypothesis tracker using turbo coding concept 130133
proc. tomography state estim., fluid dyn. models, inaccuracy effect 118266
protected telecomms. M systs. sensitivity , state and param. estim. 119034
PSP-based decoding for space-time trellis code, time-variant wireless channels 83836
QAM systs., suppressed carrier synchronizer with phase jitter 120031
radar stats. meas. using Kalman filter 120439
radar target tracking, robust persistent disturbances rejection, PI Kalman filter appl. 130140
radiotherapy inverse problem, hybrid optimisation approach 98695
random image fields filtering on arbitrary 2D grids, algms. 118357
real-time pedestrian tracking/counting using single camera 118302
real-time vehicle tracking in image seq., digital rear-view mirror 124040
road images, real-time proc., optimal moving windows method 95554
road signs detect. and tracking 95401
robot manipulator visual servoing predictors, expt. study 119062
robot tour guide, GPS-based localization, error-robust 97037
robots, indoor feature-based probab. sonar map building 120469
robust Kalman filter for discrete-time uncertain systs., design 84731
robust min. variance filter design, new approaches 130119
Saab Gripen aircraft, synthetic attitude/heading ref. 88053
SAR, airborne, motion compensation 75090
SAR spotlight-mode imagery, target motion compensation 96892
satellite orbit determ., robust Kalman filtering *(Chinese)* 98881
sawtooth iterated extended smoother derivation via AECM algm. 107520
sensorless brushless DC driver, LEQG/LTR controller design 112541
shape and camera estim., single camera based, EKF 106682
single DOF simultaneous localisation and map building problem, closed form soln. 75412
slow freq. hopping syst., error code rate reduction, SW sq. root Kalman filter *(Chinese)* 74547
smart copying, audio sig. reconstruction, new approach 118065
space-time coding/Kalman filtering for diversity transms. through time-selective fading channels 106088
speech sig. recovery in white noise using adaptive Kalman filter 118050
squirrel cage motor sliding mode posn./speed control 123474
stand-alone GPS positioning/sens. fusion, pseudo-range data, lin. differential proc. *(French)* 131314
Kalman filters continued
state estim. and multi-sens. data fusion using data-based neurofuzzy local l proc. models 86484
strapdown INS based GPS integrity monitoring, pseudorange estim. *(Chines* 86267
target-directed dyn. syst. model with switching states, param. estim. 73697
textured surfaces, struct. estim. using local affine flow 129613
time-depend. video connections call admission control 109385
time-varying elec. impedance tomography image reconstr., EKF 109925
tracking filters, α-β/α-β-γ, poles and zeros 130106
traffic surveillance, content-based event retrieval 129815
turbo codes on flat fading channels, adaptive iter. detect. 83857
two-state tracking filters, seeker appls., LOS rate estim. 120420
two-wire thermocouples, temp. reconstr., nonlin. state estim. approach 97874
unmanned aerial vehicle with GPS, radar precision assess. *(Chinese)* 13165
vehicle navig. appl., Kalman filtering 84717
vehicle-mounted mine/UXO detect., DGPS error, EKF, fixed interval smoothi 77066
vel. estim. and moving obj. detect. using wavelet transform and parallel Kalma filter 118394
video surveillance camera moving obj. tracking algm. 106839
videoconferencing, Kalman noise filtering and motion compensated video codi 95099
W-CDMA downlink detect., Kalman-filter based chip estimator 119948
WCDMA systs., Kalman filter channel tracking algm. 74695
wild life telemetry, moving target location, EKF convergence 85172
GeSi alloys growth, comp. tracking, seq. Bayesian estim. 68135
Si CZ growth, online diam. calib., shape estim. 114209
α-Si gate, high aspect ratio struct., etch profile control 103340
Kaplan turbines *see hydraulic turbines*
Karhunen-Loeve transforms
3D gated cardiac SPECT, spatiotemporal noise reduction filter 132860
3D phys.-based multi-obj. deformable model constr. 87684
background removal algm. for Navy IRST systs. 122755
basis vectors, blind adaptive estim. 83847
brain pot. maps during pain, KLT anal. 98210
car license plates detect. from complex scene 73457
coding-optimal transform 107067
color aerial images, region-based segmentation, Karhunen-Loeve transform 118316
dyn. & gated image seqs., spatially-adaptive temporal smoothing 132861
ECG, T-wave alternans detector, simul. study/perform. eval. 87396
EEG, spatio-temporal patterns, synergetic anal., Alzheimer's disease appl. 8743
facial feature detect., color segmentation/KL transform *(Chinese)* 95431
fading dispersive channels, low-complexity commun. bandwidth expansio 131055
finite-dimens. control of nonlin. parab. PDE systs. with time-depend. spati domains 90087
force sens., temp. compensation algm. 86463
highly nonlin. syst. modeling/prediction, adaptive-neuro fuzzy inference 11895
human face detect., prediction-and-verification 94965
HYDICE data, JPEG-2000 compression, 3D wavelets and KLT 95022
hyperspectral imaging, JPEG-2000 compression, 3D wavelets and KLT 9502
image and video coding, shape-adaptive transforms, overview 107000
image coding, adaptive transforms with overlapping basis fns. 106887
image compression syst., neural net based Karhunen-Loeve based transform cod ing, sq. isometries appl. 107020
Integrated Broadband Mobile System, smart antennas to reduced dimens. space time proc. develop. *(English)* 107414
large-set pattern class. via neural net dimens. reduction method 73310
mammograms, asymmetry anal., directional filtering with Gabor wavelet 132781
MEMS nonlin. device, model order reduction, Karhunen-Loeve decomp. 9250
MPEG-4 visual texture coding using double transform coding 107014
multichannel audio coding, exploration of Karhunen-Loeve transform 106364
multimodal brain image anal., phys.-based stat. deformable model 132710
multispace Karhunen-Loeve for pattern class. 118717
multispectral image compression using reversible WT and KLT *(Japanese* 73395
MVC, Nokia proprietary low bit rate video codec for mobile multimedia 11854
opt. imaging data, fast convergent factorial learning of low-dimens. independen manifolds 110531
radar sigs. STAP, orthogonal wavelet decomp. 109263
radar target ident. using 1D scatt. centres 131641
Rayleigh dispersive channel commun., matched filter bounds 119877
sig. detect. using approx. Karhunen-Loeve expansions 73712
speaker ident. using KLT based on overlapped subframes 84051
two-param. Fisher criterion for feature extraction methods 106432
VQ for nonlin. factorial models of opt. imaging data low-dimens. independent manifolds 84318
weak IR target detect., K-L transform *(Chinese)* 94622
Zeeman multitransverse mode laser, polariz. transverse pattern dyn., vectorial Karhunen-Loeve modes 71885
KBMS *see deductive databases*
KdV equation *see Korteweg-de Vries equation*
Kelvin-Helmholtz instability *see flow instability*
Kepler laws *see celestial mechanics*
keratin *see proteins*
kerma *see dosimetry*
kernels (operating systems) *see operating system kernels*
Kerr effect (optical) *see optical Kerr effect*
Kerr electro-optical effect
see also optical Kerr effect
axisymmetric point/plane electrodes, transformer oil, space charge, Kerr EO reconstr. 104260
ferroelec., nonlin. optic coeffs. 105490
gas, elec. field, non-contact meas., Kerr effect *(Japanese)* 121131
liq. crysts., third order NLO props. in phase transit. region 93750
liq. insulator elec. field vector distrib., three-direction opt. meas. syst. *(Japanese)* 77447
polythiophene derivative thin films, synthesis & NLO props. 71980
Kerr magneto-optical effect
mag. thin film head, mag. transducer, Kerr imaging 127367
magneto-opt. recording, basic phys./current technols., review 116393
magneto-optic data storage techs. and materials 116567
MAMMOS media, blue laser, high NA objective lens, domain copying and expansion phenom. *(English)* 70536
mesoscopic ring magnets, vortex circ. control 70499

r magneto-optical effect continued
periodic mag. multilayers, magneto-optic polar Kerr effects 116842
Permalloy dots, sub-micron, vert. magnetis. proc. 116272
Permalloy microgrid, near-field opt. lithog., mag. anisotropy 81819
Permalloy shield, mag. head, domain optim. 116432
perp. mag. recording head, UHF dyn. 116356
phase-change and magneto-opt. media, real-time studies of mark form. procs. *(English)* 72145
sens. based on Faraday and Kerr effects *(Russian)* 75406
super-resoln. readout using Ag scatt. center, plasmon excitation *(English)* 71438
$(Co,Fe)_{50}Pt_{50}$ thin films, mag./magneto-opt. props. rel. to struct. 116254
Co micro-ring, magnetis. reversal, nanoimprint lithog. 127312
Co ultrathin films on flat and sputtered Pt(111) surfaces, mag. props. 70484
Co/Cr/Pd multilayers, prep., struct./mag. props. *(Chinese)* 127349
CoCrTaNi(Pt) perp. thin-film media, magnetis., film depth *(Japanese)* 92781
$CrPt_3$ chem. ordered films, mag. patterning by ion-beam irrad. 104479
Fe microstruct., FIB-fabricated nano-constrictions, mag. props. 116276
Fe/Ag epitaxially grown ultrathin films, wideband microwave notch filter 81916
Fe/Cr superlattices, exchange-spring/bias systs., multiple switching cycles stabil. 81860
FePt self-assembled nanomagnet arrays, MOKE spectra, ultrahigh dens. recording appls. 116303
GaAs/ZnSe jn., spin-coherent transport 103112
$Gd_xCo_{1-x}/Gd_xCo_{1-x}$ amorph. bilayers, interlayer exch. coupling, MOKE 127342
Mn/Sb multilayer films, mag. props., MOKE 70512
Pd/Cr/Co multilayers, mag./magneto-opt. props. 81850
TbFeCo/Pt multilayers, interface effects on mag. and magneto-opt. props. 116365
TbFeCo/Pt multilayers, mag./magneto-opt. props., interface effects *(English)* 81885

boards
ATC simul., graphical and keyboard interfaces, eye point-of-gaze, EEG and ECG measures 98938
multi-colour LCD keytop for displaying syms., characters and animations *(German)* 121101

pads *see keyboards*

ney
3D mag. reson. angiography acquisition, embedded fluoroscopy 132765
abdominal breathhold contrast enhanced mag. reson. angiography, scantiming 87594
abdominal image quality, real-time correction of wavefront arrival time errors 110766
arteries, high-spatial-resoln. contrast-enhanced MR angiography 87678
arteries, rot. DSA, transplants appl. 76550
chronic renal failure, hemodialysis, electrodiagnostic test 87362
clinical radio-oncology, conf., Lugano, Switzerland (Mar. 2000) 67352
cortical blood flow, ^{15}O water dyn. PET, factor anal. 132911
dual isotope SPECT, noise reduction, analytic atten. correction method 122174
dyn. MR studies, optimal Gd-DTPA dose 132740
electrohydraulic lithotriptors, efficient LV shock wave generator 98620
glomerular filtration rate determ., radionuclide techs., healthy volunteers 122165
hemodialysis grafts, venous anastomosis, external-beam photon irrad. 98673
malignant tumor, color Doppler flow imaging diagnosis *(Chinese)* 76360
MRI, fast breath-hold T2-weighted, HASTE seqs. 76418
MRI, time-series contrast-enhanced, image registration for renography 110910
nephron sparing surgery, 3D vol. rendering using videotape display 122121
nephrourology, abdominal ultrasound diagnosis, hist. 87482
noninvasive US surgery, microbubble enhanced cavitation role 111121
paediatric kidney CT, knowledge-based segmentation, parenchymal vol. meas. 122141
perfusion, ultrasound contrast agents, radiofrequency proc. 76344
renal interstitial radiotherapy lesions, temporal CT 76499
renal tumors, human, biochem. charactn., in vitro ^1H NMR meas. 98425
renal/hepatic tissue, 2-bromoethanamine toxicity, ^1H MAS NMR 87612
stones comminution, dual-reflector lithotripter 111122
transplant diagnosis, reconstructive ultrasound elasticity imaging 87496
transplanted kidneys, rejection control, freq. depend. impedance, mixed sig. telemetry IC 98714
US backscatt. microstruct. feature anal. *(Chinese)* 98337
Dy-bearing red cells, MRI transverse relax. agents 87628
$^{99}Tc^m$-labelled radiopharmaceuticals, Indian adult, radiation dose estim. 111235
^{99m}Tc-annexin V, intravenously administered, patient dosimetry 76735

kuchi lines *see electron diffraction crystallography*

nematics
see also acceleration; robot kinematics
3-D skeletal kinematics, biplane radiograph seqs., knee appl. 87743
3D inform. acquisition using stereo vision by subpixel resoln. relative disparity 129455
3D laminated plate finite element with high-order zig-zag sublaminate approxs. 79147
3D pose estim. of biological tissues by CT/fluoroscopy 98506
below-knee amputees, kinematics props. and energy cost 111165
biomechatronic hand, design and fab. 98728
distributed multi-sens. environ., integrat., registration 118856
docking dyn. simul. of spacecraft with peripheral docking mechanism *(Chinese)* 76796
edge profiles crafting in aerospace indust., occupational biomechs. eval. 111330
elastic mech. systs. phys. modelling using servomotor drive 100244
flight simulators, computer-aided, design concept 111320
functional reach test, elderly subjs., kinematic/dyn. anal. 76220
gait anal. lab., technol. overview 132536
HexaM parallel mechanism based milling machine, kinematic calib. *(Japanese)* 78597
human motion spatial reconstruction using images of single camera 122038
Hybrid II test dummy, kinematic comparison to wheelchair user 111183
International Space Station, solar-cell orient. syst., drives control 111346
knee laxity meas., roentgen stereophotogrammetric anal., accuracy/repeatability 122132
MEMS microengines dyn., opt. laser interferometry 112570
metacarpophalangeal joint kinematics, 3D meas. using 2 markers on phalanx 110848
motor responses, onset detect., whitening filter, log-likelihood-ratio test 132524
multi-DOF meas. syst. for milli-struct., diffr. grating, kinematic anal. 121222
multiple sclerosis, ataxic symptoms meas. with graphic tablet 121890
planovalgus foot, surgical rehabilitation in cerebral palsy 87794
pneumatic tire testing machine, DAQ, control syst. *(Spanish)* 86782
portable 3D US-NDT exam., kinematic anal. 125147
spastic diplegia, prematurity/Angelman syndrome, distinct multijoint control strategies 121938

kinematics continued
spine, animation in vitro biomech. tests 98357
target tracking, multi-pattern probabilistic data assoc. 107324

kinescope *see television picture tubes*

kink instability
NCSX coil design using GA 128721

kinoforms *see computer-generated holography*

Kirkendall effect *see chemical interdiffusion*

kitchen appliances *see domestic appliances*

KL transforms *see Karhunen-Loeve transforms*

klystrons
see also optical klystrons
accelerator appl. of klystron, design and fab. issues 110149
Beijing Free Electron Laser, saturation output, RF phase ripple, pulse form net *(Chinese)* 105052
conf., advanced accelerator concepts, Santa Fe, USA (Jun. 2002) 100411
delayed-feedback klystron oscillator, chaotic operation 91558
electron linac, comparison of discrete klystron prod. RF to two-beam prod. RF 110150
electron storage ring, high-power RF distrib. syst., asymmetric power divider 132244
flat-field, high-aspect ratio RF struct. design 110154
gyroklystron, freq. doubling, for advanced accelerator appls. 80603
gyroklystron develop. for accelerator appls. 110144
gyroklystrons, shot noise, uniform plasma model 102936
gyroresonance devices, helical electron beam form. 72207
HT-7U Tokamak, LHCD syst., pulsed HV DC power supply 77951
multiple-beam klystron, output cavity coupling coeff., bandwidth charact. *(Chinese)* 102933
Next Linear Collider, design progress 110204
Next Linear Collider, multi-moded pass. RF pulse compression develop. 110148
NSRL klystron corridor, leaked EM noise *(Chinese)* 110111
NSRL klystron gallery, leaked EM field *(Chinese)* 97912
particle accelerator design/anal. review for future expts. 132272
particle accelerators, CARM klystron config. 110147
pulse forming network, output pulse waveform shaping *(Japanese)* 80594
pulsed magnicon project for accelerator appl. 110155
reflex klystron oscill. phenom. in plasma 102935
relativistic klystron two-stream amp., electron beam form. *(Chinese)* 117626
RTA beam dyn., limiting cumulative transverse instabil. growth 110146
self-amplified high-power klystron *(Chinese)* 91549
solid-state low-power klystron-pulser for CTF3 injector 91554
thermionic RF gun, beam-loading compensation by feedforward control syst. 125972
three-cavity freq. quadrupling coaxial gyroklystrons for linacs 110157
vircator klystron with external delayed feedback, oscill. conditions 91557

knapsack problems
see also bin packing
electronics mfg. AOI, optimal allocation of AOI resources 100648
exact algms. for large-scale unconstrained two and three staged cutting problems 67918
finite branch-and-bound algm. for lin. multiplicative prog. 113979
layered encoded video distrib. through caches 119745
mixed integer rounding inequalities, aggregations 78940
multiple heavy-tailed on-off flows, exact queueing asymptotics 119244

knowledge acquisition
see also data mining
aircraft repair notes, free-text, inform. extraction 133204
blanking parts' defects diagnosis using neural ES *(Chinese)* 113768
class., multi-attribute/multicriterion, reducts and rules 84074
classroom teaching, knowledge translation tool 67440
concrete product life cycle anal./CAD, intell. syst. 125089
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
fault diagnosis in rough set systs., rule extraction *(Chinese)* 100641
FILTEX, microband filter intell. design syst. 68518
integrated feature anal. and fuzzy rule-based syst. ident. in neuro-fuzzy paradigm 84255
relational graph matching for human detect. and posture recogn. 95423
telecomms. network monitoring, chronicles discovering 108048
Nb-Ti supercond. wires, prod. scheduling, quality improvement 67690

knowledge base management systems *see deductive databases*

knowledge based systems
see also deductive databases; expert systems; intelligent control; intelligent tutoring systems; software agents
3D map feature extraction from radar and vis. rem. sensed image fusion 88091
act. digit classifiers, separability optim. approach 129533
adaptive intrusion detect., data mining approach 73301
busbar layout, CSCW syst. using VRML *(Chinese)* 100501
cardiac ICU, patient state monitoring, intell. alarms syst. 132530
chest radiographs, lung regions ident., segmentation approach 98537
Chinese newspaper with complex layout, anal./understanding/representation 94677
Chinese road maps, automating data extraction/ident. 73144
Classification Canvas, biomedical data anal. 132510
color conspicuity model for visualization 129592
color image segmentation simplification using fuzzy attributed graph 94520
content-based video retrieval by integrat. spatio-temporal/stochastic recogn. of events 95015
decision-level sens.-fusion methods for anti-personnel landmine detect. 118427
decomp. of fuzzy rels. 106850
elec. power commun. network, intell. fault diagnosis syst. 74115
electronic product success/failure prediction, KBS, multiple regression models 89791
EMG, multifunctional platform develop. 98172
event correl. rules discovery 130682
Finnish indust., pattern recogn. appls. 94443
fuzzy multimedia IT based on fuzzy control 130978
fuzzy rules extraction by hybrid method for pattern class. 129594
German speech synthesis syst. extension to foreign langs. *(German)* 73095
GSM networks, fraud detect., rule-based neural network syst. 108683
handwritten dates on bank cheques, knowledge-based segmentation syst. 129671
HCI approach to usable/effective security 119542
high-quality speech synthesis based on reprod. of randomness in speech sigs. 129399
ICU telemedicine syst., intell. mgt. of procs. 98872
image recogn. and understanding systs., knowledge base constr. 95409
image recogn. via fuzzy logic, computing with words 118786

knowledge based systems continued
image understanding archit. based image proc. 107238
inform. presentation mode change for disabled, using AI 111168
integrated feature anal. and fuzzy rule-based syst. ident. in neuro-fuzzy paradigm 84255
intell. commun. systs. model, past/present/future 96073
intell. engine software 85135
IP wt. based real-time network intrusion detect. 95944
Japanese lang. rule-based speech synthesis syst. using MELP vocoder 118137
larva class., learning VQ neural net training 110537
Lucent Technologies, yield components, knowledge-based automatic software tools 103725
machine health monitoring/control by vibr. sens. 97149
microstrip radial stub, knowledge-based ANN model 80185
microwave and RF ccts., knowledge-aided-design using ANNs 91225
MRI cerebral images, rule-based ES for automatic segmentation 76429
neonates/paediatric patients, distorted plethysmogram pulses detect., fuzzy syst. 87528
OO knowledge-based CAPP syst. for bare cct. boards mfg. 91468
order based diagnostic systs., rule evol. 102801
PD class., combined neural network and fuzzy syst. 109916
pervasive speech and natural lang. technol. 106384
PET, dyn. studies, knowledge-based image smoothing tech. 132906
power syst. integrated telemetry proc. approach 99440
real time intell. sens. validation, Bayesian network 133872
robust speech proc. semantics *(German)* 72998
rural telephone networks, traffic/demand forecasting 119402
SAFARI, struct. approach for automatic rule 106434
sens. fusion rule acquisition based on environ. condition in sens. fusion syst. 131901
single-phase modular act. power harmonic filter, rule-based controller 112755
sleep anal. by AI, visual sleep stage ident. proc. modelling *(German)* 98153
smart radio, community based music radio 85381
spatial load forecast method, rule based, GIS appl. 77282
speech proc. improvement using fuzzy logic approach 118163
surveillance syst., moving obj. detect. and indexing *(Chinese)* 106491
sync. generator fuzzy adaptive control scheme 123395
telecomm. equipt., knowledge driven digital design syst. *(Japanese)* 96000
thermal waste treatment, multivariable fuzzy control, neural nets *(English)* 123195
video seq. segmentation, rule-based framework for post-proc. merging 84326
visual inform. modeling/mgt., logical framework 94770
wireless ad hoc network, QoS enabled, intell. scheduling mgt. 130524

knowledge discovery *see data mining*

knowledge engineering
see also belief maintenance; explanation; inference mechanisms; knowledge acquisition; knowledge representation
deregulated utility market place, knowledge mgt. 123122
design for reliab., engng. knowledge elicitation 100681
diagnostic models, based on FMEA models and ontologies 131799
education, multi-assess. portfolios knowledge mgt. 113366
fault diagnosis, fuzzy, using knowledge expression/approx. reasoning 124428
Hopper, automation engine, phys. design of large IC 104004
innovation, knowledge creation/mgt. practices 89741
innovation adoption anal. approach in commercial banking indust. 67486
knowledge-based concurrent engng. syst. method for die and mold *(Chinese)* 113461
meas. of knowledge mgt. 89742
mgt. engng. role, key to wealth creation 67482
OEM rels. building, knowledge transfer, Taiwan 113409
organization practices/knowledge mgt. alignment, organization consciousness 89740
pers. opt. disk library, knowledge engng. 93002
product innovation, absorptive capacity/social network effects 89745
R&D knowledge mgt. capabilities, UK-Japan company comparison 113404
reliab. modelling, expert judgement mgt. using Bayesian belief nets 100682
reverse knowledge engng., knowledge mgt. methodology 89744
support tool for knowledge mgt. activities 89743
traditional Japanese company, IT rev. 89735
transm. networks protection, intell. engng. support 112157
VAr planning optim. using expert knowledge adopted genetic algm. *(Chinese)* 111968

knowledge extraction *see knowledge acquisition*

knowledge representation
see also belief networks; blackboard architecture; knowledge representation languages; semantic networks
aircraft struct. anal., OO FE modeling ES *(Chinese)* 111308
blanking parts' defects diagnosis using neural ES *(Chinese)* 113768
distrib. substation fast fault sect. estim. approach 134313
distrib. substations, on-line fault estim., cause-effect networks 112722
electroheat procs. fuzzy knowledge appl. *(Polish)* 124093
image recogn. and understanding systs., knowledge base constr. 95409
multi-target detect., transferable belief model 133392
power plant condition monitoring, modal logic reasoning 99442
seismic acoustic image segmentation, fuzzy fusion of attributes 122605
sig. anal. using rough neural computing 118949
spacecraft fault diagnosis ES, temporal problem *(Chinese)* 88036
visual uncertainty and occlusion, resoln. through probabilistic reasoning 129627
weather forecast telegram understanding, agent-based tech. 119512

knowledge representation languages
telecomm. services design, conceptual models use 130540

Kohonen self-organising maps *see self-organising feature maps*

Korteweg-de Vries equation
lattice of nonlin. ccts., solitons generation, KdV eqn., 1D CNN 90667

Kramers-Kronig relations
broadband phase US spectrosc., phase sheet ambiguity elimination 76349
sq. QW, electroabsorption, Coulombic coupling 103136
T-invariant causal lin. syst., anal. continuation, Kramers-Kronig anal. 130075
$Al_{1-x}Ga_xN$ refl. spectra, Kramers-Kronig anal. 91681
SiOC films, PECVD, low dielec. const. 104247

Kuhn-Thomas sum rule *see molecular electronic states*

kymography *see diagnostic radiography*

Kyropoulous method *see crystal growth from melt*

labelling, radioactive *see radioactive tracers*

laboratories
energy-efficient lighting, EM field levels, med. device interf. 133149
fs laser radiation safety aspects in laser material proc. 72119
gait anal. lab., technol. overview 132536

laboratories continued
gas turbine nonlin. model predictive control lab. expts. 112320
IM control lab., Internet-based 77858
induction generator lab. perform. test studies 123477
indust. power network lab. harmonics modelling/simul. 99366
ISS Lab module, radiation distrib., visualisation in human body 122437
large multi-user labs., radiation safety considerations 111229
mechatronics lab. course 124278
NTT Communication Science Laboratories, ten-yr. hist./future vision 89952
power quality anal. lab. for power engng. education 89642
project-based design education courses 113323
small-scale indust. power network lab. harmonic reson. simul. 77365
solar home PV power systs., batt./charger testing procedures 133897
virtual lab. for power syst. CAD/load flow anals. 111958

laboratory techniques
see also specific instruments and techniques, e.g. "balances", "plasma probes", "vacuum techniques"
see also instrumentation; instruments; student experiments; test equipment; test facilities; testing
ANIPET, versatile PET scanner for lab. animals 132975
behavioral monitoring/mag. field exposure syst. 133064
BETAview autoradiography syst., lab. tests/biological expts. 76588
clinical engng. education, ISO guide 25 certified testing lab. 87291
digital logic design and computer fund. courses, microcontrollers and FPGA 124260
extracellular recording, inexpensive high-perform. amp./electrode 87369
gradiometer, mag. meas., lab. techs. 132135
intracerebral radiosensitive probe, neuropharmacology investigs., small lab. animals 132962
real-time EM field anal. syst. for engng. education 78493
rem. BLDCM learning lab. 78513
vibr. overtest problem, dual-control tech., control variables 78590
web-based microelectronics lab. within EDIT Distance Learning Network, pilot implement. 124255
WebFabIS web-based microelectronics lab. inform. syst. 113451
wedge software for linking field devices to PC, PLC, and DCS 131825

LADAR *see optical radar*

ladder filters
band pass wave digital ladder filters, direct design 130072
causal stable IIR filter banks with powers-of-two coeffs., design 119065
CMOS dual-mode continuous-time baseband filter for GSM and WCDMA 80047
CMOS GSM/WCDMA continuous-time filter, automatic tuning 102372
CMOS SC ladder filter, embedded anti-aliasing 102373
delta operator based low sensitivity ladder realization for sampled data filters 102353
doubly-terminated LC ladder filter, energy storage and Gramians 80035
ellipt. log-domain ladder filters, high-order low-pass and band-pass filters, HSPICE simul. 80072
film bulk acoustic resonator duplexer for USPCS handset appl. 85906
FIR biorthogonal multi-band filter banks design, anal./synthesis filters 130048
high reject. imped. element SAW filters on quartz and $LiTaO_3$ substrs. 91017
integrated thin film resonator filter banks, ladder bandpass filters 102329
log-domain ladder filter synthesis, unified matrix method 80074
SAW filter on ZnO/GaAs struct., 900 MHz, anal. 91237
SAW ladder filters, design algm. 116223
WDF design and implement. 125609
$LiTaO_3$, leaky SAW resonators and filters 116221

ladder networks
see also ladder filters
CMOS R-2R ladder D/A convertor, integral nonlin. anal. 114822
CMOS VGA up-converter, digital TV tuner 90758
conventionally infinite networks, nonstandard versions, operating points 125162
coupled van der Pol oscillators, phase states, wave propag. speed 101693
elec. alignment meas., resistor ladder struct. 109982
homog. transm. line, charact. eqns., three-port elec. sigs. 68525
switched-current bilinear ladder group-delay equalisers 68915

lakes
see also rivers
Balbina, Amazon, water level changes, spaceborne radar interferometry 109295
Lake Chad, basin inundation variability, synergistic rem. sens. 75215
temp. meas., lidar, freq.-shifted Raman scatt. 99022

Lamb waves *see surface acoustic waves*

lambda calculus
cellular data services, fair scheduling with location-depend. errors 120080
encryption logical rels. 83976
wavelet-based image coding, lambda iterate bit allocation algm. *(English)* 84362

laminar boundary layers *see boundary layers*

laminates
see also delamination
act. composites, microfab. by coextrusion hollow fibres 101526
act. piezoelec. layers, sound refl./transm. control, modelling 114476
adaptive laminated struct., higher-order B-spline strip models 125129
aircraft skin panels, embedded FBG sens., buckling anal. 88046
ALIVH any-layer interstitial via hole interconnect substr., insulator material 67574
automotive antennas integrated with vehicle glazing, installed perform. modelling 83619
bonded struct., laser US NDE, dispersion curve, ANN appl. 114563
buildup struct. CTE mismatch, reliab., thermal cycling, FEA 113679
CSP/MCM-L impact on portable wireless product substr. requirements 124381
delamination growth, hygrothermal/mech. loads *(Chinese)* 101504
dry thin film photoresists, wet lamination for improved PWB yields/etch lat. 125900
electronics packaging technol., phys. procs., visual modelling 124352
embedded pass. component integrat. for PWB 102827
epoxy-bonded layered struct., narrowband laser US NDE 114515
FBG sens. embedded in fibre reinforced plastic, thermal effects 120850
FBGA package, mech. chip crack 113488
fiber glass reinforcements within PCB composites 125098
filament wound press. vessel monitoring, embedded FBG sens. 97309
flexible CSP interposer substrs., laser via form. for high dens. assembly 124353
FRP laminate ITER coil insulation, neutron irrad., dielec. strength 81727
glass-fibre-reinforced epoxy, double lap shear specimens, static/dyn. scaling expts. 79473
HDI PCB, microvias reliab. assess., syst.-on-a-package 113680
HDI PCB foil lamination technol. 124369

inates continued
HDI PCB organic laminate substrs., microstructural anal. 113590
mpact damaged delaminated composite, shearography, neural fuzzy anal. 125156
aminated antiferromag. coupled recording media, noise reduction mechanisms 127366
eather, microwave-assisted drying and moisture leveling 102752
ow strain new generation light curing adhesives 78604
ow-cost suspen.-substr. strip-line config. 114934
LTCC photolithographic feature fab. 124379
LTCC resistors, elec./stabil. props., US microscope characterisation 69263
MCM-D/L/BGA integrated package with embedded pass., satellite TV demonstrator 124364
MCM-L prototyping syst. tracking tool 125944
MCM-SL/D HDI substrs. using multilayer thin film technol. on laminate substrs. 124360
med. transducer materials, tensor props., accurate determ. 111521
multilayer aircraft struct., fatigue crack charactn., US imaging 101615
multilayer composite laminates, init. strain effects 114163
multilayer struct. NDT, US tomography, iter. reconstr. 101601
multilayered syst.-on-package, design against interfacial delamination 113614
PCB laminate develop. for higher proc. temp. exposures 102819
PDP photopatternable cond. tapes, Fodel Tape-on-Substr. 109858
peel-and-stick PV laminates for metal roofs 112389
piezoceramic/Al laminated plates, vibr. characts. meas. at reson. freqs. 97853
piezoelec. laminate beam, multiple mode shunt damping, optimal resistive elements 81742
piezoelec. plates & shells, semi-anal. charactn., piecewise discretis. 125130
piezolaminated anisotropic shells, selective modal control theory 104438
plate, laminated, shear-deformable, piezoelec. actuators, thermal postbuckling 127266
plates, laminated, shear deformable, piezoelec. actuators, postbuckling anal. 127263
plates with distrib. piezoelec. sens./actuators, FEM model 114480
PWB, HDI and package substrs., halogen-free materials 91471
PWB conductive filament growth, airborne radar eval. 115117
PWB nonlin. reson. and stress anal., boundary condition eval. 91464
PZT-based piezoelec. composite laminates, bending, elec. field effects 104374
RF-LGA, LGA, laminate based CSP for 10 Gbit/s appls. 100590
simultaneous vel./thickness imaging, US scan, pulse-echo implement. 101602
smart composite plates, nonlin. actuation, coupled piezoelec.-mech. model 114478
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90602
soft mag. cores, HF, core type/appl.-based testing 116477
struct. health monitoring by elec. resist. meas., review 114549
tape flip-chip CSPs, wafer level packaging, Tacky Dots bumping technol. 67623
$Tb_{0.27}Dy_{0.73}Fe_{1.9}$, magnetostrictive peristaltic Terfenol-D motor, force capability 112565
two-layer struct. delamination/void/moisture detect., temporal microwave NDE 101576
ultra-fine line HDI for syst.-on-a-package using photoimageable polymers, low cost 67573
US rotary motor prototyping, in-plane strain actuation, model 134103
wound/stacked metallized film capacitor technols., perform. comparison 115059
woven composite laminates, delamination detect. with embedded opt. fibers 101617
Al_2O_3, nanolanminates, dielec. props. develop. 92676
$CuInSe_2$ PV solar cells, double glass laminates, tests *(German)* 89288
Nb_2O_5, nanolanminates, dielec. props. develop. 92676
Ni-MLC capacitors, Y5V dielec., bakeout-property rels. 80426
Ni-ZrO_2 anode supported SOFC technol. demons., YSZ electrolyte 89198
PZT/epoxy 2-2 composites, HF US transducer fab., tape casting 111508
Si_3N_4/Si_3N_4-TiN laminates, crack propag. detect., elec. resist. 114550
Ta_2O_5, nanolanminates, dielec. props. develop. 92676
Ta_2O_5/HfO_2, high dielec. const. nanolaminates, at. layer deposition 92677
Ta_2O_5/ZrO_2, high dielec. const. nanolaminates, at. layer deposition 92677
$WO_3 \cdot H_2O$/PANI electrochromic device, electrochem. & opt. props. 82219
ZrO_2/HfO_2, high dielec. const. nanolaminates, at. layer deposition 92677
ZrO_2/Pt electrochem. CO sens., thick-film lamination 97501

inations
20 kHz PWM-VSI-fed slotless PMSM drives, current distortion, losses, skin effect 134483
auxiliary mill duty laminated 4DN series DC motors 112540
DC electromagnet, mag. hysteresis, dyn. Preisach model 105687
elec. machine acoustic noise/vibr. reduction design approaches 133924
EVA-based encapsulants develop., flame retardant, fast curing, p-Si arrays 100045
extruded laminated dielec. shielded power cable joints, IEEE Standard 112119
ferromag. mater. crack detect., local mag. flux leakage field sens. 68478
high power dens. microtransformers, fab. techs. 80458
laminated iron core inductors, eddy-current power loss 99721
laminated-rotor interior PM sync. machine, mech. design considerations 123343
low-cost high-force inchworm actuator develop. 134321
mag.-flux-control-type var. inductor, laminated core *(Japanese)* 112578
PM reluctance motor, laminated rotor, equiv. cct. *(Russian)* 112474
polyetherimide adhesion to Si wafer, Al-chelate treatment, MCM fab. 80542
reluctance motor variable struct. robust speed control scheme *(Chinese)* 133990
SRM, stators, vibr. behaviour, 2D/3D FEM 77845
SRMs, low vibr. design, modal anal., automotive appls. 123962
steel plate thickness meas. using laminated mag. flux sens. 132157
two-phase mutually-coupled reluctance machines, dyn. simul. model 133965
Fe-Si, laminated elec. steel, field homogenization 127301
Fe-Si steel, grain-oriented, core loss reduction, laser scribing 127379
Ni-ZrO_2 anode supported SOFC technol. demons., YSZ electrolyte 89198

mp accessories
see also lamps
125 W high-press.-mercury lamp full-bridge reson. inverter ballast 89439
250 W high-press. mercury vap. lamps using buck-boost inverter topol. 89437
250 W high-press. sodium lamp electronic ballast develop. 134632
250 W metal halide lamp electronic ballast develop. 134633
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
Class D voltage switching reson. inverter electronic ballast 124075
class-E amp. used as electronic ballast with dimming capability, anal. 100313
cold cathode fluoresc. lamps, piezoelec. transformer electronic ballast 134631
compact fluoresc. lamp, electronic ballasts, perform. anal. 134616
compact fluoresc. lamps, high-PF single-switch electronic ballast 89430
compact fluoresc. lamps for household hourly load curve improvement 134608
DALI digital addressable fluorescent lighting control interface 134624
dimmable fluoresc. lamp life, cathode heating voltage effect 134623

lamp accessories continued
discharge lamp HF electronic ballasts, SMPS harmonic reduction topol. *(Spanish)* 89432
discharge lamps, hybrid electronic ignition ccts. 124085
electrodeless dimmable fluoresc. lamps, electronic ballast study 134622
electronic ballast, small size and low cost for HF fluoresc. lamps *(Japanese)* 100314
fluoresc. lamp, electronic ballast, self-oscillator, half-bridge inverter *(Japanese)* 125256
fluoresc. lamp, high PF ballast, forward half-bridge reson. inverter 134619
fluoresc. lamp, self-oscillating electronic ballast design, control syst. 134612
fluoresc. lamp, single-stage electronic ballast, dimming feature, design 124079
fluoresc. lamp act. PFC/ballast control IC 134618
fluoresc. lamp ballast, inverter, inductively coupled preheating ccts. 134620
fluoresc. lamp ballast crest factor improvement using PFM 134606
fluoresc. lamp ballasts self configuring dimming interface 134625
fluoresc. lamp electronic ballast using half-bridge reson. invertor 89440
fluoresc. lamp electronic ballast with no series pass. elements 89436
fluoresc. lamp electronic ballasts, toggled duty cycle current control 134617
fluoresc. lamp electronic ballasts topologies comparison 89433
fluoresc. lamp FHC41 and lighting fixture *(Japanese)* 113130
fluoresc. lamp model, tangent approx., electronic ballast design 134626
fluoresc. lamps, dyn. behaviour modelling, dimmable ballasts 134627
fluoresc. lamps, high PF electronic ballast, modified valley-fill filter 134614
fluoresc. lamps, single-stage high PF electronic ballast 124081
gas discharge lamp self-oscillating PFC electronic ballast 89438
halogen lamps, electronic transformer 89431
HF ballasts/fluoresc. lamps, dyn. interact. anal., SPICE simul. 124078
HF electronic ballast providing line freq. lamp current 124073
HID headlamp systs. for automobiles, electronic ballasts *(Japanese)* 100300
HID lamp ballast, single-ended reson.-type inverter 78333
high press. sodium lamps, class d LC_sC_p series-parallel reson. inverter 124074
IEEE indust. appls., conf., Chicago, IL, USA (Sept.-Oct. 2001) 124194
IEEE indust. electronics conf., Pusan, South Korea (June 2001) 124208
inductor-less charge pump PFC electronic ballast, lamp current feedback control 134621
lin. fluoresc. lamp inductorless piezoelec. transformer electronic ballast 89435
metal halide lamp electronic ballasts, acoustic reson. prevention 89434
metal halide lamps, acoustic reson. detect. 134637
metal halide lamps, control methods, stabil., acoustic reson. avoidance 124077
multiple high-press. mercury discharge lamps, common bypass cct. 124080
multiple lamp independent operation, voltage-fed half-bridge reson. converter 134613
multiple tubular fluoresc. lamps, high PF isolated electronic ballast 134615
PA-LOOK BALL dimmable compact fluoresc. lamp *(Japanese)* 124062
PA-LOOK BALL YOU self-ballasted compact fluoresc. lamps *(Japanese)* 124070
rapid-start fluoresc. lamps, electronic ballasts, universal protection cct. 134636
single-stage high-PF electronic ballast topol. 134630
single-stage push-pull electronic ballast with high input PF 100318
T8 fluoresc. lamp ballast using piezoelec. transformer, charact. 134638
TWIN PA-LOOK twin-type circ. fluoresc. lamps *(Japanese)* 124072

lamps
see also discharge lamps; filament lamps; light sources
colour props./apparent brightness review 124058
compact DC/AC inverter for large electroluminesc. lamp 99766
lamp-reflector combination design for energy efficient indust. lighting 89442
LCD backlight inverter topologies anal. 134249
LCD backlights, white EL lamps appl. 97750
mainline light sigs. with light diodes *(Russian)* 134515
phosphors, VUV radiation meas. *(Japanese)* 124068
security alarm syst. batt., charge/discharge, peripheral interface controller IC 113419
UV phosphor blends for suntanning lamps, design 104930
VUV excimer lamp semicond. wafer photo-cleaning tech. 69878
Cu_2O-Cu interface, lamps, glass sealing, Dumet, slow leak-detect. method *(Japanese)* 124067

LAN *see local area networks*

LAN interconnection
caching-proxy in LAN for educational computer room *(Polish)* 130648
corporate networks, radio relay *(German)* 130802
develop. trends 85181
f-ARIMA procs. anal. in broadband traffic modelling 130872
GBS IP multicast tunneling 107822
global hierarchically addressed non-broadcast Ethernet 108344
high perform. interconnects, conf., Stanford, CA, USA (August 2001) 124183
high-speed indust. Gigabit-Ethernet networks congestion control 130865
i.Lon™ 1000 Internet server appl. to to linking LonWorks control network and IP based networks *(Polish)* 130657
MAN, MAN 96079
med. image rem. consultation via WWW technols. 106807
multiwavelength opt. LAN internetworking, wavelength-tolerant receiver technol. 109141
next-generation residential gateway 130795
opt. interconnection as IP macro of CMOS library 130716
reliable multicast protocol applying act. network technol., perform. eval. *(Japanese)* 73989
RHiNET-2 parallel computing syst., network switch, opt. interconnection 74196
virtual LANs, admission control and bandwidth mgt. 119570
wireless and wired LAN traffic bridging in Windows NT 119554
wireless MAN, product review 119591

land mine detection *see buried object detection*

land mobile radio
see also cellular radio
2.0 GHz indoor radiated-mode leaky feeder propag. 72309
2.4 GHz diversity antenna for wireless handset external mounting 83637
2.4 GHz SS syst. meas. in modern office buildings 105763
3rd generation mobile core networks, call level perform. anal. 131281
3G systs., antenna fns. anal. 83615
3G wireless and Internet users multimedia sessions 130453
4G wireless networks, emerging issues 85579
5.2-GHz/2.2-GHz dual band antenna, meas. based path loss model for residential areas 72301
5.8 GHz OFDM commun., integrated transceiver module, multilayer packaging 108787
16DAPSK sigs., flat Ricean fading channels transm., lin. prediction based decision-feedback differential detect. 107569
32 kbits/s real-time/dual-direction video commun. syst. for wireless channels, perform. eval. 74637

land mobile radio continued
40 GHz band radio channel, ARQ combined with SR/GBN for broadband wireless systs., perform. 119262
150 MHz helical antenna close to human abdomen, radiation efficiency *(Japanese)* 83646
900 MHz handset diversity antenna, head/hand/shoulder effects, correl. charact. 94161
AAL2 protocol for low-bit-rate multimedia services, perform. 107810
access-based clustering protocol for multihop wireless ad hoc networks 85035
acoustic echo canceller, short-time spectral amplit. estim. *(Japanese)* 95664
ad hoc mobile radio networks, mobility prediction 108707
ad hoc network, GPS/ant-like routing algm. 85887
ad hoc network intell. on-demand multicast routing protocol 108672
ad hoc network mgt. with C2 data models 88236
ad hoc network routing protocol for prog. modular commun. syst., anal. 111616
ad hoc networking, wireless network interface energy consumption 119374
ad hoc networks, adaptive dist. vector routing algm. 119441
ad hoc networks, alternate path routing 107976
ad hoc networks, AODV-BR backup routing 85057
ad hoc networks, authentication scheme 83966
ad hoc networks, efficient message scheduling 85052
ad hoc networks, location aware dependable multicast 108801
ad hoc networks, multicast protocols comparison 130353
ad hoc networks, on-demand location aware multicast protocol 85059
ad hoc networks, on-demand routing protocols, min. source trees 120027
ad hoc networks, packet latency reduction 96468
ad hoc networks, QoS and perform. eval. framework 108705
ad hoc networks, replica allocation for improving data accessibility 120067
ad hoc networks, seven degrees of separation 74822
ad hoc networks, unidirectional links discovery/commun. using multi-hop acknowledgements 85020
ad hoc networks multicast routing protocol 120029
ad hoc networks with highly mobile nodes, longest life routing protocol 85056
ad hoc on-demand backup node setup routing protocol 107817
ad hoc routing enhancement with dyn. virtual infrastructures 119442
ad hoc wireless networks, admission control/power control/QoS anal. 131228
ad hoc wireless networks, distributed fair queueing, self-coordinating approach 131120
ad hoc wireless networks, landmark routing 74048
ad hoc wireless testbed for scalable adaptive QoS support 85880
ad-hoc networks, efficient multiple paths routing protocol 107807
ad-hoc networks, posn.-guided sliding-window routing protocol 108708
ad-hoc networks, power and mobility-aware wireless protocol 108704
ad-hoc networks, routing with energy considerations 85892
ad-hoc networks, scalable unidirectional routing with zone routing protocol extensions 85060
ad-hoc wireless mobile networks, location awareness 85581
ad-hoc wireless networks, capacity increment 131119
adaptive antenna arrays, beam-steering/directive characts. 96433
adaptive antennas, pot. for mobile radio appls. 117857
adaptive antennas for wireless broadband commun., constraints/possibilities 83684
adaptive array based on subband sig. proc., develop. 73628
adaptive bit-interleaved coded modulation 119980
adaptive multimedia stream service with intell. proxy 96232
adaptive QoS provisioning distributed call admission control 131275
adaptive robust type-I hybrid ARQ scheme 85801
all-IP syst. beyond 3G, QoS support 108816
antenna array for azimuthal angle-of-arrival meas., design/eval. 83748
AODV routing protocol, implement. study 85050
appl.-layer mobility using SIP 95868
ARQ adaptive hybrid schemes for wireless links 94292
asynchronous CDMA with freq. offset, multiuser detect. 84787
ATCP, TCP for mobile ad hoc networks 85036
ATM mobile networks, credit-based dyn. reservation integrated services multiple access 85886
ATM wireless broadband networks, intell. control of QoS adaptation 131223
ATM wireless CPN, efficient location mgt. protocol 84974
ATM wireless networks, efficient QoS guaranteed MAC protocol 107809
ATM wireless networks, QoS mgt. using large deviation principle 85736
ATM wireless networks, stochastic control of path optim. for inter-switch handoffs 85729
ATM wireless switch using priority-based dyn. capacity allocation, perform. eval. 73807
ATM-based wireless multimedia services network, multiple access control 85653
bandlimited procs. lin. prediction 85658
batt. perform. and traffic shaping 85400
batt. powered commun. devices, energy conservation scheme 120024
BiCMOS double-bal. subharmonic mixer for direct conversion receivers, 1.9-GHz 91352
BLAST capacities, thermal noise, spectral efficiencies 74625
blind multiuser interf. cancellation, max. likelihood approach 72364
blind spatial signature estimators 108917
blind/robust space-time receiver for turbo coded syst. 106135
Bluetooth for enabling wireless connections 85607
Bluetooth semicond. devices for short-range radio broadcasting *(German)* 85649
Bluetooth version 1.0 spec., develop. 85634
Bluetooth-based ad hoc networks, bluetrees scatternet form. 131230
Bluetooth-based public Internet access point, perform. eval. 108640
Bluetooth/proposed evol. technols., consumer electronics appl./coverage constraints 119965
BPSK W-CDMA downlink, RAKE receivers with channel estim., anal. 84913
BPSK-based WCDMA using RAKE receivers with channel estim., downlink perform. 131240
broadband fixed wireless access in future integrated commun. 119916
broadband wireless commun., transmit/receive spatial MUX 131199
capacity planning 85599
car/mobile phone voice dialling, driving perform./safety 85728
carphone designs, safety and usability eval. 85727
CCI reduction and path-diversity reception 74739
cct.-connection-based multihop wireless infrastructure for local communities 108964
cdma2000 antenna array syst., multi-user-beamforming 85748
cdma2000 mobile radio, SOVA high-perform. decoding for turbo codes 108699
CDMA2000 test sigs., I/Q simul. software WinIQIM 74796
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA commun., image source coding, channel coding and spreading 108739

land mobile radio continued
CDMA commun. systs., subchip-spaced multipath diversity 74702
CDMA data users under delay/error constraints, forward link hierarchi SIR/rate control 131150
CDMA downlink multicarrier with space diversity, perform. 74747
CDMA downlink wideband channel estim. algms., error robustness 131286
CDMA forward link, reduced-rank adaptive MMSE equalization 108919
CDMA high capacity array-receiver requiring reduced pilot power 74750
CDMA mobile radio, digital correl. proc. use 85714
CDMA mobile radio capacity, BLAST based multiuser detect. 131288
CDMA multi-carrier syst. with virtual carriers over dispersive channels, subspa based blind detector 107600
CDMA multi-rate commun. systs., double chip waveforms anal. 84681
CDMA multicarrier archit., orthogonal complementary codes for wideband wir less commun. 129001
CDMA multicarrier wireless systs., spreading codes effectiveness/perform. an 83895
CDMA multicode downlink in shadowed multipath fading 131282
CDMA multifrequency technols., perfect freq.-time codes 85715
CDMA power control, time delay compensation 73867
CDMA pulse-posn.-hopped syst., capacity anal. 119939
CDMA RAKE receivers, channel estim. errors and Doppler diversity 108920
CDMA random access systs. with heavy-tailed packet length distrib., perfor anal. 131202
CDMA RF sig. transms., SCM fiber-optic links, nonlin. effects 75040
CDMA syst. smart antenna, capacity improvement *(Chinese)* 72685
CDMA systs., adaptive array antenna with optimally form. beams, design 836
CDMA systs. in multiple time-scale fading channels, spatial diversity combi ing/power allocation 85858
CDMA systs. in Nakagami multipath fading channel, perform. 131123
CDMA systs. using multiuser receivers, throughput anal. 96547
CDMA third generation mobile commun., heavy traffic period probab. 1311
CDMA transmitter perform. testing & troubleshooting, adv. DSP 108836
CDMA wideband interf. cancellation base station, field test perform./anal. 723
CDSP, appl.-specific DSP for third generation wireless commun. 114792
centralized intell. channel assigned multiple access for ad-hoc wireless networ with UAVs 95858
channel condition ARQ rate control for real-time wireless video under buff constraints 95884
channels, nonlin. transmit amps., neural network modeling 74762
circ. patch microstrip antenna 8-element circ. array in plasma 105953
coded OFDM/BFDM systs., predictive equalization of time-varying channe 74697
COFDM systs., near optimal joint channel estim. and data detect. 74698
cognitive radio for flexible mobile multimedia commun. 131172
coherent OFDM, decision directed freq. tracking, param. optim. 72760
COMETS Ka-band and MM-wave mobile satellite commun. 74874
commun. in road tunnels, traffic conditions influence on channel charact. 10576
computing, pers. cache mgt. 119696
COMWIN vest antenna, fab./testing 105873
context-aware mobile portal 96103
Correctional Service Canada, digital radio systs., trunking syst. 74840
CPM multipath-distorted/freq.-discriminated sigs., charactn. 106065
CPM sigs. over space-time correl. Rayleigh fading channels, soft output diversit combining 131290
DAPSK preamble-assisted transm. in digital mobile radio syst., channe estim./compensation 74737
dedicated short range commun. syst., phys. layer 119994
differential amplit. PSK, adaptive signalling algms. 85637
digital LMR, network design criteria 85601
digital mobile radio systs., Doppler spread estim. 74626
Digital Modular Radio, CORBA-based DAMA modem 111580
Digital Modular Radio software defined radio, Wireless Information Transfe System 111579
digital receiver phase equalization, min. phase SAW filters anal. 107541
digital terrestrial broadcasting, mobility/interactivity saviour 75281
discrete-time sigs., residue-division MUX 85717
diversity codes for differential PM in correl. Rayleigh fading channel 96510
DOA estim. using weighted subspace fitting 108737
DOA of multiple scatt. sources 130023
Doppler spread estim. for wireless mobile radio systs. 96452
downlink transmit beamforming with selective feedback 108925
DPSK-based distributed sample acquisition for coherently demodulate MPSK/DS-CDMA systs. 94230
DS PN code acquisition on Rayleigh fading channels, anal 131243
DS-CDMA, coherent multi-carrier/single-carrier, broadband packet wireles access, perform. 74597
DS-CDMA, low-complexity multiuser channel estim. with aperiodic spreadin codes 131257
DS-CDMA, multipath fading channels, slot timing MLE, bursty pilot sigs 74703
DS-CDMA, Schur-saddle fn. property 131234
DS-CDMA asynchronous commun., GA assisted multiuser detect. 130171
DS-CDMA downlink, pilot-aided multipath delay estim. 131285
DS-CDMA downlink transm., spatio-temporal array proc. 107390
DS-CDMA in fading channels, code timing acquisition by differential correl 74792
DS-CDMA mobile radio channel, blind space-time channel estim. 108698
DS-CDMA mobile radio with multimedia services, downlink beamforming 96552
DS-CDMA mobile syst., orthogonal successive interf. canceller for downlink commun. 74700
DS-CDMA multicarrier commun., receiver design 108661
DS-CDMA multicarrier systs., rate adaptive convolutional coding 108742
DS-CDMA multicarrier wavelet based syst., multistage interf. cancellation, per form. enhancement 105818
DS-CDMA multidimensional multicode syst., code diversity/error detect., per form. 74790
DS-CDMA multirate wideband systs., power control/rate allocation 85664
DS-CDMA RLS-based adaptive multicode syst. 96469
DS-CDMA semi-blind spatio-temporal channel estim. 74659
DS-CDMA sigs. in multipath fading mobile channels, serial acquisition 74740
DS-CDMA syst., closed-loop transmit diversity with feedback delay 119982
DS-CDMA syst., power inversion adaptive array antenna for high power interf suppression 72370
DS-CDMA syst. with imperfect power control, PN code tracking loop 74833
DS-CDMA systs., dyn. groupwise successive interf. cancellation array receiver 85741
DS-CDMA systs., semi-blind spatio-temporal equalization/multiuser detect. 131132

mobile radio continued
S-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
S-CDMA systs. in slow time-varying channels, param. estimators using modified SAGE algm. 74815
S-CDMA systs. uplink, multiple user max. likelihood code-timing acquisition 05805
S-CDMA voice/data systs. with limited channel elements, Erlang capacity anal. 4646
S-CDMA wireless commun., PN code acquisition with adaptive antenna array/threshold 74668
S-CDMA wireless commun., smart antenna PN code acquisition 108735
S-CDMA with MMSE decision feedback, transmitter diversity 74665
S-CDMA-based adaptive antenna array, online calib. algm. 105977
S-SS CDMA, narrowband interf. suppression 128809
S-SS CDMA wideband modem, IMT-2000 syst. test plant 131253
S-SS systs., adaptive double-dwell PN code acquisition 108697
S-SS systs., spectral efficiency eval., general scheme 96509
S/CDMA adaptive rate convolutionally coded multicarrier syst., anal. 108809
S/CDMA systs., effective multiuser receiver 85584
S/CDMA systs. with pilot/traffic channels, per-survivor proc. seq. detect. 08800
S/SSMA unslotted ALOHA syst. with variable length data traffic, perform. nal. 131242
ergy aware sampling schemes 96446
pson mobile phone LCD drivers, low power consumption 119985
ding channels, iter. decoding scheme for pilot-assisted modulation 74699
ding model selection 74653
st fading vector channel transmit diversity combining 108913
DD WCDMA systs., closed-loop transmit diversity 108746
C-based wireless video streaming with pre-interleaving 107071
H radio networks with partial-band interf., energy-efficient routing 84980
uite width obstacles, propag. loss prediction model 72324
ve-phase reservation protocol for mobile ad hoc networks 107868
ked mobile Internet convergence 85184
ked-point iter. decoders for concatenated codes with interleavers, design 72880
at-fading channel variable-rate adaptive trellis coded QAM 119979
at-fading channels, freq. offset estim. 131167
boding-based/associativity-based ad hoc mobile multicast routing protocols, berform. eval. 85054
veation-based error resilience, unequal error protection 96522
actional-N type PLL freq. synthesizer LSI for mobile commun. syst. 91331
eq. assignment with complex co-site constraints 75265
eq.-invariant adaptive receiving/transmitting null beamforming 108871
eq.-selective fading mitigation, multiband wavelet packet spreading codes with ntra-code subband diversity 72933
eq.-selective radio channels, params. meas. using power meas. 128771
ll-scale multi-hop wireless ad hoc network testbed, quantitat. results 85541
ture-generation wireless networks 131206
A for mobiles equilib. 108695
eneralized array codes for wireless image commun. in fading presence 129797
lobal Wireless Internet, third-generation networks, pers. digital assistants 08368
lobalstar QoS 108986
MSK modulation based on squaring algm., sym. timing recovery 72720
MSK sigs. in multipath propag. environ., freq. error meas., LVQ 106051
PRS mobile radio, perform. anal. *(German)* 74783
PS query optim. in mobile/wireless networks 130391
.263 video for mobile commun., error resilient transm. 84379
alf vol. dielec. resonator antenna. FDTD simul. 72608
andset antenna perform. eval., meas. elevation distrib. 108835
andset chassis, antenna efficiency meas., loss mechanisms 119963
andsets, optimal power saving 131014
ead SAR due to mobile phones, interpolation/extrapolation 111221
eterog. networks TCP enhancement, hierarchical cache design 74684
F ALE third-generation technols., anal. 108827
igher-order-mode microstrip antennas for road vehicle commun. 105864
uman body-mobile phone interact., computational EM 133079
ybrid ARQ schemes using turbo TCM for wireless channels, perform. 83939
ybrid checkpoint protocol for mobile-to-mobile commun. 107805
ybrid mobile radio/fiber systs., opt. microwave sigs. generation 131471
ybrid-ARQ protocols for Gaussian collision channel, throughput 85038
mode car navig. syst. with small GPS appliance, overview *(Japanese)* 131712
EEE 802.11 ad hoc WLAN, distributed bandwidth allocation/sharing/extension protocol for multimedia 119375
EEE 802.11 MAC protocol working in multihop wireless ad hoc networks 73985
EEE 802.11 mobile ad hoc networks, hidden terminal jamming problems 131229
EEE Std 802.11d-2001, WLAN MAC and PHYS layer specs. 119553
nage transm. over mobile fast-fading channels, wavelet noise cancellation/interleaving techs. 95123
nage utilization within mobile e-services 131299
MT-2000, global standardization 85629
ntegrated Broadband Mobile System, smart antennas to reduced dimens. space-time proc. develop. *(English)* 107414
ntegrated echo/noise canceller 119833
nter-vehicle commun. network with autonomous relay access scheme 74649
nterf. cancellation, adaptive array algm. with spatial interpolation 131295
nterleaved (2,1,7) convolutional codes perform. in mobile image commun. syst. 83894
nternet services, global mobility/QoS provision, SUITED soln. 96100
nternetworking protocols for mobile/wireless Internet services 73986
P AAA archit. extension for differentiated services 130830
P for flexible network support 85260
P foreign agents cooperating hierarchies, local-area mobility support 130438
P mobility archit. 84961
P networks, mobile multicast protocol with error control 74402
P networks, power control by Kalman filter with error margin 85879
P support in act. networking environ. 96085
P using private IP addresses 130439
P wireless networks, centralized TDMA-based scheme for fair bandwidth allocation 130300
P wireless networks, traffic mgt./QoS provisioning 130411
P/ATM integrat. expts./enhancements, IthACI project 73887
S-95 downlink SIC receiver, ML rate determ. perform. 105811
SM-band sub carrier multiplexed broadband digital microwave radio link 96530
apan software-defined radio technols., R&D activities 108818
ava-based mobile asset location 85261
oint Combat Information Terminal, software definable radio 111581

land mobile radio continued
Joint Tactical Radio System 111576
Joint Tactical Radio System, network API defn. 111578
Joint Tactical Radio System, software-defined radio 111577
Joint Tactical Terminal (briefcase), portable INTEL syst. 111599
LEO satellite constellation, up/down link connection admission control/resources allocation 131316
load-bal. wireless ad hoc routing 130355
location-depend. inform. access, simul. framework 130833
LOS bandlimited channel, efficient error free data transm. 111583
low power ad hoc protocol stack 96470
MAC collision resoln./dyn. allocation protocol for wireless networks data/voice integrat. 84941
MAC protocol for mobile ad hoc networks using directional antennas 85051
MAC protocol for voice/data integrated wireless CDMA systs. 85034
MAC protocols for wireless ATM networks, perform. comparison 107811
MAC protocols for wireless multimedia services, perform. eval. 73961
MANET, energy-consumption reduction by dyn. switching-off network interfaces 130487
MANET, max. survivability routing 108702
MARCH, medium access control protocol for multihop wireless ad hoc networks 107845
MC-CDMA uplink, blind carrier freq. offset estim. 108829
MC-DS-CDMA downlink sensitivity to carrier freq. offsets 74629
media conversions to support mobile users 118955
meta-level archits. for component-based mobile computing 85262
mgt. protocol for ad-hoc networks, power dissipation component 85023
microsensor nets, networking issues 107988
microstrip antennas on high permitt. ceramic substrs./small ground planes, expt. study 83529
mil. commun. terminals, design 111598
mil. radio networks, service provision feasibility 111600
MIMO multiuser smart antenna systs., spectral efficiency optim. 83753
MIMO smart antennas, optim. 85863
MIMO systs. with antenna selection, capacity 131289
MIMO virtual framework for multipath fading channels 108910
min.-energy mobile wireless networks, revisit 131231
MMSE DFE, interior point least sq. estim. 85657
MMSE equalizers for freq. selective multipath CDMA forward link, perform. eval. 107696
MMSE zero-insertion adaptive receiver for asynchronous CDMA multiuser detect. 73721
mobile ad hoc networks, prediction-based link availability estim. 120070
mobile agents for pers. inform. retrieval 85731
mobile computing, adaptive bus model for distributed multimedia stream 108160
mobile computing, server location 96087
mobile computing in wireless ad hoc networks, max. batt. life routing 74361
mobile IP, virtual home agent based route optim. 85315
mobile radio video transm., unequal error protection 85891
Mobile-IP regional environ., multicast with reliable delivery support 130437
mobile/wireless IP networks using differentiated services/fast handoff method, QoS support 85735
MPEG-4 data video prioritisation over mobile networks 84377
MPEG-4 video codec for mobile multimedia appls. 119823
MPEG-4 wireless video transm., FEC-based error control 85889
MPSK/MDPSK/noncoherent MPSK with MRC/SC space diversity in Nakagami-m fading channel, sym. error probab. 96463
multi-attribute data broadcast, indexing techs. for power mgt. 86297
multi-carrier CDM, amplit. distribs. for Hadamard/Fourier spreading 74701
multi-carrier microwave breakdown in air-filled components of mobile telephone commun. systs. 104266
multi-hop wireless networks, hierarchical control scheme 120026
multi-WSSUS multipath channel, Markov chain/QAM fading based stat. discrete time model 120073
multiaccess scheme over flat slow fading channels, anal./simul. 84894
multiband software radio frontend design, interf. cancellation tech. 131264
multibeam interf. canceller based on order extended fast algms. 83393
multicarrier complex lowpass models of RF transceiver ICs, nonlin. behavior 80385
multihop ad-hoc wireless networks, bandwidth-efficient multicast routing 120028
multihop dyn. wireless networks, virtual topol. based routing protocol 107870
multimedia appls. roadmap for mobile customers 108686
multimedia commun., robust video watermarking 96261
multimedia mobile radio handoff, localized predictive resource reservation 131273
multimedia QoS adaptation for inter-tech roaming 130966
multimedia service, sub-multiplex fn. 108668
multipath propag. study combining terrain diffr./refl. 105754
multipath-fading channels, bandwidth-efficient pilot-sym.-aided tech. 108813
multiple access scheme for real-time/bursty traffic integrat. 73969
multiple antennas, high spectral efficiency promise 83668
multiple transmit muluple receive capacity survey in Manhattan 105943
multiple transmit/receive antennas with lin. unitary precoders 108959
multiprotocol label switching-based wireless mobile network 85885
multistage microwave power amps., optim. routine, large sig. S params. 69136
MUOS, Mobile User objective System 111602
Nakagami fading channels, generalized diversity selection combining, BER perform. 96453
narrow-band mobile commun. channels, vel. estim./correl. props. 108811
narrowband mobile radio, iter. CCI cancellation 85624
Near Term Digital Radio multi-hop network, collaborative planning, perform. anal. 111561
next-generation wireless/mobile networks, CAC mechanism for multimedia traffic QoS guarantee 131276
non-LOS multipath conditions, mobile location calc., scatterer inform. 119971
nonGEO satellite diversity based systs., hybrid channel adaptive handover 96541
nonlin. group-blind multiuser detect. 119983
NP-ISMA slotted SS with path diversity in LMS channel, perform. anal. 131124
OFDM, freq. offset errors, perform. degrad. reduction 72726
OFDM bandwidth-efficient systs., adaptive interleaving 108741
OFDM broadband systs., spatial transmit diversity 74823
OFDM in mobile radio channels, interchannel interf. 74696
OFDM layered space-time coded wideband archit. for dispersive wireless links 128977
OFDM mobile commun. systs., intercarrier interf. self-cancellation 96546
OFDM mobile systs., channel estim. for multiple antenna diversity reception 108926
OFDM mobile systs., receive diversity 96434
OFDM multi-user broadband mobile channel, decision-directed tracking 97011

land mobile radio continued
OFDM subspace based carrier offset estim. algm. in model mismatch 106048
OFDM systs., 2D iter. APP channel estim./decoding 72815
OFDM systs. with multiple transmit antennas, optimum training seqs. 74814
OFDM TDD systs., adaptive interleaving 72750
OFDM wireless systs., blind estim. of sym. timing/carrier freq. offset 83806
OFDM-CDMA syst. with various proc. gains, perform. 74654
OFDM-CDMA systs., adaptive antenna array appl. 108872
OFDM-CDMA systs. with 4-QAM, dyn. spreading code selection method for PAPR reduction 131168
OFDM/SDMA-based wireless local networks, adaptive loading 74605
off-line customizable Web browsing with mobile software agents 96107
Okumura-Hata propag. prediction model, fuzzy logic, min. sq. method 85688
on-demand multicast routing protocol, unicast functionality exploitation 85058
OO-appls., generic archit. 96106
open appl. interfaces for third-party service providers/developers support 85608
optimal wideband transmit antenna diversity utilizing channel state inform. 108745
over-the-air mobile-stations, integrated mgt. 131116
P25 digital mobile radio std., perform., propag. modeling 96595
packet radio, service differentiation, distributed control algms. 120020
PAM all-digital impulse radio for multiple-access through freq.-selective multipath 74662
parity-check codes on Rayleigh fading channels, perform. anal./code optim. 72885
patch antenna size reduction, inductive loading/short-points tech. 117805
PBG microstrip diplexer patch antenna, isolation enhancement 83592
PBX wireless network, mobility mgt., implement./perform. eval. 85589
peer-to-peer commun., mesh fixed and ODMA mobile radio 108642
pentagonal planar monopole for digital mobile terminals, bandwidth/modelling 83591
pervasive computing, autoconfiguration/registration/mobility mgt. 108272
pervasive computing, vision/challenges 108270
PiNet, wireless connectivity for organizational inform. access using lightweight handheld devices 108271
PMR, background noise suppressor 119970
PON retrodirective array perform., real component effects 83728
power amp. lin., adaptive predistorter, complex convolution *(Chinese)* 119969
PRN, quasi-sync., perform. eval. 131226
progressive image transm. in memory channels, perform. anal./optim. 106980
QAM systs., suppressed carrier synchronizer with phase jitter 120031
QoS provisioning for mobile tactical commun., network archit. 111569
QoS routing in ad hoc networks 85089
quasi-closed-loop transmit diversity systs., unitary transforms appl. 108743
RAC Motoring Services, mobile data/location devel. 120048
RAKE coherent combining for broadband single-carrier DS-CDMA wireless commun., expt. 74638
random freq. shift channel, differential detect. 131125
RAVEN, Reliable All-informed Voice Networking perform. 85636
Rayleigh fading channel, compressed image commun., trellis decoding of block codes 106093
reactive routing protocols network diversity 108703
reconfigurable radio terminals, continuous-time digital filters for sample-rate conversion *(English)* 107550
reconfigurable terminals, architectural solns. overview 108817
reliable all-informed voice networking syst., perform. 111584
reliable mobile multicast protocol 74861
reliable mobile multicast protocol for mobile IP networks 95862
RF integrated inductors for MMICs, mobile commun. handset appl. *(Japanese)* 80319
RF UWB helmet antenna, develop. 105872
RF UWB vest antenna 105855
Rician static fading multiple-antenna wireless channel, min-capacity 128943
RLS systolic array proc. 79941
road traffic accident risk of car drivers during mobile telephone use 78554
RSVP, resource reservation with pointer forwarding schemes 95888
satellite channel, fig. of merit for interleaver depth eval. 108658
satellite shadowed Rician fading channels, multitone jamming effect 131127
scalable/error-resilient/high-perform. video commun. in mobile wireless environ. 95042
SDMA for mobile multihop broadcast PRN 107846
sectorized proximity location mgt. 97009
self learning video filters for wavelet coded video streams 84462
self-organizing self-healing wireless networks 85774
sens. inform. networking archit./appls. 108274
separable dimens. subspace method for joint sig. freqs./DOAs/sens. mutual coupling estim. 107392
service-creation obj. based framework 96108
SFH SS commun., equalization/decoding 108674
SHAMAN, distributed mgt. appls. environ. 130680
site security, wireless integrated sens./proc./display networks 106799
smart antenna base stations with dyn. slot allocation, forward-link capacity 108810
smart antenna radio networks, dyn. spatial channel assignment simul. 119989
smart appliances design 109826
SNR scalable transcoding for video over wireless channels 95120
software defined radios, Waveform Application Development Process 108700
software radio, adaptive access technol. 85545
software radio, mode switching/QoS issues 131208
space-time block codes for four Tx antennas 72861
space-time coded systs., iter. MLSE 83877
space-time transmit precoding with imperfect feedback 117948
spontaneous networking, appl. oriented approach to ad hoc networking 74842
successive interf. cancellation with SISO decoding/EM channel estim. 105804
successive-decoding-type multiuser receivers, bandwidth-efficient multiple access 74788
superposition coded modulation for unequal error protection, design 128991
tactical commun. systs., architectural framework 111560
TCP over heterog. networks, FDA base station flow control scheme 119300
TCP perform. improvement over wireless links 73898
TCP perform. over contention based wireless multi-hop network 85021
TCP Reno and Vegas perform. in wireless ad hoc networks 130450
TCP-IP based mobile radio links, perform. eval. 74751
TD-CDMA based mobile radio systs., joint-detect. techs. comparison 107594
TDD-CDMA receivers, Bayesian multistage interf. canceller for multiuser detect. 105799
TDD/TCDMA real time/nonreal time traffic, channel adaptive scheduling 131274
TDMA narrowband systs., successive CCI cancellation 94060
TDMA slow freq.-hopping mobile radio, service coverage 108660
land mobile radio continued
TDMA/CDMA software-based syst., heterog. multimedia services, traffic pc form. 74643
terminal, polaris. diversity modelling 85693
terminal/base-station antennas, Wroclaw Univ. of Technology study 117835
terminodes, mobile ad-hoc WAN 96451
Terminodes project, self organization in mobile ad hoc networks 74841
terrestrial and satellite mobile network integrat. 85926
terrestrial/satellite intersegment handover, anal./perform. eval. through simu 96506
TETRA security 118012
time-freq.-selective channels, multicarrier syst. 85718
time-varying channels with DPSK inputs, blind DFE 84857
traffic accidents caused by driver use of car phones, react. time meas. 78553
transaction capabilities/CORBA gateway using obj. pool mechanism 130555
transportation systs., rep. identity/virtual VLR based group location trackin 109323
trellis code multiple access, iter. multi-user detect. using, posteriori probabiliti 130155
tri-band vehicular antenna design, land mobile commun. 83559
U-shaped planar microstrip antenna for dual-freq. mobile telephone commu 83644
UAV aided intell. routing for ad-hoc wireless network in single-area theat 85097
UDP/TCP perform. improvement in mobile ad hoc networks using INSIGNI 73987
UHF compact integrated diversity antenna for wireless commun. 83642
UHF indoor propag., simul. using num. tech. 128763
UMTS air interface params., voice packet size/dejittering delay for VoIP ca 119676
UMTS networks EMC problems with Russia fixed service radio relay syst 83412
UMTS-TDD syst., downlink channel estim. 131284
unifying slot assignment protocol multiple broadcast access 108709
Univ. of Bradford mobile telephone dosimetry studies 133075
universal multimedia access from wired and wireless systs. 130975
urban mobile satellite commun., propag. and syst. strategies 74731
USA LMR, FCC freq. refarming 85603
user num. dosimetry for head/hand 133126
user profiles for data recharging 108273
UTRA TDD adaptive multiuser MMSE down-link receiver techs. 108958
variable bandwidth wireless environ., dyn. mgt./adaptive appls. 130366
variant OFDM-CDMA systs. universal discrete model and lin. alg. representatio 85899
vehicular speed response PLL using sq.-law ccts. *(Japanese)* 74793
VHF band, EMC between mobile services/TV broadcasting, practical expe iences 83413
VoIP private intranets for crit. commun. 119505
VPN, nomadic users support 96491
W-CDMA blind adaptive antenna array beamforming scheme 108924
W-CDMA bursty data traffic, rate guarantee and fair access support 130446
W-CDMA channels, multimedia transm., resource allocation with adaptive Qo 85384
W-CDMA mobile network videotelephony, decoded video quality 96523
W-CDMA receiver, DSP ultra low power implement. 74678
W-CDMA reverse link, coherent adaptive antenna array diversity/SINR-base fast transmit power control 74639
W-CDMA single-chip IF transceiver IC, dyn. range variable gain amps. 13126
W-CDMA UTRA radio interface, tree random access protocol with priorit resoln. 84919
waiting time distribs. of dispatch and interconnect traffic in land mobile trunkin syst. 85646
WCDMA, look-direction downlink-beamforming *(English)* 107413
WCDMA, space-time eigenRAKE/downlink eigenibeamformer, long-term/short term channel props. 74666
WCDMA channel decoder, VLSI design/implement. 120072
WCDMA single chip high speed channel decoder, design/implement. 94331
WCDMA systs., indoor antennas meas. 83512
WCDMA UTRA uplink, joint demodulation with smart antennas *(English* 106069
wideband meas. of time-variant indoor radio channels, moving scatterers impac *(German)* 128765
wireless access networks, load-balancing routing 119428
wireless ad-hoc network, spiral-fat-tree-based on-demand multicast protoco 95920
wireless ad-hoc sens. networks, coverage problems 130704
wireless batt. powered device, very high bandwidth, SOC solns., compiler techs 96478
wireless commun., efficient anonymous channel protocol 73889
wireless commun. systs., SDM algms. 108956
wireless commun. using high altitude long endurance aeronautical platforms 108950
wireless handheld terminals, spatial/polariz./pattern diversity 119937
wireless Internet, universal mobility challenge 96090
wireless mobile commun., technol. develop./socio-economic issues 85595
wireless network simul. with detailed propag. models 85642
wireless resource mgt. using GA for mobiles equilib. 130584
wireless voicemail data retrieval, advanced integrated archit. 108085
wireless/wired subscriber access 74466
WLANs, RF power/MAC combined tuning 130736
WWW contents adaptation to terminal equipt. limitations *(German)* 74303
Youngster project, focusing on mobile world future users 85609
Youngster project for mobile users access to location-aware services 85610
zone routing protocol, query control schemes perform. 119268
AlGaAs-InGaAs-GaAs power PHEMT, 1.2 V operation for PHS handset appl 69118
GaAs microwave FET LNAs, portable radio commun. equipt., dyn. range estim 102699
GaAs mm-wave MMICs, BCB thin film layers, automotive radar and wireless commun. appl. 91304

Landau levels
antidot lattice, QHE, 2DEG nonlocal resist. 80846
narrow-gap semicond. QW, dielec. response in mag. field 80819
$Al_xGa_{1-x}As$ parab. well, QHE 80839
GaAs quantum wire superlattice, δ-doped, QHE, SdH oscills. 91772
n-GaAs/Al jns., Schottky barrier, tunneling spectrosc. 103171
$GaAs/Al_{0.33}Ga_{0.67}As$ 2DEG, spin-depend. transport 103107
GaAs/AlAs Landau-quantized superlattices, Monte Carlo simul. of minibands cond. 80842

dau levels continued
GaAs/AlGaAs MQW, 2D electrons spin polariz., ^{69,71}Ga NMR meas. 115419
n-GaAs/Au jns., Schottky barrier, tunneling spectrosc. 103171
GaAs-based superlattices, magneto-miniband transport, intense THz irrad. effects 103139
nAs/GaSb QW, 2D electron-hole syst., hybridization 126180
nAs/GaSb electron-hole syst., insulating state in mag. field, edge effects anal. 80792
Si/SiGe modulation-doped QW, magnetoresistivity 115388

gmuir-Blodgett films
see also molecular electronics
anisotropic polymer waveguides, second and third order opt. procs. 116708
nzopolymers/cadmium stearate mixed LB films, opt. storage 71226
bacteriorhodopsin/p-Si heterostruct., SPV spectrosc. 102855
4-t-butyl-CuPc-PODT mol. composite material, gas sens. appl. 97428
hemFET gas sens., sensit. and fab. using LB tech. *(Chinese)* 120996
conf., Nanomolecular electronics, Kobe, Japan (Dec. 2000) 100445
conf., Scanning probe microsc., Nizhny Novgorod, Russia (Feb./Mar. 2001) 89546
decacyclene LB film light-emitting devices, AC/DC response 93387
disperse red 19 mixed LB films, opt. storage 116594
N-dodecylacrylamide/tert-butyl-4-vinylphenyl carbonate copolymer LB film, nano-lithographic imaging 81149
erbium bis[octakis(octyloxy)phthalocyaninato] complex, gas sensitive LB films 97509
frictional electrification between polymer films/LB layers 83111
functionalized polydiacetylene, mol. recogn., fiber optic biosensors 75686
hemicyanine in LB multilayers, third order NLO props. *(Chinese)* 93291
hemicyanine/arachidic acid Y-type interleaving LB multilayers, mol. reorientation *(Chinese)* 93788
8-hydroxyquinoline lanthanum LB film based double-layer EL devices 104990
lanthanide bisphthalocyanine LB film sens. array, olive oil aroma 97539
lin. copolysiloxane LB superlattice, substituted aromatic acid side chains, dielec. props. 104236
methylviolet-C_{18}/rhodamine-C_{18} dye-sensitized p-CuSCN photoelectrochem. cell 134341
N-octadecylbenzidine-TCNQ semicond. LB films, prep., elec. props. 115343
organic LB film deposition, electronic control syst. 120660
palmitic acid LB film, gas sens., pH effect 97515
poly(3, 6-N-2-ethylhexyl carbazolyl cyanotere-phthalidene), LB films, opt. props. 121082
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole transport layers 105000
polymeric LB film incorp. LED, operating lifetimes 116990
poly[(2-methoxy-5-(2'-ethyl-hexyloxy)phenylene vinylene)] Langmuir-Schaefer films, PEC appl. 90570
porphyrin derivative LB film based LED, elec. field redistribution, EL/TOF study 127990
porphyrin derivative LB film based light-emitting devices, transient charact. 93382
PVDF LB films, 2D ferroelec., phase transits., SHG obs. 81698
SNPP and SMAP as materials for LB films for nonlin. optics 71201
tea aroma, opt. sens. using n-tetraphenyl porphine manganese (III) chloride LB thin films 109592
Tr complex, octakis(octyloxy)phthalocyaninato-LB film, NO_2 gas sens. 109777

gmuir probes
see also plasma diagnostics
ATON-thruster plasma accelerator, perform. charact. 76819
ionos., probe surface contamination effects 122674
ionos., rocket sounding, DEOS flight F06 122675
multi-probe syst. for atmos. press. arc plasmas charactn. 124140
space plasma Langmuir probes, antenna-plasma coupling effects 133303
tunable pass. external RF filter, high imped. 97768
BN cubic films, rf magnetron sputtering, ion bombard. effects 90241
CF_4 plasma discharge, 2D PIC-MCC model, diagnostics 92024
Si thin films, ECR plasma CVD, plasma param. effects 124879
Si wafers, surface passiv., plasma CVD SiN films 126401
Si:B pulsed plasma doping syst., plasma charactn. 115578
SiH_4, plasma CVD, VHF-excited plasma charact., ladder-shaped electrode 114361

guage translation
commun. sci. for indiv./society, social systs. past/present/future 96074
pattern recogn., conf., Spain (2000) 67413
pervasive speech and natural lang. technol. 106384
RWTH large vocab. speech recogn. syst. for spontaneous speech *(English)* 73097
speech recogn. syst. accuracy for professional translators 106407
speech-to-speech translation, contextual reasoning 106406
spoken Chinese lang. translation, time constituents 73108
spoken document retrieval for langs. of Hong Kong 84053
Verbmobil MT syst., fault tolerance through redundancy *(German)* 73000
Verbmobil syst. stat. translation module *(English)* 73098
Verbmobil treebanks *(English)* 73001

guages
see also formal languages; natural languages; programming languages; specification languages
tech. sign lang. for deaf engineers 124450
Vigenere cipher, interactive cryptanalysis algm. 72984

guages, formal *see formal languages*

guages, programming *see programming languages*

lace equations
3D Galerkin integrat. without Stokes' theorem 68061
BEM for Laplace's eqn. without num. integrat. 101093
cellular nonlin. networks for minimization of functionals, appl. examples 91166
difference ϕ-Laplacian problem with nonlin. functional boundary conditions 90128
dual-dual mixed formulation for nonlin. exterior transm. problems 114185
EM fields Poisson integrals, Laplacian 3D FEA solns. 128640
inhomog. problems, magnetostatic field, BEM 83141
inverse problem for acoustic wave eqn., probabilistic approach to approxs. and uniqueness 101113
inverse problem for Laplace's eqn. in thin strip, stabil. of solns. 114126
lin. EHD charged particle source, elec. space propulsion 110223
loop-gap resonator, quasi-static num. anal., mag. field distrib. 102563
mag. thin film head, mag. transducer, Kerr imaging 127367
meshless regular hybrid boundary node method 124735
num. reconstruction of internal states by boundary meas. for Laplace eqn. 101107

Laplace equations continued
redundancy of Laplace estimator based on finite window for Markovian source *(Japanese)* 83777
rot. elec. machine simul., discontinuous FEM & Galerkin method 88672
sing. in BIEs for Laplace eqn., Joukowski trailing-edge conjecture 114150
unbounded 2D scatt. problems, soln. by cylind. method of lines 72219
wavelet transforms, Green's fn. methods 90196
CdZnTe segmented detectors, edge and corner effects on spectra 132383
CdZnTe segmented detectors, edge/corner effects 121482
GaAs X-ray pixel detectors, simulated and expt. spectrosc. perform. 98006

Laplace transforms
3D scalp spline Laplacian mapping from EEG, simul. & expt. 87397
3D time domain boundary element formulation to wave propag. in poroelastic solids 79113
adaptive regularized noise smoothing of dense range image using directional Laplacian operators 118280
algms. for efficient and accurate edge detect. and localization 107141
B-spline soln., num. algm. 114020
Bayesian anal. for hazard models with nonconstant shape param. 114201
bivariate reliab. and availability modeling 89922
data networks, M/G/1 state-depend. type queueing anal. for congestion control 130315
DC-DC switching converters anal./design, symbolic approach 88973
digital image enlargement, Laplacian pyramid representation method 106502
dipole antenna, transient response using summation approach in tech. 72588
diversity systs. over generalized fading channels, av. outage duration 85483
elec. cct. noncanonical state eqns. soln. 68494
fast multipole boundary integral eqn. method to crack problems in 3D 68059
finite difference scheme on non commutative group 114142
flow graphs, feedforward, Markov-modulated 78868
fringe skeletons extraction, Laplacian transform., robust algm. *(Chinese)* 106803
FT for quadrature efficiency improvement of Laplace distrib. 114200
hand, imagined movements, recogn. from EEG, surface Laplacian/lin. classifiers 110629
high-resoln. EEG, realistic geom. spline Laplacian estim. tech. 98189
image fusion by steerable pyramid 84589
impulse response network, synthesis procedure 79497
inductive cond. meas., model selection, parametric inversion 114497
lin. integral eqns., weakly stable method 101109
lossy transm. lines, triangle impulse response 117724
M/G/1 queue length distrib., delay single server vacation 124462
M/M/1 queue in semi-Markovian environ. 119650
Markov procs., resolvents/Laplace transforms eval. by LP 78811
(max, +)-lin. systs., Poisson input, joint Laplace transform 78789
MMCPP/GE/c queue with generalised service time distrib. 130318
multiexponential transient spectrosc., iter. deconvolution 84739
natural freq. extraction from multiple freq. response sample sets using fitting error 94022
paired transient proc., characts. estim., input action delay 75340
parametric lossless image compressors 84455
perfectly conducting slotted bicone, transient excitation 83545
periodic PWM invertors, mixed p-z anal. approach 78003
pixel-level image fusion scheme, enhanced visualization, Laplacian pyramid decomp. 95534
queueing networks, Poisson driven (max,+) lin. systs. 89973
reactance network synthesis having step response described by sinusoid with given envelope 79498
redundant syst. with nonrepairable units/common cause failures, SPICE reliab. anal. 124427
reliab. syst., general shock model 89915
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
sing. superlinear BVP for 1D p-Laplacian, upper and lower solns. method 101072
SPICE simul., freq. warping/chaotic behaviour generation 90630
step-type converters, transient/quasi-steady-state procs. anal. *(Russian)* 123632
transm. line, pulse sig. propag., inverse Laplace transform 83466
unbounded dissipative media, transient field, FEM 83074
US sig. detect., useful echoes ident., parallel comput. 107588
vol. decimation using eigenvalues of Hessian matrix 95562
voltage pulses distortion in coaxial cable, UHF device power supply *(Russian)* 96343
weakly guiding opt. fiber propag. const., eigenvalue condition 127625
Cu periodic reverse electroplating, waveform shape/freq. optim. 68351
Li/polymer cell composite electrodes, variables separation method 99892
ZnO varistor-based power syst. protection modelling 112180

laptop computers
see also notebook computers
16 bit snow DAQ syst. interfaced with lap top PC, design 76841
Bluetooth semicond. devices for short-range radio broadcasting *(German)* 85649
capacitor technols. for portable electronics appls. 80437
digital music performers, Japanese, laptop performers, CD designers and techno artists 75334
education wireless laptop classroom implement. 119738
high-resoln. LCD, at. beam alignment 82235
LCD backlight inverter topologies anal. 134249

large scale integration
see also ULSI; VLSI
3D chip stack technol. 81408
3D stacked LSI struct., packaging technol. 113506
AC biased audio recording LSI cct., automatic level control *(Japanese)* 97111
ASIC mfg. lines defect inspection method *(Japanese)* 69332
autonomous decentralized low-power syst. LSI using self-instructing predictive shutdown method 125386
biodegradable LSI packing materials *(Japanese)* 78725
buildup struct. CTE mismatch, reliab., thermal cycling, FEA 113679
capacitive fingerprint sens. LSI, pixel-level auto. calib. cct. 131988
cell phone, LSI packaging, 3D lamination layer *(Japanese)* 113693
CMOS device downsizing below 0.1 μm, problems/solns. 104090
CMOS differential interfaces, shared data line tech. for doubling data transfer rate per pin 114855
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
CMOS LSI jn. technol., conf., Makuhari, Japan (Dec. 2000) 113209
CMOS LSI multi-level interconnects, scaling guidelines 127050
CMOS op amp design for mixed sig. LSIs *(Japanese)* 70314
CMOS power-on reset pulse generator, LV cct. 101852
CMOS RISC μP cache memory redundancy tech., inverse-gate-electrode flash 125566

large scale integration continued
cooperative voltage scaling between OS and appls. for low-power real-time systs. 114784
DAVIC-compliant digital commun., high-speed coded QPSK transmitter LSI 109344
DC integrat. level anal. of low-Vdd CMOS cct. using worst-case noise margin map 127055
deep submicron LSI design, parasitic wire capacitance *(Japanese)* 81493
design, education, IP database *(Japanese)* 89632
digital-to-radio converter for software radio 74579
electron beam lithog., present state and prospect *(Japanese)* 81139
embedded trench DRAMs, sub-0.10-μm, hemispherical-grain tech., LOCOS collar 102124
fab. proc., Taguchi methods 126617
ferroelec. materials, phys. insights on imprint and appl. to functional memory 70474
flip-chip BGA package, solder bump, thermo-electromigration 113654
flip-chip interconnection, micro-ball wafer bumping 113653
fractional-N type PLL freq. synthesizer LSI for mobile commun. syst. 91331
FRAM retention anal. method based on memory cell read sig. voltage meas. 102162
generic RC trees, crosstalk noise estim. 125186
GSI, interconnect and substr. struct. 81419
H.263+ video encoder LSI for face focused videotelephony, syst.-MSPA design 74487
HDTV, HDD recording/playback, transport stream proc. LSI 120546
HDTV advanced multimedia proc. LSI 120548
HDTV CMOS single chip video proc. 120544
high quality analog CMOS and mixed sig. LSI design 81507
high-productivity stud bump bonding mounting technol. *(Japanese)* 91516
IEEE1394 syst. simul. environ. and design of link layer controller 101960
Implas LSI microchip, nerve stimulation, body fn. control 122337
inter-chip opt. interconnection, planar photonic cct. *(Japanese)* 117025
IR FPAs, systs.-on-a-chip, CMOS technol., design tools 109635
J-CDMA/AMPS appl. IF-baseband CMOS receiver, 110-MHz 108833
Japanese BS digital broadcast receiver 120545
laser-SQUID microscopy for nondestructive nonelectrical-contact IC failure anal. 81497
layout with diagonal edges, resizing algm. 81490
LCD driver LSI, COF technol., reel to reel method *(Japanese)* 121125
logic/syst. LSI, front end of line technol., review 115506
low power LSI power-supply scheme, multi-Vt SOI CMOS technol. 127036
merged DRAM/logic LSIs, high-perform./low-power cache archits. *(Japanese)* 68802
micro stud bump, low-impact high-speed bonding technol. *(Japanese)* 91515
miniature mag.-field probe for HF currents meas., LSI and PCB testing 86920
MOSFET LF noise meas. for mixed-sig. LSI & SoC, noise model *(Japanese)* 81512
MPEG2 single chip AV decoder, efficient memory arbitration algm. 118544
MPEG4 multimedia syst., CMOS LSI for V_{DD}-hopping, real-time feature 102245
MPEG-2 HDTV encoder, multiple enhanced SDTV encoding LSIs based develop. 118538
multi-conductor transm. line, steady-state anal. 92455
nm-level fine struct. anal. methods *(Japanese)* 116006
nMOS/pMOS gate length correl. effects on accuracy of stat. modeling 126618
OE-COF,optoelectronic chip on film packaging technol., flip-chip bonded devices *(Japanese)* 113539
OFDM transceiver, FFT LSI design method, current mode cct. 85594
opt. interconnection as IP macro of CMOS library 130716
optoelectronic chip on film packaging, technol. and perform. 117028
pipeline A/D converter, high-speed low-power area-efficient, CMOS technol. 68862
portable multimedia terminals, motion compensation block IP, embedded DRAM macro 129657
profilometers, ultrahigh accurate flatness and 3D meas. for LSI wafers and aspheric lenses *(Japanese)* 93945
RTL partial scan design syst. *(Japanese)* 79767
scan and data driver LSIs for high-resoln. and large-size AC PDPs 97736
SCF, PSRR charact., leapfrog filter, equal level diag. design 125598
semicond. laser in 21st century 117194
silica-based thermo-optic switches *(Japanese)* 93447
single-chip Q-VLMS MLSE equaliser LSI, 100 Mbit/s, TDMA mobile radio 108653
smart pixels, appl. to opt. interconnects and image proc. 117041
SoC, substr. RC network model, substr. coupling noise, triple well CMOS 70297
SOI-BiCDMOS single-chip automotive LSI, air bag controller, RISC CPU 89411
spreading resist., lapping bevel angle, meas. accuracy effect *(Chinese)* 70265
ST, PERL package for LSI simul. and test environ. 101975
STARC, Semiconductor Technology Academic Research Center, high-level LSI design stages 114691
stud bump bonding flip-chip technol., chip-on-flex develop. 69363
sub-50 nm gate length transistors and interconnects *(Japanese)* 115905
time-multiplexed RS decoder FEC codec LSI for digital opt. transm. systs. 109089
ultrahigh thermal cond. module, direct solder-attach, C4 reliab. 113678
VCSEL-SLM integrated optoelectronic devices for parallel computing systs. 105046
yield anal. based on crit. area model *(Japanese)* 116003
EG-2 422PML video, audio, and syst. encoder, 64-Mbit embedded DRAM, portable HDTV encoder 107111
recording/playback MPEG-2 MPHL single chip decoder 120579
Al/ZrN/Zr trilayered film on Si, seq. single-oriented growth, contact syst. prep. 81127
Au-Sn(Ag) micro-metal bonding technol., LSI package 113532
CO_2 laser atm. relay digital commun. syst. 120188
Cu CMP film, RT direct bonding, bumpless interconnection 113630
InGaAs quantum wire honeycomb network, BDD quantum LSI, MBE growth 115972
PZT:Nd ferroelec. thin film capacitors, sol-gel coating, LSI 102777
SiN MEMS membrane profile appl. to condenser microphone 92554
SiO_2 CVD film, Al interconnection, laser ablation *(Japanese)* 83062
SiON-based CMOS, heavily NO nitrided, analog charact. for mixed analog/digital LSIs 127048
$SrTa_2O_6$/SiON buffer layer, ferroelec. gate FET's fab./integrat. reviews 103838

large-scale systems
see also flexible structures; hierarchical systems; interconnected systems
analog networks, regularity-based hierarchical symbolic anal. method 79542
asynchronous and decentralized estim. 131900
available operation of diversified network systs., math. theory 130476
complex computer network model, power spectrum and 1/f type power 74292
complex distrib. load flow, augmented matrix-based control scheme *(Chin* 111908
complex higher-order systs. synthesis using chain fractions 101639
complex power syst. cascading faults, reliab. eval. studies *(Chinese)* 1227
complex thermal cogen. plant operation optimisation 88562
data streams, signature-based methods 119810
electronic design, component selection, timing diags. eval. and comparison, a of fuzzy logic 68515
electronic voting in large-scale distributed syst. 106292
FACTS SSR computational anal. using sample-data model *(Chinese)* 7730
fault detect., decentralized filter using estim., games 67660
GA-based power transm. expansion planning 77299
groups of simul. on cluster of workstations, appl. to storage area networks 85
limit reliab. fn. of large series-parallel systs. with assisting components 100
magnetostrictive actuator, approx. inversion of hysteresis 81924
moving obj. complex hypothesis tracking 118941
multi-player prisoners dilemma game co-evol./cooperation 89975
MV radial distrib. network reliab. eval. algm. *(Chinese)* 77328
name mgt. archit. based on obj. rels. in large-scale distributed systs. *(Japan* 74365
neural nets, packet flow routing control, mean field approx. 107659
no-cloning and no-imprinting theorems, quantum cryptography 106246
nonlin. OPF problems, fuzzy corrector terms 99267
Petri nets, stochastic, large, perform. eval., divide-and-conquer approach 124
power syst. stabilization passivity-based output feedback control 88349
power syst. stabilization using plane-type fuzzy control method *(English)* 88
redefining systs. design 124295
VOD large-scale interactive syst., distributed server perform. 109376

large screen displays
21st century FPD technol. *(Japanese)* 121122
AC PDP, addressing time, single scan syst. 75804
beam steering device for large-area displays 109904
cognitive benefits of displays, C^2 syst. expt. 97742
colour PDP module, NEC product lineup and technol. 121104
digital cinema develop., large screen projection displays 86892
electron gun for large screen color picture tubes, beam forming region and p focusing lens *(Chinese)* 125979
FED, widescreen full-color display 97753
fighter jet cockpits large screen display 99109
HDTV projection display for ATSC std., 61 in., large neck CRT 86327
human factors of displays, mil. appls. 97698
integrated command environ., large screen displays implement. guidelines 991
LC rear-projection display with aspherical mirror projection syst., devel 116831
LCoS liq.-cryst.-on-Si microdisplays, develop. & appls. 121100
micromirror thin-film array for inform. displays 97759
multimedia TV syst. archit. using digital micro mirror array 120531
PDP drive syst., Plasma AI, image quality 86890
PDP HDTV, color temp. improvement, driving scheme 120543
PDP technol. for large size TV screens, future perspectives 132099
plasma display, high-resoln. interlaced addressing 86841
scan and data driver LSIs for high-resoln. and large-size AC PDPs 97736
TFT-LCD panel, air-bridge type gate-data line-crossover, sig. delay 75803
MgO films via sol-gel proc. for appl. to large-size PDPs 97608
Si, microcrystalline thin film, large-area polysilicon TFT-LCD 90251
Si technol./devices, develop. 103948

laser ablation
see also pulsed laser deposition
3D direct laser based micro-structuring, F_2 lasers 71386
Advanced DV-MULTI build-up packaging substr., proc./struct. 124343
biofactory-on-a-chip technol., microfabrication proc. 97406
biotissues, nonstationary mass removal by laser ablation, Doppler diagnost 122047
conf., high power laser ablation, Santa Fe, NM., USA (April 2000) 124171
cornea, human, laser ablation, fluoresc. surgical feedback 98633
diamond, direct-write laser micromachining 128619
diamond ultra hard film, CVD, maskless patterning, structuring 105631
dielec., ultrafast laser materials proc., opt. breakdown modelling 83057
dielec. materials, laser ablation using high-energy femtosecond oscillato 128185
DOE, excimer laser fab., low cost 71459
DOE, rapid prototyping, packaging appls. 128576
femtosecond laser micro-machining near air-ionization threshold 93922
femtosecond laser micromachining appls. for EO components 117555
fine line HDI PCB fab. using UV-laser photolithography 102817
flip chip assembly, bumping, laser-driven release proc. 80537
Gaussian beam irrad. laser shock phenom., mol. dyn. anal. *(Japanese)* 9392
glass ceramic green sheet, micro-via proc., Nd:YAG laser ablation *(Japanes* 83061
high-av.-power FEL for materials proc. 128594
high-power pulsed LD, damage induction & threshold level detect. 93704
IC packaging for high perform. memory 124328
impulse space propulsion, ablation studies 133258
intell. 3D microstructuring with UV-laser syst., flexible mfg. 70367
large scale LCD panels, proc. using scanner-deflected UV-laser radiation 975
launching, of objs. into LEO, optimum params. 98926
LD beam collimating micro-lens, laser ablative shaping 127823
LEO payloads launching with ground-based laser, simul. 111364
light sails, laser-pushed in vac., expt. investig. 133255
metal plastic flow due to laser ray thermomech. effect, MEMS 81615
metals, laser ablation thresholds with short laser pulses 93921
metals, micromachining with femtosecond 250-nm laser pulses 93925
micro-optic phase/DOE, excimer laser ablation 71385
micro-tool, 3D struct. mfg., laser ablation 127126
μBGA packaging for high-perform. RDRAM/SDRAM appls. 125497
PETP-polymer fibres, surface structuring by UV laser irrad. simul. 72133
photoinduced nanofabrication, near-field exposure from ns laser pulse 10370
phthalocyanine/perylene derivative bilayer, photo-reflectance/laser-ablatio props. 115351
PMMA, femtosecond laser micromachining, struct. 127108
PMMA, surface microchannels, hot embossed/UV laser ablated, chem. mappin 127112
poly(methacrylate)/poly(acrylate)/polystyrene derivative films, 146 n photodegradation 101514
polyimide, femtosecond laser micromachining, struct. 127108

r ablation continued
polyimide film, laser ablation lithog., diffractive phase mask 126537
polyperinaphthalene thin films by laser ablation of PTCDA/Co mixture target, elec. cond. 101518
propulsion, repetitive pulse ablation, momentum coupling efficiency 133253
pulsed laser ablation, microengineering appls. 128595
quartz cryst. wafer, ArF excimer laser ablation, oscillating freq. control *(Japanese)* 79612
retina implant for stimulation of ganglion cells, laser microperforation 122333
soft X-ray lasers, spatially coherent tabletop, mW av. power, appl. 117088
stainless steel, hole drilling, laser ablation 72134
steel surface laser ablating, flexural wave generation 72139
surface nanostructuring, laser pulses, field enhancement effects 83053
surface treatment by excimer laser 126332
transcutaneous drug delivery, model, diffusion rate 76608
transparent materials, enhanced laser ablation, review 128593
transparent materials, laser ablation using UV fs-pulse irrad. 104209
two-phase syst., model, laser ablation 93949
ultra-short laser pulses, machining, indust. appls. *(English)* 128616
ultrashort laser pulse ablation, on-the-fly depth profiling 93924
ultrashort-pulsed laser micromachining, acoustooptic device ang. dispersion compensation 117570
UV laser ablation, plasma/plume effects, CCD photography 105654
UV laser ablation plasma elec. current interruption, inductive energy storage appls. 134414
vapour plume, laser beam transmittance meas. 117565
Ag nanoclusters, form. by excimer-laser interact. with Ag-exchanged soda-lime glass 128603
Al, anodized surface, laser cleaning study 128598
Al, femtosecond laser pulse interact., damage and ablation thresholds 93926
AlN, KrF excimer treatment 72125
AlN ceramic, material proc., fs/ns/μs laser ablation 125082
Al_2O_3-TiC ceramic columnar topography form. on excimer laser ablation, TEM anal. 72127
Ar^+, Ne-like, capillary discharge-pumped soft X-ray laser 128093
Au-loaded inverse polystyrene-block-poly (2-vinylpyridine) micelles, excimer laser ablation 83039
$Ba_{0.5}Sr_{0.5}TiO_3$ paraelectric film phase shifter 69247
CO first-overtone laser, multiwavelength pulsed operation 128049
CO_2 laser ablation proc., polymer proc. 128610
Cu silicide nanocrystals in Si nanowires 79442
CuBr high-power laser, precision materials proc. appl. 117569
GaAs, laser heating, thermal melting threshold, ultrafast XRD 72118
GaAs nanowires, oxide-assisted growth, opt. characts. 69662
GaN, femtosecond laser machining 70357
GaN films, RF reactive sputtering, laser annealing 91940
GaN films, etching with pulsed KrF excimer laser 69919
GaN, nanowires, oxide-assisted synthesis, microstructs., transm. electron microsc. charactn. 126604
GaN surface ablation by fs. pulses, accumulation effects, AFM obs. 126334
Ge, laser heating, thermal melting threshold, ultrafast XRD 72118
Ge substr., SiO_2 particles dry laser cleaning efficiency, meas. and modeling 103410
InP, femtosecond-pulse laser machining, surface damage thresholds 93920
InP wafers, ultrashort-pulse laser ablation in air 81074
N solid films, ps laser photolysis at cryogenic temp. 72128
Nd:YAG Q-switched UV laser, perform. limits, high-throughput micromachining appls. 128188
Nd:YAG laser precise microstructuring, metallic surface wear props. improvement 72121
Nd:YAG laser-induced vap./plasma plumes, shadowgraphic/interferometric obs. 105627
NiP substr., SiO_2 particles dry laser cleaning efficiency, meas. and modeling 103410
O_3 collimated hyperthermal beam, enhanced oxid. of Si 92014
Si cryst. thin-film solar cells on laser-perforated SiO_2 barrier layers 100090
Si, femtosecond-pulse laser machining, surface damage thresholds 93920
Si micromachining, effect of energy above laser-induced damage threshold 105634
Si nanowires, surface reactivity 80817
Si, porous, buried channel waveguide, direct laser writing 104739
Si single cryst. surface, laser evap., conical microstruct. form. 105645
Si solid substrs., laser ablation in water-confined environ. 105633
Si substr., SiO_2 particles dry laser cleaning efficiency, meas. and modeling 103410
Si wafer, small W particles removal, laser-induced plasma shock waves 81057
Si wafer surfaces, laser-assisted particle removal, opt. field enhancement effects 81073
Si wafers, spherical silica particles, laser cleaning eff. 81070
Si:Fe, ablation plasma ion implant. 69824
SiO_2 CVD film, Al interconnection, laser ablation *(Japanese)* 83062
Sn-Ag(-Cu) eutectic solder joints, non-composite and particle-reinforced composite, creep 67536
Ta_2O_5 sub-micron period grating struct., interferometric excimer laser ablation 72126
Ti:sapphire regenerative amplified femtosecond pulsed laser, sub-micron-machining, Rowland ghost effect 72116
Ti-6Al-4V metallic target, pulsed Nd-YAG laser interact., keyhole form. 83043
TiN, femtosecond laser micromachining, struct. 127108
YBaCuO films, microstrip resonators, quality factor 69019
$YBa_2Cu_3O_x$ HTSC films, pulsed laser ablation, hot filament effects anal. 125010
Zn-coated C steel plate, ultra-short pulsed Nd:YAG laser-ablation surface cleaning 72143

ser ablation deposition *see pulsed laser deposition*

ser accessories
see also laser mirrors
3 mm quasioptical resonator, EM field and energy distrib., Matlab software package anal. *(Chinese)* 105403
10 MW compulsator for high power solid state laser beams *(Chinese)* 123631
antirefl. film coating on sapphire window, high power laser appls. *(Chinese)* 127895
ball lens-conically lensed fiber scheme for LD coupling 93029
BCB diffractive struct., fab. for high-power laser appls. 104602
beam-shaping CGHs for coherent/partially coherent light 105586
binary DOE for laser beams strength combination *(Chinese)* 82724
cascaded microchannel cooling of high power LD bars 117328
circulating solid state laser beam control by holographic gratings 83013
coherent/aberrated laser beam quality improvement by using optimum/smooth pure phase filter 82738

laser accessories continued
cpd. refr. lenses, high-quality imaging optics for X-ray FEL 82715
decoupling NLO elements for powerful I_2 laser 128462
DFB LD, gain-switched, pulse generation, opt. filtering effects 82661
high av. power diode laser arrays with water cooler, thermal anal. *(Chinese)* 117253
diode laser extended cavity with EO prism, broadband fast freq. tuning 82757
DOE, excimer laser fab., low cost 71459
DOE external cavity diode laser, single mode wavelength tuning 105399
DOE for LD divergent angles improvement, design, fab. and testing 93694
DOEs transfer into GaAs, direct-write electron-beam lithog., VCSEL integrat. 105400
external cavity LD with cascaded fiber Bragg gratings, dual-mode operation *(Chinese)* 117252
Faraday rotator design for high av. power lasers 127852
FEL reflective optics, metrology instrumentation 82700
femtosecond Bessel beam generation using thin-film microoptics arrays 104793
femtosecond Gaussian beam focusing by lenses *(Chinese)* 105413
fiber grating external cavity LD, all-opt. wavelength converter *(Chinese)* 117250
fiber semicond. ring lasers, all-opt. wavelength conversion 117275
fibre Raman ring laser, multi-wavelength CW 1.55 μm operation 82521
glass ceramic laser radiation controlling elements, EO sensitivity 128479
GRIN lens for LD beam collimation and shaping 93184
high av. power compact discharge X-ray laser polariz. elements 128362
high av. power laser Faraday rotator design 117326
high current pulse capillary discharges, driver design 134146
high power dens. solid-state laser, opt. components wavefront PSD meas. *(Chinese)* 71868
high power diode lasers with external resonators, improved beam quality 71821
high power laser windows, 3D temp. distrib., thermal lens effect *(Chinese)* 117327
high power single-mode diode DFB laser with curved-grooves diffr. grating 71801
high power solid state laser static phase control elements 93692
high-efficiency multilayer dielec. coated gratings, struct. params. optimisation 127891
high-energy chem. laser press. recovery syst., ejector efficiency *(Chinese)* 122745
high-power diode lasers, beam shaping techs. 93705
high-power double-layer dielec. hollow opt. fiber for IR laser transm. 127612
high-power gas flow chem. lasers, press. recovery systs. 105137
high-resoln. femtosecond pulse shaper using LCD 71419
highly reflective boundary vol. phase gratings, spectral selectivity 128357
HV pulse-packet shaper 68661
intracavity phase elements for specific laser mode selection 82709
large-aperture phase-shifting interferometer for PSD fn. meas. 93306
LD bar emission, effective brightness, array curvature correction 71886
LD radiation, high power, fast axis collimation using microlenses 82650
liq. cryst. SLM correction element, laser energy transport adaptive syst. 104822
Mars spacecraft, laser-retroreflector covered sphere 117329
micro-opt. beam transform. systs., flexible microassembly, diode laser bars 104804
micro-opt. components and systs. 116760
MODAN DOE design for laser beam charact. real-time anal. 127875
MODAN-type DOE for transversal laser mode selection, commun. appls. 127874
multimode fiber Bragg grating fab. for narrow-spectrum VCSELs 127594
Nat. Ignition Facility, optic spec. rationale 104865
NIF opt. component wavefront meas. instrumentation, init. mfg. results 110024
opt. components, test methods, standardization trend *(Japanese)* 93691
opt. components fab. for NIF laser 104864
pass./act. opt. fibers, pulse propag., fast Kerr-like nonlin. effect 104637
periodic diffractive flat-top generator, excimer laser beam shaping 93693
π-shifted long-period fiber grating bandpass filters for act. mode-locked Er-doped fiber lasers 116881
planar lightwave cct. type variable atten. slope compensator 120150
large plano optics mfg. facility develop. for Nat. Ignition Facility 105404
pseudospark electron beam source for FEL, impedance match *(Chinese)* 71861
pulsed CO_2 laser with long pulse duration, power supply 128122
pulsed Nd:YAG laser power supply adopting zero crossing control method 128217
quartz birefr. Fabry-Perot etalon for Nd:YAG dual-freq. laser *(Chinese)* 71742
refr./diffractive microlens arrays, fab. and perform. study 93182
ruby lasers, with prismatic reflectors, fund. transverse mode form. 105222
self-adapted laser mode filtering photorefr. Fabry-Perot interferometers 127569
semicond. laser, diffractive phase element prod. thick ring-shaped output *(Chinese)* 71876
semicond. laser, relative intens. noise reduction, modulation response using fiber grating 128388
seq. arranged aperture syst., coherent beam focusing 128358
SG-III laser facility, 60 kJ, design, technol. develop. 105215
SLAC linac coherent light source, short-pulse limits 105402
small opt. components for Nat. Ignition Facility, procurement strategy 104866
SOA, waveform distortion suppression using internal birefr. and slope filtering 71807
surface plasma wave Q-switch, principles and charact. *(Chinese)* 105417
UV lasers, indust.-strength optics, appls. 82714
CO_2 Q-switched laser, pulsed beam heterodyne sig. with CdTe electrooptic modulator *(English)* 117067
CO_2 high-power laser, US beamsplitter 116853
CO_2 indust. high-power laser, radially polarized beam generation 82489
CO_2 laser light delivery syst., hollow bent output tips props. 82716
CO_2 long pulse laser, simplified power supply, zero cross switching tech. 71873
CO_2 multifunctional laser with controllable spectral and temporal charact., indust./scientific appls. 82484
Cu vap. laser, pulse repetition rate, metastable state and electron dens. effects 93467
Er-doped broadband fibre amp., gain flattening filters, transm. fn. design *(Chinese)* 71658
Er-doped fiber amp., loop-locked config., gain spectrum eval. 117121
Er-doped twin-core fibre narrow-band filter for fibre lasers 105188
GeO_2-SiO_2 glass hollow waveguide fab. for CO_2 laser transm. *(Chinese)* 104732
KD_2PO_4, wide-aperture opt. elements fab. using rapid growth technol. 105396
KH_2PO_4, wide-aperture opt. elements fab. using rapid growth technol. 105396
KrF excimer TEA gas lasers, excitation discharge, floating particles influence 105131
KrF excimer laser, HV MOSFET switch, high repetition rate operation *(Japanese)* 93695

laser accessories continued
KrF excimer laser, beam shaping and homogenization using multifacet Fresnel-kinoforms 105401
KrF large-scale e-beam-pumped laser output window material chem. resist. 71870
Nd:YAG laser, flash-lamp-pumped, dual-telescopic optics config. 105256
Nd:YAG laser mode shaping DOE fab. 82727
Nd:YVO_4 rods dual-config. resonator, unidirectional operation 82708
Nd:glass lasers pulse power systs., reverse switched dinistors based semicond closed switch 105415
Nd:glass multichannel high-power laser facility, rem. control alignment 105216
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
Nd-doped solid laser with V^{3+}:YAG cryst. high repetition rate pass. Q-switch 71723
O_2-I chem. laser, RF discharge pumped, singlet O_2 generator *(Japanese)* 128117
O_2-I chem. laser, mist singlet oxygen generator 105072
O_2-I chem. laser, multi-guideplate singlet oxygen generator 105071
O_2-I chem. laser with pipe-array jet-type singlet O_2 generator 105080
O_2-I chem. laser with sq. pipe-array jet-type O_2 generator *(Chinese)* 82477
O_2-I discharge chem. laser, $O_2(a^1\Delta_g)$ RF plasma jet generator 105059
O_2-I ejector chem. laser, mixing chamber calcs. 128112
O_2-I laser, gas-phase singlet O_2 prod. using organic ozonides thermal decomp. 105395
PbS QD embedded glass for mid-IR laser Q-switching 71916
PbSe QD embedded glass for mid-IR laser Q-switching 71916
Si dimens. stable ultra-lightweight optics for cryogenic/high-energy laser appls. 82268
$Si_{20}Te_{80}$ amorph. AO cell, IR diode laser radiation appl. 116856
Ti:sapphire femtosecond amp., Gaussian spectral shaping, gain narrowing effect reduction *(Chinese)* 117157
Ti:sapphire mode-locked lasers, carrier-envelope phase stabilization using microstruct. fiber 128196
Ti^{3+}:Al_2O_3 ring laser, spectral filter counterpropagating wave coupling 93567
XeF lasers, C-A transits. pumping using sectioned surface discharge *(Chinese)* 128107
Y_2O_3-ZrO_2 anti-reflective coatings for 1.3 μm LD *(Chinese)* 82717
Yb-doped double-clad fiber laser, high-power tunable narrow line width output 105200

laser annealing *see laser beam annealing*

laser applications *see laser beam applications*

laser applications in medicine
see also photodynamic therapy
2D image space, efficient moving obj. tracking 106506
3D imaging using spherical US wave generated by laser-induced breakdown 98291
3D radiotherapy treatment planning, laser patient outline scanning 122045
acetabula cups, seq. impressions meas., noncontact syst. 122330
act. tracking, basics & appls. 93937
acupuncture points and channels, opt. props. meas./anal. 133014
angioplasty, cardiovascular appls. 111092
biochips, appls. of laser ablation to microengineering 128595
biotissues, nonstationary mass removal by laser ablation, Doppler diagnostics 122047
blood, opt. meas., conf., Amsterdam, Netherlands (Jul. 2000) 78375
blood vessels, photothermal coagulation, OCT, modelling 87830
bone tissue, pathological changes diagnostics, polariz.-correl. anal. 76407
brain, O_2 saturation from time-resolved diffuse reflectance meas. 87556
brain tumours, laser PDT appl. 87851
breast tissues, porcine, laser interstitial thermotherapy 98684
carotenoid antioxidants in living human tissues, reson. Raman detect. 122042
chicken breast muscle, gradual CO_2 laser heating, coagulated top layer depth detect. by diffuse reflectance meas. 87555
China, PDT, laser surgery and med. 122307
chitosan films, self-expandable biocompatible stent, design, prep. 98717
closed-loop adaptive optic visual aberrations correction syst. 76413
conf., Florence, Italy (Oct.1999) 89496
conf. on EO and microelectronics, Tel Aviv, Israel (Nov. 1999) 78457
contact laser scalpels, emergent power distrib., Monte-Carlo simul. *(Chinese)* 128635
cornea, human, laser ablation, fluoresc. surgical feedback 98633
cornea/PMMA plate, excimer laser absorpt., vol. luminance appl. 117598
dental cast shape, complete 3-D reconstruction using perceptual grouping 132634
dental freq.-domain IR photothermal radiometry & luminesc. 87532
dental hard tissue modif./removal using CO_2 lasers 76610
dental implant osseointegration, KrF laser hydroxylapatite films, Ti6Al4V alloy 76662
dentistry, lasers appl., conf., San Jose, CA, USA (Jan. 2001) 89542
diabetic neuropathy, autonomic nervous syst. fn., blood flow variability anal. *(Japanese)* 132630
early tumors detect., laser induced autofluorescence spectrosc., pre-computed Monte Carlo results 87540
echographic aiming, increased effectiveness of laser therapy 132597
egg white, CO_2 laser-assisted tissue coagulation, thermal-feedback-controlled 98369
electrophoretic microchips, LIF detect., clinical diagnostics 98348
endoscopic laser diagnosis/surgery prototype, in-vitro/in-vivo trials 117600
endoscopic robot surgery, laser-pointing image registration 98603
entrapped pacing/defibrillator leads, excimer laser extraction 98707
eukaryotic cell imaging by X-ray FELs 87727
FEL, appls. 93680
finger arterioles viscoelasticity, vol.-press. plots, diode laser obs. 122055
focusing GRIN rod lens, LD beam shaping, endoscope appls. 122052
haemoglobin conc., oxy-/deoxy-/total-, opt. meas. precision 83073
hazard ident./safety insurance control for med. robot 98606
Heidelberg Retina Tomograph, topographic meas. reproducibility, contour line size/location influence 76409
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
high-power incoherent opt. radiation for interstitial thermotherapy 98687
histologic changes after superpulsed CO_2/Er:YAG/blended laser treatment 87825
human tissues, opt. charactn., time-resolved reflectance spectrosc. 110843
hyaline cartilage, NIR laser radiation effect on opt. props. 132640
Iber Braun hens, excimer laser keratectomy, postoperative corneal haze meas. 76393
image digitisers, protocol-based eval. 132642
interstitial laser photocoagulation, relative light fluence changes, opt. monitoring 122302
intra-arterial blood flow meas. by self-mixing feedback LD 132626
intratumor injection of laser-absorbing dye, digital X-ray imaging tech. 122301

laser applications in medicine continued
Japanese nat. micromachine project overview, micro-opt. devices 71379
knee osteochondral lesions, low-power diode laser stimulation 98665
laser-tissue interact., tumour treatment and bone surgery 128636
lasers and electrooptics conf., Rio Grande, Puerto Rico, (Nov. 2000) 89595
liver repair/haemorrhage control, liq. albumin laser soldering 87824
living human face meas. using pulsed holography 82973
lung tissues, human, intrinsic microscopic fluoresc. and imaging *(Chinese)* 132635
metal implants, laser-microtextured surfaces, tissue integrat. 117596
MR perfusion imaging using encapsulated laser-polarised ^3He 132693
myocardium, laser-tissue interact., 3D interactive visualization, Java 98666
myocardium, lin. lesions created by Nd:YAG laser, diffusing opt. fibres 8307
myopia correction, excimer laser refr. surgery *(Japanese)* 111107
myopic refr. surgery, excimer laser, intraocular press. obs. 72150
near-wall parietal tissue coagulation control, laser scalpel radiation intens. P 87856
neovascular maculopathy, PDT/transpupillary thermotherapy *(Japanese)* 111108
NIR transcutaneous telemetry, implant. transmitter, LD irrad. 98869
ophthalmic microsurgery, laser induced vap. bubbles, quartz fiber tip geom 98632
ophthalmic therapeutic laser systs., perform. required *(Japanese)* 111110
opt. biopsy/in-vivo study of human skin, laser syst. 122057
opt. spectrometry, biomedical diagnostics 76414
optic nerve head, age-related topographical changes, scanning laser tomograph 98367
opto-acoustic tomography syst., wide-band acoustic pulse detect. 110689
optoacoustic imaging syst. for med. tomography 87499
optoacoustic press. transients, temporal backward projection, FT methods 9835
optoacoustic tomography, time-gated press. distrib. meas./image reconstructio 121989
photonic technol. in 21st century, new industries creation 78373
photonics technol. appls., conf., Quebec City, Quebec, Canada (June 2000) 89534
polystyrene-coated hollow glass waveguide, IR laser delivery *(Chinese)* 9311
port wine stain birthmarks, dye laser irrad., epidermal protection 87826
pre-embryo zona drilling, laser-assisted, thermal effects 76611
primary breast cancer, laser interstitial therapy, clinical approach 98686
prostate, transurethral robotic laser resection, LaserTrode lightguide appl. 7661
prostate computer-assisted transurethral laser resection, motion plan 122308
rat-tail tendon, collagen-rich tissues, polariz.-sensitive second harmonic confoca imaging 98377
rectal cancer, neoadjuvant treatment response predicting by laser-induced endog enous fluoresc. 87554
residual limb, laser scanning, CAD model constr. algm. 122314
respiratory flow meas., opt. sens., cross-correl. techs. appl. 98359
retina implant for stimulation of ganglion cells, laser microperforation 122333
retinal damage, red diode laser exposure 98816
retinal diseases imaging, scanning laser ophthalmoscope appl. *(Japanese)* 110835
retinal layers functional imaging, laser scatt., spreading depression 87533
retinal photocoagulation, changes and present state *(Japanese)* 111109
rigid simulated collapsed tube, steady turbulent flow meas. 110830
skeletal muscle, 3D fiber archit., MRI, opt. imaging 87673
super long pulse laser hair removal, thermal damage 98685
teeth, laser irrad., surface morph., SEM, AFM 76398
tissue, laser irrad., thermocouples, fluoroptic probes, temp. meas. 87526
tissue blood flux monitoring by time-space cross-correl. anal. 87515
tissue fluoresc. lifetime imaging, ultrafast gated image intensifier 87553
tissue imaging, US-modulated opt. tomography, parallel detect. 87531
tissue opt. props. meas., small portable spectrophotometry syst. 122058
tissue/laser beam interacts., advanced therapeutic/diagnostic techs. 117597
tissues, fast/noninvasive fluoresc. imaging using flying-spot scanner 110842
tooth whitening procs. using Ar^+/CuBr lasers, comparative investig. 117599
transcutaneous drug delivery, model, diffusion rate 76608
transmyocardial laser revascularisation/RF ablation, histologic thermal injury signatures 87823
transmyocardial laser revascularization *(Chinese)* 98634
tumor hypoxia, scanning beam confocal fluoresc. microscopy 98355
two-phase syst., model, laser ablation 93949
two-photon fluoresc. labels, biological imaging sensitivity 110831
ultralate evoked pots., Tm:YAG laser stimuli, scalp topography 132587
ultrashort laser pulse ablation, on-the-fly depth profiling 93924
venous blood, human, low-intens. He-Ne laser interact., transm. spectrum 93948
CO_2 laser light delivery syst., hollow bent output tips props. 82716
Er laser phacoemulsification/other clinical appls., 5 yrs. experience *(Italian)* 98664
Er:YAG IR laser delivery syst., launching fibre coupler fab., med. appls. 104624
Er-doped fiber lasers, 3 μm operation, med. appls. 71673
^3He microbubbles, encapsulated laser-polarized, perfusion imaging 76422
Nd:YAG based yellow laser source for portwine treatment 93947
O_2 biosensing, sharp spectral imprint gas signature detect. 86694

laser arrays
see also semiconductor laser arrays
CW double-hexagonal Talbot cavity with stochastic propag. phase, extraction charact. 128353
electrophotography, piezoelec. cantilever, micro-mirror/laser array 116755
fiber lasers lin. array in external Talbot cavity, near-/far-fields study 93498
high power multicore fiber lasers, Talbot resonator, phase-locking, self-imaging props. 71681
MEH-PPV films, tuneable DFB lasing 128210
multichannel fiber laser systs., sync. mode-locking 71683
solid-state laser arrays, synchronisation/self-organisation 93560
CO_2 waveguide lin./ring laser array phase locking 128399
Er,Al-codoped germanosilicate planar waveguide array with 50 GHz freq. separation 128191
Er,Yb:glass single-mode waveguide laser array 105236
Er,Yb:phosphate glass buried-channel act. waveguide laser array, field-assisted ion-exchange fab. tech. 82582
Er-doped fibre laser, multichannel, soliton-like pulse generation 93731
Er-doped silica amplif. planar waveguides *(English)* 105249
He-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
N laser arrays, phase locking, output charact. 128048
Nd:YAG microchip lasers, stable plano-spherical microcavity 82596
Nd:YAG microchip solid-state laser array, synchronized chaotic oscill., Talbot mirror 128204
Yb-core diffr. limited multi-mode fiber amp., SBS phase conjug. 105184

r arrays continued
Yb-doped phase-locked multicore fiber laser array, high-brightness laser beam 71661

r arrays, semiconductor *see semiconductor laser arrays*

r beam annealing
CMOS perform. improvement by laser annealed source/drain extension profiles, simul. 116030
FBG refl. enhancement and tuning, F_2-laser post exposure 82098
High-energy laser pulse opt. fibre beam delivery 72104
microbolometer arrays, thin film ferroelec. materials use 109540
monolithic SMA micro actuators, designing methods 104197
phosphors, electrophoretically coated, for FED, effect of laser irrad. 97625
poly-Si TFT, excimer laser dopant activation 126751
polysilicon annealing using high power excimer laser 91935
polysilicon TFT, channel region controlled grain growth, AMLCD appl. 86853
polysilicon TFT, low-temp., excimer laser long-axis scans 86851
polysilicon TFT, low-temp., single-pulse excimer laser beam profile 86852
polysilicon TFT, recessed-channel struct., excimer laser crystn. 70126
polysilicon TFT, single grain boundary in channel, excimer laser annealing 103853
polysilicon TFT fab. by laser-induced in-situ F passiv./laser doping 92362
polysilicon TFT-LCD, low temp. PECVD 124898
polysilicon TFTs, laser annealed and metal-induced crystal., expt. study 70124
SOI CMOSFETs, 50 nm, ultra shallow jn., by laser annealing/pre-amorphization implant. 126775
TFT-LCD develop. using 1 Hz/15 J excimer laser annealing 97642
Ag-In-Sb-Te phase-change opt. recording films, crystn. 82279
AgInTeSbO monolayer thin films, static recording perform., opt. props. *(Chinese)* 127578
Al-Ge alloy thin film resist. switching for resistor/capacitor downtrimming 80412
$Cd_{0.19}Hg_{0.81}Te$ photoresistors, sensitivity & detectivity, pulsed laser annealing effect 71546
p-CdTe crysts., shallow jn. form. by In diffusion, excimer laser annealing, γ-ray detector appl. 115309
Co-C ferromag. nanodot arrays prod. by direct interferometric laser annealing 116270
Cu films, high press. laser pulse heating, microstructural evol. 125070
Cu interconnects, electromigration-induced failure rate rel. to grain struct. 69922
Fe, laser heating in diamond cell, melting temp. determ., meas. techs. 97877
GaAs, laser heating, thermal melting threshold, ultrafast XRD 72118
GaN films, RF reactive sputtering, laser annealing 91940
p-GaN:Mg film, CO_2 laser annealed, optical, elec. props. 80984
Ge, laser heating, thermal melting threshold, ultrafast XRD 72118
Si MOSFETs, ultra shallow jn. form., excimer laser annealing 126823
p-Si TFT perform. using single-area ELA technol. 91934
a-Si film crystn., long-pulse excimer laser annealing 103235
Si films, posn.-controlled giant-grain growth, phase-modulated laser annealing 102957
Si n^+-p jn. diodes, laser annealed, trap-assisted tunneling near 77 K 92283
Si, polycryst. films, form. by a-Si excimer laser annealing, lateral grain growth 115479
Si thin films, excimer laser crystn., TFT-LCD appl. *(Japanese)* 92347
Si:B, laser thermal proc., sub 130 nm node shallow jns. 115484
Si:B, laser thermal processed, annealing, B diffusion 115480
Si:B, sub-melt laser annealing, low temp. RTA, minimised diffusion 115483
Si:B wafers, supersaturated, deactivation kinetics 103247
Si:B(As)(P)(Sb) ultra-shallow abrupt jns., activation/deactivation, laser annealing 115481
a-Si:Ge films, lateral solid phase recrystn. by RTA 69778
Si:Ge,B(As)(P), ultra-shallow abrupt jns., Ge pre-amorphised, species depend. 115514
Si:Ge,B(P)(As) implanted wafers, laser thermal annealing, Boxer cross meas. 115488
SiO_2:Ag(Cu)(Au)(Er), opt. response, ion implanted nanoparticles, review 116552
Ti/Si interface, O contaminated, surface comp. after laser proc. 91938
$TiSi_2$, low temp. C54 form., refractory-metal-free C40, CMOS interconnects 80972

er beam applications
see also specific laser application headings, e.g. "laser beam machining", "measurement by laser beam", "spectroscopy"
3D laser micro-sens. integrat. control and DP in FPGA-based calculator 86767
5-kg obj. to LEO, laser launching 133254
20 Hz linewidth MM-wave generation by opt. sideband filtering 80394
157 nm high repetition rate mini-excimer-lasers, indust. appls. 105124
AC-PDP micro-cell discharges diagnosis by laser absorpt. spectrosc. 97640
act. antennas with butterfly-shaped patches, opt. control of radiation 72635
act. stereo vision syst., lines/points matching using GA 94815
ADCs, photonic type, develops. 82795
all-elec. transportation commun./recharging via wireless power beam 89366
ambient vac. condition laser propulsion *(Japanese)* 83038
Army microwave beamforming, opt. controlled phased-array antenna use, monolithic opt. element integrat. 99173
azo-modified polymer film on liq.-cryst. cells, trans-cis photoisomerisation, opt. data recording 93020
blue laser-assisted mag. recording, track dens. and crosstalk eval. *(English)* 70533
bridge actuator, micro-adjustment by thermally induced strains using laser technol. 123701
broad band emitting tunable solid state lasers, overview 71755
broadband hybrid fiber radio systs., opt. techs. for beamforming and MM-wave gen. 131347
chaotic lightwave commun. and use of nonlin. dyn. 96880
chem. & environ. anal., conf., Santa Fe, USA (Feb. 2000) 100447
CIBER-X tabletop laser-driven electron & X-ray source 98103
cloud penetration laser radar expts., test lab. modif. 120467
concrete, laser scabbling, thermoelastic anal., reactor decommissioning appls. 105629
conf., gas flow/chem./high-power lasers, Florence, Italy (Sept. 2000) 100389
conf., high power laser ablation, Santa Fe, NM., USA (April 2000) 124171
conf., laser phys. & appls., Varna, Bulgaria (Sept. 2000) 113263
coord. ref. syst. of nonstationary sigs. 106791
cryst. originated wafer particles light scatt. expt. *(Japanese)* 97866
dams, laser safety monitoring considerations, generalized three-point method 72148
data transm. with GaAs VCSELs over PCB integrated polymer waveguides, 3 Gbit/s 104724
digital display interface, opt. interconnection technol. 105033

laser beam applications continued
diode lasers, single-freq. NIR devices, gas sens. 120965
direct laser accel. in capillary channel 110077
direct-writing device, motion control, CAD drawing exchange file *(Chinese)* 92208
DUV laser appls. in wafer inspection & opt. disc mastering 113774
DUV microlithography excimer laser source 105618
dye laser, high-energy pulsed source, freq. stabilisation 71652
dye lasers, high-efficiency flashlamp-pumped, output charact. *(Japanese)* 105160
external corros. mapping of pipelines 105621
external-injection seeded gain-switched Fabry-Perot laser based opt. pulse gen. 105450
fast protons, laser accel. from thin film targets 110227
FED, nonevaporable getter, CW IR laser activation 69420
FEL beams, distributed real time control 108298
femtowatt detect. with lasers, heterodyne tech. 95723
fiber radio, mode-locked microchip laser opt. transmitter, mm-wave generation 131451
freq. conversion based fiber-radio syst., opt. link, EO modulator *(Korean)* 109144
fs laser pulse opt. data storage 93010
high brightness high power semicond. lasers, inhomog. pumping 82671
high power diode lasers, opt. pumping appls. 71804
high power nonimage form. laser beam transform. syst. *(Chinese)* 105412
high speed ultra-short pulse soliton source using DFB laser, 20 GHz 74941
high-brightness laser synchrotron source develop. at BNL ATF 110229
high-energy chem. laser press. recovery syst., ejector efficiency *(Chinese)* 122745
high-power high-repetition-rate indust. excimer lasers, output charact. 105127
high-power solid-state laser, LD pumped, output charact. and appls. 71721
hip-joint socket imaging using pulsed laser radar 132647
holographic portraiture, display techs. 82984
ILR900 laser repair syst. for LCD TFT arrays *(Japanese)* 82240
image-encoding based 3D-vision syst., calib. *(Chinese)* 95248
impulse space propulsion, ablation studies 133258
indust. inspection and proc. control, laser US syst. appl. 131928
intense highly-charged ion beam prod., review 110279
intersatellite links, opt. WDM networking 96881
intrusion sens. using speckle pattern vars. from multimode opt. fiber *(Korean)* 120834
ion-doped crysts. for tunable solid-state lasers, laser-related spectrosc. 71710
Jefferson Lab., polarized source perform. and develop. 110262
laser beam appls. conf., Copper Mountain, CO, USA (July 2001) 124182
laser-driven rocket traction, macroparticle accel., CO_2-laser expts. 133257
launching, of objs. into LEO, optimum params. 98926
LEO payloads launching with ground-based laser, simul. 111364
LEO propulsion requirements, CO_2-laser lightcraft expts. 133252
LHC expts., lin. laser-driver array for opt. transm. 121718
light sails, laser-pushed in vac., expt. investig. 133255
lightcraft vehicle, laser beam propulsion, parab. mirror misalignment 133251
lightning, attraction/initiation by laser, review 133769
liq. thin film, thickness, laser-induced thermocapillary response 86974
localised heating due to low power focussed laser, max. temp. rise calcs. 83059
long-period fiber grating, asymm. transm. spectrum removal, beam scanning method 82115
low-power IR beam free-space optics commun. technol. 109041
materials sci., biophys. sci., materials proc., med. appls. 93680
MCP opt. sig. coupling using VCSEL, mass spectrometry appl. 97384
MEMS struct., effects of temp. on surface adhesion 104201
metropolitan opt. networks using directly modulated lasers, filter concatenation 109122
micro laser plasma thrusters for small satellites 133256
micro mirror arrays for scanning appl. in laser projection syst., fab. 82192
MM-wave fibre link based on two-sect. gain-coupled DFB lasers, 40 GHz 96652
MM-wave subcarrier freq. stabil. using laser heterodyne source and opt. delay line 109044
morph. image proc. of bubble in laser-induced shock-wave lithotripsy 95417
multi-sect. laser in MM-wave fibre-wireless uplink, dyn. range charactn. 74935
multichannel microchip electrophoresis for genetic/mol. separation detect. 93950
multiple mobile robots, laser-based guidance 93913
NLC multiplexed opt. scanner technol. 117549
nonlin. photochromic opt. super-resoln. mask layer, opt. storage *(Chinese)* 92993
opt. freq. stds., freq. synthesis, precision laser spectrosc. 120629
photonic technol. in 21st century, new industries creation 78373
photonics technol. appls., conf., Quebec City, Quebec, Canada (June 2000) 89534
pointers, diode laser, power output, federal stds., safety hazard 122365
rapid prototyping, stereolithography, build-time estim. 93910
rel. ion accel., ultraintense laser interact., PIC simul. 110117
robust all-opt. harmonic clock sig. gen. via opt. inject. into mode-locked semicond. lasers 109045
scanning beam displays, eye safety anal., LEDs and laser appls. 97725
SG-II high power laser syst., ghost refl. anal. *(Chinese)* 128372
short-lived positron emitting radioisotopes prod. by laser generated protons 132955
smart free-space opt. interconnects, commun. links 131550
smoke particles discrim. using IR photoelec. detect. 75534
high av. power solid state laser, diode pumped, output charact., indust. appls. 105211
solid-state laser-based displays 97760
solid-state pulsed power generator using high speed GTO thyristor/saturable transformer *(Japanese)* 88968
SR femtosecond X-ray source, inverse Compton scatt. 98102
superhigh dens. mag. recording, prospects *(Chinese)* 92840
threaten laser warning/orienting technol. *(Chinese)* 99129
TNT based activated landmines, laser irrad. neutralisation 105620
tunable lasers for opt. networking systs., develop. 128383
two laser-driven relativistic electron accelerators, first staging 75989
ultra high speed scanner, compact disc drive opt. data handling 117548
ultraintense laser accel., conf., Pisa, Italy (Sept.-Oct. 2000) 117550
ultraintense laser interacts. and appls., conf., Elounda, Crete, Greece (May 1999) 71882
ultrashort-pulse laser appls. review 93721
US, NDT, indust. appls. 90610
UV laser appl. for ink-jet printing machines 93911
UV lasers, indust.-strength optics, appls. 82714
VCSEL, polaris. switching, expt. obs., appls. 128301

laser beam applications continued
VUV harmonic ultrashort pulses laser source for time-resolved studies of scintillation materials 128634
waste clean-up automation, telerobotics elements 95527
weld inspection by laser-based sens. 124395
wideband photonic ADC, monolithic integrat. 114851
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
Ag^{19+} laser, wave-front shape eval. 128079
Al 1 μm line, fault localisation, thermal laser stimulation, 3D finite element ANSYS model anal. 127004
a-As_2S_3 lin. holographic recording 83014
Au indust. sealed-off vapour lasers, develop., prod. and appl. 93479
CO_2 gas-dyn. laser, mobile high-power laser module, large water area oil film cleaning 105619
CO_2 high power mobile laser technol. complexes, output charact. 82490
CO_2 high-power indust. lasers, appls., book 78415
CO_2 high-power indust. lasers for machine-building and metall. 83047
CO_2 indust. repetitive-pulse laser, energy charact. 82485
CO_2 multifunctional laser with controllable spectral and temporal charact., indust./scientific appls. 82484
CO_2 waveguide lasers, RF-excited, parametrical line develop. 82472
Cu indust. sealed-off vapour lasers, develop., prod. and appl. 93479
Cu vap. lasers, output charact. and appls. 105088
GaInSbAs/GaAlSbAs tunable QW laser, gas anal. 71819
InGaAs miniature IR camera for unattended imaging 75631
KrF high-power laser for supersonic gas flows and layered media hydrodynamic instabilities study 105093
KrF laser driver, rep-rate electron beam-pumped, electron-beam transportation expts. 105128
Nd:$LiYF_4$ laser for glass plate holographic marking using internal periodic struct. *(Japanese)* 105584
Nd:YAG ultra-stable solid-state laser, space appls. 71735
Nd:YVO_4/MgO:$LiNbO_3$ monomode microchip laser mm-wave opt. transmitter for lidar-radar 131677
Ni-like high intens. X-ray lasers, laser plasma diagnostic appls. 128074
O_2-I chem. U.S. Air Force Airborne Laser, missile defence appls. 111639
O_2-I chem. laser, nuc. plant decommissioning appl. 105622
O_2-I chem. laser with sq. pipe-array jet-type O_2 generator *(Chinese)* 82477
Si micromechanical oscillators, autoparametric opt. drive 93172
Si:Cu wafers, Cu particle laser removal 103352
Si/SiO_2 micromechanical oscillators, opt. pumped parametric amplif. 70336
TbFeCo narrow track recording by laser-assisted mag. recording using blue laser 116362
Ti:sapphire LD injected intra-cavity doubled laser, anti-phase matching behaviour 82550
Ti:sapphire high-power fs laser, solid state phys. appls. *(Japanese)* 82545
Ti:sapphire laser femtosecond pulses, fiber delivery 117362
ZnO self-organized semicond. nanowire laser arrays 93663

laser beam applications in medicine *see laser applications in medicine*

laser beam effects
see also biological effects of laser radiation; laser ablation; laser beam annealing; laser cooling; laser hardening; plasma heating by laser; plasma production by laser
5CB NLC, methyl red azo dye doped, director reorientation by short pulsed irrad. 83005
azobenzene polymer films, photoinduced hexagonal symm. microstruct., DFWM *(Chinese)* 71947
conf., high power laser ablation, Santa Fe, NM., USA (April 2000) 124171
corona radical shower NO_x removal syst., 2D imaging expts. 133354
2-cyclooctylamino-5-nitropyridine:C_{70}, opt. limiting effect, absorpt. saturation 128470
2-cyclooctylamino-5-nitropyridine-C_{70} syst., laser radiation opt. limitation 105482
diamond wafers, multicathode dc plasma-assisted CVD, thermal diffusivity 79271
direct writing, laser-guided, biological/electronic appls. 117554
DOE design, modal comp., amplit.-phase charact. 93174
dye-doped polycarbonate laser filters, alexandrite laser eye-protectors 100506
egg white, CO_2 laser-assisted tissue coagulation, thermal-feedback-controlled 98369
electron beams, relativistic, prod. by ultrashort laser pulses, characterisation 76013
FBG refl. enhancement and tuning, F_2-laser post exposure 82098
fibre nonlin. cross-polaris. switching & domain wall solitons 93842
fullerene-containing media, laser radiation opt. limitation, light-induced scatt. role 71961
gas high-order harmonic generation, sub-10-fs laser driven 82844
Gaussian beam illum. spheroidal particle light scatt., spheroidal wave fns. 72340
glass, fs laser induced recording, electron/hole trapping 92976
high harmonic generation, in collisional plasma, av. electron model 72026
high intens. super-Gaussian beams, self-focusing rings breakup and suppression *(Chinese)* 71970
high power nonimage form. laser beam transform. syst. *(Chinese)* 105412
high-energy laser pulse opt. fibre beam delivery 72104
high-power pulsed LD, damage induction & threshold level detect. 93704
inert gas kHz repetition rate high harmonic generation, piezoelec. pulsed valve 117460
K8-glass, laser-induced damage, surface resist. 105405
KGSS-0180 laser glass, laser-induced damage, surface resist. 105405
laser-induced exciplex fluoresc., quantitat. vapour-liq. visualization 132215
laser-solid interacts., high-intens., nonionising prepulse effects 117560
localised heating due to low power focussed laser, max. temp. rise calcs. 83059
long-period fibre grating fab. by F_2-laser radiation 82091
metal clusters, intense laser pulse interacts. 82741
opt. material absorpt. coeffs., laser interferometer calorimetry 132191
photoresistor, elec. field effect induced by He-Ne laser 69261
plexiglass, CO_2 laser pulse irrad., solitonic wave slow components, IR thermovision method 105562
poly(methacrylate)/poly(acrylate)/polystyrene derivative films, 146 nm photodegradation 101514
poly(phenylcarbyne) films, pulsed UV laser irrad., electron field emission 102917
powerful laser opt. resonator elements, thermal deform., cooling methods 117318
PVDF-trifluoroethylene copolymer, pyroelec. dyn. 127210
resonator mirror substrs., thermal deform. 128345
rhodamine B doped plastic opt. fibers, side illum. induced fluoresc. 116644
ring-shaped model mol., harmonic generation in laser fields, ab initio calcs. 117466

laser beam effects continued
semicond., SEE testing, equiv. laser LET 126612
semicond. surface treatment, laser-induced electronic excitation effects, review 81098
semicond. thin films, photothermic action, high-speed inform. recording 82068
std. telecomm. fiber refr.-index changes on tightly focused fs NIR pulse irrad. 104641
steel, sheet, CO_2 laser CW radiation surface treatment 83051
thermally poled glasses, $\chi^{(2)}$ grating, laser-induced quasi-phase matching 8286
thin-film coating, laser-induced damage, surface resist. 105405
third-order suscept. meas. by Mach-Zehnder interferometry tech. 71918
transparent materials, laser-induced damage, image recording appl. 93007
two-photon induced photobleaching opt. data storage 93028
UV laser ablation plasma elec. current interruption, inductive energy storage appls. 134414
UV laser exposed fiber Bragg grating tensile strength 127681
vac. arc, laser controlled elec. breakdown *(Japanese)* 91523
Ag nanoclusters, form. by excimer-laser interact. with Ag-exchanged soda-lime glass 128603
AgCl-Ag photosensitive waveguide films, s-polarized laser beam irrad., spatio-temporal instabil. 104872
AgCl-Ag waveguide films, spontaneous gratings on S-polarized laser beam irrad. 105462
$AgGaSe_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
Al, femtosecond laser pulse interact., damage and ablation thresholds 93926
Al flyer, mini size laser driven, av. vel. meas. *(Chinese)* 86980
Al, laser damage induction & threshold level detect. 93704
AlN films, pulsed sub-band-gap photoexcitation, MIM struct. obs. 93321
Al_2O_3, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
$BaTiO_3/SiO_2/TiO_2$ composite dielec. mat., matrix-assisted PLD direct-write 92597
C fibre reinforced composite, US inspection, laser-generated US 114538
CO_2 high-power CW laser design, scaling laws 82462
CO_2 high-power indust. lasers, appls., book 78415
CO_2 pulsed laser radiation/liqs. time-depend. interact. 72101
(Cd,Hg)Te epitaxial layers, laser-induced struct. defects, props. modif. 103023
p-CdTe crysts., pulsed laser-stimulated SAWs 115303
Cu interconnections, microstructural anal. using ps US 92170
Fe-Si steel, grain-oriented, core loss reduction by high-power LDs 68386
Fe-Si steel, magnetostriction, laser irrad. *(Japanese)* 92783
GaAs detectors, SI, response to NIR picosecond light pulses 97996
GaAs-(Ga,Al)As QW heterostruct., laser-field effects, dressed-band approach 91794
GaN undoped epilayer, three-photon fluoresc., SHG obs. 82904
GaSe nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
GeO_2-SiO_2 thin film, photon-induced vol. expansion, Bragg grating prep. 127554
GeS_2/In(Sn-Bi), reflectivity dyn. response, WORM opt. disk appl. *(Japanese)* 71232
a-$Ge_2Sb_2Te_5$ films, laser irrad., crystn., TEM obs. 82043
HfO_2/SiO_2 high refl. coatings, laser damage and defects rels. *(Chinese)* 116890
HgCdZnTe photodetectors, laser irrad., energy gap modif. 109566
ITO films, PLD and props., laser irrad. effects 79358
InAs THz radiation emitter, femtosecond laser pulse irrad. 71889
InP, femtosecond-pulse laser machining, surface damage thresholds 93920
InSb, Auger recomb. coeff., IR-FIR dyn. plasma reflectivity 115305
n-InSb doped piezoelec. semiconds., electrostriction effect on parametric dispersion/amplif. 93792
$LiNbO_3$ photorefr. grating form., bulk PV effect 93318
$LiNbO_3$:In, opt.-damage-resistant dopants, NLO props. 82044
MgO, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
NH_3-O_2 mixtures, laser-induced breakdown/ignition, NH planar LIF 132214
Nd:YAG CW laser keyhole dyn. characterisation 83054
$PbTiO_3$ thin film, low temp. crystn. by excimer laser irrad., XRD, SEM, EDX 101392
Sb thin film nanometer scale opt. switch form., data storage appls. 93836
a-Si LPCVD films, excimer-laser crystalliz., cryst. islands form. 115333
Si chip, neutron irrad., SEU, pulsed laser simul. *(Chinese)* 103718
Si, femtosecond-pulse laser machining, surface damage thresholds 93920
Si films, supercooled liq., solid nucleation/growth modelling 114397
Si, n±p jns., hot-carrier impact ionization PV effect 80788
Si single cryst. surface, laser evap., conical microstruct. form. 105645
Si, ultrafast cold melting under femtosecond laser pulse, band gap collapse 80631
Si:B, laser thermal processed, annealing, B diffusion 115480
a-Si:H films, Cat-CVD prep., struct. and photo-induced vol. changes 126086
SiC conducting/insulating tracks by laser direct writing 115337
SiC epilayers, defect characterisation, scanning PL spectrosc. 69586
SiC films, growth on Si, adsorbed propene laser melting 79379
SiC surface, laser-induced microdrilling modif. 103440
SiO_2, fused silica, US monitoring of laser damage 71199
SiO_2, laser-induced dielec. breakdown, femtosecond time-resolved study 127146
Te nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
Tl_3AsSe_3 nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
$W_{1-x}Si_x$/Si multilayers, excimer laser proc., thermal stabil. 126210
$YAlO_3$:Mn photocoloration, traps roles, permanent data storage appl. 92994
$ZnGeP_2$ nonlin. crysts., CO_2 TEA laser effective freq. conversion 128492
ZnS/MgF_2 interf. filter, laser induced damage *(Chinese)* 104869

laser beam etching
diamond ultra hard film, CVD, maskless patterning, structuring 105631
localizable HDI-PCB technol. develop. 113588
metal implants, laser-microtextured surfaces, tissue integrat. 117596
microchemical direct write deposition/etch methods, real-world appls. 103978
microchemical etching, MEMS inverse stereolithography/flip-chip de-bug appls. 81628
quartz tuning fork resonators fabr., selective etching, photolithography and charactn. 115735
solid targets, laser excitation, X-ray generation 93463
transparent materials, laser ablation using UV fs-pulse irrad. 104209
Cu, micromachining using nanosecond Q-switched Nd:YAG laser radiation 72142
Fe-Si steel, grain-oriented, core loss reduction, laser scribing 127379
GaN films, etching with pulsed KrF excimer laser 69919
Si RP-PERC high-efficiency solar cells, rear contact patterning methods 100074
Si, porous, buried waveguides, laser local oxid. fab. 71305
Si(100), laser-induced chem. etching, Cl_2 atmos., opt. fiber tip 92013

r beam hardening *see laser hardening*
r beam induced currents *see OBIC*
r beam machining
3-D laser proc., in-proc. depth meas./control *(Japanese)* 105628
adaptive measure/neural net control appl. *(Chinese)* 117552
autofocusing control for DIVX burst-cutting-area recording syst. 117562
biofactory-on-a-chip technol., microfabrication proc. 97406
ceramic materials with metallized surface, laser cutting 128604
ceramics laser machining, elastic thermal stresses minimization 72138
COIL size-reduction cutting of radioact.-contaminated struct. 111642
curved surface heating under laser drilling, geom. influences 128601
cutter for LCD patterned plate inspection syst. *(Japanese)* 83042
cutting, auxiliary gas outflow dyn. 83045
cutting proc., transient 3D computer simul., parallel comput. 105623
cutting quality, spatial curvature rad. effects *(Chinese)* 105652
cyclically loaded mag. disks texture fatigue, repeated load test *(Japanese)* 81897
diamond, direct-write laser micromachining 128619
die edge heat treatment, YAG laser source, on-the-machine tool *(Japanese)* 93916
drilling with short pulses, high accuracy, model 105626
electronics packaging technol., phys. procs., visual modelling 124352
embedded struct. form. in photostructurable glass-ceramics, UV direct-write micromachining 104229
femtosecond laser micro-machining near air-ionization threshold 93922
fine-cutting syst., precise XY-stage syst. *(Japanese)* 72117
flexible CSP interposer substrs., laser via form. for high dens. assembly 124353
flexible laser machining syst., micro-prototype prod. 89842
flip chip assembly, bumping, laser-driven release proc. 80537
forming thermal proc. studies *(Japanese)* 113169
Gaussian beam irrad. laser shock phenom., mol. dyn. anal. *(Japanese)* 93928
glass cutting, FPD prod. 78602
glucose amperometric sens., microchannel integrated, fab. 120948
HDI fab., laser proc. 124331
high-energy laser pulse opt. fibre beam delivery 72104
high-NA microlens fab. by wafer-based proc. 116773
high-power diode laser materials proc. review 72102
hole geom. repeatability in laser percussion drilling 117561
human skin moisture sens., flat surface attachment, interconnection tech. 132008
indust. appls. of lasers, state-of-the-art 113168
inert gas beam delivery for ultrafast laser micromachining, ambient press. 72136
intell. 3D microstructuring with UV-laser syst., flexible mfg. 70367
Ka-band temp. compensated ring resonator VCO, adjust. using laser trimming 102719
laminated rapid prototyping, octrees for material removal 105649
laser beam appls. conf., Copper Mountain, CO, USA (July 2001) 124182
laser-microjet wafer dicing, water jet cooled 103946
localizable HDI-PCB technol. develop. 113588
lumped param. model for multimode laser cutting 105635
metal plastic flow due to laser ray thermomech. effect, MEMS 81615
metals, enhanced drilling using dual-pulse Nd:YAG laser 93927
metals, micromachining with femtosecond 250-nm laser pulses 93925
micro-machining using small particle controlled by opt. radiation press. *(Japanese)* 81606
micro-vias fab. using laser microdrilling, high-dens. PCBs mfg. 128592
microchemical etching, MEMS inverse stereolithography/flip-chip de-bug appls. 81628
microelectronics packaging, laser proc. appls. 67551
microfabricated detector design review 132349
microlens, slab waveguide CO_2 laser machining, rapid prototyping 71376
mild steel, laser-assisted oxygen cutting 72109
natural fibre reinforced car interior trim panel laser beam cutting 72140
online quality detect. & beam control, multisens. class. 117564
particle and laser beam machining, energy sink charact. *(German)* 100568
pass. IR detector DOE 116873
photopolymers/imaging systs. for LD imaging 105651
planar metal target heating by ultrashort laser pulses, 1D two-temp. diffusion model 128599
planar narrow-band notch filter, temp. compensated, laser trimming 102561
plastic, precision laser forming, YAG laser *(Japanese)* 78596
PMMA, femtosecond laser micromachining, struct. 127108
polyimide, femtosecond laser micromachining, struct. 127108
polymer stencils, UV laser-cut, for fine pitch wafer bumping 100587
positioning control using real-time dyn. charcts. compensation *(Japanese)* 89838
pulsed laser ablation, microengineering appls. 128595
real-time beam anal. 93929
resist. trim syst., resist. meas. *(Chinese)* 97774
rock cutting & drilling in mining, high-power IR laser 105639
seq. build-up PWB, CO_2 laser drilling, residual thin materials 69319
seq. build-up PWB in Japan, market trends 91461
skin humidity sens., bonding tech., laser micromachining 109814
stainless steel, hole drilling, laser ablation 72134
stds. and specs. for laser materials proc. *(Japanese)* 93917
steel foils, sub-micron holes, femtosecond UV-laser proc. 93919
steel sandwich panels, laser welded, residual stress meas., hole drilling 105638
stereolithography and laser sintering, micro-rapid prototyping 116116
surface laser proc., vibr. conditioning feasibility study 117553
teach-and-play-back prog. based on laser ranging *(Chinese)* 105650
tight focusing condition short pulse propag. 105646
transparent materials, laser ablation using UV fs-pulse irrad. 104209
two-rod symmetric dyn. stable laser resonators in solid-state laser cutting syst. 117568
ultra-short laser pulses, machining, indust. appls. *(English)* 128616
ultrashort laser pulse ablation, on-the-fly depth profiling 93924
ultrashort-pulsed laser micromachining, acoustooptic device ang. dispersion compensation 117570
ultrathin pickup coil for surface flux detect., laser micromachining 75762
UV laser ablation, plasma/plume effects, CCD photography 105654
vapour plume, laser beam transmittance meas. 117565
via-hole drilling machine for ALIVH-B *(Japanese)* 92569
VLSI wafer ident., microcharacter recogn., V-shaped notch 100545
water jet supported laser cutting, high momentum transfer nozzle concept 72130
Al_2O_3-TiC ceramic columnar topography form. on excimer laser ablation, TEM anal. 72127
CO_2 fast-transverse-flow discharge CW laser for nuc. reactors fuel channels decommissioning 83049
CO_2 high power mobile laser technol. complexes, output charact. 82490
CO_2 high-power CW indust. laser, beam stabil. 93475
CO_2 high-power indust. lasers, appls., book 78415
laser beam machining continued
CO_2 lasers, CW and high repetition rate props., at. indust. appls. 83048
CO_2 planar waveguide laser amp., microsecond pulses for micromachining 105112
CO_2 planar waveguide lasers, direct high-resoln. machining appls. 105110
CO_2 ultra super pulsed planar waveguide laser, direct micro-machining 70354
Cu, micromachining using nanosecond Q-switched Nd:YAG laser radiation 72142
CuBr high-power laser, precision materials proc. appl. 117569
CuBr laser syst. for precision micromachining, indust. app. 105640
F_2-laser nanofabrication facility, precise photonic component shaping 128602
GaAs FET DC bias current adjustment, on-wafer digital laser trimming tech. 70206
GaN, femtosecond laser machining 70357
GaN, free standing, fs laser machining 105648
InP, femtosecond-pulse laser machining, surface damage thresholds 93920
Nd:YAG Q-switched UV laser, perform. limits, high-throughput micromachining appls. 128188
Nd:YAG diode-pumped high-power rod laser, high-efficiency operation 128187
Nd:YAG diode-pumped laser, micromachining appls. 82584
Nd:YAG diode-pumped rod laser, highly precise material proc. 117558
Nd:YAG laser precise microstructuring, metallic surface wear props. improvement 72121
Nd:YAG laser-induced vap./plasma plumes, shadowgraphic/interferometric obs. 105627
Nd:glass laser, pulsed-power capabilities, materials interact. appls. 128186
NiTi SMA, laser material proc., micro-syst. technol. 117571
O_2-I chem. laser, nuc. plant decommissioning appl. 105622
O_2-I kW RADICL chem. laser research 105056
PZT miniature conical AE transducer, laser micromachining 101621
Si cryst. solar cells, 12 month kWh/kWp energy output testing 112985
Si, femtosecond-pulse laser machining, surface damage thresholds 93920
Si micromachining, effect of energy above laser-induced damage threshold 105634
a-Si:H/μc-Si:H tandem solar cells, laser patterning 112980
Si/SiO_2, photonic band gap cryst. fab., femtosecond laser micromachining 83041
SiC seal rings, laser surface microtexturing, tribological prop. 105625
Ta_2O_5 sub-micron period grating struct., interferometric excimer laser ablation 72126
Ti, single-pulse Nd:YAG laser drilling, assist gas effects 128607
Ti:sapphire laser fs pulse microstructuring 70350
Ti:sapphire regenerative amplified femtosecond pulsed laser, sub-micron-machining, Rowland ghost effect 72116
TiN, femtosecond laser micromachining, struct. 127108
TiO_2 photocatalytic effect, fs Ti:sapphire laser microhole drilling 72122
laser beam modulation *see optical modulation*
laser beam properties *see laser beams*
laser beam variables measurement *see laser beams; laser variables measurement*
laser beam welding
act. tracking, basics & appls. 93937
Audi aluminium alloy car body, Nd:YAG material proc. lasers 72103
cylindrical thin-wire bolometer, light absorpt. nonuniformity 117566
direct casting/laser welding opt. focus control syst. 72113
distortion in the EDFA LD pump packaging, FEA 113446
high vol. fiberoptic component prod., automated mfg. systs. 113609
high-power diode laser materials proc. review 72102
high-power laser weld penetration, defects influence 128606
high-yield component assembly and packaging, laser welding 128617
hybrid diode/Nd:YAG laser syst., welding charact. *(German)* 128613
indust. appls. of lasers, state-of-the-art 113168
Japanese nat. micromachine project overview, micro-opt. devices 71379
JOS Uniphase clip design, fibre attachment for 980 nm pump lasers 117029
micro welding in electronics, limitations and miniaturization pot. 91514
online quality detect. & beam control, multisens. class. 117564
plastic films, high-speed laser welding 72111
power transistor laser wire bonding technol. 81260
proc. optim. using ANN, param. selection 105643
QC, AE sigs. wavelet anal. 105630
quality monitoring, fuzzy pattern recogn. based syst. 105653
real-time beam anal. 93929
real-time in-proc. monitoring using AE sigs. *(Chinese)* 72115
refractory metal laser welding, deep penetration 128608
sig. relay, mass prod., laser welding technol. *(Japanese)* 80474
stds. and specs. for laser materials proc. *(Japanese)* 93917
steel, laser-MIG welding, seam geom., proc. stabil. *(German)* 128615
steel laser deep penetration welding, Marangoni effect 128605
steel sandwich panels, laser welded, residual stress meas., hole drilling 105638
tailored blank laser welds, QC, US guided wave & EMAT use 124139
ultra-short laser pulses, machining, indust. appls. *(English)* 128616
Al alloys, direct diode laser welding 117559
Al alloys, laser hybrid welding, automotive indust. appls. *(German)* 128614
Al alloys, laser welding, complete penetration boundary, proc. instabil. 128609
Au/Ni platings, thin sheet laser welding 72137
CO_2 fast-transverse-flow discharge CW laser for nuc. reactors fuel channels decommissioning 83049
CO_2 high-power indust. lasers for machine-building and metall. 83047
CO_2 high-power laser, welding charact. of hot steel samples *(Japanese)* 93918
CO_2 laser edge welding, clad profiles, coaxial powder filler nozzle 83055
CO_2 laser, material surface proc., reliab., corros. resist. enhancement 83052
CO_2 lasers, CW and high repetition rate props., at. indust. appls. 83048
Cu-Ni laser welding, transport phenom. modelling 72135
Nd:YAG CW laser keyhole dyn. characterisation 83054
Nd:YAG diode-pumped high-power rod laser, high-efficiency operation 128187
Nd:YAG diode-pumped rod laser, highly precise material proc. 117558
Nd:YAG laser spot welding, keyhole form., power deposition 128600
Nd:YAG laser welding, keyhole form. & power deposit law 105644
Nd:glass laser, pulsed-power capabilities, materials interact. appls. 128186
Ta, laser welding, large voids form. modelling 105624
Ti-6Al-4V metallic target, pulsed Nd-YAG laser interact., keyhole form. 83043
laser beams
see also holography; laser frequency stability; laser variables measurement
1.5 μm wavelength distributed reflector lasers with vert. grating 82651
2D turbid media, short-pulsed laser transport, discrete-ordinates soln. 93737
3d-transit. metal ion doped II-VI chalcogenide crysts. for laser systs. 71218
10 MW compulsator for high power solid state laser beams *(Chinese)* 123631
act. laser resonators, intracavity flexible mirror, output charact. 82707
act. mode-locked fiber lasers, extended ABCD model, expt. validation 71680
act. opt. fiber ring resonator filter, linewidth factor, optim. *(Chinese)* 71692

laser beams continued
adaptive loop resonator, intracavity beams opt. phase distortions 82702
additive-pulse mode-locked fiber laser with fiber-grating, oscill. conditions *(Chinese)* 105181
air ultrashort laser pulse filament generation, backward supercontinuum emission 71893
all-fibre Moire DFB lasers, stable multiple wavelength generation, CW output power 128132
all-opt. 3R regeneration, nonlin. dyn., long-haul transport systs. appls. 105432
analog intens. value, binary coded data with tree archit. 116871
anisotropic Bessel-Gaussian beams, sidelobe control/mode selection 82723
annular lasers, unstable resonators, beam quality study 93703
AO laser beam steering syst., satellite commun. 127862
apertured ABCD opt. syst., flattened Gaussian beams, closed-form propag. expressions 93699
apodized nontelecentric focusing systs., focal-shift formula 128377
arbitrary inhomogeneities meas., interf.-threshold inform. recording 93711
arrow wave modes, scalar wave eqn. 117698
arylene-vinylene polymer neat films, TW lasing 93568
axial line scanning device, display/printing appls. 86863
axisymmetric flattened Gaussian beam superposition scheme 82734
B-class fiber ring laser, mode pairing and parametric self-locking 105201
bacteriorhodopsin all-opt. spatial switch 72046
beam-shaping CGHs for coherent/partially coherent light 105586
Beijing Free Electron Laser, saturation output, RF phase ripple, pulse form net *(Chinese)* 105052
Bessel light beam freq. doubling, wavefront disloc. 128500
Bessel-beam laser using nondiffractive resonators 93706
Bessel-Gauss mode laser resonator, diffr. energy losses 128351
best laser beam for SHG, study 82925
biaxial crysts., high-order Bessel light beam form. 128365
bicomponent diffr. syst., diffractive multifocal focusing 71881
bidirectional ring laser with injected sig., backscatt., stat. props. *(Chinese)* 105385
binary DOE for laser beams strength combination *(Chinese)* 82724
birefr. fibers, laser heterodyne sig. detect. 116638
Brillouin enhanced dyn. holography, dyn. aberrations 128573
Brillouin fiber ring laser, soliton compression and locking 128136
broad band emitting tunable solid state lasers, overview 71755
broad-area SLA, ultrafast act. phase conjug. 93587
broadband fiber Raman amps. for WDM appls. *(Japanese)* 128143
cascaded CW Raman fiber lasers, SRS, num. modeling, optimisation 82539
causal lin. dielec., superluminal pulse propag. 82763
cemented doublet lens laser beam expanding syst., ICF laser driver appl. *(Chinese)* 127877
charact. standardization *(Japanese)* 93698
chirped-pulse amplif. laser syst., stretching factor calc. and meas. *(Chinese)* 105418
circulating solid state laser beam control by holographic gratings 83013
class B lasers, soliton interacts., gain relax., saturable absorpt. 72058
coaxial FEL with Bragg mirror resonators, spatially coherent radiation 117306
coherent/aberrated laser beam quality improvement by using optimum/smooth pure phase filter 82738
collimated laser beam, diffr. pattern, multi-layer feedforward neural network image proc. *(Chinese)* 129544
compact mode-size lensing converters, integrated opt. waveguide/fibre coupling, FDTD simul. 131554
compact plastic plate sealed micro-prism archit., fan-out beam splitter device appls. 116776
compact tunable narrow-band LD, external abnormal-refl. mirror 128413
complex multilayered struct., VCSEL, opt. field generation modelling 128302
complex-coupled DFB laser, spontaneous emission, threshold-crossing 71802
Compton backscatt. X-ray generation by high power dens. laser *(Chinese)* 110441
CW double-hexagonal Talbot cavity with stochastic propag. phase, extraction charact. 128353
CW fibre-based SBS phase conjugator, power scalable laser beam clean up 105473
CW mode-locked all-solid-state laser source, cavity-augmented freq. tripling 105260
CW single-freq. semicond. laser with Bragg fibre grating 128303
cylinder Gaussian light beam refl., act. 3D profile measuring syst. *(Chinese)* 71884
cylindrical thin-wire bolometer, light absorpt. nonuniformity 117566
DBR fiber grating laser, freq. stabilization using interferometric tech. 105199
DCM dye doped PMMA planar waveguide laser, wide band tuning *(Chinese)* 93494
decentred twisted Gaussian Schell-model beams, Wigner distrib. fn. 117701
decoupling NLO elements for powerful I_2 laser 128462
deflection polygon scanner using HTSC bearings 71869
DFB dye laser, tunable narrow-band radiation generation 82507
DFB fiber lasers, multiple wavelength operation 82537
DFB LD, gain-switched, pulse generation, opt. filtering effects 82661
DFB-LD directly modulated 2.5 Gbit/s transmitter, self PM, extinction ratio, chirp *(Korean)* 96693
dielec. layer/ferrite film laser beam scatt. 117341
dielec. medium boundary, localized surface wave form./propag. 128549
diode laser, freq. stabilization, vel.-selective saturated absorpt. spectrosc. *(Korean)* 93713
diode laser, high-power, vert. beam divergence 105329
diode laser arrays, spatial instabilities, wavelet sig. proc. 128364
high av. power diode laser arrays with water cooler, thermal anal. *(Chinese)* 117253
diode laser extended cavity with EO prism, broadband fast freq. tuning 82757
diode lasers, freq. fluct. interf. measuring method *(Chinese)* 110016
diode lasers, mode switching charact., perturb. anal. 105285
diode lasers, real refr. index guided self-aligned struct., monolithically integrated 71813
direct laser beam focal spot meas. 117334
discrete fiber Raman amps., gain-clamped, transient anal. 128179
dispersion-managed fiber ring laser, act. mode-locked, jitter, stabil. anal. 82538
distorted laser beam wavefront correction simul. 128367
distributed fiber Raman gain amp., 1410 nm operation principle *(Chinese)* 93524
DOE external cavity diode laser, single mode wavelength tuning 105399
DOE for LD divergent angles improvement, design, fab. and testing 93694
double pass X-ray laser, focalisation, ray trace code 117051
double-way amplified laser beam, SBS phase conjug. mirror *(Chinese)* 128373
dual freq. NLC adaptive optic SLM 104775
dual-core ring fiber laser, self-mode-locking action 105207

laser beams continued
dye cored dendrimer in PMMA waveguides, single-mode random laser 9349
dye lasers, high-efficiency flashlamp-pumped, output charact. *(Japanes* 105160
dye materials in PMMA matrix, XeCl laser pumped, output charact. 105158
dye-doped ethylene glycol pendant drops, lasing, spatial-resolved spectral mea 71649
dyes, two-photon induced fluoresc. and up-conversion lasing *(Chinese)* 1281
dyn. phase mask high-power laser beam focal spot optim. 105409
electroabsorption modulated-integrated DFB laser modules, output charac 105343
ellipt. flattened Gaussian beam propag. charact. *(Chinese)* 82725
trans-4-[p-(N-ethyl-N-hydroxyethylamino)styryl]-N-methylpyridinium iodid two-photon absorbing laser material 82505
excimer laser resonators, modifs., laser beam emission energy/dens./shape 827
external cavity LD with cascaded fiber Bragg gratings, dual-mode operatio *(Chinese)* 117252
eye-safe act. Q-switched microchip lasers, electro-absorbing semicond. modul tors 117349
far-field beam shaping/beam steering by phase-retrieval-based wavefront contro 105410
FAST-Net global interconnection syst., beam-steering, aberration anal. 93457
FDA regulations for laser product manufacturers 100505
FEL, opt. cavity 5D precise rem.-control adjuster *(Chinese)* 128342
femtosecond Bessel beam generation using thin-film microoptics arrays 10479
femtosecond Gaussian beam focusing by lenses *(Chinese)* 105413
femtosecond high energy laser pulse, temporal filtering, self-PM *(Chinese* 128392
femtosecond modelocked fiber laser, WDM pulse generation, pulse shapers arrayed waveguide gratings 120315
femtosecond polariz. laser pulse shaping, dual-channel spectral interferometri 71895
fiber amp., dual-freq. soliton interact., coherent effects 82946
fiber amps., amplified sig. linewidth, phase noise effects 71676
fiber arrayed multiple beam scanning optics, laser printer 127876
fiber grating external cavity semicond. lasers with narrow linewidth high MSF *(Chinese)* 71852
fiber lasers lin. array in external Talbot cavity, near-/far-fields study 93498
fiber Raman amps., double Rayleigh scatt. noise *(Chinese)* 105204
fiber Raman amps., multiple LD backward-pumping, automatic design schem 105198
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
fiber semicond. ring lasers, all-opt. wavelength conversion 117275
fibre laser with SOA gain medium, wavelength-switching, Vernier effect 9352
fibre Raman ring laser, multi-wavelength CW 1.55 μm operation 82521
fibre ring lasers, rational harmonically modelocked, higher-order opt. pulse gen eration 93523
finite slab Gaussian light beam, finite-difference vector BPM 82730
Fizeau interferometer wavemeter for CW lasers, testing and accuracy 121243
Fizeau wedge interferometer for laser wavelength meas. *(Chinese)* 110014
flat-topped multi-Gaussian laser beam propag. 93708
flattened Gaussian beam generation by saturable absorbers 117387
fs OPO phase control 105499
fullerene-containing media, laser radiation NLO limiting 128463
fullerene-containing media, laser radiation opt. limitation, light-induced scatt role 71961
fund. Gaussian beams with edge phase disloc., SHG 82861
fused-silica plate SLM, intense fs laser pulses, adaptive feedback control 105426
gain-clamped SOA, external feedback, output charact. *(Chinese)* 105365
gain-switched DFB Bragg semicond. laser, pulse compression, chirp elimination 71772
gas Raman amp., SRS, output charact. *(Chinese)* 71631
gas-filled hollow fibre, ultrashort laser pulse THG 93799
gas-flow nuc.-pumped lasers, energy deposition, interferometric tech. 128111
Gauss-Laguerre focused vortex laser beam SRS 93758
Gaussian laser beam, passage through gradient medium 105406
Gaussian wavelet pulse propag., ultrashort pulse time evol. 105422
germanosilicate fiber Raman amp., gain optim., SRS, WDM appls. 105191
glass ceramic laser radiation controlling elements, EO sensitivity 128479
GRIN lens for LD beam collimation and shaping 93184
hard-edge apertured paraxial ABCD opt. syst., Gaussian beams, approx. close- form expression *(Chinese)* 105411
Hermite-Gauss/Laguerre-Gauss mode laser beams 117338
high av. power compact discharge X-ray laser polariz. elements 128362
high av. power laser Faraday rotator design 117326
high intens. super-Gaussian beams, self-focusing rings breakup and suppression *(Chinese)* 71970
high power beam shaping diffractive optics 117563
high power diode lasers, opt. pumping appls. 71804
high power diode lasers with external resonators, improved beam quality 71821
high power nonimage form. laser beam transform. syst. *(Chinese)* 105412
high power picosecond UV laser using BaB_2O_4 SHG tunable feature *(Chinese)* 105517
high power pulsed dye laser amp., phys. design *(Chinese)* 105155
high power single-mode diode DFB laser with curved-grooves diffr. grating 71801
high-aperture beam generalizations 82731
high-intens. pulse compression in gas-filled hollow fibers with plasma nonlin. 128386
high-num.-aperture holey fiber, enhanced short laser pulse spectral broadening 117355
high-power CW Raman phosphosilicate fiber laser, output charact. 105171
high-power diode lasers, beam shaping techs. 93705
high-power high-repetition-rate indust. excimer lasers, output charact. 105127
high-power kW-range diode lasers, direct materials proc. appls. 105268
high-power laser beam focusing, in nonlin. medium, multiple spatial solitons interact. 82718
high-power LD, spec. and custom design, rules of thumb 93641
high-power solid-state laser, LD pumped, output charact. and appls. 71721
high-power tapered semicon. laser amps., light amplif./ASE, spatio-temporal dyn. 117263
high-power tightly focused laser beam, propag., self-depolarization effect 128361
high-precision laser beam center meas. 71874
high-quality fs laser pulse generation, intracavity spatial control 117354
high-resoln. femtosecond pulse shaper using LCD 71419
highly reflective boundary vol. phase gratings, spectral selectivity 128357
hollow fiber with Raman-act. gas, ultrashort pulses group-delay-free synthesis 116630

beams continued
ollow-core dielec. waveguides, undistorted radiation beam transm., super-gaus-
ian/sombrero fns. 116685
ollow-waveguide slab laser, output beam quality optim. 93701
olographic stereography diffusers, LCD laser light projection 93882
ybrid diode/Nd:YAG laser syst., welding charact. *(German)* 128613
nfinitely long conducting circ. cylinder, Gaussian beam far field scatt. 82722
ntens. distrib., posn. sensitive photodetector 93712
on-doped crysts. for tunable solid-state lasers, laser-related spectrosc. 71710
R LD beam spatial filtering by holographic tech. 93710
rradiance PDF, laser beam propag. through turbulent media 117702
Kerr-lens mode-locked solid-state lasers, coherent semicond. absorber, ultra-short
pulse generation 82578
Kiton-Red dye laser solns., Cu-vapour-laser excitation, photo-stabil. 71648
Laguerre-Gaussian laser modes, annular profile spatial transform. 82726
Laguerre-Gaussian modes, wavefront sing. 93707
arge-area single-mode VCSELs, self-aligned surface relief 128249
aser beam control conf., St. Petersburg, Russia (June 2000) 124197
ayered spheroid internal/near-surface scatt. EM fields 105768
LD, self-pulsing simple conditions, dimensionless rate eqns. 105333
LD astigmatism meas., beam-line method 82740
LD bar emission, effective brightness, array curvature correction 71886
LD beam collimating micro-lens, laser ablative shaping 127823
LD systs. with opt. feedback, spatial beam profiles meas., interf. effects 117343
LD-pumped all-solid-state lasers, indirect thermal focal length meas. tech. *(Chi-
nese)* 128374
idar syst. for atmos. aerosol extinction and turbulence profiles meas. 133289
in. laser amps., periodically modulated laser radiation, injection-locked method
117389
iq. cryst. SLM, controllable laser beam shaping *(Chinese)* 128369
iq. cryst. SLM correction element, laser energy transport adaptive syst. 104822
iq.-cryst. diffr. gratings, asymmetric transmissive behavior, beam-steering effi-
ciency 116830
long pulse laser radiation phase conjug., feedback SBS 105471
ow-dimens. semicond. heterostruct. lasers, quantum coherence, IR generation
93618
ow-noise opt. amps., polariton transit., fiber transm. systs. 85992
naterials-proc. appls., real-time beam anal. 93929
nethane broadband Raman amp., coaxial laser pumping, output charact. *(Chi-
nese)* 82493
micro-opt. laser beam transform. systs., assembly procs. 93204
nicro-optics beam shaping elements for holographic recording appls. 72088
nicro-vias fab. using laser microdrilling, high-dens. PCBs mfg. 128592
nicrochip laser, fiber-coupled diode end-pumped, helical-wave emission dyn.
105224
nid-power solid state laser thermal lens intracavity correction by liq.-cryst. adap-
tive lens 128478
nixed strained MQW act. material SOA for opt. networks 117276
nobile on-sea terminals, medium power LD commun. 96878
MODAN DOE design for laser beam charact. real-time anal. 127875
MODAN-type DOE for transversal laser mode selection, commun. appls.
127874
mode-locked fiber laser, OTDM sig. injection, clock recovery *(Chinese)* 96778
mode-locked lasers with fast saturable absorbers, pulse generation, solitons,
period doubling 93734
modes, far-field distribs., spatial coherence effect 128360
MOPA, beam propag. and perturb., thermal aberrations 105407
MQW laser, opt. beam quality factors *(Chinese)* 71853
multi-beam high power four pass solid laser amp., flat-in time pulses *(Chinese)*
105439
multi-purpose fine opt. auto-adjuster, computer controlled *(Chinese)* 110021
multi-terawatt sub-ps. laser pulses, freq. doubling for plasma interacts. 71883
multi-wavelength fiber ring laser, tunable act. mode locking 71684
multichannel fiber laser systs., sync. mode-locking 71683
multicolor illum. compact RGB planar DOE beam expander 116727
multicore fiber laser, combined phase locking/beam shaping by struct. mirrors
93741
multicore fiber lasers, all-fiber phase locking setup 82775
multilongitudinal mode semicond. lasers, thermal dyn., unified approach 71773
multimode fiber incoherent laser beam combining, SBS 104652
multiple filamentation, self-focusing, vector/random effects 105489
multiple laser pulse max. permissible exposure determ., ANSI Z136.1-2000
100504
multiple-electrode-pair laser, sync. trigger effect on output charact. *(Chinese)*
93485
multiple-prism grating tunable laser oscillators, tunable laser beam divergence
82778
multisection LD, opt. phase conjug. using FWM 71825
multistage pulsed dye laser syst., output power, optimisation, laser isotope sepa-
ration appls. 128124
narrow laser beams, Raman-Nath condition AO interact. 117331
nondiffracting beam higher-order SBS 71919
nonlin. distortion by opt. glasses 71879
nonparaxial, small-scale self-focusing, lin. stabil. theory *(Chinese)* 105488
nonparaxial Gaussian beam struct. eigenmodes 128370
nonparaxial Gaussian beams, nonparaxial opt. vortex 82739
nonstationary semicond. plasmas, laser ultrashort pulses cascaded upshifting,
multiple refls. 71985
normally dispersive highly birefr. fibers, modulational instabil., SRS 117505
objective laser eye protector defn. tests 78551
opt. beam steering using MEMS-controllable microlens array 105047
opt.-klystron FEL with undulators, dyn. behaviour 105375
oxide-confined VCSEL device design, bidirectional BPM 128271
partially coherent high-num.-aperture scalar imaging 126559
pass. modelocked self-starting fiber laser pulse anal. using step chirped draw
tower grating arrays 128389
pass./act. opt. fibers, pulse propag., fast Kerr-like nonlin. effect 104637
periodic diffractive flat-top generator, excimer laser beam shaping 93693
phase conjug. beam steering using multipass amp. syst., high gain 71944
phase conjug. mirrors for solid-state laser systs. beam quality improvement
93696
photonics teaching conf., Giza, Egypt, (Oct. 2000) 78486
photorefr. slab waveguide, guided wave propag. charact. *(Japanese)* 82133
picosecond pulse transm. syst., third-order dispersion compensation *(Chinese)*
96659
planar waveguides with quadratic. nonlin. medium, opt. beam instabil. 128512
polariz. effects in lasers, spectrosc. and optoelectronics, conf. , Southampton,
UK, (Sept. 2000) 78384
polymer lasers, dispersion cavities with vol. holographic gratings, single-mode
operation 93686

laser beams continued
polypyrrylarylenemethine/N-methyl-2-pyrrolidone soln., passing TEM_{00} laser
beam, large NLO charact. *(Chinese)* 82837
polypyrrylarylenemethine/polyvinyl film, Gaussian beam diffr. behavior *(Chi-
nese)* 128480
polystyrene-coated hollow glass waveguide, IR laser delivery *(Chinese)* 93118
pos. branch confocal laser resonator alignment/misalignment *(Chinese)* 128352
power pulse lasers, radiation energy meas. using multichannel calorimetric syst.
110013
pulsating solitons, gain relax., saturable absorpt. 128556
pulse compression, cascaded quadratic nonlin., self-defocusing phase shift
105430
pulse energy meas. using thin-wire bolometer 75535
pulse multiple filamentation, deterministic vectorial effects 82834
pulsed doughnut-type beam spatial charactn. using cylindrical lens 82733
pulsed VCSEL, ultrafast polariz. dyn. and noise meas. 128411
PV-photorefr. cryst., Gauss beam solitary evol. *(Chinese)* 93864
pyrromethene 567 dye in polymer matrix, photophysical and lasing props.
105157
QD opt. amps., ultrafast nonlin. procs. 117256
quadratic nonlin. medium, Bessel opt. vortices interact., SHG 128526
quadratic soliton generation efficiency in SHG cut bulk cryst. 117511
QW laser, grating feedback locked, polariz.-depend. photon-no. squeezing 93585
QW LD, optoelectronic delayed-feedback and chaos 82646
radiation noisy sig. proc. by FWM 128440
radiation pulse controlled dumping by opt. semicond. switching 82782
rainbow holographic camera, single laser beam recording 117531
Raman fiber lasers and amps., opt. fiber commun. systs. appls. 128169
rare-earth doped chalcogenide glass fiber, mid-wave/LW IR laser pot. 105192
recycling of undiffracted laser light for hologram reconstruction 105582
refl. laser radiation polariz. charact. meas. by coord.-free holographic method
117340
refr. micro opt. beam shaping elements 93175
refr. thin-film micro-optics, femtosecond interf. effects 82206
reson. grating refl. filters for finite beams narrow-band spectral filtering 116893
reson. grating refl. filters for normally incident Gaussian beams 104882
reson. two-level medium, ultrashort light pulses, FDTD anal. 93718
resonator, auto-stabil. adjustment syst. *(Chinese)* 105393
retinal hazard eval., laser safety apparent source anal. 111190
Rhodamine 6G-doped spherical solid microparticles, cascade lasing 71651
Rhodamine-6G(B) dye laser solns., Cu-vapour-laser excitation, photo-stabil.
71648
ridge waveguide SOA monolithically integrated with gain-coupled DFB laser,
fibre-coupled power 71350
ring laser, counterpropagating EM waves, freqs., nonlin. electrodynamics 71878
ring laser, polariz.-nonuniform radiation, transverse Hermite-Gaussian modes
128363
S1337 photodiode, laser radiation power meas. 117339
saturable nonlin. bulk medium, multi-component spatial opt. solitons 82958
saturated soft X-ray lasers, TW pumping, transient collisional excitation regime
117082
SBS-mirror with small lenses ordered raster, phase conjug. superhigh quality
105472
self-consistent Gaussian laser pulse breathers, NLO propag. 117363
self-mode-locked solid state laser, phys. charact., self-starting study *(Chinese)*
82568
semicond. amp. tapered mode-locked integrated grating cpd. cavity laser design
71820
semicond. laser, diffractive phase element prod. thick ring-shaped output *(Chi-
nese)* 71876
semicond. laser, relative intens. noise reduction, modulation response using fiber
grating 128388
semicond. lasers, inversionless bistability, interband coherence 71788
semicond. lasers, multi-long. mode instabilities, coupled mode model with gain
dispersion 71826
semicond. lasers, pseudorandom wavelength hopping, sync. 93613
semicond. lasers, pulsed subharmonic opt. injection, sig. generation at MM-wave
repetition rates 105335
semicond. VCSEL, periodic struct. form., spatial Fourier modes competition
93622
semicond. VCSEL arrays, thermal problems soln. model approaches 93580
semicond.-fiber ring laser, up-wavelength conversion, nondegenerate FWM
(Chinese) 71982
seq. arranged aperture syst., coherent beam focusing 128358
SG-II high power laser syst., ghost refl. anal. *(Chinese)* 128372
SG-III laser facility, 60 kJ, design, technol. develop. 105215
Shack-Hartmann sens. for laser beam charactn. 71887
Shack-Hartmann sens. for laser beam M^2 anal. 110023
shaping techs. 128381
SHENGUANG II laser syst., ang. variable mirror effect on light beams *(Chi-
nese)* 105397
SHENGUANG II syst., half-wave plate computer automatic controlling syst.
(Chinese) 128371
SIL, 3D vector math. model 117332
silica fibre Raman laser, P_2O_5- and GeO_2-doped, output charact. 93512
single mode master/slave laser detectors, amplif. regimes 93620
single ridge waveguide electroabsorption modulated DFB laser for 2.5-Gb/s
transm. 120183
single-cycle THz laser pulses, near-field propag. effects 97796
slightly rough conducting surface, vert. polarized Gaussian beam EM scatt.
94048
small refr. indices changes in water, opt. forward-scatt. laser light detect. 97867
smart free-space opt. interconnects, commun. links 131550
SOA, cross-modulated beam phase recovery dyn., all-opt. sig. proc. appls.
105304
SOA, FWM, polariz.-insensitive spectral inversion 71855
SOA, FWM based all-opt. wavelength conversion *(Chinese)* 105537
SOA, FWM based polariz.-insensitive opt. wavelength conversion *(Chinese)*
128503
SOA, single to multi wavelength conversion using ASE 131416
SOA, waveform distortion suppression using internal birefr. and slope filtering
71807
SOA, XGM wavelength conversion, pulse rising time and width study *(Chinese)*
117251
SOA based all opt. wavelength converter, cross-gain modulation *(Chinese)*
105518
SOA based DWDM multiwavelength light source, stabil. *(Chinese)* 109215
SOA in terahertz opt. asymmetric DEMUX, switching charact. *(Chinese)*
131519
SOA in-line amp. for WDM syst., pattern effect, probab. model 105303

laser beams continued
SOAs, noninverted wavelength conversion, birefr., chirp compression 71817
high av. power solid state laser, diode pumped, output charact., indust. appls. 105211
solid-state laser beam mode control using holographic mirrors 93709
all-solid-state laser systs. with fiber phase-conjug. mirror 105212
solid-state lasers, axially pumped, temp. distrib., anal. treatment 105247
spatial partially coherence, far field charact. *(Chinese)* 71875
spatial-ang. charact. of laser beam leaving aerosol layer 117335
spectrally dispersed ultrafast laser pulses for quadrature spectral interferometric detect. 75869
spherically aberrated lens effects on laser beam quality *(Chinese)* 82736
spiral laser beams review 128368
sq.-lattice photonic cryst. laser, polariz. mode control 105414
stable spatial laser patterns, thermal nonlin. 117404
stochastic gradient descent controlled micromachined mirror array adaptive optics syst. 104777
storage ring-FEL, sawtooth instabil. suppression 128340
sub-picosecond UV laser pulse filamentation, nonlin. propag. 82785
subharmonic pulse fs OPO, carrier-phase control 117350
super-Gaussian laser beam, CCD based charactn. 117345
sync. mode-locked fiber laser, parametric gain modulation, soliton shaping 105206
TESLA X-FEL undulators, photon beamlines 82697
tetrachloromethane liq., Hermite-Gaussian/Laguerre-Gaussian beam generation/conversion 82737
three-element cavity Kerr mode-locked laser resonator *(Chinese)* 71862
THz beam profiler using opt. transm. modulation in Si wafer 128409
tight focusing condition short pulse propag. 105646
time window width opt. fiber pulse propag. num. simul. 127610
TM/TE/TEM beam mode solns. 128375
tunable external cavity semicond. laser with fiber Bragg grating feedback *(Chinese)* 71854
two-level saturable absorber, forward DFWM sig., pulse shape effect 105477
ultra high speed scanner, compact disc drive opt. data handling 117548
ultra-short laser pulses, machining, indust. appls. *(English)* 128616
ultra-short self-focusing intense laser pulse propag. *(Chinese)* 93785
ultrabroad-band Raman amps., WDM high-power LD pumping and gain equalisation 71671
ultraintense laser accel., conf., Pisa, Italy (Sept.-Oct. 2000) 117550
ultraintense laser interacts. and appls., conf., Elounda, Crete, Greece (May 1999) 71882
ultrashort high-intens. pulse compression with plasma nonlin. *(Chinese)* 71899
ultrashort laser pulse detect., time stds., calib. methods 93729
ultrashort laser pulse Page fn. meas. 128404
ultrashort ultraintense laser syst., beam quality meas. and amendment *(Chinese)* 110015
underdense plasma, high intens. TW fs Ti:sapphire laser pulse propag. 128790
uniform spot-size waveguide converter, laser-fiber coupling 71322
vapour plume, laser beam transmittance meas. 117565
VCSEL, noise assisted binary inform. transm. 82759
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
VCSEL, output and transient charact. 117381
VCSEL, polaris. switching, expt. obs., appls. 128301
VCSEL, relax. oscill. freqs. nondegeneracy, linewidth props. 82720
VCSEL arrays, multistable emission of vortex beams 93848
VCSEL arrays, photonic lattices, Bloch anal. 117270
VCSEL beam waists, transverse mode splitting, opt. output spectra 71900
VCSEL cavities, aperture radiation scatt. effects on mode struct. 128267
VCSEL cct.-level models, mode overlap, compact representations 93715
VCSEL with external polariz.-selective feedback, complex polariz. dyn. 82719
VCSELs, coupled, ultrafast directional beam switching 82765
VCSELs, guided-mode reson. filters, single-mode operation control 105325
VCSELs, opt. bistable injection locked, hysteresis, power and freq. depend. 71768
VCSELs, piecewise lin. modeling 93714
virtual mesa/spoiler mid-IR angled-grating DFB laser fabricated by ion bombard. 71765
vis. semicond. lasers with external light input, chaotic oscill. modes, commun. appls. 105328
wavelength tunable electroabsorption modulated DFB laser with thin film heater 105312
wide-aperture VCSELs, transverse mode selection, elec. steerable beams 71880
X-ray FEL, specs., generated pulse charact. 82699
X-ray laser lines, Gauss broadening by at. nuclei elec. pot. fluct. 117085
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
X-ray lasers pumped by ultra-short light pulses 128083
Zeeman multitransverse mode laser, polariz. transverse pattern dyn., vectorial Karhunen-Loeve modes 71885
Ag X-ray laser amplif., 3D ray-tracing simul. 117083
Ag^{+} transient Ni-like x-ray laser, two-color irrad. 128057
Ag^{19+} X-ray laser, short multi pulse pumped, saturated lasing emission 128076
Ag^{19+} laser, wave-front shape eval. 128079
$AgGaSe_2$ cryst. DFG, three-wave interact. 128436
Al alloys, direct diode laser welding 117559
AlGaAs single-lateral mode LD with window-mirror struct., high-power operation 128226
AlGaAs/GaAs high-power QW rem. jn. laser, elec. noise charact. 82662
AlGaAs/GaAsP broad-area LD with large opt. cavity waveguide struct., beam quality 82645
AlGaAs-GaAsP high power broad area LD, large opt. cavity struct. 82670
AlGaAs-based VCSEL, single-mode, long-term spectral stabil. 82652
AlGaInAs-InP 1.3-μm uncooled MQW laser design 128243
AlGaInP/GaInP multi-mode self-pulsating MQW LD with epitaxially integrated saturable absorber 71824
$(Al_{0.4}Ga_{0.6})_{0.5}In_{0.5}P$/GaInP MQW-LD, opt. beam qualities meas. 105367
$Al_xGa_{1-x}N$-based QW, DUV LED and LD, growth and opt. props. 82601
AlInAs/GaInAs quantum cascade lasers, far-IR and ultra-high-speed operation 82656
Ar high av. power table-top soft X-ray laser, spatial coherence meas. 128073
Ar high-av. power polarized soft-X-ray laser beam 93468
Ar^{8+} collisionally pumped X-ray laser, computational modelling 128088
ArF excimer lasers, long-pulse (V)UV operation 105126
As_2S_3-Ag photosensitive thin films, nonlin. anisotropic laser beam scatt. 117342
Au indust. sealed-off vapour lasers, develop., prod. and appl. 93479
BaB_2O_4 cryst. harmonic components interf., phase-controlled pulses 82774
BaB_2O_4 crysts., double wavelength/pulse laser, THG *(Chinese)* 72005
$BaMoO_4$, Raman materials for all-solid-state lasers 93543
$BaTiO_3$ photorefr. cryst., specular refl. enhance./red. rel. to pump beam 82025
$BaTiO_3$ photorefr. media, -70 dB opt. carrier suppression by two-beam couplin 82814
$BaTiO_3$ photorefr. phase-conjugating mirror, intracavity beam shaping, referenc less holography 128376
$BaWO_4$, Raman materials for all-solid-state lasers 93543
$Bi_{12}TiO_{20}$, laser beam self-focusing, opt. limiting appl. 71968
$Bi_{12}TiO_{20}$ photorefr. medium, single laser pulse propag., num. study 128483
C inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
C^{5+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
C_{60} fullerene-containing nonlin. media photodynamics 128461
C_{70} fullerene-doped polyimide systs., effective opt.-power-limiting materia 128464
C_{70}-doped polyimide films, ps radiation freq. conversion 93793
CO first-overtone laser, multiwavelength pulsed operation 128049
CO laser, fund.-band and first-overtone, perform. charact. 105108
CO_2 CW fast-flow laser beam quality 82481
CO_2 CW laser, intracavity SHG in $AgGaSe_2$ 82866
CO_2 CW laser with phase-stepped mirror, uniform intens. distrib. form. 12811
CO_2 Q switching laser, chaos control with opt. feedback 93466
CO_2 Q-switched laser, pulsed beam heterodyne sig. with CdTe electrooptic mod ulator *(English)* 117067
CO_2 TEA laser, SFUR extension to ring cavity 128121
CO_2 TEA laser, effective freq. conversion in nonlin. crysts. 128492
CO_2 TEA laser, flat-top output mode meas., saturation effects *(Chinese)* 12810
CO_2 TEA laser pulses, time-resolved spatial profile, intracavity apertures influ ence 82735
CO_2 act. medium CW fast-axial-flow laser, small-scale opt. nonuniformitie 82469
CO_2 compact reliable multi-channel lasers, radiation spectrum investigs. 8246
CO_2 elec.-discharge lasers, act. media pop. inversion, temp. effect 128115
CO_2 electrooptically Q-switched RF excited waveguide laser with two channel *(Chinese)* 71640
CO_2 fast-transverse-flow discharge CW laser for nuc. reactors fuel channel decommissioning 83049
CO_2 high power laser beam meas. & control, diagnostic instrum. 93702
CO_2 high power lasers, slab waveguide resonator, mode selectivity 105115
CO_2 high power mobile laser technol. complexes, output charact. 82490
CO_2 high-power CW indust. laser, beam stabil. 93475
CO_2 high-power CW lasers for material proc. 82483
CO_2 high-power diffusion-cooled annular lasers, split-electrode config. stud 105111
CO_2 high-power indust. lasers, appls., book 78415
CO_2 high-power indust. waveguide lasers, beam output charact. 82482
CO_2 high-power laser, US beamsplitter 116853
CO_2 high-power laser, controllable Fabry-Perot interferometer output mirro 82488
CO_2 high-power laser with variable reflectivity output mirrors unstable resonator beam QC 82487
CO_2 high-power multibeam lasers, surface hardening appls. 83050
CO_2 high-power multibeam lasers with heat regenerator, output charact. 82486
CO_2 high-power pulse-repetitive RF-excited slab lasers, output charact. 105113
CO_2 hybrid laser, dyn. emission, math. modeling 82496
CO_2 indust. CW laser beam, spatial and temporal charact. 105141
CO_2 indust. cw laser beam, polariz. state meas. 105117
CO_2 indust. high-power laser, radially polarized beam generation 82489
CO_2 indust. laser, act. mirror resonator, Q-switch regime generation 105114
CO_2 indust. repetitive-pulse laser, energy charact. 82485
CO_2 laser CW radiation for sheet steel surface treatment 83051
CO_2 laser, RF to microwave excitation, electron energy control, efficiency study *(Chinese)* 82476
CO_2 laser, electron beam sustained, plasma cond. 82464
CO_2 laser light delivery syst., hollow bent output tips props. 82716
CO_2 laser proc., high-power, focal mirror aberration meas. 117344
CO_2 laser radiation, phase-matched SHG in $CdGe(As_{1-x}P_x)_2$ cryst. 82869
CO_2 laser, slab RF-excited, unstable-waveguide resonator, output charact. 82473
CO_2 laser transm. using high-power double-layer dielec. hollow opt. fiber 127612
CO_2 laser unstable resonator mirrors, phase front compensation 128349
CO_2 laser, unstable resonators with helical mirrors 93477
CO_2 laser with hollow waveguide transm., IR refr. indices *(Chinese)* 104732
CO_2 lasers, CW and high repetition rate props., at. indust. appls. 83048
CO_2 lasers, resonator SBS-mirrors, phase conjug. develop. 105398
CO_2 lasers, waveguide-unstable cavities, laser beam profiling 82470
CO_2 long pulse laser, simplified power supply, zero cross switching tech. 71873
CO_2 multifunctional laser with controllable spectral and temporal charact., indust./scientific appls. 82484
CO_2 planar waveguide laser amp., microsecond pulses for micromachining 105112
CO_2 planar waveguide lasers, direct high-resoln. machining appls. 105110
CO_2 sealed-off slab lasers, all-solid-state generator excitation, output charact. 105109
CO_2 short laser pulse generation for IR-laser chem., parametric studies 117391
CO_2 slab-waveguide laser, RF excited, mode control 105140
CO_2 waveguide laser, electrooptically Q-switched RF excited, tunable output charact. *(Chinese)* 105149
CO_2 waveguide lasers, RF-excited, parametrical line develop. 82472
CO_2/OsO_4 stabilized laser at 28.8 THz, absol. freq. meas. 71636
Ca, innershell photo-ionization-pumped $L_{23}M_1$ transit., femtosecond X-ray laser 128090
$Ca_4GdO(BO_3)_3$ NLO cryst. wavelength freq. conversion 72038
Ce:LiLuF tuned-laser, pump-probe-gain, fluoresc. yield 117166
Cr,Yb:YAG self-Q-switched laser, perform. study *(Chinese)* 71701
Cr^{14+} soft X-ray laser, picosecond pumped, output charact. 128080
Cr^{4+},Nd^{3+}:YAG laser, self-Q-switched, LD pumping, output charact. *(Chinese)* 105240
Cr:LiSrAlF$_6$ Q-switched tunable laser with KD_2PO_4 cryst. *(Chinese)* 71747
Cr:LiSrAlF$_6$ electrooptical Q-switched laser, pulse width compression with CS_2 SBS-cell *(Chinese)* 82571
Cr:LiSrAlF$_6$ laser, Q-switched, dual pulse/wavelength output *(Chinese)* 82569
Cr:LiSrAlF$_6$ lasers, dual-pulse/dual-wavelength fourth harmonic generation beam *(Chinese)* 71743
Cr:forsterite high-energy femtosecond oscillators for dielec. materials laser ablation 128185
Cr^{4+}:YAG CW lasers, power perform. optim. 82558
Cr^{4+}:YAG cryst. laser pulse bleaching 82828
Cr^{4+}:YAG pass. Q-switched laser, antiresonant ring fn. *(Chinese)* 105255
Cr-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
Cr-doped act. material lasers, ouput pulses, self-Q-switching behavior 71730

beams continued
u high-magnification unstable laser resonator, flattened Gaussian beam concept 82732
u indust. sealed-off vapour lasers, develop., prod. and appl. 93479
u sealed-off vap. laser radiation, spatial/temporal charact. 128046
u vap. laser, max. output, design and global optimizing GA *(Chinese)* 71632
u vap. laser, output power, CAD, phys. simul. codes *(Chinese)* 82478
u vap. laser, pulse repetition rate, metastable state and electron dens. effects 93467
u vap. lasers, output charact. and appls. 105088
uPc thin film, third order NLO suscept. *(Chinese)* 117432
F chem. laser, pulse-periodic operation 105087
F/HF CW chem. laser, perform. depend. on flowfield params. *(Chinese)* 105148
r,Al-codoped germanosilicate planar waveguide array with 50 GHz freq. separation 128191
r,Yb:glass microchip laser, radiation amplif. using $KTiOPO_4$ parametric amp. 72017
r,Yb:glass single-mode laser in NIR, amplit. and freq. stabilization 105259
r,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
r fiber laser, stabilized rationally mode-locked, pulse generation, BER 105190
Er^{3+},Cr^{3+},Yb^{3+} doped phosphate glass for eye-safe wavelength lasers 117111
r:ZBLAN fibre laser, pulsed-pumped, output charact. 71682
r:glass Q-switched lasers with Co-doped transparent glass ceramic saturable absorber 117165
Er^{3+}:$LiNbO_3$ waveguide amps., pumped, spectrosc. vars. assoc. with fab. proc. 105245
r-doped Bi-based fiber laser for WDM amps. *(Japanese)* 128142
r-doped all-fiber pass. Q-switched low-threshold laser with Co^{2+}:ZnSe saturable absorber 71685
r-doped fiber amp., loop-locked config., gain spectrum eval. 117121
r-doped fiber amp. with inline fiber grating laser, L-band operation 71675
r-doped fiber amps., induced phase shift, nonlin. Schroedinger eqn. 117127
r-doped fiber amps., loss mechanisms, const. inversion black box model *(Korean)* 93525
r-doped fiber dual-ring laser, polarized mode, chaos control by lin. feedback method 117126
r-doped fiber dual-stage opt. amps., gain-locking method, WDM systs. appls. 93506
r-doped fiber laser, rational harmonic act.-pass. mode-locking *(Chinese)* 93497
r-doped fiber laser, self-Q-switched, SBS, output charact. *(Chinese)* 82522
r-doped fiber laser with cavity SOA, rational harmonic mode-locking, stable pulse generation 105166
r-doped fiber lasers, 3 μm operation, med. appls. 71673
r-doped fiber ring laser, broad-band tunability 71672
r-doped fiber ring laser, widely tunable operation in C-/L-bands 71674
r-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wavelength operation *(Chinese)* 82523
r-doped fibre amps., self-generated sig.-seeding tech., LW band performs. 105172
r-doped mode-locked fiber laser, multiwavelength pulse generation 82536
r-doped multiwavelength fiber ring laser with spatial mode beating filter 105189
r-doped silica amplif. planar waveguides *(English)* 105249
r-doped single-freq. fiber laser, external light injection, freq. control charact. 71677
r-doped twin-core fibre narrow-band filter for fibre lasers 105188
Er^{3+}-doped LW-band fiber amp., ring-laser seed sig. generator 71678
Er^{3+}-doped tellurite glass fiber amps., broadband and WDM appls. *(Japanese)* 128140
F_2 excimer lasers, long-pulse (V)UV operation 105126
F_2 laser, discharge pumped, high-repetition-rate operation, 1D model calc. 105132
Fe^{16+} X-ray lasers, multiple irrad., seq. pumping 128077
GaAlAs diode laser, violet output based on $CdZn(SCN)_4$ freq. doubling *(Chinese)* 71770
GaAs/AlAs single mode quantum cascade lasers, CW operation *(German)* 128322
GaAs/AlGaAs high power semicond. laser stack arrays, output charact. *(Chinese)* 105323
GaAs/AlGaAs periodic superlattice struct., quantum cascade devices, hot electron distrib. 93637
GaAs/AlGaAs quantum cascade lasers, facet temp. mapping, PL microprobe 93636
GaAs/InAs/AlAs quantum cascade lasers, pulsed mode operation 128318
GaAs-based quantum cascade laser with Peltier cooled element, output charact. 71815
GaAsP-AlGaAs 810-nm large opt. cavity diode lasers, narrow beam divergence 128242
GaAsSb/GaAs QW VCSELs, CW operation 71766
GaAsSb-based type-II QW laser, blue emission shift 105334
GaInAs/AlGaAs QD edge-emitting laser, highly reflecting Bragg mirrors, output charact. 71806
GaInAs/AlInAs mid-IR quantum cascade lasers, high-speed digital data transm. 128317
GaInAs/GaAs QW, multi-wavelength vert. cavities MOCVD, laser charact. 93584
GaInAsP CW lasing microdisk injection lasers, large spontaneous emission factor 105280
GaInAsP/BCB DBR laser, fab., single-mode operation 93583
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photonic integrat. 105311
GaInP/AlGaInP, strained MQW laser, perp. opt. beam quality study *(Chinese)* 128266
GaInP/AlGaInP strained MQW laser, vert. beam quality 128324
GaInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814
GaP high-av.-power Raman laser, freq. conversion/beam cleanup 128250
GaSb/InAs/AlSb mid-IR angled-grating DFB lasers, beam quality limitations 128359
$Gd_{0.37}Y_{0.63}Ca_4O(BO_3)_3$ non-crit. phase-matched cryst. THG *(Chinese)* 128521
Ge expanding laser prod. plasma X-ray laser medium, opacity calcs. 117086
Ge^{22+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
HF CW chem. laser with three-jet nozzle array, secondary-fuel supply effect on charact. 128114
HF CW chem. laser with three-jet nozzle array, spatial-energy and spectral charact. 128113
HF TEA-TEA oscillator-amp. laser syst., gain/beam profile charact. 117072
HF chain/nonchain phototriggered lasers, perform. study 105086
HF chem. laser, open surface discharge opt. pumping, output charact. 128118

laser beams continued
HF chem. laser, power spectral perform. 105082
HF laser, operation conditions, excited mols. fluoresc. meas. *(Korean)* 93486
HF nonchain chem. laser, energy, temporal and spectral charact. 105084
HF nonchain laser, pulsed pumping, output charact. 93481
HF pulsed chem. nonchain laser, electron beam pumped, output radiation 105083
HF/DF photoinitiated pulsed chain chem. laser, master generator-amp. cascade scheme 105085
He-Ar laser, hard ioniser pumped, act. medium kinetic model 93480
He-Cd^+ hollow cathode lasers, single-mode operation, linewidth studies 105096
He-Ne double-freq. laser, refl. radiation injection, detect. limit 117066
He-Ne four-mirror two-freq. laser for heterodyne measuring systs. 128104
He-Ne laser, RF to microwave excitation, electron energy control, efficiency study *(Chinese)* 82476
He-Ne laser beam focusing, beam-shape coeffs., generalized Lorenz-Mie theory 71877
He-Ne laser, full-inner-cavity birefr. dual-freq., angle-block and freq.-stabilization *(Chinese)* 105150
He-Ne laser with anisotropic cavity, magneto-induced bleaching 82456
He-Ne lasers, DC gas discharge, falling I-V charact. 128102
He-Ne lasers, amplif. influence factor, output power 128105
He-Ne three-mirror two-freq. laser with stabilized beat freq. 128103
He-Ne two-wave freq.-stabilized laser for highly sensitive airborne gas analyzer 132211
^{3}He-$XeBr_2$ nuc.-pumped flashlamp sources for nuc.-pumped lasers 128047
Hg CW at. laser, microwave discharge pumped, output charact. *(Chinese)* 71645
Ho,Tm,Cr:YAG laser, pass. Q-switching with Cr^{2+}:$Cd_{0.55}Mn_{0.45}Te$ saturable absorber 82753
I lasers, resonator SBS-mirrors, phase conjug. develop. 105398
I photodissociation ASTERIX laser, PALS project and upgrade 105081
I_2 high power laser beams, opt. freq. conversion techs. 105069
I-NCl chem. laser, $^2P_{\frac{1}{2}}$-$^2P_{\frac{3}{2}}$ electronic transit., CW action 105060
InAlAs/InGaAs/InP mid-IR quantum cascade lasers, refr. index dispersion effect on perform. 105294
InAlGaAs/GaAs high-power diode lasers, strain-induced defects, photocurrent spectrosc. 105314
InAlGaN-based QW, DUV LED and LD, growth and opt. props. 82601
InAs QD laser on InP substr., 2.5 GHz direct modulation, low chirp operation 128319
InAs self-assembled QD amps., ultrafast gain recovery, modulation limitations 71812
$InAs/Al_{0.6}Ga_{0.4}Sb$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InAs/AlSb IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InAs/GaInAs QD DFB lasers, singlemode operation 71790
InAsSbP/InGaAsSb/GaInAsSb type II heterostruct., high power mid-IR lasers 82672
InGaAlAs/InP VCSEL diodes, operation charact. 128320
InGaAs QW vert. cavity lasers, low-threshold high-temp. operation 93642
InGaAs VCSELs, singlemode output power enhancement, reduced spatial hole burning 71769
InGaAs broad area lasers, high power/reliab. operation 105315
InGaAs/AlGaAs high-power QW lasers, high-temp. operation 105317
InGaAs/GaAs single-mode ridge waveguide laser, external cavity, spectral narrowing 71823
InGaAs/GaAs single-mode ridge waveguide lasers with aperiodic Bragg-grating fibre, near-transform-limited picosecond pulses 71822
InGaAs/GaAs strained layer SCH SQW laser, output charact. 71805
InGaAs/GaAs/AlGaAs triple-QW GRINSCH laser, sol-gel fab., output charact. 93614
InGaAs/InAlAs quantum cascade reinforced ridge waveguide laser, output charact. *(Chinese)* 71797
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InGaAs-AlGaAs SQW GRINSCH ridge waveguide laser, high-power pump operation 105316
InGaAsN VCSELs, singlemode operation, high bit rate data transm. 71789
InGaAsP LD, electron radiation effects, output charact. *(Chinese)* 105324
InGaAsP, solid state thermionic cooler monolithic integrat. with semicond. lasers 104744
$In_{1-x}Ga_xAs_yP_{1-y}$ MQW heterostruct. lasers, opt. and structural props. 93624
InGaAsP/InGaP/AlGaAs SQW diode lasers with tensile-strained barriers, 2 W reliable operation 128316
InGaAsP/InP laterally coupled ridge waveguide DFB lasers, chem. sens. appls. 71767
InGaAsP/InGaAs/InP multiquantum well high power broadband singlelobe superluminescent diode 82405
InGaAsP/InP-GaAs/AlAs DBRs with BH VCSELs, output charact. 105336
InGaN CW MQW LD on Cu substrs., perform. charact. 128227
InP/InGaAs/InGaAsP strained QW lasers, fab. & perform., GSMBE growth 105291
InP/InGaAsP high-power lasers, output charact., opt. commun. appls. 105313
InP-InGaAsP VCSEL arrays with DBR, fab., WDM appls. 128225
^{39}K atoms, two-photon stimulated emission proc., laser polariz. instabilities 71637
$KLiNbO_3$ cryst. freq.-doubling props. *(Chinese)* 72002
$KNbO_3$, CW laser beam self-focusing in externally applied elec. field 128484
$KNbO_3$, Gaussian beams opt. rectification, DFWM 105475
$KTiOPO_4$ cryst. Bessel light beam sum freq. mixing 82871
$KTiOPO_4$ cryst. SHG three-wave mixing, Bessel/Gaussian light beams 82729
Kr^{8+} X-ray lasers, gain calcs. time hist., radiative-collisional model 128078
Kr^{8+} soft X-ray laser, opt.-field-induced ionization initiated transient excitation scheme 128085
Kr_2* discharge-pumped VUV laser, stimulated emission 105125
KrF excimer TEA gas lasers, excitation discharge, floating particles influence 105131
KrF excimer laser, beam shaping and homogenization using multifacet Fresnel-kinoforms 105401
KrF excimer-laser syst., four-wave difference-freq. mixing in Xe 82867
KrF laser amp., Stokes pulse saturated amplif., high intens. pulse generation 105092
KrF laser amp., electron-beam-pumped, output charact., init. testing 71635
KrF laser amp., intra-cavity ASE, nanosecond pulses high-energy extraction 82500
KrF laser driver, rep-rate electron beam-pumped, electron-beam transportation expts. 105128
Li III microcapillary plasma, lasing to ground state 128081
$LiNbO_3$ periodically poled cryst., CW UV generation by SHG 82847

laser beams continued
$LiNbO_3$, tunable narrow-band surface-emitted terahertz radiation generation 71993
LiNbO-based opt. modulators, anodic Au corros. 127824
Mo^{14+} soft X-ray laser, picosecond pumped, output charact. 128080
N inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
N laser arrays, phase locking, output charact. 128048
Nb^{13+} soft X-ray laser, picosecond pumped, output charact. 128080
Nd:$Gd_3Ga_5O_{12}$ laser, pass. Q switching, self-phase conjug. using LiF:F_2^- 117154
Nd:$GdVO_4$/$KTiOPO_4$ green laser, diode-pumped Q-switched, flat-flat resonator 71751
Nd:$KGd(WO_4)_2$ laser, pass. Q-switched diode pumped, V:YAG saturable absorber 71712
Nd:$LiYF_4$ laser for glass plate holographic marking using internal periodic struct. *(Japanese)* 105584
Nd:$NaY(WO_4)_2$, CZ growth, thermal and laser props. 93536
Nd:YAG CW laser, Cr^{4+}:YAG saturable absorber pass. Q-switching, output charact. *(Chinese)* 105441
Nd:YAG CW laser keyhole dyn. characterisation 83054
Nd:YAG LD side-pumped slab double-pass laser amp. *(Chinese)* 82555
Nd:YAG Q-switched UV laser, perform. limits, high-throughput micromachining appls. 128188
Nd:YAG boule slices, laser perform., opt. props. 93540
Nd:YAG ceramic laser, LD end-pumping scheme, output charact. 105225
Nd:YAG ceramics, hot band reson. pump, spectrosc. and laser emission 105231
Nd:YAG diode-pumped high power freq. doubling laser, output charact. *(Chinese)* 71741
Nd:YAG diode-pumped high-power rod laser, high-efficiency operation 128187
Nd:YAG dual-freq. laser with quartz birefr. Fabry-Perot etalon *(Chinese)* 71742
Nd:YAG laser, LD pumped, CW RT perform., $LiNbO_3$ waveguide freq. doubler *(Chinese)* 117158
Nd:YAG laser, LD pumped, intracavity freq. doubling, high-pulse-energy green-beam generation 117167
Nd:YAG laser Laguerre-Gaussian modes, Wigner distrib. fn. 93700
Nd:YAG laser, SHG, sum freq. mixing *(English)* 117462
Nd:YAG laser, diode end-pumped pass. Q-switched, intra-cavity freq. doubling 105232
Nd:YAG laser, flash-lamp-pumped, dual-telescopic optics config. 105256
Nd:YAG laser, high-power CW diode pumped, output charact. 105250
Nd:YAG laser mode shaping DOE fab. 82727
Nd:YAG laser, picosecond flashlamp pumped, all-solid-state pass. pulse control 105218
Nd:YAG laser radiation, Raman-conversion in $Ba(NO_3)_2$ 82561
Nd:YAG lasers, I_2-stabilized, absol. freq. meas. 86385
Nd:YAG lasers, diode side-pumped pulsed, output charact. 128195
Nd:YAG lasers, end-pumped, beam quality, thermal effects 105258
Nd:YAG lasers, semicond. laser pumped, mirror coating struct. design 127884
Nd:YAG nanosecond time period Q-switched diode-pumped laser pulses for Cu micromachining 72142
Nd:YAG ns nonselective-cavity laser radiation stats. on saturable absorber passage 82767
Nd:YAG pulsed laser, stable Kerr-lens mode-locking operation *(Chinese)* 105238
Nd:YAG pulsed laser with SBS-mirror, large vol. laser mode, num. simul. 93566
Nd:YAG regenerative amp., LDA pumped, single long. mode laser pulse *(Chinese)* 105221
Nd:YAG ring chip laser, self-modulation oscills. phase shift in mag. field 93565
Nd:YAG rod laser amp., LD-pumped, CW TEM_{00} mode 1064 nm beam generation 128212
Nd:YAG rod lasers, diode arrays side pumped, $KTiOPO_4$ intracavity-freq.-doubling operation *(Chinese)* 82570
Nd:YAG single-mode diode-pumped laser, freq. scanning regimes 117155
Nd:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Nd:YAG slab, high-gain laser amplif., SBS phase-conjug. mirror 71739
Nd:YAG slab laser, pass. Q-switched, output charact. 71725
Nd:$YAG_{0.18}YSAG_{0.82}$ laser, compositional tuning, Q-switched operation 105246
Nd:$YAlO_3$ high-power CW diode-pumped laser 82583
Nd:$YAlO_3$ laser, LiB_3O_5 intracavity-doubling, output charact. *(Chinese)* 71744
Nd:YVO_4 CW laser, LD pumped, LiB_3O_5 intracavity freq. doubling *(Chinese)* 71727
Nd:YVO_4 Q-switched mode locked laser with V^{3+}:YAG saturable absorber 105263
Nd:YVO_4 diode-pump Q-switched laser, $LiTaO_3$ quasi-CW freq. doubling *(Chinese)* 82885
Nd:YVO_4 laser, LD end-pumped, beam quality factor meas., slit-scanning method 87000
Nd:YVO_4 low-power laser, pass. mode-locking using InGaAs QW saturable absorber mirrors 105485
Nd:YVO_4 microchip laser, double-end-pumped, Laguerre-Gaussian modes 93537
Nd:YVO_4 red light laser, LD pumped, intracavity freq.-doubling *(Chinese)* 71704
Nd:YVO_4 ring lasers, LD pumped, $KTiOPO_4$ intracavity doubling, output charact. *(Chinese)* 71745
Nd:YVO_4 ring single-freq. laser, LD end-pumped, high-power freq. stabil. *(Chinese)* 71703
Nd:YVO_4 rods dual-config. resonator, unidirectional operation 82708
Nd:YVO_4 single-freq. laser with mode cleaner, intens. noise reduction *(Chinese)* 71702
Nd:YVO_4 single-mode microchip laser with feedback, phase-noise-driven instabil. 105248
Nd:YVO_4 solid-state lasers, LD end-pumped, effective stimulated emission cross-sects. *(Chinese)* 71746
Nd:YVO_4/$KTiOPO_4$ intracavity freq.-doubling mini-laser, stabilization using I_2 hyperfine transit. 82557
Nd:YVO_4/$KTiOPO_4$ single-freq. laser, design 93582
Nd:glass high-energy laser fusion PROGRESS syst. with shaped nanosecond laser pulses 105217
Nd:glass laser, pulsed-power capabilities, materials interact. appls. 128186
Nd:glass lasers pulse power systs., reverse switched dinistors based semicond. closed switch 105415
Nd:glass multichannel high-power laser facility, rem. control alignment 105216
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
Nd:phosphate glass Shenguang III laser prototype, residual thermo-opt. distortions *(Chinese)* 105237
Nd:phosphate glass diode-pumped regenerative amp., single-mode laser pulses 71731
Nd:phosphate glass slab laser, pass. Q-switch, output charact. *(Chinese)* 105239
Nd^{3+}:$(CaLi)_3Nb_{1.68}Ga_{3.2}O_{12}$ garnets, act. media for diode-pumped lasers, energy and spectral params. 128205
laser beams continued
Nd^{3+}:$Ca_3Nb_{1.68}Ga_{3.2}O_{12}$ garnets, act. media for diode-pumped lasers, energy and spectral params. 128205
Nd^{3+}:$PbWO_4$/Cr^{4+}:YAG Raman laser, diode-pumped self-stimulating pass. Q-switched, output charact. 105262
Nd^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 10526
Nd^{3+}:YAG planar waveguide lasers, fab. and output props. 71724
Nd-doped double-clad fiber amps. for coherent space commun. systs. 71679
Nd-doped laser superhigh-fidelity phase conjug. at SBS, new-generatio kinoform optics 128366
Nd-doped lasers with Cr^{4+}-doped Q switches, radiation params., operation simu 82543
Nd-doped oxide crysts. for solid state laser appls. 71722
Nd-doped self-phase-conjug. high power lasers, pass. Q-switcher 128438
Nd-doped solid laser with V^{3+}:YAG cryst. high repetition rate pass. Q-switc 71723
Ni^{18+} X-ray lasers, four-wave sum DFG scheme 128094
Ni-like high intens. X-ray lasers, laser plasma diagnostic appls. 128074
O_2-I advanced COIL chem. laser, ElectriCOIL syst. concept 105061
O_2-I chem. laser research in Dalian, multi-kilowatt output 105058
O_2-I chem. laser, small sig. gain and output power study 105062
O_2-I chem. laser with hybrid confocal type resonator, output charact. 105142
O_2-I chem. laser with pipe-array jet-type singlet O_2 generator 105080
O_2-I chem. laser with sq. pipe-array jet-type O_2 generator *(Chinese)* 82477
O_2-I chem. laser with unstable resonator, UR90 outputting annular beam 10506
O_2-I discharge chem. laser, $O_2(a^1\Delta_g)$ RF plasma jet generator 105059
O_2-I ejector chem. laser, mixing chamber calcs. 128112
O_2-I high-press. chem. laser, nozzle scale effect on perform. 105065
O_2-I high-press. pulsed laser with instantaneous I generation, operational charact 105079
O_2-I supersonic chem. laser, I_2 dissoc. study 105066
O_2-I supersonic chem. laser, twisted-aerosol singlet O_2 generator, energy per forms. 105078
O_2-I supersonic chem. lasers, flow mixing schemes, computational modeling 105063
O_2-I supersonic laser evol. at Russian Federal Nuclear Center-VNIIEF 105064
Pd$^+$ Ni-like 4d→4p laser transit., saturated output tabletop x-ray lasers 12805
Pt-Cu colloidal solns., ps Nd:YAG laser THG 93800
Si micromachined membrane deformable mirror, intracavity Nd:YAG laser radiation control 82191
Si scanning micromirror, bi-directionally movable mag. microactuator 93199
SiGe/Si layers, amorph., metastable cryst. state, CW laser irrad. 115335
$Si_{20}Te_{80}$ amorph. AO cell, IR diode laser radiation appl. 116856
Sn^{22+} X-ray lasers, 4d-4p transit., gain saturation 128075
Ti:Al_2O_3 femtosecond laser with multiple-pass cavity, stabil. anal. *(Chinese)* 105241
Ti:Al_2O_3 laser with tunable varied reflectivity mirror unstable resonator, beam quality *(Chinese)* 105220
Ti:sapphire femtosecond amp., Gaussian spectral shaping, gain narrowing effect reduction *(Chinese)* 117157
Ti:sapphire high-energy femtosecond oscillators for dielec. materials laser ablation 128185
Ti:sapphire high-power regenerative laser amp. 71718
Ti:sapphire laser, repetition-rate Kerr-lens mode-locked, high-energy pulse generation 71709
Ti:sapphire laser, sub-resonators, dual-wavelength operation 71711
Ti:sapphire lasers, Kerr lens mode-locked, bistability study 82579
Ti:sapphire mode-locked femtosecond laser pulse, spectrum broadening, cascaded second-order nonlin. 105431
Ti:sapphire mode-locked lasers, carrier-envelope phase stabilization using microstruct. fiber 128196
Ti:sapphire oscillator, XUV harmonics source props. and appls. 128190
Ti:sapphire oscillator femtosecond laser pulses, temporal charactn., SPIDER tech. *(Korean)* 93738
Ti:sapphire pass. mode-locked laser, timing jitter meas. and control *(Chinese)* 128207
Ti:sapphire regenerative amplified femtosecond pulsed laser, sub-micron machining, Rowland ghost effect 72116
Ti:sapphire self-mode-locked laser, femtosecond opt. pulses, time-resolved opt. gating 105459
Ti:sapphire ultrashort light pulses, polariz. state, cross-PM 105421
Ti^{3+}:Al_2O_3 ring laser, spectral filter counterpropagating wave coupling 93567
Ti-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
Tm,Ho:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Tm,Yb:glass fibre laser, $^1G_4$ level excitation, blue upconversion, fluoresc. 93495
Tm^{3+},Ho^{3+}-doped ZBLAN glass fibre laser, output charact. 82520
Tm^{3+}:KY_3F_{10} laser, spectrosc. and CW operation 82587
Tm^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
Tm-doped fiber amp., gain-shifted, transm. capacity, WDM appls. *(Japanese)* 128141
Tm-doped fibre amp., single pump gain-shifted, power conversion efficiency 93521
WO_3 blue thin films, photo-induced effective nonlin., Z-scan meas. method 93784
Xe laser, RF to microwave excitation, electron energy control, efficiency study *(Chinese)* 82476
Xe^{8+} femtosecond driven collisional X-ray laser, $4d^95p$-$4d^95d$ line amplif. 128082
XeCl discharge laser with Gaussian reflectivity mirror, beam quality factor evol. 105151
XeCl excimer coherence evol. impulsed lasers, beam quality 82728
XeCl long-pulse efficient laser, discharge pumped, output charact. 105129
XeCl oscillator-amp. laser syst., high contrast nanosecond pulse train generation 105130
XeF blue-green laser, opt. pumped, C-A transit., output charact. *(Chinese)* 71630
XeF excimer laser, C-A transit., segmented surface discharge radiation pumping *(Chinese)* 71641
Yb,Er:glass laser, diode side-pumped pulsed, output charact. 128195
Yb,Er-doped fiber laser, relax. oscill. locking, microsecond pulse generation 105165
Yb^{3+} doped holey fibre based modelocked laser 71656
Yb:YAG laser, pass.-Q-switched with Cr:YAG saturable absorber *(Chinese)* 128199
Yb:YAG pass. Q-switched laser with Cr^{4+}:YAG saturable absorber, output charact. 117164
Yb:YAG pass. mode-locked thin-disk laser, widely tunable pulse durations 71732
Yb:$YAl_3(BO_3)_4$ laser, diode-end-pumped, CW self-freq.-doubled output 105251
Yb^{3+}:$Sr_5(VO_4)_3F$ laser, CW dual-wavelength action, tunability perform. 82577

beams continued
Yb^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
Yb-doped double-clad fiber laser, high-power tunable narrow line width output 105200
Yb-doped double-clad fiber laser, unidirectional ring geom., high power operation 82535
Yb-doped double-clad fibre laser, single-transverse-mode output 82519
Yb-doped fiber amps., gain, saturation and noise charact. *(Chinese)* 71657
Yb-doped fiber amps., optimised design, gain and noise perform. *(Chinese)* 71693
Yb-doped high power Raman fiber laser modulator, low insertion loss 105205
Yb-doped phase-locked multicore fiber laser array, high-brightness laser beam 71661
Yb^{3+}-doped narrow-linewidth fiber laser, unpumped dopant fiber fn. *(Chinese)* 105182
Yb^{3+}-doped ring/line cavity fiber laser, LD pumped, output charact. *(Chinese)* 71691
Zn^{20+} X-ray laser, half-cavity geom. effect on output and spatial coherence 117081

cavity resonators
see also microcavity lasers
1.48-μm flared resonators, CW power coupling into single-mode fiber 128343
2D photonic bandgap defect lasers, single-mode oscill. 128270
3D photonic cryst. laser fab. 82600
Act. cavity VCSEL eigenmodes, optimized waist Gauss-Laguerre modes 128344
Act. laser resonators, intracavity flexible mirror, output charact. 82707
Act. mode-locked fiber lasers, extended ABCD model, expt. validation 71680
Act. mode-locked laser, time-resolved autocorrelation meas. 128400
Act. mode-locked laser noise dyn. 82786
Act. opt. fiber ring resonator filter, linewidth factor, optim. *(Chinese)* 71692
Act.-cavity VCSEL eigenmodes, simple analytic representation 105390
Adaptive loop resonator, intracavity beams opt. phase distortions 82702
Additive-pulse mode-locked fiber laser with fiber-grating, oscill. conditions *(Chinese)* 105181
Annular lasers, unstable resonators, beam quality study 93703
Auto-aligned fs lasers, SESAM mirrors 82756
Auto-stabil. adjustment syst. *(Chinese)* 105393
Beatwave Fabry-Perot interferometer calib. using tunable external-cavity diode laser *(Chinese)* 75348
Bessel-beam laser using nondiffractive resonators 93706
Bessel-Gauss mode laser resonator, diffr. energy losses 128351
Brillouin fiber ring laser, soliton compression and locking 128136
Cascaded CW Raman fiber lasers, SRS, num. modeling, optimisation 82539
Cascaded Raman fibre laser for stable dual-wavelength operation 82511
Cascaded WDM fiber Bragg grating sens. elements, ring-compounded-cavity fiber laser use 86591
Chirped fiber grating group time delay meas., mode-mocking tech. 116647
Circ. surface relief DFB organic semicond. lasers 82617
Circulating solid state laser beam control by holographic gratings 83013
Coaxial FEL with Bragg mirror resonators, spatially coherent radiation 117306
Coherent entanglement photon pairs in EM field, enhanced generation rate 82888
Complex multilayered struct., VCSEL, opt. field generation modelling 128302
Compton backscatt. X-ray generation by high power dens. laser *(Chinese)* 110441
Coupled-cavity pass. Q-switching 93727
Cpd. cavity semicond. lasers, LF fluct., temporal dyn. 93754
Crossed Porro laser resonator design, opt. ray tracing software 128347
Curved mirror deep-etched two-groove DBR lasers 71792
CW double-hexagonal Talbot cavity with stochastic propag. phase, extraction charact. 128353
CW mode-locked all-solid-state laser source, cavity-augmented freq. tripling 105260
CW single-freq. semicond. laser with Bragg fibre grating 128303
CW-cavity ring down spectrosc., ultra-sensitive atmos. trace detect. 76935
DBR fiber grating laser, freq. stabilization using interferometric tech. 105199
Depolarised speckle radiation wave front polaris. capture by holographic laser mode 117535
DIAL rapidly tunable AO spectrometer for space environ. 93941
Diode cascade VCSEL, cavity region reduced current spreading 82691
Diode laser extended cavity with EO prism, broadband fast freq. tuning 82757
Diode laser freq. control, cavity ring-down spectrosc. appl. 121246
DOE external cavity diode laser, single mode wavelength tuning 105399
DOEs transfer into GaAs, direct-write electron-beam lithog., VCSEL integrat. 105400
Double pass X-ray laser, focalisation, ray trace code 117051
Dual-cavity solid state laser SHG, freq. jumps 93684
DWDM transm. using directly modulated fiber Bragg-grating external-cavity laser 120290
Dye lasers, high-efficiency flashlamp-pumped, output charact. *(Japanese)* 105160
Dye-doped ethylene glycol pendant drops, lasing, spatial-resolved spectral meas. 71649
Trans-4-[p-(N-ethyl-N-hydroxyethylamino)styryl]-N-methylpyridinium iodide, two-photon absorbing laser material 82505
Excimer laser resonators, modifs., laser beam emission energy/dens./shape 82706
External cavity LD, mode-hop free tuning by grating 117244
External cavity LD design, spectrosc. opt. sens. appl. 105364
External cavity LD for all-opt. wavelength conversion, injection current selection *(Chinese)* 117314
External cavity LD with cascaded fiber Bragg gratings, dual-mode operation *(Chinese)* 117252
External cavity multi-mode semicond. laser, LF fluct. 105305
External cavity multiple reflecting semicond. laser dyn., rigorous simul. 82685
External cavity semicond. lasers, LF fluct., simple dyn. model 117257
External cavity semicond. lasers, low-freq. fluct., stochastic dyn., calcs. 93634
External cavity tunable lasers, fibre network deployment 117401
External feedback LD stabil. prediction by root-locus tech. 71829
External reflector cpd. ring resonator for single-mode TW doped fiber laser 93682
External-cavity diode laser with intracavity glass plate as fine-tuning device 71785
External-cavity laser heterodyne phase-locking, MM-wave sig. generation 69255
External-cavity mode-locked semicond. laser modules, all-opt. clock recovery 131577
External-cavity semicond. laser, transm. perform. assess. 96685
External-cavity semicond. laser stabil., strong-feedback regime 93629
External-cavity semicond. lasers, tuning range, AR-coating facet wavelength depend. *(Chinese)* 117315
Fabry-Perot LDs integrated with spot size converter for 2.5 Gbit/s appls. 120164

laser cavity resonators continued
FAST-Net global interconnection syst., beam-steering, aberration anal. 93457
FEL, opt. cavity 5D precise rem.-control adjuster *(Chinese)* 128342
FEL oscillator, sustained saturation 105373
femtosecond Gaussian beam focusing by lenses *(Chinese)* 105413
femtosecond light pulse generation/diagnostics 128408
fiber Bragg grating external cavity LD, gain saturation effect, all-opt. wavelength conversion *(Chinese)* 105519
fiber grating external cavity LD, all-opt. wavelength converter *(Chinese)* 117250
fiber grating external cavity semicond. lasers with narrow linewidth high MSR *(Chinese)* 71852
fiber laser sens. with cavity form. by ref./sens. Bragg gratings 86596
fiber lasers lin. array in external Talbot cavity, near-/far-fields study 93498
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
fibre grating laser, wavelength stabilised, WDM syst. 105178
fibre laser with SOA gain medium, wavelength-switching, Vernier effect 93522
fibre optic network conf., Kharkiv., Ukraine, (May 2001) 113238
fibre ring lasers, rational harmonically modelocked, higher-order opt. pulse generation 93523
flat-topped multi-Gaussian laser beam propag. 93708
flattened Gaussian beam generation by saturable absorbers 117387
four port opt. switch, Brillouin-based fibre-optic sens. 105551
gain-switched diode laser, nonresonant self-injection seeding, step-tunable single-mode operation 128237
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
grating-based surface-emitting tapered unstable resonator laser simul. 128272
high power beam shaping diffractive optics 117563
high power diode lasers with external resonators, improved beam quality 71821
high power laser amps., slab cavity cleanliness *(Chinese)* 82703
high power multicore fiber lasers, Talbot resonator, phase-locking, self-imaging props. 71681
high power single-mode diode DFB laser with curved-grooves diffr. grating 71801
high-power CW Raman phosphosilicate fiber laser, output charact. 105171
high-power DOE beam shaping 93923
high-speed directly-modulated semicond. laser modulation bandwidth, detuned external fibre grating reflector 105308
hollow-waveguide slab laser, output beam quality optim. 93701
hollow-waveguide slab lasers, transverse mode selectivity 93551
hyperb. unstable-resonator laser, spot-array grating-outcoupler 117317
hyperb. unstable-resonator semicond. laser, design optim. 93648
image mode laser projection display utilizing twisted NLC technol. 86809
incoherent opt. feedback semicond. laser dyn. 93689
inhomog. broadened SOA gain element, fiber grating, multiwavelength pulse train generation 105433
integrated LD sub-harmonic mode locking, spectral domain anal. 117393
integrated micromachined tunable laser using polysilicon 3-D mirror 71357
intracavity phase elements for specific laser mode selection 82709
intracavity self-adapted photorefr. Fabry-Perot 128350
intrinsic DFB fibre laser hydrophone 131943
LD injection-detect., rem. flat surface angle meas. 121205
lin. grating DFB organic semicond. lasers, threshold current anal. 105318
liq. cryst. pixel mirror, electronically tunable single wavelength broad-area semicond. laser 117352
Littman type tunable diode laser syst., external-cavity *(Korean)* 117316
localization effects in fibers/lasers 93098
LOS gas temp. distribs. using diode-laser absorpt. sens. 121253
low-dimens. semicond. heterostruct. lasers, quantum coherence, IR generation 93618
methanol-d_3 opt. pumped laser emission, SW far-IR laser cavity 82498
mid-power solid state laser thermal lens intracavity correction by liq.-cryst. adaptive lens 128478
mirror substrs., thermal deform. 128345
mixed strained MQW act. material SOA for opt. networks 117276
modes, far-field distribs., spatial coherence effect 128360
modulational-instabil. σ-resonator fiber laser 82517
monolithic mode-locked LD for high-speed opt. commun., freq. control 117373
MQW laser mode charact. 117238
multi-atom microlaser, stable photon source, subPoissonian stats. 127809
multi-wavelength fiber ring laser, tunable act. mode locking 71684
multicore fiber laser, combined phase locking/beam shaping by struct. mirrors 93741
multicore fibre laser phase locking by external mirror 117356
multimode fiber Bragg grating fab. for narrow-spectrum VCSELs 127594
multiple opt. feedback LD, self-mixing interf. effects *(Chinese)* 128304
multiple-electrode-pair laser, sync. trigger effect on output charact. *(Chinese)* 93485
multisection LD, opt. phase conjug. using FWM 71825
multisection widely-tunable sampled grating reflector laser, dyn. transfer matrix method model 105434
narrow-linewidth tunable external-cavity semicond. laser, Littman setup 117322
near-wall parietal tissue coagulation control, laser scalpel radiation intens. PM 87856
nitride VCSELs, extremely high-reflective low-loss resonator mirrors 93607
non-symmetric reson. cavity wavelength tunable fiber laser 105174
nonfeedback nonresonant laser syst. control 128422
nonresonant self-injection seeded gain-switched diode laser, tunable operation 128414
OPO, singly reson., engng., simple anal. solns. 82880
opto-electronic QW semicond. devices for opt. sig. proc. *(English)* 109075
organic solid-state dye laser, second-order DFB cavity 105159
oxide-confined VCSELs, spectral linewidth model 93647
pass. FP opt. resonator, TEM_{q00} mode, line shape fn. 82704
pass. mode-locked fiber soliton ring laser, subsideband generation 128393
pass. phototropic modulator, laser nonstationary procs. meas. 117368
pass. Q-switched laser, two-mirror reentrant ring cavity 82553
photopolymer holographic vol. gratings, laser cavity appl. 93885
π/2-phase shifted DFB fiber laser chirping, single mode operation 105177
picosecond surface-emitting semicond. laser with >200 mW av. power 82604
polariz. effects in lasers, spectrosc. and optoelectronics, conf. , Southampton, UK, (Sept. 2000) 78384
polymer lasers, dispersion cavities with vol. holographic gratings, single-mode operation 93686
pos. branch confocal laser resonator alignment/misalignment *(Chinese)* 128352
powerful laser opt. resonator elements, thermal deform., cooling methods 117318
pulsed VCSEL, ultrafast polariz. dyn. and noise meas. 128411
radiation pulse controlled dumping by opt. semicond. switching 82782
Raman act. resonator, pump laser phase/freq. stabilization 93487

laser cavity resonators continued
reconfigurable multiwavelength pulse source, self-seeded LD 105453
Rhodamine 19 autoscanned single-freq. CW dye laser 128126
Rhodamine 6G single-freq. stabilized dye jet laser, Cu-vap. laser pumped 128125
ring laser, polariz.-nonuniform radiation, transverse Hermite-Gaussian modes 128363
sampled grating DBR laser, opt. freq. synthesis over >1 THz 71914
selectively-oxidized VCSELs, hybrid ion-implanted, high-power single mode operation 117188
self-mixing interferometry, FT method, displacement meas. 97833
self-mode-locked solid state laser, phys. charact., self-starting study *(Chinese)* 82568
self-seeded coupled-cavity pulsed tunable dye laser, competitive act. mirror 117390
semicond. amp. tapered mode-locked integrated grating cpd. cavity laser design 71820
semicond. lasers, multi-long. mode instabilities, coupled mode model with gain dispersion 71826
semicond. lasers, pulsed subharmonic opt. injection, sig. generation at MM-wave repetition rates 105335
semicond. lasers with opt. feedback, chaotic sync. anticipation time 128309
semicond. VCSEL, periodic struct. form., spatial Fourier modes competition 93622
semicond. VCSEL arrays, thermal problems soln. model approaches 93580
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
short external cavity LD, output power changes, Lang-Kobayashi model 71827
short external opt. cavity DFB diode laser wavelength tuning 82779
single-mode gas laser, asymmetric limit cycle bistability 82941
SOA based DWDM multiwavelength light source, stabil. *(Chinese)* 109215
solid laser, stable resonator, graded reflectivity output coupler 93688
solid state laser nonlin. dyn., switching regimes, saturable absorber 105425
solid state laser resonator, thermal lens effect, adaptive compensation *(Chinese)* 117320
solid-state laser beam mode control using holographic mirrors 93709
spatial partially coherence, far field charact. *(Chinese)* 71875
submillimetre laser cavity, transverse laser mode selection 117313
synchrotron reson. maser, stimulated emission at high gyroharmonics 128034
tapered laser cavities, opt. props. 128291
three-element cavity Kerr mode-locked laser resonator *(Chinese)* 71862
tunable external cavity semicond. laser with fiber Bragg grating feedback *(Chinese)* 71854
tunable fiber Bragg grating external cavity LD, 1550 nm 117243
tunable lasers for opt. networking systs., develop. 128383
two-freq. solid-state laser microwave generation 128398
two-rod symmetric dyn. stable laser resonators in solid-state laser cutting syst. 117568
ultrasensitive absorpt. spectrosc., high-finesse opt. cavity/off-axis alignment 128346
unstable laser modes, edge waves and fractality 128354
unstable plane-parallel resonators, variable-reflectivity multilayer dielec. mirrors 128348
UV lasers, indust.-strength optics, appls. 82714
VCSEL, noise assisted binary inform. transm. 82759
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
VCSEL, output and transient charact. 117381
VCSEL, polaris. switching, expt. obs., appls. 128301
VCSEL, relax. oscill. freqs. nondegeneracy, linewidth props. 82720
VCSEL arrays, photonic lattices, Bloch anal. 117270
VCSEL based optoelectronic multiple chip modules 117039
VCSEL beam waists, transverse mode splitting, opt. output spectra 71900
VCSEL cct.-level models, mode overlap, compact representations 93715
VCSEL lineshape & freq. noise spectrum 71835
VCSEL mode partition noise 117294
VCSEL with external polariz.-selective feedback, complex polariz. dyn. 82719
VCSEL/CMOS optoelectronic chip-2D opt. fiber data link parallel interconnect syst., crosstalk anal. 117040
VCSELs, guided-mode reson. filters, single-mode operation control 105325
VCSELs, opt. bistable injection locked, hysteresis, power and freq. depend. 71768
VCSELs, perfectly matched layers, eigenmode expansion, opt. modelling 104702
VCSELs, piecewise lin. modeling 93714
wavelength-selective external-cavity LD, chaotic self-pulsation/cross-modulation 82705
whispering gallery mode microgear cavity, FDTD simul. 117324
wide-aperture tunable semicond. laser, external waveguide-grating mirror 82630
widely tunable difference freq. spectrometer, trace gas detect. appls. 88182
X-ray FEL, model anal. 128338
Zeeman multitransverse mode laser, polariz. transverse pattern dyn., vectorial Karhunen-Loeve modes 71885
Al^{10+} Li-like ion tabletop X-ray laser, recombining plasma 117078
AlGaAs/GaAs high-power 980 nm laser arrays, nonabsorbing facets 117246
AlGaAs/GaAsP broad-area LD with large opt. cavity waveguide struct., beam quality 82645
AlGaAs-GaAs self-assembled QD microcylinder lasers, cw RT operation 117241
AlGaAs-GaAsP high power broad area LD, large opt. cavity struct. 82670
AlGaInAs strained MQW lasers, high-power, recomb. mechanisms 71845
AlGaInP large opt. cavity LD, opt. loss 128276
AlGaInP/AlGaAs, ultralow threshold red VCSEL, MOVPE, characts. *(English)* 82678
AlGaInP-based VCSEL, 650 nm, high efficiency design 128255
Ar^+ cw ion laser modal content/noise charact., phase-conjug. feedback 93469
Ar^+ ion laser cavity stabil., thermoelastic stabil. 82712
Au indust. sealed-off vapour lasers, develop., prod. and appl. 93479
$BaBa_2O_4$ crysts., double wavelength/pulse laser, THG *(Chinese)* 72005
$Ba(NO_3)_2$ Raman cryst. laser, effective anti-Stokes radiation 82798
$BaTiO_3$ photorefr. phase-conjugating mirror, intracavity beam shaping, reference-less holography 128376
CH_2F_2 waveguide laser working in submillimetre wavelength region 71638
CO_2 CW laser, intracavity SHG in $AgGaSe_2$ 82866
CO_2 CW laser with phase-stepped mirror, uniform intens. distrib. form. 128116
CO_2 CW waveguide lasers 82471
CO_2 RF excited waveguide lasers, pulse regime operation 93476
CO_2 TEA laser pulses, time-resolved spatial profile, intracavity apertures influence 82735
CO_2 compact reliable multi-channel lasers, radiation spectrum investigs. 82468
CO_2 crossflow indust. laser, press. loss problems 105136
CO_2 high power lasers, slab waveguide resonator, mode selectivity 105115

laser cavity resonators continued
CO_2 high-power CW indust. laser, beam stabil. 93475
CO_2 high-power CW laser design, scaling laws 82462
CO_2 high-power CW lasers for material proc. 82483
CO_2 high-power indust. waveguide lasers, beam output charact. 82482
CO_2 high-power laser, controllable Fabry-Perot interferometer output mirr 82488
CO_2 high-power laser with variable reflectivity output mirrors unstable resonat beam QC 82487
CO_2 indust. CW laser beam, spatial and temporal charact. 105141
CO_2 indust. laser, act. mirror resonator, Q-switch regime generation 105114
CO_2 laser ablation proc., polymer proc. 128610
CO_2 laser phase locking, radiation exchange 71906
CO_2 laser, slab RF-excited, unstable-waveguide resonator, output charact. 824
CO_2 laser syst., regeneratively amplified, X-ray preionized 105123
CO_2 laser unstable resonator mirrors, phase front compensation 128349
CO_2 laser, unstable resonators with helical mirrors 93477
CO_2 lasers, resonator SBS-mirrors, phase conjug. develop. 105398
CO_2 lasers, waveguide-unstable cavities, laser beam profiling 82470
CO_2 multifunctional laser with controllable spectral and temporal charac indust./scientific appls. 82484
CO_2 slab-type laser, short pulse prod. *(Japanese)* 82743
CO_2 slab-waveguide laser, unstable resonator WOLS signature 93685
CO_2 variable reflectivity grating slab laser resonators 105387
CO_2 waveguide lasers, RF-excited, parametrical line develop. 82472
CO_2 waveguide lin./ring laser array phase locking 128399
Cr:$LiSrAlF_6$ laser, LiB_3O_5 intracavity SHG 71983
Cr:forsterite mode-locked all-solid-state laser, simultaneous multiwaveleng generation 82755
Cr^{2+}:ZnSe broadly tunable CW laser 93586
Cr^{4+}:YAG CW lasers, power perform. optim. 82558
Cr^{4+}:YAG end-pumped solid-state laser, stimulated-emission cross sect. 7170
Cr^{4+}:YAG two-element-cavity fs laser 128203
Cs D_2 reson. line, diode laser freq. stabilization 120613
Cu high-magnification unstable laser resonator, flattened Gaussian beam conce 82732
Cu indust. sealed-off vapour lasers, develop., prod. and appl. 93479
Cu sealed-off vap. laser radiation, spatial/temporal charact. 128046
DF repetitively pulsed three-module elec.-discharge laser, cavity Q-facte optimisation 117057
DF/HF CW chem. laser, perform. depend. on flowfield params. *(Chinese* 105148
Er,Yb:phosphate glass Q-switched diode-pumped laser, coherent Doppler lid 117137
Er,Yb-doped laser transmitters, high-bit-rate FM, pulse train stabil. 71913
Er doped fiber-ring laser wavelength-tuning anal. 71697
Er:YAG 2.94 μm laser, high-repetition-rate, high-av.-power, diode-pumpe 71733
Er/Yb-P/Al/Si co-doped short-cavity fibre grating laser 82514
Er-doped act. mode-locked fiber laser, opt. pulse train generation 93502
Er-doped all-fiber pass. Q-switched low-threshold laser with Co^{2+}:ZnSe saturab absorber 71685
Er-doped all-opt. gain-clamped fiber-ring laser amp., laser filtering tech. 9352
Er-doped fiber dual-stage opt. amps., gain-locking method, WDM systs. appl 93506
Er-doped fiber laser, effect of pass. Q-switching at low pumping power 8278
Er-doped fiber laser, self-Q-switched, SBS, output charact. *(Chinese)* 82522
Er-doped fiber laser with cavity SOA, rational harmonic mode-locking, stabl pulse generation 105166
Er-doped fiber lasers, asynchronous mode-locking, integrable model 93736
Er-doped fiber ring laser, broad-band tunability 71672
Er-doped fiber ring laser, widely tunable operation in C-/L-bands 71674
Er-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wave length operation *(Chinese)* 82523
Er-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
Er-doped fibre laser, intracavity polariser based on long-period fibre gratin 117109
Er-doped fibre multimode ring laser, coherence, Michelson interferometer ob 93513
Er-doped fibre ring laser, discrete & CW tuning 93732
Er-doped mode-locked fiber laser, multiwavelength pulse generation 82536
Er-doped multiwavelength fiber ring laser with spatial mode beating filte 105189
Er-doped opt. fibre amp. loop, micro-opt. gas sens. appl. 93499
Er-doped pulsed fiber laser, Rayleigh backscatt. SBS mechanism 93504
Er-doped single-freq. fiber laser, external light injection, freq. control charact 71677
Er-doped stable tunable dual-wavelength distributed Raman fiber laser 12817
Er-doped subpicosecond freq.-shifted feedback fibre lasers, stable pulse operatio 93503
Er^{3+}-doped LW-band fiber amp., ring-laser seed sig. generator 71678
Er^{3+}-doped fibre quasi-ring & FBGs, dual-wavelength lasers 93514
GaAs coupled-resonator VCSEL QW DBR laser, mW single-mode powe 117187
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LD 71847
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LDs, THz repeti tion rates 82693
GaAs/InGaAs high power laser struct., LP-MOCVD growth and charactn. *(Chi nese)* 128263
GaAs-AlGaAs double QW ridge-waveguide LD, near-THz pass. harmoni modelocking 105428
GaAs-AlGaAs ridge waveguide quantum cascade lasers, monolithic photoni bandgap mirrors 71800
GaAsP-AlGaAs 810-nm large opt. cavity diode lasers, narrow beam divergence 128242
GaAsSb/GaAs QW VCSELs, CW operation 71766
GaInAs/GaAs QW, multi-wavelength vert. cavities MOCVD, laser charact 93584
GaInAs/GaAsP VCSEL, photorefl. line shape symm., QW ground-state excito energy 71760
GaInAsP distrib.-reflector lasers with vert. aligned grating, RIE 117214
GaInAsP/BCB DBR laser, fab., single-mode operation 93583
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photoni integrat. 105311
GaInAsP/InP opt. pumped stripe laser, design, fabr. and high-power operation 117195
GaInAsP-InP strongly index-coupled MQW DFB lasers, wirelike act. regions 128234
GaInNAs QW, VCSEL, elemental solid source MBE 103134
GaInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814

cavity resonators continued
$_2$ tunable CW Raman laser, external cavity LD pumped 105154
F CW chem. laser with three-jet nozzle array, spatial-energy and spectral charact. 128113
F chem. laser, power spectral perform. 105082
F nonchain laser, pulsed pumping, output charact. 93481
$_2$O recomb. IR lasing in supersonic plasma expansion 82474
e-Ag hollow-cathode ion laser, Ag II transit. efficient oscill. 93473
e-Ne double-freq. laser, refl. radiation injection, detect. limit 117066
e-Ne dual-freq. bireflectance mirror laser cavity 105095
e-Ne four-mirror two-freq. laser for heterodyne measuring systs. 128104
e-Ne laser freq. stabilis. control syst., fast PLL 93725
e-Ne laser, laser fund. investig. 78499
e-Ne laser with anisotropic cavity, magneto-induced bleaching 82456
e-Ne lasers, amplif. influence factor, output power 128105
e-Ne three-mirror two-freq. laser with stabilized beat freq. 128103
e-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
e-Ar-Xe nuc. reactor pumped gas laser cavity *(Chinese)* 105147
g CW at. laser, microwave discharge pumped, output charact. *(Chinese)* 71645
o:ZBLAN glass fiber laser, LD-pumped, power conversion efficiency 93527
high-energy photolytically pumped laser, injection seeding 128041
lasers, resonator SBS-mirrors, phase conjug. develop. 105398
high-energy photolytically pumped laser, Raman conversion 128042
aAs 1.3-μm QD high temp. ridge waveguide lasers 93652
aAs QD lasers, two-sect., pass. mode-locking 82619
aAs self-assembled quantum-dash lasers, RT operation 93653
aAs/GaAs self-assembled QD laser, max. modal gain 93632
aGaAlAs strained MQW lasers, act. struct. design 82638
aGaAlAs/InP VCSEL diodes, operation charact. 128320
aGaAs QD ring and cylindrical cavity lasers, elec. pumped configs. 128254
aGaAs QW opt. pumped blue emitting semicond. laser chip 128259
aGaAs QW vert. cavity lasers, low-threshold high-temp. operation 93642
aGaAs VCSELs, singlemode output power enhancement, reduced spatial hole burning 71769
aGaAs ring cavity SOA, self-mode-locked, ps pulse generation 93730
aGaAs/AlGaAs high-power QW lasers, high-temp. operation 105317
aGaAs/GaAs QW lasers, fab. & perform. 117277
aGaAs/GaAs single-mode ridge waveguide laser, external cavity, spectral narrowing 71823
aGaAs/GaAs strained layer SCH SQW laser, output charact. 71805
aGaAs/GaAs/AlGaAs triple-QW GRINSCH laser, sol-gel fab., output charact. 93614
aGaAs/InGaAsP microlasers, equilateral triangle resonator, rate eqn. anal. 117260
aGaAs-AlGaAs SQW GRINSCH ridge waveguide laser, high-power pump operation 105316
aGaAs-GaAs QD laser, quasi-Fermi level separation 105276
aGaAsN QW VCSEL on GaAs substr., 1.3 μm, perform. charact. 93671
aGaAsN VCSELs, singlemode operation, high bit rate data transm. 71789
aGaAsP QW photonic cryst. laser, prep. & props., PL 105278
aGaAsP/AlGaAs LW fused air-gap VCSEL, charact. 82713
aGaAsP/InP multi-QW lasers, neutron radiation damage, carrier lifetime 93623
aGaAsP/InGaAs/InP multiquantum well high power broadband singlelobe superluminescent diode 82405
aGaN MQW hexagonal microfacet lasers, room-temp. lasing by current injection 105326
aGaN MQW laser, deeply etched air/nitride DBR, single mode oper. 105348
aGaN MQW, reson. cavity, blue/near UV LED, lasers 82424
aGaN lasers, unstable resonator, fundamental mode operation 93600
aGaN narrow stripe self-pulsating LDs, optim. for DVD 71844
aGaN/GaN QW SEL, SiO_2/ZrO_2 multilayer mirrors 71810
aP based QW laser, low energy ion implant. fab. 93626
aP monolithic VCSEL with air-gap Bragg reflectors, room-temp. operation 82599
aP-InGaAsP MQW DBR vert. cavity SOAs 105319
aP-InGaAsP VCSEL arrays with DBR, fab., WDM appls. 128225
K atoms, two-photon stimulated emission proc., laser polariz. instabilities 71637
KTiOAsO$_4$ noncritically phasematched type II OPO, laser pumped, multiwatt mid-IR output 93828
KrF laser amp., intra-cavity ASE, nanosecond pulses high-energy extraction 82500
LiB$_3$O$_5$, intracavity freq.-doubling of tunable Ti:sapphire laser *(Korean)* 93805
LiF:F_2^+ colour centre lasers, broadband lasing, nonlin. freq. conversion 117143
LiNbO$_3$ Fabry-Perot etalon, freq. stabilization/tuning of Ti:sapphire laser 93742
LiNbO$_3$ periodically poled cryst. intra-cavity OPO for mid-IR long pulse generation 82879
M laser arrays, phase locking, output charact. 128048
Nd laser, diode-pumped intracavity freq. doubled, param. optim. 93802
Nd:GdVO$_4$/KTiOPO$_4$ green laser, diode-pumped Q-switched, flat-flat resonator 71751
Nd:YAG CW laser, Cr^{4+}:YAG saturable absorber pass. Q-switching, output charact. *(Chinese)* 105441
Nd:YAG LD side-pumped laser, versatile compact TEM_{00}-mode resonator 71864
Nd:YAG LD-pumped RT intracavity doubling solid-state blue laser, laser *(Chinese)* 93804
Nd:YAG Q-switched high-power laser, variable reflectivity mirrors 117168
Nd:YAG diode-pumped rod laser, highly precise material proc. 117558
Nd:YAG dual-freq. laser with quartz birefr. Fabry-Perot etalon *(Chinese)* 71742
Nd:YAG eyesafe laser, flashlamp pumped, Q-switching 93553
Nd:YAG high av. power lasers, self-adaptive cavity, nonlin. mirror 117149
Nd:YAG laser, LD pumped, intracavity freq. doubling, high-pulse-energy green-beam generation 117167
Nd:YAG laser, diode-end-pumped, dyn. procedure anal. 117160
Nd:YAG laser, flash-lamp-pumped, dual-telescopic optics config. 105256
Nd:YAG laser mode shaping DOE fab. 82727
Nd:YAG laser, picosecond flashlamp pumped, all-solid-state pass. pulse control 105218
Nd:YAG laser, self-starting, self-induced refr. index gratings 71738
Nd:YAG laser tilt locking 82787
Nd:YAG laser, vectorial phase conjug. mirror in gain medium 71945
Nd:YAG lasers, diode side-pumped pulsed, output charact. 128195
Nd:YAG lasers, semicond. laser pumped, mirror coating struct. design 127884
Nd:YAG long. diode-pumped double-clad planar waveguide laser 71753
Nd:YAG monolithic ring laser, single-freq. output power, 1.444 μm 82594
Nd:YAG ns nonselective-cavity laser radiation stats. on saturable absorber passage 82767
Nd:YAG pulsed laser, stable Kerr-lens mode-locking operation *(Chinese)* 105238

laser cavity resonators continued
Nd:YAG pulsed laser with SBS-mirror, large vol. laser mode, num. simul. 93566
Nd:YAG regenerative amp., LDA pumped, single long. mode laser pulse *(Chinese)* 105221
Nd:YAG ring chip laser, self-modulation oscills. phase shift in mag. field 93565
Nd:YAG rod laser birefr./thermal lensing, dyn. correction 105226
Nd:YAG rod laser, diode laser side-pumped, Q-switching 117142
Nd:YAG rod lasers, diode arrays side pumped, KTiOPO$_4$ intracavity-freq.-doubling operation *(Chinese)* 82570
Nd:YAG self-starting phase-conjug. laser, dyn. NLC holographic mirror 71946
Nd:YAG single-mode diode-pumped laser, freq. scanning regimes 117155
Nd:YAG slab laser, pass. Q-switched, output charact. 71725
Nd:YAG$_{0.18}$YSAG$_{0.82}$ laser, compositional tuning, Q-switched operation 105246
Nd:YAlO$_3$ high-power CW diode-pumped laser 82583
Nd:YAlO$_3$ laser, LiB$_3$O$_5$ intracavity-doubling, output charact. *(Chinese)* 71744
Nd:YVO$_4$ CW laser, LD pumped, LiB$_3$O$_5$ intracavity freq. doubling *(Chinese)* 71727
Nd:YVO$_4$ LD end-pumped laser, thermal lens meas. *(Chinese)* 128213
Nd:YVO$_4$ low-power laser, pass. mode-locking using InGaAs QW saturable absorber mirrors 105485
Nd:YVO$_4$ red light laser, LD pumped, intracavity freq.-doubling *(Chinese)* 71704
Nd:YVO$_4$ ring lasers, LD pumped, KTiOPO$_4$ intracavity doubling, output charact. *(Chinese)* 71745
Nd:YVO$_4$ ring single-freq. laser, LD end-pumped, high-power freq. stabil. *(Chinese)* 71703
Nd:YVO$_4$ rods dual-config. resonator, unidirectional operation 82708
Nd:YVO$_4$ single-freq. LD-pumped ring lasers, freq. tuning charact. *(Chinese)* 71866
Nd:YVO$_4$ single-freq. laser with mode cleaner, intens. noise reduction *(Chinese)* 71702
Nd:YVO$_4$/Cr:YAG LD-pumped pass. Q-switched laser 105420
Nd:YVO$_4$/KTiOPO$_4$ intracavity freq.-doubling mini-laser, stabilization using I_2 hyperfine transit. 82557
Nd:YVO$_4$/KTiOPO$_4$ single-freq. laser, design 93582
Nd:glass laser, pulsed-power capabilities, materials interact. appls. 128186
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
Nd:phosphate glass diode-pumped regenerative amp., single-mode laser pulses 71731
Nd:phosphate glass slab laser, pass. Q-switch, output charact. *(Chinese)* 105239
Nd^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
Nd^{3+}:YAG series connected rod lasers *(Chinese)* 93535
Nd^{3+}:YAl$_3$(BO$_3$)$_4$ nonlin. laser cryst., CW UV laser source 93558
Nd-doped self-phase-conjug. high power lasers, pass. Q-switcher 128438
Nd-doped solid laser with V^{3+}:YAG cryst. high repetition rate pass. Q-switch 71723
O_2-I chem. laser research in Dalian, multi-kilowatt output 105058
O_2-I chem. laser, small sig. gain and output power study 105062
O_2-I chem. laser, virtual confocal unstable resonator 105388
O_2-I chem. laser with hybrid confocal type resonator, output charact. 105142
O_2-I chem. laser with sq. pipe-array jet-type O_2 generator *(Chinese)* 82477
O_2-I chem. laser with unstable resonator, UR90 outputting annular beam 105067
O_2-I high-press. pulsed laser with instantaneous I generation, operational charact. 105079
O_2-I supersonic chem. laser, I_2 dissoc. study 105066
O_2-I supersonic chem. laser small sig. gain profiles 105068
O_2-I supersonic chem. laser, transonic/supersonic nozzle sects. 105057
P_2O_5-SiO_2 Raman fibre laser, three-cascaded, Bragg gratings 71688
PbSe/PbSrSe low-threshold opt. pumped VCSEL with QW act. region 71850
Si micromachined membrane deformable mirror, intracavity Nd:YAG laser radiation control 82191
Ti:Al_2O_3 femtosecond laser with multiple-pass cavity, stabil. anal. *(Chinese)* 105241
Ti:Al_2O_3 laser with tunable varied reflectivity mirror unstable resonator, beam quality *(Chinese)* 105220
Ti:sapphire diode-pumped aperiodically poled laser cavity 117151
Ti:sapphire fs laser oscillator, EO cavity dumped 128192
Ti:sapphire high-power regenerative laser amp. 71718
Ti:sapphire laser, 5-fs pulse generation/octave-spanning spectra 71902
Ti:sapphire laser ramp-hold-fire seeding tech., FT-limited ns pulse generation 82585
Ti:sapphire laser, repetition-rate Kerr-lens mode-locked, high-energy pulse generation 71709
Ti:sapphire laser, sub-resonators, dual-wavelength operation 71711
Ti:sapphire pass. mode-locked laser, timing jitter meas. and control *(Chinese)* 128207
Ti^{3+}:Al_2O_3 ring laser, spectral filter counterpropagating wave coupling 93567
Tm,Ho:YAG diode-pumped laser, 2 μm, amplit. stabilisation 82593
Tm^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
U^{2+}-doped phosphate glass pass. Q-switching of eye-safe laser resonators 93722
XeCl discharge laser with Gaussian reflectivity mirror, beam quality factor evol. 105151
XeCl excimer coherence evol. impulsed lasers, beam quality 82728
XeF blue-green laser, opt. pumped, C-A transit., output charact. *(Chinese)* 71630
Yb,Er:glass laser, diode side-pumped pulsed, output charact. 128195
Yb:YAG pass. mode-locked thin-disk laser, widely tunable pulse durations 71732
Yb^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
Yb-doped double-clad fiber laser, conversion efficiency 117122
Yb-doped double-clad fiber laser, high-power tunable narrow line width output 105200
Yb-doped double-clad fiber laser in unidirectional ring cavity 105167
Yb-doped double-clad fiber laser, unidirectional ring geom., high power operation 82535
Yb^{3+}-doped ring/line cavity fiber laser, LD pumped, output charact. *(Chinese)* 71691
Yd:$Ca_5(PO_4)_3F$ cryst., lasing perform. anal. 127556
Yd:KY(WO$_4$)$_2$ cryst., lasing perform. anal. 127556
Yd:YAG cryst., lasing perform. anal. 127556
Zn^+ Ne-like amplified soft-X-ray laser radiation 128097
Zn^{20+} X-ray laser, half-cavity geom. effect on output and spatial coherence 117081
ZnO, polycryst., self-assembled laser cavities, opt. props. 93631

laser chirp *see chirp modulation*

laser cooling
at. fountain freq. std., computerised control syst. 75358
high av. power diode laser arrays with water cooler, thermal anal. *(Chinese)* 117253

laser cooling continued
electron and positron sources, recent advances 110228
electron storage ring, radiative laser cooling 75944
high-energy storage ring, cryst. ion beams 110172
isolated nanoparticle circuitry fab., lensless opt. tweezing 103703
opt. freq. stds., freq. synthesis, precision laser spectrosc. 120629
opt. stochastic muon cooling, bunch lengths 87078
seq. laser atom cooling/trapping using LD, nanofabrication 92259
solid-state lasers, axially pumped, temp. distrib., anal. treatment 105247
two-freq. generation for laser cooling, FM injection-locked LD 71912
CO_2 high-power diffusion-cooled annular lasers, split-electrode config. study 105111
CO_2 high-power multibeam lasers with heat regenerator, output charact. 82486
Ce:LiLuF tuned-laser, pump-probe-gain, fluoresc. yield 117166
Cs, laser-cooled, atom optics *(English)* 116304
GaAs/AlGaAs high power semicond. laser stack arrays, output charact. *(Chinese)* 105323
$^{199}Hg^+$ single trapped ion based opt. clock 120631
InGaAs/AlGaAs high-power QW lasers, high-temp. operation 105317
^{87}Rb laser-cooled fountain, juggling at. clock 97127

laser CVD *see chemical vapour deposition; laser deposition*

laser damage *see laser beam effects*

laser deposition
see also pulsed laser deposition
closed loop direct metal deposition, CAD/CAM design 72112
diamond film deposition, laser plasma CVD 114320
diamond films, rapid nucleation by pulsed laser CVD 114350
metal oxide/carbide/nitride/sulphide nanomaterials, synthesis 90555
microchemical direct write deposition/etch methods, real-world appls. 103978
new materials/procs., MEMS appls., reviews 104204
particle deposition, laser-guided for direct-write fab., CFD modeling 101176
Stellite SF6, laser cladding & rapid prototyping, proc. head 105641
transit. metal oxide ferromag.-ferroelec. superlattices, laser MBE *(Japanese)* 92799
AlN/Si heterointerface, laser MBE, RHEED, XPS 90332
$FeSi_{2-x}C_x$ semicond. thin films, laser CVD, energy gap *(Ukrainian)* 90371
Ga film deposition on fused silica substrs., rapid reflectivity rise, transient matter state evidence 93298
GaN films grown by plasma assisted laser-induced CVD, props., influence of HI irrad. 126017
$GaN_{1-x}P_x$ hexagonal films, laser-assisted MOCVD growth, PL obs. 101381
$Gd_xY_{1-x}Ca_4O(BO_3)_3$ films, laser MBE, at.-scale surface control/SHG 116553
HgCdTe/Si heterostruct., laser beam epitaxy 68365
ITO film prep. by IR FEL 68242
Ni patterns, laser-assisted selective deposition on porous Si substrs. 90525
Pd/Si(111) syst., laser spraying, Pd_2Si interface struct. 126205
Pt laser deposited films, thermal stabil./anal. 103493
Pt/TiO_2, photo-electrochem. deposition, electron-beam lithog. masks 79390
Si uniform single nanodots, laser synthesis 101451
SiO_2 thin film, CO_2-laser-assisted PECVD 79282
ZnS patterned thin-film growth, laser/excimer lamp deposition 68232

laser diode arrays *see semiconductor laser arrays*

laser diodes *see semiconductor lasers*

laser Doppler anemometry
Bragg grating based fibre optic ref. beam LDA 93938
coherent lidar LDA for wind turbines, opt. mixing schemes 99591
diabetic neuropathy, autonomic nervous syst. fn., blood flow variability anal. *(Japanese)* 132630
free mixing layers, vortex dyn., rapid scanning two-component LDA *(Lithuanian)* 121268
gas bubble flow behaviour meas. using LDA 110055
intermittent fuel spray flows, PDA, time dividing anal. 87027
phase Doppler anemometry, wavelet anal. 121228
phase-Doppler sizing anemometer, laser light scatt. by particles *(Chinese)* 132181
rigid simulated collapsed tube, steady turbulent flow meas. 110830
sig. freq. estim. 117573
sig. models, wavelet anal. 121267
sig. proc., no. of samples 72144
six-corner tangentially-fired boiler, burner region conc. field meas. *(Chinese)* 88575
spherical/nonspherical particles, co-axial jet and swirling flow, laser-based particle meas. 97878
swirling flow, 3D vel. vector laser meas. method 87029
turbulent vel. meas., stochastically sampled dyn. systs., spectral anal. 97844
N_2 gas flow, high-speed, laser Doppler diagnostics, spontaneous Brillouin scatt. 121266

laser drilling *see laser beam machining*

laser drivers *see driver circuits*

laser effects *see laser beam effects*

laser feedback
see also distributed feedback lasers
1.48-μm flared resonators, CW power coupling into single-mode fiber 128343
1.5 μm wavelength distributed reflector lasers with vert. grating 82651
1550-nm spot-size converter integrated DFB lasers, low-cost single-mode opt. sources appl. 109067
adaptive optics, focal-plane image and beam quality sens., wavefront phase distortion 75064
all-fibre Moire DFB lasers, stable multiple wavelength generation, CW output power 128132
all-opt. 3R regeneration, nonlin. dyn., long-haul transport systs. appls. 105432
all-opt. SOA digital proc. cct., GHz shift register 127870
all-opt. WDM-to-TDM conversion scheme with simultaneous all-opt. sync. for network nodes 120316
Brillouin fiber ring laser, soliton compression and locking 128136
chaotic LD, incoherent opt. feedback, secure commun. scheme 131431
chaotically pulsing semicond. lasers, stable route-tracking sync. 131432
coaxial FEL with Bragg mirror resonators, spatially coherent radiation 117306
compact tunable narrow-band LD, external abnormal-refl. mirror 128413
complex-coupled DFB laser, spontaneous emission, threshold-crossing 71802
coupled-cavity pass. Q-switching 93727
cpd. cavity semicond. lasers, LF fluctS., temporal dyn. 93754
DFB diode laser sens. for trace gas conc. meas. 121262
DFB dye laser, tunable narrow-band radiation generation 82507
DFB fiber lasers, multiple wavelength operation 82537
DFB LD, gain-switched, pulse generation, opt. filtering effects 82661
DFB-LD directly modulated 2.5 Gbit/s transmitter, self PM, extinction ratio, chirp *(Korean)* 96693

laser feedback continued
diode laser, noise effects, filtered external opt. feedback 105368
diode laser, opt. feedback 117181
diode laser freq. control, cavity ring-down spectrosc. appl. 121246
dual-cavity solid state laser SHG, freq. jumps 93684
DWDM systs. using self-generated seed sig., gain-enhanced L-band EDFA app 120156
EDFA using self-generated seed sig., L-band perform. 96707
egg white, CO_2 laser-assisted tissue coagulation, thermal-feedback-controll 98369
electroabsorption modulated-integrated DFB laser modules, output charac 105343
electroabsorption modulator integrated DFB laser for WDM fiber telecomm 116737
external cavity multiple reflecting semicond. laser dyn., rigorous simul. 8268
external feedback LD stabil. prediction by root-locus tech. 71829
external-cavity semicond. laser, transm. perform. assess. 96685
external-cavity semicond. laser stabil., strong-feedback regime 93629
free-space opt. commun., fine pointing control, soft/hardware implemen 120391
fused-silica plate SLM, intense fs laser pulses, adaptive feedback control 10542
gain-clamped SOA, external feedback, output charact. *(Chinese)* 105365
gain-switched DFB Bragg semicond. laser, pulse compression, chirp eliminatio 71772
high power single-mode diode DFB laser with curved-grooves diffr. gratin 71801
high reflectivity chirped laser mirrors, fs opt. pulse compression 93723
hyperb. unstable-resonator laser, spot-array grating-outcoupler 117317
III-V semicond.-based photonic crysts., coherent lasing action, ultrasmall int grated devices 127805
incoherent opt. feedback semicond. laser dyn. 93689
intra-arterial blood flow meas. by self-mixing feedback LD 132626
ion-exchanged integrated waveguide devices, appl. fields 127779
λ/4-shifted semicond. DFB devices, chirped grating effect on opt. bistabilit 93837
laser beam control conf., St. Petersburg, Russia (June 2000) 124197
LD injection-detect., rem. flat surface angle meas. 121205
LD systs. with opt. feedback, spatial beam profiles meas., interf. effects 11734
long pulse laser radiation phase conjug., feedback SBS 105471
LW QW lasers, phase-conjug. feedback 71939
mirror surface ESPI profile meas., phase-shifting fringe anal. 132167
multicore fiber laser, combined phase locking/beam shaping by struct. mirro 93741
multimode semicond. lasers, chaotic antiphase dyn., synchronisation 105300
multimode VCSEL modulation charact., very short reach commun. 117365
multiple opt. feedback LD, self-mixing interf. effects *(Chinese)* 128304
optoelectronic syst. LD chaotic dyn., delayed feedback control 128423
quantum cascade laser for LWIR emission 93635
QW laser, grating feedback locked, polariz.-depend. photon-no. squeezing 9358
QW laser struct. in optoelectronic conversion 128295
QW LD, optoelectronic delayed-feedback and chaos 82646
rangefinder, feedback interferometry, chirp-control 117575
reconfigurable multiwavelength pulse source, self-seeded LD 105453
ridge waveguide SOA monolithically integrated with gain-coupled DFB lase fibre-coupled power 71350
self-mixing interferometry, FT method, displacement meas. 97833
semicond. laser, all-opt. chaos, filtered opt. feedback 105359
semicond. laser, phase conjug. feedback, LF fluctS. 105360
semicond. laser, turn-on transient dyn., opt. feedback 117182
semicond. laser phase-conjug. feedback, bifurcations to opt. chaos 93735
semicond. laser with opt. feedback, dyn. 93617
semicond. laser with phase conjug. feedback 105301
semicond. lasers, pseudorandom wavelength hopping, sync. 93613
semicond. lasers with opt. feedback, chaotic sync. anticipation time 128309
semicond. lasers with optoelectronic feedback, synchroniz./chaotic waveform 117261
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
short external cavity LD, output power changes, Lang-Kobayashi model 7182
single mode master/slave laser detectors, amplif. regimes 93620
single ridge waveguide electroabsorption modulated DFB laser for 2.5-Gb transm. 120183
SOA-based all-opt. pulse reshaper 105424
sonic vel. meas. by laser Bragg refl. detect. tech. 72149
tunable external cavity semicond. laser with fiber Bragg grating feedback *(Chi nese)* 71854
VCSEL with external polariz.-selective feedback, complex polariz. dyn. 8271
VCSEL-based MOEMS archit., nanofab., SNOM sens. 93178
velocimeter, feedback interferometry, real-time param. estim. 117580
vis. semicond. lasers with external light input, chaotic oscill. modes, commun appls. 105328
wavelength tunable electroabsorption modulated DFB laser with thin film heate 105312
AlGaAs broad area laser emission, struct. delayed opt. feedback 82647
Ar^+ cw ion laser modal content/noise charact., phase-conjug. feedback 93469
CO_2 Q switching laser, chaos control with opt. feedback 93466
CO_2 multifunctional laser with controllable spectral and temporal charact indust./scientific appls. 82484
Er,Yb:glass single-mode laser in NIR, amplit. and freq. stabilization 105259
Er-doped all-opt. gain stabilized multichannel fiber amp., spectral hole burn ing/relax. oscill. 105179
Er-doped all-opt. gain-clamped fiber-ring laser amp., laser filtering tech. 9352
Er-doped fiber amp., loop-locked config., gain spectrum eval. 117121
Er-doped fiber amp., opt. gain-clamped L-band, optimal design 117101
Er-doped fiber dual-ring laser, polarized mode, chaos control by lin. feedback method 117126
Er-doped fibre amps., self-generated sig.-seeding tech., LW band perform 105172
Er-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
Er-doped subpicosecond freq.-shifted feedback fibre lasers, stable pulse operatio 93503
Er^{3+}-doped LW-band fiber amp., ring-laser seed sig. generator 71678
GaAs/AlAs single mode quantum cascade lasers, CW operation *(German* 128322
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photoni integrat. 105311
GaInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814
He-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
InAs/GaInAs QD DFB lasers, singlemode operation 71790
InGaAsP/InP laterally coupled ridge waveguide DFB lasers, chem. sens. appls 71767

r feedback continued
nGaN narrow stripe self-pulsating LDs, optim. for DVD 71844
nP/InGaAsP high-power lasers, output charact., opt. commun. appls. 105313
Nd:$LiYF_4$ pass. mode-locked lasers, Q-switch instabilities 71911
Nd:YAG LD-pumped laser, freq.-mode struct. anal., tuning 93552
Nd:YAG laser, freq. doubled, type II chaos 93569
Nd:YAG laser, picosecond flashlamp pumped, all-solid-state pass. pulse control 105218
Nd:YAG laser with pass. neg. feedback, compressed picosecond pulse generation 117358
Nd:YAG nonreciprocal self-pumped laser phase conjugator, reson. refr.-index grating 128439
Nd:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Nd:YVO_4 LD-pumped laser, freq.-mode struct. anal., tuning 93552
Nd:YVO_4 LD-pumped single-freq. ring lasers, intens. noise suppression *(Chinese)* 128206
Nd:YVO_4 single-mode microchip laser with feedback, phase-noise-driven instabil. 105248
Nd:YVO_4-KTP LD-pumped single-freq. ring green laser 71752
Tm,Ho:YAG diode-pumped laser, 2 μm, amplit. stabilisation 82593
Tm,Ho:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259

r frequency measurement *see frequency measurement; laser variables measurement*

r frequency stability
980 nm LD module, fiber Bragg grating wavelength stabilized 128283
tmos. laser commun., edge technol. *(Chinese)* 109220
utomatic focusing common-path heterodyne surface profiling interferometer 86969
3-class fiber ring laser, mode pairing and parametric self-locking 105201
DBR fiber grating laser, freq. stabilization using interferometric tech. 105199
iode laser, freq. stabilization, vel.-selective saturated absorpt. spectrosc. *(Korean)* 93713
iode laser freq. control, cavity ring-down spectrosc. appl. 121246
ual-cavity solid state laser SHG, freq. jumps 93684
ual-freq. laser interferometer, transverse Zeeman freq. stabilized laser appl. 117586
ye jet laser, Cu-vap. laser pumped 128125
ye laser, high-energy pulsed source, freq. stabilisation 71652
iber Bragg grating stabilized 980-nm pump lasers, L-I charact. 71781
ibre grating laser, wavelength stabilised, WDM syst. 105178
s pulse train, freq./repetition rate stabilis., F-P ref. cavity 71905
grating coupler sampled reflector tunable DBR lasers 117400
high-accuracy wavelength meter based on stabilized diode laser 128626
ASI interferometer, ref. freq. stabilised laser source 122631
LD radiation freq. synchronisation with fs Ti:sapphire laser mode freq. 117369
quantum-cascade laser, Pound-Drever-Hall freq. stabilis., rovibr. reson. 105455
Raman act. resonator, pump laser phase/freq. stabilization 93487
Rhodamine 19 autoscanned single-freq. CW dye laser 128126
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
urface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
wo-freq. generation for laser cooling, FM injection-locked LD 71912
WDM digitally controlled tunable stabilized laser transmitter 120180
AlGaInAs-InP high power tapered 1.55 μm DBR lasers 82669
CO_2 CW laser, intracavity SHG in $AgGaSe_2$ 82866
CO_2 RF excited slab laser, optogalvanic effect 105120
CO_2 multifunctional laser with controllable spectral and temporal charact., indust./scientific appls. 82484
CO_2 rapidly tunable 2.5 kW laser, lidar/pollution monitoring appls. 76933
CO_2 waveguide laser, freq. stabil. by digital tech. 82742
CO_2/OsO_4 stabilized laser at 28.8 THz, absol. freq. meas. 71636
Cs D_2 reson. line, diode laser freq. stabilization 120613
Cs opt. at. clock, Er fiber laser microwave source 75359
Er,Yb:glass bulk diode-pumped single-freq. microlasers, charactn. 117162
Er,Yb:glass microlaser, freq. doubled, opt. freq. std. develop. 109413
Er,Yb:glass single-mode laser in NIR, amplit. and freq. stabilization 105259
Er,Yb:phosphate glass Q-switched diode-pumped laser, coherent Doppler lidar 117137
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
Er,Yb-doped high-stabil. diode-pumped microlaser freq. locked to ^{39}K subDoppler line 86394
Er-doped fiber Bragg grating lasers, freq./intens. noise 117096
Er-doped single-freq. fiber laser, external light injection, freq. control charact. 71677
Er-doped subpicosecond freq.-shifted feedback fibre lasers, stable pulse operation 93503
Er^{3+}-doped fiber, stable single-freq. fiber ring laser *(Chinese)* 117105
He-Ne dual-freq. bireflectance mirror laser cavity 105095
He-Ne four-mirror two-freq. laser for heterodyne measuring systs. 128104
He-Ne laser freq. stabilis. control syst., fast PLL 93725
He-Ne laser, full-inner-cavity birefr. dual-freq., angle-block and freq.-stabilization *(Chinese)* 105150
He-Ne master-slave laser syst., power-related freq. shifts 117074
He-Ne three-mirror two-freq. laser with stabilized beat freq. 128103
He-Ne two-wave freq.-stabilized laser for highly sensitive airborne gas analyzer 132211
He-Ne/$^{127}I_2$ stabilised lasers, 633 nm, internat. comparison 109405
He-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
I_2 freq. stable Raman laser, stepwise tunable secondary freq. stds. 86375
I_2 high-stabil. diode-laser-based freq. ref. 75349
Nd:YAG LD-pumped laser, freq.-mode struct. anal., tuning 93552
Nd:YAG laser, freq. doubled, type II chaos 93569
Nd:YAG lasers, I_2-stabilized, absol. freq. meas. 86385
Nd:YAG master-slave laser syst., gravit. wave detector GEO 600 83069
Nd:YAG monolithic ring laser, single-freq. output power, 1.444 μm 82594
Nd:YAG quasi-monolithic ring laser, pass. Q-switched, single-freq. output 82592
Nd:YAG ring laser oscillator/KTP high-resoln. spectrosc. light sources 82748
Nd:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Nd:YVO_4 LD-pumped laser, freq.-mode struct. anal., tuning 93552
Nd:YVO_4 LD-pumped single-freq. ring lasers, intens. noise suppression *(Chinese)* 128206
Nd:YVO_4 ring single-freq. laser, LD end-pumped, high-power freq. stabil. *(Chinese)* 71703
Nd:YVO_4 single-freq. LD-pumped ring lasers, freq. tuning charact. *(Chinese)* 71866
Nd:YVO_4/$KTiOPO_4$ intracavity freq.-doubling mini-laser, stabilization using I_2 hyperfine transit. 82557
Rb absorpt. line, Faraday effect-based semicond. laser-freq. stabilization 120610

laser frequency stability continued
Rb two-photon transit. freq.-doubled 1556 nm source, diode laser freq. stabilization 86373
SiO_2 fused microsphere, whispering-gallery reson., freq.-scanning laser locking 82783
Ti:Al_2O_3 ring laser, freq. stabilization/tuning by $LiNbO_3$ FP etalon 93742
Ti:sapphire mode-locked lasers, carrier-envelope phase stabilization using microstruct. fiber 128196
Tm,Ho:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Yb-doped large-mode-area double-clad fiber power amp., single-freq. radiation 117107
Yb^{3+}-doped single-freq. fibre ring lasers *(Chinese)* 93496

laser fusion
cemented doublet lens laser beam expanding syst., ICF laser driver appl. *(Chinese)* 127877
diode pumped solid state laser, high power, appls. 128183
Hartmann-Shack wavefront sens., ICF laser amp. wavefront meas. 109685
high power dens. solid-state laser, opt. components wavefront PSD meas. *(Chinese)* 71868
high power solid state laser static phase control elements 93692
ICF, laser propag. into thermonucl. plasma, solitons appls. 105771
Iskra-5 facility, I_2 two-pass amp. 105089
Nat. Ignition Facility, optic spec. rationale 104865
NIF opt. component wavefront meas. instrumentation, init. mfg. results 110024
opt. components fab. for NIF laser 104864
petawatt-class lasers., intense ion beam accel., plasma ignition 97897
PHELIX, PW high-energy laser for HI expts. 105162
large plano optics mfg. facility develop. for Nat. Ignition Facility 105404
small opt. components for Nat. Ignition Facility, procurement strategy 104866
high av. power solid state laser, diode pumped, output charact., indust. appls. 105211
Vulcan Nd:glass PW laser facility 105214
KrF excimer laser syst., 6-beam, high power, ICF reactor driver appls. 105090
KrF large-aperture laser amps., segmented electron-beam diodes for pumping 117068
KrF laser amp., intra-cavity ASE, nanosecond pulses high-energy extraction 82500
KrF laser driver, rep-rate electron beam-pumped, electron-beam transportation expts. 105128
KrF lasers, high-power, laser-plasma interact. phys. 105091
Nd:glass high-energy laser fusion PROGRESS syst. with shaped nanosecond laser pulses 105217
Nd:glass multichannel high-power laser facility, rem. control alignment 105216
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
O_2-I high-press. pulsed laser with instantaneous I generation, operational charact. 105079

laser hardening
iron, austempered, ductile, laser surface hardening, math. modeling 72110
steel surface, laser-US hardening 117557
Stellite SF6, laser cladding & rapid prototyping, proc. head 105641
CO_2 high-power multibeam lasers, surface hardening appls. 83050

laser induced breakdown *see laser beam effects*

laser-induced CVD *see chemical vapour deposition; laser deposition*

laser induced damage *see laser beam effects*

laser interferometers *see light interferometers*

laser interferometry *see light interferometry*

laser isotope separation
multistage pulsed dye laser syst., output power, optimisation, laser isotope separation appls. 128124
wafer level area array solder bump interconnects with Pb-free/low-α solders 113594

laser materials processing
see also laser ablation; laser beam annealing; laser beam etching; laser deposition; laser hardening
3D modeling and visualization 117556
3D parts laser-assisted generation, blown powder proc. 105636
3D photonic lattice crysts., femtosecond laser microfabrication, multiphoton proc. 105632
acetal-based chem. amplified resist, 257 nm laser mask fab. 103626
acrylic laser sculptures, segmented pixel drawing, thermal monitoring 105642
acrylic sculpture proc., laser segmented pixel drawing 105637
adhesive curing, polymerisation reacts., UV laser light induced 72129
advanced reticle fab., laser resist screening 103624
ang. laser cleaning, metal surface small particle removal 72131
artwork conservation, laser surface cleaning, structural changes 72106
azobenzene-containing polymer surface relief grating immobilization/poled alignment, photopolymerization 105464
binary holograms, fab. method using laser punch tech. 128584
Bragg fiber gratings, laser-induced densification, interferometric determ. 127645
CCD-camera based computer vision syst., laser-struct. microdevices 93930
cleaning, diverse in-proc. monitoring techs. 72114
concrete, laser scabbling, thermoelastic anal., reactor decommissioning appls. 105629
conf., high power laser ablation, Santa Fe, NM., USA (April 2000) 124171
contact hole patterns, opt. proximity correction, attenuated phase-shift mask *(Korean)* 69979
CSP laser rework technol., energy source perform./proc. specific package reliab. 113605
curved resist surface fabr. using scanning blue laser beam with positional dose distrib. 115734
cutting, auxiliary gas outflow dyn. 83045
DC-DC converters, capacitor/resistor integrat. for improved efficiency/miniaturisation 79553
die edge heat treatment, YAG laser source, on-the-machine tool *(Japanese)* 93916
diode pumped solid state laser, high power, appls. 128183
direct write technols., commercial appls./review 103977
direct writing, laser-guided, biological/electronic appls. 117554
direct-write of materials for microelectronics appls. 103979
DOE, rapid prototyping, packaging appls. 128576
electronic device mfg. *(Japanese)* 83060
electronics packaging technol., phys. procs., visual modelling 124352
FEL, appls. 93680
FEL, semicond. sci. appl. review *(Japanese)* 83044
fiber grating, long-period, asymmetric transm. spectrum, removal by beam scanning method 82082
fibre opt. components, automated laser stripping, vol. prod. 116617
flexible CSP interposer substrs., laser via form. for high dens. assembly 124353

laser materials processing continued
flip-chip populated PCB rework by laser desoldering 124351
fluorinated polymer-based 157 nm resist for VUV lithog. 126558
focal posn. monitoring syst. 121211
fs laser radiation safety aspects in laser material proc. 72119
fusion cutting proc., cut kerf, supersonic gas flow modelling 93932
fusion cutting proc., cut kerf geom., math. modelling 93931
fusion cutting proc., proc. params., cut kerf quality 93933
hard disk coatings, charactn. of nano-wear mechanisms 68476
HDI fab., laser proc. 124331
heavy duty material proc., laser devices and machine/robot interfaces *(German)* 93915
high power beam shaping diffractive optics 117563
high-accuracy laser mask repair syst. LM700A 103635
high-av.-power FEL for materials proc. 128594
high-power diode laser materials proc. review 72102
high-power DOE beam shaping 93923
high-power kW-range diode lasers, direct materials proc. appls. 105268
highly improved range sens., spatial coherence reduction 117581
inconel 617 alloy, laser surface melted, electrochem. response 117567
indust. appls. of lasers, state-of-the-art 113168
inert gas beam delivery for ultrafast laser micromachining, ambient press. 72136
integrated microfluidic/micro-optic systs., laser fab. 93154
intra-cavity beam shaping DOE design/fab., laser material proc. appls. 72105
Ka-band temp. compensated ring resonator VCO, adjust. using laser trimming 102719
localised heating due to low power focussed laser, max. temp. rise calcs. 83059
long-period fiber grating fab., arbitrary refr. index profiles 127643
long-period grating tapered fibers, CO_2 laser microstructuring 116601
long-period gratings, fab. tech., discharge & laser exposure 93048
mag. recording media, laser-assisted mech. texturing 83040
main stream laser proc., CIM plant 83046
mask repair, LM700A syst. *(Japanese)* 81150
MEMS devices, stiction-failure, aged, laser repair yields 81610
mesoscopic integrated conformal electronics, direct write laser substr. heating, simul. 103152
metal oxide/carbide/nitride/sulphide nanomaterials, synthesis 90555
metals, surface prestressing by laser shot peening 72107
methacrylate piece, CO_2 laser marking, temp. distrib. 72141
micro-lens-fibre fab., two-step proc. using continuous CO_2 laser source 104679
micro-opt. element, laser writing syst., computer aided control 71375
micro-opt. elements with arbitrary surfaces, fab. techs. 104797
micro-opt. laser beam transform. systs., assembly procs. 93204
micro-vias fab. using laser microdrilling, high-dens. PCBs mfg. 128592
microelectronics packaging, laser proc. appls. 67551
microfabrication and micromachining proc. technol., conf., Santa Clara, USA (Sep. 2000) 89582
microlens fab. from opt. fibre ends, melting method 104791
nanostructure fab., electron beam lithog./holography, material wave nanotechnology 103702
new materials/procs., MEMS appls., reviews 104204
non-contact laser forming demonstrator syst. 72108
notebook displays, polysilicon TFT technol. 86804
one-step micro-opt. components laser fab., on-line monitoring 93194
opt. fiber end surface, laser polishing 72123
Parmod functional electronic materials, laser proc. 115157
PCB photolithography technols. for large-area boards 102833
PCB RF shield rework, laser soldering appls. 91465
PECVD films for low-temp. poly-Si TFT-LCD 86813
phosphors, electrophoretically coated, for FED, effect of laser irrad. 97625
photobleaching photoacid generator for chem. amplified resist at 193 nm 103542
photonic device fab., fs laser oscillator materials proc. 128620
photopolymers/imaging systs. for LD imaging 105651
plane surface top lacquer laser cleaning 72132
polyethylene material, mid-IR microelements direct laser writing 82205
polyimide/Cu PCB materials, laser-assisted via hole metallization 69327
polymer/C nanocomposite thin films, PLD, gas sens. appl. 68302
polysilicon cantilevers, surface-micromachined, repair of stiction-failed samples using laser 92550
polysilicon TFT, excimer laser crystallisation 126811
polysilicon TFT fab. by laser-induced in-situ F passiv./laser doping 92362
polysilicon TFTs, low temp. excimer-laser crystallized Si, fab./charact. 115935
proc. 3D-sens. for laser material proc. 83056
PWB, micro-via mfg., laser and additive proc. *(Japanese)* 80515
pyramid polygon mirror wide-band laser scanning heat treatment *(Chinese)* 93914
real-time beam anal. 93929
SCM440/SNCM220 steels, CO_2 laser heat treatment by rot. pyramid polygon mirror 83058
selective laser melting, evaporative model fab. *(Japanese)* 113458
self-written 3D opt. waveguide, light-induced, fab. 104687
semicond. surface treatment, laser-induced electronic excitation effects, review 81098
seq. laser atom cooling/trapping using LD, nanofabrication 92259
silica glass, crossed holographic gratings, periodic nanostruct. array 105581
SMT laser soldering for high-temp. environ. 125914
sol-gel-derived 0-3 composite ceramics for direct write electronics appls. 102841
solid freeform & additive fab., conf., San Francisco, USA (Apr. 2000) 67379
solid surface laser cleaning, opt. reson., near-field effects 128596
stds. and specs. for laser materials proc. *(Japanese)* 93917
steel foils, sub-micron holes, femtosecond UV-laser proc. 93919
surface cleaning, sci./engng. 128597
surface growth, proc., low energy beam-modified, conf., Boston, USA (Nov. 1999) 67359
thick masks, rapid prototyping for through-mask electrodeposition 92231
UV laser exposed fiber Bragg grating tensile strength 127681
UV lithog. technol. develop. for 157 nm, status 103647
UV-induced planar lightwave cct. index changes, birefr. control 128611
welding, QC, AE sigs. wavelet anal. 105630
Al direct laser writing on Si_3N_4 waveguides, SNOM studies, opt. mode converter fab. appls. 93934
ArF excimer laser resists, thermally stable alkylsulfonium salt photoacid generators 103544
ArF lithog., 193 nm, vinyl ether-maleic anhydride alternating polymer resist syst. 103545
ArF lithog., cyclo-olefin/maleic anhydride type resists for sub-100 nm patterning 103551
ArF lithog. for 100 nm technol. node, progress overview 103541
ArF lithog. photoacid generator design, perform. trade-offs 103543

laser materials processing continued
ArF neg. resist, androsterone derivative with δ-hydroxy acid, comonomer struc dissolution 103548
ArF/KrF excimer laser microlithography, resist react. mechanisms by laser fla photolysis 103519
AsSe chalcogenide glassy film, near field photo-darkening 82063
C spun-on bottom ARC film for KrF/ArF lithog., pattern transfer proc. 1035
CO_2 7-pass planar waveguide laser amp. syst., ms pulse generation, materia proc. appls. 72120
CO_2 compact reliable multi-channel lasers, radiation spectrum investigs. 824
CO_2 fast-transverse-flow discharge CW laser for nuc. reactors fuel channe decommissioning 83049
CO_2 high power mobile laser technol. complexes, output charact. 82490
CO_2 high-power CW indust. laser, beam stabil. 93475
CO_2 high-power CW lasers for material proc. 82483
CO_2 high-power indust. lasers, appls., book 78415
CO_2 high-power indust. lasers for machine-building and metall. 83047
CO_2 laser CW radiation for sheet steel surface treatment 83051
CO_2 laser, material surface proc., reliab., corros. resist. enhancement 83052
CO_2 laser proc., high-power, focal mirror aberration meas. 117344
CO_2 lasers, CW and high repetition rate props., at. indust. appls. 83048
CO_2 planar waveguide laser amp., microsecond pulses for micromachinin 105112
CO_2 planar waveguide lasers, direct high-resoln. machining appls. 105110
CO_2 pulsed laser radiation/liqs. time-depend. interact. 72101
Cu elec. busbar joints, laser surface melting treatment effects 115623
Cu nanoparticle embedded glass, QD, laser irrad., microlens form. 71400
CuBr laser, precision material proc. appls. 105099
Fe-Si steel, grain-oriented, core loss reduction by high-power LDs 68386
GaAs(100), fs UV laser treatment, surface modifs., surface states 69865
GaInAs/GaInAsP laser struct., pulsed-laser-induced QW intermixing 71843
GaN bonding with Si, SeS_2 bonding assisted layer, laser lift-off 80971
GaN epilayers, hydride VPE regrowth, GaN quasi substrs., XRD, PL, Rama spectra 68245
Ga_2S_3-La_2S_3-La_2O_3 chalcogenide glass based opt. channel waveguides 11667
a-Ge on GaAs, epitaxial pulsed laser crystn. 101432
InGaAs-InGaAsP MQW struct., multiple-wavelength laser fab. by direct las writing 128326
InGaN/Cu, MQW/LD, laser lift-off, MOCVD 93597
InGaN-based LEDs/lasers, wafer bonding/laser lift-off integrat. 128033
InP 2D nanostructures, two-time laser holography fab. 115794
KrF laser lithog., ARC materials containing isoflavone derivative chromopho 103557
KrF lithog. for DRAM using tri-level resist proc., material/proc. develo 103556
KrF lithog. imaging syst., anti-refl. layer design considerations 103559
KrF resist develop., alkaline conc. var. effects on CD 103553
$LiNbO_3$:Fe, c-axis fibers, laser heating, morphologies, air bubbles effects 1043
Nd:YAG Q-switched UV laser, perform. limits, high-throughput micromachinin appls. 128188
Nd:YAG diode-pumped rod laser, highly precise material proc. 117558
Nd:YAG rod/disc lasers, high-power appls. 71700
Nd:glass laser, pulsed-power capabilities, materials interact. appls. 128186
NiTi SMA, laser material proc., micro-syst. technol. 117571
O_3/N_2O cryogenic film, laser evap., hyperthermal beam for oxid./nitridatio 115616
PZT thin films/heterostruct., excimer laser liftoff proc. 105647
Pb-free solder foils, rapid laser-beam reflow 69315
$PbTiO_3$ thin film, low temp. crystn. by excimer laser irrad., XRD, SEM, EDI 101392
Si buried contact solar cells, rear-surface technols. 100146
Si cryst. thin-film solar cells prep. using laser crystn. 100086
a-Si films, ultra-large lateral grain growth by double laser recrystn. 114398
Si, nucleation-site-control excimer-laser-crystn. method 79168
Si surfaces, laser micron particle removal 69877
Si tip arrays, laser prep., electron field emission 80560
Si wafer surfaces, laser-assisted particle removal, opt. field enhancement effec 81073
Si wafers, laser-induced particle removal 126333
Si:Cu wafers, Cu particle laser removal 103352
a-Si:H, RF CVD, laser melting, polycryst. films, PV props. 91607
a-Si:H/poly-Si stacked solar cell submodule 112974
Si/SiO_2 TFT, laser crystallisation, grain struct. 70096
Si/SiO_2, photonic band gap cryst. fab., femtosecond laser micromachining 8304
Si-containing polymer photoresists 103561
Si-glass wafers, laser locally selective bonding 128618
SiC conducting/insulating tracks by laser direct writing 115337
SiC, pulsed excimer laser proc. 72124
SiC seal rings, laser surface microtexturing, tribological prop. 105625
SiC surface, laser-induced microdrilling modif. 103440
SiO_2 layers on Si, excimer-laser-induced micropatterning 81072
Ti:sapphire regenerative amplified femtosecond pulsed laser, sub-micron machining, Rowland ghost effect 72116
Ti/Si(001) interface, vis./UV pulsed laser proc., XPS microscopy 103178
$YBa_2Cu_3O_{7-x}$ on RABiTS, magneto-opt. imaging of transport currents 70674
YVO_4:Nd^{3+} cryst., LHPG, opt. props. 124796
ZrO_2 plated film spallation by short pulsed laser irrad., max. shear stress theor *(Chinese)* 128612

laser mirrors
2D photonic lattice reflectors, single mode laser components 117330
act. cavity VCSEL eigenmodes, optimized waist Gauss-Laguerre modes 12834
act. laser resonators, intracavity flexible mirror, output charact. 82707
act.-cavity VCSEL eigenmodes, simple analytic representation 105390
adaptive loop resonator, intracavity beams opt. phase distortions 82702
all-opt. header proc., SLALOM two-pulse correl. 129425
auto-aligned fs lasers, SESAM mirrors 82756
beam deflection polygon scanner using HTSC bearings 71869
Bessel-beam laser using nondiffractive resonators 93706
Bessel-Gauss mode laser resonator, diffr. energy losses 128351
bipolar cascade VCSELs, scaling behavior 105341
cascaded CW Raman fiber lasers, SRS, num. modeling, optimisation 82539
Chinese Academy of Sciences, Inst. of Optics and Electronics, act. opt. compo nents 93282
circulating solid state laser beam control by holographic gratings 83013
coaxial FEL with Bragg mirror resonators, spatially coherent radiation 11730
compact tunable narrow-band LD, external abnormal-refl. mirror 128413
continuous scanning laser Doppler vibrometer with bow scanning compensatio 132189
curved mirror deep-etched two-groove DBR lasers 71792

mirrors continued
CW double-hexagonal Talbot cavity with stochastic propag. phase, extraction charact. 128353
double pass X-ray laser, focalisation, ray trace code 117051
double-way amplified laser beam, SBS phase conjug. mirror *(Chinese)* 128373
dual fn. autocorrelator for laser pulses temporal charactn. 128402
EDFA, gain flattening using high-birefr. fiber loop mirror 105196
external reflector cpd. ring resonator for single-mode TW doped fiber laser 93682
femtosecond light pulse generation/diagnostics 128408
fiber laser mode locked by Sagnac interferometer with nonlin. polariz. rot. 128405
fiber laser sens. with cavity form. by ref./sens. Bragg gratings 86596
flattened Gaussian beam generation by saturable absorbers 117387
free-space opt. data link using Peltier-cooled quantum cascade laser 86120
freq. doubling polaris. mirror, pass. mode-locking & pulse-shortening 117385
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
high power diode lasers, opt. pumping appls. 71804
high power multicore fiber lasers, Talbot resonator, phase-locking, self-imaging props. 71681
high power pulsed laser systs., nonlin. phase conjug. mirrors 82804
high reflectivity chirped laser mirrors, fs opt. pulse compression 93723
high-power CW Raman phosphosilicate fiber laser, output charact. 105171
hollow-waveguide slab laser, output beam quality optim. 93701
hollow-waveguide slab lasers, transverse mode selectivity 93551
integrated micromachined tunable laser using polysilicon 3-D mirror 71357
intra-cavity contacted shallow implant apertured VCSELs, gain-switching 128258
lightcraft vehicle, laser beam propulsion, parab. mirror misalignment 133251
liq. cryst. pixel mirror, electronically tunable single wavelength broad-area semicond. laser 117352
long-range low-coherence pulsed Doppler lidar, ref.-beam storage 88151
Mars spacecraft, laser-retroreflector covered sphere 117329
micro mirror arrays for scanning appl. in laser projection syst., fab. 82192
multicore fiber laser, combined phase locking/beam shaping by struct. mirrors 93741
multicore fiber lasers, all-fiber phase locking setup 82775
multicore fibre laser phase locking by external mirror 117356
near-field IR microsc. transient photoinduced aperture 109622
nitride VCSELs, extremely high-reflective low-loss resonator mirrors 93607
non-symmetric reson. cavity wavelength tunable fiber laser 105174
nonresonant self-injection seeded gain-switched diode laser, tunable operation 128414
opt. components fab. for NIF laser 104864
opt. time-division DEMUX, ASLALOM, cross-talk anal. 120297
pass. FP opt. resonator, TEM_{q00} mode, line shape fn. 82704
pass. Q-switched laser, two-mirror reentrant ring cavity 82553
pass. Q-switched laser params. optimisation model 93724
phase conjug. beam steering using multipass amp. syst., high gain 71944
phase conjug. mirrors for solid-state laser systs. beam quality improvement 93696
picosecond surface-emitting semicond. laser with >200 mW av. power 82604
polariz. independent NLO loop mirror 82117
polymer lasers, dispersion cavities with vol. holographic gratings, single-mode operation 93686
pos. branch confocal laser resonator alignment/misalignment *(Chinese)* 128352
powerful laser opt. resonator elements, thermal deform., cooling methods 117318
QW planar micro-cavities, metallic mirrors, spontaneous emission *(Chinese)* 82710
resonator mirror substrs., thermal deform. 128345
ring solid-state laser, intracavity amplit. isolator 82711
sampled grating DBR laser, opt. freq. synthesis over >1 THz 71914
sampled grating DBR multiwavelength laser arrays for WDM appls. 105342
self-adapted laser mode filtering photorefr. Fabry-Perot interferometers 127569
self-seeded coupled-cavity pulsed tunable dye laser, competitive act. mirror 117390
semicond. laser, 2D photonic cryst. mirror, Al_2O_3 mask 128306
semicond. VCSEL, periodic struct. form., spatial Fourier modes competition 93622
SHENGUANG II laser syst., ang. variable mirror effect on light beams *(Chinese)* 105397
short external opt. cavity DFB diode laser wavelength tuning 82779
single SLA/reflector in DWDM PON 131388
solid laser, stable resonator, graded reflectivity output coupler 93688
solid-state laser beam mode control using holographic mirrors 93709
all-solid-state laser systs. with fiber phase-conjug. mirror 105212
solid-state ring TW laser, mirrors 117321
submillimetre laser cavity, transverse laser mode selection 117313
swept beam ultrashort-laser-pulse meas., FROG device 128396
tetrahedral 3-facet micromirror fab., inclined deep X-ray lithog. 127820
transparent SOA-based NLO loop mirror 86099
transverse mode stabilized large area oxide-confined VCSEL laser, nonlin. distortion reduction 71784
two-rod symmetric dyn. stable laser resonators in solid-state laser cutting syst. 117568
ultrashort in-plane semicond. microlasers, high reflectivity microstruct. mirrors 117325
unstable laser modes, edge waves and fractality 128354
unstable plane-parallel resonators, variable-reflectivity multilayer dielec. mirrors 128348
UV lasers, indust.-strength optics, appls. 82714
VCSEL, multiwavelength, dielec. mirror 105392
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
VCSEL arrays, photonic lattices, Bloch anal. 117270
VCSELs, guided-mode reson. filters, single-mode operation control 105325
Virgo, mirror suspen., thermal noise limit 71871
waveguide grating mirror for large-area semicond. lasers 93662
wide-aperture tunable semicond. laser, external waveguide-grating mirror 82630
widely tunable DBR semicond. laser, dyn. holographically-written grating mirror 105435
AlGaAs single-lateral mode LD with window-mirror struct., high-power operation 128226
AlGaAs/GaAs DBR laser mirror, RIE 128356
AlGaAs/GaAs high-power 980 nm laser arrays, nonabsorbing facets 117246
AlGaAs-InGaAs lasers, 2D-photonic cryst. mirrors based on Al_2O_3-mask 71778
AlGaInAs/InP Bragg mirror VCSEL, design/perform. 128332
AlGaInN VCSEL, fab., ICP etching, dielec. mirrors 81099
AlGaInP based vis. red VCSEL, develop. & perform. 71837
Ar^+ cw ion laser modal content/noise charact., phase-conjug. feedback 93469

laser mirrors continued
$Ba(NO_3)_2$ Raman cryst. laser, effective anti-Stokes radiation 82798
$BaTiO_3$ photorefr. phase-conjugating mirror, intracavity beam shaping, reference-less holography 128376
C^{5+} ion X-ray laser, capillary discharge, induced MHD instabil. 128069
C_{60}/C_{70} incorp. nanocomposite resist syst., nanolithography 92238
CO RT repetitively pulsed overtone laser 105105
CO_2 CW laser with phase-stepped mirror, uniform intens. distrib. form. 128116
CO_2 annular gain region in-phase laser mode selection 105139
CO_2 high-power CW lasers for material proc. 82483
CO_2 high-power indust. waveguide lasers, beam output charact. 82482
CO_2 high-power laser, controllable Fabry-Perot interferometer output mirror 82488
CO_2 high-power laser with variable reflectivity output mirrors unstable resonator, beam QC 82487
CO_2 indust. high-power laser, radially polarized beam generation 82489
CO_2 indust. laser, act. mirror resonator, Q-switch regime generation 105114
CO_2 indust. repetitive-pulse laser, energy charact. 82485
CO_2 laser ablation proc., polymer proc. 128610
CO_2 laser heat treatment by rot. pyramid polygon mirror on SCM440/SNCM220 steels 83058
CO_2 laser proc., high-power, focal mirror aberration meas. 117344
CO_2 laser unstable resonator mirrors, phase front compensation 128349
CO_2 laser, unstable resonators with helical mirrors 93477
CO_2 lasers, resonator SBS-mirrors, phase conjug. develop. 105398
CO_2 lasers, waveguide-unstable cavities, laser beam profiling 82470
Cr-doped act. material lasers, ouput pulses, self-Q-switching behavior 71730
Er,Al-codoped germanosilicate planar waveguide array with 50 GHz freq. separation 128191
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instabil. 128133
Er-doped fiber laser, rational harmonic act.-pass. mode-locking *(Chinese)* 93497
Er-doped fiber laser, self-Q-switched, SBS, output charact. *(Chinese)* 82522
Er-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wavelength operation *(Chinese)* 82523
GaAs, MBE for AlGaAs/CaF_2 saturable absorber mirror 93690
n-GaAs-AlAs DBR laser mirrors, elec. noise characterisation 71799
GaAs-AlGaAs ridge waveguide quantum cascade lasers, monolithic photonic bandgap mirrors 71800
GaInAs single QD edge-emitting microlasers 128239
GaInAs/AlGaAs QD edge-emitting laser, highly reflecting Bragg mirrors, output charact. 71806
GaInAsP VCSEL, design and fab. 117279
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photonic integrat. 105311
GaInAsP/InP lasers, high-reflectivity semicond./BCB Bragg reflector mirrors 71771
GaInAsP/InP opt. pumped stripe laser, design, fabr. and high-power operation 117195
GaN/SiC lasers, L-I charact., mirror reflectivity depend. 105269
He-Ne dual-freq. bireflectance mirror laser cavity 105095
He-Ne four-mirror two-freq. laser for heterodyne measuring systs. 128104
He-Ne three-mirror two-freq. laser with stabilized beat freq. 128103
Hg CW at. laser, microwave discharge pumped, output charact. *(Chinese)* 71645
Ho^{3+}-doped silica CW 2 μm fibre laser 71669
I lasers, resonator SBS-mirrors, phase conjug. develop. 105398
I* high-energy photolytically pumped laser, Raman conversion 128042
InGaAs SQW, ion implanted, saturable absorber mirrors for pass. mode-locking 105485
InGaAs/GaAs single-mode ridge waveguide laser, external cavity, spectral narrowing 71823
InGaAs/GaAs strained layer SCH SQW laser, output charact. 71805
InGaAs/InP-based saturable absorber mirrors, proton-bombard., recovery dyn. 71951
InGaAs-AlGaAs-GaAs SQW-GRINSCH LDs, dry-etched mirror facets, integrated photodiodes 128220
InGaAsP/InP ultrashort lasers with deeply etched Bragg mirrors 82622
InGaN MQW hexagonal microfacet lasers, room-temp. lasing by current injection 105326
InGaN/GaN QW SEL, SiO_2/ZrO_2 multilayer mirrors 71810
InP-lattice-matched 1.55 μm VCSEL, AlGaAsSb-AlAsSb DBR mirrors 128231
Mo^+ saturated Ni-like X-ray laser 128063
Mo/Si multilayer coatings, X-ray laser appls. 127878
Nd:YAG LD side-pumped laser, versatile compact TEM_{00}-mode resonator 71864
Nd:YAG Q-switched high-power laser, variable reflectivity mirrors 117168
Nd:YAG diode-pumped laser with Brillouin phase-conjug.-pulse-compression mirror 128406
Nd:YAG high av. power lasers, self-adaptive cavity, nonlin. mirror 117149
Nd:YAG laser, flash-lamp-pumped, dual-telescopic optics config. 105256
Nd:YAG laser, self-starting, self-induced refr. index gratings 71738
Nd:YAG laser, vectorial phase conjug. mirror in gain medium 71945
Nd:YAG lasers, semicond. laser pumped, mirror coating struct. design 127884
Nd:YAG microchip laser simul., epitaxial YAG:Cr^{4+} Q-switching layer 117379
Nd:YAG microchip solid-state laser array, synchronized chaotic oscill., Talbot mirror 128204
Nd:YAG nonreciprocal self-pumped laser phase conjugator, reson. refr.-index grating 128439
Nd:YAG pulsed laser with SBS-mirror, large vol. laser mode, num. simul. 93566
Nd:YAG rod laser birefr./thermal lensing, dyn. correction 105226
Nd:YAG self-starting phase-conjug. laser, dyn. NLC holographic mirror 71946
Nd:YAG single-mode diode-pumped laser, freq. scanning regimes 117155
Nd:YAG slab, high-gain laser amplif., SBS phase-conjug. mirror 71739
Nd:YVO_4 coupled-cavity microchip laser 93561
Nd:YVO_4 ring lasers, LD pumped, $KTiOPO_4$ intracavity doubling, output charact. *(Chinese)* 71745
Nd:YVO_4 single-freq. laser with mode cleaner, intens. noise reduction *(Chinese)* 71702
Nd:glass multichannel high-power laser facility, rem. control alignment 105216
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
Nd-doped laser superhigh-fidelity phase conjug. at SBS, new-generation kinoform optics 128366
O_2-I chem. laser with hybrid confocal type resonator, output charact. 105142
PbSe/PbEuTe midinfrared surface-emitting QD lasers 105284
Si micromachined membrane deformable mirror, intracavity Nd:YAG laser radiation control 82191
Si/Sc multilayer mirrors, Ar polarized soft-X-ray laser beam 93468
SiO_2/TiO_2 DBRs for VCSELs, dry and wet etch procs. for patterning 93697
Ti:Al_2O_3 femtosecond laser with multiple-pass cavity, stabil. anal. *(Chinese)* 105241

laser mirrors continued
Ti:Al_2O_3 laser with tunable varied reflectivity mirror unstable resonator, beam quality *(Chinese)* 105220
Ti:sapphire high-av.-power self-starting mode-locked laser 105235
Ti:sapphire laser, 5-fs pulse generation/octave-spanning spectra 71902
Ti:sapphire laser oscillator, ultrabroadband double-chirped mirror pairs, octave spectra generation 71872
Ti:sapphire laser, repetition-rate Kerr-lens mode-locked, high-energy pulse generation 71709
Ti:sapphire laser, self mode locking states *(Chinese)* 128194
Ti:sapphire self-mode-locked laser self-started by semicond. saturable absorber mirror *(Chinese)* 117370
XeCl discharge laser with Gaussian reflectivity mirror, beam quality factor evol. 105151
XeF blue-green laser, opt. pumped, C-A transit., output charact. *(Chinese)* 71630
Zn^{20+} X-ray laser, half-cavity geom. effect on output and spatial coherence 117081
ZnCdMgSe-based DBRs, high reflectivity symm. strained, MBE, charactn. 105384

laser mode locking
20 GHz OTDM sig., 10 GHz clock pulses extraction 120198
act. mode locking with hybrid lasers, num. study 117375
act. mode-locked fiber lasers, extended ABCD model, expt. validation 71680
act. mode-locked laser, time-resolved autocorrelation meas. 128400
act. mode-locked laser noise dyn. 82786
ADCs, photonic type, develops. 82795
additive-pulse mode-locked fiber laser with fiber-grating, oscill. conditions *(Chinese)* 105181
all-opt. WDM-to-TDM conversion scheme with simultaneous all-opt. sync. for network nodes 120316
AM mode-locked fiber laser, detuning charact., numeric simul. 117371
B-class fiber ring laser, mode pairing and parametric self-locking 105201
Brillouin fiber ring laser, soliton compression and locking 128136
chirped fiber grating group time delay meas., mode-mocking tech. 116647
chirped-pulse amplif. laser syst., stretching factor calc. and meas. *(Chinese)* 105418
colliding pulse mode-locked laser, direct modulation 82776
colliding-pulse mode-locked LD, opt. pulse generation 105445
CW Fabry-Perot laser opt. pulse generation, 100 GHZ 82602
CW mode-locked all-solid-state laser source, cavity-augmented freq. tripling 105260
CW-mode photoinjector, freq.-converted driving laser *(Chinese)* 82750
DFB semicond. laser opt. MM-wave generation by FWM conjug. locking 91398
DFB two-sect. gain-coupled laser, MM-wave fiber optic link 109098
dispersion-managed fiber ring laser, act. mode-locked, jitter, stabil. anal. 82538
distributed press. sens. with mode-locked fiber-ring laser 75575
dual-core ring fiber laser, self-mode-locking action 105207
elec.-pumped directly-modulated tunable VCSEL, metro DWDM appls. 117397
external-cavity laser heterodyne phase-locking, MM-wave sig. generation 69255
external-cavity mode-locked semicond. laser modules, all-opt. clock recovery 131577
Fabry-Perot semicond. laser, subharmonic sync. modelocking, suppressed AM 71890
femtosecond light pulse generation/diagnostics 128408
femtosecond modelocked fiber laser, WDM pulse generation, pulse shapers, arrayed waveguide gratings 120315
fiber grating semicond. laser, act. mode locking, time domain anal. 117392
fiber grating semicond. laser operation, act. mode-locking regime, time-domain anal. 128236
fiber laser, OTDM sig. injection, clock recovery *(Chinese)* 96778
fiber laser mode locked by Sagnac interferometer with nonlin. polariz. rot. 128405
fiber mm-wave radio, 60-GHz IF sig. transmiss., two-mode locked Fabry-Perot slave laser 96729
fiber radio, mode-locked microchip laser opt. transmitter, mm-wave generation 131451
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
fibre Fabry-Perot laser, ring cavity, act. mode locking 117097
fibre laser, pass. modelocking, dissipative FWM 93508
fibre ring laser, modelocking stabil. by pulse bunching 82512
fibre ring laser, regenerative mode-locking, pulse freq. doubling 71897
fibre ring lasers, rational harmonically modelocked, higher-order opt. pulse generation 93523
freq. doubling polaris. mirror, pass. mode-locking & pulse-shortening 117385
fs pulse train, freq./repetition rate stabilis., F-P ref. cavity 71905
Gaussian wavelet pulse propag., ultrashort pulse time evol. 105422
Gb/s flash all-opt. ADC design 93239
Gbit/s OTDM transm. systs., fibre grating laser-based RZ pulse source 96808
GHz sampling rate ADC, photonics technols. 91402
high intens. femtosecond light pulse generation in dispersion compensated ring cavity 82758
high power multicore fiber lasers, Talbot resonator, phase-locking, self-imaging props. 71681
inhomog. broadened SOA gain element, fiber grating, multiwavelength pulse train generation 105433
injection-locked 10×10 coherent VCSEL array *(German)* 93645
integrated LD sub-harmonic mode locking, spectral domain anal. 117393
Kerr-lens mode-locked solid-state lasers, coherent semicond. absorber, ultra-short pulse generation 82578
LD radiation freq. synchronisation with fs Ti:sapphire laser mode freq. 117369
lin. laser amps., periodically modulated laser radiation, injection-locked method 117389
localization effects in fibers/lasers 93098
microchip laser, fiber-coupled diode end-pumped, helical-wave emission dyn. 105224
microchip lasers for MM-wave generation for opt. fed wireless systs. 96704
modelocked DBR LD FWM conversion efficiency 109149
monolithic mode-locked LD, ultrafast opt. pulse train generation/stabilization 117372
monolithic mode-locked LD for high-speed opt. commun., freq. control 117373
multi-sect. laser in MM-wave fibre-wireless uplink, dyn. range charactn. 74935
multi-wavelength fiber ring laser, tunable act. mode locking 71684
multi-wavelength pulses of fiber lasers, gen. and dispersion compensation *(Chinese)* 93728
multichannel fiber laser systs., sync. mode-locking 71683
multicore fiber laser, combined phase locking/beam shaping by struct. mirrors 93741
multicore fiber lasers, all-fiber phase locking setup 82775

laser mode locking continued
multicore fibre laser phase locking by external mirror 117356
opt. microwave sig. generation using directly modulated semicond. laser 1173
opto-electronic QW semicond. devices for opt. sig. proc. *(English)* 109075
OTDM commun., clock recovery and DEMUX 120356
pass. mode-locked fiber soliton ring laser, subsideband generation 128393
pass. modelocked self-starting fiber laser pulse anal. using step chirped dr tower grating arrays 128389
pass./act. opt. fibers, pulse propag., fast Kerr-like nonlin. effect 104637
phase locked VCSEL amp. 117366
phase-locked phase-shifting LD interferometer, photothermal modulating tec 75872
phase-locked VCSEL laser array polariz. stabil. 128412
π-shifted long-period fiber grating bandpass filters for act. mode-locked Er-dop fiber lasers 116881
picosecond surface-emitting semicond. laser with >200 mW av. power 8260
polariz.-maintaining dispersion-flattened dispersion-decreasing fiber pulse co pressor 82950
quadratic polaris. switching mode-locking, fs pulse generation 71904
quantum cascade laser mode-locking/gain-switching 93745
QW laser, microwave modulation with/without external opt. injection 82766
rational harmonic mode locked ring fiber laser, time domain anal. 105448
robust all-opt. harmonic clock sig. gen. via opt. inject. into mode-lock semicond. lasers 109045
fast saturable absorbers, pulse generation, solitons, period doubling 93734
SCH-MQW waveguide saturable absorber of mode-locked LD, carrier dy 117430
self-mode-locked solid state laser, phys. charact., self-starting study *(Chines* 82568
semicond. amp. tapered mode-locked integrated grating cpd. cavity laser desig 71820
semicond. laser, mode locked, hybrid WDM-OTDM technol. 109159
semicond. laser phase-conjug. feedback, bifurcations to opt. chaos 93735
semicond. lasers, linewidth enhancement factor meas., injection-locking tec 71891
semicond. lasers, phase noise, carrier dyn. contrib. 128378
semicond. lasers, pulsed subharmonic opt. injection, sig. generation at MM-wav repetition rates 105335
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
single mode master/slave laser detectors, amplif. regimes 93620
single-mode laser, phase locking, mean first-passage time 82773
SOA/electroabsorption modulator in fiber ring, 10-GHz act. mode-locked pul generation 128417
solid-state laser, Laguerre Gaussian $TEM_{0,1}$* mode dyn. 82590
solid-state laser, mode-locked, ultranarrow pulse spectral charact., stimulate Raman scatt. 71750
spectrum slicing coherent light sources in high-capacity fibre transm. 85947
subharmonically mode-locked semicond. laser, pulse AM suppression 71816
sync. mode-locked fiber laser, parametric gain modulation, soliton shapin 105206
TDM network all-opt. clock extraction at 160 Gbit/s with monolithic mode locked LD 96686
three-element cavity Kerr mode-locked laser resonator *(Chinese)* 71862
turbulent jet aircraft perturbed laser beam CCD image sens. 86627
two-mode injection-locked Fabry-Perot lasers, WDM, opt. millimetre-wav sources 96805
ultrafast opt.-pulse train Fourier synthesis, SOA phase locking 71901
UV phase-locked Raman side-band generation 82745
AlInAs/GaInAs quantum cascade lasers, far-IR and ultra-high-speed operatio 82656
BaB_2O_4 cryst. harmonic components interf., phase-controlled pulses 82774
CO_2 annular gain region in-phase laser mode selection 105139
CO_2 laser phase locking, radiation exchange 71906
CO_2 slab-waveguide laser, RF excited, mode control 105140
CO_2 waveguide lin./ring laser array phase locking 128399
Cr:LiSrAlF$_6$ laser, Kerr-lens mode locking, gain-saturation 71903
Cr:forsterite mode-locked all-solid-state laser, simultaneous multiwavelength generation 82755
Cr^{2+}:ZnSe broadly tunable laser, cw/pulsed/act. mode-locked regimes 82616
Cr^{4+}:YAG as saturable absorber, act.-pass. mode-locking of Nd:YAG lase 117426
Cr^{4+}:YAG microchip lasers, Q-switched mode locking 82772
Cs opt. at. clock, Er fiber laser microwave source 75359
Er,Yb:glass single-mode laser in NIR, amplit. and freq. stabilization 105259
Er,Yb-doped laser transmitters, high-bit-rate FM, pulse train stabil. 71913
Er doped fiber laser, mode-locked, gamma-ray induced responses 117129
Er fiber laser, stabilized rationally mode-locked, pulse generation, BER 105190
Er-doped act. mode-locked fiber laser, opt. pulse train generation 93502
Er-doped fiber dual-stage opt. amps., gain-locking method, WDM systs. appls 93506
Er-doped fiber laser, act. mode locking, pulse noise meas. 105209
Er-doped fiber laser, rational harmonic act.-pass. mode-locking *(Chinese)* 9349
Er-doped fiber laser with cavity SOA, rational harmonic mode-locking, stable pulse generation 105166
Er-doped fiber lasers, asynchronous mode-locking, integrable model 93736
Er-doped fibre amp. in-line cascade, rem. in-service supervision *(Chinese)* 75051
Er-doped fibre laser, multichannel, soliton-like pulse generation 93731
Er-doped harmonically mode-locked fiber laser pulses, delay time tuning 105193
Er-doped mode-locked fiber laser, multiwavelength pulse generation 82536
Er-doped subpicosecond freq.-shifted feedback fibre lasers, stable pulse operation 93503
Er^{3+}-doped fiber pass. harmonic mode-locking laser, ultrashort opt. pulses generation/amplif. *(Chinese)* 105456
Er^{3+}-doped fibre quasi-ring & FBGs, dual-wavelength lasers 93514
GaAs photocond. antenna, ultrabroadband THz radiation detect., fs laser pulses 97797
GaAs, vis. phase-locked lin. chirped pulses, coherent broadband pulse shaping 72035
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LD 71847
GaAs/AlGaAs harmonic mode-locked monolithic cpd.-cavity LDs, THz repetition rates 82693
GaAs-AlGaAs double QW ridge-waveguide LD, near-THz pass. harmonic modelocking 105428
H_2 sync. pumped Raman laser 128043
He-Ne three-mirror two-freq. laser with stabilized beat freq. 128103
InAs QD lasers, two-sect., pass. mode-locking 82619
InGaAlAs quantum-confine. heterostruct., 100-watt laser bars based on PLA 82686
InGaAs ring cavity SOA, self-mode-locked, ps pulse generation 93730

mode locking continued
nGaAs/InP-based saturable absorber mirrors, proton-bombard., recovery dyn. 71951
nGaAsP QW mode locked LD, pulse charactn, two-photon absorpt. opt. gating 117374
nGaAsP discretely tunable mode-locked SOA laser, arrayed waveguide grating 128416
nGaAsP-InP bulk LDs, saturable absorber fab. by HI implant. 128457
$LiNbO_3$ single-pass opt. parametric generator scheme, mode-locked laser direct pumping 82903
N laser arrays, phase locking, output charact. 128048
Nd:LuYLF laser, mode-locking operation 117361
Nd:YAG diode-pumped Kerr-lens mode-locked laser, dyn. 128394
Nd:YAG dual-pulse laser, PSIL-controlled Ti:sapphire laser pumping 117386
Nd:YAG laser, picosecond flashlamp pumped, all-solid-state pass. pulse control 105218
Nd:YAG laser tilt locking 82787
Nd:YAG laser with pass. neg. feedback, compressed picosecond pulse generation 117358
Nd:YAG pulsed laser, stable Kerr-lens mode-locking operation *(Chinese)* 105238
Nd:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Nd:YVO_4 Q-switched mode locked laser with V^{3+}:YAG saturable absorber 105263
Nd:YVO_4 low-power laser, pass. mode-locking using InGaAs QW saturable absorber mirrors 105485
Nd:YVO_4 ring single-freq. laser, LD end-pumped, high-power freq. stabil. *(Chinese)* 71703
Nd:YVO_4 self-mode-locked Q-switched diode-pumped laser, LiF:F_2^saturable absorber 117353
Nd^{3+}:GdGG monoblock diode-pumped laser, two-freq. mode-locking 117357
O_2-I kW RADICL chem. laser research 105056
SiO_2 fused microsphere, whispering-gallery reson., freq.-scanning laser locking 82783
Ti:sapphire femtosecond laser, principles and appls. *(Chinese)* 117141
Ti:sapphire fs laser oscillator, EO cavity dumped 128192
Ti:sapphire high-av.-power self-starting mode-locked laser 105235
Ti:sapphire high-power regenerative laser amp. 71718
Ti:sapphire, home made self-start self-mode-locking, sub-10 fs pulses *(Chinese)* 71908
Ti:sapphire laser, 5-fs pulse generation/octave-spanning spectra 71902
Ti:sapphire laser, repetition-rate Kerr-lens mode-locked, high-energy pulse generation 71709
Ti:sapphire laser, self mode locking states *(Chinese)* 128194
Ti:sapphire laser, sub-10-fs pulse generation & charactn. 93733
Ti:sapphire lasers, Kerr lens mode-locked, bistability study 82579
Ti:sapphire mode-locked femtosecond laser pulse, spectrum broadening, cascaded second-order nonlin. 105431
Ti:sapphire mode-locked laser sub-5.2 fs pulse generation, techs./dyn./appls. 82760
Ti:sapphire mode-locked lasers, carrier-envelope phase stabilization using microstruct. fiber 128196
Ti:sapphire oscillators, sub-10-fs act. synchronisation 105230
Ti:sapphire pass. mode-locked laser, timing jitter meas. and control *(Chinese)* 128207
Ti:sapphire self-mode-locked laser, femtosecond opt. pulses, time-resolved opt. gating 105459
Ti:sapphire self-mode-locked laser self-started by semicond. saturable absorber mirror *(Chinese)* 117370
Ti:sapphire self-mode-locked laser, ultrashort-pulse amplit./phase meas. 105447
Ti:sapphire three-mirror-cavity self-locked laser, low pump power *(Chinese)* 117130
Tm,Ho:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Tm,Ho:YLF lasers, rate-eqn. models and spectrosc. 117163
Tm^{3+}:YAG broadband accumulated spectral grating dyn., stimulated photon-echo tech. 71960
Yb,Er-doped fiber laser, relax. oscill. locking, microsecond pulse generation 105165
Yb^{3+} doped holey fibre based modelocked laser 71656
Yb:YAG pass. mode-locked thin-disk laser, widely tunable pulse durations 71732
Yb-doped dual-clad multimode fiber amp., diffr.-limited polarized SBS 71663

r modes
see also laser mode locking
1.48-µm flared resonators, CW power coupling into single-mode fiber 128343
1.5 µm wavelength distributed reflector lasers with vert. grating 82651
1.5-µm three-sect. DBR lasers, transient current control, tuning time reduction 105437
2D photonic bandgap defect lasers, single-mode oscill. 128270
2D photonic lattice reflectors, single mode laser components 117330
850-nm VCSEL arrays, Gps-class parallel-interconnection module appl. 117186
1550-nm spot-size converter integrated DFB lasers, low-cost single-mode opt. sources appl. 109067
act. cavity VCSEL eigenmodes, optimized waist Gauss-Laguerre modes 128344
act. laser resonators, intracavity flexible mirror, output charact. 82707
act.-cavity VCSEL eigenmodes, simple analytic representation 105390
anisotropic Bessel-Gaussian beams, sidelobe control/mode selection 82723
ARROW-type VCSEL modal charact. anal. 93654
B-class fiber ring laser, mode pairing and parametric self-locking 105201
beam charactn. using Shack-Hartmann sens. 71887
Bessel-Gauss mode laser resonator, diffr. energy losses 128351
bidirectional ring laser with injected sig., backscatt., stat. props. *(Chinese)* 105385
bottom emitting proton implanted medium area VCSELs, flower mode emission 117207
circulating solid state laser beam control by holographic gratings 83013
curved mirror deep-etched two-groove DBR lasers 71792
CW double-hexagonal Talbot cavity with stochastic propag. phase, extraction charact. 128353
CW single-freq. semicond. laser with Bragg fibre grating 128303
CW-cavity ring down spectrosc., ultra-sensitive atmos. trace detect. 76935
depolarised speckle radiation wave front polaris. capture by holographic laser mode 117535
DFB diode laser modes, argument principle method 117178
DFB dye laser, polaris. dyn. 71655
DFB fiber lasers, multiple wavelength operation 82537
DFB laser, index-coupled, improved spectral charact., coating tech. *(Chinese)* 82679
DFB semicond. laser opt. MM-wave generation by FWM conjug. locking 91398

laser modes continued
diode cascade VCSEL, cavity region reduced current spreading 82691
diode laser extended cavity with EO prism, broadband fast freq. tuning 82757
diode lasers, mode switching charact., perturb. anal. 105285
diode lasers, real refr. index guided self-aligned struct., monolithically integrated 71813
DOE design, modal comp., amplit.-phase charact. 93174
DOE external cavity diode laser, single mode wavelength tuning 105399
dual-long.-mode birefr. moire DFB fiber laser sens. in rf domain 97333
dye cored dendrimer in PMMA waveguides, single-mode random laser 93492
edge emitting LD, defect recogn., long. mode anal. 82642
electroabsorption modulated DFB laser, low wavelength shift *(Chinese)* 105442
etched nano-hole oxide confined SEL, high-order mode selection 105307
external cavity LD with cascaded fiber Bragg gratings, dual-mode operation *(Chinese)* 117252
external cavity multi-mode semicond. laser, LF fluct. 105305
external cavity tunable lasers, fibre network deployment 117401
external reflector cpd. ring resonator for single-mode TW doped fiber laser 93682
external-cavity diode laser with intracavity glass plate as fine-tuning device 71785
eye-safe act. Q-switched microchip lasers, electro-absorbing semicond. modulators 117349
far-field distribs., spatial coherence effect 128360
fiber Bragg grating stabilized 980-nm pump lasers, L-I charact. 71781
fiber grating external cavity semicond. lasers with narrow linewidth high MSR *(Chinese)* 71852
fiber grating laser, non-AR coated, packaging 105203
fiber laser sens. with cavity form. by ref./sens. Bragg gratings 86596
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
fiber ring laser, wavelength tuning mechanism by pol. control *(Korean)* 117100
free-space opt. interconnect, VCSEL array 71621
gain-switched commercial Fabry-Perot laser, HF wavelength-tunable pulse generation 105436
gain-switched diode laser, nonresonant self-injection seeding, step-tunable single-mode operation 128237
Gauss-Laguerre focused vortex laser beam SRS 93758
glass Nd-doped laser, LF dyn. 105229
grating coupler sampled reflector tunable DBR lasers 117400
grating-based surface-emitting tapered unstable resonator laser simul. 128272
Hermite-Gauss/Laguerre-Gauss mode laser beams 117338
high brightness high power semicond. lasers, inhomog. pumping 82671
high power beam shaping diffractive optics 117563
high power diode lasers with external resonators, improved beam quality 71821
high power MEMs-tunable VCSEL lasers 117398
high power single-mode diode DFB laser with curved-grooves diffr. grating 71801
high-power DOE beam shaping 93923
high-power gas flow chem. lasers, press. recovery systs. 105137
high-power solid-state laser, LD pumped, output charact. and appls. 71721
high-speed directly-modulated semicond. laser modulation bandwidth, detuned external fibre grating reflector 105308
high-speed dyn. wavelength routing SG-DBR laser, wavelength switching 120313
high-speed laser mode-expander optimisation, low-cost automated fibre alignment 74939
hollow-waveguide slab lasers, transverse mode selectivity 93551
III-V nitride MQW lasers, mode transform., buffer layer effect 71774
image mode laser, ASE model, video projection display 97671
integrated micromachined tunable laser using polysilicon 3-D mirror 71357
intracavity phase elements for specific laser mode selection 82709
intracavity self-adapted photorefr. Fabry-Perot 128350
Laguerre-Gaussian laser modes, annular profile spatial transform. 82726
Laguerre-Gaussian modes, wavefront sing. 93707
λ/4 phase-shifted circ. grating DBR/DFB lasers, threshold anal. 93606
large aperture ARROW-type VCSEL modal charact., reflector width optimisation 117206
large-area single-mode VCSELs, self-aligned surface relief 128249
LD, fiber Bragg grating, tunable narrow line-width 117380
Littman type tunable diode laser syst., external-cavity *(Korean)* 117316
LW VCSEL technol., telecomms. networks appls. 119763
micro-optic phase/DOE, excimer laser ablation 71385
microchip laser, fiber-coupled diode end-pumped, helical-wave emission dyn. 105224
microdisk lasers and waveguides 116778
microsphere resonators, near-field probe, whispering gallery modes 82574
MODAN DOE design for laser beam charact. real-time anal. 127875
MODAN-type DOE for transversal laser mode selection, commun. appls. 127874
mol. sieve dye microlasers 82510
MQW buried-ridge waveguide LD, optimum design *(Korean)* 117197
MQW laser mode charact. 117238
multilongitudinal mode semicond. lasers, thermal dyn., unified approach 71773
multimode laser cutting, lumped param. model 105635
multimode semicond. lasers, chaotic antiphase dyn., synchronisation 105300
multimode VCSEL modulation charact., very short reach commun. 117365
multimode VCSEL noise perform. 82606
multiple wavelength DFB fiber lasers, comprehensive num. model 71662
multiple wavelength DFB fiber lasers, dyn. anal. 117119
multisection ridge waveguide DFB detuned grating lasers, high-speed opt. sig. proc. 128230
multisection widely-tunable sampled grating reflector laser, dyn. transfer matrix method model 105434
narrow-stripe high-power LD, 980 nm, lateral beam steering 117333
near field data storage micro-aperture SEL, near-field charactn. 117208
nonfeedback nonresonant laser syst. control 128422
nonresonant self-injection seeded gain-switched diode laser, tunable operation 128414
oxide-confined VCSEL device design, bidirectional BPM 128271
pass. FP opt. resonator, TEM_{q00} mode, line shape fn. 82704
pass. phototropic modulator, laser nonstationary procs. meas. 117368
phase locked VCSEL amp. 117366
phase-matched high-order harmonic generation *(Japanese)* 82453
phosphosilicate-core single-mode fibers, act. Raman laser medium 105169
Π/2-phase shifted DFB fiber laser chirping, single mode operation 105177
polariz. effects in lasers, spectrosc. and optoelectronics, conf. , Southampton, UK, (Sept. 2000) 78384
polymer lasers, dispersion cavities with vol. holographic gratings, single-mode operation 93686
polyurethaneacrylate films, dyed, as opt. apodizing diaphragms 117428

laser modes continued
pulsed VCSEL, ultrafast polariz. dyn. and noise meas. 128411
quantum cascade DFB laser, mid-IR continuously tunable single-mode 105363
quantum cascade laser for LWIR emission 93635
reconfigurable fiber-optic-based RF filters, multimode laser current injection 125834
ring laser, polariz.-nonuniform radiation, transverse Hermite-Gaussian modes 128363
ruby lasers, with prismatic reflectors, fund. transverse mode form. 105222
saturable nonlin. bulk medium, multi-component spatial opt. solitons 82958
selectively-oxidized VCSELs, hybrid ion-implanted, high-power single mode operation 117188
self-adapted laser mode filtering photorefr. Fabry-Perot interferometers 127569
self-seeded Fabry-Perot LD, wavelength-tunable chirp-compensated single-mode pulse generation 105427
semicond. lasers, multi-long. mode instabilities, coupled mode model with gain dispersion 71826
semicond. lasers, pseudorandom wavelength hopping, sync. 93613
semicond. VCSEL, periodic struct. form., spatial Fourier modes competition 93622
semicond.-fiber ring laser, up-wavelength conversion, nondegenerate FWM *(Chinese)* 71982
Shack-Hartmann sens. for laser beam M^2 anal. 110023
short external opt. cavity DFB diode laser wavelength tuning 82779
silica fibre Raman laser, P_2O_5- and GeO_2-doped, output charact. 93512
single mode master/slave laser detectors, amplif. regimes 93620
single-mode DFB heterostruct. semicond. laser line shape spectral spread 117236
single-mode dye laser syst., colored noise 117090
single-mode gas laser, asymmetric limit cycle bistability 82941
single-transverse-mode VCSEL under continuous and pulsed operation 105340
solid laser, stable resonator, graded reflectivity output coupler 93688
solid state laser resonator, thermal lens effect, adaptive compensation *(Chinese)* 117320
solid-state laser beam mode control using holographic mirrors 93709
spatial partially coherence, far field charact. *(Chinese)* 71875
sq.-lattice photonic cryst. laser, polariz. mode control 105414
submillimetre laser cavity, transverse laser mode selection 117313
TM/TE/TEM beam mode solns. 128375
transversal self-sustained gas discharge, max. current 80544
transverse mode stabilized large area oxide-confined VCSEL laser, nonlin. distortion reduction 71784
transverse VCSEL laser mode turn-on dyn. 128325
two-mode ring laser with injected sig., dyn. props. 71865
unstable laser modes, edge waves and fractality 128354
unstable plane-parallel resonators, variable-reflectivity multilayer dielec. mirrors 128348
VCSEL, comprehensive num. model, method of lines 82639
VCSEL, elec./thermal/opt.-waveguiding charact. *(Chinese)* 82673
VCSEL, multimode, neutron-induced transverse mode shifts 93687
VCSEL, noise assisted binary inform. transm. 82759
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
VCSEL, polariz. switching from low to HF mode 71907
VCSEL, surface modified, single transverse mode output, optim. 82690
VCSEL, transverse mode, steady current & temp. distrib. anal. *(English)* 82674
VCSEL array, single-mode low-impedance, integrated mode filters 117302
VCSEL array, spatial dyn., num. simul. 105394
VCSEL arrays, photonic lattices, Bloch anal. 117270
VCSEL beam waists, transverse mode splitting, opt. output spectra 71900
VCSEL cavities, aperture radiation scatt. effects on mode struct. 128267
VCSEL cct.-level models, mode overlap, compact representations 93715
VCSEL mode partition noise 117294
VCSEL transverse mode static charact., anal. calc. 71836
VCSELs, guided-mode reson. filters, single-mode operation control 105325
virtual mesa/spoiler mid-IR angled-grating DFB laser fabricated by ion bombard. 71765
vis. semicond. lasers with external light input, chaotic oscill. modes, commun. appls. 105328
wave plates, opt. phase retardation, laser freq. splitting technol. 117584
WDM tunable cost-effective transmitters, modulation index 120178
wide-aperture VCSELs, transverse mode selection, elec. steerable beams 71880
Zeeman multitransverse mode laser, polariz. transverse pattern dyn., vectorial Karhunen-Loeve modes 71885
AlGaAs index-guided VCSEL, transverse mode props. 71839
AlGaAs single-lateral mode LD with window-mirror struct., high-power operation 128226
AlGaAs-based VCSEL, single-mode, long-term spectral stabil. 82652
AlGaInAs-InP high power tapered 1.55 μm DBR lasers 82669
AlGaInN ridge geom. LD, lateral transverse modes anal. 93599
AlGaInP large opt. cavity LD, opt. loss 128276
AlGaInP/GaInP multi-mode self-pulsating MQW LD with epitaxially integrated saturable absorber 71824
AlInAs/GaInAs quantum cascade lasers, far-IR and ultra-high-speed operation 82656
Ar^+ cw ion laser modal content/noise charact., phase-conjug. feedback 93469
ArF excimer lasers, long-pulse (V)UV operation 105126
$BaTiO_3$ photorefr. phase-conjugating mirror, intracavity beam shaping, reference-less holography 128376
CO RT repetitively pulsed overtone laser 105105
CO pulsed first-overtone laser, highly excited vibr. transits., spectrum form. 128038
CO_2 CW laser with phase-stepped mirror, uniform intens. distrib. form. 128116
CO_2 Q switching laser, chaos control with opt. feedback 93466
CO_2 TEA laser, flat-top output mode meas., saturation effects *(Chinese)* 128106
CO_2 TEA laser pulses, time-resolved spatial profile, intracavity apertures influence 82735
CO_2 annular gain region in-phase laser mode selection 105139
CO_2 crossflow indust. laser, press. loss problems 105136
CO_2 high power lasers, slab waveguide resonator, mode selectivity 105115
CO_2 high-power laser, controllable Fabry-Perot interferometer output mirror 82488
CO_2 hybrid laser, dyn. emission, math. modeling 82496
CO_2 indust. high-power laser, radially polarized beam generation 82489
CO_2 laser syst., regeneratively amplified, X-ray preionized 105123
CO_2 laser transient procs., intracavity saturable absorber 82768
CO_2 laser, unstable resonators with helical mirrors 93477
CO_2 multifunctional laser with controllable spectral and temporal charact., indust./scientific appls. 82484
CO_2 multijoule TEA lasers, mag.-spiker sustainer technol., modified overshoot mode 105118

laser modes continued
CO_2 pulsed high-press. laser, injection seeding computer model 105121
CO_2 quasi-isotropic laser, polariz. competition 71644
CO_2 slab-waveguide laser, RF excited, mode control 105140
Cr:LiSrAlF$_6$ electrooptical Q-switched laser, pulse width compression with CS SBS-cell *(Chinese)* 82571
Cr-doped act. material lasers, ouput pulses, self-Q-switching behavior 71730
Er,Yb:glass bulk diode-pumped single-freq. microlasers, charactn. 117162
Er,Yb:glass diode end-pumped monomode lasers, reson. diffr. losses 71748
Er,Yb:glass single-mode laser in NIR, amplit. and freq. stabilization 105259
Er,Yb:glass single-mode waveguide laser array 105236
Er,Yb:phosphate glass Q-switched diode-pumped laser, coherent Doppler lida 117137
Er:YAG 2.94 μm laser, high-repetition-rate, high-av.-power, diode-pumpe 71733
Er:ZBLAN fibre laser, pulsed-pumped, output charact. 71682
Er-doped all-fiber pass. Q-switched low-threshold laser with Co^{2+}:ZnSe saturabl absorber 71685
Er-doped fiber dual-ring laser, polarized mode, chaos control by lin. feedbach method 117126
Er-doped fibre multimode ring laser, coherence, Michelson interferometer obs 93513
Er-doped multiwavelength fiber ring laser with spatial mode beating filte 105189
Er-doped single-mode tunable fiber ring laser operation, widely tunable fibe Bragg grating 128415
Er-doped stable tunable dual-wavelength distributed Raman fiber laser 128173
Er^{3+}-doped ZBLAN microsphere whispering-gallery-mode laser 117135
Er^{3+}-doped fiber, stable single-freq. fiber ring laser *(Chinese)* 117105
F_2 excimer lasers, long-pulse (V)UV operation 105126
Fe^{16+} X-ray lasers, muluple irrad., seq. pumping 128077
GaAs coupled-resonator VCSEL QW DBR laser, mW single-mode powe 117187
GaAs/AlAs single mode quantum cascade lasers, CW operation *(Germa* 128322
GaAs/InAs/AlAs quantum cascade lasers, pulsed mode operation 128318
GaAs-AlGaAs QW VCSEL, shallow implant-apertured, high-speed modulatio 105449
GaInAs/AlGaAs QD edge-emitting laser, highly reflecting Bragg mirrors, outpu charact. 71806
GaInAs/GaAs VCSEL array, single-mode and stable-polariz. operation 10535
GaInAs/GaAs VCSEL, polariz. controlled highly strained, MOCVD 71851
GaInAs/GaAs single mode VCSEL array, GaAs(311)B substr. 71794
GaInAsP distrib.-reflector lasers with vert. aligned grating, RIE 117214
GaInAsP/BCB DBR laser, fab., single-mode operation 93583
GaInAsP/InP DFB/DBR single-mode lasers, multiple reflectors, photonic integrat. 105311
GaInP:Fe regrowth GaAs-AlGaAs BH VCSEL, perform. charact. 82641
GaInP/AlGaInP, strained MQW laser, perp. opt. beam quality study *(Chinese)* 128266
GaInP/AlGaInP strained MQW laser, vert. beam quality 128324
GaInSb-AlGaAsSb single-mode DFB lasers, CW operation 71814
GaInSbAs/GaAlSbAs tunable QW laser, gas anal. 71819
GaN semicond. laser, opt., elec. and thermal anal. 117179
GaN/$Al_xGa_{1-x}N$ buried layer QW high-power LD 71811
HF chem. laser, open surface discharge opt. pumping, output charact. 128118
He-Cd^+ hollow cathode lasers, single-mode operation, linewidth studies 105096
He-Ne double-freq. laser, refl. radiation injection, detect. limit 117066
He-Ne lasers, amplif. influence factor, output power 128105
Hg CW at. laser, microwave discharge pumped, output charact. *(Chinese)* 71645
InAlAs/InGaAs/InP mid-IR quantum cascade lasers, refr. index dispersion effect on perform. 105294
InAlGaAs QW laser, low threshold current dens. design, k.p method 117278
InAs 1.3-μm QD high temp. ridge waveguide lasers 93652
InAs self-assembled quantum-dash lasers, RT operation 93653
InAs/GaAs self-organized QD laser, intens. noise 71848
InAs/GaInAs QD DFB lasers, singlemode operation 71790
InGaAs VCSELs, singlemode output power enhancement, reduced spatial hole burning 71769
InGaAs/GaAs QW lasers, fab. & perform. 117277
InGaAs/GaAs single-mode ridge waveguide laser, external cavity, spectral narrowing 71823
InGaAs/GaAs single-mode ridge waveguide lasers with aperiodic Bragg-grating fibre, near-transform-limited picosecond pulses 71822
InGaAs/GaAs/AlGaAs triple-QW GRINSCH laser, sol-gel fab., output charact. 93614
InGaAs/InGaAsP microlasers, equilateral triangle resonator, rate eqn. anal. 117260
InGaAs/InGaAsP second-order DFB/DBR laser, surface-emitting single-lobe operation 82627
InGaAs-AlGaAs SQW GRINSCH ridge waveguide laser, high-power pump operation 105316
InGaAs-InGaAsP MQW microdisk lasers, threshold pump power *(Chinese)* 128321
InGaAsN VCSELs, singlemode operation, high bit rate data transm. 71789
InGaAsP MQW lasers, 1.5 μm, heterobarrier leakage effect 117204
InGaAsP/AlGaAs LW fused air-gap VCSEL, charact. 82713
InGaAsP/InP laterally coupled ridge waveguide DFB lasers, chem. sens. appls. 71767
InGaAsP/InGaAs/InP multiquantum well high power broadband singlelobe superluminescent diode 82405
InGaAsP/InP-GaAs/AlAs DBRs with BH VCSELs, output charact. 105336
InGaAsP-InP wide-range-tunable laterally coupled DFB lasers 128311
InGaN lasers, unstable resonator, fundamental mode operation 93600
InGaN ridge-type MQW LD, selective area re-growth 128251
InP based electroabsorption-modulated tunable DBR laser transmitter, long-haul commun. appls. 131371
InP lasers, nanoscale patterning, FIB enhanced etching 128305
InP monolithic VCSEL with air-gap Bragg reflectors, room-temp. operation 82599
InP/InGaAsP high-power lasers, output charact., opt. commun. appls. 105313
InP-InGaAsP MQW DBR vert. cavity SOAs 105319
InP-based VCSELs for 1.55 μm wavelength range 117212
$LiNbO_3$ periodically poled pulsed OPO, tunable single-mode operation 128490
$LiNdP_4O_{12}$ LD-pumped microchip laser, self-induced pulsations 71894
NH_3 two-long.-mode superradiant THz laser, Raman effect 82457
NH_3 two-longit. mode opt. pumped submm-wave laser, energy exchange proc. 71642
Nd laser, diode-pumped intracavity freq. doubled, param. optim. 93802
Nd:$Gd_3Ga_5O_{12}$ laser, pass. Q switching, self-phase conjug. using LiF:F_2^- 117154

r modes continued
Nd:$LiNbO_3$ annealed proton-exchanged channel waveguide lasers 128198
Nd:YAG LD side-pumped laser, versatile compact TEM_{00}-mode resonator 71864
Nd:YAG LD-pumped laser, freq.-mode struct. anal., tuning 93552
Nd:YAG dual-freq. laser with quartz birefr. Fabry-Perot etalon *(Chinese)* 71742
Nd:YAG laser Laguerre-Gaussian modes, Wigner distrib. fn. 93700
Nd:YAG laser, diode-end-pumped, dyn. procedure anal. 117160
Nd:YAG laser, flash-lamp-pumped, dual-telescopic optics config. 105256
Nd:YAG laser mode shaping DOE fab. 82727
Nd:YAG laser tilt locking 82787
Nd:YAG lasers, diode side-pumped pulsed, output charact. 128195
Nd:YAG microchip solid-state laser array, synchronized chaotic oscill., Talbot mirror 128204
Nd:YAG pulsed laser, stable Kerr-lens mode-locking operation *(Chinese)* 105238
Nd:YAG pulsed laser with SBS-mirror, large vol. laser mode, num. simul. 93566
Nd:YAG regenerative amp., LDA pumped, single long. mode laser pulse *(Chinese)* 105221
Nd:YAG rod laser amp., LD-pumped, CW TEM_{00} mode 1064 nm beam generation 128212
Nd:YAG single-mode diode-pumped laser, freq. scanning regimes 117155
Nd:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Nd:YAG slab laser, pass. Q-switched, output charact. 71725
Nd:$YAG_{0.18}YSAG_{0.82}$ laser, compositional tuning, Q-switched operation 105246
Nd:$YAlO_3$ high-brightness laser systs., fiber phase conjug. 71720
Nd:$YAlO_3$ high-power CW diode-pumped laser 82583
Nd:YVO_4 CW grazing-incidence laser, 22.5 W output power, 64% conversion efficiency 117132
Nd:YVO_4 CW laser, LD pumped, LiB_3O_5 intracavity freq. doubling *(Chinese)* 71727
Nd:YVO_4 LD end-pumped laser, thermal lens meas. *(Chinese)* 128213
Nd:YVO_4 LD-pumped laser, freq.-mode struct. anal., tuning 93552
Nd:YVO_4 coupled-cavity microchip laser 93561
Nd:YVO_4 diode-pumped laser Q-switching, GaAs nonlin. output coupler 82780
Nd:YVO_4 fiber-coupled LD end-pumped laser, thermal effects *(Chinese)* 93534
Nd:YVO_4 laser, LD end-pumped, beam quality factor meas., slit-scanning method 87000
Nd:YVO_4 microchip laser, VCSEL pumped, opt. charact. 117133
Nd:YVO_4 microchip laser, double-end-pumped, Laguerre-Gaussian modes 93537
Nd:YVO_4 ring lasers, LD pumped, $KTiOPO_4$ intracavity doubling, output charact. *(Chinese)* 71745
Nd:YVO_4 rods dual-config. resonator, unidirectional operation 82708
Nd:YVO_4 single-freq. LD-pumped ring lasers, freq. tuning charact. *(Chinese)* 71866
Nd:YVO_4 single-freq. laser with mode cleaner, intens. noise reduction *(Chinese)* 71702
Nd:YVO_4 single-mode microchip laser with feedback, phase-noise-driven instabil. 105248
Nd:phosphate glass diode-pumped regenerative amp., single-mode laser pulses 71731
Nd^{3+}:$KGd(WO_4)_2$ laser characts., ion conc. effect 93570
Nd^{3+}:YAG monomode lasers with Cr^{4+} saturable absorber, polaris. dyn. 117134
Nd-doped double-clad fiber amps. for coherent space commun. systs. 71679
SiO_2 fused microsphere, whispering-gallery reson., freq.-scanning laser locking 82783
Ti:Al_2O_3 ring laser, freq. stabilization/tuning by $LiNbO_3$ FP etalon 93742
Ti:sapphire high-power regenerative laser amp. 71718
Tm,Ho:YAG diode-pumped 2 μm opt. oscillator, spectrosc. & freq. metrol. 117159
Tm,Ho:YAG single-mode laser in NIR, amplit. and freq. stabilization 105259
Tm:YAG diode-pumped 2 μm opt. oscillator, spectrosc. & freq. metrol. 117159
Tm-doped aluminosilicate double-clad fibre laser 71665
$YCa_4O(BO_3)_3$:Yb^{3+}, diode pumping self-freq. doubled lasers, wavelength tunability *(Korean)* 82544
Yb,Er:glass laser, diode side-pumped pulsed, output charact. 128195
Yb^{3+}:YAG Q-switched TEM_{00}-mode diode-pumped laser, extended tunability 128418
Yb/Al-doped germanosilicate planar waveguide lasers, internal UV-written Bragg gratings 117173
Yb-doped double-clad fiber, ASE 105168
Yb-doped double-clad fibre laser, single-transverse-mode output 82519

er noise
act. mode-locked laser noise dyn. 82786
ASE dispersion compensating fibers, fiber Raman amplif. 128150
ASE noise-induced soliton phase jitter, PSK feasibility 96653
broadband Raman fibre amps., fund. noise limits 128172
CDMA multiwavelength opt. orthogonal syst., perform. and noise 120226
coherent opt. PSK systs., perform. degrad., nonnegligible loop delay time influence 131407
commun. networks, interf. suppression 120179
diode laser, noise effects, filtered external opt. feedback 105368
diode laser, opt. feedback 117181
diode laser arrays, spatial instabilities, wavelet sig. proc. 128364
direct-detect. mid-IR random-modulation CW lidar SNR 131678
directly modulated 1550 nm AM-VSB CATV systs., long-dist. transm. 86039
dispersion supported transm. syst. perform., fiber nonlin., laser phase noise 96650
dispersion-managed fiber ring laser, act. mode-locked, jitter, stabil. anal. 82538
distributed opt. fiber Raman amps., pump depletion induced noise/crosstalk 82525
distributed Raman amplif., fiber nonlin., noise fig. 128481
distributed Raman fibre amps., loopback topol. 128180
doped fiber amps., noise fig. and gain coeff. for different host materials 128134
double orthogonal pumped semicond.-fiber ring laser, FWM based opt. wavelength conversion 71990
EDFA, non-white photodetection noise at output, ASE stat. props. 93528
EDFA using self-generated seed sig., L-band perform. 96707
EDFA-Brillouin hybrid amp., polariz.-maintaining, high-power low-noise source 105194
external cavity multiple reflecting semicond. laser dyn., rigorous simul. 82685
external cavity semicond. lasers, LF fluct., simple dyn. model 117257
Fabry-Perot laser mode partition noise reduction, SOA as high-pass filter 128241
FEL, num. simul., nonlin. coupled wave eqns. 117304
FEL oscillator, sustained saturation 105373
fiber amps., amplified sig. linewidth, phase noise effects 71676
fiber Raman amps., double Rayleigh scatt. noise *(Chinese)* 105204
fibre Raman amp., generalised atten. coeffs., simul. model 93519

laser noise continued
fibre ring laser, regenerative mode-locking, pulse freq. doubling 71897
fibre ring lasers, rational harmonically modelocked, higher-order opt. pulse generation 93523
focused-gain lasers, reson. excess quantum noise 116758
fullerene-containing media, laser radiation NLO limiting 128463
FWM wavelength converting SOAs 93759
gain-saturated SOA intens. modulation/noise suppression 128285
glass Nd-doped laser, LF dyn. 105229
high-power QW lasers, low-freq. elec. noise, device quality 117247
high-power tapered semicon. laser amps., light amplif./ASE, spatio-temporal dyn. 117263
installed fiber syst. distributed Raman amplif., OTDR data perform. prediction method 131603
L-band EDFA employing 1550 nm band ring laser, gain improvement 71699
LEAF fiber Raman polariz. depend. gain 128148
LISA grav. wave background anal. using time-delay interferometry 132192
long haul WDM transm. expts. using broadband Raman amplif./highly precise gain equalization 96864
low-noise opt. amps., polariton transit., fiber transm. systs. 85992
lumped Raman Ge-doped fibre amps. 128155
mobile on-sea terminals, medium power LD commun. 96878
mode-locked microchip lasers for MM-wave generation for opt. fed wireless systs. 96704
mode-locked semicond. lasers, phase noise, carrier dyn. contrib. 128378
multi-wavelength fiber ring laser, tunable act. mode locking 71684
multichannel coherent CPFSK syst. using opt. amp., sensitivity penalty 109069
multiple wavelength DFB fiber lasers, dyn. anal. 117119
multiwavelength backward-pumped fiber Raman amp., model/optimal design 105197
opt. amp. noise fig. defn., IEEE defn. 128144
oxide-confined VCSELs, spectral linewidth model 93647
pass. Q-switched laser, two-mirror reentrant ring cavity 82553
phase locked VCSEL amp. 117366
power-recycled interferometric gravit.-wave antenna control, Michelson interferometers 128632
pulsed VCSEL, ultrafast polariz. dyn. and noise meas. 128411
QW laser, grating feedback locked, polariz.-depend. photon-no. squeezing 93585
QW semicond. laser, modulation response, noise, cct. simul. *(Chinese)* 93630
radiation noisy sig. proc. by FWM 128440
Raman amplified opt. fibre links 128145
Raman fiber amps., pump to sig. RIN transfer 105180
Raman laser amp. test methods, noise mechanisms 85974
SEL, binary inform., noise-assisted transm. 93633
semicond. amp. tapered mode-locked integrated grating cpd. cavity laser design 71820
semicond. laser, relative intens. noise reduction, modulation response using fiber grating 128388
semicond. lasers, pulsed subharmonic opt. injection, sig. generation at MM-wave repetition rates 105335
semicond. lasers with optoelectronic feedback, synchroniz./chaotic waveforms 117261
SHG reson. opt. cavity, phase noise transfer, freq. ref. stabil. 93825
short external opt. cavity DFB diode laser wavelength tuning 82779
single-mode DFB heterostruct. semicond. laser line shape spectral spread 117236
single-mode dye laser syst., colored noise 117090
single-mode laser, phase locking, mean first-passage time 82773
SOA, FWM, polariz.-insensitive spectral inversion 71855
SOA, in-phase wavelength conversion in crit. lasing state *(Chinese)* 105521
SOA, perform. depend. on pump and sig. power of wavelength converter based on FWM 105282
SOA & SOA-based switch matrix, spectral gain/noise fig. 93640
SOA in-line amp. for WDM syst., pattern effect, probab. model 105303
SOA power equalization device, OXC nodes, BER perform. *(Chinese)* 74928
SQW LD, perform. simul. 117273
storage ring-FEL, sawtooth instabil. suppression 128340
super-Gaussian laser beam, CCD based charactn. 117345
transverse mode stabilized large area oxide-confined VCSEL laser, nonlin. distortion reduction 71784
TW nonlin. device, phase sensitive parametric amplif. 82864
VCSEL, (311)B substr., polariz. control, transm. charact. 71795
VCSEL, noise assisted binary inform. transm. 82759
VCSEL, opt. pumped 1.3 μm, real syst. appl., reliab., mfg. 82687
VCSEL lineshape & freq. noise spectrum 71835
VCSEL mode partition noise 117294
AlGaAs/GaAs high-power QW rem. jn. laser, elec. noise charact. 82662
Ar^+ cw ion laser modal content/noise charact., phase-conjug. feedback 93469
Er,Yb:glass single-mode waveguide laser array 105236
Er,Yb-doped double-cladding fibre amps. 117115
Er-doped WDM fibre amp. cascades, static/dyn. OSNR equalisation 96800
Er-doped Yb-sensitized fiber amps., noise fig./gain meas. 128138
Er-doped all-opt. gain-clamped fiber-ring laser amp., laser filtering tech. 93529
Er-doped broadband fibre amp., gain flattening filters, transm. fn. design *(Chinese)* 71658
Er-doped fiber Bragg grating lasers, freq./intens. noise 117096
Er-doped fiber amp., RIN spectral dens., transfer std. 71696
Er-doped fiber amp. noise fig. reduction 96680
Er-doped fiber amp. noise fig. reduction by loop mirror filter 117116
Er-doped fiber amp., optimum noise perform. 71664
Er-doped fiber amp. with inline fiber grating laser, L-band operation 71675
Er-doped fiber dual-stage opt. amps., gain-locking method, WDM systs. appls. 93506
Er-doped fiber laser, act. mode locking, pulse noise meas. 105209
Er-doped fiber laser, rational harmonic act.-pass. mode-locking *(Chinese)* 93497
Er-doped fiber laser, ring cavity, SNR, WDM syst. 117110
Er-doped fiber laser, stabil., pumping perturb. *(Chinese)* 105185
Er-doped fiber laser with cavity SOA, rational harmonic mode-locking, stable pulse generation 105166
Er-doped fiber ring laser, broad-band tunability 71672
Er-doped fibre amp. multichannel gain from single laser meas. 131387
Er-doped fibre amps., self-generated sig.-seeding tech., LW band performs. 105172
Er-doped hybrid Raman/fiber amps. optim. 128176
Er-doped ultra-wide band multi-component silicate fibre amps. 128160
Er^{3+}-doped LW-band fiber amp., ring-laser seed sig. generator 71678
Er^{3+}-doped fibre amp. temp. charact., gain control compensation 128152
Er^{3+}-doped tellurite glass fiber amps., broadband and WDM appls. *(Japanese)* 128140
n-GaAs-AlAs DBR laser mirrors, elec. noise characterisation 71799

laser noise continued
GaInAs/GaAs single mode VCSEL array, GaAs(311)B substr. 71794
He-Ne/$^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
Ho:ZBLAN glass fiber laser, LD-pumped, power conversion efficiency 93527
InAs/GaAs self-organized QD laser, intens. noise 71848
InGaAsP MQW lasers, elec./opt. LF noise meas. 71803
InGaAsP MQW lasers, opt. and elec. LF noise correl. 71858
InGaAsP modulation doped MQW laser emitting at 1.55 μm 82644
InGaAsP/InP ultrashort lasers with deeply etched Bragg mirrors 82622
InGaN narrow stripe self-pulsating LDs, optim. for DVD 71844
InP/InGaAsP high-power lasers, output charact., opt. commun. appls. 105313
$LiNdP_4O_{12}$ LD-pumped microchip laser, self-induced pulsations 71894
Nd:YAG lasers, diode side-pumped pulsed, output charact. 128195
Nd:YVO_4 LD-pumped single-freq. ring lasers, intens. noise suppression *(Chinese)* 128206
Nd:YVO_4 single-freq. laser with mode cleaner, intens. noise reduction *(Chinese)* 71702
Nd:YVO_4 single-mode microchip laser with feedback, phase-noise-driven instabil. 105248
Nd:YVO_4-KTP LD-pumped single-freq. ring green laser 71752
Nd-doped double-clad fiber amps. for coherent space commun. systs. 71679
Pr,Yb:ZBLAN vis. upconversion fiber lasers, noise suppression 82534
Ti:sapphire mode-locked lasers, carrier-envelope phase stabilization using microstruct. fiber 128196
Ti:sapphire pass. mode-locked laser, timing jitter meas. and control *(Chinese)* 128207
Tm,Ho:YAG diode-pumped laser, 2 μm, amplit. stabilisation 82593
Tm-doped fiber amp. gain band mgt., dual-wavelength pumping schemes 93530
Tm-doped fiber amp., gain-shifted, transm. capacity, WDM appls. *(Japanese)* 128141
Yb,Er:glass laser, diode side-pumped pulsed, output charact. 128195
Yb-doped fiber amps., gain, saturation and noise charact. *(Chinese)* 71657
Yb-doped fiber amps., optimised design, gain and noise perform. *(Chinese)* 71693
Yb-doped large-mode-area double-clad fiber power amp., single-freq. radiation 117107

laser phase locking *see laser mode locking*

laser phototherapy *see laser applications in medicine; radiation therapy*

laser power measurement *see laser variables measurement; power measurement*

laser printers
blue LD, high resoln. printing appl. 93601
diamond-like C coating DC-RPECVD on OPC drum, DC power depend. anal., laser printer appls. 68225
electronic products, remanufacturer waste streams anal., recycling 100715
fiber arrayed multiple beam scanning optics, laser printer 127876
high-dens. LD arrays, multiple beam laser scanning/printing 117551

laser pulse shaping *see optical pulse shaping*

laser pulse variables measurement *see laser beams; laser variables measurement; pulse measurement*

laser Q-switching *see Q-switching*

laser radar *see optical radar*

laser ranging
see also optical radar
3-wheeled robot vehicle, camera/laser/encoder data fusion 120888
3D laser machining, teach-and-play-back prog. based on laser ranging *(Chinese)* 105650
3D laser tracking syst. by triangulation/photogrammetry techs. 93912
3D vision, smart VLSI opto-sens., laser spot posn. meas. 109707
3D vision syst., explosives disposal & building inspection appl. 86630
act. omni-directional range sens. for 2D depth data meas., mobile robot appl. 75870
aerial laser rangefinder, counter-rot. opt. wedge appl. 122758
airborne laser rangefinder syst. perform., simul. & optimal design 122757
airborne scanning laser ranging-imager sens. 111372
APD detectors, optimal control, DSP appl. 117594
archaeological excavation, miniaturised laser range-finder 88196
color scannerless range imaging syst. 86242
combine harvester guidance, fuzzy inform. merging *(French)* 75245
compact and portable 3D camera for space appls. 83066
Counter Sniper, small projectile and gunfire localization syst. 107412
cylindrical piece meas., laser telemetry, forest caliper appl. 109993
Cyrax 2400 high-resoln. 3D laser scanner metric perform. 93944
data fusion, robot internal meas. unit, laser range finder *(Chinese)* 73638
dense range image smoothing using adaptive regularization 96910
double freq. laser interferometer, absol. dist. meas., dyn. servo-tracking syst. *(Chinese)* 109996
dual-color laser satellite ranging, refr. limitations 128630
feedback interferometry & chirp-control 117575
fibre optic sens., laser dyn.-fixed dist. meas. 75582
FMCW laser rangefinder, delay line tech., APD detect. 117576
high-power solid-state laser, LD pumped, output charact. and appls. 71721
high-precision dist. meas. by interferometer-less coherent opt. range finder 75867
highly improved range sens., spatial coherence reduction 117581
indoor mobile robot, behavior-based navig. 121224
indoor mobile robots, exploration and navig. 109971
ISS transfer vehicle guidance, RendezVous sens. laser rangefinder 98925
ISS transfer vehicles automatic guidance, RendezVous sens. 98924
ISS transfer vehicles automatic guidance, RendezVous sens. 98923
map-based mobile robot dyn. localization, optimal pose estimator, EKF comparison 97834
mobile robots, global nearness diag. navig. 97822
Modular Miniature Imaging Sensor, law enforcement appls. 111632
modular mission config. threat detect. sens. suite demonstrator 99128
moving objs., multiple, tracking with laser range finder 97000
multi-slit rangefinder develop. *(Japanese)* 84090
multiple target recogn. using laser radar range data, jump-diffusion algm. 118696
NCST opt. research facility to support space-related activities 120636
opt. vehicle classifiable sens. devel. for ITS *(Japanese)* 97397
pass. ranging IRST systs. *(Chinese)* 117583
phase-shift meas., laser range-finding 109995
pulsed laser radar high resoln. dist. meas., DSP, MLP use 120461
pulsed TOF laser radar, wide dyn. range receiver channel 109298
pulses differentiating based on wavelets 117593
range-imaging vehicle sens. devel., electronic toll collection appls *(Japanese)* 97396

laser ranging continued
rangefinder/digital camera syst., real-world scene reconstruction 120900
real-world scenes capturing/proc./rendering syst. 97164
robotic soccer, self-localization using laser range finders 109998
satellite laser ranging, laser pulse transform. 117578
satellite laser ranging theodolite, pointing precision calib. by observing sta *(Chinese)* 98902
satellite orbit determ. by combination of two kinds of meas. *(Chinese)* 9393
scanner designed for min. calib. complexity 86243
sea-water target detect. by modulated LIDAR 76921
terrain scanning robot, map building, image registration method 109668
time-correl. single photon counting, 3D imaging 106743
TOF depth profiling laser syst., ps resoln. time correl. single-photon counti 75887
tracking syst., low noise electronic cct. design *(Chinese)* 96996
wheeled robot, driving amongst obstacles, multi-sens.-based control strategi 75615
CO_2 rapidly tunable 2.5 kW laser, lidar/pollution monitoring appls. 76933
I act. quantum filter for image intensification 116886
InSb FPA based mil. miniature modular integrated sight 77102
Nd:YAG laser, single-freq. diode pumped, ranging/velocimetry 93939
YAG:Er^{3+}(Yb^{3+}) cryst., eye-safe laser syst., growth & opt. homogeneity 9354

laser reliability
980 nm pump LD module, undersea cable systs. 85991
1550-nm spot-size converter integrated DFB lasers, low-cost single-mode op sources appl. 109067
cascaded microchannel cooling of high power LD bars 117328
catastrophic opt. facet damage anal. in LD by thermoreflectance microscop 128257
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
high reliab. high power LD modules, EDFA pumping 131385
materials-proc. appls., real-time beam anal. 93929
multicore fiber lasers, all-fiber phase locking setup 82775
nitride VCSELs, extremely high-reflective low-loss resonator mirrors 93607
sampled grating DBR tunable laser 117399
VCSEL, opt. pumped 1.3 μm, real syst. appl., reliab., mfg. 82687
CO_2 compact reliable multi-channel lasers, radiation spectrum investigs. 8246
CO_2 laser, material surface proc., reliab., corros. resist. enhancement 83052
Cu high-power vapour lasers, solid state power supplies 105097
Er-doped fibre amp., opt. WDM node, power-managed control channel 13152
GaAs LD, opt. absorpt., thermoreflectance meas. 82607
GaAsP/AlGaAs LD bars, polaris.-resolved EL, mounting stress 71846
InGaAs MQW high-power VCSEL arrays, improved output perform. 128229
InGaAs SQW 940-nm diode lasers, high reliab. 128222
InGaAs broad area lasers, high power/reliab. operation 105315
InGaAs/GaAs strained layer SCH SQW laser, output charact. 71805
InGaAsP/InGaP/AlGaAs SQW diode lasers with tensile-strained barriers, 2 W reliable operation 128316
InGaAsP/InP BH LD, HBr etching 117225
Nd:YAG LD side-pumped laser, versatile compact TEM_{00}-mode resonator 71864

laser scanners *see optical scanners*

laser stability
see also laser frequency stability
14-pin butterfly packaged fiber-grating stabilized lasers 105175
act. laser resonators, intracavity flexible mirror, output charact. 82707
act. mode-locked laser noise dyn. 82786
additive-pulse mode-locked fiber laser with fiber-grating, oscill. conditions *(Chinese)* 105181
annular lasers, unstable resonators, beam quality study 93703
Beijing Free Electron Laser, saturation output, RF phase ripple, pulse form ne *(Chinese)* 105052
Brillouin fiber ring laser, soliton compression and locking 128136
cascaded Raman fibre laser for stable dual-wavelength operation 82511
chaotically pulsing semicond. lasers, stable route-tracking sync. 131432
chirped-pulse parametric amplif., pump-pulse/sig.-pulse synchronisation *(Chinese)* 105440
compact tunable narrow-band LD, external abnormal-refl. mirror 128413
CW single-freq. semicond. laser with Bragg fibre grating 128303
diode laser, opt. feedback 117181
diode laser arrays, spatial instabilities, wavelet sig. proc. 128364
dipyrromethene.BF_2 complexes, efficient and stable dye laser action 93490
directly modulated high-speed LW LD, stabil. and nonlin. dyn. 71917
dispersion-managed fiber ring laser, act. mode-locked, jitter, stabil. anal. 82538
double-way amplified laser beam, SBS phase conjug. mirror *(Chinese)* 128373
etched nano-hole oxide confined SEL, high-order mode selection 105307
external feedback LD stabil. prediction by root-locus tech. 71829
external-cavity semicond. laser stabil., strong-feedback regime 93629
fibre ring laser, modelocking stabil. by pulse bunching 82512
flattened Gaussian beam generation by saturable absorbers 117387
focused-gain lasers, reson. excess quantum noise 116758
grating-based surface-emitting tapered unstable resonator laser simul. 128272
high power single-mode diode DFB laser with curved-grooves diffr. grating 71801
high-power excimer laser, simul., design and charactn. 128052
hyperb. unstable-resonator semicond. laser, design optim. 93648
incoherent opt. feedback semicond. laser dyn. 93689
Kerr-lens mode-locked solid-state lasers, coherent semicond. absorber, ultra-short pulse generation 82578
LW QW lasers, phase-conjug. feedback 71939
multi-sect. laser in MM-wave fibre-wireless uplink, dyn. range charactn. 74935
multicore fiber lasers, all-fiber phase locking setup 82775
multiple wavelength DFB fiber lasers, dyn. anal. 117119
pass. mode-locked fiber soliton ring laser, subsideband generation 128393
phase-locked VCSEL laser array polariz. stabil. 128412
Π/2-phase shifted DFB fiber laser chirping, single mode operation 105177
Raman act. resonator, pump laser phase/freq. stabilization 93487
resonator, auto-stabil. adjustment syst. *(Chinese)* 105393
RF-linac FEL, efficiency optimiz./reduced energy spread by inverse tapering 93679
semicond. lasers, multi-long. mode instabilities, coupled mode model with gain dispersion 71826
semicond. lasers, transparent current stabil., accelerated aging tests 82605
single-mode gas laser, asymmetric limit cycle bistability 82941
SOA based DWDM multiwavelength light source, stabil. *(Chinese)* 109215
solid state laser nonlin. dyn., switching regimes, saturable absorber 105425
spatial laser patterns, thermal nonlin. 117404
storage ring-FEL, sawtooth instabil. suppression 128340
three-element cavity Kerr mode-locked laser resonator *(Chinese)* 71862

stability continued
nsverse mode stabilized large area oxide-confined VCSEL laser, nonlin. distor-ion reduction 71784
nneling-injection QD laser, ultrahigh temp. stabil. 82636
o-rod symmetric dyn. stable laser resonators in solid-state laser cutting syst. 17568
stable plane-parallel resonators, variable-reflectivity multilayer dielec. mirrors 28348
CSEL, (311)B substr., polariz. control, transm. charact. 71795
CSEL arrays, multistable emission of vortex beams 93848
DM tunable cost-effective transmitters, modulation index 120178
GaAs broad area laser emission, struct. delayed opt. feedback 82647
GaAs single-lateral mode LD with window-mirror struct., high-power opera-ion 128226
GaAs-based VCSEL, single-mode, long-term spectral stabil. 82652
GaInP lasers emitting at 670 nm, cladding material blocklayers 93667
r+ ion laser cavity stabil., thermoelastic stabil. 82712
O_2 RF-excited waveguide lasers, spectral comp. 82467
O_2 TEA laser, SFUR extension to ring cavity 128121
O_2 act. medium CW fast-axial-flow laser, small-scale opt. nonuniformities 82469
O_2 annular gain region in-phase laser mode selection 105139
O_2 crossflow indust. laser, press. loss problems 105136
O_2 high-power CW indust. laser, beam stabil. 93475
O_2 high-power laser, controllable Fabry-Perot interferometer output mirror 82488
O_2 high-power laser with variable reflectivity output mirrors unstable resonator, beam QC 82487
O_2 indust. CW laser beam, spatial and temporal charact. 105141
O_2 large aperture high-press. TE laser amp. gain 93478
O_2 laser, gas dens. small-scale inhomogeneities, glow discharge thermal instabil. 82461
O_2 laser, slab RF-excited, unstable-waveguide resonator, output charact. 82473
O_2 laser unstable resonator mirrors, phase front compensation 128349
O_2 laser, unstable resonators with helical mirrors 93477
O_2 lasers, waveguide-unstable cavities, laser beam profiling 82470
O_2 sealed-off slab lasers, all-solid-state generator excitation, output charact. 105109
O_2 slab-type laser, short pulse prod. *(Japanese)* 82743
O_2 slab-waveguide laser, RF excited, mode control 105140
O_2 slab-waveguide laser, unstable resonator WOLS signature 93685
O_2 variable reflectivity grating slab laser resonators 105387
r^{4+}:YAG microchip laser, high Q-factor 82595
r^{4+}:YAG pass. Q-switched laser, antiresonant ring fn. *(Chinese)* 105255
u high-magnification unstable laser resonator, flattened Gaussian beam concept 82732
u sealed-off vap. laser radiation, spatial/temporal charact. 128046
uBr high-PRF laser 105098
F chem. laser, pulse-periodic operation 105087
r fiber laser, stabilized rationally mode-locked, pulse generation, BER 105190
r-doped fiber dual-stage opt. amps., gain-locking method, WDM systs. appls. 93506
r-doped fiber laser, stabil., pumping perturb. *(Chinese)* 105185
r-doped fiber laser with cavity SOA, rational harmonic mode-locking, stable pulse generation 105166
r-doped fiber ring laser, broad-band tunability 71672
r-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
r-doped stable tunable dual-wavelength distributed Raman fiber laser 128173
aAs-based QW and QD lasers, 1.3 μm, comparative anal. 71857
aInAs/GaAs VCSEL array, single-mode and stable-polariz. operation 105357
aInAs/GaAs single mode VCSEL array, GaAs(311)B substr. 71794
aInAs-GaAs highly strained QW VCSEL laser, stable polariz. operation 128233
F CW chem. laser with three-jet nozzle array, spatial-energy and spectral charact. 128113
F chain/nonchain phototriggered lasers, perform. study 105086
F nonchain chem. laser, energy, temporal and spectral charact. 105084
e-Ne laser, laser fund. investig. 78499
high-energy photolytically pumped laser, injection seeding 128041
nGaN lasers, unstable resonator, fundamental mode operation 93600
nP DFB laser, wavelength stabil., non-hermetic package 117209
nP based electroabsorption-modulated tunable DBR laser transmitter, long-haul commun. appls. 131371
nP lasers, nanoscale patterning, FIB enhanced etching 128305
K atoms, two-photon stimulated emission proc., laser polariz. instabilities 71637
rF large-scale e-beam-pumped laser output window material chem. resist. 71870
$LiNdP_4O_{12}$ LD-pumped microchip laser, self-induced pulsations 71894
N laser arrays, phase locking, output charact. 128048
Nd:$LiYF_4$ pass. mode-locked lasers, Q-switch instabilities 71911
Nd:YAG LD side-pumped laser, versatile compact TEM_{00}-mode resonator 71864
Nd:YAG LD-pumped microchip laser instabil. 117136
Nd:YAG Q-switched high-power laser, variable reflectivity mirrors 117168
Nd:YAG laser, diode-end-pumped, dyn. procedure anal. 117160
Nd:YAG laser with pass. neg. feedback, compressed picosecond pulse generation 117358
Nd:YAG lasers, diode side-pumped pulsed, output charact. 128195
Nd:YAG microchip laser, high Q-factor 82595
Nd:YAG microchip lasers, stable plano-spherical microcavity 82596
Nd:YAG pulsed laser, stable Kerr-lens mode-locking operation *(Chinese)* 105238
Nd:YAG regenerative amp., LDA pumped, single long. mode laser pulse *(Chinese)* 105221
Nd:YAG ultra-stable solid-state laser, space appls. 71735
Nd:$YAlO_3$ high-power CW diode-pumped laser 82583
Nd:YVO_4 LD end-pumped laser, thermal lens meas. *(Chinese)* 128213
Nd:YVO_4 single-mode microchip laser with feedback, phase-noise-driven instabil. 105248
Nd^{3+}:$(CaLi)_3Nb_{1.68}Ga_{3.2}O_{12}$ garnets, act. media for diode-pumped lasers, energy and spectral params. 128205
Nd^{3+}:$Ca_3Nb_{1.68}Ga_{3.2}O_{12}$ garnets, act. media for diode-pumped lasers, energy and spectral params. 128205
Nd^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
Nd^{3+}:YAG series connected rod lasers *(Chinese)* 93535
O_2-I chem. laser, multi-guideplate singlet oxygen generator 105071
O_2-I chem. laser, virtual confocal unstable resonator 105388
O_2-I chem. laser with hybrid confocal-type resonator, output charact. 105142
O_2-I chem. laser with unstable resonator, UR90 outputting annular beam 105067

laser stability continued
Si micromachined membrane deformable mirror, intracavity Nd:YAG laser radiation control 82191
Ti:Al_2O_3 femtosecond laser with multiple-pass cavity, stabil. anal. *(Chinese)* 105241
Ti:Al_2O_3 laser with tunable varied reflectivity mirror unstable resonator, beam quality *(Chinese)* 105220
Ti:sapphire laser, repetition-rate Kerr-lens mode-locked, high-energy pulse generation 71709
Ti:sapphire lasers, Kerr lens mode-locked, bistability study 82579
Ti:sapphire three-wavelength femtosecond laser, multi-excited photosystem II 82781
Ti^{3+}:Al_2O_3 ring laser, spectral filter counterpropagating wave coupling 93567
Tm,Ho:YAG diode-pumped laser, 2 μm, amplit. stabilisation 82593
Tm^{3+},Ho^{3+}-doped ZBLAN glass fibre laser, output charact. 82520
Tm^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
Yb,Er:glass laser, diode side-pumped pulsed, output charact. 128195
Yb^{3+}:YAG, high-power planar dielec. waveguide lasers, output charact. 105261
Yb-doped fiber diode-pumped chirped-pulse amplif. systs., high-energy fs pulse generation 82770

laser surgery *see laser applications in medicine; surgery*

laser theory
see also laser transitions; population inversion; stimulated emission
1.55-μm DFB LD, nonlin./chaotic behavior 117407
1.5-μm three-sect. DBR lasers, transient current control, tuning time reduction 105437
2D photonic bandgap defect lasers, single-mode oscill. 128270
act. mode-locked fiber lasers, extended ABCD model, expt. validation 71680
act. mode-locked laser noise dyn. 82786
act.-cavity VCSEL eigenmodes, simple analytic representation 105390
AM mode-locked fiber laser, detuning charact., numeric simul. 117371
annular lasers, unstable resonators, beam quality study 93703
ARROW-type VCSEL modal charact. anal. 93654
B-class fiber ring laser, mode pairing and parametric self-locking 105201
backward pumped distributed Raman fibre amp., pump-sigs. cross modulation 128177
Bessel light beam freq. doubling, wavefront disloc. 128500
bidirectional ring laser with injected sig., backscatt., stat. props. *(Chinese)* 105385
blue LD, high resoln. printing appl. 93601
causal lin. dielec., superluminal pulse propag. 82763
circ. surface relief DFB organic semicond. lasers 82617
coaxial FEL with Bragg mirror resonators, spatially coherent radiation 117306
complex lineshape fn. semicond. laser modelling, simple anal. non-Lorentzian approx. 71828
complex multilayered struct., VCSEL, opt. field generation modelling 128302
complex-coupled DFB laser, spontaneous emission, threshold-crossing 71802
crossed Porro laser resonator design, opt. ray tracing software 128347
CW mode-locked all-solid-state laser source, cavity-augmented freq. tripling 105260
dendrimer-doped polymer waveguides, stimulated emission 104737
DFB diode laser modes, argument principle method 117178
diode laser, noise effects, filtered external opt. feedback 105368
diode laser, opt. feedback 117181
diode lasers, mode switching charact., perturb. anal. 105285
directly modulated high-speed LW LD, stabil. and nonlin. dyn. 71917
directly modulated laser, rate eqns., MAN 105454
discrete fiber Raman amps., gain-clamped, transient anal. 128179
distributed opt. fiber Raman amps., pump depletion induced noise/crosstalk 82525
doped fiber amps., noise fig. and gain coeff. for different host materials 128134
double pass X-ray laser, focalisation, ray trace code 117051
double pass X-ray laser, modelling 117049
dual-core ring fiber laser, self-mode-locking action 105207
EDFA/bidirectionally pumped Raman amp. comparison in 40-Gb/s RZ transm. 82528
EDWAs, erbium-doped opt. waveguide amps., gain charact. *(Chinese)* 105408
excimer laser medium discharge, filamentation instabil. 128120
external cavity multiple reflecting semicond. laser dyn., rigorous simul. 82685
external cavity semicond. lasers, LF fluctS., simple dyn. model 117257
external feedback LD stabil. prediction by root-locus tech. 71829
Fabry-Perot laser mode partition noise reduction, SOA as high-pass filter 128241
FEL, num. simul., nonlin. coupled wave eqns. 117304
FEL, second harmonic waveguide, electron bunching at large wiggler field 117303
fiber Bragg grating stabilized 980-nm pump lasers, L-I charact. 71781
fiber grating external cavity semicond. lasers with narrow linewidth high MSR *(Chinese)* 71852
fiber grating semicond. laser operation, act. mode-locking regime, time-domain anal. 128236
fiber lasers lin. array in external Talbot cavity, near-/far-fields study 93498
fiber Raman amps., optimized design, Raman gain theory *(Chinese)* 105163
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
fibre Raman amp., generalised atten. coeffs., simul. model 93519
free electron maser, dispersion eqn. 105051
fully self-consistent semicond. hetero-jn. laser current noise model 117295
gas-flow nuc.-pumped lasers, energy deposition, interferometric tech. 128111
graded gain random liq. laser amp. opt. diode spectral charact. 82506
grating-based surface-emitting tapered unstable resonator laser simul. 128272
high gain opt. fibre amps., self-similar pulse propag. 82540
high power pulsed dye laser amp., phys. design *(Chinese)* 105155
high-gain transient X-ray laser, optim. of drive pulse config. at 19.6 nm 128098
high-power solid-state laser thermal effects, anal. model 71717
high-power tapered semicon. laser amps., light amplif./ASE, spatio-temporal dyn. 117263
holding light injection cascaded SOA gates 75036
hollow-waveguide slab lasers, transverse mode selectivity 93551
III-V nitride MQW lasers, mode transform., buffer layer effect 71774
III-V semicond. based photonic crysts. and devices at opt. wavelengths 104599
III-V semicond. hot-hole lasers 93650
injection semicond. laser, nonlin. model 82648
integrated LD sub-harmonic mode locking, spectral domain anal. 117393
Kerr-lens mode-locked solid-state lasers, coherent semicond. absorber, ultra-short pulse generation 82578
λ/4 phase-shifted circ. grating DBR/DFB lasers, threshold anal. 93606
laterally coupled diode laser short-PM scheme, dyn. behavior 128379
LD, self-pulsing simple conditions, dimensionless rate eqns. 105333
LD, universal discriminant for CW operation 82637
lin. grating DFB organic semicond. lasers, threshold current anal. 105318

laser theory continued
long pulse laser radiation phase conjug., feedback SBS 105471
low-dimens. semicond. heterostruct. lasers, quantum coherence, IR generation 93618
mid-IR intersubband SOA ps opt. pulse response 93746
MQW bistable laser carrier dyn. 117259
MQW laser, modulation props., three-level model, SPICE 117382
MQW lasers, three-level SPICE model *(Chinese)* 82655
multi-atom microlaser, stable photon source, subPoissonian stats. 127809
multi-channel syst. semicond. in-line amp. pattern effect reduction, stat. anal. 128288
multichannel fiber laser systs., sync. mode-locking 71683
multilongitudinal mode semicond. lasers, thermal dyn., unified approach 71773
multiple opt. feedback LD, self-mixing interf. effects *(Chinese)* 128304
multiple wavelength DFB fiber lasers, comprehensive num. model 71662
multiple wavelength DFB fiber lasers, dyn. anal. 117119
multiple-electrode-pair laser, sync. trigger effect on output charact. *(Chinese)* 93485
multisection widely-tunable sampled grating reflector laser, dyn. transfer matrix method model 105434
multiwavelength backward-pumped fiber Raman amp., model/optimal design 105197
nitride III-V semicond. QW lasers, threshold current, opt. gain spectra 105271
nitride QW lasers, opt. anal. 105299
nonresonant self-injection seeded gain-switched diode laser, tunable operation 128414
one-facet antirefl.-coated semicond. lasers, oscill. wavelength 117248
opt. amp. noise fig. defn., IEEE defn. 128144
opt. injected semicond. laser, sudden chaotic transits. 82791
opt.-klystron FEL with undulators, dyn. behaviour 105375
oxide-confined VCSEL laser linewidth enhancement factor, gain saturation 93656
oxide-confined VCSELs, spectral linewidth model 93647
pass. Q-switched laser params. optimisation model 93724
photonic band gap struct. semicond. lasers, output power/modulation bandwidth 117235
planar circ. grating DFB/DBR lasers, relax. oscills. anal. 93605
planar circ.-grating DBR laser, nonlin. operation 71791
polariz. effects in lasers, spectrosc. and optoelectronics, conf. , Southampton, UK, (Sept. 2000) 78384
pulsating solitons, gain relax., saturable absorpt. 128556
QD lasers, dyn. behaviour, carrier capture-escape procs. 128290
QD lasers, highly excited, many-body effects in gain spectra 128275
QD SOA, high bit-rate sig. proc. 82631
quantum-cascade lasers, carrier thermalization vs. phonon-assisted relax. 82618
quantum-cascade lasers, nature of charge transport 128308
QW laser struct., small-sig. impedance charcts. 82625
QW lasers, small-sig. equiv.-cct. model based on 3-level rate eqns. 117200
QW microcavity laser, spontaneous emission *(Chinese)* 93577
QW VCSEL polariz. behavior 82629
Raman fiber amps., pump to sig. RIN transfer 105180
Raman fibre amp. gain enhancement by opt. filtering techs., num. simul. 128147
rare earth doped silver halide strongly pumped fiber amp. design considerations 117106
rational harmonic mode locked ring fiber laser, time domain anal. 105448
ring laser, polariz.-nonuniform radiation, transverse Hermite-Gaussian modes 128363
saturated soft X-ray lasers, TW pumping, transient collisional excitation regime 117082
selectively-oxidized VCSELs, hybrid ion-implanted, high-power single mode operation 117188
self-mode-locked solid state laser, phys. charact., self-starting study *(Chinese)* 82568
semicond. laser, all-opt. chaos, filtered opt. feedback 105359
semicond. laser, phase conjug. feedback, LF fluct. 105360
semicond. laser, turn-on transient dyn., opt. feedback 117182
semicond. laser and photon transport transistor, virtual analogue simul. 117183
semicond. lasers, inversionless bistability, interband coherence 71788
semicond. lasers, multi-long. mode instabilities, coupled mode model with gain dispersion 71826
semicond. VCSEL arrays, thermal problems soln. model approaches 93580
short external cavity LD, output power changes, Lang-Kobayashi model 71827
short pulse x-ray laser expts., ASE computational modelling 128035
single cryst. self-sum-freq. mixing laser modelling 71706
single-mode dye laser syst., colored noise 117090
single-mode gas laser, asymmetric limit cycle bistability 82941
single-mode laser, phase locking, mean first-passage time 82773
SOA, FWM, polariz.-insensitive spectral inversion 71855
SOA & SOA-based switch matrix, spectral gain/noise fig. 93640
SOA in-line amp. for WDM syst., pattern effect, probab. model 105303
SOA ultrashort pulse compression, microscopic theory 93658
sol-gel based waveguides, fab., opt. amplif. and photosensitivity 104716
solid state laser nonlin. dyn., switching regimes, saturable absorber 105425
solid state laser rods, diode-pumped, radial energy/temp. distribs. 117148
solid-state laser, Laguerre Gaussian $TEM_{0,1}$* mode dyn. 82590
solid-state laser arrays, synchronisation/self-organisation 93560
spatial partially coherence, far field charact. *(Chinese)* 71875
SQW laser, model and freq. response 82657
superradiant FIR laser with buffer gas, opt. pumped, energy exchange proc. 71643
time-tunable fs pulse lasers using variable pulse compressors 82762
TM/TE/TEM beam mode solns. 128375
transversal self-sustained gas discharge, max. current 80544
tunneling-injection QD laser, ultrahigh temp. stabil. 82636
TW MQW SOA gain dyn. 128238
TW SLA, cct. model, OEIC appl. *(Chinese)* 105266
two-beam coupling two-stage opt. amplif., temp. depend. *(Chinese)* 117420
two-electrode SOA, photodetected sig. response, sign reversal 105322
two-mode ring laser with injected sig., dyn. props. 71865
unipolar semicond. lasers, lateral current spreading 93649
unstable laser modes, edge waves and fractality 128354
VCSEL, comprehensive num. model, method of lines 82639
VCSEL, elec.-thermal-opt. equiv. cct. model 105391
VCSEL, elec./thermal/opt.-waveguiding charcts. *(Chinese)* 82673
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
VCSEL, output and transient charact. 117381
VCSEL, surface emitting QW laser, simul. model 117184
VCSEL, transverse mode, steady current & temp. distrib. anal. *(English)* 82674
VCSEL array, spatial dyn., num. simul. 105394
VCSEL arrays, photonic lattices, Bloch anal. 117270

laser theory continued
VCSEL cavities, aperture radiation scatt. effects on mode struct. 128267
VCSEL cct.-level models, mode overlap, compact representations 93715
VCSEL design, opt. elec. model, diagonal current injection 93683
VCSEL with external polariz.-selective feedback, complex polariz. dyn. 827
VCSEL with noncylindrical geom., self-consistent model 71838
VCSELs, perfectly matched layers, eigenmode expansion, opt. modelli 104702
VCSELs, piecewise lin. modeling 93714
whispering gallery mode microgear cavity, FDTD simul. 117324
wide-band SOA static model, accurate param. extraction 128287
wideband hybrid amps. for LAN, design params. 93518
X-ray FEL, model anal. 128338
X-ray laser lines, Gauss broadening by at. nuclei elec. pot. fluct. 117085
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
Zeeman multitransverse mode laser, polariz. transverse pattern dyn., vector Karhunen-Loeve modes 71885
Ag X-ray laser amplif., 3D ray-tracing simul. 117083
AlGaAs opt. pumped unipolar QW lasers, gain optim. 117262
$Al_{0.2}Ga_{0.8}As/GaAs/Al_{0.2}Ga_{0.8}As$ single QW laser, pop. inversion 128298
AlGaInAs/InP Bragg mirror VCSEL, design/perform. 128332
AlGaInN ridge geom. LD, lateral transverse modes anal. 93599
AlInGaAs-InP three-QW polariz.-insensitive opt. amps. 93657
Ar capillary discharge Z-pinch plasmas, soft X-ray laser amplif. 128071
Ar capillary discharge plasmas, X-ray laser intense pulse guiding 128072
Ar^{8+} collisionally pumped X-ray laser, computational modelling 128088
ArF discharge-pumped excimer laser kinetic modelling 82499
C inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
C, ultrafast inner shell photo-ionization pumped X-ray laser 128091
C^{5+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
CO gas discharge laser num. simul., vibr. kinetics 105107
CO laser, fund.-band and first-overtone, perform. charact. 105108
CO mag. confined discharge laser model anal. *(Chinese)* 128101
CO supersonic flow laser, RF-discharge, math. model 117070
CO_2 CW fast-flow laser beam quality 82481
CO_2 Q switching laser, chaos control with opt. feedback 93466
CO_2 elec.-discharge lasers, act. media pop. inversion, temp. effect 128115
CO_2 fast-flow indust. laser, 2D self-consistent num. model 82460
CO_2 high power fast axial gas flow laser tube, temp. distrib. *(Chinese)* 8249
CO_2 high-power CW laser design, scaling laws 82462
CO_2 high-power indust. waveguide lasers, beam output charact. 82482
CO_2 hybrid laser, dyn. emission, math. modeling 82496
CO_2 laser, gas dens. small-scale inhomogeneities, glow discharge therma instabil. 82461
CO_2 laser transient procs., intracavity saturable absorber 82768
CO_2 pulsed high-press. laser, injection seeding computer model 105121
CO_2 quasi-isotropic laser, polariz. competition 71644
CO_2:N_2:He gas laser mixture, DC plasma/HF fields interacts. 105133
Ca, innershell photo-ionization-pumped $L_{23}M_1$ transit., femtosecond X-ray lase 128090
Cr:$BeAl_2O_4$ laser, Cr:Y_2SiO_5 solid-state saturable absorber 71888
Cr-doped act. material lasers, ouput pulses, self-Q-switching behavior 71730
Cu kinetically enhanced vap. lasers, plasma kinetics, repetition rate scalin 105102
Cu vap. laser, max. output, design and global optimizing GA *(Chinese)* 7163
Cu vap. laser, pulse repetition rate, metastable state and electron dens. effect 93467
Cu vapour laser, pulse repetition rate limitation rel. to prepulse electron dens 117065
Er,Yb-doped double-cladding fibre amps. 117115
Er,Yb-doped fiber amps., cladding-pumped, stable modeling 82518
Er doped fiber amp., L-band, perform. under different pumping configs. 9353
Er:$LiNbO_3$ waveguide laser, quasi-two-level model, optim. 117156
Er^{3+}:$LiNbO_3$ waveguide amps., pumped, spectrosc. vars. assoc. with fab. proc 105245
Er-doped act. mode-locked fiber laser, opt. pulse train generation 93502
Er-doped fiber amp., optimum noise perform. 71664
Er-doped fiber amps., induced phase shift, nonlin. Schroedinger eqn. 117127
Er-doped fiber amps., loss mechanisms, const. inversion black box model *(Korean)* 93525
Er-doped fiber dual-ring laser, polarized mode, chaos control by lin. feedback method 117126
Er-doped fiber lasers, asynchronous mode-locking, integrable model 93736
Er-doped fiber ring laser, broad-band tunability 71672
Er-doped fiber, transversal distrib. influence, perform. optim. 104681
Er-doped fiber-amps., output-field photon-stats., quasi-anal. model 82541
Er-doped fibre amp., cascaded all opt. gain-clamped, beat phenom. 93520
Er-doped hybrid Raman/fiber amps. optim. 128176
Er-doped silica fiber amps., ASE meas. 117118
Er^{3+}-doped 7 level fiber laser syst., time evol. 117128
F_2 laser, discharge pumped, high-repetition-rate operation, 1D model calcl 105132
Fe transient Ne-like X-ray lasers. femtosecond laser pumping 71633
Fe^{16+} X-ray lasers, multiple irrad., seq. pumping 128077
GaAs-GaAlAs microaperture SEL, near-field opt. data storage appl. 128245
GaAsSb type-II QW laser gain, charge-separation effects 82623
GaAsSb-based type-II QW laser, blue emission shift 105334
GaInP/AlGaInP, strained MQW laser, perp. opt. beam quality study *(Chinese* 128266
GaInP/AlGaInP strained MQW laser, vert. beam quality 128324
GaN semicond. laser, opt., elec. and thermal anal. 117179
GaP high-av.-power Raman laser, freq. conversion/beam cleanup 128250
Ge^+ Ne-like x-ray laser, pump condition modelling 128060
Ge^{22+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
He-Ar laser, hard ioniser pumped, act. medium kinetic model 93480
He-Ne lasers, DC gas discharge, falling I-V charact. 128102
^{3}He-Ar-Xe nuc. reactor pumped gas laser cavity *(Chinese)* 105147
InAs self-assembled QD amps., ultrafast gain recovery, modulation limitations 71812
InAs/$Al_{0.6}Ga_{0.4}Sb$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InAs/AlSb IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InGaAlAs strained MQW lasers, act. struct. design 82638
InGaAs/InP strained quantum wire lasers, linewidth enhancement factor, many body effects 93664
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ IR intersubband quantum cascade lasers, shortwave limit *(Chinese)* 71796
InGaAsN/GaAs VCSEL, laser threshold temp. depend. 71761
InGaAsP LD, 1.55 μm, gain suppress. effect on nonlin. dyn. 82694

theory continued
nGaN lasers, unstable resonator, fundamental mode operation 93600
nP-InGaAsP SOA, wideband steady-state model 71787
Kr^{8+} X-ray lasers, gain calcs. time hist., radiative-collisional model 128078
$LiNdP_4O_{12}$ LD-pumped microchip laser, self-induced pulsations 71894
Mo^{+} saturated Ni-like X-ray laser 128063
N inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
NH_3 superradiant far-IR laser, opt. pumping 82458
NH_3 superradiant opt. pumped FIR laser with buffer gas, theoretical study 82459
NH_3 two-longit. mode opt. pumped submm-wave laser, energy exchange proc. 71642
Nd laser, diode-pumped intracavity freq. doubled, param. optim. 93802
Nd:$LiNbO_3$ annealed proton-exchanged channel waveguide lasers 128198
Nd:YAG LD side-pumped slab double-pass laser amp. *(Chinese)* 82555
Nd:YAG Q-switched diode-pumped laser, num. simul. 82556
Nd:YAG diode-pumped Kerr-lens mode-locked laser, dyn. 128394
Nd:YAG laser, diode-end-pumped, dyn. procedure anal. 117160
Nd:YAG pulsed laser with SBS-mirror, large vol. laser mode, num. simul. 93566
Nd:YVO_4 laser, diode pumped, pass. Q switched with GaAs 117360
Nd:YVO_4 microchip laser, double-end-pumped, Laguerre-Gaussian modes 93537
Nd:phosphate glass Shenguang III laser prototype, residual thermo-opt. distortions *(Chinese)* 105237
Nd^{3+}:YAG laser, polariz.-bistable, modeling 71726
Ni-like transient X-ray ion lasers, hydrodynamic charact. 128065
O_2-I chem. laser, virtual confocal unstable resonator 105388
O_2-I ejector chem. laser, mixing chamber calcs. 128112
O_2-I supersonic chem. laser, I_2 dissoc. study 105066
O_2-I supersonic chem. lasers, flow mixing schemes, computational modeling 105063
Ti,Er:$LiNbO_3$ waveguide laser amps., ASE spectral meas. 128200
Ti:Al_2O_3 femtosecond laser with multiple-pass cavity, stabil. anal. *(Chinese)* 105241
Ti:sapphire femtosecond amp., gain-narrowing, shaping oscill. pulse *(Chinese)* 117139
Ti:sapphire laser, electronically tuned, dual-wavelength oscill. 105244
Ti:sapphire laser, sub-resonators, dual-wavelength operation 71711
Ti:sapphire lasers, Kerr lens mode-locked, bistability study 82579
XeCl wide-aperture elec.-discharge excimer laser 82495
Yb,Er:glass Q-switched diode pumping lasers 82777
Yb-doped double-clad fiber, ASE 105168
Yb-doped fiber amps., gain, saturation and noise charact. *(Chinese)* 71657
Yb-doped phase-locked multicore fiber laser array, high-brightness laser beam 71661
Yb^{3+}-doped crysts. for laser appls., quasi-three-level laser model 82589
Yb^{3+}-doped laser crysts., overview 105223
Zn^{20+} X-ray laser, half-cavity geom. effect on output and spatial coherence 117081

r tracking *see optical tracking*

r transitions
see also laser theory
1.5-μm three-sect. DBR lasers, transient current control, tuning time reduction 105437
1.65 μm-band high differential gain broadband discrete fiber Raman amp. 128171
157 nm high repetition rate mini-excimer-lasers, indust. appls. 105124
300 nm blue-violet LD high dens. opt. disc syst. *(Japanese)* 116576
850 nm 2D selectively oxidized VCSEL arrays, flip-chip integrat. 115224
850-nm VCSEL arrays, Gps-class parallel-interconnection module appl. 117186
960/980 nm QW laser pumps for Er-doped fibre amps. 96702
980 nm LD module, fiber Bragg grating wavelength stabilized 128283
1550-nm spot-size converter integrated DFB lasers, low-cost single-mode opt. sources appl. 109067
asymmetrical funnel-shape QW lasers, intraband transits. 71831
broad band emitting tunable solid state lasers, overview 71755
cascaded Raman fibre laser for stable 1480 and 1500 nm wavelength operation 82511
CLC, self-lasing by stimulated emission/fluoresc./DFB 82560
DBR laser grating losses/coupling coeffs. determ., self-consistent method 105286
dual-cavity solid state laser SHG, freq. jumps 93684
elec.-pumped directly-modulated tunable VCSEL, metro DWDM appls. 117397
fiber Bragg grating stabilized 980-nm pump lasers, L-I charact. 71781
grating-waveguide struct. semicond. laser fs pulse source 117367
high av. power compact discharge X-ray laser polariz. elements 128362
high CW output power high-perform. LD 117292
high power MEMs-tunable VCSEL lasers 117398
high reliab. high power LD modules, EDFA pumping 131385
HMASPS dye, two-photon pumped freq. up-converted lasing props. 82037
ion-doped crysts. for tunable solid-state lasers, laser-related spectrosc. 71710
low-dimens. semicond. heterostruct. lasers, quantum coherence, IR generation 93618
methanol-d_3 opt. pumped laser emission, SW far-IR laser cavity 82498
mid-IR intersubband SOA ps opt. pulse response 93746
multistage pulsed dye laser syst., output power, optimisation, laser isotope separation appls. 128124
near field data storage micro-aperture SEL, near-field charactn. 117208
opt. injected semicond. laser, sudden chaotic transits. 82791
photonic cryst. defect laser, geom. tuning 117395
quantum cascade laser for LWIR emission 93635
quantum cascade laser mode-locking/gain-switching 93745
rare-earth doped chalcogenide glass fiber, mid-wave/LW IR laser pot. 105192
retinal damage, red diode laser exposure 98816
rhodamine-B dye doped polymer DFB microchip-laser-pumped laser 117091
semicond. lasers, inversionless bistability, interband coherence 71788
soft X-ray single pass FEL lasers 117309
soft X-ray table-top laser plasma, interferometric plasma diagnosis 128100
solitary heterolasers, 1-W, 0.985-μm, service life 117242
trans-4-[p-(pyrrolidinyl)styryl]-N-methylpyridinium iodide dye two-photon-absorpt./lasing 71213
transverse VCSEL laser mode turn-on dyn. 128325
virtual mesa/spoiler mid-IR angled-grating DFB laser fabricated by ion bombard. 71765
vis., semicond. lasers with external light input, chaotic oscill. modes, commun. appls. 105328
X-ray FEL, model anal. 128338
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
XUV source wavefront meas., high order harmonic generation 128036
Ag X-ray laser amplif., 3D ray-tracing simul. 117083

laser transitions continued
Ag^{+} Ne-like transient collisional excitation x-ray laser 128061
Ag^{+} Ni-like transient collisional X-ray laser, temporal resoln. 128059
Ag^{+} Ni-like transient short pulse X-ray laser, TW sub-ps pump pulse 128054
Al^{10+} Li-like ion tabletop X-ray laser, recombining plasma 117078
AlGaAs-GaAs QW-SCH lasers, constituent layer comp. 93608
AlGaInAs-InP 1.3-μm uncooled MQW laser design 128243
AlGaInAs-InP high power tapered 1.55 μm DBR lasers 82669
AlGaInP-based VCSEL, 650 nm, high efficiency design 128255
AlInAs/GaInAs quantum cascade lasers, far-IR and ultra-high-speed operation 82656
Ar capillary discharge Z-pinch plasmas, soft X-ray laser amplif. 128071
Ar^{+}, Ne-like, capillary discharge-pumped soft X-ray laser 128093
Ar^{+} ion fast capillary discharge soft X-ray laser plasma columns 128068
Ar^{8+} Ne-like soft X-ray ion laser, short-pulse laser-irrad. gas puff target 128109
Ar^{8+} collisionally pumped X-ray laser, computational modelling 128088
Ar-Xe high power nuc.-pumped lasers 128045
Au indust. sealed-off vapour lasers, develop., prod. and appl. 93479
Au^{+} long. nanosecond discharge ion lasers 105101
B_2O_3-P_2O_5-Na_2O-$ZnCl_2$-Nd_2O_3 glass, laser action 82575
$BaMoO_4$, Raman materials for all-solid-state lasers 93543
$Ba(NO_3)_2$ Raman cryst. laser, effective anti-Stokes radiation 82798
$BaWO_4$, Raman materials for all-solid-state lasers 93543
C inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
C, ultrafast inner shell photo-ionization pumped X-ray laser 128091
C^{5+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
C^{5+} ion X-ray laser, capillary discharge, induced MHD instabil. 128069
CO RT repetitively pulsed overtone laser 105105
CO first-overtone laser, multiwavelength pulsed operation 128049
CO laser, fund.-band and first-overtone, perform. charact. 105108
CO overtone-transit. lasers 105104
CO_2 elec.-discharge lasers, act. media pop. inversion, temp. effect 128115
CO_2 laser syst., regeneratively amplified, X-ray preionized 105123
Ca, innershell photo-ionization-pumped $L_{23}M_1$ transit., femtosecond X-ray laser 128090
Cd_3P_2 cylinder fiber light amplif. 105170
Ce:LiLuF tuned-laser, pump-probe-gain, fluoresc. yield 117166
Ce:$LiSrAlF_6$ laser, Cu vapour laser pumped, single prism tunability 93538
Co, innershell transits. inversion, photopumping by relativistic plasmas 128089
Cr^{2+}:ZnSe broadly tunable CW laser 93586
Cr^{4+}:YAG microchip laser, high Q-factor 82595
Cr^{4+}:YAG microchip laser, reliable tunable cheap source appls. 82546
Cr^{4+}:YAG microchip lasers, Q-switched mode locking 82772
Cr^{4+}:YAG two-element-cavity fs laser 128203
Cr-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
Cu indust. sealed-off vapour lasers, develop., prod. and appl. 93479
Cu^{+} pulse long. discharged ion lasers 105100
Dy^{3+}:Ga_2S_3-La_2S_3-La_2O_3 for 1.3-μm opt.-fiber amps. 128139
Er,Yb:glass diode-pumped 1.54 μm laser, 50 mJ/30 ns FTIR Q-switched output 128403
Er^{3+},Cr^{3+},Yb^{3+} doped phosphate glass for eye-safe wavelength lasers 117111
Er:$LiNbO_3$ waveguide laser, quasi-two-level model, optim. 117156
Er:YAG 2.94 μm laser, high-repetition-rate, high-av.-power, diode-pumped 71733
Er:glass Q-switched lasers with Co-doped transparent glass ceramic saturable absorber 117165
Er^{3+}:$LiNbO_3$ waveguide amps., pumped, spectrosc. vars. assoc. with fab. proc. 105245
Er-doped fiber amp., opt. gain-clamped L-band, optimal design 117101
Er-doped fiber amps., loss mechanisms, const. inversion black box model *(Korean)* 93525
Er-doped fiber gain/ASE charactn. 82120
Er-doped stable tunable dual-wavelength distributed Raman fiber laser 128173
Er-doped two-stage gain-shifted fiber amps., multiwavelength appls. 96803
Er-doped ultra-wide band multi-component silicate fibre amps. 128160
Er^{3+}-doped ZBLAN microsphere whispering-gallery-mode laser 117135
Er^{3+}-doped fibre amp. temp. charact., gain control compensation 128152
F gas laser spectral lines, probable laser pumping mechanisms 105146
F laser, excited directly by sliding discharge 117073
GaAs/$Al_{0.45}Ga_{0.55}As$ quantum cascade laser, 300 K operation at 9 μm 71762
GaAs/AlGaAs periodic superlattice struct., quantum cascade devices, hot electron distrib. 93637
GaAs/AlGaAs three-level QW struct. intersubband Raman laser 71849
GaAs-AlAs LW VCSELs 117296
GaAs-AlGaAs double QW ridge-waveguide LD, near-THz pass. harmonic modelocking 105428
GaAs-based self-organized QD laser modulation response, wetting layer entropy effect 105275
GaAsP-AlGaAs 810-nm large opt. cavity diode lasers, narrow beam divergence 128242
GaAsSb-GaAs 1.3-μm QW VCSELs, Ethernet appls. 119762
GaAsSb-based type-II QW laser, blue emission shift 105334
GaInAs strained QW 2 μm laser, improved perform. by increased carrier confine. 71780
GaInAs-GaAs highly strained QW VCSEL laser, stable polariz. operation 128233
GaInNAs LW MQW DBR VCSELs 117299
GaInNAsSb SQW CW ridge lasers, gas source MBE grown 128244
GaP high-av.-power Raman laser, freq. conversion/beam cleanup 128250
$Gd_3(Ga_2Sc)_xO_{12}$:Er epitaxial films, spectral-luminesc. props., solid lasing 117150
Ge^{+} Ne-like ion laser, hot electron beam pumped 117080
Ge^{+} Ne-like x-ray laser, pump condition modelling 128060
Ge^{22+} X-ray lasers, emissivity and intens., freq. redistribution effect 117084
HF chem. laser, power spectral perform. 105082
He-Ag hollow-cathode ion laser, Ag II transit. efficient oscill. 93473
He-Ar laser, hard ioniser pumped, act. medium kinetic model 93480
He-Cd^{+} hollow cathode lasers, single-mode operation, linewidth studies 105096
He-Cu ion laser, sputtered hollow cathode discharge, ^{3}He role 93474
He-Ne lasers, amplif. influence factor, output power 128105
He-Ne master-slave laser syst., power-related freq. shifts 117074
He-Ne(Kr) hollow cathode lasers, ^{3}He isotope influences 117075
Ho,Tm:$LiYF_4$ 2 μm cryst. laser transmitter, space appls. 105233
Ho:YAG high-power RT intracavity-pumped laser 71715
Ho:ZBLAN glass fiber laser, LD-pumped, power conversion efficiency 93527
Ho^{3+}-doped ZBLAN green emitting upconversion fiber amps. 128135
Ho^{3+}-doped silica CW 2 μm fibre laser 71669
I chem. pumped laser transit. 128044
I_2 freq. stable Raman laser, stepwise tunable secondary freq. stds. 86375
I_2 high-stabil. diode-laser-based freq. ref. 75349
I_2 short-pulse photolytic laser 128040

laser transitions continued
I-NCl chem. laser, $^2P_{\frac{1}{2}}$-$^2P_{3/2}$ electronic transit., CW action 105060
I* high-energy photolytically pumped laser, Raman conversion 128042
In(Al)GaAsSb/GaSb QW ridge-waveguide lasers, wide opt. gain spectrum 128274
InAs 1.3-μm QD high temp. ridge waveguide lasers 93652
InAs self-assembled quantum-dash lasers, RT operation 93653
InAs/GaInAs QD DFB lasers, 1.3 μm, HF characts. 128256
InAs/GaInSb mid-IR interband cascade lasers, high power 105362
InAs-InGaAs RT CW QD VCSELs 105274
InAs-InGaAs ultralow-threshold QD lasers, ground-state emission/gain 128221
InAs-InGaAs-GaAs QD VCSEL lasers 82628
InAsSb-AlAsSb DH QW opt.-pumped mid-IR lasers 93677
InGaAlP gain switched FP LD at 650 nm, opt. pulse param. anal. *(Korean)* 93726
InGaAlP-based low-threshold high-temp. proton-implanted red-emitting VCSELs 128248
InGaAs QW opt. pumped blue emitting semicond. laser chip 128259
InGaAs strained QW lasers, freq. response 105309
InGaAs/GaAs 980 nm oxide confined laser with integrated spot size converter 117288
InGaAs/InAlAs quantum cascade reinforced ridge waveguide laser, output charact. *(Chinese)* 71797
InGaAs-GaAs unipolar self-organized QD FIR laser PL spectrum 105277
InGaAs-InGaAsP MQW microdisk lasers, threshold pump power *(Chinese)* 128321
InGaAs-InGaAsP MQW struct., multiple-wavelength laser fab. by direct laser writing 128326
InGaAsP LD, 1.55 μm, gain suppress. effect on nonlin. dyn. 82694
InGaAsP QW narrow stripe 1450 nm LD, half watt fiber-coupled power 128284
InGaAsP nonidentical QW SOA-superluminescent diodes 117185
InGaAsP/InP 1.53-1.55 μm LD, on-wafer surface implanted ps pulse 117255
InGaAsP-InP MQW SLA, FWHM width 128286
InGaAsP-InP broadened waveguide semicond. lasers, record-high CW opt. output power 82668
InGaAsP-InP high power lin. QW diode laser arrays 93676
$In_{0.06}Ga_{0.94}N$ MQW LD lased at 400 nm, localized excitons 93602
(InGa)(NAs)/GaAs struct. emitting in 1-1.6 μm wavelength range 93661
InP-based BH VCSELs, 1.55 μm, low threshold current 105344
InP-lattice-matched 1.55 μm VCSEL, AlGaAsSb-AlAsSb DBR mirrors 128231
Kr^{8+} X-ray lasers, gain calcs. time hist., radiative-collisional model 128078
Kr^{8+} soft X-ray laser, opt.-field-induced ionization initiated transient excitation scheme 128085
Kr_2^* VUV laser oscill., compact discharge device pumped 71634
Li III microcapillary plasma, lasing to ground state 128081
Li^{2+} preformed plasma, Lyman-α transit., soft X-ray lasing 128087
Mo^+ Ni-like ion transient collisional excitation x-ray lasers 128056
Mo-doped solid Ar thin film lasing/luminesc. 117169
N inner-shell photoionization X-ray laser, gain modelling *(Chinese)* 93484
N plasma recomb. X-ray laser, dens. meas., emission study 128084
N^+ ion x-ray recomb. laser, exploding-type-pumping using thin membrane target 117076
N_2 UV laser, self-sustained discharge 128110
$Nd:Gd_{0.8}La_{0.2}VO_4$, spectrosc./laser props. 117147
$Nd:LaF_3$ low phonon energy channel waveguide lasers, MBE grown 128201
$Nd:LaSc_3(BO_3)_4$-$KTiPO_4$ diode-pumped solid-state microchip laser characts. 82576
$Nd:LiNbO_3$ annealed proton-exchanged channel waveguide lasers 128198
Nd:YAG Q-switched ultrashort pulse laser syst., two-pass quadrature freq. conversion scheme 82552
Nd:YAG ceramics, hot band reson. pump, spectrosc. and laser emission 105231
Nd:YAG coupled lasers, phase sync. 128202
Nd:YAG cryst. fiber laser gains, end pumped 128178
Nd:YAG laser, LD pumped, CW RT perform., $LiNbO_3$ waveguide freq. doubler *(Chinese)* 117158
Nd:YAG laser, high-power CW diode pumped, output charact. 105250
Nd:YAG long. diode-pumped double-clad planar waveguide laser 71753
Nd:YAG microchip laser, high Q-factor 82595
Nd:YAG ring laser oscillator/KTP high-resoln. spectrosc. light sources 82748
Nd:YAG tunable single-freq. diode-pumped ring laser at 946 nm 93740
$Nd:YAG_{0.18}YSAG_{0.82}$ laser, compositional tuning, Q-switched operation 105246
$Nd:YAlO_3$ high-power CW diode-pumped laser 82583
$Nd:YVO_4$ diode-pumped laser Q-switching, GaAs nonlin. output coupler 82780
$Nd:YVO_4$/Cr:YAG LD-pumped pass. Q-switched laser 105420
$Nd^{3+}:Ca_4GdO(BO_3)_3$ self-freq. doubling laser, pass. Q-switched 105419
Nd-chelate/polymer opt. fibre amplif., NIR fluoresc. bands 128151
Ni-like high intens. X-ray lasers, laser plasma diagnostic appls. 128074
O^{+5} ion charge-transfer pumped X-ray laser 117079
O_2-I chem. laser research in Dalian, multi-kilowatt output 105058
O_2-I discharge chem. laser, $O_2(a^1\Delta_g)$ RF plasma jet generator 105059
Pr,Yb:ZBLAN vis. upconversion fiber lasers, noise suppression 82534
Pr^{3+},Er^{3+}-doped selenide glass 1.6 μm opt. amp. materials 117114
Pr-doped fibre amp. gain efficiencies/loss coeffs. 128158
S^+ Ne-like hybridly pumped collisional soft x-ray laser 128067
SiO_2 fused microsphere, whispering-gallery reson., freq.-scanning laser locking 82783
Sn^{22+} X-ray lasers, 4d-4p transit., gain saturation 128075
Te_2 dimer gas mols. for solar pumped lasers, spectrosc. studies 82492
Te_2 solar-pumped dimer gas-laser amp. 117059
Ti,Er:$LiNbO_3$ quasi-phase-matched self freq. doubled waveguide lasers 93562
Ti,Er:$LiNbO_3$ waveguide laser amps., ASE spectral meas. 128200
Ti:sapphire diode-pumped aperiodically poled laser cavity 117151
Ti:sapphire three-wavelength femtosecond laser, multi-excited photosystem II 82781
Ti-doped BeO-Al_2O_3, superbroadband laser media, spectrosc. props. 93544
Tm,Yb:glass fibre laser, $^1G_4$ level excitation, blue upconversion, fluoresc. 93495
Tm vap. discharge step-tunable laser 82502
Tm:ZBLAN blue upconversion fibre laser, pumping schemes 93515
$Tm^{3+}:KY_3F_{10}$ laser, spectrosc. and CW operation 82587
$Tm^{3+}:LiYF_4$ crysts., cascade-avalanche up-conversion 82910
Tm-doped ZBLAN fiber amp., 794 nm emission 128153
Tm-doped aluminosilicate double-clad fibre laser 71665
Tm-doped fiber amp., WDM networks 71659
Tm-doped fiber amp. gain band mgt., dual-wavelength pumping schemes 93530
Tm-doped fibre amp., single pump gain-shifted, power conversion efficiency 93521
W^+ Ni-like soft-x-ray ion laser opacity effects, pulse duration depend. 128066
Xe^{8+} femtosecond driven collisional X-ray laser, $4d^95p$-$4d^95d$ line amplif. 128082

laser transitions continued
XeF blue-green laser, opt. pumped, C-A transit., output charact. *(Chinese)* 71630
XeF excimer laser, C-A transit., segmented surface discharge radiation pumpin *(Chinese)* 71641
XeF lasers, C-A transits. pumping using sectioned surface discharge *(Chinese)* 128107
Yb^{2+} doped fluorides, laser materials, opt. transits., spectrosc. 93541
Yb^{3+},$Dy^{3+}:CsCdBr_3$, cryst. growth, spectrosc. props., mid-IR laser 93542
Yb^{3+},$Dy^{3+}:KPb_2Cl_5$, cryst. growth, spectrosc. props., mid-IR laser 93542
$Yb^{3+}:Sr_5(VO_4)_3F$ laser, CW dual-wavelength action, tunability perform. 82577
Yb-doped 1.45 μm double-clad Raman fiber laser 128149
Yb-doped double-clad all-fiber tunable ring laser 117102
Yb-doped double-clad fiber laser, conversion efficiency 117122
Yb-doped double-clad fiber laser in unidirectional ring cavity 105167
Yb-doped dual-clad multimode fiber amp., diffr.-limited polarized SBS 71663
Yb-doped large-mode-area double-clad fiber power amp., single-freq. radiation 117107
Yb^{3+}-doped single-freq. fibre ring lasers *(Chinese)* 93496
ZnO self-organized semicond. nanowire laser arrays 93663

laser trimming *see laser beam machining*

laser tuning
1.5-μm three-sect. DBR lasers, transient current control, tuning time reduction 105437
3d-transit. metal ion doped II-VI chalcogenide crysts. for laser systs. 71218
all-opt. 3R regeneration, nonlin. dyn., long-haul transport systs. appls. 105432
AO filters, image proc./opt. commun. appls. 127859
arrayed waveguide grating wavelength tuned beam steerers 82746
beatwave Fabry-Perot interferometer calib. using tunable external-cavity diode laser *(Chinese)* 75348
benzopyran derivative flashlamp-pumped dye lasers, fluoresc. props. 117093
broad band emitting tunable solid state lasers, overview 71755
cascaded Raman fibre laser for stable dual-wavelength operation 82511
compact tunable narrow-band LD, external abnormal-refl. mirror 128413
coumarin CW ring laser, Ar^+-pumped, efficient stable operation 71867
cw dye tunable narrow-band UV laser syst., Cu vapour laser pumped 93491
DCM dye doped PMMA planar waveguide laser, wide band tuning *(Chinese)* 93494
delay-time tunable pulsed laser sourced EO sampling syst. 97794
develop. of tunable lasers for opt. networking systs. 128383
DFB dye laser, tunable narrow-band radiation generation 82507
DFB laser array, wavelength selection, MMI coupler and SOA 117232
DFB two-sect. gain-coupled laser, MM-wave fiber optic link 109098
DFB-LD microarray based wavelength selectable light source 117301
DFB-LD module, temp. wavelength tuning, wavelength monitor 105330
DIAL rapidly tunable AO spectrometer for space environ. 93941
diode laser extended cavity with EO prism, broadband fast freq. tuning 82757
DOE external cavity diode laser, single mode wavelength tuning 105399
double pass X-ray laser, focalisation, ray trace code 117051
dye laser, high-power, wavelength control, computerized syst. 82751
dye laser, ray trajectories in axial-symmetric inhomog. medium 117094
dye lasers, high-efficiency flashlamp-pumped, output charact. *(Japanese)* 105160
dye materials in PMMA matrix, XeCl laser pumped, output charact. 105158
elec.-pumped directly-modulated tunable VCSEL, metro DWDM appls. 117397
electroabsorption modulator integrated DFB lasers, optimal wavelength detuning 116824
electroabsorption modulator integrated DFB lasers, wavelength detuning effect 82444
EO sig. sampling syst. with delay-time-tunable pulsed LD 71406
European commission programmes 71197
external cavity LD, mode-hop free tuning by grating 117244
external cavity LD design, spectrosc. opt. sens. appl. 105364
external cavity semicond. laser with fiber Bragg grating feedback *(Chinese)* 71854
external cavity tunable lasers, fibre network deployment 117401
external-cavity diode laser with intracavity glass plate as fine-tuning device 71785
external-cavity semicond. lasers, tuning range, AR-coating facet wavelength depend. *(Chinese)* 117315
Fabry-Perot 1.55 μm LD transmitter, power/freq.-depend. pulse width and jitter 117199
fiber Bragg grating sens. array, serial TDM using tunable laser 109604
fiber ring laser, wavelength tuning mechanism by pol. control *(Korean)* 117100
fiber semicond. ring lasers, all-opt. wavelength conversion 117275
fibre laser, spacing-tunable multiwavelength operation 105187
fibre laser with SOA gain medium, wavelength-switching, Vernier effect 93522
fibre/waveguide lasers, controllable tuning of radiation freq. 128162
Fujitsu opt. devices for photonic networks *(Japanese)* 120170
fully functional wavelength selectable DWDM transmitter 120384
gain-switched commercial Fabry-Perot laser, HF wavelength-tunable pulse generation 105436
gain-switched diode laser, nonresonant self-injection seeding, step-tunable single-mode operation 128237
gigabit ethernet, 850 nm VCSEL appls., transceiver launch condition 108204
grating coupler sampled reflector tunable DBR lasers 117400
grating-tuned external-cavity quantum-cascade semicond. lasers 82620
heterocycle-based chromophores prep. and charactn. for freq.-upconverted lasing 128514
high power MEMs-tunable VCSEL lasers 117398
high power picosecond UV laser using BaB_2O_4 SHG tunable feature *(Chinese)* 105517
high precision in-plane rot. meas. by tunable LD ESPI 75889
high-speed directly-modulated semicond. laser modulation bandwidth, detuned external fibre grating reflector 105308
high-speed EO ADC principle, tunable laser & DOEs 86448
hydrocarbon contaminants imaging, laser-based syst., FPA 109716
integrated micromachined tunable laser using polysilicon 3-D mirror 71357
ion-doped crysts. for tunable solid-state lasers, laser-related spectrosc. 71710
IRMA tunable IR multicomponent DAQ syst. for plasma diagnostics 109455
large channel count wavelength-selectable 1.5 μm laser, GHz WDM appls. 109167
LD, fiber Bragg grating, tunable narrow line-width 117380
liq. cryst. pixel mirror, electronically tunable single wavelength broad-area semicond. laser 117352
Littman type tunable diode laser syst., external-cavity *(Korean)* 117316
LW VCSEL technol., telecomms. networks appls. 119763
materials-proc. appls., real-time beam anal. 93929
MEH-PPV films, tuneable DFB lasing 128210

r tuning continued
MEH-PPV thin films, ASE tuneability 128211
micromechanical photonic IC 93192
mid-IR laser absorpt. spectrosc., portable multichem. sens. 109785
monolithic mode-locked LD for high-speed opt. commun., freq. control 117373
monolithically integrated EA-modulated tunable DBR lasers, HF elec. crosstalk 127832
multi-wavelength fiber ring laser, tunable act. mode locking 71684
multichannel DWDM wavelength monitoring, temp.-tunable F-P filter 75059
multiple-prism grating tunable laser oscillators, tunable laser beam divergence 82778
multisection LD, opt. phase conjug. using FWM 71825
multisection ridge waveguide DFB detuned grating lasers, high-speed opt. sig. proc. 128230
multisection widely-tunable sampled grating reflector laser, dyn. transfer matrix method model 105434
narrow-linewidth tunable external-cavity semicond. laser, Littman setup 117322
Nd^{3+}-doped cryst. all-solid Q-switching laser, tr. *(Chinese)* 93556
non-symmetric reson. cavity wavelength tunable fiber laser 105174
nonresonant self-injection seeded gain-switched diode laser, tunable operation 128414
organic semicond. thin film, dye doped, very compact tunable laser 71818
periodically struct. polymers, tunable laser appls. 82549
photonic cryst. defect laser, geom. tuning 117395
plasma waves, parametric excitation, laser beam detuning 110123
polymer lasers, dispersion cavities with vol. holographic gratings, single-mode operation 93686
polymeric DFB-structs., erasable/permanent, multicolour tunable laser emission 116741
polysilicon micromachined 3D mirror 93214
polyurethane-based highly efficient dye laser 128128
practical tunable laser, inform. rev. appls. 82764
pulsed CO_2 laser with long pulse duration, power supply 128122
quantum cascade DFB laser, mid-IR continuously tunable single-mode 105363
quantum cascade DFB laser based sens., trace gas detect. 109784
quantum-cascade laser, Pound-Drever-Hall freq. stabilis., rovibr. reson. 105455
reconfigurable multiwavelength pulse source, self-seeded LD 105453
Rhodamine 6G-doped solid-state laser, output wavelength temp. tuning 82508
rhodamine-B dye doped polymer DFB microchip-laser-pumped laser 117091
ridge waveguide SOA monolithically integrated with gain-coupled DFB laser, fibre-coupled power 71350
sampled grating DBR laser, opt. freq. synthesis over >1 THz 71914
sampled grating DBR multiwavelength laser arrays for WDM appls. 105342
sampled grating DBR tunable laser 117399
SEL, fiber network, fixed-freq. transmitter, single-/multimode pumps 96671
self-freq. converted all solid-state diode-pumped Raman lasers 82551
self-seeded coupled-cavity pulsed tunable dye laser, competitive act. mirror 117390
self-seeded Fabry-Perot LD, wavelength-tunable chirp-compensated single-mode pulse generation 105427
semicond. lasers, pseudorandom wavelength hopping, sync. 93613
semicond.-fiber ring laser, up-wavelength conversion, nondegenerate FWM *(Chinese)* 71982
semicond.-laser based opt. PLL, phased array commun. antenna sig. source 80393
short external opt. cavity DFB diode laser wavelength tuning 82779
single mode master/slave laser detectors, amplif. regimes 93620
SOA, FWM, polariz.-insensitive spectral inversion 71855
SOA, FWM based all-opt. wavelength conversion *(Chinese)* 105537
SOA/electroabsorption modulator in fiber ring, 10-GHz act. mode-locked pulse generation 128417
SOAs, transparency condition, pump pulse power depend. reduction 117287
soliton ring laser, intrinsic wavelength-tuning mechanism 71896
sq. nanosecond pulse generating tunable dye laser 117388
tunable diode laser, cryogenic rem. sens., air pollutants 76926
tunable fiber Bragg grating external cavity LD, 1550 nm 117243
tunable lasers for DWDM, syst. limitations 86069
two-freq. solid-state laser microwave generation 128398
ultra high speed scanner, compact disc drive opt. data handling 117548
ultrafast LD, delay time tuning, EO sampling 71898
VCSEL, tunable, MAN wavelength-on-demand provision 85995
VCSELs, opt. bistable injection locked, hysteresis, power and freq. depend. 71768
wavelength shift keying, wavelength discrim. cct. in WDM networks 96790
wavelength tunable electroabsorption modulated DFB laser with thin film heater 105312
WDM digitally controlled tunable stabilized laser transmitter 120180
WDM tunable cost-effective transmitters, modulation index 120178
wide-aperture tunable semicond. laser, external waveguide-grating mirror 82630
widely tunable DBR semicond. laser, dyn. holographically-written grating mirror 105435
widely tunable DFB semicond. laser transmitters, WDM dyn. wavelength routing 128380
widely tunable difference freq. spectrometer, trace gas detect. appls. 88182
widely tunable grating-assisted co-directional coupler, fast 100-channel wavelength-tunable transmitter 85980
widely tunable laser control, HD WDM network 109181
widely tunable laser telecomm. network archits. 120200
widely tunable VCSEL MEMS technol. 93190
AlGaAs-GaAs QW-SCH lasers, constituent layer comp. 93608
AlInAs/GaInAs quantum cascade lasers, far-IR and ultra-high-speed operation 82656
Al_2O_3:Er(Ti)(Cr) for act. integrated opt. appls. 127802
$BaNO_3$ cryst. fre. converted pulsed narrow-band tunable Ti:sapphire laser radiation 82747
CO first-overtone laser, multiwavelength pulsed operation 128049
CO_2 Q-switched laser, pulsed beam heterodyne sig. with CdTe electrooptic modulator *(English)* 117067
CO_2 RF-excited waveguide lasers, spectral comp. 82467
CO_2 electrooptically Q-switched RF excited waveguide laser with two channels *(Chinese)* 71640
CO_2 laser radiation, phase-matched SHG in $CdGe(As_{1-x}P_x)_2$ cryst. 82869
CO_2 multifunctional laser with controllable spectral and temporal charact., indust./scientific appls. 82484
CO_2 pulsed high-press. laser, injection seeding computer model 105121
CO_2 rapidly tunable 2.5 kW laser, lidar/pollution monitoring appls. 76933
CO_2 slab-waveguide laser, unstable resonator WOLS signature 93685
CO_2 waveguide laser, electrooptically Q-switched RF excited, tunable output charact. *(Chinese)* 105149
CO_2 waveguide laser, freq. stabil. by digital tech. 82742

laser tuning continued
CdMnTe:Cr(Co) for tunable mid-IR lasing 93651
Ce:LiLuF tuned-laser, pump-probe-gain, fluoresc. yield 117166
$Ce:LiSr_{0.8}Ca_{0.2}AlF_6$ laser, time-resolved gain spectrum meas. 97865
$Ce:LiSrAlF_6$ laser, Cu vapour laser pumped, single prism tunability 93538
Cr^{2+} doped polycrystal ZnSe mid-IR laser 82615
$Cr:BeAl_2O_4$ laser, $Cr:Y_2SiO_5$ solid-state saturable absorber 71888
$Cr:LiSrAlF_6$ Q-switched tunable laser with KD_2PO_4 cryst. *(Chinese)* 71747
$Cr:LiSrAlF_6$ laser, Q-switched, dual pulse/wavelength output *(Chinese)* 82569
Cr:forsterite mode-locked all-solid-state laser, simultaneous multiwavelength generation 82755
Cr^{2+}:ZnSe broadly tunable CW laser 93586
Cr^{2+}:ZnSe broadly tunable laser, cw/pulsed/act. mode-locked regimes 82616
Cr^{4+}:YAG laser cryst., Q-switching material *(Chinese)* 117359
Er,Al-codoped germanosilicate planar waveguide array with 50 GHz freq. separation 128191
Er,Yb:glass bulk diode-pumped single-freq. microlasers, charactn. 117162
Er,Yb:glass microlaser, freq. doubled, opt. freq. std. develop. 109413
Er doped fiber-ring laser wavelength-tuning anal. 71697
Er fibre amp., adiabatic Raman compression, vis. duration-bandwidth tuneable source 93795
Er-doped fiber amp., loop-locked config., gain spectrum eval. 117121
Er-doped fiber laser with cavity SOA, rational harmonic mode-locking, stable pulse generation 105166
Er-doped fiber ring laser, broad-band tunability 71672
Er-doped fiber ring laser, widely tunable operation in C-/L-bands 71674
Er-doped fibre amp. multichannel gain from single laser meas. 131387
Er-doped fibre laser, fast wavelength switching, Fabry-Perot filter 105452
Er-doped fibre ring laser, discrete & CW tuning 93732
Er-doped harmonically mode-locked fiber laser pulses, delay time tuning 105193
Er-doped single-freq. fiber laser, external light injection, freq. control charact. 71677
Er-doped single-mode tunable fiber ring laser operation, widely tunable fiber Bragg grating 128415
Er-doped stable tunable dual-wavelength distributed Raman fiber laser 128173
Er^{3+}-doped CW fiber-ring laser, cascaded unbalanced Mach-Zehnder interferometers 82513
Er^{3+}-doped tunable DFB fiber laser, Bragg grating fab. method 105176
GaAlAs-GaAs micromachined DBR vert. cavity wavelength filter, temp. insensitive 85970
GaAs MEMS and MOEMS, develop., fab. and perform. 127821
GaAs-based doped superlattice laser wavelength tuning 82769
GaInAsP/InP opt. pumped tunable SEL 128252
GaInP/AlGaInP/AlGaAs/AlAs distrib. Bragg reflector VCSELs, props. 128331
GaInSbAs/GaAlSbAs tunable QW laser, gas anal. 71819
$GaN/Al_xGa_{1-x}N$ QW laser, tuning charact., MBE 93589
H_2 tunable CW Raman laser, external cavity LD pumped 105154
He-Ne laser freq. stabilis. control syst., fast PLL 93725
I_2 freq. stable Raman laser, stepwise tunable secondary freq. stds. 86375
ITO film prep. by IR FEL 68242
InGaAs MQW lasers, widely tunable, selective-area-growth 93628
InGaAs QW based 1.5-1.6 μm VCSEL for metro WDM appls. 117213
InGaAs/GaAs single-mode ridge waveguide lasers with aperiodic Bragg-grating fibre, near-transform-limited picosecond pulses 71822
InGaAs/InGaAsP microlasers, equilateral triangle resonator, rate eqn. anal. 117260
InGaAs/InP tunable external cavity LD, MEMS rotary actuator 117300
InGaAsP LD, rapid temp. tuning, high-press. H_2O absorpt. spectrosc. appl. 128407
InGaAsP discretely tunable mode-locked SOA laser, arrayed waveguide grating 128416
InGaAsP, monolithic integrat. DFB laser array, act. stripe angling, thin-film stripe heater *(English)* 93575
InGaAsP/AlGaAs LW fused air-gap VCSEL, charact. 82713
InGaAsP/InP laterally coupled ridge waveguide DFB lasers, chem. sens. appls. 71767
InGaAsSb(Gd)/InAsSbP DH lasers, 3-3.3 μm, LD spectrosc. 71833
InGaN MQW laser, differential gain charact. optim., tuning 117266
InP based electroabsorption-modulated tunable DBR laser transmitter, long-haul commun. appls. 131371
InP laser, EAM tuning, WDM telecomm. syst. 117231
LiB_3O_5, intracavity freq.-doubling of tunable Ti:sapphire laser *(Korean)* 93805
$LiNbO_3$ periodically poled cryst., CW UV generation by SHG 82847
$LiNbO_3$ periodically poled widely tunable quasi-phase-matched OPO *(Chinese)* 128505
Nd:YAG LD-pumped laser, freq.-mode struct. anal., tuning 93552
Nd:YAG high repetition rate laser syst. for real-time DIAL meas. 133290
Nd:YAG lasers, diode side-pumped pulsed, output charact. 128195
Nd:YAG miniature solid state lasers, thermal tuning, lin. *(German)* 93743
Nd:YAG monolithic ring laser, single-freq. output power, 1.444 μm 82594
Nd:YAG ring laser oscillator/KTP high-resoln. spectrosc. light sources 82748
Nd:YAG tunable single-freq. diode-pumped ring laser at 946 nm 93740
$Nd:YAG_{0.18}YSAG_{0.82}$ laser, compositional tuning, Q-switched operation 105246
$Nd:YVO_4$ CW laser, LD pumped, LiB_3O_5 intracavity freq. doubling *(Chinese)* 71727
$Nd:YVO_4$ LD-pumped laser, freq.-mode struct. anal., tuning 93552
$Nd:YVO_4$ ring lasers, LD pumped, $KTiOPO_4$ intracavity doubling, output charact. *(Chinese)* 71745
$Nd:YVO_4$ single-freq. LD-pumped ring lasers, freq. tuning charact. *(Chinese)* 71866
O_2 high press. conc. meas. by VCSEL lasers 86714
SiO_2 fused microsphere, whispering-gallery reson., freq.-scanning laser locking 82783
$Ti:Al_2O_3$ laser with tunable varied reflectivity mirror unstable resonator, beam quality *(Chinese)* 105220
$Ti:Al_2O_3$ ring laser, freq. stabilization/tuning by $LiNbO_3$ FP etalon 93742
Ti:sapphire LD injected intra-cavity doubled laser, anti-phase matching behaviour 82550
Ti:sapphire diode-pumped aperiodically poled laser cavity 117151
Ti:sapphire laser, electronically tuned, dual-wavelength oscill. 105244
Ti:sapphire laser oscillator, double-pulse Nd^{3+}:YAG laser pumped 128401
Ti:sapphire laser, sub-resonators, dual-wavelength operation 71711
Ti:sapphire three-wavelength femtosecond laser, multi-excited photosystem II 82781
Tm,Ho:YAG diode-pumped 2 μm opt. oscillator, spectrosc. & freq. metrol. 117159
Tm vap. discharge step-tunable laser 82502
Tm:YAG diode-pumped 2 μm opt. oscillator, spectrosc. & freq. metrol. 117159
$Tm^{3+}:KY_3F_{10}$ laser, spectrosc. and CW operation 82587
Tm-doped aluminosilicate double-clad fibre laser 71665

laser tuning continued
Yb,Er:glass laser, diode side-pumped pulsed, output charact. 128195
Yb:$LiYF_4$ diode-pumped chirped-pulse tunable laser oscillator 105438
Yb:YAG pass. mode-locked thin-disk laser, widely tunable pulse durations 71732
Yb^{3+}:$Sr_5(VO_4)_3F$ laser, CW dual-wavelength action, tunability perform. 82577
Yb^{3+}:YAG Q-switched TEM_{00}-mode diode-pumped laser, extended tunability 128418
Yb-doped double-clad all-fiber tunable ring laser 117102
Yb-doped double-clad fiber laser, high-power tunable narrow line width output 105200
Yb-doped double-clad fiber laser, unidirectional ring geom., high power operation 82535
Yb-doped fibre laser, cladding pumped, tuning range 117098
Yb-doped monomode silica fiber, ASE *(Chinese)* 71294
$Yb_xY_{1-x}Al_3(BO_3)_4$ cryst., growth, self-freq.-doubling props. 128208
Zn^{20+} X-ray laser, half-cavity geom. effect on output and spatial coherence 117081

laser variables measurement
arbitrary inhomogeneities meas., interf.-threshold inform. recording 93711
chirped fiber grating group time delay meas., mode-mocking tech. 116647
chirped-pulse amplif. laser syst., stretching factor calc. and meas. *(Chinese)* 105418
cylindrical thin-wire bolometer, light absorpt. nonuniformity 117566
diode lasers, freq. fluct. interf. measuring method *(Chinese)* 110016
diode pumped solid state laser, high power, appls. 128183
direct laser beam focal spot meas. 117334
distributed fiber Raman gain amp., 1410 nm operation principle *(Chinese)* 93524
EDFA lab. meas. comparison with EDFA-Design simul. results 128167
EUV at. streak camera, cloud of noble gas atoms photocathode 97385
FFH modulation, AO-modulator based laser pulse shaping 105446
fiber amps., amplified sig. linewidth, phase noise effects 71676
Fizeau wedge interferometer for laser wavelength meas. *(Chinese)* 110014
focused laser beam, random errors of diam. meas. by thin-wire bolometers 117337
focused laser radiation, meas. profile distrib., bolometer diam. effect 117336
gas-flow nuc.-pumped lasers, energy deposition, interferometric tech. 128111
Hartmann-Shack wavefront sens., ICF laser amp. wavefront meas. 109685
high-accuracy wavelength meter based on stabilized diode laser 128626
high-precision laser beam center meas. 71874
high-speed SG-DBR laser, fast wavelength switching, Fabry-Perot interferometeric meas. 105553
intens. distrib., posn. sensitive photodetector 93712
LD astigmatism meas., beam-line method 82740
LD bar emission, effective brightness, array curvature correction 71886
LD systs. with opt. feedback, spatial beam profiles meas., interf. effects 117343
LD-pumped all-solid-state lasers, indirect thermal focal length meas. tech. *(Chinese)* 128374
LISA grav. wave background anal. using time-delay interferometry 132192
MQW laser, opt. beam quality factors *(Chinese)* 71853
multi-purpose fine opt. auto-adjuster, computer controlled *(Chinese)* 110021
multi-terawatt sub-ps. laser pulses, freq. doubling for plasma interacts. 71883
multichannel DWDM wavelength monitoring, temp.-tunable F-P filter 75059
Nanonics NSOM/AFM 100, characts. and WDM components meas. 120133
optoelectronic device, radiation pattern and luminesc. spectra meas. 93414
pass. modelocked self-starting fiber laser pulse anal. using step chirped draw tower grating arrays 128389
pass. phototropic modulator, laser nonstationary procs. meas. 117368
power pulse lasers, radiation energy meas. using multichannel calorimetric syst. 110013
pulse energy meas. using thin-wire bolometer 75535
pulsed doughnut-type beam spatial charactn. using cylindrical lens 82733
pulsed VCSEL, ultrafast polariz. dyn. and noise meas. 128411
quantum cascade laser mode-locking/gain-switching 93745
QW laser, grating feedback locked, polariz.-depend. photon-no. squeezing 93585
Raman laser amp. test methods, noise mechanisms 85974
refl. laser radiation polariz. charact. meas. by coord.-free holographic method 117340
S1337 photodiode, laser radiation power meas. 117339
semicond. lasers, linewidth enhancement factor meas., injection-locking tech. 71891
SG-III laser facility, 60 kJ, design, technol. develop. 105215
Shack-Hartmann sens. for laser beam charactn. 71887
Shack-Hartmann sens. for laser beam M^2 anal. 110023
SHG autocorrel., group vel. mismatch effect, different pulse shapes 93817
SOA, nonlin. propag./FWM of picosecond opt. pulses 128289
super-Gaussian laser beam, CCD based charactn. 117345
ultrashort laser pulse detect., time stds., calib. methods 93729
ultrashort laser pulse Page fn. meas. 128404
ultrashort laser pulses meas., GRENOUILLE SHG FROG tech. 93717
ultrashort ultraintense laser syst., beam quality meas. and amendment *(Chinese)* 110015
ultrashort-pulse amplit./phase meas., two-photon absorpt. sonogram trace 105447
VCSEL beam waists, transverse mode splitting, opt. output spectra 71900
wide-aperture VCSELs, transverse mode selection, elec. steerable beams 71880
Ag^{19+} laser, wave-front shape eval. 128079
AlGaAs/GaAs high-power QW rem. jn. laser, elec. noise charact. 82662
AlGaAs/GaAsP broad-area LD with large opt. cavity waveguide struct., beam quality 82645
AlGaAs-based VCSEL, single-mode, long-term spectral stabil. 82652
AlGaInP/GaInP multi-mode self-pulsating MQW LD with epitaxially integrated saturable absorber 71824
$(Al_{0.4}Ga_{0.6})_{0.5}In_{0.5}P$/GaInP MQW-LD, opt. beam qualities meas. 105367
Ar high av. power table-top soft X-ray laser, spatial coherence meas. 128073
CO_2 TEA laser, flat-top output mode meas., saturation effects *(Chinese)* 128106
CO_2 high power laser beam meas. & control, diagnostic instrum. 93702
CO_2 high power lasers, slab waveguide resonator, mode selectivity 105115
CO_2 high-power laser with variable reflectivity output mirrors unstable resonator, beam QC 82487
CO_2 high-power multibeam lasers with heat regenerator, output charact. 82486
CO_2 high-power pulse-repetitive RF-excited slab lasers, output charact. 105113
CO_2 high-power pulsed laser params. meas. *(Chinese)* 128119
CO_2 indust. CW laser beam, spatial and temporal charact. 105141
CO_2 indust. cw laser beam, polariz. state meas. 105117
CO_2 sealed-off slab lasers, all-solid-state generator excitation, output charact. 105109

laser variables measurement continued
CO_2/OsO_4 stabilized laser at 28.8 THz, absol. freq. meas. 71636
CdTe FIR broadband autocorrelator, sub-picosecond time resoln. 128525
Ce:$LiSr_{0.8}Ca_{0.2}AlF_6$ laser, time-resolved gain spectrum meas. 97865
Er,Yb-codoped fiber grating lasers, nonradiative transits. heating, freq. instab 128133
Er-doped fiber laser, act. mode locking, pulse noise meas. 105209
Er-doped fibre amp. multichannel gain from single laser meas. 131387
Er-doped fibre amp. small sig. gain spectrum *(Chinese)* 82516
Er-doped fibre characterisation, laser transient behaviour anal. 93500
GaAs LD, opt. absorpt., thermoreflectance meas. 82607
GaAs-based quantum cascade laser with Peltier cooled element, output chara 71815
GaN-based LD, opt. gain, opt. internal loss 128314
HF CW chem. laser with three-jet nozzle array, spatial-energy and spect charact. 128113
HF CW chem. laser with three-jet nozzle array, secondary-fuel supply effect charact. 128114
HF TEA-TEA oscillator-amp. laser syst., gain/beam profile charact. 117072
InGaAsP MQW lasers, elec./opt. LF noise meas. 71803
InGaAsP QW mode locked LD, pulse charactn, two-photon absorpt. opt. gati 117374
Nd:YAG lasers, I_2-stabilized, absol. freq. meas. 86385
Nd:YAG monolithic non-planar ring laser freq. noise meas. 93559
Nd:YVO_4 laser, LD end-pumped, beam quality factor meas., slit-scanni method 87000
Nd^{3+}:$Gd_2(MoO_4)_3$ nonlin. laser cryst. quantum efficiency 82586
Ni^{18+} X-ray lasers, four-wave sum DFG scheme 128094
O_2-I chem. laser, small sig. gain and output power study 105062
O_2-I chem. laser with hybrid confocal type resonator, output charact. 105142
O_2-I supersonic chem. laser small sig. gain profiles 105068
Sn^{22+} X-ray lasers, 4d-4p transit., gain saturation 128075
Ti:sapphire laser, sub-10-fs pulse generation & charactn. 93733
Ti:sapphire mode-locked lasers, carrier-envelope phase stabilization usi microstruct. fiber 128196
Ti:sapphire oscillator femtosecond laser pulses, temporal charactn., SPIDE tech. *(Korean)* 93738
Ti:sapphire pass. mode-locked laser, timing jitter meas. and control *(Chines* 128207
Ti:sapphire self-mode-locked laser, femtosecond opt. pulses, time-resolved op gating 105459
Ti:sapphire ultrashort light pulses, polariz. state, cross-PM 105421
Tm^{3+},Ho^{3+}-doped ZBLAN glass fibre laser, output charact. 82520

laser velocimeters
act. opt. true airspeed sens., precursor expt. 76873
body vibr., adaptive compensation *(Korean)* 121234
Bragg grating based fibre optic ref. beam LDA 93938
dual-fibre laser Doppler sens., miniaturization 109606
feedback interferometry, real-time param. estim. 117580
mine detect., acoustic/seismic laser Doppler vibrometer assess. 76998
mine detect., scanning LDV vibrometer, acoustic-seismic coupling 77001

laser velocimetry
see also laser Doppler anemometry
2D flow field meas. by laser PIV tech./cross-correl. method 75926
3C stereo & holographic PIV in turbulence meas., conf., Mont-Saint-Aignan France (May 2000) 113273
adaptive second-order accurate particle image velocimetry tech. 132218
air real-time acoustic vel. meas. using LDV, PLL, demodulation 110032
annular jet, flow anal., particle image velocimetry 121290
coherent lidar high-resoln. Doppler vel. profiles retrieval 122661
condensed media, femtosecond laser pulse induced mass-transfer procs., Doppler tomography 87030
continuous scanning laser Doppler vibrometer with bow scanning compensatio 132189
Doppler vibrometer-based mine detect., speckle noise immunity 77002
dual-plane stereoscopic particle image velocimetry for lobed jet mixing flow meas. 132219
ejector co-axial flow mixing zone visualisation method 87037
EM driven cylindrical implosions, high speed laser shadowgraphy 97386
feedback interferometry, real-time param. estim. 117580
fibre optic probe for simultaneous dist./vel. determ. 97300
flow field imaging and flow visualization, laser Rayleigh scatt., spectral filterin 93946
gas bubble flow behaviour meas. using LDA 110055
horiz. axis wind turbine, pass. pitch-flap mech., flow 133894
impulsively started jet, vortex ring evol., DPIV 121291
intra-arterial blood flow meas. by self-mixing feedback LD 132626
land mine detect., acoustic technol., LDV, program overview 77007
land mine detect., acoustic-LDV syst., shape discrim. 77003
land mine detect., acoustic-seismic coupling, geophone & LDV meas. 76944
land mine detect., laser-based noncontact acoustic imager 77004
LDV, quadrature demodulation tech., freq. meas. errors 97772
mine detect., acoustic/seismic laser Doppler vibrometer assess. 76998
mine detect., scanning LDV vibrometer, acoustic-seismic coupling 77001
mol. tagging velocimetry for moving fluid flow mapping 121279
multiple plane velocimetry, in-line digital holography 117546
particle image & opt. flow velocimetry for turbulent flows/flames 110066
particle tracking velocimetry, super resoln., monophasic flow appl. 121289
radar using amplit. and time-delay compensation *(German)* 75232
sonic vel. meas. by laser-Bragg refl. detect. tech. 72149
steel, structural, residual stress, acoustoelastic LDV 79483
structural defects detect. using operational deflection shapes 90606
turbomachine passage, vel. field, LDV anal. *(German)* 97883
turbulent pipe flow, stereoscopic PIV mapping 121287
turbulent shear flow in thin laminar boundary layer embedded vert. fence, vel field meas. 132217
turbulent vel. meas., stochastically sampled dyn. systs., spectral anal. 97844
two-phase turbulent flow, PIV treatment, direct num. simul. 121288
two-phase-flow meas. using particle image velocimetry, phasic discrim. 97881
unsteady turbulent swirling flow, PIV/POD/vortex ident. 121292
von Karman Vortex Street flow meas. by frame straddling tech. 110047
wind detect. lidar, beam scanning tech., inversion method *(Chinese)* 99002
wind Doppler lidar meas., non-Gaussian sig. in turbulent atmos. 122658
Al-Mg, residual stress, acoustoelastic LDV 79483
N_2 gas flow, high-speed, laser Doppler diagnostics, spontaneous Brillouin scatt 121266
Nd:YAG laser, single-freq. diode pumped, ranging/velocimetry 93939

wavelength measurement *see laser variables measurement*
windows *see laser accessories; optical windows*

s

see also chemical lasers; distributed Bragg reflector lasers; distributed feedback lasers; dye lasers; excimer lasers; free electron lasers; gas lasers; laser arrays; laser beams; laser cavity resonators; laser frequency stability; laser tuning; liquid lasers; microdisc lasers; millimetre wave lasers; nuclear pumped lasers; Raman lasers; ring lasers; solid lasers; submillimetre wave lasers; surface emitting lasers; waveguide lasers; X-ray lasers
nf., laser phys. & appls., Varna, Bulgaria (Sept. 2000) 113263
nf., laser technol., Szczecin-Swinoujscie, Poland (Sept.-Oct. 1999) 89530
DA regulations for laser product manufacturers 100505
erwig Kogelnik, lasers/optoelectronics developer biog. 82454
notonics technol. appls., conf., Quebec City, Quebec, Canada (June 2000) 89534
G-II high power laser syst., ghost refl. anal. *(Chinese)* 128372
abilized laser design for opt. pumped at. freq. stds. 109409
rface profiler for opt. elements 117050
S Air Force develop. of high-altitude laser crosslink 86110
es *see flip-flops*
ide *see Earth rotation*
e constants
u damascene interconnects, localized strain meas. by CBED 92172
u/TiN/6H-SiC(0001) heterostruct., epitaxial growth, PLD, XRD, TEM 114381
uorite-/C-type oxide solid solns., lattice params., defect struct., SOFC 89237
is-(8-hydroxyquinoline)-aluminum, opt. spectrosc. 69614
anillin crysts. growth, SHG appls. in NIR wavelength region 79181
$gGaS_2$, cryst. growth, lattice consts. *(Chinese)* 68127
I thin interconnects, local strain meas., CBED, TEM 126437
$l_{0.3}Ga_{0.7}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
lGaN/GaN, MQWs, localised states, PL obs. 80869
lInGaN self-assembled quaternary superlattice struct. 114346
lInGaN/InGaN, MQWs, localised states, PL obs. 80869
lN film, sputtered on Al_2O_3(0001), crit. thickness 101194
lN films, RF-MBE, RF-MEE on SiC, structural anal. 90302
lN nanofibers, combustion synthesis and charactn. 68103
lN:Si, MOVPE, $Al_{1-x}Si_xN$ solid soln. form. 124925
Ba,Sr)TiO_3/Y_2O_3-ZrO_2 films, metal-ferroelec.-insulator-semicond. memory 81779
$a_xSr_{1-x}TiO_3$ thin films, sol-gel proc., crystn. 79371
aSrTiO$_3$ thin films by PLD, microstruct./props., O_2 partial press. 90466
aTiO$_3$, rare-earth and Mn substituted, occupational sites and dielec. props. 116176
$a_3NbGa_3Si_2O_{14}$ cryst., growth, struct., piezoelec. props. 127180
dHg(SCN)$_4C_3H_8O_2$, organometallic coord. complex, NLO material *(Chinese)* 71209
dO single-cryst. rocksalt layers, MOMBE growth on GaAs (001) substrs. 90315
$e_yFe_xCo_{4-x}Sb_{12}$ skutterudite, struct. and thermoelec. props., Fe content depend. *(Chinese)* 126090
eO$_2$-ZrO_2-$YO_{1.5}$ syst. as electrode of SOFC, miscibility gap 99992
oCrPtB(Ta)-CrX-Cr (X=Mo,W) long. media, mag. and read/write props. 116260
oCrPtTa/Ti perp. recording medium, sputter deposition 116339
oSi_2 coherent silicide islands on Si(111), strain 103181
u$InSe_2$ thin films, flash evaporated, struct. anal. 90535
u_2SnSe_3, cryst. growth, struct., elec./opt. charactn. 91727
'-Fe-C films, magnetocrystalline anisotropy, saturation magnetis., coercive force 116280
'-Fe-N films, magnetocrystalline anisotropy, saturation magnetis., coercive force 116280
-$FeSi_2$ single crysts., opt., elec. props. 91716
aAs:Cr(Fe)(Co) film, electronic & mag. props., MBE growth 79243
aAs:N CBE incorporation using 1,1-dimethylhydrazine 101295
GaAs)$_{1-x}$(Ge$_2$)$_x$, epitaxial metastable thin films, rf magnetron sputtered, structural/compositional props. 93299
aMnAs layers, migration-enhanced epitaxy, struct. and mag. props. 68163
aN (0001) oriented MOCVD epilayer grown on (1120) sapphire 101353
aN MOCVD growth, materials/devices, PL, EL, reviews 79304
aN epilayers, hydride VPE regrowth, GaN quasi substrs., XRD, PL, Raman spectra 68245
aN films on (001)β-$LiGaO_2$, MOVPE, polarity, coaxial impact collision ISS, PL 69524
aN:Mn, high dose ion implant., nanoscale mag. regions 127326
aN/InGaN, MQWs, localised states, PL obs. 80869
aNAs epilayers on GaAs, lattice params., Vegard's law 80691
TO films, rf sputtering, struct./elec. props. 103050
nAs/GaAs nanomesa syst., million-atom mol. dyn. simul. 69648
nAsSb, MBE grown, miscibility gap, substr. lattice const. effect 103016
$n_{1-x}Cd_xSb$ films, prep., struct. & elec. props. 91627
$n_{0.15}Ga_{0.85}As$:N CBE incorporation using 1,1-dimethylhydrazine 101295
nGaAs/AlInAs HEMT, MBE on oxide-bonded InGaAs, characts. 126897
$n_xGa_{1-x}N$, structural/elastic props. modeling, DEFT 91678
$n_xGa_{1-x}N$/GaN QW, InGaN comp./growth rate, MOCVD 126137
nP, lattice param. deviation, horiz. Bridgman method under controlled P vap. press. 69505
nP single cryst., horiz. Bridgman growth, controlled P vapour press. 101166
LiNbO$_3$, TSSG growth, blue SHG charact. 82913
LiNbO$_3$, TSSG growth, lattice consts., SHG charact. 82912
TiOPO$_4$ periodically segmented waveguide, Rb/Ba ion-exchanged, fab., self-PM 116703
aCrO_3, Sr doped, defect induced dilations, atomistic modeling, SOFC interconnect 89261
aCrO_3, doped, SOFC interconnect, lattice expansion, internal stress 89260
aS growth, cold cathode appls. 125954
i-Ni-Co oxide electrode materials, struct., XRD 99895
i-Ti oxide electrode materials, struct., XRD 99895
iNbO$_3$:Ti near-surface waveguide layers, struct., XRD 71336
lg-Mn ferrites, elec. and mag. props. 81834
lgXN$_2$ (X=Si,Ge), theoretical anal., DEFT, first principle calc., LDA, generalised gradient approx. 79023
$Na_{0.5}Bi_{0.5})_{1-x}M_xTiO_3$ ceramics, (M=Pb,Sr or Pb+Sr), dielec. props. near morphotropic phase boundary 70424
Nb_2O_5 cathode, electrochem. lithium intercalation, Li batts. 123749
Nb_2O_5, lattice consts. and gas-sens. props., calcining temp. effect 97455
$Nd_2Ba_{0.5}(Sr,Ca)_{0.5}ZnO_5$; microwave dielec. props., cryst. struct. 114926
ldS growth, cold cathode appls. 125954
i_2MnGa single cryst. thin films, MBE growth, XRD, TEM 101302
ZT films, RF magnetron sputtered, struct./elec. props. 81706

lattice constants continued
PZT thin films, sol-gel prep., surface/interface struct. 116163
(Pb,Sr)TiO_3 epitaxial films, ferroelec. domain struct. 127197
$(PbI_2)_x$-$(BiI_3)_{1-x}$ solid solns., prep., dark cond./opt. energy gap, XRD/opt. transm. 114308
$Pb_{0.85}La_{0.15-x}TiO_3$:Ce(Gd) thin films, structural/elec. charactn., rare earth substitution 104311
$PbZrTiO_3$ ultrathin films, MOCVD grown, elec. props. 104294
$RTiNbO_6$ ceramics, prep., charactn., microwave dielec. prop. 104235
Si implanted with N by PIII, reciprocal space mapping 81036
Si:C(N), low-energy ion implant., buried insulating layer form. 103253
Si:Ge cryst., lattice param., X-ray topography/chem. etching obs. 69480
SiC, isotopically disordered, Raman spectra, phonon line broadening 69576
SiC thin films, 3C, 6H-SiC(0001) substr. crysts., lattice param. meas., XRD 68171
SiC:H, 4H, H_2 conc., theoretical approach, vacancy-hydrogen complex 69588
SiC:Si(Ge), MBE quantum films, strain anal., defect form. 68170
$SrBi_2(V_{0.1}Nb_{0.9})_2O_9$ ceramics, ferroelec. props., O_2 annealing 116165
$Sr_3NbGa_3Si_2O_{14}$ cryst., growth, struct., piezoelec. props. 127180
$Ti_xCo_{1+x}Fe_{2-2x}O_4$ ferrite powders, struct., mag. props 92785
$YBa_2Cu_3O_{7-\delta}$ film, PLD, buffer layer lattice matching effects 70598
$YBa_2Cu_3O_{7-\delta}/SrTiO_3$ heterostruct., tunable microwave filter 71122
$ZnFe_2O_4$, nanocryst., influence of Fe^{3+} ions at tetrahedral sites on mag. props. 81830
ZnMgSSe/GaAs(100) photoassisted MOVPE growth, XRD and photolum. obs. 68222
ZnO substrs. for homoepitaxy, eval. 101291
ZnO:Ni films, fab., Ni content/carrier dens. effect on transport & mag. prop. 80698
$ZnXN_2$ (X=Ge,Si), theoretical anal., DEFT, first principle calc., LDA, generalised gradient approx. 79023
lattice defects *see crystal defects*
lattice filters
2D AR model using lattice representation and inform. criteria for texture anal. 118486
adaptive interpolation/smoothing algms., state-space approach 130130
bit-parallel bireciprocal lattice WDF, arith. transforms. 91098
branched tube systs., param. estim. *(English)* 73003
Cardan-Viete formulas, refl. coeffs. counterpart 95701
crosstalk-robust struct. based on sub-band noise estim. 129368
DS-SS perform. improvement using adaptive FIR notch filter 95822
DS-SS systs., interf. rejection using nonlin. interpolation lattice filters 85528
echo cancellation, adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
FIR filters, interleaved archit., hardware efficient 91109
FIR two-channel PR filter bank with lin.-phase, design 73640
flexible digital receiver, decimation with lattice WDF 130139
four operands real-multiply accumulation implemented filters 68944
freq. localised 2D nonseparable wavelet filters, Balanced-Localization metric 91058
LDI/LDD all-pass lattice filters, computational props, FPGA implements. 91079
lin. phase paraunitary filter banks, lattice structs. parameterization 107527
lin.-phase paraunitary filter banks with complex-valued freq. responses, design algm. 73705
lin.-phase perfect reconstruction filter bank, simplified lattice factorization 84719
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078
M-channel lin.-phase paraunitary filter banks with unequal length 95681
MEMS vibratory rate gyroscope, syst. ident. 75766
MLP-based DFE with lattice struct. 73840
multichannel 2D delta-domain lattice filter, noise removal 84140
noisy speech, adaptive filtering & spectral subtraction 94421
perfect reconstruction cosine modulated filters and modified DFT filter banks, prototypes 80097
reciprocal photonic lattice filter, all-opt. config., perform. characts. 71504
region-based subband/wavelet image coding 95294
regular paraunitary lin.-phase filterbanks/M-band orthogonal symmetric wavelets 129792
RLS-Laguerre lattice adaptive filtering, error-feedback/normalized/array-based algms. 130117
SAR imagery, lossless compression using multiple-pass gradient adaptive lattice filter 109251
speech synthesis, tube model for vowel-plosive-vowel transit. 118133
unbalanced lattice switched-current filters, almost phys. symm. struct. 80064
WDF, max. sample freq., circulator, Richards struct. 102392
lattice localised modes *see localised modes*
lattice networks
see also lattice filters
hybrid coupler, broadband lumped-element lattice cct. 80216
lattice parameters *see lattice constants*
lattice phonons *see phonons*
Laue effect *see X-ray crystallography; X-ray diffraction*
launchers, electromagnetic *see electromagnetic launchers*
launchers, electrothermal *see electrothermal launchers*
law administration
digital camera image ident. for legal court cases 118489
document transm. over Internet, security 130619
enabling technols., law enforcement conf., Boston, MA, USA (2000) 113185
handwritten isolated word recogn. based on Mutual Information 129681
intranets in law firms 74192
intranets in law schools and in legal practice, supporting organisational work 74191
laying, cable *see cable laying*
LB films *see Langmuir-Blodgett films*
LBIC *see OBIC*
LCAO calculations
$CoSi_2$/Si(111), BEEM, band struct. effects 69713
InGaAs QD act. layer semicond. lasers, EL2 defects 82660
ZnAgSe mixed cryst. NLO susceptibilities 71995
LCD *see liquid crystal displays*
LCD drivers *see driver circuits*
LDA *see laser Doppler anemometry*
LDPE insulation *see polyethylene insulation*
leaching *see corrosion; dissolving; environmental degradation*
lead acid batteries
36 V Pb-acid batt., vehicle appls. 78298
42 V car elec. systs., batt. options 134595
80 V bipolar lead-acid batt. for hybrid EV 78299
advanced batt. designs for hybrid EV appls. 89131

lead acid batteries continued
appls./develop., conf., Long Beach, CA, USA (Jan. 2001) 78449
automotive batts., prod. line test, failure detect., ΔV criteria 78156
batt. grids manufacture by electroforming 89123
bipolar Pb-acid batts., cladded materials, EV 89406
charger topol. using power MOSFET/Schottky bridge rectifiers 112621
conf., Dublin, Ireland (March 2001) 67385
corros.-resistant grid alloys 78150
deep-cycle valve-regulated batts., specific energy improvement 89132
dendrite-preventive additive 89108
develop. and appls. 78149
develop. in 21st Century *(English)* 78121
develops. in first decade of 21st Century *(English)* 89070
discrete freq. immittance spectrosc. 89112
EDLC-batt. hybrid stand-alone PV power syst., operating charact. 108441
electrochem. perform., complex additives effect *(Chinese)* 112780
EV batt. charging control, charging/discharging monitoring 123987
EV power sources, Chinese develop. prospects *(Chinese)* 78230
expander materials electrochem. charactn. 78139
film electrodes on Cu and Al nets, electrochemical/corros. behaviour 89134
flooded batts., gassing reacts. impedance meas. 89085
gel technol. based VRLA batts. for telecomm. appl. 112798
hybrid EV, batt. as load levelling device, dyn. modelling, simul. and control 100277
hybrid rubber-polyethylene separators eval. 78158
hydrogen ventilation in batt. rooms for recombining VRLA batts. 89113
Leghorn funicular rly., PV syst. supply 113108
life/capacity improvements, metal control additives 89109
low cost cycling, electrolyte formulation 78153
metals/engineered materials recycling, conf., Pittsburgh, PA, USA (Oct. 2000) 89560
Metlakatla batt. energy storage syst., VRLA batt. cells exam. 88665
online AC impedance meas. tech. 89135
plates perform., compression effects, cycling expts. 78137
pos. electrode oxygen evol. modelling 89119
pos. plates, semi-suspen. prep. technol. 89129
pos. plates, semi-suspen. prep. technol. 78146
PV hybrid-VRLA batt. test results from telecomms. site 112386
renewable energy syst. optimal control strategy modelling 123106
SBS front terminal pure lead VRLA batts., telecomm. appls. 112807
secondary batt. charging method study *(Chinese)* 78129
series VRLA batts., state-of-charge bal. 89114
silica and polymer mixture additives, influence on separator behaviour 78154
small valve-regulated batts., dyn. charactn. 89089
stand-alone PV syst., hybrid EDLC-lead acid batt. storage 112404
state-of-charge determ. methods 89086
storage technols., energy vs. power capabilities 112776
super-high batts., latest Indian develops. 89084
telecomm. company power supply, product develop. efforts 108451
valve regulated batts., elec. tests 78152
valve regulated Pb-acid monobloc batts. in enclosures, thermal behaviour 112803
valve-regulated batt. develop. for PV power syst. appls. 78141
valve-regulated batt. electrochem. 78133
valve-regulated batt. life improvement, electrode expts. 89130
valve-regulated batt. life prolongation study *(Chinese)* 112779
valve-regulated batt. monitoring syst. 112815
valve-regulated batt. overcharge proc. modelling 89120
valve-regulated batts., RBSM struct. design criteria 89117
valve-regulated batts., solar power appl. charge strategies 78142
valve-regulated batts., utility installation appl. perform. 89083
valve-regulated cell perform., neg. expanders expts. 78145
valve-regulated cells, recomb. catalysts role 78144
valve-regulated EV batts. 78134
valve-regulated stationary batts., high-rate recharge expts. 78143
VRLA, pos. grid plate single cells, gelled electrolyte, design, testing 112799
VRLA batt. state of health prediction, ohmic techs. 89111
VRLA batts., AGM vs. gel technols., telecom appl. 112800
VRLA batts., cycle life extension, plate-group press. 78148
VRLA batts., ETK's experience, grid corros., temp., charging voltage 112797
VRLA batts., plate group, mech. press., compression effect 78136
VRLA batts., standby appl., water loss minimisation 112802
VRLA batts. for telecomm., technol. develop. 89087
VRLA batts. life prediction from early I-V data 89122
VRLA cells, neg. electrodes, perform., life, organic expander effect 78157
VRLA cells, overcharge proc. modeling validation 89121
VRLA Refined lead, batts. spec. and perform. 78155
VRLA separator technol., ALABC research 89110
C fibers, vap.-grown, basic props. and their batt. appls. 99896
CeO_2-supported Pt as H-O recombinant catalyst for sealed Pb-acid batts. 99913
Pb-Ca electrodes, Sn and Al_2O_3 plating effects on electrochem. behaviour *(Chinese)* 89065
Pb-Sb electrodes, Sn and Al_2O_3 plating effects on electrochem. behaviour *(Chinese)* 89065
Pb-acid valve-regulated batts., oxygen cycle inefficiency expts. 89118
Pb-acid/Ni-MH/Zn-air batt. hybrid syst. polariz. characts. 89147
PbO electrode, valve-regulated lead acid batt., electrochem. perform. 123743
PbO_2 electrode, situ morph. change obs. 78147
β-PbO_2 pos. plate act. material changes over batt. lifetime 78135
PbO_2:Bi_2O_3 electrodes, effect and mechanism on Pb-acid batt. perform. 78138
SnO_2-coated pos. electrodes develop. 78140

lead bonding
see also tape automated bonding
ASIC, flip-chip and wire bonded packages 113672
automatic ribbon wire bonding technol. 102874
automotive radar sens., microstrip patch antenna array 96995
back side failure anal. flow for flip-chip/lead-on-chip/multi-metal-level dies 113778
BGA wire bond integrity/package interfacial adhesion, plasma cleaning gas chem. effects 113568
CMOS technol., low-k inter-metal dielec., act. ccts. under wire bonding I/O pads 127031
COB glob top encapsulant curing, variable freq. microwave proc. 78641
conductive layers in LTCC ccts., assembly props. 78657
DØ silicon microstrip tracker, prod. and testing 121451
DØ silicon microstrip tracker prod. and testing 132377
deformable membrane mirrors, microfab., packaging & testing 71380
die bond inspection, SAM sig. deconvolution using wavelet transforms 100633

lead bonding continued
discolored bondpads caused by $Al(OH)_3$ form., SEM inspection, EDX, FI 102873
fine pitch gold ball bonding develop., response surface methodology optimisati 91512
fpBGA packages, fine pitch BGA, ball-shear strength 78676
gas sens. sapphire substr., Pt metallis. bonding, adhesion layers 97529
IC packages, simultaneous switching noise, computer simul. 113670
IGBT power modules, wire bonding connections, lifetime improvement 8129
laser microchemical direct write deposition/etch methods, real-world appl 103978
multiple bondwires for MM-wave packaging, wideband charactn. 69210
PBGA, ultra-fine-pitch encapsulation 113490
PBGA and QFN package bandwidths, high-speed broadband products 113722
power semicond. device packaging/chip interconnection, wire/area-bondi technols. 115880
power transistor laser wire bonding technol. 81260
pre-bond IC plasma cleaning, wire bond pull strength enhancement 81077
proc. control, ASTM method F.459 revision 69370
RF chip-to-substr. interconnect, wire bond parameterized model 113639
RF-LGA, LGA, laminate based CSP for 10 Gbit/s appls. 100590
single-layer miniature broadband microstrip antenna using wirebonding tec 105896
Snap Array CSP, super thin CSP with 0.5 mm total height, 3D stacked CSI develop. 113595
stud bump bonding flip-chip technol., chip-on-flex develop. 69363
triangle- and T-profiles, design, linkage-spring model 113534
wafer-level packaging, technol./implement., education 124361
wire bond integrity, probe scrubbing damage effects 113682
wire bonding, robust bond model, proc. implement. 69372
wire bonding in back-end assembly proc., overview 69373
wirebonding loop, linkage-spring model 115219
Al capped Cu bond pads, fine pitch probing/wirebonding, reliab. 126512
Al-Si plasma-treated IC bond pads, chem. and morph. studies 67591
Au neutral electroless PCB surface finishes, wire bondability/solderabilit 102834
Au ribbon bonding for IC interconnection, designed expt. for proc. eval. 8053
Au wire bonding for organic PCB, metallization characts. effects 115166
Au wire bonding to Ni/Pd plated leadframes 102877
CdZnTe/CdTe pixel and strip detectors, technol. develop. 121488
Cu multilayer interconnect struct., wire bonding/reliab. 113606
Cu/Ag thick film conductors on Al_2O_3 substrs. for power appls. 78658
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
Sn-Ag-Cu solder ball bonding, microstruct. and strength props., cooling rat 69331
Ti US transducer, welding device 99092
$YBa_2Cu_3O_{7-\delta}$-Au(Ag) film contacts, metallization/interconnection 127508

leak detection
buried pipe, leak detect., elec. resist. tomography 109928
fiber laser sens. with cavity form. by ref./sens. Bragg gratings 86596
fibre optic sens. for machine health monitoring 120829
fluid pipelines, multi-leak detect. and isolation 86462
Ignalina nuc. power plant components, NDT activity 88549
LMFBR steam generator tubes, water leak detect., act. acoustic anal. *(Japanese)* 123152
methane highly sensitive airborne gas analyzer using two-wave freq.-stabilize He-Ne laser 132211
multichannel gas leakage monitoring syst. using CPLD chip 99040
Space Shuttle Discovery, hydrogen leak detect. by fiber optic sens. syst. 13321
steam power plant feedwater heater tubes plugging selection 99554
waste disposal seepage control sheets, damage detect. method *(Japanese)* 6767
Cu_2O-Cu interface, lamps, glass sealing, Dumet, slow leak-detect. method *(Japanese)* 124067

leakage currents
25 nm MOSFET devices, design considerations, gate oxide thickness scalin 126764
150 nm partially-depleted SOI and bulk technols., comparative perform. 12692
ABC-MT-CMOS DSP core, charge pump cct., standby current 125533
ADSS fiber-optic cable leakage current meas. sens. design 109060
antistatic floors electrostatic charactn. using equiv. cct. model 83133
autonomous decentralized low-power syst. LSI using self-instructing predictiv shutdown method 125386
backside localization using thermal laser stimulation 126930
built-in current sens. devices for micro-IDDQ test of VLSI chips 127008
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
C-class ultra fast recovery diodes for high speed switching appls. 70029
ceramic capacitors, voltage withstanding rating determ. 80444
charging damage in ion implant./plasma procs., controlled stress, tests 115589
CMOS accurate LV analog memory-cell with built-in multiplication 80129
CMOS act. pixel sens., radiation-induced dark current 97376
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS charge pump cct., high efficiency, body effect 104109
CMOS device, S/D extension, shallow jn., ion implant. *(English)* 92462
CMOS devices, 0.12 μm, high perform., with manufacturable 0.18 μm technol 127020
CMOS dual V_T domino logic, noise constrained power optim. 102031
CMOS energy-efficient skewed static logic design, topol.-depend. dual voltage 102103
CMOS gate dielec. scaling limits 116034
CMOS gate patterning, line-edge roughness effects, anal. model 69971
CMOS gates, cycle-true leakage current modeling, leakage power estim. 10211
CMOS high-k dielec. layers, gate insulator layer thickness, leakage currents, reliab. 127022
CMOS hot-carrier-induced cct. degrad., long run reliab. problems 81510
CMOS IC, deep submicron technol., standby energy reduction 104111
CMOS instruction cache, leakage energy dissipation 68789
CMOS logic ccts., leakage current estim., product engng. environ. 102073
CMOS low-k ILD form., instabil. trade-off, act./field device charact. 103487
CMOS LV logic ccts., design considerations, simulated behavior 68727
CMOS MPU appls., TCAD stat. design methodology 125555
CMOS multi-oxide proc. technol., 100 nm, for SoC appls., radical nitridation 127045
CMOS PLL, 2 GHz, gain compensation VCO, peak-to-peak jitter 102734
CMOS proc., 0.18 μm, $CoSi_2$ spike form. in act. contact salicidation 70293
CMOS proc. ported register file, leakage-tolerant, DC noise robustness 125565
CMOS proc. technol. trends for SoC era 116027

kage currents continued
CMOS technol. develop., 0.35-μm, blanket/pocket anti punchthrough device designs 104091
CMOSFET gate length scaling to 35 nm 126738
conditional keeper tech. for sub-0.13μ wide dyn. gates 125456
cooled CMOS systs., act. threshold compensation cct. 104110
deep submicron NMOSFETs, ultrathin gate oxide, post-soft-breakdown charact. 81342
diamond:N, CVD films, metal-insulator-vac. type electron emission 91536
dielec. thin film large-area growth, photo-induced, using excimer lamps 115977
DIP, epoxy coating, interfacial damage growth kinetics 113535
direct-tunneling gate CMOS perform./reliab., wafer orient. depend. 127043
disordered organic LEDs, charge carrier transport/recomb. 105014
distrib. porcelain suspen. insulators, nonsoluble indust. dust effects *(Korean)* 123039
double ion-implant Ti-salicide technol., high-perform. CMOS appl. 92126
double-sided buried-contact solar cells, floating jn. shunts localization 100064
DRAM, 0.1 μm, bitline spacerless storage node SAC/Ru-Ta_2O_5-Ru capacitor with TiN contact plug 125475
DRAM, 512 Mb/0.12 μm design rule, long data retention time strategy 125490
DRAM, embedded, dual thickness gate oxid., ion implant. 79867
DRAM cell transistor jn. leakage, band to defect tunneling, off-state bias-temp. stress 79887
DRAM retention time distrib. prediction method 79888
eDRAM, embedded DRAM technol., leakage and retention test struct. 114771
elec. double layer capacitors, gel electrolytes containing asymmet. ammonium salt, perform. *(English)* 99885
elec. induced body dyn. threshold SOI MOSFET, large body effect, low threshold voltage 103822
electromedical apparatus safety considerations *(Italian)* 87296
electrostatic actuators, extended operation range, current-pulse drive 70340
embedded decoupling capacitors, HV charact. 115067
embedded DRAM, low temp. capacitor technol., dielec. stack film 114772
embedded DRAM technol., 0.15 μm logic based, with 0.425 μm^2 stacked cell using MIM capacitor 125491
FEA with Mo tip, gate insulator etching influence obs. 97706
ferromag. tunnel jns., local transport props. 127327
FET high-temp. high-power technol. 103908
flash cell arrays, SILC charactn. tech. 79896
flash EEPROMs, thin oxide, anom. cell cond. mechanism 79894
gate oxides, very thin, trap generation/breakdown procs. 69761
gigabit dens. DRAM cell transistor using retracted Si_3N_4-liner STI 68800
high quality thermal oxide on large-grain polysilicon-on-insulator films, charact. 91899
high temp. bipolar IC for automotive appls., behaviour and reliab. *(Japanese)* 100301
high-k dielec. gate materials for ULSI devices, advances/materials compatibility 104108
high-k gate dielec. for CMOS devices, future challenges 104130
HTV silicone rubbers, sample thickness var., tracking and erosion behavior 104415
IGBT turn-on charact. improvement with trench oxide pin Schottky diode 126722
IM drives, PWM inverter-fed, HF conducted EMI modelling 123925
induction heating, MF thyristor converters, elec. shock protection *(Polish)* 100330
inductive heating converters, capacitive/leakage currents, hazard sources *(Polish)* 78340
interpoly dielec. deposited on nitrided poly-Si for NVM devices 115468
interpoly dielec. deposited on nitrided-polysilicon, NVM devices 79877
IR FPAs, readout tech. for on-chip compensation of dark current 97363
JouleTrack Web-based tool for software energy profiling, μP appls. 125548
JTAG based AC leakage self-test for digital VLSI ccts. 125303
lateral merged double Schottky rectifier, proposal and design 92282
low-k hydrogen silisesquioxane, chem. mech. planarisation, dielec. degrad. elimination 81068
LV CMOS ccts., I_{DDQ} testing, leakage control techs. 127033
merged PiN/Schottky diode, fine pattern effect 126652
metal-ferroelec.-MIS memory FET, fab. & charact. 127276
methyl silsesquioxane thin films, prep. and dielec. charactn. for IC appls. 116184
MFIS struct., ferroelec. gate FET memory 81767
MLC chip capacitor insulation resist. degrad. mechanism, materials sci. 115077
MOS capacitor, HI irrad., radiation soft breakdown, 98-300 K 103192
MOS capacitors, current-stress conditions, stress-induced leakage current *(Japanese)* 80421
MOS capacitors, polyoxide films for flash memories, low temp. growth 103211
MOS device LV near-interface trap-assisted tunneling current meas. 80941
MOS devices, thermal oxide degrad. kinetics under elec. stress 91890
MOS IC oxide leakage currents, Si dangling bond defect link, direct evidence 81529
MOS quantum yield expt., stress-induced leakage current correl. with high-energy oxide traps 91904
MOS ULSI technol., ultra-thin gate dielec., thickness meas. under inversion condition 127064
n-MOSFET, GIDL degrad., hot carrier stress *(Chinese)* 81327
p-MOSFET, off-state stress, device degrad. 92380
MOSFET, snapback/switching behaviour, hard breakdown 115906
MOSFET, ultrathin gate, oxide traps, PDO method *(English)* 92335
MOSFET inelastic trap-assisted tunneling SILC mechanism, percolation oxide breakdown model 115925
MOSFET stack gate insulator struct., reduced FIBL effect 126747
MOSFET subthreshold leakage current, H radical irrad. from microwave-excited Ar-H_2 plasma 81350
MOSFETs, bulk Si and SOI, CMOS ULSI standby currents 103877
multistage amps., coupling capacitor non-ideality effects 125238
n-channel enhancement mode power MOSFET, C-V/G-V charact., high temp. anneal effects 103832
NLC displays, long-term ion transport 86815
NMOS device, ultrathin oxide, stress induced leakage current 126248
nMOSFET, gate-current calc., closed-/open-boundary models 92376
NMOSFET, ultrathin nitride/oxide stack gate dielec. technol. 70125
nonceramic insulator polymers, SIR and EVA and blends, stress, hydrophobic stabil. 104416
outdoor distrib. polymeric suspen. insulators, contamination effects *(Korean)* 133761
outdoor HV porcelain insulators, RTV coatings, leakage current tests 77448
overhanging-metal microstrip detectors, anal. and test 121440
oxide gate dielec., in situ steam generated, rem. plasma nitridation 70150
oxide-bypassed VDMOS, alternative to superjunction MOS power devices 92366

leakage currents continued
p^+/n diodes, Ni and Ni-Pt alloy silicided, I-V charact. 70007
partial-ground-plane SOI MOSFET, deep sub-0.1-μm channel regime 81274
partial-ground-plane SOI MOSFET for deep sub-0.1-μm channel regime 70128
partially depleted SOI CMOSFET, floating body effect, temp. dependency 81341
photosensitive polyimide, integrat. and elec. charact. 69898
PIII, deep trench buried-plate doping technol. appl. 115568
plasma proc.-induced damage testing methodology for 0.13 μm CMOS technol. 104129
polluted insulators, leakage current envelope, level crossing anal. 112116
poly-Si:P gate/band gap narrowing, incomplete impurity ionization, direct tunneling leakage current 91592
polymer-ceramic nanocomposite, high-k dielec., RF embedded capacitor 115089
polysilicon MILC TFT with ultra-thin channel *(Chinese)* 115913
polysilicon MILC thin-film devices, indiv. grain boundary charactn. 102958
polysilicon surface-micromachined MEMS test structs., elec./environ. reliab. charact. 104165
polysilicon TFT, self-aligned thicker sub-gate oxide near drain/source regions 126752
polysilicon TFT fab. by laser-induced in-situ F passiv./laser doping 92362
polysilicon TFTs, elec. stabil., vert. amorph. silicon offset appl. 92342
polysilicon TFTs, laser annealed and metal-induced crystal., expt. study 70124
polysilicon TFTs, offset metal-induced unilaterally crystallized 92341
polysilicon ultrathin gate oxide MOSFETs, edge direct tunneling leakage, phys. model 70157
n^+-polysilicon/oxide interface traps in ultrathin oxides, charact. method 91903
power cable connectors, contact resist., power distrib. 123035
power diode, phys.-based compact electrothermal model, cct. simul. 92329
power DMOSFET, thermal behaviour, 2D computer simul. 92327
power IGBT, thermal behaviour, 2D computer simul. 92327
power semicond. devices, reliab. monitoring 126708
power VDMOS FETs in BCDMOS technol., reliab. study 126727
PWM inverter-fed IM, capacitive parasitism anal. 88721
PWM invertor-fed AC motor drives, HF model for EMC anal. 134453
PWM VSI, CMV reduction, act. canceling/compensating ccts. 123566
PZT amorph. thin film hydrogen gas sens. 97535
RESURF power MOSFET device, SI layer 126854
RTV silicone rubber coatings in salt-fog/rot. wheel dip tests, elec. performs. 88470
Schottky barrier rectifier, high current dens., using V as barrier metal 92287
Schottky barrier TFT, off-state leakage current, cond. mechanisms 92346
self-aligned JFET proportional-to-absol. temp. sens., nonlin. response 75508
SET fab. tech., self-aligned proc., pillar etching, charactn. 126905
shallow jn. diodes for deep sub-μm CMOS, leakage current, proc. factors effect 115822
shallow n^+-p-well diodes, generation lifetime from reverse generation current 126106
silica films, mol. templated nanoporous, plasma treatments 115643
silicone rubber outdoor insulators, degrad., leakage current monitoring *(Korean)* 123037
soft error rate for high dens. DRAM cell *(Korean)* 102168
SOI CMOSFETs, sub-60 nm, with 1.2 nm nitride/oxide gate dielec. 126776
SOI MOSFET, leakage drain current carriers, high temp. props. 81315
SOI MOSFET struct. with jn.-type body contact for suppression of pass gate leakage 81287
solar cells, short-cct. current, fill factor, resistive leakage losses 134384
SPIDER MOSFET wafers, high power implant charging damage 115583
static CMOS ccts., stand-by leakage power minimisation 79792
stator winding insulation, thermal ageing, SQUID mag. field mapping 112441
sub-qtr.-micron CMOS devices, ultrathin ox/nitride gate stack, RTCVD 127025
substation grounding grid, safety anal. 78087
subway train DC supply, switch cubicles leakage protection *(Chinese)* 123994
suspen. insulator, artificially polluted, leakage current waveforms, freq. charact. 112125
technol.-tolerant I_{DDQ} method for CMOS digital IC diagnosis 101917
thermally-enhanced rem. plasma nitrided ultrathin gate oxide, perform. 92359
thin dielec., eval. of different wafer charging metrology protocols 115803
thin gate oxides reliab. under X-ray lithog. condition irrad. 81138
thin oxide NMOSFETs, soft breakdown, substr. current anal. 70120
three-terminal band-to-band tunneling model on GIDL in MOSFET 81300
triac operation under transient thermal conditions, thermal fatigue reliab. 126688
ultra-thin oxides MOS capacitors, elec. charactn., quantum modeling 103741
ultrathin gate oxide CMOS with undoped selective epitaxial Si channel layer 70307
ultrathin MOSFET, direct tunneling current, SiO_2/Si interface roughness effect 70092
ultrathin SOI MOSFET, gate tunneling current, quantum-mech. calc. 92356
vert. pMOSFET, enhanced drive current, reduced short-channel/floating body effects 126770
VSI-fed IM drives, dual-stator windings design 134455
wafer high-temp. PECVD charging damage prediction, current-bal. model 101376
(Al,In)GaAs/GaAs pseudomorphic HEMTs, 1/f noise study, 4.2 K cryoelectronics 70188
AlGaAs X-ray detector with opt. response 98049
AlGaAs/GaAs cryogenic p-HEMTs for read-out appls., band-gap engng. 70320
AlGaAs/GaAs heterojunction phototransistors, emitter shoulder struct., opt. gain 82351
AlGaAs/InGaAs power doped-channel FETs, IMD reduct. by air-bridge gate proc. 91254
AlGaInP/AlGaAs, ultralow threshold red VCSEL, MOVPE, charact. *(English)* 82678
n-AlGaN/Au Schottky contacts, environ. aging 69736
AlGaN/GaN HFETs, gate leakage current effect on noise 81382
AlGaN/GaN short channel HEMT, gate recess, breakdown volt. 81387
AlGaN/GaN:He,P HFETs fab., ion implant., classical/gate metal approach 81381
Al_2O_3 dielec. films on Si, UHV reactive at.-beam deposition 79245
Al_2O_3 n-MOSFETs with Al gates, elec. charactn. 126757
Al_2O_3, nanolanminates, dielec. props. develop. 92676
AlSb/InAs HEMT, TiW/Au gate metallization, fab., charact. 115955
Au/PZT/p-Si ferroelec. memory diode, fab./charactn. *(Chinese)* 104475
Au/$Sr_{1-x}La_xTiO_3$, Schottky jn. fab. 80902
Au/n,p-GaN Schottky diodes, I/V/T charact., inhomog. barrier influence 81205
$(Ba,Sr)TiO_3$ MOCVD thin films deposited on Ru electrodes, leakage current charact. 81690
$(Ba,Sr)TiO_3$ dielec. thin films, RF magnetron co-sputtering deposition and charactn. 81633
$(Ba,Sr)TiO_3$ film, MOCVD growth, annealing proc. optimisation 70403

leakage currents continued
(Ba,Sr)TiO_3:Zr-substituted thin films for integrated capacitors, elec. props. 91415
$Ba_{0.96}Ca_{0.04}Ti_{0.84}Zr_{0.16}O_3$:Mg thin films, metalorganic decomp., dielec. props. 70390
$(Ba_{0.5}Sr_{0.5})TiO_3$ films, leakage current, resist. degrad. 81660
$(Ba_{0.7}Sr_{0.3})TiO_3$ capacitors, RF sputtered, TiN barrier layer effects 101184
$Ba_{0.7}Sr_{0.3}TiO_3$ thin films, sol-gel tech. prep., props. 104381
$(Ba_xSr_{1-x})Ti_{1+y}O_{3+z}$ magnetron sputter-deposited multilayer capacitors 81667
$Ba_xSr_{1-x}TiO_3$ thin films, MOCVD in multiwafer reactor, charactn. 114362
(BaSr)TiO_3 MOCVD thin films, RTA, elec. props. 70422
BaSrTiO_3 thin film integrat., DRAM devices 101330
(BaSr)TiO_3 thin films, D doping, annealing, capacitor elec. props. 81672
$(Ba_{0.5}Sr_{0.5})TiO_3$:Al thin films, PLD, transient anal. 92655
$(Ba_{0.5}Sr_{0.5})TiO_3$:La film, leakage current reduction by graded-layer La doping 92621
$(Ba_{0.5}Sr_{0.5})TiO_3$:Mg films, microstruct., elec. charact. 127165
$(Ba_{0.7}Sr_{0.3})TiO_3$:Mg,La(Nb) film, elec. props., co-dopants effects 116156
$Ba_{1-x}Sr_xTi_{1-y}Zr_yO_3$ films for DRAM, struct., elec. props. 101198
$BaTiO_3$/Ni based MLC capacitor, dc-elec. degrad. 127280
$BaTiO_3$/epoxy composite film, integral capacitor, suspen. formulation 115090
$Bi_2Ti_2O_7$ films, chem. soln. decomp. prep., RTA, dielec. props. 68323
$Bi_4Ti_3O_{12}$/SiON/Si(100) ferroelec. film elec. props., ultrathin buffer layer effects anal. 92630
a-C:F films, ICPCVD, struct./dielec. props. 114333
$CaBi_2Ta_2O_9$ ferroelec. films, PLD, dielec. props. 79350
CdTe detector, high-resoln., appl. to imaging devices 110321
CdZnTe detectors, capacitive Frisch grid struct. 110319
CdZnTe detectors, noise 110320
CdZnTe/CdTe pixel and strip detectors, technol. develop. 121488
CeO_2/Si(100) sputtered film, elec. charact. anal. 92673
CsI(Tl) scintillation detector, PIN photodiode readout, noise contrib. to energy resol. 87211
Cu backside contamination issues in CMOS proc. integrat., case study 92476
Cu damascene interconnection, SiO_2 dielec. barrier 115704
Cu damascene struct., methylsilane-doped low-k CVD oxide intermetal dielec. 69942
Cu dual-damascene barrier-free interconnects with Cu epi-contacts buried in low-k organic film 126468
Cu planarization proc., lin. polisher, pattern depend. 126357
Cu stressed damascene interconnection, dielec. breakdown, EL obs. 81110
Cu/SiO_2/TiN(TaN) interconnect diffusion barrier systs., testing methodology 69931
Cu/methylsilane-doped low-k CVD deposited oxides, damascene process,leakage current mechanisms 126448
GaAs HIGFETs, WSi gate, degrad. phenom. caused by hot carriers 92379
GaAs MESFET, TLM struct., radiation induced resist. 115942
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
GaAs double Schottky barrier particle detector charactn. *(Chinese)* 97937
GaAs, surface passiv., ion bombard. 115635
GaAs/P radiation detector, perform., role of geom./electrode technol. 132308
GaInP:Fe regrowth GaAs-AlGaAs BH VCSEL, perform. charact. 82641
GaN MBE films, screw disloc. elec. activity rel. to growth stoichiometry 80671
n-GaN, photoanodic oxid., oxide elec. props. 103335
p-GaN:Mg/Ni contacts, Schottky barriers, memory capability 80922
GaN/AlGaN/GaN, enhancement mode MISFET, prep., charact. *(English)* 81330
GaN/Ni/Au Schottky diodes on sapphire and SiC substrs. 126630
HfO_2 dielec. thin films, two-step RF sputter deposition and charactn. 90254
HfO_2 gate dielec., struct. and electronic props. anal., theoretical methodology 127140
HfO_2 ultra thin CVD MOSFET gate dielec., dual polysilicon gate electrodes, reliab. 126779
HfO_2:Dy gate dielec., elec. charact. for MOSFET appls. 126748
HfO_2/$HfSiO_4$/Si struct., $HfSiO_4$ form. react. 103193
HgCdTe 2D array technol. in UK 97257
HgCdTe/CdTe/Si IR photodetectors grown by MBE for near-RT operation 97260
HgI_2 polycryst. films for digital X-ray imagers 121597
In/B double pocket archit. for sub-100 nm MOSFETs 81340
InAs/AlGaSb QW, back-gate control 69699
InGaAs/InAlAs HEMT, ion irrad. effects, radiation tolerance 126881
InGaAs/InAlAs insulated gate PHEMT with Si interface control layer 80294
InGaAs/InAlAs quantum wire FET, NDR 115941
InGaAsP MQW LD with InP:Fe lateral current blocking layers, heterobarrier leakage 93668
InGaAsP MQW lasers, 1.5 μm, heterobarrier leakage effect 117204
InGaP/GaAs HBTs, implant isolation and base contact abnormalities influ. on perform. and reliab. 126682
InGaP/GaAs/InGaAs camel-like FET for high-breakdown/low-leakage/high-temp. appls. 103902
InP, low damage sidewall form. by ECR-RIE using CH_4/H_2 115639
InP:Fe, VGF growth, nuc. radiation detector appl. charactn. 97991
InP/InGaAs HBT degrad. induced by SiN passiv. 115859
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
(LaSr)MnO_3/$BaTiO_3$/(LaSr)TiO_3 p-i-n diode, hysteretic I-V charact. 81189
$LiNbO_3$ MFS memory capacitor, low temp. growth 116227
NbN/MgO/SiO_2/NbN multilayers on R-plane sapphire, on-chip fast RSFQ ccts. 70801
Nb_2O_5, nanolanminates, dielec. props. develop. 92676
Ni/BaSrTiO_3/Ni/TiN/Si, photoassisted MOCVD growth for DRAM appl. 101331
Ni/SiC Schottky barrier diode, elec. prop. improvement, micropipe dissoc. 126638
NiSi polycryst. films as gate material 91913
PLZT film capacitors, dielec. relax., leakage currents 70416
PZT MOCVD thin films on multilayer Pt/Ir electrodes, reliab. props. 70412
PZT capacitor integrat. for high dens. FRAM, electrode-barrier struct. 70463
PZT ferroelec. thin film capacitors, leakage I-V charact. 92775
PZT films, RF magnetron sputtering, leakage current, fatigue props. 70393
PZT films, struct./ferroelec. props. on Ir/$(ZrO_2)_{1-x}(Y_2O_3)_x$/(100)Si 70399
PZT thin films, chem. soln. deposition, ferroelec. props. 79367
PZT thin films, ferroelec. props., grain boundary effects, nucleation 104252
PZT thin films, perovskite phase, selective nucleation, grains form., lateral growth 104292
PZT thin films, prep., hydrothermal treatment following sol-gel deposition 125018
PZT thin films, sol-gel derived, low-temp. crystn. 125017
PZT:Nd ferroelec. thin film capacitors, sol-gel coating, LSI 102777

leakage currents continued
PZT/Ir/ZrN struct., heteroepitaxial growth of Ir/ZrN layered electrode hete oepitaxy on (100)Si substr., ferroelec. capacitor 101186
PZT-SiO_2-B_2O_3 sol-gel derived ferroelec. glass-ceramic thin films, RTA, prop 125020
$Pb_5Ge_3O_{11}$ thin film MFMOS capacitor, ferroelec. props. 104473
$Pb_{0.9}La_{0.1}Ti_{0.975}O_3$ thin films, elec./pyroelec. props. 92632
$Pb_{1-x}La_xTiO_3$ La-graded heterostruct. films, sol-gel prep. and elec. charact 104401
Pb(Nb,Zr,Ti)O_3/(La,Sr)CoO_3 ferroelec. thin films, leakage, contact electrod infl., capacitor appl. 80440
Pb(Nb,Zr,Ti)O_3/Pt ferroelec. thin films, leakage, contact electrodes infl., capaci appl. 80440
Pb(Nb,Zr,Ti)O_3/SrRuO_3 ferroelec. thin films, leakage, contact electrodes infl capacitor appl. 80440
$Pb(Sc_{1/2}Nb_{1/2})O_3$-$PbTiO_3$ thin films, prep. and elec. props. 101435
$Pb_{1-x}Sr_xTiO_3$ thin films, structural/elec. props., appls. 101413
(PbSr)TiO_3 thin films, prep., elec. props., post-annealing, DRAM appl. 11615
$Pb_{1-x}Sr_x(Zr_{0.53}Ti_{0.47})O_3$ thin films, appls., structural/elec. props., appls. 101413
Pb(Zr,Ti)O_3 films, highly preferred, low temp. prep. 70391
$Pb_{1.1}((Zr_{0.52}Ti_{0.48})_{0.975}Al_{0.025})O_3$:Al thin films prep., sol-gel method 101411
$Pb(Zr_{0.53}Ti_{0.47})O_3$ thin film orient., elec. props., chem. soln. deposition 104293
Pd/GaAs:H,S Schottky contact, sulfidation/thermal hydrogenation 103159
Pt/BaSrTiO_3/Pt MIM capacitors, dielec. const., coplanar struct. 102778
Pt/PZT/Pt capacitor PZT films conductive region eval., hydrogen plasma trea ment 104285
Pt/SBT/Al_2O_3/Si MFISFET, fab., memory window width 81276
Pt/SiO_xN_y/Si MOS capacitors, intrinsic oxide capacitance from LCR meter mea 121147
Pt/$SrBi_2Ta_2O_9$/Ta_2O_5/Si MFIS-FET memory, elec. charact. 81658
Pt/$YMnO_3$/Y_2O_3/Si capacitor, pulsed C/V meas., ferroelec. 102776
Pt/$YMnO_3$/Y_2O_3/Si gate capacitor MFISFET, MOCVD prep. 81662
Pt-$Ba_{0.7}Sr_{0.3}TiO_3$-Pt thin film capacitors, H_2/deuterium induced degrad. 10446
Ru-SrTiO_3-Ru cylindrical capacitor technol. for 0.11 μm generation DRAM 125495
Si MOS nanotransistor, gate technol., DC elec. results 103827
Si PIN detector, fab., planar technol. *(Chinese)* 110282
Si PIN diodes, switching time tailoring by induced defects, ion irrad. 115830
p-Si, annealed 1.5 MeV B implanted, defects 103248
Si detectors, 3D archit., perform. after intense proton irrad. 132419
Si detectors for high-energy phys. expts., radiation damage 132372
Si microstrip detector, field oxide FET-biased, radiation effects on charac 76128
Si microstrip detector, overhanging-metal, optimiz., test/simul. 110314
Si microstrip detectors at ALICE, develop., props. 76062
Si n-MOSFET, Ta_2O_5 gate dielec., n^+-p jn. leakage characts. 69629
Si pixel detectors, double-sided guard ring struct., neutron irrad. 121456
Si radiation detectors, leakage current, low-power CMOS SOI readout front-en 110390
Si solar cells, thin-film, cryst., batch-type LPCVD-syst. 100155
Si strip detector, double-sided, radiation hardness improvement for Belle SV upgrade 121470
Si tracker assembly for GLAST beam test engng. model 98022
Si, ultra-thin gate oxide, AC anodization and RTA 126348
Si:B CZ substr., boron implant., CMOS technol. 103282
Si:B Cz wafer based diode, high dose high energy implant., CMOS techno 115831
Si:B, PIII, annealing, low-leakage p^+n jn. form. 80991
Si:B, RTP, shallow jn. form., sheet resist. studies 115485
Si:B p-n jn. diode, high-energy implant.-induced P-well defects 103265
Si:B, sub-melt laser annealing, low temp. RTA, minimised diffusion 115483
a-Si:H, TFT technol. for polyimide substrs. 103826
a-Si:H TFTs, leakage charact., front hole channel effect 70135
a-Si:H, ion beam synthesis of low resist. contacts 69710
Si:H(He) power PIN diodes, defect effects on charact., ion implant. 115829
Si/SiO_2, GOI degrad., Cu contamination effect 91912
Si/SiO_2 interface, SILC, Monte Carlo simul. 80950
Si/SiO_2(ZrO_2)($ZrSi_xO_y$)/Hf(Zr) MOS capacitors, interacts. 80438
Si/SiO_2Cl_x syst., rapid thermal chlorinated oxides 92062
Si/$TiSi_2$/Ti syst., sputtering prep., preamorphization, salicide form. 103154
Si-SiO_2-Si MOS struct., gate dielec., struct. and electronic props. anal., theoret cal methodology 127140
Si-SiON-SiO_2-Si MOS struct., gate dielec., struct. and electronic props. anal theoretical methodology 127140
SiC, 4H, jn.-barrier Schottky diodes, high forward current dens. 92280
SiC, 6H, HV Schottky barrier diodes *(Chinese)* 126640
SiC HDP-CVD barrier/etch stop film for Cu/low-k damascene interconnect 92183
4H-SiC merged pn-Schottky diodes, fab. *(English)* 103745
4H-SiC pin/Schottky barrier diodes, multi-step JTE struct. 115821
SiC planar MOS-Schottky diode, leakage current 115828
a-SiC:H, ion beam synthesis of low resist. contacts 69710
a-SiC:H low-k diffusion barrier, Cu interconnect 115705
$Si_{0.91}Ge_{0.09}$ strained layers, gate dielec. growth, RTP/split-N_2O tech. 92031
$Si_{1-x}Ge_x$ raised source and drain P-channel MOSFETs, low temp. charact 103821
SiGe/Si vert. p-type high-mobility heterojunction MOSFET 70075
SiN ultrathin gate dielec., spin-depend. trap-assisted tunnelling current 80928
Si_3N_4 film, Cat-CVD, ULSI proc. appl. 124975
Si_3N_4 gate dielec. in P-MOSFET, JVD, intrinsic reliab. projections 103868
Si_3N_4 technols. for post-SiO_2 p-MOSFET gate dielec. in CMOS proc. 81520
Si_3N_4 ultra-thin gate dielec. p-MOSFET, hot-carrier reliab. 81357
SiN_x, high quality ultra-thin gate dielec. by Cat-CVD and catalytic annea 127137
SiN_x:F, gate dielec. films, rem. ECR-PECVD from NH_3/SiF_4 90414
SiN_x:H/Si structs., RTA, elec. props., C-V/SPV charactn. 91887
Si_3N_4/AlGaN/GaN MISHFETs 126802
Si_3N_4/SiO_2 ultrathin RTCVD gate stacks for ULSI, post-deposition treatment 69753
Si_3N_4-SiO_2 dielec. film, photo-enhanced NDR/photo-accelerated TDDB 71506
Si_3N_4-SiON ultra-thin gate stack CMOSFETs, sub-50 nm, high perform. 12674
SiO_2 direct-write ion beam induced CVD for IC post-proc. modif./repair 11597
SiO_2 film, gate oxide degrad., stress polarity effect 104255
SiO_2, nitrided thermal oxide, self-aligned SOI MOSFET 70151
SiO_2 ultra-thin gate films, leakage current through multiple breakdown paths modeling 81530
SiO_2 ultra-thin oxides, soft breakdown and hard breakdown, photoemissio microscopy 69746
SiO_2 ultralow-k mesoporous films, synthesis/film props., single-level Cu damas cene eval. 92146

ge currents continued
iO$_2$ ultrathin films, leakage curr. under prebreakdown, MOSFET appl. 70162
iO$_2$ ultrathin films on strained Si by by O$_2$/NO plasma proc., trap dens. 69751
iO$_2$ ultrathin layers, stress-induced leakage current, H$^+$ dispersive transport model 69741
iO$_2$ ultrathin oxides, failure anal., stored energy/carrier energy 127148
iO$_2$:H ISSG ultrathin gate oxide, NMOS capacitor, reliab. 103203
iO$_2$/Gd$_2$O$_3$/GaN, MOSFET, perform. anal. 103825
iO$_2$/Si struct., elec. props. 69771
iO$_2$/ZrO$_2$ thin gate dielec. stacks, trap-assisted tunnelling current 81637
iOCH low-k copper barrier films, PE-CVD deposition using HMDSO, N$_2$O and NH$_3$ 126446
iOCNH low-k copper barrier films, PE-CVD deposition using HMDSO, N$_2$O and NH$_3$ 126446
iON gate n/pFETs, 1.6 nm, low leakage/high perform./high reliab., base SiO$_2$ dens. 126777
iON oxynitrided thin films for flash memory appls., N$_2$ plasma conditions effects 68795
iON/Si film syst., liq. phase deposition, refr. index 90499
rBi$_2$(Ta$_{1-x}$Nb$_x$)$_2$O$_9$ thin films, MOCVD, ferroelec. props. 79283
rBi$_2$Ta$_{2-x}$Nb$_x$O$_9$/IrO$_x$ capacitors, Pt top electrode, thermal stabil., elec. props. 116233
rBi$_2$Ta$_2$O$_2$ ferroelec. thin film capacitors, leakage I-V charcts. 92775
rBi$_2$Ta$_2$O$_9$ MOCVD thin films, chem. stabil. 92656
rBi$_2$Ta$_2$O$_9$ film piezo/leakage defects, SPM-based nanoscale investig. 92657
rBi$_2$Ta$_2$O$_9$ for metal-ferroelec.-Si struct. without buffer layers 81695
rBi$_2$Ta$_2$O$_9$ nonstoichiometric films, relax. effects and steady-state cond. 70420
rBi$_2$Ta$_2$O$_9$ thin films, chem. soln. deposition, crystn. in N$_2$ ambient 68321
rBi$_2$Ta$_2$O$_9$ thin films, high leakage current dens., annealing 70417
rBi$_2$Ta$_2$O$_9$ thin films, pulse-introduced MOCVD, struct., elec. props. 104303
rBi$_2$Ta$_2$O$_9$ thin films with Bi$_2$O$_3$ buffer layers by liq.-delivery MOCVD, ferroelec. props. 104334
r$_{0.8}$Bi$_{2.2}$Ta$_2$O$_9$/LaAlO$_3$/Si syst., prep., ferroelec. props. 92646
rBi$_2$Ta$_2$O$_9$/SiON/Si ferroelec. MISFET, elec. props. 81275
rRuO$_3$/(Ba,Sr)TiO$_3$/SrRuO$_3$ capacitors, gigabit DRAM, CVD, electrode technols. 101329
rTa$_2$O$_6$/SiON buffer layer, ferroelec. gate FET's fab./integrat. reviews 103838
r(Ti$_{1-x}$Mn$_x$)O$_y$ polycryst. films, leakage currents 127164
rTiO$_3$-Si interface, gate dielec., struct. and electronic props. anal., theoretical methodology 127140
Ta capacitor MIS struct. model, transport charact./temp. depend. 80443
Ta/Nb high CV powder metall. capacitor anodes, electrolytes for anodization 115060
TaN diffusion barrier study using transient-ion-drift tech. for Cu detect. 92169
TaN(-polysilicon) SAG n-MOSFETs with ultra thin CVD ZrO$_2$ gate dielec. 126780
Ta$_2$O$_5$ MIM capacitors for Gbit DRAMs, oxid.-resistant a-TaN barrier 125493
Ta$_2$O$_5$ anodic thin films, defects, DLTS and conductance transient investig. 116134
Ta$_2$O$_5$ films, annealing, dielec./opt. props. 116126
Ta$_2$O$_5$ gate dielec. CMOS devices, low freq. noise, reliab. 127058
Ta$_2$O$_5$, nanolanminates, dielec. props. develop. 92676
Ta$_2$O$_5$ thin film, growth & precursor props., MOCVD/XRD 114364
Ta$_2$O$_5$ thin films, gate currents temp. depend. 126243
Ta$_2$O$_5$ thin films on RuO$_2$ and Ru bottom electrodes, dielec. characts. 104234
Ta$_2$O$_5$/HfO$_2$, high dielec. const. nanolaminates, at. layer deposition 92677
Ta$_2$O$_5$/ZrO$_2$, high dielec. const. nanolaminates, at. layer deposition 92677
Ta$_2$O$_5$-Si struct., gamma irrad. 91916
TaO$_x$N$_y$ ultrathin gate dielec., O$_3$ annealing, elec./reliab. charact. 69779
Ti/6H-SiC(:Ne) Schottky barrier diodes, fab., breakdown, reverse current *(English)* 126639
TiN PVD gate thermal stabil. under RTA, impact on CMOSFET charact. 104128
TiO$_2$ thin film, synthesis, metalorganic decomp./annealing 116133
TiO$_2$ thin films, gate currents temp. depend. 126243
TiO$_x$ MOCVD proc. for microelectronics appls. 90412
W/TiN/Ta$_2$O$_5$ gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
W/TiN/Ta$_2$O$_5$/Si syst., Ta$_2$O$_5$ gate dielec. degrad. 81647
W/WN$_x$/Ta$_2$O$_5$ gate struct., diffusion barrier, thermal stabil. and elec. props. 115428
W/WN/TaO$_x$N$_y$/SiO$_2$/p-Si nMOS capacitors, gate dielec. thermal stabil. 81648
W-TiN direct metal gate proc., damage-free, TiN at. layer deposition 126486
W-WN$_x$(TiN) metal gate electrode sputter deposition, gate dielec. charact. 70306
WC, diffusion barrier for Cu metallization, thermal stabil. 103467
WC$_x$ diffusion barrier/Cu metallization syst., phys./elec. props. 81109
YMnO$_3$ based MFSFET, annealing effect, MOCVD 101328
YMnO$_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
YMnO$_3$:Zr thin films, sol gel method, leakage current orig., heat treatment 104318
Y$_2$O$_3$/SiO$_2$ bilayer gate dielec. based MIS devices on Si, interfacial charge trapping 103201
ZnCdS, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdSe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnCdTe, ferroelec. props. in nonoxide semiconds., memory devices 104317
ZnO Schottky UV photodetectors 86531
ZnO varistors, Bi$_3$O$_{12}$ doping/annealing effects 81404
ZnO:SnO$_2$ based varistor ceramics, microstruct. & elec. prop. 101496
ZnO-Au Schottky diodes, elec. and defect props., high energy proton bombard. effects 126212
ZnOBi$_2$O$_3$:Y$_2$O$_3$ varistor ceramics, microstructural & elec. charact. 101495
ZnS TFEL device, BaTa$_2$O$_6$ interface elec. prop., turn-on charact. 97669
ZrO$_2$/HfO$_2$, high dielec. const. nanolaminates, at. layer deposition 92677
ZrO$_2$/ZrSiO$_4$, thermally stable ultra-thin silicates, jet-vap.-deposition, CMOS appls. 127023
ZrO$_x$N$_y$ prep. by NH$_3$ annealing of ZrO$_2$, elec. characts./thermal stabil. 91891
metal/Ta$_2$O$_5$/Si gate devices, elec. characts./thermal stabil. of W, WN$_x$, and TiN barriers 91910

kage, electrical *see electrical faults*

kage, magnetic *see magnetic leakage*

ky wave antennas
2.0 GHz indoor radiated-mode leaky feeder propag. 72309
30 GHz leaky MM-wave lin. slot array 94188
act. dual-beam microstrip leaky-wave antenna, asymmet. scan capability 72583
coaxial cable, radiation mode, high-order mode restraint *(Chinese)* 72444
cosecant sq. beam form. using curved leakywave struct. 83645
directional leaky coaxial cables, design and calc. 117797
microstrip leaky-wave antenna with beam-switchable scanning radiation 72552
MM-wave beam-steering using dielec.-image-line-fed grating film 83765
MM-wave dielec. slab leaky-wave antennas 117819

leaky wave antennas continued
multilayer printed periodic structs., appl. to antenna technol. 83774
NRD-guide leaky-wave antennas anal. 105910
periodic strip grating on grounded dielec. slab, LF dispersion features of complex mode 91200
periodically arranged pass. dipoles line, fields 83737

learning (artificial intelligence)
see also backpropagation; Hebbian learning; learning by example; unsupervised learning
3-machine power syst. neurocontrol with derivative adaptive critics 111878
3-phase inverter-fed IM, neural network based direct self control 123456
3D hand pose reconstruction using specialized mappings 106556
3D obj. recogn. digital holographic neural network 129923
3D vector-based image representation, data fusion 129837
24-hour-ahead load forecasting using neural network *(Japanese)* 88406
act. obj. recogn. 129857
act. power harmonic filters, adaptive learning current control algm. 133704
act. stereo 3D reconstruction, automatic neural net training 95000
act. vision syst., neural movement predictor 109680
adaptive image restoration, neural learning approach, fuzzy model-based network archit. 73251
ADPCM schemes, nonlin. predictive model computation 118093
aircraft sens. failure detect., ident., and accommodation, min. resource allocating networks appl. 111305
antenna, nonuniformly spaced lin. array, feed syst., GA *(Japanese)* 83770
appearance-based recogn. using perceptual components 107260
approx. value iter. and temporal-difference learning 78981
articulated shape, recogn. and visual model learning, accumulative Hopfield matching 107261
artificial immune syst. for network intrusion detect. 108032
ATM congestion control based on SELA *(Chinese)* 73818
ATM networks, connection admission control using modular neural networks 84824
ATM networks with guaranteed QoS, bandwidth allocat. using well-trained ANN 73813
ATM traffic control, neural network training 96008
automated meas. systs., neural net appl. 109440
automatic generation of multipath algms. in cellular nonlin. network 118299
automatic moving obj. extraction for content-based video indexing 118775
automatic speaker recogn. syst. by neural nets 118122
autonomous robot behavior, sens. fusion, control arbitration, LAPART-2 neural archit. 109709
background acoustic noise fuzzy pattern class. 73052
Bayes networks appl. to semantic understanding of consumer photographs 94827
Bayesian tree-struct. online transform. of HMMs, optimal model selection for speaker adaptation 106404
Beta basis fn. neural network in CMOS subthreshold mode 91163
biomedical image interpolation, generalized regression neural networks appl. 110899
biomedical image segmentation, expert delineation learning by neural net 121896
blind deconvolution of dyn. systs., natural gradient approach 107426
boiler main steam temp. control, self recurrent neural network, identifier, training algm. *(Chinese)* 77750
bonded struct., laser US NDE, dispersion curve, ANN appl. 114563
Boolean vector seq. pattern learning HMM, IC BIST appl. 116008
brain tissue class. from MRI using decision-tree learning tech. 122084
car license plate recogn. syst., neural network based 84566
CDMA syst. sig. recovery, adaptive learning 107773
channel equalization, probabilistic neural net equalizer 107713
class., multi-attribute/multicriterion, reducts and rules 84074
cluster-based neural network, pruning method 75146
CMOS analogue reinforcement neural chip, design & implement. 91140
coal-fired power station NO$_x$ emission MLP prediction model 133863
cocktail party problem, neural net approach 84046
coffee QC using electronic nose, PCA & MLP 109828
cognitive packet networks, design and perform. 119314
color textures, learning and generating, recurrent multiple class random neural networks 118296
combinat. multi-level networks synthesis using inform. theory method 79822
commun. network confidence based dual reinforcement Q-routing 107978
complex real time recurrent learning fully recurrent neural network, state space model 107712
conf., disordered and complex systs., London, Eng. (Jul.2000) 78460
congestion arbitration and source problem prediction using neural nets 119602
connectionist learning, neural nets/opt. thin-film multilayer model comparison 104853
controlled syst. lang. ident., modelling, control and anom. detect. 112731
convergence props. of Bayesian evol. algms. with pop. size greater than 1 90053
coronary artery disease diagnosis, ECG exercise test, RBF network 87422
cortical sulci, automatic recogn. using cluster of neural networks 87577
CPS synthesis, ANN model 69007
daily peak load forecasting, holidays adjustment, ANN model 111982
DAQ sens. agents, human behavior emulation 120667
data network adaptive agent based routing 74041
DC motor drive fault detect. using self-organizing neural nets 113085
DC series motors, neural networks using feedforward neural network 99680
DCT-based image coding method using random neural network 95029
develop. robot, grounded auditory develop. 106338
dictionary learning by adding hyperspherical templates *(Japanese)* 73449
digital video server, automatic recording agent 131761
distortion-invariant target recogn. syst. simul., learning VQ neural network 107234
distrib. substation/feeder load forecast using neural nets 133654
document page class. via struct. based features 84084
domestic vision-based robot, natural lang. based instruction 129392
drifting games 67748
DSP implement. of AOM, defects detect. in textile material 90955
Earth-space rain atten. model based on EPNet-evolved ANN 117696
ECG beat class. by hybrid neural network 110639
ECG ectopic beats detect., auto-associative neural network appl. 98217
EEG pattern recogn. using LVQ neural networks 121955
EEG sigs., cognitive task prediction using parametric spectral anal. 110634
EEG-based brain-computer interfaces, motor imagery control 111185
Egyptian next-day peak load forecasting using fuzzy neural net 99308
elec. load forecasting by fuzzy Bayes predictor 111983
elec. power market economic destabilisation for profit 111711
electronic nose, Forane 134a discrim., time reduced modelling param. 97550
electronic pre-proc./post-proc. procedures for opt. neural networks 93271

learning (artificial intelligence) continued
entropy minimization for semi-supervised terrain class. 94812
entropy-based learning hardware organization using FPGA 80150
error-correcting output coding learning machines, codeword bit error interdependence 117956
face anal./synthesis 73200
face ident., 1 spike per neuron, degrad. resist. 118770
face ident., online lin. discriminant anal. 84545
face recogn. in similarity space under varying head pose 129810
fast-learning noniterative neural network in pattern recogn. 118683
faulted overhead power lines, buried pipelines interf. calcs. 77438
feature discovery, deterministic generative models 129737
feature eval., quadratic mutual inform. 105987
feature selection, inform.-theoretic algm. 94205
feedforward neural network archit. develop., factorial design 114912
fighter aircraft, nonlin. tuned RBF neurocontroller design 111641
finline in MM-wave IC design, knowledge-based ANN models 80161
Fisher nonlin. discriminant using kernels 118952
football goal detect., SVM appl. 106523
FPGA-inspired neural nets, on-chip learning 102466
fuzzy classifiers design, two-level correction method 73617
fuzzy robot navig. by human visual perception mimicking, terrain traversability 129530
fuzzy set shape in adaptive fn. approx. 100821
gas turbine engine fault diagnosis using feedforward neural nets 112319
generalization error of randomized lin. zero empirical error classifier, non-centered data case 84181
generalized neural trees for outdoor scene understanding 94816
genetics-based machine learning algm., optim. in linguistic fn. approx. 90055
global congestion avoidance using decentralized adaptive agents 130848
hand modeling/anal./recogn. 73477
handwriting indiv. validation 129929
hierarchical neuro-fuzzy call admission controller for ATM networks 96120
high-dens. mag. recordings, neural net based bit-detect. 104530
highly nonlin. syst. modeling/prediction, adaptive-neuro fuzzy inference 118956
HMM based speech audio/visual features fusion 94390
human behaviors, gender recogn., neural ensembles 107153
human face detect. using fast modular neural nets 73503
hybrid 2D phase unwrapping by fuzzy clustering for SAR images 86229
ICA, indeterminacy elimination 107313
IM drive, three-level inverter, DTC, ANN as switching vector selector 134450
IM model ref. adaptive fuzzy speed control approach 123479
IM nonlin. control, parallel neural network estimator training 123459
IM sensorless control, Kalman filter neuro obs. 77869
image coding, iterated transform. theory, Kohonen neural networks and DCT 73331
image de-mixing, ICA vs principal component anal. 106484
image deblurring, projection pursuit learning network, gating network fns. 106772
image impulse noise suppression using adaptive L-Filters 106477
image proc., fuzzy tunable filter based on differences between pixels 118233
image retrieval, multiresolution-histogram indexing/relevance feedback learning 95194
image retrieval based on similarity learning 94936
image stats. learning for Bayesian tracking 106657
independent component anal. estim. by neural net 119081
induction servomotor drive robust control scheme 78212
induction servomotor drives, robust posn./speed neurocontrol scheme 134498
intell. US flowmeter, improved meas. & calib. facility 121058
interf. cancellation with nonlin. proc., hyper RBF neural networks 107419
invariant gender ident. 107284
invariant obj. recogn. with error correction and temporal difference learning 73530
inverse syst. (many-valued function) approx. by neural network 79022
IR imaging, appl. of ensemble learning ICA 121879
Jijo-2 office robot, speech recogn., dialogue mgt., and stat. learning 129393
K-nearest neighbor algm. for data mining, stat. approach 95564
k-nearest neighbor learning, fast binary image resoln. increment 94652
land cover class., nonparametric machine learning 122612
land mine detect., sens. fusion archit., limited training data sets 77009
license plate serial no. segmentation/recogn. *(Japanese)* 118776
linguistic clustering algm. for fuzzy prototype induction 129597
liver CT images, computer-assisted diagnosis, modified perceptron algm. 76511
liver X-ray diagnosis, simulated annealing with logarithmic cooling schedule 110921
local evidence learning for shading and reflectance 106583
local stereovision matching, ADALINE neural network use 118750
locally recurrent neural net., Chua cct. attractors learning 79534
logic synthesis, Hamming clustering 101884
LOLP calc. using learning VQ 77141
lossless data compression, perceptron based neural network predictors appl. 73576
low complexity (turbo) classifiers in high dimens. feature spaces 128933
maneuvering target, online tracking, neuro-fuzzy adaptive filter, linguistic method 107505
maneuvering target tracking, neuro-fuzzy adaptive filter 120400
Markov decision procs., av. cost, learning algms. 124486
microwave cct., neural network model, robust algm. 102598
minimisation, line search algm. avoiding small local min. 100964
mixed time scale recursive algms. 95702
mobile robots, biologically-inspired visual landmark learning 75643
modulation class. by wavelet decomp. entropy anal. 118857
MOS analogue neural networks, fault-tolerant training in presence of transistor mismatches 68988
MRI, ANN reconstruction from noisy sparse images 76428
MUGSHOT database, profile views, hybrid face recogn. systs. 107200
multi-fn. radar, detected target priority assignment 77108
multi-machine power syst., sync. generators, fuzzy control learning 88714
multi-machine power syst. ident. by online trained neural net 111660
multi-view face detect. and pose estim., kernel machine based learning 107187
multiclass discrim., posteriori codes 106478
multidirectional associative memory with hidden layer *(Japanese)* 90901
multimachine power syst. turbogenerators, adaptive neurocontrol scheme 111898
musical instrum. separation using multiple-cause neural networks 118061
mutation buffering capabilities of hypernetwork model 102860
Nash equilib. games, Bayesian learning eval. expt. 67751
natural-sounding vowel synthesis using nonlin. dyn. model 106414
network mgt., traffic prognosis, knowledge discovery *(German)* 119472
network mgt. fns. using learning database syst. 119464

learning (artificial intelligence) continued
neural network based fuzzy logic model for target ident., design 96908
neural network for automatic trajectory plotting 95466
neural networks learning with GA-based instance selection 129661
neuro-dyn. prog., research, survey *(Chinese)* 113954
neuro-fuzzy filters based on recursive proc. and genetic learning 130094
neurofuzzy systs., num. info. process., hardware implement. 114907
neuron-type conducting polymer-based network-type device, props. *(Japane* 102850
nonlin. ICA using ensemble learning, theory 107448
nonstationary seq. decision making, hidden-mode Markov decision procs. 677
normal form SISO nonlin. systs., neural network adaptive robust control 1130
obj. orient. and shape recogn., rot. spreading associative neural network ap 107152
obj. recogn., modular neural network 118671
obj. surface shape from shading meas. by neural net, indust. appl. 120644
obj.-based image segmentation, perceptual importance charactn. 94788
on-line speaking rate estim. using GMM/NN approach *(English)* 73084
online dyn. security class. using probabilistic neural nets 99260
opt. networks, fault location methods review 120233
pattern recogn. with novel SVM learning method 118703
physiological response to music, reinforcement, neural net 110656
post-nonlin. source separation, hard switching vs. soft learning 73630
power infrastructure defense, multi-agent systs. adaptation 111720
power syst. load forecasting, ANN, hybrid learning algm. *(Chinese)* 99316
power syst. security assess., ANN, feature selection, Fisher discrim. 133550
power syst. stabil. enhancement, variable series capacitor, recurrent NN *(Jap nese)* 99291
power syst. static security assess. using query-based learning 111817
power syst. transient instabil. prediction using fast-learning algm. 111888
power systs. off-line fault diagnosis, ANNs 99428
power transformer protection using swarm-intell. trained neural network 1235
power transformer thermal modelling using intell. learning 99729
power transformers insulating oil diagnosis using neural nets 134135
predictability, complexity, and learning 124521
prediction of gaseous emissions using neural networks 99032
pro-act. network fault mgt. using reinforcement learning 96041
probabilistic logical inference using quantities of DNA strands 102858
probabilistic models, learning VQ algm. 117969
probabilistic tracking in metric space 106595
project planning/mgt., automation, mobile agents, machine learning 89809
PWM VSI fed IM drives, steady-state power saving, RBF neural netwo 113063
RBF neural net based nonparametric meas. model *(Chinese)* 97116
real-time anom. detect. using soft-computing techs. 85232
recogn. of objs. normalized in log-polar space using Kohonen networks 12990
recommendation archit. for telecomm. network mgt. 119486
reconfigurable ANN with GA training, cct. design *(Chinese)* 102481
rect. patch antenna design using ANN model 72504
recursive autoregressive speech anal. based on quadratic classifier 118070
reinforcement learning, fuzzy, game and search appls. *(Japanese)* 113867
relational graph matching for human detect. and posture recogn. 95423
relevant features selection in fuzzy genetic learning algm. 84257
rem. sens. data, parallel fuzzy inference syst. 133370
rem. sens. image classifiers, supervised, combination based on indiv. class pe forms. 122723
RF/microwave neural models, iter. multi-stage algm. for robust training 6910
RGB image color quantization, dyn. archit. self-organizing map appl. 107022
RIE syst., neural net-based adaptive proc. control 115622
RoboCup, AI research perspective 75664
robust head pose estim. by machine learning 94795
saccade related EEG component, adaptive nonlin. PCA 87432
SAR ATR improvement, virtual neg. examples incorporation 75152
SAR polarimetric data and self-organizing map for urban features extractio *(Japanese)* 96982
second-order HMM, face recogn. appl. 84634
sectored snakes, CT image learned-energy segmentations 118718
secure commun., multi-param. modulation, Lorenz chaos 72737
self-organised mfg. scheduling, agent learning *(Japanese)* 113804
self-organizing neural net analog cct. based on mutual inform. 80149
self-supervised learning for obj. recogn. based on kernel discriminant-EM algm 107160
semi-supervised induction of fuzzy rules for image segmentation 129589
short-term load forecasting using ANN 122931
side-scan sonar imagery, robust real-time mine class. 77049
sig. class. and pattern recogn., joint time-freq. anal. based hybrid neurosyste *(Chinese)* 118936
signalling games, evol. learning 67752
sleep spindle detect., fuzzy reasoning and autoassociative MLP methods 12192
slow fluct. radar targets, neural network based detect. scheme 107573
speaker ident. for security systs. using pRAM neural net archits. 73045
speaker recogn., dyn. synapse based neural networks, wavelet preprocessing 106393
speaker verification, polynomial networks, adaptive training 106395
specific sig. extraction with temporal struct. 107418
speech recogn. by dyn. synapse neural net 118123
stochastic approx., violated Kushner-Clark conditions, anal. 78817
structural learning from iconic representations 95444
supervised fuzzy clustering for RBF neural networks training 129595
supervised fuzzy/Bayesian class. of high dimens. data, comparative study 94538
surfaces geomtry estim. in natural scenes using learning theoretic method 73226
sustained neurons in fly, analogue IC design 91134
SVM analog/digital hardware realisation 102490
sync. generator, shorted field-turns, on-line NN diagnosis 77850
sync. lin. motor servodrive, adaptive neural control 78203
TDMA burst transms., support vector classifier based equalizer 107722
TDMA systs., lin./nonlin. space diversity combining algms. 119993
TDNNs, time delay dyn. nonlin. neural networks, learning algm., appls. *(Ger man)* 114910
telecom. customer behavior prediction, learning/neural 108000
telecomm. network traffic prediction by neural net ensembles 108009
temporal attention model for on-line learning in mobile robot 107592
test feature classifiers, high-generalization ability *(English)* 118463
test feature classifiers, perform. and appls. 106433
text-to-speech synthesis, prosody control, ANN topol. optimisation 84042
tomographic data, direct proc. estim. using artificial neural systs. 106504
tomography of gravel-air-seawater mixture, neural network reconstruction 109471
trajectory tracking and predicting, CNN, VLSI 102455

ing (artificial intelligence) continued
ansformer reson. phase-shifted PWM DC-DC converter, X-ray generator appls. 112653
urbine fast valving control, ANNm conjug. gradient algm. training 77741
rbogenerator continually online trained excitation/turbine neurocontrol scheme 112445
ltimatum bargaining adaptive learning vs. punishment 124491
nified Lyapunov convergence of both unsupervised ICA and supervised PCA learning, image de-mixing 107138
nivariate sig. denoising, VC theory 107568
JS weld inspection sigs., LEARN++ incremental learning algm. 100634
ser models for intell. telephone assistant 119511
JXO remediation, sens. fusion, training algms., clutter effect 77010
VBR MPEG-2 video sources, adaptive trained neural networks for traffic prediction 118616
ert. jump height prediction, EMG charact. and ANN appl. 132576
ideo summarization using reinforcement learning in eigenspace 94643
iew-based obj. representations using RBF networks 107245
isual learning by integrat. descriptive/generative methods 106907
isual servoing invariant to changes in camera intrinsic params. 107171
isually cluttered scene search time, fuzzy logic approach 133394
VLSI fab. proc. optim., feedforward neural networks appl. 113817
VLSI neural network with digital wts. & analog multipliers 91139
owel synthesis, online EM algm./IIR filter, neural 118120
waste heat recovery sect. gas turbine, feedforward neural net simul. 112323
wavelet compression improvement with neural networks 107070
weldment intell. US flaw class., perform. enhancement 101614
Nb-Ti supercond. wires, prod. scheduling, quality improvement 67690
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033

ning automata
3D computer vision, SVM using geometric alg. 106666
daptive bus arbitration for scalable shared-medium ATM switch 73787
ar license plate recogn. syst., neural network based 84566
CDMA syst. sig. recovery, adaptive learning 107773
class., SVM training, and well-log data appl. 76827
color images, invariant face detect., orthogonal Fourier-Mellin moments and SVM appl. 95445
computationally efficient face detect. 107190
content-based image retrieval with relevance feedback 95586
DS-CDMA sigs., multipath channels, SVM multiuser receiver 73864
face authentication based on elastic graph matching, SVM appl. 84609
face detect., SVM on Walsh fn. space 129893
face recogn. with SVM, global vs. component-based approach 107189
Fisher nonlin. discriminant using kernels 118952
foetal wt. estim., support vector regression appl. 110707
football goal detect., SVM appl. 106523
gender class. using SVMs 95509
human behaviors, gender recogn., neural ensembles 107153
image class. by SVM 84247
image retrieval based on similarity learning 94936
image segmentation with SVM 94548
ischemia detect., self-organising map appl., supervised learning suppl. 76300
land mine detect., sens. fusion archit., limited training data sets 77009
mammography, computer-aided, best-partial-match dist. as improved metric space for pixel signatures 84110
occupant detect. using SVM, intell. airbags 100310
pattern recogn. with novel SVM learning method 118703
PCB inspection using SVM 80513
radar target recogn. based on SVM 75078
robust head pose estim. by machine learning 94795
SAR ATR, use of SVM 96925
SAR ATR improvement, virtual neg. examples incorporation 75152
SAR imagery, target discrim. 109277
shape deform., SVM regression and appl. to med. image segmentation 110509
speaker ident. systs. testing using SVM, decision strategy *(German)* 73090
SVM and multiple hypothesis test problem 130166
SVM for lung cancer diagnosis 87807
telephone traffic routing simul. using learning automata 119499
text-independent speaker recogn., continuous dens. SVM 106409
underwater target discrim., neural network class. paradigms 77045
videoconferencing, head pose estim. by multiple cameras and microphones 74420
zero-sum repeated game with random pay-offs, Bush-Mosteller learning 124483

rning by example
3D interconnect, crosstalk predict. via neural net-based topol. decomp. 92446
arith. compression, tree and string langs. appl. 72919
deflection yoke prod., diagnosis and rectification, hybrid knowledge acquisition and CBR 113447
face detect. by learning from pos. examples 95420
face image, automatic extraction of eye and mouth fields using eigenfeatures and MLP 129883
image resoln. increase, binary operator design, k-NN learning 118456
MRI data, multi-channel, colouring 110877
SAFARI, struct. approach for automatic rule 106434
semicond. mfg. problems solved by data mining 67517
speech recogn., ATROS syst., fast phoneme look-ahead 73074
structural descriptions learning of graphic syms. using deformable template matching 129602
time-series pattern matching using deformable Markov model templates 67765
versatile learning by sample, stat. pattern class. in biomedical images 121889
wind power generation, AI appl. 123253

rning systems
see also adaptive systems; backpropagation; cognitive systems; Hebbian learning; learning (artificial intelligence); learning by example; self-adjusting systems; unsupervised learning
2D shape model automatic constr., brain appl. 87607
ATM switches, ABR explicit rate algm., stat.-learning control 73781
biologically inspired autonomous robot, approach-avoidance behaviors learning 75628
const.-voltage const.-freq. PWM DC/AC converter, repetitive learning controller 88941
DC servo motor, real-time speed control, PID-learning controller *(Korean)* 112733
eddy current sens. response, ill-conditioned mixtures, Bayesian anal. 110037
edge-preserving filters using layered fuzzy controllers with learning 118333
error-correcting output coding learning machines, codeword bit error interdependence 117956
exponentiated gradient algms. convergence 73594
GA, hybrid, random sig.-based learning/simulated annealing 124606

learning systems continued
image denoising using wavelet thresholding/model selection 94801
matrix problems, NP-hard, and robustness, probabilistic solns. 100738
MPOA flow class. design and anal. based on neural network 95872
multimodal ICA, feature extraction from multiple inform. sources 94776
obj. recogn. from curvilinear motion estim. 129845
OFDM systs., nonlin. distortion compensation 72731
pattern recogn. algms. based on space-filling curves/orthogonal expansions 84595
pers. mobility mgt., universal model 96475
predictability, complexity, and learning 124521
Rademacher penalties, structural risk minimization 84701
RTP, wafer temp. uniformity, optimal iter. learning control 126268
SAR ATR perform. prediction, validation using learned distortion models 86133
semicond. foundry fab, priority-based tool capacity allocation 89951
three-phase CVCF PWM inverter, digital repetitive learning control 99826
US lin. piezoelec. motors, micro-positioning, learning nonlin. PID controller 77905
wireless cellular networks, mobility-based predictive call admission control/bandwidth reservation 120018

least mean squares methods
2D image sigs. with missing obs., real-time reconstruction 129467
2D shapes, accurate detect. 107122
2D sigs. restoration using autoregressive models 106453
3D shape reconstr. of hybrid reflectance by LMS algm. 106684
3D SPECT, optimal non-iter. reconstr., uniform atten. 132858
3G CDMA commun., interf. mgt. methods 96549
ABLMS equalisation, nonuniform amplit. division 107679
adaptive and blind adaptive DFE, design realization *(Chinese)* 95818
adaptive antenna array, spatial/temporal receiver, broadband wireless syst. 74534
adaptive array antenna, DFT and LMS hybrid adaptive algm. 105964
adaptive beamforming using affine projection algms. 73577
adaptive equalization in OFDM syst. *(Chinese)* 73838
adaptive equalizer, QAM, CPLD device *(Chinese)* 130255
adaptive feedforward microwave amp. lin. using analog circuitry 91272
adaptive filtering for time-varying systs. *(Japanese)* 84721
adaptive filters with LMS algms., DC bias effects 107488
adaptive FIR digital filter, modified normalized LMS modelling algm. 118976
adaptive FIR filter, breeder GA for syst. ident. 102397
adaptive iter. multiuser parallel decision feedback with different code rates, perform. 131292
adaptive line enhancement via subspace tracking 107546
adaptive LMS block Volterra filters 118997
adaptive LMS sig.-depend. L-filters using impulse detector as switch 73302
adaptive modulation for multiple antenna systs. 106062
adaptive noise canceller, normalized LMS algm. *(Chinese)* 130018
adaptive notch filter with subband filtering, algm. convergence 95685
adaptive order-stat. LMS filters 73303
adaptive parallel filter struct., 2-by-2 LMS algm. based, simul. *(Chinese)* 130108
adaptive per-survivor proc. 107404
adaptive SS commun. over multipath dispersive channels 84900
adaptively optimized DFE for convolutional coding 130278
algm. with saturation nonlin., adaptive filter output, stochastic anal. 84722
AR equalization with const. modulus criterion 119191
asynchronous TDD systs., adaptive array for high-power CCI reduction 108877
audio sigs., low delay perceptually lossless coding 106377
autonomous vehicle, real-time lane detect., image recogn. 134555
bathymetric mapping, SPOT satellite data anal. 99024
bistable meas. devices, noise tuning, neuro-fuzzy approach 120649
BLAST perform. improvement using space-time block codes/turbo decoding 72867
blind channel equalization and ε-approx. algms. 130268
blind multiuser detect., second-order nonstationarity based, subspace approach 107605
blind sig. separation from noisy lin. mixtures 118823
block-exact fast affine projection algm. *(Japanese)* 95663
brachytherapy source localization, 3D tomosynthetic image restoration 110941
burst satellite commun., joint carrier phase and sym. timing sync. 109021
car-following collision prevention, adaptive network fuzzy inference syst. 113119
cdma2000 reverse link, adaptive array antenna with no phase calib. 108734
CDMA, coded, lin. front end for iter. soft interf. cancellation/decoding 131070
CDMA, combined nonlin. MMSE beamforming and interf. cancellation 84898
CDMA, low-complexity interf. mitigation on vector channels, design/anal. 105803
CDMA, sync. systs., bandwidth-constrained signature waveforms for network capacity maximisation 84891
CDMA adaptive LMS detect. with Gram-Schmidt pre-proc. 119208
CDMA asynchronous band-limited systs., discrete sufficient stats. 107733
CDMA asynchronous multicarrier syst., partial sampling MMSE interf. suppression 105805
CDMA asynchronous systs., signature seq. optim. 131287
CDMA coded dispersive wireless channels, soft iter. multisensor multiuser detect. 84796
CDMA design through asymptotic anal., fading channels *(English)* 73856
CDMA forward link, reduced-rank adaptive MMSE equalization 108919
CDMA mobile radio systs., joint detect. and diversity techs. 108934
CDMA multi-carrier syst. with virtual carriers over dispersive channels, subspace based blind detector 107600
CDMA RAKE receivers, channel estim. errors and Doppler diversity 108920
CDMA space-time spreading multilayered syst. 74582
CDMA spectral efficiency, freq.-flat fading impact 74519
CDMA subspace-based multiuser detect., perform. 130290
CDMA sync. systs., iter. constr. of optimum signature seq. sets 85867
CDMA systs., adaptive array antenna with optimally form. beams, design 83669
CDMA systs. with multiuser receivers, optimum modulation/multicode formats 120016
CDMA wireless systs., robust constrained lin. receivers 85477
channel equalizer, block transm. syst. 107686
chaos commun. using unknown input observers 94232
chip-level equalization at cell edge 84860
chirp interf. adaptive cancellation method *(Chinese)* 129943
CMOS adaptive filter implement. using switched-current tech., FIR transversal cct. 80120
CMOS mixed-sig. equalizer for Gigabit Ethernet on copper wire 108369
co-channel sigs. detect. and copy, space-time proc. 108554
code division random multiple access systs. with packet combining, anal. 107759

least mean squares methods continued
coded OFDM/BFDM systs., predictive equalization of time-varying channels 74697
combined projection/correl. LMS sq. algm. for channel estim. with uncoded/chaotic coded speech 129388
complementary pair LMS algms., perform. improvement 119016
computer networks, optimal control of queues 130870
concurrent blind deconvolution for channel equalization 130273
constrained detect. for noncoherent nonlin. multiuser commun. 107606
convergence behavior of LMS algm. in subband adaptive filtering 73699
cross-correl. p-vector influence on LMS convergence 118873
cross-updated act. noise control syst. with online secondary path modeling 84679
crosstalk-robust struct. based on sub-band noise estim. 129368
DCTLMS algm. with selective coeff. updating, anal. 107385
decision feedback equaliser, PR-QMF orthogonal transform, optim. *(Chinese)* 95811
delay LMS 1D and 2D adaptive digital filters, systolic archits. 68941
deterministic sig.-noise models, suboptimal robust estim. 107396
DFE, interior point least sq. estim. 85657
DFE coeff. placement algm. for sparse reverberant channels 107674
DFE hybrid struct. for CAP-based DSL systs., perform. 95814
digital cellular radio, optimum combining diversity finite-length DFE 119967
digital image compression using directional sub-block DCT 95260
discrete systs., optimal self-tuning filtering/prediction 129978
Doppler radar data, spin estim., new method 75095
DS-CDMA, coded asynchronous syst., turbo soft interf. cancellation 119228
DS-CDMA, limits of coded transm. over fading channels *(English)* 73857
DS-CDMA, noncoherent MMSE interf. suppression 130304
DS-CDMA, Schur-saddle fn. property 131234
DS-CDMA asynchronous robust space-time multi-user receiver 74581
DS-CDMA asynchronous systs., Kalman filter based space-time receiver 108599
DS-CDMA blind multiuser detector, sing. values and sing. vectors 95730
DS-CDMA coded asynchronous systs., long vs. short spreading seqs. comparison 108859
DS-CDMA coded systs., multicell uplink spectral efficiency 108856
DS-CDMA coherent syst., MMSE interf. suppression/turbo coding 106157
DS-CDMA commun., lin./DF joint detectors using periodic long codes 130170
DS-CDMA detect. scheme, decision directed algms. 130288
DS-CDMA flat fading channel blind adaptive MMSE receiver 107753
DS-CDMA MMSE multiuser detect., perform. anal. 95840
DS-CDMA mobile radio, adaptive parallel interf. canceller *(Korean)* 120011
DS-CDMA multi-user detect. receiver/antenna array combination 85621
DS-CDMA multipath channels, blind adaptive multiuser detect. 95839
DS-CDMA multiuser syst. with iter. MMSE demodulation, coding-spreading trade-off 94229
DS-CDMA RLS-based adaptive multicode syst. 96469
DS-CDMA sigs. in multipath channels, adaptive min.-BER lin. multiuser detect. 73722
DS-CDMA systs., constrained optim. 108616
DS-CDMA systs., multistage semi-blind adaptive multiuser detector for reverse link 131227
DS-CDMA systs., semi-blind spatio-temporal equalization/multiuser detect. 131132
DS-CDMA systs., throughput enhancement scheme using lin. multiuser detectors 108676
DS-CDMA systs. in multipath fading channels, adaptive multiuser DFE with Kalman channel estim. 74746
DS-CDMA tracking mode receiver with joint channel/delay estim./MMSE detect. 131056
DS-CDMA wireless commun., smart antenna PN code acquisition 108735
DS-CDMA with lin. interf. suppression, pilot-to-data power ratio optim. 85800
DS-CDMA with MMSE decision feedback, transmitter diversity 74665
DS-CDMA-based adaptive antenna array, online calib. algm. 105977
DS/CDMA, block-sync., struct. multiuser channel estim. 119981
DS/CDMA cellular radio, adaptive successive interf. canceler 119984
DS/CDMA multirate commun., multiuser detect. 107571
DS/CDMA systs., multiuser detect. with cell diversity 84790
DSP for joint time-freq. adaptive echo canceller 107565
dyn. adjust. of LMS step size based on variances of wt. fluctts. 73703
ECG, adaptive canceller of 50 Hz interf., FPGA appl. 110623
echo canceler design, freq. domain extended correl. LMS 73015
equalisation of time variant multipath channels using amplit. banded LMS algms. 73823
equalizers for sparse channels, perform. 107704
evoked pots., single trial estim., amplit. estims. comparison 98249
evoked pots. latency change estim., algms. perform. comparison 76256
fading channels, iter. decoding scheme for pilot-assisted modulation 74699
feedback commun. over fading channel, power control 119975
FIR adaptive filters, word-length optim. 107563
FIR delay LMS adaptive digital filter, systolic archit. 91084
FIR DFE for wireless data commun., fast optim. 73841
FIR MMSE-DFE for multi-user commun. 107711
fractionally spaced DFE with subband decorrelation 107705
freq.-domain ANC syst. using optimal step-sizes *(Japanese)* 107417
freq.-time mixed domain optimal filter for moving obj. extraction 106674
FSR-LPTV filtering for blind equalization and interf. rejection 130263
generalized space-time lin. precoder/decoder design using weighted MMSE criterion 106140
geophys., MT automatic 1D inversion 122565
gradient-type adaptive filters, pipeline implement. 84765
GSM receiver acoustic echo cancellation using simplified Volterra filters 130059
GSM systs., freq. sync. acquisition 85784
GSM/EDGE syst., adaptive PSP-MLSE receiver in fast multipath fading channels 85684
hands-free telephony, nonlin. acoustic echo canceller 118084
hearing aids, variable step-size of LMS algm. for acoustic feedback reduct. 73017
heterog.-driven hybrid denoising 118180
image adaptive noise canceling and edge detect. filter 107294
image compression, biorthogonal wavelet filters appl. 95190
image compression, wavelet upper bounds on 2D Lipschitz class and zerotrees 118560
image compression by Gabor expansion 84392
image proc., line fitting using Hough-like procedure 73304
image restoration, recursive implement. of constrained LMS L-filters 73305
implement. of LMS algm. 114812
indoor wireless appls., perform. of turbo-coded MC-CDMA 108754
induction machine params. estim. using continuous-time observer 134014

least mean squares methods continued
instantaneous multivariate EEG coherence anal., adaptive autoregressive mode 87414
interf.-resistant LPTV-MMSE equalisation 119196
ISI adaptive noncoherent lin. min. equalization for MDPSK/MDAPSK sig 107690
jitter mgt. algms., perform. eval. 130200
JPEG-LS diagonal edge detect., low cost algms. 118528
jump Markov lin. systs., iter. algms. for state estim. 73595
lin. multiuser receivers, perform. 74524
lin. parallel interf. cancellation, large syst. anal. 128805
LMS adaptive filters using distributed arith. *(Japanese)* 80086
logarithmic CMOS sens., nonlin. illum. depend., model, calib. 120893
logistic-lin. and LMS equalizers, adaptive combination for speed-perfor improvement 119174
long adaptive LMS filters, wave theory, tapped-delay line type 84727
long LMS adaptive filters, wave theory 130065
lossless image coding, adaptive predictor combination 118564
lossless still image coding using min.-rate predictors 84457
low-complexity turbo-equalization for diversity channels 72932
lower atmos. wind profiler, wind speed estim., GA use 122638
Markov jump systs., min. MSE estim. 73680
MC-CDMA over dispersive channel, subspace based detect. 84782
MC-CDMA over multipath fading channel, perform. of freq.-time MMSE equa izer 107764
mfg., quality diffusion optimal regulation 89890
MIMO blind deconvolution, cumulant-based inverse filter criteria props./algms./appl. to DS/CDMA systs. 84853
MIMO channels, blind estim./equalization, multidelay whitening 107689
MIMO lin. freq.-selective channels, finite-length space-time equalisers 10769
MIMO wireless syst., layered space-time coding/sig. proc. 119862
MISO systs., channel tracking using EM algm. 131096
mixed sig. test bus, test waveform shaping by pre-equalization 102418
MLSE equalizer in time-dispersive channels based on adaptive channel estimato 108761
MMSE equalizers for freq. selective multipath CDMA forward link, perform eval. 107696
MMSE error threshold for noisy wavelet coeffs. of piecewise smooth sigs., asym ptotic behavior 73588
MMSE-DFE receiver with spatial diversity, design and anal. error perform 85808
MMSEC-RAKE receivers with diversity branches resoln. reduction anal./simul./appls. 85721
mobile radio bandlimited procs. lin. prediction 85658
mobile radio integrated echo/noise canceller 119833
momentum LMS algm., tracking perform. for chirped sinusoidal sig. 119021
monochrome video seqs., spatiotemporal filter for noise reduction 106765
Morse code recogn. for users with phys. impairments, neural network appl 87933
motion estim., pel-recursive algm. 129786
MPEG-2 video compression, illum.-invariant algm. for subpixel-accuracy stabili zation 95147
multi-aperture SAR, proc. for fine-resoln. images of arbitrarily large extent 96965
multi-carrier CDMA receiver, low-power MMSE archit. 108563
multicarrier commun. systs., optimal MSE DFE 85524
multicarrier sigs. in fast/selective Rayleigh channels, channel estim./detect 108518
multiple adaptive filters in tandem, perform. 130128
multiplierless adaptive filters using distributed arith., high-perform. VLSI archit. 84764
multirate sig. estim., stat. inference problem 119063
multisensor syst. target tracking filter for proc. time-delayed data *(Japanese)* 130111
multiuser detect., pilot-channel based adaptive algm. 74694
multiuser sig. design/detect. using interf.-resistant modulation 130156
NMR spin syst. ident. by nonlin. adaptive filtering 73661
noise-constrained algm. 107375
noisy speech, noise PSD estim. 84008
noncoherent LMS algm. for noncoherent seq. estim. 73830
noncoherent seq. estim. combined with noncoherent adaptive channel estim. *(English)* 107719
nonlin. single-/multi-fractal sigs., state-space equilib. based Volterra predictor 95691
nonrecursive digital filter synthesis with sig.-interf. spectrum overlap 119040
normalized least mean fourth algm., convergence behavior 107353
OFDM mobile systs., receive diversity 96434
OFDM sigs. nonlin. predistortion over fading channels 74567
OFDM systs., amplit. and phase predistortion 72763
OFDM-CDMA syst. with various proc. gains, perform. 74654
OFDM-dedicated short range commun. modem, equalization 85755
optimal adaptive multiuser detect. in unknown multipath channels 84771
optimal estimator for source codec params. using intra-frame/inter-frame correl. 131018
optimum error nonlin. in LMS adaptation with i.i.d. input 118874
Orchard-Elliott pattern synthesis algm. 105924
Orchard-Elliott pattern synthesis algm. by pseudo-inverse and LMS 117838
partitioned freq.-domain block LMS algm. 107519
perfect reconstruction cosine modulated filters and modified DFT filter banks, prototypes 80097
picture error concealment interpolation algm. based on MMSE *(Chinese)* 73365
pipelined ADCs, background digital error correction tech. 79981
polarized polymer film, order param. and polarized lifetime *(Chinese)* 71329
precoder-assisted channel estim. in complex projective space 84867
product block codes, LMSE criterion based iter. decoding 129113
progressive quantization, distortion bounds and channel code rates 129213
PSP-based decoding for space-time trellis code, time-variant wireless channels 83836
QS-CDMA, timing control algm. anal. 107746
quadratic adaptive Volterra filters, pipeline archit., NLMS algm. 91095
RAKE selective reception over Rayleigh fading channels, optimum spreading bandwidth 85460
receivers for CDMA systs., blind startup 85476
reduced-rank multiuser receiver for sync. CDMA 108526
reliab. modelling, Weibull params. estimators comparison 113780
rem. sens., robust pixel unmixing 122614
resource allocating network seq. prediction using orthogonal techs. 114091
robust adaptive filtering in impulse noise, least mean M-estim. algms. 119014
rot. machines, vibr. sigs., adaptive noise control *(Spanish)* 88681
SC/MMSE ISI iter. equalizers, matched filter approx. 95810

mean squares methods continued
D/TD/CDMA systs., joint detect./pre-distortion techs. *(English)* 130147
econd order syst. nonlin. meas., 2D adaptive algm. 107561
econd-order adaptive IIR notch filter for freq. detect., variable step-size LMS-like algm. 84792
econd-order LMS-based optim. wireless channel tracking, freq. domain anal. 95660
emi-blind closed-form co-channel sigs. separation method used in smart antenna systs. 72680
ens. modelling, neural-network based, nonlin., monitor appl. 86773
et-membership affine projection algm. 95687
hort-time stationary sigs. in additive noise/channel distortion, spectrum estim. 84670
g. detect. using approx. Karhunen-Loeve expansions 73712
g.-depend. image noise, wavelet and pyramid filtering 130056
ingle-chip Q-VLMS MLSE equaliser LSI, 100 Mbit/s, TDMA mobile radio 108653
ingle-point noise cancellation, Lyapunov tuning of leaky LMS algm. 130039
ISO equalization, prior inform. evol. 130260
lowly fading multipath channels, error probab. of adaptive DFE 84876
mart lens antenna arrays, design and appls. 83760
oftware radio, sym. sync., MMSE interpolation *(Chinese)* 96373
pace-time trellis code, soft-decision adaptive decoder 84888
patial domain interf. canceller using multistage adaptive array with precise timing estim. 108878
pectral domain estimators for nonuniform syst. modeling subband adaptive filters 107566
peech driven in-service nonintrusive meas. device, optimum variable step-size adaptation 130617
tationary cost fn. adaptation algm., recursive approach 119012
tereophonic acoustic echo cancellation, adaptive filtering algm. 119015
tereophonic acoustic echo cancellation, comparison of adaptive algms. 118967
tereophonic sig. decorrelation, NLMS-like adaptive filtering algm. 84001
tochastic fastest convergence NLMS algm., adaptive filter *(Japanese)* 73673
tochastic proc. obs. with memory under anom. noise 73689
ubband adaptive filters, steady-state perform. limitations 107524
ubspace tracking based blind multiuser detect., MMSE estim. 73719
uperellipse detect., efficient/consistent method 118399
D-CDMA uplink, multiuser detect. perform. 119946
DMA multiuser channel estim. for cochannel sigs. detect. 130284
DMA systs., lin./nonlin. space diversity combining algms. 119993
DMA/CDMA 3G systs., multirate transm. receivers 74660
hreshold adaptive tech. 107321
ime-varying channel tracking, robust adaptive predictive algms. 119018
ooth enamel EPR dosimetry, automated spectra deconvolution routine 111224
ransversal adaptive filtering algm., fast converg. for impulsive environ. 95671
wo-color spinning concentric-annular-ring reticle seeker, adaptive IR counter countermeasure 88252
wo-stage MMSE partial PIC receiver for multiuser detect. 84907
ncoded/chaotic coded speech, robust channel estim./perform. 73037
nderwater target class. in changing environ., adaptive feature mapping 77044
niversal CNN cell cct. using simplicial neuro-fuzzy inferences for fast image proc. 91149
US NDE, multistage adaptive noise cancellation, adaptive LMSE filter 79489
UTRA TDD, MMSE adaptive receiver 119947
UTRA TDD adaptive MMSE RAKE receiver 108916
UTRA TDD adaptive multiuser MMSE down-link receiver techs. 108958
UTRA/FDD uplink, space-time combining 74825
ariable step size LMS adaptive filtering algm. and anal. *(Chinese)* 119054
ariable wt. mixed-norm LMS-least mean fourth adaptive algm. convergence 107531
ariable-step-size LMS algm., subband adaptive filtering, echo cancellation 95682
ideo compression, robust region-based motion estim. 95081
ideo transm., source/channel coding trade-offs 95050
ideoendoscopic distortion correction, endoscopy virtual guidance appl. 98354
Virtex FPGA based high-perform. fine-grained pipelined LMS algm. 91102
Volterra adaptive filter, decoupling problem, MMSE criterion *(Chinese)* 107475
Volterra adaptive filters for act. control of nonlin. noise procs. 95703
W-CDMA reverse link, coherent adaptive antenna array diversity receiver 108885
W-CDMA uplink, blind channel estim. and multiuser detect. 73850
wavelet packet-based subband adaptive equalization 107721
wavelet-based image denoising under overcomplete expansion 94809
Wiener generalized image reconstruction from colour sens. data using scale invariant prior 94951
wireless video conferencing using multiple description coding 108391
Si, polycrystal torsional micromirror array design, opt. binary switching, AM appls. 104762

st squares approximations
see also least mean squares methods
2D AR model using lattice representation and inform. criteria for texture anal. 118486
2D FIR digital filters, weighted least sq. design 102414
2D FIR filters design, iter. reweighted least-sq. algm. 107517
3D finite element formulation for frictional behavior of rubber on ice and concrete surfaces 79123
3D med. images, global 3D rigid registration 98459
3D motion inform. estim. from opt. flow by subspace theory *(English)* 107286
3D obj. motion and struct. recogn., contours 95459
3D separable-denominator state-space digital filters design 73692
3D stance recovery, shadows use, parallel/perspective projection 118455
16DAPSK sigs., flat Ricean fading channels transm., lin. prediction based decision-feedback differential detect. 107569
accelerometer, LS-TLS seq. ident. algm. 97202
accurate obj. reconstruction from partial shapes for virtual worlds 84104
act. lin. arrays with peak amplit./radiated voltage distrib. constraints, transmit patterns 83744
act. shields against stationary mag. fields, stochastic optimisation procedure 117714
adaptive DFE with complete lattice orthogonalisation 95806
adaptive digital predistortion, EDGE std. 102585
adaptive filter coeffs., sub-RLS algm., convergence property 130080
adaptive interpolation/smoothing algms., state-space approach 130130
adaptive iter. multiuser parallel decision feedback with different code rates, perform. 131292
adaptive lin. prediction for lossless coding of greyscale images 84456
adaptive low complexity beamforming using split RLS algm. 73637

least squares approximations continued
adaptive mixed-sig. narrowband interf. canceller for wireline transm. systs. 108514
adaptive model-based digital halftoning incorporating image enhancement 94501
adaptive predistortion lin. using DSP 114856
adaptive reduced-rank interf. suppression algms., convergence/tracking 105813
adaptive video frame rate control over explicit rate networks based on channel rate prediction 106974
airborne moving target detect. using lin. phased array radar 131659
airborne surveillance radar detect., 2D freq. domain least sq. algm. 86182
airborne surveillance radar detect., 2D least sq. algm. 84799
alg. ICA algm. for three sources and two sens. 118810
AMPS mobile telephone syst., improvement of base station by least sq. method 108780
antenna array radiation pattern sidelobe suppression 128911
AR-model order selection, analytic finite sample criteria 118790
asynchronous AC drive adaptive fuzzy neural power control 134430
ATM networks, backward predictive congestion control using neural networks 96009
automobile tyre press. diagnosis, param. vars., observer based estim. 86979
averaging rot. in computer vision 118442
bandlimited periodic sig., nonlin. least-sq. multisine fitting algm. 118831
Bayesian interp. of periodograms 84669
Bayesian sens. image fusion, local lin. generative models 118314
biorthogonal cosine-modulated filter banks 73698
BK7 glass anti-reflecting films design and deposition for opt. fiber commun. appls. 116894
blind channel ident. and sym. estim., low-cost adaptive algm. 119190
blind source separation, 2nd order stats. algm. optim. 118798
bonded struct., laser US NDE, dispersion curve, ANN appl. 114563
Brillouin spectrum estim., least sq. method repetition algm. *(Japanese)* 97329
cantilever array based gas sens., multicomponent anal. 132037
Capon spectral estimator, efficient implement. 118882
CCD camera calib., constraint condition selection *(Chinese)* 97356
CDMA asymptotically optimal receiver, perfect MAI cancellation 96357
CDMA cellular systs., adaptive interf. suppression filtering 130054
CDMA cellular systs. with augmented antenna arrays, perform. 85587
CDMA syst. sig. recovery, adaptive learning 107773
CDMA wireless commun. link, GSM interf. detect. 83410
channel estim. equaliser on stationary channels 107317
chirp step-freq. moving obj. echo real time digital generation methods 75087
clinical PET imaging, bound generalized lin. least sq. algm. 132927
coastal water quality, multiparam. inversion, hyperspectral anal. 99010
colour photom. stereo, simultaneous reconstruction of local gradient and colour of rough textured surfaces 106649
compact opt. bends, design and optim. 104741
comparison meas. cycles eval. by least-sq. method 109396
"Complex AM sig. model for non-stationary sigs., comments 73014
complex densities modelling using similarity measures 113891
computational EM appl. of meshless method 128641
computational modelling of viscoplastic fluids based on stabilised FEM 79129
computer-generated forces modelling, data fusion technol. appl. *(Chinese)* 122765
conic fitting, least-sq. orthogonal dists. 124646
constrained matrix least sq. approx. algm. 78984
context-based adaptive arith. coding, least sq. algm. 84479
continuous-time and discrete-time systs., high-perform. conversions 118896
contour anal. using time-varying AR model 94715
coupled cavity chain, indiv. cell freq., genetic alg. 87060
Cu damascene interconnects, localized strain meas. by CBED 92172
current reconstr., transformer nonlin. compensation 86905
data reconciliation with gross errors, redundancy anal. 109395
DC motors, nonlin. models params. estim., lin. recurrent NN 99681
depth estim., robot visual control syst., perform. criterion 97387
dielec. cylinders inverse scatt., RBF NNs 128759
digital beamforming systs., adaptive pattern synthesis 72681
digital calib. methods of I and Q errors, phase and gain mismatches *(Chinese)* 131653
digital commun., blind equalization based on fourth-order cumulants 130251
digital sig. arbitrary sampling rate conversion, impulse response approx. 118854
digital sig. smoothing by orthogonal polynomials 130005
dip moveout and migration 122578
distributed nonstationary proc. modeling/time-varying AR syst. ident. by wavelets 119186
DMT receivers, RLS-based init. for per tone equalizers 130249
DOA estim. of coherent narrowband sigs. using lin. prediction, MSE-based regularization 130024
double cct. power lines fault ident. tech. 77377
DS-CDMA mobile systs., detect.-aided RLS multiuser detect. in downlink 85818
DS-CDMA multirate/multicode systs. with long spreading codes, channel estim. 84917
DS-CDMA systs., adaptive narrowband interf. rejection, parallel interf. cancellers scheme 83356
DS-CDMA systs., efficient blind multiuser detector 73717
DS-CDMA with multipath, spreading code adaptation 108828
DS/CDMA long-code systs., channel estim./multiuser detect. 108854
DS/CDMA systs., effective multiuser receiver 85584
dyn. nuc. med. seqs., factor anal., ambiguous solns. correction 122246
dyn. syst. algm. for soln. 118940
dyn. tracking/recogn. of curves, road detect. appl. 84618
ECG-gated dyn. 3D echocardiography, temporal jitter artifacts 76343
echo cancellation, adaptive subband syst., lattice LS-type algm. *(Polish)* 119032
edge-directed prediction for natural imagelossless compression 73401
eigenfilter, total least sq. error criterion, pos. definite matrix 80088
elec. impedance tomography, inverse immersed interface anal. 132127
elec. machines freq. anal. using virtual instrum. 123309
electronic part testing, data distrib. fitting *(Chinese)* 100557
EM imaging of cylindrical dielec. objs. with optimal regularization param., fast inversion 117673
endoscopic video images, nonlin. distortion correction 98361
error-correcting output code, least sq. and estim. measures 117955
ESPRIT algm. for distributed source localization 118841
ethanol-nitrobenzene binary mixture, complex permitt. spectra, TDR 116127
ethanol-nitrotoluene binary mixture, complex permitt. spectra, TDR 116127
extended precision logarithmic arith. 102016
extended RLS algm. 73625
factorial k-means anal. for two-way data 113881
fan-driven power electronics cooling assembly, num. optim. 78652
fault diagnosis of unknown nonlin. systs., neural nets 100657
FIR adaptive interpolated filtering, simplified RLS algm. 119020

least squares approximations continued
FIR filter design combining freq. response masking and WLS-Chebyshev approaches 91069
FIR filter for time delay estim. 107554
FIR least sq. filter design using piecewise polynomial approxs. 130069
FIR peak constrained least sq. filters, design 107543
Fisher nonlin. discriminant using kernels 118952
fixed order RLS adaptive filters, Laguerre networks 91076
flat-fading channels, freq. offset estim. 131167
flatness meas., correlative stitching tech., iter. least-sq. method 121216
FNS muscle model ident. using Matlab Simulink 122328
freq.-domain Volterra kernels, ident. using interpol. scheme 114018
fuzzy least-sq. lin. regression anal. using shape preserving operations 100990
galvanic skin responses anal., PCA & hierarchical clustering 121959
GEO satellites, TLS for source location estim. 109318
Glicbawls, grey level image compression algm. 107080
GPS attitude determ., Euler angle dilution of precision 120488
GPS based synchronized phasor meas., synthetic algm. *(Chinese)* 99424
GPS receiver autonomous integrity monitoring algm., clock bias *(Chinese)* 86266
guided wave opt. sens. devices, modeling and charactn. 127727
hand-drawn shape outline capture via recursive subdivision 84570
hearing aid perform., multiple model least sq. tech. 122355
hierarchical networks, robust QoS routing algm. 107641
high-speed interconnect simul. using MIMO type adaptive LS method 101677
higher-order digital differentiators, anal. least-sq. design 107548
highly robust regressor for computer vision 129489
HRV spectral anal., integral PFM model, irregular sampling 87420
hyperspectral data characterisation using GA 106517
hyperspectral imagery, atmos. correction algm., adjacency effect 97169
ICA/simultaneous third-order tensor diagonalization 118846
IF precision refl. coeff. meas., imped. stds., calib., interpolation 120626
IIR digital filters design in complex domain 107540
IIR filters design, WISE method 84723
IIR filters with variable delay, optimal design 118983
ill-posed 2D Fredholm integral eqn. solvability 90170
IM, param. ident., least sq. and GA 88724
IM, skewed rotor bar, flux linkage 134010
IM nonlin. control, parallel neural network estimator training 123459
IM param. ident. from step response *(Korean)* 123442
IM sensorless torque control syst. 123410
image compression using auto-associative neural network and embedded zero-tree coding 84423
image compression using implicit polynomials 118604
image motion anal., homography, total LSA/equilibration 118189
image proc./synthesis, multiple illuminant direction detect. 106500
image quality optimisation for decoded images using 3D smoothing method 73319
image resizing using finite differences 106693
image restoration based on autocorrelation fns., regularization methods 94745
image retrieval through shape matching of partially occluded objs. using hierarchical content description 84617
image rot. averaging, Riemannian metric method 118209
image-based rendering using parameterized image varieties 118307
images, dist. constraint based iter. struct./pose estim. 94516
Indian elec. consumption modelling/forecasting/anal. 122928
indust. image proc., real-time behaviour, multivariate approach 113745
indust. proc. monitoring & SPC, multivariate image anal. 113809
intramedullary nail trajectory planning, hole axis recovery 98553
IQ modulators, implement. of automatic digital compensation 125265
IQML-like algms. for struct. total least sq. problems 118900
IR image, noise removal based on H.263 video recommendation with adaptive filter *(Chinese)* 106678
ISAR imaging of moving targets, robust autofocus algm. 120424
Kautz filters adaptation in identifying dyn. systs., separable nonlin. least-sq. methods 107537
kernel partial least sq. regression in RKHS 78822
Kronecker product IVP involving method of least sq. 101097
LCMP beamforming under quadratic constraint, RLS implement. 73655
least trimmed sq. regression estimator 78823
lightning strike dist. determ. algm. *(Russian)* 99391
lin. arrays with equal side lobes, alternative design 105976
lin. CCD camera, interf. fringes, fast accurate algm. anal. *(Chinese)* 109703
lin. least sq. error minimization using nonorthogonal basis fns. 101043
LMR channels, nonlin. transmit amps., neural network modeling 74762
lossless image compression, arith. coding 95326
M-D IIR filters, fixed separable denominator, least-sq. design, multivariate division 102386
M-estim. robust adaptive filtering 119052
mag. material metrics, modeling and optim. 127377
mag. reson. spectrosc. quantitation via PCA 73579
manipulator with vision, self-calib. by factor method 109407
MAP algm. for image reconstruction *(Chinese)* 129427
MAP and LS estim. of abrupt changes in multiplicative noise using dyn. prog. 118485
math. fn. fitting, polynomials and lin. least sq. 101001
matrix thinning, preconditioning tech., MEI method 67990
max. likelihood trend estim. in exponential noise 107381
MEG meas., non-periodic environ. mag. noise 76333
meshless hypersingular boundary node method for 3D pot. theory and lin. elasticity problems 114149
meshless regular hybrid boundary node method 124735
MIMO FIR channels, lin. prediction-based semi-blind estim. 84866
min. message length grouping of ordered data 72711
mixture noise, nonlin. RLS, error-saturation nonlin. *(Chinese)* 107409
mobile network capacity gain, beamforming/interf. cancellation 85647
mobile radio location estim., hybrid time and angle of arrival method 108675
mol. images, three-way data pre-proc. by pulse-coupled neural nets 106810
moving finite elements, hyperb. PDE 90184
multi-spectral image spectral mixture anal., unmixing methods 118210
multi-view face pattern nonlin. mapping, Gaussian distrib. 107195
multichannel images, least sq. restoration, matrix formulation 129649
multidimensional arrays, low-rank decomp., Cramer-Rao lower bounds 107380
multidimensional filter bank design, polynomial methods 130049
multiexponential transient spectrosc., iter. deconvolution 84739
multilevel projection methods for nonlin. least-sq. finite element computations 67977
multiple jammer suppression using adaptive lin. constrained inverse QRD-RLS beamformer 84755
multiple nonseparated battlefield ordnance events class., ELMO algm. 133405

least squares approximations continued
multirate/cascaded filters, optim. algms. 107532
near-field diagnostic tech. based on equiv. mag. currents 83510
near-field/aperture-field transform., equiv. mag. currents, CGFFT algm. *(C nese)* 105661
noisy autoregressive sigs., unbiased param. ident. 84804
noisy speech, adaptive filtering & spectral subtraction 94421
non-orthogonal spectral data separation 107454
nonguaranteed network services, video frame rate control 74205
noniterative lin. least-sq. error method for inverse problems 114019
nonlin. spectral anal. method for engng. appl., ident. *(Chinese)* 84676
nonlin. time series prediction, orthogonal least sq. algm. *(Chinese)* 89987
nonmetallic buried mines detect., semianalytic mode matching techs. 77086
nonnormal response designed expts. examples 100516
nonuniform-to-uniform grid conversion using least-sq. splines 129955
OFDM multi-user broadband mobile channel, decision-directed tracking 970
Okumura-Hata propag. prediction model, fuzzy logic, min. sq. method 8568
on-line bioprocess monitoring and control, fluoresc. spectrosc. 109720
on-line dielec. loss meas., higher-order sine fitting algm. *(Chinese)* 132133
OO OPF 99266
open chiral waveguides, step discontinuities anal., least sq. boundary residu method 102507
opt. flow motion estim., variable brightness phys. model 84131
opt.-spectra, noncalibrated spectral features detect. and correction, wavelet-tras form. 106427
optimal backward perturb. bounds for LSS problem 79013
optimal motion estim. from multiview normalized epipolar constraint 10646
overhead power line free air long arc simul. 99381
overhead power line protection/adaptive autoreclosure algm. 77517
paper curl shape meas. by stereoscopic camera syst. 86966
PCA for STAP, Kronecker product improvement 107599
PCB, multi-layered current eval., least sq. method *(Japanese)* 101603
peak constrained least sq. FIR filters with low complexity finite precision coef 91067
perturb. of least sq. problem in Hilbert spaces 78977
phase-unwrapping algm. based on modulation/phase reliab. 94753
photoresist thickness uniformity, bake proc., real-time control 103567
PMR, bi-directional adaptive equalizer 108762
pose-invariant face recogn. by face synthesis 129914
power syst. failures forecasting, stat. approach 88278
power syst. state estim., parallel proc. 111681
power syst. state estim., substations representation 111682
power syst. symm. components fast estim., digital filters 111683
power systs., fast fault detect. techs., least sq. method 123093
precision meas. uncertainties estim., ISO Guide alternative 109390
projection-based regression methods, survey *(Chinese)* 113889
projective transforms., efficient param. estim. 84306
QMF banks design, modified Chen-Lee algm. 102394
QPSK demodulator perform. improvement for quadrature receiver wi amplit./phase imbalance correction 94228
QRD fast inverse-updates adaptive filtering algm., stabilisation 73667
QRD-based least-sq. adaptive filters, pipelining, hybrid annihilation transfor 125613
quadratic Volterra adaptive filters, fast RLS adaptive algms. 119022
radar target ident. using 1D scatt. centres 131641
radar target recogn., least sq. estim. 120429
range image, progressive registration based on surface triangulation 106489
range/intens. image fusion, segmentation, robust trimmed method 107217
real-time multi-modality 3-D med. image registration 110508
rect. dielec. waveguides directional coupler charact. 83496
recursive cellular networks for inverse problems 94445
regression by partial least-sq., simplified algm. 124512
RLS algm. for throughput improvement of adaptive filters, implement. 11902
RLS nonlin. algm., correl. mixture noise 78989
RLS pipelined adaptive filters, low computational complexity implemen 107495
RLS systolic array proc. 79941
RLS-adapted polynomial for nonlin. acoustic echo cancelling 118083
RLS-Laguerre lattice adaptive filtering, error feedback and array-based algms 91077
RLS-Laguerre lattice adaptive filtering, error-feedback/normalized/array-base algms. 130117
RLS-type adaptive fast on-line sig. separation algm. 130145
robot manipulator visual servoing predictors, expt. study 119062
robust fn. approx., ellipsoidal fuzzy rules *(Japanese)* 101003
robust image registration using log-polar transform 94514
robust motion estim. using spatial Gabor filters 118393
robust PCA for computer vision 106555
robust subspace tracking in impulsive noise 130035
Rotman lenses anal., hybrid least sq. FEM/transfinite element method 105895
SAR polarimetric target feature extraction/image form. via semi-parametri method 75137
satellite mobile nonlin. channel ident. using Volterra filters 119951
sea surface temp. estim., AVHRR MWIR band, MODTRAN values 133345
seismic sig./coherent noise separation, migration filtering 122564
selective search for global optim. of zero or small residual least-sq. problems 113993
semidiscretization in time, least-sq. Galerkin methods for parab. problems 124629
separable nonlin. least-sq. methods, systs. modelling, Kautz and Laguerre filters 107526
sig. class., similarity meas. by wavelete/integra-normalizer *(Korean)* 107597
sig. denoising using line-adaptive lifting wavelet transform 118993
sig. reconstruction from magnitude or phase of generalised wavelet transform 129957
single-mode proton-exchanged waveguides, ordinary/extraordinary refr. index profile charactn. 97864
smart antenna, tracking capability, RLS algm., 3G mobile commun. 94194
source current distrib. problem, hierarchical SA vs. Gauss-Newton scheme 83075
source/channel estim. using finite alphabet property, randomised algm. 107728
space-time channel tracking for multipath fast-fading channels 130275
space-time struct. of diffused multipath channels 131094
sparse channels, blind equalisation using antenna diversity 119193
SPECT filtered backprojection images, partial vol. effects correction 122248
spectral envelope estim. of voiced sounds using penalized likelihood approach 83984
spectral mixture anal., lin. and semi-parametric full and iterated partial unmixing 118443
speech coding, higher order spectrum anal. appl. *(Chinese)* 129377

squares approximations continued
peech enhancement for hands-free terminals 129373
peech recogn., integra-normalizer and neuro-fuzzy method 106421
peech recogn. using integra-normalizer defined metric 129396
plines for sig. proc. 129462
eam power plant cycles reheat/turbine extraction press. optim. 123209
epper motors drive systs., mech. params. ident. using LS method 78217
ereo echo canceler with correct echo-path ident., input-sliding tech. 131785
ereophonic acoustic echo canceler, real-time implement. 85429
ruct. total least sq., GA based 67941
ruct. total least sq. problem for Hankel/Toeplitz matrices 114079
uperconduct. accel. cavities, cell freq. tuning, GA anal. *(Chinese)* 110170
uperimposed exponential sig. least sq. param. estim. 84702
ymbolic regression, num. robust, hybrid genetic prog. approach 79004
-invariant causal lin. syst., anal. continuation, Kramers-Kronig anal. 130075
CP traffic simulator and self-similar traffic simul. 130433
D-CDMA based mobile radio systs., joint-detect. techs. comparison 107594
DMA burst transms., support vector classifier based equalizer 107722
DMA cellular syst., channel ident. and interf. cancellation 131138
xture mapping by successive refinement 94648
yroid images, computer-aided US image proc., speckle noise, least sq. approx. 76380
me-domain equalizer for filter bank-based multicarrier commun. 130256
me-normalised wave intens. haemodyn. index, real-time meas. 110740
oeplitz least sq. problems soln. via discrete polynomial LSA at roots of unity 95639
otal least sq. filtering, stable simplified gradient algms. 107544
ransm. line fault class., RBF NN, orthogonal-least-sq. learning 133787
ransm. line fault location, least sq. realization *(Chinese)* 123075
ransmitter motion detect. using TDOA/FDOA meas. 97023
riplet halfband filter banks, kernels, least sq. design 91056
urbogenerator, bearing dyn. props. ident. *(Chinese)* 88668
ncertainty propag. with non-Lagrangian interpolation, ITS-90 appl. 75345
ariable 1D FIR filters with arbitrary magnitude responses, design 68940
ariable fractional delay 2D FIR filters, discretization-free design 84756
ariable fractional-delay FIR digital filters, discretization-free design 102408
ariable fractional-delay FIR filters, discretization-free design 91072
isual motion estim. via second order cone prog. 94929
VLSI time-domain interconnect models, MIMO type selective orthogonal least-sq. method 124367
veak sig. meas. via accurate cross-spectral SVD-TLS approach 75398
videband pass. radar goniometer syst., sig. proc. 75191
vireless airborne commun. systs., overloaded array proc. 108694
xDSL systs., crosstalk ident. 108473
e-Si, elec. steel, circ. magnetis., RSST 127321
GaAs anti-reflecting films design and deposition for opt. fiber commun. appls. 116894
Si PIN photodiode, single ion hits, radiation damage 126608
Si membrane, stencil mask and mini-reticle, stress meas. 126533
SnO_2 sens., multicomponent gas mixture anal., dyn. patt. recogn. 132033
' growth *see crystal growth from melt*
) *see light emitting diodes*
) displays
ar graphic display, bar graphic press. meter *(Chinese)* 86848
olor OLED microdisplay fab. method 109848
olour polymer organic LEDs, ink-jet dye doping, lateral dye distrib. 116988
onf., display technol., Taipei, Taiwan (July 2000) 78372
ylindrical 3D display observable from all directions *(Japanese)* 86795
lat displays for TV/computers *(German)* 75802
lexible OLED 121072
lexible polymer LED mfg., cond. lithog. film technol. 121067
luoresc. 1,2-oxazole cpd. synthesis for organic LED FPD appls. 109865
reen OLED pass. matrix display, long-life, characts. 109887
nstrum. panel design in automotive indust. 89410
VHS, LED traffic lights and vehicle-mounted cameras 131969
MicroLens, microlenticular light extraction technol. for monitors 121075
notor racing appls. of LEDs 105025
notorized wheelchair, LED directed headswitch controlled 111173
multicolour OLED fab., integrated screen/thermal transfer printing 86805
OLED, microdisplay 86860
OLED, white, improved stabil. 128014
OLED controllable doping, thermal transfer approach 86806
OLED displays, perform. status & future prospects 121099
OLEDs, OLED for display appls. 93403
organic electronics, LED displays and ccts. *(Italian)* 79457
organic LED display, driver cct. *(Italian)* 86871
organic LED full color pass.-matrix display 97588
pass. matrix polymer LED displays, transient response, cct. simul. anal. 128005
planar dielec. microcavity LEDs, anal. anal. of extraction efficiency 82400
poly(1,3,4-oxadiazole) based LED, EL, vap. deposition polymerization 127989
poly(p-phenylene vinylene)/porous GaP composite materials, LED appl. 93437
polyfluorene pulse driven small area LED, enhanced perf. 93406
polymer film spin coating for LED displays, proc. optimisation anal. 125062
polymer LEDs, perform. improvement using polymer solid solns. 93409
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole transport layers 105000
polymer light-emitting devices, mol. doping, maskless dye diffusion 109872
polysilicon, metal-induced lateral crystn. technol., device appls. 80629
polysilicon act. matrix organic LED display, integrated drivers 97727
polysilicon FPD driver ccts., low temp., RTP crystn. 97728
RGB LED display for indoor appls. 75787
scanning beam displays, eye safety anal., LEDs and laser appls. 97725
screen-printed pass. matrix displays, light-emitting polymer based 71607
transparent OLED optimisation 97650
transparent OLEDs using $Ni(acac)_2$ as electron injection buffer layer 71577
white organic LED, high efficiency 97651
a-Si p-i-n diode/organic LED image sens. and display device 97733
D printers
aerial reconnaissance photograph data annotation, LED arrays appl. 99110
high-speed chip-matrix 1200-dpi LED printhead for digital color printer 94878
ED *see low energy electron diffraction*
al aspects *see legislation*
al data processing *see law administration*
al protection of software *see industrial property*
gendre polynomials
antenna array pattern synthesis accomplishing tapered minor lobe distribs. 83677
floating electrode unidirectional SAW transducers, quasi-static anal. 116212
integro-DE with Cauchy kernel 114112

Legendre polynomials continued
S/H distortion, anal. compens., monotonic & equiripple approx. 86449
spin direction, optimal encoding/decoding 94297
stochastic diff. eqns., mean sq. approx. 68051
legged locomotion
3D precise meas. with high resoln. stereo head 94967
accelerated rigid bodies, drift-free attitude estim. 97224
four-legged animal robot, multilevel multisensor based decision fusion 97223
guidance in unstructured environ., qualitat. vision 86604
NanoWalker miniature piezoactuated three-legged robot, micrometer/submicrometer step sizes, push-slip method 81750
NanoWalker robot, micrometer and submicrometer motions, piezoceramic actuation 81747
NanoWalker three-legged miniature robot, high-resoln. opt. positioning syst. 86971
obj. tracking, robust model-based, edge-projected integrat. of image and model cues 129854
RHex hexapod robot, proprioception based behavioral advances 109481
twin-frame mobile robot, 6 DOF mechanism design and control 97199
wireless miniature legged robots continuous power delivery scheme 88981
legislation
see also product liability
1994 Winter Olympic Games telecomms. 85116
access network upgrades in USA, reasons for delay 74464
Adobe eBook security, digital rights mgt. 129244
Argentinian distrib. companies privatisation, regulatory engng. *(English, French)* 133464
Asia, internat. telecomm. service companies and legislation 74059
Bavarian NPPs, notifiable events, regulatory safety criteria *(German)* 77690
Botswana telecomms. reform, policy model for African states 107997
California elec. situation 77151
chem. indust., cord-connected elec. equipt., safety initiatives 134693
China's telecomms. regulatory reform, effect of WTO agreements 119446
CISPR/H activities on RFI protection 83381
competitive elec. markets resource adequacy, US regulator perspective 111704
competitive energy market access, functional-technol. proc. optim. 111695
competitive power markets, US regulator's perspective 111712
conventional rail interoperability, single European rly. syst. 89382
copyrighted content protection against unauthorized copying, legal develop. 100481
dams, Norwegian guidelines for risk assess. 88627
data digits use for fabricated data ident., case studies 100416
DFE criteria integrat. into new product introduction proc. 100706
digital media asset mgt. *(German)* 74449
digital music legislation, neutral judicial advice 131782
dispersed generation connection to French power grids, legislation *(English, French)* 133827
distrib. reliab. targets, microeconomic exam. 112020
dosimetric services, approval procedures, EU member states, Switzerland 133100
drug patents & infringement, legal case study 78543
ecodesign priorities ranking for end-of-life scenarios 100695
elec. energy supply deregulation, retail competition 133456
elec. utilities, efficiency measures, regulatory appl., price caps 88319
electromedical apparatus safety considerations *(Italian)* 87296
ELF EM radiations and intrinsic EM phenom., human health issues 87947
EM fields, standardisation/regulation in Germany 87944
EMC, conf., Wroclaw, Poland (June 2000) 67408
EMC, European regulations *(Italian)* 94061
EMC stds., ETSI activites overview 83434
emergency power supplies, components, ccts., design *(Italian)* 88953
EMF stds., neg. human health effects 87942
environ. conscious electronics manufacture, global regulations/materials concerns 67679
Estonian energy sector transit., develop. trends 99225
ETON/NRSWA, changes/challenges affecting street works 108087
EU competition law impact on public service broadcasters financing 97054
EU Electricity Directive, consequences for intersystem operation 99210
European elec. sector liberalisation challenges *(French)* 99251
European EMC legislation initiatives 83435
European EMC standardisation bodies interface 83433
European EMF legislation standardisation 87943
European high-speed elec. trains interoperability, tech. spec. *(German)* 78264
European universal service obligations, current and future aspects 130535
FCC organizational struct. and regulatory convergence 107998
FERC orders 888, 889 and 2000, impact on elec. utilities 111723
formal benchmarking elec. safety, results 124290
French elec. indust., collective sector-based negotiations *(French)* 111697
Fujitsu used product recycling syst. *(Japanese)* 78726
German elec. indust. self-regulation, operator's view *(German)* 111688
German Federations' Agreement II on distrib. network utilisation *(German)* 112017
Germany, broadband cable networks, media law 131719
hazardous locations zone equipt. installation, US experiences 124287
human EM field exposure limitation regulations, overview 87945
HV systs., indirect contacts protection, global earthing syst., safety *(English, French)* 133771
hyperlinking to decryption software, legality, USA 100489
ICT changes, impact on evol. of e-society 130528
Indian DBS TV, influence of US foreign DBS policy 131726
indiv. dose meas., electronic dosemeters, UK regulatory approval 133101
indiv. electronic dosemeter, operational neutron dosimetry 122418
intellectual property rights, protection, legal ramifications 113395
Internet, tech., economic, legal and social trends 85206
Ionising Radiations Regulations 1999, generic approach to risk assess. 76766
Japanese EM fields human exposure limitation regulations 78548
Korea e-commerce, now/future 96214
Latvian energy policy, energy conservation, energy sector legislation 99227
lead-free soldering alternatives, environ. impact, recovery and recycling 78733
LV distrib. network transient/steady-state voltage drops *(Italian)* 88426
maritime EMC and internat. community 83432
merchant power companies, compliance mgt. programs tailoring 122824
mobile commun., regulation challenges *(German)* 108662
mobile telephony, location technol., data protection 131182
MV power lines, nonionizing radiation, Slovenian environ. legislation 133751
next generation networks, required security features 108189
next generation wireless, path to high-speed mobile multimedia services 131204
NFPA 70E elec. safety Standard changes for yr. 2000 89780
Non-Disclosure Agreements, types, when to use them 78541

legislation continued
nonionizing radiation protection, Swiss regulation 78537
notebook PC design, environ. considerations *(Japanese)* 78728
oil indust. fine water mist fire protection syst. 134709
operating NPPs, decision proc. improvements for safety 112257
operating reactor safety and regulation 123144
optimal access pricing with interconnection obligation 130993
overhead power lines/substations erection, residents' opposition/compensation *(Chinese)* 77441
PACS security model 98852
pers. dosemeters, perform. testing, Swedish regulation 133104
pers. dosimetry service, formal accreditation, Swiss legislation 133109
pers. monitoring, occupational radiation exposure, Czech Republic 133098
Polish EM field human exposure limitation regulations 78549
Polish EM field metrology, effect of new power regulations *(Polish)* 131790
Polish energy conservation policy under energy policy guidelines 99229
Polish higher vocational engng. education schools experiences 113361
Polish power distrib. companies develop. planning 133648
Polish telecomms., competitive dyn. 107996
power plant mgt. in competitive markets, IT solns. 77673
power plants air emissions control in competitive power market 133831
powerline commun. principles *(German)* 108508
radioastronomy, spectrum scientific use and regulations 86284
radionuclides for med. use, compliance with regulations 87979
reactive power exchange policy/regulations 122845
residential rooftop PV market, federal net metering legislation impact 112968
risk assess. under Estonian law on workplace safety 89782
Romania's energy efficiency promotion under transit. to market economy 99469
secure digital archiving of high-value data 118010
secure digital archiving of high-value data 129242
Spanish digital TV services, market strategies analysed 131725
spent portable batts. collection/recycling 112763
step-change reduction in environ. impact in creation of electronics products 78732
substations, EMC assurance, EM disturbances mitigation 78083
Taiwan CATV operators and channel providers, anti-competition issues 120557
targeted advertising and consumer privacy 129302
telecomm. products tech. EMC specs. 85104
telecomms. indust., competition *(German)* 108663
telecomms. tariffs, effects of liberalisation in Europe 130536
telemedical innovations, general conditions/success factors *(German)* 98864
terrestrial transm. assets 75271
transm. syst. expansion, impact on distrib., regulatory needs, Argentina 133562
UK, BT's local loop unbundling 74468
UK rly. regulatory framework 113098
UK rly. regulatory framework 113099
URSI Commission E open meeting on EMC issues 83436
URSI WG E1 activities on radio spectrum mgt./utilisation 86292
US Army IT mgt., installation inform. infrastructure archit. 111643
US elec. power indust. Indications, Assessment and Warning Program 111719
US elec. supply indust., putting consumers first 111729
US NRC risk informed regulatory activities, guidance develop. 112267
USA broadband cable market, consequences of AOL/Time Warner merger rules 74066
USA shutter control policy, commercial rem. sens. firms impact 122555
USA telecomms., tech. efficiency, allocative efficiency, incentive regulation 74063
Vienna Agreement '99, harmonised calc. method activities 86288
voice network migration towards next-generation networks 130605
Waste from Electric and Electronic Equipment Directive, implement. 100711
xDSL broadband access services, mktg. and managing 130989
CdTe thin film PV modules, CdS and ZnSe window/buffer layers comparison 112993
Li batts. transportation, UN Recommendations amendments 89047
LiF:Mg,Cu,P detectors, ENEA pers. dosemeters, beta/photon fields 122380
Pb-free PCB finish effects on final disk drive assembly proc. 115199
Pb-free PWB materials/surface finishes/mfg. procs., DOE 115178
Pb-free flip chip bumping/stud bumping/adhesive joining technols. 113674
Sn-Ag-Cu Pb-free solders for pass. components, usage implications 80445
Ta SMT capacitors, Pb-free soldering technol. effects 115058

leisure industry
virtual fashion simul. by merging CG and humans in video seqs. *(Japanese)* 106441

Lempel-Ziv data compression *see data compression*

length measurement
see also micrometry
arc length robust sens. 86487
gauge block center length, automatic laser interf. meas. *(Chinese)* 109984
gauge-block artefacts, internat. comparison implications 120624
high-power solid-state laser, LD pumped, output charact. and appls. 71721
intrusive/nonintrusive radar vehicle detectors for length and vel. meas. 96980
large-size arclength meas., noncontact ultra-accurate syst. *(Chinese)* 100623
MOST, effective channel length/threshold voltage extraction, ratio method 70115
newborn orthodontics, 3D opt. digitation, triangulation syst. 98353
pipe length/temp. meas. using 2 acoustic sens. *(Japanese)* 133373
plane plate length meas. using CCD sens. with DSP syst. 121181
precision angle & length meas., HOPG regular cryst. lattice ref. 121194
precision length measuring syst. for lin. artefacts 86384
skeletal muscle, sarcomere length meas., epi-illum.-type polaris. microscope 122049
SMF dispersion & length meas., Sagnac interferometer 93050
vehicle delineation detect. syst., laser-based 117577

length standards *see length measurement; measurement standards*

lens antennas
aperture antennas at 42 GHz for LMDS commun. syst. 72615
dielec. hollow-sphere lens antennas anal. 72587
dielec. lens antenna, Si micromachined microstrip patch radiator 83662
dielec. lens antenna curvature design 105892
electronically scanning multifrequency antennas with controlled lenses 72469
GBS/Milstar airborne RX/TX antenna 105874
gigahertz-band electronically scanned antennas 105882
IEE antennas and propag. conf., Manchester, UK (April 2001) 78418
impulse radiating antennas with arrays, prompt aperture efficiency 105861
integrated lens antennas, radiation props./input imped., effect of internal refls. 83541
K-band full-duplex transmit-receive lens array, uniplanar circuitry 105937
liqs., complex permitt., wideband/noncontact charactn. 109932
LMCS, dual-polarized lens antenna 96411

lens antennas continued
microstrip antenna array, plane spiraphase focusing lens 105940
mm-wave antennas, asymmetric parallel-plate waveguide, adaptive-cruise cont radar 128852
MM-wave automotive radar, arbitrarily shaped surface 128881
mm-wave PC antenna syst. for automotive appls. 105968
MM-wave Rotman lens for multi-beam feed, design using NRD guide, car rad appl. 94203
MM-wave wireless commun., const. flux illum. of sq. cells 74574
offset FZP reflector, design method and satellite TV appl. 83562
planar folded slot lens for slab-beam power combining 94179
Rotman lens for MM-wave sens. appls., high efficiency design and simul. 726
Rotman lenses anal., hybrid least sq. FEM/transfinite element method 10589
smart lens antenna arrays, design and appls. 83760
terahertz lens-coupled dipole antennas, cross-polarized ang. emission patter 128848

lenses
see also aberrations; contact lenses; electron lenses; electrostatic lenses; focusing; magnetic lenses; microlenses; ophthalmic lenses; photographic lenses
2×2 switch matrix with electromechanical micromotors 93197
2D wavelength-size lens simul., accurate num. method 128785
3D confocal surface profilometry, annular pupil filter, super-resoln. *(Chines* 109967
3D multiprojector display, wide FOV 75805
3D reconstruction systs., image distortion/resoln. effects 94969
157 nm lithog. for 100 nm generation and beyond, progress and status 1035
180° FOV LW IR lens design 82265
achromatic fan-out diffractive syst. for white-light free-space opt. interconnec 82260
achromatic holographic opt. lens Fourier proc. 84160
advanced camera syst. with fast autofocus control 120582
advanced opt. mfg. and testing technol., conf., Chengdu, China (Nov. 2000 89567
afocal components design for opt. metrology systs. 104867
antenna array Fourier opt. proc. beamforming network 120704
apodized nontelecentric focusing systs., focal-shift formula 128377
aspheric holographic opt. element, non-spherical wave recorded, ray tracin 128583
axial dual focus integrated opt. pickup syst. 116582
ball lens-conically lensed fiber scheme for LD coupling 93029
BC422 plastic scintillator based neutron detector for fusion burn hist. meas 97938
Bessel-Gauss mode laser resonator, diffr. energy losses 128351
BGA packaging, coplanarity study 113557
birefr. photonic IC BFN 91400
blue digital video recording opt. pick-up 127584
cemented doublet lens laser beam expanding syst., ICF laser driver appl. *(Chi nese)* 127877
CGH based interferometric setup for aspheric lens testing, sensitivity anal 105617
chromatic-dispersion compensated hybrid refr.-diffractive lens, totally incoheren opt. proc. operations 118326
circ.-hybrid electrode struct. adaptive liq. cryst. lenses, aberrations, point-sprea fns. 116836
conical multiplex holography, distortion correction using direct obj.-image rels 128578
cpd. refr. lenses, high-quality imaging optics for X-ray FEL 82715
depth meas. based on defocus images *(Chinese)* 97816
dielec. thick lenses, profiles calc. 82261
compact digital zoom photo-cameras for holographic interferometry 105614
display projection imaging syst., geometric rectification method *(Chinese* 84123
DOE, light field generation, 3D visualization 109571
DOE, perform. prediction from microrelief profile meas. 82262
dual-conjug. adaptive optics 128786
DUV stepper lens contamination control, purged gas purification 126579
ESRF, beam diagnostics tool, parab. cpd. refr. lenses 121376
ESRF ID 22 beamline high-resoln. X-ray imaging & tomography 76168
EUV and UV lithog., projection lenses, opt. design 92197
external EO measuring syst., high spatial resoln./voltage sensitivity 132120
fab. for NIF laser 104864
fast EO liq. cryst. lens design 71420
FAST-Net global interconnection syst., beam-steering, aberration anal. 93457
femtosecond Gaussian beam focusing by lenses *(Chinese)* 105413
fiber arrayed multiple beam scanning optics, laser printer 127876
fiber Fourier optics, single lens free-space propag. 118207
flat-plate micro-concentrator PV power syst. modules, mirror-less design 112388
FOCOIVA lens 2D image scanner 127872
focusing GRIN rod lens, LD beam shaping, endoscope appls. 122052
hard X rays, wavelength tunable diffr. transm. lens 110424
hemispherical lenses, silica glass thermal poling investig. 105463
herd male GA 107235
high data rate opt. parallel proc., error anal. 84159
high num. aperture diffractive lens vectorial effects 82269
high num. aperture digital video recording opt. disk syst. 92971
high-efficiency multi-jn. cell terrestrial concentrator modules 112934
high-quality microlens array fab. for photolithography 104794
high-resoln. projection microdisplays. lens image quality 109884
high-spatial-resoln. subsurface microsc., appl. to IC inspection 78686
holographic CDMA for IR wireless commun. systs. appls. 82968
holographic disk memories, defocused Fourier plane holograms storage *(Korean)* 72075
holographic element based opt. uniaxial centered systs., field improvement 82966
hybrid diffractive/graded-index splitter prototype for fiber optics 116622
integral photographic 3D display, computer-generated 132112
integrated high-power EO lens/scanner for space-based platforms 93153
integrated optoelectronic systs. opt. field modelling, FFT-based full diffr. method 105041
IR indoor WLAN photodiode receivers, nonimaging lens 85956
IRFPA nonuniformity correction, diffractive lenslet array anal. 86621
Kerr-lens mode-locked solid-state lasers, coherent semicond. absorber, ultra-short pulse generation 82578
Kumakhov lens focused x-ray therapy 87835
Lagrange's undetermined multiplier lens design method, optim. proc. *(Korean)* 93281
Laguerre-Gaussian laser modes, annular profile spatial transform. 82726

ses continued
large-aperture lightweight diffractive lens fab., astron. telescope objectives 116872
laser direct lithog. equipt., binary opt. elements mfg. *(Chinese)* 81147
laser material proc., focal posn. monitoring syst. 121211
LC rear-projection display with aspherical mirror projection syst., develop. 116831
LD bar emission, effective brightness, array curvature correction 71886
liq. cryst. phase modulators modal control, adaptive opt. 116835
logarithmic asphere electronic imaging 86641
long cylindrical lenses, opt. testing by scanning deflectometry 93279
long period fiber grating/lensed fiber coupling efficiency limitation 127717
low-energy ion implant., decel lens syst., high dose uniformity 121321
machine vision optics 86614
MAMMOS mag. amplif. magneto opt. syst., domain speed obs. *(English)* 71437
micro-machine scanner opt. switch based on beam steering angle error anal., design criterion 127818
micro-opt. laser beam transform. systs., assembly procs. 93204
micro-optics beam shaping elements for holographic recording appls. 72088
micromirror ang. rot. determ. using laser interferometric method 109978
microtomography at ESRF beamline ID 22, X-ray undulator beam 132491
mid-power solid state laser thermal lens intracavity correction by liq.-cryst. adaptive lens 128478
MM-wave receivers modelling using extended FDTD method 83612
modal liq. cryst. lenses, elec. addressing 93243
MODAN-type DOE for transversal laser mode selection, commun. appls. 127874
mode-matching graded index fiber, diffractive vortex lens design 104668
multiple beamforming, Rotman-type lens, ellipt. refocusing 83680
near-field objective design with radial GRIN rodlens for data storage 104860
night-vision device-rangefinder based on biplanar direct-transfer image-converter tube 131980
NLC wavefront correctors, static/dyn. models 127843
NLC-SLM, PM charact., phase-shift interf. 93245
nonimaging Fresnel lens solar concentrators for space PV, flux dens. issues 111351
ocular lens, aging human, thickness determ. from corrected Scheimpflug images 98366
omni-directional fisheye lenses, calib. techs. 97348
opt. coupled digital X-ray imaging, lens distortion 87755
opt. coupled digital X-ray imaging, lens distortion, comment 87758
opt. design and fab., conf., Tokyo, Japan (Nov. 2000) 124215
opt. fiber face quality detect. using GRIN lens interferometer *(Chinese)* 71255
opt. lithog., pattern placement errors, in-situ interferometry 103529
opt. lithog. lenses, wave-front aberrations meas., IC mfg. appl. 126585
optimum HOE lens, CAD design 128581
oval-core GRIN fiber coupling, highly ellipt. field LD 127703
panoramic annular lens, image lin. *(Chinese)* 84121
parab. cpd. refr. lenses for hard X-rays 110481
parallel light tube, adjustment and testing technol. 93066
partially spatially incoherent soliton form. multimode waveguide 74912
pass. IR detector DOE 116873
photoelec. automatic focusing syst., laser wave interf. patterns, CCD lin. array 127939
planar refl. grating lenses, imaging syst. 121119
plastic cpd. refr. X-ray lenses, focusing 110461
plastic opt. fibre lens fab., low-cost tech., proc. tomographic syst. appls. 104686
PLZT act. adjustable focus opt. correction lens, design and testing 127873
polymer multimode waveguide backplane, 2.5 Gbit/s transm. 104731
profilometers, ultrahigh accurate flatness and 3D meas. for LSI wafers and aspheric lenses *(Japanese)* 93945
protein macromols. investig. by Kumakhov lens X-ray diffractometry 87734
pulsed doughnut-type beam spatial charactn. using cylindrical lens 82733
refr. micro-opt. profiles for lenses, lens arrays, beam-shaping elements, fab. and props. 93181
resolved depth step color-coded opt. profilometry 75856
rewritable broad-band color filters for spectral image anal. 84075
SBS-mirror with small lenses ordered raster, phase conjug. superhigh quality 105472
self-mode-locked solid state laser, phys. charact., self-starting study *(Chinese)* 82568
semicond. laser package, opt. fibre fixing method, FEA anal. 117293
serial transform opt. correlator design principles 94736
Shack-Hartmann lenslet array fast modal wave-front sens. 120898
Shack-Hartmann sens. for aspherical surfaces nonnull testing 109718
SIL, 3D vector math. model 117332
SIL, near-field opt. data storage 127587
SIL, phase change recording material readout sigs. 127585
single lens array convolution 71456
single-mode fiber, collimated beam coupling, lens design 116642
small hole diam. meas., pattern projection method, theory *(Japanese)* 75878
small lens diams., singlet/doublet params., interferometric spec. 82264
solar thermionic energy converter, electrode heating, efficiency 78179
solid state laser resonator, thermal lens effect, adaptive compensation *(Chinese)* 117320
Space Solar Telescope star sens., high accuracy attitude determ. 98907
spatially discrete coherent imaging systs., optimal pixel profiles 97352
spherically aberrated lens effects on laser beam quality *(Chinese)* 82736
stretched lens ultralight space solar concentrator array 111350
submicron external EO meas. syst. based on GaAs immersion lens 86899
super-resoln. near-field struct. disk, near-field scatt. light 92973
surgical navig. syst. with intuitive 3D display 87787
thin film polymer media holographic memory card, data storage 82974
tomography, integrated opt. fibre-lens syst. 120840
transparent lenses surface defects detect., concentric frame difference method *(Japanese)* 82257
transparent polymeric material in simulated space environ. 92935
twisted NLC SLM, Fresnel lens amplit. apodizer encoding 82285
ultrashort pulse control by struct. opt. elem., spatiotemporal propag. 93748
UV lasers, indust.-strength optics, appls. 82714
UV lithog. technol. develop. for 157 nm, status 103647
very fast focus scanning AO lens 116855
vortex lens light coupled GRIN fiber 71279
wafer 3D micropattern meas., opt. probe & control design 120653
X-ray channeling in capillary struct., wave theory 83482
X-ray opt. custom components, nanofab. for beamline expts. 76179
zoom-lens camera, calib. from noisy data with outliers 131979
AlGaAs-GaAs all-glass terrestrial concentrator modules, develop. progress 112935

lenses continued
AsSeI chalcogenide photoresists for IR micro-optic fab. by thermal reflow proc. 82193
Be refr. X-ray lens with variable focal length 110482
Cr:LiSrAlF$_6$ electrooptical Q-switched laser, pulse width compression with CS_2 SBS-cell *(Chinese)* 82571
GaAs/GaSb tandem stack concentrator solar cell 112933
GaInP-GaInAs all-glass terrestrial concentrator modules, develop. progress 112935
$LiNbO_3$:Fe PV crysts., self-defocusing to self-focusing dyn. transit. 128471
$LiNbO_3$:Fe(Fe,Mg), dual-wavelength holographic storage, fanning noise suppression *(English)* 72086
$LiNbO_3$:Ti integrated opt. planar waveguide AO switches 116739
Nd:YAG CW laser, Cr^{4+}:YAG saturable absorber pass. Q-switching, output charact. *(Chinese)* 105441
Nd:YAG LD side-pumped laser, versatile compact TEM_{00}-mode resonator 71864
Nd:YAG pulsed laser, stable Kerr-lens mode-locking operation *(Chinese)* 105238
Nd:YVO_4 red light laser, LD pumped, intracavity freq.-doubling *(Chinese)* 71704
Nd:glass pulsed laser for ICF, sol-gel technol. for antireflective appls. 105227
Nd-doped solid laser with V^{3+}:YAG cryst. high repetition rate pass. Q-switch 71723
PZT multilayered piezoelec. bimorph actuator, quick-response dyn. focusing lens appl. 71461
TbFe substr. high-data-dens. near-field opt. recording, EM propag., num. simul. 92977
TbFeCo media, magneto-opt. recording technol. *(English)* 70531
Ti:sapphire laser, repetition-rate Kerr-lens mode-locked, high-energy pulse generation 71709
Ti:sapphire lasers, Kerr lens mode-locked, bistability study 82579
Ti:sapphire mode-locked laser sub-5.2 fs pulse generation, techs./dyn./appls. 82760

leucocytes *see blood*

level control
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
flood control/water mgt. radio DAQ syst. 120671
hydropower plant turbine governors, surge tanks fuzzy control scheme *(Chinese)* 112343
NPP low-press. heaters adaptive automatic level control 123129
NPP steam generator water level control, model predictive controller design *(Korean)* 123170
subsea separators, level meas./control strategies 110049
total body irrad., cells array compensator, state-space water-level control 133038
water clarifier tanks level meas./control, US sens., in-situ correction 76978

level measurement
capacitive level sens. develop. with LabView software *(Slovenian)* 75459
caverned large oil tanks, fibre opt. rem. inspection 123109
cryogenic fluid temp./liq. level meas. for space vehicle appls. 122514
fluid level meas., microwave principles *(Russian)* 75925
fuel oil storage tank level meas. by acoustic echo method, accuracy 110067
inclined cylindrical storage tanks, calib. characts., geom. method 75355
intermittent FMCW radar, microwave level gauging *(German)* 121286
liq. level-meter based on surface photo-charge effect 75776
long-period grating fiber-optic liq.-level sens. 120836
multicomponent solenoidal converter, distributed sectional inductance coil 72199
oil separation tank, interface level detect., HF mag. field probe 121278
photoelectronic mixing device, opt. level gauging & 3D-imaging 120913
plumb-line-type liq. level meas. syst., dyn. anal. 121271
PM lin. contactless displacement sens., differential transformer operation *(German)* 75404
self-calib. capacitive sens., threshold liq. level meas. 109510
subsea separators, level meas./control strategies 110049
water clarifier tanks level meas./control, US sens., in-situ correction 76978

level meters
caverned large oil tanks, fibre opt. rem. inspection 123109
FM-CW radar level meters, correl. algm. for high-precision meas. *(English)* 121282
FMCW radar, beat sig., spectrum correl., dist. meas. 109290
liq. level-meter based on surface photo-charge effect 75776
long-period grating fiber-optic liq.-level sens. 120836
oil separation tank, interface level detect., HF mag. field probe 121278

levels, energy *see energy states*

levitation, magnetic *see magnetic levitation*

LF radio propagation *see radiowave propagation*

librarianship *see information science*

library automation
loan recording using book and face images *(Japanese)* 95487
museums' and libraries' role on providing access to commun. tools 74170
ref. services enhanced through technol. 119514
SmartLibrary infrastructure for ubiquitous technols./appls. 74235

library science *see information science*

LIDAR *see optical radar*

Lie groups
adjoint/selfadjoint Lie-group methods 79096
aircraft autonomous landing, act. vision, predictive control law 88054
compact disc, filter banks, Lie groups 109389
diff. eqns. on Lie groups, extrapolation methods 114144
dyn. systs. of polynomial type, simplification by anal. approach 124699
fully-diverse multiple-antenna sig. constellations and fixed-point-free Lie groups 128984
generalized polar decomp. on Lie groups with involutive automorphisms 114059
ICA, joint matrix diagonalization 100799
illum. charact. estim. 84274
independent component anal., post-proc., post factor anal. 100796
motion anal., uncertainty rels. 129568
quantum holography, mag. reson. tomography and gravit. wavelets 82965
spherical motion encoder 97221
unitary space-time codes 129103
unitary space-time codes design from SU(2) Lie group representation 129184
Si for solar cells appls., modeling of H passiv. proc. 81080

life cycle costing
batt.-powered EV, retail and life cycle cost anal. 134524
CMP operations, optimised, extended X-factor theory, unit hours concept 100546

life cycle costing continued
complex IS in automotive design, in-car electronics 124013
DDP, defect detect. and prevention software tool for life-cycle risk mgt. 113443
design for environ., act. disassembly using smart materials, costs 100537
distrib. ccts. design, losses effect anal. 112013
distrib. substation computers life cycle maint. *(English, French)* 134303
electronic packaging syst. cost anal., Internet-based educ. mater. 113370
electronics and the environ., conf., Denver, CO, USA (May 2001) 100450
energy efficient motors and life cycle costing anal. 123331
environ. assess., colour CRT and LCD monitors materials eval. 86812
environ. conscious mfg., conf., Boston, USA (Nov. 2000) 89540
financial modelling, struct. approach 74027
hybrid power syst., PV array size optimisation 113002
indust. radial power systs., energy saving, life cycle cost design criteria 134670
IR imaging technol. maturation, technol. life cycles 109652
mag. induction meters, advanced diagnostics *(German)* 120783
min. lifecycle cost design under multiple hazards 113787
Norwegian power syst. losses, cost calc. method 133483
PCB DFT, testing strategy, product life cycle conditions 125890
power transformers, combustion-resist vegetable-oil-based dielec. coolants 99725
product design alternatives assess. w.r.t. environ. perform./sustainability 100614
profitability anal. using material/money flow simul. 100704
R/C buildings cost optimal design 113788
rly. vehicles, prod./life-cycle costs compromise *(German)* 78278
semicond. mfg. life cycle inventory anal. 100705
structural load probab. distrib., optimum reliab. effects 113785
Ni-Cd batts. for rem. telecomm. appls. 112804

life testing
157 nm high repetition rate mini-excimer-lasers, indust. appls. 105124
1550-nm spot-size converter integrated DFB lasers, low-cost single-mode opt. sources appl. 109067
AC motors, ASD supplied, winding insulation degrad. 99609
accelerated life test data modeling/anal. for multiple type stress 124311
accelerated life testing, simple step-stress models inference 89831
accelerated lifetime test methods for package technols. 124355
accelerated testing, methodology/stress selection/appl. 78584
advanced packages, failure anal. and reliab. testing using ultrasound 78722
Alpha μP, α-particle induced soft error rates, historical trends 79953
analog CMOS ICs, HV stress test paradigms, gate-oxide reliab. enhancement 101737
ATLAS SCT, radiation-hard optoelectronic data readout 98063
automotive electronics, design for reliab., modules 124054
base metal electrode dielec. comps. for thick/thin layer MLC capacitor appls. 115061
BCD, BCDMOS technol., gate oxide lifetime indicator, wafer level reliab. 104144
BGA backplane connector for high speed differential sigs. 115111
BME X7R/Y5V high-k dielec. for thin layer MLC capacitor appls. 80425
bordered/borderless contacts, electromigration lifetime, misalignment 69932
buried GITL and XLPE-cable, thermal calcs. 112096
capacitive RF MEMS switches, lifetime charactn. 89027
cast-resin power transformer onsite insulation diagnosis 134125
CMOS fingerprint sens./identifier LSI, semicond. capacitive sens., tests 120770
CMOS product screening strategy for low failure rate 81524
CMOS VLSI products, ultrathin gate dielec. devices, reliab. monitoring, screening issues 116024
COG bonding proc., Al/PI composite bumps appl., LCD driver chip packaging 78636
conductive adhesive joints, curing conditions and current dens. depend. of elec. reliab. 100600
defective MLC capacitors, elec. test data anal. effectiveness 115074
dimmable fluoresc. lamp life, cathode heating voltage effect 134623
electronic packaging solder joint reliab., relative damage stress concept 78678
EVA-based encapsulants develop., flame retardant, fast curing, p-Si arrays 100045
extended life ion source, lifetime improvements 121414
fiber-solder-ferrule joints, temp. cycle tested, laser module packaging 104644
fix-time censored test, Weibull distrib., simultaneous confidence region *(Chinese)* 78583
flip chip under-bump metall. conversion to intermetallics, reliab. impact 67624
flip-chip, thermal grease pump-out, accelerated reliab. testing 113475
flip-chip underfill adhesion to die passiv. before/after accelerated environ. exposure 113707
fpBGA packages, fine pitch BGA, ball-shear strength 78676
FR-4 flip chip reliab., eutectic solder bumps, reduced proc. steps 89849
GMR angle detect. & rot. speed sens., robust, automotive appl. 75469
HDD, head-disk interface tribology, accelerated testing 92843
hermetic glass-Si MEMS package form. using localized Al/Si-glass bonding 113558
hermetic wafer bonding based on RTP, wafer-level MEMS packaging 103972
highly accel. solder joint reliab. test using thermo-mech. deflect. syst. 91451
IC hermeticity assess. by electrolysis 67630
IC interconnect reliab., fast wafer-level defect detect. and control 103481
IC stress tests, moisture-based failure modelling 126953
IGBT power module in automotive traction inverter, lifetime estim. 125219
insulation systs., PD activity, ageing accel., voltage distortion 70431
integrated power electronics modules, CSP of power devices 78617
isotropic conductive adhesives as SMT solder alternative 124349
KEMET base-metal-electrode MLC chip capacitors, HALT 115079
large aluminum electrolytic capacitors, service life studies 134335
lead free interfacial struct., accelerated thermal cycle testing, BGAs and CSPs 113621
lead-free solders, bump metallurgies, flip chip appls., thermal fatigue props. 113514
limit reliab. fn. of large series-parallel systs. with assisting components 100561
locomotive traction motors, mica-bearing polyamide insulation, life testing 100278
long-lived phase change opt. storage disk reliab. test 92959
long-period fiber gratings, UV-preexposure method, transm. spectrum shift 104647
mag. recording, media thermal decay lifetime, MTR test 116388
MEMS interconnect technols., thermo-mech. reliab., testing/FEA 127088
metamorphic HEMT with 0.25 μm refractory metal gate on 4 in GaAs substr. 125731
MLC IC-BGA device reliab. 78642
MOS power device, ultra-thick gate oxide, reliab. 103197
moving-coil EM opt. scanner, polyimide-based hinges, durability 123703
multichip BGAs, stress simul., failure anal. 78618

life testing continued
multisection electro-absorpt. DBR laser, accelerated aging modelling 128269
network opt. fiber reliab., accelerated aging tests, opt. charactn. 127669
non-hermetic press. contact IGBT modules, reliab. eval. 124321
OSP accelerated aging, solderability assays via three test methods 115200
Pb-free reflow soldering impact on electronics packages 124358
piezoelec. compact displacement accumulation actuator, design/fab./testing 70341
polarized polymer film, order param. and polarized lifetime *(Chinese)* 71329
poly(arylene ether sulfide) low-loss fluorinated waveguides 82131
polymer multimode waveguide opt. backplane, avionic appls. 105040
power module design and technol. for improved power cycling capability 124322
power supply preselection testing using HALT approach 77956
power transistor, integrated, size optim. regarding reliab. constraints 127073
product life-testing strategies for improved data with time/cost savings 124306
PZT modified antiferroelec.-to-ferroelec. phase switching capacitor materials, high-energy dens. 115071
red light organic emitting diode, overview *(Chinese)* 71597
semicond. devices, reliab. certification using Goldthwaite diags. 103731
semicond. lasers, transparent current stabil., accelerated aging tests 82605
solar cell modules/encapsulations, indoor study/ageing tests 134388
solar domestic hot water syst., flat plate collector materials testing 89308
solitary heterolasers, 1-W, 0.985-μm, service life 117242
space-borne IR detectors, miniature coaxial pulse tube refrigerator 111325
spin valve head, accelerated stress degrad. 116424
stud bump bonding flip-chip technol., chip-on-flex develop. 69363
substation transformer life estim. approach 123561
telecomm. systs., accelerated reliab. testing, HALT/HASS 107999
traction, IGBT modules reliab. testing 89389
UHF components selection, acceptance checking, stat. method 69228
underfill encapsulant affected by flip chip assembly variables, adhesion 67578
VDMOS transistor, ionic contamination, wafer-level testing 126812
vehicle components/systs., lab. reliab. demons. test 89920
via/line package level/wafer level tests, comparison 81131
wafer level reliab./packaged electromigration tests, expt. comparison 81130
Weibull distrib., limited failure-censored life test 89917
AlCu line wafer level electromigration testing, isothermal/const. current/SWEAT methods 81128
AlGaAs/GaAs deep submicron PHEMT MMIC amps., high-reliab. Q-band perform. 125773
AlGaAs/InGaAs/AlGaAs PHEMT submitted to RF and DC step stresses, LF noise 126871
AlInAs-GaInAs-InP HBTs, low temp./high current lifetests 81241
a-C tetrahedral films prepared on mag. hard disks, deposition and props. 104517
C thin film cathodes, field emission lifetime, color phosphor effects 69412
C ultra-thin films, disk surfaces, variable-speed drag test, opt. surface analyzer 116436
CdS-CdTe solar cells, stress-induced degrad. anal. 100116
CdTe/CdS solar cells, Cu distrib. before/after accelerated stress testing 100108
Cu vias, direct resist removal, low-parasitic-capacitance interconnects 92133
GaAs IC reliab. prediction from life test data, regression tech. 70242
GaAs PHEMT MMIC power amps., reliab. study 115004
GaAs bulk resistors for MMIC appls., highly accelerated stress failures 69266
GaAs devices, reliab. testing, vol. impacts 113777
GaAs discrete HBT devices, DC and microwave reliab. eval. 69133
GaAs-AlGaAs HBT prod. proc. technol., perform./reliab. 70043
GaInAsP-InP complex coupled DFB lasers, FIB technol. based 128240
GaInP-GaAs HBTs for X-band power appls., reliab. 91290
GaN/$Al_xGa_{1-x}N$ buried layer QW high-power LD 71811
Ge highly doped fiber Bragg gratings, spectral charact., temp.-induced reversible changes 82085
InAlAs-InGaAs metamorphic HEMT MMIC technol. on GaAs substrs. 69244
InGaAs MQW high-power VCSEL arrays, improved output perform. 128229
InGaAs/AlInAs/GaAs metamorphic HEMTs, long term stabil., hot electron stress test 126872
InGaAs/InAlAs/InP HEMT MMIC amp., reliab. 115007
InGaP HBT, reliab., pulsed elec. stress 126661
InGaP emitter HBTs, fab. and long-term reliab. 126680
InGaP/GaAs dual-jn. solar cell mfg. experience 112936
InP HBTs, end-of-life reliab., RF modelling 115851
InP:Fe substr. highly reliable Gb/s electroabsorption modulator 127836
InP/AlInAs/GaInAs HEMT MMIC amps., reliab. 115005
Li ion large batt. for aerospace/aircraft appl., var. temp. cycling 122525
Li-ion batts., high power, hybrid elec. vehicle appl., diagnostic charactn. 99939
$MlNi_{3.65}Co_{0.75}Mn_{0.4}Al_{0.2}$ hydrogen storage alloy, Ni-MH batt., electrochem. perform. 99900
Pb-free PCB solderability preservative coatings 69318
Si photo-emitters for opt. interconnects, accelerated stressing/degrad. mechanisms 82450
Si pixel detectors, double-sided guard ring struct., neutron irrad. 121456
Si-on-Si MCM-D package, reliab. eval., flip-chip technol. PBGA 78664
SiGe/Si microwave HBT, reliab. 126678
a-SiN_xH_y thin-film diodes, hot-electron degrad., LCD appl. 70011
SnAgCu solder joints on WLP in thermal cycle testing, deform. and crack growth 113622
Ta chip capacitors, <10 mΩ ESR, heat/moisture-stable 80433
Ta solid capacitors, polymer/MnO_2 electrolytes, comparison review 80442
W-damascene SRAM cell interconnect ILD, CMP scratch induced defects, failure mechanism 79891

lifts
drive updating, expt. results 113102
high-speed gearless elevator PM motor drive systs. 113105
multi elevators, cost optimized maint. scheduling *(Japanese)* 134526
supercapacitor energy storage syst., soft commutated interface 134523
three-phase two-speed RA elevator IM, EM procs. modelling 124006

LIGA
1-3 PZT composites fab., micro PMMA mold, med. US transducer array *(Korean)* 98319
2D X-ray antiscatter grids for mammography fab. 110967
3D 30 GHz bandpass filter using LIGA micromachined proc. 102710
AC MHD micropump, UV-LIGA microfabrication 92516
deep X-ray lithog., mask fab., shaped e-beam lithog. 126564
DIN EN ISO 9001 quality mgt. syst. for mfg. of microcomponents, research institute 89906
indust. fab. proc. appls. 78603
Ka-band bandpass filter, LIGA micromachined proc. 69073
lobster-eye X-ary telescope, MCP optics, LIGA appl. 103661
low cost LIGA-microspectrometer, design 116793

GA continued
mag. thick film core, fab., LIGA proc. 127378
mammography 2D air-core antiscatter grids, MC simul., fab. 76505
MEMS materials sci., conf., Boston, MA (Nov./Dec. 1999) 89558
MEMS technol. for NASA space missions, JPL research & facilities 98883
microfabrication and micromachining proc. technol., conf., Santa Clara, USA (Sep. 2000) 89582
microoptical dist. sens., deep X-ray lithog. fab. 116765
MOXI microfabricated zoom lens for X-ray imaging 110449
on-chip eddy current sens. for proximity sens./crack detect. 101619
opt. 2×2 switch matrix with electromechanical micromotors 93197
opt. components/microsystems, fab., packaging 71384
PMMA resists, develop. rate, acoustic agitation appl. 92214
polymer opt. waveguide materials, fab. technol., LIGA proc., molding technol. *(Japanese)* 116680
spiral inductors, micromachined, UV-LIGA techs., mag. MEMS and RF devices 127409
technols./appls. for MEMS fab. 81609
tetrahedral 3-facet micromirror fab., inclined deep X-ray lithog. 127820
thick masks, rapid prototyping for through-mask electrodeposition 92231
X-ray mask, fab., ICP deep etching 69980
Cu electroplated layer, SU-8 microstruct., micro heat flux sens. 75754
Ni LIGA MEMS, microstruct. mech. props. 104176
Ni LIGA cantilevered microposts, mech. props. eval. and failure anal. 116051
Ni MEMS material microstruct./elastic property modeling 104175
Ni electroless plating for MEMS appl. 114387
Si scanning micromirror, bi-directionally movable mag. microactuator 93199

and field theory *see bonds (chemical); molecular electronic states*

ht
see also optical.....
see also optics
microwave/lightwave interacts., research and appls., review 82451

ht absorption
see also absorption coefficients; atmospheric optics; densitometry; light transmission; optical constants; optical films; optical filters; optical saturable absorption; spectra
785/1550 nm laser beam propag. in fog/haze for opt. wireless commun., comparison 86111
act. grating waveguide struct. based on semicond. materials 82146
building materials, transparent/reflective/absorbing props. expts. 114454
capacitive massive bolometers, piezoelec. cryst. weak opt. absorpt. 131913
capillary electrophoresis microchip, radionuclide/metal detect. 86718
catastrophic opt. facet damage anal. in LD by thermoreflectance microscopy 128257
causal lin. dielec., superluminal pulse propag. 82763
ceramic materials with metallized surface, laser cutting 128604
collective laser-matter interact., irreversibility 117711
cornea/PMMA plate, excimer laser absorpt., vol. luminance appl. 117598
cylindrical thin-wire bolometer, light absorpt. nonuniformity 117566
DC opt. tomography, inter-param. crosstalk minimisation 110833
dendrimer mols., large two-photon absorpt. cross sect. 117403
DMASB-based diodes, elec. and opt. characts., LED appls. 70028
double-clad chaotic fiber amp., optimized absorpt. 82530
entangled light pulse propag., dispersing/absorbing channels 94209
EPAR-Me rotaxane, anthracene-based supermolecular thin film systs., opt. and electrolum. props. 93344
fast MSM photodetector 75549
FBG grating fab., fibre-buffer UV absorpt. effect 93047
fibroadenoma, NIR tomographic breast imaging scatt. heterog. 87524
highly absorbing subquarter-wave multilayers, reflectance enhancement 71483
highly reflective boundary vol. phase gratings, spectral selectivity 128357
HMASPS dye, two-photon pumped freq. up-converted lasing props. 82037
i-line resist, aq. base developable, for micromachining appls. 104220
laser opt. components, test methods, standardization trend *(Japanese)* 93691
laser prod. vapour plume, laser beam transmittance meas. 117565
lin. polarized laser pulse in overdense plasma, anom. absorpt. 105772
low-loss IR dielec. material syst., broadband dual-range omnidirectional reflectivity 116561
mammography, absorbing/scatt. inhomogeneities, perturb. model accuracy 132625
MEH-PPV/PEO:Li-salt blend light emitting electrochem. cells charactn. 134342
(meta-phenylene vinylene) copolymers, synthesis, struct./opt. props. 79447
nano-struct. dye-sensitized solar cells, opt. props. 100038
nanomaterials as opt. limiters, review 71957
neutron capture therapy, absorbed dose imaging/profiling 111238
NOE scintillating fiber calorimeter, results of R&D activity 76083
onium salt type resist photoacid generator containing tetrakis(pentafluorophenyl)borate 103516
opt. coatings absorpt./partial scatt., multiscale mapping tech. for simult. estim. 93285
opt. computed tomography imaging of absorbers, US phase-shift detect. 110845
opto-acoustic tomography syst., wide-band acoustic pulse detect. 110689
organic thin film photodiodes, current develop., review 116959
organic thin solid films for LEDs, photophysical studies 104906
oxyfluoride:Tm vitroceramics/glasses, opt. props., display apl. 116919
pass. Q-switched laser params. optimisation model 93724
phase obj. imaging, diffr. tomography reconstruction algms. 84165
poly(o-methoxyaniline)-based solar cell, characts. 123823
poly(p-phenylene ethynylene vinylene), pendant fullerenes, prep., opt. props. 79449
polybenzidine semicond., thermal prep. and elec. charactn., doping effects anal. 103272
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole transport layers 105000
polymer low-loss waveguides, absorpt./scatt. 93110
polymer multilayer LEDs, spectral photon emission/extraction efficiency, Monte Carlo anal. 93391
polystyrene thin films, spiropyran doped, dielec. relax., waveguide obs. 92586
PPV-based film synthesis, charactn. and LED appls. 127994
PPV/porous Si composite thin films, props. and LED appls. 116925
QD concentrator solar cells characterisation 112887
radiographic film, processed, vis. dye light absorpt. props. 110963
scintillating fibers, evanescent light role in charact. meas. 121534
solid state laser rods, diode-pumped, radial energy/temp. distribs. 117148
Teflon AF, waveguiding layer fab. by ion irrad. 116550
thermally poled glasses, second order suscept., quasi-phase matching conditions 82792
thin absorbing film thickness/opt. consts. meas., photom. quantities, error anal. 86995

light absorption continued
transparent materials, enhanced laser ablation, review 128593
tris(phenylquinoxaline), dye-doped, triplet-singlet energy transfer, photoinduced absorpt. spectrosc. obs. 127918
twisted nematic display, dichroic dye, opt. params. 109891
ultrasensitive absorpt. spectrosc., high-finesse opt. cavity/off-axis alignment 128346
UV resist resin systs. for 157 nm lithog. 103650
white paint multilayer plane absorbing medium, space environ. opt. degrad. 122494
AgO_x-type super-resoln. near-field struct., NLO absorpt. 93749
AlGaN quantum cascade struct./InGaN LEDs, mid-IR absorpt./emission 93441
$Al_{0.18}GaN/GaN$ heterostruct., sub-bandgap absorpt., photocurrent spectra 91742
$Al_{0.65}Ga_{0.35}N/GaN$ MQWs, intermediated layers effect, TEM, XRD 91852
AlN epitaxial film, vibr./opt. props. 126067
ArF excimer laser resists, thermally stable alkylsulfonium salt photoacid generators 103544
$a\text{-}As_{50}Se_{50}$chalcogenide films, photoinduced cond. anisotropy 82310
$a\text{-}BN_x$ films, opt. absorpt., elec. cond. 69554
CO gas rem. detect. using tunable mid-IR OPO 86702
$CdS_{1-x}Se_x$ QD in borosilicate matrix, X-ray irrad. 91848
CrO_3 film, solar selective surface for photothermal device 82292
Cs D_2 line shift, dens. depend., precise wavelength modulation refl. spectrosc. meas. 110020
$CuFe_2O_4$ thin film prep., $CuFe_2$ cathodic electrodeposition/oxid. 79366
CuO film, solar selective surface for photothermal device 82292
Er^{3+}:Na_2O-$Ca_3Al_2Ge_3O_{12}$ glasses, opt. transits., freq. upconversion 71986
Er-doped fibre all-opt. inverted op amp, neg. nonlin. absorpt. effect 127866
$a\text{-}FeSi_x$, prep., struct. opt. props. 103068
GaAs LD, opt. absorpt., thermoreflectance meas. 82607
GaAs SI wafer for direct ion implant., nondestructive charactn. techs. 69817
GaAs cryst.-based fiber-optic temp. sens. 86593
GaAs, laser heating, thermal melting threshold, ultrafast XRD 72118
GaN crysts., opt. props., picosecond Z-scan meas. 80693
GaN:P films, electronic struct., PL 80727
GaN/AlGaN SQ wells, intersubband transits., strain relax., screening 91851
Ge, laser heating, thermal melting threshold, ultrafast XRD 72118
Ge nanocrystals, third-order opt. nonlin., pump-probe tech. 105460
ITO films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
InAlAs-InGaAs reson.-cavity APDs, ultra-low-noise 97271
InAs/InP self-assembled quantum wires, opt. transits., excitons 80811
InAsSb-AlAsSb DH QW opt.-pumped mid-IR lasers 93677
InGaN based LED, nanostructures, radiative recomb. 82426
InGaN:Zn microcrystals, Pure and doped, PL excitation spectrum, nitridation 80725
In_xMoSe_2 intercalated single cryst., growth, elec./opt. props. 115348
LiF detector, self-atten. of TL light, exptl. comparis. 132322
$a\text{-}Li_xWO_3$ films, polaron absorpt. obs. 93312
LuAG:Er garnet cryst. all-opt. NAND logic gate 116869
$MIn(MoO_4)_2$:Cr, (M=alkali metals), opt. props., laser appls. 82326
Nd:YAG rod/disc lasers, high-power appls. 71700
O_2, singlet, direct detect. by intracavity laser spectrosc. 121256
PbSe/PbSrSe MBE MQW, band struct. and opt. props., mid-IR laser appls. 126139
$PbWO_4$ crysts., mass prod. for EM calorimetry, peculiarities/prospects 121538
ReS_2, opt./elec. props., in-plane anisotropy 91702
$ReSe_2$, opt./elec. props., in-plane anisotropy 91702
Si epitaxial layer, lifetime charactn. by SPV meas. 102992
Si solar cell wafers IR lifetime mapping tech. 100058
Si surfaces, laser micron particle removal 69877
a-Si:H, RF CVD, laser melting, polycryst. films, PV props. 91607
a-Si:H, femtosecond transm., exponential band tail pumping 91692
a-Si:H,P(B) films, DC magnetron sputtering, opt. props. 114253
Si-on-insulator struct., opt. freq. energy transfer 127792
SiC, 4H, 6H, C/Si damage centres, electron irrad., low temp. PL microscopy 69585
SiC, 6H, epitaxial layers, intrinsic photocond., free exciton binding energy 71512
SiC, ion-implanted 6H, residual damage, RBS anal. 126094
SiC:Al,B, 4H/6H, absorpt. meas., doping level eval. 69809
a-SiC:H, femtosecond transm., exponential band tail pumping 91692
a-SiGe:H, femtosecond transm., exponential band tail pumping 91692
SiO_2-coated CdS nanoparticles, photodegradation in silica gels 126398
SnO_2 films, microstruct., phys. props. 115327
Te_2 dimer gas mols. for solar pumped lasers, spectrosc. studies 82492
TiO_xN_y films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
V_2O_5-MoO_3 films, electron beam evaporated, elec./opt. props. 103059
WO_3 electrochromic films, rf-sputtering, residual charges, IR absorpt. 127900
YBaCuO HTS films, opt.-microwave interact. modeling, optoelectronic devices 125825
Yb^{3+}-doped double-clad fiber laser, optimized length *(Chinese)* 71689
$Yb_xY_{1-x}Al_3(BO_3)_4$ cryst., growth, self-freq.-doubling props. 128208
$Zn_{1-x}Co_xO$ semiconds., photoacoustic spectra 103051
ZnS/MgF_2 interf. filter, laser induced damage *(Chinese)* 104869
[c-]Si solar cell diffr. grating struct. 100166

light absorption spectra *see spectra*

light attenuation *see light absorption; light scattering; light transmission; optical dispersion*

light beam induced currents *see OBIC*

light coherence
see also laser beams; lasers
2D smart detector array opt. coherence topography 73146
ASE noise reduced opt. receiver, Mach-Zender interferometric diversity scheme 109061
beam-shaping CGHs for coherent/partially coherent light 105586
bidirectional ring laser with injected sig., backscatt., stat. props. *(Chinese)* 105385
CDMA opt. commun., coherence MUX syst., generalization 86037
chromatic-dispersion compensated hybrid refr.-diffractive lens, totally incoherent opt. proc. operations 118326
coaxial FEL with Bragg mirror resonators, spatially coherent radiation 117306
coherent artifacts in OCT, obs./cancellation 110838
coherent homodyne opt. network crosstalk modelling 85999
coherent orthogonally polarized channel control, all-opt. networking appls. 131496
coherent-chaotic light conversion based delay line opt. recogniser 119852
coherent/aberrated laser beam quality improvement by using optimum/smooth pure phase filter 82738
coherent/incoherent pulse stimulated photon echo 128468

light coherence continued
contact hole patterns, opt. proximity correction, attenuated phase-shift mask *(Korean)* 69979
continuum coherent states in quantum cryptographic systs. 83957
diatomic small nanostructure objs., opt. holography, near-field effect 72083
dispersion-shifted fiber samples, second-order degree of light coherence, ASE self-PM meas. 127702
dispersive fibre medium, coherent laser pulse temporal interf. 82111
Doppler OCT, fluid flow vel. imaging 110839
dual fiber-ring depolarizer 85964
EO Michelson interferometer, low coherence fiber optics 71409
epithelial neoplasia, early detect., fluoresc. guided OCT 98376
fiber amp., dual-freq. soliton interact., coherent effects 82946
fiber Bragg grating stabilized 980-nm pump lasers, L-I charact. 71781
fiber Bragg grating vibr. sens. using incoherent light 97313
fiber Fourier optics, single lens free-space propag. 118207
fiber lasers lin. array in external Talbot cavity, near-/far-fields study 93498
fiber-optic ring resonator coherence effect, nonlin. dyn. 105466
garnet waveguide-type amps., ultrashort opt. pulses, partial coherent props. 74961
high-precision dist. meas. by interferometer-less coherent opt. range finder 75867
highly improved range sens., spatial coherence reduction 117581
incoherent holography, hand drawn images 82964
incoherent light solitons, driven modulation instabil. 128538
injection-locked 10×10 coherent VCSEL array *(German)* 93645
intense laser pulse high harmonic generation, coherence props. 117486
laser beam modes, spatial partially coherence, far field charact. *(Chinese)* 71875
LD systs. with opt. feedback, spatial beam profiles meas., interf. effects 117343
long-range low-coherence pulsed Doppler lidar, ref.-beam storage 88151
low-coherence interferometric sens. based on highly birefr. fibers, detect. syst. optimisation 109595
low-coherence off-axis photorefr. holography, beam walk-off elimination 72090
mesoscopically disordered systs., local coherence, time developing 2nd harmonic emission 93822
micromaser, coherently driven, at. pumping, superposition states 93460
monostatic lidar in weak-to-strong turbulence 96999
multiplexed opt. fiber interferometric sens. syst., opt. coherence fn. synthesis 86572
multiply scatt. coherent light, US modulation, Monte Carlo model 122043
NSRL opt. klystron harmonic generation anal. *(Chinese)* 128485
OCT, simult. refr. index & thickness meas. tech. 75908
opt. systs., superresolution improvement 129413
partially coherent high-num.-aperture scalar imaging 126559
phase sensitive amp., opt. transm. *(Japanese)* 128508
phase-sensitive freq.-multiplexed OLCR 97863
photorefr. nonlin. cryst., multicomponent spatial vector incoherent solitons 128539
photorefr. nonlin. media, bright spatial soliton form. and interact. 128548
polariz. synthesized opt. transversal FBG filter, tunable microwave freq. response 71471
polariz.-multiplexed WDM transm., PMD-induced coherent crosstalk 86086
random media, two-freq. coherence fn., ref.-wave soln. 128784
retina, 3D OCT images 98363
roughness in-proc. charactn., speckle correl. *(German)* 75886
semicond. lasers, inversionless bistability, interband coherence 71788
semicond. microcavities, parametric polariton amplif. 128489
semicond. superlattices, DC-/THz-ac-driven, coherent phenom. *(English)* 115379
semiconds., spin-depend. opt. fns./devices *(Japanese)* 93257
side-hole fiber-optic sens. for dyn. hydrostatic press. meas. 97327
skin, 3D OCT images 98363
spatially discrete coherent imaging systs., optimal pixel profiles 97352
spectrum slicing coherent light sources in high-capacity fibre transm. 85947
sub-ps opt. switches in hyper-THz repetition rates using dark reson. 72043
THz waves, coherent tunable, parametric generation 105532
tomography image form., quantization methods 106494
totally incoherent light opt. security/encryption 73420
ultrahigh scanning speed OCT, comb generators 118188
ultrahigh-resoln. OCT, continuum generation in air-silica microstruct. opt. fiber 73254
vortex spatial filter opt. sig. detect. 71475
white light interferometry, multiwavelength source equiv. coherence length 72146
wideband sig. proc. appls. for coherent opt. channelizers, mil. appls. 88237
Ar high av. power table-top soft X-ray laser, spatial coherence meas. 128073
Er-doped fibers, spectral gain saturation, distributed coherent reflectometry meas. 127649
Er-doped fibre multimode ring laser, coherence, Michelson interferometer obs. 93513
GaAs QW, exciton-polariton propag./scatt., spectra 126184
GaAs, vis. phase-locked lin. chirped pulses, coherent broadband pulse shaping 72035
GaN/AlGaN MQW, excitons/polaritons, reson. Rayleigh scatt., vert. motional narrowing 80868
$KTiOPO_4$ cryst. coherent blue/green light generation by SHG 105512
^{86}Kr low press. lamp, light stats. meas. 87004
KrF excimer laser, beam shaping and homogenization using multifacet Fresnel-kinoforms 105401
$LiNbO_3$:Ti electro-opt. coherence modulator, elec. field sens. 116723
XeCl excimer coherence evol. impulsed lasers, beam quality 82728
Zn^{20+} X-ray laser, half-cavity geom. effect on output and spatial coherence 117081

light communication *see optical communication*

light diffraction
see also holography
2D finite-aperture wire grid polarizers charactn., spectral-domain tech. 128783
3D displacement measuring moire interferometer 75864
Acid blue 7 dye soaked gelatin films, self-diffr. gratings 83006
anamorphic magnification using, chirped grating in grazing incidence mode 106787
annular phase apodizer effect on opt. disc syst. read-out sig. *(Korean)* 116573
AO interact. opt. packet sync. device 120269
apodized piezotransducer AO cell transm. fn. 116851
arbitrary oriented grating, specular diffracted wave polariz. control 117706
Bessel-Gauss mode laser resonator, diffr. energy losses 128351
binary dielec. surface-relief Bragg gratings, coated phase masks for proximity printing 82290
Bragg mismatching photorefractive effect, anisotropic self-diffr. 82048

light diffraction continued
broad-area SLA, ultrafast act. phase conjug. 93587
calix[4]resorcinarene bearing azobenzene moieties as photofunctional amorph mol., synthesis 104596
carbazole-based photorefr. organic glass, high diffr. efficiency, low external elec field 82806
CGH wavefront-transforming element, design and fab., binary opt. techs. *(Chi nese)* 128575
collimated laser beam, diffr. pattern, multi-layer feedforward neural networ image proc. *(Chinese)* 129544
colloidal photonic crysts., chem. assembly strategy, review 127568
combined diffr. grating-mirror syst., grazing incidence, waveguide props optimisation 82259
common mode/path adaptive optics syst., retroreflector array pseudo phase con jug. fidelity anal. *(Chinese)* 82805
cubic-quintic nonlin. medium, light bullet form. 82949
EUV phase-shifting point diffr. interferometer 103658
fan-beam diffr. tomography, full/min.-scan reconstruction algms. 94737
FBG, interferometric side diffr. tech. 127635
fiber Bragg gratings for WDM, phase mask stitching error study 109192
Fourier holography, alg. foundation 72093
Fresnel transform of images for watermarking appl. 95151
fuel aerosol stream, drop av. diam. meas., diffr. method 109980
fuel aerosol stream, drop size determ., diffractive method 109979
garnet-type ferrite films, VBL, dark-field microscopy geometries 116284
grating division-of-amplit. photopolarimeter for spectral polariz. meas. 109521
grating sandwich struct., NLO limiters, eye protection 71953
gravit. effects on light deflection/radar echo time, wave-propag. model 72339
Gray Field UV technol. for defect inspection systs., design/appl. 100630
groove wall induced opt. disk readout sig. deterioration, diffr. anal. 92983
Hadamard transform imaging with nanoresolution, near-field optics 95231
high power nonimage form. laser beam transform. syst. *(Chinese)* 105412
high-power laser beam focusing, in nonlin. medium, multiple spatial solitons interact. 82718
holographic diffr. gratings fab. using two step recording proc. 105595
holographic interferometry reconstruction using DMD 83037
integrated optoelectronic systs. opt. field modelling, FFT-based full diffr. metho 105041
inverse scatterometry, optimal meas. config. 84103
isotropic Kerr-type nonlin. media, pulse propag., diffr. and dispersion 128473
large modulation depth photorefr. higher-order grating, image rot. 83019
laser resonator, auto-stabil. adjustment syst. *(Chinese)* 105393
LC projector using holographic polymer-dispersed LC films 109906
limited beam, collinear AO interact., Gaussian distrib. 127861
magneto-opt. disk, light beam diffr., FDTD anal. 116843
microoptical element plane wave diffr., effective hybrid approach 94440
microscopic objs., digital holographic reconstruction, aberration compensation 83008
mixed amplit.-phase holographic gratings, shifted Borrmann effect 83011
multi-layer hologram diffr. props. 117541
multicore fiber laser, combined phase locking/beam shaping by struct. mirrors 93741
multilayer dielec. struct. diffr. grating, EM wave propag. 117704
multiple plane velocimetry, in-line digital holography 117546
narrow laser beams, Raman-Nath condition AO interact. 117331
nearly diffr. limited surface emitting conjug. polymer laser, 2D photonic band- structure 82547
nonlin. saturable/lin. medium interface, spatial soliton total internal refl. 9385
nonlin. wave-beam interacts. with energy drift, freq. conversion 128513
nonuniform refl. vol. holographic grating, num. simul. *(English)* 72094
obj. reconstruction, time reversal using single-cycle terahertz pulses 94927
OPO, diffractive domain walls, dark ring cavity solitons 93807
opt. disks, detector patterns 82071
opt. waveguide fields, free-space waves theory 116679
optimum triplicator, full-wave anal. 93283
particle sizer for hostile environ., on-line monitoring 76932
pattern slit diffr. meas., accuracy 117588
perform. prediction of DOE from microrelief profile meas. 82262
phase grating opt. low-pass filter, OTF *(Korean)* 71486
phase multiple holographic transm. grating reconstruction props., wave inclina- tion influences 72099
photonic cryst. struct., band gap, FDTD method 82139
photonic crysts. and VCSELs, perfectly matched layers, eigenmode expansion, opt. modelling 104702
photopolymer materials for refl. phase hologram recording 105593
photorefr. MQW SLM, operating speed enhancement 93229
photosensitive copolymer comps. for opt. inform. proc. and storage 71204
polypyrrylarylenemethine/N-methyl-2-pyrrolidone soln., passing TEM_{00} laser beam, large NLO charact. *(Chinese)* 82837
polypyrrylarylenemethine/polyvinyl film, Gaussian beam diffr. behavior *(Chi- nese)* 128480
quartz diffractive microlens arrays, small F no., opt. perform. study *(Chinese)* 82190
quasi-monodispersive aerosol, drop sizes, diffr. meas. methods 75866
refr./diffractive microlens arrays, fab. and perform. study 93182
semi-infinite periodical struct. wave diffr., axial symm. 117705
Shack-Hartmann sens. for laser beam M^2 anal. 110023
SIL, phase change recording material readout sigs. 127585
straight/tapered opt. waveguides, femtosecond pulse propag. 82161
tetraethoxyorthosilicate-methacryloxypropyl trimethoxy silane hybrid network, microoptical elements fab. 71364
thermal imager, input wavefront distortion, opt. perform. *(Korean)* 97394
tomography with ultrashort pulse incident wave, time-varied incident wave effect *(Chinese)* 73245
vol. hologram, diffr. efficiency, polariz. props. 117542
vol.-holographic confocal microscope, turbulence imaging 93901
AlGaInP lasers emitting at 670 nm, cladding material blocklayers 93667
$BaSrKNaNb_5O_{15}$:Ce,Co, CZ growth, photorefr. effect, holographic storage 104604
$Bi_{12}TiO_{20}$ photorefr. cryst. charactn. by feedback-controlled running holograms 82051
CO_2 laser ablation proc., polymer proc. 128610
Ce:KNSBN cryst., holographic recording with orthogonally polarized beams 128563
Ce:YIG magneto-opt. props. for mag. field sens. *(Japanese)* 109503
Er,Yb:glass diode end-pumped monomode lasers, reson. diffr. losses 71748
$KTiOPO_4$ integrated-opt. high power amplit. modulator for vis. wavelength range 82145
$LiNbO_3$ spherical waveguide AO devices, light beam guid- ing/collimating/focusing 116852

t diffraction continued
$LiNbO_3$:Zn,Fe, CZ growth, holographic storage 104619
Nd:YAG laser, diode-end-pumped, dyn. procedure anal. 117160
Nd:YAG long. diode-pumped double-clad planar waveguide laser 71753
Pd-octaisopentyloxy-phythalocyanine-doped ormosil, self-diffr., opt. limiting props. *(Chinese)* 128466
Si diffractive microlens arrays, small F no., opt. perform. study *(Chinese)* 82190
Si lamellar grating struct., groove depth, opt. scatterometry 121202
TeO_2 AO cell image proc./edge enhancement 118199
t diffusion *see light scattering*
t dispersion *see optical dispersion*
t emitting devices
see also light emitting diodes; light sources; luminescent devices
alizarin violet based light-emitting devices, CW and pulsed mode operations 71568
carboxylic acid derivatives, electrode surface adsorpt., SAM growth 116975
decacyclene LB film light-emitting devices, AC/DC response 93387
MEH-PPV, PL props. improvement by copolymerization 104989
MEH-PPV/organo-clay nanocomposite LED, enhanced quantum efficiency 127959
multicolor pixel patterning of light-emitting polymers by ink-jet printing 97603
OLED, dark spot growth 104983
OLED on polymer substrs. 104975
organic hole transport materials, trap engng. 69567
organic materials for OLED device fab., situ purification 116912
poly(7-phenylene vinylene) copolymers based light-emitting electrochem. cells 71574
polymer LED, photooxidation mechanism 127955
polymer light-emitting devices, emission color patterning, maskless dye diffusion tech. *(Japanese)* 71566
polymer light-emitting devices based on plasma-polymerized benzene(naphthalene) 71569
polymer multilayer LEDs, spectral photon emission/extraction efficiency, Monte Carlo anal. 93391
polynaphthalimide, new polymer for organic EL devices 71572
polysilicon TFT light emitting polymer high-resoln. monochrome display 97602
PPV-based self-assembled multilayer microring LED structs., fabr. and charactn. 127960
PPV/porous Si composite thin films, props. and LED appls. 116925
rare earth doped semiconds., conf., Strasbourg, France (2000) 67386
thiophene vynilic derivatives, polymerisation, OLED appl. 69619
tris(8-hydroxyquinolato)aluminium light-emitting devices, SCLC, field/temp. depend. mobility 71573
AlGaN/GaN, MQWs, localised states, PL obs. 80869
AlInGaN/InGaN, MQWs, localised states, PL obs. 80869
Er,O-doped Si layered struct. 1.54 μm light emitting devices, MBE grown 93393
GaAs/GaAlAs hot electron light emitting device at low and high elec. and mag. fields, anal. 117269
GaN/InGaN, MQWs, localised states, PL obs. 80869
InGaN-based light emitting devices, emission mechanism *(Japanese)* 82368
InSnO thin films for OLED, morph., elec. props. 109873
Si microcavity light emitting device 93392
Si/SiGe/Si:Er,O HBT light emitting devices, 1.54 μm light emission 71567
SiO_2:Ge/Si integrated Si-based optocoupler, efficient blue light emission 93389
t emitting diode displays *see LED displays*
t emitting diode printers *see LED printers*
t emitting diodes
see also LED displays; semiconductor lasers; superluminescent diodes
-NaphDATA hole transport layers, aging-induced traps, TSC meas., LED appls. 69616
3D vol.-scanning display 97592
aerial reconnaissance photograph data annotation, LED arrays appl. 99110
alkylthiophene copolymers, reversible thermochromism, PL/EL/vis. spectra 127917
all-solid-state IR gas sens., LEDs and IR detectors 120963
α-NPD hole transport layers, aging-induced traps, TSC meas., LED appls. 69616
anthracene-based cpds., pulsed-laser-depos., OLED appl. 127979
6-(9-anthryl)-1,3-diphenyl-1H-pyrazol, opt. props., LED appl. 82403
apertured QD microcavity LED 71576
bilayer organic LEDs, EL analytic model 93430
bithiazole derivative luminesc. material, synthesis & PL 127916
blue EL from polymer LED 93418
blue emitting organic thin film LEDs *(Chinese)* 104993
blue-emitting organic mols., white light emission, LED appls. 93407
bright yellow-emitting high brightness organic diode *(Chinese)* 82408
capillary electrophoresis microchip, radionuclide/metal detect. 86718
carbazole group modified polymers for LEDs 71592
carbazole-containing PPV, synthesis, EL devices appl. 105020
2-(9-carbazolyl)ethyl methacrylate/3-(2-methacryloylethoxycarbonyl)-7-diethylocoumarine electrolum. diodes 128000
chirped fiber Bragg gratings, group delay anal. 71284
CMOS 155-Mb/s opt. wireless transmitter for indoor networks 85958
colour polymer organic LEDs, ink-jet dye doping, lateral dye distrib. 116988
colour spec. & perform., user requirements 93396
conf., Radiation and its effects on components and systs., Louvain-la-Neuve, Belgium (Sep. 2000) 124202
conf., synthetic metal based LEDs, Strasbourg, France, (May-June 2000) 67406
conjug. dendrimer films, charge transport, electrolum. appls. 127993
conjug. dendrimers, struct.-property rels., electrolum., LED appl. 105021
conjug. polymer, EL liq. crysts., OLED appl. 127980
conjug. polymer blends based high perform. blue LEDs 127998
conjug. polymer LEDs, singlet/triplet exciton form. rates 127976
conjug. polymers, N- and S-containing, as hole-transporting layer in LED 82401
contact lens electrode, built in LED, ERG 98241
copper phthalocyanine based OLEDs, emission props. *(Korean)* 82397
cryogenic operation, cold light 71604
current peaking CMOS IC driver designs/reson. cavity LEDs, parallel opt. interconnects appls. 93456
DB-PPV/Alq_3 multilayer LEDs, luminous efficiency, small mol. electron transport layer effects 127992
diamond:B/diamond:P pn jn. UV LED 93438
4,4′-bis(2,2′-diphenyl vinyl)-1,1′-biphenyl multilayer blue OLEDs, ns EL spikes 105022
disordered organic LEDs, charge carrier transport/recomb. 105014
distyrylstilbenes bearing electron affinitive dendrons, blue-emitting, synthesis/charact. 105018
dithiafulvene derivative luminesc. material, synthesis & PL 127916
DMASB-based diodes, elec. and opt. characts., LED appls. 70028
doped polymer LED, phosphoresc. origs. 82393

light emitting diodes continued
DPVBi/AlO_x/Al-based OLEDs, nanosec. electrolum. spikes at voltage turn-off 127996
DWDM, opt. sources & dielec. filter type MUX/DEMUX charactn. 86053
EL dendrimers, optoelectronic props., OLED appl. 127985
electron affinitive oxadiazole novel blue light-emitting polymers, synthesis, opt. props. 114463
EM calorimeter monitoring syst., high precis. LED-based light pulser 121571
energy transfer from singlet to triplet excited states in organic LED 126096
EPAR-Me rotaxane, anthracene-based supermolecular thin film systs., opt. and electrolum. props. 93344
excitation source, freq.-domain fluoresc. microscopy 116991
fluorene-based star-shaped mols., prep., struct., opt. props. 82320
fluorinated organometallic iridium cpds., efficient EL materials 93339
free-space opt. interconnection modules for 2D photonic-VLSI circuitry, microlenses and GRINs 109225
green LEDs, based on Group III nitrides, overheating temp., act. region anal. 82373
heterostruct. organic LEDs, transient/steady-state behavior 128020
N-hexylcarbazole-co-3,4-ethylenedioxythiophene copolymers, opt./electrochem. props. 92926
hole transport materials, photolum. and absorpt., fab. conditions effect 104912
hybrid organic-inorganic struct. based optoelectronic devices 93435
II-VI dil. mag. semiconds. for magnetoelectronics 92872
II-VI materials, conf., Albuquerque, NM, USA (Oct.-Nov. 2000) 89593
III-N-V low-bandgap nitrides and their device appls. 103794
in-building opt. LAN, high speed integrated opt. wireless transceivers 85957
indirect illum. syst., LEDs, halogen & metal halide lamps 100319
integrated shadow-mask, inorganic insulator based, high-resoln. OLEDs appl. 69984
ionic emissive dyes doped in poly(vinylcarbazole), EL 116981
ITO/LED/mirror/Si struct., wafer bonding 82383
jn. diode, I-V charact., band gap and device const. 115827
ladder-type polymer LED, hot excitons dissoc. 93422
LED source diffractive optics appls. 116994
lin. displacement meas., optoelectronic installation 86967
luminesc. materials, conf., Honolulu, HI, USA (Oct. 1999) 89553
luminesc. materials for displays, overview, future prospects 109863
luminesc. mechanism of organic/inorganic EL, OLED/LED *(Chinese)* 117003
machine vision lighting, LEDs vs. fibre opt. illuminators 89886
mainline light sigs. with light diodes *(Russian)* 134515
MDOPPV, polymer LED, photooxidation effect *(Japanese)* 116985
med. diagnostics, oximetry and retinal imaging 87516
MEH-PPV high efficiency conjug. polymer-based LEDs, morph. effects 82416
MEH-PPV light-emitting polymer photonic band struct., LED appls. 86819
MEH-PPV polymer LEDs, electron-injecting/hole blocking layer 105015
methane, absorptive detect., LED/opt. fiber coupled syst. 120991
N,N′-diphenyl-N,N′-bis(3-methylphenyl)-(1,1′-biphenyl)-4,4′ -diamine, LED, UV emission 127967
microsphere resonators, near-field probe, whispering gallery modes 82574
miniature opt. barrier components *(German)* 127972
mol. organic LEDs, guest-host act. layer, enhancing device perform. 71594
monolithically integrated smart pixel, non-reson. cavity LED/photoconductive receiver 75529
Monte Carlo photon simul. 71575
MOS tunneling diode, carrier lifetime meas. from EL temporal response 126627
motor racing appls. of LEDs 105025
multilayer OLED, Alq_3-based, characts. 71619
multilayer OLED, Ir complex doped, emitting efficiency optimisation 71620
multilayer organic LEDs, transient EL 69620
multilayers OLEDs, injection/transport, num. model 71616
N×N arrayed waveguide grating protected opt. star-shaped ring network 96758
naphthalene-vinylene type polymer, photophysical props. 93399
NIR transcutaneous telemetry, implant. transmitter, LD irrad. 98869
nitride devices, multicolored LEDs, Rainbow project 82380
nonuniform injection, photon recycling influence on perform. 71605
OELD as light source for polymeric waveguides 104736
OLED, cond. phenom./degrad. monitoring, current noise meas. 71580
OLED, effect of elec. stress voltage on cathode degrad. 93410
OLED, EL enhancement 116984
OLED, electrophosphorescent, doped mol. organic thin film 117007
OLED, hopping cond., computer simul. *(Japanese)* 116987
OLED, mol. doped polymer, injection controlled EL 105007
OLED, mol. doped polymer, injection controlled EL 105006
OLED, mol. materials, elec. transport 117006
OLED, organic layer thicknesses, current and power efficiencies 105027
OLED, transport & recomb. simul. 117014
OLED, voltage depend. capacitances 104974
OLED, white, improved stabil. 128014
OLED, white light exciplex emission using tris-(8-hydroxyquinoline)aluminum 82375
OLED integrated on Si substr., 1.5 μm EL 93436
OLED integrated with polymer waveguide 127965
OLEDs, OLED for display appls. 93403
oligo(phenylenevinylene)s, increased electron affinity 69611
opt. stimulated luminesc., freq. modulated pulsed stimulation 82329
opt. transceiver modules, radiated emission/immunity characts. eval. 72387
optoelectronic device, radiation pattern and luminesc. spectra meas. 93414
organic EL, influence of sensitizer, LED appl. 71610
organic EL materials/devices, symp., Hong Kong (Jul. 2000) 100421
organic EL thin film fab., vac. deposition *(Japanese)* 79237
organic hetero-layer LEDs, interfacial charges, C-V meas. 69615
organic LED, 2,5-bis(2-{4-[bis(4-methylphenyl)amino]phenyl}thiophen-5-yl) amorph. mol. material 105009
organic LED, charge injection props. 105019
organic LED, charge transport/light-emission, intermolecular interacts. effect 93419
organic LED, computer simul. 82387
organic LED, dye doped, EL 116997
organic LED, EL/PL perform. rel. to deposition method 127988
organic LED, STM-excited EL and spectrosc. 82386
organic LED, voltage reduction 71606
organic LED carrier behavior anal. on hopping cond. basis, computer simul. *(Japanese)* 82404
organic LED dark spot growth behavior anal. by diffusion react. theory 93400
organic LED optim., IBAD procs. and optoelectronic props. 128006
organic LED with O_2 plasma treated ITO, hole transport layer ionization pot. effects 105012
organic LED with TiOPc layer, multifunctional optoelectronic device 127963
organic LEDs, C-V curves, deep hole traps, simul., modelling 71617

light emitting diodes continued
organic LEDs, electrode modif., interface engng. 105017
organic LEDs, H_2O vap./O_2 degrad. mechanisms 105004
organic LEDs, high efficiency, using undoped type emitting material 105010
organic LEDs, Joule heating effect, organic decomp. and gas evol. anal. *(Chinese)* 128008
organic LEDs, luminous efficiency improvements by carrier trapping dopants 105003
organic LEDs, mol. design *(Japanese)* 82414
organic metal for nanotechnology in electronics 91500
organic multilayer EL device, bright pure blue emission 105001
organic multilayer LED, trapped and interfacial charges 82385
organic multilayer white LED *(Chinese)* 82409
organic semicond./Mg interface, orb. lineup, XPS/UPS charactn. 91873
organic single-layer LEDs, recomb. efficiency at high fields 127970
organic solids, EL, charge recomb. mechanisms 71583
organic thin solid films for LEDs, photophysical studies 104906
organolanthanide-based IR LEDs, optoelectronic integrat. 93423
oxadiazole-containing phenylene vinylene ether-linkage copolymer, white light electrolum. 93334
PANI film, hole blocking layer in polymeric LED 127978
phosphors develop., UV LEDs 104931
photonic sens. interact./perform. in space radiat. environ., review 122477
planar dielec. microcavity LEDs, anal. anal. of extraction efficiency 82400
planar microcavities, spectral props., num. aperture, semi-empirical model 104786
POFB-MEH-PPV, blue light-emitting polymers synthesis, luminesc. props. 127981
POFB-PF, blue light-emitting polymers synthesis, luminesc. props. 127981
POFB-PK, blue light-emitting polymers synthesis, luminesc. props. 127981
poly(1,3,4-oxadiazole) based LED, EL, vap. deposition polymerization 127989
poly(2,2′-diphenylbiphenyl-4,4′-ylenevinylene-2″, 5″-bis(trimethylsilyl)-para-phenylenevinylene), EL/PL charact. 104910
poly(3, 6-N-2-ethylhexyl carbazolyl cyanotere-phthalidene), LB films, opt. props. 121082
poly(cyanoterephthalylidene)s, synthesis & charactn., LEDs 90571
poly(m,p-phenylenevinylene) derivatives, highly luminesc., synthesis, opt. charactn. 82417
poly(N-vinylcarbazole), film, evap. deposition for LED struct. 68212
poly(N-vinylcarbazole), mol. doped LED, ionic charge polariz. *(Japanese)* 116986
poly(N-vinylcarbazole)/3-(-2-methacrylate-ethoxy)carbonyl dimethylocoumarine LEDs, electrolum. 127999
poly(N-vinylcarbazole)/poly(4,4′-dialkyl-2,2′-bithiophene) LEDs, electrolum. 71593
poly(p-phenylene vinylene):$InCl_3$, opt. props., photo-/electrolum., dopant effects 69618
poly(p-phenylene vinylene) copolymers, synthesis, LED appl. 68439
poly(p-phenylene vinylene) LED, enhanced carrier mobility, perform. 71613
poly(p-phenylene vinylene)/porous GaP composite materials, LED appl. 93437
poly(p-phenylenes), ladder type, temp. depend. struct. stabil., Raman study 93439
poly(p-phenylenevinylene) derivative, charge cond. 82415
poly(phenylene pyridine) deriv. blue LED, photoluminesc. spectral narrowing 93416
poly(thiophene) derivative LED device, regiocontrolled synthesis & opt. props. 82395
polybithiophene film LEDs, electropolymerization, EL props. 93428
polydiacetylene-based LEDs, bipolar charge transport, mesoscopic model 71618
polyfluorene copolymer, trap free, SCL currents, ITO hole injecting contact 75795
polyfluorene derivative polymer LEDs, barriers to electron extraction 104992
polyfluorene derivatives, electrolum., organic tunable electrolum. diodes 71612
polyfluorene pulse driven small area LED, enhanced perf. 93406
polymer anode/small mol. interfaces, hole injection barriers 91737
polymer LED, metal fluoride/Al bilayer cathodes, efficiency 93408
polymer LED, phosphoresc. Pt(II)/Ir(III) dopants 117009
polymer LED, recoverable instabil. *(Chinese)* 82411
polymer LED, singlet/triplet energy transfer to mol. dopants 93420
polymer LED's, freq. depend. carrier mobility 127977
polymer LEDs, develop., polymerization, indust. mfg. issues 71614
polymer LEDs, perform. improvement using polymer solid solns. 93409
polymer LEDs, poly(4,4'-diphenylene diphenylvinylene) LB film hole transport layers 105000
polymer LEDs with LiF/Ca/Al cathodes, blue emission, efficient electron injection 93405
polymer phosphoresc. light emitting devices 105023
polymeric alkoxy PBD, synthesis, LED appls. 116999
polymeric LB film incorp. LED, operating lifetimes 116990
polymeric LED perform., partially oxidized Ca cathode effects eval. 93426
polymeric LEDs, device charact. 116998
polyoxadiazole derivatives based OLEDs 71615
polyphenylquinoxalines/trisphenylquinoxalines films, electronic transport, OLED appl. 127986
polypyrrole free-grown layer, interface effects in PPV OLEDs 127997
polystyrene/ether-PPV/phenylethynyl anthracene single-layer LED, voltage-depend. EL 82391
polythiophene derivative LED with nano-sized electrode, modified SNOM setup 116980
porphyrin derivative LB film based LED, elec. field redistribution, EL/TOF study 127990
portable equipt., ZXSC100 integrated DC-DC converter chips 123580
power LEDs, lighting appls. 82394
power line current sens. using analogue opt. data transfer 77661
PPV LEDs, electron/hole traps, charge based DLTS anal. 127975
PPV-based conjug. aromatic polymers, synthesis 75794
PPV-based copolymer LEDs, improved efficiency, electron transport layer effects 127995
PPV-based film synthesis, charactn. and LED appls. 127994
PPV-based LED, charge transport props. 117016
PPV-based stat. copolymer with glyme-like side groups, luminesc. props. 93415
PPV/hole-transporting unit alternating copolymers, prep., LEDs 86814
PPV/PMA layer-by-layer assembled organic LEDs, isolating clay barrier sheets 93425
proton displacement damage 128307
PVK-TPA-MEHPPV copolymers, electroluminesc. enhancement, OLED appl. 116917
PVK/CPDHFPV/MEH-PPV LED, white light emission 93401
QD LEDs, carrier lifetime & radiative recomb. 103127
light emitting diodes continued
quantum nondemolition meas. by series-coupled light emitter diodes *(Chines* 109581
QW IR photodetector-LED integrat., space charge spectrosc. 86554
red light organic emitting diode, overview *(Chinese)* 71597
red organic LED made from triphenylene hexaester and perylene tetraest 71587
red reson. cavity LED, static/dyn. prop., lateral confine. layer 82418
sens.-friendly vehicle and roadway systs. for collision avoidance 120446
p-sexiphenyl, enhanced electroluminesc., OLED appl. 116983
single-layer polymer LED, emission zone 82388
standardization, radiometric intens. meas. 82381
star-shaped organic light emitting materials synth./charact. 127982
stilbenoid phosphors with increased electron affinity, sulfones as electr accepting groups 69610
straightness monitoring, FES-1 optoelectronic device 132160
substituted thiophene oligomer, photoluminesc./electroluminesc., LED app 93417
surface-emitting, circ. corner reflector and microlens 82382
TDATA:F_4-TCNQ amorph. hole-transport layer for LED, p-type doping an enhanced hole injection 128011
tea aroma, opt. sens. using n-tetraphenyl porphine manganese (III) chloride L thin films 109592
thin film nanotechnologies, review 124849
thin-film OLED, waveguide losses 128009
thiophene vynilic derivatives, polymerisation, OLED appl. 69619
transparent OLEDs using Ni(acac)$_2$ as electron injection buffer layer 71577
triphenylamine polymers, ethynyl/aromatic moieties, synthesis & props. 9056
tris(8-hydroxy-quinolinate)aluminum-based organic LEDs, driving duty rat depend. of lifetime 71584
tris(8-hydroxyquinoline)aluminium derivates, LED, blue/yellow emissio 117000
tris-(8-hydroxy) quinoline aluminum (Alq_3) emissive layer LED, EL tem depend. 71591
tris-(8-hydroxy) quinoline aluminum LED, quantum efficiency, temp./fie depend. 71609
ultra-bright, structural and opt. failure under elec. stress 116977
vert. integrated reson.-cavity LEDs, low-power phototransceiver arrays 1280
white illum. source with inorganic LED and phosphors *(Chinese)* 82376
ytterbium tris(8-hydroxyquinoline), OLED, EL 117008
AlGaInP LED wafers, bonding to Au/AuBe mirrors 116992
Ag/tris(8-hydroxyquinoline) aluminum OLEDs, interface interactin, XPS ob 105030
Al complex, Alq(Clq)$_2$ with mixed ligands, EL behaviors 127984
Al complex with substituted 8-quinolinolate, luminesc. materials synth./charac 127983
Al/MF/poly(9,9-dioctyl-fluorene) (M=Cs,Li) hybrid interfaces, XPS/UPS, LE props. 116923
Al/MH-PPV/ITO diode structs., reversible PV/electrolum. effects 117015
AlAs mirror microcavity, ultra-thin laterally injected LEDs 82201
$Al_xGa_{1-x}As$-GaAs based nanofabricated reson. tunneling LEDs, fab., charac 93413
AlGaInN high-power flip-chip LEDs 71581
AlGaInP LED, mirror substr. wafer bonding 116993
AlGaInP LED samples, modulated doping effect on work voltage *(Chines* 104994
AlGaInP, microcavity LED, external quantum efficiency 128021
AlGaInP microcavity LED, intrinsic emission spectrum, deconvolution 1280
AlGaInP vis. LEDs 82379
AlGaInP vis. LEDs, reliab. 93440
AlGaInP/AlInP LED, fab. & perform. 117277
$Al_xGa_{1-x}N$ thin film, GSMBE growth, Si(111) substr. 101207
AlGaN:In heterostruct., UV optoelectronics appls. 103138
AlGaN:Mg films, acceptor levels, LED obs. 69534
$Al_{0.15}Ga_{0.85}N$:Mg/GaN superlattices, elec./opt. props., LED appl. 126134
AlGaN/AlGaN DH UV LEDs, MOCVD growth 116989
AlGaN/GaN multilayer based DBRs, plasma assisted MBE 127883
$Al_{0.13}Ga_{0.87}N/Al_{0.10}Ga_{0.9}N$ LED, LD, 339 nm DUV emission 82420
$Al_{0.14}Ga_{0.86}N/Al_{0.18}Ga_{0.82}N$ LED, transparent conductive layer, short period all superlattice, UV 82428
$Al_xGa_{1-x}N$/GaN epilayers, effects on UV LED chips 82413
AlGaN-based SQW LED, mW operation in UV region 82374
AlGaN-based UV-LED on bulk GaN, perform. 93421
$Al_xGa_{1-x}N$-based QW, DUV LED and LD, growth and opt. props. 82601
AlInGaN/AlInGaN MQW, pulsed ALE, LED appl. 124871
AlInGaN/InGaN MQW vert. conducting LEDs on SiC, quantum efficien 82423
AlInGaP high-power LEDs, MOVPE-grown, surface texturing 71608
Au/Si-rich SiO_2:Si(Ge)(Ar)/p-Si diodes, electrolum., ion implant. effects 1280
Au/SiO_2/amorph. Si/SiO_2 superlattice/p-Si LEDs, electroluminesc. 71585
BeMnZnSe/GaAs, spin injection/manipulation 91845
C nanotube composite electron transport layer for M3EH-PPV based LE EL/brightness 127991
C nanotube composite, electron-transport layer for organic LED 93412
C_{60}/zinc phthalocyanine supersonic mol. beam co-deposition, optoelectroni appl. 69626
Ca cathode, controlled oxid. during growth, polymeric LED appl. 127987
CdSe/ZnS nanocryst. films, layer-by-layer growth, LED appl. 125029
Eu complex-based LED, EL relax. behaviour anal. 128004
Eu-complex, soluble, pure red-emitting organic EL devices appl., triplet excit state 126095
β-$FeSi_2$/Si LED, ion beam synthesis, elec., electronic, opt. characts. 82412
GaAlAs LED, radiation degrad. effects 105026
GaAs LED, elec. spin injection using dil. mag. semiconds. 82398
GaAs:Si/InGaAs/AlGaAs forward-biased Schottky diode, EL obs. 128001
GaAs/AlGaAs V-groove quantum wire LED, narrow linewidth excitonic emi sion 93394
GaAs/AlGaAs surface textured LED, texture-enhanced transm. 127968
GaAs/AlGaAs-based LED, dil. mag. semiconds. for spin-polarized current inje tion 80684
GaAs-based microcavity LED with InAs/GaInAs QD 117011
GaAsP/GaP/Si pn diode, MOMBE, vis. LED appl. 93397
GaInAsP photonic crysts., CH_4-plasma-irrad., strongly enhanced light extracti 103137
GaInN, MQW, LED, MOCVD, PL 82427
GaInN/GaN MQWs, varying In comp., temp. depend. carrier dyn., PL 80866
GaInN/GaN mesa-struct. LEDs, current crowding, opt. saturation effects 715
GaInNAs and Ga(In)NP, optoelectronic materials, LEDs 105031
GaInNP, electronic/optoelectronic material 115318

ht emitting diodes continued
GaInP QW/AlGaAs-AlAs Bragg mirrors, high-efficiency reson.-cavity LED 71589
GaInP-AlGaInP thin-film 650 nm LEDs 82402
(GaMn)As/GaAs based ferromag./nonmagnetic semicond. LEDs, elec. spin injection 82399
GaMnAs/GaAs/InGaAs, p-n jn. LEDs, electrolum., I-V charact. 82384
GaN LEDs, Ni/Au ohmic contacts form., annealing in O_2 ambient, oxid. 80918
GaN, conf., Nottingham, UK (July 2000) 100368
GaN homo-jn. LEDs, MOCVD, multiple-pair buffer layer 71601
GaN optoelectronic devices, defect dens. reduction 91675
GaN:Mg, blue LED, nitrogen plasma treatment, vacancies, reactivation 82419
GaN:Si/InGaN:Mg QW LED, tunnel jn., hole injection 116976
GaN/Al(In)GaN heterostruct. 69523
GaN/AlGaN, LED, in situ dry etch monitoring, electronic transits. 81104
GaN/InGaN LED, device perform., uniform current spreading 71595
GaN/InGaN LED on HVPE GaN, substrate props. 68244
GaN/InGaN LED, sapphire substrs., current crowding 127974
GaN(/InGaN) LEDs, temp. depend. EL 71600
GaN/InGaN-on-sapphire blue LEDs, ESD-stressed, resistive current paths 127964
GaN/SiC, epilayers, lateral overgrowth, pulsed MOCVD, InGaN LED appl. 90455
p-GaN/transitionmetal, transparent low resist. ohmic contact, Charactn., blue LED appls. 80915
GaN-based LED, minority-carrier diffusion length 105011
GaN-based LEDs, spectrally resolved electrolum. microscopy and μ-electrolum. investig. 104995
GaN-based MQW heterostruct. LEDs, luminesc. spectra and efficiency 116978
GaN-based electronic/optoelectronic devices, business opportunities 70002
$GaN_{1-x}P_x$, laser assisted MOCVD, PL, LED, SIMS 90381
$GaN_{0.011}P_{0.989}$/GaP double-heterostruct., gas-source MBE growth, red LED appl. 101260
GaP:N LED, P^+–n^-–n jn. barrier distrib. *(Chinese)* 117004
HgCdTe LWIR emitters on conductive substrs., growth 90430
HgCdTe layers, micromachined opt. concentrators fab. for IR LEDs 71368
ITO films, PLD on flexible plastic substrs. for organic LED appl. 91685
ITO surfaces modifs. in OLED devices by Taguchi methods 103415
ITO/CuPc/CBP/Bu-PBD/CsF/Al OLED, combinat. fab. 127966
ITO/MEH-PPV/Alq_3/Al monolayer/bilayer LEDs, transient electroluminesc. 71596
ITO/copper phthalocyanine, transparent organic LED, interface photoemission spectr. 128002
ITO/tris(8-quinolinolato)aluminum/MgAg(Al) OLEDs, exciton dyn., PL obs. 128003
(In,Ga)N based LEDs, multichip LEDs, phosphor converted LED, reviews 104999
InAlGaN-based QW, DUV LED and LD, growth and opt. props. 82601
InAs QD with strain reducing layer, improved electrolum. 117010
InAs self-assembled QDs, struct./electrooptical charact., laser/LED appl. 91839
$InAs/InAs_xSb_{1-x}$, mid-IR LEDs, MBE growth 101266
InAs/InAsSbP LED grown by gas-phase epitaxy 128007
InAs/InGaAs QD, opt. microcavities/act. layers 116979
InAsSb/InAsSbP double heterostruct., LED, electrolum. 82392
InAsSbP solid soln. films, LPE on InAs, LED appl. 114382
InGaAs/GaAs QD reson.-cavity light-emitting devices 128277
InGaAs/GaAs phototransceiver OEIC, low power, photodiode & QD microcavity LED 96709
$In_{0.53}Ga_{0.47}As/GaAs_{0.5}Sb_{0.5}$ type II MQW diodes, electrolum. 105005
In(Ga)As-GaAs QD EL devices, intersubband gain/stimulated emission 91840
InGaAsP optoelectronic devices, monolithic integrat. with Si electronics 117035
InGaN, In inhomog. & emission charact., excitons 105028
(In)GaN LEDs, indust. prod. on SiC 104996
InGaN LEDs/AlGaN quantum cascade struct., mid-IR emission/absorpt. 93441
InGaN MQW, reson. cavity, blue/near UV LED, lasers 82424
InGaN MQWs, chem. mapping 101325
InGaN SQ wells, amber LED, EL/PV spectra, PL 82407
InGaN SQW blue/green LED, current-modulated electrolum. spectr. 104991
InGaN, UV LED, high power, MOVPE on patterned sapphire substr. 93424
InGaN act. layers, radiative recomb. proc. in GaN-based LEDs 82389
InGaN based LED, nanostructures, radiative recomb. 82426
InGaN epilayer, structural anal. & PL, XRD/EXAFS 103047
InGaN films, plasma-assisted MBE, photoluminesc., LEDs 104997
InGaN green LEDs, MOVPE growth on Si(111), charactn. 105002
InGaN green SQW LEDs on Si(111) by MOVPE 93442
InGaN layers, indium content, LEDs, PL peaks, RBS, EXAFS, EDX 128018
InGaN micro-size light emitters, emission wavelengths 105024
InGaN nanoscale dots, MOCVD, PL, AFM, TEM 124991
InGaN, time-resolved electroluminesc., exciton recomb., LED meas. 82318
InGaN, white light source based LEDs 82421
InGaN/AlGaN DH, blue/green LED, MOVPE *(Chinese)* 117002
InGaN/AlGaN:Zn,Si DH green LED, LP-MOVPE growth *(Chinese)* 82410
InGaN/GaN LED, elec./opt. props. charactn., MOVPE 82425
InGaN/GaN LEDs, Si-doped $In_{0.3}Ga_{0.7}N$/GaN short-period superlattice tunneling contact layer 127973
InGaN/GaN, MOCVD growth, materials/devices, PL, EL, reviews 79304
InGaN/GaN MQW LED with tunnel contact jns., lateral current spreading 71579
InGaN/GaN MQW LEDs, failure mechanisms rel. to fab. 93429
InGaN/GaN MQW LEDs, temp. depend. of radiative recomb. zone 82390
InGaN/GaN MQW LEDs transm. expt. in plastic opt. fiber LAN *(Japanese)* 93085
InGaN/GaN MQW monolithic white LEDs, wavelength emission tuning 127962
InGaN/GaN, QDs, QWs, MBE, UV to red light emission 90334
InGaN/GaN QW microdisk LED, size depend. 71582
InGaN/GaN QW struct. emission mechanism, PL, LD, LED 80865
InGaN/GaN SQW struct., blue/green LED, MOVPE *(Chinese)* 117002
InGaN/GaN SQW struct., green LED *(Chinese)* 93395
InGaN/GaN based LEDs/MQW LD, disloc., external quantum efficiency 93404
InGaN/GaN, blue LED, MOCVD on Si substr., AlAs seed layer 82422
InGaN/GaN blue LEDs, MOVPE, EL & PL spectra 82378
InGaN/GaN dual-wavelength blue/green MQW LED 127969
InGaN/GaN:Mg blue LEDs, MBE, charact. 71602
InGaN/SiC QW LEDs, high-brightness, growth mode, strain depend. 104998
$In_xGa_{1-x}N$/GaN LEDs, time-resolved PL 128019
InGaN-GaN MQW LEDs, InGaN current-spreading layer, enhanced output power 128015
InGaN-GaN(AlInGaN) multiquantum-well LEDs, opt. charact. 71603
InGaN-based LED, temp. depend. of elec.-field induced photolum. 71586
InGaN-based LEDs, review 105029
InGaN-based LEDs/lasers, wafer bonding/laser lift-off integrat. 128033

light emitting diodes continued
InGaN-based UV LED excited ZnS-based phosphors, white luminesc. 82377
InGaN-based white LED lighting, high-efficiency, illum. charact. 89441
InSb layers, micromachined opt. concentrators fab. for IR LEDs 71368
InSb multielement IR sources with alternating contrast 117005
InSnO thin films, UV irrad., cond., work fn., stabil./instabil. 69551
InSnO/PPV LEDs, charact., ITO surface modif. effects 117001
Nb_2O_5-SiO_2 multilayer interf. filters, artificial nose fluoresc. sens. 86504
Pt porphyrin-based conjug. dendrimer LED, electrophosphorescence control 128010
Si EO device, LED antifuse/photodetector integrat., sens. appls. 104745
Si LED, power conversion efficiency 117012
Si MOS tunneling diodes, band-edge electroluminesc. model 93411
Si bandgap energy EL, MOS struct. EL 71590
p-Si based LED, EL, operation mechanisms 93433
Si p-i-n struct., time depend. RT EL 105016
Si porous LED by std. BCD technol., yellow-orange EL 93432
Si, porous, integrated LEDs, fab. proc. using graded doping profiles 82396
Si, porous, large-area LED, double-layer metallization 128012
Si technol. opt. NOR gate 127871
Si:B RT LED, ULSI compatability 71611
Si:Er, Er centers optimisation for reverse biased LEDs 69489
Si:Er, nanocomposites, IR LEDs/microcavities 71598
Si/O semicond.-at. superlattices, MBE grown, struct. 90273
$(Si/SiO_2)_n$ multilayers and microcavities, LED appls. 93431
p-Si/β-$FeSi_2$ particles/n-Si LED, light emission, Si growth temp. effects 116996
Si-based opt. interconnect for sig. transm., VLSI technol. 126453
$Si_{1-x}Ge_x$, act. layer, Er/O-doped, MBE, LED 93434
a-SiN_x:H microcavities, DBR fab. 93331
SiO_2:RE in MOS diodes, efficient EL 71599
p-$SrCu_2O_2$/n-ZnO UV-emitting diodes, fab./charactn. 71588
Tb pyrazolone complex LED, efficient single layer operation 128017
TlInGaAs/InP DH LEDs, gas source MBE growth, temp. stable wavelength 116995
TlInGaAs/InP DH struct., GSMBE growth, WDM syst. appls. 101239
Yb^{3+} complex LED, IR EL 93402
Zn complex with substituted 8-quinolinolate, luminesc. materials synth./charact. 127983
ZnCdMgSe/InP QW, vis. LED, DBR 103135
ZnCdMgSe-based DBRs, high reflectivity symm. strained, MBE, charactn. 105384
ZnCdSe QW, low temp. migration enhanced epitaxy 101275
ZnS nanoparticle-doped PVCz electrolum. devices, electrolum. props. 109871
ZnSe-based cpds., device-quality, mixed-colour LEDs 117013
poly(N-vinylcarbazole) LED, $LiClO_4$ doped, efficiency 116982

light filters *see optical filters*

light intensifiers *see image intensifiers*

light interference
see also light interferometers; light interferometry; moire fringes
3D photonic cryst. fab., fs laser interf. tech. with diffr. beam splitter 93152
act. opt. fiber ring resonator filter, linewidth factor, optim. *(Chinese)* 71692
ADM, multimode interf. device, grating-induced dispersion 109201
AO phase proc., dyn. range eval. 82250
AO phase proc. of HF sigs. 82249
arrayed waveguide gratings with MMI couplers, anal. and design 127766
atmos. laser commun., edge technol. *(Chinese)* 109220
azobenzene-based polymers with oligo(ethylene oxide) side chain, rapid surface relief form. 104595
binary-phase diffr. gratings for periodic struct. fab. *(Korean)* 72074
broad-area SLA, ultrafast act. phase conjug. 93587
CDMA direct-detect. opt. sync. systs. with interf. canceller using group inform. codes 74920
CDMA opt. systs., MAI reduction 109092
coated cylinder rainbow scatt., thin-film interf. 72338
color reflective LCD, opt. design 109870
colour filter fab., thin-film layers absorpt./transmittance 97597
compact 1×2 opt. power splitter, periodic var. of error characts. with waveguide width 85965
diatomic small nanostructure objs., opt. holography, near-field effect 72083
4′-N,N-dimethylamino-N-methyl-4-stilbazolium tosylate cryst., refr. index control, grating fab. 127548
diode lasers, freq. fluct. interf. measuring method *(Chinese)* 110016
directional grating rosette and moire interf. tech., residual stress meas. *(Chinese)* 132187
dispersive fibre medium, coherent laser pulse temporal interf. 82111
distributed Raman amplif. transm. syst. modulation format, multipath interf. 109036
distributed Raman fibre amp., double Rayleigh backscatt. 128170
double-freq. laser interf. tech. for high precision straightness meas. *(Chinese)* 128629
DVD opt.-head alignment using fast wave aberration meas. *(Japanese)* 127575
DWDM wavelength routing archit., multipath interf. 109213
evanescent interferometric lithog. 69966
femtosecond Bessel beam generation using thin-film microoptics arrays 104793
FFH CDMA multirate opt. syst. using power control 74986
fiber Bragg gratings fab. using flexible/stable Sagnac interferometer 127631
fiber grating, long-period, asymmetric transm. spectrum, removal by beam scanning method 82082
fiber Raman amps., double Rayleigh scatt. noise *(Chinese)* 105204
fiber spatial-temporal charact., ultrashort-pulse interferometry 104682
fibre optic sens., interf. pattern recogn., CGH-ANN syst. 86584
Fizeau interferometer wavemeter for CW lasers, testing and accuracy 121243
gas-flow nuc.-pumped lasers, energy deposition, interferometric tech. 128111
gauge block center length, automatic laser interf. meas. *(Chinese)* 109984
laser beams, arbitrary inhomogeneities meas., interf.-threshold inform. recording 93711
LD systs. with opt. feedback, spatial beam profiles meas., interf. effects 117343
lin. CCD camera, interf. fringes, fast accurate algm. anal. *(Chinese)* 109703
low-coherence interferometric sens. based on highly birefr. fibers, detect. syst. optimisation 109595
Mach-Zehnder generalized opt. switches 119849
mag. head metrology, interf. microscopy 92803
micromirror ang. rot. determ. using laser interferometric method 109978
MMI-/AWG-based N×N devices for WDM appls., charactn. 120123
multilayer ARC for NIR wavelengths 116896
multimode interf. couplers, anal. & design 116705
multimode interf. couplers, tunable power splitting ratios 71351
multimode interf. Mach-Zehnder interferometer opt. switches *(Chinese)* 71306
multimode interf. struct. integrated optic systs. 127800

light interference continued
multiple opt. feedback LD, self-mixing interf. effects *(Chinese)* 128304
N×N tapered/straight multimode interf. couplers, sig. bandwidth 71323
nano-CMM, laser trapping probe positional detect. principle *(Japanese)* 86954
NLC-SLM, PM charact., phase-shift interf. 93245
OFFH-CDMA multirate syst., SIR perform. eval. 74967
opt. disks, detector patterns 82071
pattern slit diffr. meas., accuracy 117588
phase sing. meas., small struct. vicinity, Linnik interf. microscope *(German)* 75812
phase-shift interferometry, interf. pattern with step, proc. tech. 94752
photoelastic stress anal., multiple-refl. effects 86983
photoelec. automatic focusing syst., laser wave interf. patterns, CCD lin. array 127939
polymer photonic crysts. fab. by holographic lithog. 127567
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
profilometer for superfine surface microprofile meas. 121203
real-time micro-vibr. meas. using sync. phase detect. interferometry *(Chinese)* 132188
refr. thin-film micro-optics, femtosecond interf. effects 82206
silica-on-Si multi-mode interf. couplers, design params. optim., perform. *(English)* 104721
silicon-based integrated opt. press. sens., intermodal interf. 131868
single-mode fibers polariz.-independent wavelength conversion 82113
SOA delayed-interf. config. for all-opt. wavelength conversion 120319
SOI compact 3-dB tapered multimode interf. coupler 82181
stimulated down conversion, image transfer/phase conjug. 128434
transparent objs., real-time holographic testing method, interf. pattern *(Chinese)* 105577
twin-grating fiber optic sens., demodulation algm. 75573
ultrashort laser pulse detect., time stds., calib. methods 93729
WDM opt. systs., cross-channel interf. due to mode partition noise 131532
$Bi_{12}SiO_{20}$ sillenite cryst. photorefr. gratings 92933
a-C:H/ZnSe/BaF_2/Y_2O_3 DLC IR antirefl. multilayered interf. coatings 116883
Er-doped single-freq. fiber laser, external light injection, freq. control charact. 71677
GaAs multimode interf. opt. power splitter *(Chinese)* 104690
GaAs/GaAlAs MMI opt. power splitter, opt. commun. *(English)* 93104
GaInAsP-InP multimode interf. coupled ring resonators 93132
InGaAsP MQW microarray waveguide, selective MOVPE for integrated photonics 116730
InP/InGaAsP multimode interf. coupler, 1×8 channel power splitter 71339
InP/InGaAsP multimode interf. couplers, access guide first-order mode effect 116681
$LiNbO_3$:Fe PV crysts., self-defocusing to self-focusing dyn. transit. 128471
$LiNbO_3$:Fe photorefr. material, parasitic hologram reconstruction 83028
$LiNbO_3$:Mg photorefr. cryst. beam deflection 116800
Si SOI, integrated multimode interf. couplers 116738
SiO_2/Si 2×2 multimode interf. couplers, design params. 104706

light interferometers
see also Fabry-Perot interferometers; light interferometry; Mach-Zehnder interferometers; Michelson interferometers
3D miniaturized surface profilometer, Young's double pinhole interferometer 109591
3D profile reconstruction using opt. fibre Fizeau interferometer 118409
act. multi-mode-interferometer SOA 128281
adaptive laser US receiver, polaris. self-modulation effect 101554
adaptive opt. phased array interferometer for acoustic wave detect. 101552
adaptive optics syst. design params., reconstructor formulation error 131867
all-opt. digital proc. ccts., switching/regenerative memory appls. 116868
all-opt. SOA digital proc. cct., GHz shift register 127870
all-opt. switch based on ultrafast nonlin. interferometer 93844
astron. interferometers, integrated optics appl. 127791
automated surface profiling syst., fringe-free interferometry syst., Mueller matrix error correction 89905
automatic focusing common-path heterodyne surface profiling interferometer 86969
azo containing photosensitive liq. cryst. polymer film, two-wave mixing 128442
bimodal waveguide, integrated opt. cross strip polarizer concept 104708
Bragg wavelength fiber-optic grating filter fab., modified Talbot interferometer use 127622
broadband opt. preamplified receiver, interferometric wavelength converter 120347
coherence-multiplexed fibre-opt. sens., press./temp. change meas. 109607
displacement meas., laser interferometric syst. 109985
double freq. laser interferometer, absol. dist. meas., dyn. servo-tracking syst. *(Chinese)* 109996
dual-beam normal incidence pol. interferometer for flying height testing 121220
dual-long.-mode birefr. moire DFB fiber laser sens. in rf domain 97333
dyn. phase mask high-power laser beam focal spot optim. 105409
EUV lensless FT holography 83002
EUV lithog., phase shifting point diffr. interferometer 92200
EUV lithog. opt. charactn., phase-shifting point diffr. interferometer 69969
EUV phase-shifting point diffr. interferometer 103658
fiber Bragg gratings fab. using flexible/stable Sagnac interferometer 127631
fiber laser mode locked by Sagnac interferometer with nonlin. polariz. rot. 128405
fiber optic gyros, navig. appls. *(Japanese)* 97337
fiber polarized-light interferometer for high precise fab. meas. 97322
fiber Sagnac loop OPA, twin-beam-type quantum correl. 72016
fibre optic current sens. using differentiating Sagnac interferometer 86588
Fizeau interferometer wavemeter for CW lasers, testing and accuracy 121243
Fizeau wedge interferometer for laser wavelength meas. *(Chinese)* 110014
flames, axisymmetric gaseous, temp. meas., Lau phase interferometry with lin. gratings 132202
FOG ang. vel. sens., noise charact. 120852
gain-transparent ultrafast nonlin. interferometer, Gb/s polariz. insensitive all-opt. DEMUX 131591
Gb/s all-opt. DEMUX, gain-transparent ultrafast-nonlin. interferometer 75017
new generation devices for all-opt. commun. network 74924
heterodyne noncontact surface profiling interferometer with automatic focusing 97825
high power diode lasers with external resonators, improved beam quality 71821
hybrid optomechanical gyroscope, injection interferometer readout 86752
indust. inspection and proc. control, laser US syst. appl. 131928
insulating oil, PD sig. detect., opt. fiber Sagnac interferometer *(Korean)* 70384
integrated opt. cross strip interferometer 127728
integrated opt. interferometer, opt. control using photochromic polymer 93151

light interferometers continued
intrinsic DFB fibre laser hydrophone 131943
ion-exchanged integrated waveguide devices, appl. fields 127779
Japanese advanced accelerator develop., review 110181
λ/4-shifted semicond. DFB devices, chirped grating effect on opt. bistabili 93837
large format broadband QW IR photodetector arrays, spatially modulated pris interferometer appls. 86656
large-aperture phase-shifting interferometer for PSD fn. meas. 93306
laser interferometer, harmonic distortion sine wave amplit. meas. error *(Chines* 86986
laser interferometer for moving stage straightness meas. 75882
laser-US, NDT, indust. appls. 90610
LD-SPM interferometer, photothermal wavelength modulation, displaceme meas. *(Chinese)* 109987
LIGO arms, precision alignment using dual-freq. DGPS 97018
liq. interf. refractometers, displacement control, induction sens. 86492
LISA grav. wave detector drag-free control posn. sens. 132170
low cost all-opt. format/protocol transparent 2R translators, regenerative capabi ity 120341
machine tool meas./inspection syst. synthesis 97168
micro-opt. sens. syst. develop., laser microinterferometer 116794
micromechanical device vibr. mode shapes, microscopic interferometry mea 121230
microphone, micromachined device, opt. interferometric readout 97108
mid-IR holographic correction by opt. addressed liq. cryst. SLM 105606
multi-layer hologram diffr. props. 117541
multimode interf. couplers, tunable power splitting ratios 71351
multiplexed opt. fiber interferometric sens. syst., opt. coherence fn. synthes 86572
nonlin. fiber loop mirror peak transmittivity optimisation 127709
nonlin. loop mirrors with twisted low-birefr. fiber, theory 93037
opt. ferrule surfaces, automated NDT roughness control by micro-interferomete scheme 113763
opt. time-division DEMUX using delayed interferometer 86093
PC-controlled non-incremental dist. meter, comb spectrum/FM CW interferom ter 121184
phase-locked phase-shifting LD interferometer, photothermal modulating tech 75872
red sensitive photopolymer holographic Bragg grating, Lloyd's interferomete 117544
photothermal phase-modulating LD interferometer for obj. displacement mea 86968
planar multimode waveguide, monochromatic light momentum revivals an oscills. 127776
planar/strip waveguides, near field power distrib. measuring syst. 116735
polymer waveguide humidity sens., symm. multilayer config. 75440
power transformer PD, opt. fiber sens.-based detect. 109590
precision length measuring syst. for lin. artefacts 86384
profilometer for superfine surface microprofile meas. 121203
quasi-distributed intrinsic fiber-optic strain sens., white-light interferometr 97334
quasi-distributed white light fiber optic strain sens. 120835
real-time micro-vibr. meas. by LD interferometer *(Chinese)* 97846
real-time micro-vibr. meas. using sync. phase detect. interferometry *(Chinese* 132188
ref. plates absol. calib. for surface interferometric inspection 86392
refl. interferometer 109490
rem. addressed opt. fibre curvature sens., two-core photonic cryst. fibre sens. ele ment 97308
rem. laser interferometer with pseudo-heterodyne sig. proc. 131944
rough water surface atmos.-emitted IR radiance refl. 76941
Sagnac interferometer, SMF dispersion & length meas. 93050
sapphire low-loss high-reflectance coating advanced detector optics, birefr. meas 116876
self-calib. interferometric/intens.-based fibre opt. sens. 75577
semicond. laser, freq. modulation, interferometric displacement sens. 117595
single-grid moire interferometer for line imaging appls. 132174
single-mode fiber polariz. modes, fiber ring interferometer zero drift 120842
single-mode fiber-optic press. sens., self-referencing double interferomete 131958
small displacement meas. using homodyne polariz. laser interferometer 11757
sparse aperture imaging, origs. and hist., opt. synthesis imaging 120937
StarLight mission, instrum. complement & spacecraft concept 122488
surface testing, high-order white-light interferometer 75876
surface texture measuring instrum., laser interferometer 121197
surface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
Talbot holographic interferometer 82970
Talbot interferometer, time filter in opt. commun. systs. 116884
Talbot interferometer time filter 116885
TDM/DWDM large-scale multiplexed interferometric fiber-optic sens. 75567
twin-grating fiber optic sens., demodulation algm. 75573
ultra precision positioning apparatus using laser interferometer, feedback syst 134098
ultrafast nonlin. interferometer gate, GHz all-opt. XOR logic 131568
ultrafast SOA-based opt. switches for high-speed networks 120240
ultraprecision XYθ table drive develop. using piezoelec. actuators *(Japanese* 99864
VCSEL/REPD, interferometric sens., displacement meas. 75443
Virgo, mirror suspen., thermal noise limit 71871
virtually imaged phased array, diffr. grating rot., dyn. tunable dispersion slope compensation 131400
$BaTiO_3$ self-pumped phase-conjug. mirror, light interferometer phase noise filter ing *(Korean)* 105480
Cr:forsterite mode-locked all-solid-state laser, simultaneous multiwavelength generation 82755
Er-doped fiber ring laser with fiber Bragg grating based comb filter, multi-wave length operation *(Chinese)* 82523
Er-doped fibre DFB lasers for sens. appl. 75576
GaAs hybridized QW IR photoconductors arrays at Goddard Space Flight Center 86657
GaP cryst. fast adaptive interferometer, small out-of-plane vibr. meas. 83067
$LiNbO_3$ polariz. independent EO intens. modulator 116825
Nd:YVO_4 single-freq. LD-pumped ring lasers, freq. tuning charact. *(Chinese)* 71866
Nd-doped self-phase-conjug. high power lasers, pass. Q-switcher 128438
PZT nonlin. phase-shifting adapter, self-calib. *(Chinese)* 70439
SiO_2-TiO_2 planar waveguide sens., sol-gel tech., difference interferometer sensitivity 120758
$ZnGeP_2$, narrow-linewidth middle-IR OPO 72029

interferometry
see also electronic speckle pattern interferometry; holographic interferometry; moire fringes
D US array, perform. eval. & charactn., laser interferometry 110708
D fringe patterns, natural demodulation, self-calib. phase-shifting algm. 118358
D smart detector array, interferometric appls. 109659
D obj. class., continuous surface shadow moire tech., multilayer feedforward neural network use 129864
D shape inform., opt. methods, hybrid methodology, overview 132168
bsol. dist. meas. with fibre optic interferometer *(German)* 75885
dvanced opt. mfg. and testing technol., conf., Chengdu, China (Nov. 2000) 89567
ir real-time acoustic vel. meas. using LDV, PLL, demodulation 110032
irborne US fields mapping by opt. heterodyne probing/tomography reconstruction 110030
iosensor materials, conf., Boston, USA (Nov.2000) 78376
Bragg fiber gratings, laser-induced densification, interferometric determ. 127645
ast surface roughness, laser exam. 132163
hromatic fibre dispersion meas. methods 93041
oherence-multiplexed fibre-opt. sens., press./temp. change meas. 109607
DBR fiber grating laser, freq. stabilization using interferometric tech. 105199
leformed specimen grating replication, situ moire interferometry meas. *(Chinese)* 75858
liode lasers, freq. fluct. interf. measuring method *(Chinese)* 110016
lirectional grating rosette and moire interf. tech., residual stress meas. *(Chinese)* 132187
lisplacement meas., laser interferometric syst. 109985
DOE external cavity diode laser, single mode wavelength tuning 105399
DR13/PEK-c guest-host polymer thin film lin. EO effect 82286
dry etch proc. monitoring, CCD-controlled in situ interferometry 81086
dual-freq. laser interferometer, transverse Zeeman freq. stabilized laser appl. 117586
epoxy resin, chem. amplified resist, free vol. effect 126546
EUV lithog. and interferometry, water laser plasma source 92204
EUV lithog. opt. charactn., phase-shifting point diffr. interferometer 69969
EUV optics, Ronchi test, shearing interferometer concept 126514
evanescent interferometric lithog. 69966
Fabry-Perot fibre opt. sens., transm.-type, sig. proc. algm. 120851
fast 3D topography meas. accuracy, instrum. comparison 113757
fast US detect. syst., photorefr. GaAs two-wave mixing 101551
FBG, interferometric side diffr. tech. 127635
FBG arrays, multiple grating writing, OCDMA encoder/decoder appl. 93046
femtosecond polariz. laser pulse shaping, dual-channel spectral interferometry 71895
fiber face quality detect. using GRIN lens interferometer *(Chinese)* 71255
fiber optic interferometric fringe projection phase-shifting 3D profilometry using freq.-modulated LD 109620
fiber spatial-temporal charact., ultrashort-pulse interferometry 104682
fiber-optic sens., divide/combine polariz.-induced-fading elimination tech. *(Chinese)* 120881
fiber-optic temp. sens. using low-coherence light source *(Korean)* 75598
fibre gyroscopes, error compensation 75581
fibre optic gyroscope, startup time improvement 75580
fibre Sagnac interferometer theory *(Spanish)* 93097
flame gas-phase temp. meas. by point-diffr. interferometer 132205
flames, axisymmetric gaseous, temp. meas., Lau phase interferometry with lin. gratings 132202
flatness meas., correlative stitching tech., iter. least-sq. method 121216
flexible ref. gratings for surface inspection enhancement, Moire interferometry 97803
flip-chip electronic packages, quantitat. strain anal. by phase-shifting moire interferometry 121232
force transducer, impulse response meas. 97194
Formvar film, interferometric thickness meas. 86955
fringe skeletons extraction, Laplacian transform., robust algm. *(Chinese)* 106803
gas laser resonator mirrors, absorpt. coeffs. meas. 128355
gas-flow nuc.-pumped lasers, energy deposition, interferometric tech. 128111
gauge block center length, automatic laser interf. meas. *(Chinese)* 109984
harmonic distortion sine wave amplit. meas. error, laser interferometer *(Chinese)* 86986
head-disk interact., ramp loading proc., opt. interferometer study 116440
head-disk spacing meas., opt. interferometry, error anal. 92812
head/tape interface, digital lin. tape drive, finite element anal. 92810
heart surface deform. meas., computer aided speckle interferometry 122053
high power dens. solid-state laser, opt. components wavefront PSD meas. *(Chinese)* 71868
high-precision surface profiling with broadband accordion fringe interferometry 106788
high-spatial-resoln. blood tomographic vel. mapping by real time colour Doppler OCT 76395
high-speed dyn. wavelength routing SG-DBR laser, wavelength switching 120313
high-temp. elastic prop. & internal temp. distrib. meas., laser US 68489
III-V dry etching, depth/reflectivity meas. by CCD-controlled in situ interferometry 69888
in-situ CVD film thickness meas. by thin film interf. 97828
in-situ plasma etch proc. endpoint control in IC mfg. 103376
indust. obj., moving target, spatial coord. meas., laser tracking syst. 117585
instrumented Charpy impact testing, direct displacement meas. 90596
intense laser pulse high harmonic generation, coherence props. 117486
interf. microscopes, roughness meas., calib. guideline 120618
IR laser light interferometric dist. meas. techs. *(Spanish)* 86960
large rad. of curvature digitalization meas. by noncontact Newton's rings 97826
large-aperture phase-shifting interferometer for PSD fn. meas. 93306
large-scale multiplexed fiber optic sens. arrays for geophys. appls. 122548
laser interferometry, phase ambiguity elimination 117572
laser rangefinder, feedback interferometry, chirp-control 117575
laser velocimeter, feedback interferometry, real-time param. estim. 117580
laser-US smart mould for composite parts mfg., fibre opt. US sens. 114451
LF power US transducer, acoustic field meas. by laser-interferometer *(Chinese)* 75911
LHC supercond. cryodipoles, opt. interferometric displacement sens. 97815
LIGO arms, precision alignment using dual-freq. DGPS 97018
LISA grav. wave background anal. using time-delay interferometry 132192
long-period fibre gratings pair, curvature/load/chem. sens. appls. 97282
LSAW resonators, low-loss, BAW radiation, scanning laser interferometry 104460
Mach-Zehnder interferometer, quant. nondemol. meas., Heisenberg limit 105487
machined rough surface meas. by fringe pattern light interferometry 67662

light interferometry continued
mag. tape asperity compliance meas., five-wavelength interferometry 92851
MEMS, feedback-interferometric meas., comparison with capacitive meas. 116050
MEMs, scanning white light interferometry opt. profiling techs. 116047
MEMS microengines dyn., opt. laser interferometry 112570
MEMS vibr. meas. by fiber optic sens. *(Chinese)* 75596
micro device testing by fringe projection/white-light interferometry 120612
micro-beam, deflection/Young's modulus, opt. interferometry meas. 110006
micromirror ang. rot. determ. using laser interferometric method 109978
micromirror array wavefront correction 93219
microphone membrane deform. study, multiple-wavelength interferometry 127091
microprism array as shearing device for speckle shearing interferometry 127807
micropump dyn. meas. using fibre opt. based interferometer 78108
microsurface profiling by vibr. immune PSI 97840
microvolumes liqs., refr. index meas. with temp. control 121244
modal fiber index meas., fiber grating based 116643
multi-purpose fine opt. auto-adjuster, computer controlled *(Chinese)* 110021
multimodal waveguide struct., opt. field phase mapping 104697
multimodule tape head assembly, cylindrical profile meas. 92846
multiple-wavelength interferometry, 3D absol. dist. meas. *(German)* 75884
multiply scatt. photons, low-coherence interferometric path-length-resolved Doppler meas. 132646
network opt. fiber reliab., accelerated aging tests, opt. charactn. 127669
NIF fuel capsules, fluid props. meas., opt. reson. US spectrosc. 99102
NIF opt. component wavefront meas. instrumentation, init. mfg. results 110024
NLC-SLM, PM charact., phase-shift interf. 93245
normal incidence pol. interferometry for flying height and head-disk spacing meas. 121220
OCT, simult. refr. index & thickness meas. tech. 75908
oil-spill detect., automatic interferometric syst. 76924
on-substr. torsional micromirrors, rot. viscous damping *(Korean)* 116789
opt. fiber sens., meas. precision *(Chinese)* 97314
opt. fibre networks, interferometric crosstalk penalty formulas 96687
opt. lithog., pattern placement errors, in-situ interferometry 103529
opt. lithog. lenses, wave-front aberrations meas., IC mfg. appl. 126585
opt. material absorpt. coeffs., laser interferometer calorimetry 132191
opt. phase microelements, 3D refr. index distrib. meas. by tomographic interferometry 132193
organic impurities in water soln., thermal luminesc. spectrosc. meas. method 88186
panoramic holographic interferometers, metrological charact. 128568
partially-clamped plate, flaws detect. by comparative DSPI 114560
PCB solder joint reliab., thermal expansion mismatch impact 115116
period staggered broad-band dielec. multilayer mirrors, interferometric method 82296
phase sing. meas., small struct. vicinity, Linnik interf. microscope *(German)* 75812
phase-dispersion opt. tomography, low-coherence interferometry 73300
phase-sensitive freq.-multiplexed OLCR 97863
phase-shift interferometry, interf. pattern with step, proc. tech. 94752
phase-shifting interferometric meas. using IR laser light *(Spanish)* 86961
phase-stepping interferometry, plane meas., improved algm. *(Chinese)* 109976
phase-unwrapping algm., interferograms, circle field tv. *(Chinese)* 97820
photo-EMF receivers for laser US detect., high-responsivity 101553
photoelastic stress anal., multiple-refl. effects 86983
piezo vibr. platform, probe dyn. perform. calib. 120635
piezoceramic actuator materials, displacement-field charact., laser interferometric meas. 104434
piezoelec. tube, displacement meas., fiber optic interferometry 93059
plane glass, surface inspection, quantizing image tech. *(Chinese)* 84122
PMMA, Disperse Red I doped photoactive film, interferometric studies 87003
polariz. effects in lasers, spectrosc. and optoelectronics, conf. , Southampton, UK, (Sept. 2000) 78384
polariz.-sensitive OCT, biological sample birefr. props. 122041
polysilicon MEMS, actuated microcantilevers, interferometry, test struct. nonidealities 123702
PSI anal. tech., FT method 84162
quant. meas., interact.-free which-path info. 94208
quartz plates, extraordinary/ordinary indices meas. 132196
real-time opt. coherence-domain reflectometry, ang. dispersion imaging scheme 87518
reduced temporal phase unwrapping robustness shape meas., neg. exponential seq. 86965
ref. plates absol. calib. for surface interferometric inspection 86392
resist lithographic perform. enhancement, PAB effect and solvent removal, interferometric meas. 115741
rough reflective surface meas. by far-IR Fizeau interferometry 132166
roughness meas. using PSI, data averaging effect 109988
Sagnac interferometer, single opt. fiber grating *(Chinese)* 116892
Sagnac opt. fibre current sens., temp. induced sens. drift output compensation 109599
self-calibrated interferometric-intens.-based opt. fiber sens. 131947
self-compensation heterodyne vibrometer using AO modulator vibr. detector 116858
self-mixing interferometry, FT method, displacement meas. 97833
self-referenced intens. based opt. fiber sens., Michelson sens. head config. 109597
Shack-Hartmann wavefront sens., positioning sens. by lateral shearing interferometer 75890
shearing polaris. interferometer, roughness meas. 75888
SHG autocorrel., group vel. mismatch effect, different pulse shapes 93817
ship hull struct. monitoring using FBG strain sens., sig. proc. 89388
side-hole fiber-optic sens. for dyn. hydrostatic press. meas. 97327
single mode telecomms. devices, high-finesse Fabry-Perot interferometer meas. appls. 120126
single-image fringe projection profiling method for dyn. appl. 113749
single-mode opt. fiber, modal birefr., polariz. mode dispersion, channeled interf. spectrum 104673
slab deflection meas. using Sagnac effect FOG 75590
slightly rough surface meas. by polariz. interferometer 86957
small lens diams., singlet/doublet params., interferometric spec. 82264
small US vibr. detect. by polariz. self-modulated photorefr. crysts. 132175
small-form parts, noncontact probe for profilometric meas. 132177
smart power ESD protection device, laser interferometric mapping 127076
smart struct. NDT, imped. spectrosc., dyn. thermography, interferometry 90602
SMF dispersion & length meas., Sagnac interferometer 93050
soft X-ray table-top laser plasma, interferometric plasma diagnosis 128100
solid-state image sens., opt. charactn. methods 120896

light interferometry continued
Space Interferometry Mission instrum., real-time command, data & control 133239
Space Interferometry Mission technol. develop., status & plans 133238
spatial carrier fringe pattern, phase indeterminacy in phase anal. methods *(Chinese)* 94484
spatial coord. comparison calib. syst. develop. *(Japanese)* 97830
spectral phase interferometry for direct elec.-field reconstruction, homodyne detect. 128419
spectrally dispersed ultrafast laser pulses for quadrature spectral interferometric detect. 75869
spectrally modulated interferogram anal. by recurrence nonlin. filtering method 129539
StarLight separated spacecraft interferometer mission, stray light anal. 122516
steel rods, surface residual stress, laser US charactn. 114509
step gauge flatness & parallelism, high-accuracy interferometric meas. 120621
stimulated Raman forward scatt., solitary waves with different phase behaviour 82953
subhertz sensitivity phase-referenced interferometer, cell membrane dyn. study 120940
subsurface defect charact. of semicond. opt. components, quality assess. 97801
surface profile, opt. meas., overview *(Chinese)* 97819
thick carbon fiber/PEEK composite laminates, single moire interferometric fringe pattern 125153
thin film resonator, surface vibr., opt. mapping 92693
thin-film BAW device, laser interferometry 81764
thin-film elastic prop., laser-US method, SAW dispersion 101556
third-order suscept. meas. by Mach-Zehnder interferometry tech. 71918
third-order suscept./nonlin. refr. index meas. by Mach-Zehnder interferometry tech. 75909
THz pulse imaging 94537
tissue blood flux monitoring by time-space cross-correl. anal. 87515
transparent plates, continuous laser interf. thermometry 97875
truncation proc., asperity profile changes, interferometric microscopy 113758
ultra-fast pulses direct time-space conversion, interferometric TOF cross correl. 118360
ultrashort laser pulse detect., time stds., calib. methods 93729
ultrashort pulse interferometric autocorrelation meas., pulse width evol. 86998
US transducers, capacitive micromachined, charact. in air using opt. meas. 111499
US transducers, capacitive micromachined, integrated opt. detect. method 111500
vibr./accel. pickups, phase shift charact. *(Japanese)* 75896
wave-front meas. errors from restricted concentric subdomains 118402
white light interferometry, multiwavelength source equiv. coherence length 72146
wide-field imaging interferometry testbed for space mission support, develop. 120661
wideband sig. proc. for interferometric opt. fiber strain gauge, design 109618
wind tunnel wall press. meas., boundary layer flow, opt. & ANN method 131889
X-ray interferometry develop. at APS 121755
Zygo Pegasus 2000 fly height testers, meas. uncertainty 127362
AlN films, piezoelec. coeffs. 127220
AlN thin films, PLD 68316
Ar^+, Ne-like, capillary discharge-pumped soft X-ray laser 128093
Au sputtered MEMS contacts, wear investig., contact press. 104160
C fibre reinforced composite, US inspection, laser-generated US 114538
CdTe FIR broadband autocorrelator, sub-picosecond time resoln. 128525
Co-C ferromag. nanodot arrays prod. by direct interferometric laser annealing 116270
Er-doped fibre multimode ring laser, coherence, Michelson interferometer obs. 93513
Ga-Ni-Cu alloy via-filled stainless steel substrs. for large area MCM packaging 125945
GaAs/AlGaAs QWIP, IR radiation transm. 131919
GaN films, piezoelec. coeffs. 127220
$He-Cd^+$ hollow cathode lasers, single-mode operation, linewidth studies 105096
He-Ne dual-freq. bireflectance mirror laser cavity 105095
$He-Ne/^{127}I_2$ ultrastable laser array, real-time dimens. metrol. 93940
N plasma recomb. X-ray laser, dens. meas., emission study 128084
Nd:YAG laser-induced vap./plasma plumes, shadowgraphic/interferometric obs. 105627
Nd:YAG monolithic non-planar ring laser freq. noise meas. 93559
PZT ceramics and composites, piezoelec. coeffs. meas. by laser interferometry 104358
PZT, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
PZT thin films, MOCVD, MEMS appls. 101348
$(PbLa)TiO_3$ thin films, sol-gel prep., spontaneous pyro- and piezoelec. 81700
$PbMg_{1/3}Nb_{2/3}O_3$-$PbTiO_3$, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
$PbWO_4$ anisotropic scintillating crysts., quality inspection from interferometric fringes 121607
Si MEMS elements testing, grating & holographic interferometry 70335
Si micromechanical oscillators, autoparametric opt. drive 93172
Si opt. press. sens, white light fibre interferometry 75759
Si porous chip, DNT, TNT, HF, and nerve agents detect. 75701
SiO_2 CZ crucible, dissolution rate by Si melt, opt. in-situ meas. 68121
$SrBaNb_2O_6$ ferroelec. crysts., neg. applied field index change, interferometric meas. method 82050
$SrBi_2Ta_2O_9$, ferroelec. thin films, effective electrostriction coeffs. charactn. 70427
Ta_2O_5 sub-micron period grating struct., interferometric excimer laser ablation 72126
Ti:sapphire laser crysts., direct bonding tech., feasibility study 92936
Ti:sapphire oscillator femtosecond laser pulses, temporal charactn., SPIDER tech. *(Korean)* 93738
Zn^+ Ne-like amplified soft-X-ray laser radiation 128097

light meters *see photometers*

light microscopes *see optical microscopes*

light microscopy *see optical microscopy*

light modulation *see optical modulation*

light polarisation
see also birefringence; optical fibre polarisation; optical rotation; photoelasticity; polarimetry
2D finite-aperture wire grid polarizers charactn., spectral-domain tech. 128783
2D photonic bandgap materials based micropolarizer 104785
2R optimised all-opt. regenerator, low polaris. sensitivity SOA-Mach-Zehnder interferometer 131413
act. polariz. controller, polariz.-insensitive wavelength conversion 82916

light polarisation continued
Al_2O_3 porous anodic films, opt. polariz. props. of electrodepositing metal *(Chinese)* 127894
all-opt. logic ccts., nondegenerate FWM, polariz. props. 71446
all-opt. switch using cross-polariz. modulation in SOA 75041
anisotropic/magnetooptic waveguides, FEM full vectorial beam propag. meth 116712
apertureless second-harmonic scanning near-field opt. microscope 82889
arbitrary oriented grating, specular diffracted wave polariz. control 117706
azo-dye-doped liq. cryst., polymer-enhanced diffr. 116833
azobenzene polymer film, pattern form./quasicrystal struct. *(Chinese)* 1165
azobenzene polymer films, photoinduced hexagonal symm. microstruct., DFW *(Chinese)* 71947
azobenzene side-chain polyester thin films, rewritable polariz. holographic da storage 82976
azobenzene-containing polymer surface relief grating immobilization/pol alignment, photopolymerization 105464
azobenzene-doped polymer film, polarized-light-controlled holographic recordi 83035
backlighting syst. for LCD using beam splitter 97756
beam steering device for large-area displays 109904
bimodal waveguide, integrated opt. cross strip polarizer concept 104708
bone tissue, pathological changes diagnostics, polariz.-correl. anal. 76407
cloud polaris. prop. effect on target discrim., composite image 133406
cloud sounding, lidar sig. anal., multiple scatt. case 122662
CPFSK opt. heterodyne syst., polariz. mode dispersion effect 74955
crosslinked reactive mesogens and photochem. alignment for organic polarise EL 127954
cubic (111)-cut photorefr. piezocrystals, two-wave mixing, diffr. efficienc optimisation 127570
cubic crysts., quadratic solitons propag., Maxwell's eqns. 72061
cyanoazobenzene side-chain polymethacrylate, liq. cryst., biphotonic holograph recording 72076
Denisyuk's hologram recording, brightness distrib. features 82972
depolarised speckle radiation wave front polaris. capture by holographic lase mode 117535
DFB dye laser, polaris. dyn. 71655
diamond:H surface, vibr. sum-freq. obs. 117455
diamond, CVD, optics for UV region 82034
dielec. layer microroughness polarized light scatt. 71482
diffractive optics integrat. with IR photodetector arrays 104748
disconnected mech. devices, high precision azimuth displacement/sync. meas *(Chinese)* 104839
Disperse Red 1 azo-dye doped cellulose acetate polymer film, holographic ref gratings 93898
dye soln. laser, polarised radiation, stat. props. 105156
dye-doped LC layer near total internal refl., pass. laser Q-switching 117348
dyes, lin. dichroism, LCD appl. 109868
EDFA-Brillouin hybrid amp., polariz.-maintaining, high-power low-noise sourc 105194
ellipt. birefr. media props. using Senarmont compensator setup 132195
Faraday rotator design for high av. power lasers 127852
femtosecond polariz. laser pulse shaping, dual-channel spectral interferometry 71895
ferroelec./antiferroelec. liq. cryst. opt. PM 104826
fiber ring laser, mode-locked, pulse-train uniformity and dyn. 128137
filled liq. cryst. depolarizers 127841
finite slab Gaussian light beam, finite-difference vector BPM 82730
finite-height photonic cryst. waveguides design, light confine., dispersion rels 104735
freq. doubling polaris. mirror, pass. mode-locking & pulse-shortening 117385
fuzzy controllers, opt. implement. 71452
glass, all opt. poling, SHG anal. 117448
grating division-of-amplit. photopolarimeter for spectral polariz. meas. 109521
gray-scale images, pattern detect. with polariz. coding, matched filtering techs 84515
head-disk spacing meas., opt. interferometry, error anal. 92812
heterodyne high-power mm-wave generation using 1.55-μm TW photodetectors 125826
high num. aperture diffractive lens vectorial effects 82269
high-power tightly focused laser beam, propag., self-depolarization effect 128361
high-resoln. gas-dens. meas. by laser heterodyne method 110011
holograms, phase coded recording for data MUX and encryption 82978
holographic PDLC, evol. of anisotropic refl. gratings 105596
holographic PDLC transm. gratings, phys. props. 128569
III-V films, pulsed CBE, real-time opt. charactn. 124830
III-V semicond. hot-hole lasers 93650
image anal. using polarimetric device *(French)* 107120
intense pulsed lasers, electron accel., laser polariz. direction effect *(Chinese)* 97914
interferometric fiber-optic sens., divide/combine polariz.-induced-fading elimination tech. *(Chinese)* 120881
isolated QD ensemble, inelastic ultrashort pulse interacts. 72063
landmines polariz. features for improved automatic detect. 77118
laser beam, analog intens. value, binary coded data with tree archit. 116871
laser beam multiple filamentation, self-focusing, vector/random effects 105489
LC projector using holographic polymer-dispersed LC films 109906
LCD, reflective type, high brightness and wide viewing angle 97743
LCD using birefr. filters, generating full color 86799
LCDs, perfect polariz. conversion modes, Mueller calculus 71418
lin. polarized laser pulse in overdense plasma, anom. absorpt. 105772
liq. cryst.-porous glass syst., polariz. holograms 82997
mammalian cells, polarized backscatt. fiber-optic meas. 132638
methyl red doped NLC film, photoinduced gratings form. 128425
microdeflection LCD modes, eight-division electrodes 104835
mixed strained MQW act. material SOA for opt. networks 117276
natural backgrounds and artificial objs., spectropolarization contrasts 73534
near field optics, conf., Enschede, Netherlands (Aug. 2000) 78466
nitride III-V semicond. QW lasers, threshold current, opt. gain spectra 105271
NLC based wavelength independent Babinet compensator opt. limiter 82233
NLC polariz. converter 82246
nonlin. Fabry-Perot resonator, direct num. integrat. 72047
normal incidence pol. interferometry for flying height and head-disk spacing meas. 121220
opt. filters design using uniaxial dielec. gratings for arbitrary light polariz. 71468
opt.-klystron FEL with undulators, dyn. behaviour 105375
optimum triplicator, full-wave anal. 93283
organic NLO thin films, fab., cryst. dragging method 104608
p-phenylene oligomers films, blue light-emission enhancement 116563

polarisation continued
eriodic 1D magneto-opt. media domain arrays, readout sig. polariz. depend. 32065
eriodic dielec. multilayer cladding TM-pass waveguide polarizers 127722
eriodic nanostructure modelling, enhanced SHG, rigorous coupled-wave anal. 105501
hase-locked VCSEL laser array polariz. stabil. 128412
hotoanisotropic materials, holographic recording 72087
hotodefinable polyimide for pass. photonic devices 116549
hotonic devices, rigourous anal., FEM 85994
lanar waveguide opt. chem. gas sens. with 3-layered struct. *(Russian)* 109789
lanar waveguide problems, rigorous coupled wave anal. 104698
lanar/strip waveguides, near field power distrib. measuring syst. 116735
olar self-assembling films, NLO props., substr. micropatterning 82030
olaris. converter, thermal tuning, WDM filtering 109218
olariz. effects in lasers, spectrosc. and optoelectronics, conf. , Southampton, UK, (Sept. 2000) 78384
olariz. encrypted secure holographic memory syst. 82064
olariz. insensitive planar integrated opt. switch 117495
olariz.-entangled photons, quant. decoherence, cavity QED source 94207
olariz.-insensitive Bragg gratings design in zero-birefr. ridge waveguides 104717
olariz.-sensitive OCT, biological sample birefr. props. 122041
olarized polymer film, order param. and polarized lifetime *(Chinese)* 71329
OLDER cloud phase retrievals, ARM SGP rem. sens. meas. comparison 86236
olymer liq. cryst. membrane filters, space appls. 93305
PV derivative polymer laser polariz. depend. threshold 82029
rimate/rabbit eyes, polaris. sensitive OCT, birefr. tissue 98378
ulsed VCSEL, ultrafast polariz. dyn. and noise meas. 128411
ure freq.-polariz. bistable VCSELs 117364
uadratic polaris. switching mode-locking, fs pulse generation 71904
uartz plates, extraordinary/ordinary indices meas. 132196
W, conversion of spin into directed elec. current 69678
W IR polariz. sensitive photodetecting thermal imager 86654
W laser, grating feedback locked, polariz.-depend. photon-no. squeezing 93585
W VCSEL polariz. behavior 82629
ain-induced lidar depolarization, atmos. icing meas. 133286
efl. laser radiation polariz. charact. meas. by coord.-free holographic method 117340
efl. vol. holographic grating, polariz. props. 117530
eflective light valves, polarising microscope metrology 97658
eflective twisted NLC displays, polariz. eigenvectors 132106
eson. waveguide grating, polariz. independent filtering anal. 104710
eticle enhancement technol., phys. design, phase shift lithog., OPC, model-based tiling 126580
ing laser, polariz.-nonuniform radiation, transverse Hermite-Gaussian modes 128363
emicond. microcavities, ultrafast light-polariz. dyn., review 93639
emicond. VCSEL, periodic struct. form., spatial Fourier modes competition 93622
ide-illum. mirror photodiodes for surface hybrid integrat. modules, coupling tolerance 75521
SIL, phase change recording material readout sigs. 127585
small displacement meas. using homodyne polariz. laser interferometer 117579
small US vibr. detect. by polariz. self-modulated photorefr. crysts. 132175
SOA, FWM, polariz.-insensitive spectral inversion 71855
SOA, FWM based polariz.-insensitive opt. wavelength conversion *(Chinese)* 128503
SOA, polariz. sensitivity *(Chinese)* 82676
SOA-planar lightwave cct. hybrid Michelson interferometric wavelength converter, DWDM networks 82843
solid state laser nonlin. dyn., switching regimes, saturable absorber 105425
spatial solitons in Kerr media, vector theory 128535
spherical/nonspherical particle suspens., scatt. light polariz. states 121179
spin-polarized solar batt. 112875
sq.-lattice photonic cryst. laser, polariz. mode control 105414
stratified 3D photonic struct., light scatt. and propag., fully vectorial tech. 104750
stratified media, laser sounding, multiple scatt., sig. depolarization 88147
super-RENS MO disk characts. by optimized super-resoln. near-field struct. *(English)* 71439
surface orient. class. from polariz. images 94665
surface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
symmetric Mach-Zehnder type all-opt. switches, ultrafast all-opt. sig. proc. *(Japanese)* 96780
target detect. in polariz. diversity images, stat. techs. 73255
thin film polymer media holographic memory card, data storage 82974
thin films/multilayers/resists, VUV spectrosc. ellipsometry 92222
thin NLC film, mW power stimulated scatt. 105461
thin polymer storage layer dens. optim. for polariz. holograms 82975
third-order dispersion in birefr. fibre, enhanced pulse compress. 127686
thresholdless antiferroelec. in chiral SLC 97604
tissue, in vivo exam., calibrated fluoresc. imaging syst. 87513
TN-LCD, reflective single-polarizer bistable display 97694
type-II SHG by laser pulse with varying polariz. direction 117444
ultrafast polariz. bistable VCSEL, all-opt. RZ to NRZ format conversion 109066
ultrafast polariz. bistable VCSEL all-opt. DEMUX 117498
VCSEL, (311)B substr., polariz. control, transm. charact. 71795
VCSEL, noise assisted binary inform. transm. 82759
VCSEL, orthogonally polarized transverse Fourier modes competition 82721
VCSEL, polaris. resolved intens. noise 105302
VCSEL, polaris. switching, expt. obs., appls. 128301
VCSEL, polariz. switching from low to HF mode 71907
VCSEL, relax. oscill. freqs. nondegeneracy, linewidth props. 82720
VCSEL, soliton-like topol. defects in transverse polariz. patterns 128294
VCSEL with external polariz.-selective feedback, complex polariz. dyn. 82719
VCSEL with noncylindrical geom., self-consistent model 71838
virtual and real obj. separation, ICA 118698
vol. hologram, diffr. efficiency, polariz. props. 117542
waveguide input grating couplers, TM/TE mode splitting 104701
wide waveband wavelength-insensitive coupler, stat. optimum design *(Chinese)* 116693
Zeeman multitransverse mode laser, polariz. transverse pattern dyn., vectorial Karhunen-Loeve modes 71885
Ag-nanoparticle-dispersed fluorinated polyimide, thin flexible polariser fab. 71458
AgCl-Ag waveguide films, spontaneous gratings on S-polarized laser beam irrad. 105462
AlInGaAs-InP three-QW polariz.-insensitive opt. amps. 93657
As-Ge-Se-S chalcogenide glass thin film, photoinduced birefr. 91688

light polarisation continued
As-S-Se/As-S based chalcogenide glass multilayer channel waveguides, photoinduced Bragg reflectors 71308
As_2S_3 thin films, polariz. depend. photoinduced surface relief micro-gratings 93186
$BaTiO_3$ crysts., grating erasure, orthogonally polarized FWM 128431
$Bi_{12}SiO_{20}$, polariz. self-modulation effect, opt. charactn. 128450
$Bi_{12}TiO_{20}$ (110)-cut cryst. energy exchange optim. 128451
$Bi_{12}TiO_{20}$ photorefr. cryst., high order dark spatial solitons 93855
CO_2 indust. high-power laser, radially polarized beam generation 82489
CO_2 quasi-isotropic laser, polariz. competition 71644
Ce:KNSBN cryst., holographic recording with orthogonally polarized beams 128563
Cr:Y_2SiO_5 Q-switched ruby laser, polariz. orient. 128395
D_2 rot. mol. wave plate, opt. freq. conversion 72034
GaAs/$Al_xGa_{x-1}As$ MQW, excitonic transits., opt. selection rules 91795
GaAs/AlGaAs, MQW, coherent all-opt. nonlin. polariz. switch 93843
GaAsP/AlGaAs LD bars, polaris.-resolved EL, mounting stress 71846
GaInAs/GaAs VCSEL array, single-mode and stable-polariz. operation 105357
GaInAs/GaAs VCSEL, polariz. controlled highly strained, MOCVD 71851
GaInAs/GaAs single mode VCSEL array, GaAs(311)B substr. 71794
GaInAs-GaAs highly strained QW VCSEL laser, stable polariz. operation 128233
GaInP surfactant-enhanced OMVPE growth, photolum. spectra studies 90378
$Ga_{1-x}In_xP$ growth, surface react. kinetics during pulsed CBE 90270
GaN:Si epilayers, HVPE, polarized micro-PL spectrosc., disloc. struct. 80724
GaP waveguides, [100], [110], [11-2] directional, spontaneous Raman scatt. 93130
$Gd_{0.8}La_{0.2}VO_4$:Nd, spectrosc./laser props. 117147
Ge-As-S photobleached glassy films, photoinduced anisotropy 82830
He-Ne double-freq. laser, refl. radiation injection, detect. limit 117066
He-Ne laser with anisotropic cavity, magneto-induced bleaching 82456
^{3}He microbubbles, encapsulated laser-polarized, perfusion imaging 76422
ITO absorbing thin films, opt. consts. and thickness determ. 75905
InAs/GaAs QD, opt. anisotropy, PL intens. 69667
InAs/GaAs self-assembled dots, 2DEG, magneto-PL 80837
InAs/InP self-assembled quantum wires, opt. transits., excitons 80811
InGaAs/InAlAs:Be MQW ultrafast saturable absorber for all-opt. switch 120320
InGaAsP MQW, carrier transport, ultrafast spin dyn., polaris. switching 117500
InGaAsP tensile-strained bulk strained opt. amps., polariz. sensitivity 117229
InP-based VCSELs for 1.55 μm wavelength range 117212
^{39}K atoms, two-photon stimulated emission proc., laser polariz. instabilities 71637
$KNaSrBaNb_2O_6$:Ce cryst. two-wave coupling, optimum writing beam polariz. 93766
$K_{1-x}Rb_xTiOPO_4$ epitaxial waveguide films, opt. props. 116878
$KTiOPO_4/Si_3N_4/SiO_2$ anisotropic waveguide, SHG efficiency, TM case 104712
$LiNbO_3$, charged particle detect. by EO effect 87230
$LiNbO_3$ opt. superlattice, EO spectral filter 104816
$LiNbO_3$ polariz. independent EO intens. modulator 116825
$LiNbO_3$:Fe photorefr. material, parasitic hologram reconstruction 83028
$NaBi(WO_4)_2$:Nd^{3+} single cryst., growth, polarised opt. absorpt. & PL 104597
Nd:YAG Q-switched ultrashort pulse laser syst., two-pass quadrature freq. conversion scheme 82552
Nd:YAG diode-pumped laser, micromachining appls. 82584
Nd:YAG dual-freq. laser with quartz birefr. Fabry-Perot etalon *(Chinese)* 71742
Nd:YAG rod laser amp., LD-pumped, CW TEM_{00} mode 1064 nm beam generation 128212
Nd^{3+}:YAG laser, polariz.-bistable, modeling 71726
Nd^{3+}:YAG monomode lasers with Cr^{4+} saturable absorber, polaris. dyn. 117134
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ mesoscopic films, micro-Raman anal. 104333
ReS_2, opt./elec. props., in-plane anisotropy 91702
$ReSe_2$, opt./elec. props., in-plane anisotropy 91702
Si micromachining, effect of energy above laser-induced damage threshold 105634
SiC, 4H, D_1 bound exciton, Zeeman effect, PL 69581
15R-SiC, valence band splitting, wavelength modulated absorpt. spectrosc., low temp. PL 69580
SiGe/Si opt. channel waveguide, mapping of local stress distribs. 82157
SiN/TbFeCo/SiN/TbFeCo/PtCo film stack, light intens. distribs., matrix method *(Japanese)* 70511
SiO_2 poled thin slab EO switch, electrostrictive consts. 105548
Ti:$LiNbO_3$ digital opt. switches, low crosstalk, drive voltage reduction 120372
Ti:sapphire ultrashort light pulses, polariz. state, cross-PM 105421
Ti-Au-Ti thin metal film, long-range plasmon-polariton wave propag. 93300
$YBa_2Cu_3O_x$ HTSC plates, J_c, texture depend. 70652
$YBa_2Cu_3O_y$ HTSC films, elec. inhomogeneities, laser scanning microscopy 70629
Yb/Al-doped germanosilicate planar waveguide lasers, internal UV-written Bragg gratings 117173
$Zn_{1-x}Cd_xSe$-ZnSe asymmetric coupled QWs, reflective SHG meas. tech. *(Chinese)* 128520
$Zn_{0.97}Mn_{0.03}Te$-GaAs based QW heterostruct., opt. injection of spin-polarized carriers 91767
4-(N,N-diethylamino)-β-nitrostyrene nanocrystal, THG/two photon excitation 127561
para-hexaphenyl on GaAs, nanostructures, fab., structs., review, appls. 69988

light propagation
see also atmospheric light propagation; plasma light propagation
1D opt. struct., tight-binding approx., opt. pulse propag. 104694
2D photonic crysts., candidate for wave plates in microwave photonics 69249
3D wide-angle wave eqn., opt. wave propag. 71312
achromatic fan-out diffractive syst. for white-light free-space opt. interconnects 82260
air ultrashort laser pulse filament generation, backward supercontinuum emission 71893
all-opt. switch using different wavelength controlling pulse 105561
amplif. opt. fiber, pulse envelope max., supraluminal vel. 127699
ang. dispersive opt. syst. energy flow 71910
arrow wave modes, scalar wave eqn. 117698
av. dispersion-managed fibre syst. eqn., exact soliton soln. 93038
Bessel-beam laser using nondiffractive resonators 93706
bulk PTS-like NLO material, liq. light states 82835
cascaded directional coupler-based WDM device, 4-channel/1200 GHz spacing/1550 nm, design 109180
CCD cell struct., opto-electronic simul., FDTD method 109705
conducting interfaced dielec. slab waveguide guided light propag. 127767
const.-intens. approx. in nonlin. wave theory 94046

light propagation continued
contact laser scalpels, emergent power distrib., Monte-Carlo simul. *(Chinese)* 128635
contrast enhanced opt. tomography, gradient-based nonlin. optim. methods 106495
coupled dielec. waveguides, Feynman-Kleinert variational procedure 127742
coupled Hirota eqn. in nonlin. fiber, dark soliton solns. 105571
cross-over opt. waveguide using polystyrene micro-sphere arrays/thin film bank 104746
cubic crysts., quadratic solitons propag., Maxwell's eqns. 72061
cubic nonlin. media, self-focusing opt. wave, spatial spectrum dyn. 128475
cubic-quintic nonlin. medium, light bullet form. 82949
cylinder Gaussian light beam refl., act. 3D profile measuring syst. *(Chinese)* 71884
dark opt. beams, propag. dyn., directional coupling, sig. branching 116706
decentred twisted Gaussian Schell-model beams, Wigner distrib. fn. 117701
deeply etched semicond. bent waveguides, beam propag. modeling 82160
dispersion mgt., cubic nonlin. Schrodinger eqn., stabil. 83347
doubly clad opt. fiber with annular core, power transm. 93040
ellipt. flattened Gaussian beam propag. charact. *(Chinese)* 82725
fiber guide with random inhomogeneities, nonmonochromatic radiation limiting degree of pol. 82076
fiber pulse propag., time-domain BPM, Pade approximants in time axis 116660
fibre, opt. soliton propag., nonlin. damping, saturable amps. 104657
fibre optic Bragg gratings, pol. mode propag. modelling 71304
fibre zoned with metal-dielec. ring, light propag. 127657
field ang. momentum, Lie alg. symm. operators 117700
flat-topped multi-Gaussian laser beam propag. 93708
fractals syst., 1D, wave transm. 93159
free space optics, ultrahigh bandwidth opt. pulse propag. 109226
fund. Gaussian beams with edge phase disloc., SHG 82861
garnet mag. cryst., LPE growth, SEM, XRD, EDX, RHEED 125015
Gaussian laser beam, passage through gradient medium 105406
gravit. effects on light deflection/radar echo time, wave-propag. model 72339
hard-edge apertured paraxial ABCD opt. syst., Gaussian beams, approx. close-form expression *(Chinese)* 105411
high gain opt. fibre amps., self-similar pulse propag. 82540
high-aperture beam generalizations 82731
high-power tightly focused laser beam, propag., self-depolarization effect 128361
highly multimode dielec. waveguides with rough surfaces, charactn. tech. 127760
holographic display screen enhancement films, opt. behaviour 92940
hyperb. unstable-resonator semicond. laser, design optim. 93648
III-V semicond.-based photonic crysts., coherent lasing action, ultrasmall integrated devices 127805
isotropic Kerr-type nonlin. media, pulse propag., diffr. and dispersion 128473
isotropic point source, evanescence asymptotics 117699
isotropic to anisotropic medium propag. light, total refl. 117697
laser Laguerre-Gaussian modes, wavefront sing. 93707
localized spatially-modulated medium, spatial solitons interact. 105570
Mach-Zehnder interferometer, quant. nondemol. meas., Heisenberg limit 105487
mesoscopic struct., photons and electrons, opt. commun. appl. 131352
MODAN-type DOE for transversal laser mode selection, commun. appls. 127874
MOPA, beam propag. and perturb., thermal aberrations 105407
multi-dimens. liq. cryst. optics, num. modelling, FDTD method 82228
multilayer dielec. struct. with diffr. grating, EM diffr./propag. 127755
multiple dark soliton propag., randomly varying birefr. influence 72062
nondiffracting beam higher-order SBS 71919
nonlin. opt. devices anal., fast semivectorial finite diff. beam propag. method 71927
nonlin. optic materials with saturation, bright solitons instabil. 105568
obj. reconstruction, time reversal using single-cycle terahertz pulses 94927
opt. near-field props., evanescent waves/ang. spectrum *(Japanese)* 72341
opt. pulse and beam propag., conf., San Jose, CA, USA (Jan. 2001) 124184
opt. pulse propag. in NLO DM fibers 82077
opt. waveguiding problems, BPM/FDTD methods 127736
optoelectronic devices conflict, phys. models of laser channels, expt. investig. 116901
parab. eqn. method appl. 128820
partially coherent high-num.-aperture scalar imaging 126559
photonic cryst. waveguides, light propag. charact., SOI wafer 82129
photorefr. medium, single and incoherently coupled nondiffracting beams propag. and interact. 128559
photorefr. nonlin. cryst., multicomponent spatial vector incoherent solitons 128539
quadratic nonlin. medium, Bessel opt. vortices interact., SHG 128526
quasi-diffr.-free beams 83346
random media, two-freq. coherence fn., ref.-wave soln. 128784
random nonlin. dispersive medium, solitons long-range transm. 128537
reson. two-level medium, ultrashort light pulses, FDTD anal. 93718
slab waveguide reson. monitoring by free space waves 116682
SOA, nonlin. propag./FWM of picosecond opt. pulses 128289
soda-lime glass, Cu^+-Na^+ ion exchange channel waveguides, light propag. 93138
stratified 3D photonic struct., light scatt. and propag., fully vectorial tech. 104750
tapered laser cavities, opt. props. 128291
tapered near-field fibre probes, FDTD simul. 82102
tissue opt. props. meas., small portable spectrophotometry syst. 122058
vector solitons, cascaded collisions, inform. transfer 128562
vectorial-BPM, perfectly matched layer ABC, Fourier series expansion 94047
WDM CAD design tools 86091
Al direct laser writing on Si_3N_4 waveguides, SNOM studies, opt. mode converter fab. appls. 93934
AlGaAs VCSEL photonic quantum ring laser, evanescent/propag. wave characts. 117319
Ar-Ne filled quasi-static gas cell; high-brightness high-order harmonic generation 82840
$Bi_{12}TiO_{20}$ photorefr. medium, single laser pulse propag., num. study 128483
CO_2 laser pulse propag. in nonlin. absorbing media 82749
GaInP/AlGaInP, strained MQW laser, perp. opt. beam quality study *(Chinese)* 128266
GaInP/AlGaInP strained MQW laser, vert. beam quality 128324
Nd:YAG pulsed laser with SBS-mirror, large vol. laser mode, num. simul. 93566
Ti:sapphire ultrashort light pulses, polariz. state, cross-PM 105421
XeCl discharge laser with Gaussian reflectivity mirror, beam quality factor evol. 105151

light propagation in plasma *see plasma light propagation*

light reflection
see also attenuated total reflection; mirrors; optical films
3D sens. syst. with point light sources, robot navig. appl. 118651
180° FOV LW IR lens design 82265
abruptly ended fiber waveguide, radiation charact. 93069
acupuncture points and channels, opt. props. meas./anal. 133014
Al reflective layer on SiO_2 substr., complex-AM DOE 105610
antiferroelec. liq. cryst. cell reflective display, opt. config. and fab. *(Korea)* 93250
ARROW opt. polarizer under quasi-anti-reson. conditions 93135
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF tech 110048
autostereoscopic displays, big size holographic screen 109897
azobenzene polymers, holographic refl. gratings 72091
BB-640 holographic plates, fixation-free rehalogenating bleach optim. 82027
bis-tolane liq. crysts., birefr., display appls. 97621
Bragg fiber grating refl./phase responses, apodisation impact 127661
Bragg grating, parametric soliton tunneling, counterpropagating wave ana 128554
building materials, transparent/reflective/absorbing props. expts. 114454
bulk glass current sens. sensitivity, refl.-induced retardance 121135
cast surface roughness, laser exam. 132163
chiral mol. films, surface SHG-circ. dichroism *(Chinese)* 128504
CMOS TN displays, projection appls. 97712
coating inspection with PMD refl. sens. *(German)* 67661
compact opt. bends, design and optim. 104741
compact plastic plate sealed micro-prism archit., fan-out beam splitter devic appls. 116776
concatenated waveguide sects., refl. coeff., beam propag. algms. 104703
CRT color-picture-tube panel, inner surface curvature optim. *(Chinese)* 8684
CRT displays, monochrome, medium-resoln., calib. for purpose of board exams 97635
cubic nonlin. media, self-focusing opt. wave, spatial spectrum dyn. 128475
cylinder Gaussian light beam refl., act. 3D profile measuring syst. *(Chinese)* 71884
dielec. medium boundary, localized surface wave form./propag. 128549
dielec. thick lenses, profiles calc. 82261
Disperse Red 1 azo-dye doped cellulose acetate polymer film, holographic refl gratings 93898
dye-doped LC layer near total internal refl., pass. laser Q-switching 117348
electromechanically actuated film display for direct viewing 109844
FBG, multiple spatial harmonics 127601
fiber Bragg grating, large bandwidth/short grating length, charact. 104640
fiber Bragg grating sens. array, serial TDM using tunable laser 109604
fiber Bragg gratings for WDM, phase mask stitching error study 109192
fiber optic soil moisture sens. design, lab. and field meas. 97328
fibre zoned with metal-dielec. ring, light propag. 127657
flat panel 3D displays, scanning ripple illum. 97763
four layer eccentric fiber, frontscattered light pattern 93067
frontlights for reflective LCD, lightguides with micro-grooves 97704
grating struct. with fractionally organized gaps, reflectivity spectra evol. 74945
ground/polished surfaces, quantitat. roughness meas., total internal refl. micros copy 109999
H-ROD, versatile microoptical component 116763
high refr. index glass beads, refr. index meas. *(Chinese)* 97862
holographic color reflector, refl. profile 93904
holographic interferometry reconstruction using DMD 83037
current holographic materials available from Slavich, recent advances 82026
hybrid semicond. polymer reson. grating waveguide struct., fab. and props. 93134
interferometer, anal. 109490
IR wireless channel with dielec. specular contours, charactn. 75069
isotropic to anisotropic medium propag. light, total refl. 117697
laser opt. components, test methods, standardization trend *(Japanese)* 93691
laser scanning wafer inspection syst., focal sens. develop. 78696
laser-microjet wafer dicing, water jet cooled 103946
LCD, EO, viewing charact. *(Chinese)* 71428
lightpipes, hidden devices that light our world 116641
liq. cryst. cell, totally refl. light anal. using renormalized ellipsometry 82237
low power colour reflective TFT-LCD technol. 121106
Mars spacecraft, laser-retroreflector covered sphere 117329
multilayer waveguiding photonic bandgap struct., very fast accurate modeling 127740
natural backgrounds and artificial objs., spectropolarization contrasts 73534
nonlin. saturable/lin. medium interface, spatial soliton total internal refl. 93854
nonuniform refl. vol. holographic grating, num. simul. *(English)* 72094
obj. surface shape from shading meas. by neural net, indust. appl. 120644
off-reson. gap solitons in nonlin. grating. Bragg reson. detuning 128555
OPO, cavity-dumping mode, num. modeling 105493
opt. fiber drawing procs., Fresnel interfaces, radiative transfer modelling 82121
opt. thin samples, permitt./permeab. determ. from refl. coeff. 80152
phase-dispersion opt. tomography, low-coherence interferometry 73300
phase-shifted Bragg gratings, ultrashort light pulses transm. 127620
photoelastic stress anal., multiple-refl. effects 86983
photonic cryst. fibres, technol. overview 82080
photonic cryst. SHG/microcavity nonlin. refl. 82851
photopolymer films for vol. phase refl. hologram recording 82990
photopolymer materials for refl. phase hologram recording 105593
planar photonic struct., beam refl., bistable switching 128531
polariz. eigenvectors for reflective twisted NLC displays 132106
polariz. props. of refl. vol. holographic grating 117530
polymeric Y-branch opt. waveguide with reflecting surface, loss characts. 127730
PV modules tilted plane reflector studies 77796
quartz plates, extraordinary/ordinary indices meas. 132196
regular circ. waveguide splice with arbitrary refr. index profile, mode refl. 127739
reson. grating refl. filters for finite beams narrow-band spectral filtering 116893
reson. grating refl. filters for normally incident Gaussian beams 104882
reson. waveguide grating, polariz. independent filtering anal. 104710
Sagnac loop with inserted fiber Bragg gratings, transm. charact. *(Chinese)* 71295
SBS-mirror with small lenses ordered raster, phase conjug. superhigh quality 105472
semicond. VCSEL, periodic struct. form., spatial Fourier modes competition 93622
SG-II high power laser syst., ghost refl. anal. *(Chinese)* 128372

reflection continued
ide-illum. mirror photodiodes for surface hybrid integrat. modules, coupling tolerance 75521
ingle-line-defect planar photonic cryst. waveguide, light guiding study 82174
SMART coatings synthesis and functioning for compact instrums. and sens. appls. *(Danish)* 71467
uperfast scanning of space with phase-modulated laser radiation 131675
hresholdless antiferroelec. in chiral SLC 97604
Hz EMP refl., index of refr. meas. *(Korean)* 75902
otal internal refl. precision small-angle meas. 75857
win-grating fiber optic sens., demodulation algm. 75573
UV lithog., off-axis TIR holography 115747
vane-type electrodeless HID lamp prototype *(Japanese)* 124063
vectorial-BPM, perfectly matched layer ABC, Fourier series expansion 94047
white light expt. holography for high school teaching 78480
windshield wiper motor, rain sensitive triggering syst. 124017
Ag-halide materials for multicolor holography, comparative study 82992
Ag-nanoparticle-dispersed fluorinated polyimide, thin flexible polariser fab. 71458
AlGaInP/$Ga_{0.4}In_{0.6}P$ MQW LD, tapping-mode tuning-fork NSOM 82658
BaB_2O_4 OPO, collinear type-II phase matching, spectral width and beam divergence reduction 71998
GaAs pyramid microstruct. form. by MBE regrowth, opt. charact. 82199
GaN/InGaN multilayer EL, GaN buffer growth conditions 80890
ITO absorbing thin films, opt. consts. and thickness determ. 75905
InGaAs/InAlAs:Be MQW ultrafast saturable absorber for all-opt. switch 120320
$In_{1-x}Ga_xAs/In_{1-y}Ga_yP$ MQW modulator, smart-pixel appl. 116840
$LiNbO_3$ electrooptically addressable total internal refl. switching 72044
$LiNbO_3$:Fe, light controlled delay of MW sigs. 127867
$LiNbO_3$:Fe(Fe,Ce) photorefr. crysts., holograms, thermal fixing efficiency *(Chinese)* 72095
Nd:YAG laser welding, keyhole form. & power deposit law 105644
Si-on-ceramic thin film solar cells, light trapping, monolithic array 100157
SiON thin-film opt. coatings for FPD 97627
$Sr_{1-x}Ba_xNb_2O_6$:Ce photorefr. interface, 2D spatial solitons internal refl. 93861
Yb-doped high power Raman fiber laser modulator, low insertion loss 105205
ZnS:Mn laterally emitting TFEL displays, fast modelling 75806

reflection spectra *see reflectivity; spectra*

reflectometers *see reflectometers*

reflectometry *see reflectometry*

refraction
see also birefringence
absorptive neutral-dens. glass filters, thermally induced birefr./refr. 71499
aerial laser rangefinder, counter-rot. opt. wedge appl. 122758
beam shaping elements, refr. for opt. fiber/switching appls. 82194
bichromate gelatine refr. microlens array fab. with coding gray-tone mask *(Chinese)* 127810
carbon nanotube single-wall bundles, two-photon absorpt./nonlin. refr. 117402
coating design, integral refr. coeff. method 116898
cornea/PMMA plate, excimer laser absorpt., vol. luminance appl. 117598
dual-color laser satellite ranging, refr. limitations 128630
four layer eccentric fiber, frontscattered light pattern 93067
high-quality microlens array fab. for photolithography 104794
image sens. for testing refr. error of eyes 76408
myopia correction, excimer laser refr. surgery *(Japanese)* 111107
myopic refr. surgery, excimer laser, intraocular press. obs. 72150
ocular lens, aging human, thickness determ. from corrected Scheimpflug images 98366
opt. fiber drawing procs., Fresnel interfaces, radiative transfer modelling 82121
optoelectronic surveillance systs. effectiveness, aerosol residues influence 117703
organometallic C_{60} derivative, self focusing-self defocusing transform. *(Chinese)* 117434
phase-dispersion opt. tomography, low-coherence interferometry 73300
refr. contrast imaging using scanning microlens 71377
refr./diffractive microlens arrays, fab. and perform. study 93182
SHG crysts., nonlin. refr., femtosecond Z-scan meas. 117481
silica refr. microlenses for Shack-Hartmann wavefront sens., fab. and testing 104799
triazolehemiporphyrazines, substituted, third order opt. nonlin. 117410
AlGaInP/$Ga_{0.4}In_{0.6}P$ MQW LD, tapping-mode tuning-fork NSOM 82658
As_2S_3 based glass, NLO atten. at 1.3-1.5μm 93846
$MoOS_3ICu_3(2\text{-}Mepy)_3$ cubane-like shaped metal cluster, excited-state nonlin. refr. 82839
Pd^+ Ni-like 4d→4p laser transit., saturated output tabletop x-ray lasers 128055
TeO_2 based glass, NLO atten. at 1.3-1.5μm 93846

scattering
see also Brillouin spectra; Raman spectra; Rayleigh scattering; stimulated scattering
1D isotropic dielec. medium, scatt. amplit., first-order diff. eqns. 105767
1D struct., local defect detect./recogn. 118659
2D turbid media, short-pulsed laser transport, discrete-ordinates soln. 93737
2D wavelength-size lens simul., accurate num. method 128785
3D phase-change opt. disk structs., FDTD anal. of light-beam scatter. 82058
785/1550 nm laser beam propag. in fog/haze for opt. wireless commun., comparison 86111
abruptly ended fiber waveguide, radiation charact. 93069
aerosol size distrib. retrieval, multiwavelength lidar data 76848
aerosolized Bacillus subtilis var. niger endospores, IR spectral extinction 133347
air ultrashort laser pulse filament generation, backward supercontinuum emission 71893
atmos. aerosol charact., lidar develop. and expt. research *(English)* 99003
atmos. aerosols, laser rem. diagnostics, backscatt. spectrum reson. method 122703
atmos. probing, laser light scatt. spectral struct., nonresonant lidars 133366
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF techs. 110048
azobenzene polymers, holographic refl. gratings 72091
backscatt. enhance. from 1D rough surface, study using Monte Carlo method 128787
Bayesian opt. diffusion tomography, nonlin. multigrid algms. 73260
biomedical optics/photonics trends, conf., Miami Beach, FL, USA (Apr. 2000) 100430
biotissues, laser-ablated, Doppler diagnostics 117601
biotissues, nonstationary mass removal by laser ablation, Doppler diagnostics 122047
bis-tolane liq. crysts., birefr., display appls. 97621
blasted surfaces roughness meas., light scatt. method 75873
C-reactive protein detect., CCD-based light-scatt. instrum. 87546

light scattering continued
carotenoid antioxidants in living human tissues, reson. Raman detect. 122042
clear dielec. isotropic epoxy coating light scatt. meas. by interferometric microscopes 75907
cloud polaris. prop. effect on target discrim., composite image 133406
coated cylinder rainbow scatt., thin-film interf. 72338
CR-39/85 etched detectors with alpha/neutron-induced tracks, He-Ne laser transmiss. 121662
crankshaft finish control by light scatt. tech. 109974
crude oil emulsion conc. in natural water, laser photoacoustic detect. 88176
cryst. originated wafer particles light scatt. expt. *(Japanese)* 97866
DC opt. tomography, inter-param. crosstalk minimisation 110833
densely packed multispecies sticky particles, particle posn. simul. 105757
dielec. layer microroughness polarized light scatt. 71482
dielec. layer/ferrite film laser beam scatt. 117341
diffr.-reflecting opt. coated laser detect. systs., heterodyne locator s 120465
diffractive optic fluid shear stress sens. 120750
direct-detect. mid-IR random-modulation CW lidar SNR 131678
displacement meas. using rem. sens., Doppler effect *(Chinese)* 86474
dual-plane stereoscopic particle image velocimetry for lobed jet mixing flow meas. 132219
DUV scatterometer for nanoparticle detect. in semicond. mfg. 109434
DUV/VUV light scatt. meas., opt. lithog. 92188
dyn. light scatt., fast multi-tau real-time software correlator 128621
egg white, CO_2 laser-assisted tissue coagulation, thermal-feedback-controlled 98369
falling raindrops, radar/scatt. params. 88152
fiber bundle tip backscattered light intens., non-contact vibr. meas. 121233
fibre zoned with metal-dielec. ring, light propag. 127657
fibroadenoma, NIR tomographic breast imaging scatt. heterog. 87524
filled liq. cryst. depolarizers 127841
finite perfectly conducting corrugated rough surface light scatt., left-right method 83345
fluoride glasses, isothermal crystn. kinetics, fibre appl. 92938
fog imitators for aviation appl., liq. cryst. cells 98889
four layer eccentric fiber, frontscattered light pattern 93067
fullerene-containing media, laser radiation NLO limiting 128463
fullerene-containing media, laser radiation opt. limitation, light-induced scatt. role 71961
fully-distributed opt. fiber polariz. props., OTDR backscatt. tech. 93056
g-line pos. photoresists, opt. characterisation 115739
gas flow vel. meas. using laser-induced electrostrictive grating 121265
Gaussian beam illum. spheroidal particle light scatt., spheroidal wave fns. 72340
Gbit/s channel repeatered bi-directional WDM transm. 86075
geometric opt. modeling, multiple-scatt. scheme 76947
graded gain random liq. laser amp. opt. diode spectral charact. 82506
Gray Field UV technol. for defect inspection systs., design/appl. 100630
hidden deep phantoms in extended scatt. objs., diffusion opt. tomography 98352
highly multimode opt. waveguides, rough surfaces, ray tracing tech. 127733
hollow dielec. waveguide guided beam scatt./extinction 82150
holographic display screen enhancement films, opt. behaviour 92940
holographic stereography diffusers, LCD laser light projection 93882
human tissues, opt. charactn., time-resolved reflectance spectrosc. 110843
hyaline cartilage, NIR laser radiation effect on opt. props. 132640
Iber Braun hens, excimer laser keratectomy, postoperative corneal haze meas. 76393
in vessel nuc. fusion reactor viewing syst., amplit. modulated laser radar 105655
infinitely long conducting circ. cylinder, Gaussian beam far field scatt. 82722
inverse scatterometry, optimal meas. config. 84103
IRFPA nonuniformity correction, diffractive lenslet array anal. 86621
lamp phosphors, performance/design tailoring 104929
laser opt. components, test methods, standardization trend *(Japanese)* 93691
laser prod. vapour plume, laser beam transmittance meas. 117565
laser-guided particle deposition for direct-write fab., CFD modeling 101176
latex spheres in Intralipid suspens., turbid media opt. props., CW meas.-based methods 76394
layered spheroid internal/near-surface scatt. EM fields 105768
LCD, reflective, R-OCB cell, diffusing property 97682
light-controlled nonlin. scatterer 83540
long single-mode fibers, birefr. correl. length meas. 93095
machined rough surface meas. by fringe pattern light interferometry 67662
mammalian cells, polarized backscatt. fiber-optic meas. 132638
mammography, absorbing/scatt. inhomogeneities, perturb. model accuracy 132625
MEH-PPV light-emitting polymer photonic band struct., LED appls. 86819
midtropospheric aerosol backscatt. background mode, space-based/airborne lidars appl. 131674
Mir spacecraft sample degrad., real-time total integrated scatt. meas. 82275
monostatic lidar in weak-to-strong turbulence 96999
multi-gap fractal superlattice lacunarity, wavelet anal. 128789
multiplex imaging micro-optics/DOE design 116775
multiply scatt. coherent light, US modulation, Monte Carlo model 122043
multiply scatt. photons, low-coherence interferometric path-length-resolved Doppler meas. 132646
nano-struct. dye-sensitized solar cells, opt. props. 100038
nanomaterials as opt. limiters, review 71957
NLC planar cells, 2D spatial solitons, self-trapping 128543
obj. reconstruction, time reversal using single-cycle terahertz pulses 94927
ocular/body disease detect. by dyn. light scatt. 132637
oil content online monitoring by neural nets 111472
opt. components surface roughness and micro-displacement, dual laser probe testing 93942
opt. computed tomographic imaging by photon counting method *(Japanese)* 122066
opt. diagnosis, pre-computed Monte Carlo results, real time transform. 87540
opt. disk, light scatt., $(FD)^2TD$ anal. *(Japanese)* 71230
opt. disks, scatt. meas., media noise rel. 127574
opt. fiber WDM virtual ring network, bi-directional node 109128
opt. near-field props., evanescent waves/ang. spectrum *(Japanese)* 72341
overall light-scatt. expt. accuracy, correl. anal. errors 129411
particle size determ., multiple-light-scatt. conditions, light-transmittance predictions, inverse problem 75855
particle size meas., laser scatt. tech., projection iter. algm. 121206
particle sizer for hostile environ., on-line monitoring 76932
phase fluct. imaging OCT 76397
phase obj. imaging, diffr. tomography reconstruction algms. 84165
phase-change opt. disk struct., 3D FDTD anal. of light scatt. 127582
phase-dispersion opt. tomography, low-coherence interferometry 73300
phase-Doppler sizing anemometer, laser light scatt. by particles *(Chinese)* 132181

light scattering continued
phase-shifted fiber Bragg grating, pulse shaping, antisymmetric pulse generation 127611
photonic cryst. slab/slab waveguide, out-of-plane scatt. 71331
photonic crysts. and VCSELs, perfectly matched layers, eigenmode expansion, opt. modelling 104702
photonics teaching conf., Giza, Egypt, (Oct. 2000) 78486
photorefr. medium, single and incoherently coupled nondiffracting beams propag. and interact. 128559
planar opt. waveguide, nanometer surface roughness determ. 82126
polycarbonate layer CD recordables, radial-pattern form. 116583
polyester filament diam. meas. by real time opt. method *(Japanese)* 86956
polyester monocrystalline films, opt. control, charact. meas. 127572
polyethylene sheets, crease detect. using opt. syst. *(Japanese)* 131922
polymer low-loss waveguides, absorpt./scatt. 93110
polymer multilayer LEDs, spectral photon emission/extraction efficiency, Monte Carlo anal. 93391
polymer-dispersed smectic A liq. crysts. appls. 93244
polystyrene latex mixtures, photodetectors for heterodyne direct light scatt. instrumentation 131908
proc. turbidity sens., low range, light scatt., noise suppression 75541
pseudo side-chain liq. cryst. copolymer 97618
quasi-monodispersive aerosol, drop sizes, diffr. meas. methods 75866
rain-induced lidar depolarization, atmos. icing meas. 133286
random rough surface, beam simul. appl. 83344
retinal layers functional imaging, laser scatt., spreading depression 87533
rough water surface atmos.-emitted IR radiance refl. 76941
roughness in-proc. charactn., speckle correl. *(German)* 75886
scalar 2D inverse scatt. problems, degree of nonlin. 94015
scatt. layer medium obj. detect., laser sig. refl. model 109300
scatt. medium homodyne/heterodyne imaging by 2D holographic phase-sensitive detector 131915
sea-water target detect. by modulated LIDAR 76921
semi-infinite periodical struct. wave diffr., axial symm. 117705
semicond. technol., particle inspection, in-line monitoring *(Japanese)* 89911
sharp edge particle EM wave scatt. anal., extended boundary condition method 83348
shearing polaris. interferometer, roughness meas. 75888
short period/long period fiber grating synthesis, Gel'fand-Levitan-Marchenko inverse scatt. method 104632
sig. contaminated by multiplicative Gaussian noise, intens.-weighted phase-derivative stats. 118403
single-mode opt. fiber homodyne dyn. light scatt., sensitivity improvement 127592
single-mode waveguides with surface scatt., selective transparency 127775
small refr. indices changes in water, opt. forward-scatt. laser light detect. 97867
smoke particles discrim. using IR photoelec. detect. 75534
sodium lamp tube crack detect. using laser illum. *(Japanese)* 89429
sonic vel. meas. by laser Bragg refl. detect. tech. 72149
spaceborne aerosol sens., operational rem. sens., directional effects 88120
spatial-ang. charact. of laser beam leaving aerosol layer 117335
spherical/nonspherical particle suspens., scatt. light polariz. states 121179
spider's thread, diam. and refr. index determ., scatt. light pattern 86993
star coupler, diffused light transm. 71318
stratified 3D photonic struct., light scatt. and propag., fully vectorial tech. 104750
stratified media, laser sounding, multiple scatt., sig. depolarization 88147
stratos. aerosol meas. with L625 Mie lidar *(Chinese)* 122665
submicron bioparticle dielectrophoretic manipulation, lab-on-chip 87298
subsurface defect charact. of semicond. opt. components, quality assess. 97801
super-RENS MO disk charact. by optimized super-resoln. near-field struct. *(English)* 71439
super-RENS opt. disk storage 92957
super-resoln. near-field struct. disk, near-field scatt. light 92973
thin cirrus cloud, structural params., spaceborne backscatt. lidar 111416
tissues imaging, US tagging of transm./backscattered photons paths 87511
transparent turbid media, differential phase-contrast OCT 76390
turbid media particle size anal., single opt. fiber white light detect. 120939
urban area atmos. aerosol monitoring by two-wavelength lidar 76900
VCSEL cavities, aperture radiation scatt. effects on mode struct. 128267
VUV coatings, ion beam sputtered, microroughness charactn. 71493
wakes simul., opt. investig., bubble screen *(Chinese)* 132229
waveguide based LCD with high opt. efficiency, demo. 97745
whispering gallery mode cylindrical dielec. resonators 116752
white paint multilayer plane absorbing medium, space environ. opt. degrad. 122494
wireless IR link modelling 109223
Ag_2O thin film, micro-opt. nonlin. 82788
AlGaAs-based microcavity, electronic excitations, selectively enhanced inelastic light scatt. 71863
As-S-(Se)-based chalcogenide glass opt. waveguides, fab./charactn. 116720
As_2S_3-Ag photosensitive thin films, nonlin. anisotropic laser beam scatt. 117342
$BaTiO_3$ high-gain photorefr. cryst., beam-fanning, multi-wave mixing model 128444
$BaTiO_3$:Co photorefr. cryst., self-pumped phase conjug., all opt. control 128427
$Bi_{12}TiO_{20}$, self-pumped phase-conjug. mirror recording, spatial subharmonics generation 128446
CS_2-lead phthalocyanine based dual focal plane vis. opt. limiter 71954
$Er_3Al_5O_{12}$ selective emitters, TPV systs. 113026
GaAs, MBE for AlGaAs/CaF_2 saturable absorber mirror 93690
$GaPO_4$, hydrothermal growth, physico-chem. aspects 79164
GeSbTe:Ag film Super-RENS high-dens. opt. data storage 92974
He-Ne laser beam focusing, beam-shape coeffs., generalized Lorenz-Mie theory 71877
$Ho_3Al_5O_{12}$ selective emitters, TPV systs. 113026
$In_{0.2}Ga_{0.8}As$ on GaAs(001), growth method, monitoring of surface topography/stress evol. 90274
$LiNbO_3$ near-stoichiometric crysts., photorefr. props. 93768
$LiNbO_3$:Fe photorefr. material, parasitic hologram reconstruction 83028
$LiNbO_3$:Fe.Mn photochromic crysts., nonvolatile holographic recording, scatt. suppression 105609
Nd:YAG pulsed laser with SBS-mirror, large vol. laser mode, num. simul. 93566
Si array prism coupled THz-wave parametric oscillator 71973
Si lamellar grating struct., groove depth, opt. scatterometry 121202
a-Si pin thin film solar cells, texture-etched ZnO substrs. upscaling 112861
Si/SiO_2 waveguides, CMOS-compatible, scatt. losses 116714
Si-microarray devices, heterog. protein crystn. screening 132010
Si-on-insulator struct., opt. freq. energy transfer 127792
SiO-Cr black matrix for color CRT, thermo-vac. evap. deposition 86818
TiO_2 solar cell with extremely thin absorber, grain size effects 100211

light scattering continued
TiO_2-SiO_2 ion-beam-sputtered mixed film low-loss dielec. mirror 71492
$Tm_3Al_5O_{12}$ selective emitters, TPV systs. 113026
W CVD films, rarefied particle clouds, in situ monitoring 101314
ZBLAN planar waveguides fabricated by He ion implant. 127737
ZnO front electrode, PECVD grown, a-Si pin solar cells 112893
ZnO texture-etched substrs. for a-Si thin film solar cells 100203
ZnS phosphor, white luminesc. on InGaN UV LED illum. 127938
ZrO_2-SiO_2 modified pigment prodn., reflective coating, aerospace appls. 1144

light sensitive materials *see optical materials; photographic material sensitivity*

light sources
see also infrared sources; light emitting devices; photometric light sources; spectroscopic light sources
1.5-μm tilted integrated superluminescent light source 127971
3D light source geom. calib. from images 118365
20 GHz ultra-short opt. pulse source, DFB-LD/pulse compression technol. gene ated 117396
850-nm VCSEL light sources for opt. transm. systs. 128327
achromatic fan-out diffractive syst. for white-light free-space opt. interconnec 82260
amplit. stable spectrum-sliced supercontinuum sources, DWDM appls. 96789
Bytelight high brightness electrodeless lamp, projection display 109902
controlled radiation light guide med. devices 122054
CW mode-locked all-solid-state laser source, cavity-augmented freq. triplin 105260
device research, conf., Denver CO, USA (June 2000) 67376
dielec. barrier discharge, props., appls. 91524
digital laser commun. syst., design, work principle 120185
EO Michelson interferometer, low coherence fiber optics 71409
EUV lithog., light sources, portable diagnostics 92206
EUV lithog., pinch plasma radiation source 115748
EUV lithog., radiation sources 115750
EUV lithog., Z-pinch source 92205
EUV lithog. and interferometry, water laser plasma source 92204
far-field meas. instrum. for opt. telecom light source charactn. 120175
fiber Bragg grating vibr. sens. using incoherent light 97313
fiber optic soil moisture sens. design, lab. and field meas. 97328
fiber pigtailed super luminesc. diode for absol. temp. meas. 82406
flames, axisymmetric gaseous, temp. meas., Lau phase interferometry with lin gratings 132202
flicker effect meas., power supply quality 124084
Fourier holography, alg. foundation 72093
free-space micro-opt. components & appls., overview 104788
full parallax 3D imaging syst. with point light source array 121110
Gbit/s simultaneous photonic DEMUX, OTDM-to-WDM conversion, FWM 75025
heliostat, light source posn. microsensor, alignment sens. sig. generation 97565
high-order harmonics generation using few-opt.-cycle pulses 117491
image mode laser, ASE model, video projection display 97671
image reprod., ang. distrib. of refl. spectral intens. 94865
integrat. sphere model, low-level-light source 124082
intense laser pulse high harmonic generation, coherence props. 117486
isotropic point source, evanescence asymptotics 117699
LCD backlighting device, diffractive light extractor 82244
LED colour spec. & perform., user requirements 93396
LED source diffractive optics appls. 116994
low-press. microwave plasma UV lamp, water purif./ozone appls. 134607
machine vision lighting, LEDs vs. fibre opt. illuminators 89886
machine vision syst. light source requirements 120907
MEMS incandescent light source, low-power, fab. technol. 100316
metal atom activator isolatedly fixed in matrix, new phosphor feasibility *(Japanese)* 127930
microdischarge array UV sources, fab. 134609
micromirror thin-film array for inform. displays 97759
microstruct. fibre, microchip laser pumped, compact broadband continuum source generation 71253
microvolumes liqs., refr. index meas. with temp. control 121244
multimode circ. fibers, one-step meas. of opt. fields 127590
N×N arrayed waveguide grating protected opt. star-shaped ring network 96758
nontraditional light sources for solar cell/module testing 113131
obj. surface reconstruction, shadows use 94741
oligothiophene modified blends, tunable white light generation, Forster transfer 116921
polarising high efficiency backlighting system for LCD 97756
projection display technol., optimised light sources, UHP lamps 109901
radiation & detector stds. using SR sources, develop. *(Japanese)* 86390
semicond. lasers, pseudorandom wavelength hopping, sync. 93613
single lens array convolution 71456
SOA based DWDM multiwavelength light source, stabil. *(Chinese)* 109215
solid-state laser-based displays 97760
spectrum slicing coherent light sources in high-capacity fibre transm. 85947
SURF III electron storage ring, expt. programs 110084
SW source develop. for microlithog., overview 115784
tea aroma, opt. sens. using n-tetraphenyl porphine manganese (III) chloride LB thin films 109592
technol., current topics review 134635
ultrahigh-resoln. OCT, continuum generation in air-silica microstruct. opt. fiber 73254
UV phosphor blends for suntanning lamps, design 104930
UV source, calib., normal-incidence monochromator beam lines, BESSY II 124083
UV-EUV cascaded nonlin. upconversion, phase matching tech. 117490
violet semicond. lasers for ESPI 72098
VUV/UV light sources, dielec. barrier discharge excimer lamp *(Chinese)* 113132
white illum. source with inorganic LED and phosphors *(Chinese)* 82376
white light interferometry, multiwavelength source equiv. coherence length 72146
X-ray FEL light source, prospects and appls. 93678
X-ray lasers, conf., Saint-Malo, France (July 2000) 124174
AlGaN-based SQW LED, mW operation in UV region 82374
Ar-Cl_2 mixture UV-VUV excimer emitter, subnormal glow discharge pumping 115236
BaB_2O_4 OPO, collinear type-II phase matching, spectral width and beam divergence reduction 71998
$Ca_4GdO(BO_3)_3$ waveguides, CW blue-light SHG 82928
$CsLiB_6O_{10}$, NLO cryst. fab. for UV generation 72041
$CsLiB_6O_{10}$ cryst., coherent UV light generation 117492

sources continued
freq.-doubled laser light source for fibre gratings fab. 127607
-doped single-freq. fiber laser, external light injection, freq. control charact. 1677
InAsP/InP superluminescent LED, tapered act. region, high-power CW operation 93427
$_1Y_{1-x}Ca_xO(BO_3)_3$, NLO cryst. fab. for UV generation 72041
e, high-order harmonics generation, beam divergence in few-opt. cycle regime 17485
le-$XeBr_2$ nuc.-pumped flashlamp sources for nuc.-pumped lasers 128047
n,Ga)N based LEDs, multichip LEDs, phosphor converted LED, reviews 04999
$_{0.15}Ga_{0.85}As$ QW based microcavity EL device charact. 104976
GaAsP/InP high power 1.5μm integrated superluminescent light source 05013
GaN, white light source based LEDs 82421
GaN-based white LED lighting, high-efficiency, illum. characts 89441
$TiOPO_4$, quasi-phase-matched SHG, vis. duration-bandwidth tuneable source 93795
rCl capacitive-discharge excilamps, short radiation pulsewidth 134611
rF excimer-laser syst., four-wave difference-freq. mixing in Xe 82867
d:YAG freq.-converted pass. Q-switched ring lasers, compact UV light source 93564
i:sapphire oscillator, XUV harmonics source props. and appls. 128190
e capillary discharge extreme-UV source emitting over large ang. range 134610
e excimer emission from pulsed microhollow cathode discharges 113127
e flashlamp tube, residual stress distrib. meas. 97851
e flashlamps, bright choice for illum. 113129

transmission
see also light absorption; optical filters
D finite-aperture wire grid polarizers charactn., spectral-domain tech. 128783
sorbing opt. fiber-based heater 82096
cupuncture points and channels, opt. props. meas./anal. 133014
bitrary filter SLMs, optimal region of support 71472
rayed-waveguide grating, high-speed transm. and dispersion charact. 104695
symmetric Y-branch opt. power splitters, Ag^+-Na^+ ion exchange *(Korean)* 116678
utostereoscopic displays, big size holographic screen 109897
zobenzene polymers, holographic refl. gratings 72091
B-640 holographic plates, fixation-free rehalogenating bleach optim. 82027
CB diffractive struct., fab. for high-power laser appls. 104602
oherent phase sensitive amp., opt. transm. *(Japanese)* 128508
mpact opt. bends, design and optim. 104741
ntact hole patterns, opt. proximity correction, attenuated phase-shift mask *(Korean)* 69979
opper phthalocyanine films, femtosecond NLO response 82831
R-39/85 etched detectors with alpha/neutron-induced tracks, He-Ne laser transmiss. 121662
RT picture tube, variable transm. coating 80620
iamond, CVD, optics for UV region 82034
iamond CVD films, IR opt. props. charactn. 116551
iamond for high-dens. opt. recording 82056
UV stepper lens contamination control, purged gas purification 126579
BG, multiple spatial harmonics 127601
ber Bragg gratings, transm., dispersion compensation efficiency *(Chinese)* 127627
lled liq. cryst. depolarizers 127841
rating sandwich struct., NLO limiters, eye protection 71953
ray-scale images, pattern detect. with polariz. coding, matched filtering techs. 84515
Hadamard transform imaging with nanoresolution, near-field optics 95231
ighly reflective boundary vol. phase gratings, spectral selectivity 128357
ologrаphic PDLC transm. gratings, phys. props. 128569
ybrid semicond. polymer reson. grating waveguide struct., fab. and props. 93134
R Shack-Hartmann wavefront sens. for conformal dome metrology 109717
RFPA nonuniformity correction, diffractive lenslet array anal. 86621
TO thin film, sputter deposition, single-phase target 90250
aser opt. components, test methods, standardization trend *(Japanese)* 93691
LD package, with thermoelec. cooler, cooling, num. anal. 105331
LD radiation, high power, fast axis collimation using microlenses 82650
LD to fiber coupling anal. using Gaussian beam-BPM hybrid method 93501
imited beam, collinear AO interact., Gaussian distrib. 127861
ong-haul opt. transm., ultra high-speed, using dispersion managed solitons 74923
ong-period fiber grating, asymm. transm. spectrum removal, beam scanning method 82115
nagnesium phthalocyanine films, femtosecond NLO response 82831
-methylstyrene polymer-based 157 nm single-layer/bilayer resists 103652
nicrodeflection LCD modes, eight-division electrodes 104835
nodified fused silica mask, DUV lithog., surface contamination 103677
nulti-channel long period fiber gratings, controllable transm. charact. 82081
nultilayer waveguiding photonic bandgap struct., very fast accurate modeling 127740
nultiple dark soliton propag., randomly varying birefr. influence 72062
N-cyclohexyldimethacrylamide cyclocopolymer for appl. to photoresist/PAG 103515
nanometric opt. fiber probe, fab. method, light transm. principle 97321
nonlin. Fabry-Perot resonator, direct num. integrat. 72047
nonlin. optic and conductive polymers, thermal heating effects 93304
octa-decyloxy metallo-phthalocyanines, opt. limiting behavior 82035
pt. compensated bend cell LCD, response time, dyn. calc. *(Chinese)* 121073
pt. duobinary sig. transm., high power tolerant 75057
pt. TDM systs., dispersion-managed soliton interacts. 109164
pt. wireless propag., theory vs. expt. 86112
rganic crysts., exciton spectrum, high order nonlin. 128532
rganic mol. aggregates ultrathin film, hysteresis, transm. switching 93841
PANI composite coating, NH_3 sens., nulling opt.-transm. bridge 97433
particle size determ., multiple-light-scatt. conditions, light-transmittance predictions, inverse problem 75855
PBG struct. with act. n-i-p-i superlattice, opt. gain enhancement 126158
ers. ident., human irises recogn., opt. transm. binary models, Fourier spectra 84561
hase grating filter, light transmittance 82281
hase-shifted Bragg gratings, ultrashort light pulses transm. 127620
hase-shifted long-period grating device design, gain-flattening fiber filter appls. 93063
lastic opt. fibers, LAN, MQW LEDs transm. expt. *(Japanese)* 93085

light transmission continued
quartz crysts., wedge-like, cryst. growth conditions, structural-morph. characts. 79159
random nonlin. dispersive medium, solitons long-range transm. 128537
recycling of undiffracted laser light for hologram reconstruction 105582
reentrant fiber opt. rot. sens., design, sensitivity and resoln. *(Chinese)* 75553
refl. laser intens. from IR syst., diffr. theory *(Chinese)* 86610
RZ opt. transm., 40 Gbit/s, adaptive dispersion compensation using Bragg gratings 74960
Sagnac loop with inserted fiber Bragg gratings, transm. charact. *(Chinese)* 71295
semicond. microcavity, polaritons, exciton localization 91847
SMART coatings synthesis and functioning for compact instrums. and sens. appls. *(Danish)* 71467
SOA noise and transm. charact. 128328
sol-gel derived matrices for optoelectronic appls., transmittance exam. 92942
solar glazings, ang. depend. opt. props., outdoor meas. 123836
squarylium dye J aggregates, third-order nonlin. opt. coeffs., Z-scan tech. 127550
SSB-modulated light transm. quantum cryptography 129256
star coupler, diffused light transm. 71318
symmetric slab waveguides, Pockels media, TE waves light transm. *(English)* 71340
TDM/WDM-based opt. transm., ultrahigh bit rate >1 Tbit/s 75001
Teflon AF polymer pellicle optim. for 157 nm lithog., increased lifetime/transm. 92227
TFT-LCD product aperture ratio, reverse tilt domain magnitude control 86831
thin absorbing film thickness/opt. consts. meas., photom. quantities, error anal. 86995
THz beam profiler using opt. transm. modulation in Si wafer 128409
tissues imaging, US tagging of transm./backscattered photons paths 87511
transit. metal oxide ARC for airborne diamond optics 71500
transparent OLEDs using $Ni(acac)_2$ as electron injection buffer layer 71577
twisted nematic display, dichroic dye, opt. params. 109891
UV resist resin systs. for 157 nm lithog. 103650
wakes simul., opt. investig., bubble screen *(Chinese)* 132229
white light expt. holography for high school teaching 78480
Ag thin films inside silica capillaries for hollow waveguides, surface roughness 116674
Ag-nanoparticle-dispersed fluorinated polyimide, thin flexible polariser fab. 71458
AgO_x films, reactive sputtering, IR/Raman obs. *(Japanese)* 71214
AlGaN films, hot wall epitaxy, XRD 91680
$Al_xGa_{1-x}Sb$ films, MOCVD, elec./opt. props. 114334
AlInAs/GaInAs/InP:Be MQW structs., low-temp. MBE growth 101236
$Al_{1-x}In_xN$ films, plasma source MBE grown, opt./elec. props. 90311
CdS nanocrystals form. in SiO_2 substrs. by ion implant. 126240
CdTe/CdS flexible solar cells on polymer films 89286
$CdWO_4$ single cryst. scintillator, doping effect on radiation hardness 121557
$CsLiB_6O_{10}$ cryst., UV OHG, water-assoc. surface degrad. 93819
$Cu(InGa)Se_2$-based absorber/$Zn(O,S,OH)_x$ buffer jn. form., solar array 100095
Er-doped broadband fibre amp., gain flattening filters, transm. fn. design *(Chinese)* 71658
Fe:$LiNbO_3$ direct-bonded photorefr. planar buried waveguide, nonreciprocal transm. obs. 82138
GaAs cryst.-based fiber-optic temp. sens. 86593
GaAs pyramid microstruct. form. by MBE regrowth, opt. charact. 82199
GaAs:As, ion-implanted, opt. transm. spectra 80687
GaAs/AlGaAs surface textured LED, texture-enhanced transm. 127968
GaN crysts., opt. props., picosecond Z-scan meas. 80693
GaN films grown by plasma assisted laser-induced CVD, props., influence of HI irrad. 126017
GaN:In films, MOVPE, indium doping effect 115555
GaP/GaP mol.-force wafer bonding, nanometer air gaps meas. 68471
ITO absorbing thin films, opt. consts. and thickness determ. 75905
ITO films, DC/RF magnetron sputtering, elec./struct./opt. props. 79209
ITO films, PLD and props., laser irrad. effects 79358
ITO films, bias RF magnetron sputtering, struct./elec./opt. props. *(Chinese)* 114244
ITO films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
ITO thin films, reactive evap. prep. and charactn. 79228
ITO/Ag/ITO sandwich films for simple-matrix LCD, crosstalk 86816
ITO/GaP UV-vis. photodiodes, characterisation/modelling 82361
InF_3-YF_3-BaF_2-SrF_2-NaF-ZnF_2-GaF_3 glasses, opt. props. and thermal stabil. 127564
InGaAs:Fe/InP high-speed MQW saturable absorber, FTIR/pump-probe meas. 82822
$In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As$ MQW, photocurrent/transm. spectra anal. 126191
$In_{1-x}Ga_xAs/In_{1-y}Ga_yP$ MQW modulator, smart-pixel appl. 116840
In_2O_3:Mo transparent conductive film, prep., struct./elec./opt. props. 115328
InP guiding layer, photonic cryst. ultrashort bend waveguide 116684
InP nanoparticles in SiO_2 thin films, prep., struct./opt. props. 80701
InP/InGaAsP multimode interf. coupler, 1×8 channel power splitter 71339
InP-based arrayed waveguide gratings, crosstalk 93070
InSb, Auger recomb. coeff., IR-FIR dyn. plasma reflectivity 115305
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$ crysts., growth, characterisation 117471
$K_3Li_{2-x}Nb_{5+x}O_{15+2x}$, ferroelec., SHG 82886
$K_{1-x}Rb_xTiOPO_4$ epitaxial waveguide films, opt. props. 116878
$LiNbO_3$ opt. superlattice, EO spectral filter 104816
$LiNbO_3$:In, photodamage resist., opt. props. 104392
$LiNbO_3$:In,Fe cryst., opt. props., holographic storage props. 104618
$Li_xTa_{1-x}O_3$ single cryst., growth, opt. props., ferroelec. T_c 114212
a-Li_xWO_3 films, polaron absorpt. obs. 93312
Nb_2O_5-TiO_2 thin films for electrochromic devices 71405
$NiCo_2O_4$ films, spin casting, struct./elec./opt. props. 101397
$NiMgH_x$ films, electrochromic switchable mirror electrode, kinetics 71401
PZT thin films, prep. by aerosol deposition method, elec. and opt. props. 127168
Pb scintillating fiber calorimeter, opt. survey by digital imaging techs. 76101
PbF_2 cryst. growth, modif. non-vac. Bridgman method, strong Cherenkov effect *(Chinese)* 124781
$(PbI_2)_x$-$(BiI_3)_{1-x}$ solid solns., prep., dark cond./opt. energy gap, XRD/opt. transm. 114308
PbO-containing glass with large opt. nonlin., Z-scan anal. 92930
$PbWO_4$ crysts., mass prod. for EM calorimetry, peculiarities/prospects 121538
$PbWO_4$ single cryst. scintillator, doping effect on radiation hardness 121557
$PbWO_4$:Fe^{3+} large single cryst. CZ growth, annealing and opt. charactn. 79187
Sb_2O_3-CuI-NaCl(NaI)$(PbCl_2)(PbI_2)$ glasses, prep., struct., opt. props. 92939
Si HighVo and POWER solar cells, props., appls. 100152
p-Si:Al polycryst. film prep., Al-induced crystn. and doping 69474
a-Si:H deposition infl. by catalytic CVD on transparent cond. oxides 124956

light transmission continued
a-Si:H, femtosecond transm., exponential band tail pumping 91692
μc-Si:H films, catalytic CVD, struct./elec./opt. props. 124965
a-Si:H thin films on glass textured by embossing, light trapping and refl. control 100156
a-SiC:H, femtosecond transm., exponential band tail pumping 91692
a-SiGe:H, femtosecond transm., exponential band tail pumping 91692
SnO_2 thin films, spray pyrolysis at low temp., transparent electrodes 114412
TiO_xN_y films, spectrosc. ellipsometry/spectrophotometry/XPS anal. 104890
WO_3 films, electron beam deposition, electrochromism, film thickness 71487
ZnO epitaxial films, PLD and charactn. *(Japanese)* 68306
ZnO front electrode, PECVD grown, a-Si pin solar cells 112893
ZnO surface textured films, expanding thermal plasma CVD, solar cell appls. 101346
ZnO texture-etched substrs. for a-Si thin film solar cells 100203
ZnO:F thin films, spray pyrolysis prep., struct./elec./opt. props. 114404
ZnO:Li films, sol-gel method, crystn., c-axis orient. 114389
ZnTe:Cu thin films, struct. and opt. props., Cu soln. immersion immersion time depend. anal. 103283
Zr-Sn-Ti oxynitride thin films, enhanced dielec. props. 70379

light valves
dyn. IR scene projection, single-cryst. Si liq. cryst. light valve 116838
dyn. phase mask high-power laser beam focal spot optim. 105409
electron-beam mirror projector, light valve modulator 97741
GXGA microdisplay chip, design and fab. 109909
high-resoln. projection microdisplays, lens image quality 109884
holographic stereograms, light valve application 82996
liq.-cryst. light valve, spatial filtering phase knife, image differentiation 129639
multiparameter bifurcation points, NLO systs. 82931
nonlin. Zernike filter adaptive wavefront control 104884
opt. addressed liq. cryst. light valves 71423
polysilicon low-temp. TFTs, anodic oxid. on Al/glass substrs., LCDs 70123
projection display systs., business and professional, market growth 86882
reflective CMOS LCD light valves, fringe-field effects 97685
reflective light valves, polarising microscope metrology 97658
reflective TN-LCD, disclination dyn., CCD camera obs. 97684
SXGA liq.-cryst.-on-Si light valve, high-defn. video projector 86850
Si light valves, empirical model of flicker 86834

light velocity
faster-than-light effects/neg. group delays in optics/electronics, appls. 114863
gravit. effects on light deflection/radar echo time, wave-propag. model 72339
opt. fibers with ellipt. cross sect., anal. 127749
single-mode optic fibres synthesis 127658
Cr:forsterite fs laser radiation, SHG under group vel. matching 117461

lighting
see also lighting control; street lighting
3D light source geom. calib. from images 118365
3D model enhanced face recogn. 95541
3D obj. recogn. using appearance based neural image proc. algm. 95548
anidolic zenithal lightguides for underground spaces daylighting 116695
automatic skin-color distrib. extraction for face detect./tracking 73458
car license plates detect. from complex scene 73457
charact. estim. 84274
clinical image review using act.-matrix LCD, comparison with CRT displays 97631
color constancy, biological model for still/video images 118468
color obj. recogn. under different illum. 107281
commercial buildings, energy savings, design data, Hong Kong 123850
CRT displays, monochrome, medium-resoln., calib. for purpose of board exams. 97635
daylighting, bi-directional transm. distrib. fns., digital imaging 110022
DayMedia, multimedia teaching package on daylighting 78329
diode lasers, lighting technol. and techs. 117254
display devices, contrast-detail charact. evals. 97632
dyn. lighting syst. for specular surface inspection 118290
dyn. range compression based on illum. compensation 118383
efficiency labeling programs and stds., eval. 134664
EL emergency luminaries power supply *(Chinese)* 100321
energy-efficient buildings, components effects anal. 133842
face recogn., robust image based 84612
facial feature points, robust detect. under nonlin. illum. 107231
halogen lamps, electronic transformer 89431
human skin colour phys.-based modelling under mixed illuminants 84596
illuminance prediction techs., BRE-IDMP dataset 89427
illuminant color estim. using polarizing filter, color correction appl. *(Japanese)* 73136
image enhancement using logarithmic image proc. model 94594
image enhancement using shunting inhibitory CNN 118384
image reprod., ang. distrib. of refl. spectral intens. 94865
indirect illum. syst., LEDs, halogen & metal halide lamps 100319
interior lamp colour props./apparent brightness review 124058
Japanese complexion color preference under illum. *(Japanese)* 124057
lamp-reflector combination design for energy efficient indust. lighting 89442
LED source diffractive optics appls. 116994
LIGHT program, lighting anal. software, GUI 78330
lightpipes, hidden devices that light our world 116641
long-range laser illum. imaging, clandestine nighttime surveillance 83068
mammography, GE DMR and full-field digital imaging, viewing conditions optim. and phantom image quality eval. 98497
mobile lighting apparatus, batt. charging, PM lin. generator 123510
obj. tracking, robust model-based, edge-projected integrat. of image and model cues 129854
pedestrian crossing road sign lighting, PV syst. 113136
power LEDs, lighting appls. 82394
project savings using photom. CAD calcs. 134605
PV-powered home lighting, rural electrification, Ramakrishna Mission, India 113135
real-time face recogn. syst. using multiple mean faces/dual mode Fisherfaces 129824
residential buildings fenestration, Italian energy rating scheme 123115
solid-state camera systs. eval. in varying illum. conditions 86664
source technol., current topics review 134635
sunlight tracking sens., opt. fiber sunlight illuminating device appl. 120755
thin film cold cathode electron source, delay charact. anal. *(Chinese)* 102947
three-light-source photom. stereo, illum. config. and surface reflectance 84168
tungsten halogen energy-efficient lamps, technol. hist. 134634
Ugandan rural electrification scheme 111766
video display unit tasks, inner contrast and perceptual quality 121088
video surveillance environ., illum. vars. compensation 118174

lighting continued
work environ. ergonomic factors effect on human body impedance *(Polis* 67489
C nanotubes, electronic devices/luminesc. elements *(French)* 80528
(In,Ga)N based LEDs, multichip LEDs, phosphor converted LED, revie 104999
InGaN, white light source based LEDs 82421
Pb-acid batt. develop. and appls. 78149
Xe flashlamps, bright choice for illum. 113129

lighting control
see also building management systems
250 W metal halide lamp electronic ballast develop. 134633
APEC 2001, conf., Anaheim, CA, USA (March 2001) 78395
DALI digital addressable fluorescent lighting control interface 134624
daylighting systs. control, ceiling mounted photoelec. sens. 78328
dimmable fluoresc. lamp life, cathode heating voltage effect 134623
electrodeless dimmable fluoresc. lamps, electronic ballast study 134622
fluoresc. lamp, self-oscillating electronic ballast design, control syst. 134612
fluoresc. lamp, single-stage electronic ballast, dimming feature, design 12407
fluoresc. lamp act. PFC/ballast control IC 134618
fluoresc. lamp ballasts self configuring dimming interface 134625
fluoresc. lamp electronic ballast using half-bridge reson. invertor 89440
fluoresc. lamp electronic ballasts, toggled duty cycle current control 134617
fluoresc. lamps, dyn. behaviour modelling, dimmable ballasts 134627
inductor-less charge pump PFC electronic ballast, lamp current feedback contro 134621
integrat. into self-adaptive building control syst. 113126
integrated predictive/adaptive building HVAC/lighting control 89453
LCD backlight inverter syst. control, mixed dimming method 86864
metal halide lamps, control methods, stabil., acoustic reson. avoidance 12407
Multi-Selcon autonomous luminaire connected via networks with wireless rem control *(Japanese)* 100320
networked stage lighting *(German)* 78326
office workers' reacts. 89425
PA-LOOK BALL dimmable compact fluoresc. lamp *(Japanese)* 124062
photoelec. lightning control, switching freq. reduction strategies 78327
street lamp rem. supervisory syst. based on power-line carrier commun. *(Chi nese)* 124089
VDT offices, lighting quality recommendations, dimmable lighting ccts. contro 89426

lightning
12-pulse converter harmonic anal., unbalanced voltage operation. voltage sag 112636
22 kV/6.9 kV single-phase model coil for 3 MVA HTS power transformer 7791
air, spark paths, 3D image capturing and proc. 84169
air gaps, lightning impulse testing, humidity correction factor 99418
attraction/initiation by laser, review 133769
balloon-born two-sphere elec. field instrum., neural net DP *(Chinese)* 10566
building inherent mag. screening effects in lightning-exposed areas *(German* 128808
dielec. strength lightning impulse testing, humidity correction factor 92593
dist. determ., pulse EM method 122647
distrib. lines, lightning performs., computational methods sensitivity 112029
elec. field modelling for different channel-base current models 72172
elec. rly. systs., LEMP-like effects modelling 78313
ELF pulses in Earth-ionos. cavity 128770
ELF pulses time-domain representation 122667
EMC, conf., Wroclaw, Poland (June 2000) 67408
ESD, electronic systs. risk eval. 83120
Franklin lightning conductor, connecting leader initiation conditions 83095
grounding elec. in lightning current conditions, perform. eval. 133777
Halley Station, Antarctica, lightning atmos. count rates (1997-8) 94041
imaging sens. aboard tropical rainfall measuring mission. ground validation *(Japanese)* 122681
indirect effects modelling for transm. line protection design 88475
interact. problems, FDTD anal., ABC 105796
leadless format devices for EMI suppression 94062
location, range-difference and direction-finding methods 88144
LV power installations, indirect lightning flash induced overvoltage 77334
LV power-installation networks, lightning-induced voltages eval. 111661
mesos. lighting strokes, Schumann reson. 117689
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
oil filled transformer breakdown voltage, nonstandard lightning surge waveforms *(Japanese)* 123539
opt. coord. space-borne obs., FORTE photodiode detector+CCD imager 133294
oriented extended chain cryst. polyethylene, treeing discharges 104411
overhead conductor, lightning surge overvoltages, effect of snow 99384
pole-mounted distrib. transformer lightning-induced voltage waveforms *(Japa nese)* 77933
power syst. lightning protection, lightning discharges dens. study *(Russian)* 112132
pulse current models, EM field comparison 128797
return stroke, millimetric EM radiation obs. 121170
return stroke base modelling approaches 72173
return stroke current ident., inverse procedure 72169
return stroke ident., field-based inverse algm. 83092
return stroke model, EMP pulse calcs., overhead line protection *(Japanese)* 112174
return strokes, differing height, ident., field-based inverse algm. 117603
return strokes inverse ident. procedure 83096
spherics, thin struct. anal. 117713
strike dist. determ. algm. *(Russian)* 99391
stroked overhead line lightning channel incoming/refl. waves modelling 88476
substation, opt. fiber control cable grounding under lightning strike 78088
tall tower lightning-return strokes, current and EM fields 105795
VHF impulsive terrestrial sigs., sources location determ. 122651
wind turbine grounding modeling, soil ionization effects 112376
worldwide lightning mapping with ELF tomography 88142
N_2/SF_6 gas mixtures impulse creepage discharge propag. mechanisms *(Japanese)* 92616
SF_6-N_2 mixtures, nonuniform fields predischarge phenom., lightning impulse voltages *(Korean)* 92615

lightning arresters *see arresters; lightning protection*

lightning conductors *see lightning protection*

lightning protection
see also arresters; surge protection
154 kV transm. line arrester withstand capability reduction studies *(Japanese)* 77621

ning protection continued
ir termination lightning protection syst. using lightning strike point 88484
ttraction/initiation by laser, review 133769
CATV home networking components, lightning discharges 131743
harged oil metal vessels, lightning protection systs. 128665
ounterpoise grounding resist. impulse charact. modelling *(Japanese)* 112178
distrib. lightning surge arrester damage prevention, overhead ground wire *(Japanese)* 123061
distrib. lightning surge arrester damages prevention *(Japanese)* 123060
earthing-grounding methods, terms, systs.-grounding, safety 133794
ESD, electronic systs. risk eval. 83120
Franklin lightning conductor, connecting leader initiation conditions 83095
grounding syst. dyn. behavior anal. using FDTD method 112153
grounding syst. time-domain transm. line model improvement 112143
grounding systs., transient behavior, FDTD method 112141
HV overhead distrib. lines, lightning protection effectiveness *(English)* 112165
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 2001) 124221
indirect effects modelling for transm. line protection design 88475
LEMP-excited lossy multiconductor power line dyn. anal. approach 88490
lengthy earthing electrodes in nonlin. V-I soils *(Russian)* 112162
lumped/distributed cct. model comparison 77553
LV distrib. networks, lightning surge protective devices 133599
metal oxide surge arresters, CONEL Romania-ST Sibiu policy 133796
microwave commun. relay station, lightning protection, grounding *(Chinese)* 108539
MV lines, drained lightning currents estim., stat. simul. 133797
offshore wind turbines, lightning protection 133883
oil containers, lightning strike, current distrib., nonlin. ground impedance 133793
overhead distrib. line lightning overvoltage stat. eval. 112142
petrochemical indust. grounding systs. design considerations 134694
petroleum indust., power distrib. over long dists., design 134692
power cable insulation, ground shield semicon, resist. 112099
power electronic devices, elec. shock protection, stds. *(Polish)* 90737
power syst. lightning outages and mitigation methods *(Japanese)* 112155
power syst. lightning protection, lightning discharges dens. study *(Russian)* 112132
power syst. lightning protection project overview, USA 99417
resettable overcurrent and overvoltage fuses for telecom. equipt. *(German)* 91449
return stroke model, EMP pulse calcs., overhead line protection *(Japanese)* 112174
rods vs. charge transfer syst. 112131
secondary lightning protection syst., EM field near lightning channel 88480
self-blast spark gap power syst. lightning protectors *(German)* 133809
series graded gapped arrester, reliable overvoltage protection 112168
steam-turbine generator CHP plants, lightning effects reduction 112305
strike dist. determ. algm. *(Russian)* 99391
stroked overhead line lightning channel incoming/refl. waves modelling 88476
structural cabling syst. lightning overvoltage studies 77554
tall struct. shielding charact. against winter lightning *(Japanese)* 112151
telecomm. cable, overhead ground wire effect on lightning-induced voltages 74503
transm. line arresters eval. against winter lightning 112167
ZnO arrester blocks charcts. changes by multiple-lightning impulse currents *(Korean)* 77622
ZnO polymeric surge arresters for 500 kV compact transm. line 77623

htning rods *see lightning protection*

it cycles
bifurcation anal., Floquet multipliers 101706
chaotic syst. control using dither 101710
Colpitts oscillator, amplit. of oscill., nonlin. syst. theory 101828
cyclic connected neural networks, limit cycle generator, design 91167
discrete-time DC-DC converter, bifurcations detectability, stochastic reson. 77990
electrothermal dyn. of ccts., mixed state-variable approach 101701
IIR filters, computer-aided test for characterizing parasitic oscills. 130100
Japanese vowels, nonlin. deterministic struct. recogn., causal anal. 118110
neural network, limit cycle generator *(Japanese)* 68982
neuromorphic VLSI cct. & spinal cord real-time interact. 122329
period-doubling bifurcation, quasi-anal. method 90688
power syst. differential-alg. eqns., sensitivity anal., GMRES method 99285
sigma-DM, multibit chaotic device 68877
single-bit delta-sigma modulators, quantization noise, limit cycle patterns 114818
single-machine-infinite-bus syst. Hopf bifurcation 88351
single-mode gas laser, asymmetric limit cycle bistability 82941
teletraffic, Erlang fixed-point iter. scheme 73762
tunable recursive bandpass filters, finite word length effects 91101

niters
see also current limiters; microwave limiters; optical limiters
CMOS voltage limiter/regulator design 68585
digital FM and GMSK with limiter discriminator detect., anal. of BER on seq. estim. 106041
FM digital double errors 72744
Gaussian noise perturbed vectors, phase angle distrib. 72745
GMSK sig. detect., limiter-discriminator and envelope-aided DFE 73824
IM control syst., load profiling meas. & proc., clipping integrator 112517
Si bipolar high-IP3 RF receiver chip set for mobile radio base stations 91358

niting circuits *see limiters*

ne concentrators
high perform. versatile residential gateway, develop. 85313
multipoint commun. networks design, assignment modif. 107957

ne drivers *see driver circuits*

near accelerators
see also collective accelerators; electrostatic accelerators; linear colliders
3UDH Pelletron, ion-opt. calc. for new injector 97924
A-bomb gamma ray spectra, radiotherapy/radiobiology simul. 111246
beam profile monitoring syst., multivideo source image proc. 87115
beam-based modeling/control, particle optics 87081
bladder carcinoma, intens. modulated radiotherapy, dyn. multileaf collimation 98635
BNL EBIS high current electron/ion beam dyn. simul. 110198
BRIC charge state breeder EBIS, RIBs 110272
CARM klystron config. 110147
CEBAF injector, beam mom. meas. by quadrupole lens 87116
CEBAF upgrade, 12 GeV beam energy, Jefferson Lab., Hall D detector status 87167

linear accelerators continued
charged beam in conducting pipe, parallel 3D Poisson solver 110108
Compton backscatt. X-ray generation by high power dens. laser *(Chinese)* 110441
CONCERT, high power proton accelerator driven multi-appl. facility 121300
concrete, deep neutron penetration at ISIS 87047
cone-beam CT for MV LINAC, electronic portal imaging 98544
conf., EBIS and traps appls., New York, USA (Nov. 2000) 100436
coupled cavity chain, indiv. cell freq., genetic alg. 87060
coupled cavity chain, indiv. cell freqs. 132267
DRRs calc. algms. for different accelerator voltages, tools 98546
dyn. arc radiosurgery/radiotherapy, commissioning/dose distribs. verification 87866
dyn. multileaf collimation, periodic testing 98628
EBIS electron string mode operation, expt. design 110275
electron accelerator circ./rect./sq. fields, Monte Carlo calc. 87053
electron beam field shaping, therapeutic misadministration 76654
electron lin./circ. accel., arbitrary different RF's, synchroniz. 132265
electron linacs, 1-8 MeV, cabinet-safe study 87048
Elekta SL25 LINAC, fixed bending current 133037
EUV SASE FEL, design, appls., review 82695
gantry angle indicators calib. 75939
GSI high current linac commissioning and HIF related RF linac aspects 97888
GSI UNILAC high current linac, beam diagnostics develop., review 87136
head-scatter contrib. & photon source size, pinhole camera obs. *(German)* 87828
HI fusion final focus magnet shielding designs 76010
HI fusion induction linacs, ion sources and injectors 97928
HI inertial fusion in Europe 97896
HICAT, beam diagnostics 87124
high intens. drift tube linac, HIDIF, beam stabil. 97901
high intens. linac beams, halo form., ICF appl. 97902
high-brightness laser synchrotron source develop. at BNL ATF 110229
HLS transport line and linac focusing power supplies control syst. 110102
hybrid dielec./iris-loaded periodic accelerating struct. 97926
induction accelerator efficiency at 5 Hz 97887
inductive ion accelerator, voltage modulation and repetitive operation 97886
integrated research expt., design, planning, review 97909
intens. modulated radiation therapy class fields, scatter raytracing 98647
intens. modulated radiotherapy, neutron meas., Varian Clinac accelerator 111094
intens.-modulated radiotherapy, dose calcs., CT scans, PEACOCK syst. 98808
intens.-modulated radiotherapy treatment facilities, room shielding 98827
intense RIB facilities, post accelerator design anal. 110203
intracavitary radiotherapy, electron cones fab., dosimetry charcts. 87844
JAERI/KEK PS design anal. 132238
Jefferson Lab, switched electrode electronics beam posn. monitor 87127
Jefferson Lab FELs, video distrib. and analog monitoring syst. 87260
JNC high-power/duty electron linac, reson. ring design 87069
JNC linac, beam dump for high-current electron beam 132243
LEDA, beam phase meas. syst. 87126
LEDA, beam-induced fluoresc. diagnostic, init. operation 87119
LEDA, slow wire scanner beam profile meas. 87123
LEDA beam diagnostics instrumentation, beam current anal. 87096
LEDA beam diagnostics instrumentation, beam posn. monitors 87104
LEDA beam diagnostics instrumentation, review 87113
LEDA ionisation chamber beam loss monitors, review 87133
light ion beams for radiation treatment, facility design anal. 111130
light-ion driver develop. for inertial fusion energy 97895
lin. induction accelerator electron diode, 12 MeV, optimum design *(Chinese)* 87156
long pulse multi-bunch linac, SLED syst. *(Chinese)* 75937
microorganisms inactivation, electron beam and microwave heating effects 110083
MIT-Bates Linear Accelerator Center, overview 87085
MIT-Bates Linear Accelerator Center, SHR projects, linac upgrades 87044
MIT-Bates polarized source, beam lifetime expt. 110264
multileaf collimation, automated verification using, Siemens EPID 98627
multileaf collimator, intens. modulated radiation therapy, dose, QA 122296
multileaf collimator intens.-modulated radiation therapy, dose calc. 111195
multileaf collimator-based intens.-modulated radiation therapy, QA 111083
multipurpose neutron generators, RF quadrupole linac based syst. 110222
NSRL 200 MeV linac beam energy stabilization syst. *(Chinese)* 87066
NV-GSD-HE, high energy ion implanter, energy accuracy and control method 115565
portal imaging, kilovoltage X-ray source, thermal modelling 76646
prostate intens.-modulated radiotherapy, interrupted dyn. seqs. 98616
proton accelerators for neutron generators and electronuclear setups 97891
proton linacs for nuc./proton therapy appl., design *(Chinese)* 87051
radiation dosimetry appls. using MCNP Monte Carlo code, review 98826
radiation output constancy check, ionis. chamber/diode comparison *(German)* 87972
radiation quality QA, Plexitom phantom *(German)* 87973
radiation therapy, X-ray scatter factors 122311
radiotherapy QC practice in UK for START trial 122292
REX-ISOLDE project for post accel. of RIB 132277
REXEBIS post ion beam accelerator, design/commissioning 110092
RF linac total driver energy for HI plasma ignition, review 97910
RF-linac FEL, efficiency optimiz./reduced energy spread by inverse tapering 93679
RHIC EBIS-based preinjector design, review 110202
RTA beam dyn., limiting cumulative transverse instabil. growth 110146
S-band/X-band integrated PWT photoelectron linacs 110128
Saturne-25/-41, electron contamination sources, Monte Carlo approach 122303
short-pulsed slow positron beam, polymer films appl. 110173
single-pass high-gain FEL, electron beam diagnostics 87089
SLAC linac coherent light source, short-pulse limits 105402
SLS linac diagnostics, commissioning results 87130
SNS beam loss monitor syst., design 87112
SNS linac, beam posn./phase monitors, EM modeling 87101
SNS linac beam diagnostic suite, review 87114
soft tissues, neutron imaging using med. linacs, BNCT appl. 98133
Spallation Neutron Source, diagnostics 87087
SPES exotic nuclei prod. project, accelerator challenges 132281
std. electron cone ratio values for Varian, Siemens, Elekta accelerators 98630
stereotactic linac radiotherapy-radiosurgery unit, TLD dosimetry 122299
stereotactic radiation, linac-based, phantom dosimetry/target localisation eval. 111208
stereotactic radiosurgery, modern linac systs., Gamma Knife obsolescence 133025
supercond. ion linac and assoc. accelerator develop. at NSC 132242

linear accelerators continued
supercond. LINAC booster for Mumbai pelletron 132241
superconduct. accel. cavities, cell freq. tuning, GA anal. *(Chinese)* 110170
Tohoku Univ. storage ring light source design study 121788
TOUTATIS RF quadrupole code for cw high power LINAC 75951
treatment planning systs., photon dose calc. perform. intercomparison 122371
ultra-high gradient plasma wakefield booster 110163
UMER electron beam injector, design, appl. 97907
VUV and X-ray FEL 117307
W-band accelerator study in KEK 110159
γ-ray beams from linac with narrow beam collimator, med. appls. 122300
Fe, deep neutron penetration at ISIS 87047
$^{115}In(\gamma,\gamma')^{115}In^{m}$, 4.3 MV DYNAMITRON photoactivation facility, review 87068

linear algebra
see also determinants; dispersion relations; eigenvalues and eigenfunctions; matrix algebra; tensors; vectors
2D lin. alg. 101045
AOR iter. method for new preconditioned lin. systs. 90076
Auchmuty's error estim. 100971
biconjugate residual methods 101014
blind MIMO ident., alg. approach 107559
complexity of computing error bounds 78972
computational electromagnetism, topol. approach 72151
Cramer rule for soln. of sparse systs. of lin. alg. eqns. 124650
credit-based traffic policing, correl. cell arrivals at server 73874
digital lin. alg. 90093
DS-CDMA mobile radio with multimedia services, downlink beamforming 96552
E-polarized plane wave diffr. by impedance strip, num.-anal. method 72240
educational proc. simul. using training systs. 67447
EM 3D oscills. in orthogonal branching of two rect. waveguides 80165
EM field calc. of waveguide with anisotropic insert 80171
fast unitary transform algms., concurrent error detect. 101140
Galerkin BEM, computational lin. alg. issues 124663
image restoration, multiple filters for lin. alg. systs. 118374
improved Lanczos method for integer factorization over finite fields for public key cryptosystems 124659
interval lin. eqns. with depend. coeffs. 67983
intervals alg. props. 67981
mixed complementarity problems, strictly feasible eqn.-based methods 114086
multi-phase power transm. lines corona power loss determ. 99370
optimal estim. and tracking of general rot. using geometric alg. for computer vision 73234
phys. modeling of lin. systs. of eqns. 90641
power syst. VAr optim. using static voltage stabil. index 99298
SAR subsurface imaging, point spread fn., FFT algm. 86164
scalar wave diffr. by perfectly soft infinitely thin circ. ring 128732
sig. proc., consistency/conditioning/stabil. issues 107376
systs. of lin. eqns., iter. approach 101040
triangular soln. of lin. systs. in tensor product format 101042

linear antenna arrays
30 GHz leaky MM-wave lin. slot array 94188
act. lin. arrays with peak amplit./radiated voltage distrib. constraints, transmit patterns 83744
adaptive antenna arrays control with GA using dominance/diploidy 128895
adaptive array beamforming with random error in cycle freq. 107338
adaptive arrays, optimal subarray size for spatial smoothing 117847
adaptive radar imaging in wide ang. sector 96956
airborne moving target detect. using lin. phased array radar 131659
calib. employing beacons/steering vector estim. 83710
CDMA LEO multi-beam syst., MAI 109024
cylindrical dielec. resonator antenna arrays 83692
dielec. resonator antennas optimized for low-sidelobe appls. 72630
digital beamforming systs., adaptive pattern synthesis 72681
direction finding of non-circ. sources using polynomial rooting 107424
DOA of multiple scatt. sources 130023
DOA tracking of coherent cyclostationary sigs. without eigendecomposition 84688
double-directional channel meas. 84655
DS-CDMA, multiuser space-time channel estim. under reduced-rank constraint 74667
DS-CDMA FDD mobile radio, suboptimal algms. for downlink beamforming 85857
DS-CDMA with uniform lin. antenna array receivers, feedforward DOA estim. 108603
EM scanning 3-element array with integral phase shifters 83733
equal side lobes, alternative design 105976
equidistant lin. array, directional precision, multi-level amplit. shading *(Chinese)* 128907
failure restoration/array synthesis using GA 128888
finite phased arrays, similar behaviors of planar and lin. arrays anal. 105955
freq.-invariant adaptive receiving/transmitting null beamforming 108871
ISAR-RMSA imaging radar with high-range-resoln. algm., lin. phased antenna array appl. 75075
lin. antenna array on multilayer dielec. ground, anal. *(Polish)* 105973
meas. with rough surface reflector, anal. 105967
microcellular double-directional radio channel 120013
microstrip antenna arrays, practical design guide 72623
microstrip array antenna, airgap/no-airgap, plasma environ. 105952
microstrip array antenna with beam squint, develop. 83673
microstrip reflectarray with line-source-feed 94184
MM-wave harmonic space diversity act. integrated array, design 72678
mobile radio adaptive antenna arrays, beam-steering/directive characts. 96433
mobile radio interf. cancellation, adaptive array algm. with spatial interpolation 131295
non-circ. source localization *(French)* 107305
nonuniformly spaced lin. array antenna, feed syst., GA *(Japanese)* 83770
null steering using modified tabu search algm. 105954
Orchard-Elliott pattern synthesis algm. 105924
Orchard-Elliott pattern synthesis algm. by pseudo-inverse and LMS 117838
periodically arranged pass. dipoles line, fields 83737
phase antenna arrays simul. with waveguide simulator 83743
phased array calib. procedures based on element patterns 83732
printed dipole and dipole arrays, radiation efficiency anal. 83702
rot. lin. antenna arrays, superresolution direction finding 105936
SAR multifrequency antenna array, detect./location/imaging of fast moving targets 75159
SDMA systs., blocking probab. determ., theoretical model 119214
sector nulling 83747
self-healing arrays design using vector-space projections 72647
seq. rotated circ. polarized patch radiator lin. arrays, scanning props. 128910
Siberian Solar Radio Telescope, aperture amplit./phase meas. 75261
smart base station antenna 85767
smart WLAN syst., improved algm. for dyn. slot assignment 108309
space-time distributed multi-path params., detect. and estim. 108544
STAP forward-looking radar, Doppler compensation 131637
TCM, iter. space-time detect. for broadband wireless channels 85522
thinned multi-ring arrays using GA 128887
uncorrelated source detect.-estim., augmentable sparse antenna arrays 119099
unequally spaced arrays and scanning lin. antennas, synthesis 105932
V-shaped narrow slots, coupling and radiation characts. using FDTD metho 128836
W-CDMA blind adaptive antenna array beamforming scheme 108924
W-CDMA mobile commun. systs., switched beam antenna 108720

linear antennas
see also linear antenna arrays
anal. and synthesis using at. fns. 117752
filamentary current distrib. and transient radiation 94132
half-wave dipole, FEM, perfectly matched layers, ABC 105859
mobile radio antenna charact. 117802
reflector antenna field stats. 72531
ship radiocommunication systs., EMC anal./meas. 74588

linear-beam tubes *see microwave tubes*

linear BiCMOS circuits *see BiCMOS analogue integrated circuits*

linear bipolar circuits *see bipolar analogue integrated circuits*

linear CMOS circuits *see CMOS analogue integrated circuits*

linear codes
1-generator quasi-twisted codes and new lin. codes 129194
3D 7-ary lin. codes, wt. hierarchies/GA *(Chinese)* 129060
4-PSK schemes for unequal error protection 117887
BCH codes decoding using back multiplication algm. 129005
binary codes, undetected error probab. 129132
binary lin. code, automorphism group computation 129041
binary lin. code detect. and recogn. 94288
binary lin. codes, complete coset wt. distrib. computation *(Japanese)* 83846
binary lin. error detect. block codes, criteria *(English)* 72844
binary lin. Hamming codes, efficient algm. 106127
bit-error probab., improved tangential sphere bound 72875
blind equalisers, white data and block encoded seqs. 119175
block code, coord. ordering algms. for min. trellis complexity reduction 106097
block codes, tailbiting trellises ML decoding 129222
block codes, wt. location vectors 129075
C_5 (1,n) code, wt. distrib. 117977
Calderbank-Shor-Steane type quantum error-correcting codes, search algm., bases 72802
CDMA systs., interleaver design/anal. 129015
completely transitive codes with error-correcting capability e>3, nonexistence 72793
computational model for lin. codes 106077
concatenated code design with Hamming code and 3/4 rate 4-state MTCM/CPFSK 106095
constellation labeling 117932
convolutional encoders, unknown constraint length/generator polynomials recovery 106101
convolutional encoders in noise, constraint length/generator polynomials recovery 106102
covering rad. bounds of lin. codes 129053
cpd.-error-correcting codes, step-by-step decoding 129091
crit. indecomposable codes, constr. 83911
cyclic codes over $\mathbf{Z}_4$, binary images 83910
decoding of lin. codes over Galois rings 72789
divisible code bound, character-free proof 83880
encoder design for lin.-coded DACs 79996
even isodual codes, generalized Hamming wt. enumerators/coset wt. distribs. 129077
event error control codes, appls. 117946
extendability of lin. codes 83866
extremal nonchain ternary codes of dimens. 4, wt. hierarchies 129105
frameproof codes, efficient constr. 129110
generalized Kerdock code and related lin. codes over Galois ring 94284
Gilbert-Varshamov type bounds for $Z(2^k)$-lin. codes 129106
group signature scheme and perform. 94309
h-Chase decoding, testing conditions eval. method 129209
Hamming generalized wts., matrix charactn. 129076
Hermitian self-dual codes over GF(4) 129145
large caps in small spaces, constr. 83932
lattice constellations/codes from quadratic no. fields 72783
lin. block codes, unified BER approx. 129007
lin. precoded/coded OFDM for wireless channel fades 83815
mag. recording channels, low-dens. parity-check codes appl. 72884
MAP decoding algm. for lin. block codes using BCJR and recursive techs. 129022
max. wt. basis decoding 72825
MDS codes, curves in projective spaces 117979
MIMO FIR channels, freq. domain space time coding 106139
min. dist. bounds for lin. codes over GF(7) 94318
ML decoding, approx. upper bounds on error probab. of lin. codes *(English)* 72834
ML polynomial time syndrome decoder to correct lin. independent errors 129094
network coding, alg. approach 130186
noisy channels, decoding bit-error probab. upper bound 129117
optimal ternary lin. rate 1/2 codes 83931
packing, group codes, Radon transforms and integral geom. 94279
perfect 2-burst-correcting codes constr. 117938
PPM CDMA lin. binary block coded opt. systs. with soft-decision decoding, perform. anal. 72910
product codes/projective multisets, greedy wts. lower bound 129112
PSK full diversity space-time codes 129128
quasicyclic codes, DFT domain charactn. 129051
radiotransmission security systs., selection of key code seq. 118021
rect. codes in iter. decoding *(English)* 72846
recursive MDS codes of dimens. 2 and 3 72872
Reed-Muller codes, projections onto GF(4) and multilevel constr. 117941
self-dual codes, min. dist. and decoding capacity anal. 129043
self-dual codes constr. over F_p and weighing matrices 83921
soft-decodable high-rate "good" codes, constr./props./perform. 129114
space-time block codes for four Tx antennas 72861

r codes continued
pace-time ring TCM codes for QPSK on time-varying fast fading channels 94330
ibspace subcode of RS codes, dimens. 129146
ipercodes, multicovering bounds 129161
design supporting binary lin. codes 117927
rbo codes, trellis complexity anal., interleaver props./appls. 72898
rbo product codes decoding, fast Chase algm. appl. 129016
ype II codes over F_4 117926
EP codes, sym.-by-sym. MAP decoding 72937
ertices sets identifying codes in Hamming spaces 117978
t. distrib. restrictions 94283
t. distribs. of coset leaders of some Reed-Muller codes and BCH codes 72801
$_4$-lin. Goethals codes, coset wt. distribs. 72787
$_4$-lin. Goethals codes, coset wt. distribs. 83909
eta fns. and Riemann hypothesis analogue 94281

r colliders
eam Instrumentation Workshop 2000, conf., Cambridge, USA, May 2000 78423
DF Run II upgrade syst. status 87175
LIC e^+e^- lin. collider, multi-TeV compact design 110095
LIC machine-detector interface, design anal. 110209
iagnostics for lin. collider 87088
lectron linac, comparison of discrete klystron prod. RF to two-beam prod. RF 110150
at-field, high-aspect ratio RF struct. design 110154
uture electron lin. collider design anal. 132264
uture high-intens. muon facility design anal. 132263
uture lin. collider vertex detector design anal. 110351
uture lin. colliders, MM-wave drivers 110152
igh energy colliders for post-LHC era, review 87065
igh energy photon collider, TESLA project, review 128312
igh resoln. linac beam posn. monitors, design 87098
apan Linear Collider, polarized electron source 110236
LC, develop. status 110094
LC, polarized electron gun 110238
LC mask syst. at B=3T 110206
in. collider with microstruct. excited by laser, 2×200 GeV 110080
ow emittance flat-beam electron source for lin. colliders 97935
ow energy region lin. collider detector, design anal. 110389
Next Linear Collider, design progress 110204
Next Linear Collider, multi-moded pass. RF pulse compression develop. 110148
NLC, gamma-gamma interact. region design 110208
NLC, interact. region layout and background estim. 110207
NLC, prototype RF phase and timing distrib. syst., perform. 87049
NLC advanced collimator prototypes, review 87110
NLC electron beam final focusing syst., design anal. 110214
NLC test beam, polarized fixed target expts., Moller scatt. 110210
particle accelerator design/anal. review for future expts. 132272
photonic band gap fiber accelerator develop. 97915
pulsed magnicon project for accelerator appl. 110155
SLC-style beam energy spectrometer, extraction line anal. 110212
solid scintillator-based muon detector for lin. collider expts. 110368
TESLA, interact. region layout, collimation and extraction 110205
TESLA, overview and objectives 97921
TESLA Compton polarimeter, design anal. 110213
TESLA electron beam dyn., expected lumin., review 110211
TESLA lin. collider, muon detector syst., design anal. 110388
TESLA lin. collider, status 110093
TESLA lin. collider detector, obs. track reconstruction perform. 110366
three-cavity freq. quadrupling coaxial gyroklystrons for linacs 110157
vac. arc ion sources for HI fusion, high current, recent advances 97931
e^- collider, X-band struct. anal., TM isolation 87074
ep high energy colliders, nucleon spin struct. fn. 110184
e^+e^- collider, machine implic. for detectors and phys. 110096
e^+e^-, lin. accelerator detector, simul. anal. 110350
e^+e^-, photon colliders, future collider program 132245
Cs_2Te photocathode test, polarized RF-gun feasibil. 110239
Cu, high purity, diffusion bonding, brazing, lin. collider struct. 97916
GaAs photocathode, at. H cleaning, JLC appl. 110240
Si hybrid pixel detector develop. for lin. collider vertex detector 132376
Yb:S-FAP gas-cooled diode laser source for photon collider, design anal. 105254

ar combination of atomic orbitals calculations *see LCAO calculations*

ar differential equations
first-order impulsive diff. eqns. with advanced argument, oscill. 124711
holonomic fns. eval. near and in regular sing. 79078
Liouvillean-type theorems for lin. DEs on interval, approx. and complexity 114106
nonlin. ccts. with saturating ferromag. coils, anal. 101702
oscill. and asymptotics for second-order half-lin. diff. eqns. 101092
oscill. criterion for lin. difference eqns. with oscillating coeffs. 90150
oscill. of lin. difference eqns. with deviating arguments 90120
polynomial matrices, infinite zeros extraction 78757
regular Coulomb wave fn., error anal. for computation of zeros 78973
relax.-based algms., lin. integral-differential-alg. eqns. 101089
SVC simul., dyn. modelling, lin. diff. eqns. 99882
VCSELs, piecewise lin. modeling 93714

ear induction motors
2-phase LIM MAGLEV transport syst., motion control, freq. control *(Japanese)* 89372
3D FEA 134078
anal., 3D equiv. mag. cct. network 88768
crane mechatronic syst. dyn. behavior investig. 89493
double-sided LIM with rotary solid steel-secondary disc 88769
double-winding LIM control syst. for pers. rapid transit syst. 123512
elec. motor types, elec. perform. anal. comparison 123523
flux-conc. type, mag. field distrib. 134075
intell. backstepping drive control 100237
math. model, validation test, react. sheet discontinuity 88772
multimode LIM, edge effect, inductor module params. *(Russian)* 112549
online perform. monitoring using virtual instrumentation syst. *(Korean)* 123518
pulsed-inductive motor, mobile cryoresistive exciting winding 99690
road vehicle EM suspen. syst. using tubular LIM 124046
servo drive, robust control, neural network uncertainty observer 78210
servo-drive, nonlin. decoupled control, sliding-mode tech. 100238
short stator machine, rly. appls. 123955
simultaneously varied X-Y LIM design *(Japanese)* 112551
single-sided LIM model, equiv. cct. 99692

linear induction motors continued
supercond. cylindrical LIM improvement 77894
X-Y LIM-based carrier, center of gravity posn. *(Japanese)* 112550

linear integrated circuits *see analogue integrated circuits*

linear machines
see also linear motors
actuator design, anal., control 123507
actuator design for small movements, 3D simul. 123506
EV disc PM lin. machine, optimal efficiency operations 123967
HEV auxiliary power unit lin. alternator/engine syst. design 123963
mobile lighting apparatus, batt. charging, PM lin. generator 123510
PM lin. generator EM struct., 2D FEM anal. 88770
small moving magnet lin. actuator, high thrust, FEM *(Japanese)* 112729
tubular lin. PM machine topologies, design optimisation, comparison 123520
voice coil actuator params. 123515

linear MOS circuits *see MOS analogue integrated circuits*

linear motors
see also linear induction motors; linear synchronous motors
actuators, synthesis, constrained optim. problem, GAs 117640
adaptive robust output feedback motion control 88766
BLDCM, precise posn. control *(Korean)* 134065
brushless PM motor design/develop. optim. 123508
DC lin. actuator fast end-of-travel detect. 123692
DC motor, coil config. for thrust improvement *(Japanese)* 112555
DC motor, cylindrical moving-coil-type, efficiency charcts. 77897
double armature lin. PM DC motor closed loop posn. control 123514
drive precision motion control, neural network adaptive robust control appl. 113058
drive syst., precision motion control, neural network adaptive robust control 113046
dual-pitch lin. pulse motor operating charact. 123517
electronic components mfg., motion control syst. 113821
high-power dens. transverse flux lin. motor design 134084
high-speed packaging machines, lin. motors selection software tool 99696
high-vol. fiberoptic alignment by lin. motors 116659
HTSC bulk secondary lin. actuator studies 78098
indust. lin. motor design approaches 99694
machine tool lin. motor drives, PID posn. control unified gain tuning 89474
mesoscale piezoelec. inchworm actuator with microridges 112572
microactuator, var. reluctance stepping motor, thin film. technol. 78110
moving coil lin. motor, armature field anal., posn./stroke control 88767
moving coil lin. oscillatory actuator, dyn. charact. *(Korean)* 134080
moving coil-type lin. oscillatory actuator, multi-pole PM arrangement *(Korean)* 123690
moving coil-type lin. oscillatory actuator perform. improvement *(Korean)* 77892
Neue Bahntechnik Paderborn, lin. motor, pitch anal./control 134537
nonlin. piezo motors, lin. direct drives, positioning servo 123894
orb. satellite lin. EM motor operating principles 111340
parametric motor, mag. core width, double driving surfaces *(Japanese)* 112553
parametric motor, open mag. cct. *(Japanese)* 112552
piezoelec. ceramic lin. US motor drive, recurrent fuzzy neural network control 99703
PM lin. brushless motor, air core, space harmonics field anal. 134063
PM lin. motor, disturbance observer-based motion control, PWM modeling 77895
SAW lin. motor, driving charact. 99707
selection, manufacturer specs. defns. 77891
slotless-type PM lin. brushless motor design/anal. approach 123519
SPEEDAM 2000, conf., Ischia, Italy (June 2000) 78442
spherical EM actuator with PM surface motor, design 99865
SRM phase inductance charactn. using Fourier series approach 133966
switched reluctance motor, high precision control appls. 123511
$Tb_{0.27}Dy_{0.73}Fe_{1.9}$, magnetostrictive peristaltic Terfenol-D motor, force capability 112565
thin lin. oscillatory actuator for celluar phone, coercive force *(Japanese)* 112728
three-phase lin. motor direct drive appls. 89349
transverse flux lin. switched-reluctance motor, 3D force calcs. 112557
triple armature lin. DC motor, NdFeB magnets, thermal modelling 99693
tubular lin. DC motor EM cct. synthesis 123502
tubular lin. DC motor mag. cct. field anal. 123501
tubular lin. IPM motor, design optimisation 123504
tubular lin. IPM motor design criteria 123505
tubular lin. motors for motion control appls. 99691
two-axis lin. SRM inductances determ., controlled VSI *(Slovenian)* 77896
ultrahigh rot. speed lin. motor profiler microfabrication 81594
US lin. motor, hybrid bolt-clamped Langevin type transducer 99702
US lin. motors 99705
US lin. piezoelec. motors, micro-positioning, learning nonlin. PID controller 77905
US motor, piezoelec. ceramics, fab., operation *(Korean)* 99695
US motors, design concept, long./shear vibr. modes 112568

linear network analysis
see also distributed parameter networks; lumped parameter networks
analog cct. fault diagnosis, single-output/1-of-k neural network archits. comparison 101745
analog ccts., worst-case tolerance anal., comments and reply 125192
Brokaw bandgap voltage ref., freq. anal. of power supply rejection 79562
chaotic systs., lin. feedback sync. theorem 125263
CMOS lin. OTA design using current addit./subtraction tech. 90767
CMOS low noise transconductor, low distort. HF fully differential design 68930
compact determinant decision diag. symbolic anal. of large lin. analog ccts. 125194
continuous-time low-pass all-pole OTA-C filters, perform. comparison 68925
current-mode biquadratic filters using multiple-output FTFNs 68929
design with heterog. component comp. 114588
differential-alg. eqns., waveform relax. for periodic responses determ. 101022
distributed interconnect networks, transm. line model based anal./simul. 90651
distributed microwave cct. anal. using network methods 80239
dyn. networks with ideal switches, algm. for state and output eqns. 90698
FASTNR fault simulator for lin./nonlin. DC ccts. 101664
freq. responses of lin. ccts. with interval params., eval. 90644
high current LV current mirrors for LV analog appls. 102445
high-speed interconnection, scale reduction, DCM macromodel *(Chinese)* 92449
high-speed interconnects, anal. using multipoint Pade approx. 90642
homog. transm. line, charact. eqns., three-port elec. sigs. 68525
large analog/RF ccts., steady-state stabil. anal. algm. 79516

linear network analysis continued
large-scale networks, seq. symbolic network fns., cct. reduction to two-port 90648
lattice struct. for regular paraunitary lin.-phase filterbanks/M-band orthogonal symmetric wavelets 129792
LC matching ccts. for class-E inverter with non-stationary load, anal. 90649
lumped element formulation in general coord. syst. 90646
nonparametric ident. of lin. systs., resonator based 101686
parametric filter of sig. const. component, synthesis and anal. 80040
pass. elec. ccts. with ideal diodes, event-driven simul. 79537
phys. modeling of lin. systs. of eqns. 90641
piecewise lin. ccts., symbolic lin. Mathematica based tech. 68510
power electronic device switching, steady-state algm., PWiseSS program 70060
power electronics syst. modeling, use of Haar state eqns. 90732
PWM DC-DC converters, small-sig. symbolic anal. 99833
RLC networks, controllability/observability over field of rational fns. 68524
RLCG elec. network chain, optimal control 80034
root no. tech. modifs. 68523
SAPWIN, symbolic simulator, elec. engng. education 78521
single-ended S-params., use in two-port distrib. network anal. 79520
symbolic cct. fns., topol. anal., binary vectors *(Russian)* 114575
SZITs digital ground connection indicator, lin. cct. insulation estim. *(Russian)* 90643
transfer fn., extra element theorem 101684
two-port cct., stabil. circle, geom. params. 68522
two-port scatt.-param. stabil. criterium, single stabil. param. 80231

linear network synthesis
see also distributed parameter networks; lumped parameter networks
band-pass act.-RC filter, single-amp. biquad type, design 80077
cascade triplet and quadruplet filters, design using approx. and optim. 102586
CMOS current-mode filters, on-chip digital tuning, 1 V, 250 MHz, design 80043
continuous- to discrete-time filter conversion, algorithmic s-z transforms. 79517
current-mode biquadratic filters using multiple-output FTFNs 68929
dual-mode stepped-impedance ring resonator for bandpass filter appls. 91186
equal-element LC lowpass filter, design and use as bandpass filter 80031
FIR filter, lin. combination of weighted medians, design 107522
floating-gate MOS filter using translinear ccts., 1.25 V design 80067
folded symmetric resonator filters with source-load coupling, direct synthesis 80192
freq. filters, optim. via vertex graphs 80028
general filter sects., direct synthesis method 101685
hairpin type coupled line bandpass filter, design method 102572
HTSC cross-coupled microstrip bandpass filter, design 127532
log-domain ladder filter synthesis, unified matrix method 80074
low-power vert. biquad filter, compact design for VHF/UHF appls. 80353
lumped-element equiv. cct., automatic synthesis using GA 79519
microstrip coupled-line filter design for WCDMA using EDA package 114949
microwave act. bandpass filters, lin. and noise perform. optim. 69182
mobile radios, talk-time increment with efficient lin. transmitter archits. 74634
multiport broadband matching of complex n-port loads 90645
noise-matching networks for opt. receivers, optimum design 79518
oscillator, lin. open-loop S-params. 79611
parallel-coupled-line microstrip bandpass filter with spurious passband suppress. 102577
parametric filter of sig. const. component, synthesis and anal. 80040
radio engng. network fns., poles and zeros calc. accuracy 125193
robust min. variance filter design, new approaches 130119
suspen. substr. stripline filter design with hybrid EM simul. tools 69043
symm. interact. relatively wideband diplexers, direct design *(Chinese)* 114867
transformerless common-ground RLC networks, nonminimal realisation theorem 90650
translinear dyn. ccts., generalized class 101683
tunable ferroelec. filters with const. fractional bandwidth, design 102531
UHF OTA-C filters, design issues and CMOS implement. 69217
weak-inversion log-domain filters, operating point elimination tech. 80075

linear offset quadrature phase shift keying *see minimum shift keying*

linear phase filters
2D diamond/quadrant FIR digital filter banks with sharp responses 119069
approx. lin. phase FIR low-pass filters, design 80100
Butterworth biorthogonal wavelets derived from discrete interpolatory splines 130123
CMOS continuous-time lin. phase filter with auto. tuning syst. 80076
CMOS OTA-C seventh-order lin. phase filter, HDD read channel systs. 91039
CMOS SC bandpass filter, freq. up-translation, DDFS syst. 80048
design method 68890
digital filter and filter bank design by optim., appls. 114875
digital filter design, multimode mean field annealing approach 80085
dual-tree complex wavelet transform with improved orthogonality/symm. props. 95680
eigenfilter, total least sq. error criterion, pos. definite matrix 80088
equiripple min. phase FIR filter design from lin. phase systs. using root moments 102407
Farrow struct. based 1D and 2D FIR filters, variable cutoff freqs., design 91065
FIR, lin. combination of weighted medians, design 107522
FIR biorthogonal multi-band filter banks design, anal./synthesis filters 130048
FIR equiripple min. phase filter design from lin. phase systs. using polynomial factorisation 73702
FIR filter with discrete coeffs., optimal design 91073
FIR filtering algm., multiplication complexity reduction 102387
FIR filters, optim. using freq. response masking approach 80103
FIR filters with max. flat freq. response error magnitude, instantaneous freq. estimator 107502
FIR low-pass lin. phase filters with equiripple passband and least-sq. stopband 102415
FIR multiplierless cellular networks, lin.-phase filters 102377
FIR two-channel PR filter bank with lin.-phase, design 73640
fixed-point FIR filter design, appl. of SPT-term distrib. of CSD nos. 80109
HTSC microstrip filter, quasi-lumped element design 102562
IIR filter lossy/lossless seq. transforms, image coding appl. *(Japanese)* 107030
image enlargement/reduction, lin.-phase FIR digital filter responses, visual eval. 73208
JPEG 2000 foundations, modern lossy wavelet image compression tutorial 118495
lattice struct. for regular paraunitary lin.-phase filterbanks/M-band orthogonal symmetric wavelets 129792
lin.-phase paraunitary FIR filter bank design 107477
M-band compactly supported orthogonal symmetric interpolating scaling fns. 95698
M-channel lin.-phase paraunitary filter banks with unequal length 95681

linear phase filters continued
M-channel paraunitary filterbanks factorization 84724
max. flat lowpass digital filters, response to polynomial sigs. 84767
multicarrier systs., optimum equalization, unified geometric approach 1302
multidimensional filter bank design, polynomial methods 130049
multirate systs., lin. phase FIR filter design based on fast convolution 1300
multirate/cascaded filters, optim. algms. 107532
paraunitary filter banks, lattice structs. parameterization 107527
paraunitary filter banks with complex-valued freq. responses, design al 73705
perfect reconstruction filter bank, simplified lattice factorization 84719
QMF bank low delay design using init. filter approach 119005
QMF banks with low delay, efficient design considerations 107564
QMF two-channel approx. lin. phase filter bank design, image compression ap 73383
switched nonrecursive discrete-time lin.-phase FIR filters 102390
TDMA-based hierarchical cellular systs., mobile speed estim. 108806
two-channel IIR/FIR filter banks 130044
two-channel QMF filter bank, approx. lin. phase, based on allpass filters 102
variable 1D FIR filters with arbitrary magnitude responses, design 68940
variable 2D digital filters, perfect lin.-phase, matrix-array decomp. 80112

linear predictive coding
1.2 kbit/s MELP speech coding algm. and real-time implement. 94401
2.4 and 1.2 kbit/s speech coder with noise pre-proc. 118099
7 kHz speech and audio at 16 kbit/s, low-complexity ACELP coding 84010
8.0/8.4 kbit/s wideband speech coder based on MELP 106361
adaptive IP telephony using intrastandard hybrid speech coding 108073
adaptive lin. prediction for lossless coding of greyscale images 84456
ARMA modelling of PSD fns. 118884
audio coding, LSF quantization in LPC and warped LPC 129381
automatic speaker recogn. syst. by neural nets 118122
CELP coder, perceptual speech quality, codebook shaping method 84019
CELP coders, frame erasure concealment algm. 118090
CELP speech coding, soft-decision decoding of binary block codes 118094
computer speech recogn., nonlin. stochastic models/new params. 129401
Czech utterances, homomorphic decomp. of fund. freq. contours *(Englis* 73035
digital simultaneous voice and data appls., fast alg. codebook search meth 94301
discrete spectral modeling, enhanced CELP coding 84022
DS-CDMA Rayleigh channel variable block 2D-CELP image transm. 10894
Finnish lang., phonetic vocoder 119827
formant freq. extraction, lin. predictive anal. *(Japanese)* 83979
FS-1016 CELP, algm. compatible improvements 106371
FS-1016 CELP, enhancement via selective harmonic pre-emphasis 73026
G.729 speech coder eval. with pathological voice samples 119831
GSM, adaptive multirate speech codec *(English)* 74721
helicopter sound detect., neural networks, parametric spectral representatio techs. 88249
high quality speech coder based on CELP and appl. in TTS syst. *(Chines* 118086
isolated word speech recogn., finite-state VQ, dyn. spectral features *(Chines* 73057
Japanese lang. rule-based speech synthesis syst. using MELP vocoder 11813
joint MELP turbo coding with unequal error protect. for speech sigs. 73022
LD-CELP codec, design and implement. 119824
lin. prediction coding filters, source separation techs. 107558
line spectrum freqs. calc. using quotient-difference scheme 106370
lossless image coding, design of min.-rate predictor 118579
low bit rate speech coding, lin. prediction algm., MBE model *(Chinese)* 10636
low-bit-rate CELP coders, adaptive window excitation coding 119828
low-bit-rate speech coding combining parametric and waveform-matching code 118098
multiband excitation-LPC vocoder implemented by fixed-point DSP, 1.8 kbp *(Chinese)* 85422
noisy environ., robust speech anal. methods, perform. anal. 83999
noisy speech recogn. methods *(Chinese)* 84054
perceptual audio coding and cross channel prediction 118089
PET images, adaptive lossless compression method 111002
predictive split VQ, fast-search algm. 73019
recursive coding of spectrum params. 84007
RISC-based DSP synthesis, compiler-friendly, perform. eval. 68839
scalable speech coder based on wavelet transform *(English)* 74486
sparse vector lin. prediction with near-optimal matrix struct. 106864
speaker ident., effects of co-channel speech interf. 118106
speaker ident. syst. based on wavelet transform 94419
speaker ident. syst. using model of ANN for elevator 106400
speaker verification syst. using simple BP, recurrent neural networks and dyn time warping techs. 94437
speech coding, higher order spectrum anal. appl. *(Chinese)* 129377
speech coding, low bit-rate, improved sinusoidal model based 94408
speech compression using wavelet transform 129378
speech LPC coeffs. based on predictive neuron model, new soln. method *(Chi nese)* 84014
speech quality, output-based objective measure *(Chinese)* 72997
speech replay and compression on H/PC *(Chinese)* 94400
speech sig. transm., LPC in binary syst. 73025
TETRA Trans European Trunked Radio, alg. CELP speech coding *(Chinese)* 73030
underwater target class., sonar bandwidth effects 77042
underwater target class. in changing environ., adaptive feature mapping 77044
underwater target discrim., neural network class. paradigms 77045
VLBR speech coding, multi-stage matrix quantization 84011
vocoders using time-scale modified speech for low flexible bit rates 106368
voiced speech, all-pole spectral modelling with highly compressed set of params. 118087
warped/conventional techs. comparison 84009

linear programming
0-1 quadratic prog., decomp. and lin. 78896
2-dimens. vector packing problem, lower bounds and algms. 90022
2-stage lin. stochastic prog., quantiles, approx. 100955
aggregated limiting av. Markov decision problems 100786
AHP, interval evals. by possibility anal. 113872
ammonia prod. plant proc. sustainability solns. 124144
approx. algms. for bandwidth and storage allocation problems 100919
ATM network design, traffic models and optim.-based heuristics 84832
bal. network flows, polyhedral descriptions 90005
bi-criteria optim., fuzzy LP 67849

programming continued
nd separation of more sources than mixtures using sparsity of short-time FT 06351
nch-and-bound for general-integer lin. programs 113980
ndle-based relax. methods for multicommodity capacitated fixed charge net-ork design 113950
pacity scheduling for data services over digital networks 119483
)MA systs., multiuser interf. cancellation using simplex algm. 84889
tificates of primal or dual infeasibility in LP 113981
nnel routing, 3-layer HVH, min. crosstalk layer assignment, pseudo-Boolean ptim. 70272
MOS logic ccts., path balancing algm. for glitch power reduction 90856
MOS VLSI cct., leakage power minimization 104010
MOS wave steered ccts., latch count minimization and latency, integer LP 25440
gen. systs., optimal planning method *(Spanish)* 133858
umn generation models for channel assignment in cellular networks 119859
mbinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve alc. 102114
mplex coeff. FIR filters design, LP & Chebyshev approx. *(Chinese)* 125616
mputer networks, VC, pre-selection routing 85081
mputer vision, robust point correspondence by concave minimization 129497
ncurrent projects, crit. path ident./load balancing strategy *(Japanese)* 113438
nic quadratic minimisation, polyhedral approx. by LP 78905
nstrained optim., conical combination rep. of vector 78919
nvex prog./LP, long-step cutting plane algm. 78897
olic connected neural networks, limit cycle generator, design 91167
CT watermarks, effective channel coding 95366
gree-constrained min. spanning tree problem, branch and cut method 67799
regulated Chinese power syst., congestion mgt., generation scheduling 111667
regulated power market, trade planning model *(Chinese)* 133476
gital filter and filter bank design by optim., appls. 114875
gital lin. alg. 90093
rectional overcurrent relays, LP coord. problem 123050
RAM wafer fab, multichamber work cell mgt., optim. 100547
S-CDMA cellular forward link, transmitting array antenna beamforming 08887
SP systs., combined word-length optim. and high-level synthesis 90956
n. optimal dispatch, network flow algm. 77196
rhocardiac images, robust quantization table design 98316
c. market-oriented transaction algm. research *(Chinese)* 122831
ergy efficient storage bandwidth optim. and memory assignment 102178
ergy-aware embedded systs., real-time task scheduling 127053
it time distrib. of Markov procs., moments computation by LP 113877
ite branch-and-bound algm. for lin. multiplicative prog. 113979
R filter with discrete coeffs., optimal design 91073
ating bias voltage sources minimisation, integer LP 79496
PGA partitioning, dyn. reconfig., integer LP 125395
PGA-based reconfigurable computers, hierarchical memory mapping 79701
eq.-selective multiple access channels with adaptive QAM modulation 84911
eq.-selective multiple access channels with adaptive QAM, resource allocation 73865
zzy LP, constraint satisfaction measure 90044
neralized min. spanning trees 100885
neralized simplex algm., phase-1 approach 124588
neration bidding algm. tutorial, LP method *(Chinese)* 99198
nerator reactive power control, bus voltage control, GA 122893
neric ILP-based approaches for time-multiplexed FPGA partitioning 114717
iavit. method for LP, complexity issue 67864
droelectric resources, elec. generation expansion, investment planning 122917
pothetical opt. network, virtual topol. design 120225
M Microelectronics, supply-chain mgt., assets/demand matching 89947
C layout, wire packing, integer prog. 70257
C power/ground network optim. based on equiv. cct. modeling 126984
LP-based board-level routing of multi-terminal nets for prototyping reconfig. nterconnect 104049
MRT, forward treatment planning, "sequential"" optimisation tech. 76643
idian power syst. generation/maint. planning optim. model 99304
dust. distrib. systs., pass. filters, marginal bus costs, LP 77315
dust. load mgt. optim. using time of use tariffs 134672
feasibility repair in lin. constrained program, fuzzy method 90041
terf. limited CDMA systs., LP optimisation strategy 107766
over WDM archit., joint operation under dyn. data traffic 95953
int module selection and retiming with carry-save representation 114737
agrangian dual interior-point methods for semidefinite programs 90081
rge FPGAs, cost minimization of partition. with complex resource constraints 58787
n. pass. elec. ccts. with ideal diodes, event-driven simul. 79537
w power multiport memories exploration/design 114767
P, technol. coeffs. optim. method *(Chinese)* 90062
PSAT, unified approach to RTL satisfiability 79690
larkov procs., resolvents/Laplace transforms eval. by LP 78811
ax. likelihood trend estim. in exponential noise 107381
in. av. dist. of binary codes, LP approach 90023
ixed integer LP, multiparametric, iter. soln. algm. 78898
ixed-integer prog., branch-and-cut 78901
ixed-sig. systs., analog-digital interface elements, LP approach 102422
odels stabil., index set approach 100944
ulti-commodity flow global routing by approx. algm. 103994
ulti-leg power conversion ccts. based on neutral point voltage 123622
ulti-objective reactive power optim., fuzzy LP method 99184
ulti-period network design problem for cellular telecomm. systs. 107993
ulti-traffic data network multipath routing assignment model 130465
ulticlass M/M/m queues, parallel scheduling, heavy-traffic optim. 113854
ulticriteria Boolean prog. problem, lin. partial criteria, rad. of stabil. 90038
ulticriteria/constraint LP, interior-point method 78888
ulticriteria/multi-constraint integer LP 113955
ultidimensional periodic scheduling, high-throughput DSP systs., two-stage soln. 114794
ultimedia inform. delivery over wireless channels 130962
ultiobjective distrib. syst. planning using goal attainment method 88396
ultiobjective fuzzy lin. fractional prog. problem 90040
ultiobjective lin. integer prog. problems scalarization 90021
ultiobjective two-level lin. prog. problems, Stackelberg solns. *(Japanese)* 113985
ultiplierless FIR filters, systematic design algm. 80105
-bit parity problem, LP approach using neural nets 114913
etwork optimisation, LP and GA appl. 100915
eural network, limit cycle generator *(Japanese)* 68982
onlin. ccts., DC tolerance anal., LP techs. 90664

linear programming continued
nonlin. resistive ccts., charact. curves, dual simplex method 90657
optimal binary codes of length 9 and covering rad. 1 117939
optimal multicast server selection based on receivers' preference 86334
optimal partitioning algm., technol.-mapped designs on single-chip emulation systs. 68781
optimal solns., general expression 124574
optimal standing reserve utilisation, GA-based contracting strategy 99314
optimal structural design, stochastic LP methods 78937
optimal transform domain watermark embedding via LP 95048
overcomplete sig. rep./decomp., basis pursuit 84705
path restoration version of spare capacity allocation problem with modularity restrictions 119527
PCB assembly, tabu search heuristic for component assignment 125892
perfect-reconstruction filter banks, low-delay design using LP 107499
permutations sorting by reversals through branch-and-price 113951
piecewise lin. fn. with lin. constraint, global optim., hybrid algm. *(Chinese)* 124593
piecewise-lin. resistive cct. solns., contraction-type LP test algm. 114591
PLAs, optimal folding using 0-1 lin. prog. 90847
possibilistic LP, strong stabil. conditions 67908
power generation market, security correction algm. *(Chinese)* 111730
predictor-corrector interior point methods for LP, adaptive use of iter. methods 67932
primal-dual interior-point methods for convex optim. problems in conic form 113948
primal-dual Newton method, complexity anal. 78893
PRN, routing/scheduling 85510
prod. planning problems, double objective mixed integral prog. model *(Chinese)* 113818
quasi-concave/non-concave fuzzy multiobjective prog. 90039
recursive bi-sect. timing driven placement using phys. net constraints 125382
reentrant mfg. lines, model predictive control, real time optim. 78738
repairable systs., component testing, multistage missions 100674
rural energy syst., planning and energy inputs 99321
schedules for power consumption using multiple supply voltages reduction 125464
search direction for LP problems 124573
semi-infinite prog., solving strategies and well-posedness 100937
separable lower-semicontinuous piecewise-lin. fns., mixed-integer zero-one representations 100921
series syst., redundant subsystems, dyn. component testing 124421
short-term hydro scheduling, mixed integer LP 133877
six-harmonic buncher, double-drift bunching systs. in cyclotron 87059
small satellite mission scheduling using Hopfield neural networks *(Chinese)* 109031
special struct. LQ programs, parallel interior-point method 101002
stack filters optim. based on mirrored threshold decomp. 73656
static CMOS ccts., stand-by leakage power minimisation 79792
Steiner ring network design problem with revenues, models 78869
syst.-on-a-chip optimal test access archits. 115989
tandem queues, const. service time, optimal arrivals control 100762
telecommun. network design, Lagrangean relax./hop constraint 85077
testing point selection *(Chinese)* 75339
timed-token MAC protocol, sync. bandwidth allocation for real-time commun. 84998
traffic engng. in flat differentiated services network, scalability props. 119387
transm. network expansion, mixed integer disjunctive model 88410
transm. network expansion planning, specialised branch-and-bound algm. 133558
tree-struct. IIR/FIR octave-band filter banks with very low-complexity anal. filters 91060
TSP, cutting planes location 67779
two-channel FIR filter banks with PR and low-delay, design 91054
two-tiered mobile ad-hoc networks, clustering schemes for energy conservation 131294
VAr planning using GA and successive LP 77290
VAr-constrained real power dispatch/pricing algm. 111807
VLSI design, global routing, multicommodity flow, approx. algm. 70253
VLSI layout spacing, simplex algm., graph theory 92443
VLSI oxide CMP manufacturability, model-based dummy feature placement 81167
wavelength routed opt. network, routing and wavelength assignment 131450
wavelength routed opt. networks 120219
wavelength-routed ring network, logical topol. design, mixed integer LP *(Chinese)* 74978
WCDMA multimedia systs., optimal resource mgt. 74820
WDM mesh-survivable transport networks 96744
WDM networks, survivable routing of logical topologies 120247
WDM non-hierarchical interconnected ring networks, dimensioning 86019
WDM opt. mesh network protection strategies 109108
WDM survivable networks, capacity and revenue optim. 130470
wire packing, crosstalk-aware chip-level track/layer assignment with integer LP 101652

linear quadratic control
see also linear quadratic Gaussian control
air operations, mission details control, game-theoretic LQ method 88255
buck DC-DC converter, lin. optimal feedback/load-decoupled control 112640
decentralized power syst. load freq. control, LQR design 122879
dyn. prog., envelope theorems 100945
free-model based power syst. stabilization scheme 111893
hierarchical differential game under uncertainty, Nash-Slater soln. 67746
MAGLEV syst., H_∞ control and closed loop ident. 105691
nonlin. Kalman filter theory and wing rock motion control appl. 107496
piezoelec. intell. beam state-depend. LQ vibr. control *(Chinese)* 104433
PM sync. motor, q-axis field, optimal PF control, inverse LQ design method *(Japanese)* 88713
power syst. stabil. enhancement, local power flow based TCSC controller 99276
power syst. stabil./voltage control, decentralised excitation/STATCOM control 77275
sing. perturbed Nash games, Riccati eqns., LQ control 78804
STATCOM and generator excitation coord. control *(Chinese)* 78119
SVC controller design, nonaffine nonlin. model *(Chinese)* 89032
sync. machine nonlin. adaptive optimal excitation control scheme *(Chinese)* 77840
sync. reluctance motor, posn. control, state feedback controller 77851
three-phase UPS PWM inverter, digital voltage/current controllers 134232
TPP superheater syst. temp. control, bilinear syst. controller design 133861

linear quadratic Gaussian control
indust. predictive control overview 77765
unmanned mini-helicopter control for visual power lines inspection 123020
vert. fin buffeting alleviation, strain actuation, closed-loop control tests 111306

linear synchronous motors
capsule pipeline transport, lin. sync. motor drive 89494
controlled-PM LSM Maglev carrier, force charact. improvement design *(Korean)* 123998
coreless lin. sync. motor, controller design *(Korean)* 112554
discontinuous arranged LSM transfer syst., optimal drive control timing 89350
elec. motor types, elec. perform. anal. comparison 123523
leakage and end effects study in motor for vert. transportation 134074
partially excited PM lin. sync. motor, dyn. charact., end-effect 123509
PM lin. sync. motor, 3D EM field anal. 123513
PM lin. sync. motor, dyn. charact., moving mesh tech. *(Korean)* 123516
PM lin. sync. motor, servo drive syst., RFNN on-line gain tuning control 99863
PM lin. sync. motor, skewed magnet, design params. 134076
PM lin. sync. motors, detent force minimization techs. *(Korean)* 77893
PM lin. sync. servomotor drive adaptive hybrid neurocontrol scheme 123948
PM LSM design with high-thrust/normal force ratio 134081
PM sync. motor drive control for mfg. automation appls. 89473
PMSM driven positioning syst., PWM inverter, robust hysteresis control 134428
propulsion/levitation forces calc. 88771
reluctance motor, flux linkages, thrust, friction force 134082
reluctance motor, inductance, cross magnetis. 134077
reluctance motor, input-output lin. control 123522
slotless PM lin. sync. motor, mag. field/thrust anal. *(Korean)* 123503
slotless PM lin. sync. motor, partially excited primary current 133959
SRM robust short-dist. posn. control approach 134083
surface PM lin. sync. motor, thrust anal., 3D FEM *(Japanese)* 112556
surface PM LSM, init. pole-posn. estim. algm. 134079
sync. lin. motor servodrive, adaptive neural control 78203
two-axis lin. sync. reluctance motor, operating point depend. inductances 123521
variable struct. control toggle mechanism driven by lin. sync. motor with joint Coulomb friction 133977

linear systems
1-norm quasi-min. residual variant of Bi-CGSTAB algm. for nonsymmetric lin. systs. 124660
2D discrete lin. systs., stabil. testing, immittance-type tabular test 95679
behavioral lin. systs. theory, extension modules concept 130021
blind ident. of nonminimum phase systs., mean differential cepstrum 129974
complex-valued lin. systs. via equiv. real formulations 100980
consecutive-k-out-of-n, F repairable syst., repair priority 67674
constrained missiles with autopilot lags, receding horizon guidance laws 122768
continuous-time stochastic estimators, design using covariance info. in Krein spaces 130079
convex set directional end, theory and appls. 100863
DC motor state estim. approach 123499
DC-DC converter, robust control, large-sig. model *(Chinese)* 99791
depth estim., robot visual control syst., perform. criterion 97387
discrete systs., optimal self-tuning filtering/prediction 129978
discrete-time LTI syst., convolution representation 84663
dyn. systs., fault detectors design, $\mathcal{H}_\infty$ optim. 84751
fault detect. and isolation, lin. matrix inequality based filter design 84752
fault diagnosis, residual generation, min. polynomial 100631
FEA, fast explicit preconditioned, for symmetric lin. systs. 114194
filtering of delay systs., guaranteed cost/H_∞ 130143
filtering/deconvolution, LMI-based H_2, explicit formulas 107506
finite dimens. MIMO lin. syst., input-output sigs., finite length DFT 84683
finite eigenvalues elimination of 2D Roesser model by state feedbacks 90088
H_∞ filter design for lin. time delay systs. 130129
hybrid systs., norm-bounded unknown nonlin., robust Kalman filter design 73683
incomplete factorizations with pseudo-overlapped subdomains, parallelization 68001
inexact perturbed Newton methods, Krylov solver appl. 67936
Internet servers, modeling and perform. control 85225
jump Markov lin. systs., iter. algms. for state estim. 73595
jump Markov lin. systs., seq. simul.-based estim. 73663
Koszul decomp. for computation of lin. syzygies 67987
least sq. problem with orthogonality constraints, dyn. syst. algm. 118940
limb movement, paraplegics, elec. stimulation control design 133000
Markov jump systs., min. MSE estim. 73680
(max, +)-lin. systs., Poisson input, joint Laplace transform 78789
meas. setups, lin. systs., nonlin. distortions, ident. algm. 120606
multidimensional systs. stabilizability and stabilization, constructive approach 130112
multirate lin. systs., inform. theory 128952
multiuser systs., second-order stats. based equalization/interf. cancellation 107691
multivariable lin. systs., robust tracking under parametric uncertainty 78208
n DOF robot, model uncertainties, set-point regulation, smooth lin. control algm. 121225
noise effect reduction, coherence fn. in deconvolution 119009
nonparametric ident. of lin. systs., resonator based 101686
parab. distributed systs., sens. structs., regional detectability 75437
ParIC, family of parallel incomplete Cholesky preconditioners 101005
preconditioners for domain decomp. methods 101051
queueing networks, Poisson driven (max,+) lin. systs. 89973
regularizing L-curve Lanczos method for underdetermined lin. systs. 73274
robot visual servo control, depth estim. perform. criterion 129518
robust H_∞ FIR filtering with sampled-data meas. 130141
scale invariant sigs./systs., discrete time proc. 95688
sens. fault observer, optimum design, freq. domain synthesis *(Chinese)* 88035
separately-excited DC motor global speed control 112543
sync. power generator, robust lin. control 77227
turbogenerator integrated excitation/valve controller design, inverse syst. *(Chinese)* 88685
turbulent vel. meas., stochastically sampled dyn. systs., spectral anal. 97844
vectored thrust aircraft advanced flight control Harrier, robust lin. param.-varying control 88233
Volterra integral-differential syst., practical stabil. and Lyapunov's stabil. *(Chinese)* 100747

linearisation techniques
see also piecewise linear techniques
0-1 quadratic prog., decomp. and lin. 78896
1.85 GHz band lin. using feedforward loop, PCS base-station appls. 69127
2D opt. scanner, electrostatically actuated, surface micromachining, lin. 89020

linearisation techniques continued
3-phase 3-level neutral point clamped boost rectifier, input/output feedback control 134175
3-phase 3-level PWM NPC rectifier, input state feedback lin. control 13415
3D target tracking 86148
AC/DC buck-boost converter, soft-switched, high PF, anal. *(Japanese)* 780
act. bal. mixer, lin. method 114663
adaptive blind separation of sources using dens. estim. and simulated anneal 130150
adaptive digital predistortion, EDGE std. 102585
adaptive feedforward lin. for RF amps., DSP archit. 90751
adaptive feedforward microwave amp. lin. using analog circuitry 91272
adaptive predistortion lin. using DSP 114856
adaptive RF Cartesian predistorter for high power class-AB amp. 91250
agile missile guidance and autopilot systs., integrated design 122475
analogue IC mismatch, yield, spec-wise lin., feasibility-guided search 12521
BLDCM, precise posn. control *(Korean)* 134065
cardiac activation time imaging, nonlin. ill-posed problem, iter. lin. opti 121917
CMOS high speed voltage-to-current converter, lin. tech. 91128
DC motor drive, field-weakening regime, nonlin. MIMO speed control 1344
DC motor neuro-fuzzy speed control systs. 112545
DC series motors, neural networks using feedforward neural network 99680
DC shunt motor, speed control, nonlin. control design methods eval. 88765
decentralized adaptive power syst. stabilizer scheme 77213
digital baseband predistorter using calib. memory, perform. 108576
dual parallel electroabsorption modulator, simultaneous IMD2/IMD3 suppressi 93227
EDGE systs., blind equalization feasibility 84871
electroabsorption modulator, nonlin. suppression 71412
energy systs. perform. eval. with data reconciliation *(Spanish)* 77628
FACTS series compensating device operation under line flow congestion 1118
fault diagnosis of unknown nonlin. systs., neural nets 100657
feedforward power amp. with diode lin. for cellular base stations 91251
GSM-EDGE high power amp., digital lin. 101789
highly lin. CMOS RF MMIC amp. and Volterra series anal. 80386
hourly power scheduling, competitive framework, lin. algm. 99218
IM, speed tracking control, max. power transfer 77867
induction machine nonlin. sliding-mode torque/flux control method 99655
launch vehicle, secondary injection thrust vector control power plant lin., fuzz logic appl. 98919
LIM drive, intell. backstepping control 100237
LIM servo drive, robust control, neural network uncertainty observer 78210
LIM servo-drive, nonlin. decoupled control, sliding-mode tech. 100238
lin. SRM robust short-dist. posn. control approach 134083
Mach-Zehnder analog optic modulator, RF/microwave bandwidth 82214
mag. recording syst., situ ultra-high resoln. mag. imaging 116333
Maglev nonlin. control law design/implement. 100289
magnetostrictive actuator, approx. inversion of hysteresis 81924
microwave amp., lin., harmonic and baseband injection 125243
mirror power amp., baseband/RF feedforward lin. 90750
missiles, tail-controlled, adaptive control, param. affine 77130
MM-wave lin. FMCW radar for airfield obj. imaging, develop. 86192
MMIC lin. power amp. for 3.5 V batt. operated W-CDMA handsets 80334
mobile radios, talk-time increment with efficient lin. transmitter archits. 7463
MOSFET, charge sheet model, symmetric bulk charge lin. 81266
multi-carrier 16QAM over lin. TWTA for Internet services 96633
multi-machine syst., TCSC/excitation, robust coord. control *(Chinese)* 99262
multimachine power syst. nonlin. decentralized control strategy *(English)* 7723
multiphase pipelines, phase percentage determ., capacitance sens., coaxial capac itor 109532
nonlin. time series prediction, orthogonal least sq. algm. *(Chinese)* 89987
OFDM sigs. nonlin. predistortion over fading channels 74567
OFDM systs., amplit. and phase predistortion 72763
opt. fiber AM-CATV externally modulated transmitter, composite triple beat dis tortion *(Chinese)* 109053
panoramic annular lens, image lin. *(Chinese)* 84121
piezoelec. actuators, dyn. charact. anal. *(Chinese)* 99870
PM AC motor drive multivariable PI model ref. current control 134435
PM stepper motor, neural net based posn. control 77826
PM sync. servomotor syst., feedback lin. control *(Chinese)* 112476
polar lin. syst. for RF power amps., transmitter archit. 69213
power amp. lin., adaptive predistorter, complex convolution *(Chinese)* 119969
power syst., nonlin. decentralized disturbance atten. excitation control 133549
power syst. nonlin. control theory survey *(Chinese)* 77230
power syst. robust nonlin. controller with voltage regulation *(English)* 77232
power syst. transient/voltage stabil. enhancement control scheme 77246
predistortion-based lin. for forward-channel link broadband appl., CDMA 7470
prog. RF predistortion lin. for power amp., develop. 90752
QMF banks design, modified Chen-Lee algm. 102394
quasi-opt. lin. 102612
radial act. mag. bearing, anal. of lab. implement. *(Slovenian)* 70565
RBF network analogue implement., transducer lin. 102459
rectifier load elec. cct. transient procs. 99749
regulated power syst., state matrix formulation, UPFC action 99281
RF fiber optic link, multi-electrode lin. EA modulator 82212
RF power amp., BJT lin. cct. 68596
RF power amp. lin. with digital predistort., LUT indexing method 79602
RF power amps., memory effects cancellation techs. 79603
satellite cluster form. flying, perturbative anal. of geopotential disturbances 122481
self-lin. ccts. involving PN jns. 101690
sens. lin., BP neural networks & regression algm. *(Chinese)* 130020
skid-to-turn missiles, autopilot design, functional inversion and LMI approach 88225
smart piezoresistive press. sens., correction using microcontroller 75772
squirrel cage motor lin. control under param. vars. 99670
STATCOM robust nonlin. control scheme *(Chinese)* 77235
Steiner ring network design problem with revenues, models 78869
surface mount PMSM vector control, state feedback lin. 88712
sync. generator observer-based nonlin. control scheme 77855
sync. generators, observer-based nonlin. control, syst. stabil. 88717
three-phase three-level NPC rectifier, adaptive nonlin. control 134174
turbogenerator robust control for power syst. stabil. improvement *(Chinese)* 77813
two-channel FIR filter banks with PR and low-delay, design 91054
W-CDMA handset power amp., lin. based on predistort. tech. 80324
Walsh-Cooley basis fns., synthesis and anal. 84660
wideband photonic ADC, monolithic integrat. 114851

(telephone) *see telephone lines*
widths (spectral) *see spectral line breadth*
istics
see also dictionaries
utomatic speech recogn., multilingual interoperability 94425
i-directional spelling-to-pronunciation/pronunciation-to-spelling generation 73042
Chinese concatenative synthesis, synthesis units and prosodic inform. 129405
Dutch, native/non-native speech intelligibility and recogn. 94431
ducation, lang. acquisition in classroom via DVD 120577
Greek text-to-speech syst., neural networks use 106418
andwritten character recogn. via aspect ratio adaptive normalization 73553
norpheme based speech corpus annotation tool 73059
nultilingual speech recogn., different approaches 94428
natural speech proc., conf., Ilmenau, Germany (Oct. 2000) *(German)* 78383
OO multi user domains for lang. learning project 119588
peech automatic lang. ident. 94432
peech recogn., lang.-independent/lang. adaptive acoustic modeling 94427
peech-to-speech translation, contextual reasoning 106406
Swedish, phone set expansion and xenophones 94430
yllable core and periphery eval., foreign accent ident. 94433
Vietnamese document image recogn. based on HMM and linguistics 129938
ocab.-independent speech recogn., multilingual phone models 94426
istics, computational *see computational linguistics*
istics, language *see linguistics*
ers, program *see program compilers*
ng *see joining processes*
s, telecommunication *see telecommunication links*
ville equation
see also Vlasov equation
Fisher inform., irreversible phenom., stat. mech. 105992
Gaussian profile opt. planar waveguide propag. const. calc. 71338
Liouvillean-type theorems for lin. DEs on interval, approx. and complexity 114106
id alloy ion sources *see liquid metal ion sources*
id crystal devices
see also light valves; liquid crystal displays
1.5 μm liq. cryst. polariz. independent beam steering switches 96688
3D shape meas., LC grating pattern projection method *(Japanese)* 97813
all-optic tunable long-period grating using double-cladding layer 116879
analog SLM, dyn. complex wave-front modulation 82291
arbitrary filter SLMs, optimal region of support 71472
atmos. opt. rem. sens., fly-eye design advances 122676
automated surface profiling syst., fringe-free interferometry syst., Mueller matrix error correction 89905
axial dual focus integrated opt. pickup syst. 116582
azo-dye-doped liq. cryst., polymer-enhanced diffr. 116833
azo-modified polymer film on liq.-cryst. cells, trans-cis photoisomerisation, opt. data recording 93020
azobenzene liq. cryst. polyester, high diffr. efficiency polariz. gratings 82224
binary diffractive mask digital synthesis 127848
binary nematic liq. cryst. gratings, influ. of alignment, simul. 93248
bistable coupled-waveguide switch using SSFLC layer 93163
chiral nematic Bragg filter, fibre opt. sens. WDM tech. 97305
circ.-hybrid electrode struct. adaptive liq. cryst. lenses, aberrations, point-spread fns. 116836
CLC, self-lasing by stimulated emission/fluoresc./DFB 82560
CLC single layer refl. polarisers, elec. controlled spectrum 104820
colour balancing liq. cryst. filters for image pickup in TV film shooting 127847
controllable array Frensel zone plate, liq. cryst. SLM use *(Chinese)* 82236
diazo linkages, liq. cryst. mixtures, IR appls. 127844
diffr. gratings, asymmetric transmissive behavior, beam-steering efficiency 116830
director struct. of cholesteric diffr. gratings 82231
droplet material, elec. field sens. 120756
dual layer digital versatile disk pickup, nematic LC lens/diffractive optical elements 71227
dual-conjug. adaptive optics 128786
dual-freq. controlled liq. cryst. modulators, wavefront corrector appls. 104825
dye-doped LC layer near total internal refl., pass. laser Q-switching 117348
dyn. IR scene projection, single-cryst. Si liq. cryst. light valve 116838
dyn. phase mask high-power laser beam focal spot optim. 105409
E-polarisers, dichroic dye liq. cryst., low-leakage off-angle 104819
ellipt. liq.-cryst. core polarimetric fiber-optic sens. 109601
ellipt.-core NLC fibers, light propag., BPM 116634
EO switching approaches 116839
epoxy-based PDLC film thermo-opt. props. 82242
far-field beam shaping/beam steering by phase-retrieval-based wavefront control 105410
fast EO liq. cryst. lens design 71420
ferroelec. liq. cryst., stripe-shaped domains, SLM appl. 93242
ferroelec./antiferroelec. liq. cryst. opt. PM 104826
fibre-optic systs. in inform. proc. 127842
field seq. high-resoln. CRT using liq. cryst. colour shutter 121112
filled liq. cryst. depolarizers 127841
FLC SLM free-space opt. switch, computer-controlled adaptive beam steering 116837
FLC-based self-aligning 2×2 fiber optic switch wavelength routing module 116834
foveated wide FOV imaging syst., liq. cryst. SLM 86640
free-form complex surfaces, non-contact 3D sens. 89909
gray-scale images, pattern detect. with polariz. coding, matched filtering techs. 84515
guest-host liq.-cryst. filter automatic color-temp. compensator for video image sens. 86625
Hartmann principle liq.-cryst. SLM, EO scanning wavefront meas. 75665
helical ferroelec. liq. cryst. cells, 2nd harmonic generation, special phase matching 93820
hexabenzocoronene DLC, self-organization for high-efficiency organic PV 104836
high resoln. wavefront control conf., San Diego, CA, USA (Aug. 2000) 100415
high-resoln. phase-contrast wavefront sens., opt. addressed phase SLM based 109683
high-resoln. wavefront control syst., opt. addressed NLC SLM 109686
holographic recording, LCD, aberration compensation 72092
holographic stereograms, light valve application 82996
homeotropically aligned NLC film, ultrasound-intens.-depend. opt. transm. 71479

liquid crystal devices continued
hybrid SLC Solc/Fabry-Perot filter for wavelength DEMUX 75048
large optics real-time holographic compensation in space-based opt. systs. 105605
lasers and electrooptics conf., Rio Grande, Puerto Rico, (Nov. 2000) 89595
light valve, spatial filtering phase knife, image differentiation 129639
long-haul transm., polaris. mode dispersion reduction, LC device 74963
Methyl Red dye-doped liq. crysts., photorefr.-like gratings, elec. field control 71421
microlens, opt. props. 82243
microlens director reorientation 93179
mid-IR holographic correction by opt. addressed liq. cryst. SLM 105606
mid-power solid state laser thermal lens intracavity correction by liq.-cryst. adaptive lens 128478
modal liq. cryst. lenses, elec. addressing 93243
modulated opt. harmonic amp.-gain equalizers, WDM syst. gain profile manipulation 131557
multi-dimens. liq. cryst. optics, num. modelling, FDTD method 82228
multiband polarimetric imagery acquisition, calib. aspects 75655
multielement dual-freq. LCD, high-speed adaptive opt. wave-front correction 71425
multiparameter bifurcation points, NLO systs. 82931
NLC based wavelength independent Babinet compensator opt. limiter 82233
NLC cell with optoelectronic feedback, self-oscills., opt. bistability 82245
NLC fibers, elec. controllable long-period gratings 116618
NLC microlenses, opt. limitation systs. appl. 82204
NLC multiplexed opt. scanner technol. 117549
NLC polariz. converter 82246
NLC prism cells, stack-layered struct., MM-wave deflection props. 127846
NLC stack layered cells, elec. controlled MM-wave transm. 80401
NLC wavefront correctors, static/dyn. models 127843
NLC-SLM, PM charact., phase-shift interf. 93245
nonlin. Zernike filter adaptive wavefront control 104884
opt. addressed liq. cryst. light valves 71423
phase modulators modal control, adaptive opt. 116835
phase only liq. cryst. SLM optoelectronic Zernike filter, high-resoln. wavefront anal. 109684
phase shifters, high-resoln. wavefront control 104824
phase-modulated opt. polarimeters, calib. methods 104821
photochromic NLC, photoinduced in-plane switching 71429
photocond. polymer-NLC hybrid structs., opt. inform. proc. appl. 104832
photonic switching systs. based on EO vol. holographic diffr. gratings, perform. 85442
photosensitive nonlin. liq.-cryst. film, edge enhancement, image addit.-subtraction 118205
pixel mirror, electronically tunable single wavelength broad-area semicond. laser 117352
planar liq. cryst. waveguide beam shifters 82223
polarimetric opt. fibres with ellipt. liq.-cryst. core 97301
polariz. insensitive planar integrated opt. switch 117495
polymer pass. slab waveguide integrat. with FLC EO modulator 127806
polymer-dispersed liq. crysts., periodic structs., EO appls. 82229
polymer-dispersed smectic A liq. crysts. appls. 93244
polymer-stabilized cholesteric texture films doped with SmC* 82232
polymer-stabilized liq. cryst. films for microwave phase control 71417
real-time analog holography, pattern recogn. 105579
reconfigurable opt. crossbar interconnections, liq. cryst. opt. sens. 116865
reflective type opt. addressed liq. cryst. SLM, holographic correction 105607
rewritable broad-band color filters for spectral image anal. 84075
SLM, controllable laser beam shaping *(Chinese)* 128369
SLM correction element, laser energy transport adaptive syst. 104822
smectic A* liq. cryst. waveguide optoelectronic router 127787
smectic C* integrated Bragg grating continuously tunable filter 127885
striation marks visual comparison with struct. light 107271
surface-stabilized ferroelec. liq. cryst., laser freq. stabilization 105444
switchable diffr. gratings, dielec. anisotropy inversion in nematic liq. crysts. 71427
switchable fibre coupling using var.-focal-length microlenses, LC cell 93060
thin NLC film, mW power stimulated scatt. 105461
totally refl. light anal. using renormalized ellipsometry 82237
twisted NLC SLM, Fresnel lens amplit. apodizer encoding 82285
variable opt. attenuators integrated on planar lightwave ccts. 71352
voltage-biased NLC planar cells, spatial opt. solitons 93870
Wiener filter hybrid digital-opt. correlator, compact image recogn. syst. 71474
zenithal bistable nematic devices, BPM modelling 82227
ZLI-4792 homeotropically aligned liq. cryst., elec. switchable liq. cryst. grating 82230
Nd:YAG self-starting phase-conjug. laser, dyn. NLC holographic mirror 71946

liquid crystal dispersed polymers *see polymer dispersed liquid crystals*

liquid crystal displays
see also light valves
3D meas. of microstruct. using holography *(German)* 83026
3D multiprojector display, wide FOV 75805
21st century FPD technol. *(Japanese)* 121122
AC2K TFT-LCD panel inspection syst. *(Japanese)* 78688
achromatic wide-angle CLC-based broadband polariser, perform. 109881
act. broadband polymer stabilized liq. crysts. 86821
addressable bistable PDLC displays, switching params. improvement 97677
advanced technol., mater. develop. & future trends 121083
aerospace defense displays in 21st century 98910
AFLC cell, operation mode for high contrast ratio/fast switching time 104817
alignment by lin. photopolymerization 75789
all-polymer TFT ccts., high-resoln. ink-jet printing 103882
AMLCD, air-bridge-type gate-data-line crossover 86879
AMLCD, driving at high speeds 121074
AMLCD, low temp. COG bonding, printed UV curable ACA 97754
AMLCD glass substr. cutting, scribe-wheel dimens. effect 109857
AMLCD monitor, digital controls, VLSI implement., PanelLink 86896
AMLCD TFT array, five-mask proc., low-cost, high-yield/perform. 86857
anisotropic conducting adhesive used as flex-to-card interconnection, charact. 113529
antiferroelec. LCD, domain wall motion and switching 97620
antiferroelec. LCD, EO props., addressing waveforms 104829
antiferroelec. liq. cryst. cell reflective display, opt. config. and fab. *(Korean)* 93250
arbitrarily configurable customer tailored instrum. for vehicle appls., LCD units 124014
ASIC design of color seq. driver for LCOS microdisplay devices 114750
assembly scheduler for TFT LCD mfg. 121070

liquid crystal displays continued
ASV-LCD, high-perform., continuous pinwheel alignment mode *(Japanese)* 121090
automatic ellipsometer, LCD thin film, on-line monitoring *(Chinese)* 97589
avionics AMLCD, field-emission lamp design 98914
avionics LCD, photom. meas., intraplant & interplant correl. 98912
backlight develop., simul. tool 121109
backlight inverter syst. control, mixed dimming method 86864
backlight inverter topologies anal. 134249
backlight unit, light-guide plate, plano-convex microreflectors 97748
backlight units develop., ray tracing simul. *(Japanese)* 121071
backlighting, elec.-field-coupled discharge lamp 97747
backlighting unit, ultrahigh luminance, monitor appl. 97749
backlights, white EL lamps appl. 97750
beam steering device for large-area displays 109904
BiCMOS multi-channel opt. interface transmitter/receiver chip set, LCD appl. 117033
bis-tolane liq. crysts., birefr., display appls. 97621
bistable cholesteric reflective displays, gray scale states, refl. spectra 97707
bistable twisted nematic LCD, design optimiz. by computer simul. 97662
bistable twisted nematic liq. displays *(Chinese)* 132102
brightness uniformity/cell gap deviation rels. *(Japanese)* 97637
Bytelight high brightness electrodeless lamp, projection display 109902
chiral-homeotropic LCD dyn. 97675
cholesteric gray-scale bistable displays, pulse seq. addressing effects study 116832
CLC colour filters, opt. characts.,light recycling, brightness 109882
CLC single layer refl. polarisers, elec. controlled spectrum 104820
clinical image review using act.-matrix LCD, comparison with CRT displays 97631
clock generator using factorial DLL for video appls. 114853
cold-cathode fluoresc. lamp for LCD backlighting 97703
cold-cathode fluoresc. lamps, long lifetimes *(Japanese)* 124061
color reflective LCD, opt. design 109870
color TFT-LCDs fab. 132097
colour display, elec. rot. *(German)* 97715
colour filter fab., thin-film layers absorpt./transmittance 97597
colour filter stds., Toppan Printing proposals 121086
colour filters for LCD miniature displays 97758
colour LCD & CRT displays, colour gamut differences 86832
colour LCD controllers, SoC implements. *(Italian)* 132107
colour LCD with switched organic EL backlighting 109905
colour reprod. characts., bluish cast compensation *(Japanese)* 121093
colour TFT-LCD, wide-viewing-angle, recent trends 86827
colour TFT-LCD module, technol., product trends and appls. 121103
conducting polymers, line patterning, disposable electronic devices appl. 114461
conf., display technol., Taipei, Taiwan (July 2000) 78372
conf., Liquid crysts., chem., phys., appls., Krynica, Poland (Sep. 1999) 100412
conjug. polymer, EL liq. crysts., OLED appl. 127980
copoly((4-methacryloyloxy) chalcone-cholesteryl methacrylate, photo-aligned vert.-alignment-LCD, EO charact. 93240
defect-free ferroelec. LCD, fab., C-1/C-2 uniform states 104834
design w.r.t. optimal opt. props. 86824
desktop monitors, life-cycle environ. impacts 100702
DICOM std., electronic storage, display/print fn. *(Japanese)* 88020
digital LCDs and projectors, electronic distortion correction, warp technol. 97638
digital monitor interface, DVI std. 86889
dissipated power reduction techs. for LCDs 75801
distortion, IPS-/TN- modes, foreign particles effects 97674
driver LSI, COF technol., reel to reel method *(Japanese)* 121125
DTV TFT-LCD with integrated digital data driver 80024
dyes, lin. dichroism, LCD appl. 109868
E-polarisers, dichroic dye liq. cryst., low-leakage off-angle 104819
electronic projection, trends 75783
environ. assess., colour CRT and LCD monitors materials eval. 86812
Epson mobile phone LCD drivers, low power consumption 119985
femtosecond polariz. laser pulse shaping, dual-channel spectral interferometry 71895
ferroelec. LCD characts., surface alignment, polymer stabilisation effects 127839
ferroelec. LCDs alignment with hybrid LPP-photoaligned polymer networks 97643
field-seq.-colour poly-Si-TFT LCD 121107
film-compensated LCD, symm. viewing angle preservation 97679
flat discharge lamp for LCD backlighting, Hg-free/high luminance/high efficacy 121129
flat displays for TV/computers *(German)* 75802
flat PC desktop monitors, total market opportunity, display perform. 86883
FLC, mesogenic polymer stabilized, display device exhibiting V-shaped electrooptic characts. 121080
FLC alignment over CMOS-based microdisplay backplanes 104828
flexible LCD, phase-separated composite organic films appl. 97697
fog imitators for aviation appl., liq. cryst. cells 98889
Fourier hologram storage, opt. representation of binary data *(Korean)* 116574
FPD image interpolator with image improvement 132105
FPD repair practices, TAB/PCB/polariser/backlight rework 97729
FPD substr. defect detect. using homog. oriented NLC 97606
frontlights for reflective LCD, lightguides with micro-grooves 97704
Fuji-Wide View film biaxiality 97680
generalised mixed-mode refl. LCD, 3-panel colour projection syst. 97686
generating full color in LCD using birefr. filters 86799
glass substrs. with different barrier layers, Na exchange 132104
GXGA microdisplay chip, design and fab. 109909
H-PDLCs, holographically-form. PDLC, colour display perform. 97628
hand-held portable electronic products appls. 97695
helmet-mounted uncooled FPA camera/display for firefighting appls. 75648
high resoln. TFT-LCDs, low resistive material bus-line proc. 92114
high resoln./high content AMLCDs, TFT-array testing 81494
high-perform. displays, small spot contrast meas. 97657
high-resoln. AMLCD made with a-Si:H TFTs having Al-gate 97746
high-resoln. femtosecond pulse shaper using LCD 71419
high-resoln. LCD, at. beam alignment 82235
high-resoln. projection microdisplays, lens image quality 109884
high-vol. LCoS microdisplay mfg., testing 86801
holographic stereography diffusers, LCD laser light projection 93882
IHI-CFi LCD colour filter automatic inspection syst. *(Japanese)* 82280
ILR900 laser repair syst. for LCD TFT arrays *(Japanese)* 82240
image mode laser, ASE model, video projection display 97671
image mode laser projection display utilizing twisted NLC technol. 86809

liquid crystal displays continued
image-memory LCD with ferroelec. film 86877
incoherent triangular holography, resoln. anal. 128564
ink-jet printing technol. appl. to display assembly/interconnect 86797
integral photographic 3D display, computer-generated 132112
integral-colour plastic LCD, polaris. control, pass. retarders 109880
ion shower doping syst. for LPS-TFT LCD prod. *(Japanese)* 86868
isothiocyanato liq. cryst. low-viscosity mixtures, TN/STN display appl. 1098
Korean display indust. 97596
large area TFT-LCD, crosstalk and flicker simul. 116829
large scale LCD panels, proc. using scanner-deflected UV-laser radiation 975
large-area photomasks for display appls. 75808
large-size TFT-LCD panel, air-bridge type gate-data line-crossover, sig. de 75803
laser cutter for LCD patterned plate inspection syst. *(Japanese)* 83042
LC modes for high-perform. monitors 132095
LCD backlighting device, diffractive light extractor 82244
LCD TFT prep. using high-press. annealing syst. *(Japanese)* 82239
LCD-monitor markets in Europe and UK 86803
LCOS liq. cryst. on Si microdisplays, frame-buffering cct. 97765
LCoS liq.-cryst.-on-Si microdisplays, develop. & appls. 121100
LCoS microdisplays, LC modes 75782
letter legibility and pixel resoln. of TFTLCDs/CRTs compared 97646
light-guiding plate design and fab. *(Japanese)* 93249
lightpipes, hidden devices that light our world 116641
liq. cryst. mols.-polyethylene surface interacts., pseudopotentials 97626
liq. cryst.-on-Si microdisplay fab. using std. foundry proc. flow 86869
liq. cryst.-on-Si microdisplays, packaging proc./technol. 86872
liq. crysts., phase transit., premolecular struct. form. 86820
low power colour reflective TFT-LCD technol. 121106
low-power reflective-displays, TN/FSTN-LCDs 75781
low-temp. polysilicon TFT LCDs for mobile appls. 132113
low-temp. submicron polysilicon TFTs, scaling effects, SOG appls., LCD drive 97605
LV interface for TFT-LCD, low power consumption 101753
MEMS struct. illum. and loading control *(German)* 81560
microdeflection LCD modes, eight-division electrodes 104835
microdisplay anal., 2D opt. simul., FDTD method 97672
microdisplays, eval. 86802
MicroLens, microlenticular light extraction technol. for monitors 121075
MIM driven LCD with colour filters 86878
Mitsubishi LCD monitors for emerging multimedia use 121114
mobile phones appl., futuristic refinements 121113
modelling, vector approach 82247
module interconnection, chip-on-film technol. 86859
monitor controller IC, integrated ADCs, high perform. 86895
multi-colour LCD keytop for displaying syms., characters and animations *(Ge man)* 121101
multi-domain vert. aligned LCD 97678
multidomain surface stabilized FLC display, grey scale mechanism *(Chinese* 97636
MVA TFT-LCD panels, manufacture and perform. improvements 86846
Nan Ya displays develop., chip-on-film/COG technols. appl. 121069
NEC Digital Mova N502it HYPER, develop. *(Japanese)* 85414
nematic LCD, patterned field-induced polymer wall form. 97619
twisted NLC display grating for Ronchi test config. 71424
NLC displays, film-type low-twist-angle, EO props., simul. 121076
NLC displays, long-term ion transport 86815
NLC in polyimide, high pretilt angle control, photoalignment 97598
NLC mode for field seq. color microdisplay 109852
NLC photoalignment mater., ω-(4-chalconyloxy) alkyl groups 97607
nonlaminate microstruct. fab., stereolithography, LCD mask *(Japanese)* 9252
nonlin. optoelectronic feedback syst., spatiotemporal property 105468
notebook displays, polysilicon TFT technol. 86804
one-side-rubbing in-plane switching LCD 104830
opt. compensated bend cell LCD, response time, dyn. calc. *(Chinese)* 12107
optimized act.-matrix drives for LCDs 109913
optoelectronic HMD and sight syst. 121121
organic EL LCD technol. 71430
PanelMaster LCD panel inspection syst. *(Japanese)* 82241
panels in projectors, cell-gap tolerance increase by slit patterns in pixel electrode *(Korean)* 121111
pass. addressed LCDs, opt. threshold voltage, ions influence 86823
PDLC reflective microdisplays, cell gap optim. & alignment effects 97699
PECVD films for low-temp. poly-Si TFT-LCD 86813
pentacene TFT, polyimide/polyacryl gate dielec. layers *(Korean)* 115210
perfect polariz. conversion modes, Mueller calculus 71418
pers. navigator mobile multimodal commun. device design *(Slovenian)* 96512
photoaligned vert. alignment cell, EO characts. 93247
photopolymer material design 97616
photosensitive aligning surf., liq. cryst. slippage director 104831
π-cell LCD, dyn. simul. 121077
piezoelec. cold cathode fluoresc. lamp driver, LCD backlight 78335
pixellized displays, video proc. technology 86884
plasma addressed LCD, 42-inch high-defn. design 97723
polarising high efficiency backlighting system for LCD 97756
Poly-Si TFTs for plastic substrs. 97624
polyamide alignment layer, pretilt angle eval., Taguchi method 82225
polymer stabilized cholesteric texture reverse-mode light shutters, EO props. 109869
polymer-based multi-layer conductive electrode film for plastic LCD appl 82234
polymer-network stabilized liq. crysts., Fresnel phase zone plate 97724
polymer-stabilised CLC texture films, FLC doped, electro-opt. characts. 86807
polymer-stabilized fast-switching IPS config. 86835
polymer-stabilized FLC, microsized bistable domains, monostable V-shaped switching 127840
polymer-stabilized FLCD cell, FSC matrix display 97623
polysilicon, metal-induced lateral crystn. technol., device appls. 80629
polysilicon annealing using high power excimer laser 91935
polysilicon four-terminal TFTs, improved reliab. for AMLCD appl. 92343
polysilicon FPD driver ccts., low temp., RTP crystn. 97728
polysilicon low-temp. TFTs, anodic oxid. on Al/glass substrs., LCDs 70123
polysilicon TFT, channel region controlled grain growth, AMLCD appl. 86853
polysilicon TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
polysilicon TFT, hot carrier degrad./kink effect 97652
polysilicon TFT, low-temp., excimer laser long-axis scans 86851
polysilicon TFT, low-temp., single-pulse excimer laser beam profile 86852
polysilicon TFT, RF plasma & SiN_x hydrogenation comparison 81264
polysilicon TFT, silicide mediated crystn., large-area LCD 97732

rystal displays continued
silicon TFT data drivers for SVGA TFT-LCD panel 79642
silicon TFT integrated gate-data line-crossover struct., AMLCD panel appl. 864
silicon TFT LCD data driver output buffer, VGS compens. source follower 854
silicon TFT push-pull analogue buffer for TFT-LCD data drivers 109914
silicon TFT-LCD, 7-inch full-colour design 86891
silicon TFT-LCD, low temp. gate insulator, photo oxid. & PECVD *(Japanese)* 121124
silicon TFT-LCD, low temp. PECVD 124898
silicon TFT-LCD, low temp. sputter deposition technol. *(English)* 121081
silicon TFT-LCD, low-power 8-bit digital data driver 86885
silicon TFT-LCD for mobile PC XGA display 79645
silicon TFT-LCD glass substr., thermal dimens. stabil. 104818
silicon TFTs with SiN_x/SiO_2 dual under layer, back-channel effects 97653
table commun. devices displays 132096
ver LEDs, lighting appls. 82394
tilt angle effects on π-cell LCDs 86880
d. yield improvement, ITES opt. meas. syst. 121115
jection display systs., business and professional, market growth 86882
jection display technol., optimised light sources, UHP lamps 109901
jector using holographic polymer-dispersed LC films 109906
XGA superhigh defn. TFT-LCD, digital interface *(Japanese)* 121094
ality improvement using photopolymers 97711
VGA LCaD panel, small-size, on-board controller, portable appl. 97655
liology and pathology conf., Web browser-based image presentation, eval. in additional film-based environ. 98835
uid cooling dual slot load locks for LCD 109854
ar-projection display with aspherical mirror projection syst., develop. 116831
flective, R-OCB cell, diffusing property 97682
flective CMOS LCD light valves, fringe-field effects 97685
flective CMOS TN displays, projection appls. 97712
flective colour LCD panels, RGB directive reflectors *(Japanese)* 121091
flective colour TFT-LCD using twist PDLC mode with single polarizer 97681
flective full-colour TFT-LCD, micro slant reflector, high brightness and contrast 97708
flective LCD, EO, viewing charact. *(Chinese)* 71428
flective LCD, high brightness, opt. compensated twist-LC cell 97743
flective LCDs, diffusive micro slant & bump reflector comparison 86830
flective light valves, polarising microscope metrology 97658
flective liq. cryst. cells, cell thickness distrib., 2D Stokes param. method 93246
eflective liq.-cryst. microdisplays, automatic inspection syst. for defect detect. 97654
eflective microdisplays, projection and virtual-view appls. 97752
eflective mixed-mode TN cells, small pixels, opt. modelling 97683
eflective NLC display, in-plane rot., fringe field switching 121087
eflective stacked crossed guest-host TFT-driven monochrome reflective display panel, 4-inch 97709
eflective storage FLC display, ultralow power consumption, high-defn. *(English)* 121092
eflective TN-LCD, disclination dyn., CCD camera obs. 97684
eflective TN-LCD, wide VA, single polariser, compensation films 86839
eflective twisted nematic LED devices, operation mode evol. *(Chinese)* 121095
eflective twisted NLC displays, polariz. eigenvectors 132106
idge-fringe field LCD, 3D modeling 97673
igid LCD, gap form., reliab. 109890
RMS responding LCDs, restricted patterns display controller 97717
ubber-stamped organic TFT/PDLC monolithic integrat. for multipixel flexible display 71426
self-passivated Cu gate electrode for poly-Si TFT-LCD 81366
a-Si TFTs with planarized gate insulators, large-area TFT-LCD appl. 92368
solid-state laser-based displays 97760
SSFLC/AFLC display, matrix addressing, multichannel waveform generator 109911
STN LCDs for automobiles, multi-line addressing technol. appl. 97601
STN-LCD, under-twist defect near threshold 97676
STN-LCDs, ultra low power, for mobile telecomm. appls. 97696
subwavelength period binary phase grating color separator 132111
Super-TFT IPS-LCD, 18 in., fast response speed 86837
surface stabilised ferroelec. liq. cryst. device, time-resolved X-ray scatt. 121078
surface-stabilized FLCs, dyn. at alignment layer surface, total-refl. ellipsometry 75793
surgical navig. 3D display syst. 87804
surgical navig. syst. with intuitive 3D display 87787
SXGA liq.-cryst.-on-Si light valve, high-defn. video projector 86850
TAB-on-glass connection with anisotropic cond. film, mismatch 86858
TFT array metal films, prep., charactn. *(Chinese)* 71422
TFT LCD fab., ion doping syst., large area line beam form. 115535
TFT LCD inspection using high-speed high-resoln. vision syst. 127845
TFT-LCD develop. using 1 Hz/15 J excimer laser annealing 97642
TFT-LCD fab., high selectivity photoresist ashing proc. 92041
TFT-LCD matrix testing, e-beam test technol. 121126
TFT-LCD panel, timing meas. & simul., pixel macro models 97738
TFT-LCD product aperture ratio, reverse tilt domain magnitude control 86831
thresholdless antiferroelec. in chiral SLC 97604
TN-LCD, bistable, matrix-addressed operation 97693
TN-LCD, reflective single-polarizer bistable display 97694
twisted liq.-cryst. cell, coexisting nematic and smectic-A phases 75790
twisted nematic display, dichroic dye, opt. params. 109891
twisted nematic LCD, wide VA photoaligned plastic films 86840
twisted nematic LCD cell, cell gap meas. 82238
twisted nematic LCD viewing angle, in-plane-compensation foils 86838
twisted nematic LCDs, colour reprod. charactn. 97689
twisted NLC, azimuthal anchoring, half-leaky guided modes 93241
twisted NLC display phase screen, atmos. turbulence simul. 104827
two-domain TN-LCD with identical, symm. & ±80° viewing cones 86828
UV alignment on polyimide films, thermally stable 97644
UXGA compatible TFT LCD panel low noise triple channel graphic digitizer 114834
UXGA TFT-LCD for legible document viewers 86844
VGA TFT LCD driving cct. design *(Chinese)* 121127
video projectors, opt./illum. params. meas. *(German)* 86320
vision screener, LCD-based, tech. develop. *(German)* 98351
waveguide based LCD with high opt. efficiency, demo. 97745
wide-viewing-angle, interdigital electrodes, switching perform. 86829
wide-viewing-angle technol., Ultra-Trans View™ 86845
XGA thresholdless antiferroelec. TFT-LCD, 15 in., quasi-DC driving 109877
zigzag-defect-free ferroelec. LCD, fab., electrooptic perform. 104833

liquid crystal displays continued
ITO film prep. by IR FEL 68242
ITO/Ag/ITO sandwich films for simple-matrix LCD, crosstalk 86816
ITO/polysilicon contacts with In & Sn diffusion barriers, TFT LCD *(Korean)* 115437
PZT films on ITO coated glass, sol-gel proc., charactn., ferroelec. LCD appl. 90484
a-Si TFT LCD of SXGA class, universal controller, interpolation algm. 97730
p-Si TFT perform. using single-area ELA technol. 91934
a-Si TFT, two-step exposure technol., reduced-mask proc. 81265
a-Si TFT-LCD pixel, EO simul. 75784
p-Si TFT-LCD, splay to bend alignment 86881
Si light valves, empirical model of flicker 86834
Si, microcrystalline thin film, large-area polysilicon TFT-LCD 90251
Si sputtered microcrystalline thin film fab. for TFT-LCD 79207
Si thin films, excimer laser crystn., TFT-LCD appl. *(Japanese)* 92347
a-Si:H TFT reflective stacked crossed guest-host LCD 97744
a-Si:H, photoresist ashing using CF_4 gas plasma, NH_3 gas addit. 103505
a-SiH TFT, high-perform., $NiSi_2$ use, LCD appl. 86849
SiN films, selective photoresist ashing, trifluoromethane addit. 115740
$a\text{-}SiN_xH_y$ thin-film diodes, hot-electron degrad., LCD appl. 70011

liquid crystal doped polymers *see polymer dispersed liquid crystals*

liquid crystal polymers
achromatic wide-angle CLC-based broadband polariser, perform. 109881
azo containing photosensitive liq. cryst. polymer film, two-wave mixing 128442
azo-containing liq.-cryst. polymer films, controlled holographic recording 82062
azobenzene liq. cryst. polyester, high diffr. efficiency polariz. gratings 82224
azobenzene polymer liq. cryst. film, two-photon bit data storage 92968
azobenzene polymers, holographic refl. gratings 72091
azobenzene side-chain polymer liq.-crysts., opt. data storage 93887
BIAC liq. cryst. polymer film, high heat resist./dimens. stabil. 113710
CLC colour filters, opt. characts.,light recycling, brightness 109882
CLC single layer refl. polarisers, elec. controlled spectrum 104820
conf., Nanomolecular electronics, Kobe, Japan (Dec. 2000) 100445
conjug. polymer, EL liq. crysts., OLED appl. 127980
cyanoazobenzene side-chain polymethacrylate, liq. cryst., biphotonic holographic recording 72076
electron beam resists, prep.,charact. 92241
electronic packaging innovation, technol./mgt. issues 67619
FLC elastomers as piezoelec. devices 127219
fluorene-based copolymer blends, liq. cryst. component, low threshold lasing charact. 128209
integral-colour plastic LCD, polaris. control, pass. retarders 109880
lasing actions from liq. cryst. polymer blend 105161
liq. cryst. azobenzene side-chain polymer photo-induced birefr., data storage materials 71223
membrane filters, space appls. 93305
nematic LCD, patterned field-induced polymer wall form. 97619
photochromic side chain liq. cryst. polymer, reversible UV image recording 72072
poly(p-phenylene vinylene) derivatives, props./EL device appl. *(Japanese)* 71525
polymer-based multi-layer conductive electrode film for plastic LCD appl. 82234
pseudo side-chain liq. cryst. copolymer 97618
PVDF/trifluoroethylene cryst. copolymer films, structural/ferroelec./piezoelec. props., XRD 127206
quasi-phasematched nonlin. opt. waveguides 82127
twisted nematic LCD, wide VA photoaligned plastic films 86840
variable opt. attenuators integrated on planar lightwave ccts. 71352

liquid crystals
see also antiferroelectric liquid crystals; cholesteric liquid crystals; discotic liquid crystals; ferroelectric liquid crystals; liquid crystal polymers; lyotropic liquid crystals; nematic liquid crystals; polymer dispersed liquid crystals; smectic liquid crystals
alignment by lin. photopolymerization 75789
4-butyloxy-4′-cyanobiphenyl doped PVK-C_{60} composites, photorefr. props. 105470
dye-doped liq. crysts., SHG and photorefr. effect 128487
liq. cryst. mols.-polyethylene surface interacts., pseudopotentials 97626
liq. cryst. semiconds. as opto-electronic imaging materials *(Japanese)* 82364
multifunctional liq. cryst. based fiber-optic sens. 120865
permitt. X-band meas. *(Japanese)* 86917
polymer-stabilized liq. cryst. films for microwave phase control 71417
temp. field, 3-D visualisation, meas., liq. cryst. scanning thermography method 131795
third order NLO props. in phase transit. region 93750
totally refl. light anal. using renormalized ellipsometry 82237

liquid encapsulated Czochralski method *see crystal growth from melt*

liquid films
see also adsorbed layers; surface tension
act. broadband polymer stabilized liq. crysts. 86821
all-printed inorganic logic elements fabricated by liq. embossing 114704
automotive fuel spray, evol. and impingement, simultaneous Mie/LIF techs. 110048
azo containing photosensitive liq. cryst. polymer film, two-wave mixing 128442
azo dye doped NLC, photorefractivity, supra-opt. nonlin. 128424
FLC elastomers as piezoelec. devices 127219
free-falling fluid free surface flow characts., opto-coupler use 121270
inorganic logic elements, all-additive fab. by liq. embossing 102078
methyl red doped NLC film, photoinduced gratings form. 128425
moving liq. mirror SLM, opt. fab. 93211
polymer-stabilized liq. cryst. films for microwave phase control 71417
thickness, laser-induced thermocapillary response 86974
C_{60}-doped NLC films, holographic image storage 105598

liquid ionisation chambers
ATLAS liq. Ar EM calorimeter, module testing, 87166
ICARUS detector module, 10 m^3, operation 76080
intens. modulated radiation therapy, liq. ionization chambers *(German)* 111099

liquid lasers
see also dye lasers
cholesteric liq. crysts., 1D photonic band-gap and low threshold lasing 82504
graded gain random liq. laser amp. opt. diode spectral charact. 82506
liq. crysts., opt. props., conf., Humacao, Puerto Rico (Sept. 1999) 78380
polymer laser, gain-switched, pulse-train form. 82509

liquid metal ion sources
alloy ion sources for microelectronics indust., review 103229

liquid phase deposited coatings
see also electrodeposits; electroless deposited coatings; electrophoretic coatings
amphiphilic copolymer honeycomb film, fabr./charactn. 125028
polyfuran, films, electrochem. synthesis/charactn. 125013
polyfuran/polythiophene, films, electrochem. synthesis/charactn. 125013
polythiophene, films, electrochem. synthesis/charactn. 125013
tris-8-hydroxyquinoline aluminum films, nanoscale photophysics 115347
$Ag(Cl_{1-x}Br_x)$ microcrystals in photochromic coatings via sol-gel proc. 104880
Au passivated nanoclusters, electron beam lithog. 126566
$Ba_{0.8}Sr_{0.2}TiO_3$ film, modified sol-gel proc., struct./ferroelec. props. *(Chinese)* 116141
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$Ba_{0.8}Sr_{0.2}TiO_3$ sol-gel derived pyroelec. film, IR detector appl. 104387
$Ba_xSr_{1-x}TiO_3$, film, modified sol-gel tech. prep. 68346
$Bi_{4-x}La_xTi_3O_{12}$ films, chem. soln. deposited, charactn. 70402
CdS chem. deposited thin films under mag. field, props. modif. 68326
CdS film, Ag ion exchange modif., XPS profile anal. 126011
CdS films, CBD/CSS growth, band gap energy form. 90481
CdS window/buffer layer material, CdTe thin film PV modules 112993
CdS(Se) thin film, high yield synthesis, chem. bath deposition 125025
Cd_2SnO_4, film, nanocryst., sol-gel prep., electrochem. props. 103089
CdTe superstrate thin film solar cells, window/absorber layers influence 100109
$Cu(InGa)Se_2$-based absorber/$Zn(O,S,OH)_x$ buffer jn. form., solar array 100095
CuS thin film, high yield synthesis, chem. bath deposition 125025
Cu_2Se thin film, high yield synthesis, chem. bath deposition 125025
Fe-Al-Si-R (R=Ce,La) heat resistant coatings, thermal-diffusion deposition 125022
$In_x(OH,S)_y$ buffer layers for $Cu(In,Ga)Se_2$ solar cells 100037
$LaNiO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$LaNiO_3$/PZT films, enhanced fatigue property 116147
$La_{0.5}Sr_{0.5}CoO_3$, film, metallorganic chem. liq. deposition, metallic props. 125024
$LaSrCoO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$LaSrMnO_3$ conductive oxide thin films, chem. soln. deposited, roughness 68357
$Li(Co,Fe)O_2$ coatings, soln. prep., MCFC 112836
PLZT chem.-soln.-derived thin films, imprinting behavior, thickness depend. anal. 81684
PLZT thin films, crystn. and roughness, annealing effects 101424
PLZT:Ca(Sr) thin films for LV operation 116158
PZT antiferroelec. thin films on bare and RuO_2 coated steel, prep. 68355
PZT thick films, deposition on barrier layer covered stainless steel substrs. 101437
Pb-free PCB solderability preservative coatings 69318
$Pb_{0.9}La_{0.1}Ti_{0.975}O_3$ thin films, elec./pyroelec. props. 92632
$Pb_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films, capacitance dens. 125853
$PbTiO_3$/$Pb(Zr,Ti)O_3$/$PbTiO_3$ sandwich struct., sol-gel method, charactn. 70392
$Pb(Zr,Ti)O_3$ films, alkoxide-based sol-gel proc., chem. struct. evol. 127198
$Pt/SrBi_2Ta_2O_9/ZrO_2/Si$ ferroelec. gate oxide struct., elec. props. 69755
Si films, self-assembly, wet-chem. proc., photolum. 125994
Si-SiO_2-Ti-Pt-PZT multilayer struct., ferroelec. memory 70468
SiON/Si film syst., liq. phase deposition, refr. index 90499
SnO_2 sens., wet chem. route deposition on micromachined Si substrs. 109760
SnO_2:Os(Pd) films, sol gel proc., gas sens. devices 109775
SnO_2-based semicond. sol-gel sens. array, air pollutants detect. 109769
SnS_2 films, successive ionic layer adsorpt. and react. method deposition, charactn. 68338
$SrBi_2Ta2O_9$-Bi_3TiTaO_9, prep., structural behavior and ferroelec. response 81713
$SrBi_2Ta_2O_9$ film, chem. soln. deposition, a-axis orient. control 127158
Ta solid capacitor ESR reduction, C/Ag coatings, material/proc. optimisation 80430
n-TiO_2 film electrodes, enhanced photocurrent 71510
TiO_2 thin film, synthesis, metalorganic decomp./annealing 116133
ZnO:Al films, transparent conductive, sol-gel proc. prep., elec./struct./opt. props. 103003
ZnS films, chem. bath deposition with sodium citrate as complementary complexing agent 101400
Zn(Se,OH) buffer layer as heterojunction partners on $Cu(In,Ga)(S,Se)_2$ thin film solar cells 100189
ZnSe window/buffer layer material, CdTe thin film PV modules 112993
ZnSe/ZnS QD, highly photoluminescent 101422

liquid phase deposition
see also crystal growth from melt; crystal growth from solution; electrodeposition; electroless deposition; electrophoretic coating techniques; liquid phase epitaxial growth
ceramic thin films, low temp. liq. phase deposition, review 101419
CMOS gate high-k dielec. by liq. source misted chem. deposition 104100
fingering instabil. and max. rad. at high rot. Bond no. 90520
hybrid glass thin films, UV light induced surface expansion phenom. 93284
MEMS materials sci., conf., Boston, MA (Nov./Dec. 1999) 89558
methyl silsesquioxane thin films, prep. and dielec. charactn. for IC appls. 116184
opt. components/microsystems, fab., packaging 71384
opt. microlens arrays, deposition by ink-jet procs. 104766
organic SOG, $Si(OH)_{4-x}F_x$ liq.-phase deposition, optics 90482
organic TFT, recent advances, review 81278
pentacene thin films, growth dyn., real-time imaging 101434
polystyrene-coated hollow glass waveguide, IR laser delivery *(Chinese)* 93118
PWB surface finish proc. develop. for enhanced solder joint strength/reliab. 69316
symposium, chem. proc. of dielec., insulators and electronic ceramics, USA (1999) 113276
Ag/Ni-Au/solder PWB surface finishes, fine pitch BGA assembly second level reliab., comparison 113586
Au immersion/electrolytic PCB final finishes, comparison 115177
$Ba_{0.96}Ca_{0.04}Ti_{0.84}Zr_{0.16}O_3$:Mg thin films, metalorganic decomp., dielec. props. 70390
$Ba_{0.8}Sr_{0.2}TiO_3$ films, sol-gel proc., pyroelec. coeff. 104280
$BaSrTiO_3$ films, sol-gel derived, grain oriented, phase shifter appl. 90486
$Ba_{1-x}Sr_xTiO_3$:La thin films, growth, dielec. props. 81671
$Ba_{0.9}Sr_{0.1}TiO_3$/$LaNiO_3$ heterostruct., (100) oriented, chem. soln. route 81687
$Bi_{4-x}La_xTi_3O_{12}$ thin film, phys. and elec. props., effects of bottom electrodes 127172
Bi_2Se_3-Sb_2Se_3 multilayer films, SILAR deposition, PEC 89041
$Bi_2Ti_2O_7$ films, chem. soln. decomp. prep., RTA, dielec. props. 68323
$Bi_2Ti_2O_7$ thin film, chem. soln. deposition *(Chinese)* 90490
$Bi_4Ti_3O_{12}/Bi_2SiO_5$/Si struct., prep. by metal organic decomp. tech. 127170
CdS chem. deposited thin films under mag. field, props. modif. 68326
CdS films, CBD/CSS growth, band gap energy form. 90481
CdS films, chem. bath deposition 125034
CdS films, photochem. deposition from aq. solns., elec., opt. props. 79370

liquid phase deposition continued
CdS thin films, chem. deposition, growth kinetics, mag. field effects 904
CdS window/buffer layer material, CdTe thin film PV modules 112993
CdS(Se) thin film, high yield synthesis, chem. bath deposition 125025
CdSe/ZnS nanocryst. films, layer-by-layer growth, LED appl. 125029
$Cu(InGa)Se_2$-based absorber/$Zn(O,S,OH)_x$ buffer jn. form., solar array 100
CuS thin film, high yield synthesis, chem. bath deposition 125025
p-CuSCN hole collector/Ru bipyridyl dye coated nanocryst. TiO_2 film solar 100039
Cu_2Se thin film, high yield synthesis, chem. bath deposition 125025
Fe-Al-Si-R (R=Ce,La) heat resistant coatings, thermal-diffusion depos 125022
$Hg_{0.75}Re_{0.25}Ba_2Ca_2Cu_3O_{8+\delta}$ bi-axially textured HTSC film, synthesis, J_c 683
$(Hg_{0.8}Re_{0.2})Ba_2CaCu_2O_{6+\delta}$ HTSC thick films, fab., T_c, J_c 125038
HgSe polycryst. thin film, growth method 101399
ITO coatings, chem. soln. deposition, proc. and elec. props. 101426
$La_{0.5}Sr_{0.5}CoO_3$ thin films, chem. soln. deposition, crystn. 114395
$Li(Co,Fe)O_2$ coatings, soln. prep., MCFC 112836
LiCoO2, growth and studies for batt. electrodes 123770
$Li_xIrO_y{\cdot}nH_2O$ melt-oxidized film potentiometric pH electrode, fabr. and s props. 97472
$LiMn_2O_4$, growth and studies for batt. electrodes 123770
Mg reversible deposition procs., mechanisms, rechargeable Mg batt. syst. ap 112788
Ni selective deposition on nanoscale patterned Si(111)/organic monola 115792
PLZT thin film, chem. soln. deposition, $PbTiO_3$ seeding layer, orient. con 79368
PZT diaphragm-type film actuator, fab., ferroelec./displacement props. 134
PZT films, CSD proc., Pt bottom electrode alloying effects 90485
PZT highly (111) oriented thin films deposited using nonpolymeric route 114
PZT thick piezoelec. film, hydrothermally deposited, prep. and props. 1250
PZT thin films, chem. soln. deposition, ferroelec. props. 79367
PZT thin films, mech. props., adhesion, SPM/SEM, MEMS 127095
PZT(111) films, Ir(111) electrode effects, orient. control 101414
Pb film electrodes on Cu and Al nets, electrochemical/corros. behaviour 891
$Pb_{1.1}(Al_{1/2}Nb_{1/2})O_3$-$Pb_{1.1}TiO_3$ films, chem. soln. deposition, elec. props. 81688
$Pb_{0.85}La_{0.15}(Zr_{0.52}Ti_{0.48})_{0.96}O_3$ films, capacitance dens. 125853
$(PbSr)TiO_3$ thin films, prep., elec. props., post-annealing, DRAM appl. 1161
$PbZrO_3$ films, chem. soln. deposition, ferroelec. props. 127166
$Pb(Zr_{0.53}Ti_{0.47})O_3$ thin film orient., elec. props., chem. soln. deposition 10429
$Pt/(BiLa)_4Ti_3O_{12}/Pt/Ti/SiO_2/Si$ MFMIS struct., fab., elec. characts. 126229
$Pt/SrBi_2Ta_2O_9/CeO_2/Si$ capacitors for ferroelec. FET, gate stacks, XRD, ED TEM 104472
Sb_2Se_3 thin films, chem. bath deposition from alkaline medium, charact 101401
Si films, supercooled liq., solid nucleation/growth modelling 114397
SiC films, growth on Si, adsorbed propene laser melting 79379
SiO_2 photoresist mask, liq. phase deposition, image reversal 126555
SiO_2 superthin films on GaAs, liq. phase deposition, metal-semicond. barri height 80934
SiO_2 thin film on GaAs, annealing, enhanced quality 103246
SiON/Si film syst., liq. phase deposition, refr. index 90499
SnO_2 films, chem. prep., sulphide route, methane sensitivity, annealing tem effects 75739
SnO_2:Sb thin films, hydrolysis deposition method 68324
$SrBa(Nb,Ta)_2O_6$ highly oriented film, synthesis, struct. & dielec. prop. 12717
$SrBi_2Ta_2O_9$ films prep. by metalorganic decomp. using RTA, charact. 70421
$SrBi_2Ta_2O_9$ thin films, chem. soln. deposition, crystn. in N_2 ambient 68321
$SrBi_2Ta_2O_9$-Bi_3TiNbO_9 ferroelec. thin films, structural study, Raman spectra XRD, AFM 104289
$SrBi_2Ta_2O_9$(115) thin film, deposition from chem. soln., crown ether 101410
TiO_2 thin film, synthesis, metalorganic decomp./annealing 116133
YBaCuO HTSC films, soln. deposition, coated conductor fabr. and charactn 68334
YBaCuO thin films on multilayers prepared by all-chem. soln. deposition proc 125014
$YBa_2Cu_3O_{7-\delta}/Eu_2O_3(Gd_2O_3)$ buffer layer HTSC, dip-coating 68341
$YBa_2Cu_3O_y$/CuNiAl(NiCr) low cost coated HTSC, nonmagnetic substrs., prep. 68349
$YMnO_3$ thin films, chem. soln. deposition, struct./elec. props. 79365
ZnO varistor fabr., powder coating with mixed dopant solns. 79372
ZnS:Mn based EL device, growth & luminance, quasi-rheotaxy 104923
ZnSe window/buffer layer material, CdTe thin film PV modules 112993
$(ZrSn)TiO_4$ thin films via aq. polymeric precursor route 125030

liquid phase epitaxial growth
cryst. growth and epitaxy, conf., Vail, CO, USA (Aug 2000) 78433
fluoride materials, growing of bulk crysts. and structuring waveguides, laser appls. 68178
garnet mag. cryst., LPE growth, SEM, XRD, EDX, RHEED 125015
III-V semiconds. liq. phase electroepitaxial growth, conc. profiles simul. 101445
substr. engng., role in epitaxy, conf., Boston, USA 124224
Al/Si/p-SiC ohmic contacts. thermal stabil., LPE 69703
$Al_xGa_{1-x}As$/GaAs solar cells, highly efficient, growth, characts. 89303
AlGaAsSb, virtual substrs., LPE growth 79380
$BaSrTiO_3$ films, sol-gel derived, grain oriented, phase shifter appl. 90486
$Bi_2Sr_2CaCu_2O_{8+x}$ single-cryst. films, LPE growth 125033
GaAlAs-based symm. emitter-collector planar DHBT, LPE fabr. and DC charactn. 70030
GaAs concentrator solar cells, LPE grown, 1000 suns operation, 26.2 % efficiency 112927
GaAs:Cr, epitaxial detector p-i-n-struct., γ-ray/ξ-ray detector appl. 90489
GaAs/AlGaAs QD, modified droplet epitaxy, PL obs. 68347
n-GaAs-p-$(Ge_2)_{0.02}(ZnSe)_{0.03}(GaAs)_{0.95}$ struct., photosensitivity 104897
$GaAs_{1-x}In_xAs_ySb_{1-y}$ solid solns. by LPE, role of Pb 114383
GaInAsSb/GaSb low-bandgap TPV cells advances 113023
GaN epitaxial layers, single-mol. precursor efficient chem. soln. deposition method 101418
GaSb solar cells, simultaneous Zn and P diffusion 113028
GaSb/InGaAsSb based photodiodes, band energy diag. engng. & photoresponse 71547
$Gd_3(Ga_2Sc)_5O_{12}$:Er epitaxial films, spectral-luminesc. props., solid lasing 117150
a-Ge on GaAs, epitaxial pulsed laser crystn. 101432
$Ge_{1-x}Sn_x$ solid soln. film, LPE growth and charactn. 125011
$Ge_{1-x}Sn_x$ solid solns., epilayer growth from liq. phase 125036
HgCdTe LPE layers, undoped annealed, carrier conc., substr. quality effect 91673
HgCdTe epilayer, surface oxid., X-ray PES *(English)* 81089
HgCdTe epitaxial film, LPE growth *(Chinese)* 101431

hase epitaxial growth continued
dTe on sapphire, LPE, status & advancements 90522
sSb, virtual substrs., LPE growth 79380
sSbP solid soln. films, LPE on InAs, LED appl. 114382
sSbP, virtual substrs., LPE growth 79380
sSbP/InAs low-bandgap TPV cells advances 113023
sSbP/InGaAsSb/GaInAsSb type II heterostruct., high power mid-IR lasers 672
$_3Ga_{0.47}As$ TPV cells, simultaneous Zn and P diffusion 113028
aAs/SiN$_x$/GaAs(111)B bridge layers LPE growth, circ. trench geom. optimis- on 101444
aAsSb, virtual substrs., LPE growth 79380
aAsSb(Gd)/InAsSbP DH lasers, 3-3.3 μm, LD spectrosc. 71833
aP/GaAs, selectively-grown on Si, PV-photoelectrolysis cells appl. 79393
aP/GaAs/Si PV/PEC cells, selective heteroepitaxy, H_2 generation from sun- ht 112956
aSb, virtual substrs., LPE growth 79380
$_xRb_xTiOPO_4$ epitaxial waveguide films, opt. props. 116878
:LiYF$_4$ T-shaped channel waveguide, fab. & lasing 71337
$_{-y}Sn_xTe_{1-y}Se_y$ lattice-matched layers, LPE growth and props. 90479
$Zr_{0.5}Ti_{0.5}O_3$ thin films, chem. soln. deposition epitaxial growth and props. 0497
Ba-Cu-O thick film on metal tape, coated conductor fabricated by LPE 68331
$Ba_2Cu_3O_7$ HTSC films (R=rare earth), LPE growth from NiO saturated soln. 8350
$Ba_2Cu_3O_{7-\delta}$, mixed, solubility and LPE growth 68330
LPE thin-film solar cell characterisation 100088
cryst. thin films for solar cells, native substrs., growth, props. 100034
cryst. thin-film solar cells, lateral LPE growth method 100089
films, electro-ELO from liq.-metal solns. 79381
wafers, epitaxial growth, CMOS ICs *(English)* 79387
C-SiC films, LPE growth, XRD, XPS, Raman spectra 79391
C low-temp. LPE growth, metal solvents assess. 79392
C single crysts., micropipe/macrodefect healing, LPE growth 68322
$O_2/Na_2B_4O_7$, LPE growth, morph. anal. 101429
-Ba-Cu-O/Ag($SrTiO_3$) HTSC, biaxially aligned, spray pyrolysis epitaxial growth 68348
AG:Nd(Lu)(Ga) thin film laser, growth & charactn., LPE 93548
BaCuO HTSC wire, fab. of buffer layers and seed layers on biaxially textured Ni tapes 124880
BaCuO coated conductors, low cost, prep. by soln.-based techs., buffer layers 68332
BaCuO thin films on multilayers prepared by all-chem. soln. deposition proc. 125014
$Ba_2Cu_3O_7$ HTSC film bicrystal Josephson jns., transport 70677
$Ba_2Cu_3O_{7-\delta}$ HTSC thick films, LPE growth on textured metal substrs. 68333
$Ba_2Cu_3O_x$ epitaxial film on single domain YBCO substr., prep., charactn. 68328
$Ba_2Cu_3O_7/NdBa_2Cu_3O_7$ single cryst. contacts, LPE growth 70584
$Ba_2Cu_3O_{7-\delta}/NdGaO_3$ buffer layer/textured Ni tape, fab. 68313
nSe growth from zinc chloride solvent by successive LPE 101443

d proportional counters
Xe liq.-gas double phase proportional scintillation detector for direct WIMPs search 121494

d scintillation detectors
rgon detectors, neutrino meas., expt. design 97981
ATLAS detector liq. argon calorimeters, implement. of serial protocol 121639
ATLAS EM calorimeter, high speed digital opt. data link, SEU 121623
ATLAS liq. Ar calorimeter read out driver syst. 121736
ATLAS liq. Ar EM calorimeter, preliminary results 132429
ATLAS liq. argon calorimeter, readout drivers, PU design 76105
BICRON BC501A liq. scintillator neutron detector, FLUKA simul. 121609
BOREXINO, tech. description 76087
Borexino real-time detector, solar neutrino flux expt. 97975
Borexino solar neutrino expt. status 87160
BOREXINO solar neutrino expt. status 110281
Borexino ultrapure organic scintillator detector for solar CR neutrino expts. 132314
CLEO-III trigger, level 1 decision and gating 121733
DØ calorimeter upgrade 121630
foggy scintillation counting tech. 121429
ICARUS detector for underground phys. 76086
ICARUS detector module, 10 m^3, operation 76080
JT-60U D plasma diagnostics, neutron detector comparison anal. 121751
KamLAND reactor neutrino oscill. expt. anal. 132311
liq. methane chamber, scintillation light from interacts. of neutrons 132405
long baseline neutrino oscill. expt., large liq. scintillator detector 87208
LXeGRIT, liq. Xe gamma-ray imaging telescope, light trigger syst. perform. 121773
LXeGRIT, upgraded DAQ syst. 132461
methane chamber, scintillation light obs. from neutron interacts. 121565
MUNU detector for ν mag. moment detect., MUNU data 87162
muon catalyzed fusion with intense pulsed muon beam, neutron detect. syst. 98043
NA48 trigger supervisor, 40 MHz pipelined hardware syst. 121732
NE213 liq. scintillator, pulse-shape discrim. deterioration at high energies 121564
NE213 organic liq. scintillator, response fn. meas., neutron energy up to 206 MeV 87210
NE-213 liq. organic scintillator, high emergy neutron meas., TOF method 121563
organic scintillator, neutron detect. efficiencies up to 3 GeV 121562
radioactivity primary std. estab., traceability syst. *(Japanese)* 86391
radiotherapy, 3D dosimetry, liq. scintillator, Cerenkov radiation effect 111201
SNS beam loss monitor syst., design 87112
WIMP dark matter searches, detectors 132315
ZEPLIN-I, single phase liq. Xe detector for dark matter search 121542
Ar liq. calorimeter for ATLAS, serial protocol 132412
Xe liq. photon detector for μ→eγ expt. at PSI 121541
Xe liq., scintillation light detect. using large area APD 121592
Xe liq. scintillator response for gamma rays 121550
Xe liq.-gas double phase proportional scintillation detector for direct WIMPs search 121494
Xe liq.-scintillation chamber, ^{20}Ne ion beam response 87200

quid semiconductors
$CuAsSe_2$ liq. semicond., nonmetal-metal transit. 91703
Si:O, melt transient O conc., CZ proc. in mag. field 124801

liquid surface waves *see surface waves (fluid)*

liquid waves
see also ocean waves; surface waves (fluid)
vert. upward bubbly oil-water flows, cross correl. vel. meas. 121295

Lisa computers *see Apple computers*

LISP
VHDL described replicated archits., induction-oriented verif. 68687

listings *see complete computer programs*

literature
see also dictionaries
computer vision education and text resources, survey 113385
inhabited TV, broadcasting interact. inside collaborative virtual environs. 86301
rare books, digital archiving, image proc. technol. appl. 106706
spoken document retrieval for TREC-8, broadcast news audio 106387

literature reviews *see reviews*

lithography
see also electron beam lithography; ion beam lithography; photolithography; proximity effect (lithography)
3D microstruct., soft molding fab. 126523
3D nanolithography, light forces 126567
128×128 microshutter array design, lithog. proc. 93196
air-channel structs. for microfluidic, MEMS and microelectronic appls., fab. 113559
CD uniformity improvements based on mask quality 103633
CD-SEMs, unified spec. 103531
cell manipulation bio-microsystem, fab., shadow mask techs. *(English)* 76233
chem. amplified resist, thickness reduction effect 115724
CMOS front/back end plasma etch procs., fund. design limitations 104126
CMOS transistors, lithographic techs., operating speed and power consumption *(Italian)* 81286
color PDP, lithog., optim. *(Chinese)* 80627
conductive lithographic film ccts., fab. proc. and appls. 91463
conf., Scanning probe microsc., Nizhny Novgorod, Russia (Feb./Mar. 2001) 89546
conf. on EO and microelectronics, Tel Aviv, Israel (Nov. 1999) 78457
cpd. semicond. mfg. technol., conf., Las Vegas, NV, USA (May 2001) 113279
demodulation of servo tracking sigs. printed with litho. patterned master disk 116364
device nanofabrication, conf., Boston, MA (Dec. 1999) 89518
diamond ultra hard film, CVD, maskless patterning, structuring 105631
dip-pen nanolithography, custom multicomponent sub-100 nm surface archit. fab. 103713
direct print microlithography, computational modeling 103699
direct write technol., conf., San Francisco, CA, USA (2000) 113203
DRAM to ASIC prod. transit., lithog. challenges 115983
electrostatic chucks for litho. appls., design apsects 115764
flexible polymer LED mfg., cond. lithog. film technol. 121067
hidden product overlay errors, deciphering/encoding 103533
homopolymer films, lithographically induced self-assembly 114459
Hybrane, trilayer resist, nanoimprint lithog. 126531
InP-based arrayed waveguide grating DEMUX 120378
interdigitated capacitors by offset lithog., cct. board manufacture 91475
IR FPAs, systs.-on-a-chip, CMOS technol., design tools 109635
mag. contact duplication, lithographically patterned master medium *(Japanese)* 92837
mag. struct. design and synthesis, review 81793
metal dot arrays, hexagonally ordered, large area dense nanoscale patterning 92192
metallic point contact, nanoimprint lithog. 126204
micro- and nano-engng., conf., Jena, Germany (Sept. 2000) 113269
microfluidic devices from soft lithog. 92508
MOEMS packaging modules, micro-opt. integrat. 93202
mol. scale electronics, crit. nanolithography issues 92236
multilevel nanoimprint lithog. with submicron alignment over 4 in. wafers 92213
nanoelectronic complementary bipolar ccts., single-lithog. proc., num. simul. 70323
nanofabrication, computer-assisted design, automated vector-scanning probe lithog. 103708
nanofabrication using hot embossing lithog. and electroforming 115781
nanoimprint lithog. 81163
nanoimprint lithog., direct 3D patterning 69987
nanotechnology trends, self-assembly/defect tolerance 92257
nonlaminate microstruct. fab., stereolithography, LCD mask *(Japanese)* 92520
nontraditional micromachining technols., overview *(Chinese)* 92527
offset printing of liq. microstruct. for high resoln. lithog. 103697
opt. components/microsystems, fab., packaging 71384
opt. digital profilometry for sub-70 nm IC metrology 121209
overlay controller formulation, successive patterns alignment 103564
packaging/phys. design for high sig. bandwidth era 67635
pattern transfer, IC-compatible proc., RF-MEMS component integrat. 92558
patterned multifunctional nanostructures, rapid prototyping 103716
planar microcontacts form. by conductive probe, differential conductance 91786
polymer bonding proc., nanolithography appls. 126522
polymer thin film, viscous flow, hot embossing lithog. 126588
polymeric micromechanical components with tunable stiffness 116102
pos.-tone wafer coating materials eval. on lithog. proc. 126516
proc. control, advanced, basic functionality requirements 103524
proc. integrat., conf., Santa Clara, CA, USA (Sept. 2000) 100400
quantum point contact and QD, nanoimprint lithog. 126143
quantum wires and dots, MBE growth 90271
rapid prototyping, stereolithography, build-time estim. 93910
redox probe microscopy, mol.-scale lithographic appls. 126575
resist materials, small line-edge roughness, nanolithography 92242
reticle error correction for lithog. tool qualification benefits and limitations 103592
review 92187
semicond. exposure apparatus, anti-vibr. units, subspace multivariable syst. ident. *(Japanese)* 103657
semicond. fab, litho. equipt. financing considerations 92194
solid freeform & additive fab., conf., San Francisco, USA (Apr. 2000) 67379
SPM based nanolithography, electrodes fab., mask patterning, local oxid. 103511
SRAM densities beyond 0.13 μm technol. in yr. 2000 103628
step tapered waveguides, propag., asymptotic anal. 104707
stretching for next generation lithog. masks 103508
surface microstruct. selective emitters for TPV systs. 113020
two-phase fluid, lithographically-induced self-assembly 81137
ultrananocrystalline based high resoln. MEMS technol. 104172

lithography continued
vert. merged MOS ULSI, optoelectronic/nanoelectronic, single-wafer single-lithog. proc. 70318
AlGaAs, AFM-defined semicond. nanostructures, electronic props. 126603
AlGaAs/GaAs heterostruct., layer-compensated selectively doped, nanolithography appl. 91733
$Al_xGa_{1-x}As$-GaAs based nanofabricated reson. tunneling LEDs, fab., charact. 93413
AlGaN/GaN HEMT, prep. on 2-inch proc. line, DC/microwave charact. 126869
AlGaN/GaN HEMT, technol./perform./fab., 2-inch epitaxy, microwave power appls. 81383
Au microstrips, reversible surface modif., nanomachining by voltage-biased AFM tip 92217
CdTe surfaces, antireflective struct. by ECR plasma etching 93313
CdZnTe surfaces, antireflective struct. by ECR plasma etching 93313
Co micro-ring, magnetis. reversal, nanoimprint lithog. 127312
GaAs mfg. technol., conf., Washington, DC, USA (May 2000) 78444
GaAs nanopillars fab., colloidal gold natural lithog. 126601
p-GaAs oxide, aspect ratio improvement, AFM-based nanolithography 92216
GaAs/AlGaAs MQW IR photodetectors with 2D random-grating opt. couplers 86547
GaAs/AlGaAs shallow 2DEG, conducting tip AFM lithog. 126121
InAs QD, selective area epitaxy using InGaAs thin films 124993
PtSi ultrathin layer patterning, scanned probe lithog., quantum device appl. 103498
Si PIN detector, fab., planar technol. *(Chinese)* 110282
Si nanolithography, tip-surface interacts. 126584
Si pattern on PMMA, nano mold lithog. 115726
Si single cryst. MEMS, sub crit. crack growth, crack vel./length 104170
Si surface, 7×7 reconstruction, step/domain boundaries self organisation 91612
Si surfaces, nano-oxid., contact/noncontact AFM studies 92017
Si wafer, (100), precise mask align. to cryst. orient. using wet anisotropic etching 92563
Si(100), wet etching, nanoscale texturing, multicomponent SAM phase behav. 103337
6H-SiC, lithographically introduced cavities, high-temp. morph. evol. 80772
Si_3N_4 films, ultrathin on Si, SPM/lithog. 92030
Si_3N_4 masks, scanning probe oxid. 115786
Si_xN_y molds, low temp. nanoimprint lithog. 115780
$YBa_2Cu_3O_{7-\delta}$-Au(Ag) film contacts, metallization/interconnection 127508
ZnO selective-area ALE growth on soft lithog.-patterned substrs. 114278

lithosphere *see Earth crust*

liver
3D abdominal sonography, liver tumours appl. 121992
3D vol. registration, expts. on tissue phantom & liver 110753
abdominal breathhold contrast enhanced mag. reson. angiography, scantiming 87594
abdominal image quality, real-time correction of wavefront arrival time errors 110766
automated segmentation, multislice CT images *(Japanese)* 122152
B-scan US imaging, liver thermal coagulation, freq. shift atten. mapping 98287
biotissues, nonstationary mass removal by laser ablation, Doppler diagnostics 122047
bipolar RF ablation, separated multiprong electrodes 122309
bovine liver clenbuterol sens., mol. imprinted polymer, voltammetry 97421
breath-hold 3D CT, multi-detector row helical method 87763
cancer coagulation, microwave-induced thermal distrib., computer-aided dyn. simul. 87870
cancer RF thermal ablation, ultrasonography and Doppler tech. *(Chinese)* 76358
cirrhosis diagnosis, RF echo sig., envelope charact. estim. 98296
computed tomography interp., zoom-and-pan vs. browse-and-paste display method, effect on inter-observer agreement 76518
CT images, computer-assisted diagnosis, modified perceptron algm. 76511
diseased heart/liver tissues, acoustic prop. distribs. 98298
diseases diagnostic syst. based on conventional US equipt. 98293
dual isotope SPECT, noise reduction, analytic atten. correction method 122174
electroporation threshold determ. in vivo, rabbit liver model 98211
ELF mag. field effects on haematological/biochem. params. 98752
focused US surgery, thermoacoustic lens effect simul. 76592
graft rejection diagnosis, implant. telemetric impedance device 87449
hepatic interstitial radiotherapy lesions, temporal CT 76499
hepatitis C, glucagon injection, portal blood flow vel., sonography 98267
image segmentation, semi-automatic of 3D objs. 87705
implantable mech. microsyst. develop., blood pumps 122335
interstitial laser photocoagulation, relative light fluence changes, opt. monitoring 122302
interstitial RF therapy effectiveness, shear modulus reconstr. 122289
microwave coagulation therapy, tip-split array applicator 98682
MR imaging, contrast agents, review 122077
multielement catheter-cooled interstitial ultrasound applicators for thermal therapy 98639
parenchyma, dyn. contrast-enhanced 3D MR imaging 87677
perfusion conditions, contrast agent US imaging, data proc. 110746
PET, estrogen receptors, [^{18}F]fluoroestradiol radiation dosimetry 98758
renal/hepatic tissue, 2-bromoethanamine toxicity, ^{1}H MAS NMR 87612
repair/haemorrhage control, liq. albumin laser soldering 87824
RF ablation treatment planning, blood vessel detect. 111134
RF thermal ablation with NaCl soln. injection, elec. cond. effect 87878
soft tissue, high-precision motion estim., speckle echo wavelet transform 98301
SPECT, ^{67}Ga imaging, scatt. compensation method, ANN use 122180
surgery, impact of combined pre-operative 3D CT and intra-operative real-time 3D ultrasonography 87788
target of the day radiotherapy precision, computer-controlled table 87820
tele-virtual surgery, sharing tactile sensations between Japan and Germany 98863
therapy, image-guided, intra-operative image segmentation and non-rigid image registration 87785
tumor detect., automatic from CT images 87697
US diagnostic syst. for liver disease, fractal dimens. 110720
US echo decomp. perform. using sing. spectrum anal. 132618
US liver tissues class., M-band wavelet transform appl. 87512
whole body atlas, organ segmentation/delineation, radiation therapy CT 132811
X-ray diagnosis, simulated annealing with logarithmic cooling schedule 110921
Dy-bearing red cells, MRI transverse relax. agents 87628
^{99}Te^m-labelled radiopharmaceuticals, Indian adult, radiation dose estim. 111235
^{99m}Tc-annexin V, intravenously administered, patient dosimetry 76735
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964

livestock *see farming*

living systems
see also biocybernetics; brain models; physiological models
antenna/chip biosensor using insect species, organic odour mols. 132011
sustained neurons in fly, analogue IC design 91134
white noise excitation, bio-response 98754

LMIS *see liquid metal ion sources*

LMS methods *see least mean squares methods*

load (electric)
see also load dispatching; load distribution; load flow; load forecasting; l management; load regulation; load shedding; power station load
0.5 MV/1 GW compact twin-output pulsed power supply 99777
2.4 MVA soft-switched modular MV drive, design considerations 134201
3-phase power networks calc. using Pspice *(Russian)* 77134
3-phase supplied network, nonlin. single phase loads, neutral conductor curr 122977
4 kW, 42 V induction machine-based automotive power generation sche 134565
13.56 MHz current-source generator using HF CSI approach 123623
42 V automotive elec. distrib. systs. load dump protection 89412
42 V vehicle power archits., energy storage/mgt. systs. 78315
48 V power convertor archit. for datacom-telecom appls. 88850
120 kVA automated power quality test platform 133708
500 W series-reson. DC/AC inverter for impedance-load drives 77960
690 V indust. distrib. networks, economic savings pot. *(English, Frenc* 134668
AC rly. supply systs., static converter substations, power oscills. *(Germa* 78270
act. filters ref. currents detect., Darrieus reactive power defn. 122983
act. power filters, expanded current sync. detect. algm. 134333
act.-clamp couple-buck converter voltage regulator module 88843
adaptive SVC, arc furnaces voltage flicker/phase current imbalance eliminati 122980
arc furnace cct. pass. higher harmonics filter perform. *(Polish)* 124104
arc furnace harmonics/interharmonics/unbalance, freq. domain anal. 134649
arc furnaces, rly. traction, power converters, load anal. 100328
Asian-Pacific Economic Community integrat. overview 111701
autonomous solar power supply of low-power loads 112383
bal. three-phase variable inductance, transient power charact. 111670
batt.-operated power mgt. systs., design challenges 78026
bidirectional sinusoidal HF PWM inverter design 99820
bilateral market feasibility for load following 133502
Brazilian solar home PV power systs., energy demand meas. 133898
bridge-type supercond. fault current limiter, DC reactor effect 77583
buck converter power transfer with DC motor load 88987
buck ZVS quasi-reson. power converters, behavioral charact. eval. 77959
Chinese power distrib. planning problems *(Chinese)* 111953
CMOS act. clamp cct. for voltage regulation module appls. 114608
commercial building power syst. harmonics, digital monitoring systs. 77347
compact fluoresc. lamps for household hourly load curve improvement 13460
component load models aggregation, Kohonen self organizing map *(Korean* 122779
composite power syst. outage cost assess. method *(Korean)* 77155
controlled rectifier load, transient procs. eval. *(Russian)* 77953
current harmonics elimination using series hybrid act. filter 133714
DC distributed power systs. stabil. margin monitoring approach 88360
DC motors, solar array-fed, direct selection procedure 134064
DC-DC power converters, distributed power syst. perform. anal. 88899
DC-DC stepping inductance voltage regulator with fast transient loading response 88846
dispersed-source power syst. advanced meas. syst. 77652
distrib. network parallel act. power harmonic filter control strategy 133553
distrib. network source currents computing, stat. fns. 99343
distrib. networks rem. control, integrated quality mgt. *(English, French)* 133617
distrib. syst. load curve estim. using prediction intervals 112054
distrib. systs., harmonic flows, load models comparison 133686
distrib. transformer load profiles modelling 134123
distrib. transformers loading estim. by fuzzy logic 123564
domestic appliances on/off control devices, EMC enhancement 78351
domestic load assess., intell. syst. 99434
DSM programs economic anal./modelling in generation planning 77297
DVR™ PM platform-mounted dyn. voltage restorer, field experience 77225
dyn. loads interact. with FACTS controllers 99294
dyn. voltage restorer systs. topologies comparison 134222
elec. motor theory/operation primer, tutorial article 133943
elec. motors efficiency under practical conditions 88687
EV loads, power distrib. syst. harmonic effects 122990
four-wire elec. power systs., load compensation, PFC 77178
fourth-order DC/DC PWM power converters, external charact. plotting algm. 112643
gas turbine modeling/testing, utility experience 112326
generation bidding algm. tutorial, network flow prog. method *(Chinese)* 88323
generation syst. interruptible load carrying capability 88334
global voltage regulation, radial distrib. network supply quality measure 112061
harmonic-polluted power networks, Steinmetz circuitry behavior symmetrization 133685
high-input voltage regulator module design using integrated mag. 88845
IEE CIRED 2001 elec. distrib. conf., Amsterdam, Netherlands (June 2001) 124221
IM, params. weighting-mean synthesis modeling *(Chinese)* 123451
IM broken rotor bar detect using pattern recogn. 123424
IM load effect diagnostic tool using instantaneous power spectrum 99656
IM loads, aggregate model 77875
IM three-phase voltage unbalance effects modelling 112501
IM total losses/temp. rise determ. using equiv. loading methods 112498
IM vector control, space-vector modulation tandem inverter 123428
IM-generator traction set develop. 134545
induction generator CHP-fed distrib. network, self-excitation phenom. 122849
induction generator controller for standalone appl. with unbalanced load 112558
induction heating current-fed inverter AFC 124100
inductive load-current interruption, arcing duration estim. *(Japanese)* 102797
indust. distrib. network high-speed VAr compensation systs. 88389
indust. networks, reactive power resources, optimal exploitation 99185
indust. plant, IM load, power quality improvement by static transfer switch 134669
indust. power systs., single-phase loads balancing, hybrid scheme 122997
inexpensive quasi-unity PF regulation syst. for resistive heaters 89450
interconnected power network state estim. using branch outage sensitivity 77180
Internet hotels computer equipt. power supplies planning 88397

lectric) continued
perspectives on power syst. voltage stabil. 133544
ated three-phase induction generator, excitation capacitance requirement 2512
LP calc. using learning VQ 77141
g. power syst., unstable LF oscill. damping, eigenvalue anal. 122854
less commutated boost converter as burn-in appl. act. load 88916
distrib. network transient/steady-state voltage drops *(Italian)* 88426
distrib. networks, voltage dips and consumer sensitivity 133681
SRM drives for more elec. car concepts 123966
FC generation syst. rapid load changes, perform. implications 112437
tropolitan power syst. islanding protection/power balancing control syst. 513
ted chaotic elec. arc furnace model develop. *(English)* 124097
del params. estim., voltage vars. influence 133418
dular multilevel inverter for HV AC power supply appls. 134247
tor starting, service quality measures 123322
lti-freq. syst., nonlin. 3-phase load modeling, symmetric components 122998
lti-machine power syst. stabil., generalized Heffron-Phillips model 88355
ltiple-conductor power cable systs., short-cct. impedance calcs. *(German)* 33739
nicipal works CHP station, network disturbance consequences 77745
V distrib. network extended load modelling software 133658
V power distrib. networks, neutral grounding mode protection *(English, rench)* 133770
nactive power due to randomness 111724
nlin. arc furnace loads anal. using EMTP 134651
nlin. electronic loads, power quality assess. and harmonic comparison 112080
orton equiv. model for distrib. syst. nonlin. loads 112087
c. reactor load follow capability, fuzzy adaptive robust optimal controller 23133
timized hybrid power filter and VAr compensator 134334
erhead transm. line ampacity anal. using FEM 99382
rallel act. power filters under unbalanced load conditions *(Korean)* 123712
EMFC electrochem.-perform., testing/modelling *(Chinese)* 78161
troleum indust., power distrib. over long dists., design 134692
M motor drive single-phase high PF converter develop. *(Japanese)* 77970
M wind energy generator for power heating appls. *(Latvian)* 112367
olyphase rot. induction machines, stray load losses calc. 112518
ower acceptability curves for load compatibility studies 112079
ower line current sens. using analogue opt. data transfer 77661
ower supply voltage quality improvement using voltage control techs. 77358
ower syst. current symmetrisation, Steinmetz syst. design study 122899
ower syst. harmonics, sources and filtering approaches 89038
ower syst. load freq. response charact. calc. *(Chinese)* 77145
ower syst. static stabil. anal., freq. vars., static capacitor bank *(Russian)* 99259
ower syst. unstable LF oscill. damping, load models effect 88376
ower syst. voltage distortion source detect. method 77339
ower syst. voltage instabilities, voltage reduction emergency control 77272
ower syst. voltage level/VAr bal., generator leading PF impact 77216
ower syst. voltage stabil., SVC/TCSC effects anal. *(Chinese)* 122860
ower syst. voltage stabil. anal., combined power load model *(Chinese)* 77229
ower syst. voltage stabil. studies, indust. loads modelling 133528
rog. single phase AC power source, switched current topol. 99757
V power generation systs. simul. using field data *(Japanese)* 77800
V power systs. simul. using real weather conditions 133907
V pumping systs., test facility/charact. meas. perform. eval. 99595
WM CSI-fed PMSM drive expts. 123886
adial power distrib. syst. voltage sag countermeasure *(English)* 77453
adial three-phase four-wire distrib. feeder, cogen. plant effects 77331
eactive power optimal distrib. 99192
eactor allocation optimisation for light load operation 111940
ectifier load elec. cct. transient procs. 99749
Romanian Nat. Power System operation stabil. assurance under low load 111826
Romanian power syst. operation stabil. under light load conditions 111825
seasonal load charact. in 22.9 kV bus *(Korean)* 122774
SEIG transient conditions under symmetric load 123471
separately excited DC motor, parallel inductive R-L load, AC-DC converter supply 99684
series act. power filter control algm. *(Korean)* 123713
series act. power harmonic filter adopting hybrid control approach 78112
series power quality compensator test studies *(Chinese)* 77368
series voltage/harmonic compensator sync. frame-based control strategy 88435
short-term hourly load forecasting, time-series modeling, peak load estim. 88408
shunt act. power harmonic filter neurocontrol scheme 78114
shunt capacitor appls., harmonic reson. pot. assess. 77354
single-/3-phase unbalanced loads, PFC, multilevel diode clamped VSI 111813
single-ended power converter with integrated mag. element 77954
single-phase nonlin. loads, transient behaviour studies 88438
smart domestic appliances control using microcontroller-based triacs 78352
soft-switching choppers, load adaptive ZVS scheme 134189
solid rotor pulsed asynchronous generator, FEM-based num. anal. 123437
South Korean elec. infrastructure change 111700
Spanish elec. sector distrib. losses eval. 133486
stand-alone alternator fuzzy logic-based AVR scheme studies 133953
stand-alone PV power systs. sizing, reliab. considerations 112403
static transfer switch perform., regenerative load effect 134280
Steinmetz syst. calc. by optim. methods 111665
stepping motor size selection guidelines 88775
supercond. power supply operational charact. anal. *(Korean)* 123587
SVC siting using dyn. variable string length GAs 99268
tariff/contract develop. incl. power quality and harmonics, Iran 133443
telecomm. buck-type power converter load, input dyn. modelling 108454
three-phase four-wire distrib. syst. harmonic suppression scheme 88436
three-phase four-wire distrib. systs., neutral harmonic mitigator design 133702
three-phase fuzzy-controlled shunt act. power conditioners 122907
three-phase power syst. harmonics, seq. ccts. study *(Chinese)* 88432
three-phase transformer power-based differential protection relay model 77942
thyristor static transfer switches, modelling and simul. 112689
time-varying power syst. harmonics visualisation using Morlet wavelet transform 99367
traction power supply systs., grounding systs. anal. 78301
transformers load capacity determ., multistep load graph conversion 77909
transm. network expansion planning using GA 111945
trapezoidal-wave power distrib. syst., diode rectifier loads 133668
variable speed compressor drives, public power grid connection 133683
voltage stabil., generator and load dynamics effect 88382
voltage stabil., modelling and syst. protection scheme 77271
VSI output LC power harmonic filter design 78115
Zimbabwean rural electrification, PV power systs. experience 88660

load balancing (computers) *see resource allocation*
load control *see load regulation*
load dispatching
see also power generation dispatch
bid-based demand contingency constrained economic dispatch 77182
Chinese elec. market real-time transaction mgt. syst. *(Chinese)* 122858
control room fault disturbance recorder, operator aid 89778
daily optimal economic load dispatch in elec. market, improved priority method *(Chinese)* 77169
deregulated power market, trade planning model *(Chinese)* 133476
distrib. dispatching center, Iran 133613
distrib. feeder capacitors, branch-and-bound dispatching 77324
district power network, integrated automation syst. *(Chinese)* 77245
dyn. optimal dispatch, network flow algm. 77196
elec. market dispatch, stabil. constraints incorporation 111690
electricity dispatch automation syst. based on Intranet *(Chinese)* 77168
fast optimal dispatch, global transient stabil. constraint, Chua NN 133517
global elec. power mgt. syst. *(Chinese)* 133480
Kwang Yang steel works, on-line economic load dispatch program *(Korean)* 134673
locational marginal pricing, transm. congestion alleviation 111747
main transformer ULTC and capacitors scheduling, simulated annealing 123548
multi-zone unbundled elec. markets, real-time coord. dispatch 99264
open power market FACTS device optimisation *(Chinese)* 77187
OPF algm., num. expts., parametric techs. 88415
power dispatch EMS, commun. syst. Blown Scan improvement *(Chinese)* 77173
power dispatch with prohibited zones, Hopfield neural net 111801
power network black-start DSS *(Chinese)* 122886
power network dispatching automation, telecontrol inform. monitoring *(Chinese)* 77241
power QC using redox rechargeable batt. syst. 112063
power syst. act. secure economic dispatch algorithm 77217
power syst. automated dispatch, telecontrol, networked commun. *(Chinese)* 88356
power syst. education, OPF model 133582
power syst. load dispatching, transient stabil. considerations *(Chinese)* 122861
power systs. operation, optim. methods survey *(Japanese)* 77248
pulp mill, integrated turbine-generator digital control syst. 124151
real time economic dispatch 77160
real-time power network stabil. monitoring software *(Chinese)* 111835
short-term hourly load forecasting, time-series modeling, peak load estim. 133573
substation, RTU operation stabil., RTU design, RTU mgt. *(Chinese)* 99860
subtransmission power network dispatcher training simulator develop. *(Chinese)* 77300
TH2100 SCADA syst., front-end proc., load dispatch automation *(Chinese)* 99273
three-level dispatching syst. automation, HDCSII project, Taiwan *(Chinese)* 77191
transm. dist. estim. for proposed location factor 99324
Turkish EMS upgrade project overview 122897
unbalanced three-phase power systs. simul. for dispatcher training simulator *(Chinese)* 88312
VAr-constrained real power dispatch/pricing algm. 111807
very short term load forecaster, electronic dispatch project, ISO New Eng. 111981

load distribution
distrib. network, load profile ident., ART algm. 99245
heavy-loaded distrib. feeder loss reduction, cyclic sub-tree search method *(Korean)* 122968
LV distrib. network voltage unbalance studies 133684
pumped-storage power plant planning model *(Chinese)* 77788

load flow
see also load flow control
AC motor drive systs., reduced switch count converter configs. 134477
AC-DC power syst., modified GA, optimal PID controller 77274
anal., node ordering method, parallel computing 133580
Balkan interconnection, primary freq. control *(Serbian)* 122827
bi-directional AC-DC thyristor converter unified control scheme 88822
Brazilian interconnected syst., transfer limits, reactive compensation, voltage collapse 111780
building energy simul., power flow modelling integrat. 100235
calc. using OOP *(Korean)* 122942
Chinese multi-level elec. market approach *(Chinese)* 77166
congestion cost/OPF calc. using Internet Web program *(Korean)* 122816
Cyprus elec. grid stabil., grid-connected wind farms effects 112379
dairy firm, elec. energy consumption, syst. ident. 100353
DC zonal naval-ship power syst., probabilistic security assess. index 113109
deregulated elec. markets transactions, radial equiv., quadratic prog. 133509
deregulated power syst., counter-flow transm. loss allocation 133585
deregulated power syst., graph theory appl. 88335
deregulated power systs. elec. load flow path tracing 111756
distrib. feeder optimal loss reduction using transformer rearrangement 77295
distrib. network cable impedance calcs., parallel ccts., multi-neutral returns 112033
distrib. network topol. influence on voltage sag propag. 99345
distrib. power flow anal., voltage control devices models 133665
distrib. syst. contingency, CPN, customer load patterns 133594
distrib. syst. dispersed generation interconnection, voltage charact. improvement *(Japanese)* 133673
distrib. syst. load profiles/feeder losses, temp. effect 133674
distrib. syst. loss reduction, feeder reconfiguration/capacitor setting optim. 99355
distrib. syst. planning, optimal feeder routing, adaptive GA *(Korean)* 122959
distributed OPF, convergence rate improvement *(Korean)* 122817
doubly-fed induction machine, rotor side control strategy 134468
dyn. long-range power transm. planning using constrained GA 122922
dyn. optimal dispatch, network flow algm. 77196
economic dispatch, modified distributed slack bus load flow algm. 111782
elec. energy market, power flow tracing method 111783
elec. energy market, power flow tracing method, theory 111784
elec. market, proportional sharing principle extension *(Chinese)* 111732
elec. market-based congestion mgt. using flowgate rights *(Chinese)* 111790
element complex power components incurred by generators *(Chinese)* 77157
elevators, supercapacitor energy storage syst., soft commutated interface 134523
enhanced AC power-flow solns. for power syst. reliab. anal. 77146
FACTS devices, syst. expansion, interior-point based OPF 77306
Federal Republic of Yugoslavia elec. power syst. functioning *(Serbian)* 122828
fractional freq. transm. line networks, steady-state performs. *(Chinese)* 111997
fully ZVS phase-shift bidirectional DC-DC power converter 88919

load flow continued
generator contrib. to line reactive power flow 77179
generator reactive power control, bus voltage control, GA 122893
generator VAr limit modelling for power-flow calcs. 88679
generic direct sparse lin. syst. solver in C++ for power syst. anal. 133426
ill-conditioned power-flow problems anal., voltage stabil. methodology 133578
Impact integrated power syst. anal. package develop. 77255
induction machines, steady-state phase-coord. model 88739
indust. distrib. systs., fast harmonic load flow method 77314
interconnected power syst., available transfer capability determ. *(Chinese)* 77189
interconnected regions, act. power congestion, Lagrangian decomp. 133437
Kuwait EHV network simul., voltage stabil., multiple load flow 122911
long-range dyn. transm. planning using constrained GA 122925
long-run marginal cost-based transm. use-of-syst. pricing, methods comparison 133436
LV power networks decision making software platform *(English, French)* 133570
mag.-insulated power transm. lines, effective impedance calcs. 88440
main transformer ULTC and capacitors dispatch in distrib. syst. 134132
main transformer ULTC and capacitors scheduling, simulated annealing 123548
max. simultaneous transfer capability, probabilistic assess. approaches 122936
multi-machine power syst. dyn. visualisation 88333
multi-machine power systs., static voltage stabil., FACTS *(Chinese)* 77244
multi-source distrib. network, multiple fault sect. location *(Chinese)* 133595
multiobjective distrib. syst. planning using goal attainment method 88396
multiple embedded FACTS device power syst. load flow studies 99186
Newton-Raphson load flow, Newton OPF, SVC models, comments and reply 133512
open power market FACTS device optimisation *(Chinese)* 77187
OPF, complementarity condition, fuzzy second correction scheme 88414
OPF, entropy theory, surrogate constraint algm. *(Chinese)* 111993
OPF, multilayer feedforward NN approach 111989
OPF, transient stabil. constraints, power syst. operation 122938
OPF algm., num. expts., parametric techs. 88415
OPF soln., nonlin. interior point methods 88412
optimal act. power flow solns., modified Hopfield neural network 122945
power bal. of electromechanical systs. 112473
power syst., long term planning, transit. scheme between two planning-level yr. *(Chinese)* 77289
power syst. education, OPF model 133582
power syst. load flow calc., OO method *(Chinese)* 122943
power syst. pricing issues and approaches 111735
power syst. reactive power, concepts and defns. 77136
power syst. security enhancement, FACTS devices location 111939
power syst. short cct. capacity suppression, OPF *(Korean)* 77147
power syst. state estim., substations representation 111682
power syst. topol. errors ident. using weighted innovation graph approach *(Chinese)* 77144
power syst. voltage collapse points calc. using OPF method 99265
power syst. voltage stabil. assess. using bus impedance matrix 111938
power systs. calcs., Windows-based 133425
power trading calcs. using rough set theory/neural networks 111802
pre-dispatch schedule in power generation market, model, algm. *(Chinese)* 77158
probabilistic harmonic power flow for percentile eval. 133699
PV syst., HF link soft switching converter, space vector modulation *(Japanese)* 112432
quasi-Newton power flow using partial Jacobian updates 88413
radial distrib. network load flow calc. using symm. components 99338
radial distrib. syst. planning, heuristic method 88422
radial distrib. systs., load flow, branch-oriented techs. 133634
radial distrib. systs. capacitor switching, fuzzy modeling 112032
radial MV distrib. network calc., load params. influence 112052
railroad syst., supply network, train voltage distrib., power flow anal. *(Korean)* 78308
reactive power optim., distributed parallel GA *(Chinese)* 122772
real time economic dispatch 77160
reduced parts-count multi-level rectifiers, naval ship propulsion 134521
reduced switch count AC/AC converter topologies 134209
residential electrification, design load params. estim., S. Africa 99310
series load flow, novel noniterative load flow method, paper discussion 111994
single power distrib. transformer contingency, back-up algm. 123559
single-phase AC sources, high-perform. voltage regulator 78009
soln. by complex admittance matrix method 122940
soln. space boundary, predictor-corrector tech. 88416
spot price calc., decoupled OPF, GA *(Chinese)* 111768
substation refurbishment, disconnecting cct. breaker-based improvements 134290
substations/switches, time-varying load patterns, simultaneous phase balancing 134316
suppl. elec. power losses estim. from distrib. network load flow 112019
three-phase asymmetrical load-flow calc. *(Serbian)* 88417
transaction framework losses allocation approach, paper discussion/closure 133588
transm. congestion mgt., transactions-based power flow anal. 111986
transm. cost calc., loss allocation rule *(Chinese)* 111794
transm. interface min-max transfer capability formulation 111995
transm. line voltage/powers, probabilistic anal., voltage stabil. 123011
transm. pricing using improved sensitivity indices 111785
TRANsySTEM, power syst. transient stabil. software package for teaching/research 99279
trunk power syst., unbalance current flow mechanism *(Japanese)* 111923
unbalanced power flow calc., slack-bus expression method *(Japanese)* 77140
unbalanced three-phase power systs. simul. for dispatcher training simulator *(Chinese)* 88312
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
virtual lab. for power syst. CAD/load flow anals. 111958
voltage collapse prevention, FACTS devices, stabil. indicators 122906
voltage stabil., V-Q power flow simul. vs. dyn. simul. 111890
voltage stabil. anal. using optimal load flow method *(Korean)* 133519
voltage stabil.-constrained VAr planning using stat. approxn. 77296
voltage/reactive distortion sources detect., effect on power quality *(Russian)* 77626
wheeling options selection using evol. prog.-based algm. 111775
wind farm modelling in load flow anal., paper discussion/closure 133893
wind-driven induction generator, grid disconnection, transient anal. 133885

load flow control
345 kV Taiwan transm. syst., UPFC appl. feasibility *(English)* 77265
AC and DC power transm., power converters operation *(Russian)* 122896
back-to-back act. power flow AFC modelling 122843
bal. distrib. network general-purpose load flow tech. 122974
Beijing power syst. optimal VAr control software *(Chinese)* 111918
complex distrib. load flow, augmented matrix-based control scheme *(Chin* 111908
congestion mgt. bidding-based model using interior point methods *(Chin* 122856
deregulated market, generator's output contrib. to power flow/loads 99213
deregulated power market, transactions rescheduling, convex prog. appl. 88
distrib. feeder load restoration using robust heuristic method 122910
distrib. network reconfiguration and reactive power compensation 112059
distrib. syst. power quality improvement using PWM IGBT convertors 133
distrib. syst. reliab. improvement using dispersed generator inform. excha 112028
dyn. security corrective control by UPFCs 88378
Egyptian Nat. Energy Control Center 88366
elec. market congestion dispatch scheme *(Chinese)* 122857
embedded FACTS devices, power flow, optimal multiplier Newton-Raph method 133533
energy market conditions congestion mgt. scheme *(Slovenian)* 122842
FACTS, OPF control with UPFC *(Chinese)* 99272
FACTS devices location optimisation for congestion mgt. 99327
FACTS OPF scheme, hybrid model 111887
FACTS PC-DSP-based unified control syst. design 111855
FACTS series compensating device operation under line flow congestion 1118
FACTS TCSC devices allocation for total transm. capacity optimisation 1120
FACTS tuned interphase power controller, steady-state charact. *(Chine* 111906
FACTS UPFC controller perform. enhancement using modal anal. 111934
FACTS UPFC location for congestion mgt. 99328
FACTS UPFC scheme, power flow computation *(Chinese)* 99254
FACTS UPFC schemes, dyn. performs. comparison 111857
FACTS UPFC simul. techs. 111861
FACTS usage in liberalised elec. markets 77305
fault-tolerant reversible AC motor drive syst. 134219
generalized UPFC modelling in nonlin. interior point OPF 88419
HV transm. lines, dist. protection settings, capacitor insertion effects 77516
large-scale nonlin. OPF problems, fuzzy corrector terms 99267
local-based power syst. voltage collapse protection scheme 77559
multi-area optimum power flow solns., sensitivity anal. 122864
multi-machine FACTS with UPFC, Phillips-Heffron model *(Chinese)* 77204
multi-machine power syst. small sig. stabil. enhancement, robust UPFC 1118
multi-zone congestion mgt. using Lagrangian relax. 111883
multi-zone unbundled elec. markets, real-time coord. dispatch 99264
multiobjective optimal load flow based on ideal dist. minimization 122892
MW/MVAr flows control between utilities, phase shifting transformers 9929
New Electricity Trading Arrangement, power flow control coord. 133501
nontuned interphase power controller calc. and anal. *(Chinese)* 111907
OO OPF 99266
open power markets FACTS devices placement approach 112004
optimal distrib. load flow using fuzzy multi-objective decisions 111819
orthogonal-core-type var. inductor, third winding, harmonic reduction *(Japa* nese) 112575
power distrib. lines dual power flow regulator *(Chinese)* 77260
Power Internet power flow control/transactions monitoring archit. 122901
power quality problems, solns., technol. 77342
power syst. act. secure economic dispatch algorithm 77217
power syst. damping using fuzzy-controlled UPFC 111858
power syst. load flow algm. using optimal prog. *(Korean)* 77202
power syst. load flow regulation scheme using controllable reactance *(Chinese)* 88359
power syst. SSSC controllers, interface flow limit effects *(Korean)* 122867
power syst. stabil. enhancement, local power flow based TCSC controller 99276
power syst. transient/voltage stabil. enhancement control scheme 77246
power transfer capability incorporating FACTS devices *(Chinese)* 77259
PV power syst. capacity reduction, batt. charging-discharging control method 112413
quadratic power flow soln. Newton-Raphson UPFC model, paper discussion/closure 133552
reactive power exchange policy/regulations 122845
reactive power flow, power transformer tap changing effect 99289
reduced switch count three-phase AC motor drive 89322
regulated power syst., state matrix formulation, UPFC action 99281
reson. DC-DC buck-boost telecom. power converter, power flow control 108453
rotary power flow controller, steady-state/dyn. modelling 111889
series-connected controllable FACTS devices, control Lyapunov fns. 133548
single-stage step-up/down three-phase AC-to-DC converter modelling 88877
six-switch single-phase AC/AC converter 88835
small elec. utility, external interconnection, network aspects 99235
SMES, inverter-converter bridge energy transfer cct. 78191
static converters, indust. and utility appls. 99747
static sync. series compensator integrated with batt. energy storage 112750
telecom. inverter module with digital control for parallel operation 112671
three-phase four-wire shunt act. power filter control strategy 134331
three-phase variable act.-pass. reactance transient response 88361
transient stabil. improvement, UPFC design, DC capacitor, line inductance 111895
transm. network voltage stabil. anal., paper discussion and closure 133551
transm. syst. adequacy eval., UPFC considerations 122949
transm. syst. optimum power flow control, UPFC 99280
unbalanced transm. power systs., optimal real-time control 111876
UPFC, modeling, transient stabil. *(Chinese)* 77242
UPFC, per unit model, optimal control 111874
UPFC, proposal, research and appls., survey 99278
UPFC, PWM based, dyn. response, EMTP simul. *(Korean)* 77267
UPFC, PWM-based, eval. as impedance compensator using fuzzy logic 77238
UPFC capability assess. on power flow control 99275
UPFC control algm., stationary ref. frame simul. 133556
UPFC effects on voltage control problems in competitive power indust. 99293
UPFC model, robust nonlin. interior-point OPF 133518
UPFC model, stabil. calcs., decoupled watt-VAr control syst. 111933
UPFC prototype with energy snubber using SHE method *(Chinese)* 77203
UPFC transient anal., DC-link capacitor design appl. 122872
UPFC transient charact. for power flow var. suppression *(Japanese)* 99290
UPFC with energy snubber, control *(Chinese)* 111905
UPFC-embedded power systs., load flow injection modelling approach 111821
UPFCs operation method for optimal voltage profile maint. *(Korean)* 77201

w control continued
age sourced inverter, transfer fn., FACTS, STATCOM, UPFC, SSSC 99732
based series power quality compensator, interact. with power syst. *(Chinese)* 433

recasting
hour-ahead load forecasting using neural network *(Japanese)* 88406
ding thermal load prediction, automated proc. using recurrent neural net 4111
te power syst., short term load forecasting model 99311
y load forecasting model, wavelet decomp., recurrent NN *(Chinese)* 99306
y peak load forecasting, holidays adjustment, ANN model 111982
y peak load forecasting using analyzable struct. neural net 111960
rib. network peak load estim., fuzzy regression approach 111973
rib. substation expansion/constr. planning considering contingency *(Korean)* 4288
rib. substation/feeder load forecast using neural nets 133654
rib. syst. planning, optimal feeder routing, adaptive GA *(Korean)* 122959
trict heating and cooling, operation planning 134654
yptian next-day peak load forecasting using fuzzy neural net 99308
c. market short-term load forecasting using neural nets 111961
c. rly. depot voltage unbalance anal., two-port network model *(Korean)* 23997
ergy demand forecasting model for EU countries by 2010 122915
t-developing utility long-term load forecasting techs. 111943
dforward multilayer neural net approach, environ. effects 111979
dforward neural network archit. develop., factorial design 114912
al energy demand forecasting, national economy restructuring programmes, omania 122913
zzy Bayes predictor in elec. load forecasting 111983
zzy spatial load forecasting, small area land-use anal. *(Chinese)* 88407
zzy spatial load forecasting, small area urban land-use anal. *(Chinese)* 88399
erman elec. rly. traction energy demand predictions *(German)* 78293
gh-speed rly. traction power systs., load estim. techs. 123985
okkaido, elec. demand and supply struct. 88293
TSC power cable appl. effects study 77423
dian elec. consumption modelling/forecasting/anal. 122928
dian power demand scenario forecasting 111765
dust. load forecasting, Kohonen neural network, wavelet transform 99313
tell. EMS for optimum short-term scheduling 133830
tell. hybrid syst. 99318
ternat. load forecasting projects overview 99307
ish short-term load forecasting models comparison 99309
orean energy demand, outlook and policy implications, 2000-2005 122912
ng-range elec. load forecasting, climatic effects prediction 111941
ng-term load forecasting strategies using knowledge-based ES 111944
ng-term load forecasting using general simul. theory 122918
edium-term load forecasting using neural nets/fuzzy systs. 133563
V/LV distrib. systs. design coord. 133655
anjing daily peak load forecast, summer air temp. anal. *(Chinese)* 111970
onlin. dyn. systs. reconstruction/prediction, hierarchical Bayesian approach 106001
uc. power project mgt., cost-schedule integrat. control, MIS *(Chinese)* 88537
eak load forecasting using fuzzy ES 111977
ool load forecasts for spot/forward elec. markets 133560
ower distrib. load forecasting method based on fuzzy modelling 112056
ower load forecasting, combined crossing self-adaptable optim. *(Chinese)* 77286
ower markets cascaded neural network prediction, confidence regions 111773
ower syst. dist. protection relays, on-line setting, software develop. 99397
ower syst. load forecasting, ANN, hybrid learning algm. *(Chinese)* 99316
ower syst. load forecasting, residual error amendment method appl. *(Chinese)* 88393
power syst. load forecasts, RBFN prediction improvement 111964
power syst. peak load demand forecasting using fuzzy class. scheme *(English, French)* 133569
power syst. short-term load forecasting using data mining method *(Japanese)* 77293
power syst. spatial offer-and-demand forecasting, neuro-fuzzy inference systs. 111955
power systs. engng., conf., Halifax, NS, Canada (July 2001) 100448
power/energy systs., develop., conf., Marabella, Spain (Sept. 2000) 113275
residential electrification, design load params. estim., S. Africa 99310
residential energy consumption, behavioral factors study 88405
seasonal power load forecasting, combined gray neural network model *(Chinese)* 77285
service, Internet access 133564
short term generation scheduling, dyn. prog., GA 99216
short term load forecasting, combination model, GA *(Chinese)* 122923
short term load forecasting, deterministic annealing *(Chinese)* 111967
short-term, fuzzified neural network approach 77287
short-term hourly load forecasting, time-series modeling, peak load estim. 88408
short-term hourly load forecasting, time-series modeling, peak load estim. 133573
short-term load forecasting, ANN-based, deterministic annealing clustering 88409
short-term load forecasting, artificial neural net appl. possibilities 122929
short-term load forecasting, optimal regression tree based rule discovery 111962
short-term load forecasting mother wavelets eval. 99315
short-term load forecasting using ANN 122931
short-term load forecasting using evolving wavelet-based networks 77294
short-term load forecasting with modular neural networks *(Chinese)* 88398
short-term load forecasting/class. using neural nets 122930
short-time load forecasting, genetic neural network, forecasting optim. *(Chinese)* 77284
Spanish elec. consumption profiles calc. using prediction intervals 122932
spatial elec. load forecasting, computational support tool 112055
spatial load forecast method, rule based, GIS appl. 77282
subarea load forecasting based on power syst. dyn. *(Chinese)* 77288
substation voltage and reactive power fuzzy control, online forecasting *(Chinese)* 99859
trend data and feedforward neural net-based method 122914
UPEC 2000 power engng. conf., Belfast, UK, (Sept. 2000) 89517
very short term load forecaster, electronic dispatch project, ISO New Eng. 111981
weather-sensitive load forecast model 133561

ad management
see also demand side management; load distribution; load regulation
air condition load mgt. assess. by load survey in Taipower 134660
California ISO summer 2000 demand response programs overview 111744

load management continued
Californian power crisis, technol. solns. 88306
distributed SMES act. grid mgt. support technol. 89313
elec. load leveling, demand control technol., Taiwan Power Company *(Chinese)* 111837
elec. utilities, power syst. fault simul., customer load demand 77172
emerging competitive markets, reliab. enhancement by customer participation 111746
EV charging, single-phase residential harmonic loads 113095
external power syst. equiv. based on neural network 99252
indust. load mgt. optim. using time of use tariffs 134672
isolated thermal power systs., wind power fluctuations impact 133888
nonferric metal indust., power consumption charact., load mgt. *(Chinese)* 113163
power plant, load mgt., PUSH technol. *(Chinese)* 77192
PV power syst. fuzzy logic load control scheme 112436
stand alone PV systs., fuzzy logic controller 112401

load prediction *see load forecasting*

load regulation
see also load flow control
2001 IEEE Power Engng. Winter Meeting, conf., Columbus, OH, USA (Jan.-Feb. 2001) 100393
air-conditioners, direct load control using ripple sigs. *(Chinese)* 78344
automatic generation control unit maneuvering assess. 88513
bulk power syst. ancillary services, VAr/voltage control 111875
decentralized load freq. control, robust H_∞ control 111920
decentralized power syst. load freq. control, LQR design 122879
DIII-D tokamak, regulated power supply for high power gyrotron filaments 68580
direct load control using ripple sigs., customers' satisfaction *(Chinese)* 77264
distorted line voltage power syst. load symmetrization apporach 111929
distrib. line control, load fluct. compensation, fuzzy control, SMES 77311
distrib. systs., load bus voltage control, unified PQ conditioners rating 112037
elec. load leveling, demand control technol., Taiwan Power Company *(Chinese)* 111837
fluct. leveling, fuzzy neural net control *(Japanese)* 111910
freq. control perform. assess. criteria anal. 88379
fuzzy logic-based extended integral load freq. control scheme 111897
high-power DC-to-DC converter, elec. vehicle supercapacitor appls. 123571
hydropower stations, automatic generation control *(Chinese)* 77781
modulation for electromechanical oscills. damping 111854
multi-area load freq. control using batt. energy storage 122865
multi-area power syst., decentralized sliding mode stabilizer design 122874
multi-area power syst. PI sliding mode load freq. control scheme *(Chinese)* 88339
multivariable generalized predictive control approach 111832
power syst. load freq. control using noise-tolerable PID feedback 133555
power syst. voltage stabil. enhancement, load following units selection optim. 111822
power systs. load-freq. control, smoothed switching struct. theory 122875
pulp mill, integrated turbine-generator digital control syst. 124151
residential water heater loads control, distrib. syst. losses reduction 112040
series act. power harmonic filter adopting hybrid control approach 78112
single-phase AC sources, high-perform. voltage regulator 78009
SMES control algms. for customer power quality improvement 78190
step-down piezoelec. transformer for AC-DC converters, design, fabr. and operation 91437
TPP load control syst. simul., energy feedback sig. *(Chinese)* 77723
two-area power syst. fuzzy gain-scheduled PI load-freq. control 122903
unity PF rectifier adaptive passivity-based controller 88967
voltage compensation, series-shunt power converter 111921
VSI-based voltage sag correcting device with additional VAr compensation *(English)* 111925
wind micropower induction generators, sensorless power maximization algm. 123252
wind-diesel power syst. distributed intell. load control scheme 99590

load shedding
California ISO summer 2000 demand response programs overview 111744
deregulated power market voltage security methods anal. 111745
distrib. feeder load restoration using robust heuristic method 122910
grid security load curtailment procurement programme, Canada 111853
indust. power syst. load shedding, ES prototype develop. 78355
isolated power syst., load shedding design, time-oriented method 133494
LAN-based control 99204
large indust. distrib. networks automation solns. 133526
local-based power syst. voltage collapse protection scheme 77559
modulation for electromechanical oscills. damping 111854
oil refinery power facility, LAN-based load shedding controller 113175
optimal load shedding strategy in power systs. with distributed generation 111751
power delivery improvement using SMES 113035
power syst. dyn. security improvement, load shedding, nonlin. prog. 111868
power syst. load shedding optim. using dyn. modelling 122900
power syst. voltage collapse avoidance, control actions time depend. 111867
power systs. hybrid emergency control scheme 122853
small isolated power syst., underfrequency load shedding 77194
subtransmission substation optimal load dispatch for loadability enhancement 133539
transm. loading relief inefficiency, locational prices correction 111849
unit commitment at freq. security condition 77266
wide area protection and control systs. for power systs. 77531

local area networks
see also controller area networks; LAN interconnection; optical fibre LAN; token networks; wireless LAN; workstation clusters
1 gigabit Ethernet network design, implement. in power utility *(Chinese)* 119587
10 Gbit/s Ethernet, IEEE 802.3ae and pre-std. products 130735
10BaseS symm. Ethernet links, dedicated VDSL chipset *(German)* 74168
100 Mbps PACE technol. Ethernet networks, perform. anal. 130780
1000BASE-T, Gigabit Ethernet networks in twisted pair copper conductors *(Italian)* 85256
1000BASE-T Gigabit Ethernet, low-power digital adaptive filter archits. 114883
1000BASE-T Gigabit Ethernet, pipelined 14-tap parallel decision-feedback decoder 114811
ABR congestion control algm., fairness, equal profit principle *(Chinese)* 95739
act. networks mgt. in telecom environ. 108046
adaptive ring access protocol for super high-speed networks, perform. eval. 95928
always-on network services 130796

local area networks continued
appls.-specific backplanes, prog. routing device, clock regeneration *(German)* 74255
Arsenic user-accessible gigabit Ethernet interface 119605
ASHMEN, ATM services over shared media networks 108322
asymmetric cyclic polling syst., limited service *(Chinese)* 84933
ATLAS high-level triggers, ATM studies 132463
ATM ABR service based on cell delay, fairness study 95948
ATM access Ethernet switch, mgt. model/implement. *(Chinese)* 108016
ATM access switch, signaling software *(Chinese)* 74294
ATM backbone network, correl. traffic, expt. study 108357
ATM in network backbone 84835
ATM interworking unit with ISDN/Ethernet interfaces 108356
ATM LAN, optimal switch and interconnection location 119122
ATM LAN, signalling overview/perform. meas. 130401
ATM LAN emulation, broadcast and unknown server perform. 85301
ATM over Ethernet, protocol and implement. 95891
ATM switch, cell segmentation and reassembly, functional realization *(Chinese)* 119836
ATOLL network, clustering SMP nodes 108308
automated fault diagnosis syst. using hierarchical reasoning/alarm correl. 119468
backoff protocols for distributed mutual exclusion and ordering 73914
BC Hydro power syst. data commun. archit. 77279
Bellcore Ethernet data sets, traffic study 118848
Belle DAQ syst. switchless event building farm design anal. 120673
binary exponential backoff protocol, stabil. bound 73963
blooming mill, high-speed milling, automated control syst. *(Russian)* 85198
Bluetooth, pers. area networking enabler 120009
Brazos software DSM syst., high speed networks 96197
BS digital broadcasting, multimedia home network systs., IP-based HSLAN *(Japanese)* 119791
building access control automation based on LonWorks technol. *(Polish)* 130655
CableLabs CableHome project, home networking 74360
cables backtwisting, theoretical background 96065
caching-proxy in LAN for educational computer room *(Polish)* 130648
campus networks topol. design, evol. algm. 108213
CDF expt., Event Builder, Level 3 trigger systs. 132466
cell-based switch archits., accurate approx. anal. 74252
centralised access over TCP/IP based on real-time Java VM 130868
Cisco Netflow technol. and relational databases for network mgt. 108122
CMOS DSP-based 10BaseT/100BaseTX Ethernet transceiver 108370
CMOS low-power gigabit Ethernet analog equalizer 85446
CMOS mixed-sig. equalizer for Gigabit Ethernet on copper wire 108369
CMOS PLL for data/clock recovery without freq. divider, phase detector 79627
CMOS transceivers for gigabit rates, Gigabit Ethernet and next-generation Fibre Channel 120148
CMS event builder demonstrator, Myrinet results 131832
CompactPCI protocol packet switching commun. in electronic backplane *(German)* 85180
computed tomography exams. in filmless imaging department, transm. failure rate 98846
concurrent exception handling 108355
deferred segmentation for wire-speed transm. of large TCP frames over std. GbE networks 130357
digital library distributed multimedia syst. QoS mgt. *(Chinese)* 96257
distributed data placement strategies for storage area networks 108253
distributed machine vision syst. using Ethernet networking 113735
distributed virtual simul., network protocols/archit. 96127
dyn. DNS for regional PC commun. syst., implement. 74189
dyn. planning based protocols for real-time commun. in LAN and switched LAN environ. 107877
e-business, large scale sites, new technols. support *(Japanese)* 119626
electronic campus, network exam. syst. design based on BWD *(Chinese)* 119485
ellipt. curve public key cryptosystem 94376
enterprise LAN, trends 108172
enterprise network topol. design, fuzzy evol. hybrid metaheuristic 95966
EoS, Ethernet over SONET, electronic device verification, SUPERLOG 74350
Ethernet, real-time traffic, distributed backoff algm. 96128
Ethernet data transm. at gigabit/sec rate, IEEE stds., hybrid transceivers *(German)* 96068
Ethernet home networking 74371
Ethernet in the first mile, Internet access 108292
Ethernet interface soft IP, spec. and design 108193
Ethernet LANs, data security 119558
Ethernet networks in substations 78095
Ethernet telephone ccts., connection to data networks *(Italian)* 130601
Ethernet use at low level of factory commun. systs. 119263
Ethernet Wrapper, host access control 96199
facility provision using mobile agents 130892
fault diagnosis syst. for LAN faults 130739
FEL beams, distributed real time control 108298
fibre channel storage area networks, switch archit. 96198
fibre channel transm. vs. storage attached network *(German)* 96216
firewall operations *(French)* 108268
flight control, digital real time simul. *(Chinese)* 88042
Foundation Fieldbus network controller, commun. algm. *(Chinese)* 97151
framework wiring certifiers/testers for Ethernet *(Spanish)* 108505
Gigabit Ethernet, multi-dimens. equalizer appl. 130280
gigabit Ethernet backbones with act. loops 130783
gigabit Ethernet network, supporting multimedia commun. 85195
Gigabit Ethernet services for corporate users 130730
global hierarchically addressed non-broadcast Ethernet 108344
group commun., commercial Java implement. using reliable multicast 130752
group commun. syst. based on MAC-over-IP 108318
HALO stratos. aircraft for high-speed Internet access 85632
hard real-time commun. control protocol based on Ethernet 107848
heavy traffic modeling using α-stable self-similar procs. 95848
high-perform. mixed-technol. LAN for education and research 108345
high-speed indust. Gigabit-Ethernet networks congestion control 130865
home area network, Internet access, AutoHan project 74175
home inform. wiring syst. using bal. cable for high-speed network 119693
home-area networks, adaptive resource mgt. syst. 74233
IEEE1394/Ethernet technols. based home networking syst. 119692
IEEE 802.11 ad hoc WLAN, bandwidth allocation/sharing/extension protocol for multimedia 130369
IEEE 802.1D std. for LAN/MAN MAC bridges, amendment 96081
IEEE 802.1Q 1998 Edition amendment for virtual bridged LANs 85303
IEEE commun. technol., conf., Beijing, China (Aug. 2000) 89552

local area networks continued
IEEE computers and commun., conf., Hammamet, Tunisia (July 2001) 1241
IEEE Std.802.1w-2001, MAC bridges operation changes 119552
IEEE Std 802.1Q for local and MAN, virtual bridged LAN 119549
IEEE std. for LAN/MAN, port-based network access control 108108
IIADPS model for distributed med. image proc. using CORBA 110542
indoor pers. navig. syst., IR interactive commun. 111184
indust. automation, commun. networks, develop. trends *(Polish)* 74299
indust. Ethernet, appls. layers, Internet/IP, PROFINet *(German)* 74169
indust. Ethernet protocols, automation data systs., appls. layer *(German)* 741
indust. network design/develop. alternatives 120662
indust. protocols, transfer to Ethernet TCP/IP 130427
integrated secure & fault-tolerant voting in distributed syst. 130578
intell. building EMS using LAN technol. 89316
intrusion detect. systs., automated testing, network utilization patterns, self-sim larity 96115
IP networking autoconfiguration enabling local commun. 74301
IP over fiber, framing techs. 107881
IP satellite environ., QoS guarantee, CNIT-ASI project expt. experience 748
IP telephony solns. for customer premises 85151
ISAC, fast Faraday cups, oscilloscope, bunch shape meas. 87128
ISI-impaired narrow-band multiuser systs., min.-error-probab. single-user detect 83407
ISO 17799/BS 7799 security mgt. std. 119543
ISO/IEC 11801 std., fast Ethernet commun. protocol for office appls. *(Germa* 119628
Jiangya project sluice gate automatic control syst., reservoir dispatch, Etherne Profibus network *(Chinese)* 77772
KLOE distrib. event building syst., proc./data flow control 131833
LAN-based IP telephone syst. 96055
LHC data transm., G-link, gigabit Ethernet compliant serializer 121704
LHCb DAQ syst., event building in IN interface card 132464
load shedding, LAN-based control 99204
location-aware lifecycle environ. for ubiquitous computing 108144
MAC protocol optim., new approach 73973
MACE, multi-agent based distributed meas. systs. in CORBA environ. 12064
managing selection of transm. archit. for backbone networks 85110
Markov-type routing protocol for power line LAN 119356
microsatellite reconfigurable semi-virtual computer archit. 133244
Microsoft Personal Web Server in LAN *(Polish)* 130652
minifactory, distributed automation syst., high-perform. network infrastructur and protocols 108175
MITION, MAC-layer hybrid protocol for multi-channel control networks 8493
modular mission config. threat detect. sens. suite demonstrator 99128
MPEG-2 video/audio/signalling inform. real-time transm. using LAN/WAN *(German)* 75308
µLAN, local network between hardware devices 119690
multimedia commun. terminal, syst. control implement. 96309
multimedia networks, expt. eval. of archit. for joint QoS control 108261
multimedia QoS adaptation for inter-tech roaming 130966
multimedia traffic, network load limit and queueing buffer size 119571
Myrinet, high perform. local network *(Chinese)* 74298
Myrinet cluster, 3D wavelet compression by message passing 129706
Myrinet SANs, perform. anal., high-fidelity event-driven model 130747
NA48 expt. online PC farm, DAQ syst., switched fast ethernet network 76143
NASA Ames Research Center network, simul. 96153
ND comprehensive network admin. and anal. tool 108121
NEC NEAX2000IVS^2/NEAX2400IPX, ToIP LAN soln. 85437
networked house of the future, guide 74352
New World Campus networking 130722
NFS over Myrinet-based clusters for parallel multimedia appls., perform 130711
nonGaussian charact. and FARIMA(p,d,q) traffic models 119259
oil refinery power facility, LAN-based load shedding controller 113175
optimal control of queues 130870
OTDM ultra-fast photonic networks, access node technols. 86006
OZ, dist. learning environ. for computer sci. education 108341
PACS, distributed archit., study status consistency and duplicate-read protection mechanism 98857
PACS, enterprise-wide environ. mgt. using Siemens MagicWatch monitoring sta tion 98854
PACS security model 98852
panoramic video, compression issues 84490
parallel-polled virtual output queued switch, design/eval. 131024
parallel-polled virtual output queued switch with buffered crossbar 119134
pipelined reduced-state seq. estim. 72865
PNNI, PNNI perform. eval. 130823
power plant water syst., centralized controlling scheme *(Chinese)* 77677
power stations, microcomputer based fault recording/locating syst. *(Chinese)* 133854
power syst. protection, remote distributed MIS based on Web technol., LAN, WAN *(Chinese)* 77469
proc. control, Ethernet network stations bandwith assignment, dyn. smoothing 119747
PROFIBUS token-passing protocol over error-prone links, ring stabil. 130627
radio theatre prod. facilities *(German)* 75273
RAUM syst. spatially aware local commun. 85212
RCube-based switch using real world appl. 108305
reactive power optim., distributed parallel GA *(Chinese)* 122772
real-time LAN codesign, stat. model and realization of access unit 85193
reliable Ethernet connectivity, broadband access network 108282
reliable multicast file transfer on inter-university satellite network 96235
reliable multicast protocols over Ethernet-connected networks 130724
resource selection mechanism for complex network services 119701
Rohde & Schwarz FSP spectrum analyzer family 75387
SAN, storage area network, iSCSI *(French)* 108269
SCSP eval. over TCP/IP and SCSI over fibre channel connections 130358
Small-world network modeling 130791
SNMP agent groups for network fault mgt. 74228
SNMP objs. semi-act. replication in agent groups for fault mgt. 130562
speculative defragmentation, Gigabit Ethernet, zero-copy commun. 74359
SPring-8 beamline control, network security 132236
stats. counter archit. anal. 130720
stds., token ring access method/phys. layer specs. 96082
Stonehenge, fault-tolerant real-time network-attached storage device 130717
storage area networks appls. 119592
storage area networks in video appls. 75290
structural cabling syst. lightning overvoltage studies 77554
substation, video server based surveillance syst. design *(Chinese)* 89012
substation teleprotection and control, Ethernet networks speed/reliab. 78091

cal area networks continued
Swedish health care, telematics projects overview 98870
switched LAN design, loss probab. in heterog. traffic environ. 119557
TCOLLABO, Team Collaboration Support System 85204
TCP perform. over end-to-end rate control/stochastic available capacity 119267
TCP throughput in small LAN, improvement by delayed ACK control *(Japanese)* 96148
TCP/IP in commun. systs. 108399
TCP/IP-based multimedia appls./services over satellite links, ASI/CNIT project experience 85376
technol. develop. overview *(Chinese)* 108184
time-aware fault diagnosis syst. 130685
timing fault tolerance, dyn. replica selection algm. 108311
Totem single-ring protocol, latency anal. 130428
traffic, Hurst param., high-speed calc. 74199
traffic self-similarity, TCP/IP upper-layer protocol effects 107887
TrueCircuit LANs for video broadcasting *(German)* 74256
UCA based IEDs for substation protection and control, config. 78090
UCA based substation integrat. systs., legacy IEDs modeling 112726
UHF SATCOM, datagram-transfer protocol 107819
variable bandwidth wireless environ., dyn. mgt./adaptive appls. 130366
VCSEL interconnects, Ethernet and opt. integrated PCBs 105049
VIBe, micro-benchmark suite for virtual interface archit. implement. evaluation 85218
video network, multiple vehicles identity maint. 95007
VOD on LAN, perform. anal. of network protocol 107832
voice over IP, conversion or replacement considerations *(German)* 85144
VoIP on integrated voice/data networks, QoS perform. eval. 130824
VoIP using session initiation and media gateway control protocols 107952
WAP over Bluetooth, technol./appls. 119283
WDM networks, novel opt. IP router archit. 96876
Web computing, overhead reduction in network commun. 119641
Web technol. appl. in factory environ. 85324
wide area collaboration of public ATM networks and CATV local networks 85213
WinPcap archit. for high perform. network anal. 130781
wireless and wired LAN traffic bridging in Windows NT 119554
WorldFIP bus arbitrator table config., real-time engng. appls. 119660
WWW server perform., wide-area conditions effects 119649

cal authorities *see public administration*

cal moments
Si, shallow acceptor center, mag. moment relax. rate, muon probe 102961
Si:Mn films, super-doped, gas source MBE growth, anom. Hall effect 90295
ZnO:M,Al (M=Cr,Mn,Fe,Co,Ni,Cu) thin films, magnetoresist. 80697

cal networks *see telecommunication networks*

calised modes
2D photonic crysts., light self-trapping, nonlin. localized modes 128472
diamond:H, low-resistive n-type semicond., H-related complexes 91951
polymer low-loss waveguides, absorpt./scatt. 93110
GaN:Mg bulk single crysts., elec. props., temp. depend. 69537
p-GaN:Mg films, local vibr. modes, acceptor activation/deactivation 79344
p-/n-SiC, 6H, 15R, LF vibr. spectrosc., localised modes, Raman spectra 69578
SiC:O, 3C, 4H, isolated oxygen defects; elec. activity 69594
$Si_{1-y}C_y$:H films, photo-/plasma CVD, struct. 101318

calised states
see also Anderson model; charge-ordered states; charge transfer states; core levels; deep levels; defect states; electron traps; hole traps; impurity states; weak localisation; Wigner crystal
copper phthalocyanine films, electronic props., gas sens. appl. 109763
double-semicond. QW, mesoscopic correl., magnetotunneling spectra 91818
highly mismatched semicond. alloys, electronic struct. 125984
isolated nanoparticle circuitry fab., lensless opt. tweezing 103703
QD IR detector, high sensitivity due to barrier-limited photoelectron capture 97269
semicond. microcavity, polaritons, exciton localization 91847
superlattices, quasi-localized states, opt. transits. 80835
transit. metal oxide superlattice, spin electronics *(Japanese)* 92797
Al(Ga)N, hexagonal/cubic heterostruct., strain relax., plasma assisted MBE 79257
AlGaN/GaN, MQWs, localised states, PL obs. 80869
AlGaN/GaN heterostruct., localized charge trapping behavior 126127
AlInGaN/InGaN, MQWs, localised states, PL obs. 80869
α-Al_2O_3, TLD-500 dosimetric crysts., UV absorpt. spectra, temp./shape effect 127915
Alq_3 amorph. films, nondispersive electron transport 126089
a-BN, films, opt. absorpt., elec. cond. 69554
C nanotube electron waveguides, quantum interf. and ballistic transm. anal. 125934
CaF_2:Cu, TLD, energy conversion efficiency, theoretical limit model 127914
GaAs/AlGaAs, narrow quantum Hall bars, absence of activation-type cond. 91758
GaInN/GaN MQWs, varying In comp., temp. depend. carrier dyn., PL 80866
GaN surfaces/interfaces, low energy electron-excited nano-luminesc. spectr. 91662
GaN/AlN, QDs, QWs, MBE, UV to red light emission 90334
GaN/AlN self-organised QD, strain distrib., built-in elec. fields, carrier states 91836
GaN/GaN/Al_2O_3 epilayers, MBE/MOCVD growth, opt./elec. props., N ion damage 124863
GaN/InGaN, MQWs, localised states, PL obs. 80869
GaN/InGaN/GaN cubic double heterostruct., QD photolum. 103131
GaNAs/GaAs single QW, opt. transits., band bowing coeff. 80889
GaNP, electronic struct., pseudopotential methods 91639
a-$Ge_{10-x}In_xSe_{90}$ thin films, dielec. props. 92592
a-$Ge_{46}S_{54}$ films, thermoelectrical props. and memory switch phenom. 80756
$Ge_{30}Sb_{10}S_{60}$ film, thermal evap. under vac., opt. params. 80754
InAs/GaInSb superlattice diodes, Wannier-Stark localization 93367
InAsN/InGaAs/InP single QW, PL mechanism, photocond., gas source MBE growth 91805
InGaN SQ wells, amber LED, EL/PV spectra, PL 82407
InGaN epilayers, time resolved PL spectra, low In comp. regime 126327
InGaN films, MOCVD/MBE grown, photocond., photolum., Stokes shift 71514
InGaN, multi QW LD, pump-probe spectrosc. 71809
$In_{0.06}Ga_{0.94}N$ MQW LD lased at 400 nm, localized excitons 93602
InGaN/GaN DH, localized states, photoreflectance, PL, CL 91761
InGaN/GaN MQW struct., PL, sapphire substrs. 91834
InGaN/GaN MQW struct., time resolved PL, MOCVD 80876

localised states continued
InGaN/GaN QW, indium segreg., PL, stimulated emission, phase separation 80875
InGaN-based light emitting devices, emission mechanism *(Japanese)* 82368
InNAs, electronic struct., pseudopotential methods 91639
$KMgF_3:Ce^{3+}$, TLD, energy conversion efficiency, theoretical limit model 127914
Si QD arrays, electronic state localization, wormholes 91811
Si films, Joule heating rapid crystn., Raman scatt. 126005
Si, porous, carriers drift mobility 80634
Si/SiO_2 electron waveguides, electronic props., oxid.-induced strain 115975
SiC, natural superlattices, hot-electron transport, Wannier-Stark quantization 80822
a-SiC:H/a-Si:H/a-SiN:H, multilayer photodiodes on Si, photocurrent multiplication 116945
SiO_2 ultra-thin films, X-ray irrad. damage, microscopic obs. 81732
ZnSe/ZnS QD, highly photoluminescent 101422

lock-in transition *see commensurate-incommensurate transformations*

locomotives
see also diesel-electric locomotives; electric locomotives; motorcoaches; railways
gas turbine locomotive efficiency improvement using SMES 78240
high power locomotives, vehicle/drive dyn. simul., wheel-rail models *(German)* 100269
signalling syst., single board computer appl. *(Russian)* 78229
wheel integrity US inspection using EMAT systs. 99107

log-in procedures *see computer operating procedures*

log normal distribution
2.0 GHz indoor radiated-mode leaky feeder propag. 72309
CDMA design through asymptotic anal., fading channels *(English)* 73856
CDMA networks with smart antenna, capacity anal. 131130
CDMA power-controlled cellular network, single freq. broadcast syst. perform. 85806
cellular systs., perform. anal. of adaptive modulation with optimum power control 85685
DS-CDMA multi-service cellular systs., admission control, interf. estim. 74816
DS-CDMA syst. with imperfect power control, PN code tracking loop 74833
DS/SFH-SSMA hybrid syst. over mobile satellite log-normal shadowing channel 131304
flash memory read disturb reliab., appl.-specific usage model 79898
fuzzy probab. to expert witnessing in warning theory 124502
ground based radar, global clutter stats. 120438
ground clutter modelling, Weibull/log-Weibull/K-distrib., AIC anal. 120427
hyperspectral imagery scenes, target spectra stats. 99048
independent lognormal random variables sum, distrib. bounds 85716
Josephson interface engineered jn., crit. current 70881
long. mag. recording medium, intergranular exchange coupling 116352
long. recording medium, thermal decay, grain shapes 116348
mag. recording media, grain size distrib. determin. by X-ray diffr. 116472
phase-quadrature fields in enclosure, stat. depend. 93957
radar log-t detector in correl. K-distributed clutter, false alarm probab. *(Polish)* 120406
snowcover, microwave emission model, layered struct. 99014
spin valve device, thermal decay kinetics 116423
ultrasound images, gray level stats., lognormal approx. 98312
VBR video traffic sources, resource allocation 107786
Al-Cu(Si) metallic interconnects, electromigration modelling, percolative approach 92119
GaAs PHEMT MMIC power amps., reliab. study 115004

log periodic antennas
dipole antenna design using GA *(Chinese)* 83697
Sierpinski generalized fractal multiband antenna 105863
SF_6 GIS apertures, radiated EM wave, freq. charact. 134276

log spiral antennas *see spiral antennas*

loggers *see data loggers; recorders*

logging (recording) *see recording*

logic analysers
see also logic testing
complex digital systs., logic analyzers, test instrums. 131837
μP control logic, online integrity monitoring 125378
PC-based logic analyser *(German)* 120684
trigger prog. of logic analyser instrums., instrum.-specific lang. *(German)* 109460
virtual prototyping, EDA tools, pattern generators and logic analyzers 68699

logic arrays
see also application specific integrated circuits; programmable logic arrays; programmable logic devices
ASIC data prep. mgt. for opt. proximity correction 101938
ASIC design, MOS cct. appls. *(German)* 103982
auto-bulk-biased multithreshold SOI CMOS cct., high temp. operation *(Chinese)* 92467
cell-based design, library creation 68517
CMOS ASIC archit., timing-optimized std. cell logic, wireless/wireline products 102011
DFT, DHT, DCT, and DST, VLSI array archit. 118894
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808
QD logic ccts., shared BDD 101999
quantum cellular automaton based logic gates/ccts. simul. 102008
quotient-selected modified signed-digit division algm., optoelectronic implement. 104844
reconfigurable parallel inner product proc. archits., pipelined design 68850
RSA cryptoprocessor, Montgomery algm. 106244
systolic serial sq. for continuous operation 114701
turbo codes, low-complexity parallel decoding struct. 94319
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025

logic CAD
see also hardware-software codesign; high level synthesis; logic simulation
2D FPGAs, optimum switch box designs, global routing dens. constraints 125434
3D tech. visualizations in VLSI design, full-wave interconnect anal., clock distrib. 125363
activity-sensitive flip-flop and latch selection for reduced energy 68726
appl.-specific multiprocessor SoC, generic archit. model 79676
area-power optimal state assignment, complete weighted graph 114677
arith. cct. design, evol. graph generation syst., transmigration capability 102106
ASIC implement. flow, estim. of speed, area, and power of parameterizable soft IP 125337

logic CAD continued
ASIC verification methodologies, prog. logic 101927
assertion methodologies for Verilog design 68698
async. cross-pipelined multiplier design, handshake cct. 102002
asynchronous bus interface design for 80C51 microcontroller 79670
asynchronous ccts. and systs., conf., Salt Lake City, UT, USA (March 2001) 78399
asynchronous design styles, bundled-delay and dual-rail ccts. 79778
asynchronous distrib. control synthesis and optim., transforms. 125353
asynchronous embryonics 102052
AURA II, neg. thinking and branch-and-bound in unate covering problems 101950
BDD cct.-based Boolean reasoning, structural transforms., SAT procedure 125349
BDD with min. expected path length, Boolean fn. rep. 79703
BDDs, oscillating algm. for variable ordering 68676
biased random instruction generation, genetic approach 90828
bit-serial arith. cct. evol. synthesis *(English)* 79851
Boolean fn. minimization, mutations 125327
Boolean fn. spectral transform., BDD rep., graph transform. 79704
Boolean satisfiability problem, inactive clauses, dyn. detect., image computation algm. 125364
Boolean substitution algm. 101649
buffer minimization in pass transistor logic 101891
CADRE, Configurable Asynchronous DSP for Reduced Energy, low power multiported register bank 79908
carry-save-adder based arith. ccts., timing and area trade-offs for optim. 79846
cct. synthesis evol. using hardware-based GA 125165
cell-based design, library creation 68517
CHIPDESIGN, project-oriented microelectronics course, ASIC std. cell design flow 125298
CMOS chips, phys. design 81446
CMOS full adders in different design styles with emphasis on low-power topologies 90890
CMOS low-power seq. cct. design using T flip-flops 90882
CMOS MPU appls., TCAD stat. design methodology 125555
CMOS PLA, high-speed low-power design, pseudofootless dyn. cct. 102000
CMOS seq. ccts., power estim. using graph-based methods 114695
CMOS single-phase adiabatic multiplier, SCAL-D logic, HSPICE simul. 68725
CMOS single-rail variable encoded completion detect. scheme, self-timed design, ternary MVL 90864
CMOS SOI domino logic, technol. mapping incl. parasitic bipolar effect 125439
CMOS wave steered ccts., latch count minimization and latency, integer LP 125440
CNN modified archit. for Turing patterns generation 102451
co-ordinated design mgt. procs., project mgt. organisation for CAD *(German)* 114681
code generation and logic optimisation for embedded control appls. 79667
combinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
combinat. ccts., multiple error rectification, AND/OR graphs and BDDs 68741
combinat. equivalence checking using Boolean satisfiability and BDD 79790
complex control ccts., dyn. reconfigurable implement. 101940
conditional task graph allocation/scheduling, hardware/software co-synthesis 81441
constraint-based watermarking for graph partitioning solns. 125362
corner block list, floorplanning with abutment constraints and L-shaped/T-shaped logic blocks 125381
coverage metrics for functional validation of hardware designs 101878
CPU design by formal verification, lab. work of undergraduate students 125295
cryptographic scheme, modular exponentiation on fine-grained FPGA 125461
custom ASIC design methodology with on-demand library generation 125387
cycle time optim., timing driven placement with simultaneous netlist transforms. 101964
data-driven dyn. logic/NP-CMOS logic, design comparison 68750
datapath operators merging improve. using info. content and required precision anal. 125360
delay constrained ccts., voltage scaling and gate sizing 114672
dependency preserving probabilistic modeling of switching activity using Bayesian networks 125435
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
digital cct. evol. using, GA 79760
digital cct. sig. probab. calc. in Boolean fns., graph oriented realization 68678
digital design, PLD, elec. engng. degree course 125299
digital design education infrastruct., multiple EDA tool vendors, multiple modes of tool access 125300
digital filter synthesis based on min. signed digit representation 125615
digital high-speed CCD camera, interface design, VHDL *(Chinese)* 97355
digital logic design and computer fund. courses, microcontrollers and FPGAs 124260
distributed asynchronous control unit, hierarchically decomposed AFSMs, CDFG 68671
DLX RISC pipelined μP, forwarding and interlock logic design automation 125562
DNA simul. of Boolean ccts. 79758
DNA-based self-propag. algm., Boolean cct. simul. 79759
domino logic ccts., coupling-aware min. delay optim. 102108
domino logic ccts., coupling-aware min. delay optimisation 79829
dual-edge triggered flip-flops, timing charactn. 125184
dual-threshold voltage assignment with transistor sizing for low power CMOS ccts. 68779
dyn. bit-level systolic arrays, post-layout switch-level simul., netlist reduction 68673
dyn. labeling based FPGA delay optim. algm. *(Chinese)* 125275
dyn. power mgt. tools, integrat. in IC design flow 101946
dyn. receiver biasing for inter-chip commun., HP-14B CMOS proc. 68672
dyn. reconfigurable FPGA placement 125400
efficient routing algm. for symm. FPGAs using reliable cost metrics 68715
embedded proc., RTL fault simulator 79750
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut partitioning 102105
EPGAT, embedded PGA core ASIC for board-based designs 68756
essential signature set in logic minimization *(Chinese)* 125277
evolvable coprocessor environ. design based on GA 114785
Fibonacci interconnection topologies, spectral transforms, cct. realisation 101932
formal verification effects on quality in IP design and implement. 79724
FPGA based logic synthesis tools, efficiency measure 68734
FPGA channel segmentation design, multi-level matching-based algm. 68755
FPGA design, data and proc. mgt. *(German)* 114719

logic CAD continued
FPGA design, functional decompos., sub-fn. input support sel., inform. rels. meas. 79811
FPGA design based on LUT, error diagnosis via pattern- and BDD based formal tech. *(Japanese)* 125278
FPGA design reuse strategy for syst.-level integrat. 114727
FPGA fast placement syst. using macro-blocks 101939
FPGA intellectual property protection, fingerprinting techs. 114715
FPGA partitioning, dyn. reconfig., integer LP 125395
FPGA place and route problems, simulated annealing, iter. procs. *(Italian)* 79831
FPGA real-time prog. *(German)* 125412
FPGA struct., fully functional and self-configurable multipliers, VHDL description 79812
FPGA technol. mapping, look-up table, unified functional decomp. 68775
FPGA Windows-based design program, Innoveda packages *(German)* 68738
FPGA-based reconfigurable computers, hierarchical memory mapping 79701
FPLA cct. CAD by rewriting, Boolean vectors 101659
FSM state assignment, low power dissipation Markov chain model, VLSI ccts. *(Korean)* 101970
FSM synthesis via GA, flipflop selection 125167
full-custom compact layout tech. for switching current effects reduction in high speed ccts. 79808
Gekko PowerPC μP, timing convergence, synthesis tools and phys. design 79932
generic components, pure VHDL and VHDL abstractions, Open PROMOL external scripting lang. 79714
generic ILP-based approaches for time-multiplexed FPGA partitioning 114717
hardware compilation for software engineers, ATM example 68500
hardware compiler realising concurrent procs. in reconfigurable logic 125168
hardware logic verification engineers, teaching, graduate level course, The Ohio State Univ. 124280
hardware metering scheme, low overhead proofs, manufactured parts 125444
Harvard archit. RISC-μC core design, dedicated busses 114797
heterog. cct. synthesis, evol. graph generation, terminal-colour constraint 79827
hierarchical FPGA mapping, perform.-driven multi-level clustering 125441
high speed logic ccts., timing optim. by modified retiming *(Chinese)* 79510
home appliance inverter syst., digital logic control PWM/PFC cct. design 77976
hot-carrier reliab. simul. appl. to logic design 101996
hybrid field prog. archit., routing struct. 68680
in-place delay constrained power optim. using functional symms. 79689
indust. GHz CPU, VLSI clock distrib. cct. design 102250
IP, property ownership challenge, logic block design time 114683
large FPGAs, cost minimization of partition. with complex resource constraints 68787
layout-driven hot-carrier degrad. minimization using logic restructuring techs. 125343
learning tool for logic ccts. *(Japanese)* 79838
level assignment for displaying combinat. logic 125319
lin. FSM, phase shifter synthesis, pseudorandom seq. generation 90832
low-power asynchronous design, self-resetting logic, computing struct. 79776
low-power domino logic ccts., automated phase assignment in synthesis 79830
low-power optim.-based volt. scaling tech. using multiple supply voltages 101987
LPSAT, unified approach to RTL satisfiability 79690
LUT-array-based PLD design and SGCT-based synthesis approach 102087
LUT-based FPGA synthesis, functional decomp. 79793
LUT-based FPGA technol. mapping for power minimization with optimal depth 90870
m-out-of-n hardware bit voter, CMOS VLSI technol., fault tolerant designs 79809
MACH devices, technol. mapping algm. *(Polish)* 90633
Merlot multiprocessor chip, logic design environ. *(Japanese)* 79762
MicroNetwork-based integrat. for SOCs, automated develop. environ. 125371
mixed-HDL simul. for reduced SoC design complexity 114684
mode dependency timing charactn. method, cct. delays, timing models 125447
modular constr. of model partitioning procs. for parallel logic simul. 125282
modular neural nets for high complexity problem solving 68689
multi-level logic optim., graph-based alternative wiring scheme 68740
multi-modulus divider, low-power, in 0.6 μm digital CMOS technol. 68690
multi-phase seq. ccts., verification method, combinat. equivalence 68723
multi-way cct. partitioning using GBAW logic perturb. techs. 79683
multiple asynchronous domains, static scheduling, functional verification 125445
multiple EDA tools within ASIC design flow 101879
multiple implication checks, learning procedure, DNF, DIMACS benchmarks 79680
optimal FPGA module placement, temporal precedence constraints 79702
optimal partitioning algm., technol.-mapped designs on single-chip emulation systs. 68781
orthonormal DWTs, rapid prototyping on FPGAs 90815
parallel and distributed VLSI synthesis on workstation network 79721
partition-codec archit. synthesis for low power and small area cct. design 102113
pass-transistor adiabatic logic adder, low-noise/low-power design 68751
pipelined logarithmic no. syst. ALU, low power design 90872
placement watermarking of std.-cell designs, spatial domain and spectral domain 68732
PLD-based DSP systs., debugging and design, staged approach 79904
PLDs, high-speed/flexible controllers design 114735
post-layout optim. combining buffer insertion and transistor sizing 125285
pseudo-symmetric BDDs, global approach to variable ordering problem 101977
public-key cryptosystems, ellipt. curve, hardware-accelerated, rapid prototyping 94362
RC power bus max. voltage drop in digital VLSI ccts. 79730
reconfigurability of FPGA, Intellectual Property design proc. 79825
reconfigurable MCM syst., enhanced quality, redundant utilisation 102879
reconfigurable systs., design space, reconfiguration hierarchy 125348
recursive bi-sect. timing driven placement using phys. net constraints 125382
recursive partitioning based placement, cut seqs., dyn. prog. approach 125454
redundancy addit. and removal logic optim., generalized reasoning scheme 79794
redundant digit systs. gate networks design 90879
retimed seq. ccts., init. state computation, adaptive algm. 68786
reusable direct digital freq. synthesizers, VHDL-based design/design methodology 125585
RISC μP with DSP functionality, 32 bit, rapid prototyping 68845
RISC proc. driving in FPGA 90834
RNS converters, automatic generation, archit. level exploration, CAD tool 102218
RSFQ logic cct., top-down design, BDD 70891
RTL coding style effect on testability, use of RTL code analyzer 101993

gic CAD continued
RTL partial scan design syst. *(Japanese)* 79767
RTL VHDL simul., synthesizable, fast cycle-based approach 68514
S3C2400X indust. embedded SOC product, model checking 125367
SAT, Satisfiability algm. for combinat. equivalence checking 79789
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
scalable hybrid verification of complex µP 125545
seq. ccts., peak-power estim. algm., low-power ccts. 102010
seq. ccts., use of don't cares during symbolic reachability anal. 102104
seq. logic synthesis syst., RTL form *(Chinese)* 125276
sig.-type async. data commun. mechanism, synthesis and implement. 79784
sign Walsh spectra of Boolean fns., calc. from disjoint cubes 101974
Simple RISC Computer archit. µP design, undergraduate course 125297
simultaneous switching noise modelling, high speed systs., digital design 79656
SIMUTEL ternary logic cct. switch-level simulator 90888
single pulser design, formal methods 80021
SoC design for verification methodology, functional verification at blockto syst. level 79726
SoC programme, digital hardware organization course, block-oriented design 125292
soln.-based watermarking tech. of satisfiability, combinat. isolation lemmas 125361
static CMOS and pass transistor logic designs, technol. mapping, delay reduction 125417
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistor sizing 102035
std. cell placement optimisation by candidate sieving 125414
structural pattern matching algm. for technol. mapping, subj. Boolean network 125357
sum of pseudoproduct logic minimization using XOR gates 125432
superscalar µP archits., genetic approach to design space exploration 102249
switch logic tutorial tool, Boolean fns., static CMOS complex gate implement. 125293
symbolic verification of Boolean constraints over partially specified fns. 101976
sync. ccts., register and phase requirements, software pipelining techs. 90866
sync. handshake ccts., FPGAs, Tangram behavioral-level spec. 79783
temporal partitioning onto reconfig. PUs, static-list scheduling algm. 101956
tight coupling of timing-driven placement and retiming 101962
TITAC2 abstracted instruction cache, formal verification 102080
VeriBox CBT syst. for chip design, logic synthesis, multimedia techs. 124257
Versys2, formal verification CAD tool 101877
VHDL described replicated archits., induction-oriented verif. 68687
VHDL lang., logic synthesis of digital systs. *(Spanish)* 79657
VHDL procs., behavioral test generation 68679
VirtexDS, Virtex device simulator 90839
virtual components, publicly detectable protection techs., watermarking method 125443
VITAL VHDL gate level std., cycle-based simul. 125405
VLSI CAD, hist.-based dyn. minimization during BDD constr. 101949
VLSI ccts. designs, conservative cct. simul. on multiprocessor machines 79769
VLSI hypergraph partitioning, move-based heuristics 68509
VLSI LV/low-power/appls., std. cell library design 68837
VLSI placement, simulated evol. algorithm adaptive bias scheme 101963
wavelet coder/decoder, FPGA implement. 68754
width-adaptive data word archits., asynchronous VLSI techs. 68728
GaAs deep submicron CMOS high speed ccts., compact full-custom layout tech. 102025

logic cell arrays *see logic arrays*

logic circuit elements *see logic devices*

logic circuits
see also asynchronous circuits; asynchronous sequential logic; carry logic; combinational circuits; emitter-coupled logic; flip-flops; formal logic; integrated logic circuits; logic devices; majority logic; multivalued logic circuits; NOR circuits; probabilistic logic; sequential circuits; superconducting logic circuits; threshold logic
adiabatic logic cct., power clock generator 102069
all-opt. SOA digital proc. cct., GHz shift register 127870
Boolean alg., converter ccts., min. memory vol. 102012
cost-effective non-scan DFT 125394
design, incorporating redundant state into state assignment *(Chinese)* 68733
digital logic network simul. using spreadsheet toolbox 114567
disjoint decomp. of bal. Boolean fns. through Walsh spectrum 68768
double fixed-polarity Reed-Muller expressions *(English)* 79852
dyn. pass-transistor logic, 8-bit multiplier appl. 68710
EXOR based ccts., factorization to enhance random pattern testability 79775
finite digital sync. ccts., 2-alg. truth tables characterisation 90863
fixed-polarity OR-AND-EXOR expressions and minimization *(English)* 79853
Gb/s opt. duobinary transmitter, increased transm. dist. 96699
glitch minimization and dyn. element matching techs. in DACs 68865
home appliance inverter syst., digital logic control PWM/PFC cct. design 77976
III/V double barrier RTD for logic ccts. 81197
image anal. and pattern recogn., coord. logic filters 129575
inorganic logic elements, all-additive fab. by liq. embossing 102078
kernel extraction during logic optim. 114703
learning tool, logic ccts. *(Japanese)* 114699
learning tool for logic ccts. *(Japanese)* 79838
low-cost intell. portable MCA design anal. 121742
meas. DP, quantum logic ccts. 86454
MEMS, evolving cct. designs 102051
merged DRAM/logic LSIs, high-perform./low-power cache archits. *(Japanese)* 68802
min.-adder integer multipliers using carry-save adders 90852
modulo tests, logical ccts. design, unitary positional binary codes 68764
mutable functional units and their appls. on µP 125556
polysilicon act. matrix organic LED display, integrated drivers 97727
prefix computation and addit., optimal-depth ccts. 102084
random recursive ccts., limit law for outputs 125413
regular time-efficient VLSI archit. for multiplication modulo 2^n+1 *(Chinese)* 92433
STACEE γ-ray detector prog. digital delay/trigger syst. 121739
substation restoration syst., protective relays, logic proc. 78097
variable-correction truncated floating point multipliers 102083

logic design
see also logic CAD; logic partitioning; roundoff errors
adiabatic charge recovery logic, low-power design 79800
Alpha µP, α-particle induced soft error rates, historical trends 79953
applied Boolean equivalence verification and RTL static sign-off 101875
area-efficient iter. modified-Booth multiplier based on self-timed clocking 125463
ARM CPU core verification 68696
ASM-based self-checking controllers synthesis 125312
asynchronous ccts., init. tech. 125407
asynchronous ccts. synthesis, pseudo delay-insensitive timing model 79749
asynchronous logic, Blowfish algm. implement. 101942
asynchronous methodologies in CPU design 79672
asynchronous RISC proc., FPGA-based rapid prototyping 102206
automatic generation of parallel CRC ccts. 101904
bit-scalable archit. for fuzzy proc. 102190
Boolean fns., strict avalanche criterion ident. by Walsh spectral symms. 90816
C-PAL flip-flops, energy recovery low power design 79824
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0.1 µm rule *(Japanese)* 68773
cct. minimization problem 68668
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
circuit design, incorporating redundant state into state assignment *(Chinese)* 68733
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS and BiCMOS logic ccts., fault charactn. and DFT tech. for I_{DDQ} fault detect. 125438
CMOS ASICs, shifter design 90861
CMOS cpd. mode logic based high perform. 32×32 bit multiplier design *(Korean)* 114698
CMOS domino logic ccts., mixed-swing methodology for MAC implement. 102118
CMOS high-perform. adder, 64 bit, implement. using output prediction logic 68731
CMOS multiplier, 32×32-bit design with sign select Booth encoder 90850
CMOS/BiCMOS static latch ccts., design/meta-stable operation considerations 102046
combinat. ccts., max. power consumption problem, approx. algms. 102004
combinat. ccts., resynthesis for path delay fault testability 125418
combinat. ccts. design error diagnosis without error model 101947
combinat. logic ccts., design diversity metric 101967
combinat. multi-level networks synthesis using inform. theory method 79822
compact seq. ccts. through inform.-driven cct. synthesis 125308
computer design, VLSI in computers and proc., conf., Austin, TX, USA (Sept. 2001) 124212
configurable logic block requirements for cct. implement. 90825
constraint-driven FSM state encoding for low power 125313
control cct. for asynchronous micropipelines 114720
cork stopper class. using FPGAs and digital image proc. techs. 125325
counters with near min. counting/sampling period and hardware complexity 102056
CPLD technol. mapping algm. under time constraint 68681
data-depend. clocked logic 101889
deep submicron LSI design, parasitic wire capacitance *(Japanese)* 81493
delay insensitive SoC interconnect using 1-of-4 data encoding 79671
DES encryptor/decryptor core in FPGA 106230
digital CMOS ccts., transistor sizing for switching activity reduct. 90826
digital systs. design, conf., Warsaw, Poland (Sept. 2001) 124196
domino logic design, crosstalk noise minimization 102089
DSP appls., low-power design tech. 102241
DSP core FPGA implement. for full rate/half rate GSM vocoders 74768
dyn. FPGA implement. of Serpent block cipher 106229
dyn. pass-transistor logic, 8-bit multiplier appl. 68710
embedded DRAM technol., 0.15 µm logic based, with 0.425 µm² stacked cell using MIM capacitor 125491
entropy-based learning hardware organization using FPGA 80150
evolvable hardware, conf., Long Beach, CA, USA (July 2001) 100399
EXOR based ccts., factorization to enhance random pattern testability 79775
fast asynchronous ccts., design proc. 79786
fast IEEE floating-point adders, design 79862
finite digital sync. ccts., 2-alg. truth tables characterisation 90863
finite field digit-serial multiplier archit. for cryptography 79751
FLEETzero chip, async. switching fabric expt. 79785
flexible platform-based design 68695
FPGA logic cct. design, video proc. algms. 118453
FPGA struct. for const. coeff. multiplication *(Polish)* 114713
FPGA synthesis through functional decomp. based on inform. rels. measures 125306
functional decomp. for logic synthesis 125307
GasP async. ccts., design method and CMOS sq. FIFO implement. 79787
gate sizing using stat. static timing anal. 101892
GREEDY IIP, partitioning large graphs by greedy iter. improvement 125309
Hamming clustering 101884
header compression in Handel-C, Internet appl. and design lang. 125420
high-security cryptographic fast finite field multiplier archit. 114712
high-speed PLA using dyn. array logic ccts. with latch sense amps. 114707
IC structural anal., hierarchical class. algm. 79748
IEEE compliant floating point MAF 101941
III/V double barrier RTD for logic ccts. 81197
input-output encoding approach for functional decomp. 125318
integer multipliers, 32-bit, perform. measures, FPGA synthesis comparison 68753
Intel's Itanium proc. clock design 102196
interconnect-centric array archits. for min. SRAM access time 125515
IP supply chain, design reuse paradigm comes of age 68697
kernel extraction during logic optim. 114703
Lempel-Ziv data compress. algm., unified VLSI systolic array design 90924
lin. threshold gate implement. in SET technol. 90868
load-sensitive flip-flop charactn. and designs 90867
lookup tables, Boolean matching 102088
low power cct. synthesis combining CMOS/pass transistor logic *(Japanese)* 79850
low power CMOS ccts. with clocked power 68784
low power-delay-product multiplier with dyn. operand exchange 68782
low-power design, multi-level low swing voltage 101931
low-power design, use of residue and logarithmic no. systs. 114690
low-power design method for CPL, CVSL and domino logic families 68746
low-power design optim. 102034
low-power high-speed max. a priori decoder archits., design 79917
LSI design, education, IP database *(Japanese)* 89632
mask prog. matrix design for seq. ccts. using universal logic gates 102081
minimization of decision diags. 125311
minimization of OPKFDDs using GA 125310

logic design continued
modulo tests, logical ccts. design, unitary positional binary codes 68764
MOUSETRAP, ultra-high-speed transit.-signaling asynchronous pipelines 125180
multiple-valued logic fn., fixed polarity Reed-Muller expansion 101886
multiplier-block based FIR filter structs. implement. on FPGA, transit. anal. 68936
µP design using formal verification methodology 101876
OC-3072 packet class. using BDDs and pipelined SRAMs 125281
parallel CRC computations, systematic approach 106160
parallel multiplier archit. for low-power design 90871
parallel prefix adder design 79864
parallel-prefix modulo 2^n+1 adders for diminished-one operands 79863
partial scan seq. ccts., power dissipation minimisation 125283
pass transistor logic cct., buffer minimization 68707
phased logic, arith. ccts. 125451
pipelining considerations for FPGA case 125326
planar waveguide devices, all-opt. no. representations and logic ccts. 127863
power as design constraint for future archits. 79768
power consumption as first-class computer archit. design constraint 68564
PPMC model optimisation for hardware implement. 125317
prog. DSP design using VLIW archit. 102205
QD logic ccts., shared BDD 101999
quantum MOS logic, cct. appls. 102006
quotient-selected modified signed-digit division algm., optoelectronic implement. 104844
random recursive ccts., limit law for outputs 125413
reconfigurable computing, business model and impact on SoC design 125315
reconfigurable computing at Xilinx 125314
reconfigurable proc. for problems of combinat. computations, design and implement. 125316
regular realization of symmetric fns. using reversible logic 125324
reshuffled handshaking expansions, anal. 79669
RSFQ logic cct., std. cell design, BDD 70820
RTL cct., timing optimal design *(Chinese)* 114680
self-restored current mode CMOS multiple-valued logic design archit. 79819
self-timed cct. design, achieving worst-case perform. 79673
seq. cct., power mgt., computational kernel extraction 102091
seq. cct. design, digital watermarks 102090
seq. ccts. synthesis on PLD based on new models of FSM 125320
seq. logic ccts., design diversity for concurrent error detect. 102045
SFQ logic cct., resettable latch 70936
single ended pass-transistor logic, comparison with CMOS/CPL 101945
single wire replacement algm. 102092
SPARC v.8 Integer Unit, proc. core design and synthesis 79945
SRAM-based FPGAs, fault tolerant archit. and routing procedure *(Chinese)* 114697
static CMOS ccts., stand-by leakage power minimisation 79792
supercond. digital logic cct., yield optim. 70957
supercond. RSFQ pseudo-random no. generator, timing design 70853
synthesizing prog. logic networks based on neuron-type components 80146
syst.-level device design brings new challenges 68770
test generation and fault simul. methods on basis of cubic alg. for digital devices 125322
testable data path synthesis, GA 114731
TestChipB, prog. logic core advanced technol. demonstrator 102252
toroidal neural proc. design optimized for Xilinx Virtex FPGA devices 114909
vert. CMOS gates, feasibility study 104102
vMOS-based compressor design for parallel multipliers 68749
GaAs VLSI ccts., self-timed techs. for low-power digital arith. 102079
InP HEMT 40 Gbit/s D-type flip-flop and MUX ccts., design tech. 90855
InP RTD/HFET MOBILE depth-2 full-adder cct. 114708

logic device programming *see PLD programming*

logic devices
see also logic circuits; logic gates; programmable logic devices; threshold elements
flexible proc. based on full-adder/D-flip-flop merged module 79772
nanoscale Coulomb blockade memory and logic devices 81400
train network simulator design based on train commun. network 134543

logic, formal *see formal logic*

logic gates
see also optical logic; quantum gates
all-opt. AND gate using XPM wavelength converter 93268
bit-parallel systolic modular multipliers 79861
Boolean satisfiability problem, inactive clauses, dyn. detect., image computation algm. 125364
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS adiabatic gates, buffer comparison with conventional approach 90884
CMOS ccts., gate-level simul. using IDDM model 101986
CMOS devices, 0.12 µm, high perform., with manufacturable 0.18 µm technol. 127020
CMOS dyn. logic cct. testing based on charge sharing 102075
CMOS energy-efficient skewed static logic design, topol.-depend. dual voltage 102103
CMOS gates, cycle-true leakage current modeling, leakage power estim. 102111
CMOS inverter, series-voltage noise margin 102097
CMOS inverter, vel. saturation, delay model *(Chinese)* 92463
CMOS latches, resistive opens, delay testing, DFT 102044
CMOS logic technol., inverter delay, gate length reduction 125408
CMOS SOI domino logic, technol. mapping incl. parasitic bipolar effect 125439
CMOS three-input XOR/XNOR cct. for LV and low-power appls. 68783
CMOS three-phase half rail pass-gate differential logic, low-power ccts. 102028
CMOS VLSI cct., leakage power minimization 104010
complementary pass-transistor logic ccts., testing, single-stuck faults 102018
conditional keeper tech. for sub-0.13µ wide dyn. gates 125456
custom ASIC design methodology with on-demand library generation 125387
DC power supply decoupling, capacitor charact. impact, SPICE 99737
deep submicron CMOS structs., gate output transit. time modeling 102107
deep submicron digital ccts., functional correl. anal., crosstalk induced crit. paths 125446
delay constrained ccts., voltage scaling and gate sizing 114672
delta-sigma ADC using reson. tunneling diodes 125576
differential CMOS output prediction logic, 64:2 compressor realisation 90865
dominator gates, fault equivalence ident., redundancy, static/dyn. extraction 102043
DSM CMOS technol., energy efficient signaling, on-chip interconnect 101984
EPGA Varicore embedded PGA, reconfigurable IP *(Italian)* 79832
evolvable Internet hardware platforms 108222

logic gates continued
EXCLUSIVE-OR optoelectronic logical syst. 104850
EXOR based ccts., factorization to enhance random pattern testability 79775
fault tolerant combinat. cct. with fault diagnosis capability *(Japanese)* 90818
GasP asynchronous ccts., min. FIFO control, self-resetting logic forms 79779
higher order noise immune perceptrons 102470
intermolecular/intramolecular 91505
inverter, RLC load, short-cct. power anal. 102102
learning tool, logic ccts. *(Japanese)* 114699
learning tool for logic ccts. *(Japanese)* 79838
lin. threshold gate implement. in SET technol. 90868
low power high speed charge recycling CMOS threshold logic gate 102093
low-power domino logic ccts., automated phase assignment in synthesis 79830
mask prog. matrix design for seq. ccts. using universal logic gates 102081
micromechanical phase-shifting gate technol. for opt. logic components desiugn 104845
MicroNetwork-based integrat. for SOCs, automated develop. environ. 125371
modular neural nets for high complexity problem solving 68689
MOS asynchronous FIFO with fights, speed optim. 68742
MOS floating gate neuron cct., low temp. DC charact. 68984
multi-modulus divider, low-power, in 0.6 µm digital CMOS technol. 68690
multi-output incompletely specified logic fns., bi-decomp., BDD-based method 125431
multi-valued tunneling phase logic devices 102007
neuron-PMOS and capacitive threshold-logic ccts., delay anal. 68747
NOR-type flash memory cells, data retention failure 79893
nucleic acid computers, components design and selection 69355
organic TFT, logic gates, bias stress 103807
partially-depleted SOI CMOS design, high perform., for 0.18 µm technol. generation 70308
phased logic, arith. ccts. 125451
polysilicon TFT, reliab., CMOS inverter cct. 115929
pulse mode neural network with simple synapse multiplier 91153
reconfigurable computing at Xilinx 125314
redundant digit systs. gate networks design 90879
self-aligned supercond. nanotransistor, NOR logic gate, fab. 127484
SFQ logic cct., resettable latch 70936
SFQ phase-mode logic gates, cct. params. 70938
simultaneous switching gate delay model, static timing anal., ATPG 125437
single transistor ferroelec. memory arrays. disturb free prog. scheme 79873
SOA based integrated Mach-Zehnder interferometer, wavelength conversion, opt. logic *(English)* 104849
static CMOS and pass transistor logic designs, technol. mapping, delay reduction 125417
static CMOS ccts., combinat. blocks, gate capacitance minimisation, transistor sizing 102035
static CMOS ccts., stand-by leakage power minimisation 79792
static timing anal. incl. power supply noise effect on propag. delay in VLSI ccts. 125356
subcircuit enumeration and class. for module ident. problem 125182
sum of pseudoproduct logic minimization using XOR gates 125432
supercond. RSFQ ccts., BER and pulse jitter 70842
switch logic tutorial tool, Boolean fns., static CMOS complex gate implement. 125293
TDM photonic switching network, variable mux/demux, opt. time jumper 86106
vert. CMOS gates, feasibility study 104102
VHDL transparent fault injection and simul., shared variables and linked lists 79833
C_{60} mol. transistor, memory/adder model 125932
GaAs/AlAs vert. reson. tunneling transistor for appl. in digital logic ccts. 68762
InP-based monolithically integrated RTD/HBT MOBILE for logic ccts. 114709
Si inverter logic gate using micromechanical switch, electrostatic force actuator 92511
Si(100) bistable surface dimers, form. of logic gates 125921
W-TiN damascene metal gate CMOS technols., perform. improvement 127040

logic minimisation *see minimisation of switching nets*

logic partitioning
appl.-specific multiprocessor SoC, generic archit. model 79676
archit. driven cct. partitioning, multiterminal nets, multifield-PGA 68778
area-power optimal state assignment, complete weighted graph 114677
automatic functional vector generation using interact. FSM model 79741
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
BIST scheduling for min. energy consumption under power constraints 101933
BIST synthesis, cct. partitioning, divide-and-conquer approach 79678
cell-based VLSI ccts., table-lookup delay model-based timing-driven placement algm. *(English)* 79718
clustering based fast clock scheduling for light clock-tree 79684
CMOS seq. ccts., power estim. using graph-based methods 114695
codec archit. synthesis for low power and small area cct. design 102113
constraint-based watermarking for graph partitioning solns. 125362
cryptographic scheme, modular exponentiation on fine-grained FPGA 125461
cycle time optim., timing driven placement with simultaneous netlist transforms. 101964
DSP cores, hardware/software partitioning algm., register files 68852
dyn. iter. method for fast network partitioning 101666
dyn. reconfigurable FPGA placement 125400
ENISLE, intuitive heuristic nearly optimal soln. for mincut and ratio mincut partitioning 102105
flexible granularity automated hardware/software partitioning, high-level estim. techs. 68700
FPGA hardware/software co-design in embedded syst., partition decision, graduate course 125294
FPGA intellectual property protection, fingerprinting techs. 114715
FPGA technol. mapping, look-up table, unified functional decomp. 68775
gated-clock FSMs, low power hand-over mechanism 90883
generic ILP-based approaches for time-multiplexed FPGA partitioning 114717
large FPGAs, cost minimization of partition. with complex resource constraints 68787
large seq. ccts., testable design, partition and resynthesis approach 102039
low-power mixed sync./asynchronous implement., automatic FSM synthesis 114694
LPSAT, unified approach to RTL satisfiability 79690
mixed-sig. PCB partitioning/layout 115126
modular constr. of model partitioning procs. for parallel logic simul. 125282
multi-way cct. partitioning using GBAW logic perturb. techs. 79683
multiple-output logic fns., realization by reconfigurable cascades 125462
netlists, archit. driven partitioning, logic emulation 79795
optimal partitioning algm., technol.-mapped designs on single-chip emulation systs. 68781

gic partitioning continued
parallel logic simul. method, demand driven algm. *(Japanese)* 79757
PLD-based DSP systs., debugging and design, staged approach 79904
recursive partitioning based placement, cut seqs., dyn. prog. approach 125454
reusable components based synthesis, arith. spec., POLYSYS tool 101888
scan-based BIST, partitioning-based diagnosis, failing scan cell ident. 79679
SoC design methodology for 3rd millennium ICT products 101887
SoC dyn. reconfig. archit., hardware-software partitioning algm. 79706
SOC test resource partitioning, Object Oriented Paradigm and UML 79675
static compaction in sync. seq. cct., seq. reordering 79682
sync. seq. ccts., BIT pattern generation method 125393
temporal partitioning onto reconfig. PUs, static-list scheduling algm. 101956
variable partitioning, disjoint decomp. 101979
VLSI hypergraph partitioning, move-based heuristics 68509

gic programming
see also constraint handling; logic programming languages
FPGAs, run-time reconfiguration, dens. requirements reduction 114734
user models for intell. telephone assistant 119511

gic programming languages
see also PROLOG
network security syst. design based on immune syst. 130599

gic simulation
see also logic CAD
adiabatic quantum cellular automata, perform. assess. 79773
bipolar CML testability, inductive fault anal., library cell layouts 102074
Boolean matching by simplified BDD, logic verification *(Chinese)* 101662
bus controller verification, imPROVE-HDL model checker appl. 79826
C-PAL flip-flops, energy recovery low power design 79824
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS ASICs, shifter design 90861
CMOS combinat. ccts., av. power estim., pattern compaction tech. 102110
CMOS differential cascade voltage switch logic ccts., delay optim./energy estim. 68752
CMOS digital ccts., switching activity eval. using logic timing simul. 68664
CMOS latches with three stable operating points, open loop anal. 79840
CMOS logic ccts., leakage current estim., product engng. environ. 102073
CMOS logic ccts., path balancing algm. for glitch power reduction 90856
CMOS logic power simul., stream synthesis, spectral transforms 79847
CMOS low-noise logic cells, substr. noise, resistive substr. model 102070
CMOS LV logic ccts., design considerations, simulated behavior 68727
CMOS single-phase adiabatic multiplier, SCAL-D logic, HSPICE simul. 68725
CMOS true single-phase adiabatic multiplier, BIST logic, HSPICE simul. 125449
CMOS ultra deep submicron technol., coupling delay optim., temporal decorrelation 125448
CMOS VLSI, max. power dissipation, GA *(Chinese)* 90874
CMOS/BiCMOS static latch ccts., design/meta-stable operation considerations 102046
combinat. digital CMOS ccts., av. switching activity estim. 101882
complementary pass-transistor logic ccts., fault characterisation 102005
coverage metrics for functional validation of hardware designs 101878
data-driven dyn. logic/NP-CMOS logic, design comparison 68750
dIbSIM, parallel functional logic simulator with dyn. load balancing 79695
digital CMOS ccts., crosstalk noise, simul. results 79688
digital logic ccts., compiler driven simul. tech. 79839
digital logic network simul. using spreadsheet toolbox 114567
DNA simul. of Boolean ccts. 79758
DNA-based self-propag. algm., Boolean cct. simul. 79759
DSM CMOS technol., energy efficient signaling, on-chip interconnect 101984
education in sync. switching cct., computer aided via networking *(Polish)* 124244
emulation syst., net assignment problem, FPLA 68766
encryption VLSI proc., const. charact. power dissipation *(Japanese)* 79848
exact two-level hazard-free sum-of-products logic minimization 79781
fine grain Cooled Logic archit. for low-power proc. 68818
HALOTIS, high accuracy logic timing simulator with delay models 79694
high speed dyn. latch comparator with reduced offset using init. switch *(Korean)* 79837
HRM, hierarchical simulator for full-chip power network reliab. anal. 79734
JouleTrack Web-based tool for software energy profiling, µP appls. 125548
large digital ccts., multiple supply domains, substr. noise generation, high-level simul. 79687
large seq. ccts., power estim. approach, consecutive vector blocks 68780
learning tool, logic ccts. *(Japanese)* 114699
learning tool for logic ccts. *(Japanese)* 79838
lin. FSM, phase shifter synthesis, pseudorandom seq. generation 90832
logarithmic adder optimal struct. with fanout of two for minimizing area-delay product 90849
look-up-table driven logic simul., logic restructuring techs. 101952
mixed-HDL simul. for reduced SoC design complexity 114684
modular neural nets for high complexity problem solving 68689
multi-modulus divider, low-power, in 0.6 µm digital CMOS technol. 68690
multiple-level logic simul. algm. 90838
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
netlists, archit. driven partitioning, logic emulation 79795
parallel logic simul. method, demand driven algm. *(Japanese)* 79757
partial-order correctness-preserving props. of delay-insensitive ccts. 79782
pass-transistor adiabatic logic adder, low-noise/low-power design 68751
prefix adders, deep-submicron technol., anal. wire delay model 102086
probabilistic event propag. for fast stat. timing anal. of VLSI 125370
quantum cellular automaton based logic gates/ccts. simul. 102008
RSFQ logic cct., top-down design, BDD 70891
RT level VHDL simul., cycle-based approach 68706
RT-level fault simul. based on symbolic propag., VLSI ccts. 101922
seq. ccts., peak-power estim. algm., low-power ccts. 102010
SIMUTEL ternary logic cct. switch-level simulator 90888
single transistor ferroelec. memory arrays, disturb free prog. scheme 79873
speculative sync. VLSI logic simul., perform. predictions 79502
split-level precharge differential logic, high-speed charge-recycling 102003
ST, PERL package for LSI simul. and test environ. 101975
sub-70 nm dyn. domino MOS ccts., anal. techs. and scaling trends 125455
symbolic Elmore anal. and cct. simul. for logic-stage delays computation 125355
test seq. compaction method for seq. ccts. with reset states *(Japanese)* 79766
tree-struct. carry lookahead adder, 1.25 GHz, 32-bit 102021
VHDL interconnections analog macromodels, timing behavior, event-driven simulators 101883
VITAL VHDL gate level std., cycle-based simul. 125405
VLSI, static estim. tech. of power sensitivity in logic ccts. 125436

logic simulation continued
VLSI distributed RLC interconnects, on-chip inductance effects, perform. optim. 125385
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
VLSI test generation for maximizing ground bounce for internal circuitry with reconvergent fan-outs 101935
wavelet coder/decoder, FPGA implement. 68754
width-adaptive data word archits., asynchronous VLSI techs. 68728

logic testing
see also fault simulation; logic analysers
2D cellular automata, VLSI testing appl. 90830
accumulator-based bit-serial test response compaction schemes, ISCAS'85 benchmark ccts. 79738
aliasing-free space compactor design, switching theory formulation 101965
Alpha 21364 µP error handling syst., pre-silicon verification 125564
Alpha µP, α-particle induced soft error rates, historical trends 79953
ARM CPU core verification 68696
ASIC verification methodologies, prog. logic 101927
asynchronous cct. testing, techs. and ATE archits. 79788
asynchronous ccts., init. tech. 125407
automatic functional vector generation using interact. FSM model 79741
base-band proc., prog. archit., testing 130492
BIST data path synthesis, high-level data path allocation 90822
BIST for seq. cores in SoC environ., spectral methods 101918
BIST on-chip short-time interval meas. tech. for testing high-speed commun. links 101936
BIST RTL data paths, testability trade-offs, 3D design space 79715
BIST scheduling for min. energy consumption under power constraints 101933
BIST strategies at register-transfer and algorithmic levels 125341
BIST synthesis, cct. partitioning, divide-and-conquer approach 79678
BIST test pattern generator using ATPG vectors 125329
BIST-based design-for-test method, breaking correl. to improve testability 101914
Boolean matching by simplified BDD *(Chinese)* 101662
Booth array datapath multipliers, seq. fault testing, low-cost BIST archits. 102037
bus line interconnect defects, test methodology using I_{DDT} and boundary scan 126976
bus-based prog. SoCs, IP cores, self-test methodology 101920
capacitor-separated pass-transistor logic with offset-cancelling sense amp., 0.1 µm rule *(Japanese)* 68773
classical fault models, anal. of realistic defects 79739
CMOS, full opens in interconnection paths, detectability conditions 125330
CMOS and BiCMOS logic ccts., fault charactn. and DFT tech. for I_{DDQ} fault detect. 125438
CMOS digital ccts., defect-oriented fault simul. and test generation 79740
CMOS dyn. logic cct. testing based on charge sharing 102075
CMOS high-perform. ccts., test mode, arbitrarily low test freq. 102040
CMOS latches, resistive opens, delay testing, DFT 102044
CMOS logic open defect detect. by supply current test 79797
CMOS single-phase adiabatic multiplier, SCAL-D logic, HSPICE simul. 68725
code-perturb. simul.-based hardware verification, black- and white-box approach 79725
colour counting tech. and appl. to path delay fault coverage in ICs 79742
combinat. ATPG algms., test pattern compaction, independent/compatible faults *(Korean)* 102095
combinat. cct., configurable hardware, ATPG 68718
combinat. cct., defect coverage, target faults, test generation 79796
combinat. cct., parity testable design 114724
combinat. cct. path delay faults, ATPG methodology 79810
combinat. ccts., resynthesis for path delay fault testability 125418
combinat. logic cct. diagnosis by using neural networks 79842
combinat. logic ccts., test generation, OBDD *(Chinese)* 79756
combinat. MVL ccts., genetic algm. for ATPG tool 90891
Combination of BIST and External Test for SoC *(Japanese)* 70282
compact IDDQ test set generation method *(Japanese)* 79765
complementary pass-transistor logic ccts., testing, single-stuck faults 102018
component replacing and replacement tests for model-based diagnosis *(Chinese)* 101925
computational anal. of counter-based schemes for VLSI test pattern generation 68663
computer design, VLSI in computers and proc., conf., Austin, TX, USA (Sept. 2001) 124212
concurrent simul. of large networks using various fault models 79717
continuous scan, test environ., fault coverage 125346
coverage metrics for functional validation of hardware designs 101878
cross-chip delay meas. and charact. of delay modeling flow, boundary scan delay chain 79736
crosstalk originated error detect., error detecting codes optim. 79686
crosstalk-induced logical/delay faults, on-chip buses, embedded-software-based approach 101921
custom logic blocks, efficient path delay test generation 114718
cyclic greedy generation method for limited no. of IDDQ tests *(Japanese)* 90819
data path synthesis, GA 125404
data path synthesis, GA 114731
deterministic scan-BIST archit. with appl. to field testing of high-availability systs. 101994
DFT based methodology reduces fault-coverage anal. 101929
DFT scan wheel, tech. for interfacing high speed scan-path with slow speed tester 101915
differential diagnosis of faulty gates, eight-valued logic 68703
digital FIR filters, testing schemes 91103
digital VLSI, crosstalk faults, BIST *(Japanese)* 68666
dominator gates, fault equivalence ident., redundancy, static/dyn. extraction 102043
double fixed-polarity Reed-Muller expressions *(English)* 79852
dual-slope method time interval meas. core, CMOS technol. 101907
embedded memory access time meas. using BIST circuitry 79745
embedded memory core testing, on-chip march pattern generator, low hardware overhead 125291
embedded RAM built-in self-diagnosis, use of syndrome compression 125479
embedded RAM fault diagnosis by syndrome compression, built-in self-diagnosis 79875
embedded SRAM of µPs, µCs and DSPs, efficient BIST method 102176
enhanced fault model for high defect coverage 79719
equivalence checking of digital ccts. in indust. environ. *(German)* 114671
EXOR based ccts., factorization to enhance random pattern testability 79775

logic testing continued
fault simul. and test generation methods on basis of cubic alg. for digital devices 125322
fault tolerant combinat. cct. with fault diagnosis capability *(Japanese)* 90818
fixed-polarity OR-AND-EXOR expressions and minimization *(English)* 79853
floating-point adder, on-line testing method, abridged operation 79791
formal property verification, abstraction refinement, formal, simul. and hybrid engines 125430
formal verification, recurrence eqns. & equivalence checking 68709
forward-looking fault simul. for improved static compaction 114716
FPGA logic blocks, BIST-based test and diagnosis 68719
FPGA testing, LUT fns., delay fault testability 125424
FPGA-based systs., run-time reconfiguration for fault injection appls. 114711
freq.-directed run-length codes, appl. to syst.-on-a-chip test data compression 101911
full-scan ccts., test appl. by input control tech., power consumption 79754
functional test generation for behaviorally seq. models 79691
gate sizing using stat. static timing anal. 101892
Genevieve based semi-formal test generation 125368
geometric-primitives-based compression scheme for testing systs.-on-a-chip 101913
heuristic for multiple wt. set generation 125402
HF μP, digitally adjustable resistor for path delay charactn. 68823
hierarchical image computation, dyn. conjunction scheduling 125397
hierarchical test of VLSI, transparency extract. and utilization 101923
high level synthesis for strong testability of operational modules *(Japanese)* 68502
IC power constrained test scheduling, power profile manipulation 104052
indust. DSP block, semi-formal test generation, Genevieve methodology 102202
instruction-level DfT for testing proc. and IP cores in syst.-on-a-chip 125340
Intel Pentium 4 μP, validation 125550
interactive BIST appl., compression tech., test data vol. reduction 101909
IP-based designs, delay fault testing via symbolic path modeling 125288
isochronous testing strategy for hierarchical adaptive distributed syst.-level diagnosis 125333
JTAG based AC leakage self-test for digital VLSI ccts. 125303
large seq. ccts., testable design, partition and resynthesis approach 102039
Latin-American Test Workshop, conf., Rio de Janeiro, Brazil (March 2000) 124205
lattice-based model checking, symbolic trajectory eval. 125398
loop-based at-speed self-testing 68675
low power BIST test pattern generator, modified clock scheme 101924
low-power systs. on chips, asynchronous and locally sync., software design 79696
Merlot multiprocessor chip, logic design environ. *(Japanese)* 79762
mission logic for embedded testing, syst.-on-a-chip logic cores 79747
mixed digital and lin. analog ccts., fault diagnosis 125617
modulo tests, logical ccts. design, unitary positional binary codes 68764
multi-output incompletely specified logic fns., bi-decomp., BDD-based method 125431
multicore systs. on silicon, exact fault simul., intellectual property protection 79716
multiple logic defect diagnosis, full-scan design, curable vectors 101910
multiple scan chains in full scan module, scan chain disable, power dissipation reduction 102071
multiple-valued floating-gate MOS pass-transistor logic in deep-submicron VLSI 81528
multiple-valued logic to test case generation for software syst. functional testing 79817
μP control logic, online integrity monitoring 125378
MVpGen test program generation tool for complex pipeline behavior verification 125563
n-detect. test generation, fault dominance appl. 101934
on-chip oscilloscopes for noninvasive time-domain meas. of waveforms 125377
online testing, diagnosis, and fault tolerance for FPGAs in adaptive computing systs. 102047
parameterizable error-propag. space compactors for response obs. 101912
partial scan seq. ccts., power dissipation minimisation 125283
path delay fault diagnosis in combinat. ccts. with implicit fault enumeration 114714
path delay faults, diagnosis in at-speed environ., functionally sensitized paths 102038
pattern-depend. transit. faults, diagnostic test generation, delay fault models 68685
PLA growth faults detect., test vector generation, CNF-satisfiability problem 81447
PowerPC μP, anal. of testing methodologies for custom designs 102203
PowerPC μP, false timing path ident. 79920
proc. control subsystems, software-based self-test methodologies for perform. faults 101995
prog. BIST for embedded SDRAM, Verilog BIST modules 125478
property-specific witness graph generation for guided simul. 79713
random limited-scan to improve random pattern testing of scan ccts. 125344
reconfigurable MCM syst., enhanced quality, redundant utilisation 102879
retiming-based test pattern generator design for BIST of data path archits. 102065
ripple carry and cascaded carry lookahead adders *(Japanese)* 79854
RT level test insertion using functional test metrics 68677
RTL ccts., non-scan DFT method, fixed-control testability *(Japanese)* 68712
RTL coding style effect on testability, use of RTL code analyzer 101993
RTL partial scan design syst. *(Japanese)* 79767
SATIRE, incremental Boolean satisfiability engine, EDA verification and optim. 125365
satisfiability-based functional delay fault testing, CNF formulas 101951
scan cct. testing, nonisolated random logic legacy core 90831
scan ccts., test compaction, at-speed testing 125345
scan chain concealment for test vol. and appl. time reduction 125433
scan-based BIST, partitioning-based diagnosis, failing scan cell ident. 79679
self-testing of universal and fault-tolerant sets of quantum gates 68722
self-testing of user-programmed FPGAs based on concept of lin. segments 125323
seq. ATPG, efficient spectral techs. 79681
seq. cct. simul. based formal verification method 125453
seq. cct. test generation using state transit. diag., combinat. cct. part 114728
seq. datapath comp. verification, arith. transform 125396
seq. logic ccts., design diversity for concurrent error detect. 102045
shifter/accumulator pairs in datapaths, deterministic BIST scheme 125331
shifter/accumulator pairs in datapaths, deterministic BIST scheme 79737
simultaneous switching gate delay model, static timing anal., ATPG 125437
SoC, early error detect. for fault tol. and at-speed debugging 101919
logic testing continued
SoC and core verification at Motorola 125351
SoC embedded cores testing, twisted-ring counters use 101966
SoCs, sig. integrity, BIST, deep-submicron highspeed interconnects 125384
speed-independent async. ccts., test pattern generation 79807
SPIRIT, highly robust combinat. test generation algm. 102072
static CMOS PLA, testable design method, IDDQ testing 79806
static compaction in sync. seq. cct., seq. reordering 79682
static latches, cosmic ray induced soft errors, scaling trends 125458
static timing anal., false coupling interacts., ATPG-based approach 125374
sync. seq. cct., crossover operator for GA based test pattern generator 90829
sync. seq. ccts., almost independent reset sigs., testability struct. 102041
sync. seq. ccts., BIST method for fault diagnosis 68776
sync. seq. ccts., BIT pattern generation method 125393
sync. seq. ccts., COREL dyn. compaction procedure 125392
syst.-on-a-chip, combining low-power scan testing and test data compression 125347
syst.-on-achip ASIC design, logic bist 68692
TACOS, testability allocation and control syst., BIST cost/quality trade-off 125332
technol.-tolerant I_{DDQ} method for CMOS digital IC diagnosis 101917
test resource partitioning for SOCs 114688
test seq. compaction method for seq. ccts. with reset states *(Japanese)* 79766
tests scheduling for low power BIST 109424
token scan cell for low power testing of scan-based ccts. 68691
TS-1 micro-satellite housekeeping computer, self testing of CPU *(Chinese)* 101926
two-level LFSR high efficiency BIST scheme, asynchronous test pattern transfer 102017
unified DFT archit., IEEE 1149.1 and VSIA/IEEE P1500 compliant test access controllers 125339
VHDL procs., behavioral test generation 68679
VLSI test, conf., Marina Del Rey, CA, USA (April/May 2001) 100395
VLSI test generation for maximizing ground bounce for internal circuitry with reconvergent fan-outs 101935
voltage overshoots in high-speed digital SoCs, built-in-chip testing 101916
weighted pseudo-random testing hybrid BIST, test resource partitioning scheme 101908
NbN RSFQ logic cct., Hilbert transform spectrosc. 70824
logistics data processing
health care syst., proc.-oriented supply chain mgt., JIT appl. 89751
long tailed pair *see differential amplifiers*
lookup tables *see table lookup*
loop antennas
annular slot antenna, gain enhancement 83533
annular slot-fed cavity antenna 94153
cavity loop antenna, coupling calc., ICR heating, 3D model *(Chinese)* 128841
circ. pol. rectenna for microwave power transm. at 5.8 GHz 112089
cold magnetoplasma, current distrib./input impedance 72514
conical-pattern annular-ring microstrip antenna with PBG ground plane 105908
CPW-fed slot-loop antenna with low cross-pol. radiation 72564
dual-freq. CPW-fed dual-slot loop antenna 105870
EM fields of ellipt. torus knots 83086
EM fields of thin circ. loop antenna above (un)grounded multi-layered chiral slabs 72535
emission meas., loop antennas, calib. 86942
folded loop antenna syst. for handsets based on advanced design concept 120056
future handset antenna syst. 108718
handset antenna, human body, EM simulator 94118
HF/VHF helicopter antenna, radiation rotor-blade modulation 83634
INMARSAT-C and GPS L-band shaped beam quadrifilar helix antenna 72527
integrated MM wave radio project 96349
mesh antennas for dual polariz. 83635
metal surface cracks detect. using small antennas, EM field change 101559
pager design, new formulae 83600
pattern control using reactively loaded loop antenna 83624
PCS antenna design, miniaturization 117810
quasi-opt. antenna mixer array using mag. loop antenna *(Japanese)* 83749
radiated emission meas., TEM cell, GTEM cell, loop antennas 83426
radome, radiation from loops next to sphere 94115
reactively loaded wire loop antenna, pattern shaping 105897
slot antennas, effects of parasitic wire on coupling 117764
subsurface digital multifreq. EM cond. imaging syst. 84166
thin circ. loop antennas, near-/far-zone EM fields 83638
thin hexagonal loop transceiver antennas, near-/far-zone fields 83656
two-layered patch and loop antenna with dual freq. for indoor microcellular syst. 72579
wire antennas embedded in scatt. dielec. medium, hybrid time-domain anal. method 83626
wristwatch phone appl. 83653
Hg-based HTS loop antenna, pass. radiative cooler for spacecraft 72483
a-Si:H thin films, VHF-PECVD, U shaped loop antenna electrode 103074
loops (programming) *see program control structures*
Loran C *see radionavigation*
loss angle *see dielectric losses*
loss-angle measurement *see dielectric loss measurement*
loss measurement
see also dielectric loss measurement; optical loss measurement
2.4 GHz SS syst. meas. in modern office buildings 105763
5.2-GHz/2.2-GHz dual band antenna, meas. based path loss model for residential areas 72301
BGA fine pitch package, RF elec. meas. 78631
BiSrCaCuO-Ag HTSC tapes, AC losses expts. 70727
cage-IM, no-load losses, meas. methods 112525
cage-IM, no-load losses meas. methods 77882
cryocooled supercond. coil syst., AC loss meas. 71061
freq. multipliers and dividers, testing techs. 91129
GSM cellular handsets, stats. of meas. body loss 119938
high-speed network meas. problems, appl. of TDR and VNAs 120682
HTS multistrand conductors, multiphase AC loss mechanisms 77403
HTS tapes, AC transport current loss meas., errors suppression 70685
HTSC coils, AC loss meas. with cryocooled sample 116530
HTSC microwave charactn., surface resist. meas. accuracy using sapphire resonator 75839
HTSC tape AC transport current loss meas. set-up *(Japanese)* 104565
IM, stray load loss eval., I/O and calorimetric methods 134020
IM, stray load loss meas., stat. anal. 123449
IM total losses, calorimetric meas. facility, calib. procedure 123447

ss measurement continued
IM total losses/temp. rise determ. using equiv. loading methods 112498
indust. high temp. supercond. power cable, develop., testing 112104
ITER full-size cable-in-conduit-supercond. tests 77399
LHC IR quadrupole magnet cooling, pressurized stagnant superfluid 75966
lightwave network anal., recent develop. 74930
mobile radio, propag. loss meas. normalization, terrain effect 74718
power converter-fed IM, losses/efficiency determ. 123435
power losses meas. with DC-bias for power conversion appls. 75817
power syst. unconventional meas., uncertainty eval., virtual instrum. 112199
Rutherford cable AC loss meas. studies 77413
Rutherford supercond. cable coupling loss props. studies 77417
steam turbine units, real-time energy-loss monitoring and anal. syst. *(Chinese)* 77753
supercond. tape wires with meter-class length, perp.-field losses meas. 127460
sync. machine losses meas. using synthetic loading 123391
transformer cores/coils materials charact. meas. using power meter 69284
transformer meas. using LMG95 digital display power meter *(German)* 132093
transformer-type supercond. fault current limiter, trigger current level degrad. 77608
Bi-2223 HTS conductor struct., AC loss meas., calorimetry 70684
Bi-2223 low loss supercond. wires/tapes, AC loss meas. 70683
Bi-2223 tapes, twisted filaments, HTS power transm. cables, AC losses 77404
Bi-2223/Ag tape based resonator coil, V-I curves, loss meas. 71043
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC round-shaped strand power cable 133747
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$ HTSC tape mag. losses in parallel mag. fields *(Korean)* 116512
$(BiPb)_2Sr_2Ca_2Cu_3O_8$ HTSC Hall sens. AC loss meas. calib. 77406
$(BiPb)_2Sr_2Ca_2Cu_3O_8$ HTSC tapes, neighbouring tape AC current effects 70687
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC cables, AC losses studies 77429
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC conductor AC transport current losses studies 70741
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag HTSC tape AC loss tests 77428
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Ag multifilamentary tapes, current distribs., AC transport losses 70742
$(BiPb)_2Sr_2Ca_2Cu_3O_{10}$-Au-Ag twisted multifilamentary HTSC tape AC losses 70728
$(BiPb)_2Sr_2Ca_2Cu_3O_8$-Ag HTSC tape joint method, AC loss dependency 70686
$(BiPb)_2Sr_2Ca_2Cu_3O_8$-Ag multifilamentary HTSC tape, AC transport current loss 77405
BiSrCaCuO bifilar winding solenoid type HTS coil expts. 71044
$Bi_2Sr_2CaCu_2O_8$ HTSC SMES cables, AC loss props. 133746
BiSrCaCuO-Ag tape conductors, AC loss studies 70723
Nb_3Sn conductor for ITER Central Solenoid Model Coil, AC loss meas. 71002
Nb_3Sn sub-sized cable-in-conduit supercond. cables for ITER Central Solenoid 71063
Si-Fe sheets, mag. props./power losses meas. 109941
YBaCuO HTS conductor struct., AC loss meas., calorimetry 70684
YBaCuO low loss supercond. wires/tapes, AC loss meas. 70683
$YBa_2Cu_3O_{7-\delta}$ HTSC conductor AC transport current losses studies 70741
ss tangent, dielectric *see dielectric losses*
OTOS *see specification languages*
udness
see also acoustic intensity measurement
cochlear implant users, loudness perception/late auditory evoked pots. 76695
digital hearing aid fitting strategy, loudness & sound quality 76701
digital hearing aids, multimode compression archit., user tests 76705
digital hearing instrum. fitting strategies comparison 76704
equal-loudness contours meas., randomized max. likelihood seq. procedure 110025
hearing aid fitting procedures eval., sig. proc. algms. 76700
multi-microphone technol. for severe-to-profound hearing loss 76702
multichannel audio programme metering 118067
sensorineural hearing impaired listeners, digital ITE-hearing aids eval. *(German)* 111160
virtual hearing aid, digital/analogue aids comparison in children 133050
udspeakers
act. noise reduction by loudspeaker with self-sens. actuation 120594
bal. membrane micromachined loudspeaker, hearing instrum. 92543
binaural synthesis over loudspeakers, optimal source distrib. 75333
boost bridge audio amp. 131783
digital home entertainment syst., elevated speaker projection 118080
digital transducer array loudspeaker, distortion and directivity 97109
electret film sens. and actuator appls., aging, reciprocity, act. sound control 111539
electrodynamic loudspeakers, nonlin. params. estim. method 86352
freq. domain step-size control in nonstationary environ. 107504
hands-free commun. unit acoustic echo canceller *(Japanese)* 96326
low power audio amps. efficiency 120597
magnetomechanical US transducers, sound fields, computer modelling 99095
moving magnet loudspeaker syst. with electronic compensation 120598
omnidirectional sound sources deisgn using aperture and reverse horn 131784
panel loudspeaker syst. develop., design, eval. and enhancement 86357
plane-wave sound field reprod. with loudspeaker array 107386
ported enclosures, lumped-param. model assumptions 86353
room acoustics meas., multitone sigs. appl., freq. response 110031
sound image rendering using loudspeaker and fully open-air headphone-set 75332
sound speaker mfg., automated QC by neuro-fuzzy approach 120599
Volterra filter for 2nd order nonlin. distortion elimination 131780
wires perform. eval. without meters 86356
ove waves
crossed SAW fields investig. by scanning acoustic force microscopy 97870
gas sens., polysiloxane coated, organophosphate sens. 97437
polysiloxane coating, Love wave device, vap. detect. 97460
SAW immunosens. for liq. environ., SiO_2 protective layer 97412
ow energy electron diffraction
diamond:H/M (M=Au,Al) interfaces, elec. contact, spectrosc. anal. 69734
octamethylene-TTF MBE on Ag(100) substr. 101228
organic epitaxial multilayer film, LEED/opt. spectr. 103079
tunneling MR heads, LEEN 104516
Cu phthalocyanine/InSb(111) thin films, mol. beam deposition growth, in-situ monitoring 90337
Fe/Fe_2O_3 films growth on Cu(110) surface 90321
GaAs(100), thioacetamide passiv., struct., thermal stabil. 69836
Ge nanocrystals on SiC(0001) surface, deposition, surface struct 68169
Ge/Si near-IR photodetector, growth & photoresponse spectrum 97231
MgO/Fe(001)-based multilayers, growth, struct., electronic and mag. props. 124809
low energy electron diffraction continued
Si, selective epitaxy using at. H, substr. temp. modulation 125055
Si:H(111) surfaces, H-passivated, H_2O/NH_3 temp.-activated reacts. 69472
Si/Ag(001) thin film deposition, AES/LEED/SEM obs. 80667
Si(100), Si(113) and Si(115) surfaces, alkoxy modified, water adsorpt. 92023
SiC films, growth on Si, adsorbed propene laser melting 79379
SiC:H 6H surface passiv., hydrogenation, struct., fermi level 92020
c-SiC/Si(111) thin layer UHV growth, C incorporation, AES/LEED/EELS obs. 114306
SiC(111) growth by C_{60} decomp. on Si(111), electron spectroscopies 114269
W single-cryst. substrs., cleaning procedure, thermionic cathode appl. 102895
low gravity experiments *see zero gravity experiments*
low-pass filters
2-channel sig.-adapted biorthogonal filter banks, optimal design 118986
3D mismatched stereoscopic inputs, human perception 84451
3D wavelet-based multiresolution anal., microstrip low pass filter appl. 69087
act. filter, notch freq. adjustable using uniformly distrib. RC line 68928
air-gap overlay struct. low-loss monolithic CPW filters 102725
analog filters, introduction 107528
analog ratio spectrum cct. with adaptive Butterworth low-pass filter 80132
anti-aliasing filter effect on largest Lyapunov exponent calc. 90687
anti-blocker struct. MOSFET-C filter for direct conversion receiver 102371
approx. lin. phase FIR low-pass filters, design 80100
arbitrary-band multi-path polyphase IIR filters, design 91089
ARC low-pass filter design for band 1-50 MHz 102349
audio de-reverberation using freq.-domain center clipper 83987
bipolar log domain filters in std. CMOS proc., SPICE compatible model 80073
bipolar transistors, HF biquadratic cct. *(Japanese)* 91047
bistable ccts. coupled via low-pass filter, symm. syst. anal. 101717
boundary filters, max. coding gain, ideal DC behavior, size-limited paraunitary filter banks 91055
broad band software-defined radio receivers, supercond. device based 74635
cardiac SPECT, atten./scatt. corrected, regularisation optimisation 122187
cct. noise reduction by analogue lowpass filtering and data averaging 120699
CMOS continuous-time lin. phase filter with auto. tuning syst. 80076
CMOS current-mode filter, modified multi-output differential difference current conveyor 68931
CMOS digitally prog. current steering semidigital FIR reconstruct. filter 80092
CMOS low distort. wideband act.-RC filter for base station transmitter 80044
CMOS SC ladder filter, embedded anti-aliasing 102373
CMOS SC video FIR filter with analog-RAM-based delay efficient realization 102352
coherent OFDM syst., perform. of channel estim. using pilot syms. 106043
color image filtering in xyY color space 94824
compact ellipt. fn. BPF, triple-mode cavities, digital TV transmitter 109358
continuous time low-pass leapfrog-type filter, multi-output differential difference current conveyor *(Chinese)* 68914
continuous-time low-pass all-pole OTA-C filters, perform. comparison 68925
continuous-time LPFs, mixed-sig. tuning approach 80080
continuous-time OTA-C filters, tuning method using GA 68926
continuous-time third-order ellipt. lowpass filters, high-freq. fully differential CMOS OTA 102358
coupled-line HTS low-pass filter, broad-band harmonic rejection 116539
CPW components, neural networks modeling and parameterization, EM simul. 69065
current-mode biquad using OTAs and grounded capacitors, electronically tunable ccts 125597
current-mode biquadratic filters using multiple-output FTFNs 68929
current-version neg. feedback biquad filter, opamp cct. 68932
cylindrical FDTD appls., nonuniform orthogonal mesh generation algm., microstrip filters 90198
DAQ systs., sens. noise reduction method 131830
digital filter design using multiple Pareto fronts 102396
digital multichannel polyphase filters with IIR, synthesis *(Russian)* 114873
digital radio offset-QPSK and MSK sigs., modulation params. 96359
discrete wavelet transform computation using RNS archit. 114700
discrete Wigner distrib., interf. term elimination using nonlin. filtering 119027
document proc., image rot. 94678
dual-gate p-HEMT MMIC X-band down-converter 91382
dual-tree complex wavelet transform with improved orthogonality/symm. props. 95680
ECG feature extraction using optimal mother wavelet 121974
edge-preserving interpolation, fuzzy tech. 118175
eighth-order CMOS low-pass filter, 30-120 MHz tuning, prog. boost 91029
ellipt. log-domain ladder filters, high-order low-pass and band-pass filters, HSPICE simul. 80072
embedded third order LC low pass Butterworth filters in MCM-L technol. 80033
equal-element LC lowpass filter, design and use as bandpass filter 80031
eye movements, impulse-like, effects of digital filtering on gain and latency params. 87366
face recogn., generalized spectroface 84640
FIR digital filters, low/high-pass and mid-pass/stop designs 114878
FIR freq. masking filters, narrow-band single filter 118981
FIR low-pass lin. phase filters with equiripple passband and least-sq. stopband 102415
FIR/IIR digital filters satisfying magnitude and phase specs., comparison 91112
floating-gate MOS filter using translinear ccts., 1.25 V design 80067
FM and FSK detect. using subtractor filter 73733
foveated video compression with optimal rate control 84449
GIC-based third-order act. low-pass filters 125605
hearing aid LV CMOS filter, dyn. gate biasing use 122354
hexagonal watermark embedding in wavelet domain 84492
high output impedance current-mode multifn. filter with dual output CCIIs 91045
high PF 3-phase AC/DC Cuk struct., doubly discontinuous cond. mode 78000
high-order bal. multiwavelets, theory/factorization/design 107521
HTS coupled-line low-pass filter for broadband harmonic rejection 69084
hypercomplex color-sensitive smoothing filters 94524
IF receivers for satellite navig., multi-channel filtering *(German)* 97032
IM drive, stator-flux-oriented vector control, space-vector PWM, neural nets 123932
image denoising using scale-adaptive lifting schemes 94806
image detail prediction 94651
image sharpening/softening using freq. domain filters 106435
integrated ang. speed sens. syst. design, automotive appl. 109824
interior PMSM drive, direct torque control, offset error effect, compensation 123873
ISAR imaging of maneuvering targets, param. estim. of multicomponent polynomial sigs. 75084

low-pass filters continued
JPEG/MPEG coding perform. improvement by optimizing both compression and blocking effect elimination 84770
landmine detect., EM induction imaging, modelling 77018
lead-frame plastic CSPs, modeling for predict. of low-pass filter effects on RFICs 91336
LEDA BPM analog front-end electronics, design 87132
lin. combination of weighted medians, design 107522
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl. 125602
lossy image compression, quincunx wavelet transform lifting scheme 95077
low delay max. flat lowpass FIR digital filters, transfer fn. 80101
low-loss slow-wave CPW periodic struct. for filter appls. 80220
low-noise act.-RC low, high and band-pass allpole filters using impedance tapering 102369
LV ground-fault indicators operation, ASD effect 124147
magneto-opt./eddy current image, defect extraction, DWT, morph. filter 101592
max. flat lowpass digital filters, response to polynomial sigs. 84767
max. flat/notch FIR filter design 107478
micromachined overlay CPW struct. with low atten., low-pass filter appl. 102579
micropower class-AB CMOS log-domain filter, DECT appl. 91030
micropower log-domain filter using enhanced lateral PNPs in 0.25 µm CMOS proc. 125600
microstrip stepped impedance hairpin resonator, low-pass filter 91203
microwave multilayer cct., EM model, long. decomp. 102583
min. impulse response moment, design 102325
min.-sensitivity single-amp. biquadratic low-pass filters 102347
MM-wave planar printed ICs, scaling-fn. based multiresolution time domain anal. 102708
mobile radio discrete-time sigs., residue-division MUX 85717
moire-free color halftoning using 2×2 printer modeling 94880
multichannel array subbanding with adaptive proc., architect. 96537
multimedia sig. proc., tunable/variable pass. digital filters 84758
multiport gyrator, realization using current mirror ccts., filter appl. *(Japanese)* 80037
multisection power divider, singly terminated filter design theory 102515
nonrecursive digital filters, charact. improvement 118975
OFDM sigs., clipping for peak power reduction 73778
opt. preamplified NRZ receivers, optimum filter bandwidths 120141
optimal digital IIR filter design 102393
optimised low-pass filter integrat. in band-pass filters 102517
orthogonal block transforms and filter banks, permutation based design 73691
pair-MOSFET OTA, low power supply voltage, SPICE simul., low-pass filter 102342
pass. filter design, nonlin. inductance perform. estim. 91019
perfect-reconstruction filter banks, low-delay design using LP 107499
periodic EM bandgap struct. for finite-width conductor-backed CPWs 80191
phase grating opt. low-pass filter, OTF *(Korean)* 71486
phase-lock receivers, lock detector 79640
POCS-based image reconstruction from irregularly-spaced samples 95183
power quality improvement, EMI filters 112085
power syst. stabil./voltage control, decentralised excitation/STATCOM control 77275
predistorted refl.-mode hybrid prototype networks, symm. and asymmetrical characts. 68900
prefiltering/reconstruction filters for vol. rendering 106833
printed inductors on alumina substrs., low-pass filter appls. 115091
Q-GA, modified GA for design of phase equalizers 79546
QMF two-channel bank design, freq. sampling 102384
reconfigurable MEMS filters, tunable lumped components design 80223
reson. piezoelec. transducers, broadband test sig. generation 86503
response and phys. symm. in filters, exploitation 80030
RFIC, lead-frame plastic CSP, low-pass filtering 100610
satellite Ku-band E-plane output diplexer, CAD 85922
secure commun., multi-param. modulation, Lorenz chaos 72737
small moving targets detect., clutter environ., real time hardware implement. 75218
spline wavelets, quadratic/cubic, fast algm. 84760
split wavelet pyramids, appl. to efficient zerotree coding of med. images 107113
stack filters optim. based on mirrored threshold decomp. 73656
switch-mode DC-to-DC converters, av. PWM model, modulating fns. 88972
TDMA-based hierarchical cellular systs., mobile speed estim. 108806
three-phase act. power filter controller design/implement. 99889
time delay ccts., noise generation theory 114565
time-domain audio watermarking subj. to psychoacoustic masking 84017
triplet halfband filter banks, kernels, least sq. design 91056
UHF current-mode filter based on biquad of regulated cascode topol. 80078
UMTS mobile phone, W-CDMA IF receiver and IF transmitter 131221
universal current-mode filter using CCII and current followers 68923
universal voltage-mode filter, three input/single output, operational floating current conveyors 68921
UPS VSI, output LC filter design considering syst. response *(Korean)* 134199
US adaptive speckle reduction and coherence enhancement 87510
very LV CMOS companding filters, design based on MOS translinear principle 68912
vol. optim., packaging dens. increase 125588
VQ image proc. based on projection onto hypercubes 95040
watermarking syst. based on Bernoulli chaotic seqs., stat. anal. 94265
waveguide capacitive iris coupled lowpass filter design, use of 3D field simulators 69064
welding robots, high speed rot. arc sens., seam tracking controller 134683
$(Ba_x,Sr_{1-x})TiO_3$ capacitor tunable RF filters, bandpass and lowpass, IMD 102332
FeCoSiB amorph. wire mag. field sens. design, sig. proc. cct. *(Chinese)* 86481
Si low resist. substr. microwave filters, polyimide interface layer, wireless ccts. 91334

low-power electronics
2D motion estim. archit., complementary embedded memory banks 84264
3D SOI integrat., interconnect archits., double-gate transistors 127067
8-PAM serial-transceiver in 0.5 µm digital CMOS 108506
32-bit microcontrollers, power consumption, power-down mode and clock generation *(German)* 79926
1000BASE-T Gigabit Ethernet, low-power digital adaptive filter archits. 114883
A²BC, adaptive address bus coding for low power deep sub-micron designs 126988
activity-driven clock design, CMOS sync. digital syst. 68683
adaptive bus coding, Mediabench benchmark set run-time memory access traces 92108
ADCs, design techs. 102298
adders based on representations of carry sigs. 102085

low-power electronics continued
adiabatic charge recovery logic, low-power design 79800
ADSL-lite data DSP, four-port, SoC design 102211
affine-based texture mapping, low power SIMD archit. 95525
amp. topol., low-power SC cct. 101782
analogue-ROM based DDS with AM, 200 MHz 114895
analogue/digital conversion, low power consumption devices, dyn. perform. *(Italian)* 79966
appl.-specific heterog. multiprocessor systs., power minimisation, voltage reduction 125529
area-power optimal state assignment, complete weighted graph 114677
arith. ccts., design method *(Japanese)* 79763
arith. units, Plastic Hard Macro Technology *(Japanese)* 79764
arith. units in deep-submicron CMOS, fast low-power charactn. 102115
ASIC-embedded CAM with power-saving and design for test features 102181
asynchronous array multiplier with asymmetric parallel array struct. 68730
asynchronous design, self-resetting logic, computing struct. 79776
asynchronous VLSI FIR filter, low-power single bit-plane archit. 68933
audio decoding, low-power MPEG I/II layer 3 decoder 84018
autonomous decentralized low-power syst. LSI using self-instructing predictive shutdown method 125386
backward propagated capacitance model for VLSI RTL power estim. 114676
baseband sig. proc. systs., analog memory, low-power appls. 80126
batt.-powered distrib. real-time embedded systs., batt.-aware static scheduling 125176
batt.-powered embedded syst., energy-efficient design 68504
behavioral and gate level designs, power estim. improvement 90823
Beta basis fn. neural network in CMOS subthreshold mode 91163
BiCMOS bandgap ref. cct., curvature-compensated, 1 V supply 90720
BiCMOS dual-band freq. synthesizer, PCS cell phone 114643
BiCMOS full-rate ADSL-RT analog frontend IC with integrated line driver 102428
BiCMOS highly lin. down-conversion mixer with MCM pass. for GPS appls. 69215
BiCMOS LV act. mixer, direct conversion receiver 101860
BiCMOS SOI ADC delta-sigma modulator, Bluetooth transceiver 102294
BiCMOS transconductor, LV VHF transconductance-C filter 80050
BiCMOS very high-speed replicating current comparator for Viterbi decoders 114898
bidirectional tunneling program/erase NOR-type 3D flash memory cell 79881
bioimpedance dyn., implantable lock-in analyser, mixed-sig. ASIC 110624
bipartition-codec archit., entropy-based algm. for area overhead reduct. 101973
bipolar LC-tank VCO, wireless-targeted, 2.5-GHz, automatic amplit. control loop 102733
bipolar LNA, 5.8 GHz, 1 V, overall noise fig., robust integrat. 102728
bipolar low-power operational transresistance amp. based on CCI+ 101799
BIST scheduling for min. energy consumption under power constraints 101933
BIST test pattern generator, modified clock scheme 101924
bit-serial multiplier, low-power, GF(2^m) finite field 102020
bladder controller nerve sig. analog proc. cct., implantable, low-power CMOS 76677
block-matching motion estim., dual-bit-resoln. image, low-power VLSI architect. *(Chinese)* 106424
block-matching motion estim. algm., low-power VLSI archit. 68831
block-test scheduling under power constraints, combined tree growing 104053
BlueMoonSingle, CMOS System On Chip Bluetooth, near zero-IF RX/2-point modulation TX 102739
built-in current sens. devices for micro-IDDQ test of VLSI chips 127008
C-PAL flip-flops, energy recovery low power design 79824
cache memory archits., fast syst.-level exploration driven by energy-delay metrics 102151
cache memory syst. energy behavior anal. using software/hardware optim. 114740
CADRE, Configurable Asynchronous DSP for Reduced Energy, low power multiported register bank 79908
CADRE, low-power, low-EMI DSP archit. for digital mobile phones 125542
CalmRISC™-32, low-power cache 125514
CAM, low-power design, power models, binary static cells 102174
cardiac pacemaker, analog front-end, CMOS proc., sens. chain 76670
cardiac pacemaker, sens. chain, CMOS micro-power low noise log-domain amp. 87894
carry-save adder, low-power multiplier block 102058
cct. synthesis combining CMOS/pass transistor logic *(Japanese)* 79850
cct. theory and design, conf., Stresa, Italy (August/September 1999) 89574
ccts. and systs., conf., Sydney, NSW, Australia (May 2001) 78453
cellular transceiver, low power repeater 85667
cellular-array power-sum ccts. over prog. finite field GF(2^m) 102061
charge recovery databus, low-power design 68880
charge-transfer amp. for ADC appl., dyn. behavior anal. 90763
class AB LV opamps and lin. transconductors 79596
Class D amp., low-power LV, feedback design, improved THD 79589
class D digital amp., sampling proc. and pulse generator 101808
class G power amp., LV design 79599
CMOS 0.18-µm logic with dual polysilicon gate, CD control 103571
CMOS 10 bit DAC for high speed appls. 102302
CMOS 155 Mb/s transceiver for SONET/SDH over co-ax and fibre links 109087
CMOS accurate LV analog memory-cell with built-in multiplication 80129
CMOS act. pixel sens. imager design, high speed laser detect. 120892
CMOS adiabatic charging pass-transistor logic cct. with bootstrap switching *(Japanese)* 90845
CMOS adiabatic gates, buffer comparison with conventional approach 90884
CMOS analog FIR filter, 100 MHz, PRML equalization appl. 102366
CMOS analog front-end chip, HomePNA appls. 108472
CMOS analog IC, sliding mode control, switching DC-DC power converter 88946
CMOS analogue ICs, low-power design 116021
CMOS arbitrated address event represent. digital imager, high dyn. range 97362
CMOS ASIC archit., timing-optimized std. cell logic, wireless/wireline products 102011
CMOS bandpass filter for pager appls., LV high-Q design 91046
CMOS bang-bang phase detector, clock and data recovery 79638
CMOS binary FSK demodulator for low-IF radio receivers 114669
CMOS buffer amp. design used in LV MEMS interface ccts. 114620
CMOS cct. av./peak temps., modified high-level synthesis effects 116037
CMOS ccts., I_{DDQ} testing, leakage control techs. 127033
CMOS ccts. with clocked power 68784
CMOS charge pump cct., high efficiency, body effect 104109
CMOS combinat. ccts., av. power estim., pattern compaction tech. 102110
CMOS composite transistor for LV low power appls. *(English)* 127029
CMOS continuous-time current comparator, current-mode analog ICs 102447

power electronics continued
CMOS continuous-time current comparator, high speed/power ratio design 68968
CMOS continuous-time filter, LV, on-chip automatic tuning 102335
CMOS current comparator cct., high-perform. *(Chinese)* 104086
CMOS current comparator cct., robust high-speed and low-power design 68970
CMOS current comparator design, fully differential, LV/power, high speed 70304
CMOS current conveyor, LV low-power cct. 80061
CMOS current-mode band-gap refs. for near 1 V operation 114605
CMOS current-mode multiport SRAM, read and write operations, energy reduction 125482
CMOS current-mode prog. CNN, low-power consumption 68986
CMOS DAC, 14 bit, low power, current steering archit. 90971
CMOS DDS, low-power, self-adjusting phase interpolation 101813
CMOS device design, deep sub-micron, for low power analog appls. 127047
CMOS differential logic for low-power and high-speed appls. 102026
CMOS digital ccts., gate level power optim. using dual-supply voltages 125287
CMOS digital ccts. with subvolt supply voltages 68702
CMOS digital matched filter *(Japanese)* 80095
CMOS digitally prog. current steering semidigital FIR reconstruct. filter 80092
CMOS domino logic ccts., mixed-swing methodology for MAC implement. 102118
CMOS down-conversion doubly bal. mixer, LV design 101867
CMOS dual pixel-type imager for imaging and motion centroid localization 97361
CMOS dual V_T domino logic, noise constrained power optim. 102031
CMOS dual-output switching converter for power reduct. techs., 1.8 V 125634
CMOS dyn. logic, single-phase adiabatic cct. 68716
CMOS dyn. single phase logic, self-timed stages, power reduction, pipeline cct. designs 102027
CMOS embedded low-power FIR filter 102401
CMOS energy-efficient skewed static logic design, topol.-depend. dual voltage 102103
CMOS exhaustive min. dist. search engine using hybrid digital/analog cct. techs. 125618
CMOS FIR filter chip, PRML read channels 102406
CMOS folded cascode OTA, 1 V supply, current driven bulk tech. 90762
CMOS folding/interpolation ADC design, 3.3 V, 8 bit, 200 MS/s *(Korean)* 114815
CMOS fractional-N freq. synthesizer, GSM/GPRS/EDGE appl. 101816
CMOS freq. synthesizer, Bluetooth technol. 90777
CMOS freq. synthesizer, charge pump, dual-path loop filter, PCS- and cellular-CDMA 125817
CMOS freq. synthesizer, LC-tuned VCO, wireless commun. 114644
CMOS front-end for 900 MHz zero-IF wireless receiver, paging sigs. 125780
CMOS FSK/ASK transceiver, 900-MHz, low power, half-duplex low datarate commun. 91343
CMOS full adders in different design styles with emphasis on low-power topologies 90890
CMOS fully bal. differential difference amp. and appls. 101798
CMOS fully-monolithic LNA 68594
CMOS GSM/WCDMA continuous-time filter, automatic tuning 102372
CMOS HF low-power multirate SC realizations for NTSC/PAL digital video filtering 80041
CMOS high-Q act. inductor, IF/RF wireless appls., low power supply voltages 70316
CMOS high-speed low-power fully parallel CAM macros, design for ASIC appls. 68798
CMOS high-speed µP, register renaming units, ASIC multi-port RAM cell cct. 102247
CMOS high-speed pipeline ADC for W-CDMA appls., design/power optim. 102270
CMOS IC, deep submicron technol., standby energy reduction 104111
CMOS IF FSK demodulator for Bluetooth in 0.35 µm proc. 119958
CMOS imager with charge-leakage compensated frame difference and sum output 109706
CMOS injection-locked ring oscillator prescalers, 1-GHz and 2.8-GHz, modulo-8 design 125818
CMOS inner product proc., 3D vol. rendering 102216
CMOS instruction cache, leakage energy dissipation 68789
CMOS interpol. FIR filter, power/area efficient design for W-CDMA appl. *(Korean)* 80091
CMOS LC VCOs, low-power wireless systs., power consumption minimisation 102705
CMOS line driver, DSL 79561
CMOS LNA, 2.4-GHz ISM band, noise fig., power dissipation 102704
CMOS LNA plus mixer, GPS appls. 70295
CMOS logic ccts., path balancing algm. for glitch power reduction 90856
CMOS logic power simul., stream synthesis, spectral transforms 79847
CMOS low power 10 bit, 80 MS/s pipelined ADC at 1.8 V power supply 80002
CMOS low power pipeline archit. ADC, 33 MS/s, 10 bit *(Chinese)* 114814
CMOS low power pipelined ADC for cable modem appls., 10 bit 79985
CMOS low power RF mixer for GHz wireless appls. 102713
CMOS low-power asynchronous DES chip 106243
CMOS low-power carry select adder 102057
CMOS low-power digital filter IC via soft DSP 102416
CMOS low-power digital signature transponder IC for high perform. RFID authentication 96638
CMOS low-power DSP systs., narrow bus encoding 125531
CMOS low-power gigabit Ethernet analog equalizer 85446
CMOS low-power pipelined map overlaying archit. for hand held appls. 90948
CMOS low-power rendering engine for portable multimedia syst. 68841
CMOS low-power SC noncalib. successive approx. ADC, 12 bit, 1 MS/s 90970
CMOS low-power seq. cct. design using T flip-flops 90882
CMOS low-power sigma-delta modulator, fully-differential op amp 80007
CMOS LV act. inductor and appl. to RF bandpass amp. design 115025
CMOS LV charge pump, four-phase clock generator 80018
CMOS LV continuous-time analog cct. design 90704
CMOS LV front-end interface, switched-op amp ccts., SC designs 125603
CMOS LV high-speed fourth-order sigma-delta modulator implement. 79958
CMOS LV logic ccts., design considerations, simulated behavior 68727
CMOS LV low power 2nd-order sigma-delta modulator, 15 bit design 102268
CMOS LV low-power downconversion mixer, 900 MHz, 0.9 V 114997
CMOS LV pos. ECL, scalable crosspoint switch networks *(German)* 85438
CMOS LV S/H cct., switched-op-amp tech. 91123
CMOS LV triode-MOSFET four-quadrant multiplier, optim. current efficiency 80127
CMOS LVDS transmitter and receiver, opt. interconnections 109074
CMOS memory cct., static power consumption mgt. 102152

low-power electronics continued
CMOS memory ccts., LV four-phase charge pumps, clock generator 125477
CMOS microcontroller, low-power cct., smoke detector *(German)* 102187
CMOS microwave oscillators on SOI substrs., design and fab. 125746
CMOS mixed PTL/static logic for low-power and high-speed ccts. 125427
CMOS multi-oxide proc. technol., 100 nm, for SoC appls., radical nitridation 127045
CMOS multiple-valued static memory cell 68801
CMOS NOR-flash memory, low power techs. 102149
CMOS Norton amp.-based digitally controlled VGA for low-power wireless appls. 68612
CMOS op amp, SC channel select filter 79594
CMOS op amp with rail-to-rail input range at min. supply voltage 101783
CMOS op-amps, LV class AB output stages, floating capacitors 79600
CMOS parallel pipeline ADC, 10-bit 200-MS/s, front-end S/H cct. 90969
CMOS pipeline ADC, 8 bit, 30 MS/s, 1.8 V single power supply 125574
CMOS pipelined-burst SRAM, low-power, design 102143
CMOS PLA, high-speed low-power design, pseudofootless dyn. cct. 102000
CMOS PLL, low-power voltage control oscillator 101837
CMOS power-conscious proc. scheduling for real-time embedded systs. design 114775
CMOS power-on reset pulse generator, LV cct. 101852
CMOS prog. freq. divider for DRRS std., 1.4 GHz/2.7 V 68883
CMOS prog. on-chip backpropag. learning neural net 91154
CMOS R-2R ladder D/A convertor, integral nonlin. anal. 114822
CMOS rail-to-rail op amp design, 0.9 V, 0.51 µA 114622
CMOS regularly struct. parallel multiplier with low-power non-binary-logic counter ccts. 125426
CMOS RF receiver front-end for Bluetooth appl., 1-V 2.4-GHz 102702
CMOS RP-MDSE, portable video compression syst. 106929
CMOS SC band-pass biquad filter 102374
CMOS second order sigma-delta modulator using S^2I switched current tech. 114821
CMOS sens. interface, CARIOCA current-mode feedback cct. 79635
CMOS seq. ccts., power estim. using graph-based methods 114695
CMOS $\Sigma\Delta$ modulator, substr. biased MOS capacitors, series compens. 90968
CMOS sinh/tanh shaped ultra low-volt. floating-gate transconduct. amps., harmonic distortion 101810
CMOS soft-output Viterbi algm. traceback pipeline chip for turbo decoding appls. 106105
CMOS sync. oscillator, low-power design, HiperLAN syst. 101842
CMOS technol., hot carrier emission, timing probe 127059
CMOS technol., LV front-end receiver 119907
CMOS technol. scaling challenges for sub-0.1 µm generations 70303
CMOS technol. with act. well bias, scalability/biasing strategy 127021
CMOS three-input XOR/XNOR cct. for LV and low-power appls. 68783
CMOS three-phase half rail pass-gate differential logic, low-power ccts. 102028
CMOS transceiver for 433/900 MHz ISM bands, LV low-power RF ccts. design 96377
CMOS transconductance amp., harmonic distortion 114629
CMOS transconductance cell, down-conversion mixer 101864
CMOS transistors, lithographic techs., operating speed and power consumption *(Italian)* 81286
CMOS true single-phase adiabatic multiplier, BIST logic, HSPICE simul. 125449
CMOS ultra LV switched opamp $\Sigma\Delta$ modulator for portable appls. 102297
CMOS VLSI, LV design, temp. instabilities 116035
CMOS VLSI cct., leakage power minimization 104010
CMOS VLSI design methods 104094
CMOS VLSI digital cct. low-power design 70302
CMOS VLSI low power/low swing bus design archits. 127051
CMOS VLSI systs., low-power ccts., design flows 81505
CMOS voltage amp., readout electronics, cryogenic operation 70301
CMOS/SIMOX ASIC, current-sensed double-dens. SRAM 114762
colour reflective TFT-LCD technol. 121106
colour TFT-LCD module, technol., product trends and appls. 121103
combinat. cct. crit. path optim., area/power consumpt. vs. delay tradeoff curve calc. 102114
combinat. cct. testing, power consumption optimisation 79805
combinat. ccts., max. power consumption problem, approx. algms. 102004
concurrent dual-band CMOS LNA and receiver archits. 125779
concurrent engng. in electronic packaging, conf., Calimanesti-Caciulata, Romania (May 2001) 124229
conditional-capture flip-flop for stat. power reduction 102001
continuous-time CMOS current amp. with dyn. biasing 79585
continuous-time integrators, dyn. range limits 91032
continuous-time sigma-delta modulators, LV current-mode integrators 79967
cooperative voltage scaling between OS and appls. for low-power real-time systs. 114784
coupling-driven bus design for low-power appl.-specific systs. 126989
CPL, CVSL and domino logic families, low-power design method 68746
CPU speed-setting, low-power design 68820
CPUs, 32 bit design for handheld consumer electronic product appls. 90942
CRRDL, charge recovery-recycling differential logic, dyn. CMOS 102029
current comparator, low power cell, weak current operations 80136
current mode ccts. for prog. WTA neural network 114908
current sens. completion detect., dyn. biased current sens. 109504
current-mode chaotic ccts., IC design for secure commun. 101713
custom ICs, conf., San Diego, CA, USA (May 2001) 100451
D-FIRE 2, combined DAB/FM receiver SoC for receiver chipset 120529
DATE 2001, Design, Automation and Test in europe, conf., Munich, Germany (March 2001) 78400
DC integrat. level anal. of low-Vdd CMOS cct. using worst-case noise margin map 127055
DCT, recursive implement., comparative study 100756
DDS, memory compression ratio 125250
deep submicron CMOS, energy efficient signaling, on-chip interconnect repeater insertion 81511
delay constrained ccts., voltage scaling and gate sizing 114672
design automation, conf., Las Vegas, NV, USA (June 2001) 124209
deterministic nonlin.-capacitor model for single-electron tunneling jns. 103932
DGPS corrections use with low power GPS receivers 131696
differential bipolar quasi-pass. cyclic CMOS DAC 102303
differential pass-transistor clocked flip-flop for low power appl. 79770
digital CMOS cct. design, power estim. tech. 101985
digital CMOS ccts., transistor sizing for switching activity reduct. 90826
digital CMOS robust transit. dens. estim., input/output transit. behavior 101983
digital filtering, adaptive error-cancellation, algorithmic noise-tolerance 102409
digital matched filter, DS-SS sig. acquisition 68938

low-power electronics continued
digital multimedia wireless telecomm., very-high dens. VLSI chips, low-power design 130971
direct conversion hybrid CDMA transceiver, low-power AGC, telemetry appl. 108587
direct conversion receiver MMIC for broadband wireless appls. 91388
direct conversion receiver module for C-band wireless appls. 96360
discrete-time batt. and convertor models for syst.-level low-power design 125225
dist. computation unit, redundant arith., neural network 102487
domino logic ccts., automated phase assignment in synthesis 79830
DSM CMOS technol., energy efficient signaling, on-chip interconnect 101984
DSP core, semicustom ASIC design, batt. powered appls. 125541
DSP systs. for DSL appls., design for low-power implement. 125527
dual band TDMA power amps., analog power control IC 91346
dual-band dual-mode RF front-end for WCDMA & GSM appls. 108654
dual-band monolithic CMOS LC-tuned VCO, switched resonator concept 102732
dual-phase-controlled dyn. latched amp. for high-speed/low-power DRAMs 90899
dual-rail static edge-triggered latch with low power consumpt. 90848
dual-threshold voltage assignment with transistor sizing for low power CMOS ccts. 68779
dyn. power mgt. tools, integrat. in IC design flow 101946
dyn. reduced sig. representation low power FIR filter design 114884
ECG telemedicine and telecare, μP syst. 110590
eDRAM, embedded DRAM technol., leakage and retention test struct. 114771
EEPROM, tunneling nitride, ECR nitrogen plasma nitridation 81054
EEPROM technol. charge pump ccts., power consumption modelling 102148
elec. induced body dyn. threshold SOI MOSFET, large body effect, low threshold voltage 103822
electron beam, mag. breaking radiation, LV source 83153
embedded low-power proc., instruction cache organisation 68813
embedded systs., memory hierarchy, energy dissipation anal., DCT 102169
embedded systs.-on-chip, partitioned memory synthesis, multi-bank SRAM archit. 125383
energy-aware embedded systs., real-time task scheduling 127053
Epson mobile phone LCD drivers, low power consumption 119985
ESSCIRC 2000, conf., Stockholm, Sweden (Sept. 2000) 89548
FED, widescreen full-color display 97753
FFT proc., coeff. ROM power consumpt. reduction 90947
fine grain Cooled Logic archit. for low-power proc. 68818
FIR filter, low power design, image proc. appls. 125612
FIR filter, low-power multiplierless archit. synthesis 102410
fixed-priority energy efficient scheduling for real-time systs. on variable voltage proc. 125235
flash EEPROM, p-channel/n-channel, reliab. comparison 79895
flash EEPROM cell, ONO split gate channel dielec. 79868
flash memory, body-effect-assisted NOR-type multilevel cct. 79870
flip-flop, low-power reduced swing single clock cct. 102101
flip-flop, low-power static differential double edge-triggered cct. 102100
floating point CORDIC proc., low power, behavioural synthesis 68822
floating-gate CMOS differential analog inverter for ultra LV appls. 81516
floating-gate MOS biquad, LV, second-order g_m-C filter 125601
floating-gate MOS filter using translinear ccts., 1.25 V design 80067
folding/interpolating CMOS ADC, 10 bit, 20 Ms/s, 22 mW 68868
force bal. micromachined press. sens. 109798
fourth-order SC sigma-delta A/D converter, high-ripple Chebyshev loop filter 80006
FSK ultra low power all-digital receiver for deep space appls. 74904
FTTH low-power single-chip receiver IC for opt. video distrib. syst., 1.5-GHz 96293
full adder cell, low-power embedded archit. 102059
full-scan ccts., test appl. by input control tech., power consumption 79754
gait assess., low-power wireless microcontroller PC interface 111265
gas sens. array syst., micro hotplate substr. fab., CMOS integrat. 97532
gated-clock FSMs, low power hand-over mechanism 90883
Gaussian-MSK modulator, sigma-delta fractional-N freq. synthesis, DRRS band 101856
GGNMOS and LVTSCR protection cells, ESD 126706
GRAVITY 32 bit asynchronous proc. core, design aspects 90949
GSM dual band TC35 module, config. and features *(Spanish)* 74848
heterog. FPGA under delay constraint, low power driven re-synthesis algm. 102112
heterog. multiprocessor DSP archit. for low-power audio sig. proc. appls. 90936
high current LV current mirrors for LV analog appls. 102445
high gain n-well/gate tied PMOSFET image sens., fab. in CMOS proc. 75638
high perform. current mirror for LV designs 68969
high speed ADCs for low power appls. 68875
high speed charge recycling CMOS threshold logic gate 102093
high-level synthesis, power consumption, data flow graph 68503
high-perform. CPU designs, step power reduction, instruction prediction 79933
high-speed data converters for commun. systs., syst. specs. 79965
high-speed equalizer for mag. storage read channels 80125
high-speed low power ADC design, current-mode approach 90996
high-speed max. a priori decoder archits., design 79917
high-speed PLA using dyn. array logic ccts. with latch sense amps. 114707
high-speed power-conscious cct. design techs. for high-perform. computing 125280
high-speed/low-power electronic systs. design, high-speed electronic systs. 126952
IC power constrained test scheduling, power profile manipulation 104052
in-place delay constrained power optim. using functional symms. 79689
instruction-level power anal. model with data dependency, generic RISC proc. 114788
integrated hardware-software co-synthesis and HLS, embedded systs., power/latency constraints 79699
intra-task voltage scheduling algm. for low-energy real-time appls. 125359
IP-based design, static power estim. methodology 79685
ISM appls. of wide tuning VCO, 2,4 GHz, LV ccts., freq. control 91273
JouleTrack Web-based tool for software energy profiling, μP appls. 125548
Ka-band even-harmonic quadrature resistive MMIC mixer for direct conversion receivers 91340
LAPS, light addressable potentiometric sens., CMOS analog lock-in amp. 109467
large seq. ccts., power estim. approach, consecutive vector blocks 68780
LC bandpass filter, high-valued pass. element simul. using low-power CCIIs 91036
LCDs, dissipated power reduction techs. 75801

low-power electronics continued
lin. tunable LV CMOS transconductor, common-mode stabil., g_m-C filters appl 125602
logarithmic no. syst., low-power props. 79956
logic cct., low-power design, multi-level low swing voltage 101931
logic cct., low-power design optim. 102034
logic ccts., high-perform. and low-power technol. roadmaps 103964
low complexity FIR filters using factorization of perturbed coeffs. 80084
low-swing clock double-edge triggered flip-flop for power reduction 125419
LSI power-supply scheme, multi-Vt SOI CMOS technol. 127036
LUT-based FPGA technol. mapping for power minimization with optimal dep 90870
LV continuous time tunable HF filters based on floating gates 68911
LV HF MOS transconductors for IF sects. 91044
LV low-power accurate CMOS V_T extractor 102444
LV low-power continuous-time ΣΔ ADCs, design strategy 79963
LV low-power multiphase SI sinusoidal oscillators, design 68644
LV low-power WDF bank for intell. noise reduct. digital hearing aid 91078
LV OTA using common mode feedforward, HF SC filter use 80055
LV proc., threshold voltage hopping scheme for power saving 102253
LV submicron CMOS fast-settling OTA, regulated cascoding tech. 90769
LVDS digital display interface 86888
mag. recording, PRML read channel, adaptive FIR filtering 70517
managed syst., stochastic modeling, dyn. mgt. policy 116004
memory bus encoding, power-aware alg. coding techs. 79878
MEMS for RF/microwave wireless appls., next wave 91274
metal-oxide gas sens. for pollution detect., fully digital user interface cct. 10979
micropower class-AB CMOS log-domain filter, DECT appl. 91030
micropower log-domain filter using enhanced lateral PNPs in 0.25 μm CMO proc. 125600
microwave freq. generation unit, space appls., downconverters/upconverter 98922
microwave power amp., harmonic tuning design 79574
microwave sub-harmonic injection-locked bal. oscillator-doubler 91281
mission-crit. embedded systs., power-aware scheduling, timing constraint 133227
mixed sync./asynchronous implement., automatic FSM synthesis 114694
mixed-sig. ccts., conf., Plano, TX, USA (Mar. 2001) 89561
mixed-sig. ccts., pulsed activation power saving tech., pulse stream neuron chip 102426
MLC capacitors with ultrathin dielec. layers, specs./test methods 80436
MM-size transformer, batch proc., miniaturized power appl. 123547
MMIC LNA, low-power LV FET cct. design 80336
MMU, fully associative TLB, CAM match cct. 125535
mobile computing, low-power chips 68824
MOS high-dens. DRAM cell with built-in gain stage 68807
MOSFET, hot electron degrad. and substr. current 126734
MOSFET, low power semicond. device, portable equipt. *(German)* 81337
motion-estim. archit. based on early-jump-out tech. 102229
MQW electroabsorption modulator, neg. chirp operation 116808
multi-carrier CDMA receiver, low-power MMSE archit. 108563
multi-modulus divider, low-power, in 0.6 μm digital CMOS technol. 68690
multi-step improved breaking-off-search CMOS motion estim. ccts., low power 94575
multigate SETs, single-electron pass-transistor logic, binary adder 125459
multilevel combinat. networks, power estim. based on switching activity 114696
multilevel flash memories, high-speed low-power sense comparator 68793
multimedia syst. μP-based archits., adaptive power optim. algm. 79918
multiplier, low power-delay-product with dyn. operand exchange 68782
multiplier-block based FIR filter structs. implement. on FPGA, transit. anal. 68936
multipliers, array and Booth, low power BIST schemes 125428
multiprocessor digital syst., low-power RF clock distrib. 114852
multirate-cascade sigma-delta modulators, high speed low power config. 79976
multistage feedforward compensated opamps, low power and distortion 68600
multithreshold voltage technol. for low power bus archit. 101770
μP cache energy reduction by dual voltage supply 102246
μP LV swing clock distrib. schemes 102315
μP memory struct., architectural/cct.-level 101944
MUX, low-power decomp., sig. transit. propag. 102323
nanoelectronic CNN cell modeling, CMOS/SETs/QCAs 102009
nanometer design, dyn. power scaling trends, packaging problems 126971
nanometer technol., interconnect energy dissipation, minimization tech. 126990
nested Miller compensation in low-power CMOS design, feedforward transconductance stage 90764
neutralised class AB switched-current tech. 80057
noise perform. of current-feedback amps. vs. voltage op amp 68603
nonvolatile DRAMs, half-V_{cc} plate, with ferroelec. capacitors, read/write scheme 90910
optim.-based volt. scaling tech. using multiple supply voltages 101987
optimum voltage swing on on-chip/off-chip interconnect 92437
OTA CMOS design tech. for SC appls., low-power low-noise design 101786
oversampling sigma-delta modulator stabilized by two local nonlin. feedback loop techs. 80005
parallel multiplier archit. for low-power design 90871
partially depleted SOI CMOSFET, floating body effect, temp. dependency 81341
partially-depleted SOI CMOS technol., 0.13 μm, for low-power digital/RF appls. 127046
partition-codec archit. synthesis for low power and small area cct. design 102113
PFETs, polymer FETs, LF noise props. 92371
PHEMT LNA with integrated bypass switch, 0.05-6 GHz portable wireless appls. 80382
pHEMT technol. wideband act. downconverter MMIC, HDI 91350
PicoRadio, ad hoc wireless network for end-user data-collection 85939
pipeline A/D converter, high-speed low-power area-efficient, CMOS technol. 68862
pipelined logarithmic no. syst. ALU, low power design 90872
pipelined successive approx. A/D converter 90981
pipelined switched-current cyclic A/D converter, low power, cyclic RSD algm. 90982
PLL design, clock mgt. 101871
PMOS-boosted source follower, robust energy-efficient bus driver tech. 125584
polyphase channelizer chip-set, low-power design, FFT, appls. 102226
polysilicon hot plate, surface micromachined, gas sens. 116069
polysilicon TFT-LCD, low-power 8-bit digital data driver 86885
portable devices flash memory, power consumption reduction 114753
portable digital video cameras, image proc., VLSI switched-current implement. 95354

power electronics continued
ortable multimedia terminals, motion compensation block IP, embedded DRAM macro 129657
ower amp., LV design, second harmonic manipulation 68609
roc. and temp. independ. inverter-comparator for PWM in class-D amps. 114621
roc.-compensated MOS current ref. generation without voltage ref., sub-1 V 125230
rog. neural network, low-power current mode ccts., AB class neuron struct. 91156
rog. transconductance amp. switched current ccts. 101777
rog.-gain CMOS amp. topol., very-low temp. drift 79587
rotocol converter, protocol modules, selective clock suppression 90862
QD logic ccts., shared BDD 101999
quadrature LC-VCO, low power/phase noise differential tuned 96498
quantum tunnel diode, monolithic C-band oscillator and LNA 102720
quartz cryst. oscillator, low power design, PSPICE 81741
quasi-monolithic hybrid technol. based on micromachining and low-temp. thin-film proc. 115020
radiation hard low noise BiCMOS front-end readout syst. for capacit. detectors 110416
rail-to-rail I/O CMOS op amp, 1 V, design strategy 79590
rail-to-rail successive approx. ADC, 1 V 10 bit, std. CMOS 79990
RAM, low-power decoder cct. 114760
RC power bus max. voltage drop in digital VLSI ccts. 79730
re-engng. power-aware systs., operational diversity 104050
reconfigurable parallel inner product proc. archits., pipelined design 68850
reduced complexity primitive operator FIR filters for low power dissipation 102379
residue and logarithmic no. systs., use in low-power design 114690
retrodirective antenna array card-type transponder, dedicated short-range commun. 96640
RF high-isolation MEMS switches for wireless commun. systs. 116081
RF MEMS tunable capacitor, piezoelec. actuator, micromachining 102782
RF sens., battlefield MASINT appls. 120709
RF transceivers for wireless commun. 85617
RFIC 2 GHz VCO with post-processed Cu inductors 115002
RISC µP with DSP functionality, 32 bit, rapid prototyping 68845
ROM, low-power and high-speed modules, ASIC appls. 114761
ROM, low-power charge-recycling archit. 102153
ROM-less direct digital freq. synthesizer using segmented nonlin. DAC 101821
RS codec, finite field multiplier, custom VLSI design 108487
SC filter, LV/low-power, using cascode transistor config. 68922
SC resonators, LV implement., LDI and two-delay-loop stages 91040
SC S/H cct. for LF appl., low power dissipation 114904
Schottky jn. transistor, phys. and appls. 115966
scoliosis treatment, low power portable EM posture monitoring syst. 111068
scoliosis treatment, low power wireless load monitoring syst. 111067
second order SC sigma-delta modulator, 1 V, CMOS implement. 114816
secure chaotic commun. schemes, low-power realizations 74073
self-oscillating mixer, low power, wireless commun. 91220
seq. cct., power mgt., computational kernel extraction 102091
seq. ccts., peak-power estim. algm., low-power ccts. 102010
seq. Viterbi decoder, low-power survivor memory unit 106122
serialiser/deserialiser IC, LV differential signalling *(German)* 114857
shared division and sq.-root archit. using GST algm. 125425
sig. strength based switching activity modeling and estim. for DSP appls. 114787
sigma-delta decimation filter for pacemaker appl., low power implement. 114876
sigma-delta modulator, LV cct. 90986
sigma-delta modulator, LV MOSFET-only speech proc. 79974
sigma-delta modulator, very LV, design methodology 79962
sigma-delta modulators, integrator output swing optimisation 80004
single clocked adiabatic static logic for digital low power appls. 68759
single ended pass-transistor logic, comparison with CMOS/CPL 101945
single-chip CMOS T/R-MMIC frontend, 2.24 GHz 1.8 V, low loss switch 102656
sinusoidal clock, static CMOS design styles 102310
sixth-order cascaded ΣΔ modulator, archit. comparison, CMOS implement. 102272
small-geom. CMOS, 1.5-nm gate oxide, cutoff freq., propag. delay time 70311
SOC, syst. on a chip, cost, power dissipation, technol. and design 116019
SOI CMOS cct., high speed, variable threshold voltages 116033
SOI CMOS LVDS driver/receiver pair, source-body-tied transistors 125621
SOI MOS high-speed device, ring oscillator *(Chinese)* 80956
SOI MOSFET struct. with jn.-type body contact for suppression of pass gate leakage 81287
SOS CMOS low-power opt. receiver for inter-chip commun. 117023
split-level precharge differential logic, high-speed charge-recycling 102003
SPMCM, symmetric prog. multi-chip module for low-power prototyping syst. 115226
SRAM compiler for portable consumer electronics 102150
SS wireless commun. systs., efficient PN code design for CMOS implement. 106129
STARC, Semiconductor Technology Academic Research Center, high-level LSI design stages 114691
static CMOS ccts., stand-by leakage power minimisation 79792
static differential double edge-triggered flip-flop based on clock racing 90860
std.-cell self-timed multiplier for energy and area crit. sync. systs. 68729
subthreshold CMOS transistor analogue ASIC for biological neuron modelling 102488
subthreshold log filters, LV CMOS basic building blocks 80131
subthreshold logic, ultra-low power operation 68717
super-regenerative transceiver, low-power 1 GHz, time-shared PLL control 96374
surplus timing utilisation for power reduction in low power design 101989
switched-current S/H cct. for LF appl., 0.6 µm, simul. & perform. 80133
switched-MOSFET prog. LV bandpass filter, hearing aid devices 80071
symm. dual cascode voltage switch level converter for low-power appls. 79567
sync. ccts., register and phase requirements, software pipelining techs. 90866
sync. oscillator in SiGe technol. for UMTS 2000 appls. 69199
syst.-level energy consumption, event-driven power mgt., low-power states 78576
syst.-on-a-chip, combining low-power scan testing and test data compression 125347
syst.-on-a-chip precedence-based, preemptive, and power-constrained test scheduling 104031
systolic array, parallel algm., low-power design 102210
systs. on chips, asynchronous and locally sync., software design 79696
telescopic search motion-estim. archit. based on data-flow optim. 68830

low-power electronics continued
tests scheduling for low power BIST 109424
third-generation mobile radio base stations, LV differential signalling backplanes *(German)* 74623
token scan cell for low power testing of scan-based ccts. 68691
torsional actuator, LV, appl. in RF-microswitches 112736
transplanted kidneys, rejection control, freq. depend. impedance, mixed sig. telemetry IC 98714
turbo code decoder, adaptive iter., power consumption 72807
turbo decoder, power-efficient layered proc. archit. 79915
UHF oscillators, low-power solid-state devices 69149
ultra low-power DSP arith., data-dependencies, asynchronous appls. 125543
ultra LV floating-gate CMOS transcond. amp. 79601
ultra-low threshold voltage CMOS high perform. µP, design methodology 102255
ultra-low-power ultra-high clock rate SFQ logic ccts. 68713
variable length decoder, low-power design 106125
variable threshold voltage CMOS, optimum device param., scalability 81501
vert. biquad filter, compact design for VHF/UHF appls. 80353
very deep submicron CMOS, global interconnects, current sens. techs. 92466
very LV CMOS companding filters, design based on MOS translinear principle 68912
video compression, motion estim., low-power VLSI archit. 106926
VLIW embedded proc., data forwarding use for power budget reduct. 79916
VLIW scheduling for energy and perform. 90937
VLSI, conf., Orlando, FL, USA (April 2001) 89562
VLSI, static estim. tech. of power sensitivity in logic ccts. 125436
VLSI advanced research, conf., Salt Lake City, UT, USA (March 2001) 67360
VLSI archit. for telescopic search block-matching motion estim. *(Chinese)* 102219
VLSI archit.-level power estim. and design expts. 115990
VLSI ccts., conf., Kyoto, Japan (June 2001) 124231
VLSI design, power consumption optim., control loop 102214
VLSI low-power µP design, zero-skew gated clock routing tech. 68836
VLSI LV/low-power/appls., std. cell library design 68837
VLSI packet switching fabrics, low-power syst.-level design, perform. specs. 74496
VLSI power/perform. optim., fuzzy simulated evol. 104009
VLSI systs. on a chip, conf., Lisbon, Portugal (Dec. 1999) 100424
voltage regulators, lin. and switching rectifiers *(Italian)* 90717
Weaver receiver topol., image-rejection ratio 114990
X-band MMIC direct 8 PSK modulator for high data rate Earth obs. appls. 125748
Xetal, CMOS low-power high-perform. smart camera proc. chip 102230
XGA full-color display, serial transceiver chip set 86887
AlGaAs/GaAs four-terminal HBT, RF AGC and mixer 92305
AlGaAs/InGaAs/AlGaAs enhancement-mode double-doped HJFET, celluar phone appl. 103900
AlGaAs-InGaAs-GaAs power PHEMT, 1.2 V operation for PHS handset appl. 69118
AlInAs/InGaAs HBT IC, low-power static freq. divider 127015
Cu/low-k interconnect CMOS platform, 0.13 µm, for SoC appls. 127019
GaAs E/D mode MESFETs, 0.12 µm gate, f_T/f_{max}> 100 GHz, ion implant., low power IC appls. 69145
GaAs HBT, small-sig. model 70036
GaAs MESFET MMIC, low-power direct conversion receiver 96367
GaAs metamorphic HEMT, K-band subharmonic down-converter 102609
InGaAs/GaAs phototransceiver OEIC, low power, photodiode & QD microcavity LED 96709
InP DHBT, lin. X-band operation 115865
InP HBT VCO, freq. tuning range 101843
InP-HBT differential VCO with wide tuning range, SONET/SDH fiber optic appls. 91338
InP-InGaAs HBT technol. for low-power lightwave commun. cct. appls. 74953
$LiCoO_2$ film micro-batt. develop., micro/nanospacecraft appl. 122523
Mo tips, LV FED, gate hole openings 75807
$Pt/SrBi_2Ta_2O_9/Pt/SrTa_2O_6/SiON/Si$ MFMIS-FET, NVM 81766
SOI technol., review, IC appls. *(Chinese)* 69756
Si bipolar monolithic RF bal. down conversion mixers, noise anal. 69216
Si bipolar technol., dual-modulus prescalers 125635
Si bipolar technol., dual-modulus prescalers 102448
Si bipolar transimpedance preamplifier, opt. receiver front-end 101809
Si gas sens., low-power micromachined struct. 86704
Si micromachined struct., semicond. gas sens., reliab. 97534
Si radiation detectors, leakage current, low-power CMOS SOI readout front-end 110390
Si surface micromachining, deep vac. cavity struct. appl. to microflow sens. 97568
Si/SiGe HBT ICs with low cost in 15 to 20 GHz range 80357
SiC/HfB_2 based low power micro gas sens. 97491
SiGe BiCMOS VCO and PLL freq. synthesizer for 5.7 GHz Hiperlan std. 91330
SiGe HMOSFET differential pair, output I-V charact. lin. 79597
SiGe LV power diode 126655
SiGe RF-ICs, power consumption, reliab., device phys. 80320
SiGe high-speed LV HBT proc., implanted collector profile optimiz. 70031
SnO_2 low-power thick-film gas sens. by screen-printing on micromachined hot-plate 97489
SnO_2 thick film ultralow power CO microsens., micromachining 97447
$SrBi_2Ta_2O_9$ ferroelec. capacitor for 1 V operation in NVM 114764
YBaCuO HTS films, opt.-microwave interact. modeling, optoelectronic devices 125825
ZnO varistor, LV, microstruct. and elec. props. 81405

low-temperature electronics *see cryogenic electronics*

low-temperature physics *see cryogenics*

low-temperature production
see also magnetic cooling; refrigeration
HTSC Hall magnetometer, Stirling cryocooler, NDE 75442
HTSC SQUID, pulse tube cooler, low noise cooling 70884
LTCC laminated waveguide couplers 91194
scanning SQUID microscope, closed-cycle refrigerator-cooled 92900
space based IR surveillance & stored cryogens, adv. cryogenic technol. 133219
three-stage He sorption refrigerator for IR detector cooling 89462

low-temperature techniques
see also cryogenic electronics; cryostats; refrigeration
ASTER cryocooler, in-flight perform. 111399
atrioventricular node, catheter cryoablation in atrial fibrillation patients 98604
capacitance thermometer, low temp. & high mag. field use 97206
Coulomb blockade primary thermometer 75421
cryogenic fluid temp./liq. level meas. for space vehicle appls. 122514

low-temperature techniques continued
equilib. hydrogen triple point temp. sample dependency *(Japanese)* 86372
EVA copolymer film space charge meas. in cryogenic-RT region *(Japanese)* 127249
ferrite materials for tunable RF/microwave devices 92866
Hlow temp. detector for CPT invariance expts. 121650
land mines detect. improvement by soil freezing 75832
mid-IR laser absorpt. spectrosc., portable multichem. sens. 109785
MM-wave on-wafer testing facilities, room & cryogenic temp. 80328
planar cryoelectronic cct., subMM-wave LTSLM imaging 70875
planar MOSFET technol., 25 nm, manufacturability 126768
solid-state devices, low temp. DC/noise meas., automatic syst. 75376
SPring-8 RIKEN beamline III for coherent X-ray optics design anal. 121406
Stirling cryogenic coolers in France, IR cameras appl. 109647
supercond. tunnel jn., X-ray detector, LTSSM imaging 71148
thermoelec. mater., rapid transport props. meas., low temp. 97777
tunable diode laser, cryogenic rem. sens., air pollutants 76926
X-ray monochromator cryogenic cryst. design, large Bragg-angles 110463
$BaSrTiO_3$ thin-films, electrodynamic props., CPW struct. 80159
$(Bi,Pb)_2Sr_2Ca_2Cu_3O_10$/Ag multifilamentary tape, crit. current dens. *(Chinese)* 70739
Fe/Cr GMR sens. for mK range, temp. independ. sensitivity 75485
Fe-Cr-Ni, age-hardenable austenite alloy, low temp. mag. sens. 75483
Ge film, cryogenic microthermometer 75748
Ge film resist. cryogenic temp. microsensor 109811
InAs-GaAs normal-incidence high-temp. mid-IR vert. QD photodetector 131914
InGaAs-InP photon-counting diode detectors, ps time-resolved PL 71561
InP HEMT X-band/Ka-band amp. for Deep Space Network 115013
Pt-$Ba_{0.7}Sr_{0.3}TiO_3$-Pt thin film capacitors, H_2/deuterium induced degrad. 104467
Si diode cryogenic temp. microsensor 109811
$SrTiO_3$ single-cryst./thin-films, electrodynamic props., CPW struct. 80159
low-voltage integrated circuits *see low-power electronics*
LPC *see linear predictive coding*
LPCVD *see chemical vapour deposition*
LPE *see liquid phase epitaxial growth*
LQ control *see linear quadratic control*
LQG control *see linear quadratic Gaussian control*
LSI *see large scale integration*
luminance *see brightness*
luminescence
see also cathodoluminescence; chemiluminescence; electroluminescence; fluorescence; fluorescent screens; ionoluminescence; luminescent devices; phosphorescence; phosphors; photoluminescence; sonoluminescence; stimulated emission; superradiance; thermoluminescence
calcium oxalate, divalent Eu-doped, luminesc. props. 104921
conf., Honolulu, HI, USA (Oct. 1999) 89553
cpd. semiconds., conf. Monterey, CA, USA (Oct. 2000) 124237
diamond for high-dens. opt. recording 82056
Europa Orbiter camera systs., charged particle-induced noise 133209
imaging plate and wavelength-shifting fibers for gamma rays and neutrons dosimetry 122403
in-situ plasma etch proc. endpoint control in IC mfg. 103376
light source technol., current topics review 134635
light sources, light flicker effect meas., power supply quality 124084
luminesc. materials for displays, overview, future prospects 109863
nanoparticles/nanostructured surfaces, biological appl., conf., San Jose, CA, USA (Jan. 2001) 113264
phosphors, combinat. synthesis/screening, reviews 104928
phosphors for next-generation display devices, review *(Japanese)* 93351
UV laser ablation plasma elec. current interruption, inductive energy storage appls. 134414
VCSEL, soliton-like topol. defects in transverse polariz. patterns 128294
X-ray storage phosphor materials, recent develop. 127929
AlGaN solar blind PIN heterojunction photodiode, luminesc. 82362
AlGaN/GaN hetero bipolar phototransistor, luminesc., photodetectors, photocurrent 82363
C nanotube array, field emission, FPD *(Japanese)* 80530
CO_2 lasers, RF α-discharges 82465
$CaCO_3$, divalent Eu-doped, luminesc. props. 104921
n-Ge, electron-hole plasma, high-field autosolitons, emission from hot charge carriers 69477
$KMgF_3:Ce^{3+}$, opt. stimulated luminesc., suitability as dosimeter 122402
$Lu_3Al_5O_{12}$:Ce single-cryst. films for biological and radiation monitoring 121530
NO_x removal, pulse corona discharges, luminesc. 88190
O_2 meas., P22 tumor, polarographic electrode, fiber-optic sens. 87517
nano-Si_3N_4 ion implanted QD, blue-light enhancement effect anal. *(Chinese)* 116911
ZnO luminesc. thin films, PLD growth and charactn. 68315
ZnSCdS:Au,Cu phosphor, X-ray luminesc., med. imaging 93350
upconversion phosphors, recent advances, new appls. 104932
luminescent devices
see also electroluminescent devices; fluorescent screens; phosphors; scintillation counters
organic samples, EL, time resolved PL 93388
two-colour luminesc. aerodyn. press. sens., prism image splitter 75658
HgCdTe, LW neg. luminesc. devices 104966
SiO_2:Ge/Si integrated Si-based optocoupler, efficient blue light emission 93389
ZnO-B_2O_4:Eu fibre/Si photodiode selective UV detector 86568
luminophors *see phosphors*
luminous flux measurement *see photometry*
lumped parameter networks
2D struct., impedance grid method based algms. constr. for electrodynamic anal. 83464
20 GHz compact 90° hybrid MMIC design and layout 91303
BLDC motors for automotive appls., prediction of conducted RFI emissions 100307
cascade triplet and quadruplet filters, design using approx. and optim. 102586
cellular nonlin. networks for minimization of functionals, theoretical aspects 91165
distributed amps. with lumped or distributed elements, comparison 68616
doubly-terminated LC ladder filter, energy storage and Gramians 80035
equal-element LC lowpass filter, design and use as bandpass filter 80031
equiv. cct., automatic synthesis using GA 79519
HV CT, equiv. cct. modelling, voltage measuring topologies 88805
hybrid coupler, broadband lumped-element lattice cct. 80216
hybrid EV, batt. as load levelling device, dyn. modelling, simul. and control 100277
IM thermal modelling, lumped param./2-D FEA methods 123415
lumped parameter networks continued
interior PM offset-coupled automotive integrated starter/alternator 134562
large-scale networks, seq. symbolic network fns., cct. reduction to two-por 90648
LC matching ccts. for class-E inverter with non-stationary load, anal. 90649
lightning protection syst. lumped/distributed cct. model comparison 77553
lin. lumped element formulation in general coord. syst. 90646
MMIC interconnect, differential via, CAD model 101667
MMIC lumped element directional coupler, single bal. mixer 125766
multiple vias in stripline struct., lumped-element models 91189
multistage amp. stabil., spurious sig. cancellation 101780
noise-matching networks for opt. receivers, optimum design 79518
nonlin. evol. eqns. simul. via cellular networks 107490
optimised low-pass filter integrat. in band-pass filters 102517
planar HTS lumped element bandpass filter with spiral inductors 80210
planar HTSC lumped element bandpass filter with spiral inductors 82015
ported enclosures, lumped-param. model assumptions 86353
quadrature hybrid, transfer fn. 90647
reconfigurable MEMS filters, tunable lumped components design 80223
response and phys. symm. in filters, exploitation 80030
RLC networks, controllability/observability over field of rational fns. 68524
RLCG elec. network chain, optimal control 80034
RLCG interconnects, pass. model order reduction, moment components method 92458
three-phase PWM VSI IM drive, lumped param. model 123897
transformerless common-ground RLC networks, nonminimal realisation theorem 90650
transistor cct., MRTD anal., equiv. source method 102595
UPS push-pull DC-DC converter, PCB parasitic influences, anal. 125227
GaAs P-HEMT MMIC for K- to Ka-band wireless commun. 74610
YBaCuO supercond. lumped-element filter with planar spiral inductors 71082
lunar atmosphere *see Moon*
lung
3D medical images, line and sheet struct. detect. and quantification 87308
adenocarcinoma, tissue colour images anal. 87350
asthma telepharmacy counseling, metered-dose inhaler tech. 121869
breast, intact, radiotherapy, virtual simul. appl. 76627
bronchial abnormalities, lung CT, automated detect., ERS transform 132780
bronchoscopy, virtual, 3D, automatic centre-line extraction 87712
bronchus, 3D gray images, line fig. extraction algms. *(Japanese)* 98141
cancer, CT based radiotherapy dose planning 87861
cancer, fluoresc. image enhancement by pseudocolor proc. *(English)* 122059
cancer diagnosis, helical CT image anal. 87766
cancer radiotherapy, video-based respiratory gating syst. 87837
cancer treatment with CHARTWEL, breathing control appl. 98659
cancers, 3D med. image proc., math. morph. *(Japanese)* 98421
cardiopulmonary resuscitation, act. compression decompression, quality on-line monitoring 98605
chest CT, automated nodule detect., change over time assess. 122124
chest images, digital radiology, gradation proc. algm. 98517
chest radiograph interp., JPEG compressed images vs. uncompressed images 98486
chest radiographs, lung regions ident., segmentation approach 98537
chest radiography, tuberculosis screening, computer-aided diagnosis 87757
chest X-ray helical CT images, computer-aided diagnosis syst. 98532
chest-wall surface, lung-sound transducers, absol. sensitivity *(Japanese)* 87322
chest/lumbar spine screen-film radiography, clinical/phys. image quality measures 122118
CT, automated image eval., morph.-based concept 76525
CT, efficient sliding thin-slab vol. visualisation 110916
curvature-based internal struct. anal. of pulmonary nodules using thoracic 3D CT images 132836
diagnostic syst. for combat casualty care, obstructive/restrictive flow charact. extraction 76337
digital chest radiography, QC phantom 76559
dual head coincidence clinical camera, image correction techs. 122240
dual-screen computed radiography chest imaging, noise ratios 87754
emphysema, lung vol. assess. using multi-detector helical CT, comparison with pulmonary fn. tests 110952
endoscopy, virtual, WWW-based, for CT anal. of bronchial airways 110946
exercise induced pulmonary arterial hypertension detect., Doppler echocardiography 132595
fetal lung maturity prediction using stat. textural features 122030
fetal lung microstruct., maturation, US charactn. 76340
fissures extraction from thin-sect. CT images 98539
foetal lung maturation, EPI, diffusion meas. 122104
foetal lung vol. estim. by MR imaging, init. results 87679
haemodynamics, congenital heart defect children, scintigraphic methods *(Russian)* 132889
heterog. phantoms, radiotherapy treatment planning dose distribs. 76753
high-resoln. CT images, cardiac motion artifacts reduction *(Japanese)* 87745
human bronchial tissue autofluorescence spectrum, Monte Carlo modelling *(Chinese)* 98347
hybrid PET/SPECT imaging, motion detect., partial sinograms correl. 132890
implanted cardiac pacemakers, elec. field interf. threshold 76667
intens. modulation radiotherapy, cancer, prescription dose 133021
intrinsic microscopic fluoresc. and imaging of human lung tissues *(Chinese)* 132635
low-dens. media, X-ray irrad., underdosing reduction by mag. fields 111213
med. image quality, light-box/computer monitor, visual syst. model 122147
MR perfusion imaging using encapsulated laser-polarised ^3He 132693
MRI, cardiac suscept. artifacts arising from heart-lung interface 122114
nodule screening, scanning-beam digital X-ray syst. 76513
nodule surrounding struct., charactn. using differential geom.-based vector fields 87707
nodules, high resoln. spiral CT diagnosis *(Chinese)* 76509
nodules, malignant and benign, hybrid class. approach based on topol. and histogram features 87706
nodules, surrounding structs. anal., differential geom. based vector fields 98549
nodules detect., helical CT images, template-matching 98513
nodules in CT scans, automated detect., preliminary results 110934
non-small-cell lung cancer, palliative radiotherapy, virtual simul. impact 98669
organ doses, at. bomb survivors, radiation therapy 87961
p-MOSFET dosimeters, tissue-equiv. phantom response meas. 111242
PACS, image registration and dyn. imaging 111297
peripheral blood lymphocytes, radiotherapy, chromosome aberration anal. 76744
PET, dyn. images, segmentation using cluster anal. 132907
PET, segmented atten. correction, fuzzy inference systs. 122188
phased-array intracardiac echocardiography guided RF ablation 87503

g continued
physiology, gene expression correl. 91503
pneumoconiosis, computer-aided diagnosis using neural network 110979
pneumoconiosis, optimal scanning, display and segmentation of ILO X-ray image set 110980
pneumoconiosis rounded opacities detect. using neural net 132840
polyps, computerised detect., CT colonography, automated colonic walls segmentation 122140
protein tyrosine phosphorylation, cultured cells, 50 Hz mag. field effects 98753
pulmonary arterial press. estim., Doppler echocardiographic audio-sig. proc. *(Chinese)* 122034
pulmonary fn. diagnostic microsyst., humidity sens. design 98128
pulmonary gas meas., portable syst., fast lung fn. test 110522
pulmonary nodules, 3D curvatures, feature extraction algms. *(Japanese)* 98139
pulmonary nodules, multi-detector row CT, Hessian matrix *(Japanese)* 98515
pulmonary nodules class., contrast enhancement patterns 87767
radiographically occult tumors, bronchoscopically-guided radiotherapy 76652
radiotherapy, respiratory movement, planning target vol. var. 76649
radiotherapy X-ray dose and tumour control beyond air cavities 98824
rat lung MRI using low-temp. prepolarized helium-3 87668
regional fn. meas., non-invasive imaging using X-ray computed tomography 122123
regional perfusion eval., ultrafast MRI 98442
respiratory gating radiotherapy syst., clinical perform. eval. 87821
rot. digital angiography syst., acute pulmonary thromboembolism 87723
seq. chest radiographs, temporal subtraction, computer-aided diagnosis 110940
SPECT, ^{67}Ga imaging, scatt. compensation method, ANN use 122180
spiral CT angiography, pulmonary vascular tree, automated segmentation/visualisation 122142
SVM for lung cancer diagnosis 87807
temporally seq. chest images, digital subtraction, rib elim. 76542
thyroid gland radiotherapy, biomass anal. by X-ray images 98613
tissues, human, NIR Raman spectrosc., mol.-level cancer diagnosis 98364
total body irrad., dose in vivo meas. accuracy 98776
total body irrad. therapy, dosimetry, compensator-rice 122388
total liq. ventilation, press.-limited respirator/lung mech. syst. 122283
tumour motion, detect./prediction with fluoroscopy 87703
tumour radiotherapy, breathing/set-up errors, cumulative dose effect 111222
tumours, proton beam design, methodologies/tools 87865
upper respiratory cavities, underdosing reduction, long. mag. field appl. 111101
vascular sizes, spatial distrib., 3D greyscale morph. 87702
ventilation kinetics, dyn. ^{19}F-MRI using inhaled SF_6 76445
ventilatory movements monitoring, FBG strain sens. 98349
Visual-FSSEM, unsupervised data visualization and interactive feature selection 73455
vol. X-ray CT images, automatic lung segmentation, accurate quantitation 87742
^{241}Am lung meas., voxelised num. phantoms, MCNP code *(English)* 98830
^{3}He, hyperpolarized, pulmonary gas flow, dyn. spiral MRI 132762
^{3}He microbubbles, encapsulated laser-polarized, perfusion imaging 76422
^{99m}Tc-diethylenetriaminepentaacetate aerosol, lung ventilation imaging 132849
^{232}Th, Thorotrast patients, cerebral angiography, mortality 110964

yapunov matrix equations
alg. Lyapunov and Riccati eqns., soln. bounds 124669
analytic perturb. 67702
coupled arrays of oscillators, sync. stabil., universal probe 90682
homotopy algms. for solving coupled Lyapunov eqns. 114090
lin. transform. *(Chinese)* 100740
LMI of rank one, eigenvalues and Lyapunov's inequality 67700
noise simul. of modulated nonlin. ccts. 101694
one-variable polynomial Lyapunov eqn. soln., two-variable approach 78748
parallel algms. for solving Lyapunov and Stein eqns. 124668
rank-one LMIs and Lyapunov's inequality 100735
stable IIR 2D digital filters, design using seq. semidefinite prog. 91063

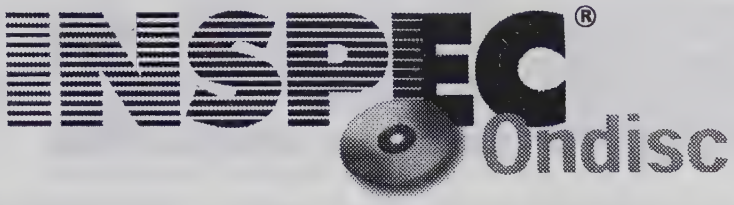
yapunov methods
see also Lyapunov matrix equations
1D iter. map with infinite collapses, chaotic characts. 90679
3-axis motion simulator robust adaptive nonlin. control, aerospace appls. 133212
act. mag. bearing sync. disturbance compensation 92880
adaptive control of av. Markov decision chains under Lyapunov stabil. condition 124506
anti-aliasing filter, band-limitation effects on largest Lyapunov exponent estim. *(Japanese)* 68541
anti-aliasing filter effect on largest Lyapunov exponent calc. 90687
boost PWM DC-DC regulator, large-sig. stabil. 99760
chaotic synchronisation in four-coupled PLL syst. 90675
Chua's cct. adaptive control/sync. 101720
Colpitts oscillator, deterministic chaos ident. using Lyapunov exponents 79530
continuous dyn. systs., computation of Lyapunov charact. exponents 79049
convolution type discrete nonlin. integro-DE, num. stabil. 68050
cryptography, chaotic dyn. syst. approach 83956
delayed bi-directional associative memory networks, exponential stabil. 68979
deterministic chaos and inform. theory 106009
fast optimal dispatch, global transient stabil. constraint, Chua NN 133517
field-excited multiconductor transm. lines, wavelet expansion anal. 83449
fighter aircraft, nonlin. tuned RBF neurocontroller design 111641
fluid networks, stabil., Lyapunov method 78778
gastric elec. uncoupling, deterministic chaos level dyn. 87418
generator predictive out-of-step protection 77856
IM control, unknown torque, sensorless speed tracking 134028
IM sensorless rotor vel. tracking control 88741
image de-mixing, ICA vs principal component anal. 106484
image-based adaptive control, nonlin./stabil. 84137
impulsive functional diff. eqns. with infinite delays, stabil. results 79085

Lyapunov methods continued
induction servomotor drive robust control scheme 78212
induction servomotor syst., adaptive fuzzy sliding-mode controller design 123699
input-queued cell-based switches, av. delays/queue size av./variances bounds 119152
International Space Station, solar-cell orient. syst., drives control 111346
interval matrix Riccati type eqn., robust control using interval anal. 67982
invariant curves of planar map Lyapunov-type no. calc. 124630
invariants and Lyapunov fns. for nonautonomous systs. 90112
Japanese vowels, nonlin. deterministic struct. recogn., causal anal. 118110
LEO satellites, mag. attitude control syst. 111310
LIM drive, intell. backstepping control 100237
LIM servo drive, robust control, neural network uncertainty observer 78210
LIM servo-drive, nonlin. decoupled control, sliding-mode tech. 100238
lin. coupled Kerr oscillators, chaotical dyn., sync. 93783
Lyapunov-Razumikhin method for impulsive functional DEs and pop. dyn. appl. 68017
multi-link smart materials robots, model-free regulation 92694
multi-machine power syst., controllable series capacitor, control strategy 111879
multimachine power systs., transient stabil. eval. methods 111881
multimachine syst., sync. dyn. stabil., Lyapunov's second method 111913
natural gas pipeline inspection gauge speed control using bypass flow 124418
neural network controlled IM, chaos detect. in vel. control 77863
neuromorphic network, current-mode cct., CNN model 91144
neutral delay difference systs. boundedness 124707
nonlin. impulsive integrodifferential eqns., uniform soln. boundedness, Razumikhin tech. 113837
nonlin. Kalman filter theory and wing rock motion control appl. 107496
nonlin. uncertain syst. robust control design, motor appl. 134054
nonsmooth optim., Lyapunov methods, quasi-Newton algms. 67878
nonuniform transm. lines, arbitrary loads, space-time wavelet expansion 83455
parallel-cascade truncated Volterra filters, computation-efficient adaptive algm. 130131
piezoelec. ceramic lin. US motor drive, recurrent fuzzy neural network control 99703
planar manipulators, eye-in-hand syst., inverse optimal H_∞ disturbance atten. 86620
PM lin. sync. motor, servo drive syst., RFNN on-line gain tuning control 99863
PM lin. sync. servomotor drive adaptive hybrid neurocontrol scheme 123948
PM stepper motor, neural net based posn. control 77826
PM sync. motor decoupling control, online params. ident. 133969
PM sync. motors chaotic phenom. anal. using Lyapunov exponent *(Chinese)* 123381
PM sync. servo motor drive, total SMC, recurrent fuzzy NN 134426
power swings damping, braking resistors control 122870
power syst., STATCOM, transient stabil. anal., Hamiltonian syst. theory *(Chinese)* 111914
power syst. nonlin. control theory survey *(Chinese)* 77230
power syst. protection operation/nonviable transients direct assess. 88486
power syst. transient stabil. anal., transient energy fn. methods *(Chinese)* 88364
power syst. transient stabil. assess., crit. methods comparison *(Chinese)* 122855
power syst. transient stabil. assess. methods comparison *(Chinese)* 122882
power syst. transient stabil. assess. methods comparison *(Chinese)* 122841
power syst. transient stabil. control anal. using Lyapunov fn. 77237
probabilistic data assoc. filter stabil. anal. 84732
PWM ZVT boost converter, dyn. model, large-sig. anal. 99832
qualitat. props. of nonlin. difference systs. 101094
QW LD, optoelectronic delayed-feedback and chaos 82646
Rayleigh oscillator, extremely weak perturb., duck soln. collapse, chaos 101712
RIE syst., neural net-based adaptive proc. control 115622
rotary US motor, TW type, robust neurocontrol 88781
semicond., charge transport hydrodynamical model, equilib. state stabil. 92274
series-connected controllable FACTS devices, control Lyapunov fns. 133548
sing. perturbed Nash games, Riccati eqns., LQ control 78804
single-point noise cancellation, Lyapunov tuning of leaky LMS algm. 130039
speaker ident. using nonlin. dyn. features 129400
sync. generators, fifth-order model, energy-based stabilizing method, Hamiltonian fn. approach 112491
sync. lin. motor servodrive, adaptive neural control 78203
transient stabil., braking resistors optimal control, Lyapunov method 88387
transient stabil. assess., disturbed-measure fns. *(Chinese)* 111915
turbogenerator shaft torsional oscill., bifurcation anal., stable region estim. *(Chinese)* 77827
under-actuated dyn. rigid-body systs., visual servoing 86619
underwater unmanned vehicles, sonar-based guidance 131685
unified Lyapunov convergence of both unsupervised ICA and supervised PCA learning, image de-mixing 107138
VLSI interconnect model order reduction, bal. truncation realization algm. 104065
voltage collapse, energy fns. anal. 133532
Volterra integral-differential syst., practical stabil. and Lyapunov's stabil. *(Chinese)* 100747
zigzag sampled phase detect freq. synthesizer, Hopf bifurcation set, chaos *(Chinese)* 125249
Er-doped fiber dual-ring laser, polarized mode, chaos control by lin. feedback method 117126

lymphocytes *see blood*

lyotropic liquid crystals
E-polarisers, dichroic dye liq. cryst., low-leakage off-angle 104819

lysozyme *see proteins*



the quality database for physics, electronics and computing

INSPEC is the world's leading English-language information service providing access to the world's scientific and technical papers in physics, electrical engineering, electronics, communications, control engineering, computing and information technology.

INSPEC Ondisc is the complete database (from 1989 onwards) available on CD-ROM. Two subsets – INSPEC Ondisc Physics and INSPEC Ondisc Electronics & Computing – are also available. New subscribers receive two years' backfile free (2000 and 2001).

http://www.iee.org/Publish/inspec/ProdCat/ondisc.cfm

Online Journals

Available direct from the IEE over the World Wide Web, the Complete Online Package comprises *Electronics Letters* (the IEE's rapid-publication letters journal) and all 12 titles of *IEE Proceedings,* the six IEE Engineering Journals, IEE Conference Proceedings, Colloquium/Seminar Digests and Medical & Biological Engineering & Computing. Discounts are available for combination print/online subscriptions and for multiple journal subscriptions. More information available at

http://ioj.iee.org/

For full information send for the Publishing and Information Services Catalogue 2002 from the Marketing Department, IEE, Michael Faraday House, Six Hills Way, Stevenage, Herts. SG1 2AY, UK.
Tel: +44 (0)1438 313311 • Fax: +44 (0)1438 742840
E-mail: inspec@iee.org



The IEE is a not-for-profit organisation and is registered as a charity in the UK.

INSPEC®

THE INSTITUTION OF ELECTRICAL ENGINEERS

If you are looking for access to the latest scientific and technical literature, then you've found it!

INSPEC the quality database for physics, electronics and computing

As the world's leading English language information service, the INSPEC bibliographic database can provide you with the most recent and comprehensive research information.

Updated weekly on most systems, it ensures you receive the best and most current data .

Adaptable to your needs INSPEC is available via CD-ROM, Online, Site Licence or Print.

Unrivalled comprehensive indexing, ensures knowledgeable and consistent indexing.

Broad coverage in

- **Physics**
- **Electrical Engineering and Electronics**
- **Computing Science**
- **Control Technology**
- **Information Technology**

For more detailed information contact
The Marketing Department, IEE, Michael Faraday House,
Six Hills Way, Stevenage, Herts. SG1 2AY, UK
Tel: +44(0)1438 313311; Fax: +44(0)1438 742840
E-mail: inspec@iee.org or visit our website
http://www.iee.org/Publish/inspec/

The IEE is a not-for-profit organisation, registered as a charity in the UK

Keep yourself up-to-date with the latest information on scientific and technical literature

Try INSPEC Current Awareness Service

INSPEC, the quality database for physics, electronics and computing is the world's leading English language information service and provides the most recent and comprehensive research information.

INSPEC Current Awareness Service is intended for individual engineers, scientists and research groups to keep them up-to-date with the latest publications in their chosen field.

Designed to be flexible, INSPEC Current Awareness offers a range of regular services.

- INSPEC Topics
- INSPEC SDI
- Key Abstracts

Topics

Low cost and frequent, Topics provide around seventy standard titles which are specially selected from dynamic areas of INSPEC.

Updates every two weeks ensures delivery of the newest information.

Convenient delivery in html format via email and/or first class post and airmail.

Prices per title: **£185 (International) £160 (EU) US$ 330 (Americas)**

SDI (Selective Dissemination of Information)

Suitable for those with specific requirements and constructed with help from the INSPEC staff, the SDI service provides a tailor made search profile.

As each subscriber has complete control of their profile, it can be changed at no extra cost, as often as required.

Updated every two weeks, it ensures you receive the very latest information.

Convenient delivery in html format via email and/or first class post and airmail.

Prices from: **£295 (International) £280 (EU) $535 (Americas)**

Key Abstracts

Key Abstracts consists of broader subject areas from 22 journals, divided into five major groupings.

- Computing and Control
- Communications and Optics
- Automation and Control
- Electronics and Power
- Materials and Measurement

It is a monthly publication, comprised of a selection of approximately 250 summaries in an easy to ready format. A subject index is also included.

Prices for each title: **£152 (International & EU) / US$ 262**
Prices for all 22 titles: **£2,580 (International & EU) / US$ 4,390**

For further information please contact
The Marketing Department, IEE, Michael Faraday House,
Six Hills Way, Stevenage, Herts. SG1 2AY, UK
Tel: +44(0)1438 313311; Fax: +44(0)1438 742840
E-mail: inspec@iee.org or visit our website at:
http://www.iee.org/Publish/inspec/ProdCat/Aware/Current.cfm

IEE

The IEE is a not-for-profit organisation and is registered as a charity in the United Kingdom

THE UNIVERSITY OF ILLINOIS AT CHICAGO
3 8198 318 978 523

ABSTRACTS AND CURRENT PAPERS JOUR

SUBSCRIPTION PRICES 2001

	The Americas $	ROW £
PHYSICS ABSTRACTS (PA)	4600	2705
2nd and subsequent copies	2730	1605
ELECTRICAL & ELECTRONICS ABSTRACTS (EEA)	3605	2120
COMPUTER & CONTROL ABSTRACTS (CCA)	2400	1410
PA/EEA/CCA COMBINED SUBSCRIPTION	8715	5230
2nd and subsequent copies	6930	4140
EEA/CCA COMBINED SUBSCRIPTION	5080	3035
CURRENT PAPERS IN PHYSICS		
Member and Associated Societies rate*	435	255
Non-Member rate	670	410
CURRENT PAPERS IN ELECTRICAL & ELECTRONICS ENGINEERING		
Member and Associated Societies rate*	365	215
Non-Member rate	550	325
CURRENT PAPERS ON COMPUTERS & CONTROL		
Member and Associated Societies rate*	365	215
Non-Member rate	550	325
KEY ABSTRACTS		
Member and Associated Societies rate*	160	95
Non-Member rate	250	145
22 Key Abstracts combined	4185	2460

*The Member and Associated Societies rate is available to Members of the IEE, IEEE, BCS, IOP and AIP.

CUMULATIVE INDEXES

Cumulative indexes are available for *Physics Abstracts, Electrical & Electronics Abstracts* and *Computer & Control Abstracts*, for both authors and subjects. These cumulations cover a period of four years. The table below shows the prices and periods for the two types of cumulative index.

	PHYSICS ABSTRACTS		ELECTRICAL & ELECTRONICS ABSTRACTS		COMPUTER & CONTROL ABSTRACTS	
	Subject	Author	Subject	Author	Subject	Author
	£	£	£	£	£	£
1985–88	1370	820	695	500	485	260
1989–92	2265	1295	1095	799	765	410

For US$ prices please contact the Marketing Department at the address below.

ORDERING PROCEDURE

All orders should be sent to: IEE Publications Sales Department, PO Box 96, Stevenage, Herts. SG1 2SD, United Kingdom. Telephone: +44 (0) 1438 767328, Facsimile: +44 (0) 1438 742792, E-mail: sales@iee.org.uk. All orders must be pre-paid. US Dollar prices apply only to subscribers in North, Central and South America, all other payments must be in Sterling.

OTHER INSPEC SERVICES

SDI

(Selective Dissemination of Information.)

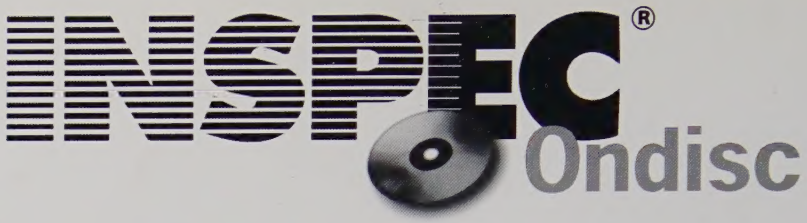
This is a service individually tailored to the requirements and interests of the engineer or research worker. Every two weeks details of information relevant to the interest profile of the individual subscriber are selected from the data being processed for the INSPEC Database.

TOPICS

This is an SDI service based on standard profiles. There are over 80 subjects covering high-activity areas of research and development. This is an inexpensive service designed to alert engineers and researchers to the availability of literature within their subject area.

TAPES

The INSPEC Tape Services contain all the information included in the INSPEC publications. They are updated 50 times per year. They enable the larger research and development organisations to produce their own internal information and current-awareness services.



the quality database for physics, electronics and computing

INSPEC is the world's leading English-language information service providing access to the world's scientific and technical papers in physics, electrical engineering, electronics, communications, control engineering, computing and information technology.

INSPEC Ondisc is the complete database (from 1989 onwards) available on CD-ROM. Two subsets – INSPEC Ondisc Physics and INSPEC Ondisc Electronics & Computing – are also available. New subscribers receive two years' backfile free (2000 and 2001).

http://www.iee.org/Publish/inspec/ProdCat/ondisc.cfm

Online Journals

Available direct from the IEE over the World Wide Web, the Complete Online Package comprises *Electronics Letters* (the IEE's rapid-publication letters journal) and all 12 titles of *IEE Proceedings,* the six IEE Engineering Journals, IEE Conference Proceedings, Colloquium/Seminar Digests and Medical & Biological Engineering & Computing. Discounts are available for combination print/online subscriptions and for multiple journal subscriptions. More information available at

http://ioj.iee.org/

For full information send for the Publishing and Information Services Catalogue 2002 from the Marketing Department, IEE, Michael Faraday House, Six Hills Way, Stevenage, Herts. SG1 2AY, UK.
Tel: +44 (0)1438 313311 • Fax: +44 (0)1438 742840
E-mail: inspec@iee.org



The IEE is a not-for-profit organisation and is registered as a charity in the UK.